



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Ohio Division**

June 30, 2014

200 North High Street, Room 328  
Columbus, OH 43215  
614-280-6896  
614-280-6876

In Reply Refer To:  
HDA-OH

Mary Knapp  
Supervisor  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, OH 43230

Subject: SCI-823-0.00 (PID 19415), Portsmouth Bypass Project, Formal Conference Request

Dear Dr. Knapp:

The Federal Highway Administration does hereby request a formal conference regarding the aforementioned project. The proposed project will incur impacts to the northern long-eared bat (*Myotis septentrionalis*) currently proposed for listing as an endangered species under the Endangered Species Act of 1973.

The proposed project is located in Scioto County Ohio. The purpose of the project is to construct a new four-lane, limited access highway/bypass of Portsmouth, Ohio as part of the Appalachian Development Highway system. State Route 823 (SR 823, Portsmouth Bypass, SCI-823-0.00) will be a four-lane, divided, limited access facility connecting US 52 near Wheelersburg to US 23 just north of Lucasville, Ohio. The new facility will be approximately 16 miles in length, bypassing approximately 26 miles of US 52 and US 23 through Portsmouth, Ohio.

The enclosed Biological Assessment (BA) of impacts on federally listed species is based on the alternative selected through the Final Environmental Impact Statement (FEIS), which received a Record of Decision on June 9, 2006. The project was subsequently divided into three design-construction phases, which have since been combined into a single construction phase. The environmental reevaluations of the ROD and FEIS were approved by FHWA for Phase 1 on April 5, 2012, and concurrently for Phases 2 and 3 on April 16, 2014.

The Ohio Department of Transportation (ODOT), acting on our behalf engaged in informal consultation regarding impacts to fifteen federally listed species and informal conference regarding the northern long-eared bat to date. We are attaching a brief summary of this process. The effect determination by FHWA for the northern-long-eared bat is that it *may affect and is likely to adversely affect* the northern long eared bat.

In response to your latest letter to ODOT dated June 17 2014, we understand that additional consultation was undertaken by the Service and ODOT. We appreciate your willingness to work toward a mutually beneficial outcome as a result of these negotiations. We asked ODOT to



provide you with the requested documents in your letter and they indicated to us that this is underway.

FHWA understands that, as stipulated in ESA Section 7(b)(1)(A) and 50 CFR 402.10, formal conference will be conducted in accordance with the procedures for formal consultation specified in 50 CFR 402.14. This will be initiated by your receipt of this request and will conclude within 90 days from that date. We also realize that the Service has 45 days following the completion of the formal consultation period to provide the Biological Opinion (BO) on the federally listed species affected by the project, and a Conference Opinion for the proposed and candidate species affected by the project.

FHWA respectfully requests an expedited consultation period and issuance of the Service's Conference Opinion by October 1, 2014 to account for the project schedule. ODOT plans to begin construction (the clearing of forested habitat) within the Phase 1 section of the project area that has received an approved 404 waterway permit by October 2014. This action would be consistent with all consultation and commitments made prior to, and within, the BA.

If you have any questions, please contact Dan Brodhag, Transportation Engineer, at (614) 280-6849 or [dan.brodhag@dot.gov](mailto:dan.brodhag@dot.gov) or Noel Mehlo, Environmental Program Manager, at (614) 280-6841 or [noel.mehlo@dot.gov](mailto:noel.mehlo@dot.gov).

Sincerely,



For: Laura S. Leffler  
Division Administrator

Enclosure(s)

ecc: Tim Hill, ODOT  
Matt Perlik, ODOT

Attachment 1:

Summarizing ODOT, USFWS, FHWA informal consultation informal conference activities.  
Prepared by ODOT on behalf of FHWA

Technical assistance provided by the USFWS identified fifteen (15) federally listed species or species of concern within the range of the project area. Concurrence on the effects determinations for several of these species was received from the USFWS through informal consultation. The list below includes the species within the range of the project area, along with the federal listing status, the effect determination, and dates the USFWS provided concurrence on the effects determinations. Having received concurrence on several of the species through informal consultation, the enclosed BA primarily discusses the impacts expected to the proposed endangered northern long-eared bat (*Myotis septentrionalis*) and the endangered Indiana bat (*Myotis sodalis*).

The following are included in the BA:

- A description of the action being considered;
- A description of the specific area that may be affected by the action;
- A description of the northern long-eared bat and the Indiana bat and their habitats that may be affected by the action;
- A description of the manner in which the action may affect the northern long-eared bat and the Indiana bat or their habitats, and an analysis of any cumulative effects;
- Appendices containing reports documenting relevant studies of impacts of the action on the affected listed species or their habitats.

Common Name	Scientific Name	Federal Listing	Effects Determination	Date(s) of USFWS Concurrence
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Former Species of Concern	No Effect	3/12/2012 9/12/2013
Clubshell	<i>Pleurobema clava</i>	Endangered	No Effect	3/12/2012 9/12/2013
Eastern Hellbender	<i>Cryptobranchus alleganiensis</i>	Species of Concern	No Effect	3/12/2012 9/12/2013
Fanshell	<i>Cyprogenia stegaria</i>	Endangered	No Effect	3/12/2012 9/12/2013
Indiana bat	<i>Myotis sodalis</i>	Endangered	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Proposed as Endangered	Proposed May affect, likely to adversely affect	PENDING
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered	No Effect	3/12/2012 9/12/2013
Pink Mucket	<i>Lampsilis abrupta</i>	Endangered	No Effect	3/12/2012 9/12/2013
Rayed Bean	<i>Villosa fabalis</i>	Endangered	May affect but is not likely to adversely affect	3/11/2005 3/12/2012 9/12/2013
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	Endangered	May affect but is not likely to adversely affect	3/12/2012 9/12/2013
Sheepnose	<i>Plethobasus cyphus</i>	Endangered	No Effect	3/11/2005 3/12/2012 9/12/2013
Small Whorled Pogonia	<i>Isotria medeoloides</i>	Threatened	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	No Effect	3/12/2012 9/12/2013
Timber Rattlesnake	<i>Crotalus horridus</i>	Species of Concern	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Virginia Spiraea	<i>Spiraea virginiana</i>	Threatened	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013

# Final Biological Assessment

## Consultation for the Northern Long-eared and Indiana Bat

# Portsmouth Bypass Project

SCI-823-0.00 PID 19415

Prepared for:



AND



Prepared by:



5070 Stow Rd.  
Stow, OH 44224  
800-940-4025

[www.EnviroScienceInc.com](http://www.EnviroScienceInc.com)

**Primary Agencies and Contacts:**

Agency	Contact	Project Role	Email	Phone
Federal Highway Administration	Noel Mehlo	Lead Federal Action Agency	<a href="mailto:Noel.Mehlo@fhwa.dot.gov">Noel.Mehlo@fhwa.dot.gov</a>	614-280-6841
U.S. Fish and Wildlife Service	Karen Hallberg	Conferencing Agency (Federal)	<a href="mailto:Karen_Hallberg@fws.gov">Karen_Hallberg@fws.gov</a>	814-234-4090
EnviroScience	Jamie Willaman	Lead BA Preparer	<a href="mailto:JWillaman@EnviroScienceInc.com">JWillaman@EnviroScienceInc.com</a>	330-688-0111
ODOT	Katie Dunlap	Non-Federal Representative	<a href="mailto:Kathleen.Dunlap@dot.state.oh.us">Kathleen.Dunlap@dot.state.oh.us</a>	614-466-6983
ODOT	Matt Raymond	Non-Federal Representative	<a href="mailto:Matt.Raymond@dot.state.oh.us">Matt.Raymond@dot.state.oh.us</a>	614-466-5129
ODOT	Megan Michael	Non-Federal Representative	<a href="mailto:Megan.Michael@dot.state.oh.us">Megan.Michael@dot.state.oh.us</a>	614-644-7099
ODOT	Mike Pettegrew	Non-Federal Representative	<a href="mailto:Mike.Pettegrew@dot.state.oh.us">Mike.Pettegrew@dot.state.oh.us</a>	614-466-7102
EnviroScience	Greg Zimmerman	BA Preparer	<a href="mailto:GZimmerman@EnviroScienceInc.com">GZimmerman@EnviroScienceInc.com</a>	330-688-0111
LJB	Heather Lacey	BA Preparer	<a href="mailto:HLacey@LJBinc.com">HLacey@LJBinc.com</a>	937-259-5143
Aurora Research Associates	Courtney Zimmerman	BA Preparer / QAQC	<a href="mailto:Courtney@Aurora-LLC.com">Courtney@Aurora-LLC.com</a>	304-685-7410

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## Executive Summary

ODOT will construct a new four-lane, limited access highway/bypass of Portsmouth, Ohio as part of the Appalachian Development Highway system. State Route 823 (SR 823, Portsmouth Bypass, SCI-823-0.00) will be a four-lane, divided, limited access facility connecting US 52 near Wheelersburg to US 23 just north of Lucasville, Ohio. The new facility will be approximately 16 miles in length, bypassing approximately 26 miles of US 52 and US 23 through Portsmouth, Ohio. The Portsmouth Bypass will provide a missing link in the Appalachian Development Highway System to improve regional mobility and promote economic development in an area with high unemployment and poverty rates. As part of the project, ODOT has planned a number of significant environmental commitments and conservation measures, including avoidance measures, wetland and stream mitigation, and protection of forested habitats for proposed threatened and endangered species.

Based on an evaluation of innovative procurement and financing methodologies, ODOT has made the determination that a design-build-finance-operate-maintain approach will be utilized to construct the project. The entire project will be built by the selected developer team according to their timelines and sequencing. Construction may start as early as October of 2014 and may be complete by as early as 2020.

Consultation with the USFWS, in compliance with Section 7 of the Endangered Species Act (ESA), began in 2000 and ODOT received concurrence on effects determinations for all listed species believed likely to occur in the project area by September of 2013. At this time, the USFWS concurred with ODOT's determination of "may affect, not likely to adversely affect" the Indiana bat. On October 2, 2013 the USFWS proposed to list the Northern Long-eared Bat (NLEB) as endangered throughout its range under the ESA. In January 2014, the USFWS issued an interim guidance for planning and coordination of NLEB. ODOT is seeking a Biological Opinion and Conference Opinion from USFWS in order to be proactive for the NLEB listing and to reaffirm the previous not likely to adversely affect determination for the Indiana bat.

The USFWS has no records of NLEB or Indiana bat hibernacula in the vicinity of the project, and no critical habitat has been or is expected to be designated for either species in this area. Two mist net surveys targeting the federally endangered Indiana bat were conducted for the project in 2003 and 2011. A total of 39 NLEB were captured at 40 net sites (172 net nights); no Indiana bats were captured. Of the 40 net sites surveyed, 14 sites captured NLEB. Of the 39 NLEB captures, 30 captures were male and nine were female. Only one female showing evidence of reproduction (pregnant) was captured in both surveys. Additionally, 34 of the 39 captures were adults. 32 of the 39 captures (82%) were made within an approximately 1.75 mile (450 acre) corridor at the northern end of Phase 3 of the project. While this area represented the High Capture Area, based on the NLEB captures, and the species' potential 3-mile home range, the entire Bypass corridor contains potential habitat for the species. During the mist net surveys the project area was searched for any caves or mine portals that may occur on the corridor, in order to identify any potential winter

hibernacula that may be affected by the project. No such areas were identified on available secondary resource mapping or identified in the field.

The Action Area was defined as five miles surrounding the project footprint based on the known Indiana bat summer home range, which also includes the federally recognized NLEB home range of three miles. This area was used for the project effects analysis. Direct effects of the Project included loss of NLEB roosting and foraging habitat due to seasonal tree clearing. Indirect effects included loss of Indiana bat roosting and foraging habitat due to seasonal tree clearing, diminished water quality and effects of construction and noise. Interrelated effects included industrial, commercial, and residential development that may accompany bypass construction. The following effect determinations were made through this assessment.

**Table E-1. Summary of Effect Determinations**

Common Name	Species Name	Federal Listing Status	Effects Determination
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Proposed for Listing as Endangered	No jeopardy/ Provisional may affect, likely to adversely affect
Indiana Bat	<i>Myotis sodalis</i>	Endangered	May affect, not likely to adversely affect

# Chapter 1. Project Overview

## 1.1. Federal Nexus

This Biological Assessment (BA), prepared by the Ohio Department of Transportation (ODOT), addresses the proposed action in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that a biological assessment be conducted for listed and proposed listed species with the U.S. Fish and Wildlife Service (USFWS), to determine that federal actions will not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat.

Effects determinations for all listed species were proposed by ODOT and FHWA, and the USFWS provided concurrence on the effects determinations for all of the listed species, by September of 2013. On October 2, 2013, the USFWS published a proposal in the *Federal Register* to list the Northern long-eared bat (NLEB) as an endangered species. Due to its recent proposed listing, this species was not included in the original Draft or Final Environmental Impact Statements or the reevaluation for Phase 1 of the Portsmouth Bypass project. The commitment to conference on the species was included in the reevaluation done for Phases 2 and 3 of the project. ODOT initiated the development of this document in September 2013 in anticipation of the listing of the NLEB. This BA evaluates the potential effects of the proposed transportation project on the NLEB (*Myotis septentrionalis*), a species proposed for federal listing under the ESA, and the Indiana bat, a federally endangered species. The lead federal agency for the Section 7 consultation for the project is the United States Department of Transportation, Federal Highway Administration (FHWA) by the provision of federal funding.

## 1.2. Project Description

ODOT will construct a new four-lane limited access highway/bypass of Portsmouth, Ohio as part of the Appalachian Development Highway system. State Route 823 (SR 823, Portsmouth Bypass, SCI-823-0.00) will connect US 52 near Wheelersburg to US 23 just north of Lucasville, Ohio. It will be approximately 16 miles in length, bypassing approximately 26 miles of US 52 and US 23 through Portsmouth (Figure 1; Appendix A).

The proposed project is approximately 90 miles south of Columbus, Ohio and 45 miles northwest of Huntington, West Virginia. Other nearby towns include Wheelersburg and Ironton, Ohio, and Ashland and Greenup, Kentucky. Existing transportation facilities in the region include US 23, US 52, SR 32, Kentucky's A-A Highway, Norfolk Southern Railway, CSX Railway, Amtrak service, Scioto County Airport, and Ohio River barge shipping.

This project is necessary, appropriate, and is in the interest of public health, safety, and economic sustainability and development. The project will provide a missing link in the Appalachian Development Highway System to improve travel time and regional mobility, avoiding 30 traffic signals, 88 intersections, and over 500 driveways over the entire 26-mile route. A new roadway will result in a time savings of 16 minutes per trip (off peak) compared to the current through route. In addition to transportation benefits, a primary purpose is to provide access to suitable property, i.e. relatively flat, for economic development in the economically depressed region surrounding Portsmouth, Ohio, which consistently experiences unemployment and poverty rates of more than twice the statewide average.

The *Draft Environmental Impact Statement* (DEIS) for the entire Portsmouth Bypass was completed in January 2005 and the *Final Environmental Impact Statement* (FEIS) was completed in July 2005. The FHWA issued the Record of Decision (ROD) based upon these documents on June 9, 2006. The project was subsequently divided into three design-construction phases, which have since been combined into a single construction phase. The environmental reevaluations of the ROD and FEIS, including Ecological Survey Reports (ESR), have been completed for Phase 1, and concurrently for Phases 2 and 3. The FHWA approved the reevaluation for Phase 1 of the project on April 5, 2012, and the reevaluation for Phases 2 and 3 of the project on April 16, 2014. These approvals determined that the June 9, 2006 Record of Decision remains valid for all three Phases of the Portsmouth Bypass.

Following the ROD in 2006, the Portsmouth Bypass was divided into three design-construction phases. These phases were used for preliminary engineering, re-evaluating the environmental impacts and permitting. However, for the purposes of determining effects on federally listed species, all three phases were assessed concurrently as a single project area. Now that the project is being constructed using a design-build-finance-operate-maintain approach, all three phases will be constructed concurrently as a single project. The three phases previously utilized for the Portsmouth Bypass Project are as follows:

- Phase 1 – Shumway Hollow Road (TR 234) Interchange near the Scioto County Airport to Lucasville-Minford Road (CR 28) Interchange. Length: 3 miles; 3 bridges; 2 interchanges
- Phase 2 – Lucasville-Minford Road (CR 28) Interchange to US 23 Interchange. Length: 7.4 miles; 10 bridges; 1 interchange
- Phase 3 – Sciotoville Interchange (US 52) to Shumway Hollow Road (TR 234) Interchange near the Scioto County Airport. Length: 5.6 miles; 6 bridges; 2 partial interchanges

### 1.3. Project Area and Setting

The Portsmouth Bypass Project is located in Scioto County in southeastern Ohio (Figures 1 and 2; Appendix A). Major rivers within the vicinity of the project area are the Ohio River and the Scioto

River, but neither is located within the project impact corridor. The Little Scioto River crosses the southern end of the project then enters the Ohio River at Sciotoville, upstream of the Scioto River. The City of Portsmouth, located at the confluence of the Ohio and Scioto rivers, is the most populated area in the project area. The remainder of the county is primarily hilly and forested, with intermittent small towns and communities. The preferred alternative for the project begins at US Route 23 near Lucasville, then spans east and southeast to the vicinity of the town of Minford. The alignment then turns south past the Scioto County Airport and runs south in the hills parallel to the east of the Little Scioto River and OH Route 335. The alignment then intersects OH 335 and the Little Scioto before meeting US Route 52 in Sciotoville, just north and east of the Ohio River.

The project area is dominated by rural communities, timberland, and small agricultural farms, much like the rest of the county. According to the Ohio Department of Development's 2003 profile of Scioto County, 71.7% of the county is wooded, while 20.9% is agricultural or open urban space. The Shawnee State Forest also falls mostly in Scioto County, though the project study area does not fall within the forest. Standing forest comprises approximately 53% of the study area. However, none of the forest in the study area can be considered "virgin" or "old growth" forest. It is likely that most or all of the forest in the study area has been logged during the past century.

#### 1.4. Consultation History

ODOT began coordination with USFWS on the Portsmouth Bypass in November of 2000 during the initial feasibility study for potential corridor alignments. Table 1-1 details the informal consultation history and relevant consultation documents are located in Appendix B. Between 2000 and 2004, ODOT conducted surveys and submitted evaluation documents for species that the project had the potential to effect. In August of 2004 the USFWS provided concurrence with the findings of ODOT effects determinations for listed species and requested additional information on mussel species that were included in the DEIS. The project was put on hold in 2005.

ODOT re-initiated informal consultation with the USFWS in 2011 on the final project alignment for all three phases, with the submittal of the ESR for Phase 1 of the project. Additional listed species surveys were conducted within and along the project corridor and effects determinations were submitted for concurrence in 2011. The USFWS concurred with the 2011 ODOT effects determinations for listed species in Phase 1 in March of 2012. ODOT submitted the ESR for Phases 2 and 3 in May of 2013 and the USFWS concurred in September. The USFWS September 2013 concurrence letter also stated that if any additional bat species became proposed listed, ODOT would need to conduct additional coordination with the agency.

On October 2, 2013 the USFWS published a proposal in the Federal Register to list the NLEB Bat as endangered throughout its range under the Endangered Species Act. On January 6, 2014 the USFWS issued an interim guidance document for planning and conferencing on NLEB.

**Table 1-1. Summary of Consultation History**

Date	Coordination Action
11-08-2000	ODOT developed a Feasibility Study for US 23 Portsmouth Transportation Study, Scioto County, Ohio ODOT Project SCI-823-0.00, PID 19415.
11-17-2000	USFWS responded to Feasibility Study.
03 to 07-2003	ODOT consultants conducted a Timber Rattlesnake survey.
04-28-2003	ODOT letter to the USFWS initiating informal consultation.
05-28-2003	ODOT coordinated survey methodologies for the Small Whorled Pogonia with the USFWS.
06-09-2003	ODOT consultant ESI performed Indiana Bat mist net surveys on the project alternative alignments.
06-30-2003	USFWS provided technical assistance and guidance on surveying for the Small Whorled Pogonia.
06 to 07-2003	ODOT consultant CH2MHill performed a rare plant survey on the project alignments.
07-21-2003	ODOT submitted a letter requesting technical assistance on Indiana Bat surveys.
07-23-2003	USFWS provided a letter of technical assistance on Indiana Bat surveys.
07-26-2003	ODOT consultant ESI performed additional Indiana Bat surveys on the project alternative alignments.
08-19-2003	ODOT submitted to USFWS a preliminary report for the Small Whorled Pogonia.
08-27-2003	ODOT provided the USFWS an update on the Indiana Bat survey.
09-12-2003	The USFWS provided technical guidance on the preliminary Small Whorled Pogonia survey.
11-26-2003	ODOT submitted a survey report for the timber rattlesnake to the USFWS.
04 to 07-2004	ODOT consultant TransSystems performed a wetland delineation on the Preferred Alignment.
06-03-2004	ODOT consultant CH2MHill performed a Small Whorled Pogonia survey.
05-28-2004	ODOT submitted a Preliminary Draft EIS and an Ecological Survey Report for the entire SCI-823-0.00 project (all three phases) to the USFWS, with effect determinations on the Indiana Bat, Small Whorled Pogonia, and Virginia Spirea.
08-25-2004	USFWS provided concurrence with effect determinations on the on Indiana bat, small whorled pogonia, and Virginia spirea, as well as acknowledged ODOT's determination of no impact to the timber rattlesnake, and recommended that the rayed bean and sheepnose mussel be addressed in the EIS. The USFWS also provided technical assistance on the Draft EIS.
03-11-2005	The USDO I provided comments on the Draft EIS.
07-2005	Final Environmental Impact Statement (FEIS) was completed in July 2005.

Date	Coordination Action
06-09-2006	FHWA issued the Record of Decision (ROD) based upon these documents on June 9, 2006.
02-10-2011	Interagency meeting between the USFWS, the FHWA, the USACE, and ODOT indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepnose mussel, pink mucket pearly mussel, fanshell mussel, snuffbox mussel and northern riffleshell mussel (as suitable habitat streams for these species are not known to be within the project area).
05 to 06- 2011	ODOT consultant ASC performed a Running Buffalo Clover and Small Whorled Pogonia surveys on the project site.
05-12-2011	Interagency field review of the project site attended by the USFWS, USACE, and ODOT resulted in the commitment for ODOT to update the inventory of the water resources (stream and wetlands) and terrestrial habitats.
07 to 08-2011	ODOT consultant EnviroScience performed an Indiana bat mist net survey on the preferred alternative site.
08-2011	ODOT consultant ASC performed a mussel survey on the Little Scioto River crossing of the project.
08-16-2011	ODOT coordinated an Ecological Survey Report for Phase 1 of the project with the USFWS.
08-16-2011	ODOT consultant Gregory Lipps performed an Eastern hellbender survey on the site.
11-09-2011	FHWA/ODOT re-initiated informal consultation addressing effects to the federally endangered Indiana bat ( <i>Myotis sodalis</i> ), the federally endangered running buffalo clover ( <i>Trifolium stoloniferum</i> ), the federally endangered clubshell mussel ( <i>Pleurobema clava</i> ), the federally endangered fanshell mussel ( <i>Cyprogenia stegaria</i> ), the federally endangered northern riffleshell mussel ( <i>Epioblasma torulosa rangiana</i> ), the federally endangered pink mucket pearly mussel ( <i>Lampsilis abrupta</i> ), the proposed endangered rayed bean mussel ( <i>Villosa fabalis</i> ), the proposed endangered sheepnose mussel ( <i>Plethobasus cyphus</i> ), the proposed endangered snuffbox mussel ( <i>Epioblasma triquetra</i> ), the federally threatened small whorled pogonia ( <i>Isotria medeoloides</i> ), the federally threatened Virginia spiraea ( <i>Spiraea virginiana</i> ), the federal species of concern bald eagle ( <i>Haliaeetus leucocephalus</i> ), the federal species of concern eastern hellbender ( <i>Cryptobranchus alleghaniensis</i> ), and the federal species of concern timber rattlesnake ( <i>Crotalus horridus horridus</i> ). ODOT coordinated five survey reports discussing potential impacts to federally listed species that may result from the construction of all three phases of the Portsmouth Bypass. Effect determinations on all species were applicable to the Project in its entirety (all three phases).
03-12-2012	USFWS provided concurrence on ODOT's effect determinations on federally listed and



Date	Coordination Action
	proposed species.
3-15-2012	USFWS officially lists rayed bean and snuffbox as endangered.
05-10-2013	ODOT submitted an Ecological Survey Report for Phases 2 and 3 of the project to the USFWS, increasing the estimated forest habitat impacts from approximately 316 acres to approximately 685 acres and reiterating the effect determinations that had been made on November 9, 2011.
09-12-2013	The USFWS provided concurrence on effect determinations, as well as technical assistance and comments on the project.
10-02-2013	USFWS proposed to list the NLEB as endangered under the Endangered Species Act.
11-19-13	ODOT begins the development of a formal conference document with consultant team for coordination of the effects of the Portsmouth project on the NLEB.
01-06-2014	USFWS releases Interim Guidance on proposed listed NLEB.
01-15-2014	ODOT consultant EnviroScience requests recent capture / hibernacula records for the NLEB

## Chapter 2. Federally Proposed and Listed Species and Designated Critical Habitat

### 2.1. Effects Determinations of All Listed Species in the Project Area

Coordination of listed species within the project area included desktop determinations, field population surveys, and effects determinations. Prior to this Biological Assessment, the project's effects on all federally listed species that have potential to occur within the project area have been determined, aside from the newly proposed listed NLEB. Table 2-1 details the effects determinations that have been made for all federally listed species, and records the dates of USFWS's concurrence with those determinations. Copies of relevant coordination correspondence are in Appendix B.

**Table 2-1. Project Effect Determination for Listed Species within Scioto County.**

Common Name	Scientific Name	Federal Listing	Effects Determination	Date of USFWS Concurrence
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Former Species of Concern	No Effect	3/12/2012 9/12/2013
Clubshell	<i>Pleurobema clava</i>	Endangered	No Effect	3/12/2012 9/12/2013
Eastern Hellbender	<i>Cryptobranchus alleganiensis</i>	Species of Concern	No Effect	3/12/2012 9/12/2013
Fanshell	<i>Cyprogenia stegaria</i>	Endangered	No Effect	3/12/2012 9/12/2013
Indiana bat	<i>Myotis sodalis</i>	Endangered	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Proposed as Endangered	Proposed May affect, likely to adversely affect	PENDING
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered	No Effect	3/12/2012 9/12/2013
Pink Mucket	<i>Lampsilis abrupta</i>	Endangered	No Effect	3/12/2012 9/12/2013
Rayed Bean	<i>Villosa fabalis</i>	Endangered	May affect but is not likely to adversely affect	3/11/2005 3/12/2012 9/12/2013
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	Endangered	May affect but is not likely to adversely affect	3/12/2012 9/12/2013
Sheepnose	<i>Plethobasus cyphus</i>	Endangered	No Effect	3/11/2005 3/12/2012 9/12/2013
Small Whorled Pogonia	<i>Isotria medeoloides</i>	Threatened	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	No Effect	3/12/2012 9/12/2013
Timber Rattlesnake	<i>Crotalus horridus</i>	Species of Concern	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013
Virginia Spiraea	<i>Spiraea virginiana</i>	Threatened	May affect but is not likely to adversely affect	8/25/2004 3/12/2012 9/12/2013

## 2.2. Status of the Species

### 2.2.1. NLEB Status

On January 21, 2010, the USFWS received a petition from the Center for Biological Diversity requesting that the NLEB be listed as threatened or endangered. After reviewing all available information on the species, the agency determined that listing the NLEB was warranted. On October 2, 2013, the USFWS published a proposal to list the NLEB as endangered throughout its range under the Endangered Species Act in the Federal Register. The largest decline in species populations has occurred in their northeast range, where declines of up to 100% have been seen (USFWS 2013). As WNS spreads it is anticipated that similar declines will be seen throughout the species range and initial winter counts from 2013 are showing an average decline of 98% in WNS hibernacula (USFWS 2014). The USFWS issued the *Northern Long-eared Bat Interim Conference and Planning Guidance* for Regions 2, 3, 4, 5, and 6 on January 6, 2014.

### 2.2.2. Indiana Bat Status

The Indiana bat was federally listed in danger of extinction in 1967 in the Endangered Species Preservation Act of 1966. The species is listed as endangered under the current act, the Endangered Species Act of 1973, as amended, which protects the species from take and requires all federal agencies to work toward the species' recovery. A plan for recovery of the Indiana bat was first issued in 1983 and was revised in 2007, along with guidance for determining the effect a project will have on the species. At the time of listing (1965) the rangewide population estimate was approximately 883,300 (USFWS 2007). Population counts continued to decrease, reaching their lowest in 2001 at approximately 451,550 (USFWS 2013). Between 2001 and 2007 the population experienced an increase to approximately 590,870, prior to the outbreak of Whitenose Syndrome (WNS). The current population is estimated at approximately 534,200 and further decreases are expected due the WNS (USFWS 2013).

## 2.3. Records of Species and Critical Habitat within Project Area

### 2.3.1. Northern Long-eared Bat Records

As part of the literature review for this document, EnviroScience contacted USFWS biologists Angela Boyer (Columbus Ohio Ecological Services Field Office) and Phil DeGarmo (Frankfort Kentucky Ecological Services Field Office) to determine the most recent recorded occurrences for the NLEB. Because protection of the NLEB was still relatively new, records for the species hibernacula, critical habitat, maternity colonies, and summer captures had not been previously requested from the USFWS and the USFWS was still in the process of compiling NLEB information into a GIS system to facilitate such requests.

Communication with Angela Boyer was initiated to determine records for Ohio. As of January 15, 2014, the only records the USFWS Columbus, Ohio Field Office had on file were the NLEB summer captures from the surveys initiated by ODOT in 2003 for the Portsmouth Bypass Project's feasibility study, and in 2011 on the preferred alignment corridor. Details of the NLEB captures from the 2003 and 2011 surveys are listed in Chapter 3.3 of this document. No NLEB hibernacula were known to occur within 3 miles of the project site. Radio telemetry to track bats and identify roosts was not employed during ODOT's 2003 and 2011 surveys; therefore, no maternity roost sites could be identified during those efforts. Critical habitat for the NLEB has not yet been designated, but no areas of critical habitat are anticipated to be listed near the project area.

Communication with Phil DeGarmo was initiated to assure that no areas of high importance to the species occur just across the Kentucky border in Greenup and Lewis Counties. Kentucky has records of four summer NLEB captures occurring in Greenup County, approximately eight to nine miles from the Ohio border. No NLEB hibernacula or maternity roost sites are known to occur within three miles or more of the project site. At the time of the request, critical habitat for the NLEB had not yet been determined, and it was not anticipated that any areas near the project area would be designated as critical habitat.

### 2.3.2. Indiana Bat Records

To re-assess the records of Indiana bat captures and hibernacula that may occur within the vicinity of the Project, ODOT consulted the GIS database that was provided to them by the USFWS in September 2013. The data shows records of captures and hibernacula east of the project site, at Wayne National Forest, ranging in date from 1998 to 2006. The closest of these records to the project area are a summer capture 5.14 miles from the Project southern terminus and a hibernacula record 10.46 miles from the Project. A record from 1981 of a hibernacula west of the Project, along the Scioto River floodplain was also found. These records have not changed since the USFWS concurred with ODOT's 2013 determination that the Project may affect but is not likely to adversely affect the species.

## 2.4. Northern Long-eared Bat Life History

### 2.4.1. Range and Description

*Myotis septentrionalis* has been recorded to occur across most of eastern North America, from central Quebec, Ontario and the southern half of Manitoba, south through all of the Dakotas, eastern Nebraska, Kansas, and Oklahoma and then east to the Atlantic coast. The southern edge of the range of this species dips south into Alabama, Georgia, and the very tip of the panhandle of northwestern Florida. Along the northern portion of its range, NLEB extends across the central portion of Saskatchewan, the northern half of Alberta, and into the eastern third of British Columbia (Caceres and Barclay 2000).

The NLEB is a medium-sized member of the genus *Myotis* whose range includes the Eastern United States and Canada. NLEB have a medium to dark brown back, wings, and ears, and a medium to light brown underside. The common name of the species is derived from their diagnostic ear length and tragus, when compared to other local members of the genus. The NLEB ears are approximately 14 to 19mm and extend past the nose when laid flat. The tragus is very long and distinctly pointed at the tip, and is usually about 10 to 12cm in length (Amelon and Burhans 2006). Adults of the species weigh between 5 -10 grams, have a total length of approximately 77 to 100mm, a wingspan of between 23 to 26cm, and a 34-39mm forearm length (Caire et al. 1979, Williams and Findley 1979). Females of the species tend to be larger than males (Kurta, 1995).

Two similar members of the genus *Myotis* have ranges that overlap the NLEB, the little brown bat (*Myotis lucifugus*) and the Indiana bat (*Myotis sodalis*). Size, appearance, diet, and habitat are similar for all three species and it is possible that all three can be found in the same habitat areas. The NLEB is distinguished from the other members of its genus by it longer ears with a long pointed tragus. The pelage of the little brown bat is glossy, while the NLEB has a duller brown fur (WIDNR 2013). The Indiana bat has a keeled calcar on its interfemoral membrane that the NLEB and little brown bat lack. The call of the NLEB is higher in frequency than the other two *Myotis*, whose calls greatly overlap. The NLEB has a longer tail and larger wing area than other *Myotis* of the same mass, which is generally associated with their gleaning behavior (Caceres and Barclay, 2000) and their maneuverability during slow flight in spatially complex areas, such as forests (Krynak 2010).

2.4.2. Habitat and Migration

The NLEB hibernates in caves in the winter and migrates to forested areas in the summer to forage and rear young. Table 2.2 details the annual lifecycle.

**Table 2-2. NLEB Annual Life Cycle**

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
All	Hibernation					Hibernation						
	Spring Migration			Summer Roosting/ Foraging					Fall Migration/ Swarming			
Female	Pregnant			Lactation								
Young					Born		Volant					

Generally, NLEB hibernate in caves and underground mines from September to early November through early March to April or May (Caceres and Barclay 2000). Bats rouse either singly or in small clusters and prefer to roost within cracks or crevices in cave walls (Kurta 1994, Caceres and Barclay 2000). Ideal hibernacula characteristics include cool temperatures between 0-9°C (32-

48.2°F), high humidity, and minimal air currents (Caceres and Pybus 1997). The NLEB is more active during hibernation than other Ohio cave bats. Bats have been observed to move between several hibernacula in the winter, but show strong annual fidelity to a winter roosting location (Caceres and Barclay 2000).

Beginning as early as March, but more typically from April to May, NLEB leave their hibernacula for summer roosting habitat. Migration distance is believed to be generally shorter for NLEB than the other local *Myotis*, ranging from 5 to 168 miles, but most often between 56 and 89 miles (Nagorsen and Brigham 1993; Griffin 1945). NLEB tend to utilize edge habitats for migration, choosing to take long routes with partial canopy protection from predators and weather, rather than shorter open routes. This practice is also advantageous for foraging during the migration periods (Limpens and Kapteyn 1991).

Summer roosting occurs from approximately April 1<sup>st</sup> to September 30<sup>th</sup> (USFWS 2014). Male and non-reproductive female NLEB roost individually in smaller trees or in cooler landscape areas, including caves and mines. Reproductive females form small maternity colonies in often larger trees that provide for warmer, pup-rearing conditions. Roost tree selection for the NLEB is more opportunistic than the other local *Myotis* species; males will roost in trees as small as 3 inches diameter at breast height (dbh), as long as the tree exhibits roosting conditions. Generally, NLEB roost trees can be of any species, live or dead, that have exfoliating bark, cracks, or crevices. These habitat characteristics used for roosting are similar for all three *Myotis* species. The NLEB is less selective in that they will use smaller diameter trees, shorter trees, areas of greater canopy cover, and tend to roost more often in cracks and crevices (Foster and Kurta 1999). They are generally prone to use of the interior or intact upland forests. Within the forest, NLEB demonstrate preference for stratum type between the sexes, with males preferring upland near stream corridors and females preferring upland interior roosts (Krynak 2010). During summer roosting, the NLEB will change roost trees every 2 to 5 nights (Carter and Feldhamer 2005; Foster and Kurta 1999; Sasse and Pekins 1996; Timpone et al. 2010). Roost trees often are clustered together and are frequently located a considerable distance away from foraging areas (Sasse and Pekins, 1996). Roost switching is thought to be motivated by limiting parasite loads, lessening predation risks, finding optimum thermal radiation, and abandoning roosts that have shed an excess amount of exfoliating back cover or are at risk of fall (Schultes, 2002). Inter-annual summer roost site fidelity has been recorded in the NLEB for roosting areas, but not necessarily for particular roosting trees (Foster and Kurta 1999; Patriquin et al. 2010). Overall, forested habitat for the NLEB has been characterized as having mixed deciduous species with interspersed open areas with edge habitat for foraging and travel (Owen et al. 2003).

### 2.4.3. Reproduction

The NLEB reproductive cycle includes fall swarming and polygamous mating from mid-August to the end of October, delayed fertilization during hibernation, ovulation and subsequent gestation in the spring, and pup rearing in the summer. Each pregnant female gives birth to a single pup from late May to early July (Owen et. al. 2002; Amelon 2001; Caceres and Barclay 2000). Pups are

born hairless and flightless and are nursed by the mother bat for approximately a month after birth. Pups become volant from about three to six weeks after birth and maternity colonies disperse shortly after and migrate to the fall swarming area/hibernacula (WIDNR 2013). Young bats do not mate before hibernation.

#### 2.4.4. Foraging and Diet

The NLEB is insectivorous and does most of its feeding by using echolocation in flight, which is called hawking. The diet of the NLEB consists mainly of moths (*Lepidoptera*), flies (*Diptera*), and beetles (*Coleoptera*). Unlike other Ohio *Myotis*, the NLEB also utilizes a gleaning foraging strategy, feeding on flightless insects and arachnids from twigs, leaves, and water surfaces (Lee and McCracken 2004). Foraging commences at dusk when the NLEB leaves its diurnal roost, and is bimodal, with a second foraging effort before dawn (Kunz 1973). The main foraging habitat of the NLEB includes upland forested hillsides and ridges (Brack and Whitaker 2001). Although the NLEB will occasionally forage over forest clearings, water or riparian areas, or roadways, they seem to prefer feeding within the canopy of the forest at much lower heights than other *Myotis* (Nagorsen and Brigham 1993).

## 2.5. Indiana Bat Life History

### 2.5.1. Range and Description

*Myotis sodalis* is a member of the genus *Myotis*, is similar in size to the NLEB, was originally listed as in danger of extinction under the Endangered Species Preservation Act of 1966, and is currently listed as endangered under the Endangered Species Act of 1973, as amended. The Indiana bat has a range from eastern Oklahoma, north to Iowa, Wisconsin, and Michigan, east to New England and south to western North Carolina, Virginia, and northern Alabama. The Indiana bat is migratory, and the above described range includes both summer and winter habitat. Major populations of this species hibernate in Indiana, Kentucky, and Missouri, with smaller populations reported in Alabama, Arkansas, Georgia, Illinois, Maryland, Mississippi, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Virginia, and West Virginia. The majority of maternity colonies are located in the glaciated Midwest (NatureServe 2014).

The Indiana bat has soft, dull grayish-chestnut fur, blackish-brown wings and ears, and uniquely pink lips. Adults of the species weigh between 5 -11 grams, have a total length of approximately 75 to 102mm, a wingspan of between 240 to 267mm, and a 35 to 41mm forearm length (Hall 1981, Barbour and Davis 1969). The Indiana bat's ears are approximately 10 to 15mm and do not extend past the nose when laid flat. The hind foot is small (7 to 10mm), has short toe hairs that do not extend beyond the toes, and a strongly keeled calcar.

Two similar members of the genus *Myotis* have ranges that overlap the Indiana bat; the little brown bat (*Myotis lucifugus*) and the NLEB. Size, appearance, diet, and habitat are similar for all three species and all three can be found in the same habitat areas. The Indiana bat is distinguished from

the other members of its genus by its strongly keeled calcar on its interfemoral membrane, lack of longer ears with a long pointed tragus, dull, non-glossy fur, short toe hairs, and pink lips (Barbour and Davis 1969). The call of the Indiana bat has a characteristic frequency 39 to 42 kHz (Szewczak 2011) and greatly overlaps with the call of the little brown bat, making acoustic determination of the species difficult. The NLEB call is higher in frequency than the other two *Myotis*, and is less frequently mistaken for the Indiana bat.

2.5.2. Habitat and Migration

The Indiana bat hibernates in caves in the winter and migrates to forested areas in the summer to forage and rear young. Table 2.3 details the annual lifecycle.

**Table 2-3. Indiana Bat Annual Life Cycle**

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec		
All	Hibernation					Spring Migration		Summer Roosting/ Foraging			Fall Migration/ Swarming		Hibernation	
Female				Pregnant		Lactation								
Young						Born		Volant						

Indiana bats hibernate in caves, underground mines, and more rarely in man-made structures from approximately mid-September to mid-May (USFWS, 2013). The species hibernates in close packed clusters of anywhere from 300 to 500 bats per square foot, but smaller clusters or single roosting bats have been encountered (USFWS 2013). Ideal hibernacula characteristics include cool temperatures between 5-10°C (41-50°F), high humidity, and minimal air currents (Tuttle and Kennedy 2002). Unlike the NLEB, Indiana bats generally do not move between hibernacula in the winter, but will arouse about every 12 to 15 days (Speakman and Thomas 2003). This species generally shows strong annual fidelity to a winter roosting location (LaVal and LaVal 1980).

Generally between March 15<sup>th</sup> and May 15<sup>th</sup> Indiana bats leave their hibernacula for summer roosting habitat, depending on weather conditions. Migration distance varies, but can be over 350 miles (Winhold and Kurta 2006).

Summer roosting occurs from approximately May 15<sup>th</sup> to August 15<sup>th</sup> (USFWS 2014). Male and non-reproductive female Indiana bats are dispersed throughout the range in the summer, roosting individually or in small groups, but may favor areas near their hibernaculum (USFWS 2007). They may use roost trees as small as 5" dbh, but generally choose larger roosting trees. Reproductive females form large maternity colonies that may utilize several trees within a proximity, but with at least one larger tree that has a high degree of solar exposure, which is the primary roost. The



primary roost may hold up to 100 bats and their young (Whitaker and Brack 2002), but the average colony size is 60 to 70 adults (Kurta 2005). The maternity colony will also use several alternate roosts that may provide different conditions, such as shade or temperature variation, in the course of a roosting season. Additionally the colony may fluctuate in population size with members roosting in smaller groups in alternate roosts from time to time during the season (Barclay and Kurta 2007). Roost tree selection for the Indiana bat can be of any species, live or dead, that have exfoliating or peeling bark or cracks. These habitat characteristics used for roosting are similar for all three *Myotis* species. The land use and canopy cover within the vicinity of an Indiana bat roosting area varies greatly. Summer roost site fidelity is very high within this species (USFWS 2007).

### 2.5.3. Reproduction

The Indiana bat reproductive cycle includes fall swarming and polygamous mating from mid-August to the end of October, delayed fertilization during hibernation, ovulation and subsequent gestation in the spring, and pup rearing in the summer. Each pregnant female gives birth to a single pup from June to early July (USFWS 2007). Pups are born hairless and flightless and are nursed by the mother bat for approximately a month after birth. Pups become volant from about three to five weeks after birth and maternity colonies disperse shortly after and migrate to the fall swarming area/hibernacula (USFWS 2007). Young bats do not mate before hibernation.

### 2.5.4. Foraging and Diet

The Indiana bat is insectivorous and does most of its feeding by using echolocation in flight, which is called hawking. The diet of the Indiana bat consists mainly of moths (*Lepidoptera*), flies (*Diptera*), beetles (*Coleoptera*) and Caddisflies, but will incorporate ants or other available insects, making them selective opportunists (Fenton and Morris 1976). The species forages around, not within the forest canopy, generally at heights of 6 to 100 feet above ground level (Humphrey et al. 1977). The main Indiana bat foraging habitat consists of streams associated with floodplain forests, and impounded water bodies where abundant supplies of flying insects are likely found. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation, along the borders of croplands, along wooded fencerows, and over farm ponds in pastures (USFWS 2007).

## 2.6. Detriments to Species

### 2.6.1. White Nose Syndrome

By far the greatest current threat to both the NLEB and the Indiana bat is White Nose Syndrome (WNS). WNS is named for the white, powdery substance noted on the face, tail, and wings of bats infected with the disease. The disease was first discovered in New York in 2006 and spread rapidly to 22 states and 5 Canadian provinces by July 2013 (USFWS 2013). WNS is the primary impetus

for the USFWS listing of the NLEB. Due to the disease, infected little brown bats and NLEB in hibernacula in New York and surrounding states have experienced mortality rates of over 90%, and WNS is estimated to have killed 5.5 million cave-hibernating bats in the Northeast, Southeast, Midwest and Canada since its discovery in 2006.

WNS is caused by a fungus called *Pseudogymnoascus destructans*. This fungus grows best in the cool, wet conditions of hibernacula (Verant et al. 2012). Mortality from the fungus appears to come from increased arousals during torpor, which deplete bats' fat reserves, causing starvation (Reeder et al. 2012) and dehydration (Cryan et al. 2010). WNS is believed to primarily spread bat-to-bat within the hibernacula, but humans can spread the fungus spores on shoes, clothes, and gear when entering caves.

The first confirmed case of WNS in Ohio was reported in an abandoned mine in the Wayne National Forest in Lawrence County in 2011. Currently, 16 counties in Ohio have been confirmed as WNS positive, including Lawrence County in 2011, 5 counties added in 2012 (Geauga, Summit, Cuyahoga, Portage, and Preble), and 10 counties added in 2013 (Medina, Jefferson, Union, Wayne, Ashland, Athens, Clinton, Madison, Warren, and Sandusky) (ODNR 2014).

#### 2.6.2. Other Diseases and Pests

Other infectious diseases observed in North American bat populations include rabies, histoplasmosis, St. Louis encephalitis, and Venezuelan equine encephalitis (Burek 2001). NLEB and Indiana bats are also known to carry a variety of pests including chiggers, mites, bat bugs, and internal helminthes (Caceres and Barclay 2000). None of these diseases or pests has caused the record level of bat mortality like that observed since the emergence of WNS.

#### 2.6.3. Wind Energy Development

The increased development of the wind power industry is another emerging threat to bats. Wind-turbine blades cause mortality through direct impact or through the pressure differential caused by the motion of the spinning blades. This pressure differential causes a bat's lungs to fill with fluid as it flies near the spinning blades, and this phenomenon (known as barotrauma) kills the bat instantly (Baerwald et. al. 2008). Aside from the turbine's direct effect on bats, development may include forest-clearings associated with turbine placement, road construction, turbine lay-down areas, transmission lines, and substations. Current studies suggest that bats face the greatest risk from wind turbines during migration from summer foraging sites to hibernacula (Kunz et al. 2007).

#### 2.6.4. Loss or Degradation of Summer Habitat

Loss of summer roosting and foraging habitat can be attributed to any activity that involves altering forested landscapes such as mining, timbering, prescribed burning and forest management, utility

line construction, transportation construction, housing and commercial development, and agricultural expansion.

Clear cutting and selective cutting practices can affect bats either by directly killing or injuring bats occupying roost trees, if done in the summer months, or by removing a roosting site to which a bat is returning in the spring from hibernation. Although NLEB has been shown to be more opportunistic about the type of roost tree they will utilize (species, size, canopy cover, understory), inter-annual summer roost site fidelity has been recorded in the NLEB (Foster and Kurta 1999; Patriquin et al. 2010) and annual site fidelity is well known for the Indiana bat. Thus, when returning to a previously used roosting site in the spring that has been disturbed, bats will have to seek out new roosts and use up already depleted energy reserves, or may have complications with pup-rearing.

Because roost selection for both NLEB and Indiana bat species is different for reproductive females than males and non-reproductive females, the implications of loss of roosting habitat vary by sex (Krynak 2010). Reproductive females generally form maternity colonies in larger diameter trees that have sufficient solar radiation to promote growth of young, and that are on the interior of contiguous forest tracks. Reproductive females returning to a roost site that has been disturbed could have difficulty relocating to a new habitat with the conditions required for proper pup-rearing. This could cause the bats to deplete their energy reserves before a new roost is located, or could abort the developing fetus due to stress or lack of reserves. Male and non-reproductive female bats, which are not as limited in roost selection, do not have the energetic cost of raising young, and are less affected by loss of roosting habitat. Also, males do not require larger trees with greater solar exposure, and therefore are more able to quickly find a roost site suitable for their needs (Henderson et al. 2008).

Forest cutting can also alter foraging areas of the *Myotis*. The selection of a good roosting site for both males and females is dependent on the availability of good foraging habitat within an appropriate distance to the roost to be used at least twice a night. Removal or fragmentation of forest tracks may detrimentally affect the NLEB feeding capacity, due to their preference for contiguous tracts of forest cover for foraging (Owen et al. 2003). Additionally, forest timbering can have an overall effect on the *Myotis* diet by limiting the number of insect prey in the disturbed area. Loss of foraging areas can also affect bats during spring or fall migration by loss of landmarks that help the bat navigate to hibernacula or summer roosting sites (WIDNR 2013). The loss of forest corridors for migration also decreases the bat's ability to maintain necessary energy reserves to locate summer roosts or to sustain the bat for hibernation. Increased predation could also be a complication of forest loss.

