

Attachment O2
Indiana SHPO Reports

Results of a Phase I Archaeological Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Griffith Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
David Keene, Ph.D., RPA
June 2008

Signature of Project Archaeologist, David Keene

EXECUTIVE SUMMARY

Phase I Archaeological Investigations were conducted on a parcel of land in Griffith, Indiana. The client plans to construct connections between existing rail lines. Prior to field testing a background document search was conducted. Field inspection of the area took place in April 2008. No prehistoric or historic archaeological properties were encountered during the course of this investigation. No further archaeological or historic investigations are recommended.

DESCRIPTION OF UNDERTAKING

The client plans to construct connecting rails between existing rail lines.

PROJECT AREA and AREA OF POTENTIAL EFFECT

The parcel of land is in Lake County, Indiana, immediately within the boundaries of an area used for storage of industrial materials. The area of potential effect (APE) as outlined in Attachment 2 is approximately 2000 feet by 1000 feet in size. This is an area of approximately 2,000,000 square feet, or 185,800 square meters, or 45.91 acres, or 18.85 hectares
(SEE ATTACHMENTS 1 and 2).

HDR Engineering provided ARI with project location information including a site sketch delineating the location of the proposed project area and supporting information (See Attachment 2). The archaeological and historical background research was conducted by ARI on the proposed project area in April 2008.

For this project the APE for archaeological investigation has been determined to be the area of direct impact.

PROJECT LOCATION INFORMATION

The project area is located in the following section, township and range:
Lake County, Indiana
Highland 7.5 Minute USGS Quadrangle
Section 35, T36N, R9W (North Township) &
Section 2, T35N, R9W (St. John Township)
(See Attachment 1)

BACKGROUND DOCUMENT and LITERATURE SEARCH

The purpose of the background and literature search is to evaluate the existing data on cultural resources within the APE of the proposed project and identify the potential for impacts to significant historic properties. For the purposes of this search, all cultural resources that are listed on or eligible for state or national registers of historic places are considered to be significant historic properties. Objectives include assessment of the known cultural resource within the APE and evaluation of the adequacy of previous cultural resource investigations in the project area for planning and management. Background and literature research does not entail field work, but identifies the known cultural resources in the project area. In addition, background and literature research can help identify known gaps in the archaeological context of the area and possibly identify cultural resources that need further evaluation.

METHODS

Background and literature research was compiled from a number of sources, including summaries of previous cultural investigations conducted within the project area.

The following sources were identified and consulted:

- *The Indiana State Historic Architectural and Archaeological Research Database (SHAARD)

- *Archaeological Survey site files housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

- *Archaeological review and compliance reports housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

- *Historic Plats and Atlases housed at the Archaeological Research Incorporated including Government Land Office maps and notes from previous surveys in the area.

PREVIOUSLY RECORDED CULTURAL RESOURCES

The Division of Historic Preservation and Archaeology follows a program that requires a trinomial archaeological site number (using the Smithsonian Institution Trinomial System) be assigned for any evidence of human occupation over 50 years of age. The trinomial archaeological site number is assigned by the Division of Historic Preservation and Archaeology.

The list of National Register of Historic Places does not preclude that other cultural resources may have formally been determined eligible without filing a National Register of Historic Places nomination. Alternatively, cultural resources may be identified, assigned a site number, but never evaluated in the context of National Register of Historic Places eligibility.

Background document search was conducted by David Keene. No archaeological sites have been recorded in the project area. However, three sites have been recorded within one mile of the project area. These sites are listed in Table 1 below. The artifact assemblage of each site is rather small which fits the pattern of similar sites found on beach ridges elsewhere (Keene and Karamanski 1980).

Table 1. Sites near the project area

Site Number	Site Type	Cultural Affiliation	Year Recorded
12-La-0140	Habitation	Undetermined	1964
12-La-0138	Habitation	Undetermined	1964
12-La-0139	Habitation	Undetermined	1964

REGIONAL CULTURAL CONTEXT

The millennia prior to the occupation of North America are divided into a number of time periods which are commonly referred to as 'cultural traditions' by archaeologists. The following discussion briefly outlines these cultural traditions. Special emphasis will be made to archaeological sites near the project that contained archaeological material representative of each tradition. It should be noted that the project area rest in the Lake Plain formed by Glacial Lake Chicago. The dominant presettlement features in this region are a series of beach ridges and swales formed by the advancing and receding

waters of Glacial Lake Chicago (now Lake Michigan). Prehistoric populations took advantage of these natural features settling on the beach ridges covered with grasses and Oak Hickory Forests and extracting food resources from the wetland swale areas (Keene 1989).

Paleo-Indian Tradition (roughly 10,000 to 8000 B.C.E.)

This is the earliest known prehistoric tradition in the Midwestern United States. Archaeological sites from this period are sporadic. Gates (1961) suggests that these sites are not found in the Lake Plain formed by Glacial Lake Chicago. In fact, none are found in areas lower than 630 feet above mean sea level in the Calumet Region and its surrounding moraines. This is most likely due to the fact that lake levels fluctuated greatly during this time and that most of the Lake Plain was filled with water (Larsen 1985).

Occupation sites are rare from this period. Artifacts from this period suggest that the native population was small. They wandered in small nuclear bands hunting large megafauna that occupied the area south of the Lake Plain at the close of the Pleistocene. The most common artifacts associated with these groups are lanceolate shaped points known as Clovis and Dalton Points (Fagan 1991:80).

Paleo-Indian lanceolate type points have been recovered near Fort Wayne (Buerhing and Hicks 1982) and in LaPorte County (DeRegnaucourt 1992; Dorwin 1966, Justice 1987).

No cultural resources of this type have been identified in the project area.

Archaic Occupation (8000 B.C.E. to 900 B.C.E.)

Amelioration of climate conditions encouraged the development of plant and animal communities throughout the Midwestern United States. Cleland (1966: 20-23) suggests an extension of the southern deciduous forest into the Lake Plain. As available food resources became more abundant native populations began to aggregate into larger groups. These groups were still primarily involved in hunting and gathering. The artifact assemblage from these groups contain greater varieties of lithic tools, generally smaller in scale than those of their predecessors (Caldwell 1958). In addition there is evidence that these groups

were engaged in the domestication of select plants (Watson 1988:39). The archaic period is divided into early, middle, and late periods. In Northern Indiana Archaic occupations of the Late Archaic have been encountered by Jeske (1991). Overall the Archaic is not well represented in northern Indiana. No cultural resources of this type have been identified in the project area.

Woodland Occupations (900 B.C.E. to 1000 C.E.)

As with the Archaic period the Woodland is divided into three subdivisions: the Early, Middle, and Late. The production of pottery marks the onset of the Woodland periods. It is during this period that elaborate trade networks begin to develop. Mound building activity begins – particularly burial mounds and effigy mounds. The material cultural assemblage includes not only utilitarian objects like lithic knives, points, and drills, but also ceremonial artifacts like pipes, shell gourgets, effigy figures in stone and clay, ear spools, and breast plates to name only a few.

At the opening of this period we see the continuation of domestication of various plants until we move into the Late Woodland period where maize becomes the primary domesticant.

In northern Indiana, the area of concern here, sites representative of the Early Woodland period (900 B.C.E. to 100 C.E.) are located along river terraces and floodplains (Faulkner 1966). Late Woodland sites (500 C.E. to 1000 C.E.) are well documented in southwestern Michigan (Bettarel and Smith 1973).

It should be noted that no sites of this period were encountered in the project area or in adjacent areas.

Mississippian (1000 C.E. to 1450 C.E.)

This is the period in which many of the tribal groups encountered by the early European explorers developed. It is the best represented period in Lake Plain and surrounding upland moraines in the Calumet Region. A number of these sites have been excavated and documented over the past 50 years. Most notable among these are the Fifield Site (Faulkner 1972), the Palos Site (Keene and Karamanski 1980), the Ankers Site (Bluhm and Liss 1961) and the Hoxie Site

(Brown and O'Brien 1990). The Hoxie site is once again under intense excavation and providing new information that links these occupations to sites further south in the Illinois River Valley (Emerson, personal communication, 2003). During this period in the Calumet Region the archaeological sites are large – an acre or more in size. These sites contain clear evidence of structures as well as massive storage pits similar to those found during the same period in and around Cahokia near East St. Louis, Illinois. The ceramic remains contain elaborate motifs and the lithic assemblage is dominated by small triangular points reminiscent of the Late Woodland.

Faulkner (1972) suggests that these native populations lived on a seasonal cycle that involved hunting the upland wooded areas in the winter, spring exploitation of the marsh resources in the Lake Plain, and summer agriculture around the large villages located along sandy river banks. No cultural resources of this type have been identified in the project area.

AFFECTED ENVIRONMENT

It is necessary to understand the geomorphology and topography of the project area prior to conducting field investigations. Any such study necessitates a discussion of the physiography, soils, drainage systems, and present land uses. These factors contribute to an understanding of what the prehistoric and historic landscape looked like at the time of site formation as compared to the present landscape.

Physical Setting

The City of Griffith and surrounding areas are located in the Northern Moraine and Lake Region as defined by Schnieder (1966). More specifically, the project area is located within the Lake Plain formed by Glacial Lake Chicago. The presettlement landscape here would have been a mixture of beach ridges and swales along the shore of Lake Michigan.

Drainage

The Project Area is drained by the Calumet River System which drains into Lake Michigan.

