



5.14 Archaeology Impacts

5.14.1 Introduction

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, mandates federal agencies, or their designees, to consider the effects of their actions on historic properties. The definition of historic properties includes, but is not limited to, prehistoric or historic sites or districts that may be eligible for listing in the National Register of Historic Places (NRHP). Tier 2 studies for the I-69 Evansville to Indianapolis project include the identification of archaeological resources (36 CFR 800.4), the assessment of effects on archaeological resources (36 CFR 800.5), and consultation to develop methods to avoid, minimize, or mitigate any adverse effects (36 CFR 800.6).

Per 36 CFR 800.4 (b)(2), a phased approach has been developed to accomplish Tier 2 archaeological research and evaluation tasks. For this DEIS, archaeological research included literature review, background research, and site files research at the Indiana Department of Natural Resources (IDNR) - Division of Historic Preservation and Archaeology (DHPA) and other pertinent repositories. Information pertaining to previously recorded sites within a 2,000-foot-wide study corridor, identified in the Tier 1 FEIS, was gathered. Section 5.14.2 describes the phases and methods employed to accomplish the work in Section 2.

The current study is in compliance with the Indiana Historic Preservation Act (IC-14-21-1). The archaeological records and literature review has been accomplished by, or directly supervised by, professional archaeologists meeting the standards set forth by the U.S. Department of the Interior detailed in 36 CFR Part 61 and *Archeology and Historic Preservation: Secretary of Interior's Standards and Guidelines* (48 FR 44716).

5.14.2 Methodology

In the I-69 Tier 1 study, potentially eligible historic and archaeological resources were evaluated using eligibility criteria established under the NHPA (See Section 5.13.3 for NRHP Criteria). The purpose of the Tier 1 research was to determine the “likely presence” of historic and archaeological resources within the Area of Potential Effects (APE), in accordance with 36 CFR 800.4(b)(2). The description and results of the Tier 1 evaluation are included in the Tier 1 FEIS Chapter 5 and Appendix P. That appendix includes a Memorandum of Agreement (MOA) between FHWA and the Indiana State Historic Preservation Officer (SHPO)¹ identifying the corridor known as Alternative 3C as the preferred alternative, and agreeing to the steps that would be taken to continue the Section 106 process in Tier 2. Tier 1 Appendix P also includes FHWA documentation of the Section 106 finding of potential adverse effects (800.11(e)

¹ For the State of Indiana, the Director of the Department of Natural Resources (IDNR) has been designated as the SHPO. Members of his or her staff in the Division of Historic Preservation and Archaeology (DHPA) typically are involved in the consultation.



Section 2—Draft Environmental Impact Statement

documentation) and the Section 106 Compliance Plan, which provides a framework for completing the consultation process.

The Tier 2 Section 106 archaeological research has been phased to appropriately correspond with the project NEPA process. The *Draft Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites*, which have been compiled with for these studies, define the phases of archaeological research, summarized below:

- Phase Ia is a surface survey and visual inspection of the soil when ground surface visibility and survey conditions are adequate, or when ground surface and survey conditions are not adequate, the use of shovel probes, cores, and/or augering techniques to discover site evidence at or near the surface of the site.
- Phase Ib is an intensive survey with the use of controlled surface collections, piece plotting, or subsurface sampling.
- Phase Ic is subsurface reconnaissance to locate archaeological sites buried in alluvial, colluvial, or eolian landforms.
- Phase II testing is conducted for sites identified through Phase I investigations that are potentially eligible for the National Register of Historic Places (NRHP). Sites are tested to determine the vertical extent of the site, the presence of subsurface cultural features (i.e. hearths, trash/storage pits, living surfaces), the nature and context of deposits, and extent of disturbance, if any. Field research is conducted through the controlled excavation of test units (usually measuring between 1x1m to 2x2m). Testing may also involve the stripping of top soil in areas to identify cultural features. Sites determined eligible for NRHP listing are recommended for avoidance and/or mitigation.
- Phase III data recovery efforts are designed to mitigate or recover data from significant archaeological sites that cannot be avoided. These projects involve large-scale excavations and recovery efforts to mitigate adverse effects on a site. Mitigation plans are developed to determine the methodology and research design for the project.