#### 2.6.5. Impacts to Hibernacula

Bats are highly susceptible to mortality when in their winter hibernation state. Modifications to the hibernacula, disturbance by humans, and disturbance to the surrounding landscape can all have detrimental effects on the species.

Disturbances to the physical environment of the hibernacula, such as blockage or alteration of the cave entrance, collapse of a passage in mines, or alteration of lands over the cave can change the very specific microclimate (airflow and temperature) that bats need to maintain their torpor state (Amelon and Burhans 2006).

Additionally, disturbances by humans can detrimentally affect hibernating bats. The primary forms of human disturbance to hibernating bats result from cave commercialization, recreational use, and vandalism. When these disturbances occur, bats often awake from torpor, using up precious fat reserves that they need to sustain themselves through the winter. Too many arousals during hibernation will cause bats to either starve or die of exposure when they leave the cave in search of food to replenish their fat reserves (WIDNR 2013).

#### 2.6.6. Pesticides

Pesticide use by agriculture can have negative effects on bats through direct exposure and through dietary accumulation (O'Shea et al. 2001). Pesticides are a threat to many taxa, but bats may be more vulnerable than other small mammals due to bat longevity and high trophic level allowing pesticides to concentrate in their body fat. Even after pesticide exposure ceases, residues can be passed on to nursing young (Clark 1988). Bat species that migrate long distances may be more affected because pesticide residues become increasingly concentrated in the brain tissue as fat reserves are depleted during long distance flights. This concentration can lead to convulsions and even death (Geluso et al. 1976, Clark 1978).

#### 2.6.7. Predation

Bats face natural predation by forest dwelling animals such as owls, hawks, raccoons, skunks, and snakes, although a limited number of animals consume bats as a regular part of their diet (Caceres and Pybus 1997). NLEB and Indiana bats are known to be affected to a small degree by predators at summer roosts and in flight during foraging and migration. Additionally, predators have been known to enter the winter hibernacula to feed on bats roosting low on the walls. Since bats are not a primary prey source for any known natural predators, it is unlikely that predation has substantial effects on this species at this time.

## Chapter 3. Environmental Baseline

### 3.1. Project Environmental Setting

The project is located in the Shawnee-Mississippian Plateau of the un-glaciated portion of the Appalachian Plateau Physiographic Region. The region is typified by rough, steep, broken, and severely dissected topography within the pre-glacial drainage system. The corridor is characterized by the general absence of continuous ridges due to the highly dissected nature of

the topography. The natural slopes are generally very steep, rising abruptly from the valley bottoms. The project is in the Lower Scioto Dissected Plain and Ohio-Kentucky Coniferous Plateaus Ecoregions.

The project lies within two major watersheds; the Scioto River (HUC 05060002) and the Little Scioto River (HUC 05090103), which both outlet to the Ohio River just south of the project site. Both main stems are listed by the OEPA as Warmwater Habitat, and neither has extensive impairments (OEPA 2012). Wetlands and streams within the project alignment have been delineated and characterized, and the individual results are reported in ESR Phase 1 and Phase 2 and 3 Reports (Early 2011, Early 2013).

Development in the vicinity of the project alignment generally consists of small towns (Lucasville, Minford, and Sciotoville), limited commercial and industrial areas, and individual residences and farms. The majority of existing roadways that intersect the project alignment are two-lane county and township roads that are often steep or poorly maintained.

Water resources in the preferred alignment include wetlands, streams, open waters, and ditches. The majority of wetlands on the site are categorized as Category 1 or 2, but a Category 3 wetland occurs on Phase 3 of the project. Streams within the project area range from ephemeral to large perennial streams, with qualitative ratings of Class I, II, and III Primary Headwater Habitats, and Warmwater Habitat. Both jurisdictional and isolated resources occur on the alignment, and avoidance, minimization, and mitigation measures for the project have been developed to ensure that road construction will not cause a substantial lowering of water quality in the project watersheds.

### 3.2. Existing Land Uses

The proposed impact area consists of approximately 1,400 acres of mixed land use typical of Scioto County. The majority of the area is composed of upland forest with interspersed agricultural, residential, commercial, or previously disturbed lands; as detailed in Table 3-1 and Figures 3a-c; Appendix A.

**Table 3-1. Land Uses in the Project Area**

Resource Type	Size*	Percent of Area*
Upland Forest -UF -(uplands dominated by trees)	773 ac	55.0%
Scrub/Shrub -SS -(true shrubs, and young trees in an early successional stage)	142 ac	11.2%
Grassland/Herbaceous - GH - (new fields, pastures, hay fields)	137 ac	10.7%
Cultivated Crops -CC -(annual crops, all land being actively tilled, and perennial woody crops such as orchards and vineyards)	36 ac	2.8%

Resource Type	Size*	Percent of Area*
Pasture/Hay-PH – (areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 % of total vegetation)	46 ac	3.6%
Developed Open Space -DS -(mown right-of-way, large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes)	109 ac	8.6%
Barren Land (Rock/Sand/Clay) –(barren areas of bedrock, slides, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover)	114 ac	8.9%
Open Water – (generally with less than 25% cover of vegetation or soil)	3 ac	0.2%
Wetland -As defined by the USACE 1987 Manual	12 ac	0.9%
Stream -As defined by the USEPA, OEPA, and USACE	81,611 lf	0.7%

The estimate of forested acreage within the project impact area was calculated using remote sensing techniques on high resolution aerial photography of the project area that was taken in December 2013. This estimate of forested acreage is the most accurate estimate to date, and is higher than estimates reported in the May 2004 Ecological Survey Report that had been coordinated with the USFWS, and lower than a cumulative estimate previously reported from the 2011 Ecological Survey Report for Phase 1 and the 2013 Ecological Survey Report for Phases 2 and 3.

The reason for the increase reported from the May 2004 Ecological Survey Report is outlined in Section 3.1.7 of the Environmental Impact Statement Reevaluation for Phases 2 and 3 of the project (Appendix D). The Ecological Survey Report, prepared in May 2004, reported that 493 acres (53%) of the Portsmouth Bypass project area was standing forest. Of these 493 acres, 370 acres were located within the anticipated construction limits for Phases 2 and 3. The Ecological Survey Report, dated June 20, 2013, reported approximately 688 acres of forested areas will be impacted as a result of Phases 2 and 3 of the project. This was an increase of approximately 318 acres of forested habitat impacts (from 493 acres to approximately 811 acres) between the initial consultation and subsequent reevaluations and consultation. The increase was directly related to an increase in the project footprint as a result of the design build nature of the project. Since Phases 2 and 3 of the project will be developed using the design build process, no detailed designs have been completed, and precise construction limits are unknown (this is not the case for the construction limits for Phase 1 which have been established and have not changed). Therefore, for consultation purposes it had to be assumed that all forested areas within the Phase 2 and 3 right-of-way footprint will be impacted.

As noted, the most recent estimate acreage of forested habitat within the project area is approximately 773 acres. This is a decrease of 38 acres from the estimated reported to the USFWS with the June 20, 2013 Ecological Survey Report. The primary reasons for this discrepancy are private logging activities that have occurred within the proposed project area. The 2011 and 2013 Ecological Survey Reports utilized older aerial photographs to calculate forested area. The older aerial photographs of the site did not depict logging activities that had occurred on properties that overlapped the project area prior to December 2013. While project planning and development was occurring at the time of the logging activities, the properties were in private ownership, and ODOT did not possess any rights over the use or extraction of resources on the properties. ODOT believes that the December 2013 aerial photography represents the most accurate and up to date representation of the forested acreage present within the project area prior to construction. For this reason, the Biological Assessment has used an estimate of 773 acres of forested habitat within the project impact area. Remaining land uses were derived from the ESR Level 2 Reports for Phase 1 and Phases 2 and 3 of this project.

### 3.3. Bat Coordination and Surveys

Inquiries were made to the USFWS in January of 2014 for any record of NLEB hibernacula, critical habitat, maternity colonies, and summer captures on or within the vicinity of the project site. The only known records of NLEB near the Portsmouth Bypass Project were the summer captures from surveys initiated by ODOT in 2003 for the feasibility study, and again in 2011 on the preferred alignment corridor. Details of the NLEB captures from the 2003 and 2011 surveys are detailed in Table 3-2 and Figures 4, 5a-e, and 6 of Appendix A. Currently, there are no records of NLEB hibernacula within 3 miles of the project site. No critical habitat for the NLEB has been designated, as the Service has determined that critical habitat for the species is not determinable at this time. To re-assess the records of Indiana bat captures and hibernacula that may occur within the vicinity of the Project, ODOT consulted the GIS database that was provided to them by the USFWS in September 2013. The data shows records of captures and hibernacula east of the project site, at Wayne National Forest, ranging in date from 1998 to 2006. The closest of these records to the project area are a summer capture 5.14 miles from the Project southern terminus and a hibernacula record 10.46 miles from the Project. A record from 1981 of a hibernacula west of the Project, along the Scioto River floodplain was also found. These records have not changed since the USFWS concurred with ODOT's 2013 determination that the Project may affect but is not likely to adversely affect the species.

Two bat surveys were conducted within the project area; one in 2003 and one in 2011 (ESI 2003, ES 2011; Appendix C). Both surveys were conducted using the respective Indiana Bat survey guidance of the time. Neither survey had Indiana bat captures and both surveys recorded captures of NLEB. The surveys were conducted at net sites that displayed habitat characteristics that were known to be favorable to Ohio *Myotis spp.*: potential flyway corridors within both upland forest sites and bottomland riparian forest sites.

The 2003 survey for Indiana Bats was conducted for the potential bypass corridor alignment alternatives. A total of 83 bats of seven species were captured at 21 net sites. Eight of the captures were determined to be NLEB: one female and seven males. The majority of the NLEB captures were made outside of the preferred alignment corridor, with the exception of a single male adult. The greatest number of NLEB individuals captured in the survey was four, all adult males, at net site 7-2003. This net site is adjacent to the net sites with the most NLEB captures in the 2011 survey. No Indiana bats were captured in the 2003 survey.

The 2011 survey was completed in the selected preferred alternative corridor and included 19 net sites. A total of 121 bats of six species were captured including 31 NLEB: seven female and 24 males. The majority of the NLEB captures were made in Phase 3, at the southern end of the project in the bottomland forest west of OH Route 335. Most of the NLEB captured in this survey were adult males, followed by non-reproductive females. Five juvenile NLEB were also captured; four males and one female. No Indiana bats were captured in the 2011 survey.



**Table 3-2. Northern Long-eared Captures in the Project Area**

Survey Year	Site	Coordinates	Number Captured	Sex	Age*	Reproductive Status**	Site Description
2003 (ESI 2003)	1-2003	38.883556 -82.990639	1	F	A	P	Edge of small upland forest patch on minor slope. Nets placed across small intermittent stream and ATV trail.
	4-2003	38.854167 -82.881667	1	M	A	A	Bottomland riparian forest edge adjacent to forest patch, agricultural field and roadway. Nets placed across intermittent stream.
	6-2003	38.8505 -82.851444	1	M	A	A	Bottomland riparian corridor with thin buffer of forest, adjacent to roadway intersection, residences, and agricultural fields. Nets placed across stream in forest buffer.
	7-2003	38.816333 -82.854833	4	M	A	A	Forested bottomland roadway/ stream corridor adjacent to agricultural fields. Nets placed across shallow gravel stream/road and at end of underpass tunnel.
	9-2003	38.764722 -82.838611	1	M	A	A	Bottomland riparian forest edge adjacent to residences and roadway. Nets placed across intermittent stream.
2011	2-2011	38.896737 -82.9729155	1	F	J	NR	Mid-slope Upland Forest Interior. Nets placed at Intersection of ATV trail and small shallow stream on flyway leading to/away from pond
	3-2011	38.892884 -82.953474	1	M	A	NR	Ridgetop Upland forest track edge, agricultural, clearing, and residential adjacent. Nets placed cross a logging road within woods.
	5-2011	38.870109 -82.936544	1	M	A	A	Upland forest edge on tributaries side slope. Nets placed across intersection of two roads and adjacent to entrenched creek.
	11-2011	38.828371 -82.8529720	1	M	A	A	Bottomland forest. Nets placed across Blake Hollow Road, ~30m west of R.R. overpass/tunnel.
	12-2011	38.821908 -82.8547872	1	M	A	A	Bottomland forest. Nets placed across gravel road within woods and across small pond.
			2	F	A	NR	
			4	M	A	NR	
13-2011	38.816956	1	F	A	NR	Forested bottomland roadway/ stream corridor adjacent to agricultural fields.	

Survey Year	Site	Coordinates	Number Captured	Sex	Age*	Reproductive Status**	Site Description	
2011 (EnviroScience, 2011)		-82.857633	3	M	A	A	Nets placed across shallow gravel stream/road under complete canopy closure, across intermittent stream corridor, and at end of underpass tunnel.	
			1	M	A	NR		
			2	M	J	NR		
	14-2011	38.801159	-82.861964	5	M	A	NR	Forested bottomland roadway/ stream corridor adjacent to agricultural fields. Nets placed across cross gravel stream with closed canopy and intersection of gravel stream and ATV trail.
				3	F	A	NR	
	15-2011	38.800329	-82.8623069	1	F	A	NR	Forested bottomland roadway/ stream corridor adjacent to agricultural fields. Nets placed across cross closed canopy road, gravel stream with closed canopy, and intersection of 2 streams and road.
				1	M	J	NR	
				1	M	A	NR	
	16-2011	38.790128	-82.8653326	1	M	J	NR	Mid slope upland forest. Nets placed cross a logging road within woods.
				2	M	A	NR	
Totals	Female Adults						8	
	Female Juveniles						1	
	Male Adults						26	
	Male Juveniles						4	
	Northern Long-eared Captures						39	
	2003 Captures						8	
	2011 Captures						31	

\*A(dult) or J(uvenile) \*\*N(on)-R(eproductive), A(ctive), P(regnant), L(actating), or P(ost)-L(actating).

## Chapter 4. Project Details

### 4.1. Background

The proposed Portsmouth Bypass is a four-lane, divided, limited-access highway around the City of Portsmouth in Scioto County, Ohio. The highway, to be designated State Route 823 (SR 823), is known as the Portsmouth Bypass and will comprise 16 miles of four lane divided highway. The project will improve travel and regional mobility, avoiding significant numbers of traffic signals, intersections, and driveways over the current 26 mile route using US 52 and US 23. The proposed 16-mile new route is estimated to provide travel time savings of up to 16 minutes per trip over the current route using US 23 and US 52. The large number of access points and traffic signals currently compromise US 23/US 52's ability to safely and efficiently serve its intended function of a primary arterial.

On June 9, 2006, the United States Department of Transportation, Federal Highway Administration (FHWA) issued a Record of Decision (ROD) for the SR 823 Portsmouth Bypass Project, PID 19415. The ROD was based upon the Draft Environmental Impact Statement (DEIS) dated January 2005 and Final Environmental Impact Statement (FEIS) dated July 2005. During the preliminary design phase, the project was divided into three smaller projects for design and construction. The three phases that were used for preliminary engineering, re-evaluating the environmental impacts, and permitting are as follows:

- Phase 1 – Shumway Hollow Road Airport to Lucasville; including three bridges and two interchanges; detailed design has been completed
- Phase 2 – Lucasville Phase 2 is 7.4 miles in length; including ten bridges and one interchange; preliminary design and value engineering completed
- Phase 3 – Sciotoville Interchange near the Scioto County Airport; including six bridges and two partial interchanges; preliminary design and value engineering completed

These three phases are now scoped to be constructed as a single phase, using a design-build-finance-operate-maintain approach.

### 4.2. Construction

Based on an evaluation of innovative construction methodologies, ODOT has made the determination that a design-build-finance-operate-maintain (DBFOM) approach will be utilized to construct the project. With a DBFOM approach, the responsibilities for designing, building, financing and operating are bundled together and transferred to private sector partners.

Due to the DBFOM approach, the entire project will be built in a single phase by one DBFOM team. While the final details of the construction methodologies have yet to be determined, Table 4-1 shows some of the project attributes expected based on the preliminary design and value engineering conducted for the project to date.

**Table 4-1. Project Attributes**

Attribute	Size
Maximum Excavation Depth	211 feet
Maximum Embankment Fill Depth	187 feet
Excavation	Over 20 million cubic yards, with approximately 15% of soil excavation, and 85 % of rock excavation
Embankment	Over 20 million cubic yards
Estimated Surface Area of Roadway and/or Impervious Surfaces Constructed	230 acres
Bridges	21
Depth to deepest culvert	171 feet

#### 4.2.1. Project Timeline and Sequencing

Due to the DBFOM approach, the entire project will be built by the selected DBFOM team according to their timelines and sequencing. As ODOT is currently in the procurement phase for the DBFOM team, the defined construction timelines and sequencing are difficult to predict. Construction may start as early as October of 2014, with the clearing of forested areas, and may be complete by as early as 2020.

#### 4.2.2. Site Preparation

Clearing and grubbing will be necessary for the entire project area and any borrow/spoil areas. Regardless of the DBFOM team selected, adherence with the environmental commitments in the draft re-evaluation documents for the Portsmouth Bypass will be required. In accordance with those environmental commitments, the clearing and grubbing for the project will only occur between September 30 and April 1. It is estimated that all tree removals will be complete by April 1, 2019.

The DBFOM team shall design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants as required under General Permit Authorization for construction stormwater discharges under the National Pollutant Discharge Elimination System

(NPDES). At a minimum, these controls will be designed, installed, and maintained for the following reasons:

- Control storm water volume and velocity within the site to minimize soil erosion
- Control storm water discharges, including both peak flow-rates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion
- Minimize the amount of soil exposed during construction activity
- Minimize the disturbance of steep slopes
- Minimize sediment discharges from the site
- If feasible, will provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state
- Minimize soil compaction and, unless infeasible, preserve topsoil

Permanent and temporary stabilization of disturbed areas will be conducted in accordance with the time frames specified in Table 4-2.

**Table 4-2. Permanent and Temporary Stabilization Requirements**

Area requiring permanent stabilization	Timeframe to apply seed and mulch to reduce erosion
Any areas that will lie dormant for one year or more	Within 7 days of most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within 2 days of reaching final grade
Any other areas at final grade	Within 7 days of reaching final grade
Area requiring temporary stabilization	Timeframe to apply seed and mulch to reduce erosion
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within 2 days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within 7 days of most recent disturbance
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Any dewatering necessary during construction will be managed by appropriate controls to minimize sedimentation and erosion in downstream receiving waters.

As detailed in the Storm Water Pollution Prevention Plan (SWP3) that will be prepared for the project, pollution prevention measures will be designed, installed, implemented, and maintained to minimize the discharge of pollutants from any wash waters. In addition, the exposure of

construction wastes, trash, and other chemicals and materials to storm water will be minimized to the extent possible. Finally, the pollution prevention measures specified will minimize the discharge of pollutants from spills and leaks with the implementation of chemical spill and leak prevention and response procedures.

To facilitate the maintenance of the construction storm water controls, inspections of the sediment and erosion control measures will occur every 7 days, and within 24 hours of a 0.5 inch (13 mm) or greater rainfall event throughout the life of the construction. Documentation of these inspections will be maintained in the SWP3.

ODOT will keep the USFWS apprised of the construction schedule for the project and USFWS will be given the opportunity to conduct periodic site visits to ensure that the site is being monitored and that all BMPs are implemented and functioning properly.

#### 4.2.3. Construction Access and Staging

Construction access, staging areas, and borrow/spoil areas will be determined by the DBFOM team during the design-build process. All documentation and consultant certifications that have been prepared to clear all properties utilized by the DBFOM team outside the project Right-of-Way for all environmental resource impacts will be provided to the USFWS.

#### 4.2.4. Project Area Restoration

The project area will be stabilized with vegetation planting in accordance with the permanent and temporary stabilization requirements in the NPDES discharge permit, detailed above. Temporary fills required in streams to facilitate structure construction or provide construction access will be removed and the areas will be restored to the original grade and vegetated as specified in the permit authorizations from the U.S. Army Corps of Engineers and the Ohio EPA.

### 4.3. Operations and Maintenance

Once the project is completed, the operation of the bypass and routine maintenance activities conducted in the bypass corridor are expected to affect the environment. Impacts are expected from the following:

- traffic
- storm water runoff
- snow and ice removal
- mowing
- herbicide application
- bridge cleaning

- bridge painting
- culvert clean-outs
- ditch maintenance

As indicated previously, all operations and routine maintenance of the Portsmouth Bypass will be conducted and finalized by the selected DBFOM team for the life of the contract. The maximum term of the contract will extend 35 years after substantial completion (open to traffic). The DBFOM team (Developer) is ultimately responsible to ensure environmental compliance during the Construction and Operating Period. The following sections of *The Request For Proposals To Design-Build-Finance-Operate-Maintain Sci-823-0.00 Portsmouth Bypass* address this issue:

- Project Scope, Section 4 (Appendix F) states the Developer is responsible for environmental compliance during the Construction Period and the Operating Period.
- Public-Private Agreement (PPA), Articles 5.2.2 and 5.2.3 (Appendix G) state that the Developer shall prepare application submissions for the Environmental Approvals (other than those required to obtain the Department-Provided Approvals), and shall obtain all other Governmental Approvals required in connection with the Project, the Project Right of Way or the Work (Construction Period and Operating Period). The Department will interface with all applicable Governmental Entities in respect of, and reasonably assist Developer in obtaining, all Environmental Approvals. Prior to submitting to a Governmental Entity any application for a Governmental Approval (or any proposed modification, renewal, extension or waiver of a Governmental Approval or provision thereof), Developer shall submit the same, together with any supporting environmental studies, analyses and data, to the Department for review and comment, unless a different standard of review is expressly provided in the Contract Documents. In addition, PPA Section 5.2.4.5 states that The Department and FHWA will independently evaluate all environmental studies and documents and fulfill the other responsibilities assigned to them by 23 CFR Part 771.
- PPA, Article 5.4.1.5 (Appendix G) states that the Developer shall prepare all information and submissions required by, or necessary to maintain in full force and effect, all Department-Provided Approvals and maintain in full force and effect all Environmental Approvals to be obtained by Developer. The Department shall interface with all applicable Governmental Entities in respect of the maintenance of such Department-Provided Approvals and shall deliver to such Governmental Entities the information and submittals prepared by the Developer following approval thereof and promptly deliver to the Developer any responses or communications applicable to the Work following receipt thereof from such Governmental Entities.
- Project Scope, Section 2.1.5.10 identifies the Developer's Lead Operations and Maintenance Manager as being responsible for environmental compliance following commencement of the Operating Period and interfacing with the Department in compliance with the O&M Work requirements of the Agreement.
- Project Scope, Section 4.2 and 4.3 (Appendix F) indicates that the Environmental Compliance Specialist and Independent Quality Firm (IQF) will be involved during the

Construction and Operating Period. The Environmental Compliance Specialist shall initiate, develop, and administer any new Governmental Approvals, Governmental Approval modifications, and necessary NEPA documentation during the Construction Period and the Operating Period of the Project. Unless specifically stated otherwise, the Department's Office of Environmental Services is responsible for any environmental coordination with the Governmental Entities. The Department's Project Manager is the point of contact.

In addition to the water pollution controls implemented during construction, the project will likely maintain extended detention basins, vegetated filter strips, and vegetated bio-filters as part of the post-construction storm water best management practices (BMPs). These post construction BMPs protect water quality by reducing sediment and pollutant concentrations prior to discharge.

## Chapter 5. Project Action Area

The Action Area includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). The Action Area is defined by measurable or detectable changes in land, air, and water. The Action Area is not limited to the "footprint" of the action and should consider the biotic, chemical, and physical impacts to the environment resulting from the action.

For this project, ODOT has proposed to define the Action Area as the direct project impact area and all areas within a five mile buffer of the outer Portsmouth Bypass Project boundaries (see Figures 6 and 7; Appendix A). A five mile buffer was selected because it is the USFWS estimated home range buffer from known capture sites of the Indiana bat (USFWS 2014) and should reasonably include all potential effects of noise, construction, and effects on water quality. The five mile action area also encompasses the USFWS recognized three mile home range of the NLEB.

The approximate acreage of the project impact area is approximately 1,400 acres, and the acreage of the Action Area defined is 160,738 acres. Forested area that occurs in the project impact area is estimated at 773 acres, and the total forest occurring in the Action Area is 97,506 acres; the percentage of direct impact the Portsmouth Bypass Project will have to forested area within the action area is 0.79%. Wetlands, streams, and open water areas within the project impact area amount to approximately 12 acres, 81,611 linear feet, and 3 acres, respectively. Wetlands, streams, and open water within the action area are estimated at 760 acres, 436,986 lf, and 620 acres, respectively.



## Chapter 6. Effects Analysis

In evaluating the effects of the action, Section 7 of the Endangered Species Act and the implementing regulations (50 CFR §402) require the USFWS to consider both the direct and indirect effects of the action on the species, together with the effects of other activities that are interrelated or interdependent with the action that will be added to the environmental baseline. Direct effects are those effects that have immediate impacts on the species or its habitat while indirect effects are those that are caused by, or will result from, the proposed action and are later in time, but are still reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for project justification. Interdependent actions are actions that have no independent utility apart from the action under consideration. The effects evaluation is necessary to make the required determination under 7(a)(2), ensuring that the Federal action does not jeopardize the continued existence of the species or result in the destruction or adverse modification of designated critical habitat.

The analytical approach of the effect analyses was to identify the following: (1) the environmental consequences to which NLEB and Indiana bats will be exposed, (2) which individuals may be exposed and when (males vs. maternity colonies), and (3) how these individuals will respond upon exposure. Once it was understood how exposed individuals would likely respond in terms of reproduction and survival, it was determined whether the collective responses would affect the survivorship and reproductive potential of the populations to which they belong (i.e., maternity and winter colonies). This analysis, based on the data, demonstrates that reductions in survivorship and reproductive potential are unlikely to occur. Once it was understood how exposed individuals will respond, it was assessed how these responses affect their fitness and ultimately the reproduction, numbers, and distribution of the species range-wide. In general, the environmental consequences associated with implementation of proposed project include the following: permanent loss of roosting and foraging habitat, temporary reductions in water quality, and disturbance from human presence. There are no known hibernacula within the Action Area, so impacts to NLEB and Indiana bats during the winter are not anticipated and will not be analyzed in this determination.

### 6.1. Direct Effects

#### 6.1.1. Loss of Northern Long-eared Bat Summer Roosting Habitat

The direct effect of the project on NLEB summer roosting is that upon the species return to the landscape from hibernation, roosting sites the species may have used in previous years will have been partially or fully cleared. Approximately 55% of the project impact area consists of forested vegetation, and approximately 773 acres of forest will be eliminated for this project. Foster and Kurta, 1999, stated that NLEB show an inter-annual fidelity to roosting sites, meaning that NLEB that had used forest on the project as roosting in previous years will likely return to the area to

roost, forage, and rear young. In this scenario, NLEB will be forced to alter their breeding, feeding, and sheltering patterns if substantial portions of their home ranges are modified. Until the bats locate another desirable roost tree, some individuals may be subject to increased stress resulting from having to search for a replacement roost tree, which increases energy expenditure and risk of predation. Additionally, displaced bats may have to roost in alternate trees that are less effective in meeting thermoregulatory needs. It is not known how long or how far NLEB will search to find new roosting habitat if their traditional roost tree is lost. The effects of the search can be compounded by stress from the energy demands of migration because it will occur in the spring, when fat reserves are low or depleted. This could expose them to an increased risk of mortality and/or failed reproduction.

In order to ensure that no direct take of summer roosting NLEB occurs during project forest clearing, ODOT has committed to perform tree clearing activities outside of the period federally considered the NLEB summer roosting season (April 1 to September 30). Clearing will most likely occur over multiple years depending on the phased construction timeline, but no trees greater than 3 inch dbh will be cleared within the seasonal restriction. Since no NLEB winter activity is known to occur on-site, avoidance of habitat impacts during the NLEB potential presence should ensure that any roosting trees or foraging areas on the project site being utilized by the NLEB will be left undisturbed until their fall migration and exit from the project vicinity (see Mitigation and Minimization Strategies section).

The direct effects of loss of roosting sites differ by sex in NLEB, due to specific habitat requirements of reproductive females versus males and non-reproductive females. Upon returning to cleared traditional roosting sites, reproductive female NLEB will have to expend time and energy to search for a new roosting site that offers the requirements of pup-rearing, which includes protective cover, thermoregulation characteristics, size to accommodate the colony, availability of secondary or alternate roost trees, and access to sufficient foraging and drinking opportunities. In the interim of this search, females may have to roost singly, rather than with their colony, until the colony can attain roosting cohesiveness at an alternative roosting site. Roosting singly decreases the likelihood of the female meeting thermoregulatory needs, thereby reducing the potential for reproductive success. The effort will place additional stress on pregnant females at a critical time when fat reserves are low or depleted, they are already stressed from the energy demands of migration and pregnancy, and food availability is unpredictable. Pregnant bats not only need to secure sufficient food to maintain their body weight and temperature, they also need to support a growing fetus or pup. Effects to the displaced reproductive population could include delayed fetal development, fetal abortion, and reduced body condition.

Proposed clearing on the project site is linear in nature, and the potential for affecting the entirety of any existing maternity roosting sites is low since capture data suggests only occasional use by potential maternity individuals. Additionally, the Action Area contains a high abundance of forest and the proposed clearing only accounts for 0.79% of forest in the Action Area, and 1.34% of the forested area within the home range of any NLEB residing within the project area. For these reasons, reproductive females should either not experience a total loss of roosting sites or should not have extreme difficulty in locating an alternate colony site. Although the proposed loss of summer roosting habitat may adversely affect the reproductive population, it is unlikely that the response of individual females will rise to the level of failed reproduction or death.

Adult male and non-reproductive female NLEB may also be exposed to loss of roosting habitat upon return from hibernation. In general, effects on these individual bats would be less severe than the effects associated with individuals of maternity colonies. Adult male and non-reproductive female NLEB are not subject to the physiological demands of pregnancy and rearing young. Males and non-reproductive females typically roost alone and are more opportunistic in roost selection. Because these individuals are not functioning as members of maternity colonies, they do not face the challenge of reforming as a colony. Additionally, energy demands and reserves are not being used at the increased rate, as with pregnant females. Therefore, it is anticipated that adverse effects to non-reproductive bats will be less than the effects to reproductively active females.

The population model currently estimated to be using the project impact area was derived from surveys conducted for Indiana Bat in 2003 and 2011 (Brack 2003, Schwierjohann 2003, ES 2011). In these surveys a total of 39 NLEB were captured on a total effort of 40 net sites in the action area (Figures 4, 5a-e, and 6; Appendix A). A total of 24 of the 40 net sites were directly in the project impact area. Of the 40 net sites surveyed, 14 sites captured NLEB (11 of the 24 sites within the impact area). Of the 39 total NLEB captures, 31 captures were male and nine were female. Only one female showing evidence of reproduction (pregnant) was captured in the 2003 survey and no reproductive females were captured in the 2011 survey. Additionally, 34 of the 39 captures were adults. The five juvenile captures were made in late July and early August, most likely not indicating newly volant individuals or proximity to a maternity area.

A mist-net survey is not designed to determine all individuals utilizing an area, but to give a general census of the population. Based on the low number of reproductive females captured during this survey, maternity colonies do not appear to be regularly using the project area for roosting sites. Male and non-reproductive female NLEB appear to be using the site for foraging and potentially for roosting areas.

The majority of NLEB captures were made in an approximately 1.75 mile section of the project area that ODOT has identified as the High Capture Area (Figure 5e; Appendix A). Of the 39 NLEB captures made in the two surveys, 32 were made in this area. This area is in the northern section of Phase 3 of the project, and is characterized by undulating upland and bottomland forest with slight fragmentation of local roads, residences, and open fields. This area represents the most contiguous forest tracks that will be impacted by the project. All of NLEB captures made in this area were males and non-reproductive females. The area contains many headwater tributaries to the Little Scioto River, and most of the captures were made along these small to medium riparian corridors. This area is believed to be serving as a foraging ground for non-reproductive NLEB. No evidence of reproductive females was found at these sites; however the presence of 3 juvenile males indicates the possibility of a maternity area within the surrounding landscape. It is also possible that non-reproductive NLEB are using the area for roosting, but no evidence of roosting maternity colonies was found. Clearing of this area will likely adversely affect foraging capabilities, and roosting potential of non-reproductive NLEB.

Given the amount of habitat that will be lost relative to what is available in the Action Area, and given that the loss will not be concentrated in any one area, but along a linear corridor, we believe it is unlikely that quality and quantity of habitat will be reduced to the extent that reproductive or survival consequences are incurred. Therefore, we believe the adverse effects of the project from tree removal during the non-active period for NLEB will adversely affect the species, but will not rise to the level of jeopardy.

#### 6.1.2. Loss of Northern Long-eared Bat Summer Foraging Habitat

The forest clearing proposed for the project will also affect the NLEB by altering existing foraging areas. The selection of a good roosting site for both males and females is dependent on the availability of good foraging habitat within an appropriate distance to the roost to be used at least twice a night. Removal or fragmentation of forest tracts may detrimentally affect the NLEB feeding capacity due to their preference for contiguous tracts of forest cover for foraging (Carroll et al. 2002, Owen et al. 2003, Patriquin and Barclay 2003). NLEB whose foraging areas occur entirely or mostly in the project area or whose foraging areas will be significantly fragmented due to the project, will have to expend an increased amount of energy to establish new foraging areas as well as travel corridors between roosting and foraging. Bats in this scenario could be adversely affected due to displacement from their home range and thus incur decreased fitness. The severity of this effect depends on the needs of the individual, the ability to establish new successful foraging areas, the ability to travel unharmed to new foraging areas, and the continued availability of prey and water sources.

As with roosting habitat, the needs and preferences of female versus male and non-reproductive female NLEB differ in scope and intensity. Reproductive female NLEB have much higher energy needs than males in the spring, due to pregnancy, then a much higher foraging need into later summer for lactation demands of young. Once pups become volant the mother must ensure that there is adequate foraging habitat for young in the vicinity of the roost, where new flyers can become proficient and have enough cover to protect them from predators. Male and non-reproductive NLEB have much less demanding energy needs in the roosting season, but are still affected by loss of foraging habitat by stress and energy expenditures for locating new habitats. The project clearing activities will occur along a linear corridor and the effects to any particular existing foraging areas NLEB may be using are expected to be low. Additionally, the high amount of forested habitat in the surrounding Action Area should ensure that NLEB will be able locate and regularly utilize foraging habitats that meet their needs.

Another consequence of forest clearing can be inter- and intra-specific competition with other bat species that occupy the same roosting and foraging habitats. In the preferred habitat of NLEB and in areas such as the project site, Indiana bats (*Myotis sodalis*), little brown Bats (*Myotis lucifugus*), big brown bats (*Eptesicus fuscus*), red bats (*Lasiurus borealis*), Tri-color bats (*Perimyotis subflavus*), evening bats (*Nycticeius humeralis*), silver-haired bats (*Lasionycterus noctivagans*), and hoary bats (*Lasiurus cinereus*) may be present on the landscape. Depending on the overall landscape conditions, an overlap of the foraging habitat of any of these bats may occur. When

prey resources become limited it is possible that other species could out-compete this species, and NLEB may suffer starvation as a consequence. Additionally, in years of drought, bats are drawn together to remaining water resources and suffer competition and possible dehydration. Due the availability of forested area and water resources in the Action Area outside of the impact area, the effects of competition are believed to be minimal. Impacts to the NLEB prey supply due to impacted water quality will be discussion in Section 6.3.1 of this document.

As detailed in the previous section, the findings of mist net surveys conducted in the project impact area suggest that the main population dynamic of NLEB using the site for foraging habitat are males and non-reproductive females. Additionally, the concentration of this utilization appears to be in the area we have deemed as the High Capture Area. A loss of this foraging area will have adverse effects on these NLEB, but because of their less stringent energy demands, their greater ability to adapt to new habitat, and the high amount of alternative foraging areas in the Action Area, it is anticipated that they will have little difficulty establishing new foraging grounds.

## 6.2. Indirect Effects

### 6.2.1. Loss of Indiana Bat Summer Roosting and Foraging Habitat

A little over half the project area currently consists of forested area (773 acres). The forest maturity, topographic situation, and fragmentation level varies throughout the proposed corridor and ranges from immature upland areas to mature second-growth bottomlands. A majority of the impact area forest is considered potential summer roosting and foraging habitat for the Indiana bat. As a result of project construction this acreage will be permanently lost and therefore the project construction will have an indirect effect on the species by way of potential habitat loss.

Existing records of Indiana bat summer captures and winter hibernacula do not occur on or in the vicinity of the project site, and the two surveys conducted on the areas of the site that displayed the best potential for Indiana bat utilization failed to result in an Indiana bat capture. This result indicates the probable absence of the species or its presence in low density in the project vicinity. However because habitat that could be used by future populations will be lost, the project will affect the species ability to colonize this area. In the scope of the action area the loss of potential habitat caused by project construction will only account for 0.79% of the forested area (773 of 97,506 acres). The forest clearing will occur along the proposed corridor, which consists mainly of already fragmented forested patches and will not affect or further fragment a large forested track to a noticeable degree.

To ensure that no direct take of the species results from project construction, ODOT has committed to seasonal tree clearing. This will ensure that any populations that were not recorded previously and may currently use the forested areas of the proposed project corridor will not be on the landscape during tree clearing activities. Indiana bats have been shown to exhibit strong roost site fidelity and it is unlikely that new populations have entered the project area since the 2011 survey, or that they will colonize the area during construction of the project, but seasonal tree clearing should assure that no effect to potential summering individuals will occur.

Additionally, potential foraging habitat will be lost during project tree clearing. Research has shown that the Indiana bat prefers to forage around the forest edge, particularly in bottomland riparian areas and forested closed canopy corridors (Humphrey et al. 1977; Kurta 2005; USFWS 2007). Several of these features exist within the proposed project impact area and were netted without Indiana bat capture during both the 2003 and 2011 surveys. Within the five-mile action area surrounding the site there is a large amount of the preferred foraging areas for the species with portions of the Scioto, Little Scioto, and Ohio Rivers and their tributaries remaining largely forested. The loss of potential foraging habitat for the species is minimal and is not anticipated to affect summer foraging success.

### 6.2.2. Impacts to Water Quality

Earthwork and general road construction activities will result in short-term adverse impacts to the water quality in the Action Area. Road construction will result in permanent impacts to 10.428 acres of wetlands and 3.741 acres of ponds through fill activities, and 76,964 linear feet of stream habitat through permanent discharges (by relocating or converting streams through drainage structures). Sediment, herbicides, and other contaminants could affect water quality through erosion, vegetation management, and accidental spills during any phase of the project from construction to operation. These impacts will primarily be localized (i.e., limited to the construction limit footprint), but may extend for some distance downstream, depending on intensity of disturbance and field conditions at the time of construction.

Insects associated with these aquatic habitats make up a portion of the diet of the NLEB and Indiana bat; a change in water quality can affect the prey base of these species. Decreases in water quality through contamination and the destruction of wetlands and stream habitats while NLEB are present will reduce the availability of aquatic insects and reduce the availability or quality of suitable drinking sources.

In general, adverse impacts to the water quality of streams during construction are not expected to be substantial, and can be minimized through strict adherence to Best Management Practices (BMP's) during daily construction activities. Chapter Four: Project Details includes a number of measures to be performed to both minimize and offset the impacts to water quality during all phases of the project. These measures can substantially reduce the extent of impacts to water quality from the project.

Additionally, water resources in the Action Area include the Ohio River, the Scioto River, the Little Scioto River, and the vast network of headwater and main tributaries, wetlands, and open water features that drain to these rivers from the hills and valleys surrounding the site (Figure 7; Appendix A). NLEB that currently use the project site for foraging and water supply should not have difficulty locating alternate sources of hydration and prey.

Direct adverse effects to NLEB from this decrease in aquatic insect prey and drinking sources is likely to be undetectable due to the linear nature of the project, the availability of suitable habitat in the surrounding Action Area, and the assumption that bats will use or seek alternate areas for foraging and drinking as some areas become unsuitable. The Action Area will continue to provide an abundant prey base of both terrestrial and aquatic insects during project construction, operation, and maintenance. Therefore, any potential effects of lowered water quality are anticipated to have a minor effect on NLEB, making them seek alternate foraging and drinking locations. Since Indiana bats were never found on the site it is assumed that the temporary disturbance of water quality will not affect the species.

### 6.2.3. Impact of Construction Activity and Noise While Bats are Present

In addition to the habitat impacts in the project alignment, the proposed project may result in increased disturbance in the action area during construction from the use of equipment and blasting. As a result, NLEB in the action area will be indirectly exposed to noise levels, or intensity of noise and vibrations that they may not have experienced in the past, depending on the proximity of their roost sites to other human activities. The highest project noise levels are expected to occur during clearing, when no NLEB should inhabit the action area, and during construction activities, which will be conducted year round until project completion. An additional increase in noise level will accompany the completed project in the form of traffic flow.

A short-term ambient noise level survey was conducted for the proposed alignment in 2002 and 2003 (CH2M Hill 2003) to establish a pre-construction noise level baseline. The survey found that existing noise levels in the alignment were well below the noise abatement criteria (NAC); noise levels that, when approached or exceeded, require the consideration of traffic noise abatement measures. CH2MHill then did traffic counts and assessed existing peak-hour traffic noise levels at the roads currently being used to travel this area (US-23, US-52, and Lucasville-Minford Road). The resultant peak-hour traffic noise levels and traffic volumes were then input into Traffic Noise Model program designed to determine the estimated noise levels. When the estimated noise levels were compared with the NAC, it was found that over 50% of the surveyed areas would experience noise impacts. The noise level anticipated during project operation is around 60.9 dBA. This would noticeably increase the noise around the project to a distance of about 400 ft based upon the typical reduction level of noise over distance.

In general, the increased noise and vibrations could cause disturbance to NLEB unaccustomed to these impacts while roosting and thereby lower the suitability of habitat adjacent to the project area. Owen et al. 2003 found that NLEB prefer roosting sites on the interior of forest tracts. Similar findings (Henderson et al. 2008) for NLEB foraging areas support the NLEB preference for less fragmented forest to edge habitats as flyways. Because selection of roosting and foraging sites for NLEB will most likely be greater than 400ft away from the project impact limits, any impact resulting from noise and vibrations related to construction activities would be expected to result in bats selecting roost trees further from the disturbance in habitat. For this reason, it is anticipated that increases in noise impact associated with the project may cause short-term, nuisance-level

adverse impacts in the immediate project vicinity and will not detrimentally affect the species. Since Indiana bats were never found on the site it is assumed that the temporary disturbance of construction will not affect the species.

### 6.3. Interrelated and Interdependent Actions and Activities

Construction of a bypass will likely increase mobility throughout the area, and therefore spur development, as is the intended goal of the Appalachian Regional Commission's Appalachian Highway System initiative and ODOT's Access Ohio plan. The intent of these programs is to provide a transportation infrastructure to impoverished areas to promote economic growth and attract industrial investments to the area. Because of this, future industrial development in the Action Area is reasonably plausible, particularly in the vicinity of the Ohio River. Although no current commitments by industry have been made for the area following bypass construction, industrial development affecting the habitat of the NLEB and potential habitat of the Indiana bat could be an effect of bypass construction.

In addition to industrial development, a level of commercial development is anticipated at proposed exit ramps of the bypass. The communities surrounding the preferred alignment are small and have few businesses that would accommodate travelers, such as gas stations, restaurants, hotels, and shopping. Three full interchanges to existing local roads and two partial interchanges are proposed for the project, including one for the Portsmouth Regional Airport. It is reasonable to assume that an increased level of commercial development will follow the construction of the bypass in these areas, although no plans are known at this time.

With the increased access to a highway infrastructure and the potential for increased industrial and commercial growth in the area, it is also reasonable to assume that residential development along the bypass will increase as well. The Action Area currently contains many sparse individual residences and clusters of residential housing around existing roadways, as is typical of rural areas, but increased access to the highway could attract additional residents and commuters.

Increased development in any area creates the need for increased utility systems to facilitate electric, gas, phone/cable, water, sewer use to a larger customer base. If creation of the bypass increases industrial, commercial, or residential development, it is reasonable to assume that utility line expansion will be necessary in the Action Area.

All of these potential effects of bypass construction are interdependent of the project, because the construction of the bypass may facilitate economic growth in the area. It is impossible to predict how the bypass construction will ultimately affect the land use outside the direct impact footprint, but it is reasonable to assume that some degree of additional NLEB and potential Indiana bat habitat destruction will occur. These effects should be minor and confined mostly to previously developed areas. Any project that would cause a significant loss of NLEB and potential Indiana bat habitat would likely require coordination with the USFWS, independent of the bypass project.



## 6.4. Cumulative Impacts

At this time ODOT is unaware of any other tribal, state, local, or private actions presently occurring or that are reasonably certain to occur in the future, which would destroy, modify or curtail the remaining NLEB and Indiana bat summer habitat within the Action Area. Therefore, we do not anticipate significant cumulative effects from the proposed action, combined with other reasonably foreseeable non-Federal actions.

## 6.5. Conservation Measures and Minimization Strategies

### 6.5.1. Water Resource Conservation Measures and Mitigation

The project will mitigate for impacts to jurisdictional waters in accordance with federal and state requirements. Although impacts to wetlands and streams will cause an initial lowering of water quality within the watershed, the long-term effects of mitigation should preserve and enhance habitat for the NLEB using this region, as well as any Indiana bats that may come to use the region, thereby minimizing impacts to the species.

ODOT will be securing wetland credits at a 1.5-2.5:1 ratio, depending on the impacted wetland's quality and vegetation type. All wetlands located on the mitigation sites will meet or exceed existing wetland characteristics, including forested wetlands. Mitigation for stream impacts will be done at a 1.5:1 ratio, either as preservation of equal or higher quality streams or restoration of existing degraded streams, and will include both the preservation and restoration of forested riparian buffers. All mitigation areas will be preserved in perpetuity, insuring the continued preservation of the resources and allowing for the continued use of the areas by the NLEB and the potential use by the Indiana bat. The current conceptual stream mitigation plan, for Phases 2 and 3 contains several potential stream preservation and restoration sites within three miles of one or more of the NLEB captures associated with the surveys done for the project. These areas are located within the home range of the NLEB that were captured within the project area, and would provide preserved suitable habitat for the species if these sites are selected as part of the final stream mitigation. In addition, the current stream mitigation plan for Phase 1 of the project includes the preservation of approximately 170 acres of high quality forested habitat along stream corridors at a location in Adams County within the Scioto Brush Creek watershed, approximately 20.7 miles west of the project. While this site is not within the home range of any known capture records for either the NLEB or the Indiana bat, the area possesses suitable summer roosting and foraging habitat characteristics for both species. The total acreage of forested riparian restoration and preservation that will be completed as part of the stream mitigation for the project is yet to be determined. However, any forested areas restored or preserved for stream or wetland mitigation will provide suitable roosting and foraging habitat for the NLEB, and will be in addition to the areas preserved for the species as described in section 6.5.3 of this Biological Assessment. Further details on the stream and wetland mitigation components of the project, and the aspects of those

components that will also provide benefit to the NLEB through the preservation, restoration, or enhancement of forested habitats, will be provided to the USFWS as they are developed.

Some areas found to contain high quality or sensitive resources have been deemed “no build” zones, and no impacts will occur in these areas. These areas are depicted in Figures 3d-3g of Appendix A and will continue to provide habitat for the species within the right-of-way following construction.

### 6.5.2. Seasonal Clearing

ODOT has committed to perform tree clearing activities outside of the period considered the NLEB and Indiana bat summer roosting season (April 1 to September 30). Clearing will most likely occur over multiple years depending on the phased construction timeline, but no trees greater than 3 inch dbh will be cleared within the seasonal restriction.

### 6.5.3. Bat Habitat Conservation

To further ensure that no long-term detriment to the NLEB occurs as a result of the project, ODOT is proposing to preserve forested habitat at a ratio of 1:1 (acres) for forested impacts on the entire project site. This proposed conservation ratio was developed to be protective of the NLEB and should be relatively conservative (in favor of the species), since the NLEB was primarily found to utilize only a small portion of the project area for maternity use (Figure 5e; Appendix A), and suitable forested habitat for the NLEB will also be preserved and restored in conjunction with the stream and wetland mitigation activities being completed for the project (refer to section 6.5.1 of the Biological Assessment).