Soils

Soils in the project area are classified as Maumee Loamy Fine Sand. The Maumee series consists of very deep, poorly drained or very poorly drained soils formed in sandy outwash or sandy sediments in depressions on outwash plains

and lake plains. Permeability is rapid (<http://websoilsurvey.rcs.usda.gov/app/>). At the time of this investigation the entire sandy surface of these soils had been moved around by construction and recreational activity.

Current Land Use

At the time of this investigation surface soils were radically disturbed by previous railroad rail line placement and current recreational activity. Evidence was abundant that much of this area is used for dirt bike recreation. Photos of the project area in Attachments 3 and 4 illustrate typical surface conditions throughout most of the project area. Much of the ridge/swale system natural to this area has been obliterated.

INVESTIGATION METHODS

The field investigations and reported format were completed to meet the guidelines as set forth by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

The field survey was conducted on April 24, 2008 by David Keene PhD, RPA. At the time of survey portions of the project area were exposed sand surfaces due to dirt bike and other recreational activities. There were also some portions covered with mature forest vegetation immediately adjacent to wetlands. The exposed surface areas were walked at 5 meter intervals. Shovel test units were excavated at irregular intervals to assess soil composition and to test for buried cultural deposits. These units were approximately 60 centimeters deep. Soil was screened through 1/8 inch hardware cloth. In forested areas shovel test units were excavated at 10 meter intervals on an irregular checkerboard pattern. These units were approximately 60 centimeters in depth. Soil was screened through 1/8 inch hardware cloth.

SURVEY LIMITATIONS

There were no limitations to a comprehensive survey of the project area.

RESULTS

Research into archaeological site files and historic documents suggest that there were no recorded prehistoric sites and no documented historic ruins in the project area. During the course of this investigation no archaeological resources (neither historic nor prehistoric) were encountered. It should be noted that

testing suggests that there are no intact ground surfaces except possibly in wetland areas. The beach ridge and swale system that dominates the natural ground surface just north of the project area has been destroyed.

CONCLUSION

No historic or prehistoric archaeological remains were encountered during the course of this investigation. Field investigations were intensive and field methods used were appropriate for the situation. It is our recommendation that no further historic or archaeological investigations be required for this project area.

Conventional archaeological testing cannot detect all types of buried cultural resources. If any unanticipated cultural resources are encountered during construction, construction activities must be halted in that location and appropriate authorities and specialists will be contacted.

Bibliographic References Cited and Consulted

- Asher, Adams and Higgins
1870 New Topographical Atlas and Gazetteer of Indiana. New York.
- Baskin, Forster & Co.
1876 *Maps of Indiana Counties in 1876*. Reprinted from Illustrated Historical Atlas of the State of Indiana, Indiana Historical Society, 1968.
- Bettarel, R.L. and H.G. Smith
1973 The Moccasin Bluff Site and the Woodland Cultures of Southwestern Michigan. Anthropological Papers 49. Museum of Anthropology, University of Michigan, Ann Arbor.
- Blanchard & Eastman
1872 Guide Map of Indiana. Chicago.
- Blanchard, Rufus
1821 Map of Indiana. Published by A. Finley, Philadelphia.
- 1981 Late Quaternary Floodplain Sedimentation along the Pomme De Terre River, Southern Missouri. *Quaternary Research* 15:62-76.
- Bluhm, Elaine and Allen Liss
1961 The Ankers Site. Illinois Archaeological Survey Bulletin 3: 1-6.
- Brown, James and Patricia O'Brien
1990 At the Edge of Prehistory: Huber Phase Archaeology in the Chicago Area. Center for American Archaeology, Campsville, Illinois.
- Buerhrig, J.E. and R. Hicks
1982 A Comprehensive Survey of the Archaeological Resources of Mounds State Park, Anderson, Indiana with a Proposed Resource Management Plan. Reports of Investigations 6. Archaeological Resource Management Service, Ball State University, Muncie, Indiana.
- Caldwell, J. R.
1958 Trend and Tradition in the Prehistory of the Eastern United States. American Anthropological Association. Memoirs, Volume 88. Menasha, Wisconsin.

Cleland, Charles E.

- 1966 The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region. Anthropological Papers, No.29. University of Michigan Museum of Anthropology.

DeRegnaucourt, T.

- 1992 A Field Guide to the Prehistoric Point Types of Indiana and Ohio. Revised Edition. Occasional Monographs of the Upper Miami Valley Archaeological Research Museum. No.1.

Dorwin, J.T.

- 1966 Fluted Points and Late-Pleistocene Geochronology in Indiana. Indiana Historical Society, Prehistoric Research Series, 6(3):141-188.

Fagan, Brain M.

- 1991 Ancient North America. Thames and Hudson. London.

Faulkner, Charles

- 1966 The Morrow Site: A Red Ocher Workshop in the Kankakee Valley, Indiana. Wisconsin Archaeologist 45(2): 151-156.

- 1972 The Late Prehistoric Occupation of Northwest Indiana: A Study of the Upper Mississippian Cultures of the Kankakee Valley. Prehistory Research Series No. 5. Indiana Historical Society, Indianapolis.

Finley, A.

- 1830 *Map Establishment: Map of Indiana*. Philadelphia.

Gates, Stanford

- 1961 An Archaeological Survey of the DuPage River Drainage. Illinois Archaeological Survey Bulletin 3: 1-6.

Historic Landmarks Foundation of Indiana

- 2001 *Historic Landmarks Foundation Statewide Survey*.

Hodge, F.W.

- 1907 *Handbook of the American Indians North of Mexico*. Bureau of American Ethnology, Bulletin 30, pts. 1-2, Washington, D.C.

Jeske, Robert J.

- 1991 The Davidson Site: A Huber Phase Upper Mississippian Burial and Habitation Site in Porter County, Indiana. Northeast Indiana

- Archaeological Survey Report of Investigations 2. Indiana-Purdue University, Fort Wayne.
- Justice, N.D.
1987 Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States. Indiana University Press.
- Keene, David
1989 Reconstructing Prehistoric Settlement Patterns in the Chicago Area. *Illinois Archaeology* 1(2):137-149.
- Keene, David, and Ted Karamanski
1980 Cultural Resource Survey of the Cook County Forest Preserve, Palos, Calumet Divisions. Mid-American Research Center, Loyola University of Chicago.
- Kellar, James
1884 Cultural History of the Indians, In *Natural Features of Indiana*, edited by Alton Lindsey.
1992 *An Introduction to the Prehistory of Indiana*. Indiana Historical Society, Indianapolis.
- Larsen, Curtis
1985 Geoarchaeological Interpretations of Great Lakes Coastal Environments. In *Archaeological Sediments in Context*, edited by Julie K. Stein and William R. Ferrand, pp. 91-110. Center for the Study of Early Man, Orono, Maine.
- Lindsey, Alton, editor
1966 *Natural Features of Indiana*. Indiana Academy of Science
- Mitchell, S. Augustus
1834 Mitchell's Map of Ohio, Indiana and Illinois.
- National Historic Landmark
2005 National Historic Landmark Listing. National Park Service.
- National Trust for Historic Preservation
2005 *National Register of Historic Places, 1966-2005*. National Trust for Historic Preservation. Preservation Press, Washington, D.C.
- Petty, R.O. and M. T. Jackson
1966 Plant Communities, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schneider, Allan F.

1966 Physiography, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schurr, Mark R.

1993 *Woodland and Early Historic Period Settlement Patterns in the Kankakee Drainage of La Porte County, Indiana*. Notre Dame Report of Investigations 93-1.

