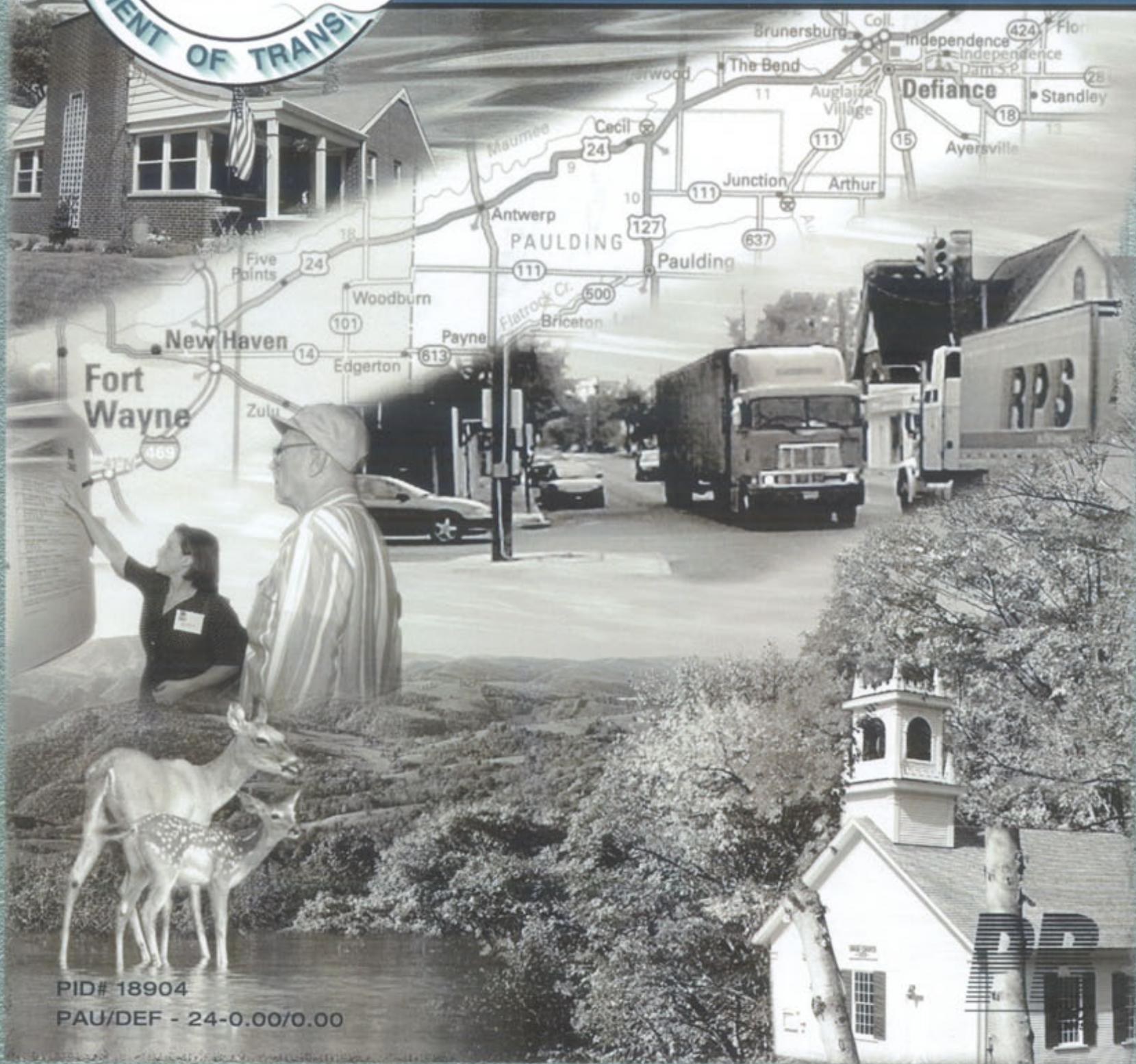




New Haven to Defiance

Draft Environmental Impact Statement



PID# 18904

PAU/DEF - 24-0.00/0.00

US 24**Interstate 469 in New Haven, Indiana to Ohio Route 15 in Defiance, Ohio****Draft Environmental Impact Statement**

Submitted Pursuant to: 42 U.S.C. 4332 (2)(c), (and where applicable, 49 U.S.C. 303) by the

*U.S. Department of Transportation - Federal Highway Administration,
Ohio Department of Transportation and Indiana Department of Transportation*7-17-03

Date of Approval

8/6/03

Date of Approval

8/19/2003

Date of Approval

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For Indiana Department of Transportation

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This project consists of a proposal to upgrade existing US Route 24 to a four-lane limited access highway between New Haven, Indiana and Defiance, Ohio. Twenty-seven alternatives were evaluated including the No Build alternative, an improved two-lane facility on existing location, an improved four-lane facility on existing location, and 24 alternatives on new alignment.

Comments on this DEIS are due by **NOV 21** 2003
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ACRONYMS

401 Certification	Ohio EPA/Indiana DEM Section 401 Water Quality Certification
404 Permit	US Army Corps of Engineers Section 404 Dredge and Fill Permit
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council for Historic Preservation
ACM	Asbestos Containing Materials
ADT	Average Daily Traffic
APE	Area of Potential Effect
AST	Aboveground Storage Tank
BMP	Best Management Practice
BUSTR	Bureau of Underground Storage Tank Regulations
CAA	Clean Air Act
CAAAAs	Clean Air Act Amendments
CE	Categorical Exclusion
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIA	Community Impact Assessment
CMS	Construction and Material Specifications (produced by ODOT)
COFC	Container on a Flat Car
DEIS	Draft Environmental Impact Statement
DFC	Documentation for Consultation
DNAP	Division of Natural Areas and Preserves (ODNR)
DOW	Division of Wildlife (ODNR)
DPS	Allen County Department of Planning Services
EIS	Environmental Impact Statement
EJ	Environmental Justice
EO	Executive Order
ER	Emergency Relief (Program)
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
EWH	Exceptional Warmwater Habitat
FCIR	Farmland Conversion Impact Rating (Form AD-1006)
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FPPA	Farmland Protection Policy Act (of 1981)
FPL	Federal Poverty Level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GIS	Geographical Information System
GPS	Global Positioning System
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HHS	Department of Health and Human Services
HOV	High Occupancy Vehicle
IAC	Indiana Administrative Code
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
IHRC	Indiana Hi-Rail Corporation
IJS	Interchange Justification Study
INDOT	Indiana Department of Transportation
ISTEA	Intermodal Surface Transportation Efficiency Act (of 1991)
ITS	Intelligent Transportation System

LOA	Letter of Agreement
LOS	Level of Service
LRW	Limited Resource Water
LWCFA	Land and Water Conservation Fund Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSL	Master Site List (OEPA)
MVMT	Million Vehicle Miles Traveled
MWH	Modified Warmwater Habitat
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHS	National Highway System
NIRCC	Northeastern Indiana Regional Coordinating Council
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System (Permit)
NPL	National Priorities List
NPS	National Park Service (USDOI)
NRCS	Natural Resources Conservation Service (USDA)
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OAC	Ohio Administrative Code
OAI	Ohio Archaeological Inventory
ODA	Ohio Department of Agriculture
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
OEPA	Ohio Environmental Protection Agency
OHI	Ohio Historic Inventory
OHPO	Ohio Historic Preservation Office
OHW	Ordinary High Water
ORAM	Ohio Rapid Assessment Method
ORC	Ohio Revised Code
ORDC	Ohio Rail Development Commission
OSHA	Occupational Safety and Health Administration
OVA	Organic Vapor Analyzer
PA	Programmatic Agreement
PCBs	Polychlorinated Biphenols
PCS	Petroleum Contaminated Soil
PDP	Preliminary Development Process
PI	Public Involvement
PID	Project Identification Number
PS&E	Plans, Specifications and Estimates
PTC	Fort Wayne Public Transportation Company
QA/QC	Quality Assurance/Quality Control
QHEI	Qualitative Habitat Evaluation Index
RCRA	Resource Conservation and Recovery Act of 1976
ROD	Record of Decision
ROW	Right-of-Way
SARA	Superfund Amendment and Reauthorization Act of 1986
Semi-VOCs	Semi-Volatile Organic Compounds
SFMO	State Fire Marshal's Office
SHPO	State Historic Preservation Officer
SOV	Single Occupancy Vehicle
SSA	Sole Source Aquifer
SSHSP	Site-Specific Health and Safety Plan
STIP	State Transportation Improvement Plan
SWCD	Soil and Water Conservation District
SWPPP	Storm Water Pollution Prevention Plan

T&E Species	Threatened and Endangered Species
TCLP	Toxic Characteristic Leaching Procedure
TCM	Transportation Control Measures
TDM	Transportation Demand Management
TDP	Transportation Development Process
TEA-21	Transportation Equity Act for the 21 st Century
TIP	Transportation Improvement Plan
TMACOG	Toldeo Metropolitan Area Council of Governments
TNC	The Nature Conservancy
TOFC	Trailer on a Flat Car
TPH	Total Petroleum Hydrocarbons
TRB	Transportation Research Board
TSM	Transportation System Management
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDOJ	United States Department of the Interior
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
WWH	Warmwater Habitat

COMMONLY USED METRIC CONVERSIONS

Quantity	Metric Unit	English Unit	Factor to Convert Metric Units to English Units
Length	Kilometer (km)	Mile (mi)	Kilometers x 0.62 = Miles
	Meter (m)	Feet (ft)	Meter x 3.28 = Feet
Area	Square Kilometer (km ²)	Square Mile (mi ²)	Square kilometers x 0.39 = Square miles
	Hectare (ha)	Acre (ac)	Hectares x 2.47 = Acres
Volume	Liter (l)	Gallon (gal)	Liters x 0.26 = Gallon
Mass	Kilogram (kg)	Pound (lb)	Kilograms x 2.21 = Pounds
Velocity	Kilometers per hour (kph)	Miles per hour (mph)	Kilometers per hour x 0.62 = Miles per hour

SUMMARY

PROJECT DESCRIPTION

United States Route 24 (US 24) is a major east-west transportation corridor through the Midwestern United States, linking Michigan and Colorado. The eastern portion of the corridor traverses northern Indiana and northwestern Ohio, and provides the most direct access between Fort Wayne, Indiana and Toledo, Ohio. US 24 also provides direct connections to I-69/I-469, I-80/90 and I-75, enabling the motoring public to reach destinations northward into the Great Lakes region and Canada as well as other large cities on the eastern seaboard. As a result of the direct linkage between the Fort Wayne, Indiana region and the Port of Toledo, US 24 has been nicknamed “Fort to Port” by local users and advocacy groups, such as the Fort to Port Organization.

The Ohio Department of Transportation (ODOT) and the Indiana Department of Transportation (INDOT), in cooperation with the Federal Highway Administration (FHWA) have undertaken a study of improvements to US 24 in northeast Indiana and northwest Ohio. The focus of this study is the approximately 64.5 kilometer (40-mile) segment of US 24 between New Haven, Indiana and Defiance, Ohio.

SUMMARY OF THE PURPOSE AND NEED

The segment of US 24 between New Haven, Indiana and Defiance, Ohio is a two-lane road that suffers from congestion and safety-related issues as a result of inadequate capacity to accommodate current traffic demand. The facility does not meet current design criteria for travel lane widths, provision of shoulders, roadway curvature, sight distance, and travel speed. These characteristics contribute to increasing travel time delays, and a declining level of service along the roadway.

Deteriorating levels of service are due primarily to an increased volume of users, location, and existing design. Much of US 24 in the study area is a two-lane rural, winding arterial roadway as it follows the Maumee River. Frequent driveway cuts or access points for local residences, businesses, and other local roadway crossings are common. In some areas, development is directly adjacent to the roadway.

The roadway has narrow, often discontinuous shoulders and numerous no-passing zones. The frequency of no-passing zones severely limits the flow of traffic and the capacity of the roadway. Approximately 45 percent of the overall traffic on US 24 is trucks, and along some roadway segments, truck traffic is more than half of the total traffic. This high volume of trucks often results in platoons of trucks, three or more, making passing difficult and dangerous.

US 24 is identified as a macro corridor in the *Access Ohio* plan. Its importance was also nationally recognized when US 24 was identified as one of the 21 High Priority Corridors as part of the National Highway System in the Intermodal Surface Transportation Efficiency Act of 1991.

ODOT and INDOT, in cooperation with FHWA, are proposing to improve the operational characteristics of US 24 for both local and through traffic in the Fort to Port area through a major transportation project. The purpose of this project is to:

- Improve traffic flow and the level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

STUDY AREA AND LOGICAL TERMINI

The US 24 New Haven to Defiance study area is approximately 1282.1 square kilometers (500 square miles) in size. Beginning 0.8 kilometers (1/2 mile) west of the I-469 bypass in New

**SUMMARY OF
REASONABLE
ALTERNATIVES
CONSIDERED**

Haven, Indiana, the study area extends northeast to the four-lane section of US 24 at its intersection with Ohio State Route 15, just west of Defiance.

The study area includes portions of Allen County, Indiana, and Paulding and Defiance counties in Ohio. It is primarily rural in nature, traveling through rich and productive farmlands in both Indiana and Ohio. The Maumee River flows along the entire stretch of US 24 through the study area. Small stands of forests and wetlands are also interspersed throughout the study area, mainly associated with the floodplain adjacent to the Maumee River.

Industrial, commercial, and residential developments are concentrated along US 24 and its local cross streets. Although largely unincorporated, the study area does include several small municipalities. In Indiana, the incorporated areas are New Haven, Harlan, Halls Corner, Woodburn, and Edgerton. In Ohio, these are Hicksville, Mark Center, Sherwood, Antwerp, Cecil, Paulding, Payne, and Defiance.

A broad range of modal alternatives was considered for the US 24 New Haven to Defiance project. These alternatives include:

- No Build.
- Transportation System Management (TSM).
- Transportation Demand Management (TDM).
- Transit.
- Rail Freight.
- Highway.

The modal alternatives were evaluated on their ability to address the current and future transportation needs and problems identified in the US 24 New Haven to Defiance study area.

The No Build alternative consists of only minor, short-term safety and maintenance improvements to US 24 that maintain its continuing operation. The No Build alternative does not meet the needs of the study area, but is retained as the baseline condition to measure the potential impacts of the other alternatives.

TSM and TDM alternatives are made up of relatively low cost, small scale improvements that are designed to address transportation problems in an area by using the existing roadways more efficiently. Examples of TSM improvements are improved signal timing, turn lanes, and intersections. TSM improvements are effective in addressing localized traffic problems, such as increasing capacity at specific congested intersections. However, the benefits of such improvements over the length of a long corridor can be sporadic. TDM aims to reduce travel demand, by shifting trips away from travel by single occupant vehicles (SOV) to transit or car pools, or shifting trips out of the peak travel time period. The TSM and TDM strategies by themselves would not reduce travel demand to the degree required to offset from the need for additional capacity nor would they adequately address the design or safety problems associated with US 24. Additionally, the TSM or TDM measures would not adequately address the predicted future growth in traffic and the declining LOS. TDM measures are not cost-effective in a rural setting and are not expected to have a large enough impact to have positive measurable effects on the operational characteristics of US 24. Additionally, TDM measures have limited applicability to truck traffic.

The transit alternative would involve the establishment of new fixed-route transit services between Defiance and Fort Wayne that could accommodate commuters. This alternative is neither feasible nor cost-effective for a rural area with low population, housing, and employment densities. In addition, the transit alternative does not address the design deficiencies associated with US 24 and does not address truck traffic or the movement of freight through the study area.

The rail freight alternative would seek to improve and/or increase the capacity and competitiveness of the existing rail freight lines in the study area while decreasing the amount of truck traffic on US 24. This would entail shifting goods that are currently transported in and through the study

area from trucks to rail, thus reducing truck traffic on US 24. The freight rail alternative requires the construction of a direct rail line between Fort Wayne and Toledo. Though this alternative could alleviate some of the truck traffic on US 24, it would not address the access, design, and safety issues associated with the highway.

Highway alternatives include various strategies to improve existing US 24 that are more substantial than the TSM and TDM alternatives. Proposed highway improvements include:

- Improving the two-lane facility by adding turn lanes, widening shoulders, and improving intersections.
- Upgrading the two-lane facility to a four-lane, limited access expressway, including a bypass around Antwerp.
- Constructing a four-lane, limited access expressway on new alignment.

The highway alternatives provide the highest degree of flexibility in meeting all of the transportation needs identified in the study area. The highway alternatives would increase capacity, improve the level of service, and allow higher volumes of traffic to more safely use the facility. The provision of modern transportation infrastructure would enhance the economic competitiveness of the area and would improve the marketability of key economic development sites. Based on the results of the purpose and need study and modal analysis, only the highway alternatives adequately address the transportation problems and needs associated with US 24. Therefore, only the highway alternatives were carried forward for further study in the in-depth analysis required for the US 24 Draft Environmental Impact Statement (DEIS).

FEASIBLE CORRIDORS

Within the study area, 14 preliminary corridors 609.8 meters (2,000 feet) in width were initially developed for the US 24 New Haven to Defiance project between the I-469/US 24 interchange in New Haven and the Ohio SR 15/US 24 intersection west of Defiance. The preliminary corridors were evaluated individually with regards to environmental features, public comments, agency comments, and consistency with local and regional planning goals and objectives. Five of the 14 preliminary corridors were selected for further research based on a process of elimination – Corridors 4, 7, 10, 13, and existing US 24. Corridor widths used for the alternative development studies vary from 152.4 meters (500 feet) for the existing US 24 Corridor and 609.8 to 1219.5 meters (2,000 to 4,000 feet) for Corridors 4, 7, 10, and 13.

FEASIBLE ALTERNATIVES

Within Corridors 4, 7, 10, and 13, feasible highway alternatives approximately 91.5 meters (300 feet) in width were developed. A total of 26 feasible highway alternatives were studied for the project. These included 24 expressway on new alignment alternatives (Alternatives A through X), the improved two-lane alternative on existing US 24 (Alternative Y), and the four-lane expressway along existing US 24 (Alternative Z). Feasible Alternatives A through X are comprised of combinations of 20 segments that were developed within the corridors, resulting in 24 highway alternatives on new alignment.

Alternatives A through X (expressway on new alignment alternatives) are designed as four-lane, divided, limited access facilities. The expressways provide for two lanes of travel in each direction separated by a 25.0-meter (82-foot) wide grass median in Indiana and an 18.3-meter (60-foot) wide grass median in Ohio. Access to the Feasible Alternatives is limited to one interchange at SR 424 and several at-grade intersections located at state routes, frequently traveled roads, and roads that provide access across the Maumee River. The design for Alternatives A through X includes an expanded right-of-way footprint between I-469 and the Indiana/Ohio State Line to allow for future freeway development in Indiana. A design speed of 112.9 kilometers per hour (70 miles per hour) was used for determining the horizontal and vertical alignments.

Within the existing US 24 Corridor, a two-lane alternative (Alternative Y) and a four-lane alternative (Alternative Z) were developed. The design of Alternative Y (the two-lane alternative) improves the existing road by adding shoulders, improving intersections, and adding turning lanes. This highway alternative would have unlimited access along the route. A design speed of 88.7

kilometers per hour (55 miles per hour) was used for determining the horizontal and vertical alignments.

Alternative Z is a four-lane divided, limited access expressway that follows along the existing route of US 24. Existing US 24 is incorporated into this alternative where possible and also used as a frontage road in some areas. This highway provides for two lanes of travel in each direction divided by a 25.0-meter (82-foot) wide grass median in Indiana and an 18.3-meter (60-foot) wide grass median in Ohio and median barriers. Access to this alternative is provided by at-grade intersections. A design speed of 112.9 kilometers per hour (70 miles per hour) was used for determining the horizontal and vertical alignments.

**FEASIBLE ALTERNATIVES
US 24/I-469
INTERCHANGE**

In October 2002, INDOT indicated its intention to construct US 24 as a four-lane divided freeway with full access control between I-469 and the Indiana/Ohio State Line. In addition to interchanges constructed at Ryan/Bruick Road, Webster Road, and SR 101, the existing I-469/US 24 interchange will be upgraded to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange). Nineteen conceptual alternatives focusing on improvements to the existing interchange were developed and evaluated through a two-step screening process. The conceptual alternatives were first screened to determine if they met the purpose and need for the improvements. The second step involved a comparative analysis of environmental impacts, engineering features, and cost-effectiveness. Based on the results of the screening analysis, three Feasible Alternatives for the interchange improvements were selected for further development and in-depth analysis. The interchange alternatives and associated impacts will be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be identified and will be presented in the US 24 New Haven to Defiance Final Environmental Impact Statement (FEIS).

**IDENTIFICATION OF THE
PREFERRED
ALTERNATIVE**

The 26 Feasible Alternatives were analyzed in a three-step screening process. First, the alternatives were analyzed to determine if they met the established purpose and need of the project. In the second step of the screening analysis, the potential environmental impacts were assessed for each alternative. This analysis focused on environmental resources unique to the study area and also those that require state and federal permits, if affected. The environmental resources determined to be differentiating factors in the Step II analysis were farmlands, woodlots, Category 3 forested wetlands, and streams. In addition, residential and commercial displacements were identified as a differentiating factor in the Step II analysis. No priority or rankings were assigned to the five factors. They were considered to be of equal value in the analysis. Alternatives with low impacts to the five factors were retained for further consideration. The third step of analysis involved a more detailed examination of the environmental impacts and the consideration of other information such as public and agency comments, constructability, and right-of-way issues. Through this three-step analysis, Alternative C was identified as the Preferred Alternative.

Agency input was also considered in the identification of the Preferred Alternative. ODOT met with representatives from US Environmental Protection Agency (USEPA), Ohio Environmental Protection Agency (OEPA), and FHWA on March 8, 2001 to discuss the Preliminary Draft Environmental Impact Statement (PDEIS) and recommendations for the Preferred Alternative. The USEPA discussed their comments on the PDEIS, which were focused only on wetland impacts. OEPA expressed concern about impacts to Category 3 wetlands and streams. In general, the agencies indicated a preference for those alternatives that minimize impacts to wetlands, streams, farmlands, wildlife habitat, woodlands, and the Maumee River. Several agencies recommended Alternative C as the Preferred Alternative for US 24 because it would result in the least impact to high quality Category 3 forested wetlands.

The identification of the Preferred Alternative was the focus of public meetings held on May 1, 2, and 3, 2001. Citizens and local public officials in the Defiance area requested that Alternative D be reconsidered as the Preferred Alternative. Alternative D follows the same route as Alternative C from the intersection with I-469 in Indiana to Defiance County, Ohio. In Defiance County, Alternative C follows Segments 14 and 19, while Alternative D follows Segments 15 and 18.

As a result of agency and public comments, Alternatives C and D were retained for further study. Detailed environmental studies (i.e. archaeology surveys, wetlands delineations, and threatened and endangered species surveys) were conducted on Alternatives C and D. Additional engineering designs were developed with the intention of minimizing impacts on wetlands, particularly the Category 3 forested wetlands located in Segment 18. This resulted in the development of a 27th alternative – Alternative D-1. Further coordination with the US Army Corps of Engineers and the OEPA regarding wetland impacts and potential mitigation for the new minimization alignment resulted in Alternative D-1 being identified as the Preferred Alternative for the project.

Since the identification of Alternative D-1 as the Preferred Alternative, investigation into several design refinements were undertaken, which focused on:

- Accomodation of the transportation needs of the Amish population residing in Allen County.
- Identification of potential design changes for local road crossings to accommodate the transportation needs of farm operators affected by the Preferred Alternative.
- Addition of service roads to provide access to properties landlocked by the Preferred Alternative.
- Completion of detailed traffic analysis of operational characteristics at intersections and interchanges with crossroads.
- Development of interchange designs for SR 49 and US 127 crossings.
- Evaluation of options for median design.
- Development of design refinements to minimize impacts on affected wetlands.
- Evaluation of the potential use of the Maumee & Western Railroad right-of-way.
- Inclusion of the Antwerp Bypass in the Preferred Alternative.
- Revisions to the design of the proposed interchange at SR 424 to avoid the displacement of residential housing in the Bohlman Trailer Park.

These investigations were undertaken in response to specific comments made by the public and resource agencies on the Preferred Alternative. The main objective of the investigations was to identify mitigation strategies that result in the avoidance of or minimization of impacts to sensitive resources.

Alternative development and impact analysis for the three interchange alternatives for improvements to the US 24/I-469 interchange will be completed over the next several months. The results will be presented to the public at the US 24 Public Hearing and will be presented in the US 24 New Haven to Defiance FEIS.

SUMMARY OF MAJOR ENVIRONMENTAL IMPACTS

Environmental concerns for the 26 Feasible Alternatives are summarized in Table S-1. Table S-2 presents the environmental impacts associated with the Preferred Alternative, D-1.

The evaluation of the Feasible Alternatives for the US 24/I-469 interchange improvements are currently underway. The results of these studies will be presented in the US 24 New Haven to Defiance FEIS.

AREAS OF CONTROVERSY

The rural location of this project through a region with a long-established agricultural history has resulted in the involvement of large farmsteads and farmlands with associated family heritage and local historic connections. Public comments and opinions have been in favor of minimizing the impact to farmlands. Farmlands have played a major role in the development of the Feasible Alternatives. Where possible, alignments were developed adjacent to or within previously existing disturbed rights-of-way such as the current US 24 route or railroad corridors well as along township lines, property lines, and fencerows, where possible. These existing man-made breaks were used in order to minimize right-of-way acquisition from active agricultural lands and to minimize effects of field fragmentation and the landlocking of parcels. Additional coordination with the county Soil and Water Conservation Districts has been undertaken to address impacts on the drainage systems for actively farmed areas. A Service Road Study has

been completed to investigate the feasibility of constructing service roads to minimize right-of-way impacts and reduce the number of parcels landlocked by construction of the Preferred Alternative.

In the City of Defiance, the existing US 24 and West High Street intersection will be closed as a result of the construction of the Preferred Alternative and will be replaced with an overpass. West High Street will remain open to traffic, with the overpass carrying the Preferred Alternative over it. Direct access to the Preferred Alternative from West High Street will not be provided.

Public opinion is divided at West High Street. Several residents and public officials have requested that an interchange be constructed at this location to maintain access to US 24 at West High Street. Other citizens have stated that they do not want an interchange at West High Street. City officials and local business are concerned that the elimination of access to US 24 at West High Street will be detrimental to the economic development of Defiance. In addition, there is a concern that the proposed grade-separation of US 24 and West High Street will be detrimental to the local roadway network by encouraging through traffic to use Haller and Harding streets. ODOT does not recommend an interchange at this location because it would be located less than 1.6 kilometers (one mile) from the existing US 24 and SR 15 interchange. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of 3.2 kilometers (two miles) and a minimum distance of 1.6 kilometers (one mile).

In response to public comments, a study was conducted to identify any significant traffic-related impacts that would result from the proposed grade-separation at the US 24 and West High Street crossing. The study determined that in the future, without any changes to the US 24/West High Street intersection, the existing local road network will exceed capacity along the Ralston Avenue and North Clinton Street corridors. The future capacity problems will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the study area. The future capacity problems will occur regardless of the existence of an interchange at US 24 and West High Street. The proposed grade-separation of US 24 and West High Street will have no more than minor adverse impacts on the capacity of the study area roadways, beyond the problems already inherent under the future traffic volumes.

**UNRESOLVED ISSUES
WITH OTHER AGENCIES**

All of the detailed environmental studies required in Step 6 of the ODOT's 9-Step Transportation Development Process (TDP) have not been completed for the Preferred Alternative (D-1). These studies include the evaluation of the Feasible Alternatives for the US 24/I-469 interchange improvements.

In 2002, INDOT recommended that improvements to the existing US 24/I-469 interchange should be included in the project. Nineteen conceptual interchange alternatives were initially developed. Out of the 19 conceptual alternatives, three feasible interchange improvement alternatives were selected through a two-step screening process. Currently, the three feasible interchange improvement alternatives are being developed in more detail. Design studies will be completed, including both engineering and environmental studies. The environmental studies for the interchange will be inclusive of those conducted for the highway alternatives developed for the project. The results of these studies will be documented in technical reports (if required), and will be coordinated with the appropriate resource agencies.

The interchange alternatives and associated impacts will also be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be selected and presented in the US 24 New Haven to Defiance FEIS.

**OTHER FEDERAL
ACTIONS IN THE
REGION**

Other federal actions in the northeastern Indiana and northwestern Ohio region include:

- Preliminary development study for US 24 between Defiance and Napoleon, Ohio. A Categorical Exclusion is being completed by ODOT for this roadway improvement project.

***OTHER FEDERAL
ACTIONS REQUIRED
FOR THE PROJECT***

- Preliminary development study for US 24 between Napoleon and Toledo, Ohio. A DEIS is being prepared by ODOT for the roadway improvement project.
- Development of the Woodburn Industrial Site in Allen County, Indiana by the US Department of Agriculture. Development of this site will require an environmental analysis in accordance with the National Environmental Policy Act (NEPA).

Environmental permits are required from one or more regulatory agencies for most land alterations, including addition of impervious surface; construction, alteration, or abandonment of stormwater management facilities; and wetlands or surface water impacts. The specific permits required for the US 24 New Haven to Defiance project are:

- US Army Corps of Engineers Section 404 Individual Permit.
- Indiana Department of Environmental Management Section 401 Water Quality Certification.
- Ohio Environmental Protection Agency Section 401 Water Quality Certification.
- National Pollutant Discharge Elimination System (NPDES) Program - NPDES General Permit for Discharges from Construction Activities.

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**TABLE S-1
COMPARISON OF IMPACTS BY ALTERNATIVE**

ALTERNATIVE		No-Build	A	B	C	D	E	F	G	H	I	J	K	L	M
SEGMENTS			1 3 8 11 12 16 19 20	1 3 8 11 12 17 18 20	1 3 8 11 13 14 19 20	1 3 8 11 13 15 18 20	2 6 8 11 12 16 19 20	2 6 8 11 12 17 18 20	2 6 8 11 13 14 19 20	2 6 8 11 13 15 18 20	1 4 7 10 12 16 19 20	1 4 7 10 12 17 18 20	1 4 7 10 13 14 19 20	1 4 7 10 13 15 18 20	1 4 7 9 11 12 16 19 20
ISSUE/CONCERN															
ENGINEERING	Length (miles)	37.4	36.4	36.2	36.6	36.4	36.5	36.3	36.7	36.5	37.0	36.7	37.2	37.0	36.7
	Estimated Freeway Construction Cost	\$0	\$202,761,263	\$200,786,529	\$200,307,425	\$200,198,132	\$206,265,374	\$204,290,640	\$203,811,536	\$203,702,243	\$198,467,275	\$196,492,541	\$196,013,437	\$195,904,144	\$198,843,584
	Estimated Expressway Construction Cost	\$0	\$146,054,134	\$142,553,452	\$144,393,373	\$141,091,511	\$150,015,850	\$146,515,168	\$148,355,089	\$145,053,227	\$146,490,744	\$142,990,062	\$144,829,983	\$141,528,121	\$146,824,968
	Total Estimated Right-of-Way Costs	\$0	\$16,956,194	\$16,223,467	\$16,706,861	\$16,042,821	\$15,329,774	\$14,594,647	\$15,080,441	\$14,406,401	\$16,830,352	\$16,095,225	\$16,581,119	\$15,906,979	\$17,381,101
	Roadway Right-of-Way Cost (including Damages for Landlocked Parcels)	\$0	\$15,450,994	\$14,358,767	\$15,271,411	\$14,168,321	\$14,230,774	\$13,138,547	\$14,051,191	\$12,948,101	\$15,456,352	\$14,364,125	\$15,276,769	\$14,173,679	\$15,787,351
	Relocation Costs	\$0	\$1,505,200	\$1,864,700	\$1,435,450	\$1,874,500	\$1,099,000	\$1,456,100	\$1,029,250	\$1,458,300	\$1,374,000	\$1,731,100	\$1,304,350	\$1,733,300	\$1,593,750
	Total Freeway Cost	\$0	\$219,717,457	\$217,009,996	\$217,014,286	\$216,240,953	\$221,595,148	\$218,885,287	\$218,891,977	\$218,108,644	\$215,297,627	\$212,587,766	\$212,594,556	\$211,811,123	\$216,224,685
	Total Expressway Cost	\$0	\$163,010,328	\$158,776,919	\$161,100,234	\$157,134,332	\$165,345,624	\$161,109,815	\$163,435,530	\$159,459,628	\$163,321,096	\$159,085,287	\$161,411,102	\$157,435,100	\$164,206,069
Major Utility Conflicts	0	3	3	3	3	3	3	3	3	3	3	3	3	3	
TRAFFIC	Average Daily Traffic, 2008 (vehicles per day)	9,277-13,277	7,731-10,705	8,490-10,705	7,731-10,705	7,731-10,705	7,731-10,705	7,776-10,705	7,731-10,705	8,490-10,705	7,731-10,705	8,490-10,705	7,731-10,705	7,731-10,705	7,731-10,705
	Average Daily Traffic, 2028 (vehicles per day)	11,811-20,264	9,805-16,732	11,196-14,436	9,825-16,732	11,196-16,732	9,835-16,732	10,074-16,732	10,074-16,732	9,825-16,732	9,825-16,732	11,196-16,732	9,825-16,732	9,825-16,732	9,825-16,732
	Level of Service (year 2008)	D/E	A	A	A	A	A	A	A	A	A	A	A	A	A
	Level of Service (year 2028)	E/F	A	A	A	A	A	A	A	A	A	A	A	A	A
	Travel Time in Minutes, 2008	67	34	33	34	34	34	33	34	34	34	34	34	34	34
	Travel Time in Minutes, 2028	77	34	33	34	34	34	34	34	34	34	34	34	34	34
	Vehicle Miles Traveled, 2008 (in millions)	149.5	122.2	121.9	123.1	121.6	120.3	119.9	121.2	119.7	123.4	123.0	124.3	122.8	122.3
	Vehicle Miles Traveled, 2028 (in millions)	213.4	175.1	175.0	176.6	173.5	172.0	171.9	173.5	170.4	176.8	176.7	178.3	175.2	174.6
Local Roadways Closed/Severed (number)	0	13	13	12	12	14	14	14	14	14	14	13	13	15	
LAND USE	Residential Use (acres)	0.0	74.8	76.2	71.0	73.1	46.3	47.7	42.5	44.6	63.4	64.8	59.6	61.7	70.2
	Community/Public Use (acres)	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0
	Commercial Use (acres)	0.0	21.4	32.7	21.4	32.7	20.9	32.2	20.9	32.2	21.4	32.7	21.4	32.7	21.4
	Industrial Use (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Agricultural Use (acres)	0.0	1,440.4	1,363.9	1,461.9	1,372.6	1,447.7	1,371.2	1,469.2	1,379.9	1,452.4	1,375.9	1,473.9	1,384.6	1,449.9
	Open Space/Undeveloped Use (acres)	0.0	124.7	162.3	116.5	162.9	145.4	183.0	137.2	183.6	134.1	171.7	125.9	172.3	118.7
DISPLACEMENTS	Landlocked Parcels (acres)	0	1,291.0	937.2	1,374.4	951.5	1,206.4	852.6	1,289.7	866.8	1,433.7	1,079.9	1,517.1	1,094.2	1,362.0
	Landlocked Parcels (number)	0	61	53	63	52	58	50	60	49	52	44	54	43	50
	Residential Properties: Total (number)	0	51	69	47	67	38	56	34	54	46	64	42	62	53
	Residential Properties: Single Family Homes (number)	0	41	39	36	35	30	28	25	24	35	33	30	29	40
	Residential Properties: Apartments (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Residential Properties: Trailers (number)	0	0	21	0	21	0	21	0	21	0	21	0	21	0
	Residential Properties: Farms (number)	0	10	9	11	11	8	7	9	9	11	10	12	12	13
	Commercial Properties (number)	0	1	2	1	2	0	1	0	1	1	2	1	2	1
	Industrial Properties (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Community Facilities (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISE	Category B Receptors Approaching or Exceeding FHWA Noise Abatement Criteria (number)	432	94	97	94	99	16	20	17	22	85	88	84	89	80
	Category B Receptors Meeting Substantial Noise Increase Criteria (number)	N/A	42	45	42	47	27	30	27	32	25	28	25	30	26
FARMLANDS	Farm Operations Affected (number)	0	206	204	214	213	177	175	185	184	184	182	192	191	182
	Productive Farmland Affected (number)	0	1,440.4	1,363.9	1,461.9	1,372.6	1,447.7	1,371.2	1,469.2	1,379.9	1,452.4	1,375.9	1,473.9	1,384.6	1,449.9
	Properties in Affected Agricultural Districts (number)	0	12	7	12	7	12	7	12	7	15	10	15	10	14

**TABLE S-1 (CONTINUED)
COMPARISON OF IMPACTS BY ALTERNATIVE**

ALTERNATIVE SEGMENTS		N	O	P	Q	R	S	T	U	V	W	X	Y	Z
		1 4 7 9 11 12 17 18 20	1 4 7 9 11 13 14 19 20	1 4 7 9 11 13 15 18 20	2 5 7 10 12 16 19 20	2 5 7 10 12 17 18 20	2 5 7 10 13 14 19 20	2 5 7 10 13 15 18 20	2 5 7 9 11 12 16 19 20	2 5 7 9 11 12 17 18 20	2 5 7 9 11 13 14 19 20	2 5 7 9 11 13 15 18 20	Existing US 24 2 Lane Upgrade	Existing US 24 4 Lane Upgrade
ISSUE/CONCERN														
ENGINEERING	Length (miles)	36.5	36.9	36.7	38.2	38.0	38.4	38.2	38.0	37.7	38.1	37.9	37.4	37.7
	Estimated Freeway Construction Cost	\$196,868,850	\$196,389,746	\$196,280,453	\$199,135,475	\$197,160,741	\$196,681,637	\$196,572,344	\$199,511,784	\$197,537,050	\$197,057,946	\$196,948,653	N/A	\$161,268,049
	Estimated Expressway Construction Cost	\$143,324,286	\$145,164,207	\$141,862,345	\$144,870,385	\$141,369,703	\$143,209,624	\$139,907,762	\$145,204,609	\$141,703,927	\$143,543,848	\$140,241,986	\$66,908,558	\$128,959,036
	Total Estimated Right-of-Way Costs	\$16,655,974	\$17,131,768	\$16,467,728	\$14,792,374	\$14,057,247	\$14,543,041	\$13,869,001	\$15,343,123	\$14,607,996	\$15,093,790	\$14,419,750	\$5,807,510	\$21,815,935
	Roadway Right-of-Way Cost (including Damages for Landlocked Parcels)	\$14,695,124	\$15,607,768	\$14,504,678	\$13,953,724	\$12,861,497	\$13,774,141	\$12,671,051	\$14,284,723	\$13,192,496	\$14,105,140	\$13,002,050	\$3,889,510	\$18,293,535
	Relocation Costs	\$1,960,850	\$1,524,000	\$1,963,050	\$838,650	\$1,195,750	\$768,900	\$1,197,950	\$1,058,400	\$1,415,500	\$988,650	\$1,417,700	\$1,918,000	\$3,522,400
	Total Freeway Cost	\$213,524,824	\$213,521,514	\$212,748,181	\$213,927,849	\$211,217,988	\$211,224,678	\$210,441,345	\$214,854,907	\$212,145,046	\$212,151,736	\$211,368,403	N/A	\$183,083,984
	Total Expressway Cost	\$159,980,260	\$162,295,975	\$158,330,073	\$159,662,759	\$155,426,950	\$157,752,665	\$153,776,763	\$160,547,732	\$156,311,923	\$158,637,638	\$154,661,736	\$72,716,068	\$150,774,971
Major Utility Conflicts	3	3	3	3	3	3	3	3	3	3	3	3	0	3
TRAFFIC	Average Daily Traffic, 2008 (vehicles per day)	8,491-10,705	7,731-10,705	7,731-10,705	7,731-10,705	8,801-10,705	7,731-10,705	7,731-10,705	7,731-10,705	8,491-10,705	7,731-10,705	7,731-10,705	9,277-13,277	9,277-13,277
	Average Daily Traffic, 2028 (vehicles per day)	11,196-16,732	9,825-16,732	9,825-16,732	9,825-16,732	11,196-16,732	9,825-16,732	9,825-16,732	9,825-16,732	11,196-16,732	9,825-16,732	9,825-16,732	11,811-20,264	11,811-20,264
	Level of Service (year 2008)	A	A	A	A	A	A	A	A	A	A	A	D/E	A
	Level of Service (year 2028)	A	A	A	A	A	A	A	A	A	A	A	E/F	A
	Travel Time in Minutes, 2008	32	34	34	35	35	36	35	35	35	35	35	67	38
	Travel Time in Minutes, 2028	32	34	34	35	35	36	35	35	35	35	35	77	40
	Vehicle Miles Traveled, 2008 (in millions)	122.0	123.2	121.7	128.2	127.9	129.1	127.6	127.2	126.8	128.1	126.5	149.5	150.7
Vehicle Miles Traveled, 2028 (in millions)	174.5	176.1	173.0	183.1	183.0	184.6	181.5	180.9	180.9	182.4	179.3	213.4	215	
Local Roadways Closed/Severed (number)	15	14	14	15	15	14	14	16	16	15	15	3	7	
LAND USE	Residential Use (acres)	71.6	66.5	68.6	34.8	36.2	31.0	33.1	41.6	43.0	37.9	40.0	97.5	175.4
	Community/Public Use (acres)	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.5	4.5
	Commercial Use (acres)	32.7	21.4	32.7	20.9	32.2	20.9	32.2	20.9	32.2	20.9	32.2	13.0	39.5
	Industrial Use (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	14.5
	Agricultural Use (acres)	1,373.3	1,471.3	1,382.1	1,452.2	1,375.7	1,473.7	1,384.4	1,449.7	1,373.2	1,471.2	1,381.9	198.2	992.8
	Open Space/Undeveloped Use (acres)	156.3	110.5	156.9	154.7	192.3	146.5	192.9	139.2	176.8	131.1	177.4	162.9	145.4
DISPLACEMENTS	Landlocked Parcels (acres)	1,008.1	1,445.3	1,022.5	1,337.6	983.7	1,420.9	998.1	1,265.8	912.0	1,349.2	926.3	0.0	1,040.8
	Landlocked Parcels (number)	42	52	41	55	47	57	46	53	45	55	44	0	60
	Residential Properties: Total (number)	71	49	69	29	47	25	45	36	54	32	52	14	107*
	Residential Properties: Single Family Homes (number)	38	35	34	22	20	17	16	27	25	22	21	12	95
	Residential Properties: Apartments (number)	0	0	0	0	0	0	0	0	0	0	0	0	4
	Residential Properties: Trailers (number)	21	0	21	0	21	0	21	0	21	0	21	2	7
	Residential Properties: Farms (number)	12	14	14	7	6	8	8	9	8	10	10	0	1
	Commercial Properties (number)	2	1	2	0	1	0	1	0	1	0	1	7	13
	Industrial Properties (number)	0	0	0	0	0	0	0	0	0	0	0	0	1
Community Facilities (number)	0	0	0	0	0	0	0	0	0	0	0	1	3	
NOISE	Category B Receptors Approaching or Exceeding FHWA Noise Abatement Criteria (number)	83	80	85	25	28	24	29	20	23	20	25	432	324
	Category B Receptors Meeting Substantial Noise Increase Criteria (number)	29	26	31	25	28	25	30	26	29	26	31	0	1
FARMLANDS	Farm Operations Affected (number)	180	190	189	166	164	174	173	164	162	172	171	216	260
	Productive Farmland Affected (number)	1,373.3	1,471.3	1,382.1	1,452.2	1,375.7	1,473.7	1,384.4	1,449.7	1,373.2	1,471.2	1,381.9	198.2	992.8
	Properties in Affected Agricultural Districts (number)	9	14	9	15	10	15	10	14	9	14S	9	11	14

**TABLE S-1 (CONTINUED)
COMPARISON OF IMPACTS BY ALTERNATIVE**

ALTERNATIVE SEGMENTS		No-Build	A	B	C	D	E	F	G	H	I	J	K	L	M
ISSUE/CONCERN			1 3 8 11 12 16 19 20	1 3 8 11 12 17 18 20	1 3 8 11 13 14 19 20	1 3 8 11 13 15 18 20	2 6 8 11 12 16 19 20	2 6 8 11 12 17 18 20	2 6 8 11 13 14 19 20	2 6 8 11 13 15 18 20	1 4 7 10 12 16 19 20	1 4 7 10 12 17 18 20	1 4 7 10 13 14 19 20	1 4 7 10 13 15 18 20	1 4 7 9 11 12 16 19 20
ECOLOGICAL RESOURCES	100-Year Floodplain Encroachments (acres)	0.0	71.1	75.4	71.1	75.4	18.5	22.9	18.5	22.9	71.1	75.4	71.1	75.4	71.7
	Streams Crossings (number)	0	52	51	49	48	51	50	51	44	59	58	56	55	57
	Total Length of Stream Impacts (feet)	0	40,259	44,059	36,577	38,451	38,618	42,418	34,936	36,810	47,481	51,281	43,799	45,673	46,585
	Total Length Culverted (feet)	0	12,916	12,916	12,221	11,732	12,119	12,119	11,424	10,935	21,751	21,751	21,056	20,567	20,024
	Total Length Bridged (feet)	0	4,305	4,305	4,305	4,305	3,521	3,521	3,521	3,521	2,815	2,815	2,815	2,815	2,511
	Additional Impact Length (feet)	0	23,038	26,838	20,051	22,414	22,978	26,778	19,991	22,354	22,915	26,715	19,928	22,291	24,050
	Total Length of Impacts to Limited Resource Water Streams - QHEI < 45 (feet)	0	30,554	32,964	26,383	27,356	28,690	31,100	24,519	25,492	29,783	32,193	25,612	26,585	28,839
	Total Length of Impacts to Warm Water Habitat Streams - QHEI = 45 to 60 (feet)	0	9,705	11,095	10,194	11,095	9,928	11,318	10,417	11,318	17,698	19,088	18,187	19,088	17,746
	Total Length of Impacts to Exceptional Warm Water Habitat Streams - QHEI > 60 (feet)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Acreage of Wetland Systems Affected	0.0	22.3	32.1	17.1	24.3	37.9	47.7	28.6	39.9	33.1	43.0	23.8	35.2	22.2
	Affected Forested Category 1 Wetland Systems (acres)*	0.0	0.2	0.2	<0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0
	Affected Forested Category 2 Wetland Systems (acres)*	0.0	17.8	17.0	6.1	9.2	33.4	32.6	24.1	24.8	23.1	22.3	13.8	14.5	17.9
	Affected Forested Category 3 Wetland Systems (acres)*	0.0	4.3	14.9	2.7	14.9	4.3	14.9	4.3	14.9	9.0	19.7	9.0	19.7	4.3
	Affected Non-Forested Category 1 Wetland Systems (acres)*	0.0	0.0	0.0	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Affected Non-Forested Category 2 Wetland Systems (acres)*	0.0	0.0	0.0	9.3	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
	Affected Non-Forested Category 3 Wetland Systems (acres)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Affected Forested Upland Habitat (acres)	0.0	22.6	35.9	23.5	44.1	30.1	43.4	31.0	51.6	24.5	37.8	25.4	46.0	20.0
Affected Woodlots (number)	0	17	19	19	22	18	20	20	20	23	18	20	20	23	
Affected Woodlots (acres)	0.0	44.9	68.0	36.4	68.4	67.9	91.0	59.5	91.4	56.6	79.8	48.2	80.2	42.2	
HISTORIC RESOURCES	Properties Listed on the National Register of Historic Places (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Properties Eligible for Listing on the National Register of Historic Places (number)	0	1	1	1	1	0	0	0	0	1	1	1	1	1
SECTION 4(f) RESOURCES	Historic Resources with Direct Impacts (number)	0	1	1	1	1	0	0	0	0	1	1	1	1	1
	Historic Resources with Indirect Impacts (number)	0	0	0	0	0	0	0	0	0	3	3	3	3	1
	Public Parks with Direct Impacts (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Public Parks with Indirect Impacts (number)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HAZARDOUS MATERIALS	Sites with Above Ground/Underground Storage Tanks (number)	0	4	4	4	4	4	4	4	4	3	3	3	3	3
	Sites with Past/Current Use of Hazardous Materials (number)	0	3	1	1	3	3	1	1	1	3	3	3	1	3
	Past/Current Use for Solid Waste Disposal (number)	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	Sites with Other Hazardous Materials Concerns (number)	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	Sites Recommended for Further Investigation (number)	0	5	3	3	5	5	3	5	3	5	3	5	3	5

*Alternative Z displaces one multi-unit dwelling containing four residential units.

**TABLE S-1 (CONTINUED)
COMPARISON OF IMPACTS BY ALTERNATIVE**

ALTERNATIVE SEGMENTS		N	O	P	Q	R	S	T	U	V	W	X	Y	Z
		1 4 7 9 11 12 17 18 20	1 4 7 9 11 13 14 19 20	1 4 7 9 11 13 15 18 20	2 5 7 10 12 16 19 20	2 5 7 10 12 17 18 20	2 5 7 10 13 14 19 20	2 5 7 10 13 15 18 20	2 5 7 9 11 12 16 19 20	2 5 7 9 11 12 17 18 20	2 5 7 9 11 13 14 19 20	2 5 7 9 11 13 15 18 20	Existing US 24 2 Lane Upgrade	Existing US 24 4 Lane Upgrade
ISSUE/CONCERN														
ECOLOGICAL RESOURCES	100-Year Floodplain Encroachments (acres)	75.4	71.1	75.4	18.5	22.9	18.5	22.9	18.5	22.9	18.5	22.9	30.6	85.4
	Streams Crossings (number)	56	54	53	55	54	52	51	53	52	50	49	0	53
	Total Length of Stream Impacts (feet)	50,385	42,903	44,777	43,230	47,030	39,548	41,422	42,334	46,134	38,652	40,526	0	32,837
	Total Length Culverted (feet)	20,024	19,329	18,840	21,186	21,186	20,491	20,002	19,459	19,459	18,764	18,275	0	4,247
	Total Length Bridged (feet)	2,511	2,511	2,511	2,031	2,031	2,031	2,031	1,727	1,727	1,727	1,727	0	1,439
	Additional Impact Length (feet)	27,850	21,063	23,426	20,013	23,813	17,026	19,389	21,148	24,948	18,161	20,524	0	27,151
	Total Length of Impacts to Limited Resource Water Streams (feet) QHEI<45	31,249	24,668	25,641	27,379	29,789	23,208	24,181	26,435	28,845	22,264	23,237	0	0
	Total Length of Impacts to Warm Water Habitat Streams (feet) QHEI=45 to 60	19,136	18,235	19,136	15,851	17,241	16,340	17,241	15,899	17,289	16,388	17,289	0	32,837
	Total Length of Impacts to Exceptional Warm Water Habitat Streams (feet) QHEI>60	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Acreage of Wetland Systems Affected	32.0	12.9	24.2	48.7	58.6	39.4	50.8	37.8	47.6	28.6	39.8	10.2	25.4
	Affected Forested Category 1 Wetland Systems (acres)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2
	Affected Forested Category 2 Wetland Systems (acres)*	17.1	8.7	9.3	38.7	37.9	29.4	30.1	33.5	32.7	24.3	24.9	8.8	22.0
	Affected Forested Category 3 Wetland Systems (acres)*	14.9	4.3	14.9	9.0	19.7	9.0	19.7	4.3	14.9	4.3	14.9	0.0	1.3
	Affected Non-Forested Category 1 Wetland Systems (acres)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9
	Affected Non-Forested Category 2 Wetland Systems (acres)*	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
	Affected Non-Forested Category 3 Wetland Systems (acres)*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Affected Forested Upland Habitat (acres)	33.3	20.9	41.5	31.9	45.1	32.7	53.3	27.3	40.6	28.2	48.8	19.6	97.0
Affected Woodlots (number)	19	19	22	19	21	21	24	18	20	20	23	22	36	
Affected Woodlots (acres)	65.3	33.8	65.7	79.6	102.7	71.2	103.1	65.1	88.2	56.8	88.6	29.4	121.5	
HISTORIC RESOURCES	Properties Listed on the National Register of Historic Places (number)	0	0	0	0	0	0	0	0	0	0	0	1	0
	Properties Eligible for Listing on the National Register of Historic Places (number)	1	1	1	0	0	0	0	0	0	0	0	13	5
SECTION 4(f) RESOURCES	Historic Resources with Direct Impacts (number)	1	1	1	0	0	0	0	0	0	0	0	14	5
	Historic Resources with Indirect Impacts (number)	1	1	1	2	2	2	2	1	1	1	1	2	2
	Public Parks with Direct Impacts (number)	0	0	0	0	0	0	0	0	0	0	0	2	1
	Public Parks with Indirect Impacts (number)	0	0	0	0	0	0	0	0	0	0	0	0	1
HAZARDOUS MATERIALS	Sites with Above Ground/Underground Storage Tanks (number)	3	3	3	3	3	3	3	3	3	3	3	15	10
	Sites with Past/Current Use of Hazardous Materials (number)	0	3	1	3	1	3	1	3	1	3	1	6	4
	Past/Current Use for Solid Waste Disposal (number)	1	1	1	1	1	1	1	1	1	1	1	3	2
	Sites with Other Hazardous Materials Concerns (number)	1	1	1	1	1	1	1	1	1	1	1	4	1
	Sites Recommended for Further Investigation (number)	3	5	3	5	3	5	3	5	3	5	3	21	11

**TABLE S-2
SUMMARY OF PREFERRED ALTERNATIVE (D-1) IMPACTS**

Issue/Concern	Alternative D-1
Engineering	
Length (miles)	36.4
Estimated Freeway Construction Cost	\$ 214,105,703
Estimated Expressway Construction Cost	\$ 154,999,152
Estimated Freeway/Expressway Combination Construction Cost	\$ 204,971,652
Total Estimated Right-of-Way Costs	\$ 16,731,214
Roadway Right-of-Way Cost (Including Damages for Landlocked Parcels)	\$ 14,806,465
Relocation Costs	\$ 1,728,500
Total Freeway Cost	\$ 230,836,987
Total Expressway Cost	\$ 171,730,366
Total Freeway/Expressway Combination Cost	\$ 221,702,015
Major Utility Conflicts	3
Traffic	
Average Daily Traffic, 2008 (vehicles per day)	7,731-10,705
Average Daily Traffic, 2028 (vehicles per day)	11,196-16,732
Level of Service (year 2008)	A
Level of Service (year 2028)	A
Travel Time in Minutes, 2008	34
Travel Time in Minutes, 2028	34
Vehicle Miles Traveled, 2008 (in millions)	121.6
Vehicle Miles Traveled, 2028 (in millions)	173.5
Local Roadways Closed/Severed (number)	15
Land Use	
Residential Use (acres)	57.9
Community / Public Use (acres)	10.3
Commercial Use (acres)	3.6
Industrial Use (acres)	0.0
Agricultural Use (acres)	1,428.8
Open Space/Undeveloped Use (acres)	130.0
Displacements	
Landlocked Parcels (number)	41
Landlocked Parcels (acres)	444
Residential Properties: Total (number)	51
Residential Properties: Single Family Homes (number)	31
Residential Properties: Trailers (number)	10
Residential Properties: Farms (number)	10
Commercial Properties (number)	2
Industrial Properties (number)	0
Community Facilities (number)	0
Noise	
Category B Receptors Approaching or Exceeding FHWA Noise Abatement Criteria (number)	114
Category B Receptors Meeting Substantial Noise Increase Criteria (number)	47
Farmlands	
Farm Operations Affected (number)	214
Productive Farmland Affected (acres)	1,428.8
Affected Properties in Agricultural Districts (number)	6

**TABLE S-2 (CONTINUED)
SUMMARY OF PREFERRED ALTERNATIVE (D-1) IMPACTS**

Issue/Concern	Alternative D-1
Ecological Resources	
100-Year Floodplain Encroachments (acres)	69.2
Streams Crossings (number)	26
Total Length of Stream Impacts (feet)	20,189
Total Length Culverted (feet)	3,958
Total Length Bridged (feet)	1,185
Additional Impact Length (feet)	14,071
Total Length of Impacts to Limited Resource Water Streams - QHEI < 45 (feet)	17,513
Total Length of Impacts to Warm Water Habitat Streams - QHEI = 45 to 60 (feet)	2,363
Total Length of Impacts to Exceptional Warm Water Habitat Streams - QHEI > 60 (feet)	313
Total Acreage of Wetland Systems Affected	22.5
Affected Forested Category 1 Wetland Systems (acres)	<0.1
Affected Forested Category 2 Wetland Systems (acres)	11.0
Affected Forested Category 3 Wetland Systems (acres)	2.3
Affected Non-Forested Category 1 Wetland Systems (acres)	<0.1
Affected Non-Forested Category 2 Wetland Systems (acres)	9.6
Affected Non-Forested Category 3 Wetland Systems (acres)	0.0
Affected Forested Upland Habitat (acres)	75.4
Affected Woodlots (number)	20
Affected Woodlots (acres)	87.7
Historic Resources	
Properties Listed on the National Register of Historic Places (number)	0
Properties Eligible for Listing on the National Register of Historic Places (number)	3
Section 4(f) Resources	
Historic Resources with Direct Impacts (number)	1
Historic Resources with Indirect Impacts (number)	0
Public Parks with Direct Impacts (number)	0
Public Parks with Indirect Impacts (number)	0
Hazardous Materials	
Sites with Above Ground/ Underground Storage Tanks (number)	4
Sites with Past/Current Use of Hazardous Materials (number)	2
Past/Current Use for Solid Waste Disposal (number)	0
Sites with Other Hazardous Materials Concerns (number)	1
Sites Recommended for Further Investigation (number)	3

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

United States Route 24 (US 24) is a major east-west transportation corridor through the midwestern United States, linking Michigan and Colorado. The eastern portion of the corridor traverses northern Indiana and northwestern Ohio, and provides the most direct access between Fort Wayne, Indiana and Toledo, Ohio (Figure 1.1). US 24 also provides direct connections to I-80/90 and to I-75, enabling the motoring public to reach destinations northward into the Great Lakes region and Canada as well as other large cities on the eastern seaboard. As a result of the direct linkage between the Fort Wayne, Indiana region and the Port of Toledo, US 24 has been nicknamed “Fort to Port” by local users and advocacy groups such as the Fort to Port Organization.

1.2 PROJECT DESCRIPTION/ OVERVIEW

The existing operational deficiencies of the roadway, including decreased safety, increased congestion and a deteriorating level of service, are due primarily to its location, design, and high volume of users. Approximately 112.4 kilometers (69.7 miles) of the 130.6 kilometers (80.9 miles) of US 24 is a two-lane rural arterial roadway that is often winding as it follows the Maumee River and has frequent driveway cuts or access points for local residences, businesses, and other local roadway crossings. In some areas, development is directly adjacent to the roadway. The roadway has narrow, often discontinuous shoulders and numerous no-passing zones. The frequency of no-passing zones severely limits the flow of traffic and roadway capacity. Additionally, approximately 45 percent of the overall traffic on US 24 is trucks. In fact, along some segments, trucks account for more than half of the total traffic. Due to this high volume, trucks are often observed traveling in platoons of three or more, which makes passing difficult and dangerous.

US 24 has been the subject of numerous planning and engineering studies over the years and has been identified as a strategic link in the region’s and the nation’s highway network. As such, the Ohio Department of Transportation (ODOT) and the Indiana Department of Transportation (INDOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the operational characteristics of US 24 in the Fort to Port area through a major transportation project. The purpose of this project is to:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

The US 24 New Haven to Defiance project is being developed in accordance with ODOT’s Nine-Step Transportation Development Process, which is illustrated in Figure 1.2. The project is currently in Step 7 of the process.

1.3 PROJECT HISTORY

The proposed US 24 project represents a long-standing commitment by the states of Ohio and Indiana, local governments, regional planning commissions, and citizens to improve US 24 between Fort Wayne and Toledo. During the 1960’s, studies on improvements to US 24 were initiated and have continued off and on through the 1990s.

During the early 1960s, the Bureau of Location and Design of the Ohio Department of Highways, a forerunner to ODOT, studied US 24 between Maumee and Napoleon. The results of the study were presented in a report entitled *Preliminary Engineering Report of US 24* (March 1962). The report proposed a new and improved alignment between the two cities. The initial plans to construct a new roadway were defeated shortly after the proposal was presented to the public, primarily because of farming interests who opposed using their farmland for the new roadway.

Additional efforts by the Ohio Department of Highways to improve US 24 occurred in the mid-1960s. The agency planned a new four-lane alignment between Defiance and Napoleon. The

highway was designed and right-of-way was purchased for a four-lane route. However, for financial reasons, only two lanes of the alignment were constructed. Old US 24 was renamed SR 424 along the Maumee River.

Interest in improving US 24 lay dormant until the issue again garnered public support in the mid-1970s, when US 24 was widened between I-475 and Dutch Road in the Toledo area. However, the opportunity to improve US 24 outside the limits of the I-475/Dutch Road project to other parts of the corridor, especially to the west, were not pursued at that time.

In the 1980s “grass-roots” efforts to alleviate problems associated with US 24 were initiated after a series of accidents in the Village of Waterville, Ohio. Between 1983 and 1984, a committee to study traffic and congestion problems associated with US 24 was formed in the village. In cooperation with the village engineer and ODOT, the committee analyzed traffic patterns and volumes mainly related to Waterville. As the study progressed, the neighboring communities of Napoleon and Defiance joined in the efforts. As a result of the Waterville Study, it was determined that the problems associated with US 24 were regional in scope and not limited to Waterville and its neighboring communities. With Waterville as the lead governmental agency, the Toledo Metropolitan Area Council of Governments (TMACOG) was asked to assist in forming a larger regional group to study the US 24 Corridor from Toledo to Defiance.

Also during the 1980s, citizens in the Fort Wayne, Indiana area held a series of meetings to investigate transportation problems associated with US 24 in the Fort Wayne/New Haven area. In 1989, citizens from both Indiana and Ohio who were concerned about US 24 met in Woodburn, Indiana. As a result of this meeting, the Fort to Port Organization was formed. This group has focused on improving US 24 in its entirety between Fort Wayne and Toledo from the standpoints of safety, mobility and economic development.

The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) identified 21 High Priority Corridors on the National Highway System (NHS). Among these corridors was US 24 from Fort Wayne to Toledo. The purpose of the NHS is to identify priority transportation corridors that are important from an intermodal efficiency, economic growth and/or user safety standpoint and to target these roadways for strategic improvements, including them with other roadways, into a larger strategic network.

In response to ISTEA, ODOT completed a statewide transportation study and strategic plan, *Access Ohio*, in October 1993, which identified “Transportation Efficiency and Economic Advancement Corridors” also known as “macro corridors” throughout the state of Ohio. These corridors are defined as “those corridors of statewide significance upon which rests the economic vitality of Ohio.” The US 24 Corridor was included in the list of macro corridors.

To achieve the goals and objectives articulated in the *Access Ohio* plan, more recent studies have been conducted in the US 24 Corridor. These studies include:

- *US Route 24 Improvement Feasibility Study* (1994).
- *Origin-Destination Survey on US 24/Ohio Turnpike Corridor at Ohio/Indiana State Line* (December 1997).
- *US 24 Vehicle License Plate Survey* (August 2001).
- *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio* (September 2002).

1.3.1 Feasibility Study

The *US Route 24 Improvement Feasibility Study* analyzed the highway characteristics, traffic conditions and capacity, accident history, and economic development influences of the approximately 130.6-kilometer (81-mile) US 24 route between New Haven, Indiana and Toledo, Ohio. Of the 130.6-kilometers (81-miles), 18.9 kilometers (11.7 miles) consist of four-lane, divided highway. The study found that the four-lane, divided highway segments would provide adequate capacity and safety characteristics for traffic conditions over the next 25 years. The two-lane highway segments of US 24 were found to be at or below level of service (LOS) C with the exception of a 14.5-kilometer (nine-mile) section between Antwerp and Cecil, Ohio. The

study projected that the majority of the two-lane facility would reach LOS D by the year 2000. As a result of this analysis, the study recommended that the two-lane sections of US 24 be upgraded to a four-lane, fully limited access highway.

Between New Haven and Toledo, three sections of two-lane highway are connected by four-lane highway segments. The study identified these three segments of US 24 as planning sections. They include:

- Planning Section One: I-469 in Indiana to the bypass of Defiance, Ohio.
- Planning Section Two: bypass of Defiance to the bypass of Napoleon, Ohio.
- Planning Section Three: bypass of Napoleon to I-475.

Each of these planning sections is a two-lane highway that is bound at their western and eastern termini by multi-lane, divided highways. In addition, they link major urban centers (i.e., Fort Wayne/New Haven, Indiana and Defiance, Ohio) along the US 24 Corridor. The study determined that each of the three, two-lane sections function independently of each other and that improvements in any one section would provide direct transportation and safety benefits within that section, regardless of whether any of the other sections were improved.

Currently, the three sections are under study by ODOT. Environmental Impact Statements (EIS) are being prepared for two planning sections of US 24: I-469 in Indiana to the bypass of Defiance (Planning Section One), and the bypass of Napoleon to I-475 (Planning Section Three). A Categorical Exclusion is being prepared for Planning Section Two, the bypass of Defiance to the bypass of Napoleon. These studies are a direct outgrowth of the 1994 Feasibility Study and are the first steps in making the recommended corridor-wide improvements to US 24 as supported by the Fort to Port Organization and others in the region.

1.3.2 Origin-Destination Survey

The *Origin-Destination Survey on US 24/Ohio Turnpike Corridor at Ohio/Indiana State Line* analyzed the possible traffic diversions onto other routes resulting from toll increases in 1997 and possible future toll increases for the Ohio Turnpike. In addition, the survey estimated the traffic diversion that could be expected if tolls were removed from the Turnpike. Analysis of the survey data for US 24 indicated the following:

- 19 percent of the motorists would divert from US 24 to the Ohio Turnpike if tolls were eliminated.
- 9 percent of the motorists would divert from US 24 to the Turnpike if tolls were rolled back to pre-increase levels.
- 11 percent of motorists named the Ohio Turnpike as their primary alternate route to US 24.
- 9 percent of motorists using US 24 listed toll fees as the reason for not using the Turnpike as an alternate route.

The study found that drivers were concerned about the longer travel times on other roads and chose their travel route based on travel time and not toll costs. The survey indicated that 42 percent of the motorists on US 24 would not travel an alternate route. The primary reasons for this were the factors of time and distance (52 percent) and the lack of a suitable alternate route to US 24 to reach their destination (37 percent).

1.3.3 License Plate Survey

The approach to developing improvements to US 24 by studying the three planning sections independently raises the issue that all possible corridor-wide Feasible Alternatives would not be identified.

The key factor to this issue is determining the function of US 24 relative to local and regional travel demand - does US 24 function primarily as a regional connector between New Haven, Indiana and Toledo, Ohio or do the individual sections accommodate varied trip purposes and lengths depending upon location and surrounding land use characteristics?

In order to answer these questions, historic origin-destination data was obtained from the 1997 *Origin-Destination Study at the Ohio-Indiana Stateline and the Ohio Turnpike*. To supplement this data, a license plate survey was conducted which is documented in detail in a separate report entitled *US 24 Vehicle License Plate Survey* (August 2001). The survey was designed to achieve the following objectives:

- Measure the number of trips by car and truck entering US 24 in the vicinity of the Toledo metropolitan area and traveling US 24 west through Antwerp (i.e. trips traveling through all three planning sections) to provide an indicator of long distance (regional) travel demand.
- Measure the number of trips by cars and trucks traveling US 24 across one or two planning sections to provide a measurement of travel demand between neighboring communities in the US 24 corridor (intercity travel demand).
- Measure the number of trips by cars and trucks entering and exiting US 24 within the limits of one planning section to provide a measurement of local travel demand.

Field data was collected on October 17, 2000; license plate numbers were recorded as westbound vehicles drove past survey points located along US 24. Survey points were established at three locations:

- Intersection of US 24 and SR 64 in Waterville.
- Intersection of US 24 and SR 281 in Defiance.
- Intersection US 24 and SR 49 in Antwerp.

To correct for the potential for bias associated with a one-time survey, a Travel Behavior Estimation Model was developed. Based on the results of the survey and the model, the following trends were identified:

- Four percent of the total automobile trips traveled the entire distance of US 24 between Waterville and Antwerp (i.e., are regional trips with origins and destinations beyond the limits of the survey area).
- Of the trucks surveyed, 43 percent traveled the entire distance between Waterville and Antwerp.
- Of the 2,501 automobiles entering US 24 east of Waterville, 83 percent exited the highway before Defiance and 13 percent exited the highway before Antwerp.
- Of the 1,618 trucks entering US 24 east of Waterville, 36 percent exited the highway before reaching Defiance and 21 percent exited the highway before reaching Antwerp.
- Of the 2,183 automobiles entering US 24 between Waterville and Defiance, 76 percent exited the highway before reaching Antwerp.
- Of the 593 trucks entering US 24 between Waterville and Defiance, 33 percent exited the facility east of Antwerp.
- None of the 918 automobiles and 344 trucks entering US 24 between Defiance and Antwerp exited US 24 before Antwerp.

The key findings of the model were that four percent of the automobile trips, as compared to 43 percent of the truck trips, are regional (travel the entire length of the corridor) Furthermore, US 24 functions as a connector between communities located along US 24 with each of the three planning sections having slightly different travel demand characteristics. These findings support the conclusions of the *US 24 Improvement Feasibility Study* (1994) and that each of the three planning sections have independent utility.

1.3.4 Modal Analysis for the US 24 Corridor

To insure that all possible corridor-wide Feasible Alternatives have been identified and investigated, a modal analysis of the entire 130.6-kilometer (80.9-mile) US 24 Corridor was conducted. The analysis is documented in a separate report entitled *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio* (September 2002).

The modal analysis examined the feasibility of using other traditional and non-traditional strategies to address the problems of the US 24 Fort to Port Corridor. These strategies included:

- Removing tolls from the Ohio Turnpike.
- Diverting US 24 traffic to US 6.
- Prohibiting truck traffic from using US 24 by regulation.
- Diverting freight traffic to rail.
- Creating a dedicated truck facility.
- Implementing transit alternatives (commuter rail, light rail, and improved bus service).
- Implementing transportation demand management (TDM) programs aimed at reducing travel demand by changing traveler behavior.
- Implementing transportation systems management (TSM) initiatives aimed at improving traffic flow by increasing capacity through low-cost capital improvements.
- Combinations of various elements of the options listed above.

Attempting to divert traffic from US 24 to other routes does not appear to be a feasible solution, because the strategies that were proposed were either ineffective, politically or legally infeasible, or failed to produce a sustainable impact. Similarly, none of the individual multi-modal alternatives that were investigated would successfully address the project's stated Purpose and Needs by themselves. The most promising alternatives, combinations of the most feasible and effective strategies, do appear to perform fairly well in addressing the wide array of key issues on the corridor, but are not as cost-effective as the highway alternative.

While alternatives need to be considered in the performance of corridor analyses, it is important to note that not all transportation strategies fare well in every environment. Many strategies often work best in environments with specific characteristics and attributes. Several of the most notable characteristics of the US 24 Corridor include: high percentage of truck traffic (although only moderate volumes), low residential and employment density, and relatively small central business districts. These factors greatly affect the feasibility and reasonableness of solutions for the US 24 Corridor. While the alternatives considered represent "the best" solutions in other regions, none appear to be as cost-effectively as the current proposal of a four-lane highway.

1.3.5 Corridor Segmentation Analysis

FHWA regulations 23 CFR part 777.111(f) state, "In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each environmental impact statement (EIS) or finding of no significant impact (FONSI) shall:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements."

This regulation anticipates that an agency's National Environmental Policy Act (NEPA) review of a highway project may be separated into smaller segments if circumstances and facts so warrant.

The *US Route 24 Improvement Feasibility Study* identified three sections of two-lane highway between New Haven and Toledo:

- Planning Section One: I-469 in Indiana to the bypass of Defiance, Ohio.
- Planning Section Two: bypass of Defiance to the bypass of Napoleon, Ohio.
- Planning Section Three: bypass of Napoleon to I-475.

Each section is a two-lane highway that is bound at their western and eastern termini by multi-lane, divided highways. In addition, they link major urban centers (i.e., Fort Wayne/New Haven, Indiana and Defiance, Ohio) along the US 24 Corridor. The feasibility study determined that each of the three, two-lane sections function independently of each other and that improvements in any one section would provide direct transportation and safety benefits within that section, regardless of whether any of the other sections were improved.

Traffic conditions and ecological, cultural, and community resources vary substantially along the 130.6-kilometer (80.9-mile) corridor. For example, the individual planning sections contain environmental features that are unique to their study areas such as oak openings habitat, threatened and endangered species, and Amish populations. Therefore, the environmental impacts associated with improvements to the US 24 Corridor are anticipated to be different for each planning section.

In addition, other factors such as right-of-way needs and the number of municipalities involved vary across the three sections as described below:

- Planning Sections One and Three - These sections would require new right-of-way for the US 24 improvements. These two sections also involve many disparate governmental jurisdictions that would make study coordination across the entire length of the corridor problematic.
- Planning Section Two - The design and right-of-way acquisition was already completed in the 1960s for the Defiance to Napoleon section and construction for this portion would occur within existing right-of-way.

After consideration of these factors, ODOT determined that Planning Sections One and Three require major efforts in planning and environmental evaluation and documentation while more limited planning and environmental analysis efforts are needed for Planning Section Two.

ODOT's decision to pursue three separate planning studies for the US 24 Corridor is consistent with FHWA regulations and many subsequent interpretations of those regulations. According to FHWA regulations, an agency cannot segment the environmental review of a proposed highway project, and thus avoid the preparation of an EIS for the overall highway project unless three criteria are met, as described below:

1. The proposed highway segment must be supported by logical termini: Each of the three planning sections is supported by logical termini, which are already completed sections of four-lane, divided highway. The logical termini for Planning Section One are the existing I-469/US 24 interchange to the west and the SR 15/US 24 interchange to the east. The logical termini for Planning Section Two are the existing four-lane divided highway bypass of Defiance in the west and the four-lane divided highway bypass of Napoleon in the east. The logical termini for Planning Section Three are the existing four-lane divided Napoleon bypass in the west and the I-475 bypass around the Toledo metropolitan area in the east.

2. The segment must have independent utility outside the function of connecting the roadways of the overall project: The majority of traffic identified on US 24 is local in nature as demonstrated by the license plate survey. The license plate survey determined that only four percent of the car trips and 43 percent of the truck trips on US 24 are regional in nature. The remaining automobiles and trucks (96 percent and 57 percent, respectively) are using the corridor for inter-city trip making. The information indicates that the majority of trips made in the US 24 Corridor (particularly by automobiles) do not travel the entire length of US 24 between Fort Wayne and Toledo, but rather only use portions of it. Consequently, each planning section functions independently. Furthermore, the *US Route 24 Improvement Feasibility Study* found that improvements made to one of the sections would provide direct transportation and safety benefits within that section.

3. The segment cannot restrict consideration of alternatives for other reasonably foreseeable transportation projects: The US 24 Corridor modal analysis evaluated the effectiveness of conceptual modal alternatives in meeting the transportation needs of the entire 130.6-kilometer (80.9-mile) corridor between I-469 and I-475. The analysis determined that the most effective alternative to address the purpose and need for the overall corridor is the proposed highway improvements. However, construction of the proposed highway improvements will not restrict or prevent any modal transportation options from being developed in the future. In fact, improving US 24 could benefit some of the modal options such as implementing an improved bus service or TDM programs. Thus, construction of the planning sections would not restrict alternatives for the other segments under consideration.

**1.4 LOGICAL TERMINI
AND STUDY AREA
DESCRIPTION**

In conclusion, the proposed actions and alternatives are consistent with the FHWA policies for “logical termini” and “independent utility”. Currently, the three sections are under study by ODOT. Environmental Impact Statements (EIS) are being prepared for Planning Section One and Planning Section Three. A Categorical Exclusion is being prepared for Planning Section Two.

Planning Section One is referred to as the US 24 New Haven to Defiance project which is the subject of this Draft Environmental Impact Statement (DEIS). It extends from I-469 in New Haven, Indiana (east of Fort Wayne) to the four-lane section of US 24 at its intersection with Ohio SR 15, just west of Defiance. The logical termini for the project are the existing I-469/US 24 interchange to the west and the SR 15/US 24 interchange to the east. These interchanges were selected as the logical termini for the project because they are existing interchanges that serve as points of access to the regional and interstate highway system in the area. In addition, these termini were selected based upon the need to achieve a seamless connection with the existing regional transportation system without creating new access points.

The US 24 New Haven to Defiance study area is approximately 1282.1 square kilometers (500 square miles) in size. The study area includes Allen County, Indiana, and portions of Paulding and Defiance counties in Ohio. The boundaries of the study area are shown in Figure 1.3. The US 24 study area is primarily rural in nature, traveling through rich and productive farmlands in both Indiana and Ohio. The Maumee River flows along the entire stretch of US 24 through the study area. Small stands of forests and wetlands also are interspersed throughout the study area, mainly associated with the floodplain adjacent to the river.

Industrial, commercial, and residential developments also characterize the study area and are densely concentrated along US 24 and its local cross streets. Although largely unincorporated, the study area does include several small municipalities. In Ohio, these include Hicksville, Mark Center, Sherwood, Antwerp, Cecil, Paulding, Defiance, and Payne. In Indiana, the incorporated areas include New Haven, Harlan, Halls Corner, Woodburn, and Edgerton.

Other transportation routes in the study area include state and federal roads that cross, run parallel to, or are in close proximity of US 24 (Figure 1.3). A total of 19 major highways are within the study area, including one interstate, 13 state routes in Ohio and three in Indiana, and two US routes.

Development along US 24.



In addition to the existing roadway system, three rail lines serve the study area. A CSX Transportation (CSXT)-owned double-tracked rail line extends from the Indiana state line through Defiance County and continues eastward through Ohio before entering Pennsylvania just east of Youngstown in Mahoning County. This rail line, originally constructed in 1873 as the former Chicago line of the Baltimore and Ohio (B&O) railroad, is now one of CSXT’s main east/west

connectors in Ohio. Connections from this line are also possible to other railroads in the City of Defiance (the Maumee & Western Railroad), in Hamler in Henry County, and to the Port of Toledo at Deshler.

A local short line also extends from Woodburn, Indiana through Defiance and into Henry County, terminating at Liberty Center, Ohio. This line was recently purchased by the Maumee & Western Railroad through funding provided by the Ohio Rail Development Commission (ORDC) and from the Indiana High Rail Corporation (IHRC). The Maumee & Western rail line serves local producers and consumers in the region and has mainline connections to CSXT in Defiance and to Norfolk Southern (NS) in Woodburn.

The third rail line in the study area is the NS line that extends from Woodburn, Indiana, through Paulding, Putnam, and Hancock Counties, terminating in Arcadia, Ohio. This rail line is one of NS's east/west connectors in Ohio and is part of its nationwide system.

1.5 FUNCTIONAL CLASSIFICATION

In Allen County, US 24 is classified by INDOT as an Other Principal Arterial. Within Paulding County, US 24 is classified by ODOT as a Rural Principal Arterial. Within Defiance County, US 24 is classified as a Rural Principal Arterial, with the exception of those segments located within the City of Defiance. Within the City of Defiance, US 24 is classified as an Urban Other Principal Arterial. Commonly used criteria and guidelines for different classifications of roads are published in the American Association of State Highway and Transportation Officials (AASHTO) "Green Book" (2001). According to AASHTO, a Rural Principal Arterial accommodates substantial statewide or interstate travel and connects most urban centers with populations over 25,000. Principal arterials, therefore, constitute routes that should be expected to provide for relatively high travel speeds and minimum interference to through travel.

As it is currently configured, US 24 does not meet AASHTO criteria for the type of traffic it serves because of the frequent cross streets and numerous driveways and access points for residences and commercial establishments. The numerous interruptions introduce turning vehicles and slower-moving vehicles into the main traffic flow, which when coupled with the lower speed limits through incorporated areas, do not allow through traffic to maintain consistent travel speeds. AASHTO also allows for the possibility of upgrading a roadway to a multi-lane facility along heavily traveled routes, which is true in the case of US 24 because of the direct access it provides between Fort Wayne, the Port of Toledo, and their respective interstate connections.

1.6 PURPOSE AND NEED

The US 24 project is intended to improve the operational characteristics for both local and through traffic currently using US 24. Between New Haven and Defiance, US 24 suffers from congestion and safety-related issues as a result of inadequate capacity to accommodate current traffic demand. The facility does not meet current design criteria for travel lane widths, provision of shoulders, roadway curvature, sight distance and travel speed. These characteristics contribute to increasing travel time delays and a declining level of service along the roadway. The goals of the US 24 project are to:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

1.6.1 Improve Traffic Flow and Level of Service

According to the 1994 *US Route 24 Improvement Feasibility Study*, traffic operations on US 24 between Fort Wayne and Defiance are less than optimal due to congestion. Consequently, one goal of the US 24 project is to reduce congestion. Congestion on US 24 is directly related to the existing and proposed traffic conditions as expressed by the concept of level of service.

US 24 has experienced substantial traffic growth over the past several years, at a rate higher than

normal for northwest Ohio and eastern Indiana. Major factors contributing to this growth are people moving into the area, developing industry, and a greater reliance on intermodal transportation (via rail, water and highway) affecting accessibility to both regional and national railroad connections and the Port of Toledo on Lake Erie.

To evaluate the trends in traffic growth, traffic counts were obtained from two-directional traffic 24-hour count data recorded at various permanent count station locations in both Indiana and Ohio in 1998. Future traffic projections used for the *Preliminary Alternatives Summary* (July 1999) assumed the project's base year to be 2004, which represented the earliest date for opening of an improved US 24. For this Purpose and Needs Analysis, these projections have been updated assuming a new project base year of 2008. Using 1998 traffic volumes, traffic engineers developed projections of 2008 traffic volumes on US 24 in the study area, which are shown in Table 1.1 and Figure 1.4. The overall average daily traffic (ADT) volumes along US 24 in the base year range from a low of 9,780 vehicles per day (vpd) between the Antwerp East Corporation Limit and US 127 west to a high of 13,277 vpd between I-469 and the Webster/Woodburn Roads intersection in Indiana. The US 24 segments identified in Table 1.1 are shown in Figure 1.4.

Using average annual growth rates based on data provided by the Northeastern Indiana Regional Coordinating Council (NIRCC) and ODOT's Office of Technical Services, ADT volumes for the year 2028 were developed. The traffic projections indicate that all of the sections within the study area will have ADT volumes of approximately 13,000 vpd or higher by the year 2028 (Table 1.1). The highest volumes occur between US 127 west and US 127 east, which has a projected ADT of over 19,000 vpd and a peak hour volume of 2,135 vehicles. Figure 1.5 shows the expected increase in traffic volume from 1998 to 2028.

**TABLE 1.1
CURRENT AND PROJECTED TRAFFIC CONDITIONS FOR US 24**

Segment	Location	Length in Kilometers (in miles)	1998 ADT	1998 LOS	2008 ADT	2008 LOS	2028 ADT	2028 Peak Volume	2028 LOS	24-Hour Trucks
1	I-469 to Webster/Woodburn Roads	7.4 (4.6)	11,303	D	13,277	E	17,188	1,891	E	36%
2	Webster/Woodburn Roads to SR 101	7.4 (4.6)	6,305	C	11,061	E	14,667	1,613	E	42%
3	SR 101 to State Line/Meridian Road	3.8 (2.4)	6,879	C	11,269	E	16,934	1,863	E	52%
4	State Line/Meridian Road to Antwerp West Corp. Limit	4.8 (3.0)	7,095	D	10,064	E	14,736	1,621	E	54%
5	Antwerp West Corp. Limit to SR 49	1.0 (0.6)	9,058	D	10,064	E	14,736	1,621	E	47%
6	SR 49 to Antwerp East Corp. Limit	1.1 (0.7)	8,090	D	10,203	E	15,674	1,724	E	44%
7	Antwerp East Corp. Limit to US 127 West	14.5 (9.0)	5,954	D	9,780	E	15,105	1,661	E	60%
8	US 127 West to US 127 East	3.4 (2.1)	8,040	D	11,936	E	19,407	2,135	E	47%
9	US 127 East to SR 424	11.9 (7.4)	7,193	D	11,114	E	15,910	1,750	E	43%
10	SR 424 to West of SR 15/18 (Defiance)	4.0 (2.5)	8,280	D	10,709	E	13,623	1,499	E	46%

Traffic engineers use these existing and projected volumes to measure qualitatively operational conditions on a roadway through the level of service, which addresses both mobility and accessibility concerns, with speed and capacity utilization used as secondary measures. These criteria are measured by percent of time delay where efficient mobility is the primary objective of the facility. The percent of time delay calculation is assigned a "grade," or LOS, ranging from "A" (the best) to "F" (the worst). The various LOS "grades" are defined as follows:

- LOS A: Free flow conditions.
- LOS B: Reasonably free flow conditions.
- LOS C: Stable, but small changes cause substantial deterioration.
- LOS D: Borderline unstable flow.
- LOS E: Extremely unstable (maximum capacity is generally reached between LOS D and E).
- LOS F: Forced or breakdown flow.

The desirable level of service for roadways similar to US 24 is a LOS B in rural areas and a LOS C in urban/suburban areas (FHWA, *Flexibility in Highway Design*, No Date). In order to determine a LOS for each of the study segments along US 24, capacity analyses were conducted for both the existing and projected volumes using the Transportation Research Board's computerized version of the Highway Capacity Software (HCS).

For all segments of US 24 in the study area, the level of service in 2008 is projected to be LOS E, indicating heavily congested flow with traffic demand exceeding the capacity of the road. The projected volumes for the year 2028 indicate that the entire study corridor will operate at LOS E. These inadequate capacity conditions to 2028 can be attributed to high traffic volumes, high truck composition, minimal shoulder widths, and limited passing zones. Level of service predictions show a downward trend towards undesirable service levels for the entire corridor, indicating that capacity will be an even greater concern along US 24 in the future.

Truck Traffic

Truck traffic has a substantial impact on the capacity and LOS for any type of roadway. Truck traffic is widely considered to be a primary contributor to traffic congestion along US 24. Based on historical data, truck volumes on US 24 increased over 128 percent between 1990 and 1997. In 1998, truck traffic represented over 40 percent of the total volume on US 24. In the future, trucks are expected to make up as much as 60 percent (Table 1.1) of the vehicle mix on some segments of a roadway whose overall traffic volumes are increasing by more than 1.5 percent each year. This condition could cause the roadway capacity to completely break down.

Truck traffic represents over 40 percent of the total volume on US 24.



In 1992, the southern portion of the I-469 bypass around Fort Wayne was completed. The route that uses the I-469 bypass along with US 24 has since provided through truck traffic with a more direct link between Indianapolis, Detroit, and Ontario, compared to alternative routes. ODOT conducted a study entitled *Origin-Destination Survey of US 24/Ohio Turnpike Corridor at Ohio/Indiana State Line* in June and July of 1997 to determine the impact of turnpike toll increases on regional traffic patterns. The results of this study showed for the truck traffic surveyed, 42 percent indicated that there were no suitable alternatives to US 24. Other routes that were acceptable alternatives are shown in Figure 1.6 with the associated percentage that chose each route.

ODOT also conducted an Origin-Destination Survey for the City of Defiance in July 1997. The intent of this survey was to obtain information on the route selection of trips passing through but not stopping in the Defiance area, as well as the origin and destination of each trip. The survey was conducted on a cordon line drawn around the city in order to obtain a complete picture of all traffic entering and exiting the area. Data was collected at two locations along US 24: the east and west approaches to Defiance. The resulting data from this survey showed that the majority of the truck traffic on US 24 is associated with long distance trips from Michigan or Toledo to Indiana and the remainder of the United States to the west. On the days that the survey was taken, there was an average of 3,350 through truck movements.

1.6.2 Reduce Travel Times Between Project Termini

By their classification, rural arterials should provide for relatively high travel speeds. US 24 in the study area has posted speed limits ranging from 40.3 kilometers per hour (kph) (25 miles per hour [mph]) to 88.7 kph (55 mph). This variation in speed limits increases travel times through the study area. Between unincorporated areas, speed limits are generally 88.7 kph (55 mph), but because of the presence of more highly populated areas and locations with severe roadway design deficiencies, speed limit reductions occur at multiple points between the study's limits. For example, on the approach to the Village of Antwerp, Ohio speed limits are gradually reduced from 88.7 kph to 40.3 kph (55 mph to 25 mph) through the center of town with speeds sometimes as low as 32.3 kph (20 mph) during posted school zone hours. Antwerp has three traffic signals within its city limits, which is another factor in elevated travel times and inconsistent speeds. In addition, substandard horizontal geometry at five curves along existing US 24 reduces speeds to 72.6 kph (45 mph). Other detrimental travel time factors along US 24 include:

- Uncontrolled cross traffic entering or exiting US 24.
- Truck platoons in no-passing zones and when opposing traffic is too heavy for safe passing opportunities.
- Mail delivery operations on US 24.
- School bus operations on US 24.
- Active rail crossings on US 24.
- Accident delays within the US 24 right-of-way.
- Inadequate shoulder widths for emergency pull off for stopped or inoperable vehicles.

1.6.3 Improve Roadway Safety

US 24 is characterized by several design features that are not consistent with currently acceptable design criteria. Field inventories of the roadway characteristics, were conducted in 1998 and 2002, which illuminated some of the deficiencies. These are summarized in the following section and presented by segment in Table 1.2. The segments between Antwerp's western corporate limit and US 127 (West Leg) as depicted in Table 1.1 were combined to coincide with the field survey notes.

Roadway Deficiencies

Shoulder Widths: Shoulder widths along US 24 vary throughout the study area. The shoulder width is typically 0.9 to 1.2 meters (three to four feet) paved with an additional 0.6 to 1.5 meters (two to five feet) of gravel. AASHTO recommends a 3.1-meter (10-foot), and preferably a 3.7-meter (12-foot), continuous paved shoulder along high volume rural arterials and freeways, particularly where high volumes of trucks exist. Shoulders also should be continuous, not intermittent with varying widths as currently exists on US 24. These existing minimal shoulder widths create hazards for stopped vehicles, emergency vehicles, police radar detection, and mail delivery that need to pull off the roadway.

Uncontrolled Access: The entire length of US 24 has an uncontrolled right-of-way, meaning that access to enter or cross the roadway is available at any location. Along the approximate 64.5-kilometer (40-mile) segment, there are at least 67 at-grade cross streets (five of these are signalized), two active railroad crossings, more than 50 commercial access points, and approximately 300 residential driveways. Additionally, school bus operations occur on US 24 east of Antwerp in a posted 88.7-kph (55-mph) speed zone.

**TABLE 1.2
ROADWAY CHARACTERISTICS INVENTORY**

Segment #	Roadway Segment	# of Cross Streets*	# of Commercial Access Points	# of Residential Drives	# of Lanes Each Direction	Approx. Width of Shoulder	Segment Length in Kilometers (in Miles)	Speed Limit in KPH (in MPH)	Other Notable Features
1	I-469 to Webster/Woodburn Roads (Indiana)	X: 2 incl. Webster Tnorth: 2 Tsouth: 3	north side: 4 south side: 1	north side: 43 south side: 11	2 @ I-469 1	3.7m (12') lane 0.9-1.2m (3-4') paved 0.6m (2') gravel	7.4 (4.6)	80.6 (50) to west of Ort Rd., 72.6 (45) to end	Signal with left turn phase @ I-469 east ramps; Signal @ Webster/Woodburn
2	Webster/Woodburn Roads to SR 101 (Indiana)	X: 2 incl. SR 101 Tnorth: 3 Tsouth: 2	north side: 2 - incl. Quarry south side: 1 - UniRoyal Goodrich	north side: 33 south side: 7	1	3.7m (12') lane 0.9-1.2m (3-4') paved + gravel	7.4 (4.6)	72.6 (45) for 1.3 km (0.8 mile), 80.6 (50) to end, 72.6 (45) @ 3 bends	Added lane pull-off for right turns both directions @ SR 101; Emergency pull-off area
3	SR 101 to State Line/Meridian Road (Indiana)	X: 1 incl. Meridian Tnorth: 3 Tsouth: 1	north side: 0 south side: 0	north side: 4 south side: 3	1	3.7m (12') lane 0.9-1.2m (3-4') paved + gravel	3.8 (2.4)	80.6 (50) to Cole Rd., 88.7 (55) to end, curve caution @ 1 bend	
4,5,6	State Line/Meridian Road to Antwerp East Corp. Limit (Ohio)	X: 7 (incl. 3 signals) Tnorth: 5 Tsouth: 1	(not incl. downtown) north side: 8 south side: 1	(not incl. downtown) north side: 12 south side: 2	1 (wider in downtown)	3.7m (12') lane 0.9m (3') paved 2.4m (8') paved downtown	4.8 (3.0)	88.7 (55) to West Corp. limit, 56.4 (35) to Madison, 40.3 (25) to Kroos, 46.4 (35) to end	Downtown Antwerp, RR along south side of US 24; 20 mph school zone with flashing light; Signals at Archer, US 49, & Oswalt
7	Antwerp East Corp. Limit to US 127 East (Ohio)	X: 2 Tnorth: 8 Tsouth: 8 incl. US 127	north side: 5 south side: 13	north side: 56 south side: 29	1	3.7m (12') lane 0.9m (3') paved 1.2m (4') gravel	14.5 (9.0)	72.6 (45) to T-51, 88.7 (55) to end, 72.6 (45) @ 1 bend	Rest area on North; School bus stops on US 24; Flashing yellow signal for curves
8	US 127 West to US 127 East (Ohio)	X: 0 Tnorth: 1 incl. US 127 Tsouth: 1	north side: 3 south side: 3	north side: 7 south side: 5	1	3.7m (12') lane 0.9m (3') paved 1.2m (4') gravel	3.4 (2.1)	88.7 (55)	Added left turn lane @ US 127 both interchanges; Flashing yellow signal for US 24 @ east intersection w/ US 127
9	US 127 East to SR 424 (Ohio)	X: 2 Tnorth: 5 Tsouth: 7 RR Xing: 2	north side: 6 south side: 5	north side: 42 south side: 34	1	3.7m (12') lane 0.9m (3') paved 1.5m (5') gravel	11.9 (7.4)	88.7 (55)	Railroad crossing
10	SR 424 to beginning of four lane section west of Defiance (Ohio)	X: 1 Tnorth: 0 Tsouth: 0	total number undetermined	total number undetermined	1	3.7m (12') lane 2.4m (8') paved 0.6m (2') gravel	4.0 (2.5)	88.7 (55)	Maumee River Bridge - 0.9m (3') shoulder

NOTES: *X=No. of Cross Streets; Tnorth=Streets that form a T-intersection with US 24 from the north; Tsouth=Streets that form a T-intersection with US 24 from the south.

Five of 67 intersections along US 24 are signal-controlled.



No-Passing Zones: One of the most important factors governing the safety and capacity of a two-lane facility is the ability to pass slower moving vehicles. On typical highways (with 88.7 kph [55 mph] speeds), approximately 762.2 meters (2,500 feet) is needed to accommodate safe passing. Relative to passing zones, AASHTO considers a road with no more than 10 to 25 percent of its length composed of no-passing zones as acceptable. As shown in Figure 1.7, the percentage of US 24 designated as a no-passing zone exceeds the AASHTO criteria in Allen and Paulding counties.

School Bus Safety Concerns

US 24 has become increasingly hazardous for the transportation of students to and from school and special activities (field trips, sports, etc.) in the area. Whenever a school bus stops in the roadway to pick up or drop off students or pull in and out of the school, it only serves to exacerbate already undesirable conditions brought on by inadequate design and sight distance issues. Situations like these are especially critical at key locations such as the two intersections in Antwerp near SR 49 and in Woodburn, Indiana near Woodlan High School.

A previous study completed in 1993 and entitled *US 24 Baseline Study Between I-475 in Lucas County, Ohio and I-469 in Allen County, Indiana* cataloged the pupil transportation activities of six local school systems in the study area. Those figures were revisited as part of this current study and the updates are presented in Table 1.3. In many respects, the magnitude of student transportation activities has not changed much since the previous survey; the number of buses using US 24 and the number of students who live near US 24 are relatively unchanged. Interviews with school transportation staff, however, indicate that schools in the area are trying to use US 24 less frequently, both as a route and for stops. Some local school systems in Ohio, at the urging of the Ohio State Police, have discontinued the use of stop locations on US 24 altogether and are using alternate stops on less heavily traveled roadways. Other school systems have tried to curtail their transportation activities on the road to whatever extent possible in order to reduce the chance of accidents involving their vehicles and students.

Accident Analysis

The Ohio Department of Public Safety, INDOT, and the NIRCC provided accident data for US 24. Data were collected for the three most recent complete years: 1998, 1999, and 2000. Accident data for each segment of US 24 within the study area were analyzed and further separated into intersection and non-intersection accidents, and the results are shown in Table 1.4. An accident analysis was completed for the at-grade intersections versus the non-intersection accident locations to determine whether the intersections themselves or deficiencies in the roadway were contributing to the accidents.

The ODOT criterion for an intersection to qualify as a high accident location states that there must be at least 14 accidents at that intersection during a consecutive three-year period. None of the intersections in the corridor qualified as a high accident location under ODOT's criterion.

**TABLE 1.3
EXISTING SCHOOL BUS ACTIVITY ON US 24**

County	School District	Total Bus Fleet	# of Buses Traveling on US 24	# of Buses Crossing US 24	Average Daily Bus Trips	# Students in Buses on US 24	# Students Living near US 24
Allen, IN*	East Allen County	125	21	0	4	808	61
Paulding, OH*	Antwerp Local	12	5	12	20	300	30
Paulding, OH	Paulding Ex. Village	20	4	0	14	60	20
Defiance, OH	Central Local	23	3	0	2	100	27
Defiance, OH	Defiance City	22	2	0	4	80	7
Defiance, OH	Northeastern Local	18	2	5	4	149	0
Total		220	37	17	48	1,497	145
Average		37	6	3	8	250	24

Note: * Data taken from previous study.

**TABLE 1.4
SUMMARY OF ACCIDENT DATA BY SEGMENT**

Segment #	Location	Accidents						3-Year Accident Total
		1998		1999		2000		
		INT	NON	INT	NON	INT	NON	
1	I-469 to Webster/Woodburn Roads	4	13	5	10	3	14	49
2	Webster/Woodburn Roads to SR 101	5	14	3	16	4	7	49
3	SR 101 to State Line/Meridian Road	0	3	1	8	3	12	27
4	State Line/Meridian Road to Antwerp West Corp. Limit	2	1	1	1	2	9	16
5	Antwerp West Corp. Limit to SR 49	0	0	0	0	1	0	1
6	SR 49 to Antwerp East Corp. Limit	0	2	0	2	0	3	7
7	Antwerp East Corp. Limit to US 127 West	2	14	3	12	2	16	49
8	US 127 West to US 127 East	2	9	1	9	0	11	32
9	US 127 East to SR 424	4	14	0	24	6	29	77
10	SR 424 to west of SR 15/18 (Defiance)	0	24	2	27	2	9	64

Note: INT=intersections; NON=non-intersections.

For non-intersection accidents, ODOT's criterion requires that a 0.6-kilometer (0.4-mile) segment of roadway between intersections must have at least 16 accidents over a three-year period. Although Table 1.4 indicates 64 non-intersection accidents between SR 424 and SR 15 during the three-year period, this segment is 4.0 kilometers (2.5 miles) long and the accidents were not concentrated within any 0.6-kilometer (0.4-mile) segment to qualify under ODOT's criterion.

Table 1.5 shows the accident rate per million vehicle miles traveled (MVMT) over the three -year period beginning in 1998 and ending in 2000. In calculating the accident rates, 1998 ADT volumes and the length of each segment were used to normalize the data; this is an important distinction to make because it allows for a more even comparison among the segments. The Ohio statewide accident rate for rural undivided two-lane highways based upon 1999 data is 1.504 per MVMT annually. The last column of Table 1.5 indicates whether each segment is above or below the statewide average for similar roadways.

**TABLE 1.5
ACCIDENT RATES BY ROADWAY SEGMENT**

Segment #	Roadway Segment	Segment Length in Kilometers (in Miles)	1998 Average Daily Traffic	Accident Total	Accident Rate (Per MVMT)	Above or Below State Average Rate
1	I-469 to Webster/Woodburn Roads	7.4 (4.6)	11,303	49	0.86	Below -0.64
2	Webster/Woodburn Roads to SR 101	7.4 (4.6)	6,305	49	1.54	Above 0.04
3	SR 101 to State Line/Meridian Road	3.8 (2.4)	6,879	27	1.49	Below -0.01
4	State Line/Meridian Road to Antwerp West Corp. Limit	4.8 (3.0)	7,095	16	0.69	Below -0.82
5	Antwerp West Corp. Limit to SR 49	1.0 (0.6)	9,058	1	0.17	Below -1.34
6	SR 49 to Antwerp East Corp. Limit	1.1 (0.7)	8,090	7	1.13	Below -0.38
7	Antwerp East Corp. Limit to US 127 West	14.5 (9.0)	5,954	49	0.84	Below -0.67
8	US 127 West to US 127 East	3.4 (2.1)	8,040	32	1.73	Above 0.23
9	US 127 East to SR 424	11.9 (7.4)	7,193	77	1.32	Below -0.18
10	SR 424 to west of SR 15/18 (Defiance)	4.0 (2.5)	8,280	64	2.82	Above 1.32

The normalized accident rates are lower than those shown in the 1994 *US Route 24 Improvement Feasibility Study*, even though the overall ADT and truck volumes have increased. The most noteworthy decrease in accidents occurred in Segment 8 where US 127 shares the right-of-way with US 24. In the 1994 study, the accident rate was 3.85 accidents per MVMT. That rate has been reduced to 1.73 accidents per MVMT using the data for 1998, 1999, and 2000. However, this rate remains above the statewide average for similar type roadways.

There are several factors that alone, or in combination, have influenced accident rates along this section of US 24 over the past decade. Differences in weather conditions may have had an effect as the number of weather-related accidents dropped dramatically when comparing the period beginning in in 1995 and ending in 1997 with the period beginning in 1998 and ending

in 2000. The posted speed limit for most of US 24 between I-469 and the Indiana-Ohio state line (Segments 1 and 2) was reduced from 88.7 kph (55 mph) to 80.6 kph (50 mph). Also, state highway patrols and enforcement of the posted speed limits in Allen County were increased concurrent with the reduction in the posted speed limit. In Paulding and Defiance counties, accident rates may have been influenced by the installation of traffic signals in Antwerp (at Oswalt and Archer streets). Additionally, an increase in state highway patrols on US 24 in Ohio and enforcement of the posted speed limits has occurred, primarily as a result of increased federal funding for salaries for state highway patrol officers. Also, all of US 24 located within the State of Ohio has been designated as a Targeted Enforcement Area.

The accident analysis also examined the types of vehicles involved and the severity of the accident. US 24 supports a relatively high volume of truck traffic and it is important to consider the impact of the high percentage of truck traffic on accident occurrences. Table 1.6 separates accidents by the type of vehicles involved. For purposes of this comparison, the classification "cars" includes collisions involving one or more automobiles, vans, pick-up trucks, buses, or sport utility vehicles. The "trucks" category includes accidents involving one or more semi-tractor trailers or other heavy vehicles used for transporting goods. The category "both" refers to an accident involving at least one vehicle from both the car and truck classification categories. Classified data was only available for the segments in Ohio over the three-year period analyzed, therefore, the accident totals in Table 1.6 do not equal those shown in Tables 1.4 and 1.5.

Heavy trucks were involved in approximately 60 percent of the accidents along the Ohio portion of US 24 within the study area. Because of their size and weight, truck accidents often cause greater damage to other vehicles and their passengers, particularly when a semi-tractor trailer truck collides with a compact car.

**TABLE 1.6
ACCIDENTS BY VEHICLE TYPE ALONG US 24 IN OHIO**

Year	Cars	Trucks	Both	Total Accidents
1998	36	25	13	74
1999	31	29	22	82
2000	32	41	17	90
Total	99	95	52	246

Table 1.7 compares the severity of accidents over the three-year period along the section of US 24 between New Haven and Defiance. The severity was separated into three separate classifications - injury, fatal, and property damage only (PDO), which could involve any dollar amount of damage as long as none of the individuals in or out of the vehicles were injured. The injury and fatality values represent only one accident each and do not take into account multiple injuries or deaths resulting from one particular incident.

**TABLE 1.7
ACCIDENT SEVERITY: 1998 TO 2000**

Year	Accident Severity			Total Accidents
	Fatal	Injury	PDO*	
1998	1	35	77	113
1999	2	34	89	125
2000	0	29	104	133
Total	3	98	270	371

Note: PDO = Property Damage Only.

Injury accidents and deaths comprised approximately 27 percent of the total number of accidents on US 24 over the three-year period. Fatal accidents accounted for 0.8 percent of all accidents on US 24 over the three-year period. Based on crash data available from the Ohio Department of Public Safety, fatal and injury accidents comprised 30.8 percent of the total number of accidents statewide over the same three-year period, which is higher than the percentage observed on US 24. However, the percentage of fatal accidents for the section of US 24 between New Haven and Defiance (0.8 percent) is slightly higher than the percentage of fatal accidents for all of Ohio over the same three-year period (0.3 percent).

**1.6.4 Enhance
Regional Transportation
Network**

Currently, a conflict exists between local and regional traffic on US 24. The *US 24 Vehicle License Plate Survey* (August 2001) showed that only four percent of the automobile traffic traveling US 24 was regional in nature as compared to 43 percent of the truck traffic. One goal of this project is to reduce the conflicts that occur between these groups of US 24 users.

US 24 and the supporting roadway network help sustain localized services that are an important part of the fabric and quality of life for surrounding communities. Providing safe, timely, and adequate access to surrounding communities is a principal role of a well designed transportation system. US 24 currently functions as the primary roadway for many communities in the study area. It provides direct access to the emergency and routine medical services available at Paulding and Defiance County Hospitals and also provides access to various parts of the counties for fire, police, and emergency services. In addition, US 24 provides primary access to local school districts and other educational facilities such as Defiance College.

US 24 is a major east-west transportation corridor between Colorado and Michigan. In the Midwest, US 24 provides the most direct access between Fort Wayne, Indiana and Toledo, Ohio. US 24 also provides direct connections to I-80/90 and I-75, enabling the motoring public to reach points northward into the Great Lakes region and Canada as well as other large cities on the eastern seaboard. For these reasons, US 24 plays an important role in through travel in the region. However, its popularity as a travel route combined with its operational deficiencies make travel on the roadway difficult. Improvements to US 24 would reduce the conflicts between local and through traffic and would also address the needs of specialized travel on US 24.

US 24 provides access to local residential, business, and commercial developments.



**1.6.5 Accommodate
Economic Growth**

An efficient transportation network is essential to sustain the local and regional economy. The US 24 Corridor, because of its connection between the Port of Toledo and the interstate highway system, is important for regional and national economic development. It is identified as a macro corridor in the *Access Ohio* Long Range Transportation Plan. The US 24 Corridor is identified in INDOT's *2000-2025 Long Range Plan* as a statewide mobility corridor.

Its importance was also nationally recognized when US 24 was identified as one of the 21 High Priority Corridors as part of the NHS in the ISTEA. US 24 was recognized under ISTEA as the Hoosier Heartland Industrial Corridor from Lafayette, Indiana, to Toledo, Ohio (Corridor 4 on Figure 1.8). The NHS recognition is an outgrowth of efforts to identify post-interstate transportation needs and is the first step in a continuing effort to combine the nation's modal networks into a national transportation system that will meet the country's future transportation demand.

To produce the NHS, FHWA worked in partnership with state and local transportation officials and joined with the Department of Defense and other federal departments as well as the private sector to develop a method of addressing the intermodal transportation needs of the nation in the post-Interstate era. Congress passed legislation to designate the NHS in the National Highway System Designation Act of 1995 on November 28, 1995.

Routes chosen as part of the NHS include those "of highest importance to the Nation, built to the uniform geometric and construction standards of 23 U.S.C. 109(h), which connect, as directly as practicable, the principal metropolitan areas, cities, and industrial centers, including important routes into, through, and around urban areas, serve the national defense and, to the greatest extent possible, connect at suitable border points with routes of continental importance in Canada and Mexico." Other criteria include serving major population centers, providing multimodal connectivity (for example connecting a major airport and a port), or providing rural – urban connectivity (23 CFR 470.107-Federal-aid Highway Systems).

Locally, economic development agencies in both Ohio and Indiana have recognized the importance of US 24 for access to and from large existing and planned industrial and commercial tracts. Numerous proposed and/or expanded industrial parks are planned in the US 24 service area. New developments such as the Fox Run Executive Park and Enterprise Park in Defiance County and Canal Place in Allen County depend on US 24 to provide access and help stimulate spin-off growth. Existing industrial developments such as Uniroyal-Goodrich, Johns Manville Corporation, Dana Corporation, Aeroquip Corporation, and others also rely on US 24 and have located close to the roadway for better accessibility.

In a presentation to the Transportation Review Advisory Council (TRAC) in March 1998, Mr. Jim Hartung, President of the Toledo-Lucas County Port Authority, pointed out that many companies in northwest Ohio depend heavily on US 24 for continued economic growth. Mr. Hartung also noted that improvements to US 24 are vital to the port's vision of being "a premier international transportation center." Mr. Hartung went on to indicate that the US 24 Corridor has the capability of helping expand the shipping and intermodal transportation activities of the Port of Toledo, primarily due to the fact that an improved US 24 could handle additional truckloads of cargo, improving operations and efficiencies throughout the region while aiding in the development of new markets west and southwest of the Toledo and Defiance areas.

On a larger scale, US 24 has become integral to the economic health of the midwestern United States, especially in a global economic marketplace. Ohio, Michigan, and Indiana have become a staging area for international commerce through the Port of Toledo and the Great Lakes system with heavy usage by the automotive and steel industries in the midwestern and southern United States. The global marketplace, "just in time" inventory delivery, and international free-trade zones require American businesses to compete internationally. To be competitive, an efficient transportation network is essential for the quick and cost-effective transportation of raw materials and finished goods. The US 24 Corridor is an important link in that network.

1.7 PURPOSE AND NEED SUMMARY

As a segment of the major east-west transportation corridor between Colorado and Michigan, US 24 between Fort Wayne, Indiana and Defiance, Ohio has experienced substantial traffic growth over the past several years, at a rate higher than normal for northwest Ohio and eastern Indiana. The major factors contributing to this growth include increased population, developing industry, and a greater reliance on intermodal transportation connections with the regional and national rail systems and the water-based shipping at the Port of Toledo. US 24 between New Haven and Defiance is now primarily a two-lane roadway that is unable to meet the needs of the

continually increasing volumes of local and through vehicles that utilize it. The operational deficiencies of US 24 are due to a combination of the following factors:

- Its design features include unlimited access, minimal shoulder widths, and a curvilinear alignment requiring multiple speed reductions and limited passing opportunities.
- Its location attracts high speed through traffic by providing direct access between Detroit, Ontario, and Indianapolis, while at the same time serving as the primary local access through the center of many small towns.
- The number and diversity of its users ranging from school buses to a vehicle mix with about 45 percent heavy trucks.

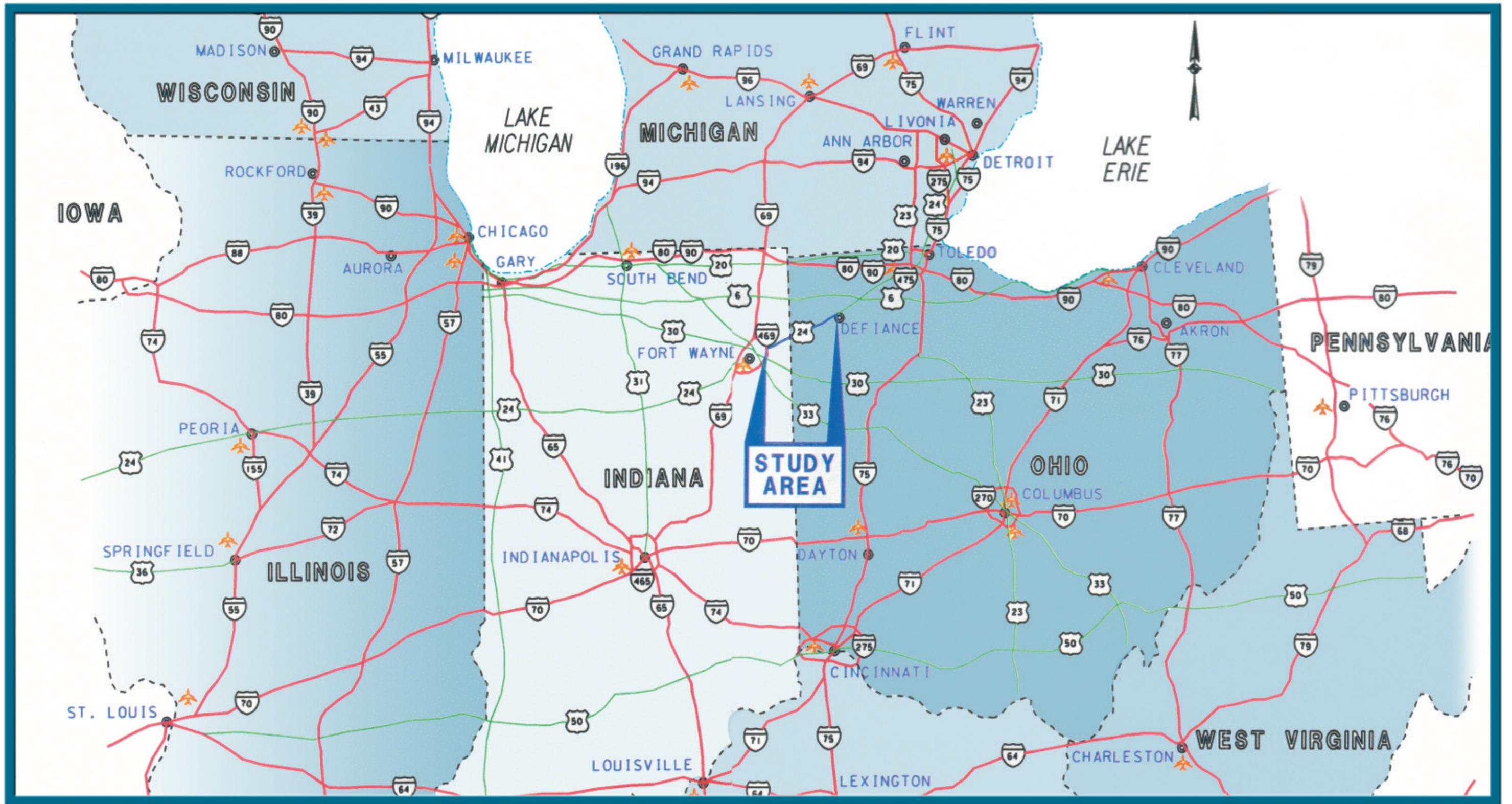
The level of service provided by US 24 in the year 2008 under the No Build scenario is a LOS E. This indicates that the two-lane roadway does not have adequate capacity to meet anticipated future travel demand. If improvements are not made to US 24, the problems currently experienced on US 24 will only worsen if the operational characteristics of the roadway are not improved.

The accident data for US 24 between New Haven and Defiance do not identify any intersections or roadway segments that qualify as high accident locations according to ODOT criteria. However, the severity of the accidents is an issue of concern. In examining specific statistics of accidents over a recent three-year period, 60 percent of the total accidents involved heavy trucks and approximately 30 percent resulted in injuries or fatalities, including a collision between a car and a public bus that killed three people and injured nine. Many more accidents have been avoided in the recent past due to a concentrated effort by various policing agencies to enforcement of posted speed limits, combined with local users exercising extra caution. Additionally, school systems that previously included US 24 as part of their bus routing are searching for different alternatives to avoid heavy traffic volumes and numerous near collisions.

With its inclusion as a macro corridor in *Access Ohio* and as a statewide mobility corridor in INDOT's *2000-2025 Long Range Plan*, and its identification as one of 21 High-Priority Corridors in the nation, the importance of US 24 in sustaining the local and regional economy is firmly established.

For US 24 to continue to support the growing transportation demands being placed upon it, the roadway needs improvements that will address the following concerns:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

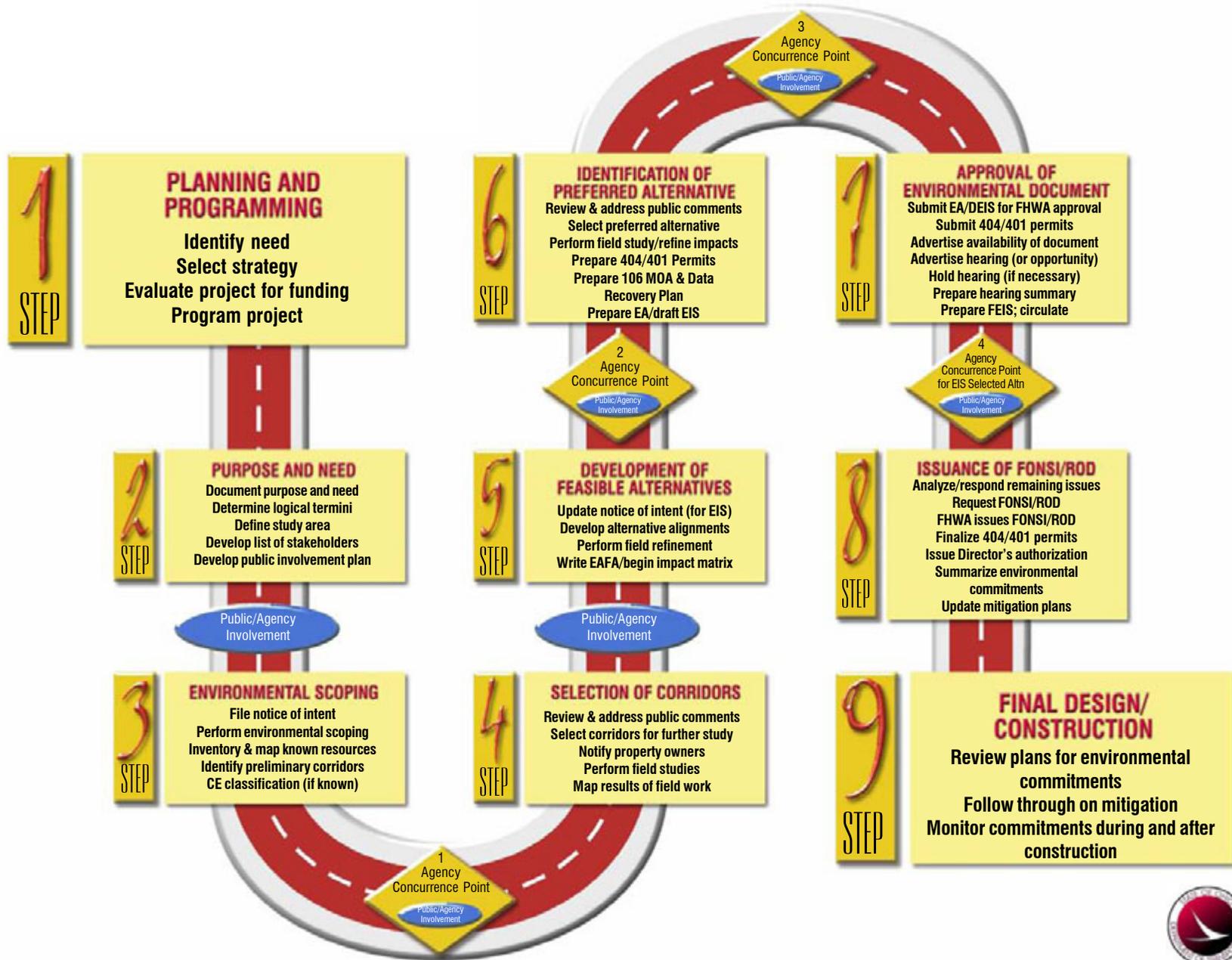


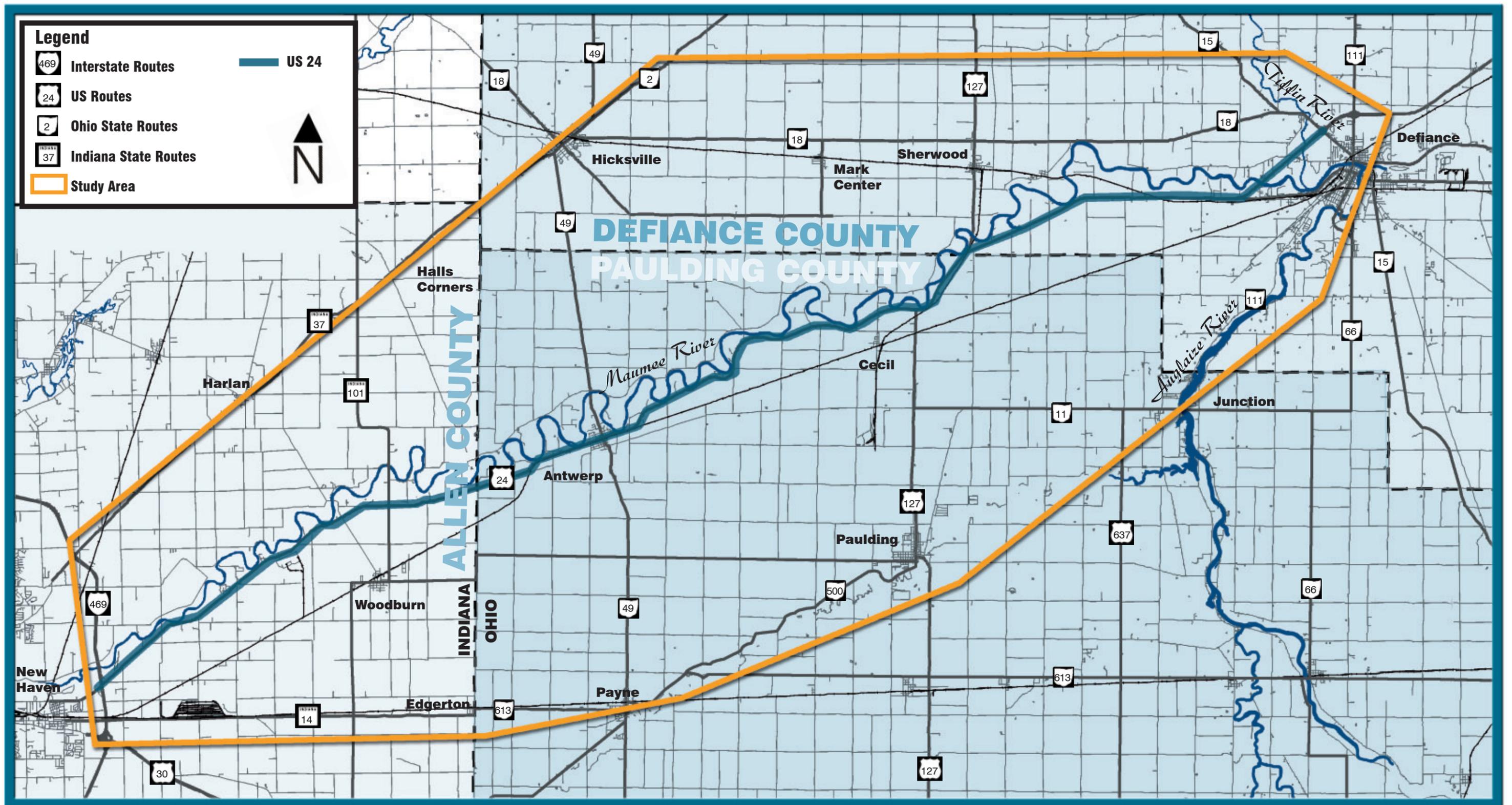
Regional Context Map

Figure 1.1



FIGURE 1.2
ODOT 9-STEP TRANSPORTATION DEVELOPMENT PROCESS

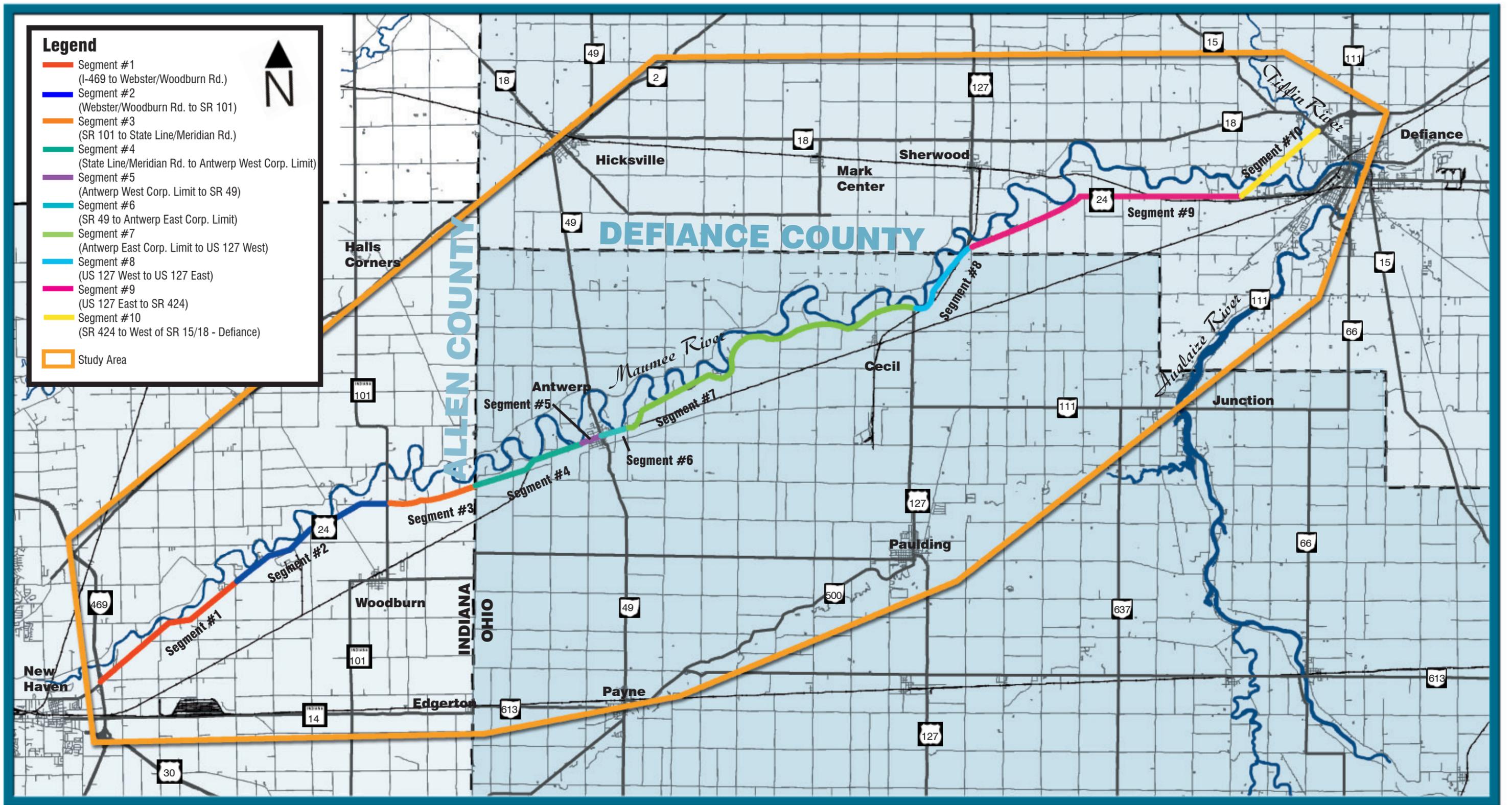




Study Area

Figure 1.3





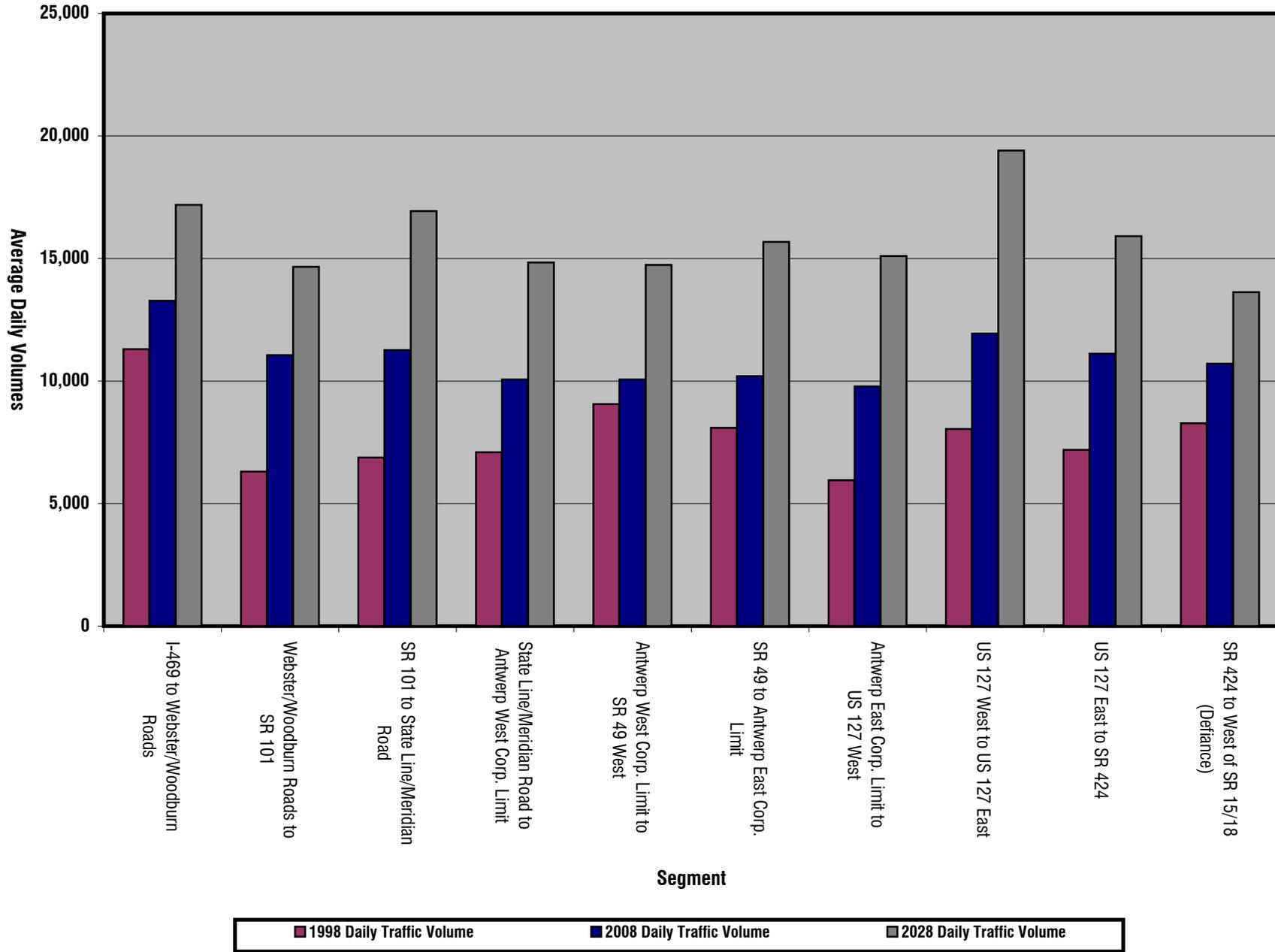
Traffic Study Segments



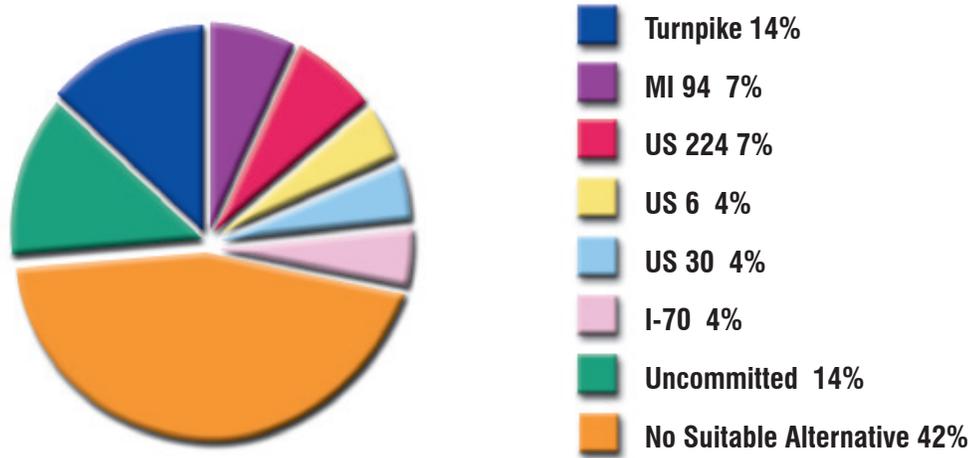
Figure 1.4



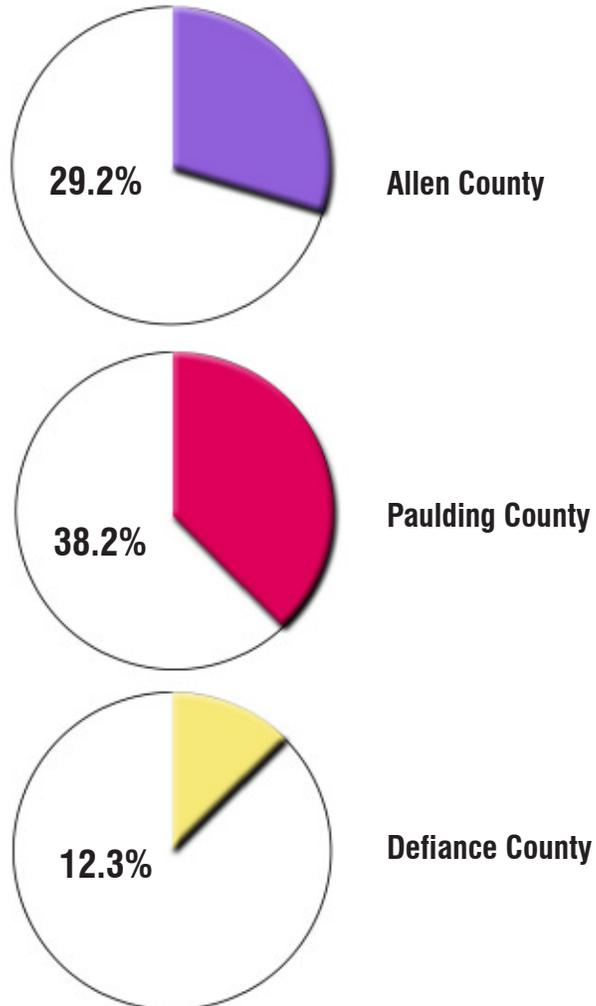
**FIGURE 1.5
CURRENT AND FUTURE TRAFFIC VOLUMES**



**FIGURE 1.6
ACCEPTABLE ALTERNATIVE ROUTES**



**FIGURE 1.7
NO PASSING ZONES**



**FIGURE 1.8
NATIONAL HIGH-PRIORITY CORRIDORS**



Note: Numbers in the map represent the statutory listing in ISTE. Some corridors subject to subsequent adjustment where statutory description is general.
Source: www.fhwa.dot.gov/hipcorridors/index.html

2.0 ALTERNATIVES

2.1 US 24 CORRIDOR MODAL ANALYSIS

As part of the Transportation Development Process (TPD), a modal alternatives analysis was conducted for the entire 130.6-kilometer (81-mile) US 24 Corridor between Fort Wayne, Indiana and Toledo, Ohio. As discussed in Section 1.3.5 of this Draft Environmental Impact Statement (DEIS), the US 24 Corridor has been separated into three separate planning sections, which are currently under study by the Ohio Department of Transportation (ODOT). The purpose of the US 24 Corridor modal analysis was to study the three planning sections as one unit to insure that all possible Feasible Alternatives were identified and investigated. Five strategies were investigated for the US 24 Corridor modal alternatives analysis:

- Alternative roadway options.
- Freight to rail alternatives.
- Freight truck facility.
- Transit alternatives.
- Combinations of alternative strategies.

The modal analysis also examined how these alternatives addressed the purpose and need identified for each planning section. Detailed discussions of the purpose and need for each of the three planning sections and the modal strategies investigated are included in the *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio* (September 2002).

2.1.1 Alternative Roadway Options

Citizens and interest groups have made several inquiries to ODOT inquiring if the Purpose and Needs for the US 24 Corridor could be met by diverting traffic to other parallel and near-parallel highway facilities. The rationale is that if traffic can be diverted to other routes, then many of the problems of US 24 may be addressed without the need for major capital improvements.

To achieve such a diversion, two conceptual approaches can be taken. The first is to encourage greater use of other routes through incentives (or, the removal of existing penalties), while the second is to do so through prohibitive or punitive measures, which could include a truck ban or the initiation of tolling on US 24.

These two options were investigated through comparative analyses of US 24, the Indiana and Ohio Turnpikes, and US 6. The analyses addressed the likelihood that some of the regional truck and automobile traffic could be diverted from US 24 to the other facilities. The comparative analyses included travel time studies, historical overview of traffic volumes, the rate of growth for automobile and truck traffic, and the percentage of truck traffic compared to the percentage of automobile traffic, and other factors associated with the operation of each highway.

Travel Time Studies

Two different travel time studies were conducted on US 6, US 24, and the Ohio and Indiana Turnpikes. Figure 2.1 highlights the corridors traveled for these studies.

On February 15, 2001, travel time runs were obtained for three different routes between I-469 in Fort Wayne, Indiana and I-475 in Toledo, Ohio. Corridor A followed US 24 between I-469 and I-475; Corridor B followed I-469, I-69, US 6 and US 24; and Corridor C followed I-469, I-69, and I-80/I-90 (the Indiana and Ohio Turnpikes). The starting and endpoints points were chosen as logical points of entry for travel between Fort Wayne, Indiana to the Port of Toledo, Ohio (Fort to Port). Drivers were asked to travel a safe speed, close to the speed limit, but to stay with traffic, both auto and truck. The trips were made between 10:00 am and 4:00 pm. Two trips were made within each of the three corridors, which were compared for consistency and averaged for analysis purposes. The results of this survey are presented in Table 2.1.

In January 2001, ODOT conducted a similar study that addressed travel times for I-475 to I-75 to US 6 where it meets with US 24 in Napoleon, Ohio. This corridor could be used as an alternative to US 24 for Fort to Port travel along the eastern portion corridor from I-475 to the

intersection of US 6 and US 24. Table 2.1 displays the travel times observed by ODOT for this alternative listed as Corridor D.

**TABLE 2.1
OBSERVED (2001) AVERAGE TRAVEL TIME, DISTANCE, AND COST**

Corridor	Route	Travel Distance in Kilometers (in miles)	Travel Time in Minutes	Average Travel Speed	Travel Cost
A	US 24 between I-469 and I-475	129.8 (80.5)	88	88.7 kph (55.0 mph)	\$0.00
B	I-469/I-69/US 6/US 24	169.4 (105)	114	88.7 kph (55.3 mph)	\$0.00
C	I-469/I-69/ Indiana Turnpike/Ohio Turnpike	203.2 (126)	127	95.8 kph (59.4 mph)	\$2.95 * \$16.11**
D	US 24/US 6/I-75/I-475	159.0 (98.6)	103	91.9 kph (57.0 mph)	\$0.00

Note: * Automobile tolls as of December 2000.
** December 2000 weighted average for truck tolls by classification.

Table 2.1 demonstrates that the routes between I-469 in New Haven, Indiana and I-475 in Toledo, Ohio vary in travel time and distance. US 24 is the shortest route in terms of both distance and travel time, in spite of having a slightly slower average travel speed than the alternatives. Only the Turnpike alternative (Corridor D) involved direct monetary costs in the form of tolls.

The information in Table 2.1 reflects non-peak hour travel time for the entire 130-kilometer (80.6-mile) corridor between the US 24/I-469 interchange at New Haven and the junction of US 24 and I-475 in Toledo. Between New Haven and Defiance, current design hour travel speeds average 65.2 kilometers per hour (40.4 miles per hour) with an average travel time of 55 minutes. In 2008, average design hour travel speed is estimated to be 53.4 kilometers per hour (33.1 miles per hour) and travel time is estimated to be 67 minutes. In 2028, the average design hour travel speed between New Haven and Defiance is estimated to be reduced to 46.4 kilometers per hour (28.8 miles per hour) and travel time is estimated to be 77 minutes.

**US 24 and the
Indiana/Ohio Turnpike
Comparison**

The Ohio Turnpike and Indiana Turnpikes combined, with I-69 and I-469 in Indiana, provide an alternative route to US 24 for trips between Fort Wayne and Toledo. Requests were made to ODOT by citizens and interest groups to investigate the effects of reducing or removing tolls from the Ohio Turnpike, in the hopes that the removal of toll costs might stimulate a diversion of some US 24 traffic to the Turnpike.

As shown in Table 2.1, Fort to Port travel using the Turnpike is 74.2 kilometers (46 miles) and 39 minutes longer than Fort to Port travel using US 24. The posted speed for the Turnpike is 104.8 kilometers per hour (kph) (65 miles per hour [mph]) for cars and 88.7 kph (55 mph) for trucks. It can be assumed that the truck travel speed would be lower and travel time would be longer due to the four toll plazas on the Turnpike starting with I-75 in Ohio and ending at I-69 in Indiana. These stops do not significantly increase the travel time for a car, but slower acceleration means that each start and stop made by a truck adds additional time to a trip. Similarly, US 24 has a variety of posted speed limits throughout the corridor and traffic signals that cause stops.

The ODOT contacted the Ohio Turnpike Commission regarding the elimination of tolls. In the correspondence, date May 20, 2002, the Ohio Turnpike Commission stated that the "reduction

or elimination of tolls for trucks is not an option." (Letter, from Daniel F. Castrigano, Ohio Turnpike Commission, May 20, 2002). Currently, the Turnpike pays over \$50 million per year in interest to bondholders, on nearly \$680 million dollars of outstanding bonds. These bonds were issued based on projections of Turnpike traffic and toll revenue.

Even if an acceptable and financially feasible means of paying the Turnpike's bond debt, along with its annual operation and maintenance expenses, was devised, there still remains the question of just how effective such a strategy would be in diverting traffic from US 24. The effect of Turnpike toll changes on Turnpike and US 24 traffic volumes was explored.

In 2000, a car traveling from I-75 to I-69 via the Ohio and Indiana Turnpikes paid \$2.95, while trucks, on average, paid \$16.11 (based upon a weighted average of truck revenue by truck classification) for travel on the Ohio Turnpike. Additionally, as highlighted from the License Plate Survey, a substantial portion of trucks (43 percent) but very few cars (four percent) currently travel the US 24 Corridor in its entirety. Thus, a toll reduction on the Turnpikes would likely have a greater potential for diverting trucks from US 24 than it would for cars.

To consider the likely impact, the effects of previous toll increases on the Ohio Turnpike were compared to truck volumes for both the Turnpike and US 24. Figure 2.2 shows the historic growth in automobile and truck volumes on both US 24 and the Ohio Turnpike. Table 2.2 shows the historic traffic growth and the average Turnpike automobile and truck revenues per trip (in current dollars). Figure 2.3 compares the annual growth of traffic on the Ohio Turnpike and US 24 to the growth in toll prices (in current dollars) for the period.

**TABLE 2.2
HISTORIC TRENDS IN DAILY VEHICLE VOLUME AND REVENUE FOR THE ENTIRE OHIO TURNPIKE, 1979 - 2000**

	1979	1980	1984	1985	1989	1990	1994	1995	1999	2000
Number of Cars	48,056	47,302	51,519	53,922	68,534	73,057	88,754	92,378	98,363	99,423
Number of Trucks	18,124	16,528	18,347	18,523	20,420	20,254	22,932	23,532	25,081	25,440
Revenue per Trip (Cars)	\$0.92	\$0.95	\$1.26	\$1.23	\$1.23	\$1.21	\$1.10	\$1.17	\$1.98	\$1.99
Revenue per Trip (Trucks)	\$4.26	\$4.27	\$6.67	\$6.80	\$6.82	\$6.84	\$7.02	\$7.28	\$11.51	\$11.24

Source: Ohio Turnpike Commission

From 1990 to 1995, toll rates on the Ohio Turnpike remained constant in nominal dollars. However, starting in 1995, the toll rates were increased at a rate of 10 percent in 1995, 15 percent in 1996, 20 percent in 1997, 10 percent in 1998, and 10 percent in 1999. At the initiation of the toll increases in 1995, truck traffic on the Ohio Turnpike initially declined, but by 1998 had returned to positive growth rates even with the continued rise in tolls. Meanwhile, the average annual truck-traffic growth rate on US 24 continued to remain above 10 percent during the beginning of the toll increases but has since slowed to 6.4 percent. The data shows that the annual truck growth rate on US 24 was substantially higher in the years prior to the Turnpike toll increases, and has since slowed. In 1996 and 1997, after the initiation of the annual toll increases, truck traffic growth rates declined for both the Turnpike and US 24. However, since 1998 the truck growth on US 24 has continued to slow, while it has rebounded on the Turnpike, even exceeding that of US 24 in 1999.

The decline in the growth rate on the Turnpike is not mirrored by a growth rate increase on US 24, in spite of a 65 percent increase in tolls on the Turnpike. This would tend to indicate that while some truck traffic may have shifted to US 24 to avoid higher tolls, the overall impact of the tolls does not appear to be a major contributor to such a shift. The data indicate that these two roadways likely serve distinct route and travel markets and are not necessarily viewed as substitute routes for freight movement.

These findings mirror that of research and analysis performed by the Ohio Turnpike Commission evaluating the impact of the toll increases occurring between 1995 and 2000 on Turnpike truck traffic. The analysis showed that the Turnpike's toll increases had the greatest impact on US 20 and US 20A, which experienced greater truck volume increases (above and beyond its generally anticipated growth) than the truck volume losses experienced on the Turnpike. This observed diversion of truck traffic was nearly identical to those predicted in a 1996 model created to forecast traffic and revenue for a Turnpike bond sale. The May 2002 letter from the Ohio Turnpike Commission concludes, "At the least the fact that substantially fewer trucks were diverted from the Turnpike than were added to US 20 would appear to dispel the claim that the increase in Ohio Turnpike Tolls caused truck traffic to be diverted to US 24."

In December 1997, ODOT conducted a stated preference survey (*Origin-Destination Survey of US 24/Ohio Turnpike Corridor at Ohio/Indiana State Line*), in which 192 cars and 28 trucks traveling on US 24 were surveyed - constituting approximately five percent and one percent of the automobile and truck traffic, respectively. Results indicated that 11 percent of all surveyed US 24 traffic at the Ohio/Indiana state line considered the Turnpike to be their primary alternative to traveling on US 24. Furthermore, a sensitivity analysis performed from this survey indicated that potentially only 19 percent of US 24 traffic might divert to the Turnpike if tolls were removed. However, assuming the recent annual growth rate for US 24 traffic (approximately 3.5 percent), even if a 19 percent diversion were achievable, it would be fully offset by growth in less than six years. While this may reduce traffic on US 24 for the short term, it does not appear to be a sustainable long-term solution to accommodate the corridor's projected increased demand.

The costs and potential problems of this alternative are high, while the potential benefits are low. Removal of Turnpike tolls would not produce significant impacts to traffic along US 24, since the Ohio Turnpike is not a comparable alternative to US 24 for many trips between Fort Wayne and Toledo. Even without tolls, the majority of US 24 users would likely continue to use US 24 as it would still remain the shortest routing option, both in terms of mileage and travel time, than other alternatives. While the Turnpike might attract some of the US 24 traffic, it would not likely produce significant impacts to US 24 due to the simple fact that the less than 50 percent of both auto and truck traffic not traveling the entire length of the Fort-to-Port corridor, and for these trips the Turnpike is not a viable option.

While it is true that the removal of tolls could potentially delay the deterioration of conditions on US 24 over the short term, such benefits would likely be short-lived. Growth would offset the shifts that would result from such a strategy in only several years. Because of this factor, the removal of tolls cannot be viewed as a sustainable strategy for addressing the problems of the US 24 Corridor and will therefore be eliminated from further consideration.

US 24 and US 6 Comparison

US 6, with I-69 and I-469 could also serve as a potential routing option for travelers between Fort Wayne and Toledo. Likewise, I-475/I-75/US 6/US 24 is another potential routing option. US 6 runs parallel to US 24, with fewer curves and reduced traffic volumes when compared with US 24. These facilities are not currently tolled and as noted previously, travel time and mileage tend to be the primary factors in user's route choice. As indicated in Table 2.1, these alternatives are 25.8 kilometers (16 miles) and 41.9 kilometers (26 miles) longer, which equates to 5 and 22 minute increases in travel times, respectively, as compared to US 24 for travel between Fort Wayne and Toledo.

To compare US 24 and US 6, historical traffic count data was analyzed for each roadway at the Indiana/Ohio State Line. The purpose of this analysis was to identify similar traffic patterns, indicating that these roadways share a predominant purpose. Figure 2.4 and Table 2.3 report the average daily traffic volumes for US 24 and US 6 at the Indiana/Ohio state line. The data show that traffic volumes on each roadway have grown over the last 17 years.

Over the 17-year period, traffic volumes on US 6 have increased from 2,900 in 1982 to 4,190 in 1999, a change of 1,290 vehicle trips (31 percent). US 24 traffic more than doubled, from 3,530 in 1982, to 7,800 in 1999, a change of 4,270 (55 percent). As noted above, US 24 has experienced a higher percentage of growth over the period. This growth has occurred

independently of traffic volume growth on US 6, not because of traffic shifting from US 6 onto US 24. Both facilities have experienced traffic growth and continue to do so, indicating that traffic is not simply shifting from one facility to the other.

**TABLE 2.3
US 24 AND US 6 HISTORICAL TRAFFIC COUNTS**

Route	1982	1986	1990	1994	1996/1997	1999
US 24	3,530	4,470	5,300	6,440	7,100	7,800
US 6	2,900	2,920	4,330	3,830	4,070	4,190

The percentage of the total traffic on US 6 attributed to trucks increased from 34 percent to 38 percent between 1982 and 1999. On US 24, the percent of total traffic attributed to trucks increased much more dramatically over the period, from 25 percent to 56 percent between 1982 and 1999. Table 2.4 documents the truck traffic volumes at the Indiana/Ohio Stateline, for key years over the same 17-year time period. Consistent with the overall traffic, the number of trucks on both US 6 and US 24 has increased over the 17-year period. The number of trucks using US 6 increased by 39 percent while the number of trucks using US 24 increased by 79 percent.

**TABLE 2.4
US 24 AND US 6 HISTORICAL TRAFFIC COUNTS FOR TRUCKS**

Route	1982	1986	1990	1994	1996/1997	1999
US 24	900	1,260	1,470	2,690	3,840	4,350
US 6	980	1,180	1,840	1,240	1,440	1,610

As there are no tolls to remove along any of the US 6 routing options, the route cannot be made more attractive through decreasing the out-of-pocket toll costs to users. Travelers currently select US 24 over US 6 because it is the most attractive route for making their trip. US 6 is similar in character to US 24, a rural two-lane arterial, and attempting to divert traffic to it may merely relocate, rather than address, the problems of US 24. Therefore, there does not appear to be any viable way to encourage current or future users of US 24 to divert to US 6 without making US 6 more attractive through a major capacity improvement project. However, such improvements to US 6 would generate similar costs and environmental impacts anticipated for the US 24 project.

Disincentives on US 24

Another strategy to divert vehicles from US 24 would be to make the roadway less attractive to travelers. One approach evaluated was to increase the out-of-pocket costs to users through the imposition of tolls. Outside of the technical challenges and enforcement issues of tolling an arterial, it is unlikely that this would be politically feasible. There are no facilities other than cordon-line tolls at a single location (such as a bridge crossing), where an entire arterial corridor is tolled. This proposal would also likely face significant opposition from residents and businesses along the corridor. Such a measure would likely increase the cost of traveling along the corridor for residents, increase the cost of doing business along US 24, and would reduce the economic competitiveness of the corridor, in direct conflict with one of the stated key objectives of the project.

Another approach that was suggested was to merely ban trucks from using US 24. This option would also not likely be desirable for a number of reasons. First, nearly 60 percent of truck trips on US 24 are not regional, or "pass through", trips. A large number of trucks using US 24 are originating from or destined for locations along the route. Banning trucks from using US 24 would be highly undesirable, as a prohibition would hurt the economic competitiveness

of communities along the corridor. Furthermore, any such attempt would likely be challenged, both politically and legally, by a number of businesses and interests along the corridor that directly serve the trucking industry as well as others that rely on trucks for shipment of materials and products. Such a prohibition also contradicts the vision and goals of *Access Ohio*, the State's long-range transportation plan, which identifies the US 24 Corridor as a "macro-corridor". "Macro-corridors" are corridors that are targeted for directing further economic growth. A measure such as banning trucks would significantly restrict that objective. Finally, prohibition of trucks on a US highway is currently illegal under the Ohio Revised Code. The explicit purpose of state highways is to facilitate the movement of goods and services. As long as the roadway pavement and structures can support the loads carried by trucks, ODOT cannot restrict their use of US 24 or of any other US route.

Strategies that raise the cost of doing business hurt the economic competitiveness of a region or corridor. The strategies rely on achieving one of the objectives of this project (traffic reduction on US 24) at the expense of another (retaining the economic competitiveness of the corridor). Because of these negative economic impacts, punitive measures could face significant political opposition from businesses and residents along the project corridor. Furthermore, such strategies would merely shift the traffic and the problems of the US 24 Corridor to other roadways.

Conclusion of Alternative Roadway Options

A politically acceptable and equitable means of diverting traffic from US 24 to the Ohio Turnpike or to US 6 could potentially serve the needs established for each of the three planning sections. However, of the strategies investigated, none appear to be feasible because their implementation would likely result in the creation of additional problems that do not appear to be politically acceptable. The findings of this portion of the study are:

- Creating incentives to use the Ohio Turnpike through the removal of tolls does not appear to be a sustainable solution and creates significant equity and financial problems.
- As tolls do not currently exist, there does not appear to be any feasible way to make the US 6 routes more attractive.
- Even if obstacles were overcome, US 24 is still a significantly shorter route than both US 6 routes and the Ohio Turnpike route.
- Some punitive measures (such as tolls and truck prohibitions) are not permissible under Ohio Revised Code and would hurt the economic competitiveness of US 24 (in direct conflict with the stated Purpose and Needs of the projects).

US 24 remains the corridor of choice, because it is currently the most economical route for travelers to take, whether local or beyond. Alternative routes are simply less competitive, and cannot be made more so through any reasonable set of incentives or disincentives. The promotion of alternative highway routes, through either incentives or punitive measures, does not appear to be a feasible means in meeting the Purpose and Needs of the three US 24 planning sections. Because of these factors, the strategy of attempting to divert vehicles to other routes is eliminated from further consideration as the Preferred Alternative.

2.1.2 Multimodal Alternatives

In addition to the consideration of alternate highway routes, several strategies were investigated to determine if the Purpose and Needs of the planning sections could be met through other means. The following discussion investigates several of these strategies including the diversion of truck freight to rail, the creation of a dedicated truck facility, transit alternatives, transportation demand management (TDM) strategies, and transportation systems management (TSM) improvements.

Freight to Rail Alternative

There are several unique characteristics of freight traffic along the US 24 Corridor. First, it has an unusually high share of truck traffic. Along the corridor segments, peak-period truck composition ranges from 14 percent to 60 percent, with an average of around 40 percent. The percentage of trucks decreases as one approaches Toledo or Fort Wayne due primarily to

increasing auto volumes along these segments. The large volume of truck traffic raises concern from capacity, safety and quality-of-life standpoints. Second, as indicated in the findings of the license plate survey, 43 percent of trucks on US 24 travel the entire length of the corridor. This means that a significant proportion of trucks might be drawn from US 24 if a more attractive alternative means of shipping from Toledo to Fort Wayne existed. Finally, truck traffic on US 24 has grown substantially over the last decade, increasing 196 percent from 1990 to 1999 (averaging approximately 13 percent growth per year). This trend is expected to continue. Because of these unique characteristics, one alternative that was proposed was the diversion of truck traffic to rail.

Currently, three freight rail lines, CSX Transportation (CSXT), Norfolk Southern, and the Maumee & Western Railroad exist within the Fort-to-Port study area. Figure 2.5 shows the existing rail service corridors within the study area. While none closely parallels US 24 for the entire corridor length, the study area does host several regional rail operations, providing a number of opportunities for shippers to use rail, if so desired. The Maumee & Western Railroad runs more or less parallel to US 24 for approximately 80.6 kilometers (50 miles) between Liberty Center, Ohio and Woodburn, Indiana. It operates as a single-tracked short-line that runs through the Maumee Valley. Connections to the larger rail system exist at Woodburn, Indiana (Norfolk Southern) and at Defiance, Ohio (CSXT). The Maumee & Western rail line presently serves approximately 15 customers along the route (approximately 10 trains per week), shipping mainly locally grown agricultural products (i.e., grains), sand, silica, and other bulk commodities. Although recent investments have improved, the Maumee & Western Railroad continues to have operational limitations. For example, the current subgrade underlying ballast and jointed rail conditions impose a 16-kph (10-mph) speed limit along the line.

While railroad right-of-way that closely parallels US 24 does exist along the entire Fort-to-Port length, a large section of it has been abandoned over the years. Some of the railroad right-of-way has been converted to a recreational trail. The Ohio Rail Development Commission (ORDC) has indicated that while there are currently no plans to re-initiate service along this right-of-way, the ORDC intends to continue to preserve the corridor for future rail use (Letter from James F. Seney, ORDC, January 23, 2002). Therefore, while it could be said that a perfect rail substitute to US 24 does not exist, rail options do exist within the study corridor. Currently, the rail alternative may not be the most economically competitive means of meeting the needs of shippers.

Several factors pertaining to a multi-modal rail-truck operation are likely to make diverting traffic from truck to rail an un-economical strategy. First, incorporating rail into the movement of freight along this relatively short, 130.6-kilometer (81-mile) corridor would likely not offer improved travel times. In the age of just-in-time deliveries, time can often be the most critical factor in freight modal choice. As rail operates along a fixed route, nearly all rail shipments depend on trucks to perform the collection and distribution functions on their originating and terminating ends. The additional time it takes to transfer shipments to and from rail, along with the likely slower average travel speeds that rail would provide in this corridor, would not improve delivery time. This factor alone challenges the potential effectiveness of using rail to attract freight from trucks.

Second, the transfer also adds a penalty for shipping by rail, as there are uncertainties and costs in coordinating the timed transfers of goods from truck to rail and back. Furthermore, complexity in scheduling truck drop-offs and pick-ups (and the subsequent accompanying loss of productivity of having trucks and drivers waiting for freight transfers) significantly reduces the "economy-of-scale" benefits of rail shipments and reduces the competitiveness of incorporating rail into such short trips.

Finally, a relatively small demand would exist for such rail service. As mentioned previously, only 43 percent of trucks are regional traffic. Even though trucks comprise a large portion of overall highway traffic, most truck trips in the corridor are local in nature, and could not effectively use the rail operations. The ability to effectively schedule and operate multiple rail transfer points along such a short corridor is simply infeasible from an operations standpoint, so the only segment of the freight market that could use rail effectively would be freight that is traveling the length of the corridor.

Based on information in the *1997 Ohio Commodity Flow Survey* (CFS), Rail and Truck and Rail mode shares are not significant until trip distances approach a range greater than 400 to 800 kilometers (roughly equivalent to 250 to 500 miles). For distances of 161.3 kilometers (100 miles) and shorter (the approximate length of the Fort to Port Corridor), the Rail mode attracts only 1.1 percent of shipments by value and only 2.1 percent by tonnage, while the combination of Truck and Rail modes attracts only by 0.2 percent by value and 0.02 percent by tonnage. For freight trips of 161 to 402 kilometers (100 to 249 miles), the Rail and Truck and Rail shares increase to just over four percent by value and 16 percent by weight. Therefore, even if approximately 25 percent of the corridor's year 2028 regional truck traffic could be diverted to rail, the maximum weekday peak-hour diversion would only be approximately 60 truck trips, leaving approximately 400 to 500 of the 2028 peak-hour truck trips to continue using US 24.

This point is confirmed further by a statistical model developed for the analysis of freight mode choice (*Journal of Transportation and Statistics*, December 1999). Based on the empirical data of 5,100 shipments, the model shows that:

Transportation distance is a very important factor in mode choice... For short distance transportation, road (truck) is the dominant mode and has little competition from other modes. On the other hand, the shares of rail, road, and combined (shipment using both truck and rail) transportation depend strongly on transportation distance at distances longer than 1,000 km (620 miles)... The maximum probability of choosing public road (truck) takes place at approximately 700 km (430 miles), but that of choosing rail transportation occurs at 1,300 km (810 miles). Combined transportation becomes dominant if transportation distance is more than 1,400 km (870 miles).

As a revealed confirmation of this point, the fact that service is not currently being provided reflects the inability of rail companies to operate this service competitively and economically.

Finally, while providing public funds for transportation infrastructure is common, it is typical for infrastructure that the public can directly use. There would likely be political challenge to providing public funding and/or subsidy directly to a private rail operator or owner of private rail infrastructures. Even though the investment would provide indirect benefits to the public at large, by reducing truck traffic and improving roadway safety, direct public funding and/or subsidy of private rail operations that would primarily benefit one rail operator at the expense of trucking interests while providing little direct benefit to the traveling public, would likely face political opposition. At minimum, such an investment in public subsidy would probably need to be offset by a commitment on the part of the rail operator to accede to price controls, to providing access to public passenger rail initiatives on the affected rail rights of way or on other track owned by the company, or other concessions. Private rail operators have not typically shown eagerness to enter into such arrangements, although precedents for such arrangements exist in other areas.

When deciding between rail and trucks for shipping, firms typically make rational decisions based on monetary costs, the time value of the goods, and other intangibles of the modal alternatives. Thus, businesses that can tolerate delays in exchange for cost savings make that trade-off, while businesses whose shipments are time-sensitive often pay high prices for faster, more flexible, and more reliable service. The businesses that ship goods to and through the US 24 Corridor have made their shipping mode decision based on these rational cost and time factors, and have arrived at the mode that best suits their needs.

The US 24 Corridor demonstrates characteristics that highly favor demand for truck movements over rail. The primary reason, however, is that the corridor is less than 161.3 kilometers (100 miles) long, a length that does not lend itself to conducting cost-effective multi-modal rail operations.

For the purpose of analysis, a rail service alternative was analyzed under the assumptions that rail service could reasonably serve "through" corridor movements, but intermediate transfer points and use of rail by non-"through" trips could not be cost-effectively accommodated.

Dedicated Freight Truck Facility

Though the CFS shows that rail would only likely attract approximately three percent of freight movements over this distance. Assuming that the initiation of such a rail service could attract as much as a 25 percent share (very optimistic) of the "through" truck traffic from US 24, it would be likely that only several hundred truck trips per day could potentially be diverted from US 24. While this strategy would not meet the Purpose and Needs for the three planning sections by itself, it is carried forward for use in multi-modal combination alternatives.

Another potential alternative for the Fort-to-Port corridor would be to construct a dedicated truck-only facility, or truckway, parallel to existing US 24. The primary purpose for such a facility would be to provide an exclusive facility to separate heavy truck flows from auto traffic. Trucks still would be able to use US 24 for local deliveries, but it is likely that most regional truck traffic would be diverted to this parallel facility.

In 1999, the Federal Highway Administration (FHWA) issued a report on industry issues related to the National Highway System (*The Role of the National Highway System Connectors: Industry Context and Issues*). This report noted:

Separating trucks from passenger vehicles, along with separating long distance movements from local traffic could substantially help...one of the biggest headaches is freight and passenger vehicles having to use the same roadways. Similarly, long distance truck moves must pass through local peak period congestion zones hampering their speed and reliability. Dedicated truck routes or lanes can expedite traffic and cargo flows. A similar situation exists with railroads who must share their right-of-way and track with passenger operations.

Dedicated truck lanes, where trucks are encouraged or required to travel in one or more lanes of a multi-lane facility, have been in existence for some time. Such lanes are common where long or steep grades are present and trucks are unable to maintain the posted speed limit. Such stretches often severely disrupt the operational performance of the road, while creating safety issues due to large travel speed differentials in adjacent lanes. The truckway concept takes the truck lane a step further by creating an exclusive facility for trucks, so that these vehicles, with similar operational characteristics, can travel in a segregated manner. Truckways would include the following design attributes:

- Longer acceleration and deceleration ramps at interchanges.
- Wider pavements and flatter turning radii at interchanges.
- Additional pavement thickness.
- Bridges designed for heavier loads.
- Maximum grades of three percent.
- Additional space at rest areas.

An additional benefit of a truckway is that it may attract trucks from adjacent or parallel facilities where large volumes of trucks are creating operational and/or safety issues. Such facilities already exist on I-5, just outside of Los Angeles, and on the New Jersey Turnpike (though, autos are permitted in Turnpike's truck lanes). Additional benefits often associated with dedicated truck facilities may include the ability to operate LCVs. LCVs are combination of two or more trailers to one truck. While safety concerns often prohibit their use on high volume, urban freeways, in more rural settings, increasing the permissible number of trailers a truck can have in tow provide additional economies of scale and can create increased cost savings for truckers. However, due to the relatively short length of this corridor (less than 161.3 kilometers [100 miles]) and the lack of connecting truckway facilities, it is unlikely that an exclusive truckway would realize the potential benefits of economies of scale from LCVs. Like the rail-truck alternative, economies of scale and any potential cost savings would likely be limited due to the additional time and energy required to update configurations at the ends of the truckway.

The potential downside with a dedicated truck facility is that, if they are not created in tandem with an equivalent auto-only facility, non-truck users might not experience significantly increased

benefits. Of the two facilities mentioned, I-5 and the New Jersey Turnpike, the truck lanes are actually parallel to auto-only freeway lanes. In the case of US 24, while trucks would now have a freeway route between Toledo and Fort Wayne, autos would still be required to use existing US 24. Another consideration is that such a facility would need to be similar in cross section to the currently proposed highway alternative. While it appears that the dedicated truck facility could meet some elements of the Purpose and Needs of the three planning sections, these design requirements would be similar in nature to a highway and would likely produce comparable impacts to farmland, wetlands, streams and other environmental features along the corridor as a highway alternative at a comparable capital cost.

There appears to be little justification for creating a truck-only facility that would exclude automobile traffic. The benefits of such a facility would likely be less than a highway, at a cost, both financially and environmentally, that is similar. Because of these factors, a truckway alternative is eliminated from further consideration as the Preferred Alternative.

Transit Alternatives

Transit improvements could be used to divert some automobile traffic off US 24. Types of transit improvements could include new fixed guideway facilities or substantially improved bus service. Fixed guideway projects generally have greater potential to attract ridership; however, their costs also can be several orders of magnitude higher than improved bus service alternatives.

Typically, transit services operate best in corridors with high population and employment densities that afford large enough travel demands to warrant the operation of buses or trains. For mass transit to work, many people must want to travel at the same time along a common path. These circumstances most commonly are achieved when a large downtown attracts work trips from a densely populated region. In such regions, the densely populated residential areas geographically concentrate the trip origins; the work-orientation of the trips concentrates the time of their occurrence; and the densely developed downtown aligns the trips along common paths to common destinations. High residential and employment densities are essential for ensuring effective mass transit.

Confirming this point, researchers have characterized the land use development thresholds necessary to support transit service in a cost effective manner. Numerous metropolitan areas across the United States were observed to assess where transit had been implemented effectively. Their results are summarized in Table 2.5.

**TABLE 2.5
RESIDENTIAL AND EMPLOYMENT DENSITIES REQUIRED TO JUSTIFY TRANSIT SERVICE**

Mode	Minimum Downtown Size (square feet of non-residential floor space)	Minimum Residential Density (dwelling units per acre, sustained over a 10- to 20-mile corridor)
Heavy Rail (e.g., subway)	50 million	12
Commuter Rail (e.g., railroad)	50 million	1
Light Rail (e.g., streetcar)	20 million	9
Express Bus – Walk Access	20 million	9
Express Bus – Auto Access	20 million	3
Local Bus – Frequent Service*	Minimal	12
Local Bus – Moderate Service*	Minimal	7
Local Bus – Hourly Service*	Minimal	4

* Assumes that bus services are spaced no greater than 1/2-mile apart
Source: Pushkarev and Zupan, *Public Transportation and Land Policy*, 1977.

The US 24 Corridor has an average residential density of just 0.10 dwelling units per hectare (0.25 dwelling units per acre), or about 0.64 dwelling units per hectare (1.59 dwelling units per acre) if one includes the cities of Fort Wayne and Toledo. Residential densities are far lower than typically would be necessary to support even minimal bus or commuter rail service in the long rural stretch of this corridor. Likewise, downtowns in Toledo and Fort Wayne have only

approximately 53.8 million square meters (five million square feet) of occupied, non-residential floor space. These numbers are lower than thresholds shown in Table 2.5. For these reasons, the US 24 Corridor provides very little potential for any type of effective regional transit service, whether bus or rail, beyond those services that already exist in the Fort Wayne and Toledo areas.

Nevertheless, to better understand how conditions on US 24 might be affected by transit, and the costs of those improvements, the possibility of implementing robust bus and rail services in the corridor was investigated.

Existing Services and Facilities

Currently, a freight rail line runs parallel to the US 24 Corridor, which could present an option for commuter or light rail services. Mass transit in the US 24 Corridor is currently limited to express bus routes extending a short distance from the two major Central Business Districts. Toledo's transit agency, TARTA, provides express bus service in the US 24 Corridor in the form of the Route 29 series, which operates from the Village of Waterville, southwest of Toledo, to downtown Toledo. This service operates at a half-hour composite headway during the peak period and on hourly headways during the off peak period. In Fort Wayne, the corridor is served by Route 10, which operates between New Haven and downtown Fort Wayne. The route operates on an hourly headway throughout the day. These routes are currently not operating at full capacity, indicating that little latent demand exists for additional transit service. Additional ridership could be induced, to a certain extent, by increasing the frequency of service and by increasing operating speed (through the use of busways, queue jumps, high-occupancy vehicle (HOV) lanes and other facilities to speed buses past congestion). However, the costs of developing and operating these facilities and services would be significant, and are unlikely to increase ridership on public transit sufficiently to reduce congestion in the corridor. In addition, these improvements would only be applicable in those portions of the corridor that lie within the suburban ring around Toledo and Fort Wayne; over the majority of the corridor alignment, employment nodes are too small and residential densities are insufficient to support efficient local bus service.

Options for Mass Transit Improvements

Fixed guideway transit includes heavy rail transit, light rail transit, and busway transportation systems. Non-fixed guideway transit modes include express or intercity bus and local bus. The fixed-guideway modes are described below, in order from most to least expensive.

Heavy rail uses an electrically energized third rail requiring an exclusive right-of-way through the corridor. This provides a high level of service for very large volumes of travelers. The busiest heavy rail systems can transport up to 80,000 passengers per hour, per track, and some systems provide more than one track per direction. Heavy rail typically costs between \$160 million and \$405 million per kilometer (\$100 million and \$250 million per mile).

Light rail transit (LRT) is typically powered from an overhead wire or catenary system and unlike heavy rail can operate both on exclusive right-of-ways and on public roads. An LRT system's versatility is that the rail guideway does not need to be elevated on structure or buried in a subway; thus, construction costs are significantly lower. LRT systems typically cost between \$32 million and \$145 million per kilometer (\$20 million and \$90 million per mile). On the other hand, city block lengths limit light rail trains to two or three cars in length, such that LRT systems' capacity is significantly lower than heavy rail. In addition, LRT systems experience the same delays at intersections as automobiles and therefore attract fewer riders than rapid heavy rail systems. The busiest LRT systems can carry as many as 30,000 passengers per hour and are most commonly implemented along very busy arterials with significant volumes of short, on-and-off trips.

Bus rapid transit (BRT) operates very much like LRT, except that vehicles are rubber-tired buses rather than steel-wheeled trains. Compared to LRT, BRT systems of comparable capacity provide greater operational flexibility and lower capital costs, but they entail greater operating and maintenance costs. Overall, comparable BRT and LRT systems cost about the same on an annualized basis and attract similar levels of ridership, depending on the system.

Commuter rail, unlike the modes above, is most appropriate for longer-distance trips. Commuter rail (called "regional rail" if service is provided all day) usually operates with overhead electrification or diesel power and can cross roadways at grade. However, commuter rail requires an exclusive right-of-way for operation, since its comfortable cars tend to be very bulky, long and heavy, therefore inappropriate for use in mixed traffic. Commuter rail's service patterns tend to relegate the mode to serving primarily long-distance work trips during peak hours. Headways tend to be every half hour or hour during peak, every hour or nonexistent during off-peak hours. On the other hand, commuter rail's costs tend to be the lowest of any fixed guideway modes: typically \$8 million to \$16 million per kilometer (\$5 million to \$10 million per mile), depending on the number of tracks and the availability of right-of-way.

Finally, at the low end of the transit option spectrum are the non-fixed guideway modes, including express or intercity bus and local bus.

For the US 24 Corridor, the feasibility of intercity express bus, commuter rail, and light rail options for relieving traffic congestion were examined. Heavy rail, bus rapid transit and expanding the local bus services were not included in the analysis for the following reasons:

- A subway or elevated railway that can carry 80,000 passengers per hour is clearly inappropriate for a roadway that carries just 6,500 passenger vehicles per day.
- Bus rapid transit (BRT) also is not studied, but cost and ridership estimates for light rail are generally applicable to evaluating the feasibility of bus rapid transit as well.
- Local bus is excluded, since as mentioned earlier, any transit approach to reducing US 24 traffic would need to entail substantial improvements over the current system, which additional local bus service is not likely to provide.

Express Bus Service Between Fort Wayne and Toledo

Logical locations for express, inter-city stops would be Toledo, Napoleon, Defiance, and Fort Wayne, along with several additional intermediate stops. Each stop would serve the nearby region via park-and-ride access. Greyhound now provides three daily intercity trips that make these stops; the service takes about two hours and 25 minutes for a one-way trip. Currently, Greyhound full fare is \$57 for a round trip ticket from Toledo to Fort Wayne. A typical transit fare for this length of express trip would probably need to be about \$20 round trip, with any remainder made up through some operator subsidy.

If competitive, subsidized transit service were implemented, it would compete directly with Greyhound's service and would likely attract some riders who currently use Greyhound for public transit trips within the US 24 Corridor. Assuming that Greyhound's services are roughly three-fourths full on a typical run and that 50 percent of riders are using Greyhound for "local" service (an optimistic estimate), the diverted ridership would amount to approximately 45 passengers per weekday in each direction. Currently, TARTA's Route 29X operates as an express service from Waterville to Toledo and attracts only about 15 boardings per weekday in each direction.

Methodology provided in the Transportation Cooperative Research Program's (TCRP) *Traveler Response to Transportation System Changes* (March 2000) was used to estimate ridership increases that could result from service improvements and fare reductions. According to the TCRP's methodology, the reduced fare probably would induce about a 25 percent increase in ridership, assuming that nearly all Greyhound patrons pay the higher \$57 round trip fare. Meanwhile, if the transit operators were to saturate the corridor with an express trip departure every hour of the day between 6:00 am and 7:00 pm (i.e., 14 round-trips daily, an increase of 11 trips over the current three), the additional service could induce as much as a 100 percent increase in ridership. All together, the services could amount to a 150 percent increase in daily ridership, or approximately 113 new daily trips in each direction. If about 40 percent of these trips occur during the peak hour (high for bus transit, but reasonable for a commuter bus service), then about 45 of these trips would be diverted from peak hour traffic flows. Assuming that auto vehicles carry 1.15 occupants on average, these 45 trips translate into approximately 39 peak-hour peak-direction automobile trips that would be removed from US 24 in each of the most congested sections. The peak congestion point on the western end of the corridor in

2028 is projected to be the segment of US 24 between I-469 and Webster/Woodburn Roads, where two-directional traffic would total about 1,891 vehicles during the peak hour. Similarly, the peak congestion point on the Toledo-end of the corridor is located along the US 24 segment between Canal and Dutch Roads, where the 2028 peak-hour volume is projected to be 3,160. In the context of these volumes, a reduction of 39 automobile trips would not produce a measurable change in traffic congestion or safety conditions in the corridor.

The service would require six vehicles to operate during the peak period. Including one spare vehicle, ODOT would need to purchase a fleet of seven comfortable, over-the-road coaches. At approximately \$400,000 each, the vehicles would entail about \$2.8 million in capital expenses. Adding another estimated \$1.5 million for parking, right-of-way acquisition, bus stop shelters, and related facilities, total capital costs for the express bus service would total about \$4.3 million.

Based on existing operating costs and service statistics for the TARTA, it was estimated that the express bus service would cost approximately \$8,400 per weekday (\$2.4 million annually) to operate and maintain.

Two measures of cost effectiveness were considered: (1) cost per new transit rider, and (2) cost per auto trip diverted from the peak congestion point. To estimate these measures, the capital costs were annualized and added to the annual operations and maintenance (O&M) costs. The result were then divided by the annual number of new transit riders or annual number of auto trips diverted from the peak congestion point.

Results show that the cost per new rider is \$45 and the cost per diverted peak-hour auto trip is \$66. For reference, transit projects that compete for federal funding typically demonstrate costs per new rider of roughly \$6 to \$10, so the new service is unlikely to attract federal funding, leaving its costs to be borne by state and local sources. Given the low number of automobile trips that would be diverted, a commuter bus service would not make a significant contribution toward congestion reduction, nor would it address many of the other problems of the corridor.

Even though the express bus option, as described, would be a reasonable service for the conditions of the US 24 Corridor, the option, by itself, does not meet the Purpose and Needs of the three US 24 planning sections.

Commuter Rail

Commuter railroad service was assumed to operate using existing rail rights-of-way between Fort Wayne and Toledo, most notably the Maumee & Western Railroad. The right-of-way, which closely parallels US 24, would require a full upgrade to rapid passenger rail service, with cruising speeds of up to 127 kph (79 mph) for commuter rail service to be effective. For maximum performance, commuter rail service would be fully grade-separated along this approximately 153.2-kilometer (95-mile) corridor, as identified in Table 2.6, with stops located several miles apart. For the planning analysis, 19 potential station locations were identified, spaced on average about 8.1 kilometers (five miles) apart at town and community centers along US 24.

A model developed by the Transit Cooperative Research Program (TCRP) was used to estimate ridership. The model, designed specifically for sketch-level planning, takes into account employment density in downtown Fort Wayne and Toledo, population density and household income within 3.2 kilometers (two miles) of each station, distance and travel time to downtown, and the availability of parking and feeder bus service at each station. Results show that the rail service would attract about 1,570 trips per day (about 456,000 trips annually). To put this figure in perspective, it would amount to roughly a 10 percent increase in TARTA's annual system-wide ridership.

The commuter rail service's traffic impact on US 24 would vary greatly depending on the segment of highway and the direction. Generally, impacts would be greatest near Fort Wayne and Toledo and lowest in the central portion of the corridor, near Defiance. At the most congested

portion of the corridor, just west of I-475, the service would carry about 354 trips per day in each direction. Approximately 45 of these passengers would be diverted from competing Greyhound services - leaving 309 who can be assumed would divert from traveling by car on US 24. If a full 50 percent of these trips occur during the peak hour (a typical percentage for downtown-oriented commuter rail systems), then about 154 trips would be diverted from peak-hour peak-direction traffic flows. Finally, assuming that auto vehicles carry about 1.15 occupants on average (a typical factor), these 154 trips translate into approximately 134 peak-hour, peak-direction auto trips that would be removed from this section of roadway. This volume reduction would be significant but unlikely to reduce congestion to the degree of even one letter grade in terms of highway capacity level of service, and would not measurably improve safety.

**TABLE 2.6
COMMUTER RAIL STATIONS, DISTANCES AND TRAVEL TIMES**

From	To	Distance in kilometers (in miles)	Time (minutes)
Fort Wayne	US 24	5.74 (3.56)	4.4
US 24	New Haven	4.75 (2.95)	8.3
New Haven	Woodburn	15.35 (9.52)	17.1
Woodburn	Antwerp	11.69 (7.25)	24.2
Antwerp	Cecil	12.32 (7.64)	31.6
Cecil	Ashwood	12.89 (7.99)	39.3
Ashwood	Defiance	9.26 (5.74)	45.3
Defiance	Jewell	7.45 (4.62)	50.5
Jewell	Okolona	6.56 (4.07)	55.2
Okolona	Napoleon	8.68 (5.38)	60.9
Napoleon	Liberty Center	11.60 (7.19)	68.0
Liberty Center	Colton	5.31 (3.29)	72.2
Colton	Neapolis	7.31 (4.53)	77.3
Neapolis	Whitehouse	6.47 (4.01)	82.0
Whitehouse	I-475	6.58 (4.08)	86.7
I-475	Maumee	6.84 (4.24)	91.6
Maumee	SR 25	8.76 (5.43)	97.3
SR 25	Toledo	5.45 (3.38)	101.6
TOTAL		153.01 (94.87)	101.6

Source: Model based on Transit Cooperative Research Program Project Report 16, *Transit and Urban Form*.

The sketch-level planning model developed through the TCRP was used to estimate capital and operating costs. The capital cost model is based on the length of the line (153 kilometers [94.9

miles]), the number of stations (19 stations), and the rail fleet size (20 vehicles). The fleet size estimate of 20 vehicles assumes two-car trains, headways of 30 minutes during peak periods, and a fleet comprised of 15 percent spares. Total capital costs, summarized in Table 2.7, would be about \$750 million, in Year 2002 dollars.

**TABLE 2.7
CAPITAL COSTS FOR COMMUTER RAIL SERVICE**

Unit Type	Unit Cost (in millions)	Number of Units	Cost (in millions)
Route-Miles	\$4.7	94.9	\$447
Fleet Size	\$3.1	20	\$62
Stations	\$12.7	19	\$241
TOTAL			\$750

Source: Model based on Transit Cooperative Research Program Project Report 16, *Transit and Urban Form*.

Operating and maintenance costs were also estimated in this analysis. The operating cost model is based on the amount of service provided in a year measured in terms of revenue-vehicle-hours, revenue-vehicle-miles, fleet size, and miles of track. Total operating and maintenance costs, summarized in Table 2.8, would amount to approximately \$10.3 million annually, in Year 2002 dollars. Two measures were used to determine cost effectiveness: (1) cost per new transit rider, and (2) cost per auto trip diverted from the peak congestion point.

**TABLE 2.8
ANNUAL OPERATING AND MAINTENANCE COSTS FOR COMMUTER RAIL SERVICE**

Cost Type	Approximate Cost (in millions)
Fixed	\$3.1
1000s of Annual Revenue-Hours	\$2.8
Fleet Size	\$2.6
Track Miles and 1000s of Revenue-Miles per Track Mile	\$1.8
TOTAL	\$10.3

Source: Model based on Transit Cooperative Research Program Project Report 16, *Transit and Urban Form*.

Results show that a commuter rail line's annualized costs (including annual O&M costs and annualized capital costs) are about \$70 million. The cost per new rider is \$164 and the cost per diverted auto trip is \$906. Again, for reference, transit projects that compete for federal funding typically demonstrate costs per new rider of roughly \$6 to \$10. In comparison, the cost effectiveness of a commuter rail alternative in the US 24 Corridor is abysmal. A commuter rail alternative would not be able to attract federal funding, which would likely be a pre-requisite for building this \$750 million project.

Light Rail

Light rail would require significantly more infrastructure than commuter rail at an even more expensive cost. An estimate for the capital cost for a light rail system is provided in Table 2.9. System assumptions include: 54 stations along the 153-kilometer (95-mile) alignment, peak period headways of 15 minutes, a one-car train, average operating speeds of 48.4 kph (30 mph), and electrification via overhead catenary - all of which are typical specifications for a light rail system. Costs are expressed in Year 2002 dollars. Light rail would cost significantly more than commuter rail, due to its full electrification, more numerous stations, and higher number of vehicles. Light rail would require more vehicles because of its shorter headways and slower operating speeds. A light rail system in this corridor would cost about \$2.5 billion, or about \$1.6 million per kilometer (\$26.7 million per mile).

**TABLE 2.9
CAPITAL COSTS FOR A LIGHT RAIL SYSTEM**

Capital Component	Unit of Measure	Unit Cost	Number of Units	Cost (in millions)
Guideway	Track Mile (Double track system)	\$4.3 million	189.7 miles	\$813.9
Stations	Each	\$1.3 million	54 stations	\$70.2
Yard & Shop	Per Vehicle	\$576,000	29 vehicles	\$16.7
Right-of-way	Track mile	\$1.2 million	189.7 miles	\$230.2
Traction Power	Track mile	\$600,000	189.7 miles	\$113.9
Train Control Signals & Communications	Track mile	\$588,000	189.7 miles	\$111.6
Utilities, Betterments & Mitigation Measures	Track mile	\$1.2 million	189.7 miles	\$227.9
Vehicles & Spare Parts	Per Vehicle	\$1.8 million	29 vehicles	\$51.9
Fare Collection	Per Station	\$196,000	54 stations	\$10.6
Agency Costs	Percent of Subtotal	41%	\$1.65 billion	\$675.1
TOTAL				\$2,321.7

Sources: Parsons Brinckerhoff Quade & Douglas, Inc. *Capital Cost Reference Manuals*; Transit Cooperative Research Project Report 16, *Transit and Urban Form*.

Annual operating and maintenance costs are estimated to be approximately \$43.5 million annually, as shown in Table 2.10. This figure again is based on the sketch-planning model developed through the Transit Cooperative Research Program. The operations and maintenance costs for LRT tend to be significantly higher than that for commuter rail. This is primarily due to the fact that because light rail has significantly more alignment based infrastructure (for electrification, etc.) than commuter rail, its track-mile O&M costs tend to be significantly higher than those for a similar length commuter rail line.

**TABLE 2.10
ANNUAL OPERATIONS AND MAINTENANCE COSTS FOR A LIGHT RAIL SYSTEM**

Unit Type	Unit Cost	Number of Units	Cost (in millions)
Service Hours	\$50.02	83,520	\$4.2
Car-Miles	\$ 1.87	1,980,886	\$3.7
Peak Vehicles	\$37,242	24	\$0.9
Track-Miles	\$134,595	189.74	\$25.5
Stations	\$52,167	54	\$2.8
Annual Trips	\$0.0721	600,000	\$0.0
Facilities Maintenance	\$321,826	2	\$0.6
General & Administration	15% of other costs	\$37.8 million	\$5.7
TOTAL			\$43.5

Source: Model based on Transit Cooperative Research Program Report 16, *Transit and Urban Form*.

The annualized cost of light rail service would be about \$229.2 million, nearly triple the cost for commuter rail. Meanwhile, light-rail service on this corridor, even operating at a greater frequency than commuter rail, would likely only attract the same, or marginally more, ridership the commuter rail service, due to the fact that the benefits of light rail's higher frequency service would likely be offset by its lower average operating speed. Because of this, light-rail doesn't appear to be a cost effective solution for this corridor. Its anticipated benefits (ridership, and the removal of auto vehicles from US 24) do not appear to be any greater than commuter rail, but at a significantly higher capital and O&M cost. Because of this, light rail is not being considered a competitive transit alternative.

Summary of Transit Alternatives

None of the transit alternatives considered appears to adequately meet the identified Purpose and Need statements of the US 24 Corridor. One shortcoming is that none of the transit alternatives would address any of the truck and freight issues within the corridor. Furthermore, it does not appear that these solutions would even provide a significant impact to the corridor's auto traffic. Finally, the costs of these proposals, especially the rail alternatives, indicate that it is unlikely that these alternatives, even if they could meet the projects' needs, would be the most cost-effective means of doing so. However, from a transit standpoint, express bus and commuter rail services appear to be the most cost-effective transit alternatives for the US 24 Corridor.

Transportation Demand Management Alternative

Transportation Demand Management (TDM) strategies try to optimize the effectiveness of the existing transportation system by providing travelers with incentives to change their travel habits. Unlike typical transportation projects that seek to expand transportation capacity, TDM strategies seek to reduce or redistribute demand. Various TDM strategies seek to increase carpooling; shift some travel to off-peak hours; increase the use of walk, bike and transit modes; or reduce traveling overall - for example, by implementing a compressed work week of four, 10-hour shifts.

Wide arrays of possible TDM strategies exist. Typically, TDM programs are administered through large employers, since work trips comprise the most significant portion of peak period travel and because employers can have considerable influence over workers' schedules and travel habits. Generally, the environments in which TDM strategies are most successful tend to have:

- Large concentrations of employment, such as a large suburban employment complex or downtown area.
- Alternative modes of travel available, such as transit, taxi, walking and biking.
- Political leadership that is willing to implement potentially unpopular pricing strategies and travel incentives or disincentives.

In cases where such conditions exist, even the most successful TDM strategies have reduced peak-hour trips by about five percent, though more commonly by lesser amounts. Unfortunately, the US 24 Corridor does not demonstrate any of the TDM-supportive qualities mentioned above. If under the most favorable circumstances TDM strategies have successfully reduced vehicle trips by about five percent, the potential impacts in the US 24 Corridor would be significantly less than five percent. A best guess would be that TDM strategies might afford a one percent to two percent reduction in traffic, if that.

If a five percent reduction in automobile passenger trips could be achieved, the reduction would amount to as much as 57 peak-direction auto trips in 2028, in the most heavily traveled portion of the corridor between I-469 and Webster/Woodburn Roads. This segment is projected to have a 2028 peak-hour two-way volume of 1,891. Assuming a 60/40 directional split, and subtracting out the mix of truck traffic, the peak direction travel demand would comprise about 1,135 passenger vehicles. An optimistic five percent decrease in this traffic would amount to a reduction of 57 automobiles, or only four percent of the US 24 total roadway volume. A more likely reduction of just one percent to two percent would amount to just 11 to 23 peak-direction automobile trips.

Transportation Systems Management Alternative

Transportation Systems Management (TSM) strategies are relatively low-cost, localized improvements targeted at improving the operational capacity of the roadway. Typical TSM strategies include: improved signal timing, new turn bays or storage lanes, intersection/interchange improvements, safety improvements, improved geometric design, and the use of Intelligent Transportation Systems (ITS). TSM strategies are oriented toward improving capacity and typically do not significantly alter demand. However, as such improvements are likely to improve traffic flow, they have been included as part of the packages. TSM strategies alone would not satisfy the entire project's identified needs, but could be useful in improving traffic

flow and operations for the corridor. As estimating the effects of such improvements often involves micro-simulation of intersections, the improvements' effects are not quantified as part of this analysis. However, the beneficial effects of such strategies are accounted for in the qualitative evaluation of the two "investment packages" (discussed below), and can be viewed as one of the more potentially effective strategies for improving traffic flow along US 24.

Combinations of Modal Alternatives

None of the identified alternatives proposed in the multi-modal analysis would, on their own, successfully meet the stated Purpose and Needs of the three US 24 planning sections. The potential effectiveness of packages of alternatives in meeting the projects' needs was examined to assess the likely impacts. Two investment packages were created for comparison with the highway alternative.

Both packages are identical in composition except for the transit mode. Investment Package A utilizes freight rail, commuter rail, TDM, and TSM; Investment Package B incorporates freight rail, express bus service, TDM, and TSM. The primary difference between the two packages is that commuter rail will typically attract more ridership than express bus service, but is on the order of 100 times as expensive due to its requirements for its own right-of-way, guideway, stations, and rail vehicles.

The results of the quantitative analysis for Investment Packages A and B are shown in Tables 2.11 and 2.12. The analysis for these two packages incorporated estimates of benefits that are based on the most optimistic performance that could likely be expected for each of these strategies. In reality, their performance may actually be much lower than the results shown here. The primary differences between the two packages reflect the performance of the transit modes and their costs. This is reflective of the ability for commuter rail to attract greater ridership than bus service, but at a much greater cost.

**TABLE 2.11
INVESTMENT PACKAGE A PERFORMANCE**

Measure of Effectiveness	Strategy				
	Freight to Rail	Commuter Rail	TDM	TSM	Cumulative
Estimated Capital Cost (in millions)	\$300 to \$400	\$800	\$5	\$15	\$1,120 to \$1,200
Peak Period Volume Reduction on US 24					
Total Anticipated Traffic Reduction on US 24 (percent)	1 to 3	5 to 8	2 to 4	0	9 to 14
Anticipated Automobile Traffic Reduction (percent)	0	6 to 10	2 to 5	0	8 to 15
Anticipated Truck Traffic Reduction (percent)	10 to 11	0	0	0	10 to 11
Project Purpose and Need					
Improve Traffic Flow and Level of Service	Low	Low	Low	Medium	Medium
Reduce Travel Time Between Project Termini	Very Low	Low	Low	Low	Low
Improve Roadway Safety	Low	Low	Low	Medium	Medium
Enhance Regional Transportation Network	Low	Low	Very Low	Low	Medium
Accommodate Future Economic Growth	Low	Very Low	Very Low	Low	Low
Political Feasibility	Low	Very Low	High	High	Medium

Note: Individual strategy performances do not necessarily sum up to cumulative performance.

Table 2.13 compares the cumulative performance of these two packages against the performance of a highway alternative. The highway alternative is considerably more effective at improving the operations and safety of US 24, due primarily to its ability to divert a significantly greater number of trucks off US 24 than either Investment Package A or B. While Investment Package B is comparable in cost to the highway alternative, the highway alternative is better suited at meeting the current deficiencies of the US 24 Corridor.

Conclusion of Modal Analysis

The modal analysis investigated the possibility of utilizing several traditional and non-traditional transportation strategies to address the problems of US 24 Corridor. Attempting to divert traffic from US 24 to other routes does not appear to be a feasible solution, due to legal, political and

financial considerations, and inconclusive evidence that the strategies considered would produce effective and sustainable impact. Similarly, none of the individual multi-modal alternatives that were investigated appears to be able to successfully address the stated Purpose and Needs of the three planning sections. The most promising alternatives, combinations of the most promising of these strategies, do perform fairly well in addressing the wide array of key issues on the corridor, but not as cost-effectively as the highway alternative.

**TABLE 2.12
INVESTMENT PACKAGE B PERFORMANCE**

Measure of Effectiveness	Strategy				
	Freight to Rail	Commuter Rail	TDM	TSM	Cumulative
Estimated Capital Cost (in millions)	\$300 to \$400	\$5	\$5	\$15	\$325 to \$425
Peak Period Volume Reduction on US 24					
Total Anticipated Traffic Reduction on US 24 (percent)	1 to 3	1	2 to 4	0	4 to 7
Anticipated Automobile Traffic Reduction (percent)	0	1	2 to 5	0	3 to 6
Anticipated Truck Traffic Reduction (percent)	10 to 11	0	0	0	10 to 11
Project Purpose and Need					
Improve Traffic Flow and Level of Service	Low	Very Low	Low	Medium	Low
Reduce Travel Time Between Project Termini	Very Low	Very Low	Low	Low	Low
Improve Roadway Safety	Low	Low	Low	Medium	Medium
Enhance Regional Transportation Network	Low	Low	Very Low	Low	Medium
Accommodate Future Economic Growth	Low	Very Low	Very Low	Low	Low
Political Feasibility	Low	High	High	High	High

Note: Individual strategy performances do not necessarily sum up to cumulative performance.

**TABLE 2.13
COMPARISON OF PACKAGE PERFORMANCE**

Measure of Effectiveness	Strategy		
	Investment Package A	Investment Package B	Highway Alternative
Estimated Capital Cost (in millions)	\$1,120 to \$1,220	\$325 to \$425	\$5
Peak Period Volume Reduction on US 24			
Total Anticipated Traffic Reduction on US 24 (percent)	9 to 14	4 to 7	16 to 23
Anticipated Automobile Traffic Reduction (percent)	8 to 15	3 to 6	4 to 10
Anticipated Truck Traffic Reduction (percent)	10 to 11	10 to 11	40 to 50
Project Purpose and Need			
Improve Traffic Flow and Level of Service	Medium	Low	High
Reduce Travel Time Between Project Termini	Low	Low	High
Improve Roadway Safety	Medium	Medium	Very High
Enhance Regional Transportation Network	Medium	Medium	Very High
Accommodate Future Economic Growth	Low	Very Low	High
Political Feasibility	Medium	High	High

While alternatives need to be considered in the performance of corridor analyses, it is important to note that not all transportation strategies fare well in every environment. Many strategies often work best in environments with specific characteristics and attributes. Several of the most notable characteristics of the US 24 Corridor include: high percentage of truck traffic (although not necessarily very high volumes), low residential and employment density, and small central business districts. These factors greatly affect what solutions are feasible and reasonable for the US 24 Corridor. While alternatives considered in this report may be the most effective solutions in other regions, none appear to do so as cost-effectively as a four-lane highway alternative.

**2.2 US 24 NEW HAVEN
TO DEFIANCE
ALTERNATIVES
ANALYSIS**

For the US 24 New Haven to Defiance project, a broad range of modal alternatives were considered. These alternatives include:

- No Build.
- Transportation System Management (TSM).
- Transportation Demand Management (TDM).
- Transit.
- Rail freight.
- Highway.

The modal alternatives were evaluated on their ability to address the current and future transportation needs and problems identified in the US 24 New Haven to Defiance study area. Those alternatives satisfying the purpose and need of the project were carried forward to the next level of analysis, as documented in this Draft Environmental Impact Statement (DEIS).

**2.3 ALTERNATIVES
CONSIDERED AND
DISMISSED
2.3.1 No Build
Alternative**

The No Build alternative consists of only minor, short-term safety and maintenance improvements to US 24 that maintain its continuing operation. The No Build does not meet the needs of the study area, but is retained as the baseline condition to measure the potential impacts of the other alternatives.

**2.3.2 TSM and TDM
Alternatives**

TSM and TDM alternatives are made up of relatively low cost, small-scale improvements and programs that are designed to address the transportation of the study area by using existing facilities more efficiently. TSM and TDM improvements offer opportunities to increase capacity and reduce travel demand on the existing roadway network.

In the US 24 study area, specific examples of TSM/TDM improvements that could improve the efficiency and safety of US 24 include:

- Intersection improvements and/or signage improvements at the entrances for the Georgian Park and Havenwood Forest subdivisions. Improvements could include some cost-effective combination of a signalized intersection, center-turning lane, increased warning signs, and improved pavement markings.
- Intersection improvements at the entrance to the Uniroyal/BF Goodrich Plant.
- Intersection and signage improvements at the US 24/Woodburn Road intersection near the Woodlan High School. Improvements would include new turn/storage lanes and better signalization at that intersection, flashing warning signs approaching the intersection, and warning signs denoting reductions in speed.
- Grade-separation/intersection improvements at the US 24/SR 101 intersection. Improvements would include the grade separation of the intersection and the addition of direct access ramps.
- Bypass of the Village of Antwerp on a new alignment. Although this is beyond the scope of a TSM solution, a bypass would be more feasible than improvements to existing US 24 through the village due to the close proximity of buildings near the existing roadway. If a bypass of the Village of Antwerp is not feasible, additional warning signs and signal timing of the three intersections along US 24 in Antwerp or elimination of unwarranted signals along US 24 in Antwerp would be advisable.
- Grade separation/interchange improvements of the two US 24/US 127 intersections. Improvements would include the grade separation of the intersections and the addition of access ramps for both the north intersection (Defiance County) and the south intersection (Paulding County).
- Improvements to the CSXT rail crossing with US 24 west of the City of Defiance. A grade separation could be warranted based on the volume of rail traffic and traffic volumes on US 24.
- Intersection improvements at the US 24/SR 424 intersection. The improvements would include reconfiguring the intersection so that westbound traffic from SR 424 does not have to cross the eastbound lane of US 24.
- Intersection/interchange improvements at the West High Street/US 24 intersection.

Improvements could include the grade separation of the interchange and the addition of direct access ramps.

Other TSM/TDM measures that could be proposed on a corridor-wide basis include:

- Increased law enforcement.
- Emergency rapid response teams to quickly respond to accidents.
- New and/or improved signage (including variable message signs) and pavement markings.
- Traveler advisory radio, new wide shoulders, and programs and incentives to encourage the promotion, establishment and use of car pool and van pool programs.
- Guaranteed ride home program for users of public transportation and car/van pools.

The TSM measures proposed for US 24 would provide benefits in increasing system capacity and reducing congestion at the specific locations mentioned above. An effective combination of TSM and TDM improvements, such as those described above, would provide some limited capacity benefits throughout the study area.

However, TSM and TDM improvements alone could not increase capacity and reduce or shift demand sufficiently to address adequately the transportation needs and problems identified in the study area. TSM improvements such as grade separation and intersection improvements leave many areas of US 24 without significant increases in capacity or an improved and more efficient highway facility. Level of service problems in several key areas along US 24 would not be addressed by TSM improvements and the combination of TSM and TDM improvements is unlikely to reduce or shift demand sufficiently to significantly improve the level of service in the study area. Finally, TDM measures have limited applicability to truck traffic and would not significantly impact the anticipated growth in truck traffic in the corridor, which constitutes a major element of the study area's travel problems.

A detailed discussion on the applicability of TSM/TDM strategies to the US 24 Corridor is included in the *Preliminary Alternatives Summary* (July 1999) and the *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio* (September 2002).

2.3.3 Transit Alternatives

Transit alternatives would include the establishment of new fixed-route transit services such as express bus or subscription bus services between Defiance and Fort Wayne, as well as improvements to fixed-route and other bus services within the more urbanized settings of Defiance and Fort Wayne. Bus service between Defiance and Fort Wayne on a schedule that could accommodate commuters, in particular, would provide a valuable contribution to addressing the transportation needs of a small but important number of persons traveling in the study area. However, the study area's low population, housing and employment densities and its rural character make bus service an impractical option for most of the trip purposes served by US 24.

Transit service could be provided by an extension of service by the Fort Wayne Public Transportation Company (PTC), which currently does not extend east of I-469. The service could operate with limited AM peak-period trips (two or three per morning, depending on demand) traveling westbound on US 24 from Defiance in the mornings. The service could utilize medium capacity vehicles such as cutaway vehicles (airport shuttle-style) or 9.2 meter (30-foot) transit buses, which could be upgraded to larger vehicles (i.e. over-the-road motor coaches or 12.2-meter [40-foot] transit vehicles) as ridership increases. Express-only service with no local stops or limited stop service to larger employers such as Dana, BF Goodrich, etc., would provide public transit service that approximates the directness, speed and convenience of driving. The service could operate from terminal park and ride lot locations such as the vicinity of the US 24/SR 66 interchange in Defiance. This type of transit service targeted to a single employer or small number of major employers has been successfully implemented in several areas of the country. One example is in Louisville, Kentucky where express transit service is provided to the United Parcel Service headquarters.

Existing bus service within Fort Wayne might be adjusted slightly, in terms of route alignment and schedules, to better serve certain portions of the study area or to connect to fixed-route

express or subscription bus services. However, on a corridor-wide basis, US 24 provides minimal application for relatively frequent, fixed-route transit services of the type commonly found in large urban areas and their suburban peripheries. Public transit services are usually appropriate only in a more densely populated urban context where zoning, land use and other regulations promote their use, thus justifying the expense of initial startup costs and ongoing operational expenses. USDOT standards (1987) state that large-scale public transportation is relevant only for urbanized areas with a population over 200,000 and the density of population, housing, and employment also is sufficient to support successful implementation of fixed-route service.

The developed density and land use pattern of the US 24 Corridor are insufficient to provide practical fixed-route, fixed schedule bus service. Spot densities in excess of 10 dwelling units per hectare (four units per acre) certainly exist in the towns, villages, and mobile home parks along the corridor, interspersed with low density residential and industrial developments. New Haven, Indiana and Defiance, Ohio are the two largest municipalities within the study area. The 2000 Census also shows a population of 12,406 for the City of New Haven, Indiana. Allen County population estimates for 2015 indicate a total residential population of 339,486. The majority of this population will likely be concentrated in the City of Fort Wayne. The 2000 Census indicated that the City of Defiance had a residential population of 16,465. Recent (2015) population estimates for Defiance and Paulding counties estimate the population of the two counties to be 41,600 and 20,400 persons, respectively, giving the two Ohio counties a combined population of 62,000 persons. The two Ohio counties are each more than 1025.6 square kilometers (400 square miles) in size, with a combined projected population density of 29.2 persons per square kilometer (74.9 persons per square mile).

Bus service could be provided between Fort Wayne and Defiance.



To provide for the minimal demand for public transit service in rural areas, USDOT has established the Section 18 public transit program to provide startup funding and operating subsidies to provide public transit service to rural communities. The US 24 Corridor is an ideal area for the provision of Section 18 service, though currently there is no such service in either the Indiana or Ohio portion of the study area. Section 18 funding is typically provided to agencies providing public transit service to sparsely populated rural communities. Sixty percent of Section 18 providers serve areas with population densities of less than 39 persons per square kilometer (100 persons per square mile), while one in eight providers serves areas with population densities below 3.9 persons per square kilometer (10 persons per square mile). Funding is provided to rural governmental entities to provide a minimal level of transit service to the transit dependent including people with disabilities, the elderly, and people who cannot afford or are

unwilling, to drive. However, the characteristics of typical Section 18 transit systems clearly indicate that they are incapable of moving more than a small portion of person-trips in the study area. The average Section 18 provider has a fleet of six vehicles and provides about 83,000 person-trips per year. Section 18 agencies typically provide demand-responsive, rather than fixed-route service. Users arrange in advance to be picked up or dropped off, and the transit provider attempts to group as many person-trips as practical on the same trip. Only one-fifth of Section 18 trips carry people to their jobs. A much larger percentage of trips provide access to human services agencies or health care providers.

Section 18 transportation is an essential service in rural areas, but the greatest value of these services is in the social service it provides to the transit-dependent population of rural areas, not in their potential for diverting automobile trips. Most Section 18 operators lack the capacity to carry more than a very small portion of the trips made in their service area, and the service they provide is not a reasonable alternative to driving for those who are capable of doing so. Where such services do not exist in the study area, their implementation should be encouraged for the benefit of those who need them. However, Section 18 service, even at expanded funding levels, could not significantly improve traffic conditions or otherwise address the problems of the US 24 Corridor.

Even if public transit service were a viable mode for a significant proportion of the trips using US 24 between Defiance and New Haven, such service would not help with through trips or to truck traffic. Based on these factors, it is clear that public transit service has limited applicability to the study area and could not significantly address or ameliorate the area's transportation problems.

A more detailed discussion on the applicability of transit alternatives to the US 24 Corridor is included in the *Preliminary Alternatives Summary* (July 1999) and the *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio* (September 2002).

2.3.4 Rail Freight Alternative

The rail freight alternative would seek to improve and/or increase the capacity and competitiveness of the existing rail freight lines in the study area while decreasing the amount of truck traffic. This would entail shifting goods that are currently transported in and through the study area from trucks to railroads.

Existing rail freight facilities in the US 24 study area consist of two major rail lines and one short-line operator (Figure 2.5). The two major operators in the project area are CSXT and NS. CSXT operates a double-track line that extends from Defiance eastward through Ohio to Youngstown. It is one of the busiest rail lines in the state, carrying approximately 50 trains a day through the study area. Connections from this line are also possible to other railroads in the City of Defiance (Maumee & Western Railroad) and in Hamler in Henry County and to the Port of Toledo at Deshler.

The NS line extends from Woodburn, Indiana, through Paulding, Putnam, and Hancock counties, terminating in Arcadia, Ohio. This rail line is one of NS's east-west connectors in Ohio and is part of the national system.

The short-line is the Maumee & Western Railroad, which primarily serves customers between Liberty Center, Ohio, and Woodburn, Indiana. Connections to larger lines are possible at Defiance (CSXT) and Woodburn (NS). The rail line, formerly operated by the Indiana Hi-Rail Corporation (IHRC) was purchased by the Maumee & Western Railroad after IHRC went bankrupt in March 1998. The rail line presently serves approximately 15 customers along the route, shipping mainly locally grown agricultural products (i.e. grains), sand, silica, and other bulk commodities. Approximately 10 trains per week use the Maumee & Western rail line. The short-line is a single track operation and has undergone considerable upgrades. Recently, \$1.3 million was spent on track repairs needed to open the rail line for use. Despite the upgrade, a 16.1 kph (10 mph) speed limit is imposed on the line due to the use of jointed rail and the fact that the subgrade underlying ballast is poor. Currently, there are no plans for expansion of this rail line through the study area. However, through coordination undertaken for this project, the ORDC

has indicated a preference to preserve the right-of-way for future rail use (Letter from James F. Seney, ORDC, January 23, 2002).

Toledo, Ohio, located to the northeast of the project area, is the third largest rail center in the United States. Despite the presence of large-scale rail operations in Toledo and the presence of two major rail lines in the study area, there is currently no through railroad line that provides a direct connection between Fort Wayne and Toledo.

According to a 1998 truck commodity origins and destinations survey for the City of Defiance conducted by ODOT, approximately 50 percent of the goods transported via truck on US 24 pass through the region, beginning or ending at the Port of Toledo. These trucks carry a wide variety of cargo items, including scrap metal, grain, automotive parts, hazardous materials, newsprint, construction materials, general merchandise, grocery/food items, and less than a truck load (LTL) cargo. The majority of the westbound trucks, including those from the port, also pass through the region, destined for points outside the study area. Only 20 percent of westbound traffic from Napoleon, Ohio was destined within the study area.

Reducing the volumes of truck traffic on US 24 in the study area would only be likely through a direct rail connection between Fort Wayne and the Port of Toledo. That connection would be efficient if it was near or parallel to existing US 24. Such a connection would involve the construction of new tracks within new or existing rights-of-way (most likely on the current Maumee & Western line) and substantial upgrades to existing rail lines, including double-tracking, new ballast, tracks, ties and signals. These improvements would require a substantial investment of several million dollars, which may be beyond the means of a short-line operator, or the ORDC. The larger railroads (CSXT and NS) also may be unwilling to provide these improvements.

Current trends in the rail freight industry point towards the consolidation of rail traffic to existing higher density lines through the use of doublestack container-on-flat-car operations (COFC-stacking containers two to a low-slung car) as well as trailer-on-flat-car operations, also known as "pig" trains (TOFC-piggyback flat cars that carry trailers). Smaller scale lines/operations, including short-lines, like the Maumee & Western are usually abandoned. Consolidation to larger, more profitable lines is usually only possible for larger volumes of commodities that travel longer distances or have common origins or destinations that are in turn redistributed by other modes, often trucks. Because of this trend, it is unlikely that CSXT or NS would construct a new rail line with a direct connection between Fort Wayne and the Port of Toledo.

The rail freight alternative is dependent on privately owned railroad companies. The construction of additional rail lines would have to be provided by private companies, not through ODOT and the public sector. The provision of additional rail facilities does not address the transportation needs of the study area. The proposed rail freight improvements would not offer the expedited delivery or flexibility of goods movement that trucking offers. Additionally, the rail freight alternative would not address roadway capacity or design issues. The rail freight alternative will not accommodate economic development in the region. Based on the above analysis, the rail freight alternative is eliminated from further consideration as the Preferred Alternative.

Highway alternatives include various strategies to improve the existing US 24 that are more substantial than the TSM alternatives. Proposed highway improvements include:

- Construction of additional capacity (travel lanes).
- More substantial intersections such as fully grade-separated interchanges.
- Substantially larger shoulders.

These improvements entail the construction of a new limited access highway on a new alignment in the existing right-of-way or on a separate new alignment. The highway alternatives could also consider bypasses around existing towns such as Antwerp and Woodburn or a combination of strategies.

2.4 REASONABLE ALTERNATIVES

2.4.1 Highway Alternatives

The highway alternatives provide the highest degree of flexibility in meeting all of the transportation needs identified for the US 24 New Haven to Defiance project. A new highway alternative would meet the capacity, congestion, and safety needs of the current facility through additional lanes, improved design/geometry, and the elimination of some access points/crossroads.

The highway alternatives in the form of upgrades to existing US 24, new alignment, bypasses, or a combination of these three, offer the flexibility of design to meet the existing and future transportation, mobility and accessibility needs of the study area's residents, the communities from New Haven to Defiance, and the national users of the facility. A new roadway would increase capacity, improve the level of service and allow higher volumes of traffic (both passenger and freight) to more safely use the facility. A new limited-access design with bypasses would eliminate the inadequate design features of the existing road and greatly improve safety.

Based on the above analysis, only the highway alternatives adequately address the transportation problems and needs associated with US 24. Therefore, only the highway alternatives were carried forward for further study in the in-depth analysis required for the US 24 DEIS.

2.4.2 Development of Preliminary Corridors

Based on the results of the purpose and need study and the modal analysis, only the highway alternatives were found to meet the project purpose and need. The next step of the ODOT's Transportation Development Process (TDP) entailed developing several 609.8-meter (2,000-foot) wide corridors between the project termini. First, an environmental inventory map of the study area was developed through researching secondary sources (i.e. agency databases, literature, national wetland inventory maps). Environmental features such as wetlands, streams, historic sites, and community facilities were identified and plotted on project mapping. After the environmental inventory map was complete, 609.8-meter (2,000-foot) wide corridors were developed through the study area. In developing the corridors, the goal was to avoid as many of the environmental features as possible and utilize existing transportation corridors (i.e. railroads). A total of 14 preliminary corridors consisting of adjoining segments (A through T) were developed jointly by ODOT and the Indiana Department of Transportation (INDOT) throughout the US 24 study area (Figure 2.6). These corridors were presented to state and federal agencies and local citizens during Concurrence Point #1 of the TDP.

2.4.3 Corridor Analysis

A comparative analysis was conducted on the 14 preliminary corridors to assess the environmental impacts associated with each of them. The analysis approach was a broad-brushed effort to screen preliminary corridors and to identify Feasible Corridors for further study in Step 4 of the TPD.

The environmental features within the study area were incorporated into a geographic information system (GIS) database for the alternatives analysis. These environmental features included community facilities (cemeteries, churches, institutional facilities, recreational facilities, residences and businesses), cultural resources (historic structures and sites), ecological resources (natural areas, wetlands, woodlands, streams, known areas with protected and/or sensitive features), and land use (protected land uses and built-up land). Based on the data values generated for each corridor within each category, ratings were assigned (none, low, medium, high) relative to the data values across the 14 preliminary corridors. Data values are shown in Table 2.14. GIS data categories with zero values or equivalent values were removed from the comparative analysis.

The ratings were then totaled and compared across the 14 corridors, as shown in Table 2.15. The final comparison of the total number of high to low rankings for the corridors relative to each other is graphically depicted in Figure 2.7. The corridors with low numbers of rankings in the high category (4, 7, 10, 12, 13, and 14) are the least impacting corridors relative to each other. Conversely, Corridors 5, 8, and 11 have greater impacts associated with them (Figure 2.7).

An important assumption was made for the comparative analysis. All GIS database categories were weighted evenly in importance, even though there are instances where a particular category

or involvement may be more or less significant compared to the others. These quantitative comparisons give equal weight to values within categories and do not reflect the individual qualitative significance of a data point. This point is illustrated by the inclusion of the St. Paul Teacherage in Segment E, included in Corridors 2, 3, 4, 5, 6, and 7. This historic structure is designated a “significant” structure by the Indiana Historic Preservation Office. All other historic sites in the study area within Indiana have been identified as “contributing” structures. The State of Indiana rates historic significance with a scale from most to least importance as outstanding, significant, contributing, and non-contributing. The state designation of the St. Paul Teacherage was not a factor in the comparative analysis of the 14 corridors.

**TABLE 2.14
RELATIVE RANK OF THE PRELIMINARY CORRIDORS**

Corridor	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Segments	ABDT	ABEFLMPOST	ABEFLMOQST	ABEFLNRST	ABEGKMPPOST	ABEGKMOOST	ABEGKNRST	ACHLMLPOST	ACHLMOOST	ACHLNRST	ACHKMPPOST	ACHKMOOST	ACHKNRST	ACGRST
Community Facilities	Cemetery	0	2	0	0	2	0	0	2	0	0	2	0	0
	Church	0	0	0	0	0	0	0	0	0	0	0	0	0
	Institutional (town halls, hospitals, etc.)	1	3	3	2	3	3	2	3	3	2	3	3	2
	Recreational Area (campgrounds, etc.)	0	0	0	0	0	0	0	0	0	0	0	0	0
	School	0	0	0	0	0	0	0	0	0	0	0	0	0
	Structures (total)	267	531	395	381	464	328	314	445	309	295	418	280	266
	Residential	42	223	176	174	197	150	148	192	145	143	176	129	127
	Non-residential	37	42	33	22	33	24	13	45	36	25	38	27	16
	Undetermined	188	266	186	185	234	154	153	208	128	127	204	124	123
Cultural Resources	Historic Structures	3	3	4	4	8	7	7	11	10	10	12	11	11
	Historic Sites	1	4	4	4	2	2	2	4	5	4	2	2	0
	Environmentally Sensitive Areas	16	6	5	5	6	5	5	6	5	5	6	5	0
Ecological Resources	Protected Natural Areas	0	0	0	0	0	0	0	0	0	0	0	0	0
	Parks	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rare, Threatened and Endangered Species	0	0	0	0	0	0	0	0	0	0	0	0	0
	Wetlands (acres)	70	304	264	317	304	267	319	316	361	73	37	24	76
	Woodlands (acres)	722	642	508	533	684	550	575	613	479	504	656	522	547
	Stream Crossings	24	22	24	17	31	33	24	25	25	19	32	32	24
Land Use	Airport	0	0	0	0	0	0	0	0	0	0	0	0	0
	Amish Land (acres)	218	0	0	0	0	0	0	0	0	0	0	0	0
	Commercial Use (large-scale)	0	3	2	0	3	2	0	3	2	0	3	2	0
	Hazardous Material Sites	0	5	4	2	5	4	2	5	5	2	5	4	2
	Industrial–Existing and Future (acres)	71	74	74	74	74	74	74	437	437	437	437	437	437
	Livestock Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (substations, etc.)	1	1	1	1	1	1	1	1	1	1	1	1	1
	Quarry	0	0	0	0	0	0	0	0	0	0	0	0	0
	Farmlands (acres)	7,054	6,483	6,102	6,044	6,359	6,808	6,750	5,514	5,963	5,905	6,205	6,654	6,596
	Length (miles)	36.9	34.2	34	34	34.7	34.6	34.6	33	32.8	32.9	33.7	33.6	33.6
Railroad Crossings	1	5	5	5	5	5	5	5	5	5	4	4	4	

2.4.4 Public Comments

The first public involvement meetings for the US 24 New Haven to Defiance project were held on June 15, 16, and 17, 1999. During the meetings, ODOT solicited specific comments on the

purpose and need for the project, possible transportation alternatives, and the 14 preliminary corridors. The public was also invited to provide comments on the project by calling the toll-free hotline, submitting comments electronically through the project website, or mailing written comments to the US 24 project office.

**TABLE 2.15
COMPARATIVE ANALYSIS MATRIX**

Corridor	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Amish Land (acres)	Red													
Cemetery		Red			Red			Red			Red			
Commercial Use (large-scale)			Yellow		Red	Yellow		Red	Yellow		Red	Yellow		
Environmentally Sensitive Areas	Red	Cyan	Yellow	Yellow	Cyan	Yellow	Yellow	Cyan	Yellow	Yellow	Cyan	Yellow	Yellow	
Hazardous Material Site		Red	Cyan	Cyan	Red	Cyan		Red	Red	Cyan	Red	Cyan	Cyan	Yellow
Historic Structures	Yellow	Yellow	Yellow	Yellow	Cyan			Red	Cyan	Cyan	Red	Red	Red	
Historic Sites	Yellow	Cyan	Cyan	Cyan				Red		Cyan	Cyan	Cyan	Cyan	
Industrial (existing /future [acres])	Yellow	Cyan	Cyan	Cyan	Cyan			Red	Red	Red	Red	Red	Red	
Institutional (town halls, hospitals, etc.)	Yellow	Red	Red	Cyan	Red	Red	Cyan	Red	Red	Cyan		Red	Cyan	Cyan
Structures (total)	Yellow	Red	Red	Red	Red	Cyan	Yellow	Red	Yellow		Red	Yellow	Yellow	Yellow
Residential	Yellow	Red	Red	Red	Red	Red	Cyan	Red	Yellow		Red	Yellow	Yellow	Yellow
Non-residential	Red	Red	Red	Yellow	Cyan	Yellow		Red	Red		Red	Yellow	Yellow	Yellow
Undetermined	Red	Red	Red	Cyan	Red	Yellow		Red	Yellow		Red	Yellow	Yellow	Yellow
Wetlands (acres)	Yellow	Cyan	Cyan	Red	Cyan	Cyan	Red	Red	Red	Cyan	Yellow	Yellow	Cyan	Yellow
Woodlands (acres)	Red	Red	Yellow	Cyan	Red	Cyan	Cyan	Cyan	Yellow		Red	Cyan	Cyan	Yellow
Stream Crossings	Cyan	Cyan	Cyan	Yellow	Red	Red	Cyan	Cyan			Red	Red	Cyan	Red
Farmlands (acres)	Red	Cyan	Cyan	Yellow	Red	Red	Red	Yellow	Yellow		Yellow	Yellow	Yellow	Red
Length (miles)	Red	Cyan	Cyan	Cyan	Red	Cyan	Cyan	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
R.R. Crossings	Yellow	Red	Cyan	Cyan	Cyan	Cyan								
Totals														
High	7	10	6	4	11	5	3	12	7	2	12	4	2	3
Medium	1	7	7	7	7	8	9	4	2	5	5	6	9	2
Low	8	1	4	5	0	5	4	2	8	9	1	7	5	7
None	3	1	2	3	1	2	3	1	2	3	1	2	3	7

Approximately 200 written comments were received from concerned citizens about the US 24 project. In general, most of those who responded were in favor of making improvements to US 24. A common belief expressed was that the US 24 project is long over due, and construction should begin as quickly as possible. Because of farmland impacts and high construction costs, most people wanted the new route for US 24 to remain in the vicinity of the existing route.

Based upon the comments received, the most popular corridors were 2, 3, and 4. Corridor 4 was the most favored of all 14 corridors because it was considered more direct, generally parallels existing US 24, and was believed to be the least costly to construct. Commentors also seemed to think that Corridor 4 would have minimal impact on the local economies because many of the businesses are located near existing US 24. In addition, many people supported the idea of paralleling existing US 24 as much as possible, in order to use land that is already disturbed by transportation corridors and development.

A variety of issues were raised in the comments submitted on the project. These include:

- Impacts to farmland: Many respondents discussed the region’s highly productive farmland and believe special consideration should be made to protect it. One measure suggested was to maximize the use of existing disturbed rights-of-way such as the current roadway corridor, railroad corridors, or canals.
- Economic impacts: Some people were concerned that if the new US 24 is constructed

far from the existing US 24, the economies of Antwerp, Paulding, and Woodburn would suffer because they are very dependent on US 24. In the Defiance area, a new interchange at West High Street and US 24 is important to provide access for the industrial parks, businesses, and local residences. In the Woodburn area, a new interchange for the industrial park is important for access to and from US 24.

- Roadway safety and congestion: A major concern for US 24 is the amount of large truck traffic on the roadway. Trucks, especially in the downtown areas, cause traffic jams and sometimes create unsafe conditions. Some individuals suggested completing bypasses around small towns (especially Antwerp) before constructing other sections of the road in order to ease congestion as quickly as possible.
- Relocations: Many people stated that the route selected should minimize the number of residents relocated for the roadway.
- Improving existing US 24: Many commenters requested that existing US 24 be improved instead of constructing a new highway alignment.

2.4.5 Corridor Selection

A project meeting was held on July 6, 1999, at the ODOT District 1 office in Lima, Ohio to discuss corridor selection. The purpose of the meeting was to narrow the selection of the 14 preliminary corridors for further study in Step 4 of the TDP. The meeting focused on an overview of the corridor development process, comments received at the public involvement meetings, and the analysis conducted on the 14 preliminary corridors.

Corridor selection was based on a process of elimination. The corridors and segments were individually evaluated in regard to their environmental features, public comments, and consistency with local and regional planning. During this process, modifications to some of the corridors and segments were developed. For example, the Defiance County Engineer's Office suggested a new Corridor Segment (U) north of the Maumee River connecting to Segment O south of the river.

Segment U was proposed 0.8 kilometer (0.5 mile) south of SR 18 and required a new crossing of the Maumee River. This connector was intended to improve access and interchange geometry approaching Defiance while minimizing impacts to businesses and residences. Other corridor modifications included combining segments or widening them to 1219.5 meters (4,000 feet).

The corridors and segments least favored by the majority of the public who had submitted comments, had a high number of environmental impacts, or were inconsistent with local and regional planning, were eliminated from further consideration. The following points summarize the rationale for eliminating corridors and segments.

- Corridors 1, 2, 3, 5, 6, 8, 9, and 11 were eliminated from further study based on the high number of environmental impacts associated with each corridor and public input.
- Corridors 1 and 14 would impact the greatest number of farms and adversely affect the agriculture industry of the region.
- The Northeastern Indiana Regional Coordinating Council (NIRCC) has included the proposed widening of US 24 in their Long-Range Transportation Plan since 1991. Segments D, C, H, and I are not consistent with the regional 2015 and 2025 plans. In addition, representatives of Indiana were opposed to Segments D, C, H, and I because of farmland impacts and future industrial development impacts.
- Segment D would impact an Amish community and require a new bridge crossing over the Maumee River. These issues removed Corridors 1, 8, 9, 10, 11, 12, 13, and 14 from consideration.
- Engineering constraints occur in Segment Q affecting potential interchange geometry from the close proximity of the existing rail corridor to US 24. Additionally, the potential number of business and residential impacts associated with this relatively short segment was high and cause for dropping this segment from further consideration. This action removed Corridors 2, 3, 5, 6, 8, 9, 11, and 12 from further consideration.

As a result of the corridor selection process, Corridors 4 and 7 were selected for further study. In addition to these corridors, several modifications that evolved during the project meeting were studied (Figure 2.8). The modifications to Corridors 4 and 7 included:

- Addition of an expanded corridor inclusive of the area bounded by Segments F, G, and J.
- Segments O and N were combined and studied as a single 1219.5-meter (4,000-foot) wide segment centered on the railroad tracks and shifted south of the railroad at US 127, bypassing the Town of Cecil to the south.
- Addition of a new Corridor Segment (U) north of the Maumee River, which connected to Segment O, south of the river.
- Addition of a new Corridor Segment (X) north of the Maumee River, which connected to Segment W south of the river.

In response to public comments, a new corridor was added to the project to be studied as a viable option. This was a 152.4-meter (500-foot) wide corridor that followed the path of existing US 24 (Figure 2.8). Improvements to US 24 to be considered include:

- Widening the road to four lanes.
- Adding more lanes for turning movements.
- Straightening curves.
- Intersection and interchange improvements.
- Improving the CSXT railroad crossing.

State and federal resource agencies were also involved in the corridor selection process. For Concurrence Point #1 the agencies were provided with the *US 24 Preliminary Alternatives Summary* (July 1999) for review and comment. This document contains the purpose and need statement, the modal analysis, and the results of the preliminary corridor analysis. In regards to the preliminary corridors, several agencies commented that any corridor that requires a new location crossing of the Maumee River should be eliminated from the project. In addition, Corridors 4 and 7 should be carried forward for further study because of the minimal amount of potential environmental impacts associated with them. The resource agencies also encouraged ODOT and INDOT to investigate improvements to existing US 24. Comments provided by the resource agencies resulted in the following changes to the corridors selected for further study:

- Corridor Segments U and Y were eliminated in their entirety.
- Corridor Segment X north of the Maumee River was eliminated.
- A bypass around the Village of Antwerp was added to the corridors.
- Corridors 10 and 13 were added back into the study.

As a result of the corridor analysis, public involvement, and agency coordination, five Feasible Corridors were selected for further study in the fall of 1999. These corridors were 4, 7, 10, 13, and existing US 24 (Figure 2.9). The width of these corridors varied from 152.4 meters (500 feet) for the existing US 24 Corridor to 609.8 to 1219.5 meters (2,000 and 4,000 feet) for Corridors 4, 7, 10, and 13.

2.4.6 Development of Feasible Alternatives

Within the five Feasible Corridors, a total of 26 highway alternatives were developed. These include 24 four-lane expressways on new alignment (Alternatives A through X), a two-lane improved highway alternative on existing US 24 (Alternative Y), and a four-lane expressway along existing US 24 (Alternative Z). Alternatives A through X consist of various combinations of 20 segments developed within Feasible Corridors 4, 7, 10 and 13. These segments and the alternatives are shown in Figure 2.10. The design for Alternatives A through X includes an expanded right-of-way footprint between I-469 and the Indiana/Ohio State Line to allow for future freeway development in Allen County, Indiana.

Design Criteria

Design standards for all the Feasible Alternatives were developed in accordance with guidelines presented in the American Association of Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets* (2001) and state design requirements such as ODOT's *Location and Design Manual*, Volume I (1999); ODOT's *Bridge Design Manual* (2000); INDOT's *Part V Road Design*, Volumes 1 and 2 (1995); ODOT's *Construction and*

Materials Specifications (1997); and INDOT's *Construction and Materials Specifications* (1999). Table 2.16 presents the design criteria used for the development of the Feasible Alternatives.

**TABLE 2.16
DESIGN CRITERIA**

Design Feature	US 24		Improved Local Roads	
Design Speed	112.9 kph (70 mph) 104.8 kph (65 mph) (posted – Ohio) (Indiana Freeway) 88.7 kph (55 mph) (posted – Indiana Expressway)		96.8 kph (60 mph) (Desirable) 56.5 kph (35 mph) (Minimum)	
Maximum Horizontal Curvature	3° 15' (Rural) 2° 45' (Urban)		6° 00' (Rural) 5° 30' (Urban)	
Maximum Vertical Grade	3% (Level) 4% (Rolling)		5% (Level) 6% (Rolling)	
Stopping Sight Distance	259.2 m (850 ft.) (Desirable) 190.6 m (625 ft.) (Minimum)		152.4 m (550 ft.) (Desirable) 137.2 m (450 ft.) (Minimum)	
Vertical Curves "K Value"	<u>Crest</u> 544 (Desirable) 294 (Minimum)	<u>Sag</u> 214 151	<u>Crest</u> 318 (Desirable) 207 (Minimum)	<u>Sag</u> 158 123
Maximum Superelevation	0.083 m/m (0.083 ft./ft.)		0.083 m/m (0.083 ft./ft.)	

Note: Figures above based upon preferred design speeds unless otherwise noted

Alternatives A through X (Alternatives on New Alignment)

Within Corridors 4, 7, 10, and 13, feasible highway alternatives (Alternatives A through X) were developed (Figure 2.10). The Feasible Alternatives are comprised of combinations of 20 segments approximately 97.5 meters (320 feet) in width in Indiana and 91.4 meters (300 feet) in width in Ohio developed within the corridors. Various combinations of the 20 segments resulted in 24 possible alternatives. The design for Alternatives A through X includes an expanded right-of-way footprint between I-469 and the Indiana/Ohio State Line to allow for future freeway development in Indiana. For these 24 alternatives, both an expressway and a freeway option were developed. Both options provide for two lanes of travel in each direction separated by a grass median. Access is either limited (at-grade and/or overpass with ramp intersections) or controlled (overpass with ramp only intersections), depending on the design option.

The expressway option has separated lanes for traffic traveling in opposite directions. Access is limited to a combination of at-grade crossings and interchanges. The principal advantages of an expressway are driver comfort and ease of operations. Basic design elements include 3.7-meter (12-foot) travel lane widths, full width paved shoulders, fencing along the right-of-way, and grade-separated railroad crossings. Expressways are designed for high-volume, high-speed traffic operations.

The freeway option is similar to the expressway option with the exception of full access control. Preference is given to through traffic by providing access connections via overpasses with ramps to selected public roads only and by prohibiting all at-grade crossings and direct connections with private driveways. The principal advantages of controlled access are the preservation of as-built capacity of the freeway and higher speed. Freeways are grade-separated at all railroads and at selected public crossroads. The remaining crossroads are interconnected or terminated.

A design speed of 112.9 kph (70 mph) was used for both the freeway and expressway options to determine the horizontal and vertical alignments. The typical section for both options includes four 3.7-meter (12-foot) travel lanes (two in each direction of travel), a 3.1-meter (10-foot) paved right side shoulder, a 1.2-meter (4-foot) paved left side shoulder, and a 25-meter (82-foot) wide grass median in Indiana and an 18.3-meter (60-foot) wide grass median in Ohio. Figure 2.8 shows a typical section of these alternatives.

In either option, overpasses would be located at all existing railroad lines. Bridges over rivers, streams, and crossroads would be constructed to the same widths as the approach roadway,

including pavement and shoulders. The two existing bridges over the Maumee and Tiffin rivers west of Defiance would be removed and replaced in both options.

A limited number of local roads would need to be realigned, relocated, or terminated as part of controlling access under both options. Access to the expressway option would be provided by at-grade intersections located at state routes, frequently traveled roads, and roads that provide access across the Maumee River. The expressway option provides access points at various existing roadways, as shown in Table 2.17. Full control of access to the freeway option is provided by a limited number of intersections generally located at state routes, and roads that provide access across the Maumee River. The freeway option provides seven access points for each alternative. These access points would be located at the following locations: Ryan/Bruick Road, Webster Road, SR 101, SR 49, US 127, SR 424, Switzer Road, and West High Street. Frequently traveled roads selected for at-grade crossings in the expressway option would either have an interchange or overpass in the freeway option to minimize any disruption to local traffic movements. The construction of new roads and/or reconfiguration of local roads would meet or exceed existing design conditions. These improvements may include wider roads, shoulders, and better visibility.

Drainage along these alternatives would be connected to the existing storm drainage system. In some locations, the existing storm drainage system would need to be relocated and/or improved to handle changes to the existing system. Some of these changes could include wider ditches, wider culverts, new (or relocated) ditches, and improved maintenance on existing ditches to allow for better drainage. In addition to the paved roadway section, where right-of-way permits, safety grading of shoulders would take place beyond the paved shoulders. This safety grading would be performed per current state standards, which entails an 8:1 slope beyond the paved shoulder for a distance of 2.9 meters (9.5 feet) followed by a recoverable ditch cross section. Guardrails would be installed in areas that right-of-way does not permit safety grading.

The estimated construction costs for the expressway options including right-of-way acquisition range from \$153,776,763 (Alternative T) to \$165,345,624 (Alternative E). The estimated construction costs for the freeway options range from \$210,441,345 (Alternative T) to \$221,595,148 (Alternative E). These costs include the acquisition of approximately 669 hectares (1,652 acres) of right-of-way (including additional right-of-way to be purchased and preserved for the future development of interchanges in Indiana), damages for landlocked parcels, the displacement of approximately 17 to 60 residences and two commercial properties, and relocation costs. The costs also include mitigation of three major utility conflicts, which include the encasement of a major gas main and the relocation and/or modification of high-tension power lines and structures.