Forested acreage on the proposed alignment that may be impacted as a result of bypass construction was calculated to be 773 acres from December 2013 aerial photographs. Therefore, a minimum of 773 acres of forested land, which has been found to provide summer roosting and foraging habitat for *Myotis*, will be preserved in perpetuity. At the current time, the exact location of the proposed conservation commitments is still to be determined and all proposed habitat preservation sites will be coordinated with the USFWS. However, the following criteria will apply to the land that is being conserved specifically for the NLEB (these same criteria would not necessarily apply to the areas discussed in section 6.5.1 of the Biological Assessment);

- Conservation efforts will be focused, but not limited to, areas within 5 miles of the Portsmouth Bypass project, as this area has been defined as the action area of the project. However, any property with suitable NLEB habitat in the state will be considered, with priority given to sites closer to the Portsmouth Bypass project.
- Preference will be given to larger properties that provide high value conservation on a landscape scale.
- No property will be considered for this task that is already understood to be protected (e.g., parkland, nature preserve, etc.)

- Properties under consideration will contain a positive detection survey for NLEB. In accordance with the NLEB Interim Conference and Planning Guidance, methods used to determine presence of the NLEB will follow any of the acceptable methods in the Indiana bat Summer Survey Guidance or any future revisions of that or subsequent guidance.
- Properties that have severed interests with respect to mineral rights, oil/gas leases, timber rights, or similar, that would conflict with the conservation values of the properties, will not be considered.
- All property(ies) obtained for this purpose will be protected in perpetuity with an appropriate site protection legal instrument and will include provisions for long term stewardship/management.

The anticipated schedule for completion of the bat habitat conservation is as follows:

- Conceptual Conservation Plan due by November 1, 2015
- Final Conservation Plan due by June 1, 2016
- Completion of project (including all property acquisition, recording of site protection legal instruments, any restoration activities) by June 1, 2017

#### 6.5.4. Bat Habitat Enhancement

In addition to the preservation of forested habitat, ODOT is proposing to construct up to 12 bat condominiums suitable for use as summer roosting habitat for the NLEB. While it has yet to be determined where these artificial bat habitats will be placed, it is anticipated that they will be located within existing parks or preserved lands owned and maintained by conservation minded organizations within Ohio.

#### 6.5.5. Environmental Compliance Monitoring

According to the terms of the agreement between ODOT and the DBFOM team for the Portsmouth Bypass, the DBFOM team shall provide an Environmental Compliance Specialist, who shall report to the DBFOM team. The Environmental Compliance Specialist shall be pre-qualified in all the ODOT environmental categories. In addition to the requirements for pre-qualification, the Environmental Compliance Specialist shall have experience in environmental compliance and be familiar with permitting requirements in Ohio for such areas as NPDES Permits and Waste Discharge Requirements (WDRs), Clean Water Act (Section 404 and Section 10), Ohio Environmental Protection Agency (OEPA) Section 401 Water Quality Certification, Threatened or Endangered Species, Section 106, Section 4(f), Section 6(f), regulated materials, groundwater, and Governmental Entity coordination. The Environmental Compliance Specialist shall be the point of contact for the DBFOM team regarding environmental regulatory issues.

The Environmental Compliance Specialist shall supervise or conduct all Work during the Construction Period and the O&M Work during the Operating Period, necessary to ensure compliance with all Environmental Commitments, regulations, and permit requirements.

The Environmental Compliance Specialist shall prepare and administer a system for documenting and verifying that the project is in compliance with all environmental commitments and permit requirements. This system shall be known as the Environmental Compliance Management Plan (ECMP). It is expected that the ECMP will be user-friendly, web-based, and linked to the Department's Environmental Commitment Achievement Tracking system (ECAT). The ECMP will contain a way to track progress and include the necessary inspection schedules, maintenance checklists, timelines, and standards to assure compliance on all Environmental Commitments and permit requirements. Oversight for Environmental Commitment and permit compliance during the Construction Period and Renewal Work during the Operating Period will be conducted by the IQF. The DBFOM team shall not proceed with activities that do not meet the Environmental Commitments. The ECMP should be applicable throughout the Term of the Agreement. The ECMP will establish the approach, requirements, and procedures to be employed to protect the environment, both during the Construction Period, as well as during the Operating Period.

All documentation and consultant certifications prepared to clear all properties utilized by the DBFOM team outside the project right-of-way for all environmental resource impacts prior to the beginning of work must be provided to the USFWS.

#### 6.5.6. Storm Water Management

Impacts associated with erosion and sedimentation caused by demolition and construction activities will be minimized by implementation of Best Management Practices (BMPs). An Erosion and Sediment Control Plan utilizing BMPs will be implemented throughout the duration of construction/demolition work to prevent adverse sedimentation effects to water quality and aquatic/terrestrial habitats in the project area. The DBFOM team shall prepare a Storm Water Pollution Protection Plan (SWPPP) in accordance with the NPDES Permit that is signed and sealed by an Engineer who maintains a current certification as a Certified Professional in Erosion and Sediment Control (CPESC). Earth disturbing activity will not be permitted prior to the OEPA issuance of a Facility Permit Number and fully executed NPDES Permit. The temporary sediment and erosion control as outlined in the SWPPP will be in place prior to the initiation of any earth disturbing activity. All temporary sediment and erosion control work will comply with the requirements of the NPDES Permit. The DBFOM team will perform the required NPDES Permit inspections and prepare the NPDES Inspection Reports. The DBFOM team's staff preparing NPDES Inspection Reports will update, amend, and revise the SWPPP as the DBFOM team's operations and site conditions warrant.

The DBFOM team shall design Post Construction BMPs to meet the requirements of the NPDES permit.

6.5.7. Bridge Inspection

Prior to the removal of bridge structures, the underside will be carefully examined for the presence of bats. Should any bats be found roosting on the underside of the bridge, the DBFOM team is required to notify the Engineer for coordination with ODOT- Office of Environmental Services (614-466-7100).

6.5.8. Construction BMPs Near Waters

To minimize impacts to water quality, materials utilized in or adjacent to streams, wetlands, and ponds on this project for permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Cadmium, chromium, arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in wetlands and streams. Additionally, the DBFOM team will provide and maintain an oil spill kit with a minimum capacity of 65 gallons. The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream, wetland, and ponds. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours.

## Chapter 7. Effect Determinations

**Table 7-1. Effect Determination**

Common Name	Species Name	Federal Listing Status	Effects Determination
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Proposed for Listing as Endangered	No jeopardy / Provisional may affect, likely to adversely affect
Indiana Bat	<i>Myotis sodalis</i>	Endangered	May affect, not likely to adversely affect

### 7.1. Northern Long-eared Bat Effect Determination

No NLEB hibernacula were identified within a ten-mile range of the project site and similarly no critical habitat for the species occurs in the project vicinity, to date. Direct captures of NLEB were made in 2003 and 2011 on the proposed construction corridor, affirming the species summer presence.

A total of 39 NLEB were captured at 14 of the 40 net sites on two surveys (2003 and 2011) in the action area; 24 of the 40 net sites were directly on the project impact area. Of the 14 sites that captured NLEB, 11 were within the impact area. Of the 39 NLEB captures, 31 were males and nine were female. Only one female showing evidence of reproduction (pregnant) was captured during either survey. Additionally, 34 of the 39 captures were adults.

A mist-net survey is not designed to determine all individuals utilizing an area, but to give a general census of the population. Based on the low number of reproductive females captured during this survey, maternity colonies do not appear to be regularly using the project area for either roosting sites or foraging corridors. Male and non-reproductive female NLEB appear to be using the site for foraging and potentially for roosting areas.

The majority of clearing associated with the Portsmouth Bypass construction will most likely destroy foraging and roosting habitats of male and non-reproductive female NLEB, although some clearing will likely destroy areas providing roosting and foraging habitat for maternity colonies. Additionally, clearing will further fragment forested tracks in the Action Area, cause temporary lowering of water quality and reduction of prey, and a long-term increase in traffic noise. Because the Action Area is composed of a majority of forested land, and construction clearing will only account for 1.34% of forest in the Action Area it is anticipated that NLEB, upon return from hibernation, will be able to find alternative roosting and foraging sites within the Action Area with only minor disruption. These disruptions to NLEB will be further minimized over the life of the project by ODOT's commitment as part of the project for the preservation of forested habitats in the region.

Based on the analysis in this assessment it has been determined that the Portsmouth Bypass Project **will not jeopardize the continued existence of the Northern Long-eared Bat**. In the likely event that the species becomes listed prior to completion of the project, a provisional effects determination has been made that **the project may affect Northern Long-eared Bat, and is likely to adversely affect the species**. The minimization and mitigation strategies outlined in this conference document will be implemented in an effort to offset potential adverse impacts to the species.

## 7.2. Indiana Bat Effects Determination

No Indiana bat hibernacula were identified within a ten-mile range of the project site, no summer captures were made in surveys conducted in 2003 and 2011, and no critical habitat for the species occurs in the project vicinity. The USFWS concurred with an effects determination of may affect not likely to adversely affect the species initially on August 25, 2004, then again on March 12, 2012 and September 12, 2013.

Based on previous coordination with USFWS regarding the impacts the proposed project will have on the Indiana bat and the analysis in this assessment it has been determined that the Portsmouth Bypass Project **may affect the Indiana bat, but is not likely to adversely affect the species**.

The minimization and mitigation strategies outlined in this document will be implemented in an effort to ensure continued potential habitat is available for the species.

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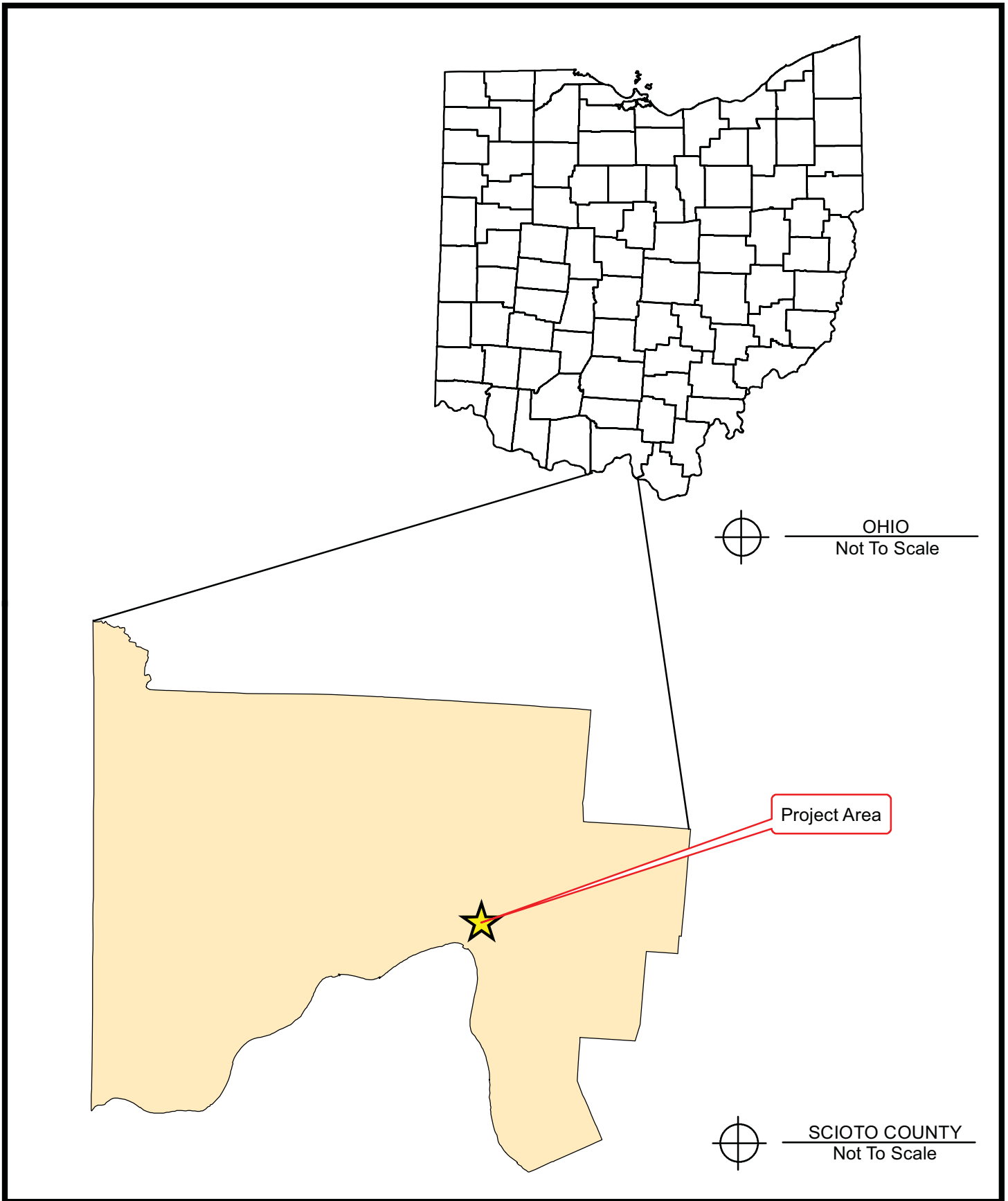
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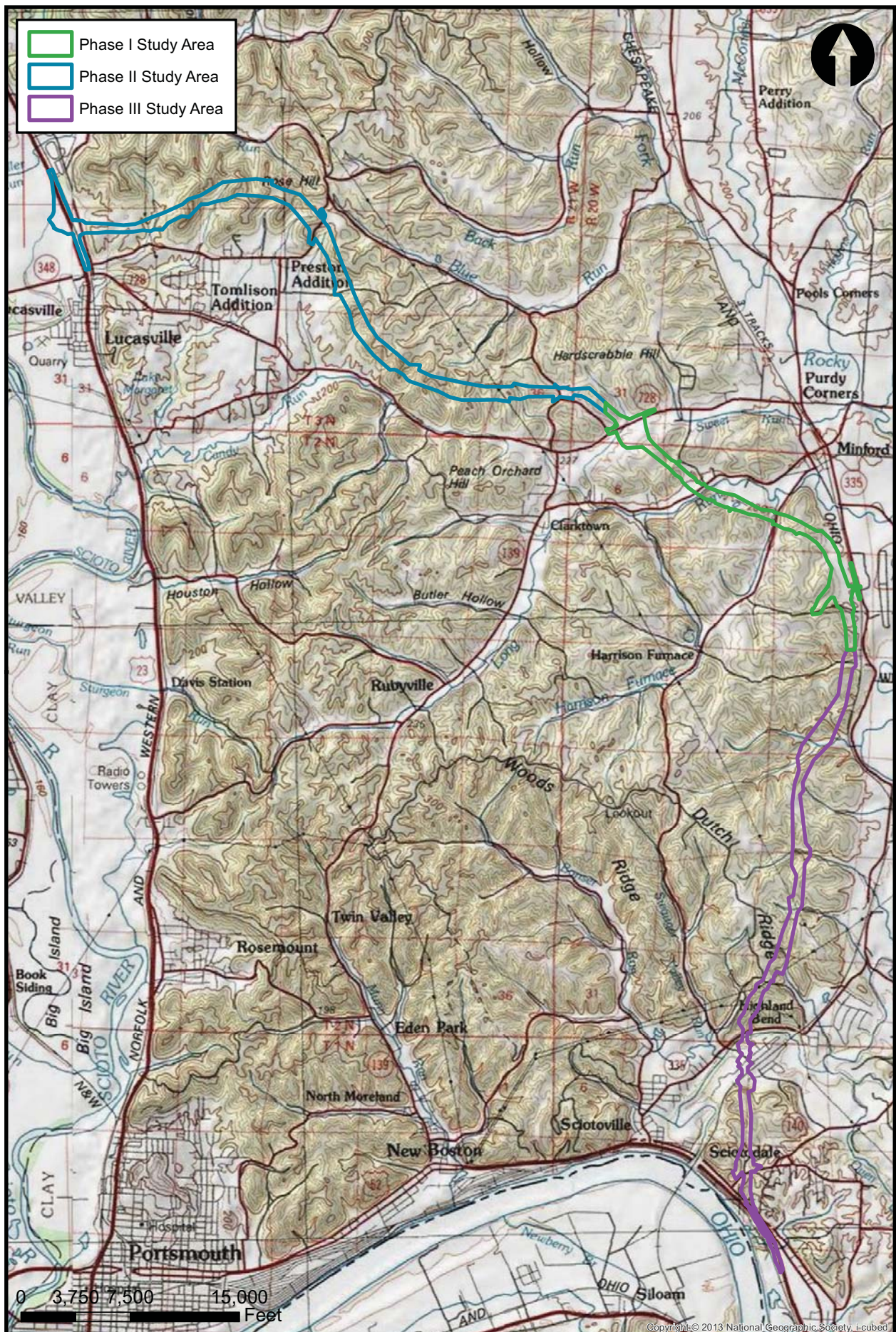
# Appendix A: Figures



> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH  
Figure 1. County Location Map - Scioto County



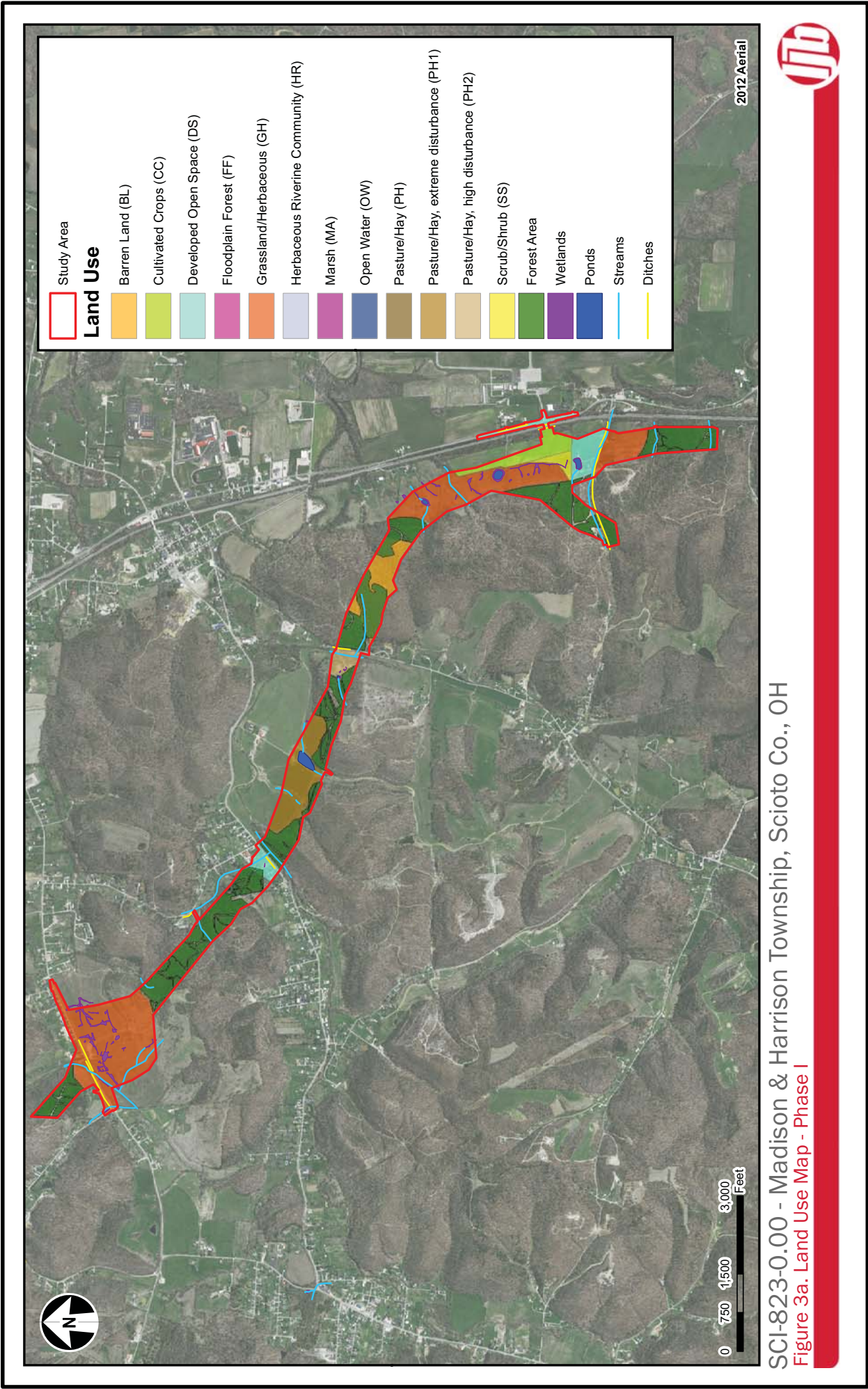




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 Figure 2. USGS Topographic Map - New Boston, Minford, Lucasville, & Wheelersburg, OH Quadrangles



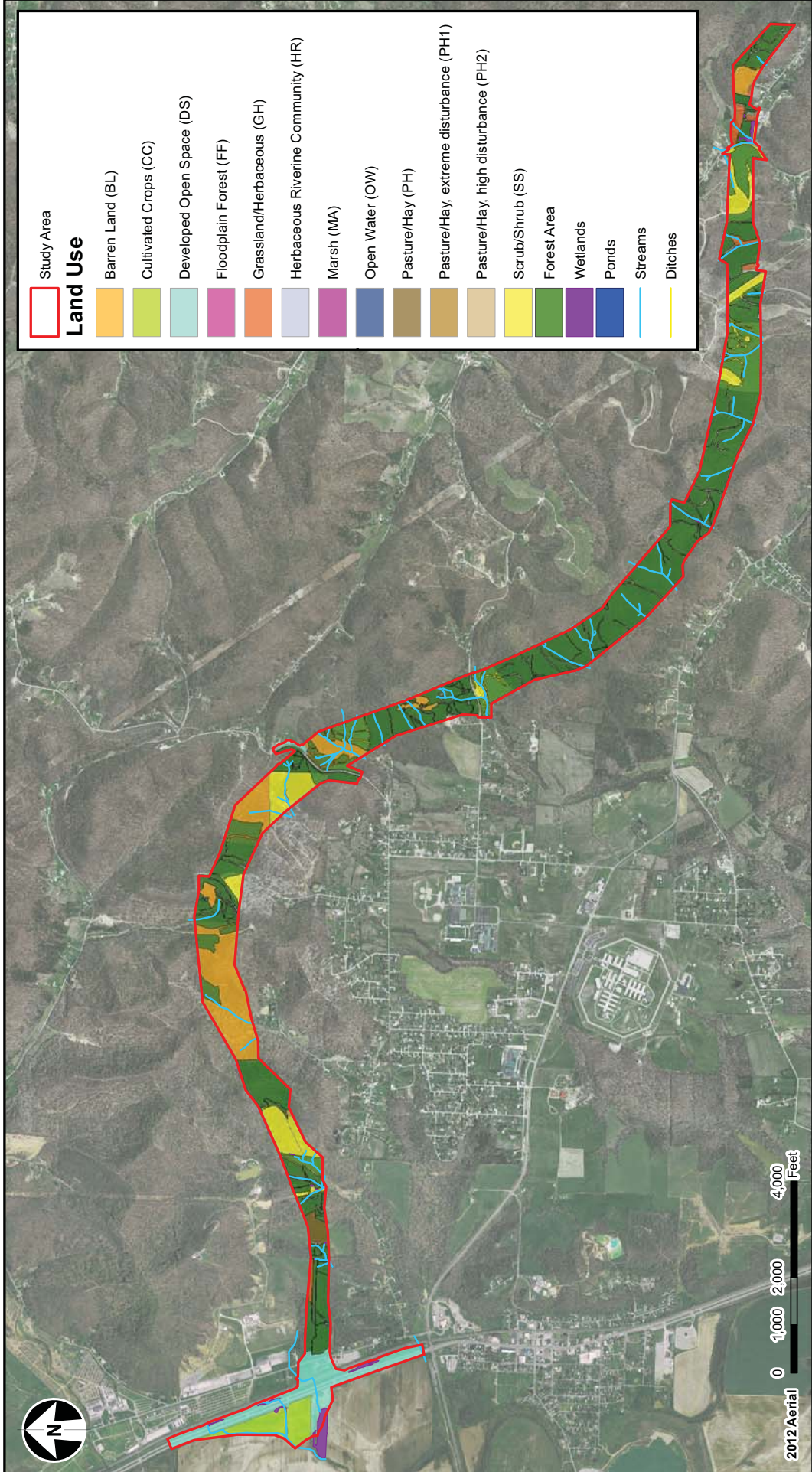




SCI-823-0.00 - Madison & Harrison Township, Scioto Co., OH  
 Figure 3a. Land Use Map - Phase I



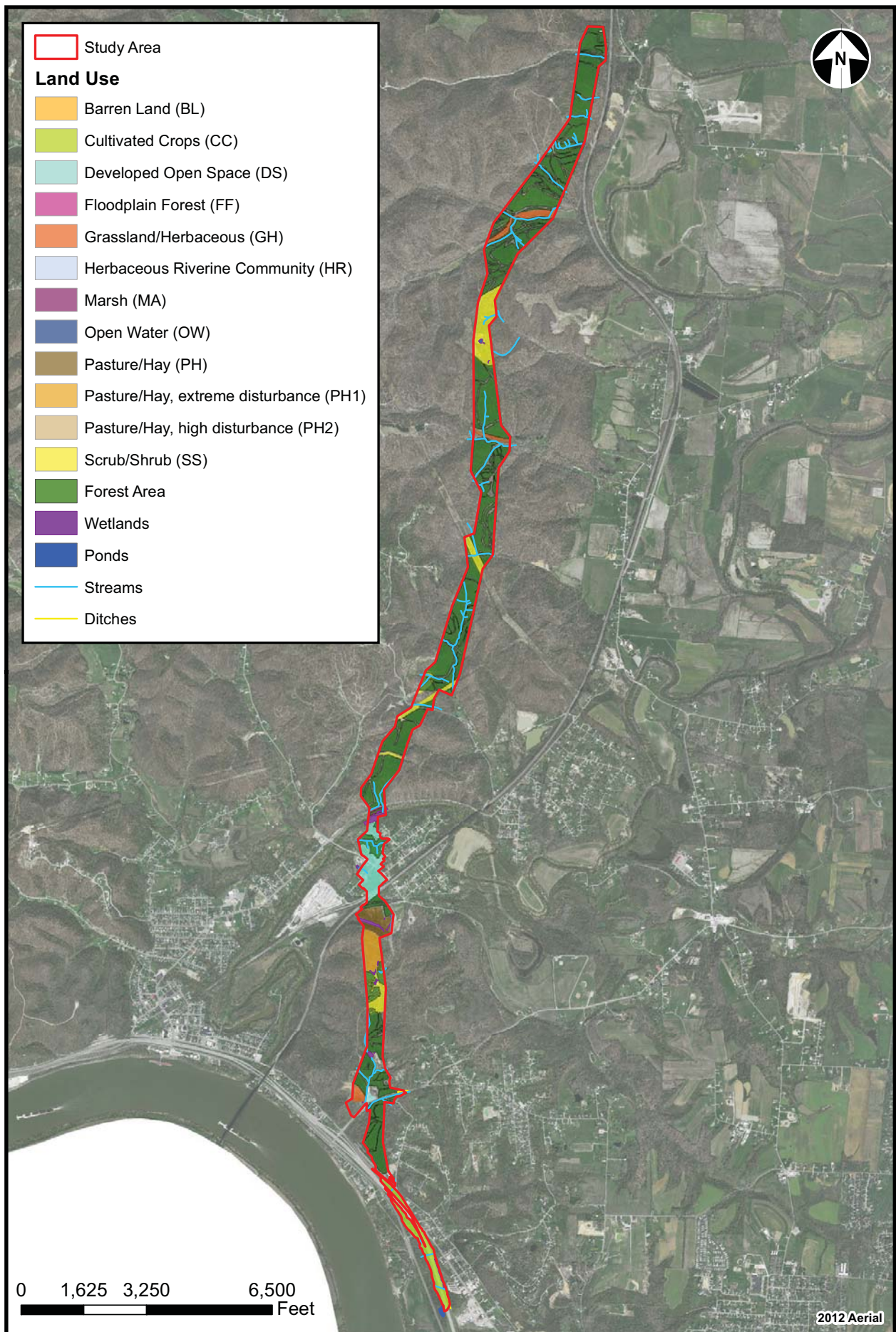




SCI-823-0.00 - Valley & Jefferson Township, Scioto Co., OH  
 Figure 3b. Land Use Map - Phase II



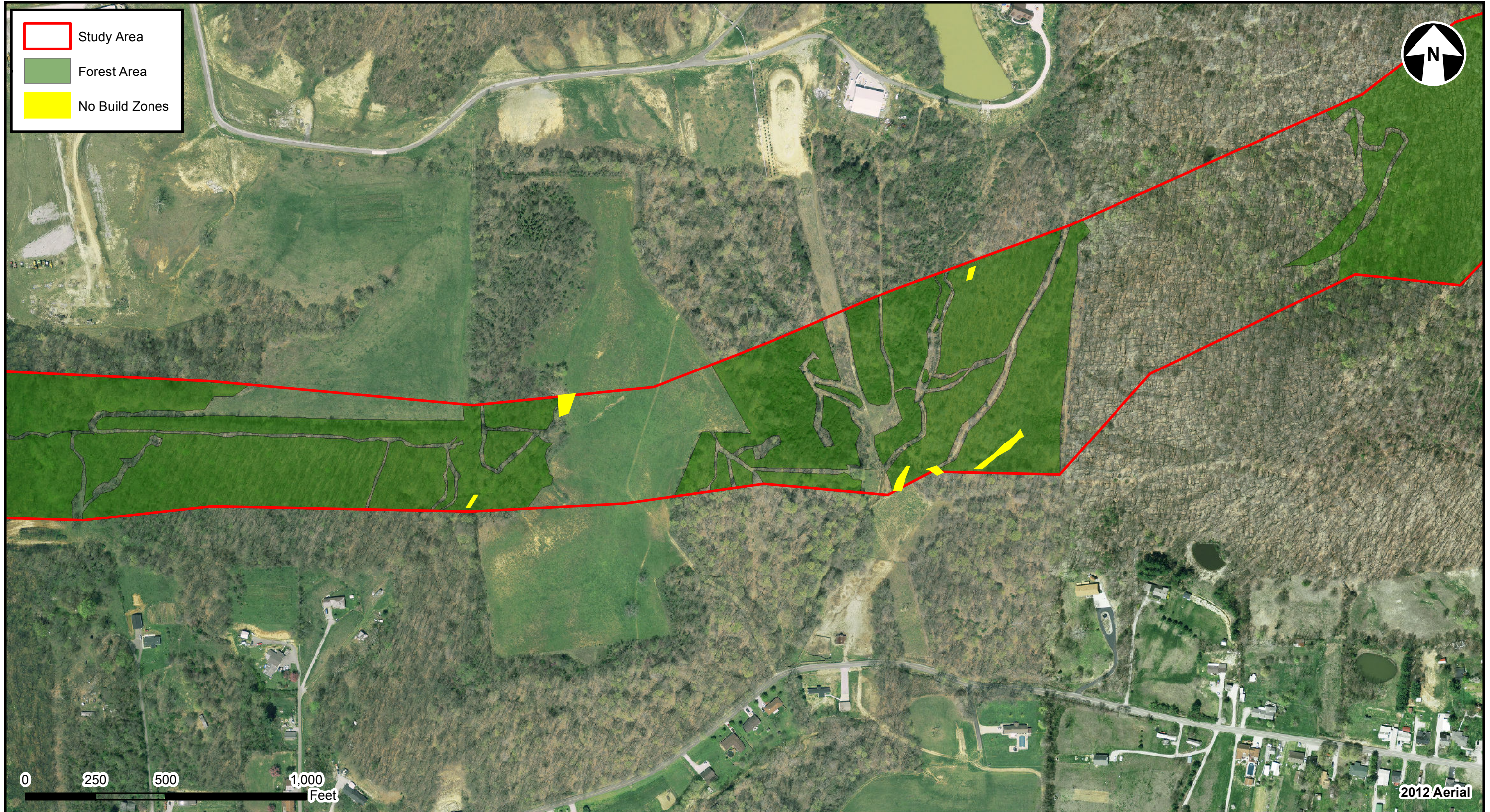




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 Figure 3c. Land Use Map - Phase III



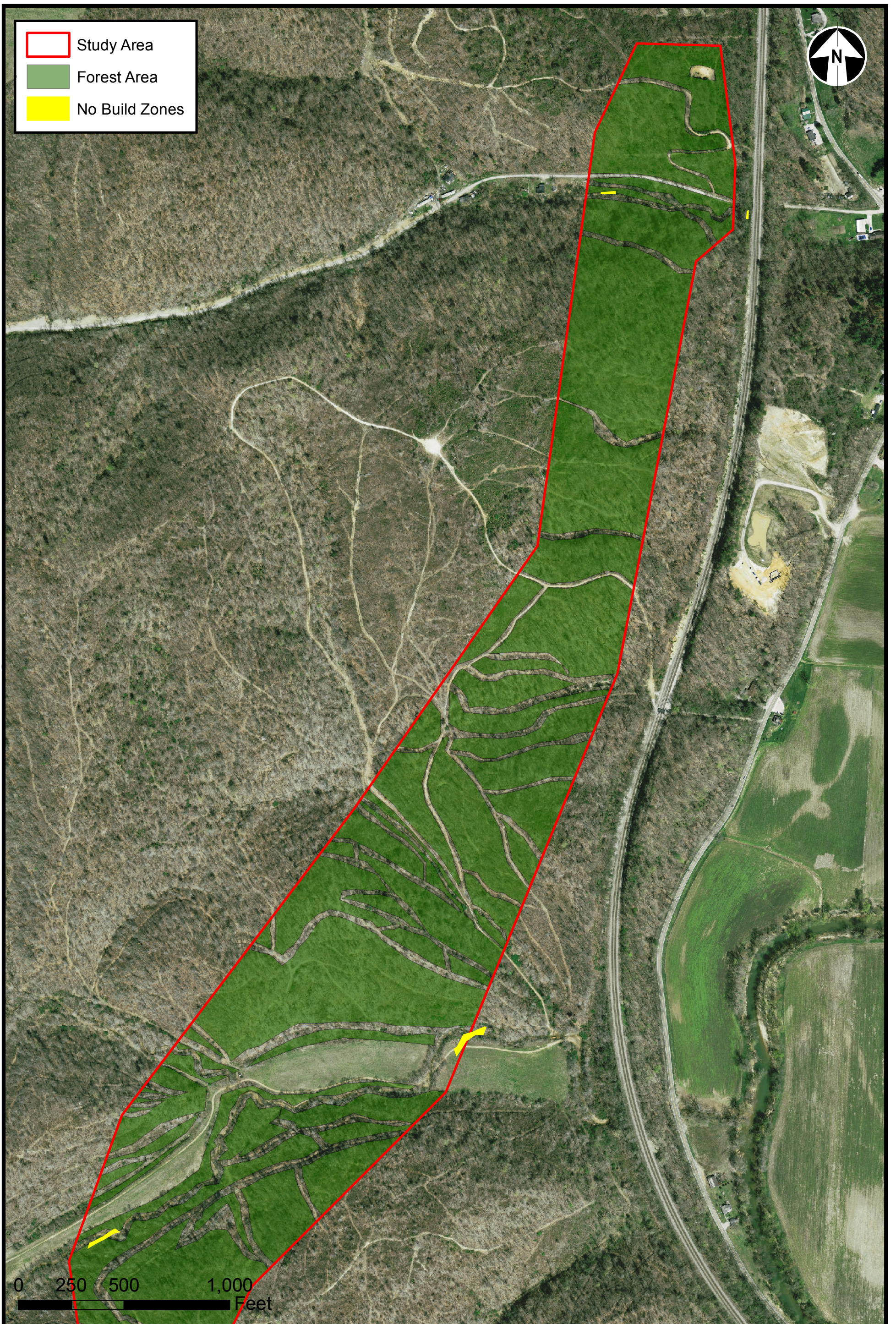




SCI-823-0.00 - Valley & Jefferson Township, Scioto Co., OH  
Figure 3d. No Build Zones - Phase II







> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH  
Figure 3e. No Build Zones - Phase III - North







> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH  
Figure 3f. No Build Zones - Phase III - Central



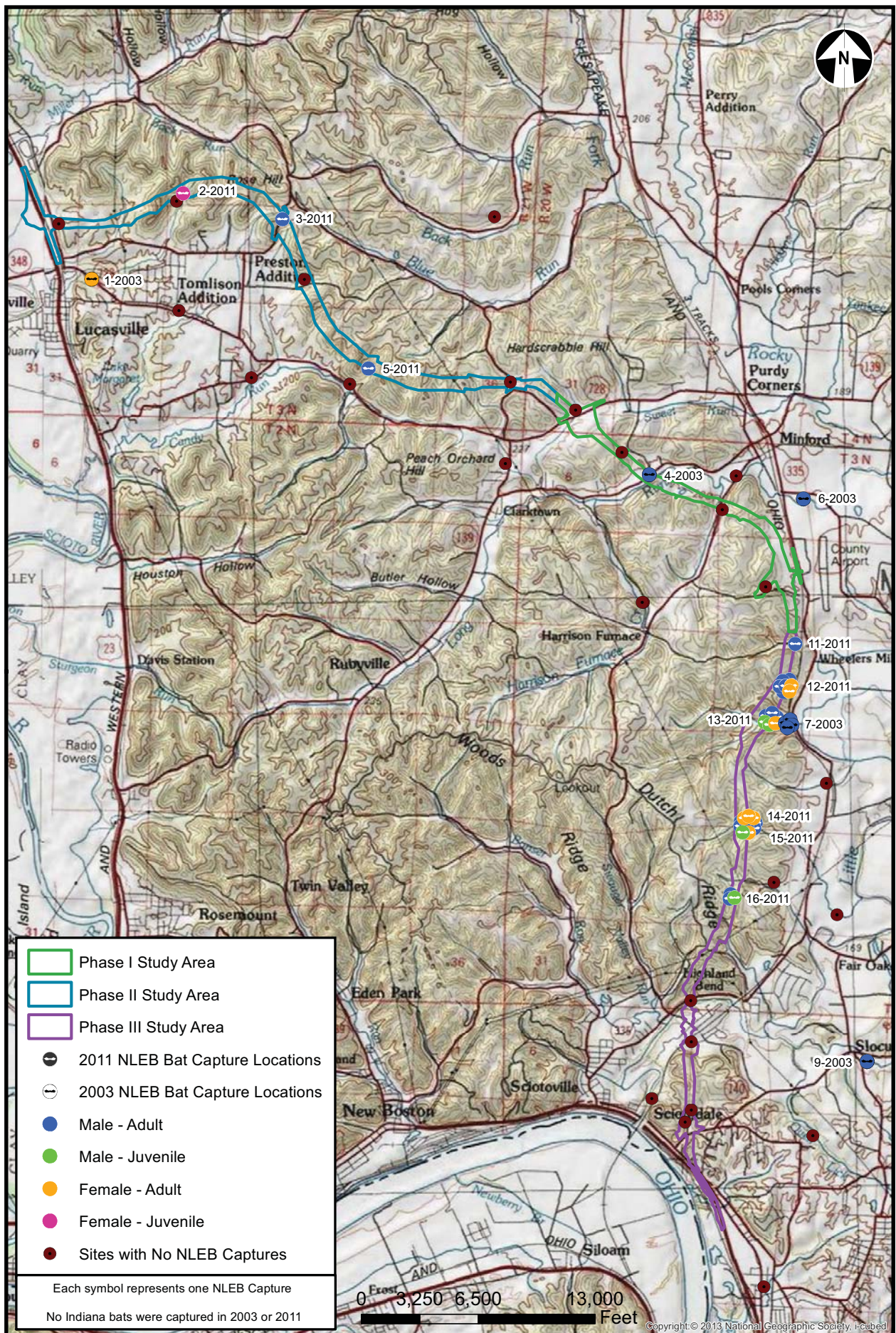




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Figure 3g. No Build Zones - Phase III - South





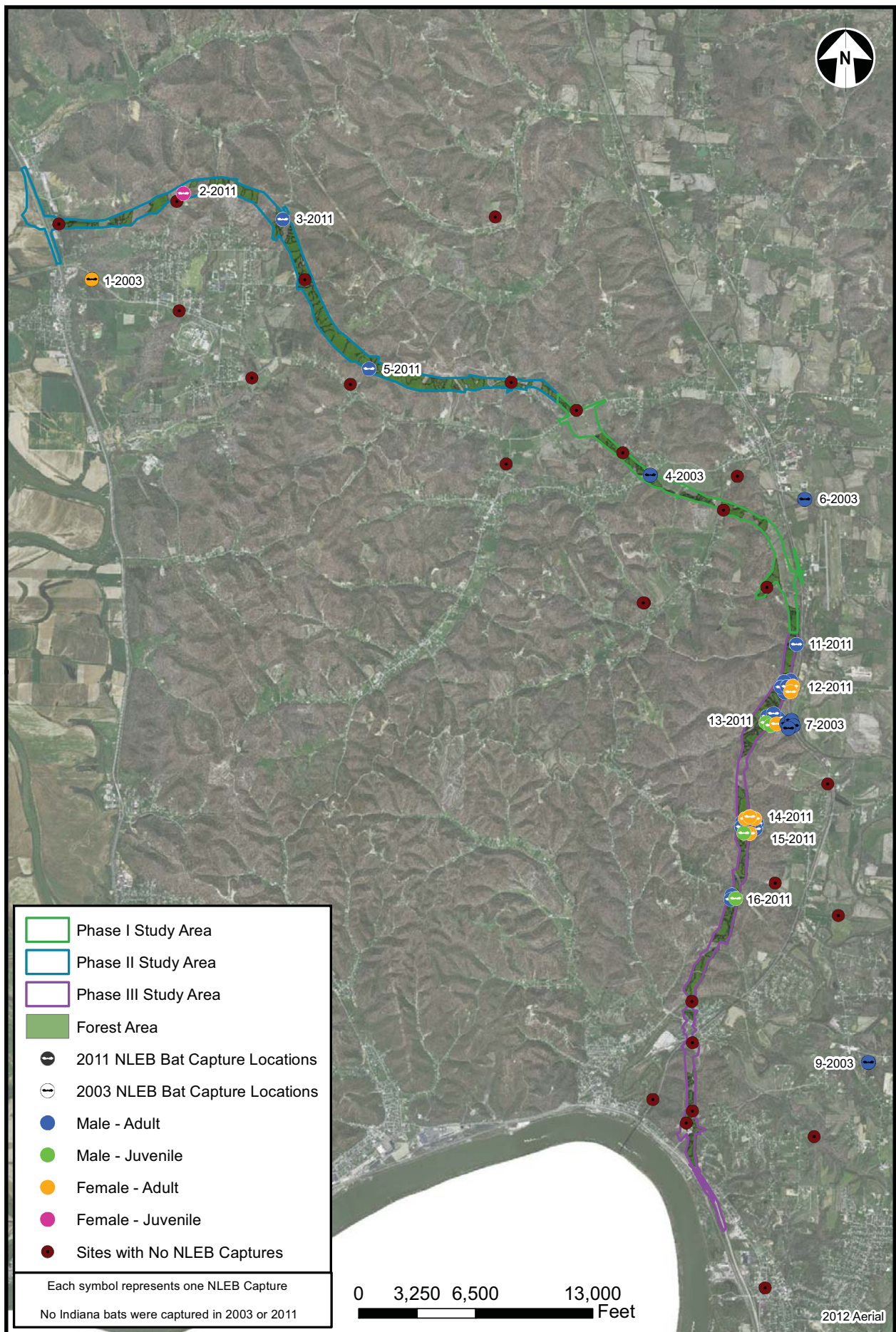


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Figure 4. USGS Map - 2011 & 2003 Bat Mist-net Survey Results for Northern Long-Eared Bat Captures - All Phases





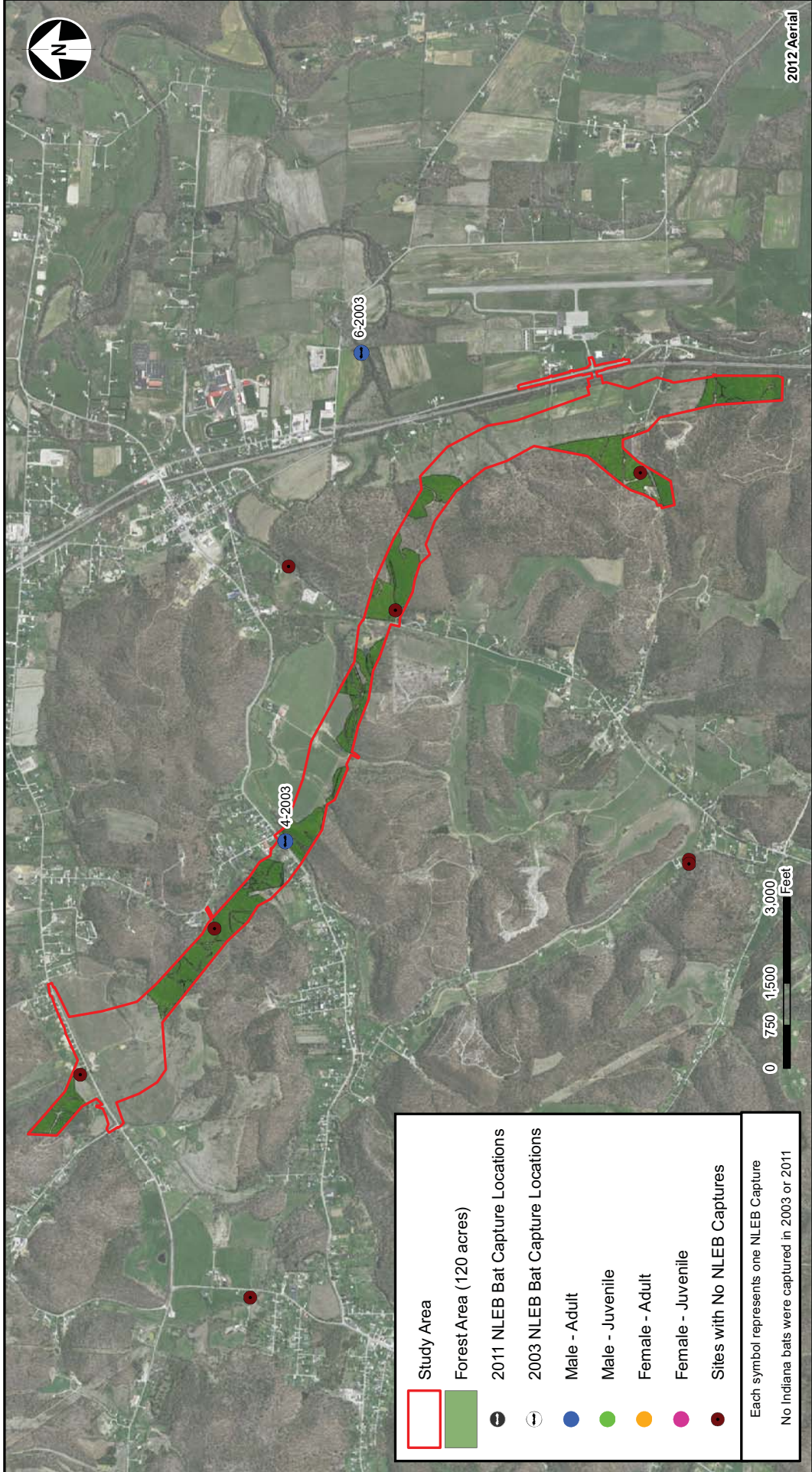


> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH

Figure 5a. USGS Map - 2011 & 2003 Bat Mist-net Survey Results for Northern Long-Eared Bat Captures - All Phases