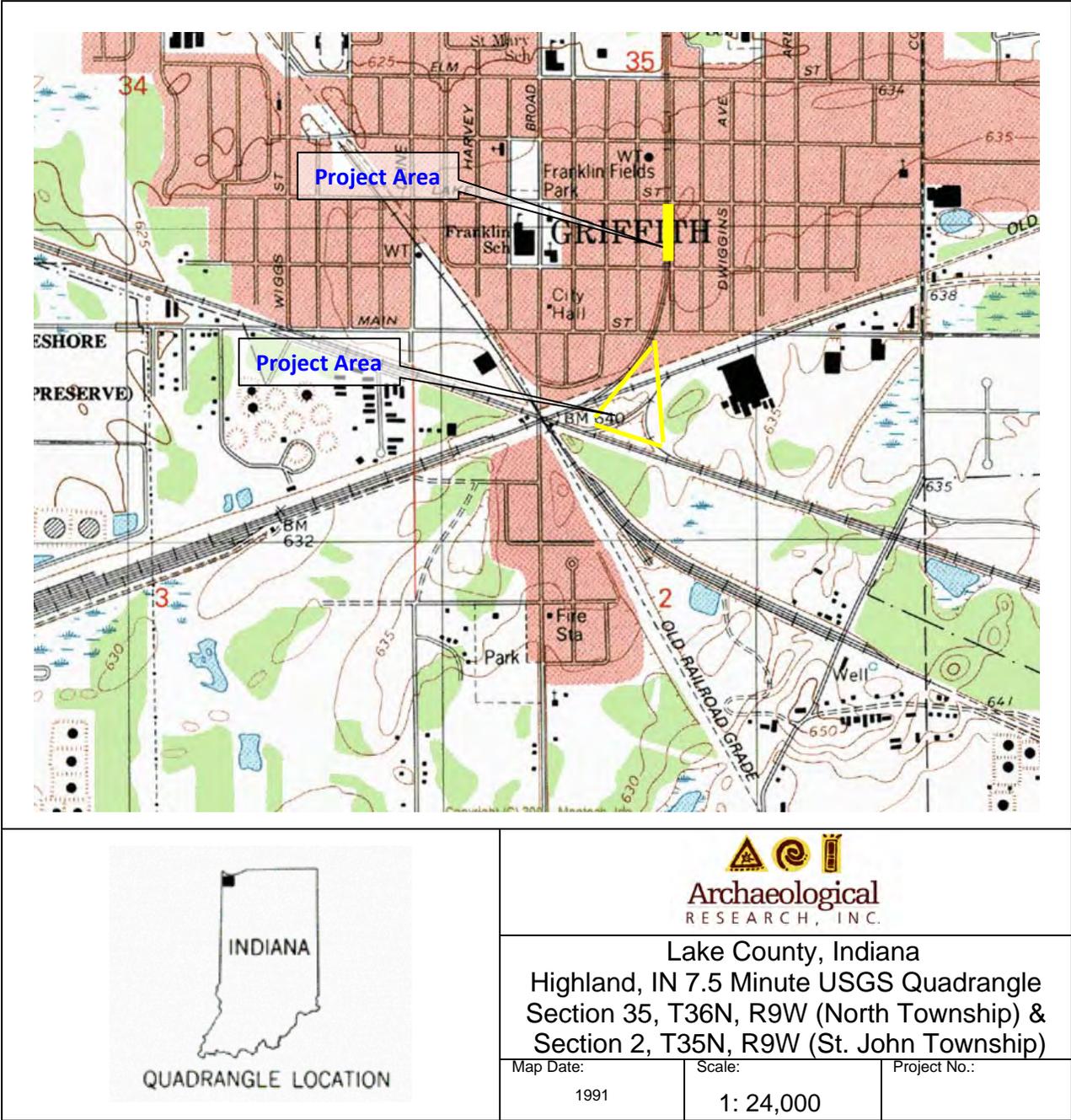
Tanner, Helen, editor

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman.

Watson, Patty Jo

1988 Prehistoric Gardening and Agriculture in the Midwest and Midsouth. Occasional Papers in Anthropology No. 3: Interpretations of Culture Change in the Eastern Woodlands During the Late Woodland Period, R.W. Yerkes, (ed) Department of Anthropology, Ohio State University, Columbus.

Attachment 1: Project Location Map



Attachment 2. Map Provided by Client showing APE



The red dotted line depicts the boundaries of the footprint of construction.

Attachment 3. Photo of Project Area



View from the south end of the project area toward the north. Photo taken 4.24.2008

Attachment 4. Photo of Project Area



View from the southwest of the project area toward the north. Photo taken 4.24.2008

Results of a Phase I Archaeological Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Ivanhoe Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
David Keene, Ph.D., RPA
June 2008

Signature of Project Archaeologist, David Keene

EXECUTIVE SUMMARY

Phase I Archaeological Investigations were conducted on a parcel of land within an existing industrial area in Ivanhoe, Indiana. The client plans to construct connections between existing rail lines. Prior to field testing a background document search was conducted. Field inspection of the area took place in April 2008. No prehistoric or historic archaeological properties were encountered during the course of this investigation. No further archaeological or historic investigations are recommended.

DESCRIPTION OF UNDERTAKING

The client plans to construct connecting rails between existing rail lines.

PROJECT AREA and AREA OF POTENTIAL EFFECT

The parcel of land is in Lake County, Indiana, immediately within the boundaries of an area used for storage of industrial materials. The area of potential effect (APE) as outlined in Attachment 2 is approximately 1500 feet by 200 feet in size. This is an area of approximately 300,000 square feet, or 27,870 square meters, or 6.887 acres, or 2.787 hectares
(SEE ATTACHMENTS 1 and 2).

HDR Engineering provided ARI with project location information including a site sketch delineating the location of the proposed project area and supporting information (See Attachment 2). The archaeological and historical background research was conducted by ARI on the proposed project area in April 2008.

For this project the APE for archaeological investigation has been determined to be the area of direct impact.

PROJECT LOCATION INFORMATION

The project area is located in the following section, township and range:
Lake County, Indiana
Highland 7.5 Minute USGS Quadrangle
Sections 2 and 11, T36N, R9W
Civil Township: North
(See Attachment 1)

BACKGROUND DOCUMENT and LITERATURE SEARCH

The purpose of the background and literature search is to evaluate the existing data on cultural resources within the APE of the proposed project and identify the potential for impacts to significant historic properties. For the purposes of this search, all cultural resources that are listed on or eligible for state or national registers of historic places are considered to be significant historic properties. Objectives include assessment of the known cultural resource within the APE and evaluation of the adequacy of previous cultural resource investigations in the project area for planning and management. Background and literature research does not entail field work, but identifies the known cultural resources in the project area. In addition, background and literature research can help identify known gaps in the archaeological context of the area and possibly identify cultural resources that need further evaluation.

METHODS

Background and literature research was compiled from a number of sources, including summaries of previous cultural investigations conducted within the project area.

The following sources were identified and consulted:

- *The Indiana State Historic Architectural and Archaeological Research Database (SHAARD)

- *Archaeological Survey site files housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

- *Archaeological review and compliance reports housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

- *Historic Plats and Atlases housed at the Archaeological Research Incorporated including Government Land Office maps and notes from previous surveys in the area.

PREVIOUSLY RECORDED CULTURAL RESOURCES

The Division of Historic Preservation and Archaeology follows a program that requires a trinomial archaeological site number (using the Smithsonian Institution Trinomial System) be assigned for any evidence of human occupation over 50 years of age. The trinomial archaeological site number is assigned by the Division of Historic Preservation and Archaeology.

The list of National Register of Historic Places does not preclude that other cultural resources may have formally been determined eligible without filing a National Register of Historic Places nomination. Alternatively, cultural resources may be identified, assigned a site number, but never evaluated in the context of National Register of Historic Places eligibility.

Background document search was conducted by David Keene. No archaeological sites have been recorded in the project area. However, in Section 3 immediately west of the project area 13 archaeological sites, all classified as "Hunting Camp Sites" were reported by the Indiana State University Anthropology Lab in Terra Haute, Indiana, in 1981. These sites are numbered 12-La-0268 thru 12-La-0280 and are all located in the SW ¼ of Section 3. All of these sites were discovered on beach ridges. The artifact assemblage of each site is rather small which fits the pattern of similar sites found on beach ridges elsewhere (Keene and Karamanski 1980).

REGIONAL CULTURAL CONTEXT

The millennia prior to the occupation of North America are divided into a number of time periods which are commonly referred to as 'cultural traditions' by archaeologists. The following discussion briefly outlines these cultural traditions. Special emphasis will be made to archaeological sites near the project that contained archaeological material representative of each tradition. It should be noted that the project area rest in the Lake Plain formed by Glacial Lake Chicago. The dominant presettlement features in this region are a series of beach ridges and swales formed by the advancing and receding waters of Glacial Lake Chicago (now Lake Michigan). Prehistoric populations took advantage of these natural features settling on the beach ridges covered with grasses and Oak Hickory Forests and extracting food resources from the wetland swale areas (Keene 1989).

Paleo-Indian Tradition (roughly 10,000 to 8000 B.C.E.)

This is the earliest known prehistoric tradition in the Midwestern United States. Archaeological sites from this period are sporadic. Gates (1961) suggests that these sites are not found in the Lake Plain formed by Glacial Lake Chicago. In fact, none are found in areas lower than 630 feet above mean sea level in the Calumet Region and its surrounding moraines. This is most likely due to the fact that lake levels fluctuated greatly during this time and that most of the Lake Plain was filled with water (Larsen 1985).

Occupation sites are rare from this period. Artifacts from this period suggest that the native population was small. They wandered in small nuclear bands hunting large megafauna that occupied the area south of the Lake Plain at the close of the Pleistocene. The most common artifacts associated with these groups are lanceolate shaped points known as Clovis and Dalton Points (Fagan 1991:80).

Paleo-Indian lanceolate type points have been recovered near Fort Wayne (Buerhing and Hicks 1982) and in LaPorte County (DeRegnaucourt 1992; Dorwin 1966, Justice 1987).

No cultural resources of this type have been identified in the project area.

Archaic Occupation (8000 B.C.E. to 900 B.C.E.)

Amelioration of climate conditions encouraged the development of plant and animal communities throughout the Midwestern United States. Cleland (1966: 20-23) suggests an extension of the southern deciduous forest into the Lake Plain. As available food resources became more abundant native populations began to aggregate into larger groups. These groups were still primarily involved in hunting and gathering. The artifact assemblage from these groups contain greater varieties of lithic tools, generally smaller in scale than those of their predecessors (Caldwell 1958). In addition there is evidence that these groups were engaged in the domestication of select plants (Watson 1988:39). The archaic period is divided into early, middle, and late periods. In Northern Indiana Archaic occupations of the Late Archaic have been encountered by

Jeske (1991). Overall the Archaic is not well represented in northern Indiana. No cultural resources of this type have been identified in the project area.

Woodland Occupations (900 B.C.E. to 1000 C.E.)