***Alternative Y (Existing
US 24 Two-Lane
Alternative)***

Within the existing US 24 Corridor, a two-lane alternative and a four-lane alternative were developed. Alternative Y, the two-lane alternative, improves the existing roadway by adding shoulders, improving intersections, and adding turning lanes. This alternative would continue to have unlimited access along the route as it currently exists. The posted speed limits, which range from 40.3 kph (25 mph) to 88.7 kph (55 mph), would remain the same along the route. The horizontal and vertical alignments would remain unchanged with the exception of a new grade-separated crossing of the CSXT Railroad west of Ashwood Road intersection. An overpass, approximately 9.2 meters (30 feet) above the railroad tracks, would be constructed for this crossing.

The typical section for the two-lane alternative includes two 3.7-meter (12-foot) wide travel lanes with 3.1-meter (10-foot) wide paved shoulders. Figure 2.11 shows a typical section of this improved two-lane alternative. This roadway design would also be applied to all existing bridges including the two over the Maumee and Tiffin rivers located west of Defiance. These two bridges would be widened to accommodate the 3.7-meter (12-foot) travel lanes and 3.1-meter (10-foot) shoulders. The only two exceptions to the typical section design would be within the Village of Antwerp where widening the shoulders is not possible with the proximity of commercial and residential buildings to US 24, and for a short section just west of the SR 424 intersection. Within the Village of Antwerp, current on-street parking would be removed to allow for wider lanes and for the addition of a turning lane in the middle of the roadway.

**TABLE 2.17
CHANGES AT CROSSINGS WITH EXISTING ROADS**

County	Local Roadways	Project Impacts
Allen County, Indiana	Harper Rd.	Closed for all alternatives on new alignment.
	Doyle Rd.	At-grade intersection with all alternatives on new alignment.
	Ryan/Bruick Rd.	At-grade intersection with all alternatives on new alignment.
	Berthaud Rd.	Closed for Alternatives A, B, C, D, I, J, K, L, M, N, O, P. At-grade intersection with Alternatives E, F, G, H, Q, R, S, T, U, V, W, X.
	Bremer Rd.	Closed for Alternatives E, F, G, H, Q, R, S, T, U, V, W, X, Z.
	Webster Rd.	At-grade intersection with all alternatives on new alignment.
	Rousey Rd.	At-grade intersection with Alternatives A, B, C, D, I, J, K, L, M, N, O, P. Closed for Alternatives E, F, G, H, Q, R, S, T, U, V, W, X.
	Woodburn Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H.
	Sampson Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Grade-separated crossing with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. Closed with Alternative Z.
	Slusher Rd.	At-grade intersection with Alternatives Q, R, S, T, U, V, W, X. Grade-separated crossing intersection with Alternatives E, F, G, H.
	Fahlsing Rd.	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	Brobst Rd.	Closed for Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	Cole Rd.	Closed with Alternative Y.
	Gustin Rd.	At-grade intersection with all alternatives on new alignment.
	Becker Rd.	Closed for Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	SR 101	At-grade intersection with all alternatives on new alignment.
	Maumee Center Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H.
	Bull Rapids Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H.
	Paulding County, Ohio	State Line Rd. (T-1/C-1)
T-21/C-21		Closed for Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. At-grade intersection with Alternatives A, B, C, D, E, F, G, H.
C-11		At-grade intersection with all alternatives on new alignment.
T-29		Closed for Alternatives A, B, C, D, E, F, G, H, Z.
C-33		At-grade intersection with Alternatives A, B, C, D, E, F, G, H.
T-33		At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
T-144/C-144		At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
SR 49		At-grade intersection with all alternatives.
T-51		Re-aligned at-grade intersection with all alternatives on new alignment.
C-176		At-grade intersection with all alternatives on new alignment.
C-180		At-grade intersection with all alternatives on new alignment.
T-150		Closed for Alternatives A, B, C, D, E, F, G, H.
T-61		Closed for all alternatives on new alignment.
C-87		At-grade intersection with all alternatives.
T-83		Closed for all alternatives on new alignment.
US 127		At-grade intersection with all alternatives on new alignment.
C-206		East of US 24 – At-grade with C-87 with Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X. West of US 24 – Closed at the Maumee & Western Railroad with Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X.
T-69		At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Closed with Alternative Z.
T-97		Closed for Alternatives I, J, K, L, Q, R, S, T.

**TABLE 2.17
CHANGES AT CROSSINGS WITH EXISTING ROADS**

County	Local Roadways	Project Impacts
Paulding County (continued)	C-105/T-105	Grade-separated crossing under US 24 for all alternatives on new alignment.
	C-216	Closed for Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X.
	C-224	At-grade intersection with all alternatives on new alignment.
	C-115	At-grade intersection with all alternatives on new alignment.
	T-97	Closed for Alternatives I, J, K, L, Q, R, S, T.
	C-105/T-105	Grade-separated crossing under US 24 for all alternatives on new alignment.
	C-216	Closed for Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X.
	C-224	At-grade intersection with all alternatives on new alignment.
	C-115	At-grade intersection with all alternatives on new alignment.
	T-228	Closed for Alternatives A, B, E, F, I, J, M, N, Q, R, U, V.
	C-232	At-grade intersection with all alternatives on new alignment.
	C-250	West side of US24 closed with Alternative Y.
	C-123	Closed for all alternatives on new alignment.
	T-129	Closed for Alternatives C, D, G, H, K, L, O, P, S, T, W, X.
	C-133	At-grade intersection with all alternatives on new alignment.
	T-139	Closed for all alternatives on new alignment.
	T-236	Closed for Alternatives A, B, E, F, I, J, M, N, Q, R, U, V.
C-143 (Whetstone Rd.)	At-grade intersection with all Alternatives on new alignment.	
Defiance County, Ohio	Krouse Rd. (C-146)	Closed for Alternatives B, D, F, H, J, L, N, P, R, T, V, X.
	Powers Rd. (C-29)	Closed for all alternatives on new alignment.
	Pomerantz Rd.	Closed for Alternative Z.
	Ashwood Rd. (T-53)	At-grade intersection with Alternatives B, D, F, H, J, L, N, P, R, T, V, X. Closed for Alternatives A, C, E, G, I, K, M, O, Q, S, U, W, Y.
	SR 424	Remains open with interchange. Under US 24 with Alternatives B, D, F, H, J, L, N, P, R, T, V, X. Remains open with interchange. Under US 24 with Alternatives A, C, E, G, I, K, M, O, Q, S, U, W.
	May Rd.	At-grade intersection with Alternatives A, C, E, G, I, K, M, O, Q, S, U, W.
	Switzer Rd.	Grade-separated crossing over US 24 with all alternatives on new alignment.

Forty-five existing intersections and several critical access points (i.e., the entrance to the Uniroyal Goodrich Fort Wayne Plant) along US 24 would be reconfigured to allow for better sight distances and turning lanes. Some of these intersection locations are: Doyle Road, Bremer Road, Ryan/Bruick Road, Berthaud Road, Webster Road, Maumee Center Road, Sampson Road, Bull Rapids Road, SR 101, State Line Road, T-51, T-61, C-206, T-83, C-224, US 127, Burns Road, Jacobs Road, and SR 424.

The storm drainage system would also be upgraded by relocating and/or improving existing ditches, which is required by the widening of the shoulders. Where right-of-way permits, safety grading of shoulders would take place beyond the paved shoulders. This safety grading would be performed per current state standards, which entails an 8:1 slope beyond the paved shoulder for a distance of 2.9 meters (9.5 feet) followed by a recoverable ditch cross-section. Guardrails would be installed in areas where right-of-way does not permit safety grading.

The estimated construction cost of Alternative Y is \$72,716,068, which includes acquisition of approximately 160 hectares (394 acres) of right-of-way, and the relocation costs associated with 14 residential and seven business displacements.

**Alternative Z
(Existing US 24 Four-Lane Alternative)**

Alternative Z, the four-lane alternative developed within the US 24 Corridor, is a divided, controlled access expressway that follows the existing route of US 24. Two options were developed using the same alignment. The only difference between the two options is the types of access provided at the intersections to existing roads. The two options are:

- Strictly limited access with at-grade intersections or,
- The combination of four full controlled interchanges (controlled access) at Ryan/Bruick Road, SR 101, SR 49, and US 127 with the remaining intersections being designed as at-grade intersections.

For the most part, this alignment parallels the existing route of US 24 to the south with the exception of a bypass to the south of the Village of Antwerp. Existing US 24 is incorporated into this expressway alternative for approximately 12.9 kilometers (eight miles) and also used as a frontage road in other areas. For example, from C-146 to SR 15, this expressway is located within the existing right-of-way of US 24 west of Defiance. The Antwerp Bypass follows a southerly route leaving the existing highway generally at State Line Road traveling on new alignment for approximately 11.3 kilometers (seven miles) and then rejoining the existing highway near C-206. At this point, the expressway either parallels or is within the existing US 24 right-of-way to SR 15.

Both four-lane options provide for two lanes of travel in each direction divided by a grass median and median barriers. The typical section (Figure 2.11) for a four-lane alternative includes four 3.7 meter (12-foot) wide travel lanes, a 3.1 meter (10-foot) wide paved right side shoulder, a 1.2-meter (4-foot) paved left side shoulder, a 25-meter (82-foot) wide grass median in Indiana and a 18.3-meter (60-foot) wide grass median in Ohio. Figure 2.8 presents a typical section of this alternative. Median barriers would be used between C-146 and SR 424 to reduce the amount of right-of-way required thus minimizing the number of residential and business displacements. A design speed of 112.9 kph (70 mph) was used for determining the horizontal and vertical alignments. The posted speed limit would be 88.7 kph (55 mph) in Indiana and 104.8 kph (65 mph) in Ohio.

Access along this alternative is provided by approximately 25 at-grade intersections. These access points are located at Doyle Road, Ryan/Bruick Road, Berthaud Road, Webster Road, Uniroyal Goodrich Plant, Maumee Center Road, Bull Rapids Road, SR 101, Gustin Road, State Line Road, SR 49, C-87, C-224, T-83, C-105, C-11, C-21, T-43, C-176, C-180, C-206, C-73, US 127, C-232, C-115, Gier Road, Burns Road, The Bend Road, Jacobs Road, Whetstone Road, Krouse Road, SR 424, and West High Street. The exception to an all at-grade intersection option is to have four controlled access interchanges located at Ryan/Bruick Roads, SR 101, SR 49, and US 127, with at-grade intersections at the remaining crossings.

Ten local roads would need to be realigned or relocated as part of controlling access to the expressway. An additional ten roadways are closed including Harper Road, Bremer Road, Sampson Road, May Road, Title Road, Limbaugh Road, Knox Road, Butt Road, T-29, C-33 and T-61. Access would be provided via the controlled access interchanges and existing US 24 which is converted to a frontage road. At some locations, a new frontage road would be constructed to provide access to the expressway from roads that have been closed. The construction of new roads and/or reconfiguration of local roads would meet or exceed existing design conditions. These improvements may include wider roads, shoulders, and better visibility.

Alternative Z includes the construction of 10 new bridges. This number would be increased to 14 bridges if the four controlled access interchanges option were used. Bridges over rivers, streams, and crossroads would be constructed to the same widths as the roadway, including pavement and shoulders. The two existing bridges over the Maumee and Tiffin rivers west of Defiance would be removed and replaced with new bridges to accommodate the proposed roadway section. Bridges would also be constructed to carry traffic over the CSXT Railroad west of the Ashwood Road intersection. These two bridges would be built approximately 9.2 meters (30 feet) above existing railroad tracks.

In addition, the drainage system for Alternative Z would incorporate existing drainage ditches into the design. The existing drainage ditches would be relocated and/or improved based upon incorporating the proposed typical section with existing conditions. Where right-of-way permits, safety grading of shoulders would take place beyond the paved shoulders. This safety grading would be performed per current state standards, which entails an 8:1 slope beyond the paved shoulder for a distance of 2.9 meters (9.5 feet) followed by a recoverable ditch cross section.

Guardrails would be installed in areas that right-of-way does not permit safety grading.

The estimated construction cost for the all at-grade intersections option is \$150,774,971. The estimated construction cost for the four interchanges and the remaining at-grade intersections option is \$183,083,984. These costs include the acquisition of approximately 611 hectares (1,508 acres) of right-of-way and displacement of 106 residences, 13 commercial properties, one industrial property and one community facility. These costs also include three major utility conflicts, including the encasement of a major gas main and the relocation and/or modification of high-tension power lines and structures.

2.4.7 Development of Feasible Alternatives - US 24/I-469 Interchange

In October 2002, INDOT indicated its intention to construct US 24 as a four-lane divided freeway with full access control between I-469 and the Indiana/Ohio State Line. In addition to interchanges constructed at Ryan/Bruick Road, Webster Road, and SR 101, the existing I-469/US 24 interchange will be upgraded to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange).

The existing interchange at I-469 and US 24 has a partial cloverleaf configuration with loop ramps in the northeast and southwest quadrants. It was constructed in 1992. The interchange serves a portion of eastern Allen County as a point of entry to the Interstate Highway System. Approximately 40,000 vehicles per day presently use this interchange. The high traffic volume movements for the interchange are northbound I-469 to eastbound US 24 and westbound US 24 to southbound I-469. Each ramp carried an average daily traffic (ADT) of 4,140 vehicles per day in 2000. During the morning (AM) and evening (PM) peak hours, these movements each carried approximately 230 vehicles per hour.

Design Criteria

Engineering design criteria used for the interchange studies includes:

- Uninterrupted travel along the critical directions, the free-flow movements (northbound I-469 to eastbound US 24, southbound I-469 to eastbound US 24, westbound US 24 to northbound I-469, and westbound US 24 to southbound I-469).
- Adequate loop radii for the appropriate design speed (loop design speeds should not be less than 40.3 kph (25 mph) with a minimum radius of 155 meters (80 feet) and a maximum superelevation rate of eight percent).
- Adequate minimum weaving distance between the exit and entrance ramps (on cloverleaf interchanges without collector-distributor roads should be at least 304.9 meters (1,000 feet)).

Screening of Conceptual Alternatives

Nineteen conceptual alternatives were developed and evaluated in early 2003. The evaluation is documented in a separate report entitled *I-469 and US 24 Interchange: Conceptual Alternatives Summary* (May 2003).

The conceptual alternatives were evaluated through a two-step screening process for the purpose of identifying the Feasible Alternatives. First, the alternatives were screened to determine if they met the Need and Purpose established for the interchange. The second step involved a comparative analysis of the 19 conceptual interchange improvement alternatives to assess the environmental impacts, engineering features, and cost-effectiveness associated with each concept.

The environmental assessment focused on resources of public interest, resources unique to the study area, and resources that require state and federal permits and/or mitigation of impacts if affected. Based on preliminary impact assessments, the following resources were considered: farmlands, displacements, floodplains, streams, woodlots, wetlands, and historic resources eligible for inclusion in the National Register of Historic Places (NRHP). The environmental features were incorporated into a GIS database for the alternatives analysis. No priority or ranking was assigned to the environmental resources for the assessment.

The engineering and cost assessment of each conceptual interchange alternative focused on the following features: free-flow movement of the critical directions; ramp curvature; weave distance; and initial construction costs. Based on evaluations, three Feasible Alternatives for the interchange improvements (Alternatives 12, 13, and 14) were selected for further development and evaluation. Additional alternative development is now underway for the three interchange improvement alternatives. The Feasible Alternatives for the interchange improvements and associated impacts will be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be selected and will be presented in the US 24 New Haven to Defiance Final Environmental Impact Statement (FEIS).

Alternative 12

Alternative 12 provides free-flowing movement in each critical direction as well as ample loop radii to allow for future adjustments. While minor layout modifications, such as adjustments to ramp terminal locations and adjustments to ramp radii, may be required to increase the freeway ramp terminal spacing, all of the remaining design criteria have been satisfied. These modifications would not require a change in the Alternative 12 footprint and will not result in any additional impacts. Two at-grade intersections at crossroads are incorporated into this option and there are no entrance-to-exit conditions requiring weaving length. The estimated construction cost is \$31.6 million, which includes the acquisition of 16.8 hectares (52.0 acres) of right-of-way and includes the relocations costs for five residential displacements.

Alternative 13

Alternative 13 provides free-flowing movement in each critical direction and requires only one at-grade crossing. As with Alternative 12, minor modifications to ramp terminal locations and/or ramp radii may be required to provide the minimum ramp terminal spacing. The estimated construction cost for Alternative 13 is \$37.8 million, which includes the costs of acquiring 19.0 hectares (46.9 acres) of land for right-of-way and the relocation costs for five residential displacements.

The selection of Alternative 13 as a Feasible Alternative assumes that a geometric adjustment to the connection of eastbound US 24 to southbound I-469 can be made. Alternative 13, as currently designed, provides a high-speed ramp for traffic making this movement. The use of a high-speed ramp at this location is not required based on estimated traffic movement. The impacts created by the additional grading and right-of-way required for the high-speed ramp could be avoided by combining this traffic movement into the at-grade crossing already proposed with this alternative. In the next phase of study, Alternative 13 will be adjusted to remove the high-speed ramp, which could result in a reduction of both the estimated construction cost and impacts for this option.

Alternative 14

Alternative 14 provides free-flowing movement in each critical direction and requires only one at-grade crossing. As with the other Feasible Alternatives for the interchange improvements, minor modifications to ramp terminal locations and/or ramp radii may be required to provide the minimum ramp terminal spacing. These changes would not affect the current estimated impacts. Estimated construction cost is \$30.9 million. This includes costs for the acquisition of 16.4 hectares (40.4 acres) of right-of-way and relocation costs associated with for five residential displacements.

Selection of Alternative 14 as a Feasible Alternative is based on the assumption that the southbound I-469 to westbound US 24 ramp can be constructed within the existing right-of-way, thereby avoiding impacts to the Niemeyer Farm property (a NRHP-eligible resource). This ramp alignment parallels I-469 along the property. Further investigation is required to determine if the proposed ramp can be constructed within the existing right-of-way.

2.5 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

In April 2001, the ODOT announced the identification of Alternative C as the Preferred Alternative for the US 24 New Haven to Defiance project. The recommendation was based on the evaluation of the 26 Feasible Alternatives using a three-step screening process. First, the alternatives were

screened to determine if they met the established purpose and need of the project. In the second step of analysis, the potential environmental impacts were assessed for each alternative. The third step of analysis involved a more detailed examination of the environmental impacts and the consideration of other information such as public comments and right-of-way/constructability issues. The evaluation is described in detail in the following text.

2.5.1 Step I Analysis

As documented in Section I - Purpose and Need, the goals of the project are:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

As shown in Table 2.18 (Step I Analysis Summary), Alternatives A through X, and Z were found to address and improve these five factors. Alternative Y addressed only one factor, it improved roadway safety by eliminating some of the geometric and design deficiencies. The No Build alternative, which consists of minor safety and maintenance improvements to US 24, did not address any of the five factors. The No Build alternative is not a Feasible Alternative, but is retained for study in the Draft Environmental Impact Statement (DEIS) in accordance with the requirements of the National Environmental Policy Act (NEPA).

**TABLE 2.18
STEP I ANALYSIS SUMMARY**

Project Purpose	No Build Alternative		Alternatives A - X		Alternative Y		Alternative Z	
	2008	2028	2008	2028	2008	2028	2008	2028
Improve traffic flow and level of service.	No LOS D-E	No LOS E-F	Yes LOS A	Yes LOS A	No LOS D-E	No LOS E-F	Yes LOS A	Yes LOS A-B
Reduce travel times between project termini.	No 67 minutes	No 77 minutes	Yes 34 minutes	Yes 34 minutes	No 67 minutes	No 77 minutes	Yes 38 minutes	Yes 40 minutes
Improve roadway safety.	No	No	Yes	Yes	Partial	Partial	Yes	Yes
Enhance the regional transportation network.	No	No	Yes	Yes	No	No	Yes	Yes
Accommodate future economic growth in the region to enhance the competitiveness of local and regional business.	No	No	Yes	Yes	No	No	Yes	Yes

Alternatives A through X, and Z

According to the traffic analysis conducted for the Feasible Alternatives, Alternatives A through X and Z improve traffic flow and the level of service (LOS) on US 24 by reducing congestion (Table 2.18). Currently, the level of service on US 24 between New Haven and Defiance ranges between LOS D and E. For Alternatives A through X, level of service projections are LOS A for opening year 2008 and future year 2028. Alternative Z will have LOS A in 2008 and LOS A/B in 2028.

Travel time is also improved by Alternatives A through X, and Z (Table 2.18). Currently, average travel time between New Haven and Defiance is approximately 55 minutes to drive 59.7 kilometers (37 miles). With no improvements to US 24, the average travel time is expected to increase to 67 minutes in 2008 and 77 minutes in 2028. For any of the alternatives on new alignment (A through X), the average travel time in 2008 and 2028 is estimated to be 34 minutes. Travel time estimates for Alternative Z are 38 minutes in 2008 and 40 minutes in 2028.

In general, the efficiency of the four-lane expressway alternatives is reflected in the projected vehicle miles traveled (VMT). The average VMTs for Alternatives A through X are 123.9 million in year 2008 and 177 million in 2028. The VMTs projected for Alternative Z are 150.7 million for 2008 and 215 million for 2028.

Alternatives A through X, and Z are proposed as four-lane, controlled access expressways. Using a design speed of 112.9 kph (70 mph), the alternatives were designed for high-volume, high-speed traffic operations in accordance with AASHTO's most current design criteria (*A Policy on Geometric Design of Highways and Streets*, 2001) and current ODOT and INDOT design criteria. Alternatives A through X, and Z divert traffic from existing US 24 to a new expressway thus enhancing motorist safety (Table 2.18). These alternatives support the conversion of existing US 24 to function as a local or rural collector road.

Alternatives A through X, and Z enhance the regional transportation network by separating the local and regional traffic streams (Table 2.18). The majority of traffic will be diverted onto the new four-lane limited access, divided highway. Even most of the local traffic commuting between communities in the study area such as between New Haven and Defiance will acknowledge the travel time savings achieved on a new four-lane facility. A modest percentage of traffic, however, especially short-distance localized traffic between small communities in the study area, farm machinery and equipment, and local delivery vehicles may continue to use existing US 24, which would become a local roadway or frontage road.

Regional economic growth and sustainability is dependent upon several factors including the support of transportation infrastructure. US 24 between New Haven and Defiance is not able to meet the needs of the continually increasing volumes of local and through vehicles that utilize it. Local economic officials have indicated that the lack of a modern regional connector is a major detractor relative to attracting new industry to the area. Furthermore, several of the key economic development sites in the study area are not located on US 24. A four-lane expressway will support faster and more efficient service to the planned and existing commercial and industrial developments in the area (Table 2.18).

On a larger scale, US 24 has become integral to the economic health of the midwestern United States, especially in a global economic marketplace. The midwestern United States, particularly Ohio, Michigan, and Indiana, has become a staging area for international commerce through the Port of Toledo and the Great Lakes system with heavy usage by the automotive and steel industries in the midwestern and southern United States. Current economic trends for supporting "just in time" inventory delivery and international free-trade zones have encouraged American businesses to compete internationally. To be competitive under these conditions, an efficient transportation network is essential for quick and cost-effective transportation of raw materials and finished goods. The US 24 Corridor is an important link in the NHS as evidenced by its designation as a High Priority Corridor. A four-lane expressway as provided by Alternatives A through X, and Z would provide the vital link in the regional transportation network.

Alternative Y

Alternative Y improves the existing roadway by adding shoulders, turn lanes, and improving intersections. Roadway safety is improved by eliminating some of the geometric and design deficiencies. But the addition of left turning lanes at key intersections to alleviate rear-end collisions, and to improve safety does not add sufficient additional mainline capacity. Left turning lanes at key intersections do not reduce congestion on US 24 because the turning traffic volumes onto crossroads are nominal when compared to the mainline traffic. Nevertheless, left turning lanes, shoulders, and intersection improvements are beneficial roadway safety enhancements.

With only two lanes of travel, Alternative Y does not significantly increase the capacity of the highway and therefore the level of service does not improve. Currently, the level of service on US 24 between New Haven and Defiance ranges between LOS D and E. Alternative Y does not improve traffic flow and the level of service on US 24 in the future as level of service projections range from LOS D/E in the opening year 2008 and from LOS E/F in the year 2028.

Travel time on US 24 will also increase with Alternative Y. Currently, average travel time between New Haven and Defiance is approximately 55 minutes for the 59.7 kilometer (37-mile) trip. Alternative Y is estimated to increase the travel time to 67 minutes in 2008 and to 77 minutes in 2028.

As a result of the natural growth of traffic over time, the overall VMTs will increase to 149.5 million by 2008 and to 213.4 million by 2028. These estimates reflect 15 percent and 64 percent increases, respectively over current VMT levels as a result of the increased traffic congestion.

Alternative Y will not minimize conflicts between local and through traffic. Through traffic and local traffic on Alternative Y has only one routing option, the existing US 24 alignment. No additional capacity or passing lanes will be added to enhance traffic flow.

With increased travel time and costs, Alternative Y does little to enhance future economic growth in the region and the economic competitiveness of local and regional businesses. Furthermore, Alternative Y does not improve accessibility to key economic development sites within the study area.

Summary

Alternatives A through X, and Z meet the purpose and need of the project. Alternative Y only partially satisfies one factor of the purpose and need. Based on the findings of the Step I analysis, Alternative Y was eliminated from further consideration as the Preferred Alternative.

2.5.2 Step II Analysis

In the Step II analysis, potential social and environmental impacts of Alternatives A through X, and Z were assessed. This analysis is based on key environmental issues studied for the DEIS (see Table S-1, Comparison of Impacts by Alternative) and focuses on resources of public interest, resources unique to the study area, or resources that require state and federal permits and/or mitigation of impacts if affected. Five environmental issues used for the Step II analysis are farmlands, woodlots, Category 3 forested wetlands, streams, and displacements. Environmental issues not considered in the Step II analysis include traffic (non-parametric data), noise, historic resources, Section 4(f) resources, and hazardous materials. These parameters had either similar values (non-significant variation) across all alternatives or were considered non-controversial for this project. No priority or ranking was assigned to the five environmental issues used for the Step II analysis; they were considered to be of equal value in the analysis.

On August 6, 1996, Executive Order (EO) 96-65V was issued by then Ohio Governor Voinovich promoting the preservation of productive agricultural lands. The goal of this EO is to preserve the state's productive agricultural land and protect against its unnecessary and irretrievable conversion to nonagricultural uses. Nearly 90 percent of the land in the study area is in farmland production. The productivity of this land is remarkable and forms the basis for the local economy. The role of farmlands goes beyond the economy to forming the identity of the study area communities. Farmlands are irreplaceable resources. Once a piece of land is removed from production, it will likely never be farmed again. The direct loss of farmland could result from the conversion of land by the roadway itself or by landlocking parcels.

Scattered throughout the expansive agricultural lands in the study area are upland woodlots and forested wetlands. Historically, the study area was part of the Great Black Swamp, which covered approximately 12 820 square kilometers (5,000 square miles) between the Indiana/Ohio State Line and Lake Erie. During the 19th and early part of the 20th century, most of this swamp was cleared and drained for agricultural purposes. The wooded areas scattered across

the landscape are remnants of the Great Black Swamp and are considered a rare and unique resource of the study area by the US Fish and Wildlife Service (USFWS) because they are limited in number and size. Within the predominantly agricultural landscape, the wooded areas provide most of the habitat for wildlife. The USFWS provided written comments requesting that every effort be made to avoid impacting the woodlot areas and that bisecting larger woodlots would be especially detrimental to nesting birds and other wildlife.

Forested wetland areas are located within the woodlots. Some of the forested wetlands are classified as Category 3 wetlands based on their vegetative composition and functions and values they provide. Category 3 wetlands are high quality wetlands and are protected by State regulations in Ohio (OAC 3745-1-54). The Ohio Environmental Protection Agency (OEPA) will not grant a 401 Water Quality Certification for any Category 3 wetland impact unless it can be demonstrated that there is no practicable alternative and there is a demonstrated public need for the impact.

There are numerous streams that are crossed by the alternatives. Many of these streams have been channelized or modified for agricultural uses and are an integral part of the drainage system of the croplands. The streams contain moderate to low water quality and qualify as warmwater habitat as defined by the State of Ohio water quality definitions. Their Qualitative Habitat Evaluation Index (QHEI) scores range between 45 and 60 for warm water habitat streams and below 45 for limited resource water streams. None of the streams affected by the Feasible Alternatives are classified as exceptional warm water habitat with QHEI scores of 60 or above. In the State of Ohio, the OEPA requires mitigation for any stream impacts. Replacement ratios are based on the quality of the stream reach being impacted. In general, the mitigation ratio for the streams impacted by the alternatives would be 1:1, for on-site, in-kind replacement.

The study area is characterized as rural-agricultural scattered with single-family residences. In addition, to the residential areas there are commercial and industrial developments. The residential, commercial, and industrial developments are primarily concentrated along US 24 and local cross streets.

In the Step II analysis, the 25 Feasible Alternatives (A through X, and Z) were compared to each other. The comparison focused on five differentiating factors composed of 13 parameters shown in Table 2.19. It is important to note that no priority or ranking is assigned to the five factors. All parameters were evaluated quantitatively and considered to be of equal significance in the analysis.

The ranges of impacts shown in Table 2.19 are separated into two categories relative to the median value of the data set: values equal to or lower than the median, and values higher than the median of the data set. Feasible Alternatives with seven or more of the 13 measured parameters above the median value of the data set (>50%) were eliminated from further consideration in the selection of the Preferred Alternative. This process eliminated 10 Feasible Alternatives (B, D, I, K, L, N, O, P, Q, and Z) from further consideration.

Based on the environmental impacts associated with Alternatives B, D, I, K, L, N, O, P, Q, and Z, these alternatives were eliminated from further consideration as the Preferred Alternative.

2.5.3 Step III Analysis

Fifteen alternatives (A, C, E, F, G, H, J, M, R, S, T, U, V, W, and X) reached the Step III analysis. This analysis involved a more detailed examination of the environmental impacts, as well as, a review of public and agency comments, and right-of-way and constructability issues.

Environmental Issues

A comparison of environmental impacts reviewed during the Step III analysis focused on the five differentiating factors from Step II (farmlands, woodlots, Category 3 forested wetlands, streams, and displacements) as well as floodplain encroachments. Environmental impacts associated with the 15 alternatives are presented in Table 2.20. Median values for the environmental resources were determined based on the 15 alternatives that were carried forward to the Step III analysis. As in the Step II analysis, the ranges of impacts shown in Table 2.20 are

separated into two categories relative to the median value of the data set: values equal to or lower than the median, and values higher than the median of the data set.

**TABLE 2.19
STEP II ANALYSIS SUMMARY OF KEY ENVIRONMENTAL ISSUES**

Differentiating Factors Measured Parameter	Range of Impacts Equal to or Below Median	Alternatives with Impacts Equal to or Below Median	Range of Impacts Above Median	Alternatives with Impacts Above Median
Farmlands				
Farmland Affected	402-567 hectares (993-1,401 acres)	B, D, F, H, L, J, N, P, R, T, V, X, Z	568-598 hectares (1,402-1,474 acres)	A, C, E, G, I, K, M, O, Q, S, U, W
Number of Landlocked Parcels	41- 52	D, I, H, J, L, M, N, O, P, R, T, V, X	53-63	A, B, C, E, F, G, K, Q, S, U, W, Z
Landlocked Area	345-443 hectares (853-1,094 acres)	B, D, F, H, J, L, N, P, R, T, V, X, Z	488-614 hectares (1,206-1,517 acres)	A, C, E, G, I, K, M, O, Q, S, U, W
Number of Affected Properties in Agricultural Districts	7-12	A, B, C, D, E, F, G, H, J, L, N, P, R, T, V, X	13-15	I, K, M, O, Q, S, U, W
Number of Farm Operators Affected	162-182	E, F, J, M, N, Q, R, S, T, U, V, W, X	183-260	A, B, C, D, G, H, I, K, L, O, P, Z
Number of Farm Residences Displaced	1-10	A, B, E, F, G, H, J, Q, R, S, T, U, V, W, X, Z	11-14	C, D, I, K, L, M, N, O, P
Woodlots				
Number of Woodlots Affected	17-20	A, B, C, E, F, G, I, J, K, M, N, O, Q, U, V, W	21-36	D, H, L, P, R, S, T, X, Z
Area of Woodlots Affected	13-27 hectares (33-67 acres)	A, C, K, M, O	28-49 hectares (68-122 acres)	B, D, E, F, H, I, J, L, N, P, Q, R, S, T, U, V, W, X, Z
Category 3 Wetlands				
Area of Wetlands Affected	2-4 hectares (4-9 acres)	A, C, E, G, I, K, M, O, Q, S, U, W, Z	5-8 hectares (10-20 acres)	B, D, F, H, J, L, N, P, R, T, V, X
Streams				
Number of Stream Crossings	44-52	A, B, C, D, E, F, G, H, S, T, V, W, X	53-59	I, J, K, L, M, N, O, P, Q, R, U, Z
Total Length of Stream Impacted	9874-12 932 meters (32,387-42,418 feet)	A, C, D, E, F, G, H, S, T, U, W, X, Z	12 933-15 634 meters (42,419-51,281 feet)	B, I, J, K, L, M, N, O, P, Q, R, V
Displacements				
Number of Residences Displaced	17-41	A, C, E, G, I, K, M, O, Q, R, S, T, U, W	42-106	B, D, F, H, J, L, N, P, V, X, Z
Number of Commercial Businesses Displaced	0-1	A, C, E, F, G, H, I, K, M, O, Q, R, S, T, U, V, W, X	2-13	B, D, J, L, N, P, Z
Results: Range vs. Median	A, C, E, F, G, H, J, M, R, S, T, U, V, W, X (Alternatives with 6 or less of 13 parameters)		B, D, I, K, L, N, O, P, Q, Z (Alternatives with 7 or more of 13 parameters)	

As shown in Table 2.20, Alternatives A, C, E, F, G, H, R, S, T, U, V, W, and X have 50 percent or more of the parameters below the median value of the data set. Alternatives J and M have more than 50 percent of the parameters above the median value.

TABLE 2.20
STEP III ANALYSIS SUMMARY – KEY ENVIRONMENTAL ISSUES

Parameter	Range	Below Median								Above Median						
Number of Stream Crossings	44-58	C	E	F	G	H	T	W	X	A	J	M	S	R	U	V
Length of Stream Impacts	10 651-15 634 meters (34,936-51,281 feet)	A	C	E	F	G	H	S	T	U	W	X	J	M	R	V
Total Category III Forested Wetlands Affected	2-8 hectares (4-20 acres)	A	C	E	G	M	S	U	W	F	H	J	R	T	V	X
Number of Woodlots Affected	17-24	A	C	E	F	G	J	M	U	V	W	H	R	S	T	X
Total Area of Woodlots Affected	15-42 hectares (36-103 acres)	A	C	E	G	M	S	U	W	F	H	J	R	T	V	X
Total Area of Floodplain Encroachment	8-30 hectares (19-75 acres)	E	F	G	H	R	S	T	U	V	W	X	A	C	J	M
Total Area of Farmland Affected	555-596 hectares (1,371-1,473 acres)	A	F	H	J	R	T	V	X	C	E	G	M	S	U	W
Number of Affected Properties in Agricultural Districts	7-15	A	C	E	F	G	H	J	R	T	V	X	M	S	U	W
Number of Farm Operators Affected	162-214	F	R	S	T	U	V	W	X	A	C	E	G	H	J	M
Number of Parcels Landlocked	44-63	F	H	J	M	R	T	V	X	A	C	E	G	S	U	W
Total Area of Landlocked Parcels	345-575 hectares (853-1,421 acres)	E	F	H	J	R	T	V	X	A	C	G	M	S	U	W
Number of Residential Displacements	17-54	C	E	G	M	S	T	U	W	A	F	H	J	R	V	X
Number of Commercial Displacements	0-2	A	C	E	F	G	H	M	R	S	T	U	V	W	X	J
Results: Range versus Median		A, C, E, F, G, H, R, S, T, U, V, W, X (Alternatives with 6 or less of the 13 parameters below the median)								J, M (Alternatives with 7 or more of the 13 parameters above the median)						

Public and Agency Comments

Comments from the public and resource agencies were also evaluated in the Step III analysis. Table 2.21 summarizes the public comments received concerning the location of the Feasible Alternatives and certain alternative segments.

The following is a summary of the agency comments on the selection of the Preferred Alternative:

- The US Environmental Protection Agency (USEPA) stated that Alternative C or Alternative O would have the least amount of wetland impacts and either one should be identified as the Preferred Alternative.
- In addition, the USEPA stated that Alternatives A or M should be selected as the Preferred Alternative if C or O are not feasible.
- The USFWS favors whichever alternative would have the least impacts on woodlands, wetlands, and other wildlife habitat. The agency stated that this appears to be Alternative

C, although Alternative Z may also be acceptable if damages to woodlands and Section 4(f) resources are avoided or greatly reduced.

- The Ohio Department of Natural Resources (ODNR) is not in favor of the alternative that upgrades existing US 24.
- The OEPA stated that based solely on impacts to streams and wetlands identified in the Preliminary Draft Environmental Impact Statement, the agency recommends Alternative C as the Preferred Alternative.

**TABLE 2.21
STEP III ANALYSIS OF PUBLIC COMMENTS**

Comment	Consideration in Identification of the Preferred Alternative
Most of the comments received regarding the Feasible Alternatives favored Alternative Z. Reasons given for favoring Alternative Z included the perception that the alternative would be less disruptive to farmland operations and other businesses in the area, and the cost to construct would be less than the others.	The quantitative analysis in Step II resulted in the elimination of this alternative. The quantitative analysis approach favors alternatives with the least involvement in the most parameters. Alternative Z has values higher than the median for 7 of the 13 factors evaluated. Categories with values exceeding the median include farmlands (landlocked parcels and number of farm operations impacted); woodlots; stream crossings; residential displacements; and business displacements.
To minimize farmland impacts, improvements to US 24 should maximize the use of existing disturbed rights-of-way such as the current route or railroad corridors.	All of the 15 Feasible Alternatives analyzed in Step III use some portion of existing right-of-way and railroad corridors.
Many individuals stated that the new route for US 24 should remain in the vicinity of the existing alignment to allow businesses to maintain contact with transportation facilities, to minimize farmland impacts, to use land already disturbed by a transportation corridor and development, and to minimize construction costs.	Alternatives A, C, E, F, G, H, M, V, and W are located near existing US 24 and along transportation corridors.
<p>In Indiana, Segment 1 was favored over Segment 2 because of greater impacts to a church, nurseries, and farmland along Segment 2.</p> <p>In Woodburn, Segment 8 was preferred because it would minimize traffic impacts on local roads. North of Woodburn is an industrial park and a steel plant that generate truck traffic. Segment 7 would result in trucks traveling through Woodburn to access the industrial park and steel plant.</p>	<p>Alternatives A, C, J, and M contain Segment 1.</p> <p>Alternatives A, C, E, F, G, and H contain Segment 8.</p>
In Ohio, Segment 8 was preferred over Segment 7. The public considered Segment 7 to be too far away from Antwerp. Segment 8 provides a bypass around the Village of Antwerp, which could be built in the first phase of construction. This bypass would alleviate traffic congestion in Antwerp while the other sections of US 24 are constructed.	Alternatives A, C, E, F, G, and H contain Segment 8.
In Ohio, public comment favored Segment 10 over Segment 11 because of the concern for possible long delays and reroutes of emergency vehicles.	Alternatives J, R, S, and T contain Segment 10.
In Ohio, Segment 18 was preferred over Segment 19. The City of Defiance believes that Segment 19 and the proposed interchange at May Road are too far from the City and its future industrial development sites to provide much benefit to the community. In addition, Segment 19 passes through the middle of a large dairy farm.	Alternatives F, H, J, R, T, V, and X contain Segment 18.

Comments received from citizens and public officials indicate a preference for an alignment that is close to existing US 24 and follows existing transportation corridors. Alternative Segments 1, 3, 8, 11, 12, 13, 14, 19, and 20 are located in close proximity to existing US 24 and/or are located along existing transportation corridors. Of the eight segments that comprise each alternative, Alternatives A, C, E, G, M, and W include five or more of these segments. In terms of overall length, 40 to 45 percent of Alternatives A, C, E, F, G, H, M, and V are located along existing transportation corridors.

**Right-of-Way/
Constructability Issues**

Proximity to existing US 24 is also an important consideration for the phased construction likely to occur for the selected alternative. The new US 24 expressway will be constructed in several sections. During construction, motorists will be able to use the new sections of the highway as they are completed. Alternatives in close proximity to the existing US 24 alignment will benefit motorists with shorter temporary construction detours and immediate linkage from existing US 24 to completed segments of the new highway as they open for traffic. Alternatives near existing US 24 are also consistent with comments received from citizens and public officials that indicate a preference for an alignment that is close to the existing highway.

Another factor evaluated under the constructability review focused on the impact of traffic patterns in the City of Woodburn. Alternatives using Segment 7 would force the routing of northbound traffic through the town creating congestion on the local roads. A component of this traffic is heavy trucks associated with industrial businesses located north of Woodburn. Alternatives J, M, R, S, T, U, W, and X contain Segment 7. In addition, Segment 2 is considered by local residents as having a negative impact on the community of Gar Creek. Segment 2 is also not supported by Indiana representatives, lacks consistency with existing Allen County comprehensive plans, is located away from the existing transportation facilities, and is not generally supported by the public. Alternatives E, F, G, H, R, S, T, U, V, W, and X contain Segment 2.

Drainage of highway runoff was another component of the constructability review. Soils in the region tend to be poorly or very poorly drained. Known drainage problems occur in Segments 12 and 16, which parallel the south side of the Maumee & Western Railroad in Paulding County, Ohio. In these areas, water flows north toward the Maumee River. Culverts installed at intervals under the tracks at intervals provide minimal connections for proper drainage. The railroad ballast and the limited size of the culverts create a barrier for surface water south of the tracks flowing to the north. The addition of a highway alignment along the south side of the railroad tracks would increase the drainage problem in this area. Stormwater runoff from the highway would be added to the existing surface water flowing north through the railroad culverts. The additional water would exacerbate the current drainage situation and could result in negative impacts to agricultural land south of the railroad. Alternatives A, E, M, and U contain both Segments 12 and 16, while Alternatives F, J, R, and V contain Segment 12 only. These alternatives could result in even greater impacts to cropland south of the railroad.

**2.5.4 Step III
Analysis Results**

Based on the examination of the environmental impacts, public and agency comments, and review of right-of-way and constructability issues, Alternative C was identified as the Preferred Alternative in April 2001. Alternative C was found to minimize environmental impacts and constructability and right-of-way issues. It also addressed the concerns of the general public and resource agencies. Alternative C reflected the best/fit/resource based used of the Feasible Alternatives. Features of Alternative C are summarized below:

- Alternative C has 49 total stream crossing; the total length of stream impact is 11 152 meters (36,577 feet). Of the total length, 8044 meters (26,383 feet) of limited resource water streams are affected and 3108 meters (10,194 feet) of warm water habitat streams are affected.
- Alternative C impacts 6.9 hectares (17.1 acres) of wetlands in total, including 1.1 hectares (2.7 acres) of Category 3 forested wetlands.
- Alternative C impacts 14.7 hectares (36.4 acres) of woodlot area, within a total of 19 woodlots.
- Alternative C displaces 47 residences and one businesses.
- Alternative C impacts 28.8 hectares (71.1 acres) of floodplain area.
- The expressway cost associated with Alternative C is \$161,100,234. This total amount includes \$144,393,373 for construction and \$16,706,861 for right-of-way.
- Alternative C includes two segments that are favored by the public (Segments 1 and 8) and includes two segments that are not favored by the public (Segments 11 and 19).
- Alternative C utilizes existing transportation corridors in Segments 1, 8, 11, 13, 14, 19, and 20, approximately 44 percent of the total 58-kilometer (36-mile) project length.
- Alternative C follows Segment 13, located north of the Maumee & Western Railroad.

2.5.5 Identification of the Preferred Alternative

This segment minimizes drainage impacts to adjacent cropland.

- Alternative C impacts 591.6 hectares (1,461.9 acres) of agricultural land involving 11 farm residences, 214 farm operators, and 7 agricultural districts.
- Alternative C results in 63 landlocked parcels totaling 556.4 hectares (1,374.3 acres).

The identification of Alternative C as the Preferred Alternative was the focus of public meetings held on May 1, 2, and 3, 2001. During the two-week comment period that followed the public meetings, ODOT received numerous comments regarding the recommendation of Alternative C. Citizens and local officials in the Defiance area requested that Alternative D be reconsidered as the Preferred Alternative. Alternative D follows the same route as Alternative C from the intersection with I-469 in Indiana to Defiance County, Ohio. In Defiance County, Alternative C follows Segments 14 and 19, while Alternative D follows Segments 15 and 18.

Alternative C was also presented to the US Army Corps of Engineers (USACE) and OEPA during a field review on May 10, 2001. The focus of this meeting was the Category 3 wetlands within Alternative Segments 14, 15, 18, and 19. During the agency field review, the OEPA recommended that Alternative D be selected as the Preferred Alternative to eliminate impacts to Wetland S-4, which is located in Segment 19 of Alternative C. S-4 is a high-quality, forested wetland located in the floodplain of a tributary to the Maumee River. In correspondence dated May 24, 2001, the OEPA suggested that construction of an embankment through Wetland R-1 located within Alternative D (Segment 18) would result in less overall wetland impacts than culverting Wetland S-4 in Alternative C.

As a result of public and agency input, it was determined that detailed environmental studies (i.e. archaeology surveys, wetlands delineations, and threatened and endangered species surveys) would be conducted on both Alternatives C and D. Following completion of wetlands delineations, additional engineering designs were developed with the intention of minimizing impacts on wetlands. In Paulding County, the Preferred Alternative was shifted to the north between US 127 and C-224, which reduced impacts to Wetland NO-15 from 1.8 hectares (4.5 acres) to 1.0 hectares (2.5 acres), a 64 percent reduction. Within Segment 18 in Defiance County, design refinements reduced impacts to R-1, a Category 3 forested wetland. These engineering refinements resulted in the development of a 27th alternative – Alternative D-1, which minimizes impacts to Category 3 wetlands, which is shown in Figure 2.12.

On February 14, 2002 a meeting was held with the USACE and OEPA to discuss wetland impacts resulting from Alternatives C and D-1. In comparison, overall wetland impacts associated with Alternative D-1 are greater than Alternative C. But Alternative D-1 will impact a smaller area of Category 3 wetlands than Alternative C. In addition, the land adjacent to Wetland R-1 could provide for several mitigation options such as restoration, preservation, and creation. The area adjacent to Wetland S-4 is limited for wetland mitigation options.

Following the February 14, 2002 meeting, the USACE and the OEPA provided written comments regarding the wetland impacts and mitigation options associated with Alternatives C and D. The USACE commented that Alternative D is the least damaging practical alternative and recommended the minimization alignment (Alternative D-1) as the Preferred Alternative. The USACE also stated that preservation of Wetlands RC-1 and R-1 combined with wetland creation would be acceptable for mitigation. In addition, the OEPA commented that the ODOT should investigate several alternative alignments through the RC-1 and R-1 wetland complex, which minimize direct and indirect impacts. The OEPA stated that preservation of Wetlands RC-1 and R-1 with a forested buffer combined with wetlands creation or restoration is acceptable.

Based on public comments, the May 10, 2001 agency field review, the findings of the wetland delineation surveys, the February 14, 2002 agency meeting, and concurrence by the USACE and OEPA, Alternative D-1 was identified as the Preferred Alternative for the US 24 New Haven to Defiance project in May 2002. Features of Alternative D-1 are summarized in the following:

- Alternative D-1 has 26 total stream crossings, impacting 6155 meters (20,189 feet) of streams. Of the total length of impact, 5339 meters (17,513 feet) are limited resource

water streams and 816 meters (2,676 feet) are warm water habitat streams.

- Alternative D-1 impacts 9.1 hectares (22.5 acres) of wetlands in total, including 0.9 hectares (2.3 acres) of Category 3 forested wetlands.
- Alternative D-1 impacts 35.7 hectares (87.7 acres), within a total of 20 woodlots.
- Alternative D-1 impacts 51 residences and two commercial businesses.
- Alternative D-1 impacts 28.0 hectares (69.2 acres) of floodplain area.
- The estimated freeway/expressway combination cost for Alternative D-1 is \$221,702,866. This total amount includes \$204,971,652 for construction and \$16,731,214 for right-of-way.
- Alternative D-1 includes three segments that are favored by the public (Segments 1, 8, and 18) and includes one segment not favored by the public (Segment 11).
- Alternative D-1 utilizes existing transportation corridors in Segments 1, 8, 11, 13, 15, and 20, approximately 45 percent of the total length.
- Alternative D-1 follows Segment 13, located north of the Maumee & Western Railroad. This segment minimizes drainage impacts to cropland.
- Alternative D-1 impacts 560.0 hectares (1,384 acres) of agricultural land involving 10 farm residences, 214 farm operators, and six agricultural districts.
- Alternative D-1 results in 41 landlocked parcels totaling 179.8 hectares (444 acres). With mitigation (construction of service roads), this impact is reduced to 29 parcels, totaling 99.2 hectares (245 acres).

2.5.6 Identification of a Preferred Alternative – US 24/I-469 Interchange

In October 2002, INDOT indicated its intention to construct US 24 as a four-lane divided freeway with full access control between I-469 and the Indiana/Ohio State Line. The existing I-469/US 24 interchange will be upgraded to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange).

Nineteen conceptual alternatives were developed and evaluated leading the selection of three Feasible Alternatives (Alternatives 12, 13, and 14) for further development and analysis. The evaluation is documented in a separate report entitled *I-469 and US 24 Interchange Conceptual Alternatives Summary* (May 2003). The evaluation of the Feasible Alternatives included a preliminary impact assessment, which indicated the following for Alternatives 12, 13, and 14:

- The costs of the three alternatives range from \$30.9 million to \$37.8 million.
- All three alternatives provide free-flow movements for the critical traffic movements and provide adequate loop radii to meet the minimum ramp design speed (40.3 kph [25 mph]).
- Estimated weaving distance that can be provided with Alternative 13 is 365.9 meters (1,200 feet). Alternative 12 provides at two at-grade intersections, eliminating the need for a weaving area. Alternative 14 provides for one at-grade connection, eliminating the need for weaving areas.
- None of the alternatives meets the design criteria for minimum ramp terminal, requiring adjustments in the design studies.
- All three alternatives result in the displacement of five residences.
- Additional right-of-way needed to construct the interchange ranges from 16.4 hectares (40.4 acres) to 19.0 hectares (46.9 acres).
- Each of the three alternatives requires three crossings of intermittent streams affecting approximately 2870 meters (9,410 feet) in total.
- Wetland encroachments are similar for all three alternatives, totaling approximately 0.08 hectares (0.2 acres).
- Woodlot impacts (including encroachments on forested wetlands) are also similar for the three alternatives (approximately 0.8 hectares [1.9 acres]).
- The three alternatives will result in a 2.3-hectare (5.8-acre) encroachment on the 100-year floodplain of the Maumee River.
- Affected land uses are agricultural, residential, open space, and transportation (existing highway right-of-way) for all three alternatives. Impacts to the agricultural land uses range from 9.4 hectares (23.3 acres) to 11.3 hectares (28.1 acres); 2.9 hectares (7.2 acres) to 3.6 hectares (8.8 acres) to residential land uses, and 4.0 hectares (10.0 acres) to 4.3 hectares (10.4 acre) of open space.

- None of the alternatives are anticipated to require acquisition of land from within the NRHP boundary set for the Niemeyer Farm property (a NRHP-eligible resource). For Alternative 14, this is based on the assumption that the southbound I-469 to westbound US 24 ramp can be constructed within the existing right-of-way, thereby avoiding impacts to the historic property.

The reported impacts are preliminary and are subject to change based on the further development of Alternatives 12, 13, and 14. The results of the detailed engineering and environmental studies will be presented at the US 24 New Haven to Defiance Public Hearing and will be discussed in the FEIS.

**2.6 DESIGN
REFINEMENTS
CONSIDERED FOR THE
PREFERRED
ALTERNATIVE**

Since the identification of Alternative D-1 as the Preferred Alternative, investigation into several design refinements were undertaken, which focused on:

- Accommodation of the transportation needs of the Amish population residing in Allen County.
- Identification of potential design changes for local road crossings to accommodate the transportation needs of farm operators affected by the Preferred Alternative.
- Addition of service roads to provide access to properties landlocked by the Preferred Alternative.
- Completion of detailed traffic analysis of operational characteristics at intersections and interchanges with crossroads.
- Development of interchange designs for SR 49 and US 127 crossings.
- Evaluation of options for median design.
- Development of design refinements to minimize impacts on affected wetlands.
- Evaluation of the potential use of the Maumee & Western Railroad right-of-way.
- Inclusion of the Antwerp Bypass in the Preferred Alternative.
- Revisions to the proposed interchange at SR 424 to avoid the displacement of residential housing in the Bohlman Trailer Park.

These efforts have been undertaken in response to specific comments made by the public and resource agencies on the Preferred Alternative. The main objective of the investigations is to identify mitigation strategies that result in the avoidance of or minimization of impacts to sensitive resources.

**2.6.1 Accommodations
for Amish
Transportation Needs**

In Allen County, Indiana, members of the Amish community have expressed safety concerns regarding the at-grade intersections originally proposed along the Preferred Alternative (Alternative D-1). Representatives of the Amish community explained that since they travel by horse and buggy or by foot, overpasses would be safer than at-grade intersections for crossing US 24. They noted that horses are unpredictable and sometimes will not stand and wait for traffic to pass before crossing an at-grade intersection. In addition, teams of four to eight draft horses are used to pull farm equipment and the total length of farm equipment and horses is generally 18.3 meters (60 feet). Medians are typically 25 meters (82 feet) wide in Indiana, which could accommodate the horses and farm equipment. Due to the unpredictable nature of horses, crossing a four-lane highway using an at-grade intersection is unsafe and it could be disastrous if a team of horses is in the median waiting to cross two lanes of road and the horses start to back up or go forward out of the control of the driver into oncoming traffic. The farmers stated that the best locations for interchanges or overpasses for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are main north-south routes across the Maumee River.

In response to the Amish community concerns, several options to provide grade-separated crossings in Allen County were developed and evaluated. A meeting was held on September 5, 2002 with members of the Amish Community and representatives from the ODOT and INDOT to discuss the transportation needs of the Amish. Instead of interchanges at Ryan/Bruick and Webster roads, the INDOT had proposed to provide a grade-separated crossing at Berthaud Road, which would allow Amish vehicles to safely cross the new highway. The Amish

2.6.2 Accommodations for Affected Farm Operators

commented that Berthaud Road was too long of a detour from their current routine travel routes. The additional mileage would take time away from their work and also tire their horses. The farmers emphasized that the best locations for grade-separated crossings for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are main north-south routes crossing the Maumee River. With the change in design from expressway to freeway, INDOT will construct interchanges at Ryan/Bruick Road, Webster Road, and SR 101.

Farmlands were identified as a critical concern early in the US 24 project, and issues important to farm operations were reviewed during the development of the Preferred Alternative. Where possible, the alignment follows along property lines, fencerows, and adjacent to or within previously existing disturbed rights-of-way such as the existing US 24 Corridor and the Maumee & Western Railroad.

Landlocked Parcels / Service Road Study

A total of 41 parcels would be landlocked by construction of the Preferred Alternative and would result in the acquisition of more property than required for the highway right-of-way. The 41 parcels cover approximately 179.8 hectares (444 acres) of land. To minimize the number of landlocked parcels, a Service Road Study was conducted to review the practicality and feasibility of providing access to the parcels landlocked by the Preferred Alternative. The study is documented in detail in a separate report entitled *US 24 New Haven to Defiance Service Road Study - Draft* (December 2002).

Based on the evaluation, eleven service roads are justified, eliminating the need to purchase 80.6 hectares (199 acres) landlocked by the Preferred Alternative. Six of the service roads will be constructed in Allen County, providing access to 45.3 hectares (112 acres) of land. Three service roads are recommended in Paulding County, which will provide access to 3.6 hectares (9.8 acres). In Defiance County, two service roads are proposed providing access to 31.2 hectares (77 acres).

Local Roads Important to Agricultural Operations

The impacts to the local roadway network and access for agricultural operations has also been addressed during the development of the Preferred Alternative. As listed below, 10 roadways in Allen County identified as being important to local farming operations would be affected by Alternative D-1; 13 in Paulding County; and one in Defiance County.

- Allen County: Ryan/Bruick Road, Bremer Road, Webster Road, Rousey Road, Sampson Road, SR 101, Gustin Road, State Line Road, Slusher Road, Woodburn Road, and Maumee Center Road.
- Paulding County: T-21/C-21, T-51, C-11, T-43, SR 49, C-87, C-176, C-180, T-61/C-61, C-83/T-83, US 127, C-206, T-224/C-224.
- Defiance County: Powers Road.

As presented at the public meetings held in June 2002, several local roadways important to farming operations would be closed or severed in Allen and Paulding counties, including Bremer, Rousey, and Gustin roads, T-61, and T-83. Where the Preferred Alternative would cross other important roadways, at-grade intersections or grade-separated crossings were proposed.

Changes in the design of the Preferred Alternative have been made in response to comments received on the Preferred Alternative. Within Allen County, the Preferred Alternative has been redesigned as a freeway. Consequently, most of the crossings at important local roadways have been redesigned as grade-separated crossings, with the exception of Gustin Road and Rousey Road crossings. Interchanges are proposed at Ryan/Bruick Road, Webster Road, and SR 101, while overpasses/underpasses will be constructed at Sampson, Woodburn, and State Line roads. The grade-separated crossings will minimize impacts to agricultural traffic by eliminating delays associated with at-grade crossings. Bremer, Gustin, and Rousey roads will be closed at the Preferred Alternative, as proposed at the June 2002 Public Meetings.

On November 13, 2002, representatives of the ODOT met with local officials from Paulding County and the Paulding County Engineer to discuss the Preferred Alternative and impacts on the local roadway system. Based on input received during the meeting, the design of the Preferred Alternative at several crossings with local roads important to agricultural operations has been modified. Grade-separated crossings are proposed at C-11, T-43, SR 49, and US 127, which were previously proposed as at-grade crossings. The C-180 and C-224 crossings, also previously designed as at-grade crossings, will be closed. The T-83 crossing, previously to be closed, has been redesigned as an at-grade crossing. T-61/C-61 remains closed at the Preferred Alternative.

No local roadways important to farming operations will be closed or severed in Defiance County as a result of construction of the Preferred Alternative.

Drainage

The engineering studies conducted on the Preferred Alternative include a drainage analysis. This analysis developed a system of ditches and embankments for controlling storm water runoff from the new highway. The study also examined the impacts that the new highway and associated ditches and embankments would have on individual property owners' croplands and tile systems. On July 16, 2002, representatives from the ODOT and Soil and Water Conservation Districts (SWCD) for Paulding and Defiance counties met to discuss the drainage issues associated with the Preferred Alternative. The ODOT presented the proposed conceptual drainage design for the Preferred Alternative and requested comments from the SWCD representatives. It was recommended that the SWCD work with property owners to ensure that surface drainage and field tile systems are not negatively affected by construction of the Preferred Alternative.

2.6.3 Traffic Operations at Interchanges and Intersections

Changes to the local roadway network were coordinated with local officials and design refinements have been developed for the Preferred Alternative (D-1) in response to public comments received during Concurrence Point #2. Construction of the Preferred Alternative will affect the local roadways in several ways:

- Fifteen crossroads will be closed given minimal traffic volumes or unacceptable sight distance characteristics (Harper, Bremer, Berthaud, Rousey, and Gustin roads in Allen County; T-29, C-180, T-150, T-61, T-69, C-224, C-123, T-129, and T-139 in Paulding County; and Ashwood Road in Defiance County).
- Four crossroads will be realigned to intersect with other roadways instead of the new highway (Maumee Center Road in Allen County; T-51 and C-206 in Paulding County; and Powers Road in Defiance County).
- Interchanges are proposed at Ryan/Bruick Road, Webster Road, and SR 101 in Allen County; SR 49 and US 127 in Paulding County; and SR 424 in Defiance County.
- Ten local roads will remain open with overpasses or underpasses constructed across the new highway (Doyle, Woodburn, Woodburn, Bull Rapids, and State Line roads in Allen County; C-11, T-43, and C-105/T-105 in Paulding County; and Krouse and Switzer roads in Defiance County).
- The crossings at the remaining local roads are designed as at-grade intersections.

Traffic traveling local roads where overpasses and underpasses will be constructed across the new highway will not experience delays. The provision of full interchanges at Ryan/Bruick Road, Webster Road, SR 101, SR 49, US 127, and SR 424 will also allow for continuous flow of traffic onto and off of the Preferred Alternative with little delay to motorists. Where road closures are proposed, it is assumed that the traffic will travel to the nearest roadway that crosses or intersects the Preferred Alternative.

The flow of traffic on certain north-south crossroads will be impacted by the new highway due to the proposed at-grade intersections. Capacity analyses were conducted for each of the proposed at-grade intersections. The results of the capacity analyses indicate that the majority of the at-grade intersections will operate at a LOS C for the crossroad traffic movements under 2008 and 2028 traffic conditions. The analyses and results are presented in a detail in a

separate report entitled *US 24 Traffic Impact Analysis for the Preferred Alternative* (June 2003).

In the City of Defiance, the existing intersection of US 24 and West High Street will be closed as a result of the construction of the Preferred Alternative and the existing at-grade intersection will be replaced with an overpass. West High Street will remain open to traffic with an overpass constructed over West High Street to carry the Preferred Alternative over it. Public opinion is divided at West High Street. Several residents and public officials have requested that an interchange be constructed at this location to maintain access to US 24 at West High Street. Community representatives are concerned that eliminating access to US 24 at West High Street would be detrimental to economic development on the west side of the City of Defiance. Other citizens have stated that they do not want an interchange at West High Street.

In response to the public comments, a separate traffic study was conducted to determine the secondary impacts on the local road network resulting from closing the US 24/Switzer Road/West High Street intersection. The study is documented in a separate report entitled *City of Defiance, Ohio Traffic Study: Assessment of Traffic Impacts Due to the Proposed Grade Separation of US 24 and West High Street* (February 2003). The traffic study determined that future capacity problems on the local roads will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the surrounding area. Future capacity problems on local roads will occur regardless of the existence of an interchange at US 24 and West High Street/Switzer Road.

At this time, ODOT is not proposing to construct an interchange at Switzer Road and West High Street as part of the US 24 project. An interchange at this location is not recommended because it is less than 1.6 kilometers (one mile) to the existing US 24/SR 15 interchange. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of 3.2 kilometers (two miles) and a minimum distance of 1.6 kilometers (one mile).

2.6.4 Provision of Full Access Control in Allen County

Prior to October 2002, INDOT was proposing to initially construct an expressway with at-grade intersections at Ryan/Bruick, Webster, Bull Rapids, and State Line roads, and SR 101 and then upgrade the facility to a freeway with full access control in the future. To support the phased construction of the freeway, an expanded right-of-way footprint was used for the evaluation of the Feasible Alternatives between I-469 and the Indiana/Ohio State Line. Under Indiana state law, INDOT is permitted to purchase (condemn) right-of-way for a freeway and to preserve the right-of-way for future freeway development.

In October 2002, INDOT indicated its intention to construct US 24 as a four-lane divided freeway with full access control between I-469 and the Indiana/Ohio State Line. Access will be provided via interchanges to be constructed at Ryan/Bruick Road, Webster Road, and SR 101. In addition to the three new interchanges, the existing I-469/US 24 interchange will be upgraded to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange). The interchange alternatives and associated impacts will be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be selected and will be presented in the US 24 New Haven to Defiance FEIS.

The design for US 24 provides for a freeway between I-469 and the proposed Indiana/Ohio State Line and an expressway between the state line and the eastern terminus at SR 15 in Defiance. The use of this terminology suggests that the function of the two facilities will vary between Indiana and Ohio; however, this is not the case. The FHWA, AASHTO, INDOT, and ODOT classify the function of freeways and expressways as principal arterials. FHWA defines a freeway as "a divided highway facility with full control of access and two or more lanes for the exclusive use of through traffic in each direction", and expressway as "a divided highway facility with partial control of access and two or more lanes for the exclusive use of through traffic in each direction; includes grade separations at most major intersections" (*Highway Performance Monitoring System Field Manual*, December 2000). Functionally classified as the same type of facility (Principal Arterial), both facility types (freeway and expressway) provide for

high-speed travel with the only difference being access management design.

A closer look at Preferred Alternative (Alternative D-1) shows that the design actually provides for a freeway between I-469 and the Indiana/Ohio State Line and between the Paulding/Defiance County Line and SR 66. In these locations, the land use of the surrounding communities is either urban in nature or rural and targeted for economic development by local planning organizations. The section between the Indiana/Ohio State Line and the Paulding/Defiance County Line will be constructed as an expressway as the surrounding land use is rural in character. Paulding County has experienced modest growth in comparison to Allen and Defiance Counties. The predominant land use in Paulding County is agriculture and conversion to residential development is the current trend.

Furthermore, traffic volumes are not constant along the US 24 Corridor between New Haven and Defiance. Traffic volumes on US 24 in Allen County and Defiance County are higher than in Paulding County. The largest volumes are found on the section of US 24 between New Haven and Woodburn, Indiana, exceeding 11,000 vehicles per day. This is attributed to the daily commuting that takes place between suburban communities and jobs in New Haven/Fort Wayne in addition to through trips. The section of US 24 between SR 424 and the City of Defiance ranks second for highest daily traffic volume, carrying more than 10,700 trips per day. This is also attributed to the daily commuting which takes place to jobs in Defiance in addition to through trips. The lowest traffic volumes on US 24 are found in Paulding County due to the rural setting of the area. In general, average daily traffic volumes are 9,000 vehicles per day.

The differences in “facility type” for the US 24 Preferred Alternative are consistent with FHWA’s Context Sensitive Design approach to project development. The freeway design applied to the Allen and Defiance counties sections of the proposed highway is appropriate for urban, target growth, and high traffic volumes areas. This highway design will accommodate existing and future transportation needs of these dynamic areas. In the rural setting of Paulding County, an expressway is an appropriate solution to the transportation needs of the area. This design will accommodate existing and future transportation needs as the county continues to experience modest economic growth.

For the US 24 New Haven to Defiance project, the evolution of alternative development, beginning with the identification of the Feasible Corridors and continuing through the development of Feasible Alternatives, the identification of a Preferred Alternative, and the development of design refinements for the Preferred Alternative, reflects the integration of public comment into the design process. For the Preferred Alternative, the decision to provide interchanges in Allen County came about through the evaluation of mitigation to offset impacts to the Amish community, farm operators, and the Allen County Schools’ transportation needs. Ultimately to provide safe facilities for the Amish, farm operators, school buses, US 24 motorists, and local roadway users, the placement of interchanges at the major local roadways became the most cost-effective option. The provision of grade-separated crossings at low volume roadways in Paulding and Defiance counties rather than closing the roads, in many cases, was based on input from the public and municipal officials. The end result is a safe and user-friendly facility that is consistent with the character of the surrounding community and supports the travel needs of the communities being served by the facility.

2.6.5 Options for Median Design

In comments submitted as part of Concurrence Point #2 coordination, the USFWS indicated that the right-of-way for the Preferred Alternative could be reduced by changing the median design from a grassed median to a concrete barrier median or similar design. This option was evaluated, but is not considered to be feasible.

The Preferred Alternative is designed to meet current AASHTO design standards for a controlled access expressway. For rural divided highways such as US 24, AASHTO recommends that flat, unobstructed medians be used with widths as wide as practical. The principle functions of a median are to separate opposing travel lanes, provide a recovery area for out of control vehicles, provide stopping areas for vehicles in case of emergencies, allow space for storage of vehicles, and minimize headlight glare. Medians can also preserve space for future expansion of the

highway. The principle function of a median barrier is simply to minimize the possibility of an errant vehicle crossing into the path of traffic traveling in the opposite direction. The design of narrow medians with barriers can be enhanced to provide for left turn lanes and emergency stopping areas.

Relative to motorist safety, medians are used to separate opposing travel lanes. For relatively wide medians, the probability of a vehicle crossing the median and colliding with a vehicle in the opposing direction is relatively low. Rural and urban highways are designed to include a "clear zone" - an unobstructed, relatively flat area provide beyond the edge of the travel lanes for the recovery of errant vehicles. For rural highways in areas with flat terrain features, AASHTO recommends that the clear zone be a minimum of 9.0 meters (30 feet) in width from the edge of pavement, which can include shoulders and auxiliary travel lanes (AASHTO, 1996). The "clear zone" should be free of "unyielding" objects such as trees, sign supports, utility poles, light poles, and other objects that can severely damage out-of-control vehicles. Where such objects are placed in the clear zone, additional protection to minimize vehicle damage is generally provided.

The physical separation of opposing travel lanes is recommended not only to reduce to the potential for crossover accidents, but also to enhance driver comfort. Flat, unobstructed medians are recommended on rural expressways to reduce effects of headlight glare as well as air and noise pressure from passing vehicles thereby minimizing driver-related stress.

Wide medians are a desirable feature for highways with unsignalized intersections to provide adequate storage of vehicles crossing the highway. Where a median is 7.5 meters (25 feet) or more in width, passenger cars turning left or crossing the highway will have adequate space to stop safely in the median area. Medians less than 7.5 meters (25 feet) in width should be avoided because vehicles stopped in the median may encroach on the travel lanes, unprotected from through traffic. Of particular concern are larger vehicles such as school buses, farm vehicles, and freight vehicles where the lengths typically exceed 15 meters (50 feet).

In addition to motorist safety and operational issues, grassed medians also provide environmental benefits. Grassed medians are pervious and therefore provide storage areas for highway drainage and the filtration of pollutants contained in highway runoff including chemicals from winter maintenance (snow/ice removal). For facilities using median barriers, extensive enclosed drainage systems are constructed to convey highway runoff from the roadway surface. In addition to the initial construction cost, such drainage systems require maintenance and upkeep which often require temporary closure of travel lanes. While grass medians also require upkeep (grass-cutting), this can be achieved without travel interruptions.

Relative to winter maintenance and motorist safety, grass medians provide ample space for snow storage while median barriers limit the space available for snow storage and keep the snow within the clear zone of the facility. Furthermore, rural highways constructed with grassed median or median barriers are subjected to the effects of snow drifting across the highway. Over the past decade, innovations in winter maintenance have been introduced which greatly enhance winter maintenance on rural highways and significantly reduce maintenance costs. These innovations include the provision of snow fences, use of alternative chemical solutions to traditional salt and sand for pavement deicing, and implementation of computerized systems to inventory roadway surface conditions as well as disperse deicing chemicals.

The effect of median design on wildlife populations was also evaluated. To date, most efforts have focused on developing methodologies to evaluate impacts on wildlife and the design of sophisticated wildlife crossings (overpasses, bridges, oversized culverts, etc.). No studies were found comparing the effects of alternate median designs on wildlife populations.

However, reducing the right-of-way footprint through the provision of concrete medians is not considered to be feasible given the traffic volumes, the rural setting of the study area, the provision of numerous at-grade intersections along the Preferred Alternative, and the need to accommodate turning and crossing movements by large vehicles (school buses, farm equipment, and freight trucks).

2.6.6 Minimization of Wetland Impacts

Following completion of wetlands delineations, additional engineering designs were developed with the intention of minimizing impacts on wetlands. In Paulding County, the Preferred Alternative was shifted to the north between US 127 and C-224, which reduced impacts to Wetland NO-15 from 1.8 hectares (4.5 acres) to 1.0 hectares (2.5 acres).

In April 2001, the ODOT selected Alternative C as the Preferred Alternative for the US 24 New Haven to Defiance project. Alternative C was presented to the USACE and OEPA during a field review on May 10, 2001. The focus of this meeting was the Category 3 wetlands present within Segments 14, 15, 18, and 19. In the Defiance area, Alternative C impacts 1.4 hectares (3.4 acres) of wetlands, including 0.3 hectares (0.7 acres) of Category 2 wetlands, and 1.1 hectares (2.7 acres) of Category 3 wetlands. Within Segments 15 and 18, Alternative D impacts 5.2 hectares (12.8 acres) of wetlands including 2.6 hectares (6.5 acres) of Category 3 wetlands.

During the agency field review, the OEPA recommended that Alternative D be selected as the Preferred Alternative to eliminate impacts to Wetland S-4, which is located in Segment 19 (Alternative C). S-4 is a high-quality, forested wetland located in the floodplain of a tributary to the Maumee River. In correspondence dated May 24, 2001, the OEPA suggested that construction of an embankment through Wetland R-1 located within Segment 18 (Alternative D) would result in less overall wetland impacts than culverting Wetland S-4 in Alternative C.

Following the field review, additional engineering designs were developed to minimize impacts on wetlands, particularly the Category 3 forested wetlands located in Segment 18. This resulted in the development of a 27th alternative – Alternative D-1, which reduces wetland impacts to 4.7 hectares (11.6 acres) within Segments 15 and 18.

2.6.7 Use of the Maumee & Western Railroad Corridor

A frequent comment received at the Concurrence Point #1 and #2 Public Meetings is to locate the proposed four-lane limited access facility within the existing right-of-way of the Maumee & Western Railroad. In consideration of this comment, ODOT presented the concept to the ORDC. The ORDC indicated a preference to preserve the Maumee & Western Railroad corridor for future rail use, thereby greatly reducing the feasibility of the concept (Letter, from James F. Seney, ORDC, January 23, 2002). Factors noted by the ORDC supporting preservation of the Maumee & Western Railroad corridor for future freight use include:

- Rail users need both connections with the NS and CSX rail lines. Severing the Maumee & Western line would result in reroutes of freight traffic adding cost, time, and inefficiency in freight movement.
- The current configuration provides direct connections to two major railroads. Eliminating these connections makes development sites along the rail line less attractive to rail-dependent businesses. Furthermore, the economic development benefits of the corridor are enhanced by the presence of two transportation modes.
- The Maumee & Western Railroad is an active railroad carrying approximately 4,000 carloads per year. While it is in need of improvements, it is not a corridor that the ORDC expects to be abandoned in the near future.
- Preservation is important for future freight planning considerations, as the line provides important connections to major freight rail networks. Additionally, the line may have potential for passenger rail service and is being considered in the Midwest Rail Initiatives Study.

Based on input from the ORDC, conversion of the Maumee & Western Railroad corridor for highway use is not feasible and has been eliminated from further consideration.

2.6.8 Inclusion of the Antwerp Bypass

Incorporated into the design of the Preferred Alternative is a bypass around the Village of Antwerp. The proposed highway will be constructed in sections and it is assumed that the portion near Antwerp will be the first segment constructed. By constructing this section first, the traffic congestion in Antwerp will be alleviated. The bypass includes western and eastern two-lane segments that would connect to the new four-lane expressway. To the west, a new roadway will be constructed between C-11 and C-21 to provide the connection between the

new highway and existing US 24. In the east, a two-lane road on new alignment will be constructed between existing US 24 and the Preferred Alternative. Motorists will use the Antwerp Bypass while the other sections of the Preferred Alternative are under construction. When construction of the Preferred Alternative is complete, the temporary connector roadways will be abandoned.

2.6.9 Avoidance of the Bohlman Trailer Park

The Preferred Alternative (Alternative D-1), as originally designed, would result in impacts to the Bohlman Park Trailer Park, located in Defiance County. The original US 24/SR 424 interchange and relocation of SR 424 requires the acquisition of land from the trailer park, the displacement of mobile homes (residences), and relocation of the trailer park access road. Based on initial coordination with the property owner, there is ample vacant space in the mobile home park to relocate the affected residential units. The trailer park is a target Environmental Justice community.

On September 18, 2002, ODOT representatives met with the owner and 15 residents of the Bohlman Trailer Park. The owner of the trailer park had requested that ODOT proceed with advanced acquisition of his property. The purpose of the meeting was to inform the residents of the project status, advanced acquisition proceedings, and ODOT's property acquisition and relocation process. ODOT will either relocate or purchase the affected mobile homes. ODOT representatives explained that a relocation agent would be assigned to each individual to assist them in their relocation.

In accordance with ODOT's policy on Environmental Justice, ODOT investigated potential design options for the SR 424 interchange to avoid impacts on the community. Four conceptual designs were developed for the SR 424 interchange and evaluated based on consistency with current design standards, impacts to the local roadway system, farmland, wetlands, streams, displacements, and sites with potential environmental concerns (hazardous materials) as well as impacts to the Bohlman Trailer Park.

Based on the evaluation of the conceptual interchange options, the interchange at SR 424 has been redesigned to avoid the displacement of residences in the Bohlman Trailer Park. The eastbound exit and westbound entrance ramps for the interchange are shifted to the west, impacting property associated with ODOT's Defiance County Garage located between US 24 and SR 424. In addition to the loss of 3.1 hectares (7.7 acres) of land, four structures will be displaced from ODOT's garage. ODOT will replace the displaced facilities on-site, thereby retaining the function of the property.

2.7 MITIGATION

Beginning with the alternative development studies, avoidance, minimization, and mitigation of sensitive environmental resources have been considered. The development of minimization and mitigation strategies will continue through final design of the US 24 New Haven to Defiance project. The design of the Preferred Alternative includes a number of mitigation measures, which are listed in Table 2.22.

**TABLE 2.22
SUMMARY OF MINIMIZATION AND MITIGATION MEASURES**

Issue	Minimization/Mitigation Measures
Geology, Soils and Erosion	Erosion and sedimentation control measures will be implemented during construction. Stormwater management measures will be implemented during construction.
Groundwater, Sole Source Aquifers and Wellheads	Affected water wells to be abandoned. Erosion and sedimentation control and stormwater management measures to be implemented during construction
Wetlands	Wetland mitigation plan to be developed in accordance with provisions of the Section 404 permit.
Streams	Stream mitigation plan will be developed in accordance with provisions of the Section 404 permit and 401 water quality certification. Erosion and sedimentation control measures and stormwater management measures to be implemented during construction.
Floodplains	Completion of detailed hydraulic studies for affected streams. Development of adequate drainage measures so that post-construction hydraulics match pre-construction (existing) drainage conditions.
Wildlife, Plants, and Threatened/Endangered Species	Identification of potential roosting and brooding habitat for the Indiana bat prior to construction. Removal of potential roosting and brooding habitat for the Indiana bat to be restricted between April 15 and September 15. Minimization of impacts to stream corridors. Review of data on mussel species present within the Maumee and Tiffin rivers to confirm presence of federal and/or state listed species.
Farmlands	Property acquisition and relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Coordination with the Ohio Department of Agriculture concerning condemnation of farmlands designated as Agricultural Districts. Provision of service roads to mitigate landlocking of active farmland. Coordination with local agencies and property owners concerning mitigation of impacts to farmland irrigation/drainage systems.
Municipal/Industrial/Hazardous Waste	Completion of asbestos and lead-based paint investigations on structures to be demolished for project and development of appropriate disposal plans (if required). Closure of USTs and ASTs in accordance with applicable regulations on three properties (ODOT Defiance County Garage, Mark Moats Ford, and an abandoned property on T-69). Further investigation of storage drums found on an abandoned property on T-69.
Land Use	Provision of service roads to mitigate landlocking of properties.
Residential Displacements	Property acquisition and relocation assistance provided in accordance with the Uniform Relocation and Real Property Acquisition Policies Act. Implementation of a Residential Relocation Assistance Program.
Environmental Justice	Provisions for grade-separated crossings at Ryan/Bruick Road, Webster Road, and SR 101 in Allen County to support travel needs of the local Amish Community. Minimization of right-of-way impacts to the Bohlman Trailer Park (Defiance County) and avoidance of residential units.
Community Facilities	Provisions for grade-separated crossings at Woodburn Road (Allen County) and T-43 (Paulding County) for safe access to Woodlan High School and Antwerp School complex. On-site replacement of salt storage, brine mixing, and other affected facilities at the ODOT Defiance County Garage. Notifications to emergency service providers during construction concerning temporary local roadway impacts.

**TABLE 2.22 (CONTINUED)
SUMMARY OF MINIMIZATION AND MITIGATION MEASURES**

Issue	Minimization/Mitigation Measures
Parks, Recreation Land, Natural and Wildlife Areas, Section 4(f)/6(f) Resources	Coordination with ODNR for the Maumee River crossing in accordance with Section 1517.6 of the Ohio Revised Code.
Business Displacements	Property acquisition and relocation assistance provided in accordance with the Uniform Relocation and Real Property Acquisition Policies Act.
Visual Resources	Implementation of landscape design features where feasible.
Archaeological Resources	SHPO Notification in the event of an unanticipated discovery. A plan for the proposed archaeological documentation for the unexcavated portion of the Gronaeur Lock will be prepared and submitted to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology for review and comment. Upon approval of the work plan, a qualified archaeologist will record the remaining portion of lock during construction.
Historic Resources	Avoidance of NRHP-listed and NRHP-eligible resources. Preservation of existing vegetation between the right-of-way and the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House.
Traffic	Provisions for grade-separated crossings at Woodburn Road (Allen County) and T-43 (Paulding County) for safe access to Woodlan High School and Antwerp School complex. Provisions for grade-separated crossings at Ryan/Bruick Road, Webster Road, and SR 101 in Allen County to support travel needs of the local Amish Community. Maintenance and protection of traffic during construction. Notifications to general public and emergency service providers during construction concerning temporary local roadway impacts.
Air Quality	Implementation of Best Management Practices during construction to minimize local short-term air quality problems.
Noise	Implementation of Best Management Practices during construction to minimize local short-term construction noise.

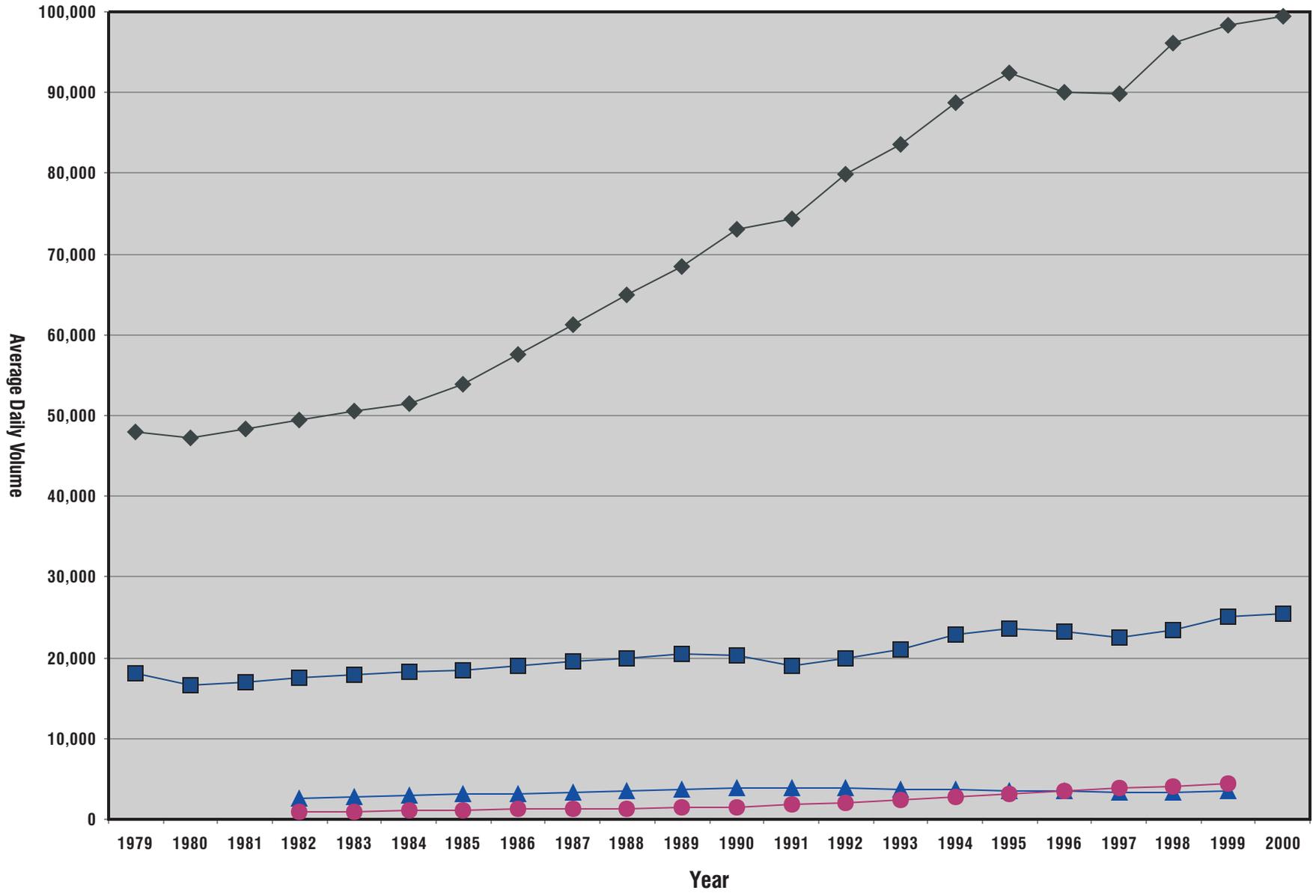


Travel Time Studies Routes

Figure 2.1



FIGURE 2.2
AVERAGE DAILY AUTOMOBILE AND TRUCK VOLUMES ON US 24 AND THE OHIO TURNPIKE



◆ Turnpike Cars ■ Turnpike Trucks ▲ US 24 Cars ● US 24 Trucks

FIGURE 2.3
ANNUAL GROWTH RATES FOR TRUCK TRAFFIC AND TOLLS ON US 24 AND THE OHIO TURNPIKE

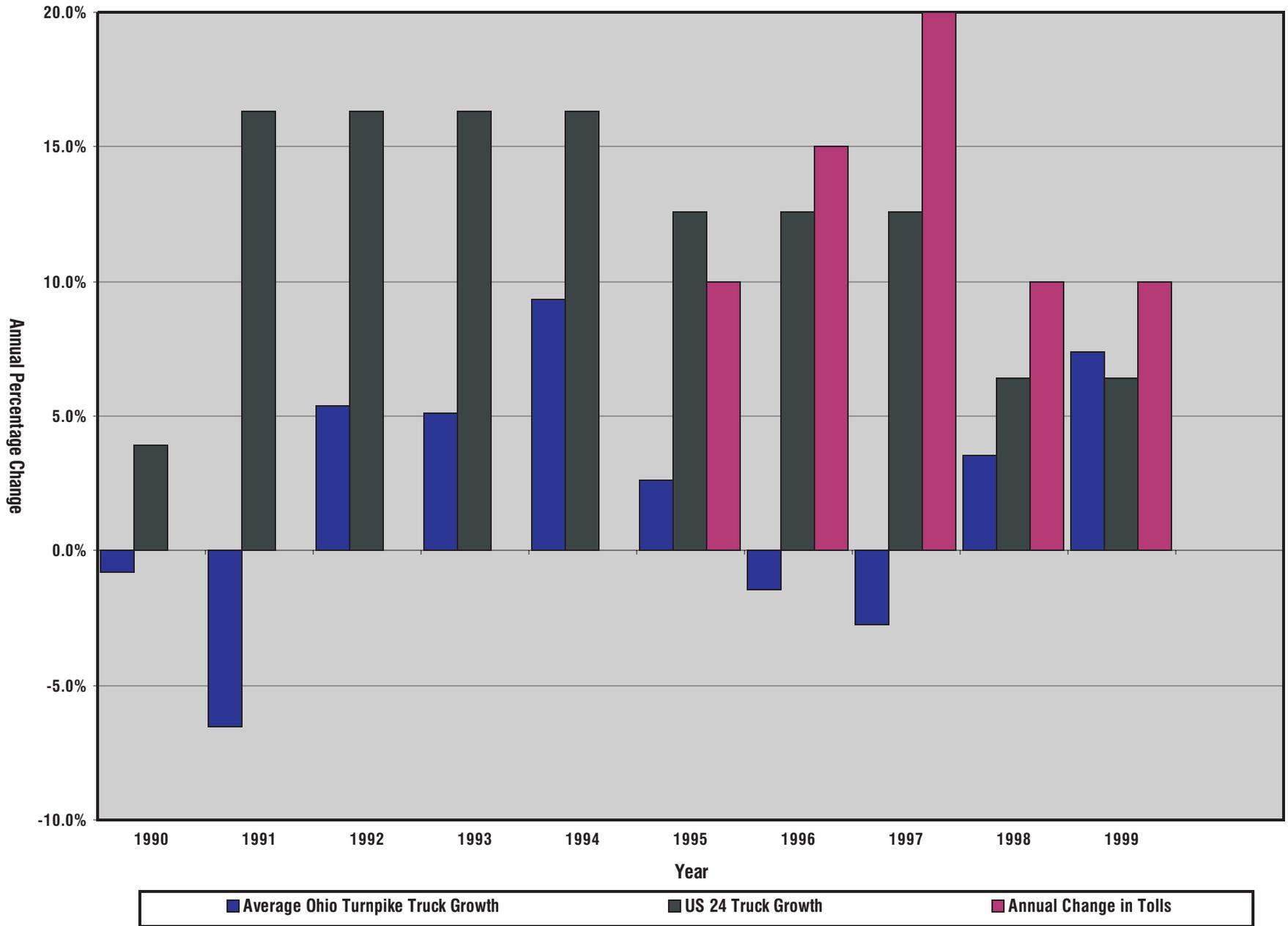
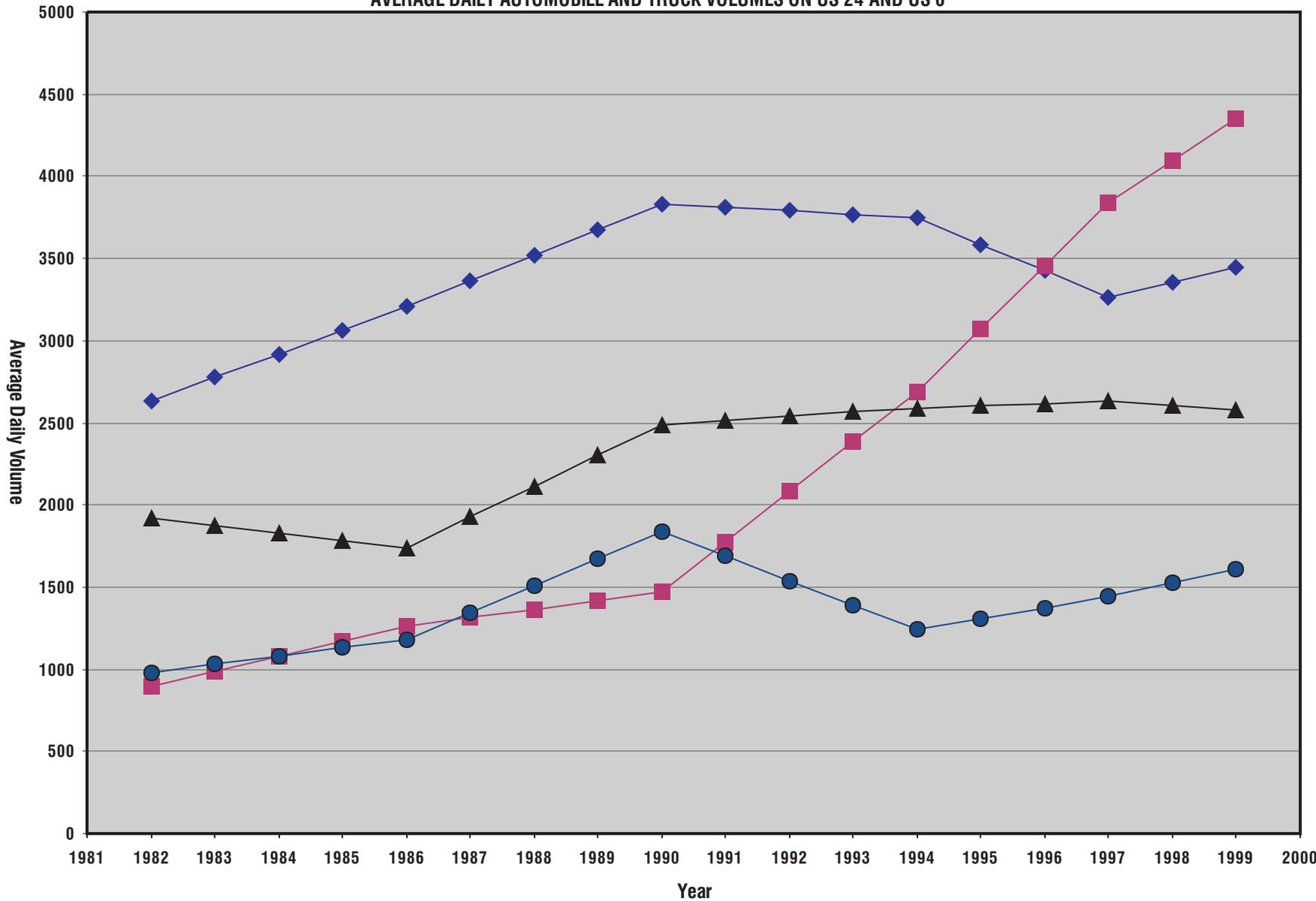
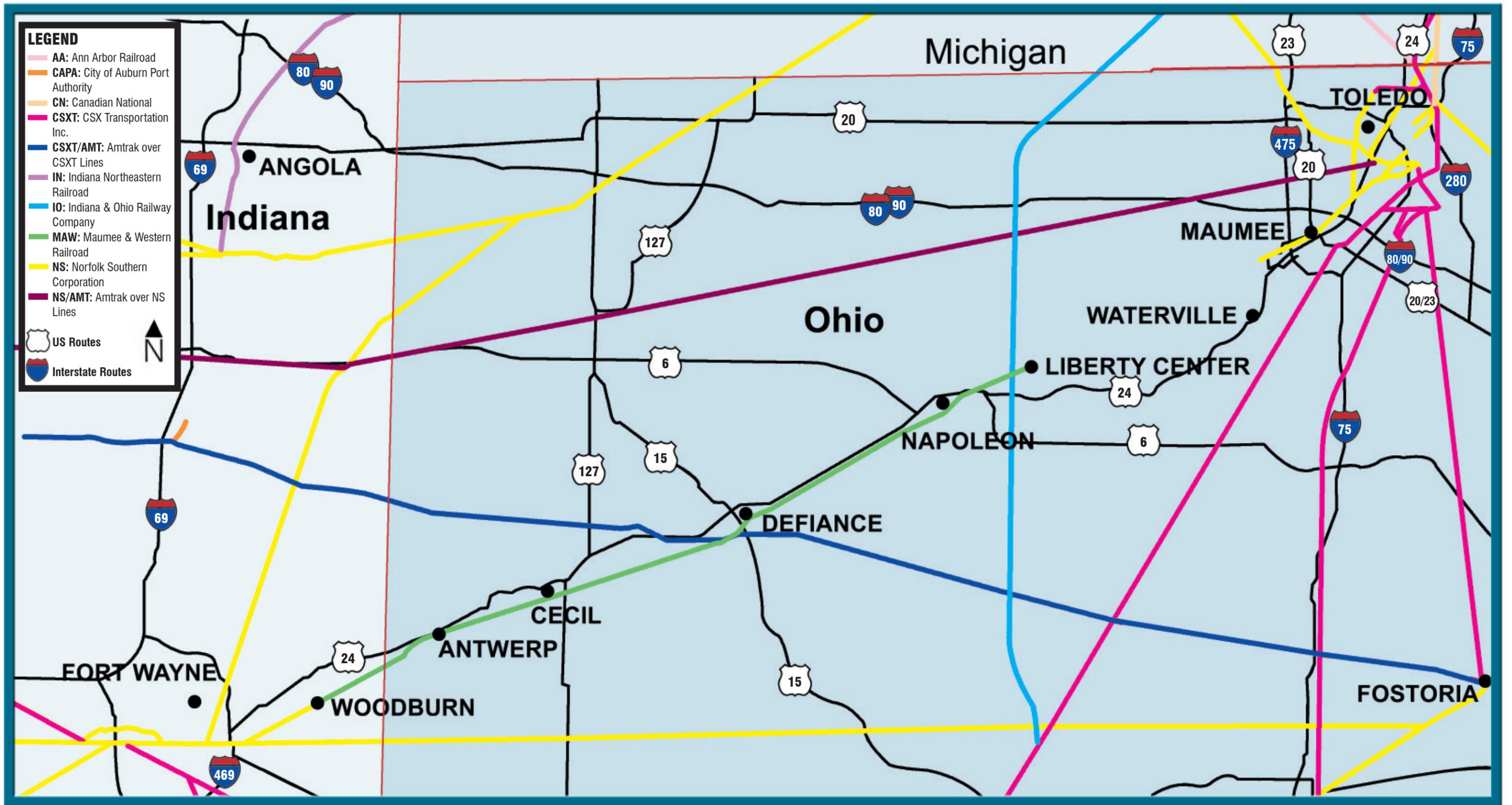


FIGURE 2.4
AVERAGE DAILY AUTOMOBILE AND TRUCK VOLUMES ON US 24 AND US 6

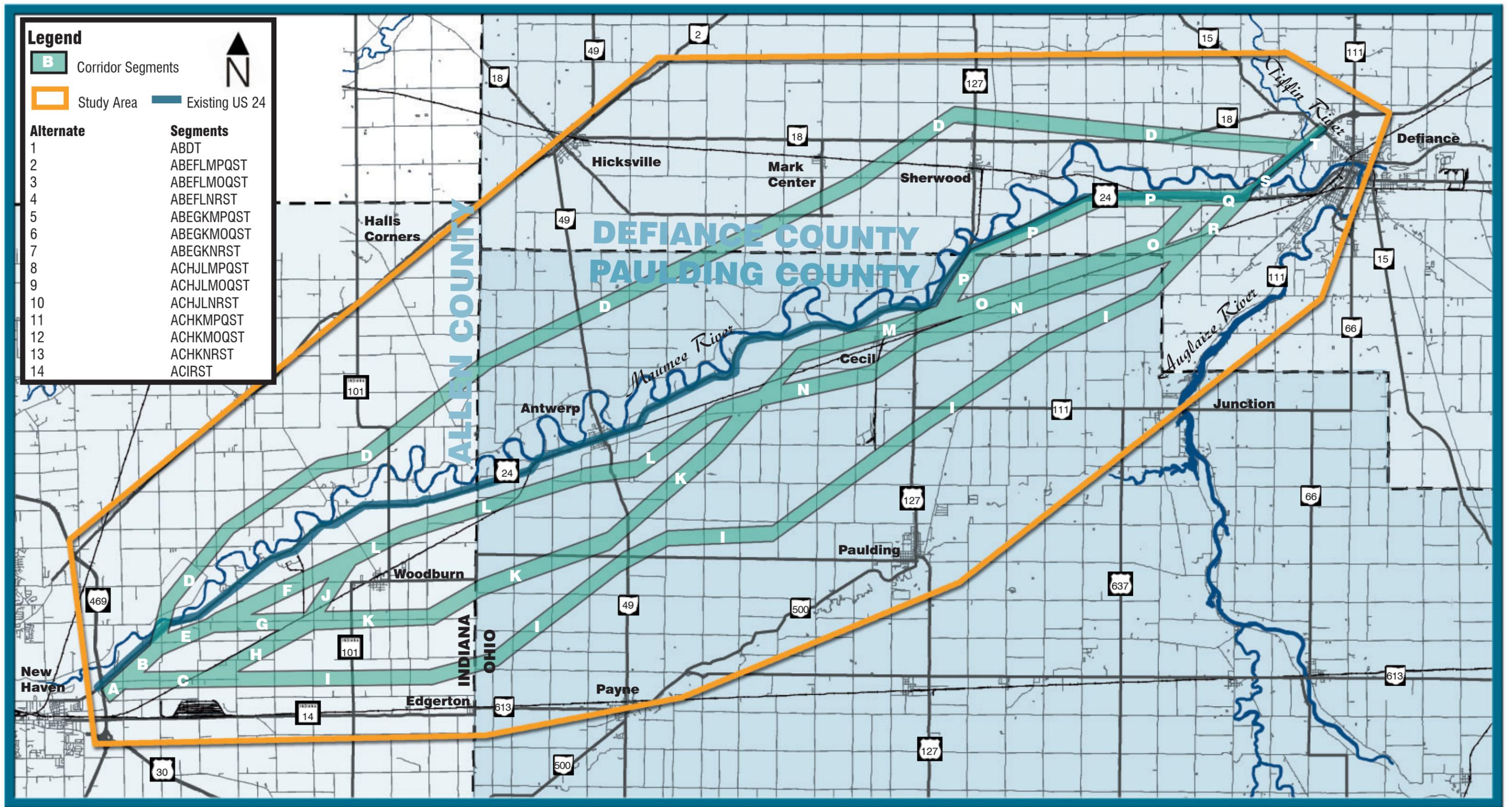




Northwest Ohio/Northeast Indiana Railroads

Figure 2.5





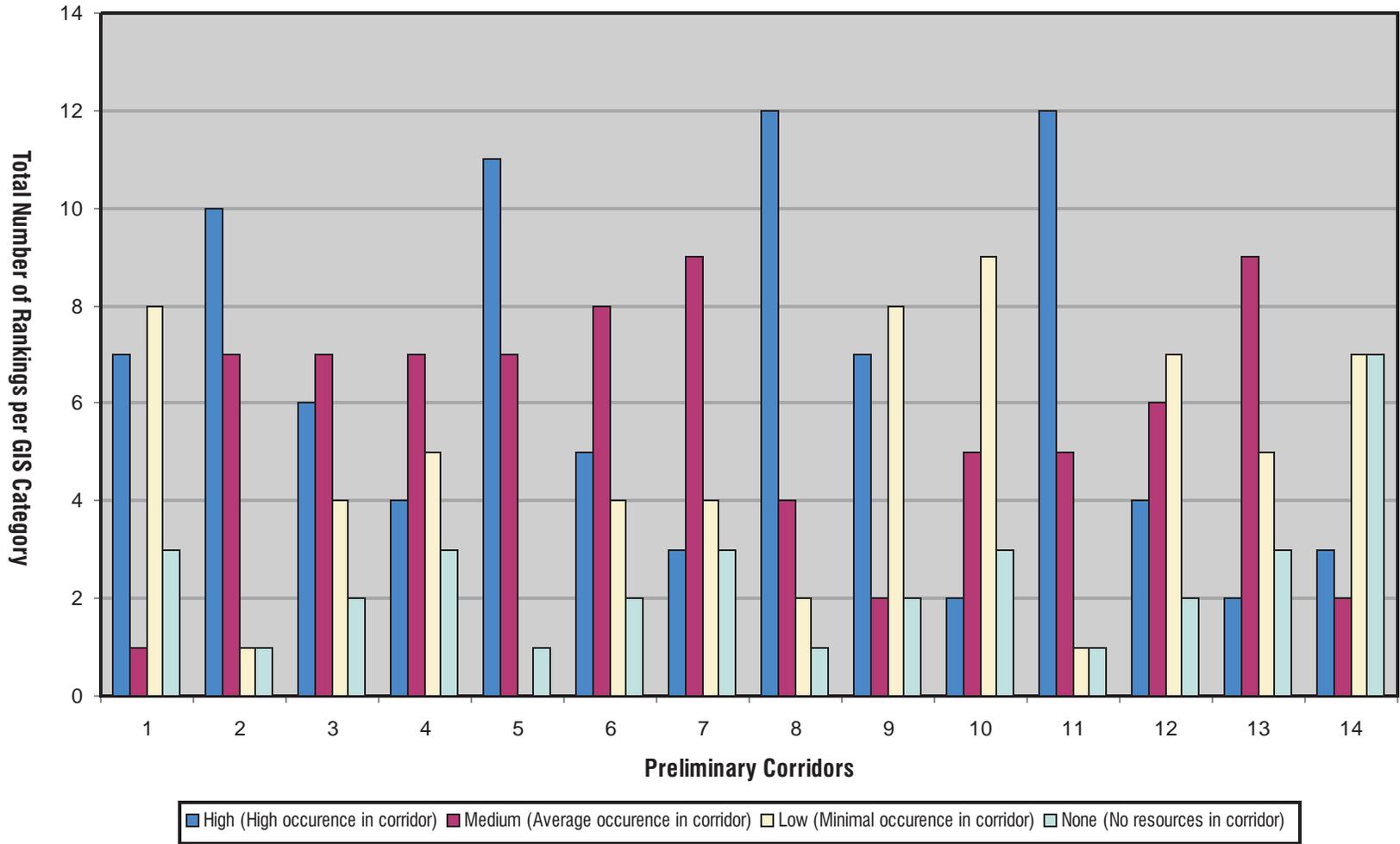
Study Area Boundaries & Preliminary Corridors



Figure 2.6



**FIGURE 2.7
PRELIMINARY CORRIDOR COMPARISON**



Note: Ratings assigned relative to data for category across all corridors

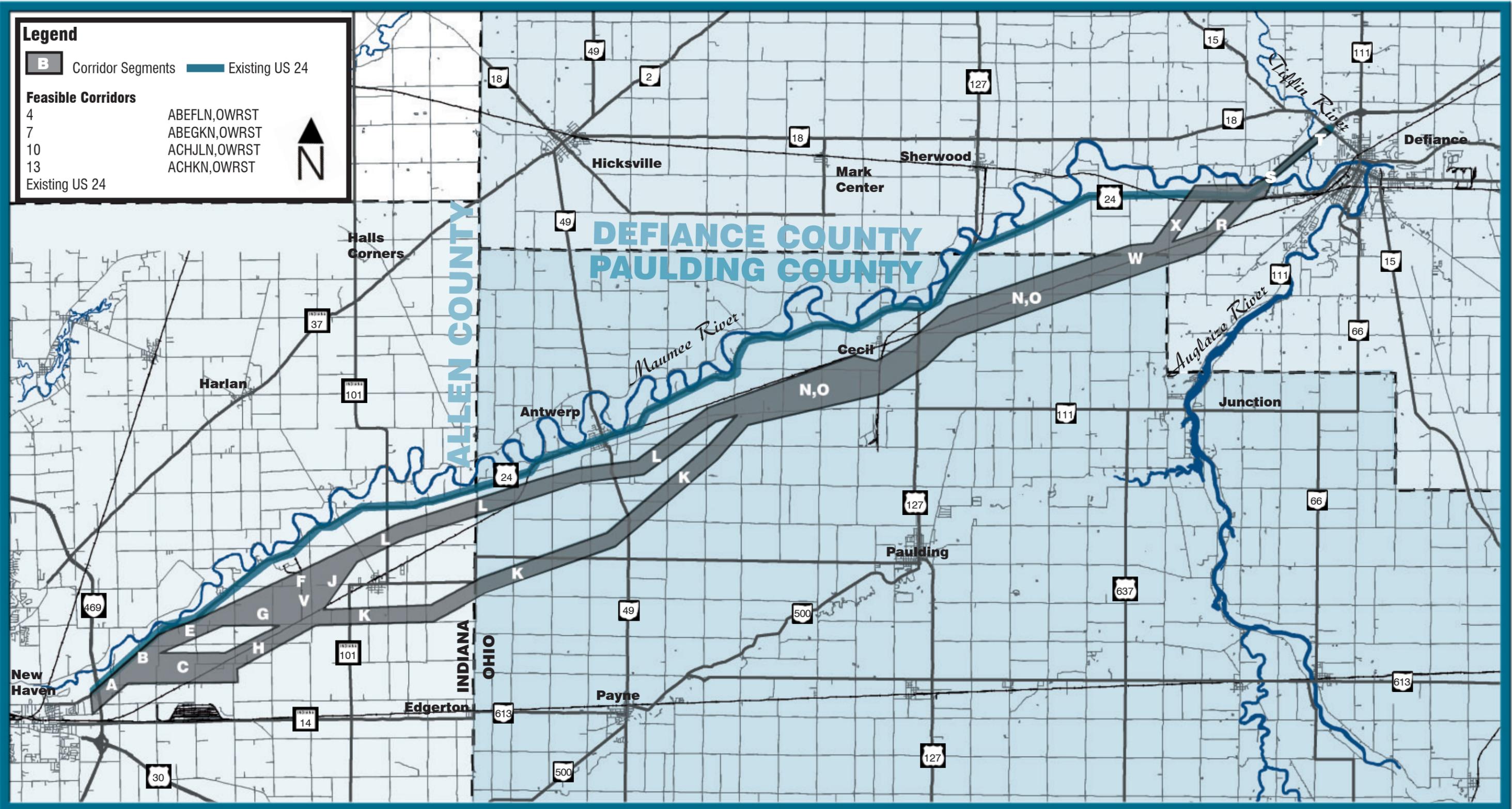
Legend

B Corridor Segments Existing US 24

Feasible Corridors

4	ABEFLN,OWRST
7	ABEGKN,OWRST
10	ACHJLN,OWRST
13	ACHKN,OWRST
Existing US 24	

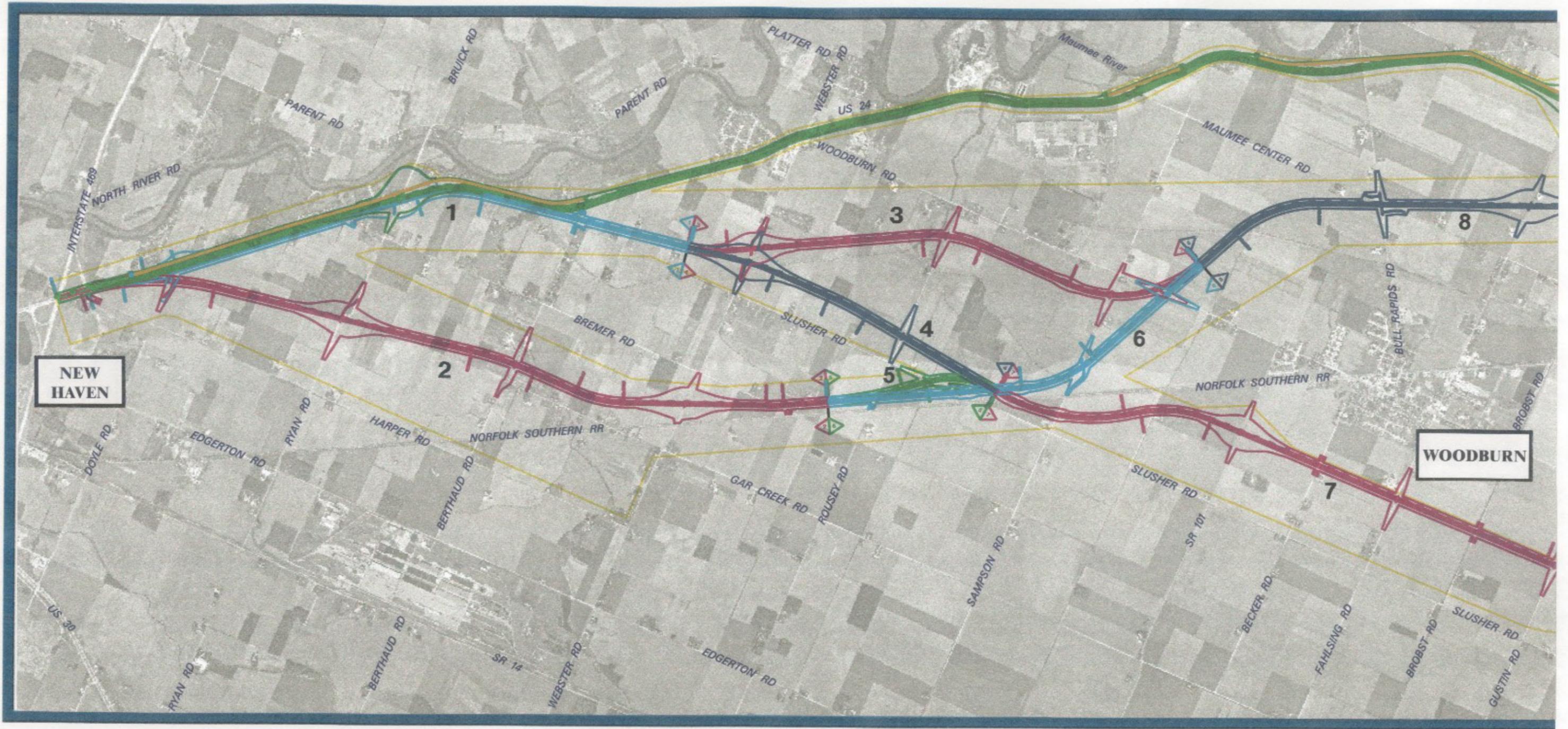
N



Feasible Corridors Selected for Further Study

Figure 2.9





Legend		Segments		Segments		Segments		Segments		Segments			
Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments		
A	1-3-8-11-12-16-19-20	D	1-3-8-11-13-15-18-20	H	2-6-8-11-13-15-18-20	L	1-4-7-10-13-15-18-20	P	1-4-7-9-11-13-15-18-20	T	2-5-7-10-13-15-18-20	X	2-5-7-9-11-13-15-18-20
B	1-3-8-11-12-17-18-20	E	2-6-8-11-12-16-19-20	I	1-4-7-10-12-16-19-20	M	1-4-7-9-11-12-16-19-20	Q	2-5-7-10-12-16-19-20	U	2-5-7-9-11-12-16-19-20	Y	2-Lane on Existing US 24
C	1-3-8-11-13-14-19-20	F	2-6-8-11-12-17-18-20	J	1-4-7-10-12-17-18-20	N	1-4-7-9-11-12-17-18-20	R	2-5-7-10-12-17-18-20	V	2-5-7-9-11-12-17-18-20	Z	4-Lane on Existing US 24 with Antwerp Bypass
		G	2-6-8-11-13-14-19-20	K	1-4-7-10-13-14-19-20	O	1-4-7-9-11-13-14-19-20	S	2-5-7-10-13-14-19-20	W	2-5-7-9-11-13-14-19-20		



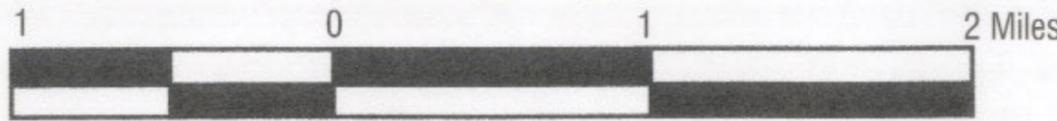
Alternatives

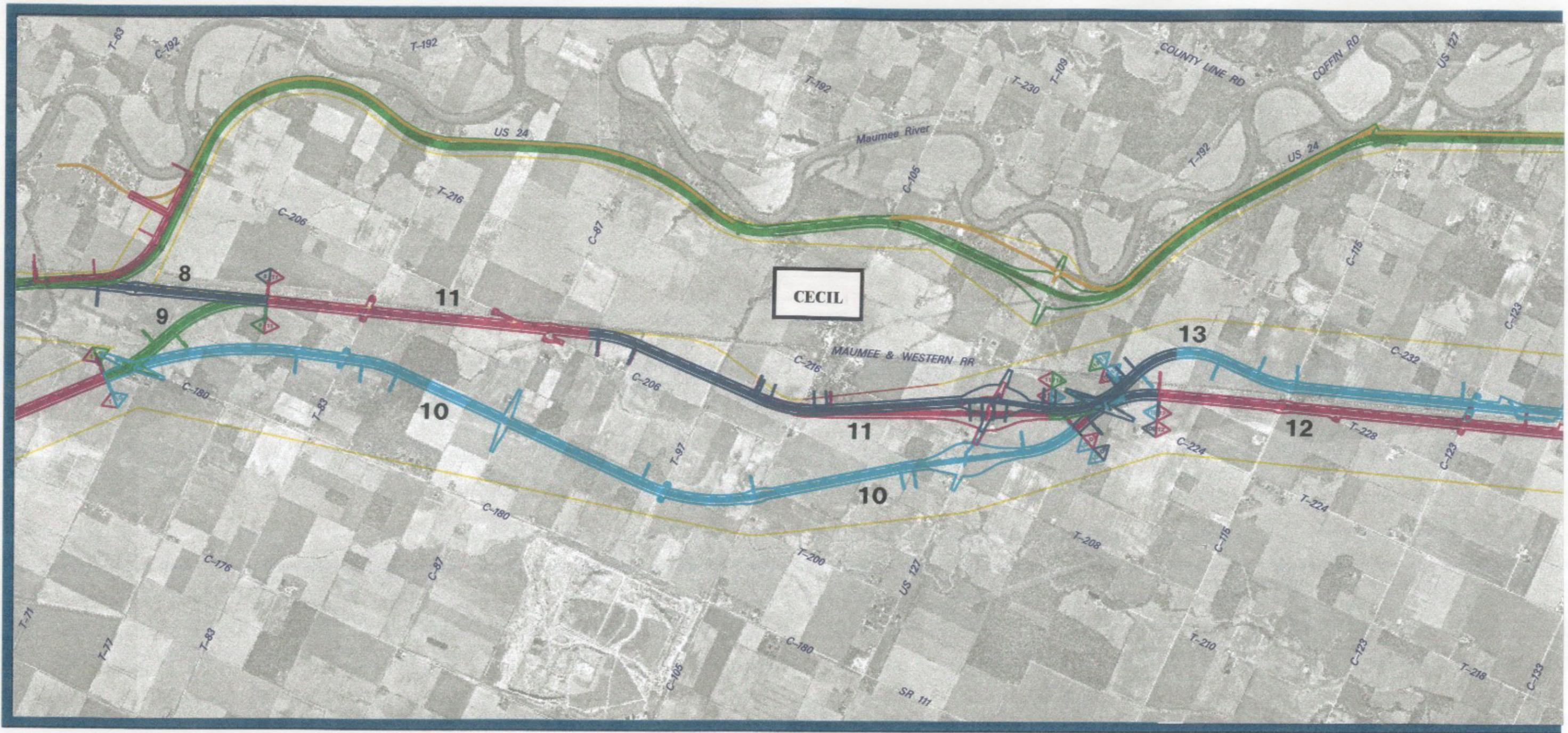
Sheet 1 of 4



	Alternatives		Corridor boundaries
	Alternatives		Segment boundaries
	Existing US 24	1	Segment numbers





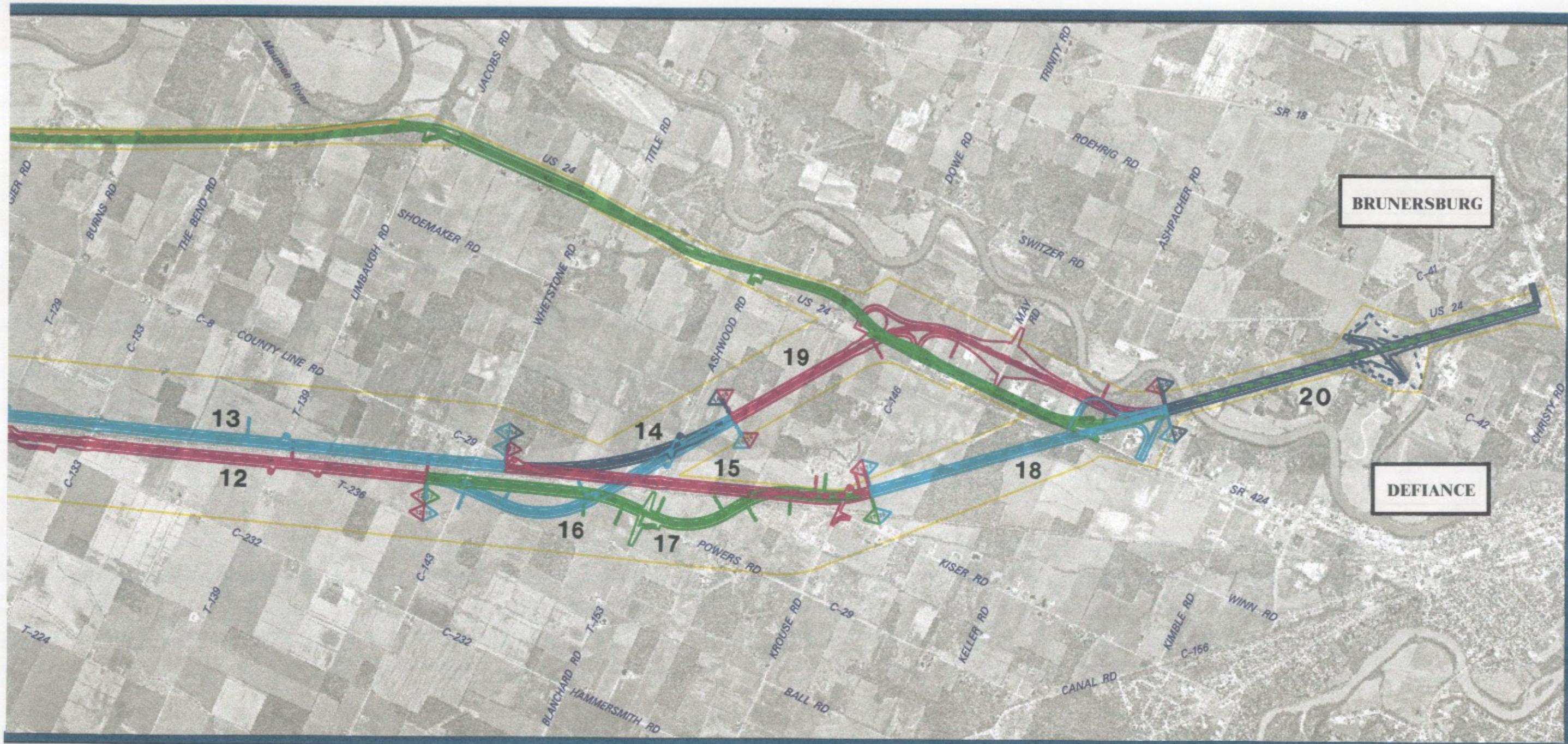


Legend		Segments		Segments		Segments		Segments		Segments			
Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments		
A	1-3-8-11-12-16-19-20	D	1-3-8-11-13-15-18-20	H	2-6-8-11-13-15-18-20	L	1-4-7-10-13-15-18-20	P	1-4-7-9-11-13-15-18-20	T	2-5-7-10-13-15-18-20	X	2-5-7-9-11-13-15-18-20
B	1-3-8-11-12-17-18-20	E	2-6-8-11-12-16-19-20	I	1-4-7-10-12-16-19-20	M	1-4-7-9-11-12-16-19-20	Q	2-5-7-10-12-16-19-20	U	2-5-7-9-11-12-16-19-20	Y	2-Lane on Existing US 24
C	1-3-8-11-13-14-19-20	F	2-6-8-11-12-17-18-20	J	1-4-7-10-12-17-18-20	N	1-4-7-9-11-12-17-18-20	R	2-5-7-10-12-17-18-20	V	2-5-7-9-11-12-17-18-20	Z	4-Lane on Existing US 24 with Antwerp Bypass
		G	2-6-8-11-13-14-19-20	K	1-4-7-10-13-14-19-20	O	1-4-7-9-11-13-14-19-20	S	2-5-7-10-13-14-19-20	W	2-5-7-9-11-13-14-19-20		

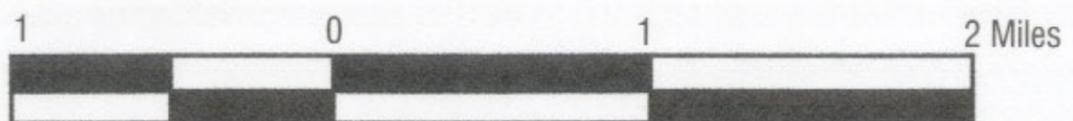


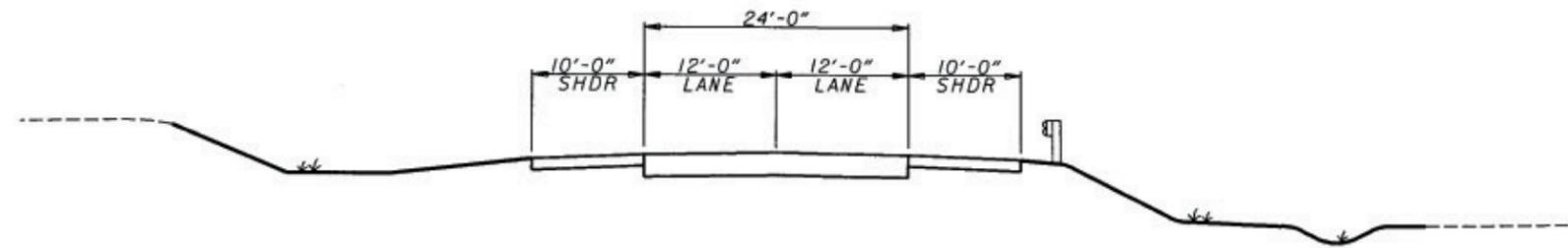
Alternatives

Sheet 3 of 4

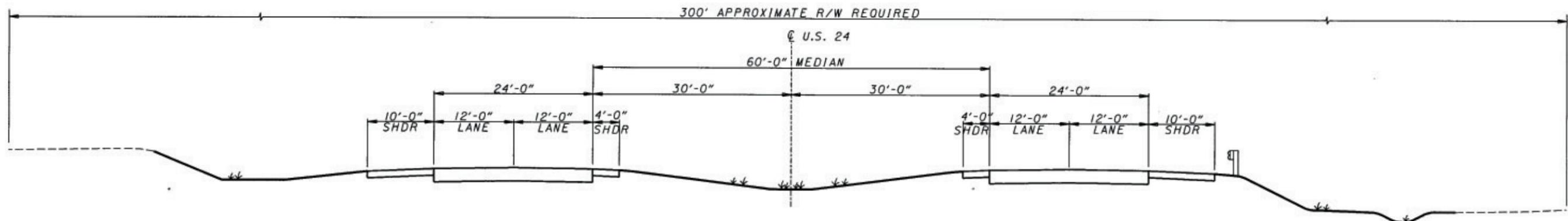


	Alternatives		Corridor boundaries
	Alternatives		Segment boundaries
	Existing US 24		Segment numbers

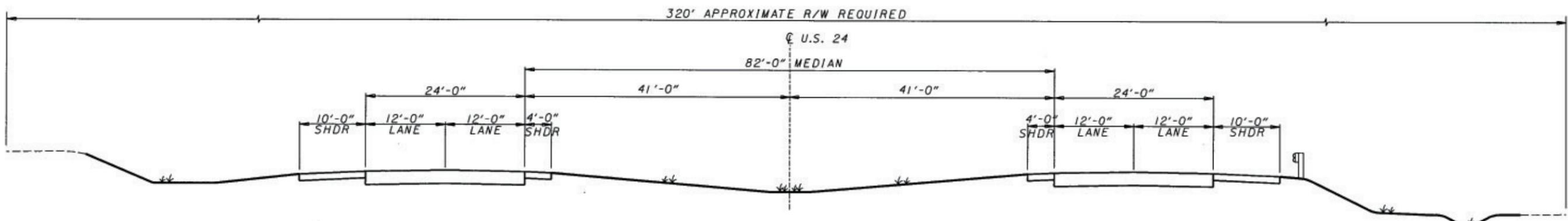




Two Lane on Existing US 24 Typical Section - Alternative Y



ODOT Typical Section - Four Lane Alternatives (A-X, Z)



INDOT Typical Section - Four Lane Alternatives (A-X, Z)



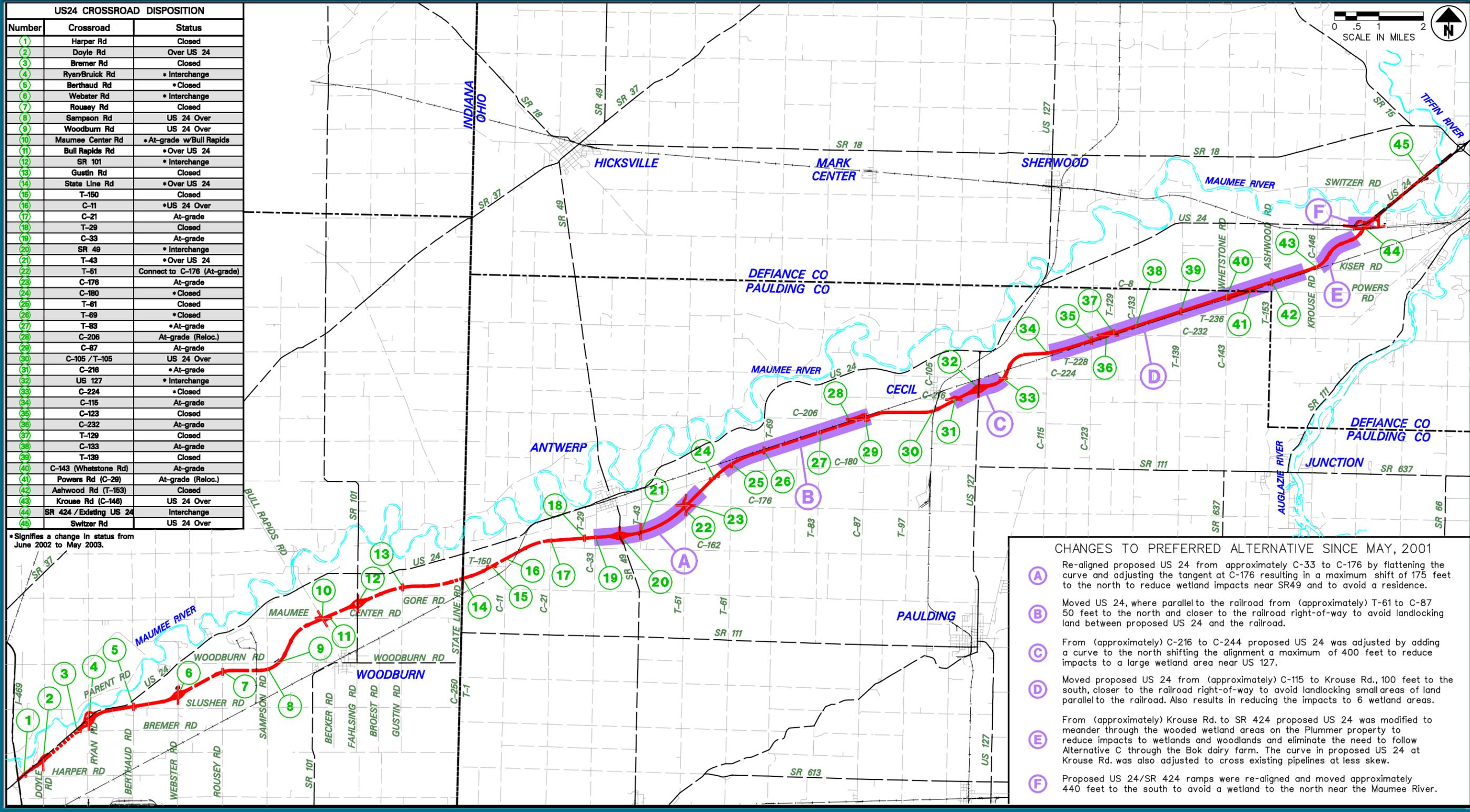
Typical Sections

Figure 2.11



US24 CROSSROAD DISPOSITION		
Number	Crossroad	Status
1	Harper Rd	Closed
2	Doyle Rd	Over US 24
3	Bremer Rd	Closed
4	Ryan/Bruick Rd	* Interchange
5	Berthaud Rd	* Closed
6	Webster Rd	* Interchange
7	Rousey Rd	Closed
8	Sampson Rd	US 24 Over
9	Woodburn Rd	US 24 Over
10	Maumee Center Rd	* At-grade w/Bull Rapids
11	Bull Rapids Rd	* Over US 24
12	SR 101	* Interchange
13	Gustin Rd	Closed
14	State Line Rd	* Over US 24
15	T-150	Closed
16	C-11	* US 24 Over
17	C-21	At-grade
18	T-29	Closed
19	C-33	At-grade
20	SR 49	* Interchange
21	T-43	* Over US 24
22	T-51	Connect to C-176 (At-grade)
23	C-176	At-grade
24	C-180	* Closed
25	T-61	Closed
26	T-69	* Closed
27	T-83	* At-grade
28	C-206	At-grade (Reloc.)
29	C-87	At-grade
30	C-105 / T-105	US 24 Over
31	C-216	* At-grade
32	US 127	* Interchange
33	C-224	* Closed
34	C-116	At-grade
35	C-123	Closed
36	C-232	At-grade
37	T-129	Closed
38	C-133	At-grade
39	T-139	Closed
40	C-143 (Whetstone Rd)	At-grade
41	Powers Rd (C-29)	At-grade (Reloc.)
42	Ashwood Rd (T-153)	Closed
43	Krouse Rd (C-146)	US 24 Over
44	SR 424 / Existing US 24	Interchange
45	Switzer Rd	US 24 Over

* Signifies a change in status from June 2002 to May 2003.



- CHANGES TO PREFERRED ALTERNATIVE SINCE MAY, 2001**
- (A)** Re-aligned proposed US 24 from approximately C-33 to C-176 by flattening the curve and adjusting the tangent at C-176 resulting in a maximum shift of 175 feet to the north to reduce wetland impacts near SR49 and to avoid a residence.
 - (B)** Moved US 24, where parallel to the railroad from (approximately) T-61 to C-87 50 feet to the north and closer to the railroad right-of-way to avoid landlocking land between proposed US 24 and the railroad.
 - (C)** From (approximately) C-216 to C-244 proposed US 24 was adjusted by adding a curve to the north shifting the alignment a maximum of 400 feet to reduce impacts to a large wetland area near US 127.
 - (D)** Moved proposed US 24 from (approximately) C-115 to Krouse Rd., 100 feet to the south, closer to the railroad right-of-way to avoid landlocking small areas of land parallel to the railroad. Also results in reducing the impacts to 6 wetland areas.
 - (E)** From (approximately) Krouse Rd. to SR 424 proposed US 24 was modified to meander through the wooded wetland areas on the Plummer property to reduce impacts to wetlands and woodlands and eliminate the need to follow Alternative C through the Bok dairy farm. The curve in proposed US 24 at Krouse Rd. was also adjusted to cross existing pipelines at less skew.
 - (F)** Proposed US 24/SR 424 ramps were re-aligned and moved approximately 440 feet to the south to avoid a wetland to the north near the Maumee River.



Preferred Alternative (Alternative D-1)

Figure 2.12



3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides an overview and description of the general setting of the US 24 New Haven to Defiance study area as well as detailed data describing the natural and man-made resources that would be potentially impacted by the alternatives analyzed in this Draft Environmental Impact Statement (DEIS).

Twenty-six Feasible Alternatives (Alternatives A through Z) have been developed for the project. For Alternatives A through X, US 24 would be upgraded to a four-lane expressway constructed on new right-of-way. Alternatives A through X include an expanded right-of-way footprint between I-469 and the Indiana/Ohio State Line to allow for future interchange development in Allen County, Indiana. Alternative Y consists of minor improvements to existing US 24, including the addition of shoulders, turning lanes, and passing lanes and intersection improvements. Under Alternative Z, existing US 24 would be reconstructed as a four-lane expressway. The Preferred Alternative is Alternative D-1, which consists of Alternative D with design refinements to minimize impacts to sensitive resources.

The No Build alternative is also discussed for specific categories as consistent with the Federal Highway Administration's (FHWA)'s *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (T 6640.8A, October 30, 1987).

The discussion for each impact category presents the subject, setting the stage with a discussion of the existing conditions found in the 1282 square kilometers (500 square miles) study area and Feasible Corridors. The discussion presents data starting from the westernmost county, Allen County, Indiana, and proceeding eastward through Paulding and Defiance counties in Ohio. Feasible Corridors are generally 610 meters (2,000 feet) in width for new alignments. The Feasible Corridor width studied for existing US 24 is 152 meters (500 feet). Discussion of the methodologies, reference standards, and analyses used for the impact determinations follows the existing condition discussions.

The project impact discussions refer only to those resources found within the rights-of-way identified for the Feasible Alternatives. The rights-of-way for Alternatives A through X and Z are approximately 91 meters (300 feet) wide and the right-of-way for Alternative Y is approximately 13.41 meters (44 feet) wide. The impacts associated with each alternative serve as a basis for comparison of the Build Alternatives leading to the identification of the Preferred Alternative (Alternative D-1). A discussion of proposed mitigation strategies follows the impact analysis and concludes the discussion.

In October 2002, INDOT indicated its intention to construct US 24 as a four-lane divided freeway with full access control between I-469 and the Indiana/Ohio State Line. In addition to interchanges constructed at Ryan/Bruick Road, Webster Road, and SR 101, the existing I-469/US 24 interchange will be upgraded to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange). Nineteen conceptual alternatives for improvements to the existing interchange were developed and evaluated through a two-step screening process. The conceptual alternatives were first screened to determine if they met the purpose and need for the improvements. The second step involved a comparative analysis of environmental impacts, engineering features, and cost-effectiveness. Based on the results of the screening analysis, three Feasible Alternatives for the interchange improvements were selected for further development and in-depth analysis.

The development of the three Feasible Alternatives for improvements to the US 24/I-469 interchange and the detailed analysis of the environmental impacts of the alternatives are being completed. The interchange alternatives and associated impacts will be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be selected, which will be presented in the US 24 New Haven to Defiance Final Environmental Impact Statement (FEIS).

3.1 NATURAL ENVIRONMENT

3.1.1 Geology, Soils, and Erosion

Existing Conditions

Allen County, Indiana

Allen County is in the northeastern part of Indiana in the Eastern Lake and Till Plains sections of the Central Lowland physiographic province. Soils in Allen County are generally medium to moderately coarse in texture and poorly drained, except for areas along drainageways and stream terraces. The southern and western parts are within the Tipton till plain, and the northern and eastern parts are within the Northern Lake and Moraine region. The Northern Lake and Moraine region is made up of the Maumee lacustrine plain and the Steuben morainal-like area. The lacustrine plain is characterized by a covering of lake sediments over glacial tills that were originally formed in deep water.

General elevation in the Allen County varies from 207 to 216 meters (680 to 710 feet), with the high areas corresponding primarily to beach ridges located around the ancient lake plain. Topographic relief in the study area varies by less than 1.5 meters (5 feet). The Little River and the Eel River, both of which are part of the Mississippi River watershed, drain the far-western quarter of the county. The valley of the Little River is also called the Wabash sluiceway.

The study area is not within an Indiana karst region and no karst geologic features were observed during the field reviews. Therefore, the Memorandum of Understanding (MOU) between the Indiana Department of Transportation (INDOT), US Fish and Wildlife Service (USFWS), Indiana Department of Natural Resources (IDNR), and Indiana Department of Environmental Management (IDEM) is not applicable.

Paulding County, Ohio

Paulding County is part of the glacial lake plain section of northwestern Ohio. Most of the soils in the county are clayey and poorly drained. Glacial till and lacustrine deposits are the chief parent materials for soils in Paulding County. Several glaciers that left a mantle of fine-textured till covered the area. The mantle ranges in thickness from less than 6.1 meters (20 feet) to nearly 15.2 meters (50 feet).

The land surface has been affected by glaciation in two ways. The ice sheets of the several glaciers that crossed the county planed it. Level topography was then enhanced by sedimentation of two glacial lakes, Lake Maumee and Lake Whittlesey. Topographic relief in Paulding County is nearly level to gently undulating except along major drainageways. The land surface generally has a fall of less than 0.95 meters per kilometer (five feet per mile). The generally low relief contributes to poor drainage in much of the county. Combined with fine-textured and rather impervious materials, this has made many of the soils wet under natural conditions.

Drainage in Paulding County is divided into three watersheds. The majority of the area drains into the Upper Maumee River Watershed. The northwestern portion of the county drains into the St. Joseph River Watershed and the southeastern portion of the county drains in the Little Auglaize River Watershed.

Defiance County, Ohio

Defiance County is part of the Indiana and Ohio Till Plains and the Lake Plain section of the Central Lowlands physiographic province. The highest elevation in the county is about 266.5 meters (874 feet) above sea level. The lowest elevation is about 196.7 meters (645 feet) above sea level. The northwestern part of the county has stronger relief and is composed mostly of gently sloping and sloping ground and end moraines deposited during the ice age. The greater relief is on the Fort Wayne end moraine, which was formed when the ice front remained stationary for a period of time. Less rolling areas and ground moraines, illustrate the relatively uniform rate of glacial retreat.

Drainage in Defiance County is divided into three watersheds. The northwest part of the county drains into the St. Joseph River; the north-central part of the county is part of the Upper Maumee River watershed, and the southeastern part of the county is part of the Little Auglaize River Watershed.

Methodology

The information for this section was obtained from review of the *Soil Survey of Allen County*,

Indiana (1969); the *Soil Survey of Paulding County, Ohio* (1960); and the *Soil Survey of Defiance County, Ohio* (1984). US Geological Survey (USGS) topographic maps were also reviewed for the study area.

Project Impacts

A result of the project would be the permanent conversion of currently arable soils to impervious surfaces. In the geologic sense, the minor amount of surface area covered would not have an effect on the geology of the area. Certain soil types may be found to be unsuitable as roadway fill and be removed during construction in order to achieve a stable road base. Erosion potential for the area is low due to the minor variations in elevation found in the Lake Plains region. The addition of elevated portions of the roadway can increase the potential for localized erosion.

Because of the typical highway sections considered for all the alternatives, similar effects can be expected between alternatives. Existing US 24 alignments (Alternatives Y and Z) can be expected to have less of an effect because of the existing impervious surfaces associated with the roadway and localized development. Alternatives A through X would have more of an effect, however, these impacts are minor.

Preferred Alternative Impacts

The Preferred Alternative (D-1) will result in the permanent conversion of arable soils to impervious surface. This will not have an effect on the geology of the study area or soils present within the study area.

Mitigation

The use of Best Management Practices (BMPs) and current design standards would eliminate undesirable effects. Erosion control and stormwater management is required during construction through the National Pollutant Discharge Elimination System (NPDES) permitting program. Adherence to federal and state design criteria for the construction of roadways will eliminate the potential for long-term soil erosion due to the project.

**3.1.2 Groundwater/
Sole Source Aquifer/
Wellhead Protection**

Geologic formations (e.g., sand, gravel, limestone, sandstone) have the ability to receive, store and transmit water. In general, if a formation is capable of yielding enough water to support a well or spring, it is called an aquifer. The types of geologic material influence its ability to store and transmit water. For example, sands and gravel allow water to flow through easily while shale, which originated from compacted layers of mud and clay, allows very little water to flow through it unless the shale is highly fractured.

Existing Conditions

The US Environmental Protection Agency (USEPA) defines a sole source aquifer as one that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas can have no alternative drinking water source(s) that could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are referred to as “sole source aquifers” (SSA). There are no SSAs present in the study area.

Allen County, Indiana

The study area is underlain by limestone and dolomite bedrock of Devonian or Silurian age. The bedrock is covered by a 9.1 to 15.2 meter (30 to 50 feet) thick layer of water worked glacial till and lacustrine sediments. Water for the cities of Fort Wayne and New Haven is taken from the St. Joseph River. The river is fed mainly from surface runoff. Within the US 24 study area, Woodburn has a public water system that utilizes groundwater. Rural towns, farms, some suburban developments, and certain industrial facilities also depend on groundwater. Slightly more than half of the groundwater used is pumped from wells that are completely within the glacial drift. None of these wells have the capacity to supply an extremely large amount of water, but they supply enough to meet domestic and light agricultural needs. Table 3.1 lists identified public water supplies for the portion of the study area in Indiana. Industries and the municipalities are generally supplied from wells drilled into the limestone bedrock. These wells are 30.5 to 121.9 meters (100 to 400 feet) deep.

**TABLE 3.1
ACTIVE PUBLIC WATER SUPPLY SYSTEMS
WITHIN THE STUDY AREA IN ALLEN COUNTY, INDIANA**

Public Water Supply ID	Public Water System	Primary Water Source	Owner Type
2020919	Pond-A-River Golf Course	Groundwater	Private
2020913	Uniroyal Goodrich Tire Company	Groundwater	Private
5202024	Woodburn Water Works	Groundwater	Municipal Government
5202026	Havenwood Utility, Inc.	Groundwater	Private
2020263	St. Paul Lutheran Church	Groundwater	Other
2020907	Woodlan Jr./Sr. High School	Groundwater	Municipal Government
2020242	Zion Lutheran Church	Groundwater	Other
2020804	Ridgeview Mennonite Church	Groundwater	Other

Paulding County, Ohio

Paulding County is underlain by limestone or dolomite bedrock, most of which contains only a fair supply of potable water. The Tymochtee and Greenfield formations of dolomitic stone form the bedrock under more than half of the southern part of the county. These formations yield fair supplies of water at shallow depths. Along the northern edge of the county, the underlying formation of Delaware limestone is too hard and dense to provide a good source of water. It is highly charged with pyrite, which causes the small amount of water in it to be of poor quality. Columbus limestone is the bedrock south of the Delaware limestone and north of the Tymochtee dolomite. Its southern edge crosses the county in an east-west direction just north of Paulding, Charloe, and Oakwood. Columbus limestone yields a fair amount of water.

Based on statewide averages of runoff and groundwater recharge, Paulding County's 85.3 centimeters (33.6 inches) of average annual precipitation result in about 22.9 centimeters (nine inches) of runoff to streams and lakes, and about 12.7 centimeters (five inches) have the potential to recharge aquifers annually.

Groundwater is a major water source for rural households in Paulding County. Approximately 62 percent of the population obtains their water from private wells. Based on an estimated usage of 289 liters (75 gallons) per person per day, 3.6 million liters per day (lpd) (940,000 gallons per day [gpd]) from private wells are used. Additional private water uses include industry and livestock mostly from groundwater supplies. The remaining households use public-water supplies, as identified in Table 3.2.

Water use for Paulding County's public water-supply systems in the study area is given in Table 3.2. For each water system, Table 3.2 presents an estimate of the population served, water source, estimated daily usage and treatment plant capacity. The county's largest public-water system is the Village of Paulding system, which uses Flatrock Creek for its supply. Groundwater is the primary source for other community water systems (Antwerp, Payne, and Oakwood).

Defiance County, Ohio

Three aquifers underlie Defiance County. These are unconsolidated coarse-grained aquifers, unconsolidated fine-grained aquifers, and a sedimentary carbonate aquifer. An unconsolidated coarse-grained aquifer consists of highly permeable sand and gravel deposited by glaciers. This aquifer is very productive and is under artesian pressure. Fine-grained unconsolidated aquifers are similar in form and origin to coarse-grained unconsolidated aquifers, but are less permeable because of a higher percentage of mixed fine sands, silt and clay. The sand and gravel deposits usually are interbedded within glacial till.

In Defiance County, approximately 44 percent of all households use groundwater as a primary source of water; about 31 percent draw water from a private well; and 13 percent use public supplies from municipal wells. The remaining 56 percent use surface water; about 10 percent from ponds and 46 percent from public water supplies that use a surface water source.

Within the study area, the county has four public water systems: Defiance, Hicksville, Sherwood, and Brunersburg. Table 3.3 lists all the public water supply systems within the study area,

along with the population served, primary water source, estimated daily water usage and treatment plant capacity. Except for the City of Defiance, all of the public water systems are supplied solely by groundwater. Defiance serves its population and Brunersburg from the Maumee River.

**TABLE 3.2
ACTIVE PUBLIC WATER SUPPLY SYSTEMS WITHIN THE STUDY AREA, PAULDING COUNTY, OHIO¹**

Public Water Supply ID	Public Water System	Population Served	Primary Water Source	Water Usage LPD (GPD) ²	Treatment Plant Capacity LPD (GPD)
6300411	Paulding	3,338	Surface Water	1 976 923 (514,000)	5 769 231 (1,500,000)
6300012	Antwerp	1,700	Groundwater	1 411 538 (367,000)	830 769 (216,000)
6300712	Payne	1,250	Groundwater	53 846 (14,000)	1 103 846 (287,000)
6300312	Oakwood	800	Groundwater	430 769 (112,000)	830 769 (216,000)
6331212	Vagabond Village	250	Groundwater	19 231 (5,000)	N/A ³
6330712	Randi s Road House Cafe	131	Groundwater	53 846 (14,000)	N/A ³
6332212	LaFarge Corporation	130	Groundwater	17 692 (4,600)	N/A ³
6330812	Five Span Inn, Inc.	100	Groundwater	16 538 (4,300)	N/A ³
6332112	Kingdom Hall of Jehovah s Witnesses	100	Groundwater	1923 (500)	N/A ³
6300212	Brentwood Mobile Home Court	95	Groundwater	33 077 (8,600)	N/A ³
6332612	Grace Tabernacle/Rock Church	55	Groundwater	2308 (600)	N/A ³

Notes: 1) Estimates from the municipality responsible for the water system (2002).
2) LPD (GPD) = liters per day (gallons per day).
3) Treatment plant capacity figure not available.

**TABLE 3.3
ACTIVE PUBLIC WATER SUPPLY SYSTEMS WITHIN THE STUDY AREA, DEFIANCE COUNTY, OHIO¹**

Public Water Supply ID	Public Water System	Population Served	Primary Water Source	Water Usage LPD (GPD) ²	Treatment Plant Capacity LPD (GPD)
2000111	City of Defiance	17,000	Surface Water	16 923 077 (4,400,000)	30 769 231 (8,000,000)
2000212	Hicksville	3,659	Groundwater	1 730 769 (450,000)	2 769 231 (720,000)
2000712	Sherwood	850	Groundwater	269 231 (70,000)	1 161 538 (302,000)
2001103	Brunersburg	446	Groundwater	126 923 (33,000)	N/A ³
6330312	Auglaize Country Club	328	Groundwater	42 404 (11,025)	N/A ³
2031012	Cashman s Club	104	Groundwater	14 615 (3,800)	N/A ³
2032912	Power Dam Express	102	Groundwater	9423 (2,450)	N/A ³
2031512	D.A.V. Hall Chapter 36	100	Groundwater	7692 (2,000)	N/A ³
2033112	St. John s Lutheran Church	90	Groundwater	3462 (900)	N/A ³
2031812	Faith Baptist Church	25	Groundwater	481 (125)	N/A ³

Notes: 1) Estimates from the Ohio Environmental Protection Agency 2002; information is based on data available at time of publication.
2) LPD (GPD) = liters per day (gallons per day).
3) Treatment plant capacity figure not available.

Wellhead Protection

Wellhead protection serves to safeguard a public water supply system by preventing contamination in and around the source of the supply. Developing a wellhead protection area involves three steps: delineating the area for protection, inventorying the sources of potential contamination that pose a threat to the zone, and developing protective strategies for the area.

To date, no wellhead protection plans have been submitted to IDEM within the Allen County portion of the US 24 study area.

No wellhead protection plans have been endorsed by the Ohio Environmental Protection Agency (OEPA) for the US 24 study area in Paulding County. The Village of Antwerp, however, is in the process of completing a wellhead protection plan. In 1998, the OEPA approved the Village's wellhead delineation that consists of two management zones. The inner management zone comprises of approximately 32.0 hectares (79 acres) immediately around the wellfield, which consists of two wells south of Canal Street. The inner management zone corresponds to the one-year time of travel (i.e., water at the boundary of the zone would take one year before reaching the public water supply). The outer management zone is approximately 182.2 hectares (450 acres) and extends roughly from the Maumee River south to North Creek, and west from C-33 and east to just past T-43. The outer management zone corresponds to the five-year time of travel (i.e. water at the boundary of the zone would take five years before reaching the public water supply). Although the Village's delineation was approved by OEPA, an inventory of potential contaminants has not yet been completed. Currently, no time frame for completing the wellhead protection plan process has been established by the Village.

To date, no wellhead protection plans have been submitted to OEPA within the portion of the study area located in Defiance County.

Methodology

The Ohio Department of Natural Resources (ODNR), Division of Water and IDEM Division of Water Management maintain statewide databases of well logs. The Groundwater Resources Section of ODNR manages the Ohio data base, which includes some information collected by the US Geological Survey (USGS) and the OEPA. Maps produced by OEPA depicting wellhead protection areas, community water supplies, non-community/non-transient water supplies, and non-community/non-transient water supplies were reviewed. Since 1948, well log information has been collected to increase the understanding of the groundwater resources in Ohio. Geologists and hydrogeologists continue to study the state's groundwater resources, and as a result, Ohio is one of only a few states that has been completely mapped for groundwater availability (mapped by river basin, from 1959 to 1962). Estimates of the size, shape, geologic make-up and yields of aquifers are being mapped county by county. Most of Ohio's counties have a completed map. Data for Indiana is currently being developed.

Project Impacts

Both Indiana and Ohio have implemented and received approval from the USEPA for the states' source water protection programs (SWAP) to comply with the 1996 amendments to the Safe Drinking Water Act. Indiana and Ohio have yet to receive USEPA approval of comprehensive wellhead protection plans for many of the individual public water supplies. This process will require the examination of the cone of influence for public water wells and the identification of potential sources of contamination and protection of wellhead areas.

There is one existing OEPA endorsed area identified for wellhead protection in the vicinity of Antwerp. Alternatives A through H infringe on the outer management zone and may present a potential source of contamination to this public water supply system. Drainage design limitations may be imposed to ensure protection of groundwater in the wellhead protection area and restrictions through zoning codes may limit the type of development that can occur ancillary to the construction of the roadway and proposed intersection with SR 49.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) infringes on the outer management zone of a proposed wellhead protection area in the Village of Antwerp.

Mitigation

All water wells affected by the project will be properly abandoned. Properties where a drinking water well is affected will be re-drilled or connected to public systems, if appropriate, for the property or acquired if economically advantageous.

Mitigation of impacts to wellhead protection zones typically consist of minimizing the potential for roadway runoff to enter the area, if it is determined that the potential for impacts exist. Coordination will be completed with the Village of Antwerp to determine impacts to the area. Further mitigation of impacts to groundwater will be accomplished during the final right-of-way design and obtaining the NPDES permit. The development of a Storm Water Pollution Prevention Plan (SWPPP) will be required to obtain the approval of the NPDES permit. This plan will establish BMPs for the construction procedures that minimize the impact to water quality.

3.1.3 Wetlands

Existing Conditions

Historically, the study area was part of the Great Black Swamp, being covered primarily by wooded swampland. During the nineteenth and early part of the twentieth centuries, most of this habitat was cleared and drained for agricultural purposes. The resulting landscape now consists primarily of agricultural land used for the production of soybeans, corn, and wheat. These vast agricultural areas contain sparsely scattered woodlots, which in many cases contain wooded wetlands.

Nine distinct types of wetland community associations were found within the study area. Among those, four are considered non-forested wetland associations: mixed emergent marsh, mixed shrub swamp, mixed emergent riverine, and old field/meadow. Scrub-shrub wetlands, although clearly not forested, represent the successional step between non-forested and forested communities and often contain saplings that will eventually constitute the forested canopy. The forested wetland communities consist mainly of mixed swamp forest and oak-maple swamp forest, but also include maple-cottonwood-sycamore floodplain forest and oak-hickory forest.

A total of 146 wetlands were identified within the Feasible Corridors. Figure 3.1 shows the locations of the wetlands within the Feasible Corridors. Specific details regarding these sites such as sample site data, wetland data forms and woodlot community data forms can be found in the reports listed below:

- *US 24 Ecological Survey for Allen County, Indiana* (December 2000).
- *US 24 Ecological Survey for Defiance and Paulding Counties, Ohio* (3 Volumes), (December 2000).

Detailed information on wetlands located within the proposed right-of-way limits of the Preferred Alternative is provided in a separate report entitled *US 24 Wetlands Delineation Study - Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio* (June 2003).

Methodology

Several secondary information sources were reviewed for wetlands data prior to initiating fieldwork. Soil types within each corridor were identified utilizing the Allen County, Indiana *Soil Survey* (1969) and the Defiance County and Paulding County, Ohio, *Soil Surveys* (US Department of Agriculture, Soil Conservation Service (SCS), 1984 and 1960, respectively). Through a review of the *National Wetland Inventory Maps*, 707 wetland areas were identified within the study area. Data collected from the Natural Resources Conservation Service (formerly the SCS) indicated the presence of 67 wetland areas, eight farmed wetlands, two converted wetlands and 502 parcels of land designated as prior converted croplands.

Field investigations for the Feasible Alternatives consisted of initial site inspections of all wetland areas located within the corridors. Wetland determinations were conducted utilizing the methods described in the *1987 Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1, hereafter referred to as the 1987 Wetlands Delineation Manual). Dominant vegetation and indicators of wetland hydrology were confirmed in every potential wetland area.

In Indiana, wetlands were classified as either Tier I or Tier II wetlands based on their sensitivity

to disturbance, rarity and potential to be adequately replaced by compensatory mitigation (327 IAC 2-1.8-4). Tier I wetlands include all those that are not classified as Tier II wetlands. Tier II wetlands included acid bogs, circumneutral bogs, cypress swamps, fens, depressional dune wetlands, mud flats, sinkhole ponds, sinkhole swamps, sand flats, and marl beaches. No Tier II wetlands occur within the US 24 study area.

In Ohio, wetland quality was assessed using the Ohio Rapid Assessment Method (ORAM) developed by OEPA. ORAM sheets were filled out and a provisional rating was assigned for each wetland located within the Feasible Corridors. Wetland quality assessment is based on the function of a wetland in its environment, its sensitivity to disturbance, and its potential for adequate compensation by wetland mitigation (OAC 3745-1-54). The wetland category determines the ratio of compensatory mitigation, with Category 3 the highest quality wetland to Category 1 the lowest quality wetland (OAC 3745-1-54).

Wetland delineations were conducted on wetland areas located within the proposed right-of-way for the Preferred Alternative utilizing the methodology specified in the 1987 Wetlands Delineation Manual, ODOT's *Ecological Guidelines* (revised, February 2001) and INDOT's *Procedural Manual for Preparing Environmental Studies* (1996). Dominant vegetation was determined for each wetland area as well as the surrounding upland plant communities. Soils were examined for positive indicators of hydric conditions. Wetland boundaries were surveyed using a Global Positioning System (GPS). The functional quality of each wetland area was assessed and assigned a quantitative rating and provisional category using the ORAM (Version 5.0) procedures. For the purpose of evaluating impacts, all wetland areas studied in Allen County were assessed and assigned provisional ratings using the ORAM procedures. The wetland investigations for the Preferred Alternative are documented in a separate report entitled *US 24 Wetlands Delineation Study - Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio* (June 2003).

Project Impacts

Impacts to wetlands associated with the Feasible Alternatives are summarized in Table 3.4. None of the wetland habitats impacted are considered to be unique or significant, as designated by ODNR and IDEM, to the region. No Tier II wetlands were identified in the Allen County portion of the study area. For Ohio, as determined by the wetland quality assessment, wetlands that have been rated as Category 3 wetlands are viewed by OEPA as being of higher quality than Category 2 wetlands (intermediate quality) or Category 1 wetlands (low quality). In general, forested wetland involvement is viewed more critically due to the length of time required to achieve replacement of the wetland function and value.

The greatest amount of total wetland impacts (forested and non-forested) occurs with Alternative R, 23.7 hectares (58.6 acres). The least amount of total wetland impacts is 4.0 hectares (10.2 acres) with Alternative Y.

In Allen County, impacts to Category 2 forested wetlands (Tier I wetlands) range from 0.3 hectares (0.7 acres) for Alternatives A through D and I through P to 6.6 hectares (16.3 acres) for Alternatives E through G and Q through X. Alternatives C and D-1 impact 0.2 hectares (0.6 acres) of non-forested wetlands. Alternatives Y and Z impact 1.6 hectares (4.0 acres) and 3.1 hectares (7.6 acres), respectively.

In Paulding and Defiance counties, non-forested wetland involvement is low for Alternatives A through X. Impacts range from none to 0.4 hectares (1.0 acres) for Category 2 non-forested wetlands. Category 1 non-forested wetland impacts range from 0.2 hectares (0.04 acres) to 0.4 hectares (0.9 acres). No Category 3 non-forested wetlands are affected by the Feasible Alternatives.

As shown in Figure 3.2, forested wetland involvement is the primary differentiator among the Feasible Alternatives, all of which impact forested wetlands. In Allen County, forested wetland impacts range from 0.3 to 6.6 hectares (0.7 to 16.3 acres). In Paulding and Defiance counties, forested wetland impacts range from 2.4 hectares (5.8 acres) for Alternative Y to 16.7 hectares (41.2 acres) for Alternatives J and R.

**TABLE 3.4
SUMMARY OF WETLAND IMPACTS**

Alternative	Total Impact Hectares (acres)	Indiana				Ohio									
		Forested		Non-Forested		Forested			Non-Forested						
		Tier 1		Tier 1		Category 1		Category 2		Category 3		Category 1		Category 2	
		Impacts	Hectares (acres)	Impacts	Hectares (acres)	Impacts	Hectares (acres)	Impacts	Hectares (acres)	Impacts	Hectares (acres)	Impacts	Hectares (acres)	Impacts	Hectares (acres)
A	9.0 (22.3)	2	0.3 (0.7)	0	0	2	0.1 (0.2)	10	6.9 (17.1)	2	1.7 (4.3)	0	0	0	0
B	13.0 (32.1)	2	0.3 (0.7)	0	0	2	0.1 (0.2)	9	6.6 (16.3)	4	6.0 (14.9)	0	0	0	0
C	6.9 (17.0)	3	0.7 (1.8)	2	0.2 (0.6)	1	<0.1 (<0.1)	7	1.7 (4.3)	1	1.1 (2.7)	1	<0.1 (<0.1)	11	3.5 (8.7)
D	9.9 (24.3)	2	0.3 (0.7)	0	0	2	0.1 (0.2)	7	3.5 (8.5)	4	6.0 (14.9)	0	0	0	0
D-1	9.1 (22.5)	3	0.7 (1.8)	2	0.2 (0.6)	1	<0.1 (<0.1)	8	3.7 (9.2)	2	0.9 (2.3)	2	0.1 (<0.1)	13	3.9 (9.6)
E	15.3 (37.9)	3	6.6 (16.3)	0	0	2	0.1 (0.2)	10	6.9 (17.1)	2	1.7 (4.3)	0	0	0	0
F	19.3 (47.7)	3	6.6 (16.3)	0	0	2	0.1 (0.2)	9	6.6 (16.3)	4	6.0 (14.9)	0	0	0	0
G	11.6 (28.6)	3	6.6 (16.3)	0	0	2	0.1 (0.2)	8	3.2 (7.8)	2	1.7 (4.3)	0	0	0	0
H	16.2 (39.9)	3	6.6 (16.3)	0	0	2	0.1 (0.2)	7	3.5 (8.5)	4	6.0 (14.9)	0	0	0	0
I	13.5 (33.1)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	12	9.1 (22.4)	3	3.7 (9.0)	0	0	2	0.4 (1.0)
J	17.4 (43.0)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	11	8.7 (21.6)	5	8.0 (19.7)	0	0	2	0.4 (1.0)
K	9.7 (23.8)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	10	5.3 (13.1)	3	3.7 (9.0)	0	0	2	0.4 (1.0)
L	14.3 (35.2)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	9	5.6 (13.8)	5	8.0 (19.7)	0	0	2	0.4 (1.0)
M	9.0 (22.2)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	12	7.0 (17.2)	2	1.7 (4.3)	0	0	0	0
N	12.9 (32.0)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	11	6.6 (16.4)	4	6.0 (14.9)	0	0	0	0
O	5.3 (13.0)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	10	3.2 (8.0)	2	1.7 (4.3)	0	0	0	0
P	9.8 (24.2)	2	0.3 (0.7)	0	0	1	<0.1 (<0.1)	9	3.5 (8.6)	4	6.0 (14.9)	0	0	0	0
Q	19.8 (48.7)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	12	9.1 (22.4)	3	3.7 (9.0)	0	0	2	0.4 (1.0)
R	23.7 (58.6)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	11	8.7 (21.6)	5	8.0 (19.7)	0	0	2	0.4 (1.0)
S	16.0 (39.4)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	10	5.3 (13.1)	3	3.7 (9.0)	0	0	2	0.4 (1.0)
T	20.6 (50.8)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	9	5.6 (13.8)	5	8.0 (19.7)	0	0	2	0.4 (1.0)
U	15.3 (37.8)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	12	7.0 (17.2)	2	1.7 (4.3)	0	0	0	0
V	19.2 (47.6)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	11	6.6 (16.4)	4	6.0 (14.9)	0	0	0	0
W	11.5 (28.6)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	10	3.2 (8.0)	2	1.7 (4.3)	0	0	0	0
X	16.1 (39.8)	3	6.6 (16.3)	0	0	1	<0.1 (<0.1)	9	3.5 (8.6)	4	6.0 (14.9)	0	0	0	0
Y	4.0 (10.2)	7	1.6 (4.0)	0	0	9	0.4 (1.0)	10	1.9 (4.8)	1	<0.1 (<0.1)	1	0.1 (0.4)	0	0
Z	10.3 (25.4)	10	3.1 (7.6)	0	0	18	0.5 (1.2)	20	5.8 (14.4)	2	0.5 (1.3)	2	0.4 (0.9)	0	0

Notes: No Category 3, non-forested wetlands are impacted by any of the Feasible Alternatives. No Tier II wetlands are present within the proposed rights-of-way for any of the Feasible Alternatives. Hydrologically connected wetlands were counted as one wetland impact. Area estimates for Alternatives C and D-1 are based on wetlands studies conducted for the Preferred Alternative.

Preferred Alternative Impacts

Following identification of the Preferred Alternative, wetland delineations were conducted on the proposed right-of-way for the Preferred Alternative to determine specific wetland impacts. The wetland investigations for the Preferred Alternative are documented in a separate report entitled *US 24 Wetlands Delineation Study - Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio* (June 2003). Table 3.5 provides a summary of the wetland impacts for the Preferred Alternative (Alternative D-1).

**TABLE 3.5
IMPACTS TO INDIVIDUAL WETLANDS FOR THE PREFERRED ALTERNATIVE**

Wetland	Location	Wetland Type	ORAM Score	Provisional ORAM Category	Isolated / Non-Isolated	Impacted Area Hectares (acres)
US 24-72(A)	South of US 24, west of Bruick Road, Allen County	Palustrine forested broad-leaved deciduous	48.5	2	Isolated	0.05 (0.13)
US 24-72(B)	South of US 24, west of Bruick Road, Allen County	Palustrine forested broad-leaved deciduous/emergent persistent	48.5	2	Isolated	0.41 (1.01)
E-1 (A)	Gar Creek, South of US 24, west of Berthaud Road, Allen County	Palustrine forested broad-leaved deciduous	48	2	Non-Isolated	0.02 (0.06)
E-1 (B)	Gar Creek, South of US 24, west of Berthaud Road, Allen County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	48	2	Non-Isolated	0.03 (0.08)
E-1 (C)	Gar Creek, South of US 24, west of Berthaud Road, Allen County	Palustrine emergent persistent	48	2	Non-Isolated	0.004 (0.01)
L-9 (A)	South of Snyder Road and US 24, west of Maumee & Western Railroad, Paulding County	Palustrine forested broad-leaved deciduous	22	1	Non-Isolated	0.004 (0.01)
L-9 (B)	South of Snyder Road and US 24, east of Maumee & Western Railroad, Paulding County	Palustrine emergent persistent	28	1	Isolated	0.02 (0.04)
L-8 (A)	North of T-162, east of US 49, Paulding County	Palustrine forested broad-leaved deciduous	38.5	Modified 2	Isolated	0.10 (0.24)
L-8 (B)	North of T-162, east of US 49, Paulding County	Palustrine forested broad-leaved deciduous	38.5	Modified 2	Isolated	0.02 (0.06)
L-6	South of Maumee & Western Railroad, west of T-69, Paulding County	Palustrine forested broad-leaved deciduous	41	Modified 2	Non-Isolated	0.09 (0.22)
RC-14 (B)	South of Maumee & Western Railroad, west of T-69, Paulding County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	41	Modified 2	Non-Isolated	0.12 (0.30)
NO-15	South of C-216, west of US 127, Paulding County	Palustrine forested broad-leaved deciduous	43.5	2	Isolated	1.02 (2.52)
RC-10	South of Maumee & Western Railroad, east of C-115, Paulding County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	37.5	Modified 2	Non-Isolated	0.11 (0.26)

TABLE 3.5 (CONTINUED)
IMPACTS TO INDIVIDUAL WETLANDS FOR THE PREFERRED ALTERNATIVE

Wetland	Location	Wetland Type	ORAM Score	Provisional ORAM Category	Isolated/ Non-Isolated	Impacted Area Hectares (acres)
W-4 (A)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine forested broad-leaved deciduous/ Palustrine scrub-shrub broad-leaved deciduous	55.5	2	Non-Isolated	0.21 (0.51)
W-4 (B)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine emergent persistent	55.5	2	Isolated	0.04 (0.09)
W-4 (C)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine emergent persistent	55.5	2	Isolated	0.004 (0.01)
W-4 (D)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine scrub-shrub broad-leaved deciduous	55.5	2	Isolated	0.08 (0.19)
W-4 (E)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine scrub-shrub broad-leaved deciduous	55.5	2	Isolated	0.08 (0.20)
W-4 (F)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine emergent persistent	55.5	2	Non-Isolated	0.06 (0.16)
W-4 (G)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine scrub-shrub broad-leaved deciduous	55.5	2	Isolated	0.02 (0.04)
W-4 (H)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine scrub-shrub broad-leaved deciduous	55.5	2	Isolated	0.14 (0.35)
W-4 (I)	North of Maumee & Western Railroad, south of County Line Road, east of T-239, Paulding County	Palustrine emergent persistent	55.5	2	Non-Isolated	2.62 (6.46)
RC-5	North of Maumee & Western Railroad, west of Whetstone Road, Defiance County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	55.5	2	Non-Isolated	0.27 (0.67)
RC-2	North of Maumee & Western Railroad, west of Krouse Road, Defiance County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	46	2	Non-Isolated	0.13 (0.32)

TABLE 3.5 (CONTINUED)
IMPACTS TO INDIVIDUAL WETLANDS FOR THE PREFERRED ALTERNATIVE

Wetland	Location	Wetland Type	ORAM Score	Provisional ORAM Category	Isolated/ Non-Isolated	Impacted Area Hectares (acres)
R-4	North of Maumee & Western Railroad, east of Ashwood Road, Defiance County	Palustrine forested broad-leaved deciduous	46	2	Non-Isolated	2.23 (5.50)
RC-1	North of Maumee & Western Railroad, east of Krouse Road, Defiance County	Palustrine Scrub-Shrub Broad-leaved Deciduous/ Palustrine emergent persistent	73.5	3	Isolated	0.14 (0.34)
R-1 (A)	South of US 24/SR 424, east of Krouse Road, Defiance County	Palustrine forested broad-leaved deciduous/ Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent/ Riverine perennial emergent	73.5	3	Non-Isolated	0.78 (1.92)
R-1 (B)	South of US 24/SR 424, east of Krouse Road, Defiance County	Palustrine forested broad-leaved deciduous	45	2	Isolated	0.06 (0.14)
R-1(C)	South of US 24/SR 424, east of Krouse Road, Defiance County	Palustrine forested broad-leaved deciduous	39.5	Modified 2	Non-Isolated	0.02 (0.04)
R-1 (F)	South of US 24/SR 424, east of Krouse Road, Defiance County	Palustrine scrub-shrub broad-leaved deciduous/ Palustrine emergent persistent	14	1	Non-Isolated	0.03 (0.07)
R-1 (G)	South of US 24/SR 424, east of Krouse Road, Defiance County	Palustrine emergent persistent	32	Modified 2	Non-Isolated	0.22 (0.56)
S-4	North of US 24/SR 424	Palustrine forested broad-leaved deciduous	73	3	Non-Isolated	0.004 (0.01)

In Allen County, Alternative D-1 impacts 0.5 hectares (1.3 acres) of wetlands. All impacted wetlands are classified as Category 2 wetlands under the ORAM procedures and as Tier I wetlands under current IDEM regulations. The greatest impact is a 0.41-hectare (1.01-acre) encroachment on Wetland US 24-72(B), a palustrine forested/emergent system. The smallest area of impact will be a 0.004-hectare (0.01-acre) encroachment on Wetland E-1(C), a palustrine emergent marsh. Five wetlands will be impacted by the Preferred Alternative. Two of the wetlands (US 24-72[A] and US 24-72[B]) are isolated wetlands (i.e., not hydrologically connected to a stream, ditch, or other wetland and not located within a 100-hundred year floodplain). Alternative D-1 will impact a total of 0.4 hectares (1.1 acres) of isolated wetlands. Three of the wetlands (E-1[A], E-1[B], and E-1[C]) are hydrologically connected to Gar Creek. Alternative D-1 will impact 0.1 hectares (0.2 acres) of non-isolated wetlands in Allen County.

In Paulding and Defiance counties, Alternative D-1 impacts 9.0 hectares (21.2 acres) of wetlands. More specifically, the anticipated wetland impacts include:

- 0.9 hectares (2.3 acres) of Category 3 forested wetlands.
- 3.7 hectares (9.2 acres) of Category 2 forested wetlands.
- 0.04 hectares (0.01 acres) of Category 1 forested wetlands.
- 3.9 hectares (9.6 acres) of Category 2 non-forested wetlands.
- 0.04 hectares (0.1 acres) of Category 1 non-forested wetlands.

The encroachments on individual wetlands range from 0.004 hectares (0.01 acres) to 2.6 hectares (6.5 acres), which is an impact to Wetland W-4(I), a Category 2 non-forested wetland. A number of individual wetlands affected by the Preferred Alternatives are railroad swales located

adjacent to the Maumee & Western Railroad. These wetlands are RC-1, RC-2, RC-5, RC-10, and RC-14(B). Of the 8.6 hectares (21.2 acres) of wetland impacts within Paulding and Defiance counties for the Preferred Alternative, approximately 0.8 hectares (1.9 acres) are associated with these railroad swales. The Preferred Alternative encroaches on 0.9 hectares (2.3 acres) of Category 3 forested wetlands (RC-1 is hydrologically connected to R-1(A) and is being processed as a Category 3 forested wetland).

In Paulding and Defiance counties, Alternative D-1 impacts a total of 27 wetlands. Twelve of the wetlands are isolated wetlands: L-9(B), L-8(A), L-8(B), NO-15, W-4(B), W-4(C), W-4(D), W-4(E), W-4(G), W-4(H), RC-1, and R-1(B). The Preferred Alternative will impact a total of 1.6 hectares (4.0 acres) of isolated wetlands. The other 15 wetlands are non-isolated wetlands and are hydrologically connected to a stream, ditch or another wetland. A total of 6.9 hectares (17.0 acres) of non-isolated wetlands will be impacted by Alternative D-1 in Ohio.

Mitigation

All transportation projects affecting wetlands are required to maintain the natural functions of wetlands, or provide appropriate mitigation or compensation. Avoidance of environmental impacts is the preferred approach recommended by regulatory agencies. The preliminary alternative analysis of potential corridors carried out early in the US 24 study showed that complete avoidance of wetlands is not possible or practical, due to the length of the project and number of wetland areas located throughout the study area.

Where impacts are unavoidable, impacts must be minimized to the extent practicable. ODOT and INDOT are required to submit an evaluation of alternatives that have been considered to avoid or minimize the impacts. In addition to avoidance and minimization strategies, compensatory mitigation may also be implemented. Compensatory mitigation includes such actions as wetland preservation, restoration, enhancement, and creation; other surface water improvements; and upland preservation and conservation. Compensatory mitigation varies depending on the permitting agency, the type of wetland system, the quality of the wetland, and extent of impacts. The design of the compensatory mitigation measures is determined by the relationship of the size, type, function, and quality of the wetlands to be impacted, compared to the quality, size, type, and function of the mitigation proposal. If the permitting agencies concurs that the impacts are unavoidable, mitigation strategies must be developed.

Minimization of Wetland Impacts

Since complete avoidance of all wetlands is not possible, minimization of impacts was the primary means for mitigating wetland impacts for the project. As part of the Concurrence Point #2 coordination, a meeting was held on March 8, 2001 with representatives of USEPA, OEPA, FHWA, and ODOT to discuss recommendations for the Preferred Alternative. The USEPA discussed their comments on the *US 24 New Haven to Defiance Preliminary Draft Environmental Impact Statement (PDEIS)*, which were focused only on wetland impacts. OEPA expressed concern about impacts to Category 3 wetlands and streams. Both agencies recommended Alternative C as the Preferred Alternative. In general, the resource agencies that provided comments on the PDEIS indicated a preference for those alternatives that minimize impacts to wetlands, streams, farmlands, wildlife habitat, woodlands, and the Maumee River.

In April 2001, ODOT recommended Alternative C as the Preferred Alternative for the US 24 New Haven to Defiance project. This decision was based on analysis of the environmental impacts associated with the Feasible Alternatives, agency review of the PDEIS, and public input. The selection of the Preferred Alternative was the focus of public meetings held on May 1, 2, and 3, 2001. Citizens and local officials in the Defiance area requested that Alternative D be reconsidered as the Preferred Alternative. Alternative D follows the same route as Alternative C from the intersection with I-469 in Indiana to Defiance County, Ohio. In Defiance County, Alternative C follows Segments 14 and 19, while Alternative D follows Segments 15 and 18.

Alternative C was also presented to the US Army Corps of Engineers (USACE) and OEPA during a field review on May 10, 2001. The focus of this meeting was the Category 3 wetlands within Alternative Segments 14, 15, 18, and 19. During the agency field review, the OEPA recommended that Alternative D be selected as the Preferred Alternative to eliminate impacts to Wetland S-4,

which is located in Segment 19 of Alternative C. S-4 is a high-quality, forested wetland located in the floodplain of a tributary to the Maumee River. In correspondence dated May 24, 2001, the OEPA suggested that construction of an embankment through wetland R-1 located within Alternative D (Segment 18) would result in less overall wetland impacts than culverting Wetland S-4 in Alternative C.

As a result of public and agency input, it was determined that detailed environmental studies (i.e. archaeology surveys, wetlands delineations, and threatened and endangered species surveys) would be conducted on both Alternatives C and D. Based on the wetland delineation studies, Alternative C impacts 6.9 hectares (17.0 acres) of jurisdictional wetlands including 1.1 hectares (2.7 acres) of Category 3 wetlands. Alternative D impacts 9.9 hectares (24.3 acres) of jurisdictional wetlands, including 6.0 hectares (14.9 acres) of Category 3 wetlands. In the Defiance area, Alternative C impacts 1.4 hectares (3.4 acres) of wetlands, including 0.3 hectares (0.7 acres) of Category 2 wetlands, and 1.1 hectares (2.7 acres) of Category 3 wetlands. Within Segments 15 and 18, Alternative D impacts 5.2 hectares (12.8 acres) of wetlands including 2.6 hectares (6.5 acres) of Category 3 wetlands.

Following completion of the wetlands delineations, additional engineering designs were developed with the intention of minimizing impacts on wetlands. In Paulding County, between US 127 and C-224, the Preferred Alternative was shifted to the north, which reduced impacts to Wetland NO-15 by 64 percent. Within Segment 18, alternative alignments were developed to reduce impacts to Wetland R-1, a Category 3 forested wetland. These design refinements resulted in the development of a 27th alternative – Alternative D-1. Figure 3.3 shows the proposed alignments for Alternatives C, D and D-1 between Ashwood Road and existing US 24. Within Segments 15 and 18, Alternative D-1 reduces wetland impacts from 5.2 hectares (12.8 acres) to 4.7 hectares (11.6 acres) when compared to Alternative D. Overall, Alternative D-1 reduces wetland impacts to 9.1 hectares (22.5 acres) and impacts to Category 3 wetlands to 0.9 hectares (2.3 acres).

Compensatory Mitigation Requirements – State of Indiana

The IDNR, INDOT, and USFWS agreed to a standardized approach to wetland habitat mitigation. In 1990, a Memorandum of Understanding (MOU) was executed by these three agencies, which remains in effect today. General wetland mitigation goals for Indiana are shown in Table 3.6. In Indiana, mitigation ratios range from two acres of wetland replaced or created for one acre of wetland impacted (2:1 mitigation ratio) to four acres of wetlands replaced or created for one acre of wetland impacted (4:1 ratio) for Tier I impacts.

**TABLE 3.6
INDIANA WETLAND MITIGATION RATIOS**

Habitat Category	Standard Minimum
Palustrine Emergent Wetland	2:1
Palustrine Scrub Shrub Wetland	3:1
Palustrine Forested Wetland	4:1

The standard minimum ratio assumes that the functions and values of the original habitat will be replaced in the same watershed as a result of compensatory mitigation. Where the following criteria apply to the existing habitat or replacement habitat, the compensatory mitigation ratio requirement would be adjusted from the standard minimum:

1. Proximity of the replacement habitat to the disturbed habitat. The standard minimum ratio may be increased if replacement does not occur in the same stream or within an area extending 4.0 kilometers (2.5 miles) from the disturbed site. Mitigation outside of the 8-digit Hydrologic Unit Code Area would likely be denied.
2. Cumulative effect of the activity. The standard minimum ratio may be increased when the impact on the disturbed area results in an incremental impact when added to other past, present, and reasonably foreseeable future disturbances in the area.
3. Location of the disturbed habitat to include such considerations as riparian corridor,

community structure and composition, species diversity, and quality degradation. The standard minimum ratio may be increased when it is determined that one or more of these considerations apply and are a major influence in the functions and benefits of the habitat.

4. Other habitats of concern.

Compensatory Mitigation Requirements – State of Ohio

In Ohio, the OEPA has established wetland Ohio Water Quality Standards that address wetland mitigation criteria. The mitigation criteria take into account the affected wetland category, the replacement wetland category, and the mitigation site. Table 3.7 summarizes OEPA's wetland mitigation criteria.

**TABLE 3.7
OHIO WETLAND MITIGATION RATIOS**

Wetland Category	On-Site Mitigation Ratio	Off-Site Mitigation Ratio	Replacement Wetland Category	Compensatory Mitigation Site Location (For Off-Site Replacement)
Category 1 Non-Forested & Forested Wetlands	1.5:1	1.5:1	2 and 3	Within the USACE District
Category 2 Non-Forested Wetlands	1.5:1 Non-Forested	2.0:1 Non-Forested	2 and 3	Within Watershed
Category 2 Forested Wetlands	2.0:1 Forested	2.5:1 Forested	2 and 3	Within Watershed
Category 3 Non-Forested Wetlands	2.0:1 Non-Forested	2.5:1 Non-Forested	3	Within Watershed
Category 3 Forested Wetlands	2.5:1 Forested	3.0:1 Forested	3	Within Watershed

Proposed Mitigation Strategies

Based on input provided by the USACE and OEPA on wetland impacts, the following mitigation strategies are being considered:

- Acquisition and preservation of Wetlands R-1 and RC-1 as well as the adjacent forested buffer.
- Acquisition and preservation of Wetland S-4.
- Creation of new compensatory wetland areas to offset the loss of wetlands.
- Development of additional design refinements to further minimize and/or avoid wetland impacts.

The feasibility of acquiring land associated with Wetlands R-1, RC-1, and S-4 for preservation is contingent upon successful negotiation with property owners for purchase of the property. The wetland mitigation plan will be refined during preliminary design studies and will be finalized as part of the Section 404 permitting process.

**3.1.4 Streams/Rivers/
Waterbodies
Existing Conditions**

Within the study area, there are three major surface waterbodies, the Maumee, Auglaize, and Tiffin rivers (See Figure 3.1). Two of the rivers, the Maumee and Tiffin, occur within the Feasible Corridors. Both the Maumee River and Tiffin River are designated as a warmwater habitat that indicates these waters are capable of supporting and maintaining a balanced, integrated community of warmwater aquatic organisms. Qualitative Habitat Evaluation Index (QHEI) scores for the Maumee and Tiffin rivers were 60.75 and 53.75, respectively. These scores indicate that the waterbodies have some channel modifications and provide intermediate habitat quality. In addition, the Maumee is considered a State Scenic and Recreational River and a State Resource Water in Ohio. In addition to the three rivers, there are numerous small streams and agricultural ditches within the study area. Many of the streams have been channelized or modified for agricultural uses and receive runoff from farming operations. The streams and ditches within

the Feasible Corridors appear to be typical of the low-gradient streams in the Huron/Erie Lake Plain (HELP). Index of Biotic Integrity (IBI) scores in the range of 28 to 34 are typical in warmwater habitats of the HELP ecoregion, with moderate to low water quality, and unremarkable fish and macrobenthic communities. The habitat in all of the streams within the Feasible Corridors qualify as warmwater habitat.

Allen County, Indiana

Within the Feasible Corridors, most of the streams are modified and channelized agricultural ditches. Croplands and residential properties surround these waterbodies. Narrow bands of wooded riparian vegetation border some of these ditches however, most of the streams have intermittent flow and therefore contain limited aquatic habitat during the late summer and early autumn months. Due to the intermittent nature, they support unremarkable fish and macroinvertebrate species that are typical in low-gradient warmwater habitat of the HELP ecoregion. Streams sampled in Allen County are presented in Table 3.8.

**TABLE 3.8
STREAMS SAMPLED WITHIN ALLEN COUNTY**

Stream/ Ditch	QHEI Score	Characteristics
Gar Creek	46.75	2.4 meters (8 feet) wide; steep banks 1.2 meters (4 feet) high; pools and riffles.
Grover Ditch	31.5	1.8 meters (6 feet) wide; steep banks 1.8 meters (6 feet) high; pools and riffles; widespread and severe habitat modifications.
Marsh Ditch	57	1.8 to 2.4 meters (6 to 8 feet) wide; steep banks 7.6 to 9.1 meters (25 to 30 feet) high; pools, riffles and glides.
Viland Ditch	44.5	2.4 meters (8 feet) wide; steep banks 6.1 to 7.6 meters (20 to 25 feet) high; pools, riffles and glides.
Unnamed tributary east of Bruick Road	16	0.9 meters (3 feet) wide; steep banks 1.2 meters (4 feet) high; long pool; severe habitat modifications.
Schaaf Ditch	18.5	2.4 meters (8 feet) wide; steep banks 1.2 meters (4 feet) high; pools and riffles.
Shumacher Ditch	15.5	2.4 meters (8 feet) wide; steep banks 1.2 meters (4 feet) high; pools and riffles.

Note: QHEI = Qualitative Habitat Evaluation Index.

Paulding County, Ohio

As in Allen County, most of the streams are modified and channelized agricultural ditches within the Feasible Corridors in Paulding County. Croplands and residential properties, and in some instances, wooded riparian vegetation border these waterbodies. The streams have intermittent flow and therefore contain limited aquatic habitat during the late summer and early autumn months. Due to their intermittent nature, they support unremarkable fish and macroinvertebrate species that are typical to low-gradient warmwater habitat of the HELP ecoregion. Stream crossings sampled in Paulding County are presented in Table 3.9. The Maumee River flows through Paulding County; however, it was not sampled in Paulding County.

Defiance County, Ohio

In Defiance County, the Maumee and Tiffin rivers are located within the Feasible Corridors. The Maumee River was sampled, approximately 108.4 kilometers (67.3 river miles) up-stream of the mouth of the Maumee River. Surrounding land use consists of residential properties, agricultural lands, and woodlands. Both banks are wooded, except for the area immediately surrounding US 24. Banks range from 1.2 to greater than 4.6 meters (4 to 15 feet) in height. This site attained a QHEI of 60.75, which is in the good to excellent range (60 to 100) in terms of habitat quality. For comparison, OEPA evaluated the Maumee River at 112.4 kilometers (69.8 river miles) upstream from the mouth and obtained a QHEI of 54 (OEPA, 1989). Two species of state special interest were found in the Maumee River at the US 24 sampling site: one live purple wartyback (*Cyclonaias tuberculata*) and 152 live deertoe (*Truncilla truncata*). Also, sub-fossils of the federally endangered clubshell mussel (*Pleurobema clava*) and the state threatened black sandshell mussel (*Ligumia recta*) were found at this site.

**TABLE 3.9
STREAMS SAMPLED WITHIN PAULDING COUNTY**

Stream/ Ditch	QHEI Score	Characteristics
North Creek	15	Intermittent flow; pools; straight, channelized drainage ditch; silt substrate.
Zuber Cutoff	53.5	1.2 to 3.1 meters (4 to 10 feet) wide; steep banks 0.9 to 6.1 meters (3 to 20 feet) high; riffles, runs, pools and glides; widespread and severe habitat modifications.
Wabash and Erie Canal, south of C-180	18	30.4 meters (100 feet) wide; no apparent inflow or outflow to this area; silt substrate.
Six-Mile Cutoff at Vinegar Road	32	0.6 to 0.9 meters (2 to 3 feet) wide; steep banks 6.1 to 7.6 (20 to 25 feet) high; pools, riffles and pools; substrate consists of silt, gravel, and sand; a narrow band of emergent wetland exists along both sides of the stream channel.
Unnamed tributary at Mathis Road	56.5	Steep banks 0.6 to 1.5 meters (2 to 5 feet) high; mostly dry with exception of a few pools; gravel and sand substrate.
Unnamed tributary west of Wunder Road	60.5	Steep banks 0.6 to 1.5 meters (2 to 5 feet) high; mostly dry with exception of a few pools; gravel, sand and cobble substrate.
Unnamed tributary west of US 127 (South Leg)	51.5	Severely impacted by all terrain vehicles; gravel, silt, muck and sand substrate.
Unnamed tributary west of US 127 (North Leg)	53	Steep banks 0.9 to 1.5 meters (3 to 5 feet) high; mostly dry with exception of a few pools; gravel and sand substrate.
Ferarre Ditch	21	Steep banks, 1.5 to 1.8 meters (5 to 6 feet) high; mostly dry with few pools; densely vegetated; substrate mostly silt with some sand.
Unnamed tributary west of Shafer Road	17	Steep banks, 1.5 to 1.8 meters (5 to 6 feet) high; shallow water (all pool); some overhanging vegetation; silt substrate.
South Creek south of T-144 & west of SR 49	23.5	Steep banks, 2.7 to 3.1 meters (9 to 10 feet) high; shallow water, mostly glide with few pools or riffles; mostly sand and gravel substrate.
South Creek south of C-176	28	Steep banks, 2.7 to 3.1 meters (9 to 10 feet) high; all pool; mostly sand substrate with some gravel.
South Creek north of C-176	40	Steep banks, 2.7 to 3.1 meters (9 to 10 feet) high; mostly pool with few riffles and runs; sparsely vegetated with some in-stream cover; mostly sand substrate with some gravel.
Mansfield Ditch west of Ewing Road	19	Steep banks, 1.8 to 2.1 meters (6 to 7 feet) high; all pool; sparsely vegetated; mostly silt substrate.
Unnamed tributary west of C-21	21	Steep banks, 2.7 to 3.1 meters (9 to 10 feet) high; all pool; sparsely vegetated; mostly silt substrate with some sand.
Six Mile Cutoff east of Knox Road	14.5	Steep banks, 1.5 meters (5 feet) high; all pool; very little in-stream cover; silt substrate.
Unnamed tributary west of Ross Road	16.25	Steep banks, 1.8 to 2.1 meters (6 to 7 feet) high; isolated pools, recently channelized; silt substrate.
Unnamed tributary west of Post Road	14	Steep banks, 1.8 to 2.1 meters (6 to 7 feet) high; partially dry with isolated pools; no in-stream cover; mostly silt substrate with very little sand.
Unnamed tributary east of Kuntz Road	16.5	Steep banks, 1.8 to 2.1 meters (6 to 7 feet) high; isolated pools, some areas saturated at surface; vegetation nearly absent; silt substrate.
Abandoned Wabash & Erie Canal west of Knox Road	12.25	Banks 0.1 to 0.4 meters (0.4 to 1.2 feet) high; no inflow or outflow; silt substrate.
Six Mile Creek east of C-105	17	Steep banks, 1.5 to 1.8 meters (5 to 6 feet) high; all pool; little in-stream cover; mostly silt substrate with some sand.

Note: QHEI = Qualitative Habitat Evaluation Index.

The Tiffin River was investigated approximately 2.0 kilometers (1.24 river miles) north of the Maumee River. At this location the river is approximately 30.4 meters (100 feet) wide and the banks are steep and wooded, ranging from 1.5 to 3.7 meters (5 to 12 feet) high. Agricultural land and woodlands exist on both sides of the river upstream of US 24, while industrial properties exist on both sides of the river downstream of US 24. This corridor segment of the Tiffin River attained a QHEI of 53.75, which is in the intermediate range. Weathered sub-fossil shells of the federally endangered clubshell mussel and the northern riffleshell (*Epioblasma torulosa rangiana*) were found at the Tiffin River sampling site. Also, nine live deerto species and ten live purple wartyback mussels were found at the Tiffin River site.

Most of the streams within the Feasible Corridors in Defiance County are modified and channelized

ditches surrounded by agricultural and residential land uses. These streams have intermittent flow and have limited aquatic habitat during the late summer and early autumn months. Due to their intermittent nature, they support unremarkable fish and macroinvertebrate species that are typical in low-gradient warmwater habitat of the HELP ecoregion. Streams sampled in Defiance County are presented in Table 3.10.

**TABLE 3.10
STREAMS SAMPLED IN DEFIANCE COUNTY**

Stream/Ditch	QHEI Score	Characteristics
Maumee River	60.75	Banks range from 1.2 to greater than 4.6 meters (4 to 15 feet) in height; wooded; intermediate habitat quality.
Tiffin River	53.75	Approximately 30.4 meters (100 feet) wide; banks are steep and wooded, 1.5 to 3.7 meters (5 to 12 feet) high; intermediate habitat quality.
Stevens Ditch south of US 24	23.5	Dry with the exception of a ponded area with a silt bottom; banks 1.2 meters (4 feet) high; pools and riffles; south of ponded area, the stream channel increases in sinuosity; bordered by a wetland.
Stevens Ditch north of US 24	40.5	2.4 meters (8 feet) wide; banks 0.6 to 4.6 meters (2 to 15 feet) in height; dry with the exception of several pools; substrate consists of gravel, silt, and sand.
Stevens Ditch east of Ashwood Road	17	Banks 1.5 to 1.8 meters (5 to 6 feet) high; isolates pools, in-stream cover nearly absent; silty substrate with some gravel.
Dowe Ditch	48.5	Dry with the exception of a ponded area; substrate consists of large pieces of concrete, cobble, gravel, muck and sand; bordered by narrow riparian corridor.
Unnamed tributary to the Maumee River west of Gier Road	56.75	Banks 1.2 to 2.4 meters (4 to 8 feet) in height; dry with the exception of several pools; substrate consists of gravel and sand; riffle habitat present.
Unnamed tributary to the Maumee River west of Burns Road	45.5	Banks 0.9 to 1.2 meters (3 to 4 feet) high; substrate consists mainly of silt and sand with occasional areas of muck.
Unnamed tributary to the Maumee River east of The Bend Road	57.25	Banks 0.9 to 4.3 meters (3 to 14 feet) high; series of riffles, pools, runs, and glides; a small oxbow was identified along the east side of main channel; substrate consists of silt, sand and hardpan, with occasional deposits of cobble.
Unnamed tributary to the Maumee River at Limbaugh Road	53.25	Banks 0.6 to 2.1 meters (2 to 7 feet) high; at time of sampling, much of this stream was dry except for several scattered pools; substrate consists of both gravel and sand with occasional deposits of cobble and hardpan.
Unnamed tributary west of Ashwood Road	52.75	Banks 0.3 to 1.5 meters (1 to 5 feet) high; substrate consists of gravel and sand with occasional deposits of cobble, hardpan, and silt.
Unnamed tributary north of C-8	15.75	Steep banks, 1.5 to 1.8 meters (5 to 6 feet) high; isolated pools; no in-stream cover; silty substrate.
Unnamed tributary north of Kiser Road	32.5	Steep banks, 1.8 meters (6 feet) high; mostly run with some pools; moderately vegetated; silt substrate.

Note: QHEI = Qualitative Habitat Evaluation Index.

Methodology

Stream investigations were conducted in accordance with the ODOT *Ecological Guidelines* (April 1999) and the INDOT *Procedural Manual for Preparing Environmental Studies* (July 1996). All project-related stream data are provided in the technical reports listed below:

- *US 24 Ecological Survey for Allen County, Indiana* (December 2000).
- *US 24 Ecological Survey for Defiance and Paulding Counties, Ohio* (3 Volumes), (December 2000).

An initial literature search was conducted over a 1282 square-kilometer (500 square-mile) study area. This literature search included the review of environmental inventories from both federal and state information resources. Following the literature review, field surveys were conducted on the streams and rivers within the Feasible Corridors. Stream surveys were completed in August and October 1999 and May 2000. All data were collected according to methods specified by ODOT (1999). Field data sheets for each stream sampling location were completed.

Project Impacts

There are numerous streams that are crossed by the Feasible Alternatives. Many of these streams have been channelized or modified for agricultural uses and are an integral part of the

drainage systems of active farms located within the study area. The quality of most streams ranges from low to moderate (QHEI scores less than 45) although some warm water habitat (WWH) streams are crossed by the Feasible Alternatives (QHEI scores range from 45 to 60). Other than the Maumee River, none of the streams affected by the Feasible Alternatives are classified as exceptional warm water habitat (QHEI score greater than 60).

Figure 3.4 and Table 3.11 summarize the potential stream involvement by alternative and quality of the streams, based on the QHEI scores assigned to each stream. The stream lengths represent the total lengths of stream reaches within the right-of-way of each alternative. Table S-1 provides a comparison of the length of streams bridged, culverted, and left in open channel for each of the Feasible Alternatives.

The number of stream crossings ranges from none with Alternative Y to 59 with Alternative I. Excluding Alternative Y, the alternative with the least amount of impact, based on length of stream impacted, is Alternative Z, which affects 10 011 meters (32,837 feet) of streams. In contrast, Alternative J affects 15 634 meters (51,281 feet) of streams with 58 stream crossings. As shown in Table 3.11, stream impacts associated with most of the Feasible Alternatives occur primarily to channelized agricultural ditches with limited aquatic habitat (low quality streams). The notable exception is Alternative Z, with 53 crossings of high quality streams.

Impacts for Alternatives A through X are substantially higher, on average, than those for Alternatives Y and Z. The primary factor for the variance is that Alternatives A through X would be constructed on new location. However, Alternative Y follows existing US 24 for its entire length and does not involve any new stream crossings. Alternative Z follows the existing US 24 corridor for most of its length with the exception of the Antwerp Bypass. Under this alternative, stream crossings are limited to extensions of existing crossings along existing US 24 and construction of new crossings along the Antwerp Bypass.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) results in 26 stream crossings, affecting 6155 meters (20,189 feet) of streams. These numbers are lower than those for the Feasible Alternatives because they reflect only those streams that are considered jurisdictional as described in ODOT's *Technical Guidance on Roadside Ditches* (December 17, 2002). Similar to the Feasible Alternatives that would be constructed on new alignment, the majority of streams impacted are low quality streams. Table 3.12 provides a summary of jurisdictional stream impacts associated with the Preferred Alternative.

Mitigation

The general approach to reducing impact to surface waters is to avoid and minimize impacts to the greatest extent possible, then to compensate for any unavoidable impacts. Replacement ratios will be based on the quality of the stream reach being impacted.

Avoidance of all surface water resource would not be possible. Therefore, impacts to streams and rivers will be minimized during design and construction. Mitigation measures may include:

- Implementation of an Erosion and Sediment Control Plan.
- Construction of stormwater detention/treatment facilities to minimize the impact highway contaminants on surface water quality.
- Properly sized and engineered culverts for stream crossings to minimize impacts attributed to flood height and flood duration.
- Culverted stream crossings which are properly sized and engineered to provide unobstructed, continuous flow for fish and macroinvertebrates.
- Perpendicular stream crossings.
- Stream enhancement techniques such as creation of pool and riffle zones, planting stream-shading vegetation, constructing low-flow channels and pools, and placing boulders and channel deflectors in unavoidable stream relocations.
- Utilization of BMPs in accordance with ODOT's *Construction and Materials Specifications* (2002) and INDOT's *Part V Design Manual* (August 1999).
- Utilization of an environmental monitor during construction.

Concurrent with preliminary and final design efforts, detailed mitigation measures specific to the right-of-way and the impacted surface water will be developed. At a minimum, any stream mitigation design will employ the recognized concepts of fluvial geomorphological design.

**TABLE 3.11
SUMMARY OF STREAM IMPACTS**

Alternative	Number of Crossings	Total Length of Impacts		Length of Impacts to High Quality Streams ¹		Length of Impacts to Low Quality Streams ²	
		Meters	Feet	Meters	Feet	Meters	Feet
No Build	0	0	0	0	0	0	0
A	52	12,274	40,259	2,959	9,705	9,315	30,554
B	51	13,433	44,059	3,383	11,095	10,050	32,964
C	49	11,152	36,577	3,108	10,194	8,044	26,383
D	48	11,723	38,451	3,383	11,095	8,340	27,356
D-1 ³	26	6,158	20,189	816	2,676	5,342	17,513
E	51	11,774	38,618	3,027	9,928	8,747	28,690
F	50	12,932	42,418	3,451	11,318	9,482	31,100
G	51	10,651	34,936	3,176	10,417	7,475	24,519
H	44	11,223	36,810	3,451	11,318	7,772	25,492
I	59	14,476	47,481	5,396	17,698	9,080	29,783
J	58	15,634	51,281	5,820	19,088	9,815	32,193
K	56	13,353	43,799	5,545	18,187	7,809	25,612
L	55	13,925	45,673	5,820	19,088	8,105	26,585
M	57	14,203	46,585	5,410	17,746	8,792	28,839
N	56	15,361	50,385	5,834	19,136	9,527	31,249
O	54	13,080	42,903	5,559	18,235	7,521	24,668
P	53	13,652	44,777	5,834	19,136	7,817	25,641
Q	55	13,180	43,230	4,833	15,851	8,347	27,379
R	54	14,338	47,030	5,256	17,241	9,082	29,789
S	52	12,057	39,548	4,982	16,340	7,076	23,208
T	51	12,629	41,422	5,256	17,241	7,372	24,181
U	52	12,907	42,334	4,847	15,899	8,060	26,435
V	51	14,065	46,134	5,271	17,289	8,794	28,845
W	50	11,784	38,652	4,996	16,388	6,788	22,264
X	49	12,355	40,526	5,271	17,289	7,085	23,237
Y	0	0	0	0	0	0	0
Z	53	10,111	32,837	10,011	32,837	0	0

Notes: ¹ Warm Water Habitat (WWH) streams, includes both the Maumee and Tiffin rivers.

² Limited Resource Water (LRW) streams.

³ Impacts reported for Alternative D-1 are based upon additional field surveys. Impacts reported for all other alternatives are based upon studies reported in the US 24 Ecological Survey Report (December 2000). See Table S-1 for data on length of stream bridged, piped, and left in open channel.

Mitigation for stream impacts will be negotiated with resource agencies through coordination for the Section 404 permit and 401 water quality certification. In accordance with state regulations, both Indiana and Ohio require mitigation for stream impacts. Replacement ratios are based on the quality of the stream being affected. In general, the minimum replacement ratio for impacted streams is 1:1 for on-site, in-kind replacement. Final mitigation requirements will be developed in conjunction with the Section 404 permit and 401 water quality certification.

**TABLE 3.12
SUMMARY OF STREAM IMPACTS ASSOCIATED WITH THE PREFERRED ALTERNATIVE**

	Entire Corridor	Within Allen County	Within Paulding County	Within Defiance County
Total Number of Stream Crossings	26	7	10	9
Total Length of Stream Crossings	6155 meters (20,189 feet)	1236 meters (4,055 feet)	3010 meters (9,873feet)	1909 meters (6,261 feet)
Impacts to Low Quality Streams ¹				
Number of Stream Crossings	19	4	9	6
Length of Stream Crossings	5339 meters (17,513 feet)	849 meters (2,785 feet)	2912 meters (9,546 feet)	1580 meters (5,182 feet)
Number of Crossings in Culverts	15	3	8	4
Length of Streams in Culverts	1195 meters (3,918 feet)	279 meters (915 feet)	546 meters (1,793 feet)	369 meters (1,210 feet)
Number of Crossings with Bridges	2	1	1	0
Length of Streams Bridged	91 meters (300 feet)	46 meters (150 feet)	46 meters (150 feet)	0 meters (0 feet)
Number of Streams Relocated	2	0	0	2
Length of Relocated Streams	297 meters (975 feet)	0 meters (0 feet)	0 meters (0 feet)	297 meters (975 feet)
Length of Additional Impact	3756 meters (12,320 feet)	52 meters (1,720 feet)	2318 meters (7,603 feet)	914 meters (2,997 feet)
Impacts to High Quality Streams ²				
Number of Stream Crossings	7	3	1	3
Length of Stream Crossings	816 meters (2,676 feet)	387 meters (1,270 feet)	100 meters (327 feet)	329 meters (1,079 feet)
Number of Crossings in Culverts	1	0	0	1
Length of Streams in Culverts	12 meters (40 feet)	0 meters (0 feet)	0 meters (0 feet)	12 meters (40 feet)
Number of Crossings with Bridges	6	3	1	2
Length of Streams Bridged	270 meters (885 feet)	114 meters (375 feet)	46 meters (150 feet)	110 meters (360 feet)
Length of Additional Impact	534 meters (1,751 feet)	273 meters (895 feet)	54 meters (177 feet)	207 meters (679 feet)

Notes: ¹ Limited Resource Water (LRW) streams.

² Warm Water Habitat (WWH) streams, includes both the Maumee and Tiffin rivers.

**3.1.5 Floodplains
Existing Conditions**

Within the study area, flood hazard areas (areas within a stream’s 100-year flood boundary as defined by the Federal Emergency Management Agency [FEMA]) occur adjacent to the Maumee, Tiffin, and Auglaize rivers and their tributaries. Figure 3.1 shows the floodplains associated with these surface waters relative to the alternatives. One isolated 100-year floodplain area occurs near Woodburn and SR 101 in Allen County.

Methodology

The base floodplain involvement and risks associated with the Feasible Alternatives were analyzed by using information gathered during field reviews and reviewing Flood Insurance Rate Maps (FIRM), Flood Insurance Studies (FIS), aerial photographs, and USGS topographic maps.

Detailed floodplain management reports and flood insurance studies are available for Allen,

Paulding, and Defiance counties. These reports have been prepared by cooperative efforts of the Natural Resources Conservation Service (NRCS), FEMA, IDNR, soil and conservation districts, planning commissions, and other local agencies. The Maumee River Basin Commission is in the process of updating the FIS for Allen County. Preliminary FIRMs (September 21, 2001) have been produced by FEMA. These preliminary FIRMs are currently being used for planning purposes in the Allen County, Indiana.

Existing floodplain management regulations in Indiana establish minimum standards governing the delineation and regulation of flood hazard areas. The 1945 Indiana Flood Control Act (I.C. 14-28-1) prohibits construction, excavation, or the placement of fill in a floodway without prior approval from the IDNR.

The IDNR, Division of Water, and ODNR administer the flood control regulations, and also act as the state coordinators of the National Flood Insurance Program (NFIP) that helps to regulate the development of flood-prone lands. Under this program, which is administered by the Federal Insurance Administration of FEMA, a community may enter the NFIP after the following criteria have been met: 1) a detailed FIRM is issued following an FIS, and 2) local officials enact comprehensive regulations that require all new or substantially improved structures to be built in accordance with federal floodplain management criteria. Fort Wayne, New Haven, and Woodburn, Indiana participate in the NFIP.

Project Impacts

Floodplain encroachments are restricted to the Maumee River floodplain adjacent to existing US 24, and one existing crossing of the Tiffin River. Floodplain encroachment is generally limited due to the incised nature of the Maumee River. In total, 22 areas of floodplain encroachment have been identified among the Feasible Alternatives. Encroachment areas are along existing US 24 and occur at both ends of the project area where all of the alternatives join together. Sixteen of the 22 encroachment areas are exclusive to Alternative Z and all involve perpendicular encroachments of existing drainages. All alternatives contain the same existing crossing of the Maumee and Tiffin rivers near Defiance. In general, alternatives located further away from the Maumee River have less involvement with floodplains than those alternatives in close proximity to the Maumee River.

Table 3.13 presents a summary of the floodplain encroachments associated with the Feasible Alternatives. A longitudinal encroachment is defined as a floodplain encroachment where the alignment, or impact area of the alternative, follows the floodplain alignment without being on an elevated structure. A perpendicular encroachment is where the alignment, or impact area, perpendicularly crosses the floodplain, whether or not it is on an elevated structure.

Alternative Z has the greatest area of encroachment on the Maumee River floodplain of all the alternatives. This floodplain involvement is limited to existing perpendicular crossings of incised tributaries to the Maumee River. Alternatives E, G, Q, S, U, and W have the least amount of floodplain involvement, 7.5 hectares (18.5 acres).

Preferred Alternative Impacts

Floodplain encroachments for Preferred Alternative (Alternative D-1) are less than those reported for Alternative D because of minor shifts in the alignment to minimize impacts to wetland and associated streams. The Preferred Alternative (D-1) encroaches on 28.0 hectares (69.2) acres of floodplains. The Preferred Alternative does not impact or interfere with floodplain management activities in Allen County, Indiana or Paulding and Defiance counties, Ohio.

The floodplain encroachments associated with the Preferred Alternative do not constitute "significant encroachments," as defined in 23 CFR 650, Subpart A. "Significant encroachment" is defined as a highway encroachment and any direct support of likely base flood-plain development that would involve one or more of the following construction or flood-related impacts:

- A significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route.

- A significant risk, or
- A significant adverse impact on natural and beneficial flood-plain values."

**TABLE 3.13
100-YEAR FLOODPLAIN IMPACTS**

Alternative	Watercourse	Longitudinal Encroachments		Perpendicular Encroachments		Total Encroachments	
		Number	Area Affected in Hectares (Acres)	Number	Area Affected in Hectares (Acres)	Number	Area Affected in Hectares (Acres)
A	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
B	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
C	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
D	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
D-1	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	5.3 (13.0)	4	28.0 (69.2)
E	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)
F	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
G	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)
H	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
I	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
J	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
K	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
L	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
M	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
N	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
O	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	6.1 (14.9)	4	28.8 (71.1)
P	Maumee River, Stevens Ditch & Tiffin River	1	22.7 (56.2)	3	7.8 (19.2)	4	30.5 (75.4)
Q	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)
R	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
S	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)

**TABLE 3.13 (CONTINUED)
100-YEAR FLOODPLAIN IMPACTS**

Alternative	Watercourse	Longitudinal Encroachments		Perpendicular Encroachments		Total Encroachments	
		Number	Area Affected in Hectares (Acres)	Number	Area Affected in Hectares (Acres)	Number	Area Affected in Hectares (Acres)
T	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
U	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)
V	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
W	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	7.5 (18.5)	4	7.5 (18.5)
X	Gar Creek, Maumee River, Stevens Ditch & Tiffin River	0	0	4	9.3 (22.9)	4	9.3 (22.9)
Y	Gar Creek, Grover Ditch, Viland Ditch, Unnamed Trib. @ Wunder Rd., Gier Rd., Burns Rd., The Bend Rd., Limaugh Rd., Stevens Ditch, Maumee & Tiffin Rivers	7	8.2 (20.2)	11	4.2 (10.4)	18	12.4 (30.6)
Z	Gar Creek, Grover Ditch, Viland Ditch, Unnamed Trib. @ Wunder Rd., Gier Rd., Burns Rd., The Bend Rd., Limaugh Rd., Ashwood Rd., Stevens Ditch, Maumee & Tiffin Rivers	4	26.5 (65.5)	12	8.1 (19.9)	16	34.6 (85.4)

The encroachments would not interrupt transportation facilities needed for emergency vehicles. On the contrary, emergency vehicles would be given the ability to better meet the needs of the communities involved, and would no longer be subject to the excessive traffic delays and congestion of the current road system. In addition, the Preferred Alternative would provide additional means of evacuation routing to the region. Preliminary floodplain encroachment studies indicate the encroachments would not raise flood levels in the area, therefore, the project would not increase risks of property loss or hazards to natural and beneficial floodplain values.

Mitigation

Protection of floodplains and floodways is required by Executive Order 11988 *Floodplain Management*; USDOT Order 5650.2, *Floodplain Management and Protection*; Federal-Aid Highway Program Manual 6-7-3-2, *Guidelines for the Evaluation of Encroachments on Floodplains*; and 23 CFR 650A, *Location and Hydraulic Design of Encroachments on Flood Plains*. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplains, where practicable, and to avoid supporting land use development that is incompatible with floodplain values. Where encroachment is unavoidable, the regulations require appropriate measures to minimize impacts.

Actual floodplain impacts will likely be less than the totals listed in Table 3.13 because the width of the entire right-of-way across a floodplain will not be filled. In addition, detailed design

studies on the Preferred Alternative will evaluate alternative bridge designs and the use of retaining walls to reduce the floodplain encroachments, wherever practical and feasible. Post-construction hydraulics will match the pre-existing drainage conditions, and no negative change will occur to existing flood levels, as determined by the Flood Hazard Evaluation conducted for each crossing.

The design of the Preferred Alternative will be further developed in accordance with current drainage practices and standards and ODOT and INDOT. ODOT and INDOT will coordinate with FEMA and local agencies to ensure that the highway is developed in accordance with accepted local floodway plans and floodplain management programs.

3.1.6 Wildlife, Plants, and Threatened and Endangered Species

The effects of the Feasible Alternatives on terrestrial ecology were also assessed for the US 24 New Haven to Defiance project. This investigation focused on the potential effects on wildlife and plants habitating the study area as well as sensitive species that have been officially designated as endangered, threatened, or rare in accordance with federal and/or state regulations.

Existing Conditions

Terrestrial habitats present in the study area consist primarily of agricultural land, wetlands, upland forested areas, old field habitats, and other undeveloped areas such as median strips, large mowed areas, and vacant lots. Information on wetlands present within the study area and project-related impacts are discussed in Section 3.1.3 of this DEIS.

Allen County

Within Allen County, the dominant land cover type is agriculture, which is reflected in the land cover and classification data developed for the Feasible Corridors and presented in Table 3.14. Agricultural drainage, selective logging, and other human activities have greatly affected the woodlots present within the study area. Other cover types relevant to terrestrial habitat found within the Feasible Corridors include wetlands, upland forested areas, and undeveloped land areas.

Through the ecological field investigations conducted on the Feasible Corridors, 34 woodlots were identified in Allen County. The majority of these woodlots are associated with wetlands; however, six consist entirely of upland communities. The forested wetlands found within the Allen County portion of the study area are of three ecological associations - mixed swamp forest, oak-maple swamp forest, and maple-cottonwood-sycamore floodplain forest. Three ecological associations were identified for the upland forested areas - oak maple forest, maple-cottonwood-sycamore floodplain forest, and mixed swamp forest.

The presence of mammals, birds, amphibians, and reptiles was recorded during the field investigations. Mammals recorded in the Allen County portion of the study area include woodchuck (*Marmota monax*), white-tailed deer (*Odocoileus virginianus*), muskrat (*Ondatra zibethica*), and raccoon (*Procyon lotor*). Several species of birds were recorded including the turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), wood duck (*Aix sponsa*), mourning dove (*Zenaidura macroura*), rock dove (*Columba livia*), blue jay (*Cyanocitta cristata*), American robin (*Turdus migratorius*), American kestrel (*Falco sparverius*), field sparrow (*Spizella pusilla*), and black-capped chickadee (*Poecile atricapillus*). One species of amphibian, the green frog (*Rana clamitans*), was recorded.

The USFWS Bloomington, Indiana field office identified the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened bald eagle (*Haliaeetus leucocephalus*) as federally listed species that range within Allen County. Two additional federally endangered species, the clubshell mussel (*Pleurobema clava*) and the white catspaw (*Epioblasma obliquata perobliqua*) were reported to exist in Allen County but not within the study area.

A data search of the Indiana Natural Heritage Inventory database revealed past records of 13 state endangered species within the study area. Of these 13 species, three are also designated as federally endangered species. The database also identified five state species of special concern, two state rare species, one state extirpated species, and three species which are no longer listed but are rare enough to be tracked by the IDNR within the Allen County portion of the study area.

**TABLE 3.14
LAND AREA SUPPORTING TERRESTRIAL HABITAT WITHIN THE FEASIBLE CORRIDORS IN ALLEN COUNTY**

Alternative	Forested Land Hectares (Acres)	Undeveloped Land Hectares (Acres)	Agriculture Land Hectares (Acres)	Total Hectares (Acres)
A	1.1 (2.8)	1.4 (3.4)	119.1 (491.5)	201.6 (497.7)
B	1.1 (2.8)	1.4 (3.4)	119.1 (491.5)	201.6 (497.7)
C	1.1 (2.8)	1.4 (3.4)	119.1 (491.5)	201.6 (497.7)
D	1.1 (2.8)	1.4 (3.4)	119.1 (491.5)	201.6 (497.7)
D-1	2.7 (6.7)	1.4 (3.4)	200.9 (496.1)	204.9 (506.2)
E	4.2 (10.2)	0.5 (1.2)	202.0 (498.8)	206.6 (510.2)
F	4.2 (10.2)	0.5 (1.2)	202.0 (498.8)	206.6 (510.2)
G	4.2 (10.2)	0.5 (1.2)	202.0 (498.8)	206.6 (510.2)
H	4.2 (10.2)	0.5 (1.2)	202.0 (498.8)	206.6 (510.2)
I	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
J	1.2 (2.9)	1.4 (3.4))	182.8 (451.4)	185.4 (457.7)
K	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
L	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
M	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
N	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
O	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	185.4 (457.7)
P	1.2 (2.9)	1.4 (3.4)	182.8 (451.4)	187.4 (462.6)
Q	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
R	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
S	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
T	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
U	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
V	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
W	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
X	4.2 (10.2)	0.5 (1.2)	182.8 (451.3)	187.4 (462.6)
Y	1.6 (3.8)	3.4 (8.5)	23.5 (57.9)	28.4 (70.2)
Z	3.4 (8.3)	11.4 (28.3)	100.4 (247.8)	115.1 (284.3)

This data search also revealed the presence of 12 high quality natural communities listed as state significant areas. These include two Central Till Plains, five Wet-Mesic Floodplain Forests, three Mesic-Upland Forests, and two Dry-Mesic Prairies. The data search also identified seven Protected Natural Areas and three Unprotected Significant Natural Areas within the Indiana portion of the 1282-square kilometer (500-square mile) study area. None of these habitat resources are affected by the Feasible Corridors.

Paulding and Defiance Counties

As with Allen County, the predominant land cover type in the Paulding and Defiance counties portion of the study area is agriculture. Land cover and classification data developed for the Feasible Corridors for Paulding and Defiance counties are provided in Table 3.15. Other cover types relevant to terrestrial habitat found within the Feasible Corridors include upland forested areas, old fields, and undeveloped land areas.

Through the ecological field investigations conducted on the Feasible Corridors within Paulding and Defiance counties, 123 woodlots were identified. Of the 123 woodlots, 39 consisting entirely of upland communities were identified. Six upland ecological community associations, not including agriculture, were identified. These associations are oak-maple forest, mixed swamp forest, old field/meadow, maple-cottonwood-sycamore floodplain forest, scrub/shrub, and big bluestem prairie. Forested wetland communities consist mainly of mixed swamp forest and oak-maple swamp forest, but also include maple-cottonwood-sycamore floodplain forest and oak-hickory forest.

Mammals observed in the study area during field investigations include woodchuck, meadow vole (*Microtus pennsylvanicus*), white-tailed deer, muskrat, raccoon, deer mouse (*Peromyscus maniculatus*), fox squirrel (*Sciurus niger*), eastern cottontail (*Sylvilagus floridanus*), and eastern chipmunk (*Tamias striatus*). More than 50 species of birds were observed, most of which are common throughout the study area. Notable species include raptors, neotropical migrants, and some of the more rarely seen birds of the region. Among the rare and/or notable species observed are the red-tailed hawk, American kestrel, spotted sandpiper (*Acititis macularia*), and brown-headed cowbird (*Molothrus ater*). Green frogs and bull frogs (*Rana catesbeiana*) were the most commonly observed amphibians. Others include the northern leopard frog (*Rana pipiens*), American toads (*Bufo americanus*), spring peepers (*Pseudacris crucifer*), and Blanchard's cricket frog (*Acris crepitans blanchardi*).

The USFWS Reynoldsburg, Ohio field office identified four federally listed species, two endangered species, one threatened species, and one candidate species that range within the Ohio portion of the study area. These species include the federally endangered Indiana bat, the federally endangered clubshell mussel, the federally listed threatened copperbelly water snake (*Nerodia erythrogaster neglecta*), and the federally listed candidate species eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*).

A search of the Ohio Natural Heritage Inventory database revealed the past records of eight state potentially threatened species, six species of state special interest, three state threatened species, and one species which has not been assigned a state status but is included within the Natural Heritage Inventory. In addition, nine high quality plant communities were identified consisting of maple-ash swamps, floodplain forests, bur oak savanna, and mixed emergent marsh.

Special interest species identified for the Paulding County portion of the study area included the deertoed mussel (*Truncilla truncata*) and the four-toed salamander (*Hemidactylium scutatum*). The Kirtland's snake (*Clonophis kirtlandii*) is the only state threatened fauna identified in Paulding County. The pale carrion-flower (*Smilax herbacea* var. *lasioneura*), a state threatened plant, was reported as extant in Paulding County. The grove sandwort (*Arenaria lateriflora*) was reported as a potentially threatened floral species in Paulding County. Two great blue heron (*Ardea herodias*) colonies and one turkey vulture (*Cathartes aura*) roost were also identified in Paulding County. Five areas in Paulding County were identified as high quality natural communities. One area was noted as maple-ash-oak swamp, three areas listed as floodplain forest, and one area identified as a mixed emergent marsh. None of these high quality communities are located within the Feasible Corridors.

**TABLE 3.15
LAND AREA SUPPORTING TERRESTRIAL HABITAT WITHIN THE FEASIBLE CORRIDORS IN PAULDING AND DEFIANCE COUNTIES**

Alternative	Forested Land Hectares (Acres)	Old Field Hectares (Acres)	Undeveloped Land Hectares (Acres)	Agriculture Land Hectares (Acres)	Total Hectares (Acres)
A	8.1 (19.8)	0.0 (0.0)	28.3 (69.8)	384.3 (948.9)	420.3 (1,037.9)
B	13.4 (33.1)	0.0 (0.0)	31.2 (77.2)	353.0 (871.5)	391.7 (967.0)
C	8.4 (20.7)	0.0 (0.0)	28.3 (69.8)	393.2 (970.9)	429.6 (1,060.7)
D	16.7 (41.3)	0.0 (0.0)	31.2 (77.2)	357.1 (881.7)	399.1 (985.4)
D-1	27.8 (68.7)	0.0 (0.0)	20.8 (51.3)	377.6 (932.7)	426.2 (1,052.7)
E	8.4 (19.8)	0.0 (0.0)	28.3 (69.8)	384.3 (948.9)	420.3 (1,037.9)
F	13.4 (33.1)	0.0 (0.0)	31.2 (77.2)	353.0 (871.5)	391.7 (967.0)
G	8.4 (20.7)	0.0 (0.0)	28.3 (69.8)	393.2 (970.9)	429.6 (1,060.7)
H	16.7 (41.3)	0.0 (0.0)	31.2 (77.2)	357.1 (881.7)	399.1 (985.4)
I	8.8 (21.6)	0.0 (0.0)	28.3 (69.8)	405.4 (1,001.0)	442.4 (1,092.4)
J	14.3 (35.0)	0.0 (0.0)	31.2 (77.2)	374.1 (923.6)	413.8 (1,021.6)
K	9.1 (22.5)	0.0 (0.0)	28.3 (69.8)	414.3 (1,022.9)	451.7 (1,115.3)
L	17.5 (43.1)	0.0 (0.0)	31.2 (77.2)	378.2 (933.8)	421.2 (1,040.0)
M	6.9 (17.1)	0.0 (0.0)	28.3 (69.8)	406.6 (1003.9)	441.8 (1,090.9)
N	12.3 (30.4)	0.0 (0.0)	31.2 (77.2)	375.3 (926.6)	413.1 (1,020.1)
O	7.3 (18.0)	0.0 (0.0)	28.3 (69.8)	415.5 (1,025.9)	451.1 (1,113.7)
P	15.6 (38.6)	0.0 (0.0)	31.2 (77.2)	379.4 (936.7)	420.6 (1,038.4)
Q	8.8 (21.6)	0.0 (0.0)	28.3 (69.8)	405.4 (1,001.0)	442.4 (1,092.4)
R	14.1 (34.9)	0.0 (0.0)	31.2 (77.2)	374.1 (923.6)	413.8 (1,021.6)
S	9.1 (22.5)	0.0 (0.0)	28.3 (69.8)	414.3 (1,022.9)	451.7 (1,115.3)
T	17.5 (43.1)	0.0 (0.0)	31.2 (77.2)	378.2 (933.8)	421.2 (1,040.0)
U	6.9 (17.1)	0.0 (0.0)	28.3 (69.8)	406.6 (1,003.9)	441.8 (1,090.9)
V	12.3 (30.4)	0.0 (0.0)	31.2 (77.2)	375.3 (926.6)	413.1 (1,020.1)
W	7.3 (18.0)	0.0 (0.0)	28.3 (69.8)	399.3 (986.0)	434.9 (1,073.8)
X	15.6 (38.6)	0.0 (0.0)	31.2 (77.2)	379.4 (936.7)	420.6 (1,038.4)
Y	6.4 (15.8)	0.5 (1.1)	14.0 (34.7)	56.8 (140.3)	78.5 (193.8)
Z	35.9 (88.7)	1.8 (4.6)	30.6 (75.6)	301.7 (745.0)	369.2 (911.6)

Methodology

In the Defiance County portion of the study area, two state special interest species were reported, the purple wartyback mussel (*Cyclonaias tuberculata*) and the sharp-shinned hawk (*Accipiter striatus*). Only one potentially state threatened plant species, the prairie ironweed (*Vernonia fasciculata*), was reported as occurring within the Defiance County portion of the study area. Four areas in Defiance County were identified as high quality natural communities. Two of the listed areas are floodplain forest; one is a maple-ash-oak swamp, and one is a bur-oak savanna. None of the four high quality plant communities identified in Defiance County are located within the Feasible Corridors.

Terrestrial ecological investigations were conducted in accordance with the ODOT *Ecological Guidelines* (April 1999) and the INDOT *Procedural Manual for Preparing Environmental Studies* (July 1996). All project-related ecological data are provided in the technical reports listed below:

- *US 24 Ecological Survey for Allen County, Indiana* (December 2000).
- *US 24 Ecological Survey for Defiance and Paulding Counties, Ohio* (3 Volumes), (December 2000).
- *US 24 Wetlands Delineation Study: Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio* (June 2003).

The determination of involvement with federally threatened or endangered species; proposed (under review) threatened or endangered species; and designated critical habitat was accomplished through literature searches, personal interviews with known specialists, and requests for confirmation of the list of species from the USFWS, state agencies, and completion of field surveys. Section 7(c) of the Endangered Species Act requires that USFWS or the National Marine Fisheries Service (NMFS) be contacted for an official list of endangered, threatened, and proposed species that may be present in the area of a proposed construction project.

The USFWS Bloomington, Indiana and the USFWS Reynoldsburg, Ohio field offices were contacted for information about federally listed species within the study area. The IDNR, Division of Nature Preserves conducted a Natural Heritage Data Search within the study area of Allen County, Indiana. The ODNR, Division of Natural Areas and Preserves conducted a Natural Heritage Data Search for the study area within Defiance and Paulding counties. A Natural Heritage Data Search provides data on state endangered, threatened, or rare species, plus unique habitats and special geologic features.

Endangered and threatened species surveys were conducted during the stream, wetland, and terrestrial surveys. Special interest was given to those areas identified through database searches as possibly containing either state or federally listed species.

In response to USFWS comments received during the Concurrence Point #2 consultation, surveys were conducted for the eastern massasauga rattlesnake and the copperbelly water snake within the proposed right-of-way of the Preferred Alternative (Alternative D-1).

Eastern Massasauga Rattlesnake Surveys

Sixteen areas identified as potentially containing suitable habitat for the eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*) were identified along the Preferred Alternative (Alternative D-1). Suitable habitat for this species of rattlesnake consists of open, sunlit areas intermixed with shaded areas, the presence of the water table at or near the surface, and variable elevations between upland and lowland areas.

The surveys were conducted during suitable environmental conditions between May 1, 2001 and September 20, 2001. Based on site characteristics, six of the 16 areas were designated as high probability areas and the remaining areas were designated as low probability areas. To provide an artificial form of cover, roofing tin was placed at strategic locations within the 16 areas selected for the surveys. The high probability areas were checked weekly except during July and August when ambient temperatures exceeded suitable sampling conditions. The

remaining (low probability) areas were checked between eight and 13 times over the duration of the field studies.

No specimens of the eastern massasauga rattlesnake were observed during the field investigations. It is unlikely that the species is using the areas of potential habitat identified within the right-of-way limits of the Preferred Alternative (D-1).

The USFWS and ODNR reviewed the results of the survey and concurred that the species is not likely to be present within the proposed right-of-way for the Preferred Alternative, and therefore would not be impacted by the project. The USFWS (Reynoldsburg) noted its concurrence in correspondence dated December 13, 2001; the USFWS (Bloomington), January 3, 2002; and the ODNR, December 19, 2001. Summaries of the comments are provided in Section 5.3.3 of this DEIS; copies of the agency comment letters are provided in Appendix 3.4.

Copperbelly Watersnake Surveys

Four areas identified as potentially having habitat suitable to support the copperbelly watersnake (*Nerodia erythrogaster neglecta*) were selected for the survey. Habitat requirement for the species includes lowland swamps or other warm, quiet waters (both seasonal and permanent); adjacent wooded migration corridors; adjacent wooded upland slopes with underground hibernation sites below the frost line; and streams or rivers. Field reviews were completed on June 12, July 6, and July 20, 2000 to determine if suitable habitat existed in the areas and if the copperbelly watersnake was in fact present in the study area.

The survey did not identify the presence of suitable habitat to support the copperbelly water snake within the limits of the Preferred Alternative (D-1). The USFWS and ODNR reviewed the results of the survey and concurred that the species is not likely to be present within the proposed right-of-way for the Preferred Alternative, and therefore would not be impacted by the project. The USFWS (Reynoldsburg) noted its concurrence in correspondence dated December 13, 2001; the USFWS (Bloomington), January 3, 2002; and the ODNR, December 19, 2001. Summaries of the comments are provided in Section 5.3.3 of this DEIS; copies of the agency comment letters are provided in Appendix 3.4.

Project Impacts

In general, all Feasible Alternatives affect terrestrial habitats. Of all habitats observed, the greatest impact will occur on agricultural land, the dominant land cover in the study area, as indicated in Tables 3.14 and 3.15.

Due to the limited presence of woodlands within the study area, the USFWS requested that efforts be made to preserve forested uplands and wetlands to avoid detrimental impacts on wildlife habitat. Wildlife habitat effects can be compared by alternative based on the estimates of the affected land area containing forested upland habitat and woodlots, which is presented in Table 3.16. The woodlot data is inclusive of upland and wetland areas. The ratio of woodlot acreage to the number of sites affected illustrates the fragmentation of the existing wildlife habitat. The remaining habitat serves limited populations of generalist species such as blue jays, gray squirrels, skunks, raccoon, and deer.

No high quality natural communities are affected by any of the Feasible Alternatives.

No federally endangered species of vascular plants, birds, fish, or invertebrates were observed within the study area during field surveys conducted for the project. The Feasible Alternatives, however, may affect areas considered to contain general habitat of three federally listed species (the Indiana bat, eastern massasauga rattlesnake, and copperbelly watersnake) and five state listed species (the northern harrier, dark-eyed junco, sharp-shinned hawk, pale carrion flower, and nodding rattlesnake root).

Summer roosting habitat for the federally endangered Indiana bat was observed in many of the woodlots located within the right-of-way limits of the Feasible Alternatives. The USFWS identifies suitable roosting and breeding habitat as any living or dead standing tree with exfoliating, peeling, or loose bark; split trunks and/or branches; or cavities. While the species was not observed directly, it is known to be extant throughout this region.

**TABLE 3.16
IMPACTS OF THE FEASIBLE ALTERNATIVES ON TERRESTRIAL HABITAT**

Alternative	Total Area of Affected Forested Upland Habitat	Number of Affected Woodlots	Total Area of Affected Woodlots
A	9.2 hectares (22.6 acres)	17	18.2 hectares (44.9 acres)
B	14.5 hectares (35.9 acres)	19	27.5 hectares (68.0 acres)
C	9.5 hectares (23.5 acres)	19	12.7 hectares (31.3 acres)
D	17.9 hectares (44.1 acres)	22	28.0 hectares (68.4 acres)
D-1	30.5 hectares (75.4 acres)	20	35.7 hectares (87.7 acres)
E	12.2 hectares (30.1 acres)	18	27.5 hectares (67.9 acres)
F	17.6 hectares (43.4 acres)	20	36.8 hectares (91.0 acres)
G	12.6 hectares (31.0 acres)	20	24.1 hectares (59.5 acres)
H	20.9 hectares (51.6 acres)	23	37.0 hectares (91.4 acres)
I	9.9 hectares (24.5 acres)	18	22.9 hectares (56.6 acres)
J	15.3 hectares (37.8 acres)	20	32.3 hectares (79.8 acres)
K	10.3 hectares (25.4 acres)	20	19.5 hectares (48.2 acres)
L	18.6 hectares (46.0 acres)	23	32.5 hectares (80.2 acres)
M	8.1 hectares (20.0 acres)	17	17.1 hectares (42.2 acres)
N	13.5 hectares (33.3 acres)	19	26.4 hectares (65.3 acres)
O	8.5 hectares (20.9 acres)	19	13.7 hectares (33.8 acres)
P	16.8 hectares (41.5 acres)	22	26.6 hectares (65.7 acres)
Q	12.9 hectares (31.9 acres)	19	32.2 hectares (79.6 acres)
R	18.3 hectares (45.1 acres)	21	41.6 hectares (102.7 acres)
S	13.2 hectares (32.7 acres)	21	28.8 hectares (71.2 acres)
T	21.6 hectares (53.3 acres)	24	41.7 hectares (103.1 acres)
U	11.1 hectares (27.3 acres)	18	26.4 hectares (65.1 acres)
V	16.4 hectares (40.6 acres)	20	35.7 hectares (88.2 acres)
W	11.4 hectares (28.2 acres)	20	23.0 hectares (56.8 acres)
X	19.8 hectares (48.8 acres)	23	35.9 hectares (88.6 acres)
Y	7.9 hectares (19.6 acres)	22	11.9 hectares (29.4 acres)
Z	39.3 hectares (97.0 acres)	36	49.2 hectares (121.5 acres)

Known populations of the eastern massasauga rattlesnake have been identified in Paulding County in several locations and in Defiance County near Hicksville. The species is reported to inhabit wet areas during the spring and fall and sparsely vegetated dry upland areas in the summer. The USFWS's status assessment of the species lists three critical components of habitat suitability: open sunlit areas intermixed with shaded areas; the presence of the water table near the surface for hibernation; and variable elevations between adjoining lowland and

upland areas. Based on general habitat requirements, all woodlots that contain wetlands are potential habitat for the eastern massasauga rattlesnake. All 26 Feasible Alternatives impact woodlots that are potential habitat.