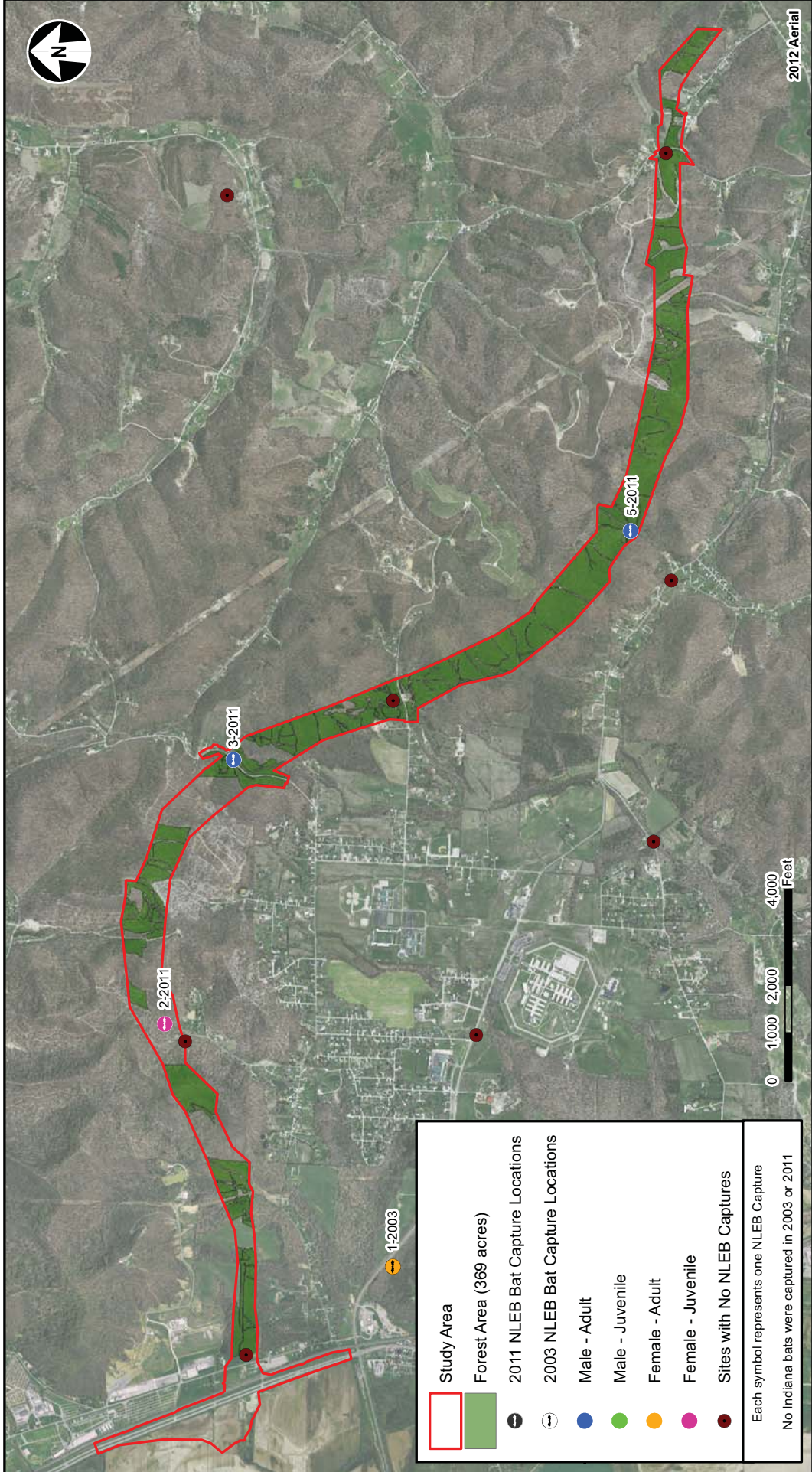


	Study Area
	Forest Area (120 acres)
	2011 NLEB Bat Capture Locations
	2003 NLEB Bat Capture Locations
	Male - Adult
	Male - Juvenile
	Female - Adult
	Female - Juvenile
	Sites with No NLEB Captures
Each symbol represents one NLEB Capture	
No Indiana bats were captured in 2003 or 2011	

SCI-823-0.00 - Madison & Harrison Township, Scioto Co., OH  
 Figure 5b. 2011 & 2003 Bat Mist-net Survey Results for Northern Long-Eared Bat Captures - Phase I



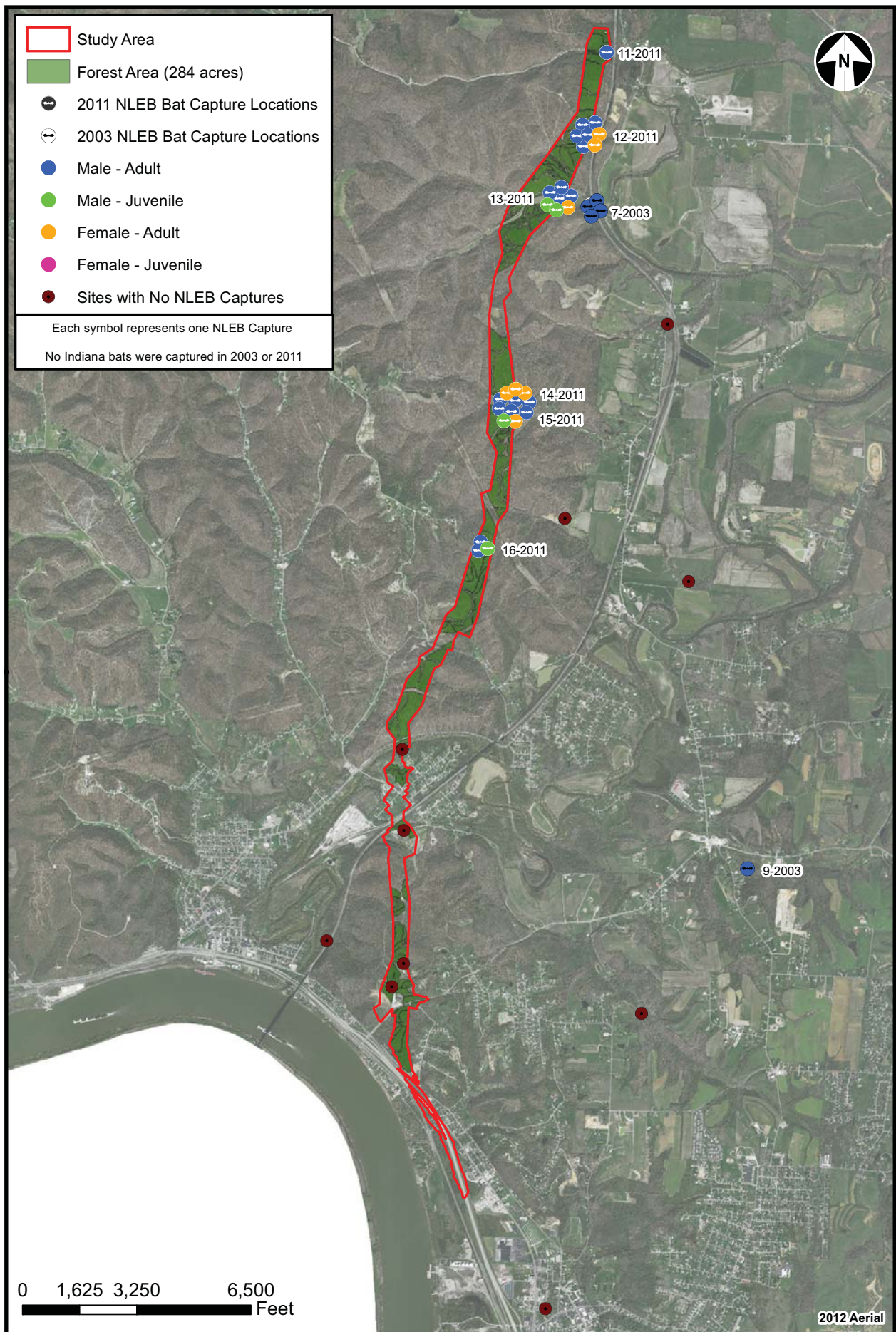




SCI-823-0.00 - Valley & Jefferson Township, Scioto Co., OH  
 Figure 5c. 2011 & 2003 Bat Mist-net Survey Results for Northern Long-Eared Bat Captures - Phase II





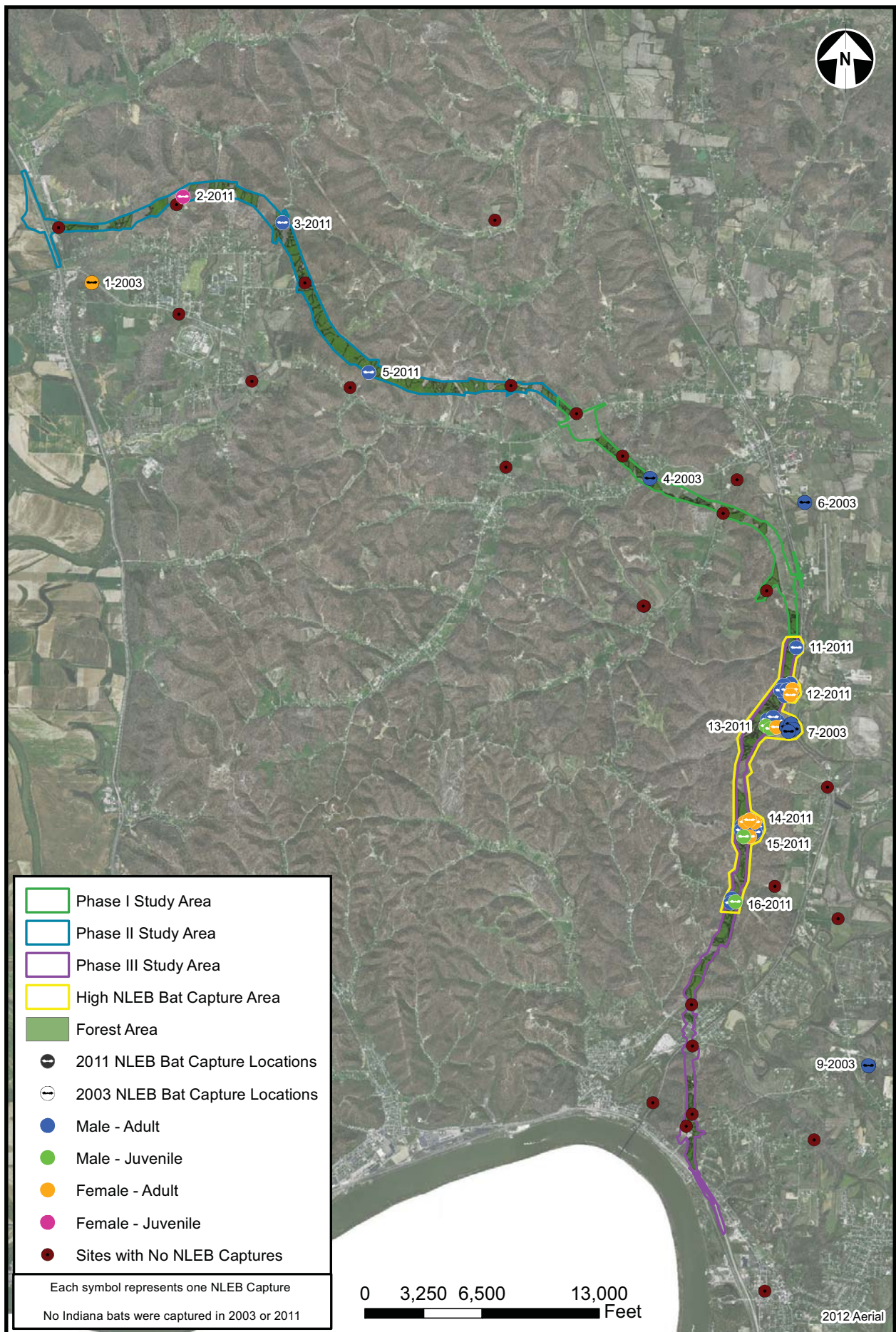


> SCI-823-0.00 - Porter & Harrison Township, Scioto Co., OH

Figure 5d. 2011 & 2003 Bat Mist-net Survey Results for Northern Long-Eared Bat Captures - Phase III



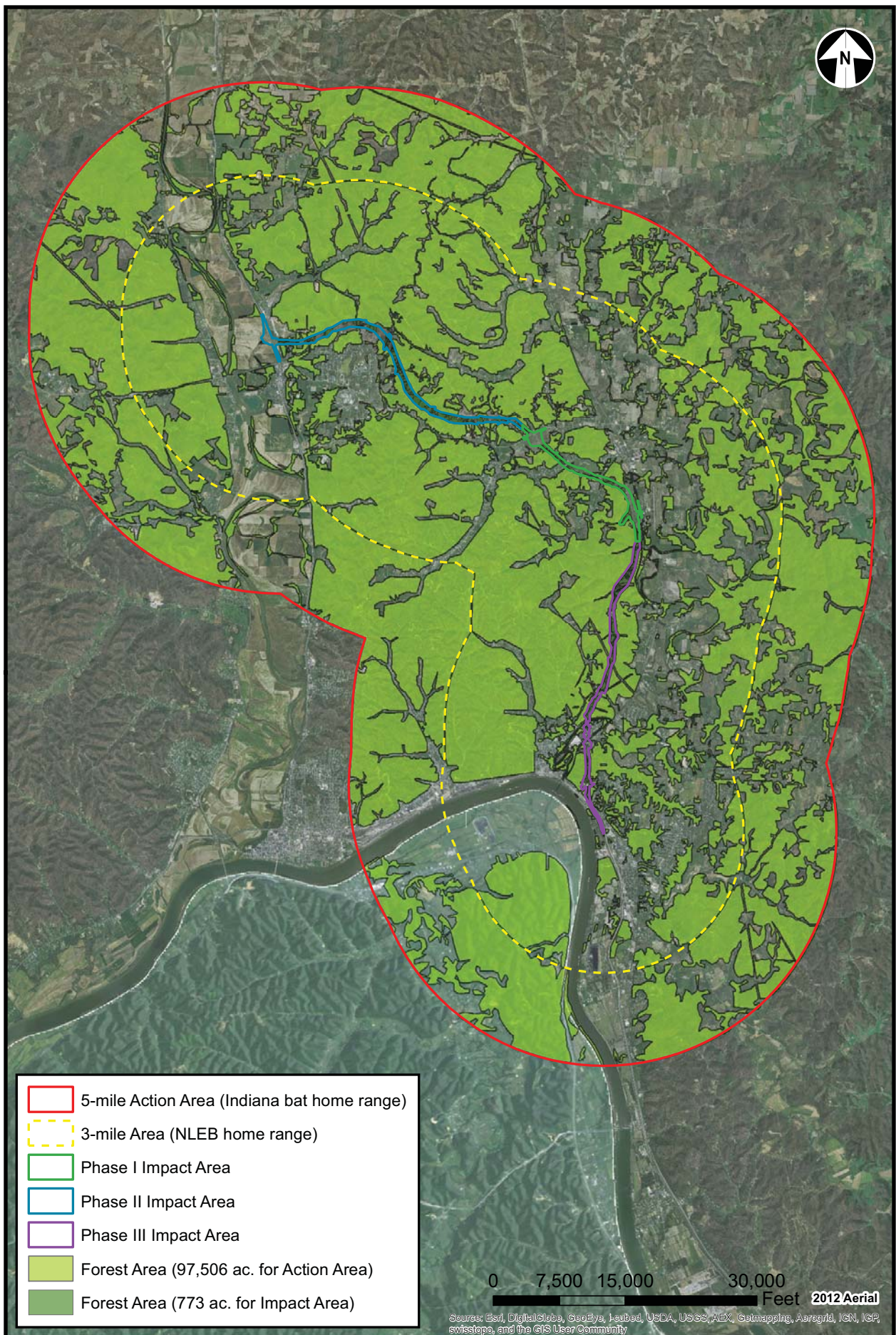




> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH  
Figure 5e. USGS Map - 2011 & 2003 Bat Mist-net Survey Results for NLEB Captures - All Phases





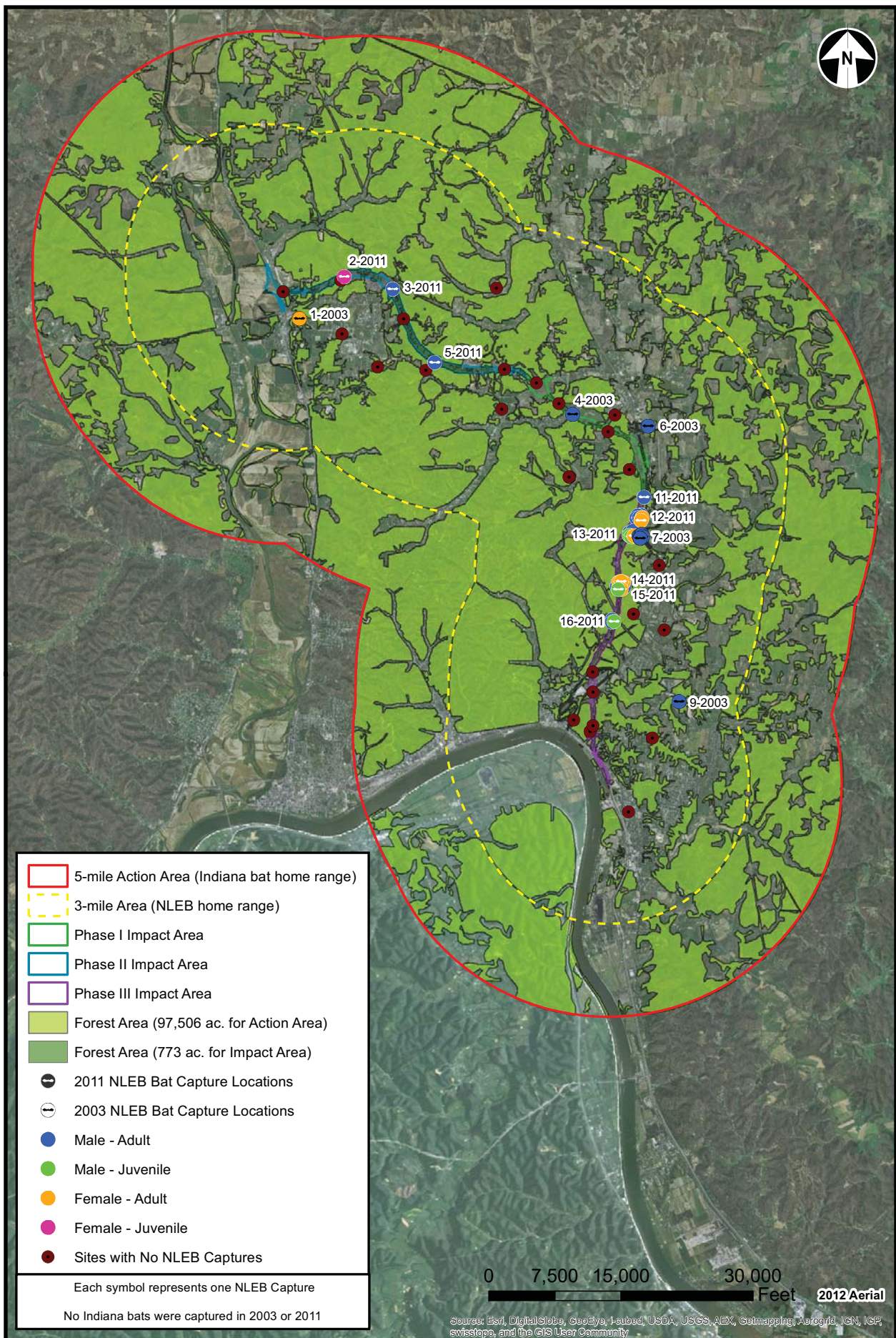


> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH

Figure 6a. Action Area and Impact Area for All Phases



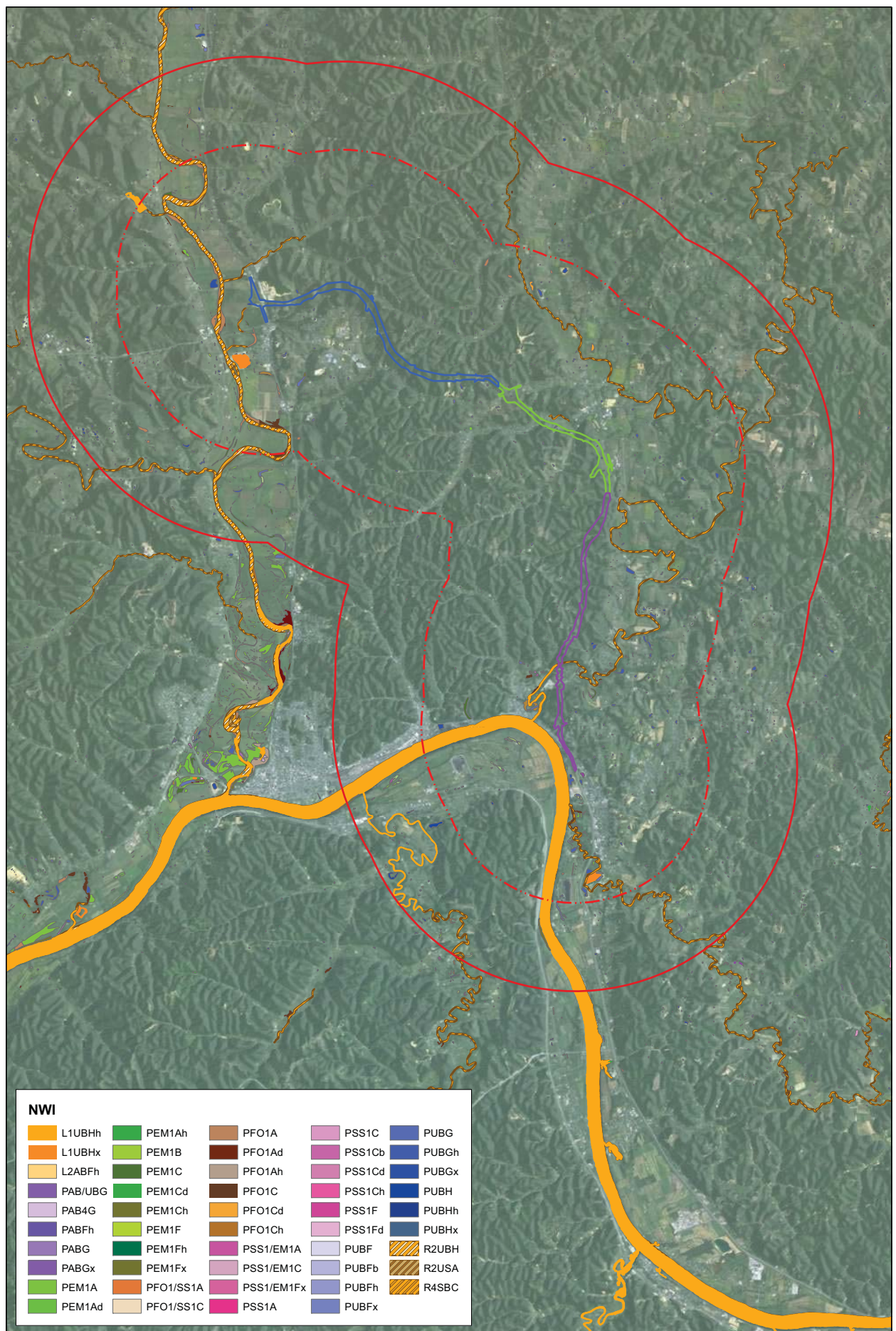




> SCI-823-0.00 - Madison, Porter, Valley, Jefferson & Harrison Twp, Scioto Co., OH  
 Figure 6b. 2011 & 2003 Bat Mist-net Survey Results for NLEB Captures - Action Area and Impact Area for All Phases







**NWI**

L1UBHh	PEM1Ah	PFO1A	PSS1C	PUBG
L1UBHx	PEM1B	PFO1Ad	PSS1Cb	PUBGh
L2ABFh	PEM1C	PFO1Ah	PSS1Cd	PUBGx
PAB/UBG	PEM1Cd	PFO1C	PSS1Ch	PUBH
PAB4G	PEM1Ch	PFO1Cd	PSS1F	PUBHh
PABFh	PEM1F	PFO1Ch	PSS1Fd	PUBHx
PABG	PEM1Fh	PSS1/EM1A	PUBF	R2UBH
PABGx	PEM1Fx	PSS1/EM1C	PUBFb	R2USA
PEM1A	PFO1/SS1A	PSS1/EM1Fx	PUBFh	R4SBC
PEM1Ad	PFO1/SS1C	PSS1A	PUBFx	

Figure 7. NWI Map of Action Areas for All Phases, Scioto and Greenup Counties, Ohio and Kentucky.

Indiana Bat Action Area	Phase I Impact Area	2 1 0 2 Miles	
Northern Long-Eared Bat Action Area	Phase II Impact Area	4 2 0 4 Kilometers	
	Phase III Impact Area		



Basemap courtesy of ESRI (Microsoft 2011).

# Appendix B: Consultation Documents



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068-4127  
(614) 469-6923/FAX (614) 469-6919  
November 17, 2000



**RECEIVED**

**NOV 22 2000**

**OFFICE OF  
ENVIRONMENTAL SERVICES**

Mr. Timothy M. Hill  
Office of Environmental Services  
Ohio Department of Transportation  
Post Office Box 899  
Columbus, Ohio 43216-0899

RE: Feasibility Study for US 23 Portsmouth Transportation Study, Scioto County, Ohio  
ODOT Project SCI-823-0.00, PID 19415

Dear Mr. Hill:

This responds to your November 8, 2000 letter requesting our comments on the study referenced above. We have reviewed the report and have no specific comments as they relate to fish and wildlife resources, wetlands, and Federally listed endangered and threatened species.

As your planning for this project advance, we recommend that concerted efforts be used to avoid, wetlands, streams and other important ecological areas. Also, preference should be given to locating the roadway in areas that have already been disturbed by previous land development activities.

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U. S. Fish and Wildlife Service's Mitigation Policy. It does not, however, constitute the report of the Secretary of the Interior under Section 2(b) of the Fish and Wildlife Coordination Act, nor does it represent the review comments of the Department of the Interior on any forthcoming environmental document.

**ENDANGERED SPECIES COMMENTS:** To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, we are providing you the following list of endangered (E) or threatened (T) species which may be present in the referenced area:

Indiana bat (E)  
Virginia spiraea (T)  
small whorled pogonia (T)

**OES-Project Filing**

DEC 08 2000

File From: MAA  
File By: SAB

ADDITIONAL COMMENTS

Two divisions of the Ohio Department of Natural Resources, the Division of Wildlife (614-265-6300) and the Division of Natural Areas and Preserves (614-265-6472), maintain lists of plants and animals of concern to the State of Ohio. If you have not already done so, please contact each of the above two agencies to obtain project comments or site-specific information on State listed species. In addition, the Ohio Environmental Protection Agency (OEPA; 614-728-3393; 614-728-3388) will sometimes make available lists of fish and invertebrate species found in many of Ohio's rivers and streams.

If you have any further questions, please call Ken Multerer at 614/469-6923, Ext. 16.

Sincerely,



*Ken* Kent E. Kroonemeyer  
Supervisor

cc: ODW, Wildlife Environmental Section, Columbus, OH  
ODNR, Division of Real Estate and Land Management, Columbus, OH



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

April 28, 2003

Mary Knapp  
Area Supervisor  
U.S. Fish and Wildlife Service (FWS)  
6950-H Americana Parkway  
Reynoldsburg, Ohio 43068

Re: SCI-823-0.00 (PID 19415) Portsmouth Bypass  
Initiation of Informal Consultation

Dear Ms. Knapp:

The Ohio Department of Transportation is submitting this letter to start Informal Section 7 Consultation for the SCI-823-0.00 (PID 19415) Portsmouth Bypass.

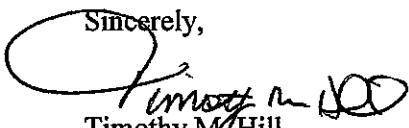
The project is located in Scioto County. The new highway will be a four lane limited access facility that will start at Lucasville Ohio on SR 23 and bypass Portsmouth to the east and then tie into US Route 52 at Sciotoville, Ohio.

The listed species for Scioto County are the Indiana Bat (Endangered), small whorled pogonia (Threatened) Virginia Spiraea (Threatened) and the Timber Rattlesnake (pre-listing conservation plan).

While no endangered species have been located within the project area, four species are known to occur in Scioto County. ODOT plans on preparing and submitting a Draft BA for the alternatives to address the possibility of having an effect on these species. If an endangered species is located during the field surveys, ODOT will prepared a final BA for the preferred alternative only.


If your office concurs, the above listed species are the ones that will be included in the Draft Biological Assessment (BA) for this project.

Sincerely,

  
Timothy M. Hill  
Administrator  
Office of Environmental Services

OES-Project Filing

JUL 10 2003

File From: 

File By: 

c: Dave Snyder, FHWA - Kaye Humble, ODOT D-9 - Susan Swartz, TranSystems - Jennifer Townley, ODOT - M. Ciotola - Noel Alcala, ODOT -File - Reading File



OHIO DEPARTMENT OF TRANSPORTATION  
CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068

MAY 28, 2003

OES-Project Filing

**Re: Potential Sampling Methodologies – Small Whorled Pogonia  
Portsmouth Bypass, SCI-823-0.00  
PID 19415**

MAY 28 2003

File From: RCL  
File By: SAB

Dear Dr. Knapp:

Since there are no definitive guidelines regarding small whorled pogonia (*Isotria medeoloides*) survey methodology, we have developed two approaches for your consideration. They vary in intensity and have their own pros and cons. Overall, we believe that either of the proposed methodologies should be adequate for USFWS to make/defend a determination relative to the presence or absence of the federally-listed plant species known to occur in Scioto County<sup>1</sup>.

Sampling Methodology Summaries:

**1. Comprehensive Survey Limited to Areas of Suitable Soil and/or Elevation**

A team will comprehensively survey (0.5 hours per acre) all wooded areas within the Hill and Valley Alternatives that have suitable soil type and elevation characteristics. For the purposes of this survey, suitable soil types are defined as low pH (less than 6) and low nutrient content (as organic matter). This description is in accordance with some literature sources. Within Scioto County, the following soils meet this description - Brownsville, Steinberg and Tilsit.

Approximately 30% of the wooded portions of the Hill and Valley Alternatives (310 of 1024 acres) are mapped with these soils types. Suitable elevation is defined as all areas above 800 feet msl. Assuming that a total 250 acres meet all three criteria (wooded, soils, elevation), an estimated 250 man-hours would be required to complete this survey.

**2. Survey Based on Professional Judgement of Quality Habitat**

A team will survey all wooded areas within the Hill and Valley Alternatives that have "Quality Habitat" based on the project team's professional experience and the data obtained during the project's Ecological Survey. Plot sampling will be used to survey the selected areas. At a

---

<sup>1</sup> Regarding the other plant species of concern, the Virginia spiraea, we propose to re-survey those locations where the Hill and Valley alignments cross perennial streams. We will document the conditions of the streams at these crossing, and indicate the presence or absence of the plant and important habitat features, as described in USFWS literature/website.

minimum, a one-quarter acre plot will be located for each 15 acres of selected habitat. If populations of associated ground layer or canopy species are identified in transit between areas or plots, additional plots will be centered around these populations. Assuming a total of 200 acres of "Quality Habitat" and approximately 20 plots, an estimated 130 man-hours would be required to complete this survey.

### Definition of Associates and Plot Sampling Protocols

For this study, the associate species for the small whorled pogonia will be the following, based on literature obtained from the world wide web:

**TABLE 1: Canopy Associate Species.**

SCIENTIFIC NAME	COMMON NAME
<i>Acer rubrum</i>	Red Maple
<i>Tsuga canadensis</i>	Eastern Hemlock (Canada hemlock)
<i>Fagus grandifolia</i>	American Beech
<i>Quercus rubra</i>	Northern Red Oak
<i>Quercus alba</i>	White Oak
<i>Quercus coccinea</i>	Scarlet Oak

**TABLE 2: Ground Layer Associate Species.**

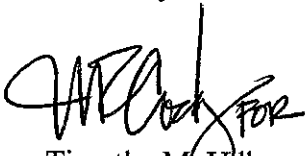
SCIENTIFIC NAME	COMMON NAME
<i>Vaccinium pallidum (vacillans)</i>	Sweet lowbush blueberry
<i>Mitchella repens</i>	Partridge berry
<i>Acer rubrum (seedlings)</i>	Red maple
<i>Gaultheria procumbens</i>	Wintergreen
<i>Medeola virginiana</i>	Indian Cucumber root
<i>Thelypteris noveboracensis</i>	New York Fern
<i>Maianthemum canadense</i>	Canada Mayflower
<i>Lycopodium spp</i>	Clubmosses

In each option, the standard procedure at each one-quarter acre plot (approximately 60-foot diameter circle) will be:

1. Flag the center of the plot and locate it with a handheld GPS unit. Label the flag with the plot number.
2. Compile a list of species present within the plot by stratum (canopy, subcanopy [shrubs, small trees], and ground layer) based on a minimum 20-minute search.
3. Obtain a single soil sample to characterize the texture and color of the upper 10 inches of soil within the plot.
4. Visually estimate percent canopy closure.
5. Record slope position (lower, middle, upper), slope aspect, and slope angle near the center of the plot or at the associate/target species population.
6. If rare species are located, flag the location anonymously and record the position with the GPS unit.

Please review the two survey procedures and provide us with comments at your earliest convenience Contact William R. Cody, at 614-466-5198, or John Baird, at 614-466-1913 of this office with questions of comments.

Sincerely,



Timothy M. Hill

Administrator

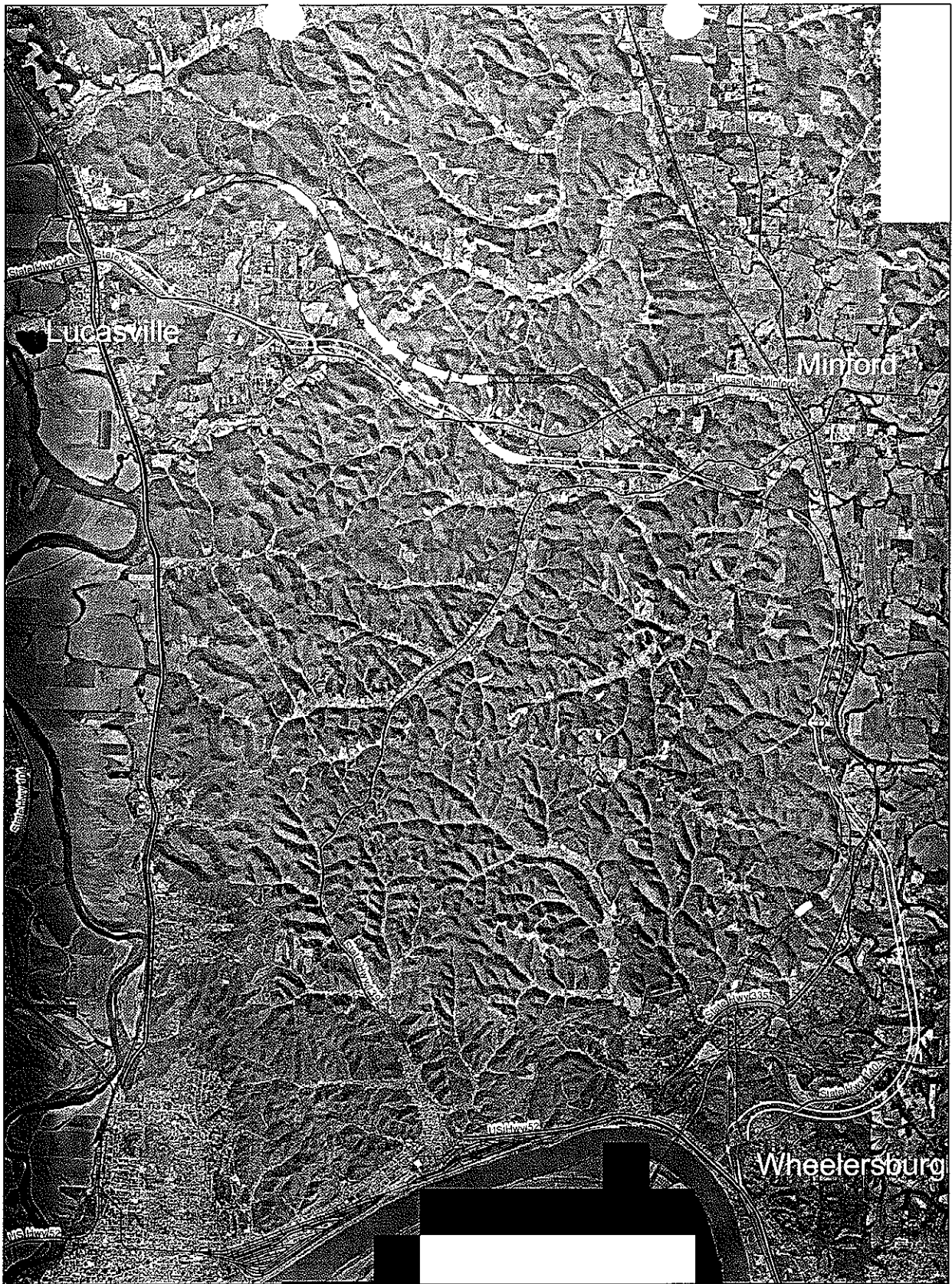
Office of Environmental Services

Attachment




TMH:WRC

c: Tony Durm(D-10) - R. Miller(CH2Hill) - Baird - Cody - File - Reading File






**Legend**


-  Whorled Pogonia Survey Areas
-  Hill Alternative
-  Valley Alternative

Survey Areas Based on  
Woodlands, Soils and Elevation  
Sampling Protocol



N




0 2,000 4,000 6,000 8,000




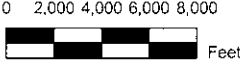
Feet



**Legend**

-  Whorled Pogonia Survey Areas
-  Hill Alternative
-  Valley Alternative

Survey Areas Based on  
"Professional Judgement"  
Sampling Protocol

0 2,000 4,000 6,000 8,000  
Feet

44-023 Portsmouth Bypass



Bill Cody  
07/01/03 10:12 AM

To: Tim Hill/Environmental/CEN/ODOT, John Baird/Environmental/CEN/ODOT, Noel Alcalá/Environmental/CEN/ODOT, Kaye Humble/Planning/D09/ODOT, rmiller2@CH2M.com, scswartz@transystems.com

cc:  
Subject: Small Whorled Pogonia Surveys

All,

Below is an email from Sarena Selbo outlining the plan of action for the Small Whorled Pogonia Survey based on the site visit last week.

-Bill

c:file

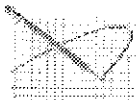
William R. Cody, L.A.  
Assistant Environmental Administrator  
Office of Environmental Services  
Phone (614)466-5198 Fax (614) 728-7368

----- Forwarded by Bill Cody/Environmental/CEN/ODOT on 07/01/03 10:13 AM

OES-Project Filing

JUL 01 2003

File From: [Signature]  
File By: [Signature]



John Baird  
07/01/03 05:55 AM

To: Bill Cody/Environmental/CEN/ODOT  
cc:  
Subject: small whorled pogonia surveys

Bill,

Comments from USFW on our trip. If you want you can send them on to the consultants and District or wait and I will do it on Thursday.

John Baird, Environmental Specialist  
Ecological Section, Office of Environmental Services  
1980 West Broad Street  
Columbus, Ohio 43223  
Phone: (614) 466-1913; Fax 614-728-7368; Pager 614-637-9316

-----Forwarded by John Baird/Environmental/CEN/ODOT on 07/01/2003 05:54AM -----

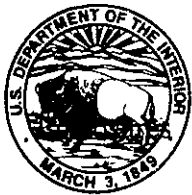
To: John.Baird@dot.state.oh.us  
From: Sarena\_Selbo@fws.gov  
Date: 06/30/2003 02:10PM  
cc: Mary\_M\_Knapp@fws.gov  
Subject: small whorled pogonia surveys

John,

The following is a summary of our conversation and site visit last Friday (27 June 2003) concerning the small whorled pogonia (SWP) surveys along the potential Portsmouth bypass corridors.

- 1) SWP was not located at the known site in Hocking County. We determined that it may be too late in the season to locate the two plants that were present in May.
- 2) We agreed that surveys for the SWP would cease for the rest of





# United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068-4127

OES-Project Filing

JUL 31 2003

(614) 469-6923 / FAX (614) 469-6919

July 23, 2003

File From: WMA

File By: \_\_\_\_\_

Timothy M. Hill  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, Ohio 43216-0899

Dear Mr. Hill:

*Jim*

This responds to your July 21, 2003 letter regarding the SCI-823-0.00 (PID 19415) Portsmouth Bypass project and surveys for the federally endangered Indiana bat (*Myotis sodalis*).

In your letter you state that 10 sites have been sampled for bats using mist-nets. All of these surveys have been conducted in accordance with the Service's survey protocol for the Indiana bat. Your letter correctly states that the methodology and site selection techniques associated with these surveys are acceptable to us, however the overall sampling intensity is not.

Upon reviewing the project's GIS database in our July 8<sup>th</sup> meeting, it is our opinion that a minimum of 11 additional sites must be sampled in order to make an accurate effects determination for the Indiana bat.

In your letter, you state that the 11 additional sites will be surveyed using the same protocol used for the previous 10 sites. The locations and the survey methods for the additional sites are acceptable to us. Please contact this office with the results of these surveys so that we may determine whether there may be any impacts to this species.

If you have questions, or if we may be of further assistance in this matter, please contact Angela Zimmerman at extension 22 in this office.

Sincerely,

*Mary Knapp*

Mary Knapp, Ph.D.  
Supervisor

RECEIVED

JUL 29 2003

OFFICE OF  
ENVIRONMENTAL SERVICES



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

August 19, 2003

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service (FWS)  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068

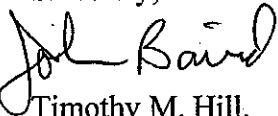
Re: Portsmouth Bypass SCI-823-0.00 PID 19415  
Small Whorled Pogonia and Virginia Spiraea Survey

Dear Ms. Knapp:

Enclosed for your review is the preliminary report for the survey of Small Whorled Pogonia and Virginia Spiraea for the Portsmouth Bypass Project in Scioto County. The Virginia Spiraea surveys are complete and the Small Whorled Pogonia surveys are partially complete with the final surveys scheduled for May of 2004. No endangered or threatened species were found during the field survey.

Your review, concurrence and/or comments on the report would be appreciated. You may call John Baird at 614-466-1913 if you have questions or need additional information.

Sincerely,

*for*   
Timothy M. Hill.  
Administrator  
Office of Environmental Services

TMH:JRB

Enclosures

c: District 9 -  File - Reading File

OES-Project Filing

AUG 19 2003  
File From: MRB  
File By: JAB





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

## OFFICE OF ENVIRONMENTAL SERVICES

August 27, 2003

Ms. Mary Knapp, Supervisor  
United States Fish & Wildlife Service  
6950 Americana Parkway, Suite 11  
Reynoldburg, Ohio 43068

Re: Status of the Indiana Bat Surveys, Portsmouth Bypass Project - SCI-823-0.00

Dear Ms. Knapp,

This letter is to update you on the progress and findings of the Indiana bat surveys conducted on the above mentioned transportation project. A total of 21 sites have been sampled (in two parts) in the Portsmouth Bypass project area. The first survey of ten sites was completed June 9 through June 25, 2003. The second survey of 11 additional sites was completed July 26 through August 6, 2003. The surveys were conducted in accordance with the USFWS guidelines for Indiana bat mist netting. Each site included two nets, located some 30 meters apart or more, and was observed for a minimum of 5 hours per night for two nights. Thus, each site represents a total of 4 net-nights. Site location was determined in coordination with USFWS.

Neither of the surveys captured any Indiana bats. Netting efforts provided no evidence that Indiana bats use the project area during summer months. A total of 83 bats of seven species were captured. The species distribution, diversity, and number of bats captured in the project area were typical for the geographic location and type of habitat. No sites were rated as having a high roost site potential due primarily to lack of canopy structure, canopy storm damage, cluttered understories, and a relatively low abundance of large trees.

An additional bat study site has been included as part of the Indiana bat survey on the subject project. A cave/outcropping was recently identified that may hold suitable bat habitat. The additional study is necessary to properly evaluate the cave which is located on the Fitzgerald property - in the vicinity of the intersection of the existing railroad, the abandoned railroad and the Hill Alternative (see attached location mapping). The investigation of this site is the only remaining fieldwork. This investigation is not affected by the August 15 deadline for mist netting. The results of the cave/outcropping investigations are pending.

OES-Project Filing

AUG 26 2003

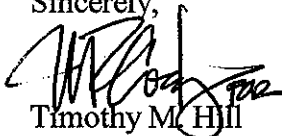
File From: MV

File By: SAB

Environmental Solutions and Innovations, Inc (ESI) is currently drafting their final report for the surveys. Copies of the report will be forwarded as soon as they are available. The Ecological Survey includes reference to this work. Based on our coordination with the USFWS, we expect that this work will be sufficient for an Absence Determination to be made regarding the Indiana bat and the Portsmouth Bypass.

Thank you for your time. If you have any questions concerning this update, please do not hesitate to call William R. Cody at: (614) 466-5198.

Sincerely,



Timothy M. Hill

Administrator

Office of Environmental Services

Enclosure

TMH:mev

c:File - Reading File - N. Alcala - J. Baird - R. Miller, CH2MHill - S. Swartz, TransSystems - J. Townley - T. Hill



## Status of the Indiana Bat Surveys Portsmouth Bypass Project, SCI-823-0.00 PID 19415

PREPARED FOR: Mac Vance and John Baird, ODOT-OES  
PREPARED BY: Rob Hook  
DATE: August 22, 2003

In accordance with coordination with the USFWS, Reynoldsburg Office, a total of 21 sites have been sampled (in two parts) for the federally listed endangered Indiana bat in the Portsmouth Bypass project area. The first survey of ten sites was completed June 9 through June 25, 2003. The second survey of 11 additional sites was completed July 26 through August 6, 2003. The surveys were conducted in accordance with the USFWS guidelines for Indiana bat mist netting. Each site included two nets, located some 30 meters apart or more, and was observed for a minimum of 5 hours per night for two nights. Thus, each site represents a total of 4 net-nights. Site location was determined in coordination with USFWS.

Neither of the surveys captured any Indiana bats. Netting efforts provided no evidence that Indiana bats use the project area during summer months. A total of 83 bats of seven species were captured. The species distribution, diversity, and number of bats captured in the project area were typical for the geographic location and type of habitat. No sites were rated as having a high roost site potential due primarily to lack of canopy structure, canopy storm damage, cluttered understories, and a relatively low abundance of large trees.

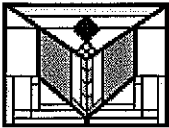
The only remaining fieldwork is the investigation of a rockhouse "cave" site. This investigation is not affected by the August 15 deadline for mist netting. The results of the rockhouse investigation are pending.

Environmental Solutions and Innovations, Inc (ESI) is currently drafting their final report for the surveys. Copies of the report will be forwarded as soon as they are available. The Ecological Survey includes reference to this work.

Based on our coordination with the USFWS, we expect that this work will be sufficient for an Absence Determination to be made regarding the Indiana bat and the Portsmouth Bypass.

File By: SAS  
File From: JK  
AUG 26 2003

OES-Project Filing



**Fredric Steck**  
09/16/03 02:18 PM

To: rhook@ch2m.com  
cc: John Baird/Environmental/CEN/ODOT@ODOT, Bill Cody/Environmental/CEN/ODOT@ODOT, Noel Alcalá/Environmental/CEN/ODOT@ODOT, Jennifer Townley/Director/CEN/ODOT@ODOT, Kaye Humble/Planning/D09/ODOT@ODOT, Mike Ciotola/Director/CEN/ODOT@ODOT, scswartz@transystems.com  
Subject: Re: SCI-823-0.00 PID 19415 2003 Plant Surveys

Rob,

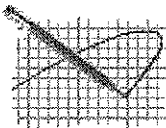
FYI -- below are USFWS's comments on the preliminary plant survey report.

Fred

Fredric K. Steck  
Environmental Supervisor  
Ecological Review Unit  
Office of Environmental Services  
Ohio Department of Transportation  
(614) 466-1937  
fredric.steck@dot.state.oh.us

c: File

----- Forwarded by Fredric Steck/Environmental/CEN/ODOT on 09/16/03 02:11 PM -----



**John Baird**  
09/15/03 07:15 AM

To: Sarena\_Selbo@fws.gov  
cc: Bill Cody/Environmental/CEN/ODOT, Tim Hill/Environmental/CEN/ODOT, Fredric Steck/Environmental/CEN/ODOT  
Subject: Re: SCI-823-0.00 PID 19415 2003 Plant Surveys

Sarena,

Thanks for the comments. When we sent the preliminary report over, we were looking for comments on format and the protocol used rather than an actual concurrence letter. We also wanted to let you see the preliminary data that has been collected to date.

John Baird, Environmental Specialist  
Ecological Section, Office of Environmental Services  
1980 West Broad Street  
Columbus, Ohio 43223  
Phone: (614) 466-1913; Fax 614-728-7368; Pager 614-637-9316

-----Sarena\_Selbo@fws.gov wrote: -----

To: John.Baird@dot.state.oh.us, Tim.Hill@dot.state.oh.us  
From: Sarena\_Selbo@fws.gov  
Date: 09/12/2003 01:00PM  
cc: Mary\_M\_Knapp@fws.gov, Angela\_Zimmerman@fws.gov, Kenneth\_Lammers@fws.gov  
Subject: SCI-823-0.00 PID 19415 2003 Plant Surveys

The Ohio FWS office is providing the following comments on your preliminary

OES-Project Filing

SEP 16 2003

File From:   
File By:





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

November 26, 2003

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068

Re: SCI-823-0.00 (PID 19415), Portsmouth Bypass  
Timber Rattlesnake Survey Report

Dear Dr. Knapp:

Enclosed for your review is a survey report for the timber rattlesnake (*Crotalus horridus*) prepared for the Portsmouth Bypass project in Scioto County. The survey was performed by herpetologist Doug Wynn from March 24 through September 27, 2003, along the alternative corridors for the project. He found no individuals of the species. While he did find potentially suitable habitat, he found that the proximity of humans has caused significant disturbance of the area. He also states that the proximity of humans suggests that if the species were present in the area, sightings would be common and often reported, which he did not find to be the case. It is his professional opinion that it is very unlikely that the species inhabits or utilizes the surveyed area.

This submission is part of our informal Section 7 consultation for this project. The enclosed report will be included in the appendices of the Ecological Survey Report for the project. If you have any questions, please call Fred Steck, Environmental Supervisor, at 466-1937.