As with the Archaic period the Woodland is divided into three subdivisions: the Early, Middle, and Late. The production of pottery marks the onset of the Woodland periods. It is during this period that elaborate trade networks begin to develop. Mound building activity begins – particularly burial mounds and effigy mounds. The material cultural assemblage includes not only utilitarian objects like lithic knives, points, and drills, but also ceremonial artifacts like pipes, shell gourgets, effigy figures in stone and clay, ear spools, and breast plates to name only a few.

At the opening of this period we see the continuation of domestication of various plants until we move into the Late Woodland period where maize becomes the primary domesticant.

In northern Indiana, the area of concern here, sites representative of the Early Woodland period (900 B.C.E. to 100 C.E.) are located along river terraces and floodplains (Faulkner 1966). Late Woodland sites (500 C.E. to 1000 C.E.) are well documented in southwestern Michigan (Bettarel and Smith 1973).

It should be noted that no sites of this period were encountered in the project area or in adjacent areas.

Mississippian (1000 C.E. to 1450 C.E.)

This is the period in which many of the tribal groups encountered by the early European explorers developed. It is the best represented period in Lake Plain and surrounding upland moraines in the Calumet Region. A number of these sites have been excavated and documented over the past 50 years. Most notable among these are the Fifield Site (Faulkner 1972), the Palos Site (Keene and Karamanski 1980), the Ankers Site (Bluhm and Liss 1961) and the Hoxie Site (Brown and O'Brien 1990). The Hoxie site is once again under intense excavation and providing new information that links these occupations to sites

further south in the Illinois River Valley (Emerson, personal communications, 2003).

During this period in the Calumet Region the archaeological sites are large – an acre or more in size. These sites contain clear evidence of structures as well as massive storage pits similar to those found during the same period in and around Cahokia near East St. Louis, Illinois. The ceramic remains contain elaborate motifs and the lithic assemblage is dominated by small triangular points reminiscent of the Late Woodland.

Faulkner (1972) suggests that these native populations lived on a seasonal cycle that involved hunting the upland wooded areas in the winter, spring exploitation of the marsh resources in the Lake Plain, and summer agriculture around the large villages located along sandy river banks. No cultural resources of this type have been identified in the project area.

AFFECTED ENVIRONMENT

It is necessary to understand the geomorphology and topography of the project area prior to conducting field investigations. Any such study necessitates a discussion of the physiography, soils, drainage systems, and present land uses. These factors contribute to an understanding of what the prehistoric and historic landscape looked like at the time of site formation as compared to the present landscape.

Physical Setting

The Town of Ivanhoe and surrounding areas are located in the Northern Moraine and Lake Region as defined by Schnieder (1966). More specifically, the project area is located within the Lake Plain formed by Glacial Lake Chicago. The presettlement landscape here would have been a mixture of beach ridges and swales along the shore of Lake Michigan.

Drainage

The Project Area is drained by the Calumet River System which drains into Lake Michigan.

Soils

Soils in the project area are classified as Urban Land (<http://websoilsurvey.nrcs.usda.gov/app/>).

Current Land Use

At the time of this investigation the entire project area was level and covered by an asphalt/gravel layer. Any evidence of the ridge/swale system natural to this area has been obliterated.

INVESTIGATION METHODS

The field investigations and reported format were completed to meet the guidelines as set forth by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

The field survey was conducted on April 24, 2008 by David Keene PhD, RPA. At the time of survey the entire project area was covered by a layer of loose asphalt and gravel. Surface inspection of the area suggests that the entire project area has been leveled by industrial activity. The beach ridge and swale system that dominates the natural ground surface just north of the project area has been destroyed.

The project area was surface inspected. Shovel testing in this area proved impossible since the ground surface was covered with limestone gravel and asphalt and other large landfill debris. No intact ground surfaces were encountered.

SURVEY LIMITATIONS

There were no limitations to a comprehensive survey of the project area.

RESULTS

Research into archaeological site files and historic documents suggest that there were no recorded prehistoric sites and no documented historic ruins in the project area. During the course of this investigation no archaeological resources (neither historic nor prehistoric) were encountered. It should be noted that this area is classified by the Soil Conservation Service as Urban Land and that field inspection failed to find any original ground surface. Most of the area consists of limestone gravel and asphalt which appears to serve as a storage area for various industrial materials.

CONCLUSION

No historic or prehistoric archaeological remains were encountered during the course of this investigation. Field investigations were intensive and field methods used were appropriate for the situation. It is our recommendation that no further historic or archaeological investigations be required for this project area.

Conventional archaeological testing cannot detect all types of buried cultural resources. If any unanticipated cultural resources are encountered during construction, construction activities must be halted in that location and appropriate authorities and specialists will be contacted.

Bibliographic References Cited and Consulted

- Asher, Adams and Higgins
1870 New Topographical Atlas and Gazetteer of Indiana. New York.
- Baskin, Forster & Co.
1876 *Maps of Indiana Counties in 1876*. Reprinted from Illustrated Historical Atlas of the State of Indiana, Indiana Historical Society, 1968.
- Bettarel, R.L. and H.G. Smith
1973 The Moccasin Bluff Site and the Woodland Cultures of Southwestern Michigan. Anthropological Papers 49. Museum of Anthropology, University of Michigan, Ann Arbor.
- Blanchard & Eastman
1872 Guide Map of Indiana. Chicago.
- Blanchard, Rufus
1821 Map of Indiana. Published by A. Finley, Philadelphia.
- 1981 Late Quaternary Floodplain Sedimentation along the Pomme De Terre River, Southern Missouri. *Quaternary Research* 15:62-76.
- Bluhm, Elaine and Allen Liss
1961 The Ankers Site. Illinois Archaeological Survey Bulletin 3: 1-6.
- Brown, James and Patricia O'Brien
1990 At the Edge of Prehistory: Huber Phase Archaeology in the Chicago Area. Center for American Archaeology, Campsville, Illinois.
- Buerhrig, J.E. and R. Hicks
1982 A Comprehensive Survey of the Archaeological Resources of Mounds State Park, Anderson, Indiana with a Proposed Resource Management Plan. Reports of Investigations 6. Archaeological Resource Management Service, Ball State University, Muncie, Indiana.
- Caldwell, J. R.
1958 Trend and Tradition in the Prehistory of the Eastern United States. American Anthropological Association. Memoirs, Volume 88. Menasha, Wisconsin.

Cleland, Charles E.

- 1966 The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region. Anthropological Papers, No.29. University of Michigan Museum of Anthropology.

DeRegnaucourt, T.

- 1992 A Field Guide to the Prehistoric Point Types of Indiana and Ohio. Revised Edition. Occasional Monographs of the Upper Miami Valley Archaeological Research Museum. No.1.

Dorwin, J.T.

- 1966 Fluted Points and Late-Pleistocene Geochronology in Indiana. Indiana Historical Society, Prehistoric Research Series, 6(3):141-188.

Fagan, Brain M.

- 1991 Ancient North America. Thames and Hudson. London.

Faulkner, Charles

- 1966 The Morrow Site: A Red Ocher Workshop in the Kankakee Valley, Indiana. Wisconsin Archaeologist 45(2): 151-156.

- 1972 The Late Prehistoric Occupation of Northwest Indiana: A Study of the Upper Mississippian Cultures of the Kankakee Valley. Prehistory Research Series No. 5. Indiana Historical Society, Indianapolis.

Finley, A.

- 1830 *Map Establishment: Map of Indiana*. Philadelphia.

Gates, Stanford

- 1961 An Archaeological Survey of the DuPage River Drainage. Illinois Archaeological Survey Bulletin 3: 1-6.

Historic Landmarks Foundation of Indiana

- 2001 *Historic Landmarks Foundation Statewide Survey*.

Hodge, F.W.

- 1907 *Handbook of the American Indians North of Mexico*. Bureau of American Ethnology, Bulletin 30, pts. 1-2, Washington, D.C.

Jeske, Robert J.

- 1991 The Davidson Site: A Huber Phase Upper Mississippian Burial and Habitation Site in Porter County, Indiana. Northeast Indiana

- Archaeological Survey Report of Investigations 2. Indiana-Purdue University, Fort Wayne.
- Justice, N.D.
1987 Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States. Indiana University Press.
- Keene, David
1989 Reconstructing Prehistoric Settlement Patterns in the Chicago Area. *Illinois Archaeology* 1(2):137-149.
- Keene, David, and Ted Karamanski
1980 Cultural Resource Survey of the Cook County Forest Preserve, Palos, Calumet Divisions. Mid-American Research Center, Loyola University of Chicago.
- Kellar, James
1884 Cultural History of the Indians, In *Natural Features of Indiana*, edited by Alton Lindsey.
1992 *An Introduction to the Prehistory of Indiana*. Indiana Historical Society, Indianapolis.
- Larsen, Curtis
1985 Geoarchaeological Interpretations of Great Lakes Coastal Environments. In *Archaeological Sediments in Context*, edited by Julie K. Stein and William R. Ferrand, pp. 91-110. Center for the Study of Early Man, Orono, Maine.
- Lindsey, Alton, editor
1966 *Natural Features of Indiana*. Indiana Academy of Science
- Mitchell, S. Augustus
1834 Mitchell's Map of Ohio, Indiana and Illinois.
- National Historic Landmark
2005 National Historic Landmark Listing. National Park Service.
- National Trust for Historic Preservation
2005 *National Register of Historic Places, 1966-2005*. National Trust for Historic Preservation. Preservation Press, Washington, D.C.
- Petty, R.O. and M. T. Jackson
1966 Plant Communities, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schneider, Allan F.