The study area lies within the range of the copperbelly watersnake. Habitat requirement for the species includes lowland swamps or other warm, quiet waters (both seasonal and permanent); adjacent wooded migration corridors; adjacent wooded upland slopes with underground hibernation sites below the frost line; and streams or rivers. Investigation of wetlands within the study area indicated that suitable habitat for the species is not present.

During the winter of 1999/2000, the state endangered northern harrier (*Circus cyaneus*) was observed flying in the area between Ashwood Road and Krouse Road in Defiance County. Alternatives D, H, L, P, T, and X traverse the area where the northern harrier was identified. It was also observed in Paulding County, southeast of Antwerp, Ohio near the intersection of T-51 and Gonser Road. Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X traverse the area where the northern harrier was sighted. However, no nests were observed within the proposed right-of-way limits of the Feasible Alternatives.

The state endangered dark-eyed junco (*Junco hyemalis*) was observed in a woodlot located on the north side of US 24, west of Ashwood Road in Defiance County also during the winter of 1999/2000. No nests of this species were observed within right-of-way limits for Alternatives Y and Z, which would affect this area. While dark-eyed juncos do not breed in northwest Ohio, they are common winter residents.

The sharp-shinned hawk (*Accipiter striatus*), a state special interest species, was observed flying in Paulding County, southwest of Cecil in the vicinity of T-87 and T-97. Alternatives I, J, K, L, Q, R, S, and T traverse the area where the sharp-shinned hawk was sighted. During the study, no nests were observed within the right-of-way limits of the Feasible Alternatives.

In the spring of 2000, two state-threatened species were identified in woodlots along US 24. The pale carrion flower (*Smilax herbacea* var. *lasioneura*) was found in two woodlots located in Paulding County near the Indiana/Ohio state line. This species can be found in wetlands, uplands, and along wetland-upland boundaries. The state-listed threatened nodding rattlesnake-root (*Prenanthes crepidinea*) was found in a woodlot located in Paulding County in the vicinity of Antwerp. Individuals and potential habitat of these two state listed plant species would be affected by Alternative Y.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) will encroach on agricultural lands, forested areas, and undeveloped areas that support terrestrial habitats. The Preferred Alternative impacts approximately 30.5 hectares (75.4 acres) of forested upland habitat. The Preferred Alternative affects 20 individual woodlots covering approximately 35.7 hectares (87.7 acres).

The Preferred Alternative (Alternative D-1) may affect areas considered to contain habitat for one federally listed endangered species – the Indiana bat. In August 2001, the FHWA, ODOT and USFWS entered into an agreement concerning Section 7 consultation for the Indiana bat on transportation projects undertaken by ODOT. A copy of the Letter of Agreement is provided in Appendix 9. The agreement provides Section 7 clearance to ODOT for projects located within the range of the federally endangered Indiana bat provided that the project includes provisions restricting the removal of roosting and brood-rearing habitat between April 15 and September 15. This commitment has been included in the mitigation requirements for this project.

In response to USFWS comments received during the Concurrence Point#2 consultation, surveys were conducted for the eastern massasauga rattlesnake and the copperbelly water snake within the proposed right-of-way of the Preferred Alternative (Alternative D-1). The USFWS comments are discussed in Section 5.2.4 of this DEIS; a copy of the USFWS Concurrence Point #2 comment letter is provided in Appendix 3.3.

The surveys did not reveal the presence of either snake species within the limits of the Preferred

Alternative. The USFWS and ODNR reviewed the results of the endangered species surveys and concurred that neither species are likely to be present within the proposed right-of-way for the Preferred Alternative and therefore would not be impacted by the project. The USFWS (Reynoldsburg) noted its concurrence in correspondence dated December 13, 2001; the USFWS (Bloomington), January 3, 2002; and the ODNR, December 19, 2001. Summaries of the comments are provided in Section 5.3.3 of this DEIS; copies of the agency comment letters are provided in Appendix 3.4.

USFWS comments issued during the Concurrence Point#2 consultation also indicated that certain mussel species are known to be present within the Maumee and Tiffin rivers. Mussel surveys have been previously conducted at the proposed bridge sites along the Maumee and Tiffin rivers. Sub-fossil shells of the federally-listed endangered clubshell were found at both sites and sub-fossil shells of the northern riffleshell were found at the Tiffin River site. Additionally, two species of state special interest in Ohio (deertoe and purple wartyback mussels) were found alive at both sites. While no federally-listed endangered species are currently extant in the vicinity of the Maumee River and Tiffin River bridge sites, minimization of impacts to mussel species is desired because some of the mussel species may be designated in the future as endangered or threatened species.

Mitigation

If required, ODOT and INDOT will enter into formal consultation under Section 7 of the Endangered Species Act and the Indiana and Ohio state regulations. Based on investigations to date, the need for formal Section 7 consultation is not anticipated. Specific mitigation measures for listed species will be developed, as required, concurrent with preliminary and final design of the Preferred Alternative (D-1). Development of mitigation measures will be coordinated with the appropriate state and federal agencies.

ODOT has an agreement with the USFWS concerning mitigation commitments for the federally endangered Indiana bat. Efforts to be implemented to mitigate potential impacts on the Indiana bat include:

- Potential roosting and brood-rearing habitat will be identified prior to construction.
- The removal of potential roosting and brood-rearing habitat will be prohibited during the period beginning April 15 and ending September 15.
- Minimization of impacts to stream corridors and the openings created along streams by the Preferred Alternative will be considered in design studies for the Preferred Alternative.

Crossings of the Maumee and Tiffin rivers will be maintained at the existing crossing locations, which will minimize impacts to sensitive mussels that may be present within the Maumee and Tiffin rivers. The footprint of the existing bridges will be expanded to accommodate the widened facility. It has not yet been determined if the structures will be widened up-stream or down-stream. Widening will require construction of piers to support the highway. Future design studies will incorporate efforts to avoid or mitigate impacts on sensitive species of mussels (if present). If, prior to completion of design studies and/or construction, new data indicates that federally or state-listed species are present within the vicinity of the crossings of the Maumee and Tiffin rivers or species of mussels known to exist within these rivers are elevated to the status of threatened or endangered species, consultation with the appropriate federal and/or state agencies will be initiated.

3.1.7 Farmlands Existing Conditions

Farming is an integral part of life within Allen County, Indiana and Paulding and Defiance, counties, Ohio. Understanding the role of farming in the local communities, as well as to the local and state economies is critical during the assessment of farmland issues within the study area.

Relying on some of the most fertile lands in the region, the three counties are vital parts of the diverse farming economies of their respective states. In 1997, Indiana ranked among the top five states in the production of soybeans, peppermint, grain corn, and spearmint. Indiana was

also among the top 10 states in the production of cultivated blueberries and tobacco. Ohio has an equally substantial and diverse farming economy and is ranked in the top five states in the production of maple syrup, soybeans, and processed Concord grapes, and among the top ten states in the production of grain corn, oats, winter wheat, tobacco, and grape production.

Allen County, Indiana

According to the 1997 Agricultural Census, there were 1,440 farm operations in Allen County comprising approximately 64 percent of the land area. Between 1987 and 1997, the percent of land in farms and the number of farms decreased five percent and 13 percent, respectively. The average farm size, however, increased eight percent over 1987. Soybeans accounted for slightly over 42 percent of the cash crops, followed by corn at approximately 36 percent and wheat at only 12 percent. The market value of all agricultural products sold in the county in 1997 was nearly \$90 million.

Paulding County, Ohio

As of 1997, there were 542 farm operations in Paulding County, comprising well over 80 percent of the land area. Although predominantly agricultural, between 1987 and 1997 the amount of farmlands decreased approximately eight percent in the county. During this time, however, the average farm size increased 18 percent to approximately 156.7 hectares (387 acres). With a total of nearly 80 971.7 hectares (200,000 acres) in production in Paulding County, the majority of crops included soybeans (47 percent), corn (27 percent), and wheat (19 percent). The market value of all agricultural products sold in the county in 1997 was just over \$54 million.

Defiance County, Ohio

Defiance County is comprised of over 70 percent of farmland with approximately 861 farm operations. Between 1987 and 1997, the percent of land in farms and number of farms decreased 10 percent and 13 percent, respectively. The average farm size in the county during 1997 was 87.5 hectares (216 acres). Soybeans accounted for nearly 51 percent of the cash crops, followed by corn at approximately 23 percent and wheat at only 14 percent. The market value of all agricultural products sold in the county in 1997 was just over \$45 million.

Methodology

The potential project-related farmland involvement must be evaluated in accordance with federal and state regulations. The US Department of Agricultural (USDA) is the lead agency relative to federal policy regarding farmlands.

FPPA Review

At the federal level, evaluations are governed by the Farmland Protection Policy Act (FPPA) of 1981, which requires the completion of a Farmland Conversion Impact Rating (FCIR) Form (AD-1006). Form AD-1006 is the principal coordination document relative to farmlands, and establishes a format to determine the relative value of farmland impacts associated with a project. The FPPA is intended to minimize unnecessary conversion of farmlands during federal projects.

Two individual AD-1006 forms were generated for the 26 Feasible Alternatives. One form was completed for Allen County, Indiana with the assistance of the Allen County NRCS. Another FCIR form was completed for both Paulding and Defiance counties, Ohio with the assistance of both the Paulding and Defiance counties NRCS Offices. Copies of the completed forms are provided in Appendix 8.

Agricultural Districts

The Indiana Code does not have provisions for Agricultural Districts.

In Ohio, Agricultural Districts are established under the Ohio Revised Code (ORC), Section 929 to provide protection against nuisance suits over farm operations, deferment of property tax assessments to build sewer and water lines, and allows for additional review if land is taken by eminent domain for public purposes. To qualify as an Agricultural District, the land must be in agricultural production, and must be comprised of tracts, lots, or parcels at least 4.0 hectares (10 acres) in size, or have generated an average gross income of at least \$2,500 during the previous three years at the time of the application.

To determine the number of Agricultural Districts within the Feasible Corridors, lists of properties that have been established as Agricultural Districts were obtained from the Paulding and Defiance counties auditors offices on March 10, 2000. Updated listings for Paulding County were obtained on July 29, 2002 and July 9, 2003; for Defiance County, listings were obtained on August 7, 2002 and July 8, 2003.

Farmland Survey

In addition to contacting federal and state agencies, an agricultural impact survey (farmland survey) was undertaken for the project. The farmland survey sought to elicit from property owners the perceived impacts that would result from the project. The questionnaire also addressed roads frequently used by the farmers or operators to access fields or other facilities, such as storage bins or grain elevators. The landowners were also asked the amount of land each currently is responsible for, the amount of tillable acreage, the acreage tilled in 1999, and the crops produced. Landowners were also asked if their farmland was in any programs, such as Agricultural Districts, century farms, etc.

Nearly 400 farmland questionnaires were distributed at public meetings on February 1 and 2, 2000. Only 43 surveys were returned. In order to obtain additional responses, questionnaires were mailed to individuals or organizations that were listed by each county assessor as owning more than one tract of land within the Feasible Corridors. Approximately 350 surveys were mailed and 186 surveys (53 percent) were returned.

Impact Assessment

In order to determine potential farmland impacts created by the alternatives, farm use patterns were determined using project mapping with determinations verified through field reconnaissance and aerial photointerpretation. This data was entered into a Geographic Information System (GIS) to superimpose right-of-way limits of each alternative. In conjunction with the results of the farmland survey, the GIS was then used to calculate the extent of direct impacts on farmlands, number of farm operations involved, and parcels that would be landlocked by each alternative.

Project Impacts

The entire region is predominantly farmland. This is evident in the areas impacted by the Feasible Alternatives. In all cases, except the No Build alternative, the land use with the greatest impact from the proposed project is agricultural land (Figure 3.6). The conversion of agricultural land ranges between 80.3 hectares (198.2 acres) by Alternative Y and 596.7 hectares (1,473.9 acres) by Alternative K (Table 3.17). For Alternatives A through X, these numbers represent between 83.4 and 88.6 percent of the right-of-way. Alternatives Y and Z have an overall lower percentage of agricultural land being impacted, 50.5 and 67.9 percent, respectively.

Based on information obtained from the farmland surveys and GIS, the number of farm operations affected range between 162 for Alternative V and 260 for Alternative Z. Alternatives A, B and D, however, each impact over 210 farm operations (Figure 3.6). Although Alternatives A, B, C and D have the greatest impacts on the number of farm operations, they do not result in the greatest number of farm displacements. The number of farm displacements, defined to include the residence and outbuildings, for Alternatives A through X ranges from six for Alternative R to 14 for Alternatives O and P. Alternative Y has no displacements; Alternative Z will displace only one farm residence.

FPPA Review

Under the AD-1006 system, land taken by an alternative can receive a maximum FCIR score of 260. Land receiving a total score of less than 160 is considered "committed to urban development" and need not be given further consideration for protection. The higher the total score, the more suitable the land is for protection under the provisions of the FPPA. AD-1006 forms were generated separately for the portions of the alternatives in Indiana and for the portions of the alternatives in Ohio. The FCIR scores for the Feasible Alternatives are calculated independently for the Indiana and Ohio portions of the project. The FCIR scores are found in Table 3.18.

In Allen County, there are six different potential routes for the 26 Feasible Alternatives. As expected for the agricultural nature of the county, the scores for Alternatives A through X are relatively similar in nature ranging between 177 and 181. Alternatives Y and Z have lower

**TABLE 3.17
PRODUCTIVE FARMLAND WITHIN THE RIGHTS-OF-WAY OF THE FEASIBLE ALTERNATIVES**

Alternative	Farmland Area Within Rights-of-Way Hectares (Acres)	Total Land Within Rights-of-Way Hectares (Acres)	Percent of Agricultural Land In Alternative Right-of-Way
No Build	N/A	N/A	N/A
A	583.2 (1,440.4)	672.6 (1,661.3)	86.7
B	552.2 (1,363.9)	662.0 (1,635.1)	83.4
C	591.8 (1,461.9)	676.5 (1,670.8)	87.5
D	555.7 (1,372.6)	664.5 (1,641.4)	83.6
D-1	578.5 (1,428.8)	667.1 (1,647.7)	86.7
E	586.1(1,447.7)	672.3 (1,660.6)	87.2
F	555.1(1,371.2)	661.7 (1,634.3)	83.9
G	594.8 (1,469.2)	676.1 (1,670.1)	88.0
H	558.7 (1,379.9)	664.2 (1,640.6)	84.1
I	588.0 (1,452.4)	676.6 (1,671.3)	86.9
J	557.0 (1,375.9)	666.0 (1,645.0)	83.6
K	596.7 (1,473.9)	680.5 (1,680.8)	87.7
L	560.6 (1,384.6)	668.6 (1,651.3)	83.8
M	587.0 (1,449.9)	672.1 (1,660.2)	87.3
N	556.0 (1,373.3)	661.5 (1,633.9)	84.1
O	595.7 (1,471.3)	676.0 (1,669.7)	88.1
P	559.6 (1,382.1)	664.1 (1,640.3)	84.3
Q	587.9 (1,452.2)	673.2 (1,662.8)	87.3
R	557.0 (1,375.7)	662.6 (1,636.6)	84.1
S	596.6 (1,473.7)	677.1 (1,672.4)	88.1
T	560.5 (1,384.4)	665.1 (1,642.9)	84.3
U	586.9 (1,449.7)	668.7 (1,651.8)	87.8
V	555.9 (1,373.2)	658.1 (1,625.5)	84.5
W	595.6 (1,471.2)	672.6 (1,661.3)	88.6
X	559.5 (1,381.9)	660.7 (1,631.8)	84.7
Y	80.3 (198.2)	158.9 (392.5)	50.5
Z	401.9 (992.8)	592.1 (1,462.4)	67.9

**TABLE 3.18
FCIR SCORES FOR THE FEASIBLE ALTERNATIVES**

Alternatives	FCIR Scores
Allen County, Indiana	
A, B, C, D, D-1	178
E, F, G, H	181
I, J, K, L, M, N, O, P	177
Q, R, S, T, U, V, W, X	180
Y	160
Z	164
Alternatives	FCIR Scores
Paulding and Defiance Counties, Ohio	
A, E	165
B, F	164
C, G	168
D, D-1, H	166
I, Q	169
J, R	165
K, S	169
L, T	168
M, U	172
N, V	171
O, W	176
P, X	172
Y	160
Z	165

scores (160 and 164, respectively) because of non-farming uses, such as residential and industrial lands, along existing US 24.

In Paulding and Defiance counties, there are 14 different potential routes for the 26 Feasible Alternatives. As with the portions of the alternatives located in Indiana, FCIR scores for the alternatives in Ohio are similar. For the Alternatives A through X, scores range between 164 and 176. The scores for Alternatives Y and Z (160 and 165, respectively) are lower than those for Alternatives A through X and reflect the greater amount of non-farming uses along existing US 24.

Agricultural Districts

Agricultural Districts in Ohio are established by tax parcels within the county auditor's office. Impacts of each alternative to the number of properties currently included in the Agricultural District program were computed. There are a total of 31 properties with parcels listed within 95 Agricultural Districts that are located within the proposed rights-of-way of the Feasible Alternatives.

Table 3.19 compares the number of properties and total land area affected that are within Agricultural Districts across the Feasible Alternatives. The locations of Agricultural Districts affected by the Feasible Alternatives are shown in Figure 3.7. For Alternatives A through X, the impacts range between 55.6 hectares (137.3 acres) and 110.1 hectares (272.0 acres). Alternatives Y and Z have fewer impacts to land within Agricultural Districts, affecting 15.6 hectares (38.6 acres) and 36.7 hectares (90.6 acres), respectively.

**TABLE 3.19
IMPACTS TO AGRICULTURAL DISTRICTS**

Alternative	Land Area Within Affected Agricultural Districts		Number of Affected Properties in Agricultural Districts	Number of Impacts Exceeding the ORC 925.05 Threshold*
	in hectares	in acres		
No Build	NA	NA	NA	NA
A	78.5	193.9	12	5
B	65.3	161.3	7	6
C	77.4	191.3	12	4
D	63.7	157.4	7	3
D-1	55.6	137.3	6	2
E	78.5	193.9	12	5
F	65.3	161.3	7	6
G	77.4	191.3	12	4
H	63.7	157.4	7	3
I	105.4	260.3	15	7
J	92.1	227.6	10	8
K	104.3	257.6	15	6
L	90.6	223.7	10	5
M	110.1	272.0	14	7
N	96.9	239.3	9	8
O	109.0	269.3	14	7
P	95.3	235.5	9	5
Q	105.4	260.2	15	7
R	92.1	227.6	10	8
S	104.3	257.6	15	6
T	90.6	223.7	10	4
U	110.1	272.0	14	7
V	96.9	239.3	9	8
W	109.0	269.3	14	6
X	95.3	235.5	9	5
Y	15.6	38.6	11	0
Z	36.7	90.6	14	0

Note: Threshold equals 4.0 hectares (10 acres) or 10 percent, which ever is greater, of any individual property in an agricultural district.

Local Roads

One important aspect of a farming operation is the access between areas where farming equipment is stored and where it is used. Access is also important for bringing crops to storage facilities or delivering them to distribution locations. US 24 and neighboring township, county, and state roadways provide site access and facilitate regional distribution of farm-related traffic. The Feasible Alternatives impact the local roadway system. At-grade intersections are proposed at most of the roads identified by farmers as being important for their farming, including those identified by Amish farmers in Allen County. Impacts to the local road identified as being important to farm operations are listed in Table 3.20.

Fragmentation/Landlocked Parcels

In addition to affecting farm operations, Alternatives A through X would result in fragmentation of the existing pattern of agricultural fields. This could result in smaller, irregular fields that could be more difficult and time consuming to plant, maintain, and harvest. This additional work may increase labor costs and reduce profit margins. The impact of fragmentation could be minimized through selling or renting land to neighboring farm operations.

Field fragmentation impacts could be magnified on farms operated by members of the Amish community because of the reliance on horse-drawn vehicles. Amish farmers may face greater increases in travel time associated with accessing smaller, irregularly shaped fields with slower moving vehicles. Planting and harvesting these smaller fields with horse-drawn vehicles may also increase the labor costs of operations and lower profit margins. Within the Allen County portion of the US 24 study area, there are currently three Amish farm operations south of the Maumee River. One is located north of Bremer Road between Webster and Rousey Roads and is within or adjacent to the right-of-way required for Alternatives I through X. The remaining two Amish farm operations occur south of the NS Railroad corridor off of Rousey and Edgerton roads. Within the Paulding County portion of the US 24 study area, the Amish population is limited in number and concentrated well north of the Maumee River near Hicksville and Edgerton, Ohio. In Defiance County, no Amish farm operations occur within or near the US 24 study area.

Alternatives A through X and Z will also result in the landlocking of parcels. As shown in Figure 3.6 and reported in Table S-1 (Comparison of Impacts by Alternative), the number of landlocked parcels ranges from 41 with Alternative D-1 to 81 with Alternative C. As with field fragmentation, the impact of landlocking can be minimized through selling or renting land parcels to neighboring farm operations as well as through the construction of service roads to provide access.

Drainage

Impacts to farming from the proposed alternatives could result from disrupting field drainage. For the most part, soils within the study area are poorly or very poorly drained. In order to be successfully cultivated, poorly and very poorly drained soils require substantial drainage improvements. Extensive subsurface tile systems are in place throughout the study area to allow for successful cultivation. Disruption to the tile systems would potentially impact the farmlands adjacent to the Feasible Alternatives.

Preferred Alternative Impacts

Alternative D-1 will result in the conversion of 578.5 hectares (1,428.8 acres) of farmland and impact 214 different farm operations. These impacts include six properties within agricultural districts totaling 55.6 hectares (137.3 acres). In addition, the conversion of farmland will also result in the landlocking of approximately 179.8 hectares (444.0 acres) of land. The area estimated to be landlocked was based upon the restriction of access to the property from the existing owner, and does not include the possibility of usage agreements between adjacent property owners.

The differences in the footprints for Alternatives D and D-1 are nominal relative to farmland impacts and the FCIR scores for the two alternatives are equal. The alignments for the two alternatives are identical with the exception of the alignment between Krouse Road and SR 424 in Defiance County. In this area, the alignment of Alternative D-1 is shifted less than approximately 106.7 meters (350 feet) from the Alternative D alignment, and remains within the same soil-mapping units. The FCIR score is 178 for the section of the Preferred Alternative in Allen County, and 166 for the section in Paulding and Defiance counties.

**TABLE 3.20
IMPACTS TO ROADS IDENTIFIED AS KEY TO FARM OPERATIONS**

Allen County, Indiana	
Ryan/Bruick Rd.	At-grade intersection with all alternatives on new alignment, except D-1. Grade-separated interchange with Alternative D-1.
Webster Rd.	At-grade intersection with all alternatives on new alignment, except D-1. Grade-separated interchange with Alternative D-1.
Rousey Rd.	At-grade intersection with Alternatives A, B, C, D, I, J, K, L, M, N, O, P. Closed with Alternatives D-1, E, F, G, H, Q, R, S, T, U, V, W, X.
Sampson Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Grade-separated crossing with Alternatives D-1, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. Closed with Alternative Z.
SR 101	At-grade intersection with all alternatives on new alignment. Grade-separated interchange with Alternative D-1.
Becker Rd.	Closed with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
Gustin Rd.	At-grade intersection with all alternatives on new alignment. Closed with Alternative D-1.
State Line Rd.	At-grade intersection with all alternatives on new alignment. Grade-separated crossing with Alternative D-1.
Slusher Rd.	At-grade intersection with Alternatives Q, R, S, T, U, V, W, X. Grade-separated crossing with Alternatives E, F, G, H.
Woodburn Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Grade-separated crossing with Alternative D-1.
Bremer Rd.	Closed with Alternatives E, F, G, H, Q, R, S, T, U, V, W, X, Z.
Maumee Center Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Re-aligned to intersection with Bull Rapids Road with Alternative D-1.
Edgerton Rd.	No intersection with existing US 24. No intersection with any alternatives.
Paulding County, Ohio	
T-162/C-162	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
T-21/C-21	Closed with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. At-grade intersection with Alternatives A, B, C, D, D-1, E, F, G, H.
T-51	Re-aligned at-grade intersection with all alternatives on new alignment and Alternative Z. Re-aligned to intersect with C-176 with Alternative D-1.
C-11	At-grade intersection with all alternatives on new alignment and Alternative Z. Grade-separated crossing with Alternative D-1.
T-33	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Z.
T-43	At-grade intersection with Alternatives A, B, C, D, E, F, G, H, Z. Grade-separated crossing with Alternative D-1.
SR 49	At-grade intersection with all alternatives on new alignment and Alternative Z. Grade-separated interchange with Alternative D-1.
C-87	At-grade intersection with all alternatives.
SR 111	Re-aligned at-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
C-176	At-grade intersection with all alternatives on new alignment.
T-144/C-144	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
C-180	At-grade intersection with all alternatives on new alignment and Alternative Z. Closed with Alternative D-1.
T-61/C-61	Closed with all alternatives on new alignment including D-1 and Alternative Z.
C-83/T-83	Closed with all alternatives on new alignment. At-grade intersection with Alternative D-1.
US 127	At-grade intersection with all alternatives on new alignment. Grade-separated interchange with Alternative D-1.
C-206	East of US 24, at-grade intersections with C-87 for Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X. West of US 24, closed at railroad with Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X. Re-aligned to intersect with C-83 with Alternative D-1.
T-224	At-grade intersection with all alternatives on new alignment. Closed with Alternative D-1.
Defiance County, Ohio	
Powers Rd.	Closed for all alternatives on new alignment. Re-aligned to intersect with T-153 with Alternative D-1

Within Allen County, Bremer, Rousey and Gustin roads were identified as being important to farmers. These roads will be closed with the Preferred Alternative. Maumee Center Road will be re-aligned to intersect with Bull Rapids Road.

In August 2001 and September 2002, representatives of the ODOT and INDOT met with representatives of the Amish community residing in Allen County to review transportation safety issues associated with the design of the Preferred Alternative. The Amish farmers are concerned that crossing a four-lane facility using an at-grade intersection in a horse-drawn vehicle could be unsafe because of the unpredictable nature of horses. Based on information supplied by representatives of the Amish community, the local roadways that are most heavily used by the Amish are Webster and Ryan/Bruick roads. Both roadways span the Maumee River and therefore, provide an important link for the community. While the majority of Amish residents live to the north of the river, the Amish community is growing in portions of Milan and Maumee townships south of the river. To accommodate the travel movements of the Amish farmers, the Preferred Alternative includes grade-separated crossings at Doyle, Sampson, Woodburn, Bull Rapids, and State Line roads. Grade-separated interchanges are proposed at Ryan/Bruick Road, Webster Road, and SR 101. The grade-separated crossings will allow the horse-drawn vehicles to travel safely under the new highway.

In Paulding County, three roads identified by farmers as being important to their operations will be closed with the Preferred Alternative. These roads are T-61/C-61, C-180, and C-224. T-51 and C-206 will be realigned to intersect with C-176 and C-83, respectively. Grade-separated crossings will be provided at C-11 and T-43.

No local roadways identified as being important to agricultural operations in Defiance County will be closed, however, Powers Road will be realigned to intersect with T-153.

Mitigation

Farmlands were identified as a critical issue early on in the project and have played a major role in the development of the roadway alternatives. Avoidance of active farmlands is not possible given the rural nature of the study area. However, minimization of impacts to productive agricultural lands was a primary objective guiding alternative development as discussed below. Additionally, various approaches to mitigating impacts have been considered as described in the following discussion.

Minimization of Impacts During Alternative Development

Where possible, alignments were developed adjacent to or within previously existing disturbed rights-of-way such as the current US 24 route or railroad corridors. Alignments were also developed along township lines, property lines, and fencerows, where possible. These existing man-made breaks were used in order to minimize right-of-way acquisition from active agricultural lands and displacement of farms and farm operations, and to minimize effects of field fragmentation and the landlocking of parcels resulting from the construction of the Preferred Alternative.

Property Acquisition

Acquisition of farmland located within the right-of-way of the Preferred Alternative will be handled in accordance with FHWA acquisition policies as specified in the Uniform Relocation and Real Property Acquisition Policies Act of 1970. Whenever federal funds are utilized on a project funded by the federal government and displacements occur as a result, relocation and financial assistance must be provided. Relative to right-of-way acquisition of farmland, INDOT and ODOT will pay the owners of agricultural land compensation equal to the fair market value of the property. Residents that are displaced and meet occupancy requirements may be eligible for supplemental housing payments to assist them in purchasing or renting safe, decent and sanitary replacement housing. In the case of the owner being displaced, the payment is in addition to the amount INDOT or ODOT will pay for the purchase of the residence to be acquired.

Businesses, farm operations, and non-profit organizations are entitled to compensation for the relocation of their personal property based on actual and reasonable costs. ODOT and INDOT will also pay reasonable expenses incurred in searching for a replacement site. Storage bills

may also be reimbursable, provided that storage time does not exceed 12 months. Finally, owners of a displaced farm could receive, in lieu of reimbursement for moving and related expenses, a payment equal to the average annual net earnings of the farm for a two-year period. The payment may not be more than \$20,000 nor less than \$1,000.

Agricultural Districts

Pursuant to Section 929.05 of the ORC, a public agency operating within the State of Ohio cannot appropriate 4.0 hectares (10 acres) or 10 percent, whichever is greater, of an individual property in an Agricultural District, except as provided for in the Section. To condemn land within an Agricultural District, the agency must give written notice to the Ohio Department of Agriculture. The notice must include a report justifying the proposed action and an evaluation of alternatives that would not impact the Agricultural District.

Local Roadways Important to Agricultural Operations

Mitigation has been developed to offset impacts to agricultural activities associated with changes in the local roadway network. At-grade intersections are proposed at most locations where the Preferred Alternative crosses key roads. Within Indiana, three local roadways identified as being important to farmland operations will be closed or severed by the Preferred Alternative (Bremer, Gustin, and Rousey roads). However, grade-separated crossings are provided at all other crossings, offsetting the impacts of the local road closures. Several of the grade-separated crossings are needed to accommodate the transportation needs of the Amish farmers, specifically those at Ryan/Bruick Road, Webster Road, and SR 101, which will allow horse-drawn vehicles to travel safely under the new highway and directly access crossings over the Maumee River. All crossroads in Paulding County identified as key to agricultural operations will remain open, with the exception of T-61/C-61, C-180, and T-224/C-224. T-61 is closed approximately 244 meters (800 feet) south of where it dead-ends at the Maumee & Western Railroad. Neighboring roadways are available to provide alternate routes for farmers using C-180 and T-224/C-224. No roadways identified at key to agricultural operations will be closed in Defiance County.

Landlocked Properties

An estimated 41 properties are landlocked by the Preferred Alternative (Alternative D-1), resulting in the acquisition of more property than required for construction. The 41 affected parcels comprise a total land area equaling approximately 179.8 hectares (444.0 acres). A Service Road Study was completed for the Preferred Alternative, evaluating the feasibility of potential service roads. The study identified all parcels where access would have been eliminated through construction of the new US 24 and evaluated the feasibility of providing access to these areas through the construction of service roads. The cost of providing access was compared to the cost of buying the landlocked parcels. Based on the evaluation, 11 service roads are justified (*US 24 Service Road Study - Draft*, December 2002). The 11 service roads would provide access to 80.6 hectares (199.0 acres). Six of the proposed service roads would be constructed in Allen County and would provide access to 45.3 hectares (112.0 acres). Three service roads are recommended in Paulding County, which would provide access to 3.6 hectares (9.8 acres). Two service roads are proposed in Defiance County, which would provide access to 31.2 hectares (77.0 acres).

Drainage

Potential impacts to farmland drainage systems were considered during the development of the Feasible Alternatives and the identification of the Preferred Alternative. To be successfully cultivated, many fields in the area require substantial drainage systems because soils in the region tend to be poorly drained. Areas with existing drainage problems are located in Segments 12 and 16, which parallel the Maumee & Western Railroad in Paulding County. In these areas, water flows north toward the Maumee River. Culverts installed under the tracks at intervals provides for minimal conveyance of the drainage. The railroad ballast and the limited size of the culverts create a barrier for surface water south of the tracks flowing north. This factor was considered in the selection of the Preferred Alternative (Alternative D-1), which does not include either Segment 12 or 16.

A preliminary drainage analysis was completed for the Preferred Alternative. This analysis consisted of developing a system of ditches and embankments to control storm water runoff

from the new highway. The study also examined the impacts that the new highway and associated ditches and embankments would have on individual property owners' farmlands and tile systems. On July 16, 2002, representatives from ODOT and the Soils and Water Conservation Districts (SWCD) for Paulding and Defiance, counties met to discuss the drainage issues associated with the Preferred Alternative. Because the SWCD provides local knowledge of individual property owners and their systems, ODOT recommends that the SWCD work directly with property owners on its behalf to ensure that surface drainage and field tile systems are not negatively affected by construction of the Preferred Alternative.

3.1.8 Municipal/ Industrial/Hazardous Waste

Existing Conditions

In general, municipal, industrial and hazardous waste materials and management are regulated under two federal laws – the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendment and Reauthorization Act (SARA) and the Resource Conservation and Recovery Act (RCRA) of 1984. CERCLA focuses on liability for cleanup of contaminated sites. RCRA deals with the management of hazardous materials including the manufacture, storage, transportation, use, treatment and disposal of hazardous waste materials.

FHWA, ODOT, and INDOT policies emphasize the early identification of sites with potential environmental concerns such as contamination; assessment of the type and extent of contamination and estimated clean-up costs; and avoidance of substantially contaminated properties. The current policies of these agencies recognize that minor contamination (e.g., limited contamination from leaking Underground Storage Tanks, structural asbestos, and lead) can be easily remediated and does not generally result in excessive project delays, clean-up costs, or liability.

Phase I Environmental Site Assessments (ESAs) have been conducted to identify properties located within the Feasible Corridors, which potentially may have environmental concerns. These sites can be grouped into four general categories:

- Manufacturing facilities that utilize and/or generate hazardous materials.
- Properties with Underground Storage Tanks (USTs) or Above-Ground Storage Tanks (ASTs) such as gas stations, car dealerships, and residences.
- Waste operations, such as municipal landfills, tire dumps, industrial dumps, and unofficial (illegal) dumping areas.
- Businesses that use chemicals for commercial activities such as autobody shops, auto dealerships, and agricultural companies.

Methodology

A preliminary ESA was conducted for the study area in accordance with ODOT's *Interim Guidelines: Dealing With Hazardous Waste Sites During Project Development* (Revised December 21, 1989) and the American Society for Testing and Materials (ASTM) Standard E 1527-97. EcoSearch Environmental Resources, Inc., (EcoSearch) provided a summary of environmental database information available within the public domain for properties located within the study area. This environmental database summary was reviewed to determine the general locations of sites and to provide a preliminary evaluation of the potential for recognized environmental conditions to exist within the study area. The database search identified sites of potential environmental concern located within set intervals (0.4-kilometer [0.25-mile], 0.8-kilometer [0.5-mile], and 1.6-kilometer [1-mile]) of the study area. The federal databases searched as part of this review included:

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).
- National Priorities List (NPL).
- Resource Conservation and Recovery Information System (RCRIS).
- Treatment, Storage, and Disposal Facilities (TSD) Large and Small Quantity Generators.
- RCRA Administrative Action Tracking System (RAATS).
- Emergency Response Notification System (ERNS).
- PCB Activity Database System (PADS).

- Toxic Release Inventory (TRI).
- Section Seven Tracking System (SSTS).
- Civil Enforcement Docket (DOCKET).
- Site Enforcement Tracking System (SETS).
- Toxic Substances Control Act Inventory (TSCA).

The following state databases were also searched as part of the review:

- Ohio Master Sites List (MSL).
- Indiana State Cleanup List (SCL).
- Ohio Solid Waste Facilities (Ohio SWF).
- Indiana Permitted Solid Waste Facilities (Indiana SWF).
- Ohio Leaking Underground Storage Tank List (Ohio LUST).
- Indiana Leaking Registered Underground Storage Tank List (Indiana LUST).
- Ohio Underground Storage Tank List (Ohio UST).
- Indiana Registered Underground Storage Tank List (Indiana UST).

The locations of approximately 25 percent of the sites identified by the database search were field verified. As part of the field verification, the locations of sites not identified by the database search, but of potential environmental concern to the study area (i.e., abandoned gasoline service stations and apparent landfills/dumps), were also recorded.

The preliminary ESA screening is documented in detail in a separate report entitled *US 24 New Haven to Defiance Environmental Site Assessment Preliminary Project Screening* (September 1999).

Following the preliminary ESA screening, Phase I ESAs were conducted on sites of potential environmental concern identified within or immediately adjacent to the Feasible Corridors. The objective of the Phase I ESAs was to determine whether past or present activities at any of the the identified sites may have adversely impacted environmental conditions on properties located within the Feasible Corridors. The Phase I ESAs were conducted in accordance with the ASTM Standard E 1527-97, ODOT's *Environmental Site Assessment Guidelines* (September 1, 1999), and the INDOT's *Procedural Manual for Preparing Environmental Studies* (July 1996).

The Phase I ESA investigations involved the following efforts:

- Review of environmental database information provided by EcoSearch.
- Review of historic land use mapping (Sanborn Fire/Insurance Rate Maps).
- Non-intrusive site reconnaissance and evaluation.
- Review of historic aerial photographs provided by the County Soil and Water Conservation Service District offices.
- Review of historical ownership information at the County Recorder of Deeds offices in October 1999.
- Interviews with the County Health Departments.
- Review of City and Suburban Street Directories at local public libraries.
- Review of regulatory files maintained by IDEM, OEPA, and the Ohio State Fire Marshal/Bureau of Underground Storage Tank Regulations (BUSTR).

The Phase I ESA investigations are documented in detail in three separate reports entitled *US 24 New Haven to Defiance Phase I Environmental Site Assessment Survey* (December 1999), *US 24 New Haven to Defiance Phase I Environmental Site Assessment Survey Addendum* (March 2000), and *US 24 New Haven to Defiance Phase I Environmental Site Assessment Addendum 2* (October 2000).

Within the right-of-way of the Preferred Alternative, four sites were recommended for Phase II ESAs due to the presence of USTs, ASTs, and drums of unknown contents. The Phase II ESA investigations involved the following efforts:

- Review of site information including soils, geology, piping layout, and/or utility

- drawings, and any previous investigation documentation for each site.
- Soil borings using a Geoprobe sampling system.
- Analysis of the soil samples for volatile organic compounds (VOCs), semi-volatile organic compound (SVOCs), and the eight RCRA metals.
- Analysis of the site investigation results to determine potential remediation and costs for such remediation.

The Phase II ESA investigations are documented in detail in *US 24 New Haven to Defiance Phase II Environmental Site Assessments for Sites 177, 194, and 384 in Defiance and Paulding Counties, Ohio* (March 2003).

Project Impacts

Table 3.21 and Figure 3.8 list the potential hazardous material sites located within or immediately adjacent to the Feasible Corridors where Phase I ESAs were conducted. Phase II ESA Surveys were recommended at 29 sites.

**TABLE 3.21
POTENTIAL HAZARDOUS MATERIAL SITES LOCATED WITHIN THE FEASIBLE CORRIDORS**

Map ID	Site Name	Address	Alternatives	Phase I ESA Recommendations
73	Spill Location	I- 469 US 24 East New Haven, IN	A-X, Y, Z	No additional investigation
75	Aeroquip Corp.	10801 US 24 East New Haven, IN	A-X, Y, Z	No additional investigation
83	Country Oasis	16817 US 24 East Woodburn, IN	Y, Z	Phase II ESA for potential petroleum contamination
86/87	Hanson Aggregate	17831 US 24 East Woodburn, IN	Y, Z	Phase II ESA for potential petroleum contamination
89/90	Uniroyal Goodrich Tire Manufacturing	18906 US 24 East Woodburn, IN	Y, Z	No additional investigation
127	Antwerp Shell Station	310 West River Street Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
129	Leinard Chevrolet, Buick and Pontiac, Inc.	145 North Main Street Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
130	Pop-N-Brew Drive Thru	102 North Main Street Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
131/146	Boston Weatherhead - Division of Dana Corp.	5278 US 24 East Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
133	Liberty Fuel Stop	506 East River Street Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
135/145	Reiff, Steve, Inc.	5196 US 24 East Antwerp, OH	Y	Phase II ESA for site contamination determination
147	Paul Kennedy Industrial Waste Dump	Latitude 41 10 51; Longitude 84 41 55 Corryall Township, OH	None	Phase II ESA for site contamination determination
148	Felix Tijerina Dump	Latitude 41 11 18; Longitude 84 40 48 Crane Township OH	I-X	Phase II ESA for site contamination determination
160	Vagabond Village	13173 US 24 East Cecil, OH	Y, Z	Phase II ESA for potential petroleum contamination
172	Stykemain White GMC	1640 Baltimore Road Defiance, OH	Y, Z	Phase II ESA for potential petroleum contamination and other contamination
176	Ohio State Highway Patrol Post	2350 North Baltimore Road Defiance, OH	A-X, Y, Z	Phase II ESA for site contamination determination

TABLE 3.21 (CONTINUED)
POTENTIAL HAZARDOUS MATERIAL SITES LOCATED WITHIN THE FEASIBLE CORRIDORS

Map ID	Site Name	Address	Alternatives	Phase I ESA Recommendations
177	ODOT Defiance County Garage	2340 North Baltimore Road Defiance, OH	A-X, Y, Z	Phase II ESA for site contamination determination
188	Integrity Motor Sales, Inc.	20390 US 24 West Defiance, OH	Y, Z	Phase II ESA for site contamination determination
194	Mark Moats Ford	20793 US 24 West Defiance, OH	A, C, D-1, E, G, I, K, M, O, Q, S, U, W, Y, Z	Phase II ESA for site contamination determination
380	Inactive/Unfenced Dump	US 24 across from Dana Corp. Antwerp, OH	Y	Phase II ESA for site contamination determination
381	Sewage Disposal Facility	5482 US 24 Antwerp, OH	Y	Phase II ESA for site contamination determination
382	Chucks Tires	415 River Street Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
383	Noah Yoder Sales	1011 US 24 at State Route 49 Antwerp, OH	A-H, Z	Phase II ESA for potential petroleum contamination
384	Abandoned House	6545 Road 69 Antwerp, OH	Y	Phase II ESA for potential petroleum contamination
385	Potential Dump (Soil Mound)	Southwest corner of US 24 and T-61 Crane Township, OH	Y, Z	Phase II ESA for site contamination determination
386	Marathon Gas Station	12742 US 24 Cecil, OH	Y, Z	Phase II ESA for potential petroleum contamination
387	Waste Tire Dump	Intersection of CR-232 and US 24 Cecil, OH	Y, Z	Phase II ESA for site contamination determination
388	Waste Tire Dump II	6545 County Road 162 Antwerp, OH	None	No additional investigation
398	The Lone Tower	17404 Rt 105 Cecil, OH	Y, Z	Phase II ESA for site contamination determination
399	Smith Farms	9800 Switzer Road Defiance, OH	A-X, Y, Z	No additional investigation
400	Culy Residence	1017 Webster Road New Haven, IN	None	Phase II ESA for potential petroleum contamination
401	Ladd Residence	13929 Harper Road New Haven, IN	None	Phase II ESA for potential petroleum contamination
402	Former Rothgeb Garage	16340 Gar Creek Road New Haven, IN	None	Phase II ESA for potential petroleum contamination
403	Former J and W Carryout	13980 US 24, Sherwood, OH	Y, Z	Phase II ESA for potential petroleum contamination
404	Hankinson Residence	17490 US 127 Cecil, OH	Y, Z	No additional investigation

All of the Feasible Alternatives involve at least three sites recommended for Phase II ESA investigations. Alternatives Y and Z involve the most sites due to the level of development along existing US 24. Table 3.22 summarizes the number of sites recommended for Phase II ESAs for each alternative.

Preferred Alternative Impacts

Four properties were identified in the Phase I ESA with potential environmental concerns within the proposed right-of-way for the Preferred Alternative (Alternative D-1). These sites were recommended for Phase II investigations:

- Site 176 – Ohio State Highway Patrol Post: A Phase II ESA was recommended to determine potential contaminants on the site.
- Site 177 – ODOT Defiance County Garage: A Phase II ESA was recommended due to possible remnant petroleum contamination associated with USTs on the property.
- Site 194 – Mark Moats Ford: A Phase II ESA was recommended due to possible remnant petroleum contamination associated with USTs and automobile repairs/maintenance on the property.
- Site 384 – Abandoned House at 6545 Township Road 69: A Phase II ESA was recommended due to the presence of an UST, an AST without secondary containment, and several drums with unknown contents.

**TABLE 3.22
PHASE II ESA SITES BY FEASIBLE ALTERNATIVE**

Alternatives	Number of Sites Recommended for Phase II ESA
B, D, F, H, J, L, N, P, R, T, V, X	3
A, C, D-1, E, G, I, K, M, O, Q, S, U, W	4
Z	13
Y	24

Mitigation

Phase II ESAs were conducted on three of the four sites (177, 194, and 384). It was determined that a Phase II ESA investigation would not be conducted on Site 176 since the potential for encountering contamination is minimal.

The results of the Phase II ESA investigations determined that for all three sites the soils do not reveal the presence of VOCs, SVOCs, or metals in excess of the OEPA's *Voluntary Action Program Single Parameter Commercial and Industrial Use Direct Contact Standards* (Effective, October 21, 2002). In addition, groundwater was not encountered during the soil borings and site soils were identified as low permeability clay and silty clay.

Based on the results of the Phase II ESAs, no further analysis is required for Sites 177, 194, and 384. The USTs and ASTs will be closed in accordance with applicable regulations. In addition, the unknown contents of the drums on Site 384 will be determined and will be disposed of in a regulatory compliant manner.

3.1.9 Environmental Permits Existing Conditions

Environmental permits are required from one or more regulatory agencies for most land alterations, including the addition of impervious surface; construction, alteration, or abandonment of stormwater management facilities; and wetlands or surface water impacts.

Numerous environmental rules and regulations administered by federal, state, local, and special district governing agencies regulate ODOT and INDOT construction activities. Environmental permits are usually required, unless exempted by statute or rule, for any activity that is expected to be a source of air, ground, or surface water pollution. To obtain a permit, the applicant must provide reasonable assurance that state and federal water quality and quantity standards will not be violated and will not be contrary to the public interest for activities located in, on, or over wetlands or other surface waters.

The OEPA and the IDEM are currently responsible for the NPDES program in Ohio and Indiana, respectively. An NPDES permit is required for all discharges to waters of the United States from construction sites and stormwater management facilities. Although highways have not been classified as industrial sites, highway construction has been classified as an industrial activity. An NPDES construction permit is required for all ODOT and INDOT construction activities identified in the NPDES General Permit for Storm Water Discharges From Construction Activities published in the *Federal Register*, Volume 63, Number 61, Tuesday, March 31, 1998.

Two types of NPDES permits are used for most ODOT and INDOT activities: NPDES General Permit for Discharges from Construction Activities; and the NPDES Municipal Separate Storm

Sewer System Permit (MS4). All activities classified as an industrial activity as defined in 40 CFR Part 122.26 (b)(14)(x), which discharge stormwater to waters of the United States, should use the General Permit unless ODOT and INDOT are otherwise notified to obtain an Individual Permit.

The USACE has the authority to issue permits for activities involving the discharge of dredge and fill materials into waters of the United States, including wetlands. A permit from the USACE is also required to build any structure in navigable waters. The USACE may request comment from other agencies, including the USFWS, the ODNR, and the State Historic Preservation Office (SHPO).

The US Coast Guard (USCG) issues permits for bridges or causeways in or over navigable water of the United States, and for causeway construction in all tidal waters of the United States.

Project Impacts

The specific permits required for this project are:

- USACE Section 404 Individual Permit.
- OEPA Section 401 Water Quality Certification.
- IDEM Section 401 Water Quality Certification.
- NPDES General Permit for Discharges from Construction Activities.

Mitigation

Conceptual mitigation for specific project impacts will be developed during the preliminary design studies of the Preferred Alternative. In general, stream and wetland impacts incurred due to the project would require replacement in some form at an agreed-upon ratio of replacement. Regional replacement of these resources would be requested by the resource agencies and would involve the recreation of the impacted function and value of the wetland and streams in the project. The overall low quality of the area resources would result in lower required replacement ratios and reduced mitigation requirements.

3.2 SOCIAL ENVIRONMENT

3.2.1 Land Use and Development Trends

Existing Conditions

The study area is primarily rural in nature, consisting of rich and productive farmlands. The Maumee River flows along the entire stretch of US 24 between New Haven and Defiance. Small stands of forests and wetlands mainly associated with the Maumee River floodplain are also interspersed throughout the study area.

Industrial, commercial, and residential developments also characterize the study area and are densely concentrated along US 24 and its local cross streets. The land uses in the study area are agricultural, residential, business/commercial, industrial, and open space/forested/ undeveloped land as shown in Figure 3.9.

Land use changes in the study area are not expected to occur rapidly, except around the cities of New Haven and Woodburn, Indiana, the Village of Antwerp, and the City of Defiance, Ohio. Zoning ordinances for Allen County and Paulding and Defiance counties are focused on limiting industrial and commercial development to currently developed areas to preserve the rural character of the area and support agricultural uses. These counties also encourage clustered residential development in areas zoned for agricultural use.

Allen County, Indiana

The portion of Allen County located within the study area is characterized as rural-agricultural scattered with single-family houses. In addition to the residential areas, there are industrial and commercial developments.

The City of New Haven Planning Commission and the Allen County Planning Commission administer land use controls for the county. The *New Haven Comprehensive Plan* (1990) contains a variety of zoned land uses in the study area, including Heavy Industrial (I-3), General Industrial (I-2), Light Industrial (I-1), Limited Commercial (C-1), Roadside Commercial (C-4), Suburban Residential (RS-1), and Estates (A-3). Zoning ordinances developed by the county do not restrict the development of land for transportation uses. The transportation goals

established in *Allen County 2000 and Beyond* state, however, that transportation plans will be reviewed in conjunction with development proposals, and will promote new development in areas where adequate transportation facilities exist.

Three types of industrial zoning districts occur within the study area, Heavy (I-3), General (I-2), and Light (I-1) industrial. The Heavy Industrial zoning district establishes areas where the processing and manufacturing of materials occurs from extracted raw materials. Areas zoned I-3 are often contiguous with transportation facilities such as roads or railroads. Currently, three I-3 districts occur within the study area, and all are adjacent to US 24. The largest of the three areas is the Uniroyal Goodrich Plant located between Webster and Sampson roads, south of US 24. North of US 24 across from the Uniroyal Goodrich Plant is the second I-3 zoned area, which is Hanson's Woodburn Quarry. The third I-3 area is northeast of Woodburn near Gustin Road, but is not currently associated with a particular industry.

The General Industrial (I-2) district designates areas for manufacturing and fabricating activities. Transportation facilities such as railroads, county and state routes, and US 24 serve the parcels within this zoning district. The Light Industrial (I-1) zoned districts create areas for light manufacturing from previously prepared materials, warehousing, and assembly activities. The I-1 and I-2 zoned areas within the study area occur at the intersection of Webster Road and US 24. Another I-2 area is southwest of the Woodburn city limit.

Two types of commercial zoning districts occur within the study area, including Limited Commercial (C-1), which establishes areas for professional offices and service-oriented uses. The second type of commercial zoning in the project area is designated Roadside Commercial (C-4), and establishes areas for the intense commercial activities, such as gas stations and food marts. The areas zoned for commercial uses occur sporadically adjacent to existing US 24, and adjacent to the corporate limits of Woodburn.

Two residential zones also occur in the study area, Suburban Residential and Estates. Suburban Residential (RS-1) zoning is intended to create areas for residential uses on individual lots for single-family developments. Estate Zoning (A-3) creates low-density residential uses on individual lots within a rural agricultural setting. The goal of this zoning is to provide a variety of areas for large lot single-family rural subdivisions.

The remaining, and vast portion of the study area in Allen County is mapped for Agriculture (A-1) use. The A-1 designation establishes areas for a full range of agricultural activities and associated uses. The goal of this zoning is to encourage continued use for agricultural production. This is accomplished by restricting permitted uses that negatively affect crop production.

New industrial development is encouraged to locate in existing industrial areas, wherever possible. Within the Allen County portion of the study area, there are five areas designated for economic development and actively marketed for industrial development. The Casad East Economic Development Area (EDA) was approved in May 1996. This area, which is approximately 43 hectares (106 acres) in size, is located to the east of I-469 and bounded by Edgerton Road on the north and Ryan Road on the west. The area was previously developed for heavy industrial use and retains the rail connections that supported its previous use as well as large industrial buildings. Approved in May 1998, the Canal Place EDA encompasses 253 hectares (624 acres) and is located in Jefferson Township, east of the US 24 and I-469 interchange. Boundaries are Doyle Road to the west, Edgerton Road to the south, Ryan Road to the east, and Jefferson/Milan township line to the north. The third EDA within the study area, named Bandalier, was approved in April 1998. This site is approximately 47 hectares (116 acres) in size and is located to the east of I-469. It is bounded by Dawkins Road on the south, Bandalier Road on the west, Edgerton Road on the north, and Ryan Road on the east. Development of these areas would result in changing existing land usage from agricultural/residential to industrial/commercial. The New Haven Industrial Area is shown in the *Allen County 2025 Transportation Plan* (Northeastern Indiana Regional Coordinating Council, 2000). It is a large area bounded by US 24 to the north, Berthaud Road to the east, Edgerton Road to the south, and Doyle Road to the west. The area is aggressively marketed for industrial development. The land is currently used for agricultural production. The Canal Place EDA is located within the boundaries of the New Haven Industrial Area. The Doyle Road Industrial Area is also shown in the *Allen County 2025 Transportation Plan*. The area is bounded by Edgerton Road to the north, Bandalier Road to the east, Dawkins

Road to the south, and Doyle Road to the west. The area is currently used for agricultural production. Also within Allen County, the City of Woodburn is developing the Industrial Park located to its northeast off SR 101.

Paulding County, Ohio

Over 86 percent of all land area in Paulding County is used for agricultural activities. Single-family housing is intermittently scattered along roadways throughout the study area. Residential, business, and industrial land uses are concentrated in the Villages of Antwerp, Cecil, and Paulding. Two industrial parks are located within the county. The Gasser Road Industrial Park is located in Paulding Township and the Antwerp Industrial Park is on the eastern edge of the village limits.

Individual townships control zoning within Paulding County. Four townships exist within the study area which are Carryall, Crane, Harrison, and Emerald townships. Zoning ordinances within the four townships are relatively similar, and reflect the rural-agricultural nature of the area. None of the townships have ordinances that preclude development of a transportation system. All four townships have Business (B) and Industrial (I) zoning districts, within or adjacent to their boundaries.

A majority of the study area is agricultural in nature, and all four townships recognize agricultural uses in their zoning codes. Crane and Harrison townships expand agricultural zoning to permit uses that include residential development and institutional development such as parks, schools, churches, cemeteries, and hospitals. In Carryall and Emerald townships, there are two classifications for rural residential districts. Rural Residential District 1 allows agricultural land uses, single-family dwellings, and mobile homes. Rural Residential District 2 is primarily for single-family dwellings.

Within Paulding County, the Village of Antwerp is building a major school complex with elementary, middle, and high schools, as well as associated athletic facilities and amenities. The site is bordered by SR 49 to the west, Waterworks Drive to the south, T-43 to the east, and C-180 to the north. In addition to the school complex, the Village also plans to expand the Antwerp Industrial Park, which is located west of the school complex on CR 176.

Defiance County, Ohio

Similar to Allen and Paulding counties, Defiance County is predominantly rural-agricultural in nature. Agriculture accounts for over 80 percent of the land use in the county. Single-family housing occur intermittently throughout the study area adjacent to roadways. The greatest concentration of residential and business areas occur in the City of Defiance, and the Townships of Hicksville, Sherwood and Maumee Center.

Within the study area, the urban development characterizes the City of Defiance, east of US 24. Zoning ordinances encourage industrial, business, and residential development within the Defiance urban area. Outside the City of Defiance, agricultural use is encouraged. The *Defiance County Comprehensive Plan* (January 2000) calls for residential, industrial, and commercial development to follow existing or planned transportation infrastructure. For land under consideration for use as a transportation route, the plan also encourages that it be purchased as quickly as possible. Zoning ordinances developed by the county do not restrict the development of land for transportation uses.

Currently, there is dense development along US 24 between the SR 424 and SR 15. Zoning within this area allows for highway and business development (B-4). The area between the Tiffin River and US 66 is zoned for industrial park development (M-2), and coincides with the Fox Run Industrial Park. West of the SR 424 and US 24 junction, the study area is primarily agricultural in nature, scattered with single-family residential and commercial development.

Within Defiance County, there are four designated economic development areas. The Defiance Hospital recently developed a 18.2-hectare (45-acre) medical complex west of SR 15 and north of US 24. In addition, the City of Defiance is currently planning for the expansion of the Fox Run Executive Park that lies immediately south of US 24, just east of the Tiffin River. Across from the Fox Run Executive Park is the Smith-Zachrich residential/commercial development area. Also, near Krouse Road, plans for a 283.4-hectare (700-acre) Industrial Park are being developed.

Transportation plans developed for the City of Defiance and the Maumee Valley Planning Organization contain an interchange in the area of West High Street/Switzer Road and US 24 in order to provide access to these rapidly developing areas.

Methodology

Land use patterns were determined through review of USGS topographic mapping as well as review of available zoning maps and comprehensive plans including the *City of New Haven Comprehensive Plan* (May 1990), the *Paulding County Comprehensive Plan* (1972), and the *Defiance County Comprehensive Plan* (January 2000). Zoning ordinances and plans were also used to define future land use goals and objectives for the affected municipalities. In addition, this information was supplemented with input from local planners and public officials and developers with interests in the study area.

The information on land use patterns was overlain of parcel mapping and entered into a GIS. Information was verified through field reviews. The proposed right-of-way limits of the 26 Feasible Alternatives were superimposed on the mapping of land use patterns within the Feasible Corridors and used to calculate the extent of direct impacts on various types of land uses existing within the study area.

Land use classifications included in the GIS did not distinguish land that is actually dedicated to transportation uses. Since the Feasible Alternatives do utilize land associated with various public roadways, the impact analysis did consider the reuse of existing transportation corridors. This was quantified by estimating the length of the total alignment that followed or abutted existing transportation corridors.

Project Impacts

Existing Land Use Patterns

As shown in Table 3.23 and Figure 3.10, the amount of land that would be converted to transportation use varies between 193.6 hectares (478.2 acres) for Alternative Y and 687.8 hectares (1,698.9 acres) for Alternative W. Alternatives A through X require between 658.1 hectares (1,625.5 acres) and 687.8 hectares (1,698.9 acres) of land to be converted from existing land uses to transportation use.

In all cases, except the No Build Alternative, the land use type with the greatest conversion from existing conditions to transportation uses is agricultural land (Figure 3.10). The conversion of agricultural land ranges from 80.3 hectares (198.2 acres) by Alternative Y to 596.7 hectares (1,473.9 acres) by Alternative K. The next greatest conversion of land to transportation uses would be to open/undeveloped land, with a conversion range from 44.7 hectares (110.5 acres) for Alternative O to 78.1 hectares (192.9 acres) for Alternative T.

Residential land use conversion to transportation use would be greatest with Alternative Z, at approximately 71.0 hectares (175.4 acres) and lowest with Alternative S at 12.5 hectares (31.0 acres). These conversion estimates do not necessarily reflect the actual residence relocations that would range between 14 with Alternative Y and 106 with Alternative Z.

The conversion data also does not reflect the reuse of existing transportation corridors that is characteristic of the Feasible Alternatives. To compare the Feasible Alternatives, estimates of the length of the highway alignment that follow or abut existing transportation facilities were developed. These are provided in Table 3.24. Alternative Y follows existing US 24 for its entire length and therefore 100 percent of the alignment follows an existing transportation corridor. Alternative Z follows existing US 24 for most of its length with the exception of the Antwerp Bypass, portions of which also follow existing transportation corridors. Approximately 75 percent of Alternative Z follows or abuts existing transportation corridors. For the remaining Feasible Alternatives, use of land within or abutting existing transportation corridors accounts for 31 to 47 percent of the entire length of the alternative alignments.

Landlocked Parcels

In addition to the land that would be converted to a transportation use as right-of-way for US 24, the Feasible Alternatives would also landlock parcels, leaving the land area as uneconomically

feasible remnants because access has been eliminated. Relative to landlocked parcels and affected area, Alternative Y has the least impact of the 26 Feasible Alternatives as it does not landlock any properties. Of the remaining 25 alternatives, Alternative P landlocks the fewest number of parcels (41 parcels), while Alternative C landlocks the greatest number of parcels (63 parcels). The total land area affected varies; Alternative H affects least amount of land (345 hectares [853 acres]) while Alternative K affects the greatest amount of land area (614 hectares [1,517 acres]). The costs associated with the purchase of landlocked property also varies by alternative ranging from \$3,122,448 for Alternative Z to \$6,826,950 for Alternative K.

**TABLE 3.23
LAND USES CONVERTED TO TRANSPORTATION USE FOR THE FEASIBLE ALTERNATIVES**

	Residential Use		Community/ Public Use		Commercial Use		Industrial Use		Agricultural Use		Open Space/ Undeveloped		Total	
	ha	ac	ha	ac	ha	ac	ha	ac	ha	ac	ha	ac	ha	ac
No Build	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	30.3	74.8	0.0	0.0	8.7	21.4	0.0	0.0	583.2	1440.4	50.5	124.7	672.6	1661.3
B	30.8	76.2	0.0	0.0	13.2	32.7	0.0	0.0	552.2	1363.9	65.7	162.3	662.0	1635.1
C	28.7	71.0	0.0	0.0	8.7	21.4	0.0	0.0	591.8	1461.9	47.2	116.5	676.5	1670.8
D	29.6	73.1	0.0	0.0	13.2	32.7	0.0	0.0	555.7	1372.6	66.0	162.9	664.5	1641.4
D-1	24.0	59.3	10.3	25.5	1.5	3.6	0.0	0.0	578.5	1428.8	52.6	130.0	667.1	1647.7
E	18.7	46.3	0.1	0.3	8.5	20.9	0.0	0.0	586.1	1447.7	58.9	145.4	672.3	1660.6
F	19.3	47.7	0.1	0.3	13.0	32.2	0.0	0.0	555.1	1371.2	74.1	183.0	661.7	1634.3
G	17.2	42.5	0.1	0.3	8.5	20.9	0.0	0.0	594.8	1469.2	55.6	137.2	676.1	1670.1
H	18.1	44.6	0.1	0.3	13.0	32.2	0.0	0.0	558.7	1379.9	74.3	183.6	664.2	1640.6
I	25.7	63.4	0.0	0.0	8.7	21.4	0.0	0.0	588.0	1452.4	54.3	134.1	676.6	1671.3
J	26.2	64.8	0.0	0.0	13.2	32.7	0.0	0.0	557.0	1375.9	69.5	171.7	666.0	1645.0
K	24.1	59.6	0.0	0.0	8.7	21.4	0.0	0.0	596.7	1473.9	51.0	125.9	680.5	1680.8
L	25.0	61.7	0.0	0.0	13.2	32.7	0.0	0.0	560.6	1384.6	69.8	172.3	668.6	1651.3
M	28.4	70.2	0.0	0.0	8.7	21.4	0.0	0.0	587.0	1449.9	48.0	118.7	672.1	1660.2
N	29.0	71.6	0.0	0.0	13.2	32.7	0.0	0.0	556.0	1373.3	63.3	156.3	661.5	1633.9
O	26.9	66.5	0.0	0.0	8.7	21.4	0.0	0.0	595.7	1471.3	44.7	110.5	676.0	1669.7
P	27.8	68.6	0.0	0.0	13.2	32.7	0.0	0.0	559.6	1382.1	63.5	156.9	664.1	1640.3
Q	14.1	34.8	0.1	0.3	8.5	20.9	0.0	0.0	587.9	1452.2	62.6	154.7	673.2	1662.8
R	14.6	36.2	0.1	0.3	13.0	32.2	0.0	0.0	557.0	1375.7	77.8	192.3	662.6	1636.6
S	12.5	31.0	0.1	0.3	8.5	20.9	0.0	0.0	596.6	1473.7	59.3	146.5	677.1	1672.4
T	13.4	33.1	0.1	0.3	13.0	32.2	0.0	0.0	560.5	1384.4	78.1	192.9	665.1	1642.9
U	16.9	41.6	0.1	0.3	8.5	20.9	0.0	0.0	586.9	1449.7	56.4	139.2	668.7	1651.8
V	17.4	43.0	0.1	0.3	13.0	32.2	0.0	0.0	555.9	1373.2	71.6	176.8	658.1	1625.5
W	15.3	37.9	15.3	37.9	8.5	20.9	0.0	0.0	595.6	1471.2	53.1	131.1	687.8	1698.9
X	16.2	40.0	0.1	0.3	13.0	32.2	0.0	0.0	559.5	1381.9	71.8	177.4	660.7	1631.8
Y	39.5	97.5	0.6	1.5	5.2	13.0	2.1	5.1	80.3	198.2	66.0	162.9	193.6	478.2
Z	71.0	175.4	1.8	4.5	16.0	39.5	5.9	14.5	401.9	992.8	58.9	145.4	555.5	1372.0

Note: ha = hectares; ac = acres

Future Land Use Patterns

Any of the Feasible Alternatives would likely stimulate and accelerate development opportunities in the study area by improving access. This is particularly true where the Feasible Alternatives are located adjacent to areas currently in transition, planned development areas or urban zoning districts. In areas where future development is not expected, a new highway could stimulate investment in areas currently considered too remote for development. Local and state land use and environmental regulations including zoning ordinances and permitting requirements, will

serve to control the type of future development and minimize impacts on potentially affected sensitive resources.

**TABLE 3.24
REUSE OF EXISTING TRANSPORTATION CORRIDORS**

Alternative	Length Along Existing Transportation Rights-of-Way	Percentage of Total Length
A	26 275 meters (86,183 feet)	45%
B	27 487 meters (90,189 feet)	47%
C	26 023 meters (85,354 feet)	44%
D	26 271 meters (86,169 feet)	45%
D-1	26 271 meters (86,169 feet)	45%
E	24 964 meters (81,883 feet)	42%
F	26 186 meters (85,889 feet)	45%
G	24 712 meters (81,054 feet)	42%
H	24 960 meters (81,869 feet)	42%
I	20 455 meters (67,091 feet)	34%
J	21 676 meters (71,097 feet)	37%
K	20 202 meters (66,262 feet)	34%
L	20 450 meters (67,077 feet)	34%
M	23 808 meters (78,091 feet)	40%
N	25 030 meters (82,097 feet)	43%
O	23 555 meters (77,262 feet)	40%
P	23 804 meters (78,077 feet)	40%
Q	18 799 meters (61,662 feet)	32%
R	20 021 meters (65,668 feet)	34%
S	18 547 meters (60,833 feet)	31%
T	18 795 meters (61,648 feet)	32%
U	22 141 meters (72,662 feet)	38%
V	23 374 meters (76,668 feet)	40%
W	21 900 meters (71,833 feet)	37%
X	22 149 meters (72,648 feet)	38%
Y	60 295 meters (197,472 feet)	100%
Z	44 238 meters (145,101 feet)	73%

One potential impact that would result from any of the Feasible Alternatives would be the conversion of future development land that would be required to construct the proposed highway. In Allen County, the northern portion of the Canal Place EDA in Jefferson Township, east of the US 24/I-469 interchange would be impacted by the project. The entire development area is approximately 253 hectares (624 acres) in size. Alternatives A, B, C, D, I, J, K, L, M, N, O, P, Y, and Z would impact the northern 2.8 hectares (6.9 acres) of the area, leaving the remaining 249.8 hectares (617.1 acres) intact. This large area would still be accessible from US 24 and Harper, Ryan/Bruick, Doyle, and Edgerton roads.

Alternatives E, F, G, H, Q, R, S, T, U, V, W, and X bisect the northern portion of the Canal Place EDA, leaving approximately 28.3 hectares (70.0 acres) north of the alignment and approximately 208.9 hectares (516.0 acres) south of the alignment. The right-of-way limits for the alternatives themselves would impact approximately 15.4 hectares (38.0 acres) of the site. The northern parcel would have access from existing US 24 to the west, but would not have easy access from the east. The larger parcel to the south of the alternatives would be accessible from Harper, Berthaud, Doyle, and Edgerton roads.

The New Haven Industrial Area is bisected by Alternatives E, F, G, H, Q, R, S, T, U, V, W, and X resulting in a small loss of land area. Access would be provided with the alternatives via intersections with Doyle, Ryan/Bruick, and Berthaud roads. The improved visibility of the site would enhance marketability for either commercial or industrial development.

Also within Allen County, the City of Woodburn is expanding the Woodburn Industrial Park northeast of the city off SR 101. Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X are located south of Woodburn, without an interchange providing access to the industrial park. To access the industrial park from these alternatives, motorists would have to exit from US 24 at SR 101 south of Woodburn and travel through the city to reach the site. While traveling on Alternatives A, B, C, D, E, F, G, H, Y, or Z, motorists would exit US 24 at SR 101 (north of Woodburn) to reach the industrial park.

In the Village of Antwerp, Alternatives A through X would have access to the new school complex site via SR 49. Alternatives A, B, C, D, E, F, G, H, and Z would have an at-grade intersection with SR 49 less than 0.4-kilometer (0.3-mile) from the site. Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X would have an intersection with SR 49, but motorists would have to travel on SR 49 approximately 1.6 kilometers (one mile) and cross two township roads (T-152 and T-162) before entering the school complex. Travel patterns to the site caused by Alternative Y would not be different than current routes. Travelers from the north would access the new school complex through the Village of Antwerp before reaching SR 49.

East of the school complex on C-176 is the Antwerp Industrial Park, which would have similar access issues as the school complex. Direct access via an intersection at C-176 would be provided with Alternatives A, B, C, D, E, F, G, H and Z. For Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X, travelers would take T-51 north approximately 1.6 kilometers (one mile) before turning left on C-176. Travel patterns to the industrial park from Alternative Y would not be different than current routes. Motorists from the north would access the site via T-43.

In Defiance County, the 283.4-hectare (700-acre) Enterprise Park would be divided into two smaller tracts of land by Alternatives B, D, F, H, J, L, N, P, R, T, V, and X. The right-of-way of the alternatives would require approximately 23.7 hectares (58.5 acres) of land, leaving a western parcel approximately 90.7 hectares (224.2 acres) in size to the east of Krouse Road and an eastern parcel that is approximately 168.9 hectares (417.3 acres) to the east of the proposed highway. Krouse Road would provide the only access to the western parcel, while Integrity Road would provide the only access for the eastern parcel. Development of the 90.7-hectare (224.2-acre) property could also be limited because of a natural gas pipeline corridor and wetlands that are located on the site.

Outside of the City of Defiance limits, access to the other three major developments would be affected by the alternatives. These are the Defiance Hospital medical complex, Fox Run Executive Park, and Smith-Zachrich Development. As currently planned, the proposed alternatives would

Preferred Alternative Impacts

provide an overpass of US 24 and West High Street, but not direct access to roads leading into these sites. Access to these three sites would have to be diverted through the City of Defiance.

With the Preferred Alternative (Alternative D-1), the amount of land to be converted to transportation use is 667.1 hectares (1,647.7 acres). As with the 26 Feasible Alternatives, the land use with the greatest conversion from existing conditions is agricultural land. Approximately 578.5 hectares (1,428.8 acres) of land currently used for agricultural activities will be converted to right-of-way for US 24. Residential land uses account for 23.4 hectares (57.9 acres) of land that will be acquired for right-of-way. Approximately 52.6 hectares (130.0 acres) of land classified as open space/undeveloped use will be converted to transportation use. Other land uses to be converted to transportation use included commercial (1.5 hectares [3.6 acres]) and community/public use (25.5 hectares [10.3 acres]). The latter category is related to right-of-way acquisition of land for the SR 424 interchange from to the Ohio State Patrol Facility and the ODOT's District 1 Garage.

The Preferred Alternative requires right-of-way from land contained within the Canal Place EDA, an economic development site in Allen County. Alternative D-1 impacts 2.8 hectares (6.9 acres) of land located along the northern edge of the development site, leaving 249.8 (617.1 acres) of land for development. The Preferred Alternative also requires land for right-of-way from the Enterprise Park, an economic development site located in Defiance County. The 283.4 hectare (700-acre) site will be bisected by the Preferred Alternative, leaving two separate parcels for development located to the west and the east of the Preferred Alternative. The development potential of the western parcel is limited by the presence of a natural gas pipeline and wetlands.

Access to the Antwerp Industrial Park will be improved by the provision of an at-grade intersection at T-51, just to the east of the development site.

In the City of Defiance, the existing intersection of US 24 and West High Street will be closed as a result of the construction of the Preferred Alternative and the existing at-grade intersection will be replaced with an overpass. West High Street will remain open to traffic with an overpass constructed over West High Street to carry the Preferred Alternative over it. Public opinion is divided at West High Street. Several residents and public officials have requested that an interchange be constructed at this location to maintain access to US 24 at West High Street. Community representatives are concerned that eliminating access to US 24 at West High Street would be detrimental to economic development on the west side of the City of Defiance. Other citizens have stated that they do not want an interchange at West High Street.

In response to the public comments, a separate traffic study was conducted to determine the secondary impacts on the local road network resulting from closing the US 24/Switzer Road/West High Street intersection. The study is documented in a separate report entitled *City of Defiance, Ohio Traffic Study: Assessment of Traffic Impacts Due to the Proposed Grade Separation of US 24 and West High Street* (February 2003). The traffic study determined that future capacity problems on the local roads will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the surrounding area. Future capacity problems on local roads will occur regardless of the existence of an interchange at US 24 and West High Street/Switzer Road.

At this time, ODOT is not proposing to construct an interchange at Switzer Road and West High Street as part of the US 24 project. An interchange at this location is not recommended because it is less than 1.6 kilometers (one mile) to the existing US 24/SR 15 interchange. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of two miles and a minimum distance of one mile.

The Preferred Alternative potentially landlocks 41 properties, requiring acquisition of more property than needed for construction. The 41 affected properties cover a land area equaling 179.8 hectares (444 acres). The costs associated with the purchase of landlocked property for the Preferred Alternative is \$2,440,278.

Consistency with Comprehensive Development Plans

Improvements to US 24 are incorporated in the Northeastern Indiana Regional Coordinating Council's (NIRCC) *2025 Long Range Transportation Plan*, the *City of New Haven Comprehensive Plan* (1990), the *Paulding County Comprehensive Plan* (1972), and the *Defiance County Comprehensive Plan* (2000). Table 3.25 compares the design of the Feasible Alternatives with the recommendations presented in these plans.

**TABLE 3.25
CONSISTENCY WITH COMPREHENSIVE DEVELOPMENT PLANS**

County	Plan Statement and Issues	Project Applicability
Allen County, Indiana	<p>INDOT 2000-2025 Long Range Plan designates US 24 as a Statewide Mobility Corridor. Recommended design features for such corridors include high speed, free-flowing traffic conditions, multiple-lane divided cross-section, partial to full access control, and highway and railroad grade-separations.</p>	<p>Alternatives A through X and Z are four-lane, divided expressways with partial to full access control.</p> <p>Alternative D-1 is four-lane divided facility with full access control.</p> <p>US 24 remains as a two-lane facility with free access for Alternative Y.</p>
	<p>NIRCC 2025 Long Range Plan states US 24 to be improved as an expressway in the vicinity of existing US 24 between I-469 and Bruick Road.</p>	<p>Alternatives A, B, C, D, I, J, K, L, M, N, O, P, and Z are expressways, which utilize existing US 24 right-of-way between I-469 and the Indiana/Ohio state line.</p> <p>Alternatives E, F, G, H, Q, R, S, T, U, V, W, and X relocate US 24 to the south of its existing alignment.</p> <p>Alternative D-1 is a four-lane freeway, which utilizes existing US 24 right-of-way between I-469 and Berthaud Road and relocates US 24 between Berthaud Road and the Indiana-Ohio state line.</p> <p>US 24 remains as a two-lane facility with shoulder and intersection improvements for Alternative Y.</p>
	<p>A Rural Transportation Plan is being developed which will make recommendations for US 24 improvements between Bruick Road and the Indiana/Ohio state line.</p>	<p>Alternatives A, B, C, D, D-1, I, J, K, L, M, N, O, P, and Z are expressways which utilize existing US 24 right-of-way between I-469 and Berthaud Road and relocate US 24 between Berthaud Road and the Indiana-Ohio state line.</p> <p>Alternatives E, F, G, H, Q, R, S, T, U, V, W, and X relocate US 24 to the south of its existing alignment.</p> <p>Alternative D-1 is a four-lane freeway, which utilizes existing US 24 right-of-way between I-469 and Berthaud Road and relocates US 24 between Berthaud Road and the Indiana-Ohio state line.</p> <p>US 24 remains as a two-lane facility with shoulder and intersection improvements for Alternative Y.</p>
	<p>Based on input obtained for this DEIS, Woodburn officials propose US 24 to remain a local road and a new-four lane expressway built south of the existing alignment but north of Woodburn city limits.</p>	<p>Alternatives A, B, C, D, D-1, E, F, G, H, Y, and Z are four-lane highways located north of Woodburn city limits. Existing US 24 remains open as a local road.</p> <p>Alternatives E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X are four-lane expressways located south of existing US 24 and Woodburn. Existing US 24 remains open as a local road.</p> <p>US 24 remains as a two-lane facility with shoulder and intersection improvements for Alternative Y.</p> <p>US 24 is upgraded to a four-lane facility on existing alignment with partial access control for Alternative Z.</p>

**TABLE 3.25 (CONTINUED)
CONSISTENCY WITH COMPREHENSIVE DEVELOPMENT PLANS**

Paulding County, Ohio	<i>Access Ohio</i> (1995) designates US 24 as a Macro Corridor and proposes to upgrade the highway to a four-lane facility within the county limits.	<p>Alternatives A through X and Z are four-lane, divided expressways with partial to full access control.</p> <p>Alternative D-1 is four-lane divided facility with partial access control.</p> <p>US 24 remains as a two-lane facility with free access for Alternative Y.</p>
	<i>Comprehensive Plan</i> (1972) states US 24 will be relocated on limited access right-of-way north of the Village of Paulding, and south of the Villages of Antwerp and Cecil. Interchanges would provide access to Antwerp and Paulding.	<p>Alternatives A through X are located north of Paulding and south of Antwerp. Access to Antwerp and Paulding provided through at-grade intersections with local roadways.</p> <p>Alternative D-1 is located north of Paulding and south of Antwerp. Access to the villages is provided through interchanges at SR 49 and US 127.</p> <p>Alternatives Y and Z remain on the existing US 24. Alternative Z includes the Antwerp Bypass located to the south of the village.</p>
	Based on input obtained for this DEIS, Antwerp officials propose a bypass around the village, but prefer to have the new four-lane expressway closer to the south part of Antwerp, with C-21 and C-11, and State Line Road remaining open.	<p>All alternatives except Y are four-lane expressways relocating US 24 to the south of Antwerp.</p> <p>Alternatives A, B, C, D, D-1, E, F, G, and H are closer to the southern edge of Village of Antwerp limits.</p> <p>For all alternatives, C-11 and State Line Road remain open. For D-1, C-11 and State Line Road remain open with grade-separated crossings.</p> <p>C-21 remains open for Alternatives A through H, and Y but is closed for Alternatives I through Z.</p>
Defiance County, Ohio	<i>Access Ohio</i> (1995) designates US 24 as a Macro Corridor and proposes to upgrade the highway to a four-lane facility within the county limits.	<p>Alternatives A through X and Z are four-lane, divided expressways with partial to full access control.</p> <p>Alternative D-1 is four-lane divided facility with partial access control.</p> <p>US 24 remains as a two-lane facility with free access for Alternative Y.</p>
	<i>Comprehensive Plan</i> (2000) states there will be a new, rerouted US 24.	<p>Alternatives A through X and D-1 are located on new alignment except for the area between SR 15 to the intersection at SR 424, approximately 4.8 kilometers (three miles) in length.</p> <p>US 24 remains on existing alignment for Alternatives Y and Z.</p>
	The Defiance City Council has passed a resolution to include a four-legged style interchange at US 24 and West High Street/Switzer Road.	Currently, an interchange is not proposed at US 24 and West High Street/Switzer Road.

The US 24 project is listed on INDOT's *2000-2025 Long Range Plan* with US 24 being designated as a Statewide Mobility Corridor and recognized as a Congressional High Priority Corridor. Statewide Mobility Corridors serve as the connections between urban areas of 25,000 persons or greater in Indiana and neighboring states, provide macro-level accessibility to cities and regions around the state, and play a vital role in economic development. These roadways carry long distance trips, heavier commercial vehicle flows, and warrant upper level design standards such as multiple travel lanes, railroad and highway grade-separations, and bypasses of congested areas.

The project is also included in *ACCESS OHIO*, ODOT's current long range multi-modal transportation plan. In this plan, US 24 is designated as a macro corridor, which are defined as "corridors of statewide significance upon which rests the economic vitality of Ohio".

Mitigation

Any of the Feasible Alternatives would result in the conversion of land uses from existing conditions to that of a transportation facility. One form of mitigation for impacts to this conversion is the selection of a Preferred Alternative that minimizes the total amount of land converted to transportation use. Approximately 45 percent of the total length of Alternative D-1 uses land or abuts land that is now used for transportation purposes.

In addition, counties, cities, and townships should be encouraged to develop zoning regulations near and around the transportation facility that minimize undesired or unregulated development and enhance protection of natural resources, cultural resources, and important community resources located in areas adjacent to the Preferred Alternative.

To minimize the impacts associated with the landlocking of parcels, service roads will be constructed to provide access, where practical and feasible. A Service Road Study has been completed investigating the potential of providing access to parcels landlocked by construction of the Preferred Alternative (Alternative D-1). The study, which evaluated potential service roads, is discussed in detail in a separate report entitled *US 24 Service Road Study - Draft* (December 2002).

The investigation consisted of identifying all parcels potentially where access would be eliminated through construction of Alternative D-1 and evaluating the feasibility of providing access to these properties through the construction of service roads. The cost of providing access was compared to the cost of buying the landlocked parcels.

Based on the evaluation comparing the cost of purchasing the property to the cost of purchasing right-of-way and constructing a service road, 11 service roads are justified. The service roads will provide access to 80.6 hectares (199.0 acres). Six of the 11 proposed service roads would be constructed in Allen County, and will provide access to 45.3 hectares (112 acres). Three service roads are recommended in Paulding County, providing access to 3.6 hectares (9.8 acres). In Defiance County, two service roads are recommended, which would provide access to 31.2 hectares (77 acres).

3.2.2 Population/ Housing Existing Conditions

In Allen County, the study area covers Jefferson, Milan, and Maumee townships and the incorporated municipalities of New Haven and Woodburn. The portion of the study area in Ohio contains three incorporated municipalities (the villages of Antwerp and Cecil and the City of Defiance) and Harrison, Carryall, Crane, and Emerald townships in Paulding County and Delaware, Defiance, and Noble townships in Defiance County.

Population

The total population of the United States increased by 13.2 percent between 1990 and 2000, representing the largest census-to-census increase in American history (US Census Bureau, *Population and Age Distribution: 1990 to 2000*, April 2001). While the total population of the both Indiana and Ohio grew, the rate of growth was less than the national rate. Ohio, however, is ranked 7th of the 50 states for total population. Within the study area, the growth rate for Allen County was slightly higher than the growth rate reported for the state of Indiana, while the changes in population for both Paulding and Defiance lagged behind the state of Ohio.

Allen County is part of the Fort Wayne Metropolitan Statistical Area (MSA), which is comprised of six northeastern Indiana counties (Adams, Allen, DeKalb, Huntingdon, Wells, and Whitely) Allen County is the largest, in terms of land area, of the 92 counties within the state of Indiana and is the third largest county in the state relative to population size. Approximately five percent of Indiana's residents live in Allen County. The social and economic relationships between Fort Wayne, New Haven, and the other communities within the Fort Wayne MSA are widely recognized and well established. The Fort Wayne MSA is a regional center for work, shopping, and entertainment supporting Allen County as well as the five other counties in the Fort Wayne

MSA, and other surrounding counties in Indiana (Jay, Noble, Steuben and Wabash counties) and Ohio (Mercer, Paulding, Van West and Williams).

Allen County is the most populated county in the Fort Wayne MSA, home to 67 percent of the population within the six-county region. According to the 2000 Census, Allen County had a total of 331,849 residents, an increase of 10.3 percent over the 1990 total population (Table 3.26). The percent increase was slightly higher for Allen County than the state (9.7 percent) or the Fort Wayne MSA (10.1 percent). The growth in Allen County is consistent with trends observed nationally for metropolitan areas; metropolitan areas with total populations ranging from 250,000 to 999,999 persons grew by approximately 13.1 percent between 1990 and 2000. Population growth in Allen County is expected to continue through 2020, but not at the same pace experienced over the past decade. The population is expected to grow to 343,414 persons in 2020 (Indiana Business Research Center, 1998), an increase of 3.4 percent.

**TABLE 3.26
POPULATION CHARACTERISTICS**

County	1990	2000	2010	2015
Allen	300,836	331,849	335,120	339,486
Paulding	20,488	20,293	20,500	20,400
Defiance	39,350	39,500	41,200	41,600

Source: US Census Bureau, *1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1*; Indiana Business Research Center, *Population Projections of Indiana Counties: 2000 to 2020 (1998 Preliminary Series)*, <http://www.stats.indiana.edu>; Ohio Department of Development, *Projected Population to 2015, By County*, August 1997.

By contrast, Paulding County is rural in nature and is not associated with any of Ohio's 15 MSAs. In terms of land area, Paulding County ranks 60th out of the 88 counties comprising the state. Relative to total population, the county ranks 83rd, accounting for less than one percent of the total state population. Analysis of 2000 Census data shows that Paulding County experienced a nominal decline in population between 1990 and 2000, where the population declined by less than one percent (Table 3.26). This trend is not consistent with statewide trends as the state's population grew by 4.7 percent. Based on population projections, the population of Paulding County is expected to grow by one percent through 2010 (Ohio Department of Development, Office of Strategic Research, August 1997) and then decline slightly through 2015.

Defiance County is a predominantly rural county and is not associated with any of Ohio's 15 MSAs, although the City of Defiance is situated within the county. The county is ranked 65th in terms of land area, when compared to Ohio's other 88 counties. Relative to population size, Defiance County is ranked 64th, accounting for less than one percent of the total population of Ohio. Like Paulding County, Defiance County also experienced a nominal change in population between 1990 and 2000, growing by 150 persons (approximately 0.4 percent) as shown in Table 3.26, which is not consistent with the statewide trend. Based on population projections, the population of Defiance County is expected to grow by 5.3 percent through 2015 (Ohio Department of Development, Office of Strategic Research, August 1997).

Tables 3.27, 3.28, and 3.29 provide an overview of the population by age from 1990 to 2000 by county in the study area. Based on the data, observed trends in population age are:

- Of the three counties, only Allen County experienced an increase (8.5 percent) in the 0 to 25 years of age cohorts between 1990 and 2000. In Paulding County, these cohorts experienced an overall decline of 10.6 percent; in Defiance County, the decline was approximately seven percent.
- All three counties experienced a decrease in the 25 to 34 age cohort between 1990 and 2000.
- All three counties experienced increases in four age cohorts - 35 to 44, 45 to 54, 55 to 59, and 65+ years of age during this same period.

**TABLE 3.27
POPULATION BY AGE, ALLEN COUNTY, INDIANA**

Age	1990	2000	Percent Change
Under 5 years	23,860	25,440	6.6%
5 to 14 years	46,532	51,682	11.1%
15 to 19 years	21,930	24,119	10.0%
20 to 24 years	21,142	21,903	3.6%
25 to 34 years	52,612	47,011	-10.7%
35 to 44 years	46,968	52,496	11.8%
45 to 54 years	29,408	45,188	53.7%
55 to 59 years	12,057	14,974	24.2%
60 to 64 years	12,203	11,276	-7.6%
65 years and older	34,124	37,760	10.7%
Total	300,836	331,849	10.3%

Source: US Census Bureau, *1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.*

**TABLE 3.28
POPULATION BY AGE, PAULDING COUNTY, OHIO**

Age	1990	2000	Percent Change
Under 5 years	1,577	1,334	-15.4%
5 to 14 years	3,516	3,105	-12.0%
15 to 19 years	1,634	1,572	-3.8%
20 to 24 years	1,300	1,169	-10.1%
25 to 34 years	3,176	2,493	-21.5%
35 to 44 years	2,968	3,193	7.6%
45 to 54 years	2,191	2,876	31.3%
55 to 59 years	841	1,098	30.6%
60 to 64 years	841	898	6.8%
65 years and older	2,444	2,555	4.5%
Total	20,488	20,293	1.0%

Source: US Census Bureau, *1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.*

**TABLE 3.29
POPULATION BY AGE, DEFIANCE COUNTY, OHIO**

Age	1990	2000	Percent Change
Under 5 years	2,877	2,747	-4.5%
5 to 14 years	6,447	5,769	-10.5%
15 to 19 years	3,178	3,184	0.2%
20 to 24 years	2,693	2,436	-9.5%
25 to 34 years	6,024	4,814	-20.1%
35 to 44 years	5,977	5,992	0.3%
45 to 54 years	4,269	5,757	34.9%
55 to 59 years	1,635	2,070	26.6%
60 to 64 years	1,647	1,633	-0.9%
65 years and older	4,603	5,098	10.8%
Total	39,350	39,500	0.4%

Source: US Census Bureau, *1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.*

Table 3.30 provides total population data for the communities through which the Feasible Corridors traverse. The total population in 2000 of the affected communities in Allen County (Jefferson, Maumee and Milan Townships, and the cities of New Haven and Woodburn) was 22,065 persons, accounting for only 6.8 percent of the total population of Allen County. In 2000, the total population of affected Paulding County communities (Carrall, Crane, Emerald, and Harrison townships and the villages of Cecil and Antwerp) was 8,922 persons, approximately 44 percent of the total county population. For Defiance County, the affected communities

(Defiance, Delaware, and Noble townships, and the City of Defiance) account for 96.7 percent of the total county population.

**TABLE 3.30
TOTAL POPULATION, AFFECTED COMMUNITIES**

Community	Total Population		Percent Change (1990 to 2000)
	1990	2000	
Allen County			
City of New Haven	9,320	12,406	33.1%
City of Woodburn	1,321	1,579	19.5%
Jefferson Township	1,882	1,958	4.0%
Maumee Township	2,459	2,619	6.5%
Milan Township	3,165	3,503	10.7%
Paulding County			
Village of Antwerp	1,677	1,740	3.8%
Village of Cecil	249	216	-13.3%
Carryall Township	3,039	3,046	0.2%
Crane Township	1,527	1,530	0.2%
Emerald Township	766	824	7.6%
Harrison Township	1,712	1,566	-8.5%
Defiance County			
City of Defiance	16,768	16,465	-1.8%
Defiance Township	13,743	13,461	-2.1%
Delaware Township	2,025	2,128	5.1%
Noble Township	6,249	6,171	-1.2%

Source: US Census Bureau, *1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.*

Households and Housing

The number of households in the study area is a function of a variety of factors considered including the number of persons older than age 20 who form households; the housing supply; economic conditions; and individual decisions regarding marriage, divorce and childbearing. The US Bureau of Census reports that “there have been considerable shifts in the choices American adults have made concerning family formation and dissolution, and these choices are clearly reflected in the changing composition of households and families....Most of the increase in the number of family households since 1980 has been attributable to families maintained by a man or woman with no spouse present, and a substantial majority of these ‘other families’ were maintained by women.” (US Bureau of Census, *Household and Family Characteristics*, 1983).

Nationwide, the number of households increased by 15 percent between 1990 and 2000. Family households increased by 11 percent, while non-family households (one person living alone or household where householder shares the home with non-relatives) increased by 23 percent. While non-family and one-parent family households are becoming more prevalent in the US, family households still account for the largest share of households (69 percent in 2000 as compared to 81 percent in 1970). Also notable, the average size of households and the average family size decreased from 2.63 to 2.59 persons per household and 3.16 to 3.14 persons per family, respectively, between 1990 and 2000 (US Census Bureau, *Households and Families: 2000*, September 2001).

Similar trends were also observed at the state level in Indiana and Ohio. The number of households increased by 13.1 percent while the number of family households increased by 8.3 percent in Indiana. Non-family and one-parent family households increased by more than 25 percent across the state of Indiana. The number of persons per household declined from 2.61 to 2.53 while the number of persons per family dropped from 3.11 to 3.05. In Ohio, the number of total households increased by 8.8 percent; the number of family households increased by only 3.4 percent. Non-family and one-parent family households accounted for an increasing share in the percentage of households, where the number of non-family households grew by 21.8 percent and the number of one-parent family households grew by 17.7 percent. As

observed nationally and in Indiana, both household size and family size declined between 1990 and 2000.

Tables 3.31, 3.32, and 3.33 present household characteristics for Allen, Paulding, and Defiance counties. Based on the data, observed trends in household characteristics are:

- All three counties experienced an increase in the number of households and a decrease in number of persons per household and persons per family, consistent with national and state trends.
- Increases in the number of family households varied across the three counties; however, the percent increase was lower for all three counties than observed at the national or state levels.
- All three counties experienced increases in the number of non-family and one-parent households.

**TABLE 3.31
ALLEN COUNTY HOUSEHOLD CHARACTERISTICS**

Category	1990	2000	Change	Percent Change
Total Households	113,333	128,475	15,142	13.4%
Family Households	79,624	86,235	6,611	8.3%
Non-Family Households	33,709	42,510	8,801	26.1%
One-Parent Households	15,615	19,984	4,369	28.0%
Average Household Size (persons per household)	2.61	2.57	-0.04	N/A

Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

**TABLE 3.32
PAULDING COUNTY HOUSEHOLD CHARACTERISTICS**

Category	1990	2000	Change	Percent Change
Total Households	7,252	7,773	521	7.2%
Family Households	5,651	5,693	42	0.7%
Non-Family Households	1,601	2,080	479	29.9%
One-Parent Households	778	963	185	23.8%
Average Household Size (persons per household)	2.81	2.59	-0.22	N/A

Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

**TABLE 3.33
DEFIANCE COUNTY HOUSEHOLD CHARACTERISTICS**

Category	1990	2000	Change	Percent Change
Total Households	14,070	15,138	1,068	7.6%
Family Households	10,634	11,016	382	3.4%
Non-Family Households	3,436	4,122	686	20.0%
One-Parent Households	1,523	2,093	570	37.4%
Average Household Size (persons per household)	2.74	2.57	-0.17	N/A

Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

Table 3.34 presents household characteristics for the affected communities in the US 24 study area. Changes observed in these communities over the past decade are generally consistent with national, state, and county trends. With the exception of the Village of Cecil, all affected communities experienced an increase in the number of households. Most notable is the City of New Haven, which reported 45.4 percent growth in the number of households. The number of family households increased in most communities; declines were observed in Harrison Township and the Village of Cecil, both located in Paulding County. The number of non-family households

and one-parent households also increased in all of the affected communities. The change for both types of households varies greatly across communities. As the number of households increased within the study area, the number of housing units also

**TABLE 3.34
HOUSEHOLD CHARACTERISTICS, AFFECTED COMMUNITIES**

Community	HOUSEHOLD TYPE, 1990				Average Household Size
	Total Households	Family Households	Non-Family Households	One-Parent Households	
Allen County					
City of New Haven	3369	2,588	781	370	2.73
City of Woodburn	460	360	100	65	2.87
Jefferson Township	615	508	107	57	3.06
Maumee Township	830	680	150	96	2.95
Milan Township	908	802	106	59	3.49
Paulding County					
Village of Antwerp	641	457	184	74	2.62
Village of Cecil	82	66	16	14	3.04
Carryall Township	1,100	842	258	113	2.76
Crane Township	509	426	83	46	3.00
Emerald Township	263	213	50	19	2.91
Harrison Township	599	461	138	66	2.77
Defiance County					
City of Defiance	6,186	4,374	1,812	777	2.61
Defiance Township	5,066	3,698	1,368	620	2.69
Delaware Township	685	558	127	69	2.96
Noble Township	2,157	1,551	606	239	2.66
Community	HOUSEHOLD TYPE, 2000				Average Household Size
	Total Households	Family Households	Non-Family Households	One-Parent Households	
Allen County					
City of New Haven	4,900	3,417	1,483	721	2.73
City of Woodburn	583	432	151	110	2.87
Jefferson Township	708	558	150	65	3.06
Maumee Township	940	745	195	129	2.95
Milan Township	1007	895	112	60	2.49
Paulding County					
Village of Antwerp	739	487	252	114	2.62
Village of Cecil	77	49	28	15	3.04
Carryall Township	1,223	856	367	161	2.76
Crane Township	549	428	112	49	3.00
Emerald Township	319	244	75	29	2.91
Harrison Township	606	426	180	74	2.77
Defiance County					
City of Defiance	6,572	4,423	2,149	1,122	2.61
Defiance Township	5,347	3,727	1,620	920	2.69
Delaware Township	780	605	175	90	2.96
Noble Township	2,332	1,609	723	335	2.66

Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

increased (Table 3.35). Of the three counties, Allen County experienced the greatest increase in occupied housing units between 1990 and 2000, with a 13.6 percent increase (from 113,333 to 128,645). This increase slightly outpaced the 13.1 percent growth in households across the state of Indiana. Defiance and Paulding counties experienced a smaller increase in the number of occupied housing units, equaling 7.2 percent and 7.6 percent, respectively. The State of Ohio had a slightly higher rate of increase (8.8 percent) for the decade.

The number of housing units also increased over the past decade within the study area, as

**TABLE 3.35
HOUSING UNITS TRENDS, 1990 TO 2000**

	1990	2000	Change	Percent Change
Allen County				
Total Housing Units	122,923	138,905	15,982	13.0%
Owner-Occupied Units	79,567	91,415	11,848	14.9%
Renter Occupied Units	33,766	37,330	3,564	10.6%
Paulding County				
Total Housing Units	7,951	8,478	527	6.6%
Owner-Occupied Units	6,037	6,514	477	7.9%
Renter Occupied Units	1,215	1,259	44	3.6%
Defiance County				
Total Housing Units	14,737	16,040	1,303	8.8%
Owner-Occupied Units	11,028	12,048	1,020	9.2%
Renter Occupied Units	3,042	3,090	48	1.6%

Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

shown in Table 3.36. Overall, the study area experience a 13.8 percent increase in total housing units. Within individual communities, the change in total housing units between 1990 and 2000 ranged from -6.1 percent to 45.4 percent. The Village of Cecil was the only study area community to experience a loss in housing units, consistent with its decrease in population and the number of households. The City of New Haven experienced the greatest growth in the number of total housing units, increasing by 1,531 units (45.4 percent).

Over the past 30 years, trends in household vehicle ownership indicate an increase in vehicles per household. The *1995 National Personal Transportation Survey: Early Results Report* (US Department of Transportation, No Date) reports, “the most startling in change in vehicle ownership has been in the number of households with 3 or more vehicles, which has grown from 3 million households in 1969 to 19 million in 1995, a six-fold increase. The number of two-vehicle households has grown from 17 million in 1969 to 40 million in 1995.” Data collected for the 2000 Census confirm this trend; nationally, 58.5 million (55.5%) occupied housing units have two or more vehicles available for use and 18 million units have three or more vehicles available for use. The 2000 census data for the study area communities shows that more than 63 percent of the occupied housing units in the study area have two or more vehicles available for use, which is higher than the levels reported nationwide (see Table 3.37).

Relative to local and regional transportation demand, the increase in the number of households, housing units, and vehicles available to residents are indicators of an increased demand for transportation services.

Commuter Trends

Data on commuting trends collected as part of the 2000 Census shows that personal vehicles are used for most workers living in study area communities, accounting for the preferred mode of travel by more than 96 percent of workers, as compared to 87.9 percent nationwide. Of this 96 percent, 86.2 percent of the workforce drove alone and 9.8 percent carpooled. As shown in Table 3.38, there is some variability in these trends across the study area communities, but personal vehicles are the predominant mode of travel for worktrips by workers. The use of personal vehicles by the labor force has increased since 1990, when 93.5 percent of workers living in study area communities reported using personal vehicles for work trips. Of the 93.5 percent, 81.6 percent of the workforce drove alone. The increased use of personal vehicles, particularly single-occupancy vehicles for worktrips, indicates an increased demand for highway travel.

Data from the Ohio Department of Development provide some additional insight into the commuting patterns for Paulding and Defiance counties. Allen County, Indiana businesses attract approximately 1,600 persons from Paulding County. Approximately 230 persons from Paulding County were employed by businesses in Williams County, which is connected to

Paulding County by US 24. A small number of persons travel from Allen County and Defiance County (12 and 393 persons, respectively) to jobs in Paulding County. For Defiance County, the number of commuters traveling into the county from nearby counties is as follows: 1,557 from Paulding; 563 from Williams County; and 1,126 persons from Henry County. The latter two counties are located to the east of Defiance County with US 24 connecting these areas with Defiance County. The number of Defiance County residents traveling out of the county for work was 393 persons traveling to Paulding; 1,699 persons traveling to Williams County; and 788 traveling to Henry County. The data indicates that US 24 is a likely travel route for workers from Paulding and Defiance counties who travel to jobs in surrounding counties.

**TABLE 3.36
HOUSING UNITS, AFFECTED COMMUNITIES**

Community	Total Housing Units		Percent Change (1990 to 2000)
	1990	2000	
Allen County			
City of New Haven	3,369	4,900	45.4%
City of Woodburn	460	583	26.7%
Jefferson Township	615	708	15.1%
Maumee Township	830	940	13.3%
Milan Township	908	1,038	14.3%
Paulding County			
Village of Antwerp	641	739	15.3%
Village of Cecil	82	77	-6.1%
Carryall Township	1,100	1,223	11.2%
Crane Township	509	549	7.9%
Emerald Township	263	319	21.3%
Harrison Township	599	606	1.2%
Defiance County			
City of Defiance	6,186	6,572	6.2%
Defiance Township	5,066	5,347	5.5%
Delaware Township	685	780	13.9%
Noble Township	2,157	2,332	8.1%
Community	Total Owner-Occupied Housing Units		Percent Change (1990 to 2000)
	1990	2000	
Allen County			
City of New Haven	2,590	3,903	50.7%
City of Woodburn	393	445	13.2%
Jefferson Township	537	625	16.4%
Maumee Township	719	769	6.7%
Milan Township	843	1007	19.5%
Paulding County			
Village of Antwerp	508	519	2.2%
Village of Cecil	68	71	2.9%
Carryall Township	914	961	5.1%
Crane Township	466	519	11.4%
Emerald Township	239	286	19.7%
Harrison Township	500	489	-2.2%
Community	Total Owner-Occupied Housing Units		Percent Change (1990 to 2000)
	1990	2000	
Defiance County			
City of Defiance	4,298	4,624	7.5%
Defiance Township	3,668	3,924	15.8%
Delaware Township	600	695	9.0%
Noble Township	1,599	1,743	75%

**TABLE 3.36 (CONTINUED)
HOUSING UNITS, AFFECTED COMMUNITIES**

Community	Total Renter-Occupied Housing Units		Percent Change (1990 to 2000)
	1990	2000	
Allen County			
City of New Haven	779	997	28.0%
City of Woodburn	67	138	106.0%
Jefferson Township	78	83	6.4%
Maumee Township	111	171	6.3%
Milan Township	65	31	-5.2%
Paulding County			
Village of Antwerp	133	220	65.4%
Village of Cecil	14	6	-57.1%
Carryall Township	186	262	40.9%
Crane Township	43	30	-30.2%
Emerald Township	24	33	37.5%
Harrison Township	99	117	18.2%
Defiance County			
City of Defiance	1,888	1,948	3.2%
Defiance Township	1,398	1,423	1.8%
Delaware Township	85	85	0.0%
Noble Township	558	589	5.6%

Source: US Census Bureau, 2000 Census, Source: US Census Bureau, 1990 Census of the Population and Housing, Summary Tape File 1; Census 2000 Summary File 1.

**TABLE 3.37
HOUSEHOLD VEHICLE AVAILABILITY**

Community	Housing Units with 2 or More Vehicles Available	Percent of Total Households
Indiana	1,411,593	60.4%
Allen County	75,719	58.0%
City of New Haven	3,041	62.3%
City of Woodburn	349	59.2%
Jefferson Township	582	80.7%
Maumee Township	615	64.5%
Milan Township	694	69.9%
Ohio	2,577,930	58.0%
Paulding County	5,467	70.3%
Village of Antwerp	458	61.9%
Village of Cecil	48	63.2%
Carryall Township	855	70.0%
Crane Township	402	75.2%
Emerald Township	256	77.5%
Harrison Township	405	66.1%
Defiance County	10,191	67.3%
City of Defiance	3,871	59.2%
Defiance Township	3,283	62.4%
Delaware Township	543	72.4%
Noble Township	1,424	60.4%

Source: US Census Bureau, Census 2000, Summary File 1.

**TABLE 3.38
WORKFORCE COMMUTING CHARACTERISTICS**

	Workers 16 Years or Older	Number of Workers Driving Alone	Percent of Workers Driving Alone	Number of Workers Carpooling	Percent of Workers Carpooling	Mean Travel Time (in minutes)
Indiana	2,910,612	2,379,989	81.8%	320,910	11.0%	22.6
Allen County	164,549	138,315	84.1%	17,185	10.4%	22.2
City of New Haven	6,476	5,654	87.3%	496	7.7%	20.0
City of Woodburn	788	668	84.8%	81	10.3%	25.6
Jefferson Township	963	815	84.6%	63	6.5%	22.2
Maumee Township	1,329	1,105	83.1%	159	12.0%	25.8
Milan Township	1,726	1,302	75.4%	339	19.6%	24.2
Ohio	5,307,502	4,392,059	82.8%	494,602	9.3%	22.9
Paulding County	9,640	8,108	84.1%	934	9.7%	24.6
Village of Antwerp	798	664	83.2%	62	10.4%	23.4
Village of Cecil	89	71	79.8%	83	13.5%	22.8
Caryall Township	1,493	1,272	85.2%	135	9.0%	23.3
Crane Township	717	620	86.5%	62	8.6%	28.8
Emerald Township	404	305	75.5%	56	13.9%	27.1
Harrison Township	743	620	83.4%	62	8.3%	26.4
Defiance County	19,540	16,539	84.6%	1,916	9.8%	19.2
City of Defiance	7,901	6,728	85.5%	1,710	9.3%	16.8
Defiance Township	6,471	5,578	86.2%	613	9.5%	17.4
Delaware Township	1,015	867	85.4%	87	8.6%	25.1
Noble Township	3,129	2,662	85.1%	273	9.3%	16.1

Source: US Census Bureau, *Census 2000, Summary File 3*.

Based on the demographic information, trends that affect travel demand in the study area are:

- The total population of Allen County will likely increase through 2015 while population in Paulding and Defiance counties will not change much over the same time period.
- Analysis of population by age shows three cohorts experienced dramatic growth, specifically the 35 to 44 years of age group, the 45 to 54 group, and 55 to 59 years of age group. All three cohorts represent licensed drivers.
- The average number of persons per household declined between 1990 and 2000 in all three counties and the number of households increased. Generally, an increase in the number of households results in increased travel demand within a region.
- The number of housing units also increased between 1990 and 2000. Generally, an increase in the number of housing units results in increased travel demand within a region.
- Automobiles are used for an overwhelming percentage (96+ percent) of work-related trips for persons residing in the study area, creating high roadway and highway travel demand.
- Within the Ohio portion of the study area, US 24 appears to be a major route used by residents of Paulding and Defiance counties for work-related trips located outside of their county of residence.

Methodology

Baseline conditions for the study area were defined using regional, county, and municipal land use plans; and county and community demographic data. Information and statistics on these characteristics were obtained primarily from the US Department of Commerce, Bureau of the Census, the Ohio Department of Development, and the Indiana Business Research Center; and through consultation with the economic development authorities and community service providers of the region.

A Relocation Assistance Program (RAP) Study was conducted to identify the number of

residences potentially displaced by the Feasible Alternatives and to establish the probable availability of “Decent, Safe and Sanitary” replacement housing in the local areas. This investigation is summarized in this section and documented in detail in a separate report entitled *US 24 New Haven to Defiance Relocation Assistance Program Study* (August 2000). Right-of-way impacts and residential displacements were determined through review of preliminary design plans and field views. Estimates of the value of these properties were determined for each residential structure based on a visual survey of the area and review of detailed property information obtained from the County Auditors offices in Allen, Defiance, and Paulding counties.

Data obtained from 2000 Census of Population and Housing for the study area and interviews with local realtors and review of current real estate listings were used to assess availability of adequate replacement property. Available residential housing was identified in all three impacted counties to determine if there was sufficient replacement housing available for those occupants that may be displaced by the project. The information covering available housing for Allen County was obtained from the Local Multiple Listing Service with the help of Century 21 Landmark in New Haven. Available housing in Paulding County was obtained through the listings of Foltz Realty, Straley Real Estate, Inc., and Gorrell Brothers Auctioneers and Real Estate. Century 21 Strait Realty, Inc. in Defiance County provided the listings shared through a cooperative program.

Available replacement rental housing was identified in all three counties to determine if there was sufficient replacement rental housing available for those occupants that may be displaced by the project. The information covering available rental housing for Allen County was obtained from *The Journal Gazette* (May 26, 2000 edition). Available rental housing in Paulding County was obtained from the *Paulding County Progress* (May 24, 2000 edition). Available rental housing in Defiance County was obtained from *The Crescent News* (May 25, 2000 edition).

Relocation cost estimates for owner-occupied parcels were determined utilizing an estimated replacement housing payment amount of \$20,000 for 75 percent of the parcels affected by the proposed highway alternatives and \$30,000 for 25 percent of the affected parcels. The \$30,000 payment would fall under the provisions of last resort housing as outlined in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Relocation Act) (P.L. 91-646). Relocation assistance for tenant occupied parcels was determined utilizing the maximum rental assistance amount of \$5,250 for each parcel as outlined in the Uniform Relocation Act. A fixed payment moving schedule from the Uniform Relocation Act for the States of Ohio and Indiana was used with a move cost payment based on the average room counts of those residential structures identified in each proposed alternative. Moving costs took into consideration those additional rooms contained in basements and outbuildings, of which the room count was 17.

Relocation cost estimates for owner-occupied mobile home parcels were determined utilizing an estimated replacement housing payment amount of \$15,000 for each parcel affected by the proposed alternatives. Relocation assistance for rental of the mobile home lot in a trailer park was determined utilizing the maximum rental assistance amount of \$5,250 for each parcel as outlined in the Uniform Relocation Act. A fixed payment moving schedule from the Uniform Relocation Act for the States of Ohio and Indiana was used with a move cost payment based on the average room counts of those mobile homes identified in the mobile home park located at 2290 Baltimore Road in Defiance, of which the average room count was five.

Project Impacts

Construction of any of the 26 Feasible Alternatives will require acquisition of property and the displacement and relocation of residents. Displacements occur where structures (houses, mobile homes, and residential structures located on active farms) lie directly within the path of a proposed alternative and where access to parcels would be permanently denied due to alteration of the local street system.

The total number of residential displacements for the 26 Feasible Alternatives ranges from 14 to 107. Table 3.39 identifies the number of residential displacements and the estimated relocation costs associated with each of the 26 Feasible Alternatives. The totals provided for single-family dwellings include residential units on farms that would be acquired for the alternatives.

A comparative analysis of the 26 Feasible Alternatives was completed to determine which of the alternatives require the greatest number of relocations and highest associated costs and which alternatives require the fewest number of residential relocations and lowest associated costs. Alternative Y has the fewest residential displacements (14 displacements) while Alternative Z has the greatest number (107 displacements). Alternative Y has the lowest estimated residential relocation costs (\$268,300) while Alternative Z has the greatest (\$2,062,400).

**TABLE 3.39
RESIDENTIAL RELOCATIONS BY FEASIBLE ALTERNATIVE**

Alternative	Total Household Displacements	Single-Family Dwellings*	Multi-Family Dwellings	Mobile Home Displacements	Relocation Costs
A	51	51	0	0	\$985,200
B	69	48	0	21	\$1,382,300
C	47	47	0	0	\$865,450
D	67	46	0	21	\$1,284,500
D-1	51	41	0	10	\$1,706,550
E	38	38	0	0	\$699,000
F	56	35	0	21	\$1,086,100
G	34	34	0	0	\$579,250
H	54	33	0	21	\$988,300
I	46	46	0	0	\$804,000
J	64	43	0	21	\$1,191,000
K	42	42	0	0	\$684,250
L	62	41	0	21	\$1,093,300
M	53	53	0	0	\$923,750
N	71	50	0	21	\$1,320,850
O	49	49	0	0	\$804,000
P	69	48	0	21	\$1,223,050
Q	29	29	0	0	\$488,650
R	47	26	0	21	\$875,750
S	25	25	0	0	\$368,900
T	45	24	0	21	\$777,950
U	36	36	0	0	\$608,400
V	54	33	0	21	\$995,500
W	32	32	0	0	\$488,650
X	52	31	0	21	\$897,700
Y	14	12	0	2	\$268,300
Z	107	96	1 (4 units)	7	\$2,062,400

Note: Estimate includes single-family homes on farms that will be displaced.

Table 3.40 identifies residential listings of properties for sale on the open market in Allen, Paulding, and Defiance counties in the spring of 2000. This table identifies the probable availability of “Decent, Safe, and Sanitary” replacement housing. Table 3.41 identifies the mobile home listings of properties available for sale on the open market in the three counties in the spring of 2000. This table identifies the probable availability of “Decent, Safe, and Sanitary” replacement mobile homes. Table 3.42 identifies residential listings of properties available for rent on the open market in Allen, Paulding, and Defiance counties in the spring of 2000. This table identifies the probable availability of “Decent, Safe, and Sanitary” replacement rental housing. The analysis of available replacement property indicates that there are enough residential properties available for relocation of displaced residents.

None of the Feasible Alternatives, with the exception of Alternative Z, results in a large number of residential displacements that would create a divisive or disruptive effect on the community. For Alternative Z, a total of 107 residences would be displaced. Based on the analysis of available replacement properties, there is an adequate number of available “Decent, Safe and Sanitary” housing units throughout the study area to absorb the displaced residents. Also, there is a sufficient number of vacant lots available for new construction. The majority of displaced

residents should be able to stay in the area near shopping, schools, churches and other community facilities, if they choose. There appeared to be no identifiable unusual conditions in need of special relocation advisory services identified during the field views conducted for the RAP study.

**TABLE 3.40
AVAILABLE RESIDENTIAL PROPERTIES**

Number of Available Properties	Asking Prices
4	Under \$20,000
9	\$ 20,001 - \$ 30,000
12	\$ 30,001 - \$ 40,000
24	\$ 40,001 - \$ 50,000
33	\$ 50,001 - \$ 60,000
54	\$ 60,001 - \$ 70,000
66	\$ 70,001 - \$ 80,000
67	\$ 80,001 - \$ 90,000
73	\$ 90,001 - \$100,000
45	\$100,001 - \$110,000
47	\$110,001 - \$120,000
40	\$120,001 - \$130,000
24	\$130,001 - \$140,000
102	\$140,001 - \$300,000

**TABLE 3.41
AVAILABLE MOBILE HOME PROPERTIES**

Number of Available Properties	Asking Prices
4	Under \$10,000
26	\$ 10,001 - \$ 20,000
12	\$ 20,001 - \$ 30,000
4	\$ 30,001 - \$ 40,000
4	\$ 40,001 - \$ 50,000
1	\$ 50,001 - \$ 60,000

**TABLE 3.42
AVAILABLE RESIDENTIAL RENTAL PROPERTIES**

Number of Available Properties	Asking Rents
0	Under \$250
10	\$ 251 - \$ 350
15	\$ 351 - \$ 450
25	\$ 451 +

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1), as presented to the public in June 2002 has the potential to displace 63 residences, of which 31 are single-family homes, 21 are mobile homes, and 10 are single-family residences located on actively farmed properties. Based on the analysis of available replacement properties, there is an adequate number of available "Decent, Safe and Sanitary" housing units throughout the study area to absorb the displaced residents. Also, there is a sufficient number of vacant lots available for new construction. The majority of displaced residents should be able to stay in the area near shopping, schools, churches and other community facilities, if they choose. There appeared to be no identifiable, unusual conditions in need of special relocation advisory services.

Of the 21 mobile homes, 11 are located in the Bohlman Trailer Park located off of SR 424 in Defiance County. The Preferred Alternative (Alternative D-1), as originally designed, would result in impacts to the Bohlman Trailer Park, located in Defiance County. The original US 24/SR 424 interchange and relocation of SR 424 requires the acquisition of 2.43 hectares (six acres)

of land, the displacement of 11 mobile homes (residences), and relocation of the trailer park access road. Based on initial coordination with the property owner, there is ample vacant space in the mobile home park to relocate the affected residential units. The trailer park is a target Environmental Justice community.

On September 18, 2002, ODOT representatives met with the owner and 15 residents of the Bohlman Trailer Park. The owner of the trailer park had requested that ODOT proceed with advanced acquisition of his property. The purpose of the meeting was to inform the residents of the project status, advanced acquisition proceedings, and ODOT's property acquisition and relocation process. ODOT will either relocate or purchase the affected mobile homes. ODOT representatives explained that a relocation agent would be assigned to each individual to assist them in their relocation.

In accordance with ODOT's policy on Environmental Justice, ODOT is investigating potential design options for the SR 424 interchange to avoid impacts on the community. Four conceptual designs were developed for the SR 424 interchange and evaluated based on consistency with current design standards; impacts to the local roadway system, farmlands, wetlands, streams, displacements, and sites with potential environmental concerns (hazardous materials); and impacts to the Bohlman Trailer Park.

Based on the evaluation of the conceptual interchange options, the eastbound exit and westbound entrance ramps for the SR 424 interchange have been shifted to the west to avoid the acquisition of property from the Bohlman Trailer Park and the displacement of 11 mobile homes.

With the redesign of the SR 424 interchange, the Preferred Alternative (Alternative D-1) will displace 51 residences, of which 31 are single-family homes, 10 are mobile homes, and 10 are houses located on actively farmed properties

Mitigation

The Uniform Relocation Act was enacted by the United States Congress in 1971 to assist residents, organizations, and businesses displaced by public agencies to relocate without suffering a disproportionate loss. Whenever federal funds are utilized for a project and residential displacements occur, then relocation advisory and financial assistance must be offered to those occupants being displaced as a direct result of the project.

Reimbursement benefits include Just Compensation (Fair Market Value) for the property paid to the owner or owners for real property to be acquired, fees incidental to the transfer of the property, mortgage prepayment penalties, and appraisal expenses. In addition, a person displaced from his or her dwelling is eligible to receive compensation for the relocation of their personal property. Affected owners and tenants are eligible to receive residential relocation assistance. Every resident being displaced is eligible to receive advisory assistance in relocating to a replacement dwelling.

When certain eligibility requirements are met, displaced persons are entitled to financial assistance in relocating their personal property and the increased costs of buying or renting a comparable replacement dwelling. These services and benefits would be in addition to the compensation received by the property owner for the acquisition of real property. The Uniform Relocation Act requires that adequate replacement housing is available before requiring an individual to vacate the dwelling being acquired.

During further development of the Preferred Alternative, design refinements will be developed. One objective will be to minimize the number of residential displacements. Also, detailed right-of-way investigations will be conducted through which the fair market value of affected properties will be determined as well as the individual needs of displaced residents, including any special needs.

A Residential Relocation Assistance Program will be established to help property owners displaced by construction of the Preferred Alternative. The program will follow the procedures set forth in the Uniform Relocation Act and the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs (March 2, 1989). The Relocation Assistance Program will be administered by ODOT and INDOT. Representatives of

these agencies will contact individual property owners well in advance of construction activities to begin negotiations for the purchase of the property.

3.2.3 Environmental Justice

Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued February 11, 1994) requires federal agencies to identify and address disproportionately high and adverse health and environmental effects including the interrelated social and economic effects of programs, policies and activities on minority populations and low-income populations. The FHWA implementing policy for the Executive Order was issued on April 15, 1997.

According to the USEPA Office of Environmental Justice, environmental justice is defined as:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic group should bear a disproportionate share of negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies.

The following terms are used in the policies of FHWA, INDOT, and ODOT on environmental justice:

- Low-Income: Household income at or below the Department of Health and Human Services poverty guidelines.
- Minority: Person who is Black, Hispanic, Asian American, American Indian, and Alaskan Native.
- Low-Income Population: Any readily identifiable group of low-income persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed program, policy or activity.
- Minority Population: Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed program, policy or activity.
- Adverse Effects: Totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairments, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or non-profit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of proposed programs, policies or activities.
- Disproportionately High and Adverse Effect on Minority and Low-Income Populations: An adverse effect that is predominately borne by a minority population and/or low-income population; or will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Typically low-income and minority populations are spread throughout the regional area and state, but are likely to be located in concentrated locations or neighborhoods. These areas (considered to be target areas) should have a significantly higher percentage of low-income and minority population than the regional or statewide average.

Ohio has the largest population of the Amish community in the United States. It is estimated that 50,000 Amish live within the State of Ohio, the majority of which live in the northeastern part of the state. The Old Order Amish, a subgroup of the Amish community, do not use motorized forms of transportation or farm equipment (ODOT, September 2000). The Amish community is recognized by ODOT as a special population group to be considered in the analysis of environmental justice issues.

Existing Conditions

As shown in Table 3.43, the minority population of the study area consists of 7,840 persons, approximately 15.8 percent of the total population of the study area. The most prominent group is Hispanic/Latino, which accounts for approximately 10 percent of the total study area population and 63 percent of all minorities residing in the study area.

Within the Allen County study area communities, the percentage of Hispanic/Latino persons is lower than the Indiana statewide average as well as the Allen County average. In Paulding County, several study area communities exceed the Ohio statewide average percentage (Village of Antwerp and Crane, Emerald, and Harrison townships). Of these communities, only Emerald Township exceeds the Paulding County average. In Defiance County, communities that exceed the Ohio statewide average are the City of Defiance, Defiance Township, and Noble Townships. These communities also exceed the Defiance County average. Within the State of Ohio, Defiance County has the highest percentage of Hispanic/Latino residents across all 88 counties (Ohio State University, April 2001). However, the Hispanic/Latino population in Defiance County only accounts for 1.3 percent of the total Hispanic/Latino population in the state; relative to the number of persons within this population group, the county ranks 14th in the state.

The data in Table 3.43 also show that 196 residents (0.4 percent of the total population) living in the study area are considered to be American Indian or Alaska Native. The percentage of the total population reported for communities in Paulding and Defiance counties marginally exceeds the State of Ohio average of 0.2 percent. These communities include the Village of Antwerp, Village of Cecil, Carryall Township, and Emerald Township in Paulding County; and the City of Defiance, Defiance Township, and Delaware Township in Defiance County. The Village of Cecil and Emerald Township exceed the Paulding County average. None of the Defiance County communities exceed the county average. Between 1990 and 2000, American Aboriginal population within study area communities grew from 156 persons to 196 persons, a 25.6 percent increase. This increase is consistent with growth trends reported for Indiana (24.3 percent increase) and Ohio (20.3 percent increase). Individually, some communities did see a decline in the number of American Indian and Alaska Native persons, in particular Jefferson Township (Allen County), Harrison Township (Paulding County), and Delaware Township (Defiance County). Because of the small number of American Aboriginal persons within the study area population, the rate of change differs dramatically across individual communities. The target communities all experienced growth in this population group, totaling 58 new residents for these communities.

The ODOT also considers impacts on the Amish populations in the analysis of project effects on affected communities and population groups. There is a growing Amish community residing in Allen County (Letter from Mark Schwartz, Ben Schmucker, and Paul Graber, August 2, 2001). There are approximately 640 Amish families living in Allen County. The majority of Amish residents own property and live to the north of the Maumee River. The community is expanding into portions of Milan and Maumee townships located to the south of the river. Figure 3.11 shows the areas where the Amish reside. Of particular concern to the community is the effect that the project may have on Amish travel patterns, with a special emphasis on providing safe passage across the new highway for horse-drawn vehicles and maintaining connections across the Maumee River. Local roads that are most heavily used for travel across the Maumee River are Ryan/Bruick and Webster roads. Through coordination with local community planners, it was determined that no Amish residents reside within the affected communities in either Paulding or Defiance counties (Telephone Interview with Joyce Cavanaugh, Defiance County Farm Service Agency, August 9, 2002 and Denise Lange, Paulding County Natural Resource Conservation Service, August 14, 2002).

**TABLE 3.43
RACIAL COMPOSITION OF STUDY AREA COMMUNITIES**

Community	Race					
	Total Population (2000)	African American (Number and Percent of Community Total)	American Indian and Alaska Native (Number and Percent of Community Total)	Asian, Native Hawaiian, and Other Pacific Islander (Number and Percent of Community Total)	Hispanic or Latino (Number and Percent of Community Total)	Two or More Races (Number and Percent of Community Total)
Indiana	6,080,485	510,034 8.4%	15,815 0.3%	16,690 0.3%	214,536 3.5%	75,672 1.2%
Allen County	331,849	37,527 11.3	1,187 0.4%	4,776 1.4%	13,877 4.2%	5,946 1.8%
City of New Haven	12,406	83 0.7%	41 0.3%	37 0.3%	242 2.0%	154 1.2%
City of Woodburn	1,579	2 0.1%	2 0.1%	1 0.1%	31 2.0%	12 0.8%
Jefferson Township	1,958	10 0.5%	5 0.3%	1 0.1%	18 0.9%	10 0.5%
Maumee Township	2,619	4 0.2%	3 0.1%	2 0.1%	32 1.2%	13 0.5%
Milan Township	3,503	13 0.4%	0 0.0%	3 0.1%	36 1.0%	9 0.3%
Ohio	11,353,140	1,301,307 11.5%	24,486 0.2%	135,382 1.2%	217,123 1.9%	157,885 1.4%
Paulding County	20,293	194 1.0%	58 0.3%	34 0.2%	612 3.0%	270 1.3%
Village of Antwerp	1,740	6 0.3%	6 0.3%	0 0.0%	38 2.2%	14 0.8%
Village of Cecil	216	0 0.0%	2 0.9%	0 0.0%	3 1.4%	2 0.9%
Carryall Township	3,046	18 0.6%	9 0.3%	3 0.1%	50 1.6%	28 0.9%
Crane Township	1,530	6 0.4%	2 0.1%	0 0.0%	34 2.2%	15 1.0%
Emerald Township	824	8 1.0%	8 1.0%	3 0.4%	34 4.1%	9 1.1%
Harrison Township	1,566	1 0.1%	2 0.1%	0 0.0%	41 2.6%	14 0.9%
Defiance County	39,500	692 1.8%	102 0.3%	33 0.1%	2,857 7.2%	563 3.6%
City of Defiance	16,465	674 4.1%	53 0.3%	72 0.4%	2,100 12.8%	354 2.2%
Defiance Township	13,461	380 2.8%	45 0.3%	68 0.5%	1,742 12.9%	299 2.2%
Delaware Township	2,128	9 0.4%	6 0.3%	1 0.0%	48 2.3%	16 0.8%
Noble Township	6,171	197 3.2%	12 0.2%	44 0.7%	507 8.2%	93 1.5%
Study Area	49,353	1,411 2.9%	196 0.4%	235 0.5%	4,956 10.0%	1,042 2.1%

Source: US Census Bureau, *Census 2000, Summary File 3*.

As shown in Table 3.44, 1999 per capita income and median family income for study area communities are greater than the 1999 Federal Poverty Level (FPL) thresholds. The 1999 FPL threshold for an individual is \$8,350 (US Department of Health and Human Services, January 2002). The 1999 FPL threshold for families are weighted thresholds based on family size. For a family comprised of two persons the 1999 FPL threshold is \$11,250; for a family of eight, the FPL threshold is \$28,650.

**TABLE 3.44
INCOME CHARACTERISTICS FOR STUDY AREA COMMUNITIES**

Community	1999 Per Capita Income	1999 Median Family Income	Family Income			1999 Poverty Status	
			Less than \$10,000 (Number and Percent)	\$10,000 to \$14,999 (Number and Percent)	\$15,000 to \$24,999 (Number and Percent)	Families Below Poverty Level (Number and Percent)	Persons Below Poverty Level (Number and Percent)
Indiana	\$20,397	\$50,261	70,076 4.3%	55,878 3.5%	165,558 10.3%	107,789 6.7%	559,484 9.5%
Allen County	\$21,544	\$52,708	3,678 4.2%	2,505 2.9%	8,246 9.5%	5,792 6.7%	29,807 9.1%
City of New Haven	\$19,960	\$49,597	95 2.8%	92 2.7%	322 9.5%	168 4.9%	805 6.6%
City of Woodburn	\$18,061	\$45,871	9 2.1%	14 3.3%	49 11.5%	21 4.9%	92 5.8%
Jefferson Township	\$19,954	\$55,893	19 3.4%	6 1.1%	66 11.7%	33 5.9%	163 8.1%
Maumee Township	\$18,942	\$51,806	9 1.2%	20 2.8%	75 10.4%	21 2.9%	96 3.7%
Milan Township	\$18,352	\$58,750	20 2.2%	4 0.4%	41 4.5%	36 3.9%	209 6.0%
Ohio	\$21,003	\$50,037	156,828 5.2%	113,007 3.8%	309,926 10.3%	235,026 7.8%	1,170,698 10.6%
Paulding County	\$18,062	\$45,481	194 3.4%	169 2.9%	609 10.6%	283 4.9%	1,546 7.7%
Village of Antwerp	\$18,785	\$40,441	19 4.1%	15 3.2%	69 14.7%	26 5.6%	152 8.9%
Village of Cecil	\$12,687	\$28,000	5 10.0%	5 10.0%	7 14.0%	10 20.0%	49 23.4%
Carryall Township	\$18,907	\$46,151	21 2.5%	30 3.6%	98 11.6%	35 4.1%	193 6.4%
Crane Township	\$18,651	\$47,235	12 2.7%	16 3.6%	38 8.7%	17 3.9%	104 33.3%
Emerald Township	\$24,081	\$45,625	5 2.0%	6 2.5%	13 5.3%	5 2.0%	30 3.4%
Harrison Township	\$17,472	\$44,583	8 1.8%	9 2.0%	62 14.0%	8 1.8%	46 2.9%
Defiance County	\$19,667	\$50,876	351 3.2%	320 2.9%	996 9.1%	495 4.5%	2,180 5.6%
City of Defiance	\$19,790	\$49,559	233 5.4%	176 4.0%	420 9.7%	324 7.4%	1,375 8.8%
Defiance Township	\$19,126	\$48,693	170 4.7%	139 3.8%	329 9.1%	219 6.1%	1,009 7.7%
Delaware Township	\$17,676	\$48,913	21 3.6%	8 1.4%	59 10.2%	35 6.0%	168 8.3%
Noble Township	\$21,105	\$55,457	84 5.1%	54 3.3%	163 9.9%	133 8.1%	487 8.4%

Source: US Census Bureau, *Census 2000, Summary File 3*.

Using data on family income provided in the 2000 Census, the Village of Cecil exceeds the statewide average for the three income brackets shown. Comparison of the 1990 and 2000 income data shows that the village had a 16.7 percent decrease in median family income between 1990 and 2000 as compared to the State of Ohio, which reported a 12.2 percent increase (Ohio Department of Development, June 2002). However, this appears to be a result of the decline in the number of families from 64 to 50 as the village has a 27.9 percent increase in per capita income. Across the state of Ohio, per capita income increased by 20.2 percent between 1990 and 2000. As shown in Table 3.44, the City of Defiance and Noble Township

also show higher percentages for the lowest reported income bracket, Families with Income Less Than \$10,000. Both communities, however, showed increases in median family income with the percent increase in Noble Township exceeding the statewide rate. For the \$10,000-14,999 income bracket, the City of Defiance and Noble Township exceed the statewide average for Ohio. For the \$15,000 to \$24,999 income bracket, the City of Woodburn, Jefferson Township, and Maumee Township exceed the Indiana statewide average while the Village of Antwerp, Village of Cecil, Carryall Township, and Harrison Township exceed the Ohio statewide average.

Table 3.44 also provides data on individuals and families living below poverty levels in 1999. The data show that the percentages of individuals and families living below poverty levels in Allen County study area communities do not exceed the percentages reported for Indiana. However, three communities in Ohio exceed the statewide averages - the Village of Cecil, Crane Township, and Noble Township. In the Village of Cecil, 23 percent of individuals and 20 percent of the families are living below the poverty level. Other data (total population of 216 persons, lowest per capita income of all study area communities, lowest median family income of all study area communities, and highest percentage of families with incomes less than \$25,000) also indicate that the Village of Cecil is a target community relative to low-income persons and families.

There is a higher percentage of individuals living below the poverty level in Crane Township than reported for the State of Ohio. However, a comparison of 1990 and 2000 income data shows that the township experienced a 7.1 percent increase in median family income and a 31.9 percent increase in per capita income (Ohio Department of Development, June 2002).

The 2000 Census data show a slightly higher percentage of families living below the poverty level in Noble Township than across the State of Ohio. However, a comparison of 1990 and 2000 median family income data shows that the township experienced a 15.8 percent increase in median family income, which exceeds the statewide average of 12.2 percent growth. Furthermore, the per capita income of Noble County increased by almost 25 percent as compared to a 12.2 percent increase across the state (Ohio Department of Development, June 2002).

Field reviews of the study area identified several target communities, which are shown on Figure 3.11:

- Brentwood Motor Home Court located on US 24 in Emerald Township, Paulding County.
- Unnamed subdivision located in the Village of Antwerp near Riverside Cemetery and Riverside Park.
- Bohlman Trailer Park located along SR 424 in Defiance Township, Defiance County.

Methodology

The environmental justice analysis was conducted in accordance with guidelines presented in *Guidance and Best Practices for Incorporating Environmental Justice into Ohio Transportation Planning and Environmental Processes* (ODOT August 2002).

Data available through the 2000 Census for study area communities were collected to determine if target communities were located in the study area. Data on racial composition and incomes were the primary source of information for the community.

Data for state, county and affected municipalities were reviewed. If the percentage of minorities relative to total municipal population for a municipality exceeded the percentage reported for the state, the community was considered to be a target community. Data used in the analysis of the Amish population were obtained through interviews with representatives of the Amish community in Allen County and local community planners in Paulding and Defiance counties.

FPL thresholds are issued each year in the *Federal Register* by the US Department of Health and Human Services (HHS). The 1999 FPL threshold for an individual was \$8,350 (US Department of Health and Human Services, January 2002). The 1999 FPL threshold for families were weighted thresholds based on family size. For a family comprised of two persons, the 1999 FPL threshold was \$11,250; for a family of eight, the FPL threshold was \$28,650.

Per capita and median family income statistics reported in the 2000 Census were compared to the individual and family 1999 FPL thresholds, respectively. Communities with per capita and median family incomes less than the FPL thresholds were considered to be target communities. Statistics provided in the 2000 Census on poverty were also reviewed. If percentages of individuals and families living at or below the poverty level exceeded the percentage of individuals and families reported for the state (statewide average), the community was identified as a target community.

For this analysis, the study area was limited to the Feasible Corridors. Project mapping delineating the Feasible Corridors was overlain on study area mapping. The location of the Feasible Alternatives relative to the target communities was noted. Effects of the Feasible Alternatives with respect to the following potential impacts were evaluated:

- Health effects such as bodily impairment, infirmity, illness, or death.
- Degradation of air quality, ambient noise environment, and water supplies, and soil contamination.
- Destruction or disruption of natural or man-made resources.
- Destruction or diminution of aesthetic values.
- Destruction or disruption of community cohesion.
- Destruction or disruption of a community's economic vitality.
- Destruction or disruption of the availability of public and private facilities and resources.
- Vibration.
- Adverse Employment Effects.
- Displacement of residences, businesses, farming operations, or non-profit organizations.
- Increased traffic congestion.
- Isolation.
- Exclusion or separation of minority or low-income individuals within a given community or from the broader community.
- Denial of, reduction in, or significant delay in the receipt of benefits.

Project Impacts

All of the municipalities in Paulding and Defiance counties are considered to be target communities, as all have a higher percentage of residents who reported their race as Hispanic/Latino or American Indian/Alaska Native than reported statewide. Additionally, the Village of Cecil is a target community because of income characteristics and a higher percentage of persons and individuals living below the poverty level than observed statewide. Other target areas include the Amish community in Allen County and three residential subdivisions (the Brentwood Court Mobile Home Park in Antwerp, an unnamed subdivision near Riverside Cemetery in Antwerp, and the Bohlman Trailer Park in Defiance Township).

The development of the Feasible Corridors and Feasible Alternatives was completed with the objective of minimizing impacts on the communities within the study area and minimizing the number of residential, business and other displacements. Therefore, the alternatives have limited potential to result in environmental justice impacts as described below:

- The No Build Alternative and Alternative Y do not relieve the traffic congestion or safety issues identified along US 24 within the study area.
- Alternative Z results in a substantially higher number of residential displacements than the other Feasible Alternatives with 107 displacements for Alternative Z as opposed to 71 displacements for Alternative N (ranked second) and 14 displacements for Alternative Y (ranked lowest).
- Alternative Z results in a slightly higher number of business displacements than the other Feasible Alternatives, exclusive of impacts on farming operations.
- Alternatives A through X and Z will relocate US 24 from its existing alignment in Antwerp changing access to the unnamed subdivision near Riverside Cemetery. Access will be maintained, but the subdivision will no longer have direct and convenient access to and from US 24.
- Alternatives A through X will relocate US 24 from its existing alignment changing access to the Brentwood Court Mobile Home Park. Access will be maintained, but the

subdivision, will no longer have direct and convenient access to and from US 24.

- Alternatives A through H, M through P, and U through X result in the displacement of three single-family homes, reducing the number of total housing units in Cecil from 77 to 74. The remaining Feasible Alternatives do not result in displacements within the municipal limits of Cecil.
- Alternatives A through H, M through P, and U through X affect access through the Village of Cecil as a result of the closure of C-216 between C-105 and US 127.
- With Alternatives A through H (exclusive of D-1), M through P, and U through X, C-206 is also closed affecting east-west access through the Village of Cecil.
- Alternatives A through H, M through P, and U through X bisect the Village of Cecil. The community is already split in two by the Maumee & Western Railroad corridor
- Within Defiance Township, the effects of the Feasible Alternatives vary. Alternatives A, E, I, M, Q, and U result in the loss of one business. Alternatives B, F, J, N, R, and V result in the acquisition of right-of-way from the Prop Floppers Flying Field and 21 residences located within the Bohlman Trailer Park. Alternatives C, G, K, O, S, and W would have the least impact on Defiance Township, resulting in only one residential displacement in the community. Alternatives D, H, L, P, T, and X would result in the displacement of 21 residences located within the Bohlman Trailer Park.
- Alternatives B, D, F, H, J, L, N, P, R, T, V, and X displace 21 residences in the Bohlman Trailer Park, a target low-income community.
- All Feasible Alternatives are located within the existing US 24 right-of-way in Noble Township, requiring acquisition of minor amounts of right-of-way from adjacent properties. There are no displacements or major access changes proposed within this community.
- Alternatives B, D, F, H, J, L, N, P, R, T, V, and, X have a small section located within the City of Defiance that would be constructed on new right-of-way currently undeveloped. There are no displacements proposed within this community.
- All alternatives affect roadways used by the Amish community in Allen County.
- For Alternatives E through X, only two grade-separate crossings are proposed in Allen County. With Alternatives E, F, G, and H, a grade-separated crossing is provided at Slusher Road. For Alternatives I through X, a grade-separated crossing is provided at Sampson Road. At-grade intersections are provided at most crossings for Alternatives A, B, C, and D.
- For Alternatives A through X (exclusive of D-1), at-grade intersections are proposed at Ryan/Bruick and Webster roads, which are key roads used by the Amish community to cross the Maumee River. This is undesirable since at-grade intersections on a four-lane, divided, high-speed facility are not compatible with safe crossings by slow-moving, horse-drawn vehicles.

The No Build Alternative and Alternative Y are likely to have the greatest impact on low-income and minority communities through increased traffic congestion, resulting in increased travel costs, reduced accessibility as well as increased ambient noise levels and concentrations of vehicular pollutants for properties located along or in close proximity to US 24. While these impacts will be experienced by all residents of the study area, low-income persons and families are likely to be more sensitive to the reduction in disposable income associated with increased travel costs. Impacts are also likely to be high with Alternative Z due to the higher number of residential and commercial displacements, thereby affecting the availability of goods and services along US 24.

Alternatives A through X result in fewer displacements than either Alternatives Y or Z and greatly enhance mobility throughout the study area. These alternatives, however, impact access to and from the Village of Cecil, an environmental justice target community. Of these alternatives, Alternatives A through H (exclusive of D-1), M through P, and U through X will have a greater impact because both east-west routes through the village would be closed.

All alternatives affect the Amish community through impacts on the local roadway system. The No Build Alternative and Alternative Y do not improve traffic flow on US 24 and will result in increasing travel delays for horse-drawn vehicles attempting to cross US 24. Safety is also an issue with these alternatives as neither provides for grade-separated crossings along US 24.

Alternatives E through X provide for a limited number of grade-separated crossings. Under Alternatives A through D, no at-grade crossings would be provided at crossroads in Allen County; under Alternatives E through H, one grade-separated crossing is provided at Slusher Road; and under Alternatives I through X, one grade-separated crossing is provided at Sampson Road. With limited provisions for the safe crossing of slow-moving, horse-drawn vehicles, the Feasible Alternatives could have disproportionate impacts on the Amish community related to health effects (bodily impairment, infirmity, or death), destruction or disruption of community cohesion (isolation, exclusion, or separation of the community from surroundings), destruction or disruption of a community's economic vitality, increased traffic congestion, and changes in travel patterns.

Alternatives B, D, F, H, J, L, N, P, R, T, V, and X displace 21 residences in the Bohlman Trailer Park, a target low-income community.

Preferred Alternative Impacts

In Allen County, members of the Amish community have expressed safety concerns regarding the at-grade intersections originally proposed along the Preferred Alternative (Alternative D-1). Representatives of the Amish community explained that since they travel by horse and buggy or by foot, overpasses would be safer than at-grade intersections for crossing US 24. They noted that horses are unpredictable and sometimes will not stand and wait for traffic to pass before crossing an at-grade intersection. In addition, teams of four to eight draft horses are used to pull farm equipment and the total length of farm equipment and horses is generally 18.3 meters (60 feet). Medians are typically 25 meters (82 feet) wide in Indiana, which could accommodate the horses and farm equipment. Due to the unpredictable nature of horses, crossing a four-lane highway using an at-grade intersection is unsafe and it could be disastrous if a team of horses is in the median waiting to cross two lanes of road and the horses start to back up or go forward out of the control of the driver into oncoming traffic. The farmers stated that the best locations for interchanges or overpasses for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are the main north-south routes across the Maumee River.

In response to the Amish community concerns, several options to provide grade-separated crossings in Allen County were developed and evaluated. A meeting was held on September 5, 2002 with members of the Amish Community and representatives from the ODOT and INDOT to discuss the transportation needs of the Amish. Instead of interchanges at Ryan/Bruick and Webster roads, the INDOT had proposed to provide a grade-separated crossing at Berthaud Road, which would allow Amish vehicles to safely cross the new highway. The Amish commented that Berthaud Road was too long of a detour from their current routine travel routes. The additional mileage would take time away from their work and also tire their horses. The farmers emphasized that the best locations for grade-separated crossings for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are main north-south routes crossing the Maumee River. With the change in design from expressway to freeway, INDOT will construct interchanges at Ryan/Bruick Road, Webster Road, and SR 101. Grade-separated crossings will be provided at all other crossroads in Allen County with the exception of Harper, Bremer, Berthaud, and Gustin roads, which will be closed at the new highway.

The Preferred Alternative minimizes the potential for disproportionate impacts on the Hispanic population. Alternative D-1 is located on the same alignment as existing US 24 within Noble Township, requiring minimal right-of-way takes. Within the City of Defiance, Alternative D-1 will be constructed on undeveloped land and will not result in any displacements.

The Preferred Alternative (Alternative D-1) will have minimal impact on the target communities. The Preferred Alternative avoids the unnamed subdivision in the Village of Antwerp and the Brentwood Court Mobile Home Park. While a regional transportation facility will not be located within the immediate vicinity of these neighborhoods, the new facility will be accessible via the local road system. The changes in travel patterns do not result in disproportionate impacts to the neighborhoods.

The Preferred Alternative, as originally presented to the public in June 2002, would result in the closure of both C-206 and C-216 near the Village of Cecil, thereby affecting direct east-west

access through this targeted community. Based on input from the public and local agencies, C-206 will be realigned to intersect with C-87 maintaining one of the two east-west routes serving Cecil. Additionally, east-west access through the village will be improved by the new highway which skirts the southern perimeter of the village, and therefore would not result in disproportionate impacts to low-income persons and families residing within the community.

Within Defiance Township, the Preferred Alternative, as originally designed, requires the displacement of mobile homes within the Bohlman Trailer Park. The original US 24/SR 424 interchange and relocation of SR 424 requires the acquisition of 2.43 hectares (6.0 acres) of land, the displacement of 11 mobile homes (residences), and relocation of the trailer park access road. Based on initial coordination with the property owner, there is ample vacant space in the mobile home park to relocate the affected residential units. On September 18, 2002, ODOT representatives met with the owner and 15 residents of the Bohlman Trailer Park. The owner of the trailer park had requested that ODOT proceed with advanced acquisition of his property. The purpose of the meeting was to inform the residents of the project status, advanced acquisition proceedings, and ODOT's property acquisition and relocation process. In accordance with ODOT's policy on Environmental Justice, ODOT investigated potential design options for the SR 424 interchange to avoid impacts on the community. Four conceptual designs were developed for the SR 424 interchange and evaluated based on consistency with current design standards, impacts to the local roadway system, farmland, wetlands, streams, displacements, and sites with potential environmental concerns (hazardous materials) as well as impacts to the Bohlman Trailer Park. Based on the evaluation of the conceptual interchange options, the interchange at SR 424 was redesigned to avoid the displacement of residences in the Bohlman Trailer Park. The eastbound exit and westbound entrance ramps for the interchange are shifted to the west, impacting property associated with ODOT's Defiance County Garage located between US 24 and SR 424. In addition to the loss of 3.1 hectares (7.7 acres of land), four structures located on the property will be displaced. ODOT will replace the affected facilities on-site.

Shifting the access ramps for the SR 424 interchange to the west to avoid the displacement of residential units associated with the Bohlman Trailer Park results in changes in traffic-generated noise levels at the trailer park. Additional noise analyses have been conducted to determine the noise impacts on the trailer park. Based on noise measurements taken in April 2003, the ambient existing noise level at the trailer park is approximately 59.2 dBA. The future noise level is estimated to be 60.9 dBA for the No Build Condition and 69.2 with the Preferred Alternative (Alternative D-1). As defined in 23 CFR 772, traffic noise impacts occur "when the predicted traffic noise levels approach or exceed the noise abatement criteria or when then predicted traffic noise levels substantially exceed the existing noise levels." This is interpreted by ODOT to mean noise levels within one dBA of the FHWA Noise Abatement Criteria (NAC) (i.e., 66 dBA for exterior residential receivers) or a 10 dBA increase over existing noise levels. With the Preferred Alternative, future traffic generated noise at the trailer park are predicted to exceed the FHWA NAC for residential uses.

In accordance with ODOT's noise policies, the feasibility of noise abatement has been considered for the Bohlman Trailer Park. Because of the limited amount of land available between US 24 and the trailer park as well as the existing development patterns for the surrounding land uses, several strategies for noise abatement are not feasible such as changes in the vertical and horizontal geometry. Also, under current state regulations, ODOT cannot restrict traffic on US 24, limiting the feasibility of traffic management strategies. There is, however, sufficient area to accommodate noise walls. The evaluation of noise walls indicates that a noise wall varying in height from 2.4 meters (8 feet) to 3.7 meters (12 feet) and approximately 298 meters (978 feet) in length will reduce noise levels by approximately 5.1 dBA. With an estimated construction cost of \$194,900, the cost per dwelling unit is \$10,250, which is less than the reasonable cost threshold of \$25,000 per benefited receiver.

Mitigation

The development of the Feasible Alternatives was completed with the objectives of minimizing impacts on the communities located within the study area and minimizing the number of residential, business and other displacements. Consequently, the Feasible Alternatives have limited potential to result in environmental justice impacts.

A number of design refinements have been made to the Preferred Alternative to avoid and/or minimize impacts on environmental justice communities. These include the provision of grade-separated crossings in Allen County, which address the Amish community transportation concerns. Interchanges will be constructed at Ryan/Bruick Road, Webster Road, and SR 101; grade-separated crossings will be provided all other crossroads in Allen County with the exception of Harper, Bremer, Berthaud, and Gustin roads. In the Village of Cecil, C-206 will be realigned to intersect with C-87, maintaining this existing east-west crossroad. The SR 424 interchange has been redesigned to avoid the displacement of residential properties at the Bohlman Trailer Park.

With the Preferred Alternative, future traffic-generated noise levels at the Bohlman Trailer Park are predicted to exceed the FHWA NAC for residential uses. In accordance with ODOT's noise policies, the feasibility of noise abatement has been considered for the neighborhood. The noise mitigation analysis indicates that a noise wall varying in height from 2.4 meters (8 feet) to 3.7 meters (12 feet) and approximately 298 meters (978 feet) in length will reduce noise levels by approximately 5.1 dBA. With an estimated construction cost of \$194,900, the cost per dwelling unit is \$10,250, which is less than the reasonable cost threshold of \$25,000 per benefited receiver.

Coordination with local community leaders will be maintained throughout the design studies on the Preferred Alternative to assist in more refined identification of minority and special population groups and families. Through the Relocation Assistance Program, additional investigations of affected property owners will be undertaken to determine the likelihood for disproportionate impacts on minority and low income communities. If warranted, additional design refinements including alignment shifts and reroutes will be investigated to minimize and/or avoid impacts to target groups and communities.

**3.2.4 Community Cohesion/
Neighborhood Impacts**

Community cohesion is defined as the connections between and within communities that are essential for serving the needs of the residents (FHWA, 1991). In a rural area, it is important to retain community structure while providing links to other rural communities. These links facilitate access to public and private services such as access to a regional hospital, county library, retail outlets, or secondary school serving a large area.

Existing Conditions

Transportation throughout the study area is essential in maintaining community cohesion. Local transportation routes include roads that cross, run parallel to, or are in close proximity to US 24. A total of 18 major highways are located in the project area: three US Routes and 15 State Routes (four in Indiana and 11 in Ohio).

The study area is primarily a large expanse of rural farming communities. Within Allen County, the study area covers the Cities of New Haven and Woodburn and Jefferson, Milan, and Maumee townships. Within Paulding County, communities located within the study area are the Villages of Cecil and Antwerp and Harrison, Carryall, Crane, and Emerald townships. Within Defiance County, the study area includes the City of Defiance and Delaware, Defiance, and Noble townships. Each community has its own cohesive characteristic. However, with the consolidation of some community facilities and services (e.g., school districts, health care facilities, police, fire and emergency response), many communities have developed strong interdependence.

Within the study area, the Village of Antwerp is the only incorporated municipality that is bisected by US 24. Antwerp is the second largest incorporated community in Paulding County with 1,740 residents in 2000. It is also bisected by SR 49, which runs south to north (perpendicular to US 24). US 24 bisects the rural townships in the study area. US 24 also bisects the urbanized development in the Cities of New Haven and Defiance, both located on the fringe of the study area. In all three settings, US 24 acts more as an economic link than a facility that is a barrier to community cohesiveness.

The character of the City of New Haven, located at the western edge of the study area, has changed significantly over the past decade as rapid suburbanization has taken place. It has

several distinct sub-areas, each with its own characteristics and dynamics. Collectively, these sub-areas represent a quasi-independent growth center within the greater Fort Wayne urban area. In Allen County, the study area covers two defined subareas - the River Greenway Area and the Interstate Corridor Area. The River Greenway Area is located to the north of US 24. The Interstate Corridor Area is located to the south of US 24 and west of Doyle Road. The major geographical policy of the River Greenway is that New Haven will cooperate and coordinate at a regional level for a greenway along the Maumee River and will disallow local development within the greenway. Within the Interstate Corridor Area, large-scale, well designed mixed use projects that take advantage of locational attributes of the corridor are promoted.

There are a variety of broad topical policies that are embodied in the *City of New Haven Comprehensive Plan*. For community facilities, New Haven will provide infrastructure to support existing development and shape new development within the Urban Service Area Boundary. However, for the River Greenway area, New Haven will “avoid extending public facilities” through this area (*New Haven Comprehensive Plan*, May 1990).

In addition to communities defined by municipal boundaries, there are a number of subdivisions and neighborhoods located within the study area. These include four areas in Allen County (Georgian Park, Havenwood Forest, and Edgerton Addition subdivisions and the Gar Creek Area), three areas in Paulding County (Jarrett Wood subdivision, Newman’s Rolling Acres, and Brentwood Motor Home Court, and an unnamed mobile home park in Antwerp), and two areas in Defiance County (Bohlman Trailer Court and the Noble Heights subdivision). A new residential subdivision, the Maumee River Crossing, is under construction in Noble Township. Phase I construction consists of 71 single-family homes. Also, the expansion of the Noble Heights subdivision is under construction.

Methodology

Communities and neighborhoods were identified through a review of available documentation, including:

- Greater Fort Wayne Chamber of Commerce, *2000 Guide to Fort Wayne, Indiana* (Michiana Business Publications, 2000).
- Greater Fort Wayne Chamber of Commerce, *Business Information Guide 2000* (Michiana Business Publications, 2000).
- *Platbook of Defiance County* (1993).
- Highway Map of Paulding County, Ohio (1998).
- Highway Map of Defiance County, Ohio (1998).
- *Defiance Area Chamber of Commerce Membership Directory and Consumer Guide* (1997-1998).
- *City of New Haven Comprehensive Plan* (1990).
- *Paulding County Comprehensive Plan* (1972).
- *Defiance County Comprehensive Plan - Draft* (1999).
- *Defiance County Comprehensive Plan* (2000).

The location of these resources were mapped and then verified through field reviews. Additional information was also collected through interviews with local officials and planning agencies.

Project mapping depicting the Feasible Corridors and the Feasible Alternatives was overlain on mapping depicting the locations of municipalities and neighborhoods. Those located within or in close proximity to the Feasible Corridors were identified for impact evaluation. The mapping was then reviewed to identify a wide variety of changes including:

- Acquisition of property.
- Acquisition of significant community resources.
- Location of the alternatives relative to community/neighborhood boundaries.
- Location of the alternatives relative to major topographical features (major roadways, railroad corridors, and rivers).
- Changes in access and in the local roadway system.
- Changes in noise levels.

Project Impacts

The development of the Feasible Alternatives was completed with an objective of minimizing impacts on the communities within the study area and minimizing the number of residential, business and other displacements. Impacts to community cohesiveness resulting from the Feasible Alternatives are described in Table 3.45.

Alternative Y and the No Build Alternative would result in little physical change within the communities. However, these alternatives would result in increased traffic congestion along US 24. Associated with increased traffic congestion are increased noise levels and increased vehicular pollutant concentrations at sensitive receptors located within close proximity to US 24. The noise analysis completed for this project shows that traffic-generated noise levels at most properties located along US 24 now exceed the FHWA Noise Abatement Criteria (NAC) for Category B land uses (i.e., residential development). Noise levels will continue to increase in the future with either Alternative Y or the No Build Alternative. Also, Alternative Y and the No Build Alternative do little to enhance access to key economic development areas in the study area and therefore constrain economic growth in targeted areas.

Alternatives A through X and Z affect several communities, the primary impact being the introduction of a new transportation corridor in rural areas. Comments received from citizens and public officials indicate a preference for an alignment that is close to existing US 24 and follows existing transportation corridors to minimize impacts on communities. Segments 1, 3, 8, 11, 12, 13, 14, 19, and 20 are located in close proximity to existing US 24 and/or are located along existing transportation corridors.

More specifically, comments received from citizens and public officials in Allen County indicate a preference for the Feasible Alternatives that incorporate Segment 1 over those that follow Segment 2. Segment 2 is considered to have a negative impact on the Gar Creek neighborhood. The Feasible Alternatives which include Segment 1 are Alternative A through D and I through P.

Within the study area, there are several natural and man-made features that act as barriers within Allen County - the Maumee River, existing US 24, and the Maumee & Western Railroad corridor. The construction of a highway on Segment 2 would result in the creation of another topographic barrier within this portion of the study area. Segment 1, for most of its length (75 percent), abuts the existing US 24 Corridor, thereby minimizing the creation of another physical barrier affecting community cohesion. Only 12 percent of Segment 2 falls within or abuts the right-of-way of US 24 and the Maumee & Western Railroad.

Comments received from citizens and public officials also indicate a preference for the Feasible Alternatives that relocate US 24 to the north of the City of Woodburn (i.e., alternatives that include Segment 8). Alternatives using Segment 7 would force the routing of northbound traffic through the city creating congestion on the local roads. A component of this traffic is heavy trucks associated with industrial businesses located to the north of Woodburn. Alternatives I through X include Segment 7. US 24 is relocated to the north of the city with Alternatives A through H, minimizing traffic impacts on Woodburn.

Alternatives A through X affect the Gar Creek neighborhood. One effect is a change in accessibility. This impact is greater with Alternatives A through D and I through P because Berthaud Road is closed at US 24. Alternatives E through H and Q through X would result in US 24 being relocated much closer to the Gar Creek neighborhood, causing increases in noise levels at nearby sensitive receptors. Future noise levels are not expected to exceed the FHWA NAC for Category B receptors. In Paulding County, Alternatives A through X and Z include a bypass of the Village of Antwerp and nearby residential subdivisions. Antwerp is the only incorporated community in Paulding County bisected by US 24. The *Paulding County Comprehensive Plan* supports a bypass around Antwerp, a goal that has been promoted by local officials and planning agencies during project outreach activities.

Alternatives A through X would also impact the Village of Cecil. The *Paulding County Comprehensive Plan* supports the relocation of US 24 from north of Cecil to south of Cecil, which would be achieved by these alternatives. However, Alternatives A through H (exclusive of Alternative D-1), M through P, and U through X require closure of local roadways providing east-west access through the village. These alternatives result in the closure of both C-206 and C-

216 on the outskirts of Cecil, eliminating east-west access to the village by way of these routes. Adequate east-west access is provided by the Feasible Alternatives, which include an underpass at C-105. Alternatives A through X relocate US 24 closer to the Village of Cecil, thereby increasing noise levels at sensitive noise receptors located in the area.

**TABLE 3.45
IMPACTS TO COMMUNITIES/NEIGHBORHOODS**

Affected Area	Alternative	Description of Impact
New Haven, Allen County	A-X, No Build	No change (US 24 on existing alignment).
	Y, No Build	No change (US 24 follows existing alignment).
	Z	No change (US 24 on existing alignment).
Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change (US 24 on existing alignment, widening to the south of US 24).
	E-H, Q-X	US 24 on new alignment through rural area. Improved access to Casad East, Canal Place and Bandalier Economic Development Areas.
	Y, No Build	No change (US 24 follows existing alignment).
	Z	US 24 on existing alignment, widened to the south except at Ryan/Bruick Road where relocated to the north of existing US 24.
Milan Township, Allen County	A-D, D-1	US 24 on existing alignment between Doyle Road and Berthaud Road, widening to the south of US 24. From Berthaud Road to Maumee Township, US 24 on new alignment through rural area.
	I-P	US 24 on existing alignment between Doyle Road and Berthaud Road, widening to the south of US 24. From Berthaud Road to Maumee Township, US 24 on new alignment through rural area. US 24 parallels Maumee & Western Railroad between Webster Road and Maumee Township
	E-H, Q-X	US 24 on new alignment through rural area. US 24 parallels Maumee & Western Railroad between Webster Road and Maumee Township.
	Y, No Build	No change (US 24 follows existing alignment).
	Z	No change (US 24 on existing alignment, widening to the south of US 24).
	A-X	US 24 on new alignment through rural area.
Maumee Township, Allen County	Y, No Build	No change (US 24 follows existing alignment).
	Z	No change (US 24 on existing alignment, widening to the south of US 24).
	A-X	US 24 on new alignment through rural area.
City of Woodburn, Allen County	A-H	US 24 relocated just to the north of Woodburn. Improved access to city and Woodburn Industrial Park.
	I-X	US 24 relocated just to the south of Woodburn. Increased traffic traveling through city to access Woodburn Industrial Park and existing US 24. Brobst Road closed between Woodburn Road and Slusher Road. Woodburn/Webster Road intersection is closed.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Harrison Township, Paulding County	A-D, D-1	US 24 located on new alignment through rural area along northwest edge of township.
	I-X	US 24 located on new alignment through rural area, bisecting township.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Village of Antwerp, Paulding County	A-H, Z	US 24 relocated away from commercial district just beyond southern village boundary.
	I-X	US 24 relocated on new alignment out of community.
	Y, No Build	No change (US 24 follows existing alignment).
Carryall Township, Paulding County	A-H, Z	US 24 relocated on new alignment to southern section of township through rural area.
	I-X	US 24 relocated on new alignment through rural in southeast corner of township.
	Y, No-Build	No change (US 24 follows existing alignment).
Crane Township, Paulding County	A-H, M-P, U-X	US 24 on new alignment through rural area bisecting township. US 24 parallels Maumee & Western Railroad between T-77 and C-87.
	I-L, Q-T	US 24 on new alignment through rural area bisecting township.
	Y, Z, No Build	No change (US 24 follows existing alignment).

TABLE 3.45 (CONTINUED)
IMPACTS TO COMMUNITIES/NEIGHBORHOODS

Affected Area	Alternative	Description of Impact
Village of Cecil, Paulding County	A-H, M-P, U-X	US 24 relocated on new alignment through southern portion of village. Both east-west access routes (C-206 and C-216) closed limiting travel movements through municipality.
	I-L, Q-T	US 24 relocated on new alignment south of the village.
	D-1	US 24 relocated on new alignment through southern portion of village. C-206 is re-aligned to intersect with C-87.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Emerald Township, Paulding County	A-X	US 24 on new alignment through rural development bisecting northern portion of township. US 24 parallels Maumee & Western Railroad between Crane Township and Defiance County.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Delaware Township, Defiance County	A, E, I, M, Q, U	US 24 on new alignment through rural development in very southeastern portion of township. C-8 closed just west of T-153.
	B, F, J, N, R, V	US 24 on new alignment through rural development in very southeastern portion of township. C-8 closed just west of T-153.
	C, G, K, O, S, W	US 24 on new alignment through rural development in very southeastern portion of township. C-8 closed just east of C-143.
	D, H, L, P, T, X	US 24 on new alignment through rural development in very southeastern portion of township. C-8 closed just east of C-143. US 24 parallels Maumee & Western Railroad between Paulding County and Defiance Township.
	D-1	US 24 on new alignment through rural development in very southeastern portion of township. C-8 re-aligned to intersect with C-143. US 24 parallels Maumee & Western Railroad between Paulding County and Defiance Township.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Defiance Township, Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W-X	US 24 on new alignment through rural area between Delaware Township and existing US 24. US 24 on new alignment north of commercial development on existing US 24 to City of Defiance (May Road).
	B, F, J, N, R, V	US 24 on new alignment through rural area between Delaware Township and City of Defiance (C-146). Interchange at SR 424. Displaces Bohlman Trailer Park.
	D, H, L, P, T, X	US 24 on new alignment through rural area between Delaware Township and City of Defiance (C-146). US 24 parallels Maumee & Western Railroad between Delaware Township and the City of Defiance. Interchange at SR 424. Displaces Bohlman Trailer Park.
	D-1	US 24 on new alignment through rural area between Delaware Township and City of Defiance (C-146). US 24 parallels Maumee & Western Railroad between Delaware Township and the City of Defiance. Interchange at SR 424.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Noble Township, Defiance County	A-X, Y, Z, No Build	US 24 on existing alignment.

TABLE 3.45 (CONTINUED)
IMPACTS TO COMMUNITIES/NEIGHBORHOODS

Affected Area	Alternative	Description of Impact
City of Defiance, Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W	US 24 on new alignment to north of existing US 24 through rural area west of SR 424. US 24 on existing alignment east of SR 424.
	B, D, D-1, F, H, J, L, N, P, R, T, V, X	US 24 on new alignment to north of US 24 through commercial area west of SR 424. US 24 on existing alignment east of SR 424.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Georgian Park Subdivision, Jefferson Township, Allen County	A-X	US 24 on existing alignment, widening to the south of US 24.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Havenwood Forest Subdivision, Milan Township, Allen County	A-X	US 24 relocated on new alignment to the south of the development.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Gar Creek Berthaud/Gar Creek Roads, Milan Township, Allen County	A-D, D-1, I-P	Access affected due to closure of Berthaud Road at US 24.
	E-H, Q-X	Access affected due to closure of Bremer Road between Webster and Rousey roads.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Edgerton Addition Subdivision, City of Woodburn, Allen County	A-H	US 24 relocated to the north of Woodburn.
	I-X	US 24 relocated to the south of Woodburn.
	Y, Z	US 24 on existing alignment. Woodburn/Webster Road intersection is closed.
	No Build	No change (US 24 follows existing alignment).
Jarrett Wood Subdivision, US 24, Carryall Township, Paulding County	A-X, Z	US 24 relocated on new alignment to the south of the development.
	Y, No Build	No change (US 24 follows existing alignment).
Unnamed Mobile Home Park, US 24/T-43 Village of Antwerp, Paulding County	A-X, Z	US 24 relocated away from development.
	Y, No Build	No change (US 24 follows existing alignment).
Newman s Rolling Acres No. 2 Subdivision Fort Wayne/Riverside Drives Crane Township, Paulding County	A-X, Z	US 24 relocated on new alignment to the south of the development.
	Y, No Build	No change (US 24 follows existing alignment).
Brentwood Mobile Home Court, US 24/C-232, Emerald Township, Paulding County	A-X	US 24 relocated on new alignment to the south of the development.
	Z	US 24 on existing alignment, widening to the south.
	Y, No Build	No change (US 24 follows existing alignment).
Bohlman Trailer Park, US 24/SR 424, Defiance Township, Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W	US 24 relocated to the north of existing US 24.
	B, D, F, H, J, L, N, P, R, T, V, X	SR 424 interchange displaces neighborhood.
	D-1	SR 424 interchange ramps abut western boundary of neighborhood.
	Y, Z, No Build	No change (US 24 follows existing alignment).
Noble Heights Subdivision, Noble Township, Defiance County	A-X, Y, Z, No Build	No change (US 24 within existing right-of-way).

In Defiance County, Alternatives B, D, F, H, J, L, N, P, R, T, V, and X displace 21 residences in the Bohlman Trailer Park, a target Environmental Justice community.

In the City of Defiance, the existing intersection of US 24 and West High Street will be closed as a result of the construction of the Alternatives A through X and Z and the existing at-grade intersection will be replaced with an overpass. West High Street will remain open to traffic with an overpass constructed over West High Street. Public opinion is divided at West High Street. Several residents and public officials have requested that an interchange be constructed at this location to maintain access to US 24 at West High Street. Community representatives are concerned that eliminating access to US 24 at West High Street would be detrimental to economic development on the west side of the City of Defiance. Other citizens have stated that they do not want an interchange at West High Street.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) follows essentially the same alignment as Alternative D with the exception of shifts in Paulding and Defiance counties to minimize impacts to sensitive resources. The Preferred Alternative also differs from Alternative D in Allen County in that it will be constructed as a freeway with interchanges and grade-separated crossings. Interchanges will be constructed at Ryan/Bruick Road, Webster Road, and SR 101. Grade-separated crossings will be provided at all other crossroads in Allen County with the exception of Harper, Bremer, Berthaud, and Gustin roads, which will be closed at the new highway.

Within Paulding County, Alternative D-1 differs from Alternative D with respect to local road crossings. For Alternative D-1, interchanges will be constructed at SR 49 and US 127. Also, the crossings at C-11 and T-43 will be constructed as grade-separated crossings. At-grade crossings were proposed at the crossroads for Alternative D. Alternative D-1 results in the closure of C-180, T-61, T-69, and C-224; at-grade intersections were proposed at these locations for Alternative D. The crossings at C-33, T-83, and Powers Road (C-8), closed with Alternative D, will be constructed as at-grade intersections.

The Preferred Alternative follows Segment 1 through Allen County. The City of New Haven and Jefferson Township will not be affected by the changes as Segment 1 abuts the US 24 Corridor within these two communities. Within Milan and Maumee townships, the Preferred Alternative follows the US 24 Corridor to Berthaud Road where it deviates from the existing alignment. This will minimize the barrier effect of the new facility. The alignment stays to the north of the Gar Creek neighborhood, minimizing effects on the neighborhood.

In the vicinity of Woodburn, the Preferred Alternative follows Segment 8, located to the south of the municipality. Based on comments received from public and local officials, Segment 8 is preferred over Segment 7 to minimize impacts to the local roadway system serving Woodburn.

In Paulding County, the Preferred Alternative passes to the south of the Village of Antwerp, which is consistent with goals specified in the *Paulding County Comprehensive Plan*. Within the Village of Antwerp, the crossing at T-43 will be constructed as a grade-separated crossing to minimize impacts on local traffic movements, particularly traffic that will be generated by the new Antwerp Schools complex on T-43.

The Preferred Alternative also passes to the south of the Village of Cecil. Unlike Alternative D, the design of the Preferred Alternative proposes at-grade intersections at the crossings of C-206 and C-216. These are the only east-west routes providing direct access to the village. C-206 will be re-aligned to intersect with C-87 and an at-grade intersection will be constructed at the C-216 crossing.

Between the Village of Cecil in Paulding County and Krouse Road in Defiance County, the Preferred Alternative parallels the Maumee & Western Railroad corridor to the north, minimizing impacts on communities and neighborhoods. From Ashwood Road to the junction of US 24/SR 424, the Preferred Alternative traverses an area that is now targeted for economic development by the county, thereby minimizing impacts to communities and neighborhoods in this area.

Within Defiance Township, the Preferred Alternative, as originally designed, requires the displacement of mobile homes within the Bohlman Trailer Park. The original US 24/SR 424 interchange and relocation of SR 424 requires the acquisition of 2.43 hectares (six acres) of land, the displacement of 11 mobile homes (residences), and relocation of the trailer park access road. Based on initial coordination with the property owner, there is ample vacant space in the mobile home park to relocate the affected residential units. On September 18, 2002, ODOT representatives met with the owner and 15 residents of the Bohlman Trailer Park. The owner of the trailer park had requested that ODOT proceed with advanced acquisition of his property. The purpose of the meeting was to inform the residents of the project status, advanced acquisition proceedings, and ODOT's property acquisition and relocation process. In accordance with ODOT's policy on Environmental Justice, ODOT investigated potential design options for the SR 424 interchange to avoid impacts on the community. Four conceptual designs were developed for the SR 424 interchange and evaluated based on consistency with current design standards, impacts to the local roadway system, farmland, wetlands, streams, displacements, and sites with potential environmental concerns (hazardous materials) as well as impacts to the Bohlman Trailer Park. Based on the evaluation of the conceptual interchange options, the interchange at SR 424 was redesigned to avoid the displacement of residences in the Bohlman Trailer Park. The eastbound exit and westbound entrance ramps for the interchange are shifted to the west, impacting property associated with ODOT's Defiance County Garage located between US 24 and SR 424. In addition to the loss of 3.1 hectares (7.7 acres) of land, four structures will be displaced from ODOT's garage.

Shifting the access ramps for SR 424 interchange to the west to avoid the displacement of residential units associated with the Bohlman Trailer Park results in changes in traffic-generated noise levels at the park. With the Preferred Alternative, future traffic generated noise at the trailer park are predicted to exceed the FHWA NAC for residential uses. In accordance with ODOT's noise policies, the feasibility of noise abatement has been considered for the Bohlman Trailer Park. The noise mitigation evaluation indicates that a noise wall varying in height from 2.4 meter (8 feet) to 3.7 meters (12 feet) and approximately 298 meters (978 feet in length) will reduce noise levels by approximately 5.1 dBA. With an estimated construction cost of \$200,500, the cost per dwelling unit is \$10,550, which is less than the reasonable cost threshold of \$25,000 per benefited receiver.

In the City of Defiance, the existing intersection of US 24 and West High Street will be closed as a result of the construction of the Preferred Alternative and the existing at-grade intersection will be replaced with an overpass. West High Street will remain open to traffic with an overpass constructed over West High Street to carry the Preferred Alternative over it. As indicated in the discussion on the Feasible Alternatives, public opinion is divided at West High Street. In response to the public comments, a separate traffic study was conducted to determine the secondary impacts on the local road network resulting from closing the US 24/Switzer Road/West High Street intersection. The study is documented in a separate report entitled *City of Defiance, Ohio Traffic Study: Assessment of Traffic Impacts Due to the Proposed Grade Separation of US 24 and West High Street* (February 2003). The traffic study determined that future capacity problems on the local roads will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the surrounding area. Future capacity problems on local roads will occur regardless of the existence of an interchange at US 24 and West High Street/Switzer Road. At this time, ODOT is not proposing to construct an interchange at Switzer Road and West High Street as part of the US 24 project. An interchange at this location is not recommended because it is less than 1.6 kilometers (one mile) to the existing US 24/SR 15 interchange. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of two miles and a minimum distance of one mile.

Mitigation

The development of the Feasible Alternatives was completed with an objective of minimizing impacts on the communities within the study area and minimizing the number of residential, business, and other displacements.

Engineering refinements that further minimize impacts to local communities and neighborhoods will be developed during preliminary and final design studies. Such refinements may include

horizontal and vertical alignment shifts; refinements to intersection and interchange designs; construction of service roads where practical and feasible to minimize right-of-way acquisition; and the design of and installation of signing to assist motorists traveling through the area.

3.2.5 Community Facilities and Services Existing Conditions

Most of the study area is characterized by farmland and residences dotting the countryside with a few businesses and churches scattered along rural highways. Most residential neighborhoods, businesses, churches, and community services (e.g., medical facilities, volunteer fire departments, post offices and elementary schools) are concentrated in the established towns and villages. The larger municipalities, particularly Fort Wayne, Antwerp, Paulding, and Defiance, have a broader range of services such as post-secondary schools and regional medical complexes. Figure 3.12 shows those community facilities that are located within the study area.

Medical/Health Care

Medical facilities in Allen County are located within the City of Fort Wayne and are major regional medical centers serving people in Indiana, Ohio and Michigan. Five hospitals are located in the City of Fort Wayne: Parkview Hospital, Lutheran Hospital of Indiana, Lutheran Children's Hospital, St. Joseph Medical Center and the Veterans Affairs Medical Center. Parkview Hospital is located in the northeastern section of the City of Fort Wayne and specializes in neonatal and maternity services and trauma care. The Lutheran Hospital of Indiana is located in the southwest section of the City of Fort Wayne. The facility provides specialized services in heart and lung transplants. The Lutheran Children's Hospital provides advanced care for children. St. Joseph Medical Center is located in the center of the City of Fort Wayne. In addition to general services, the hospital is the region's burn center and wound care center. The hospital also specializes in sleep disorders and gerontology. A regional Veterans Affairs Medical Center with 220 beds is located in Fort Wayne and serves a 26-county area. Other specialized care centers located in the Fort Wayne area include the Rehabilitation Hospital of Fort Wayne, and Charter Beacon Behavioral System (psychiatric and substance abuse treatment) and Park Center (psychological and psychiatric counseling services).

Several hospitals support Paulding County. The Paulding County Hospital is located in the Village of Paulding, the only hospital located within the county. The Van Wert County Hospital, located in Village of Van Wert, also serves Paulding County as do medical facilities in Defiance County. Paulding County Hospital provides comprehensive medical, surgical and related care services. The hospital has 57 beds, two extended care homes with a total of 100 beds, and seven physicians and provides comprehensive medical services. The Van Wert County Hospital, a 100-bed facility, also provides comprehensive services.

The principal health care facilities for Paulding and Defiance counties are located in Defiance. There are two hospitals in Defiance with a total of 198 beds for medical, surgical, pediatric care, and mental health services. The City of Defiance Hospital is planning to relocate from its existing location on 2nd Avenue to a new 16.6 hectares (41 acres) site at the intersection of US 24 and West High Street. The second hospital is the Community Memorial Hospital in Hicksville. Fifty-three doctors practice in Defiance and there also are five extended care homes with a total of 365 beds.

One of these community medical resources is located near the existing US 24 Corridor, the new City of Defiance Regional Medical Center.

Fire/Police

The Allen County Fire Department consists of 24 volunteer fire departments located throughout the county. There is one volunteer fire department station located in close proximity to the Feasible Corridors, the Maumee Volunteer Fire Department Station in Woodburn.

In Allen County, continued development within the Urban Service Area Boundary of New Haven will require the extension of utility systems and police and fire services. The minimum fire protection standards for New Haven are:

- Every part of the community must be within 3.23 kilometers (two miles) of an engine and hose company.

- Every part of the community must be within 4.84 kilometers (three miles) of a ladder company.

One existing station currently serves the community of New Haven. According to the *City of New Haven Comprehensive Plan* (1990), there is a need for two new fire stations, each to accommodate an engine and hose company. One station should be located near I-469 to provide improved response time to the eastern part of the city. Another fire station should be located in the eastern portion of the city along US 30/24 in the vicinity of Adams Center Road or Hartzell Road. The ladder and hose company should be located in the center of the city. The 4.8-kilometer (three-mile) service radius would encompass most of the Urban Service Area.

There are four volunteer fire departments in Paulding County, located in Antwerp, Cecil, Brunersburg, and Paulding. The Village of Antwerp Volunteer Fire Department is located near the intersection of Cleveland and Daggett Streets within the village limits. The Cecil Volunteer Fire Department is located in the Village of Cecil at the intersection of Duquesne Street and Fourth Avenue.

The Defiance County Fire Department consists of 18 full-time personnel, 11 on-call volunteer members, the chief and the assistant chief. Equipment includes four pumpers, one aerial ladder truck, one heavy equipment truck, and two rescue vehicles. Eight of the 12 townships in the county also are supported by volunteer fire departments. Of the three townships in the Defiance County portion of the study area, only Noble Township has a volunteer fire department, which is located at the intersection of SR 15 and SR 18. The fire departments maintain intra-county mutual aid fire fighting agreements as well as inter-county cooperative agreements with neighboring counties.

The Allen County Sheriff's Department provides police service for most of the study area located within Indiana. The sheriff's department consists of 120 sworn offices and 113 volunteer officers.

The Paulding County Sheriff and Police Department provides police protection for most of the county. Many of the incorporated communities have police departments including Antwerp that are supported by the county.

The City of Defiance Police Department is composed of 19 uniformed officers, two investigators, and four dispatchers. The force operates 24 hours a day and has four patrol vehicles. A 911 emergency telephone system is in place.

The Ohio State Highway Patrol maintains a barracks in the City of Defiance. Officers assigned to this post are responsible for the patrol and enforcement of motor vehicle regulations on surrounding state highways including US 24.

There are several fire and police stations located within close proximity to the Feasible Alternatives, as listed below and shown on Figure 3.12:

- Maumee Township Volunteer Fire Department (in Woodburn).
- Village of Cecil Volunteer Fire Department.
- Village of Antwerp Volunteer Fire Department.
- Ohio State Highway Patrol Station (Defiance Township).

Schools

Allen County has four public school districts encompassing the City of Fort Wayne and the Allen County area. These districts include 53 elementary, 16 middle and 11 high schools. In addition, there are 16 Catholic and 12 Lutheran schools in the county. Fort Wayne Community Schools have an average student/teacher ratio of 27:1 with a per student investment of \$3,913. The Allen County ratio is approximately 17:1.

Higher education opportunities are excellent in the Fort Wayne area and include the Indiana University - Purdue University at Fort Wayne (IPFW), Indiana Institute of Technology, International

Business College, Michiana College, Indiana Wesleyan University, Taylor University, Ivy Tech State College and St. Francis College. Also located in Fort Wayne are Concordia Theological Seminary and Lutheran College of Health Professions.

There are six school districts within Paulding County – Antwerp Local Schools, Paulding Exempted Village Schools, Wayne Trace Local Schools, Lincolnville Local Schools, Crestview Local Schools and Van Wert City Schools. The Antwerp Local Schools currently consists of an elementary school and a high school. The complex is located in the Village of Antwerp, one block north of US 24. The Antwerp School System is currently constructing a new K-12 complex, which will be located on the southwest side of the village on T-43. The estimated cost of the new facility is \$14 to \$16 million. The new complex will be located on the southwest side of the village on T-43. The existing school facilities will be converted to provide other public services. One parochial school (St. John the Baptist Roman Catholic Elementary School) is located in the Village of Payne. Other educational facilities include the Vantage Vocational School (in Van Wert) and the PARC Lane Training Center (in Paulding).

The Defiance Public School system has 20 public schools grouped into six school districts. There are 12 elementary schools, two middle schools (grades 5 and 6), a junior high (grades 7 and 8), and five high schools. Sixty percent of Defiance County’s public educational facilities are elementary schools, 15 percent are middle and junior high schools, and 25 percent are high schools. The public school system enrollment is approximately 3,200 students. Defiance also has four parochial schools: two Roman Catholic, one Lutheran, and one Church of God School. The Defiance School Districts help support a separate Four County Joint Vocational School District. Twenty-eight trade specialties are offered to high school juniors and seniors, along with adult education in standard and custom-designed programs.

Northwest State Community College, an adjoining campus to the Vocational High School, offers post-graduate and continuing education. Defiance College located within the city, is a four-year liberal arts college with an enrollment of approximately 900 students. Defiance College has established a cooperative education program with local business and industry. The college offers accelerated Business Management Programs and a Masters Program in Education. Additional higher education opportunities exist at Bowling Green State University, the University of Toledo, and Tri-State University.

Several schools are located within or in close proximity to the Feasible Corridors, as listed below and shown on Figure 3.12:

- Woodlan Junior/Senior High School.
- Woodburn School.
- Woodburn Lutheran School.
- Antwerp Elementary/High School.
- We Care, God Cares Day Care facility.
- Proposed site for the new Antwerp Schools Complex.

Churches

Fort Wayne has frequently been referred to as “the City of Churches.” There are 347 houses of worship in the Fort Wayne area, representing all major faiths and most denominations. Within Paulding County, there are 12 houses of worship. There are 46 places of worship serving the City of Defiance and 36 additional places of worship located throughout the remainder of Defiance County.

There are seven churches located near or within the Feasible Corridors, as listed below and shown on Figure 3.12:

- St. Paul Lutheran Church (Milan Township, Allen County).
- Kingdom Hall of the Jehovah’s Witnesses (Carryall Township, Paulding County).
- Mount Calvary Church (Village of Antwerp, Paulding County).
- First Presbyterian Church (Village of Antwerp, Paulding County).
- Antwerp United Methodist Church (Village of Antwerp, Paulding County).

- First Baptist Church (Village of Antwerp, Paulding County).
- Harvest Life Fellowship (Defiance Township, Defiance County).

Cemeteries

There are numerous cemeteries located throughout the study area. These vary in size, type, association with religious faiths, and age. As shown on Figure 3.12, seven cemeteries are located within or on close proximity to the Feasible Corridors:

- St. Paul Lutheran Cemetery (Gar Creek, Milan Township, Allen County).
- EV Mennonite Cemetery (Maumee Township, Allen County).
- Riverside Cemetery (Village of Antwerp, Paulding County).
- Lutheran Cemetery (Crane Township, Paulding County).
- Rochester Cemetery (Crane Township, Paulding County).
- St. Stephens Cemetery (Delaware Township, Defiance County).
- Tuttle Cemetery (Noble Township, Defiance County, Ohio).

Existing US 24 also provides access to several other cemeteries located throughout the study area.

Government

As shown on Figure 3.12, there are several government/community facilities located in the study area:

- Village of Antwerp Administrative Offices.
- US Postal Service – Village of Antwerp Post Office.
- Carryall Township Hall (Village of Antwerp).
- Crane Township Hall (Village of Cecil).
- US Postal Service – Village of Cecil Post Office.
- ODOT Defiance County Garage.

Public Utilities

There are several public utilities that provide electrical distribution, natural gas distribution, telecommunications, water distribution, and sewage collection services in the study area. These include the American Electric Power (AEP), Ohio Power Company, Paulding-Putnam Electric Cooperative, Toledo Edison, Ohio Gas Company, Adelphia Cable, MCI/Worldcom, Alltel Ohio, Inc., Verizon (GTE North), ANR Pipeline Company, Panhandle Eastern Pipeline, Defiance Water Treatment, and the Village of Antwerp.

Several of these providers have major infrastructure in the study area. An electrical substation owned and operated by AEP Power is located on Harper Road in Allen County. The station is connected to the electric distribution system by way of an overhead transmission line that crosses existing US 24. ANR Pipeline has three high pressure natural gas distribution pipelines (two 30 inches in diameter and one 36 inches in diameter) that cross through the study area in Defiance County. The Panhandle Eastern Pipeline Company has four high pressure natural gas transmission lines connecting to the Defiance Number 1M&R Station located on US 24 in Defiance County.

Railroads

There are three active rail lines located within the Feasible Corridors. These are the Norfolk Southern (NS) Railroad in Allen County, the Maumee and Western Railroad in Defiance and Paulding County, and the CSXT rail line in Defiance County.

The NS line extends from Woodburn, Indiana, through Paulding, Putnam, and Hancock counties, terminating in Arcadia, Ohio. This rail line is one of NS's east-west connectors in Ohio and is part of the national system.

The Maumee & Western Railroad is a short-line railroad, which primarily serves customers between Liberty Center, Ohio, and Woodburn, Indiana. Connections to larger lines are possible at Woodburn (NS) and Defiance (CSXT). The rail line presently serves approximately 15

customers along the route, shipping mainly locally grown agricultural products (i.e. grains), sand, silica, and other bulk commodities. Approximately 10 trains per week use the Maumee & Western rail line. The short-line is a single-track operation and has undergone considerable upgrades. Recently, \$1.3 million was spent on track repairs needed to open the rail line for use. Despite the upgrade, a 16.1-kph (10-mph) speed limit is imposed on the line due to the use of jointed rail and the fact that the subgrade underlying ballast is poor. Currently, there are no plans for expansion of this rail line through the study area. However, through coordination undertaken for this project, the ORDC has indicated a preference to preserve the right-of-way for future rail use (Letter from James F. Seney, ORDC, January 23, 2002).

CSXT operates a double-track line that extends from Defiance eastward through Ohio to Youngstown. It is one of the busiest rail lines in the state, carrying approximately 50 trains a day through the study area. Connections from this line are also possible to other railroads in the City of Defiance (Maumee & Western Railroad) and in Hamler in Henry County and to the Port of Toledo at Deshler.

Other

The Cecil Community Grange is located within the Village of Cecil.

Methodology

Community facilities were located through a review of available documentation including:

- Greater Fort Wayne Chamber of Commerce, *2000 Guide to Fort Wayne, Indiana*.
- Greater Fort Wayne Chamber of Commerce, *Business Information Guide 2000*.
- *Platbook of Defiance County* (1993).
- Highway Map of Paulding County, Ohio (1998).
- Highway Map of Defiance County, Ohio (1998).
- Defiance Area Chamber of Commerce *Membership Directory and Consumer Guide* (1997-1998).
- *City of New Haven Comprehensive Plan* (1990).
- *Paulding County Comprehensive Plan* (1972).
- *Defiance County Comprehensive Plan - Draft* (1999).
- *Defiance County Comprehensive Plan* (2000).

The information on location of community resources was mapped and then verified through field reviews. Additional information was also collected through interviews with local officials and planning agencies.

Public utilities were identified through coordination with INDOT's and ODOT's utility coordinators and a review of listing and maps available through the Indiana and Ohio Utility Protection Services. Additional coordination was undertaken in November 2001 with affected utilities to get information on infrastructure present within the study area, planned expansion, and project-related concerns and issues.

Project mapping depicting the Feasible Corridors and the Feasible Alternatives was overlain on mapping depicting the locations of community facilities. Community facilities located within or in close proximity to the Feasible Corridors were identified for impact evaluation. Direct impacts are defined as impacts that require acquisition of all, or a portion of the property on which the facility is located. Minor direct impacts are those where the function of the site on which the community facility is located is not affected. Major impacts are those impacts that would impair the function of the facility. Indirect impacts are defined as changes in access, noise level impacts, vibration impacts, or other types of proximity impacts that may affect the provision of services by the facility.

Project Impacts

Several community facilities are located within or in close proximity to the Feasible Alternatives as shown in Table 3.46 and on Figure 3.12. The majority of these community resources are located along US 24. In general, community resources will be negatively affected by Alternative Y and the No Build Alternative through increased traffic congestion and noise levels. Alternatives

A through X, and Z affect a small number of community facilities by relocating US 24 closer to these resources. These impacts do not substantially affect the function of these facilities and therefore would result in minimal impacts.

**TABLE 3.46
SUMMARY OF IMPACTS TO COMMUNITY FACILITIES**

Type of Facility	Facility & Location	Alternative	Description of Impact
Medical/ Health Care	City of Defiance Regional Medical Center West High Street City of Defiance, Defiance County	A-X, Z	Improved access.
		Y, No Build	No change in access.
Police/Fire	Milan Township Volunteer Fire Department Sampson Road Milan Township, Allen County	A-X	Improved access.
	Maumee Township Volunteer Fire Department SR-101 City of Woodburn, Allen County	A-X	Improved access.
	Village of Antwerp Volunteer Fire Department US 24 Village of Antwerp, Paulding County	A-X, Z	US 24 relocated out of Antwerp.
	Village of Cecil Fire Department C-105 Village of Cecil, Paulding County	A-H, M-P, U-X	Both east-west access routes (C-206 and C-216) closed affecting travel movement through municipality.
		D-1	Improved access.
	Ohio State Highway Patrol, Defiance Post US 24 Defiance Township, Defiance County	B, D, D-1, F, H, J, L, N, P, R, T, V, X, Z	Direct impact (right-of-way acquisition) associated with US 24/SR 424 interchange. Does not affect buildings or access.
Schools	Woodlan High School Woodburn Road Milan Township, Allen County	Z	Webster/Woodburn Roads intersection closed. Increased noise levels.
		Y, No Build	Increased noise levels.
	We Care, God Cares Day Care US 24 Village of Antwerp, Paulding County	Y, No Build	Increased noise levels.
Churches	St. Paul Lutheran Church Berthaud Road Milan Township, Allen County	A-D, D-1, I-P	Access affected due to closure of Berthaud Road at US 24. Increased noise levels.
		E-H, Q-X	Access affected due to closure of Bremer Road between Webster and Rousey roads. Increased noise levels.
	Kingdom Hall of Jehovah's Witnesses US 24 Carryall Township, Paulding County	A-X, Z	Access changed by relocation of US 24. Decreased noise levels.
		Y, No Build	Increased noise levels.
	Mount Calvary Church US 24 Village of Antwerp, Paulding County	A-X,	Access changed by relocation of US 24. Decreased noise levels.
		Y, No Build	Increased noise levels.
		Z	Displaced.
	First Presbyterian Church US 24 /SR 49 Village of Antwerp, Paulding County	A-X	Access changed by relocation of US 24. Decreased noise levels.
		Y	Displaced.
		Z	Increased noise levels.
No Build		Increased noise levels.	
Harvest Life Fellowship US 24 and Krouse Road Defiance Township, Defiance County	Z	Minor property acquisition, does not affect function of facility.	
Cemeteries	St. Paul Lutheran Church Cemetery Berthaud Road Milan Township, Allen County	A-D, D-1, I-P	Access affected due to closure of Berthaud Road at US 24. Increased noise levels.

**TABLE 3.46 (CONTINUED)
SUMMARY OF IMPACTS TO COMMUNITY FACILITIES**

Type of Facility	Facility & Location	Alternative	Description of Impact
Cemeteries (Continued)	St. Paul Lutheran Cemetery Berthaud Road Milan Township, Allen County	E-H, Q-X	Access affected due to closure of Bremer Road between Webster and Rousey Roads. Increased noise levels.
	EV Mennonite Cemetery US 24 Maumee Township, Allen County	Y, No Build	Increased noise levels.
		Z	Decreased noise levels.
	Riverside Cemetery US 24 Village of Antwerp, Paulding County	A-X	Decrease in noise levels. Changes in access (US 24 relocated to south of Antwerp).
		Y, No Build	Increased noise levels.
		Z	Changes in access (US 24 relocated to south of Antwerp). Increased noise levels.
	Lutheran Cemetery C-206/C-87 Crane Township, Paulding County	A-H, M-P, U-X	Location based on literature review and public comment; presence could not be verified by fieldviews.
	Rochester Cemetery US 24 Crane Township, Paulding County	Y, Z, No Build	Increased noise levels.
	St. Stephens Cemetery US 24 at Jacobs Road Defiance Township, Defiance County	Y, Z, No Build	Changes in access. Increased noise levels.
	Tuttle Cemetery US 24 Noble Township, Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W, X	No direct impact, US 24/SR 424 interchange is located on adjacent property.
		Y	US 24 relocated to north of cemetery. Increased noise levels.
		Z	US 24 relocated to north of cemetery. Increased noise levels.
		No Build	Increased noise levels.
	Government	Crane Township Hall C-105 Village of Cecil, Paulding County	A-H, M-P, U-X
D-1			Improved access.
Village of Cecil Post Office C-105 Village of Cecil, Paulding County		A-H, M-P, U-X	Both east-west access routes (C-206 and C-216) closed affecting travel movement through municipality.
		D-1	Improved access.
ODOT Defiance County Garage US 24 /SR 424 City of Defiance, Defiance County		B, D, F, H, J, L, N, P, R, T, V, X	US 24/SR 424 interchange will require acquisition of property; function of site is retained.
		D-1	Acquisition of 3.1 hectares (7.7 acres). Salt storage and brine mixing facilities affected. Function of site retained through on-site replacement of affected facilities.
		Y, No Build	Increased traffic congestion.
Public Utilities	AEP Substation Harper Road New Haven, Allen County	A-X, Z	Direct access from US 24 via Harper Road is eliminated; access is provided via Doyle Road.
		Z	Improved access.
	Philadelphia Power Substation US 24 Crane Township Paulding County	A-X	Crossing of pipelines requiring reconstruction within the right-of-way.
	Z	Displaced.	

**TABLE 3.46 (CONTINUED)
SUMMARY OF IMPACTS TO COMMUNITY FACILITIES**

Type of Facility	Facility & Location	Alternative	Description of Impact	
Public Utilities (Continued)	ANR Pipeline City of Defiance and Noble Township Defiance County	A-Z	Perpendicular crossing of the pipeline requiring reconstruction within the right-of-way.	
	Panhandle Eastern Pipeline Company Defiance No. 1 M&R Station & Natural Gas Pipeline US 24, Defiance Township Defiance County	A-X	All Alternatives cross pipeline.	
		Y	No change.	
Railroads	Norfolk Southern Railroad Crossing at Jefferson, Maumee, Milan Townships, Allen County	I-X	Grade-separated crossing between Rousey and Sampson roads.	
	Maumee & Western Railroad Various crossings in Paulding and Defiance counties	A-H	At-grade crossing between C-11 and C-21. To be removed when temporary sections of the Antwerp Bypass are abandoned. At-grade crossing at T-69 to be removed when temporary sections of Antwerp Bypass are abandoned.	
		C, D, D-1, G, H, K, L, O, P, S, T, W, X	Grade-separated crossing between US 127 and C-115.	
		A, E, I, M, Q, U	Grade-separated crossing west of C-153.	
		B, F, J, N, R, V	Grade-separated crossing east of C-153.	
		Z	Grade-separated crossing between C-11 and C-21. Grade-separated crossing at T-69.	
	CSX Transportation Crossing at US 24 near Ashwood Road, Delaware Township Defiance County	A-X, Z	Grade-separated crossing to carry highway over railroad.	
		Y, No Build	Crossing remains unchanged. Increased traffic volumes at crossing. Increased time delays for vehicles stopped by crossing trains.	
	Other	Cecil Community Grange C-105 Village of Cecil, Paulding County	A-H, M-P, U-X	Both east-west access routes (C-206 and C-216) are closed affecting travel movement through community.

With Alternatives B, D, F, H, J, L, N, P, R, T, V, X, and Z, the Ohio State Highway Patrol and the ODOT Defiance County Garage Property will be affected by right-of-way acquisition; however, the function of both facilities is not affected. The Harvest Life Fellowship will be affected through right-of-way acquisition, possibly affecting the parking area under Alternative Z, but the acquisition does not affect the building.

Alternatives Y and Z result in the displacement of community facilities as described below:

- The First Presbyterian Church, located along US 24 in Antwerp, is displaced by Alternative Y.
- The Panhandle Eastern Pipeline Defiance M&R Station, located along US 24 in Defiance County, will be displaced by Alternative Z.
- The Mt. Calvary Church in Antwerp will be displaced by Alternative Z.
- The Philadelphia Power Electrical Substation, located along US 24 in Paulding County, will be displaced by Alternative Z.

The Lutheran Cemetery in Crane Township was identified through literature reviews and comments received from local landowners. However, the exact location of burials could not be determined through field reviews. According to the local landowners, the remains of four grave

markers from the cemetery were moved into a narrow wooded area located immediately outside of the right-of-way limits for the Alternatives A through H, M through P, and U through X. There is evidence of at least one pet burial nearby. Originally, the cemetery was associated with the Lutheran Emmanuel Church of Cecil, which was built in Crane Township in the 1890's. After relocating its operations, the Lutheran Emmanuel Church abandoned the cemetery. Since then, the cemetery has been referred to locally as the Stuart Farm Lutheran Cemetery, named after the family who operated a farm on the property. While only relocated headstones have been located, there is a potential for unmarked burials to be present within the right-of-way limits for Alternatives A through H, M through P, and U through X.

All Feasible Alternatives affect transmission lines associated with the AEP substation at Harper Road. Coordination with the utility identified one project-related concern, which is the need to provide adequate vertical clearance for the transmission lines crossing US 24.

Alternatives A through X and Z also affect natural gas distribution operations associated with the Panhandle Eastern's Defiance No. 1 Station. Alternative Z displaces the distribution station while Alternatives A through X result in the crossing of distribution lines. All Feasible Alternatives affect the ANR Pipeline, a major natural gas pipeline that traverses western Defiance County. The utilities expressed a preference for perpendicular road crossings. Project-related issues include emergency access, depth of cover, expense of relocation, and potential disruption of service during construction.

All Feasible Alternatives involve rail crossings. The number of rail crossings ranges from 1 with Alternative Y to four with Alternatives A through H. A grade-separated crossing carrying US 24 over the NS line would be constructed for Alternatives I through X. All alternatives with the exception of Alternative Y cross the Maumee & Western Railroad. Alternatives I through X cross the rail line twice while three crossings would be constructed for Alternatives A through H. Two of the crossings proposed with Alternatives A through H will be temporary crossings, constructed at-grade, and to be removed when the Antwerp Bypass connectors are abandoned. Alternative Z involves two crossings, also along the Antwerp Bypass. However, these crossings are permanent and will be constructed as grade-separated crossings. All alternatives cross the CSXT line in Defiance County. For Alternatives A through X and Z, an overpass will be constructed to carry the highway over the rail. This will enhance safety as well as eliminate time delays of US 24 travelers who must stop for crossings trains. With Alternative Y, the crossing would remain as an at-grade crossing. Increasing traffic volumes on US 24 could potentially diminish safety at the rail crossings as well as increase travel times for motorists delayed by passing trains.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) has similar impacts to those reported for Alternative D. No community facilities will be displaced by the Preferred Alternative.

The Ohio State Highway Patrol Post located just east of the US 24/SR 424 intersection in Defiance will be affected by minor right-of-way acquisition; however, the function of the facility will not be permanently affected by Alternative D-1.

There is the potential for unmarked graves associated with the Lutheran Cemetery to be located within close proximity to the right-of-way of the Preferred Alternative.

The ODOT Defiance County Garage will be affected by construction of the US 24/SR 424 interchange for the Preferred Alternative. The eastbound entrance and exit ramps at the SR 424 interchange were shifted to the west to avoid the displacement of residences located in the Bohlman Trailer Park. As a result, the salt storage and brine mixing facilities at ODOT's Defiance County Garage will be affected. The facilities will be replaced on-site, thereby retaining the function of the property.

The Preferred Alternative also impacts the AEP transmission line crossing in Allen County as well as pipelines owned and operated by the ANR Pipeline and Panhandle Eastern Pipeline companies.

The Preferred Alternative crosses the Maumee and Western Railroad as well as the CSXT corridor.

The crossings over the Maumee & Western line will be constructed at-grade as these are considered to be temporary crossings and will be removed when the Antwerp Bypass connectors are abandoned. The crossings should have little impact on traffic as the rail line is not a heavily traveled line and there are currently no plans to expand service on the line. An overpass will be constructed to carry Alternative D-1 over the CSXT line in Defiance County. This will enhance safety as well as eliminate time delays of US 24 travelers who must stop for crossings trains. Access to other community facilities will be changed through road closures and other changes in the local road network.

Through coordination with local municipal officials, concerns have been raised on the need to minimize conflicts between US 24 mainline traffic and traffic associated with school trips. In particular, these comments have focused on two schools – Woodlan High School in Allen County and the new Antwerp Local Schools complex in Paulding County. In response to the comments received from local officials, the Woodburn Road crossing has been revised from an at-grade intersection to a grade-separated crossing for the Preferred Alternative, minimizing the conflicts between automobiles, busses, and pedestrians traveling to and from Woodlan High School and US 24 mainline traffic. Similarly, the crossing at T-43 has been changed from an at-grade intersection to a grade-separated crossing for the Preferred Alternative to minimize conflicts between school-related traffic traveling to and from the Antwerp Local School complex recently constructed east of T-43 and US 24 mainline traffic.

Mitigation

The displacement of or other negative impacts on community facilities or services provided through such facilities is an undesirable effect of the project development. The Preferred Alternative (Alternative D-1) does not result in the displacement of any community facilities, but it does have the potential to affect access to services provided through community facilities. Coordination will be undertaken with affected community service providers to avoid or minimize the impacts on these facilities and services during preliminary and final design studies. The efforts will address both short-term construction impacts as well as long-term permanent impacts.

Salt storage, brine mixing, and other affected facilities located on property associated with ODOT's Defiance County Garage will be replaced on site.

3.2.6 Parks/ Recreation Land/ Natural and Wildlife Areas/Section 4(f) and 6(f) Resources

The US Department of Transportation Act of 1966 included a provision affording protection to public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f), found in 23 CFR 771.135, stipulates that the FHWA will not approve any program or project which requires the use of any publicly owned park, recreation area, or wildlife or waterfowl refuge, or any land from a historic site of national, state or local significance unless:

- There is no feasible and prudent alternative to the use, and
- All possible planning to minimize harm resulting from such use is included.

A "use" occurs when:

- Land subject to Section 4(f) is acquired for a transportation project;
- There is an occupancy of land that is adverse in terms of the statute's preservation purposes; or
- The effects of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired (referred to as "constructive use").

Publicly owned land is considered to be a park, recreation area, or wildlife/waterfowl refuge when the lands have been officially designated as such or when the official having jurisdiction over the land determine that one of its major purposes or functions is for park, recreation or refuge purposes. Incidental, secondary, occasional or dispersed recreational activities do not constitute a major purpose. Generally, officials having jurisdiction are the officials of the agency owning or administering the land.

Consideration of Section 4(f) is not required when the officials having jurisdiction over a park, recreation area or refuge determine that the entire site is not significant. Significance for the purposes of Section 4(f) is determined by comparing the availability and function of the resource with the park, recreational, and wildlife/waterfowl refuge objectives of the community. In the absence of such a determination, the Section 4(f) land is presumed to be significant. Where lands are managed for multiple uses, Section 4(f) applies only to those portions of such lands which function for, or are so designated, and the significance of those lands shall be made by the officials having jurisdiction over the lands.

The Land and Water Conservation Fund Act (LWCFA) of 1965 provided funding to be utilized for the planning, acquisition, or development of approved outdoor public recreational resources. Section 6(f) of the Act protects public recreational resources supported by LWCFA monies by requiring approval of the Secretary of the Interior for conversion of the resource to a non-recreational use and replacement of the resource. As with Section 4(f) resources, the Secretary can only approve the conversion if no prudent or feasible alternative exists.

Existing Conditions

Parks, recreation lands, and natural/wildlife areas within the study area are identified on Figure 3.13. Only five such resources are located within the Feasible Corridors. These resources include two parks, a rest area, Antwerp Schools proposed recreation area, and the Maumee State Scenic and Recreational River. Of these five resources, only two are Section 4(f) resources:

- Maumee River Public Fishing Area.
- Riverside Park.

Neither of these resources qualifies for protection in accordance with Section 6(f) of the LWCFA.

Maumee River Public Fishing Area

This public resource is located along US 24 in Allen County approximately 914.6 meters (3,000 feet) east of the existing US 24/Webster Road intersection. The 0.6-hectare (1.5-acre) resource consists of a gravel driveway with two access points intersecting US 24. The adjacent land is grassland and forested areas. Steps providing access to the southern shore of the Maumee River are also located on the site. The public fishing area is owned and operated by the IDNR, Division of Fish and Wildlife. There are no restrictions on use by the public.

The park is not included in the *Indiana 2000 Recreation Guide* (IDNR, Division of State Parks and Reservoirs) and is not included in the current listings of Public Fishing Areas maintained by the IDNR, Fish and Wildlife Division.

The land associated with the Maumee River Public Fishing Area was recently donated to the IDNR, Fish and Wildlife Division by Allen County. It was formerly designated as a local park. Prior to ownership by Allen County, INDOT owned and operated the site as a rest area for motorists traveling US 24.

IDNR, Fish and Wildlife Division is planning to improve the site through site grading, addition of a paved parking area, and construction of a boat launch ramp. Construction was scheduled to begin in 2001, pending approval of necessary permits (Telephone Interview with Gary Hudson, IDNR, November 27, 2000).

Riverside Park

Riverside Park is located along US 24 on the eastern edge of the Village of Antwerp in Paulding County. The park property is bordered to the west by Island Street, to the north by the Maumee River, to the east by T-43, and US 24 to the south. The park is owned and operated by the Village of Antwerp.

The 3.6-hectare (8.9-acre) park contains several recreational amenities including a wellness trail, picnic shelters and tables, horseshoe pits, children's play equipment (swings, see-saws, sand box, slides), half-court basketball and bathrooms. Pedestrian access to the Maumee River is also provided. The park also contains a memorial dedicated to the memory of Antwerp's veterans. The park is open to the public 24 hours per day. In the past, the park was home to the

annual Chautauqua Heritage Review through which the surrounding public could participate in plays and concerts. The park is also known as the Veterans Memorial Park and Antwerp Village Park.

Coordination with the ODNR, Real Estate and Land Management Office showed that no LWCFA monies have been used in Paulding County (Telephone Interview with Steve Kloss, November 22, 2000).

Antwerp Local Schools Athletic Facilities

The Antwerp Local Schools is constructing new school facilities including the expansion of recreational facilities on property bounded by SR 49 to the west, C-180 to the north, T-43 to the east, and Waterworks Drive to the south. The new facilities will include indoor and outdoor recreational amenities supporting interscholastic athletics. This resource has the potential to be subject to Section 4(f); however, the Preferred Alternative will not affect this resource.

New Rochester Park

New Rochester Park is located north of the Village of Cecil in Paulding County. It is located approximately 457.3 meters (1,500 feet) east of the US 24/C-105 intersection. The first county seat was established in 1838 in New Rochester on the Maumee River, reportedly at this site. The site is now a roadside rest area along US 24. The site is approximately 5.4 hectares (13.2 acres) in size. Access to the rest area is not restricted at any time. The land is owned by the State of Ohio, and operation and maintenance activities are overseen by ODOT. The primary function of the resource is a safety rest area for motorists traveling on US 24. Improvements to the rest stop (new rest rooms facilities and installation of new sewage system) have recently been constructed on the site.

Paulding County does not recognize the resource as a public park under its jurisdiction. However, the planning officials do recognize that local residents use the facility for passive recreational activities. Also, the resource is noted as the New Rochester Park on the *Paulding County, Ohio Highway Map* (1998). The land is deeded to the State of Ohio as the Rochester Park.

This resource is not designated as a Section 4(f) resource given that its primary function is not recreational. The parcel is developed as a safety rest area, its primary function is to provide for the safety and convenience of highway users. As noted in AASHTO's *A Policy on Geometric Design of Highways and Streets* (2001), a rest area is not intended to be used for active forms of recreation.

A formal determination was made on January 18, 2001 regarding the New Rochester Park Rest Area. Section 4(f) is not applicable to the site (see correspondence in Appendix 3.5 dated January 18, 2001).

Maumee State Scenic and Recreational River

The Maumee River is a State Scenic and Recreational River, designated as such by the State of Ohio on July 18, 1974. The scenic portion of the river starts at the Indiana/Ohio state line and proceeds east for a distance of approximately 69.4 kilometers (43 miles) to the US 24 Maumee River crossing. The section is characterized by a broad meandering floodplain with sharply rising banks that distinctly contrast from much of the surrounding terrain. The recreational portion of the river is 85.5 kilometers (53 miles) long and begins at the US 24 river crossing at Defiance and continues east to the SR 20/25 bridge at Perrysburg and Maumee, Ohio.

In 1972, the river was reviewed for inclusion in the National Wild and Scenic Rivers System; however, the river did not meet all criteria required for designation as a National Wild and Scenic River.

Coordination with the ODNR concerning the applicability of Section 4(f) to the Maumee State Scenic and Recreational River has been conducted for this project. ODNR is exempting the resource from review under the provisions of Section 4(f) for this project (see correspondence from ODNR dated June 18, 2001 in Appendix 3.4). Therefore, further consideration of the Maumee River as a Section 4(f) resource is not required.

Methodology

Parks, recreation areas, and wildlife refuges were identified through review of available mapping of the study area, review of websites dedicated to public recreation opportunities and facilities, field views and review of project mapping. Resources within the Feasible Corridors were located on project mapping in order to determine impacts resulting from the alternatives.

Two types of impacts are considered for Section 4(f) resources - direct impacts and indirect impacts. Direct impacts occur when an alternative requires the acquisition of property, either in whole or a portion of, associated with the Section 4(f) resource. Direct impacts can also occur in association with temporary or permanent construction easements, if these adversely affect the activities, features, attributes that are important to the purpose of the function of the property. For park, recreational and wildlife/waterfowl refuge resources, the Section 4(f) boundaries are consistent with current legal boundaries of the parcels on which the resources are located. Indirect impacts include changes in ambient noise levels, changes in site access, and visual impacts (changes in views of and from a Section 4(f) resource).

Impacts are evaluated based on the following criteria:

- Amount of land to be acquired of the total amount of land comprising the recreation resource.
- Effect of impact on function of the resource.
- Changes in viewsheds, ambient noise levels, and access.
- Effect of proximity impacts on function of the resource.

Project Impacts

Table 3.47 summarizes the impacts of the Feasible Alternatives on the five recreational resources located within the study area. Alternative Y has the greatest impact directly affecting three recreational resources. Alternative Z affects three resources, requiring property acquisition from two of the three resources. Alternatives A through H also impact three resources. Alternatives I through X indirectly impact two recreational resources.

Of these five resources, only two meet the criteria for Section 4(f) protection - the Maumee River Public Fishing Area and Riverside Park. Alternative Y requires acquisition of property associated with both Section 4(f) resources. Alternative Z requires acquisition from the Maumee River Public Fishing Area.

Maumee River Public Fishing Area

The Maumee River Public Fishing Area will be directly affected by Alternatives Y and Z. These impacts are limited to minor acquisition of right-of-way and reconfiguration of access to and from US 24. Approximately 0.2 hectares (0.6 acres) of the 0.6 hectares (1.5 acres) comprising the public resource is required for right-of-way for Alternative Y. Alternative Z requires acquisition of 0.3 hectares (0.8 acres) for right-of-way. All other alternatives avoid the resource. Visual impacts are not a factor affecting the function of the site; similarly changes in noise levels will not impair the function of the site.

Antwerp Local Schools Athletic Facilities

The site on which Antwerp Local Schools is constructing new facilities will not be directly affected by any of the alternatives. The site is in close proximity to Alternatives A through H. The resource will not be subjected to substantial increases in noise levels as approximated by Noise Analysis Site #L1. Noise levels will increase by two dBA from 62 dBA to 64 dBA. In accordance with FHWA and ODOT noise impact guidelines, the future noise level at this site does not exceed FHWA Noise Abatement Criteria (NAC) for Category B land uses and does not meet impacts from substantial increases in noise levels.

Riverside Park

Riverside Park will be directly affected by Alternative Y. The impacts are limited to minor right-of-way acquisition and reconfiguration of access driveways at intersections with US 24. Approximately 0.2 hectares (0.4 acres) of the 3.6 hectares (8.9 acres) comprising the park is required for right-of-way for Alternative Y. Minimal changes in the visual environment will occur as a result of minor roadway improvements. The resource will be subjected to increased noise levels for Alternative Y and the No Build Alternative. Noise levels would increase by eight

dba from 66 dba to 74 dba, as approximated by Noise Analysis Site #7. In accordance with FHWA and ODOT noise impact guidelines, the future noise level at this site exceeds FHWA NAC. The increased noise level may affect the quality of the recreational experiences, but does not substantially impair the function of the resource. All other alternatives avoid the resource by relocating US 24 south of the Village of Antwerp.

**TABLE 3.47
IMPACTS TO RECREATIONAL RESOURCES**

Resource	Meets Criteria for Section 4(f)	Alternative	Description of Impact	Property to be Acquired Hectares (Acres)	Percent of Total Area of Resource
Maumee River Public Fishing Area	Yes	Y	Minor property acquisition affecting frontage and driveways.	0.2 (0.6)	38%
		Z	Minor property acquisition affecting frontage and driveways.	0.3 (0.8)	55%
Riverside Park	Yes	A-X, Z	Reduced noise levels and traffic congestion as US 24 is relocated out of Antwerp.	—	0%
		Y	Property acquisition affecting frontage and access roads. Increased traffic congestion. Increased noise levels.	0.2 (0.4)	5%
		No Build	Increased traffic congestion. Increased noise levels.	—	0%
Antwerp Local Schools Athletic Facilities	No	A-H	Improved access. Increased noise levels.	—	0%
New Rochester Park	No	A-X	US 24 Rest Area no longer located on US 24.	—	0%
		Y	Property acquisition. Increased traffic congestion. Increased noise levels.	0.6 (1.5)	11%
		Z	Improved traffic flow. Increased noise levels.	—	0%
		No Build	Increased traffic congestion. Increased noise levels.	—	0%
Maumee State Scenic and Recreational River	No	A-X, Z	New crossing over river.	—	—

New Rochester Park

New Rochester Park will be directly affected by Alternatives A through Z. The impacts would be limited to minor right-of-way acquisition and reconfiguration of driveways at the intersections with US 24. Approximately 0.6 hectares (1.5 acres) of the 5.4-hectare (13.2-acre) rest area will be required for right-of-way with Alternative Y. The resource will be subjected to increased noise levels for Alternative Y and the No Build Alternative. Noise levels will increase by five dba from 74 dba to 79 dba, as approximated by Noise Analysis Site #10. In accordance with FHWA and ODOT noise impact guidelines, the future noise level at this site exceeds FHWA NAC. The increased noise level may affect the quality of the recreational experiences, but does not substantially impair the function of the resource. For Alternatives A through X, US 24 will be relocated off of the existing alignment at this location thereby significantly diminishing the function of the resource as a safety rest area for motorists traveling US 24. The resource is not a Section 4(f) resource.

Maumee State Scenic and Recreational River

The existing crossing of the Maumee River will be reconstructed under all alternatives with the exception of the No Build alternative and Alternative Y. Also, a parallel structure will be constructed upstream (west) of the existing structure. Reconstruction of the existing structure will likely require placement of piers within the river channel. The impacts are located just to the west of the boundary of the recreational portion of the river. Therefore, no direct impacts to recreational activities are expected. Construction activities, however, will likely require the temporary suspension of any recreational activities on the river at this location. The potential for visual impacts is minimized by the construction of a parallel structure adjacent to the existing structure. The Maumee State Scenic and Recreational River is not considered to be a Section 4(f) resource.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) does not impact any parklands or recreational resources that qualify for Section 4(f) protection.

Reconstruction of the existing US 24 crossing over the Maumee River, including the construction of a new parallel structure adjacent to the existing structure, is required for the Preferred Alternative.

Alternative D-1 will be located to the south of the new Antwerp Local Schools complex. In response to comments received from the Paulding County officials, the crossing at T-43 has been redesigned as a grade-separated crossing to separate school traffic from traffic traveling US 24.

Coordination

Coordination was undertaken with the IDNR, Fish and Wildlife Division concerning the Maumee River Public Fishing Area to determine the future use of the area as a recreational resource. The land associated with the Maumee River Public Fishing Area was recently donated to the IDNR, Fish and Wildlife Division by Allen County. The land was formerly designated as a local park by the county. Prior to ownership by Allen County, INDOT owned and operated the site as a rest area for motorists traveling US 24. IDNR, Fish and Wildlife Division is planning to improve the site through site grading, addition of a paved parking area, and construction of a boat launch ramp (Telephone Interview with Gary Hudson, IDNR, November 27, 2000).

Coordination has been undertaken with the ODNR for the Maumee State Scenic and Recreational River. During the review of the preliminary corridors, as presented in the *Preliminary Alternatives Summary* (July 1999) as part of Concurrence Point #1 coordination, ODNR indicated a preference for maintaining the crossing over the Maumee River on its existing location. All Feasible Corridors proposing a new crossing of the Maumee River at a new location were eliminated from further study following Concurrence Point #1 coordination, thereby avoiding impacts associated with a new crossing over the Maumee State Scenic and Recreational River.

Following development of the 26 Feasible Alternatives, additional coordination was undertaken with ODNR concerning the applicability of Section 4(f) protection to the Maumee State Scenic and Recreational River. In June 2001, ODNR indicated its concurrence in exempting the Maumee State Scenic and Recreational River from Section 4(f) review given the agency's responsibilities for review and approval of final design plans for State Scenic River crossings as specified in the Ohio Revised Code, Section 1517.6 (see correspondence from ODNR dated June 18, 2001 in Appendix 3.4).

Mitigation

Compliance with the intent of the Section 4(f) regulations to protect recreational resources involves implementing methods to avoid the resources. The Preferred Alternative (Alternative D-1) avoids parklands and recreational areas that qualify for Section 4(f) protection. The Preferred Alternative requires the reconstruction of the existing US 24 crossing of the Maumee River. Impacts to the river are minimized by maintaining this crossing at its current location and will be further minimized through the implementation of Best Management Practices for in-stream activities, as requested by the ODNR. Review and approval of final plans by ODNR is required under Section 1517.6 of the Ohio Revised Code.

3.2.7 Economy and Employment Existing Conditions

In Allen County, the study area covers Jefferson, Milan, and Maumee townships and the incorporated municipalities of New Haven and Woodburn. The portion of the study area in Ohio contains three incorporated municipalities (the Villages of Antwerp and Cecil and the City of Defiance) and Harrison, Carryall, Crane and Emerald townships in Paulding County and Delaware, Defiance and Noble townships in Defiance County.

The Fort Wayne Metropolitan Statistical Area (MSA) is a major economic center in the nation's Midwest. In 1997, Fort Wayne was named the number one most industry friendly city for its size and ranked 11th for all cities across the nation. The City of Fort Wayne, the second largest city in the state of Indiana, is located approximately 4.8 kilometers (three miles) to the west of the study area. Several Fortune 500 and national companies are headquartered in Fort Wayne (i.e., Central Soya, Essex Group, Ltd., General Motors, North American Van Lines, Steel Dynamics, Tokheim Corporation and Zollner Corporation).

The City of Defiance is located at the eastern end of the study area. The urban center consists of the City of Defiance and portions of Defiance and Noble Townships. The industrial base is concentrated within the city limits (*Defiance County Comprehensive Plan - Draft*, 1999). Over the past few decades, manufacturing, service, and retail trade have been the core industrial sectors supporting the City of Defiance in terms of employment and annual payroll. In 2000, the total employment of for all industries in Defiance County was 18,467 with the manufacturing industry accounting for the largest percentage of jobs (Ohio Department of Development, 2002). Major employers in the county include Defiance Board of Education, Defiance Hospital, Defiance Metal Products, Defiance Precision Products, General Motors Corporation, Johns Manville Corporation, and Meijer, Inc.

In Allen County, there were a total of 233,769 nonfarm jobs in 2000. The service industry accounted for the greatest percentage of jobs (29.5 percent or 68,907 jobs). In Paulding County, there were total of 6,920 nonfarm jobs in 2000. The split across industrial sectors was 24 percent in manufacturing, 22 percent in services, 19 percent in government, and 16 percent in retail trade.

Even with close proximity of two major economic centers, agriculture development dominates the land use and the economic base of communities located within the study area. The Bureau Economic Analysis (BEA) reports that there were 1,058 farm-related jobs in 2000 in Defiance County (www.stats.indiana.edu). Total cash receipts for the 940 farms operating in the county in 2000 amounted to \$43 million (Ohio Department of Development, 2002). In Paulding County, the BEA reported 844 farm-related jobs in 2000. Cash receipts for 650 farms totaled \$40.5 million in 1999 and Cooper Farms was reported as one of the largest employers in Paulding County (Ohio Department of Development 2002). Farmland impacts are addressed in Section 3.1.7 of this DEIS.

As reported in Table 3.48, there are a number of major non-farming industrial entities located throughout the study area.

Within Allen County, industrial operations within the study area include Pacesetter Finishing, Superior Aluminum, Kwik Lok, Webster Lumber, Hanson Quarry, Uniroyal Goodrich, and Midwest Tile and Concrete. With more than 1,300 employees, Uniroyal Goodrich is one of the largest employers in Allen County (Indiana University-Purdue University at Fort Wayne, Community Research Institute, 2002).

Within Paulding County, the majority of non-agricultural industrial entities are located within the Village of Paulding, south of the study area. There are a total of 32 manufacturing operations in the county (Paulding County Economic Development Corporation, February 1999), five of which are located within the study area: Dana Corporation, Spec-Temp, Inc., Antwerp Tool & Die, K&L Tool, Inc., and Steve Reiff, Inc. Dana Corporation and Spec-Temp, Inc. are two of the largest employers in Paulding County.

Within Defiance County, the majority of industrial entities are located within the city limits. Defiance Hospital, which recently relocated into the study area, is one of the largest employers in the county. Also located within the study area is Koester Corporation, which is major employer.

**TABLE 3.48
MAJOR INDUSTRIAL ENTITIES WITH OPERATIONS IN THE STUDY AREA**

Industrial Entity	Location	Comments
Pacesetter Finishing	Casad Industrial Park Edgerton Road Jefferson Township, Allen County	
Superior Aluminum	Casad Industrial Park Edgerton Road Jefferson Township, Allen County	Freight generator.
Kwik Lok	Edgerton and Ryan Roads Jefferson Township, Allen County	
Webster Lumber	Edgerton Road Jefferson Township, Allen County	Freight generator.
Hanson Quarry	US 24 Milan Township, Allen County	Freight generator.
Uniroyal Goodrich Fort Wayne Plant	US 24 Milan Township, Allen County	Major traffic generator. Freight generator. Major employer in Allen County.
Midwest Tile and Concrete	Webster and Woodburn Roads at US 24 Milan Township, Allen County	Freight generator.
Antwerp Tool & Die	US 24 Village of Antwerp, Paulding County	Freight generator.
K&L Tools	US 24 Village of Antwerp, Paulding County	
Steve Reiff, Inc.	US 24 Village of Antwerp, Paulding County	
Dana Boston Weatherhead	US 24 Village of Antwerp, Paulding County	Major traffic generator. Freight generator. Largest employer in Paulding County.
Spec-Temp, Inc.	US 24 Village of Antwerp, Paulding County	Major traffic generator. Freight generator. Major employer in Paulding County.
Quarry	Crane Township, Paulding County	Freight generator.
Cement Plant	Crane Township, Paulding County	Freight generator.
Defiance Woodworking Machine	SR 424 Noble Township, Defiance County	
Olson Electric	Olson Industrial Park City of Defiance, Defiance County	Major traffic generator. Freight generator.
Olson Cold Storage	Olson Industrial Park City of Defiance, Defiance County	Major traffic generator. Freight generator.
Koester Corporation	Fox Run Executive Park West High Street Noble Township, Defiance County	Major traffic generator. Major employer in Defiance County.
Northwest Controls	Fox Run Executive Park West High Street Noble Township, Defiance County	Major traffic generator.
Defiance Hospital	SR 15 City of Defiance, Defiance County	Major traffic generator. Emergency access needs. Major employer in Defiance County.

There are also commercial districts in the study area, which are located in the City of Woodburn in Allen County, and the Villages of Antwerp and Cecil in Paulding County. Woodburn and Antwerp are the largest of these commercial districts and are very diversified in the type and range of services provided to area residents and businesses. Outside of these commercial districts, commercial and industrial development is concentrated along US 24.

A number of sites are being marketed for economic development within the study area. These sites are listed in Table 3.49 and shown on Figure 3.14.

**TABLE 3.49
ECONOMIC DEVELOPMENT SITES LOCATED IN THE STUDY AREA**

Site/Location	Description	Owner/ Operator	Zoning
Doyle Road Industrial Site Doyle Road/ Edgerton Road/ Bandalier Road/ Dawkins Road Jefferson Township, Allen County	Undeveloped. Site is currently being used for agricultural purposes.	Private	Industrial
Bandalier Economic Development Area Jefferson Township, Allen County	Partially developed. Most of site is currently being used for agricultural purposes. Two industrial entities are utilizing space Kwik Lok and Webster Lumber.	Private	Industrial
Casad Industrial Park Jefferson Township, Allen County	Site is developed with buildings and rail sidings. Current tenants include Superior Aluminum and Pacesetter Finishing. Additional space available.	Private	Industrial
New Haven Industrial Site Doyle Road/US 24/Berthaud Road/Edgerton Road Jefferson Township, Allen County	Undeveloped. Site is currently being used for agricultural purposes. Area includes Canal Place EDA.	Private	Industrial
Canal Place Economic Development Area Ryan Road/Edgerton Road/Webster Road/Dawkins Road Jefferson Township, Allen County	Undeveloped. Site is currently being used for agricultural purposes.	Private	Industrial
Woodburn Industrial Park SR 101 City of Woodburn, Allen County	Currently undeveloped. 12 lots available ranging in size from 1.2 hectares (2.9 acres) to 13.3 hectares (32.8 acres), 3 phase development. Currently undeveloped.	Owned by City of Woodburn, Sponsored by US Department of Agriculture	Industrial
Antwerp Industrial Park T-43/C-180/T-51/C-176 Village of Antwerp, Paulding County	Currently undeveloped. Approximately 54.7-hectare (135-acre) site. Phase 1 consists of eight parcels ranging in size from 1.1 hectares (2.6 acres) to 4.7 hectares (11.5 acres); Phase 2 consists of eight parcels, ranging in size from 2.2 hectares (5.4 acres) to 8.7 hectares (21.6 acres).	Antwerp CIC	Industrial
Enterprise Park SR 424 City of Defiance, Defiance County	Undeveloped 303.6-hectare (750-acre) site. Zoning supports mixed use.	Private	Industrial/ Commercial
Maumee River Crossing Development West High Street Noble Township, Defiance County	Currently under development. Two phase development. Phase 1 construction consists of 71 residential units.	Private	Industrial/ Residential
Olson Industrial Park West High Street City of Defiance, Defiance County	Tenants include Olson Cold Storage, Sun Management, Olson Electric, Defiance Engine Rebuilders, Chief Supermarket (Corporate Headquarters).	Private	Industrial
Fox Run Executive Park West High Street Noble Township, Defiance County	9.1-hectare (22.5-acre) Executive Office Park with two tenants - Northwest Controls and Koester Corporation. Five lots for sale.	Private	Industrial
Defiance Hospital SR 15 City of Defiance, Defiance County	Regional medical facility. Site development recently completed.	City of Defiance	Industrial

Modern transportation facilities are a key component in creating and maintaining a healthy and robust economy. US 24 is the only major route through the study area and serves as an economic link between Fort Wayne and Defiance in addition to many locations to the east and west of the immediate study area. US 24 is one of several High Priority Corridors designated by

the United States Congress in the Intermodal Surface Transportation Act of 1991 (ISTEA) which recognizes corridors that are vital in supporting the nation's economy. This designation was made because of the highway's direct connection between the Port of Toledo and the interstate highway system.

One key strength of the region that is frequently cited in economic development marketing materials is the region's central location and accessibility to major market areas throughout the country. US 24, as a major interregional connector, is an integral part of the infrastructure supporting not only the local economies of Fort Wayne, Paulding County and Defiance, but is also an integral part of the National Highway System (NHS). As noted elsewhere in this document, more than 40 percent of the traffic traveling US 24 between Fort Wayne and Defiance is freight traffic. A substantial percentage (43 percent) is through traffic traveling to and from other communities outside of the study area. However, there are a number of entities operating within the study area that generate a significant amount of freight traffic.

Methodology

The study area for the economic analysis includes all of the communities located within or adjacent to the Feasible Corridors. Economic conditions for the study area were defined through a review of available documentation on the communities including:

- Greater Fort Wayne Chamber of Commerce, *2000 Guide to Fort Wayne Indiana* (2000).
- Greater Fort Wayne Chamber of Commerce, *Business Information Guide 2000*.
- Paulding County, *Final Report: Retail/Industrial Program Ohio Business Retention and Expansion Program* (No date).
- Paulding Chamber of Commerce, *Industrial Directory* (July 1998).
- Paulding County Economic Development Office, *Economic and Demographic Information* (February 1999).
- Paulding Progress, *1999 Paulding Area Guide*.
- *Paulding County Comprehensive Plan* (1972).
- *Defiance County Comprehensive Plan - Draft* (April 1999).
- *Defiance County Comprehensive Plan* (January 2000).
- Defiance Area Chamber of Commerce, *Membership Directory and Consumer Guide 1997-1998*.
- Northeastern Indiana Regional Coordinating Council, *2025 Transportation Plan* (May 2000).
- *City of New Haven Comprehensive Plan* (May 1990).
- *US 24 New Haven to Defiance Relocation Assistance Program Study* (August 2000).

The information on location of businesses, industrial facilities and economic development sites was mapped and verified through field reviews conducted in August 2000. Additional information was also collected through interviews with local officials and planning agencies.

Project mapping depicting the Feasible Corridors for the 26 Feasible Alternatives was overlain on mapping depicting the locations of businesses, industrial sites, and economic development sites. Facilities located within or in close proximity to the Feasible Corridors were identified for impact evaluation.

Direct impacts may occur in the form of the loss of businesses associated with right-of-way acquisition. Business displacements were estimated as part of the *US 24 New Haven to Defiance Relocation Assistance Program Study* (August 2000) and are summarized in the following analysis. The impacts on these business displacements were analyzed based on the following criteria:

- Type of business.
- Size of business.
- Likelihood of relocating within the study area.

The relocation of a roadway can result in impacts to existing businesses that are bypassed by a new facility. There are no reliable predictive models that can be used to assess the impacts of

bypassing existing businesses. In the absence of reliable methodology, input from local officials, planning organizations and economic development entities was used to assess the potential impact on the business communities.

Indirect impacts such as acquisition of a portion of the property, changes in site access, and changes in visibility were also evaluated through the use of map overlays. This approach was used to evaluate the effect of the alternatives on major employers and economic development sites. The impacts were classified based on the likelihood of improving business operations or site marketability, negatively affecting operations and or site marketability, or no effect. The information was tabulated and the alternatives were ranked for comparative analysis.

Construction of any of the alternatives would require a considerable amount of investment. This investment would increase construction trade employment in the study area and other areas. A 1999 report entitled *Summary: Economic Impacts of Federal-Aid Highway Investment* (FHWA) summarizes recent studies completed for FHWA on the economic impacts of highway investment. The results indicated that every \$1 billion in highway investment supports between 42,100 and 44,709 full-time-equivalent jobs in the economy. These jobs include both “direct” jobs for on-site workers and “indirect” jobs at firms supplying equipment, materials, and administrative support. Construction also creates “induced” jobs. These are jobs created as a result of on-site and off-site construction employees spending their earnings in the surrounding economy.

Direct employment projections were calculated based on estimated construction costs exclusive of right-of-way acquisition costs and relocation costs using the following multipliers (FHWA, 1999):

- Short-term on-site construction jobs: 7,900 jobs per billion dollars invested in construction (exclusive of right-of-way costs).
- Short-term off-site construction jobs: 19,700 jobs per billion dollars invested in construction (exclusive of right-of-way costs).
- Short-term construction induced jobs: 14,500 jobs per billion dollars invested in construction (exclusive of right-of-way costs).

Project Impacts

The primary economic impact of a transportation project is the loss (displacement) of study area businesses. Table 3.50 summarizes the total number of commercial and farm displacements, number of farm operators affected, and the anticipated relocation costs for the Feasible Alternatives.

The study area is predominantly rural in nature and agriculture is the predominant economic industry operating within the study area. Alternatives O and P displace the greatest number of farms; both alternatives displace 14 farms. Alternative Z results in the loss of one farm. The actual number of farm operations affected ranges from 162 with Alternative V to 260 with Alternative Z. Alternatives A, B, C, D, D-1, Y, and Z impact over 200 farm operations. Even though these alternatives impact the most farm operations, they would do not cause the greatest number of farm displacements.

Table 3.51 lists the commercial businesses and not-for-profit organizations affected by the 26 Feasible Alternatives under consideration. Alternative Z has the greatest number of commercial displacements, resulting in the loss of 13 businesses and one church (not-for-profit organization). Many of these businesses support the local and regional economies (i.e., Hoosier Propane, Northern Indiana Fuel and Light, Marathon Gas Station, Mark Moats Ford, Volvo/GMC, Three Rivers Garden Center, and Integrity Motor). It is likely that these businesses will be able to relocate to other sites within the study area, but may not have the visibility associated with being located on a major roadway.

Alternative Y ranks second with the displacement of seven businesses. Alternatives E, G, Q, S, U, and W do not result in the displacement of any commercial businesses. None of the commercial displacements are considered to be major employers within the study area.