Sincerely,

Timothy M. Hill  
Administrator  
Office of Environmental Services

TMH:WRC:Fks:fs

Enclosure

c: Noel Alcalá - Jennifer Townley - Kaye Humble, District 9, w/encl. - Susan Swartz, TranSystems Corp., w/encl. - File - Reading File

**OES-Project Filing**

NOV 28 2003

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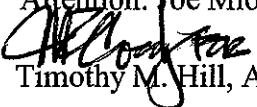
File By:



**OHIO DEPARTMENT OF TRANSPORTATION  
INTEROFFICE COMMUNICATION**  
Office of Environmental Services

**DATE:** November 26, 2003

**TO:** Steven A. Gray, Chief, Division of Wildlife, ODNR  
Attention: Joe Mion

**FROM:**   
Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Timber Rattlesnake Survey Report

**PROJECT:** SCI-823-0.00 (PID 19415), Portsmouth Bypass

---

Enclosed for your review is a survey report for the timber rattlesnake (*Crotalus horridus*) prepared for the Portsmouth Bypass project in Scioto County. The survey was performed by herpetologist Doug Wynn from March 24 through September 27, 2003, along the alternative corridors for the project. He found no individuals of the species. While he did find potentially suitable habitat, he found that the proximity of humans has caused significant disturbance of the area. He also states that the proximity of humans suggests that if the species were present in the area, sightings would be common and often reported, which he did not find to be the case. It is his professional opinion that it is very unlikely that the species inhabits or utilizes the surveyed area. We are requesting your concurrence with that opinion.

The enclosed report will be included in the appendices of the Ecological Survey Report for the project. If you have any questions, please call Fred Steck, Environmental Supervisor, at 466-1937.

**ODNR Concurrence**

---

(Date)

TMH:WRC:FKS:fs  
Enclosure

c: Noel Alcalá - Jennifer Townley - Kaye Humble, District 9 - Susan Swartz, TranSystems Corp. -  
File - Reading File



**OHIO DEPARTMENT OF TRANSPORTATION  
INTER-OFFICE COMMUNICATION  
Office of Environmental Services**

SCI-823-0.00  
Portsmouth Bypass  
SB  
SG  
M  
Loc 600

**TO:** Harry Fry, District 9 Deputy Director **DATE:** April 24, 2006  
Attention: Greg Manson, District Environmental Coordinator

**FROM:** Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** SCI-823-0.00 Summary of Cultural Resources in Scioto County, Ohio  
Extended Planning Study Footprint

**PROJECT:** CRS: SCI-823-0.00 PID: 19415 SJN: 491820

On April 14, 2006, ODOT-OES Staff completed a review of the subject project. The proposed project involves the extended Planning Study Footprint for the Portsmouth Bypass (SCI-823).

A Phase I archaeology report entitled *Phase I Archaeological Reconnaissance Survey for the Proposed Portsmouth Bypass (SCI-823-0.00 [PID 19415] in Porter, Harrison, Madison, Jefferson and Valley Townships, Scioto County, Ohio*, was concurred with by SHPO on October 28, 2004 and a Phase II history/architecture report entitled *Phase II History/Architecture Evaluation of 532 Fairground Road (SCI-600-03) for the Proposed Portsmouth Bypass (SCI-823-0.00; PID 19415) in Porter, Harrison, Madison, Jefferson and Valley Townships, Scioto County, Ohio*, was concurred with by SHPO on December 3, 2004. This report presented an evaluation of one property in Valley Township identified during the Phase I history/architecture survey. At that time, the project area consisted of a 16 mile long corridor with construction limits varying between 250 and 1000 feet. For the archaeology survey, a 400 foot wide section of the corridor was surveyed with areas exceeding these limits also investigated. For the history/architecture survey, a one to two mile wide corridor was examined.

Based on the extreme topography in this area of Scioto County, the design team had to make a number of adjustments to the proposed construction limits, consisting of increasing the fill slopes in order to minimize earthwork waste. Changes were made at various station numbers (see attached), and a field visit was made to each of the seven areas on March 14, 2006, by TranSystems' Andrew M. Schneider. Field methods were identical to those described in the original archaeology survey report. History/architecture investigations were unnecessary since the original Phase I survey covered a one to two mile wide corridor. As a result of the additional field survey work, no new archaeological sites were identified and no further work is recommended unless the scope of the project changes.

In view of the above, please note that there is no change in the original 2004 findings by OES and SHPO that "no historic properties affected," is appropriate for this project. No further cultural resources coordination are recommended unless either the funding or the scope of the project changes. The date of this Inter-Office Communication and the dates of the above 2004 SHPO concurrences should be used for cultural resources clearance. The District should also attach a copy of this IOC and the 2004 SHPO concurrences to the appropriate environmental document.

APR 23 2006  
[Signature]

Michael C. Flynn, District 8 Deputy Director  
SCI-823-0.00 (PID19415)  
Cultural Resources Re-evaluation

-2-

April 24, 2006

Should you have any questions or concerns, feel free to contact Staff Archaeologist Marilyn Orr, at (614)752-8279.

TMH:

c: OHPO, Thomas Grooms; Noel Alcala, OES: File; Reading File



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068

May 28, 2004

Re: SCI-823-0.00 (PID 19415), Portsmouth Bypass  
Ecological/NEPA Coordination

Dear Dr. Knapp:

Enclosed for your review are the Ecological Survey Report (ESR) and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County. Depending on the alternative selected, the project will impact a total of 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. The documents also discuss the impacts of the project on three federally listed species (Indiana bat, Virginia spiraea and small whorled pogonia) as well as the timber rattlesnake, which is receiving pre-listing consideration. The ESR concludes that the project **may affect but is unlikely to adversely affect** the three listed species and that no impacts on the timber rattlesnake are expected.

ODOT in cooperation with the Federal Highway Administration will identify the Preferred Alternative after consideration of comments from cooperating resource agencies and the public on the forthcoming Draft Environmental Impact Statement (DEIS). The quality of Figure 3-3, Streams and Threatened and Endangered Species, will be improved prior to printing of the DEIS, which will also include a List of References. In addition, as champion trees are no longer tracked by ODNR's Natural Heritage Database, the state champion sourwood record will be removed from Figure 3-3.

We are requesting comments from your agency with respect to the ecological resources present in the area and your recommendation for a preferred alternative. Your comments would be appreciated as soon as possible. If comments or notification of when comments will be provided are not received within 30 days of your receipt of the documents, we will proceed with development of the Draft Environmental Impact Statement. If you have any questions concerning the enclosed documents, please contact Fred Steck, Environmental Supervisor, at 466-1937, or Noel Alcalá, Major New Environmental Coordinator, at 466-5222.

Sincerely,

*for* Timothy M. Hill  
Administrator  
Office of Environmental Services

TMH:WRC:Fks:fs

Enclosures

c: Dave Snyder, FHWA, w/encls. - Noel Alcalá - Karen Young - Todd Long, District 9 - Greg Manson, District 9 - Susan Swartz, TranSystems Corp. - File - Reading File

OES-Project Filing	
MAY 28 2004	
File From:	
File By:	





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. Box 899, COLUMBUS, OHIO 43216-0899

U.S. Army Corps of Engineers  
Huntington District  
502 Eighth Street  
Huntington, WV 25701  
ATTN: Rebecca Rutherford, Chief  
North Regulatory Section

May 28, 2004

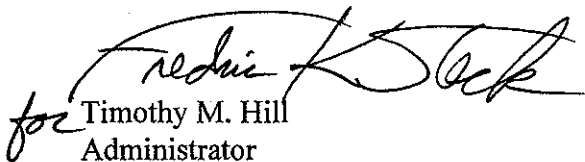
Re: SCI-823-0.00 (PID 19415), Portsmouth Bypass  
Ecological/NEPA Coordination

Dear Ms. Rutherford:

Enclosed for your review are the Ecological Survey Report (ESR) and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County. Depending on the alternative selected, the project will impact a total of 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. The documents also discuss the impacts of the project on three federally listed species (Indiana bat, Virginia spiraea and small whorled pogonia) as well as the timber rattlesnake, which is receiving pre-listing consideration. The ESR concludes that the project may affect but is unlikely to adversely affect the three listed species and that no impacts on the timber rattlesnake are expected. ODOT in cooperation with the Federal Highway Administration will identify the Preferred Alternative after consideration of comments from cooperating resource agencies and the public on the forthcoming Draft Environmental Impact Statement (DEIS). The quality of Figure 3-3, Streams and Threatened and Endangered Species, will be improved prior to printing of the DEIS, which will also include a List of References.

We are requesting comments from your agency with respect to the ecological resources present in the area and your recommendation for a preferred alternative. Your comments would be appreciated as soon as possible. If comments or notification of when comments will be provided are not received within 30 days of your receipt of the documents, we will proceed with development of the Draft Environmental Impact Statement. If you have any questions concerning the enclosed documents, please contact Fred Steck, Environmental Supervisor, at 614-466-1937, or Noel Alcala, Major New Environmental Coordinator, at 614-466-5222.

Sincerely,

  
for Timothy M. Hill  
Administrator  
Office of Environmental Services

TMH:WRC:FKS:fs

Enclosures

c: Dave Snyder, FHWA, w/encls. - Noel Alcala - Karen Young - Todd Long, District 9 - Greg Manson, District 9 - Susan Swartz, TranSystems Corp. - File - Reading File



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE, P.O. BOX 899, COLUMBUS, OHIO 43216-0899

Kenneth Westlake, Chief  
Office of Strategic Environmental Analysis  
Environmental Planning and Evaluation Branch  
U.S. Environmental Protection Agency, Region 5  
77 West Jackson Street  
Chicago, IL 60604

May 28, 2004

Re: SCI-823-0.00 (PID 19415), Portsmouth Bypass  
Ecological/NEPA Coordination

Dear Mr. Westlake:

Enclosed for your review are the Ecological Survey Report (ESR) and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County. Depending on the alternative selected, the project will impact a total of 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. The documents also discuss the impacts of the project on three federally listed species (Indiana bat, Virginia spiraea and small whorled pogonia) as well as the timber rattlesnake, which is receiving pre-listing consideration. The ESR concludes that the project may affect but is unlikely to adversely affect the three listed species and that no impacts on the timber rattlesnake are expected. ODOT in cooperation with the Federal Highway Administration will identify the Preferred Alternative after consideration of comments from cooperating resource agencies and the public on the forthcoming Draft Environmental Impact Statement (DEIS). The quality of Figure 3-3, Streams and Threatened and Endangered Species, will be improved prior to printing of the DEIS, which will also include a List of References.

We are requesting comments from your agency with respect to the ecological resources present in the area and your recommendation for a preferred alternative. Your comments would be appreciated as soon as possible. If comments or notification of when comments will be provided are not received within 30 days of your receipt of the documents, we will proceed with development of the Draft Environmental Impact Statement. If you have any questions concerning the enclosed documents, please contact Fred Steck, Environmental Supervisor, at 614-466-1937, or Noel Alcala, Major New Environmental Coordinator, at 614-466-5222.

Sincerely,

  
for Timothy M. Hill  
Administrator  
Office of Environmental Services

TMH:WRC:FKS:fs  
Enclosures

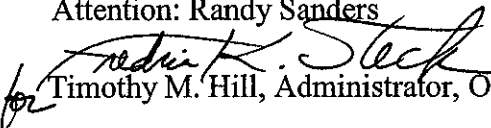
c: Dave Snyder, FHWA, w/encls. - Noel Alcala - Karen Young - Todd Long, District 9 - Greg Manson, District 9 - Susan Swartz, TransSystems Corp. - File - Reading File



**OHIO DEPARTMENT OF TRANSPORTATION  
INTEROFFICE COMMUNICATION  
Office of Environmental Services**

**DATE:** May 28, 2004

**TO:** Paul Baldrige, Chief, Division of Real Estate and Land Management, ODNR  
Attention: Randy Sanders

**FROM:**  Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Ecological/NEPA Coordination

**PROJECT:** SCI-823-0.00 (PID 19415), Portsmouth Bypass

---

Enclosed for your review are the Ecological Survey Report (ESR) and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County. Depending on the alternative selected, the project will impact a total of 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. The documents also discuss the impacts of the project on three federally listed species (Indiana bat, Virginia spiraea and small whorled pogonia) as well as the timber rattlesnake, which is receiving pre-listing consideration. The ESR concludes that the project **may affect but is unlikely to adversely affect** the three listed species and that no impacts on the timber rattlesnake are expected.

ODOT in cooperation with the Federal Highway Administration will identify the Preferred Alternative after consideration of comments from cooperating resource agencies and the public on the forthcoming Draft Environmental Impact Statement (DEIS). The quality of Figure 3-3, Streams and Threatened and Endangered Species, will be improved prior to printing of the DEIS, which will also include a List of References. In addition, as champion trees are no longer tracked by your Natural Heritage Database, the state champion sourwood record will be removed from Figure 3-3.

We are requesting comments from your agency with respect to the ecological resources present in the area and your recommendation for a preferred alternative. Your comments would be appreciated as soon as possible. If comments or notification of when comments will be provided are not received within 30 days of your receipt of the documents, we will proceed with development of the Draft Environmental Impact Statement. If you have any questions concerning the enclosed documents, please contact Fred Steck, Environmental Supervisor, at 466-1937, or Noel Alcala, Major New Environmental Coordinator, at 466-5222.

TMH:WRC:FKS:fs  
Enclosures

c: Dave Snyder, FHWA, w/encls. - Noel Alcala - Karen Young - Todd Long, District 9 - Greg Manson, District 9 - Susan Swartz, TranSystems Corp. - File - Reading File



**OHIO DEPARTMENT OF TRANSPORTATION  
INTEROFFICE COMMUNICATION**  
**Office of Environmental Services**

**DATE:** May 28, 2004

**TO:** Randy Bournique, Section 401 Supervisor, Division of Surface Water, OEPA  
Attn: Art Coleman, Section 401 Coordinator

**FROM:**  Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Ecological/NEPA Coordination

**PROJECT:** SCI-823-0.00 (PID 19415), Portsmouth Bypass

---

Enclosed for your review are the Ecological Survey Report (ESR) and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County. Depending on the alternative selected, the project will impact a total of 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. The documents also discuss the impacts of the project on three federally listed species (Indiana bat, Virginia spiraea and small whorled pogonia) as well as the timber rattlesnake, which is receiving pre-listing consideration. The ESR concludes that the project may affect but is unlikely to adversely affect the three listed species and that no impacts on the timber rattlesnake are expected.

ODOT in cooperation with the Federal Highway Administration will identify the Preferred Alternative after consideration of comments from cooperating resource agencies and the public on the forthcoming Draft Environmental Impact Statement (DEIS). The quality of Figure 3-3, Streams and Threatened and Endangered Species, will be improved prior to printing of the DEIS, which will also include a List of References. In addition, as champion trees are no longer tracked by ODNR's Natural Heritage Database, the state champion sourwood record will be removed from Figure 3-3.

We are requesting comments from your agency with respect to the ecological resources present in the area and your recommendation for a preferred alternative. Your comments would be appreciated as soon as possible. If comments or notification of when comments will be provided are not received within 30 days of your receipt of the documents, we will proceed with development of the Draft Environmental Impact Statement. If you have any questions concerning the enclosed documents, please contact Fred Steck, Environmental Supervisor, at 466-1937, or Noel Alcalá, Major New Environmental Coordinator, at 466-5222.

TMH:WRC:FKS:fs  
Enclosures

c: Dave Snyder, FHWA, w/encls. - Noel Alcalá - Karen Young - Todd Long, District 9 - Greg Manson, District 9 - Susan Swartz, TranSystems Corp. - File - Reading File



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068-4127  
(614) 469-6923/FAX (614) 469-6919  
August 25, 2004

Timothy M. Hill  
Ohio Dept. of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

Re: SCI-823-0.00 (PID 18415), Portsmouth Bypass

Dear Mr. Hill:

This is in response to your May 28, 2004 letter requesting our review of the Ecological Survey Report and Preliminary Draft Environmental Impact Statement (PDEIS) for the Portsmouth Bypass project in Scioto County, Ohio. The Bypass would connect US 23 near Lucasville with US 52 near Scioto Dale by a new limited access highway northeast of Portsmouth. Depending on the alternative selected, the project would impact 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. Forest habitat to be impacted or destroyed due to this project would be 362 to 528 acres, depending on the alternative selected.

We have reviewed the PDEIS and find that it adequately addresses aspects of interest to the U.S. Fish and Wildlife Service, with minor exceptions. The following are comments with our concerns or notations.

Relative to Federally listed species in Scioto County, the PDEIS addresses the three species (Indiana bat-*Miotis sodalis*, Virginia spiraea-*Spiraea virginiana*, and small whorled pogonia-*Isotria medeoloides*) and concludes that the project may affect but is unlikely to adversely affect the three listed species. We concur with this determination. We understand that no Indiana bats were found during surveys in the project area. Nevertheless, we recommend adherence to our standard guidance for avoiding or minimizing impacts to Indiana bats and their habitat.

The timber rattlesnake-*Crotalus horridus horridus*-was given consideration relative to a pre-listing conservation plan, and no impacts on this species are expected.

Since the publication of the PDEIS, two mussel species (rayed bean-*Villosa fabalis* and sheepnose-*Plethobasus cyphus*) have officially been added in Scioto County as Federal candidate species. We recommend that these two species be addressed in the draft EIS.

### **GENERAL COMMENTS**

In addition to significant direct effects of major road construction, such as the Portsmouth Bypass, these projects have many secondary impacts, not only to the environment, but also to the economy and society in the project area. Areas adjacent to the road alignment are frequently changed from basically undeveloped rural settings to residential and commercial developments with large areas of impervious surfaces. Areas near interchanges are particularly vulnerable. Economic development with transportation elements should be pursued which would rejuvenate old, economically dying neighborhoods in cities such as Portsmouth. We are concerned that this project would not only destroy many natural resources in the project area, but also could promote further deterioration of the city's core. Unfortunately, this type of project promotes the so-called urban sprawl. We recommend that Ohio Department of Transportation (ODOT) work with local governments in the project vicinity to initiate local zoning which would result in controlled developments that protect the natural resources rather than destroy them.

We are also concerned with impacts to forest habitat which result in increased fragmentation to large tracts of forests. While the percentage of forest in Ohio has increased during the past decades, the number of large blocks of uninterrupted forest has decreased. To some degree the Portsmouth Bypass would further fragment forest in the Portsmouth area. This is an issue that should be addressed in the draft EIS, along with more attention to project-caused impacts to forest habitat, in general.

### **Mitigation Measures**

As in other bypass projects in southeast Ohio, new roads are commonly routed through forested areas. Also, most of the forested areas are hilly. Therefore, additional terrain is needed to have a cut or fill segment with stable slopes. To minimize those impacts, we recommend that the median and shoulder areas be reduced to that which is necessary for safety and maintenance. If necessary, median width should be reduced with the use of "Jersey" barriers.

## **SPECIFIC COMMENTS**

### **ECOLOGICAL SURVEY REPORT VOL. I**

#### **Page 16, Endangered Species:**

In the second paragraph the last sentence should be modified to read, "This species has been confirmed in Hocking County (approximately 50 miles north of the study area, and there is a 1985 record in Scioto County (approximately 5 miles from the study area)."

The same comment pertains to the second paragraph on page 63, which addresses the small whorled pogonia (SWP).

#### **Page 38, Endangered Species, Small Whorled Pogonia:**

In the second paragraph, the second sentence should be modified to read, "The timing of this work will be coordinated with Paul Knoop, a private naturalist, who is monitoring the known population of the SWP in Hocking and Scioto Counties..." The same change should be made in Volume III, Tab K, Page 1 and Appendix A, sixth page, Field visit, Small Whorled Pogonia site, Hocking County.

### **Pre-DRAFT EIS**

#### **Page 3-25, *Mitigation/Additional Coordination Required:***

We note that the Little Scioto River is designated State Resource Waters. As such, the Ohio EPA prohibits authorization of impacts to the river and adjacent wetlands under the Nationwide Permit Program of Section 404 of the Clean Water Act. Therefore, we recommend that established best construction and management practices be exceeded in portions of this project that are near this river. In addition to all the standard practices, adequately sized sediment control structures should be constructed, used and maintained during the entire project construction period to prevent project originated silt from entering the stream(s).

#### **Page 3-35, *Mitigation/Additional Coordination Required:***

The second paragraph states that specific stream mitigation measures will be developed during coordination with the Corps and Ohio EPA in the pre-application process for Section 404 and 401 permits. In accordance with the Fish and Wildlife Coordination Act, we ask that the above agencies include both the State and Federal fish and wildlife agencies in the above deliberation. We recommend the same for development of the wetland mitigation plan, as required by the U.S. Army Corps of Engineers Regulatory Guidance and Ohio's Revised Code, primarily in the Little Scioto River watershed.



**Page 3-41, 3.4.6 Wildlife, Vegetation and Threatened and Endangered Species:  
Existing Conditions**

It should be noted that the eastern sand darter is on a list of species for which status assessments will be done in the next few years. Also, another species, for which a relatively recent record (1988) exists in Little Scioto River, is the eastern hellbender (*Cryptobranchus alleganiensis*). This species is currently under evaluation for possible Federal candidate status. This information should be included in the draft EIS.

**Page 3-48, Natural Environment Secondary Impacts:**

We note that this section has not been included in the above document but will be in the subsequent draft EIS. We appreciate this heads-up comment, since we understand that a primary purpose of the project is to stimulate economic development in the Bypass corridor. Considering this, habitat impacts beyond the construction of the Portsmouth Bypass could be, and predictably will be, substantial. Your treatment of secondary impacts should include discussions of economic goals by local governments.

**Page 3-50, Figure 3-6: Existing Land Use:**

This figure should be revised to show a land use for Forest. We assume this is included with "Agricultural" in the current figure. It should be categorized as in Table 3-13 on page 3-53. (Refer to our comments on forest habitat.)

Much emphasis has been placed on impacts to streams, wetlands, and federally listed species; since impacts to such are regulated. Unfortunately, upland forest habitat receives relatively little attention. In recent years we have observed that the ODOT has placed considerable effort on the planting of woody vegetation along constructed roads and adjacent impacted areas. We recommend the same be done for this project to mitigate the significant loss of forest habitat. The general project vicinity should be scanned for possible opportunities to replace the many acres of forest habitat. Furthermore, conservation easements should be used where feasible to protect reforestation efforts in perpetuity. The focus should be made on hillsides, as well as bottomlands and riparian areas.

**Page 2-10, 2.2.1.2 Evaluation Process and Criteria:**

The second paragraph lists the resources that should be considered during the impact analyses. Among other resources, we noted wetlands, streams, and floodplains. We recommend that you add another very important resource relative to everyone's interest: forest!

**Table 3-22, PREMINARY PROJECT IMPACTS BY SECTION:**

After careful evaluation of data in this table, based on lower levels of impacts to priority habitats, we recommend that following segments for the three sections of this project where there is a choice.

- Section 1, Segment Hill
- Section 2, no choice
- Section 3, Segment Hill (actually both segments are very similar in terms of impacts to various habitats)
- Section 4, Segment Valley

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U. S. Fish and Wildlife Service's Mitigation Policy.

We appreciate this opportunity to provide the above comments. If you have questions, or if we may be of further assistance in this matter, please contact Ken Lammers at extension 15 in this office.

Sincerely,



for Mary Knapp, Ph.D.  
Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH  
ODNR, Division of Real Estate & Land Management, Columbus, OH  
Ohio EPA, 401/Wetland Section, Columbus, OH  
US EPA, Office of Environmental Review, Chicago, IL



State of Ohio Environmental Protection Agency

## STREET ADDRESS:

Lazarus Government Center  
122 S. Front Street  
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3104

## MAILING ADDRESS:

P.O. Box 1049  
Columbus, OH 43216-1049

February 23, 2005

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
PO Box 899  
Columbus, Ohio 43216-0899**Re: SCI-823-0.00, PID 19415 (Portsmouth Bypass)  
Draft Environmental Impact Statement (DEIS)  
and Addendum**

Dear Mr. Hill:

We have completed our review of the above referenced documents that we received in this office on January 24, 2005. The documents are the latest in a series of studies regarding the "Portsmouth Bypass," a project deemed essential in promoting economic development and improving traffic problems in the area. At this stage in the review process, we understand that the "Hill Alignment" (H1, Hill/Valley 2, H3, H4) has been chosen for further consideration and likely will be announced as the Preferred Alternative, pending assessment of alternatives impacts and comments on the DEIS. We understand that this alternative will impact an estimated 37 streams (20, 881 linear feet), ten ponds (2.93 acres), and ten wetlands (1.27) acres.

We do not have any objections to using the Hill Alignment as the Preferred Alternative. We expressed our acceptance of such an alignment in our June 24, 2004 letter. Of course, we would like to see further project refinements to avoid or lower ecological impacts, especially forested habitat, Category II wetlands, Class III PWH streams, Little Scioto River, Long Run, and Candy Run. Our brief comments (below) are primarily focused on aquatic resources.

1. **Ponds** - Because ponds serve important ecological functions, we would like like to see more details on pond fauna composition and whether any ponds may be potential amphibian habitat.
2. **Forested/Wooded Habitat** - Although the report stated that the forested habitats in the project area are fragmented and not mature stands, we would appreciate further clarification on the potential impacts the project may have on habitat fragmentation and soil stability.

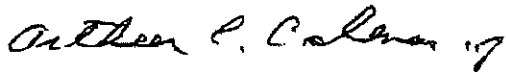
Bob Taft, Governor  
Jennette Bradley, Lieutenant Governor  
Christopher Jones, Director

Timothy M. Hill, Administrator  
Ohio Department of Transportation  
Portsmouth Bypass, SCI-823-0.00, PID 19415  
DEIS and Addendum  
Page 2 of 2

3. **Roadway Sedimentation and Runoff** - If new roadway is constructed near aquatic resources, we would like priority given to stabilizing embankments with vegetation and BMPs to minimize run-off from pavement and sedimentation into these resources.
4. **Use of Culverts** - Because culverts could have cumulative impacts within the watershed, we would appreciate details on the types of culverts used and the lengths of the culverts, as information becomes available. Where practicable, we encourage the use of oversized culverts.

This completes our comments on your submittal. We look forward to additional information on the project. If you have any issues you would like to discuss, feel free to contact me at (614) 644-2138.

Sincerely,



Arthur L. Coleman, Jr.  
Environmental Specialist  
Division of Surface Water

cc: Kimberley-Courts-Brown, Army COE, Huntington District  
Kenneth Lammers, USFWS  
Mary Knapp, USFWS  
Wayne Gorski, US EPA/Region V  
William Cody, Asst. Administrator, OES/ODOT  
Mike Pettegrew, Waterway Permits, OES/ODOT  
Noel Alcala, OES/ODOT  
Randy Sanders, ODNR/REALM  
Marty Kuklis, Ohio EPA/SEDO

"Sanders, Randy"  
<Randy.Sanders@dnr.state.oh.us>

02/24/2005 09:16 AM

To <david.snyder@fhwa.dot.gov>

cc "Bill Cody" <Bill.Cody@dot.state.oh.us>, "Noel Alcala"  
<Noel.Alcala@dot.state.oh.us>

Subject 05-0020; Draft Environmental Impact Statement (DEIS) SCI-823  
Portsmouth Bypass PID 19415

**David, As mentioned over the phone, here are the Department's final comments on the DEIS for the Portsmouth Bypass project. Randy Sanders**

**ODNR COMMENTS TO David Snyder, U.S. Department of Transportation, Federal Highway Administration, 200 North High Street, Room 328, Columbus Ohio 432215 for ODOT, Draft Environmental Impact Statement (DEIS) SCI-823 Portsmouth Bypass PID 19415**

**Location:** Portsmouth Bypass, Scioto County, Ohio

**Project:** Construction of a four lane limited access freeway in Scioto County.

The Ohio Department of Natural Resources (ODNR) has completed an additional review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Rare and Endangered Species:** The ODNR Division of Natural Areas and Preserves (DNAP) has no additional comments on this project as it appears our previous concerns have been addressed. DNAP will defer to the ODNR Division of Wildlife to make any additional comments on listed animals.

**Fish and Wildlife:** The Draft Environmental Impact Statement indicates wetland and stream mitigation will be provided for unavoidable impacts, work will be done to avoid impacts to freshwater mussels, and no instream work will occur from April 15 to June 15. It appears wetlands and streams have been avoided where possible. Therefore, the ODNR, Division of Wildlife has no additional comments regarding the DEIS.

ODNR appreciates the opportunity to provide these comments. Please contact Randy Sanders at 614.265.6344 if you have questions about these comments or need additional information.

Randall E. Sanders

Environmental Administrator

Division of Real Estate & Land Management

Ohio Department of Natural Resources

2045 Morse Rd, C4

Columbus, Ohio 43229-6693

614.265.6344

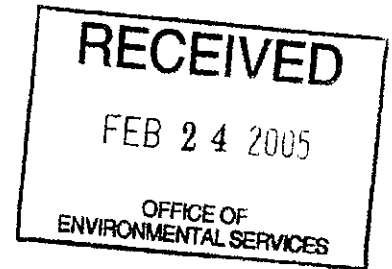
Fax 614.267.4764

[randy.sanders@dnr.state.oh.us](mailto:randy.sanders@dnr.state.oh.us)



DEPARTMENT OF THE ARMY  
HUNTINGTON DISTRICT, CORPS OF ENGINEERS  
502 EIGHTH STREET  
HUNTINGTON, WEST VIRGINIA 25701-2070

February 18, 2005



REPLY TO  
ATTENTION OF:  
Operations and Readiness Division  
Regulatory Branch  
UN Trib Ohio River-200001321

Timothy Hill  
Office of Environmental Services  
Ohio Department of Transportation  
Post Office Box 899  
Columbus, Ohio 43216-0899

Dear Mr. Hill:


I refer to Draft Environmental Impact Statement (DEIS) and Impact Addendum Report (IAR) of the Ecological Survey Report (ESR) received in this office on January 21, 2005 concerning the proposed Portsmouth Bypass project in Scioto County, Ohio. You have requested our comments on the DEIS and IAR in accordance with Concurrence Point 3 of the NEPA 404/401 Merger Implementation Agreement. The CRS and PID numbers for this project are SCI-823-0.00 (PID 19415).

The DEIS incorporates all of our recommendations of July 5, 2004. The document is extremely well prepared, well organized, and clearly defines all of the ecological, socio-economic, logistical, and financial issues surrounding each alternative. The document clearly describes the ecological impacts associated with the project as a whole and concisely illustrates the ecological impacts associated with each Feasible Alternative. The comparative impact tables included in the DEIS provides a clear basis for selecting a preferred alternative. The IAR more clearly defines the affected waters of the United States within the preferred alternative and provides a strong basis to determine where impacts can be minimized. The IAR also provides excellent baseline information that can be used to determine mitigation requirements for the proposal.

As you are aware, this office's main priority is to review the environmental impacts associated with each alternative. We concur that the Hill Alignment (H1/HV2/H3/H4) is the least environmentally damaging practicable alternative. You have indicated you will continue to take steps to further minimize impacts to waters of the United States and to provide adequate mitigation for all environmental and social impacts associated with proposal.

Thank you for allowing this office the opportunity to review and provide comments on the proposal. If you have any questions concerning the above, please contact Kimberly Courts-Brown at 304-399-5210.

Sincerely,

  
Ginger Mullins, Chief  
Regulatory Branch





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590



REPLY TO THE ATTENTION OF

B-19J

MAR 09 2005

Dave Snyder  
Federal Highway Administration  
200 North High Street, Room 328  
Columbus, OH 43215

**RE: SR 823 Portsmouth Bypass, Scioto County, Ohio (SCI-823 0.00, PID 19415)**

Dear Mr. Snyder:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (U.S. EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the SR 823 Portsmouth Bypass in Scioto County, Ohio. The project involves constructing a 16 mile, 4 lane divided bypass northeast of Portsmouth from Lucasville to Wheelersburg. The project is part of the multi-state Appalachian Development Highway System plan. The document presents the preferred alternative, the Hill Option, and its expected impacts to: 493 woodland acres, 55 acres of active farmland, 5.5 wetland acres, and relocation of 30 homes, an apartment building and 18 other residences. U.S. EPA previously reviewed the USH-23 Portsmouth Transportation Feasibility Study and concurred with your agency's recommendation to forward the Airport Bypass corridor for further analysis. On July 1, 2004, we contributed comments on the preliminary DEIS.

U.S. EPA rated the DEIS an Environmental Concerns- insufficient information (EC-2). This means that the U.S. EPA has identified environmental impacts that should be avoided and suggests corrective measures which may require changes to the preferred alternative or mitigation measures that can reduce impacts. The rating also means that the DEIS does not contain sufficient information to fully assess environmental impacts of the preferred alternative or other alternatives that are reasonably available to the project. Comments follow below.

### **River Crossings**

The DEIS mentions that temporary increases in sedimentation have the potential to affect two fish species listed as rare (Page 3-49). We recommend that the strictest mitigation measures be added where the fish occur, in Long Run and the Little Scioto River. We also suggest monitoring these fish populations over the duration of construction and for a period of time thereafter, for example one year. The work should be coordinated with Ohio Department of Natural Resources.

## **Forest Fragmentation/ Loss of Forested Acreage**

In general, the DEIS does not fully address forest fragmentation. In addition, the DEIS should address impacts from the loss of woodland acreage, aside of fragmentation. While we understand that the existing forest acreage is not "virgin" or "old growth" (p. 3-50), we note that several segments of the preferred section appear to cut through wooded areas that appear relatively continuous (in Segments H-1 and HV-2). It is clear that when an overall 493 acres of woodland are impacted for the bypass, habitat will be lost, edge environments will increase, and the potential for invasive species along the edges will increase.

We do not agree with the statement on page 3-51: "Because there are already roads throughout the project area, the addition of the bypass will do little to fragment the forested area more than they have already been fragmented." Since the area has been previously fragmented and logged, additional impacts to woodlands and habitat from the project should be characterized as cumulative impacts. Therefore, we suggest that this section of the DEIS evaluate and discuss the project's cumulative impacts with regard to fragmentation and loss of acreage. Please note that we looked at information in the project's Ecological Survey Report (ESR), or describe cumulative impacts.

We note further that the DEIS claims that secondary impacts due to forest fragmentation are expected to be minor, due to existing conditions (p. 3-51). We suggest removing the statement from the DEIS, since the purpose of the road, in part, is to encourage development. If the road is successful in this aspect of its purpose, it is reasonable to expect the removal of more woodland acreage or further fragmentation. These secondary impacts are not acknowledged or described by the DEIS, and they should be.

The DEIS is not specific about mitigation to replace the use and values provided by woodland acreage that will be removed or fragmented. These values, as described in the DEIS and the ESR, appear to be mainly as habitat for wildlife. We encourage voluntary mitigation of upland forest losses. We realize that mitigation close to the project may not be achievable, given that the project is bordered mainly by private land, some of which is used for timber production or agriculture. It may be difficult to address cumulative forest fragmentation impacts as well. Even under these circumstances, mitigation efforts should be more fully described because removal of woodland acres is one of the largest environmental impacts of the project. For example, we recommend the DEIS identify, or discuss the undertaking to identify, local preservation groups that might be interested in monitoring invasive species and replanting the area with native species. We suggest the Ohio Department of Transportation consider the Shawnee State Forest in its mitigation plans. There may be opportunities to add to contiguous woodland acreage the park or to assist in habitat restoration. While that resource is outside the study area, we suggest that adding to it could at least help preserve the use and values in the region.

If you have any questions, please contact Anna Miller of my staff at (312) 886-7060 or miller.anna@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth A. Westlake". The signature is fluid and cursive, with a large loop at the end.

Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities

cc: Tim Hill, Ohio Department of Transportation



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106-2904



IN REPLY REFER TO:

March 11, 2005

ER 05/82

Mr. Dennis Decker  
Division Administrator  
Federal Highway Administration  
Ohio Division  
200 North High Street, Room 328  
Columbus, Ohio 43215-2408

Dear Mr. Decker

The Department of the Interior (Department) has reviewed the January 2005 Draft Environmental Impact Statement (DEIS) for SR-823, Portsmouth Bypass Project PID 19415, Scioto County, Ohio. The Department offers the following comments and recommendations for your consideration.

## GENERAL COMMENTS

The U.S. Fish and Wildlife Service (Service) has been coordinating with the ODOT on the project, including reviewing the Ecological Survey Report and Preliminary DEIS in the summer of 2004. The Service's review letter of August 25, 2004, is included in Appendix A of the DEIS. The Service's review comments and recommendations are also provided in Chapter 5 of the DEIS along with ODOT responses. Overall, the Department believes that ODOT's responses adequately address the Service's concerns.

The proposed Bypass would connect US 23 near Lucasville with US 52 near Scioto Dale by a new limited-access highway northeast of Portsmouth. The preliminary DEIS indicated that depending on the alternative selected, the project would impact 2.59 to 4.43 acres of wetlands and 39,560 to 49,340 linear feet of stream habitat. Forest habitat impacted would be 362 to 528 acres, depending on the alternative selected. A preferred alternative is identified in the DEIS that would impact 5.55 acres of Category 1 and 2 wetlands; 20,881 linear feet of stream habitat; and 493 acres of woodland habitat, including 47.58 acres of floodplain crossed.

In its letter of August 25, 2004, the Service recommended selection of the Hill segments for Sections 1 and 3 and the Valley segment for Section 4 to minimize overall impacts to fish and wildlife resources. The Department is pleased to note that the recommended segments for Sections 1 and 3 were selected for the Preferred Alternative. However, we note that ODOT selected the Hill segment for Section 4, which would impact much more forest habitat than the Valley segment which was recommended by the Service (183 acres for the Hill segment, versus

41 acres for the Valley segment). We recommend that reconsideration be given to selecting the Valley segment for this section.

The Department appreciates the response provided on pages 5-17 through 5-19 of the DEIS to the Service's concerns regarding potential secondary impacts of the project on natural resources. We also appreciate ODOT's efforts in working with local entities to develop land use planning that would be protective of important natural resources in the project area. We note that measures to minimize direct impacts to forested areas, such as reducing median widths and rights-of-way, will be addressed during the design phase of the project. Likewise, best management practices and erosion control during and after construction will be addressed during design phase to mitigate impacts to important resources such as the Little Scioto River, a State Resource Water.

We believe that all reasonable measures to avoid or minimize impacts to species such as the hellbender and eastern sand darter, whose status is precarious, should be taken. To that end, we support the proposal put forth in the fourth full paragraph on page 3-49 of the DEIS that "no structures will be placed below the ordinary high water mark of the Little Scioto River." The paragraph goes on to indicate that "the river at this location will be spanned with piers," presumably set outside the ordinary high water (OHW) line of the river. The Department understands this to be the present position of ODOT, but notes that a contradictory statement is made in the first full paragraph on page 3-25 of the DEIS, which states that "the bridge would include concrete abutments stabilized with rock channel protection and possibly piers in the river." This apparent discrepancy between the two paragraphs should be addressed in the final EIS. We strongly recommend that no piers or other structures be placed in the river below the OHW line.

## **SPECIFIC COMMENTS**

### Page 3-40, 3.4.6 Wildlife, Vegetation and Threatened and Endangered Species

This section summarizes ODOT's efforts to determine presence in the project area of federally listed species, candidate species, and species for which the Service has a conservation plan. As documented in this section and the Ecological Survey Report for this project, extensive surveys were conducted to determine the presence of the above species along all feasible project alternative routes. None were found. We understand that this evaluation will be continued as planning for this project progresses. If any of the listed species for Scioto County are encountered, the Service's Endangered Species Coordinator should be immediately notified. We appreciate these considerable efforts of ODOT to ensure the conservation of threatened and endangered species.

### Page 3-50, 3.4.7 Forest Fragmentation

Based on its review of the preliminary DEIS, the Service recommended additional treatment of project impacts to forest habitat, including forest fragmentation. We are pleased that forest fragmentation was addressed further in the subject DEIS. However, reference is made to the fact that the forests to be impacted are not "virgin" or old growth forest and, therefore, are less valuable habitat. We do not believe that second or third growth mature forest is necessarily of

appreciably less value to most wildlife species than is virgin forest. For this reason, in part, we recommend that all possible opportunities for reforestation as mitigation for the significant loss of this habitat be pursued.

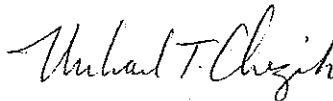
In addition to the issues discussed above, we note and appreciate that ODOT has addressed the following subjects in the DEIS for which the Service had included comments and/or recommendations in its letter of August 25, 2004, concerning the preliminary DEIS.

- Corrections in information on the small whorled pogonia.
- Comments regarding the rayed bean and sheepsnose mussels added to DEIS.
- Commitment that coordination will continue with State and federal fish and wildlife agencies with regard to the application process for Clean Water Act section 401 and 404 permits.
- The discussion of secondary impacts has been expanded in the DEIS.

Because of the significant impacts to fish and wildlife resources associated with any feasible alternatives for the above project, we anticipate ODOT's continued coordination and consultation with all resource agencies during subsequent planning for the subject project. The Department has a continuing interest in working with ODOT and the Federal Highway Administration to ensure that impacts to resources of concern to the Department are adequately addressed. For matters related to fish and wildlife resources and threatened and endangered species, please continue to coordinate with the Field Supervisor, U.S. Fish and Wildlife Service, 6950 Americana Parkway, Suite H, Reynoldsburg, Ohio 43068-4127, telephone: (614) 469-6923.

We appreciate the opportunity to provide these comments.

Sincerely,



Michael T. Chezik  
Regional Environmental Officer

cc: G. Proctor, ODOT, Columbus, OH



**OHIO DEPARTMENT OF TRANSPORTATION  
INTEROFFICE COMMUNICATION**  
**Office of Environmental Services**

**DATE:** August 16, 2010

**TO:** Brian Mitch, Division of Engineering, ODNR

**FROM:** *Timothy M. Hill*  
Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Ecological Coordination

**PROJECT:** SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

---

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and ODNR for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to ODNR in June 2004 and January 2005, and comments provided to ODOT from ODNR in December 2003, August 2004, and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches. Additionally, Phase 1 of the project will disturb approximately 328.10 acres of land, including 123.28 acres of forested habitats and 3.46 acres of scrub/shrub habitats.

The ecological survey of Phase 1 of the project area identified the presence of the state endangered southern monkshood (*Aconitum uncinatum*), the state endangered primrose-leaved violet (*Viola*



*primulifolia*), the state potentially threatened American chestnut (*Castanea dentata*), and the state species of concern eastern box turtle (*Terrapene carolina carolina*)

- Several individuals of southern monkshood were identified along Stream 18 (Long Run). All of the identified individuals are located within the project limits and will be impacted as a result of this project. No other individuals were identified in the vicinity of the project during the ecological survey of the project area.
- Several individuals of the primrose-leaved violet were identified during the ecological investigation for the proposed project. The violet was found along the edges of several logging roads that are prevalent throughout the project area. This species was also found in areas adjacent to the project area that will not be impacted by this project.
- One young American chestnut tree was found within the project area in the forested area located along the east side of Swauger Valley Road. The tree is located within the project area and will be impacted as a result of this project. Suitable habitat for the American chestnut is prevalent throughout the vicinity of the project.
- Several individuals of the eastern box turtle were encountered throughout the project area. Impacts to individuals will likely occur as a result of this project. However, impacts to the overall population of this species would likely be negligible as they are abundant throughout the project area and southern Ohio.

In addition to the state listed species encountered during the survey of Phase 1, several other federal and state listed species have the potential to be within the project area. These species included the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat. Specific surveys for these species have been conducted, or are in the process of being conducted, for the entire Portsmouth Bypass project area. Reports detailing the survey results and any potential impacts to these species will be coordinated in a future submission.

No additional survey work would be conducted for the timber rattlesnake or Virginia spiraea, as the previous surveys conducted were considered still valid by the USFWS and the approved herpetologist that conducted the original timber rattlesnake survey (Doug Wynn).

ODNR's concurrence and/or comments on Phase 1 of the Portsmouth Bypass project would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)  
Ecological Coordination

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginia Spirea - *Spirea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received on for the project on June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) has committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species.

The enclosed ecological survey report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335.

Scioto County is now known to be within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis orbiculata*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepnose mussel (*Plethobasus cyphus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled

pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), the federal species of concern timber rattlesnake (*Crotalus horridus horridus*).

During an interagency meeting held on February 10, 2011 between the Service, the Federal Highway Administration, the U.S. Army Corps of Engineers (USACE), and ODOT, the Service indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepnose mussel, pink mucket pearly mussel, fanshell Mussel, snuffbox mussel and northern riffleshell mussel (as suitable habitat streams for these species are not known to be within the project area). Additionally, a field review of the project site on May 12, 2011 attended by the Service, USACE, and ODOT resulted in the commitment for ODOT to update the inventory of the water resources (stream and wetlands) and terrestrial habitats.

The enclosed report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches. Additionally, Phase 1 of the project will disturb approximately 328.10 acres of land, including 123.28 acres of forested habitats and 3.46 acres of scrub/shrub habitats.

While federally listed species are briefly discussed within the enclosed revised ecological survey report, the discussion does not provide a detailed description of the habitats or additional survey work conducted for these species. Species specific reports detailing the survey results for the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat will be coordinated in a future submission. This future submission will also include updated affect determinations for all federally listed species known to be within the rage of the entire proposed project (all three phases).

The enclosed updated ecological survey report for Phase 1 of the Portsmouth Bypass project has been provided for the Service's review. If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,



Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File



**Ohio Department of Transportation**  
**INTER-OFFICE COMMUNICATION**  
Office of Environmental Services

**TO:** Ric Queen, OEPA - DSW **DATE:** August 16, 2011  
*Timothy M. Hill*  
**FROM:** Timothy M. Hill, Administrator, Office of Environmental Services  
**SUBJECT:** Pre-application Coordination  
**PROJECT:** SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

---

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and OEPA for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to OEPA in June 2004 and January 2005, and comments provided to ODOT from OEPA in June 2004 and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr  
Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

U.S. Army Corps of Engineers  
Ohio Regulatory Transportation Office  
DSCC Building 10, Section 10  
3990 East Broad Street  
Columbus, Ohio 43218

Attention: Mr. Peter Clingan, Team Leader  
Ohio Regulatory Transportation Office

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)  
Pre-application Coordination

Dear Mr. Clingan:

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and USACE for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS), an Ecological Survey Report, and an Impact Addendum Report to the USACE in June 2004 and January 2005, and comments provided to ODOT from USACE in January 2005 and February 2005 (attached). Additionally, the USACE provided a jurisdictional verification of Water of the U.S. for the entire project area in April 2005 (attached), which was valid for a period of five years. The USACE's comments on the project were addressed in the Final Environmental Impact Statement (FEIS), which was completed in August 2005. The Record of Decision for the project was received in June 2006.

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. Additionally, a field review of the project site on May 12, 2011 attended by the USACE, USFWS, and ODOT resulted in the commitment for ODOT to update the inventory of the water resources (stream and wetlands) and terrestrial habitats. It was determined that the updated water resources inventory would be used by the USACE to prepare a new jurisdictional determination on Water of the U.S. located within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project.

Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Phase 1 is expected to result in impacts to approximately 4.21 acres of Category 1 and 2 wetlands, 12,331 linear feet of streams, 2.74 acres of ponds, and 0.22 acres of potentially jurisdictional ditches.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments, including a jurisdictional determination of Waters of the U.S. within Phase 1 of the project area, would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

A handwritten signature in black ink, appearing to read "Timothy M. Hill" followed by a flourish.

Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak,  
FHWA - File



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

August 16, 2011

U.S. Environmental Protection Agency  
NEPA Implementation Section, Mail Code E-19J  
77 W. Jackson Blvd.  
Chicago, IL 60604

Attention: Mr. Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415)

Dear Mr. Westlake:

Enclosed for your information is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

This project had been previously coordinated with your agency as a Draft EIS in 2004 and a Final EIS in 2005. The 2006 Record of Decision documented the Preferred Alternative and addressed USEPA's final comments (attached).

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project. Phase 1 of the project will be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phase 1 of the project. Additional endangered species coordination remains ongoing with the U.S. Fish and Wildlife Service.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

  
Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

November 9, 2011

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415) , Phase 2, and Phase 3  
Consultation on Federally Listed Species

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), are five survey reports discussing potential impacts to federally listed species that may result from the construction of all three phases of the Portsmouth Bypass project. The purpose of the project is to establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginia Spirea - *Spirea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received for the project in June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources, including endangered species, within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species.

Scioto County is now known to be within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis abrupta*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepsnose mussel (*Plethobasus cyphus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), and the federal species of concern timber rattlesnake (*Crotalus horridus horridus*).



During an interagency meeting held on February 10, 2011 between the Service, the Federal Highway Administration, the U.S. Army Corps of Engineers (USACE), and ODOT, the Service indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepsnose mussel, pink mucket pearly mussel, fanshell Mussel, snuffbox mussel and northern riffleshell mussel (as suitable habitat streams for these species are not known to be within the project area). An ecological survey report that updated the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project was coordinated with the Service on August 16, 2011. While federally listed species were briefly discussed within the revised ecological survey report, the discussion did not provide a detailed description of the habitats or additional survey work conducted for these species.

The enclosed species specific reports detail the survey results for the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat. The following effect determinations for species known from Scioto County are based on the contents of the enclosed reports, previous consultation and coordination efforts, and the suitability of the habitats found within the proposed project area. These effect determinations are applicable to the Portsmouth Bypass project in its entirety (all three phases).