The Tier 2 research for the Section 2 DEIS focused on background research to identify previously recorded archaeological sites and corresponding studies within a 2,000-foot-wide study corridor. The results, which were reviewed by IDNR-DHPA, were considered in the selection of the preferred alternative (See Section 5.14.2.2).

For Section 2, the Phase Ia archaeological field survey for the preferred alternative will be completed before the FEIS. The results of the Phase Ia survey will be published in the FEIS, and in a technical report submitted for IDNR-DHPA review. Should potentially significant sites be identified during the Phase Ia, additional testing through Phase Ib or Phase II may be recommended to evaluate eligibility for the NRHP. The Phase Ib or Phase II testing would be



completed prior to the publication of the FEIS, and the results included in that document, and corresponding technical reports or addenda. Mitigation commitments will be developed for a MOA if NRHP eligible sites are identified and would be adversely impacted. If the results of additional testing show that a Phase III would be warranted, that work will be completed before construction on the project could begin at that site. Phase Ic investigations will be completed for inclusion in the FEIS; however, Phase Ic can result in significant personal property disturbances and may need to be delayed until the property is acquired for the project. If access is denied to areas requiring Phase Ic deep testing or to archaeological sites requiring Phase II evaluation, these areas and/or resources will be specified in the Record of Decision. Table 5.14-1 summarizes the phases and schedule for accomplishing the work in Section 2.

Table 5.14-1: Phases of Archaeological Research in Section 2

Phase	Work Completed	Section 106 Step	Schedule	Deliverable
Ia literature review	Archival research and site files check for study corridor (2000')	Research design and identification	Before DEIS (inform selection of preferred alternative)	Technical report
Ia field research	Survey of APE, preferred alternative ROW (average of 320')	Identification	Before FEIS	Technical report/results summarized in FEIS
Ib	Intensive survey of site	Eligibility clarification for questionable sites	Before FEIS	Addendum to Phase Ia technical report/results summarized in FEIS
Ic	Subsurface Reconnaissance	Identification of buried sites	Before FEIS	Technical report/results summarized in FEIS
II	Site evaluation investigation	Determination of NRHP Eligibility	Before FEIS	Technical report/results summarized in FEIS
MOA	Develop plan outlining FHWA responsibilities and schedule for Section 106 completion	Mitigation of Adverse Effects	In FEIS, if necessary	MOA
III	Data recovery of site	Mitigation of NRHP eligible sites	Following ROD but before construction	Technical report issued for each site subject to data recovery

5.14.2.1 Consultation Process

Section 106 consultation pertaining to archaeological resources was conducted in conjunction with consultation for historic, aboveground resources. The timeline and results of the consultation process for Section 2 were detailed in 5.13.2.1. Topics specific to archaeological resources discussed at the Section 2 consulting parties meetings focused on the phased research

**Section 2—Draft Environmental Impact Statement**

approach. The Tier 1 MOA was reviewed, and it was noted that the archival research and site file reviews focused on the study corridor. Consulting parties, in attendance, were informed that after the preferred alternative is selected, a Phase Ia survey of the alternative's approximate right-of-way will be conducted in accordance with INDOT's standard practice for NEPA studies, as described in the *Procedural Manual for Preparing Environmental Studies* (INDOT, December 2004). The survey report will then be issued by Indiana DHPA. Documentation associated with consulting party meetings (invitations, agenda, minutes, etc.) is contained in Appendix N, *Section 106 Documentation*.

5.14.2.2 Area of Potential Effects

One of the first steps in the Section 106 process is to define the Area of Potential Effects (APE). The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The area of potential effects is influenced by the scale and nature of an undertaking..." [36 CFR 800.9(a)].