**TABLE 3.50
COMMERCIAL AND FARM DISPLACEMENTS**

Alternative	Commercial Displacements	Farm Displacements	Affected Farm Operations	Relocation Costs
No Build	0	0	0	\$0
A	1	10	206	\$520,000
B	2	9	204	\$490,000
C	1	11	214	\$570,000
D	2	11	213	\$590,000
D-1	2	10	214	\$540,000
E	0	8	177	\$400,000
F	1	7	175	\$370,000
G	0	9	185	\$450,000
H	1	9	184	\$470,000
I	1	11	184	\$570,000
J	2	10	182	\$540,000
K	1	12	192	\$620,000
L	2	12	191	\$640,000
M	1	13	182	\$670,000
N	2	12	180	\$640,000
O	1	14	190	\$720,000
P	2	14	189	\$740,000
Q	0	7	166	\$350,000
R	1	6	164	\$320,000
S	0	8	174	\$400,000
T	1	8	173	\$420,000
U	0	9	164	\$450,000
V	1	8	162	\$420,000
W	0	10	172	\$500,000
X	1	10	171	\$520,000
Y	7	0	216	\$490,000
Z	13	1	260	\$1,460,000

**TABLE 3.51
LISTING OF COMMERCIAL DISPLACEMENTS**

Type of Business	Alternative Affecting Business	Total Relocation Payment
Sid's Dog & Cat Grooming	A, B, C, D, D-1, I, J, K, L, M, N, O, P	\$20,000
Mobile Home Office	B, D, F, H, I, J, L, N, P, T, X	\$20,000
CCCS Insurance, Inc.	D-1	\$20,000
Laundromat (Antwerp)	Y	\$20,000
Buckeye Pallets	Y	\$250,000
Riverside Restaurant	Y	\$35,000
Mister B's (Antwerp)	Y	\$30,000
Office Building (Antwerp)	Y	\$100,000
Miller Sales	Y	\$35,000
Barber Shop (Antwerp)	Y	\$20,000
Calvary Chapel of Defiance (NPO)	Z	\$20,000
Hoosier Propane	Z	\$20,000
Sanders Collision Repair	Z	\$20,000
Northern Indiana Fuel & Light	Z	\$20,000
Marathon Gas Station	Z	\$125,000
Reagle Radiator & Air	Z	\$20,000
Sanford Trucking	Z	\$40,000
Mans Homes Unlimited	Z	\$20,000
Mark Moats Ford	Z	\$100,000
Volvo GMC	Z	\$80,000
Stykemain Trucks	Z	\$20,000
Three Rivers Garden Center	Z	\$75,000
Carter Lumber	Z	\$750,000
Integrity Motors	Z	\$100,000

The majority of the businesses impacted by Alternatives A through Y are small businesses. Many would suffer without the visibility afforded by being located on a major roadway and will likely go out of business if US 24 is relocated away from these businesses. The loss of these businesses, however, will not result in the disproportionate impacts on the local economy or local employment as none are major employers.

Alternatives A through X relocate US 24 onto new location and can therefore result in bypass impacts to businesses located along US 24. Alternative Z relocates a portion of US 24 in the vicinity of the Village of Antwerp. With these alternatives, existing US 24 will remain open to traffic. The effect of bypassing a community or business is a function of many factors including loss of visibility; changes in access; local, regional, and national economic conditions; and support or opposition of the local business community. The impact is therefore difficult to assess with any great degree of certainty.

The effect of bypassing businesses on US 24 is not considered to be a major impact. Within Allen County, there are few businesses located along US 24 and therefore the impacts of Alternatives A through X on US 24 businesses are considered to be minimal. However, representatives of Allen County and the NIRCC have expressed their support for those alternatives that utilize the existing US 24 Corridor between I-469 and Ryan/Bruick Road.

The *Paulding County Comprehensive Plan (1972)* advocates the relocation of US 24 to the south of its present alignment including a bypass of Antwerp. No changes to this long-standing goal were communicated through the public involvement process. The Paulding County, Ohio Economic Development Corporation *Economic and Demographic Profile Information (1999)* notes the following:

- The Village of Antwerp is divided in half by US 24 and suffers from excessive car and truck traffic congestion.
- It is widely held that US 24 is dangerous and in need of realignment. However, the route does serve as the connecting point for Paulding County industry and its residents and does provide the county with necessary and critically needed transportation access. Improvement of US 24 in Paulding County would add greatly to existing businesses and communities and would offer enormous opportunities for growth.
- The Villages of Antwerp and Paulding have purchased land for industrial parks and have located these sites as close to existing major transportation routes as possible to enhance the marketability of these sites. Major transportation systems or lack of is a major determining factor in the success or failure of attracting new business into the county.
- The Villages of Antwerp, Paulding and Payne would be the biggest benefactors of a realignment of US 24 should the realignment occur somewhere between Antwerp and Paulding. These communities strongly support the realignment.
- The entire county would also benefit. With the proximity of I-69 in Indiana and US 30, the placement of a four-lane highway in Paulding County would open the entire county up for development. Paulding County is preparing for proper planning of development.
- Should the US 24 improvements not occur in Paulding County, the entire county would be negatively impacted.

Given the past and present support to relocating US 24 on new alignment through Paulding County, the impacts of Alternatives A through X and Z are considered to be minimal.

The *Defiance County Comprehensive Plan (2000)* notes that no location of US 24 has been determined and that this was a major and mostly unknown factor during the development of the updated comprehensive plan. Within Defiance County, the Feasible Alternatives make use of the existing US 24 corridor between Keller Road and SR 15. A portion would be constructed on new alignment with Alternatives A through X between the Paulding/Defiance county line and Keller Road. Between Krouse Road and Keller Road, Alternatives A, C, E, G, I, K, M, O, Q, S, U and W would be located no more than 304.9 meters (1,000 feet) north of existing US 24. Alternatives B, D, F, H, J, L, N, P, R, T, V and X would be located to the south of existing US 24 between the Paulding/Defiance county line and Keller Road. With respect to bypass effects,

Alternatives A, C, E, G, I, K, M, O, Q, S, U, and W would have the least negative effect given that they are located closer to existing US 24 than the other alternatives. Local officials for Defiance County and the affected municipalities have not presented objections to US 24 being relocated on new alignment.

Although not displaced, many of the study area major employers and industrial sites would experience varying levels of accessibility and visibility impacts with the Feasible Alternatives. These impacts are summarized in Tables 3.52 and 3.53. To compare the effect of the Feasible Alternatives on the businesses and economic development sites, the effects were classified by general effect (positive, negative, or no change) for each site and the classifications were totaled for each Feasible Alternative (Tables 3.52 and 3.53).

**TABLE 3.52
SUMMARY OF IMPACTS ON LOCAL INDUSTRIAL ENTITIES**

Industrial Entity	Alternative	Description of Impacts
Pacesetter Finishing Casad Industrial Park Edgerton Road Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Distance to US 24 is reduced from 2865.9 meters to 1524.4 meters (9,400 feet to 5,000 feet). Visibility.
Superior Aluminum Casad Industrial Park Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Distance to US 24 is reduced from 2865.9 meters to 1524.4 meters (9,400 feet to 5,000 feet). Visibility.
Kwik Lok Edgerton and Ryan Roads Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Direct access to US 24, approximately 1554.9 meters (5,100 feet) north.
Webster Lumber Edgerton Road Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. No direct access to US 24, but corridor is closer.
Hanson Quarry US 24 Milan Township, Allen County	A-D, D-1	Decreased access. Closest access route is Sampson Road (US 24 approximately five kilometers [3.1 miles]).
	E-H	Decreased access. Closest access route is Sampson Road (US 24 approximately 6.13 kilometers [3.8 miles]).
	I-P	Decreased access. Closest access point is at Webster Road where ties into existing alignment.
	Q-X	Decreased access. Closest access point is at Berthaud Road where ties into existing alignment (US 24 approximately 5.16 kilometers [3.2 miles]).
	Y, No Build	Decreased access. Severe congestion of US 24.
	Z	Improved access. Reduced congestion on US 24.

**TABLE 3.52 (CONTINUED)
SUMMARY OF IMPACTS ON LOCAL INDUSTRIAL ENTITIES**

Industrial Entity	Alternative	Description of Impacts
Uniroyal Goodrich Fort Wayne Plant US 24 Milan Township, Allen County	A-D, D-1	Decreased access. Closest access route is Sampson Road (US 24 approximately 4.03 kilometers [2.5 miles]).
	E-H	Decreased access. Closest access route is Sampson Road (US 24 approximately five kilometers [3.1 miles]).
	I-X	Improved access. Direct road into plant from US 24.
	Y, No Build	Decreased access. Severe congestion of US 24.
	Z	Improved access. Reduced congestion on US 24.
Antwerp Tool and Die US 24 Village of Antwerp, Paulding County	A-H	Decreased access. US 24 located approximately 1737.8 meters (5,700 feet) south.
	I-X	Decreased access. US 24 located approximately 3567.1 meters (11,700 feet) south.
	Y, No Build	Decreased access. Severe traffic congestion on US 24.
	Z	Increased access. Improved traffic flow on US 24.
K&L Tools US 24 Village of Antwerp, Paulding County	A-H	Decreased access. US 24 located approximately 1737.8 meters (5,700 feet) south.
	I-X	Decreased access. US 24 located approximately 3567.1 meters (11,700 feet) south.
	Y, No Build	Decreased access. Severe traffic congestion on US 24.
	Z	Increased access. Improved traffic flow on US 24.
Steve Reiff, Inc. US 24 Village of Antwerp, Paulding County	A-H	Decreased access. US 24 located approximately 1737.8 meters (5,700 feet) south.
	I-X	Decreased access. US 24 located approximately 3567.1 meters (11,700 feet) south.
	Y, No Build	Decreased access. Severe traffic congestion on US 24.
	Z	Increased access. Improved traffic flow on US 24.
Dana Boston Weatherhead US 24 Village of Antwerp, Paulding County	A-H	Decreased access. US 24 located approximately 1737.8 meters (5,700 feet) south.
	I-X	Decreased access. US 24 located approximately 3567.1 meters (11,700 feet) south.
	Y, No Build	Decreased access. Severe traffic congestion on US 24.
	Z	Increased access. Improved traffic flow on US 24.

TABLE 3.52 (CONTINUED)
SUMMARY OF IMPACTS ON LOCAL INDUSTRIAL ENTITIES

Industrial Entity	Alternative	Description of Impacts
Spec-Temp, Inc. US 24 Village of Antwerp, Paulding County	A-H	Decreased access. US 24 approximately 1737.8 meters (5,700 feet) south.
	I-X	Decreased access. US 24 approximately 3567.1 meters (11,700 feet) south.
	Y, No Build	Decreased access. Severe traffic congestion on US 24.
	Z	Increased access. Improved traffic flow on US 24.
Quarry Crane Township, Paulding County	A-H, M-P, U-X	Improved access. US 24 located 1097.6 meters (3,600 feet) north; existing US 24 is 4054.9 meters (13,300 feet) north.
	I-L, Q-T	Improved access. US 24 located 1981.7 meters (6,500 feet) north; existing US 24 is 4054.9 meters (13,300 feet) north).
	Y, Z, No Build	No change.
Cement Plant Crane Township, Paulding County	A-H, M-P, U-X	Improved access. US 24 located 1097.7 meters (3,600 feet) north; existing US 24 is 4054.9 meters (13,300 feet) north.
	I-L, Q-T	Improved access. US 24 located 1981.7 meters (6,500 feet) north; existing US 24 is 4054.9 meters (13,300 feet) north.
	Y, Z, No Build	No change.
Defiance Woodworking Machine SR 424 City of Defiance, Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W	Direct access to regional highway system via interchange at SR 424. Interchange is approximately 3048.8 meters (10,000 feet) from entrance.
	B, D, D-1, F,H, J, L, N, P, R, T, V, X	Direct access to regional highway system via interchange at SR 424. Interchange is approximately 1067.1 meters (3,500 feet) from entrance. Site is bisected by alternative between Krouse and Keller Roads affecting area not programmed for development. High visibility from US 24.
	Y, Z, No Build	No change.
Koester Corporation Fox Run Executive Park West High Street Noble Township, Defiance County	A-X, Z	Slightly improved access with widening of US 24.
	Y, No Build	No Change.
Northwest Controls Fox Run Executive Park West High Street Noble Township, Defiance County	A-X, Z	Slightly improved access with widening of US 24.
	Y, No Build	No Change.
Olson Electric Olson Industrial Park City of Defiance, Defiance County	A-X, Z	Slightly improved access with widening of US 24.
	Y, No Build	No Change.
Olson Cold Storage Olson Industrial Park City of Defiance, Defiance County	A-X, Z	Slightly improved access with widening of US 24.
	Y, No Build	No Change.
Defiance Hospital City of Defiance, Defiance County	A-X, Z	Slightly improved access with widening of US 24.
	Y, No Build	No Change.

**TABLE 3.53
SUMMARY OF IMPACTS ON ECONOMIC DEVELOPMENT SITES**

Economic Development Site/Location	Alternatives	Description of Impacts
Doyle Road Industrial Site Doyle Road/Edgerton Road/Bandalier Road/Dawkins Road Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. US 24 is approximately 182.9 meters (600 feet) closer to Doyle Road.
New Haven Industrial Site Doyle Road/Edgerton Road/Bandalier Road/Dawkins Road Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	US 24 bisects site. Improved access at Ryan Road. High visibility.
Casad Industrial Park Development Area Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Distance to US 24 is reduced from 2865.9 meters to 1524.4 meters (9,400 feet to 5,000 feet). Improved visibility.
Canal Place Economic Development Area Ryan Road/Edgerton Road/Webster Road/Dawkins Road Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Improved visibility.
Bandalier Economic Development Area Jefferson Township, Allen County	A-D, D-1, I-P, Y, Z, No Build	No change.
	E-H, Q-X	Improved access. Distance to US 24 is reduced from 2865.9 meters to 1524.4 meters (9,400 feet to 5,000 feet). Improved visibility.
Woodburn Industrial Park SR 101 City of Woodburn, Allen County	A-H	Improved Access. Distance to US 24 is reduced from 1981.7 to 914.6 meters (6,500 to 3,000 feet). High visibility.
	I-X	Distance to US 24 is slightly longer (2134.2 meters [7,000 feet]). High visibility.
	Y, Z, No Build	No change.
Antwerp Industrial Park T-43/C-180/T-51/C-176 Village of Antwerp, Paulding County	A-H	Improved access. US 24 borders site. High visibility. Small loss of area at southwest corner of site for relocation of T-51.
	I-X	Decreased access. No direct access to US 24 on western side. US 24 located 1646.3 meters (5,400 feet) south on east. Existing US 24 426.8 meters (1,400 feet) north on west and 1158.5 meters (3,800 feet) north on east.
	Y, Z, No Build	No change.
Enterprise Park SR 424 City of Defiance Defiance County	A, C, E, G, I, K, M, O, Q, S, U, W	Direct access to regional highway system via: interchange at SR 424. Interchange approximately 3048.8 meters (10,000 feet) from entrance.
	B, D, D-1, F, H, J, L, N, P, R, T, V, X	Direct access to regional highway system via: interchange at SR 424. Interchange approximately 1067.1 meters (3,500 feet) from entrance. Site is bisected by alternatives between Krouse and Keller Roads affecting area not programmed for development. High visibility from US 24.
	Y, Z, No Build	No change.

**TABLE 3.53 (CONTINUED)
SUMMARY OF IMPACTS ON ECONOMIC DEVELOPMENT SITES**

Economic Development Site/Location	Alternatives	Description of Impacts
Maumee River Crossing Development West High Street Noble Township, Defiance County	A-X, Z	Slightly improved access with widening of US 24 to the north.
	Y, No Build	No change.
Fox Run Executive Park West High Street Noble Township, Defiance County	A-X	Slightly improved access with widening of US 24 to the north.
	Y, No Build	No change.
Olson Industrial Park City of Defiance, Defiance County	A-X	Slightly improved access with widening of US 24 to the north.
	Y, No Build	No change.
Defiance Hospital SR 15 City of Defiance, Defiance County	A-X	Slightly improved access with widening of US 24 to the north.
	Y, No Build	No change.

The analysis of existing industrial entities indicated the following:

- Alternatives A through D will likely have a positive effect on eight industrial entities, a negative effect on eight entities, and no effect on four entities.
- Alternatives E through H will likely have a positive effect on 12 industrial entities and a negative effect on eight entities.
- Alternatives I through P will likely have a positive effect on nine industrial entities, a negative effect on seven entities, and no effect on four entities.
- Alternatives Q through X will likely have a positive effect on seven industrial entities and a negative effect on 13 entities.
- Alternative Y and the No Build Alternative have a negative effect on 14 industrial entities and no effect on six entities.
- Alternative Z has a positive effect on 14 industrial entities and no effect on six entities.

The comparison of the effect of the Feasible Alternatives on economic development sites indicated the following:

- Alternatives A through D will have a positive effect on six economic development sites and no effect on four sites.
- Alternatives E through H will have a positive effect on all 10 economic development sites.
- Alternatives I through P will have a positive effect on five economic development sites, a negative effect on one site, and no effect on four sites.
- Alternatives Q through X will have a positive effect on nine economic development sites and a negative effect on one site.
- Alternative Y and the No Build Alternative will have a negative effect on four economic development sites and no effect on six sites.
- Alternative Z will have a positive effect on four economic development sites and no effect on six sites.

Construction of any Feasible Alternative would require a considerable amount of investment. The estimated construction costs range from \$66.9 million (Alternative Y) to \$150.0 million (Alternative E). Such investment will increase construction trade employment in the study area and surrounding counties. These jobs include both “direct” jobs on-site workers, and “indirect” jobs at firms supplying equipment, material and administrative support. Construction would also create “induced” jobs. These are jobs created as a result of on-site and off-site construction employees spending their earnings in the surrounding economy.

Construction-related employment projections are provided in Table 3.54. The No Build Alternative would not generate any employment associated with construction activities. Alternative Y, with the lowest construction cost, would likely generate the fewest construction-related

employment opportunities which is estimated to be about 2,800 jobs. The other alternatives would likely create approximately 3,000 more jobs. Alternative E would generate the greatest number of construction-related employment opportunities, approximately 6,316 jobs in total.

**TABLE 3.54
CONSTRUCTION-RELATED EMPLOYMENT PROJECTIONS**

Alternative	Construction Cost	Jobs Created By Type			
		Direct	Indirect	Induced	Total
No Build	\$0	0	0	0	0
A	\$146,054,134	1,154	2,877	2,118	6,149
B	\$142,553,452	1,126	2,808	2,067	6,002
C	\$144,393,373	1,141	2,845	2,094	6,079
D	\$141,091,511	1,115	2,780	2,046	5,940
D-1	\$204,971,652	1,619	4,038	2,972	8,629
E	\$150,015,850	1,185	2,955	2,175	6,316
F	\$146,515,168	1,157	2,886	2,124	6,168
G	\$148,355,089	1,172	2,923	2,151	6,246
H	\$145,053,227	1,146	2,858	2,103	6,107
I	\$146,490,744	1,157	2,886	2,124	6,167
J	\$142,990,062	1,130	2,817	2,073	6,020
K	\$144,829,983	1,144	2,853	2,100	6,097
L	\$141,528,121	1,118	2,788	2,052	5,958
M	\$146,824,968	1,160	2,892	2,129	6,181
N	\$143,324,286	1,132	2,823	2,078	6,034
O	\$145,164,207	1,147	2,860	2,105	6,111
P	\$141,862,345	1,121	2,795	2,057	5,972
Q	\$144,870,385	1,144	2,854	2,101	6,099
R	\$141,369,703	1,117	2,785	2,050	5,952
S	\$143,209,624	1,131	2,821	2,077	6,029
T	\$139,907,762	1,105	2,756	2,029	5,890
U	\$145,204,609	1,147	2,861	2,105	6,113
V	\$141,703,927	1,119	2,792	2,055	5,966
W	\$143,543,848	1,134	2,828	2,081	6,043
X	\$140,241,986	1,108	2,763	2,034	5,904
Y	\$66,908,558	529	1,318	970	2,817
Z	\$128,959,036	1,019	2,540	1,870	5,429

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) will result in impacts similar to those resulting from Alternative D. One local industrial sector, agriculture, is affected by the Preferred Alternative. Impacts to the agricultural industry include the displacement of ten farms. Additionally, 214 farming operations will be affected by the Preferred Alternative.

The Preferred Alternative (Alternative D-1) also results in the displacement of two businesses, Sid's Dog and Cat Grooming, located in Milan Township, Allen County; and CCCS Insurance, Inc., located in the City of Defiance.

The impacts of the Preferred Alternative (Alternative D-1) on industrial entities operating within the study area are mixed. Overall, the Preferred Alternative will have a positive effect on eight industrial entities, a negative effect on eight entities, and no effect on four. The entities that will be positively affected include an unnamed quarry and an unnamed cement plant, both operating in Crane Township; Defiance Woodworking Machine; Koester Corporation; Northwest Controls,

Olson Electric; Olson Cold Storage; and Defiance Hospital. The potential positive effects are associated with improved access and/or visibility associated with US 24. Entities potentially experiencing a negative effect include Hanson Quarry, Uniroyal Goodrich, Midwest Tile and Concrete, Antwerp Tool and Die, K&L Tools, Steve Reiff, Inc., Dana Boston Weatherhead, and Spec-Temp.Inc. The potential negative effects are associated with decreased access as US 24 would be relocated away from the operating sites. The four entities with no change are Pacesetter Finishing, Superior Aluminum, Kwik Lok, and Webster Lumber.

Relative to economic development sites, the Preferred Alternative (Alternative D-1) will have a positive effect on six economic development sites and no effect on four development sites. The Woodburn Industrial Park and Antwerp Industrial Park will experience improved access as US 24 is relocated closer to the sites. Access to the Enterprise Park will improve with direct access to SR 424 provided by way of a full interchange. The Maumee River Crossing Development, Fox Run Executive Park, Olson Industrial Park, and Defiance Hospital will experience slightly improved access through reduction in congestion on US 24.

In the City of Defiance, the existing intersection of US 24 and West High Street will be closed as a result of the construction of the Preferred Alternative and the existing at-grade intersection will be replaced with an overpass. West High Street will remain open to traffic with an overpass constructed over West High Street to carry the Preferred Alternative over it. Public opinion is divided at West High Street. Several residents and public officials have requested that an interchange be constructed at this location to maintain access to US 24 at West High Street. Community representatives are concerned that eliminating access to US 24 at West High Street would be detrimental to economic development on the west side of the City of Defiance. Other citizens have stated that they do not want an interchange at West High Street.

In response to the public comments, a separate traffic study was conducted to determine the secondary impacts on the local road network resulting from closing the US 24/Switzer Road/West High Street intersection. The study is documented in a separate report entitled *City of Defiance, Ohio Traffic Study: Assessment of Traffic Impacts Due to the Proposed Grade Separation of US 24 and West High Street* (February 2003). The traffic study determined that future capacity problems on the local roads will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the surrounding area. Future capacity problems on local roads will occur regardless of the existence of an interchange at US 24 and West High Street/Switzer Road.

At this time, ODOT is not proposing to construct an interchange at Switzer Road and West High Street as part of the US 24 project. An interchange at this location is not recommended because it is less than 1.6 kilometers (one mile) to the existing US 24/SR 15 interchange. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of 3.2 kilometers (two miles) and a minimum distance of 1.6 kilometers (one mile).

Construction of the Preferred Alternative is projected to create 8,629 construction-related jobs. This includes 1,619 direct opportunities, 4,038 indirect opportunities, and 2,972 induced opportunities. Alternative D-1 has a higher construction cost than the other alternatives given the differences in design in Allen County (D-1 is a freeway with interchanges or grade-separated crossings at most crossroads while the other Feasible Alternatives are designed as expressways with at-grade intersections at most crossroads).

Mitigation

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (Uniform Relocation Act) (P.L. 91-646) was enacted by the federal government in 1971 to help residences and businesses displaced by public agencies relocate without suffering a disproportionate loss. Whenever federal funds are utilized in a project and business displacements occur as a result of a project funded by the federal government, relocation advisory and financial assistance must be offered to those occupants being displaced as a direct result of the project.

The Uniform Relocation Act contains certain inalienable rights for those property owners affected

**3.2.8 Municipal
Finances/Taxes
Existing Conditions**

by a federally funded project. These rights include the right to just compensation for that portion of property being acquired for the project.

Every displaced business, farm operation and non-profit organization is eligible to receive advisory assistance in relocating personal property. These services and benefits would be in addition to the compensation received by the property owner for the acquisition of real property.

Businesses, farm operations and non-profit organizations are entitled to compensation for the relocation of their personal property, based on actual and reasonable cost. A displaced business may also be entitled to reimbursement for miscellaneous expenses incurred for such items as storage or searching for a replacement site. The Uniform Relocation Act also provides an option to businesses to receive a payment in lieu of actual moving costs. This payment of up to \$20,000 is based on average annual net income of the operation for the two taxable years prior to displacement. Displaced farming operations that also maintain a residence on the affected parcel(s) will be eligible to receive both and business expenses to move the personal property and re-establish the business (farm) and residential relocation benefits for replacement of the residential dwelling.

The study area includes a number of rural farming communities. Within Allen County, the study area covers the Cities of New Haven and Woodburn, and Jefferson, Milan, and Maumee townships. Within Paulding County, Ohio, communities located within the study area include the Villages of Cecil and Antwerp and Harrison, Carryall, Crane, and Emerald townships. Within Defiance County, the study area includes the City of Defiance and Delaware as well as Defiance and Noble townships.

The economy of Allen County generates various tax revenues, including:

- 5 percent State Sales Tax (exceptions are groceries and prescriptions).
- 1 percent County Food and Beverage Sales Tax.
- 0.6 percent County Residential Income Tax.
- 3.4 percent State Income Tax.
- County Property Tax (\$8.8353 per \$100 of assessed valuation).
- 0.4 percent County Economic Development Income Tax.
- Corporate Income Tax – various rate structures.
- Corporate Supplemental Net Income Tax.

The economy of Paulding County generates various tax revenues, including:

- 6 percent State Sales Tax (exceptions are groceries).
- 0.5 percent County Sales Tax (exceptions are groceries).
- 1.3 percent Residential Income Tax (City of Defiance).
- 3.4 percent State Income Tax.
- County Property Tax (37.732 mills per \$1000 of assessed valuation for residential and agricultural and 41.289 mills per \$1000 of assessed valuation for commercial and industrial).
- Local property taxes – various rates for affected municipalities and school districts.
- 0.4 percent County Economic Development Income Tax.
- 1.3 percent Corporate Income Tax.

The economy of Defiance County generates various tax revenues, including:

- 6 percent State Sales Tax (exceptions are groceries).
- 1.3 percent Residential Income Tax (City of Defiance).
- 3.4 percent State Income Tax.
- County Property Tax (37.732 mills per \$1000 of assessed valuation for residential and agricultural and 41.289 mills per \$1000 of assessed valuation for commercial and industrial).
- 0.4 percent County Economic Development Income Tax.
- 1.3 percent Corporate Income Tax.

Methodology

Impacts to municipal finance occur when land is acquired for conversion to public use, in this case, the development of a transportation facility. The conversion of land results in the loss of taxes collected on the privately owned property as well as the loss of personal income and business income taxes associated with the displacement of residents and businesses.

The analysis of potential impacts of the Feasible Alternatives on municipal finances included a review of displacement estimates for each alternative, as well as right-of-way acquisition estimates calculated at the county level for each alternative.

Project Impacts

The No Build Alternative does not require property acquisition or displacement of businesses and residences. Therefore, this alternative will not result in any direct impact on tax revenues.

Alternatives A through X would have the greatest impact on property tax revenues as these alternatives would result in the greatest land area being removed from the tax base. As shown in Table 3.55, right-of-way needs range from 658.1 hectares (1,625.1 acres) for Alternative V to 693.5 hectares (1,713 acres) for Alternative K.

Of the Feasible Alternatives to be constructed on new alignment, Alternatives Q through W require the least amount of land, 198.0 hectares (489.1 acres), from Allen County while Alternatives A through D require the greatest amount of land, 223.2 hectares (551.3 acres).

Paulding County would experience the greatest impact, as it would lose the largest amount of land to public right-of-way conversion. Alternatives C and G require the least amount of land, approximately 353.4 hectares (828.2 acres), while Alternatives S and T all require more than 357.2 hectares (882.4 acres) of land for right-of-way within Paulding County.

In Defiance County, right-of-way impacts range from 117.8 hectares (291.0 acres) for Alternatives B, F, J, N, R, and V to 134.9 hectares (333.1 acres) for Alternatives C, G, K, O, S, and W.

Given the design features of Alternative Y, the total right-of-way requirements for this alternative are approximately one-third of the requirements of the other Feasible Alternatives and therefore have less impact on tax revenues drawn from property taxes. This alternative requires right-of-way acquisition totaling 144.5 hectares (110.4 acres) for Allen County, 94.9 hectares (234.4 acres) for Paulding County, and 71.5 hectares (176.5 acres) for Defiance County.

Right-of-way requirements for Alternative Z are more similar to those required for Alternatives A through X, totaling 630.4 hectares (1,557 acres). Estimated right-of-way acquisition is 173.1 hectares (427.5 acres) in Allen County, 274.9 hectares (679.2 acres) in Paulding County, and 182.4 hectares (450.4 acres) in Defiance County. Alternative Z requires more acreage for right-of-way in Defiance County than any of the proposed four-lane alternatives.

The right-of-way estimates also include land to be acquired as a result of property being landlocked by the Feasible Alternatives. The number of landlocked parcels ranges from 45 with Alternative N to 81 with Alternative C. The impact of landlocking can be minimized through selling or renting land parcels to neighboring farm operations as well as through the construction of service roads to provide access.

The loss of property taxes from properties required for right-of-way would be offset by continued economic development within the three counties included in the study area. The Feasible Alternatives would improve access to key economic development areas in the three counties. In some cases, Alternatives A through X would dramatically increase the visibility of the key economic development areas, as well as making these development sites more marketable through improved access.

Residential and business displacements associated with the Feasible Alternatives also affect public and municipal finances through the loss of personal and business income taxes. A summary of the residential, farming operations and commercial displacements is provided in Table 3.56.

**TABLE 3.55
REQUIRED RIGHT-OF-WAY, BY COUNTY**

Alternative	Right-of-Way Required Allen County Hectares (Acres)	Right-of-Way Required Paulding County Hectares (Acres)	Right-of-Way Required Defiance County Hectares (Acres)
A	223.2 (551.3)	337.4 (833.4)	130.2 (321.7)
B	223.2 (551.3)	337.9 (834.5)	117.8 (291.0)
C	223.2 (551.3)	335.4 (828.3)	134.9 (333.1)
D	223.2 (551.3)	335.6 (828.8)	124.1 (306.6)
D-1	218.6 (540.0)	344.7 (851.4)	103.7 (256.2)
E	222.9 (550.6)	337.4 (833.4)	130.2 (321.7)
F	222.9 (550.6)	337.9 (834.5)	117.8 (291.0)
G	222.9 (550.6)	335.4 (828.3)	134.9 (333.1)
H	222.9 (550.6)	335.6 (828.8)	124.1 (306.6)
I	201.4 (497.5)	359.3 (887.4)	130.2 (321.7)
J	201.4 (497.5)	359.78 (888.6)	117.8 (291.0)
K	201.4 (497.5)	357.2 (882.4)	134.9 (333.1)
L	201.4 (497.5)	357.4 (882.9)	124.1 (306.6)
M	201.4 (497.5)	355.1 (877.0)	130.2 (321.7)
N	201.4 (497.5)	355.5 (878.2)	117.8 (291.0)
O	201.4 (497.5)	353.6 (871.9)	134.9 (333.1)
P	201.4 (497.5)	353.2 (872.5)	124.1 (306.6)
Q	198.0 (489.1)	359.3 (887.4)	130.2 (321.7)
R	198.0 (489.1)	359.8 (888.6)	117.8 (291.0)
S	198.0 (489.1)	357.2 (882.4)	134.9 (333.1)
T	198.0 (489.1)	357.4 (882.9)	124.1 (306.6)
U	198.0 (489.1)	355.1 (877.0)	130.2 (321.7)
V	198.0 (489.1)	355.5 (878.2)	117.8 (291.0)
W	198.0 (489.1)	353.0 (871.9)	134.9 (333.1)
X	198.0 (489.1)	353.2 (872.5)	124.1 (306.6)
Y	144.5 (110.4)	94.9 (234.4)	71.5 (176.5)
Z	173.1 (427.5)	274.9 (679.2)	182.4 (450.4)

**TABLE 3.56
RESIDENTIAL, COMMERCIAL, AND FARM DISPLACEMENTS**

Alternative	Residential Displacements	Commercial Displacements	Farm Displacements	Farm Operations Affected
A	51	1	10	206
B	69	2	9	204
C	47	1	11	214
D	67	2	11	213
D-1	51	2	10	214
E	38	0	8	177
F	56	1	7	175
G	34	0	9	185
H	54	1	9	184
I	46	1	11	184
J	64	2	10	182
K	42	1	12	192
L	62	2	12	191
M	53	1	13	182
N	71	2	12	180
O	49	1	14	190
P	69	2	14	189
Q	29	0	7	166
R	47	1	6	164
S	25	0	8	174
T	45	1	8	173
U	36	0	9	164
V	54	1	8	162
W	32	0	10	172
X	52	1	10	171
Y	14	7	0	216
Z	107	13	1	260

The No Build Alternative would not result in any displacements and therefore would have no effect on personal or corporate income tax revenues.

The Feasible Alternatives would result in residential displacements ranging from 14 for Alternative Y to 107 for Alternative Z (including the displacement of residences on farms). Based on information collected for the *Relocation Assistance Program Survey (2000)*, there is available replacement housing within the study area to accommodate all residential displacements. Therefore, the alternatives have minimal effect on personal income tax revenues.

Farm displacements range from one for Alternative Z to 14 for Alternatives O and P. The number of farm operations affected ranges from 162 with Alternative V to 260 with Alternative Z. These impacts are likely to result in the loss of personal and corporate income taxes for displaced farming operations.

The number of business displacements is low, ranging from zero to thirteen for Alternatives A through Z. The displaced businesses are small businesses and their displacement should have a nominal effect on personal income tax revenues (loss of employment) and corporate income tax revenues (loss of business).

All of the Feasible Alternatives result in residential displacements. Based on information collected for the *US 24 New Haven to Defiance Relocation Assistance Program Survey (2000)*, there is available replacement housing within the study area to accommodate all residential displacements. Therefore, the alternatives would likely have no effect on personal income tax revenues.

Similarly, all Feasible Alternatives result in business displacements. None of the affected businesses are major employers. It is likely that most of these businesses would relocate to

other locations within the study area, being the only suppliers of a service or product within an established market area. Therefore, the displacements should have a nominal effect on personal income tax revenues (loss of employment) and corporate income tax revenues (loss of business).

Preferred Alternative Impacts

The Preferred Alternatives (Alternative D-1) requires the acquisition of 218.6 hectares (540.3 acres) of land within Allen County, 344.7 hectares (851.4 acres) of land within Paulding County, and 103.7 hectares (256.2 acres) of land in Defiance County for right-of-way. This acquisition will remove land generating property tax revenues from the tax revenue streams for the affected counties and municipalities.

A total of 41 parcels are potentially landlocked by construction of the Preferred Alternative, resulting in the acquisition of more property than required for the highway right-of-way. The 41 parcels cover approximately 179.8 hectares (444 acres) of land. To minimize the number of landlocked parcels, a Service Road Study was conducted to review the practicality and feasibility of providing access to the parcels landlocked by the Preferred Alternative. The study is documented in detail in a separate report entitled *US 24 New Haven to Defiance Service Road Study - Draft* (December 2002).

Based on the evaluation, 11 service roads are justified, eliminating the need to purchase 80.6 hectares (199 acres) landlocked by the Preferred Alternative. Six of the service roads will be constructed in Allen County, providing access to 45.3 hectares (112 acres) of land. Three service roads are recommended in Paulding County, which will provide access to 3.6 hectares (9.8 acres). In Defiance County, two service roads are proposed providing access to 31.2 hectares (77 acres).

Residential and business displacements associated with the Preferred Alternative will also have a slight effect on municipal tax revenues. Alternative D-1 results in 51 residential displacements, including the displacement of 10 farms, and two business displacements. As there is available replacement housing within the study area to accommodate all residential displacements, the Preferred Alternative will likely have no effect on personal income tax revenues. The displaced businesses are small businesses and their displacement should have a nominal effect on personal income tax revenues (loss of employment) and corporate income tax revenues (loss of business).

Mitigation

Impacts on tax revenues could be mitigated by relocating displaced residents and businesses within the same municipality in which they are currently living. Impacts can also be reduced through the provision of service roads to provide access to landlocked parcels. Additionally remnant right-of-way could be sold to adjacent property owners, returning ownership to private entities. The economic benefits of a new facility could be enhanced if the municipalities continue planning efforts that recognize the benefits and negative effects of a new facility as decisions on location and design are made. Through adequate land use planning, the affected municipalities could develop policies that encourage efficient development, stimulate employment and tax revenue growth, sustain and/or enhance the quality of life, and protect sensitive natural and community resources.

3.2.9 Visual Resources

The National Environmental Policy Act maintains that it is the continuous responsibility of the federal government to use all practicable means to assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings. Other related policies and regulations also reflect commitments to consider visual impacts of publicly funded projects and minimize the adverse visual impacts of projects to the maximum extent possible.

Existing Conditions

The existing visual setting of the study area is predominantly rural in nature. In general, the study area was planed by glaciers and the predominant landform in the study area is glacial till. Hence, there is little difference in elevation of the land within the study area. Other landforms such as mountains, hills and ridges, and valleys are absent. There is one location along US 24 that is the exception to this – the Hanson Quarry located along US 24 in Allen County. This man-

made surface feature rises above the elevation of the surrounding area, and lacks vegetation. The landform is in stark contrast to the rest of the study area.

Surface water resources are limited to small perennial and intermittent streams with the exception of the Maumee and Tiffin rivers.

Vegetative land cover varies throughout the study area. The predominant vegetative cover is cropland and discontinuous coniferous and deciduous woodlots. Within the existing US 24 corridor, mowed grassed areas and discontinuous swathes of woodland are the predominant vegetative cover types.

Man-made development is very diverse within the study area. Within the Feasible Corridors associated with the Feasible Alternatives on new alignment, man-made development is sporadically spaced and includes agricultural development, industrial areas, institutional areas, residential areas, cultural features, railroads, major utility corridors, and roadways. There is a higher concentration of development located along existing US 24 including commercial centers, residential development, industrial development, institutional development, cultural features, parklands, parking storage yards, utility lines, billboards and signs, and open space. Consequently, the Feasible Corridors for Alternatives Y and Z are characterized by higher development densities than the corridors for the other alternatives.

The development in the vicinity of the Village of Antwerp is much denser than development throughout the rest of the corridor. Within the Village, the type of development and the style and form of architecture varies through the community. Also, to the east of the I-469 interchange and north of US 24 in Allen County are post-1950's housing developments (subdivisions), which are unique in terms of the type of development and style and the type of architecture when compared to development found elsewhere in the study area.

Visual resources of the natural and cultural environments of the study area are presented in Table 3.57. As shown in the table, there are few visual resources, natural or man-made in the study area. There are two viewer groups that could be affected by the projects, those with a view of the roadway (highway neighbors) and those traveling the roadway with a view of the area surrounding the highway.

**TABLE 3.57
VISUAL RESOURCES IN THE STUDY AREA**

Setting	Visual Resources in Study Area
Natural Environment	Cropland/Pastureland Woodlots Maumee River Tiffin River
Cultural Environment	Rural Development Village Development (Antwerp, Woodburn) Suburban Development (Defiance, New Haven) Historic Resources

Methodology

Because of the length of the Feasible Alternatives, there are numerous viewsheds that would be affected by the various alternatives. However, given the length of the Feasible Alternatives and the varied development patterns of the study area, analysis of visual impacts for all impacted viewsheds would be labor intensive. Therefore, a general analysis addressing potential impacts on visual resources that are representative of much of the study area was completed with the exception of a few site-specific visual resources potentially affected by the project. The site-specific resources include the communities of Antwerp and Woodburn, suburban development in New Haven, and historic resources. The historic resources are discussed in detail in this DEIS (see Section 3.3.2, Historic Resources; and Appendix 4, Section 4(f) Evaluation).

The visual assessment methodology is based on procedures presented in *Visual Impact Assessment: A Six-Step Process for Evaluating Transportation Projects* (Minnesota Department

of Transportation, September 1992) and *Visual Impact Assessment for Highway Projects* (FHWA, September 1990). The study area used for the visual impacts analysis is limited to the Feasible Corridors.

The six steps used for the visual assessment are:

- Identify affected visual resources.
- Identify affected persons (viewers).
- Define existing visual quality.
- Analyze impacts to visual quality.
- Summarize visual impacts by alternative.
- Mitigate adverse visual impacts and enhance existing visual quality.

The identification of affected visual resources and viewers was completed through review of aerial mapping and overlays of the alignments for the Feasible Alternatives as well as field reviews. The inventory was completed for visual resources of the natural environment (land, water, plants, animals), visual resources of the cultural environment (buildings, structures, artifacts) and visual resources of the highway environment (geometrics, structures, fixtures). Visual resources of the natural and cultural environments are presented in Table 3.57; visual resources of the highway environment are presented in Table 3.58.

**TABLE 3.58
VISUAL RESOURCES OF THE HIGHWAY ENVIRONMENT**

Alternative	Visual Resources
Alternatives A - H	Geometrics: Four-lane facility with grassy median. Structures: Structures over rail crossings. Grade-separated crossing at Sampson Road. Major structure over CSXT railroad corridor. Major structures over Maumee and Tiffin rivers. Interchange at SR 424.
Alternatives I - X	Geometrics: Four-lane facility with grassy median. Structures: Structures over rail crossings. Grade-separated crossing at Slusher Road. Major structure over CSXT railroad corridor. Major structures over Maumee and Tiffin rivers. Interchange at SR 424.
Alternative D-1	Geometrics: Four-lane facility with grassy median. Structures: Structures over rail crossings. Interchanges at Ryan/Bruick Road, Webster Road, SR 101, SR 49, US 127, and SR 424. Grade-separated crossings at Doyle, Sampson, Woodburn, Bull Rapids, and State Line roads, C-11, T-43, C-105/T-105, C-146 (Krouse Road), and C-42 (Switzer Road). Major structures over Maumee and Tiffin rivers. Major structure over CSXT railroad corridor.
Alternative Y	Geometrics: Two-lane facility with turning lanes and shoulders.
Alternative Z	Geometrics: Four-lane facility with grassy median. Structures: Structures over rail crossings. Major structure over CSXT railroad corridor. Major structures over Maumee and Tiffin rivers. Interchange at SR 424.

To define the existing visual quality of the study area, areas within the Feasible Corridors were inventoried with respect to the following characteristics:

- Natural landforms.
- Water resources.
- Vegetative cover.
- Man-made development.

For the impact assessment, a rating scale was used to qualify the relative degree of potential visual impact based on the importance of the viewpoint, the volume of viewer activity, and the sensitivity of the viewer (Table 3.59). The assessment methodology is based on FHWA guidelines. The assessment of potential visual impacts is based on two factors: 1.) evaluating the visual components of the facility itself and how the facility relates to the surrounding environment, and 2.) evaluating the potential visual impact the facility could have on the visual experience of the viewers. This involvement could range from no visual impact to a high visual impact. The visual quality rating also took into account the orientation of the proposed facility as being at-grade, or above-grade, from the perspective of a viewer at each viewpoint.

**TABLE 3.59
VISUAL IMPACT RATINGS**

Impact Rating	Criteria
No Impact	The project would not be visible to viewers, with the exception of those using the proposed facility.
Low Impact	The view of the proposed facility would be limited from a viewpoint of limited importance, if the nature and level of viewer activity is not affected, if there are dominating visual impacts in the viewshed from other sources, or if there is a weak visual contrast between the proposed facility and the existing landscape unit.
Medium Impact	The view of the proposed facility would produce a medium impact to an existing viewshed if the facility produces dominating visual impacts in the viewshed or if there is a moderate contrast between the proposed facility and the existing landscape unit.
High Impact	The view of the proposed facility would produce a high impact to an existing viewshed if the proposed facility would be located in close proximity and visible to viewers or if the facility resulted in a strong contrast with the surrounding landscape unit. Also, the proposed facility would produce a high impact to an existing viewshed if it were located within areas of visual diversity, or would involve substantial viewer activity and sensitivity.

Project Impacts

No Build Alternative

The No Build Alternative will not result in alterations to the viewshed and therefore would have no visual impacts.

Alternatives A through X

Alternatives A through X would be constructed on new alignment. However, to minimize impacts, on communities, farms, wetlands, woodlots, and other sensitive resources, the Feasible Alternatives were designed to follow existing transportation corridors to the maximum extent possible. For Alternatives A through X, the use of land within or abutting existing transportation corridors accounts for 31 to 47 percent of the entire length of the alternatives. Also, Alternatives A through X follow existing US 24 between the US 24/SR 424 intersection and the eastern project terminus, which would be widened to a four-lane expressway. Consequently, the introduction of a new visual element into the viewshed of the neighboring properties is minimized. In most locations where the a new visual element is introduced into the setting, the Feasible Alternatives are located more than 304.9 meters (1,000 feet) from residential areas and moderate to high density land uses.

Alternatives A through D and I through P would alter the viewsheds for residential subdivisions located north of US 24 in Milan Township. However, the impacts would be low to moderate as the alternatives follow the alignment of existing US 24 and would not result in the introduction of a new visual element into the viewshed.

Alternatives E through H and Q through X pass in close proximity to residences located in the Gar Creek area of Milan Township, Allen County. The visual impact on these residences is considered to be high as these alternatives would result in the introduction of a new visual element into a

rural setting; the roadway would be located in close proximity to the sensitive resources.

With Alternatives A through X, US 24 would be relocated closer to the residences located in the Edgerton Addition subdivision. With Alternatives A through H, US 24 would be relocated to the north of the neighborhood; Alternatives I through X relocate US 24 to the south of the neighborhood. These alternatives are within the view of residential properties that are considered to be visually sensitive. Therefore, the impact in this area is considered to be moderate to high.

With Alternatives A through X, US 24 would be relocated closer to the City of Woodburn. For Alternatives A through H, US 24 would be relocated to the north of the community where much of the industrial development is located. This area is not considered to be visually sensitive; therefore, there would be no impact as a result of these alternatives. Alternatives I through X relocate US 24 to the south of the community within the view of residential properties that are considered to be visually sensitive. Therefore, the impact in this area is considered to be moderate to high.

Alternatives A through X would result in US 24 being relocated to the south of the Village of Antwerp. The area is predominantly agricultural in nature with some institutional and industrial development. The impact is considered to be minimal given the development characteristics of the viewshed.

Development in the area between the US 24/SR 424 intersection and the eastern project terminus is mixed residential and commercial. The residential development to the north would be sensitive to changes in the viewshed. With Alternatives A through X, US 24 would be widened to the north. Moving the roadway approximately 45.7 meters (150 feet) closer to these resources, most of the residences are setback from the roadway and would experience minimal impacts since new visual elements are not introduced into the setting or the change does not result in a significant contrast to visual elements already comprising the viewshed. A few residences are located in close proximity to US 24 in this area and would experience high visual impacts because the roadway would be located in close proximity to the residences.

Sensitive resources associated with Alternatives A through X include several historic resources eligible for listing in the National Register of Historic Places (NRHP) as described below:

- Harper House – Alternatives A through D and I through P.
- Meyer/Gallmeyer Farm – Alternatives A through D and I through P.
- Smith/Rich/Krug House – Alternatives A through H.
- Amos Schlatter Farmstead – Alternatives I through X.
- Six-Mile Reservoir Remnants – Alternatives I through L and Q through T.
- Inselmann House – Alternatives I through L and Q through T.
- Chester House – Alternatives I through L and Q through T.

In the vicinity of the Harper House (an NRHP-eligible resource), Alternatives A through D and I through P follow the existing US 24 alignment. The visual impact is expected to be low as the alternatives are constructed on roughly the same elevation as existing US 24 and would be shielded by existing trees growing along the south side of US 24 and on the Harper House property.

Alternatives A through D and I through P would also affect the Meyer/Gallmeyer Farm, a NRHP-eligible resource. In the vicinity of this resource, the residence is screened from the proposed right-of-way by outbuildings and landscaping. Some vegetative screening is provided by trees and brush growing along Gar Creek in addition to trees surrounding the property. The view of the alternatives is also minimized by distance as the resource is situated approximately 152.4 meters (500 feet) from the proposed right-of-way. Therefore, the visual impact of these alternatives is considered to be low.

The Smith/Rich/Krug House, a NRHP-eligible resource, is within the Area of Potential Effect for Alternatives A through D. The alternatives would be located more than 365.9 meters (1,200 feet) from the resource. The roadway would be constructed at approximately the same elevation

as the existing ground level. Also, there is existing vegetation and modern development that would screen the view of the highway from the resource. Therefore, the visual impact is expected to be low as there is sufficient distance between the farm and the roadway to minimize the intrusion of additional travel lanes.

Alternatives I through X affect the Amos Schlatter Farmstead, a NRHP-eligible farmstead. Buildings associated with the resource are located approximately 45.7 meters (150 feet) from the alternatives. The roadway would be constructed at approximately the same elevation as the existing ground level. The impact is considered to be moderate to high as the alternatives would result in the introduction of a new visual element into the existing viewshed located in close proximity to the resource.

Alternatives I through L and Q through T would be located within 304.8 meters (1,000 feet) of the Six-Mile Reservoir Remnants, an NRHP-eligible resource. In addition to distance, the alternatives would be screened by a wooded area on the north side of CR 180. Therefore, the visual impact is considered to be low.

Alternatives I through L and Q through T would be located within 475.2 meters (1,500 feet) of the Inselmann House, a NRHP-eligible resource. The impact is considered to be low to moderate as the alternatives would result in the introduction of a new visual element into the viewshed, but the effect is minimized by distance.

The Chester House, a NRHP-eligible resource, is located in close proximity to Alternatives I through L and Q through T. The alternatives would be located within 350.5 meters (1,150 feet) of the resource. The impact is considered to be moderate as the alternatives would result in the introduction of a new visual element into the viewshed, but the effect is somewhat minimized by distance.

Alternative Y

Visual impacts associated with Alternative Y are expected, in general, to be minimal as the roadway design would not change very much when compared to the existing design. Residential resources that are located within close proximity to the roadway and major intersections may experience moderate to high visual impacts with the addition of turning lanes.

Sensitive resources associated with Alternative Y include the Village of Antwerp and several historic resources that are located along US 24 in the Village of Antwerp. The alternative proposes to add a turning lane to US 24, which will require the acquisition of property on both sides of the facility. The visual impact of the widening is considered to be moderate to high as many sensitive resources are located relatively close to US 24 with a limited buffer zone, which would be reduced by the widening. Historic resources of concern located in the Village of Antwerp include the Antwerp Norfolk and Western Railroad Depot (listed in the NRHP, Higgenbotham House, Doering House, E.V. Gordon House and H.H. Gordon House. The viewsheds of the resources would experience moderate to high visual impacts as an additional travel lane (turning lane) would be constructed through Antwerp. The resources are now located in relatively close proximity to US 24 and their frontage would be reduced for the expansion of the existing road.

Other historic resources of concern are located along US 24 outside of the Village of Antwerp include the Harper House, Meyer/Gallmeyer Farm, Armbruster Log Cabin, Villa Motel, Banks Farmstead, Peffley Farmstead, Lone Tower, Simpson Farmstead, and Vagabond Village. Most of these resources would experience low impacts as there is sufficient distance (30.5 meters [100 feet] or more) between the highway and the structures so that the project would not introduce new and/or highly contrasting elements into the viewshed. However, some resources (i.e., the Villa Motel, Banks Farmstead, Lone Tower, and Vagabond Village) are less than 30.5 meters (100 feet) from existing US 24. The changes would be visible to viewers of the roadway. Since the alternative would not result in the introduction of a new visual element, the impact is considered to be moderate.

Alternative Z

Visual impacts associated with Alternative Z are expected to vary. Alternative Z would alter the viewsheds for residential subdivisions located along US 24. However, the impacts are expected to be low to moderate as the alternatives follow the alignment of existing US 24 in most locations and would not result in the introduction of a new visual element into the viewshed. In some locations, US 24 would be relocated onto new alignment, namely the Antwerp Bypass. Several of the historic resources of concern affected by Alternative Z would experience no changes to existing viewsheds as the roadway would be relocated to the south of the village. These resources include the Antwerp Norfolk and Western Railroad Depot, Higgenbotham House, Doering House, E.V. Gordon House, H.H. Gordon House, Banks Farmstead and Peffley Farmstead.

Other historic resources located along US 24 outside of the Village of Antwerp limits would experience low to moderate visual impacts and include the Harper House, Meyer/Gallmeyer Farm, Villa Motel, Simpson Farmstead and Vagabond Village. The impacts are low as there is sufficient distance (30.5 meters [100 feet] or more) between the highway and the structures so that the project would not introduce new and/or highly contrasting elements into the viewshed.

Development along the section between the US 24/SR 424 intersection and the eastern project terminus is mixed residential and commercial. The residential development to the north would be most sensitive to changes in the viewshed. With Alternative Z, US 24 would be widened to the north. Moving the roadway approximately 45.7 meters (150 feet) closer to these resources, most of the residences are setback from the roadway and would experience minimal impacts since new visual elements would not be introduced into the setting or the change would not result in a significant contrast to visual elements already comprising the viewshed. A few residences are located in close proximity to US 24 in this area and would experience high visual impacts because the roadway would be located in close proximity to the residences.

Preferred Alternative Impacts

The Preferred Alternative (Alternative D-1) is similar to Alternative D with respect to its horizontal and vertical alignment with the following exceptions:

- Interchanges provided Ryan/Bruick Road, Webster Road, SR 101, SR 49, US 127, and SR 424.
- Grade-separated crossings at Doyle, Sampson, Woodburn, Bull Rapids, and State Line roads, C-11, T-43, and Krouse Road in addition to the grade-separated crossings proposed at C-105 and Switzer Road for Alternative D.
- Horizontal alignment shifted between US 127 and C-224 in Paulding County.
- Horizontal alignment shifted between Krouse Road and SR 424 in Defiance County.

These changes have little effect on the visual impacts for either Alternative D or Alternative D-1. The Preferred Alternative will alter viewsheds for Georgian Park and Havenwood Forest residential subdivisions located to the north of US 24 in Milan Township. As with Alternative D, these impacts are considered to be low to moderate as the changes to the alignment in Allen County have negligible impact on the viewsheds of residences located within these subdivisions.

Alternative D-1 will pass in close proximity to the Gar Creek and Edgerton Addition neighborhoods. The visual impacts on nearby residences is considered to be high because a new visual element is being introduced into the rural setting of the neighborhoods in close proximity to sensitive resources.

Within the vicinity of Woodburn, Alternative D-1 will be located to the north of the community in an area that is not considered to be visually sensitive because of the industrial nature of the existing development. Therefore, the impact rating for this area is no impact.

The Preferred Alternative will be relocated to the south of Antwerp. Construction of SR 49 will result in the introduction of a new visual element, which will be elevated above the existing ground level. The area is predominantly agricultural in nature with some institutional and industrial development. Given the development characteristics of this area, only minor visual impacts are anticipated.

Three historic resources are located within the Area of Potential Effect for Alternative D-1, which are the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House. Any visual intrusions within the vicinity of these three resources is minimized through distance between the resources and the highway as well as screening by existing vegetation. The visual impact of the Preferred Alternatives on these properties is considered to be low.

In the vicinity of the Harper House (a NRHP-eligible resource), Alternative D-1 follows the existing alignment of US 24. The visual impact is expected to be low the highway will be constructed on roughly the same elevation as existing US 24. The view will be screened by existing trees growing along the south side of US 24 and on the Harper House property.

Alternative D-1 also affects the Meyer/Gallmeyer Farm, a NRHP-eligible resource. In the vicinity of this resource, the residence is screened from the proposed right-of-way by outbuildings and landscaping. Some vegetative screening is provided by trees and brush growing along Gar Creek in addition to trees surrounding the property. The view of Alternative D-1 is also minimized by distance as the resource is situated approximately 152.4 meters (500 feet) from the proposed right-of-way. Therefore, the visual impact of Alternative D-1 is considered to be low.

The Smith/Rich/Krug House, a NRHP-eligible resource, is within the Area of Potential Effect for Alternative D-1. The alternative will be located more than 365.9 meters (1,200 feet) from the resource. Alternative D-1 will be constructed on new alignment through active agricultural lands. The vertical profile of the proposed highway, in general, will result in a minimal rise in elevation in relationship to the existing landscape, except for the proposed overpasses that will carry Alternative D-1 over Woodburn Road, Sampson Road, and the NS Railroad. The new highway will be elevated approximately 7.0 meters (23 feet), at its highest point, over these existing rights-of-way. The Woodburn Road overpass, the closest of the three, will be located approximately 670.7 meters (2,200 feet) west of the property. The potential for a direct visual impact to the Smith/Rich/Krug House by the proposed overpasses is mitigated by distance, existing vegetation, and modern development that will effectively screen the view of the facility from the resource. Therefore, the visual impact of Alternative D-1 is considered to be low.

Mitigation

The quality of the view from the road and of the road are important considerations for this project because the highway would serve as one of the principal means of transportation through the study area. As such, an objective of the design of the Preferred Alternative will be to construct a facility that would be visually compatible with the surrounding environment.

Mitigation may include but is not limited to the landscape design features such as wide medians with island plantings, rounded slopes, and heavy plantings between the highway and sensitive viewers, where feasible.

3.3 CULTURAL RESOURCES

The National Historic Preservation Act (NHPA) of 1966 requires the consideration of potential impacts of federally funded projects on significant historic and archaeological properties. Section 106, 36 CFR Part 800 of the NHPA provides regulations for completing the identification of significant historic sites and evaluating the impact a proposed action will have on these sensitive resources.

The National Register for Historic Places (NRHP) was established as part of the evaluation process to nominate significant resources in the fields of history, architecture, archaeology, and engineering. The NRHP developed a set of criteria designed to be consistent with the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. The criteria states that historic buildings, sites, structures and objects may be included that possess significance from their innate integrity and/or association with persons and/or events significant in our past. Historic or prehistoric archaeological sites that have yielded or may be likely to yield important information are also included.

The Advisory Council on Historic Preservation (ACHP) oversees the Section 106 process. To facilitate the Section 106 review process, the State Historic Preservation Officer (SHPO) generally

assumes the responsibility of the ACHP. As such, the SHPO is responsible for the review of and concurrence with the determinations of eligibility recommendations, application of the Criteria of Effects and Adverse Effects, and development of potential strategies that could be used to minimize and/or mitigate the impacts on historic resources. In Ohio, the SHPO is assigned to the Ohio Historic Preservation Office (OHPO); in Indiana, the Indiana Department of Natural Resources, Division of Historic Preservation and Archeology (DHPA) represents the SHPO.

Detailed investigations focusing on the identification of cultural resources are presented in the separate technical reports listed in Appendix 6.

3.3.1 Archaeological Resources

An archaeological resource, as adapted from 36 CFR Part 79 and defined in the OHPO's *Archaeology Guidelines* (1994) means any surface, subsurface, or submerged location which contains material remains of prehistoric or historic human life or activities that are of archaeological interest in the depositional environment in which they were interred or accumulated.

Existing Conditions

Archaeological investigations were completed for the US 24 New Haven to Defiance project to determine if any significant archaeological resources are present within the study area that could be impacted by the project. The investigations consisted of the following tasks: background research, development of an archaeological predictive model for the study area, completion of field investigations within the proposed right-of-way limits for Alternatives C, D, D-1 and the Antwerp Bypass Connectors, laboratory analysis of artifacts collected during field surveys, and evaluation of the significance of recorded archaeological sites for NRHP eligibility. The results of the archaeological investigations were submitted to the DHPA and OHPO for review and approval.

A total of 542 archaeological sites have been previously recorded in the 1282 square kilometer (500 square mile) study area. Of the 542 sites, 437 are located in Allen County, Indiana; 15 are located in Paulding County, Ohio; and 90 in Defiance County, Ohio. A recent survey in Indiana recorded over 300 archaeological sites in proximity to the Maumee River. The unbalanced distribution of recorded sites within the three counties is most likely a factor of differences in the intensity of professional archaeological investigation within the study area. The majority of the recorded sites represent prehistoric lithic scatters and isolates of unknown temporal designation. However, many sites are temporally and/or culturally placed within the Lake Erie drainage basin archaeological complexes. Three burial mounds and one village have been professionally recorded within the study area, while at least one other mound and two historic Indian villages are reported to exist (Mills, 1914) but have not been field verified.

Eleven of these previously recorded archaeological sites are in close proximity to the Feasible Alternatives developed for US 24. These sites were identified by avocational and professional archaeologists but have not been evaluated to determine site dimensions and cultural affiliation. The majority of the sites were surface collected and contained minimal non-diagnostic cultural material or isolated finds. Three sites are located near the Preferred Alternative (Alternative D-1), all located in Defiance County (33-DE-8, 33-DE-67, and 33-DE-147).

The Gronauer Lock Site (12-AL-1674), constructed as part of the Wabash and Erie Canal, is located within the right-of-way of the existing US 24/I-469 interchange. The site was determined to be eligible for inclusion in the NRHP in 1991. Mitigation of adverse effects to the site were completed in conjunction with the construction I-469 interchange which included a Historic American Engineering Record (HAER) on the lock and off-site preservation following data recovery. Based on available information, a portion of the lock remains underneath US 24. Through coordination with the DHPA, it has been determined that the unexcavated portion of the lock may have the potential to yield additional information about the resource (see correspondence in Appendix 3.4 dated May 16, 2003).

A predictive archaeological model was developed for the US 24 New Haven to Defiance study area to identify areas with high probability for archaeological resources located within the

proposed right-of-way for the Preferred Alternative (Alternative D-1). Based on the predictive model, much of the Preferred Alternative has a low probability for archaeological resources given the low, flat, and poorly drained lake plain physiography of the study area.

Phase I field investigations were conducted on the proposed right-of-way for the Preferred Alternative (D-1), including the Antwerp Bypass. A total of 107 sites were identified through the Phase I investigations completed on the proposed right-of-way for Alternative D-1. Twenty-eight sites are located in Allen County, 32 in Paulding County, and 47 in Defiance County. Table 3.60 describes the type and size of the sites and the NRHP eligibility recommendations. Of the 107 sites surveyed, none were determined to meet the NRHP eligibility requirements.

Of the 28 sites recorded in Allen County, 21 sites were classified as prehistoric sites, six as historic, and one as a multi-component site. Of the 32 sites recorded in Paulding County, 17 sites were classified as prehistoric sites, 14 as historic, and one as a multi-component site. Of the 47 sites in Defiance County, 44 were classified as prehistoric sites and three as historic sites.

In Allen County, twelve percent of the sites were recorded in low probability areas while 88 percent of the sites were recorded in high probability areas. The locations of the sites recorded during the Phase I investigations are consistent with the predictive model developed for the project. Fourteen percent of the sites recorded in Paulding and Defiance counties were located in areas considered to have a low probability for archaeological resources while 86 percent of the sites were located in high probability areas. The locations of the sites are consistent with the predictive model developed for the project. Furthermore, the sites recommended for Phase II evaluation testing were located near drainages. This pattern is consistent with the prediction that potentially eligible archaeological sites are more likely to be found on bluffs and terraces near rivers and streams than in glacial lake plains.

Methodology

Archaeological investigations were completed in accordance with the requirements of OHPO and DHPA.

Background research was conducted to identify previously recorded sites in the study area and patterns associated with these previously recorded sites as well as define areas of archaeological potential based on previous studies, the regional geography and surrounding environments. Research was conducted at the DHPA and OHPO as well as the Fort Wayne/Allen County Historical Museum, the Canal Society of Indiana, Indiana-Purdue University Department of Anthropology, the Little Turtle Archaeological Research Society, the Archives Division of the Ohio Historical Society, the Local History Division of the Toledo/Lucas County Library, the John Paulding Historical Society, the Center for Archival Collections at Bowling Green State University, the Toledo Area Aboriginal Research Society, and the University of Toledo Department of Anthropology.

A predictive archaeological model was developed for the US 24 New Haven to Defiance study area to identify areas with high probability for archaeological resources located within the proposed right-of-way for the Preferred Alternative (Alternative D-1). This project area-specific model is based on a predictive archaeological model for the Lake Plains region of Northwest Ohio developed by ODOT. The potential for prehistoric sites is based on environmental data such as physiography, drainage, relief, soil characteristics, and data associated with previously recorded sites. Data for historic sites is based mainly on cartographic information. The reliability of the model was tested against the data recorded in the field investigations. The model was used to predict the probability for the prehistoric and historic archaeological resources.

Using the predictive model, a sampling strategy was developed for the Phase I field investigations. The corridor associated with the Preferred Alternative (Alternative D-1) was divided into 50 survey segments, which were designated as having either a high or low potential for archaeological resources. All of the high probability areas were surveyed by surface survey or shovel testing while only a sample of the low probability areas were tested, consisting of surface survey in only those areas with sufficient ground visibility. In areas identified as having

high probability for archaeological resources and good surface visibility (greater than 25 percent in Indiana and greater than 50 percent in Ohio), surface transects were employed for field investigations. Field surveys were completed using shovel tests in high probability areas with poor ground surface visibility. In low probability sections with good ground visibility, surface transects were used. In low probability areas with poor ground visibility, pedestrian walkovers were employed.

TABLE 3.60
SITES RECORDED THROUGH ARCHAEOLOGICAL SURVEYS FOR ALTERNATIVE D-1

Site Number	Survey Method	Site Type	NRHP Eligibility
12-AL-898	Surface	Lithic and historic scatter	Not Eligible
12-AL-2013	Surface	Historic canal related site	Not Eligible
12-AL-2014	Surface	Lithic scatter	Not Eligible
12-AL-2015	Shovel-test	Lithic isolate	Not Eligible
12-AL-2016	Shovel-test	Lithic scatter	Not Eligible
12-AL-2017	Shovel-test	Lithic scatter	Not Eligible
12-AL-2018	Surface	Historic canal-related site	Not Eligible
12-AL-2019	Surface	Lithic scatter	Not Eligible
12-AL-2020	Surface	Lithic scatter	Not Eligible
12-AL-2021	Surface	Lithic scatter	Not Eligible
12-AL-2022	Surface	Lithic scatter	Not Eligible
12-AL-2023	Surface	Lithic scatter	Not Eligible
12-AL-2024	Surface	Lithic scatter	Not Eligible
12-AL-2025	Shovel-test	Lithic scatter	Not Eligible
12-AL-2026	Shovel-test	Lithic isolate	Not Eligible
12-AL-2027	Surface	Historic canal-related site	Not Eligible
12-AL-2028	Shovel-test	Lithic scatter	Not Eligible
12-AL-2029	Shovel-test	Lithic isolate	Not Eligible
12-AL-2030	Surface	Lithic scatter	Not Eligible
12-AL-2031	Surface	Lithic scatter	Not Eligible
12-AL-2032	Surface	Lithic scatter	Not Eligible
12-AL-2033	Surface	Lithic scatter	Not Eligible
12-AL-2034	Surface	Historic structure location	Not Eligible
12-AL-2035	Surface	Historic scatter	Not Eligible
12-AL-2036	Surface	Historic scatter	Not Eligible
12-AL-2037	Surface	Lithic scatter	Not Eligible
33-PA-142	Shovel-test	Historic structure location	Not Eligible
33-PA-143	Surface	Lithic scatter	Not Eligible
33-PA-144	Surface	Lithic scatter	Not Eligible
33-PA-145	Shovel-test	Lithic isolate	Not Eligible
33-PA-146	Surface	Historic canal-related site	Not Eligible
33-PA-147	Surface	Lithic scatter	Not Eligible
33-PA-148	Surface	Lithic scatter	Not Eligible
33-PA-149	Surface	Lithic scatter	Not Eligible
33-PA-150	Surface	Historic structure location	Not Eligible
33-PA-151	Surface	Lithic scatter	Not Eligible
33-PA-152	Surface	Lithic scatter	Not Eligible
33-PA-153	Surface	Historic canal-related site	Not Eligible
33-PA-154	Surface	Lithic scatter	Not Eligible
33-PA-155	Surface	Lithic scatter	Not Eligible
33-PA-156	Surface	Historic structure location	Not Eligible

TABLE 3.60 (CONTINUED)
SITES RECORDED THROUGH ARCHAEOLOGICAL SURVEYS FOR ALTERNATIVE D-1

Site Number	Survey Method	Site Type	NRHP Eligibility
33-PA-157	Surface	Historic structure location	Not Eligible
33-PA-158	Surface	Historic scatter	Not Eligible
33-PA-159	Surface	Lithic scatter	Not Eligible
33-PA-160	Surface	Lithic scatter	Not Eligible
33-PA-161	Surface	Lithic scatter	Not Eligible
33-PA-162	Surface	Historic structure location	Not Eligible
33-PA-163	Surface	Lithic scatter	Not Eligible
33-PA-164	Surface	Lithic scatter	Not Eligible
33-PA-165	Surface	Lithic isolate	Not Eligible
33-PA-166	Surface	Lithic isolate	Not Eligible
33-PA-167	Surface	Historic structure location	Not Eligible
33-PA-168	Surface	Historic dump	Not Eligible
33-PA-169	Surface	Historic structure location	Not Eligible
33-PA-170	Surface	Historic structure location	Not Eligible
33-PA-171	Surface	Historic dump	Not Eligible
33-PA-172	Surface	Historic structure location	Not Eligible
33-PA-173	Surface	Lithic and historic scatter	Not Eligible
33-DE-323	Shovel-test	Lithic scatter	Not Eligible
33-DE-324	Shovel-test	Lithic scatter	Not Eligible
33-DE-329	Shovel test	Lithic isolate	Not Eligible
33-DE-330	Shovel-test	Historic dump	Not Eligible
33-DE-331	Shovel-test	Lithic scatter	Not Eligible
33-DE-332	Shovel-test	Lithic scatter	Not Eligible
33-DE-333	Shovel-test	Lithic scatter	Not Eligible
33-DE-334	Shovel-test	Lithic isolate	Not Eligible
33-DE-335	Shovel-test	Lithic isolate	Not Eligible
33-DE-336	Shovel-test	Lithic isolate	Not Eligible
33-DE-337	Shovel-test	Lithic scatter	Not Eligible
33-DE-338	Shovel-test	Lithic scatter	Not Eligible
33-DE-339	Shovel-test	Lithic scatter	Not Eligible
33-DE-340	Surface	Lithic scatter	Not Eligible
33-DE-341	Shovel-test	Lithic scatter	Not Eligible
33-DE-342	Shovel-test	Lithic scatter	Not Eligible
33-DE-343	Shovel-test	Lithic scatter	Not Eligible
33-DE-344	Shovel-test	Lithic isolate	Not Eligible
33-DE-345	Shovel-test	Lithic scatter	Not Eligible
33-DE-346	Shovel-test	Lithic scatter	Not Eligible
33-DE-347	Shovel-test	Lithic isolate	Not Eligible
33-DE-348	Shovel-test	Lithic scatter	Not Eligible
33-DE-349	Shovel-test	Lithic scatter	Not Eligible
33-DE-350	Shovel-test	Historic isolate	Not Eligible
33-DE-351	Shovel-test	Lithic scatter	Not Eligible
33-DE-352	Shovel-test	Lithic scatter	Not Eligible
33-DE-353	Shovel-test	Lithic scatter	Not Eligible
33-DE-354	Shovel-test	Lithic isolate	Not Eligible

TABLE 3.60 (CONTINUED)
SITES RECORDED THROUGH ARCHAEOLOGICAL SURVEYS FOR ALTERNATIVE D-1

Site Number	Survey Method	Site Type	NRHP Eligibility
33-DE-355	Shovel-test	Lithic scatter	Not Eligible
33-DE-356	Shovel-test	Lithic scatter	Not Eligible
33-DE-357	Shovel-test	Lithic scatter	Not Eligible
33-DE-358	Shovel-test	Lithic scatter	Not Eligible
33-DE-359	Shovel-test	Lithic scatter	Not Eligible
33-DE-360	Shovel-test	Lithic isolate	Not Eligible
33-DE-361	Shovel-test	Lithic scatter	Not Eligible
33-DE-362	Shovel-test	Lithic scatter	Not Eligible
33-DE-363	Shovel-test	Lithic scatter	Not Eligible
33-DE-364	Shovel-test	Lithic scatter	Not Eligible
33-DE-365	Shovel-test	Lithic scatter	Not Eligible
33-DE-369	Shovel-test	Historic dump	Not Eligible
33-DE-370	Shovel-test	Lithic scatter	Not Eligible
33-DE-371	Shovel-test	Lithic isolate	Not Eligible
33-DE-372	Surface	Lithic isolate	Not Eligible
33-DE-378	Shovel-test	Lithic isolate	Not Eligible
33-DE-379	Shovel-test	Lithic scatter	Not Eligible
33-DE-380	Surface	Lithic isolate	Not Eligible
33-DE-381	Surface	Lithic scatter	Not Eligible
33-DE-382	Surface	Lithic scatter	Not Eligible

In locations where artifacts were discovered, additional transects and/or shovel tests were completed. The distribution of artifacts was mapped, and soil characteristics and stratigraphy recorded for each site. All artifacts were collected from prehistoric sites. For historic sites, all diagnostic artifacts and representative samples of non-diagnostic were collected. All required data were recorded on archaeological inventory forms. Collected cultural materials were washed, sorted, cataloged, and analyzed.

For the Phase II surveys, intensive field surveys of the sites were completed. For sites located within actively farmed agricultural field, timed-controlled surveys were employed. For those sites with low surface visibility, shovel tests were used with samples taken at 5-meter (16.4-foot) intervals. Artifacts collected through field surveys were recorded on site maps and used to determine artifact concentration and density. The original site boundaries were modified for those sites where artifact densities from the Phase II surveys indicated discrepancies. Protocols for subsurface investigations were developed based on the results of the field surveys. The percentage of the sites excavated for the Phase II surveys depended upon the results of the field survey but was generally between five and ten percent of the total site area as defined by the field survey. Excavation units were placed in both areas with high and low artifact densities to define artifact boundaries and activity areas. In agricultural fields and areas subjected to plowing, series of hand excavated units were used to determine plowzone depths and vertical artifact densities. Mechanical excavations were completed at locations identified as having potential for intact cultural features. In smaller sites and those areas that had not been plowed, all test units were hand-excavated. Excavated artifacts were washed, sorted and analyzed. Detailed tabulations were developed for each of the nine sites. Building from information collected during the Phase I surveys, specific research hypotheses were developed for the nine sites. Common research questions focused on subsistence strategies, settlement patterns, site function, chronology, and cultural changes over time. In addition to the examination of sites individually, hypotheses focusing on regional interpretations were also evaluated. The research hypotheses were used to evaluate the significance of the sites and their eligibility for inclusion in the NRHP.

The sites were evaluated for their potential eligibility according to NRHP criteria. Eligibility is determined by assessing site significance using the NRHP eligibility criteria. A site would be eligible for the NRHP under one or more of the following criteria:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded or may be likely to yield, information important in prehistory or history.” (36 CFR 63)

In general, archaeological remains not found within the depositional environments in which they were interred or accumulated (i.e., found in a grossly disturbed environment such as agricultural field or developed areas) are not likely yield to information that advances or contributes to the understanding of past human behavior.

Adverse effects on archaeological resources include, but are not limited to: physical destruction to all or part of the property, alteration of a property including hazardous materials remediation, and transfer, lease or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance (36 CFR Part 800.5(a)(2)).

Three separate reports were prepared to document results of the Phase I archaeological surveys, as listed below.

- *Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana* (April 2002).
- *Phase I Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio (2 Volumes)* (December 2001).
- *Addendum Report: Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance County, Ohio* (July 2002).

The reports were submitted to DHPA and OHPO for review and concurrence on recommendations for additional studies. The DHPA concurred with the findings presented in the April 2002 report; the OHPO concurred with the findings in the December 2001 and July 2002 reports. Summaries of the agency comments on the Phase I archaeological surveys are provided in Section 5.3.5; copies of the agency comment letters are provided in Appendix 3.4.

Phase II archaeological investigations were completed for two sites in Allen County (12-AL-898 and 12-AL-2034). The investigations are documented in detail in a separate report entitled *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements at Sites 12-AL-898 and 12-AL-2034, Milan and Maumee Townships, Allen County, Indiana* (January 2003). The Phase II archaeology report was submitted to DHPA for review and concurrence. The agency concurred that the two sites do not meet the eligibility requirements for inclusion in the NRHP and no further investigation of the sites is required. A summary of the agency comments is provided in Section 5.3.6; a copy of the agency comment letter is provided in Appendix 3.4

The Phase II archaeological investigations completed on nine sites in Defiance County are documented in a report entitled *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (June 2002). The report was submitted to OHPO for review and concurrence on the study findings. The agency concurred that the nine sites are not eligible for inclusion in the NRHP and no further

archaeological investigations are required. A summary of the agency comments on the Phase II archaeological surveys are provided in Section 5.3.6; a copy of the agency comment letter is provided in Appendix 3.4.

Preferred Alternative Impacts

A total of 107 sites were recorded during the archaeological investigations of the proposed right-of-way for the Preferred Alternative (Alternative D-1). Twenty-eight sites were identified in Allen County, 32 in Paulding County, and 47 in Defiance County. Of the 107 recorded sites, all sites were found to lack sufficient integrity and associated historical significance required to meet the NRHP eligibility criteria. Also, the Gronauer Lock Site is located within the existing right-of-way of the US 24/I-469 interchange.

Mitigation

A plan for the proposed archaeological documentation for the unexcavated portion of the Gronauer Lock Site (12-AL-1674) will be prepared and submitted to the DHPA for review and comment. Upon approval of the work plan, a qualified archaeologist will record the remaining portion of lock during construction.

If future design studies result in changes in the proposed footprint of the Preferred Alternative affecting previously unsurveyed areas, additional archaeological investigations will be undertaken to determine the potential impact on archaeological resources.

If any unanticipated archaeological sites or human remains are uncovered during construction, construction activities will be temporarily suspended and the discovery will be reported to the SHPO. Within the State of Indiana, SHPO notification will be made within two days in accordance with state regulations (Indiana Code 14-21-1-27 and 29).

3.3.2 Historic Resources

A historic property is defined as a site, building, structure, or object significant in American history, architecture, engineering, archaeology, or culture. Historic resources are distinguished from archaeological resources as being located above ground.

Existing Conditions

Within the US 24 New Haven to Defiance study area, there are 475 previously recorded historic sites. The majority of these sites represent residential properties clustered in small villages and towns. Other historic resources include cemeteries, ghost towns, canal-related structures, Indian villages, and bridges. The bridges located in the Ohio portion of the study area are cleared by a programmatic agreement between ODOT and OHPO.

Of the 475 sites, only six properties in Ohio are listed in the NRHP, and only one is located within the Feasible Corridors (the Antwerp Norfolk and Western Railroad Depot is located with the Area of Potential Effect for Alternative Y). These NRHP-listed resources are presented in Table 3.61.

Within the Feasible Corridors, field surveys identified 131 structures over 40 years old in Allen County, Indiana and 192 structures over 50 years old in Paulding and Defiance counties, Ohio. The surveyed properties can be grouped into five general categories:

- Vernacular upright and wing, gabled ell and gable front farmhouses dating from 1830-1920.
- Mass-produced one to two story houses associated with the bungalow, Cape Cod cottage and early ranch types common in the 1905-1950 period.
- Stand alone agricultural outbuildings or farmsteads of several outbuildings lacking a surviving associated house.
- Roadside commercial properties, such as restaurants and motels associated with early automobile related tourism.
- Cemeteries and parks.

**TABLE 3.61
HISTORIC RESOURCES LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES**

Name	Location	Description
Antwerp Norfolk and Western Railroad Depot	503 River Street, Village of Antwerp, Paulding County	Built ca. 1880 on Wabash, St. Louis and Pacific Railroad.
Paulding County Court House	Courthouse Square, Paulding County	Built from 1886-88 and designed by E.O. Fallis and Co. Architects. The Romanesque Revival building was modeled after the Adrian, MI courthouse.
Round Barn	Township Road 168 near County Road 123, Paulding County	Built around 1911 and part of thematic nomination for Round Barns in the Black Swamp of Northwest Ohio.
Paulding County Library	205 S. Main Street, Paulding County	This Carnegie library was built in 1916 and was the first library funded by Andrew Carnegie to serve an entire county.
St. Paul's Episcopal Church	High Street, Hicksville, Defiance County	Built ca. 1873 in Gothic Revival style, reportedly second oldest building in Hicksville.
Dey Road Bridge	County Road 42 crossing over the Tiffin River, Defiance County	Pratt Through Truss built in 1906 by the Toledo Massillon Bridge Company.

Of these inventoried properties, 20 have been determined to be eligible for inclusion in the NRHP. Table 3.62 identifies listed and eligible resources; Figure 3.15 depicts their location. The remaining inventoried properties were determined to be ineligible for inclusion in the NRHP due to a lack of architectural integrity and/or historical association. More specifically, these structures have undergone extensive renovation that generally included altered footprints and additions, reconfigured fenestration, application of synthetic siding, and/or removal of associated period farm outbuildings. This lack of architectural integrity is complemented by the absence of discernible documented historical events or family association.

In general, the extant residential architecture of rural locales in the study area is predominantly the vernacular upright and wing and gabled ell farmhouse. The vast majority of these buildings have undergone significant alterations and additions, almost completely masking the original footprint and massing of the building. The incorporated areas, such as the City of New Haven and Village of Antwerp, display the variety of national styles such as Queen Anne, Second Empire, Bungalows, Cape Cods and early Ranch homes typical of more populated towns and villages. Commercial Italianate architecture dominates the main street commercial areas of the towns. The defining feature of county seat towns such as Fort Wayne, Indiana and Paulding and Defiance, Ohio, is the county courthouse, located in the center of town.

Tourist motel cottages, gas stations, and diner/drive-ins along US 24 reflect examples of early impact of the automobile on roadside architecture. Also common are relatively restrained examples of public architecture represented in township halls, schools, and churches.

Farm-related outbuildings compose a significant portion of the built environment of the region, many lacking a surviving associated farmhouse. English three-bay barns are common reflecting a progression from gable to gambrel roofs. Other common farm outbuildings in the study area include granaries with a central vehicular access aisle flanked by crib storage bins and concrete, tile and metal storage silos.

In addition to the Phase I and II history/architecture surveys of the study area, a common themes investigation was completed which considered historic resources located within the study areas for the three US 24 planning sections (New Haven, Indiana to Defiance, Ohio; Defiance, Ohio to Napoleon, Ohio and Napoleon, Ohio to Toledo, Ohio). The study area for common themes investigation was confined to the portions of the study areas located within the State of Ohio (i.e., between the Indiana/Ohio State Line and Toledo, Ohio). The purpose of the investigation was to identify historic themes common to historic resources located within the study areas. The investigation is documented in a separate report entitled *US 24 Fort to Port: Common Themes Identification: Cultural Resources in Ohio* (April 2001).

**TABLE 3.62
NATIONAL REGISTER LISTED AND ELIGIBLE PROPERTIES LOCATED WITHIN THE FEASIBLE CORRIDORS**

Map ID Number	Site Number	Property Name, Date, and Address/Location	Property Description and Eligibility Criteria	National Register Eligibility Status
1	003-382-40084	Harper House ca. 1930 12823 US 24 Milan Township Allen County, IN	Vernacular farmhouse with minor alterations. Eligible under Criterion A for association with a prominent local family.	Eligible
2	003-382-40086	Meyer/Gallmeyer Farm 1830-1898 2811 Berthaud Road Milan Township Allen County, IN	Upright and wing with log cabin as core and well-preserved outbuilding complex. Eligible under Criterion A for association with prominent local families and Criterion C for potential log construction and well-preserved farm complex.	Eligible
3	003-245-40150	Armbruster Log Cabin ca. 1840, US 24 Milan Township Allen County, IN	Single pen one and one half story log cabin with hewn timber walls and wood shingle roof. Eligible under Criterion C for construction methods.	Eligible
4	003-692-45034	Smith/Rich/Krug House ca. 1880 20813 Woodburn Road Maumee Township Allen County, IN	Excellent and unusual example of Queen Anne style. Notable elements include rock-faced block construction, wrap-around porch and irregular plan. Eligible under Criterion C for architectural integrity.	Eligible
5	003-691-45024	Villa Motel ca. 1930 21701 US 24 Maumee Township Allen County, IN	Semi-circular complex of small tourist cabins anchored by Tudor-Revival office; adjacent to truck stop and Bluecast Mineral Springs tourist attraction. Eligible under Criterion A for association with auto-related business and role as a community social center.	Eligible
6	003-692-45035	Amos Schlatter Farm ca. 1890 3536 Becker Road Maumee Township Allen County, IN	Original farmhouse associated with Schlatter family, one of original settlers in the area. Intact and complete farmstead complex includes rare summer kitchen. Eligible under Criterion A and C for integrity of architecture and farmstead assemblage, intact uncommon dwelling type, and association with significant residents and events.	Eligible
7	PAU-35-1	Antwerp Norfolk and Western Railroad Depot ca. 1880 503 West River St. Village of Antwerp Paulding County, OH	Excellent example of late nineteenth century public railroad-related architecture; moved to present site in 1980s but retained National Register status. Listed on National Register of Historic Places under Criteria A and C for architecture and historical associations.	Listed
8	PAU-129-1	First Presbyterian Church 1901 106 W. River St. Village of Antwerp Paulding County, OH	Good example of Late Gothic Revival style with buttresses, lancet stained glass windows and stone mullions. Eligible under Criterion C for architectural integrity.	Eligible
9	PAU-183-1	Shirley Block Building 1866 101 S. Main Village of Antwerp Paulding County, OH	Two-story brick Italianate was first brick commercial building in Antwerp and home of Graces and Harris grocery and department store for over 60 years. Eligible under Criterion A for historical association and Criteria C for architectural integrity.	Eligible
10	PAU-220-1	Higgenbotham House ca. 1925 103 E. River St. Village of Antwerp Paulding County, OH	Exhibits classic massing and decorative elements of Craftsman Bungalow. Eligible under Criterion C for architectural integrity.	Eligible

TABLE 3.62 (CONTINUED)
NATIONAL REGISTER LISTED AND ELIGIBLE PROPERTIES LOCATED WITHIN THE FEASIBLE CORRIDORS

Map ID Number	Site Number	Property Name, Date, and Address/Location	Property Description and Eligibility Criteria	National Register Eligibility Status
11	PAU-221-1	Doering House ca. 1915 107 E. River St. Village of Antwerp Paulding County, OH	Excellent example of Queen Anne cottage with asymmetrical plan, abundant ornamentation, and leaded glass windows. Eligible under Criterion C for architectural integrity.	Eligible
12	PAU-222-1	E.V. Gordon House ca. 1915 111 E. River St. Village of Antwerp Paulding County, OH	Excellent example of Queen Anne cottage with asymmetrical plan and abundant ornamentation and leaded glass windows. Eligible under Criterion C for architectural integrity.	Eligible
13	PAU-224-1	H.H. Gordon House ca. 1875 112 E. River St. Village of Antwerp Paulding County, OH	Excellent example of Second Empire style built by H.H. Gordon, prominent businessman. Eligible under Criterion C for architectural integrity and Criterion B for association with H.H. Gordon.	Eligible
14	PAU-359-1	Banks Farmstead ca. 1880-1910 6227 US 24 Caryall Township Paulding County, OH	Queen Anne gabled ell notable for its integrity and collection of outbuildings including a Wisconsin Dairy Barn. Eligible under Criterion A for collection of farm-related outbuildings representing farmstead evolution since the turn of the century, and Criterion C for architectural integrity.	Eligible
15	PAU-357-1	Peffley Farmstead 1860-1885 6630 US 24 Caryall Township Paulding County, OH	Hipped roof Italianate farmhouse notable for integrity and outbuildings including an English three-bay barn and hipped roof shed. Eligible under Criterion A for its association with the early brick tile industry and Criterion C as good example of Italianate influence on rural construction.	Eligible
16	PAU-124-1	Six-Mile Reservoir 1840-1887 South of County Rd. 180 Crane Township Paulding County, OH	Reservoir remnants from Wabash and Erie Canal including embankments. Eligible under Criterion A for association with the Wabash and Erie Canal.	Eligible
17	PAU-100-2	Inselmann House ca. 1890 8404 County Rd. 180 Crane Township Paulding County, OH	Italianate house has hipped roof and segmental arch windows; low-pitch gable addition bungalow type. Eligible under Criterion A for association with Wabash and Erie Canal and Criterion C for architectural integrity.	Eligible
18	PAU-101-2	Chester House ca. 1900 15041 Township Rd. 83 Crane Township Paulding County, OH	Queen Anne references include footprint, wrap-around porch and canted bay. Eligible under Criterion A for association with family responsible for growth of township and county and Criterion C as a good example of Queen Anne influences on rural house construction.	Eligible
19	PAU-335-2	Lone Tower ca. 1934 Southeast corner of US 24 and County Rd. 105 Crane Township Paulding County, OH	Novelty building built around oil derrick serving as restaurant, service station and tourist attraction. Eligible under Criterion A as community social focus and representative of auto-related business and Criterion C as representative of roadside architecture.	Eligible

**TABLE 3.62 (CONTINUED)
NATIONAL REGISTER LISTED AND ELIGIBLE PROPERTIES LOCATED WITHIN THE FEASIBLE CORRIDORS**

Map ID Number	Site Number	Property Name, Date, and Address/Location	Property Description and Eligibility Criteria	National Register Eligibility Status
20	PAU-364-2	Simpson Farmstead ca. 1900-1925 12197 US 24 Crane Township Paulding County, OH	American foursquare with concrete block walls notable for its use of materials in a rural setting. The property is eligible under Criterion C for architectural integrity.	Eligible
21	PAU-375-3	Vagabond Village Ca. 1940-1947 13173 US 24 Emerald Township Paulding County, OH	Flat-roofed, commercial building with vertical metal siding and brick veneer. Adjacent is 2-story rock faced limestone building with flat roof and Spanish tile cornice. The village offered food, lodging and entertainment during the 1940s-50s. Eligible under Criterion A for association with development of emerging automobile-related business while serving as a community social focus.	Eligible

The investigation found that 382 historic resources have various thematic associations. Historic themes and subthemes identified include:

- Military.
- Early Settlement (Early Land Grants, Canal Towns, Railroad Towns, Ethnic Communities/Properties, and Main Street Communities).
- Agriculture (Pre-drainage of the Great Black Swamp [1820-1880], and Post-drainage of the Great Black Swamp [Post-1880]).
- Industry (Milling).
- Transportation (Canal, Railroad, Automobile, Interurban).
- Recreation (Works Progress Administration/Civilian Conservation Corps Projects, Toledo Area Metroparks, Summer Homes).

Of the themes identified, agriculture development occurring after the drainage of the Great Black Swamp is the most common theme associated with NRHP-listed and eligible resources located within the common themes investigation study area (Indiana/Ohio State Line to Toledo). Of the 382 historic resources with thematic associations, 138 are reflective of this theme. This pattern is consistent with the history of the area - agricultural development rapidly expanded after the Great Black Swamp was drained in the 1880s. The second most commonly found theme is Early Settlements – Railroad Towns; 61 of the 382 historic properties fall into this category. Of the themes investigated, Transportation was found to be the strongest theme for the Maumee River Valley, although this is not reflected in the number of extant resources situated within the study area for the common themes investigation. The Maumee River has served as a major transportation corridor over the course of time. The river was used for transportation long before colonization of the area; other transportation corridors (Miami and Erie Canal, railroad lines, and US 24) were constructed on routes that paralleled the Maumee River.

Within the Ohio portion of the US 24 New Haven to Defiance study area, most resources are associated with one theme - agriculture development (post-drainage of the Great Black Swamp). Other themes identified include Early Settlement (Ethnic Communities), Early Settlement (Main Street Communities), Early Settlement (Railroad Towns), Agriculture (Pre-drainage of the Great Black Swamp), Transportation (Canal), Transportation (Railroad), Transportation (Automobile) and Recreation (Summer Homes).

Methodology

A literature search was conducted to identify previously documented historic resources within the study area. State agencies responsible for compiling this information were consulted as well as other sources of information such as maps, local histories, and personal communication with local residents and interested parties. Research was conducted at the Center for Archival

Collections at Bowling Green State University, the Defiance City Library, the Defiance College Library, the John Paulding Historical Society in Paulding, the Paulding County Library, the Allen County Library, the Toledo Public Library Local History Room and the Woodburn and Antwerp Branch Libraries. Research on properties in the Village of Antwerp was also conducted at the Paulding County Recorder and Auditor's office.

Phase I history/architecture surveys were conducted to identify potential historic resources. In accordance with 36 CFR 800.16, an Area of Potential Effects (APE) was defined for these investigations. The APE represents the area within which an undertaking may result in changes to the character or use of significant historic resources if present. The APE for the US 24 project was defined as the area within each of the five Feasible Corridors including existing US 24 extending from New Haven, Indiana to Defiance, Ohio (Figure 2.6). The width of the corridors varied from 2,000 to 4,000 feet. The APE for the proposed two-lane and four-lane alternatives along existing US 24 generally conformed to the 500-foot wide corridor centering on the existing roadway including a bypass around Antwerp. Subsequent to the Phase I history/architecture surveys, 26 alternative alignments, each approximately 40 miles in length, were developed within the Feasible Corridors (Figure 2.7). Throughout the course of the corridor and alternatives evaluations, the boundary of the APE was defined as the area within the Feasible Corridors.

The Phase I history/architecture surveys included an inventory of all properties over 50 years of age in Ohio and over 40 years of age in Indiana, regardless of condition or alteration. Survey fieldwork was initiated in July 1999 and completed in the Spring of 2000. Field surveys identified 125 properties that were not previously surveyed in Indiana and 192 properties that were not previously surveyed in Ohio. These properties were researched and evaluated to determine eligibility for listing in the NRHP. State historic inventory forms recording relevant historic architectural features were completed in the field. Some properties within the APE had been previously surveyed (13 in Indiana and 23 in Ohio). These properties were photographed and the survey forms updated to reflect any significant changes since the property was initially surveyed. Site reconnaissance was conducted through observation from public right-of-way or by entering onto a property, and interviewing the residents or occupants.

Historic plat books and atlases, general county histories and other local resources were consulted to ascertain the age, associations and historic developments of the historic properties. A general history of the counties and cities in the study area was written from the early settlement period through the early twentieth century. The research focused on civil developments as well as transportation corridors in the study area. The history of the settlements and growth in the area of the Maumee River was a major focus of research, as the river runs adjacent to the study corridors. Personal communication with property owners or residents assisted in establishing construction and alteration dates.

The highway bridges identified within the study area were compared against the ODOT Bridge Management System inventory and the ODOT Office of Environmental Services (OES) historic bridge files.

The properties identified in the Phase I history/architecture surveys for which additional information was needed to make a determination of NRHP eligibility were subject to a Phase II history/architecture investigation. The Phase II history/architecture investigation consisted of interviews of property owners or residents, and review of property transfer records. Site plans and floor plan sketches were prepared along with a history of each property. A total of 29 properties were investigated in the Phase II surveys, 10 properties in Indiana and 19 properties in Ohio.

For the Common Themes investigation, the Phase I history/architecture surveys completed for the three US 24 planning sections (New Haven, Indiana to Defiance, Ohio; Defiance, Ohio to Napoleon, Ohio and Napoleon, Ohio to Toledo, Ohio) were reviewed. The review focused on the physical characteristics, historic contexts, geographical areas, and periods of historic significance of historic properties. Only those historic properties located in Ohio were evaluated in the investigation. Properties with similar physical characteristics and historical associations were then grouped to determine themes found common to the study areas of the three planning sections.

Determination of Eligibility

Eligibility determinations were made by applying the National Register Criteria for Evaluation. These criteria state that properties can be eligible for listing in the NRHP under one or more criteria, as follows:

“The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded or may be likely to yield, information important in prehistory or history.” (36 CFR 63)

Preliminary eligibility determinations were included in the Phase I and II history/architecture surveys. Final determinations were made by the DHPA and OHPO.

Criteria of Adverse Effects

Potential adverse effects to the cultural resources within the APE were evaluated by applying the criteria of effects established by the ACHP.

The ACHP issued revised Section 106 regulations, effective June 17, 1999, that replace the 1986 procedures. According to 36 CFR 800.5(a)(1), the definition for Criteria of Adverse Effect is as follows: “An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association.”

Adverse effects on historic properties include, but are not limited to:

- Physical destruction, damage, or alteration of all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR 68) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance.
- Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features.
- Neglect of a property, which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.
- Transfer, lease, or sale of the property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance.

All qualifying characteristics of a historic property are taken into consideration when applying the criteria of adverse effects. Direct and indirect effects and reasonably foreseeable effects such as cumulative, later in time or at a distance, can also constitute adverse effects. Direct impacts are a result of the take of a property and/or buildings on the property, while indirect impacts can result from a given action that occurs later in time or farther removed in distance, such as visual and noise impacts.

Proximity impacts resulting from changes in ambient noise levels for each historic property were determined. Existing noise levels were compared to projected future noise levels for the No Build alternative and the Feasible Alternatives. A resource was considered to be impacted if the projected future noise levels exceed the FHWA Noise Abatement Criteria (NAC) or substantially exceed the existing noise level.

Visual impacts are more subjective and can be defined in two ways: obvious visual intrusion in close proximity to the property, and visual intrusion that affects a viewshed over several thousand meters (feet) to a few kilometers (miles) depending on the local topography and vegetation. Visual resources are the components of the natural, cultural or project environments that are capable of being seen. Cultural visual resources are the buildings that compose the cultural environment and that were constructed by people. The value of the visual impact is defined by viewers as either beneficial, adverse or a neutral change to visual quality. The scale of impact can be defined as the physical change to visual resources and can be minor or major. The number of viewers affected by the change can define the extent of the impact. The extent of the impact to viewers is either localized or widespread.

The formal assessment of effects was completed for three rural properties located within the APE of the Preferred Alternative (Alternative D-1) as originally designed with Berthaud Road closed and an overpass carrying Woodburn Road over the new highway. The Effects Determinations are documented in a separate report entitled *Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana* (November 2001). The DHPA reviewed and concurred with the Effects Determination for the Preferred Alternative as presented in the report. A summary of the agency comments are provided in Section 5.3.7 of this DEIS; a copy of the agency comment letter is provided in Appendix 3.4.

Additional coordination with the DHPA concerning the effects of specific design refinements on the three historic properties was completed in June 2002. These changes include an overpass at Berthaud Road in the vicinity of the Meyer/Gallmeyer Farm and overpasses at Woodburn Road, Sampson Road, and the Norfolk Southern (NS) Railroad near the Smith/Rich/Krug House. The DHPA concurred in July 2002 that the proposed design changes will not diminish the qualities that make the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House significant. A summary of the agency comments are provided in Section 5.3.7 of this DEIS; a copy of the agency comment letter is provided in Appendix 3.4.

In the fall of 2002, a number of modifications were included in the design of the Preferred Alternative. These include the change in the crossing at Berthaud Road, which will be closed at the intersection with Alternative D-1. This intersection treatment was included in the November 2001 documentation and the DHPA determined that the design will not cause adverse effects to the Meyer/Gallmeyer Farm.

Project Impacts

Direct and proximity impacts to the NRHP-listed and eligible properties were identified. Table 3.63 summarizes the impacts to the historic resources; descriptions are provided in Sections 3.2.4 and 3.3.3 of this DEIS.

Alternatives A through D and I through P require the acquisition of land from one historic resource - the Meyer/Gallmeyer Farm. The DHPA concurred that the effect on the resource was not adverse. Alternatives Y and Z require acquisition from 14 and five historic properties, respectively. Alternative Y requires the total acquisition of three historic properties and the demolition of associated structures; thereby altering the characteristics that make the historic resources eligible for inclusion in the NRHP. Similarly, Alternative Z requires the total acquisition of two historic resources and the demolition of associated structures.

The noise analysis indicated that few historic resources may experience noise impacts. Future noise levels at two resources would exceed the FHWA NAC with Alternatives I through L and Q through T. Future noise levels at one historic resource would exceed the FHWA NAC with Alternatives M through P and U through X.

**TABLE 3.63
IMPACTS TO NRHP LISTED AND ELIGIBLE HISTORIC RESOURCES**

Resource Name and Location	Type of Resource	Alternative	Impact	Impact Description	Hectares (Acres) Taken by Alternative	% Area of Property Impacted
Harper House 12823 US 24 Milan Township Allen County, IN	NRHP Eligible	A-D, D-1, I-P, Z	None	None	N/A	N/A
		Y	Direct	Partial take of property	<0.1 (0.1)	<1
Meyer/Gallmeyer Farm 2811 Berthaud Road Milan Township Allen County, IN	NRHP Eligible	A-D, D-1, I-P	Direct	Partial take of property	1.2 (3.0)	4
		Y	Direct	Partial take of property	0.2 (0.6)	1
		Z	Direct	Partial take of property	2.5 (6.1)	8
Armbruster Log Cabin US 24 Milan Township Allen County, IN	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	10
		Z	Direct	Total take of property and buildings	0.2 (4.0)	100
Smith/Rich/Krug House 20813 Woodburn Road Maumee Township Allen County, IN	NRHP Eligible	A-D, D-1, E-H	None	None	N/A	N/A
Villa Motel 21701 US 24 Maumee Township Allen County, IN	NRHP Eligible	Y	Direct	Partial take of property Operational	0.1 (0.2)	13
		Z	Direct	Partial take of property Operational	0.1 (0.2)	13
Amos Schlatter Farmstead 3536 Becker Road Maumee Township Allen County, IN	NHRP Eligible	I-X	Proximity	Noise	N/A	N/A
Antwerp Norfolk and Western Railroad Depot 503 West River Street Village of Antwerp Paulding County, OH	NRHP Listed	Y	Direct	Total take of property and buildings	0.1 (0.2)	100
First Presbyterian Church 106 W. River Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Total take of property and building	0.1 (0.3)	100
Shirley Block Building 101 S. Main Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Total take of property and building	0.1 (0.3)	100
Higgenbotham House 103 E. River Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	15
Doering House 107 E. River Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	15
E.V. Gordon House 111 E. River Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	15
H.H. Gordon House 112 E. River Street Village of Antwerp Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	25
Banks Farmstead 6227 US 24 Corryall Township Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	0.1 (0.3)	1

Note: Impact assessments for the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House are based on the Effects Evaluation for the Preferred Alternative, as approved by the DHPA.

TABLE 3.63 (CONTINUED)
IMPACTS TO NRHP LISTED AND ELIGIBLE HISTORIC RESOURCES

Resource Name and Location	Type of Resource	Alternative	Impact	Impact Description	Hectares (Acres) Taken by Alternative	% Area of Property Impacted
Peffley Farmstead 6630 US 24 Carryall Township Paulding County, OH	NRHP Eligible	Y	None	None	N/A	N/A
Six-Mile Reservoir Remnants C-180 Crane Township Paulding County, OH	NRHP Eligible	I-L, Q-T	Proximity	Visual	N/A	N/A
Inselmann House 8404 C-180 Crane Township Paulding County, OH	NRHP Eligible	I-L, Q-T	Proximity	Noise	N/A	N/A
Chester House 15051 T-83 Crane Township Paulding County, OH	NRHP Eligible	I-L, Q-T	None	None	N/A	N/A
Lone Tower US 24 at C-105 Crane Township Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property	<0.1 (0.1)	3
		Z	Direct	Total take of property and building	1.4 (3.4)	100
Simpson Farmstead 12197 US 24 Crane Township Paulding County, OH	NRHP Eligible	Y	None	None	N/A	N/A
		Z	None	None	N/A	N/A
Vagabond Village 13173 US 24 Emerald Township Paulding County, OH	NRHP Eligible	Y	Direct	Partial take of property Operational	0.3 (0.8)	11
		Z	Direct	Partial take of property Operational	0.4 (0.9)	13

Note: Impact assessments for the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House are based on the Effects Evaluation for the Preferred Alternative, as approved by the DHPA.

The analysis of visual effects showed that the proposed new alignments (Alternatives A through X) in rural sections of the study area introduce minor visual impacts, as the vertical profile of the proposed roadway will generally result in a minimal rise in elevation in relationship to the existing landscape. The sight line of the rural area viewers will not be interrupted on a widespread scale. The scale of the impact will be minor and the extent of the impact localized. Improvements to existing US 24 for Alternatives Y and Z consist of upgrading shoulders and lane widening. Visual impacts along existing US 24 are minor due to the fact that proposed improvements will not introduce a new visual element into the setting and therefore will not alter the views of the buildings' occupants.

Preferred Alternative Impacts

A formal assessment of impacts was completed for the Preferred Alternative (Alternative D-1) by applying the Criteria of Effect in accordance with the requirements of the NHPA. The Effects Determinations are summarized in Table 3.64. Three properties eligible for the NRHP are located within the APE, all in Indiana. The properties are the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House.

Harper House

The Preferred Alternative (D-1) does not require acquisition of property associated with the Harper House. The Preferred Alternative (Alternative D-1) reduces traffic noise from the current levels, but these reduced levels remain above the FHWA NAC. Because the proposed highway does not introduce audible elements that degrade the existing historic property environment but actually improve the overall setting, the noise levels associated with the undertaking have no effect on the Harper House property. The property is shielded by vegetation (mature trees and undergrowth) and therefore will not suffer visual effects from proposed highway construction. The Preferred Alternative will have No Effect on the Harper House.

**TABLE 3.64
FINDING OF EFFECT ON NRHP-ELIGIBLE PROPERTIES
WITHIN THE AREA OF POTENTIAL EFFECTS OF THE PREFERRED ALTERNATIVE**

Property	Potential Impact	Mitigating Factors	Finding of Effect (36 CFR Part 800.5)
Harper House	Introduction of large-scale highway into the setting of the resource.	View shielded by existing mature trees and undergrowth; reduction in future ambient noise levels.	No Effect
Meyer/Gallmeyer Farm	Acquisition of 1.2 hectares (3.0 acres) of farmland (no buildings) from within the NRHP boundary; slight increase in ambient noise levels; introduction of large-scale highway into the setting of the resource.	Acquisition affects less than four percent of land contained within NRHP boundary; future noise levels do not exceed the FHWA NAC; view shielded by outbuilding complex and existing mature trees and shrub vegetation.	No Adverse Effect
Smith/Rich/Krug House	Introduction of large-scale highway into the setting of the resource; slight increase in ambient noise levels.	View buffered by distance and shielded by existing mass of mature trees; future noise levels do not exceed the FHWA NAC.	No Effect

Meyer/Gallmeyer Farm

The Preferred Alternative (Alternative D-1) results in a direct impact to the Meyer/Gallmeyer Farm through the proposed right-of-way acquisition of approximately 4.0 hectares (9.9 acres) of farmland, which includes 1.2 hectares (3.0 acres) of the remaining 31.1 hectare (76.8-acre) original farm tract comprising the historic resource. The taking of the 1.2-hectare (3.0-acre) triangle from the northern edge of the parcel constitutes an effect on the property. However, since it does not diminish its integrity in a manner that alters the characteristics of the farm that qualify it for inclusion in the NRHP (36 CFR 800.5[a][1]), the effect is not adverse.

The Preferred Alternative has the potential for a slight increase over the current noise levels at the Meyer/Gallmeyer Farm, but the noise levels will remain below FHWA NAC level. The noise analysis shows that the difference between the future build noise levels for the Preferred Alternative and the No Build Alternative is negligible. Because the proposed highway does not introduce audible elements that degrade the existing historic property environment, the change in the noise levels has no effect on the property. The view of the highway from the residence is shielded for the most part by the outbuilding complex, mature trees, and shrub growth indicating that it will not suffer adverse visual effects. A No Adverse Effect Determination is indicated for the Meyer/Gallmeyer Farm.

Smith/Rich/Krug House

The Preferred Alternative (Alternative D-1) has No Effect on the Smith/Rich/Krug House. The noise analysis completed for the Effects Determination indicates that future build noise levels will increase slightly, but do not exceed the FHWA NAC level. Alternative D-1 will be located more than 365.9 meters (1,200 feet) from the resource. The alternative will be constructed on new alignment through active agricultural lands. The vertical profile of the proposed highway, in general, will result in a minimal rise in elevation in relationship to the existing landscape, except for the proposed overpasses that will carry Alternative D-1 over Woodburn Road, Sampson Road, and the NS Railroad. The new highway will be elevated approximately 7.0 meters (23 feet), at its highest point, over these existing rights-of-way. The Woodburn Road overpass, the closest of the three, will be located approximately 670.7 meters (2,200 feet) west of the property. The potential for a direct visual impact to the Smith/Rich/Krug House by the proposed overpasses is mitigated by distance, existing vegetation, and modern development that will effectively screen the view of the facility from the resource. Therefore, the visual impact of Alternative D-1 is considered to be low. Also, sufficient distance between the resource and the Preferred Alternative as well as existing vegetation and buildings shield the property from significant alteration to its viewshed. Therefore, it is concluded that the Preferred Alternative will have No Effect on this property.

Mitigation

Avoidance of NRHP listed and eligible resources is the preferred mitigation option. If adverse effects to eligible resources cannot be avoided, then appropriate mitigation measures will be recommended and implemented to minimize or mitigate impacts associated with the Preferred Alternative (Alternative D-1). Mitigation measures could include, but are not limited to:

- Minor alignment shifts.
- Relocation of the resource.
- Historic American Building Survey (HABS) or Historic American Engineering Record (HAER) recordation.
- Preservation of existing natural and man-made features that provide visual screening to sensitive resources.

Specific mitigation measures to be implemented for the US 24 New Haven to Defiance project to mitigate impacts on the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House include the preservation of existing vegetation which screens the view of the roadway from these properties.

Public involvement, as required by the Section 106 regulations, will continue during the project. ODOT and INDOT will provide information on the Section 106 studies to the public, as appropriate.

3.3.3 Historic Sites- Section 4(f) Resources Existing Conditions

Within the APE associated with the 26 Feasible Alternatives, 21 historic resources have been identified that qualify for protection under Section 4(f) of the US Department of Transportation Act of 1966. Table 3.65 presents a summary of these resources; Figure 3.15 depicts the general location of these sites.

The historic Section 4(f) resources can be divided into five general categories. The first are farmsteads with a large agricultural component. The Section 4(f) boundary of these farmsteads includes the agricultural lands associated with the farming operation that have been determined to be a historic component of the site. The size of these sites range from 15.9 to 31.1 hectares (39.4 to 76.8 acres). Two sites fall into this category:

- Meyer/Gallmeyer Farmstead (003-382-40086).
- Banks Farmstead (PAU-359-1).

The second category of historic 4(f) resources is farmsteads without a large associated agricultural component. These farmsteads are configured such that the associated farmland does not contribute to the factors that make the site historic. Consequently, the Section 4(f) boundaries are limited to the area surrounding the structures on the property. While the legal parcels are quite large, the Section 4(f) boundaries are limited to less than 1.2 hectares (three acres). Generally, the resources include a farm house and miscellaneous outbuildings, such as barns and silos. Four resources are in this category:

- Harper House (003-382-40084).
- Amos Schlatter Farmstead (003-692-45035).
- Peffley Farmstead (PAU-357-1).
- Simpson Farmstead (PAU-364-2).

The third category of historic resources is individual residences eligible under Criterion C. These residences are eligible for the NRHP due to their architectural attributes. The Section 4(f) site boundaries for these properties include all of the land within the properties' current legal boundaries. Seven sites are in this category:

- Armbruster Log Cabin (003-245-40150).
- Smith/Rich/Krug House (003-692-45034).
- Higgenbotham House (PAU-220-1).
- Doering House (PAU-221-1).
- E.V. Gordon House (PAU-222-1).

- H.H. Gordon House (PAU-224-1).
- Inselmann House (PAU-100-2).

**TABLE 3.65
SUMMARY OF HISTORIC SECTION 4(f) RESOURCES**

Resource	Resource Type	Description	Alternatives Associated With Resource
Harper House 003-382-40084	Farmstead	20.4-hectare (50.3-acre) farmstead eligible for NRHP under Criterion A Area within Section 4(f) boundary 0.9 hectares (2.1 acres)	A-D, D-1, I-P, Y, Z
Meyer/Gallmeyer Farm 003-382-40086	Farmstead	35.4-hectare (87.5-acre) farm eligible for NRHP under Criterion A Area within Section 4(f) boundary 31.1 hectares (76.8 acres)	A-D, D-1, I-P, Y, Z
Armbruster Log Cabin 003-245-40150	Log Cabin	15.9-hectare (39.3-acre) parcel eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.2 hectares (0.40 acres)	Y, Z
Smith/Rich/Krug House 003-692-45034	Queen Anne Rock-Faced Block House	75.6-hectare (187.0-acre) parcel eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.7 hectares (1.7 acres)	A-D, D-1, E-H
Villa Motel 003-691-45024	1930s Tourist Cabins	0.6-hectare (1.6-acre) tourist cabin complex eligible under Criterion A Area within Section 4(f) boundary 0.6 hectares (1.6 acres)	Y, Z
Amos Schlatter Farmstead 003-692-45035	Farmstead	32.3-hectare (80.0-acre) farmstead eligible for NRHP under Criteria A & C Area within Section 4(f) boundary 0.6 hectare (1.4 acres)	I-X
Antwerp Norfolk & Western RR Depot PAU-35-1	Railroad Depot	0.1 hectares (0.2 acres) eligible for NRHP under Criteria A & C Area within Section 4(f) boundary 0.1 hectares (0.2 acres)	Y
First Presbyterian Church PAU-129-1	Late Gothic Revival	0.1 hectares (0.3 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.1 hectares (0.3 acres)	Y
Shirley Block Building PAU-183-1	Italianate Commercial	0.1 hectares (0.3 acres) eligible for NRHP under Criteria A & C Area within Section 4(f) boundary 0.1 hectares (0.3 acres)	Y
Higgenbotham House PAU-220-1	Craftsman Bungalow	0.1 hectares (0.2 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.1 hectares (0.2 acres)	Y
Doering House PAU-221-1	Queen Anne Cottage	0.1 hectares (0.2 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.1 hectares (0.2 acres)	Y
E.V. Gordon House PAU-222-1	Queen Anne Cottage	0.1 hectares (0.2 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.1 hectares (0.2 acres)	Y
H.H. Gordon House PAU-224-1	Second Empire	0.2 hectares (0.4 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.2 hectares (0.4 acres)	Y
Banks Farmstead PAU-359-1	Farmstead	15.9 hectare (39.4 acre) farmstead eligible for NRHP under Criterion A Area within Section 4(f) boundary 15.9 hectares (39.4 acres)	Y
Peffley Farmstead PAU-357-1	Farmstead	4.2 hectare (10.5 acre) farmstead eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.2 hectares (0.4 acres)	Y
Six-Mile Reservoir Remnants PAU-124-1	Canal Reservoir Levee and Adjacent Canal Bed	1.1 hectares (2.8 acres) eligible for NRHP under Criterion A Area within Section 4(f) boundary 1.1 hectares (2.8 acres)	I-L, Q-T
Inselmann House PAU-100-2	Italianate/Renaissance Revival	1.7 hectares (4.3 acres) eligible for NRHP under Criterion C Area within Section 4(f) boundary 1.7 hectares (4.3 acres)	I-L, Q-T
Chester House PAU-101-2	Vernacular Queen Anne	4.0 hectares (10.0 acres) eligible for NRHP under Criterion A Area within Section 4(f) boundary 4.0 hectares (10.0 acres)	I-L, Q-T
Lone Tower PAU-335-2	Roadside Architecture	1.4 hectares (3.4 acres) eligible for NRHP under Criteria A & C Area within Section 4(f) boundary 1.4 hectares (3.4 acres)	Y, Z
Simpson Farmstead PAU-364-2	Farmstead	23.4 hectare (57.8 acre) farmstead eligible for NRHP under Criterion C Area within Section 4(f) boundary 0.2 hectares (0.4 acres)	Y, Z
Vagabond Village PAU-375-3	Automobile-Related Roadside Architecture	2.9 hectares (7.3 acres) eligible for NRHP under Criterion A Area within Section 4(f) boundary 2.9 hectares (7.3 acres)	Y, Z

The fourth category is properties eligible under Criterion A or both Criteria A and C. These properties derive historical significance through association with important historical events (or historical trends). Three resources fall under this category:

- Shirley Block Building (PAU-183-1).
- Six-Mile Reservoir Remnants (PAU-124-2).
- Chester House (PAU-101-2).

The final category of historic Section 4(f) resources is miscellaneous sites. Four sites are in this category:

- Villa Motel (003-691-45024).
- Antwerp Norfolk and Western Railroad Depot (PAU-35-1).
- First Presbyterian Church (PAU-129-1).
- The Lone Tower (PAU-335-2).
- Vagabond Village (PAU-375-3).

Only one resource, the Antwerp Norfolk and Western Railroad Depot, is listed in the NRHP. The other 20 resources have been determined to be eligible for inclusion in the NRHP.

Methodology

The Section 4(f) analysis focuses on properties listed and determined to be eligible for inclusion in the NRHP.

Before the impacts of the alternatives on the Section 4(f) resources were evaluated, a preliminary boundary was defined for each historic resource. Section 4(f) boundary determinations were evaluated based on the historic features and characteristics of the property. Right-of-way acquisition of land within this boundary was considered to be a direct impact. The boundary also established the framework for the assessment of potential indirect impacts.

For the purpose of the Section 4(f) analysis, historic properties were categorized as “urban” if they were 2.0 hectares (five acres) or less in size and “rural” if they were greater than 2.0 hectares (five acres) in size. The current legal boundary of the resource served as the Section 4(f) boundary for all the urban properties.

The boundary determinations for rural properties were made by applying the criteria outlined in *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* (US Department of Interior, No Date), and *National Register Bulletin #21, How to Establish Boundaries for National Register Properties* (US Department of Interior, No Date). Section 4(f) boundaries of rural properties eligible for the NRHP under Criterion C (architectural integrity) were defined to encompass the farmstead and associated outbuildings only. The 4(f) boundary for the eligible remnants of the Six-Mile Reservoir was defined as the intact segment of the former canal reservoir levee and the area immediately adjacent former canal bed believed to be closely associated with the 1887 Reservoir War. The Section 4(f) boundaries for the balance of the rural properties eligible under NRHP Criterion A were evaluated differently. If the land surrounding farm buildings continued to be included in the parcel with the farm buildings, the land was farmed historically, and continued to be farmed, the entire acreage was included in the Section 4(f) boundary. If the surrounding land was not currently being farmed or no longer included in the parcel with the farm buildings, the 4(f) boundary was limited to include to the area of the farm buildings. Boundaries were established based on the results of the Phase I and Phase II history/architecture surveys and deed and historic map research showing chain of ownership and change in acreage.

The “use” of a Section 4(f) resource is only permissible if there is no “feasible and prudent” alternative, and if the project includes all possible planning to minimize harm. The term use, with respect to Section 4(f) resources can include direct as well as indirect impacts. Relative to the historic site provisions of Section 4(f), direct uses are generally limited to permanent right-of-way acquisition. The acquisition or modification of any existing improvement (building/earthwork/process) is also considered a direct impact.

Section 4(f) also recognizes the potential for temporary and proximity (constructive use) impacts. Temporary impacts are most often related to traffic detours and physical construction and end when construction is complete. Constructive uses are defined as those uses that do not involve the actual acquisition of land, but whose impacts are in proximity to the Section 4(f) property and consequently impair it. In either case, when the indirect impact substantially impairs the activities, features or attributes that qualify a resource for Section 4(f) protection, it is considered a use.

For the preliminary impact assessments of the 26 Feasible Alternatives, direct impacts were defined as right-of-way acquisition and improvement losses. Proximity impacts were reported in accordance with existing data and assumptions and applicable resource impact criteria. For example, noise and visual impacts are described in accordance with the regulations that govern those resources. Noise impacts are defined in accordance with FHWA, INDOT, and ODOT policies on traffic-noise impacts. The Section 4(f) resources are classified as Category B receptors (residential properties) for the purpose of this analysis. As defined in 23 CFR 772, traffic noise impacts occur “when the predicted traffic noise levels approach or exceed the FHWA Noise Abatement Criteria (NAC) or when the predicted traffic noise levels substantially exceed the existing noise levels.” This is interpreted by INDOT and ODOT to include noise levels within one dBA of the NAC (i.e., greater than or equal to 66 dBA for exterior residential receivers) or noise levels that increase by 10 dBA for properties in Ohio (in accordance with ODOT policies) and 15 dBA for properties in Indiana (in accordance with INDOT policies). In addition, the Section 4(f) regulations note that in cases where the traffic generated noise levels of the Build Alternative exceed the threshold, but by less than 3 dBA over the projected No Build noise levels, a constructive use of the resource does not occur. The Section 4(f) regulations also note that a constructive use does not occur if the project is determined to result in No Effect or No Adverse Effect on a NRHP-listed or eligible property.

Effects evaluations were completed for three NRHP-eligible resources located within the APE for the Preferred Alternative (Alternative D-1). These three resources are the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House. Potential adverse effects to the resources were identified by applying the Criteria of Effects established by the ACHP, which were submitted to DHPA for review. Boundary determinations were included in the Effects Evaluation submitted to the DHPA. The DHPA has concurred with the effects recommendations for the Preferred Alternative (D-1). A summary of DHPA comments on the Effects Evaluation is presented in Section 5.3.7; copies of agency comment letters are provided in Appendix 3.4.

Project Impacts

The assessment of potential impacts on the historic 4(f) resources by the Feasible Alternative is summarized in Table 3.66 and described below:

Antwerp Norfolk and Western Railroad Depot (PAU-35-1)

The Antwerp Norfolk and Western Railroad Depot is currently listed on the NRHP (Map Reference #7 on Figure 3.15). The Section 4(f) boundary of the resource includes the entire 0.1-hectare (0.2-acre) legal parcel. Alternative Y will impact the Antwerp Depot, resulting in the total acquisition of the property. The depot building will be demolished or moved.

Harper House (003-382-40084)

Located at 12823 US 24, Milan Township, Allen County, the Harper House is shown as Map Reference #1 on Figure 3.15. The property has approximately 91.5 meters (300 feet) of frontage along US 24. Tax parcels show the total acreage for the Harper House as 20.4 hectares (50.3 acres); the Section 4(f) boundary includes 0.9 hectares (2.1 acres) with the house, barn and period outbuildings. The Harper House is surrounded by level terrain consisting of current and former agricultural fields. The nearest houses and farm complexes are situated across US 24, approximately 182.9 meters (600 feet) from the resource.

Because of their proximity to the Harper House, all of the alternatives that utilize Segment 1 (Alternatives A through D and I through P) have the potential for proximity impacts. Alternatives A through D and I through P will pass within 152.4 meters (500 feet) of the Harper House, paralleling the south side of existing US 24. These alternatives do not encroach upon the NRHP boundary or result in a loss of land from the resource.

The property’s use will not change and no physical features within the property’s setting that contribute to its historic significance will be altered. The proposed new highway will be built on generally the same grade and cross-section as existing US 24, and will be screened from the view of the Harper House primarily by existing trees growing along the south side of US 24 and augmented by the existing mature landscape vegetation of the historic property. Together, these factors buffer the resource from potential visual impacts. The farmland surrounding the house was not included within the boundary because it is now primarily wooded and fallow.

**TABLE 3.66
SUMMARY OF IMPACTS TO SECTION 4(f) RESOURCES**

Alternative	Resource	Impacts	
A	Meyer/Gallmeyer Farm	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres)	Proximity: None
B	Meyer/Gallmeyer Farm	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres)	Proximity: None
C	Meyer/Gallmeyer Farm	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres)	Proximity: None
D	Meyer/Gallmeyer Farm	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres)	Proximity: None
D-1	Meyer/Gallmeyer Farm	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres)	Proximity: None
E	—	—	—
F	—	—	—
G	—	—	—
H	—	—	—
I	Meyer/Gallmeyer Farm Amos Schlatter Six-Mile Reservoir Remnants Inselmann House	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None Direct: None Direct: None	Proximity: None Proximity: Noise Proximity: Visual Proximity: Noise
J	Meyer/Gallmeyer Farm Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None Direct: None Direct: None	Proximity: None Proximity: Noise Proximity: Visual Proximity: Noise
K	Meyer/Gallmeyer Farm Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None Direct: None Direct: None	Proximity: None Proximity: Noise Proximity: Visual Proximity Noise
L	Meyer/Gallmeyer Farm Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None Direct: None Direct: None	Proximity: None Proximity: Noise Proximity: Visual Proximity: Noise
M	Meyer/Gallmeyer Farm Amos Schlatter Farmstead	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None	Proximity: None Proximity: Noise
N	Meyer/Gallmeyer Farm Amos Schlatter Farmstead	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None	Proximity: None Proximity: Noise
O	Meyer/Gallmeyer Farm Amos Schlatter Farmstead	Direct: 1.2 of 31.1 hectares (3.0 of 76.8 acres) Direct: None	Proximity: None Proximity: Noise
P	Meyer/Gallmeyer Farm Amos Schlatter Farmstead	Direct: 1.2 of 31.0 hectares (3.0 of 76.8 acres) Direct: None	Proximity: None Proximity: Noise
Q	Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: None Direct: None Direct: None	Proximity: Noise Proximity: Visual Proximity: Noise

Note: Impact assessments for the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House are based on the Effects Evaluation for the Preferred Alternative as approved by the DHPA.

**TABLE 3.66 (CONTINUED)
SUMMARY OF IMPACTS TO SECTION 4(f) RESOURCES**

Alternative	Resource	Impacts	
R	Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: None Direct: None Direct: None	Proximity: Noise Proximity: Visual Proximity: Noise
S	Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: None Direct: None Direct: None	Proximity: Noise Proximity: Visual Proximity Noise
T	Amos Schlatter Farmstead Six-Mile Reservoir Remnants Inselmann House	Direct: None Direct: None Direct: None	Proximity: Noise Proximity: Visual Proximity: Noise
U	Amos Schlatter Farmstead	Direct: None	Proximity: Noise
V	Amos Schlatter Farmstead	Direct: None	Proximity Noise
W	Amos Schlatter Farmstead	Direct: None	Proximity: Noise
X	Amos Schlatter Farmstead	Direct: None	Proximity: Noise
Y	Harper House Meyer/Gallmeyer Farm Armbruster Log Cabin Villa Motel Antwerp RR Depot First Presbyterian Church Shirley Block Building Higgenbotham House Doering House E.V. Gordon House H.H. Gordon House Banks Farmstead The Lone Tower Vagabond Village	Direct: 0.1 of 0.3 hectares (0.1 of 2.1 acres) Direct: 0.2 of 31.1 hectares (0.6 of 76.8 acres) Direct: 404.7 m ² of 0.2 hectares (0.1 of 0.4 acres) Direct: 0.1 of 0.8 hectares (0.2 of 1.7 acres) Direct: Total acquisition Direct: Total acquisition Direct: Total acquisition Direct: 121.4 m ² of 809.3 m ² (0.03 of 0.2 acres) Direct: 121.4 m ² of 809.3 m ² (0.03 of 0.2 acres) Direct: 80.9 m ² of 809.3 m ² (0.02 of 0.2 acres) Direct: 0.1 of 0.2 hectares (0.1 of 0.4 acres) Direct: 0.1 of 15.9 hectares (0.3 of 39.4 acres) Direct: 0.1 of 1.4 hectares (0.1 of 3.4 acres) Direct: 0.3 of 2.7 hectares (0.8 of 7.3 acres)	Proximity: None Proximity: None Proximity: None Proximity: Operational N/A N/A N/A Proximity: None Proximity: None Proximity: None Proximity: None Proximity: None Proximity: None Proximity: Operational
Z	Meyer/Gallmeyer Farm Armbruster Log Cabin Villa Motel The Lone Tower Vagabond Village	Direct: 2.5 of 31.1 hectares (5.5 of 76.8 acres) Direct: Total acquisition Direct: 0.1 of 0.8 hectares (0.2 of 1.6 acres) Direct: Total acquisition Direct: 0.4 of 2.7 hectares (0.9 of 7.3 acres)	Proximity: None N/A Proximity: Operational N/A Proximity: Operational

Note: Impact assessments for the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House are based on the Effects Evaluation for the Preferred Alternative as originally designed and approved by the DHPA.

Because this farmland does not contribute to the property's significance, the introduction of the new roadway into this area does not constitute an effect. Wooded areas presently line the south side of US 24 opposite the house and will remain after the project is built, screening the new road from the house.

Noise analyses completed for the project indicate the future (2028) traffic-generated noise levels projected for Alternatives A through D and I through P will exceed the FHWA NAC levels but are lower than the future (2028) traffic-generated noise levels for the No Build alternative.

Based on these conditions, Alternatives A through D and I through P are considered to have No Effect on the resource. The DHPA concurred with the Effects Determinations for the Harper House. Therefore, Alternatives A through D and I through P do not result in a direct use of the property and do not substantially impair the qualities or attributes that make the property eligible for inclusion in the NRHP.

Alternative Y directly impacts the Harper House. The current property boundary (and Section 4(f) boundary) extends to the existing edge of right-of way of US 24. Alternative Y will require a small area of land for shoulder improvements. This will result in the loss of approximately 0.1 hectare (0.1 acre) (less than one percent of the total) from the parcel eligible for protection under Section 4(f). The structures associated with the Harper House will be avoided. Because Alternative Y proposes to improve the operational characteristics of US 24 while maintaining its existing configuration, proximity impacts are expected to be limited. Alternative Y does not result in any changes within the viewshed of the property. Operational and access impacts are expected to be resolvable. Future noise levels for Alternative Y are predicted to be 76.3, equal to the future No Build noise level.

Alternative Z will not directly impact the Harper House property. The roadway will be widened, increasing the width of the visual element. However, new visual elements will not be introduced into the viewshed. Under Alternative Z, the future noise level is expected to be 72.4 dBA, a 3.9 dBA reduction in comparison to the future No Build noise level. Alternative Z will not substantially impair the qualities or attributes that make the resource eligible for inclusion in the NRHP.

Meyer/Gallmeyer Farm (003-382-40086)

The Meyer/Gallmeyer Farm is located at 2811 Berthaud Road, Milan Township, Allen County and is shown as Map Reference #2 on Figure 3.15. The property consists of approximately 35.4 hectares (87.5 acres) divided into three parcels. The largest parcel consisting of 31.1 hectares (76.8 acres) represents the remainder of the original 32.4-hectare (80-acre) 1850s Meyer/Gallmeyer Farm and includes the house, farm building complex, surrounding trees, tillable land, and an unnamed tributary to Gar Creek. The log-constructed wing of the main house represents the original 1850s farm residence. The setting including the house, cluster of eight farm buildings and landscape features of the original parcel, retains a feeling of historic integrity. Therefore, the Section 4(f) boundary of the property is defined as the tax/legal parcel boundary of the 31.1-hectare (76.8-acre) farm parcel.

Alternatives A through D and I through P directly impact the Meyer/Gallmeyer Farm. These share a common alignment in the vicinity of the Meyer/Gallmeyer Farm. The highway alignment will be located to the south of US 24 and within the northern portion of the property. The proposed highway will pass along the south side of existing US 24 about 91.5 meters (300 feet) north of the farm building complex at its closest point, and about 152.4 meters (500 feet) north of the residence. The residence is screened from the proposed right-of-way by outbuildings and landscaping. Some vegetative screening is provided by trees and brush associated with Gar Creek and field edges in addition to the trees surrounding the dwelling. The proposed highway will be constructed at-grade traversing the property from west to east.

Alternatives A through D and I through P require a right-of-way acquisition of approximately 4.0 hectares (9.9 acres) of land from the farm's three tax parcels. The right-of-way acquisition is limited to 1.2 hectares (3.0 acres) within the NRHP boundaries of the property. The proposed right-of-way acquisition represents less than four percent of the land associated with the original 1850s farm tract. The alternatives, however, do not affect buildings, structures, or access to the farm. The affected area does not comprise a part of the historically defined farm tract as originally composed and recorded in historic land ownership records. This land at the northern periphery of the current farm does not contribute significantly to the rural aesthetics associated with open fields and agrarian architecture. It was not a portion of the farm during its period of significance as defined by family members.

Relative to the visual attributes of the property, the tributary to Gar Creek runs diagonally across the northern portion of the property. Wooded and fallow areas presently line approaches and bottoms along Gar Creek, opposite the farmstead, and south of existing US 24 and the

route of Alternatives A through D and I through P. The view of the proposed right-of-way from the Meyer/Gallmeyer buildings is also minimized by distance; the resource is situated approximately 152.4 meters (500 feet) from the proposed right-of-way. Any existing vegetative screening will largely remain intact and intersections will be at grade such that there will be no overpasses in the vicinity, and the proposed road profile will not be higher than the existing US 24. The visual changes will not affect the architectural significance of the resource to the extent that it would no longer be considered eligible for inclusion in the NRHP under Criterion C for its log cabin construction and well-preserved cluster of outbuildings.

The projected future (2028) traffic-generated noise level for Alternatives A through D and I through P is 58.1 dBA, below the FHWA NAC level.

Although the taking of the 1.2-hectare (3.0-acre) triangle of land from the northern edge of the property and introducing a four-lane divided highway is a direct impact on the property, it will not alter the characteristics of the farm that qualify it for inclusion in the NRHP in a manner that would diminish its integrity as defined in 36 CFR 800.5(a)(1). Therefore, since the impacts of Alternatives A through D and I through P do not diminish the integrity of the Meyer/Gallmeyer Farm in a manner that alters the characteristics of the resource that qualify it for inclusion in the NRHP, the effect of the impact is not adverse. The DHPA has concurred with the No Adverse Effect Determination for the Meyer/Gallmeyer Farm.

Alternative Y does not result in any changes within the viewshed of the property. Future noise levels for Alternative Y are estimated to be 75.6, equal to the future No Build noise level. Alternative Y does not result in a direct use of the property and does not substantially impair the qualities or attributes that make the property eligible for inclusion in the NRHP.

Alternative Z will require the acquisition of approximately 2.5 hectares (6.1 acres) of land from the northern edge of the Meyer/Gallmeyer Farm. No buildings or structures will be demolished nor will access to the farm be cut off. For Alternative Z, future noise levels will decrease by 3.2 dBA, when compared to the future No Build noise level.

Armbruster Log Cabin (003-245-40150)

The Armbruster Log Cabin is located on the south side of US 24 approximately 0.5 kilometers (0.3 miles) west of Sampson Road in Milan Township, Allen County and is shown as Map Reference #3 on Figure 3.15. Tax parcel information shows the total acreage for the property, including the log cabin, barn and surrounding farm fields, is 15.9 hectares (39.3 acres). The Section 4(f) property includes the 0.2 hectare (0.4 acre) with the log cabin and barn. The property has approximately 61.0 meters (200 feet) of frontage along US 24. Alternatives Y and Z will impact the Armbruster Log Cabin parcel.

Alternative Y will directly impact 404.7 square meters (0.1 acres) of the Armbruster Log Cabin property including a portion of the Wabash and Erie Canal. The current property boundaries extend to the existing edge of right-of way. The Wabash and Erie Canal corridor is not contiguous throughout the state of Indiana and does not retain sufficient integrity to be considered eligible for the NRHP. This resource, however, could be archaeologically sensitive and is included in the Section 4(f) boundary. The log cabin is located approximately 22.9 meters (75 feet) from existing US 24. The log cabin is currently vacant and in a state of deterioration. Future noise levels for Alternative Y are expected to be 75.2 dBA, equal to the future No Build noise level.

Alternative Z will result in the total acquisition of the Armbruster Log Cabin property. The cabin will be demolished or moved.

Smith/Rich/Krug House (003-692-45034)

The house is located at 20813 Woodburn Road, Maumee Township, Allen County and shown as Map Reference #4 on Figure 3.15. Tax parcels show the total acreage for the Smith/Rich/Krug House including the house, newer outbuildings to be 75.6 hectares (187 acres). The Section 4(f) boundary incorporates 0.7 hectares (1.7 acres) and includes the house and an open woodlot of oaks planted in rows to the west and approximately 152.4 meters (500 feet) of frontage along Woodburn Road. The older house and woodlot to the west are the only

remaining features that retain historical integrity. All original outbuildings are gone and only newer metal outbuildings reflecting the current farming operation remain on the property. Alternatives A through H are in the proximity of the Smith/Rich/Krug House and have the potential for indirect impacts.

In the vicinity of the Smith/Rich/Krug House, Alternatives A through H share a common alignment, passing to the northwest of resource at a minimum distance of 365.9 meters (1,200 feet) from the west side and rear of the house. The highway will be on new alignment crossing farm fields. The vertical profile of the proposed highway results in a minimal rise in elevation in relationship to the existing landscape. An overpass carrying Woodburn Road over the proposed highway is located approximately 670.7 meters (2,200 feet) west of the property.

Alternatives A through H do not require the acquisition of property located within the NRHP boundaries established for the Smith/Rich/Krug House. The potential for a direct visual impact to the Smith/Rich/Krug House by the proposed Woodburn Road overpass is mitigated by distance as well as existing vegetation and modern development that effectively screen the view of the highway. The area situated between the resource and the proposed right-of-way consists of mature trees. Modern ranch houses are located directly across and along the road, which create a modern intrusion into the property's setting. The sight line and view from the Smith/Rich/Krug House will not be noticeably altered or interrupted by the proposed highway.

Future (2028) traffic generated noise levels for Alternatives A through H are estimated to be 63.5 dBA, which is below the FHWA NAC.

Based on these conditions, it has been determined that Alternatives A through H have No Effect on the Smith/Rich/Krug House. The DHPA has concurred with this Effects Determination. Therefore, Alternatives A through H do not result in a direct use of the Smith/Rich/Krug House property and do not substantially impair the qualities or attributes that make the property eligible for inclusion in the NRHP.

Villa Motel (003-691-45024)

The Villa Motel is located at the southwest corner of Bluecast Road and US 24 in Maumee Township, Allen County and is shown as Map Reference #5 on Figure 3.15. The Section 4(f) boundary has been determined to be 0.6 hectare (1.6 acres), the same area encompassed by the site's tax parcel boundaries. The Villa Motel has approximately 121.9 meters (400 feet) of frontage along US 24. The Villa Motel consists of an assemblage of tourist cabins and a larger Tudor office/residence immediately adjacent to portions of US 24. The office and cabins are a distance of approximately 9.1 to 15.2 meters (30 to 50 feet) from existing US 24. Alternatives Y and Z would impact this resource.

Alternatives Y and Z will both require the acquisition of 0.1 hectare (0.2 acre) of land along US 24. The current property boundary extends to the existing edge of right-of way. Alternative Y does not result in any changes within the viewshed of the property. Under Alternative Z, the roadway will be widened, increasing the width of the visual element. However, new visual elements will not be introduced into the viewshed.

Future noise levels for Alternative Y are expected to be 75.2 dBA, equal to the future No Build noise level. Future noise levels for Alternative Z are expected to be 69.2 dBA, lower than the future No Build noise level.

Amos Schlatter Farmstead (003-692-45035)

The Amos Schlatter Farmstead is located at 3536 Becker Road, Maumee Township, Allen County and is shown as Map Reference #6 on Figure 3.15. Tax parcel information shows the total acreage for the Amos Schlatter Farmstead including the house, several period outbuildings and surrounding farm fields to be 32.3 hectares (80 acres). The Section 4(f) boundary incorporates 0.1 hectare (1.4 acres) and includes only the house and the period outbuildings. The surrounding farm fields do not retain any historic landscape features that contribute to the historic integrity of the property. There are no expected direct impacts to this resource.

Alternatives I through X utilize common segments in the vicinity of the resource. The dwelling is a distance of 45.7 meters (150 feet) from the alternatives. The vertical profile of the proposed roadway will result in a minimal rise in elevation in relationship to the existing landscape. The sight line for the residents of the house will not be interrupted on a widespread scale.

Future noise levels for Alternatives I through X are expected to be 66.1 dBA, an increase of 13.3 dBA over existing levels and the No Build noise level. Future noise levels approach the FHWA NAC.

First Presbyterian Church (PAU-129-1)

The First Presbyterian Church in the Village of Antwerp, Paulding County is shown as Map Reference #8 on Figure 3.15. The Section 4(f) boundary includes the entire 0.1-hectare (0.3-acre) legal parcel. Because of its location adjacent to US 24, only Alternative Y will impact the First Presbyterian Church.

Alternative Y will result in the total acquisition of the First Presbyterian Church property. The church building will be demolished or moved.

Shirley Block Building (PAU-183-1)

The Shirley Block Building occupies the southwest corner of the West River Street intersection with US 24 in the Village of Antwerp, Paulding County and is shown as Map Reference #9 on Figure 3.15. The Section 4(f) boundary includes the entire legal parcel, 0.1 hectare (0.3 acre). Because of its location adjacent to existing US 24 in the Village of Antwerp, only Alternative Y will impact this property.

Alternative Y will result in the total acquisition of the Shirley Block property. The Shirley Block Building will be demolished or moved.

Higgenbotham House (PAU-220-1)

The Higgenbotham House is located at 103 East River Street in the Village of Antwerp, Paulding County and is shown as Map Reference #10 on Figure 3.15. The Section 4(f) boundary includes the entire legal parcel, 0.1 hectare (0.2 acre) in size. Because of its location adjacent to US 24 in the Village of Antwerp, only Alternative Y will impact this property.

Direct impacts resulting from Alternative Y will be limited to the acquisition of 121.4 square meters (0.1 acres) of right-of-way or approximately 15 percent of the total lot. Alternative Y does not result in any changes within the viewshed of the property. Future noise levels for Alternative Y are expected to be 74.6 dBA, equal to the future No Build noise level.

Doering House (PAU-221-1)

The Doering House is located at 107 East River Street in the Village of Antwerp, Paulding County and is shown as Map Reference #11 on Figure 3.15. The Section 4(f) boundary includes the entire legal parcel, 0.1 hectare (0.2 acre) in size. Because of its location adjacent to US 24 in the Village of Antwerp, only Alternative Y will impact this property.

Direct impacts resulting from Alternative Y will be limited to the acquisition of 121.4 square meters (0.1 acres) of right-of-way or approximately 15 percent of the total lot. Alternative Y does not result in any changes in the viewshed of the property. Future noise levels for Alternative Y are expected to be 74.6 dBA, equal to the future No Build noise level.

E.V. Gordon House (PAU-222-1)

The E. V. Gordon House is located at 111 East River Street in the Village of Antwerp, Paulding County and is shown as Map Reference #12 on Figure 3.15. The Section 4(f) boundary includes the entire legal parcel, approximately 80.9 meters² (0.2 acre) in size. Because of its location adjacent to US 24 in the Village of Antwerp, only Alternative Y will impact this property.

Direct impacts resulting from Alternative Y will be limited to the acquisition of 121.4 square meters (0.1 acres) of right-of-way or approximately 15 percent of the total lot. Proximity impacts are expected to be limited with Alternative Y. Alternative Y does not result in any

changes within the viewshed of the property. Future noise levels for Alternative Y are expected to be 74.6 dBA, equal to the future No Build noise level.

H.H. Gordon House (PAU-224-1)

The H. H. Gordon is located at 112 East River Street in the Village of Antwerp, Paulding County and is shown as Map Reference #13 on Figure 3.15. The Section 4(f) boundary includes the entire legal parcel, 0.2 hectare (0.4 acre) in size. Because of its location adjacent to existing US 24 in the Village of Antwerp, only Alternative Y will impact this property.

Direct impacts resulting from Alternative Y will be limited to the acquisition of 121.4 square meters (0.1 acres) of right-of-way or approximately 15 percent of the total lot. Alternative Y does not result in any changes within the viewshed of the property. Future noise levels for Alternative Y are expected to be 74.6 dBA, equal to the future No Build noise level.

Banks Farmstead (PAU-359-1)

The Banks Farmstead is located on the north side of US 24, east of Antwerp, 0.4 kilometer (0.3 mile) east of T-51 in Carryall Township, Paulding County and is shown as Map Reference #14 on Figure 3.15. The Section 4(f) boundary encompasses land within the current legal parcel boundaries, approximately 15.9 hectares (39.4 acres).

Only Alternative Y impacts the Banks Farmstead. Alternative Y requires the acquisition of 0.12 hectares (0.3 acres) of land from the property but does not impact any of the buildings. The house is 30.5 meters (100 feet) from existing US 24. Due to its location on US 24, the visual quality of the site would not be altered by Alternative Y. Future noise levels for Alternative Y are expected to be 78.3 dBA, equal to the future No Build noise level.

Peffley Farmstead (PAU-357-1)

The Peffley Farmstead is located at 6630 US 24, Carryall Township, Paulding County and is shown as Map Reference #15 on Figure 3.15. The farmstead encompasses 4.2 hectares (10.5 acres). The Section 4(f) boundary is limited to the 0.2 hectares (0.4 acres) including the house and outbuildings. Only Alternative Y impacts the Peffley Farmstead.

Alternative Y will require acquisition of 0.2 hectares (0.4 acres) of US 24 frontage from the property; however, this acquisition affects land outside of the NRHP boundary established for the property. None of the buildings will be directly impacted by Alternative Y. The house is 45.7 meters (150 feet) from US 24 and the proposed improvements will not alter the views of the buildings' occupants. The visual quality, therefore, will not be altered by Alternative Y. Future noise levels for Alternative Y are expected to be 78.3 dBA, equal to the future No Build noise level.

Six-Mile Reservoir Remnants (PAU-124-2)

The Six-Mile Reservoir Remnants consist of the intact section of the former reservoir levee located adjacent the south side of C-180 in Crane Township, Paulding County near the C-180/T-77 intersection and 6.5 kilometers (four miles) east of Antwerp. The property is represented as Map Reference #16 on Figure 3.15. The reservoir levee segment is associated with the immediately adjacent former Wabash and Erie Canal bed and represents a discrete visual reference to the events of the Reservoir War of 1887, an event that pitted the local farmers against federal troops in an effort to disrupt the canal and drain the reservoir.

The northeast corner of the Six-Mile Reservoir was identified in period literature as the site where federal troops were stationed with Gattling gun. The segment of the levee is a grass and tree covered embankment, approximately 1.8 to 2.4 meter (6.0 to 8.0 foot) high bordering C-180, and extending a distance of 304.8 meters (1,000 feet) west from the Inselmann House at 8404 C-180. Other remnants of the reservoir levee do exist but are discontinuous and lack the close association with activities of the Reservoir War. The area within Section 4(f) boundary encompasses the segment of the levee and the immediately adjacent former canal bed for an area totaling 1.1 hectares (2.8 acres).

Alternatives I through L and Q through T will be located within approximately 304.8 meters

(1,000 feet) from the Six-Mile Reservoir Remnants. The Six-Mile Reservoir Remnants will experience an altered visual environment. However, the line of sight from the reservoir remnants will not be disrupted on a wide scale due to distance and screening by the wooded area on the north side of C-180. The reservoir remnants do not represent a noise-sensitive use and changes in ambient noise levels would not diminish the significant qualities of the resource.

Alternatives I through L and Q through T do not result in a direct use of the property and do not substantially impair the qualities or attributes that make the property eligible for inclusion in the NRHP.

Inselmann House (PAU-100-2)

The Inselmann House is located at 8404 C-180 at the intersection of T-77 in Crane Township, Paulding County. The property is shown as Map Reference #17 on Figure 3.15. The house and associated out buildings are situated on a parcel of 1.7 hectare (4.3 acres). Although the house shares the parcel with the NRHP eligible segment of levee of the former Six Mile Reservoir, the house post dates the reservoir, and instead draws its historical significance from architectural attributes associated with German immigration. The Section 4(f) boundary for the property matches the tax/legal parcel boundaries.

Alternatives I through L and Q through T will be located within 475.2 meters (1,500 feet) of the Inselmann House. The Inselmann House will experience an altered visual environment. However, the line of site from the Inselmann House will not be disrupted on a wide scale due to distance.

Future noise level under Alternatives I through L and Q through T are expected to be 70.9 dBA, a 15.9 dBA increase over the existing and the future No Build noise levels. The future noise level expected with Alternative I through L and Q through T exceeds the FHWA NAC.

Chester House (PAU-101-2)

The Chester House is located at 15041 T-83 in Crane Township, Paulding County and is shown as Map Reference #18 on Figure 3.15. The Chester House is cited as a prime example of elements of the Queen Anne style and Second Empire style of architecture incorporated into vernacular building design and represents the Chester family's important contributions to the local government and development. The 4(f) boundaries match the property's tax/legal parcel boundaries, and encompasses 4.0 hectares (10.0 acres). Alternatives I through L and Q through T will be located within approximately 350.5 meters (1,150 feet) of the Chester House.

The Chester House will experience an altered visual environment. However, the site line from the Chester House will not be disrupted on a wide scale. Future noise level under Alternatives I through L and Q through T are expected to be 61.8 dBA, below the FHWA NAC. Alternatives I through L and Q through T do not result in a direct use of the property and do not substantially impair the qualities and/or attributes that make the property eligible for inclusion in the NRHP.

Lone Tower (PAU-335-2)

The Lone Tower property is located at the southeast corner of US 24 and C-105, Crane Township, Paulding County and is shown as Map Reference #19 on Figure 3.15. The Section 4(f) boundary has been determined to be 1.4 hectares (3.4 acres), the same area encompassed by the site's tax parcel boundaries. The property has approximately 91.5 meters (300 feet) of frontage along US 24. The Lone Tower assemblage consist of the main tapered boxed tower built around the frame of an old oil derrick, and a barn/garage, outhouse and small tourist cabin, moved from the front of the property, are located at the back of the property. Alternatives Y and Z impact this property.

Alternative Y will result in the acquisition of less than 0.1 hectares (0.1 acres). The Lone Tower building is approximately 9.1 meters (30 feet) from the existing alignment. The proposed improvements are not expected to result in further obstruction of the views of the building's occupants. Future noise levels for Alternative Y are expected to be 78.9 dBA, equal to the future No Build noise level.

Alternative Z will result in the total acquisition of the 1.4-hectare (3.4-acre) Lone Tower property.

All buildings including the main building, barn/garage, outhouse and small tourist cabin will be demolished or moved.

The Simpson Farmstead (PAU-364-2)

The Simpson Farmstead is located at 12197 US 24, Crane Township, Paulding County and is shown as Map Reference #20 on Figure 3.15. The area encompassed by the farmstead's tax parcel boundaries is 23.4 hectares (57.8 acres); however, the Section 4(f) boundaries include only the house, barn and the 0.2 hectares (0.4 acres) that they occupy. Alternatives Y and Z will have proximity impacts on the Simpson Farmstead.

The residential building associated with the farmstead is approximately 91.5 meters (300 feet) from Alternative Y and 228.6 meters (750 feet) from Alternative Z. The vertical profile of the proposed roadway will result in a minimal rise in elevation in relationship to the existing landscape. The line of sight of the residents will not be interrupted on a widespread scale. Under Alternative Z, the roadway will be widened, increasing the width of the visual element. However, new visual elements will not be introduced into the viewshed.

Future noise levels for Alternative Y are expected to be 78.9 dBA, equal to the future No Build noise level. Future noise levels for Alternative Z are expected to be 63.9 dBA, a decrease of 9.8 dBA as compared to the future No Build noise levels.

Alternatives Y and Z do not substantially impair the qualities and/or attributes that make the property eligible for inclusion in the NRHP.

Vagabond Village (PAU-375-3)

The Vagabond Village is located at 13173 US 24 in Emerald Township, Paulding County and is shown as Map Reference #21 on Figure 3.15. The property represents automobile-related roadside architecture dating back to the early 1940s and the emergence of the automobile as a major mode of transportation and recreation. The property includes the Vagabond Village Diner (PAU-375-3), the adjacent stone clad Vagabond Village Owner's Residence (PAU-379-3), an associated garage and outbuilding of similar design and materials and the large surface parking area and formerly occupied by a cabin camp north and west of the restaurant. The Section 4(f) boundary has been determined to be 2.9 hectares (7.3 acres), the same area encompassed by the site's tax parcel boundaries. The Vagabond Village has approximately 237.7 meters (780 feet) of frontage along the north side of US 24. Alternatives Y and Z impact this resource.

Alternative Y would require the acquisition of 0.3 hectares (0.8 acres) of land along US 24 for shoulder improvements. The current boundary extends to the existing edge of right-of-way. The Vagabond Village Diner and owner's residence are a distance of approximately 15.2 to 22.9 meters (50 to 75 feet) from existing US 24. Alternative Y does not result in any changes within the viewshed of the property. Future noise level expected with Alternative Y is 78.9 dBA, equal to the future No Build noise level.

Alternative Z requires the acquisition of 0.4 hectares (0.9 acres) of land located within the NRHP-boundary for the resource. Under Alternative Z, Vagabond Village will experience changes in the visual environment. The roadway will be widened, increasing the width of the visual element. However, new visual elements will not be introduced into the viewshed, minimizing impacts to the visual environment. The future noise level expected with Alternative Z is 63.9 dBA, which is below the FHWA NAC level.

Preferred Alternative Impacts

Effects evaluations were completed for three NRHP-eligible resources located within the APE for the Preferred Alternative (Alternative D-1) and reviewed by the DHPA. These three resources are the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House. Potential adverse effects to the resources were evaluated by applying the Criteria of Effects established by the ACHP. The Preferred Alternative was determined to have No Effect on the Harper House and the Smith/Rich/Krug House and No Adverse Effect on the Meyer/Gallmeyer Farm. Boundary determinations were included in the Effects Evaluation submitted to the DHPA for review and

concurrency. The DHPA has concurred with the effects recommendations for the Preferred Alternative (Alternative D-1). A summary of DHPA comments on the Effects Evaluation is presented in Section 5.3.7; copies of agency comment letters are provided in Appendix 3.4.

The Preferred Alternative (Alternative D-1) has one Section 4(f) impact. The highway alignment will be located to the south of US 24 within the northern portion of the Meyer/Gallmeyer Farm. In this area, the highway will be constructed at-grade. Berthaud Road, which is located along the eastern boundary of the property, will be closed where it intersects with Alternative D-1.

Alternative D-1 requires a right-of-way acquisition of approximately 4.0 hectares (9.9 acres) of land from the Meyer/Gallmeyer Farm. The right-of-way acquisition is limited to 1.2 hectares (3.0 acres) of the 31.1 hectares (76.8 acres) of land contained within the NRHP boundaries of the property. The proposed right-of-way acquisition represents less than four percent of the land associated with the original 1850s farm tract. The Preferred Alternative does not affect buildings, structures, or access to the farm. The affected area does not comprise part of the historically defined farm tract as originally composed and recorded in historic land ownership records. This land at the northern periphery of the current farm does not contribute significantly to the rural aesthetics associated with open fields and agrarian architecture. It was not a portion of the farm during its period of significance as defined by family members.

The proposed highway alignment will be located approximately 91.5 meters (300 feet) north of the farm-building complex at its closest point and about 152.4 meters (500 feet) north of the residence. The view of the proposed highway is minimized by distance. In addition, the residence is screened from the proposed highway by outbuildings, vegetation, and landscaping. Vegetative screening is provided by trees and shrubs associated with Gar Creek and field edges, in addition to the trees surrounding the dwelling. Any existing vegetative screening will largely remain intact, which will minimize the visual impacts of the Preferred Alternative on the property. The visual changes will not affect the architectural significance of the resource to the extent that it would no longer be considered eligible for inclusion in the NRHP under Criterion C for its log cabin construction and well-preserved cluster of outbuildings.

The noise analysis conducted for this property determined that the noise levels will remain below FHWA NAC levels.

Although the taking of the 1.2-hectare (3.0 acre) triangle of land from the northern edge of the property and introducing a four-lane divided highway is a direct impact on the Meyer/Gallmeyer Farm, it will not alter the characteristics of the farm that qualify it for inclusion in the NRHP in a manner that would diminish its integrity as defined in 36 CFR 800.5(a)(1). Therefore, since the impacts of the Preferred Alternative do not diminish the integrity of the Meyer/Gallmeyer Farm in a manner that alters the characteristics of the resource that qualify it for inclusion in the NRHP, the effect of the impact is not adverse. The DHPA has concurred with the No Adverse Effect Determination for the Meyer/Gallmeyer Farm.

Summary

A total of 21 NRHP-listed and eligible resources that qualify for Section 4(f) protection are located within the corridors associated with the 26 Feasible Alternatives. The number of resources impacted and the magnitude of impacts vary by alternative. For Alternatives A through X, the number varies from zero to four. Alternatives E, F, G, and H have no Section 4(f) involvements. Alternatives U, V, W, and X would result in noise impacts to one historic property. Alternatives A, B, C, D, and D-1 would require the acquisition of land from one historic property. Alternatives I, J, K, and L impact four historic properties including acquisition of property from one resource. The two alternatives that use the existing US 24 Corridor affect a greater number of Section 4(f) resources. Alternative Z impacts five Section 4(f) resources, requiring property acquisition from all five resources. Alternative Y impacts 14 Section 4(f) resources through property acquisition.

Alternative D-1 was selected as the Preferred Alternative for the US 24 New Haven to Defiance Project. The Preferred Alternative (Alternative D-1) has one Section 4(f) involvement.

Four Feasible Alternatives (Alternatives E, F, G and H) have no Section 4(f) involvements. However, these alternatives are not considered to be prudent and feasible. Within Allen County, Alternatives E, F, G, and H would result in greater impacts to productive farmlands than the Preferred Alternative (Alternative C), a key issue of the project. These alternatives also result in greater impacts to forested areas and forested wetlands than the Preferred Alternative, another key issue of the project. Given the dominance of agricultural land uses in the study area, the occurrence of these resources within the study area is now limited. Because woodlands are so rare within the study area, the USFWS has requested that every effort be made to avoid woodlots within the study area. Lastly, Alternatives E, F, G, and H follow Segment 2 between I-469 and Rousey Road in Allen County. Construction of Segment 2 is not consistent with the Allen County comprehensive plans. Of the 20 segments comprising the Feasible Alternatives, Segment 2 is one of the least favored by the general public and local officials.

Mitigation

For Section 4(f) properties, avoidance of the properties is the preferred strategy. If, however, adverse effects to eligible resources cannot be avoided, then minimization and/or mitigation of impacts should be recommended to reduce the negative impacts. These could include:

- Minor alignment shifts.
- Vegetative screening, i.e., trees, hedgerows, etc.
- Grass-covered earthworks or other landscaping features.
- Introduction of artificial barriers such as fences, walls, noise barriers.
- Relocation of the resource.
- Historic American Building Survey (HABS) or Historic American Engineering Record (HAER) – level recordation.
- Data recovery excavations.

Design features will be incorporated into the design of the Preferred Alternative to mitigate impacts to NRHP-eligible resources. Specific mitigation measures to be implemented for the US 24 New Haven to Defiance project to mitigate impacts on the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House include the preservation of existing vegetation which screens the view of the roadway from these properties.

3.3.4 Coordination with Tribal Governments

In accordance with Section 106 of the NHPA and Executive Order 13175 - *Consultation and Coordination with Indian Tribal Governments* (issued November 6, 2000), consultation with federally recognized tribal governments was initiated in July 2001. Sixteen tribal governments were provided with project information and the opportunity to present any concerns or information regarding sites of religious or cultural significance associated with the US 24 project. The following tribes were contacted:

- Absentee-Shawnee Tribe of Oklahoma.
- Citizen Potawatomi Nation.
- Delaware Tribal Headquarters.
- Delaware Tribe of Western Oklahoma.
- Eastern Shawnee Tribe of Oklahoma.
- Forest County Potawatomi.
- Hannahville Indian Community Council.
- Joint Shawnee Council.
- Loyal Shawnee Tribe.
- Miami Tribe of Oklahoma.
- Ottawa Tribe of Oklahoma.
- Peoria Indian Tribe of Oklahoma.
- Prairie Band Potawatomi Nation.
- Seneca-Cayuga Tribe of Oklahoma.
- Seneca Nation.
- Wyandotte Shawnee Tribe of Oklahoma.

In response to the tribal consultation letters and information packages sent out in 2001, three

tribes requested to be involved in the archaeological aspects of the project:

- Citizen Potawatomi Nation asked to be informed of any findings during the archaeological studies and construction.
- Forest County Potawatomi Community requested to be considered as a consulting party and requested copies of the archaeological surveys.
- Wyandotte Nation stated that documentation on any historic archaeological site discovered requires immediate notification and proper archaeological field inspection.

Copies of tribal government comment letters are provided in Appendix 3.4.

In May 2003, copies of the US 24 Phase I and II archaeological survey reports for Indiana and Ohio were provided to the Citizen Potawatomi Nation, Forest County Potawatomi Community, and Wyandotte Nation. These tribes were also informed of the Section 106 Consulting Party Meeting on May 14, 2003 and provided with copies of the Section 106 Consulting Party coordination document (*Section 106 Consulting Party Coordination Summary of Section 106 Investigations*, April 2003) and meeting agenda. In addition, FHWA offered to host a second Consulting Party meeting for the tribes if they could not attend the May 2003 meeting.

3.3.5 Coordination with Consulting Parties

Section 106 requires that FHWA and its state partners identify those parties that are eligible to participate as consulting parties in the historic preservation review process. The consulting party coordination followed the requirements of 36 CFR Part 800. In February 2002, individuals and organizations with interests in the affected communities and historic preservation were invited to participate in efforts to identify historic properties potentially affected by the proposed improvements; assess its effects; and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. In addition to FHWA, INDOT, ODOT, DHPA, OHPO, a total of 23 individuals were contacted through written correspondence and invited to be consulting parties for the US 24 project. These individuals included local government officials and members of local historic organizations. Thirteen individuals responded to the invitation and requested to be consulting parties.

In April 2003, the consulting parties were contacted and invited to attend a consulting party coordination meeting. Prior to the meeting, the consulting parties were provided with a meeting agenda and a document entitled, *US 24 New Haven to Defiance Section 106 Consulting Party Coordination: Summary of Section 106 Investigations* (April 2003). The report summarizes the cultural resources investigations and NRHP eligibility recommendations for the project. It also discusses the effects recommendations for four properties in Indiana, which are located within the APE for the Preferred Alternative.

On May 14, 2003, a Section 106 Consulting Party Coordination Meeting was held in Woodburn, Indiana. The meeting was held from 6:00 to 8:00 PM at the Woodlan High School. Nine people attended the meeting including a Maumee Township Trustee, a City of Woodburn Councilman, a representative of the Allen County/Fort Wayne Historical Society, a representative from the DHPA, a representative from INDOT, and four representatives for ODOT.

The purpose of the meeting was to obtain comments from the consulting parties on the various aspects of the US 24 cultural resources studies. Specifically, the objectives of the meeting were to seek, discuss and consider the views of the consulting parties on the APE, the identification of significant historic properties, delineation of historic boundaries, and the assessment of effect on the historic properties.

The meeting began with a presentation about the US 24 project, archaeological surveys, historic architecture surveys, agency coordination, and effects of the Preferred Alternative on four historic properties in Indiana. The presentation was followed by an open discussion of the US 24 project and cultural resources. Topics of discussion included:

- US 24 project schedule.
- Design of the Preferred Alternative.

- Archeological sites on local properties.
- A large oak tree that is over 100 years old that will be affected by the Preferred Alternative.
- Gronauer Lock (#2).

3.4 TECHNICAL ISSUES
3.4.1 Transportation and Traffic Existing Conditions

Much of US 24 in the study area is a two-lane rural arterial roadway that is often winding as it follows the Maumee River. The roadway has frequent driveway cuts or access points for local residences, businesses, and other local roadway crossings. In some areas, development is directly adjacent to the roadway. The roadway has narrow, often discontinuous shoulders and numerous no-passing zones. The frequency of no-passing zones severely limits the flow of traffic and the capacity of the roadway.

US 24 Traffic Movements

Daily traffic volumes along the existing US 24 mainline are not constant along the entire section as shown in Table 3.67. Figure 3.16 shows the location of the roadway segments identified in Table 3.67 and other tables in this section. Volumes expressed in average daily traffic (ADT) range from 7,900 to 11,375 vehicles per day in 1999.

TABLE 3.67
1999 BI-DIRECTIONAL TRAFFIC VOLUMES

US 24 Segments	Average Daily Traffic Volumes (vehicles per day)
1. I 469 to Webster/Woodburn Rd.	11,375
2. Webster/Woodburn Rd. to Sampson Rd.	10,105
3. Sampson Rd. to SR 101	9,052
4. SR 101 to IN/OH State Line	8,458
5. IN/OH State Line to Antwerp (SR 49)	9,024
6. Antwerp (SR 49) to Hazelet Rd. (C-87)	9,209
7. Hazelet Rd. (C-87) to US 127 (South Leg)	7,900
8. US 127 (South Leg) to US 127 (North Leg)	10,335
9. US 127 (North Leg) to The Bend Rd. (C-134)	9,267
10. The Bend Rd. (C-134) to Ashwood Rd. (T-153)	9,041
11. Ashwood Rd. (T-153) to SR 424	10,739
12. SR 424 to SR 15	9,992

The segment between New Haven and Woodburn carries the greatest volume of traffic, exceeding 11,000 vehicles per day. This is attributed to the daily commuting which takes place between suburban communities and jobs in Fort Wayne and New Haven in addition to through trips. Segment 11, which is located in the vicinity of the SR 424 interchange and the City of Defiance ranks second for highest daily traffic volume, carrying more than 10,700 vehicles per day. This is also attributed to the daily commuting which takes place to jobs in Defiance in addition to through trips.

Traffic volumes on Segments 4,5, and 6 range between 8,000 and 9,000 vehicles per day. The study area surrounding these segments is predominately rural. A notable exception is Segment 8 (US 127 south to US 127 north), which carries over 10,300 vehicles per day. When these traffic volumes are compared to the adjacent segments of US 24, it can be concluded that approximately 1,000 to 2,000 vehicles per day utilize this segment to travel in the north-south direction along US 127 through the study area.

Crossroad Traffic Movements

Traffic movements at key crossroads through the study area are modest, especially when they are compared to the east-west mainline traffic volumes. Current traffic volumes observed at key crossroads in the vicinity of US 24 are shown in Table 3.68.

**TABLE 3.68
1999 CROSSROAD TRAFFIC VOLUMES**

Crossroad	Average Daily Traffic Volumes (Vehicles per Day)
Webster/Woodburn Road - North Approach with US 24	3,883
Webster/Woodburn Road - South Approach with US 24	5,120
SR 101	1,258*
SR 49	4,357
US 127 (South Leg) - South Approach with US 24	3,551
US 127 (North Leg) - North Approach with US 24	9,041
SR 424 - East of US 24	3,656

Note: * Denotes average representative number of bi-directional traffic volumes.

Passenger - Car Traffic

Data from the 1997 *Origin-Destination Survey of the US 24/Ohio Turnpike Corridor at the Ohio/Indiana State Line* also shows that the majority of the passenger-car traffic observed on US 24 (80 to 86 percent) is local, traveling short distances between residential communities in the study area and Fort Wayne/New Haven. A smaller portion (10 to 12 percent) is regional, traveling between the Toledo metropolitan area and destinations elsewhere in Indiana beyond Fort Wayne/New Haven. Finally, the remaining passenger-car traffic (two to ten percent) is interregional, traveling long distances between neighboring counties and states.

More recently, a license plate survey was completed for the US 24 Corridor, which is documented in a separate report entitled *US 24 Vehicle License Plate Survey* (August 2001). Using the data collected in October 2000 for the survey, a Travel Behavior Estimation Model was developed. Based on the results of the survey and the model, the following trends were identified:

- Four percent of total automobile trips traveled the entire distance of US 24 between Waterville and Antwerp.
- Of the 2,501 automobiles entering US 24 east of Waterville, 83 percent exited the highway before Defiance and 13 percent exited the highway before Antwerp.
- Of the 2,183 automobiles entering US 24 between Waterville and Defiance, 76 percent exited the highway before reaching Antwerp.
- None of the 918 automobiles entering US 24 between Defiance and Antwerp exited US 24 before Antwerp.

The key findings of the model were that four percent of the automobile trips, as compared to 43 percent of the truck trips, are regional (travel the entire length of the corridor). Furthermore, US 24 functions as a connector between communities located along US 24 with each of the three planning sections having slightly different travel demand characteristics. These findings support the conclusions of the 1997 Origin Destination Survey.

Freight Traffic

Within the study area, commercial (truck) traffic expressed by volume, remains consistently high throughout the 59.68± kilometer (37± mile) corridor between New Haven and Defiance. The daily and peak hour truck traffic percentages of total traffic on US 24 in 1999 are summarized in Table 3.69. At many locations, truck traffic represents approximately 50 percent of the overall traffic volumes on US 24 today. Truck traffic for the purposes of this study is defined as heavy commercial vehicles of various sizes larger than pick-up trucks and light vans. Buses are also included in the truck category as a result of their size and weight. Comparable roadway facilities may carry an average of five to 10 percent truck traffic during a typical day. Based on historical data from the ODOT Traffic Survey Reports, truck volumes on US 24 increased over 128 percent between 1990 and 1997.

As a component of a major east-west transportation corridor between Colorado and Michigan and also a main route serving the Fort Wayne/New Haven metropolitan area, US 24 accommodates regional, long-distance trips having origins or destinations far away as well as

short-distance, local trips. In addition to automobile traffic, US 24 is heavily used for freight movement. This section of US 24 also accommodates local, short-distance specialized trips within the study area and includes trips made by farmers, school-aged students, and emergency service providers.

**TABLE 3.69
1999 TRUCK TRAFFIC ON US 24**

US 24 Segments	Daily Truck Percentage	Peak Hour Truck Percentage
1. I – 469 to Webster/Woodburn Rd.	44%	28%
2. Webster/Woodburn Rd. to Sampson Rd.	49%	34%
3. Sampson Rd. to SR 101	54%	41%
4. SR 101 to IN/OH State Line	52%	37%
5. IN/OH State Line to Antwerp (SR 49)	54%	39%
6. Antwerp (SR 49) to Hazelet Rd. (C-87)	52%	41%
7. Hazelet Rd. (C-87) to US 127 (South Leg)	62%	46%
8. US 127 (South Leg) to US 127 (North Leg)	55%	42%
9. US 127 (North Leg) to The Bend Rd. (C-134)	55%	40%
10. The Bend Rd. (C-134) to Ashwood Rd. (T-153)	51%	39%
11. Ashwood Rd. (T-153) to SR 424 Intersection	46%	35%
12. SR 424 Intersection to SR 15	48%	37%

Based upon data collected for the *US 24 Origin-Destination Survey of the US 24/Ohio Turnpike Corridor at the Ohio/Indiana State Line* (ODOT 1997), 33 percent of the truck traffic observed on US 24 has local origins (i.e., Paulding, Antwerp, and Defiance). Approximately 50 percent of the truck traffic has regional origins (i.e., Toledo, Detroit, elsewhere in northwest Ohio), and the remaining has national/international origins (i.e., New England states and Ontario, Canada). Despite the diversity in truck traffic origins, truck destinations are mainly located in Indiana (i.e., 50 percent in Fort Wayne/New Haven and 35 percent in remaining of Indiana). Only 15 percent of the trucks continue beyond Indiana to other states.

In addition, the following trends were observed during the October 2000 license plate survey:

- Of the 1,618 trucks entering US 24 east of Waterville, 39 percent completed the trip between Waterville and Antwerp while 36 percent exited the highway before reaching Defiance and 21 percent exited the highway before reaching Antwerp.
- Of the 593 trucks entering US 24 between Waterville and Defiance, 33 percent exited the facility east of Antwerp.
- None of the 344 trucks entering US 24 between Defiance and Antwerp exited US 24 before Antwerp.

The information generated by the license plate survey indicates that most of the traffic traveling the US 24 Corridor is intercity or local in nature with the exception of truck traffic, of which 43 percent has origins and destinations outside of the study area.

Pedestrian Traffic

As a regional arterial traversing farmland and connecting two metropolitan areas, US 24 was not designed to accommodate pedestrian traffic. While there are residential developments and other land uses located along US 24, the development density is not high enough to generate local demand for pedestrian movements (e.g., tourists/visitors, walking to school, walking to nearby activity centers). The high truck volumes on US 24, the uninterrupted flow of traffic, and the lack of traffic signals discourage the development of pedestrian amenities (e.g., sidewalks, crosswalks, and pedestrian traffic signals). The only exception is the short segment in downtown Antwerp, which is designed as an urban environment.

Local School Bus Traffic

There are five local school districts in the study area, each operating school-bus routes on US 24, crossing US 24, or using local roadways in its immediate vicinity. These school districts are

Eastern Allen County Schools (Allen County), Antwerp Local School District (Paulding County), Paulding Exempted Village School District (Paulding County), Central Local School District (Defiance County) and Northeastern Local School District (Defiance County). Based upon information provided by each school district, US 24 is used extensively to transport students to various area schools as described below:

- Eastern Allen County Schools currently operates a fleet of 13 buses each making two round trips daily (i.e., 26 bus trips daily) on US 24. There are approximately 24 stops daily on US 24. The bus routes cross US 24 numerous times, particularly at the intersection of US 24 and Woodburn Road, in the vicinity of Woodlan Junior/Senior High School.
- Antwerp Local School District currently utilizes US 24 from SR 49 in downtown Antwerp to T-224 in Cecil for two separate school-bus routes transporting elementary and high school students. There are approximately 50 stops daily on US 24. Antwerp Local School District also utilizes US 24 from the Indiana/Ohio state line to SR 49 for two separate school-bus routes, which transport elementary and high school students. These routes do not have stops on US 24, but cross US 24 two to three times daily. Another school-bus route utilizes US 24 from SR 49 in downtown Antwerp and T- 43; it does not have stops on US 24, but crosses the facility twice daily.
- Paulding Exempt Village School District currently operates a fleet of three buses each making three round trips daily, and one bus making one round trip daily for a total of 11 trips daily on the six to seven miles of US 24 located within its jurisdiction. There are 15 stops daily on US 24.
- Central Local School District currently utilizes US 24 from US 127 North to the Paulding/Defiance County Line to operate a fleet of three school buses each making one round trips daily on US 24. One school-bus route has 12 stops on US 24. The school district also operates two buses for physically-challenged students, which do not have any stops on US 24, but cross it.
- Northeastern Local School District currently operates 19 separate bus routes; six of these routes travel on US 24. None of these routes have stops on US 24.

Capacity Analysis

The operational conditions at various segments of US 24 are expressed in terms of levels of service (LOS). The definition of each LOS for a typical two-lane roadway facility according to the Transportation Research Board's (TRB) *Highway Capacity Manual, Special Report 209* (TRB December 1997) is as follows:

- LOS A: The highest quality of traffic service. It occurs when motorists are able to drive at their desired speed, and to pass slow moving vehicles without forming platoons of three or more vehicles. At this level of service, approximately 420 vehicles per hour could be accommodated in both directions of travel.
- LOS B: Characterizes the traffic flow of speeds of 88.7 kilometers per hour (kph) (55 miles per hour (mph) on level terrain. It occurs when motorists can pass slow moving vehicles with relative ease. At this level of service, approximately 750 vehicles per hour could be accommodated in both directions of travel.
- LOS C: Characterizes the traffic flow of speeds of 83.9 kph (52 mph) on level terrain. Motorists can no longer pass slow moving vehicles unimpeded. While the traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow moving vehicles. At this level of service approximately 1,200 vehicles per hour could be accommodated in both directions of travel.
- LOS D: The two opposing traffic streams essentially begin to operate separately, as passing becomes extremely difficult. Platoons of five to 10 vehicles are common, although speeds of 80.6 kph (50 mph) can still be maintained under ideal conditions. At this level of service, approximately 1,800 vehicles per hour could be accommodated in both directions of travel. This is the highest traffic flow rate that can be maintained for any length of time over an extended section of the roadway without a high probability of breakdown.
- LOS E: This represents traffic conditions where passing slow moving vehicles is virtually impossible, platooning becomes intense when slower vehicles or other interruptions are encountered. At this level of service, approximately 2,800 vehicles

- per hour could be accommodated in both directions of travel.
- LOS F: This represents saturated flow conditions where the movement of vehicles is extremely restricted.

Table 3.70 summarizes current operating conditions on US 24. The data provided are the Design Hour Volume (DHV) conditions. DHVs represent the 30th highest hour of traffic of the entire year. This approach is consistent with the procedures used by ODOT Office of Technical Services for planning studies. Design hour conditions were derived in accordance with Office of Technical Services guidelines.

**TABLE 3.70
CURRENT OPERATING CONDITIONS**

US 24 Segment	Design Hour Volumes (vehicles per hour)	Level of Service (LOS)
1. I – 469 to Webster/Woodburn Rd.	1,251	E
2. Webster/Woodburn Rd. to Sampson Rd.	1,112	E
3. Sampson Rd. to SR 101	996	D
4. SR 101 to IN/OH State Line	930	D
5. IN/OH State Line to Antwerp (SR 49)	993	D
6. Antwerp (SR 49) to Hazelet Rd. (C-87)	1,013	D
7. Hazelet Rd. (C-87) to US 127 (South Leg)	869	D
8. US 127 (South Leg) to US 127 (North Leg)	1,137	D
9. US 127 (North Leg) to Bend Rd. (C-134)	1,019	D
10. Bend Rd. (C-134) to Ashwood Rd. (T-153)	995	D
11. Ashwood Rd. (T-153) to SR 424 Intersection	1,181	D
12. SR 424 Intersection to SR 15	1,099	D

According to the data in Table 3.70, the western most segments (i.e., Segments 1 and 2) are the most congested as indicated by the LOS E. Other segments of US 24 such as from the Indiana/Ohio state line to Defiance, operate at LOS D. This indicates that passing slow moving vehicles is difficult, as gaps in traffic are seldom and limited. In addition, turning vehicles from the mainline travel lanes and roadside distractions also impede movement of the traffic stream resulting in even slower travel speeds.

Vehicle Miles Traveled and Travel Time

Vehicle Miles Traveled (VMT) is an indicator of the travel demand of a particular roadway facility. VMT takes into account the number of vehicles using a particular facility daily and the length of trips made by users of the facility. Travel Time is an indicator of the attractiveness of a particular highway to the traveling public based on the amount of time it takes to make a trip. Table 3.71 summarizes the VMT along US 24 and the Average Travel Time estimate (in minutes) for current conditions.

Accident Analysis

Table 3.72 summarizes the one-year and three-year accident rates for each segment of US 24. The one-year accident rates are below the one-year statewide averages (i.e., 2.565 accidents per million vehicle miles traveled) each year between 1998 and 2000. The three-year accident rates are below the three-year statewide averages (i.e., 1.513 accidents per million vehicle miles traveled) for all segments of US 24 except two, Segments 3 and 12.

The number and types of vehicles involved in each vehicle crash were recorded separately for years 1998, 1999, and 2000 (Table 3.73). Each vehicle involved in a crash (often multi-vehicle crashes) was accounted as a separate vehicle. Data shown under the heading “Cars” includes small size vehicles represented by vehicle codes 00-05 and 19 in the ODOT Traffic Accident Listings. Data shown under the heading “Trucks” includes medium and large size commercial vehicles, panel trucks, buses, and fire trucks. All vehicles involved in crashes where the vehicle type was not recorded in the crash reports were identified as “Vehicle Type Not Stated”. The vehicles could be either cars or trucks.

**TABLE 3.71
VEHICLE MILES TRAVELED AND TRAVEL TIME ESTIMATES FOR EXISTING US 24**

US 24 Segment	Average Annual Daily Traffic Volumes	Length (kilometers [miles])	Vehicle Miles Traveled (millions)	Travel Time (minutes)
1. I-469 to Webster/Woodburn Rd.	11,375	7.4 (4.6)	19.3	7
2. Webster/Woodburn Rd. to Sampson Rd.	10,105	3.9 (2.4)	8.7	3
3. Sampson Rd. to SR 101	9,052	3.5 (2.2)	7.3	3
4. SR 101 to IN/OH State Line	8,458	3.9 (2.4)	7.5	4
5. IN/OH State Line to Antwerp (SR 49)	9,024	5.8 (3.6)	11.9	5
6. Antwerp (SR 49) to Hazelet Rd. (C-87)	9,209	11.3 (7.0)	23.6	11
7. Hazelet Rd. (C-87) to US 127 (South Leg)	7,900	4.4 (2.7)	7.7	4
8. US 127 (South Leg) to US 127 (North Leg)	10,335	3.4 (2.1)	7.8	3
9. US 127 (North Leg) to The Bend Rd. (C-134)	9,267	3.9 (2.4)	8.3	3
10. The Bend Rd. (C-134) to Ashwood Rd. (T-153)	9,041	5.0 (3.1)	10.3	4
11. Ashwood Rd. (T-153) to SR 424 Intersection	10,739	3.2 (2.0)	7.8	3
12. SR 424 Intersection to SR 15	9,992	4.5 (2.8)	10.3	4
Totals		60.2 (37.3)	130.4	54

**TABLE 3.72
ACCIDENT RATES ON US 24**

US 24 Segment	Accident Rates (One-Year Average)			Accident Rates (3-Yr Average) 1998-2000	Above or Below 3-Yr State Average
	1998	1999	2000		
1. I-469 to Webster/Woodburn Rd.	0.88	0.78	0.88	0.85	Below
2. Webster/Woodburn Rd. to Sampson Rd.	1.04	0.81	0.00	0.62	Below
3. Sampson Rd. to SR 101	1.38	1.65	1.51	1.51	Below
4. SR 101 to IN/OH State Line	0.40	1.19	1.99	1.19	Below
5. IN/OH State Line to SR 49	0.25	0.17	1.01	0.48	Below
6. SR 49 to Hazelet Rd. (C-87)	0.59	0.55	0.72	0.62	Below
7. Hazelet Rd. (C-87) to US 127 (South Leg)	0.52	0.52	0.52	0.52	Below
8. US 127 (South Leg) to US 127 (North Leg)	1.40	1.27	1.27	1.27	Below
9. US 127 (North Leg) to The Bend Rd. (C-134)	0.73	1.33	1.94	1.94	Below
10. The Bend Rd. (C-134) to Ashwood Rd. (T-153)	0.68	0.97	1.36	1.36	Below
11. Ashwood Rd. (T-153) to SR 424 Intersection	0.77	0.51	0.77	0.77	Below
12. SR 424 Intersection to SR 15	2.23	2.71	1.07	1.07	Above

Fatalities and injuries have occurred as a result of some accidents along US 24. While it is difficult to assess if there is a higher incidence of severe vehicle crashes on US 24, a basic analysis of number of accidents with injuries and/or fatalities was completed. Crash statistics for years 1998, 1999, and 2000 were used. The analysis assumed that each vehicle involved in a crash had an average vehicle occupancy rate of 1.5 persons per vehicle.

The data provided in Table 3.74 shows that for every 100 people involved in accidents, 19 percent were injured or died in 1998, 17 percent in 1999, and 11 percent in 2000 with an average of 15 percent over the three-year period.

Travel Demand Forecasting

The development of a project specific regional travel demand model for travel demand forecasts (i.e., future traffic volumes) was determined to be cost-prohibitive for this project as such an effort would have required significant data collection to document surrounding land use, inventory roadways, and define origin-destinations patterns for regional travel movements. In light of the linear configuration of the US 24 corridor and the characteristics of the alternatives, future traffic volumes were developed based on current field counts and historical traffic data.

**TABLE 3.73
ACCIDENTS BY VEHICLE TYPE ON US 24**

Year	Cars	Trucks	Vehicle Type Not Stated	Total	Truck Participation
1998	90	70	4	164	43%
1999	91	97	3	191	51%
2000	84	104	5	193	54%
3-Year Total	265	271	12	548	49%

**TABLE 3.74
ACCIDENT SEVERITY ON US 24**

Year	Accident Severity		Number of Vehicle Crashes	Number of Vehicles Involved	Number of Persons Involved	Fatalities/Injuries as Percentage of Total Number of Persons in Crashes
	Fatalities	Injuries				
1998	1	45	113	164	246	19%
1999	2	46	125	191	287	17%
2000	0	32	133	193	290	11%
3-Year Total	3	123	371	548	822	15%

Sources: Ohio Department of Transportation-Bureau of Traffic (Traffic Technical Support and Evaluation) and Indiana Department of Transportation Division of Roadway Management (Safety Management/ Crash Analysis).

Methodology

Background information on the travel patterns and system user characteristics as well as origins and destination points of trips on US 24 were obtained from ODOT, INDOT, the Northeastern Indiana Regional Coordinating Council (NIRCC), and previous studies.

Traffic volume counts were taken on US 24 in December 1999. The counts were counted during mid-week workdays for a minimum duration of 24 hours. Separate counts were obtained for the eastbound and westbound travel lanes. The data was collected at twelve locations along the US 24 Corridor listed below:

- Mid-segment between I-469 and Webster/Woodburn Road.
- Mid-segment between Webster/Woodburn Road and Sampson Road.
- Mid-segment between Sampson Road and SR 101.
- Mid-segment between SR 101 and State Line Road.
- Mid-segment between State Line Road and SR 49.
- Mid-segment between SR 49 and Hazelet Road (C-87).
- Mid-segment between Hazelet Road (C-87) to US 127 (South Leg).
- Mid-segment between US 127 (South Leg) and US 127 (North Leg).
- Mid-segment between US 127 (North Leg) and The Bend Road (C-134).
- Mid-segment between The Bend Road (C-134) and Ashwood Road (T-153).
- Mid-segment between Ashwood Road (T-153) and SR 424.
- Mid-segment between SR 424 and SR 15.

Each of the locations represents a roadway segment with relatively consistent traffic volumes, roadway characteristics, and adjacent land use composition. Since the mainline US 24 travel activity dominates the study area, the 12 locations selected for the counts were mid-segment locations. In addition, traffic counts were conducted at key intersections during the same time period to assess the influence of crossroads on the overall travel along US 24 and to assess the potential impact of the Feasible Alternatives on US 24 crossroads. The crossroads that were surveyed include:

- Webster/Woodburn Road.
- SR 101.

- SR 49.
- US 127 (South Leg).
- US 127 (North Leg).
- SR 424 (East of US 24).

Between August 29 and September 1, 2000, 24-hour traffic counts were collected on 65 local roadways in the study area to determine the average daily traffic volumes for these roadways and assess of the potential impacts on the local roadway network.

Historic traffic volume data collected between 1982 and 1998 by the ODOT, INDOT, and the NIRCC were merged with the December 1999 traffic count data in order to create a 17-year-long traffic growth profile for the US 24 Corridor. Certain locations along the US 24 Corridor were counted repeatedly by the agencies. Other locations were counted fewer times. With several or just few data points available for each location, a Linear Regression Analysis (i.e., best-fit line among random data points) was conducted to develop year 2008 and 2028 traffic volume estimates. In order to maximize the forecasting capability of the Linear Regression Analysis and to smooth-out short-term data anomalies, all of the 17-year-long profile was utilized.

The ODOT – Office of Traffic Engineering provided statewide statistics and guidance on seasonal adjustment to be used to adjust the December traffic volumes into year-round average daily traffic volumes. The ODOT – Office of Technical Services provided statewide statistics and procedures on the conversion of daily traffic volumes into DHV for the purposes of conducting capacity analyses and determining the LOS. Years 2008 and 2028 were selected as the opening year traffic conditions and the 20-year future conditions, respectively, for the analysis of alternatives. The Year 2008 is considered to be representative of opening year, allowing for completion of required environmental and design studies as well as construction of the facility.

For Alternatives A through X, US 24 would be upgraded to a four-lane limited access expressway on a new location. It is anticipated that a substantial portion of years 2008 and 2028 traffic volumes would divert onto the new facility in anticipation of higher operating speeds and shorter travel times. A nominal portion of years 2008 and 2028 traffic volumes (i.e., mostly short-distance local trips) would remain on the existing US 24, which would eventually function as a local roadway. It is assumed that more trucks than automobiles would divert onto the new facility, since trucks generally travel longer distances and are more sensitive to travel time and cost savings. The greater the travel time savings realized by using the new alignment, the greater the number of vehicles that would eventually divert from the existing alignment onto the new US 24 alignment. Procedures specified in FHWA's *Traffic Diversion Curve for Freeways* were used to calculate the Years 2008 and 2028 mainline traffic volumes for Alternatives A through X. In addition, the critical and non-critical directions of traffic flow on US 24 were determined and the number of vehicles traveling in the critical direction on US 24 were estimated for the Years 2008 and 2028.

The Year 2008 and Year 2028 peak hour traffic volumes for local roadways were determined by multiplying the previously calculated Year 2000 peak hour traffic volumes by a growth factor. A growth rate of 1.92 percent per year was used based on historic traffic growth patterns for study area roadways and average statewide growth rates for rural local roadways.

In order to estimate the roadway capacities for each of the 12 traffic segments defined for US 24, the average annual daily traffic (AADT) volumes were converted into DHV. DHV reflect more congested traffic conditions than typical afternoon commuter hour conditions. DHV reflect traffic conditions during the 30th highest hour of the year in terms of traffic volumes. Based upon previous experience from statewide surveys, DHV are in general approximately 11 percent of the daily traffic volumes (ODOT – Office of Technical Services). Also, using statewide statistics, the Design Hour Truck Percentage was established at 60 percent of the daily truck percentage (ODOT – Office of Technical Services).

Corridor Capacity Analyses

Capacity analyses were conducted for the US 24 mainline to determine the operating LOS for the Feasible Alternatives. The capacity analyses were performed using procedures outlined in the *Highway Capacity Manual* (TRB December 1997).

Sensitivity Analyses

The lack of a regional travel demand forecasting model necessitated the development of an alternate methodology to derive year 2008 and 2028 travel demand forecasts. Although this methodology is based on current traffic volume counts and historic traffic growth patterns for the last 17 years, there may be a margin of error in the future traffic volume estimates for the years 2008 and 2028.

In order to ensure that nominal to moderate changes in the future traffic volumes do not substantially change the resulting levels of service and the ranking of alternatives, sensitivity analyses were conducted. For each of the four alternative scenarios under consideration (i.e., No Build Alternative, Alternatives A through X - expressways on new alignment, Alternative Y - existing US 24 two-lane alternative, and Alternative Z - existing US 24 expressway alternative), traffic volume changes were tested. Incremental changes of future traffic volumes by 10, 20, 30 and 40 percent were tested to determine if the resultant levels of service would change. If the final results did not significantly change with nominal to moderate changes in future traffic volume estimates, then the alternative approach is considered to be valid.

Intersection Analyses

Capacity analyses were also conducted for each at-grade intersection proposed for the Preferred Alternative (Alternative D-1). Crossings where overpasses or underpasses with no access ramps were proposed were not analyzed since traffic movements on US 24 or crossroads would not be subject to travel delays associated with intersection operations. Also, full interchanges were not analyzed since the ramps will be constructed to allow continuous flow of traffic onto and off of the expressway with little delay to motorists. The capacity analyses were completed using the procedures and methodologies outlined in the *Highway Capacity Manual, Special Report 209* (TRB, 2000). An "average vehicle delay" based on traffic volumes, number of lanes, and percentage of truck traffic was calculated for each intersection and then assigned a LOS rating. The intersection LOS grades as defined by TRB for unsignalized intersections are as follows:

- LOS A: 10 seconds or less of delay per vehicle.
- LOS B: 10 to 15 seconds of vehicle delay.
- LOS C: 15 to 25 seconds of vehicle delay.
- LOS D: 25 to 35 seconds of vehicle delay.
- LOS E: 35 to 59 seconds of vehicle delay.
- LOS F: 50 seconds or more of delay per vehicle.

The intersection capacity analyses were based on several assumptions:

- No right turns on red will be permitted.
- Truck percentage for crossroad traffic is two percent.
- All vehicles entering the intersection from local roadways cross through the intersection and continue traveling on the same local roadway.
- All vehicles entering the intersection from US 24 cross through the intersection and continue traveling on US 24.

The proposed geometry of the at-grade intersections provides for a minimum 18.3 meter (60-foot) grass median between the two directional roadways of US 24. At intersections, this area could be used by crossroad traffic to cross traffic moving in one direction on US 24 and wait for a gap in traffic to cross traffic moving in the other direction on the roadway. The junctions of the crossroad and the critical and non-critical directions of US 24 were considered as two separate intersections due to the 18.3 meters (60 feet) separating the two approaches. The analyses were limited to the intersection of the critical direction of US 24 and the crossroad since vehicles will experience far less delay attempting to cross the non-critical direction of US 24.

Traffic signal warrant analyses were conducted to determine if traffic signals would be needed at intersections of crossroads and the Preferred Alternative predicted to have a LOS E or F in 2008 and 2028. These analyses used the existing conditions 24-hour traffic count data to determine the percent of the ADT that travels during each hour on the crossroads. This hourly

percentage was applied to the 2008 and 2028 design ADT to calculate the future hourly volumes on the roadways. In a similar manner, a 24-hour traffic count performed on existing US 24 was utilized to calculate the hourly distribution of year 2008 and 2028 design ADT for the Preferred Alternative. Since the speed of travel on the new expressway will exceed 64.5 kph (40 mph), 70 percent of the minimum traffic requirements were used in the traffic signal warrant analyses.

Vehicle Miles Traveled

In addition to the traditional capacity analyses, the utilization levels of US 24 were calculated in terms of VMT. VMT is often used in technical analyses to measure the use of a facility by the travelling public. VMT is often used to measure the overall efficiency of alternatives; the alternative with the lowest VMT will typically be the most efficient. VMT is developed by taking into account the number of vehicles using a particular roadway segment and the length of the particular roadway segment.

Travel Time Savings

Travel time estimates on the existing US 24 and the Feasible Alternatives were calculated in order to develop estimates of travel time savings under various alternatives in relation to existing conditions. Average operating speeds observed in the field during off-peak traveling conditions during mid-week and the posted speed limits on US 24 were taken into account during the development of the travel time estimates under various alternatives.

Accident Analysis

Accident data for the three-year period (1998 through 2000) were obtained and analyzed independently and compared to rates for similar roadway facilities elsewhere in Ohio. ODOT, INDOT, and the Ohio Department of Public Safety provided the data. ODOT's Office of Traffic Engineering provided statewide one-year (1999) and three-year (1997-2000) accident rate averages for comparison purposes. Statewide accident rate averages for Indiana were not available.

A comparative assessment of the accident rates for US 24 with other roadway facilities elsewhere in Ohio having similar functional classifications and geometric design characteristics was conducted. The state of Ohio uses either a one-year statewide average or a three-year statewide average, which tends to "smooth-out" short-term crash data anomalies. The accident rates are measured in number of accidents per million vehicle miles traveled. For comparison purposes, the following statewide average accident rates were used:

- One-year statewide accident rate average for a two-lane facility: 2.64 accidents per million vehicle miles traveled.
- One-year statewide accident rate average (two-lane undivided facility): 2.54 accidents per million vehicle miles traveled.
- Three-year statewide accident rate for a two-lane facility: 1.50 accidents per million vehicle miles traveled.
- Three-year statewide accident rate average (two-lane undivided facility): 1.49 accidents per million vehicle miles traveled.

A qualitative analysis was conducted to determine if trucks contributed to accidents on US 24 in direct proportion to their participation in the traffic mix. Three levels of accident severity were identified: property damage, injury, and fatality. The analysis focused only on accident statistics provided by ODOT since accident data by vehicle type was not available for the state of Indiana. Given that the one-year and three-year statewide accident rate averages do not reflect the extent of damage and injury in accidents, a qualitative analysis was conducted to determine if fatalities and/or injuries were associated with the accidents that have occurred on US 24. For the purpose of the analysis, property damage, injury, and fatality occurrences were calculated as percentages of the total accidents.

Local Road Closures

Changes to the local roadway network and the impact of such changes on study area transportation needs were also evaluated. Key access roads were identified through coordination with local farm owners and operators, school districts, and emergency service providers.

Through feedback from farmland questionnaires distributed to local farm owners and operators, the most frequently used roadways for farm operations and access were identified. The five local school districts operating bus routes along US 24 were also interviewed. School bus routing and scheduling information was used to assess the potential impacts of local road closures. Similarly, emergency medical and fire service providers were surveyed. Information was requested on emergency access roads, plans, and programs currently in place that serve local area residents and used to determine the impacts of the various alternatives under consideration.

The impact of local road closures was evaluated for the 26 Feasible Alternatives. Road closures were determined to have a negligible impact if an alternative route was no more than 3.2 kilometers (two miles) from the existing route and if the intersections accommodating the detoured traffic did not meet signal warrant requirements in either 2008 or 2028.

To perform the latter evaluation, preliminary intersection analyses were completed. The analyses were based on traffic volumes collected along the local roadways in August 2000. As with the traffic data collected for the mainline segments, seasonal adjustments were applied to the ADT volumes to generate DHVs using an adjustment factor of 0.11. Year 2008 and 2028 DHVs were calculated using a growth rate of 1.78 percent per year. Procedures specified in FHWA's *Manual on Uniform Traffic Control Devices* (1988) were used to determine if affected intersections meet criteria for traffic signals or grade separation (i.e., interchange) for Opening Year (2008) and the Design Year (2028). For Alternatives A through X, it was assumed that 75 percent of the US 24 mainline traffic would be diverted onto the new facility.

Project Impacts

Capacity Analyses – US 24 Mainline Movements

Using average annual growth rates derived from 17 years of historic traffic volume data and recent December 1999 data, AADT were derived and converted into DHV for the years 2008 and 2028. These are provided in Table 3.75.

**TABLE 3.75
FUTURE TRAFFIC VOLUMES ON EXISTING US 24**

US 24 Segment	Years		Years	
	2008 (AADT)	2028 (AADT)	2008 (DHV)	2028 (DHV)
1. I 469 to Webster/Woodburn Rd.	13,277	17,188	1,460	1,891
2. Webster/Woodburn Rd. to Sampson Rd.	12,845	17,315	1,413	1,905
3. Sampson Rd. to SR 101	9,277	12,019	1,020	1,322
4. SR 101 to IN/OH State Line	11,269	16,934	1,240	1,863
5. IN/OH State Line to Antwerp (SR 49)	10,064	14,736	1,107	1,621
6. Antwerp (SR 49) to Hazelet Rd. (C-87)	10,203	15,674	1,122	1,724
7. Hazelet Rd. (C-87) to US 127 (South Leg)	9,356	14,535	1,029	1,599
8. US 127 (South Leg) to US 127 (North Leg)	11,936	19,407	1,313	2,135
9. US 127 (North Leg) to The Bend Rd. (C-134)	11,018	15,655	1,212	1,722
10. The Bend Rd. (C-134) to Ashwood Rd. (T-153)	9,294	11,811	1,022	1,299
11. Ashwood Rd. (T-153) to SR 424 Intersection	13,031	20,264	1,433	2,229
12. SR 424 Intersection to SR 15	10,709	13,623	1,178	1,499

With the No Build Alternative, no roadway improvements would be made to existing US 24. Consequently, traffic conditions in terms of level of service would gradually deteriorate from present levels as traffic volumes continue to increase over time. By 2008 and 2028, US 24 will become increasingly congested as indicated by the LOS E and LOS E/F results (Table 3.76).

Under Alternatives A through X, traffic has two routing options, the old US 24 alignment and the new roadway. The majority of traffic would be diverted onto the new four-lane limited access, divided highway. More trucks will divert onto a new expressway alignment than passenger cars, since trucks are in general more sensitive to travel time savings. Table 3.77 summarizes

the key traffic parameters for Alternatives A through X. The expected mainline level of service for these alternatives is LOS A. Even most of the local traffic commuting between communities in the study area such as between Fort Wayne/New Haven and Defiance will realize the travel time savings by using the new four-lane facility. A modest percentage of traffic, however, especially short-distance localized traffic between small communities in the study area, farm machinery and equipment, and local delivery vehicles may continue to use the existing US 24, which would become a local roadway.

**TABLE 3.76
TRAFFIC CONDITIONS FOR THE NO BUILD ALTERNATIVE**

US 24 Segment	Design Hour Volumes (DHV)		Level of Service (LOS)		Vehicle Miles Traveled (in millions)		Travel Time (in minutes)	
	2008	2028	2008	2028	2008	2028	2008	2028
1	1,460	1,891	E	E	22.5	29.1	8	10
2	1,413	1,905	E	E	11.0	14.9	4	5
3	1,020	1,322	D	E	7.4	9.7	4	5
4	1,240	1,863	E	E	10.0	15.1	4	5
5	1,107	1,621	E	E	13.2	19.4	7	7
6	1,122	1,724	E	E	26.1	40.1	14	16
7	1,029	1,599	D	E	9.1	14.2	5	5
8	1,313	2,135	E	F	9.1	14.7	4	4
9	1,212	1,722	D	E	9.8	13.9	4	5
10	1,022	1,299	D	E	10.6	13.5	5	6
11	1,433	2,229	E	F	9.5	14.8	3	4
12	1,178	1,499	E	E	11.1	14.1	5	5
Total					149.5	213.4	67	77

Alternative Y consists of improvements to existing US 24 through the addition of shoulders, turning lanes, passing lanes and improvements to intersections. This alternative does not significantly increase the capacity of US 24 and therefore the Year 2008 and 2028 LOS do not improve (Table 3.78).

Alternative Z consists of upgrading existing US 24 to a four-lane, divided highway with access limited to at-grade intersections. The alternative also includes a bypass of the Village of Antwerp to the south. The addition of two travel lanes provides additional carrying capacity on US 24. As shown in Table 3.79, this improves the operating conditions on US 24 to LOS A/B. The additional roadway capacity and the higher geometric design standards enable motorists to travel safely at higher speeds.

Table 3.79 shows total DHV (by segment) in both directions of travel and DHV by direction of travel for Alternative Z. If existing US 24 is improved to a four-lane facility, the two directions of travel would be completely separated by either a median or a concrete barrier. Consequently, each direction of travel will function mostly as an independent facility. Therefore, its capacity would be determined by its own traffic flows independently from the traffic activity in the opposite direction. This is consistent with the principles presented in the *Highway Capacity Manual*. The resulting LOS rating for each segment reflects the worst possible operating conditions.

Sensitivity Analysis

In order to ensure that nominal to moderate changes in the travel demand forecasts (i.e., future traffic volumes) do not alter the resultant levels of service under various alternatives, a sensitivity analysis was conducted. For the four alternative scenarios under consideration (i.e., No Build, Alternative Y, Alternative Z, and Alternatives A through X), nominal to moderate traffic volume changes were tested. Incremental changes of future traffic volumes by 10, 20, 30, and 40 percent were tested to determine if the levels of service would change.

**TABLE 3.77
TRAFFIC CONDITIONS FOR ALTERNATIVES A THROUGH X**

Alternative	Length Kilometers (miles)	Level of Service (LOS)		Vehicle Miles Traveled (millions)		Travel Time (minutes)	
		2008	2028	2008	2028	2008	2028
A	58.7 (36.4)	A	A	122.2	175.1	34	34
B	58.3 (36.2)	A	A	121.9	175.0	33	33
C	59.0 (36.6)	A	A	123.1	176.6	34	34
D	58.7 (36.4)	A	A	121.6	173.5	34	34
D-1	58.7 (36.4)	A	A	121.6	173.5	34	34
E	58.9 (36.5)	A	A	120.3	172.0	34	34
F	58.5 (36.3)	A	A	119.9	171.9	33	33
G	59.2 (36.7)	A	A	121.2	173.5	34	34
H	58.8 (36.5)	A	A	119.7	170.4	34	34
I	59.7 (37.0)	A	A	123.4	176.8	34	34
J	59.2 (36.7)	A	A	123.0	176.7	34	34
K	60.0 (37.2)	A	A	124.3	178.3	34	34
L	59.7 (37.0)	A	A	122.8	175.2	34	34
M	59.2 (36.7)	A	A	122.3	174.6	34	34
N	55.6 (34.5)	A	A	122.0	174.5	32	32
O	59.5 (36.9)	A	A	123.2	176.1	34	34
P	59.2 (36.7)	A	A	121.7	173.0	34	34
Q	61.6 (38.2)	A	A	128.2	183.1	35	35
R	61.3 (38.0)	A	A	127.9	183.0	35	35
S	61.9 (38.4)	A	A	129.1	184.6	36	36
T	61.6 (38.2)	A	A	127.6	181.5	35	35
U	61.3 (38.0)	A	A	127.2	180.9	35	35
V	60.8 (37.7)	A	A	126.8	180.9	35	35
W	61.5 (38.1)	A	A	128.1	182.4	35	35
X	61.1 (37.9)	A	A	126.5	179.3	35	35
Average	59.7 (37.0)	A	A	123.9	177.0	34	34

**TABLE 3.78
TRAFFIC CONDITIONS FOR ALTERNATIVE Y**

US 24 Segment	Design Hour Volumes (vph) Vehicles per Hour		Level of Service (LOS)		Vehicle Miles Traveled (millions)		Travel Time (minutes)	
	2008	2028	2008	2028	2008	2028	2008	2028
1	1,460	1,891	E	E	22.5	29.1	8	10
2	1,413	1,905	E	E	11.0	14.9	4	5
3	1,020	1,322	D	E	7.4	9.7	4	5
4	1,240	1,863	E	E	10.0	15.1	4	5
5	1,107	1,621	E	E	13.2	19.4	7	7
6	1,122	1,724	E	E	26.1	40.1	14	16
7	1,029	1,599	D	E	9.1	14.2	5	5
8	1,313	2,135	E	F	9.1	14.7	4	4
9	1,212	1,722	D	E	9.8	13.9	4	5
10	1,022	1,299	D	E	10.6	13.5	5	6
11	1,433	2,229	E	F	9.5	14.8	3	4
12	1,178	1,499	E	E	11.1	14.1	5	5
Total					149.5	213.4	67	77

**TABLE 3.79
TRAFFIC CONDITIONS FOR ALTERNATIVE Z**

US 24 Segment	Design Hour Volumes- Both Directions (DHV)		Design Hour Volumes (DHV) by Direction of Travel				Level of Service (LOS)		Vehicle Miles Traveled (millions)		Travel Time (minutes)	
			Year 2008		Year 2028							
	2008	2028	EB	WB	EB	WB	2028	2008	2008	2028	2008	2028
1	1,460	1,891	906	554	1,173	718	A	A	22.7	29.4	5	5
2	1,413	1,905	877	536	1,183	722	A	A	11.1	15.0	2	2
3	1,020	1,322	513	507	665	657	A	A	7.5	9.7	2	2
4	1,240	1,863	644	596	967	895	A	A	10.1	15.2	2	3
5	1,107	1,621	557	550	816	805	A	A	13.3	19.5	4	4
6	1,122	1,724	482	640	741	983	A	A	26.3	40.4	7	7
7	1,029	1,599	455	575	706	893	A	A	9.2	14.3	3	3
8	1,313	2,135	627	686	1,020	1,115	A	B	9.1	14.8	2	2
9	1,212	1,722	536	676	762	960	A	A	9.9	14.0	2	3
10	1,022	1,299	495	527	629	670	A	A	10.7	13.6	3	3
11	1,433	2,229	763	671	1,186	1,043	A	B	9.6	14.9	2	2
12	1,178	1,499	546	632	695	803	A	A	11.1	14.2	3	3
Totals									150.7	215.0	38	40

Notes: EB = Eastbound Travel Lane. WB = Westbound Travel Lane.

For the No Build Alternative and Alternative Y, nominal to moderate traffic volume increases would deteriorate the levels of service from their present LOS D/E to LOS E/F. LOS D, E, and F reflect congested travel conditions with infrequent gaps in the mainline traffic, difficulty bypassing slow moving vehicles, and the platooning of vehicles behind slow moving vehicles.

For Alternatives A through X, and Z, nominal to moderate increases in traffic volume would not deteriorate the levels of service from LOS A. There is substantial unused roadway capacity available to accommodate increases in traffic volumes before the level of service would be affected (i.e., reduced to LOS B). Therefore, a four-lane expressway, regardless of its alignment, would have substantial unused roadway capacity to operate at high levels of service (i.e., LOS A or LOS B) even if the travel volume forecast estimates have not been accurately estimated. Consequently, Alternatives A through X, and Z are not as sensitive to nominal to moderate traffic volume increases as are the No Build Alternative and Alternative Y, which would operate at relatively low levels of service. The findings of the above analyses are summarized in Table 3.80.

**TABLE 3.80
OUTCOMES OF THE SENSITIVITY ANALYSES**

Alternative	Year 2008					Year 2028				
	As Is	+10%	+20%	+30%	+40%	As Is	+10%	+20%	+30%	+40%
No Build	LOS D/E	LOS D/E	LOS E	LOS E	LOS E/F	LOS E/F	LOS E/F	LOS E/F	LOS E/F	LOS E/F
A through X	LOS A	LOS A	LOS A	LOS A	LOS A	LOS A	LOS A/B	LOS A/B	LOS A/B	LOS A/B
Y	LOS D/E	LOS D/E	LOS E	LOS E	LOS E/F	LOS E/F	LOS E/F	LOS E/F	LOS E/F	LOS E/F
Z	LOS A	LOS A	LOS A/B							

Vehicle Miles Traveled

In general, the alternative with the lowest possible VMT is the most efficient alternative since it yields the lowest possible utilization of the roadway.

As a result of the natural growth of traffic over time, the overall VMT for the study area will increase to 149.5 million by 2008 and to 213.4 million by 2028. These estimates reflect increases of 15 percent and 64 percent, respectively over current facility utilization levels and are reflected in the VMT estimates for the No Build Alternative and Alternative Y.

Alternatives A through X yield lower VMT since future traffic is divided between the “old” and the “new” US 24 facilities. The overall VMT for Alternative Z is slightly higher than the VMT forecasted for Alternative Y although neither the daily traffic volumes nor the overall facility length change. As shown in Table 3.77, the differences across Alternatives A through X are modest. However, these alternatives would reduce the VMT for US 24 users by 20 to 30 million miles annually in the Year 2028 when compared with Alternatives Y and Z which do not provide for a new facility.

Travel Time

Travel time for US 24 motorists will increase from 54 minutes in 2000 to 77 minutes in 2028 under the No Build Alternative, an increase of approximately 43 percent. This increase is attributed to the natural growth in traffic and the corresponding increase in traffic congestion. With the provision of additional capacity proposed under Alternatives A through X and Z, the overall time needed to travel US 24 between Fort Wayne/New Haven and Defiance is reduced when compared to existing conditions, the No Build Alternative, and Alternative Y as shown in Table 3.81.

Local Road Impacts

US 24 and neighboring township, county and state roadways provide site access and facilitate regional distribution of local traffic. During the development of the Feasible Alternatives, potential impacts of local road closures were taken into account in order to ensure that local access to private residences, businesses and farms was maintained; and adequate connections to the local roadway system were maintained.

All crossroads in the study area that have river crossings over the Maumee River will remain open in order to ensure efficient connectivity. These roadways include Ryan/Bruick Road, Webster Road, Bull Rapids Road, and SR 101 in Allen County; C-105, SR 49, and C-73 in Paulding County; and US 127 and C-134 in Defiance County.

Alternatives A through X would have a greater impact on the local roadway system than Alternatives Y or Z. Much of the traffic using existing US 24 would be diverted to the new facility improving the travel flow through the study area. Alternatives A through X (exclusive of D-1) would be constructed on new location crossing existing state and local roadways.

As indicated in Table 3.82, at-grade intersections are proposed at most crossings. One exception is the crossing at SR 424 where an interchange is proposed. An interchange would be constructed at the junction with SR 424, allowing for unimpeded movement of vehicles

transferring between the two facilities. Preliminary intersection analysis indicates that based on future traffic estimates, improvements may be needed at five proposed crossing locations. The crossings are:

- Woodburn Road (Alternatives A through H).
- Bull Rapids Road (Alternatives A through H).
- Webster Road (Alternatives A through X).
- SR 49 (Alternatives A through X and Z).
- US 127 (Alternatives A through X and Z).

**TABLE 3.81
COMPARISON OF VEHICLE MILES TRAVELED AND TRAVEL TIME ESTIMATES**

Alternative	Vehicle Miles Traveled (millions)		Travel Time (minutes)	
	2008	2028	2008	2028
A	122.2	175.1	34	34
B	121.9	175.0	33	33
C	123.1	176.6	34	34
D	121.6	173.5	34	34
D-1	121.6	173.5	34	34
E	120.3	172.0	34	34
F	119.9	171.9	33	33
G	121.2	173.5	34	34
H	119.7	170.4	34	34
I	123.4	176.8	34	34
J	123.0	176.7	34	34
K	124.3	178.3	34	34
L	122.8	175.2	34	34
M	122.3	174.6	34	34
N	122.0	174.5	32	32
O	123.2	176.1	34	34
P	121.7	173.0	34	34
Q	128.2	183.1	35	35
R	127.9	183.0	35	35
S	129.1	184.6	36	36
T	127.6	181.5	35	35
U	127.2	180.9	35	35
V	126.8	180.9	35	35
W	128.1	182.4	35	35
X	126.5	179.3	35	35
Y	149.5	213.4	64	77
Z	150.7	215.0	38	40

Construction of Alternatives A through X would result in the closure of several local roadways. These closures are also listed in Table 3.82. The number of local roadways closed ranges from 13 (Alternatives C, D, K, and L) to 17 (Alternatives Q and R). Table 3.83 ranks the Feasible Alternatives by the number of local roadway closures associated with each alternative. The impact of local road closures has been minimized at most locations by keeping neighboring roads open, and thereby minimizing length of permanent detours. Table 3.84 summarizes alternative routes available for each roadway affected by road closures.

There are two locations where closure of local roadways impact accessibility – Harper Road in Allen County and the Village of Cecil in Paulding County. For Alternatives A through X, Harper Road would be severed between US 24 and Doyle Road affecting access to properties located along Doyle Road. Under Alternatives A through H (exclusive of D-1), M through P, and U through X, C-206 and C-216 would be severed. These two routes support direct east-west

access through the Village of Cecil. C-206 is severed just south of the intersection with Maumee & Western Railroad corridor. C-216 will be severed at the community's eastern border. Alternative access is provided via existing roadways as well as the new US 24 facility.

**TABLE 3.82
LOCAL ROADWAY IMPACTS**

County	Local Roadway	Project Impacts
Allen County, Indiana	Harper Rd.	Closed for all alternatives on new alignment and Alternative Z.
	Doyle Rd.	At-grade intersection with all alternatives on new alignment. Grade-separated crossing over US 24 with Alternative D-1.
	Ryan/Bruick Rd.	At-grade intersection with all alternatives on new alignment. Interchange with Alternative D-1.
	Berthaud Rd.	Closed for Alternatives A, B, C, D, D-1, I, J, K, L, M, N, O, P. At-grade intersection with Alternatives E, F, G, H, Q, R, S, T, U, V, W, X.
	Bremer Rd.	Closed for Alternatives D-1, E, F, G, H, Q, R, S, T, U, V, W, X, Z.
	Webster Rd.	At-grade intersection with all alternatives on new alignment. Interchange with Alternative D-1.
	Rousey Rd.	At-grade intersection with Alternatives A, B, C, D, I, J, K, L, M, N, O, P. Closed for Alternatives D-1, E, F, G, H, Q, R, S, T, U, V, W, X.
	Woodburn Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Grade-separated crossing under US 24 with Alternative D-1.
	Sampson Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Grade-separated crossing with Alternatives D-1, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. Closed for Alternative Z.
	Slusher Rd.	At-grade intersection with Alternatives Q, R, S, T, U, V, W, X. Grade-separated crossing with Alternatives E, F, G, H.
	Fahlsing Rd.	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	Brobst Rd.	Closed for Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	Cole Rd.	Closed with Alternative Y.
	Gustin Rd.	At-grade intersection with all alternatives on new alignment. Closed for Alternative D-1.
	Becker Rd.	Closed for Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	SR 101	At-grade intersection with all alternatives on new alignment. Interchange with Alternative D-1.
	Maumee Center Rd.	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Re-aligned to intersect with Bull Rapids Road with Alternative D-1.
	Bull Rapids Rd.	At-grade intersection with alternatives A, B, C, D, E, F, G, H. Grade-separated crossing over US 24 with Alternative D-1.
	State Line Rd. (T-1/ C-1)	At-grade intersection with all alternatives on new alignment. Grade-separated crossing over US 24 with Alternative D-1.
	Paulding County, Ohio	T-21/C-21
T-51		Re-aligned at-grade intersection with T-162 for all alternatives on new alignment and Z. Re-aligned to intersect with C-176 with Alternative D-1.
C-11		At-grade intersection with all alternatives on new alignment and Z. Grade-separated crossing under US 24 with Alternative D-1.
T-29		Closed for Alternatives A, B, C, D, D-1, E, F, G, H, Z.
C-33		At-grade intersection with Alternatives A, B, C, D, D-1, E, F, G, H
T-33		At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
T-43		At-grade intersection with Alternatives A, B, C, D, E, F, G, H, Z. Grade-separated crossing over US 24 with Alternative D-1.

TABLE 3.82 (CONTINUED)
LOCAL ROADWAY IMPACTS

County	Local Roadway	Project Impacts
Paulding County, Ohio (Continued)	SR 49	Re-aligned at-grade intersection with all alternatives on new alignment and Z. Interchange with Alternative D-1.
	T-162/C-162	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	SR 111	Re-aligned at-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	C-176	At-grade intersection with all alternatives on new alignment.
	T-144/C-144	At-grade intersection with Alternatives I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X.
	C-180	At-grade intersection with all alternatives on new alignment and Z. Closed for Alternative D-1.
	T-150	Closed for Alternatives A, B, C, D, D-1, E, F, G, H.
	T-61/C-61	Closed for all alternatives on new alignment and Z.
	C-87	At-grade intersection with all alternatives on new alignment and Z.
	C-83/T-83	Closed for all alternatives on new alignment. At-grade intersection with Alternative D-1.
	US 127	At-grade intersection with all alternatives on new alignment. Interchange with Alternative D-1.
	C-206	East of US 24 At-grade intersection with C-87 with Alternatives A, B, C, D, D-1, E, F, G, H, M, N, O, P, U, V, W, X. West of US 24 Closed at the Maumee & Western Railroad with Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X. Re-aligned to intersect with C-83 with Alternative D-1.
	T-69	At-grade intersection with Alternatives A, B, C, D, E, F, G, H. Closed for Alternatives D-1 and Z.
	T-97	Closed for Alternatives I, J, K, L, Q, R, S, T.
	C-105/T-105	Grade-separated crossing under US 24 with all alternatives on new alignment.
	C-216	Closed for Alternatives A, B, C, D, E, F, G, H, M, N, O, P, U, V, W, X. At-grade intersection with Alternative D-1.
	C-224	At-grade intersection with all alternatives on new alignment. Closed for Alternative D-1.
	C-115	At-grade intersection with all alternatives on new alignment.
	T-228	Closed for Alternatives A, B, E, F, I, J, M, N, Q, R, U, V.
	C-232	Re-aligned at-grade intersection with all alternatives on new alignment.
	C-250	West side of US 24 closed with Alternative Y.
	C-123	Closed for all alternatives on new alignment.
	T-129	Closed for Alternatives C, D, D-1, G, H, K, L, O, P, S, T, W, X.
	C-133	At-grade intersection with all alternatives on new alignment.
	T-139	Closed for all alternatives on new alignment.
	T-236	Closed for Alternatives A, B, E, F, I, J, M, N, Q, R, U, V.
C-143 (Whetstone Rd.)	At-grade intersection with all alternatives on new alignment.	
Defiance County, Ohio	Krouse Rd. (C-146)	Closed for Alternatives B, D, F, H, J, L, N, P, R, T, V, X. Grade-separated crossing under US 24 with Alternative D-1.
	Powers Rd. (C-29)	Closed for all alternatives on new alignment. Relocated to intersect with T-153 with Alternative D-1.
	Ashwood Rd. (T-153)	At-grade intersection with Alternatives B, D, F, H, J, L, N, P, R, T, V, X. Closed for Alternatives A, C, D-1, E, G, I, K, M, O, Q, S, U, W, Y.
	Pomerantz Road (T-211)	Closed with Alternative Z.
	SR 424	Remains open with interchange with Alternatives A through X. At-grade intersection with Alternatives Y and Z.
	May Rd. (T-197)	At-grade intersection with Alternatives A, C, E, G, I, K, M, O, Q, S, U, W.
	Switzer Rd. (C-42)	Grade-separated crossing with all alternatives on new alignment.

**TABLE 3.83
RANKING OF ALTERNATIVES BY NUMBER OF LOCAL ROAD CLOSURES**

Alternative	Number of Local Road Closures
Y	3
Z	7
C, D	12
A, B, K, L	13
E, F, G, H, I, J, O, P, S, T	14
D-1, M, N, Q, R, W, X	15
U, V	16

**TABLE 3.84
ALTERNATIVE ROUTES FOR ROADS AFFECTED BY CLOSURES**

Roadway	Alternatives	Detour Routes
Harper Rd.	A-X, Z	Harper Road to Ryan Road/Bruick Road to US 24
Berthaud Rd.	A-D, D-1, I-P	Berthaud Road to Ryan Road/Bruick Road
Bremer Rd.	D-1, E-H, Q-X, Z	From North: Bremer Road to Webster Road to US 24 From South: Bremer Road to Rousey Road to Gar Creek Road to Webster Road to US 24
Rousey Rd.	D-1, E-H, Q-X	Rousey Road to Gar Creek Road to Webster Road to US 24.
Sampson Rd.	Z	Sampson Road to Slusher Road to Webster Road to US 24.
Brobst Rd.	I- X	From North: Brobst Road to Woodburn Road to Fahlsing Road to US 24. From South: Brobst Road to Slusher Road to Fahlsing Road to US 24.
Cole Rd.	Y	No detour available.
Gustin Rd.	D-1	Maumee Center Road to SR 101 US 24.
Becker Rd.	I- X	From North: Becker Road to Brobst Road to Woodburn Road to Fahlsing Road to US 24. From South: Becker Road to Brobst Road to Slusher Road to Fahlsing Road to US 24.
T-21/C-21	I- X	T-21/ C-21 to C-124 to C-11 to US 24.
C-180	D-1	T-61 to C-176 to T-51 to US 24.
T-150	A-H	From North: T-150 to State Line Road to US 24. From South: T-150 to C-11 to US 24.
T-61	A-X, Z	From North: T-61/C-61 to C-176 to US 24. From South: T-61/C-61 to C-162 to US 24.
T-83	A-D, E-X	Alternatives A-D, E-H, M-P, U-X From North: T-83 to C-216 to C-87. From South: From South: T-83 to C-180 to C-87 to US 24. Alternatives: I-L and Q-T From North: T-83 to C-216 to C-87. From South: T-83 to C-180 to C-87 to US 24.
C-206	Closed at railroad with A-D, E-H, M-P, U-X	From North: C-206 to C-216 to US 24. From South: C-2-6 to C-87 to C-180.
T-69	Z	C-180 to T-51 to US 24.
T-29	A - H, Z	T-29 to C-33 to existing US 24.
T-97	I- L, Q-T	T-97 to C-180 to T-87/C-87 to US 24.
C-216	A, B, C, D, E, F, G, H, M-P, U-X	C-206 to C-105 to US 24.
C-224	D-1	
T-228	A, B, E, F, I, J, M, N, Q, R, U, V	T-228 to C-123 to C-224 to US 24.
C-123	A-X	From North: C-123 to C-232 to C-115 to US24. From South: C-123 to T-224 to US 24.
T-129	C, D, D-1, G, H, K, L, O, P, S, T, W, X	Road currently closed.
T-139	A-X	C-139 to C-232 to US 24.
T-236	A, B, E, F, I, J, M, N, Q, R, U, V	T-236 to C-143 to US 24.

**TABLE 3.84 (CONTINUED)
ALTERNATIVE ROUTES FOR ROADS AFFECTED BY CLOSURES**

Roadway	Alternatives	Detour Routes
Krouse Rd. (C-146)	B, D, F, H, J, L, N, P, R, T, V, X	From North: Krouse Road to existing US 24 to Ashwood Road. From South: Krouse Road to C-29 to Ashwood Road to US 24.
Powers Rd. (C-29)	A-X	Powers Road to C-143 to US 24 or Powers Road to C-153 to US 24. From North: Powers Road to T-153 to US 24. From South: Powers Road to C-143 to US 24.
Pomerantz Rd.	Z	No detour available.
Ashwood Rd. (T-153)	A, C, D-1, E, G, I, K, M, O, Q, S, U, W, Y	From North: Ashwood Road to Shoemaker Road to Whetstone Road to US 24. From South: Ashwood Road to C-232 to C-143 to US 24.

Alternative Y would result in the closure of two local roadways - Cole Road in Allen County and Ashwood Road in Defiance County. Alternative access is not available for properties located along Cole Road. Alternative access is available for Ashwood Road.

Alternative Z also would result in changes to the local roadway system including bypasses and roadway closures. US 24 would be relocated on a new alignment to the south of the Village of Antwerp between C-11 and T-83. In addition, seven local roadways would be severed or closed to traffic. The affected roadways are Harper, Bremer, and Sampson Roads in Allen County; T-29, T-61, and T-69 in Paulding County; and Pomerantz Road in Defiance County. Access to Harper, Bremer, and Sampson Roads from US 24 would be eliminated. Alternative access is provided via other north-south roadways that intersect US 24. However, the closure of the Harper Road intersection could affect access to properties located in close proximity to the US 24 intersection.

In Paulding County, T-29 would be severed between the Maumee & Western Railroad corridor and C-162. T-61 would be severed between C-180 and the Maumee & Western Railroad corridor. Existing roadways provide alternative means of access to negate the effects of these roadway closures. The section of T-69 located between existing US 24 and the Maumee & Western Railroad corridor would be incorporated into the US 24 mainline and a small portion of the roadway, approximately 228.7 meters (750 feet) in length, situated between Alternative Z and the railroad would be vacated.

In Defiance County, Pomerantz Road would be closed at existing US 24 under Alternative Z. No other routes are available to provide access to properties on Pomerantz Road.

Preferred Alternative Impacts

The Preferred Alternative (D-1) will improve traffic flow, congestion, and safety conditions in the US 24 Corridor for all travelers. The Preferred Alternative would not replace existing US 24 but rather would augment transportation service in the study area.

The operational characteristics for the Preferred Alternative (D-1) are the same as those reported for Alternative D. The expected mainline level of service under the Preferred Alternative is LOS A. The estimated 2028 VMT is 173.5 million, while the estimated time to travel the corridor in 2028 between New Haven and Defiance is 34 minutes.

Local roadway impacts, however, differ from Alternative D. Design refinements have been developed for Alternative D-1 resulting in design changes at several crossings with local roads. In most cases, the differences are design changes made in response to public comments received during Concurrence Point #3 coordination. In Indiana, the changes are associated with the change in design from expressway to freeway. The affected crossings and descriptions of previous and current intersection designs are listed in Table 3.85 and shown on Figure 3.17.

**TABLE 3.85
DESIGN REFINEMENTS FOR ALTERNATIVE D-1 RELATIVE TO LOCAL ROAD CROSSINGS**

Road	Alternative D Intersection Design (May 2001)	Alternative D-1 Intersection Design (January 2003)
Doyle Road	At-grade intersection.	Grade-separated crossing with Doyle Road passing over Alternative D-1.
Ryan/Bruick Road	At-grade intersection.	Interchange.
Webster Road	At-grade intersection.	Interchange.
Rousey Road	At-grade intersection.	Closed.
Sampson Road	At-grade intersection.	Grade-separated crossing with Sampson Road passing under Alternative D-1.
Woodburn Road	At-grade intersection.	Grade-separated crossing with Woodburn road passing under Alternative D-1.
Maumee Center Road	At-grade intersection.	Re-aligned to at-grade intersection with Bull Rapids Road
Bull Rapids Road	At-grade intersection.	Grade-separated crossing with Bull Rapids Road passing over Alternative D-1.
SR 101	At-grade intersection.	Interchange.
Gustin Road	At-grade intersection.	Closed.
State Line Road	At-grade intersection.	Grade-separated crossing with State Line Road passing over Alternative D-1.
C-11	At-grade intersection.	Grade-separated crossing with C-11 passing under Alternative D-1.
C-33	Closed.	At-grade intersection.
SR 49	At-grade intersection.	Interchange.
T-43	At-grade intersection.	Grade-separated crossing with T-43 passing over Alternative D-1.
T-51	At-grade intersection.	Re-aligned to at-grade intersection with C-176.
C-176	Closed.	At-grade intersection.
C-180	At-grade intersection.	Closed.
T-61	At-grade intersection.	Closed.
T-69	At-grade intersection.	Closed.
T-83	Closed.	At-grade intersection.
US 127	At-grade intersection.	Interchange.
C-206	At-grade intersection.	Re-aligned to at-grade intersection with C-87.
C-216	Closed.	At-grade intersection.
C-224	At-grade intersection.	Closed.
Powers Road (C-29)	Closed.	Re-aligned to at-grade intersection with Ashwood Road (T-153).
Krouse Road (C-146)	At-grade intersection.	Grade-separated crossing with Krouse Road passing under Alternative D-1.

Construction of the Preferred Alternative will affect the local roadways in several ways:

- Addition of at-grade intersections or interchanges at specific locations where the Preferred Alternative crosses local roadways.
- Construction of under/over passes at locations where the Preferred Alternative crosses local roadways and access is not provided.
- Closure of the crossroads.
- Realignment of the crossroads.

In order to examine the effects of the Preferred Alternative on the local roadway network, capacity analyses were performed at each proposed at-grade intersection. A summary of the 2008 and 2028 levels of service for each crossroad is shown in Table 3.86. The table only indicates the levels of service experienced by vehicles on the crossroads since vehicles traveling on US 24 will experience little or no delay.

The results of the capacity analyses indicate that 14 at-grade intersections will operate at a LOS C or better in 2008 and 10 at-grade intersections will operate at a LOS C in 2028. Four at-grade intersections are anticipated to function at a LOS D in 2028 for crossroad traffic movements: the Maumee Center Road/Bull Rapids Road intersection, the T-51/C-176 intersection, and the at-grade intersections with Alternative D-1 at C-176 and C-115.

**TABLE 3.86
INTERSECTION ANALYSIS FOR THE PREFERRED ALTERNATIVE**

Crossroad	Year 2008 Crossroad LOS	Year 2008 Crossroad LOS	Results and Recommendations
Harper Rd.	Closed	Closed	Recommend closing due to close proximity to the I-469 interchange.
Doyle Rd.	Overpass	Overpass	Overpass is proposed to provide for freeway design in Allen County.
Bremer Rd.	Closed	Closed	Recommend closing because it would require a realignment to provide an acceptable sight distance. Nearby Ryan Road would not require realignment and would serve as a better crossing location.
Ryan/Bruick Rd.	Interchange	Interchange	Provides crossing over the Maumee River and is a primary travel route for the Amish community.
Berthaud Rd.	Closed	Closed	Recommend closing due to minimal traffic volumes. Nearby Webster Road is more heavily traveled and would serve as an acceptable crossing location.
Webster Rd.	Interchange	Interchange	Provides crossing over the Maumee River, a primary travel route for the Amish community.
Rousey Rd.	Closed	Closed	Recommend closing due to minimal traffic volumes.
Sampson Rd.	Overpass	Overpass	Overpass is proposed to provide for freeway design in Allen County.
Woodburn Rd.	Overpass	Overpass	An overpass is proposed because of the high volume of high school traffic expected to attempt to cross the new US 24 on this roadway and to address public comments.
Maumee Center Rd.	Realignment C	Realignment D	Maumee Center Road re-aligned to intersect with Bull Rapids Road.
Bull Rapids Rd.	Overpass	Overpass	Overpass is proposed to provide for freeway design in Allen County.
SR 101	Interchange	Interchange	Provides crossing over Maumee River and is a primary travel route for the Amish community.
Gustin Rd.	Closed	Closed	Recommend closing since few vehicles presently use this road.
State Line Rd.	Overpass	Overpass	Overpass is proposed to provide for freeway design in Allen County.
T-150	Closed	Closed	Recommend closing since few vehicles currently use this roadway.
C-11	Underpass	Underpass	Underpass is proposed to maintain emergency access to properties north of the Maumee & Western Railroad.
C-21	C	C	An at-grade intersection provides acceptable LOS.
T-29	Closed	Closed	Recommend closing since the small number of vehicles on this roadway can use SR 49 to travel into and out of Antwerp.
C-33	C	C	An at-grade intersection provides acceptable LOS.
SR 49	Interchange	Interchange	Due to heavy traffic volumes on SR 49 in 2008 and 2028, an at-grade intersection provides a poor LOS F.

TABLE 3.86 (CONTINUED)
INTERSECTION ANALYSIS FOR THE PREFERRED ALTERNATIVE

Crossroad	Year 2008 Crossroad LOS	Year 2008 Crossroad LOS	Results and Recommendations
T-43	Overpass	Overpass	Overpass is proposed to separate mainline traffic from Antwerp School traffic.
T-51	Realignment C	Realignment D	T-51 will be re-aligned to intersect with C-176. T-51 could be considered for closure since very few vehicles presently travel on this road.
C-176	C	D	An at-grade intersection provides acceptable LOS on opening day. A poor LOS D will be experienced on the crossroad under Year 2028 traffic conditions.
C-180	Closed	Closed	Recommend closing since roadway provides same function as C-176, but is not built to ODOT design standards for local roadways.
T-61	Closed	Closed	Recommend closing since only a small number of vehicles use this roadway.
T-69	Closed	Closed	Access to properties along T-69 will be provided by the Antwerp Bypass connector.
T-83	C	C	T-83 could be considered for closure since very few vehicles presently travel on this road.
C-206	Realignment C	Realignment C	Re-aligned to at-grade intersection with C-87.
C-87	C	C	An at-grade intersection provides acceptable LOS.
C-105	Underpass	Underpass	An underpass is being proposed at C-105 because the proposed US 24 alignment must span over the nearby railroad tracks.
C-216	B	C	An at-grade intersection provides an acceptable LOS.
US 127	Interchange	Interchange	Due to heavy traffic volumes on US 127, an at-grade intersection provides a poor LOS F.
C-224	Closed	Closed	Recommend closing since very few vehicles travel on the roadway.
C-115	C	D	An at-grade intersection provides acceptable LOS in 2008. A poor LOS D will be experienced under Year 2028 traffic conditions.
C-123	Closed	Closed	Recommend closing since very few vehicles travel on the roadway and vehicles can cross Alternative D-1 using the at-grade intersection proposed at nearby C-115.
C-232	C	C	An at-grade intersection provides acceptable LOS.
T-129	Closed	Closed	T-129 was closed during the traffic count. Traffic traveling this roadway will be able to cross Alternative D-1 on C-133.
C-133	B	C	An at-grade intersection provides acceptable LOS.
T-139	Closed	Closed	Recommend closing due to the minimal number of vehicles traveling on the roadway.
Whetstone Rd (C-143)	B	C	An at-grade intersection provides acceptable LOS.
Powers Rd. (C-29)	Realignment C	Realignment C	Re-aligned to intersect with T-153.

TABLE 3.86 (CONTINUED)
INTERSECTION ANALYSIS FOR THE PREFERRED ALTERNATIVE

Crossroad	Year 2008 Crossroad LOS	Year 2008 Crossroad LOS	Results and Recommendations
Ashwood Rd. (T-153)	Closed	Closed	Recommend closing since vehicles can use C-143 to travel across new US 24.
Krouse Rd. (C-146)	Underpass	Underpass	An underpass is proposed as roadway is key north-south access route for area residents.
SR 424	Interchange	Interchange	A full interchange is being proposed to provide a connection between existing SR 424/US 24 and the new US 24. This location will also provide direct access into the City of Defiance.
May Rd.	Driveway	Driveway	May Road is an unimproved road that functions as an industrial driveway.
Switzer Rd.	Overpass	Overpass	An overpass is being proposed at Switzer Road due to the large number of vehicles using the roadway and to address public comments.