**Bald eagle (*Haliaeetus leucocephalus*)** - The bald eagle is protected under the Bald and Golden Eagle Protection Act which prohibits taking bald eagles, including disturbance. The preferred habitat includes mature forests adjacent to open water for nesting and foraging. No nests for this species were encountered during any of the ecological surveys. Additionally, the preferred habitat of the bald eagle does not occur within the study area; therefore, this bird is not likely to be encountered within study limits. The nearest active bald eagle nest location is located approximately 3.9 miles from the northwestern project terminus along the Scioto River. As such, the project is expected to have **no effect** on this species.

**Clubshell mussel (*Pleurobema clava*)** - The clubshell mussel prefers clean, loose sand and gravel in medium to small rivers and streams. This mussel will bury itself in the bottom substrate to depths of up to four inches. Within Scioto County the species is known from the Ohio River. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area, including the survey of the Little Scioto River (see enclosed report). As a result, the proposed project should have **no effect** on the species.

**Eastern hellbender (*Cryptobranchus alleghaniensis*)** - The eastern hellbender inhabits well-oxygenated flowing waters where large rocks are available for shelter and nesting. Within the proposed project area it was determined that the only stream with potentially suitable habitat for the species was the Little Scioto River. Additionally, the eastern hellbender is known from the Little Scioto River, with capture records for the species as recent as 2009. During 2011, Ohio herpetologist Gregory Lipps conducted a survey for the eastern hellbender and its habitat within the Little Scioto River at the location of the proposed bridge crossing for the project (see enclosed report). The survey did not find any individuals of the species, and determined that this segment of the Little Scioto River did not contain suitable habitat for the species. Due to the lack of suitable habitat for the species within the proposed project area, it is anticipated that the project will have **no effect** on the species.

**Fanshell mussel (*Cyprogenia stegaria*)** - The fanshell mussel is found in shallow to deep water living on a coarse sand and gravel substrate in swift currents. The species appears to be restricted to free flowing

reaches of medium to large rivers. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Indiana bat** (*Myotis sodalis*) – The Indiana bat life cycle requires suitable summer roosting and brood rearing habitat (which includes living or standing dead trees or snags with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities) and suitable hibernacula during the winter months (typically caves, or abandoned mines that provide cool, humid, stable conditions for hibernation). The nearest known record for the Indiana bat was a suspected hibernacula located approximately 5.75 miles from the project area. No caves, mine portals, or other features that could be acting as potential Indiana bat hibernacula were found within the project area. Approximately 493 acres of successional, second growth, and mature forested habitats will be impacted by the proposed project (all three phases). Mist net surveys for Indiana bats were conducted in 2003 within the preliminary project alternatives (21 net sites), and again in 2011 (enclosed report) within the selected alternative for the project (19 net sites). No Indiana bats were captured during either survey. Although the proposed project will result in the removal of multiple acres of trees possessing potential Indiana bat roost and maternity roost habitat characteristics, the results of the surveys suggest that Indiana bats were not present in the project area, or were present in very low numbers. To avoid direct take of bats, trees will be cleared for the project only between 30 September and 1 April. Based on the results of the survey, and the commitment to avoid the direct take of Indiana bats by implementing seasonal cutting restrictions, it is reasonable to conclude this project **may affect, but is not likely to adversely affect** the Indiana bat.

**Northern riffleshell mussel** (*Epioblasma torulosa rangiana*) – This species prefers riffles composed of firmly packed fine gravel in swift flowing shallow water. Within Scioto County the species is only known from the Scioto River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Pink mucket pearly mussel** (*Lampsilis abrupta*) - The pink mucket pearly mussel is a moderate to large river species that is generally found in gravel-cobble-boulder substrates associated with riffle and run habitats. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Rayed bean mussel** (*Villosa fabalis*) –The rayed bean generally lives in smaller, headwater creeks, but they are sometimes found in large rivers and wave-washed areas of glacial lakes, including Lake Erie. They prefer gravel or sand substrates, and are often found in and around roots of aquatic vegetation. Within Scioto County the species is known from the Scioto River and the Scioto Brush Creek. However, the species is considered potentially present within any streams in the County that possess its preferred habitat, including the Little Scioto River. Although suitable habitat for the species was present, no specimens of rayed bean were found during the survey of the Little Scioto River (see enclosed report) or any other mussel surveys conducted during the ecological surveys of the project area. It is unlikely that the species is present within the proposed project area and that it will be impacted by proposed construction activities. As a result, the proposed project **may affect, but is not likely to adversely affect** the species.

**Running buffalo clover** (*Trifolium stoloniferum*) – Running buffalo requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe

disturbance. Potential areas of running buffalo clover habitat include partially shaded woodlots, periodically mown areas (lawns, parks, cemeteries), and partially shaded woods along streams and trails. The nearest record for the running buffalo clover is located approximately 11 miles from the project area within Lawrence County. A survey for this species was conducted in 2011(see enclosed report). Although this species was not identified within the project study area during any of the survey, suitable habitats for the species, partially shaded woodlots along streams and maintained lawns and trails, were present within the project area. Due to the absence of the species, but the presence of potentially suitable habitat within the project area, ODOT believes that the project **may affect but is not likely to adversely affect the species.**

**Sheepnose mussel (*Plethobasus cyphus*)** – The sheepnose mussel lives in larger rivers and streams where they are usually found in shallow areas with moderate to swift currents flowing over coarse sand and gravel. Sheepnose have also been found in mud, cobble, and boulders. In larger rivers they may be found in deep runs. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Small whorled pogonia (*Isotria medeoloides*)** –The small whorled pogonia prefers “upland sites in mixed-deciduous or mixed deciduous/coniferous forests that are generally in second- or third-growth successional stages,” in areas that “include sparse to moderate ground cover in the species’ microhabitat, a relatively open understory canopy, and proximity to features that create long persisting breaks in the forest canopy” (*Small Whorled Pogonia Recover Plan*, von Oettingen, 1992). This species typically flowers from mid-May through mid-June, however, flowering occurs only for a period of about one week, and the plant may not flower on an annual basis. In addition, it is believed that this species may be capable of extended periods of dormancy, and that it may not emerge within a given year. The inconsistent, sporadic, nature of this species, as well as the similarity in morphological appearance to large-whorled pogonia (*I. verticillata*) and sterile individuals of the abundant Indian cucumber-root (*Medeola virginiana*), makes it difficult to survey for within the project area. Records for the small whorled pogonia within Scioto County are located approximately 17.5 miles west of the proposed project study area. Surveys for this species were conducted in 2003, 2004, and 2011(see enclosed report). While the species was not found within the project study area during any of the field surveys, suitable habitats for *I. medeoloides* were observed. Due to the presence of potentially suitable habitat for the species, the proximity to a known location for the plant, and the potential difficulties associated with surveying for this species (short flowering period, similarity in appearance to sterile plants of Indian cucumber-root, and potential periods of dormancy) the species cannot be completely discounted from being present within the study area. As a result, ODOT believes that the project **may affect, but is not likely to adversely affect** the species.

**Snuffbox mussel (*Epioblasma triquetra*)** - The snuffbox mussel is usually found in small to medium-sized creeks in areas with a swift current, although it is also found in Lake Erie and some larger rivers. Adults often burrow deep in sand, gravel or cobble substrates, except when they are spawning or the females are attempting to attract host fish. Within Scioto County the species is known from the Ohio River, Scioto Brush Creek, and the South Fork Scioto Brush Creek. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Timber rattlesnake (*Crotalus horridus horridus*)** - These snakes are a woodland species. In addition to using wooded areas, timber rattlesnakes also utilize sunlit gaps in the canopy for basking and deep rock crevices for overwintering (den sites). Individuals may make larger movements between various sites in

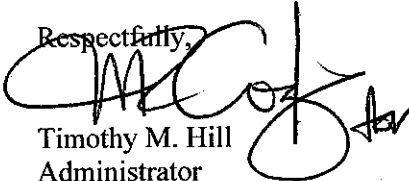
the summer. A survey for this species was conducted by herpetologist Doug Wynn during 2003. The Service and Doug Wynn both concurred that updated surveys for this species were unnecessary to make an effect determination for this species. The 2003 survey found that suitable habitat for this species is present within the proposed project area, however, signs of major human disturbance were common, and it was determined to be very unlikely that the species inhabits or utilizes the surveyed area. This species was not encountered during the species specific survey (conducted in 2003) or during any of the previous or updated ecological surveys. Due to the presence of suitable habitat for the species, but the lack of evidence of timber rattlesnakes using the habitat, the proposed project **may affect, but is not likely to adversely affect** the species.

**Virginia spiraea** (*Spiraea virginiana*) – Habitat for the Virginia spiraea is usually rocky, flood scoured banks of high energy (high gradient) streams or rivers. This species is currently only known in Scioto County along Scioto Brush Creek, west of the Scioto River. During the 2003 ecological survey (as well as the 2011 ecological survey on Phase 1) each perennial stream located within the proposed project area was reviewed for habitat for the Virginia spiraea. The conditions along the Little Scioto River at the proposed crossing did not appear suitable for the plant. While several of the other perennial streams within the project area appeared to have satisfactory habitat conditions for this shrub species, none of the plants were found. Due to the presence of suitable habitat for the species, but the lack of evidence that the plant is within the proposed project area, the proposed project **may affect, but is not likely to adversely affect** the species.

If a listed or proposed species is subsequently found to occur in the project area, the Federal Highway Administration will initiate coordination with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

The Service's concurrence and/or comments on the effect determinations for listed species would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, please call Matt Raymond, Environmental Specialist, at (614) 466-5129.

Respectfully,



Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Ron Garczewski, FHWA -  
File





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

March 12, 2012

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03E15000-2012-I-0581 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

RE: **SCI-823-0.00 Portsmouth Bypass**, Phase 1 (PID 19415), Phase 2, and Phase 3

Dear Mr. Hill,

This is in response to your November 9, 2011 letter received in our office on November 15, 2011 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act section 7(a)(2) effects determination for federally listed species in the SCI-823-0.00 Portsmouth Bypass project area. The project proposes to establish a 17-mile long bypass, to be constructed in three phases, with Phase 1 (the middle portion of the 3-phase project) to be built first. The construction schedule for the entire project is approximately 13 years. The Ohio Department of Transportation (ODOT) and the Federal Highway Administration (FHWA) have determined that each phase of the project has independent utility. Phase 1 includes interchanges with TR 234 (Shumway Hollow Road) and CR 28 Lucasville-Minford Road) and is approximately 3 miles long. According to Public Notice 2011-00646-OHR, recently issued by the U.S. Army Corps of Engineers (USACE) (Huntington District), the proposed work on Phase 1 would result in permanent discharge of approximately 1,381 cubic yards of fill material into 9,525 linear feet (1.22 acre) of streams; 5,076 cubic yards of fill material into 3.89 acres of emergent wetlands, and 26,137 cubic yards of fill material into 2.70 acres of ponds. Approximately 1,175 cubic yards of temporary fill material will be discharged 300 linear feet (0.26 acre) of stream for bridge construction access and staging areas.

This project lies within the range of the **Indiana bat** (*Myotis sodalis*), **sheepnose mussel** (*Plethobasus cyphus*), **running buffalo clover** (*Trifolium stoloniferum*), **snuffbox mussel** (*Epioblasma triquetra*), **rayed bean** (*Villosa fabalis*), **fanshell** (*Cyprogenia stegaria*), **northern riffleshell** (*Epioblasma torulosa rangiana*), **pink mucket pearlymussel** (*Lampsilis abrupta*), **clubshell** (*Pleurobema clava*), all federally endangered species; **small whorled pogonia** (*Isotria medeoloides*) and **Virginia spiraea** (*Spiraea virginiana*), both federally threatened plant species; and the **bald eagle** (*Haliaeetus leucocephalus*), **timber rattlesnake** (*Crotalus horridus*), and **eastern hellbender** (*Cryptobranchus a. alleganiensis*), federal species of concern.



Although only activities associated with Phase 1 have been public noticed for permitting by the USACE, ODOT chose to consult with the Service and address potential impacts to federally listed species within the entire bypass project corridor. Therefore, those impacts are addressed in this letter. However, if construction of the subsequent phases of the project is delayed for three or more years, ODOT/FHWA should re-initiate consultation with the Service to address any potential changes in species distributions or occurrence records within the Phase 2 and Phase 3 project areas.

As discussed during an interagency meeting held on February 10, 2011 between the Service, FHWA, ODOT, and USACE, suitable habitat streams for sheepnose, pink mucket, fanshell, snuffbox, and northern riffleshell mussels are not present within the bypass project area. Therefore, no impacts to these species are anticipated. During the February 2011 meeting, the Service also informed ODOT/FHWA that no surveys, in addition to those conducted in 2004, would be required for the timber rattlesnake or Virginia spiraea, as the earlier survey results are still valid.

A survey for federally listed mussel species was conducted in the Little Scioto River by Dr. Michael Hoggarth, a federally permitted malacologist, during the 2011 summer season. None of the federally listed mussel species were found during this survey. Based on the results of this survey and other less intensive surveys conducted in the other streams within the project area, as well as current records of species occurrence, impacts to the clubshell are not anticipated. Although no rayed bean mussels were discovered during Dr. Hoggarth's survey or the other less intensive surveys, suitable habitat for the species was present in the Little Scioto River. Therefore, it is possible that the species could occur in other reaches of the stream. Based on this information, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* the rayed bean. The Service concurs with this determination.

Surveys for running buffalo clover and small whorled pogonia were conducted in May and June 2011. No individuals of either species were identified during these surveys; however, suitable habitat for each species was present within the project corridor. Therefore, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* running buffalo clover and small whorled pogonia. The Service concurs with this determination.

On August 16, 2011, Greg Lipps, a professional herpetologist, surveyed the reach of the Little Scioto River that will be impacted by the bypass project for suitable habitat for the eastern hellbender. Although the hellbender is known to occur in the Little Scioto, no suitable habitat for the species was identified at or near the proposed crossing for the bypass. Therefore, no impacts to this species are anticipated.

The corridors associated with the proposed alignment of the bypass, both currently and in 2003, were surveyed for Indiana bat. Twenty-one net sites were surveyed in 2003 and Nineteen net sites were surveyed in 2011. No Indiana bats were captured during either survey, suggesting that the species is not present in the project area or occurs at very low density. Therefore, ODOT has determined that the project *may affect but is not likely to adversely affect* the Indiana bat. The Service concurs with this determination. We also appreciate ODOT's commitment to conduct tree clearing activities only between September 30 and April 1 to avoid direct take of bats during their summer brood-rearing season.

Although the bald eagle is known to occur in Scioto County, the nearest nest to the project construction limits is 3.9 miles from the northwestern project terminus along the Scioto River. Therefore, no impacts to this species are anticipated.

Our office has received copies of all the survey reports for the surveys conducted in 2011. As stated above, additional surveys may be necessary if construction on some or all of the bypass project does not occur for three or more years. Although no federally listed species were identified, the Service



recommends that best management practices (BMPs) be implemented to minimize impacts to water quality. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species. Also, **Please note that if** the applicant plans to clear trees prior to issuance of a 404 and/or 401 permit: 1) Section 7 consultation with the Service must be completed; and 2) No tree clearing on any portion of the project should occur until both the U.S. Army Corps of Engineers and Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the project as a whole is imminent. This will ensure that clearing will be limited to the footprint of the alternative that is ultimately permitted, and that no unnecessary clearing will occur.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy. This concludes consultation on this action as required by section 7(a)(2) of the Endangered Species Act. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,



Mary Knapp, Ph.D.  
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH (*email only*)  
USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
OEPA, Columbus, OH (*email only*)



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

May 10, 2013

U.S. Environmental Protection Agency  
NEPA Implementation Section, Mail Code E-19J  
77 W. Jackson Blvd.  
Chicago, IL 60604

Attention: Mr. Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities

Re: SCI-823-0.00, Portsmouth Bypass Project, Phases 2 and 3 (PID 19415)

Dear Mr. Westlake:

Enclosed for your information is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

This project had been previously coordinated with your agency as a Draft EIS in 2004 and a Final EIS in 2005. The 2006 Record of Decision documented the Preferred Alternative and addressed USEPA's final comments. This information was previously provided in the August 16, 2011 letter to your agency.

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phases 2 and 3 of the selected alternative for the project. Phase 2 of the project will be constructed from the US 23 interchange at the northern project terminus to the CR 28 (Lucas-Minford Road) Interchange, where it ties into Phase. This phase is 7.4 miles long. Phase 3 extends from The TR 234 (Shunway Hollow Road) to the US 52/Sciotoville proposed interchange. This phase is approximately 5.6 miles long. Upon completion of these phases, the entire bypass will be open to traffic. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phases 2 and 3 of the project. Endangered Species Act consultation has been completed with USFWS for all phases.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

May 10, 2013

U.S. Army Corps of Engineers  
Ohio Regulatory Transportation Office  
DSCC Building 10, Section 10  
3990 East Broad Street  
Columbus, Ohio 43218

Attention: Mr. Peter Clingan, Team Leader  
Ohio Regulatory Transportation Office

Re: SCI-823-0.00, Portsmouth Bypass Project, Phases 2 and 3 (PID 19415)  
Pre-application Coordination

Dear Mr. Clingan:

Enclosed for your review is an updated Ecological Survey Report for the Phases 2 and 3 of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and USACE for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS), an Ecological Survey Report, and an Impact Addendum Report to the USACE in June 2004 and January 2005, and comments provided to ODOT from USACE in January 2005 and February 2005 (attached). Additionally, the USACE provided a jurisdictional verification of Water of the U.S. for the entire project area in April 2005 (attached), which was valid for a period of five years. The USACE's comments on the project were addressed in the Final Environmental Impact Statement (FEIS), which was completed in August 2005. The Record of Decision for the project was received in June 2006.

A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. The updated ESR for Phase 1 was coordinated on August 10, 2010, and Phase 1 received a 404 Permit on November 27, 2012.

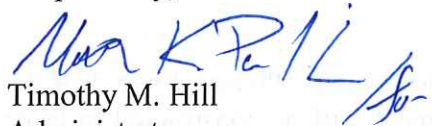
The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phases 2 and 3 of the selected alternative for the project. Phase 2 of the project will be constructed from the US 23 interchange at the northern project terminus to the CR 28 (Lucas-Minford Road) Interchange, where it ties into Phase. This phase is 7.4 miles long. Phase 3 extends from The TR 234 (Shumway Hollow Road) to the US

52/Sciotoville proposed interchange. This phase is approximately 5.6 miles long. Upon completion of these phases, the entire bypass will be open to traffic. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phases 2 and 3 of the project. Phase 2 is expected to result in impacts to approximately 4.345 acres of Category 1 and 2 wetlands and 38,492 linear feet of streams. Phase 3 is expected to impact 3.335 acres of Category 1, 2, and 3 wetlands and 29,889 linear feet of streams. Approximately 0.152 acre of ponds and 567 linear feet of potentially jurisdictional ditches will be impacted in total for both phases.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments, including a jurisdictional determination of Waters of the U.S. within Phases 2 and 3 of the project area, would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,



Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak,  
FHWA - File





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

May 10, 2013

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 2 and 3 (PID 19415)  
Ecological Coordination

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), is an updated Ecological Survey Report for Phases 2 and 3 of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginia Spirea - *Spirea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received on for the project on June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) has committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species. Updated endangered species consultation for the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis abrupta*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepsnose mussel (*Plethobasus cyphus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), and the federal species of concern timber rattlesnake (*Crotalus horridus horridus*) for all three phases of this project occurred on November 9, 2011, and USFWS concurred with the effect calls for made for these species for the entire corridor on March 12, 2012.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phases 2 and 3 of the selected alternative for the project. Phase 2 of the



# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

project will be constructed from the US 23 interchange at the northern project terminus to the CR 28 (Lucas-Minford Road) Interchange, where it ties into Phase. This phase is 7.4 miles long. Phase 3 extends from The TR 234 (Shumway Hollow Road) to the US 52/Sciotoville proposed interchange. This phase is approximately 5.6 miles long. Upon completion of these phases, the entire bypass will be open to traffic. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phases 2 and 3 of the project. Phase 2 is expected to result in impacts to approximately 4,345 acres of Category 1 and 2 wetlands and 38,492 linear feet of streams. Phase 3 is expected to impact 3,335 acres of Category 1, 2, and 3 wetlands and 29,889 linear feet of streams. Approximately 0.152 acre of ponds and 567 linear feet of potentially jurisdictional ditches will be impacted in total for both phases. The effect calls as noted in the November 9, 2011 consultation remain valid for Phases 2 and 3 of the project.

The enclosed updated ecological survey report for Phases 2 and 3 of the Portsmouth Bypass project has been provided for the Service's review. If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614)466-5129.

Respectfully,

Timothy M. Hill  
Administrator

Office of Environmental Services

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File





**Ohio Department of Transportation**  
**INTER-OFFICE COMMUNICATION**  
**Office of Environmental Services**

**TO:** Ric Queen, OEPA - DSW **DATE:** May 10, 2013  
*Matt K. R. L. Hill*  
**FROM:** Timothy M. Hill, Administrator, Office of Environmental Services  
**SUBJECT:** Pre-application Coordination  
**PROJECT:** SCI-823-0.00, Portsmouth Bypass Project, Phases 2 and 3 (PID 19415)

---

Enclosed for your review is an updated Ecological Survey Report for the first phase of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and OEPA for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to OEPA in June 2004 and January 2005, and comments provided to ODOT from OEPA in June 2004 and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phases 2 and 3 of the selected alternative for the project. Phase 2 of the project will be constructed from the US 23 interchange at the northern project terminus to the CR 28 (Lucas-Minford Road) Interchange, where it ties into Phase. This phase is 7.4 miles long. Phase 3 extends from The TR 234 (Shumway Hollow Road) to the US 52/Sciotoville proposed interchange. This phase is approximately 5.6 miles long. Upon completion of these phases, the entire bypass will be open to traffic. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phases 2 and 3 of the project. Phase 2 is expected to result in impacts to approximately 4.345 acres of Category 1 and 2 wetlands and 38,492 linear feet of streams. Phase 3 is expected to impact 3.335 acres of Category 1, 2, and 3 wetlands and 29,889 linear feet of streams. Approximately 0.152 acre of ponds and 567 linear feet of potentially jurisdictional ditches will be impacted in total for both phases.

This information is being provided for the purposes of pre-application coordination. Your concurrence and/or comments would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr  
Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA -  
File

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**OHIO DEPARTMENT OF TRANSPORTATION  
INTEROFFICE COMMUNICATION**  
**Office of Environmental Services**

**DATE:** May 10, 2013

**TO:** Brian Mitch, Division of Engineering, ODNR

**FROM:**   
Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Ecological Coordination

**PROJECT:** SCI-823-0.00, Portsmouth Bypass Project, Phase 2 and 3 (PID 19415)

---

Enclosed for your review is an updated Ecological Survey Report for the Phase 2 and 3 of the selected alternative for the Portsmouth Bypass project. The project will be constructed in three phases, and will establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Previous ecological coordination efforts between ODOT and ODNR for the entire bypass project (all three phases) included the submission of a Draft Environmental Impact Statement (EIS) and an Ecological Survey Report to ODNR in June 2004 and January 2005, and comments provided to ODOT from ODNR in December 2003, August 2004, and February 2005 (attached). These comments were addressed in the Final Environmental Impact Statement (FEIS) and the attached Record of Decision (ROD) for the project, which were completed in August 2005 and June 2006, respectively. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources within the project area. The Level 2 ESR for Phase 1 was coordinated with your office on August 16, 2010, and additional species specific surveys were coordinated with your office on various dates in 2011. ODOT received comments from ODNR on these surveys on October 11, 2011 and December 9, 2011.

The enclosed Ecological Survey Report was prepared to update the inventory of ecological resources within the construction limits of Phases 2 and 3 of the selected alternative for the project. Phase 2 of the project will be constructed from the US 23 interchange at the northern project terminus to the CR 28 (Lucas-Minford Road) Interchange, where it ties into Phase. This phase is 7.4 miles long. Phase 3 extends from The TR 234 (Shumway Hollow Road) to the US 52/Sciotoville proposed interchange. This phase is approximately 5.6 miles long. Upon completion of these phases, the entire bypass will be open to traffic. The report includes a detailed update of the stream, wetlands, and vegetative communities found within Phases 2 and 3 of the project. Phase 2 is expected to result in impacts to approximately 4.345 acres of Category 1 and 2 wetlands and 38,492 linear feet of streams. Phase 3 is expected to impact 3.335 acres of Category 1, 2, and 3 wetlands and 29,889 linear feet of streams. Approximately 0.152 acre of ponds and 567 linear feet of potentially jurisdictional ditches will be impacted in total for both phases.



The ecological survey of Phases 2 and 3 of the project area identified the presence of several state listed species:

- Several individuals of the **primrose-leaved violet** (*Viola primulifolia*) were identified during the ecological investigation for the proposed project. The violet was found along the edges of several logging roads that are prevalent throughout the project area. This species was also found in areas adjacent to the project area that will not be impacted by this project. Locations of species found during the ecological survey of the area are presented on Figure 2.
- Several individuals of the state species of concern **eastern box turtle** (*Terrapene carolina carolina*) were encountered throughout the project area. Impacts to individuals will likely occur as a result of this project. However, impacts to the overall population of this species would likely be negligible as they are abundant throughout the project area and southern Ohio.
- Several individuals of the state threatened **riverbank paspalum** (*Paspalum repens*) were identified in the Wetland 24 complex along the Little Scioto River. Southern Ohio is the northern extent of this species. The preferred habitat for the riverbank paspalum includes shallow water or wet muddy soils along the margins of temporary pools, riverbanks, and riverine woodlands. Impacts to individuals will likely occur where the project crosses the Little Scioto River; however, there is suitable habitat in the immediate vicinity of the crossing. Locations of species found during the ecological survey of the area are presented on Figure 2.
- Two live specimens and one dead specimen of the state-threatened **black sandshell mussel** (*Ligumia recta*) were collected upstream and downstream of the proposed Little Scioto River bridge crossing during the 2011 mussel survey. The presence of this species is a new record for the Little Scioto River. The mussel survey report indicates that this "*species appears to be increasing its range and abundance in the state, apparently including its distribution in the Little Scioto River.*" Impacts to individuals and habitat may occur as a result of this project; however, due to the increasing abundance of this species in Ohio and amount of potentially suitable habitat for this species upstream and downstream of the impact area, these impacts would likely be insignificant.
- Several individuals of the state species of concern **eastern garter snake** (*Thamnophis sirtalis sirtalis*) were observed in the project area during the ecological survey. According to the ODNR Division of Wildlife, the eastern garter snake is the most abundant snake in Ohio. Impacts to habitat for this species are expected as a result of this project; however, due to the abundance of suitable habitat and the overall abundance of this snake in Ohio impacts are expected to be negligible.
- The state potentially threatened **umbrella magnolia** (*Magnolia tripetala*) was observed during the T&E survey in 2011 by representatives of ASC Group in a second-growth upland forest. Suitable habitat for this species is abundant throughout the area.



Several other records of listed species are known within a mile of the project area. The findings for these species are discussed in the attached Level 2 ESR.

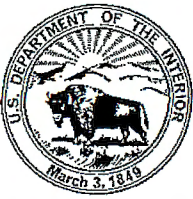
ODNR's concurrence and/or comments on Phase 2 and 3 of the Portsmouth Bypass project would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Jason Spilak, FHWA - File



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

September 12, 2013

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03E15000-2012-I-0581 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

RE: **SCI-823-0.00 Portsmouth Bypass**, Phase 2 and Phase 3 (PID 19415)

Dear Mr. Hill,

This is in response to your May 20, 2013 letter received in our office on July 9, 2013 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act (ESA) section 7(a)(2) effects determinations for federally listed species within the project area of Phases 2 and 3 of the SCI-823-0.00 Portsmouth Bypass project (PID 19415). The overall Portsmouth Bypass project proposes to establish a 17-mile long bypass around the city of Portsmouth in Scioto County. The bypass is proposed to be constructed in three phases, with Phase 1 (the middle portion of the 3-phase project) to be built first. We have been advised that ODOT and the Federal Highway Administration (FHWA) have determined that each phase of the Bypass project has independent utility. The Ohio Department of Transportation (ODOT) has estimated that the construction schedule for the entire project is approximately 13 years.

Due to a six-year delay in implementation of the project, following issuance of the 2005 Final EIS, ODOT re-evaluated the project impacts in 2011. The Service concurred with ODOT's effects determinations for all federally listed species in the overall project area, as proposed, in March 2012. We understand that the project area and impacts within the Phase limits have not changed since the 2012 consultation. However, your letter indicates that the estimated corridor width for Phase 2 and Phase 3 of the project has been increased to represent the widest possible corridor that may be impacted. We understand that the project will now be contracted as design-build; therefore, the exact construction limits are unknown at this time. The Service appreciates ODOT coordinating the "worst case" impact scenario in consideration of the design-build contract.

The forest habitat impacts, estimated at approximately 316 acres in 2012, are now estimated at approximately 685 acres. This represents an increase of approximately 115 feet to each side of the previously coordinated corridor. This change in corridor width will not require additional survey effort for detection of the **Indiana bat** (*Myotis sodalis*). Therefore, the negative survey results for that species, coordinated with our office in March 2012, are still valid. *Please note, however, that additional surveys*



**may be required for any Phase of the project (Phase 1, Phase 2, or Phase 3) that has not been implemented by April 1, 2014.**

As stated in your earlier coordination with us, we understand and appreciate ODOT's commitment to conduct tree clearing activities only between September 30 and April 1 to avoid direct take of other bat species that occur in the project area during their summer brood-rearing season. **Please note that** no tree clearing should occur until both the U.S. Army Corps of Engineers and Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the action is imminent. This will ensure that clearing will be limited to the footprint of the alternative that is ultimately permitted, and that no unnecessary clearing will occur.

In addition to the federally endangered Indiana bat, the following federally listed species could be present within the Portsmouth Bypass project area: **sheepnose mussel** (*Plethobasus cyphus*), **running buffalo clover** (*Trifolium stoloniferum*), **snuffbox mussel** (*Epioblasma triquetra*), **rayed bean** (*Villosa fabalis*), **fanshell** (*Cyprogenia stegaria*), **northern riffleshell** (*Epioblasma torulosa rangiana*), **pink mucket**, **pearly mussel** (*Lampsilis abrupta*), **clubshell** (*Pleurobema clava*), all federally endangered species; **small whorled pogonia** (*Isotria medeoloides*) and **Virginia spiraea** (*Spiraea virginiana*), both federally threatened plant species; and the **bald eagle** (*Haliaeetus leucocephalus*), **timber rattlesnake** (*Crotalus horridus*), and **eastern hellbender** (*Cryptobranchus a. alleganiensis*), federal species of concern. As referenced above, surveys required for detection of these species were conducted in 2011, and the Service concurred with ODOT's effects determinations based on those surveys in March 2012. Both the surveys and our concurrence are still valid at this time.

As we have discussed during recent meetings, additional bat species may be proposed for federal listing or may become federally listed under the ESA prior to implementation of one or more of the Portsmouth Bypass project phases. Once a proposal or final rule has been published in the Federal Register, conferencing or formal consultation (respectively) with the Service may be required under section 7 of the ESA for projects that *may affect* these species. Although the bat surveys conducted in 2011 did not detect the presence of Indiana bats, 121 bats representing 6 species were captured. We appreciate ODOT's desire to coordinate as soon as possible with the Service should any of these 6 species become officially proposed as federally threatened or endangered prior to or during the course of this action.

Please be aware that the Service is concerned with the following types of associated project activities: 1) borrow sites, 2) burn sites, 3) construction debris waste disposal areas, 4) concrete and asphalt plants, 5) haul roads, 6) stockpiling areas, 7) staging areas, 8) material storage sites, and 9) maintenance. The Service recognizes that it is FHWA's policy not to intervene in the site selection for these activities, but instead consider it the responsibility of the selected contractor to comply with federal environmental statutes and regulations, as stated in Section 107.10 (Protection and Restoration of Property) of the ODOT 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) manual:

The Contractor is responsible for the preservation of all public and private property impacted by the Contractor's operations.

Do not create staging areas, store materials and equipment, or borrow or waste materials in areas labeled as environmental resource areas in the Contract Documents. All properties to be utilized by the Contractor outside the project Right-of-Way must be cleared for all environmental resource impacts prior to the beginning of work. Environmental resources include but may not be limited to:

1. Cultural Resources
  - a. Buildings, structures, objects, and sites eligible for or listed on the [National Register of Historic Places](#)

- b. Historic or prehistoric human remains, cemeteries, and/or burial sites (pursuant with ORC 2909.05 and 2927.11)
- 2. Ecological Resources
  - a. Wetlands
  - b. Streams
  - c. Wooded areas with trees to be removed in excess of 8 inches diameter at breast height
- 3. Public Lands
  - a. Lands meeting the criteria of 49 U.S.C. 303, 23 CFR 771.135: 4(f).
  - b. Lands meeting the criteria of 16 U.S.C. 4601-4, 36 CFR 59.1: 6(f).
- 4. FEMA Mapped 100 year Floodplains
- 5. Hazardous Waste Areas

Except for locations utilized specifically for parking of equipment between workdays for maintenance type projects, all areas proposed to be utilized by the Contractor outside the project construction limits shall be reviewed by environmental contractor(s) that are prequalified by the Department for each environmental resource. This exception applies to projects with "maintenance" in the project description. Have the consultant(s) certify that the proposed site to be utilized for the contractor will not impact:

- 1. Cultural Resources
- 2. Ecological Resources
- 3. Public Lands
- 4. FEMA Mapped 100 year Floodplains
- 5. Hazardous Waste Areas

Provide all documentation and the consultant certification to the Office of Environmental Services with a copy to the Engineer.

Should the areas proposed for use by the Contractor outside the project right of way limits contain environmental resources the Contractor is responsible to the Department for all environmental clearances and permits prior to the beginning of work.

It is the position of FHWA that the contractor is responsible for consulting with the Service for impacts to federally listed species and federally designated critical habitats for these activities. The Service recommends that ODOT and FHWA ensure that the contractor(s) awarded the SCI-823 Portsmouth Bypass project understands their responsibility to be in compliance with the Endangered Species Act. The Service also respectfully requests that ODOT OES provide our office with copies of the documentation and consultant certification referenced in the CMS, as highlighted in gray above.

If construction of any phase of the project is delayed for three or more years, ODOT/FHWA should re-initiate consultation with the Service to address any potential changes in species distributions or occurrence records within the Phase 2 and Phase 3 project areas.

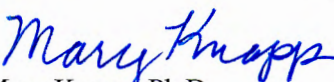
Although no federally listed species were identified, the Service recommends that best management practices (BMPs) be implemented to minimize impacts to water quality. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species.



These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,

  
Mary Knapp, Ph.D.  
Field Supervisor

cc: J. Kessler, ODNR, Office of Real Estate, Columbus, OH (*email only*)  
P. Clingan, USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
J. Lung, OEPA, Columbus, OH (*email only*)  
B. Mitch, ODNR, Office of Real Estate, Columbus, OH (*email only*)

# Appendix C: Bat Survey Reports

**A SUMMER MIST NET SURVEY FOR THE ENDANGERED INDIANA  
BAT ALONG THE PROPOSED PORTSMOUTH BYPASS PROJECT IN  
SCIOTO COUNTY, OHIO**

29 December 2003

*Prepared for:*  
CH2MHill  
5775 Perimeter Drive  
Dublin, Ohio 43017

OES-Project Filing

JAN 14 2004

File From: \_\_\_\_\_

File By: \_\_\_\_\_

*Prepared by:*  
Jeffrey H. Schwierjohann and V. Brack, Jr., Ph.D.



Environmental Solutions & Innovations, Inc.

781 Neeb Road  
Cincinnati, Ohio 45233  
Phone: (513) 451-1777  
Fax: (513) 451-3321

Donna Brack, President  
dbrack@EnvironmentalSI.com

409 Highway 317  
P.O. Box 205  
Neon, Kentucky 41840  
Phone: (606) 855-9949  
Fax: (606) 855-9101

Jeffrey Hawkins, Scientist  
jhawkins@EnvironmentalSI.com

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- Appendix A.** USFWS Ohio field office acknowledgement and approval of study plan
- Appendix B.** Completed project data sheets with site photographs

## 1.0 Regulatory Setting

The federal Endangered Species Act (ESA) [16 U.S.C. 1531 *et seq.*] became law in 1973 and provides for the listing, conservation, and recovery of endangered and threatened species of plants and wildlife. Under ESA, the U.S. Fish and Wildlife Service (USFWS) strives to protect and monitor the numbers and populations of listed species. Many states enacted similar laws.

Section 7(a)(2) of the Act states that each federal agency shall insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of designated critical habitat. Federal actions include (1) expenditure of federal funds for roads, buildings, or other construction projects, and (2) approval of a permit or license, and the activities resulting from such permit or license. This is true regardless of whether involvement is apparent, such as issuance of a federal permit, or less direct, such as federal oversight of a state-operated program.

Section 9 of the Act prohibits the take of listed species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect." The definition of harm includes adverse habitat modification. Actions of federal agencies that do not result in jeopardy or adverse modification, but that could result in a take, must be addressed under Section 7.

Prior to development of the Portsmouth bypass project, the Ohio Department of Transportation (ODOT) must comply with a variety of requirements for environmental protection, including compliance with ESA. Environmental Solutions & Innovations, Inc. (ESI) was contracted to complete a summer mist netting survey for the endangered Indiana bat (*Myotis sodalis*) within the bypass footprint in Scioto County, Ohio. ESI coordinated timing and methodologies of proposed surveys with USFWS, Ohio Field Office to begin on 6 June 2003 (Appendix A).

ESI completed field efforts under Federal Endangered species permit TE 023664-10 and State of Ohio Division of Wildlife permit 216.



## **2.0 Project Setting**

### **2.1 Location**

The project site is located in Scioto County in southern Ohio (Figure 1). The area lies within the Appalachian Plateau Physiographic Province of south-central Ohio (ODNR, 2003). Specifically, within the Shawnee-Mississippian Plateau. The area is characterized by high relief (400'-800' ASL). The Plateau is highly dissected with coarse- and fine-grained rock sequences and is considered the most rugged area in Ohio. Remnants of ancient lacustrine clay-filled Teays drainage system are extensive in lowlands but absent in uplands. The geology of the Plateau has developed from Devonian and Mississippian age shales, siltstones, and locally thick sandstones; a Pleistocene age sandy outwash of the Scioto River; Teays age Minford clay, and silt loam and channery colluvium (ODNR, 2003).

The bypass is intended to connect Ohio State Route 23 to Ohio State Route 52. The general footprint of the bypass runs west to east from Lucasville to Minford and then south to Wheelersburg. The footprint covers an area approximately 14.5 miles (23.3 km) long by 1.5 miles (2.4 km) wide. Primary drainage within the footprint comes from the Little Scioto River; Candy Run, Long Run, and Sweet Run creeks also serve as important watersheds for the area.

### **2.2 Regional Species Occurrence**

The federally endangered Indiana bat is known from the region that includes the Portsmouth bypass project area. Winter hibernacula occur in nearby Adams and Brown counties in Ohio, and Carter County, Kentucky. A maternity colony was recorded just east of Scioto County in Lawrence County, Ohio. Both Scioto and Pike counties have summer, nonreproductive Indiana bat records (Figure 2).



Figure 1. Project Location in Scioto County, Ohio.



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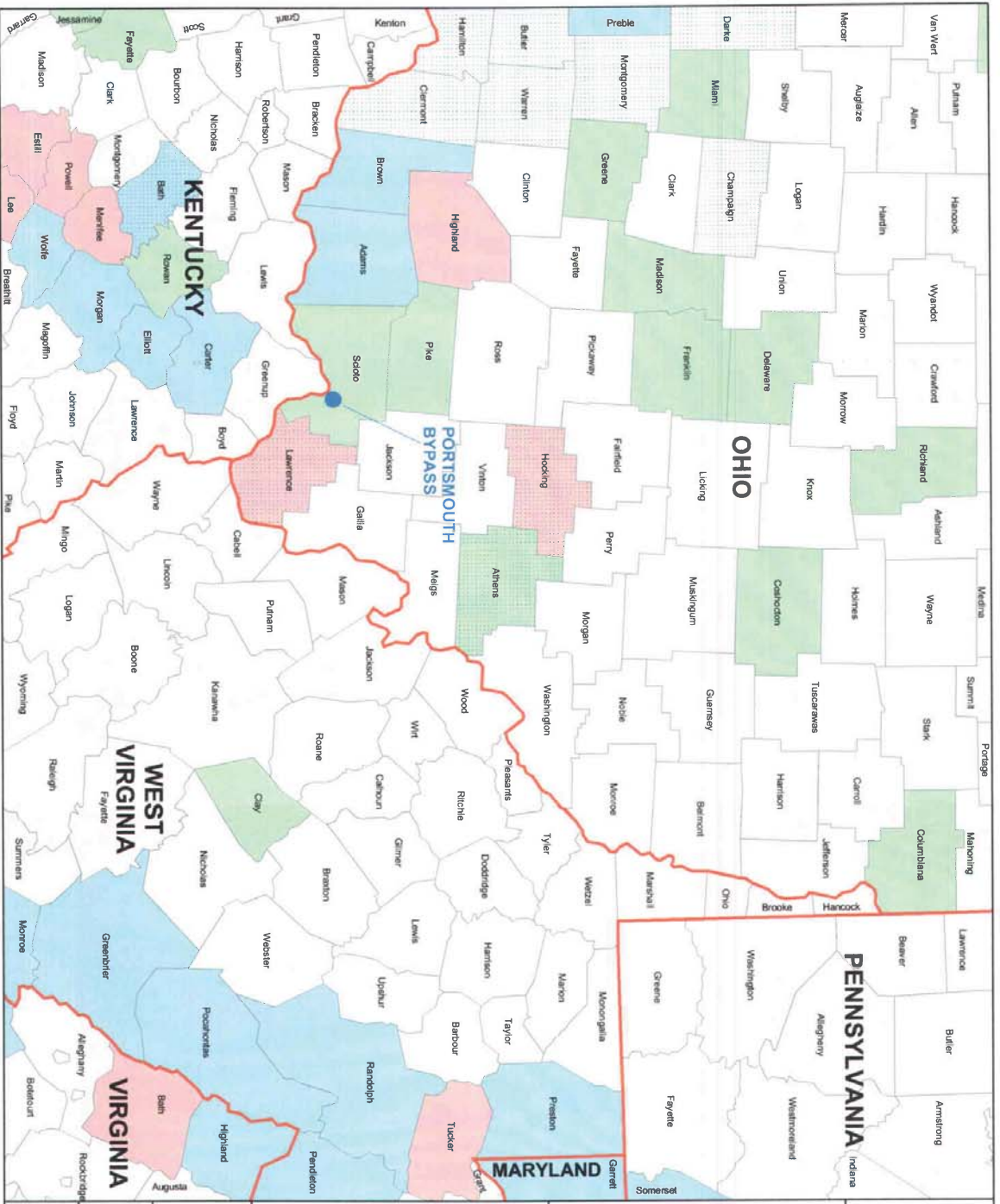


Figure 2. Counties near the project area with hibernacula, summer maternity, and other summer (nonreproductive) records for the Indiana bat (*Myotis sodalis*).

- County with Record of Indiana Bat Hibernacula Occurrence
- County with Record of Indiana Bat Summer Maternity Occurrence
- County with Record of Indiana Bat Other Summer (Nonreproductive) Occurrence
- County with Record of Indiana Bat Hibernacula and Other Summer (Nonreproductive) Occurrences
- State Boundary
- County Boundary

STATES WITH RECORDS OF INDIANA BAT OCCURRENCE



■ Recorded Species Occurrence

Sources: USFWS, Indiana Bat Revised Recovery Plan, Agency Draft, 1999.



### 3.0 Ecological Setting

The USFWS listed the Indiana bat as endangered on 11 March 1967. The current total population of Indiana bats is estimated at 350,000 individuals (USFWS, 1999). This is less than half the estimated population of 1960. Long-term, detailed documentation of population changes are lacking in most areas, although Indiana is an exception (Brack et al., 1984; Brack and Dunlap, 1999; Johnson et al., 2001). Summer habitat losses (USFWS, 1999) and winter disturbance (Johnson et al., 1998) are believed to have contributed to the decline.

Indiana bats are "tree bats" in the summer and "cave bats" in winter. A detail life history is provided in the U.S. Fish and Wildlife Service Recovery Plan (1999), Brack (1983), and LaVal and LaVal (1980). Figure 3 provides a chronology of seasonal activities discussed in the following paragraphs.

The winter range of the Indiana bat is restricted to regions of well-developed limestone caverns, which serve as hibernacula. Most hibernacula are in caves, but abandoned mines are sometimes used. There are large populations of Indiana bats in only a few caves; most hibernacula contain only a few bats. Large populations of bats hibernate in caves in Indiana, Kentucky, and Missouri (over 82% of the known population). Smaller populations are known from Alabama, Arkansas, Connecticut, Georgia, Illinois, Iowa, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and West Virginia. Although the winter range is large, the species is restricted to approximately 135 known hibernacula.

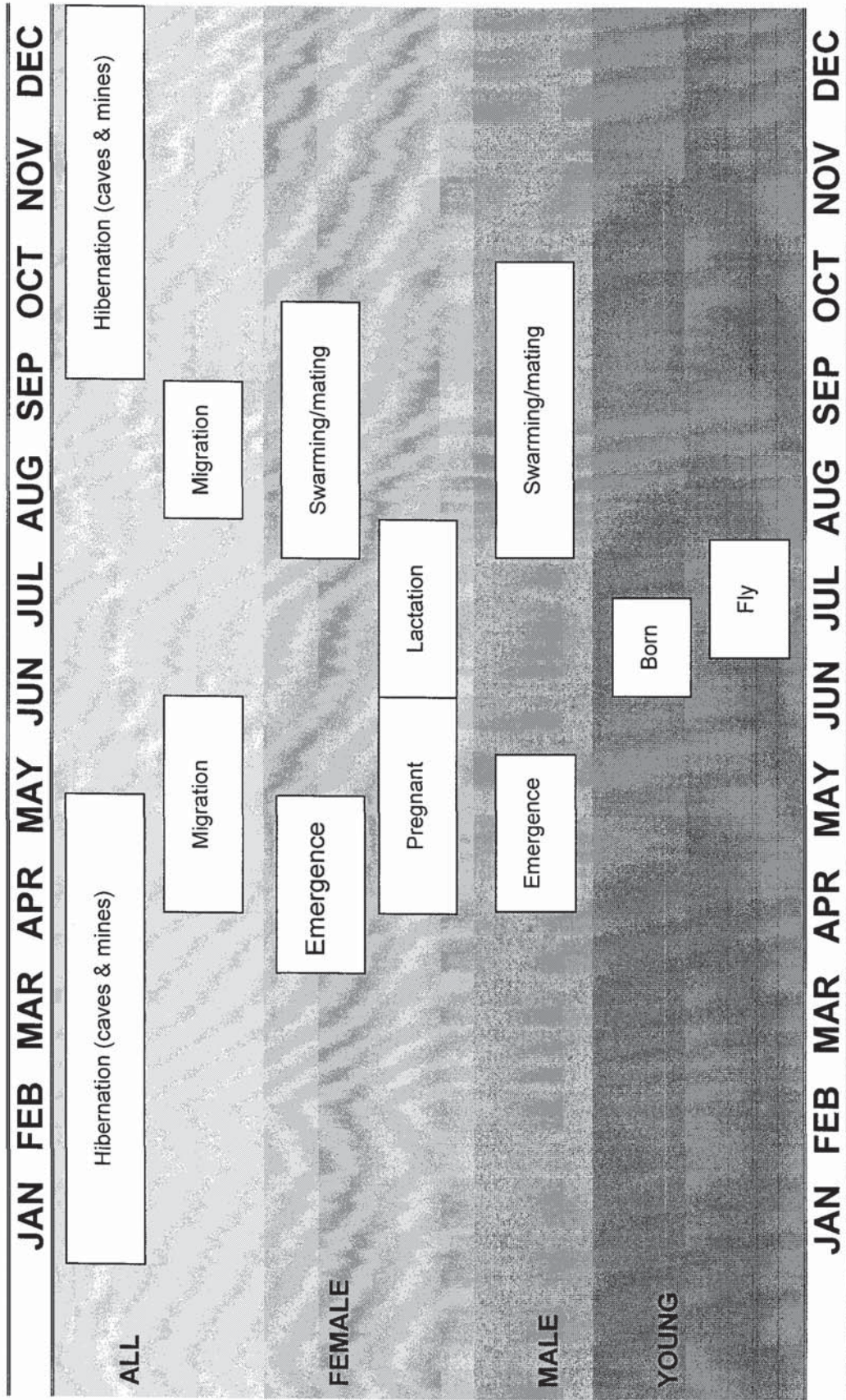
Brack (3D/I, 1996) documented a population of nearly 9,300 Indiana bats hibernating in a mine in Preble County, Ohio. The most recent survey (ESI-Brown and Brack 2002) indicated that the number of bats hibernating in the mine has remained stable since first discovered. Spring (ESI-Little et al., 2001) use of coal mines by the Indiana bat in Virginia, and autumn use in Ohio (ESI-Brack and Little, 2001) have recently been documented. This use may be associated with autumn swarming, winter hibernation, spring staging, or seasonal migration, or it may represent use by vagrants.