1966 Physiography, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schurr, Mark R.

1993 *Woodland and Early Historic Period Settlement Patterns in the Kankakee Drainage of La Porte County, Indiana*. Notre Dame Report of Investigations 93-1.

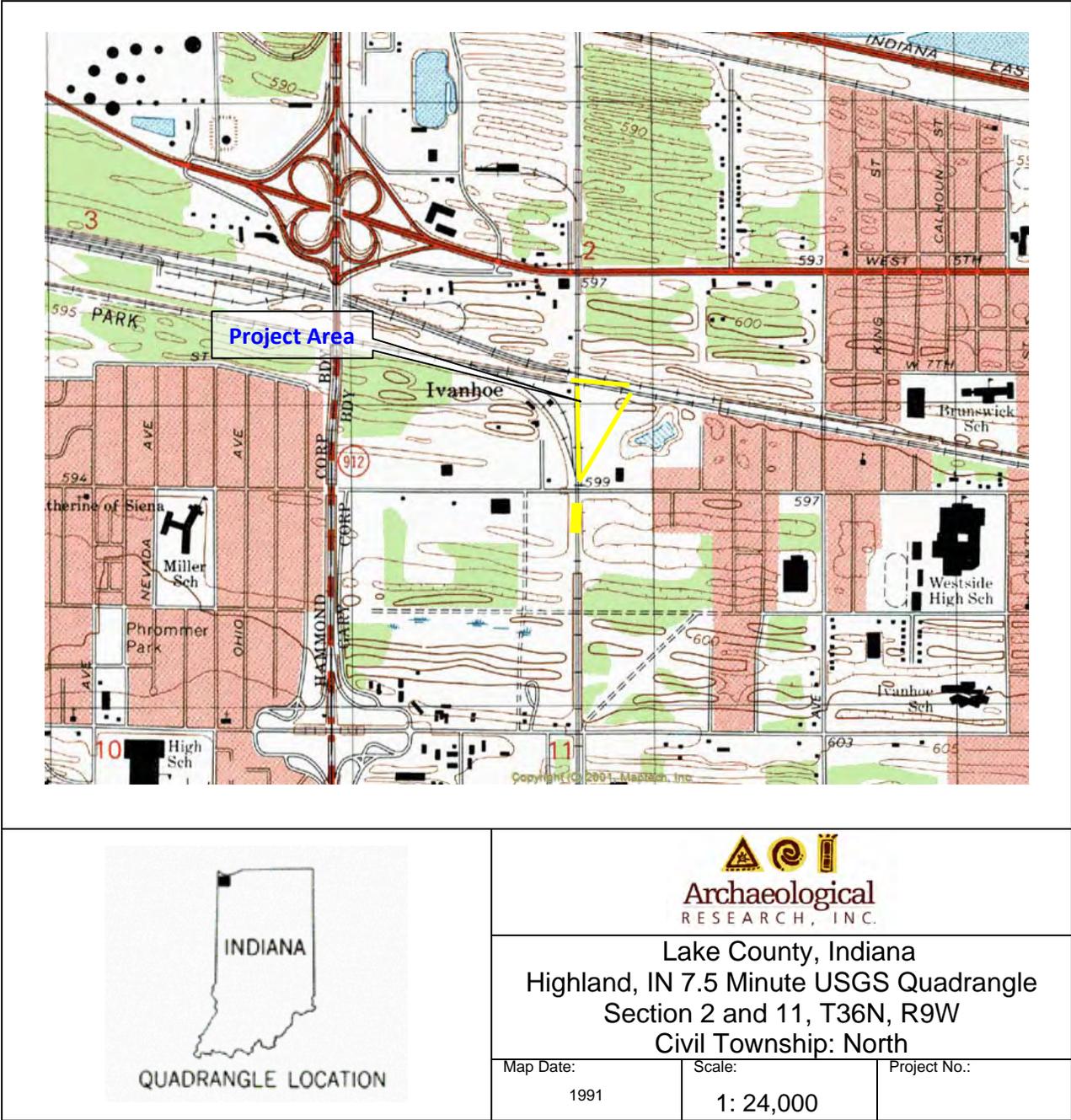
Tanner, Helen, editor

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman.

Watson, Patty Jo

1988 Prehistoric Gardening and Agriculture in the Midwest and Midsouth. Occasional Papers in Anthropology No. 3: Interpretations of Culture Change in the Eastern Woodlands During the Late Woodland Period, R.W. Yerkes, (ed) Department of Anthropology, Ohio State University, Columbus.

Attachment 1: Project Location Map



Archaeological
 RESEARCH, INC.

Lake County, Indiana
 Highland, IN 7.5 Minute USGS Quadrangle
 Section 2 and 11, T36N, R9W
 Civil Township: North

Map Date: 1991	Scale: 1: 24,000	Project No.:
-------------------	---------------------	--------------

Attachment 2. Map Provided by Client showing APE



The red dotted line depicts the boundaries of the footprint of construction.

Attachment 3. Photo of Project Area



View from the center of the project area toward the northeast.

Attachment 4. Photo of Project Area



View of Project area toward the northwest.

Results of a Phase I Archaeological Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Kirk Yard Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
David Keene, Ph.D., RPA
June 2008

A handwritten signature in blue ink, appearing to read 'D. Keene', with a long horizontal flourish extending to the right.

Signature of Project Archaeologist, David Keene

EXECUTIVE SUMMARY

Phase I Archaeological Investigations were conducted on a parcel of land within an existing rail yard in Gary, Indiana, known as the Kirk Yard. The client plans to construct connections between existing rail lines. Prior to field testing a background document search was conducted. Field inspection of the area took place in April 2008. No prehistoric or historic archaeological properties were encountered during the course of this investigation. No further archaeological or historic investigations are recommended.

DESCRIPTION OF UNDERTAKING

The client plans to construct connecting rails between existing rail lines in an existing rail yard.

PROJECT AREA and AREA OF POTENTIAL EFFECT

The parcel of land is in Lake County, Indiana, immediately adjacent to the United States Steel Mill Plant. This rail yard is commonly referred to as the Kirk Yard. The area of potential effect (APE) as outlined in Attachment 2 is approximately 1500 feet by 200 feet in size. This is an area of approximately 300,000 square feet, or 27,870 square meters, or 6.887 acres, or 2.787 hectares (**SEE ATTACHMENTS 1 and 2**).

HDR Engineering provided ARI with project location information including a site sketch delineating the location of the proposed project area and supporting information (See Attachment 2). The archaeological and historical background research was conducted by ARI on the proposed project area in April, 2008.

For this project the APE for archaeological investigation has been determined to be the area of direct impact.

PROJECT LOCATION INFORMATION

The project area is located in the following section, township and range:
Lake County, Indiana
Gary 7.5 Minute USGS Quadrangle
Sections 32 and 33, T37N, R8W
Civil Township: Calumet
(See Attachment 1)

BACKGROUND DOCUMENT and LITERATURE SEARCH

The purpose of the background and literature search is to evaluate the existing data on cultural resources within the APE of the proposed project and identify the potential for impacts to significant historic properties. For the purposes of this search, all cultural resources that are listed on or eligible for state or national registers of historic places are considered to be significant historic properties. Objectives include assessment of the known cultural resource that are within the area of potential effect, and evaluation of the adequacy of previous cultural resource investigations in the project area for planning and management. Background and literature research does not entail field work, but identifies the known cultural resources in the project area. In addition, background and literature research can help identify known gaps in the archaeological context of the area and possibly identify cultural resources that need further evaluation.

METHODS

Background and literature research was compiled from a number of sources, including summaries of previous cultural investigation conducted within the project area.

The following sources were identified and consulted:

*The Indiana State Historic Architectural and Archaeological Research Database (SHAARD)

*Archaeological Survey site files housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

*Archaeological review and compliance reports housed at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

*Historic Plats and Atlases housed at the Archaeological Research Incorporated including Government Land Office maps and notes from previous surveys in the area.

PREVIOUSLY RECORDED CULTURAL RESOURCES

The Division of Historic Preservation and Archaeology follows a program that requires a trinomial archaeological site number (using the Smithsonian Institution Trinomial System) be assigned for any evidence of human occupation over 50 years of age. The trinomial archaeological site number is assigned by the Division of Historic Preservation and Archaeology.

The list of National Register of Historic Places does not preclude that other cultural resources may have formally been determined eligible without filing a National Register of Historic Places nomination. Alternatively, cultural resources may be identified, assigned a site number, but never evaluated in the context of National Register of Historic Places eligibility.

Background document search was conducted by David Keene. No archaeological sites have been recorded in or within one mile of the project area.

REGIONAL CULTURAL CONTEXT

The millennia prior to the occupation of North America are divided into a number of time periods which are commonly referred to as 'cultural traditions' by archaeologists. The following discussion briefly outlines these cultural traditions. Special emphasis will be made to archaeological sites near the project that contained archaeological material representative of each tradition. It should be noted that the project area rests in the Lake Plain formed by Glacial Lake Chicago. The dominant presettlement features in this region are a series of beach ridges and swales formed by the advancing and receding waters of Glacial Lake Chicago (now Lake Michigan). Prehistoric populations took advantage of these natural features settling on the beach ridges covered with grasses and Oak Hickory Forests and extracting food resources from the wetland swale areas (Keene 1989).