Notes: The Crossroad LOS represents the level of service of the vehicles attempting to cross the critical direction of the Preferred Alternative traffic only. Vehicles traveling on the Preferred Alternative will operate at LOS A since their movements are unimpeded.

C (F) designates the LOS rating for vehicles attempting to travel across the non-critical direction of Preferred Alternative with traffic crossing the critical direction of the Preferred Alternative.

SR 49 and US 127, originally proposed as at-grade intersections, would function at a LOS E or F for crossroad traffic, as an intersection. Due to the heavy traffic volumes on SR 49, the proposed at-grade intersection with Alternative D-1 will provide a LOS F under 2008 and 2028 traffic conditions for vehicles on this crossroad. A traffic signal warrant analysis on this intersection determined that the intersection did not meet any of the traffic signal warrants under Year 2008 traffic conditions, but did meet several criteria under Year 2028 traffic conditions. The proposed at-grade intersection of Alternative D-1 and US 127 would provide a LOS E in 2008 LOS F in 2028. A traffic signal warrant analysis on this intersection determined that the intersection meets several criteria for signalization in 2008 and 2028.

Signalization of the SR 49 and US 127 intersections is an option to reduce delay experienced by motorist traveling on the crossroads. The installation of traffic signals at these at-grade intersections would stop vehicles on the proposed expressway and allow vehicles on the crossroads safer passage through the intersection. However, traffic signals would also increase the travel time and delay experienced to motorists traveling on the expressway in addition to creating an unsafe condition based on driver expectancy along similar roadways. The absence of traffic signals would greatly assist in providing a continuous travel speed of 65 mph along the Preferred Alternative. To improve travel time and provide for motorist safety, interchanges are proposed at SR 49 and US 127.

On roads where grade-separated crossings (overpasses and underpasses) will be constructed, traffic will not experience delays as a result of Alternative D-1. The roadways include Doyle, Sampson, Woodburn, Bull Rapids, and State Line roads in Allen County; C-11, T-43, and C-105 in Paulding County; and Krouse and Switzer roads in Defiance County. Similarly, the provision of full interchanges at Ryan/Bruick Road, Webster Road, SR 101, SR 49, US 127, and SR 424 will also allow for continuous flow of traffic onto and off of Alternative D-1 with little delay to motorists.

Where road closures are proposed, it is assumed that the existing traffic will travel to the nearest roadway that crosses or intersects the Preferred Alternative. Fifteen of the existing crossroads are slated for closures due to minimal traffic volumes or unacceptable sight distance characteristics. These include Harper, Bremer, Berthaud, Rousey, and Gustin roads in Allen County, T-150, T-29, C-180, T-61, T-69, C-224, C-123, T-129, and T-139 in Paulding County; and Ashwood Road in Defiance County.

Four crossroads will be realigned to intersect with other roadways instead of Alternative D-1. These are Maumee Center Road in Allen County, T-51, and C-206 in Paulding County, and Powers Road in Defiance County.

Mitigation

Overall, the Preferred Alternative (Alternative D-1) will significantly improve traffic operations on US 24 and throughout the study area. These potential for traffic impacts has been minimized by the inclusion of three design objectives:

- Crossroads in the study area that have river crossings over the Maumee River will remain open to traffic.
- Where local roadways are closed, neighboring roadways are left open as alternate routes to the maximum extent possible.
- Key state and township roadways connecting local communities and other activity centers are left open to through traffic to the maximum extent possible.

3.4.2 Air Quality

“Air Pollution” is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants degrade the atmosphere by reducing visibility, damaging property, reducing the productivity or vigor of crops or natural vegetation, and reducing human or animal health.

Eight air pollutants are regulated by the USEPA, carbon monoxide (CO), sulfur oxides (SO_x), hydrocarbons (HC), nitrogen oxides (NO_x), ozone (O₃), particulate matter sized 10 microns or less (PM₁₀), particulate matter with a size of 2.5 microns or less (PM_{2.5}), and lead (Pb).

The Clean Air Act Amendments (CAAA) of 1990 direct the USEPA to implement strong environmental policies and regulations that will ensure cleaner air quality. The legislation affects proposed transportation projects such as the US 24 project. According to Title I, Section 101, Paragraph F of the CAAA, “No federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program, or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this Act.” The Final Conformity Rule defines project conformity as follows:

Conformity to an implementation plan’s purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards (NAAQS) and achieving expeditious attainment of such standards; and that such activities will not: 1) cause or contribute to any new violation of any NAAQS in any area; 2) increase the frequency or severity of any existing violation of any NAAQS in any area; or 3) delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area.

As required by the Clean Air Act, NAAQS have been established for seven major air pollutants: Carbon Monoxide (CO), Ozone (O₃), Nitrogen Oxide (NO_x), Sulfur Dioxide (SO₂), Suspended Particulate Matter (PM₁₀), Suspended Fine Particulate Matter (PM_{2.5}), and Lead (Pb). Table 3.87 shows the standards for each pollutant. Primary standards have been established to protect the public health. Secondary standards are intended to protect the nation’s welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

Section 107 of the CAAA requires the USEPA to publish a list of all geographic areas in compliance with the NAAQS, as well as those not in attainment of the NAAQS. Areas not in compliance with the NAAQS are termed nonattainment areas. Areas that were redesignated from nonattainment to attainment are termed maintenance areas. Areas that have insufficient data to make a determination are unclassified, and are treated as being in attainment areas until proven otherwise. The designation of an area is made on a pollutant-by-pollutant basis.

Existing Conditions

The study area includes portions of Allen County, Indiana and Paulding and Defiance counties, Ohio. Allen County is part of the Northeastern Indiana Regional Coordinating Council (NIRCC),

the Metropolitan Planning Organization (MPO) for the Fort Wayne urbanized area. All three of these counties are located within Region 5 of the USEPA's jurisdiction. The agencies normally involved with air quality issues in the study area are the USEPA, OEPA, ODOT, INDOT, and IDEM.

**TABLE 3.87
NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Period	National and State Standards	
		Primary	Secondary
Ozone	1 Hour*	0.12 ppm (235 ug/m ³)	Same as Primary Standard
	8 Hour**	0.08 ppm (157 ug/m ³)	
Carbon Monoxide	8 Hour	9 ppm (10 mg/m ³)	-
	1 Hour	35 ppm (40 mg/m ³)	-
Nitrogen Dioxide	Annual Average	0.053 ppm (100 ug/m ³)	Same as Primary Standard
Sulfur Dioxide	Annual Average	80 ug/m ³ (0.03 ppm)	-
	24 Hour	365 ug/m ³ (0.14 ppm)	-
	3 Hour	-	1300 ug/m ³ (0.5 ppm)
Suspended Particulate Matter (PM ₁₀)	24 Hour	150 ug/m ³	Same as Primary Standard
	Annual Arithmetic Mean	50 ug/m ³	Same as Primary Standard
Suspended Fine Particulate Matter (PM _{2.5})**	24 Hour	65 ug/m ³	Same as Primary Standard
	Annual Arithmetic Mean	15 ug/m ³	Same as Primary Standard
Lead	Calendar Quarter	1.5 ug/m ³	Same as Primary Standard

Source: USEPA, National Primary and Secondary Ambient Air Quality Standards. (49 CFR 50).

Notes: * Applicable to current Non-Attainment Areas until such areas meet the standard for three consecutive years.

** New Standards effective September 16, 1997 (Final rules can be found in Federal Register July 18, 1997), set aside on May 14, 1999 by a panel of the US Court of Appeals. Standards are in place but not enforceable. USEPA plans to appeal this decision.

Abbreviations: ppm = parts per million; ug/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter.

According to data from the USEPA (Green Book and AIRSData websites), the counties included in the study area are in attainment for all criteria pollutants. Table 3.88 shows the available 1995 to 2001 air quality monitoring data for the study area (USEPA, May 2002). The data comes from air quality monitoring stations in Allen County. No air quality data was available from the USEPA for Paulding or Defiance counties. The table shows that air quality in Allen County did not exceed the NAAQS for the measured criteria pollutants during the years for which data is available. (Allen County exceeded the 8-hour ozone standard, however, implementation of this standard was blocked by a 1999 federal court ruling.)

Methodology

Pollutants that can be traced principally to motor vehicles and are therefore relevant to the evaluation of the highway project impacts, include CO, HC, NO_x, O₃ and PM₁₀. Transportation sources account for a very small percentage of regional emissions of SO₂ and Pb, thus a detailed analysis for those pollutants is not required. While USEPA has indicated that PM₁₀ is a pollutant of concern for mobile source projects, the USEPA has not adopted PM₁₀ project-level analysis guidance.

**TABLE 3.88
MONITORED AMBIENT AIR QUALITY LEVELS**

Carbon Monoxide (CO)							
Monitor	Year	Concentration (in parts per million)		Number of Days Standard Exceeded	Concentration (in parts per million)		Number of Days Standard Exceeded
		1 Hour			8 Hour		
		1st Max	2nd Max		1st Max	2nd Max	
Fort Wayne Monitor	1995	6.5	6.2	0	5.5	4.7	0
	1996	4.6	4.2	0	2.8	2.7	0
	1997	10.9	9.8	0	7.2	6.3	0
	1998	4.7	4.6	0	3.3	3.0	0
	1999	5.5	5.5	0	3.8	3.3	0
	2000	6.5	5.8	0	4.0	3.9	0
	2001	4.4	3.9	0	2.5	2.4	0
Air Quality Standard		35.0	35.0		9.0	9.0	

Ozone (O₃)						
Monitor	Year	Concentration (in parts per million)				Number of Days Standard Exceeded
		First	Second	Third	Fourth	
Monitor 02 Allen County	1995	0.116	0.112	0.108	0.106	0
	1996	0.097	0.094	0.094	0.093	0
	1997	0.098	0.094	0.093	0.092	0
	1998	0.110	0.105	0.101	0.100	0
	1999	0.102	0.101	0.099	0.098	0
	2000	0.105	0.099	0.098	0.094	0
	2001	0.100	0.098	0.096	0.092	0
Monitor 04 Allen County	1995	0.107	0.106	0.104	0.101	0
	1996	0.107	0.105	0.101	0.099	0
	1997	0.095	0.095	0.095	0.095	0
	1998	0.102	0.101	0.097	0.097	0
	1999	0.100	0.099	0.097	0.096	0
	2000	0.093	0.087	0.086	0.086	0
	2001	0.084	0.084	0.083	0.082	0
Air Quality Standard		0.120	0.120	0.120	0.120	

Lead (Pb)						
Monitor	Year	Quarterly Averages (in ug/m³)				Number of Days Standard Exceeded
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	
Monitor 09 Allen County	1995	0.03	0.02	0.00	0.00	0
Monitor 12 Fort Wayne	1995	0.04	0.02	0.03	0.01	0
	1996	0.01	0.01	0.02	0.01	0
	1997	0.02	0.01	0.03	0.02	0
Monitor 13 Fort Wayne	1996	0.01	0.01	0.01	0.01	0
	1997	0.01	0.03	0.00	0.00	0
Air Quality Standard		1.5	1.5	1.5	1.5	

**TABLE 3.88 (CONTINUED)
MONITORED AMBIENT AIR QUALITY LEVELS**

Monitor	Year	24 Hour Values (in ug/m ³)				Number of Days Standard Exceeded	Annual Mean
		1 st Max	2 nd Max	3 rd Max	4 th Max		
Monitor 04 Fort Wayne	1995	54	53	53	47	0	23.9
	1996	49	34	33	29	0	17.2
	1997	50	46	37	31	0	19.6
	1998	58	48	43	39	0	22.3
	1999	41	39	37	32	0	17.1
	2000	51	43	36	36	0	20.2
	2001	55	51	43	42	0	19.2
Monitor 09 Allen County	1995	55	51	43	42	0	24.6
Monitor 12 Fort Wayne	1995	65	64	60	58	0	28.3
	1996	74	70	52	50	0	23.9
	1997	49	45	40	35	0	22.2
Monitor 13 Fort Wayne	1996	27	18	15	14	0	14.4
Air Quality Standard	150	150	150	150		50	

Source: USEPA Office of Air Quality Planning and Standards (AIRSData), May 2002.

Notes: No air quality monitoring data available from the USEPA for Nitrogen Dioxide and Sulfur Dioxide for Allen County, Indiana.

No air quality monitoring data available from the USEPA for Paulding and Defiance Counties, Ohio.

CO impacts are localized. Even under the worst meteorological conditions and most congested traffic conditions, high concentrations are limited to within a relatively short distance (91.5 to 182.9 meters [300 to 600 feet]) of heavily traveled roadways. Consequently, it is appropriate to predict concentrations of CO on both a regional and localized or project-level basis.

HC and NO_x emissions from automotive sources are of concern due to their role as precursors in the formation of ozone and particulate matter. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Since the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of HC and NO_x emissions are therefore generally examined on a regional or "mesoscale" basis. PM₁₀ is also examined on a regional basis, although, as previously discussed, a localized or project level analysis may be required in the near future.

Regional (Mesoscale) Impacts

The regional or mesoscale analysis of a project determines the project's overall impact on regional air quality levels. The study area includes portions of two regions: the NIRCC Region, which includes Allen County, and the ODOT District 1 Region including Paulding and Defiance counties. Typically, an air quality conformity analysis is conducted for all projects included in a region's Transportation Improvement Program (TIP). The analysis would be conducted by the NIRCC and ODOT for their respective areas of responsibility. The analysis determines if the current emission levels combined with projected emissions resulting from new transportation projects will exceed the NAAQS. If a project is included in an approved TIP, then either it has been tested and determined not to have a significant negative impact on air quality or it is exempt from the federal conformity procedures.

Localized (Microscale) Impacts

Consistent with FHWA, USEPA, OEPA, IDEM, ODOT, and INDOT policies, the potential adverse impacts of the proposed alternatives due to increased and diverted vehicular activity in the study

area were investigated. A traffic volume threshold analysis was conducted to determine if a detailed microscale analysis was warranted. In accordance with an agreement between OEPA and ODOT, a quantitative CO analysis is required for 1) projects on new right-of-way that cause an increase in ADT of more than 20,000 vehicles within 10 years of construction and; 2) modifications to existing highways that cause an increase ADT volumes of more than 10,000 vehicles within 10 years of construction. Projects with AADT volumes that do not meet these thresholds do not require a detailed CO analysis.

Localized areas of concern, such as intersections, are referred to as “hot spots”. As stated in the USEPA Conformity Guidelines, the need for a hot spot analysis is determined as follows: 1) A hot spot analysis may be necessary if the project worsens an intersection level of service from LOS C or D, and 2) A hot spot analysis may be necessary if the intersection level of service is D or worse and the project substantially increases the intersection delay.

Project Impacts

Mesoscale Analysis

The US 24 project is included in the Ohio FY 2000 – 2003 State Transportation Improvement Program (STIP) and the NIRCC Long Range Plan in Indiana (approved in August 2000). On August 27, 1999, the Ohio STIP was found to conform by the Federal Transit Administration and FHWA in accordance with the USEPA final rule for determining conformity of transportation plans, programs and projects with the Clean Air Act implementation plans under the 1990 CAAA. There have been no significant changes in the project’s design concept or scope from that used in the STIP conformity analysis.

The project is in a region where the Indiana Statewide Implementation Plan (SIP) does not contain any transportation control measures and the conformity procedures of 23 CFR 770 do not apply.

Therefore, the project conforms to the existing SIPs and does not contradict any specific requirements or commitments of those plans.

Microscale Analysis

Traffic projections for the US 24 Corridor indicate that traffic volumes will increase from a maximum of approximately 13,300 vehicles per day in 2008 to a maximum of approximately 16,800 vehicles per day in 2018 as shown in Table 3.89. The volumes vary depending on the location within the corridor.

For Alternatives A through X, it is estimated that the maximum traffic volume in 2018 will be 13,700 vehicles on the new facility, with approximately 3,100 vehicles remaining on the existing US 24 alignment. This projected traffic volume is below the 20,000 vehicle per day threshold for conducting a detailed air quality analysis for highways on new alignments.

For Alternatives Y and Z, the maximum volume in 2018 is 16,800 vehicles per day, the same as for the No Build Alternative. This is an increase of 3,500 vehicles per day over the existing traffic volume. This volume is below the threshold of 10,000 vehicles per day that would require a completion of a detailed air quality analysis for modifications to existing highways.

A traffic analysis was conducted to determine the operating level of service for each of the 26 Feasible Alternatives. As shown in Table 3.89, Alternatives A through X and Alternative Z will operate at LOS A. These alternatives will experience very little queuing or congestion.

Queuing and congestion at intersections are the major contributors to high CO levels. Given the good levels of service for these alternatives, CO concentrations are not expected to approach the state and federal ambient air quality standards. Under the “hot spot” screening criteria used by the USEPA, the project would be exempted from a “hot spot analysis”.

Alternative Y would operate at the same level of service as the No Build Alternative, and therefore would experience the same level of delay, queuing and congestion as the No Build Alternative.

**TABLE 3.89
TRAFFIC PARAMETERS CONSIDERED FOR AIR QUALITY ANALYSIS**

Alternative	Estimated Maximum 2008 AADT (Opening Day)	Estimated Maximum 2018 AADT (10 Year Horizon)	Change	2008 LOS (Opening Day)	2018 LOS (10 Year Horizon)
No Build	13,300	16,800	3,500	D/E	E/F
A	10,700	13,700	3,000	A	A
B	10,700	12,600	1,900	A	A
C	10,700	13,700	3,000	A	A
D	10,700	13,700	3,000	A	A
D-1	10,700	13,700	3,000	A	A
E	10,700	13,700	3,000	A	A
F	10,700	13,700	3,000	A	A
G	10,700	13,700	3,000	A	A
H	10,700	13,700	3,000	A	A
I	10,700	13,700	3,000	A	A
J	10,700	13,700	3,000	A	A
K	10,700	13,700	3,000	A	A
L	10,700	13,700	3,000	A	A
M	10,700	13,700	3,000	A	A
N	10,700	13,700	3,000	A	A
O	10,700	13,700	3,000	A	A
P	10,700	13,700	3,000	A	A
Q	10,700	13,700	3,000	A	A
R	10,700	13,700	3,000	A	A
S	10,700	13,700	3,000	A	A
T	10,700	13,700	3,000	A	A
U	10,700	13,700	3,000	A	A
V	10,700	13,700	3,000	A	A
W	10,700	13,700	3,000	A	A
X	10,700	13,700	3,000	A	A
Y	13,300	16,800	3,500	D/E	E/F
Z	13,300	16,800	3,500	A	A

Preferred Alternative Impacts

In summary, this type of highway proposal has been evaluated and found to have no significant effect upon air quality. Based on a current agreement between the ODOT and OEPA, a detailed CO analysis is not considered necessary for this project.

In addition, none of the Feasible Alternatives are expected to significantly increase the vehicular delay or result in a substantially decreased level of service. Therefore, the project does not require a detailed CO analysis according to the USEPA guidelines.

The proposed project is included in the Ohio FY 2000-2003 STIP and the NIRCC Long Range Plan. The Ohio STIP conforms with the USEPA final rule for conformity determinations. Within the State of Indiana, the project is in a region that does not contain any transportation control measures and the conformity procedures of 23 CFR 770 do not apply.

Traffic projections for the US 24 Corridor indicate that traffic volumes will increase from a maximum of 13,800 vehicles per day in 2008 to a maximum of 16,800 vehicles per day in 2018. This projected traffic volume is below the 20,000 vehicles per day threshold for conducting detailed air quality analyses.

The Preferred Alternative (Alternative D-1) is similar to Alternative D with respect to its horizontal and vertical alignments with the following exceptions:

- In Allen County, the Preferred Alternative will be constructed as a freeway with interchanges constructed at Ryan/Bruick Road, Webster Road, and SR 101.
- Crossings at Doyle, Sampson, Woodburn, Bull Rapids and State Line roads in Allen County; C-11, T-43 , and C-105 in Paulding County; and Krouse and Switzer roads in Defiance County will be constructed as grade-separated crossings.
- In Paulding County, the SR 49 and US 127 crossings will be constructed as interchanges.
- Horizontal alignment is shifted between US 127 and C-224 in Paulding County.
- Horizontal alignment is shifted between Krouse Road and SR 424 in Defiance County.

Capacity analyses were conducted for each at-grade intersection proposed for the Preferred Alternative (Alternative D-1) to determine the effect of the Preferred Alternative on crossroad traffic movements. Crossings with overpasses or underpasses were not included since the traffic movements would not be subject to intersection delays. Also, interchanges were not analyzed since the ramps will be constructed to allow for the continuous flow of traffic onto and off of the expressway with little time delay.

The results of the intersection capacity analyses indicate that four intersections will operate at a LOS D in the design year (2028). These are the Maumee Center Road/Bull Rapids Road and T-51/C-176 intersections and the crossings of Alternative D-1 at C-176 and C-115. The levels of service reported for each intersection reflect the operations of traffic crossing US 24 on the local roadway since traffic traveling US 24 will flow unimpeded through the intersections. Traffic flow through the intersections can be improved through signalization or construction of interchanges to allow for free flow of traffic.

Mitigation

No mitigation is required as the project conforms with the requirements of the CAAA and will not cause significant air quality impacts at either the local or regional level.

3.4.3 Noise

The noise analysis documents the existing and anticipated noise levels, determines possible noise impacts, and discusses the feasibility of noise mitigation measures associated with the proposed alternatives. The analysis includes design year forecasts of traffic-generated noise for the No Build Alternative and the Feasible Alternatives, as well as a discussion of noise abatement measures. The analysis is presented in a separate technical report entitled *US 24 New Haven to Defiance Noise Analysis* (August 2000).

Existing Conditions

Thirty-seven representative receiver locations were selected along US 24 and within the Feasible Corridors for measurement of existing sound levels. The receiver locations were chosen to be representative of conditions and neighborhoods throughout the study area. The locations focused on noise sensitive receivers, which for this project consisted of over 500 one-story and two-story, single-family and multi-family residences, 17 businesses, four churches, three cemeteries, one school, and one park. Receiver locations are shown on Figure 3.18; Table 3.90 shows the general location, and land use activity.

The primary existing noise source in the vicinity of the receivers along existing US 24 is vehicular traffic. Traffic noise is not necessarily the primary existing noise source at sites not located in close proximity to existing US 24.

Receivers 1 through 11, 16, and C1 currently exceed the FHWA Noise Abatement Criteria (NAC) level, which is 67 dBA. The NAC level is the threshold at which noise sensitive receivers are considered to be impacted and the analysis of mitigation measures is warranted. Receiver S1 approaches FHWA's NAC as defined by INDOT and ODOT (66 dBA is used by ODOT and INDOT as the approach criteria for Category B receptors). All of these receivers are located on existing US 24, except Receivers 16 and C-1. Receiver 16 represents three residential receptors located near SR 49 in Paulding County; C-1 represents one residential property located south of US 24 on Ryan Road in Allen County (Figure 3.17). The close proximity to existing US 24 influences the noise levels at these sites. Existing noise levels are lower for receivers not located in close proximity to the existing US 24 Corridor.

**TABLE 3.90
RECEIVER NUMBER, GENERAL LOCATION, AND LAND USE ACTIVITY**

Receiver Number	Location	Number of Associated Receivers Represented	Land Use Activity
1	US 24 & Doyle Rd., Allen County	10 Residences	Residential
2	US 24 & Bremer Rd., Allen County	16 Residences	Residential
3	US 24 Havenwood Estates, Allen County	34 Residences	Residential
4	US 24 & EV Mennonite Cemetery, Allen County	66 Residences 1 Cemetery	Residential Cemetery
5	US 24 & Kingdom Hall of Jehovah's Witnesses, Paulding County	10 Residences 1 Church	Residential Church
6	US 24 & Mt. Calvary Lutheran Church, Paulding County	12 Residences 1 Church	Residential Church
7	US 24 & Antwerp Elementary School, Paulding County	50 Residences 14 Commercial	Residential School
8	US 24 & Riverside Park, Paulding County	8 Residences 1 Cemetery	Residential Park
9	US 24 & First Baptist Church, Paulding County	9 Residences 3 Commercial	Residential Church
10	US 24 & Immaculate Conception Cemetery, Paulding County	113 Residences 1 Cemetery	Residential Cemetery
11	US 24 & Brentwood Mobile Home Court, Paulding County	65 Residences	Residential
16	SR 49, North of T-162, Paulding County	3 Residences	Residential
17	US 127 & C-216, Paulding County	5 Residences	Residential
18	Bohlman Trailer Park, Defiance County	14 Residences	Residential
35	US 24 east of I-469, Allen County	2 Residences	Residential
36	Maumee Center Rd. east of Sampson Rd., Allen County	1 Residence	Residential
37	Etters Rd. at Collins Rd., Paulding County	1 Residence	Residential
38	Wabash Rd. west of Gosner Rd., Paulding County	2 Residences	Residential
39	C-105 north of Hargrave Rd., Paulding County	1 Residence	Residential
40	US 127 south of US 24, Paulding County	2 Residences	Residential
41	T-51 south of Etters Rd., Paulding County	1 Residence	Residential
42	Wabash Rd. east of Knox Rd., Paulding County	4 Residences	Residential
43	C-105 north of Woodring Rd., Paulding County	1 Residence	Residential
44	US 127 south of Vogel Rd., Paulding County	2 Residences	Residential
45	US 24 west of SR 424, Defiance County	8 Residences	Residential
46	Rousey Rd. at Bremer Rd., Allen County	1 Residence	Residential
47	North of Slusher Rd. east of Rousey Rd., Allen County	1 Residence	Residential
48	Weippert Rd. east of US 127, Paulding County	1 Residence	Residential
49	Weippert Rd. east of US 127, Paulding County	1 Residence	Residential
50	Collins Rd. at SR 111, Paulding County	5 Residences	Residential
C1	Harper Rd. & Ryan Rd., Allen County	1 Residence	Residential

TABLE 3.90 (CONTINUED)
RECEIVER NUMBER, GENERAL LOCATION, AND LAND USE ACTIVITY

Receiver Number	Location	Number of Associated Receivers Represented	Land Use Activity
C2	Berthaud Rd. south of Bremer Rd., Allen County	4 Residences	Residential
EG1	Webster Rd. north of Slusher Rd., Allen County	2 Residences	Residential
F2	Woodlan High School, Allen County	1 School	School
G1	Slusher Rd. east of Webster Rd., Allen County	2 Residences	Residential
H1	Gar Creek Rd. west of Webster Rd., Allen County	16 Residences	Residential
J1	Woodburn Rd. west of SR 101, Allen County	7 Residences	Residential
K1	C-176 east of Gonser Rd., Paulding County	4 Residences	Residential
K2	SR 49 south of Gasser Rd., Paulding County	2 Residences	Residential
K3	Slusher Rd. east of Gustin Rd., Paulding County	1 Residence	Residential
L1	C-176 east of T-43, Paulding County	1 Residence	Residential
L2	SR 49 north of T-162, Paulding County	1 Residence	Residential
L3	T-150 west of Ewing Rd., Paulding County	2 Residences	Residential
L4	Maumee Center Rd. west of SR 101, Allen County	3 Residences	Residential
NO1	C-115 at C-232, Paulding County	5 Residences	Residential
NO2	Church of God, C-105 south of C-216, Paulding County	5 Residences 1 Church	Residential Church
NO3	Wunder Rd. north of Wabash Rd., Paulding County	1 Residence	Residential
R1	Auglaize Village, C-146 north of Kiser Rd., Defiance County	5 Residences	Residential
S1	State Service Rd. next to US 24 north of SR 424, Defiance County	6 Residences	Residential
V1	Rousey Rd. south of Woodburn Rd., Allen County	15 Residences	Residential
W1	Ashwood Rd. north of Powers Rd., Defiance County	2 Residences	Residential
W2	C-139 at T-236, Paulding County	3 Residences	Residential

Methodology

The noise analysis methods used to assess the potential impacts of the project were conducted in accordance with 23 CFR Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The analysis also complies with the policies and procedures found in *Highway Traffic Noise Analysis and Abatement, Policy and Guidance* (FHWA, 1995), *Analysis and Abatement of Highway Traffic Noise* (ODOT, 1997), *Standard Procedure for Analysis and Abatement of Highway Traffic Noise* (ODOT, 2001) and *Policy for the Consideration of Highway Traffic Noise on Federal-Aid Highway Projects* (INDOT, 1997).

Field Measurements

To establish current ambient noise levels in the study area, sound level measurements were taken at the 34 representative receiver locations between January 12 and 14, 2000 and at three locations in May 2003. The 34 monitoring locations are shown on Figure 3.17. Noise levels were collected with the use of a Larson Davis Model No. 812 Precision Integrating Sound Level Meter/Dosimeter. For an additional 14 receiver sites included in the analysis (i.e., receiver locations 36 through 44, and 46 through 50), an average existing noise level of 52.8 dBA was calculated based on measurements taken at similar receiver locations in the study area. For

receiver locations 35 and 45, the reported existing noise levels are those generated by the traffic noise model.

Traffic Noise Forecasts

Noise levels were calculated for the existing (1999) conditions as well as the future design year (2028) conditions using the FHWA's Traffic Noise Model (TNM) Version 1.0b. The Traffic Noise Model estimates vehicle noise emissions and resulting noise levels based upon reference energy mean emission levels for cars (including light trucks), two-axle trucks, and three- to five-axle trucks. The reported noise levels represent the design hour Leq(h).

As shown on Figure 3.17, 51 receivers were modeled, which included residences, businesses, churches, cemeteries, and a school. The total number of receivers affected by each alternative is dependent on the location of the alternative relative to the location of the receiver and the length of the specific roadway segment.

Traffic data used for the Traffic Noise Model are based on daily and peak hour traffic counts and vehicle classification data collected for US 24 in December 1999 and on local crossroads in August 2000. Figure 3.16 provides a graphical representation of the roadway segments listed in these tables. Vehicle speeds for the existing US 24 noise analysis were based upon the posted speed limits as they existed in January 2000. The vehicle speed used for the noise analysis for Alternatives A through X, and Z was 104.8 kilometers per hour (65 miles per hour), the posted speed limit for a four-lane expressway. The vehicle speeds used for the Alternative Y noise analysis were based upon the posted speed limits on US 24 as designated in January 2000. Vehicles were assumed to be traveling at the posted speed limit. No approach roads or local roads were modeled, due to the unavailability of traffic forecasts for these roads at the time the noise analysis was completed.

Traffic Noise Forecasts - Preferred Alternative

The alignments for Alternative D and the Preferred Alternative (Alternative D-1) are generally the same with the exception of minor alignment shifts in Paulding and Defiance counties and interchanges located at Ryan/Bruick Road, Webster Road, SR 101, SR 49, and US 127. With Alternative D-1, interchanges are proposed at SR 49 and US 127 whereas at-grade intersections are provided with Alternative D. Two additional receiver sites (16 and 17) were monitored and modeled to determine the noise impacts of the Preferred Alternative. Between Krouse Road and SR 424 in Defiance County, the two alternatives follow different alignments. In this area, the alignment of Alternative D-1 is shifted less than approximately 106.7 meters (350 feet) from the Alternative D alignment. Noise levels were calculated for receivers located in close proximity to the alignment changes. These receivers are R1, W1, and 45. With Alternative D-1, the ramps for the SR 424 interchange have been shifted to the west. Receiver 18 was monitored and modeled to determine impacts on the Bohlman Trailer Park, a target Environmental Justice community.

Traffic Noise Impact Analysis

ODOT and INDOT have adopted the FHWA NAC as presented in 23 CFR Part 772. Table 3.91 summarizes the NAC for various land uses. The acceptable NAC for residential areas is 67 dBA Leq measured over a period of one hour.

Mitigation Analysis

The Bohlman Trailer Park, located along SR 424 in Defiance County, is being evaluated for Environmental Justice impacts. Alternative D-1 has been redesigned to avoid the displacement of residences located within the trailer park. Shifting the access ramps for the SR 424 interchange to the west to avoid the displacement of residential units associated with the Bohlman Trailer Park results in the traffic-generated noise levels which exceed the FHWA NAC for residential land uses (Activity Category B). In accordance with ODOT's noise policies, the feasibility of noise abatement has been considered for the Bohlman Trailer Park.

Because of the limited amount of land available between US 24 and the trailer park, as well as existing development patterns for the surrounding land uses, several strategies for noise abatement are not feasible such as changes in vertical and horizontal geometry. Also, under

current state regulations, ODOT cannot restrict traffic on US 24, limiting the feasibility of traffic management strategies. There is, however, sufficient area to accommodate noise walls. The feasibility of providing noise walls to mitigate noise impacts at the Bohlman Trailer Park was evaluated through the use of FHWA's Traffic Noise Model 1.0b (TNM). In this analysis, the Leq(h) peak hour traffic volumes were used to predict representative noise levels for the trailer park for three scenarios: existing (2000) conditions, future design year (2028) conditions for the Preferred Alternative, and future design year (2028) conditions with a noise barrier in place for the Preferred Alternative. A unit cost of \$17.50 per square foot was used to estimate costs of the noise barrier.

**TABLE 3.91
NOISE ABATEMENT CRITERIA
HOURLY A-WEIGHTED SOUND LEVEL IN DECIBELS (DBA)**

Activity Category	Leq(h)	L10(h)	Description of Activity Category
A	57 (EXTERIOR)	60 (EXTERIOR)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (EXTERIOR)	70 (EXTERIOR)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, hotels, motels, schools, churches, libraries, and hospitals.
C	72 (EXTERIOR)	70 (EXTERIOR)	Developed lands, properties, or activities not included in Categories A and B.
D	-	-	Undeveloped lands.
E	52 (INTERIOR)	55 (INTERIOR)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: FHWA, *Highway Traffic Noise Analysis and Abatement, Policy and Guidance*, June 1995.

Project Impacts

As defined in 23 CFR 772, traffic noise impacts occur “when the predicted traffic noise levels approach or exceed the noise abatement criteria, or when the predicted traffic noise levels substantially exceed the existing noise levels.” This is interpreted by INDOT and ODOT to mean noise levels within one dBA of the NAC (i.e. 66 dBA for exterior residential receivers), or noise levels that increase by 10 dBA (ODOT) and 15 dBA (INDOT) over existing noise levels.

Table 3.92 provides a summary of the existing and anticipated noise levels associated with the No Build and Feasible Alternatives. Table 3.93 provides the results on the noise impact analysis for each receiver for the No Build Alternative and the 26 Feasible Alternatives.

Table 3.94 provides a summary of impacts of the Feasible Alternatives. The No Build Alternative would result in the greatest number of noise impacts, impacting 432 sensitive receivers. Of the Feasible Alternatives, Y and Z have the greatest impacts on noise sensitive receivers. The number of impacted receptors is substantially higher for these two alternatives, as compared to Alternatives A through X, because most of the noise sensitive receptors are located in close proximity to existing US 24. Noise impacts for Alternative Z, however, are lower than Alternative Y because Alternative Z requires the acquisition of noise sensitive receptors for widening existing US 24. There is variation in the total number of noise impacts associated with the Feasible Alternatives that would relocate US 24 onto a new alignment. Alternative D would result in the greatest impact, affecting 111 noise sensitive receptors, while Alternatives S and W would affect 27 noise sensitive receivers.

Preferred Alternative Impacts

Alternative D-1 impacts 127 noise sensitive receptors including 126 residences and one church. The impacts are higher than those reported for Alternative D, which displaces mobile homes at the Bohlman Trailer Park.

**TABLE 3.92
EXISTING AND ANTICIPATED NOISE LEVELS**

Receiver	Alternative	Existing (2000) Noise Level (dBA)	Future (2028) Noise Level (dBA)	Noise Level Change (dBA)	Affected Receivers
1	A-D, I-P	75.3	70.1	-5.2	10 Residences
	E-H, Q-X	75.3	65.9	-9.4	10 Residences
	No Build, Y	75.3	76.3	1	10 Residences
	Z	75.3	72.4	-2.9	10 Residences
2	A-D, I-P	74.6	70.8	-3.8	16 Residences
	E-H, Q-X	74.6	63.1	-11.5	16 Residences
	No Build, Y	74.6	75.7	1.1	16 Residences
	Z	74.6	72.4	-2.2	16 Residences
3	A-D, I-P	73.6	70.2	-3.4	34 Residences
	E-H, Q-X	73.6	62.2	-11.4	34 Residences
	No Build, Y	73.6	75.6	2	34 Residences
	Z	73.6	72.4	-1.2	34 Residences
4	A-X	72.6	61.6	-11	66 Residences 1 Cemetery
	No Build, Y	72.6	75.2	2.6	66 Residences 1 Cemetery
	Z	72.6	69.2	-3.4	66 Residences 1 Cemetery
5	A-X, Z	74.8	64.7	-10.1	10 Residences 1 Church
	No Build, Y	74.8	77.7	2.9	10 Residences 1 Church
6	A-X, Z	72.5	64.3	-8.2	12 Residences 1 Church
	No Build, Y	72.5	77.5	5	12 Residences 1 Church
7	A-X, Z	65.8	57.1	-8.7	50 Residences 14 Commercial
	No Build, Y	65.8	73.7	7.9	50 Residences 14 Commercial
8	A-X, Z	71.2	60.6	-10.6	8 Residences 1 Cemetery
	No Build, Y	71.2	74.6	3.4	8 Residences 1 Cemetery
9	A-X, Z	73.5	65.4	-8.1	9 Residences 3 Commercial
	No Build, Y	73.5	78.3	4.8	9 Residences 3 Commercial
10	A-X	73.7	65.3	-8.4	113 Residences 1 Cemetery
	No Build, Y	73.7	78.9	5.2	113 Residences 1 Cemetery
	Z	73.7	63.9	-9.8	113 Residences 1 Cemetery
11	A-X	75.4	61.7	-13.7	65 Residences
	Z	75.4	72.8	-2.6	65 Residences
	No Build, Y	75.4	75.1	-0.3	65 Residences

**TABLE 3.92 (CONTINUED)
EXISTING AND ANTICIPATED NOISE LEVELS**

Receiver	Alternative	Existing (2000) Noise Level (dBA)	Future (2028) Noise Level (dBA)	Noise Level Change (dBA)	Affected Receivers
16	D-1	71.0	73.7	2.7	3 Residences
17	D-1	58.5	65.3	6.8	5 Residences
18	D-1	59.2	69.2	10.0	19 Residences
	No Build	59.2	60.9	1.7	19 Residences
35	A-D, D-1, I-P	63.5	68.7	5.2	2 Residences
	E-H, Q-X	63.5	69	5.5	2 Residences
	No Build, Y	63.5	66.6	3.1	2 Residences
	Z	63.5	69.4	5.9	2 Residences
36	A-H	52.8	70.3	17.5	1 Residence
37	A-H	52.8	71.3	18.5	1 Residence
	Z	52.8	69.3	16.5	1 Residence
38	A-H	52.8	64.1	11.3	2 Residences
	Z	52.8	62.6	9.8	2 Residences
39	A-H, M-P, U-X	52.8	62.2	9.4	1 Residence
	I-L, Q-T	52.8	56.3	3.5	1 Residence
40	A-H, M-P, U-X	52.8	65.5	12.7	2 Residences
	I-L, Q-T	52.8	61.3	8.5	2 Residences
41	I-X	52.8	60.9	8.1	1 Residence
42	A-H	52.8	53.1	0.3	4 Residences
	I-L, Q-T	52.8	66.9	14.1	4 Residences
	M-P, U-X	52.8	62.1	9.3	4 Residences
43	I-L, Q-T	52.8	61.8	9	1 Residence
44	I-L, Q-T	52.8	64.1	11.3	2 Residences
45	A, C, E, G, I, K, M, O, Q, S, U, W	64.1	65.8	1.7	8 Residences
	B, D, F, H, J, L, N, P, R, T, V, X	64.1	65.1	1	8 Residences
	D-1	64.1	65.1	1	20 Residences
	No Build, Y	64.1	66.9	2.8	8 Residences
	Z	64.1	68.8	4.7	8 Residences
46	E-H	52.8	62.5	9.7	1 Residence
	Q-X	52.8	58.4	5.6	1 Residence
47	E-H	52.8	62.4	9.6	1 Residence
	I-P	52.8	61.5	8.7	1 Residence
	Q-X	52.8	63.7	10.9	1 Residence
48	A, B, E, F, M, N, U, V	52.8	70.0	17.2	1 Residence
	C, D, G, H, O, P, W, X	52.8	70.8	18.0	1 Residence
	I, J, Q, R	52.8	65.6	12.8	1 Residence
	K, L, S, T	52.8	64.2	11.4	1 Residence

**TABLE 3.92 (CONTINUED)
EXISTING AND ANTICIPATED NOISE LEVELS**

Receiver	Alternative	Existing (2000) Noise Level (dBA)	Future (2028) Noise Level (dBA)	Noise Level Change (dBA)	Affected Receivers
49	A, B, E, F, M, N, U, V	52.8	65.4	12.6	1 Residence
	C, D, G, H, O, P, W, X	52.8	60.4	7.6	1 Residence
	I, J, Q, R	52.8	66.3	13.5	1 Residence
	K, L, S, T	52.8	61.6	8.8	1 Residence
50	I-X	52.8	66.1	13.3	5 Residences
C1	E-H, Q-X	67.5	59.3	-8.2	1 Residence
C2	E-H, Q-X	53.1	58.2	5.1	4 Residences
EG1	A-D	56.6	67.7	11.1	2 Residences
	I-P	56.6	58.6	2.0	2 Residences
F2	A-D	58.5	52.7	-5.8	School
	Z	58.5	60.1	1.6	School
G1	A-D, D-1	47.5	55.1	7.6	2 Residences
	I-P	47.5	59.3	11.8	2 Residences
H1	E-H, Q-X	50.5	62.8	12.3	16 Residences
J1	I-X	62.5	50.3	-12.2	7 Residences
K1	I-X	58.4	61.9	3.5	4 Residences
K2	I-X	64.8	55.7	-9.1	2 Residences
K3	I-X	52.4	51.8	-0.6	1 Residence
L1	A-H	56.9	63.2	6.3	1 Residence
	Z	56.9	61.8	4.9	1 Residence
L2	A-H	61.8	63.9	2.1	1 Residence
	Z	61.8	62.3	0.5	1 Residence
L3	A-H	45.8	63.5	17.7	2 Residences
L4	A-H	46.2	58.6	12.4	3 Residences
N01	A, B, E, F, I, J, M, N, Q, R, U, V	55.4	52.3	-3.1	5 Residences
	C, D, D-1, G, H, K, L, O, P, S, T, W, X	55.4	52.4	-3.0	5 Residences
N02	A-H, M-P, U-X	46.8	59.6	12.8	5 Residences 1 Church
N03	A-H, M-P, U-X	55.0	56.0	1.0	1 Residence
R1	B, F, J, N, R, V	54.5	72.1	17.6	5 Residences
	D-1	54.5	50.2	-4.3	5 Residences
S1	A-X	66.4	72.1	5.7	6 Residences
	No Build, Y	66.4	70.5	4.1	6 Residences
	Z	66.4	71.3	4.9	6 Residences
V1	A-D	44.8	67.9	23.1	15 Residences

**TABLE 3.92 (CONTINUED)
EXISTING AND ANTICIPATED NOISE LEVELS**

Receiver	Alternative	Existing (2000) Noise Level (dBA)	Future (2028) Noise Level (dBA)	Noise Level Change (dBA)	Affected Receivers
W1	A, E, I, M, Q, U	51.6	71.2	19.6	2 Residences
	B, F, J, N, R, V	51.6	58.6	7.0	2 Residences
	C, G, K, O, S, W	51.6	66.7	15.1	2 Residences
	D, D-1, H, L, P, T, X	51.6	67.3	15.7	2 Residences
W2	A, B, E, F, I, J, M, N, Q, R, U, V	52.8	68.4	15.6	3 Residences
	C, D, D-1, G, H, K, L, O, P, S, T, W, X	52.8	66.2	13.4	3 Residences

**TABLE 3.93
SUMMARY OF NOISE IMPACTS BY RECEPTOR LOCATION**

Receiver	Alternatives with Noise Impacts	Noise Levels Approach/Exceed FHWA NAC	Noise Levels Meet Impact for Substantial Increase Criteria
1	No Build, A, B, C, D, D-1, I, J, K, L, M, N, O, P, Y, Z	Yes	No
2	No Build, A, B, C, D, D-1, I, J, K, L, M, N, O, P, Y, Z	Yes	No
3	No Build, A, B, C, D, D-1, I, J, K, L, M, N, O, P, Y, Z	Yes	No
4	No Build, Y, Z	Yes	No
5	No Build, Y	Yes	No
6	No Build, Y	Yes	No
7	No Build, Y	Yes	No
8	No Build, Y	Yes	No
9	No Build, Y	Yes	No
10	No Build, Y,	Yes	No
11	No Build, Y, Z	Yes	No
16	D-1	Yes	No
17	None	--	--
18	D-1	Yes	Yes
35	No Build, A, B, C, D, D-1, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	Yes	No
36	A, B, C, D, D-1, E, F, G, H	Yes	Yes
37	A, B, C, D, D-1, E, F, G, H, Z	Yes	Yes
38	A, B, C, D, D-1, E, F, G, H	No	Yes
39	None	--	--
40	A, B, C, D, D-1, E, F, G, H, M, N, O, P, U, V, W, X	No	Yes
41	None	--	--
42	I, J, K, L, Q, R, S, T	Yes	Yes
43	None	--	--
44	I, J, K, L, Q, R, S, T	No	Yes
45	No Build, Y, Z	Yes	No
	D-1	--	--
46	None	--	--
47	None	--	--
48	A, B, C, D, D-1, E, F, G, H, M, N, O, P, U, V, W, X	Yes	Yes
	I, J, K, L, Q, R, S, T	No	Yes
49	A, B, E, F, M, N, U, V	No	Yes
	I, J, Q, R	Yes	Yes
50	I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X	Yes	Yes
C1	No Build, Y, Z	Yes	No
C2	None	--	--
EG1	A, B, C, D, D-1	Yes	No

**TABLE 3.93 (CONTINUED)
SUMMARY OF NOISE IMPACTS BY RECEPTOR LOCATION**

Receiver	Alternatives with Noise Impacts	Noise Levels Approach/Exceed FHWA NAC	Noise Levels Meet Impact for Substantial Increase Criteria
F2	None	--	--
G1	None	--	--
H1	None	--	--
J1	None	--	--
K1	None	--	--
K2	None	--	--
K3	None	--	--
L1	None	--	--
L2	None	--	--
L3	A, B, C, D, D-1, E, F, G, H	No	Yes
L4	None	--	--
N01	None	--	--
N02	A, B, C, D, D-1, E, F, G, H, M, N, O, P, U, V, W, X	No	Yes
N03	I, J, K, L, Q, R, S, T	Yes	Yes
R1	D, F, H, J, L, N, P, R, T, V, X	Yes	Yes
S1	No Build, A, B, C, D, D-1, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	Yes	No
V1	A, B, C, D, D-1	Yes	Yes
W1	A, C, D, E, G, H, I, K, L, M, O, P, Q, S, T, U, W, X	Yes	Yes
	D-1	--	Yes
W2	A, B, C, D, D-1, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X	Yes	Yes

**TABLE 3.94
TOTAL NUMBER OF NOISE IMPACTED RECEIVERS BY ALTERNATIVE**

Alternative	Total	Residential	Commercial	Church	School	Cemetery
A	107	106	0	1	0	0
B	110	109	0	1	0	0
C	106	105	0	1	0	0
D	111	110	0	1	0	0
D-1	127	126	0	1	0	0
E	30	29	0	1	0	0
F	33	32	0	1	0	0
G	29	28	0	1	0	0
H	34	33	0	1	0	0
I	88	88	0	0	0	0
J	91	91	0	0	0	0
K	87	87	0	0	0	0
L	92	92	0	0	0	0
M	89	88	0	1	0	0
N	92	91	0	1	0	0
O	88	87	0	1	0	0
P	93	92	0	1	0	0
Q	28	28	0	0	0	0
R	31	31	0	0	0	0
S	27	27	0	0	0	0
T	32	32	0	0	0	0
U	29	28	0	1	0	0
V	32	31	0	1	0	0
W	28	27	0	1	0	0
X	33	32	0	1	0	0
Y	432	410	17	2	0	3
Z	324	322	0	0	0	2
No Build	432	410	17	2	0	3

Mitigation

Various methods exist for noise abatement, including but not limited to:

- Traffic management.
- Alteration of the horizontal and vertical alignments.
- Noise barriers.
- Sound insulation.

Traffic management practices are sometimes used to mitigate noise impacts on surrounding properties. These practices include, but are not limited to, restrictions on heavy and medium trucks, and restrictions on all motor vehicles during certain daily time periods.

Existing US 24 is a part of the National Highway System and is a major route from Michigan to Colorado and provides connections to other major transportation corridors. Traffic management practices that would restrict certain vehicle types or hours of operation would interfere with interstate commerce and would not be feasible.

Alteration of the horizontal and vertical alignments can be considered in certain instances to mitigate highway traffic noise impacts on the surrounding communities. Horizontal alignment alterations include changes in straight tangent lines and horizontal curves. Vertical alignment alterations consist of changes in vertical grade lines (slopes) and vertical curves connecting these grade lines. Alterations in horizontal and vertical alignments increase the distance from the highway facility to the community receivers, thereby reducing the traffic noise impact. Noise abatement through alterations to the horizontal and vertical alignments will be difficult for a number of reasons. The existing corridor topography is generally flat with little vertical relief. Therefore, any major alteration to the vertical alignments may complicate intersection and drainage issues. Additionally, the horizontal alignments are based upon approved corridor locations. Reasonable opportunities to minimize noise impacts through modifications to the roadway geometry should be considered.

Installation of noise barriers can be used to mitigate highway traffic noise impacts on surrounding properties. These barriers may consist of masonry, metal, or earthen berms that parallel the highway alignment. Strategically located and designed, noise barriers can increase the distance that traffic noise must travel to reach the sensitive receivers, thereby reducing the traffic noise level.

INDOT and ODOT have each established cost-benefit criteria for use in evaluation of proposed traffic noise barriers. INDOT guidelines state that a benefited receiver must experience a five dBA reduction in the traffic noise levels during the noisiest hour conditions. INDOT has set the acceptable cost per benefited receiver range as \$20,000 to \$30,000. ODOT guidelines state that a benefited receiver must experience a three dBA reduction in the traffic noise levels during the noisiest hour conditions. ODOT has set the reasonable cost per benefited receiver as \$25,000. If a proposed barrier is within the acceptable criteria for each state, it must then be subject to an evaluation by local stakeholders including public officials and affected citizens.

Sound insulation of public/institutional buildings could be considered for reducing traffic noise impacts. This insulation is limited to public, non-profit, or institutional structures, such as churches, schools, and hospitals. The practical and reasonable sound insulation of all public/institutional buildings will be investigated during the design studies of the Preferred Alternative.

The feasibility of providing noise walls to mitigate impacts at the Bohlman Trailer Park, a low-income (Environmental Justice) community, was evaluated for this project. The mitigation analysis indicated that a noise wall varying in height from 2.4 meter (8 feet) to 3.7 meters (12 feet) and approximately 298 meters (978 feet) in length will reduce noise levels by approximately 5.1 dBA. The noise barrier extends from the intersection of SR 424 and Indian Bridge Lane west along the north side of SR 424 to the US 24/SR 424 interchange and then extends north paralleling the eastbound entrance ramp to US 24. With an estimated construction cost of \$194,900, the cost per dwelling unit is \$10,250, which is less than the reasonable cost threshold of \$25,000 per benefited receiver. Coordination with local officials, the property owner, and

residents to determine the acceptability of noise mitigation has not been completed. Because of the limited amount of land available between US 24 and the trailer park as well as existing development patterns for the surrounding land uses, several strategies for noise abatement are not feasible such as changes in the vertical and horizontal geometry. Also, under current state regulations, ODOT cannot restrict traffic on US 24, limiting the feasibility of traffic management strategies. There is, however, sufficient area to accommodate noise walls.

Detailed investigations and evaluation of noise mitigation measures will be considered, as appropriate, in future design studies.

3.4.4 Energy Existing Conditions

Energy is expended by vehicles traveling on US 24. As documented in the traffic analysis, US 24 currently operates at a poor level of service, which will worsen with time. There are also numerous access points, which result in stop and go traffic conditions as vehicles enter and exit the facility. Vehicular energy consumption is increased under these conditions as compared to free-flow conditions.

Fossil fuels, once expended, are not retrievable. However, fossil fuels are not considered to be in short supply and the expenditure is not considered to have adverse effects on the continued availability of resources.

Methodology

The comparison of the construction and operational energy requirements and the potential for energy conservation for alternatives under consideration is required by FHWA (FHWA, 1987). The energy evaluation consists of a qualitative comparison of energy consumed in the construction of the facility, long-term maintenance of the facility, and operation by vehicles on the facility.

Traditional methodologies for calculating energy consumption for construction apply multipliers to construction costs (exclusive of right-of-way costs) to estimate the total energy required for construction. The alternative with the greatest construction cost will require the greatest amount of energy for construction. The multipliers used are very dated (based on information published by CALTRANS in 1983) and do not recognize energy efficiency improvements in construction vehicle consumption or the manufacture of building materials that have been made over the last 20 years, and therefore cannot accurately estimate the energy required for construction. In the absence of reliable multipliers, this analysis assumes that the alternative with the greatest construction cost will require the most energy for construction.

Traditional methods for calculating energy consumption needed to maintain facilities apply multipliers to lane-miles of roadway or highway. The alternative with the greatest number of lane-miles will require the greatest amount of energy for maintenance activities. Again, available multipliers are very dated (based on information published by USDOT in 1980) and do not reflect improvements in energy efficiency that have occurred over the last 20 years. Energy consumption estimates calculated with these multipliers are not accurate. In the absence of reliable multipliers, this analysis assumes that the alternative with the greatest total of lane miles will require the most energy for maintenance.

The evaluation of operational energy consumption is based on a comparison of Vehicle Miles Traveled (VMT) estimates. The analysis assumes that the alternative with the greatest VMT will result in the greatest operational consumption of energy.

Project Impacts

The analysis of energy consumption is summarized in Table 3.95. A onetime energy expenditure would be required for the construction of any of the Feasible Alternatives. Construction of Alternative E (\$150,015,850) is the most costly of all alternatives, whereas Alternative Y (\$66,908,558) is the least expensive to construct. Therefore, Alternative E would require the greatest amount of energy for construction.

Between the project termini, US 24 is approximately 60.3 kilometers (37.4 miles) in length and consists of two travel lanes. US 24 would remain as a two-lane facility for the No Build

Alternative and Alternative Y. Of the four-lane alternatives, Alternative B is approximately 58.3 kilometers (36.2 miles) in length and would have the least lane-miles of pavement. Alternative S is the longest alternative (61.9 kilometers [38.4 miles]), and would therefore have the most lane-miles of pavement. The Feasible Alternatives would require more energy for maintenance than the No Build Alternative given the addition of travel lanes to the local roadway network. Because it has the greater length, Alternative S would require the most energy for maintenance. The No Build Alternative and Alternative Y would require the least amount of energy for maintenance.

**TABLE 3.95
ENERGY CONSUMPTION COMPARISONS**

Category	Alternative Ranked Highest	Alternative Ranked Lowest
Construction Cost	Alternative E	Alternative Y
Total Length of Lane-Miles	Alternative S	Alternative B
Vehicle Miles Traveled	Alternative Z	Alternative H

Estimates of vehicle miles traveled were developed for the No Build and Feasible Alternatives. Alternative Z would generate the greatest vehicle miles traveled (215 million miles per year) and would likely result in the greatest energy consumption. Alternative H would generate the fewest vehicle miles traveled (170.4 million miles per year).

Preferred Alternative Impacts

The impacts of the Preferred Alternative (Alternative D-1) are slightly higher than those resulting from the other Feasible Alternatives. The construction cost of Alternative D-1 is \$204,971,652, which exceeds the construction costs for the other alternatives. The cost estimate is higher because of the change in design in Allen County from expressway to freeway with interchanges and grade-separated crossings as well as the addition of grade-separated crossings in Paulding and Defiance counties. The additional cost for structures results in higher construction costs. A onetime energy expenditure will be required for construction. Additional energy expenditures will be incurred for operation and maintenance of the facility as well as by users of the facility. Expenditures for operation and maintenance will exceed that associated with the No Build Alternative and the other Feasible Alternatives because of the additional structures that have been incorporated in to the design. User energy consumption rates may be higher than the No Build Alternative because regional travel (VMT) is higher. However, this will be offset by reductions gained through improved traffic flow.

Mitigation

No mitigation is required.

3.5 SECONDARY AND CUMULATIVE IMPACTS

Guidelines prepared by the Council on Environmental Quality (CEQ) for implementing the National Environmental Policy Act (NEPA) broadly define secondary impacts as those impacts that are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable (40 CFR 1508.8). Examples of secondary effects include increased erosion and sedimentation from earth moving at waste/borrow areas, construction staging areas, and mitigation sites; adjacent habitat degradation or modification due to air and water quality contamination; increased noise levels resulting from increased traffic volumes associated with induced site development projects; and increased traffic-related mortality to area fauna and flora.

Cumulative impacts are defined as “the impact on the environment which results from the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative effects include future foreseeable actions unrelated to the proposed action that will have an effect on the same regional resources. Cumulative impacts include future regional development or future resource extraction.

**3.5.1 Secondary
Impacts
Existing Conditions**

The prediction of development impacts beyond those directly attributable to construction of the transportation facility is largely speculative. The analysis provided is intended to provide an understanding of the impacts of improving access through the study area and is not meant to be interpreted or utilized for other purposes.

For the US 24 New Haven to Defiance project, specific environmental resources that are potentially affected by the Feasible Alternatives include community concerns, economic development, farmlands, wetlands, streams, woodlots, floodplains, and cultural resources.

In Allen County, the study area covers Jefferson, Milan, and Maumee townships and the incorporated municipalities of New Haven and Woodburn. In Ohio, the study area covers portions of Paulding and Defiance counties. In Paulding County, the affected communities are Villages of Antwerp and Cecil, and Carryall, Crane Emerald, and Harrison townships. The affected communities in Defiance County are the City of Defiance and Delaware, Defiance, and Noble townships.

The City of Fort Wayne, the second largest city in the state of Indiana, is located approximately 4.8 kilometers (three miles) to the west of the study area. The City of Defiance is located at the eastern end of the study area. The urban center of Defiance County consists of the City of Defiance and portions of Defiance and Noble Townships. The industrial base is concentrated within the city limits (*Defiance County Comprehensive Plan - Draft, 1999*). Even with close proximity to these two major economic centers, rural agriculture development dominates the study area.

Population Growth Trends

Since colonization of the study area began, the population has grown slowly and variably throughout the study area. Table 3.96 shows the population growth over the last century and projections through 2015. The growth rate in Allen County has outpaced the growth of Indiana and the rest of the study area, but most of that growth has occurred within the City of Fort Wayne. Paulding County has actually declined in population over the past century as has the Village of Cecil. While the population in Defiance County has grown over the past century, most of this growth is concentrated in the City of Defiance. Based purely on US Census Population data, the analysis of historic trends does not consider the effect of annexation on the changes in population.

Population estimates for 2000 and projections are also shown in Table 3.96. A comparison of the Year 2000 estimates with the actual total population recorded in the 2000 Census indicates that the population in Allen County grew faster than expected over the last decade. In Paulding and Defiance counties, the population did not grow at the anticipated rate. Table 3.96 also provides 2015 projections for the three counties, which indicate that the study area is expected to experience minimal changes in total population over the next 15 years.

Land Use Trends

While open space and undeveloped land typically associated with rural landscapes and rural development patterns are common to the study area, the undeveloped areas have changed significantly over time. The study area lies in the Central Lowland Physiographic province and is situated within an area of low relief defined by glaciation. Past glacial action resulted in the creation of the Great Black Swamp, a poorly drained morass that effectively isolated northwestern Ohio and northeastern Indiana from the remaining areas within the states. Historically, the swamp was a hindrance to inhabitants until it was finally drained in the late 19th century and replaced with croplands. The saturated soils supported various ecological communities including hardwood forest communities common to water-saturated landscapes, which gradually disappeared when the Great Black Swamp was drained.

Agriculture is the dominant industrial sector in the study area relative to land use as much of the land is now in agricultural production. Commercial and industrial development occurs sporadically through the study area, concentrated along major transportation corridors (US 24, SR 49, US 127, SR 424, and the Maumee & Western Railroad) and within the incorporated

municipalities (City of Woodburn, Village of Cecil, Village of Antwerp, and City of Defiance). A number of major employers are located within these communities including Uniroyal Goodrich in Allen County, Dana Boston Weatherhead and Spec Temp in Paulding County, and Koester Corporation and Defiance Hospital in Defiance County. Similar patterns hold true for residential development, higher densities of residences are located along the major roadways and within the incorporated communities.

**TABLE 3.96
STUDY AREA POPULATION TRENDS, 1900 TO 2015**

Community	Year				
	1900	1950	2000	2000 (estimated)	2015
Indiana	2,516,462	3,934,224	6,080,485	6,044,528	6,404,070
Ohio	4,157,545	7,946,627	11,353,140	11,288,760	12,060,620
Allen County	77,270	183,722	331,849	321,245	339,486
Paulding County	27,528	15,047	20,293	20,600	20,400
Defiance County	26,837	25,925	39,500	40,500	41,600
City of Fort Wayne	45,115	133,607	205,727	N/A	N/A
City of New Haven	950	2,336	12,406	N/A	N/A
City of Woodburn	236	540	1,579	N/A	N/A
Village of Antwerp	1,206	1,162	1,740	N/A	N/A
Village of Cecil	326	266	216	N/A	N/A
City of Defiance	7,579	11,265	16,465	N/A	N/A

Source: Ohio Department of Development, *Decennial Census of Population*.
Indiana Business Research Center, *STATS Indiana, Historic Census Counts*.

Economic Development Trends

There are a number of economic development sites that are being actively marketed for economic development in the study area. These include the Doyle Road Industrial Site, Bandalier Economic Development Area, Casad East Industrial Park/Economic Development Area, New Haven Industrial Site, Canal Place Economic Development Area, and Woodburn Industrial Park in Allen County; the Antwerp Industrial Park in Paulding County; and the Enterprise Park, Olson Industrial Park, and Fox Run Executive Park in Defiance County. There is one proposed major residential development in the study area, the Maumee River Crossing residential development in Defiance County. Also, there are plans to expand the Noble Heights subdivision, which is located in Defiance County.

Allen County is one of the fastest growing areas in the State of Indiana; consequently much of the open space is subject to development pressures. The City of New Haven has experienced tremendous population growth that is outpacing population growth across the county. In 1960, New Haven had a population of 3,396 persons; in 1980, its population was 6,714. In 2000, New Haven's population was 12,406 persons. Consequently, New Haven is considered to be a quasi-independent growth center within the larger Fort Wayne metropolitan area.

The area east of New Haven near I-469, US 24, and US 30 has the potential for significant industrial growth (Northeastern Indiana Regional Coordinating Council, May 2000). The construction of new housing in northern Allen County has been significant. Within the affected communities in Allen County, new housing units constructed since 1990 account for only 5.4 percent on new housing units built within the county. Additionally, the Amish community is growing in Maumee and Milan townships, acquiring property as it becomes available on the open market. The expansion of the Amish community limits the potential for large-scale residential development as land is purchased by the Amish and preserved for agricultural use.

Since the 1970's, Paulding County has experienced very modest growth in comparison to Allen and Defiance counties. Agricultural use is the predominant land use, accounting for 86 percent

of the land area. A major concern in Paulding County, however, is the conversion of farmland to residential development (Paulding County Economic Development Office February 1999). According to data provided in the 2000 Census, 516 new housing units were constructed between 1990 and 2000 within the Paulding County study area communities, accounting for 44 percent of new residential units constructed within the county. No new residential development was constructed within the Village of Cecil between 1990 and 2000 and only 3 new units were constructed between 1980 and 1990.

According to the Paulding County Economic Development Office, the Villages of Antwerp, Paulding, and Payne are under the most pressure for commercial and industrial development. These communities are supported by adequate infrastructure (water, sewer, and transportation). Several areas are targeted for industrial development including the Antwerp Industrial Park. Attraction of new industry is a key objective of the county and the realignment of US 24 in accordance with the *Paulding County Comprehensive Plan* (1970) is viewed as a critical factor in enhancing the economic competitiveness of the county.

As with the neighboring Paulding County, Defiance County is considered to be primarily rural and agrarian. The City of Defiance and Noble Township are considered to be more urbanized than the remaining portion of the study area. Unlike the Allen and Paulding counties, almost all of the county residential development (99.7 percent) is located within the study area communities. Slightly less than 75 percent of the 2,115 residential units built in Defiance County between 1990 and 2000 were constructed in study area communities.

Comprehensive Plans/Zoning

Also considered in the identification and analysis of secondary impacts for the Feasible Alternatives is the adoption of comprehensive planning policies to guide development by affected municipalities. Comprehensive planning policies and objectives as well as zoning ordinances have been adopted by all municipalities affected by the project. These policies, objectives, and associated zoning ordinances will strongly influence the location and type of development that could occur as well as protect sensitive resources that could be impacted by secondary development. Many of the affected municipalities have policies that serve to protect sensitive natural and cultural resources. Comprehensive land use plans as well as zoning regulations are in place for all of the affected municipalities. In most cases, the land use plans have been developed at the county level with the exception of the City of New Haven. New Haven also has an adopted comprehensive land use plan in addition to comprehensive planning efforts undertaken by the Allen County Department of Public Services.

The draft comprehensive plan of Allen County recognizes the current pressures affecting development within the county. As documented in the draft plan entitled *Allen County 2000 and Beyond* (Allen County Department of Planning Services, no date), there are 27 key objectives of the plan with 88 supporting policies addressing land use and site design considerations, environmental preservation, transportation and community services, and sensitive resources. The cornerstone of this plan is to focus development in areas where the necessary infrastructure exists while protecting natural, cultural and man-made resources. The objectives of the plan will be achieved through a well-defined development plan review and approval process.

The *City of New Haven Comprehensive Land Use Plan* (May 1990) also recognizes the development pressures affecting land use decisions in Allen County. The New Haven comprehensive plan is supported by administrative and legal tools which include zoning ordinances, subdivision control ordinances, building codes, special purpose plans (parks, utilities and other community facilities) and programming of capital improvements. As part of the land use planning effort, geographic areas with different development trends, land use characteristics, and development goals were defined. Much of the area is located within the core Urban Services Area which encompasses land which is or can be readily served with police and fire protection as well as water and sewer service. Intense development outside of this area should be discouraged. A small portion of the study area, west of Doyle Road, is located within the Urban Services Boundary. South of US 24, the study area is located within the Interstate Corridor Development Policy Area. The planning goals for this area support large-scale well-designed mixed use projects that take advantage of the locational attributes of the

corridor are promoted. North of US 24 and west of Doyle Road, the study area is located in the River Greenway Corridor. The primary planning objective for planning area is to disallow development. Outside of the Urban Services Boundary, the area bounded by Edgerton Road to the north and SR 4 to the south is referred to as the Eastern Industrial Development Policy Area within which industrial development is being promoted. This area includes the Doyle Road Industrial Area and the Casad, and Bandalier Economic Development Areas. The plan discourages industrial development north of Edgerton Road.

The Northeastern Indiana Regional Coordinating Council (NIRCC) *2025 Transportation Plan* supports the Allen County and City of New Haven land use plans. Outside of widening US 24 and the reconstruction of the US 24/I-469 interchange, no major capital projects are proposed for the study area or areas within 1.6 kilometer (one mile) of the study area.

The Paulding County *Comprehensive Land Use Plan* was adopted in the early 1970s. All townships in Paulding County have zoning ordinances in place to guide development. The plan recognizes the realignment on US 24 to the south of its existing alignment, recommending bypasses of the Villages of Antwerp and Cecil.

Defiance County recently updated its *Comprehensive Land Use Plan*, which was officially adopted in January 2000. The plan notes four goals that provide the foundation for the plan and future land use development:

- To support and maintain sustainable economic development.
- To encourage and maintain cooperation among political subdivisions.
- To protect and preserve the quality of life for citizens of the county.
- To protect and/or preserve prime land for agricultural production.

The land use goals developed during the Land Use Plan update reflect that much of the study area within Defiance County is urbanized as none of the study area is targeted for preservation as prime farmland. It is targeted, however, for future residential development. Although there are several targeted areas for commercial and industrial development in the Defiance County portion of the study area which are now supported by necessary infrastructure, the plan notes that such development should be encouraged in the vicinity of the Village of Hicksville, which is located to the north of the study area.

Methodology

For this analysis, the study area has been defined as the area extending 1.6 kilometers (one mile) from the right-of-way limits for the Feasible Alternatives. The boundary was held at the Maumee River as this topographic features would act as a natural boundary restricting development. The study area for the secondary impacts assessment is shown in Figure 3.19.

Baseline socioeconomic conditions for the study area were defined using regional, county, and municipal land use plans; and county and community demographic data. Land use patterns were determined through review of USGS topographic mapping as well as review of available zoning maps and comprehensive plans including the *City of New Haven Comprehensive Plan* (May 1990), the *Paulding County Comprehensive Plan* (1972), and the *Defiance County Comprehensive Plan* (January 2000). Zoning ordinances and plans were also used to define future land use goals and objectives for the affected municipalities which was supplemented with input from local planners and public officials and developers with interests in the study area. Traffic data was obtained from analyses of the Feasible Alternatives and the Preferred Alternative.

Information on natural resources was obtained from GIS environmental inventory data collected for use in the development and analysis of the Feasible Corridors. This data set provided the most extensive coverage geographically and included the extended study area. The data was supplemented with more updated information on specific environmental resources, such as stream classifications, where the information was consistent with the data contained in the GIS environmental inventory data. Specific natural resources considered in the analysis include productive farmlands, woodlots, wetlands, streams, floodplains.

Cultural resources (archaeological sites and historic resources) were also considered. The GIS environmental inventory data was supplemented with data from the Phase I archaeological survey and the Phase I and Phase II history/architecture surveys.

The boundary for the extended study area was entered in to the GIS and used to calculate the occurrence of the sensitive environmental and cultural resources located within the extended study area. The occurrence of these resources was calculated for areas within the boundaries of the economic development sites. For the purpose of this analysis, it was assumed that the economic development sites are being actively marketed now and will develop with or without the project. It was also assumed that under the worst-case conditions, all land within the 1.6 kilometer (one-mile) area extending from the intersections, would be developed for transportation-related services (e.g., gasoline stations, automotive service centers, restaurants, convenience stores).

Project Impacts

As noted above, the analysis assumes that the designated economic development sites will be developed. As such, impacts to sensitive environmental resources will be incurred with or without the project. An overview of the sensitive environmental features associated with these economic development sites area is presented in Table 3.97. The effects of developing these sites are:

- Loss of three wetland systems, affecting a total of 1.1 hectares (2.7 acres).
- Changes to five low quality and nine high quality streams.
- Encroachment on 40.9 hectares (101.0 acres) of land located within 100-year floodplain boundaries of study area streams.
- Loss of 14 woodlots of varying sizes, covering a total of 40.9 hectares (101.0 acres) of land.
- Loss of 676.0 hectares (481.2 acres) of productive farmland.

Table 3.98 presents the an overview of the environmental features located within the extended study area established for the Feasible Alternatives. The potential secondary effects on these resources are described below.

Wetlands

The clearing, grubbing, excavating, and filling activities associated with construction will directly impact wetland areas. Wetland areas adjacent to sites of filling activity may also be impacted by sedimentation from runoff during construction. Surrounding wetland areas may also dry out over time if drainage patterns are altered during construction. Current state and federal regulations prevent wetland encroachments unless it can be demonstrated that there is no practicable alternative. Furthermore, both Indiana and Ohio require compensatory mitigation for all publicly and privately funded projects. Wetlands regulations are implemented at the state level and require the submission and approval of a Section 404 permit application before construction can begin.

Streams/Rivers/Waterbodies/Groundwater

Erosion and sedimentation are the most frequent effect of new construction on water quality. Construction activities generally produce erosion due to clearing and grubbing activities wherein the natural vegetation is removed from the site. This loss of vegetation can increase sediment loads into surrounding surface waterways. These impacts are not continuous throughout construction activities, but typically occur only during and after storm events. The greatest suspended sediment concentrations are expected after heavy rainfalls, and result in increased sediment deposition.

All of the drainage ditches in the study area receive runoff from agricultural fields, which contain sediments, herbicides, and pesticides. Moderately and large-sized streams already carry large sediment loads following heavy rains or snowmelts, thereby minimizing the relative contribution of silt-laden runoff from smaller construction sites. Impacts to smaller streams, however, can be detrimental. Since small streams carry lesser sediment loads, excess siltation can be greatly increased by runoff from construction sites. If these sedimentation impacts are severe enough, small streams can be buried under a thick layer of silt throughout the construction

period. However, these changes are usually temporary and conditions eventually return to pre-construction levels. Runoff into nearby waters can be slowed or prevented by the use of Best Management Practices (BMPs) during construction.

**TABLE 3.97
SENSITIVE RESOURCES WITHIN TARGETED ECONOMIC DEVELOPMENT AREAS**

Planned Development Areas	Wetlands	Low Quality Streams (QHEI < 45)	High Quality Streams (QHEI between 45 and 60)	Floodplains	Woodlots	Productive Farmlands	NRHP Listed and Eligible Sites	Recorded Archeological Sites
Doyle Road Industrial Site	None	Unnamed tributary to the Maumee River (QHEI not available)	None	None	None	None	None	1
New Haven Industrial Site	None	None	Unnamed tributary to Gar Creek (46.75) Unnamed tributary to Gar Creek (46.75)	None	2 woodlots 7.3 hectares (4.9 acres)	42.5 hectares (104.9 acres)	None	1
Casad Industrial Park	None	None	None	None	None	None	None	0
Bandalier Economic Development Area	None	None	None	None	None	None	None	0
Canal Place Economic Development Area	2 wetland systems 0.5 hectares (1.2 acres)	None	Unnamed tributary to Gar Creek (46.75) Unnamed tributary to Gar Creek (46.75)	None	3 woodlots 29.0 hectares (71.8 acres)	84.4 hectares (208.5 acres)	None	1
Woodburn Industrial Park	None	Viland Ditch (44.5)	Viland Ditch (48) Marsh Ditch (57)	20.2 hectares (49.9 acres)	None	None	None	8
Antwerp School Expansion	None	Abandoned Wabash and Erie Canal (12.25)	None	None	None	6.0 hectares (14.9 acres)	None	0
Antwerp Industrial Park	None	Abandoned Wabash and Erie Canal (12.25)	Unnamed tributary west of T-51 (56.5)	None	None	1.7 hectares (4.3 acres)	None	0
Enterprise Park	1 wetland system 0.6 hectares (1.5 acres)	Unnamed tributary to the Maumee River (32.5) Stevens Ditch south (23.5)	None	None	4 woodlots 5.3 hectares (13.0 acres)	60.2 hectares (148.6 acres)	None	0
Maumee River Crossing Development	None	None	Tiffin River (53.75) Dowe Ditch (48.5)	16.4 hectares (40.5 acres)	3 woodlots 3.2 hectares (8.0 acres)	None	1 NRHP- Listed Dey Road Bridge	2
Olson Industrial Park	None	None	Tiffin River (53.75)	2.1 hectares (5.3 acres)	1 woodlot 1.0 hectares (2.5 acres)	None	1 NRHP- Listed Dey Road Bridge	3
Fox Run Executive Park	None	None	Tiffin River (53.75)	2.1 hectares (5.3 acres)	None	None	1 NRHP- Listed Dey Road Bridge	1
Defiance Hospital	None	None	None	None	1 woodlot 0.3 hectares (0.8 acres)	None	None	0

An area of long-term concern is channelization of streams associated with highway construction. Channelization is known to reduce aquatic habitat diversity, lower groundwater levels, increase

turbidity and sedimentation through erosion, and increase pollution levels and solar heating of the water.

**TABLE 3.98
SENSITIVE RESOURCES WITHIN THE EXTENDED STUDY AREA
FOR SECONDARY/CUMULATIVE IMPACTS ANALYSIS**

Resource	Description of Resources
Wetlands	281 wetlands 307.7 hectares (760.1 acres)
Low Quality Streams (QHEI < 45)	23 streams
High Quality Streams (QHEI between 45 and 60)	11 streams
Floodplains	1461 hectares (3,609 acres)
Woodlots	189 woodlots 532 hectares (1,313 acres)
Productive Farmlands	7178 hectares (17,730 acres)
NRHP - Listed and - Eligible Sites	23 Properties
Recorded Archeological Sites	187 Sites

Localized secondary effects on groundwater can also occur. The lack of existing development generally indicates that much of the study area does not rely on municipal supplies for water. Also, the current agricultural use of the land has more potential for groundwater contamination due to the widespread use of pesticides, herbicides, and fertilizers.

Floodplains

The increased velocity of stormwater runoff generated by conversion of arable land to impervious surface can affect the hydraulic characteristics of floodwaters within the study area. Current regulations prevent development within the 100-year floodplain unless it can be demonstrated that the development will have no net effect on 100-year flood elevation set for nearby streams. Floodplain regulations are implemented at the local level, through review of site development plans.

Woodlots

A secondary effect of highway construction is wildlife habitat fragmentation. Fragmentation is the subdivision of formerly continuous habitat into smaller, discontinuous areas. Fragmentation of forested areas increases the amount of edge habitat and thereby dramatically decreases the amount of forest interior. Edge effects in fragmented forests are usually found to persist at least 50 meters (164 feet) from the disturbed edges. This fragmentation can result in wildlife displacement. Displaced wildlife may be forced into lower quality neighboring habitats (sinks), resulting in the loss of individuals through competition for food, cover, and breeding territory.

Interior-woodland wildlife communities can be replaced by species characteristic of edge and successional habitats. Breeding bird communities along these disturbed habitats are usually composed of fewer species than the communities that occupy the wooded interiors (Stauffer 1980). As woodlots decrease in overall size, there is an increase in nest predation and parasitism. The parasitic brown-headed cowbird (*Molothrus ater*) is usually found along the edges of large forests, but can sometimes be found throughout small (14 to 65 hectares [34.6 to 160.5 acres]) fragmented forests (Robinson 1993). The female lays one of its eggs in the nest of another species, generally removing one of its victim's eggs during the process. The host parents treat the cowbird egg as one of their own. After hatching, the young cowbird may push one or more of the host's eggs out of the nest and then subsequently out-competes the host's young for care within the nest, thereby reducing the reproductive success of the host parents. Small woodlots can become ecological sinks, where Neotropical migratory birds lose enough eggs due to the parasitic cowbird that their death rates outweigh their birth rates (Robinson 1993). Increased woodlot fragmentation also allows predators such as raccoons, feral cats, dogs, opossums,

crows, and foxes easier access to not only bird nests, but other forms of wildlife as well. The existing forested habitat within the study area is highly fragmented and individual forested stands range from approximately 2.02 to 16.2 hectares (five to 40 acres). As a result, the USFWS has requested that all efforts be made to preserve these rare resources.

The edge effect is less apparent for disturbed edge habitats dominated by herbaceous vegetation (e.g., edge habitats along existing highways, active rail lines, utility corridors, and developed areas). Impacts to edge habitats should produce only minor changes in the composition of their wildlife communities when compared to the impact to continuous habitat sections found in larger woodlots.

Similar trends also occur for amphibian, reptilian, and mammalian communities. Smaller organisms (e.g., frogs, turtles, and mice) may have limited dispersal ability, thus reducing the availability of adequate resources, such as breeding habitat.

Highway operations may also cause adverse impacts to wildlife. Losses due to road kills, especially where a highway bisects tracts of natural habitats, are also expected. The highway may serve as a barrier to wildlife movement and migration activities. Traffic noise may initially affect the density and breeding success of wildlife along highways.

Farmlands

As noted in Section 3.2.1 of this DEIS (Land Use Trends), agricultural uses account for more than 80 percent of the land area within the right-of-way limits for the Feasible Alternatives. Agricultural lands will likely experience the greatest impact from secondary development of any resource analyzed. Secondary impacts to farmlands include the potential landlocking of parcels and fragmentation of the existing pattern of agricultural fields. This results in smaller, irregular fields that could be more difficult and time consuming to plant, maintain, and harvest. This additional work may increase labor costs and reduce profit margins.

One important aspect of a farming operation is the access between areas where farming equipment is stored and where it is used. Access is also important for bringing crops to storage facilities or delivering them to distribution locations. US 24 and neighboring township, county, and state roadways provide site access and facilitate regional distribution of farm-related traffic. The impacts of the Feasible Alternatives on local roads are described in Sections 3.1.7 and 3.4.1 of this DEIS. There is the potential that other roadways not discussed in these sections could be closed or realigned by other projects. This cannot be assessed without site development plans. However, such issues for township and county roadways would be evaluated by city and/or county engineers as part of the site development review process. For projects that affect state roads, INDOT, and ODOT must agree to the roadway changes prior to construction.

Other secondary impacts to farming include the disruption of field drainage systems. For the most part, soils within the study area are poorly or very poorly drained. In order to be successfully cultivated, these soils require substantial drainage improvements. Extensive subsurface tile systems are in place throughout the study area to allow for successful cultivation. Disruption to the tile systems would potentially impact the farm operations within the study area.

Cultural Resources

There is a potential for secondary impacts to affect cultural resources. Adverse effects on historic properties include, but are not limited to:

- Physical destruction, damage, or alteration of all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR 68) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.
- Introduction of visual, atmospheric or audible elements that diminish the integrity of

the property's significant historic features.

- Neglect of a property, which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.
- Transfer, lease, or sale of the property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

The occurrence of potential historic resources is common as many of the structures present within the study area are more than 50 years in age. However, many resources researched within the Feasible Corridors were found to lack historic integrity. More specifically, these structures have undergone extensive renovation that generally includes altered footprints and additions, reconfigured fenestration, the application of synthetic siding, and the removal or demolition of associated period farm outbuildings. This lack of architectural integrity is complemented by the absence of discernible documented historical events or family association. In general, the extant residential architecture of rural locales in the study area is predominantly the vernacular upright and wing and gabled ell farmhouse. The vast majority of these buildings have undergone significant alterations and additions, almost completely masking the original footprint and massing of the building.

Relative to archaeology, the presence of the Great Black Swamp limited the attractiveness of the area to aboriginal inhabitants of the area, limiting the locations where prehistoric sites are likely to be found. The Great Black Swamp also limited the attractiveness of the area to settlers, limiting the potential for historic archaeological sites pre-dating the 19th century. Initial literature reviews conducted on the 1282 square-kilometer (500 square-mile) study area identified a total of 542 previously recorded archaeological sites. Of the 542 sites, 437 are located in Allen County, 15 in Paulding County, and 90 in Defiance County. A recent survey in Indiana recorded over 300 archaeological sites in proximity to the Maumee River. The significance of many of these sites has not been assessed.

The unbalanced distribution of recorded sites within the three counties is most likely a factor of differences in the intensity of professional archaeological investigation within the study area. The majority of the recorded sites represent prehistoric lithic scatters and isolates of unknown temporal designation. However, many sites are temporally and/or culturally placed within the Lake Erie drainage basin archaeological complexes. Three burial mounds and one village have been professionally recorded within the study area, while at least one other mound and two historic Indian villages are reported to exist (Mills, 1914) but have not been field verified.

Through the Phase I and Phase II archaeological investigations of the Preferred Alternative (Alternative D-1), a total of 107 archaeological sites were identified. Of these 107 sites, none met the criteria for inclusion in the NRHP.

Traffic and Transportation

Relative to traffic-related issues, secondary effects can occur as traffic patterns on local roadways change. US 24 is projected to operate at an acceptable level of service (LOS A) in 2008 and 2028 with Alternatives A through X and Z, and it is unlikely that service would degrade to LOS C or less with the worst-case secondary development based on the results of the sensitivity analysis. Preliminary analyses completed for the Feasible Alternatives indicated that the following intersections could require some type of improvements relative to crossroad traffic movements:

- Woodburn Road (Alternatives A through H).
- Bull Rapids Road (Alternatives A through H).
- Webster Road (Alternatives A through X).
- SR 49 (Alternatives A through X and Z).
- US 127 (Alternatives A through X and Z).

It is likely that primary local roadways providing direct access to US 24 will experience increases in traffic volumes as development occurs on properties located along adjacent crossroads. This may result in the need to install traffic signals at intersections with local roadways and upgrade intersection approaches to provide for such improvements as turning lanes, additional

travel lanes, and grade-separated crossings.

An intersection capacity analysis was completed for the Preferred Alternative (Alternative D-1). The information generated for the Preferred Alternative can be applied to the other Feasible Alternatives as traffic patterns are not expected to vary across the 24 Feasible Alternatives on new alignment. The Preferred Alternative traffic analysis showed that several at-grade intersections would operate at a LOS D or worse without any additional development. These roads are:

- Webster Road (Alternatives A through X).
- Maumee Center Road/Bull Rapids Road intersection (Alternatives A through H).
- Bull Rapids Road (Alternatives A through H).
- SR 101 (Alternatives A through X).
- T-51 (Alternatives A through X, and Z).
- SR 49 (Alternatives A through X, and Z).
- C-176 (Alternatives A through X, and Z).
- C-180 (Alternatives A through X, and Z).
- US 127 (Alternatives A through X, and Z).
- C-115 (Alternatives A through X).

Other intersections are projected to operate at a LOS C or better through 2028. These intersections, however, may experience a degradation in service with the addition of development along crossroads. However, this cannot be determined without detailed traffic impact analyses considering site development characteristics, and geometric design of crossroads and intersections. Typically, potential impacts on township, county, and state roads would be reviewed during site development design studies by the jurisdictional agency and mitigation would be required in cases where site development projects substantially impact local roads.

Preferred Alternative Impacts

The Preferred Alternative is the same as Alternative D with the following exceptions:

- In Allen County, the Preferred Alternative will be constructed as a freeway with interchanges constructed at Ryan/Bruick Road, Webster Road, and SR 101.
- Crossings at Doyle, Sampson, Woodburn, Bull Rapids and State Line roads in Allen County; C-11, T-43, and C-105 in Paulding County; and Krouse and Switzer roads in Defiance County will be constructed as grade-separated crossings.
- Crossings at SR 49 and US 127 in Paulding County will be constructed as interchanges.
- Horizontal alignment is shifted between US 127 and C-224 in Paulding County.
- Horizontal alignment is shifted between Krouse Road and SR 424 in Defiance County.

Because the geographic variability across the Feasible Alternatives is small, the secondary effects of the Preferred Alternative are essentially the same as those of the other alternatives on new alignment (Alternatives A through X). Unlike the other alternatives, the provision of additional interchanges and grade-separated crossings at crossroads will improve traffic flow on these crossroads, specifically Webster Road, Bull Rapids Road, and SR 101.

Mitigation

All municipalities affected by the US 24 project have taken steps to define the desired land uses and development within their communities. The likelihood of secondary long-term undesirable impacts on surrounding land use is strongly reduced by the land use planning goals and objectives. The affected communities have established mechanisms to ensure adherence to these goals. It would be appropriate, given that the general location of the Preferred Alternative has been determined, for affected municipalities to review land use goals and objectives as well as zoning ordinances and make adjustments as required to preserve and protect resources important and/or vital to the communities' well-being.

Also, the construction of any facility, be it publicly or privately funded, requires the application for and approval of various federal, state, and local permits prior to groundbreaking and monitoring by permitting agencies during construction. Permit applications generally require

an evaluation of project effects on natural resources (e.g. wetlands, streams, groundwater, threatened and endangered species, and floodplains), cultural resources (archaeological and historic resources), man-made resources (local roadway system), and adherence to zoning ordinances. Federal, state, and local permitting agencies have the authority to approve or deny permits based on the magnitude of the impacts relative to the benefits and specify conditions for minimizing or mitigating impacts.

Lastly, the implementation of BMPs for site design and construction activities will further serve to minimize negative secondary effects of the Feasible Alternatives.

3.5.2 Cumulative Impacts

Cumulative impacts are defined as “the impact on the environment which results from the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative effects include future foreseeable actions unrelated to the proposed action that will have an effect on the same regional resources.

Methodology

The analysis of cumulative effects considered not only the impacts of the Feasible Alternatives, but other “reasonably foreseeable actions”. This includes planned projects, projected economic development, and development induced by the US 24 project. As with the secondary impacts analysis, the cumulative impacts analysis assumes that the economic development sites located within the study area are being actively marketed and will develop with or without the project. This analyses also assumes that under the worst-case conditions, all land within the 1.6-kilometer (one-mile) area extending from the interchanges and intersections will be developed for transportation-related services (e.g., gasoline stations, automotive service centers, restaurants, convenience stores, etc.).

Project Impacts

Table 3.99 summarizes the cumulative effects of the Feasible Alternatives for the US 24 New Haven to Defiance project. Because the geographic proximity of the alternatives is close, there is not much variability in the effects of the Feasible Alternatives with the exception of Alternative Y (two-lane alternative on existing alignment). However, Alternative Y does not meet the purpose and need for the US 24 New Haven to Defiance project, and is likely to result in long-term negative impacts on communities located along US 24 including increased traffic congestion and travel time delays, degraded air quality associated with increased vehicular emissions, and increased noise levels at properties located in close proximity to existing US 24.

Preferred Alternative Impacts

The cumulative effects of the Preferred Alternative (Alternative D-1) are summarized in Table 3.99. Given that its geographic proximity is similar to Alternatives A through X, the cumulative impacts are within the range of impacts provided for the Feasible Alternatives.

Mitigation

All municipalities affected by the US 24 project have taken steps to define the desired land uses and development within their communities. The likelihood of long-term, secondary and cumulative negative impacts on surrounding land use is strongly reduced by the land use planning goals and objectives. The affected communities have defined the goals and objectives and established mechanisms to ensure adherence to these goals. It would be appropriate, given that the general location of the Preferred Alternative has been determined, for affected municipalities to review land use goals and objectives as well as zoning ordinances and make adjustments as required to preserve and protect resources important and/or vital to the communities’ well-being.

Also, the construction of any facility, be it publicly or privately funded, requires the application for and approval of various federal, state, and local permits prior to groundbreaking and monitoring by permitting agencies during construction. Permit applications generally require an evaluation of project effects on natural resources such as wetlands, streams, groundwater,

threatened and endangered species and wildlife, floodplains, traffic impacts, and adherence to zoning goals and ordinances. Federal, state, and local permitting agencies have the authority to approve or deny permits based on the magnitude of the impacts relative to the benefits and specific conditions for minimizing or mitigating impacts.

**TABLE 3.99
SUMMARY OF CUMULATIVE IMPACTS**

Resource	Development Scenario	Low Range	High Range	Preferred Alternative
Wetlands	US 24 Improvements	4.1 hectares (10.2 acres)	23.8 hectares (58.6 acres)	9.1 hectares (22.5 acres)
	Development of Known Economic Development Sites	1.1 hectares (2.7 acres)	1.1 hectares (2.7 acres)	1.1 hectares (2.7 acres)
	Full Development of Secondary Study Area	585.8 hectares (1,447 acres)	585.8 hectares (1,447 acres)	585.8 hectares (1,447 acres)
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area/ US 24 Improvements)	591.1 hectares (1,459.9 acres)	610.6 hectares (1,508.3 acres)	590.2 hectares (1,457.9 acres)
Low Quality Streams (QHEI < 45)	US 24 Improvements	0 meters (0 feet)	10 050 meters (32,964 feet)	5339 meters (17,513 feet)
	Development of Known Economic Development Sites	N/A	N/A	N/A
	Full Development of Secondary Study Area	N/A	N/A	N/A
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area/ US 24 Improvements)	0 meters (0 feet)	10 050 meters (32,964 feet)	5339 meters (17,513 feet)
High Quality Streams (QHEI between 45 and 60)	US 24 Improvements	0 meters (0 feet)	10 011 meters (32,837 feet)	816 meters (2,676 feet)
	Development of Known Economic Development Sites	N/A	N/A	N/A
	Full Development of Secondary Study Area	N/A	N/A	N/A
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area/ US 24 Improvements)	0 meters (0 feet)	10 011 meters (32,837 feet)	816 meters (2,676 feet)
Floodplains	US 24 Improvements	7.5 hectares (18.5 acres)	34.6 hectares (85.4 acres)	28.0 hectares (69.2 acres)
	Development of Known Economic Development Sites	40.9 hectares (101.0 acres)	40.9 hectares (101.0 acres)	40.9 hectares (101.0 acres)
	Full Development of Secondary Study Area	1461.1 hectares (3,609 acres)	1461.1 hectares (3,609 acres)	1461.1 hectares (3,609 acres)
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area/ US 24 Improvements)	1509.5 hectares (3,728.5 acres)	1536.6 hectares (3,795.4 acres)	1538.1 hectares (3,779.2 acres)
Woodlots	US 24 Improvements	17 woodlots 11.9 hectares (29.4 acres)	36 woodlots 49.2 hectares (121.5 acres)	20 woodlots 35.7 hectares (87.7 acres)
	Development of Known Economic Development Sites	14 woodlots 40.9 hectares (101.0 acres)	14 woodlots 40.9 hectares (101.0 acres)	14 woodlots 40.9 hectares (101.0 acres)
	Full Development of Secondary Study Area	189 woodlots 531.6 hectares (1,313 acres)	189 woodlots 531.6 hectares (1,313 acres)	189 woodlots 531.6 hectares (1,313 acres)
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area/ US 24 Improvements)	220 woodlots 584.4 hectares (1,443.4 acres)	261 woodlots 621.7 hectares (1,535.7 acres)	223 woodlots 608.0 hectares (1501.7 acres)

**TABLE 3.99 (CONTINUED)
SUMMARY OF CUMULATIVE IMPACTS**

Resource	Development Scenario	Low Range	High Range	Preferred Alternative
Productive Farmlands	US 24 Improvements	80.3 hectares (192.2 acres)	596.7 hectares (1,473.9 acres)	578.5 hectares (1,428.8 acres)
	Development of Known Economic Development Sites	194.8 hectares (481.2 acres)	194.8 hectares (481.2 acres)	194.8 hectares (481.2 acres)
	Full Development of Secondary Study Area	7178.1 hectares (17,773.0 acres)	7178.1 hectares (17,773.0 acres)	7178.1 hectares (17,773.0 acres)
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area /US 24 Improvements)	7450.6 hectares (18,403 acres)	7969.7 hectares (19,685.1 acres)	7933.0 hectares (19594.4 acres)
NRHP Listed and Eligible Sites	US 24 Improvements	0 sites	14 sites	1 site
	Development of Known Economic Development Sites	0 sites	0 sites	0 sites
	Full Development of Secondary Study Area	24 sites	24 sites	24 sites
	Cumulative Impacts (Development on Known Economic Sites/ Full Development of Secondary Study Area /US 24 Improvements)	24 sites	38 sites	25 sites

3.6 CONSTRUCTION IMPACTS

Lastly, the implementation of BMPs for site design and construction activities will further serve to minimize negative cumulative effects of the Feasible Alternatives.

Construction activities for any of the Feasible Alternatives will affect the residents of the immediate study area and those traveling in the vicinity. These construction-related involvements include:

- The temporary degradation of air, noise, and water quality.
- The temporary disruption to the maintenance and control of local and through traffic; and temporary changes in traffic flow patterns.
- Temporary travel time delays and route interruptions affecting the delivery of community and emergency services.
- The stockpiling and disposal of construction materials.
- The use and mitigation of borrow areas.
- The temporary disruption of utilities.

The severity of the various impacts varies depending on the location of the alternatives. Alternatives Y and Z will impact a large number of households and businesses due their close proximity to existing US 24 and the construction zone required for either of the two alternatives. These impacts will include degradation of air and noise quality, and restrictions to local travel. Alternatives A through X will impact a greater number of farmers by limiting their access to their fields and temporarily changing drainage patterns of their fields. Water quality in the Maumee River could be impacted due to stormwater runoff during construction. The driving of pilings for new bridge abutments and heavy construction equipment will impact the noise levels in the area. The additional construction vehicles will add to the traffic congestion in the area and may cause delays at times.

Air Quality

During the construction of any of the Feasible Alternatives, air quality disturbances will be temporary and will primarily be the result of open burning, emissions from diesel-powered construction equipment, and dust from embankments, stockpiles, and haul roads.

All burning will be done in accordance with all applicable laws, ordinances, and regulations, and will be subject to the regulations of OEPA and Indiana Air Pollution Control Board. Non-combustion disposal options, such as removal, mulching, and burial, will also be considered during construction.

Slight increases in particulate levels may occur during the construction phase of the project. However, this effect will be minimized by requiring the contractor to adhere strictly to dust control measures as outlined in the latest edition of the INDOT *Standard Specifications* and ODOT *Construction and Material Specifications*.

Where fugitive dust is likely to be a problem, effective dust control measures will be implemented following standard roadway construction procedures. These measures include, but are not limited to:

- Minimizing the area of exposed erodible earth.
- Stabilizing exposed earth with grass, mulch, pavement, or other cover as early as possible.
- Periodic sweeping or the application of water or chemical stabilizing agents to the working and hauling areas.
- Covering, shielding, or stabilizing stockpile material, as necessary.
- Using covered haul trucks.
- Constructing wind barriers.

If construction or demolition is conducted in wooded areas where large blackbirds have roosted for three to five years, precautionary measures will be taken to avoid an outbreak of histoplasmosis.

If asphalt paving is performed during the months April through October in the state of Indiana, the use of cutback asphalt, or asphalt emulsion containing more than seven percent oil distillate will not be used per 326 IAC 8-5 Asphalt Paving Rule.

Prior to demolition or renovation of any structure, asbestos and lead-based paint testing and inspections will be done in accordance with all applicable laws, ordinances, and regulations. Removal and disposal of lead or asbestos containing materials will be conducted in accordance with applicable local, state and federal regulations.

Noise

Heavy equipment operations and certain construction activities, such as pile driving, and vibratory compaction of embankments, will result in temporary noise increases within the area. All such potential impacts will be limited in duration to the actual construction period and to the immediate vicinity of the work in progress. Any anticipated noise impacts will be confined to time periods considered relatively "noise tolerant" periods generally accepted to be normal weekday working hours. In addition, temporary noise barriers will be utilized, as appropriate, for noise mitigation as well as any additional measures recommended and contained in the INDOT *Standard Specifications* and ODOT *Construction and Material Specifications* to decrease noise impacts during construction.

To reduce construction noise impacts, the following mitigation measures will be used as appropriate:

- Require contractors to use construction equipment with operable mufflers.
- Prohibit contractors from working in residential areas during the hours between 10 p.m. and 6 a.m.

Water Quality

Effects to water quality resulting from erosion and sedimentation, as well as from pollutants such as chemicals, fuels, bitumens, raw sewage, and other harmful waste, will be strictly controlled in accordance with all applicable laws, ordinances, and regulations as well as highway construction specifications of INDOT and ODOT. The contractor will be required to exercise

every reasonable precaution necessary during construction to prevent pollution of rivers, streams, and impoundments. All construction discharge will be adequately filtered prior to discharge into water and will meet the requirements of all applicable laws, ordinances, and regulations. During spawning seasons, discharges and construction activities in spawning areas will be restricted to avoid disturbing or inhibiting aquatic species. The contractor will not establish any spoil (soil and rock) disposal sites within or immediately adjacent to any regulated water body. All disposal sites will be properly stabilized following closure or a prolonged period of inactivity. In the event the contractor dumps, discharges, or spills any contaminant or toxic substances or materials which may affect water quality, the contractor will be required to immediately notify all appropriate local, state, and federal agencies and will take immediate actions to contain and remove the contaminant.

Maintenance and Control of Traffic

The maintenance of traffic, construction sequencing, and traffic detours will be planned and scheduled to minimize any adverse impacts to the traveling public. Signs will be used and local newspapers notified to provide ample notice of detours, closings, and other construction-related activities in order to plan alternate travel routes and accommodate time delays in advance. Traffic congestion and delays will be controlled where many construction operations are in progress at the same time. Within construction areas, traffic control measures using standard practices will be used. Access to residences and businesses impacted by the construction will be maintained through construction scheduling, sequencing, temporary driveway construction and temporary connections.

Any disruption to the delivery of community and emergency services during construction will be minimal. Intersections with major local roads may be grade-separated or relocated to allow for continuous operation and access. Local police and fire departments as well as other emergency service providers will be notified well in advance of any construction-related activities.

Health and Safety

During the course of construction, the contractor will comply with all federal, state, and local laws governing safety, health, and sanitation. All reasonable safety considerations and safeguards necessary to protect the life and health of employees on the job, the safety of public, and the protection of property in connection with roadway construction, will be taken.

Pollution Control

The construction of any of the alternatives will require the excavation of unsuitable materials, placement of embankments, and the use of materials such as aggregates, bituminous concrete, and portland cement concrete. The stockpiling and disposal of the construction and excavation materials may be visually displeasing to some of the residents along the construction corridor. However, this is a temporary feature. Temporary erosion control measures will consist of berms, dikes, temporary seeding, sediment traps, fiber mats, silt fences, slope drains, mulches, crushed stone, or other methods, as appropriate. The contractor will be responsible for methods of placing and maintaining the necessary features of erosion control on haul roads, borrow areas, areas used for the disposal of waste materials, and other potential pollutants associated with highway construction.

The removal of structures and debris will be done in accordance with local and state regulatory agencies permitting this project. In addition, any interruptions or disconnection of public utilities will be done under close coordination with the affected utility. Any replacement systems will be constructed and tested prior to termination of the old system to ensure that any disruptions will be kept to a minimum and be done during non-peak periods.

During construction, the contractor will make every effort to utilize suitable excess materials (rock and soil) for forming the base of embankments, connection roads, ramps, and approaches. If there is excess material that is unsuitable, or if there is a surplus, the contractor will prepare a waste disposal plan. The plan will identify the location, size, and details of the site(s), as well as, discuss acceptable waste and instructions for stabilization and closure. The contractor will not utilize "sensitive areas" identified on the construction plans for borrow or waste disposal. This plan will be reviewed and approved by governing authorities prior to implementation.

Existing conditions that could pose problems to the constructability of the Preferred Alternative (e.g., utility relocations, stream crossings and relocations) will be handled individually during the final design phase. The final alignment will be placed in the most practical location to avoid construction problem areas and sensitive natural and cultural resources. In-depth geotechnical research, reconnaissance, and core borings will be used to make sound engineering judgments to solve constructability problems as they arise.

3.7 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

In general, the Feasible Alternatives will have similar impacts on the local, short-term uses of resources and the maintenance and enhancement of long-term productivity. Of all the Feasible Alternatives, the majority can be classified as construction of a new facility on new alignment (Alternatives A through X), while the remaining two alternatives are improvements to the existing US 24 facility (Alternatives Y and Z). Upgrading US 24 to a modern four-lane facility is a goal presented in the transportation and comprehensive plans of the ODOT, INDOT, Northeastern Indiana Regional Coordinating Council, Allen County, Paulding County, Defiance County, and the City of New Haven.

While the construction phase of the US 24 project could cause limited short-term impacts on the human environment, other long-term impacts could also occur. Each Feasible Alternative and the Preferred Alternative were evaluated based on its impacts to the surrounding communities, cultural resources, ecological resources and land use. Adverse effects on the environment have been evaluated in detail and conceptual mitigation measures identified.

This 59.7-kilometer (37.4-mile) segment of US 24 from New Haven, Indiana to Defiance, Ohio is located within a predominantly rural area. Presently, there is ample replacement land to accommodate the relocation of any commercial and residential property affected by the Feasible Alternatives. The farming community is also concerned about the potential loss of productive farmland to a new highway and the effects that construction may have on their field drainage tiles. These issues will be addressed as they relate to short and long-term effects. In addition, careful attention will be given to problems identified during design. Proposed mitigation measures, both temporary and permanent, will be implemented to minimize adverse short-term effects and any substantial long-term damage.

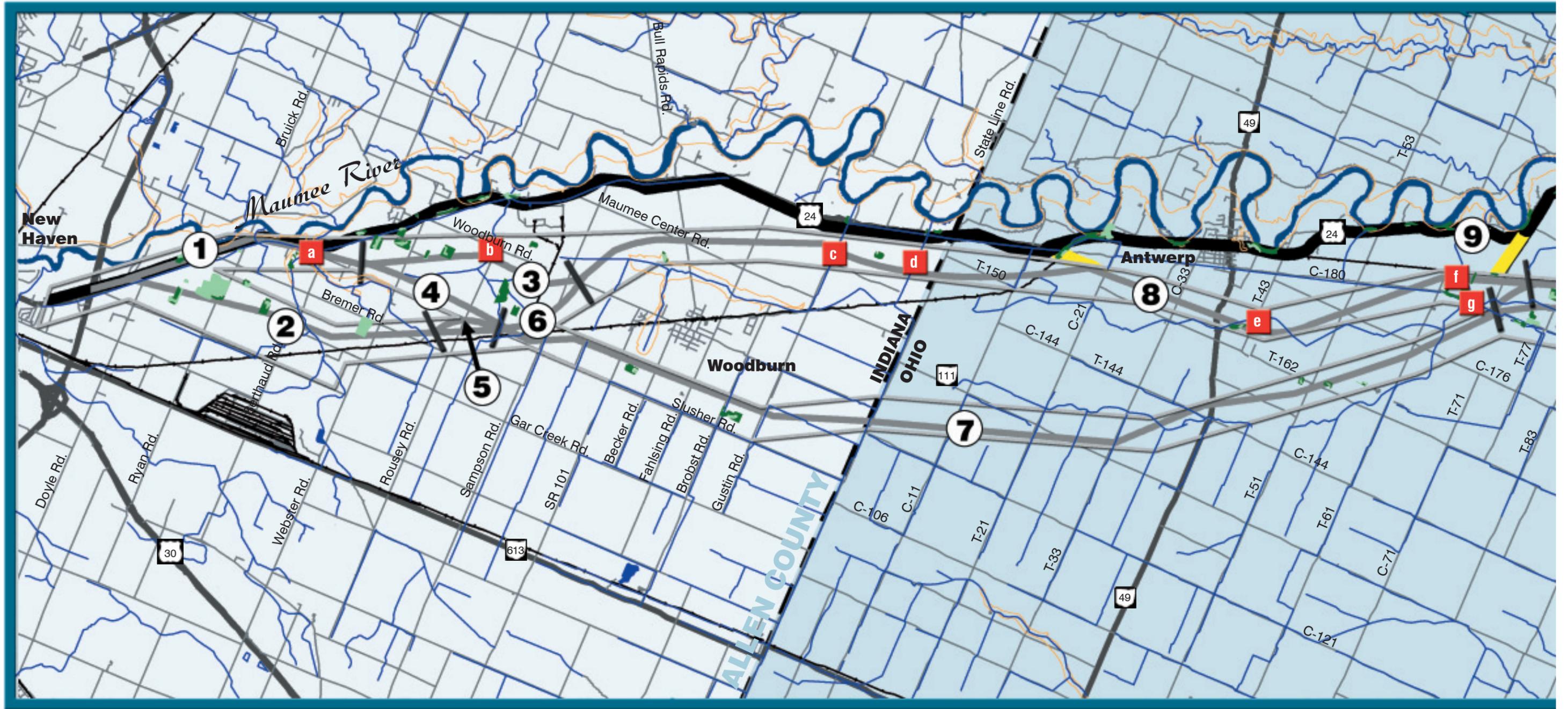
The US 24 project is classified as a long-term productive facility. This project, with its desirable design characteristics, will provide for safe and efficient passage of vehicles when the new US 24 facility is open to traffic and through the design year. Anticipated benefits of the proposed alternatives include reduced operating costs, reduced travel time, improved safety of motorists, and general economic enhancement of the study area and the region. The benefits offered by the long-term productivity of the US 24 project should more than offset the short-term inconvenience and adverse effects on the human environment.

3.8 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION

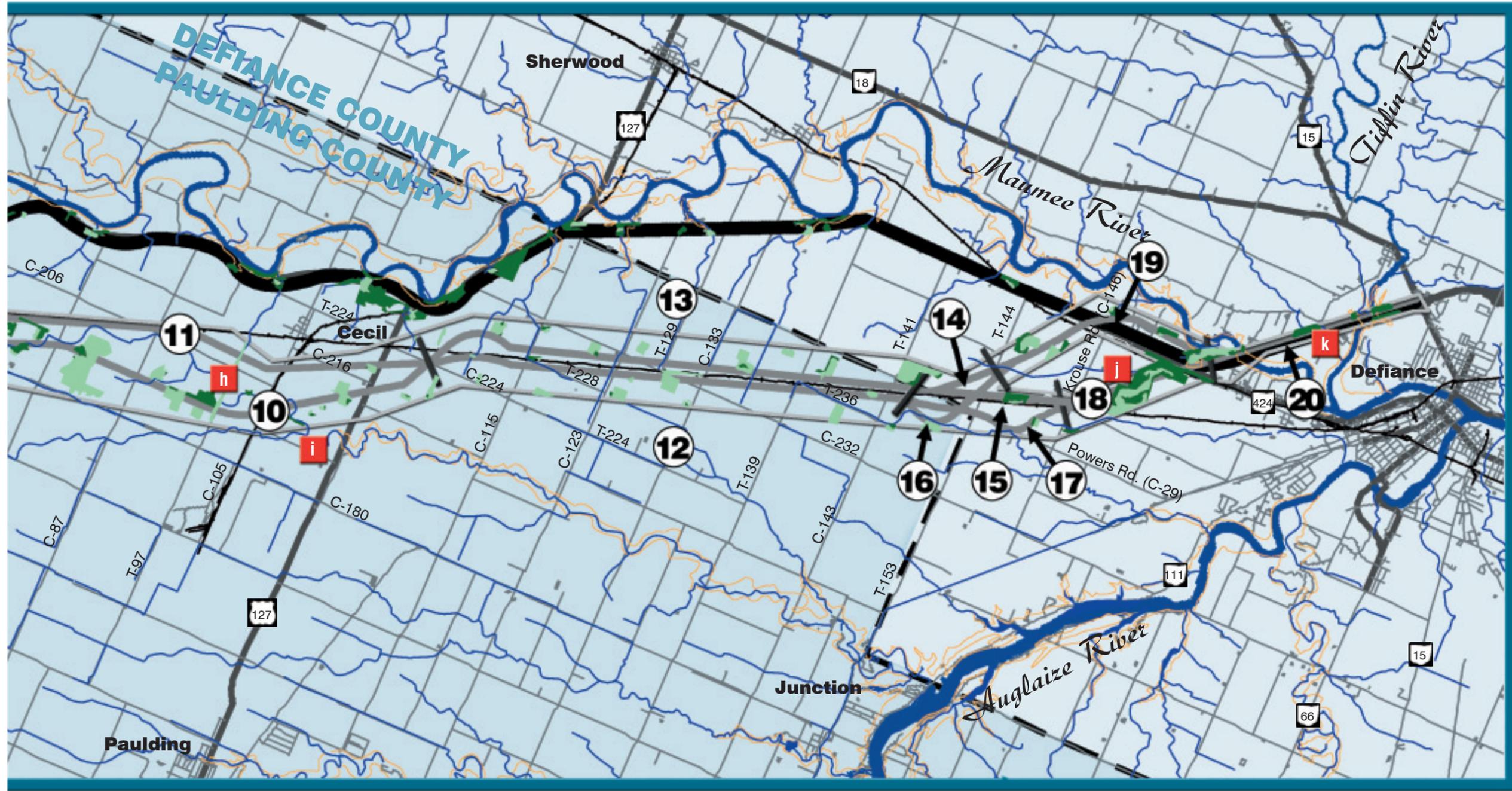
All of the Feasible Alternatives will involve the commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed highway is considered an irreversible commitment. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land could be converted to another use. At present, there is no indication to believe that such a conversion would ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material will be expended to construct the Preferred Alternative (Alternative D-1). Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are not retrievable. However, they are not in short supply and their use would not have an adverse effect upon continued availability of these resources. The US 24 project will also require a substantial one-time expenditure of both state and federal funding which will not be directly retrievable. Indirectly, construction costs can be recovered through highway taxes, user fees (e.g. gasoline tax), and the income taxes generated by a more robust and healthy economy in the study area and the region.

The commitment of these resources is based on the concept that residents in the immediate area as well as those in Indiana and Ohio will benefit by the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services. These benefits are anticipated to outweigh the commitment of resources.



Ecological Resources



Legend

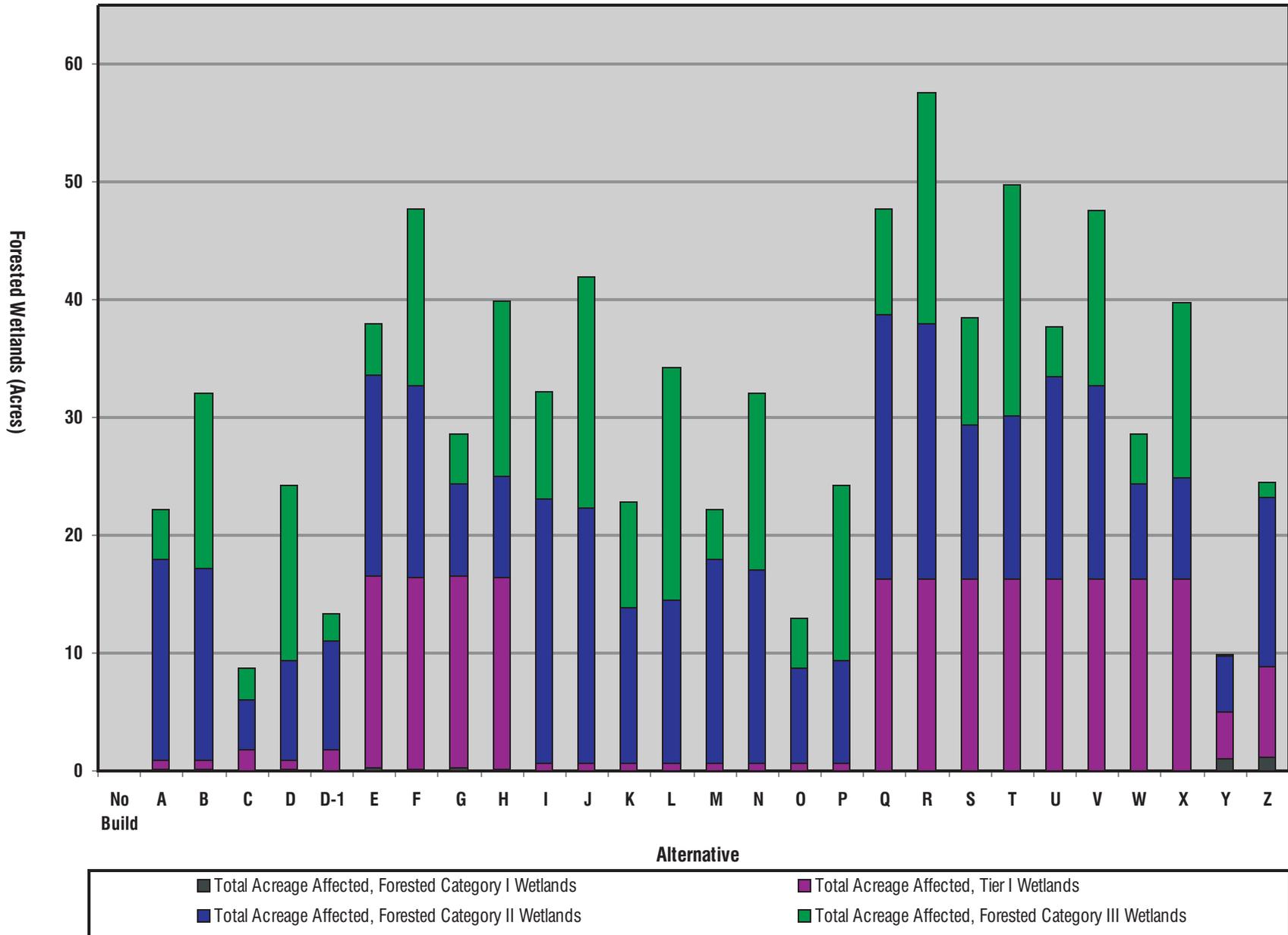
- Upland Forest
- Wetland
- Stream
- 100-year Floodplain Boundary
- Existing US 24
- Corridor boundaries
- Alternatives
- Antwerp Bypass connectors
- Segment boundaries
- 1 Segment numbers
- a Gar Creek
- b Grover Ditch
- c Marsh Ditch
- d Viland Ditch
- e North Creek
- f Zuber Cutoff
- g Wabash & Erie Canal
- h Six Mile Cutoff
- i Six Mile Creek
- j Stevens Ditch
- k Dowe Ditch



Figure 3.1



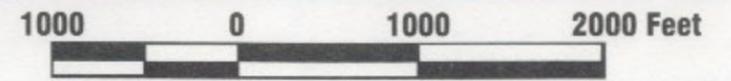
**FIGURE 3.2
COMPARISON OF FORESTED WETLAND IMPACTS**





Legend

- Corridor boundaries
- 15 18 Segment boundaries
- Alternative C
- Alternative D
- Alternative D-1
- Category 2 Wetland
- Category 3 Wetland

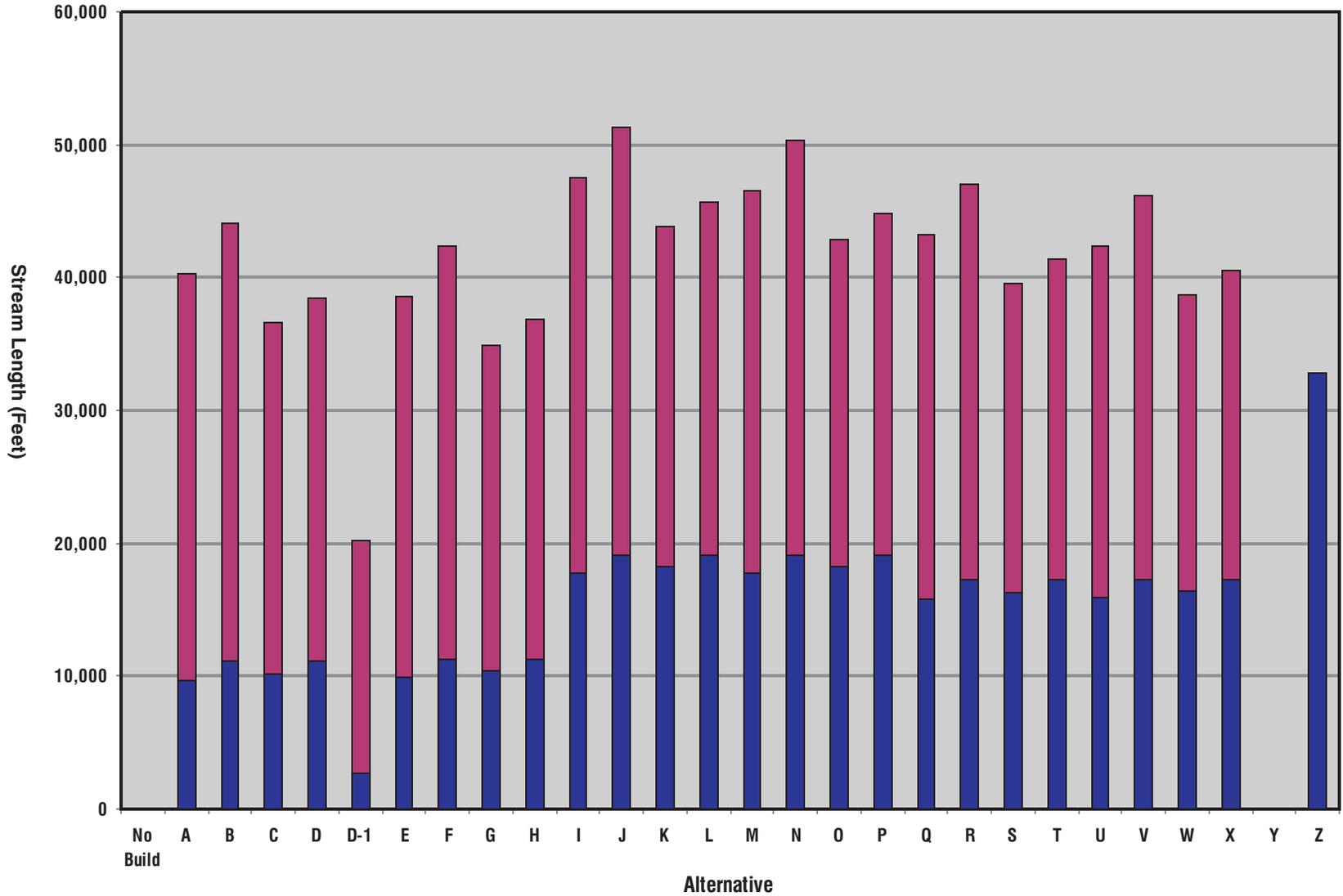


Design Refinements - Minimization of Wetland Impacts

Figure 3.3

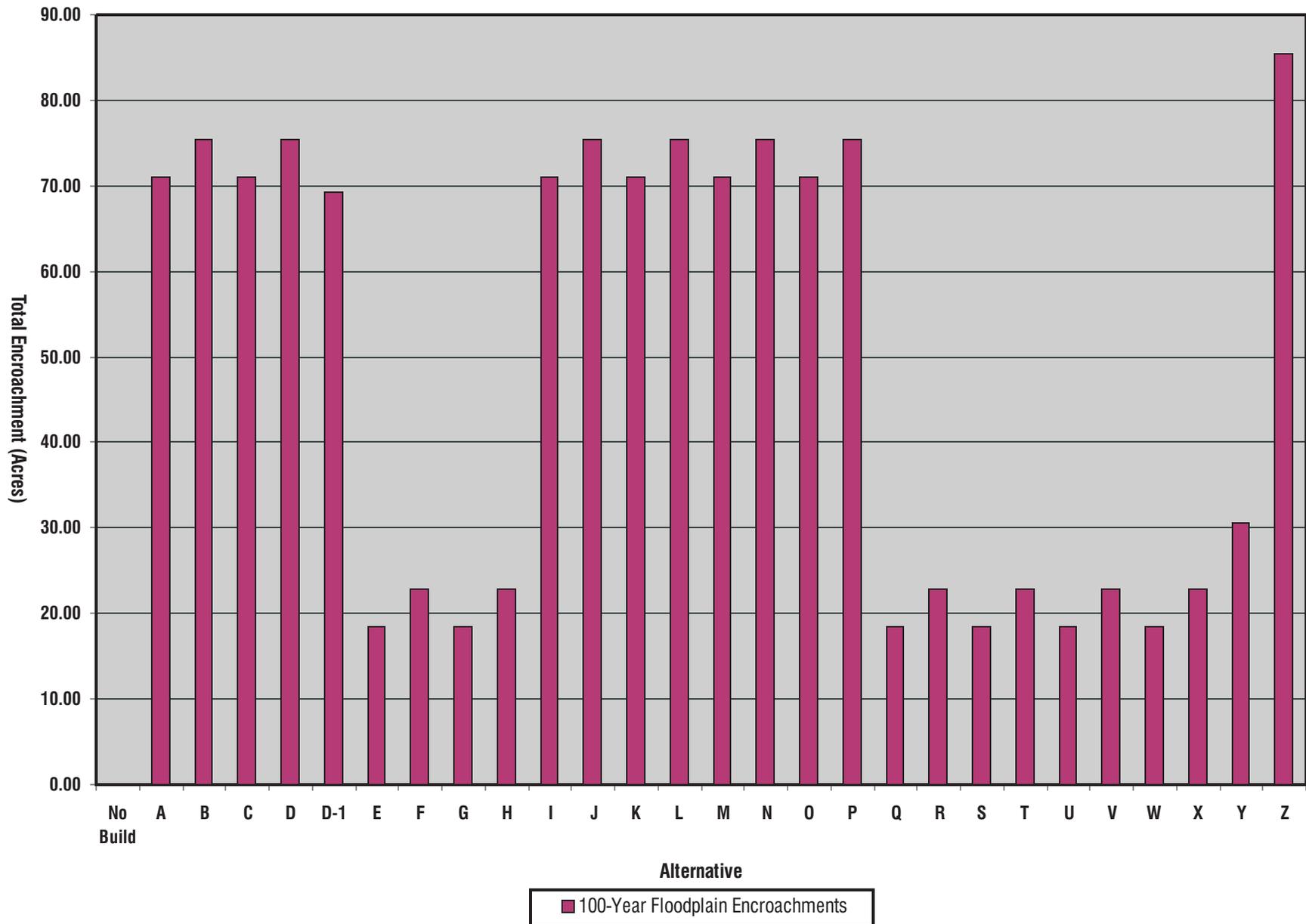


**FIGURE 3.4
COMPARISON OF STREAM IMPACTS**

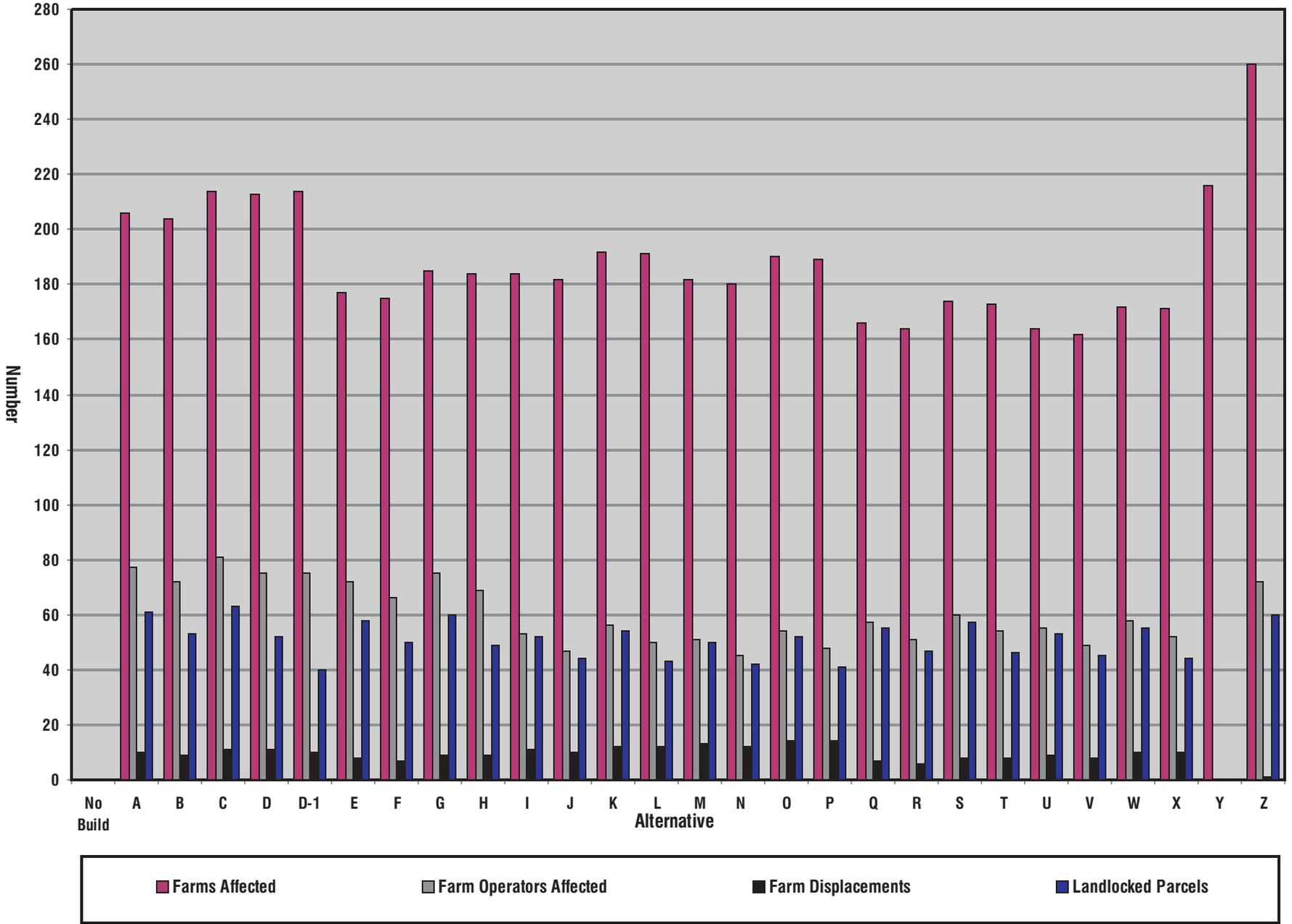


Total Length of Impacts to Warm Water Habitat Streams (in feet)
 Total Length of Impacts to Limited Resource Water Streams (in feet)

**FIGURE 3.5
COMPARISON OF FLOODPLAIN ENCROACHMENTS**



**FIGURE 3.6
COMPARISON OF AGRICULTURAL IMPACTS**



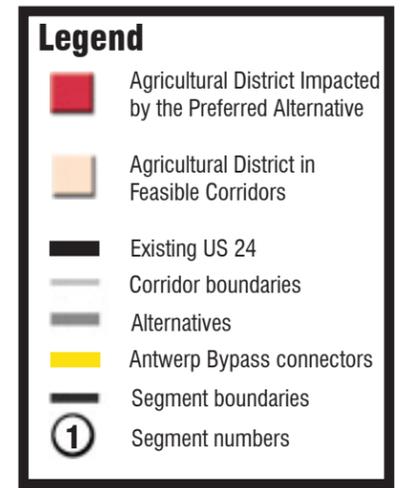
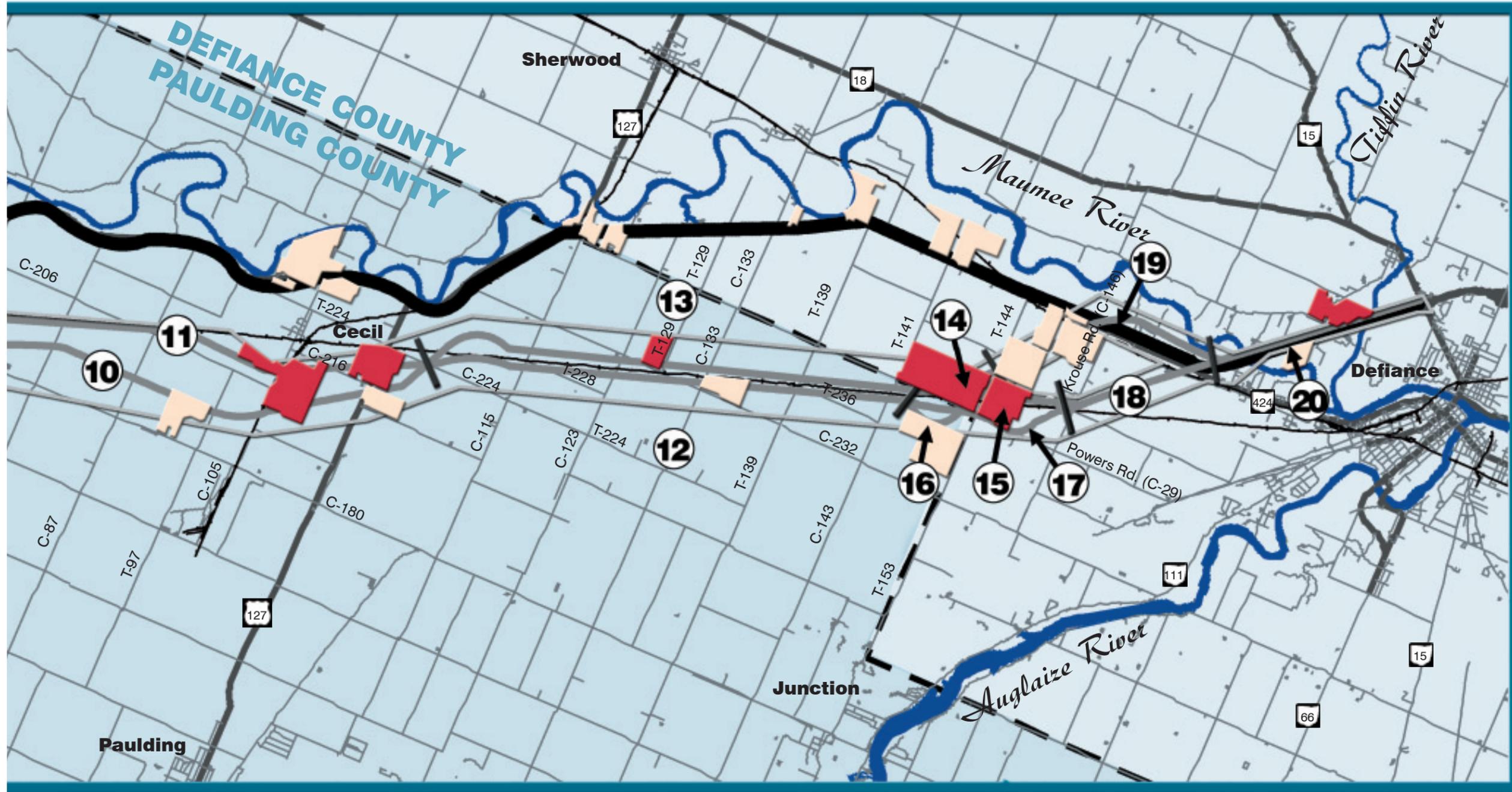
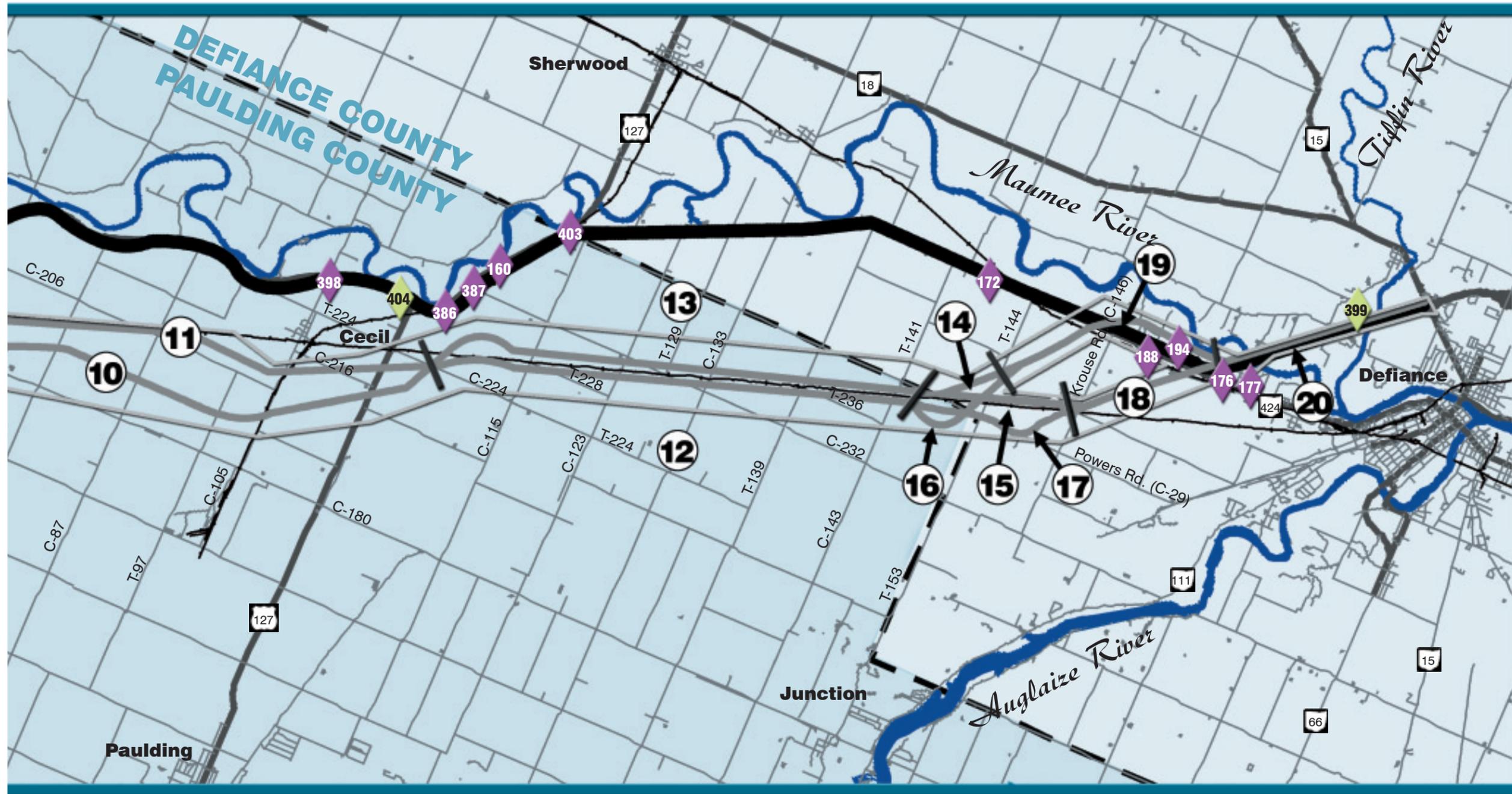


Figure 3.7





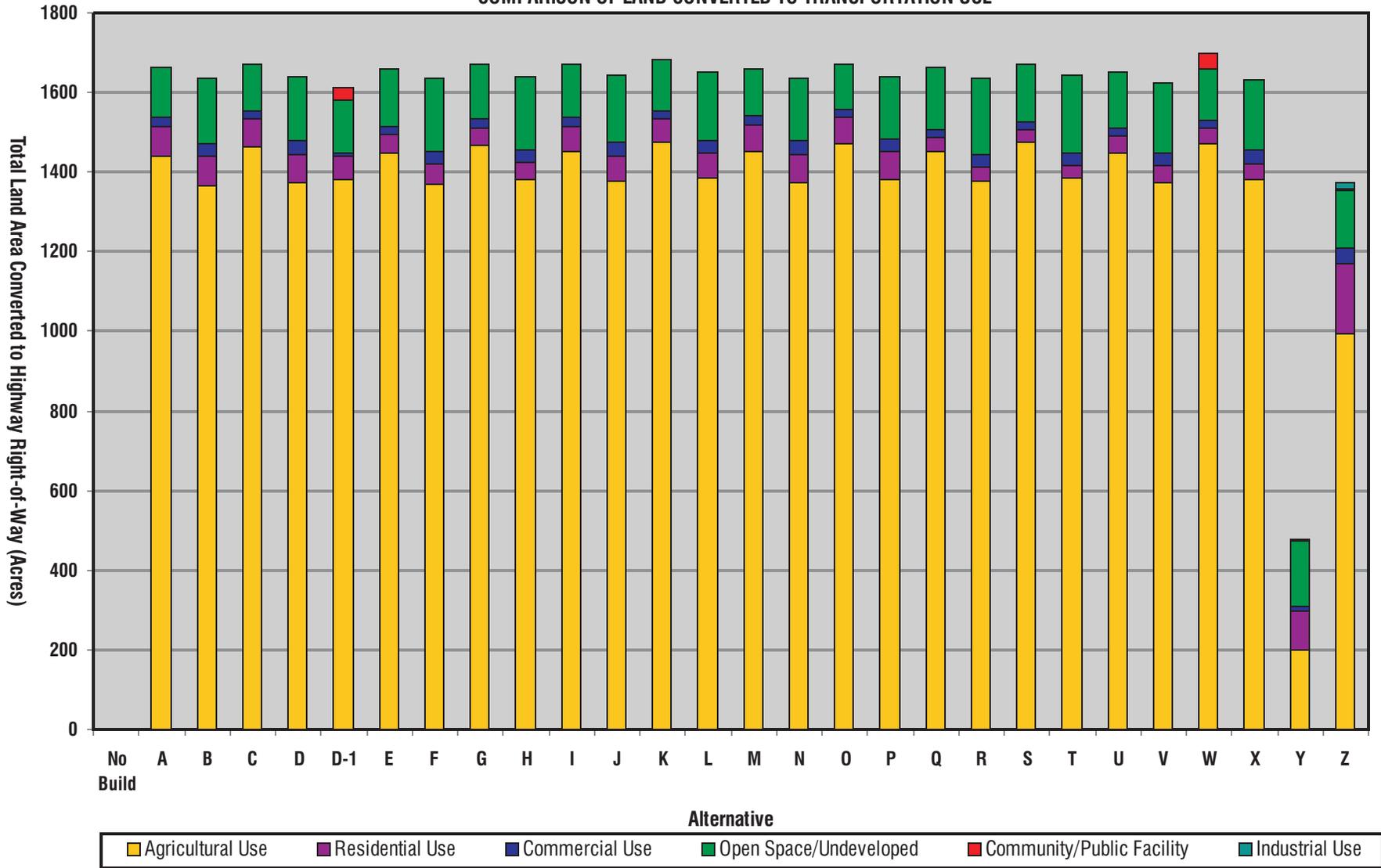
- Legend**
- ◆ Phase I ESA Sites
 - ◆ Phase II ESA Sites
 - Existing US 24
 - Corridor boundaries
 - Alternatives
 - Antwerp Bypass connectors
 - Segment boundaries
 - ①** Segment numbers
- 75. Aeroquip Corp.
 - 73. Spill Location
 - 401. Ladd Residence
 - 402. Rothgeb Garage
 - 400. Culy Residence
 - 83. Country Oasis
 - 86./87. Hanson Aggregate
 - 89./90. Uniroyal Goodrich Tire Manufacturing
 - 127. Antwerp Shell Station
 - 129. Leinard Chevrolet, Buick and Pontiac, Inc.
 - 130. Pop-N-Brew Drive Thru
 - 382. Chucks Tires
 - 383. Noah Yoder Sales
 - 133. Liberty Fuel Stop
 - 135./145. Steve Reiff, Inc.
 - 131./146. Boston Weatherhead - Division of Dana Corp.
 - 381. Sewage disposal facility
 - 380. Inactive/unfenced dump
 - 148. Felix Tijerina Dump
 - 385. Potential dump
 - 384. Abandoned house
 - 388. Waste tire dump II
 - 147. Paul Kennedy Industrial Waste Dump
 - 398. The Lone Tower
 - 404. Hankinson Residence
 - 386. Marathon Gas Station
 - 387. Waste tire dump
 - 160. Vagabond Village
 - 403. Former J and W Carryout
 - 172. Stykemain White GMC
 - 188. Integrity Motor Sales, Inc.
 - 194. Mark Moats Ford
 - 176. Ohio State Highway Patrol Post
 - 177. ODOT Defiance County Garage
 - 399. Smith Farms

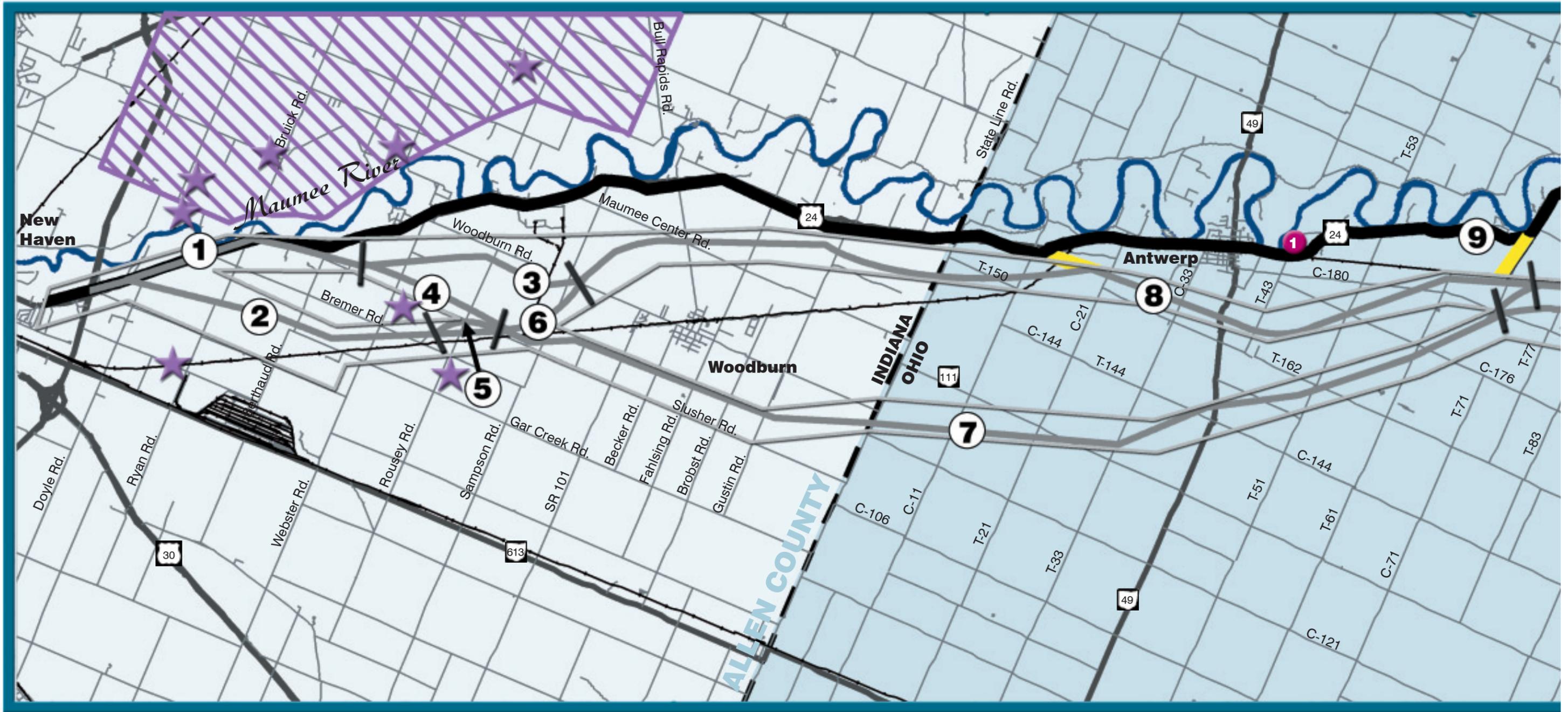


Figure 3.8

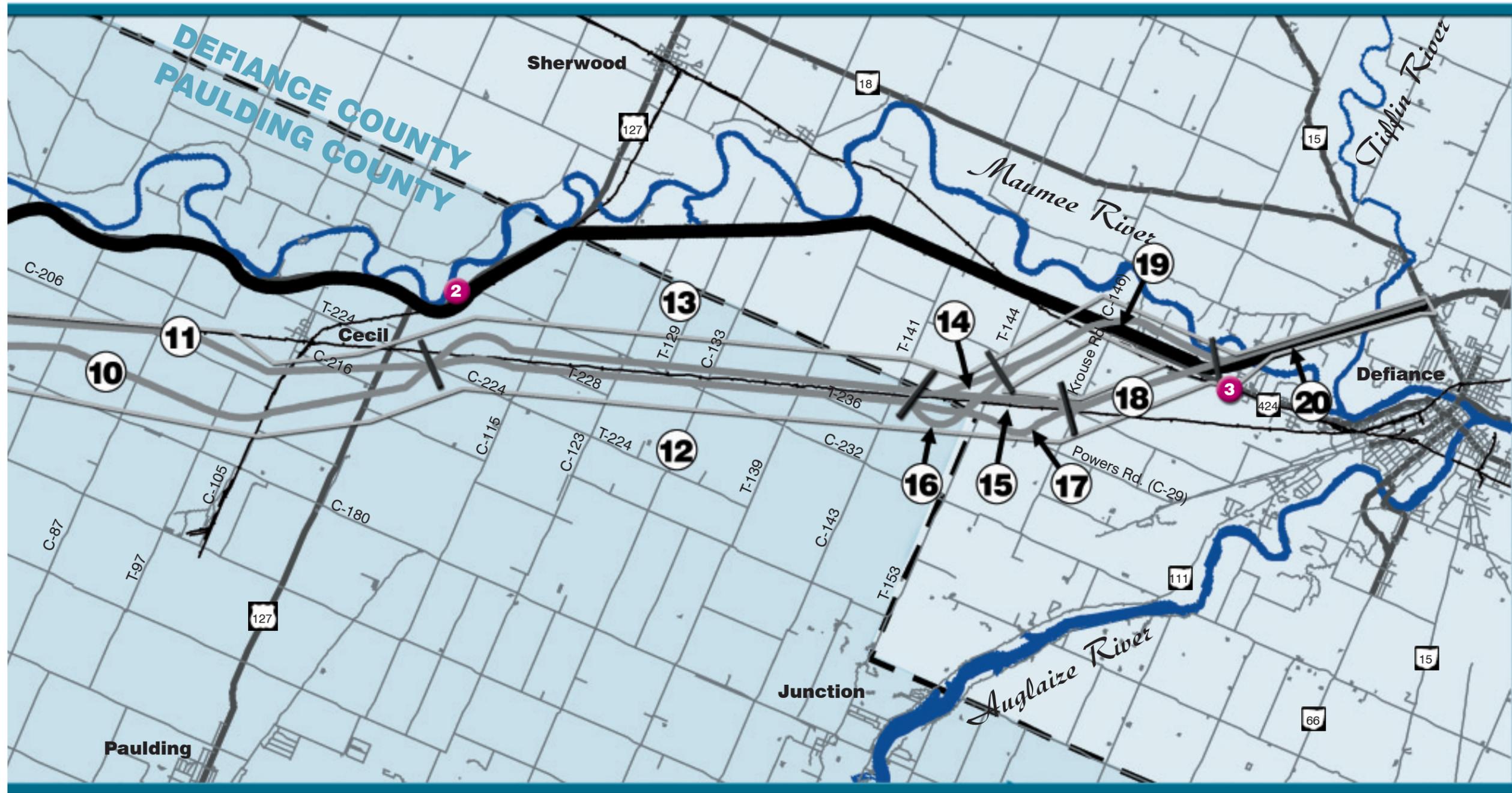


**FIGURE 3.10
COMPARISON OF LAND CONVERTED TO TRANSPORTATION USE**





Environmental Justice Concerns



Legend

- Allen County Amish Community
- Properties owned by Amish
- Subdivisions/neighborhoods with environmental justice concerns
- Existing US 24
- Corridor boundaries
- Alternatives
- Antwerp Bypass connectors
- Segment boundaries
- Segment numbers

1. Unnamed subdivision
2. Brentwood Court Mobile Home Park
3. Bohlman Park

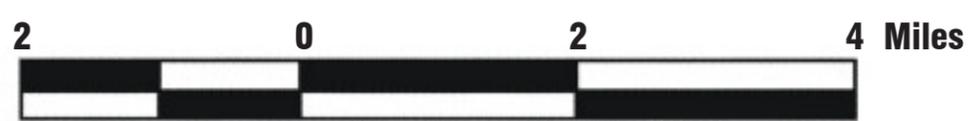
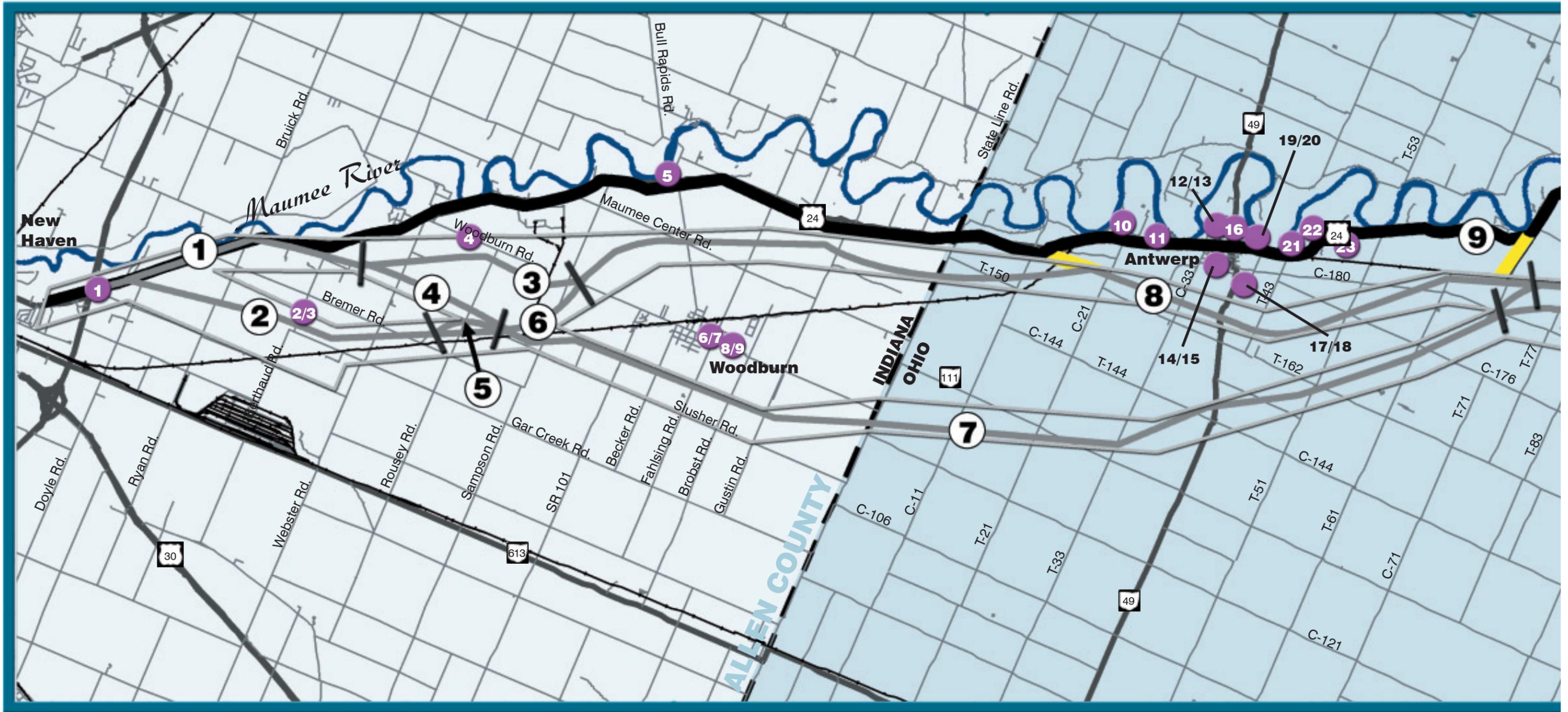
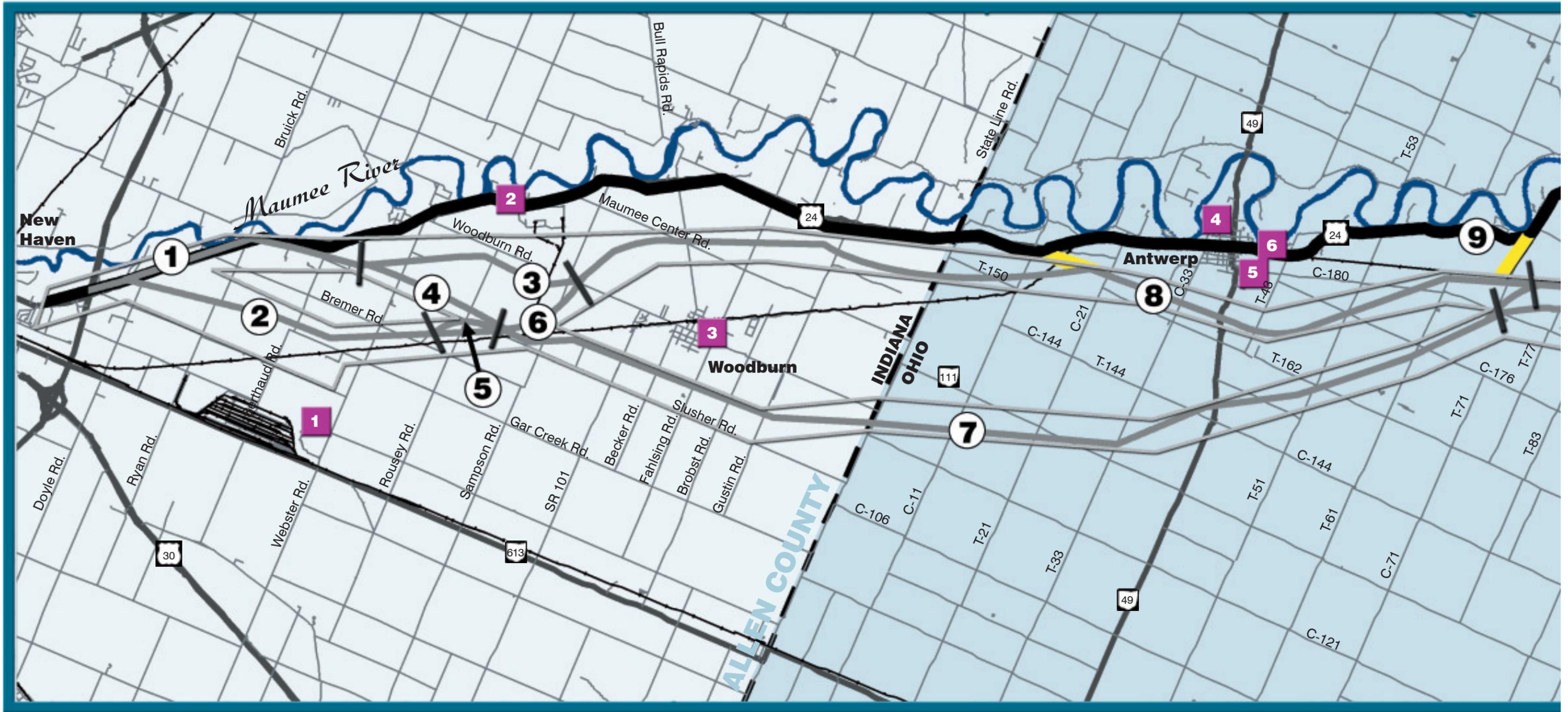


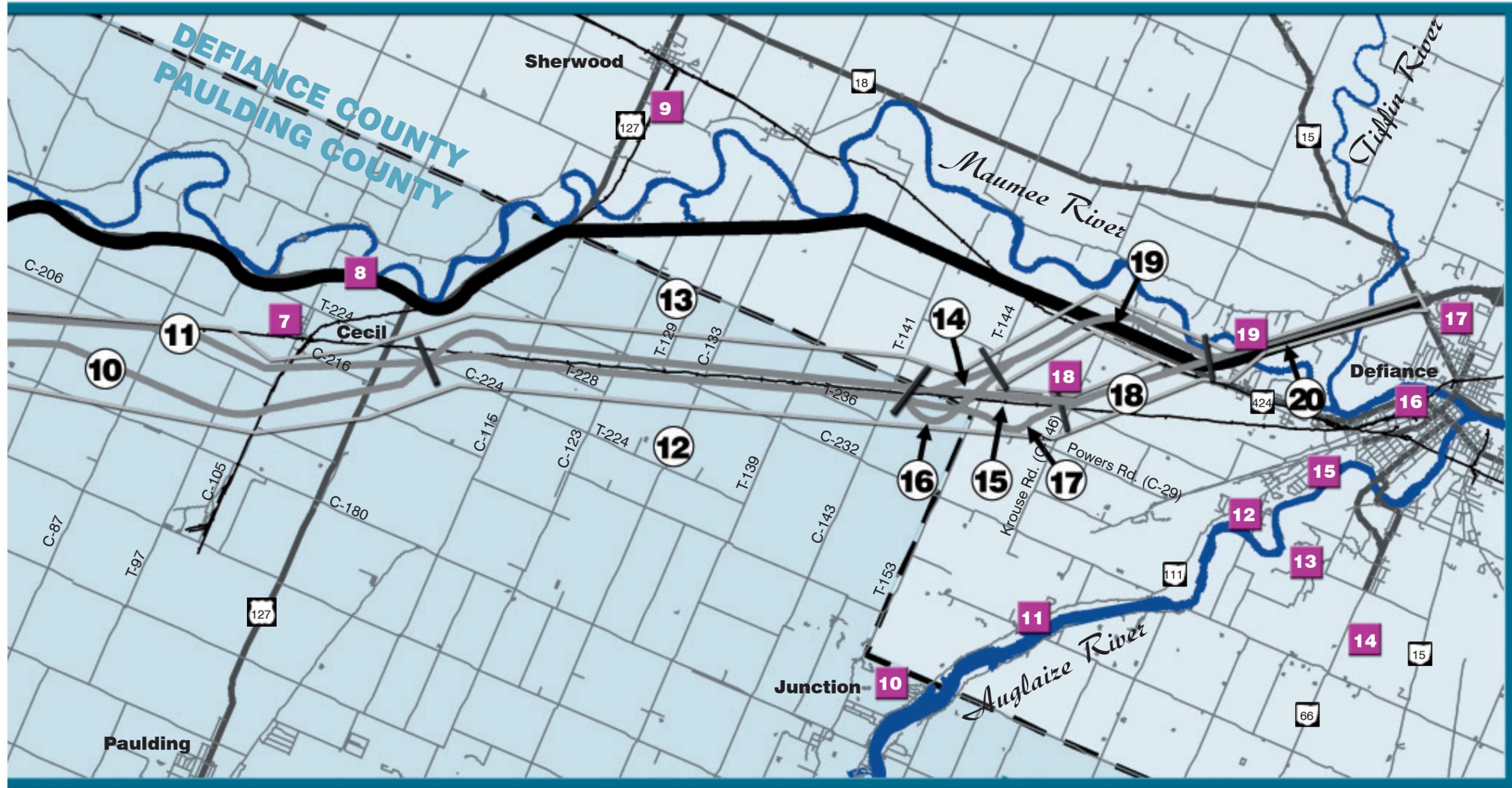
Figure 3.11



Community Facilities



Parks/Recreation Facilities



Legend

- Park/Recreational Facility
- Existing US 24
- Corridor boundaries
- Alternatives
- Antwerp Bypass connectors
- Segment boundaries
- 1 Segment numbers

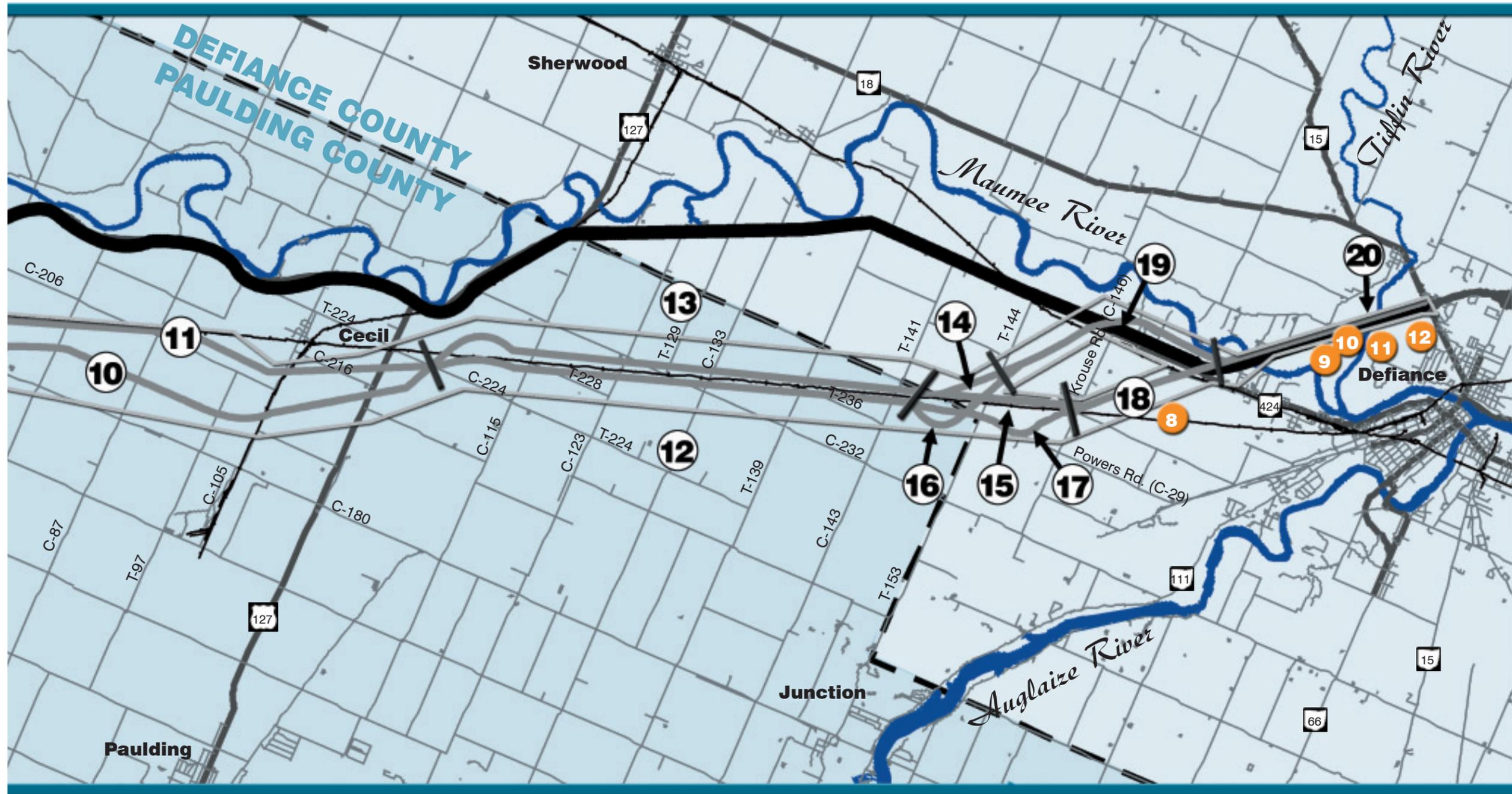
1. Local Park
2. Public Fishing Area
3. Local Park
4. Antwerp Community Park
5. Antwerp Schools Athletic Facilities
6. Riverside Park
7. Cecil Community Park
8. New Rochester Park
9. Village Park
10. Auglaize Country Club
11. River Boat Launch
12. Bronson Park
13. Camp Lakota (Boy Scouts of America, Shawnee Council)
14. VFW 3360 Park
15. Tecumseh Park
16. Second Ward Park
17. Diehl Park
18. Auglaize Village
19. Maumee River



Figure 3.13



Economic Development Sites



- Legend**
- Economic Development Area/Projects
 - Existing US 24
 - Corridor boundaries
 - Alternatives
 - Antwerp Bypass connectors
 - Segment boundaries
 - Segment numbers
1. Doyle Road Industrial Site
 2. New Haven Industrial Site (includes Canal Place EDA)
 3. Bandalier Economic Development Area
 4. Casad East Economic Development Area/Casad Industrial Park
 5. Woodburn Industrial Park
 6. Antwerp Schools (proposed expansion)
 7. Antwerp Industrial Park
 8. Enterprise Industrial Park
 9. Smith Zachrich Development Site
 10. Fox Run Executive Park
 11. Olson Enterprise Park
 12. Defiance Hospital

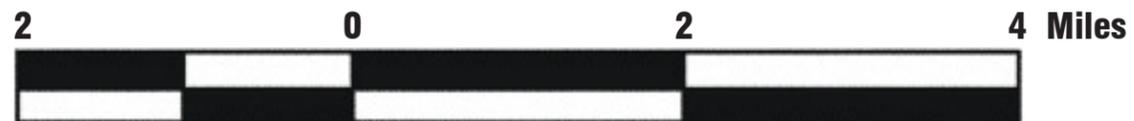
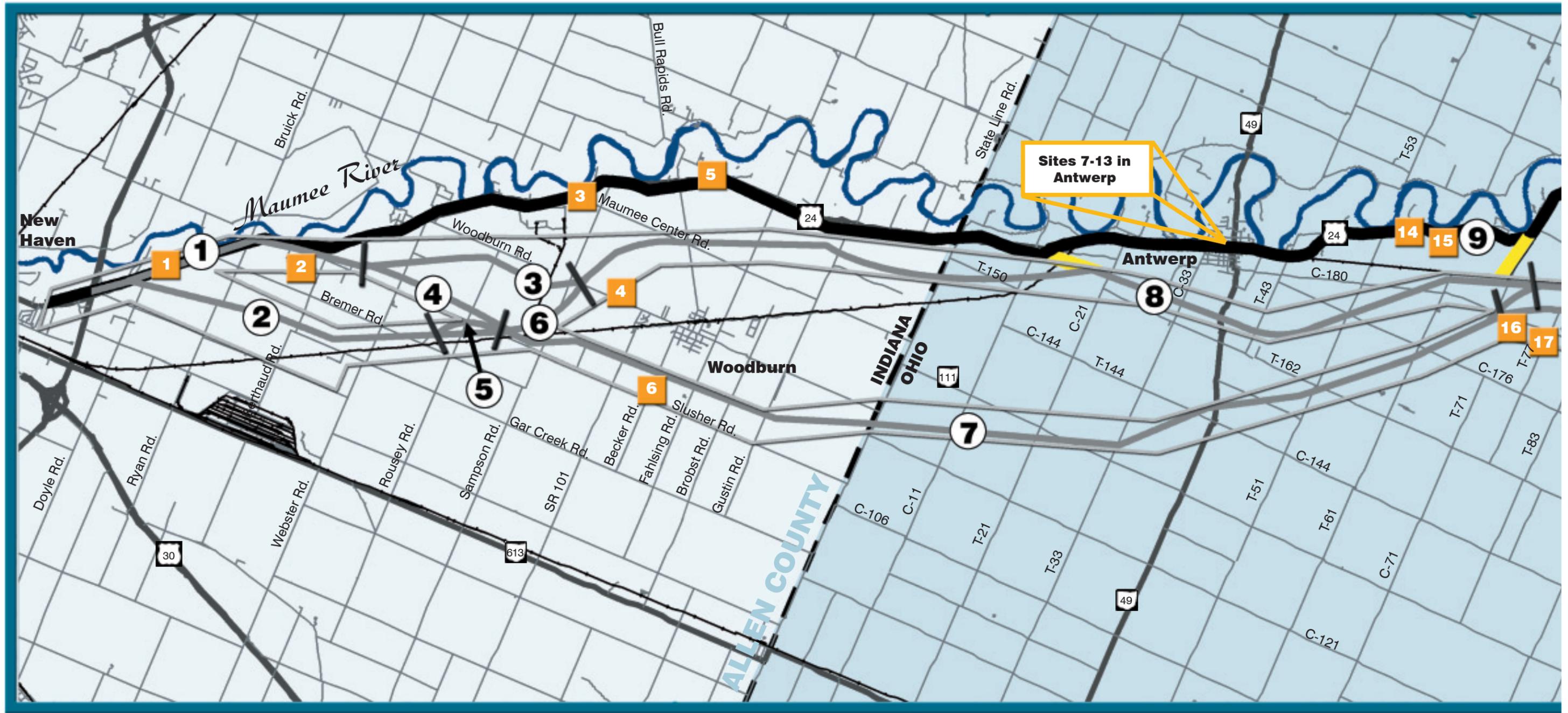


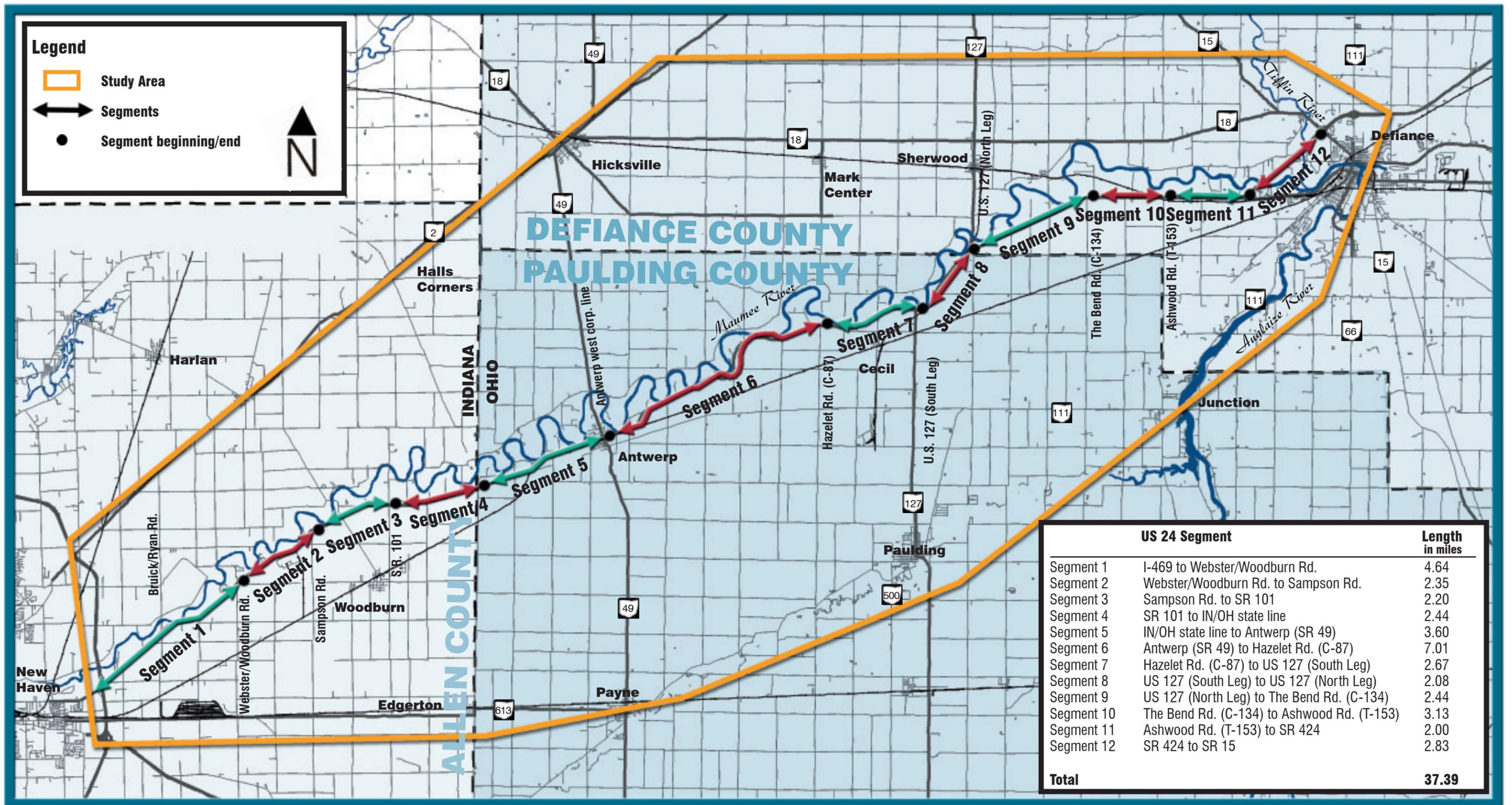
Figure 3.14



Legend		Segments		Segments		Segments		Segments		Segments			
Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments	Alternatives	Segments		
A	1-3-8-11-12-16-19-20	D	1-3-8-11-13-15-18-20	H	2-6-8-11-13-15-18-20	L	1-4-7-10-13-15-18-20	P	1-4-7-9-11-13-15-18-20	T	2-5-7-10-13-15-18-20	X	2-5-7-9-11-13-15-18-20
B	1-3-8-11-12-17-18-20	E	2-6-8-11-12-16-19-20	I	1-4-7-10-12-16-19-20	M	1-4-7-9-11-12-16-19-20	Q	2-5-7-10-12-16-19-20	U	2-5-7-9-11-12-16-19-20	Y	2-Lane on Existing US 24
C	1-3-8-11-13-14-19-20	F	2-6-8-11-12-17-18-20	J	1-4-7-10-12-17-18-20	N	1-4-7-9-11-12-17-18-20	R	2-5-7-10-12-17-18-20	V	2-5-7-9-11-12-17-18-20	Z	4-Lane on Existing US 24 with Antwerp Bypass
		G	2-6-8-11-13-14-19-20	K	1-4-7-10-13-14-19-20	O	1-4-7-9-11-13-14-19-20	S	2-5-7-10-13-14-19-20	W	2-5-7-9-11-13-14-19-20		



Historic Resources



Traffic Analysis Roadway Segments

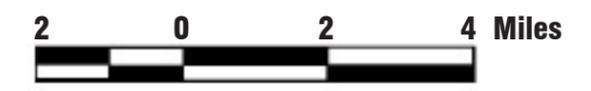
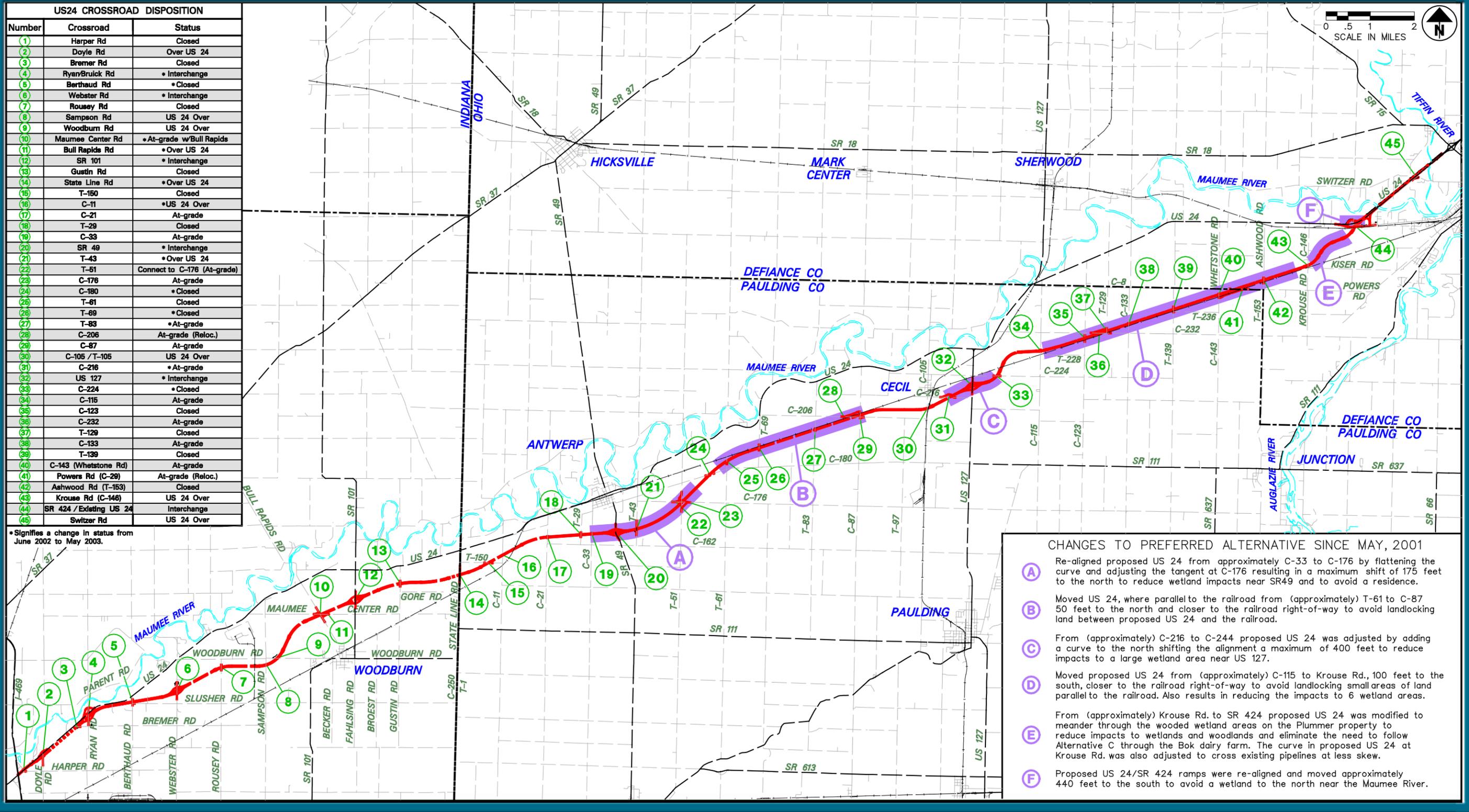


Figure 3.16



US24 CROSSROAD DISPOSITION		
Number	Crossroad	Status
1	Harper Rd	Closed
2	Doyle Rd	Over US 24
3	Bremer Rd	Closed
4	Ryan/Bruick Rd	* Interchange
5	Berthaud Rd	* Closed
6	Webster Rd	* Interchange
7	Rousey Rd	Closed
8	Sampson Rd	US 24 Over
9	Woodburn Rd	US 24 Over
10	Maumee Center Rd	*At-grade w/Bull Rapids
11	Bull Rapids Rd	*Over US 24
12	SR 101	* Interchange
13	Gustin Rd	Closed
14	State Line Rd	*Over US 24
15	T-150	Closed
16	C-11	*US 24 Over
17	C-21	At-grade
18	T-29	Closed
19	C-33	At-grade
20	SR 49	* Interchange
21	T-43	*Over US 24
22	T-51	Connect to C-176 (At-grade)
23	C-176	At-grade
24	C-180	* Closed
25	T-61	Closed
26	T-69	* Closed
27	T-83	*At-grade
28	C-206	At-grade (Reloc.)
29	C-87	At-grade
30	C-105 / T-105	US 24 Over
31	C-216	* At-grade
32	US 127	* Interchange
33	C-224	* Closed
34	C-116	At-grade
35	C-123	Closed
36	C-232	At-grade
37	T-129	Closed
38	C-133	At-grade
39	T-139	Closed
40	C-143 (Whetstone Rd)	At-grade
41	Powers Rd (C-29)	At-grade (Reloc.)
42	Ashwood Rd (T-153)	Closed
43	Krouse Rd (C-146)	US 24 Over
44	SR 424 / Existing US 24	Interchange
45	Switzer Rd	US 24 Over

* Signifies a change in status from June 2002 to May 2003.



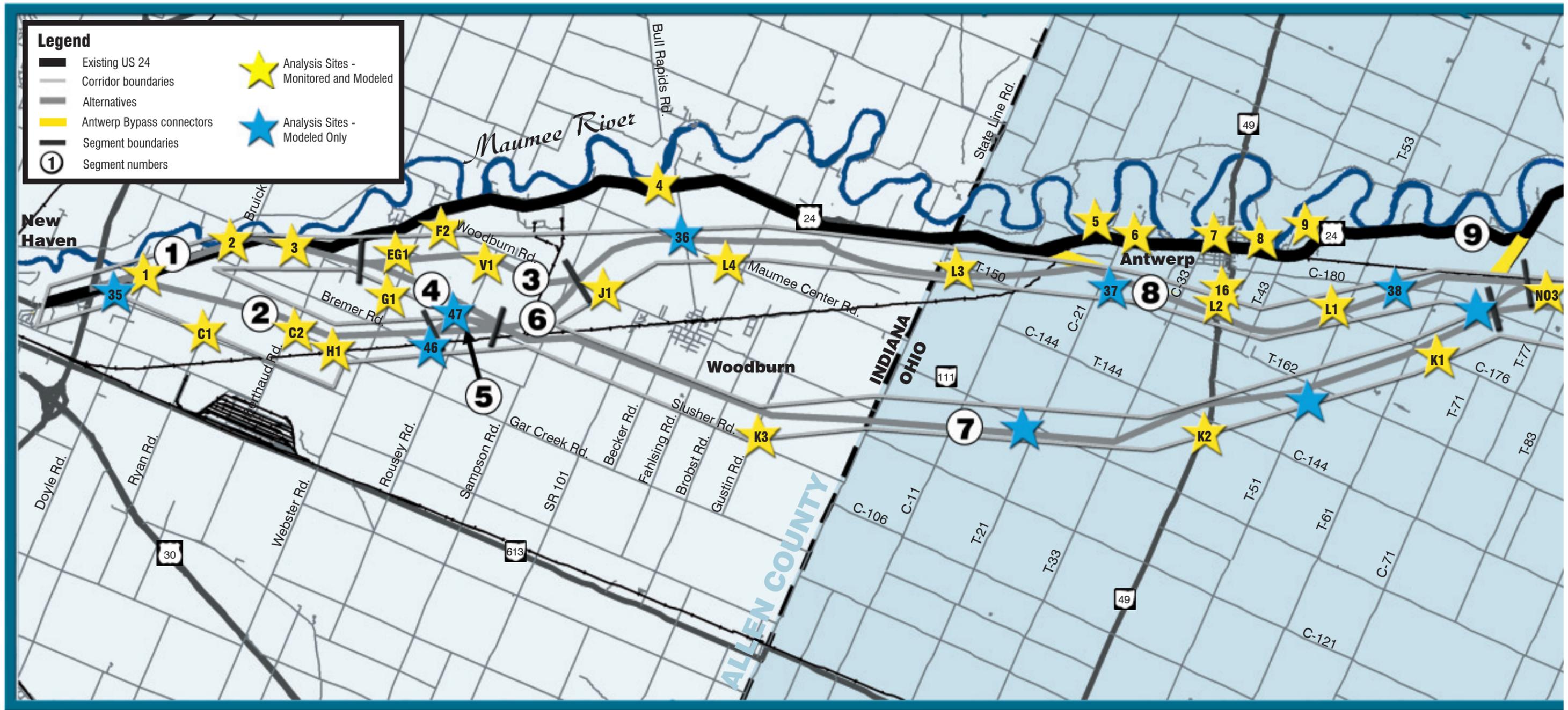
- CHANGES TO PREFERRED ALTERNATIVE SINCE MAY, 2001**
- (A)** Re-aligned proposed US 24 from approximately C-33 to C-176 by flattening the curve and adjusting the tangent at C-176 resulting in a maximum shift of 175 feet to the north to reduce wetland impacts near SR49 and to avoid a residence.
 - (B)** Moved US 24, where parallel to the railroad from (approximately) T-61 to C-87 50 feet to the north and closer to the railroad right-of-way to avoid landlocking land between proposed US 24 and the railroad.
 - (C)** From (approximately) C-216 to C-244 proposed US 24 was adjusted by adding a curve to the north shifting the alignment a maximum of 400 feet to reduce impacts to a large wetland area near US 127.
 - (D)** Moved proposed US 24 from (approximately) C-115 to Krouse Rd., 100 feet to the south, closer to the railroad right-of-way to avoid landlocking small areas of land parallel to the railroad. Also results in reducing the impacts to 6 wetland areas.
 - (E)** From (approximately) Krouse Rd. to SR 424 proposed US 24 was modified to meander through the wooded wetland areas on the Plummer property to reduce impacts to wetlands and woodlands and eliminate the need to follow Alternative C through the Bok dairy farm. The curve in proposed US 24 at Krouse Rd. was also adjusted to cross existing pipelines at less skew.
 - (F)** Proposed US 24/SR 424 ramps were re-aligned and moved approximately 440 feet to the south to avoid a wetland to the north near the Maumee River.



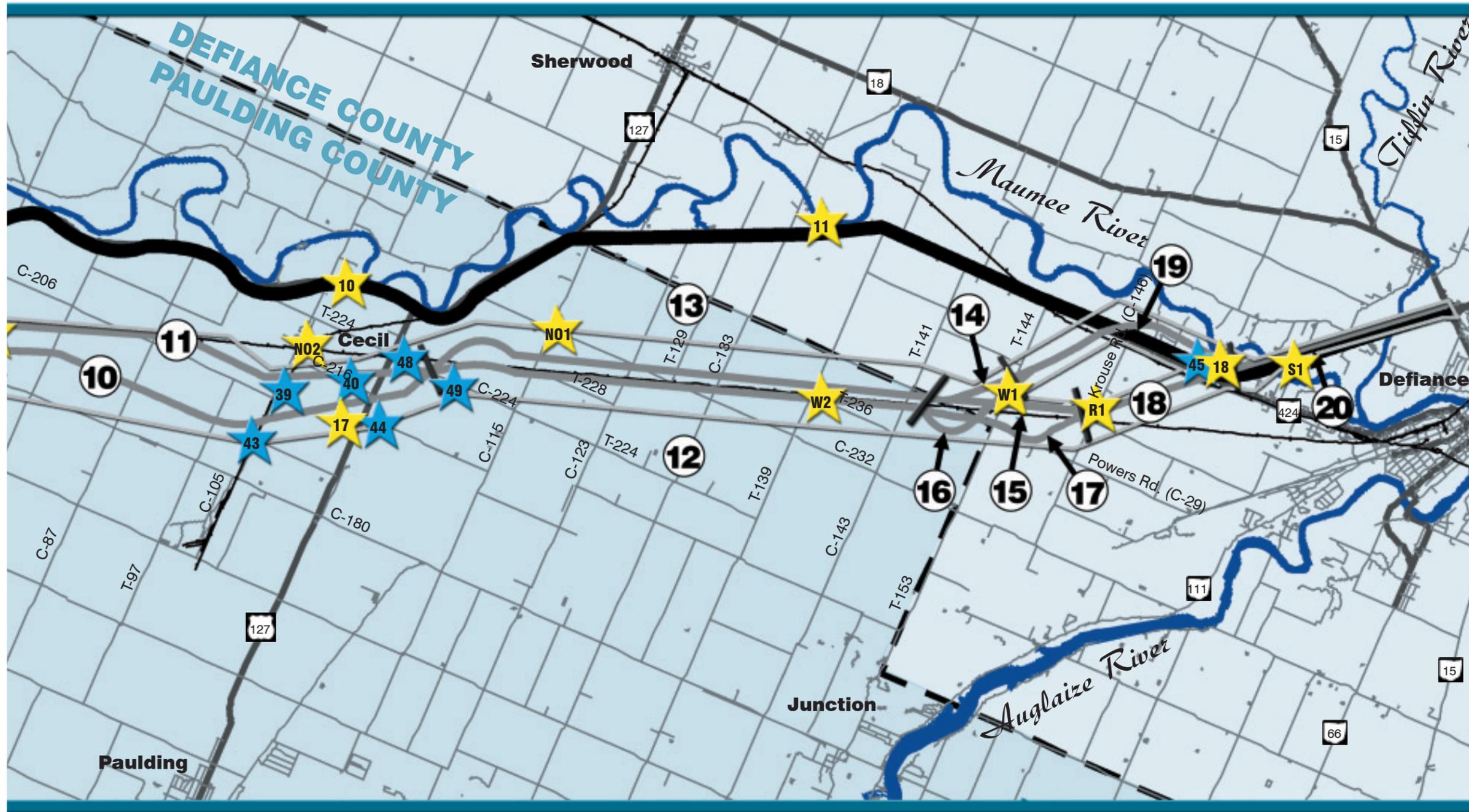
Proposed Crossroad Design

Figure 3.17





Noise Analysis Sites



Legend	
Receiver Location	Land Use Activity
1. US 24 & Doyle Rd.	RES
2. US 24 & Bremer Rd.	RES
3. US 24, Havenwood Est.	RES
4. US 24 & Ev Mennonite Cemetery	CEM
5. US 24 & Kingdom Hall of Jehovah's Witnesses	CH
6. US 24 & Mt. Calvary Lutheran	CH
7. US 24 & Antwerp Elem. School	SCH
8. US 24 & Riverside Park	PARK
9. US 24 & First Baptist Church	CH
10. US 24 & Immaculate Con. Cemetery	CEM
11. US 24 & Brentwood Court	RES
16. SR 49	RES/AGR
17. US 127	RES/AGR
18. Bohlman Trailer Park	RES
35. US 24 East of I-469	RES
36. Maumee Center Rd. East of Sampson Rd.	RES
37. Etters Rd. at Collins Rd.	RES
38. Wabash Rd. West of Gosner Rd.	RES
39. C-105 North of Hargrave Rd.	RES
40. US 127 South of US 24	RES
41. T-51 South of Etters Rd.	RES
42. Wabash Rd. East of Knox Rd.	RES
43. C-105 North of Woodring Rd.	RES
44. US 127 South of Vogel Rd.	RES
45. US 24 West of SR 424	RES
46. Rousey Rd. at Bremer Rd.	RES
47. North of Slusher Rd. East of Rousey Rd.	RES
48. Weippert Rd. East of US 127	RES
49. Weippert Rd. East of US 127	RES
50. Collins Rd. at SR 111	RES
C1. Harper Rd. & Ryan Rd.	RES
C2. Berthaud Rd. South of Bremer Rd.	RES
EG1. Webster Rd. North of Slusher Rd.	RES
F2. Woodlan High School	SCH
G1. Slusher Rd. East of Webster Rd.	RES
H1. Gar Creek Rd. West of Webster Rd.	RES
J1. Woodburn Rd.	RES
K1. C-176 East of Gosner Rd.	RES
K2. SR 49 South of Gasser Rd.	RES
K3. Slusher Rd. East of Gustin Rd.	RES
L1. C-176 East of T-43	RES
L2. SR 49 North of T-162	RES
L3. T-150 West of Ewing Rd.	RES
L4. Maumee Center Rd. West of SR 101	RES
N01. C-115 at C-232	RES
N02. Church of God, C-105 South of C-216	CH
N03. Wunder Rd. North of Wabash Rd.	RES
R1. Auglaize Village, C-146 North of Kiser Rd.	RES
S1. State Service Rd. next to US 24 North of SR 424	RES
V1. Rousey Rd. South of Woodburn Rd.	RES
W1. Ashwood Rd. North of Powers Rd.	RES
W2. C-139 at T-236	RES

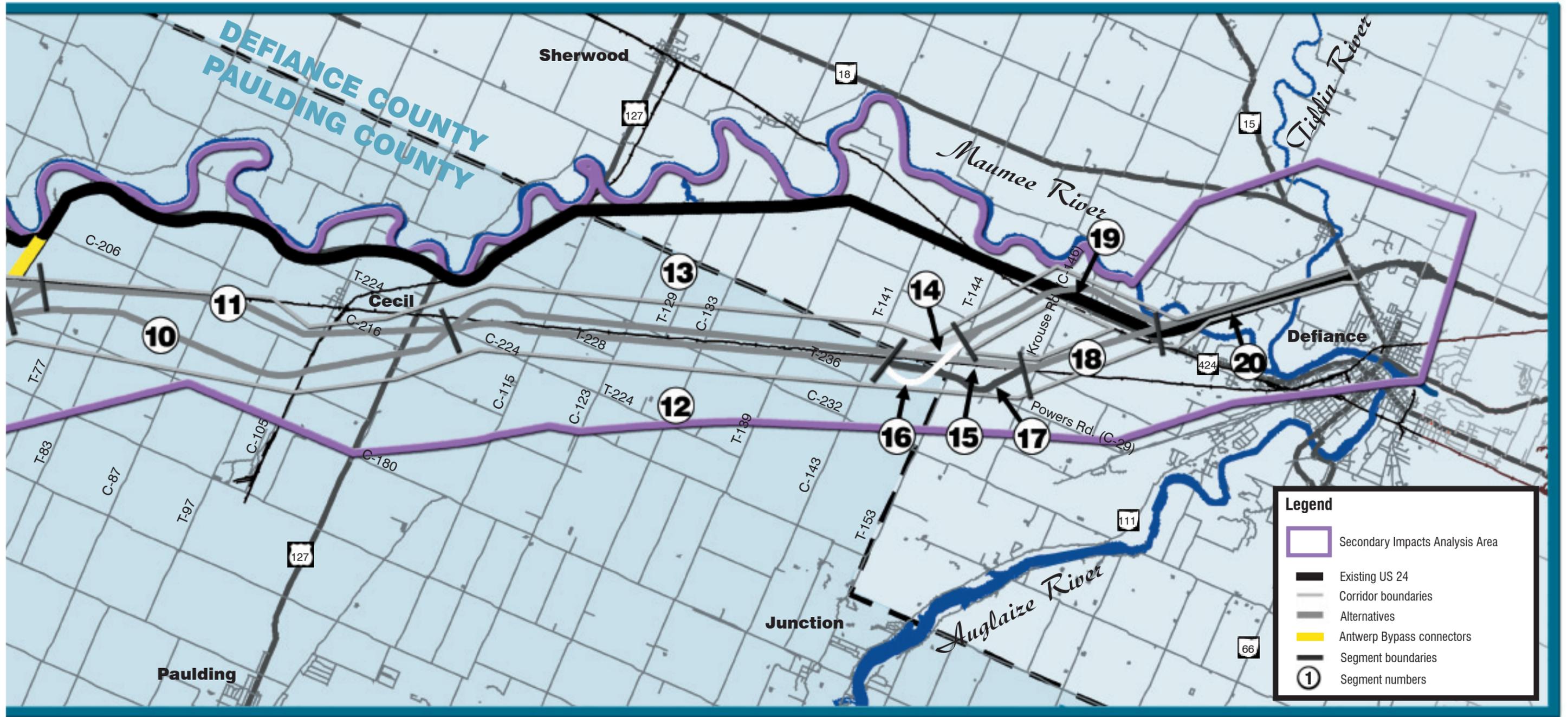


Figure 3.18





Secondary Impacts Analysis Study Area



Legend

- Secondary Impacts Analysis Area
- Existing US 24
- Corridor boundaries
- Alternatives
- Antwerp Bypass connectors
- Segment boundaries
- Segment numbers

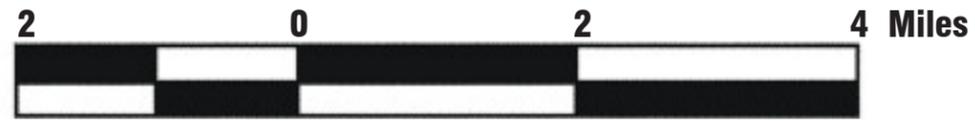


Figure 3.19



4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 SELECTION OF THE PREFERRED ALTERNATIVE

4.1.1 Screening Analysis

In May 2002, the Ohio Department of Transportation (ODOT) announced that Alternative D-1 had been identified as the Preferred Alternative for the US 24 New Haven to Defiance project. The recommendation of D-1 as the Preferred Alternative is based on in-depth analysis of the potential environmental impacts associated with the Feasible Alternatives; agency review of the Preliminary Draft Environmental Impact Statement (PDEIS), public input; results of detailed environmental studies conducted on Alternatives C and D; additional engineering design development to minimize impacts; and further coordination with resource agencies. The alternative screening process, summarized below, is described in detail in Section 2 of this Draft Environmental Impact Statement (DEIS).

The 26 Feasible Alternatives developed for the US 24 New Haven to Defiance project were analyzed in a three-step screening process leading to the selection of Alternative C as the Preferred Alternative. In the first step, the 26 alternatives and the No Build alternative were analyzed to determine if they met the established purpose and need of the project, based on the following criteria:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

Of the alternatives evaluated in the first step, Alternative Y and the No Build alternative did not meet the purpose and need for the project and were eliminated from further consideration as the Preferred Alternative.

In the second step of the screening analysis, the potential environmental impacts were assessed for the remaining 25 Feasible Alternatives. This analysis focused on environmental resources unique to the study area and also those that require state and federal permits, if affected. The environmental resources analyzed in the Step II screening were farmlands, woodlots, Category 3 forested wetlands, streams, and displacements. Specific factors evaluated relative to these categories included:

- Farmlands - total area of productive farmland impacted, number of landlocked parcels, total area of farmland landlocked, number of agricultural districts affected, number of farm operators affected, and number of farm residences displaced.
- Woodlots - number of woodlots affected and total area of woodlots affected.
- Category 3 Wetlands - total area affected.
- Streams - number of stream crossings and total linear feet of streams impacted.
- Displacements - number of residences and businesses displaced.

All parameters were evaluated quantitatively and considered to be of equal significance in the analysis; no priorities or rankings were assigned to any categories for the screening analysis. The ranges of impacts were separated into two categories relative to the median value of the data set: values equal to or lower than the median, and values higher than the median of the data set. Feasible Alternatives with seven or more of the 13 measured parameters above the median value of the data set (>50%) were eliminated from further consideration as the Preferred Alternative. This process eliminated ten of the 25 remaining Feasible Alternatives, specifically Alternatives B, D, I, K, L, N, O, P, Q, and Z from further consideration as the Preferred Alternative.

Fifteen alternatives (A, C, E, F, G, H, J, M, R, S, T, U, V, W, and X) reached the Step III analysis. The third step of analysis involved a more detailed examination of the environmental impacts and the consideration of other information such as public and agency comments and right-of-way/constructability issues.

A comparison of environmental impacts reviewed during the Step III analysis focused on the five differentiating factors from Step II (farmlands, woodlots, Category 3 forested wetlands, streams, and displacements) as well as floodplain encroachments. Median values for the environmental resources were determined based on the 15 alternatives that were carried forward to the Step III analysis. As in the Step II analysis, the ranges of impacts were separated into two categories relative to the median value of the data set: values equal to or lower than the median, and values higher than the median of the data set.

4.1.2 Public/Agency Comments

Comments from the public and resource agencies concerning the location of the Feasible Alternatives and certain alternative segments were also evaluated in the Step III analysis. Comments received from citizens and public officials indicate a preference for an alignment that is close to existing US 24 and follows existing transportation corridors. In addition, the right-of-way and constructability issues associated with the 15 Feasible Alternatives were examined. These issues focused on the phased construction aspects of the Feasible Alternatives; impacts on local traffic patterns; and drainage of highway runoff.

As part of the Concurrence Point #2 coordination, a meeting was held on March 8, 2001 to discuss the PDEIS and recommendations for the Preferred Alternative. Representatives from the US Environmental Protection Agency (USEPA), Ohio Environmental Protection Agency (OEPA), Federal Highway Administration (FHWA), and ODOT were in attendance. The USEPA discussed their comments on the PDEIS, which were focused only on wetland impacts. The OEPA expressed concern about impacts to Category 3 wetlands and streams. Both agencies recommended Alternative C as the Preferred Alternative. In general, the resource agencies that provided comments on the PDEIS indicated a preference for those alternatives that minimize impacts to wetlands, streams, farmlands, wildlife habitat, woodlands, and the Maumee River.

Based on the examination of environmental impacts, public and agency comments, and review of right-of-way and constructability issues, Alternative C was identified as the Preferred Alternative in April 2001. Alternative C was found to minimize environmental impacts and constructability and right-of-way issues. It also addressed the concerns of the general public and resource agencies. Alternative C reflected the best/fit/resource based use of the Feasible Alternatives.

The identification of Alternative C as the Preferred Alternative was the focus of public meetings held on May 1, 2, and 3, 2001. Citizens and local officials in the Defiance area requested that Alternative D be reconsidered as the Preferred Alternative. Alternative D follows the same route as Alternative C from the intersection with I-469 in Indiana to Defiance County, Ohio. In Defiance County, Alternative C follows Segments 14 and 19, while Alternative D follows Segments 15 and 18.

Alternative C was also presented to the US Army Corp of Engineers (USACE) and OEPA during a field review held on May 10, 2001. The focus of this meeting was the Category 3 wetlands within Segments 14, 15, 18, and 19 (wetlands located within Segments 14, 15, 18, and 19 are shown on Figure 3.3). During the agency field review, the OEPA recommended that Alternative D be selected as the Preferred Alternative to avoid impacts to Wetland S-4, which is located in Segment 19 of Alternative C. S-4 is a high-quality, forested wetland located in the floodplain of a tributary to the Maumee River. In correspondence dated May 24, 2001, the OEPA suggested that construction of an embankment through Wetland R-1 located within Alternative D (Segment 18) would result in less overall wetland impacts than culverting Wetland S-4 in Alternative C.

As a result of public and agency input, it was determined that detailed environmental studies (i.e. archaeology surveys, wetlands delineations, and threatened and endangered species surveys) would be conducted on both Alternatives C and D. Additional engineering designs were developed with the intention of minimizing impacts on wetlands, particularly the Category 3 forested wetlands located in Segment 18. This resulted in the development of a 27th alternative, Alternative D-1, which minimizes impacts to the Category 3 Wetland R-1 and avoids Wetland S-4.

**4.2 DESIGN
REFINEMENTS
EVALUATED FOR THE
PREFERRED
ALTERNATIVE**

On February 14, 2002, a meeting was held with the USACE and OEPA to discuss wetland impacts resulting from Alternatives C and D-1. In comparison, overall wetland impacts associated with Alternative D-1 are greater than Alternative C. But Alternative D-1 will impact a smaller area of Category 3 wetlands than Alternative C. In addition, the land adjacent to Wetland R-1 could provide for several mitigation options such as restoration, preservation, and creation. The area adjacent to Wetland S-4 is limited for wetland mitigation options.

Following the February 14, 2002 meeting, the USACE and OEPA provided written comments regarding the wetland impacts and mitigation options associated with Alternatives C and D. The USACE commented that Alternative D is the least damaging practical alternative and recommended the minimization alignment (Alternative D-1) as the Preferred Alternative. The USACE also stated that preservation of Wetlands RC-1 and R-1 combined with wetland creation would be acceptable for mitigation. In addition, the OEPA commented that the ODOT should investigate several alternative alignments through the RC-1 and R-1 wetland complex, which minimize direct and indirect impacts. The OEPA stated that preservation of Wetlands RC-1 and R-1 with a forested buffer combined with wetlands creation or restoration is acceptable.

Based on public comments, the May 10, 2001 agency field review, the findings of the wetland delineation surveys, the February 14, 2002 agency meeting, and concurrence by the USACE and OEPA, Alternative D-1 was identified as the Preferred Alternative for the US 24 New Haven to Defiance project in May 2002.

Since the identification of the Preferred Alternative, investigation into several design refinements has been initiated. These refinements focus on:

- Accommodation of the transportation needs of the Amish population residing in Allen County.
- Identification of potential design changes for local road crossings to accommodate the transportation needs of farm operators affected by the Preferred Alternative.
- Addition of service roads to provide access to properties landlocked by the Preferred Alternative.
- Completion of detailed traffic analyses of operational characteristics at intersections and interchanges with crossroads.
- Development of interchange designs for the SR 49 and US 127 crossings.
- Evaluation of options for median design.
- Development of design refinements to minimize impacts on affected wetlands.
- Evaluation of the potential use of the Maumee & Western Railroad right-of-way.
- Inclusion of the Antwerp Bypass in the Preferred Alternative.
- Revisions to the proposed interchange at SR 424 to avoid the displacement of residential housing in the Bohlman Trailer Park.

These efforts were undertaken in response to specific comments made by the public and resource agencies on the Preferred Alternative. The main objective of the investigations is to identify mitigation strategies that result in the avoidance or minimization of impacts to sensitive resources.

**4.3 FEATURES OF THE
PREFERRED
ALTERNATIVE**

Environmental impacts, costs, and certain design elements of the Preferred Alternative are summarized in the following:

- Alternative D-1 will be constructed as a freeway between I-469 and the Indiana/Ohio State Line and as expressway between the state line and SR 15 in Defiance. In Indiana, interchanges will be constructed at Ryan/Bruick Road, Webster Road, and SR 101. In Ohio, interchanges will be provided at SR 49, US 127, and SR 424 with at-grade intersections constructed at other key crossroads.
- Alternative D-1 has 26 total stream crossings, impacting 6155 meters (20,189 feet) of streams. Of the total length of impact, 5339 meters (17,513 feet) are limited resource

water streams and 816 meters (2,676 feet) are warm water habitat streams.

- Alternative D-1 impacts 9.3 hectares (22.5 acres) of wetlands in total, including 0.92 hectares (2.27 acres) of Category 3 forested wetlands.
- Alternative D-1 impacts 35.7 hectares (87.7 acres), within a total of 20 woodlots.
- Alternative D-1 impacts 51 residences and two commercial businesses.
- Alternative D-1 impacts 28.0 hectares (69.2 acres) of floodplain area.
- The estimated freeway/expressway combination cost for Alternative D-1 is \$221,702,866. This total amount includes \$204,971,652 for construction and \$16,731,214 for right-of-way.
- Alternative D-1 includes three segments that are favored by the public (Segments 1, 8, and 18) and includes one segment not favored by the public (Segment 11).
- Alternative D-1 utilizes existing transportation corridors in Segments 1, 8, 11, 13, 15, and 20, approximately 45 percent of the total length.
- Alternative D-1 follows Segment 13, located north of the Maumee & Western Railroad. This segment minimizes drainage impacts to cropland.
- Alternative D-1 impacts 560.0 hectares (1,384 acres) of agricultural land involving 10 farm residences, 214 farm operators, and six agricultural districts.
- Alternative D-1 results in 41 landlocked parcels totaling 179.8 hectares (444 acres). With mitigation (construction of service roads), this impact is reduced to 29 parcels, totaling 99.2 hectares (245 acres).

**4.4 MINIMIZATION/
MITIGATION
STRATEGIES**

Beginning with the alternative development studies, avoidance, minimization, and mitigation of sensitive environmental resources have been considered to resolve potential impacts of the project. The development of minimization and mitigation strategies will continue through the final design studies to be completed for the US 24 New Haven to Defiance project. The design of the Preferred Alternative includes a number of minimization strategies and mitigation measures, which are summarized in Table 4.1.

**TABLE 4.1
SUMMARY OF MINIMIZATION AND MITIGATION MEASURES**

Issue	Minimization/Mitigation Measures
Geology, Soils and Erosion	Erosion and sedimentation control measures will be implemented during construction. Stormwater management measures will be implemented during construction.
Groundwater, Sole Source Aquifers and Wellheads	Affected water wells to be abandoned. Erosion and sedimentation control and stormwater management measures to be implemented during construction
Wetlands	Wetland mitigation plan to be developed in accordance with provisions of the Section 404 permit.
Streams	Stream mitigation plan will be developed in accordance with provisions of the Section 404 permit and 401 water quality certification. Erosion and sedimentation control measures and stormwater management measures to be implemented during construction.
Floodplains	Completion of detailed hydraulic studies for affected streams. Development of adequate drainage measures so that post construction hydraulics match pre-construction (existing) drainage conditions.
Wildlife, Plants, and Threatened/ Endangered Species	Identification of potential roosting and brooding habitat for the Indiana bat prior to construction. Removal of potential roosting and brooding habitat for the Indiana bat to be restricted between April 15 and September 15. Minimization of impacts to stream corridors. Review of data on mussel species present within the Maumee and Tiffin rivers to confirm presence of federal and/or state listed species.

TABLE 4.1 (CONTINUED)
SUMMARY OF MINIMIZATION AND MITIGATION MEASURES

Issue	Minimization/Mitigation Measures
Farmlands	Property acquisition and relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Coordination with the Ohio Department of Agriculture concerning condemnation of farmlands designated as Agricultural Districts. Provision of service roads to mitigate landlocking of active farmland. Coordination with local agencies and property owners concerning mitigation of impacts to farmland irrigation/drainage systems.
Municipal/Industrial/Hazardous Waste	Completion of asbestos and lead-based paint investigations on structures to be demolished for project and development of appropriate disposal plans (if required). Closure of USTs and ASTs in accordance with applicable regulations on three properties (ODOT Defiance County Garage, Mark Moats Ford, and an abandoned property on T-69). Further investigation of storage drums found on an abandoned property on T-69.
Land Use	Provision of service roads to mitigate landlocking of properties.
Residential Displacements	Property acquisition and relocation assistance provided in accordance with the Uniform Relocation and Real Property Acquisition Policies Act. Implementation of a Residential Relocation Assistance Program.
Environmental Justice	Provisions for grade-separated crossings at Ryan/Bruick Road, Webster Road, and SR 101 in Allen County to support travel needs of the local Amish Community. Minimization of right-of-way impacts to the Bohlman Trailer Park (Defiance County) and avoidance of residential units.
Community Facilities	Provisions for grade-separated crossings at Woodburn Road (Allen County) and T-43 (Paulding County) for safe access to Woodlan High School and Antwerp School complex. On-site replacement of salt storage, brine mixing, and other affected facilities at the ODOT Defiance County Garage. Notifications to emergency service providers during construction concerning temporary local roadway impacts.
Parks, Recreation Land, Natural and Wildlife Areas, Section 4(f)/6(f) Resources	Coordination with ODNR for the Maumee River crossing in accordance with Section 1517.6 of the Ohio Revised Code.
Business Displacements	Property acquisition and relocation assistance provided in accordance with the Uniform Relocation and Real Property Acquisition Policies Act.
Visual Resources	Implementation of landscape design features where feasible.
Archaeological Resources	SHPO Notification in the event of an unanticipated discovery. A plan for the proposed archaeological documentation for the unexcavated portion of the Gronaeur Lock will be prepared and submitted to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology for review and comment. Upon approval of the work plan, a qualified archaeologist will record the remaining portion of lock during construction.
Historic Resources	Avoidance of NRHP-listed and NRHP-eligible resources. Preservation of existing vegetation between the right-of-way and the Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House.
Traffic	Provisions for grade-separated crossings at Woodburn Road (Allen County) and T-43 (Paulding County) for safe access to Woodlan High School and Antwerp School complex. Provisions for grade-separated crossings at Ryan/Bruick Road, Webster Road, and SR 101 in Allen County to support travel needs of the local Amish Community. Maintenance and protection of traffic during construction. Notifications to general public and emergency service providers during construction concerning temporary local roadway impacts.

TABLE 4.1 (CONTINUED)
SUMMARY OF MINIMIZATION AND MITIGATION MEASURES

Issue	Minimization/Mitigation Measures
Air Quality	Implementation of Best Management Practices during construction to minimize local short-term air quality problems.
Noise	Implementation of Best Management Practices during construction to minimize local short-term construction noise.

5.0 COMMENTS AND COORDINATION

5.1 PUBLIC INVOLVEMENT

A public involvement program was developed and implemented for the US 24 New Haven to Defiance project to address the concerns of federal, state, and local agencies, as well as concerns expressed by the general public. The public involvement program is designed to allow all interested parties to participate in the project. It is intended to encourage and provide ample opportunity for an open exchange of ideas and views. The goals of the US 24 public involvement program are to:

- Educate the public regarding the study process.
- Inform the public of current project activities.
- Ensure that all issues of concern are addressed.
- Present the results of all study tasks to the general public, interest groups, task forces and government agencies before decisions are made.
- Receive feedback from the public and government agencies.

The public involvement program includes several different elements:

- Stakeholder mailing list.
- Website.
- Toll free hotline.
- Newsletters.
- Video.
- Meetings.

5.1.1 Stakeholder Mailing List

At the beginning of the US 24 study, a stakeholder mailing list was developed, which included the names and addresses of public officials, community groups, government agencies, local businesses, planning organizations, property owners, and interested citizens. This list was used to disseminate project information such as notification of public meetings and newsletters. This mailing list is updated continuously through the study process and currently includes approximately 1,800 names.

5.1.2 Website and Hotline

In May 1999, a website (www.us24.org) and a toll-free hotline (877-ASK-US24) were established for public use. The website is accessed through the internet and provides information that is updated regularly on all aspects of the project, including:

- Project history and overview.
- Project schedule.
- Public meeting advertisements and summaries.
- Project activity updates.
- Maps of the corridors and alternatives.
- Newsletters.
- Project documents.

The website also allows citizens to submit their comments and questions about the project via e-mail. Members of the project team respond to the comments and questions. The public comments submitted through the project website are included in Appendix 3.

The toll-free hotline is available 24 hours a day, seven days a week. It provides a means for the public to talk directly to members of the US 24 project team. The hotline has received inquiries about project activities, the schedule, and property acquisition. All comments received through hotline calls are recorded and taken into consideration in the development of the project. A summary of the comments received through the hotline is included in Appendix 3.

5.1.3 Newsletters

Newsletters are prepared at key points throughout the course of the project. To date, four newsletters (dated June 1999, August 1999, April 2000, and May 2002) have been published and circulated to over 1,800 individuals. The newsletters provide information on upcoming meetings, project activities, project schedule, frequently asked questions and answers, maps of the corridors and highway alignments, and summaries of public meetings and comments.

5.1.4 Video

An informational video about the US 24 study is also part of the public involvement program. The video is used for public meetings and other forums, as needed. This video was developed for the Concurrence Point #1 public meetings held in June 1999. This video presented:

- An overview of the preliminary development process.
- The project schedule.
- The study area.
- The purpose and need for the project.
- An overview of public participation opportunities.

5.1.5 Public Forums

Public meetings are an essential part of the public involvement plan for the US 24 project. These include Concurrence Point Meetings, Public Hearings, information meetings, and special outreach meetings.

The Concurrence Point and information meetings are formal opportunities for public participation. They provide a public forum for expressing public opinion and concern prior to key decision points in the project. These meetings are announced through direct mailings to all stakeholders on the project mailing list, press releases provided to the local media, and notices posted on the project website. Since the US 24 project was initiated in January 1999, there have been three Concurrence Point public meetings and four public information meetings.

5.1.6 Concurrence Point #1 Public Meetings (June 15, 16, and 17, 1999)

On June 15, 16, and 17 of 1999, a series of three public meetings for Concurrence Point #1 were held at Antwerp and Defiance, Ohio and Woodburn, Indiana, respectively. The public meetings were held from 4:00 to 8:00 PM at the Antwerp Junior High School, Woodlan High School, and Defiance College. The purpose of these meetings was to inform the public about the results of the purpose and need study, the modal analysis, and the environmental inventory. In addition, the 14 preliminary corridors developed for the US 24 project were presented. These meetings were conducted in an open house style format and were attended by approximately 500 people.

During the meetings, the Ohio Department of Transportation (ODOT) solicited specific comments on the purpose and need for the project, possible transportation alternatives, and the 14 preliminary corridors. The public was also invited to provide comments regarding the project by calling the toll free hotline, visiting the website, or mailing written comments to the US 24 Project Office.

During the two-week public comment period following the meetings, approximately 200 comments were received from concerned citizens. In general, respondents were in favor of making improvements to US 24. Most stated that improvements to US 24 are long overdue, and construction should begin as quickly as possible. Those in favor of the project saw a new highway as a means to stimulate local economies, decrease traffic congestion along US 24, and improve safety along the highway.

Many individuals stated that the new alignment for US 24 should remain in the vicinity of the existing highway to allow businesses to maintain contact with transportation facilities, to minimize farmland impacts, to use land already disturbed by a transportation corridor and development, and to minimize construction costs. The public comments identified Preliminary Corridors 2, 3 and 4 as the most popular routes for a new highway. Of these three, Corridor 4 was the preferred route because it was considered more direct, generally paralleling existing US 24. Corridors 1 and 14 were the least favored of the preliminary corridors. Corridor 1 was

perceived as having the greatest impact to farmland and Corridor 14 was perceived as being too far removed geographically from the local communities. There was also concern that Corridor 1 would result in the decline of local economies, which are based on businesses established adjacent to or near existing US 24.

A variety of issues were raised in the comments submitted to ODOT and Indiana Department of Transportation (INDOT) concerning the proposed improvements to US 24:

- **Farmland Impacts:** Many discussed the region's highly productive farmland and believe special consideration should be made to protect it. One suggested measure was to maximize the use of existing disturbed rights-of-way such as the current US 24 route, railroad corridors or canals.
- **Economic Impacts:** Some people were concerned that if the new US 24 is constructed far from existing US 24, the economies of Antwerp, Paulding, and Woodburn would suffer because they are very dependent on US 24. In the Defiance area, an interchange at West High Street and US 24 would provide access for the industrial parks, businesses and local residences. In the Woodburn area, an interchange for the industrial park would provide access to and from US 24.
- **Roadway Safety and Congestion:** A major concern for US 24 is the number of large trucks on the roadway. Trucks, especially in the downtown areas, cause traffic jams and sometimes create unsafe conditions. Some individuals suggested completing bypasses around small towns (especially Antwerp) before constructing other sections of the new US 24 in order to ease congestion as quickly as possible.
- **Relocations:** Many people stated that the selected route for US 24 should minimize the number of people who would be relocated for the roadway.
- **Emergency Vehicle Access:** Some individuals were concerned about cutting off local roads and slowing down the response times of emergency vehicles.
- **Routing:** Many stated a desire for a direct (straight) corridor because it would be less expensive to build and it would save travel time between destinations.

5.1.7 Public Information Meeting (August 23, 1999)

On August 23, 1999, a public information meeting was held from 6:00 to 9:00 PM at the Antwerp High School to present the Feasible Corridors selected for further study. Approximately 600 citizens attended this meeting. ODOT opened the meeting with a presentation discussing the project's history, current events, and selection of the Feasible Corridors. The presentation was followed by a question and answer session. After the formal presentation was completed, the format of the meeting changed to an open house forum. Citizens were able to review maps of the feasible corridors and talk with members of the project team.

A two-week public comment period followed the meeting, during which approximately 120 comments were received from concerned citizens. Summarized below are the primary issues that were discussed in the comments received from the public as a result of the August 23rd information meeting.

- **Routing:** A highway on new alignment is not needed; instead existing US 24 should be improved. The belief in modifying the existing route was that it would minimize impacts to surrounding areas and take less time and money to construct. Suggested improvements to the existing US 24 route included adding turn lanes, modifying curves, bypassing towns, and widening the road to four-lanes, where possible.
- **Quality of Life:** A four-lane expressway on new alignment would disrupt the rural nature of the area. Many individuals expressed their desire to live "in the country" away from noise and traffic concerns. There was also a concern that a new highway would result in the destruction of wildlife habitat and force wild animals, such as deer and squirrels, to leave the area.
- **Farmland Impacts:** The importance of the region's productive farmland was expressed. To minimize farmland impacts, improvements to US 24 should maximize the use of existing disturbed rights-of-way such as the current route or railroad corridors. Utilizing existing corridors as much as possible, would mean that fewer fields would be cut in half; bisecting farms would make them less productive and inefficient to farm, if they

could be farmed at all.

- **Local Road Impacts:** Local traffic would be affected if roads are cut-off by a four-lane controlled access highway. The issues of concern centered on the movement of farm machinery from field to field, school bus routing, and access for emergency vehicles. Some farmers were concerned that by limiting access to their fields via county roads, they would be forced to put slow moving farm vehicles on a busy four-lane road or go miles out of their way. Parents and bus drivers were concerned that if access on local roadways is denied, buses would be forced to make numerous U-turns on narrow roads in order to safely pick up students. In addition, citizens were concerned that if local roadways were cut-off they would not have access to area hospitals, and emergency vehicles would not be able to get to their homes quickly.

5.1.8 Public Information Meeting (October 13, 1999)

On October 13, 1999, INDOT sponsored a public meeting at the Woodlan High School in Woodburn, Indiana. The meeting was held from 6:00 to 9:00 PM, and was attended by approximately 210 people. The purpose of the meeting was to present the selection of the Feasible Corridors to the residents of Indiana.

The format of the meeting was an open house forum with a short presentation about the project. The presentation discussed the history and current activities of the project. The presentation was followed by a question and answer session. After the question and answer session, citizens were able to view a video and Feasible Corridor maps developed for the project. Representatives from INDOT, ODOT, and the consultant team were available to answer questions and discuss the project on an individual basis.

A two-week public comment period followed the meeting, during which approximately 20 comments were received from concerned citizens. The following summarizes the primary issues expressed in the comments submitted after the October 13th public meeting.

- **Local Road Impacts:** Several individuals expressed concern about the effects of the US 24 project on local roads. Some were concerned that a new US 24 would cut off local roads and suggested that access be maintained during and after construction of the project.
- **Routing:** In Indiana, the northern corridor comprised of Segments F and L was preferred over the southern corridor route comprised of Segments G and K. It was believed that the northern route would impact fewer acres of farmland and would provide better access to the new Woodburn Industrial Park compared to the southern route. In addition, locating US 24 along the railroad right-of-way was suggested as an alternative to minimize farmland impacts.
- **Improve Existing US 24:** Several individuals preferred improving existing US 24 instead of constructing a new highway on a new alignment. It was believed that improving existing US 24 would cause fewer impacts on farmland and be less costly than a new four-lane highway on new alignment.

5.1.9 Public Information Meetings (February 1 and 2, 2000)

Two public information meetings were held on February 1 and 2, 2000 to present changes to the Feasible Corridors that resulted from Concurrence Point #1 state and federal agency coordination. Comments received from federal and state regulatory agencies resulted in the following changes to the Feasible Corridors:

- **Allen County, Indiana:** Two Corridor Segments, C and H, were added back into the study.
- **Paulding County, Ohio:** Corridor Segments bypassing Antwerp were added.
- **Defiance County, Ohio:** Corridor Segments U and Y were eliminated in their entirety from the study. Segment X, north of the Maumee River, was eliminated from the study.

In addition to these revisions, several minor changes to the corridors were made to accommodate expressway alignments under development for the project.

The first of the two meetings was sponsored by INDOT and held on February 1, 2000 in Woodburn, Indiana at the Woodlan High School. The meeting was held from 6:00 to 8:00 PM and was attended by approximately 330 people. The meeting opened with a presentation that summarized INDOT's highway projects throughout Allen County. This discussion was followed by an overview of the US 24 project activities that had occurred throughout 1999 and an explanation of the changes in the Feasible Corridors. Following the presentations, there was a question and answer session. The forum then changed to an open house type format. The floor was made available for citizens to look at the project maps of the corridor changes and talk with members of the project team.

The second meeting was held on February 2, 2000 in Defiance, Ohio and sponsored by ODOT. Approximately 200 citizens attended this meeting, which was held at the Defiance High School from 7:00 to 9:00 PM. ODOT opened the meeting with a presentation discussing the project's history, current events, and selection of the Feasible Corridors. The presentation was followed by a question and answer session. After the formal presentation portion of the evening was completed, the format of the meeting changed to an open house forum. Citizens were able to review maps of the Feasible Corridors and talk with members of the project team.

A two-week public comment period followed the meeting, during which approximately 80 comments were received from concerned citizens. Consistent with previous public comments, the primary issues of concern were safety, farmlands, residential displacements, and economic development.

- **Safety:** Many individuals stated that speeding tractor-trailers make travelling on US 24 unsafe. Some of the respondents are in favor of banning large trucks on US 24, and others believe a new limited access four-lane highway is needed to improve safety conditions on US 24 for the travelling public.
- **Farmlands:** Several individuals expressed concern about the amount of farmland that would be taken to construct a new four-lane highway. Others were concerned about the effects of a new roadway on cropland drainage systems. Suggestions to minimize the impacts to farmlands ranged from widening existing US 24 to designing a new four-lane highway that parallels the existing railroad corridors.
- **Residential Displacements:** Many citizens are concerned about the number of homes that would be taken by a new four-lane highway. In addition, a number of individuals were concerned that a new roadway would limit accessibility to other members of their communities. Modifications to the corridors were suggested in order to minimize the number of homes displaced by a new highway.
- **Economic Development:** Individuals expressed concern about the economic development impacts resulting from the US 24 project. Some were concerned that the project would reduce economic development in Woodburn, Indiana and Defiance, Ohio if a new highway were to reduce or eliminate access to existing industrial parks.

**5.1.10 Concurrence
Point #2 Public
Meetings (July 17, 18,
and 19, 2000)**

On July 17, 18, and 19, 2000, a series of three public meetings for Concurrence Point #2 of ODOT's Nine-Step Transportation Development Process were held in Antwerp, Ohio; Woodburn, Indiana; and Defiance, Ohio, respectively. The public meetings were held from 6:00 to 9:00 PM at the Antwerp Junior High School in Antwerp, from 5:00 to 8:00 PM at Woodlan High School in Woodburn, and from 6:00 to 9:00 PM at the Defiance High School in Defiance. The three meetings were attended by a total of approximately 800 people.

The purpose of these meetings was to allow the public to review the proposed Feasible Alternatives developed for the project. Each meeting was opened with a presentation discussing the project's current events and the philosophy behind the development of the various alternatives. The presentation was followed by a question and answer session. After the formal presentation was completed, the format of the meeting changed to an open house forum. Citizens were able to review detailed information on the Feasible Alternatives, including cost estimates, right-of-way requirements, environmental impacts, and interchange and intersection locations. Participants were encouraged to provide written comments on their preferred alternatives and segments.

During a two-week public comment period following the meetings, approximately 100 comments were received from concerned citizens. Many comments identified preferred alternatives or segments while others addressed issues of concern such as farmlands, safety, and economic development.

- **Alternatives:** Most of the comments received regarding the Feasible Alternatives favored Alternative Z. Reasons given for favoring Alternative Z included the belief that the alternative would be less disruptive to farmland operations and other businesses in the area, and the cost to construct would be less than the others.
- **Segments:** In Indiana, Segment 1 was favored over Segment 2 because of greater impacts on nurseries and farmland along Segment 2. In Ohio, Segment 8 was preferred over Segment 7 because of perceived detrimental impacts (such as greater air pollution to the town of Woodburn). Also in Ohio, Segment 10 was preferred over Segment 11 because of the concern for possibly long delays and reroutes of emergency vehicles if Segment 11 is selected as part of the Preferred Alternative.
- **Safety:** Several citizens stated that Alternatives X, Y, K, or L should be selected because these alternatives would minimize delays and reroutes of emergency vehicles that could occur if access were limited to Paulding County Roads 105, 206 and 87. In addition, a freeway design should be utilized to avoid conflicts between large, slower moving farm equipment and faster moving traffic at intersections.
- **West High Street/Switzer Road Interchange:** Some residences opposed an interchange, while others insisted that one is needed for the economic growth and development of Defiance, Ohio.
- **Antwerp Bypass:** A bypass around Antwerp should be constructed first in order to move truck traffic out of the Village as quickly as possible. Some individuals believe the bypass should be close to the community while others stated that it would be better to have one farther south of the Village, to allow for the possible southward expansion of Antwerp.
- **Project Schedule:** The project schedule should be expedited because of ongoing safety concerns with increased traffic.
- **US 24 Website:** Materials displayed at the public meetings, including the project impact matrix, were requested to be made available for review on the website.

**5.1.11 Concurrence
Point #3 Public
Meetings (May 1, 2,
and 3, 2001)**

On May 1, 2, and 3 of 2001, a series of three public meetings were held in Antwerp, Ohio; Woodburn, Indiana; and Defiance, Ohio, respectively. The public meetings were held from 6:00 to 8:30 PM at the Antwerp Junior High School in Antwerp, the Woodlan High School in Woodburn, and the Defiance Junior High School in Defiance. The three meetings were attended by a total of approximately 600 people.

The purpose of the meetings was to present and discuss the Preferred Alternative. Each meeting began as an open house in order to give the public time to review maps showing the Preferred Alternative. A formal presentation was given which explained why Alternative C was selected as the Preferred Alternative and why other alternatives were not chosen. The presentation was followed by a question and answer session. After the formal presentation, the open house format resumed.

All meeting participants were encouraged to provide written comments on the selection of the Preferred Alternative. During the two-week public comment period following the meetings, over 100 comments were received. Many of the comments addressed particular areas of the Preferred Alternative while others focused on general issues of concern such as the location of overpasses and interchanges, the need for a four-lane highway, project schedule, and farmland impacts.

- **Overpasses:** Many individuals, especially in Allen County, Indiana stated that overpasses are needed to accommodate slow moving vehicles, such as horses and buggies and farm equipment. Ryan/Bruick Road, Webster Road, and SR 101 were identified as areas where overpasses are most needed.
- **West High Street/Switzer Road:** Comments from Ohio citizens focused on the US 24

and West High Street/Switzer Road intersection. Many individuals opposed building an interchange at this location, but others insisted that one is needed for economic growth and development in the area.

- Staging of Project Construction: Many individuals stressed that a four-lane highway is needed, and that building two lanes of roadway at a time would not address the safety and traffic congestion issues in the region.
- Project Schedule: Most citizens were satisfied with the alignment selected as the Preferred Alternative, but were concerned about the length of time before construction could begin. The common sentiment was that the project schedule should be accelerated because ongoing safety concerns are only expected to increase over time.
- Farmlands: Several individuals expressed concern about impacts to farmlands in the area. Farming concerns included impacts to drainage tiles, limiting access to fields, and concern for crossing a four-lane highway with slow moving farm equipment.

5.1.12 Public Information Meetings (June 4, 5, and 6, 2002)

On June 4, 5, and 6 of 2002, a series of three public meetings were held in Antwerp, Ohio; Woodburn, Indiana; and Defiance, Ohio, respectively. The public meetings were held from 5:30 to 8:30 PM in Ohio and from 6:00 to 9:00 PM in Indiana. The meetings were held at the Antwerp Senior High School in Antwerp, the Woodlan High School in Woodburn, and the Defiance Senior High School in Defiance. The three meetings were attended by a total of approximately 500 people.

The purpose of the meetings was to present and discuss recommended changes in the Preferred Alternative from Alternative C to Alternative D-1. In addition, property owners were able to see how the new highway would affect their land. Each meeting began as an open house in order to give the public time to review maps showing changes in the Preferred Alternative and right-of-way impacts on land parcels. A formal presentation was given which provided an update of project activities since the May 2001 public meetings and explained the revisions to the Preferred Alternative. The presentation was followed by a question and answer session. After the presentation, the open house format resumed.

All meeting participants were encouraged to provide written comments on the changes in the Preferred Alternative. During the two-week public comment period following the meetings, 85 comments were received. Many of the comments addressed site-specific impacts of the Preferred Alternative while others focused on general issues of concern. The general issues included:

- Project schedule: Several individuals expressed the desire to begin construction as quickly as possible. The common sentiment was that the project schedule should be accelerated because ongoing safety issues are only expected to increase over time.
- Overpasses: In the Indiana portion of the project, there were several requests for overpasses at Ryan/Bruick Road and Webster Road to provide a safe crossing for Amish vehicles over the new highway.
- Interchanges: Several citizens requested interchanges at Ryan/Bruick Road, Webster Road, SR 101, SR 49, and West High Street.
- Antwerp Bypass: some individuals expressed concern about using State Line Road as a connector road between existing US 24 and the new highway. They suggested that other options should be explored such as SR 101 and C-11.
- Alignment Location: Several individuals suggested shifting the alignment north or south in different areas. In addition, others requested that the new highway follow the Maumee & Western Railroad tracks.
- Farmlands: Citizens expressed concern over impacts to drainage tiles, landlocked parcels, and bisecting fields.

5.1.13 Section 106 Consulting Party Coordination Meeting

On May 14, 2003, a Section 106 Consulting Party Coordination Meeting was held in Woodburn, Indiana. The meeting was held from 6:00 to 8:00 PM at the Woodlan High School. Nine people attended the meeting.

The purpose of the meeting was to obtain comments from the consulting parties on the various aspects of the US 24 cultural resources studies. Specifically the objectives of the meeting were to seek, discuss and consider the views of the consulting parties on the Area of Potential Effect, the identification of significant historic properties, delineation of historic boundaries, and the assessment of effect on the historic properties.

The meeting began with a presentation about the US 24 project, archaeological surveys, historic architecture surveys, agency coordination, and effects of the Preferred Alternative on four properties determined to be eligible for inclusion in the National Register of Historic Places (NRHP). All four historic properties are located in Allen County, Indiana. The presentation was followed by an open discussion of the US 24 project and cultural resources. Topics of discussion included:

- US 24 project schedule.
- Design of the Preferred Alternative.
- Archaeological sites on local properties.
- A large oak tree on Karl Hockemeyer's property that will be affected by the highway alignment.
- Gronauer Lock (#2).

The consulting parties were in agreement with the Section 106 studies, documentation, and conclusions that were completed for the US 24 project.

5.1.14 Special Outreach Meetings

In 1999, 2000, 2001, 2002, and 2003, ODOT and INDOT held a series of special outreach meetings to discuss the proposed highway alternatives with citizens and public officials in Allen County, Indiana and Paulding and Defiance counties, Ohio.