Federal Register Documents	
41 FR 41914	24 September 1976: Final Critical Habitat, Critical habitat—mammals
40 FR 58308-58312	16 December 1975: Proposed Critical Habitat, Critical habitat—mammals
32 FR 4001	11 March 1967: Final Listing, Endangered



Figure 3. Seasonal chronology of Indiana bat activities.





Indiana bats hibernate from mid-November to mid-April. Hibernating Indiana bats usually form dense clusters on cave ceilings in portions of the cave where winter temperatures are 39-46°F (4-8°C). Clusters are not sexually segregated.

Hibernation by bats is an adaptation that allows for survival through the winter months when food and water are not available. Mammalian hibernation consists of periods of hibernation interrupted by periodic, spontaneous arousals. Bats frequently move during arousal, and thus are able to change the microenvironment to which they will be exposed during the next period of hibernation. The duration of the period of hibernation between arousals varies by species (Brack, 1979; Brack and Twente, 1985; Twente et al., 1985), and is affected by temperature.

Female Indiana bats leave hibernacula earlier in spring (beginning in mid-April) than do males (peak of departure in early May). This part of spring activity is referred to as staging. Some males remain near hibernacula throughout summer while others migrate to distant areas (Whitaker and Brack, 2001). When female Indiana bats emerge from hibernation, they migrate up to several hundred miles to maternity colonies. Females form nursery colonies under exfoliating bark of dead trees, or living trees such as shagbark hickory (*Carya ovata*) in upland or riparian forests. A single maternity colony typically consists of 25 to 100 adult females. Maternity colonies have been found in many species of trees, indicating that it is tree form, not species that is important for roosts. Some of the species of trees in which roosts have been documented include slippery elm (*Ulmus rubra*), American elm (*U. americana*), cottonwood (*Populus deltoides*), northern red oak (*Quercus rubra*), post oak (*Q. stellata*), white oak (*Q. alba*), shingle oak (*Q. imbricaria*), sassafras (*Sassafras albidum*), sugar maple (*Acer saccharum*), silver maple (*A. saccharinum*), green ash (*Fraxinus pennsylvanica*), and bitternut hickory (*Carya cordiformis*).

Since Indiana bat roosts typically are located in dead or dying trees, they are often ephemeral. Roost trees may be habitable for one to several years, depending on the species and condition of the tree (Callahan et al., 1997). In addition, a single colony of bats moves among roosts within a season. Therefore, numerous suitable roosts may be needed to support a single nursery colony (Foster and Kurta, 1999; Kurta et al., 1993). It is not known how many alternate roosts are required to support a colony within a particular area, but large tracts of mature forest containing large trees increases the probability that suitable roost trees are present. Indiana bats exhibit strong site fidelity to summer roosting and foraging areas, returning to the same area year-after-year.

Reproductive phenology is likely dependent upon seasonal temperatures and the thermal character of the roost (Brack, 1983; Humphrey et al., 1977). Like many other bats, Indiana bats are thermal conformists (Henshaw, 1965), with prenatal, neonatal, and juvenile development heavily temperature dependent (Racey, 1982). Cooler



summer temperatures associated with latitude or altitude likely affect reproductive success and therefore the summer distribution of the species (Brack et al., 2001).

Females are pregnant when they arrive at maternity roosts. Fecundity of the species is low with females producing only one young per year. Parturition typically occurs between late June and early July. Lactating females have been caught from 11 June to 29 July in Indiana, from 26 June to 22 July in Iowa, and between 11 June and 6 July in Missouri (Brack, 1983; Clark et al., 1987; Humphrey et al., 1977; LaVal and LaVal, 1980). Juveniles become volant between early July and early August.

Indiana bats may travel several miles to forage. Instances where individuals from maternity colonies traveled 2.5 miles in Illinois (Gardner et al., 1991), and summer males traveling 3.1 miles in Missouri (LaVal and LaVal, 1980) have been documented. Brack (1983) observed foraging light-tagged bats within 2 miles of caves used during the autumn swarming period.

Indiana bats forage in upland and floodplain forest (Brack, 1983; Humphrey et al., 1977; LaVal et al., 1977; LaVal and LaVal, 1980; Gardner et al., 1991). Foraging activity is concentrated around the foliage of tree crowns, and although the bats may forage in other areas, it is quantitatively and qualitatively less important (Brack, 1983). Indiana bats often use stream corridors and other linear woodland openings as flight corridors from roosts to foraging areas.

Brack and LaVal (1985) referred to the Indiana bat as a selective opportunist that often eats similar types of prey when readily available. However, components of the diet do vary by habitat, geographic location, season, and sex or age of the bat (Kurta and Whitaker, 1998; Brack and LaVal, 1985; Brack, 1983; Belwood, 1979). In Missouri, Brack and LaVal (1985) noted that terrestrial-based insects, e.g., moths (Order Lepidoptera) and beetles (Coleoptera), were most often eaten, logically as a result of treetop foraging. The proportion of aquatic insects eaten [e.g., flies (Diptera), caddisflies (Trichoptera), and stoneflies (Plecoptera)] was small and influenced by the lunar cycle.

Indiana bats begin to arrive at hibernacula in August (Figure 3) and engage in a behavior referred to as swarming (Cope and Humphrey, 1977). Early during autumn swarming, bats visit hibernacula at night but may day-roost in woodlands. As the season progresses, more bats roost in hibernacula caves. Males become active first in mid-August. Females begin arriving in late August. By September, numbers of swarming females peak, although the male may be more common since males frequent the swarming site more than females. By late September, many females are hibernating; males remain active until mid-October or later, apparently in an effort to breed late-arriving females. Swarming chronology likely is influenced by temperature and precipitation.

Swarming is an important part of the Indiana bat's life cycle and is when most copulation occurs (Hall, 1962). However, Richter et al. (1993) postulated that males lacking sufficient fat to survive winter hibernation may remain active, seeking opportunities to mate well into the winter in a final effort to reproduce before they die. Females store sperm through winter hibernation, and fertilization is delayed until spring (Wimsatt, 1944). It is not known whether juvenile females mate their first autumn. Limited mating may occur in spring (Hall, 1962).



## 4.0 Methods

### 4.1 Site Selection

Survey sites were selected to provide broad coverage of the project area, focusing on areas that provided larger trees and riparian corridors suitable for travel and forage. Sites were selected using topographic maps, aerial photographs, and reconnaissance survey information on potential Indiana bat habitat collected by CH2MHill biologists.

### 4.2 Mist Netting

Efforts to survey for endangered bats are difficult to standardize because of the large amount of variability that exists in a field situation. However, a number of practices used for summer surveys for Indiana bats have provided structure for implementation of netting guidelines provided by the U.S. Fish and Wildlife Service (1999) in the most recent (Agency Draft) revision of the Indiana Bat Recovery Plan. At the 10 net sites surveyed, those guidelines (Table 1) were employed for this survey.

Ten mist net sites were selected and operated for two nights each from 9 June to 25 June 2003. Each site consisted of two net sets run for two nights, for a total of four net nights per site. Net placement was based upon canopy cover, presence of a flight corridor, water, and conditions near the site. Nets were set to maximize coverage of flight paths used by Indiana bats along suitable corridors. Site selection was based upon an expectation of greatest bat activity and an effort to provide survey coverage of the permit area. Nets are often placed over streams, which are used as travel corridors and sometimes for foraging. In upland areas, road ruts or other areas of standing water frequently produce high capture rates. The location and specific orientation of each net was determined in the field.

Mist net sites were also selected based upon habitat characterizations described for the Indiana bat in current literature and extensive experience of ESI personnel capturing this species. General habitat types selected included the following characteristics:

- Large trees (>16 inches dbh) for maternity roosts
- An open canopy, apparently important for warming roost sites
- An open, uncluttered understory, used for travel and forage

To insure compliance with weather conditions outlined in the Table 2, temperature, percent cloud cover, wind, and rainfall were monitored and recorded hourly while mist netting.



Table 1. Standard netting guidelines.

1. Netting Season: 15 May to 15 August, when Indiana bats occupy summer habitat.
2. Equipment (Mist Nets): constructed of the finest, lowest visibility mesh commercially available – monofilament or black nylon – with the mesh size approximately 1½ inch (1¼ – 1¾) (38 mm).
3. Net Placement: mist nets extend approximately from water or ground level to tree canopy and are bounded by foliage on the sides. Net width and height are adjusted for the fullest coverage of the flight corridor at each site. A “typical” net set consists of three (or more) nets “stacked” on top of one another; width may vary up to 60 feet (20 m).
4. Net Site Spacing:
  - ◆ Streams – one net site per 0.5 mile (1 km)
  - ◆ Land Tracts – two net sites per 250 acres (1 square km)
5. Minimum Level of Effort Per Net Site:
  - ◆ Two net locations (sets) per net site, with locations (sets) at least 100 feet (30 m) apart
  - ◆ Two (calendar) nights of netting
  - ◆ At least three net-nights (1 net-night = 1 net set deployed for 1 night); typically, two net sets are deployed at one site for two nights, resulting in four net-nights
  - ◆ Sample Period: begin at dusk and net for 5 hours (approximately 0200h)
  - ◆ Nets are monitored at approximately 20-minute intervals
  - ◆ No disturbances near the nets between checks
6. Weather Conditions: net only if the following weather conditions are met:
  - ◆ No precipitation
  - ◆ Temperature  $\geq 10^{\circ}\text{C}$  (50°F)
  - ◆ No strong winds
7. Moonlight: avoid net sets with direct exposure to a moon ½ -full or greater – typically by utilizing forest canopy cover

Source: U.S. Fish and Wildlife Service, 1999

### 4.3 Bat Capture

The netting setup allows bats to be caught live and released unharmed near the point of capture. Bats were identified to species using a combination of morphological characteristics (e.g., ear and tragus, calcar, pelage, size/weight, length of right forearm, and overall appearance of the animal). The species, sex, reproductive condition, age, weight, length of right forearm, and time and location/net site of capture were recorded for all bats captured. Age (adult or juvenile) of bats is determined by examining ephiphyseal-diaphyseal fusion (calcification) of long bones in the wing. Weight was measured to 0.1 grams using a Pesola spring scale. Length of the right forearm of each bat was measured to the nearest 1.0 mm using either dial calipers or metric ruler. The reproductive condition of captured bats was classified as non-descended male, descended male, non-reproductive female, pregnant female (based on gentle abdominal palpation), lactating female, or post-lactating female.

Bats were not banded. Bat processing and data collection was typically completed within 30 minutes of the time the bat was removed from the net. All data were recorded on data sheets (Appendix B).



The species diversity in the project area was examined using the species diversity index used was MacArthur's (1972): Species Diversity Index =  $1/\sum P_i^2$ , where  $P_i$  is the proportion of bats belonging to species  $i$ . This index has an advantage over other commonly used indices in that it provides an estimate of the number of equally represented species. Chi-square analysis was completed to compare the catch of males and females.

#### **4.4 Habitat Characterization of Net Sites**

Habitat assessment at net sites focused on features indicative of suitability for Indiana bats. A habitat description of each net location was completed (Appendix B). The emphasis of this description was habitat form: size and relative abundance of large trees and snags that potentially serve as roost trees, canopy closure, understory clutter/openness, distance to water, stream or pond characteristics (if net was placed over them), and flight corridors. Habitat form was emphasized because the Indiana bat roosts in many species of trees. Tree species composition was included because it provides insight to edaphic conditions of each site.

Habitat characterization identifies components of canopy and subcanopy layers. Trees that reach into the canopy are canopy trees, regardless of their diameter/size. As defined in the Indiana Bat Habitat Suitability Index Model (3D/Environmental 1995), dominant trees are the large trees in the canopy (> 16" dbh) that have the greatest likelihood of being used by maternity colonies of Indiana bats. Many smaller trees are often also found in the canopy, and in some situations, the canopy can be entirely composed of small-diameter trees. ESI's habitat characterization identifies dominant and subdominant elements of the canopy.

The subcanopy vegetation layer is well defined in classical ecological literature. It is that portion of the forest structure between the ground vegetation (to approximately 2 feet (0.6 m) and the canopy layers, usually beginning at about 25 feet (7.6 m).

Vegetation in the understory may come from:

- Lower branches of overstory trees
- Young overstory trees
- Small trees and shrubs that are confined to the understory

The amount of vegetation in the understory is termed clutter. Many species of bats, including the Indiana bat, tend to avoid areas of high clutter.

Other site-specific parameters pertinent to assessing the quality of the habitat were also recorded such as distance to water, stream habitat (if present), standing water in an upland site, and travel corridors – or lack thereof. Each net site was documented with a sketch.



## 5.0 Results

### 5.1 Weather and Temperature

In general, precipitation, humidity, and cloud cover were higher than normal for the Portsmouth area during the survey period (Weather Underground, 2003), but weather parameters were within netting guidelines. Days were usually overcast, humid, and

Start/End Dates (2002)	High Temp. °F	Low Temp. °F
9 June	65	56
25 June	76	67

rainy. Rain was frequent in late afternoon, but tapered off in the early evening prior to netting. Evening skies sometimes remained overcast and fog set in during the night. Over the entire project time period nighttime lows ranged from 53 to 68°F, high temperatures ranged from 64 to 82°F. The spread of temperatures between high and low ranged from 2 to 17 degrees. Appendix B contains completed Weather Data Sheets.

### 5.2 Mist Netting and Site Selection

Ten net sites were surveyed for a total of 40 net nights. Four net sites selected based on topographic maps and related information were relocated during field efforts. Two sites (#2 and #7) were relocated due to poor habitat and/or lack of potential net sites. Two additional sites (#8 and #9) were moved due to water level of the Little Scioto River and current strength. Landowner permission was obtained for all sites. Sites were renumbered to match their geographical sequence from Lucasville to Wheelersburg (Figure 4).

### 5.3 Bat Captures

No endangered bats were captured.

A total of 53 bats of seven species were caught (Table 2). All bats were adults. All males were non-descended. Thirty two percent of captured bats were big brown bats (*Eptesicus fuscus*). Eastern pipistrelles (*Pipistrellus subflavus*) and northern bats (*Myotis septentrionalis*) were the next most common bats captured at 28 and 15 percent, respectively. Species diversity was relatively high with a Diversity Index value of 6.02. Twenty-nine reproductive females were captured versus 22 adult males, which is not significantly different than random ( $\chi = 0.9608$ ;  $P = 0.3270$ ).





Figure 4. Summer 2003 Indiana bat survey sites for Portsmouth bypass project, Scioto County, Ohio.



- ◆ Survey Site Location
- ▲ Cave Location

- ▭ Valley Alternative
- ▭ Hill Alternative

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Base Map: USGS 30 x 60 Minute Series (1:100,000)  
Topographic Map - Ironton, OH-KY-WV (enlarged)



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Table 2. Bat captures from 9 June to 25 June 2003 for the Portsmouth bypass project, Scioto County, Ohio.

Species	Male	Female				Escape*	Total
		P*	L*	PL*	NR*		
<i>Eptesicus fuscus</i>	2	9	5			1	17
<i>Pipistrellus subflavus</i>	8	7					15
<i>Myotis septentrionalis</i>	7	1					8
<i>Myotis lucifugus</i>	2		1				3
<i>Lasiurus borealis</i>		4	1			1	6
<i>Lasiurus cinereus</i>			1				1
<i>Lasionycteris noctivagans</i>	3						3
<b>Total</b>	<b>22</b>	<b>21</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>53</b>

\*P=pregnant; L=lactating; PL=Post lactating; NR=non-reproductive; Escape=escaped from net before processing could be completed

Two bats escaped before sex and morphometric data were collected, although they were identified to species.

#### 5.4 Habitat Assessment

Approximately half of the project area is forested. The remaining area is inundated with suburban development and agricultural operations. All net sites were over streams in close proximity to developed areas and/or agricultural operations. Most sites (80%) had low roost site potential due to lack of canopy structure and/or canopy storm damage (90% of sites) and cluttered understories (90% of sites). Appendix B contains completed Net Site Habitat Description Data Sheets and photographs of each net site.



## 6.0 Discussion and Conclusions

Netting efforts provided no evidence that endangered Indiana bats use the project area during summer months. The species complement and number of bats captured in the project area was typical for the geographic location and type of habitat. Bryan and Kiser (1996) caught 11 bats of three species over 3 nights of netting north of the Portsmouth bypass project site in Pike County. All three species [Big brown bats (*Eptesicus fuscus*), eastern red bats (*Lasiurus borealis*), and eastern pipistrelles (*Pipistrellus subflavus*)] are commonly found in open/edge, developed areas, and do not form maternity colonies in large trees as does the Indiana bat (*Myotis sodalis*). Although diversity appeared higher for this project, most additional species caught in the project area also readily use open/edge, developed areas, and do not form maternity colonies in trees. The little brown bat (*Myotis lucifugus*) and northern bat (*Myotis septentrionalis*) were the only two species caught during this netting effort that form maternity colonies in trees and utilize habitat similar to that of the Indiana bat although little brown bats often use man-made structures. Of these 2 species, 9 males and 2 females were captured, which is significantly different than random ( $\bar{x} = 4.4545$ ;  $P = 0.0348$ ). A low female capture rate may indicate poor quality habitat.

Habitat for the Indiana bat within the project area at sites netted was of relatively low value. Ecological impacts from natural and man-made disturbances were clearly evident throughout the project area. An ice storm during the previous season destroyed much of the forest canopy in many areas. The storm also felled many snags that could have served as potential roost sites. Due to storm damage and the early successional stage of most forested areas, understory clutter was usually high and unfavorable for bat activity.

Streams in the project area were heavily impacted by land use in surrounding areas. All showed signs of erosion. Some streams had been dredged. Cattle often had access to streams, leading to high sediment loads. ATV trails along and through streams also increased sediment loads and erosion. Many streams had only narrow bands (sometimes a single row) of small- to medium-sized trees buffering them from agricultural fields and or maintained areas (e.g., roads, lawns, parking areas). Some had no buffer. cursory examination of flora and fauna components of the stream ecosystem revealed apparent low diversity and density.



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**Appendix A**

USFWS Ohio field office acknowledgement and approval of study plan



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**Environmental Solutions & Innovations, Inc.**

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**Jeffrey H. Schwierjohann, Scientist**

781 Neeb Road  
Cincinnati, OH 45233  
Phone: (513) 451-1777; Fax: (513) 451-3321  
E-mail: jschwierjohann@EnvironmentalSI.com

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Pesi096

6 June 2003

Mrs. Mary Knapp  
Endangered Species Field Supervisor for Ohio  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
6950-H American Parkway  
Reynoldsburg, Ohio 43068-4132

Re: Netting for the Indiana Bat along the Proposed Portsmouth Bypass, Scioto County, Ohio

Dear Mrs. Knapp:

Environmental Solutions & Innovations, Inc. (ESI) has been selected to complete netting for the Indiana bat for the above referenced project and is seeking written concurrence of these activities from the Region 3 Field Office. Project information follows:

Activity: Net 10 sites to help ascertain presence/absence of the Indiana bat in the project area

Location: ODOT's Proposed Portsmouth Bypass, Scioto County, Ohio

Federal Permit holder: Environmental Solutions and Innovations, Inc.

Federal Permit No: TEO23664-10 (pdf copy attached)

Methods: Netting as identified in the Permit

Personnel: Identified on the permit





ESI would very much appreciate your helping us expedite this process. We have just received notice to proceed and would like to begin work next Monday, 9 June 2003, weather permitting. If you could sign below or if we could get verbal agreement, as we have done on past projects, we could begin these studies as planned.

Thank you for your assistance.

Sincerely,

Jeffrey H. Schwierjohann, Scientist  
Environmental Solutions and Innovations, Inc.



## Jeff Schwierjohann

---

**From:** Megan\_Sullivan@fws.gov  
**Sent:** Friday, June 06, 2003 1:39 PM  
**To:** jschwierjohann@environmentalsi.com  
**Cc:** Mary\_M\_Knapp@fws.gov; Angela\_Boyer@fws.gov  
**Subject:** Indiana bat survey

Mr. Schwierjohann,

This is in response to your proposal to conduct mist netting surveys for the Federally endangered Indiana bat in Ohio. These surveys will be completed to determine the presence or absence of the Indiana bat along the Ohio Department of Transportation's proposed Portsmouth Bypass, located in Scioto County, Ohio. Environmental Solutions and Innovations, Inc. proposes to net 10 sites according to the methods identified in Federal Permit No. TEO23664-10. Work is scheduled to begin on Monday, June 9, 2003.

The Service has no objection to the proposed survey. The survey should be completed as described above. Upon completion of the survey, we request that you submit a copy of the survey report results to this office for review.

If you have any questions or need additional information, please feel free to contact me.

Sincerely,  
Megan Seymour  
Wildlife Biologist  
U.S. Fish and Wildlife Service  
6950 Americana Pkwy.  
Suite H  
Reynoldsburg, OH 43068  
(614) 469-6923 ext. 16  
(614) 469-6919 fax



## **Appendix B**

Completed project data sheets with site photographs





## NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2MHill

Date: 10 JUNE 2003 Biologist: Schwendt Johann; Houtman

State: OH County: Scioto Forest: / Tract: /

GPS: Latitude: N 38.53, 08.0 Longitude: W 82.59, 26.3

Site Name/#: 10 Waypoint Name: \_\_\_\_\_

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 70 YARDS - See NET SITE DESCRIPTION (a (9 June) EX STREAM

~~ESTIMATED SITE~~

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

~~VEGETATION~~

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: \_\_\_\_\_ dbh Sm \_\_\_\_\_ dbh

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: \_\_\_\_\_

Description of Overstory Habitat Form: \_\_\_\_\_

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

Dominant Understory Species: 1.

2.

3.

Description of Habitat Form: \_\_\_\_\_

~~Herbaceous Cover:~~

Wildlife spp: WATER THRUSH, LA. WATER THRUSH, TOWHEE, A. TOWHEE, GREEN FROG;  
WEEZY,

HABITAT  
DESC.



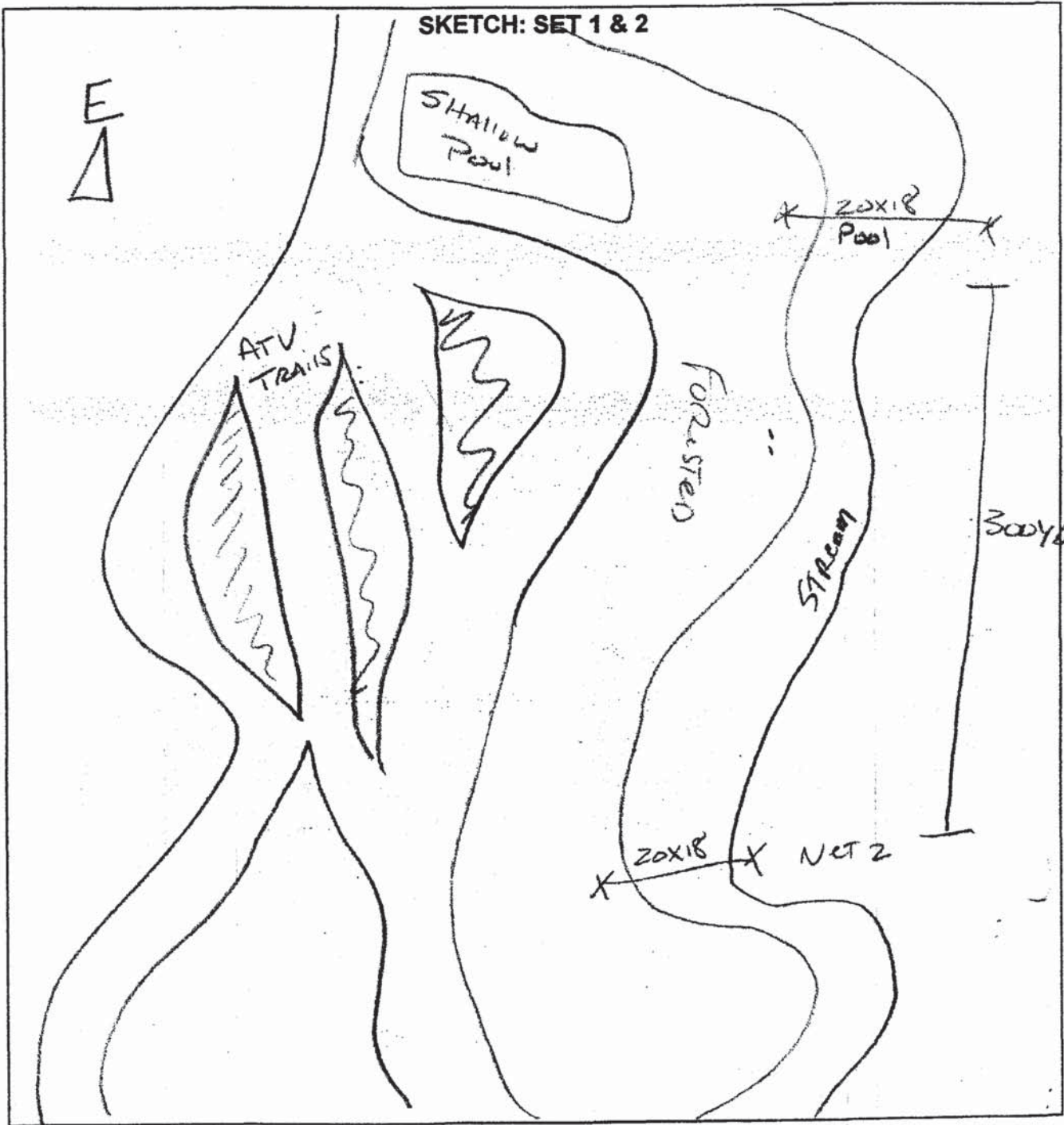
NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto

Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: #1A

Waypoint Name: \_\_\_\_\_



COMMENTS

Wood lot is approximately 700-1000 yards wide (N to S)  
 MANY Heavily used ATV TRAILS Run E To W.





# BAT CAPTURE DATA

Project No.: Pesi 096 Project Name: ODOT CH2MHill Page 1 of 1

Date: 9 June 2003 Biologists: Schwartz, Johnson, Hesterman Camera # 4

State: OH County: Scioto Forest: ✓ Tract: ✓ Site Name #: #19

GPS: Latitude: N 38° 53' 06.9" Longitude: W 82° 59' 13.9" Waypoint Name: ✓

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
	1	Mono / Old Nylon / New Nylon	18	20	2030	0200
	2	Mono / Old Nylon / New Nylon	18	20	2030	0200
		Mono / Old Nylon / New Nylon				

Site Description/Comments: #1 Pic #: 100-0817 #2: 100-0816

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L /PL; M=↑/↓	Wt (g)	RFA (mm)	Belly: F, M, E	Feces #	NET-Picture # LOCATION & Description
1	E. Fuscus	2355	✓	✓	✓	✓	✓	✓	✓	1; Top center
	L7 BAT escaped from NET									

















### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2MHill

Date: 9 June 2003 Biologist: Schwierthand; Hojman

State: OH County: Scioto Forest:                      Tract:                     

GPS: Latitude: N 38° 53' 06.9" Longitude: W 82° 59' 13.9"

Site Name/ #: # 1a Waypoint Name:                     

Quad.:                      Range:                      Township:                      Sec.:                      1/4 Sec.:                     

Distance to water: OVER STREAM

Bank Height: 2'-6' Channel Width: 10'-30' Stream Width: 5'-20'

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other                     

Average Water Depth: 2" - 2' Clarity:  High  Moderate  Low

Estimated Canopy Closure:  Closed  Moderate  Open                     

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 30<sup>cm</sup> dbh Sm 10<sup>cm</sup> dbh

1. Sycamore (Platanus occidentalis)
2. Red maple (Acer rubrum)
3. A. BACH (Fraxinus americana)

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):                     

1. Box Elder (Acer negundo)
2. Mockernut Hickory (C. Tommoxia)
3. TUP POPLAR (L. Tulipifera)

Relative Abundance of Dominant vs. Subdominant: 3:1

Description of Overstory Habitat Form:                     

Moderately closed canopy, relatively uncluttered; uneven aged stands

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Layer Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Paw Paw (Asimina triloba)
  2. Box elder (Acer negundo)
  3.

Description of Habitat Form:                     

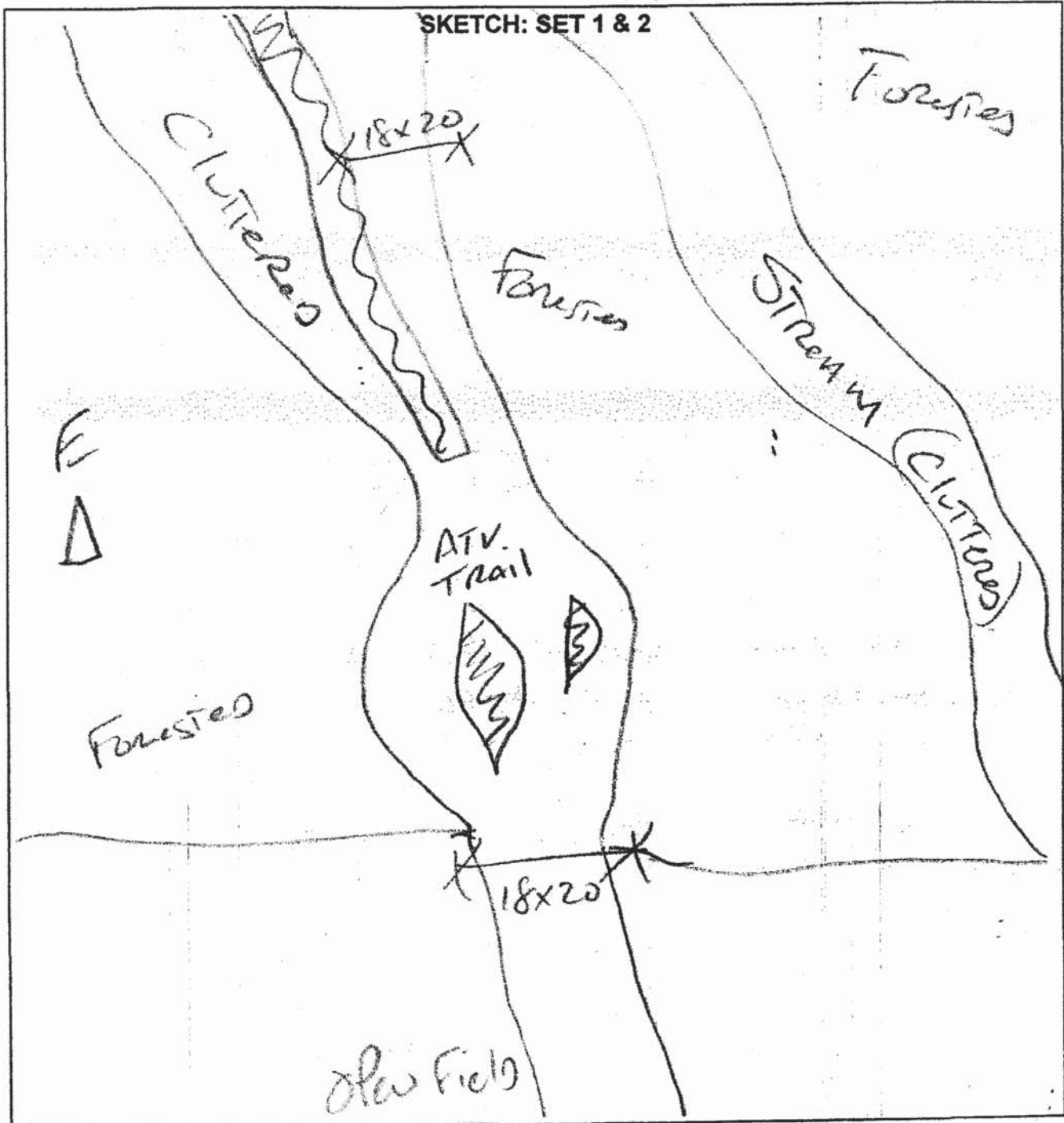
Herbaceous Cover: Rose, JACK-IN-R.I.P.T., Honeysuckle, MAYAPPLE



NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name#: 16 Waypoint Name: \_\_\_\_\_



COMMENTS

No way to cover all corridors; water NOT a limiting factor; since only 1 BAT captured over stream on 9 June I decide to try ATV trails 2 of 2





















Camera #4 - Jeff took

Property of: Environmental Solutions & Innovations, Inc.  
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)



### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT SH2MHill  
 Date: 10 JUNE 2003 Biologist: M. Gilley & J. Duffey  
 State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_  
 GPS: Latitude: N 38° 52' 04.1" Longitude: W 82° 56' 24.6"  
 Site Name/#: #3 2 Waypoint Name: 065  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_  
 Distance to water: Over Stream

ESTIMATED STREAM  
Bank Height: 2.5 ft. Channel Width: 22 ft. Stream Width: 5-10 ft.

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 6 in. Clarity:  High  Moderate  Low

Estimated Canopy Closure:  Closed  Moderate  Open  
Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 45 dbh Sm 38 dbh

1. P. occidentalis
  2. Juglans nigra
  3. \_\_\_\_\_
- ] only 2 dominant over story trees

Roost Tree Potential consists of:  Large Trees  Snags  Both <sup>2</sup> Hollow sycamores

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Acer negundo
2. Fraxinus pennsylvanica
3. Platanus occidentalis

Relative Abundance of Dominant vs. Subdominant: 10% D : 90% Sub

Description of Overstory Habitat Form:

2 single rows of deciduous trees bordering each side of stream

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

Dominant Understory Species: 1. Acer negundo shoots  
2. Platanus occidentalis shoots  
3. Vitis spp.

Description of Habitat Form:

Small Stream channel bordered by trees & mowed lawns - Very open & maintained by residents

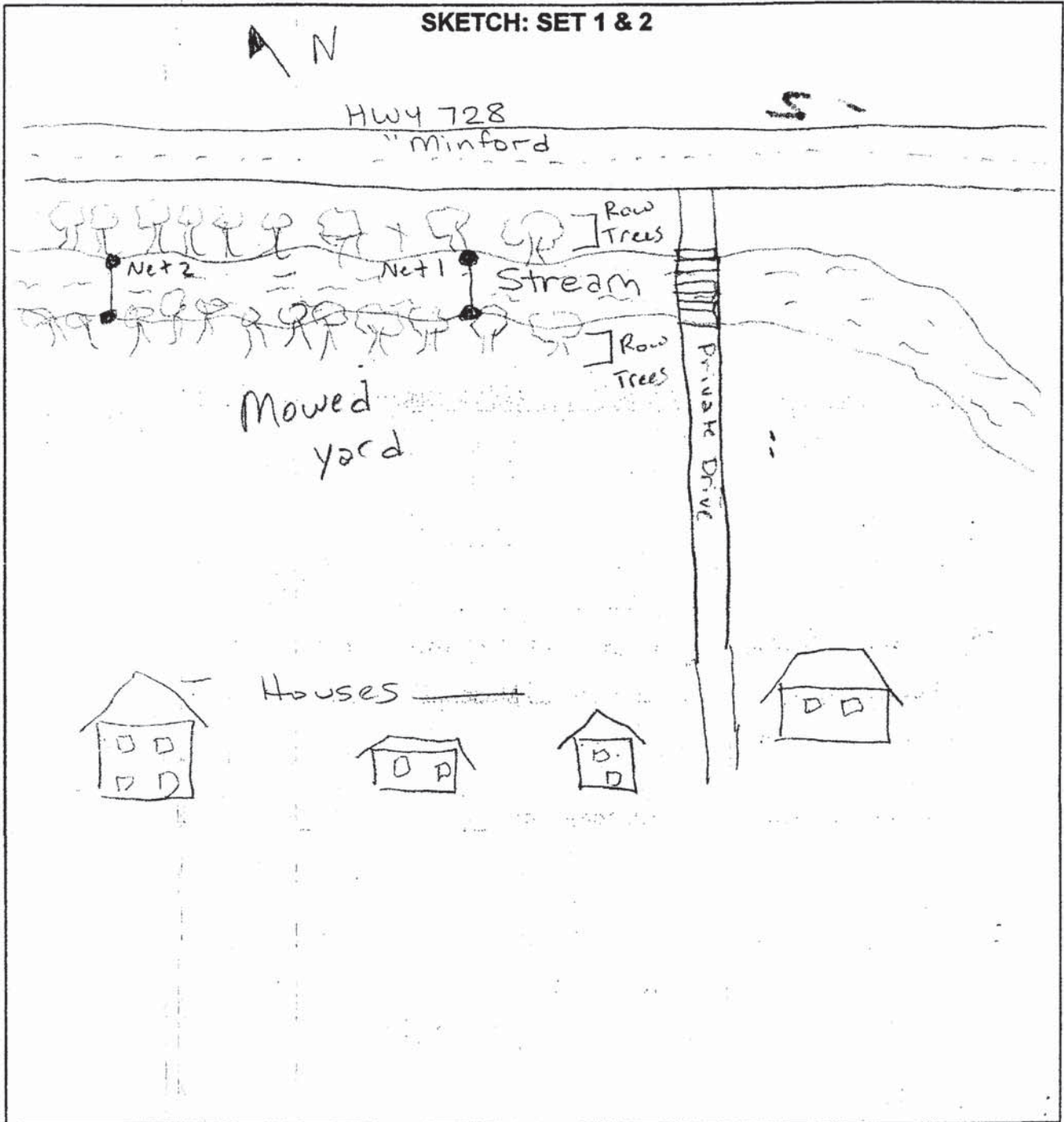
Herbaceous Cover: Spearmint  
Grasses 1 of 2  
Virginia creeper on trees



**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: ODOT # 32 Waypoint Name: 065



**COMMENTS**

Small stream. Flowing water. Area very open, with few trees. Mostly maintained yards of residents















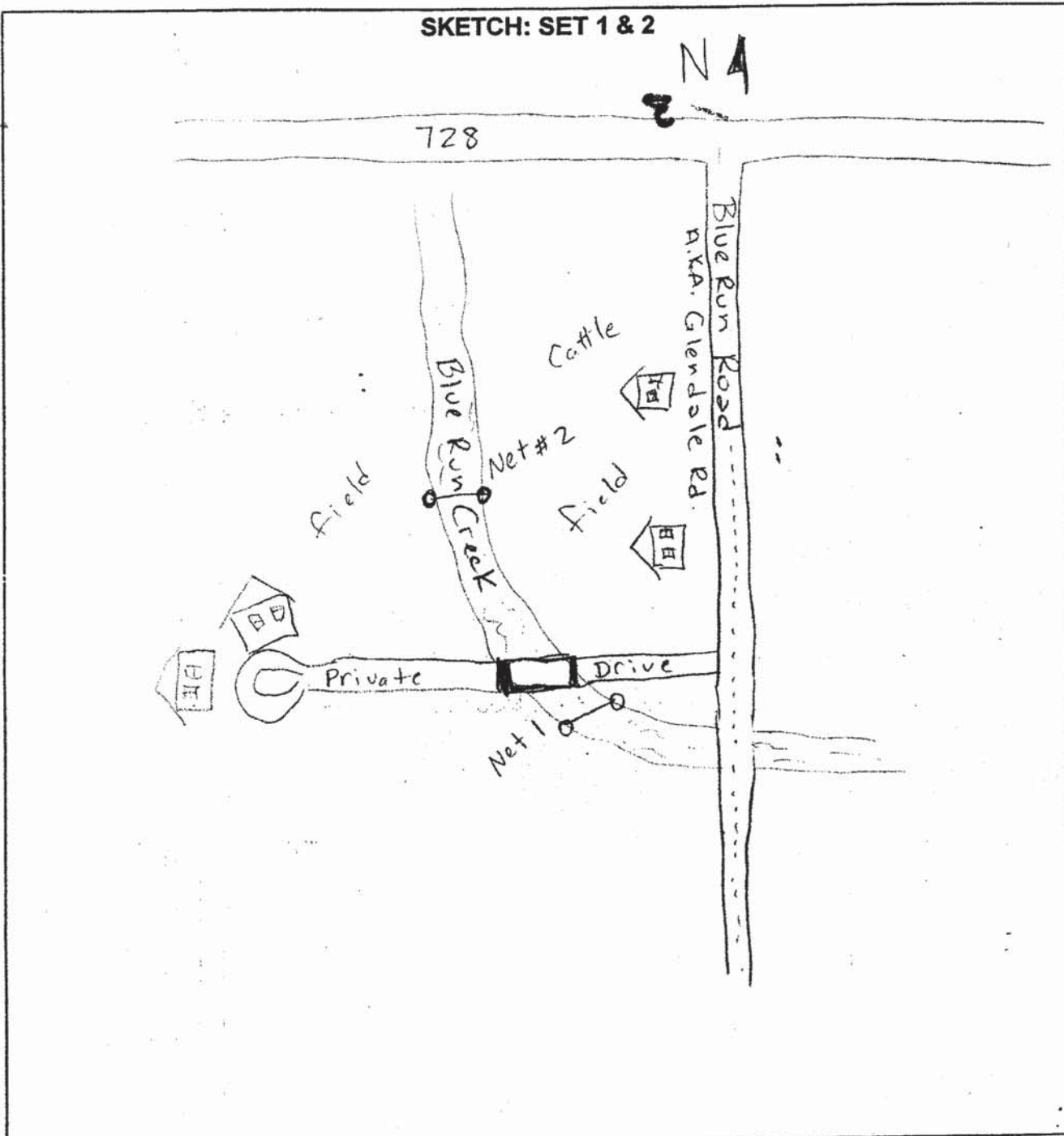


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: ODOT # 43 Waypoint Name: 066

SKETCH: SET 1 & 2



### COMMENTS





# BAT CAPTURE DATA

Project No.: Pesi 096 Project Name: ODOT CH2MHill Page 1 of 1

Date: 06/14/2003 Biologists: MG, BC Camera # 1

State: OH County: Scioto Forest: --- Tract: --- Site Name/#: OPOT #54

GPS: Latitude: N 38° 51' 15.0" Longitude: W 82° 52' 54.0" Waypoint Name: Net 7

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
1	1	Mono / Old Nylon / New Nylon	42	20	20:40	02:20
2	2	Mono / Old Nylon / New Nylon	30	20	21:30	02:35

Site Description/Comments: Pictures: Net #1 - 160.708  
Net #2 - 100.709

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L /PL; M=↑/↓)	Wt (g)	RFA (mm)	Belly: F, M, E	Feces #	Picture # & Description
1	<i>E. fuscus</i>	22:00	Ad	F	PG	24	48.00	M	---	Net # 1
2	<i>M. septentrionalis</i>	22:00	Ad	M	↑	6.5	35.65	M	---	Net # 1
3	<i>P. subflavus</i>	22:00	Ad	M	↑	6	34.00	F	---	Net # 1
4	<i>E. fuscus</i>	22:40	Ad	F	PG	22	49.55	M	---	Net # 1
5	<i>E. fuscus</i>	23:05	Ad	F	PG	21.5	45.00	F	---	Net # 2
6	<i>P. subflavus</i>	23:40	Ad	F	PG	8	33.80	F	---	Net # 1
7	<i>P. subflavus</i>	24:00	Ad	F	PG	9	34.05	F	---	Net # 2
8	<i>L. borealis</i>	24:20	Ad	F	L	13	42.40	E	---	Net # 1
9	<i>E. fuscus</i>	01:40	Ad	F	PG	23	49.00	F	---	Net # 1









# BAT CAPTURE DATA

Project No.: Pesi 096 Project Name: ODOT CH2MHill Page 1 of 1

Date: 06/15/2003 Biologists: MG, BC Camera #           

State: OH County: Scioto Forest:            Tract:            Site Name#: ODOT # 24

GPS: Latitude: N 38° 51' 15.0" Longitude: W 82° 52' 54.0" Waypoint Name: 067

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
	1	Mono / Old Nylon / New Nylon	42'	20'	8:00	01:45
	2	Mono / Old Nylon (New Nylon)	30'	20'	8:30	02:15
		Mono / Old Nylon / New Nylon				

Site Description/Comments:           

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L /PL; M=↑/↓)	Wt (g)	RFA (mm)	Belly: F, M, E	Feces #	Picture # & Description
7	<i>E. fuscus</i>	2370	Ad	M	↑	18	45.00	F	—	— Net # 2
2	<i>E. fuscus</i>	2400	Ad.	F	PG	21.5	48.50	F	—	— Net # 1
2	<i>E. fuscus</i>	2400	Ad	M	↑	18	45.80	F	—	— Net # 2
4	<i>P. subflavus</i>	2420	Ad	M	↑	5.5	33.10	F	—	— Net # 2
5	<i>E. fuscus</i>	2420	Ad	F	L	20	47.25	F	—	— Net # 2
6	<i>E. fuscus</i>	2420	Ad	F	L	18.5	45.50	F	—	— Net # 2
7	<i>E. fuscus</i>	0100	Ad	F	PG	20.5	46.20	F	—	old Bat Net # 2
8	<i>E. fuscus</i>	0120	Ad	F	PG	24.0	49.80	F	—	Net # 1
9	<i>E. fuscus</i>	0130	Ad	F	PG	—	—	F	—	Net # 1







Camera #1 → Net 1 - 100-708

→ Net 2 - 100-709

Property of: Environmental Solutions & Innovations, Inc.  
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)



### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT OH2MHill

Date: 15 JUNE 2003 Biologist: MG & RW

State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_

GPS: Latitude: N 38° 51' 15.0" Longitude: W 82° 52' 54.0"

Site Name/ #: ODOT # 34 Waypoint Name: 067

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: \_\_\_\_\_

Bank Height: 10 ft Channel Width: 45 ft Stream Width: 35-40 ft

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 17 in. Clarity:  High  Moderate  Low

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 60 dbh Sm 38 dbh

- Platanus occidentalis
- Acer saccharum
- Liriodendron tulipifera

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

- Acer saccharum
- Betula nigra
- P. occidentalis

Relative Abundance of Dominant vs. Subdominant: 50:50

Description of Overstory Habitat Form:

Mature hardwood forest w/ many large trees & open underneath

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
- Carpinus caroliniana
  - Acer saccharum
  - Prunus serotina

Description of Habitat Form:

Creek with flowing water, high banks & open understory *\* Good roosting & foraging potential*

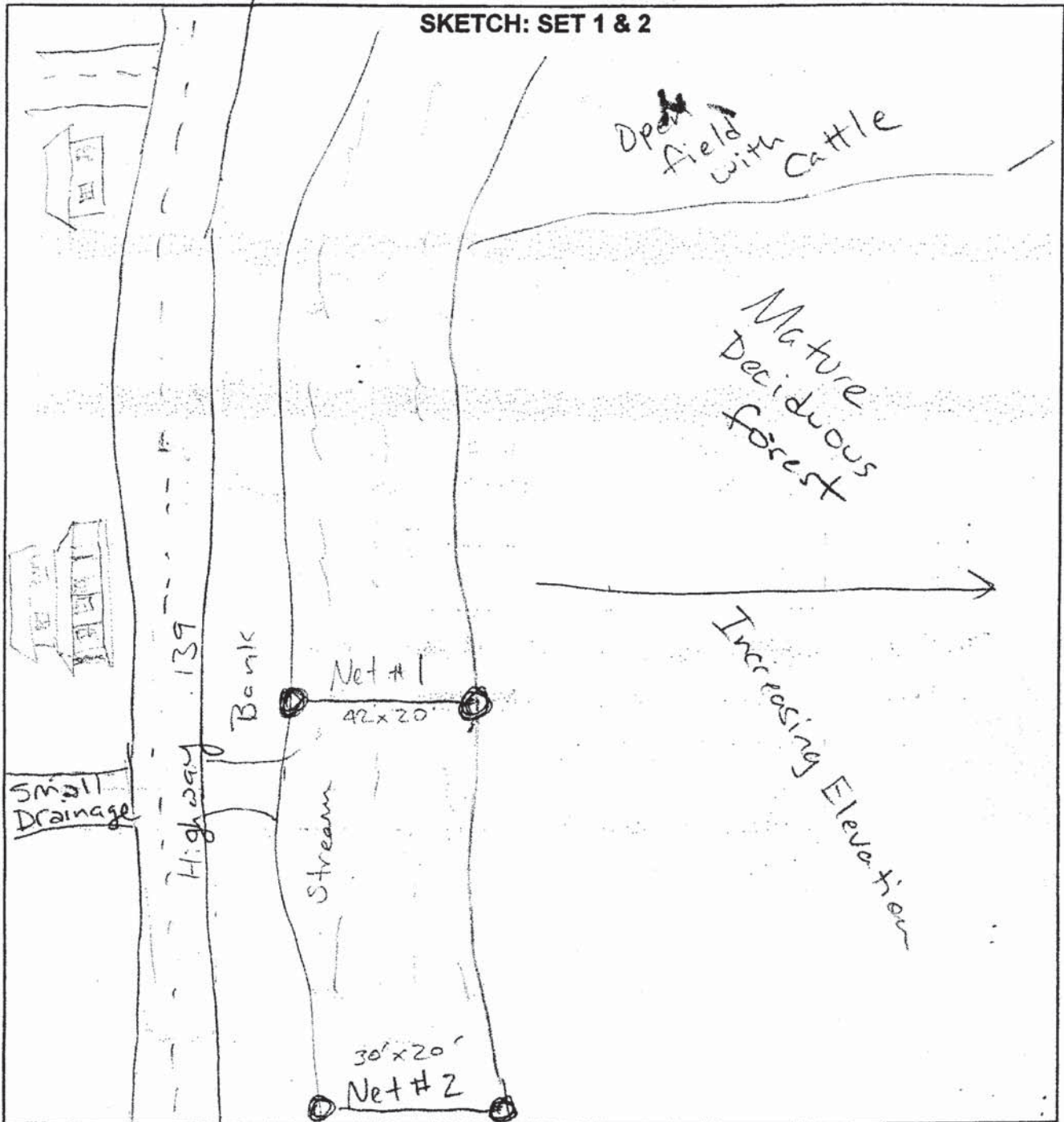
Herbaceous Cover: along banks: May Apple, Viola spp., Salidago spp.  
Grasses



NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: ODOT # 54 Waypoint Name: De 7



**COMMENTS**



















## NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2M Hill  
 Date: 20 June 2003 Biologist: Schwierjohnson/Hootman  
 State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 51' 14.6" Longitude: W 82° 51' 52.7"  
 Site Name/#: #85 Waypoint Name: \_\_\_\_\_

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water:

**ESTIMATED**  
 Bank Height: 4-8' Channel Width: 30-40' Stream Width: 35'  
 Substratum: Sand Gravel Cobble Bedrock Silt/mud other \_\_\_\_\_  
 Average Water Depth: 1'-2' Clarity: High Moderate Low

Estimated Canopy Closure: Closed Moderate Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 17" dbh Sm: 15" dbh  
 1. Platanus occidentalis  
 2. Acer saccharum  
 3. Liriodendron tulipifera

Roost Tree Potential consists of: Large Trees Snags Both  
 Roost Tree Potential for the Area is: High Moderate Low

Subdominant Overstory Species (<38cm/15"):  
 1. Acer saccharum 2. Fagus grandifolia 3. Acer negundo  
 Relative Abundance of Dominant vs. Subdominant: 1:2

Description of Overstory Habitat Form:  
Creek - mostly open w/ a few low branches jutting out into corridor/road - moderately  
 Subcanopy Clutter: Closed Moderate Open closed

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?