Paleo-Indian Tradition (roughly 10,000 to 8000 B.C.E.)

This is the earliest known prehistoric tradition in the Midwestern United States. Archaeological sites from this period are sporadic. Gates (1961) suggests that these sites are not found in the Lake Plain formed by Glacial Lake Chicago. In fact, none are found in areas lower than 630 feet above mean sea level in the

Calumet Region and its surrounding moraines. This is most likely due to the fact that lake levels fluctuated greatly during this time and that most of the Lake Plain was filled with water (Larsen 1985).

Occupation sites are rare from this period. Artifacts from this period suggest that the native population was small. They wandered in small nuclear bands hunting large megafauna that occupied the area south of the Lake Plain at the close of the Pleistocene. The most common artifacts associated with these groups are lanceolate shaped points known as Clovis and Dalton Points (Fagan 1991:80).

Paleo-Indian lanceolate type points have been recovered near Fort Wayne (Buerhing and Hicks 1982) and in LaPorte County (DeRegnaucourt 1992; Dorwin 1966, Justice 1987).

No cultural resources of this type have been identified in the project area.

Archaic Occupation (8000 B.C.E. to 900 B.C.E.)

Amelioration of climate conditions encouraged the development of plant and animal communities throughout the Midwestern United States. Cleland (1966: 20-23) suggests an extension of the southern deciduous forest into the Lake Plain. As available food resources became more abundant native populations began to aggregate into larger groups. These groups were still primarily involved in hunting and gathering. The artifact assemblages from these groups contain greater varieties of lithic tools, generally smaller in scale than those of their predecessors (Caldwell 1958). In addition there is evidence that these groups were engaged in the domestication of select plants (Watson 1988:39). The archaic period is divided into early, middle, and late periods. In Northern Indiana Archaic occupations of the Late Archaic have been encountered by Jeske (1991). Overall the Archaic is not well represented in northern Indiana. No cultural resources of this type have been identified in the project area.

Woodland Occupations (900 B.C.E. to 1000 C.E.)

As with the Archaic period the Woodland is divided into three subdivisions: the Early, Middle, and Late. The production of pottery marks the onset of the Woodland periods. It is during this period that elaborate trade networks begin to develop. Mound building activity begins – particularly burial mounds and effigy mounds. The material cultural assemblage includes not only utilitarian objects

like lithic knives, points, and drills, but also ceremonial artifacts like pipes, shell gourgets, effigy figures in stone and clay, ear spools, and breast plates to name only a few.

At the opening of this period we see the continuation of domestication of various plants until we move into the Late Woodland period where maize becomes the primary domesticant.

In northern Indiana, the area of concern here, sites representative of the Early Woodland period (900 B.C.E. to 100 C.E.) are located along river terraces and floodplains (Faulkner 1966). Late Woodland sites (500 C.E. to 1000 C.E.) are well documented in southwestern Michigan (Bettarel and Smith 1973).

It should be noted that no sites of this period were encountered in the project area or in adjacent areas.

Mississippian (1000 C.E. to 1450 C.E.)

This is the period in which many of the tribal groups encountered by the early European explorers developed. It is the best represented period in Lake Plain and surrounding upland moraines in the Calumet Region. A number of these sites have been excavated and documented over the past 50 years. Most notable among these are the Fifield Site (Faulkner 1972), the Palos Site (Keene and Karamanski 1980), the Ankers Site (Bluhm and Liss 1961) and the Hoxie Site (Brown and O'Brien 1990). The Hoxie site is once again under intense excavation and providing new information that links these occupations to sites further south in the Illinois River Valley (Emerson, personal communication, 2003).

During this period in the Calumet Region the archaeological sites are large – an acre or more in size. These sites contain clear evidence of structures as well as massive storage pits similar to those found during the same period in and around Cahokia near East St. Louis, Illinois. The ceramic remains contain elaborate motifs and the lithic assemblage is dominated by small triangular points reminiscent of the Late Woodland.

Faulkner (1972) suggests that these native populations lived on a seasonal cycle that involved hunting the upland wooded areas in the winter, spring exploitation of the marsh resources in the Lake Plain, and summer agriculture around the

large villages located along sandy river banks. No cultural resources of this type have been identified in the project area.

AFFECTED ENVIRONMENT

It is necessary to understand the geomorphology and topography of the project area prior to conducting field investigations. Any such study necessitates a discussion of the physiography, soils, drainage systems, and present land uses. These factors contribute to an understanding of what the prehistoric and historic landscape looked like at the time of site formation as compared to the present landscape.

Physical Setting

The City of Hobart and surrounding areas are located in the Northern Moraine and Lake Region as defined by Schnieder (1966). More specifically, the project area is located within the Lake Plain formed by Glacial Lake Chicago. The presettlement landscape here would have been a mixture of beach ridges and swales along the shore of Lake Michigan.

Drainage

The Project Area is drained by the Calumet River System which drains into Lake Michigan.

Soils

Soils in the project area are classified as Urban Land (<http://websoilsurvey.nrcs.usda.gov/app/>).

Current Land Use

At the time of this investigation the entire project area was a rail road yard.

INVESTIGATION METHODS

The field investigations and reported format were completed to meet the guidelines as set forth by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology.

The field survey was conducted on April 24, 2008 by David Keene PhD, RPA. At the time of survey the entire project area was 10 to 15 feet above the surrounding ground surface just to the south. Surface inspection of the area suggests that the entire project area rests upon landfill presumably deposited in

order to raise the ground surface above the beach ridge and swale system that dominates the natural ground surface. This would allow for both a dry and firm surface for the rail yard.

The project area was surface inspected. Shovel testing in this area proved impossible since the ground surface was covered with limestone gravel and other large landfill debris. No intact ground surfaces were encountered.

SURVEY LIMITATIONS

There were no limitations to a comprehensive survey of the project area.

RESULTS

Research into archaeological site files and historic documents suggest that there were no recorded prehistoric sites and no documented historic ruins in the project area. During the course of this investigation no archaeological resources (neither historic nor prehistoric) were encountered. It should be noted that this area is classified by the Soil Conservation Service as Urban Land and that field inspection failed to find any original ground surface. Most of the area is consists of limestone rock serving as base material for rail lines.

CONCLUSION

No historic or prehistoric archaeological remains were encountered during the course of this investigation. Field investigations were intensive and field methods used were appropriate for the situation. It is our recommendation that no further historic or archaeological investigations be required for this project area.

Conventional archaeological testing cannot detect all types of buried cultural resources. If any unanticipated cultural resources are encountered during construction, construction activities must be halted in that location and appropriate authorities and specialists will be contacted.

Bibliographic References Cited and Consulted

- Asher, Adams and Higgins
1870 New Topographical Atlas and Gazetteer of Indiana. New York.
- Baskin, Forster & Co.
1876 *Maps of Indiana Counties in 1876*. Reprinted from Illustrated Historical Atlas of the State of Indiana, Indiana Historical Society, 1968.
- Bettarel, R.L. and H.G. Smith
1973 The Moccasin Bluff Site and the Woodland Cultures of Southwestern Michigan. Anthropological Papers 49. Museum of Anthropology, University of Michigan, Ann Arbor.
- Blanchard & Eastman
1872 Guide Map of Indiana. Chicago.
- Blanchard, Rufus
1821 Map of Indiana. Published by A. Finley, Philadelphia.
- 1981 Late Quaternary Floodplain Sedimentation along the Pomme De Terre River, Southern Missouri. *Quaternary Research* 15:62-76.
- Bluhm, Elaine and Allen Liss
1961 The Ankers Site. Illinois Archaeological Survey Bulletin 3: 1-6.
- Brown, James and Patricia O'Brien
1990 At the Edge of Prehistory: Huber Phase Archaeology in the Chicago Area. Center for American Archaeology, Campsville, Illinois.
- Buerhrig, J.E. and R. Hicks
1982 A Comprehensive Survey of the Archaeological Resources of Mounds State Park, Anderson, Indiana with a Proposed Resource Management Plan. Reports of Investigations 6. Archaeological Resource Management Service, Ball State University, Muncie, Indiana.
- Caldwell, J. R.
1958 Trend and Tradition in the Prehistory of the Eastern United States. American Anthropological Association. Memoirs, Volume 88. Menasha, Wisconsin.

Cleland, Charles E.

- 1966 The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region. Anthropological Papers, No.29. University of Michigan Museum of Anthropology.

DeRegnaucourt, T.

- 1992 A Field Guide to the Prehistoric Point Types of Indiana and Ohio. Revised Edition. Occasional Monographs of the Upper Miami Valley Archaeological Research Museum. No.1.

Dorwin, J.T.

- 1966 Fluted Points and Late-Pleistocene Geochronology in Indiana. Indiana Historical Society, Prehistoric Research Series, 6(3):141-188.

Fagan, Brain M.

- 1991 Ancient North America. Thames and Hudson. London.

Faulkner, Charles

- 1966 The Morrow Site: A Red Ocher Workshop in the Kankakee Valley, Indiana. Wisconsin Archaeologist 45(2): 151-156.

- 1972 The Late Prehistoric Occupation of Northwest Indiana: A Study of the Upper Mississippian Cultures of the Kankakee Valley. Prehistory Research Series No. 5. Indiana Historical Society, Indianapolis.

Finley, A.

- 1830 *Map Establishment: Map of Indiana*. Philadelphia.