Allen County, Indiana

A meeting was held on March 29, 2000 with representatives from ODOT, INDOT, the Northeastern Indiana Regional Coordinating Council (NIRCC), and the Allen County Engineer. The purpose of this meeting was to review and discuss preliminary feasible highway alternatives that had been developed in Allen County, Indiana and to obtain Indiana's concurrence. The discussion focused on how the corridors and alignments had been developed over the past several months. In addition, the locations of interchanges in Allen County were reviewed. The only aspect of the alternatives that the Indiana representatives were concerned with was the cul-de-sac of existing US 24 near I-469. Otherwise, the Indiana representatives approved of the proposed alternatives in Allen County.

On May 16, 2000, ODOT met with the Mayor of Woodburn, Indiana to review and discuss preliminary feasible highway alternatives that had been developed in Allen County. The Mayor discussed the local traffic patterns, industrial developments, and soil types in Woodburn and the surrounding area. In addition, he discussed the improvements that are planned for local roads in Woodburn. The Mayor also provided information on fire and emergency services and response areas in Allen County. In general, the Mayor of Woodburn approved of the proposed highway alternatives in Allen County. He stated his preference that US 24 remain as a local road and a new four-lane expressway be constructed just south of the existing route.

A meeting was held on August 1, 2001 with representatives from INDOT, ODOT, NIRCC, Allen County Engineers Office, the Amish Community, and the East Allen County school system. The purpose of the meeting was to discuss how to accommodate the transportation needs of the Amish Community and the East Allen County school system into the design of the Preferred Alternative. The proposed at-grade intersections are a safety concern for the Amish farmers and the school system.

The Amish farmers explained that since they travel by horse and buggy or by foot, overpasses would be safer than at-grade intersections for crossing US 24. They explained that horses are unpredictable and sometimes will not stand and wait for traffic to pass before crossing an at-grade intersection. In addition, teams of four to eight draft horses are used to pull farm

equipment and the total length of farm equipment and horses is generally 18.3 meters (60 feet). Medians are typically 25 meters (82 feet) wide in Indiana, which could accommodate the horses and farm equipment. Due to the unpredictable nature of horses, crossing a four-lane highway using an at-grade intersection is unsafe and it could be disastrous if a team of horses is in the median waiting to cross two lanes of road and the horses start to back up or go forward out of the control of the driver into oncoming traffic. The farmers stated that the best locations for interchanges or overpasses for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are main north-south routes across the Maumee River.

One of the primary concerns expressed by the representatives of the East Allen County school system is the safety of the inexperienced student drivers and the children on school buses. The discussion focused on the driving ability of teenagers and the school bus routes. It was explained that Webster Road and SR 101 are main school bus routes and Woodburn Road is main east-west route that connects the high school and elementary school. The school system representatives stated their preference for interchanges instead of at-grade crossings at Webster Road and SR 101 and an overpass at Woodburn Road.

A second meeting with members of the Amish Community and representatives from ODOT and INDOT was held on September 5, 2002 to discuss the transportation needs of the Amish. Instead of interchanges at Ryan/Bruick and Webster roads, INDOT had proposed to provide a grade-separated crossing at Berthaud Road, which would allow Amish vehicles to safely cross the new highway. The Amish commented that Berthaud Road was too long of a detour from their current routine travel routes. The additional mileage would take time away from their work and also tire their horses. The farmers emphasized that the best locations for grade-separated crossings for the Amish Community would be Ryan/Bruick Road, Webster Road, and SR 101, which are main north-south routes crossing the Maumee River. As a result of the meeting, INDOT will construct interchanges at the Ryan/Bruick Road, Webster Road, and SR 101 crossings.

Paulding County, Ohio

On March 29, 2000, ODOT representatives met with members of two families that own and farm several hundred acres of land that lie within the Feasible Corridors. The purpose of the meetings was to discuss the impacts that the preliminary feasible highway alternatives could have on the families' farming operations. During the meetings, ODOT showed the preliminary Feasible Alternatives that had been developed for the US 24 project. The farmers commented on the impacts of the various highway alternatives on their residences and farming operations. Both families support the US 24 project and are not opposed to a new highway taking some of their land.

On April 18, 2000, ODOT representatives met with the Paulding County Engineer to review and discuss the preliminary feasible highway alternatives that had been developed for Paulding County. The County Engineer discussed the local traffic patterns, industrial developments, and the new Antwerp School. He recommended that C-21, C-11, C-87, T-69, C-115, C-143, and C-232 remain open to through traffic.

On May 16, 2000, ODOT representatives met with public officials from the Village of Antwerp, Ohio to review and discuss the preliminary feasible highway alternatives that had been developed for Paulding County. The public officials included the Superintendent of Schools, the Mayor of Antwerp, and the President of the Community Improvement Corporation. Antwerp officials prefer Alternative Segment 8 over Alternative Segment 7 in the vicinity of Antwerp, but they are not opposed to Segment 7. In general, the discussion focused on local traffic patterns, the new Antwerp public school, and construction of the new highway:

- Heavily traveled roads in the Antwerp area are C-33, C-21, C-11, T-43, and State Line Road. T-43 is used by employees of Dana Corporation. Antwerp officials requested that C-21 and C-11 and State Line Road remain open.
- If approved by voters in November 2000, Antwerp will break ground on its new school site in October 2001. The new school will open in 2002. School bus routes will be changed to accommodate the new school site. The school bus garages will also be

relocated near the new school site.

- The order of design and construction of the various US 24 segments was discussed. Public officials would like the US 24 section in Antwerp addressed first to alleviate the traffic congestion in the village.

On April 19, 2001, ODOT representatives met with a local property owner to discuss the impacts that the Preferred Alternative could have on his land. He was concerned about the proximity of the new highway to an airplane landing strip that he had constructed on his property. It was determined that the new highway will not affect his property or his use of the landing strip.

On May 2, 2001, ODOT representatives met with a local property owner to discuss the impacts of the Preferred Alternative on his property. He was concerned about the proximity of the expressway to his residence and the increase in noise levels from the traffic. During the meeting, noise abatement measures were discussed.

On September 5, 2001, ODOT representatives met with members of a family that own and farm several hundred acres of land, some of which lie within the right-of-way of the Preferred Alternative. The purpose of this meeting was to discuss the impacts that the Preferred Alternative could have on their property and farming operations. During the meeting, measures to minimize impacts to their farmland were discussed.

On November 13, 2002, ODOT representatives met with local officials from Paulding County and the Paulding County Engineer to discuss the Preferred Alternative and impacts on the local roadway system. Based on input received during the meeting, the design of the Preferred Alternative was updated for several local road crossings. Grade-separated crossings are proposed at C-11, T-43, and C-105/T-105; the C-11 and T-43 crossings were previously designed as at-grade intersections. Several local roadways will be closed where they intersect with the Preferred Alternative; the affected roadways are T-61, T-69, C-123, T-129, T-139, T-150, C-180, and C-224. At-grade crossings were previously proposed at T-69, C-180, and C-224. The T-83 crossing, previously proposed to be closed, is currently designed as an at-grade intersection.

Defiance County, Ohio

On August 19, 1999, the Defiance County Commissioners and local residents held a public meeting in Noble Township to address the Feasible Corridor segments in Defiance County. Approximately 160 citizens participated in this meeting. Representatives from ODOT also attended this meeting to answer questions and address issues of concern. A County Commissioner, a local resident, and an ODOT official made presentations about the US 24 project. The presentations were followed by a question and answer session. The primary issue of concern expressed by the residents was the addition of Corridor Segments U, X, and Y to the project after the public involvement meetings in June 1999.

On March 30, 2000, ODOT met with officials from the City of Defiance and Defiance County, including the Mayor of Defiance, City Engineer, City Finance Director, Defiance County Engineer, and the Director of the Defiance County Economic Development Office. The purpose of this meeting was to review and discuss preliminary feasible highway alternatives that had been developed. The city and county representatives discussed the various industrial, residential, and commercial developments proposed in the Defiance area. The location and design of interchanges to provide access to these developments sites was a primary concern of the public officials. They specifically requested that interchanges should be constructed at West High Street and at SR 424 to provide access to commercial and industrial parks.

In general, the City of Defiance regards US 24 as a regional highway with wide ranging uses and a catalyst for development. The public officials expressed their preference of Alternative Segment 18 over Alternative Segment 19. They believe that Segment 19 and the interchange at May Road are too far from the City of Defiance and its future industrial development sites to provide much benefit to the city.

Other topics discussed during the meeting with Defiance officials included:

- The local road system, preferred travel routes, and planned improvements.

- Right-of-way and corridor preservation issues.
- Local opposition to the project.
- Right-of-way land leases with farmers.
- Enterprise Industrial Park.

Also on March 30, 2000, ODOT representatives met with a property owner who has a herd of approximately 300 dairy cows and also farms several hundred acres of land. Alternative Segment 19 passes through the middle of farmland owned by his family. The purpose of this meeting was to review and discuss preliminary feasible highway alternatives that had been developed and their impacts to his family's farming operations. The farmer's main concern is maintaining access to the fields. He supports the US 24 project and is not opposed to a new highway taking some of his family's land as long as ODOT works with him to minimize impacts to his farm operations.

A second meeting with the dairy farmer was held on April 18, 2001. An ODOT representative met with the farmer to discuss the Preferred Alternative and how it would impact his farming operation. Measures to minimize impacts to his farming operations were discussed during this meeting.

On May 10, 2001, ODOT representatives met with a local property owner to discuss the impacts of the Preferred Alternative on his property. He was concerned about the proximity of the highway to his warehouse building and the potential impacts on the use of his property.

On September 5, 2001, ODOT representatives met with the owner of the Enterprise Industrial Park. This industrial park is approximately 303.6 hectares (750 acres) in size and is planned for mixed-use development. The planned development of this industrial park and access from the Preferred Alternative were discussed.

A second meeting with the owner of the Enterprise Industrial Park was held on January 28, 2002 to further discuss impacts of the Preferred Alternative on his property. Impacts to the forested wetland located within the industrial park and possible mitigation options were also discussed.

On September 4, 2002, ODOT met with officials from the City of Defiance and Defiance County, including the Mayor of Defiance, City Engineer, City Administrator, County Commissioners, County Engineers, and the Director of the Defiance County Economic Development Office. The purpose of the meeting was to discuss access to US 24 at Switzer Road and West High Street. ODOT does not recommend a new interchange at this location because it is less than 1.6 kilometers (one mile) to the interchange at SR 15. According to ODOT's *Location and Design Manual*, interchanges within urban areas should not be spaced closer than an average of 3.2 kilometers (two miles) and a minimum distance of 1.6 kilometers (one mile).

ODOT is concerned about the secondary traffic impacts on the local roadway network if access to US 24 is eliminated from Switzer Road and West High Street. Harding and Haller streets are two roads that provide access to US 24 at SR 15. In the area west of SR15, there are existing and proposed developments. The traffic generated by the developments will affect the local road network when access to US 24 is eliminated at the Switzer Road/West High Street intersection. It was determined that ODOT will study the secondary traffic impacts on the local road network resulting from closing the Switzer Road/West High Street intersection.

In addition, the impacts of the Preferred Alternative on the Bohlman Trailer Park were discussed. The proposed US 24/SR 424 interchange and relocation of SR 424 could potentially require the acquisition of land, the displacement of residential trailers, and the relocation of the roadway providing access to the trailer park. ODOT will construct the new access road to the trailer park and requested that the service road be maintained by a public entity. The City and County Engineers stated that the relocated service road should be 10.6 to 12.2 meters (35 to 40 feet) wide to accommodate emergency vehicles and a turnaround should be provided for snowplows.

On September 18, 2002, ODOT representatives met with the owner and 15 residents of the Bohlman Trailer Park. The owner of the trailer park had requested that ODOT proceed with advanced acquisition of his property. The purpose of the meeting was to inform the residents

of the project status, advanced acquisition proceedings, and ODOT's property acquisition and relocation process. ODOT will either relocate or purchase the affected residential trailers. ODOT representatives explained that a relocation agent would be assigned to each individual to assist them in their relocation.

On April 15, 2003, ODOT met with officials from the City of Defiance and Defiance County, Township Trustees, and local business owners. The purpose of the meeting was to discuss the possibility of an interchange at US 24 and Switzer Road/West High Street. In addition, the results of a traffic study conducted to determine the secondary impacts on the local road network resulting from closing the US 24/Switzer Road/West High Street intersection were presented. The traffic study determined that future capacity problems on the local roads will occur as a result of the increase in background traffic as well as the increase in traffic generated by planned developments in the area. Future capacity problems on local roads will occur regardless of the existence of an interchange at US 24 and West High Street/Switzer Road. Community representatives were concerned that eliminating access to US 24 at West High Street would be detrimental to economic development on the west side of Defiance. ODOT stated that an interchange would not be constructed at Switzer Road and West High Street as part of the US 24 project.

Special Interest Groups

On December 5, 2001, ODOT representatives met with several concerned citizens and members of the Sierra Club and Family/Farming Americans Resisting More Unneeded Pavement (FARMUP). FARMUP is a grassroots organization that is opposed to improving US 24 as a new four-lane highway on new alignment. This group would like ODOT to improve the existing US 24 highway between Napoleon and Toledo, Ohio. The purpose of the meetings was to present an overview of the studies that had been conducted on US 24 over the past several years (i.e., origin and destination surveys, license plate survey, modal analyses, etc.) and to discuss the concerns that representatives from the Sierra Club and FARMUP have about the US 24 project. During the meeting, FARMUP representatives and citizens expressed their concern that a multi-modal alternative for the entire US 24 Corridor had not been studied by ODOT. They suggested that an alternative that combines bus service, light rail, and highway be evaluated. ODOT agreed to study this type of multi-modal alternative for the US 24 Corridor.

On January 30, 2002, ODOT representatives met again with the same citizens and members of the Sierra Club and FARMUP to discuss the results of the multi-modal alternative study. Two multi-modal scenarios were investigated. The first option was a combination of express bus, freight rail, transportation demand management (TDM) strategies, and transportation system management (TSM) improvements. The second scenario combined commuter rail, freight rail, TDM strategies and TSM improvements. The analysis determined that the highway alternative is considerably more effective at improving the operations and safety of US 24 than either of the multi-modal alternative scenarios. This is primarily due to its ability to divert a significantly greater number of trucks off of US 24 than the multi-modal alternatives.

5.1.15 Response to Public Comments

All public comments received throughout the public meetings and special outreach meetings were reviewed and taken into consideration in the development of the US 24 project. All written comments submitted through the mail or to the US 24 website received a written response. A summary of these comments is contained in Appendix 3.

The majority of the comments expressed issues of concern such as farmland impacts, noise, safety, local road closures, and residential displacements. There were also comments that recommended design features of the highway alternatives, such as their location within the corridors and the location of interchanges. Each design recommendation was reviewed and taken into consideration in the development of the Feasible Alternatives and also the Preferred Alternative. Table 5.1 summarizes the alternative design recommendations from the public and how they were incorporated into the development of the feasible alternatives. Table 5.2 summarizes the design recommendations from the public and how they were incorporated into the development of the Preferred Alternative.

**TABLE 5.1
PUBLIC COMMENTS REGARDING THE DEVELOPMENT OF THE FEASIBLE ALTERNATIVES**

Commenter	Comment	Response
<p>Linda Shaffer (July 2000) Elizabeth Rettig (July 2000) Mary Beth Wiesenberger (July 2000) Steve Swartzendruber (July 2000) Tracy Nagel (July 2000) Orville Smith (February 2000) Jerry Monnin (February 2000) Defiance County Commissioners (June and August 1999) Nelson Smith (August 1999) James W. Gillis (August 1999) Robert J. Coholich (September 1999 and July 2000) Darrell W. Handy (June 1999) Greg Jones (June 1999) Jerry Monnin (June 1999) Jerry Hayes (February 2000) Mayor Fred Schultz (February 2000)</p>	<p>Requested an interchange at West High Street/Switzer Road and US 24.</p>	<p>Currently, an overpass proposed at West High Street/Switzer Road and US 24 is included in the Feasible Alternatives. A potential interchange was studied and developed at this location.</p>
<p>William Bok (February 2000)</p>	<p>Believes that at the junction of SR 424 and US 24, a new alignment should follow the railroad to the south.</p>	<p>At the SR 424 and US 24 junction, Segment 18 travels southwest towards the railroad corridor. Alternative Segments 11, 12, 13, 15 and 17 parallel the railroad corridor. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.</p>
<p>Ron Kadesch (February 2000)</p>	<p>Would like to see a super two-lane highway with a bypass around Antwerp and generally following the railroad right-of-way as much as possible.</p>	<p>A super two-lane highway was discussed but never developed for the project. An Antwerp bypass and alignments that follow the railroad tracks were incorporated into the alternatives developed for the project. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.</p>
<p>Vernon Scheumann (February 2000) Lee Minick (February 2000)</p>	<p>Believes an interchange is needed at SR 101 and US 24 and Woodburn Road and US 24.</p>	<p>The original expressway options developed for US 24 provide for at-grade intersections at SR 101 and Woodburn Road. Currently, an interchange is proposed at SR 101 for Alternative D-1.</p>
<p>Kevin Werling (February 2000) Ronald N. Swymeler (August 1999)</p>	<p>Evaluate the existing interchange at I-469 and US 24 to provide access from I-469 to eastbound US 24.</p>	<p>INDOT is studying improvements to the I-469/US 24 interchange.</p>
<p>Ben Schmucker (October 1999)</p>	<p>Would like to have overpasses/underpasses at Bruick, and Webster Roads, and SR 101.</p>	<p>All original Feasible Alternatives provide at-grade intersections at SR 101, and Ryan/Bruick and Webster roads. Currently, interchanges are proposed at these locations for Alternative D-1.</p>
<p>Theresa Leonard (August 1999) James Haller (August 1999)</p>	<p>Against putting a cloverleaf at West High/US 24. Would like to see a super two-lane highway with left turn lanes and reduced speed to 55 mph.</p>	<p>Currently, an overpass is proposed at West High Street/Switzer Road and US 24 for some of the alternatives. Alternative Y, which includes modifying existing US 24 by adding turn lanes and improving intersections, is the only two-lane option under evaluation.</p>

**TABLE 5.1 (CONTINUED)
PUBLIC COMMENTS REGARDING THE DEVELOPMENT OF THE FEASIBLE ALTERNATIVES**

Commenter	Comment	Response
Paul J. Imber (August 1999)	For Feasible Corridor Segments R, S and T complete a four-lane divided highway with an interchange at SR 424 and US 24; at US 24 and West High Street construct a crossover only; east of the Ralston Avenue interchange construct a service road to connect with West High Street east of newly built Tiffin River bridge to serve the Fox Run Industrial Park.	Several of the four-lane expressway alternatives provide for an interchange at US 24 and SR 424. Currently, an overpass is proposed at West High Street/Switzer Road and US 24 for some of the alternatives. An interchange is proposed at SR 424 for Alternative D-1.
Denise K. Hentch (August 1999)	The Defiance Hospital must have access to West High Street/Switzer Road via US 24 for Emergency Medical Service.	Currently, an overpass proposed at West High Street/Switzer Road and US 24 is included in the Feasible Alternatives. A potential interchange was studied and developed at this location.
Naomi Blosser (August 1999)	New US 24 should follow old US 24 with a cloverleaf at SR 424 and believes Corridor Segments U or X will have bad curves.	Alternatives Y and Z follow existing US 24. An interchange and an overpass are both proposed at SR 424 for the various alternatives. Corridor Segments U, X and Y were eliminated from the study. An interchange is proposed at SR 424 for Alternative D-1.
Emil K. Msels and Norman E. Cloch (July 1999)	Believes it is logical to consider using the existing railroad right-of-way as much as possible and prefers interchanges near Antwerp and SR 127.	Each of the proposed alternatives provides an at-grade intersection with US 127 and SR 49. Currently, interchanges are proposed at SR 49 and US 127 for Alternative D-1. Railroad rights-of-way were paralleled as much as possible during the development of the alternatives. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.
Jerry M. Hayes (June and August 1999)	Requested possible interchanges for commercial access at State Route 15/18, West High Street/Switzer Road, and SR 424 West.	An interchange at US 24 and West High Street was studied and a potential interchange was developed. Currently, an overpass is proposed at West High Street/Switzer Road and US 24. An interchange or an overpass are proposed at SR 424 for the various alternatives. Currently, an interchange is proposed at SR 424.
Robert W. Schaper (June 1999)	Prefers that Sampson Road have an overpass and the rail line right-of-way should be utilized as much as possible.	For the original Feasible Alternatives, access to Sampson Road is maintained with an at-grade intersection or with an underpass, with the exception of Alternative Z. Railroad rights-of-way were utilized as much as possible during the design of the alternatives. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.
Deborah Harrmann (June 1999)	Prefers Corridor 7 with a cloverleaf in the Antwerp area.	Corridor 7 was selected as a Feasible Corridor. Intersections are proposed at SR 49 south of Antwerp and are included in each of the proposed Feasible Alternatives. Currently, an interchange is proposed at SR 49 for Alternative D-1.

**TABLE 5.1 (CONTINUED)
PUBLIC COMMENTS REGARDING THE DEVELOPMENT OF THE FEASIBLE ALTERNATIVES**

Commenter	Comment	Response
Floyd Ramsier (February 2000) Thomas Heck (February 2000) Sharon Enz (February 2000)	Suggested building a four-lane highway similar to US 30 along existing US 24 with a bypass around Antwerp.	Alternative Z is a four-lane expressway, located along existing US 24, which includes a bypass around Antwerp.
Bernadine and John Koch (February 2000) Donald Fielder (February 2000) Kathi Renie (February 2000) Everett Heck (February 2000) Rebecca Stuart (February 2000) John and Marjorie Stuart (February 2000) Gertie Stuart (February 2000) Russel Beerbower (February 2000) Tim Tobias (August 1999) Mary Fronk (August 1999) Kevin Stuart (August 1999) Nancy Mathews (August 1999) Jerry Stanton (August 1999) John Simon (August 1999)	Suggested improving existing US 24.	Two alternatives that improve existing US 24 were developed for the project, an improved two-lane alternative (Alternative Y) and a four-lane expressway alternative (Alternative Z).
Ronald Hockemeyer (August 1999)	Suggested an alignment that follows the Milan-Jefferson Township line and then follows the railroad tracks between I-469 and Antwerp.	Alternative Segments 2 and 6 follow this suggested route between I-469 and Sampson Road in Allen County. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.
Jerry Stanton (August 1999)	Suggested an interchange design at SR 424 and various alignment routes within Corridor Segments X, R, S and T.	This interchange design was reviewed and incorporated into a proposed interchange at SR 424 with the Feasible Alternatives. The proposed alignment routes were incorporated into the design of the alignments within Alternative Segments 18, 19, and 20.
Paul Weisgerber (August 1999)	Suggested an alignment that utilizes the straight section of US 24 west of Defiance (four miles) then angles southwest and follows the Maumee & Western Railroad right-of-way.	Alternative Segments 11, 12, 13, 14, 15, 18, 19, and 20 incorporate this suggested alignment into their design. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.
John Simon (August 1999)	Suggested that ODOT use the Maumee & Western Railroad right-of-way for the new US 24 alignment.	Where possible, the Feasible Alternatives parallel this railroad line. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.

**TABLE 5.2
PUBLIC COMMENTS REGARDING THE DESIGN OF THE PREFERRED ALTERNATIVE**

Commenter	Comment	Response
<p>Jerry Monnin (May 2001) Carl Andre (May 2001) Heath Wright (May 2001) Jeanette Spiller (May 2001) Amy Linebrink (May 2001) Donald Sauber (May 2001) Brad Schlachter (May 2001) Daniel Doenges (May 2001) Charles Dempsey (May 2001) Peter Simonis (May 2001) Cynthia Wendall (May 2001) William Koester (May 2001, June 2002, December 2002) Lori Schafer (May 2001) Paul Wiley (May 2001) Board of Defiance County Commissioners (May 2003)</p>	<p>Requested an interchange at West High Street/Switzer Road and US 24.</p>	<p>Currently, an underpass is proposed at West High Street/Switzer Road and US 24. These local roads will remain open via an underpass under the Preferred Alternative.</p>
<p>Lois Casty (May 2001) Mary Ann Hall (May 2001) Irene and Robert Scantlen (May 2001) Theresa Leonard (May 2001) David Hoffman (May 2001) Joyce and John Herr (May 2001) Mary Ann and Dennis Smith (May 2001) Veronica Matvey (May 2001) Staci and Doug Kaufman (May 2001) Debra and Gary Smith (May 2001) Petition with 22 signatures (May 2001)</p>	<p>Opposed to an interchange at West High Street/Switzer Road and US 24.</p>	<p>Currently, an underpass is proposed at West High Street/Switzer Road and US 24. These local roads will remain open via an underpass under the Preferred Alternative.</p>
<p>Wayne and Carolyn Carr (May 2001)</p>	<p>Requested that CR 11 have access to the new highway.</p>	<p>Currently, an underpass is proposed at the intersection of C-11 and the Preferred Alternative.</p>
<p>Russell Reinhart (May 2001)</p>	<p>Requested that CR 33 remain open for access.</p>	<p>An at-grade intersection is proposed at C-33.</p>
<p>John Omlor (May 2001) Laura McFaren (May 2001) Kenneth Benien (May 2001) Petition with 293 signatures Richard Poinsett (June 2002) Barry Steinman (June 2002)</p>	<p>Would like to see US 24 upgraded to a freeway.</p>	<p>Currently, the Preferred Alternative is designed as a four-lane freeway in Indiana and a four-lane expressway in Ohio.</p>
<p>Tony Burkley (September 2002) Maurice Wannemacher (September 2002) Ron Lane (September 2002)</p>	<p>Suggested a new route for the Preferred Alternative in Crane Township.</p>	<p>The route of the Preferred Alternative will remain in its currently proposed location in Paulding County.</p>

**TABLE 5.2 (CONTINUED)
PUBLIC COMMENTS REGARDING THE DESIGN OF THE PREFERRED ALTERNATIVE**

Commenter	Comment	Response
<p>Karen Sanders (May 2001) Michael Schuerman (May 2001) Steve Mauldin (May 2001) Loraine Bassett (May 2001) Vagabond Village (May 2001) John Molitor (May 2001) Richard Hoepfner (May 2001) Kenneth Knoblauch (May 2001) James Weaver (May 2001) Leon Witter (May 2001) Mary and Victor Gutierrez (May 2001) Mark Moats (May 2001) Joy Hanson (May 2001) Jackie Van Cleve (May 2001) Chris Fletcher (May 2001)</p>	<p>Believes the Preferred Alternative should be a four-lane highway.</p>	<p>Currently, the Preferred Alternative is designed as a four-lane freeway in Indiana and a four-lane expressway in Ohio.</p>
<p>Stephan Brandenberger (May 2001, June 2002) Sarah Brandenberger (May 2001, June 2002) Elmer Brandenberger (May 2001, June 2002) Paul Graber (May 2001, June 2002) Mark Schwartz (May 2001, June 2002) Barbara Schmucker (May 2001) Aron Schmucker (May 2001) Amos Graber (May 2001, June 2002) Jacob Graber (May 2001, June 2002) Samuel Graber (May 2001) Mary Schwartz (May 2001, June 2002) Annette Schwartz (May 2001, June 2002) Miriam Schwartz (May 2001, June 2002) Naomi Schwartz (May 2001) Ruben Schwartz (May 2001, June 2002) Melvin Brandenberger (May 2001) Jacob Brandenberger (May 2001) Suzanne Schmucker (May 2001, June 2002) Ben Schmucker (May 2001, June 2002) Victor Witmer (June 2002) Dave Graber (June 2002) Mary Graber (June 2002) Lester Graber (June 2002) Michael Schuerman (June 2002) Melvin Graber (June 2002) Pete Girod (June 2002) William Wickey (June 2002) Daniel Steury (June 2002) Sam and Wilma Brandenberger (June 2002) Jonas Schmucker (June 2002) Mike Schmucker (June 2002) David Witmer (June 2002) Enos Graber (June 2002)</p>	<p>Requested overpasses at Webster, Woodburn, and Bruick Roads, and SR 101.</p>	<p>Currently, interchanges are proposed at Ryan/Bruick Road, Webster Road, and SR 101. Woodburn Road will remain open via an underpass under the Preferred Alternative.</p>

**TABLE 5.2 (CONTINUED)
PUBLIC COMMENTS REGARDING THE DESIGN OF THE PREFERRED ALTERNATIVE**

Commenter	Comment	Response
Richard and Marilyn McCann (May 2001) Jerry Boes (May 2001) Lester and Alta Sanders (May 2001) Sam and Julie Bok (May 2001) Larry Plummer (May 2001) John Simon (May 2001) Melvin Bok (May 2001)	Want the Preferred Alternative to follow Alternative Segments 15 and 18, west of Defiance.	The Preferred Alternative generally follows Segments 15 and 18, west of Defiance.
Ron Emrick (August 2001)	Requested interchanges at Webster Road and SR 101, and an overpass at Woodburn Road.	Currently, interchanges are proposed at Ryan/Bruick Road, Webster Road, and SR 101. Woodburn Road will remain open via an underpass under the Preferred Alternative.
Robert Simpson (June 2002)	The Preferred Alternative should be located on the Maumee & Western Railroad tracks.	Where possible, the Preferred Alternative parallels this railroad line. Coordination was undertaken with the Ohio Rail Development Commission (ORDC) concerning the use of the Maumee & Western Railroad right-of-way. The ORDC has indicated its commitment to preserve the current function of this active rail corridor.
David and Suzanne Kilcoin (June 2002)	State Line Road should be closed at the Preferred Alternative.	State Line Road will remain open via an underpass under the Preferred Alternative.
Dwight and Mary Doctor (June 2002) Dwight Jr. and Jacqueline Doctor (June 2002)	State Line Road should not be used as a connector road between existing US 24 and the new highway. SR 101 and CR 11 should be considered for this connection.	The Preferred Alternative will be constructed in sections. It is anticipated that the section around Antwerp will be the first to be constructed. In the west, a temporary connector road will be built between the new highway and existing US 24.
Michael Schuerman (June 2002)	Requested overpass for Bull Rapids Road and State Line Road.	Overpasses carrying Bull Rapids Road and SR 101 over the Preferred Alternative will be constructed.
Floyd Ramsier (June 2002) Dana Hullinger (June 2002)	Requested overpass at SR 49 or T-43.	An interchange is proposed at SR 49; an overpass over the Preferred Alternative is proposed at T-43.
Karl Hockemeyer (June 2002)	Requested that the I-469/US 24 interchange be enlarged to a full cloverleaf. Also requested that Berthaud and Doyle Roads be closed and an overpass built for Bruick Road.	INDOT is studying improvements to the I-469/US 24 interchange. Berthaud Road is closed at the Preferred Alternative, an overpass over the Preferred Alternative is proposed at Doyle Road, and an interchange is proposed at Ryan/Bruick Road.
Greg Hughes (December 2002) John Wycokoff (December 2002) Joseph Barker (December 2002) David Bagley (January 2003)	Requested a grade separation at T-43.	An overpass over the Preferred Alternative is proposed at T-43.

**5.2 AGENCY
COORDINATION**
5.2.1 Notice of Intent

In accordance with 40 CFR Section 1501.7, a notice of intent to prepare an Environmental Impact Statement (EIS) for the US 24 New Haven to Defiance project was published in the *Federal Register* on August 31, 1999. A copy of the notice of intent is included in Appendix 3.1.

**5.2.2 NEPA/404/401
Merger Consultation**

In ODOT's Nine-Step Transportation Development Process, there are four designated agency concurrence points throughout the development of an EIS. The US 24 project has completed Concurrence Points #1 and #2. Concurrence Point #1 represents the completion of initial project planning and programming efforts, development of the project purpose and need, and initiation of the environmental scoping process. Concurrence Point #1 also represents the first consultation step in the Concurrent National Environmental Policy Act (NEPA)/404 Permit Process, as defined in Concurrent NEPA/404 Process for Transportation Projects (Federal Highway Administration [FHWA], US Army Corps of Engineers [USACE], US Environmental Protection Agency [USEPA], and US Fish and Wildlife Service [USFWS]). For projects led by ODOT, this concurrence point also includes coordination with the Ohio Environmental Protection Agency (OEPA) (relative to Section 401 of the Clean Water Act) and the Ohio Department of Natural Resources (ODNR). Concurrence Point #2 represents the completion of the evaluation of the Feasible Alternatives developed for the project. State and federal agencies are asked to review the Feasible Alternatives and their associated impacts, and to provide recommendation for a Preferred Alternative.

**5.2.3 Concurrence
Point #1**

In July 1999, ODOT and INDOT initiated Concurrence Point #1 with the circulation of the *Preliminary Alternatives Summary* to federal and state resource agencies for review and comment. This document contains the purpose and need statement, the modal analysis, and discussions of the preliminary corridor development and Feasible Corridor selection. ODOT and INDOT asked the agencies for their concurrence on the purpose and need statement and Feasible Corridors for the US 24 project. In addition, the agencies were asked to identify any issues of concern, required permits and reviews, and reasonable alternatives to be considered. Table 5.3 identifies the state and federal agencies that were involved with Concurrence Point #1 consultation.

TABLE 5.3
FEDERAL AND STATE RESOURCE AGENCIES CONTACTED FOR CONCURRENCE POINT #1

Federal Agencies	State Agencies
US Army Corps of Engineers - Louisville District	Indiana Department of Environmental Management
US Army Corps of Engineers - Detroit District	Indiana Department of Natural Resources
US Army Corps of Engineers - Buffalo District	Indiana Geological Survey
US Department of Agriculture, Natural Resources Conservation Service	Ohio Department of Natural Resources
US Department of Housing and Urban Development	Ohio Environmental Protection Agency
US Department of the Interior	
US Environmental Protection Agency - Region 5	
US Fish and Wildlife Service - Reynoldsburg Field Office	
US Fish and Wildlife Service - Bloomington Field Office	
US Fish and Wildlife Service - Warsaw Field Office	

In general, the resource agencies that provided comments on the *Preliminary Alternatives Summary* concurred with the purpose and need for the US 24 New Haven to Defiance project. The comments received from the resource agencies primarily focused on the clarification of certain details in the document and suggested specific items that they would like included in the US 24 project. Table 5.4 summarizes the agency comments and how they were addressed in the study. Agency correspondence from Concurrence Point #1 is included in Appendix 3.2.

**TABLE 5.4
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency US Army Corps of Engineers, Buffalo District (October 19, 1999)	
Comment	Response
The Corps hereby accepts the Statement of Purpose and Need for the proposed project.	Comment noted.
The Corps concurs that one of the highway alternatives would be the most appropriate with respect to all of the issues involved.	Comment noted.
ODOT mentions on page 23 that motorist safety is a primary concern on US 24. However, accident numbers and rates during the three-year period (1995-1997) do not seem to be increasing. What's more, most segments of US 24 appear to be below the state average rate as shown in the table on page 21. Please clarify the importance of safety on US 24 in light of its role in the project's purpose and need.	The accident data for the New Haven to Defiance section of US 24 do not identify any intersections or roadway segments that qualify as high accident locations according to ODOT criteria. The severity of the accidents is the issue of concern in this section of US 24. When determining if a roadway has an accident problem, it is important to examine the types of vehicles involved and the severity of the accidents. US 24 supports an extremely high truck volume and it is important to consider how those volumes are affecting accident occurrences. The data presented in the purpose and need show that heavy trucks are involved in 45% of the accidents along US 24 between Defiance and the Indiana state line. Because of their size and weight, truck accidents often cause greater damage to the vehicles and their passengers, particularly when a semi-tractor-trailer truck collides with a compact car. Table 7 of the <i>Preliminary Alternatives Summary</i> compares the severity of accidents for a three-year period on US 24 between New Haven and Defiance. This information shows that accidents involving injury and deaths comprise approximately 40% of the total number of accidents. Overall, this is a high percentage and is an indication that motorist safety is a primary concern on US 24.
Existing and predicted travel times for each of the corridors of US 24 should be presented in table format. This should include upgrades to existing US 24.	Existing and predicted travel times for each of the alternatives are presented in Sections 2.1.1 and 3.4.1 of the Draft Environmental Impact Statement (DEIS).
Based on public comment, engineering constraints, farm impacts, and existing long-range community development plans, the Corps agrees that Corridors 4 and 7 are appropriate for further study. However, these two corridors do not represent the best alternatives for the avoidance and minimization of impacts to Waters of the United States. Accordingly, the Corps would prefer additional studies on Corridors 10 and 13, which will likely have fewer aquatic resource impacts.	Corridors 10 and 13 were added to the Feasible Corridors for the US 24 project.
All impacts to Waters of the United States, including streams and freshwater wetlands, will require Department of the Army (DA) authorization prior to beginning of work.	Comment noted.
Any work in wetlands, as defined in a 40 CFR Part 230(t), will require DA authorization. Impacts to all Waters of the United States, including freshwater wetlands, that are associated with this project from the Ohio/Indiana border to SR 18 in the City of Defiance, Ohio will be considered as a single and complete project in accordance with 33 CFR Part 330.2(i).	Comment noted.
A wetland delineation for the non-agricultural areas of the selected corridor must be prepared in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual. For those areas of the selected corridor that are agricultural lands, the Natural Resources Conservation Service (NRCS) has the lead responsibility for making or certifying wetland determinations and delineations. You are encouraged to coordinate this project with the USDA-NRCS. Parcels that are determined to be prior converted cropland (PC) by the USDA-NRCS, are not currently regulated by the Corps under Section 404. However, those parcels that are determined to be farmed wetlands (FW) are regulated under Section 404 and will require a DA permit.	Wetland delineations were conducted for wetlands that are impacted by Alternatives C, D, and D-1. The wetland delineations will be coordinated with the appropriate agencies.

**TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency US Army Corps of Engineers, Buffalo District (continued) (October 19, 1999)	
Comment	Response
<p>You are encouraged to explore any and all minimization possibilities that would reduce your impacts to aquatic resources (e.g. use of existing roads, bridges, large culverts). Mitigation requirements will be based on the relative quality and associated value of the aquatic resources that will be impacted through construction of this project. Accordingly, the Corps requests that functions and values assessments of the affected resources be submitted for review. These may be the same reports that you submit to the OEPA for their review.</p>	<p>Throughout the development of the alternatives, impacts to wetlands and aquatic resources were avoided and/or minimized to the extent practicable. Functions and values assessments were conducted for the wetland and aquatic resources. The results of these assessments are detailed in the <i>Ecological Survey Report for Allen County, Indiana</i>, the <i>Ecological Survey Reports for Defiance and Paulding Counties, Ohio</i>, and the <i>Wetlands Delineation Study - Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio</i>. Summaries of the functions and values assessments are provided in Section 3.1.3 of the DEIS.</p>
<p>Currently, Nationwide Permit (NWP) No. 26 is scheduled to expire on January 5, 2000. At that time, new activity-specific Nationwide Permits are expected to replace NWP (26). Should the proposed work require an Individual Permit from the Corps, a Section 401 water quality certification (WQC) from Ohio EPA must be obtained prior to the issuance of a validated permit. The Ohio EPA will have one year from the publication of the Corp's Public Notice to either issue, deny, or waive the need for WQC. It is also possible that public hearings or meetings may be required. Therefore, you are encouraged to allow sufficient time for the evaluation process to run its course.</p>	<p>Comment noted.</p>

Agency US Army Corps of Engineers, Detroit District (November 4, 1999)	
Comment	Response
<p>The County of Allen and the City of New Haven are in the regular basis of the National Flood Insurance Program. Many waterways (Maumee River, etc.) near or along the proposed project are delineated on the applicable Flood Insurance Rate Map.</p>	<p>Comment noted.</p>
<p>To ensure full compliance with local and state flood plain management regulations and acts, we recommend that project design be fully coordinated with local officials, and with officials of the Indiana and Ohio Departments of Natural Resources, pursuant to the Indiana Flood Control Act (IC 13-2-22) and Ohio regulations, regarding the applicability of a proper permit prior to construction. There are no current or proposed USACE studies for this portion of Allen County or New Haven.</p>	<p>Comment noted. The design of the US 24 project will be coordinated with the appropriate agencies.</p>
<p>The proposed project has been reviewed by our Regulatory Branch for regulatory compliance pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Based on the information provided, it appears that the proposed project is within the USACE permit jurisdiction.</p>	<p>Comment noted.</p>
<p>A formal wetland delineation along the project corridor, in accordance with the Corps of Engineers' 1987 Wetland Delineation Manual, would be required. The delineation and a completed permit application must be provided to the Detroit District's Regulatory Branch, and permit received, prior to initiation of any work in Allen County.</p>	<p>Wetland delineations were conducted for wetlands that are impacted by Alternatives C, D, and D-1. The wetland delineations will be coordinated with the appropriate agencies.</p>

TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS

Agency US Department of Agriculture, Natural Resources Conservation Service, Indianapolis, Indiana (September 9, 1999)	
Comment	Response
It has been found that the project site is located in a prime farmland area.	Comment noted.
To comply with the Farmland Protection Act, please complete Parts I and III of Form AD 1006 and return it to our office.	A Form AD 1006 has been completed for Allen County and submitted to the Allen County NRCS offices. A separate Form AD 1006 has been completed for the Ohio portion of the project and submitted to the Paulding and Defiance counties NRCS offices. The Allen, Paulding, and Defiance counties NRCS offices completed Part II of the forms. Copies of the two forms are provided in Appendix 8.

Agency US Environmental Protection Agency, Region 5 (November 23, 1999)	
Comment	Response
Based on the information presented in the <i>Preliminary Alternatives Summary</i> document, we agree that a need exists to improve traffic flow and Level of Service for the purpose of relieving congestion, including roadway safety improvements, on US 24 between I-469 in Indiana and Defiance, Ohio. Current documentation (e.g. Table 5) does not demonstrate that safety is a major problem along most segments of this US 24 planning section. We note that it is unclear whether Table 7 represents accidents severity information for the New Haven to Defiance planning section or for the entire length of US 24, Fort Wayne to Toledo.	The accident data for the New Haven to Defiance section of US 24 do not identify any intersections or roadway segments that qualify as high accident locations according to ODOT criteria. The severity of the accidents is the issue of concern in this section of US 24. When determining if a roadway has an accident problem, it is important to examine the types of vehicles involved and the severity of the accidents. US 24 supports a high truck volume and it is important to consider how those volumes are affecting accident occurrences. The data presented in the purpose and need show that heavy trucks are involved in 45% of the accidents along US 24 between Defiance and the Indiana state line. Because of their size and weight, truck accidents often cause greater damage to other vehicles and their passengers, particularly when a semi-tractor-trailer truck collides with a compact car. Table 7 of the <i>Preliminary Alternatives Summary</i> compares the severity of accidents for a three-year period on US 24 between New Haven and Defiance. This information shows that accidents involving injury and deaths comprise approximately 40% of the total number of accidents. Overall, this is a high percentage and is an indication that motorist safety is a primary concern on US 24.
We are pleased to see the broad range of modal alternatives initially considered for this US 24 planning section. However, based on the problems substantiated for this planning section, ODOT and INDOT should fully evaluate an additional highway alternative that is not limited to the construction of a new limited access highway. The alternative should include: improve existing US 24 on current alignment, in combination with bypasses, additional travel lanes where necessary, Transportation System Management (TSM), Transportation Demand Management (TDM), and transit components, wherever feasible.	<p>Within the existing US 24 Corridor, a two-lane and a four-lane alternative were developed. The two-lane alternative improves the existing highway by incorporating a number of TSM-type measures such as adding shoulders, improving intersections, and adding turn lanes. The four-lane alternative is a divided, controlled access highway that follows along the existing route of US 24. Existing US 24 is incorporated into this alternative where possible and also used as a frontage road in some areas.</p> <p>TDM strategies, alone or in combination with the proposed highway alternatives, have limited effectiveness in rural communities. Also, TDM measures have limited applicability in altering the travel demand characteristics associated with freight traffic.</p> <p>Transit alternatives would have limited effectiveness given the study area's low population and rural housing/employment densities.</p>
This alternative should be carried forward for further study. The alternative, along with the other highway alternatives, should be subjected to the same level of in-depth analysis required for the DEIS.	Alternatives Y and Z consist of improvements to existing US 24. These alternatives have been evaluated to the same level of detail as the other Build Alternatives.

**TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency US Environmental Protection Agency, Region 5 (continued) (November 23, 1999)	
Comment	Response
<p>The development of the preliminary corridors is deficient in that a corridor, which includes the existing US 24 roadway is not included. In addition, only the western and easternmost ends of existing US 24 were included within corridor segments. At this time, there is no substantial reason to exclude the major portion of exiting US 24 as a viable corridor alternative. In addition, there may be segments along existing US 24 that could be used in developing a feasible alternative that would have less potential environmental impacts than those proposed in this document for further study. This oversight should be corrected in future documentation, including, but not limited to, corrections to corridor/environmental maps, for this US 24 planning section.</p>	<p>As a result of public and agency comments received from Concurrence Point #1, a corridor that includes US 24 was added to the study. Within the existing US 24 Corridor, a two-lane and a four-lane alternative were developed. The two-lane alternative improves the existing highway by adding shoulders, improving intersections, and adding turn lanes. The four-lane alternative is a divided, limited access highway that follows along the existing route of US 24. Existing US 24 is incorporated into this alternative where possible and also used as a frontage road in some areas.</p>
<p>We note that the corridor analysis used to screen for the preliminary corridors was a "broad-brush" approach based on minimal detailed information. We note that Table 8 (Comparative Analysis Matrix) and Table 9 (Relative Rank of Preliminary Corridors) do not include floodplain acreage information even though the Environmental Inventory map identifies corridors within floodplain areas. We note that the Environmental Inventory map does not depict woodland or farmland areas. We note that the totals in Table 9 erroneously include one additional count for the "Structures (Total)" category. Consequently, Figure 7 (Corridor Comparison) is inaccurate.</p>	<p>The corridor analysis is based on the results of the studies conducted in Steps Two and Three of ODOT's Transportation Development Process. At these steps of the process, environmental investigation uses available secondary source information from database and literature reviews to identify environmental resources in the study area. Review of Federal Emergency Management Agency (FEMA) floodplain mapping depicts only one major floodplain within the study area which is associated with the Maumee River. Overall, the project will not impact the floodplain within the entire corridor, rather a narrow segment within an alignment. Therefore, it is not appropriate to consider floodplain acreage within a corridor for screening purposes.</p>
<p>Based on the information provided in the document, we note that subcategories that could have easily been identified and included in their respective main categories were not included. We suspect that the inclusion of additional subcategories would have provided additional accounts that would have affected the ranking tables in Table 9 and consequently, the information depicted in Figure 7 (Corridor Comparison). The additional information provided by the inclusion of additional subcategories would have helped to further guide the corridor elimination decision process.</p>	<p>Based on information available through secondary source review, corridors were developed to minimize involvement with identified resources within the study area and to meet the project's Purpose and Need. Upon further development of the project, more information is made available through field studies at which time alternative alignments are developed.</p>
<p>At this time we do not agree that only Preliminary Corridors 4 and 7 be carried forward for further study as proposed in the document. Of the 14 corridors, Corridors 7 and 4 have the potential to impact the second and third largest amount of wetland acreage. In accordance with Section 404 of the Clean Water Act, the alternative ultimately recommended for implementation also must clearly be documented to be the feasible alternative with the least potential to result in the loss of, or attenuation of, any naturally occurring wetlands.</p>	<p>As a result of public and agency comments received from Concurrence Point #1, a corridor that includes existing US 24, in addition to Corridors 10 and 13 were added to the Feasible Corridors. Throughout the development of the alternatives, impacts to wetlands and aquatic resources were avoided and/or minimized to the extent practicable.</p>
<p>Based on the information provided, Corridor 10 and Corridor 13 appear to be viable corridor alternatives that should be carried forward for further study. Table 9 shows that Corridors 10 and 13 ranked better than Corridors 4 and 7, over all.</p>	<p>Corridors 10 and 13 were added to the Feasible Corridors for the US 24 project.</p>
<p>Unless otherwise demonstrated, Corridors 10 and 13, along with an existing US 24 corridor appear to be viable corridor alternatives with potentially less environmental impacts than Corridors 7 and 4. They should be carried forward for further study and analysis in preparation for the documentation required for the DEIS.</p>	<p>As a result of public and agency comments received from Concurrence Point #1, a corridor that includes existing US 24, in addition to Corridors 10 and 13 were added to the Feasible Corridors for the US 24 project.</p>

TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS

Agency US Fish and Wildlife Service, Reynoldsburg, Ohio Office (September 22, 1999)	
Comment	Response
We have reviewed your letter and attached documents. We find that they adequately address the purpose, need, and preliminary alternatives for this proposed project.	Comment noted.

Agency US Fish and Wildlife Service, Bloomington, Indiana Office (August 31, 1999)	
Comment	Response
Much of the proposed project area was once a part of the Great Black Swamp, an approximate 5000 square mile forested wetland within the Maumee River Valley from near the Indiana-Ohio State Line to Lake Erie. It is now extensively drained and farmed, and woodlands exist only as small remnants. Many of these small woodlands remain as forested wetlands while others no longer have sufficient hydrology to be wetlands. Because woodlands, either wet or dry, are now so rare within this portion of Indiana and Ohio, the FWS requests that every effort be made to avoid impacting these areas with the new roadway. Bisecting larger woodlands would be especially detrimental to nesting birds and other wildlife, but removal of any forested lands would adversely affect wildlife resources. Wetland losses should also be held to a minimum, with mitigation for any unavoidable impacts.	Throughout the development of the alternatives, impacts to woodlots, wetlands, and aquatic resources were avoided and/or minimized to the extent practicable. Wetland mitigation as required will be provided for any unavoidable impacts.

Agency Ohio Department of Natural Resources (September 3, 1999)	
Comment	Response
Natural Heritage maps and files for the proposed projects were reviewed for records involving endangered, threatened or special interest species in the immediate project vicinity. The Natural Heritage Database contains no records for rare species or unique natural features within the Preferred Corridors 4 and 7. There are no state nature preserves within these corridors, but a portion of the corridor east of Antwerp (where sections L and K merge to form section N/O) includes part of the old Wabash-Erie Canal.	Comment noted.
Segment S is the preferred route since there is an existing bridge crossing and right-of-way. Corridors 4 and 7 are acceptable routes. Their distance from the Maumee State Scenic River should have little or no impact to the river ecosystem. Segments U and X should definitely not be considered since they would require new bridge construction and further impacts to the Maumee River.	All of the alternatives developed for the US 24 project follow existing US 24 through Corridor Segment S and utilize the existing bridge crossing of the Maumee River. Segment U and the portion of Segment X north of the Maumee River were eliminated from the project.

TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS

Agency Ohio Environmental Protection Agency (September 30, 1999)	
Comment	Response
The Summary states on page 4 that US 24 from Fort Wayne to Toledo is designated in the federal Intermodal Surface Transportation Efficiency Act of 1991 as a High Priority Corridor on the National Highway System. ODOT should elaborate on the selection process for these high priority corridors.	Section 1.6.5 of the DEIS provides additional information on High Priority Corridors.
The Summary states on page 8 that segments of existing US 24 are classified as either a Rural Principle Arterial (RPA) or a Rural Minor Arterial (RMA) as those terms are defined by the American Association of State Highway and Transportation Officials (AASHTO). ODOT should identify the classification for each segment of existing US 24, and identify which segments do not meet AASHTO criteria.	Information on each roadway segment is provided in Sections 1.5, 1.6, and 3.4.1 of the DEIS.
ODOT should incorporate Average Daily Traffic (ADT) and Level of Service (LOS) ratings for 1998 for each segment into Table 1 located on page 10 of the Summary.	Table 1.1 of the DEIS includes ADT and LOS for 1998.
OEPA requests clarification regarding what ODOT's 1997 Origin-Destination Survey of the US 24/Ohio Turnpike Corridor at the Ohio/Indiana State Line was attempting to evaluate. Specifically, ODOT should: 1) state if the survey was examining travel patterns between specific cities or areas, as was the Origin-Destination Survey for the City of Defiance, and would the responses differ if different cities were listed as the origin and destination; 2) include responses from automobile traffic and explain why only responses from truck traffic were reported in the Summary; 3) explain why only westbound traffic was surveyed and would a survey of eastbound traffic produce different results; and 4) include any other relevant information that would clarify the intent of the survey.	<p>The Origin - Destination Survey is discussed in more detail in Sections 2.1.1 and 3.4.1 of the DEIS. This survey investigated regional travel destinations such as townships and neighboring counties. Specific cities outside of the region were categorized as "further destination cities" and not individually identified. Automobile traffic was included in the survey and is discussed in Section 3.4.1 of the DEIS. Responses from truck traffic were reported in the purpose and need to provide supporting documentation to the discussion of truck traffic using US 24. Truck traffic has a substantial impact on the capacity and level of service for any type of roadway and it is considered to be a primary contributor to the traffic congestion on US 24.</p> <p>Typically, origin and destination surveys only collect information from one direction of travel. This accepted approach is based on the assumption that motorists return from their destinations resulting in a symmetrical traffic flow. Based on this assumption, the results from a survey of eastbound traffic would not significantly differ from the westbound traffic results.</p>
ODOT should elaborate on the time of travel discussion found on page 15 of the Summary. Specifically, ODOT should identify the existing time for travel for the study area and the predicted time of travel for the various corridors, including upgrading existing US 24. ODOT should also state if criteria exists for determining acceptable times of travel for various types of highways analogous to criteria for LOS or ADT.	A travel time discussion is provided in Sections 2.1.1 and 3.4.1 of the DEIS.
ODOT should provide LOS and ADT rating and time of travel data for TSM and/or TDM alternatives to better compare these alternatives to the build alternatives.	Alternatives Y and Z include TSM and TDM measures in its design. Refer to the LOS and ADT data for Alternatives Y and Z presented in Section 3.4.1 of the DEIS.
On page 31 of the <i>Preliminary Alternatives Summary</i> , it is noted that TSM and TDM alternatives alone will not resolve the deficiencies of existing US 24. This conclusion would be greatly reported by quantitative LOS, ADT and time travel data.	Detailed traffic operational analysis required to develop ADT volumes, LOS ranking and travel time was not completed for TDM and TSM options only (i.e., without roadway improvements) These were proven not to effectively resolve all identified transportation problems. Alternative Y (two-lane alternative) includes a variety of TSM strategies in its design.

**TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency Ohio Environmental Protection Agency (continued) (September 30, 1999)	
Comment	Response
ODOT should describe the degree to which examining passenger and freight railroad alternatives is within the scope of its overall mission.	<p>The Federal Highway Administration's guidance on <i>Preparing Environmental and Section 4(f) Documents</i> (Technical Advisory T6640.8A) states that a range of alternatives, including all reasonable alternatives, should be discussed in environmental documents. Because approximately 50% of the traffic on US 24 is through truck traffic carrying freight, a rail freight alternative was investigated and is addressed in Section 2.3.4 of the DEIS.</p> <p>In addition to the rail freight alternative analysis that was conducted for the US 24 New Haven to Defiance section, ODOT also conducted a regional study of alternatives that could address transportation needs between New Haven, Indiana and Toledo, Ohio. This regional study investigated a freight rail alternative between New Haven, Indiana, and Toledo, Ohio. A summary of this study is provided in Section 2.1.2 of the DEIS.</p>
ODOT should elaborate on how the logical termini were selected for the various US 24 projects and discuss if there is any logic to consolidating the US 24 projects. ODOT should include a discussion of the basis for establishing independent utility for each US 24 project.	Discussion on the function of the three US 24 planning section is provided in Section 1.3; discussion on logical termini and independent utility are provided in Sections 1.3 and 1.4 of the DEIS.
ODOT states on page 49 of the Summary that, based on public comments, it will be evaluating an upgrade to existing US 24. ODOT's analysis of the upgrade alternative should be no less rigorous than that provided for the build alternatives considered in the Summary.	As a result of public and agency comments received from Concurrence Point #1, a corridor that includes US 24 was added to the study. Within the existing US 24 Corridor, a two-lane alternative (Alternative Y) and a four-lane alternative (Alternative Z) were developed. The two-lane alternative improves the existing highway by adding shoulders, improving intersections, and adding turn lanes. The four-lane alternative is a divided, limited access highway that follows along the existing route of US 24. Existing US 24 is incorporated into this alternative, where possible, and also used as a frontage road in some areas. Alternatives Y and Z are addressed in detail as Feasible Alternatives in this DEIS.
OEPA was unable to reproduce the relative ranking of the preliminary corridor evaluation described in pages 40 through 49 of the Summary. ODOT must describe what rationale was used to assign GIS data points None, Low, Medium, or High values as described on page 40 of the Summary, and what is the significance of the ranking.	The none, low, medium, and high values reflect the quantitative impacts of the different resources within the 14 preliminary corridors. Using historic sites as an example, Corridor 14 does not contain any historic sites, therefore it was given the value of none. Corridor 1 was assigned a value of low for historic sites because only one historic site is located within this corridor and the other 12 corridors have more than one historic site within them. Corridor 9 was assigned a high value because it contains the greatest number of historic sites compared to the other alternatives. The other 11 corridors were assigned a medium value because they contain two or four historic sites. These numbers are between 1 and 5, therefore they fall within the medium value category.
OEPA is also concerned that all EIS categories are weighted evenly as described on page 45. OEPA believes it is inappropriate to consider impacts to an exceptional warmwater habitat stream equally to impacts to a warmwater or modified warmwater stream.	The project is being developed in accordance with ODOT's Nine-Step Transportation Development Process. All available secondary information available through database and literature reviews is used to categorize environmental features included in the corridor-level analysis.
ODOT should expand on Table 8, Comparative Analysis Matrix, located on page 42 of the Summary for wetlands and streams. First, ODOT should indicate the beneficial aquatic life use designations for the stream located in the study area and how many of each use designation will be impacted by each preliminary corridor. Second, ODOT should indicate how many acres of each wetland vegetation class is located within each corridor.	The corridor analysis is based on the results of the studies conducted in Steps Two and Three of ODOT's Nine-Step Transportation Development Process. At these steps of the process, environmental investigation uses database and literature reviews to identify environmental resources in the study area. The requested information for wetlands and streams is provided in Section 3.1.3 and 3.1.4 of the DEIS.
ODOT should eliminate preliminary alternatives that include Segments U and X, as these will require construction of a new bridge across the Maumee River.	Segment U and Segment X north of the Maumee River were eliminated from the project.

**TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency Ohio Environmental Protection Agency (continued) (September 30, 1999)	
Comment	Response
ODOT should clarify its ability to avoid and minimize impacts to resources within the 609.8-meter (2,000-foot) planning corridors through the careful development of feasible alternatives. OEPA seeks to determine the actual benefit of selecting preliminary corridors with fewer identified streams and wetlands.	The project is being completed under ODOT's Nine-Step Transportation Development Process. Section 2 of the DEIS contains a detailed description of the alternative development process including corridor development and selection as well as alternative development and selection.

Agency Indiana Department of Environmental Management, Office of Water Management (November 23, 1999)	
Comment	Response
Overall, the Indiana segment of this project would have minimal impacts on wetlands or other water resources. We recommend that an alignment be chosen which avoids wetland impacts completely.	Comment noted.
The Office of Water Management recommends that you contact the Detroit District, USACE at (313) 225-2298 concerning the possible requirement of Section 404 Permit for this project. In the event the Section 404 Permit is required, the project may be subject to a Section 401 Permit from the Indiana Department of Environmental Management (IDEM).	Comment noted. The design of the US 24 project will be coordinated with the appropriate agencies.
Water pollution control measures, as specified in the 1993 Indiana State Highway Standard Specifications, shall be applicable.	Construction of the project will be done in accordance with the required Standard Specifications.
The Indiana Department of Natural Resources (IDNR), Division of Water, is to be contacted for approval of construction in floodways.	Comment noted. The design of the US 24 project will be coordinated with the appropriate agencies.
The IDNR, Division of Fish and Wildlife, shall be consulted regarding potential harm to the local biota resulting from the proposed project.	Coordination with the IDNR, Division of Fish and Wildlife has already been initiated for the US 24 project.
The project should be designed to minimize any impact on ambient air quality in or about the project area. The project must comply with all Indiana Air Pollution Control Board rules.	The section of US 24 in Indiana will comply with the Indiana Air Pollution Control Board rules.
What disposal method is being used for organic debris from land clearing and other waste materials? Open burning is allowed for certain types of maintenance purposes with specific conditions. If burning is allowed by the rule and is being considered, evaluate the economic and technical feasibility of non-combustion disposal option, for example removal, mulching and burial. Open burning approvals may be granted for certain projects by OAM. Open Burning Rule 326 IAC 4-1 should be taken into consideration.	<p>During construction, the contractor will make every effort to utilize suitable excess materials (rock and soil) for forming the base of embankments, connection roads, ramps, and approaches. If there is excess material that is unsuitable, or if there is a surplus, the contract will prepare a waste disposal plan. The plan will identify the location, size, and details of the site(s) as well as discuss acceptable waste and instructions for stabilization and closure. This plan will be reviewed and approved by governing authorities prior to implementation.</p> <p>All burning will be done in accordance with all applicable laws, ordinances, and regulations, and will be subject to the regulations of the OEPA and Indiana Air Pollution Control Board. Other options such as non-combustion disposal options, for example removal, mulching and burial, will also be considered.</p>
Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. Example precautions are wetting the area with water, constructing wind barriers, or treating the area with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked out from unpaved areas should be minimized. Please refer to the Fugitive Dust Rule 326 IAC 6-4 for details.	All reasonable precautions as required will be taken to minimize fugitive dust emissions from construction and demolition activities for the US 24 project.

TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS

Agency Indiana Department of Environmental Management, Office of Water Management (continued) (November 23, 1999)	
Comment	Response
If construction or demolition is conducted in a wooded area where large blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted three to five years, precautionary measures should be taken to avoid an outbreak of histoplasmosis.	Precautionary measures as required to avoid an outbreak of histoplasmosis will be taken during construction or demolition for the US 24 project.
Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than 7 % oil distillate, is prohibited during the months April through October. Please refer to 326 IAC 8-5 Asphalt Paving Rule for details.	If asphalt paving is performed during the months of April through October in Indiana, the use of cutback asphalt, or asphalt emulsion containing more than 7% oil distillate will not be used per 326 IAC 8-5 Asphalt Paving Rule.
If demolition or renovation of a structure will take place, asbestos and lead-based paint rules may apply. An inspection should be performed by an accredited asbestos inspector to determine if asbestos containing materials are present. If asbestos are present, rules governing project licensing will apply. Projects that involve lead-based paint activities should take the proper safety precautions to ensure the health of building occupants and the safety of the environment. In projects that involve asbestos, notification rules and set schedules apply to renovation operations above a certain size and all demolition projects.	Prior to demolition or renovation of any structure, asbestos and lead-based paint testing and inspections will be done in accordance with all applicable laws, ordinances, and regulations.
If this project is the construction of a new source of air emissions or the modification of an existing source of air emissions, it will need to be reviewed for an air emissions permit or registration according to 326 IAC 2-1 Permit Review Rules.	Comment noted.
The Office of Solid and Hazardous Waste Management (OSHWM) does not believe the site is or represents an environmental problem, based on the information provided.	Comment noted.
If the site is found to contain any areas used to dispose of solid or hazardous waste, you shall contact the OSHWM at 317-232-3210.	Comment noted.
If any contaminated soils are discovered during this project, they may be subject to disposal as either special or hazardous waste.	Comment noted.
There may be PCB issues related to this site. Please contact the Special Waste Section of OSHWM for information regarding management of any PCB wastes from this site.	Comment noted.
There may be asbestos issues related to this site. Please contact the Special Waste Section of OSHWM for information regarding management of any asbestos wastes from this site.	Comment noted.

Agency Indiana Department of Environmental Management (January 28, 2000)	
Comment	Response
Staff in our Office of Water Management responded to an early coordination request from INDOT regarding this project in mid-November 1999. We are available to assist the public in the inspection of public records and would be glad to provide technical assistance, at your request, as this project proceeds.	Comment noted.

**TABLE 5.4 (CONTINUED)
CONCURRENCE POINT #1 AGENCY COMMENTS**

Agency Indiana Department of Natural Resources, Habitat and Diversity Protection Unit (May 5, 2000)	
Comment	Response
This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Act (IC 14-28-1).	Comment noted. The design of the US 24 project will be coordinated with the appropriate agencies.
The National Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. The consultant's study overlooked two natural areas, Bluecast Spring and Bull Rapids, which occur in the project vicinity. It appears that neither area will be affected by the project.	Comment noted.
The Division of Fish and Wildlife requests that a meeting be held to fly the alternate routes to identify potential impacts. In addition, the Division would also like to fly the US 24 route from Wabash to Huntington.	INDOT and ODOT will drive the proposed routes with the Division to review potential impacts if so desired. If it is determined to be necessary, ODOT will consider flying the proposed alternatives with the Division.

5.2.4 Concurrence Point #2

In January 2001, ODOT and INDOT initiated Concurrence Point #2 with the circulation of the Preliminary Draft Environmental Impact Statement (PDEIS) to federal and state agencies for review and comment. ODOT and INDOT asked the agencies to review the Feasible Alternatives and their associated impacts based on the studies conducted for the various resources. In addition, the agencies were asked to provide recommendation for a Preferred Alternative out of the 26 Feasible Alternatives under consideration. Table 5.5 identifies the state and federal agencies that were involved with Concurrence Point #2 consultation.

**TABLE 5.5
FEDERAL AND STATE RESOURCE AGENCIES CONTACTED FOR CONCURRENCE POINT #2**

Federal Agencies	State Agencies
US Army Corps of Engineers – Detroit District	Indiana Department of Environmental Management
US Army Corps of Engineers – Buffalo District	Indiana Department of Natural Resources
US Environmental Protection Agency – Region 5	Ohio Department of Natural Resources
US Fish and Wildlife Service – Reynoldsburg Field Office	Ohio Environmental Protection Agency
US Fish and Wildlife Service – Bloomington Field Office	Ohio Department of Agriculture
US Fish and Wildlife Service – Warsaw Field Office	

As part of the Concurrence Point #2 coordination, a meeting was held on March 8, 2001 to discuss the PDEIS and recommendations for the Preferred Alternative. Representatives from the USEPA, OEPA, FHWA, and ODOT were in attendance. The USEPA discussed their comments on the PDEIS. The USEPA based their alternatives evaluation only on wetland impacts. The OEPA expressed concern about impacts to category three wetlands and streams.

In general, the resource agencies that provided comments on the PDEIS stated that they agree with the need for a Build Alternative and that a reasonable range of alternatives was evaluated for the project. The agencies indicated a preference for those alternatives that minimize impacts to wetlands, streams, farmlands, wildlife habitat, woodlands, and the Maumee River. Several agencies recommended Alternative C as the Preferred Alternative for US 24. Table 5.6 summarizes the agency comments and how they were addressed in the study. Agency correspondence from Concurrence Point #2 is included in Appendix 3.3.

**TABLE 5.6
CONCURRENCE POINT #2 AGENCY COMMENTS**

Agency US Environmental Protection Agency, Region 5 (February 26, 2001)	
Comment	Response
The agency concurs with the project's Purpose and Need Statement and in the Identification of Alternatives to be Evaluated. The agency agrees that implementation of a "Build" Alternative will be necessary to meet present and projected traffic volumes while providing an acceptable level of service. A broad range of alternatives (27 alternatives) has been carried through an environmental impact assessment.	Comment noted. Alternative C was originally recommended as the Preferred Alternative.
It appears that either Alternative C or Alternative O would constitute the Feasible Alternative with the least amount of wetland impact. Since no information is presented in the PDEIS calling the feasibility of either of these alternatives into question, we strongly urge that either of the alternatives be identified as the Preferred Alternative. If new information not contained in the PDEIS were to be developed clearly showing that neither Alternative C nor Alternative O is feasible, we would strongly urge that either Alternative A or Alternative M be selected as the Preferred Alternative.	Alternative C was originally recommended as the Preferred Alternative. Through efforts to minimize wetland impacts, a 27th Feasible Alternative was developed (Alternative D-1), which was subsequently identified as the Preferred Alternative.

Agency US Fish and Wildlife Service, Reynoldsburg, Ohio Office (February 9, 2001)	
Comment	Response
The agency favors whichever alternative would have the least impact on woodland, wetlands, and other wildlife habitat. This appears to be Alternative C, although building existing US 24, as a four-lane highway with a bypass around Antwerp, Ohio may be greatly acceptable if damages to woodlands and Section 4(f) resources are greatly reduced.	Alternative C was originally recommended as the Preferred Alternative.
The agency questions the use of a wider median for Indiana 25 meters (82 feet) than Ohio 18.3 meters (60 feet).	Design criteria established by the individual states were used in the development of the Feasible Alternatives. The typical median width recommended by the Indiana Department of Transportation is 25 meters (82 feet) while the typical median width recommended by the Ohio Department of Transportation is 18.3 meters (60 feet).
A 91.4-meter (300-foot) right-of-way is excessive given the flat nature of the terrain and little need for cuts and fills, except for overpasses. Therefore, the agency recommends that the Preferred Alternative have the minimum necessary right-of-way with concrete median barriers rather than a grassed median. This type of construction has proven safe and effective along numerous interstate highways nationwide and should be equally effective for US 24. The purpose of the project is to improve traffic flow, improve safety, reduce travel times and enhance the regional network. We believe that these goals can be achieved using a right-of-way narrower than 300 feet with a concrete median barrier, while still preserving as much farmland, residential, existing business and wildlife habitat as possible as requested by the people living in the area of impact.	Design standards for the Feasible Alternatives were developed in accordance with guidelines of the American Association of Highway and Transportation Officials (AASHTO) as presented in <i>A Policy on Geometric Design of Highways and Streets</i> . These guidelines recommend the use of open space medians as opposed to median barriers, particularly for the rural expressways and freeways. Medians serve several purposes, predominantly safety-related: separate opposing traffic streams, provide recovery areas for out-of-control vehicles, provide emergency stopping areas, allow space for speed changes and storage of left-turning and U-turning vehicles, and minimize headlight glare. In addition, the median can also provide area for snow storage. The option to reduce the median width through the use of concrete median barriers for the Preferred Alternative has been considered. This discussion is presented in Section 2.6.4 of this DEIS.
Mussel surveys have been conducted at the proposed bridge sites along the Maumee and Tiffin Rivers. Sub-fossil shells of the federally-listed endangered clubshell were found at both sites and sub-fossil shells of the northern riffleshell were found at the Tiffin River site. Additionally, two species of state special interest in Ohio (deertoe and purple wartyback mussels) were found alive at both sites.	Comment noted.

TABLE 5.6 (CONTINUED)
CONCURRENCE POINT #2 AGENCY COMMENTS

Agency US Fish and Wildlife Service, Reynoldsburg, Ohio Office (continued) (February 9, 2001)	
Comment	Response
Even though no federally-listed endangered species are currently extant in the vicinity of the Maumee River and the Tiffin River bridge sites, every effort must be taken to reduce impacts to mussel species because some of those within the project area may eventually become federally-listed. The proposed bridges need to be located where they will least impact the mussel beds or the mussels need to be relocated to appropriate habitat, preferably upstream of the impact area where project-cause sedimentation and other impacts would be less.	Crossings of the Maumee and Tiffin rivers will be maintained at the existing crossing locations. The footprint of the existing bridges will be expanded to accommodate the widened facility. It has not yet been determined if the structures will be widened up-stream or down-stream. Future design studies will incorporate efforts to avoid or mitigate impacts on sensitive species of mussels, including relocation if necessary. Additional coordination will be undertaken with USFWS concerning the design of these river crossings. If, prior to completion of design studies and/or construction, new data indicates that federally-listed species are present within the vicinity of the Maumee and Tiffin rivers bridge sites, ODOT will initiate Section 7 consultation.
The federally-listed endangered Indiana bat is potentially present within riparian woodland, adjacent wooded uplands, and wetlands throughout the project area. Surveys are proposed once the Preferred Alternative is determined. Survey protocols should be coordinated with the Reynoldsburg, Ohio and Bloomington, Indiana field offices.	ODOT has an existing agreement with the USFWS waiving requirements for field surveys for the Indiana bat provided that mitigation commitments include a provision prohibiting tree removal between April 15 and September 15. This commitment has been included in the mitigation requirements for this project.
Summer roosting habitat is not the only concern with the Indiana bat. Foraging habitat along wooded stream corridors is also a concern. Removal of some trees along a stream may not affect Indiana bat roosting habitat, but could potentially affect foraging use of a stream corridor, especially if such habitat is already limited in an area or if the opening created is wide enough to discourage foraging.	Minimization of impacts to stream corridors and the openings created along streams by the US 24 project will be considered in design studies for the Preferred Alternative.
If after conducting mist net surveys for Indiana bats, it is determined that tree cutting restrictions alone are adequate to protect the species, then tree cutting cannot occur during the period of summer habitat is used by Indiana bats (April 15 through October 15). If bats are present and additional restrictions necessary, this will be determined during Section 7 consultation under the Endangered Species Act of 1973, as amended.	In accordance with the agreement between ODOT and the USFWS waiving field survey requirements for the Indiana bat, contractors will not be allowed to remove trees between April 15 and September 15 during construction.
The eastern massasauga rattlesnake, a federal candidate species, is potentially present in the Ohio portion of the proposed project area. This species is very secretive and difficult to locate, so site surveys may not locate it even if it is present. Therefore, avoidance of potential habitat is the best method of preventing impacts to this species. If the Preferred Alternative may affect this species, the agency should be contacted prior to site construction.	Site surveys for the eastern massasauga rattlesnake and suitable habitat have been completed for the Preferred Alternative. The species was not found during the survey. The results of the survey are summarized in Section 3.1.6 of the DEIS.
The project also lies within the range of the copperbelly water snake, a federally-listed threatened species. Habitat requirements for this species include lowland swamps or other warm, quiet waters (both seasonal and permanent), adjacent wooded migration corridors, adjacent wooded upland slopes with underground hibernation sites below the frost line, and streams or rivers. If suitable habitat for this species is located in the project area, the agency should be contacted prior to site construction.	Site surveys for the copperbelly water snake have been completed for the Preferred Alternative. No observations of the species or suitable habitat were observed during the survey. The results of the survey are summarized in Section 3.1.6 of the DEIS.
These endangered species comments constitute informal consultation only. They do not fulfill the requirements of Section 7 of the Endangered Species Act of 1973, as amended.	Comment noted. If required, ODOT and INDOT will enter into formal consultation under Section 7 of the Endangered Species Act. Based on investigations to date, no involvements with federally or state-listed threatened and endangered species are anticipated.

TABLE 5.6 (CONTINUED)
CONCURRENCE POINT #2 AGENCY COMMENTS

Agency Ohio Department of Agriculture (March 6, 2001)	
Comment	Response
The agency is proposing a review process that would facilitate coordination between the Ohio Department of Transportation and the Ohio Department of Agriculture. This process would include the development of an Agricultural Impact Statement (AIS) for each major transportation project. The AIS would contain relevant facts and information on a major transportation projects' impact on agricultural lands, farmers, operations, and agribusiness. The AIS information would be included in the appropriate concurrence point or points in the project development process. Local officials, farmers and other citizens of the impacted communities would have the opportunity to comment on a projects impact on agriculture for each alternative under consideration and the Preferred Alternative.	The PDEIS contained information required for agency review in accordance with the federal Farmland Protection Policy Act, much of which is the same information proposed for inclusion in an AIS. Based on the rural project setting and public comments received through the project development process, ODOT is aware that alternatives could result in substantial impacts to agricultural lands and operations. Minimization of such impacts was a goal guiding development of Feasible Corridors and Feasible Alternatives as well as the selection of the Preferred Alternative. Citizens of impacted communities are encouraged to attend project meetings including project meetings held in conjunction with project concurrence points. In addition, several special purpose meetings have been held with individual farmers to review potential impacts, screen alternatives and develop feasible mitigation strategies. The DEIS will be circulated to the public for review and comment. Copies will be provided at local public buildings for review (such as libraries); in addition, copies will be provided to individuals requesting a copy of the DEIS.
The AIS would specifically include: 1.) Amount of acres impacted, directly and indirectly; 2.) Annual economic output of impacted agricultural land; 3.) Types of agricultural operations (i.e. crops, livestock, specialty agriculture, etc.); 4.) Type of soil on impacted agricultural land (i.e. prime, non-prime, unique, or locally important); 5.) Impact of project on farmers' ability to haul products to markets or grain elevators; 6.) Impact of project on farmers' ability to get tractors, combines or other farm equipment to fields; and 7.) Other factors relevant to the community and its agricultural base.	The PDEIS contained information required for agency review in accordance with the Farmland Preservation and Protection Act, much of which is the same information proposed for inclusion in an AIS, with the exception of the annual economic output of the impacted land, which has not yet been determined.
It may be necessary for ODOT to work closely with local officials, the county's Farm Bureau, the county's Soil and Water Conservation District, the county's OSU Agricultural Extension officials, and other local organizations to collect the necessary information for the AIS.	ODOT has worked closely with the affected farmers, local officials and the Defiance and Paulding counties' Soil and Water Conservation Districts to gather information on agricultural activities in the study area.
The information to be collected for the AIS should be include in the Preliminary Draft Environmental Assessment and other public review documents to ensure that farmers, local officials and citizens can review the potential impacts (adverse and positive) on agriculture of a major transportation project.	The information recommended for inclusion in the AIS was included in the PDEIS submitted to the Ohio Department of Agriculture for review with the exception of the annual economic output of the impacted land, which has not yet been determined.

Agency Ohio Department of Natural Resources (February 15, 2001)	
Comment	Response
Natural Heritage maps and files for the proposed project were reviewed for records involving endangered, threatened or special interest species in the immediate project vicinity. The Natural Heritage database contains no records for rare species or unique natural features within the corridors proposed for new construction or along the existing US 24 alignment. There are no state nature preserves in the vicinity of these routes.	Comment noted.
Because of its proximity to the Maumee State Scenic River, we are not in favor of the ODOT Alternative to upgrade the existing US 24 alignment.	The existing bridge cannot be reconstructed to carry four lanes of traffic over the Maumee River. To meet expected traffic demand, a second structure will be constructed immediately adjacent to the existing bridge to carry two travel lanes over the river. Further coordination was undertaken with the Ohio Department of Natural Resources, Scenic Rivers Coordinator for the project to identify strategies to mitigate impacts to the Maumee State Scenic River.

**TABLE 5.6 (CONTINUED)
CONCURRENCE POINT #2 AGENCY COMMENTS**

Agency Ohio Department of Natural Resources (continued) (February 15, 2001)	
Comment	Response
The proposed project falls within the 100-year floodplain for the Auglaize River as designated on the Paulding County Flood Insurance Rate Map 390777 0065D, effective date January 5, 1996 and 0055C, effective date December 5, 1989. Paulding County is a participant in the National Flood Insurance Program and has adopted locally enforced flood damage reduction standards. The local floodplain administrator should be contacted for the specific development requirements and permits.	The presence of the 100-year floodplain for the Auglaize River has been considered in the development of the Feasible Alternatives. In accordance with Executive Order 11988 <i>Floodplain Management</i> , avoidance of the 100-year floodplains for streams was considered in the development of the Feasible Alternatives. Coordination with Allen, Paulding and Defiance counties has been undertaken to obtain local floodplain management plans. The policies and requirements have been considered in the development of the Preferred Alternative. Future design studies will consider avoidance of 100-year floodplains and areas prone to flooding. Where avoidance is not feasible, minimization and/or mitigation will be used. Potential mitigation efforts include: use of bridges and retaining walls to minimize amount of material placed in floodplains; development of adequate drainage systems so that post-construction conditions will equal pre-construction conditions; and coordination with agencies charged with overseeing local floodplain managements plans.

Agency Ohio Environmental Protection Agency (March 9, 2001)	
Comment	Response
The agency will evaluate the forthcoming modal analysis for the entire US 24 Corridor prior to concurring with the selection of Feasible Alternatives.	The modal analysis for the entire US 24 corridor has been incorporated into Sections 1.3.4 and 2.1 of the DEIS.
Based solely on impacts to streams and wetlands identified in the PDEIS, the agency recommends Alternative C be considered the Preferred Alternative. The agency reserves the right to reconsider this recommendation should the modal analysis or the cumulative impacts provide significant new information warranting the selection of a new alternative.	Alternative C was originally recommended as the Preferred Alternative. Through efforts to minimize wetland impacts, a 27th Feasible Alternative was developed (Alternative D-1), which was subsequently identified as the Preferred Alternative.
The agency concurs that a reasonable range of alternatives have been presented in the PDEIS provided that the independent utility of the segment is confirmed in the modal analysis.	Comment noted.
Discussion of cumulative impacts to streams and wetlands require elaboration of past impacts to the study areas and potential impacts that would result from build-out conditions. An exhibit or exhibits, superimposing existing aquatic resources over existing land uses and development trends should be provided. Also, the cumulative impacts analysis should consider the development that would occur with and without the project.	A discussion on secondary and cumulative impacts of the project on streams and wetlands has been added to Section 3.5 of the DEIS.
Photographs of all streams within the Feasible Alternatives should be provided in the DEIS to confirm that studies were performed on representative streams within the various corridors.	Photographs of all streams within the Feasible Alternatives were included in the Ecological Survey Reports which are supporting documents to the DEIS. Also, photographs of all streams will be included in the information submitted as part of the 401 water quality certification review process.
The DEIS should include a detailed discussion of potential impacts and specific design construction techniques to avoid those impacts to wetlands S-4 and R-1. Both R-1 and S-4 are large Category 3 wetlands. The agency understands that impacts are evaluated on a broad scale at this point but believes factors other than acreage of wetland impact are required to fully determine a focused evaluation at this particular location. Pending the outcome of the review, the agency may recommend use of Segment 18 in the Preferred Alternative.	The impacts associated with the footprint of the new facility are discussed in Section 3.1.3 of the DEIS. Indirect construction-related impacts have been investigated based on preliminary construction plans. Preliminary mitigation commitments have been investigated and are discussed in Section 3.1.3 of the DEIS.

TABLE 5.6 (CONTINUED)
CONCURRENCE POINT #2 AGENCY COMMENTS

Agency Ohio Environmental Protection Agency (continued) (March 9, 2001)	
Comment	Response
A portion of the facility will be constructed within Indiana. The agency expressed its willingness to discuss any concerns with the appropriate review agencies from the state of Indiana prior to the selection of a Preferred Alternative.	Comment noted.
The acreage of wetland impacts resulting from the the footprint of the new facility, indirect construction related impacts and build out impacts should also be discussed. By way of illustration but not limitation, installation of culverts to maintain hydrologic communication should be evaluated as compared to spanning wetland S-4.	Wetland impacts resulting from the new facility are addressed in Section 3.1.3 of the DEIS. The discussion on Secondary and Cumulative Impacts in Section 3.5 addresses the potential for construction-related and build-out impacts. Detailed design issues such as using culverts as opposed to spanning wetlands will be evaluated in the conceptual mitigation design studies.

Agency Indiana Department of Natural Resources, Diversity and Habitat Protection Unit (July 13, 2001)	
Comment	Response
Comments previously submitted by the agency in correspondence dated May 5, 2000 remain in effect.	Comment noted.
The agency will provide an assessment and recommendation concerning project alternatives after flying the alternative routes.	Comment noted.

5.3 AGENCY COORDINATION ON REQUIRED TECHNICAL STUDIES

5.3.1 Ecological Surveys

Ecological surveys were documented in separate technical reports as follows:

- *US 24 Ecological Survey for Allen County, Indiana* (December 2000).
- *US 24 Ecological Survey for Defiance and Paulding Counties, Ohio* (December 2000).

These reports included the results of studies conducted on aquatic habitat, water quality, fish, macroinvertebrates, wildlife, wetlands, wildlife habitat, and threatened and endangered species within the project area. These reports also presented the impacts to the ecological resources as a result of the Feasible Alternatives. As part of the Concurrence Point #2 coordination, the ecological survey reports were submitted to the USEPA - Region Five, USFWS - Reynoldsburg Field Office, USACE - Detroit and Buffalo Districts, OEPA, and ODNR. Comments from these agencies on the ecological survey reports were included in the Concurrence Point #2 comments presented in Table 5.6.

On May 10, 2001, a resource agency field meeting was held to review the ecological resources within the Preferred Alternative. Representatives from the USACE, OEPA, FHWA, and ODOT attended the field meeting. Category 3 wetlands and streams located within Alternative Segments 14, 15, 18, and 19 were the focus of the field review. Comments from the OEPA based on their observations during the meeting are presented in Table 5.7. A copy of the agency comment letter is provided in Appendix 3.4.

5.3.2 Wetlands Delineations

Following the May 10, 2001 field review and receipt of comments from the OEPA, wetland delineations were conducted within Alternative C and Alternative Segments 15 and 18. The wetland delineations enabled further alignment design developments, which resulted in the development of Alternative D-1. This alignment minimizes impacts to Wetland R-1.

**TABLE 5.7
AGENCY COMMENTS ON ECOLOGICAL RESOURCES AFFECTED BY THE PREFERRED ALTERNATIVE**

Agency Ohio Environmental Protection Agency (May 24, 2001)	
Comment	Response
Based on observations made during the May 10, 2001 site visit, the OEPA prefers an alternative that impacts wetland R-1 over an alternative that impacts wetland S-4. Wetland S-4 is a palustrine forested wetland located in a floodplain of a tributary to the Maumee River. While final engineering has not been conducted, ODOT believes a culvert will be constructed at this location.	Following the May 10, 2001 site visit, ODOT studied segments 15 and 18, which impact Wetland R-1 to the same level of detail as Alternative C. Additional design developments resulted in Alternative D-1, which minimizes impacts to Wetland R-1. Further coordination with the USACE and OEPA regarding wetland impacts and potential mitigation for the new minimization alignment resulted in Alternative D-1 being selected as the Preferred Alternative for the project.
The agency believes constructing an embankment through wetland R-1 will result in less overall wetland impacts than culverting wetland S-4 and the adjacent floodplain. Alternatives impacting R-1 are located on the drainage divide between two small watersheds and with the incorporation of structures to maintain hydrology, should not result in any direct impacts. This alternative will also avoid the open water and stream components of R-1.	See response provided above.
The agency has no major concerns with the remainder of the proposed impacts to streams and wetlands. However, ODOT must still avoid and minimize impacts to those resources as part of the 401 review process.	Comment noted. Refinements to the Preferred Alternative included minimizing impacts to all ecological resources.

On February 14, 2002, a meeting was held to discuss wetland impacts resulting from Alternatives C and D-1. Representatives from the USACE, OEPA, FHWA, and ODOT attended this meeting. In comparison, overall wetland impacts associated with Alternative D-1 are greater than Alternative C. But Alternative D-1 will impact a smaller area of Category 3 wetlands than Alternative C. In addition, the land adjacent to Wetland R-1 could provide for several mitigation options such as restoration, preservation, and creation. The area adjacent to Wetland S-4 is limited for wetland mitigation options.

Following the February 14, 2002 meeting, the USACE and OEPA provided written comments regarding the wetland impacts and mitigation options associated with Alternatives C and D. These comments are presented in Table 5.8. Copies of the agency comment letters are provided in Appendix 3.4. The USACE commented that Alternative D is the least damaging practical alternative and recommended the minimization alignment (Alternative D-1) as the Preferred Alternative. The USACE also stated that preservation of Wetlands RC-1 and R-1 combined with wetland creation would be acceptable for mitigation. The OEPA commented that the ODOT should investigate several alternative alignments through the RC-1 and R-1 wetland complex, which minimize direct and indirect impacts. The OEPA stated that preservation of Wetlands RC-1 and R-1 with a forested buffer combined with wetlands creation or restoration is acceptable.

Based on the May 10, 2001 field review, the findings of the wetland delineation surveys, the February 14, 2002 agency meeting, and concurrence by the USACE and OEPA, Alternative D-1 was identified as the Preferred Alternative for the project.

The results of the wetland delineation survey conducted for Alternatives C and D-1 are presented in the technical report, *US 24 New Haven to Defiance Wetlands Delineation Study - Addendum to the Ecological Survey For Allen County, Indiana and Defiance and Paulding Counties, Ohio* (June 2003). Potential impacts to wetlands resulting from construction of Alternatives C and D-1 are presented in this report. In addition, the functional quality of each delineated wetland is assessed using the Wetland Water Quality Standards in Indiana and the OEPA Rapid Assessment Method for Wetlands in Ohio. This report will be circulated to the USEPA – Region Five, USFWS – Reynoldsburg Field Office, USACE – Buffalo District, OEPA, ODNR, IDEM, and IDNR as part of the Concurrence Point #3 coordination.

**TABLE 5.8
AGENCY COMMENTS ON WETLANDS AFFECTED BY THE PREFERRED ALTERNATIVE**

Agency US Army Corp of Engineers, Buffalo District (March 25, 2002)	
Comment	Response
On February 14, 2002, a Section 404 permit preapplication meeting was held to discuss the Preferred Alternative and wetland mitigation options for the proposed US 24 project. Based on the discussion in this meeting, the Corps believes that Alternative D is the least damaging practical alternative and recommends route b in Segment 18 to minimize wetland impacts in this portion of the alignment.	Alternative D-1, which is route b in Alternative Segment 18, was identified as the Preferred Alternative following the February 14, 2002 meeting.
The acquisition and preservation of 184 acres of forest, which contains 68.5 acres of wetlands identified as RC-1 and R-1 is acceptable. This preservation could be used as partial mitigation for this project and others in the area. The final mitigation plan for the project should include a combination of preservation and wetland creation.	The final mitigation plan for the US 24 project will include a combination of wetland preservation and creation or restoration.
The ODOT should ensure that avoidance and minimization measures are employed to reduce the project's impacts to the aquatic resources.	Comment noted. Refinements to the Preferred Alternative include minimizing impacts to all ecological resources.

Agency Ohio Environmental Protection Agency (February 26, 2002)	
Comment	Response
The OEPA believes acquiring wetlands RC-1, R1-a, and R1-d and adjacent forested buffer, as a component of the wetland mitigation for the US 24 project, is consistent with existing regulations.	Comment noted.
Preservation of the wetlands must be in conjunction with restoration or creation as specified in Rule 3745-1-54(E)(5) of the Administrative Code. The ODOT must also obtain concurrence from the ODNR for preservation of the wetlands.	The final mitigation plan for the US 24 project will include a combination of wetland preservation and creation or restoration. The ODOT will coordinate with and obtain concurrence from the ODNR for preservation of wetlands.
Wetland acreage exceeding that needed to mitigate impacts associated with the US 24 project could be used as mitigation for other ODOT projects so long as all other requirements of OAC Rule 3745-1-54 are met at the time additional mitigation is sought. The ODOT must also devise a means to track available credit at the preserved wetland site.	Comment noted. A system to track available wetland credits will be developed if a wetland mitigation bank is developed for the US 24 project.
The OEPA inquires whether the ODOT can investigate acquiring or preserving wetland S-4 to help maintain water quality in the Maumee River.	The ODOT will consider acquiring or preserving Wetland S-4 as part of the mitigation plan for the US 24 project.
The ODOT should consider several alternative alignments though the wetland complex consisting of RC-1 and R-1 as part of the 401 application. The design of the alignment through this wetland complex must consider both direct and indirect impacts including changes in hydrology, vegetative cover, sunlight exposure, and highway runoff. These factors must be reduced through alignment location and detailed design features to the maximum extent possible if preservation of wetlands as mitigation is to be allowed.	Several alternative alignments have been developed through the RC-1 and R-1 wetland complex and will be included in the 401 application. Alternative D-1 is the alignment that minimizes impacts to Category 3 wetlands within Alternative Segment 18. Design refinements to Alternative D-1 will consider direct and indirect impacts to wetlands and streams.
ODOT should not neglect avoidance and minimization measures at other locations along the Preferred Alternative.	Comment noted. Refinements to the Preferred Alternative include minimizing impacts to all ecological resources.

5.3.3 Threatened and Endangered Species Surveys

During the Concurrence Point #2 consultation, the USFWS noted that the US 24 study area lies within the ranges of the eastern massasauga rattlesnake, a federal candidate species and the copperbelly water snake, a federally-listed threatened species (Table 5.6). In response to the USFWS comments, surveys were conducted for the eastern massasauga rattlesnake and

the copperbelly water snake within the proposed rights-of-way of Alternatives C, D, and D-1. The surveys did not reveal the presence of either snake species within the limits of the Preferred Alternative.

The USFWS and ODNR reviewed the results of the endangered species surveys and concurred that neither species are likely to be present within the proposed right-of-way for the Preferred Alternative and therefore would not be impacted by the project. Comments from the USFWS and ODNR on the surveys are presented in Table 5.9. Copies of the agency comment letters are provided in Appendix 3.4.

**TABLE 5.9
AGENCY COMMENTS ON THREATENED AND ENDANGERED SPECIES SURVEYS**

Agency US Fish and Wildlife Service, Reynoldsburg, Ohio Office (December 13, 2001)	
Comment	Response
The agency has reviewed the survey reports for the eastern massasauga rattlesnake and the northern copperbelly water snake. The agency concurs that neither of the species are likely to be present or impacted by the project.	Comment noted.

Agency US Fish and Wildlife Service, Bloomington, Indiana Office (January 3, 2002)	
Comment	Response
The agency has reviewed the survey reports for the eastern massasauga rattlesnake and the northern copperbelly water snake. The agency concurs that neither of the species are likely to be present or impacted by the project.	Comment noted.

Agency Ohio Department of Natural Resources, Division of Wildlife (December 19, 2001)	
Comment	Response
The agency has reviewed the survey reports for the eastern massasauga rattlesnake and the northern copperbelly water snake. The agency concurs that neither of the species are likely to be present or impacted by the project.	Comment noted.

5.3.4 Phase I and II History/Architecture Surveys

The Phase I and II History/Architecture Surveys were documented in separate technical reports as follows:

- *Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana* (March 2000).
- *Addendum to Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana* (August 2000).
- *Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (April 2000).
- *Addendum to the Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (September 2000).
- *Phase II History/Architecture Report of US 24 Improvements in Maumee, Milan, and Jefferson Townships, Allen County, Indiana* (January 2001).

- *Phase II History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (March 2001).
- *Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana; US 24/I-469 Interchange* (January 2003).

The reports included recommendations on eligibility for inclusion in the National Register of Historic Places (NRHP) for the properties surveyed. These reports were submitted to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) and the Ohio Historic Preservation Office (OHPO) for review and concurrence on the eligibility recommendations.

The comments from the DHPA and OHPO on the Phase I and Phase II History/Architecture Studies are summarized in Table 5.10. Copies of the agency comment letters are provided in Appendix 3.4.

TABLE 5.10
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Ohio Historic Preservation Office (OHPO) (October 19, 2000)	
Comment	Response
The following comments were made on the <i>Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (April 2000).	
Ten properties were found to require additional Phase II investigations to determine their eligibility for inclusion in the NRHP: PAU-39-3, PAU-47-3, PAU-100-2, PAU-101-2, PAU-124-1, PAU-241-2, PAU-244-3, PAU-262-2, PAU-330-4, and PAU-338-4.	Additional Phase II Studies research has been completed on the ten properties. Based on this research, OHPO determined that three of the ten resources (PAU-100-2, PAU-101-2, PAU-124-1) are eligible for listing in the NRHP.
Seven properties are eligible for inclusion in the NRHP without further investigation: PAU-129-1, PAU-183-1, PAU-220-1, PAU-221-1, PAU-222-1, PAU-224-1, and PAU-335-2.	Preliminary effects analysis has been completed for those properties listed in or eligible for inclusion in the NRHP including these seven properties.

Agency Ohio Historic Preservation Office (OHPO) (December 27, 2000)	
Comment	Response
The following comments were made on the <i>Addendum to the Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (September 2000).	
The Addendum report addresses 56 historic resources, three of which are considered eligible for listing in the National Register of Historic Places, and seven of which are recommended for further research to determine their eligibility.	Comment noted.
The OHPO cannot concur with the recommendations that PAU-357-1, PAU-359-1, and PAU-364-2 are eligible for inclusion in the National Register of Historic Places without Phase II studies being conducted.	Phase II investigations have been completed on 19 properties located in Paulding and Defiance counties, Ohio, including PAU-357-1, PAU-359-1, and PAU-364-2. Based on the Phase II research, OHPO determined that the three resources are eligible for inclusion in the NRHP.

TABLE 5.10 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Ohio Historic Preservation Office (OHPO) (continued) (December 27, 2000)	
Comment	Response
The agency does not concur with the recommendation that PAU-363-2 warrants additional research to assess its eligibility for inclusion in the NRHP.	Based on the recommendation of the OHPO, the resource is not considered to be eligible for inclusion in the NRHP.
The agency cannot concur with the recommendations that PAU-379-3 is not eligible for inclusion in the NRHP without further information being submitted for review (OH Historic inventory forms and photographs).	Ohio Historic Inventory Forms and photographs were submitted to the OH Historic Preservation Office for review and comment. In addition, further research on the PAU-379-3 indicates that the resource is a 1910-1920 dwelling that shares property with the Vagabond Village (PAU-375-3), is contemporary and directly associated with the Vagabond Village diner as the residence of the diner's owner, and contributes to the significance of the Vagabond Village. Therefore, PAU-375-3 and PAU-379-3 are considered to be one resource. This resource has been determined to be eligible for inclusion in the NRHP.
The agency does concur that PAU-377-3, PAU-348-1, PAU-375-3, PAU-376-3, and PAU-378-3 require additional investigation (Phase II) to assess their NRHP eligibility.	Phase II investigations have been completed on the five resources to assess their NRHP eligibility. Of these five resources, only one (PAU-375-3) was determined to be eligible for inclusion in the NRHP.
The agency recommends that PAU-375-3 (Vagabond Diner), PAU-376-3 (Randi's Roadside Cafe) and PAU-378-3 (diner) be considered a potential roadside development district. However, their significance needs to be strongly argued.	As a result of the Phase II investigations, PAU-375-3 is considered eligible for the NRHP, while PAU-376-3 and PAU-378-3 are not considered eligible for the NRHP. A common themes study was conducted on all the historic resources in the Fort to Port Corridor. PAU-375-3 and PAU-376-3 were categorized in the transportation theme category.
The agency concurs that the remaining 46 resources are not eligible for listing on the NRHP. No further work is required.	Comment noted.

Agency Ohio Historic Preservation Office (OHPO) (July 13, 2001)	
Comment	Response
The following comments were made on the <i>Phase II History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (March 2001).	
The SHPO concurs that as a result of the Phase II investigations, seven of the 19 properties investigated are eligible for listing in the NRHP: PAU-100-2, PAU-101-2, PAU-124-1, PAU-357-1, PAU-359-1, PAU-364-2, and PAU-375-3.	Comment noted.
The SHPO concurs that as a result of the Phase II investigations, 12 of the 19 properties investigated are not eligible for listing in the NRHP.	Comment noted.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (June 7, 2000)	
Comment	Response
The following comments were made on the <i>Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana</i> (March 2000).	

TABLE 5.10 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (continued) (June 7, 2000)	
Comment	Response
DHPA concurs that the following properties are within the probable area of potential effects and are eligible for inclusion in the NRHP: Harper House, Meyer/Gallmeyer House, Smith/Rich/Krug House, Amos Schlatter Farm, and the Villa Motel.	As presented in Section 3.3 of the DEIS, preliminary Effects Determinations were completed for those properties listed or eligible for inclusion in the NRHP including these seven properties. Detailed documentation on effects of the Preferred Alternative is presented in a separate report for three properties (Harper House, Meyer/Gallmeyer Farm, and Smith/Rich/Krug House) located within the Area of Potential Effects. DHPA has concurred with the Effects Determinations for the three properties.
DHPA concurs that the ten remaining properties addressed in the report do not meet criteria to be considered eligible for inclusion based upon their architectural features and design. When additional documentation becomes available, DHPA will consider eligibility based on association with events or persons that may have made a broad contribution to broad patterns of history.	Additional research was completed on the ten properties to determine if they meet criteria for inclusion in the NRHP based on association with historic events or persons.
Based upon the information provided, Corridor 4 will affect 8 properties, Corridor 7 will affect 6 properties, Corridor 10 will affect 5 properties, Corridor 13 will affect 3 properties and US 24 will affect two properties. DHPA recommends that the alternative with the least potential effect on historic buildings including three settings be selected as the Preferred Alternative.	Additional research has been completed which changes the ranking of corridors with respect to historic resources. Potential adverse effects on historic resources were considered in the selection of the Preferred Alternative.
Once the Preferred Alternative is selected, DHPA will require the following information in order to comment on potential effects – right-of-way, if any, to be acquired from historic properties; activities that will occur within the existing and/or proposed right-of-way; detailed site plans showing proposed action; and photographs showing existing conditions of the area where work will be undertaken in close proximity to the historic resources.	Detailed information on the potential effects of the Preferred Alternative on historic structures was submitted to the DHPA for review and comment. DHPA has concurred with the effects determinations in the report.
The project area has not been subjected to an archaeological investigation. The project area is physiographically suitable to contain archaeological resources. An archaeological reconnaissance level survey and method description is requested.	Phase I archaeological surveys were completed within the proposed right-of-way limits for the Preferred Alternative. The results of the surveys are documented in two separate reports and summarized in Section 3.3 of the DEIS. The survey reports have been submitted to the OHPO and DHPA for review and comment.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (September 5, 2000)	
Comment	Response
The following comments were made on the <i>Addendum to Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (August 2000).	
The Armbruster Log Cabin is potentially eligible for inclusion in the NRHP.	Preliminary Effects determination has been completed for the Armbruster Log Cabin.
The following properties do not meet the criteria for inclusion in the NRHP: Parson Krieg Farmstead, Jay/Richardson House, and Hockmeyer Farmstead.	Comment noted.
In addition, we concur that the other 33 properties addressed in the report do not meet criteria for inclusion in the NRHP.	Comment noted.

TABLE 5.10 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (continued) (September 5, 2000)	
Comment	Response
If any of the historic properties listed above or addressed in previous correspondence dated June 7, 2000 are affected by the project, INDNR-DHPA, the public and all consulting parties should be notified in accordance with 36 CRF 800.11(d)(2).	Effects determinations were prepared for three properties located within the Area of Potential Effect of the Preferred Alternative – the Harper House, the Meyer/Gallmeyer Farm and the Smith/Rich/Krug House. These are presented in detail in a separate report entitled <i>Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana</i> . The DHPA concurred with the effects determinations for the three properties.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (March 9, 2001)	
Comment	Response
The following comments were made on the <i>Phase II History/Architecture Report of US 24 Improvements in Maumee, Milan, and Jefferson Townships, Allen County, Indiana</i> (January 2001).	
The agency concurs that the ten properties identified in the report are not eligible for inclusion in the NRHP.	Comment noted. Based on recommendations made by DHPA, no further investigation or evaluation of the ten properties has been undertaken.
Comments on the need to complete archaeological investigations in accordance with Section 106 as presented in correspondence dated June 7, 2000 should be addressed once the Preferred Alternative has been selected.	A Phase I archaeological survey has been completed within the limits of the proposed right-of-way for the Preferred Alternative. This survey and its conclusions are documented in two separate reports. The reports have been submitted to the Ohio and Indiana State Historic Preservation Officers for review and comment.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (March 4, 2003)	
Comment	Response
The following comments were made on the <i>Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan, and Jefferson Townships, Allen County, Indiana: US 24/I-469 Interchange</i> (January 2003).	
Based upon the historical and architectural documentation available to our office, we concur that the following properties do not meet the criteria to be considered eligible for inclusion in the NRHP: Emanuel Evangelical Lutheran Cemetery, house at 10919 East US 24, Melcher Farm at 10949 East US 24, house at 11613 Edgerton Road, Hoetzer House at 724 South Doyle Road, and house at 226 South Doyle Road.	Comment noted.
In addition, we concur that the Niemeyer Farm at 1123 East US 24 meets the criteria to be considered eligible for inclusion in the NRHP as an intact example of a nineteenth century farmstead associated with early settlement of Jefferson Township with a Queen Anne farmhouse.	Comment noted.
Furthermore, we agree that the possible historic boundaries are more or less the same as shown on the aerial photograph.	Comment noted.

**5.3.5 Phase I
Archaeological Surveys**

Phase I archaeological investigations have been completed on the proposed right-of-way for the Preferred Alternative, the Antwerp Bypass, and Segments 14 and 19. The results of the Phase I surveys are presented in separate technical reports as follows:

- *Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana* (April 2002).
- *Phase I Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio (2 Volumes)* (December 2001).
- *Addendum Report: Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance County, Ohio* (July 2002).

The reports also include recommendations for additional archaeological studies (Phase II investigations). The reports were submitted to the OHPO and DHPA for review and comment. The OHPO and DHPA concurred with the findings of the Phase I archaeological investigations (see Table 5.11). Copies of the agency comment letters are provided in Appendix 3.4.

**TABLE 5.11
AGENCY COMMENTS ON PHASE I ARCHAEOLOGICAL SURVEYS**

Agency Ohio Historic Preservation Office (OHPO) (January 25, 2002)	
Comment	Response
The agency concurs with the findings of the Phase I archaeological investigations of the portions of Alternatives C and D located in Paulding and Defiance counties.	Comment noted.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (May 8, 2002)	
Comment	Response
The agency has conducted an analysis of the <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002). The agency concurs with the conclusions and recommendations therein.	Comment noted.
The agency agrees that site 12-AL-2027 does not appear likely to meet the minimum criteria for inclusion in the National Register of Historic Places. Accordingly, no additional investigation of the site will be required.	Comment noted.
The proposal for testing sites 12-AL-898 and 12-AL-2034 will be acceptable, with the following conditions: 1.) All excavation must be directly supervised by an archaeologist meeting the supervisory criteria of 312 IAC 21; 2.) All contextual archaeological deposits that are exposed must be hand excavated. If stratified cultural features are encountered, they must be excavated by stratigraphic layer, to maximize data return; 3.) If human remains are encountered, they must be treated in accordance with IC 14-21-1 and 312 IAC 22; 4.) A report detailing the methods and results of the archaeological testing must be submitted to our office, for review and comment, within one year of the completion of fieldwork; and 5.) Our office should be advised of the testing schedule, so that we may schedule appropriate site visits. With these conditions, the proposed archaeological test excavation may proceed. This letter, or a copy of this letter, should be carried by the archaeologists in the field so as to minimize confusion if they are challenged by law enforcement officials.	Comment noted. The additional conditions will be incorporated into the workplan for the additional archaeological investigations on sites 12-AL-898 and 12-AL-2034.

**TABLE 5.11
AGENCY COMMENTS ON PHASE I ARCHAEOLOGICAL SURVEYS**

Agency Ohio Historic Preservation Office (OHPO) (September 6, 2002)	
Comment	Response
Based upon the review of the report entitled <i>Addendum Report Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance Township, Defiance County, Ohio</i> (July 2002), the agency concurs with the following determinations: 1.) Since no history/architecture resources exist within the revised Preferred Alignment, no additional history/architecture investigations are warranted for Alignment D-1; 2.) As a result of the previous Phase I and Phase II archaeological resources investigations combined with the results of this Phase I archaeological reconnaissance for Alignment D-1, it is clear that the PAU/DEF 24-0.00/0.00 (PID 18904) project will have no effect on any archaeological resources and no additional investigations are warranted; and, 3) MSG, Inc. has adequately investigated the previously unsurveyed portions of the Preferred Alternative (Alternative D-1) and no further archaeological resources investigations are warranted unless the scope of the project is changed.	Comment noted.

**5.3.6 Phase II
Archaeological Surveys**

Phase II archaeological investigations were recommended at 11 sites. Two sites were located in Allen County, Indiana and nine sites in Defiance County, Ohio. The Phase II investigations have been completed and the results are presented in separate technical reports as follows:

- *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (June 2002).
- *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements at Sites 12-AL-898 and 12-AL 2034, Milan and Maumee Townships, Allen County, Indiana* (January 2003).

The reports were submitted to OHPO and DHPA for review and comment. The OHPO and DHPA concurred with the findings of the Phase II archaeological investigations that none of the sites meet the eligibility criteria for inclusion in the NRHP and therefore no further archaeological investigations are required (Table 5.12). Copies of the agency comment letters are provided in Appendix 3.4.

**TABLE 5.12
AGENCY COMMENTS ON PHASE II ARCHAEOLOGICAL SURVEYS**

Agency Ohio Historic Preservation Office (OHPO) (June 27, 2002)	
Comment	Response
The following comments were made on the <i>Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (June 2002).	
The agency concurs with the findings and recommendations of the Phase II archaeological studies conducted on nine sites located in Paulding and Defiance counties (33-DE-324, 33-DE-327, 33-DE-328, 33-DE-332, 33-DE-337, 33-DE-338, 33-DE-339, 33-DE-346, and 33-DE-349).	Comment noted.
The agency concurs with the findings and recommendations of the investigations on four previously unidentified sites (33-DE-367, 33-DE-368, 33-DE-376, and 33-DE-377).	Comment noted.
The agency concurs that no further archaeological investigations are required for this project, unless the scope of the project is changed to include areas not previously investigated.	Comment noted.

TABLE 5.12 (CONTINUED)
AGENCY COMMENTS ON PHASE II ARCHAEOLOGICAL SURVEYS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (March 4, 2003)	
Comment	Response
The following comments were made on the <i>Phase II Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (January 2003).	
In terms of potential impact on archaeological resources, we concur with the conclusions and recommendations of the Phase II archaeological report.	Comment noted.
Based on the information recovered by the archaeological test excavations, sites 12-AL-898 and 12-AL-2034 do not contain significant information relating to the prehistoric or historic habitation of northeastern Indiana. Accordingly, the sites do not appear to meet the minimum criteria for inclusion in the National Register of Historic Places, and no additional investigation of the sites will be required.	Comment noted.

5.3.7 Historic Resources Case Studies

The Preferred Alternative has the potential to impact three rural historic properties, the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House, all three of which are located in Allen County, Indiana. A separate report entitled *Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana* (November 2001) documents the application of the Criteria of Effect and Adverse Effect on the three properties as required by 36 CFR 800.11(e) for the Preferred Alternative (Alternative D-1). The report findings and the Effects determinations presented in the report are based on the original design of the Preferred Alternative. This report was submitted to the DHPA for review and concurrence on the effects determinations. The comments from the DHPA on the report are summarized in Table 5.13. A copy of the agency comment letter is provided in Appendix 3.4.

Additional coordination with the DHPA concerning the effects of specific design refinements on the three historic properties was completed in June 2002. The DHPA concurred that the proposed design changes will not diminish the qualities that make the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House significant. The DHPA comments on the effects of the design refinements are summarized in Table 5.13. A copy of the agency comment letter is provided in Appendix 3.4.

As originally designed, the Preferred Alternative passes the Harper House approximately 152 meters (500 feet) to the south of the residence, at its closest point. The DHPA concurred that the Preferred Alternative, as originally designed, would have No Effect on the Harper House. No design refinements have been incorporated into the design of the Preferred Alternative that affect the Harper House. Therefore, the Preferred Alternative, as currently designed, is considered to have No Effect on the Harper House.

The Preferred Alternative requires the acquisition of approximately 4.0 hectares (9.9 acres) of land from the Meyer/Gallmeyer Farm, of which 1.2 hectares (3.0 acres) are situated within the NRHP boundary of the resource. The Preferred Alternative will be constructed at-grade along the northern boundary of the property. At its closest point, the Preferred Alternative will be located approximately 152 meters (500 feet) to the north of the residence. An option to construct an overpass to carry the Preferred Alternative over Berthaud Road was considered and coordination with DHPA concerning this design change was completed in August 2002. However, due to design changes, the original option (to construct the Preferred Alternative at-grade and close Berthaud Road) is included in the freeway design of the Preferred Alternative. Although the taking of the 1.2-hectare (3.0-acre) triangle of land from the northern edge of the property and introducing a four-lane divided highway is an impact on the property, it does not alter the characteristics of the farm that qualify it for inclusion in the NRHP. Since the impact by the Preferred Alternative does not diminish its historic integrity in a manner that would alter the characteristics of the Meyer/Gallmeyer Farm that qualify it for inclusion in the NRHP, the effect of the impact is not adverse.

**TABLE 5.13
AGENCY COMMENTS ON HISTORIC RESOURCES CASE STUDIES**

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (December 7, 2001)	
Comment	Response
The Indiana State Historic Preservation Officer has conducted an analysis of the report entitled <i>Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana</i> .	Comment noted.
The DHPA has no reason to object with the finding that no historic properties within the area of potential effects will be adversely affected by the project.	Comment noted.
Identification efforts beyond consultation with the Indiana SHPO need to be carried out as specified in 36 CFR 800.4. Therefore, a summary of the results of the identification efforts including preliminary determinations, level of effort undertaken to identify historic properties, basis for this effort, and gathering of documentation as specified in 36 CFR 800.11(e) should be submitted to FHWA.	Copies of all Section 106 documents prepared for the US 24 New Haven to Defiance project have been provided to the FHWA.
If any archeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the DHPA within two working days.	Phase I and II archaeological investigations have been completed on the proposed right-of-way for the Preferred Alternative. Project mitigation commitments include provisions required by Indiana state law for construction activities occurring within the State of Indiana.
If artifacts or features are discovered during the implementation of the federally assisted project, activity, or program, and a plan has not been developed, it is the federal agency's responsibility to make reasonable efforts to avoid, minimize, or mitigate adverse effects in accordance with 36 CFR 800.13.	Phase I archaeological investigations have been completed on the proposed right-of-way for the Preferred Alternative. The results of the Phase I survey for the portion of the Preferred Alternative located within Indiana are presented in detail in a separate technical report entitled <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002).

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (July 23, 2002)	
Comment	Response
The Indiana State Historic Preservation Officer has conducted an analysis of the materials submitted on June 20, 2002.	Comment noted.
Based on the information provided, the agency does not believe that the change in design will diminish the qualities that make the Meyer/Gallmeyer Farm (Site #003-382-40086) or the Smith/Rich/Krug House (Site #003-692-45034) significant.	Comment noted.

In the vicinity of the Smith/Rich/Krug House, the Preferred Alternative was originally designed to be constructed at-grade to the northwest of the resource, with an overpass constructed to carry Woodburn Road over the new highway. At its closest point, the right-of-way for the Preferred Alternative is approximately 365.9 meters (1,200 feet) to the north of the residence; the Woodburn Road crossing is located approximately 670.7 meters (2,200 feet) to the west of the resource. Discussions with local officials and representatives of the Amish community determined that a grade-separated crossing is needed at Woodburn Road. Due to the close proximity of Woodburn Road, Sampson Road, and the Norfolk Southern (NS) Railroad to each other, design engineering for three closely spaced crossings necessitates carrying the Preferred Alternative over Woodburn Road, Sampson Road, and the railroad instead of carrying the local roads and the railroad over the new highway. With the design changes, the Preferred Alternative will still be located approximately 365.9 meters (1,200 feet) to the north of the Smith/Rich/Krug House. The right-of-way footprint will be expanded slightly (from 97.6 meters [320 feet] to 128.0 meters [420 feet]) to accommodate the overpass embankments. The change in design to include overpasses

to carry the Preferred Alternative over Woodburn Road, Sampson Road, and the NS rail corridor does not result in a change in the determination of No Effect for the Smith/Rich/Krug House.

5.3.8 Tribal Consultation

In accordance with Executive Order 13175 *Consultation and Coordination with Indian Tribal Governments* and Section 106 of the National Historic Preservation Act, consultation with federally recognized tribal governments was initiated in July 2001. Sixteen tribal governments were provided with project information and the opportunity to present any concerns or information regarding sites of religious or cultural significance associated with the US 24 project. The following tribes were contacted:

- Absentee-Shawnee Tribe of Oklahoma.
- Citizen Potawatomi Nation.
- Delaware Tribal Headquarters.
- Delaware Tribe of Western Oklahoma.
- Eastern Shawnee Tribe of Oklahoma.
- Forest County Potawatomi Community.
- Hannahville Indian Community Council.
- Joint Shawnee Council.
- Loyal Shawnee Tribe.
- Miami Tribe of Oklahoma.
- Ottawa Tribe of Oklahoma.
- Peoria Indian Tribe of Oklahoma.
- Prairie Band Potawatomi Nation.
- Seneca-Cayuga Tribe of Oklahoma.
- Seneca Nation.
- Wyandotte Shawnee Tribe of Oklahoma.

Comments received by the tribal governments on the project are presented in Table 5.14. Copies of the comment letters from the tribal governments are provided in Appendix 3.4.

Three of the 16 tribal governments requested copies of the archaeological survey reports prepared for the project. In May 2003, copies of the US 24 Phase I and II archaeological survey reports for Indiana and Ohio were provided to the Citizen Potawatomi Nation, Forest County Potawatomi Community, and Wyandotte Shawnee Tribe of Oklahoma. These tribes were also informed of the Section 106 Consulting Party Meeting and provided with copies of the Section 106 Consulting Party coordination document (*Section 106 Consulting Party Coordination Summary of Section 106 Investigations*, April 2003) and the meeting agenda.

**TABLE 5.14
TRIBAL GOVERNMENT COMMENTS**

Tribal Government Absentee Shawnee Tribe of Indians of Oklahoma (May 25, 2001)	
Comment	Response
The Absentee Shawnee Tribe of Indians of Oklahoma has no knowledge or recorded evidence of historical properties of cultural or sacred significance within the vicinity of the project area.	Comment noted.

Tribal Government Citizen Potawatomi Nation (August 17, 2001)	
Comment	Response
The Citizen Potawatomi Nation would like to be kept informed of any findings during the archaeological investigations as well as any discoveries during the construction phase of the project.	Comment noted. The tribal government will be notified in the event that new archaeological sites are discovered.

TABLE 5.14 (CONTINUED)
TRIBAL GOVERNMENT COMMENTS

Tribal Government Forest County Potawatomi Community (August 20, 2001)	
Comment	Response
Since the Potawatomi have lived in so many areas of what is now the State of Wisconsin, the community has concerns for these types of projects or whenever there is earth disturbance in those areas and wishes to be considered as a Consulting Party under Section 106.	Comment noted.
At this time, the community has no knowledge of any archaeological sites in the study area. However, the community is aware that the general area may have many archaeological sites and requests that an archaeological survey and literature search be completed in the entire project area.	Comment noted. Phase I and Phase II archaeological surveys have been completed within the proposed right-of-way limits for the Preferred Alternative. The surveys are documented in four separate reports entitled <i>Phase I Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (December 2001); <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002); <i>Addendum Report Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance Township, Defiance County, Ohio</i> (July 2002); and <i>Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio</i> (June 2002).
The community would like to receive a copy of the archaeological survey reports for review and comment.	The Phase I and Phase II archaeological survey reports documents will be forwarded to tribal governments for review and comment following review by the Ohio and Indiana State Historic Preservation Office.
While much of the land may have been previously disturbed, it is possible that when new land is disturbed that an inadvertent discovery could take place. In this event, we wish to be notified immediately.	The tribal government will be notified in the event that new archaeological sites are discovered.

Tribal Government Hannahville Indian Community Council (September 13, 2001)	
Comment	Response
The community expressed its gratitude to ODOT for coordination and request for input on the project and its potential impacts on burial grounds and artifacts of the community's ancestors.	Comment noted.
Based on information submitted to the tribal government, the project will not have an effect on any Indian religious sites or burial ground associated with the Hannahville Indian Community.	Comment noted.

TABLE 5.14 (CONTINUED)
TRIBAL GOVERNMENT COMMENTS

Tribal Government Wyandotte Nation (August 7, 2001)	
Comment	Response
Examination of historic resource files finds no properties documented within the project area that meet the criteria of concern to properties of traditional or ceremonial value.	Comment noted.
Based on topographic and hydrological setting of the project, archaeological materials could likely be encountered. Documentation on any historic archaeological sites discovered requires immediate notification and proper archaeological field inspection is necessitated	Comment noted. Phase I and Phase II archaeological surveys have been completed within the proposed right-of-way limits for the Preferred Alternative. The surveys are documented in four separate reports entitled <i>Phase I Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (December 2001); <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002); <i>Addendum Report Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance Township, Defiance County, Ohio</i> (July 2002); and <i>Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio</i> (June 2002).

5.3.9 Consulting Party Coordination

In accordance with Section 106 of the National Historic Preservation Act (NHPA), coordination with consulting parties was conducted for the US 24 project. The consulting party coordination followed the requirements of 36 CFR Part 800. In addition to FHWA, INDOT, ODOT, DHPA, OHPO, a total of 23 individuals were contacted through written correspondence and invited to be consulting parties for the US 24 project in February 2002. These individuals included local government officials and members of local historic organizations. Thirteen individuals responded to the invitation and requested to be consulting parties.

In April 2003, the consulting parties were contacted and invited to attend a consulting party coordination meeting. Prior to the meeting, the consulting parties were provided with a meeting agenda and a document entitled, *US 24 New Haven to Defiance Section 106 Consulting Party Coordination: Summary of Section 106 Investigations* (April 2003). The report summarizes the cultural resources investigations and NRHP eligibility recommendations for the project. It also discusses the effects recommendations for four properties in Indiana, which are located within the APE for the Preferred Alternative.

On May 14, 2003, a Section 106 Consulting Party Coordination Meeting was held in Woodburn, Indiana. The meeting was held from 6:00 to 8:00 PM at the Woodlan High School. Nine people attended the meeting including a Maumee Township Trustee, a City of Woodburn Councilman, a representative of the Allen County/Fort Wayne Historical Society, a representative from the Indiana DHPA, a representative from INDOT, and four representatives for ODOT.

The purpose of the meeting was to obtain comments from the consulting parties on the various aspects of the US 24 cultural resources studies. Specifically, the objectives of the meeting were to seek, discuss and consider the views of the consulting parties on the APE, the identification of significant historic properties, the delineation of historic boundaries, and the assessment of effect on the historic properties.

The meeting began with a presentation about the US 24 project, archaeological surveys, historic architecture surveys, agency coordination, and effects of the Preferred Alternative on four properties determined to be eligible for inclusion in the NRHP. All four historic properties are located in Allen County, Indiana. The presentation was followed by an open discussion of the US 24 project and cultural resources. Topics of discussion included:

- US 24 project schedule.
- Design of the Preferred Alternative.
- Archeological sites on local properties.
- A large oak tree on Karl Hockemeyer’s property that will be affected by the highway alignment.
- Gronauer Lock (#2).

The consulting parties were in agreement with the Section 106 studies, documentation, and conclusions that were completed for the US 24 project. Minutes of the meeting were recorded and distributed to those that participated in the consulting party meeting.

5.3.10 Drainage Systems

The engineering studies conducted on the Preferred Alternative include a drainage analysis. This analysis developed a system of ditches and embankments for controlling stormwater runoff from the new highway. The study also examined the impacts that the new highway and associated ditches and embankments would have on individual property owners' croplands and tile systems.

On July 16, 2002, representatives from ODOT and the Soil and Water Conservation Districts (SWCD) for Paulding and Defiance, counties met to discuss the drainage issues associated with the Preferred Alternative. ODOT presented the proposed conceptual drainage design for the Preferred Alternative and requested comments from the SWCD representatives. It was recommended that the SWCD work with property owners to ensure that surface drainage and field tile systems are not negatively affected by construction of the Preferred Alternative.

5.4 FUTURE PUBLIC INVOLVEMENT AND AGENCY COORDINATION ACTIVITIES

Public involvement and agency coordination activities will continue through the duration of the US 24 project. The toll-free hotline and project website will be monitored and maintained daily. Other public involvement and agency coordination activities will occur in specific steps of the TDP. Table 5.15 presents an overview of these activities and the steps and time frames in which they occur.

**TABLE 5.15
FUTURE PUBLIC INVOLVEMENT AND AGENCY COORDINATION ACTIVITIES**

Step	Schedule	Activities
Step 7	August 2003 – February 2004	<ul style="list-style-type: none"> • Concurrence Point #3 agency coordination to solicit concurrence on the Preferred Alternative, impacts, and mitigation. • Conduct Public Hearings. • Concurrence Point #4 agency coordination to solicit concurrence on the Preferred Alternative and the Final Environmental Impact Statement.
Step 8	March 2004 – April 2004	<ul style="list-style-type: none"> • Prepare and distribute newsletter #5. • Conduct special outreach meetings with public officials and stakeholders. • Prepare and distribute newsletter #6. • Conduct special outreach meetings with public officials and stakeholders.

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GIS Specialist, Graphics
MA, Geography; BA, Geography and Planning
5 years of experience

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MS, Structural Engineering; BS, Civil Engineering
24 years of experience

Nicholas Boland
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Environmental Site Assessments
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7 years of experience

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Associate Scientist Geologist
Geology Document Review, Environmental Site Assessments and Documentation
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Erica Cameron
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Archaeological Investigation and Documentation
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7 years of experience

Regina Collins
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Patricia Croninger
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Traffic Analysis, Data Collection
MA, Geography and Planning; BA, Geography and Planning
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Project Director for GIS Projects
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13 years of experience

Maura Johnson
Cultural Resources Associate
Cultural Resources Documentation
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17 years of experience

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Monica Kuhn
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Robert Linn
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BS, Biology (in progress)
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Environmental Document Review, Environmental Site Assessments, Geological Data Compilation and Review
BA, Geology; Ohio Voluntary Action Program Certified Professional No. 236.
18 years of experience

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BS, Chemical Engineering
16 years of experience

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MS, Historic Preservation; MA, Anthropology; BA, History, Political Science; Federally Certified Prehistoric and Historic Archaeologist
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10 years of experience

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Wetlands Assessments and Delineation Studies, Threatened/Endangered Plant Surveys and Documentation
PhD, Biology-Ecology (in progress); MS, Biology; BA, Biology-Environmental Science
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***O. R. COLAN
ASSOCIATES, INC.***

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10 years of experience

Stephen Toth
Regional Manager
Relocation Assistance Program Study
BBA in Accounting and Finance
14 years of experience

***TRANSPORTATION
RESOURCE
MANAGEMENT***

Elena Constantine, P.E.
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MBA, Finance; MS, Transportation Engineering; BS, Civil Engineering
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***INDEPENDENT
CONSULTANTS***

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Malacologist
Mollusk Surveys
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22 years of experience

Bruce Kingsbury, Ph.D.
Herpetologist
Copperbelly Water Snake Surveys
PhD, Biology; MS, Biology; BA, Biology
13 years of experience

DISTRIBUTION LIST

FEDERAL AGENCIES

Center for Disease Control, Center for Environmental Health and Injury Control, Atlanta, Georgia

Federal Aviation Administration, Great Lakes Region Chief Planning Staff, Des Plaines, Illinois

Federal Emergency Management Agency, Chicago, Illinois

Federal Railroad Administration, Office of Economic Analysis, Washington, D.C.

National Oceanic and Atmosphere Administration, Office of Ecology and Conservation, Washington, D.C.

US Army Corps of Engineers, Environmental Analysis Branch, Detroit District, Detroit, Michigan

US Army Corps of Engineers, Chicago District, Chicago, Illinois

US Army Corps of Engineers, Regulatory Branch, Buffalo, New York

US Coast Guard, District 9, Cleveland, Ohio

US Department of Agriculture, Natural Resources and Environment, Office of the Secretary, Washington, D.C.

US Department of Agriculture, Natural Resources Conservation Service, Indianapolis, Indiana

US Department of Agriculture, Natural Resources Conservation Service, Columbus, Ohio

US Department of Energy, Office of Environmental Compliance, Washington, D.C.

US Department of Housing and Urban Development, Community Planning and Development, Chicago, Illinois

US Department of Housing and Urban Development, Columbus, Ohio

US Department of Housing and Urban Development, Region V, Indianapolis, Indiana

US Department of the Interior, Fish and Wildlife Service, Bloomington Field Office, Bloomington, Indiana

US Department of the Interior, Fish and Wildlife Service, Reynoldsburg Field Office, Reynoldsburg, Ohio

US Department of the Interior, Office of Environmental Policy and Compliance, Washington, D.C.

US Department of Transportation, Office of Secretary, Washington, D.C.

US Environmental Protection Agency, Office of Federal Activities, Washington, D.C.

US Environmental Protection Agency, Region V, Environmental Review Section, Chicago, Illinois

STATE AGENCIES

Indiana

Indiana Board of Health, Indianapolis, Indiana

Indiana Department of Environmental Management, Indianapolis, Indiana

Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis, Indiana
Indiana Department of Natural Resources, Habitat Diversity Protection Unit, Indianapolis, Indiana
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, Indianapolis, Indiana
Indiana Department of Transportation, Division of Design, Indianapolis, Indiana
Indiana Department of Transportation, Public Hearings Office, Indianapolis, Indiana
Indiana Geological Survey, Bloomington, Indiana
Indiana State Attorney General, Indianapolis, Indiana

Ohio

Ohio Department of Agriculture, Reynoldsburg, Ohio
Ohio Department of Development, Columbus, Ohio
Ohio Department of Natural Resources, Columbus, Ohio
Ohio Environmental Protection Agency, Columbus, Ohio
Ohio Historic Preservation Office, Technical Review Services, Columbus, Ohio

LOCAL AGENCIES

Allen County, Indiana

Allen County Department of Planning Services, Fort Wayne, Indiana
Allen County Engineer, Fort Wayne, Indiana
Allen County Fire Department, Fort Wayne, Indiana
City of Fort Wayne, Fort Wayne, Indiana
City of New Haven, New Haven, Indiana
City of Woodburn, Woodburn, Indiana
Jefferson Township, Allen County, Indiana
Maumee Township, Allen County, Indiana
Maumee Township Volunteer Fire Department, City of Woodburn, Indiana
Milan Township, Allen County, Indiana
Milan Township Fire Department, Milan Township, Indiana
Northeastern Indiana Regional Coordinating Council, Fort Wayne, Indiana

Paulding County, Ohio

Antwerp Branch, Paulding County Carnegie Library, Antwerp, Ohio
Carryall Township, Antwerp, Ohio
Crane Township, Cecil, Ohio

Emerald Township, Cecil, Ohio
Harrison Township, Paulding County, Ohio
Paulding County Engineer, Paulding, Ohio
Payne Branch, Paulding County Carnegie Library, Payne, Ohio
Village of Antwerp, Antwerp, Ohio
Village of Cecil, Cecil, Ohio
Village of Paulding, Paulding, Ohio

Defiance County, Ohio

City of Defiance, Defiance, Ohio
Defiance County Engineer, Defiance, Ohio
Defiance Public Library, Defiance, Ohio
Defiance Township, Defiance, Ohio
Delaware Township, Defiance, Ohio
Maumee Valley Planning Organization, Defiance, Ohio
Noble Township, Defiance, Ohio

INDIVIDUALS

Terry Jonathan Lodge

[Federal Register: August 31, 1999 (Volume 64, Number 168)]

[Notices]

[Page 47561-47562]

From the Federal Register Online via GPO Access [wais.access.gpo.gov]

[DOCID:fr31au99-166]

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Paulding and **Defiance** Counties,
Ohio and **Allen County**, Indiana

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an

[[Page 47562]]

environmental impact statement will be prepared for a proposed highway project in Paulding and **Defiance** Counties, **Ohio** and **Allen County**, Indiana.

FOR FURTHER INFORMATION CONTACT: Mark L. Vonder Embse, Field Operations Engineer, Federal Highway Administration, 200 North High Street, Room 328, Columbus, **Ohio** 43215, Telephone: (614) 280-6854.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the **Ohio** Department of Transportation (ODOT), will prepare an **environmental impact statement** (EIS) on a proposal to improve US-24 between the I-469 bypass around the City of Fort Wayne, Indiana, and the City of **Defiance, Ohio**. This segment of US-24 is approximately 40 miles in length.

Improvement to US-24 is considered necessary to enhance the operational characteristics of east- and west-bound traffic between Fort Wayne, Indiana and **Defiance, Ohio**.

Alternatives under consideration include: (1) Taking no action; (2) constructing the highway on new alignment; (3) upgrading the existing alignment. The alternative on new alignment has sub-alternatives providing for various access options.

Letters describing the proposed action and soliciting comments were sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. A series of public meetings will be held in the project area. In addition, a public hearing will be held. Public notice will be given of the time and place of the meetings and hearing. The draft EIS will be available for public and agency review and comment prior to the public hearing. Scoping activities are planned for 1999.

To ensure that the full range of issues relating to this proposed

action are addressed, and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be sent to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program)

Issued on August 18, 1999.

Mark L. Vonder Embse,
Field Operations Engineer, Federal Highway Administration, Columbus,
Ohio.

[FR Doc. 99-22624 Filed 8-30-99; 8:45 am]

BILLING CODE 4910-22-P

**APPENDIX 3.2
CONCURRENCE POINT #1 AGENCY CORRESPONDENCE
INDEX OF CORRESPONDENCE**

Agency	Date of Correspondence
Army Corps of Engineers, Buffalo District	October 19, 1999
Army Corps of Engineers, Detroit District	November 4, 1999
US Department of Agriculture, Natural Resources Conservation Service	September 9, 1999
US Environmental Protection Agency, Region 5	November 23, 1999
US Fish and Wildlife Service, Reynoldsburg Office	September 22, 1999
US Fish and Wildlife Service, Bloomington Field Office	August 31, 1999
Ohio Department of Natural Resources	September 3, 1999
Ohio Environmental Protection Agency	September 30, 1999
Indiana Department of Environmental Management, Office of Water Management	November 23, 1999
Indiana Department of Environmental Management	January 28, 2000
Indiana Department of Natural Resources	May 5, 2000

Note: Date shown is the date the commenting agency submitted correspondence to ODOT.



DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO
ATTENTION OF:

October 19, 1999

Regulatory Branch

SUBJECT: Department of the Army Application No. 1999-02122(1)

Mr. Timothy M. Hill
Ohio Department of Transportation
Office of Environmental Services
Central Office
PO Box 899
25 South Front Street
Columbus, Ohio 43216-0899

Dear Mr. Hill:

This is in reference to the Preliminary Alternatives Summary for the proposed upgrade of US 24 from New Haven, Indiana to Defiance, Ohio (PUA/DEF-24-0.00/0.00 PID: 18904). The project area is located in the vicinity of the Maumee River near the current US 24, in Paulding and Defiance Counties, Ohio.

In accordance with the NEPA/404/401 Merger Implementation Agreement, the U.S. Army Corps of Engineers (Corps) is submitting the following comments regarding the proposed US 24 upgrade project.

Under Section 10 of the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers has regulatory authority over construction, excavation, or deposition of materials in, over, or under navigable waters of the United States. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States, including freshwater wetlands. Certain types of excavation activities are defined as discharges of dredged material when they occur in waters of the United States. For instance, landclearing using mechanized equipment, ditching, channelization and other types of excavation when performed in such waters, including wetlands, would likely be regulated under Section 404 of the Clean Water Act.

The Corps hereby accepts the Statement of Purpose and Needs for the proposed project. If substantial new information is discovered during the development of the project, the Corps reserves the right to reassess the adequacy of this statement.

SUBJECT: Department of the Army Application No. 1999-02122(1)

It is understood that US 24 is currently experiencing, and will continue to experience, increasing congestion and safety problems between the Cities of New Haven and Defiance. Accordingly, the Corps concurs that one of the highway alternatives would be the most appropriate with respect to all of the issues involved. However, ODOT does need to elaborate on a few issues:

1. ODOT mentions on page 23 that motorist safety is a primary concern on US 24. However, accident numbers and rates during the three year period (1995-97) do not seem to be increasing. What's more, most segments of US 24 appear to be below the state average rate as shown in the table on page 21. Please clarify the importance of safety on US 24 in light of its role in the project's Purpose and Need.

2. Existing and predicted travel times for each of the corridors of US 24 should be presented in table format. This should include upgrades to existing US 24.

Based on public comment, engineering constraints, farm impacts, and existing long-range community development plans, the Corps agrees that corridors 4 and 7 are appropriate for further study. However, these two corridors do not represent the best alternatives for the avoidance and minimization of impacts to waters of the United States. Accordingly, the Corps would prefer additional studies on corridors 10 and 13 which will likely have fewer aquatic resource impacts. Specific comments regarding the corridor segments within the state of Ohio are provided below:

Highway Alternatives 10 and 13:

All impacts to Waters of the United States, including streams and freshwater wetlands, will require Department of the Army (DA) authorization prior to beginning of work. The following streams and their tributaries were identified within the proposed corridors for highway alternatives 10 and 13:

Segment K: South Creek and Sixmile Creek.

Segment L: North Creek, Zuber Cutoff, and Sixmile Creek.

Segment N: Sixmile Creek, Sixmile Cutoff, Threemile Creek,

Segment R: Stevens Ditch, Dowe Ditch, and the Maumee River.

Segment S: Stevens Ditch, Maumee River, Dowe Ditch

Segment T: Tiffin River

SUBJECT: Department of the Army Application No. 1999-02122(1)

In addition, any work in wetlands, as defined in 40 CFR Part 230(t), will require DA authorization. Impacts to all waters the United States, including freshwater wetlands, that are associated with this project from the Ohio/Indiana border to SR 18 in the City of Defiance, Ohio will be considered as a single and complete project in accordance with 33 CFR Part 330.2(i).

A large portion of the soils through which the corridors extend are hydric as mapped in the 1960 Soil Survey of Paulding County, Ohio and the 1984 Soil Survey of Defiance County, Ohio. This includes the Hoytville Clay, Paulding Clay, and Wabash silty clay soil types. A wetland delineation for the non-agricultural areas of the selected corridor must be prepared in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual. For those areas of the selected corridor that are agricultural lands, the Natural Resources Conservation Service (NRCS) has the lead responsibility for making or certifying wetland determinations and delineations. You are encouraged to coordinate this project with the USDA-NRCS. Parcels that are determined to be prior converted cropland (PC) by the USDA-NRCS are not currently regulated by the Corps under Section 404. However, those parcels that are determined to be farmed wetlands (FW) are regulated under Section 404 and will require a DA permit.

While it is not known at this time what Nationwide Permits, if any, may apply to the proposed work, it is likely that some form of mitigation will be required for those impacts to Waters of the United States that are determined to be unavoidable. You are encouraged to explore any and all minimization possibilities that would reduce your impacts to aquatic resources (e.g. use of existing roads, bridges, large culverts). Mitigation requirements will be based on the relative quality and associated value of the aquatic resources that will be impacted through construction of this project. Accordingly, the Corps requests that functions and values assessments of the affected resources be submitted for review. These may be the same reports that you submit to the Ohio EPA for their review.

The Corps review process includes the evaluation of various public interest factors (e.g. safety, economics, water quality) and how they relate to the proposed project. All these factors are taken into consideration when reviewing an application and making a final permit decision.

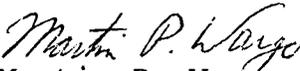
Currently, Nationwide Permit (NWP) No. 26 is scheduled to expire on January 5, 2000. At that time, new activity-specific Nationwide Permits are expected to replace NWP (26). Should the proposed work require an Individual Permit from the Corps, a Section 401 water quality certification (WQC) from Ohio EPA must be obtained prior to the issuance of a validated permit. The Ohio

SUBJECT: Department of the Army Application No. 1999-02122(1)

EPA will have one year from the publication of the Corp's Public Notice to either issue, deny, or waive the need for the WQC. It is also possible that public hearings or meeting may be required. Therefore, you are encouraged to allow sufficient time for the evaluation process to run its course.

I appreciate the opportunity to comment on the Preliminary Alternatives Summary for the PAU/DEF-24 upgrade project. If you have any questions pertaining to this matter or to any of the above comments, please feel free to contact me at (716) 879-4116, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207-3199, or by e-mail at: Martin.P.Wargo@usace.army.mil

Sincerely,


Martin P. Wargo
Biologist

cc: Thomas Harcarik, 401 Coordinator
Kent Kroonemeyer, USFWS, Reynoldsburg Office
Kim Baker, ODNR, REALM
Dave Schulenburg, USEPA, Reg. V



DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
BOX 1027
DETROIT, MICHIGAN 48231-1027

IN REPLY REFER TO:

NOV 4 1999

**Engineering and Planning Division
Environmental Analysis Branch**

**Mr. Dean L. Munn
Division of Planning and Programming
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249**

Dear Mr. Munn:

This correspondence is in response to your August 26, 1999, letter requesting comments on the proposed project: New Road Construction U.S. 24 from New Haven, Indiana, to Defiance, Ohio.

The Detroit District, U.S. Army Corps of Engineers (USACE), Flood Plain Manager, has reviewed the proposal and offers the following comments: This response only covers Indiana, but the same requirements will probably be applicable to Ohio as well. The County of Allen and the City of New Haven are in the regular phase of the National Flood Insurance Program. Many waterways (Maumee River, etc) near or along the proposed project are delineated on the applicable Flood Insurance Rate Map. If needed, information exists for the 100-year flood elevation and delineation for these waterways. (The total number of waterways that will be crossed, including those not delineated on the rate maps, is unknown.) To ensure full compliance with local and state flood plain management regulations and acts, we recommend the project design be fully coordinated with local officials, and with officials of the Indiana and Ohio Departments of Natural Resources, pursuant to the Indiana Flood Control Act (IC 13-2-22) and Ohio regulations, regarding the applicability of a proper permit prior to construction. This coordination action is important since we assume the proposed construction may be within the flood plains of many waterways, and that stormwater generated from projects of this nature may have an impact on these nearby waterways. Finally, we note there are no current or proposed USACE studies for this portion of Allen County or New Haven.

The proposed project has been reviewed by our Regulatory Branch for regulatory compliance pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Based on the information provided, it appears that the proposed project is within USACE permit jurisdiction. The Detroit District, USACE, is responsible for reviewing the activities in Allen County, Indiana, with the Buffalo District, USACE, responsible for regulating the activities in Ohio. You should contact Paul G. Leuchner of the Buffalo District at 1776 Niagara Street, Buffalo, New York, 14207-3199 (telephone 716-879-4310), when inquiring about jurisdictional issues in Ohio. A formal wetland delineation along the project corridor, in

accordance with the Corps of Engineers' 1987 Wetland Delineation Manual, would be required. The delineation and a completed permit application must be provided to the Detroit District's Regulatory Branch, and a permit received, prior to initiation of any work in Allen County. When communicating with the Detroit District's Regulatory Branch, please refer to file number 99-100-006-0.

We appreciate the opportunity to comment upon your proposed project. Please note that this preliminary review does not represent a comprehensive public interest review. Such a review would be completed during the permit application evaluation process in the Regulatory Branch.

The Environmental Analysis Branch will continue to be the primary point of contact at the USACE for environmental coordination on the proposed project. Any questions may be directed to me at 313-226-6752 or Mr. Paul Allerding at 313-226-7590. Any questions regarding the Detroit District's regulatory program should be directed to Mr. Robert Tucker, Chief, Enforcement Section, Regulatory Branch, at 313-226-6812. Questions regarding the District's civil works program should be directed to Mr. Joe Wanielista, Program Manager, Flood Plain Management Services, at 313-226-6773.

Sincerely,



Les E. Weigum
Chief, Environmental Analysis Branch
Engineering and Planning Division

Enclosure



United States
Department of
Agriculture

September 9, 1999

Natural
Resources
Conservation
Service

6013 Lakeside Blvd.
Indianapolis, IN
46278-2933
(317) 290-3200
FAX 290-3225

Dean L. Munn
Division of Planning and Programming
Indiana Department of Transportation
100 North Senate Ave., Room N755
Indianapolis, Indiana 46204-2249

Dear Mr. Munn:

In response to your letter concerning the construction Project PID #18904 New Road Construction, U.S. 24 from New Haven, Indiana, to Defiance, Ohio, dated August 26, 1999, it has been found that the project site is located in a prime farmland area.

To comply with the Farmland Protection Act, please complete Parts I and III of Form AD-1006 and return it to our office.

Also, please find enclosed the soils maps for that particular location. If you would, please locate your project on this map and return it with the AD-1006. This will help eliminate errors as to the correct location of your site and expedite our soil scientist's evaluation

If you need additional information, please contact John Reynolds at (317) 290-3200, extension 341.

Sincerely,

ACTING FOR

ROBERT L. EDDLEMAN
State Conservationist

enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 23 1999

REPLY TO THE ATTENTION OF:

B-19J

Dean Munn
Division of Planning and Programming
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249

Dear Mr. Munn:

The United States Environmental Protection Agency in Region 5 (U.S. EPA) has received your August 26, 1999, letter with an enclosed document titled: U.S. 24, New Haven to Defiance, Preliminary Alternatives Summary. We understand the Indiana and Ohio Departments of Transportation (INDOT and ODOT) have begun work in preparation of an Environmental Impact Statement (EIS) for improvements to the U.S. 24 planning section between New Haven, Indiana and Defiance, Ohio. This planning section is one of three planning sections along U.S. 24 between Fort Wayne, Indiana and Toledo, Ohio, identified in the U.S. Route 24 Improvement Feasibility Study (1994). A separate EIS is currently being prepared for the Napoleon to Toledo planning section.

Your letter requests early coordination on the New Haven to Defiance proposal by review of the Preliminary Alternatives Summary document. We offer the following early coordination comments and concerns for consideration in preparing additional environmental documentation for inclusion in the Draft Environmental Impact Statement (DEIS). Our comments are in regard to the three major chapters of the Preliminary Alternatives Summary: (1) Purpose and Need, (2) Modal Analysis, and (3) Development of Preliminary Corridors.

Purpose and Need

Based on the information presented in the Preliminary Alternatives Summary document we agree that a need exists to improve traffic flow and Level of Service for the purpose of relieving congestion, including roadway safety improvements, on U.S. 24 between I-469 in Indiana and Defiance, Ohio. Current documentation (e.g., Table 5) does not demonstrate that safety is a major problem along most segments of this U.S. 24 planning section. We note that it is unclear whether Table 7 represents accident severity information for the New Haven to Defiance planning section or for the entire length of U.S. 24, Fort Wayne to Toledo.

Modal Analysis

We are pleased to see the broad range of modal alternatives initially considered for this U.S. 24 planning section. They include:

- No Build
- Transportation System Management (TSM)
- Transportation Demand Management (TDM)
- Transit
- Rail Freight
- Highway

All but the No Build and Highway modal alternatives were dismissed because they alone could not solve the major problems of traffic flow and Level of Service. The only highway improvements proposed under the Highway modal alternative are those that appear to preclude all potentially viable alternatives except those the document identifies as entailing:

- construction of a new limited access highway in the existing right-of-way, or
- construction of a new limited access highway on a separate new alignment.

However, based on the problems substantiated for this planning section ODOT and INDOT should fully evaluate an additional highway alternative that is not limited to the construction of a new limited access highway. The alternative should include:

- improve existing U.S. 24 on current alignment, in combination with bypasses, additional travel lanes where necessary, TSM, TDM, and transit components, whenever feasible.

This alternative should be carried forward for further study. The alternative, along with the other highway alternatives, should be subjected to the same level of in-depth analysis required for the DEIS.

Development of Preliminary Corridors

Fourteen (14) preliminary corridors were initially developed for the highway alternatives. The development of the preliminary corridors is deficient in that a corridor that includes the existing U.S. 24 roadway is not included. In addition, only the western and eastern most ends of existing U.S. 24 were included within corridor segments. At this time there is no substantiated reason to exclude the major portion of existing U.S. 24 as a viable corridor alternative. In addition, there may be segments along existing U.S. 24 that could be used in developing a feasible alternative that would have less potential environmental impacts than those proposed in this document for further study. This oversight should be corrected in future documentation, including, but not limited to, corrections to corridor/environmental maps, for this U.S. 24 planning section.

Figure 8 should clearly identify existing U.S. 24 as a feasible corridor selected for further study.

Corridor Analysis - We note that the corridor analysis used to screen for the preliminary corridors was a "broad-brush" approach based on minimal detailed information. We note that Table 8 (Comparative Analysis Matrix) and Table 9 (Relative Rank of Preliminary Corridors) do not include flood plain acreage information even though the Environmental Inventory map identifies corridors within flood plain areas. We note that the Environmental Inventory map does not depict woodland or farmland areas. We note that the totals in Table 9 erroneously include one additional count for the "Structures (Total)" category. Consequently, Figure 7 (Corridor Comparison) is inaccurate.

The "Structures (Total)" category contains three subcategories in Table 8 and Table 9 that provide more detailed information on the types of structures (e.g., residential) that could potentially be impacted. These subcategories provide additional counts for the ranking totals in Table 9. Based on the information provided in the document, we note that subcategories that could have easily been identified and included under their respective main categories were not included. These main categories are: Wetlands, Industrial - existing and future, and Historic Structures. We suspect that the inclusion of additional subcategories would have provided additional counts that would have affected the ranking totals in Table 9 and consequently, the information depicted in Figure 7 (Corridor Comparison). The additional information provided by the inclusion of additional subcategories would have helped to further guide the corridor elimination decision process.

New information may come to light as the EIS process develops. Consequently, it may be necessary to look at additional corridor alternatives or reinstate, whole or segments of, those corridor alternatives that were eliminated through the analysis process and selection process.

Corridor Selection - At this time we do not agree that only preliminary corridors 4 and 7 be carried forward for further study as proposed in the document. Of the fourteen corridors, corridor 7 and corridor 4 have the potential to impact the second and third largest amount of wetland acreage, 319 and 317 acres, respectively. We would consider impacts to wetlands far less than this amount to be extremely significant. In accordance with Section 404 of the Clean Water Act (CWA), the alternative ultimately recommended for implementation also must clearly be documented to be the feasible alternative with the least potential to result in the loss of or attenuation of any naturally occurring wetlands. In addition, corridor 7 has the sixth highest acreage (575 acres) of woodlands and the fourth largest amount of farmland (6,750 acres).

Based on the information provided, corridor 10 and corridor 13 appear to be viable corridor alternatives that should be carried forward for further study. Table 9 shows that corridors 10 and 13 ranked better than corridors 4 and 7, over all. In addition, corridors 10 and 13 have significantly less wetland acreage, 73 and 76 acres, respectively. Corridor 10 has fewer stream crossings (19) than corridor 7 (24). Corridor 10 and corridor 13 have less farmland acreage (5,905 and 6,596 acres, respectively) compared to corridor 7 (6,750 acres). Corridor 10 also has

less farmland than Corridor 4 (6,044 acres). In addition, Corridor 10 and corridor 13 have fewer residential impacts (143 and 127, respectively) compared to corridor 7 (148) and corridor 4 (174). An adequate detailed explanation for their elimination is not provided in the document.

Unless otherwise demonstrated, corridors 10 and 13, along with an existing U.S. 24 corridor appear to be viable corridor alternatives with potentially less environmental impacts than corridors 7 and 4. They should be carried forward for further study and analysis in preparation for the documentation required for the DEIS.

We appreciate the opportunity to coordinate early on this proposal. We are available for further consultation and discussion. Ms. Virginia Laszewski is our point of contact for this project. If you have any questions or comments, please contact Virginia at (312) 886-7501 or by e-mail, laszewski.virginia@cpa.gov.

Sincerely yours,



Shirley Mitchell, Deputy Director
Office of Strategic Environmental Analysis

fc: FHWA (IN)
FHWA (OH)
ODOT
CORPS
USFWS



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4132

(614) 469-6923/FAX (614) 469-6919
September 22, 1999

Mr. Timothy M. Hill
Administrator
Office of Environmental Services
Ohio Department of Transportation
25 South Front Street
P.O. Box 899
Columbus, Ohio 43216-0899

Re: PAU/DEF-24-0.00/0.00 9PID 189040
NEPA/404/401 Merger Consultation

Dear Mr. Hill:

This responds to your August 9, 1999 letter regarding the above referenced project. We have reviewed your letter and attached documents. We find that they adequately address the purpose, need, and preliminary alternatives for this proposed project.

Sincerely,


Kent E. Kroonemeyer
Supervisor



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
BLOOMINGTON FIELD OFFICE (ES)
620 South Walker Street
Bloomington, Indiana 47403-2121
(812) 334-4261 FAX 334-4273

August 31, 1999

Ohio Department of Transportation
US 24 Project Office
1800 Indian Wood Circle
Maumee, Ohio 43537

Project No: PAU/DEF-24-0.00/0.00
PID No: 18904
Road: US 24
Waterway: Maumee River and tributaries
Work Type: Highway construction/reconstruction
County(ies): Allen, Indiana; Paulding and Defiance, Ohio

Dear Sir:

The U.S. Fish and Wildlife Service (FWS) has reviewed information on possible US 24 highway corridors as provided in your Newsletters and at the Special Public Meeting in Antwerp, Ohio, on August 23, 1999. We have the following comments.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The Ohio Department of Transportation (ODOT) and Indiana Department of Transportation (INDOT) are investigating the feasibility of reconstructing US 24 as a 4-lane, limited access, divided highway between New Haven, Indiana, and Defiance, Ohio. Two possible new corridors are being considered, as are improvements to existing 2-lane US 24. Also being considered, in conjunction with improvements to existing US 24, is a "Super 2" 2-lane highway for trucks and through traffic while local traffic would continue to utilize the existing roadway. The study corridors are between 2000 and 4000 feet wide, although the actual highway right-of-way would be a maximum of 300 feet wide.

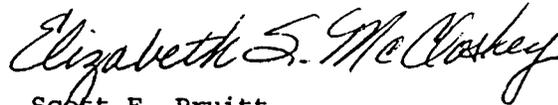
Much of the proposed project area was once part of the Great Black Swamp, an approximate 5000 square mile forested wetland within the Maumee River Valley from near the Indiana-Ohio State Line to Lake Erie. It is now extensively drained and farmed, and woodlands exist only as small remnants. Many of these small woodlands remain as forested wetlands while others no longer have sufficient hydrology to be wetlands. Because woodlands, either wet or dry, are now so rare within this portion

of Indiana and Ohio, the FWS requests that every effort be made to avoid impacting these areas with the new roadway. Bisecting larger woodlands would be especially detrimental to nesting birds and other wildlife, but removal of any forested lands would adversely affect wildlife resources. Wetland losses should also be held to a minimum, with mitigation for any unavoidable impacts.

A number of tributary streams of the Maumee River and the Maumee itself would be crossed by the proposed highway, whether on new alignment or parallel to the existing right-of-way. We understand from your consultants, Midwest Environmental Consultants, Inc., that surveys for the Federally endangered Indiana bat (*Myotis sodalis*) are already planned at sites where potential habitat for this species exists.

We appreciate the opportunity to comment at this early stage of project planning. Please coordinate both the Indiana and Ohio portions of this project, including endangered species surveys, with Mrs. Elizabeth McCloskey at the Northern Indiana Suboffice, 120 South Lake Street, Suite 230, Warsaw, Indiana 46580, (219) 269-7640

Sincerely yours,



for Scott E. Pruitt
Acting Supervisor

cc: Federal Highway Administration, Indianapolis, IN and Columbus, OH
Indiana Dept. of Environmental Mgt., Water Management, Indianapolis, IN
Steve Jose, Indiana Division of Fish & Wildlife, Indianapolis, IN
Ohio Division of Wildlife, Columbus, OH
Manager, Environmental Assessment, INDOT, Room N848, Indianapolis, IN
USFWS, Reynoldsburg Field Office, Reynoldsburg, OH

Create Date: Friday, September 03, 1999 4:32 PM
Send Date: Wednesday, December 31, 1969 8:00 PM
Attach:
Certify: N

(Paulding/Defiance Counties)

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review in consultation with the Division of Wildlife and other divisions within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Environmental Policy Act and other applicable laws and regulations.

Natural Heritage maps and files for the proposed project were reviewed for records involving endangered, threatened or special interest species in the immediate project vicinity. The Natural Heritage Database contains no records for rare species or unique natural features within the preferred corridors 4 & 7. There are no state nature preserves within these corridors, but a portion of the corridor east of Antwerp (where sections L & K merge to form section N/O) includes part of the old Wabash-Erie Canal.

Segment S is the preferred route since there is an existing bridge crossing and right-of-way.

Corridors 4 and 7 are acceptable alternative routes. Their distance from the Maumee State Scenic River should have little or no impact to the river ecosystem.

Segments U and X should definitely not be considered since they would require new bridge construction and further impacts to the Maumee River.

We appreciate the opportunity to provide these comments. If you have any questions, please contact me.



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 South Front St.
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2324

MAILING ADDRESS:

Lazarus Government Center
P. O. Box 1049
Columbus, OH 43216-1049

September 30, 1999

Re: Ecological Coordination
PAU/DEF-24-0.00/0.00
PID 18904

Mr. Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, Ohio 43216-0899
ATTN: Chris Yoder, ODOT, OES

Dear Mr. Hill:

The Division of Surface Water (DSW) of Ohio EPA has evaluated the *Preliminary Alternatives Summary (Summary)* for the proposed upgrade of US 24 between Fort Wayne, Indiana and Defiance, Ohio. The *Summary* was submitted to Ohio EPA by cover letter dated August 9, 1999. The August 9, 1999 submission is intended to satisfy Concurrence Point 1 of the proposed NEPA/404 merger agreement.

Ohio EPA accepts the Statement of Purpose and Need for the project. Ohio EPA found the Statement of Purpose and Need to be both thorough and well written. However, Ohio EPA requests additional details that should further clarify the project's purpose and need. Ohio EPA also requires additional information regarding preliminary corridor locations and their environmental constraints prior to concurring on the selection of feasible corridors. Ohio EPA's specific comments are provided below.

Statement of Purpose and Need

1. The *Summary* states on page 4 that US 25 from Fort Wayne to Toledo is designated in the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) as a high priority corridor on the National Highway System. ODOT should elaborate on the selection process for these high priority corridors.
2. The *Summary* states on page 8 that segments of existing US 24 are classified as either a Rural Principle Arterial (RPA) or a Rural Minor Arterial (RMA) as those terms are defined by the American Association of State Highway Transportation Officials (AASHTO). ODOT should identify the classification for each segment of existing US 24, and identify which segments do not meet AASHTO criteria.

Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

3. ODOT should incorporate Average Daily Traffic (ADT) and Level-of-Service (LOS) ratings for 1998 for each segment into Table 1 located on page 10 of the *Summary*.
4. Ohio EPA requests clarification regarding what ODOT's 1997 *Origin-Destination Survey of US 24/Ohio Turnpike Corridor at the Ohio/Indiana State Line* was attempting to evaluate. Specifically, ODOT should: 1) state if the survey was examining travel patterns between specific cities or areas, as was the *Origin-Destination Survey for the City of Defiance*, and would the responses differ if different cities were listed as the origin and destination; 2) include responses from automobile traffic and explain why only responses from truck traffic were reported in the *Summary*; 3) explain why only west bound traffic was surveyed and would a survey of east bound traffic produce different results; and 4) include any other relevant information that would clarify the intent of the *Survey*.

Ohio EPA recognizes that ODOT's intent was to summarize the results of the *Survey* rather reproduce the entire document. However, Ohio EPA is not inclined to rely on the *Survey* to support the project's purpose and need based solely on the results reported in the *Summary*.

5. ODOT should elaborate on the time of travel discussion found on page 15 of the *Summary*. Specifically, ODOT should identify the existing time for travel for the study area and the predicted time of travel for the various corridors, including upgrading existing US 24. ODOT should also state if criteria exists for determining acceptable times of travel for various types of highways analogous to criteria for LOS or ADT.
6. ODOT should provide LOS and ADT rating and time of travel data for Transportation System Management (TSM) and /or Transportation Demand Management (TDM) alternatives to better compare these alternatives to the build alternatives. ODOT concludes on page 31 of the *Summary* that TSM and TDM alternatives alone will not resolve the deficiencies with existing US 24. This conclusion would be greatly supported by quantitative LOS, ADT, and time of travel data.
7. ODOT should describe the degree to which examining passenger and freight railroad alternatives is within the scope of its overall mission. Ohio EPA makes this request in light of ODOT's dismissal of rail alternatives on page 38 of the *Summary*. If this information is provided elsewhere, ODOT should provide references for Ohio EPA's convenience.

Preliminary Corridor Selection and Evaluation

8. The proposed upgrade of US 24 is composed of several projects of which PAU/DEF-24-0.00/0.00 is only one. In fact, Ohio EPA is currently preparing comments for the HEN/LUC-6/24-24.10/0.00 project. ODOT should elaborate on how the logical termini were selected for the various US 24 projects and discuss if there any logic to consolidating the US 24 projects. ODOT should include a discussion of the basis for establishing independent utility for each US 24 project. This comment will likely appear in Ohio EPA's responses to the other US 24 projects.
9. ODOT states on page 49 of the *Summary* that, based on public comments, it will be evaluating an upgrade to existing US 24. ODOT's analysis of the upgrade alternative should be no less rigorous than that provided for the build alternatives considered in the *Summary*.
10. Ohio EPA was unable to reproduce the relative ranking of the preliminary corridor evaluation described in pages 40 through 49 of the *Summary*. ODOT must describe what rationale was used to assign GIS data points None, Low, Medium, or High values as described on page 40 of the *Summary*, and what is the significance of the ranking.

Ohio EPA is also concerned that all GIS categories are weighted evenly as described on page 45. Ohio EPA believes it is inappropriate to consider impacts to an exceptional warmwater habitat stream equally to impacts to a warmwater or modified warmwater habitat stream.

11. ODOT should expand on Table 8 Comparative Analysis Matrix located on page 42 of the *Summary* for wetlands and streams. First, ODOT should indicate the beneficial aquatic life use designations for the stream located in the study area and how many of each use designation will be impacted by each preliminary corridor. Second, ODOT should indicate how many acres of each wetland vegetation class is located within each corridor.

Neither of these tasks require field work. Stream use designations can be found in Ohio's Water Quality Standards. Vegetation classes are identified on the National Wetland Inventory maps prepared by the US FWS. However, the information will greatly facilitate Ohio EPA's ability to concur on the selection of feasible corridors. Avoidance and minimization of impacts to high quality aquatic resources is the impetus for conducting the current coordination.

Mr. Timothy M. Hill, Administrator
PAU/DEF-24-0.00/0.00
September 30, 1999
Page 4

12. ODOT should eliminate preliminary alternatives that include segments U and X as these will require construction of a new bridge across the Maumee River. Ohio EPA recognizes that bridge replacements are not free from adverse impacts to aquatic resources. However, on the whole, bridge replacements will likely result in less impacts than those constructed along a new alignment.
13. ODOT should clarify its ability to avoid and minimize impacts to resources within the 2000 foot planning corridors through the careful development of feasible alternatives. Ohio EPA seeks to determine the actual benefit of selecting preliminary corridors with fewer identified streams and wetlands.

Thank you for the opportunity to comment on the *Summary* for the PAU/DEF-24 project. Ohio EPA believes that coordination between our agencies at this early stage in project development will provide the opportunity to truly avoid and minimize impacts to aquatic resources to the greatest extent practicable. Feel free to contact me at 614/644-2139 if you have any questions regarding the above.

Sincerely,



Thomas C. Harcarik
401 Coordinator
Division of Surface Water

cc: Kathy Ryan, USACE, Buffalo District
Kent Kroonemeyer, USFWS, Reynoldsburg Office
Dave Schulenburg, USEPA, Reg. V.
Mike McMullen, USEPA, Reg. V.
Kim Baker, ODNR, REALM
Tom Balduf, OEPA, NWDO
Rod Maas, ODOT, D-1 ✓



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

November 23, 1999

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

Mr. Dean L. Munn
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249

Dear Mr. Munn:

RE: New Road Construction U.S. 24 from
New Haven, Indiana to Defiance, Ohio
Allen County, Indiana

The Indiana Department of Environmental Management (IDEM) has reviewed the above-noted project with consideration to potential effects on the environment at or about the project location.

The following topics were considered during our review process:

WATER AND BIOTIC QUALITY

Overall, the Indiana segment of this project would have minimal impacts on wetlands or other water resources. We recommend that an alignment be chosen which avoids wetland impacts completely. As the project design is finalized, staff are available to conduct onsite early coordination to evaluate alignments and potential impacts to aquatic resources. Contact Mr. Brett Crump at (317)23-2475 if additional meetings or project assessment is required.

Recommended water pollution control measures:

1. Section 404 of the Clean Water Act requires a permit from the U.S. Army Corps of Engineers for dredging and filling in wetlands and in the waters of the State of Indiana. The Office of Water Management (OWM) recommends that you contact the Detroit District, U.S. Army Corps of Engineers at (313)225-2298 concerning the possible requirement of a Section 404 Permit for this project. In the event the Section 404 Permit is required, the project may be subject to a Section 401 Permit from IDEM.

2. Water pollution control measures, as specified in the 1993 Indiana State Highway Standard Specifications, shall be applicable.
3. The Department of Natural Resources, Division of Water, is to be contacted for approval of construction in floodways.
4. The Department of Natural Resources, Division of Fish and Wildlife, shall be consulted regarding potential harm to the local biota resulting from the proposed project.

AIR QUALITY

The above project should be designed to minimize any impact on ambient air quality in or about the project area. The project must comply with all Indiana Air Pollution Control Board rules.

Consideration should be given to the following:

1. What disposal method is being used for organic debris from land clearing and other waste materials? Open burning is allowed for certain types of maintenance purposes with specific conditions. If burning is allowed by the rule and is being considered, evaluate the economic and technical feasibility of non-combustion disposal options, for example removal, mulching and burial. Open burning approvals may be granted for certain projects by OAM. Open Burning Rule 326 IAC 4-1 should be taken into consideration.
2. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. Example precautions are wetting the area with water, constructing wind barriers, or treating the area with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked out from unpaved areas should be minimized. Please refer to Fugitive Dust Rule 326 IAC 6-4 for details. If construction or demolition is conducted in a wooded area where large blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be

wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

3. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. Please refer to 326 IAC 8-5 Asphalt Paving Rule for details.
4. If demolition or renovation of a structure will take place, asbestos and lead-based paint rules may apply. An inspection should be performed by an accredited asbestos inspector to determine if asbestos containing materials are present. If asbestos is present, rules governing project licensing will apply. Projects that involve lead-based paint activities should take the proper safety precautions to ensure the health of the buildings occupants and the safety of the environment. In projects that involve asbestos, notification rules and set schedules apply to renovation operations above a certain size and all demolition projects. The following rules may apply to either projects involving asbestos or lead-based paint:
 - 40 CFR 745 Lead: Requirements for Lead-Based Paint Activities in Target Housing and Child Occupied Facilities.
 - 326 IAC 14-2 Emissions Standard for Asbestos;
 - 326 IAC 14-10 Emissions Standard for Asbestos; Demolition and Renovation Operations, and
 - 326 IAC 18-1 and 18-3 Asbestos Personnel Accreditation Rules.
5. If this project is the construction of a new source of air emissions or the modification of an existing source of air emissions, it will need to be reviewed for an air emissions permit or registration according to 326 IAC 2-1 Permit Review Rules. Applications for permit review can be obtained by calling 317-232-8369.

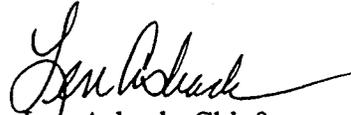
SOLID AND HAZARDOUS WASTE

1. The Office of Solid and Hazardous Waste Management (OSHW) does not believe the site is or represents an environmental problem, based on the information provided. However, OSHWM reserves the right to reassess the site if new or additional information becomes available.

Should you have any questions relating to our review, please contact the following program area people responsible for this review:

Water and Biotic Quality Andrew Pelloso	317-233-2481
Air Quality Kennyne' Johnson	317-233-0178 317-233-0430
Solid & Hazardous Waste Management Debby Baker	317-232-0066
Review Coordinator Gary Starks	317-232-8795

Sincerely,



Len Ashack, Chief
Permits & Compliance Branch
Office of Water Management

Project No. 3207



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

January 28, 2000

Mr. Norman Redick
Ohio Department of Transportation, District 1
1885 N. McCullough Street
P.O. Box 40
Lima, Ohio 45802-0040

Dear Mr. Redick:

Re: US 24 New Haven to Defiance Project

I am writing in response to your letter dated November 3, 1999, concerning the US 24 New Haven to Defiance Project. Because some time has passed since the date of your letter, I have enclosed a copy and would like to apologize for the delay in my reply.

I have also enclosed *Access IDEM*, an overview of our agency (including a listing of public file rooms) which helps guide the public and all interested parties in reporting concerns and obtaining information. I hope this will be helpful to you and other Ohio Department of Transportation staff members. Please feel free to share it with other interested parties, as well.

A copy of your letter was forwarded to our Office of Water Management staff, for review. It is my understanding that staff in our Office of Water Management responded to an early coordination request from the Indiana Department of Transportation (INDOT) regarding this project in mid-November, 1999. We are available to assist the public in the inspection of public records and would be glad to provide technical assistance, at your request, as this project proceeds. Questions concerning early coordination on this or other projects may be directed to Mr. Gary Starks, with our Office of Water Management, at 317/232-8694.

Thank you for contacting the Indiana Department of Environmental Management (IDEM) concerning this matter. Please feel free to direct any future correspondence concerning the US 24 New Haven to Defiance Project to us at the above address.

Sincerely,

Lori F. Kaplan
Commissioner

Enclosures



Indiana Department of Natural Resources

Habitat and Diversity Protection Unit
Division of Fish and Wildlife
402 W. Washington Street, Rm. W-273
Indianapolis, IN 46204

5 May 2000

Mr. Dean L. Munn
Division of Planning and Programing
Indiana Department of Transportation
100 N. Senate Avenue, Rm. N755
Indianapolis, IN 46204-2249

RE: DNR #7644 - Proposed new road construction: U.S. 24 from New Haven, Indiana to Defiance, Ohio

Dear Mr. Munn:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request dated 26 August 1999. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1). A copy of this letter should be included with the permit application.

The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. The consultant's study overlooked two natural areas, Bluecast Spring and Bull Rapids, which occur in the project vicinity. It appears that neither area will be affected by the project.

The Division of Fish and Wildlife requests that a meeting be held to fly the alternate routes to identify potential impacts. In addition, the division would also like to fly the U.S. 24 route from Wabash to Huntington.

Our agency appreciates this opportunity to be of service and apologizes for not being able to respond sooner in this matter. Please do not hesitate to contact me at (317) 232-4080 if we can be of further assistance.

Sincerely,

Stephen H. Jose
Environmental Coordinator

cc: Joyce Newland, Federal Highway Administration, Indianapolis, IN

**APPENDIX 3.3
CONCURRENCE POINT #2 AGENCY CORRESPONDENCE
INDEX OF CORRESPONDENCE**

Agency	Date of Correspondence
US Environmental Protection Agency, Region 5	February 26, 2001
US Fish and Wildlife Service, Reynoldsburg Office	February 9, 2001
Ohio Department of Agriculture	March 6, 2001
Ohio Department of Natural Resources	February 15, 2001
Ohio Environmental Protection Agency	March 9, 2001
Indiana Department of Natural Resources	July 13, 2001

Note: Date shown is the date the commenting agency submitted correspondence to ODOT.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

FEB 26 2001

REPLY TO THE ATTENTION OF

Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
Post Office Box 899
Columbus, Ohio 43216-0899

B-19J

Dear Mr. Hill:

This is in response to your letter of January 11, 2001, requesting our review of the Preliminary Draft Environmental Impact Statement (PDEIS) USR-24 project in Defiance and Paulding Counties, Ohio (PID 18904).

Based upon our review of the PDEIS, we hereby concur in the project's Purpose and Need Statement and in the Identification of Alternatives to be Evaluated. We agree that implementation of a "build" alternative will be necessary to meet present and projected traffic volumes while providing an acceptable level of service. In addition, we note that an exceptionally broad range of alternatives (27 alternatives) has been developed on behalf of this project and that all of the potential "build" alternatives have been carried through an environmental impact assessment matrix.

Based upon our review of the PDEIS it appears that either Alternative "C" or Alternative "O" would constitute the feasible alternative with the least amount of wetlands impact. Since no information is presented in the PDEIS calling the feasibility of either of these alternatives into question, we strongly urge that either of these alternatives be identified as the Preferred Alternative. If new information not contained in the PDEIS were to be developed clearly showing that neither Alternative "C" nor Alternative "O" is feasible, we would strongly urge that either Alternative "A" or Alternative "M" be selected as the Preferred Alternative.

We appreciated the opportunity to review this project and its PDEIS. If you have any questions on our comments, please contact MikeMacMullen of my staff. Mike can be reached either by phone at: 312/886-7342 or by e-mail at: macmullen.michael@epa.gov.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Kenneth A. Westlake".

Kenneth A. Westlake, Chief
Environmental Planning and Evaluation Branch



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127



February 9, 2001

Ms. Jennifer Graf
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Project No: 18904 PAU/DEF-24.0.00/0.00
Road: US 24
Waterway: Maumee River and tributaries
Work Type: Highway construction/reconstruction
County(ies): Allen, Indiana; Paulding and Defiance, Ohio

Dear Ms. Graf:

The U.S. Fish and Wildlife Service's (FWS) Reynoldsburg, Ohio Field Office and Northern Indiana Suboffice have reviewed the Preliminary Draft Environmental Impact Statement (PDEIS) for the proposed reconstruction of US 24 between I-469 in Allen County, Indiana and Ohio Route 15 in Defiance County, Ohio.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

We favor whichever alternative would have the least impact on woodland, wetlands, and other wildlife habitat. This appears to be Alternative C, although rebuilding existing US 24 as a 4-lane highway, with a bypass around Antwerp, Ohio, may also be acceptable if damages to woodlands and Section 4(f) resources are avoided or greatly reduced.

We question why a wider median is proposed for Indiana (82 feet) than Ohio (60 feet). We also believe that a 300-foot-wide right-of-way is excessive given the very flat nature of the terrain and little need for cuts and fills, except for overpasses. Therefore, we recommend that the Preferred Alternative have the minimum necessary right-of-way with concrete median barriers rather than a

grassed median. This type of construction has proven safe and effective along numerous Interstate highways nationwide and should be equally effective for US 24.

The purpose of the project is to improve traffic flow, improve safety, reduce travel times, and enhance the regional transportation network. We believe that these goals can be achieved using a right-of-way narrower than 300 feet with a concrete median barrier, while still preserving as much farmland, residential land, existing businesses, and wildlife habitat as possible, as requested by the people living in the area of impact.

ENDANGERED SPECIES

We note that mussel surveys have been conducted at the proposed bridge sites along the Maumee and Tiffin Rivers. Sub-fossil shells of the Federally-listed endangered clubshell (Pleurobema clava) were found at both sites and sub-fossil shells of the northern riffleshell (Epioblasma torulosa rangiana) were also found at the Tiffin River site. Additionally, 2 species of state special interest in Ohio, the deertoe (Truncilla truncata) and purple wartback (Cyclonaias tuberculata), were found alive at both sites.

Mussels as a group are comprised of the most endangered species in the Midwest. Even though no Federally-listed endangered species of mussels are currently extant in the vicinity of the Maumee River and Tiffin River bridge sites, every effort must be taken to reduce impacts to mussel species because some of those within the project area may eventually become Federally-listed. The proposed bridges need to be located where they will least impact the mussel beds, or the mussels need to be relocated to appropriate habitat, preferably upstream of the impact area, where project-caused sedimentation and other impacts would be less.

The Federally endangered Indiana bat (Myotis sodalis) is potentially present within riparian woodland, adjacent wooded uplands, and wetlands throughout the project area. We note that surveys for this species are proposed once the Preferred Alternative is determined. Please coordinate survey protocols with the Reynoldsburg, Ohio and Bloomington, Indiana Field Offices of the Service.

Please note that summer roosting habitat is not the only concern for the Indiana bat. Foraging habitat along wooded stream corridors is also of concern. Removal of some trees along a stream may not affect Indiana bat roosting habitat, but could potentially affect foraging use of a stream corridor, especially if such habitat is already limited in an area or if the opening created is wide enough to discourage foraging.

If after conducting mist net surveys for Indiana bats it is determined that tree cutting restrictions alone are adequate to protect the species, the tree cutting cannot occur during the period of summer habitat use by Indiana bats, which is April 15 through October 15. If the bats are present

and additional restrictions are necessary, this will be determined during Section 7 consultation under the Endangered Species Act of 1973, as amended.

The eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), a Federal candidate species, is potentially present in the Ohio portion of the proposed project area. This species is very secretive and difficult to locate, so site surveys may not locate it even if it is present. Therefore, avoidance of potential habitat is the best method of preventing impacts to this species. If the Preferred Alternative may affect this species, please notify the Reynoldsburg, Ohio Field Office.

The project also lies within the range of the Copperbelly water snake, a Federally-listed threatened species. Habitat requirements for this species include lowland swamps or other warm, quiet waters (both seasonal and permanent), adjacent wooded migration corridors, adjacent upland slopes with underground hibernation sites below the frost line, and streams or rivers. If suitable habitat for this species is located in the project area, please contact this office prior to site construction.

These endangered species comments constitute informal consultation only. They do not fulfill the requirements of Section 7 of the Endangered Species Act of 1973, as amended.

We appreciate the opportunity to comment on the Preliminary Draft EIS. Please keep us informed of decisions made concerning the Preferred Alternative. If you have any questions about our comments, please call Elizabeth McCloskey at the Northern Indiana Suboffice at 219-269-7640 or Megan Sullivan at the Reynoldsburg, Ohio Field Office at 614- 469-6923.

Sincerely,



William J. Kurey
Acting Supervisor

cc: Federal Highway Administration, Indianapolis, IN
Federal Highway Administration, Columbus, OH
Steve Jose, Indiana Division of Fish & Wildlife, Indianapolis, IN
Ohio Division of Wildlife, Columbus, OH
Manager, Environmental Assessment, INDOT, Room N848, Indianapolis, IN
Ohio Department of Transportation, US 24 Project Office, Maumee, OH

bc: NISO, Warsaw, IN

ES: EMcCloskey/02-05-01/PDEIS US24.wp



Ohio Department of Agriculture



Governor Bob Taft
Lieutenant Governor Maureen O'Connor
Director Fred L. Dailey

Administrative Offices
8995 East Main Street • Reynoldsburg, Ohio 43068
Phone: 614-466-2732 • Fax 614-466-6124
ODA home page: www.state.oh.us/agr/ • e-mail: wwwagri@ohio.gov

March 6, 2001

Mr. Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Dept. of Transportation
Central Office
P.O. Box 899
Columbus, OH 43216-0899

PAU/DEF-24-0.00/0.00 (PID 19904)

Dear Mr. Hill:

This letter is in response to your attached January 22, 2001, letter to me regarding our two agencies "currently developing an agreement for coordination regarding the impacts of major transportation projects on agricultural lands." We appreciate ODOT's interest in balancing the needs of Ohio's transportation system with the needs of our state's farmers and their reliance on agricultural land.

After much internal discussion within our department, we have come to the conclusion that we do not have the time or expertise to conduct the kind of review in your process that you are calling for in the first paragraph of the above referenced letter.

We have an alternative proposal that we would like to submit to you and ODOT for your consideration. Specifically, we propose that an "Agricultural Impact Statement" (AIS) be conducted by ODOT for each major transportation project. This statement would contain relevant facts and information on a major transportation project's impact on agricultural lands, farmers' operations, and agribusinesses. The AIS information would be included in the appropriate concurrence point or points in the project development process. That way, local officials, farmers and other citizens of the impacted communities would have the opportunity to comment on a project's impact on agriculture for each alternative under consideration and the preferred alternative.

We propose that ODOT's AIS contain the following types of information for each project:

1. Amount of acres impacted, directly and indirectly, by the project.
2. Annual economic output of impacted agricultural land.
3. Types of agricultural operations, i.e., crops, livestock, specialty agriculture, etc.
4. Type of soil on impacted agricultural land, i.e., prime, non-prime, unique, or locally important.

5. Impact of project on farmers' ability to haul products to markets or grain elevators.
6. Impact of project on farmers' ability to get tractors, combines, or other farm equipment to fields.
7. Other factors relevant to the community and its agricultural base.

It may be necessary for ODOT to work closely with local officials, the county's Farm Bureau, the county's Soil and Water Conservation District, the county's OSU Agricultural Extension office, and other local organizations to collect the necessary information for putting together an AIS on a major transportation project. What's important in our proposed AIS concept is that the facts and information collected are included in ODOT's "Preliminary Draft Environmental Assessment" and other important public review documents. That way, farmers, local officials, and citizens can see for themselves the impact (adverse or positive) that a major transportation project will have on agriculture.

I briefly discussed this AIS idea in November-December 2000 with Jack Marshbanks, Bruce Ward, and other key ODOT officials during the Bryan Road Overpass project in Silvercreek Township, Greene County. There was general consensus among these ODOT officials and local officials that an AIS concept would have been very informative to all interested parties to the Bryan Road situation. In fact, at my suggestion, ODOT and township officials conducted in early December 2000, a survey among farmers regarding the effect of the closure of Bryan Road. All agreed that it would have been ideal to collect this information earlier in the project development process. I believe our AIS proposal, like the Bryan Road Survey, can provide a community with the information it needs in order to provide input to ODOT early on in the process.

Since our AIS is a new proposal and a departure from the process mentioned in your attached January 22, 2001, letter, I would be happy to meet with you to discuss this matter in more detail. I can be reached at 614-466-2732.

Sincerely,



Howard F. Wise
Executive Director
Office of Farmland Preservation

Enclosure (Tim Hill letter dated January 22, 2001)

cc: Director Fred L. Dailey



"Povolny, Don"
<Don.Povolny@dnr.state.oh.us>

02/15/01 10:10 AM

To: "Linkous, Tom" <Thomas.Linkous@dot.state.oh.us>, "Alcala, Noel" <nalcala@dot.state.oh.us>, "Steck, Fred" <fsteck@dot.state.oh.us>
cc: "Bartz, Dick" <Dick.Bartz@dnr.state.oh.us>, "Gable, Bob" <Bob.Gable@dnr.state.oh.us>, Becky Jenkins <Becky.Jenkins@dnr.state.oh.us>, Bob Fletcher <Bob.Fletcher@dnr.state.oh.us>, Greg Nageotte <Greg.Nageotte@dnr.state.oh.us>, "Harcarik, Tom" <tom.harcarik@epa.state.oh.us>, John Marshall <John.Marshall@dnr.state.oh.us>, John Mathews <John.Mathews@dnr.state.oh.us>, "Lammers, Kenneth" <Kenneth_Lammers@fws.gov>, "Linkous, Tom" <Thomas.Linkous@dot.state.oh.us>, Pat Jones <Pat.Jones@dnr.state.oh.us>, "Staron, Chris" <Chris.Staron@dot.state.oh.us>, "Steck, Fred" <fsteck@dot.state.oh.us>, "Sullivan, Megan" <megan_sullivan@fws.gov>
Subject: PAU/DEF-24-0.00/0.00 (PID 18904) (NEPA/404/401 Merger Consultati on Ohio Department of Transportation

(Paulding and Defiance Counties)

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review in consultation with the Division of Wildlife and other divisions within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Environmental Policy Act and other applicable laws and regulations.

Natural Heritage maps and files for the proposed project were reviewed for records involving endangered, threatened or special interest species in the immediate project vicinity. The Natural Heritage Data Base contains no records for rare species or unique natural features within the corridors proposed for new construction or along the existing U.S. 24 alignment. There are no state nature preserves in the vicinity of these routes.

Because of its proximity to the Maumee state scenic river, we are not in favor of the ODOT alternative to upgrade the existing U.S. 24 alignment.

The proposed project falls within the 100-year floodplain of the Auglaize River as designated on the Paulding County Flood Insurance Rate Map 390777 0065D, Effective Date January 5, 1996 and 0055C, Effective Date December 5, 1989.

Paulding County is a participant in the National Flood Insurance Program (NFIP) and has adopted locally enforced flood damage reduction standards. The local floodplain administrator should be contacted for the specific development standards and permits.

Paulding County
Tony Winsdor, County Engineers Office
115 N. Williams St.
Paulding, OH 45879
(419) 399-4771

We appreciate the opportunity to provide these comments. If you have any questions, please contact me.



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

March 9, 2001

Re: Ecological Coordination
PAU/DEF-24-0.00/0.00
PID 18904

Mr. Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, Ohio 43216-0899
ATTN: Chris Yoder, ODOT, OES

Dear Mr. Hill:

The Division of Surface Water (DSW) of Ohio EPA has reviewed Volumes 1 through 3 of the December 2000 Ecological Survey Report (ESR) for Defiance and Paulding counties, the Ecological Survey Report Allen County, Indiana, and the preliminary draft Environmental Impact Statement (PDEIS) for the proposed upgrade of US 24 from Defiance, Ohio to New Haven, Indiana. The above documents were transmitted to Ohio EPA by letter dated January 11, 2001. The DSW's comments memorialize its review of the above referenced documents and the discussions that took place during our March 8, 2001 meeting regarding this project.

1. Ohio EPA will evaluate the forthcoming modal analysis for the entire US 24 corridor prior to concurring with the selection of feasible alternatives. Ohio EPA understands this analysis will be provided in the draft EIS.
2. Based solely on impacts to streams and wetlands identified in the PDEIS, Ohio EPA recommends Alternative C be considered the preferred alternative. Ohio EPA reserves the right to reconsider this recommendation should the modal analysis or the cumulative impacts provide significant new information warranting selection of a different alternative.
3. Should the independent utility of the PAU/DEF-24 segment be confirmed by the modal analysis, Ohio EPA is satisfied that a reasonable range of alternatives has been presented.

Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

Mr. Timothy M. Hill, Administrator
PAU/DEF-24-0.00/0.00
March 9, 2001
Page 2

4. Discussion of cumulative impacts to streams and wetlands impacts require elaboration to include past impacts to the study area and potential impacts that would result from build-out conditions. An exhibit, or exhibits, superimposing existing aquatic resources over existing land uses and development trends should be provided. ODOT should also compare development that would occur with and without the proposed facility.
5. Photographs of all streams within the feasible alternatives should be provided in the DEIS to confirm that studies were performed on representative streams within the various corridors.
6. The DEIS should include a detailed discussion of potential impacts and specific design construction techniques to avoid those impacts, to wetlands S-4 and R-1. Both R-1 and S-4 are large Category 3 wetlands. Ohio EPA understands that impacts are evaluated at a broad scale at this point in the review, but believes that factors other than acreage of wetland impact are required to fully determine focused evaluation at this particular location. Pending the outcome of the review Ohio EPA may recommend use of segment 18 in the preferred alternative.

The acreage of wetlands impacts resulting from the footprint of the new facility, indirect construction related impacts, and build out impacts should be also discussed. By way of illustration but not limitation, installation of culverts to maintain hydrologic communication between portions of wetland R-1 on the east and west sides of the new facility should be evaluated as compared to spanning wetland S-4.

7. Finally, Ohio EPA recognizes that a portion of this facility will be constructed within Indiana and welcomes the opportunity to discuss any concerns any state of Indiana reviewing authority before selection of a preferred alternative.

Thank you for the opportunity to review the PDEIS. While voluminous, Ohio EPA found the document to be well organized and easily comprehended. Feel free to contact me if you have any questions or comments regarding the above. I may be reached at 614/644-2139.

Sincerely,



Thomas C. Harcarik
401 Coordinator
Division of Surface Water

Mr. Timothy M. Hill, Administrator
PAU/DEF-24-0.00/0.00
March 9, 2001
Page 3

cc: Kathy Ryan, USACE, Buffalo District
Ken Multerer, USFWS, Reynoldsburg Office
Dave Schulenburg, USEPA, Reg. V.
Mike McMullen, USEPA, Reg. V.
Kim Baker, ODNR, REALM
Tom Balduf, OEPA, NWDO
Kirk Slusher, ODOT, D-1



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Diversity and Habitat Protection Unit
Division of Fish and Wildlife
402 W. Washington Street, Rm. W-273
Indianapolis, IN 46204

13 July 2001

Ms. Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, OH 45202-2720

RE: DNR #7644-1 - Proposed US 24 New Haven to Defiance Project: Preliminary Draft Environmental Impact Statement

Dear Ms. Graf:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Our previous comments (DNR #7644, dated 5 May 2000) remain in effect. Please be certain, staff will provide an assessment and recommendation concerning project alternatives after flying the alternative routes.

Our agency appreciates this opportunity to be of service and apologizes for not being able to respond sooner in this matter. Please do not hesitate to contact me at (317) 232-4080 if we can be of further assistance.

Sincerely,

Stephen H. Jose
Environmental Coordinator

**APPENDIX 3.4
AGENCY CORRESPONDENCE ON REQUIRED TECHNICAL STUDIES
INDEX OF CORRESPONDENCE**

Agency	Date of Correspondence	Topic
Army Corps of Engineers, Buffalo District	March 25, 2002	Wetlands Investigations
US Fish and Wildlife Service, Reynoldsburg Office	December 13, 2001	Threatened and Endangered Species Surveys
US Fish and Wildlife Service, Bloomington Field Office	January 3, 2002	Threatened and Endangered Species Surveys
Ohio Department of Natural Resources, Office of the Director	June 18, 2001	Section 4(f) Process Review
Ohio Department of Natural Resources, Division of Wildlife	December 19, 2001	Threatened and Endangered Species Surveys
Ohio Environmental Protection Agency	May 24, 2001	Ecological Surveys
Ohio Environmental Protection Agency	February 26, 2002	Wetlands Investigations
Ohio Department of Transportation to the Ohio Historic Preservation Office	October 13, 2000	Phase I History/ Architecture Surveys
Ohio Historic Preservation Office	October 19, 2000	Phase I and II History/ Architecture Surveys
Ohio Historic Preservation Office	December 27, 2000	Phase I and II History/ Architecture Surveys
Ohio Historic Preservation Office	July 13, 2001	Phase I and II History/ Architecture Surveys
Ohio Historic Preservation Office	January 25, 2002	Phase I Archaeological Surveys
Ohio Historic Preservation Office	June 27, 2002	Phase II Archaeological Surveys
Ohio Historic Preservation Office	September 8, 2002	Phase I Archaeological Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	June 7, 2000	Phase I and II History/ Architecture Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	September 5, 2000	Phase I and II History/ Architecture Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	March 9, 2001	Phase I and II History/ Architecture Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	December 7, 2001	Historic Resources Case Studies
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	May 8, 2002	Phase I Archaeological Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	July 23, 2002	Historic Resources Case Studies
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	March 4, 2003	Phase I History/Architecture Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	March 4, 2003	Phase II Archaeological Surveys
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	May 16, 2003	Mitigation for the Gronauer Lock Site (12-AL-1674)
Absentee Shawnee Tribe of Indians of Oklahoma	May 25, 2001	Tribal Consultation
Citizen Potawatomi Nation	August 17, 2001	Tribal Consultation
Forest County Potawatomi Community	August 20, 2001	Tribal Consultation
Hannahville Indian Community	September 13, 2001	Tribal Consultation
Wyandotte Nation	August 7, 2001	Tribal Consultation

Note: Date shown is the date the commenting agency submitted correspondence to ODOT.



DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

RECEIVED
APR 1 2002
OFFICE OF
ENVIRONMENTAL SERVICES

March 25, 2002

Regulatory Branch

SUBJECT: NEPA/404/401 Merger Process and Preapplication
Comments, US Route 24, New Haven, Indiana to Defiance, Ohio
PAU/DEF - 24.0.00/0.00 (PID: 18904) Application No. 1999-02122(3)

Mr. Timothy M. Hill
Attn: Bill Cody
Ohio Department of Transportation
Office of Environmental Services
Central Office
PO Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

This is in reference to the proposed PAU/DEF-24 PID: 18904 project in the vicinity of Maumee River. The project will involve the upgrade of US 24 from New Haven, Indiana to Defiance, Ohio. The Ohio portion of the project is located near existing US 24 in Paulding and Defiance Counties, Ohio.

In accordance with the NEPA/404/401 Merger Implementation Agreement, the U.S. Army Corps of Engineers (Corps) is submitting the following comments regarding the proposed US 24 New Haven to Defiance highway improvement project.

On February 14, 2002 a preapplication meeting was held at the ODOT Central Building to discuss changes to the proposed US 24 project. The goals of this meeting were to determine the preferred alternative and discuss mitigation options for this portion of the project. Based on the discussion in this meeting, the Corps believes that Alternative D is the least damaging practical alternative and recommends Route b. in Segment 18 to minimize wetland impacts in this portion of the alignment.

In regards to mitigation options, ODOT's proposal to acquire and preserve the 184 acre forested lot containing approximately 68.5 acres of forested wetlands identified as RC-1 and the R-1

Regulatory Branch

SUBJECT: NEPA/404/401 Merger Process and Preapplication
Comments, , Application No. 1999-02122(3)

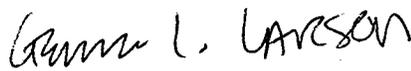
wetland complex is acceptable, and this preservation could be used as **partial** mitigation for this project and others in the area. However, the final mitigation plan for the project should include a wetland creation component which, in combination with preservation, will off-set impacts to waters of the United States.

Although these mitigation options are available, ODOT should ensure that avoidance and minimization measures are employed to reduce the project's impacts to the aquatic resources.

A copy of this letter has been sent to: Mr. Art Coleman (OEPA).

I appreciate the opportunity to comment on the changes to the proposed PAU/DEF-24-0.00/0.00 PID: 18904 US 24 highway improvement project. If you have any questions pertaining to this matter, please feel free to contact me at (716) 879-4331, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: geraldine.l.larson@usace.army.mil

Sincerely,



Geraldine L. Larson
Biologist



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

December 6, 2001

RECEIVED

DEC 10 2001

Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
6950-H Americana Parkway
Reynoldsburg, Ohio 43068

U.S. Fish & Wildlife Service
Reynoldsburg, Ohio

Re: PAU/DEF-24-0.00/0.00 (PID 18904)
Eastern Massasauga and Copperbelly Water Snake Coordination

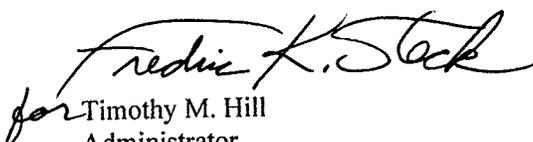
Dear Ms. Knapp:

Enclosed for your review are survey reports for the eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), a federal candidate species, and the copperbelly water snake (*Nerodia erythrogaster neglecta*), a federal threatened species, prepared for the proposed relocation of U.S. Route 24 as a four-lane controlled access expressway in Allen County, Indiana, and Paulding and Defiance counties, Ohio. This project was previously coordinated with your office on August 9, 1999, by submission of a Preliminary Alternatives Summary and a resources inventory map, and on January 11, 2001, by submission of a Preliminary Draft Environmental Impact Statement (DEIS) and an Ecological Survey Report. While those submissions looked at a range of alternative alignments, the current submission considers only Alternatives C and D, one of which will be identified in the forthcoming DEIS as the preferred alternative for the project. Those alternatives differ only between the Paulding-Defiance county line and the proposed crossing of the Maumee River.

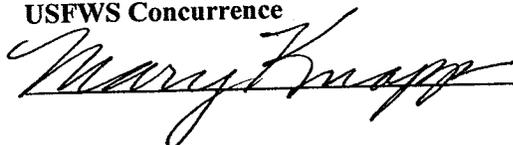
The survey for the eastern massasauga was performed by herpetologist Greg Lipps from April 23 through September 27, 2001, while the survey for the copperbelly water snake was performed by herpetologist Bruce Kingsbury in June and July 2001. Neither found either of the species in any of the areas which appeared to have potential habitat for the species within and along the proposed right of way limits. It is Mr. Lipps' professional opinion that the presence of eastern massasaugas along Alternatives C and D is unlikely and that therefore the species should not be adversely impacted by this project. It is Dr. Kingsbury's professional opinion that none of his survey areas had even marginal habitat for the copperbelly water snake. We are requesting your concurrence with those opinions.

Coordination of the enclosed reports with the Northern Indiana Suboffice of the USFWS is being initiated by Parsons Brinckerhoff Ohio on behalf of the Indiana Department of Transportation. If you have any questions concerning the enclosed reports, please call Fred Steck, Environmental Supervisor, at 466-1937.

Sincerely,


for Timothy M. Hill
Administrator
Office of Environmental Services

USFWS Concurrence

 12.13.01
(Date)

TMH:TEL:FKS:fs

Enclosures

c: Noel Alcalá - Kirk Slusher, District 1, w/encl. - Jennifer Graf, Parsons Brinckerhoff Ohio - File - Reading File



United States Department of the Interior

FISH AND WILDLIFE SERVICE

BLOOMINGTON FIELD OFFICE (ES)

620 South Walker Street
Bloomington, Indiana 47403-2121
(812) 334-4261 FAX 334-4273

January 3, 2002

IN REPLY REFER TO:

Ms Jennifer Graf
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Project No.: PAU/DEF-24-0.00/0.00 (PID 18904)
Road(s): US 24
Waterway: Maumee River and tributaries
Work Type: Construction of 4-lane highway on new alignment
County(ies): Allen County, Indiana; Paulding and Defiance Counties, Ohio

Dear Ms Graf:

This responds to your letter dated December 10, 2001, requesting our comments on endangered species studies for the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

We have reviewed the survey reports for the eastern massasauga rattlesnake (Sistrurus catenatus catenatus) and northern copperbelly water snake (Nerodia erythrogaster neglecta) which were prepared for the proposed relocation of US 24 in Indiana and Ohio. We concur with the reports that neither of these species are likely to be present or impacted by the proposed project.

We appreciate the opportunity to review these documents. Please continue to coordinate with our Northern Indiana Suboffice, which has moved and is now located at mailing address P.O. Box 2616, Chesterton, Indiana 46304 or parcel shipping address 1000 West Oakhill Road, Porter, Indiana 46304. If you have any questions, please call Elizabeth McCloskey at (219) 983-9753.

Sincerely yours,

for Scott E. Pruitt
Supervisor

cc: Megan Sullivan, Reynoldsburg Field Office, Reynoldsburg, OH



Ohio Department of Natural Resources

RECEIVED

BOB TAFT, GOVERNOR

SAMUEL W. SEBCK, DIRECTOR

JUN 25 2001

OFFICE OF
ENVIRONMENTAL SERVICES

Office of the Director
1930 Belcher Drive - Bldg. D-3
Columbus, OH 43224-1387

Phone: (614) 265-6879 Fax: (614) 261-9601

June 18, 2001

Mr. Timothy Hill, Administrator
Ohio Department of Transportation
Office of Environmental Services
Central Office, P.O. Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

I have reviewed the documentation regarding Section 4f of the Department of Transportation Act as well as your request for our Department's concurrence that sections of the Maumee and Stillwater State Recreational Rivers and the Little Miami National Recreational River may not be subject to the review criteria set forth therein. At this point in time, I am reluctant to concur that all three recreationally designated segments be excluded from the 4f review process. It is true that our recreational designation is based more on the degree of natural character of a stream rather than the degree of recreational usage the stream receives. However, the primary usage of these stream segments is recreational and conservation and therefore I believe they should be subject to the 4f review process.

With regard to the proposed Paulding/Defiance Route 24 project, I am willing to concur with your department's request at this time and support the exemption of this project from additional review under Section 4f. My basis for this decision is as follows:

- Bob Vargo, Assistant Scenic River Manager in Northwest Ohio, has conducted a preliminary review of the project with the consultant, Parsons- Brinckerhoff, and believes that negative impacts from the project can be minimized through conditions of approval in accordance with Section 1517.16. Final approval will be granted upon submission and review of a final plan set.
- The bridge construction associated with this project is on the same alignment as the existing route 24 bridge over the Maumee River. Although this structure will be significantly enlarged, negative impacts associated with in-stream work can be addressed through the proper implementation of Best Management Practices (BMP's).

Mr. Timothy Hill
Section 4f, State Designated Recreational Rivers
June 18, 2001
Page 2

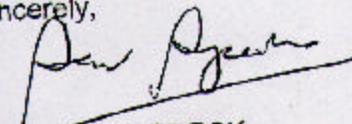
For the aforementioned reasons, my Scenic Rivers staff and I agree that little would be gained by subjecting this project to subsequent review under Section 4f. Please instruct your District 1 and District 2 staff and consultants to continue to work closely with Bob Vargo throughout the development of this project to minimize negative impacts to the Maumee River.

For future projects of this nature within recreationally designated river segments, our department would be willing to work with you on a case-by-case basis with regard to the issue of Section 4f review.

If you have any additional questions, please contact Bob Vargo at 419/981-6319 or Bob Gable, Scenic River Group Manager at 614/265-6814.

Thank you.

Sincerely,



SAMUEL W. SPECK
Director

SWS/bg

cc: Scott Zody
Stu Lewis
Bob Gable
Bob Vargo



OHIO DEPARTMENT OF TRANSPORTATION RECEIVED
INTEROFFICE COMMUNICATION DECEMBER 1 2001

Office of Environmental Services

OFFICE OF ENVIRONMENTAL SERVICES

DATE: December 6, 2001

TO: Michael J. Budzik, Chief, Division of Wildlife, ODNR
Attention: Randall E. Sanders

FROM: *Fredrick K. Steck*
for Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Eastern Massasauga and Copperbelly Water Snake Coordination

PROJECT: PAU/DEF-24-0.00/0.00 (PID 18904)

Enclosed for your review are survey reports for the eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), a state endangered and federal candidate species, and the copperbelly water snake (*Nerodia erythrogaster neglecta*), a state endangered and federal threatened species, prepared for the proposed relocation of U.S. Route 24 as a four-lane controlled access expressway in Allen County, Indiana, and Paulding and Defiance counties, Ohio. This project was previously coordinated with your office on August 9, 1999, by submission of a Preliminary Alternatives Summary and a resources inventory map, and on January 11, 2001, by submission of a Preliminary Draft Environmental Impact Statement (DEIS) and an Ecological Survey Report. While those submissions looked at a range of alternative alignments, the current submission considers only Alternatives C and D, one of which will be identified in the forthcoming DEIS as the preferred alternative for the project. Those alternatives differ only between the Paulding-Defiance county line and the proposed crossing of the Maumee River.

The survey for the eastern massasauga was performed by herpetologist Greg Lipps from April 23 through September 27, 2001, while the survey for the copperbelly water snake was performed by herpetologist Bruce Kingsbury in June and July 2001. Neither found either of the species in any of the areas which appeared to have potential habitat for the species within and along the proposed right of way limits. It is Mr. Lipps' professional opinion that the presence of eastern massasaugas along Alternatives C and D is unlikely and that therefore the species should not be adversely impacted by this project. It is Dr. Kingsbury's professional opinion that none of his survey areas had even marginal habitat for the copperbelly water snake. We are requesting your concurrence with those opinions.

If you have any questions concerning the enclosed reports, please call Fred Steck, Environmental Supervisor, at 466-1937.

ODNR Concurrence

[Signature] 12/19/01
(Date)

TMH:TEL:FKS:fs

Enclosures

c: Noel Alcalá - Kirk Slusher, District 1 - Jennifer Graf, Parsons Brinckerhoff Ohio - File - Reading File



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

May 24, 2001

RECEIVED
MAY 29 2001
OFFICE OF
ENVIRONMENTAL SERVICES

Re: Ecological Coordination
PAU/DEF-24-0.00/0.00
PID: 18904

Mr. Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, Ohio 43216-0899
ATTN: Chris Yoder, ODOT, OES
ATTN: Bill Cody, ODOT, OES

Dear Mr. Hill:

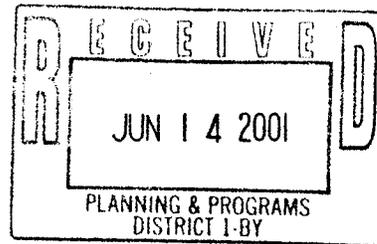
This letter serves to memorialize the Division of Surface Water's (DSW) comments regarding the May 10, 2001 site visit of selected aquatic resources located within the PAU/DEF-24 project study area. The DSW's comments are intended to facilitate the selection of a preferred corridor for the proposed upgrade of the US 24 segment from Defiance to Fort Wayne, Indiana.

Based on observations made during the may 10, 2001 site visit, the DSW prefers an alternative that impacts wetland R-1 over an alternative than impacts wetland S-4. Wetland S-4 is a palustrine forested wetland located in the flood plain of a tributary to the Maumee River. While final engineering has not been conducted, ODOT believes a culvert will be constructed at this location.

The DSW believes constructing an embankment through Wetland R-1 will result in less overall wetlands impacts that culverting wetland S-4 and the adjacent flood plain. Alternatives impacting R-1 are located on the drainage divide between two small watershed and, with the incorporation of structures to maintain hydrology, should not result in any indirect impacts. This alternative will also avoid the open water and stream components of R-1. However, the DSW will consider any information ODOT believes should be evaluated before a final determination is rendered.

Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

Mr. Timothy M. Hill, Administrator
PAU/DEF-24-0.00/0.00
May 24, 2001
Page 2



The DSW had no major concerns with the remainder of the proposed impacts to streams and wetlands. However, ODOT must still avoid and minimize impacts to those resources as part of the 401 review process.

Thank you for arranging the site visit. Feel free to contact me at 614/644-2139 if you have any questions or comments regarding the above.

Sincerely,

A handwritten signature in cursive script that reads "Thomas C. Harcarik".

Thomas C. Harcarik
401 Coordinator
Division of Surface Water

cc: Kathy Ryan, USACE, Buffalo District
Ken Lammers, USFWS, Reynoldsburg Office
Dave Schulenburg, USEPA, Reg. V.
Mike McMullen, USEPA, Reg. V.
Don Polvony, ODNR, REALM
Tom Balduf, OEPA, NWDO
Kirk Slusher, ODOT, D-1



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

February 26, 2002

Re: Ecological Coordination
PAU/DEF-24-0.00/0.00
PID: 18904

Mr. Timothy M. Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
P.O. Box 899
Columbus, Ohio 43216-0899
ATTN: Bill Cody, ODOT, OES

Dear Mr. Hill:

The Ohio EPA, Division of Surface Water, (DSW) believes acquiring wetlands RC-1, R1-a, and R-1d and adjacent forested buffer as a component of the wetland mitigation for the PAU/DEF-24-0.00/0.00 project is consistent with existing regulations. Preservation of these wetlands must be conducted in conjunction with restoration or creation as specified in Rule 3745-1-54(E)(5) of the Administrative Code. ODOT indicated that it may be able to restore wetland acreage immediately west of wetland R-1a. ODOT must also obtain the concurrence from the Ohio Department of Natural Resources with the decision to preserve these wetlands in accordance with OAC Rule 3745-1-54(E)(5)(ii).

Further, wetland acreage exceeding that needed to mitigate impacts associated with PAU/DEF-24-0.00/0.00 could be used as mitigation for other ODOT projects so long as all other requirements of OAC Rule 3745-1-54 are met at the time additional mitigation is sought, including appropriate amounts of wetland restoration and/or creation. ODOT must also devise a means to track available credit at the preserved wetland site.

Ohio EPA believes the forested wetland complex consisting of RC-1, R1-a, R-1b, R-1c, and R-1d and adjacent forested buffer help maintain water quality in the Maumee River. To that end, the DSW inquires whether ODOT can investigate acquiring or preserving wetland S-4. Preservation of wetland S-4 in conjunction with R-1a would be of greater than value to the Maumee River than either wetland individually.

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Bob Taft, Governor
Maureen O'Connor, Lieutenant Governor
Christopher Jones, Director

OFFICE OF
ENVIRONMENTAL SERVICES

Mr. Timothy M. Hill, Administrator
PAU/DEF-24-0.00/0.00
February 26, 2002
Page 2

ODOT should consider several alternative alignments through the wetland complex consisting of RC-1, R1-a, R-1b, R-1c, and R-1d as part of the alternatives analysis component of the 401 application that will be required for this project. The design of the alignment through this wetland complex must not only consider direct impacts of the highway footprint, but also potential indirect impacts due to changes in hydrology, changes in vegetative cover and resultant increased amount of sun light reaching the wetlands, and highway runoff. These factors must be reduced through alignment location and detailed design features to the maximum extent possible if preservation of wetland as mitigation is to be allowed.

The DSW has focused its efforts on wetlands RC-1, R1-a, R-1b, R-1c, and R-1d due to their high quality. However, ODOT should not neglect avoidance and minimization measures associated with detailed design at other locations along the alignment that is ultimately selected. Such measures include, but are limited to, minor alignment shifts, retaining structures, bridges or modified culverts, changes in profile, variable slopes, and environmentally sensitive construction methods.

Thank you for the opportunity to comment at this important stage in project development. It is this type of coordination that was envisioned under the NEPA/404 merger and could serve as a model for future projects. Feel free to contact me at 614/644-2139 if you have any questions or comments regarding the above.

Sincerely,



Thomas C. Harcarik
401 Coordinator
Division of Surface Water

cc: Geraldine Larson, USACE, Buffalo District
Mary Knapp, USFWS, Reynoldsburg Office
Wayne Gorski, USEPA, Reg. V.
Mazin Enwiya, M.S., USEPA, Reg. V.
Kim Baker, ODNR, REALM
Tom Balduf, OEPA, NWDO
Kirk Slusher, ODOT, D-1



OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

October 13, 2000

Mr. Mark J. Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Mary K. Smith, History/Architecture ODOT Reviews Manager

Re: PAU/DEF-24-0.00/0.00 PID 18904
History/Architecture Coordination for Addendum

Dear Mr. Epstein:

Enclosed for your review is *Addendum to Phase I History/Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. for Parsons Brinkerhoff Ohio in September, 2000

The Ohio Department of Transportation and the Indiana Department of Transportation have undertaken preliminary studies for improvements to United States Route 24 (US 24), a major east-west transportation route between Fort Wayne, Indiana and Toledo, Ohio. US 24 is currently a two-lane road that suffers from congestion and safety related issues as a result of inadequate capacity due to substandard design. Alternative solutions under study include modifying the current US 24 and constructing a four-lane limited access highway on a new alignment.

This addendum to the Phase I report that was transmitted to your office on August 24, 2000 addresses the historic resources associated with the four-lane expressway along existing US 24 between the Indiana-Ohio state line and the City of Defiance in northwest Ohio. The original Phase I report addressed five other corridors in that area, including the parts of the existing US 24 that would be modified for intersection improvements, the addition of turn lanes, and shoulder improvements. Separate studies are investigating the other portions of the overall undertaking in Ohio east of the City of Defiance. The results of all these studies will aid in determining a preferred

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File From: 

alignment for the improved US 24 in Ohio.

The addendum project area is located in the Black Swamp area of northwest Ohio running roughly parallel to the Maumee River but bypassing the Village of Antwerp. It is mostly rural and agricultural but encompasses commercial properties, cemeteries, and residences in addition to farmsteads. Settlement in the area was negligible until work on the Miami & Erie and Wabash & Erie canals commenced in the 1830s providing jobs and the completion of the canals in the 1840s provided markets. Settlement accelerated in the third quarter of the nineteenth century with the arrival of railways and the initiation of widespread agricultural field drainage. The early settlers were of German and British ancestry, i.e., migrants from New England and Pennsylvania and emigrants from Germany and Great Britain. Corn and soybeans are the dominant agricultural income producers in the project area, followed by dairying and hog producing.

A literature review of the entire Ohio portion of an 500 square mile study area for the overall project revealed the presence of 287 previously documented properties including residential, commercial, agricultural, and institutional properties, bridges, cemeteries, ghost towns and villages, canal remnants, and earthworks. Seven properties in the study area already are listed in the National Register of Historic Places (NRHP).

The area of potential effects (APE) for this addendum is a 500-foot wide corridor centered on the existing US 24 roadway with a bypass around the Village of Antwerp. The field survey, which was conducted in May of 2000, identified 56 properties within the APE, none of which had been previously documented. The properties identified include farmsteads with vernacular houses dating from 1850 to 1920, mass-produced houses common to the 1910-1950 period, orphan outbuildings, early automobile-related commercial properties, and cemeteries. Forty-six of those 56 properties were readily identified as not eligible for inclusion in the NRHP; seven of the 56 properties are recommended for Phase II investigation to determine their eligibility for inclusion in the NRHP; three of the 56 properties are recommended for inclusion in the NRHP without further investigation.

The three properties recommended for inclusion in the NRHP without further investigation are:

PAU-357-1

PAU-359-1

PAU-364-2

The seven properties recommended for Phase II investigation to determine their NRHP eligibility are:

PAU-377-3

PAU-348-1

PAU-358-1

PAU-363-2

PAU-375-3

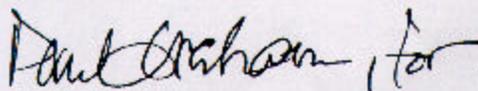
PAU-376-3

PAU-378-3

A table describing the 10 properties listed above, the NRHP criteria under which they are or may be considered significant, the rationale behind that consideration, and the page of the Addendum report on which that rationale is presented is included with this letter as Attachment A.

We would appreciate the return of this letter, signed to indicate your concurrence with our history/architecture recommendations. If no response is received within 30 days, in accordance with the Advisory Council on Historic Preservation's current regulations under Section 800.2(c)(1) and Section 800.4(d)(1) it will be presumed that the State Historic Preservation Officer agrees with the determination made in the above history/architecture coordination. If you have any questions or comments they may be directed to Joan Randall, Staff Historian, at 614-752-2171, or via e-mail at mrandall@dot.state.oh.us.

Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:jr

STATE HISTORIC PRESERVATION OFFICE CONCURRENCE:

(Date)

Attachments

c: District 1, Kirk Slusher, DEC; FHWA FOE Mark Vonder Embse;
ODOT-OES Major New Project Coordinator Noel Alcalá;
File, W/at; Reading File

RECOMMENDATION TABLE
ADDENDUM REPORT for PAU/DEF-24-0-00/0.00 PID 18904

OHI #; report page	Description	Location	Criteria	Rationale
PAU-377-3 p. 19	Mid-nineteenth century farmhouse with early twentieth century outbuildings	13613 US 24	A	Association with a single family, the Mincks, since the mid- to late-nineteenth century.
PAU-348-1 p. 20	The Park Station, an early convenience store with cabins	303 East River Street	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century
PAU-358-1 p. 20	The Liberty Stop, a complex of garage, gas station, cabins, diner, and washhouse	US 24, one mile east of Antwerp	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century
PAU-363-2 p. 21	A restaurant/truck stop	11166 US 24	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century
PAU-375-3 p. 22	The Vagabond Village, a building housing under one roof a motel, informal movie theater, restaurant, and store	13173 US 24	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century

RECOMMENDATION TABLE
ADDENDUM REPORT for PAU/DEF-24-0.00/0.00 PID 18904

OHI #; report page	Description	Location	Criteria	Rationale
PAU-376-3 p. 23	A still functioning diner.	13186 US 24	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century
PAU-378-3 p.24	A vacant aluminum diner	US 24/127	A	Part of a themed grouping of automobile related businesses along an emerging automobile route in the early twentieth century
PROPERTIES RECOMMENDED AS ELIGIBLE				
PAU-357-1 p.16	Italian Villa farmhouse with outbuildings	6630 US 24	C	A distinctive example of Italianate influence affecting rural house construction in the mid- to late-1800s
PAU-359-1 p. 17	A Gabled Ell farmhouse with Queen Anne elements and outbuildings	6227 US 24	A	Intact structures with notable integrity of function, composition, and association, together forming a good representation of farmstead evolution since the turn of the twentieth century.
PAU-364-2 p. 18	Foursquare farmhouse with Raised Basement barn	12197 US 24	C	A set of remarkably intact structures representative of a popular turn of the twentieth century construction trend, the large-scale use of rock-faced-concrete-block for utility and decorative effect.



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

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OFFICE OF ENVIRONMENTAL SERVICES

OFFICE OF ENVIRONMENTAL SERVICES

May 3, 2000

Mr. Mark J. Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Mary K. Smith, History/Architecture ODOT Reviews Manager

Re: PAU/DEF-24-0.00/0.00 PID 18904
Phase I History/Architecture Coordination

Dear Mr. Epstein:

Enclosed for your review is the document *Phase I History/Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. for Parsons Brinkerhoff Ohio in April, 2000. Also included are a descriptive table and 24 labeled envelopes of 3½"x5" photographs associated with the survey, one for each roll of film.

The Ohio Department of Transportation and the Indiana Department of Transportation have undertaken preliminary studies for improvements to United States Route 24 (US 24), a major east-west transportation route between Fort Wayne, Indiana and Toledo, Ohio. US 24 is currently a two-lane road that suffers from congestion and safety related issues as a result of inadequate capacity due to substandard design. Alternative solutions under study include modifying the current US 24 and constructing a four-lane limited access highway on a new alignment.

The subject Phase I report documents the history/architecture investigation of five feasible corridors in a portion of the area of this undertaking, that between the Indiana-Ohio County line and the city of Defiance in northwest Ohio. Separate studies are investigating the other portions of the overall undertaking. The results of all these studies will aid in determining a preferred alignment for the improved US 24.

The project area is located in the Black Swamp area of northwest Ohio running roughly parallel to the Maumee River. It is mostly rural and agricultural but encompasses the sites of several ghost towns and one extant political entity, the village of Antwerp. Settlement in the area was negligible until work on the Miami & Erie and Wabash & Erie canals commenced in the 1830s providing jobs and their completions

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File From: JP

File By: SAB

in the 1840s provided markets. Settlement accelerated in the third quarter of the nineteenth century with the arrival of railways and the completion of widespread agricultural field drainage. The early settlers were of German and British ancestry, i.e., migrants from New England and Pennsylvania and immigrants from Germany and Great Britain. Corn and soybeans are the dominant agricultural income producers in the project area, followed by dairying and hog producing.

A literature review of the entire Ohio portion of an overall 500 square mile study area revealed the presence of 287 previously documented properties including residential, commercial, agricultural, and institutional properties, bridges, cemeteries, ghost towns and villages, canal remnants, and earthworks. Seven properties in the Ohio part of the study area already are listed in the National Register of Historic Places (NRHP). Twenty-four properties within the project area have been previously recorded in the Ohio Historic Inventory, most of them in the village of Antwerp. One of those Antwerp properties, the Antwerp Depot, already is listed in the NRHP.

The field survey, which was conducted in the summer of 1999, identified 136 properties within the project area, including the 24 which had been previously documented. The properties identified include buildings and structures, farm complexes, canal remnants, and cultural landscapes. The buildings and structures can be grouped generally into three categories: vernacular upright and wing, gabled ell, and gable front farmhouses of the period 1850-1920; small mass-produced bungalows, Cape Cod cottages, and early ranch types of the period 1910-1950; and orphan agricultural outbuildings. The few high style buildings are located in the village of Antwerp. Most barns are of the three-bay English type, some with pent roofs on the gable end; the most common outbuildings are granaries (some with cupolas) and silos. Most of the pre-1949 history/architecture resources were common examples of their types with nothing to distinguish them from others of their kind; many lack sufficient integrity to convey significance; few are associated with persons or events in our history.

As a result of the literature review, field investigation, analysis, and post-survey research we have determined that of the 136 inventoried properties 112 are clearly not eligible for inclusion in the NRHP; one (PAU-35-1) is already listed on the NRHP, nine require further research to determine their eligibility, and 14 are recommended as eligible without further research.

ten

MSE 10/19/00 The ~~nine~~ properties requiring further research are:

- | | | | |
|----------------------------|----------------------------|--------------|----------------|
| DEF-254-8 (NEP) | DEF-255-8 (NEP) | 1. PAU-47-3 | 2. PAU-39-3. |
| 3. PAU-100-2 | 4. PAU-124-1 | 5. PAU-241-2 | 6. PAU-101-2. |
| 7. PAU-244-3 | 8. PAU-262-2 | 9. PAU-338-1 | 10. PAU-300-4. |

Seven

The ~~14~~ recommended as eligible for inclusion in the NRHP are:

MSE 10/19/00

- | | | |
|----------------------------|---------------------------------|----------------------------------|
| DEF-253-8 (NEP) | PAU-39-3 (see above) | PAU-101-2 (see above) |
| 1. PAU-129-1 | 2. PAU-183-1 | 3. PAU-220-1 |
| 4. PAU-221-1 | 5. PAU-222-1 | 6. PAU-224-1 |

~~PAU-228-1 (NEP)~~

~~PAU-229-1 (NEP)~~

~~PAU-230-1 (NEP)~~

PAU-300-4 (see above) 7. PAU-335-2

A table describing the 23 properties listed above, the NRHP criteria under which they are considered significant, the rationale behind that consideration, and the page of the Phase I report on which that rationale is presented is included with this letter as Attachment A.

We would appreciate the return of this letter, signed to indicate your concurrence with our history/architecture resources findings regarding the 136 inventoried properties. If no response is received within 30 days, in accordance with the Advisory Council on Historic Preservation's current regulations under Section 800.2(c)(1) and Section 800.4(d)(1) it will be presumed that the State Historic Preservation Officer agrees with the determination made in the above history/architecture coordination. If you have any questions or comments they may be directed to Joan Randall, Staff Historian, at 614-752-2171, or via e-mail at jrandall@dot.state.oh.us.

Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:jr

STATE HISTORIC PRESERVATION OFFICE CONCURRENCE:



10/19/00
(Date)

Attachments

c: District 1, Rodney Maas, DEC; File, W/att.; Reading File

Ohio Historic Preservation Office

567 East Hudson Street
Columbus, Ohio 43211-1030
614/ 298-2000 Fax: 614/ 298-2037

Visit us at www.ohiohistory.org/resource/histpres/

December 27, 2000

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**OHIO
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SINCE 1885

Timothy M Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
25 South Front Street, P.O. Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

Re: PAU/DEF-24-0.000/0.00 (PID 18904)
History/Architecture Coordination for Addendum

This is in response to your correspondence dated October 13, 2000 transmitting the report entitled *Addendum to Phase I History/Architecture Survey of the PAU/DEF-24-0.000/0.00 (PID 18904) Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Township, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. The comments of the Ohio Historic Preservation Office (OHPO) are submitted in accordance with provisions of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]).

The addendum report addresses fifty-six (56) historic resources identified along existing US24 not the proposed alternative/bypass corridors. Of these 56 resources, the report considers three eligible for listing on the National Register of Historic Places (NRHP) and seven for further research to determine NRHP eligibility/significance. However, our office cannot concur with the recommendations that PAU-357-1, PAU-359-1, and PAU-364-2 are eligible without further investigations (Phase II) being conducted nor do we believe that PAU-363-2 warrants additional research. In addition, our office cannot concur that PAU-379-3 is not eligible for listing on the NRHP without OHI forms and photographs being submitted. Both items were omitted from the report.

Our office does agree PAU-377-3, PAU-348-1, PAU-358-1, PAU-375-3, PAU-376-3, and PAU-378-3 require Phase II investigations to determine their NRHP eligibility. We would also like to suggest that PAU-375-3 (Vagabond Diner), PAU-376-3 (Randi's Roadside Cafe), and PAU-378-3 (diner) be considered a potential roadside development district; however, their significance needs to be strongly argued.

Mr. Timothy Hill
PAU/DEF-24-0.000/0.00 (PID 18904)
Page 2

Regarding the remaining 46 historic resources identified, our office concurs that they are not eligible for listing on the NRHP. No further work is required.

Finally, our office cannot continue to accept reports with very poor quality photographs and poorly written OHI's. Some of the above-mentioned resources are marginal but we cannot determine how marginal they are without better photo and written documentation.

Any questions concerning this matter should be addressed to Mary Smith at (614) 298-2000, between 9 a.m. to 5 p.m. Thank you for your cooperation.

Sincerely,



fr Mark J. Epstein, Department Head
Resource Protection and Review

MJE: MKS/ms



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

April 16, 2001

Mr. Mark J. Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Mary K. Smith, History/Architecture ODOT Reviews Manager

Re: PAU/DEF-24-0.00/0.00 PID 18904
Cultural Resources Coordination Phase II

Dear Mr. Epstein:

Enclosed for your review is *Phase II History/Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County, and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. in March, 2001 for Parsons Brinckerhoff, Ohio Inc. In accordance with ODOT Office of Environmental Services (ODOT-OES) policy, unless errors observed during review of consultant documents interfere with the ability to make recommendations regarding cultural resources, the report will be coordinated as is, with a copy of the coordination letter and a comment sheet generated by ODOT-OES bound into the report. This comment sheet will be coordinated separately with the consultant as a means of education regarding ODOT/SHPO report requirements without an effect to the project schedule.

The Ohio Department of Transportation and the Indiana Department of Transportation have undertaken preliminary studies for improvements to United States Route 24 (US 24), a major east-west transportation route between Fort Wayne, Indiana and Toledo, Ohio. US 24 is currently a two-lane road that suffers from congestion and safety related issues as a result of inadequate capacity due to substandard design. Alternative solutions under study include modifying the current US 24 and constructing a four-lane limited access highway on a new alignment. The portion of the US24 corridor that this Phase II report addresses runs from the Indiana-Ohio state line east to the City of Defiance in Defiance County. Separate studies have investigated the other portions of the overall undertaking in Ohio east of the City of Defiance. The results of all these studies will aid in determining a preferred alignment for the improved US 24.

The history/architecture surveys for this project documented 192 pre-1950 properties in Paulding and Defiance counties, Ohio. As a result of coordinating the results of those surveys with your office, seven properties were identified as clearly eligible for listing in the National Register of Historic Places (NRHP) without further investigation and 19 were identified as requiring Phase II investigation to establish their eligibility for listing in the NRHP. One property within the project area (PAU-35-1, the Antwerp Railroad Depot) was already listed in the NRHP.

Properties Investigated

The nineteen properties that underwent Phase II investigation between May 2000 and January 2001 are:

PAU-47-3	PAU-100-2	PAU-101-2	PAU-124-1
PAU-241-2	PAU-244-3	PAU-262-2	PAU-300-4
PAU-338-1	PAU-348-1	PAU-357-1	PAU-358-1
PAU-359-1	PAU-364-2	PAU-375-3 and PAU-379-3	PAU-376-3
PAU-377-3	PAU-378-3	PAU-381-3	

Please note that although the list of properties agreed upon as requiring further work as a result of the Phase I surveys included PAU-39-3 rather than PAU-381-3, the Phase II investigation ultimately proceeded with PAU-381-3 as one of its object rather than PAU-39-3. Early Phase II deed research revealed that the Renollet Farmstead identified as PAU-39-3 (a c.1893 gabled ell farmhouse) is located outside the survey corridor and that the Renollet Farmstead that is located inside the survey corridor is PAU-381-3 (a c. 1905-1925 gabled ell farmhouse). Since PAU-39-3 had been recommended for further work to establish its eligibility under Criterion A for association with the locally prominent Renollet family, it was decided to investigate PAU-381-3 instead.

Also note that Phase II investigation of PAU-375-3 (the Vagabond Village Diner) revealed that PAU-379-3, a c. 1910-1920 dwelling that had previously been thought to be separate from the Vagabond Village Diner, actually shares the Vagabond Village parcel, is contemporary with and directly associated with the Vagabond Village Diner as the residence of the diner's owner, and contributes to the significance of the Vagabond Village Diner. Thus PAU-375-3 and PAU-379-3 are considered a unit for the purposes of the Phase II investigation.

Results of Phase II Investigations

As a result of the Phase II investigations, seven of the 19 properties investigated were found eligible for listing in the NRHP:

PAU-100-2	PAU-101-2	PAU-124-1	PAU-357-1
PAU-359-1	PAU-364-2	PAU-375-3 and PAU-379-3	

Coordination to Mark Epstein
March 29, 2001

PAU/DEF-24-0.00/0.00 PID 18904
Page 3 of 3

and the remaining 12 of the 19 properties were found not eligible for listing in the NRHP:

PAU-47-3	PAU-241-2	PAU-244-3	PAU-262-2
PAU-300-4	PAU-338-1	PAU-348-1	PAU-358-1
PAU-76-3	PAU-377-3	PAU-378-3	PAU-381-3.

Boundaries for the eligible properties will be established later, if necessary, in order to determine the effects of the preferred route.

Request for Concurrence

As a result of the findings of the Phase I and Phase II investigations, we are asking your concurrence with the following:

- 1) that PAU-100-2, PAU-101-2, PAU-124-1, PAU-357-1, PAU-359-1, PAU-364-2, and PAU-375-3 (including PAU-379-3) are eligible for listing in the NRHP and
- 2) that the remaining 12 of the 19 investigated properties are not eligible for listing in the NRHP.

We would appreciate the return of this letter, signed to indicate your concurrence with our cultural resources findings. If no response is received within 30 days, in accordance with the Advisory Council on Historic Preservation's current regulations under Section 800.3(c)(4) it will be presumed that the State Historic Preservation Officer agrees with the determination made in the above history/architecture coordination. If you have any questions or comments they may be directed to Joan Randall, Staff Historian, at 614-752-2171, or via e-mail at mrandall@dot.state.oh.us.

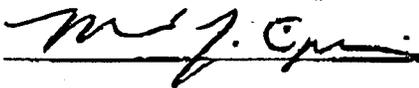
Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:jr

STATE HISTORIC PRESERVATION OFFICE CONCURRENCE:



7/13/01
(Date)

Attachments

c: District 1 DEC Clark Nash; FHWA FOE Mark Vonder Embse;
Major New Project Coordinator Noel Alcalá; PB Ohio Project Manager Jennifer Graf
File, W/att.; Reading File



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

January 9, 2002

Mr. Mark Epstein
Head-Resource Protection and Review-OHPO
567 East Hudson Street
Columbus, Ohio 43211

Attn: Laura Tanley, Archaeological Transportation Reviews Manager

Re: Phase I Cultural Resources Evaluation for the PAU/DEF-24-0.00/0.00 (PID 18904)

Dear Mr. Epstein:

Included with this letter is a copy of the report titled, *Phase I Archaeological Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County Ohio* which was produced by The Mannik & Smith Group Inc., (MSG).

The proposed project is to improve a 40 mile (64 kilometer) segment of US 24 between New Haven, Indiana and Defiance, Ohio. Within the State of Ohio two alternatives were selected for archeological investigations, Alternative C which is 27.25 miles long and follows a northern route in Defiance County, and Alternative D which is 27.05 miles long and follows a more southerly route in Defiance County. Both of these two alternatives consist of a 300 foot (91 meter) wide proposed right-of-way corridor extending from the Ohio/Indiana State line east to S.R. 15 in the City of Defiance. In total, approximately 1,660 acres (672 ha) were subjected to archaeological investigations for this project in the state of Ohio.

Results of the literature review identified that four previously documented archaeological sites that fall within the area of potential effect (APE) for this subject project: 33 De 8, 33 De 67, 33 De 116, and 33 De 147. Two of these previously documented sites, 33 De 8 and 33 De 116 were found to be in close proximity to archaeological sites identified as a result of this Phase I Survey but were likely outside of the APE, while the remaining two sites, 33 De 67 and 33 De 147 could not be relocated during these investigations. In addition to these archaeological sites, the literature review revealed that the Stuart Farm Lutheran Cemetery was recorded adjacent to the APE, while another possible cemetery location was reported by a property owner but this information could not be substantiated by archival research and no evidence of a cemetery was located within the APE during Phase I archaeological investigations.

As a part of these Phase I archaeological investigations, MSG, Inc. developed a predictive model for prehistoric sites modeled after the Lake Plains predictive model developed by staff of ODOT-OES (1997). As a result, MSG, Inc. determined that areas near the Maumee and Tiffin Rivers in the APE have the highest potential for prehistoric sites that are likely to be eligible to the National Register of Historic Places (NRHP). Furthermore, large village sites are most likely to occur on river terraces and bluffs, while small sites have the potential to occur on all landforms.

MSG, Inc., also developed a predictive model for historic-era archaeological resources for this project. Specifically through the use of extant histories, records and archives, MSG, Inc., determined that historic-era occupations within the APE are typically located along former and existing transportation corridors as well as primary and secondary drainages. The identification of specific areas with a high probability of historic-era archaeological materials was also guided by the identification of former building locations indicated on early plat maps and county atlases.

Field methods were designed to test the hypotheses of the predictive model. The entire proposed ROW for both Alternatives C & D was subjected to a pedestrian walk-over and a sampling strategy was employed by dividing both alternatives into high and low probability sections for prehistoric and historic-era archaeological resources. Investigative techniques included surface collection in areas where cultivated fields offered sufficient ground surface visibility, and shovel test excavations was employed in all areas with less than 50% ground surface visibility in all high probability areas and in a sample of low probability areas as well.

As a result of these Phase I archeological investigations, MSG, Inc. identified a total of 84 sites: 66 prehistoric sites, 17 historic-era sites, and one multi-component site. Of the 66 prehistoric sites 16 were found to represent isolated finds, (33 Pa 145., 33 Pa 160-161, 33 Pa 165-166, 33 De 322, 33De 329, 33 D3 334-336, 33De 344, 33 De 347, 33 De 354, and 33 De 360), and the remaining 50 were defined as lithic scatters (33 Pa 143-144, 33 Pa 147-149, 33 Pa 151-152, 33 Pa 154-155, 3 Pa 159, 33 Pa 163-164, 33 Pa 173, 33 De 318-321, 33 De 323-328, 33 De 331-333, 33 De 337-343, 33 De 345-346, 33 De 348-349, 33 De 351-353, 33 De 355-359, 33 De 361-365). Eight of these lithic scatters contained temporally diagnostic artifacts dating to the Early, Middle, and Late Archaic Periods as well as the Late Woodland Period. Concerning the 17 historic-era sites, one historic-era isolate was recorded (33 De 350), two historic-era scatters (33 Pa 158 & 33 Pa 173), nine historic-era structure locations (33 Pa 142, 33 Pa 150, 33 Pa 156-157, 33 Pa 162, 33 Pa 167, 33 Pa 169-170, and 33 Pa 172), three historic-era dumps (33 Pa 168, 33 Pa 171, and 33 De 330), and two canal-related sites were recorded (33 Pa 146 & 33 Pa 153). Nearly all of these historic-era sites date to the late 19th through mid 20th century and are indicative of rural residences and farmsteads.

As a result of these investigations MSG, Inc. recommended nine moderate to large lithic scatters for Phase II evaluative testing in order to clarify their eligibility for the NRHP: 33 De 324, 33 De 327, 33 De 328, 33 De 332, 33 De 337, 33 De 338, 33 De 339, 33 De 346, and 33 De 349.

It is the opinion of ODOT-OES that MSG, Inc. was not able to justify recommendations for further work at 33 De 337, 33 De 339, and 33 De 349 and it is our opinion that these archaeological sites do not meet established criteria for eligibility to the NRHP. Nevertheless, additional investigations at all nine sites recommended for additional work has already been conducted by MSG, Inc. Therefore, this issue of eligibility for 33 De 337, 33 De 339, and 33 De 349 will be considered in the forthcoming Phase II Archeological Report for this subject project.

ODOT-OES has also requested that MSG, Inc. submit to our office a revised Figure 7 depicting the location of 33 De 361 which appears to have been inadvertently left off this figure. Once this revised figure has been received by ODOT-OES, our office will forward it on to OHPO to replace Figure 7 in the Phase I report included with this letter.

In addition, based on the photo on page 66 and metrics provided in Table 3, ODOT-OES does not concur that this projectile point fragment conforms to the Brewerton Corner Notched point form which dates to the Late Archaic period. Nevertheless, we concur with the recommendation of no further work is appropriate for 33 Pa 154 based on the information provided. However, we have made MSG, Inc. aware of this concern and we have instructed them to re-examine this artifact and re-assign it to another diagnostic point type if your office deems this necessary, or if this point can not be confidently be assigned to a specific point type.

Another issue concerns the discussion of 33 De 324 on the last paragraph on page 84 which has missing/fragmented text.

ODOT-OES has made MSG, Inc. aware of this concern and has requested that they provide a corrected form of this page.

Finally, ODOT-OES has requested that MSG, Inc., revise Figure 16 by putting the project right-of-way boundary on this figure so that the relationship between this project and the surviving grave stones at the Stuart Family Lutheran Cemetery can be seen. We have also requested clarification on what is a "portable pet burial?". While it is clear that the Stuart Cemetery lacks site integrity and does not meet any of the specific criteria for eligibility to the NRHP for cemeteries, ODOT-OES needs this information to be clarified so that we can adequately consider the possibility of impacting this cemetery within the proposed right-of-way during project construction.