The APE for archaeological resources, per 36 CFR 800.16(d), has been defined, through consultation with IDNR-DHPA, as the right-of-way for the preferred alternative. In Section 2, the Preferred Alternative is a combination of Alternatives A and B (see Chapter 3.5, *Recommended Preferred Alternative*). Typical right-of-way width for the Section 2 alternatives is approximately 320 feet.

5.14.2.3 Research Methods

As part of the phased approach to Tier 2 archaeological studies, research in the project study corridor consisted of a literature search, IDNR-DHPA site files check, and archival research. Site recordation forms for all sites were copied and site locations marked on project maps and entered into the Section 2 project Geographic Information System (GIS). The sites were considered in the alternative selection process described in this document.

5.14.3 Evaluation of Archaeological Resources in Corridor

A total of 39 previously documented sites were identified within the Section 2 study corridor through the Phase Ia literature review. (Table 5.14-2). Cultural affiliation for the sites is: 26 prehistoric, 3 with both prehistoric and historic components, and 10 historic. Twenty five of these sites are potentially impacted by one or the other (or in some cases both) of the alternatives. The preferred alternative would potentially impact 13 of these previously-documented sites.

The Phase Ia archaeological survey conducted for the preferred alternative may provide additional information pertaining to previously-recorded archaeological resources. The Phase Ia survey may also locate other properties in the APE. The APE will be investigated through shovel probing at 10 meter intervals, surface collection/survey at 10 meter intervals, and visual



inspection as outlined in IDNR – DHPA guidelines. Attempts will be made to locate previously documented archaeological sites. Site boundaries will be delineated through reduced interval testing. Testing will also facilitate collection of data regarding artifact densities and facilitate preliminary NRHP evaluation

Table 5.14-2: Previously Inventoried Archaeological Sites in the Study Area

State Site Number	Cultural Period	Site Type	County	NRHP Evaluation	Alternative Potentially Impacting Site	Within Preferred Alternative
12Da981	Unidentified Prehistoric	Isolated find	Daviess	Undetermined	Not Affected	No
12Da982	Unidentified Prehistoric	Isolated find	Daviess	Not Eligible	A	No
12Da983	Unidentified Prehistoric	Lithic scatter	Daviess	Not Eligible	A	No
12Da988	Unidentified Prehistoric	Lithic scatter	Daviess	Not Eligible	A	No
12Gi425	Unidentified Prehistoric	Isolated find	Gibson	Undetermined	Not Affected	No
12Gi426	Unidentified Prehistoric	Isolated find	Gibson	Not Eligible	Not Affected	No
12Gi427	Early Archaic, Historic	Lithic scatter/ isolated find	Gibson	Not Eligible	Not Affected	No
12Gi428	Late Archaic	Lithic scatter	Gibson	Not Eligible	B	No
12Gi620	Unidentified Prehistoric	Camp	Gibson	Undetermined	B	No
12Gi621	Early Archaic	Camp	Gibson	Undetermined	Not Affected	No
12Gi915	Unidentified Prehistoric	Lithic Scatter	Gibson	Undetermined	A & B	Yes
12Gi916	Unidentified Prehistoric, Historic	Lithic and Historic Scatter	Gibson	Undetermined	A & B	Yes
12Pi31	Historic	Historic scatter	Pike	Undetermined	Not Affected	No
12Pi50	Unidentified Prehistoric	Isolated find	Pike	Undetermined	Not Affected	No
12Pi52	Historic	Demolished structure	Pike	Potentially Eligible	B	No
12Pi53	Historic	Historic scatter	Pike	Undetermined	A	No
12Pi54	Unidentified Prehistoric	Camp	Pike	Undetermined	A	Yes
12Pi55	Terminal Late Archaic	Camp	Pike	Undetermined	Not Affected	No
12Pi56	Unidentified Prehistoric	Camp	Pike	Undetermined	A and B	Yes
12Pi61	Early Archaic, Late Woodland	Lithic scatter	Pike	Potentially Eligible	B	No
12Pi62	Unidentified Prehistoric, Historic	Camp	Pike	Undetermined	Not Affected	No
12Pi103	Terminal Late Archaic	Camp	Pike	Undetermined	A and B	Yes
12Pi104	Unidentified Prehistoric	Camp	Pike	Undetermined	Not Affected	No
12Pi105	Late Woodland	Camp	Pike	Undetermined	Not Affected	No
12Pi106	Late Archaic	Camp	Pike	Undetermined	A and B	Yes
12Pi107	Unidentified Prehistoric	Camp	Pike	Undetermined	A and B	Yes