Gates, Stanford

- 1961 An Archaeological Survey of the DuPage River Drainage. Illinois Archaeological Survey Bulletin 3: 1-6.

Historic Landmarks Foundation of Indiana

- 2001 *Historic Landmarks Foundation Statewide Survey*.

Hodge, F.W.

- 1907 *Handbook of the American Indians North of Mexico*. Bureau of American Ethnology, Bulletin 30, pts. 1-2, Washington, D.C.

Jeske, Robert J.

- 1991 The Davidson Site: A Huber Phase Upper Mississippian Burial and Habitation Site in Porter County, Indiana. Northeast Indiana

Archaeological Survey Report of Investigations 2. Indiana-Purdue
University, Fort Wayne.

Justice, N.D.

1987 Stone Age Spear and Arrow Points of the Midcontinental and Eastern
United States. Indiana University Press.

Keene, David

1989 Reconstructing Prehistoric Settlement Patterns in the Chicago Area. *Illinois
Archaeology* 1(2):137-149.

Keene, David, and Ted Karamanski

1980 Cultural Resource Survey of the Cook County Forest Preserve, Palos,
Calumet Divisions. Mid-American Research Center, Loyola University of
Chicago.

Kellar, James

1884 Cultural History of the Indians, In *Natural Features of Indiana*, edited by Alton
Lindsey.

1992 *An Introduction to the Prehistory of Indiana*. Indiana Historical Society,
Indianapolis.

Larsen, Curtis

1985 Geoarchaeological Interpretations of Great Lakes Coastal Environments.
In *Archaeological Sediments in Context*, edited by Julie K. Stein and
William R. Ferrand, pp. 91-110. Center for the Study of Early Man, Orono,
Maine.

Lindsey, Alton, editor

1966 *Natural Features of Indiana*. Indiana Academy of Science

Mitchell, S. Augustus

1834 Mitchell's Map of Ohio, Indiana and Illinois.

National Historic Landmark

2005 National Historic Landmark Listing. National Park Service.

National Trust for Historic Preservation

2005 *National Register of Historic Places, 1966-2005*. National Trust for Historic
Preservation. Preservation Press, Washington, D.C.

Petty, R.O. and M. T. Jackson

1966 Plant Communities, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schneider, Allan F.

1966 Physiography, In *Natural Features of Indiana*, edited by Alton Lindsey.

Schurr, Mark R.

1993 *Woodland and Early Historic Period Settlement Patterns in the Kankakee Drainage of La Porte County, Indiana*. Notre Dame Report of Investigations 93-1.

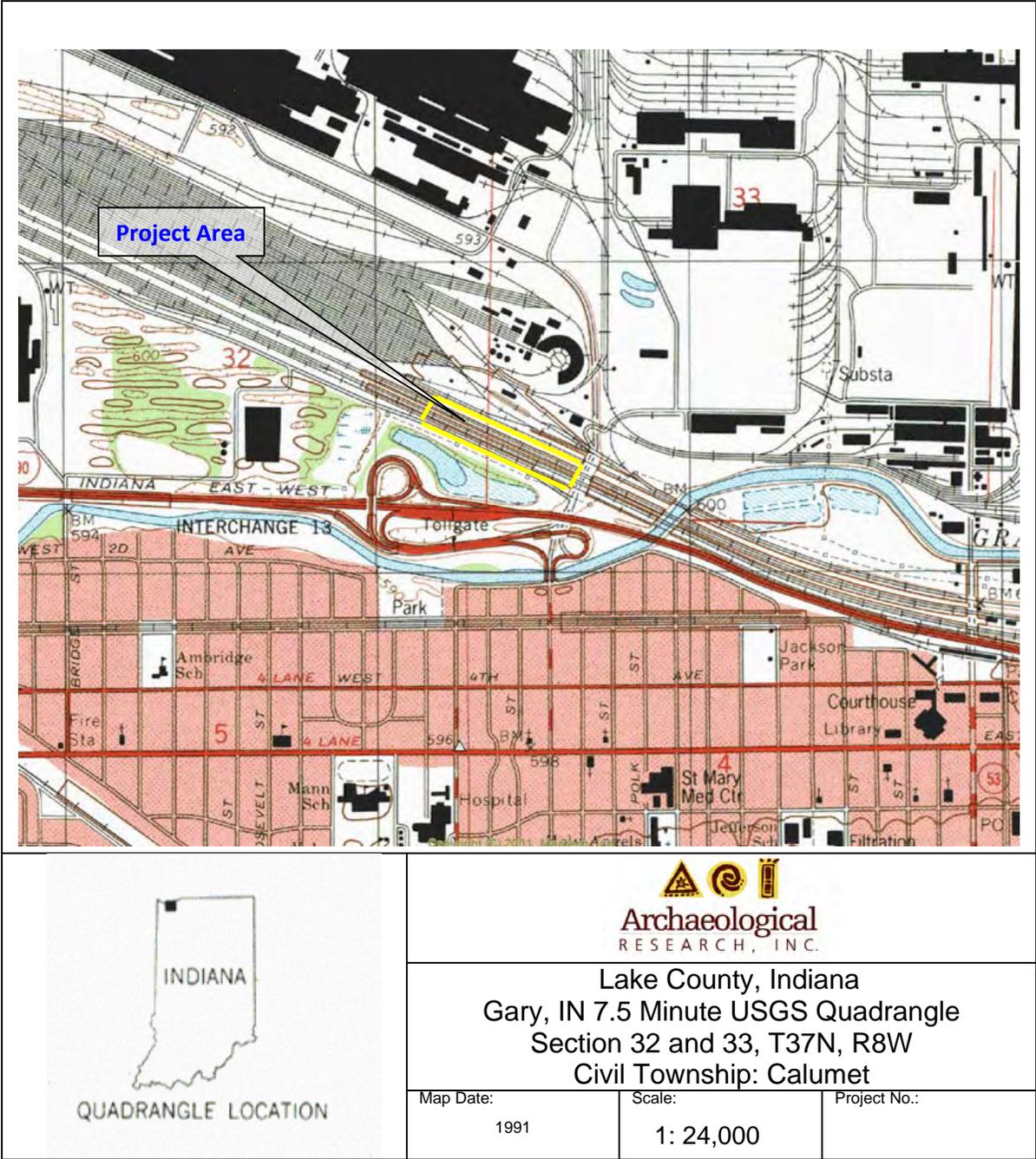
Tanner, Helen, editor

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman.

Watson, Patty Jo

1988 Prehistoric Gardening and Agriculture in the Midwest and Midsouth. Occasional Papers in Anthropology No. 3: Interpretations of Culture Change in the Eastern Woodlands During the Late Woodland Period, R.W. Yerkes, (ed) Department of Anthropology, Ohio State University, Columbus.

Attachment 1: Project Location Map



Archaeological
 RESEARCH, INC.

Lake County, Indiana
 Gary, IN 7.5 Minute USGS Quadrangle
 Section 32 and 33, T37N, R8W
 Civil Township: Calumet

Map Date: 1991	Scale: 1: 24,000	Project No.:
-------------------	---------------------	--------------

Attachment 2. Map Provided by Client showing APE



The red dotted line depicts the boundaries of the footprint of construction.

Attachment 3. Photo of Project Area



View from the center of the project area toward the northwest.

Attachment 4. Photo of Project Area



View of Project area toward the southeast.

Results of a Phase I Historic Standing Structure Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Griffith Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
John Vogel, Ph.D. and
David Keene, Ph.D., RPA
June 2008

A handwritten signature in blue ink, appearing to read 'D. Keene', with a large, stylized initial 'D'.

Signature of Principal Investigator, David Keene

EXECUTIVE SUMMARY:

Phase I Historical Investigations were conducted for two parcels of land in Griffith, Indiana. Current plans propose the construction of a connection between the existing rail lines. Background research revealed two National Register-listed and Indiana State Historic Architectural and Archaeological Research Database-identified properties in the project's immediate vicinity, but not within the APE. No other notable historic resources were observed in the project area. No further historical investigations are recommended.

DESCRIPTION OF UNDERTAKING:

Current plans propose the construction of a connection between existing rail lines, as well as a one block side track.

AREA OF POTENTIAL EFFECT (APE):

The nature of this project is very limited, although it is intended to accommodate rail traffic growth. The corresponding APE, therefore, was determined to include all resources that are in the project area, as well as those resources *immediately* adjacent to it that are not set apart from the rail line by trees, foliage, side tracks, roadways, undeveloped land or other forms of delineation.

This project is intended to facilitate railcar passage and transfer. Several factors influence the definition of the APE, and are identified as follows: 1) rail transport is historically associated with the community of Griffith, which at one time was serviced by five railroads; 2) no new rail line is proposed, only a connection track between two extant lines in the vicinity of Broad Street and its intersection with Avenue A, as well as a one-block sidetrack between Columbia and Lake streets, all of which is intended to accommodate a natural increase in traffic; 3) no different or unique elements will be introduced into the historic environment; 4) no right-of-way acquisition will occur; 5) no historic resources will be demolished; and 6) most historic-period resources in the vicinity of the project are undistinguished and unremarkable.