As a result of this cultural resources investigation, ODOT-OES has made the following determinations:

- 1) Six of the moderate to large lithic scatters identified by MSG, Inc. during Phase I archaeological investigations merit Phase II evaluative testing in order to clarify their eligibility for the NRHP. These sites include: 33 De 324, 33 De 327, 33 De 328, 33 De 332, 33 De 338, and 33 De 346.
- 2) Contrary to MSG, Inc.'s recommendations, 33 De 337, 33 De 339, and 33 De 349 do not merit additional work, nor do they meet established criteria for eligibility to the NRHP. Nevertheless, since Phase II investigations at these three sites has already been conducted by MSG, Inc. this issue of eligibility for 33 De 337, 33 De 339, and 33 De 349 will be more fully considered in the forthcoming Phase II Archeological Report for this subject project.

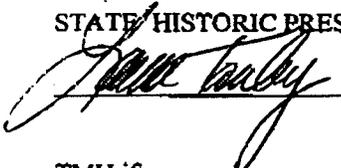
In sum, it is the opinion of ODOT-OES that further cultural resources investigations for this subject project should be restricted to the six prehistoric archaeological sites listed above unless the scope of this project is changed. We would appreciate the return of this letter, signed to indicate that you do not object to our cultural resources findings. If no objection is received within 30 days, in accordance with the Advisory Council On Historic Preservation's current regulations under 36 CFR Part 800.4(d)(1), FHWA's and ODOT's responsibilities under Section 106 are fulfilled.

If you have any questions or comments, please direct them to John F. Schweikart, Staff Archaeologist, at (614) 466-7087, via e-mail at john.schweikart@dot.state.oh.us.

Respectfully,


Timothy M. Hill
Administrator
Office of Environmental Services

STATE HISTORIC PRESERVATION OFFICE:



(Date) 01/25/02

TMH:jfs

Attachment

c:District 1 Environmental Coordinator, Susan Gasbarro, Project File, Reading File



OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

June 24, 2002

Mr. Mark Epstein
Head-Resource Protection and Review-OHPO
567 East Hudson Street
Columbus, Ohio 43211

RECEIVED
JUL 01 2002
OFFICE OF
ENVIRONMENTAL SERVICES

Attn: Laura Tanley, Archaeological Transportation Reviews Manager

Re: Coordination for the Phase II Archaeological Resources Evaluation for the PAU/DEF-24-0.00/0.00
(PID 18904) project

Dear Mr. Epstein:

Included with this letter is a copy of the report titled, *Phase II Archaeological Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County, Ohio* which was produced by The Mannik & Smith Group Inc., (MSG).

The proposed project is to improve a 40 mile (64 kilometer) segment of US 24 between New Haven, Indiana and Defiance, Ohio. Within the State of Ohio two alternatives were selected for archeological investigations, Alternative C which is 27.25 miles long and follows a northern route in Defiance County, and Alternative D which is 27.05 miles long and follows a more southerly route in Defiance County. Both of these two alternatives consist of a 300 foot (91 meter) wide proposed right-of-way corridor extending from the Ohio/Indiana State line east to S.R. 15 in the City of Defiance. Approximately 1,660 acres (672 ha) were subjected to Phase I archaeological investigations, the results of which were coordinated with your office on January 25, 2002.

As a result of the Phase I archaeological survey a total of eighty-four archaeological sites were identified in Paulding and Defiance Counties, Ohio. Nine of these archaeological sites were recommended for Phase II evaluative testing (33 De 324, 33 De 327, 33 De 328, 33 De 332, 33 De 337, 33 De 338, 33 De 339, 33 De 346, and 33 De 349). Phase II archaeological investigations were conducted by staff of MSG, Inc. during the fall and winter of 2001-2002. In order to guide these Phase II investigations towards evaluation of each of these nine archaeological sites under the National Register of Historic Places (NRHP) criteria, a series of research questions were developed. For all nine of these sites questions concerning site chronology, season(s) of occupation/use, site size and spatial organization, the identification of activity areas, relationship(s) to others in the area, and if there is any indication of cultural change over time. MSG, Inc. identified that the following would be needed to address these areas of interest, 1) Features containing chronometrically datable materials and seasonally diagnostic floral and faunal remains, 2) Clusters of features and/or artifacts indicative of discrete activity areas within the site boundaries, and 4) Artifact assemblages and features indicative of site function. For each of these nine archaeological sites, MSG, Inc. evaluated each site as to its ability to A) facilitate interpretation of the assemblages in a meaningful way and B) Allow for comparison of the sites presented here and the other known archaeological sites in the area. Site specific hypotheses were developed for each of these nine sites and are presented in Section 4.0 of the attached Phase II archaeological report.

Field methods employed during these Phase II archaeological investigations included site re-location utilizing GPS data generated during the Phase I archaeological survey, controlled surface collections of 16.4-foot (5 m) blocks in agricultural fields with suitable ground-surface visibility. In areas containing sites recommended for Phase II investigations that possessed low ground-surface visibility, 1.6 ft by 1.6 ft (50 x 50 cm) square shovel test units were excavated on a 16.4-foot (5 m) grid. As a result artifact density and distributions were calculated and mapped and was used to direct the placement of additional subsurface investigations.

Agricultural fields and other areas with insufficient ground surface visibility, were subjected to the excavation of shovel test units in order to refine the information concerning plow zone depths across each site as well as determine vertical artifact density. In larger areas mechanically excavated test trenches were placed in locations thought to have the best potential for sub-surface archaeological features using a 5.5 foot (1.65 m) ditching bucket on a track hoe. In smaller areas and/or in areas where there was an indication that the area may have not been plowed, all expanded excavation units were hand-excavated and consisted of different sized units in order to accommodate the specific conditions encountered, and to maximize the potential for encountering subsurface features or deposits.)

Laboratory analyses included lithic debitage, modified flake, lithic tool, fire cracked rock (FCR), ceramic, and archaeobotanical analyses conducted by staff of MSG, Inc.

During Phase II archaeological investigations of sites 33 De 324 and 33 De 346 discrete artifact clusters were identified as being separate from these two sites. As a result, four additional archaeological sites were defined during the surface surveys: 33 De 367, 33 De 368, 33 De 376, and 33 De 377. Site 33 De 368 is an unassigned prehistoric isolated find, while sites 33 De 367 and 33 De 377 are unassigned prehistoric lithic scatters. Finally, Site 33 De 376 is a small Early Archaic lithic scatter as indicated by the presence of a Kessel Side Notched point. ^{lcs}

It was also determined that 33 De 346 lies outside of the proposed right-of-way boundaries for Alternative C, therefore no subsurface testing was conducted, and its eligibility for listing on the NRHP has not been assessed. Nevertheless, as a result of the Phase II archaeological investigations, the remaining eight sites (33 De 324, 33 De 327, 33 De 328, 33 De 332, 33 De 337, 33 De 338, 33 De 339, and 33 De 349) are not considered eligible for listing on the NRHP due to a lack of research potential and in some cases exacerbated by a lack of integrity due to disturbances. Furthermore, all four of the newly identified sites (33 De 367, 33 De 368, 33 De 376, and 33 De 377) do not meet any of the eligibility criteria for the NRHP and no further work is recommended.

As a result of this cultural resources investigation, ODOT-OES has made the following determinations:

- 1) Site 33 De 346 was found to lie outside of the proposed right-of-way boundaries for Alternative C, and is outside of the area of potential effect for the PAU/DEF-24-0.00/0.00 project. Therefore, while the eligibility of this site for listing on the NRHP was not assessed, no further work is recommended unless the scope of the project was changed so that 33 De 346 could be affected by the PAU/DEF-24-0.00/0.00 project
- 2) While Sites 33 De 324, 33 De 327, 33 De 328, 33 De 332, 33 De 337, 33 De 338, 33 De 339, and 33 De 349 were subjected to Phase II archaeological assessment, none of these eight sites were found to possess any significant information for them to be considered eligible under Criterion D (information potential) for listing on the NRHP. Therefore no further work is recommended for these eight archaeological sites.
- 3) As a result of Phase II archaeological investigations, four previously undefined archaeological sites were documented (33 De 367, 33 De 368, 33 De 376, and 33 De 377) do not meet any of the eligibility criteria for the NRHP and no further work is recommended.

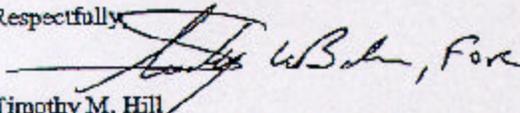
PAU/DEF 24-0.00/0.00
PID 18904
Phase II Archaeology
6/24/02

4) Finally, since no archaeological sites associated with the PAU/DEF-24-0.00/0.00 (PID 18904) project were found to represent archaeological properties listed on, considered eligible to, or that hold a potential to be eligible to the NRHP, no further archaeological investigations are warranted for the portion of this project within the State of Ohio. Unless project plans are changed to include potential impacts to areas not previously investigated as a part of the original Phase I and Phase II surveys no further archaeological investigations are recommended.

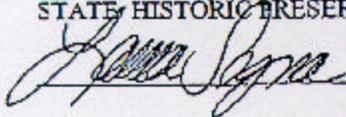
In sum, it is the opinion of ODOT-OES that no further archaeological resources investigations for this subject project are warranted unless the scope of this project is changed. We would appreciate the return of this letter, signed to indicate that you do not object to our cultural resources findings. If no objection is received within 30 days, in accordance with the Advisory Council On Historic Preservation's current regulations under 36 CFR Part 800.4(d)(1), FHWA's and ODOT's responsibilities under Section 106 are fulfilled.

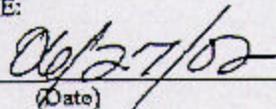
If you have any questions or comments, please direct them to John F. Schweikart, Staff Archaeologist, at (614) 466-7087, via e-mail at john.schweikart@dot.state.oh.us.

Respectfully


Timothy M. Hill
Administrator
Office of Environmental Services

STATE HISTORIC PRESERVATION OFFICE:




(Date)

TMH:jfs

Attachment

c:District 1 Environmental Coordinator, Noel Alcalá, Susan Gasbarro, Project File, Reading File



OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

August 22, 2002

Mr. Mark Epstein
Head-Resource Protection and Review-OHPO
567 East Hudson Street
Columbus, Ohio 43211

Attn: Laura Tanley, Archaeological Transportation Reviews Manager

Re: Addendum Phase I Cultural Resources Evaluation for the PAU/DEF-24-0.00/0.00 (PID 18904)

Dear Mr. Epstein:

Included with this letter is a copy of the report titled, *Addendum Report Phase I Archaeological Reconnaissance of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Defiance Township, Defiance County Ohio* which was produced by The Mannik & Smith Group Inc., (MSG), and is dated July 2002.

The proposed project is to improve a 40 mile (64 kilometer) segment of US 24 between New Haven, Indiana and Defiance, Ohio. Within the State of Ohio two alternatives were originally selected for archeological investigations, Alternative C which is 27.25 miles long and follows a northern route in Defiance County, and Alternative D which is 27.05 miles long and follows a more southerly route in Defiance County. Both of these two alternatives consist of a 300 foot (91 meter) wide proposed right-of-way corridor extending from the Ohio/Indiana State line east to S.R. 15 in the City of Defiance. In total, approximately 1,660 acres (672 ha) were initially subjected to archaeological investigations for this project in the state of Ohio. As a result, a Phase I reconnaissance survey was undertaken by MSG in 1999 and 2001 and nine archaeological sites were identified within the Ohio portion of this project that required evaluative testing (Schneider et al 2001).

As a result, Phase II evaluative testing was conducted over the fall and winter of 2001-2002, and none of these nine archaeological sites were found to be eligible to the National Register of Historic Places (NRHP)[Schneider & Cameron 2002], the results of which was coordinated with your office in a letter dated June 24, 2002, which was signed by the Ohio Historic Preservation Office (OHPO) on June 27, 2002.

In May 2002, a new alternative, Alternative D-1 was designated as the Preferred Alternative. Alternative D-1 follows the same alignment as Alternative D with the exception of a few minor shifts within segments 15 and 18 which is located between Krouse Road and the CSXT Railroad tracks in Defiance Township,

Defiance County, Ohio. Since portions of this new Preferred Alternative had already been subjected to a Phase I cultural resources survey, only those portions that had not been previously surveyed were considered for this addendum Phase I investigation for the PAU/DEF-24-0.00 (PID 18904) project. This consisted of a 300 foot by 500 foot (91 m by 152 m) wide section of proposed right-of-way covering approximately 3.4 acres (1.4 hectares).

Results of the literature review failed to identify any previously documented cultural resources within the un-surveyed portions of Alternative D-1, with one archaeological site, 33 De 324 being identified immediately adjacent to Alternative D-1.

As a part of the original Phase I archaeological investigations for this project, MSG, Inc. developed a predictive model for prehistoric sites. In addition to utilizing this previously developed predictive model, all other aspects of the Research Design and Methods used for this addendum Phase I archaeological reconnaissance adhered to the same approach developed and discussed in the original Phase I archaeological report (see Schneider et al. 2001).

As a result of these addendum Phase I archeological investigations, MSG, Inc. identified a total of five previously unidentified archaeological sites (33 De 378, 33 De 379, 33 De 380, 33 De 381, and 33 De 382). Of these five previously unidentified sites, two are lithic isolates and three were identified as lithic scatters. Only one site (33 De 378) yielded a temporally diagnostic artifact, which was a Kirk Corner Notched point dating to the Early Archaic Period within the revised Preferred Alternative (Alternative D-1). In addition, MSG determined that site 33 De 324 extended beyond its original site boundaries which were confined within the original footprint for Alternative D, and were found to extend into Alternative D-1. Site 33 De 324 was originally recommended for Phase II evaluative testing after the original Phase I archaeological survey (Schneider et al. 2001), but was found to not meet the eligibility criteria for the NRHP as a result of the subsequent Phase II testing (Schneider & Cameron 2002).

As a result of these investigations MSG, Inc. concluded that none of the five newly identified archaeological sites meet the criteria for listing on the NRHP, and the redefinition of the site boundary for 33 De 324 does not change the previous recommendation for no additional work for 33 De 324 (Schneider & Cameron 2002).

As a result of this cultural resources investigation, ODOT-OES has made the following determinations:

- 1) Since no history/architecture resources exist within the revised Preferred Alignment no additional history/architecture investigations are warranted for Alignment D-1.
- 2) As a result of the previous Phase I and Phase II archaeological resources investigations combined with the results of this Phase I archaeological reconnaissance for Alignment D-1, it clear that the PAU/DEF-24-0.00/0.00 (PID 18904) project will no effect on any archaeological resources and no additional archaeological investigations are warranted.
- 3) MSG, Inc. has adequately investigated the previously un-surveyed portions of the Preferred Alternative (Alternative D-1), and no further archaeological resources investigations are warranted unless the project

scope is to be changed.

In sum, it is the opinion of ODOT-OES that no further archaeological resources investigations for this subject project are warranted unless the scope of this project is changed. On behalf of the FHWA-Ohio Division, and in compliance with 36 CFR Part 800.3(c)(4), we request your comments on the enclosed by 30 days after your receipt of this letter. If no objection is received within 30 days, in accordance with the Advisory Council On Historic Preservation's current regulations, FHWA's and ODOT's responsibilities concerning archaeological resources under Section 106 are fulfilled.

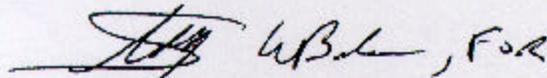
References Cited

Schneider, A.M., J.M. Koralewski, and E. L. Cameron
2001 *Phase I Archaeological Survey of the PAU/DEF-24-0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County, and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio.* MSG, Inc. Report on file at the Ohio Historic Preservation Office, Columbus.

Schneider, A.M. and E. L. Cameron
2002 *Phase II Archaeological Report of the PAU/DEF-24-0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County, and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio.* MSG, Inc. Report on file at the Ohio Historic Preservation Office, Columbus.

If you have any questions or comments, please direct them to John F. Schweikart, Staff Archaeologist, at (614) 466-7087, via e-mail at john.schweikart@dot.state.oh.us.

Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

STATE HISTORIC PRESERVATION OFFICE:

 _____
(Date) 09/02/02

TMH:jfs

Attachment, c:District 1 Environmental Coordinator, Susan Gasbarro, Noel Alcala, Project File, Reading File



June 7, 2000

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Improvements to US 24 from New Haven, Indiana, to Defiance, Ohio

Dear Ms. Graf:

Pursuant to the National Historic Preservation Act (16 U.S.C. § 470 et seq. and 36 C.F.R. Part 800) the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted an analysis of the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana, for the FHWA.

We concur with your assessment that the following properties are within the probable area of potential effects of the project areas and are eligible for inclusion in the National Register of Historic Places.

- 1) Harper House at 12823 US 24
- 2) Meyer/Gallmeyer House at 2811 Berthaud Road
- 3) Smith/Rich/Krug House at 20813 Woodburn Road
- 4) Amos Schlatter Farm at 3536 Becker Road
- 5) Villa Motel at 21701 US 24

With regards to the following properties that you have identified within the area of potential effects, we believe that they do not meet the criteria to be considered eligible for inclusion in the National Register based upon their architectural features and design. However, when additional historical documentation becomes available, then we will be happy to consider whether or not the buildings were associated with events or persons that may have made a significant contribution to broad patterns of our history

- 1) Barrows/Henderson House on US 24
- 2) John Harper Farm at 13086 Bremer Road
- 3) Werling Farm at 13028 US 24
- 4) Peter Schaaf Farm at 3637 Webster Road
- 5) Woebeking Farm at 21316 Maumee Center Road
- 6) Rothgeb Garage at 16430 Gar Creek Road
- 7) Hartman Farm north of Gar Creek Road between Webster and Rousey Roads
- 8) Henry Busche Farm at 4029 Sampson Road
- 9) Brenneke Farm on Maumee Center Road
- 10) House at 21830 US 24

Jennifer Graf
June 7, 2000
Page 2

Based upon the information provided, it appears that by choosing Corridor 4, eight properties will be affected, Corridor 7 will affect 6 properties, Corridor 10 will affect 5, Corridor 13 will affect 3 and US 24 will affect 2. We recommend that you select the alternative which will have the least potential to affect the historic buildings including their setting. Once an alternative has been selected and design work has been initiated, we will need the following information in order to comment upon the potential effects:

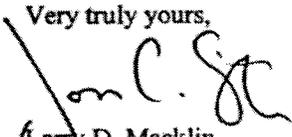
- 1) Indicate how much right-of-way, if any, will be acquired from the historic properties?
- 2) Specify what activities will occur within the existing or proposed rights-of-way (e.g., grading, removal of bushes, trees, or grass, installation of gutters, relocation of mailboxes, reconfiguration of the driveway, construction of drainage ditches)?
- 3) Provide a detailed site plan drawn to scale (with a key) identifying where all construction, demolition, changes in rights-of-way and associated work will occur in relation to the house. Be sure to indicate existing property lines and proposed modifications.
- 4) Provide photographs showing the existing conditions of the areas where work will be undertaken in close proximity to the historic resources

As far as archaeology is concerned, a review of our records indicates the proposed project area has not been the subject of evaluation by a qualified archaeologist. Furthermore, the project area is physiographically suitable to contain archaeological resources. Thus, a complete analysis of the submitted project is not possible, as the information provided is incomplete. Please provide the indicated information to facilitate the identification and analysis of historic properties in the project area:

- 1) Provide an archaeological reconnaissance level survey and method description, performed in accordance with I.C. 14-21-1 & 310 I.A.C. 19. (Please refer to the enclosed list of qualified professionals for your reference.) The survey should focus on the portions of the project area which have not been significantly disturbed by previous construction, are not severely eroded, have slopes of less than 25%, and contain soils which are described as somewhat poorly drained or better.

If you have any further questions, please contact our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:MDF:LAS:NAW:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Michael Westfall, Allen County Historian
Joy Poole, Allen County Fort Wayne Historical Society
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
Don Orban, Historic Preservation Planner, City of Fort Wayne



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Historic Preservation
and Archaeology
402 W. Washington Street, W274
Indianapolis, IN 46204-2748
PH: 317/232-1646
FAX: 317/232-0693
dhpa@dnr.state.in.us

September 5, 2000

Jennifer Graf
Project Manager
Parsons Brinckeroff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Additional information regarding the improvements to US 24 from New Haven, Indiana, to Defiance, Ohio

Dear Ms. Graf:

Pursuant to the National Historic Preservation Act (16 U.S.C. § 470 et seq. and 36 C.F.R. Part 800) the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted an analysis of the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana, for the FHWA.

In our opinion, the Arbuster Log Cabin on US 24 is potentially eligible for inclusion in the National Register of Historic Places.

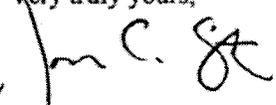
However, based upon the available historical and architectural documentation, we believe that the following properties do not meet the criteria to be considered eligible for inclusion in the National Register.

- 1) Parson-Krieg Farmstead at 20114 US 24
- 2) Jay/Richardson House at 22013 US 24
- 3) Hockemeyer Farmstead at 15029 US 24

In addition, we concur that the other 33 properties identified in your addendum report dated August 2000 do not meet the criteria to be considered eligible for inclusion in the National Register.

If any of the historic properties mentioned above or in our letter dated June 7, 2000, may be affected, please notify us, the public and all consulting parties of the FHWA's finding and seek views on effects in accordance with 36 C.F.R. 800.11(d)(2). If you have questions concerning buildings or structures, please contact our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:MDF:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Michael Westfall, Allen County Historian
Joy Poole, Allen County Fort Wayne Historical Society
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
Don Orban, Historic Preservation Planner, City of Fort Wayne



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Historic Preservation
and Archaeology
402 W. Washington Street W274
Indianapolis, IN 46204-2748
PH 317/232-1646
FAX 317/232-0693
dhpa@dnr.state.in.us

March 9, 2001

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration

Re: Additional information regarding improvements to US 24 from New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

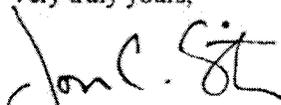
Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated January 26, 2001, and received by the Indiana SHPO on January 29, 2001, for the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana.

We concur that the ten properties identified in your addendum report dated January 2001 do not meet the criteria to be considered eligible for inclusion in the National Register of Historic Places.

In terms of archaeological issues, please refer to our letter dated June 7, 2000, once the final route has been determined.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January, 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Karie Brudis of our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

EDM:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Historic Preservation
and Archaeology
402 W. Washington Street, W274
Indianapolis, IN 46204-2739
PH: 317/232-1646
FAX: 317/232-0693
dhpa@dnr.state.in.us

December 7, 2001

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Additional information and preliminary finding of "no adverse effect" concerning the improvements to US 24 from New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

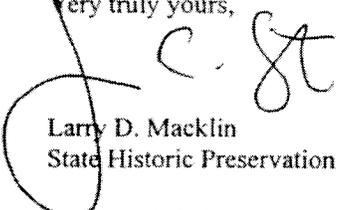
Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated November 8, 2001, and received by the Indiana SHPO on November 13, 2001, for the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana.

We see no reason to object with Parsons Brinckerhoff, Ohio, Inc.'s November 8, 2001, finding that no historic properties within the area of potential effects will be adversely affected by the above indicated project. However, be advised that identification efforts beyond consultation with Indiana SHPO need to be carried out as specified in 36 C.F.R. § 800.4. Therefore, you will need to ensure that you provide a summary of the results of your identification efforts including your preliminary determinations, explain the level of effort taken to identify historic properties and the basis for your efforts, and gather the documentation specified in 36 C.F.R. § 800.11(e) for the FHWA. This information is needed to enable the FHWA to make the necessary determinations and findings as specified in 36 C.F.R. § 800.4 (c) and (d).

Be advised that if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In the event that artifacts or features are discovered during the implementation of the federally assisted project, activity, or program and a plan has not been developed, it is the federal agency's responsibility to make reasonable efforts to avoid, minimize or mitigate adverse effects in accordance with 36 C.F.R. § 800.13.

If you have any further questions, please call Karie Brudis of our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Southern Regional Office, Historic Landmarks Foundation of Indiana
James Juricic, Indiana Department of Transportation



May 8, 2002

Jennifer Graf
Project Manager
Parsons Brinckerhoff Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Revised archaeological reconnaissance report (Rutter, Schneider, Koralewski, and Cameron 04/02), and Phase II proposal (Rutter, Schneider, and Cameron 04/02) for the testing of site 12-AI-898 and 2034, in conjunction with the proposed improvements to U.S. 24

Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated 04/02/02, and received by the Indiana SHPO on 04/08/02, for the above indicated project in Maumee, Milan, and Jefferson Townships, in Allen County, Indiana.

The revised report is acceptable, and we concur with the conclusions and recommendations therein. Based on the additional information provided, we agree that site 12-AI-2027 does not appear likely to meet the minimum criteria for inclusion in the National Register of Historic Places. Accordingly, no additional investigation of the site will be required.

The proposal for the archaeological testing of site 12-AI-898 and 2034 will be acceptable, with the following conditions:

- 1) All excavation must be directly supervised by an archaeologist meeting the supervisory criteria of 312 IAC 21.
- 2) All contextual archaeological deposits that are exposed by the testing, must be excavated by hand. If stratified cultural features are encountered, they must be excavated by stratigraphic layer, to maximize data return.
- 3) If human remains are encountered, they must be treated in accordance with IC 14-21-1 and 312 IAC 22.
- 4) A report detailing the methods and results of the archaeological testing must be submitted to our office, for review and comment, within one year of the completion of fieldwork.

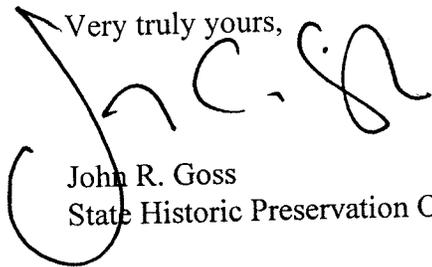
Jennifer Graf
May 8, 2002
Page 2

- 5) Our office should be advised of the testing schedule, so that we may schedule appropriate site visits.

With these conditions, the proposed archaeological test excavation may proceed. This letter, or a copy of this letter, should be carried by the archaeologist in the field, so as to minimize confusion if they are challenged by law enforcement officers.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call our office at (317) 232-1646. Questions about archaeological issues should be directed to Dr. Rick Jones or Jim Mohow. Questions about buildings or structures should be directed to Karie Brudis.

Very truly yours,



John R. Goss
State Historic Preservation Officer

JRG:JAM:jam

cc: John Baxter, Division Administrator, Federal Highway Administration
Jim Juricic, Indiana Department of Transportation
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



July 23, 2002

Jennifer Graf
Project Manager
Parsons Brinkerhoff Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2120

Federal Agency: Federal Highway Administration ("FHWA")

Re: Change of design for the proposed reconstruction of U.S. 24 from New Haven,
Indiana to Defiance, Ohio

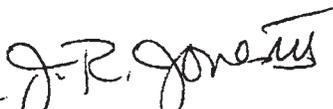
Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated June 19, 2002, and received by the Indiana SHPO on June 20, 2002, for the above indicated project in Allen County, Indiana.

Based upon the information provided, we do not believe that the change in design will diminish the qualities that make the Meyer/Gallmeyer Farm (Site #003-382-40086) and the Smith/Rich/Krug House (Site #003-692-45034) significant.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Karie A. Brudis of our office at (317) 232-1646.

Very truly yours,

for 
John R. Goss
State Historic Preservation Officer

JRG:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Jim Juricic, Indiana Department of Transportation
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology 402 W. Washington Street, West 4th - Indianapolis, IN 46204-2779
Phone 317-232-1646 Fax 317-232-0692 dhpa@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



March 4, 2003

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Addendum to the Phase I History/Architecture Report of the US 24 improvements from New Haven, Indiana to Defiance, Ohio for the US 24/I-469

Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated January 28, 2003, and received by the Indiana SHPO on January 30, 2003, for the above indicated project in Jefferson Township, Allen County, Indiana.

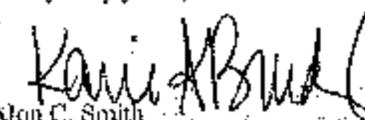
Based upon the available historical and architectural documentation available to our office and provided by you, we concur that the following properties do not meet the criteria to be considered eligible for inclusion in the National Register of Historic Places:

- 1) Emanuel Evangelical Lutheran Cemetery (Site #003-382-55013)
- 2) house at 10919 East US 24 (Site #003-382-55077)
- 3) Melcher Farm at 10949 East US 24 (Site #003-382-55078)
- 4) House at 11613 Edgerton Road (Site #003-382-55079)
- 5) Hoetzer House at 724 South Doyle Road (Site #003-382-55080)
- 6) house at 226 South Doyle Road (Site #003-382-55081)

In addition, we concur that the Niemeyer Farm at 11231 East US 24 (Site #003-382-55001) in your addendum report dated January 2003 meets the criteria to be considered eligible for inclusion in the National Register as an intact example of a nineteenth century farmstead associated with early settlement of Jefferson Township with a Queen Anne farmhouse. Furthermore, we agree that the possible historic boundaries are more or less the same as shown on the aerial photograph.

If any of the historic properties mentioned above may be affected, please notify us, the public and all consulting parties of the FHWA's finding and seek views on effects in accordance with 36 C.F.R. 800.11(d)(2). If you have questions concerning buildings or structures, please contact Karie A. Brudis of our office at (317) 232-1646.

Very truly yours,


Jon C. Smith
Deputy State Historic Preservation Officer

JCS:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
cnc: Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
James E. Juricic, Indiana Department of Transportation



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology 152 W. Washington Street, W271-Indianapolis, IN 46204-2739
Phone 317-232-1646 Fax 317-232-0690 dhp@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



March 4, 2003

Jennifer Graf
Senior Project Manager
Parsons Brinkerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Phase II archaeological report (Schneider, Cameron, Tchorzynski, 1/03) for improvements to a forty-mile segment of US 24 between New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated February 24, 2000 and received by the Indiana SHPO on February 26, 2003, for the above indicated project in Milan and Maumee townships, Allen County, Indiana.

In terms of potential impact on archaeological resources, we concur with the conclusions and recommendations of the Phase II archaeological report. Based on the information recovered by the archaeological test excavations, sites 12-A-898 and 12-A1-2034 do not contain significant information relating to the prehistoric or historic habitation of northeastern Indiana. Accordingly, the sites do not appear to meet the minimum criteria for inclusion in the National Register of Historic Places, and no additional investigation of the sites will be required.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet, www.achp.gov for your reference. If you have questions about our comments, please call Jim Mohow of our office (317) 232-1646.

Very truly yours,

for
Jon C. Smith,
Deputy State Historic Preservation Officer

JCS:JAM:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
etc: Todd Zieger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
James E. Juricic, Indiana Department of Transportation



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, West 1 - Indianapolis, IN 46204-2709
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



May 16, 2003

Jennifer Graf
Senior Project Manager
Parsons Brinkerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration

Re: Information about Gronauer Lock, site 12AL1674, in relation to improvement of a forty-mile segment of US 24 between New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated March 14, 2003, and received by the Indiana SHPO on March 19, 2003, for the above indicated project in Allen County, Indiana.

Our office believes that the unexcavated portion of the Gronauer Lock can yield additional information in regards to the important historic structure. As such, the remaining portion of the lock should be recorded in plan and profile views, by a qualified archaeologist. A plan for the proposed archaeological documentation should be submitted to our office, for review and comment, in advance of implementation.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Dr. Rick Jones or Jim Mohow of our office at (317) 232-1646.

Very truly yours,

for Jon C. Smith
Deputy State Historic Preservation Officer

JCS:JAM:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
cmc: Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
James E. Jurcic, Indiana Department of Transportation

Absentee Shawnee Tribe of Indians of Oklahoma

2025 South Gordon Cooper
Shawnee, Oklahoma 74801-9381

Kenneth Daugherty
Tribal Secretary

US MAIL

May 25, 2001

US Dept. of Transportation
Leonard E. Brown, Div. Administrator
200 North High Street
Columbus, OH 43215

RE: PAU/DEF 249 000 00- PID 15904
Allen County, Indiana

Dear Mr. Brown:

This correspondence is in regard to your letter received by the Tribal Secretary's Office on May 25, 2001, requesting review of the proposed transportation construction project at site listed above. The Absentee Shawnee Tribe of Indians of Oklahoma has no known knowledge or records of existence of historical properties of cultural or sacred significance within the vicinity mentioned.

We thank you for notifying us on this and other transportation projects. Should you have any questions or request any additional information in the future, please do not hesitate to notify the Absentee Shawnee Tribal Secretary's Office at (405) 275-4030 x170. Thank you.

Sincerely,



Mr. Kenneth Daugherty, Tribal Secretary
Office of Tribal Secretary
Absentee Shawnee Tribe

KD/cif

Phone (405) 275-4030 • Fax (405) 273-4534
1-800-256-3341

RECEIVED FAX
JUN 7 91
DIVISION

CHAIRMAN
John "Rocky" Barrett



SECRETARY-TREASURER
Gene Bruno

CITIZEN POTAWATOMI NATION

August 17, 2001

Mr. Mark Vonder Embse
Federal Highway Administration, Ohio Division Office
200 N. High Street
Columbus, OH 43215

Dear Mr. Embse,

In response to your July 5, 2001 letter referenced HTO-OH (proposed US Route 24 corridor project), the Citizen Potawatomi Nation would like to be kept informed of any findings during the archaeological investigations, as well as any discoveries during the construction phase of the project. In the event of any findings or discoveries, please contact me at the address below. For a more immediate response you can call at (405) 878-4672 or email to rgray@potawatomi.org.

Thank you for your time and consideration in this matter.

Sincerely,

A handwritten signature in black ink that reads "Rex V. Gray". The signature is written in a cursive, flowing style.

Rex V. Gray
Environmental Director
Citizen Potawatomi Nation
1601 South Gordon Cooper Drive
Shawnee, OK 74801

FOREST COUNTY POTAWATOMI COMMUNITY

P. O. BOX 340
CRANDON, WI 54520

HISTORICAL/CULTURAL CENTER

Phone (715) 478-7475
Fax (715) 478-7482
e-mail-claricew@fcpotawatomi.com

August 20, 2001

Mr. Mark Vonder Embse
US Department of Transportation
Federal Highway Administration
200 High Street
Columbus, OH 43215

RE: HRO-OH
PAU/DEWF-24-0.00/0.00:PID 18904
US 24 – Fort Wayne, Indiana to Defiance Ohio

Thank you for the notification regarding the aforementioned projects. Since the Potawatomi have lived in so many areas of what is now the State of Wisconsin, we have concern for these types of projects or whenever there is earth disturbance in those areas, therefore we wish to be considered as a consulting party under Section 106.

At this time we are not knowledgeable of any archaeological sites in the specific project area. However we are aware that the general area may have many archaeological sites. We request that you do an archaeological survey and a literature search of the entire project area. When your surveys are completed we would appreciate receiving a copy of them. After review of those surveys it is possible that we might wish to make further comments.

While much of this land may have been previously disturbed, it is always possible that when new land is disturbed that an inadvertent discovery could take place. In the event that this would happen we wish to be notified immediately

And we further request that all borrow used for this project is surveyed as well.

Clarice M. Ritchie

Clarice M. Ritchie
Researcher
WITRC Representative

Copy to: Jeff Crawford, Attorney General



HANNAHVILLE

INDIAN COMMUNITY

N14911 HANNAHVILLE B1 RD.
WILSON, MICHIGAN 49896-9728



Administration: (906) 466-2934
Fax: (906) 466-2933
Accounting Office: (906) 466-9933
Fax: (906) 466-2001

Council Members:
Audrey Gamez, Lisa Little,
Robin Halfaday, John Meshigaud,
Anna Larson, Henry Philemon Jr.,
Ann Saboo, Connee Sagataw

September 13, 2001

U.S. Department of Transportation
Leonard E. Brown, Division Administrator
200 N. High Street
Columbus, Ohio 43215

RE: Project Number: Route 24 relocation project
Ft. Wayne, Indiana to Defiance, Ohio

RECEIVED FHPA
SEP 24 01
OHIO DIVISION

Dear Mr. Brown:

On behalf of the Hannahville Indian Community I would like to thank the U.S. Department of Transportation for your inquiry as to whether your Highway project may come into conflict with the National Environmental Policy Act (NEPA), Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et seq., and the applicable regulations at 47 CFR § 1.1307. The burial grounds and artifacts of our ancestors are very dear to our community and we take all construction projects that may affect our ancestors and tribal history very seriously.

After a review of the specifications of your project, it is the belief of my staff and myself that your project does not affect an Indian religious site or burial ground of the Hannahville Indian Community and would not offend any federal law in place.

If you have any other questions please do not hesitate to call me at (906) 466-2934. Once again I would like to thank you for taking to time to contact my office on this matter.

Sincerely,

Kenneth Meshigaud
Tribal Chairperson
Hannahville Indian Community

KENNETH MESHIGAUD
Tribal Chairperson

ELAINE MESHIGAUD
Vice Chairperson

DONNA M. BODA
Secretary

MARY LOU MESHIGAUD
Treasurer

Leaford Bearskin
Chief



James R. Bland
2nd Chief

P.O. Box 250
Wyandotte, OK 74370
Phone (918) 678-2297/98
Fax (918) 678-2944

803 North 7th Street
Kansas City, KS 66101
(913) 621-2000

August 7, 2001

Leonard E. Brown, Division Administrator
U. S. Department of Transportation
Federal Highway Administration
Ohio Division Office
200 North High Street
Columbus, Ohio 43215

Dear Mr. Brown:

We have received and reviewed the documentation submitted concerning the referenced project listed on your letter of May 16, 2001. The project is as follows:

PAU/DEF-240.00/0.00; PID 18904;
Paulding & Defiance Counties, Ohio;
Allen County, Indiana

Examination of historic resource files in this office finds no properties documented within the project area that meet the criteria for concern to properties of traditional and/or ceremonial value.

Based on the topographic and hydrologic setting of your projects, archeological materials could likely be encountered. *Documentation on any historic archaeological site discovered requires immediate notification and proper archaeological field inspection is necessitated.*

If you should have any questions or comments please do not hesitate to contact our office.
Thank you for your consideration and cooperation.

Sincerely yours,

A handwritten signature in cursive script, reading "Barbara Kyser-Collier".

Barbara Kyser-Collier
Environmental Director



U.S. Department
of Transportation
**Federal Highway
Administration**

POSTNET Fax Note	7671	Date	
To	<i>Gordon Proctor</i>	From	<i>Robert D. Embse</i>
Co/Dept.		Co.	
Phone #		Phone #	
Fax #		Fax #	

RECEIVED
JAN 19 2001

OFFICE OF
ENVIRONMENTAL SERVICES
Ohio Division Office
200 North High Street
Columbus, Ohio 43215

January 18, 2001

In Reply Refer To:
HTO-OH

Gordon Proctor, Director
Ohio Department of Transportation
Columbus, Ohio

Subject: PAU/DEF-24-0.00/0.00; PID 18904
Determination of Applicability of
Section 4(f)

Dear Mr. Proctor:

Your letter dated January 2, 2001 requested determination of applicability of Section 4(f) to two specific resources within the study area of the subject project. We have completed our review of the submission and have the following comments:

1. **New Rochester Park.** Your letter states that this site is owned by the State of Ohio and operated and maintained by the state, officially as a rest area. Therefore, the passive recreational activities occurring there should be considered as "incidental, secondary, occasional, or dispersed" in accordance with our October 5, 1987 Section 4(f) Policy Paper, Question 2(A). As such, we would agree that Section 4(f) is not applicable to the New Rochester Park rest area. However, to verify that our assessment is correct, we request documentation which indicates that the property is presently owned by the state and is no longer a locally-owned park (which appears to be the lingering understanding of the local community).
2. **Maumee River.** Your letter states that this resource is designated as a State Scenic River. Our 4(f) Policy Paper, Question 8, addresses only rivers included in the National Wild and Scenic Rivers System and omits any reference to rivers designated by the states. However, the Maumee River is publicly owned, officially designated as a recreational area, and provides recreation as a major function. Therefore, in accordance with Question 2(A) of our Policy Paper, the Maumee River must be considered a 4(f) resource east from the US-24 river crossing in the City of Defiance.

We thank you for the opportunity to comment at this time. If you have questions, please contact Mark L. Vonder Embse of our staff at 280-6854.

Sincerely yours,

Mark L. Vonder Embse

For: Leonard E. Brown
Division Administrator



U.S. Department
of Transportation
**Federal Highway
Administration**

RECEIVED

MAY 16 2001

OFFICE OF
ENVIRONMENTAL SERVICES

MAY 31 2001

PB OHIO, INC.
Ohio District Office
200 North High Street
Columbus, Ohio 43215

May 15, 2001

In Reply Refer To:
HTO-OH

Gordon Proctor, Director
Ohio Department of Transportation
Columbus, Ohio

Subject: PAU/DEF-24-0.00/0.00; PID 18904
Determination of Applicability of
Section 4(f)

Dear Mr. Proctor:

Your letter dated May 2, 2001 provides additional information to your January 2 submission in which ODOT requested determination of non-applicability of Section 4(f) to New Rochester Park and the Maumee River. In our January 18 response, we requested additional documentation regarding ownership of New Rochester Park, and stated that the recreational segment of the Maumee River must be considered a 4(f) resource. We have completed our review of your second submission and have the following comments:

1. **New Rochester Park.** The attached documents are evidence that the State of Ohio, and not a local jurisdiction, is the owner of the Park. Therefore, our initial assessment that Section 4(f) is not applicable to the Park is correct. Thank you for your efforts in researching this information.
2. **Maumee River.** The attached documents regarding Ohio's Scenic and Recreational River program support our contention that the segment of the Maumee River designated as a recreational area must be considered a 4(f) resource. It has been formally designated a recreational area of "major state and national significance," remains publicly owned, and provides recreation as a major function. In the absence of a formal statement by the Ohio Department of Natural Resources that either "the entire site is not significant" or the proposed site of the river crossing serves a multiple-use purpose whose primary function is not recreational, consideration of Section 4(f) must apply to this segment of the Maumee River.

We thank you for the opportunity to comment at this time. If you have any questions, please contact Mark L. Vender Embse of our staff at 280-6854, or Scott McGuire at 280-6852.

Sincerely yours,

Mark L. Vender Embse

For: Leonard E. Brown
Division Administrator

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Louis Simonis 17740 SR 18 Defiance, OH 43512	Defiance Public Meeting June 1999	14	Location, relocations	Prefers more direct route, it would mean less impacts to dwellings. Stay south of the Maumee River.
Steve Hathaway 26032 Maumee Ctr Rd. Woodburn, IN 46797	Defiance Public Meeting June 1999	None	Access to Woodburn and Antwerp	Woodburn and Antwerp must have easy access for fire/accident response. Willing to sell house if option L is moved south and chosen.
Fred Schulz 425 Holgate Ave. Defiance, OH 43215	Defiance Public Meeting June 1999	3	Location, costs	Prefers the least expensive to construct and most direct route.
Gerald Hurt 1524 Terriaweinda Defiance, OH 43215	Defiance Public Meeting June 1999	9	None specified	None specified.
Anonymous	Defiance Public Meeting June 1999	All except 1	Drainage, exhibits	Show creeks, drainage ditches, and altitudes on Exhibits. Road should be constructed on the high side of the Maumee River.
Mary Fronk 9905 Haller Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	14	None specified	None Specified
Kerry Samples 10050 Kleinhen Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	None	Access, added local congestion, safety	If B is chosen, His road would be cut-off from SR 18 which would increase time for fire and rescue services and would require improvements to handle increased traffic.
Pat Walter 300 Melody Lane Defiance, OH 43512	Defiance Public Meeting June 1999	None	Timing	Project should be completed as quickly as possible.
Darrell Miller 500 Court St. Defiance, OH 43512	Defiance Public Meeting June 1999	None (alignment near railroad)	Location	A route that is least costly is linked to the main east-west railroad.
Orville Smith 9800 Haller St. Defiance, OH 43512	Defiance Public Meeting June 1999	1	Costs	Prefers the least expensive to construct and easiest route.
Mrs. Orville Smith 9800 Haller St. Defiance, OH 43512	Defiance Public Meeting June 1999	1	Relocations, location	Believes Alternate 1 avoids the Maumee River, railroads and lots of relocations.
Elmer & Mona Klinger 11982 Linbaugh Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	14	Truck traffic, costs, relocations	Believes a route along the RR would increase the amount of trucks on US 24. Suggests making trucks pay for the use of the road. Southern routes would have less relocations.
Jerry Hayes 197 2B-1 Island Park Ave. Defiance, OH 43512	Defiance Public Meeting June 1999	7	Interchange locations	Provide interchanges for commercial access at SR 15/18, West High Street and SR 424.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Rick Weippert 17225 Rd. 115 Cecil, OH 45821	Defiance Public Meeting June 1999	14	Relocations	Prefers the more direct route with fewer relocations.
Janice Duerk 1905 State Service Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	1	None specified	None specified.
Robert Zimmerman 26435 Standley Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	1	Traffic	Alignment would keep traffic from small towns.
William Schlatter 14834 Campbell Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	None	Farmland impact	Believes impacts to farmland should be based on crop yields not acreage.
Margaret Hohenberger 1775 Elmwood Dr. Defiance, OH 43512	Defiance Public Meeting June 1999	Yes; any south of US 24	None specified	None specified.
Bernard Hohenberger 1775 Elmwood Dr. Defiance, OH 43512	Defiance Public Meeting June 1999	Yes; any just south of US 24	Costs, economics	Likes alignments just south of existing US 24 because it would be less expensive to build and businesses would not lose current contacts with transportation facilities.
John Gray 18436 US 24 W. Defiance, OH 43512	Defiance Public Meeting June 1999	14	Relocations, ecological	Alternate 14 appears to have fewest relocations and stream crossings.
Anonymous	Defiance Public Meeting June 1999	4	None specified	None specified.
Ronald Clinger 800 Jackson Ave. Defiance, OH 43512	Defiance Public Meeting June 1999	4	Location, economics	Alternate 4 is a direct route and would enhance economic development.
Warren Schlatter 14689 SR 66 Defiance, OH 43512	Defiance Public Meeting June 1999	None	Location	Move Corridor D south near Jacobs Road to intersect with US 24. It would provide a Defiance bypass. Existing US 24 would provide local access to Defiance.
Terry & Marlene Cripe 1969 Redwood Dr. Defiance, OH 43512	Defiance Public Meeting June 1999	4	Location	Prefers a route along the railroad to minimize disturbances to communities.
Tom Sanford 15840 Campbell Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	10	Timing	Project should be completed as quickly as possible. Alternate 1 is not good, stay off existing US 24.
John Walk 14173 SR 24 Sherwood, OH 43556	Defiance Public Meeting June 1999	None	Location	New alignment is best.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Bob Mueller 1640 Trillium Ct. Reading, OH 45215	Defiance Public Meeting June 1999	None	Canals, exhibits	Clearly map Wabash and Erie and Wabash-Miami-Erie canals on exhibits.
Robert Simpson 16594 US 127 Cecil, OH 45821	Defiance Public Meeting June 1999	Order of preference: 14, 6, 5, 4, 1	Farmland, location	Locate alignment on railroad or canal right-of-way to minimize impacts to crops.
Lois McCullough 12791 Lockwood Rd. Sherwood, OH 43556	Defiance Public Meeting June 1999	14	Farmland, additional alternates	Alternative 1 would impact family farm, inquired about other options to limit traffic on US 24 (truck fines, and bypass small towns).
Michael Fronk 21563 Flory Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	Any south of the Maumee River	Economics, environmental, alignment	Alternate 1 would impact his property that may have wetlands and old-growth forest. Corridors south of the Maumee would have greater economic benefits for the local communities and be less expensive.
Linda Semple 19598 Powers Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	Yes; any south of the Maumee River	Safety, timing	Project should have been done sooner.
Mylo Gerken 27964 Hagy Defiance, OH 43512	Defiance Public Meeting June 1999	None	Safety	The US 24/Domersville intersection is very dangerous and needs improvement.
Pam Weippert 17225 Rd. 115 Cecil, OH 42851	Defiance Public Meeting June 1999	14	Relocations, truck traffic	Alternate 14 would have less relocations. Trucks should have to pay to use US 24.
William Duerk 1905 State Service Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	1	Safety, timing	Trucks passing are hazardous, specifically at the US 24/West High Street/Switzer Road crossing. Expedite project.
James Hitchcock 650 W. First St. Defiance, OH 43512	Defiance Public Meeting June 1999	None	Timing	Project is overdue. Construction should start in March 2000.
John Michell 241 Riverdale Dr. Defiance, OH 43512	Defiance Public Meeting June 1999	2, 3, 4	Costs	Prefers the least expensive to build and most direct route.
Michael Giebers 14370 Rt 210 Cecil, OH 45821	Defiance Public Meeting June 1999	2	Location	Follow existing or railroad rights-of-way that are already disturbed.
Joseph Clemens 19272 Switzer Rd. Defiance, OH 43512	Defiance Public Meeting June 1999	2	Location	Most direct alignment. Does not see the need for two overpasses on SR 18.
John Jacob 1005 Jefferson Ave. Defiance, OH 43512	Defiance Public Meeting June 1999	2, 3	Location, costs	Alternates 2 and 3 are the most direct routes, and would probably cost less to build.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Carol Jacob 1005 Jefferson Ave. Defiance, OH 43512	Defiance Public Meeting June 1999	2, 3	Location	Prefers the more direct route.
Merl Wortman 16817 US 24 E. Woodburn, IN 46797	Woodburn Public Meeting June 1999	ABEFL	Economics	Owens a truck stop, and prefers a route near his business. All other corridors would greatly impact his business.
James & Ruth Thompson 26529 Foote Rd. Harlan, IN 46743	Woodburn Public Meeting June 1999	2	Exhibits	Add South Scipio United Brethren Church on the corner of Antwerp Road at Scipio Road. Their home on the corner of State Line and Foote Road is 135 years old. They also felt that Alternate 1 would be more expensive to build.
Michael Shuerman 19333 24 E. Woodburn, IN 46797	Woodburn Public Meeting June 1999	ABEFL	Economics, safety, timing	ABEFL or ABEGK would benefit local business. Concern for safety of road users. Project is long overdue.
William Etzler 10735 Lone Eagle Wy. Fort Wayne, IN 46845	Woodburn Public Meeting June 1999	4	Location, timing	Connect Segments I and K near SR 49. Do not pick Alternate 1. Project is long overdue.
Terry Wade 201 E. River Rd. Antwerp, OH 45813	Woodburn Public Meeting June 1999	2 through 10	Economics, congestion, safety	US 24 is critical for economic development of Paulding County. Two new industrial parks depend on US 24.
Vera Miles 29 Miles St. Paulding, OH 40879	Woodburn Public Meeting June 1999	7	Timing	Happy the project is starting.
Richard Hockemeyer 14609 US 24 E. New Haven, IN 46774	Woodburn Public Meeting June 1999	10	Location, congestion	Chosen route should be straight and direct. Traffic has increased tremendously the last few years.
Mark Mayers 4503 Park St. Woodburn, IN 46797	Woodburn Public Meeting June 1999	5	Economics, safety	Too many serious accidents on US 24. Prefers a route south of Woodburn and close to existing route. Hopes the alignment will improve the tax base and economic stability of Woodburn.
Todd Lisker 20505 Edgerton Rd. Woodburn, IN 46797	Woodburn Public Meeting June 1999	3, 6	Economics, farmland	Alternates 3 and 6 are closer to current industry and towns. Also wishes that existing property lines are followed to minimize impacts to farmland.
Jon Hoepfner 5109 Bull Rapids Rd. Woodburn, IN 46797	Woodburn Public Meeting June 1999	Segments L and K	Safety	Segments D and I would increase response time in emergencies. Segments L and K should be in the final alignment of the project.
Mark Stockman 115 N. Williams St. Room B-2 Paulding, OH 45879	Woodburn Public Meeting June 1999	None	Constructibility	Must take into account poor soils (from Paulding Clay series) in the area of Emerald Township. Cited problems the railroads have had in the vicinity because of the soils. Special consideration of subgrade pavement design will be needed.
Jan Hahn 16743 SR 49 Antwerp, OH 45813	Woodburn Public Meeting June 1999	14	Relocations, Maumee River	Alternate 14 runs through a less populated area, and has fewer stream crossings.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Virgil Hirsch 9233 Schaffer Rd. Woodburn, IN 46797	Woodburn Public Meeting June 1999	None	None specified	None specified.
Guy Beerbower 11018 Bull Rapids Rd. Gragill, IN 46741	Woodburn Public Meeting June 1999	ABEFL	Location	Believes route is far superior then the other options.
Louise Miller 311 W. Woodcox Antwerp, OH 45813	Woodburn Public Meeting June 1999	2, 3	Location	Desires road to be as close as possible to Antwerp.
Ken Knoblauch 8021 Delagrange Dr. Woodburn, IN 46797	Woodburn Public Meeting June 1999	4	Location	Believes the new alignment should parallel existing US 24.
Ruth Fry 50728 US 24 E. Woodburn, IN 46797	Woodburn Public Meeting June 1999	Any south of Woodburn	None specified	None specified.
Phillip Davich 23022 Park Lane Woodburn, IN 46797	Woodburn Public Meeting June 1999	6	Economics, safety, exhibits	Prefers route that is similar to existing to minimize impacts to Woodburn businesses. Also is concerned about safety along the existing US 24. The intersection of Webster and US 24 is very dangerous. Clearly mark Woodburn Industrial Park.
James Decker 19317 US 24 E. Woodburn, IN 46797	Woodburn Public Meeting June 1999	2	None specified	Desires to know what is hazardous at US 24 and Maumee Center Road.
Jim Thompson 12916 Scipio Rd. Harlan, IN 46743	Woodburn Public Meeting June 1999	2	Location, exhibit	Prefers the most direct route and least costly to construct. Mark the church on the corner of Scipio and Foote Roads.
Mark Roemke 12125 SR 101 Grabill, IN 46741	Woodburn Public Meeting June 1999	7	Farmland	Suggests using concrete barriers between east-west bound lanes to minimize the amount of land (agricultural) needed for construction.
Clarence Reickhart 4904 Cloverdale Dr. Woodburn, IN 46797	Woodburn Public Meeting June 1999	L, N	Farmland, timing	Segments L and N would result in less impacts to farmland. Project should be completed as quickly as possible.
Rex Coomer 24828 Slusher Rd. Woodburn, IN 46797	Woodburn Public Meeting June 1999	4	Location, economics	Desires the most direct route that does not move US 24 away from small towns and businesses.
James Coomer 9423 Shadow Creek Pl. Ft. Wayne, IN 46835	Woodburn Public Meeting June 1999	L	Farmland, location	Desires to minimize impacts to farmland. Wants to know if the old Wabash railroad be discontinued and used for the road improvement.
Kenneth Hahn 16743 SR 49 Antwerp, OH 45813	Woodburn Public Meeting June 1999	3	Location, streams	Believes Alternate 3 is more direct than the others and will impact less streams.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Kent Wortman 16817 US 24 E. Woodburn, IN 46797	Woodburn Public Meeting June 1999	ABEFL, ABEGJ, ABEGK	Economics	He owns a Foodmart/Truck stop, and these routes would minimize impacts to his business. He wants the road near his property.
Scott Thompson 12325 Scipio Rd. Harlan, IN 46743	Woodburn Public Meeting June 1999	4	Location, costs, economics	Prefers the most direct and least costly to construct route. Also believes economic developments would benefit from Alternate 4.
Randall Bridge 4220 Becker Rd. Woodburn, IN 46797	Woodburn Public Meeting June 1999	2, 3, 4	Location, economics, exhibits	Alternates 2, 3 or 4 would keep US 24 near the Woodburn Industrial Park and other industries. Other alternates tend to isolate businesses and residents. Portray Industrial Park on exhibits.
James Bridge Box 285 (4601 SR 101) Woodburn, IN 46797	Woodburn Public Meeting June 1999	2, 3, 4 (Segments F and L in particular)	Economics, exhibit	Alternates would benefit the Woodburn Industrial Park, which should be marked on exhibits.
Sandra Lorte 719 N. Roussey Rd. New Haven, IN 46774	Woodburn Public Meeting June 1999	Any, but Segment I	Relocation, farmland	This segment would impact their residence, and also have greater impacts to farmland.
Lloyd Wiesehan 3474 Rd. 162 Antwerp, OH 45813	Antwerp Public Meeting June 1999	Yes (none listed)	Location	Described a bypass that was not build around Defiance when US 24 was constructed.
Alice Caple 2354 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	L	Location, traffic	Prefers the most direct route. The project should result in less congestion.
Francis Caple 2354 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	L	Location; safety	Believes this route is the most direct, and is needed to make US 24 safe to drive.
Mary Snider 16231 Rd. 45 Antwerp, OH 45813	Antwerp Public Meeting June 1999	None	Timing, safety	Project should be completed as quickly as possible for the safety of travelers and residents.
Chris Freichter 13511 CR 21 Antwerp, OH 45813	Antwerp Public Meeting June 1999	BEFLMO	Development, timing	With a new school being built, a bypass around Antwerp would be beneficial. Project should be completed as quickly as possible.
Larry Hormann 5910 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	I	Timing	Project should be built as quickly as possible.
Wayne Shuherk 2386 Rd. 144 Antwerp, OH 45813	Antwerp Public Meeting June 1999	D, K	Farmland	Does not want the road to impact his farmland.
Gabriel Oberlin 19061 Defiance-Paulding CLR Hicksville, OH 43526	Antwerp Public Meeting June 1999	14	Economics	The alternate would benefit Paulding County's three largest communities and increase infrastructure.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Mr. & Mrs. Jerry Overmyer 5761 Rd. 144 Antwerp, OH 45813	Antwerp Public Meeting June 1999	1, 10	Congestion, safety	Heavy congestion that makes driving on US 24 unsafe.
Helen Livingston 220 W. River St. (US 24) Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Location, timing	Alternate 4 seems to be the most direct. Project should be completed as quickly as possible.
Diane Phillips 7108 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Location, congestion, timing	Alternate seems the most direct. Congestion is bad and getting worse. The project should be completed as quickly as possible.
Robert Phillips 7108 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Congestion	Congestion is increasing.
John Molitor Sr. 5978 SR 111 Payne, OH 45880	Antwerp Public Meeting June 1999	7	Location	This alternate seems the most direct and will affect less farmland.
Marean Shuherk 2386 Rd. 144 Antwerp, OH 45813	Antwerp Public Meeting June 1999	D, K	Farmland	Those segments would not cross their farm.
Jim Hooker P.O. Box 427 Payne, OH 45880	Antwerp Public Meeting June 1999	One closest to Payne	Development	Placing US 24 near Payne will benefit local businesses and citizens.
Max Zuber 3491 Rd. 192 Antwerp, OH 45813	Antwerp Public Meeting June 1999	One closest to railroad	Farmland	By staying close to the railroad corridor, there would be less impact to farmland.
Jerry & Cherry Klupfenstein Paulding, OH	Antwerp Public Meeting June 1999	None	Location	Alternate 1 is too far north. Alternate 14 seems to be centrally located between Paulding, Antwerp, Payne, and Woodburn.
Floyd Ramsier 15407 Rd. 7 Antwerp, OH 45813	Antwerp Public Meeting June 1999	3	Location, exhibits	Follow existing ROW as much as possible. Located an interchange as close to Antwerp as possible. Canal locks should be depicted on exhibits.
Mark Stockman 14234 Rd. 224 Cecil, OH 45821	Antwerp Public Meeting June 1999	7	Location, farmland	Alternate 7 favors existing development and is relatively close to the Maumee River. Alternate 14 would impact more farmland than any other.
Jim & Joni Arend 117 Maple Dr. Antwerp OH 45813	Antwerp Public Meeting June 1999	7, 6	Location, economics	These routes seem the most direct, and favors existing industry and businesses.
Kirk Hopkins 13998 Rd. 27 Antwerp, OH 45813	Antwerp Public Meeting June 1999	L	None specified	None specified.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Joseph Barker 13390 SR 49 Antwerp, OH 45813	Antwerp Public Meeting June 1999	1	Farmland	Prefers Alternate 1 because it is the farthest from his farm.
Tim Derck 1244 Rd. 192 Antwerp, OH 45813	Antwerp Public Meeting June 1999	All but 1	Farmland	Alternate 1 will have greater impacts on farmland. Segments L, K and I are more direct than others.
David Derck 2532 Rd. 192 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Economics	Alternate 4 would benefit Antwerp and Paulding, the industrial areas, and the new school.
Sue Derck 2532 Rd. 192 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Economics, recreation	Alternate 4 would favor industrial areas of Antwerp. The DNR may develop a heritage corridor along the Maumee that would benefit from keeping US 24 near Antwerp. Alternate 1 would have large impacts on farmland and be harmful to industry. Does not want the community to be without direct access to US 24.
Terry Bowers 7194 US 24 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Location, economics, safety, congestion	Alternate 4 is the most direct route and has the least impact on existing businesses. Believes the current congestion on US 24 makes it unsafe.
Rick King 6601 Rd. 124 Payne, OH 45880	Antwerp Public Meeting June 1999	4, 3, 7, 6	Location, farmland	Prefers most direct routing. Alternate 14 would have the greatest impact on farmland.
Arden King 6635 Rd. 124 Payne, OH 45880	Antwerp Public Meeting June 1999	3, 4	Farmland	Segment I and K would restrict travel to their farms.
Earl Peters P.O. Box 162 Antwerp, OH 45813	Antwerp Public Meeting June 1999	Yes, the one closest to Antwerp	Antwerp bypass	Prefers the southern alternate closest to Antwerp so the bypass could be utilized prior to the completion of the project.
Janice Shaffer P.O. Box 326 Antwerp, OH 45813	Antwerp Public Meeting June 1999	None	Ecological	A Great Blue Heron Rookery is in Forders Woods, north of Forder Bridge.
David Coughlin 8658 SR 49 Payne, OH 45880	Antwerp Public Meeting June 1999	K	Historic resources, location	Believes Segment K is on an area with poor land quality. Believes Alternate 1 would impact artisan wells. Many historic sites are along all of the corridors.
Carol Schaefer 9257 SR 49 Payne, OH 45880	Antwerp Public Meeting June 1999	One closest to existing US 24	Economics	Believes an alignment near the existing US 24 route would benefit local economies.
Dan Fowler 202 E. Canal St. Antwerp, OH 45813	Antwerp Public Meeting June 1999	2, 3	Economics, location, traffic	Build the bypass around Antwerp first, to get truck traffic out of Antwerp.
Karen Niff 6513 Rd. 11 Payne, OH 45880	Antwerp Public Meeting June 1999	1	Farmland, location	Alternate 1 is the most direct, and will not impact good quality farmland to the south of the Maumee River.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Don Oberlin 7438 Rd. 220 Antwerp, OH 45813	Antwerp Public Meeting June 1999	2, 3, 4	Location	Suggest connecting Segment P to Segment I near the cement plant then connect this to Segment L.
Deborah Harrmann 201 S. Harrmann Rd. Antwerp, OH 45813	Antwerp Public Meeting June 1999	7	Location, economics	A cloverleaf in the Antwerp area will help community grow and sustain existing businesses.
Harry Harrmann 201 S. Harrmann Rd. Antwerp, OH 45813	Antwerp Public Meeting June 1999	7	Economics	Believes 7 would benefit Antwerp and Paulding County.
David Bagley 13971 Rd. 27 Antwerp, OH 45813	Antwerp Public Meeting June 1999	4	Location	Believes it is the most direct route and to benefit the future of Antwerp, it should stay south of the Maumee River.
Ray Friend 6305 US 24- P.O. Box 218 Antwerp, OH 45813	Mailed Comment Form June 1999	K-3	Congestion, safety, economics	Alternate 3 helps existing businesses. Prefers a bypass around Antwerp be built as quickly as possible. Truck traffic through town is unsafe and creates congestion.
Danielle Friend P.O. Box 218 Antwerp, OH 45813	Mailed Comment Form June 1999	L	Congestion, trucks	Prefers an alignment close to town with a bypass. Trucks in Antwerp are unsafe and create congestion.
Tom Friend P.O. Box 552 306 W. River (US 24) Antwerp, OH 45813	Mailed Comment Form June 1999	O-M-L	Economics, environment	To help existing businesses, he prefers a route close to town with a bypass. Trucks create congestion and are unsafe. Also, an alignment south of the Maumee River would have less impact on wooded areas and wildlife.
Cyndy Bowers 7194 US 24 Antwerp, OH 45813	Mailed Comment Form June 1999	4	Location, safety, environment	Prefers a route that is most direct, with the least disturbance. Driving on and crossing US 24 is dangerous.
Ron Hockemeyer 15029 US 24 E. New Haven, IN 46774	Mailed Comment Form June 1999	4	Economics, safety, timing, exhibits	Believes Alternate 4 will have the least impact on existing businesses and farms. Heavy truck traffic continues to increase, and makes US 24 dangerous. Project should be completed as quickly as possible. Add St. Paul Lutheran Church on Berthaud Road.
Gregory Heath 614 West Clinton St. Napoleon, OH 43545	Mailed Comment Form June 1999	None	Safety, location	Project is needed for safety. Please review the possibility of an interchange at Bales Rd. near Napoleon.
William Holmes 963 Chateau Dr. Marion, OH 43302	Mailed Comment Form June 1999	D, L	Economics, costs	D and L would have less impact on area industries. Widening and straightening existing US 24 is least expensive and causes less damage to the environment.
Jerry Monnin 188 Fox Run Defiance, OH 43512	Mailed Comment Form June 1999	None	Economic stability	Concerned the intersection of West High Street and US 24 would not have interchange. One is needed because of existing industrial parks.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Raymond Schaper 2172 Woodburn Rd. Woodburn, IN 46797	Mailed Comment Form June 1999	1, 14	Farmland, route	Prefers Alternate 1 because it is most direct, and would not impact prime farmland south of the Maumee River. Except for prime farmland, Alternate 14 is acceptable if you use Harper Road, which would allow the route to follow property lines and impact less homes. Sampson Road must stay open for access. If the Norfolk and Southern railroad is closed, that would make a good alignment and have less impact on farmlands.
Robert Schaper 5630 Sampson Rd. Woodburn, IN 46797	Mailed Comment Form June 1999	1, 14	Farmland, drainage	Alternate 14 is acceptable if you use Harper Road, which would allow the route to follow property lines and impact less homes. Sampson Road must stay open for access. If the Norfolk and Southern railroad is closed, that would make a good alignment and have less impact on farmlands.
Norman Schaefer 2693 Rd. 60 Payne, OH 45880	Mailed Comment Form June 1999	2	Farmland, relocations, drainage, exhibit	Believes Alternate 2 is most direct and would result in less impact to prime farmland and result in less relocations. Show Wildcat Creek on exhibits. Believes the expense of I-80/90 forces trucks to use US 24.
Dana Hullinger 4337 Rd. 162 Antwerp, OH 45813	Mailed Comment Form June 1999	14	Routing	Prefers most direct route. Segment L is too close to Antwerp. Segment D is out of the way. Desires to have trucks out of Antwerp.
Greg Jones 922 Washington Ave. Defiance, OH 43512	Mailed Comment Form June 1999	None	Routing	Desires an interchange at US 24 and West High Street to sustain industrial park.
Marilyn McVay 4361 SR 5 South Whitley, IN 46787	Mailed Comment Form June 1999	Northern or central	Farmland, drainage	The northern or central routes would have less impact on prime farmland. Concerned that the roadway would disrupt drainage and reduce productivity of land.
Reginald Shull 3212 Becker Rd. Woodburn, IN 46797	Mailed Comment Form June 1999	None specified	Farmland, location	Prefers a route utilizing as much existing road corridor as possible. This would also minimize impacts to farmland.
Thomas & Janice Gerig 16800 Irving Rd. New Haven, IN 46774	Mailed Comment Form June 1999	8	Costs, exhibits	Property south of the Maumee River is less expensive. In addition, they would help the communities of Woodburn and Antwerp. On exhibits mark Indian Reservation and Amish communities.
Hazel Reich 5713 SR 111 Payne, OH 45880	Mailed Comment Form June 1999	None specified	Exhibit	Show Smalley's Body Shop on the corner of SR 49 and SR 111.
Frank Roach 1150 S. McCord Rd. Holland, OH 43528	Mailed Comment Form June 1999	14, 13	Economics	Believes Alternate 14 would enhance industrial development.
Caroline Zimmerman Route 2- 7292 Rd. 176 Antwerp, OH 45813	Mailed Letter June 1999	None specified	Relocation	If Segment K is chosen, her property would be impacted. She is unsure of the relocation/reimbursement process.
Paul Grant 7565 Magee St. Paulding, OH 45879	Mailed Letter June 1999	14	Economics	Believes Alternate 14 would result in economic development for Antwerp, Paulding, and Payne.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
William Koester Koester Corporation 945 Cleveland Ave. Defiance, OH 43512-3696	Mailed Letter June 1999	None specified	Location	Believes an interchange at US 24 and West High Street is necessary to continue economic development in the area.
Allen Shininger P.O. Box 448 Sherwood, OH 43556	Mailed Letter June 1999	None specified	Costing	If US 24 is not widened, could the money be used for local roads or used to reduce tolls on I-80/90?
Thomas Kerwin 5011 Tristam Ct. Fort Wayne, IN 46815-5060	Mailed Letter June 1999	None specified	Timing	Project should be completed as quickly as possible.
William McVay 4361 S. SR 5 South Whitley, IN 46787	Mailed Letter June 1999	None specified	None specified	None specified.
William Earle (Halderman Mgmt. Firm) 403 W. 105 N. North Manchester, IN 46962	Mailed Letter June 1999	None specified	Farmland, safety	US 24 needs to be limited access and improved. Is concerned about the loss of prime farmland and affecting existing drainage/ drainage tiles.
Christina Schaefer 1629 Rd. 194 Payne, OH 45880	Mailed Comment Form June 1999	1	Farmland, drainage, exhibit	Land north of the Maumee River is less productive. If a southern alternate is chosen, it is imperative that drainage is not impacted. Access to grain elevators should not be impacted. Show Pan Handle Eastern's Pipeline on exhibits.
Dave Westrick 113 Biedee Defiance, OH 43512	Mailed Comment Form June 1999	None specified	Location, farmland	Prefers a route following railroad rights-of-way as much as possible.
Lisa Matthews 2123 Rd. 106 Payne, OH 45880-9112	Mailed Comment Form June 1999	No-Build, 4 (if any build is chosen)	Farms, safety	Believes it is not necessary to impact farmland to build US 24 on new alignment when existing road could be widened. Believes having more patrol cars would reduce speed and safety issues on US 24.
Sharon Enz 10386 Rd. 21 Antwerp, OH 45813-962	Mailed Comment Form June 1999	3, 1	Farmland, drainage, traffic	Main concern is taking prime farmland out of production. Believes a weigh station on US 24 would reduce the amount of heavy truck traffic.
William Stoller 901 Kay Nora Ave. Paulding, OH 45879	Mailed Letter June 1999	See comments	Location	Routing should be as follows: T, S, R, I to Section 25.36 in Crane Township, proceed west through Sections 35,34,33,32 31 (Crane Township), Follow through Sections 36,35 (Carryall Township), 3,4,8,7,18 (Harrison Township), then pick up Segments K, H, C, A. Interchanges should be provided for Paulding and Antwerp.
Claude Mongean (Lafarge Corporation) P.O. Box 160- 11435 Rd. 176 Paulding, OH 45879	Mailed Letter June 1999	None involving Segment I	Economics	Segment I would have a large detrimental impact to the Lafarge quarry reserves which are vital to the company's operation.
Thomas Heck 3478 Rd. 144 Antwerp, OH 45813	Mailed Comment Form June 1999	D or widen existing route	Location, farmland	Northern segment would have least amount of impact on farmlands, but Amish community should be avoided. Would be satisfied if existing roadway is widened.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Richard Figert 10483 Rd. 21 Antwerp, OH 45813	Mailed Comment Form June 1999	2	Farmland, drainage	Widening the existing route would minimize impacts. New "cross country" alignment would result in fragmenting farmland, and possibly destroying more tiles. Both would be detrimental to farm production.
Steve and Lynette Beardsley 13173 US 24 Cecil, OH 45821	Mailed Comment Form June 1999	None; possibly widen existing US 24	Economics, location	Owens Vagabond Village Restaurant-Convenience Stop. US 24 on new alignment would devastate their business.
Donna Enz-Argon 16 Wildwood Dr. Bedford, MA 01730	Mailed Comment Form June 1999	2	Economics, location, farmland	Prefers to use as much of the current route as possible to reduce the cost and amount of land taking. This would also minimize impact to farmlands.
Dick Pittenger 188 Fox Run Defiance, OH 43512	Mailed Comment Form June 1999	None specified	Economics, residence access	Concerned that closing the intersection of West High Street and US 24 will reduce access to residential areas and businesses.
Mary Doctor 12582 Rd. 1 Antwerp, OH 45813	Mailed Comment Form June 1999	1	Location	Between Defiance and New Haven, US 24 should be north of the Maumee River (as it is between Toledo and Defiance). This would allow access to hospitals, universities, shopping malls, and be closer to I-69.
Barbara Heck 4070 Rd. 124 Payne, OH 45880	Mailed Comment Form June 1999	4	None specified	None specified.
John Young 2143 Rd. 96 Payne, OH 45880	Mailed Comment Form June 1999	1	Farmland	Farmland to the north is less productive. Does not like alternates that impact his, his father's or his grandmother's farms.
Tim Holtsberry 909 Davidson Defiance, OH 45312	Mailed Comment Form June 1999	14	Location, drainages, relocations	Prefers the least expensive route that results in the minimum amount of creek/drainage crossings and relocations.
Margaret Normack Box 293 Antwerp, OH 45813	Mailed Comment Form June 1999	4	Location, timing	Prefers to follow the route, with a bypass around Antwerp. The existing US 24 is unsafe, and the project should be completed as quickly as possible.
Nancy Matthews 2123 Rd. 106 Payne, OH 45880-9112	Mailed Comment Form June 1999	No-Build	Farmland, exhibits	Exhibits were produced from old maps. Believes the need for a new US 24 results from truck traffic, but the costs will be placed on farmers. Also, a new US 24 will result in a longer response time for emergency vehicles to existing locations. Wishes to know if tolls can be reduced on I-69 to encourage its use as a viable route.
George Kurtz 14345 SR 37 New Haven, IN 46774	Mailed Comment Form June 1999	2	Economics	Use the routing of existing US 24 as much as possible to save money.
Esther Coomer 7623 Preakness Ln. Forty Wayne, IN 46815	Mailed Comment Form June 1999	None specified	Location	Segment L will impact more prime farmland than Segments K and I. Wishes to know if right-of-way from the Walbash Railroad could be used to minimize disturbance.
Mark Schwartz 17703 Bremer Rd. New Haven, IN 46774	Mailed Comment Form June 1999	Order of preference: 14, 5, 6, 7	Amish	Prefers alternates that do not impact Amish farms/businesses. If US 24 is limited access, it will make traveling difficult by horse and buggy.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Stephen Breit 3501 Sampson Rd. Woodburn, IN 46797	Mailed Comment Form June 1999	14 (1)	Farmland	Prefers route that does not impact his farm. Feels that 14 is most direct with fewest obstacles. Alternates 5, 6, or 7 would probably wipe out his farming business.
John Breit 2830 N. Sampson Woodburn, IN 46797	Mailed Comment Form June 1999	1, 14	Farmland	Corridors J, K, G and H would cut off his southern buildings from his grain drying facilities. Also middle corridors would hurt the railroad that is used heavily by the Allen County Co-op and Michelin tire plant.
Ron Mumma 13946 Parent Rd. New Haven, IN 46774	Mailed Comment Form June 1999	2, 3, 4	Farmland, economics	Prefers the shortest route with the least impact to farmland. In addition, Alternates 2, 3, or 4 would help Antwerp grow economically.
Ryan Fortner 920 Lombard St. Napoleon, OH 43545	Mailed Comment Form June 1999	None	Location	Believes an interchange with CR-P would help Napoleon.
Adam Hoff 23486 Long Judson Rd. Grand Rapids, OH 43522	Mailed Comment Form June 1999	None	Location	Believes an interchange at US 24 and CR-P would benefit Napoleon and an overpass at Glenwood Avenue would need to be provided.
Rex Moll 8132 CR-E Hamler, OH 43524	Mailed Comment Form June 1999	None	Location	Believes an interchange at CR-P would be beneficial.
Richard Barnes 9356 CR-S Napoleon, OH 43545	Mailed Comment Form June 1999	None	Location	Believes an interchange at US 24 and CR-P would benefit Napoleon and an overpass at Glenwood Avenue would need to be provided.
Michael Dietrich 214 Shelby St. Napoleon, OH 43545	Mailed Comment Form June 1999	None	Location	Prefers to have an interchange at US 24 and CR-P.
Brent Damman 15302 SR 424 Napoleon, OH 43545	Mailed Comment Form June 1999	None	Location	Believes an interchange at US 24 and CR-P would benefit Napoleon and an overpass at Glenwood Avenue would need to be provided.
Mark Spiess 1053 Highland Ave. Napoleon, OH 43545	Mailed Comment Form June 1999	None	Location	Believes an interchange at US 24 and CR-P would benefit Napoleon and an overpass at Glenwood Avenue would need to be provided.
Mr/s. James Schmunk 207 East River St. P.O. Box 76 Antwerp, OH 45813	Mailed Letter June 1999	None specified	Congestion, economics	Increased traffic makes driving difficult. A bypass around Antwerp would keep trucks from town. Economic development is important to the county.
Coleen Lengacher 6104 Hursh Rd. Fort Wayne, IN 46845	Mailed Comment Letter June 1999	No-Build	Farmland	The No-Build is least intrusive and would expedite making driving on US 24 safer.
Everett Heck 4070 Rd. 124 Payne, OH 45880	Mailed Letter June 1999	2	Economics, farmland	Prefers an alternate that is least expensive, quickest to build, and have fewer impacts on farmland.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Darrell Handy 248 Harding St. Defiance, OH 43512	Mailed Letter June 1999	None specified	Location	The intersection of US 24 and West High Street must remain open to allow economic development to occur in the area.
Frieda Gordon 5345 Rd. 230 Antwerp, OH 45813	Mailed Letter June 1999	Any but northern route	Farmland	The northern alternate would fragment her farm and decrease farm productivity.
John Gray 9609 Rd. 11 Payne, OH 45880	Mailed Comment Form June 1999	2	Farmland, access	Suggests putting it over the old canal or widening US 24. Doesn't want to waste farmland. If Alternate 14 is selected, he would lose access to Payne emergency response vehicles.
Jacob Schmucker 22130 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Farmland	Alternates north of the river would take his farm.
Jonas Wittmer 22538 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Inconvenience	Recently settled into a new place.
Ben Wittmer 22306 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	None specified	None specified.
Ada Schwartz 22130 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Amish community	Prefers a route south of the Maumee River so they would not lose contact with the Amish Community.
Rosalie Wittmer 22538 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	None specified	None specified.
Mervin Schwartz 22306 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Farmland	Alternates north of the Maumee River would make farming his land an even greater struggle.
Emma Schmucker 22130 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Impact	The northern alternate would take her property.
Jacob Wittmer 22306 SR 101 Woodburn, IN 46797	Mailed Comment Form June 1999	Any south of the Maumee River	Impact	Does not want his property destroyed by the new US 24.
Ezra and Clara Gerig 24310 Antwerp Rd. Harlan, IN 46743	Mailed Comment Form June 1999	One that goes behind B.F. Goodrich	Farmland, economics	Does not want to lose good farmland, but likes the idea of creating economic opportunities.
Jerry Hayes 197-2B-1 Island Park Ave. Defiance, OH 43512	Mailed Letter June 1999	None specified	Economic stability	Concerned the intersection of West High Street and US 24 would not have interchange. One is needed for access to existing industrial parks and residences.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Defiance County Commissioners	Mailed Letter June 1999	None specified	Interchange at US 24 and West High Street	Requests interchange to support economic stability of area and allow access for residents.
Dean Brown 5675 St. Joe Rd. Fort Wayne, IN 46835	Mailed Comment Form June 1999	2	Routing	Prefers the route that is directly south of, and close to the Maumee River.
Joseph Kuhn 301 South Main St. P.O. Box 529 Payne, OH 45880	Mailed Letter June 1999	Route closest to the southern side of Antwerp and existing US 24	Timing, local publicity	Believes the project is overdue, and disagrees with the opinion of Lisa Matthews and her letter to the editor regarding the project.
Phil Bauer 7065 Rd. 180 Antwerp, OH 45813	Mailed Comment Form June 1999	14	Traffic, routing	Prefers an alternate that would be able to handle truck traffic from the LaForge Cement Plant, and remove traffic from the more populated areas of Woodburn and Antwerp.
Stephen Guyings 13407 Rd. 176 Paulding, OH 45879	Mailed Comment Form June 1999	13	Routing, safety, economics	Prefers a straight route away from the Maumee River to allow the development of a recreational facility in the area. The route would also be close enough to local communities to encourage economic developments. The improvement is also needed for safety.
Mary Unsicker 1815 SR 101 N. Woodburn, IN 46797	Mailed Comment Form June 1999	4, 10	Routing, farmland	Believes these routes are the most direct, with good access to existing towns and businesses. Alternate 14 would impact their farmland.
Theodore Unsicker 1815 SR 101 N. Woodburn, IN 46797	Mailed Comment Form June 1999	4	Routing, farmland	Believes Alternate 4 would be the most direct and allows the greatest access to local industry and towns. Alternate 14 would have greatest impact on his farmland.
Roy and Pat Mabis 10220 SR 49 Payne, OH 45880	Mailed Comment Form June 1999	None	Routing, farmland	Prefers to follow existing US 24 route to minimize impacts to prime farmland.
Barbara Heine 4935 Ball Rapids Rd. Woodburn, IN 46797	Mailed Comment Form June 1999	2	Farmland, exhibits	Prefers a route that minimizes impacts to farmland. A new meeting is needed with up to date maps.
Cynthia Wortman 16817 US 24 E. Woodburn, IN 46797	Mailed Comment Form June 1999	2 through 7	Economics	New US 24 should be close enough to existing businesses so they would not lose contact with existing transportation facilities.
Elizabeth Bickham 21727 Woodburn Rd. #5b Woodburn, IN 46797	Mailed Comment Form June 1999	2	Routing	Prefers the most direct route between Fort Wayne and Toledo. Believes Alternate 2 would allow current industrialized areas to expand. Wishes to see an alternate located directly south of Indiana 37 and Ohio Routes 2 and 18 with a notable turn in the Hicksville area. As it nears Defiance, use Segments D and T to reach the existing bypass.
William & Jeanine Young 2549 Rd. 96 Payne, OH 45880	Mailed Comment Form June 1999	D or a route adjacent to the Maumee River	Farmland, access	If a southern corridor is chosen, it would have greater impact on prime farmlands. In addition, a roadway would cut off farmland forcing slow moving farm machinery to use SR 49. In addition, the lack of access would increase the time of emergency access.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Anita Friend 6305 US 24 Antwerp, OH 45813	Mailed Public Comment Form June 1999	5	Safety, traffic	Bypassing small towns will reduce truck traffic congestion by routing them around more populated areas.
Jan & Byron Rasey 7948 Rd. 1031 Antwerp, OH 45813	Mailed Public Comment Form June 1999	3	Safety, routing	Residential developments 3.5 miles east of Antwerp have direct access to US 24 and inquired if a turn lane in the area could be installed for the safety of residents and travelers on US 24.
Carl Young 2591 Rd. 96 Payne, OH 45880	Mailed Comment Form June 1999	L or one closest to the Maumee River	Safety, farmland, routing	Prefers an alternate close to the Maumee River to minimize impacts to farmland. If Segment I or K is chosen, access to family farms in Sections 19 and 29 (Harrison Twp.) would increase travel time of farm machinery (from 1 mile to 18 miles round trip) and force farm machinery to travel on SR 49. In addition the limited access would result in increasing the time of emergency response vehicles.
Sally Young 2591 Rd. 96 Payne, OH 45880	Mailed Comment Form June 1999	L or one closest to the Maumee River	Farmland, safety, routing	Prefers an alternate close to the Maumee River to minimize impacts to farmland. If Segment I or K is chosen, access to family farms in Sections 19 and 29 (Harrison Twp.) would increase travel time of farm machinery (from 1 mile to 18 miles round trip) and force farm machinery to travel on SR 49. In addition the limited access would result in increasing the time of emergency response vehicles.
Patricia Gray 9609 Rd. 11 Payne, OH 45880	Mailed Comment Form June 1999	2	Routing	Prefers an alternate close to the Maumee River to minimize impacts to farmland. If Segment I or K is chosen, access to family farms in Sections 19 and 29 (Harrison Twp.) would increase travel time of farm machinery (from 1 mile to 18 miles round trip) and force farm machinery to travel on SR 49. In addition the limited access would result in increasing the time of emergency response vehicles.
Iona Wearley 2123 Rd. 106 Payne, OH 45880-9112	Mailed Comment Form June 1999	4, 2	Routing, exhibits	Road names on exhibits were unfamiliar. Prefers to keep US 24 as direct as possible. Inquired about impacts to drainage ditches and emergency vehicle service if access is cut off.
Rose & Kerry Shanebrook 20405 Ward Rd. Woodburn, IN 46797	Mailed Letter June 1999	None specified	Notifications	Their property may be impacted by the proposed project, and would like to receive a copy of routes, newsletters, and other currently available information.
Robert Simpson 16594 US 127 Cecil, OH 45821-9715	Antwerp Public Meeting August 1999	None specified	Location	Minimize impacts to surrounding area by using existing disturbed right-of-way.
Terry Jonathan Lodge 316 N. Michigan St. Toledo, OH 43624	Mailed Letter August 1999	None specified	Open Records Act records request	Requests all preliminary studies, the Draft EIS, and complete mailing list.
William Weippert 17721 Rd. 123 Cecil, OH 45821	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland	Widen existing route and build a bypass south of Antwerp. An alignment south of the railroad corridor would have great impact on numerous family members.
Roberta Roebuck-Vest 17812 SR 18 Defiance, OH 43512	Mailed Letter August 1999	Existing US 24, and against U	Farmland	Corridor U fragments too much farmland; make improvements to existing US 24.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Edward Ludeman 17461 Rd. 228 Cecil, OH 45821	Mailed Letter August 1999	Existing 24 with bypass	Location, farmland	Existing US 24 would disturb fewest people of any alternative presented.
Randy & Michelle Luderman 14716 Rd. 228 Cecil, OH 45821	Mailed Letter August 1999	Existing 24 with bypass	Location, farmland	Existing US 24 would disturb fewest people of any alternative presented.
Emi Gamby 10538 Dowe Rd. Defiance, OH 43512	Mailed Letter August 1999	Against U, X, and Y	Location	Routes U, X and Y will cause relocation of a greater number of people.
Russell Beerbower 1397 Rd. 150 Antwerp, OH 45813	Antwerp Public Meeting (2 comment forms) August 1999	S	Schools, access	Road 111 is division for schools, EMS and other service providers.
James & Brenda Ankney 21937 Switzer Rd. Defiance, OH 43215	Antwerp Public Meeting August 1999	Against U, X, Y	Location, safety	Believes the project is necessary, but wishes to minimize impacts by improving existing route.
Anonymous	Antwerp Public Meeting August 1999	None specified	Public involvement	Sending out information to all box holders at area Post Offices will save complaints.
Denny Kees 22712 Antwerp Rd. Harlan, IN 46743	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland	Improving existing route would decrease impacts on homeowners.
Beverly Stout 629 South Erie St. Box 61 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Cost	Believes the project is necessary, but that it should follow the existing route to save money.
Raymond Schaper 21728 Woodburn Rd. Woodburn, IN 46797	Antwerp Public Meeting August 1999	ABEGJ and L	Location, farmland	Keeping Sampson Road open is essential because it serves as an alternate route to Woodburn and the High School.
Robert & Gloria Craig 14286 Rd. 224 Cecil, OH 45821	Antwerp Public Meeting August 1999	Routes north of railroad tracks	Location, costs	Opposed to the project, but following existing disturbed rights-of-way will minimize impacts on property owners and cost less.
David Bok 19518 US 24 W. Defiance, OH 43512	Antwerp Public Meeting (2 comment sheets) August 1999	Existing US 24	Truck traffic	Weight scales would deter overloaded trucks from utilizing US 24. Following existing disturbed rights-of-way would minimize impacts on property owners and farmers.
Frances Rosselet 17364 Shoemaker Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24 east of SR 424	Location, farmland	Believes a new alignment would cause severe hardship on farmers.
Jim & Christine Boyd 15255 US 24 Sherwood, OH 43556	Mailed Letter August 1999	New alignment	Truck traffic	Stated new alignment should be used for the four-lane US 24.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
LeRoy Hurtig 12563 Limbaugh Rd. Defiance, OH 43512	Mailed Letter August 1999	WRST	Development, access	Believes R, S, and T are less intrusive than U, X, and Y.
Terry McClure 2684 Rd. 151 Grover Hill, OH 45849	Antwerp Public Meeting August 1999	None specified	Access, farmland	Believes design should allow for movement of farm equipment.
Pat & Ed Osborn 21983 Switzer Rd. Defiance, OH 43512	Mailed Letter August 1999	Not specified	Location	Corridors U and X would disrupt quality of life.
David Kretzer 16476 CR 8 Defiance, OH 43512	Antwerp Public Meeting August 1999	R, S, and T	Farmland	Corridors R, S, and T would minimize project costs and impacts to farmland.
Judith Speiser 16135 SR 18 Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Costs, environment	Existing route is most feasible with least impact on the quality of life.
Ronald Swymeler 11933 US 24 E. New Haven, IN 46774	Antwerp Public Meeting August 1999	None specified	Safety, congestion	An interchange at US 24 and I-469 would reduce the area's heavy congestion.
Gregory Bryant 14473 Rd. 224 Cecil, OH 45821	Antwerp Public Meeting August 1999	Corridors north of the railroad	Location	Use of existing disturbed rights-of-way would minimize impacts to homes and businesses.
Gary Justinger 14543 Power Dam Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	None specified	Farmland	Believes a new alignment should follow disturbed rights-of-way to minimize farm fragmentation.
Cornelius & Patricia Hindall 20154 Kiser Rd. Defiance, OH 43512	Antwerp Public Meeting Mailed Letter August 1999	Existing US 24	Farmland, location, and cost	Stated that improvements to existing route are most feasible.
Virginia Weinken 29573 Youngman Rd. Defiance, OH 43512	Mailed Letter August 1999	Existing US 24	Location	Believes staying close to the existing route with a bypass around Antwerp, would result in less impacts to homes and farms.
Thomas Heck 3478 Rd. 144 Antwerp, OH 45813	Mailed Letter August 1999	Existing US 24	Farmland	Alignments off existing US 24 will impact his farm and livelihood.
Ronald Hockemeyer 15029 US 24 E. New Haven, IN 46774	Antwerp Public Meeting August 1999	New alignment	Location	Route should be relocated away from the existing roadway to minimize impacts on existing homes and businesses.
Jim Hoops 195 Old Creek Dr. Napoleon, OH 43545	Antwerp Public Meeting August 1999	None specified	Communication, safety	Believes communication between ODOT and community is good and supports the project in order to minimize accidents on US 24.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Elizabeth Bickham 21727 Woodburn Rd. #5B Woodburn, IN 46797	Antwerp Public Meeting August 1999	ABEFLNO	Traffic	Believes the most direct route should be selected.
Mary Ketzler 17026 Slusher Rd. New Haven, IN 46774	Antwerp Public Meeting August 1999	Existing US 24	Location	Upgrading the existing route would minimize the impacts on the community.
Lisa Matthews 2123 Rd. 106 Payne, OH 45880	Antwerp Public Meeting August 1999	No-Build	Location	Believes a new US 24 is unnecessary, and existing US 24 could be upgraded.
Anonymous	Antwerp Public Meeting August 1999	Existing US 24	Emergency access	Design should allow county routes to remain open to maintain existing emergency service coverage.
Naomi Blosser 19802 Switzer Rd. Defiance, OH 43215	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland	Believes the land originally acquired for highway purposes should be used.
Johanna & Bill Mack 10200 Haller St. Defiance, OH 43512	Antwerp Public Meeting August 1999	T and S	Location, access, land-locking	Believes using the existing route would minimize impacts to Switzer Road residents, and possibly landlock them between US 24 and the Maumee River.
Bernard Gamby 10538 Dowe Rd. Defiance, OH 43215	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland	Believes it is more economical to use land previously acquired to improve US 24.
Frances Minck 11511 US 24 Cecil, OH 45821	Antwerp Public Meeting August 1999	Existing US 24	Cost	Believes project should be constructed as soon as possible because costs of purchasing property will only increase with time.
Paul Weisgerber 21350 Roehrig Rd. Defiance, OH 43215	Antwerp Public meeting August 1999	Existing US 24 and corridors N and O	Location	Widening the existing route would have least impact on the quality of life.
Ashley Imber 191 Horsey Rd. Defiance, OH 43215	Antwerp Public Meeting August 1999	None specified	Location	Existing route should be improved to minimize impacts on local residents.
Anonymous	Antwerp Public Meeting August 1999	None specified	Truck traffic	Project is needed.
Sharon Enz 10386 Rd. 21 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Location	Improve existing US 24 with a bypass around Antwerp to minimize impacts to quality of life.
Raymond Winzeler 2428 N. Roussey Rd. New Haven, IN 46774	Mailed Letter August 1999	Existing US 24	Location	Provided many suggestions for possible routes.
Robert Schaper 5630 Sampson Rd. Woodburn, IN 46797	Antwerp Public Meeting August 1999	US 6	Location, farmland	Believes right-of-way along US 6 is wide enough for four lanes of traffic and that route should be considered for improvement rather than US 24.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Paul Imber 191 Horsey Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	R, S, T	Access	Construct a crossover only at High Street and US 24. Build a service road for access to developments east of the Ralston Ave. interchange. Complete four lane divided highway with bridges at Tiffin and Maumee Rivers, build overpasses at railroads and SR 424 before connecting with old 24.
Wayne Carr 12459 Rd. 11 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Communication	Appreciates the open communication, and provided the location of two capped wells off of Switzer Road.
Doris Rekeweg 6117 SR 101 Woodburn, IN 46797	Antwerp Public Meeting August 1999	Existing US 24	Farmland, locations	Follow the existing route to minimize farm fragmentation and the number of houses impacted.
Denise Hench 6117 SR 101 Woodburn, IN 46797	Antwerp Public Meeting August 1999	None specified	Location of interchange	Interchange at High Street and US 24 will improve Emergency Medical Service access. A parallel access road is acceptable, if feasible.
Ed & Emi Gamby 10538 Dowe Rd. Defiance, OH 43215	Antwerp Public Meeting August 1999	Existing US 24	Notification, location	Corridors U, X, and Y would destroy their quality of life.
Renee & Kirk Richman 1107 N. Berthoud Rd. New Haven, IN 46774	Antwerp Public Meeting August 1999	None specified	Notifications	Concerned that not all property owners were notified.
Anonymous	Antwerp Public Meeting August 1999	None specified	Traffic, development	Believes project is necessary.
Theresa Leonard 1553 State Service Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Cost, access	A "Super Two Highway" with truck lanes would cost less and still allow access to West High Street without an interchange.
John Simon 20408 Kiser Rd. Defiance, OH 43512	Mailed Letter August 1999	Existing US 24 and NOWR	Cost, farmland, and drainage	Follow existing disturbed corridors as much as possible to minimize impacts to residences, businesses, and farmland.
Bob Mueller 1640 Trillium Court Reading, OH 45215	Mailed Letter August 1999	None specified	Canals	Believes canal and canal facilities should not be impacted by project.
Don Detterie 201 Seneca St. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	Widen existing route to four lanes and straighten curves.
Lindsay Harris 20123 Switzer Rd. Defiance, OH 43512	Mailed Letter August 1999	Existing US 24	Relocation	Believes Corridors U, X, and Y would disrupt the quality of life.
Cathy Harris 20123 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	Believes the state owns right-of-way needed for the existing route to be expanded to four lanes and Corridors U, X, and Y would destroy the quality of life in the area.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Joe Clemens 18272 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	Corridors U, X, and Y would impact the last three livestock operations in the area.
Mary Doctor 12582 Rd. 1 Antwerp, OH 45813	Mailed Letter August 1999	South corridor	Time, cost, safety	Believes the southern corridors would have less impact on school bus routes and emergency services.
Floyd Ramsier 15401 Rd. 7 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Access	Believes county roads should remain open for local uses.
Reginald Shull 3212 Becker Rd. Woodburn, IN 46797	Mailed Letter August 1999	Route near Slusher and Becker Roads	Cost, locations	Believes buying out homes is more expensive than buying property.
Rick King 6601 Rd. 124 Payne, OH 45880	Antwerp Public Meeting August 1999	L	Access, safety	A four-lane highway is needed, but design should allow for movement of farm equipment, especially on Routes 144 and 49.
Gabriel Oberlin 02961 Defiance-Paulding CLR Hicksville, OH 43526	Antwerp Public Meeting August 1999	None	Location	Believes project should not impact the cultural diversity of the area.
Tom Otto Darrell Wiseman Nicely Miller 500 Court Street, Suite A Defiance, OH 43512	Mailed Letter August 1999	None specified	Opposed to routes U, X, and Y	Supports an overpass/interchange at West High Street.
Richard Beebe 205 S. Main Street P.O. Box 152 Cecil, OH 45821	Antwerp Public Meeting August 1999	None specified	Location	Believes it would be more cost effective if there was no bypass around the Town of Cecil.
Charles Wells 22140 Roehrig Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Opposes X, Y, and Z	Believes widening existing route would minimize land needed, and impacts on homes and the community.
Caroline Zimmerman 7292 Rd. 176 Antwerp, OH 45813	Mailed Letter August 1999	None specified	Relocation	Believes Corridor K could impact her property, and inquired about relocation procedures.
Mary Fronk 9905 Haller St. Defiance, OH 43512	Mailed Letter August 1999	Existing US 24	Cost, locations	Using existing right-of-way would minimize impacts on homes, historic areas, the Maumee River, and cost less.
Jerry Foust 400 Baubice St. Pioneer, OH 43554	Mailed Letter August 1999	Existing US 24	Notifications	If the new US 24 is on new alignment, he will be impacted.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
James Harris 20123 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	Believes the state owns right-of-way needed for the existing route to be expanded to four lanes and Corridors U, X, and Y would destroy the quality of life in the area.
Jerry Van Cleve 4116 SR 111 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Location	Existing disturbed rights-of way would result in less overall impacts.
Daniel Rhoad 4068 SR 111 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland	Stated that existing disturbed rights-of-way should be utilized to minimize impacts to homes and farmland.
Carol Bartley 19833 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	None specified	Location	Believes there is no justification for either Switzer Road or Roehrig Road corridors. If they are chosen, the project would destroy the area's quality of life.
Roma Wycoff 413 West Canal St. P.O. Box 195	Antwerp Public Meeting August 1999	Existing US 24	Traffic, safety	Believes the project is long overdue, and trucks make traveling on US 24 unsafe.
Terry Poulson 22120 Switzer Rd. Defiance, OH 43512	Mailed Letters August 1999	None specified	Relocation, safety	Believes an interchange at Switzer Road would eliminate access to his property.
Jim Hooker P.O. Box 427 Payne, OH 45880	Antwerp Public Meeting August 1999	Alignment closest to Route 111	Location	Believes the economic boost of an improved US 24 would outweigh any impact. Payne would benefit from an alignment near SR 111.
Thomas Marlin 209 West Woodcox Antwerp, OH 45813	Antwerp Public Meeting August 1999	Against L	Location	Route L would force relocation of family farm.
Bruce & Colleen Longardner 12402 Rd. 11 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Access	Concerned that emergency services would be disrupted by a limited access highway.
James Gillis 1129 Valley Forge Dr. Defiance, OH 43512	Antwerp Public Meeting August 1999	None specified	Interchange locations	Building interchange at Switzer Road is necessary to provide access to the Defiance Hospital complex.
James Haller 22300 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Traffic, cost	Not in favor of an interchange at Switzer Road, but instead, supports a road with added turn lanes. Believes the speed limit should be maintained at 55 mph.
Larry & Royetta Otto 21430 Roehrig Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	Existing route preserves homes, woods, and farmland.
Mary Musselman 15869 Rd. 87 Cecil, OH 45821	Mailed Card August 1999	None specified	Notification	Concerned that not all property owners were notified.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Theodore Unsicker 1815 SR 101 N Woodburn, IN 46797	Antwerp Public Meeting August 1999	Existing US 24	Safety	Prefers a route utilizing as much existing road corridor as possible.
Robert Coholich 1206 East Second St. Defiance, OH 43512	Mailed Letter August 1999	Interchange at Switzer	Interchange location	An interchange at Switzer Road is necessary to provide access to the new Defiance Hospital complex.
Anonymous	Antwerp Public Meeting August 1999	Existing US 24	Location, access	Believes existing route should be utilized in order to minimize impacts to residents and farmland.
Michael Owens 10196 Kleinhen Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location, truck traffic	Believes existing US 24 route should be improved. Provided suggestion for alternatives including truck only lanes and encouraging use of Turnpike.
Nelson Smith 1601 State Service Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	South of Defiance	Economics	Interchange at Switzer Road would disrupt too much farmland. Route south of RR tracks would disrupt industrial property.
P. Hyland	Mailed Card August 1999	Existing US 24	Farmland	Believes impacts to farmlands should be minimized.
Steven Schrenk 11753 Rd. 33 Antwerp, OH 45813	Mailed Letter August 1999	Existing US 24	Location	Provided many suggestions for possible routes.
Daniel Marlin 13381 Rd. 43 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Environment	Believes project should not impact wetlands and manmade ponds that are associated with the Six Mile Reservoir in Section 34 on Road 43.
Ruth Foust 15940 US 127 Cecil, OH 45821	Mailed Letter August 1999	Existing US 24	Location	Believes the existing corridor would be less expensive and minimize impacts to the area.
Victor Relue 20479 Switzer Rd. Defiance, OH 43512	Antwerp Public Meeting August 1999	S and R	Location	Opposed to U, X, and Y because they would take his property and have greater impacts than following the existing route.
Anonymous	Antwerp Public Meeting August 1999	Existing US 24	Safety, traffic	Improvements can be made to the existing roadway.
Mary Williams 401 N. Laura St. Payne, OH 45880	Mailed Letter August 1999	None specified	Traffic, trucks	Believes reducing the fare on the Turnpike would keep trucks from using US 24.
Kenneth Rekeweg 6117 SR 101 Woodburn, IN 46797	Antwerp Public Meeting August 1999	Existing US 24	Farmland	Stated impacts to farmlands should be minimized.
Dennis Hartman 301 S. Roussey Rd. New Haven, IN 46774	Antwerp Public Meeting August 1999	None specified	Safety	Believes a median barrier should be used to minimize the right-of-way needed for the roadway. It would also reduce the possibility of head on collisions.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Iona Wearley 2123 Rd. 106 Payne, OH 45880	Antwerp Public Meeting August 1999	Existing US 24	Safety	Believes existing route of US 24 could be used for improvements.
Nancy Mathews 2123 Rd. 106 Payne, OH 45880	Antwerp Public Meeting August 1999	Existing US 24	Farmland, location	Following the existing right-of-way would save money.
Richard & Janice Schrenk 18431 Slusher Rd. New Haven, IN 46774	Antwerp Public Meeting August 1999	Existing US 24	Location, farmland and businesses	Concerned that a new alignment would have greater impacts on farmland and businesses than following existing routing.
Kevin Stuart 8763 Rd. 176 Paulding, OH 45879	Mailed Letter August 1999	Existing US 24	Farmland, access	A number of improvements can be made to US 24 such as widening and turn lanes at intersections. Believes county roads should remain open to allow for emergency service access.
Rebecca Stuart 10433 Rd. 206 Cecil, OH 45821	Mailed Letter August 1999	Existing US 24	Location, farmland	Utilize disturbed right-of-way to minimize impacts to residences and farmlands.
Jim Harris 22485 Mill St. Defiance, OH 43512	Mailed Letter August 1999	Existing US 24	Economics	US 24 is needed, but Corridors U, X, and Y seem to maximize the environmental impacts while minimizing economic opportunities along existing US 24.
Jerry Hayes 197-2B-1 Island Park Ave. Defiance, OH 43512	Mailed Letter August 1999	R	Economics	Economic development opportunities are maximized by Corridor R.
Jackie Van Cleve 4116 SR 111 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Location, cost	Utilize existing disturbed rights-of-way to minimize impact to homes.
Martin & Betty Bessette 8983 Rd. 180 Antwerp, OH 45813	Antwerp Public Meeting August 1999	Existing US 24	Location, cost	Believes the project's progress could be hastened by use of existing right-of-way.
William Bok 17929 SR 24 W. Defiance, OH 43512	Antwerp Public Meeting August 1999	Existing US 24	Location	In favor of a corridor past the highway patrol post, then crossing CSX tracks. Against Corridor U because it would impact a greater number of property owners.
Bill McVay 4361 South SR 5 South Whitley, IN 46787	Antwerp Public Meeting August 1999	L	Location, farmland	Corridor L would have less impact on homes and farms than other corridors.
Sandra Bowers Box 493 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Safety	Supports improving existing US 24 to increase safety.
Lila Miller 6147 Rd. 180 Antwerp, OH 45813	Antwerp Public Meeting August 1999	None specified	Trucks, safety	Believes the project is taking too long to complete.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Gertie Stuart 10327 Rd. 206 Cecil, OH 45821	Mailed Letter August 1999	None specified	Location	Believes following the existing route would minimize impacts to residents and farmland.
Tim Tobias 20216 Kiser Rd. Defiance, OH 43512	4 Mailed Letters and Comment Form August 1999	Corridor X to tie in with current route before Switzer and Roehrig Roads	Location, access and safety	New home development at Kiser/Krouse Roads should be avoided. County routes should be maintained to allow movement of farm equipment.
John & Marjoie Hanenkratt 10433 Rd. 206 Cecil, OH 45821	Mailed Letter August 1999	Existing US 24	Location	Believes following the existing route would minimize impacts to residents and farmland.
Kyle Hanenkratt 10433 Rd. 206 Cecil, OH 45821	Mailed Letter August 1999	None specified	Location, farmland	A four-lane roadway would be detrimental to the quality of life in the area.
Laurence Mielke 12681 SR 49 Antwerp, OH 45813	Mailed Letter August 1999	None specified	Location	Prefers a new route connecting I-75 to Woodburn.
Joy Bronson 1927 N. Berthaud Rd. New Haven, IN 46774	Woodburn Public Meeting October 1999	Route generally north of proposed corridors	Location, farmland	Believes farmland will be ruined by the proposed project.
Tim & Denise Knott 3221 Becker Rd. Woodburn, IN 46797	Woodburn Public Meeting October 1999	None specified	Notifications	Requested to be added to the mailing list.
Ken Knoblauch 8021 Delagrang Dr. Woodburn, IN 46797	Woodburn Public Meeting October 1999	In Indiana, the northern corridor	Farmland	Believes farmland has intrinsic value.
Karen Grover-Minton 15208 CR 83 Antwerp, OH 45813	Woodburn Public Meeting October 1999	None specified	Mailing list	Requested to be added to the mailing list.
Rebecca Markley 15311 Harder Rd. New Haven, IN 46774	Woodburn Public Meeting October 1999	None specified	Location, safety	Interested in plans around Harper Road, I-469, and US 24.
Philip Davich 23022 Park Ln. Woodburn, IN 46797	Woodburn Public Meeting October 1999	None specified	Access	Wants to know what the plans are for Woodburn Road. Believes access to Woodburn Road should not be reduced or limited.
Kenneth Rekeweq 6117 SR 101 Woodburn, IN 46797	Woodburn Public Meeting October 1999	Existing US 24	Location	Improve existing US 24. Erie Canal could be used as a median for the highway.
Ben Schmucker 12808 Parent Rd. New Haven, IN 46774	Woodburn Public Meeting October 1999	None specified	Design, farmland	Believes over/underpasses are necessary at Bruick Road, Webster Road, and Route 101 to allow movement of slow moving vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Doris Rekeweq 6117 SR 101 Woodburn, IN 46797	Woodburn Public Meeting October 1999	Existing US 24	Location	Improving existing US 24 would save time and minimize impacts to farmlands and homes.
Terry Gentz 3536 Becker Rd. Woodburn, IN 46797	Woodburn Public Meeting October 1999	Option F	Location, farmland	Routing north of Woodburn would allow better access to the Woodburn Industrial Park and minimize impacts to farmland.
Ronald Hockemeyer 15029 US 24 E. New Haven, IN 46774	Woodburn Public Meeting October 1999, 2 letters	Along railroad corridor	Location	Believes improving existing US 24 would be more expensive because of the development around the alignment.
Dennis Huguenard 13417 US 24 E. New Haven, IN 46774	Woodburn Public Meeting October 1999	None specified	Location	Believes the new US 24 should follow the most direct route.
Elizabeth Bickham 21727 Woodburn Rd. #5B Woodburn, IN 46797	Woodburn Public Meeting October 1999	ABEFLNOWRST	Location, farmland	The selected alignment should be the most direct in order to minimize impacts to farmlands.
Christina Schaefer 1629 Rd. 94 Payne, OH 45880	Woodburn Public Meeting October 1999	None specified	Location	States that the alignment should parallel existing local roads instead of cutting diagonally through fields to minimize the amount of farmlands impacted.
Richard & Janice Schrenk 18431 Slusher Rd. New Haven, IN 46774	Woodburn Public Meeting October 1999	US 24	Location	Believes the existing US 24 route could be improved. Suggests using right-of-way from the canal.
Faye Roemke 2620 Bruick Rd. New Haven, IN 46774	Woodburn Public Meeting October 1999	None specified	Location	Disappointed that the Department of Transportation did not notify her of plans for upgrading/improving US 24.
Everett Heck 4070 Rd. 124 Payne, OH 45880	Woodburn Public Meeting October 1999	Alternate 4	Location	Believes improving existing US 24 will save money.
Little Eight, Inc. 4070 Rd. 124 Payne, OH 45880	Woodburn Public Meeting October 1999	Alternate 4	Location	Believes improving existing US 24 will save money.
Barry Steinman 23526 Dawkins Rd. Woodburn, IN 46797	Woodburn Public Meeting October 1999	Existing US 24	Safety	Stated project is necessary to improve safety and would prefer the new US 24 to follow the existing route.
Joel Tye 801 Mildred Ave. Fort Wayne, IN 46808-2177	Woodburn Public Meeting October 1999	None specified	Timing, design	Prefers the Indiana portion of US 24 be built prior to 2003, and would like the new US 24 to be a four-lane divided highway.
Leon & Joyce Russell 17568 US 24 Defiance, OH 46512	Public Meeting February 2000	New alignment	Safety, maintenance	Prefers a new alignment for US 24, but believes maintenance should continue on the existing US 24 route.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Gary & Kathey Johnson 19210 Maumee Center Rd. Woodburn, IN 46797-9598	Public Meeting February 2000	None specified	Safety	Would like to see something done immediately because travel on existing US 24 is unsafe.
Russel Beerbower 1397 Rd. 150 Antwerp, OH 45813	Public Meeting February 2000	Widen existing US 24	Farmland	Stated the project is necessary to improve safety and would prefer the new US 24 to follow the existing transportation rights-of-way to minimize impacts to farmlands and residences.
Kenneth Koeneman 1590 N. Berthaud Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Progress	Would like to see the project move quicker so landowners would know how much they will be impacted. Also stated that speed limit should be enforced.
Max Nusbaum 18920 Woodburn Rd. Woodburn, In 46797	Public Meeting February 2000	None specified	Truck traffic	Believes trucks should be prohibited from US 24, and speed and weight laws should be enforced.
Lydia Bok 19454 Powers Rd. Defiance, OH 43512	Public Meeting February 2000	Widen existing US 24	Farmland	Believes widening existing US 24 route would minimize impacts to farms.
Jim Jacob 15989 SR 18 Sherwood, OH 43556	Public Meeting February 2000	None specified	Mailing list	Requested to be added to mailing list.
Terry Gentz 3536 Becker Rd. Woodburn, IN 46797	Public Meeting February 2000	Corridor L	Traffic, economic development	Believes an alignment in Corridor L would have greater benefit for industries in Woodburn and allow for better access for emergency vehicles.
Charles Marchant 838 Indian Bridge Ln. Defiance, OH 43512	Public Meeting February 2000	Existing US 24	Safety	Stated that the existing US 24 alignment should be widened to improve travel safety.
Randy Germann 645 Buckeye Ln. Napoleon, OH 43545	Public Meeting February 2000	None specified	Design	Stated US 24 should be a four-lane divided highway for safety.
Paul Grant 7565 Magee St. Paulding, Oh 45879	Public Meeting February 2000	None specified	Design, economic development	Believes US 24 should be a four-lane divided highway for travel safety and enhancing economic development opportunities in the county.
Walt Werling 713 N. Berthaud Rd. New Haven, IN 46774	Public Meeting February 2000	Any but Corridors C and H	Farmland, residences	Believes Corridors C and H should be eliminated because of impacts to farmlands and residences.
Phyllis Germann 645 Buckeye Ln. Napoleon, OH 43545	Public Meeting February 2000	None specified	Safety	Believes US 24 should be a four-lane divided highway.
Frederick & Linda Meyer 3215 N. Berthaud Rd. New Haven, IN 46774	Public Meeting February 2000	Any but Corridor E	Community	Stated that an alignment in Corridor E would eliminate access to church and family members on Gar Creek Road.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Patricia Schooley 20702 Old Forge Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	None specified	None.
Floyd Ramsier 15407 Rd. 7 Antwerp, OH 45813	Public Meeting February 2000	Existing US 24	Impacts	Believes impacts would be reduced if the existing route was followed.
Charles Holacker 17840 Rd. 232 Cecil, OH 45821	Public Meeting February 2000	None specified	Mailing list	Requested to be added to mailing list.
Dave Wellman 4301 N. Western Ave. Connersville, IN 47331	Public Meeting February 2000	None specified	None specified	Requested copies of the <i>Modal Analysis</i> and <i>Preliminary Alternatives Summary</i> .
Donald Manley 1574 Palmer Dr. Defiance, OH 43512	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Mark Beach 21412 Roehring Rd. Defiance, OH 43512	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Naomi Blosser 19802 Switzer Rd. Defiance, OH 43512	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Marvin Taylor 18993 Rd. 143 Cecil, OH 45821	Public Meeting February 2000	None specified	Real estate	Believes realtors increase prices of property during long-term projects.
Rev. William Emmick P.O. Box D Antwerp, OH 45813	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Dale Hermann 15514 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Property issues	Inquired about the right-of-way acquisition procedures.
Gloria Gerig 606 Brobst Rd. Woodburn, IN 46797	Public Meeting February 2000	None specified	Truck traffic	Believes speed limits should be enforced.
Lawrence Giangriande 19029 US 24 P.O. Box 133 Woodburn, IN 46797	Public Meeting February 2000	Existing US 24	Location	Believes US 24 should be improved. Also asked if trucks could be forced to use US 30.
Richard Brenneke 6416 Bull Rapids Rd. Woodburn, IN 46797	Public Meeting February 2000	Any south of Woodburn	Location	Believes a route should be selected which would route US 24 south of Woodburn.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Mr. Koeneman 1730 N. Berthaud Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Notification	Property owners who stated they received no notifications.
Karen Linkemann 724 S. Doyle Rd. New Haven, IN 46774	Public Meeting February 2000	Corridors C, H and F	Location	Stated the desire to see a straight route, without cutting off access between Woodburn from Woodlan High School.
Joyce Adkins 15076 Rd. 83 Antwerp, OH 45813	Public Meeting February 2000	None specified	Location	Does not wish to be impacted by the project.
J.R. Arnold 5126 Indiana Rd. Fort Wayne, IN 46807	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Darcy Ringenberg 3916 Bruick Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Construction	Stated that they would be interested in a pond, if fill is needed.
Bill Zimmerman-WPTA TV 3401 Butler Rd. Fort Wayne, IN 46808	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Orville Smith 9800 Haller St. Defiance, OH 43512	Public Meeting February 2000	None specified	Interchange locations	Stated the need for an interchange at US 24 and West High Street.
Doug Goyings 12571 US 127 Paulding, OH 45879	Public Meeting February 2000	New alignment	Safety	Believes a new four-lane highway is the best available solution to problems on US 24.
Robert Philipot 18242 Rd. 133 Cecil, OH 45821	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
David Andrews 20213 US 24 E. Woodburn, OH 46797	Public Meeting February 2000	None specified	Mailing list	Requested to be added to the mailing list.
Don Vogtman 22414 Maumee Center Rd. Woodburn, IN 46797	Public Meeting February 2000	None specified	Location	If Corridor L is chosen, it should be moved north to minimize impacts to residences.
Dan Bremer 2824 Webster Rd. Monroeville, IN 46773	Public Meeting February 2000	ABEFLNRST	Location	Prefers to have a straightened roadway locate north of Woodburn. Also stated an alignment north of Woodburn would have less impact than one south of Woodburn.
Donald Fiedler 16415 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	Existing US 24	Farmland	Desires to minimize impacts by widening existing route.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Kathi Renie 8419 Medicine Bow Run Fort Wayne, IN 46825	Public Meeting February 2000	Existing US 24	Economics, farmlands	Believes widening existing route would minimize impacts and save money.
Mr/s. Lonnie Willimans 14439 Rd. 8 Cecil, OH 45821	Public Meeting February 2000	None specified	Safety	Stated a four-lane highway is needed to improve travel safety in the area.
Philip Rholf 21310 Kiser Rd. Defiance, OH 43512	Public Meeting February 2000	None specified	Project priority, location	Believes US 24 between Toledo to Defiance is more critical than between Defiance to New Haven. Also stated the desire to see existing railroad rights-of-way be used to minimize impacts to farmlands.
Thomas Heck 3478 Rd. 144 Antwerp, OH 45813	Public Meeting February 2000	Existing US 24	Location, farmlands	Believes widening the existing route would cost less and have less overall associated impacts.
Hauke Enterprises 15501 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Farmlands, business	Soil quality in the area is ideal for nursery stock. Impacts could be detrimental to business.
Randall Hauke 15501 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Community	Stated that impacts to residences and people should have equal weight as those of wetlands and historic sites.
Gary Derck 5628 Rd. 220 Antwerp, OH 45813	Public Meeting February 2000	None specified	None	None specified.
Little Eight, Inc. 4070 Rd. 124 Payne, OH 45880	Public Meeting February 2000	Existing US 24	Cost	Believes rebuilding existing US 24 would be less costly.
Everett Heck 4070 Rd. 124 Payne, OH 45880	Public Meeting February 2000	Existing US 24	Farmlands	Stated that improving existing US 24 would have less impact to farmland access and drainage.
Sharon Enz 10386 Rd. 21 Antwerp, OH 45813-9624	Public Meeting February 2000	None specified	Timing	Bypass around Antwerp should be the first step in construction.
Charles Mobley 17206 Rd. 226 Cecil OH 45821	Public Meeting February 2000	None specified	Safety, timing	Project should be completed as quickly as possible because safety conditions will worsen with time.
Vernon Scheumann 23010 Park Lane Woodburn, IN 46797	Public Meeting February 2000	Any north of Woodburn	Truck access	An alignment north of Woodburn would keep trucks accessing city industries out of downtown Woodburn.
Elizabeth Bickham 21727 Woodburn Rd. #5B Woodburn, IN 46797	Public Meeting February 2000	ABEGVJLNOWXST	Location	Prefers to have the most direct route, and inquired about forcing trucks off US 24 and onto US 127 and US 30.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Lee Minick P.O. Box 43 Woodburn, IN 46797	Public Meeting February 2000	None specified	Interchange locations	Stated SR 101 and Woodburn Road should have access to US 24 for movement of emergency vehicles.
John Zielke 10017 Rd. 206 Cecil, OH 45821	Public Meeting February 2000	None specified	Notifications	Property owners who stated they have not received any notifications of meetings.
Jerry Monin 188 Fox Run- P.O. Box 8 Defiance, OH 43512	Public Meeting February 2000	None specified	Interchange locations	Believes an interchange at West High Street and US 24 is necessary for economic development of Defiance.
Loraine Hartmann 17628 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Trucks	Truck traffic on US 24 makes traveling unsafe.
Kevin Werling 13110 US 24 E New Haven, IN 46774	Public Meeting February 2000	None specified	Location	Believes I-469 needs to have an off-ramp onto east US 24.
Ron Kadesch 12421 Rd. 71 Paulding, OH 45879	Public Meeting February 2000	Existing US 24	Location	Existing US 24 should become a "Super Two Highway" with a bypass around Antwerp. Otherwise, alignments should minimize fragmentation to properties.
Ann Whitman 5011 Bull Rapids Rd. Woodburn, IN 46797	Public Meeting February 2000	Corridor K	Community	An alignment in Corridor K would have less impact to Woodburn.
Ray Melcher 13119 Harper Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Farmlands	Concerned about drainage, and having limited access to farmlands.
Wayne Horman 17328 Gar Creek Rd. New Haven, IN 46774	Public Meeting February 2000	Close to existing US 24	Farmlands	Believes constructing near existing US 24 would have less impact on residences and farms.
William Bok 17929 US 24 W. Defiance, OH 43512	Public Meeting February 2000	None specified	Interchange location	Believes an interchange at West High Street and US 24 is necessary.
George Schaaf 3637 N. Webster Rd. New Haven, IN 46774	Public Meeting February 2000	None specified	Farmlands	Stated that the use of farmland should be minimized.
Rebecca Stuart 10433 Rd. 206 Cecil, OH 45821	Public Meeting February 2000	Existing US 24	Costs, safety, farmlands	Believes that improving existing US 24 would have less overall impacts.
Rebecca Stuart 10433 Rd. 206 Cecil, OH 45821	Mailed Letter February 2000	Existing US 24	Farmlands	Improving existing US 24 would have fewer impacts to farmlands and

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
John Stuart 10433 Rd. 206 Cecil, OH 45821	Mailed Letter February 2000	Existing US 24	Farmlands	community. Improving existing US 24 would have less impacts to community and farmlands.
Kyle Hanenkratt 10433 Rd. 206 Cecil, OH 45821	Mailed Letter February 2000	None specified	Location, farmland	A four-lane roadway would be detrimental to the quality of life in the area.
Gertie Stuart 10372 Rd. 206 Cecil, OH 45821	Public Meeting February 2000	Existing US 24	Location	Improving existing US 24 would have less detrimental impacts to area.
Nellie Bauer 10372 RD 206 Cecil, OH 45821	Mailed Letter February 2000	Existing US 24	Location	Believes improving existing US 24 would be best solution for the area.
Bernadine Koch 7077 Rd. 5 Payne, OH 45880	Public Meeting February 2000	Existing US 24	Location, farmlands	Improving existing US 24 would have fewer impacts to farmlands.
John Koch 7077 Rd. 5 Payne, OH 45880	Public Meeting February 2000	Existing US 24	None specified	Believes improving existing US 24 is best for the area.
Ronald Clegg 246 Front St. Woodburn, IN 46797	Public Meeting February 2000	Anything north of Woodburn	Economics	An alignment north of Woodburn is better for existing businesses because of easier access.
Lois Emenhiser 1404 Dundee Dr. New Haven, IN 46774	Public Meeting February 2000	Northern route	Farmland	Believes the northern route would have fewer impacts to farmlands.
Vicki Kadesch 12421 Rd. 71 Paulding, OH 45879	Public Meeting February 2000	Existing US 24	Location	Believes existing US 24 should be improved. However, if a new route is chosen, it should follow railroad corridor to minimize fragmentation.
Ron Kadesch 12421 Rd. 71 Paulding, OH 45879	Public Meeting February 2000	Existing US 24	Location	Believes existing US 24 should be improved. If a new route is chosen, however, it should follow the railroad corridor to minimize fragmentation.
Bob Schaper 5630 Sampson Rd. Woodburn, IN 46797	Mailed Letter February 2000	Proposed route	Location	Identified his idea of the best location for US 24 route.
Sally Skillen 27 Rocklynn Place Pittsburgh, PA 15228	Mailed Letter July 2000	Alternative 7, improve existing US 24	Farmland/community bisection	Believes US 24 needs improvement. Concerned that Segment 8 would destroy farmland and bisect Antwerp without benefiting its tax base.
Everett Heck 4070 Rd. 124 Payne, OH 45880	Mailed Letter July 2000	Z	Farmland	Stated that it would be the least expensive to build. The southern corridor would divide their farm limiting access to their fields.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Iona Wearley 2123 Rd. 106 Payne, OH 45880-9112	Comment Sheet July 2000	Z	Farmland, emergency routing	Believes Segment 7 would alter mail, school and emergency routes and their farm.
Mary Beth Weisenburger Defiance Hospital 1206 E. Second St. Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange locations	The hospital will need an interchange at High Street/Switzer Road.
Mark & Mary Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet July 2000	Y, Z	Farmland, mobility	Segment 2 would cut of his access route to work.
David Nice Harvest Farm Management 6605 East State Blvd, Ste #2 Fort Wayne, IN 46815	Comment Sheet July 2000	Southern route	Farmland	Stated that Segment 8 would bisect productive farmlands.
Linda Shaffer 205 Ketten Ring Dr. Defiance, OH 43512	Comment Sheet July 2000	Z	Farmland	Minimize impacts to farmlands and include an interchange at West High Street and Switzer Road.
William & Jane Weippert 17721 Rd. 123 Cecil, OH 45821	Comment Sheet July 2000	Z	Farmland	Use existing US 24 with a bypass around Antwerp to minimize impacts to farmlands.
Roger Hadley 3712 Sampson Rd. Woodburn, IN 46797	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farmlands. Middle route takes his home.
Gladys Hadley 3712 Sampson Rd. Woodburn, IN 46797	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts. Middle route takes her home.
Elizabeth Rettig 12103 CRL Napoleon, OH 43545	Comment Sheet July 2000	None specified	Interchange location	Utilize segments of US 24 near Defiance and add an interchange at West High Street and Switzer Road.
Little Eight, Inc. 4070 Rd. 124 Payne, OH 45880	Comment Sheet July 2000	Z, A	Farmland	Minimize impacts to farmlands.
Mary Werling 15215 Bremer Rd. New Haven, IN 46774	Comment Sheet July 2000	None specified	Community cohesion	Concerned about impacts to church on Berthaud Road.
Steven Schrenk 11753 Rd. 33 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to his farm operations. Segments 2, 4, and 5 severely impact his access to farm fields.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Richard & Janice Schrenk 18431 Slusher Rd. New Haven, IN 46774	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farms and local access routes. Segments 2, 4, 5, and 6 severely impact their farming operations.
Debra & Eko Pinardi 18431 Slusher Rd. New Haven, IN 46774	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farms and local access routes. Segments 2, 4, 5, and 6 severely impact their farming operations.
Gar Creek Nursery Randall Hauke 15503 Gar Creek Rd. New Haven, IN 46774	Comment Sheet July 2000	Any without Segment 2	Business, community cohesion	Segment 2 would destroy his business and livelihood.
John Breit 2830 Sampson Rd. Woodburn, IN 46797	Comment Sheet July 2000	Z	Farmland	Segments 3, 6, and 7 bisect the Geneva Breit farm where there are penalties by the IRS if taken out of production.
Stephen Briet 3501 Sampson Rd. Woodburn, IN 46797	Comment Sheet July 2000	Z	Farmland	Alternative Z impacts the fewest amount of farmland.
Daniel Nieter 202 West Berry St. 420 Metro Building Fort Wayne, IN 46802	Comment Sheet July 2000	Z	Farmland	Segments 3, 6, and 7 bisect the Geneva Breit farm where there are penalties by the IRS if taken out of production.
Robert Cohouch 45 Mirival Ln. Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange location	Believes an interchange is needed at West High Street and Switzer Road.
Steve Swartzendruber 06351 SR 15 Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange location	Believes an interchange is needed at West High Street and Switzer Road.
Tracy Nagel 328 Arleta Dr. Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange location	Believes an interchange is needed at West High Street and Switzer Road.
Marlyn Overmyer 5761 Rd. 144 Antwerp, OH 45813	Comment Sheet July 2000	Z	Antwerp bypass	Bypass should be completed around Antwerp as the first phase of the project to get trucks out of town as quickly as possible.
Russell & Nellie Beerbower 1397 Rd. 150 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	If a new alignment is chosen, prefers Segments 6, 7 to minimize impacts to farmlands and school routes.
Kevin Stuart 8763 Rd. 176 Paulding, OH 45879	Comment Sheet July 2000	X, Y, K – L and Segment 10	Farmland, safety and mobility issues	CR 206 is important for emergency vehicle routing and farmers.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
John Stuart 10433 Rd. 206 Cecil, OH 45821	Comment Sheet July 2000	X, Y, K – L and Segment 10	Farmland, safety and mobility issues	CR 206 is important for emergency vehicle routing and farmers.
Willhelm Ruder P.O. Box 114 Cecil, OH 45821	Comment Sheet July 2000	X, Y, K – L and Segment 10	Farmland, safety and mobility issues	CR 206 is important for emergency vehicle routing and farmers.
Richard Figert 10483 Rd. 21 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	Believes Alternative Z minimizes impacts to farmlands and businesses and Segment 7 decreases travel time and effort for transporting farm equipment.
Wayne Carr 12459 Rd. 111 Antwerp, OH 45813	Mailed Letter July 2000	Any south of SR 111, Z	Farmland	Stated that a route south of SR 111 minimizes impacts to farmlands.
Michael Nagel 3306 Utah Dr. Ft. Wayne, IN 46815-6640	Mailed Letter July 2000	None specified	Economics	Believes improvements are needed. If nothing is done, the Ohio State sales tax should be reduced.
Penny Hertel 528 W. River Rd. Antwerp, OH 45813	Mailed Letter July 2000	None specified	Safety	Prefers a straighter road on new alignment.
Karl Hockemeyer 14431 Bremer Rd. New Haven, IN 46774	Mailed Letter July 2000	None specified	Farmland	Proposes that the project take US 24 from the intersection with I-469, paralleling Harper Road before crossing the railroad tracks and heading towards Antwerp.
Jerry Monnin 188 Fox Run P.O. Box 8 Defiance, OH 43512	Comment Sheet July 2000	Z, Segments 18 and 20	Interchange location	Believes an interchange is needed at West High Street and Switzer Road.
Chris Smitley 308 Clinton St. Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange location	Believes an interchange is needed at West High Street and Switzer Road.
Rick King 6601 Rd. 124 Payne, OH 45880	Comment Sheet July 2000	None specified	Safety	Stated that farming equipment crossing at at-grade intersections is very dangerous.
David & Nancy Bok 19518 US 24 W. Defiance, OH 43512	Mailed Letter July 2000	Segments 13, 14, 19, 20	Farmland routing	Concerned how a new alignment would affect access routes to their fields.
Charles & Sue Simpson 12147 Rd. 216 Cecil, OH 45821	Comment Sheet July 2000	Z	Farmland, drainage	Alternative Z would minimize impacts to their farm drainage system.
Nancy Mathews 2123 Rd. 106 Payne, OH 45880-9112	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farmlands.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Christine Boyd 15255 US 24 W. Sherwood, OH 43556	Comment Sheet July 2000	R	Truck traffic, quality of life	Would like US 24 to be relocated as far away from existing alignment as possible with local traffic only on existing US 24.
Petition signed by 16 people	Petition July 2000	None specified	Interchange location	Opposes cloverleaf or diamond interchange at West High Street and Switzer Road and US 24. Turning lanes are enough.
Jerry Foust 16006 US 127 Cecil, OH 45821	Mailed Letter July 2000	Existing US 24	Project impacts	Has an understanding that expressway would have 500 foot wide median. Does not want to see air quality and farmland impacted by project.
Beverly Stout P.O. Box 61 Antwerp, OH 45813	Mailed Letter July 2000	C or Z	Economics	Bypass around Antwerp should be completed as the first phase of construction.
Frederick & Linda Meyer 3215 N. Berthaud Rd. New Haven, IN 46774	Comment Sheet July 2000	Segment 2	Location	Segment 1 would place their home between new and old US 24.
Patrick Vogel 1230 Rd. 216 Cecil, OH 45821	Mailed Letter July 2000	Z	Location	Would rather improve existing US 24 route.
Jackie Van Clive 4116 SR 111 Antwerp, OH 45813	Comment Sheet July 2000	Z	Safety, timing	Believes using existing US 24 would affect the least number of people and that the project is taking too long.
Vicki Kadesch 12421 Rd. 71 Paulding, OH 45879	Comment Sheet July 2000	Z	Farmland	Prefers Alternative Z but if not, then Segment 11 because it minimizes impacts to farms and wetlands.
Barbara Fraser 2817 Baywood Trail Ft. Wayne, IN 46845	Comment Sheet July 2000	None specified	Farmland	Segments 3, 6, and 7 bisect the Geneva Breit farm where there are penalties by the IRS if taken out of production.
Terry Gentz 3536 Becker Rd. Woodburn, IN 46797	Comment Sheet July 2000	Existing US 24, Segment 8	Timing, location	Project schedule should be quickened, a bypass around Antwerp would improve safety, and Segment 8 has less impacts than 7.
Mary, Raymond, & Raymond Snyder 11432 Harper Rd. New Haven, IN 46774	Comment Sheet July 2000	Existing US 24	Location	Believes Harper Road should not be cut off, and following the existing route would be the least disruptive option.
Charles & Janice Sisco 615 Henry St. Defiance, OH 43512	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farmlands.
Robert Simpson 16594 US 127 Cecil, OH 45821	Comment Sheet July 2000	Existing US 24	Farmland	If existing US 24 cannot be used, follow as much railroad rights of way as possible.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Paul Scheiderer 17622 Woodburn Rd. Woodburn, IN 46797	Comment Sheet July 2000	Existing US 24	Farmland	Segment 3 would landlock and bisect his farm. Less residential and farmland would be impacted by Segment 1.
Kenneth & Marianne Koeneman 1509 N. Berthaud Rd. New Haven, IN 46774	Comment Sheet July 2000	Existing US 24	Economics	Segment 2 would severely impact the Beverly Nursery.
Raymond Schaper 19723 Slusher Rd. Woodburn, IN 46797	Comment Sheet July 2000	Z	Farmland, safety	Concerned that property will be bisected or land locked, and farm equipment and emergency vehicle movement would be limited.
Dorothy Schaper 19723 Slusher Rd. Woodburn, IN 46797	Comment Sheet July 2000	Existing US 24	Farmland	Existing roadway would minimize impacts to farmlands.
Otto Gerdeman 2012 Shawnee Dr. Defiance, OH 43512	Comment Sheet July 2000	T	Limited access	Believes Alternative T is the most logical and cost effective route, and an interchange is needed at West High Street and Switzer Road.
Gabe Parker P.O. Box 44591 Tacoma, WA 98444-4591	Comment Sheet July 2000	Use existing bypasses and south route	Congestion	Stated that a southern alignment would have less congestion.
Margaret Womack, Mayor P.O. Box 1046 118 N. Main St. Antwerp, OH 45813	Comment Sheet July 2000	A, Segment 8	Antwerp bypass, relocations	Believes too many homes would be impacted with using existing US 24 alignment, and a bypass around Antwerp is needed.
Robert & Linda Vance 7675 US 24 Antwerp, OH 45813	Comment Sheet July 2000	New four-lane along railroad	Location	Stated that more people would use the turnpike if the toll was removed.
Pat Druley 2707 West Main St. Richmond, IN 47374	Comment Sheet July 2000	Z	Farmland	Alternative Z minimizes impacts to farmlands.
Leo Koenn 17981 Rd. 226 Cecil, OH 45821	Comment Sheet July 2000	Southern route (if new route)	Economic development	Allow for southward expansion of Antwerp by building an alignment far south of the existing US 24.
Joyce Yoder SR 49 Antwerp, OH 45813	Comment Sheet July 2000	Z	Cost	Believes it is most cost effective to widen existing US 24.
William Wetli P.O. Box 1104 Antwerp, OH 45813	Comment Sheet July 2000	Existing US 24	Farmland, timing	Use existing US 24 with an Antwerp Bypass because it would cut up less farmland. Construction should begin as quickly as possible.
Cindy & Keith Delagrangre 13524 US 24 E. New Haven, IN 46774	Comment Sheet July 2000	Segment 1	Farming, timing	Believes project should minimize impacts to farmlands.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Ron Kadesch 12421 Rd. 71 Paulding, OH 45879	Comment Sheet July 2000	Z, Segment 10	Farmland, safety	CR 206 is important for emergency vehicle routing and farmers. Minimize impacts to farms by following property lines.
Russell Figert 12063 Rd. 11 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	Alternative Z would cause less impact to farmlands, and be less expensive.
Danny Bremer 2824 Webster Rd. Monroeville, IN 46773	Comment Sheet July 2000	Z	Farmland, location	Using existing US 24 would impact the community the least.
Denise Reeb 5385 Rd. 144 Antwerp, OH 45813	Comment Sheet July 2000	A-H	Location	A four-lane roadway would be detrimental to the quality of life in the area.
Charles & Ann Marchant 838 Indian Bridge Ln. Defiance, OH 43512	Comment Sheet July 2000	Z	Trucks	Roadway should be designed to be safe for all vehicles.
Caroline Zimmerman 7292 CR 176 Antwerp, OH 45813	Comment Sheet July 2000	Segment 7	Historic preservation	Believes Segment 7 would impact the reservoir.
Chris Feichten Antwerp, OH 45813	Comment Sheet July 2000	None specified	Exhibits	Requested the Impact matrix be printed in newsletter.
James & Sheila Dailey 11015 Rd. 206 Cecil, OH 45821	Comment Sheet July 2000	None specified	Mailing list	Requested to be added to the mailing list.
Tim Franklin 403 North Williams Paulding, OH 45879	Comment Sheet July 2000	None specified	Mailing list	Requested to be added to the mailing list.
Lisa Mathews 8268 Bergner Rd. Van Wert, OH 45891-9300	Comment Sheet July 2000	Z, B	Farmland	Respectively, Alternative Z and B minimize impacts to farmlands the most.
John & Darlane Tuto 5862 US 24 Antwerp, OH 45813	Comment Sheet July 2000	New four-lane alignment	Timing	Project should be constructed as quickly as possible.
Ken Hale 5763 US 24 Antwerp, OH 45813	Comment Sheet July 2000	I	Timing	Project should be constructed as quickly as possible.
Lyn Werling 1730 Orkney Ln. New Haven, IN 46774	Comment Sheet July 2000	Existing US 24, B	Farmland	Believes project should minimize impacts to farmlands.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Barbara Fageol 16718 Platter Rd. New Haven, IN 46774	Comment Sheet July 2000	New location	Safety	Stated there should not be a four-lane road near Woodlan High School because of inexperienced drivers.
Thomas & Anne Rohner 7818 Butt Rd. E. Woodburn, IN 46797	Comment Sheet July 2000	None specified	Canal	Concerned that there is a buried canal lock at US 24 and Butt Road and it may be impacted by the project.
Randy Treadway 809 Airport N. Office Park Ft. Wayne, IN 46825	Comment Sheet July 2000	None specified	Exhibits	Stated that the matrix should be placed on the website.
Mark Hoepfner 22610 Maumee Center Rd. Woodburn, IN 46797	Comment Sheet July 2000	None specified	Mailing list	Requested to be added to the mailing list.
Tim Holtsberry 909 Davidson Rd. Defiance, OH 46512	Comment Sheet July 2000	R	Interchange location	Believes interchanges are needed at Krouse Road; Switzer Road and High Street; Domersville Road; Carpenter Road; and widening SR 15/18 and SR 66.
Wayne Horman 17328 Gar Creek Rd. Woodburn, IN	Comment Sheet July 2000	Z, A-D	Farmland	Bisecting fields makes them difficult to farm. Farm equipment would have trouble crossing a four-lane facility without an overpass.
Emil Mseis & Norman Cook 110 West South St. Bryan, OH 43506	Comment Sheet July 2000	Modified existing US 24 alignment	Location	Existing US 24 route should be used as much as possible.
Carolyn Langdon 2417 West 71 St. Prairie Village, KS 66208	Comment Sheet July 2000	Segment 7	Location	Feels that Segment 7 would have minimal impact to the area.
Faye Roemke 2620 Bruick Rd. New Haven, IN 46774	Comment Sheet July 2000	Segment 10, 12, 17, 18, 20	Exhibits, location	Mapping should be updated to include her house. Options should be considered to minimize the amount of land needed (barriers verses median).
Daniel Rhoad 4068 SR 111 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	Minimize impacts to farmlands.
Randy Luderman 14616 Rd. 228 Cecil, OH 45821	Comment Sheet July 2000	Z	Farmland	Minimize impacts to farmlands.
Ed Luderman 14616 Rd. 228 Cecil, OH 45821	Comment Sheet July 2000	Z	Farmland	Minimize impacts to farmlands.
Thomas Heck 3478 Rd. 144 Antwerp, OH 45813	Comment Sheet July 2000	Z	Farmland	Utilizing as much existing transportation right-of-way as possible would minimize impacts to farmlands.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Patricia Breit 1800 Indian Wood Cir. Maumee, OH 43573	Comment Sheet July 2000	Z	Farmland	Segments 3,6, and 7 bisect the Geneva Breit farm where there are penalties by the IRS if taken out of production.
Michael & Dianna Voors 19414 Woodburn Rd. Woodburn, IN 46797	Mailed Letter July 2000	Y, Z, Q-X	Safety	Believes an improved two-lane with police enforcement would solve much of the traffic issues. If a new four-lane is needed, the number of relocations should be minimized.
James Coomer 9423 Shadecreek Pl. Ft. Wayne, IN 46835	Mailed Letter July 2000	Route closest to existing US 24	Farmland	Believes it is easier to relocate homes than farmland.
Michael Shuerman 19333 US 24 E. Woodburn, OH 46797	Mailed Letter July 2000	Segments 1, 3, 8	Safety, timing	Prefers the freeway concept due to an increase in safety. Believes the project should be completed as quickly as possible.
Robert & Mary Richhart 1930 N. Berthaud Rd. New Haven, IN 46774	Comment Sheet July 2000	Southern route	Safety	Believes the southern route would be safer because of less school related congestion. In addition, and provide easier access to Woodburn.
Defiance County Commissioners 500 Court St., Suite A Defiance, OH 43512	Comment Sheet July 2000	None specified	Interchange location	Supports an interchange at West High Street and Switzer Road.
Gerald Monnin 324 Perry St. Defiance, OH 43512	Mailed Letter June 2000	None specified	Timing, interchange location	Project can not wait 5 to 20 years, and believes an interchange is needed at West High Street and Switzer Road.
Michael Hamilton & Joseph Farinella 26427 SR 281 E. Defiance, OH 43512	Mailed Letter August 2000	None specified	Timing	Project must begin as quickly as possible.
Matthew Behringer P.O. Box 506 1090 Perry St. Defiance, OH 43512	Mailed Letter August 2000	None specified	Economics	Improving transportation infrastructure will reduce overall freight costs.
Samuel Strausbaugh P.O. Box 447 21 Seneca St. Defiance, OH 43512	Mailed Letter March 2000	None specified	Economics	Supports four-lane limited access highway that will help business remain competitive on product delivery and price.
Bryan Keller 1160 Carpenter Rd. Defiance, OH 43512	Mailed Letter March 2000	None specified	Safety, interchange location	Four-lane divided highway would be safest design. Stated an interchange is needed at Carpenter Road to alleviate traffic on SR 66 and Domersville Road interchanges.
David Graham 505 Downs St. P.O. Box 1040 Defiance, OH 43512	Mailed Letter May 2000	None specified	Location	Four-lane limited access highway as needed for safety and transportation efficiency.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Floyd Culver 615 W. Third St. P.O. Box 130 Defiance, OH 43512	Mailed Letter August 2000	None specified	Timing, interchange location	Portions of projected must be expedited including Domersville Road interchange, Carpenter Road overpass and widening of Elliott Road and SR 66 overpass.
Phil Buell P.O. Box 608 1781 Deerwood Dr. Defiance, OH 43512	Comment Sheet March 2000	None specified	Safety, economics, interchange locations	Four-lane limited access is necessary. Priority interchanges are at SR 281, West High Street, SR 424, and Carpenter Road.
Robert Coholich 1206 E. Second St. Defiance, OH 43512	Mailed Letter August 2000	None specified	Timing, interchange location	Portions of projected must be expedited including a four-lane US 24, and Domersville Road interchange, Carpenter Road overpass and widening SR 66 overpass, and an interchange at West High Street and Switzer Road.
William Koester 136 Fox Run Defiance, OH 43512	Mailed Letter July 2000	None specified	Timing	An interchange is needed at West High Street and Switzer Road.
Noble Township Trustees 22485 Mill St. Defiance, OH 43512	Mailed Letter April 2000	None specified	Interchange location	Support a four-lane limited access highway with improvements to Elliott Road, and an interchange at West High Street and Switzer Road. A warning device at SR 15 is needed to alert traffic of emergency vehicles entering the roadway.
John Turner 1625 Indiana Wood Cir. Maumee, OH 43537	Mailed Letter March 2000	None specified	Interchange location	Supports a four-lane limited access highway with an interchange at SR 281.
Marc Warncke 419 Fifth St., Suite 2000 P.O. Box 787 Defiance, OH 43512	Mailed Letter March 2000	None specified	Design	Believes a four-lane limited access highway is necessary.
Tony Langham 103 1/2 A, E. Perry St. Paulding, OH 45879	Mailed Letter August 2000	None specified	Design	Believes a four-lane limited access highway is necessary.
Elizabeth Bickham 21727 Woodburn Rd. #5B Woodburn, IN 46797	Comment Sheet July 2000	A-D, Segments 1, 3, 8, 11	Location	Selected route should be most direct to minimize construction costs and impacts to field drainage systems.
B. E. Gamby 10538 Dowe Rd. Defiance, OH 43512	Mailed Letter May 2001	None specified	Public meeting	Requested for information discussed at the May 3, 2001 public meeting.
Karen Sanders 7908 RD 206 Antwerp, OH 45813	Mailed Letter May 2001	None specified	Design	Believes a four-lane limited access highway is necessary.
Lois Gasty 1796 Evansport Rd. Defiance, OH 43512	Comment Sheet May 2001	No Build	Design	Believes a four-lane limited access highway is necessary, and a cloverleaf interchange near Defiance is unwarranted.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Mr. & Mrs. Ronald Maser 21316 Maumee Center Rd. Woodburn, IN 46797	Comment Sheet May 2001	None specified	Location, safety	Believes that measures should be taken to eliminate air pollution and noise that the new US 24 would contribute to their home and business.
Donald A. Fee, Sr. 233 Riverdale Dr. Defiance, OH 43512	Comment Sheet May 2001	None specified	Economics, safety, timing	Believes that the project would be an economic benefit to the region, and travel between Toledo and Defiance would be safer. Also stated that the project should begin as quickly as possible.
Michael C. Schuerman 19333 US 24 E. Woodburn, IN 46797-9599	Comment Sheet May 2001	C, for the Indiana Section	Design, timing	Believe that a four-lane limited access highway is necessary and should begin as quickly as possible.
Wayne & Carolyn Carr 12459 Rd 11 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Location	Concerned that the Preferred Alternative will impact water wells and feels that CR 11 should have access to the new road for emergency vehicles.
Sharon Kepler 05436 CR 8 Bryan, OH 43506	Comment Sheet May 2001	None specified	Farmland, safety	Believes that the problem with US 24 is the amount of commercial truck traffic. Feels that farmlands should not be impacted.
Carl Gallup 15661 Rd 83 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Information	Believes that affected property owners should receive more direct contact or updated information.
Chris Feichter 13511 CR 21 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Design	Supports a four-lane limited access highway.
Jackie Van Cleve 4116 SR 111 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Design, timing	Believes that a four-lane limited access highway is necessary, and should include a bypass around Antwerp. The project should begin as quickly as possible.
Jerry Monnin 188 Fox Run, P.O. Box 8 Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location, safety, economics	Feels an interchange at West High Street/Switzer Road and US 24 is necessary to eliminate traffic rerouted to Route 15 through residential areas. Access at the interchange would promote economic development in Defiance.
Carl Andre 16211 SR 34E Bryan, OH 43506	Comment Sheet May 2001	None specified	Interchange location	Believes that the proposed overpass on West High Street /Switzer Road should be an interchange. The continuing growth in this area will force truck traffic through residential areas. The new bridge on High Street was constructed to promote additional growth and should be utilized.
Steve Mauldin 839 Georgian Dr. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design	Supports a four-lane expressway similar to US 30 in Indiana because it will be inconvenient to reach a limited access US 24 highway on new alignment.
Mary Ann Hall 1553 State Service Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, interchange location	Opposes an interchange at West High Street/Switzer Road and US 24. Prefers an overpass at this location.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Stephan Brandenberger 5436 Thimlar Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Supports an overpass at Webster and Bruick Roads. Believes this will increase safety for horse and buggy transportation.
Irene Scantlen P.O. Box 232 Ney, OH 43549	Comment Sheet May 2001	None specified	Interchange location	Opposes an interchange at West High Street/Switzer Road and US 24. A bridge across the Maumee River could provide alternate access to Fox Run Executive Park.
Robert Scantlen P.O. Box 232 Ney, OH 43549	Comment Sheet May 2001	None specified	Interchange location	Opposes an interchange at West High Street/Switzer Road and US 24.
Theresa Leonard 1553 State Service Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Opposes an interchange at West High Street/Switzer Road and US 24.
David Hoffman P.O. Box 24 Ney, OH 43549	Comment Sheet May 2001	None specified	Interchange location	Opposes an interchange at West High Street/Switzer Road and US 24.
Joyce & John Herr 9955 Haller St. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Opposes an interchange at West High Street/Switzer Road and US 24. Believes turning lanes would be sufficient to handle traffic.
Heath Wright 124 W. Gas St. P.O. Box 307 Edgerton, OH 43517	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24.
Jeanette Spiller 27615 SR 424 Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24, which would serve as the main access to and from the center of Defiance.
Amy Linebrink 27883 Watson Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24 to eliminate unwanted residential truck traffic.
Donald Sauber 8419 Christy Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24. Also stated that a center turn lane could improve the intersection.
Brad Schlachter 24679 Def/Paulding Co. Line Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24.
Daniel Doenges 28364 Blanchard Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24 to improve safety of the area.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Charles Dempsey 313 Northwood Dr. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24 to accommodate the growth of the Fox Run Industrial Park.
Peter Simonis 127 Prospect St. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24.
Cynthia Wendell 1150 Wayne Ave. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Supports an interchange at West High Street/Switzer Road and US 24. Believes the existing route should be widened rather than re-routing on new alignment.
William Koester 352 Koerber Dr. Defiance, OH 43512	Comment Sheet May 2001	Alternative C	Interchange location, economics, safety	Supports an interchange at West High Street/Switzer Road and US 24 because of increasing growth. Believes this interchange will provide access to the hospital and emergency services.
Lori Schafer 09919 Adams Ridge Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location, economics	Believes that US 24 needs improvement. Supports an interchange at West High Street/Switzer Road and US 24 because of increasing growth. Believes this will minimize downtown and residential traffic.
Paul Wiley 27330 West St. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location, safety	Supports an interchange at West High Street/Switzer Road and US 24. Stated that exit ramps at this interchange will increase safety.
Bruce Brenneke 22129 Maumee Center Rd. Woodburn, IN 46797	Comment Sheet May 2001	None specified	Farmland	Concerned that the highway will divide his dairy farm. Travel back and forth over a four-lane highway will be difficult.
Elmer Brandenberger 5436 Thimlar Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Loraine Bassett 107 North Harrmann Rd. Antwerp, OH 45813	Comment Sheet May 2001	None specified	Design	Prefers a four-lane highway, and does not want to see it with two-lanes built now, and two-lanes constructed later.
Dennis Smith 161 Horsey Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Believes that US 24 needs improvement. Opposes an interchange at West High Street/Switzer Road and US 24. Prefers an overpass at this location.
Mary Ann Smith 161 Horsey Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location, safety	Believes that US 24 needs improvement for safety purposes. Opposed to an interchange at West High Street/Switzer Road.
Veronica Matvey 1597 Horsey Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Interchange location	Believes that US 24 needs improvement. Opposes an interchange at West High Street/Switzer Road and US 24. Prefers an overpass at this location.
Sarah Brandenberger 5436 Thimlar Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make is safer for the Amish to cross the four-lane highway in horse drawn vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Vagabond Village 13173 US 24 Cecil, OH 45821	Comment Sheet May 2001	None specified	Location, economics	Supports a four-lane highway or improvements to the existing US 24 with a new route around Antwerp. Concerned that the new US 24 alignment will hurt businesses along existing US 24. Feels business owners should be able to purchase new land around the Preferred Alternative alignment at a reasonable cost.
John Molitor, Sr. 5978 SR 111 Payne, OH 45880	Comment Sheet May 2001	Alternative C	Design	Supports an expressway and believes that the route selected is the most feasible.
Louise Miller 311 W. Woodcox P. O. Box 52 Antwerp, OH 45813	Comment Sheet May 2001	Alternative C	Location, timing	Believes that the Antwerp bypass should be within one mile of the village. Supports the proposed route and feels the project should begin as soon as possible.
David Nice Harvest Farm Management Georgetown Square Professional Bldg. 6605 E. State Blvd. Suite 2 Fort Wayne, IN 46815	Letter May 2001	None specified	Farmland	Believes that the highway should not divide farm fields because the resulting smaller fields are less profitable than larger tracts of land.
Lester Hart 7657 US 24 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Timing	Believes that the project should begin as soon as possible.
Erv Denig 6136 Winchester Rd. New Haven, IN 46813	Comment Sheet May 2001	None specified	Farmland	Prefers an early acquisition plan.
Richard Hoepfner 5109 Bull Rapids Rd. Woodburn, IN 46797	Comment Sheet May 2001	None specified	Design	Supports a four-lane freeway similar to US 30 and does not want to see two-lanes built at a time.
James Decker 19317 US 24E Woodburn, IN 46797	Comment Sheet May 2001	Alternative C	Location, environmental	Supports the selected alternative. Believes that moving the highway away from the Maumee River will preserve wildlife.
Betty Hickox 3020 N. Berthaud Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design	Believes that the highway should be moved north at the corner of Berthaud and Slusher Roads to accommodate a buffer zone for their property.
Kenneth Knoblauch 8021 Delagrang Dr. Woodburn, IN 46797	Comment Sheet May 2001	Alternative C	Design, timing	Supports a four-lane highway and does not want to see two lanes built at a time.
James Weaver 300 E. Broadway, Suite 103 Logansport, IN 46947	Comment Sheet May 2001	None specified	Design, funding	Supports a four-lane limited access highway, and stated that Ohio and Indiana seek joint federal dollars to build the project.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Leon Witter 2064 Royal Oak Dr. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety, timing	Supports a four-lane highway. Feels the highway should be constructed as soon as possible for safety purposes.
Deloris Hofacker 105 Market St. Napoleon, OH 43545	Comment Sheet May 2001	None specified	Safety	Believes that the toll rate should be lowered so that truck traffic will stay off of US 24. Feels that truck safety is an issue on the existing US 24.
Antonia Leal 897 Circle Dr. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety	Prefers a highway system that focuses on driver safety.
Mary & Victor Gutierrez 815 Bell St. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety	Prefers a four-lane highway with right and left turn lanes. Believes that this will increase safety.
John Omlor 2268 Royal Palm Dr. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety	Believes a freeway system will address the safety issues on US 24.
Laura McFaren 15803 CR 191 Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety	Believes a freeway system will address the safety issues on US 24.
Kenneth Benien, Sr. 25212 Watson Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design, safety	Believes a freeway system will address the safety issues on US 24.
Gaylon Davis 500 Second St Defiance, OH 43512	Comment Sheet May 2001	Alternative C	Design	Supports the Preferred Alternative. He also wants the opportunity to offer suggestions and input for the project.
Mark Moats 329 Koerber /Bus 20793 US 24 Defiance, OH 43512	Comment Sheet May 2001	None specified	Design	Supports a four-lane highway, but not by building two-lanes at a time.
Beth Martin 12127 Neowash Rd. Whitehouse, OH 43571	Comment Sheet May 2001	None specified	Design	Interested in receiving the improvement plans and maintenance cost information for the new and existing US 24.
B. Hearndon 7910 Neoward Rd. Waterville, OH 43566	Comment Sheet May 2001	None specified	Safety	Believes that improvements like police enforcement, turning lanes, and lighting should be done on US 24 right away.
James Hitchcock, Esq. 650 W. First St. Defiance, OH 43512	Letter May 2001	None specified	Safety, timing	Believes the project should be completed as soon as possible.
Jerry Boes 6089 US 24 Antwerp, OH 45813	Letter May 2001	Segment 18	Design	Believes that Segment 19 adds additional cost, a longer route, more curves, and a greater inconvenience to landholders. Prefers Segment 18.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Carolyn Langdon 2417 W. 71 st Street Shawnee Mission, KS 66208	Letter May 2001	None specified	Farmland	Minimize impacts to farmlands.
Sally Skillen 27 Rocklynn Place Pittsburgh, PA 15228	Letter May 2001	None specified	Farmland	Minimize impacts to farmlands.
George Major 98-410 Koauka Loop #7-F Aiea, Hawaii 96701	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
Joseph Meyer P.O. Box 315 Antwerp, OH 45813	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
Grant Messmann 8934 E. Tillman Rd. Fort Wayne, IN 46816	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
Russell Figert 12063 Rd. 11 Antwerp, OH 45813	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
Gaylen Stetler 22327 Main St. Woodburn, IN 46797	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
Loretta McCann 18319 Woodburn Rd. Woodburn, IN 46797-9568	Letter May 2001	None specified	Mailing list	Wishes to be added to the project mailing list.
G. Charles & Joyce Schaaf 3637 N. Webster Rd. New Haven, IN 46774	Letter June 2001	None specified	Design, farmlands	Do not want to live near an interchange at Webster Road. Also concerned about impacts to farmland drainage system.
Joy Hanson 1201 Terrace Dr. Defiance, OH 43512	Comment Sheet May 2001	Alternative D	Design	Believes a four-lane road is needed, but the alignment should involve Segment 18 to maximize opportunities for economic development, and minimize impacts to residences.
Dorothy & Raymond Schaper 19723 Slusher Rd. Woodburn, IN 46797	Comment Sheet May 2001	None specified	Farmlands	Very concerned about impacts that the roadway would have on field drainage system.
Gary Mamer 4908 Weatherside Run Ft. Wayne, IN 46804-6549	Comment Sheet May 2001	None specified	Safety, timing	Stated that freeways are the safest type of system, with the quickest travel times. The system should also have rest areas, and overpasses for the benefit of Amish in the area.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Staci Kaufman 1811 State Service Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design	Does not want to see an interchange at West High Street/Switzer Road and US 24 because it will increase the potential for annexation of the area to Defiance. Also concerned about the impacts to State Service Road with an interchange.
Ray Plummer R&L Enterprises 21297 Kiser Rd. Defiance, OH 43512	Comment Sheet May 2001	Segments 15 and 18 (Alternative D)	Location	Wishes to see Segments 15 and 18 reconsidered as part of the Preferred Alternative to minimize impacts to landowners while maximizing economic impact to the Defiance area.
Jeff Abbott 23613 Gar Creek Rd. Woodburn, IN 46797	Comment Sheet May 2001	None specified	Timing, design	Believes that decisions should have been made already regarding the location, type of roadway, and lanes needed for the project. Does not want to see two lanes built now, and two lanes built later.
Larry Yoder Yoder's Realty, Inc. 905 N. Clinton St. Defiance, OH 43512	Comment Sheet May 2001	None specified	Safety	Existing US 24 is unsafe. Too many people have died on the highway. Also said that industrial/commercial development in Defiance has been hindered by poor access.
Robert Constien 1578 Hampton Ave. Defiance, OH 43512	Comment Sheet May 2001	Alternative C	Timing	Believes the proposed alignment is reasonable, but the project should be begin immediately.
Joel Tye 801 Mildred Ave. Ft Wayne, IN 46808-2177	Comment Sheet May 2001	None specified	Mailing list	Wishes to be added to the mailing list.
Doug Kaufman 1811 State Service Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design	Stated that an interchange on West High Street/Switzer Road and US 24 would allow Defiance to easily annex the area. Also stated that local residents would prefer to have an overpass and not an interchange at this location.
Gary & Debra Smith 121 Horsey Rd. Defiance, OH 43512	Comment Sheet May 2001	None specified	Design	Does not want to see an interchange at Switzer Road.
Russell Reinhart 13514 CR 33 Antwerp, OH 45813	Comment Sheet May 2001	None specified	Design, location	Requested that the Preferred Alternative be shifted away from their home, and asked that CR 33 remain open for access.
Paul Graber 13035 Edgerton Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses on Bruick and Webster Roads, and SR 101 because crossing a four-lane divided highway is unsafe with a horse and buggy.
Mark Schwartz 2007 N. Roussey Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads to make it safer for the Amish to cross the four-lane highway.
Mark Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Barbara Schmucker 12808 Parent Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Aaron Schmucker 12808 Parent Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads and SR 101 to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Amos Graber, Jr. 5229 Bruick Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles
Jacob Graber, Sr. 5235 Bruick Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Samuel Graber 15602 Ehle Rd New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads and SR 101 to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Mary Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles. Overpasses would also make it safer to access the high school.
Annette Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Miriam Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Naomi Schwartz 17703 Bremer Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Ruben Schwartz 2007 N. Roussey Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Roussey Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Melvin Brandenberger 17326 Ehle Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Jacob Brandenberger 17326 Ehle Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster and Bruick Roads to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Suzanne Schmucker 12931 Parent Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads and SR 101 to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Ben Schmucker 12808 Parent Rd. New Haven, IN 46774	Comment Sheet May 2001	None specified	Design, overpasses	Stated that there should be overpasses at Webster, Woodburn, and Bruick Roads and SR 101 to make it safer for the Amish to cross the four-lane highway in horse drawn vehicles.
Richard & Marilyn McCann 21017 US 24 Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Environmental impacts, drainage, costs	Their property was previously taken by the State of Ohio for construction of US 24 and for ODOT's garage and the State Highway Patrol Barracks. Now ODOT wants more of their property. Constructing US 24 on their property would create considerable amount of environmental impacts, create drainage problems and also be expensive.
Lester & Alta Sanders US 24 Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Landlocked property, location	The Preferred Alternative will cut off the road they live on and also landlock farmland that they own. Propose that US 24 follow the Maumee and Western Railroad.
Jerry Boes 6089 US 24 Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Design, location	The design of the Preferred Alternative west of Defiance creates more curves, requires more concrete and is more expensive than Segments 15 and 18. It will also affect the use of his property. US 24 should follow Segments 15 and 18 west of Defiance.
Sam & Julie Bok 11310 Krouse Rd. Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Farmland impacts	The Preferred Alternative will pass through the dairy farm and could put it out of business. US 24 should follow Segments 15 and 18.
Larry Plummer 21205 Kiser Rd. Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Location	If the Preferred Alternative would follow Segments 15 and 18 it would help in the future development of his industrial park.
John Simon 20408 Kiser Rd. Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Location, environmental impacts	The Preferred Alternative should follow Segments 15 and 18 to minimize impacts on farmland, residences, and businesses.
Melvin & Harvey Bok 12709 Ashwood Rd. Defiance, OH 43512	Letter May 2001	Segments 15 and 18	Farmlands	The Preferred Alternative would landlock approximately 100 acres and divide the remaining land into small fields that would be difficult to farm. The new highway should follow the Maumee and Western Railroad.
Donald Fee, President Defiance County Community Improvement Corporation Defiance, OH 43512	Resolution of Support August 2001	None specified	Construction funding	Requests that the Transportation Review Advisory Council approve construction funding for the Domersville Road area highway project and cause construction to be started as soon as possible.
Otto Nicely, Darrell Miller, & Thomas Kline Defiance County Commissioners Defiance, OH 43512	Resolution September 2001	None specified	Construction funding	Requests that the Transportation Review Advisory Council approve construction funding for the Domersville Road area highway project and cause construction to be started as soon as possible.
James Murray & Peter Robinson First Energy 300 Madison Avenue Toledo, OH 43652	Letter September 2001	None specified	Intersection improvements	Support improvements to US 24 in the Carpenter Road and Domersville Road area.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Alan & Heather Lee 8103 US 24 East Antwerp, OH 45813	Comment Sheet June 2002	None specified	Safety, timing	Believes the project should be completed soon, and looks forward to a faster and safer commute to work on the new highway.
Barry L. Delong 3768 Road 162 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Safety, timing	Believes the project is long overdue, however, he is concerned about school traffic crossing a four-lane highway.
Charles D. Marchant 838 Indian Bridge Lane Defiance, OH 43512	Comment Sheet June 2002	None specified	None specified	Likes the Preferred Alternative.
Jack Quinn 4726 N. Webster Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Timing	Likes the Preferred Alternative and hopes for a timely completion of the project.
Richard G. Lano 62 Charnell Street Defiance, OH 43512	Comment Sheet June 2002	None specified	Mailing list	Requested to be added to the mailing list.
Stephen Kruckeberg 802 Rosemond Road Fort Wayne, IN 46774	Comment Sheet June 2002	None specified	Mailing list	Requested to be added to the mailing list.
Mr. & Mrs. Roland Yoder 14001 US 24 East New Haven, IN 46774	Comment Sheet June 2002	None specified	Mailing list	Requested to be added to the mailing list.
Erna Meyer 2811 N. Berthaud Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Public meeting display materials	Stated that her name is misspelled on the public meeting display.
Pamela Brown 2520 Bruick Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Public meeting display materials	Stated that the owner of project parcel number 366 is misidentified.
James & Martha Long 14614 US 24 East New Haven, IN 46774	Comment Sheet June 2002	None specified	Property access	Stated their concerns about how the new US 24 alignment would impact access to their property and requested a noise barrier.
Ted E. Meyer 1413 N. Webster Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Public meeting display materials	Indicated that the owner's name of project parcel 72 is misspelled on the public meeting display, and the owners of project parcels 73 and 74 are incorrect.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Willard L. Schafer 24209 US 24 East Woodburn, IN 46797	Comment Sheet June 2002	None specified	Public meeting display materials	Identified owners and acreages for project parcels 134, 135, 136, and 137.
Donn P. Werling The History Center/Allen County-Fort Wayne Historical Society 302 East Berry Street Fort Wayne, IN 46802	Comment Sheet June 2002	None specified	Environmental impacts	Stated that a very large white oak tree on Karl Hockemeyer's property could be impacted by the Preferred Alternative and should be preserved.
Karl Hockemeyer 14431 Bremer Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Environmental impacts	Stated that the Preferred Alternative should avoid a very large oak tree on his property. Also inquired about the acreage impact to Hockemeyer LP #1 resulting the Preferred Alternative.
Dwight & Mary Doctor 12582 Road 1 – State Line Road Antwerp, OH 45813	Comment Sheet June 2002	None specified	Design, construction phasing	Believes that linking the new US 24 alignment and the existing alignment would have less of an impact if Paulding County Road 11 or SR 101 was used and not State Line Road.
Dwight & Jacqueline M. Doctor 16339 Road 63 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Design	Believes that linking the new US 24 alignment and the existing alignment would have less of an impact if Paulding County Road 11 or SR 101 was used and not State Line Road.
Jon M. Williams 5736 Thimlar Road New Haven, IN 46773	Comment Sheet June 2002	None specified	Public meeting	Inquired about the number and type of displacements that would occur in Milan Township, Indiana.
Luann Holman Antwerp Village Administrator P.O. Box 1046 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Safety, design	Inquired as to how traffic will be safely diverted from existing US 24 to the Antwerp Bypass, and how the existing US 24 alignment would be maintained if control were turned over to the county.
Tim Schroeder 15990 Road 69 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Weigh stations	Believes that a weigh station on US 24 would solve traffic problems and save money.
Roger W. Hadley II 5505 Bull Rapids Road Woodburn, IN 46797	Comment Sheet June 2002	None specified	None specified	Requested a detailed map from SR 101 to Berthaud Road, and stated that bridges/overpasses require a minimum of 17 feet for farm equipment clearance. Also asked numerous questions about the design of the new highway.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Joy Bronson 1927 N. Berthaud Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Timing, relocation	Inquired about construction schedule, funding, and relocation processes.
Steve Mauldin 839 Georgian Drive New Haven, IN 46774	Comment Sheet June 2002	None specified	Design	Stated that Harper Road should remain open as long as possible because of the homes in Georgian Park.
Ken Knoblauch 8021 Delagrang Drive Woodburn, IN 46797	Comment Sheet June 2002	None specified	Timing	Believes the project should proceed quickly to improved safety and increase economic development opportunities.
Rick Van Landingham 1312 Paxton Road Toledo, OH 43608	Comment Sheet June 2002	None specified	Public meeting	Requested a copy of the Origin and Destination Study and specific information about the percentage of through versus local truck traffic on US 24.
Russell and Nellie Beerbower 1397 Road 150 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Maintenance	Described a hazardous pothole on US 24 south of State Line Road.
Caroline Zimmerman 7292 Road 176 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Safety	Believes there should be several places on the new US 24 to provide access across the highway for cars and busses.
William C. Koester Koester Corporation 136 Fox Run Defiance, OH 43512	Letter June 2002	None specified	Interchange location	Supports an interchange at US 24 and West High Street.
Barry L. Steinman 23526 Dawkin Road Woodburn, IN 46797	Comment Sheet June 2002	None specified	Design	Believes interchanges should be provided at Woodburn Road and SR 101 and SR 49.
Michael C. Schuerman 19333 US 24 East Woodburn, IN 46797-9599	Comment Sheet June 2002	None specified	Design, timing	Believes the project should be expedited. Also stated that interchanges should be provided at Bruick/Ryan Road, SR 101 and Webster Road, overpasses built at Bull Rapids Road and State Line Road, and that Berthaud Road should be closed.
Dana Hullinger 4337 Road 162 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Overpasses	Stated that an overpass should be provided at SR 49 or on T-43 near the new school in Antwerp.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Floyd A. Ramsier P.O. Box 1 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Overpasses	Stated that an overpass should be provided at either SR 49 or on T-43 near the new school in Antwerp.
Ben Schmucker 12808 Parent Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests a meeting to discuss constructing overpasses at Bruick and Webster Roads for Amish vehicles.
Richard A. Poinatte 1840 Florida Drive Fort Wayne, IN 46805	Comment Sheet June 2002	None specified	Design	Prefers to see interchanges at key roads not at-grade crossings.
Paul J. Graber 13035 Edgerton Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads.
Amos & Mary Graber 15904 Bull Rapids Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads.
Lester Graber 12332 Grabill Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruck and Webster Roads.
Dennis Fey Lot 15 234 Lincoln Highway West New Haven, IN 46774	Comment Sheet June 2002	None specified	Safety	Supports improvements to US 24 but stated that stricter law enforcement could improve safety on US 24 between I-69 and State Line Road.
David & Suzanne Kilcoin 11830 Road One Antwerp, OH 45813	Comment Sheet June 2002 and Letter	None specified	Design, truck traffic	Believes that State Line Road should be closed at the new US 24 intersection and stated that trucks should not be allowed on US 24.
Raymond Schaper 19723 Slusher Road Woodburn, IN 46797	Comment Sheet June 2002	None specified	Design	Requested that the alignment on his property be shifted slightly to the south and east to minimize impacts to his tile system.
Kenneth & Doris Rekeweq 6117 SR 101 Woodburn, IN 46797	Comment Sheet June 2002	None specified	Design	Requested that the alignment be shifted slightly north (in project parcels 128 and 129) to avoid taking his residence and his neighbor's residence.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Leo Koenn 17981 Road 226 Cecil, OH 45821	Comment Sheet June 2002	None specified	Design	Believes that the US 24 is too close to Cecil and Antwerp.
Joel Tye 801 Mildred Avenue Fort Wayne, IN 46808-2177	Comment Sheet June 2002 and Letter	None specified	Timing	Believes the construction of the project should be expedited. Also requested that the project website be updated more frequently.
Melvin B. Graber 19413 Springfield Court Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Mark Schwartz Schwartz Agricultural Sales 17703 Bremer Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Mary Schwartz 17703 Bremer Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Annette Schwartz 17703 Bremer Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Miriam Schwartz 17703 Bremer Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Pete Girod 15835 Irving Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
William Wickey 15702 Irving Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Daniel Steury 15715 Irving Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Elmer Brandenberger 5436 Thimlar Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Stephan Brandenberger 5436 Thimlar Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Sarah Brandenberger 5436 Thimlar Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Jacob A. Graber, Sr. 5235 Bruick Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Flat Rock Inc. 2007 N. Roussey Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests interchanges with overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Kevin Stuart 8763 Road 176 Paulding, OH 45879	Comment Sheet June 2002	None specified	Alignment	Stated that a route farther south of the Preferred Alternative would be better for the area.
Kyle Hanenkraat 10433 Road 206 Cecil, OH 45821	Comment Sheet June 2002	None specified	New highway	Opposed to the entire project.
Jonathan Q. Rister 14935 Road 61 Antwerp, OH 45813	Comment Sheet June 2002	None specified	Landlocked property	Stated that his parcel may be landlocked by construction of the Preferred Alternative and wants to know if a Service Road will be constructed to provide access to his land.
Alice Dix 4031 N. Sampson Road Woodburn, IN 46797	Comment Sheet June 2002	None specified	Farmlands	Concerned that construction of the Preferred Alternative would damage the drainage tile system of her farm.
Robert I. Simpson 16594 US 127 Cecil, OH 45821-9715	Comment Sheet June 2002	None specified	Alignment	Suggested the alignment should be located on the Maumee & Western Railroad tracks and inquired about the local road crossings in Allen County, Indiana.
Marjorie Stuart 10433 Road 206 Cecil, OH 45821	Comment Sheet June 2002 and Letter	Existing alignment	Alignment	Would prefer to see improvements made to the existing US 24 alignment or have the Preferred Alternative be located north of the Maumee & Western Railroad tracks.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Sam & Wilma Brandenberger 6222 Bruick Road New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests an overpass at Bruick Road to provide a safe way of crossing the new highway for Amish vehicles.
Jonas A. Schmucker 18518 Springfield Center Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests an overpass to provide a way to cross the new US 24 highway.
Mike Schmucker 10909 SR 37E New Haven, IN 46774	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Dave Graber 14436 Spencerville Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests an overpass to provide a way to cross the new US 24 highway.
Bob & Judy Adams 17827 Bishop Road Spencerville, IN 46788	Comment Sheet June 2002	None specified	Intersections	Stated there should be an intersection at Bruick Road and US 24 to provide connections for businesses and individual families.
Victor Witmer 15433 Antwerp Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests an overpass at Bruick Road to provide a way to cross the new US 24 highway.
David Witmer 15433 Antwerp Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests an overpass at Bruick Road to provide a way to cross the new US 24 highway.
Steven A. Graber 14213 Hurshtown Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Design	Requests a review of traffic crossing US 24 prior to deciding the type of intersection/interchanges built as part of the new US 24 highway.
Suzanne Schmucker 12931 Parent Road New Haven, IN 46744	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.
Enos Graber 8809 Ricker Road Grabill, IN 46741	Comment Sheet June 2002	None specified	Overpasses	Requests overpasses at Bruick and Webster Roads to provide a safe crossing over the new highway for Amish vehicles.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Karl Hockmeyer 14431 Bremer Road New Haven, IN 46774	Letter June 2002	None specified	Local road impacts	Requests that the I-469/US 24 interchange be enlarged to a full clover leaf. Also requested that Berthaud and Doyle Roads be closed and an overpass built for Bruick Road.
Karl Hockmeyer 14431 Bremer Road New Haven, IN 46774	Letter July 2002	None specified	Oak tree, I-469 interchange, design	Provided the location of an oak tree on his property. The tree is over 100 years old and he would like it preserved. Also, requested improving the I-469 interchange to a full cloverleaf design, closing Berthaud and Doyle roads, and building an overpass at Bruick Road.
Floyd Ramsier 120 South Main Street Antwerp, OH 45813	Letter August 2002	None specified	Design	Suggested grade separated crossings at SR 49 and T-43 and possible interchanges at these locations.
Mr. and Mrs. Marlon Hoop 2290 Baltimore Road, Lot #4 Defiance, OH 43512	Comment Sheet September 2002	None specified	Relocations	Requested that all the trailers in the Bohlman Trailer Park be relocated or move the highway alignment to another route.
Timothy Hutchinson 102 Washington Avenue Defiance, OH 43512	Letter September 2002	None specified	Southwest bypass of Defiance	Suggested that an improved bypass southwest of Defiance be developed as part of the US 24 project. The bypass would provide a direct access to US 24 for the stone hauling trucks from the StoneCo's quarry operations south of Defiance.
Paulding County Commissioners 115 North Williams Street Paulding, OH 45879	Letter September 2002	None specified	Alignment	Suggested an alternative to the route of the Preferred Alternative in Crane Township.
William Koester	Letter December 2002	None specified	Interchange	Expressed his concerns regarding a possible interchange at West High Street. Believes that access is needed to US 24 at this location via an interchange or at-grade intersection.
Emerald Township Trustees	Letter December 2002	None specified	Design	Stated their approval of the design of the Preferred Alternative and treatment of local roads in Emerald Township.
Carryall Township Trustees P.O. Box 652 Antwerp, OH 45813	Letter December 2002	None specified	Design	Requested that T-43 and US 24 be grade separated for the safety of students.
David Bagley, Superintendent Antwerp Local School 204 Archer Drive Antwerp, OH 45813	Letter January 2003	None specified	Design	Requested that T-43 and US 24 be grade separated for the safety of students. Also requested a traffic light at T-43 and existing US 24 until the new highway is built.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH WRITTEN CORRESPONDENCE (CONTINUED)

Name and Address	Source	Preferred Alternate or Segment	Issue	General Comment
Mark Stockman Paulding County Engineer 115 North Williams Street Paulding, OH 45879	Letter January 2003	None specified	Design	Stated his approval of the design of the Preferred Alternative and treatment of local roads in Paulding County.
Board of Defiance County Commissioners 500 Court Street Defiance, Ohio 43512	Letter May 2003	None specified	Design	Stated concerns about the proposed over pass at US 24 and West High Street. Believe that an interchange is vital to the economic growth of Defiance. Eliminating access at West High Street to US 24 will cause an economic loss to the area and also create safety problems.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE

Name	Date/Time Received	Comment	Response
Unknown	07/11/99 1:21:56 PM	How can I get a more detailed map of the proposed corridor areas? I have 5 acres south of 24 in Defiance Township.	Currently, the maps available for distribution consist of those which are included in the project newsletter or the public meeting handout. If you have not received either of these, please let us know and they will be sent to you. Thank you for your interest and please continue to check this site for updated information.
Rolland Wolfrum	07/13/99 6:40:44 PM	<p>I have attended one of your public forums and I have not talked with anyone who has addressed or contemplated the possible drainage issue that would arise from the proposed northern route (Alternate 1). The proposed route runs perpendicular to approximately 10 major creeks, not including the Maumee River. Tens of thousands of acres drain into these creeks. This would result in a damming-up of local water run-off.</p> <p>Conversely, the "three" southerly proposals are better choices relative to drainage due to fewer acres draining across and through these routes.</p> <p>I appreciate any consideration you give to this issue. If you would like to contact me personally, you may reach me at: Rolland Wolfrum 7601 State Route 249 Hicksville, OH 43526 419-658-8855</p>	<p>Your point is well taken. All other things equal, a project with fewer stream crossings is superior to one with more stream crossings. In general, the engineering process is robust enough to adequately address drainage issues. The ability to pass flood volumes is a standard component of the design process.</p> <p>In order to better address the needs of farm drainage (tile systems) many ODOT projects are now utilizing the Soil and Water Conservation District to insure that the bisected farms have their tile systems are appropriately reconfigured/reconnected. Farmland impacts are increasingly becoming important in project selection.</p> <p>Thank you for your input.</p>
Unknown	07/13/99 8:28:54 PM	If the turnpike became "free" as was originally proposed, instead of hiking rates, the trucks would not be forced to seek the less expensive route 24. The increased truck traffic on 24 is directly related to the increase in the tolls. Is the turnpike going to continue to increase tolls? Please advise concerning the original idea to have the turnpike become free!!	<p>ODOT conducted a study entitled "Origin-Destination Survey of US 24/ Ohio Turnpike Corridor at Ohio/Indiana State Line" in June/July of 1997 to determine the impact of turnpike toll increases on regional traffic patterns. The results of that study showed that of the truck traffic surveyed, 42% believe there is no suitable alternative to using US 24. Only a small percentage of those surveyed indicated that toll hikes on the turnpike have caused them to start using US 24. The increased truck traffic on US 24 is more directly related to the amount of industry directly on or adjacent to US 24.</p> <p>Unfortunately we do not have a definitive answer as to the status of eliminating tolls altogether on the Turnpike. That decision is one that has to be made by the Ohio Turnpike Commission with input from lawmakers and politicians. We do appreciate your comments. If you have any additional questions, please feel free to contact us through our Web page. Thanks</p>
Unknown	07/16/99 5:15:08 PM	Do you have plans to hold more informal meetings? There wasn't much publicity ahead of time for enough public participation. The possible corridors were in the paper about the same time as the meetings were held. People need a little advance notification, especially when it's so close to home!!	At this time, the next public involvement meetings are scheduled for July, 2000. ODOT will increase their public meeting notification efforts for the next series of public meetings. As the US 24 project progresses over the next several months ODOT will keep the public informed through newsletters, the Website, and the toll-free hotline.
Unknown	07/18/99 7:09:31 PM	I just want to say that its about time...and I will be monitoring developments, both as a property owner in Paulding County and as a former resident of Defiance. US 24 is the most frightening highway I have ever driven	We appreciate your input and will definitely be further investigating your concerns about safety along the roadway. If you have any additional questions or comments, please feel free to contact us again through our Website. Thank you.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>on. I live in Indianapolis and travel to Defiance. I am not used to passing. I literally get ill when I anticipate travelling that road.This will be exciting to watch unfold.</p>	
Steve Burke	08/03/99 7:29:04 PM	<p>I am interested in any information as several of the routes pass right pass our house. I also get an error when I try to be added to the mailing list. Steve Burke 14027 Bremer Rd New Haven IN 46774 219-493-2664 maddog@mixi.net</p>	<p>Thank you for your interest in US 24. Your name and address have been added to our mailing list. The Website error is being repaired. A new US 24 newsletter will be mailed out next week and you will receive a copy. There are currently two corridors under study. These corridors may be viewed on the US 24 Website on the Study Process page. A portion of Bremer Road is within the corridor under study. If you live within approximately 1/2 mile of US 24, then you are located within the corridor under study. Also, if you are located within the corridor, you would have received a letter recently informing you that environmental field crews may be entering your property to gather environmental data. If you did not receive one of these letters, then your property is not located within the area currently under study. If you would like additional information, you may use e-mail through the US 24 Website or you may call us toll-free at 1-877-ASK-US24.</p>
Unknown	08/05/99 6:51:23 AM	<p>I have two problems with the 24 building - the public, whose lives are being disturbed are never notified until the meeting is going on or is about to happen within the hour - there should be major announcements made, i.e. TV, radio, all local newspapers. I also have a concern with farmland being taken - yes, we will be paid but what happens to our future income, what will we live on 5 and 10 years down the road. Even if we are given a fair market price that will not be paying bills for the future. It must be a difficult task but please consider not taking valuable farm ground, what is going to be left for the grandchildren of this country?</p>	<p>Thank you for your comments. The advertisement efforts for the next US 24 public meetings will be will be greatly increased. The next public meetings for the project are scheduled for July 2000.</p> <p>Minimizing impacts to farmlands is a priority of this project. Due to the vast number of farms in the area, it will be impossible to avoid all farmland if a new alignment is selected for the US 24 project. In addition to studying a new alignment for US 24, ODOT is studying improvements to existing US 24 which will have the least amount of impact on farmland in the area.</p>
Unknown	08/05/99 10:02:08 AM	<p>As the former Director of Economic Development for Paulding County I am please to see that of the two proposed realignment routes will remain in Paulding County. Being familiar with not only the traffic and safety concerns on 24 in Paulding County I also understand the need for better transportation systems for industry and business in the county. I would submit that what is needed on this section of 24, as well as the entire segment from New Haven to Waterville is a four-lane limited access structure. I feel an improved two-lane route would not meet the needs of a growing Northwest Ohio and would be a set-back to all the hard work the Fort to Port Improvement Organization has work for all these years.</p>	<p>Thank you for your comments and please continue to check the Website for project updates.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Clete and Julie Miller	08/05/99 4:56:16 PM	After reviewing the recent newspaper articles as well as your Website, it would seem that simply widening existing US 24 would make the most sense. It does not seem logical to reroute an entire road and cause damage to houses, farmland and wetlands (such as our property). Thank you, Clete and Julie Miller	Thank you for your comments. The widening of the existing US 24 highway will be included in the project study. All alternatives will be evaluated to determine their impacts to residences, businesses, farmlands and sensitive environmental sites. They will also be compared to the stated goals contained in the Purpose and Need document. Please continue to check the Website for project updates.
Clete Miller	08/05/99 5:04:36 PM	We would like to know how far the north edge of Corridor U would be from the existing SR 18 at the intersection of Glenburg Road. If possible, a detailed map would be appreciated. Thank you, Clete Miller	The northern edge of corridor segment U is approximately 1000 feet south of SR 18 near the intersection of Glenburg Road. If you call the toll-free US 24 hotline (1-877-ASK-US24) you can be added to the project mailing list. Thank you for your comments.
Unknown	08/06/99 10:02:29 AM	Please do not waste one dollar on this plan if it is anything less than 100% limited access with interchange intersections only between New Haven and Toledo. Look at the mess US 30 has become between Fort Wayne and Gary!	Thank you for your comments. The decision regarding limited access will be made at a future date once the project studies and engineering analysis have been completed. Please continue to check the Website for project updates.
Unknown	08/06/99 5:09:56 PM	The project is much needed. I have missed the meetings, but I am very interested. The traffic just keeps getting heavier and it take longer and longer to get to where you need to go. The impatient driver causes accidents trying to get around all the trucks. I frequently drive 24 between Defiance and Toledo. It is always a trial on your nerves!! I work for the Ohio Department of Health and my district office is in Toledo.	We would like to thank you for your comments and interest in improving safety along US 24. Parsons Brinckerhoff is not specifically looking at the segment from Defiance to Toledo, however that portion of the roadway is being investigated as part of the overall project. It is my understanding that the second newsletter should be sent out within the next week or so. If you have any additional questions or comments, please do not hesitate to contact us through the Website or on the hotline. Again, thank you for your input.
Unknown	08/06/99 5:16:07 PM	I live along Roehrig Road and I never received any type of mailing from you, as was stated in the paper. I think that the new road should follow the old road as much as possible.	Thank you for your comments. Please call the project toll-free hotline (1-877-ASK-US24) for a packet of information and to be added to the project mailing list.
Unknown	08/07/99 2:14:20 PM	Could you tell me where in relation to Roehrig Road this segment will run. My personal residence is very close to Roehrig Road. I do not favor listening to highway traffic 24 hours a day.	Thank you for your comments. The corridors currently under study are 2000 feet in width. The northern edge of Corridors U and Y are between 500 feet and 1000 feet south of Roehrig Road. These corridors are currently under investigation and no decision has been made regarding the final alignment of the new highway. Please continue to check the Website for project updates.
Unknown	08/10/99 5:00:41 PM	I believe that route "L" is the best because it will allow the time from New Haven to Defiance to be the quickest and the straightest for the public. I travel US 24 on a regular basis up to Toledo, and if the distance could be shorter it would be great.	Thank you for your comments. Currently, we are evaluating the feasible corridors which were selected following the first public involvement meetings. Please continue to check the Website for project updates.
Unknown	08/11/99 12:51:14 PM	My untrained eye notes that the logical hook up for a corridor is at the 424 and 24 junction west of Defiance then widen the section going east of there to SR 15 and 18 using the right of way land adjacent to the existing 24. The state already had a straight tract of 24 there until past where Rt. 6 goes to Bowling Green to the west of Napoleon.	Thank you for your comments. There is a concern about the location of an interchange with existing US 24 and Route 424. This resulted in the addition of a corridor north of the Maumee River that crossed at a location where the river, the railroad and the existing highway were far enough apart that they would not impact the interchange. We are currently conducting field surveys to

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
			determine what impacts are associated with each alternative. Please continue to check the Website for project updates.
Unknown	08/11/99 5:31:08 PM	Will there be any additional involvement from other consultants on this project? If so, in what capacity and what other opportunities will be available on this project?	The consultants are already underway on the preliminary development phase of the project. At some point in the future, there may be opportunities in the final plan development phase.
Unknown	08/12/99 8:24:59 PM	I hope that we can resolve this without destroying our 200+ acre farm which is located where two of the possible routes are going through near Kennedys curve on SR 18. Our family has strong ties to our land, my brother has just built a new home which lies right in the path of one of the routes, for God sakes leave the road where it is, add passing lanes, don't destroy people's lives for a new road. Believe me this will destroy our lives, our land is all we have made from our years of busting our butts farming, not to develop and make a quick buck off of. We would like to leave this to our children, their children, etc. The state can keep their money they will so graciously force us to take. If this note sounds like I'm upset, good. I am outraged and will do anything legally possible to stop this road.	<p>The US 24 project has been slowly developing over many years. A project of this magnitude is both very expensive and could potentially result in significant impacts. Consequently, extensive study was undertaken to examine the need for improvements to the US 24 corridor. This included studies to examine what types of transportation facilities could satisfy the demand (rail, transit, highway etc.). Only the highway alternative was found to be effective at satisfying the need.</p> <p>The purposes of the US 24 project are specified in the Website so I won't repeat them here. I think virtually all citizens/residents in northwestern Ohio/northeastern Indiana will benefit from the improvement of this important arterial.</p> <p>That brings us to the preliminary development study. The intention is to systematically develop and evaluate alternatives in order to select one that meets the need and minimizes impacts to the human and natural environments. It goes without saying that affected landowners (wherever its located) would prefer that the project be somewhere else. So maybe the real question is, where is the best location for the project. Unless, the project is truly unneeded. If that's the case you should focus on why the project is a waste of money. There are plenty of places that ODOT could spend its money. The No-Build Alternative is still a viable alternative.</p> <p>Relative to farmland impacts, the evaluation of alternatives will need to evaluate their compliance with the Farmland Policy Protection Act (administered by the USDA) and the Agricultural District provisions of Ohio Revised Code Section 929.</p> <p>In addition, the preliminary development process will evaluate the alternatives relative to their impacts on community resources, relocations, property takes and socioeconomic factors among many other topics. Each topic will have their own standards on what will constitute a "significant negative impact". The goal is to avoid significant negative impacts. The public involvement process (this sort of dialog is a part of public involvement process) is intended to utilize the public's knowledge of the area to assist in the selection process. We appreciate your interest and urge you to stay involved with the project, your input is important.</p>
Unknown	08/13/99 2:56:47 AM	The proposed corridors for the Kleinhen Road and Switzer Road area are totally unacceptable. They're are wetlands and woods, not to mention homes that would be trespassed on all for the sake of more concrete to be added to accomodate business and trucking industry. There is no reason why the existing	Thank you for your comments. We are sorry that you did not see the notice for the public involvement meetings which were held in June. We did not send notices to individuals at that time because the study area covered almost 500 square miles. Instead we relied on the local media outlets, i.e. TV,

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>route 24 can not be facilitated and widened where necessary. A number of my neighbors, as well as myself have not even received any notification about scheduled meetings. What happened to the process of keeping us informed? There is to be a meeting in Antwerp on August 23,1999, affecting specifically the Defiance area residents, and we are not even alerted to the fact. You are not doing your job by keeping us informed. Your strategy is to keep this low keyed, and in another location, in hopes that no one will attend your meetings. I expect to see notice of this meeting on the internet and newspaper immediately.</p> <p>What happened to humanitarian and environmental concerns?? How would you like it if this was happening to you and your home?</p>	<p>radio etc., in addition to leaving fliers at gas stations and convenience stores.</p> <p>The decision to hold another public meeting was just made and finalized this week. It is being held in Antwerp so it will be at a location in the middle of the project. We are sending out meeting notices to everyone on the project mailing list. If you would like to call the toll-free hotline 1-877-ASK-US24, we can make sure that you are on the mailing list.</p> <p>At this time, the project is studying the corridors, no preference has been made. You input and comments, along with many similar ones by your neighbors, over the past week are definitely being heard. They are the reason that the meeting on August 23 was scheduled.</p> <p>The study process will include looking at the existing alignment of US 24 to see if upgrading the highway will meet the purpose and need of the project. Please continue to check the Website for project updates and we look forward to seeing you at the meeting on Monday, August 23, 1999, 6:00-9:00 p.m. in the Antwerp High School.</p>
<p>Patricia A. Marida</p>	<p>08/13/99 7:05:04 PM</p>	<p>My name is Patricia A. Marida and I am chair of the Central Ohio Sierra Club, an organization with over 3,000 members in the Central Ohio Area. I am also a member of the Executive Committee of the Ohio Sierra Club, an organization of over 14,00 members statewide. Both of these organizations are participants in the national Sierra Club's "Sprawl Costs Us All" campaign.</p> <p>Highway construction has been a major cause of sprawl. Transportation systems have in the past been constructed without meaningful public debate. These systems were in fact brought to us by the automobile, trucking, roadbuilding and petrochemical industries and by the US military. Trolley systems all over the nation were bought by the automobile manufacturers and dismantled.</p> <p>Ohio already has far more roads per square mile and per capita than any other state. We have prime agricultural land that is being destroyed to build these roads. Ohio's road building plans need to be more than a knee-jerk reaction to traffic congestion. This congestion has been brought to us by the fact that there has been and is currently no comprehensive plan for moving people or freight in the future.</p> <p>What served (or failed to serve) in the past is clearly no longer appropriate. With the advent of road rage, citizens are becoming vastly more aware of the failure of our transportation policies.</p> <p>Trucks are a major cause of traffic congestion, accident fatalities, and road wear. Instead of citizens paying more taxes for roads for trucks, ODOT needs to look at the option of shifting freight to rail. Truck traffic needs to be restricted so that the rail option for freight will become more viable. Then roads such as US 24 will not need to be widened. Although ODOT cites population increase as a reason for its plans for US 24, population in the area has actually decreased.</p>	<p>Thank you for your comments, they are an important part of the process. We will be including rail freight alternatives as a part of this project study. The goals of this study include improving traffic flow and level of service (for people and goods), reducing travel times between project termini, improving roadway safety, enhancing the regional transportation network and accommodating future economic growth in the region to increase the competitiveness of local and regional businesses. Designated U.S. Routes that span state boundaries play a major role in all of these areas. The obligation to address all the elements of the purpose and need of the project will be examined in the evaluation of the project corridors and alternatives.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>Construction of a totally new US 24 is the most damaging possible way to organize transportation. Ohio cannot afford to lose any more farmland to sprawl-encouraging road systems. ODOT needs to remove itself from the political system that listens to the roadbuilding and trucking industries, and take a giant leap toward public debate and community and transportation design. The individual people who are part of the aforementioned industries will actually benefit as well from a well-designed and well thought-out transportation system.</p> <p>Sincerely, Patricia A. Marida 1710 Dorsetshire Rd. Columbus, OH 43229</p>	
Clete Miller	08/13/99 7:08:42 PM	<p>Looking at the map the existing Rt. 24 from 127 to Defiance is a straight shot. And we believe the state already has right a way along this road. We believe this is by far the best option to widen the existing road. We would like to know the specific reasons why you would consider any other route.</p> <p>Clete Miller</p>	<p>Thank you for your comments. The option of widening the existing highway is being looked at as a part of the study. The corridors selected for further study off of the existing alignment were located to parallel the existing railroad tracks. The railroad already bisects the area, so it was chosen as a viable alternative. Your input and comments are an important part of the study process. A special Public Meeting has been scheduled for August 23, 1999 at the Antwerp High School. Your continued participation is appreciated.</p>
Neil Hindall	08/16/99 10:39:20 PM	<p>Dear Sirs, Could you please add my name to your mailing list, for the US 24 newsletter.</p> <p>Neil Hindall 20154 Kiser Road Defiance, Ohio 43512 Thank you</p>	<p>You have been added to the project mailing list. A special Public Involvement meeting has been scheduled for next Monday evening, August 23, 1999 at the Antwerp High School from 6:00-9:00 p.m.</p>
Unknown	08/17/99 6:10:17 AM	<p>I feel that allot of improvements can be made to the current us 24, by straighting out curves, making turning lanes and triming some tree line, this would have less of an impact on the eviroment, farm land, and in peoples lives. The Volunteer Fire Deptment of Cecil has 19 firemen, nine of the firemen live southwest of town, with the way the corridors are layed out it would make it very difficult for these firemen to report to the fire station. Is this being considered? Also it would make it difficult for the farmers to transport there farm equipment and it would make it hard for the farmers south and west of Cecil to haul there grain to the elevator in Cecil, as County Road 105, County Road 206 and County Road 87 are used for both fire protection and by farmers.</p> <p>Homes that are 50 years old or older, will these homes be more likley to be torn down rather than a newer home?</p>	<p>Thank you for your comments. The existing alignment of US 24 will be included in the project study. It will be evaluated to see if upgrades such as turn lanes, passing lanes, wider shoulders and straightening of curves can meet the goals of the project.</p> <p>In regards to older homes, there is no policy that dictates which homes take precedent over others. In fact, homes over 50 years of age may have historic significance and are therefore given special consideration. As we move further into the study process, we will be looking at ways to minimize impacts to local issues and communities.</p>
Unknown	08/17/99 6:58:25 AM	<p>Your highway will run right next to my property and realtors have told me my property value will drop 20%. Will I be compensated or will you buy me out?</p>	<p>If right-of-way is required from your property then you will be compensated for the fair market value of your property. You may be eligible for compensation if no right-of-way is required, but the right-of-way touches on your property</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
			line and it is determined that the end result is a loss of property value. This loss of property value is determined through a comparison of the before and after fair market values.
Unknown	08/17/99 7:01:32 AM	You have already marked a 2000 foot corridor which runs in-between many houses, will you be acquiring more than 2000 feet?	The 2000 foot corridor that has been staked is one of several that represent a study area. The actual highway alignment has not been determined at this time. It is estimated that a four-lane highway would require a 300 foot right-of-way.
Roger Hadley	08/17/99 8:39:10 AM	<p>I am wondering how and why you so quickly eliminated the north (D) and the south (L) corridors. They appear to be the two that would have the least impact on the local communities and would be the most direct route. Route D appears to be the best and easiest tie in to Defiance. I have been told that the main reason that D was abandoned was because of the Amish population in this route. This is not a fair reason to drop that corridor. If you look at the Amish farming style versus the other larger farmers in the other corridors the Amish can work around the smaller tracts created by the highway construction. The Amish would also welcome the chance to buy smaller tracts from those of us who can't get our bigger equipment into them. In the long run the Amish would have opportunities to buy more ground rather than lose ground. If you are going to drop D and L then I feel the only logical corridor to consider is to follow the existing US 24 road. Yes, I understand that you will have to go off of the path to straighten some curves to miss Woodlan High School and BF Goodrich. There is ground that could be used on the north side of the road by both the high school and BF Goodrich. By using this path for the new 24 you will do the least damage to our farms in the area. You will disrupt my farming operation with this path also but it will not cut my entire operation into many small pies that will not be easily farmable. If you chose L, J, F, and G, I will have nearly every farm I own cut into and I will probably be put out of business. Show me where you are going to take the road through any other 30 year old business. If you follow the above mentioned corridors I will probably lose 40+ acres along with having pies cut of my remaining fields and also some of my ground would be land locked with no existing access. If you chose this above mentioned route many farming operations will be cut into. Of my 40+ acres that the new US 24 would take, are you going to pay me the \$200.00 per acre that I net per acre each year? Then take that \$200.00/ acre times 40 acres or \$8,000.00 per year of lost income. Over the next 30 years of my farming career that translates to \$240,000.00 of lost opportunity that you will deprive me and my family of. Who will pay me and my neighbors for this lost income? I would give up my house and build on a different tract of land before I would give up my livelihood of farming the land. Please consider my comments and remember that houses can be replaced but farm ground can't.</p> <p>Sincerely, Roger Hadley, II</p>	<p>Thank you for your comments. The preliminary corridors were developed to avoid as many of the environmental features as possible and utilize existing transportation corridors (i.e. railroads). A comparative analysis was conducted on the 14 preliminary corridors to assess the impacts of each. The analysis and comments received from local citizens at the public involvement meetings were used to identify two feasible corridors for further study. Corridor selection was based upon a process of elimination. The corridors and segments were evaluated individually in regards to their environmental features, public comments and consistency with local and regional planning. The northern and southern corridors you refer to were included in Corridor #1 and Corridor #14 respectively.</p> <p>The following summarizes the rationale for eliminating corridors and segments:</p> <p>Corridors 1,2,3,5,6,8,9, and 11 were eliminated from further study based upon the high number of environmental impacts associated with each and public input.</p> <p>Corridors 1 and 14 would impact the greatest number of farmlands and adversely impact the agriculture industry of the region.</p> <p>The Northeastern Indiana Regional Coordinating Council has included the proposed widening of US 24 in their long-range plan since 1991. Segments D,C,H, and I are not consistent with the regional 2015 comprehensive plan. In addition, representatives of Indiana were opposed to Segments D,C,H and I because of the farmland impacts and future industrial development impacts. Segment D would require a new bridge crossing over the Maumee River. These issues effectively removed Corridors 1,8,9,10,11,12,13 and 14 from further consideration.</p> <p>As a result of the selection process, Corridors 4 and 7 were selected for further study. Additionally, improving the existing US 24 will be studied as a viable option to the project. Upgrades such as widening the road to four lanes, adding turn lanes, adding passing lanes, straightening curves and intersection improvements will be analyzed to see if they meet the purpose and need of the project.</p> <p>The next step in the study is to conduct field surveys to verify the existence and location of sensitive areas. That work should be completed later this fall. At that time, engineers will begin looking at alignments within the corridors</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
			<p>that avoid or minimize impacts. Typically, a four-lane limited access highway requires a 300 foot strip of right-of-way. So, a number of alignment locations could be included in one 2000 foot wide corridor.</p> <p>In regards to your questions concerning right-of-way acquisition, State Highway agencies follow federal regulations for the purchase of lands needing for highway construction. These regulations specify that property owners be reimbursed the fair market value of the property to be acquired plus damages to the remaining property, if any. The term fair market value is defined by the courts as the amount of money a property will bring if offered for sale on the open market.</p> <p>We will be holding a special Public Involvement Meeting on Monday, August 23, 1999 at the Antwerp High School. If you can possibly attend, representatives from the Real Estate Division of ODOT will be in attendance and will be better able to answer your questions.</p>
Mr. and Mrs. Steven Potts	08/17/99 7:12:07 PM	<p>Question I hope to get a good answer on with no delays because of uncertain engineers or because the states do not want to release it to the public, is no matter what the engineers decide my house is the first house in the way coming east from New Haven 469 highway,so no matter what by your maps my house is in the way. (Mr and Mrs Steven Potts 12602 US 24 east)...We have been putting in alot of improvements to our house around \$10,000 alone just this year to only find out our dreams and hard work our going to be destroyed. Now I know that NOBODY cares and we can not stand in the way of progress, but why do we have to put our lives on hold for 2 or 3 years to find out whether we are going to have to move or how close the road will be to my front door or can we continue our improvements. We would greatly appreciate the answer now so we can just plan to move.... Question 2 would be, if we try to move in a year or two would the State buy us out early or do we have to wait until it is convenient for the State? I do not think it would be right to put people's lives on hold at least we would know what to do.</p>	<p>Thank you for your request. Please be assured that the State is required to compensate you for the fair market value of your home. Therefore, the financial investment you have made in your home should not be lost. You may not have to wait 2-3 years if it is determined that an advance acquisition is appropriate. Advance acquisition may be appropriate due to hardship on the part of the property owner or if the state determines that it is necessary to protect the right-of-way. This determination is made on a case by case basis. A special public meeting will be held on August 23 (see the Website for more information) and a right-of-way representative from the State will be available at this meeting.</p>
Unknown	08/18/99 2:10:04 PM	<p>Hello Kerry...Is it not possible to get an interchange at US 24 and Switzer Road in Defiance? I thought that I had been told that nothing was "set in stone yet". I have traveled through Napoleon to check out their interchanges, which are close together, and so far these appear to provide easier and safer access to and from US 24. I believe the same would happen in Defiance as routing trucks in the Switzer/High Street area through the residential sections is not very safe or timely. I spent time reviewing aerial maps of the area and there appears to be enough land for a half figure eight intersection if not a diamond one. Also I was told (but I have verified this) that the State also owns land at the 424/24 connection to put in an intersection or something there and the railroad could be elevated to have enough distance between the new 24 and the existing railroad. Does the state own this parcel? Thanks for keeping me informed.</p>	<p>You are right, nothing is "set in stone". The location of interchanges have yet to be determined. We will be analyzing the need and possible locations after the environmental and traffic studies have been completed. Intuition about where an interchange would located has to be backed up with justification.</p> <p>I'm not sure what parcel the State owns near the 24/424 intersection, but I would think that they do not have enough right-of-way for an interchange. I'll have to look into it. At this time we have no plans to make any changes to the railroad. It is treated as a fixed design parameter.</p> <p>We will have large scale aerial exhibits at the meeting on Monday, August 23. Perhaps at the meeting we could discuss the alternatives. Hope to see you there.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/18/99 9:04:22 PM	I am opposed to these routes because of existing forests and wetlands. It also does not make sense to build another set of bridges over the Maumee and Tiffin rivers. Surely we would not want to waste valuable funds in such a manner.	Thank you for your comments.
Unknown	08/18/99 9:04:38 PM	I am opposed to these routes because of existing forests and wetlands. It also does not make sense to build another set of bridges over the Maumee and Tiffin rivers. Surely we would not want to waste valuable funds in such a manner.	Thank you for your comments regarding Corridors U, X, and Y. The Ohio Department of Transportation is currently conducting field investigations that will document all ecological resources, including wetlands, woodlands, scenic rivers and threatened and endangered species within all of the corridors, including U, X, and Y. Other resources, such as farmlands, historic buildings and archaeological sites are also being documented, so that ODOT can select a preferred alignment that will have minimum impacts to these resources. Again, your comments are greatly appreciated.
Unknown	08/19/99 12:50:22 PM	I oppose the proposed Corridors U, X, and Y, because these routes would cause severe damage to the Maumee State Scenic River ecosystem, further fragment the remaining woodlands, destroy people's homes, split farms, and be a waste of tax money, when the existing Maumee crossing could and should be used.	Thank you for your comments regarding Corridors U, X, and Y.
Unknown	08/19/99 5:19:37 PM	With the proposed Corridors U, X, Y there will be farmland, private property that contains a large amount of woods, private homes and wildlife habitat.	Thank you for your comments.
Unknown	08/19/99 7:58:32 PM	I attended the meeting held today at Brunersburg, and the two thoughts repeated throughout the meeting were (1) most realize the highway needs to be widened and (2) ODOT should seriously consider expanding the current facility by either widening the existing road or using the railroad as the "path." As an individual who drove on Rt. 24 every day for 12 years, I know the hazards of travel on the existing facility. But I also find the idea of re-routing the highway through farmland and people's homes a ludicrous idea. The state already owns the "right-of-way" along US 24 and should utilize that land. To go elsewhere would destroy natural resources, disrupt lives, and ruin homes and farmland. I can understand re-routing 24 if the roadway goes through towns where widening is impossible to achieve, but to reroute when the land is already available is assinine, to say the least.	Thank you for your comments. The existing alignment of US 24 is included in the study as an option. We will be looking at various improvements to determine if they meet the purpose and need of the project. Turn lanes, passing lanes, wider shoulders and straightening of sharp curves will all be considered. Also, widening the existing alignment to four lanes will be studied. All the corridors will be analyzed to determine their benefits, costs and impacts. As you stated, the natural resources, farmlands, woodlands and homes are important to protect. As the study continues, the corridors will be compared to see which ones offer the most benefits while minimizing the environmental, social and economic impacts. Please continue to check the Website for project updates. Your participation in the study process is important.
David Werner	08/20/99 3:32:00 PM	In examining the three proposed routes of 24 on the west side of Defiance, I became concerned about access to either old or new 24. Currently, many of the rural residents use Krouse Road and other county roads to get out onto 24, to bypass downtown traffic in Defiance in order to get to many of the businesses on the North side of town, including the North Towne Mall, or simply to head West on 24. If these accesses are blocked, traffic will be forced through downtown Defiance, adding to already existing congestion. Whatever route is finally adopted, please provide for access to 24 or even old 24 on the south side of town. I look forward to hearing from you. David Werner, Rural Defiance	Thank you for your comments. Local access is an important part of the US 24 project. As the study of the corridors proceeds, accessibility will be analyzed for each of the alignments. It will be important that the chosen alternative meets the needs of the local and regional travel demands, while minimizing impacts to the surrounding community. Please continue to check the Website for project updates.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/20/99 5:35:06 PM	<p>The more I think about last night's public forum, the more frustrated I am. The state rep. did not have answers for many of the audience's questions. He indicated that ODOT did not have answers either. Wrong way to do business!!! You should do your research first, then make your plans. The two "bypass" corridors appear ill-conceived and ill-planned or not planned at all!! Will this project be another example of my tax dollars at work...but not for my benefit. The best—and only— proposal in my opinion is to widen the existing highway rather than loopdeolooping around the area. A waste of land and money. Whoever thought of either of these options should go back to engineering school. If you have a reply which makes sense, then write ASAP. Otherwise, save your time and energy because you will NEVER convince me of the feasibility of the two corridors which veer off US 24.</p>	<p>Thank you for your comments. Please allow me to attempt to explain why we are looking at the Corridors U,Y and X. When we began the study of US 24, we considered the entire study area which went from Defiance to Fort Wayne with Hicksville as the northern limit and Paulding as the southern limit. This study area comprised approximately 500 square miles. A search of existing databases was conducted to identify known environmental, social and community resources within the study area. A map was then created depicting the inventory of sensitive areas and sites. A number of preliminary corridors were selected to avoid as many of the sites as possible. The combination of corridors segments resulted in 14 preliminary alternatives that were taken to the Public Involvement Meetings in June. An analysis of the impacts of each of the alternatives was prepared. Items considered included community facilities, cultural resources, ecological resources and land use. Based upon the impact analysis and comments received from the public, we narrowed down the corridors from 14 to 2 for further study. At that time, the one corridor that went north of the Maumee River was eliminated. A concern arose that a problem may come from the geometric layout of an interchange at US 24 and 424 by the State Highway Patrol Post. If we limited the study of feasible corridors to just the existing crossing and a problem arose at a later date with that alignment, the study process would have to be delayed to look at other alternatives and river crossings. We realize the impacts involved in an alternative that creates a new river crossing. The Maumee River is designated a State Scenic River and a new crossing would not be viewed favorably by the agencies we must coordinate with in the study process. These agencies include the Ohio Department of Natural Resources, Ohio Department of Fish and Wildlife and the Ohio EPA. Their input, along with those from the public, like you, will make a difference in the selection of the preferred alignment. The next step in the process is to identify, by field surveys, the resources located in each feasible corridor, then develop alignments within the corridors to minimize impacts. Another analysis will be undertaken at a higher degree of engineering design. These alternatives will be presented at another set of public involvement meetings next June/July. Comments from the public will be used to help in determining the selection of the preferred alignment. I hope that I have been able to explain the process and why the additional corridors were added. Please continue to check the Website for updates and stay involved in the process. Your comments are important.</p>
Dave Roehling	08/20/99 5:46:30 PM	<p>If I read the maps properly Corridors T, U, and X would require another four-lane bridge over the Maumee River. This appears to be an unnecessary expenditure of time and money. The existing bridge could easily handle four lane traffic and should be used.</p>	<p>Thank you for your comments. You are correct in that Corridors U and X would require a new river crossing and that it would be more expensive than upgrading the existing bridge. As the study proceeds, the benefits, impacts and costs of the different alternatives will be analyzed.</p> <p>The Corridors U, X, and Y were added as an option in case something was found along the existing crossing that would prevent us from determining a safe and functional alignment. Please continue to check the project Website for updates.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/21/99 7:09:41 PM	Who is responsible for the possible corridors? We are greatly opposed to the ones chosen thus far. ODOT's consultants must lack direction and sanity. Why haven't we received information on our land that we have there or informed of the public meetings? We will fight this until the end.	<p>Thank you for your comments. The corridors currently under consideration were chosen by the US 24 Project Team, consisting of the Ohio Department of Transportation and the consulting firm of Parsons Brinckerhoff. Additional input was also received from the Indiana Department of Transportation and the local County Engineers.</p> <p>The corridors were selected after a record search was conducted to identify known environmental, community and natural resources within the study area. The alignment of the corridors will be studied to determine their benefits, impacts, costs and ability to meet the purpose and need of the project.</p> <p>The public meetings were advertised in the local newspapers and radio stations. Please call the US 24 toll-free Hotline at 1-877-ASK-US24 to be added to the project mailing list.</p>
Unknown	08/23/99 8:13:42 AM	The more I think about the proposed corridors which move west of the existing highway, the more ludicrous the proposals are. One purpose of widening the road at many locations is to eliminate curves, yet two of the Defiance proposals add curves and what amount to detours. Also, there is already a bridge across the Tiffin River. To widen the existing road means the need to add one bridge to accommodate two lanes of traffic. The other two proposals require adding bridge(s) across the Maumee plus building another bridge across the Tiffin. In addition, the two "detour" proposals add several miles to the route. How cost effective!!! The proposal to add an interchange at Dey/Switzer is a sound proposal as the traffic volume is high at that intersection and the road provides access to Defiance schools/businesses/etc. Also sound are the proposed interchanges at Domersville and Independence Roads as again these are major county roads for trucks, school buses, and farm equipment. I urge you to carefully evaluate the proposals before you and choose the one which has the least impact on farmers, home owners, and the environment while also providing the best and safest route for those who utilize Route 24.	<p>Thank you again for your comments. You are absolutely correct about the cost effectiveness of the additional corridors. I also appreciate the input regarding the interchanges.</p>
Dave Roehling	08/24/99 9:29:51 AM	<p>It would seem to me that the southern route would have a lot less impact on farms. The route - at least around our area - Woodburn cuts off farm land in a straight line rather than diagonally. The diagonal would destroy many fields and have lot bigger impact on the useability of the remaining ground.</p> <p>The need for this project is obvious. The number of trucks and traffic is way to many for a two lane highway, including a super 2 that was discussed at the meeting last night.</p> <p>Dave Roehling 3303 Fahlsing Road Woodburn, IN 46797</p>	<p>Thank you for your comments.</p>
Unknown	08/24/99 11:32:24 AM	<p>Please provide us with any and all information regarding the possibility of updating the existing road or information concerning the intersection of IN 101 and US 24.</p>	<p>At this time there is not any detailed information to provide to you on studying improvements to existing US 24. In response to public comments ODOT agreed to study upgrades to US 24 in July 1999. Therefore, the studies</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
			are currently in the beginning stages. Beginning this winter project engineers will develop improvements to the existing route such as widening the road to four lanes; straightening curves; and improving interchanges and intersections such as 101 and 24.
Unknown	08/24/99 4:36:10 PM	I oppose the proposed Corridors U, X, and Y, because these routes would cause severe damage to the Maumee State Scenic River ecosystem, further fragment the remaining woodlands, destroy people's homes, split farms, and be a waste of tax money, when the existing Maumee crossing could and should be used. Especially since the existing crossing and right of way is already paid for, and designed for a major four lane highway.	Thank you for your comments regarding Corridors U, X and Y. ODOT is currently conducting field studies that will document all of the significant resources, including farmlands, wetlands, woodlands and scenic rivers, within all of the corridors that have been proposed for further study. Other resources, such as historic structures, threatened and endangered species and known archaeological sites, as well as residential properties, will also be documented during the next several months. ODOT will consider the potential impacts to these resources when selecting the preferred alignment for US 24. Again, your comments are greatly appreciated.
Unknown	08/24/99 6:40:23 PM	Having traveled US 24 from Fort Wayne to Toledo weekly since 1971, and having lived in Defiance from 1986 to 1994, and having grown up in Swanton, and now living in Fort Wayne, I am in favor of any cost effective, affordable, and long term relocation and highway improvement project that will make the highway, neighborhoods, and public (motorists, passengers, and roadside residents) safe by reducing accidents, curves, poor passing zones, and death or injury elimination. While it is the driver's responsibility to drive safely, defensively, and obey all rules of the road, we know from experience of the increased traffic, accidents, deaths, injuries, and housing developments. In order to protect lives, save property, reduce insurance and medical claims, and make the quality of live and economic development better, the highway must be improved from two to four lanes immediately. While some citizens will disagree with change and relocation, it is in the best interest of the general population to proceed without interference from a minority with selfish interests. Just do it!	Thank you for your comments about the US 24 project. Positive input is always greatly appreciated.
Terry Lodge	08/25/99 12:23:35 PM	At the August 23, 1999 Antwerp presentation, Kirk Slusher said FHWA had approved breakdown of the overall project into three components, roughly the New Haven to Defiance segment, Defiance to Napoleon segment, and Napoleon to Maumee segment. He said that FHWA concurred that each segment had independent utility. Please provide me with all Federal Highway Administration documents so indicating/ruling in that fashion. Thank you very much, Terry Lodge	Thank you for your participation in the project study process. I have forwarded your request directly to ODOT.
Michael J. Fronk	08/25/99 8:19:45 PM	I am a land owner in the U corridor where it enters Delaware Township from Noble Township. This land has been in my family since approximately 1840 and we had hoped that it would remain in the family for another 160 years. Your proposed route U, would split the property directly down the middle and	Thank you for your comments. When we began the study of US 24, we considered a 500 square mile study area from Defiance to Fort Wayne with Hicksville as the northern limit and Paulding as the southern limit. A search of existing databases was conducted to identify known environmental, social and

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>destroy valuable woodlands and wetlands that we have been trying to save and restore for the future generations. It seems to me, that these proposed corridors (U and X) are nothing more than a ploy by the Defiance County Engineer to benefit two individual business men in their efforts to gain access to 24 at the West High intersection, at the expense of many of the landowners in these corridors. Why do you want to destroy several miles of prime woodlands, wetlands, farm ground, homes and wildlife habitat, when you already have an existing crossing of the Maumee River just west of Defiance? Is it because you don't want to tear down the Highway Garage and State Patrol Post to make room for a new intersection? This whole issue of the U and X corridors smells of political scandal and under the table agreements between elected officials that are forgetting who their employers are. Please forgive me if I sound bitter towards you and the State, but I have seen far too much of this type of government action in my life, and would like to see it stop.</p> <p>To use any other crossing of the Maumee would not only be a waste of my tax dollars, but it would also cost all of us a lot more of what little remains of a rich natural heritage. For the sake of future generations, and those of us that value our woodlands, wetlands, and riparian habitats, don't consider Corridors U, X, and Y! Keep US 24 on the existing right of way and crossing of the Maumee State Scenic River.</p> <p>Please respond asap. Michael J. Fronk 21563 Flory Road Defiance, Ohio 43512</p>	<p>community resources within the study area. A map was created depicting the inventory of sensitive areas and sites. A number of preliminary corridors were selected to avoid as many of the sites as possible. The combination of corridor segments resulted in 14 preliminary corridor alternatives that were taken to the Public Involvement Meetings in June. An analysis of the impacts of each of the alternatives was prepared. Items considered included community facilities, cultural resources, ecological resources and land use. Based upon the impact analysis and comments received from the public, 12 of the corridors were eliminated from further study. Thus, two corridors are presently under study. The one corridor north of the Maumee River was eliminated. A concern arose that a problem may come from the geometric layout of an interchange at US 24 and 424 by the State Highway Patrol Post. If we limited the study of feasible corridors to just the existing crossing and a problem arose at a later date with that alignment, the study process would have to be delayed to look at other alternatives and river crossings. We realize the impacts involved in an alternative that creates a new river crossing. The Maumee River is a State Scenic River and a new crossing would not be viewed favorably by the agencies we must coordinate with in the study process. These agencies include the Ohio Department of Natural Resources, US Fish and Wildlife, and the Ohio Environmental Protection Agency. Their input, along with those from the public, like you, will make a difference in the selection of the preferred alignment. The next step in the process is to identify, by field surveys, the resources located in each feasible corridor, then develop alignments within the corridors to minimize impacts. Another analysis will be undertaken at a higher degree of engineering design. These alternatives will be presented at another set of public involvement meetings next June/July. Comments from the public will be used to help in determining the selection of the preferred alignment. Please continue to check the Website for updates and stay involved in the process. Your comments are important.</p>
Unknown	08/26/99 8:55:55 AM	After completion of this project will the speed limit be raised to 65 mph?	The speed limit of the improved road will depend on the preferred alternative that is chosen for the project. If a new four-lane highway is constructed on a new alignment, then the speed limit will probably be 65 miles per hour. If improvements are made to the existing route of US 24, then the speed limit will depend on the types of improvements that are constructed.
Unknown	08/30/99 12:18:39 PM	In the meeting 8-23-99 at Antwerp, Ohio, after the discussion I spoke to the representatives to find out if everything that was said pertained to Indiana residence as well as Ohio. The answer was a simple 'NO'. So that means that the information given to us thus far is of little or no value. Ohio had about a dozen reps there. Indiana had one. Even he stated that not all the info was the same (He did not specify what was applicable and correct). The State of Indiana has not given us any indication that anyone has authority to do any inspections or surveys. It is easy for someone to say they have authorization but that needs to be backed up with documentation from the State. Where is it? Please document it. I suggest that Indiana establish meetings to answer our questions.	Thank you for your comments. In response to other comments such as yours, INDOT has scheduled a public meeting to discuss the US 24 project and to answer questions that concerned citizens may have. The meeting will be held on October 13 at the Woodlan High School. INDOT will advertise the meeting in the near future.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/30/99 12:22:18 PM	Why isn't INDOT listed on the 'related links' page?	Thank you for your comment. In response to your question the US 24 Website will be linked to INDOT's website in the very near future.
Unknown	08/30/99 3:57:19 PM	I just finished reading the Crescent News. After attending 2 meetings in the last two weeks, I did not come away with the impression that the Defiance public was against expansion of the highway. Rather, the voices most often said they felt the expansion should take place along the existing route from Paulding County to the Henry County line with the addition of interchanges and overpasses at necessary points. The consensus seemed to be that the State already owns a significant amount of land...in fact enough in many areas to widen the existing road, thereby negating the need for the State to buy huge tracts of additional land and/or disturb nature as well as farmland and homesteads. When the Rt. 24 bypass was first constructed, enough land was purchased to allow for the expansion of the roadway in the future. The future is here and the land is still waiting to be utilized by ODOT for this expansion. Why would ODOT even consider the U, X, or Y corridors? This would add curves (which you are trying to eliminate), increase expenses due to the need to purchase land and homes, and require more bridges to cross the Tiffin and Maumee Rivers. Furthermore, the additional miles needed for U, X, and Y would also add costs to the project since the road would veer from the existing route. In conclusion, those in attendance at the Defiance and Antwerp meetings recognize that some individuals would have their homes and land disturbed; however, they also feel this disturbance should be minimal.	Thanks again for your comments. I also read the article in the Crescent-News yesterday and came away from the public meetings with the same impression as you did. It seems that there is support for a four-lane highway, just that we should utilize the existing right-of-way as much as possible. I think the public's displeasure with Corridors U, Y and X were very obvious. As we move forward with this study, the avoidance and minimization of impacts to houses, farms, businesses and environmental resources will be weighed against how well an alternate meets the goals of the purpose and need of the project. Public input, like yours, will also have an affect on the selection of a Preferred Alternative.
Nick Kelble	08/30/99 5:24:44 PM	I am one of what seems to be zillions of concerned citizens regarding US 24. I live right on the highway in a row of houses just west of Deadmans Curve. There is not one family (19 of us) that would like to see the highway widened or new turn lanes constructed. Part of the reason that my wife and I bought our house was because of the pending 'relocation' of a new highway, drastically reducing the traffic on existing 24. There is not a day that goes by, when you try to leave your driveway, that you can do it without fear. I know for a fact that the tractor-trailer speeds exceed 70 mph in a zone that is a so called "target enforcement area" with posted speed limits of 45 mph. I am not blaming you for lack of enforcement by state or county officials. I can see however that by making turn lanes that we will all be forced to move due to even more traffic and having a highway where our front yards used to be. I am sure that there are more families that will be forced to leave their homes, than there are families that will be affected by loosing some farmland. Most of the people in my neighborhood are retired or close to retirement age and getting ready to settle in for their "golden years". Not thinking about buying a new house on social security. I have a while to go. I hope to be able to spend it here. Enjoying a quieter, less traveled, existing 24. Thank you for your time. Nick Kelble bruha@bright.net 7084 US 24 Antwerp	We would like to thank you for your comments regarding the US 24 project. Currently, ODOT is studying several options for the project including improving existing US 24 and new alignments between Defiance and New Haven. At this time environmental data is being collected within the corridors and along the existing highway. Beginning in November 1999, engineers will begin developing highway alignments and improvements for US 24. During this phase of the project details such as turn lanes, interchanges, and potential widening to sections of US 24 will be determined. At this time, these details have not yet been developed. Please continue to be involved with the project and provide our input as the US 24 project develops.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/30/99 6:05:01 PM	<p>1. Timetable - the federal government identified the US 24 corridor from Fort Wayne to Toledo as "high priority" back in 1991. At the meeting it was noted that construction on the New Haven to Defiance section is not scheduled to begin before 2005. Yet the final alignment is to be announced in October of 2000. Baloney! The comments from the first series of public meetings clearly indicated we want this done as quickly as possible.</p> <p>The same applies to the Defiance - Napoleon section. The right-of-way was purchased in the 1960's and farm crops are being grown on it. In addition, the ODOT Website notes that TRAC has allotted \$36,250,000 for the project. The land is there, the money is there. But construction will not begin until 2002. Come on now.</p> <p>2. Limited access - I am still of the opinion that a four-lane limited access highway is a bit of overkill. Look at US 30 from I-469 to the Ohio state line (or to I-75 for that matter). I see no reason why the new US 24 cannot be like that road. If future traffic volumes dictate interchanges, they can be built at that later date. I just can't picture an interchange at the new US 24 and State Road 101. Come on now.</p> <p>3. Third Lane - related to future needs: will the final alignment have enough room for a third lane if traffic volumes in 50 years dictate the need? Look at the Ohio Turnpike which was built 40 years ago but now is third-laning from Toledo to Youngstown. I just don't want future generations to have to go through this entire process all over again.</p> <p>4. U, X, and Y segments - why go around right-of-way already in place? Apparently the concern is over SR 424 and it's interchange. As stated in #2 above, stop being so extravagant and the problem will take care of itself. And it will cost less.</p> <p>In other words, stop piddling around with details and just get it in gear. We want and need that new highway NOW.</p>	<p>Thank you for your comments regarding the US 24 project. ODOT appreciates your support as US 24 moves through the project development process. Building a highway improvement project is not a simple process. There are numerous federal regulations that must be followed before construction begins. Eighty percent of the project funding is being provided by the federal government. Therefore, ODOT must follow specific requirements in developing the US 24 highway project. Specifically, the National Environmental Policy Act requires the environmental studies that are currently being conducted for US 24. Yes, a Preferred Alternative will be selected in 2000 but the environmental studies continue specifically on the Preferred Alternative. These studies are very detailed such as archaeological investigations and are not quickly completed especially on a 40 mile long alignment.</p> <p>Currently, alignments have not been developed for the project. ODOT will begin developing new highway alignments this winter in addition to improvements to existing US 24. The specific highway design has not yet been determined. ODOT will look at several possible options such as a Super-Two, a freeway facility, and a highway facility. The location of interchanges/intersections will be studied and coordinated with the local government officials.</p> <p>Future traffic volumes are projected to the year 2025 and not 50 years into the future. As previously stated, time engineering has not started on the alignments. One other item that one must keep in mind is that currently there is no money for construction of the US 24 project. Thank you for supporting the US 24 project and please continue to provide your comments through the Website, the project office, or on the US 24 hotline.</p>
Roger Hadley	08/31/99 10:52:42 PM	<p>Why are meeting dates and locations not being advertised to the public? Why can't local papers carry the information? Why can't we be notified via our e-mail? We should be able to notified at least 2-3 weeks before meetings. When and where are the next meetings scheduled?</p> <p>Please keep me informed via my e-mail address.</p> <p>Thank You, Roger Hadley,II</p>	<p>Thank you for your comments. We have issued press releases to the local newspapers and radio stations as the means to advertise the first set of public meetings back in June. We have now established a mailing list which is used to notify people of upcoming meetings. We will also use the list to sent out project newsletters. These notices and newsletters are also available on our Website. If you feel that you would like to be added to the mailing list, please let us know. The next public meeting is tentatively scheduled for October 13, 1999 at the Woodlan High School, Woodburn, Indiana, from 6:00 to 9:00 p.m.</p>
Paul Mallett	09/01/99 5:29:23 AM	<p>I would like to submit my disapproval for the suggested new US 24 corridors immediately west of Defiance. The Switzer/Roehrig Road area is one of the last undisturbed areas of nature, history, and agriculture left in our area. Destroying this area while a perfectly feasible existing highway and right of way exists would be criminal. It is true that wherever this highway is located someone will be unhappy. However, this area is extraordinary in its proximity</p>	<p>Thank you for your comments. Your input is an important part of the study process. Please continue to check the project Website for updates.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>to the river, and is rich in the heritage of our area. It is imperative that we preserve this area for future generations to enjoy. Paul Mallett 1191 Fallen Timbers Drive Defiance, OH 43512 (419) 784-4128</p>	
Denise K. Hench	09/01/99 7:08:38 AM	<p>Last night the Defiance Hospital board (a division of Promedica) had our monthly meeting and a major topic was the impact of the proposed new US Route 24 to our medical campus, situated at the intersection of 24 and 15/18. We are breaking ground in December for a campus to include but not limited to a hospital out patient clinic, alzheimers unit , adult day care, hospice and SNF. The plans have been prepared by NBBJ of Columbus with the existing 24 traffic pattern in tact so we can transport patients in the Defiance region in a timely fashion by ambulance, mobile ICU, and helicopter. The existing 24 route gives the Defiance Hospital access to all the parts of the area . If there is no access at the High St. area onto 24 the county or city will entertain a proposal to put in a truck corridor "somewhere" on the hospital's immediate property. Of course trucks going through a medical campus is not acceptable to the Board nor will it be to the community of Defiance and surrounding area. The best possible 24 routing for quality patient care is the current one with access/interchanges at High Street, Routes 15 and 18 and 66 as we already have. Please be advised that a deviation from the current 24 routing will cause significant obstacles for the transporting of patients. Thanks for your consideration, Denise K. Hench Defiance Board Chairman and Promedica Board Member</p>	<p>Thank you for the update concerning the future plans of the hospital. We will be investigating the issues of access, interchanges and intersections later this fall. Any plans depicting the layout of the hospital and related facilities would be helpful.</p>
Unknown	09/01/99 9:45:11 AM	<p>My wife and I sincerely hope you don't run a corridor thru the Switzer Road area. We believe the area majority expected to see an improved US 24, keeping 24 where it is. Why does a cloverleaf have to be constructed at US 24 and old 424? Can you move the positioning west of Defiance in open area and avoid size complications? We agree with what was brought up in past meetings that any route going north of 24 is money wasted, and basically Fort Wayne is south keep the highway south and closer to the large commercial site west of Defiance.</p>	<p>Thank you for your comments. Your input and participation is an important part of the study process. Once the environmental field studies are completed, later this fall, we will begin the engineering studies. The issue of interchange/ intersection locations will be studied as to need, justification, safety and economic terms. Please continue to check the project Website for updates.</p>
Unknown	09/01/99 10:13:39 PM	<p>I can't believe that a roadway would be directed east along US 24 or near US 24 then for no good reason near Defiance it changes. The road heads north going across two river then turns and goes back east again to the existing US24. The only thing that I would say someone or a few people has a lot pull if this takes place. Take this to a six grade class anywhere and give them the choices and they will be able to tell you the cheapest way. My belief is put up two signs one at Fort Wayne and the other one at Toledo stating "No Thru Trucks" then take the toll off the Toll Road. Then forget about this "Fort to Port Road".</p>	<p>Thank you for your comments. When we began the study of US 24, we considered the entire study area which went from Defiance to Fort Wayne with Hicksville as the northern limit and Paulding as the southern limit. This study area comprised approximately 500 square miles. A search of existing databases was conducted to identify known environmental, social and community resources within the study area. A map was then created depicting the inventory of sensitive areas and sites. A number of preliminary corridors were selected to avoid as</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
			<p>many of the sites as possible. The combination of corridors segments resulted in 14 preliminary alternatives that were taken to the Public Involvement Meetings in June. An analysis of the impacts of each of the alternatives was prepared. Items considered included community facilities, cultural resources, ecological resources and land use. Based upon the impact analysis and comments received from the public, we narrowed down the corridors from 14 to 2 for further study. At that time, the one corridor that went north of the Maumee River was eliminated. A concern arose that a problem may come from the geometric layout of an interchange at US 24 and 424 by the State Highway Patrol Post. If we limited the study of feasible corridors to just the existing crossing and a problem arose at a later date with that alignment, the study process would have to be delayed to look at other alternatives and river crossings. We realize the impacts involved in an alternative that creates a new river crossing. The Maumee River is designated a State Scenic River and a new crossing would not be viewed favorably by the agencies we must coordinate with in the study process. These agencies include the Ohio Department of Natural Resources, US Department of Fish and Wildlife and the Ohio EPA. Their input, along with those from the public, like you, will make a difference in the selection of the preferred alignment. The next step in the process is to identify, by field surveys, the resources located in each feasible corridor, then develop alignments within the corridors to minimize impacts. Another analysis will be undertaken at a higher degree of engineering design. These alternatives will be presented at another set of public involvement meetings next June/July. Comments from the public will be used to help in determining the selection of the preferred alignment. Please continue to check the Website for updates and stay involved in the process. Your comments are important.</p>
Unknown	09/02/99 7:13:55 PM	Please don't just improve 24. It must be a four lanes. Northwest Ohio needs to grow, and will. Change is always hard. We must look to the future.	Thank you for your comment on the US 24 project. Currently, improvements to the existing US 24 and new highway alignments are being studied. One is not preferred over the other.
Tracey	09/03/99 4:16:48 PM	<p>I own a home on Powers Road in Defiance County, between Krouse and Ashwood Roads. I would like to know how close this highway will be to my front door because I am trying to sell my house. The RR tracks are less than a 1/4 mile north of me. Thank you for any information you can give me at this time.</p> <p>Tracey</p>	<p>At this time, ODOT and INDOT are in the planning stages of the US 24 project. Currently 2000 to 4000 foot wide corridor are being studied by environmental scientists. In addition, improvements to the existing route will be studied. At this time, highway alignments have not been developed within the corridors or specific improvements to the route developed. These efforts will be done this winter and presented at a public meeting scheduled for July 2000. In addition, a preferred alignment has not been selected for the project. One will be selected after the July 2000 meeting. Currently, the information is not available to answer your question.</p>
Unknown	09/05/99 3:53:25 PM	Thank you for the very informative site. Is there any information on studies or planned studies regarding how traffic will be routed just outside the actual study zones, e.g. New Haven just west of I-469? A new four-lane is great, but not if you live in the quiet neighborhood on the two-lane just at the entrance or exit to it.	Through the course of the study, the actual termination point for the roadway improvement will be determined based upon the effects that termination point will have on the adjacent roadways and communities. Consideration will be given as to how to terminate the improvement without