State Site Number	Cultural Period	Site Type	County	NRHP Evaluation	Alternative Potentially Impacting Site	Within Preferred Alternative
12Pi114	Unidentified Prehistoric	Camp	Pike	Undetermined	B	Yes
12Pi248	Early woodland	Lithic Scatter	Pike	Undetermined	A & B	Yes
12Pi381	Historic	Unknown	Pike	Undetermined	Not Affected	No
12Pi572	Historic	Historic scatter	Pike	Undetermined	B	No
12Pi573	Historic	Historic scatter	Pike	Undetermined	A and B	Yes
12Pi574	Historic	Historic scatter	Pike	Undetermined	B	No
12Pi575	Middle Woodland	Isolated find	Pike	Not Eligible	A and B	Yes
12Pi576	Early Archaic, Middle Woodland	Lithic scatter	Pike	Potentially Eligible	B	No
12Pi577	Unidentified Prehistoric	Isolated find	Pike	Not Eligible	Not Affected	No
12Pi578	Unidentified Prehistoric	Lithic scatter	Pike	Potentially Eligible	B	No
12Pi582	Historic	Cabin	Pike	Potentially Eligible	A and B	Yes
12Pi649	Historic	Farmstead	Pike	Undetermined	Not Affected	No
12Pi738	Historic	Cemetery	Pike	Undetermined	B	Yes

5.14.4 Mitigation

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 as defined in 36 CFR 800.5(a)(1). Adverse effects of an undertaking on archaeological resources generally involve partial or complete destruction of a site. Determination of adverse project effects on archaeological resources and development of mitigation measures cannot be accomplished until the Phase Ia archaeological field survey is completed. The Phase Ia survey for the preferred Section 2 alternative APE will be conducted before the FEIS. Mitigation commitments will be developed for the MOA following completion of the Phase Ia survey. If any sites requiring further investigation have been identified and cannot be surveyed before the FEIS, those will be documented in the MOA, if required, and/or the Record of Decision.

5.14.5 Summary

Section 106 of the National Historic Preservation Act of 1966, as amended, mandates that federal agencies to consider the effects of their actions on historic properties, including archaeological resources. For Tier 2 of the I-69 project, a phased approach has been developed to accomplish this task. The literature review and research phase has been completed. Thirty-nine previously documented sites were identified within the Section 2 portion of the Tier 1 corridor through the literature review (see Table 4.4-2, *Previously-Inventoried Archaeological Sites in the Study*



Corridor). Cultural affiliation for the sites is: 26 prehistoric, 3 with both prehistoric and historic components, and 10 historic. Of these sites, 25 are potentially impacted by one or more alternatives, as shown in Table 5.14-2. The preferred alternative potentially affects 13 of these previously-documented sites.

The Phase Ia archaeological survey will be conducted before the publication of the FEIS to identify whether NRHP-eligible archaeological resources may be located within the APE of the preferred alternative, and to determine what effect the proposed I-69 undertaking could have on those resources. The majority of the APE will be investigated through shovel probing, surface collection/survey, and visual inspection.

The results of the Phase Ia survey and other required surveys will be included in the FEIS. Commitments to mitigate adverse impacts of the project to archaeological resources that are determined eligible for the NRHP will be developed for a MOA. The SHPO, INDOT, and FHWA would be parties to the MOA. Any further required investigations which cannot be completed prior to the FEIS (such as Phase Ic surveys in locations where access to private property has been denied) will be documented in the MOA, if required, and/or the Record of Decision.



BLANK PAGE