PREVIOUSLY IDENTIFIED AND/OR LISTED PROPERTIES:

No historic buildings are within the limits of the project. Several structures are adjacent to it (that is not separated by trees, foliage, etc.), however, two of which are listed on the National Register of Historic Places. They are identified as follows:

EJ&E Interlocking Tower	201 S. Broad Street	NR Listed on 09/28/03
Griffith Grand Truck Depot	201 S. Broad Street	NR Listed on 09/28/03

EVALUATION:

The proposed connection track is largely in an area historically occupied by railroad through tracks. No historic-period structures were noted in the immediate vicinity. Two National Register-listed buildings are in a small park adjacent to the project's westernmost limits, but those buildings are beyond the APE. And finally, the structures located to either side of the proposed sidetrack between Columbia Street (on the south) and Lake Street (on the north) are beyond the APE, which is otherwise delineated by undeveloped land, roadways and tree lines.

CONCLUSION:

No structures with historical interest were noted in the APE. That fact, as well as the nature of the project itself, means that there is very little to no chance of affecting historic properties. ARI recommends that no additional historical investigations are needed.

Should project plans change, or previously unobserved properties be located in the APE, further investigations may be necessary.



Figure 1: Project location identified on USGS Quadrangle (Highland, IN-7.5').



Figure 2: The red line identifies the specific construction area. The two NR-listed properties are also noted.



Figure 3: National Register-listed Griffith Grand Trunk Depot. This building is nearby, but not considered to be in the project's APE.



Figure 4: National Register-listed EJ&E Interlocking Tower. This building is adjacent to the project's western terminal point. It is nearby, but not in the APE.



Figure 5: View to the northwest. This image illustrates the setback that the tracks have from the buildings to the west. Given that distance, as well as the roadway in the background which also acts as a barrier, the structures are not thought to be in the APE.



Figure 6: View to the north northeast. This picture shows the setback, roadway and trees that separate the houses to the east from the tracks, all of which separates the structures from the APE.

Results of a Phase I Historic Standing Structure Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Ivanhoe Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
John Vogel, Ph.D. and
David Keene, Ph.D., RPA
June 2008



Signature of Principal Investigator, David Keene

EXECUTIVE SUMMARY:

Phase I Historical Investigations were conducted for the Ivanhoe Site, which is located immediately east of the Gary, Indiana, western Corporate Limits (IN/State Highway 912), on 9th Street. Current plans propose the construction of a rail connection in the southeast quadrant of an already extant north/south and east/west rail line. Background research revealed no National Register-listed nor Indiana State Historic Architectural and Archaeological Research Database-identified properties in, or near, the APE. No other notable historic resources were observed in the project area. No further historical investigations are recommended.

DESCRIPTION OF UNDERTAKING:

Current plans propose the construction of a connection between the existing rail lines.

AREA OF POTENTIAL EFFECT (APE):

The nature of this project is very limited, although it is intended to accommodate rail traffic growth. The corresponding APE, therefore, was determined to include all resources that are in the project area, as well as those resources *immediately* adjacent to it that are not set apart from the rail line by trees, foliage, side tracks, roadways, undeveloped land or other forms of delineation.

This project is intended to facilitate railcar passage and transfer. Several factors influence the definition of the APE, and are identified as follows: 1) no new rail line is proposed, only a connection track between two extant lines in the vicinity of 9th Street, east of the Gary, Indiana, western Corporate Limits, which is intended to accommodate a natural increase in traffic; 2) no different or unique elements will be introduced into the historic environment; 3) minor, strip right-of-way acquisition will occur; and 4) no historic resources were observed in or near the project area.

PREVIOUSLY IDENTIFIED AND/OR LISTED PROPERTIES:

No historic buildings are within the limits of the project. One structure was observed southeast of the proposed connection track, but it is a modern industrial building.

EVALUATION:

The proposed connection track is in an area largely confined to industrial production and storage. No historic-period structures were noted in the vicinity.

CONCLUSION:

No structures with historical interest were noted in or near the APE. That fact, as well as the nature of the project itself, means that there is very little to no chance of affecting historic properties. ARI recommends that no additional historical investigations are needed.

Should project plans change, or previously unobserved properties be located in the APE, further investigations may be necessary.



Figure 1: Project location identified on USGS Quadangle (Highland, IN-7.5').



Figure 2: The red line identifies the specific construction area.



Figure 3: View to the northwest that reflects the undeveloped character of the area in which the connection track will be installed.



Figure 4: View to southeast, away from the area in which the connection track will be constructed. This is a modern, industrial building.

Results of a Phase I Historic Standing Structure Investigation
For the CN EJ&E Acquisition
Environmental Impact Statement
Proposed Kirk Yard Connection,
Lake County, Indiana

Prepared for
Surface Transportation Board
Section of Environmental Analysis
and HDR Engineering, Inc.

Prepared by
Archaeological Research, Inc.
4147 N. Ravenswood Ave.
Chicago, IL 60613
(773) 975-1753
www.arch-res.com

This document was prepared by
John Vogel, Ph.D. and
David Keene, Ph.D., RPA
June 2008



Signature of Principal Investigator, David Keene

EXECUTIVE SUMMARY:

Phase I Historical Investigations were conducted for the Kirk Yard Site, which is located immediately north of the Indiana East/West Tollway's Interchange 13. Current plans propose the construction of a connection between two existing northwest/southeast rail lines. Background research revealed no National Register-listed nor Indiana State Historic Architectural and Archaeological Research Database-identified properties in, or nearby, the APE. No other notable historic resources were observed in the project area. No further historical investigations are recommended.

DESCRIPTION OF UNDERTAKING:

Current plans propose the construction of a connection between existing rail lines.

AREA OF POTENTIAL EFFECT (APE):

The nature of this project is very limited, although it is intended to accommodate rail traffic growth. The corresponding APE, therefore, was determined to include all resources that are in the project area, as well as those resources *immediately* adjacent to it that are not set apart from the rail line by trees, foliage, side tracks, roadways, undeveloped land or other forms of delineation.

This project is intended to facilitate railcar passage and transfer. Several factors influence the definition of the APE, and are identified as follows: 1) no new rail line is proposed, only a northwest/southeast-oriented connection between two extant northwest/southeast-oriented mainlines, all immediately north of Interchange 13 of the Indiana East/West Tollway; 2) no different or unique elements will be introduced into the historic environment; 3) no right-of-way acquisition will occur; 4) the area to the south is wooded and undeveloped; 5) no historic resources will be demolished; and 6) most historic-period resources in the general vicinity are significantly to the north and associated with the EJ&E railroad's nearby shop complex.

PREVIOUSLY IDENTIFIED AND/OR LISTED PROPERTIES:

No historic buildings are within the limits of the project. Several structures are approximately 400 feet or more to the north that are associated with the rail yard's switching operation and the EJ&E's railroad shop complex beyond it. Those resources, however, are separated from the project by various railroad tracks, undeveloped land, parking lots and an earthen embankment that obscures views from the project area to the north, atop which is another railroad track.

EVALUATION:

The proposed connection track is in an area defined by already extant through tracks to either side. Some rail yard buildings are located approximately 400 feet to the north, as are some EJ&E railroad shop buildings beyond those. All buildings are separated from the project area by distance, additional tracks and a prominent berm. The shop buildings farther to the north are separated by a parking lot and more roads, but those buildings are beyond the APE. It may be concluded, therefore, that no historic-period structures were noted in the project APE or its immediate vicinity.

CONCLUSION:

No structures with historical interest were noted in the APE. That fact, as well as the nature of the project itself, means that there is very little to no chance of affecting historic properties. ARI recommends that no additional historical investigations are needed.

Should project plans change, or previously unobserved properties be located in the APE, further investigations may be necessary.

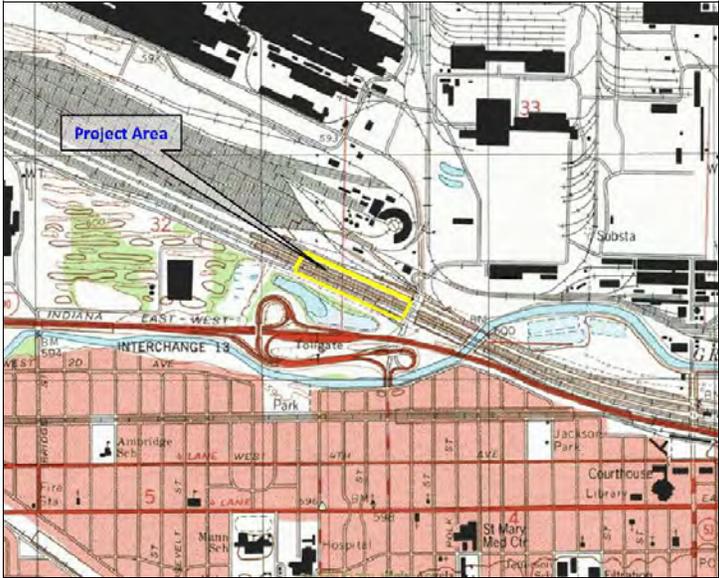


Figure 1: Project location identified on USGS Quadrangle (Gary, IN-7.5').



Figure 2: The redline identifies the specific construction area, while the yellow lines represent the switching tracks to be installed.



Figure 3: View to the south southeast. Identified by this picture is the wooded area to the south of the proposed improvement, as well as the earthen embankment pictured below. The north project limit is also identified.



Figure 4: View to the southeast. Depicted in this image is the earthen embankment, with a railroad track on the top, that obscures the view from the railroad yard and shop complex to the south, where the connection tracks will be installed.