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		Thanks.	adversely effecting areas outside of the study zone. At this point in time, we are looking in more detail at the impacts of the various alternatives within the corridor including impacts on either end of the study area. Please keep in contact through our Website, newsletter, and public meetings as the study progresses further and the preferred alignment begins to develop.
Unknown	09/07/99 2:48:19 PM	I understand there is a public meeting scheduled for Oct. 13, 1999 at Woodburn, Indiana. Is this documented on this Website?	The Indiana Department of Transportation will hold a public involvement meeting for the US 24 project on October 13. The meeting will be held at the Woodlan High School in Woodburn, Indiana from 6:00 p.m. to 9:00 p.m. Indiana time. A notice of this meeting will be on the US 24 Website by the end of next week.
Unknown	09/13/99 3:00:03 PM	You haven't updated anything since the special meeting held in August for IN/OH residents. I (and many others, I am sure) am quite interested in knowing the answer to one question in particular. An Ohio resident stated that the public was informed at the initial building of US 24 that enough land was purchased at that time to convert the two-lane highway into a four-lane highway should the future need arise. She wanted to know why this wasn't happening and why the other study areas were even needed if the state/s already had all the land they were supposed to need. There was not an answer available to this question at the meeting. As a matter of fact, your experts seemed totally stumped with the information this Ohio resident had to offer.	<p>You are correct. With the exception of a notice for a public meeting in Indiana on October 13th, the Website has not been updated. The Website will be updated monthly as the project progresses. The Website will be updated for the month of September before the end of the month.</p> <p>ODOT does not own right-of-way along the entire length of US 24 between New Haven and Defiance in which to construct a four-lane highway. The section of US 24 from the existing four-lane section west of Defiance to the US 24/424 intersection is the area that ODOT does own enough right-of-way to construct a four-lane highway. Therefore, ODOT must study various routes between New Haven and Defiance for the new US 24. As you know, in addition to new alignments, improving the existing US 24 route is being studied.</p> <p>The US 24 project is being funded by the federal government. Because federal money is being used for this transportation project, specific regulations must be followed. The current US 24 studies are being conducted in accordance with the National Environmental Policy Act.</p>
Unknown	09/21/99 11:54:43 AM	It is September 21st. We have received no newsletter as yet for this month. How often do you plan to update this publication?	There is not a set schedule for the newsletter publications. Newsletters will be written and mailed out as the US 24 project develops and significant milestones are achieved. As of to date, ODOT has not indicated when the next newsletter will be issued.
Unknown	10/13/99 2:33:11 PM	Since this project isn't going to start till 2004 or 05 what are the plans with the increase in traffic that seems to be happening every day. I live on 24 and the night traffic is also increasing during the night. This seems like a long time to live this way with no relief, especially when the truckers get mad and use their Jake brakes because someone wants to turn in their driveway. Next question, when is something going to be done with the road in Antwerp, with the dips from the tires? Very dangerous with winter weather coming up. They came and fixed a crack in the cement by the stoplight. It took 2 days. Now what?	Concurrent with the US 24 Study, an additional study is being performed that is looking at the feasibility of alternative modes of transportation along US 24 from Toledo to New Haven in order to reduce the number of vehicles on the roadway. Also, a truck weigh station was added east of Defiance to help police monitor and enforce trucks carrying loads exceeding the weight restrictions. And the State Highway Patrol is still conducting target enforcement to control speeding along US 24.
Kirk and Renee Richman	10/14/99 10:56:18 AM	We are still confused why we have not as property owners of the farmland located at the northwest corner of US 24 and Doyle Road; legal description:	Thank you for your comments. We have sent a letter and added you to the list of property owners. Should you not receive the letter by the end of this

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>72.5ac tr n 1/2 nw 1/4 sec 5, received a letter from you regarding the study team on our property. you have replied stating you received addresses via the county records and we are definitely on the county records since purchasing the property in 1992. the only problem we can think of possibly is that the property and our residence are not the same address. in fact there are no residences on our property nor on the three surrounding properties though we are aware the other two property owners have received letters! Please check your records again!</p> <p>Thank you, Kirk and Renee Richman 1107 N. Berthaud Rd. New Haven, IN 46774 219-749-4136</p> <p>(Above is our residence address; since our property has no residential address; though the county is aware as we receive our property tax bill yearly without a problem!)</p>	<p>week, please notify us. Thanks again.</p>
Unknown	10/17/99 8:38:59 AM	<p>This is a copy of the public comments that I filed with INDOT re: the October 13 meeting in Woodburn, IN. Since I think this was an INDOT meeting (but not sure), I sent the written comments to Indianapolis. I don't know whether they share their public comments with you; that's the reason for this copy going to you.</p> <p>1. Timetable - the federal government identified the US 24 corridor from Fort Wayne to Toledo as "high priority" back in 1991. At the meeting it was noted that construction on the New Haven to Defiance section is not scheduled to begin before 2005. Yet the final alignment is to be announced in October of 2000. The comments from the first series of public meetings clearly indicated we want this done as quickly as possible (US 24 newsletter August 1999).</p> <p>At a certain time INDOT and ODOT have to split their joint effort and go separate ways because of the funding from each state. After the final alignment is announced, there is no reason why INDOT cannot take the ball and run with it. I think 11 miles of new highway can easily be completed before January 2003. Even with this timetable it would be 12 years after the Federal government listed this as a "high priority" project. (The "high priority" information in this and the preceeding paragraph was obtained from the "US 24 Preliminary Alternatives Study". This document can be downloaded at www.us24.org.)</p> <p>2. Limited access - I am still of the opinion that a limited access highway is a bit of overkill. Look at US 30 from I-469 to the Ohio state line. There is no reason why the new US 24 cannot be like US 30 - and it will cost much less. If future traffic volumes dictate interchanges/overheads/cul-de-sacs, they can be built at that later date (as in the new interchange in Napoleon, OH). Besides, there are only two interchanges that I can see in Indiana at this time: Webster Road and State Road 101. This would virtually close off the new highway to almost everyone in eastern Allen County.</p> <p>I do not believe this would compromise safety. Obviously safety is a huge issue here because I was told at one of the previous Public Involvement Meetings</p>	<p>Thank you for your comments and support on the US 24 project. It would be nice to move forward with final design as you suggested right after the selection of the Preferred Alternative, but unfortunately the preliminary development process that the US 24 project is currently in the middle of requires more environmental work before final design can begin. Following selection of the Preferred Alternative, very detailed studies are conducted on the alignment such as wetland delineations and mitigation plans; and archaeological surveys. Environmental permits are applied for and preliminary engineering is completed on the Preferred Alternative. In addition, public hearings are held on the project. Then a Final Environmental Impact Statement is completed followed by a Record of Decision document. All these items are required by law and have specific time frames allocated to them. The project is moving as fast as possible through ODOT's Nine Step Process. For more details on this process please visit ODOT's Website.</p> <p>Your suggestions for the highway design will be taken into consideration during the next engineering phase of the project which will begin in November.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>that over 40% of the total number of accidents on US 24 involve injury or death. Again, let's look at US 30: the old 2-lane highway was just as bad as US 24 is now (in both design and vehicle capacity), and the accident rate went right off the scale. I am aware that quite a few accidents on US 24 are broadside and result from a vehicle attempting to cross over or turn onto the highway. I do not have any accident statistics, but believe this is no longer a problem since US 30 was rebuilt as a four-lane divided highway - and it's not limited access.</p> <p>3. Third Lane - this may sound contradictory to what I just said, but is related to future needs: I believe the final alignment should have enough room in the median for a third lane if future traffic volumes dictate the need. Look at the Ohio Turnpike which was built 45 years ago but now is third-laning from Toledo to Youngstown. Someone had the foresight to plan for the future. I just don't want future generations to have to go through this entire process all over again, or to have to acquire additional right-of-way to build the third lane on the right side of the existing lanes when it could easily be built in the median.</p> <p>This is now the problem on the Defiance-Napoleon section, and it's just to build 4 lanes. When the right-of-way was designed and purchased in the 1960's, someone wasn't paying attention, so now they need additional right-of-way just to build the additional two lanes. Note that the money for this section has already been allocated by the Transportation Review Advisory Council (TRAC is the independent government agency that determines which Ohio highway projects are funded). So now we have to wait until 2002 before construction from Defiance to Napoleon can even begin.</p> <p>The people have clearly stated: we want and need this new highway now. I have no problem with the time involved to conduct the necessary studies. However, once the final alignment is determined, then get it designed, go purchase the property, get construction bids, and do it!</p>	
Unknown	11/08/99 4:54:53 PM	<p>I hope that those working on this project are not letting a few "negative and Non-progressive" thinkers here in Northwest Ohio think all of us are anti-US 24 four-lane. This project is much needed and many years overdue. The three deaths this past week and then the lost steel coil this morning closing the road show the need to improve safety of the road. This area also needs a shot in the arm to carry us into the 2000's as a four-lane highway would at least improve our chances for economic development to offset the lower employment in farm related industries as farms become larger and more efficient, thus reducing overall employment. Keep positive and get us this new road.</p>	<p>Thank you for your input. As you can image the majority of the comments we receive from the public are critical to our proposals. That's understandable but its always nice to hear some positive input. Our project development goal is to accomplish the project's Purpose and Need while minimizing impacts to the natural and human environments. Because some impacts are difficult to discern without local knowledge, we appreciate all the public's input. Rest assured, the project team is moving ahead with the project with all due diligence.</p>
Unknown	11/08/99 7:58:04 PM	<p>Road noise from increased and faster moving trucks is a concern. Tire noise from faster moving trucks is a different pitch and seems to travel further away from the source. Therefore noise barriers should protect homes within one mile of the new four-lane.</p>	<p>Thank you for your input. Road noise is an important issue in developing transportation projects. Noise studies will be conducted on the alignments developed for US 24 to determine the noise levels that result from the proposed alignments. Existing noise levels are recorded and future noise levels are projected through computer modeling to determine the change in noise levels as a result of a highway. From these studies, noise mitigation measures are designed and implemented.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	11/18/99 8:26:42 AM	With the increase of traffic through Hicksville and Rt. 2 (Ind. 37) Why not route US 24 north of Antwerp? Wouldn't it be cheaper and help take some of the traffic off these roads? I travel both roads and some times wonder which is worse. US 24 has more trucks but 37 has bottle necks too. Why is it the 24-469 exit is always brought up couldn't the west exit be farther north? Wouldn't this take some of the traffic off of US 6 and 20?	Thank you for your interest in the US 24 project. All comments become part of the public record and documentation for the project.
Unknown	11/23/99 1:23:50 PM	I think the new US 24 project is gay!!!!!!	Thank you for your interest in the US 24 project. All comments become part of the public record and documentation for the project.
Unknown	01/03/00 5:33:33 PM	I have property that follows the single rail track, that goes between Fort Wayne and Defiance. I believe that my property is included in the #4 corridor, at the corner of Krouse and Kiser Roads in Defiance County. Can you tell me if this corridor is still under consideration. I have plans to build a new home this spring.	The intersection of Krouse and Kiser Roads is within the limits of one of the corridors under study. The corridors are typically 2000 feet wide, while the right-of-way necessary for the new highway is approximately 300 feet. We are currently investigating the actual highway alignments within the corridors. According to the project schedule, we will have the preliminary alignments established and presented to the public for comments by June/July of this year. Please contact us if you have any further questions. Thank you.
Roger Hadley	01/08/00 4:53:59 PM	<p>Why can't you keep us informed of upcoming meetings using the internet? I have supplied my e-mail address to you several times and have never received a response from you. Why don't you list the up coming meetings on the internet sight? I have found out that you have a meeting scheduled for Feb. 1st at Woodlan High school. I would like more details on the meeting. Also do you have any better idea as to where your first preference for the location of the Indiana route. I am about to start building a new house and I don't want it in the middle of the prospective new road. Please let me know where the highest percentage chance is that the road will be.</p> <p>I will be waiting for some answers. Roger Hadley, II</p>	<p>The US 24 public meeting information has been and will continue to be posted on the US 24 Website. Every public meeting to date for the project has been advertised on the US 24 Website. In addition, after each meeting, a summary of the public meetings has been put on the Website for all to read.</p> <p>The Ohio Department of Transportation and the Indiana Department of Transportation have scheduled two public meetings on February 1 at the Woodlan High School and on February 2 at the Defiance Senior High School. The purpose of the meetings is to update the public on changes that have occurred to the feasible corridors. Announcement of these meetings will be posted on the US 24 Website by the end of next week. Also public meeting announcement flyers will be mailed this week to everyone on the mailing list which includes over 1,500 names. Public meeting notices will also be put in the local newspapers.</p> <p>To date, there is not a preferred route for the US 24 project. At this stage in the planning process, ODOT and INDOT are still giving equal consideration for all of the proposed feasible corridors.</p>
Unknown	01/15/00 5:03:49 PM	I have twice requested to be on the mailing list and have not recieved anything. The first request form I filled out when an employee of Parsons Brinckerhoff came to my house to take pictures. The second form I filled out was at the meeting at Woodlan High School in October. This is the third time I have requested to be on the mailing list. Considering that my homestead is shaded by both relocation proposals, I have a great interest in this project.	Please except our apologies for not getting your name and address on the mailing list. A mailing was sent last week with information concerning the upcoming public meetings to be held on February 1 and 2. Please e-mail your name and address to me and I will personally see to it that the information is put in the mail to you.
Steve and Jackie Brookhart	02/02/00 6:38:17 PM	We moved to this area 6 years ago – to the south of Indiana Highway 14 and to the north of Paulding on Morgan Road. We chose this area because of	I received your comments on the US 24 project. The project team is dedicated to developing a project that accomplishes the Purpose and Need

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>the quiet tranquil atmosphere and also to have Highway 14 as a nice quiet route into town, free of semi's and a large amount of cars. We recently became aware of the proposed route for Highway 24 to the south of Woodburn and are very disturbed by it. This is an area full of folks who have lived in this area for years, some most of their lives and who value their privacy and solitude. We moved to the south of Woodburn to escape the area of Highway 24 and all it stands for. We do not wish our farmland, woods, or beautiful land disturbed by the impact or scenary of a US highway, semi's, more cars and more people coming any closer to us than they already do. There are many folks who came to this area to be "out in the country and away from all the commotion". We would like our opinion known, which is to disagree on bringing the highway to the south if Woodburn.</p> <p>Sincerely, Steve and Jackie Brookhart 5112 Morgan Road Monroeville, IN 46773 219-623-2331</p>	<p>established for the area while minimizing impacts to the natural and man-made environment. The Transportation Development Process requires the project team to rigorously investigate the impacts associated with the alternatives they generate. However, no matter how diligent the project team's investigations are, the local residents have an understanding of the area that a non-resident cannot. Consequently, I'd urge you to supply (to the project team) any information that might pertain to the natural, cultural, socio-economic, environmental and neighborhood impacts of the project. I'd also urge you to work with your municipal, fraternal and civic institutions in order to best coordinate with the project team. We're acutely interested in how our alternatives might affect existing communities. Thanks for your input. Your participation will allow for the development of the best possible project.</p>
Unknown	02/03/00 10:45:52 AM	<p>I think Mr. Slusher did a commendable job during this meeting last night. He kept the information flowing and answered questions that were sometimes very opinionated. It was obvious that some individuals don't want progress. This "new road" is needed and the sooner the better. Also, to help with bringing future jobs to this area for our children, an interchange at West High Street or a short access to an interchange from this area is needed. Keep up the good work and don't let a few taint the final studies to be negative.</p> <p>As always, the voices that are often the loudest are those of the minority speaking against the project while there remains the silent or passive majority that favor it.</p>	<p>Thank you for your positive comment about the US 24 project. As we develop the highway alignments, we take everyone's comments and requests into consideration. We understand about the High Street interchange and are addressing this issue as we work on the alignments. Thank you again for your support.</p>
Unknown	02/12/00 9:44:14 AM	<p>In my opinion, improving and widening the existing highway 24 is the best solution, the reason moving north, you are again going to destroy hundred of acres of farm land and we will have four major highway within 5 miles distant. Here we will have old 24 then new 24 then 14 then old 30 then new 30. So widening the existing highway will lessen the damages to this land.</p>	<p>Thank you for your input relative to the US 4 project. In addition to the No-Build Alternative, the project is investigating other alternatives that involve design solutions that do not involve new alignments - such as the improvement of the existing facility. Yours is not the first suggestion to improve the existing highway that we've received. Although its not intuitively obvious, the costs and impacts of large-scale improvements of an existing highway are often very great. This is typically because the land adjacent to existing highways is developed (often with land uses that will require expensive hazardous material cleanups) and the acquisition of these properties is costly. Another difficulty is developing a revamped highway so that it will accommodate the traffic needs of the area. These factors will be incorporated into the evaluation process. Thank you for your input.</p>
Marvin Hoot	02/14/00 7:10:36 PM	<p>My family purchased some property just north of the railroad tracks at the intersection with Gar Creek Road in Indiana just outside New Haven. We purchased this 2.7 acre lot in June 1999. Several lots were partitioned from the</p>	<p>At this time, all the US 24 corridors are equally viable for the project, there is not one preferred over the others. Currently, we are in the process of developing highway alignments within the corridors. These alignments are 350</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>Fiedler farm at that intersection for homebuilding. My question concerns the reasonableness of acquisition since currently unimproved building lots have a higher per acre price than farmland. What is the likelihood of losing this lot and our life savings (sunk into the lot) too?</p> <p align="right">Marvin Hoot</p>	<p>feet wide. At this time I cannot tell you how your property will be impacted by the US 24 project because the highway alignments are still being planned and developed. The alignments will be presented to the public in July 2000 at a series of three public meetings.</p>
<p>Karol Covington</p>	<p>02/18/00 9:47:21 AM</p>	<p>I live in the proposed corridor of C, right on the corner of Webster and Harper Roads. My first concern is why this area was even added in along with H, when you can widen the existing US 24 instead of going so far south and dropping down into farm and wooded areas, it puts the proposed corridor closer to US 30.</p> <p>My second concern is the loss of property value. When you have a four-lane highway along side or in back of your house and property or farm. My property and that of my neighbors will never be able to be sold which really bothers me as I am retiring in four and a half years and need the money from the sale of my home to move north. Who would want to buy property that close to a four-lane highway, that is zoned agricultural? All of us are out here because of the peace and quiet. We all like the country life, if we wanted the hustle and bustle of vehicle traffic, we'd live in the city.</p> <p>My third concern is why you are buying out the homeowners on the rest of Webster Road and leaving mine on the corner, along with the homes and farms on the north side of Harper? We feel that we are being left high and dry. Why don't you buy us all out, so we can all start over? Not left with homes we can't sell or farms with barns, machinery, silo's, etc. that can't be farmed because the land is gone in back and alongside their farm houses. These farms have been in these families for a hundred years and longer.</p> <p>The other thing I would like to address is the impact on animal life and the environment. I feed blue birds, blue jays cardinals, finches and chickadees, sparrows, crows, ravens along with squirrels and rabbits. I also enjoy watching the hawks, blue herons and deer. I have put up a bat house and will be adding another in March, along with a martin house. What will happen to these animals if your four-lane highway arrives in my back yard?</p> <p>In closing I would like to say, please drop Corridors C and H. The farmers here have worked these farms for generations, it's all they really know and most important love, their livelihood is at stake here. If the highway has to be in our back yards, than buy our properties at market value and let us start over.</p> <p align="right">Sincerely yours, Karol Covington</p>	<p>Thank you for your comments concerning the US 24 project.</p>
<p>Everett Schurg</p>	<p>04/04/00 4:18:00 PM</p>	<p>Note: The Gar Creek road terminates just west of state road 101. That is not correct, it continues through the Webster Road. Please consult state or local map. Sure wish this situation could be resolved more expeditiously.</p> <p align="right">Everett Schurg</p>	<p>Thank you for your comments.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Everett Schurg	05/21/00 11:27:42 AM	Your Website is not functioning such that there is a current map that can be printed. I got the last of the four shown to show full screen once, tried to print and the screen defaulted to the face page. Then none of the maps could be viewed full screen. What did I do wrong? We have been left off of your current mailings, such as the recent newsletter. Everett Schurg 1333 State Road 101 Woodburn, Indiana 46797.	Thank you for your comments.
Everett Schurg	05/21/00 11:58:39 AM	Please ignore my previous e-mail today. I did find the newsletter. The map is not accurate in showing the location of county roads such as Gar Creek Road from State Road 101 to Webster. Could this be corrected and the county roads identified on the map that you have on the internet? Need to be able to isolate smaller segments and "blow them up" for a better understanding of the corridors. The Fort Wayne to Defiance is too large an area. Could you change the Website to be able to just print the Indiana section? Thank you, Everett Schurg 219-424-1762	Thank you for your comments.
Jim Beerbower	06/13/00 1:27:48 PM	According to the time line on the us24.org Website, there is to be Public Open House #2 scheduled in June 2000. I've not received information on where or when. Can you advise? Thank you	The public meetings are scheduled for July not June. ODOT and INDOT will hold three meeting on July 17, 18, and 19 to present the feasible highway alternatives that have been developed for the project. Public Meeting notices will be sent out next week. In addition, the newspapers will advertise the meetings.
Susan McNeely	07/04/00 9:00:33 AM	I'd like to be kept informed about the meetings you have concerning US 24. I know you post them in the paper, but me and a few other neighbors don't get the paper. If it wasn't for me looking at this site I wouldn't have known about the meeting on the nineteenth. I would like to receive letters on up coming events and plans. I live on one of the routes and I need to be informed on these matters. Don't miss understand me, I'm not upset, I just would really like to be kept informed. Thank you, Susan McNeely	Public meetings for the US 24 project are planned for July 17, 18, and 19. On July 17 the meeting will be at the Antwerp High School at 6:00 p.m. On July 18 the meeting will be at the Woodlan High School at 6:00 PM Ohio time and on July 19 the meeting will be at the Defiance High School, also at 6:00 p.m. Currently, we are in the process of mailing out meeting flyers to everyone on the US 24 project mailing list. I looked for your name and did not see it on the mailing list. You can sign up to be on the mailing list at the public meetings or through the Website. That way you will receive future project mailings. If you have any other questions or concerns please do not hesitate to contact me through the website or US 24 toll free hotline 1-877-ASK-US24.
Unknown	07/10/00 9:30:52 PM	I think the idea of turn lanes is way to dangerous on US 24. I live just off 24 how could it be safe sitting in the middle of two lanes waiting to turn with trucks passing on both sides at 60 to 70 m.p.h? bad enough during good weather then you have the snow and rain trucks do not slow down.	Thank you for your comment regarding turn lanes on US 24. After studying an improved two-lane alternative for the US 24 project, ODOT has determined that it is not a feasible alternative because it would not meet the needs of the future traffic volumes projected for US 24.
Unknown	07/17/00 7:23:33 PM	It appears to me that the current increase in truck traffic has resulted since the completion of I-469. Why can't the US 24 exit be closed off to reduce that traffic? Areas between New Haven and Toledo grew without it before.	According to federal and state regulations, neither INDOT nor ODOT can restrict truck traffic on US 24. The purpose of a US highway is to facilitate the movement of goods and services. As long as the pavement and bridges are

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		Remove the route for the truck drivers, and the traffic that has no direct result on the area (those vehicles that do not stop between Fort Wayne and Toledo) will take alternate routes to get to their destinations. Could it be possible to close the 469 exits for a period of time to study the results of traffic, and the adverse affects (if any) on the area business and industry. They all took different routes before the "loop" was completed could it happen again without decreasing the areas' economy?	able to support the loads carried by trucks, INDOT and ODOT cannot restrict trucks from using US 24.
Unknown	07/17/00 7:29:39 PM	I attended the meeting on 7/17/00 at Antwerp. The question about placement of scales was asked and the reply was that there were already scales in place between Napoleon and Defiance. Why are there not actual weigh stations on the route. If trucks have to stop on the route, overloaded or not, the might detour 24 and take a route that does not require them to stop. A member in the audience near me also said that the scales tha that are in place are only accurate to 10%, if a driver knows the location of the scales, he can touch his brakes as he crosses them and that will throw the accuracy off. I would like to see weigh stations present somewhere between Napoleon and Defiance to force each truck to be weighed.	Between Defiance and Napoleon, there is a weigh in motion scale in place. Most trucking companies do not know that this scale is in place. The weigh in motion scale collects weight data on trucks traveling on US 24 and as you stated, the accuracy is not perfect. Data collected to date, shows that approximately 5% of the trucks using US 24 between Defiance and Napoleon are overweight. This amount is minimal. At this time ODOT does not have plans to put any other type of weigh stations on US 24. The truck issue on US 24 is the number of trucks that use the highway and the capacity of US 24.
Unknown	07/18/00 8:57:45 AM	If it can be feasible to build the corridor that bypasses Antwerp just outside of the city limits it should greatly help out the town's economy, while building the corridor three miles out of the city limits would make entering the town too much of a hassile for passing motorist because most through traffic will only stop to get gas food ect. if they can see it from the highway and traveling three miles just to get gas would be a worthless trip.	Thank you for your comments. Segment 8 would be located just south of Antwerp as you indicate. Your input is appreciated.
Unknown	07/18/00 7:58:41 PM	Alternate rt. 2,5,7,9,11,12,16,19,20 would be the most feasible route to go...	Thank you for your comments, they are appreciated.
Unknown	07/18/00 8:09:55 PM	I believe route #Q would be the most feasible route. Thank you.	Thank you for your comments, they are appreciated.
Unknown	07/19/00 3:25:22 PM	If this road is to be built, I feel it would be in the best interest of the design goals to make it a freeway (limited access) from the start. This would be needed more so for segments that go through the center of farmlands. If access is allowed, there will be farm implements crossing this road, traveling between fields on this road and creating hazards currently not seen. The 50% semi traffic will be travelling much faster on a 4 lane highway increasing the incidence of fatalities with numerous county road crossings.	ODOT has not yet determined whether or not the improved US 24 will be a freeway or an expressway. Currently, both options are being evaluated. At the July public meetings the right-of-way limits shown represented a freeway footprint and the highway alignments reflected an expressway design. ODOT stated that a freeway is the safest type of highway that they can build. Currently, ODOT is in the process of determining which highway option will be constructed for the US 24 project.
Unknown	07/19/00 3:33:32 PM	Has a route following Indiana 14 East from New Haven to Ohio 49 North been investigated? This parrallels the tracks, with a north-east bypass for Payne and a south-west bypass of Antwerp then aligning along the old US 24. Seems like these are extremely rural areas where aquiring the land to widen each of these existing roads would be less costly and less of an impact on the farmers.	A corridor located north of Route 14 was included at the preliminary corridor phase of the project. It was not selected for further study as a feasible corridor due to various reasons as depicted in the project's "Preliminary Alternatives Summary". Thank you for your comments.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	07/20/00 4:11:53 PM	<p>In the past, it was necessary to install a stop light near Woodlan High School in Indiana on the current Highway 24. During the discussion in the most recent meetings, the concept of an overpass at crossroads was said to be eliminated. However, specifically at this location where a higher number of young drivers are likely to be crossing the highway, I believe it would be safety wise to have an overpass. Else a stop light would be needed on the new four-lane highway.</p>	<p>Thank you for your comments. The use of overpasses have not been completely eliminated from the project. They may still be required at some specific locations that are determined to warrant them. However, on the whole, they were dropped when considering the cost of expressway and freeway designs. On all alternatives (with the exception of the four-lane on existing alignment) Webster Road was identified as one of the locations that might warrant an interchange instead of an at-grade intersection. While the use of stop lights on four lane highways is not desirable, they would have to be considered at some locations as you have noted. Thank you again for your participation.</p>
Karl Mielke	07/23/00 7:19:52 PM	<p>I understand there were numerous concerns about Alternative 7 coming into Woodburn, Indiana expressed at the July 18th, 2000 meeting. What impact has this had on ruling out Alternative 7 as a choice and using only Alternative 8 around Antwerp, OH?</p> <p>There is an extreme concern on my part about the adverse effect an Alternative 7 choice will have on my father's health, since a portion of the alternative will negatively impact our farm.</p> <p>Sincerely yours, Karl Mielke kmielke@bright.net 223 Augustus St. Marys, OH 45885 491-394-2263</p>	<p>Thank you for your comments. We have heard concerns regarding Segments 7 and 8 near Woodburn. They will be considered when determining a preferred alternative. At this point in time, none of the alternatives have been ruled out. We are now in the process of analyzing the impacts, benefits, costs, public/agency comments, etc. for each alternative. Again, thank you for your comments.</p>
Kevin J. Werling	07/24/00 8:12:44 AM	<p>I am writing in response to the presentation made to the public at Woodlan High School, Woodburn, Indiana on 18 July. I request that you send me two copies of the Alternative Analysis Matrix seen at the public meeting in poster board form.</p> <p>The many materials as presented had noticeable, and quite severe shortcomings which I will pass on to you :</p> <p>The large (approximately 30 ft x 5 ft) map displayed along the south wall of the gym did feature a legend for the symbols used on the map. However, one legend was not used, and that was the legend for cemeteries. With little effort, local residents were able to show your staff at least four incidences where existing cemeteries were not labeled at all on the map you provided (even though a symbol for them was included in the legend).</p> <p>In the case of St. Paul Lutheran Church (1910 Berthaud Road New Haven, Indiana 46774), the cemetery immediately adjacent to the church and one still in use today was not shown on the map !!! We were assured by your staff that an accurate map calling out all cemeteries affected was in hand at the project office. May I point out that this fact of itself does nothing to inform the concerned public (which is ostensibly the reason why you conduct these meetings [by law]). In this particular instance, the public was grossly and unnecessarily underserved. From our vantage point, we saw no evidence that</p>	<p>Please accept my apology for not including the cemeteries on the environmental display map presented to the public at the July 2000 US 24 public meetings. This was an oversight on our part and as you requested, we will redouble our efforts to make sure that this omission is not repeated.</p> <p>As part of the US 24 planning process, the locations of cemeteries have been identified and are included in the project mapping. At the previous public meetings cemeteries were shown on the project mapping.</p> <p>Cemeteries are areas that Departments of Transportation avoid if at all possible.</p> <p>In the Noise Analysis, the graphic on page 88 presented the locations where noise receptors were modeled. Because of the 40 mile length of the US 24 project, the scale of the map is such that details are not shown. The focus of the graphic is the location of the receptors and the roads so that the reader can relate to the location of the receptor sites. On this graphic all receptor sites were indicated with a star symbol and the legend provided a brief description of the receptor (i.e. church, residence, school). Detailed maps of the receptor sites are provided in Appendix A of the report.</p> <p>To answer your question: Can US 24 be constructed as a four-lane highway using any portion of the old Erie Canal? The answer is, it depends. In general, there are no laws that say that highways cannot be built over canals.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>the US 24 project office was aware of the existence of a cemetery at 1910 Berthaud Road, not to mention another nearby cemetery on Gar Creek Road.</p> <p>This opinion is still held by many of the public that were in attendance on 18 July Even more vexing is the fact that the Noise Analysis page 88 likewise featured a map with a legend; for cemeteries, and again; the St. Paul Gar Creek cemetery was not delineated on it! (Nor was the nearby Gar Creek Road cemetery) May we again point out that Segment 2 as proposed for a southerly routing of US 24 (as a four-lane) has been proposed for a distance as close as 300 feet from the church mentioned above at 1910 Berthaud Road. In light of these facts, many of the church's friends, neighbors, and parishioners are of the opinion that little if any adequate consideration has been afforded St. Paul (Gar Creek) Church. The potential negative impacts that would result from a nearby four-lane US 24 alignment would certainly include noise generated by that highway. Again, the public saw no tangible evidence that adequate consideration had been afforded St. Paul (Gar Creek). This situation is deplorable, and an affront to the delicate sensibilities of many good Christian folks. cursory review of the remainder of the alternative routings failed to reveal any other church as tenuously located as is St. Paul. In addition, a much more localized and more accurately delineated map depicting St. Paul Church and cemetery location relative to both Segments 1 and 2 is called for, and requested. If nothing else, as a courtesy and a belated offset to the shortcomings of the printed products previously mentioned above.</p> <p>We were mystified at the difference in responses from your staff that we received to the same question posed at two separate meetings. Our question is in essence: Will / can US 24 be constructed as a four-lane highway using any portion of the old Erie Canal ? The general right of ways for this canal are not well defined, and are ostensibly a no man's land. Moreover, your maps, Army Corps of Engineer maps; and common sense will tell you that the Erie Canal and its environs are wetlands.</p> <p>We also wish to lodge a protest concerning the inconsistency in your office's use of its own US 24 project goals. Both verbally at public meetings, and in printed materials the stated goals include; Improve traffic flow and level of service; and also Improve roadway safety. In a previous public meeting at Antwerp High School, Mr. Slusher specifically decried the dangers of the many sharp and potentially hazardous turns currently featured on US 24 in the area just northwest of Woodburn Indiana. He said that proposed four-lane alignments would include a noticeable reduction in number of, and flattening of such corners. Your attention is drawn to current Segment 1 proposals which include a suggested alternative that features putting the four-lane over the top of the current two lane highway's right of way. Review of this routing reveals numerous curves, many of which are not noticeably flattened at all; in opposition of stated program goals. This particular portion of Segment 1 alternatives plans seems to be especially half hearted, and basically a square filler proposal. For the record, this particular [supposed] Alternative Z is non sequitur, and indeed; not a valid or viable proposal at all. Likewise, Alternative Z likewise fails to meet the goals.</p>	<p>In areas where the canals still contain water and support wetland vegetation, they are considered wetlands. As such, wetland permits would be required for highway construction.</p> <p>In addition, both archaeological and historic investigations are conducted on the canal. Historic studies are conducted to determine if existing segments of the canal impacted by the proposed project can be listed on the National Register of Historic Places. Archaeological studies are also conducted on the canal to determine if they contain artifacts. If so, the artifacts are evaluated to determine if they warrant preservation in place or not.</p> <p>The four-lane expressway alternatives developed for the US 24 project meet federal and state design criteria. These alternatives meet the criteria for a design speed of 70 miles per hour and will be posted at 65 miles per hour.</p> <p>In response to public comments which requested that ODOT design an alternative that utilizes and/or lies adjacent to existing US 24, ODOT developed Alternatives Y and Z. Alternative Z utilizes portions of existing US 24 in the east and then shifts south, following along the existing route, not otop of the existing two-lane road. This alternative is a feasible alternative. It has flatter curves than then existing highway and meets the design criteria for 70 mph/posted 65 mph.</p> <p>As requested, I will forward copies of project mapping that displays the proposed alternatives for the US 24 project. In addition, copies of the alternatives matrix will be sent to you.</p> <p>Please don't hesitate to contact me if you have further questions or comments regarding the US 24 project. I can also be contacted through the US 24 hotline 1-877-275-8724.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>As a specific recommendation that has already been recorded in the 18 July public meeting, we strongly recommend that you do not four-lane Highway 24 in close proximity to either the Maumee River, or the old Erie Canal right of way. These wetland areas are notoriously prone to localized fog. We are quick to point out that current plans for the type of road way to be built still include; at grade; intersections for a heavily traveled four-lane highway. The implications for compromised safety of school bus stops, not to mention local residents needing to enter the highway are enormous.</p> <p>We specifically request that your office give us a written response to all the questions and concerns listed here. We urge your office to redouble its efforts, to better serve the public in the upcoming months leading to the December public hearing.</p> <p>Regards, Kevin J. Werling</p>	
Unknown	07/27/00 3:47:09 PM	<p>I am very concerned with this alternative for two reasons. As our prevailing winds are from the southwest all the toxic vehicular emissions would be blown into Woodburn causing many respiratory problems to be either developed or escalated. My second concern is for a local nursery we do business with. This is a family owned and operated nursery which has been in operation for 70 years. Alternative 2 would cut this business in half. The stock that would be left would be finished off by emissions. The end of livelihood for that family.</p>	<p>Thank you for your comments. We are currently analyzing all of the alternatives for their benefits, impacts and costs. Your involvement in the project is appreciated.</p>
Unknown	07/27/00 4:08:02 PM	<p>A portion of our property lies in the overpass footprint at Bull Rapids Road north of Woodburn. I understand that Ohio has decided when this occurs they intend to purchase the property and/or make settlement for setback. What is Indiana's intentions even if you do not put an overpass on at the time of construction? My new 220 foot well sets within the footprint, the driveway would be cut off, the house and barn would be too close to the road for code restrictions, most of my frontage landscaping would be in jeopardy. Thank you.</p>	<p>Because you are located in the State of Indiana, your only concern is what INDOT's intentions are with your property. At this time, no one can tell you what the impacts will be to your property. It is too early in the project development process to make any decisions as to specific property impacts.</p> <p>In December, a Preferred Alternative will be selected. It will not be until final design plans are developed that you will know the specific impacts to you property, should it lie within the Preferred Alternative.</p>
Karl Wilhelm	07/28/00 11:04:39 AM	<p>Preliminary corridors alternates #2, #3, and #4 would be the best for me as far as the impact of traffic on my land and me and my families life. Thanks. Karl T. Wilhelm 2nd</p>	<p>Thank you for your comments, your participation in the project is appreciated.</p>
Marvin Hoot	07/31/00 12:05:36 PM	<p>This is my electronic "comment sheet " following the public meeting of July 18, 2000 at Woodlan High School.</p> <p>My personal preferences, in order of importance, are Z then one of the first four (A - D) which have the 1-3-8-11 combination.</p> <p>I prefer Z (existing US 24) because it takes the least amount of productive farmland which is very important to the community culture and economics. We have businesses which are located on the current US 24 that would be affected negatively by a move away from the Z option. Fire and safety services focus on the current US 24 because of the housing along its path.</p>	<p>Thank you for your comments. It is helpful to our team to receive public observations and the back-up reasoning. Your participation in the project is appreciated and your input will become part of the public record.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>My second choice primarily has existing business and housing locations as the focus. The 1-3-8-11 combination keeps the new four-lane highway close to the existing businesses and housing to minimize the economic and fire/safety impact. The options utilizing Segment 2 are my least favorite. A church and cemetery are located on the egress path to Roussey Road (north). If you eliminate the exit at that location and build an overpass there is another cemetery just south (Gar Creek) that would probably be in the way. The Fiedler farm at the intersection of Gar Creek Road and the railroad was parceled out and sold in lots for homebuilding. Most of these lots are right on the path of #2 as it parallels the railroad tracks. The remaining of these lots are trapped between the railroad/Gar Creek Road and the #2 route. The owners of these lots would probably not be able to sell them because of US 24 just behind the back yard. Who wants to listen to road traffic on one side and train traffic on the other. This option is the farthest from the existing US 24 and would negatively affect more than one business. The two nursery businesses which service the area are located on #2 and would be discontinued. More than one of the remaining non-farm businesses would be too far from the existing US 24 to be viable.</p> <p>Only option Z (current US 24) fronts the BF Goodrich factory which is among the largest businesses in the county and is a major contributor to the East Allen County School District. Long term continuation of this business is of great concern for the whole of eastern Allen County.</p> <p>Many people would certainly complain during the construction of the existing US 24 (Z) option but would put up with it and would be happier in the end.</p> <p>Marvin Hoot President, East Allen County Schools Home address: 4232 Ort Drive Woodburn, Indiana 46797 Phone: (219) 749-9024 E-mail: marvinhoot@briefcase.com (preferred) or mhoot@eacs.k12.in.us</p>	
Everett Schurg	08/01/00 8:26:38 AM	<p>I believe the general public would be better served if you were to further segment the current map so that it could be more detailed showing detail similar to that of the large map at the Woodlan Gym. Why not show just the Indiana side and even break it into sections to better show detail of buildings, be more accurate in the identification of roads on the map. (If you look closely at the Gar Creek Road from State Road 101 west, I believe you will find a section to be missing from your current maps. I pointed that out earlier but got no response.) Doing this would allow individuals more time to study the map and perhaps make more meaningful comments.</p> <p>In addition, why not publish the environmental impact studies on the internet? Surely it would be feasible for someone to place an up to date weekly comment in the what is new section, even if it is very short.</p> <p>Thank you for the opportunity to comment.</p> <p>Everett Schurg</p>	<p>Thank you for your comments. We are currently looking at a way to display the aerial mapping on the Website. Hopefully, by next week we'll have something better for the public to review.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Joel Tye	08/02/00 5:49:34 PM	<p>As stated in a previous public comment, I am still very much concerned about the timetable for this project. I wish to again note that the Federal Highway Administration identified this particular corridor as "High Priority" back in 1991. It was stated at the meeting that the construction timetable has been pushed back to 2008; that makes me furious. I realize that ODOT can only go ahead with projects funded by TRAC; therefore, this issue needs to be addressed with that agency. If indeed it takes 17 years for construction to begin on a "High Priority" corridor, then we have a serious problem here - whether it be government red tape, funding priorities, or whatever other reasons.</p> <p>My other item of concern is the design speed for a four-lane alternative. As stated in the newsletter handed out at the meeting, the design speed is going to be 70 miles per hour for a road with a 65 mile-per-hour speed limit. I'm not sure if this means the design is for a maximum speed of 70 mph. If it is, then I am quite concerned about safety. If a vehicle is passing another, they will probably be travelling faster than 70 miles per hour. If that is the maximum speed the new US 24 is designed for, then I believe safety issues are going to come into play. My comment would be to make the design for a maximum speed of 80 miles per hour, if not faster. This would bring an extra margin of safety into the equation. Remember the large number of trucks that are now using the present US 24; this number will only increase with a four-lane divided highway.</p> <p>Finally, I was pleased to hear that the project has been scaled back, with cost savings of \$50 million. I have always felt that a limited-access "mini-interstate" was a bit of overkill. As in a previous comment, I point out US 30 from Fort Wayne to Van Wert. From what I heard at the public meeting, the traffic counts are similar. US 30 is a very safe road, and I believe the new US 24 could be just as safe with a similar design. If studies determine there is a dangerous intersection on the new US 24, then an interchange would be necessary. I have no problem with that.</p> <p>Thank you for the opportunity to publicly comment on what I consider to be a very important project, and one in which I believe safety plays a major role.</p> <p>Joel Tye 801 Mildred Ave Fort Wayne, IN 46808-2117</p>	<p>Thank you for your comments regarding the US 24 New Haven to Defiance project.</p> <p>ODOT will be making a presentation to TRAC regarding funding for the US 24 project.</p> <p>Regarding your question about the 70 miles per hour (mph) design speed, highways are designed to meet state and federal guidelines. The most prominent design manual is published by the American Association of State Highway and Transportation Officials, entitled "A Policy On Geometric Design Of Highways And Streets". This book states that in the design of highways provisions should be made for a speed that satisfies nearly all drivers. As most drivers operate at or near the speed limit, a top speed of 70 mph accommodate most drivers. This does not mean that the road is not safe for those driving at higher speeds. A road designed for 70 mph is still safe for travelers at higher speeds under good weather conditions. The 70 mph design speed is the average speed of the drivers, not the maximum speed the road is designed for.</p> <p>Highways designer for higher speeds are more costly to construct because they require flatter curves, more gradual grades, and larger signs. In addition, they require more right-of-way and therefore result in greater environmental impacts.</p> <p>In general, most highways are designed for 70 mph and posted at 65 mph. To design a road for a higher speed would encourage motorists to drive faster.</p> <p>Thank you again for your comments regarding the US 24 project.</p>
Jamie Black	08/03/00 5:42:40 AM	<p>Can you tell me how many people attended the recent public meeting held on your end of the project?</p> <p>Thank you, Jamie Black Co-Chair Fort to Port</p>	<p>During our series of three public meetings held on July 17, 18, and 19, a total of 742 people signed in. There were of course several others that attended the meetings and did not sign in so they are not accounted for in the total. The breakdown is as follows: 7/17 – 268, 7/18 – 343, 7/19 – 131</p>
Jamie Black	08/03/00 4:46:35 PM	<p>Can you tell me how many are on your mailing list? Just round number.</p> <p>Thank you Jamie Black</p>	<p>Approximately 1,900 names are on the mailing list.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Joe Fortman	08/03/00 8:39:56 PM	<p>My name is Joe Fortman and I am an employee at Beverly Nursery. Beverly Nursery is located at 1807 North Berthaud Road in east of New Haven. I am a graduate of Purdue University May 2000. I graduated with a degree in landscape horticulture and I plan to continue working for Beverly Nursery. I have been employed there for 8 years now.</p> <p>I am writing because I strongly oppose any of the US 24 Highway alternatives that use Segment #2. This is because it would cut through the south one quarter of the nursery. This would pretty much destroy the business that I work for. This business is over 65 years old and has fourth generation workers employed. It would also put Gar Creek Nursery out of business. Including both nurseries that would put over 20 people out of work. Both nurseries combined support 5 families not including my own. I am engaged and the nursery will also support my family. The nursery is also helping put another young man through college. So his education is dependent upon the nursery. If the Highway goes through the nursery it will also affect our customers. Since 1992 we have grown and expanded tremendously. The customer base has grown and expanded as well and many landscapers in the Fort Wayne area would be hurt if the nursery goes out of business.</p> <p>So when making your decision on which segments to choose for the US 24-expansion project please take what I have mentioned into consideration, 6 families futures depend on it.</p> <p>Thank you, Joe Fortman 13919 Bremer Rd. New Haven, IN 46774</p>	<p>Thank you for your comments. Your participation in the project is appreciated and your input will be entered into the public record for the project.</p>
Roger Hadley	08/03/00 10:17:45 PM	<p>I attended the July 17th meeting on the US 24 development project. I have reviewed all of the alternatives and I still believe following the existing US 24 is the best alternative. The least amount of disruption to the farming community would be felt, and farming is the single largest business in the area. Each farm is a business, and how many other small businesses would you cut in two to build a new road. Yes, I will lose some ground with this plan but it will be on the edge of the existing road not through the middle of the farming operation. I do understand that you have a lot of homes that may be affected, but I'll bet you will have very few home owners that wouldn't take a new house, if you give them a fair price for their property. I have heard many home owners say "I hope it goes through my house so I can have a new home away from that road". I haven't heard one farmer say that they want their farm cut in two, many would take a pond but they want the road to be on an edge of their farm or on a neighbors farm. You will make the most people happy if you can see fit to follow the old road either using it or laying along side of it. This route would also make the City of Woodburn happy as it would be close to their struggling industrial park. I vote for Alternative Z.</p> <p>If the old road route can't be used the next best route that would disrupt</p>	<p>Thank you for your comments. Your participation in the project is appreciated and your input will be entered into the public record.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>the next least amount of farm ground in the Woodburn area would be a 2-5-7-11 route. This route does run parallel to the Railroad Tracks for many miles and that will have minimal impact on farming operations, but still is far more impractical than Alternative Z.</p> <p>My vote still has to be Z with the Antwerp bypass and the curves taken out where needed. Using this method many houses can be spared as they are on curves. I would greatly appreciate your consideration of the Z alternative. I pray you use common sense in your decision.</p> <p>Thank You for your consideration. Roger Hadley, II Family</p>	
Marvin Hoot	08/04/00 7:03:14 AM	<p>Please select a route close to Woodlan High School and the tire plant for easy access.</p> <p>A water tower will likely be built on the Woodlan HS site and will replace the Woodburn City and the Havenwood Forest water source. This will open opportunities for economic growth along the line from Woodburn to and around the current US 24/Webster Road intersection. Please provide a new US 24 route which will enhance the economic opportunities of the area. Please choose a route on or close to the existing US 24.</p> <p>Thanks for your consideration, Marvin Hoot President, East Allen County Schools 4232 Ort Drive Woodburn, Indiana 46797</p>	Thank you for your comments. Your participation in the project is appreciated and your input will be entered into the public record.
Kirk and Renee Richman	08/04/00 10:34:11 AM	<p>This is to inform you of our objection to using the Segment 2 for expanding US 24 due to the segment disrupting two retail/wholesale nursery businesses and their owners homes. It would probably put the eastern nursery out of business and it has been in business over 50 years! This segment would also be too close proximity to St. Paul Lutheran Church which has been at its present location over 100 years; due to noise and increased traffic concerns.</p> <p>This segment would also cut our farmland property we own at the northeast corner of US 24 and Doyle Road in half creating more drainage problems, questionable usability of each half and concern for future tillable use.</p> <p>Please use Segment 1 as the route for US 24 for the final proposal in December 2000; the state also already has land bought along this segment on the south side of present US 24 so not as much land would need to be purchased and less valuable property would need to be purchased.</p> <p>Thank you for allowing us to make comments. We are also writing to our Indiana legislators to obtain funding for Indiana for US 24 so we don't have to wait 10 more years for a new, expanded, safer, US 24 to be built.</p> <p>Thank you, Kirk and Renee Richman</p>	Thank you for your comments regarding the US 24 project. Your preference for Segment 1 over Segment 2 in Allen County will be taken into consideration in the selection of the Preferred Alternative.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	08/04/00 2:07:18 PM	Staying along the existing route of US 24, whether with an improved two-lane or four-lane road makes much more sense than any other choice. Farmland has already been divided. Air quality is already affected by heavy traffic. Moving it to another location just adds to the problem. If another route is selected, after viewing your own charts at the July meetings, it seems that alternatives containing Segments 2-5-7 lettered Q through X, destroy fewer acres of farmland and homes. South of Woodburn on SR 101 there are fewer homes and fewer major roads to disrupt. Woodburn Road is a major traffic artery for much of that area, carrying school buses for at least three schools, as well as emergency equipment. Any route staying south of Woodburn would be safer than any alternative cutting Woodburn Road.	Thank you for your comments regarding the US 24 project. They will be taken into consideration in selecting the Preferred Alternative for the project.
Nancy Ahrens	08/08/00 8:27:52 PM	This is going to be a ruff one either way. But I hope a light like they have near Defiance, that warns you that you have a red light will be installed. It's near GM Plant. I never saw one before until my daughter moved to Defiance. With the area so dark at night, It tells you by a light that come on that the traffic light is red. I really thought, it was a good thing to warn people driving, that slow down you have a red light. Otherwise it doesn't light up when the light is green. This would save lives if more were installed around Waterville area. Thank You, Nancy Ahrens from Maumee OH	Thank you for your comment regarding the US 24 project. Your suggestion about the warning lights for the traffic signals is a very good idea. I have seen then used on many expressways and they are really helpful in warning motorists when the light is changing.
Jim Beerbower	9/20/00 11:37:39 AM	On the maps screen it says Aerial Photos of Corridor is coming soon. How far are we away from this very useful tool? Thank you.	We have just added an interactive map depicting the alternatives. If you have any problems viewing it, please let us know. The addition of the aerials is currently underway. Hopefully, we'll have them up on the Website by next week. Thanks for your comments.
Unknown	10/11/00 9:00:03 AM	The timeline states that September was the approximate time that a Preferred Project Alternative would be selected. Has that been done or when will it be done?	The selection of a Preferred Alternative has been rescheduled for December 2000. The timeline shown on the Website is being revised and should be up to date by next week. Thank you for your interest.
Unknown	10/17/00 11:47:42 AM	As a graduate of a public affairs program, a former public office holder, and a current public university employee, I applaud you for your superb efforts at making information available to the public in a variety of media. This is by far the most extensive public notification effort I've EVER seen. In a situation where the public is decidedly nervous about the impacts this project might have on their families and their livelihood, your sensitivity to these concerns and to the public's need for feedback and information is commendable. I think you should enter your Website in the Webby Awards (http://www.webbyawards.com/index.html).	Thank you for your encouragement. The US 24 project team is working hard to keep the project moving forward as quickly as possible and to keep the public informed of our progress.
Gerald and Becky Woodbury	12/3/00 3:48:42 PM	I live right in the middle of this whole project and I have yet to receive any information from any one. I think you better get your act together! Gerald & Becky Woodbury. woody922@netzero.net 3813 N. Roussey Rd. Woodburn, IN 46797.	Thank you for providing me with your name and address. I have added you to the US 24 mailing list. Since you are now on the mailing list, you will receive information about the US 24 project such as newsletters and public meeting notices.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Unknown	12/5/00 1:42:47 PM	<p>I live on US 24 at Sampson Road in Indiana. The noise from trucks downshifting on the curve here prevents us from having our patio doors or windows open and even caused me to have to move my bedroom from the largest in the house to the smallest. This only became a problem when I-469 was opened. I have lived here for 20 years. I would like a sign posted stating "no down shifting" such as they use down south or "no jake brake" such as I see all over Ohio. There are several of these signs in Ohio just a few miles from my house. The story is the police refuse to stop semis on this road saying it is unsafe for them. Excuse me, but if that were my job I would do it or find another position. Park View Samaritan helicopter has landed on this stretch of road far too many times. Again just last week. Six people injured when they were struck by a semi that was probably traveling much too fast. A friend of mine that lives east of me said that many times she goes on past her home because she is so intimidated by the semi that is practically pushing her down the highway. One day an Allen County deputy was run off the road by two semis that did not yield the right-of-way. The patrol car went off of the road and the deputy overcorrected. I almost got hit and my car was covered with stones from the deputy car. I thought, well here are two truckers who will have to pay for this one. The deputy went on down the road without doing a thing. I went to Bob's Restaurant in Woodburn. I told the story and one gentleman in there acknowledged apparent lack of concern from the local police but added, you know why he did not pursue them don't you. I said no. He said, well, the cop had to go change his drawers. Everybody got a good chuckle but on the other hand, everyone in this area feels this is a very serious situation. I have been promised that, yes it is true that the police feel it is unsafe to pull traffic over in this area because there are no berms. I was assured that pull off lanes were to be installed by this fall, now gone, that would allow the police a safe avenue to pull vehicles over. There is a very unsafe condition here and lives depend on something being done NOW! Thanks.</p>	<p>Thank you for your comments regarding US 24. INDOT and ODOT understand the problems that motorists experience on US 24. They are working together through the environmental and planning stages of the highway development process. This process takes approximately three to four years to complete. Following the planning and environmental stage comes the final design and then construction. Because of the various steps that a highway project must go through, it will be several years before a new US 24 is built. In the mean time, contact the local district office of INDOT to obtain the safety improvements that you requested such as a sign stating, no downshifting, and also improvements to the shoulders along US 24. Thank you for your comments and interest in the US 24 project.</p>
Dan Garstka	12/13/00 7:34:52 AM	<p>Well?? The final selection was to be announced in September 2000. Delayed until December 2000. Today is December 13th. When will we know?? As a new home owner (built after Corridor 2 was eliminated in 99 and then reinserted after the house was nearly completed) I sure would like to know what the hell is going on!! How about even a message with new timelines if things are delayed (again).</p>	<p>The selection of the Preferred Alternative has been postponed again until the spring of 2001. If you are on the US 24 mailing list, you would have received notice of this change in the beginning of December. This week, ODOT will issue a press release regarding the delay in selection of the Preferred Alternative. Before a Preferred Alternative can be selected, the preliminary Draft Environmental Impact Statement, which evaluates the environmental impacts of the proposed alternatives, must be reviewed by state and federal resource agencies. Comments have not been received from the agencies on this document. ODOT and INDOT cannot select a Preferred Alternative until the agencies review and comment on the preliminary Draft Environmental Impact Statement. Once a Preferred Alternative is selected, public meetings will be held to present the alternative and receive comments.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Jim Beerbower	12/14/00 1:48:17 PM	<p>In the July 2000 meeting, there was discussion about not putting in overpasses in this plan. However, Ohio would acquire the needed property for eventual construction. I questioned if Indiana would pursue the same. At that time, the discussion was that I would be told in December. It is now December and I would like a response. I would think that in order to determine estimated property acquisition costs, this determination would have had to have been made before the online cost comparisons were made available. If the footprints would be purchased, it would cost more than if they were not. That took place in September with an update in October. I believe it must be determined by now. Since this does affect me directly, I would like to know the intentions. My dwelling, 220 foot well, driveway, landscaping and 48'X 72' pole barn all lie within a few feet of the proposed footprint. I wrote concerning this in August on the provided online 'Get Involved' screen of the Website, with no response. Please advise. Thank you.</p>	<p>Since the July 2000 public meetings, it has been determined that US 24 will be constructed as an expressway in both Indiana and Ohio. There will be at-grade intersections and overpasses but no interchanges in the design of the new highway. At this time, the right-of-way limits are still the same as those shown on the maps at the July 2000 meetings. The costs of the highway alternatives and the environmental impacts associated with each alternative are based on these right-of-way limits. Previously, ODOT and INDOT had stated that they would announce a Preferred Alternative in December 2000. This decision has been postponed until the Spring of 2001. Before a Preferred Alternative can be selected, ODOT and INDOT must coordinate with state and federal resource agencies. A preliminary Draft Environmental Impact Statement has been prepared and this document has to be reviewed and commented on by the agencies. The required comments from the state and federal agencies have not been received. Without the agency comments a Preferred Alternative cannot be selected. Once a Preferred Alternative is selected, ODOT and INDOT will hold public meetings to present and receive comments on the Preferred Alternative.</p>
Dan Garstka	3/12/01 1:43:53 PM	<p>Well?? Here it is Mid-March. Another delay. When can we expect to hear the final selected option for the new highway??</p>	<p>The selection of the Preferred Alternative is scheduled for the Spring of 2001. The preliminary Draft Environmental Impact Statement was submitted to the state and federal resource agencies in January 2001 for their review and comment. Comments have been received from some, but not all of the agencies. ODOT and INDOT are currently reviewing the comments received to date. Once the Preferred Alternative is selected, public meetings will be held to present the alternative and receive comments.</p>
Dan Garstka	3/16/01 1:49:05 PM	<p>There used to be an aerial photo of the proposed corridors on this Website. It was the same picture shown at the public meetings. Where can I get a copy of it (specifically, a section that pertains to my property)? Also, I have signed up numerous times for the newsletter on this Website and have yet to receive a single one. Problems??</p>	<p>The aerial photos showing the alternatives are still on the US 24 Website. Click on Interactive Map and then the alternative that you are interested in. The alternative will then show the segments that it is comprised of. Click on the segment number that you are interested in and it will show the alignment on the aerial photography. There are instructions on the Website that will lead you through the steps I just described. You can also print out the portions of the map that you are interested in. In regards to adding your name to the mailing list, please reply to this email with your name and mailing address. I will add your name to the mailing list so that you receive future mailings for the US 24 project. Please let me know if you need any other information regarding US 24.</p>
Jane Weippert	4/16/01 2:02:44 PM	<p>We received a letter today announcing the Preferred Alternative route as C. I'm not sure at this point where C is located since there were so many numbers and sections looked at. Can you direct me to the proper map on your Website to clarify the results? Thank you. Jane Weippert, Paulding County Road 123, Cecil, OH.</p>	<p>Please refer to the interactive map, located on the front page of the Website. When you first bring it up, the Preferred Alternative "C" will be highlighted in red. Click on the red circle (with a segment number inside) nearest your point of concern to view an aerial photo of that segment of the alignment. Please note that we will be holding three public involvement meetings (May 1, 2 & 3) to display the Preferred Alternative "C" to the public for comment. If you have any further questions, please call our toll-free hotline at 1-877-ASK-US24. Thank you for your participation in this important project.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
Jerry Hayes	01/03/02 4:15:14 PM	Please take note of the start of construction of the Meinard's home improvement store in Defiance at the intersection of St. Rt. 66 and Elliott Road. This will increase traffic volume at Domersville and Rt. 24 as well as at Carpernter Road and U.S. Rt. 24. Please try to keep on schedule for construction of the Domersville/Carpernter Road project in 2006. Thank you.	Thank you for keeping the US 24 project team informed of the current developments in the City of Defiance.
Unknown	06/06/02 10:13:24 PM	I grew up in New York so you may view my opinions as biased nonetheless they are my opinions. Whatever the final price tag is for this project, I strongly recommend that this road be divided limited access highway. In addition, I also recommend this be jointly run as extensions of the Indiana Toll Road and Ohio Turnpike. Indiana should follow the lighting designs like the Ohio Turnpike and take strong notice on what adequate lighting is.	Thank you for your comments. The new US 24 highway is proposed as a four-lane limited access divided highway. As far as running it jointly with the Turnpikes, Departments of Transportation and Turnpike Commissions are two separate entities. The new US 24 highway will not be connected to the Turnpikes in any way. As the new US 24 highway is developed, the lighting design will conform to the most current design specifications that are used by both INDOT and ODOT for highways.
Unknown	06/10/02 10:07:18 AM	My wife, son and I were coming from our brief vacation in Indianapolis, IN. From I-469 in Fort Wayne, we took US 24 to escape traffic. While in Ohio, we did not realize there was construction on US 24 between US routes 6 and 127. After the detour, we entered US24/US6 East. After the second interchange, I didn't notice a cop was on the median until my wife told me. I was over 1200 feet behind the cop. I had my foot on the brake to slow down not knowing I would be targeted from a radar gun that's so far away. After I approached the cop while going 55, he waited 3 seconds to enter the highway. Only the lights were flashing on the roof. The front headlights were never activated. I saw one "speed limit 55" sign before I was ticketed. I suggest more speed limit signs need to be posted.	Thank you for your comments regarding US 24. Your suggestion about posting more speed limit signs along US 24 will be forwarded to ODOT.
Jim Beerbower	07/26/02 11:40:55 AM	In the recent meeting, the proposed US 24 intersection at Bull Rapids Road and Maumee Center Road (in Indiana) was different from the one presently on the interactive map (on this web site). The staff was not clear if Bull Rapids will cross US 24, as no ramp right-of-way is in the new aerial photos. Please confirm if the proposed right-of-way now extends south on to my property as this site now suggests. Thank you.	As currently planned, an at-grade intersection is proposed for Bull Rapids Road with the new US 24. This will require relocating Maumee Center Road, both north and south of new US 24 to intersect with Bull Rapids Road. This should be depicted on the interactive map in the same manner as was presented at the last set of public meetings.
Pete Bova	9/12/02 6:59:26 AM	I am Pete Bova Sr. at 15195 US 24 West. I am having a problem with the trucks tail gating and trying to run us over when pulling into my driveway. There are too many trucks and they think that they are the only ones that are suppose to use US 24. There are grooves in the road from the weight of the trucks so when it rains you hydroplane, this is very dangerous. The truckers are running over the speed limit and if you don't travel at 65 mph they want to pass or intimidate. They should be made to take the toll road. Give them a cheaper rate before someone else gets killed. If I have to, will confront a trucker face to face if it comes to that. I will not be intimidated.	Thank you for your comments regarding US 24.
Unknown	10/6/02 10:36:47 AM	I disagree with the statement, "trucks traveling in three's make it difficult to pass." Not too many cars are trying to pass trucks that are running in excess of	Thank you for your comments regarding US 24.

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>65 mph, I live on this road and no one needs to tell me different. I was disappointed in the investigation recently when an eleven year old girl was killed. It was decided that the truck driver did some defensive driving and possibly saved other lives. I say that from the skid marks and from the speeds that most trucks drive this road, that truck was over 60 in a 50. Had it been going so he may have avoided the accident all together. I always thought the SPEED LIMIT meant maximum. The State Police are now doing an excellent job out here and Brooks just did an excellent job of really improving this section of highway. Problem now is the better the road, the faster they drive, regardless of MAXIMUM SPEED LIMIT. I also remember when they were discussing lowering the load limit of semis from 72,000 pounds. Instead, big companies got it increased to 84,000. This ruins roads quicker and trucks are less under control and able to stop or react in an emergency. I don't see how people who make these decisions can put a price on even one life.</p>	
<p>Jim Beerbower</p>	<p>10/23/02 10:31:48 AM</p>	<p>Your online time line show public hearing scheduled for October 2002. Please advise when/where it was/is scheduled to take place. Thank you.</p>	<p>The public hearing scheduled for October 2002 was not held. The hearing will be rescheduled for early 2003. At this time a date has not been set. The time line needs to be updated to reflect the latest changes in the project schedule.</p>
<p>Concerned Citizen</p>	<p>3/16/03 5:46:39 AM</p>	<p>At the last meeting I attended at Woodlan HS it was stated that there wasn't any access onto US 24 from Woodburn Road. I have a major concern with access at that location. Woodburn Road is the main road to Woodlan HS and to ask school buses and driving students to cross four lanes of traffic would be a real safety issue! In turn the cost of this project also is a major concern of many. If you were to make this access a cloverleaf or on and off ramps this would increase the budget more than a few thousand dollars! What you proposed at the meeting was that Woodburn would have two accesses, one from Bull Rapids Road and the one from US 101. The question I ask is why add a third access and drive up the cost of this project when an overpass at Woodburn Road would be much safer for our children. Thank you for your time. Concerned Citizen</p>	<p>Dear Concerned Citizen, you are correct, there will be no access to US 24 from Woodburn Road. The new US 24 highway will bridge over Woodburn Road. This separation was intentionally done for safety reasons to keep school buses and student drivers separate from highway traffic. Earlier this year INDOT announced that the section of US 24 between I-469 and the Indiana/Ohio State Line would be constructed as a freeway. As a result, interchanges will be provided at Bruick Road, Webster Road and SR 101 for access to the new US 24. Access to the new US 24 will not be provided at any other locations.</p>
<p>James and Brenda Anknev</p>	<p>4/18/03 2:03:40 PM</p>	<p>I am writing with regard to the City of Defiance's interest in an interchange at US 24 and West High Street (Switzer/Dey Road). We live west of US 24 on Switzer Road. We have lived here for 33 years, but my family has owned farm acreage about 1/2 mile from US 24 for over 50 years. We are pleading with you not to let an interchange be put in the aforementioned location. We are perfectly willing to give up our direct access to the bypass, which may at time be an inconvenience, but it is nothing compared to the repercussions of an interchange in that location. Who has more rights here...families who have lived in this area for 50 years, even prior to construction of the bypass...or business owners who have only recently located in the area? If the City/business owners want access to the highway, let them construct some type of service road to one of the already planned interchanges, or let them upgrade West High Street/Harding</p>	<p>Thank you for your comments regarding US 24.</p>

PUBLIC COMMENTS RECEIVED THROUGH THE US 24 WEBSITE (CONTINUED)

Name	Date/Time Received	Comment	Response
		<p>Street to accommodate trucks. Please don't further destroy the beauty of our countryside...it is happening far too often. It is time that the opinions of long-time residents take precedence over business or City...this is our home and our township, not the City's. Thank you for hearing our point of view.</p> <p>James and Brenda Anknev</p>	

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE

Name	Date	Summary of Conversation
Dave Nahrwold	08/09/99	Dave Nahrwold asked questions about the locations of the two selected corridors. He owns several farms in Allen County and is concerned about the corridors cutting through his farms. The southern corridors would affect his farms. He asked to be put on the mailing list and to be sent a map of the feasible corridors. Jennifer Graf added his name to the mailing list and sent him a map of the feasible corridors.
Frank Roach	08/10/99	Asked several questions about the US 24 project. All questions were answered by Chris Coffield.
Joann Malfait	08/10/99	Requested newsletter and handouts. Also wants to be added to the mailing list. Jennifer Graf sent the handouts and added him to the list.
Mark Schwartz	08/10/99	Requested newsletter and handouts. Also wants to be added to the mailing list. Jennifer Graf mailed the information and added him to the mailing list.
Jerry Schaefer	08/10/99	Wanted to talk about the project and possible corridors. Also wanted to be put on the mailing list. Kerry Osborn sent newsletter and handouts and answered his questions regarding the project.
Robert Herber	08/10/99	Wanted to be placed on the mailing list. Jennifer Graf did so and mailed the latest information to him.
Mark Schwartz	07/8/99	Asked if a selection was made on two corridors? He is concerned with Corridor H. Kerry Osborn informed him that Corridors 4 and 7 were chosen for further study. Corridor H has been dismissed.
Diane Guagenti	06/21/99	Concerned that her house is in the path of a corridor. Jennifer Graf suggested she put her comments and concerns in writing and placed her on the mailing list.
Carolyn Malfait	06/21/99	Wants to be placed on mailing list and have the latest information sent to her. Jennifer Graf placed her on the mailing list and sent the latest handouts.
Gene Fuelling	06/21/99	Requested US 24 newsletters and maps for a farm bureau meeting to be held on 6/25/99. Jennifer Graf placed him on the mailing list and sent the newsletters and handouts.
Vern Scheumann	06/21/99	Requested 20 handouts and to be placed on the mailing list. Jennifer Graf placed him on the mailing list and sent him all the latest project information.
Dianne and Terry Polson	06/17/99	They are concerned because they live in the path of Corridor D. Linda High informed them of the public meeting for that evening and gave them directions to the meeting.
Eugene Nahrwold	06/17/99	He was unable to attend the public meeting on 6/16/99. Requested handouts and to be placed on the mailing list. Linda High informed him of the public meeting being held on 6/17/99, mailed him the latest handouts and placed him on the mailing list.
Colleen Taylor	06/17/99	Requested information on corridor alternatives. Jennifer Graf placed her on the mailing list and sent her the latest project information.
Rebecca Markley	06/17/99	She saw a brief clip on the news about US 24 and would appreciate any information on the US 24 project. Jennifer Graf placed her on the mailing list and sent her the latest information handouts.
Paul Imber	06/17/99	Mr. Imber stated that he was opposed to Segments U and X. These are new routes that were not presented to the public during the public meetings. His property has been impacted before by other ODOT projects and he does not want to be impacted again. He thinks that improving existing US 24 is the best option for the project.
Susan Raperton	06/17/99	Requested to be placed on the mailing list. Jennifer Graf placed her on the mailing list and sent her the latest project information.
Janice Schrenk	06/18/99	She could not log on to the Website - wondered if we were having problems with it. Linda High explained that the web page was indeed down at the moment and suggested that she try again in an hour or so. If she encountered any problems at that time to please call back.
Roger Strautman	06/18/99	Requested to be placed on the mailing list and have the latest information sent to him. Jennifer Graf placed him on the mailing list and sent him the latest information.
Ronald Nahrwold	06/18/99	Would like to be placed on the mailing list. Jennifer Graf placed him on the mailing list and mailed the latest information to him.
Bob Shaper	06/18/99	Mr. Shaper recommended that the new highway not be located between Woodlan High School and the power plant. The new road should be located south of the power plant. On the corner of Sampson and Slusher roads is a barn that is approximately 70 years or older. It is on his property.
Susan Caperton	06/14/99	Requested to be placed on the mailing list. Kerry Osborn placed her on the mailing list and sent her the latest information.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
Dan Garstka	06/14/99	Requested the corridor map be faxed to him. Kerry Osborn faxed the map to him.
Rita Vanclave	06/18/99	Requested the latest information be sent to her as well as place her on the mailing list. Kerry Osborn sent her the latest information and placed her on the mailing list.
Philip Ketcham	07/9/99	Requested to be placed on the mailing list. Also, wanted to know if the speed limit on US 24 could be reduced. Kerry Osborn placed him on the mailing list and sent the latest information to him. Also, explained that the speed limit issues were not part of the project.
Sharon Waterman	06/29/99	She lives approximately 1 mile east of I-469 and is concerned of the effect the project will have on her selling her property. She doesn't think she'll be able to now. Rhonda Mears advised her to go ahead and list her property - Sharon hung up on her.
Dorris Rekeweg	07/28/99	Requested to be added to the mailing list. Jennifer Graf sent the latest information and placed her on the mailing list.
Dave Diehl	06/23/99	His house is located within Corridor I and he would like information about the project. Rhonda Mears mailed latest information to him and placed him on the mailing list.
Bill Moates	07/13/99	Asked which corridor went through his property. Jennifer Graf identified which corridor went through his property and explained the next steps of the project.
Ms. Weirech	07/23/99	Asked which corridor went through her property. Jennifer Graf identified which corridor went through her property and explained the next steps of the project. Also, added her to the mailing list.
John Simon	07/27/99	Asked which corridor went through his property. Jennifer Graf identified which corridor went through his property and explained the next steps of the project. Also, added him to the mailing list.
Linn Fish	08/3/99	Requested to be placed on the mailing list and to received the latest information. Jennifer Graf placed him on the mailing list and mailed him the latest information.
Tom Dodane	08/4/99	Asked which corridors were selected for further study. Kerry Osborn informed him which corridors were selected.
Everett Schurg	08/4/99	Asked to be placed on the mailing list. Jennifer Graf added him to the mailing list and sent the latest information out to him.
Nick Longardner	08/5/99	Asked which corridors were selected for further study? Chris Coffield informed him which corridors were selected.
Lynn Bickhard	08/5/99	Asked to be added to the mailing list and have latest information sent. Linda High mailed the latest information and added her to the mailing list.
Lori lasley	08/5/99	Wants to know the current status of the project. Kerry Osborn updated her on the project and mailed the latest information to her. Also, added her to the mailing list.
Sam Bok	08/5/99	Asked what is the current status of the project? Kerry Osborn updated him on the project and mailed him the latest handouts. Also, added him to the mailing list.
Tony Bloomfield	08/5/99	Asked what is the current status of the project? Kerry Osborn updated him on the project and mailed him the latest handouts. Also, placed him on the mailing list.
Edward C. Osborn	08/9/99	Concerned about Corridors U and Y. Kerry Osborn answered his questions regarding U and Y. Also, sent him the latest handout materials.
April and Tracy Schultz	08/6/99	Concerned about Corridor U. Kerry Osborn answered the questions regarding Corridor U, mailed the latest handouts to them and placed them on the mailing list.
Greg Bryant	08/9/99	Concerned about Corridors N and O. Kerry Osborn answered questions regarding Corridors N and O, mailed the latest handouts and added him to the mailing list.
Mildred Figert	08/5/99	Requested information. Kerry Osborn mailed her the latest handouts and added her to mailing list.
Roger and Jennie Vogel song	08/6/99	Concerned with Corridors U and X. Kerry Osborn answered the questions regarding Corridors U and X, mailed the latest handouts and placed them on the mailing list.
Danny Branham	08/6/99	Concerned about Corridor R. Kerry Osborn answered his questions regarding Corridor R, mailed him the latest handouts and placed him on the mailing list.
Marianne Detray	08/6/99	Concerned about Corridor X. Kerry Osborn answered her questions regarding Corridor X, mailed her the latest handouts and placed her on the mailing list.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
Jim Raimonde	08/6/99	He was upset that Corridors X and U were added to the project. Kerry Osborn answered his questions, mailed him the latest handouts and placed him on the mailing list.
Carol Bartley	08/6/99	She was concerned about Corridors U and Y, requested latest handouts and more public meetings. Kerry Osborn answered her questions on Corridors U and Y, mailed her the latest handouts and placed her on the mailing list.
Tammy and Mike Imber	08/6/99	They were concerned about Corridors X and U. Kerry Osborn answered questions regarding Corridors X and U, mailed them the latest handouts and placed them on the mailing list.
Eugene Nahrwold	08/10/99	He was concerned about the Indiana section and requested the latest handouts. Kerry Osborn answered questions and mailed to him the latest handouts.
Ronald Nahrwold	08/10/99	Concerned about the Indiana section and requested the latest handouts. Kerry Osborn answered questions, mailed to him the latest handouts and placed him on the mailing list.
Joyce Herr	08/10/99	Concerned with Corridors U and Y. Kerry Osborn answered her questions on Corridors U and Y, mailed her the latest handouts and placed her on the mailing list.
David Nice	08/10/99	Concerned about the impact of this project on farmlands. Kerry Osborn answered his questions, mailed latest handouts and placed him on the mailing list.
Unidentified	08/10/99	Left message on voice mail - Thinks US 24 is a great project. Wondered if there was a way to direct trucks off of US 24 and onto the toll road - maybe find a way so trucks don't have to pay until the state line.
Carl Milke	08/10/99	Mr. Mielke is concerned about the impacts of a highway alignment on his father's farm. He wanted to meet with field crews to discuss the location of a new highway through the farm. Jennifer Graf explained that the field crews are collecting ecological, hisotrical, and hazardous matrials data and that highway alignments have not been developed. Also that there is not a prefered alignment at this time. Mr. Mielke was added to the mailing list.
Unidentified	08/10/99	Inquired where the new Segments U and X near Defiance came from and was upset that they were not shown to the public. He did not think that the public is being given enough information about the project. He did not know about the meetings in June and wanted ODOT to do a better job of advertising future meetings.
Dale Bowers	08/10/99	Requested to be placed on the mailing list. Linda High added him to the mailing list as well as mailed the latest handouts to him.
Johanna and Bill Mack	08/11/99	Concerned with Corridors U and Y. Kerry Osborn answered their questions regarding the corridors, added them to the mailing list and mailed them the latest handouts.
William Wetci	08/11/99	Requested to be placed on the mailing list. Linda High placed him on the mailing list and mailed him the latest handouts.
Julie Peio	08/11/99	Concerned with Corridors U and Y. Kerry Osborn answered her questions, placed her on the mailing list and mailed her the latest handouts.
Larry McMichael	08/11/99	Concerned about his property within Corridors L, K, N, and O. Kerry Osborn answered his questions, added him to the mailing list and mailed the latest handouts.
Sandra Bratmiller	08/11/99	Concerned about where her house is in relation to the new road alternatives. Would like a map showing the corridors.
Randy Bell	08/12/99	He was concerned about the location of Corridors L and K because his property is between them.
Max Foust	08/12/99	Mr. Foust was concerned about the location of his property in Corridor F. He also mentioned that he should be notified by phone whenever someone needs to enter upon his property because of his dog.
Victor Relue	08/12/99	He was concerned about the highway being located within Corridors U and Y. Kerry Osborn told him that right now the final location of the proposed highway was not determined and that Corridors U and Y were under study.
Barbara Hull	08/12/99	Barbara Hull inquired about the location of the corridors in relation to her property. She wanted to know how accurate the map is showing the proposed routes. Jennifer Graf spoke with her and explained what the corridors represent and how alignments will be developed within the corridors. Jennifer told her about the August 23rd public meeting and also put her on the mailing list.
Margie Stevenson	08/12/99	Margie Stevenson asked if her property was within one of the corridors. She asked about property acquisition procedures and when ODOT would be buying properties. Jennifer Graf explained ODOT's

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
		procedure for buying property and how that will not happen for several years. Jennifer invited her to the August 23rd public meeting.
Sandra Bratmiller	08/12/99	Sandra Bratmiller inquired about property acquisition procedures. Jennifer Graf answered her questions and offered to send her ODOT's booklets on property acquisition.
Ronald Swymeler	08/12/99	Ronald Swymeler asked questions about property acquisition procedures. Jennifer Graf answered his questions and offered to send him a booklet on INDOT property acquisition procedures.
Elizabeth Weisgerber	08/12/99	Elizabeth Weisgerber called to express her opinion against using Corridors U, X and Y. She was upset that she received no prior notification until the letter advising her of the field activities. Kerry Osborn explained the study process currently underway. She had recently received the second newsletter and was planning to attend the August 23, 1999 public meeting.
Robert Simpson	08/13/99	Mr Simpson wanted to know the status of the project since he is located within Corridor N,O. Kerry Osborn explained the study process and invited him to come to the meeting on the 23rd of August. Kerry also sent an information package and added him to the mailing list.
Jim Raimonde	08/13/99	Jim Raimonde called to get the number of the Fort to Port Organization. He is against the project and is very upset about Segments X and U. He thinks that ODOT should have a meeting for the Defiance residents. The meeting on August 23rd should not be held in Antwerp. It should be held in Defiance to discuss Segments U and X.
Otto Nicely	08/13/99	Otto Nicely is a Defiance County Commissioner. He called to say that the Defiance County citizens are very upset about Segments U and X. He wanted to confirm whose idea they were.
Mr. Shininger	08/13/99	Mr. Shininger lives west of Defiance. The new Segment U affects his property. He has three mentally handicapped sons that live with him. If the highway takes his house it would be a hardship for him.
Robin Coil	08/16/99	Robin Coil called to voice her concern about Corridor U. Kerry Osborn told her about the study process and invited her to come to the public meeting on August 23, 1999.
Beth Hollifield	08/16/99	Beth Hollifield called to state her concerns about Corridor U. Kerry Osborn explained the study process and invited her to the public meeting on August 23, 1999.
Jim Raimonde	08/16/99	Jim Raimonde called requesting answers to several questions he has about the costs of highway construction. For example, how much does it cost to construct one mile of the four-lane highway? How much does it cost to construct a four-lane bridge? How much does one-mile of a four-lane highway cost to maintain per year? Jennifer Graf asked him to fax his list of questions so that she could find out the answers to his questions.
Shirley Witte	08/16/99	Shirley Witte called to correct her address on the mailing list. Jennifer Graf made the correction on the mailing list as requested.
Joe Barker	08/16/99	Joe Barker requested to be put on the mailing list. He also discussed a new project that his church has that is within one of the corridors. Jennifer Graf asked him to send a map with the location of the church building on it. Jennifer added Joe and a neighbor of his to the mailing list.
Francis Rosselet	08/16/99	Francis Rosselet called and asked to be put on the mailing list. Jennifer Graf added her to the list and sent her a newsletter.
Gary Schaaf	08/16/99	Gary Schaaf asked why he did not receive a personal invitation to the US 24 public meetings in June and to the Fort to Port Organization meeting held in August. This call was left on Jennifer Graf's voice mail. Jennifer sent him a letter which answered his questions and enclosed a meeting flyer for the US 24 meeting scheduled for August 23rd.
Ronald Swymeler	08/16/99	Ronald Swymeler asked several questions about property acquisition procedures. Jennifer Graf answered his questions and said she would send him INDOT booklets about property acquisition.
Sandra Bradtmiller	08/16/99	Sandra Bradtmiller asked several questions about property acquisition procedures. Her property is located within one of the corridors. Jennifer Graf answered her questions and said that she would send her an INDOT booklet on right-of-way acquisition.
Paul Imber	08/16/99	Mr. Imber asked questions about staking the outer limits of the corridors and what is the purpose for the corridors. Jennifer Graf answered his questions and told him about the public meeting on August 23rd.
Bill Zeller	08/16/99	Bill Zeller call to discuss the impacts he saw with Corridor U. He had received a property owner notification letter and Kerry Osborn told him about the upcoming special public meeting.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
Michael Fronk	08/16/99	Michael Fronk is the president of the Northwest Ohio Rivers Council and on the Advisory Board of the Maumee Scenic River. He is opposed to Segments U, X, and Y because of their impacts to woodlands and wetlands in the Defiance area. In the area west of Defiance there is a large deer population that would be displaced. He is opposed to a new crossing of the Maumee River because of its scenic river status. Segment U goes through his family farm that they have owned since the 1800's. This property contains old growth timber and wetlands that should be preserved.
Bob Schaper	08/16/99	Bob Schaper was concerned that Sampson Road would be cut off by a new US 24 alignment. He stated that Sampson Road is a very busy local road and it should be kept opened. He owns farmland along Sampson Road and it would be a hardship if the road was cut off.
Sue McNealy	08/16/99	Sue McNealy requested to be placed on the mailing list. Jennifer Graf added her to the list and sent her the latest newsletter and a flyer for the public meeting on August 23rd.
Kevin Stuart	08/17/99	Kevin Stuart called to say that his grandparents own 100 acres within Segment N and they have not received any mailings about the project. He asked where the road is going to go and how it would affect his family's farm. On the property is a cemetery that is over 100 years old. Jennifer Graf explained that alignments have not been developed for the highway. That work will begin in November of this year. Jennifer asked that at the August 23rd public meeting Kevin review the environmental inventory map to see if the cemetery is on it. If it is not on the map then it should be added. Jennifer added both Kevin and his grandparents to the project mailing list and put the grandparents on the property owner list.
Barry Richhart	08/17/99	Barry Richhart owns property within one of the corridors and he has not received any project mailings. Jennifer Graf added him to the mailing list and property owner list. She also sent him a newsletter and a flyer for the August 23rd public meeting.
Jerry Stanton	08/17/99	Jerry Stanton called to voice his opposition to Segments U and X. He wanted to know whose idea they were and when they were developed. Why weren't they presented at the public meetings in June. Jennifer Graf explained that they were developed during the public involvement process after the public meeting. Jerry Stanton stated that the interchange at West High Street would only serve one person. The project should not cater to individual interests. He believes that something is going on behind the public's back with this project.
Nancy Lobler	08/19/99	Nancy called to ask about what will happen to their farm since they are located within Corridor K. Kerry Osborn explained that currently all the feasible corridors are being looked at including the existing US 24 alignment. Nancy said that the farm has been in her family for over 100 years.
Brenda Griffith	08/19/99	Brenda is a City of Defiance Councilwoman and called on behalf of the residents she represents. She voiced their concerns about the location of Corridors U and Y and the fact that most of the people had not heard of the project until the stakes were set in the field.
Richard Sabo	08/20/99	Mr. Sabo called to request a larger map of the feasible corridors. He has poor vision and is unable to see the 11x17 map well. He also is in a wheelchair and unable to attend the public meetings, although his wife and son have been.
Mr. Marlin	08/23/99	Mr. Marlin owns a 40 acre farm next to Route 162. This farm has been in his family since 1856. He does not want the road to go through his farm.
Unidentified	08/23/99	Route 111 is the dividing line between bus routes, school districts, fire districts, and mail routes. The location of the new highway should take this information into consideration when developing alignments.
Jim Raimonde	08/23/99	Jim Raimonde had read an article in the paper which described the location of the corridors and was confused by what was written. He asked for clarification on some of the things written about in the article regarding the location of the corridors. Jennifer Graf answered his questions.
Joanna Mack	08/24/99	Joanna Mack expressed her opposition to Segments U, X, and Y because they would impact her property. She asked if anyone had looked at improvements to the intersection of US 24 and SR 424. Jennifer Graf explained that alignment development will begin this winter and improvements to that intersection would possibly be studied at that time. She also asked if the Highway Patrol building could be impacted by the project or was that off-limits. Jennifer said that she did not know the answer to this question but would call her back with an answer. Mrs. Mack's asked if impacts to residences and businesses were weighted equally in developing alignments. Jennifer explained that it depended on the business impacted. For example impacts to large businesses such as Goodrich would be looked at differently compared to a house due to the cost of purchasing the property for right-of-way acquisition and also because the industry provides jobs to local residents. Mrs. Mack asked if Jennifer could send her information on property acquisition procedures. Jennifer said that she would mail out the information to her.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
Unidentified	08/25/99	An unidentified caller wanted to know if ODOT would take all of her property. It was explained that ODOT would only take what was needed for transportation purposes, however, ODOT would not leave a property owner with an uneconomic remnant.
Paul Hale	08/25/99	Paul Hale called to express his support of the project and his opinion that the new facility be a limited-access, four-lane highway on a new alignment. Kerry Osborn explained the status and process being undertaken for the project and sent an information package.
Ted McSorley	08/25/99	Ted McSorley called to find out where the corridors being studied are located. He recently purchased a two acre lot near the southeast corner of SR 101 and Maumee Center Road. Kerry Osborn explained that currently a corridor under study is located north of the referenced intersection. Ted asked to be sent an information packet and added to the mailing list.
Tammy and Mike Imber	08/26/99	Mike Imber called to offer suggestions for an interchange with US 24 and SR 424. He explained how an interchange could be put in this area. He asked if the engineers working on the project had been out to the corridors. Jennifer Graf asked Mike Imber to put his suggestion in writing and send them to her so that she could forward them to the project engineers. She told him that most of the people working on the project have been to the study area, but not all the engineers will visit the corridors in person.
Dan Lichty	08/26/99	Dan Lichty called to express his concern for the wildlife habitat in the area. He explained that woodlots are limited in the US 24 study area due to their conversion to farmland. If an alignment goes through a wooded area, there is really nowhere for the displaced wildlife to go. There is a large wooded area south of US 24 where a reservoir had existed. This is the only wooded area south of US 24 and the highway should avoid it. This wooded area contains a large deer population and a variety of other wildlife species. Dan Lichty prefers improving existing US 24 over a new alignment. He also suggested putting scale for trucks at the intersection of 127/24 to help the truck traffic along US 24. Also in the vicinity of CR 83, 161, 183, and 206, a local citizen has found numerous Indian artifacts.
Jerry Fulton	08/26/99	Jerry Fulton called to express his concerns about a new alignment cutting off Switzer Road. He wanted to know if Switzer Road was going to be cul-de-saced. He would prefer turning lanes instead of an interchange at Switzer Road. He is concerned that a new alignment would cut off access to Route 15. A new hospital and a fire station are on Route 15 and he is concerned that people on Switzer Road would not have access to these facilities. Jennifer Graf explained that in developing alignments, engineers try to keep local roads open with overpasses and underpasses. Jerry also said that he would like to see turning lanes at High Street instead of a new interchange or intersection.
Ray Shaper	08/26/99	Ray Schaper said that there is an unmarked grave site were two children are buried on the east side of Sampson Road between Woodburn Road and Maumee Center. The site is marked by a tree and lilies. He has no proof that the bodies are buried there, but the residents respect that area as a grave site. The bodies were buried before 1894.
James Passwater	08/26/99	James Passwater called to say he is in favor of the project and has supported the project for many years. He can't understand what is being studied now that hasn't already been studied in the past. He asked why is the state paying an engineering firm over 4 million dollars to study the project. This is a waste of tax payers' money. Jennifer Graf tried to explain about the federal regulations that require the US 24 studies to be done in order to use federal funding for the project. Jennifer Graf added Mr. Passwater's name to the mailing list.
Nellie Bauer	08/27/99	Nellie Bauer called to say that her mother (who is 90 years old) is concerned about the field crews standing along the road, staring at her house. Nellie asked if we could direct the people to introduce themselves and let her mother know what they are doing. Kerry Osborn stated that he would contact the appropriate person and let them know her concern. Nellie asked to be added to the mailing list along with adding her mother (Gertie Stuart, 10372 Road 206, Cecil OH 45821). Kerry sent them both a package of information.
Deb Fraley	08/27/99	Deb Fraley called to inquire about the status of the project. She had heard numerous stories and wanted to know what really was happening. Kerry Osborn explained the status and process of the project. She also indicated that she had not received any notification so Kerry said that he would send her a package of information and add her to the mailing list.
David Rager	08/27/99	David Rager believes that the woodlot located in the vicinity of CR 83 in Paulding County is a valuable resource and is commonly used as hunting grounds. He is suggested that the corridor be moved to cross CR 87 where there are not significant woods. He also requested to be added to the mailing list.
Jim Spicer	08/31/99	He is concerned about access for fire protection and emergency vehicles in the Defiance area, particularly if an alignment /corridor is chosen on the north side of the river. He does not want a circuitous route to reach homes in need and mentioned several homes on Switzer Road. He's a

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
		Trustee in Delaware Township. Jim Bednar assured him that those items are considered in the evaluation of the corridors and alignments, especially at the alignment stage.
Joe Clemens	09/01/99	Joe Clemens called to state his opposition to the location of Corridors U, X, and Y. He and his son run a beef farm that would be bisected by an alignment in this area.
Daniel Ludemann	09/08/99	Daniel Ludemann, the president of the Defiance County Farm Bureau, called and spoke to Kerry to request a large-size exhibit of the feasible corridors. He said that he has been asked a lot of questions about the project and wanted something he could use to explain it better. He said that he had asked Kirk Slusher how he could get a map and was told to contact Kerry. Daniel also asked to be added to the project mailing list. Kerry Osborn told Daniel that when possible he should direct people's questions to the project hotline in order to maintain consistency in answers.
Debra Fraley	09/15/99	Debra Fraley's neighbor told her that ODOT is keeping a list of property owners who want "ponds" on their property. Kerry Osborn explained that ODOT would not be making determinations of borrow sites until the alignment was selected, and that that decision may likely be made by the contractor just prior to construction.
Paul Imber	10/04/99	Mr. Imber called to say that he had received a letter in response to his comments. He stated that the Ralston interchange serves the Fox Run development and Olson Industries. A new interchange is not needed at West High Street. Jennifer Graf thanked him for his input and encouraged him to send in any other comments he has on the US 24 project. She told him that his suggestion for interchange designs will be reviewed by project engineers over then next few months.
Ray Shaper	10/04/99	Mr. Shaper called to offer his ideas of where a US 24 alignment could be located in the Woodburn area. Jennifer Graf asked him to put his ideas on a map and mail them in to her. She told him about the US 24 meeting in Woodburn on 10/13 and invited him to discuss his ideas with her and Kerry Osborn at the meeting.
Shirley McMichael	10/21/99	Shirley McMichael called to inquire where the US 24 alignments will go in the Antwerp area. Her son would like to build a new home but does not want to do so until he knows where the alternatives will be located. Jennifer Graf told her that the alignments have not been developed yet for the project. Engineers will begin developing alignments in November, 1999. Shirley said that she would call back in December.
Ronald Maser	11/30/99	Ronald Maser called to inquire about improving Route 6 to a four-lane facility instead of US 24. He stated that the right-of-way is already in place for a four-lane highway and asked if ODOT had considered Route 6 as a possible option to the US 24 project. Mr. Maser asked that the Route 6 question be answered in writing. Jennifer Graf stated that should would look into this matter and write Mr. Maser a letter responding to his question. Mr. Maser also stated that all the US 24 public meetings should have a question and answer session and that a PA system should be provided at the meetings.
Mike Simon	11/30/99	Mike Simon called to ask what the concrete monuments are within the US 24 study area. Jennifer told him that they are markers for the coordinate system that the project will be based on. The markers will be used for project surveys and mapping. Mr. Simon stated that the selected alignment should follow the railroad tracks between Antwerp and Defiance. He is concerned about impacts to farmlands and homes. He said that there are only five houses between Antwerp and Defiance near the railroad tracks. Mr. Simon stated that he believed corridor Segments R and S make sense for industries.
Irma Hurtig	01/26/00	Irma Hurtig called to inquire about the location of the proposed alignments and how existing pipelines could affect their locations. She owns over 100 acres at the southeast corner of CR 8 and CR 133 which contain several pipelines. It was explained that the location of the alignments have not yet been determined and that highway locations are not necessarily affected by the presence of pipelines. Usually the pipelines can be encased in a protective conduit under the highway. Ms. Hurtig stated that she thought the increase in truck traffic on US 24 was due the the higher tolls charged by the turnpike. She also said that she would like to see the exisiting alignment improved rather than building a new highway on a new alignment.
Diane Poulson	02/09/00	Diane Poulson called to express her opposition to an interchange for Switzer Road and West High Street with US 24. She felt that the interchange would bring additional traffic onto the local roads. She also thought that having the existing interchange at SR 15 was adequate for the area.
Greg Bryant	02/15/00	Greg Bryant called to express his concerns regarding the proposed location of the highway. Greg has a farm on the east side of Cecil and prefers an alignment that would be on the north side of the railroad in Corridor N, O.
Mark Schwartz	02/17/00	Mark Schwartz called to inquire if Bremer Road was going to be closed off as a result of the US 24 alignments. He is Amish and uses Bremer Road to travel to work at a neighboring farm. Mr. Schwartz

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
		walks to work or travels by horse and buggy. Closing Bremer Road would be a hardship to him and increase his commute by four to five miles. If Bremer Road is closed near the railroad tracks, he stated he would have to move or find a new job. Jennifer Graf asked Mr. Schwartz if there are any other Amish families in the area. The Amos Schwartz family is on Sampson Road and they talk about moving from the area if the new highway would close off the roads that they travel on. Mr. Schwartz added that Webster Road is the main route used to access the Amish community north of the Maumee River.
Mrs. Hertel	02/29/00	Mrs. Hertel called to ask if anyone is looking into the effects that the vibrations caused by truck traffic have on the buildings, water lines, and gas lines along US 24. She stated that the heaviest truck volumes are during the night. She is concerned that the vibrations caused by the trucks will damage her house foundation.
Don Rockaway	02/29/00	Don Rockaway called to ask about the fieldwork that will be conducted on his father's property. His father received a letter stating that field crews would be accessing his property to collect data for the US 24 project. Jennifer Graf explained what the field crews were doing and the type of information that they needed to obtain.
Dianne Polson	04/17/00	Dianne Polson called to inquire if an interchange is being proposed at West High Street and if so, what type of design will it be. Jennifer Graf explained that an interchange is being designed for West High Street and currently there are several designs under review. Mrs. Polson stated that the residents in the area are not in favor of an interchange at this location.
Ronja Kreig	05/18/00	Ronja Kreig called to inquire about the status of the US 24 project. She and her husband bought a farmhouse on US 24 in March, 1999. She noticed some people were taking pictures of her house and was concerned. Kerry Osborn explained the current progress of the project, including the addition of an alignment along the existing US 24. Ronja Kreig asked if she could be added to the mailing list and if some information could be sent to her.
Ken Meyer	09/05/01	Mr. Meyer called to inquire about a parcel of land that he was interested in purchasing. He wanted to know if the property would be landlocked by the new highway and how much of the land would be taken for construction. Jennifer Graf told Mr. Meyer that the Preferred Alternative is being refined and at this time she could not tell him definitely whether or not the property that he was asking about would be landlocked by the new highway. Project engineers are currently conducting a service road study for landlocked parcels. Jennifer asked that Mr. Meyer contact her at the end of October when she would have more information for him about the property in question. Mr. Meyer requested that he be sent a map of the proposed highway in Allen County. Jennifer said that she would send him a map.
Mark Schwartz	09/26/01	Mark Schwartz called to inquire if the project team had received a letter with responses to INDOT's questions regarding travel patterns in the Amish Community in Allen County. Jennifer Graf replied that she had received the letter and forwarded it to INDOT and ODOT. Mark Schwartz inquired about the status of the project. Jennifer Graf provided him with a brief update about fieldwork, engineering, and report preparation that was being done for the project.
Orville Bremer	06/18/02	Orville Bremer called to ask about local road impacts in Allen County, Indiana. He asked how the new highway would affect Woodburn Road, Webster Road, and Ryan/Bruick Road. Jennifer Graf explained that the new US 24 highway would be built over Woodburn Road. There would be no change at Woodburn Road. At Webster and Ryan Roads, there would be an at-grade intersection with the new highway. Motorists would be able to access the new road at these two locations.
Mark Schwartz	06/18/02	Mark Schwartz called to ask if INDOT would provide an overpass at Webster Road instead of building an at-grade intersection at this location. The overpass at Berthaud Road is unacceptable to the Amish community. They want overpasses at Webster Road and Bruick Road. He suggested that an at-grade intersection be provided at Woodburn Road and an overpass constructed at Webster Road. Jennifer Graf stated that she would tell INDOT about his comments.
Ray Jeffrey	06/18/02	Mr. Jeffrey called to ask how much of his property would be needed for the new highway. Jennifer Graf located his property on project mapping and told him how many acres would be needed for the new highway.
Donn Werling	06/18/02	Donn Werling called to say that there is a very large oak tree in a woodlot in Allen County that should not be destroyed by the new highway. He asked if the tree was in the right-of-way of the Preferred Alternative. Jennifer Graf asked that he send the information on the location of the tree so that she could determine whether or not the new highway would affect the tree. Ms. Graf asked that Mr. Werling send her a map with the tree's location and she would investigate this matter. Mr. Werling said he would send her the information.

SUMMARY OF PUBLIC COMMENTS RECEIVED THROUGH THE US 24 HOTLINE (CONTINUED)

Name	Date	Summary of Conversation
Dennis Fey	07/12/02	Mr. Fey called to inform the project team that there was a terrible accident on US 24 at SR 101 in Allen County on July 10, 2002. A semi truck hit a church van carrying children. An 11 year old girl was killed. US 24 was closed for 6 hours after the accident.
Nellie Beerbower	07/17/02	Nellie Beerbower called to report a pothole on State Line Road at the intersection with US 24. She is concerned that if a motorist hits the pothole while turning onto State Line Road from US 24 they will lose control of their vehicle. She stated that sometimes the hole is filled with gravel but that is not working to correct the situation.
Donn Werling	4/29/03	Donn Werling called to inquire if the large oak tree on Karl Hockemeyer's property is within the right-of-way of the US 24 Preferred Alternative. He stated that the tree is over 100 years old and should be preserved. Jennifer Graf stated the oak tree is within the right-of-way of the proposed highway alignment.
Karl Hockemeyer	4/29/03	Karl Hockemeyer called to inquire about the large oak tree on his property. He asked if the tree was located in the right-of-way of the new US 24 highway. Jennifer Graf stated that the tree is within the right-of-way of the Preferred Alternative. Mr. Hockemeyer asked if the tree was going to be destroyed by the new highway and asked how much the tree is worth? Jennifer Graf replied that the tree would be avoided if possible and that she did not know what the tree was worth.
Roger Theis	5/8/03	Roger Theis called to inquire if the new US 24 highway impacted his property on Road 143 in Cecil, Ohio. Jennifer Graf stated that his property on Road 143 was south of the proposed highway alignment and would not be taken by the US 24 project. Jennifer Graf suggested that Mr. Theis visit the County Engineers office to view the map of the US 24 Preferred Alternative.

US 24
New Haven to Defiance
Section 4(f) Evaluation

PID # 18904
PAU/DEF 24-0.00/0.00

Prepared for

Ohio Department Of Transportation
District 1

Prepared by

Parsons Brinckerhoff Ohio, Inc.

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1.0 INTRODUCTION

The Ohio Department of Transportation (ODOT) and Indiana Department of Transportation (INDOT) have undertaken a study of possible improvements to United States Route 24 (US 24) in northeast Indiana and northwest Ohio. US 24 is a major east-west transportation route through the Midwestern United States, providing access between Fort Wayne, Indiana and Toledo, Ohio. US 24 has been identified as a strategic link in both the regional and national highway network, as it provides a connection to other major transportation corridors.

This document presents an analysis of the Section 4(f) involvements associated with the Preferred Alternative identified for the US 24 New Haven to Defiance project. Four historic properties determined to be eligible for inclusion in the National Register of Historic Places (NRHP) are located within the Area of Potential Effect (APE) for the Preferred Alternative. These properties are the Niemeyer Farm, the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House. All of the resources are located in Allen County, Indiana.

The initial study area established for the project is approximately 1282 square kilometers (500 square miles) in size. Beginning 0.8 kilometer (1/2 mile) west of the I-469 bypass in New Haven, Indiana, the study area extends to the four-lane section of US 24 at its intersection with Ohio State Route 15, just west of Defiance. The study area includes Allen County, Indiana, and both Paulding and Defiance counties in Ohio. Existing US 24 is approximately 60.3 kilometers (37.4 miles) in length between I-469 and Ohio State Route 15.

The US 24 project is intended to improve the operational characteristics for both local and through traffic currently using US 24. Between New Haven and Defiance, US 24 suffers from congestion and safety-related issues as a result of inadequate capacity to accommodate current traffic demand. The facility does not meet current design criteria for travel lane widths, provision of shoulders, roadway curvature, sight distance and travel speed. These characteristics contribute to increasing travel time delays and a declining level of service along the roadway. The goals of the US 24 project are to:

- Improve traffic flow and level of service.
- Reduce travel times between project termini.
- Improve roadway safety.
- Enhance the regional transportation network.
- Accommodate future economic growth in the region to enhance the competitiveness of local and regional businesses.

The Purpose and Need for the US 24 New Haven to Defiance project is discussed in detail in Section 1 of this Draft Environmental Impact Statement (DEIS).

2.0 SECTION 4(f) RESOURCES

Four properties that have been determined to be eligible for inclusion in the NRHP are located within the Area of Potential Effect (APE) for the Preferred Alternative (Alternative D-1). These resources, the Niemeyer Farm, the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House, are shown in Figure 1. Potential effects to the historic properties were evaluated by applying the Criteria of Effects established by the Advisory Council on Historic Preservation (ACHP).

The Preferred Alternative was determined to have No Effect on the Harper House and the Smith/Rich/Krug House. Although impacted by right-of-way acquisition, the Preferred Alternative was determined to have a No Adverse Effect on the Meyer/Gallmeyer Farm.

The Effects Evaluations for the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House were submitted to the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) for review and concurrence in November 2001. DHPA concurred with the Effects Determinations on December 7, 2001. Changes in the design of the Preferred Alternative, specifically with respect to disposition of crossroads within the vicinity of the Meyer/Gallmeyer Farm and the Smith/Rich/Krug House, were also evaluated and additional coordination with the DHPA was undertaken in May and June 2002. The DHPA concurred in July 23, 2002 that specific design changes would not change the effects determinations for Alternative D-1.

Potential effects determinations for the Niemeyer Farm are preliminary and have not yet been reviewed by the DHPA. The existing US 24/I-469 interchange will be improved to support the free flow of traffic between the two highways. None of the three feasible interchange improvement alternatives require acquisition of property from the farm. The improvements will not introduce a new element into the viewshed as the existing interchange is now located within the viewshed. Similarly, traffic-generated noise levels are not anticipated to change as a result of the interchange improvements. Therefore, the Preferred Alternative is anticipated to have No Effect on the Niemeyer Farm. Additional coordination with the DHPA will be undertaken when preliminary engineering studies and impact analyses for the US 24/I-469 feasible interchange improvement alternatives are completed. The Feasible Alternatives for the interchange improvements and associated impacts will be presented to the public for comment at the US 24 Public Hearing. Following the public comment period, a preferred interchange alternative will be selected and will be presented in the US 24 New Haven to Defiance Final Environmental Impact Statement (FEIS).

As noted above, the DHPA has concurred with the finding that the Preferred Alternative will have No Effect on the the Harper House and the Smith/Rich/Krug House. Furthermore, it is anticipated that the Preferred Alternative will have No Effect on the Niemeyer Farm property. Therefore, the Preferred Alternative will not result in a 4(f) impact to the Niemeyer Farm, the Harper House, or the Smith/Rich/Krug House. Discussions on the impacts of the Preferred Alternative on the Harper House, and Smith/Rich/Krug House are presented in Section 3.3.2 and 3.3.3 of the Draft Environmental Impact Statement (DEIS).

One NRHP-eligible resource, the Meyer/Gallmeyer Farm, will be directly impacted by the project. The impacts to this resource are presented in the following discussion.

2.1 DESCRIPTION OF THE MEYER/ GALLMEYER FARM

The Meyer/Gallmeyer Farm is located at 2811 Berthaud Road, Milan Township, Allen County, Indiana and is shown as Resource #3 on Figure 1. The property is eligible under Criterion A for its association with the locally prominent Gallmeyer-Meyer families who have owned the farm since the 1850s and still reside in the residence. The farm is also eligible for the NRHP under Criterion C for its partial log cabin construction and its cluster of eight well-preserved outbuildings, at least half of which are 50 years old or older.

The farm extends from the intersection of Berthaud and Bremer roads northward to US 24. The property consists of approximately 35.4 hectares (87.5 acres) divided into three parcels. The larger 31.1-hectare (76.8-acre) parcel represents the remaining land associated with the original Meyer/Gallmeyer farm and includes the house and farm building complex. Two smaller parcels to the north, 3.9 hectares (9.6 acres) and 0.4 hectares (1.0 acre) in size, respectively, are later additions and include tillable and non-tillable acreage. Formerly part of the farm property, three residential lots have been developed along the property's southern border, and another residential lot has been developed in the northeast corner. Although currently fronting to the east on Berthaud Road, the property also includes 365.9 meters (1,200 feet) of frontage to the north on US 24.

The residence is set back about 213.4 meters (700 feet) west of Berthaud Road and about 304.9 meters (1,000 feet) south of US 24. An unnamed tributary to Gar Creek cuts across the northern portion of the property and converges with Gar Creek in the northwest corner before passing under US 24 and heading towards a confluence with the Maumee River. The general setting is comprised of gently rolling agricultural fields with brush and trees restricted to the area around the farmhouse, and the area in immediate association with Gar Creek. While the rural setting predominates, the east side of Berthaud Road is completely lined with residences occupying tracts averaging 0.2 hectares (0.5 acres) in size.

The farmstead consists of an upright-and-wing house, the wing of which conceals a log cabin constructed ca. 1850, and eight associated outbuildings built between 1901 and 1980 including a gable-roofed three-bay barn, milk house, silo, granary, garage and storage sheds. The 31.1-hectare (76.8-acre) parcel, including the house and outbuildings, originally fronted on a section of Slusher Road that formed the northern boundary of the property. Two smaller parcels to the north of the Slusher Road line were added to the property sometime after 1900. This section of Slusher Road was vacated sometime between 1907 and 1920.

As shown in Figure 2, the defined NRHP boundaries conform to the original 31.1-hectare (76.8-acre) parcel to the south of the former Slusher Road right-of-way. This parcel best represents the original Meyer/Gallmeyer property of the 1850s and includes the farmhouse and cluster of well maintained out buildings. These buildings, surrounding farm fields, and landscape features including an unnamed tributary to Gar Creek, rows of hardwoods, and fencing, retain a feeling of historic integrity, justifying incorporation of the historically associated farm acreage within the historic property boundary.

The DHPA concurred that the property is eligible for inclusion in the NRHP (see Table 1 and correspondence dated June 7, 2000) and with the historic boundary defined for the resource (see correspondence dated December 7, 2001).

2.2 PROJECT EFFECT ON THE MEYER/ GALLMEYER FARM

The Preferred Alternative (Alternative D-1) will be constructed at-grade to the south of US 24 and within the northern portion of the property, as shown in Figure 2. The highway will traverse the property from west to east. The proposed highway will pass along the south side of existing US 24 about 91.5 meters (300 feet) north of the farm building complex at its closest point, and about 152.4 meters (500 feet) north of the residence. The residence is screened from the proposed right-of-way by outbuildings and landscaping. Some vegetative screening is provided by trees and brush associated with Gar Creek and field edges in addition to the trees surrounding the dwelling.

In accordance with the requirements of the National Historic Preservation Act, the Criteria of Adverse Effect were applied to determine if the Meyer/Gallmeyer Farm is adversely effected by the US 24 project. The Preferred Alternative affects a portion of the northern periphery of the property, resulting in a direct impact to the resource. The project will require a right-of-way acquisition of approximately 4.0 hectares (9.9 acres) of land from the farm's three tax parcels, of which 1.2 hectares (3.0 acres) is situated within the historic boundary of the resource. The taking affects less than four percent of the land within the NRHP boundaries (land associated with the original 1850s farm tract). The Preferred Alternative will not affect buildings or structures or access to the farm.

The noise analysis conducted for this property predicts that the Preferred Alternative will result in a slight increase in noise over existing noise levels; however, the future noise levels will remain below the FHWA Noise Abatement Criteria (NAC) level.

According to historic atlases and plat maps for Milan Township, the Meyer/Gallmeyer Farm historically fronted on a continuation of Slusher Road that formed the northern boundary of the original farm. This section of Slusher Road was vacated early in the 20th century. The Preferred Alternative (Alternative D-1) will run along and across the property in the vicinity of the previously closed section of Slusher Road. The affected area does not comprise a part of the historically defined farm tract as originally composed and recorded in historic land ownership records. This land at the northern periphery of the current farm does not contribute significantly to the rural aesthetic associated with open fields and agrarian architecture. It was not a portion of the farm during its period of significance as defined by family members.

With the Preferred Alternative (Alternative D-1), the tributary to Gar Creek will still run diagonally across the northern portion of the property. Wooded and fallow areas presently line approaches and bottoms along Gar Creek, opposite the farmstead, and south of existing US 24 and the route of the Preferred Alternative. This extensive vegetative buffer will remain after the project is built, screening the new road from the farmstead residence. The view between the Meyer/Gallmeyer buildings and the Preferred Alternative will also be minimized by distance between the resource and the facility; the resource is situated approximately 152.4 meters (500 feet) from the Preferred Alternative. Any existing vegetative screening will largely remain intact and intersections will be at-grade such that the proposed highway profile will not be higher than the existing US 24 alignment. The visual changes will not affect the architectural significance of the resource to the extent that it would no longer be considered eligible for inclusion in the NRHP under Criterion C for its log cabin construction and well preserved cluster of outbuildings.

The taking of the 1.2-hectare (3.0-acre) triangle of land from the northern edge of the property is a Section 4(f) use of the property. However, the Preferred Alternative will not alter the characteristics of the farm that qualify it for inclusion in the NRHP in a manner that would diminish its integrity. Therefore, the effect of the impact is not adverse. The DHPA has concurred with the No Adverse Effect Determination for the Meyer/Gallmeyer Farm (see summary of DHPA comments in Table 2 and correspondence dated December 7, 2001).

3.0 ALTERNATIVES CONSIDERED

3.1 OVERVIEW OF ALTERNATIVES

The US 24 New Haven to Defiance project is being developed in accordance with ODOT's Transportation Development Process. A detailed discussion on the development and evaluation of the Feasible Corridors and Feasible Alternatives and the identification of the Preferred Alternative is provided in Section 2 of the DEIS.

Three types of alternatives were developed for the US 24 New Haven to Defiance project: No Build, Improvements Within the Existing US 24 Corridor, and Highway on New Alignment Alternatives. The No Build Alternative does not meet the Purpose and Need for the project and therefore is not considered to be prudent and feasible.

Two Feasible Alternatives (Alternatives Y and Z) were developed within the US 24 Corridor. Alternative Y consists of improving the existing facility adding shoulders, improving intersections, and adding turning and passing lanes. This alternative does not meet the Purpose and Need for the project and therefore is not considered to be prudent and feasible.

The second alternative developed within the US 24 Corridor consists of upgrading existing US 24 to a four-lane divided highway with at-grade intersections. Although, Alternative Z meets the Purpose and Need for the project, construction requires acquisition of right-of-way from six Section 4(f) properties. Therefore, Alternative Z is not considered to be prudent and feasible.

For the Highway on New Alignment Alternatives, 24 Feasible Alternatives (Alternatives A through X) were originally developed. Through the screening of the Feasible Alternatives, a 25th alternative (Alternative D-1) was developed, which minimized impacts on high quality wetlands. Alternative D-1 has been identified as the Preferred Alternative for the US 24 New Haven to Defiance project. The Highway on New Alignment Alternatives are designed as four-lane, divided, limited access facilities. The alternatives provide for two lanes of travel in each direction separated by a 25-meter (82-foot) wide grass median in Indiana and a 18.3-meter (60-foot) wide grass median in Ohio. The design for Alternatives A through X includes an expanded right-of-way footprint between I-469 and the Indiana/Ohio State Line to support the construction of a controlled access freeway in Allen County, Indiana. The Preferred Alternative is designed as a freeway with interchanges in Allen County. Between the state line and SR 15, the alternatives (including the Preferred Alternative) are designed as expressways; access is limited to interchanges and at-grade intersections located at state routes, frequently traveled roads, and roads that provide access across the Maumee River.

Alternatives A through X meet the Purpose and Need for the project. The number of Section 4(f) resources located within the APE as well as Section 4(f) impacts varies by alternative. Of the 25 Highway on New Alignment Alternatives, four avoid Section 4(f) resources (Alternatives E, F, G, and H). There is one Section 4(f) resource located within the APE for Alternatives E, F, G, and H, which is the Smith/Rich/Krug House. In the vicinity of the Smith/Rich/Krug House, the boundaries of the APE are the same for the Preferred Alternative (Alternative D-1) and Alternatives E, F, G, and H. None of these alternatives require direct use of the Smith/Rich/Krug House property. Through coordination with the DHPA, it has been determined that these alternatives would have No Effect on the resource. However, as presented in the following discussion, Alternatives E, F, G, and H are not considered to be prudent alternatives.

In addition, an alignment shift for the Preferred Alternative (Alternative D-1) has been developed to avoid direct impact to the Meyer/Gallmeyer Farm and evaluated for this analysis. The Preferred Alternative, with the alignment shift, is not considered to be a feasible and prudent alternative as discussed below.

3.2 FEASIBLE ALTERNATIVES E, F, G, AND H

Feasible Alternatives E, F, G, and H follow the same alignment as the Preferred Alternative (Alternative D-1) in the vicinity of the Smith/Rich/Krug House (Resource #4), but differ from the Preferred Alternative with respect to the design of the crossing at Woodburn Road. For Alternatives

E, F, G, and H, an at-grade-intersection would be constructed at Woodburn Road. For the Preferred Alternative (D-1), a grade-separated crossing carrying the new highway over Woodburn Road is proposed. The DHPA concurred that a grade-separated crossing over Woodburn Road will also have No Effect on the Smith/Rich/Krug House (see correspondence dated July 23, 2002).

As noted in the Effects Evaluation submitted to the DHPA in November 2001, there is sufficient vegetation to screen the view of the highway and the intersection from the Smith/Rich/Krug House. In addition, the distance between the resource and the alignment proposed for Alternatives E, F, G, and H is more than 304.9 meters (1,000 feet), which also serves to minimize the introduction of a new visual element into the setting of the resource. Given these conditions, Alternatives E, F, G, and H will have No Effect on the resource. The DHPA concurred that an at-grade intersection at Woodburn Road will have No Effect on the resource (see correspondence dated December 7, 2001). Therefore, Alternatives E, F, G, and H are considered to be "avoidance alternatives".

Alignments were developed in several corridors with the Allen County portion of the study area. Focusing on just Alternatives D-1, E, F, G, and H, there are two possible combinations of segments. Alternative D-1 includes Segments 1, 3, and 8, while Alternatives E, F, G, and H include Segments 2, 6, and 8.

Segment 2 has been identified by the general public and public officials as one of the least preferred segments of the 20 segments developed for the Feasible Alternatives. Furthermore, Segment 2 is not consistent with Allen County or City of New Haven comprehensive plans.

Given the rural setting of the project and the dominance of agricultural industry in the local economy, impacts to productive farmlands are a key issue of the project. The public has commented that impacts to farmlands should be minimized as much as possible. Overall, Alternatives E, G, and H have a greater impact on productive farmland than Alternative D-1. Within Allen County only, Alternatives E, F, G, and H have a greater impact on productive farmlands than Alternative D-1.

Preservation of natural resources, particularly forested wetlands, woodlots, and wildlife habitat, is a key issue raised by several resource agencies. Because the land use of the study area is predominantly agricultural, the occurrence of these resources is limited throughout the study area. In comments provided for Concurrence Point #2, the US Fish and Wildlife Service (USFWS) stated that all efforts should be made to preserve woodlots, a rare resource in the study area. Overall, Alternatives E, F, G, and H have a greater impact on wetlands and forested wetlands than Alternative D-1. Similarly, Alternatives E, F, G, and H have a much greater impact on wetlands within Allen County than Alternative D-1 (16.5 hectares [6.7 acres] for Alternatives E, F, G, and H versus 0.4 hectares [1.0 acre] for Alternative D-1). For woodlots, Alternative D-1 has greater impacts than Alternatives E and G. However, when comparing the portions of these alternatives within Allen County only, Alternatives E, F, G, and H have a much greater impact on woodlots (12.1 hectares [29.8 acres] for Alternatives E, F, G, and H versus 2.8 hectares [6.8 acres] for Alternative D-1).

Through the public involvement activities for the project, one comment frequently submitted on the project is the suggestion to use existing transportation rights-of-way for the new highway. These rights-of-way include existing US 24, railroad corridors, and local roadways. The Feasible Alternatives were designed to parallel existing rights-of-way as much as practicable and feasible to minimize project impacts. Alternative D-1 parallels more of the existing transportation corridors overall and within Allen County than Alternatives E, F, G, and H.

Given the following factors, Alternatives E, F, G, and H are not considered to be prudent alternatives:

- Segment 2 is one of the least preferred segments of all 20 segments developed for the Feasible Corridors, based on input from local public officials and residents. It is not consistent with the objectives stated in the Allen County or City of New Haven comprehensive plans.

3.3 ALIGNMENT SHIFT FOR ALTERNATIVE D-1

- Alternatives E, F, G, and H have a greater impact on productive farmlands within Allen County. Agriculture is the dominant industry in the Allen County portion of the study area.
- Alternatives E, F, G, and H have a greater impact on woodlots and forested wetlands within Allen County. The occurrence of these resources within Allen County is rare. Consequently, resource agencies have requested that all efforts be made to preserve woodlots and forested wetlands.
- The impact of Alternative D-1 on the Meyer/Gallmeyer Farm is not considered to be adverse and will not diminish the historic integrity of the resource.

The Preferred Alternative (Alternative D-1) has a direct impact on one historic resource, requiring acquisition of a small portion of the Meyer/Gallmeyer Farm. The possibility of avoiding acquisition of land from the resource by shifting the alignment of Alternative D-1 was also considered. The alignment shift, shown in Figure 3, moves Alternative D-1 to the north of its proposed location and requires a 5484-meter (3,400-foot) realignment of existing US 24 to the north of its current location.

Based on a review of available information, the alignment shift would result in the following impacts:

- Displacement of an additional eight single-family homes including one farm residence and the acquisition of an additional 3.2 hectares (7.8 acres) right-of-way, increasing right-of-way costs by \$1.43 million.
- Potential involvement with archaeological resources as the area between the existing US 24 and the Maumee River is considered have a high probability for archaeological resources.
- Destruction of the Wabash and Erie Canal, an archaeological resource determined not to be eligible for inclusion in the NRHP.
- Increase in encroachments to the 100-year floodplain of the Maumee River (approximately 7.3 hectares [18.1 acres]).
- Slight decrease in forested wetland impacts (approximately 0.1 hectares [0.2 acres]), and a net reduction in total wetland impacts of approximately 0.05 hectares (0.12 acres).
- The loss of an additional 10.1 hectares (24.9 acres) of productive farmland.
- Potential need for approximately 183 meters (600 lineal feet) of slope stabilization for the realignment of existing US 24, given its proximity to the Maumee River.
- Greater temporary impacts to the local roadway network during construction. (Construction can be phased using the newly constructed highway and temporary crossovers. Construction delays and complexity of phasing is probable.)

Because the impact of Alternative D-1 on the Meyer/Gallmeyer Farm is not considered to be adverse and will have no effect on the historic integrity of the resource, the additional impacts associated with the Meyer/Gallmeyer avoidance option are not considered to be prudent.

4.0 MINIMIZATION OF HARM

The project includes all possible planning to minimize harm to the Meyer/Gallmeyer Farm. Acquisition impacts are minimized by setting the alignment along the northern periphery of the property; the Preferred Alternative passes approximately 91.5 meters (300 feet) north of the farm building complex at its closest point and 152.4 meters (500 feet) north of the residence. The view of the Preferred Alternative from the residence will be screened by existing farm buildings and vegetation. Lastly, the acquisition of right-of-way will be completed in accordance with policies and procedures specified in the Uniform Relocation Act and the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs (March 2, 1989), which guarantees that the property owners will be justly compensated for the property needed for right-of-way.

Consideration of additional design features or changes to minimize impacts to the Meyer/Gallmeyer Farm will be undertaken during the design studies to be completed for the Preferred Alternative. Potential minimization measures may include, but are not limited to, evaluation of design shifts to avoid or minimize direct impact on the resource, preservation of vegetation to minimize the visual intrusion of the new highway, and development of landscaping plans to provide a visual buffer between the new highway and the resource.

5.0 COORDINATION

As required by Section 4(f) of the Department of Transportation Act, the National Environmental Policy Act (NEPA) and the NHPA, coordination has been undertaken with federal, state and local agencies having jurisdiction over historic resources listed on or eligible for inclusion in the NRHP. The following text summarizes the results of the coordination efforts

Coordination has been undertaken with the DHPA and Ohio Historic Preservation Office (OHPO) concerning the potential eligibility of historic resources for inclusion in the NRHP. The Phase I and Phase II History/Architecture Surveys for the US 24 study area are documented in separate technical reports as follows:

- *Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana* (March 2000).
- *Addendum to Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana* (August 2000).
- *Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (April 2000).
- *Addendum to the Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (September 2000).
- *Phase II History/Architecture Report of US 24 Improvements in Maumee, Milan, and Jefferson Townships, Allen County, Indiana* (January 2001).
- *Phase II History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio* (March 2001).
- *Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana: US24/I-469 Interchange* (January 2003).

The reports include recommendations on eligibility for inclusion in the NRHP for the surveyed properties. These reports were submitted to the DHPA and OHPO for review and concurrence on the eligibility recommendations. The DHPA and OHPO comments on the Phase I and Phase II History/Architecture Studies are summarized in Table 1.

**TABLE 1
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS**

Agency Ohio Historic Preservation Office (OHPO) (October 19, 2000)	
Comment	Response
The following comments were made on the <i>US 24 New Haven to Defiance Phase I History/Architecture Report of the PAU/DEF 24.0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (April 2000).	
Ten properties were found to require additional Phase II investigations to determine their eligibility for inclusion in the NRHP: PAU-39-3, PAU-47-3, PAU-100-2, PAU-101-2, PAU-124-1, PAU-241-2, PAU-244-3, PAU-262-2, PAU-330-4 and PAU-338-4.	Additional Phase II Studies research has been completed on the ten properties. Based on this research, OHPO determined that three of the ten resources (PAU-100-2, PAU-101-2, PAU-124-1) are eligible for listing in the NRHP.
Seven properties are eligible for inclusion in the NRHP without further investigation: PAU-129-1, PAU-183-1, PAU-220-1, PAU-221-1, PAU-222-1, PAU-224-1, and PAU-335-2.	Preliminary effects analysis has been completed for those properties listed in or eligible for inclusion in the NRHP including these seven properties.

TABLE 1 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Ohio Historic Preservation Office (OHPO) (December 27, 2000)	
Comment	Response
The following comments were made on the <i>Addendum to the Phase I History/ Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (August 2000).	
The Addendum report addresses 56 historic resources, three of which are considered eligible for listing in the National Register of Historic Places, and seven of which are recommended for further research to determine their eligibility.	Comment noted.
The OHPO cannot concur with the recommendations that PAU-357-1, PAU-359-1, and PAU-364-2 are eligible for inclusion in the National Register of Historic Places without Phase II studies being conducted.	Phase II investigations have been completed on 19 properties located in Paulding and Defiance counties, Ohio, including PAU-357-1, PAU-359-1, and PAU-364-2. Based on the Phase II research, OHPO determined that the three resources are eligible for inclusion in the NRHP.
The agency does not concur with the recommendation that PAU-363-2 warrants additional research to assess its eligibility for inclusion in the NRHP.	Based on the recommendation of the OHPO, the resource is not considered to be eligible for inclusion in the NRHP.
The agency cannot concur with the recommendations that PAU-379-3 is not eligible for inclusion in the NRHP without further information being submitted for review (Ohio Historic inventory forms and photographs).	Ohio Historic Inventory Forms and photographs were submitted to the Ohio Historic Preservation Office for review and comment. In addition, further research on the PAU-379-3 indicates that the resource is a 1910-1920 dwelling that shares property with the Vagabond Village (PAU-375-3), is contemporary and directly associated with the Vagabond Village diner as the residence of the diner's owner, and contributes to the significance of the Vagabond Village. Therefore, PAU-375-3 and PAU-379-3 are considered to be one resource. This resource has been determined to be eligible for inclusion in the NRHP.
The agency does concur that PAU-377-3, PAU-348-1, PAU-375-3, PAU-376-3, and PAU-378-3 require additional investigation (Phase II) to assess their NRHP eligibility.	Phase II investigations have been completed on the five resources to assess their NRHP eligibility. Of these five resources, only one (PAU-375-3) was determined to be eligible for inclusion in the NRHP.
The agency recommends that PAU-375-3 (Vagabond Diner), PAU-376-3 (Randi's Roadside Cafe) and PAU-378-3 (diner) be considered a potential roadside development district. However, their significance needs to be strongly argued.	As a result of the Phase II investigations, PAU-375-3 is considered eligible for the NRHP, while PAU-376-3 and PAU-378-3 are not considered eligible for the NRHP. A common themes study was conducted on all the historic resources in the Fort to Port Corridor. PAU-375-3 and PAU-376-3 were categorized in the transportation theme category.
The agency concurs that the remaining 46 resources are not eligible for listing on the NRHP. No further work is required.	Comment noted.

TABLE 1 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Ohio Historic Preservation Office (OHPO) (July 13, 2001)	
Comment	Response
The following comments were made on the <i>Phase II History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio</i> (March 2001).	
The SHPO concurs that as a result of the Phase II investigations, seven of the 19 properties investigated are eligible for listing in the NRHP: PAU-100-2, PAU-101-2, PAU-124-1, PAU-357-1, PAU-359-1, PAU-364-2, and PAU-375-3.	Comment noted.
The SHPO concurs that as a result of the Phase II investigations, 12 of the 19 properties investigated are not eligible for listing in the NRHP.	Comment noted.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (June 7, 2000)	
Comment	Response
The following comments were made on the <i>Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana</i> (March 2000).	
DHPA concurs that the following properties are within the probable area of potential effects and are eligible for inclusion in the NRHP: Harper House, Meyer/Gallmeyer House, Smith/Rich/Krug House, Amos Schlatter Farm and the Villa Motel.	As presented in Section 3.3 of the DEIS, preliminary effects determinations have been completed for those properties listed in or eligible for inclusion in the NRHP including these seven properties. Detailed documentation on Effects of the Preferred Alternative is presented in a separate report for three properties (Harper House, Meyer/Gallmeyer Farm and Smith/Rich/Krug House) located within the Area of Potential Effect for this alternative. DHPA has concurred with the Effects Determinations for the three properties.
DHPA concurs that the ten remaining properties addressed in the report do not meet criteria to be considered eligible for inclusion based upon their architectural features and design. When additional documentation becomes available, DHPA will consider eligibility based on association with events or persons that may have made a broad contribution to broad patterns of history.	Additional research was completed on the ten properties to determine if they meet criteria for inclusion in the NRHP based on association with historic events or persons.
Based upon the information provided, Corridor 4 will affect 8 properties, Corridor 7 will affect 6 properties, Corridor 10 will affect 5 properties, Corridor 13 will affect 3 properties and US 24 will affect 2 properties. The DHPA recommends that the alternative with the least potential effect on historic buildings including three settings be selected as the Preferred Alternative.	Additional research has been completed which changes the ranking of corridors with respect to historic resources. Potential adverse effects on historic resources was considered in the selection of the Preferred Alternative.
Once the Preferred Alternative is selected, DHPA will require the following information in order to comment on potential effects – right-of-way, if any, to be acquired from historic properties; activities that will occur within the existing and/or proposed right-of-way; detailed site plans showing proposed action; and photographs showing existing conditions of the area where work will be undertaken in close proximity to the historic resources.	Detailed information on the potential effects of the Preferred Alternative on historic structures was submitted to the DHPA for review and comment. DHPA has concurred with the Effects Determinations in the report.
The project area has not been subjected to an archaeological investigation. The project area is physiographically suitable to contain archaeological resources. An archaeological reconnaissance level survey and method description is requested.	Phase I archaeological surveys were completed within the proposed right-of-way limits for the Preferred Alternative. The results of the surveys are documented in two separate reports and summarized in Section 3.3 of the DEIS. The survey reports have been submitted to the OHPO and DHPA for review and comment.

TABLE 1 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (September 5, 2000)	
Comment	Response
The following comments were made on the <i>Addendum to Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana</i> (August 2000).	
The Armbruster Log Cabin is potentially eligible for inclusion in the NRHP.	Preliminary Effects determination has been completed for the Armbruster Log Cabin.
The following properties do not meet the criteria for inclusion in the NRHP: Parson Krieg Farmstead, Jay/Richardson House, and Hockmeyer Farmstead.	Comment noted.
In addition, we concur that the other 33 properties addressed in the report do not meet criteria for inclusion in the NRHP.	Comment noted.
If any of the historic properties listed above or addressed in previous correspondence dated June 7, 2000 are affected by the project, IDNR-DHPA, the public and all consulting parties should be notified in accordance with 36 CRF 800.11(d)(2).	Detailed effects evaluations and coordination with the DHPA have been completed for the Preferred Alternative in accordance with the provisions of the 36 CFR 800. Effects determinations were prepared for three properties located within the Area of Potential Effect of the Preferred Alternative – the Harper House, the Meyer/Gallmeyer Farm and the Smith/Rich/Krug House. These are presented in detail in a separate report entitled <i>Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana</i> (November 2001). The DHPA concurred with the Effects Determinations for the three properties.

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (March 9, 2001)	
Comment	Response
The following comments were made on the <i>Phase II History/Architecture Report of US 24 Improvements in Maumee, Milan, and Jefferson Townships, Allen County, Indiana</i> (January 2001).	
The agency concurs that the 10 properties identified in the report are not eligible for inclusion in the NRHP.	Comment noted. Based on recommendations made by DHPA, no further investigation or evaluation of the 10 properties has been undertaken.
Comments on the need to complete archaeological investigations in accordance with Section 106 as presented in correspondence dated June 7, 2000 should be addressed once the Preferred Alternative has been selected.	A Phase I archaeological survey has been completed within the limits of the proposed right-of-way for the Preferred Alternative. This survey and its conclusions are documented in two separate reports. The reports have been submitted to the Ohio and Indiana State Historic Preservation Offices for review and comment.

TABLE 1 (CONTINUED)
AGENCY COMMENTS ON PHASE I AND PHASE II HISTORY/ARCHITECTURE SURVEYS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (March 4, 2003)	
Comment	Response
The following comments were made on the <i>Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana: US 24/I-469 Interchange</i> (January 2003).	
Based upon the historical and architectural documentation available to our office, the agency concurs that the following properties do not meet the criteria to be considered eligible for inclusion in the NRHP: Emanuel Evangelical Lutheran Cemetery, house at 10919 East US 24, Melcher Farm at 10949 East US 24, house at 11613 Edgerton Road, Hoetzer House at 724 South Doyle Road, and house at 226 South Doyle Road.	Comment noted.
In addition, the agency concurs that the Niemeyer Farm at 1123 East US 24 meets the criteria to be considered eligible for inclusion in the NRHP as an intact example of a nineteenth century farmstead associated with early settlement of Jefferson Township with a Queen Anne farmhouse.	Comment noted.
Furthermore, the agency agrees that the possible historic boundaries are more or less the same as shown on the aerial photograph.	Comment noted.

The Preferred Alternative (Alternative D-1) has the potential to impact three rural historic properties in Indiana, the Harper House, the Meyer/Gallmeyer Farm, and the Smith/Rich/Krug House, all three of which are located in Allen County, Indiana. A separate report entitled *Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana* (November 2001) documents the application of the Criteria of Effect and Adverse Effect on the three properties as required by 36 CFR 800.11(e). This report was submitted to DHPA for review and concurrence on the Effects Determinations. The DHPA concurred with the November 2001 Effects Determinations in correspondence dated December 7, 2001. The comments from DHPA are summarized in Table 2.

TABLE 2
AGENCY COMMENTS ON EFFECTS DETERMINATIONS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (December 7, 2001)	
Comment	Response
The Indiana State Historic Preservation Officer has conducted an analysis of the report entitled <i>Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana</i> .	Comment noted.
The DHPA has no reason to object with the finding that no historic properties within the area of potential effects will be adversely affected by the project.	Comment noted.
Identification efforts beyond consultation with the Indiana SHPO need to be carried out as specified in 36 CFR 800.4. Therefore, a summary of the results of the identification efforts including preliminary determinations, level of effort undertaken to identify historic properties, basis for this effort, and gathering of documentation as specified in 36 CFR 800.11(e) should be submitted to FHWA.	Comment noted.

TABLE 2 (CONTINUED)
AGENCY COMMENTS ON EFFECTS DETERMINATIONS

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (continued) (December 7, 2001)	
Comment	Response
If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the DHPA within two working days.	Phase I archaeological investigations have been completed on the proposed right-of-way for the Preferred Alternative. The results of the Phase I survey for the portion of the Preferred Alternative located within Indiana are presented in detail in a separate technical report entitled <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002). Additionally, project mitigation commitments include provisions required by Indiana state law for construction activities occurring within the State of Indiana.
If artifacts or features are discovered during the implementation of the federally assisted project, activity, or program, and a plan has not been developed, it is the federal agency's responsibility to make reasonable efforts to avoid, minimize, or mitigate adverse effects in accordance with 36 CFR 800.13.	Phase I archaeological investigations have been completed on the proposed right-of-way for the Preferred Alternative. The results of the Phase I survey for the portion of the Preferred Alternative located within Indiana are presented in detail in a separate technical report entitled <i>Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana</i> (April 2002).

Agency Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) (July 23, 2002)	
Comment	Response
The Indiana State Historic Preservation Officer has conducted an analysis of the materials submitted on June 20, 2002.	Comment noted.
Based on the information provided, the agency does not believe that the change in design will diminish the qualities that make the Meyer/Gallmeyer Farm (Site #003-382-40086) or the Smith/Rich/Krug House (Site #003-692-45034) significant.	Comment noted.

Following concurrence from the DHPA on the Effects Determinations in December 2001, the design of the Preferred Alternative changed. Subsequent consideration of the Preferred Alternative through public comment and coordination with local officials resulted in changes to the design of the alignment to include a limited number of overpasses, located in close proximity to two Section 4(f) historic resources, the Meyer/Gallmeyer Farm and the Smith/Rich/Krug House.

Design refinements developed for the Preferred Alternative (Alternative D-1) included a new overpass to carry the new highway over Berthaud Road in the vicinity of the Meyer/Gallmeyer Farm. The Berthaud Road overpass was proposed by INDOT for the safe passage of horse-drawn vehicles crossing the new highway. Through coordination with the DHPA in July 2002, it was determined that the construction of an overpass at Berthaud Road would not diminish the qualities that make the Meyer/Gallmeyer Farm significant and will have No Adverse Effect on the resources.

In the fall of 2002, additional design changes were made to the Preferred Alternative. These include the elimination of the overpass at Berthaud Road (as proposed in November 2001). At Berthaud Road, the Preferred Alternative will be constructed at-grade; Berthaud Road will be permanently closed to traffic.

A second design change for the Preferred Alternative is proposed at Woodburn Road to accommodate the transportation needs of the local Amish community as well as school-related traffic. Through additional coordination with representatives of the Amish community residing in Allen County, local public officials, and the East Allen County School System, it was determined

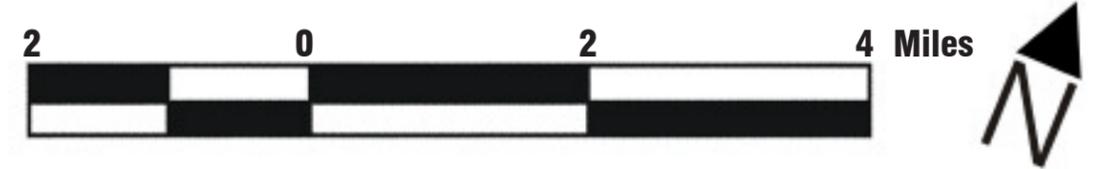
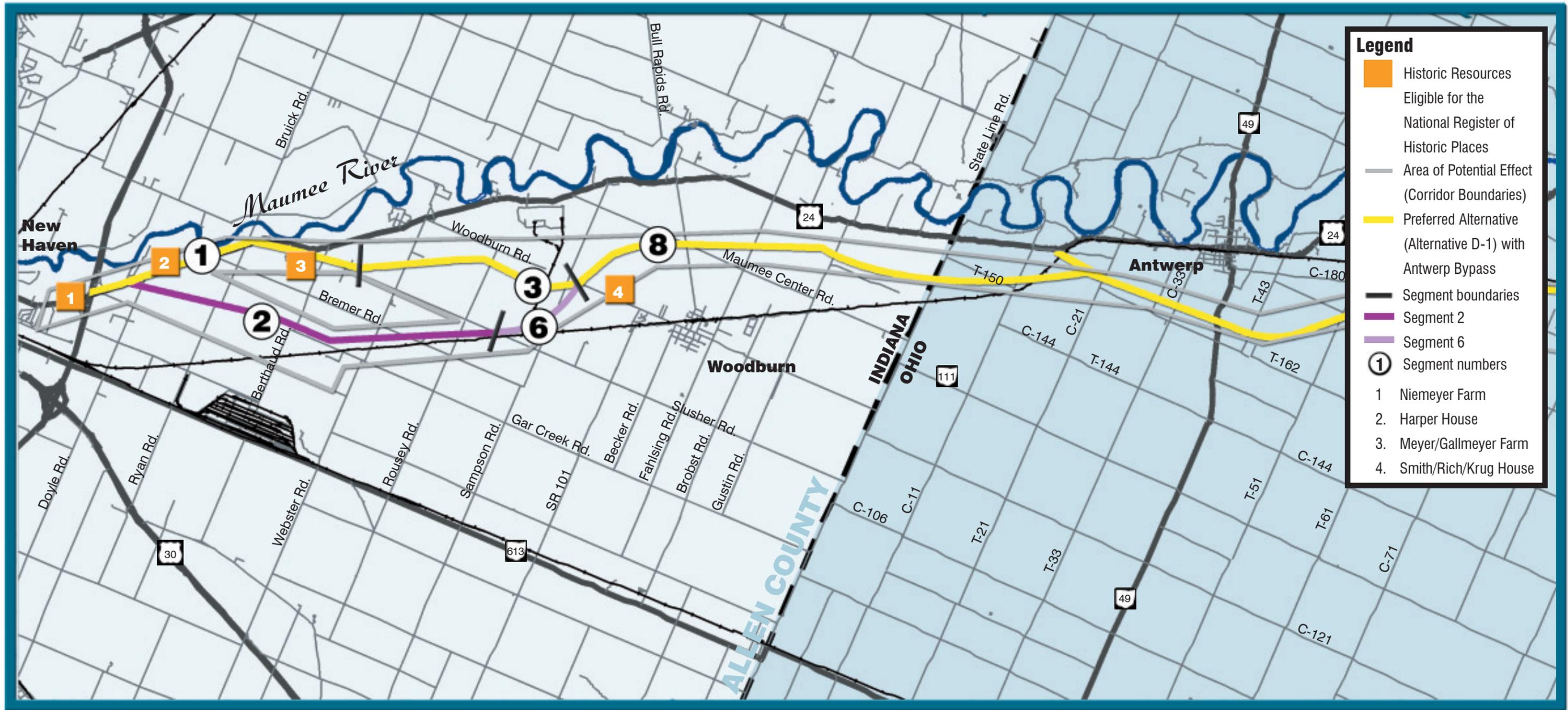
that a grade-separated crossing is needed at Woodburn Road to accommodate safe travel of horse-drawn vehicles as well as school-related traffic traveling to and from Woodlan High School. Design engineering for three closely spaced crossing necessitates carrying the highway over Woodburn Road, Sampson Road, and the Norfolk Southern Railroad. The Smith/Rich/Krug House is located in close proximity to Woodburn Road. Through coordination with the DHPA, it was determined that the provision of an overpass at Woodburn Road does not result in a change in the determination of No Effect for Smith/Rich/Krug House (see correspondence from DHPA dated July 23, 2002). The comments from DHPA are summarized in Table 2.

LIST OF FIGURES

Figure 1: Section 4(f) Resources - Preferred Alternative

Figure 2: Plan View - Meyer/Gallmeyer Farm

Figure 3: Meyer/Gallmeyer Avoidance Option



Section 4(f) Resources - Preferred Alternative

Figure 1



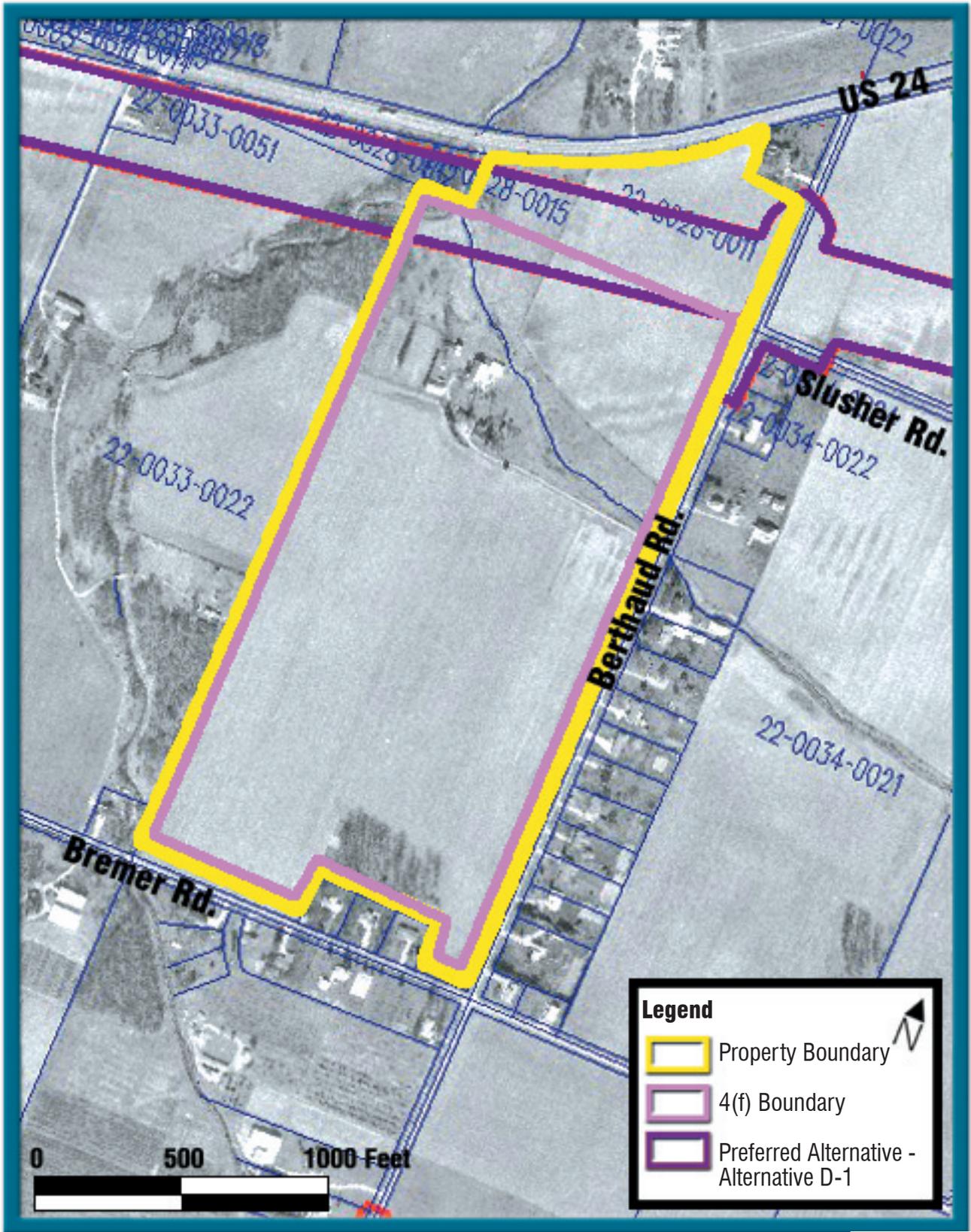
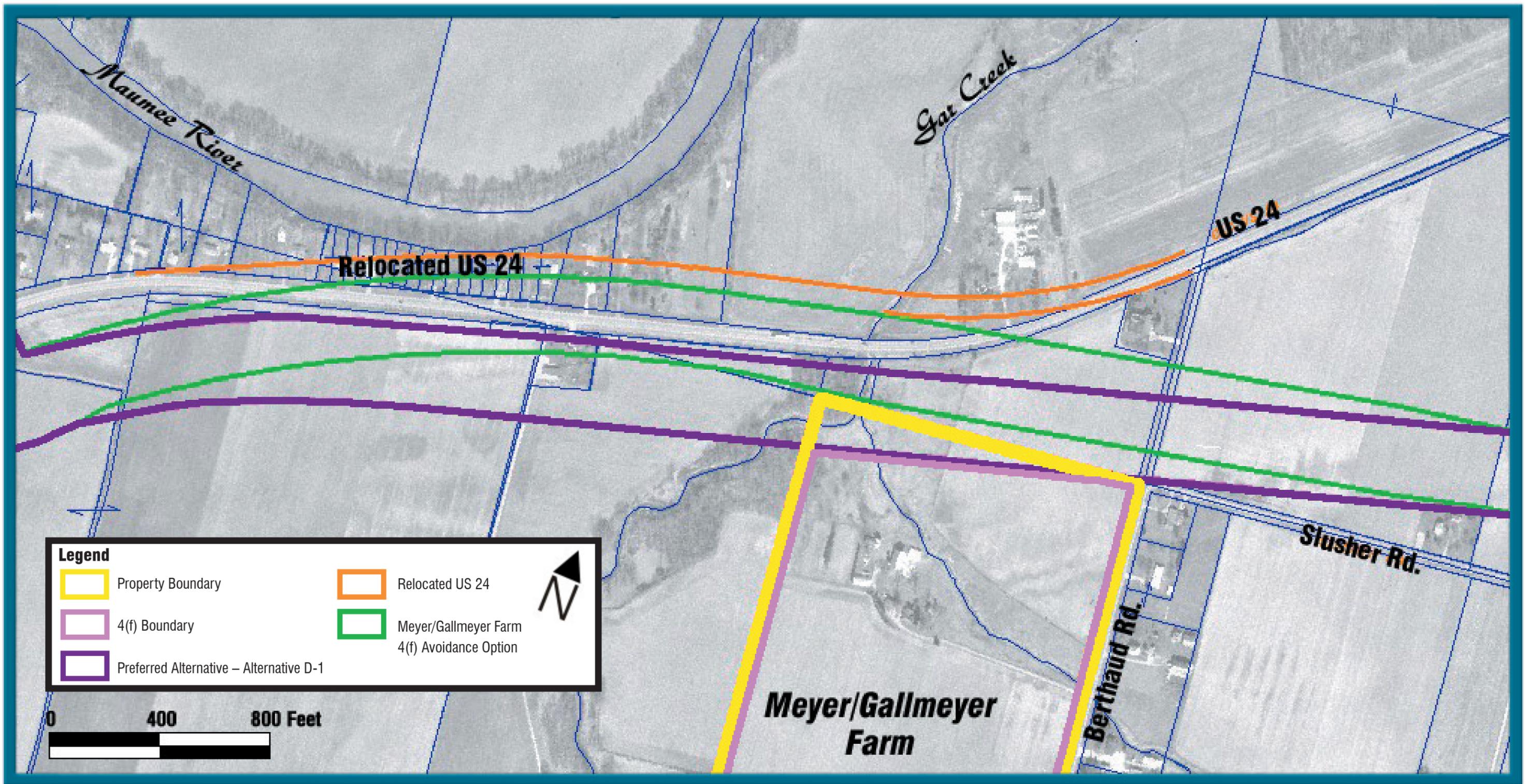


Figure 2 – Plan View, Meyer/Gallmeyer Farm





Meyer/Gallmeyer Farm Avoidance Option

Figure 3



INDEX OF CORRESPONDENCE

Agency	Date of Correspondence	Topic
Ohio Historic Preservation Office	October 19, 2000	Phase I History/Architecture Surveys - Eligibility Determinations
Ohio Historic Preservation Office	December 27, 2000	Phase I History/ Architecture Surveys - Eligibility Determinations
Ohio Historic Preservation Office	July 13, 2001	Phase II History/Architecture Surveys - Eligibility Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	June 7, 2000	Phase I History/Architecture Surveys - Eligibility Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	September 5, 2000	Phase I History/Architecture Surveys - Eligibility Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	March 9, 2001	Phase II History/Architecture Surveys - Eligibility Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	December 7, 2001	Historic Resources Case Studies - Effects Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	July 23, 2002	Historic Resources Case Studies – Effects Determinations
Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology	March 4, 2003	Phase I History/Architecture Surveys – Eligibility Determinations

Note: Date shown is the date the commenting agency submitted correspondence.



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

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OFFICE OF ENVIRONMENTAL SERVICES

OFFICE OF ENVIRONMENTAL SERVICES

May 3, 2000

Mr. Mark J. Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Mary K. Smith, History/Architecture ODOT Reviews Manager

Re: PAU/DEF-24-0.00/0.00 PID 18904
Phase I History/Architecture Coordination

Dear Mr. Epstein:

Enclosed for your review is the document *Phase I History/Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. for Parsons Brinkerhoff Ohio in April, 2000. Also included are a descriptive table and 24 labeled envelopes of 3 1/2"x5" photographs associated with the survey, one for each roll of film.

The Ohio Department of Transportation and the Indiana Department of Transportation have undertaken preliminary studies for improvements to United States Route 24 (US 24), a major east-west transportation route between Fort Wayne, Indiana and Toledo, Ohio. US 24 is currently a two-lane road that suffers from congestion and safety related issues as a result of inadequate capacity due to substandard design. Alternative solutions under study include modifying the current US 24 and constructing a four-lane limited access highway on a new alignment.

The subject Phase I report documents the history/architecture investigation of five feasible corridors in a portion of the area of this undertaking, that between the Indiana-Ohio County line and the city of Defiance in northwest Ohio. Separate studies are investigating the other portions of the overall undertaking. The results of all these studies will aid in determining a preferred alignment for the improved US 24.

The project area is located in the Black Swamp area of northwest Ohio running roughly parallel to the Maumee River. It is mostly rural and agricultural but encompasses the sites of several ghost towns and one extant political entity, the village of Antwerp. Settlement in the area was negligible until work on the Miami & Erie and Wabash & Erie canals commenced in the 1830s providing jobs and their completions

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File From: JP

File By: SAB

in the 1840s provided markets. Settlement accelerated in the third quarter of the nineteenth century with the arrival of railways and the completion of widespread agricultural field drainage. The early settlers were of German and British ancestry, i.e., migrants from New England and Pennsylvania and immigrants from Germany and Great Britain. Corn and soybeans are the dominant agricultural income producers in the project area, followed by dairying and hog producing.

A literature review of the entire Ohio portion of an overall 500 square mile study area revealed the presence of 287 previously documented properties including residential, commercial, agricultural, and institutional properties, bridges, cemeteries, ghost towns and villages, canal remnants, and earthworks. Seven properties in the Ohio part of the study area already are listed in the National Register of Historic Places (NRHP). Twenty-four properties within the project area have been previously recorded in the Ohio Historic Inventory, most of them in the village of Antwerp. One of those Antwerp properties, the Antwerp Depot, already is listed in the NRHP.

The field survey, which was conducted in the summer of 1999, identified 136 properties within the project area, including the 24 which had been previously documented. The properties identified include buildings and structures, farm complexes, canal remnants, and cultural landscapes. The buildings and structures can be grouped generally into three categories: vernacular upright and wing, gabled ell, and gable front farmhouses of the period 1850-1920; small mass-produced bungalows, Cape Cod cottages, and early ranch types of the period 1910-1950; and orphan agricultural outbuildings. The few high style buildings are located in the village of Antwerp. Most barns are of the three-bay English type, some with pent roofs on the gable end; the most common outbuildings are granaries (some with cupolas) and silos. Most of the pre-1949 history/architecture resources were common examples of their types with nothing to distinguish them from others of their kind; many lack sufficient integrity to convey significance; few are associated with persons or events in our history.

As a result of the literature review, field investigation, analysis, and post-survey research we have determined that of the 136 inventoried properties 112 are clearly not eligible for inclusion in the NRHP; one (PAU-35-1) is already listed on the NRHP, nine require further research to determine their eligibility, and 14 are recommended as eligible without further research.

ten

MSE 10/19/00 The ~~nine~~ properties requiring further research are:

- | | | | |
|----------------------------|----------------------------|--------------|----------------|
| DEF-254-8 (NEP) | DEF-255-8 (NEP) | 1. PAU-47-3 | 2. PAU-39-3. |
| 3. PAU-100-2 | 4. PAU-124-1 | 5. PAU-241-2 | 6. PAU-101-2. |
| 7. PAU-244-3 | 8. PAU-262-2 | 9. PAU-338-1 | 10. PAU-300-4. |

Seven

The ~~14~~ recommended as eligible for inclusion in the NRHP are:

MSE 10/19/00

- | | | |
|----------------------------|---------------------------------|----------------------------------|
| DEF-253-8 (NEP) | PAU-39-3 (see above) | PAU-101-2 (see above) |
| 1. PAU-129-1 | 2. PAU-183-1 | 3. PAU-220-1 |
| 4. PAU-221-1 | 5. PAU-222-1 | 6. PAU-224-1 |

~~PAU-228-1 (NEP)~~

~~PAU-229-1 (NEP)~~

~~PAU-230-1 (NEP)~~

PAU-300-4 (see above) 7. PAU-335-2

A table describing the 23 properties listed above, the NRHP criteria under which they are considered significant, the rationale behind that consideration, and the page of the Phase I report on which that rationale is presented is included with this letter as Attachment A.

We would appreciate the return of this letter, signed to indicate your concurrence with our history/architecture resources findings regarding the 136 inventoried properties. If no response is received within 30 days, in accordance with the Advisory Council on Historic Preservation's current regulations under Section 800.2(c)(1) and Section 800.4(d)(1) it will be presumed that the State Historic Preservation Officer agrees with the determination made in the above history/architecture coordination. If you have any questions or comments they may be directed to Joan Randall, Staff Historian, at 614-752-2171, or via e-mail at jrandall@dot.state.oh.us.

Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:jr

STATE HISTORIC PRESERVATION OFFICE CONCURRENCE:



10/19/00
(Date)

Attachments

c: District 1, Rodney Maas, DEC; File, W/att.; Reading File

Ohio Historic Preservation Office

567 East Hudson Street
Columbus, Ohio 43211-1030
614/ 298-2000 Fax: 614/ 298-2037

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December 27, 2000

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**OHIO
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SINCE 1885

Timothy M Hill, Administrator
Office of Environmental Services
Ohio Department of Transportation
25 South Front Street, P.O. Box 899
Columbus, Ohio 43216-0899

Dear Mr. Hill:

Re: PAU/DEF-24-0.000/0.00 (PID 18904)
History/Architecture Coordination for Addendum

This is in response to your correspondence dated October 13, 2000 transmitting the report entitled *Addendum to Phase I History/Architecture Survey of the PAU/DEF-24-0.000/0.00 (PID 18904) Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Township, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. The comments of the Ohio Historic Preservation Office (OHPO) are submitted in accordance with provisions of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]).

The addendum report addresses fifty-six (56) historic resources identified along existing US24 not the proposed alternative/bypass corridors. Of these 56 resources, the report considers three eligible for listing on the National Register of Historic Places (NRHP) and seven for further research to determine NRHP eligibility/significance. However, our office cannot concur with the recommendations that PAU-357-1, PAU-359-1, and PAU-364-2 are eligible without further investigations (Phase II) being conducted nor do we believe that PAU-363-2 warrants additional research. In addition, our office cannot concur that PAU-379-3 is not eligible for listing on the NRHP without OHI forms and photographs being submitted. Both items were omitted from the report.

Our office does agree PAU-377-3, PAU-348-1, PAU-358-1, PAU-375-3, PAU-376-3, and PAU-378-3 require Phase II investigations to determine their NRHP eligibility. We would also like to suggest that PAU-375-3 (Vagabond Diner), PAU-376-3 (Randi's Roadside Cafe), and PAU-378-3 (diner) be considered a potential roadside development district; however, their significance needs to be strongly argued.

Mr. Timothy Hill
PAU/DEF-24-0.000/0.00 (PID 18904)
Page 2

Regarding the remaining 46 historic resources identified, our office concurs that they are not eligible for listing on the NRHP. No further work is required.

Finally, our office cannot continue to accept reports with very poor quality photographs and poorly written OHI's. Some of the above-mentioned resources are marginal but we cannot determine how marginal they are without better photo and written documentation.

Any questions concerning this matter should be addressed to Mary Smith at (614) 298-2000, between 9 a.m. to 5 p.m. Thank you for your cooperation.

Sincerely,



fr Mark J. Epstein, Department Head
Resource Protection and Review

MJE: MKS/ms



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

OFFICE OF ENVIRONMENTAL SERVICES

April 16, 2001

Mr. Mark J. Epstein, Department Head
Resource Protection and Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211

Attn: Mary K. Smith, History/Architecture ODOT Reviews Manager

Re: PAU/DEF-24-0.00/0.00 PID 18904
Cultural Resources Coordination Phase II

Dear Mr. Epstein:

Enclosed for your review is *Phase II History/Architecture Report of the PAU/DEF-24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County, and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio* prepared by Midwest Environmental Consultants, Inc. in March, 2001 for Parsons Brinckerhoff, Ohio Inc. In accordance with ODOT Office of Environmental Services (ODOT-OES) policy, unless errors observed during review of consultant documents interfere with the ability to make recommendations regarding cultural resources, the report will be coordinated as is, with a copy of the coordination letter and a comment sheet generated by ODOT-OES bound into the report. This comment sheet will be coordinated separately with the consultant as a means of education regarding ODOT/SHPO report requirements without an effect to the project schedule.

The Ohio Department of Transportation and the Indiana Department of Transportation have undertaken preliminary studies for improvements to United States Route 24 (US 24), a major east-west transportation route between Fort Wayne, Indiana and Toledo, Ohio. US 24 is currently a two-lane road that suffers from congestion and safety related issues as a result of inadequate capacity due to substandard design. Alternative solutions under study include modifying the current US 24 and constructing a four-lane limited access highway on a new alignment. The portion of the US24 corridor that this Phase II report addresses runs from the Indiana-Ohio state line east to the City of Defiance in Defiance County. Separate studies have investigated the other portions of the overall undertaking in Ohio east of the City of Defiance. The results of all these studies will aid in determining a preferred alignment for the improved US 24.

The history/architecture surveys for this project documented 192 pre-1950 properties in Paulding and Defiance counties, Ohio. As a result of coordinating the results of those surveys with your office, seven properties were identified as clearly eligible for listing in the National Register of Historic Places (NRHP) without further investigation and 19 were identified as requiring Phase II investigation to establish their eligibility for listing in the NRHP. One property within the project area (PAU-35-1, the Antwerp Railroad Depot) was already listed in the NRHP.

Properties Investigated

The nineteen properties that underwent Phase II investigation between May 2000 and January 2001 are:

PAU-47-3	PAU-100-2	PAU-101-2	PAU-124-1
PAU-241-2	PAU-244-3	PAU-262-2	PAU-300-4
PAU-338-1	PAU-348-1	PAU-357-1	PAU-358-1
PAU-359-1	PAU-364-2	PAU-375-3 and PAU-379-3	PAU-376-3
PAU-377-3	PAU-378-3	PAU-381-3	

Please note that although the list of properties agreed upon as requiring further work as a result of the Phase I surveys included PAU-39-3 rather than PAU-381-3, the Phase II investigation ultimately proceeded with PAU-381-3 as one of its object rather than PAU-39-3. Early Phase II deed research revealed that the Renollet Farmstead identified as PAU-39-3 (a c.1893 gabled ell farmhouse) is located outside the survey corridor and that the Renollet Farmstead that is located inside the survey corridor is PAU-381-3 (a c. 1905-1925 gabled ell farmhouse). Since PAU-39-3 had been recommended for further work to establish its eligibility under Criterion A for association with the locally prominent Renollet family, it was decided to investigate PAU-381-3 instead.

Also note that Phase II investigation of PAU-375-3 (the Vagabond Village Diner) revealed that PAU-379-3, a c. 1910-1920 dwelling that had previously been thought to be separate from the Vagabond Village Diner, actually shares the Vagabond Village parcel, is contemporary with and directly associated with the Vagabond Village Diner as the residence of the diner's owner, and contributes to the significance of the Vagabond Village Diner. Thus PAU-375-3 and PAU-379-3 are considered a unit for the purposes of the Phase II investigation.

Results of Phase II Investigations

As a result of the Phase II investigations, seven of the 19 properties investigated were found eligible for listing in the NRHP:

PAU-100-2	PAU-101-2	PAU-124-1	PAU-357-1
PAU-359-1	PAU-364-2	PAU-375-3 and PAU-379-3	

Coordination to Mark Epstein
March 29, 2001

PAU/DEF-24-0.00/0.00 PID 18904
Page 3 of 3

and the remaining 12 of the 19 properties were found not eligible for listing in the NRHP:

PAU-47-3	PAU-241-2	PAU-244-3	PAU-262-2
PAU-300-4	PAU-338-1	PAU-348-1	PAU-358-1
PAU-76-3	PAU-377-3	PAU-378-3	PAU-381-3.

Boundaries for the eligible properties will be established later, if necessary, in order to determine the effects of the preferred route.

Request for Concurrence

As a result of the findings of the Phase I and Phase II investigations, we are asking your concurrence with the following:

- 1) that PAU-100-2, PAU-101-2, PAU-124-1, PAU-357-1, PAU-359-1, PAU-364-2, and PAU-375-3 (including PAU-379-3) are eligible for listing in the NRHP and
- 2) that the remaining 12 of the 19 investigated properties are not eligible for listing in the NRHP.

We would appreciate the return of this letter, signed to indicate your concurrence with our cultural resources findings. If no response is received within 30 days, in accordance with the Advisory Council on Historic Preservation's current regulations under Section 800.3(c)(4) it will be presumed that the State Historic Preservation Officer agrees with the determination made in the above history/architecture coordination. If you have any questions or comments they may be directed to Joan Randall, Staff Historian, at 614-752-2171, or via e-mail at mrandall@dot.state.oh.us.

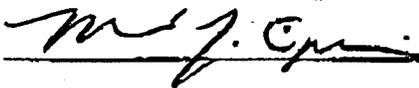
Respectfully,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:jr

STATE HISTORIC PRESERVATION OFFICE CONCURRENCE:



7/13/01
(Date)

Attachments

c: District 1 DEC Clark Nash; FHWA FOE Mark Vonder Embse;
Major New Project Coordinator Noel Alcalá; PB Ohio Project Manager Jennifer Graf
File, W/att.; Reading File



June 7, 2000

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Improvements to US 24 from New Haven, Indiana, to Defiance, Ohio

Dear Ms. Graf:

Pursuant to the National Historic Preservation Act (16 U.S.C. § 470 et seq. and 36 C.F.R. Part 800) the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted an analysis of the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana, for the FHWA.

We concur with your assessment that the following properties are within the probable area of potential effects of the project areas and are eligible for inclusion in the National Register of Historic Places.

- 1) Harper House at 12823 US 24
- 2) Meyer/Gallmeyer House at 2811 Berthaud Road
- 3) Smith/Rich/Krug House at 20813 Woodburn Road
- 4) Amos Schlatter Farm at 3536 Becker Road
- 5) Villa Motel at 21701 US 24

With regards to the following properties that you have identified within the area of potential effects, we believe that they do not meet the criteria to be considered eligible for inclusion in the National Register based upon their architectural features and design. However, when additional historical documentation becomes available, then we will be happy to consider whether or not the buildings were associated with events or persons that may have made a significant contribution to broad patterns of our history

- 1) Barrows/Henderson House on US 24
- 2) John Harper Farm at 13086 Bremer Road
- 3) Werling Farm at 13028 US 24
- 4) Peter Schaaf Farm at 3637 Webster Road
- 5) Woebeking Farm at 21316 Maumee Center Road
- 6) Rothgeb Garage at 16430 Gar Creek Road
- 7) Hartman Farm north of Gar Creek Road between Webster and Rousey Roads
- 8) Henry Busche Farm at 4029 Sampson Road
- 9) Brenneke Farm on Maumee Center Road
- 10) House at 21830 US 24

Jennifer Graf
June 7, 2000
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Based upon the information provided, it appears that by choosing Corridor 4, eight properties will be affected, Corridor 7 will affect 6 properties, Corridor 10 will affect 5, Corridor 13 will affect 3 and US 24 will affect 2. We recommend that you select the alternative which will have the least potential to affect the historic buildings including their setting. Once an alternative has been selected and design work has been initiated, we will need the following information in order to comment upon the potential effects:

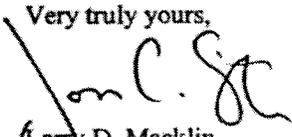
- 1) Indicate how much right-of-way, if any, will be acquired from the historic properties?
- 2) Specify what activities will occur within the existing or proposed rights-of-way (e.g., grading, removal of bushes, trees, or grass, installation of gutters, relocation of mailboxes, reconfiguration of the driveway, construction of drainage ditches)?
- 3) Provide a detailed site plan drawn to scale (with a key) identifying where all construction, demolition, changes in rights-of-way and associated work will occur in relation to the house. Be sure to indicate existing property lines and proposed modifications.
- 4) Provide photographs showing the existing conditions of the areas where work will be undertaken in close proximity to the historic resources

As far as archaeology is concerned, a review of our records indicates the proposed project area has not been the subject of evaluation by a qualified archaeologist. Furthermore, the project area is physiographically suitable to contain archaeological resources. Thus, a complete analysis of the submitted project is not possible, as the information provided is incomplete. Please provide the indicated information to facilitate the identification and analysis of historic properties in the project area:

- 1) Provide an archaeological reconnaissance level survey and method description, performed in accordance with I.C. 14-21-1 & 310 I.A.C. 19. (Please refer to the enclosed list of qualified professionals for your reference.) The survey should focus on the portions of the project area which have not been significantly disturbed by previous construction, are not severely eroded, have slopes of less than 25%, and contain soils which are described as somewhat poorly drained or better.

If you have any further questions, please contact our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:MDF:LAS:NAW:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Michael Westfall, Allen County Historian
Joy Poole, Allen County Fort Wayne Historical Society
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
Don Orban, Historic Preservation Planner, City of Fort Wayne



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Historic Preservation
and Archaeology
402 W. Washington Street, W274
Indianapolis, IN 46204-2748
PH: 317/232-1646
FAX: 317/232-0693
dhpa@dnr.state.in.us

September 5, 2000

Jennifer Graf
Project Manager
Parsons Brinckeroff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Additional information regarding the improvements to US 24 from New Haven, Indiana, to Defiance, Ohio

Dear Ms. Graf:

Pursuant to the National Historic Preservation Act (16 U.S.C. § 470 et seq. and 36 C.F.R. Part 800) the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted an analysis of the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana, for the FHWA.

In our opinion, the Arbuster Log Cabin on US 24 is potentially eligible for inclusion in the National Register of Historic Places.

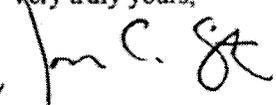
However, based upon the available historical and architectural documentation, we believe that the following properties do not meet the criteria to be considered eligible for inclusion in the National Register.

- 1) Parson-Krieg Farmstead at 20114 US 24
- 2) Jay/Richardson House at 22013 US 24
- 3) Hockemeyer Farmstead at 15029 US 24

In addition, we concur that the other 33 properties identified in your addendum report dated August 2000 do not meet the criteria to be considered eligible for inclusion in the National Register.

If any of the historic properties mentioned above or in our letter dated June 7, 2000, may be affected, please notify us, the public and all consulting parties of the FHWA's finding and seek views on effects in accordance with 36 C.F.R. 800.11(d)(2). If you have questions concerning buildings or structures, please contact our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:MDF:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Michael Westfall, Allen County Historian
Joy Poole, Allen County Fort Wayne Historical Society
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
Don Orban, Historic Preservation Planner, City of Fort Wayne



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

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dhpa@dnr.state.in.us

March 9, 2001

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration

Re: Additional information regarding improvements to US 24 from New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

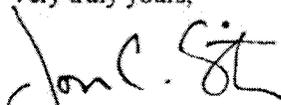
Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated January 26, 2001, and received by the Indiana SHPO on January 29, 2001, for the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana.

We concur that the ten properties identified in your addendum report dated January 2001 do not meet the criteria to be considered eligible for inclusion in the National Register of Historic Places.

In terms of archaeological issues, please refer to our letter dated June 7, 2000, once the final route has been determined.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January, 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Karie Brudis of our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

EDM:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana



Indiana Department of Natural Resources

Frank O'Bannon, Governor
Larry D. Macklin, Director

Division of Historic Preservation
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402 W. Washington Street, W274
Indianapolis, IN 46204-2739
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dhpa@dnr.state.in.us

December 7, 2001

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Additional information and preliminary finding of "no adverse effect" concerning the improvements to US 24 from New Haven, Indiana to Defiance, Ohio

Dear Ms. Graf:

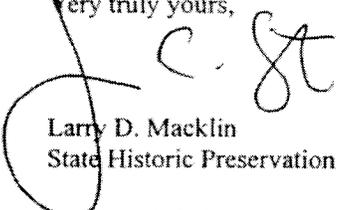
Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated November 8, 2001, and received by the Indiana SHPO on November 13, 2001, for the above indicated project in Maumee, Milan and Jefferson townships, Allen County, Indiana.

We see no reason to object with Parsons Brinckerhoff, Ohio, Inc.'s November 8, 2001, finding that no historic properties within the area of potential effects will be adversely affected by the above indicated project. However, be advised that identification efforts beyond consultation with Indiana SHPO need to be carried out as specified in 36 C.F.R. § 800.4. Therefore, you will need to ensure that you provide a summary of the results of your identification efforts including your preliminary determinations, explain the level of effort taken to identify historic properties and the basis for your efforts, and gather the documentation specified in 36 C.F.R. § 800.11(e) for the FHWA. This information is needed to enable the FHWA to make the necessary determinations and findings as specified in 36 C.F.R. § 800.4 (c) and (d).

Be advised that if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In the event that artifacts or features are discovered during the implementation of the federally assisted project, activity, or program and a plan has not been developed, it is the federal agency's responsibility to make reasonable efforts to avoid, minimize or mitigate adverse effects in accordance with 36 C.F.R. § 800.13.

If you have any further questions, please call Karie Brudis of our office at (317) 232-1646.

Very truly yours,


Larry D. Macklin
State Historic Preservation Officer

LDM:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Southern Regional Office, Historic Landmarks Foundation of Indiana
James Juricic, Indiana Department of Transportation



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



July 23, 2002

Jennifer Graf
Project Manager
Parsons Brinkerhoff Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2120

Federal Agency: Federal Highway Administration ("FHWA")

Re: Change of design for the proposed reconstruction of U.S. 24 from New Haven,
Indiana to Defiance, Ohio

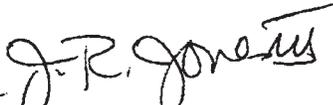
Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated June 19, 2002, and received by the Indiana SHPO on June 20, 2002, for the above indicated project in Allen County, Indiana.

Based upon the information provided, we do not believe that the change in design will diminish the qualities that make the Meyer/Gallmeyer Farm (Site #003-382-40086) and the Smith/Rich/Krug House (Site #003-692-45034) significant.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call Karie A. Brudis of our office at (317) 232-1646.

Very truly yours,

for 
John R. Goss
State Historic Preservation Officer

JRG:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
Jim Juricic, Indiana Department of Transportation
Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology 402 W. Washington Street, West 4th - Indianapolis, IN 46204-2779
Phone: (317) 232-1646 Fax: (317) 232-0692 dhpa@dnr.state.in.us

Frank O'Bannon, Governor
John Goss, Director



March 4, 2003

Jennifer Graf
Project Manager
Parsons Brinckerhoff, Ohio, Inc.
312 Elm Street, Suite 2500
Cincinnati, Ohio 45202-2720

Federal Agency: Federal Highway Administration ("FHWA")

Re: Addendum to the Phase I History/Architecture Report of the US 24 improvements from New Haven, Indiana to Defiance, Ohio for the US 24/I-469

Dear Ms. Graf:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated January 28, 2003, and received by the Indiana SHPO on January 30, 2003, for the above indicated project in Jefferson Township, Allen County, Indiana.

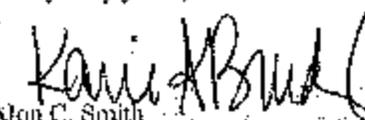
Based upon the available historical and architectural documentation available to our office and provided by you, we concur that the following properties do not meet the criteria to be considered eligible for inclusion in the National Register of Historic Places:

- 1) Emanuel Evangelical Lutheran Cemetery (Site #003-382-55013)
- 2) house at 10919 East US 24 (Site #003-382-55077)
- 3) Melcher Farm at 10949 East US 24 (Site #003-382-55078)
- 4) House at 11613 Edgerton Road (Site #003-382-55079)
- 5) Hoetzer House at 724 South Doyle Road (Site #003-382-55080)
- 6) house at 226 South Doyle Road (Site #003-382-55081)

In addition, we concur that the Niemeyer Farm at 11231 East US 24 (Site #003-382-55001) in your addendum report dated January 2003 meets the criteria to be considered eligible for inclusion in the National Register as an intact example of a nineteenth century farmstead associated with early settlement of Jefferson Township with a Queen Anne farmhouse. Furthermore, we agree that the possible historic boundaries are more or less the same as shown on the aerial photograph.

If any of the historic properties mentioned above may be affected, please notify us, the public and all consulting parties of the FHWA's finding and seek views on effects in accordance with 36 C.F.R. 800.11(d)(2). If you have questions concerning buildings or structures, please contact Karie A. Brudis of our office at (317) 232-1646.

Very truly yours,


Jon C. Smith
Deputy State Historic Preservation Officer

JCS:KAB:kab

cc: John Baxter, Division Administrator, Federal Highway Administration
cnc: Todd Zeiger, Director, Northern Regional Office, Historic Landmarks Foundation of Indiana
James E. Juricic, Indiana Department of Transportation

REFERENCES

- 7 USC 658., *Farmland Policy Protection Act of 1981*, as amended.
- 16 USC 4601, *Land and Water Conservation Fund Act of 1965*, as amended.
- 23 USC 138 and 49 USC 303, *Section 4(f) of the Department of Transportation Act of 1966*.
- 23 USC 101, *National Highway System Designation Act*. 1995.
- 42 USC 4231 et seq., *National Environmental Policy Act of 1969*, as amended.
- 42 USC 4601 et seq., *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*.
- 23 CFR 470, *Federal-Aid Highway Systems*.
- 23 CFR 650A, *Federal-Aid Policy Guide, Location and Hydraulic Design of Encroachments on Flood Plains*.
- 23 CFR 771, *Environmental Impact and Related Procedures; Constructive Use; Section 4(f)*.
- 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.
- 36 CFR 800, *National Historic Preservation Act of 1966*, as amended.
- 40 CFR 1500, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*.
- 50 CFR 402, *Interagency Coordination Endangered Species Act of 1973*, as amended; Final Rule, FR 19926-19963. June 3, 1986.
- CFR EPA NPDES Permit for Stormwater Discharge for Highway Construction Sites. February 27, 1995.
- CFR Volume S7 No. 175, Find NPDES General Permit for Stormwater Discharge from Construction Sites. September 9, 1992.
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- Allen County Department of Planning. *Allen County: 2000 and Beyond*. No Date.
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- *US 24 New Haven to Defiance Modal Analysis*, June 1999. The report documents the analysis of six modal alternatives evaluated for the US 24 project: No Build, Transportation System Management (TSM), Transportation Demand Management (TDM), Transit, Rail Freight, and Highway. The modal alternatives were evaluated on their ability to address the current and future transportation needs and problems identified in the US 24 New Haven to Defiance study area.
- *US 24 New Haven to Defiance Purpose and Need Statement*, June 1999. The purpose and need statement identifies and describes transportation and socioeconomic needs to be addressed by the proposed project. Transportation and socioeconomic factors addressed include safety, inconsistencies in existing roadway design as compared to currently acceptable design criteria, system linkage, travel demand, demographics, and regional economics. This information has been used to determine which components or operational characteristics of the existing transportation system require improvement in order to satisfy these needs and alleviate deficiencies. The purpose and need statement documents the problems anticipated without the proposed project. It also defines the study area and identifies logical termini. Setting the basis for project goals and objectives, the purpose and need statement provides a set of measures by which the alternatives are evaluated.
- *US 24 New Haven to Defiance Preliminary Alternatives Summary*, July 1999. This report documents the Purpose and Need Statement and the Modal Analysis, the development of preliminary corridors for highway alternatives, and the analysis of the Feasible Corridors for further consideration.
- *US 24 New Haven to Defiance Public Involvement Plan*, July 1999. The public involvement plan identifies goals and objectives of the public involvement program; planned activities for public and agency involvement; locations for public involvement activities; communication tools to be used; and an anticipated schedule of events. The plan identifies appropriate methods and activities for dissemination of project information and public input.
- *US 24 New Haven to Defiance Environmental Site Assessment Preliminary Project Screening*, September 1999. This report documents additional evaluation of potential hazardous materials concerns for sites located within or adjacent to existing US 24 corridor and the 609.8-meter (2,000-foot) Feasible Corridors investigated for new highway alternatives.
- *US 24 New Haven to Defiance Phase I Environmental Site Assessment Survey (3 Volumes)*, December 1999. This report documents the Phase I Site Investigations conducted on 30 sites with potential environmental concerns (hazardous materials) located within or immediately adjacent to the 609.8-meter (2,000-foot) Feasible Corridors investigated for new highway alternatives.
- *Phase I History/Architecture Report of the US 24 Improvements in Jefferson, Maumee, and Milan Townships, Allen County, Indiana*, March 2000. This report documents the Phase I History/Architecture survey of potential historic resources located within or immediately adjacent to the 609.8-meter (2,000-foot) Feasible Corridors investigated for new highway alternatives in Allen County, Indiana.
- *US 24 New Haven to Defiance Phase I Environmental Site Assessment Survey Addendum*, March 2000. This report documents the Phase I Site Investigations conducted on 5 sites with potential environmental concerns (hazardous materials) located within or immediately adjacent to the existing US 24 Corridor.

- *Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio*, April 2000. This report documents the Phase I History/Architecture survey of potential historic resources located within or immediately adjacent to the 609.8-meter (2,000-foot) Feasible Corridors investigated for new highway alternatives in Paulding and Defiance counties, Ohio.
- *Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana*, August 2000. This report documents the Phase I History/Architecture survey of potential historic resources located within or immediately adjacent to the existing US 24 Corridor in Allen County, Indiana.
- *US 24 New Haven to Defiance Noise Analysis Report*, August 2000. This report documents the existing and future noise levels for sensitive receptors located within or adjacent to the 609.8-meter (2,000-foot) Feasible Corridors investigated for highway development. It also identifies potential noise impacts associated with the proposed Feasible Alternatives and describes potential noise abatement measures.
- *US 24 New Haven to Defiance Relocation Assistance Program Survey*, August 2000. This report documents the number of potential residential and business displacements associated with the 26 Feasible Alternatives, provides cost estimates for the required relocations, and evaluates the availability of “Decent, Safe, and Sanitary” replacement housing for residential displacements.
- *US 24 Traffic Impact Analysis*, August 2000. This report documents the traffic analysis conducted on the 26 Feasible Alternatives under consideration. It presents an overview of the existing traffic conditions; the methodologies used for development of the travel demand forecasts; the analyses used for the evaluation of alternatives; the results of the analyses of future conditions; and a comparison of the analyses results for the Feasible Alternatives.
- *Addendum to the Phase I History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio*, September 2000. This report documents the Phase I History/Architecture survey of potential historic resources located within or immediately adjacent to the existing US 24 Corridor in Paulding and Defiance counties, Ohio.
- *US 24 New Haven to Defiance Phase I Environmental Site Assessment Addendum 2*, October 2000. This report documents the Phase I Site Investigation conducted on one additional property located within the existing US 24 Corridor.
- *US 24 Ecological Survey for Allen County, Indiana*, December 2000. The purpose of this ecological survey is to identify all ecological resources within the Feasible Corridors and describe the impacts to these resources associated with each of the 26 Feasible Alternatives. This report also provides a summary of the background ecological resource data collected for the proposed relocation and/or widening of US 24.
- *US 24 Ecological Survey for Defiance and Paulding Counties, Ohio (3 Volumes)*, December 2000. The purpose of this ecological survey is to identify all ecological resources within the Feasible Corridors and describe the impacts to these resources associated with each of the 26 Feasible Alternatives. This report also provides a summary of the background ecological resource data collected for the proposed relocation and/or widening of US 24.
- *Phase II History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana*, January 2001. This report documents the additional historic/architectural surveys of potential historic resources located within or immediately adjacent to the 26 Feasible Alternatives investigated for new highway alternatives in Allen County, Indiana. The purpose of the Phase II investigation is to determine if properties are eligible for inclusion in the National Register of Historic Places.

- *US 24 Interstate 469 in New Haven, Indiana to Ohio Route 15 in Defiance, Ohio Preliminary Draft Environmental Impact Statement*, January 2001. This report documents the Purpose and Need for improvements to US 24, the development of 26 Feasible Alternatives for the project, and the potential environmental impacts associated with the Feasible Alternatives. The report was circulated to federal and state resource agencies for review and comment and input into the selection of the Preferred Alternative. In addition, the results of the environmental impact studies and design development as detailed in the report, were presented to the general public for review and comment and input into the selection of the Preferred Alternative. The report is intended to comply with the requirements of the National Environmental Policy Act in accordance with current policies and procedures of the Ohio Department of Transportation.
- *Phase II History/Architecture Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio*, March 2001. This report documents the additional history/architecture surveys of potential historic resources located within or immediately adjacent to the 26 Feasible Alternatives investigated for new highway alternatives in Paulding and Defiance counties, Ohio. The purpose of the Phase II investigation is to determine if properties are eligible for inclusion in the National Register of Historic Places.
- *US 24 Common Themes Identification: Cultural Resources in Ohio*, April 2001. The purpose of this report is to review all historic properties over 50 years of age evaluated for the three US 24 planning sections (New Haven, Indiana to Defiance, Ohio; Defiance, Ohio to Napoleon, Ohio; and Napoleon, Ohio to Toledo, Ohio). The historic properties were grouped into historic and thematic categories for identification of common themes and subthemes. Common themes identified include military, early settlements, agriculture, industry, transportation, and recreation.
- *US 24 Fort to Port Project, New Haven, Indiana to Toledo, Ohio - Tribal Coordination and Consultation*, April 2001. This purpose of this report is to summarize information on the three planning studies being conducted for the US 24 Corridor between New Haven, Indiana and Toledo, Ohio for distribution to Native American Tribal Governments with interests and concerns in the study area.
- *US 24 Vehicle License Plate Survey*, August 2001. This report documents the methodology and results of a license plate survey conducted for the US 24 Corridor between Fort Wayne, Indiana and Toledo, Ohio. The purpose of the survey is to define the trip-making characteristics (local versus regional travel) of automobiles and trucks traveling US 24.
- *Documentation for No Adverse Effect on Historic Properties Within the Area of Potential Effects of the US 24 Preferred Alternative in Allen County, Indiana*, November 2001. The Preferred Alternative has the potential to impact three rural historic properties in Indiana. This report documents the application of the Criteria of Effect and Adverse Effect on the three properties and satisfies the requirements of 36 CFR 800.11(e) for above ground resources that may be impacted by the Preferred Alternative. This report is prepared in an effort to enter into consultation with the Indiana Department of Natural Resources - Division of Historic Preservation and Archaeology on the effect of the US 24.
- *Phase I Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall and Harrison Townships, Paulding County, Ohio (2 Volumes)*, December 2001. This report presents the results of the Phase I archaeological investigations conducted to identify potential archaeological resources located within the proposed right-of-way in Paulding and Defiance Counties for Alternative D-1, the Antwerp Bypass, and Segments 14 and 19. The report also includes recommendations for additional archaeological studies (Phase II investigations).

- *Phase I Archaeological Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana*, April 2002. This report presents the results of the Phase I archaeological investigations conducted to identify potential archaeological resources located within the proposed right-of-way for the Preferred Alternative in Allen County, Indiana. The report also includes recommendations for additional archaeological studies (Phase II investigations).
- *US 24 Preliminary Geotechnical Investigation*, May 2002. This report summarizes the results of the preliminary geotechnical investigation conducted for the Preferred Alternative. This investigation consisted of 20 preliminary borings performed at widely spaced intervals along the proposed highway alignment.
- *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements in Noble, Delaware, and Defiance Townships, Defiance County and Emerald, Crane, Carryall, and Harrison Townships, Paulding County, Ohio*, June 2002. This report presents the results of the Phase II archaeological investigations conducted on nine sites to determine if they are eligible for listing on the National Register of Historic Places. The Phase II surveys determined that none of the nine sites meet the eligibility requirements for inclusion in the National Register of Historic Places.
- *Addendum Report: Phase I Archaeological Reconnaissance of the PAU/DEF 24-0.00/0.00 (PID 18904) Improvements in Defiance Township, Defiance County, Ohio*, July 2002. This report presents the results of the Phase I archaeological investigations conducted to identify potential archaeological resources located within the proposed right-of-way of Alternative D-1 within Segments 15 and 18, in Defiance Township, Defiance County, Ohio.
- *Modal Analysis for the US 24 Corridor from Fort Wayne, Indiana to Toledo, Ohio*, September 2002. To insure that all possible corridor-wide Feasible Alternatives have been identified and investigated, a modal analysis of the entire 130.6-kilometer (81-mile) US 24 Corridor was conducted. This report analyzes the feasibility of using parallel roadways such as US 6 and the Ohio Turnpike as well as other modal options to meet the transportation needs of the Fort to Port Corridor. Modal alternatives evaluated in this analysis are freight/rail, dedicated truck facility, transit, and combinations of several modes.
- *US 24 New Haven to Defiance Service Road Study - Draft*, December 2002. This report documents the investigation into the feasibility of constructing service roads to reduce the number of parcels landlocked by construction of the Preferred Alternative. The investigation examined 20 possible service roads.
- *Addendum to the Phase I History/Architecture Report of the US 24 Improvements in Maumee, Milan and Jefferson Townships, Allen County, Indiana: US 24/I-469 Interchange*, January 2003. This report documents the Phase I History/Architecture survey of potential historic resources located within a 1/2 mile radius of the existing US 24/I-469 interchange in Allen County, Indiana.
- *Phase II Archaeological Report of the PAU/DEF 24-0.00/0.00 PID 18904 Improvements at Sites 12-AL-898 and 12-AL-2034, Milan and Maumee Townships, Allen County, Indiana*, January 2003. This report presents the results of the Phase II archaeological testing recommended for two sites in Allen County, Indiana and recommendations concerning the significance of the sites and eligibility for inclusion in the National Register of Historic Places.
- *City of Defiance, Ohio Traffic Study: Assessment of Traffic Impacts Due to the Proposed Grade Separation of US 24 and West High Street*, February 2003. This report documents the traffic-related effects of the proposed grade separation at US 24 and West High Street on the surrounding roadway network.

- *US 24 New Haven to Defiance Phase II Environmental Site Assessments for Sites 177, 194 and 384 in Defiance and Paulding Counties, Ohio*, March 2003. The report documents the Phase II Environmental Site Assessment investigations completed for three properties located within the proposed right-of-way for Alternative D-1.
- *US 24 Corridor Segmentation Analysis*, April 2003. 23 CFR Part 777.111(f) anticipates that an agency's approach to a highway development project may be to separate the project into smaller segments if warranted by circumstances and if in compliance with specific criteria (the individual projects must have logical termini and independent utility, and must not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements). This analysis documents the justification for separating the US 24 Fort to Port project into three separate planning studies.
- *US 24 New Haven to Defiance Section 106 Consulting Party Coordination: Summary of Section 106 Investigations*, April 2003. In accordance with the provisions of the National Historic Preservation Act, additional coordination with the Section 106 Consulting Parties was undertaken for this project. This report summarizes the Section 106 investigations and Eligibility recommendations for the project. It also discusses the Effects recommendations for four properties in Allen County, Indiana which are located within the Area of Potential Effect for the Preferred Alternative.
- *I-469 and US 24 Interchange: Conceptual Alternatives Summary*, May 2003. As part of the US 24 New Haven to Defiance project, INDOT is proposing to improve the I-469 and US 24 interchange to maintain free-flow operation for freeway-to-freeway movements (system-to-system interchange). The report documents the development and evaluation of 19 conceptual improvement alternatives for the existing US 24/I-469 interchange.
- *US 24 New Haven to Defiance Wetlands Delineation Study - Addendum to the Ecological Survey for Allen County, Indiana and Defiance and Paulding Counties, Ohio*, June 2003. This addendum presents the results of the delineation study conducted on wetlands located within the proposed rights-of-way for Alternatives C, D-1, and the Antwerp Bypass. The functional quality of each wetland and provisional category of the wetland areas are based on the Ohio Environmental Protection Agency's Rapid Assessment Method for Wetlands (ORAM) Version 5.0.
- *US 24 Traffic Impact Analysis for the Preferred Alternative*, June 2003. This report documents the traffic analyses of the local road crossings with Alternative D-1.

GLOSSARY OF TERMS

A

Advisory Council for Historic Preservation (ACHP) - An independent federal agency responsible for the federal review process to ensure that cultural resources are considered during federal project planning and implementation.

Affected Environment - The physical features, land, area or areas to be influenced, affected or created by a transportation improvement under consideration; also includes various social and environmental factors and conditions pertinent to an area.

Agency Coordination - Refers to the process whereby the Department of Transportation contacts, consults and maintains communication with various public and environmental resource agencies, affording such agencies an opportunity to review and comment upon specific transportation proposals.

Agreements (Programmatic) - Agreement between agencies designed to accomplish all agency goals, including timely and efficient coordination. Establishment of a procedure that will reduce the paperwork and processing time for certain federal actions with minor impacts on the human and natural environment and effective communication, while reducing paperwork and time commitments for all involved agencies.

Alternative - One of a number of specific transportation improvement proposals, alignments, options, design choices, etc. in a study. Following detailed analysis, one improvement alternative is chosen for implementation.

Archaeological Investigations - Studies of prehistoric and historic locales which provide understanding of past human behavior, culture change, and related topics through scientific and scholarly techniques such as literature research, excavation, analysis and interpretation.

Arterial - A class of street serving major traffic movement emphasizing a high level of mobility. Includes interstates, highways, and roadways.

Average Daily Traffic (ADT) - The average number of vehicles that pass a point each day averaged over a specified period of time.

C

Capacity - The maximum number of vehicles that can reasonably be expected to pass over a lane of roadway during a given time period under prevailing roadway and traffic conditions.

Categorical Exclusion (CE) - A classification given to federally aided or 100 percent state funded projects or actions that either individually or cumulatively do not have a significant effect on the environment. Once a categorical exclusion is approved for a project, environmental clearance requirements of the National Environmental Policy Act have been satisfied.

Council of Environmental Quality Regulations (CEQ) - Directives issued by the Federal Council on Environmental Quality (40 CFR 1500-1508) that govern the development and issuance of environmental policy and procedures for federal aid actions by public agencies. The regulations contain definitions, spell out applicability and responsibilities, and mandate certain processes and procedures to be followed by state agencies that administer federally funded programs.

Clean Air Act Amendments (CAAAAs) - Federal legislation passed in 1990 to change both federal and state approaches to regulating air quality; mandating programs to curb acid rain, urban air pollution, and toxic air emissions. The CAAAs call for emission reduction measures in air quality nonattainment areas, including the consideration of transportation control measures (TCMs) as part of transportation improvement projects. Projects in nonattainment areas may not increase the number of vehicle miles traveled (VMTs); the number of cars on the roadways must be reduced by encouraging drivers to use mass transit, ridesharing, and carpooling.

Clean Water Act (CWA) - Recognizing the potential for continued or accelerated degradation of the Nation's waters, the US Congress enacted the Clean Water Act formerly known as the Federal Water Pollution Control Act (33 USC 1344). The objective of the Clean Water Act is to maintain and restore the chemical, physical, and biological integrity of the waters of the United States. Section 404 of the Act authorizes the Secretary of the Army, acting through the Corps of Engineers, to issue permits for the discharge of dredged or fill material into waters of the United States, including wetlands.

Comprehensive Plan - The general, inclusive long-range statement of the future development of a community. The plan is typically a map accompanied by description and supplemented by policy statements that direct future capital improvements in an area.

Conceptual Mitigation - The early, generalized identification of design, operational or construction measures that would minimize or avoid anticipated adverse environmental consequences.

Conformity - The US Clean Air Act stipulates that any approved transportation project, plan, or program must conform to the State Implementation Plan (SIP), a document which prescribes procedures for the implementation, maintenance, and enforcement of primary and secondary pollutants.

Constraints - More commonly described as "environmental features". Significant resources, facilities or other features of a study area located in or adjacent to an existing or proposed transportation corridor that serve to restrain, restrict, or prevent the ready implementation of proposed transportation improvements in a given area; may include natural or physical resources, important structures, manner of payment, and various administrative requirements which must be met.

Consulting Party - The participants included in the consultation on historic properties during the Section 106 review process. For highway projects, consulting parties always include the Department of Transportation and the State Historic Preservation Officer, local governments, representatives of Indian tribes, and may include others such as affected land-owners and other interested parties.

Cooperating Agency - As defined in the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA), "any organization other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in...[a] major federal action significantly affecting the quality of the human environment." CEQ emphasizes that agency cooperation should begin early in the NEPA process.

Cumulative Impact - The impact on the environment which results from the incremental impact of a transportation project when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

D Design Approval - An administrative action taken by either the Ohio Department of Transportation or by the Division Office of the Federal Highway Administration at the conclusion of the Preliminary Design Phase to officially certify the route location and major design features of a highway.

Design Criteria - Established state and national standards and procedures that guide the establishment of roadway layouts, alignments, geometry, and dimensions for specified types of highways in certain defined conditions. The principal design criteria for highways are traffic volume, design speed, the physical characteristics of vehicles, the classification of vehicles, and the percentage of various vehicle classification types that use the highway.

Design Exception - An approval issued by a state or federal agency to permit certain deviation from a specified, accepted design criteria granted on the basis of a report explaining the need for the exception and the consequences that will result from the action.

Design Manual - ODOT publication defining criteria, processes and procedures for the evaluation, assessment, engineering design and development of highway and bridge projects.

Determination of Effect - A finding made by Departments of Transportation for federal actions, in consultation with the State Historic Preservation Officer (and the Advisory Council for Historic Preservation), which determines whether a proposed project affects a property included on or eligible for the National Register of Historic Places.

Determination of Eligibility - The process of assembling documentation to render professional evaluation of the historical significance of a property. Departments of Transportation, in consultation with the State Historic Preservation Officer apply National Register of Historic Places criteria when deciding matters of historical significance.

Direct Effects - Influences or occurrences caused by a given action and occurring at the same time as the action. Changes in noise levels, traffic volumes, or visual conditions are some examples of direct effects generated by transportation improvements.

District Office - One of 12 Ohio Department of Transportation field offices throughout Ohio responsible for administering project development, design, construction and maintenance activities within their geographic region.

E Ecological Survey Report - A report summarizing the ecological field studies done to inventory ecological resources and product impacts of various project alternatives. Procedures and requirements are set forth in ODOT's *Ecological Manual*.

Environmental - In a scientific context, a combination of external or extrinsic conditions present in nature. In a planning context, a category of analytical studies of aesthetic values, ecological resources, cultural resources, sociological and economic conditions, etc.

Environmental Impact Statement (EIS) - The detailed statement required by the National Environmental Policy Act of 1969 when an agency proposes a federal action that significantly affects the environment.

Environmental Justice - Efforts to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment.

Environmental Site Assessment (ESA) - An environmental study conducted to assess the potential for contamination of a property or parcel with hazardous substances. The process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) has been impacted by hazardous substances and/or petroleum products.

Erosion and Sedimentation Control Plan - A detailed plan developed to minimize accelerated erosion and prevent sedimentation damage.

Expressway - A divided highway facility with partial control of access and two or more lanes for the exclusive use of through traffic in each direction; includes grade separations at most major intersections.

F Farmland - As defined by the Farmland Protection Policy Act, "farmland" means prime or unique farmlands as defined in Section 1540(c)(1) of the Act or farmland that is determined by the appropriate state or local governmental agency or agencies with concurrence of the Secretary of Agriculture to be farmland of statewide or local importance. Such land may include more than actual cropland (i.e. it may include fallow or abandoned cropland, grazing land and forested land). It does not include land already in or committed to urban development or water storage, thereby excluding developed land with a density of 30 structures per 16.19 hectare (40-acre) area; lands identified as "urbanized area" (UA) on the US Census Bureau Map; lands shown as urban area (i.e. mapped with that "tint overprint") on US Geological Survey topographic maps;

lands shown as “urban-built-up” on the US Department of Agriculture Important Farmland Maps (available only for a few counties in Ohio); and all land that receives a combined score of 160 points or less from the land evaluation and assessment criteria on the Farmland Conversion Impact Rating Form.

Farmland Conversion Impact Rating (FCIR) Form - Form AD-1006 of the US Department of Agriculture, Natural Resources Conservation Service, used for determining whether land to be taken by a federally-funded project is farmland subject to the Farmland Protection Policy Act.

Farmland Protection Policy Act (FPPA) of 1981 - A federal law requiring federal agencies to consider the adverse effects of federal programs on farmland preservation, consider alternative actions, and as appropriate, consider mitigation that could lessen adverse effects.

Feasibility Study - Refers to systematic evaluations to better assess the desirability or practicality of further developing a proposed action. Such studies are typically performed during the planning stage or very early in the preliminary development phase when improvement proposals or design concepts need to be more fully investigated.

Federal Action - A highway or transit project proposed for Federal Highway Administration or Federal Transit Administration funding. It also includes actions such as joint and multiple use permits, other federal permits and approvals, changes in access control, etc., which may or may not involve a commitment of federal funds.

Federal Highway Administration (FHWA) - An agency of the US Department of Transportation responsible for carrying out federal highway and transportation mandates through a network of several regional offices and Division Offices in each state.

Field Review - A site visit conducted to gather or verify data, define scopes of work, perform analyses, and make decisions for specific projects.

Final Design - The development of detailed working drawings, specifications, and estimates for transportation projects. Final Design follows the receipt of necessary design and/or environmental approval and it includes right-of-way acquisition, utility relocation, and contract advertisement and award.

Freeway - A divided highway facility with full control of access and two or more lanes for the exclusive use of through traffic in each direction.

G Geometric Design - Pertains to those engineering activities involving standards and procedures for establishing the horizontal and vertical alignment and dimensions of slopes of a highway. It includes engineering work involved with proportioning the visible elements of a facility, tailoring the highway to the terrain, the controls of environmental and land space usage, and the requirements of the highway user, individually and collectively.

Geographical Information Systems (GIS) - Technology designed to capture, store, manage, manipulate, analyze and display geographically referenced data.

H Headwaters - Non-tidal rivers, streams, and their lakes and impoundments, including adjacent wetlands, that are part of a surface tributary system to an interstate or navigable water of the United States upstream of the point on the river or stream at which the average annual flow is less than five cubic feet per second. The US Corps of Engineers may estimate this point from available data by using the mean annual area precipitation, area drainage basin maps, and the average runoff coefficient, or by similar means. For streams that are dry for long periods of the year, the US Army Corps of Engineers may establish the point where headwaters begin as that point on the stream where a flow of five cubic feet per second is equaled or exceeded 50 percent of the time.

High Occupancy Vehicles (HOVs) - Vehicles carrying two or more people. The number that constitutes an HOV for the purpose of HOV highway lanes may be designated differently by the sponsoring transportation agencies.

History/Architecture Investigations - Studies that result in identification of resources (buildings, structures and sites) constructed over 50 years ago or of recent construction and demonstrably significant based on National Register of Historic Places guidelines, via literature research, photo documentation, analysis, and interpretation.

Human Environment - Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

Identification of Alternatives - The Department of Transportation's engineering and environmental evaluations, in which the Department identifies and chooses an initial set of study alternatives that address the stated program objectives and the project need, and which are sensitive to the resources and land uses of a study area. The process involves a wide variety of possible options, assessing the merits and drawbacks, and choosing those that should be carried forward. Alternatives to be studied normally include the No Build or no action alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation systems management strategies, multi-modal alternatives if warranted, and any combination of the above.

Impacts - Positive or negative effects upon the natural or human environment resulting from transportation projects.

Indirect Effects - Impacts that can be expected to result from a given action that occurs later in time or further removed in distance; for example, induced changes to land use patterns, population density or growth rate.

Interested Community - A compilation of the names and addresses of persons or groups affected by or interested in a specific transportation project. This information is gathered and maintained by Department of Transportation officials or local planning agencies during the course of transportation project studies.

Intermodal Surface Transportation Efficiency Act (ISTEA) - Signed in 1991, this federal legislation (Public Law 102-240) established the policy of developing an economic, efficient, and environmentally sound national transportation system. To further this goal, ISTEA conceives transportation enhancement activities and requires transportation policy to advance the objectives of regional and metropolitan planning by considering the "overall social, economic, energy and environmental effects" of improvement projects.

Isolated Wetlands - Wetlands that have no connection to a surface water of the state; are outside of, and not contiguous to any one hundred-year floodplain and do not have a contiguous hydric soil between the wetland and any surface water of the state.

Jurisdictional Determination (JD) - A site survey or document review performed by the US Army Corps of Engineers to officially determine whether or not a given parcel of land is subject to regulation as waters of the United States, and if so, the extent of the area. This is generally applied to wetlands, but may also be used to determine jurisdictional issues with respect to headwater streams, ditches, and similar areas.

K **Keeper of the National Register (Keeper)** - The official responsible for the administration of the National Register of Historic Places (NRHP) within the National Park Service. One duty of the Keeper is to provide a formal determination of eligibility on cultural resources submitted when there is disagreement between the federal agency and the State Historic Preservation Officer.

L **Lead Agency** - A state or federal agency taking primary responsibility for preparing an engineering or environmental document.

Legal Notice - A formal announcement or finding per the Ohio Revised Code published according to legal requirements by Ohio Department of Transportation or a Local Project Sponsor Agency in a periodical or newspaper to provide official public notice of an action or approval of interest to the public.

Level of Service (LOS) - A commonly used indicator of a highway's performance. Levels of service range from A, which indicates unrestricted free flow conditions, to F which indicates high congestion and generally restricted operating speeds.

Local Planning Agency (LPA) - Any other state agency, local political subdivision, board, commission, or other governmental entity identified under paragraph C of Section 5501.03 of the Ohio Revised Code as being eligible for assuming the administrative responsibilities for Ohio Department of Transportation improvement projects.

Location Map - A graphic drawing used in study reports and meeting presentations to show the orientation and the relationship of the project with its study area in comparison with existing roadways, features, developments, municipalities, and principal land uses nearby. The graphic typically will be large enough to show all major roadways, major cities, and principal topographic controls in the region.

Logical Termini - Connecting points with known features (land uses, economic areas, population concentrations, cross route locations, etc.) at either end of a proposed transportation route that enhance good planning and which serve to make the route usable. Logical termini are considered rational end points for a transportation improvement.

M **Mapping** - A plan surface with graphic or photographic representation of land or water depicting the study area for a project. Existing alignments, alternatives, engineering design features, and environmental constraints are plotted on various types of mapping. Photogrammetric (aerial) mapping assists in resource identification and studies. Topographic (base) mapping provides a foundation in alignment layout. Property tax maps, and traffic data maps also are consulted in the transportation development process. The type and scale of mapping are selected to fit the terrain and land use intensity of the study area as well as the level of detail in the proposed design.

Metropolitan Planning Organization (MPO) - The organization designated by the governor and local elected officials as responsible, together with the state, for transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

Mitigation Measures - Specific design commitments made during the environmental evaluation and study process that serve to moderate or lessen impacts deriving from the proposed action.

Multiple Use - The nonhighway use of the airspace above or below the highway gradeline between the horizontal highway right-of-way limits acquired by the highway agency.

N **National Environmental Policy Act (NEPA)** - Passed in 1969, the federal legislation requiring states to document the environmental impact of transportation projects. Various approaches, steps, and approvals now used in the Ohio Transportation Development Process originated with the National Environmental Policy Act. The NEPA process is enforced by regulations of the Council on Environmental Quality.

National Pollutant Discharge Elimination System (NPDES) Permit - Mandated by Section 401 of the Clean Water Act for the discharge of pollutants from a point source into surface waters (including wetlands) for disposal purposes; intended to regulate the amount of chemicals, heavy metals, and biological wastes discharged in wastewater.

National Register of Historic Places (NRHP) - The national list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering, or culture. It is maintained by the Secretary of the Interior under authority of Section 101(a)(1)(A) of the National Historic Preservation Act, as amended.

National Register of Historic Places - Criteria for Evaluation - The criteria used by the National Park Service to evaluate the eligibility of properties for listing on the National Register of Historic Places (NRHP).

Navigable Waters of the United States - Navigable Waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity. 33 CFR 329.4.

No Build Alternative - Option of maintaining the status quo by not building transportation improvements. Usually results in eventual deterioration of existing transportation facilities. It serves as a baseline for comparison of Build Alternatives.

Non-Attainment Areas - Counties that do not meet national ambient air quality standards for carbon monoxide and/or ozone pollution; ranked by the severity of their problem as marginal, moderate, serious, severe or extreme. In accordance with the Clean Air Act Amendments of 1990, these areas must take specific emission reduction measures.

Notice of Intent - Announcement in the Federal Register advising interested parties that an Environmental Impact Statement will be prepared and circulated for a given project.

O **Open House** - An informal, unstructured Public Meeting or Hearing during which information stations with exhibits convey important project information and Department of Transportation and consultant personnel are available to answer the public's questions.

Ordinary High Water (OHW) - The ordinary high water mark is the elevation at which US Army Corps of Engineers jurisdiction begins. The OHW mark is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as an impressed natural line, shelving, a vegetation change or debris lines.

P **Planning Stage** - First stage of the Transportation Development Process. Planning involves the development of a Statewide Multimodal Transportation Plan and Metropolitan Areas Plan. This phase involves inventories, data collection, problems/needs assessments, generating and comparing alternative plans, evaluating the social, economic, and environmental impacts of proposed transportation actions with a variety of public, agency, and citizen involvement groups, and selecting the preferred plan for the state and the Metropolitan Planning Organizations.

Plans - Technical drawings which show the location, character, and dimensions of prescribed project work, including layouts, profiles, cross-sections and other details.

Programming - A general term to refer to a series of activities carried out by the Department of Transportation, including data assessment, appraisal of identified planning needs and consideration of available or anticipated fiscal resources to result in the drawing up, scheduling and planning.

Public Hearing - A meeting designed to afford the public the fullest opportunity to express support of, opposition to, or comment on a transportation project. Documentation is required.

Public Involvement - Coordination events and informational materials geared toward public participation in the Transportation Development Process.

Public Meeting - An announced meeting conducted by transportation officials designed to facilitate public participation in the decision-making process and to assist the public in gaining an informed view of a proposed project during the Transportation Development Process.

Q **Qualitative Analysis** - A general concept which categorizes a process used in certain types of environmental or route location studies where multiple factors are compared in a systematic and comprehensive manner on the basis of sound judgement. Factors analyzed by using a qualitative analysis are such that they cannot be measured in monetary terms, have no apparent common denominators, and are not readily quantifiable.

Quantitative Analysis - The process used in certain environmental, economic, cost-benefit, engineering, or traffic studies where multiple factors, elements, and/or outcomes are evaluated and compared by the use of measurable data. Certain mathematical models, formulas, numerical indices, rankings, and value matrices may be used to assist with such a process.

R **Record of Decision (ROD)** - A document prepared by the Division office of the Federal Highway Administration that presents the basis for selecting and approving a specific transportation proposal that has been evaluated through the various environmental and engineering studies of the Transportation Development Process. Typically, the ROD identifies the alternative selected in the Final Environmental Impact Statement (FEIS), the alternatives considered, measures to minimize harm, monitoring or enforcement programs, and an itemized list of commitments and mitigation measures.

Regulatory Agency - An agency empowered to issue permits or recommend approval or denial of a permit or action.

Right-of-Way - Land, property, or interest therein acquired for and devoted to transportation purposes such as construction, maintenance, operations, and protection of a facility.

S **Secondary Impacts** - A general term to define impacts which are caused by a specific action and which take place later in time or further removed in distance but are still reasonably foreseeable.

Section 106 Procedures - Procedures based on Section 106 of the National Historic Preservation Act of 1966 which govern the identification, evaluation, and protection of historical and archaeological resources affected by state and federal transportation projects. Principal areas identified include required evaluations to determine the presence or absence of sites, the eligibility based on National Register of Historic Places criteria and the significance of the effect of a proposed project upon such a site.

Section 401 Water Quality Certification - Required by Section 401 of the federal Clean Water Act for projects involving the discharge of materials into surface waters, including wetlands. The applicant must demonstrate that activities will comply with water quality standards and other provisions of federal and state law and regulations regarding conventional and nonconventional pollutants, new source performance standards, and toxic pollutants.

Section 404 Permit - A permit issued by the Army Corps of Engineers to authorize the discharge of dredged or fill material into waters of the United States pursuant to Section 404 of the Clean Water Act.

Section 4(f) Resources - Publicly owned parks, recreation lands, wildlife/waterfowl refuges, and historic sites that are listed on or eligible for listing on the National Register of Historic Places (NRHP).

Section 4(f) Determination - Administrative action by which the Federal Highway Administration confirms that, on the basis of extensive studies and analysis, there are no “prudent and feasible” alternatives to the taking of land from resources protected under Section 4(f) of the US Department of Transportation Act, as amended.

Section 6(f) - A provision in the Federal Land and Water Conservation Fund Act that protects public recreational properties developed or enhanced using federal funding supplied to states or municipalities under the Act by requiring replacement of lands converted to nonrecreational uses. Proposed transportation projects which affect such lands require a study and an analysis of alternatives to serve as the basis for a Section 6(f) finding by the US Department of the Interior. Specific state legislation for any proposed land transfer is also required in order to implement a Section 6(f) action. Mitigation generally includes replacement of Section 6(f) land taken for a project.

Sensitive Receptor - An area of frequent human use (i.e. residential property, church, school, library, hospital, park, hotel, motel, etc.).

Sensitive Species - Plant or animal species which are (1) federally listed or proposed threatened or endangered species; (2) bird species protected under the Migratory Bird Treaty Act; (3) species protected under state endangered species laws and regulations, plant protection laws and regulations; fish and game codes, or species of special concern listings and policies, or (4) species recognized by national, state, or local environmental organizations (e.g. The Nature Conservancy).

Significant Impacts - Any number of social, environmental, or economic effects or influences that may result from the implementation of a transportation improvement; classified as direct, secondary, or cumulative which significantly affect the human and natural environments. The Federal Highway Administration mandates environmental clearance documents based upon the significance of impacts. In most cases, environmental impact statement projects involve significant impacts. Both context and intensity as described in 40 CFR 1508.27 are important when determining significance.

Sole Source Aquifer - As defined by the federal Safe Drinking Water Act, a groundwater source that represents the principle source of a water supply for a community or region that, if contaminated, would create a significant hazard to public health.

Special Aquatic Sites - Those sites identified in accordance with 40 CFR 230 Subpart E (i.e. sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes). They are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

State Historic Preservation Officer (SHPO) - The official appointed or designated pursuant to Section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation program. The SHPO consults with state and federal agencies during the Section 106 process review. The SHPO administers the national historic preservation program at the State level, reviews National Register nominations, and maintains file data on historic properties that have been identified but not yet nominated. Agencies seek the view of the SHPO in the identification of historic properties and the assessment of the effects of a project on historic properties.

State Transportation Improvement Plan (STIP)- A staged, multi-year statewide, intermodal program of transportation projects which is consistent with the statewide transportation plan and planning processes, metropolitan plans, Transportation Improvement Plans and processes.

Study Area - A geographic area selected and defined at the outset of engineering and environmental evaluations which is sufficiently adequate in size to address all pertinent project matters occurring within it.

Summary of Environmental Commitments - Design commitments made during the environmental evaluation and study process to moderate or lessen impacts from the proposed action. These measures may include planning and development commitments, environmental measures, right-of-way improvements, and agreements with resource or other agencies to affect construction or post construction action.

T **Transcript** - A typewritten record, usually prepared by a certified stenographer, providing a verbatim account of the official proceedings that take place at all Public Hearings and some Public Meetings.

Transportation Improvement Plan (TIP)- A document prepared by metropolitan planning organizations listing projects to be funded with Federal Highway Administration and Federal Transit Administration funds for the next one to three-year period.

U **Urbanized Area** - An area containing 50,000 or more population plus incorporated surrounding areas.

W **Waters of the United States** - Water bodies subject to US Army Corps of Engineers jurisdiction. They include all interstate and intrastate waters such as lakes, rivers, streams (including intermittent streams) and wetlands.

Wellhead Protection Area - The surface and subsurface area surrounding a water well, well field, spring or infiltration gallery supplying a public water system, through which contaminants are reasonably likely to move toward and reach the water well or well field.

Wetlands - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence or vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 2, 2000	Farmland Conversion Impact Rating Form 1 of 2		
Name of Project US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration			
Proposed Land Use US 24 roadway alignment		County and State Allen County, Indiana			
PART II (To be completed by NRCS)		Date Request Received by NRCS			
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated —	Average Farm Size 168		
Major Crop(s) CORN	Farmable Land in Government Jurisdiction Acres: 319,480 % 74	Amount of Farmland As Defined in FPPA Acres: 309,800 % 72			
Name of Land Evaluation System Used FPPA	Name of Local Site Assessment System Allen County, Indiana	Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Alternatives ABCD	Alternatives EFGH	Alternatives IJKLMNOP	Alternatives QRSTUVWXYZ
A. Total Acres To Be Converted Directly		564	555	522	506
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	0	0
C. Total Acres in Site		564	555	522	506
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland		563	554	521	505
B. Total Acres Statewide and Local Important Farmland		—	—	—	—
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		.182	.179	.168	.163
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		65	65	66	65
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		77	77	76	78
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area in Nonurban Use	15	12	14	12	12
2. Perimeter in Nonurban Use	10	9	10	9	10
3. Percent of Site Being Farmed	20	20	20	20	20
4. Protection Provided by State and Local Government	20	18	18	18	18
5. Distance from Urban Built-up area	NA	NA	NA	NA	NA
6. Distance to Urban Support Services	NA	NA	NA	NA	NA
7. Size of Present Farm Unit Compared to Average	10	10	10	10	10
8. Creation of Non-Farmable Farmland	25	0	0	0	0
9. Availability of Farm Support Services	5	5	5	5	5
10. On-Farm Investments	20	18	18	18	18
11. Effects of Conversion on Farm Support Services	25	0	0	0	0
12. Compatibility with Existing Agricultural Use	10	9	9	9	9
TOTAL SITE ASSESSMENT POINTS	160	101	104	101	102
PART VII (To be completed by Federal Agency)					
Relative Value of Farmland (from Part V above)	100	77	77	76	78
Total Corridor or Site Assessment (From Part VI above or a local site assessment)	160	101	104	101	102
TOTAL POINTS (Total of above 2 lines)	260	178	181	177	180
Site Selected: Alternative D-1	Date of Selection: February, 2002	3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Reason For Selection: See Attachment 1.					

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 16, 2000	Farmland Conversion Impact Rating Form 1 of 4		
Name of Project: PID No. 18904 PAU/DEF-24-0.00/0.00 US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration			
Proposed Land Use US 24 roadway alignment		County and State Paulding and Defiance counties, Ohio			
PART II (To be completed by NRCS)		Date Request Received by NRCS 8/18/2000			
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated 0	Average Farm Size 284 Ac.		
Major Crop(s) Soybeans, Corn, Wheat, Hay	Farmable Land in Government Jurisdiction Acres: 432,000 % 82%	Amount of Farmland As Defined in FPPA Acres: 346,098 % 65%			
Name of Land Evaluation System Used Soil Productivity Index	Name of Local Site Assessment System —	Date Land Evaluation Returned by NRCS 5/01/2001			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Alternatives A, E	Alternatives B, F	Alternatives C, G	Alternatives D, H
A. Total Acres To Be Converted Directly		1126	1106	1133	1107
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	0	0
C. Total Acres in Site		1126	1106	1133	1107
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland		338	332	334	332
B. Total Acres Statewide and Local Important Farmland		-0-	-0-	-0-	-0-
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		19%	19%	19%	19%
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		59%	59%	59%	59%
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		75	75	75	75
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area in Nonurban Use		15	11	13	13
2. Perimeter in Nonurban Use		10	8	8	9
3. Percent of Site Being Farmed		20	19	18	19
4. Protection Provided by State and Local Government		20	15	15	15
5. Distance from Urban Built-up area		NA	NA	NA	NA
6. Distance to Urban Support Services		NA	NA	NA	NA
7. Size of Present Farm Unit Compared to Average		10	10	10	10
8. Creation of Non-Farmable Farmland		25	0	0	0
9. Availability of Farm Support Services		5	5	5	5
10. On-Farm Investments		20	13	14	13
11. Effects of Conversion on Farm Support Services		25	0	0	0
12. Compatibility with Existing Agricultural Use		10	9	9	9
TOTAL SITE ASSESSMENT POINTS		160	90	92	93
PART VII (To be completed by Federal Agency)					
Relative Value of Farmland (from Part V above)		100	75	75	75
Total Corridor or Site Assessment (From Part VI above or a local site assessment)		160	90	92	93
TOTAL POINTS (Total of above 2 lines)		260	165	164	168
Site Selected: Alternative D-1		Date of Selection: February, 2002		3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Reason For Selection:

See Attachment #1.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 16, 2000	Farmland Conversion Impact Rating Form 2 of 4		
Name of Project: PID No. 18904 PAU/DEF-24-0.00/0.00 US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration			
Proposed Land Use US 24 roadway alignment		County and State Paulding and Defiance counties, Ohio			
PART II (To be completed by NRCS)		Date Request Received by NRCS 8/18/2000			
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated -0-	Average Farm Size 284 Ac.		
Major Crop(s) Soybeans, Corn, Wheat, Hay	Farmable Land in Government Jurisdiction Acres: 432,000 % 82%	Amount of Farmland As Defined in FPPA Acres: 346,098 % 65%			
Name of Land Evaluation System Used Soil Productivity Index	Name of Local Site Assessment System -	Date Land Evaluation Returned by NRCS 5/2/2001			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Alternatives I, Q	Alternatives J, R	Alternatives K, S	Alternatives L, T
A. Total Acres To Be Converted Directly		1177	1157	1184	1158
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	0	0
C. Total Acres in Site		1177	1157	1184	1158
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland		365	359	361	371
B. Total Acres Statewide and Local Important Farmland		-0-	-0-	-0-	-0-
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		1%	1%	1%	1%
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		57	56	56	54
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		80	80	80	80
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area in Nonurban Use	15	12	11	12	12
2. Perimeter in Nonurban Use	10	7	6	7	7
3. Percent of Site Being Farmed	20	17	15	17	16
4. Protection Provided by State and Local Government	20	15	15	15	15
5. Distance from Urban Built-up area	NA	NA	NA	NA	NA
6. Distance to Urban Support Services	NA	NA	NA	NA	NA
7. Size of Present Farm Unit Compared to Average	10	10	10	10	10
8. Creation of Non-Farmable Farmland	25	0	0	0	0
9. Availability of Farm Support Services	5	5	5	5	5
10. On-Farm Investments	20	14	14	14	14
11. Effects of Conversion on Farm Support Services	25	0	0	0	0
12. Compatibility with Existing Agricultural Use	10	9	9	9	9
TOTAL SITE ASSESSMENT POINTS	160	89	85	89	88
PART VII (To be completed by Federal Agency)					
Relative Value of Farmland (from Part V above)	100	80	80	80	80
Total Corridor or Site Assessment (From Part VI above or a local site assessment)	160	89	85	89	88
TOTAL POINTS (Total of above 2 lines)	260	169	165	169	168
Site Selected: Alternative D-1	Date of Selection: February, 2002	3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			

Reason For Selection:

See Attachment #1.

U.S. DEPARTMENT OF AGRICULTURE

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 2, 2000	Farmland Conversion Impact Rating Form 2 of 2	
Name of Project US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration		
Proposed Land Use US 24 roadway alignment		County and State Allen County, Indiana		
PART II (To be completed by NRCS)		Date Request Received by NRCS		
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated —	Average Farm Size 168	
Major Crop(s) CORN	Farmable Land In Government Jurisdiction Acres: 319,480 % 74	Amount of Farmland As Defined in FPPA Acres: 309,800 % 72		
Name of Land Evaluation System Used FPPA	Name of Local Site Assessment System Allen County, Indiana	Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Site Rating		
		Alternatives Y	Alternatives Z	Alternatives
A. Total Acres To Be Converted Directly		476	476	
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	
C. Total Acres in Site		476	476	
PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime and Unique Farmland		473	473	
B. Total Acres Statewide and Local Important Farmland				
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		153	153	
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		65	65	
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		78	78	
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points		
1. Area in Nonurban Use	15	12	11	
2. Perimeter in Nonurban Use	10	8	8	
3. Percent of Site Being Farmed	20	5	10	
4. Protection Provided by State and Local Government	20	15	15	
5. Distance from Urban Built-up area	NA	NA	NA	
6. Distance to Urban Support Services	NA	NA	NA	
7. Size of Present Farm Unit Compared to Average	10	10	10	
8. Creation of Non-Farmable Farmland	25	0	0	
9. Availability of Farm Support Services	5	5	5	
10. On-Farm Investments	20	18	18	
11. Effects of Conversion on Farm Support Services	25	0	0	
12. Compatibility with Existing Agricultural Use	10	9	9	
TOTAL SITE ASSESSMENT POINTS	160	82	86	
PART VII (To be completed by Federal Agency)				
Relative Value of Farmland (from Part V above)		100	78	78
Total Corridor or Site Assessment (From Part VI above or a local site assessment)		160	82	86
TOTAL POINTS (Total of above 2 lines)		260	160	164
Site Selected: Alternative D-1	Date of Selection: February, 2002	3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Reason For Selection:

See Attachment 1

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 16, 2000	Farmland Conversion Impact Rating Form 3 of 4		
Name of Project: PID No. 18904 PAU/DEF-24-0.00/0.00 US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration			
Proposed Land Use US 24 roadway alignment		County and State Paulding and Defiance counties, Ohio			
PART II (To be completed by NRCS)		Date Request Received by NRCS 8/18/2000			
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated -0-	Average Farm Size 284 Ac.		
Major Crop(s) Soybeans, Wheat, Corn, Hay	Farmable Land in Government Jurisdiction Acres: 432,000 % 82%	Amount of Farmland As Defined in FPPA Acres: 346,098 % 65%			
Name of Land Evaluation System Used Soil Productivity Index	Name of Local Site Assessment System -	Date Land Evaluation Returned by NRCS 5/01/2001			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Alternatives M, U	Alternatives N, V	Alternatives O, W	Alternatives P, X
A. Total Acres To Be Converted Directly		1169	1149	1176	1150
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	0	0
C. Total Acres in Site		1169	1149	1176	1150
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime and Unique Farmland		386	379	376	391
B. Total Acres Statewide and Local Important Farmland		-0-	-0-	-0-	-0-
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		19%	19%	19%	19%
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		52	53	53	52
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		83	83	83	83
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area in Nonurban Use	15	12	12	13	12
2. Perimeter in Nonurban Use	10	7	7	8	7
3. Percent of Site Being Farmed	20	17	16	18	16
4. Protection Provided by State and Local Government	20	15	15	15	15
5. Distance from Urban Built-up area	NA	NA	NA	NA	NA
6. Distance to Urban Support Services	NA	NA	NA	NA	NA
7. Size of Present Farm Unit Compared to Average	10	10	10	10	10
8. Creation of Non-Farmable Farmland	25	0	0	0	0
9. Availability of Farm Support Services	5	5	5	5	5
10. On-Farm Investments	20	14	14	15	15
11. Effects of Conversion on Farm Support Services	25	0	0	0	0
12. Compatibility with Existing Agricultural Use	10	9	9	9	9
TOTAL SITE ASSESSMENT POINTS	160	89	88	93	89
PART VII (To be completed by Federal Agency)					
Relative Value of Farmland (from Part V above)		100	83	83	83
Total Corridor or Site Assessment (From Part VI above or a local site assessment)		160	89	88	93
TOTAL POINTS (Total of above 2 lines)		260	172	171	176
Site Selected: Alternative D-1		Date of Selection: February 2002		3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Reason For Selection:

See Attachment #1.

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request August 16, 2000	Farmland Conversion Impact Rating Form 4 of 4	
Name of Project: PID No. 18904 PAU/DEF-24-0.00/0.00 US 24 New Haven to Defiance Preliminary Project Development		Federal Agency Involved Federal Highway Administration		
Proposed Land Use US 24 roadway alignment		County and State Paulding and Defiance counties, Ohio		
PART II (To be completed by NRCS)		Date Request Received by NRCS 8/18/2000		
Does the site or corridor contain prime, unique, statewide or local important farmland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, the FPPA does not apply - Do not complete additional parts of this form)		Acres Irrigated 0	Average Farm Size 284 Ac.	
Major Crop(s) Soybeans, Corn, Wheat, Hay	Farmable Land in Government Jurisdiction Acres: 432,000 % 82%	Amount of Farmland As Defined in FPPA Acres: 346,098 % 65%		
Name of Land Evaluation System Used Soil Productivity Index	Name of Local Site Assessment System -	Date Land Evaluation Returned by NRCS 5/01/2001		
PART III (To be completed by Federal Agency)		Alternative Site Rating		
		Alternatives Y	Alternatives Z	Alternatives
A. Total Acres To Be Converted Directly		1062	1062	
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	
C. Total Acres in Site		1062	1062	
PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime and Unique Farmland		70	176	
B. Total Acres Statewide and Local important Farmland		-0-	-0-	
C. Percentage of Farmland in County or Local Govt. Unit to be Converted		1/2 %	1/2 %	
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value		79	73	
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)		85	85	
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points		
1. Area in Nonurban Use	15	9	9	
2. Perimeter in Nonurban Use	10	9	9	
3. Percent of Site Being Farmed	20	5	10	
4. Protection Provided by State and Local Government	20	13	13	
5. Distance from Urban Built-up area	NA	NA	NA	
6. Distance to Urban Support Services	NA	NA	NA	
7. Size of Present Farm Unit Compared to Average	10	10	10	
8. Creation of Non-Farmable Farmland	25	0	0	
9. Availability of Farm Support Services	5	5	5	
10. On-Farm Investments	20	15	15	
11. Effects of Conversion on Farm Support Services	25	0	0	
12. Compatibility with Existing Agricultural Use	10	9	9	
TOTAL SITE ASSESSMENT POINTS	160	75	80	
PART VII (To be completed by Federal Agency)				
Relative Value of Farmland (from Part V above)	100	85	85	
Total Corridor or Site Assessment (From Part VI above or a local site assessment)	160	75	80	
TOTAL POINTS (Total of above 2 lines)	260	160	165	
Site Selected: Alternative D-1	Date of Selection: February, 2002	3. Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Reason For Selection:

see attachment 1

Attachment 1

The 26 potential alternatives developed for the project were analyzed in a three-step screening process. First, the alternatives were analyzed to determine if they met the established purpose and need of the project. In the second step of analysis, the potential environmental impacts were assessed for each alternative. This analysis focused on environmental resources unique to the study area and also those that require state and federal permits, if affected. The environmental resources determined to be differentiating factors in the Step II analysis were farmlands, woodlots, category 3 forested wetlands, and streams. In addition, residential and commercial displacements were identified as a differentiating factor in the Step II analysis. No priority or rankings were assigned to the five factors. They were considered to be of equal value in the analysis. Alternatives with low impacts to the five factors were retained for further consideration. The third step of analysis involved a more detailed examination of the environmental impacts and the consideration of other information such as public and agency comments and costs. In this step, qualitative factors of the impacted resources were considered in the selection of the Preferred Alternative. Through this three-step analysis, Alternative C was identified as the Preferred Alternative.

The selection of the Preferred Alternative was the focus of public meetings held on May 1, 2, and 3, 2001. Citizens and local officials in the Defiance area requested that Alternative D be reconsidered as the Preferred Alternative. Alternative D follows the same route as Alternative C from the intersection with I-469 in Indiana to Defiance County, Ohio. In Defiance County, Alternative C follows segments 14 and 19, while Alternative D follows segments 15 and 18. Agency input was also considered in the selection of the Preferred Alternative. The Ohio Department of Transportation met with representatives from US Environmental Protection Agency, Ohio Environmental Protection Agency, and Federal Highway Administration on March 8, 2001 to discuss the PDEIS and recommendations for the Preferred Alternative. The USEPA discussed their comments on the PDEIS, which were focused only on wetland impacts. OEPA expressed concern about impacts to category three wetlands and streams. In general, the agencies indicated a preference for those alternatives that minimize impacts to wetlands, streams, farmlands, wildlife habitat, woodlands, and the Maumee River. Several agencies recommended Alternative C as the Preferred Alternative for US 24 because it would result in the least impact to category III forested wetlands.

As a result of public and agency input, Alternatives C and D were retained for further study. Detailed environmental studies (i.e. archaeology surveys, wetlands delineations, and threatened and endangered species surveys) conducted on Alternatives C and D. Additional design development was completed with the intention of minimizing impacts on wetlands, particularly the category 3 forested wetlands located in segment 18. This resulted in the development of a 27th alternative – Alternative D-1. Further coordination with the USACE and the OEPA regarding wetland impacts and potential mitigation for the new minimization alignment resulted in Alternative D-1 being selected as the Preferred Alternative for the project in February 2002.

The footprint modifications that resulted in the creation of Alternative D-1 do not change the farmland impact rating calculated for Alternative D. The alignments for Alternatives D and D-1 are identical except for between just west of Krouse Road and just south of SR 424 in Defiance County, Ohio. In this area, the alignment shift in Alternative D-1 is less than approximately 106.7 m (350 feet) from the Alternative D alignment, and occurs in the same soil-mapping units.

Alternative D-1 meets the purpose and need of the project, follows existing transportation corridors, where possible, and minimizes environmental impacts.



OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

June 6, 2001

Kenneth Lammers
Acting Area Supervisor
U.S. Fish and Wildlife Service
6950-H Americana Parkway
Reynoldsburg, Ohio 43068

Re: Letter of Agreement
Endangered Species Coordination

Dear Mr. Lammers:

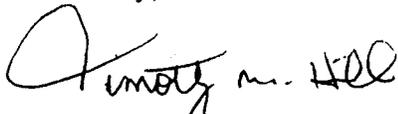
This Department and the Federal Highway Administration participate in numerous projects which lie within the range of federally listed endangered or threatened species or species proposed for such listing. For these projects, consultation with the U.S. Fish and Wildlife Service is required under Section 7 of the Endangered Species Act to determine if those species or their habitats will be impacted. For most of those projects, however, no such impacts would be expected either because neither the listed species nor their habitats were found in the project area or because no impact would be expected to occur to any such species or habitats which were found. Accordingly, this Department is requesting blanket Section 7 clearance for the following types of roadway construction projects:

1. All projects for which no federally listed or proposed endangered or threatened species or habitat for such species were found during a survey of the project area.
2. All projects for which habitat for federally listed or proposed endangered or threatened species was found during a survey of the project area but for which that habitat will not be affected by the project.
3. All projects within the range of the federally endangered Indiana bat (*Myotis sodalis*) which may impact roosting and brood-rearing habitat for that species (i.e. living or standing dead trees or snags with peeling bark, split trunks and/or branches or cavities) but for which the project plans will include a special note stating that any unavoidable cutting of such trees will occur only before April 15 or after September 15.

It is the opinion of this Department that the above types of projects will have no potential for impacts on federally listed or proposed endangered or threatened species or their habitats. However, if a listed or proposed species is subsequently found to occur in the project area, the Federal Highway Administration will initiate consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

Your signature and date on the line provided below will indicate your office's concurrence with this determination.

Sincerely,



Timothy M. Hill
Administrator
Office of Environmental Services

TMH:TEL:FKS:fs

c: File - Reading File

U.S. Fish and Wildlife Service Concurrence

Kenneth J. Jennings 23 JUL 2001
(Date)

Federal Highway Administration Concurrence

Scott M. Brown 8/27/01
FOR DIVISION ADMIN. (Date)