Dominant Understory Species: 1. Lindera benzoin Saplings Shrubs  
 2. Asimina triloba Ironwood  
 3. Fagus grandifolia

Description of Habitat Form:  
intermixed sap/shrub w/ herbaceous cover

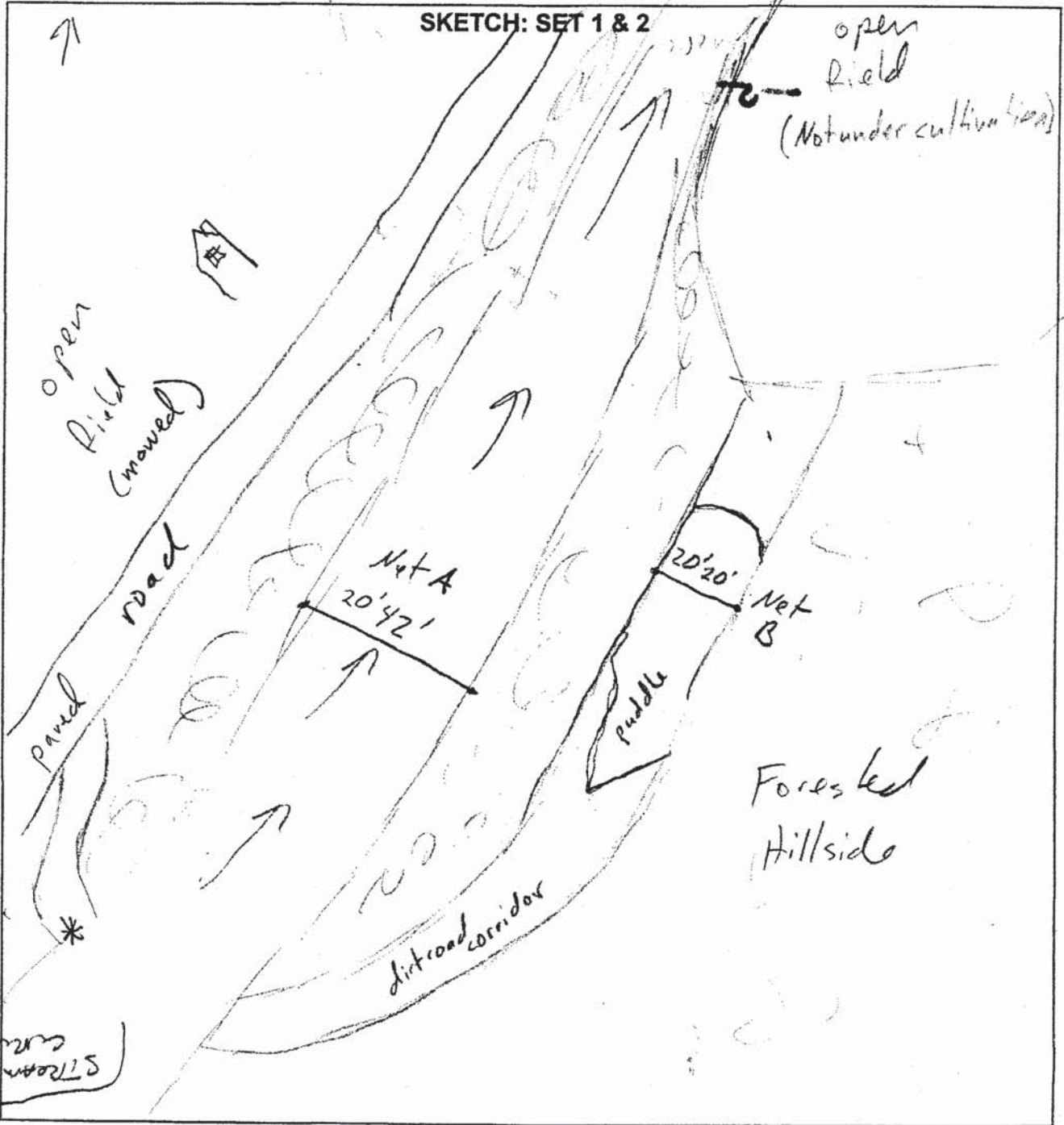
Herbaceous Cover: Nettle<sup>spp.</sup>, New York / xmas fern, may apple, trillium spp.  
SAKERoot



### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/#: #85 Waypoint Name: \_\_\_\_\_



\* Anabat

#### COMMENTS



















# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2MHill  
 Date: 21 June 2003 Biologist: Schwenkhaus; Hartman  
 State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 51' 0 1.8" Longitude: W 82° 51' 05.2"  
 Site Name/#: #76 Waypoint Name: \_\_\_\_\_  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 0

ESTIMATED SITE CHARACTERISTICS  
Bank Height: 5'-10' Channel Width: 20'-40' Stream Width: 20'-40'

Substratum: Sand Gravel Cobble Bedrock Silt/mud other \_\_\_\_\_

Average Water Depth: 1'-2' Clarity: High Moderate Low

VEGETATION  
 Estimated Canopy Closure: Closed Moderate Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 15 cm Sm: 5 cm

1. BOX ELDER (ALN NUNCO)
2. ELM (ULMUS AMERICANS)
3. MAPLE (ACER SAUTERNAI)

Roost Tree Potential consists of: Large Trees Snags Both

Roost Tree Potential for the Area is: High Moderate Low

Subdominant Overstory Species (<38cm/15"):

1. BOX ELDER
2. ELM
3. MAPLE

Relative Abundance of Dominant vs. Subdominant: 1:1

Description of Overstory Habitat Form:

SINGLE ROW ALONG STREAM SID

Subcanopy Clutter: Closed Moderate Open

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?  
Saplings Shrubs

Dominant Understory Species: 1. \_\_\_\_\_  
2. NONE  
3. \_\_\_\_\_

Description of Habitat Form: \_\_\_\_\_

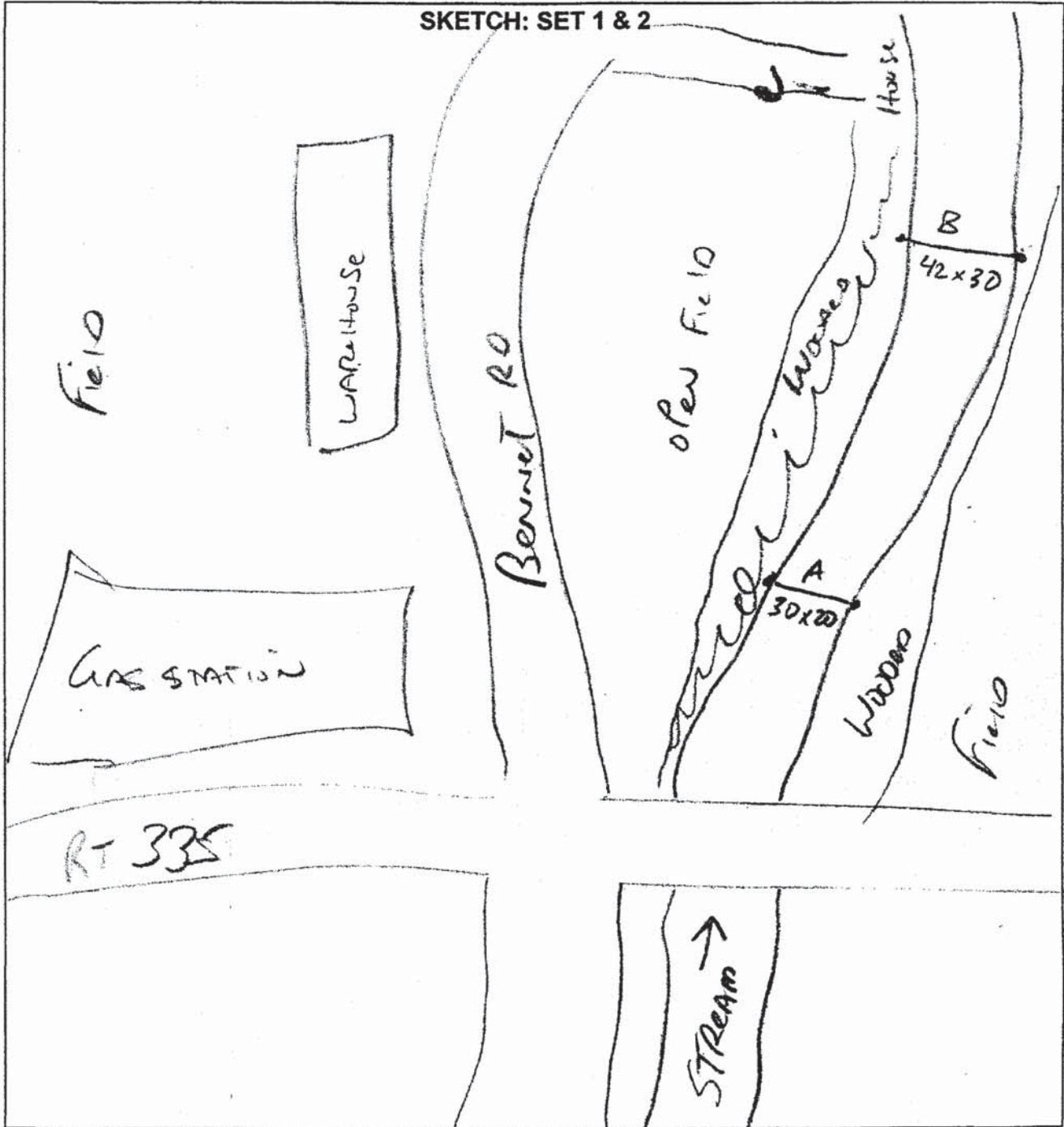
Herbaceous Cover: \_\_\_\_\_



NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: 76 Waypoint Name: \_\_\_\_\_



COMMENTS









## WEATHER DATA SHEET

Project No.: Pesi 096 Project Name: ODOT CH2MHill

Date: 17 June 2003 Biologist: Schwieb Johann Heetman

State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXX

GPS: Latitude: N 39° 48' 58.8" Longitude: W 82° 51' 17.9"

Site Name/#: Scioto City 57 Waypoint Name: \_\_\_\_\_

Comments: RAIN = 1 hour prior to netting. Cleared out to  
partly cloudy. Less humid than last night. Hum in mid 70's

**Moist Phase (Gibber)**

Time (2400 h)	Temp (°C/F)	Wind Speed (estimated - see chart)	Wind Direction: From to	% Cloud Cover (estimated)	Comments
20:30	72	1-3	W-E	100	
21:00	67	1-3	W to E	100	
21:30	66	1-3	W to E	100	FOG SET IN
22:00	65	1-3	W to E	70	
22:30	64	1-3	W to E	50	
23:00	64	1-3	W to E	30	
23:30	64	1-3	"	10	
00:00	63	1-3	"	75	
01:30	64	1-3	"	100	
1:00	64	1-3	"	100	
1:30	64	1-3	"	100	
02:00	62	1-3	"	100	













# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2M Hill

Date: 17 June 03 2003 Biologist: Schwier Johann Hootman

State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX

GPS: Latitude: N 38° 48' 58.8" Longitude: W 82° 51' 17.4"

Site Name/#: 67 Waypoint Name: \_\_\_\_\_

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: set over water, a road that has been recently dredged.

### ESTIMATED CHANNEL CHARACTERISTICS

Bank Height: 6-10' Channel Width: 15' Stream Width: 12-13'

Substratum: Sand  Gravel Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 1-2" Clarity: High Moderate  Low

Estimated Canopy Closure: Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 15" dbh Sm \_\_\_\_\_ dbh

- Platanus occidentalis sycamore
- Liquidambar tulipifera tulip poplar
- Acer saccharum s. Maple

Roost Tree Potential consists of: Large Trees Snags  Both

Roost Tree Potential for the Area is: High  Moderate  Low

Subdominant Overstory Species (<38cm/15"): \_\_\_\_\_

- Fagus grandifolia Beech
- Ulmus americana 1. Elm
- Robinia pseudoacacia Black locust

Relative Abundance of Dominant vs. Subdominant: 1:2 Emulchior

Description of Overstory Habitat Form: patchy open areas + closed areas

Subcanopy Clutter: Closed Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?

Dominant Understory Species: Saplings  Shrubs

- Fagus grandifolia
- Acer saccharum
- \_\_\_\_\_

Description of Habitat Form: Open uneven aged stand, highly disturbed, damage due to

Herbaceous Cover: Nettle ice storm

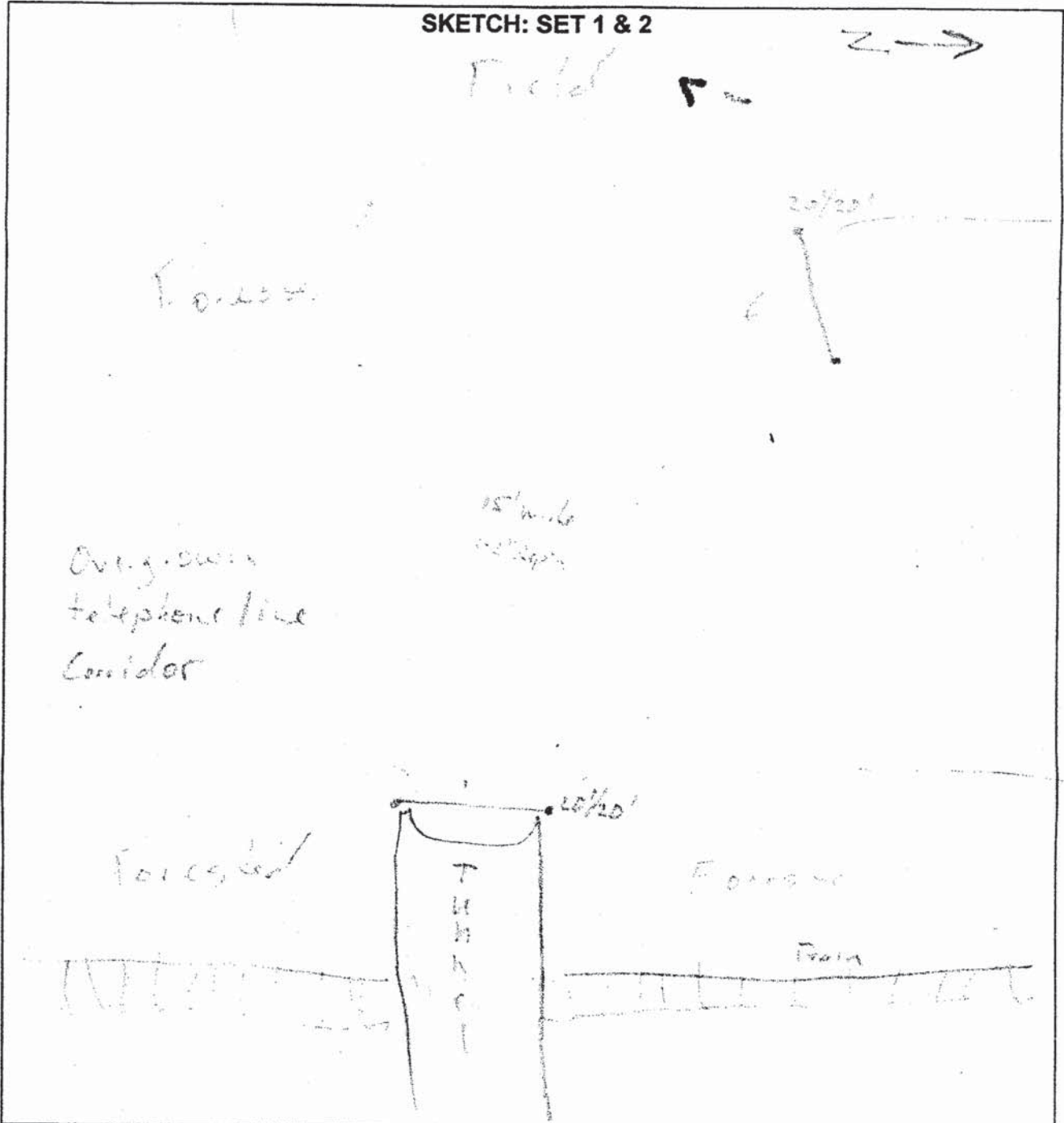
Phytolacca spp.  
Vitis spp.



### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/#: 47 Waypoint Name: \_\_\_\_\_



#### COMMENTS

still 335 ft parallel to train tracks just to the east. +  
just east of that is the Little Scioto River



















### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT C&M Hill  
Date: 25 June 2003 Biologist: Schwartz Johann Hootman

State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX  
GPS: Latitude: N 38° 47' 20.5" Longitude: W 82° 50' 29.2"

Site Name/#: # ~~7~~ 8 Waypoint Name: \_\_\_\_\_

Quad: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: \_\_\_\_\_

**ESTIMATED STREAM CHANNEL**

Bank Height: 15' - 3' Channel Width: 20' Stream Width: 15'

Substratum: Sand Gravel Cobble Bedrock Silt/mud other \_\_\_\_\_

Average Water Depth: 3" Clarity: High Moderate Low

**VEGETATION**

Estimated Canopy Closure: Closed Moderate Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 20 dbh Sm: 15 dbh

- Fagus grandifolia Beech
- Platanus occidentalis sycamore
- Q. Rubra Red Oak

Roost Tree Potential consists of: Large Trees Snags Both

Roost Tree Potential for the Area is: High Moderate Low

Subdominant Overstory Species (<38cm/15"): 1. Fagus grandifolia 2. Carya tomentosa 3. Acer saccharinum

Relative Abundance of Dominant vs. Subdominant: 1/3

Description of Overstory Habitat Form: Broken over story

Subcanopy Clutter: Closed Moderate Open

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?

Dominant Understory Species: 1. Acer saccharum Saplings Shrubs  
2. F. grandifolia Beech  
3. Carpinus cordifolia Ironwood

Description of Habitat Form: Open understory w patches of thick m. Rose where canopy

Herbaceous Cover: Virginia creeper ground cover w/ New York's open

fern, may apple, m. flowers  
Rose

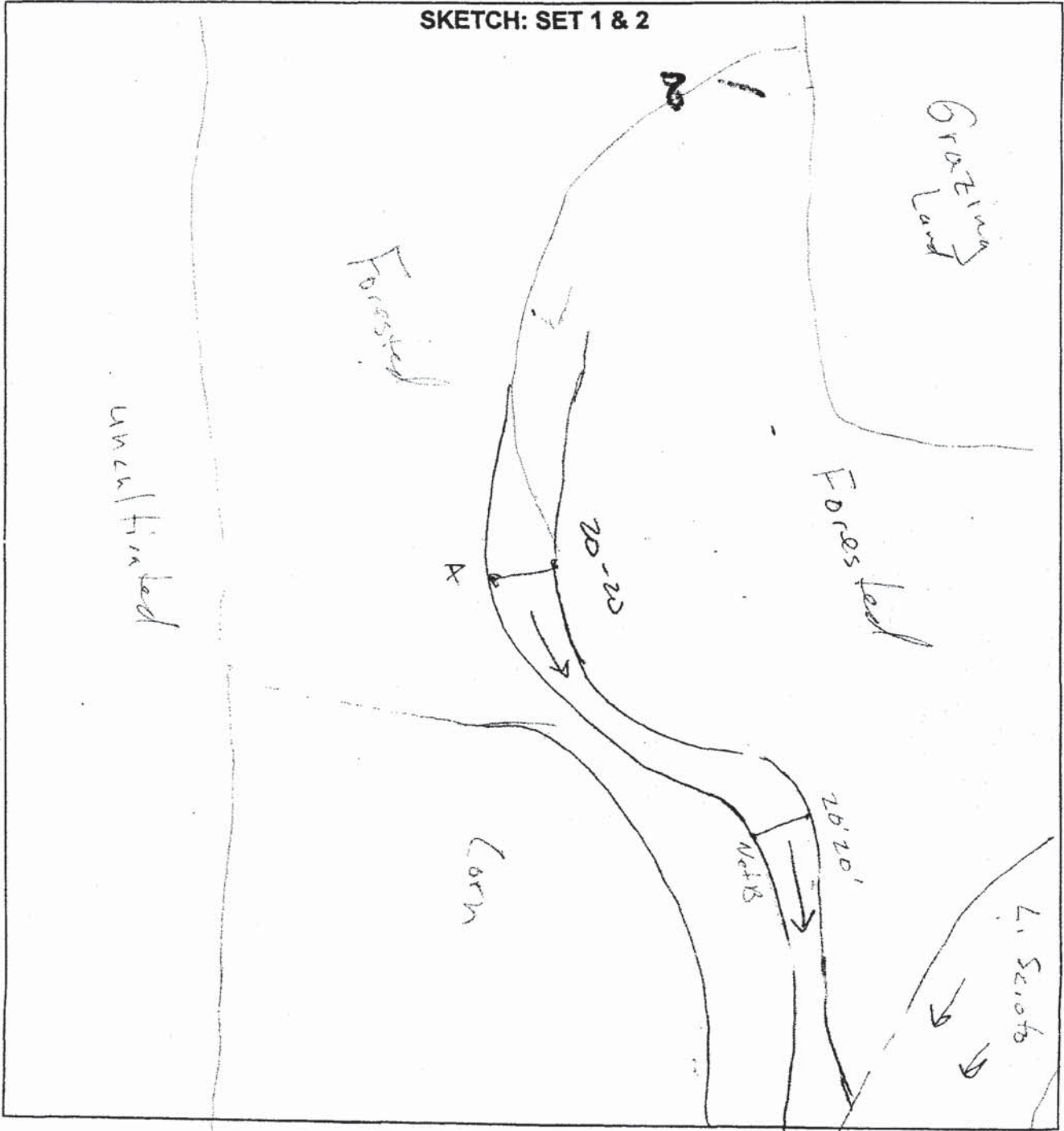


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: # 78 Waypoint Name: \_\_\_\_\_

SKETCH: SET 1 & 2



COMMENTS

















Camera #1 [ Net 1 - 100-711  
Net 2 - 100-710

Property of: Environmental Solutions & Innovations, Inc.  
781 Neeb Road, Cincinnati, OH 45233 (Phone: 513-451-1777)



### NET SITE HABITAT DESCRIPTION

Camera #1  
Net 1 - 100-711  
Net 2 - 100-710

Project No.: Pesi 096 Project Name: ODOT #2 Hill

Date: 17 JUN 2003 Biologist: MGZ JD

State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_

GPS: Latitude: N 38° 45' 53.0" Longitude: W 82° 50' 19.0"

Site Name/ #: ODOT # 09 Waypoint Name: 068

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: over H2O

Bank Height: 15ft Channel Width: 30ft Stream Width: 20ft

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 12 in Clarity:  High  Moderate  Low

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 70 dbh Sm 38 dbh

1. P. occidentalis
2. L. tulipifera
3. Q. alba

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"): \_\_\_\_\_

1. Aesculus glabra
2. Acer saccharinum
3. Betula nigra

Relative Abundance of Dominant vs. Subdominant: 15% D: 85% S

Description of Overstory Habitat Form: \_\_\_\_\_

Few large hardwoods, mostly young trees with dense vegetation underneath

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Carpinus caroliniana
  2. Aesculus glabra
  3. Unknown

Description of Habitat Form: \_\_\_\_\_

Early successional woods with a lot of undergrowth. Stream flowing

Herbaceous Cover: Jewel weed, multiflora rose

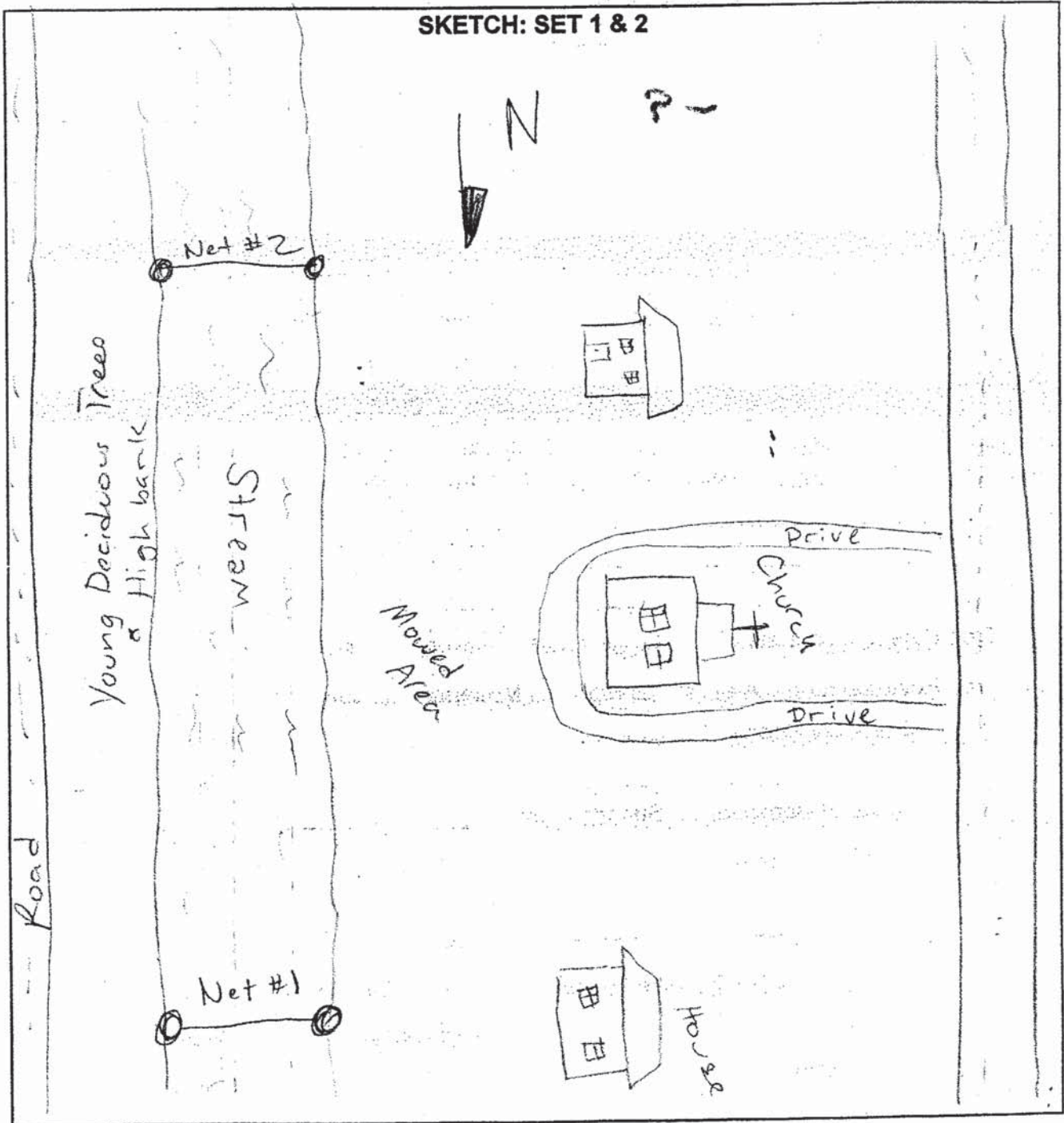


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/#: ODOT # 109 Waypoint Name: 068

SKETCH: SET 1 & 2



### COMMENTS



















### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096 Project Name: ODOT CH2MHill

Date: 22 June 2003 Biologist: Schwarzmann, Houtman

State: OH County: Scioto Forest: XXXXXXXXX Tract: XXXXXXXXXX

GPS: Latitude: N 38° 43' 49.3" Longitude: W 82° 51' 30.9"

Site Name/#: 910 Waypoint name: CAMERA #4

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 0 Picture #'s: A) 100-0714 B) 100-0718/100-0715

#### ESTIMATED STREAM

Bank Height: 1-5' Channel Width: 10'-20' Stream Width: 1-20'

Substratum: Sand Gravel Cobble Bedrock Silt/mud other \_\_\_\_\_

Average Water Depth: 1-3' Clarity: High Moderate Low

Estimated Canopy Closure: Closed Moderate Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 30 cm dbh Sm: 5 dbh

- Sycamore (Platanus occ. americana)
- Box Elder (Acer Negundo)
- Black Walnut (Juglans nigra)

Roost Tree Potential consists of: Large Trees Snags Both

Roost Tree Potential for the Area is: High Moderate Low

Subdominant Overstory Species (<38cm/15"): \_\_\_\_\_

- Box Elder
- Elm (Ulmus americana)
- \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 1:1

Description of Overstory Habitat Form: NARROW BAND OF WOODS ALONG STREAM EDGE. CANOPY OPEN, PATCHY

Subcanopy Clutter: Closed Moderate Open

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?

Saplings Shrubs

- Dominant Understory Species:
- \_\_\_\_\_
  - SAME AS ABOVE
  - \_\_\_\_\_

Description of Habitat Form: Very cluttered, poor correlation

Herbaceous Cover: Poison Ivy, Solonch SP, Jewelweed, Anemone Ivy, Viola spp,

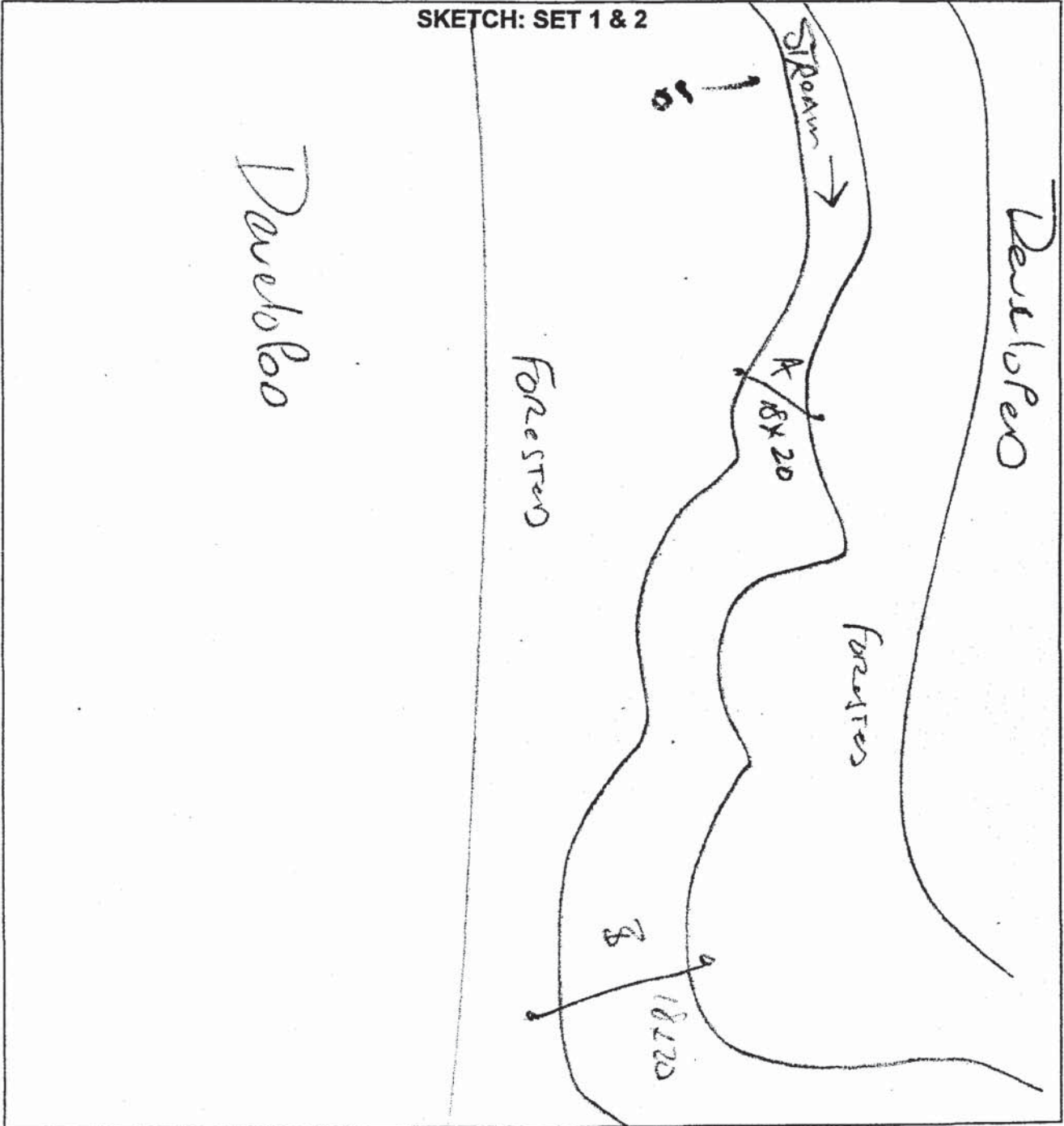


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: 910 Waypoint Name: \_\_\_\_\_

SKETCH: SET 1 & 2



COMMENTS

---



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0752





**Net Sites 1b1 and 1b2**







**Net Sites 2a and 2b**







Net Sites 3a and 3b







**Net Sites 4a and 4b**







**Net Sites 5a and 5b**







Net Sites 7a and 7b







**Net Sites 8a and 8b**







**Net Sites 9a and 9b**







Net Sites 10a and 10b



**A CAVE ASSESSMENT AND SUMMER MIST NET SURVEY AT 11  
ADDITIONAL SITES FOR THE ENDANGERED INDIANA BAT ALONG  
THE PROPOSED PORTSMOUTH BYPASS PROJECT IN SCIOTO  
COUNTY, OHIO**

22 December 2003

*Prepared for:*  
CH2MHill  
5775 Perimeter Drive  
Dublin, Ohio 43017

*Prepared by:*  
V. Brack, Jr., Ph.D., and Jeffrey Hawkins



Environmental Solutions & Innovations, Inc.

781 Neeb Road  
Cincinnati, Ohio 45233  
Phone: (513) 451-1777  
Fax: (513) 451-3321

Donna Brack, President  
dbrack@EnvironmentalSI.com

409 Highway 317  
P.O. Box 205  
Neon, Kentucky 41840  
Phone: (606) 855-9949  
Fax: (606) 855-9101

Jeffrey Hawkins, Scientist  
jhawkins@EnvironmentalSI.com



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- Appendix A.** USFWS Ohio field office acknowledgement and approval of study plan
- Appendix B.** Completed project data sheets



## 1.0 Regulatory Setting

The federal Endangered Species Act (ESA) [16 U.S.C. 1531 *et seq.*] became law in 1973 and provides for the listing, conservation, and recovery of endangered and threatened species of plants and wildlife. Under ESA, the U.S. Fish and Wildlife Service (USFWS) strives to protect and monitor the numbers and populations of listed species. Many states enacted similar laws.

Section 7(a)(2) of the Act states that each federal agency shall insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of designated critical habitat. Federal actions include (1) expenditure of federal funds for roads, buildings, or other construction projects, and (2) approval of a permit or license, and the activities resulting from such permit or license. This is true regardless of whether involvement is apparent, such as issuance of a federal permit, or less direct, such as federal oversight of a state-operated program.

Section 9 of the Act prohibits take of listed species. Take is defined by the Act as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect.” The definition of harm includes adverse habitat modification. Actions of federal agencies that do not result in jeopardy or adverse modification, but that could result in a take, must be addressed under Section 7.

Prior to development of the Portsmouth bypass project, the Ohio Department of Transportation (ODOT) must comply with a variety of requirements for environmental protection, including compliance with ESA. Environmental Solutions & Innovations, Inc. (ESI) was contracted to complete a summer mist netting survey for the endangered Indiana bat (*Myotis sodalis*) within the bypass footprint in Scioto County, Ohio. Initially 10 sites were selected and netted (ESI-Schwierjohann and Brack, 2003), and after additional coordination between ODOT, CH2MHill, and the USFWS, Ohio Field Office, it was decided that an additional 11 sites should be netted. In addition, during field netting studies, a “cave” was located and investigated for its potential use by bats.

ESI completed field efforts under Federal Endangered species permit TE 023664-10 and State of Ohio Division of Wildlife permit 216.



## **2.0 Project Setting**

### **2.1 Location**

The project site is in the Appalachian Plateau Physiographic Province of south-central Ohio (Figure 1). More specifically, the site is within the Shawnee-Mississippian Plateau. The area is characterized by high relief (400'-800' ASL). The Plateau is highly dissected with coarse- and fine-grained rock sequences and is considered the most rugged area in Ohio. Remnants of ancient lacustrine clay-filled Teays drainage system are extensive in lowlands but absent in uplands. The geology of the Plateau has developed from Devonian and Mississippian age shales, siltstones, and locally thick sandstones; a Pleistocene age sandy outwash of the Scioto River; Teays age Minford clay, and silt loam and channery colluvium (ODNR, 2003).

The bypass is intended to connect Ohio State Route 23 to Ohio State Route 52. The general footprint of the bypass runs west to east from Lucasville to Minford and then south to Wheelersburg. The footprint covers an area approximately 14.5 miles (23.3 km) long by 1.5 miles (2.4 km) wide. Primary drainage within the footprint comes from the Little Scioto River; Candy Run, Long Run, and Sweet Run creeks are also important watersheds for the area.

### **2.2 Regional Species Occurrence**

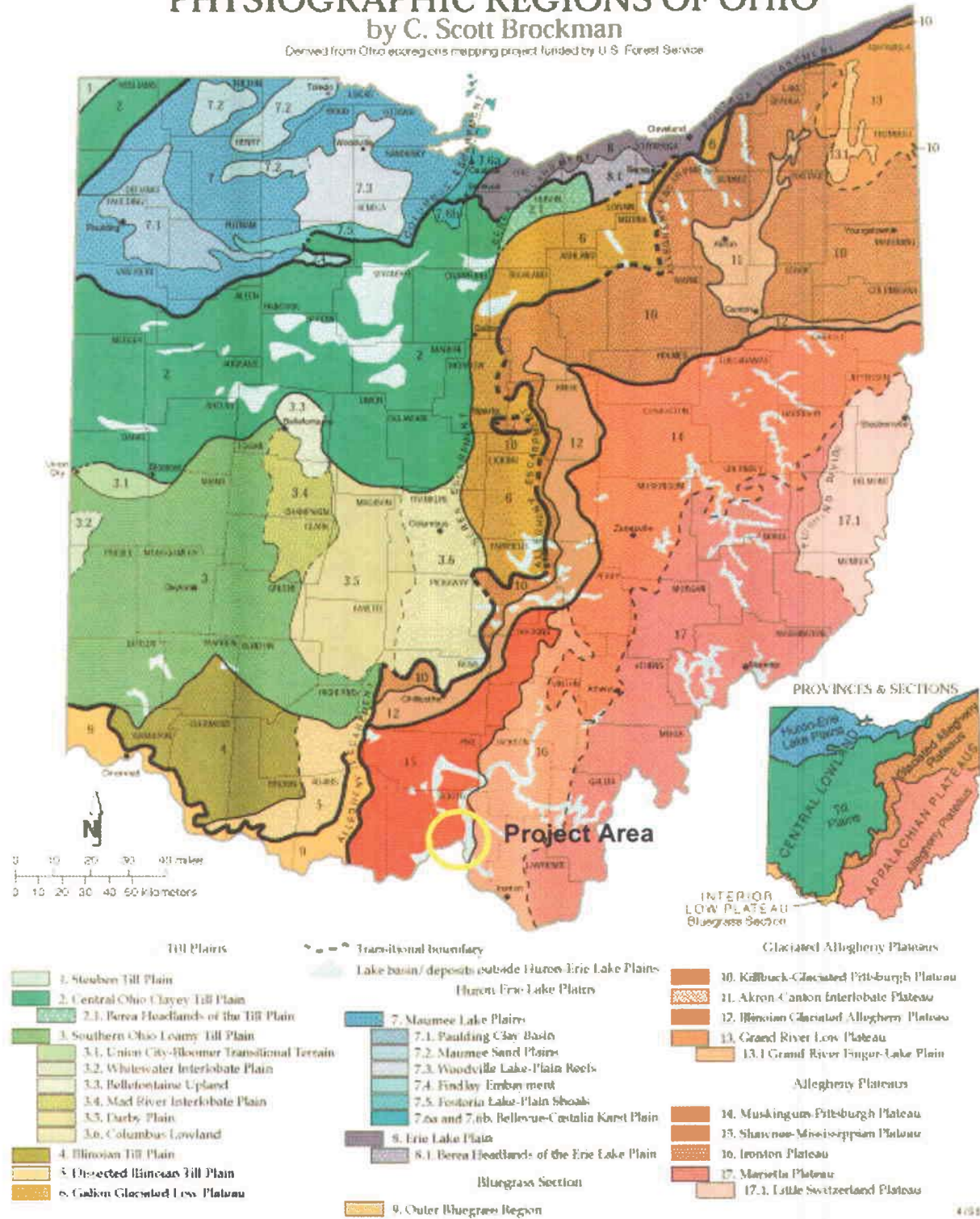
The federally endangered Indiana bat is known from the region that includes the Portsmouth bypass project area. Winter hibernacula occur in nearby Adams and Brown counties in Ohio, and Carter County, Kentucky. Evidence of a maternity colony was recorded east of Scioto County in Lawrence County, Ohio. Both Scioto and Pike counties have records of summer, nonreproductive Indiana bats (Figure 2).

Figure 1. Ohio Physiographic Regions and the project area (Source: ODNR, 2003).

# PHYSIOGRAPHIC REGIONS OF OHIO

by C. Scott Brockman

Derived from Ohio ecoregions mapping project funded by U.S. Forest Service





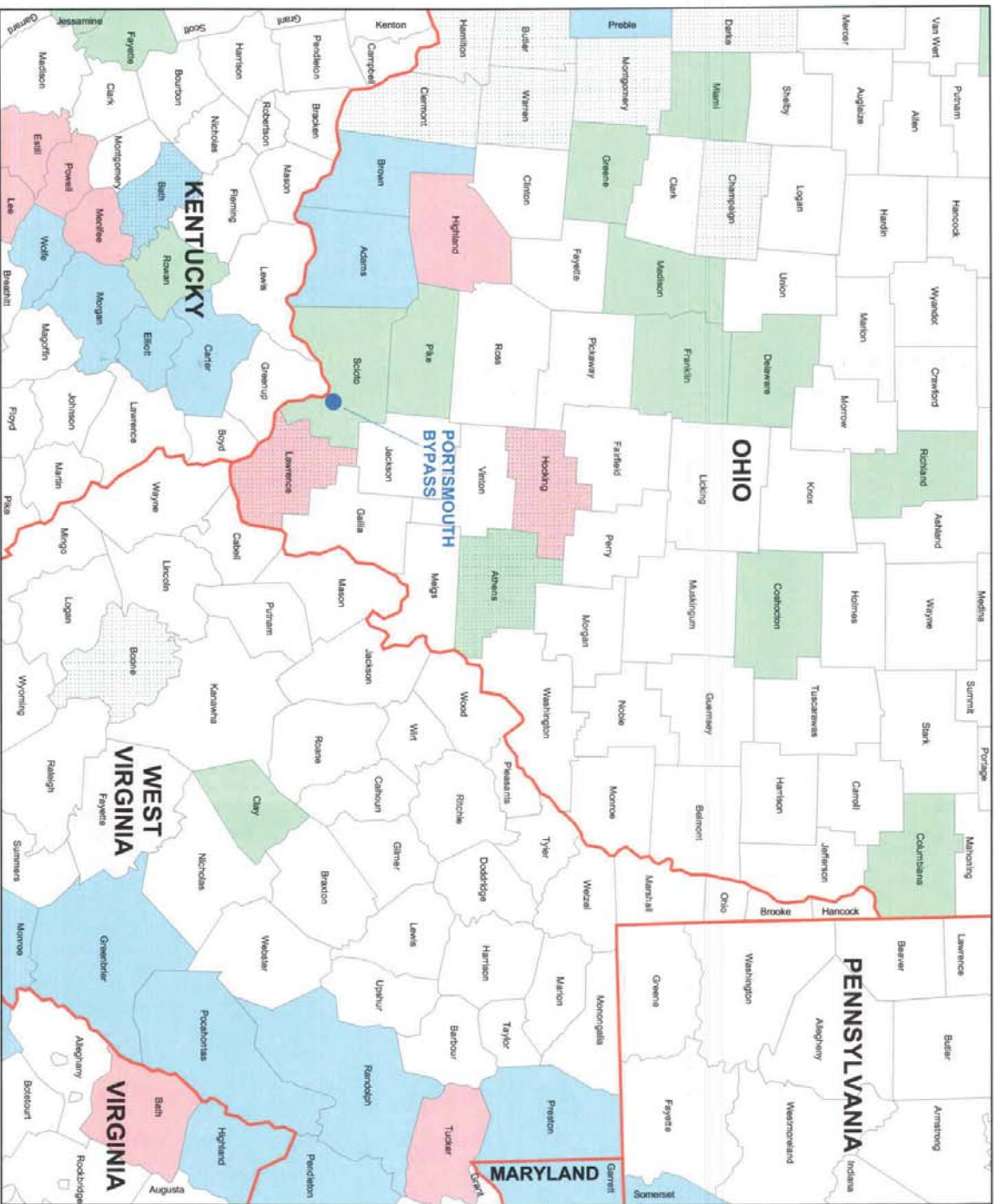


Figure 2. Counties near the project area with hibernacula, summer maternity, and other summer (nonreproductive) records for the Indiana bat (*Myotis sodalis*).

- County with Record of Indiana Bat Hibernacula Occurrence
- County with Record of Indiana Bat Summer Maternity Occurrence
- County with Record of Indiana Bat Other Summer (Nonreproductive) Occurrence
- County with Record of Indiana Bat Hibernacula and Other Summer (Nonreproductive) Occurrences
- State Boundary
- County Boundary

**STATES WITH RECORDS OF INDIANA BAT OCCURRENCE**



Recorded Species Occurrence

Miles

Sources: USFWS, Indiana Bat Revised Recovery Plan, Agency Draft, 1999.



### 3.0 Ecological Setting

The USFWS listed the Indiana bat as endangered on 11 March 1967. The current total population of Indiana bats is estimated at 350,000 individuals (USFWS, 1999). This is less than half the estimated population of 1960. Long-term, detailed documentation of population changes are lacking in most areas, although Indiana is an exception (Brack et al., 2003; Brack et al., 1984; Brack and Dunlap, 2003; Johnson et al., 2002). Summer habitat losses (USFWS, 1999) and winter disturbance (Johnson et al., 1998) are believed to have contributed to the decline.

Federal Register Documents	
41 FR 41914	24 September 1976: Final Critical Habitat. Critical habitat—mammals
40 FR 58308, 58312	16 December 1975: Proposed Critical Habitat. Critical habitat—mammals
32 FR 4001	11 March 1967: Final Listing. Endangered

Indiana bats are "tree bats" in the summer and "cave bats" in winter. A detail life history is provided in the U.S. Fish and Wildlife Service Recovery Plan (1999), Brack (1983), and LaVal and LaVal (1980). Figure 3 provides a chronology of seasonal activities discussed in the following paragraphs.

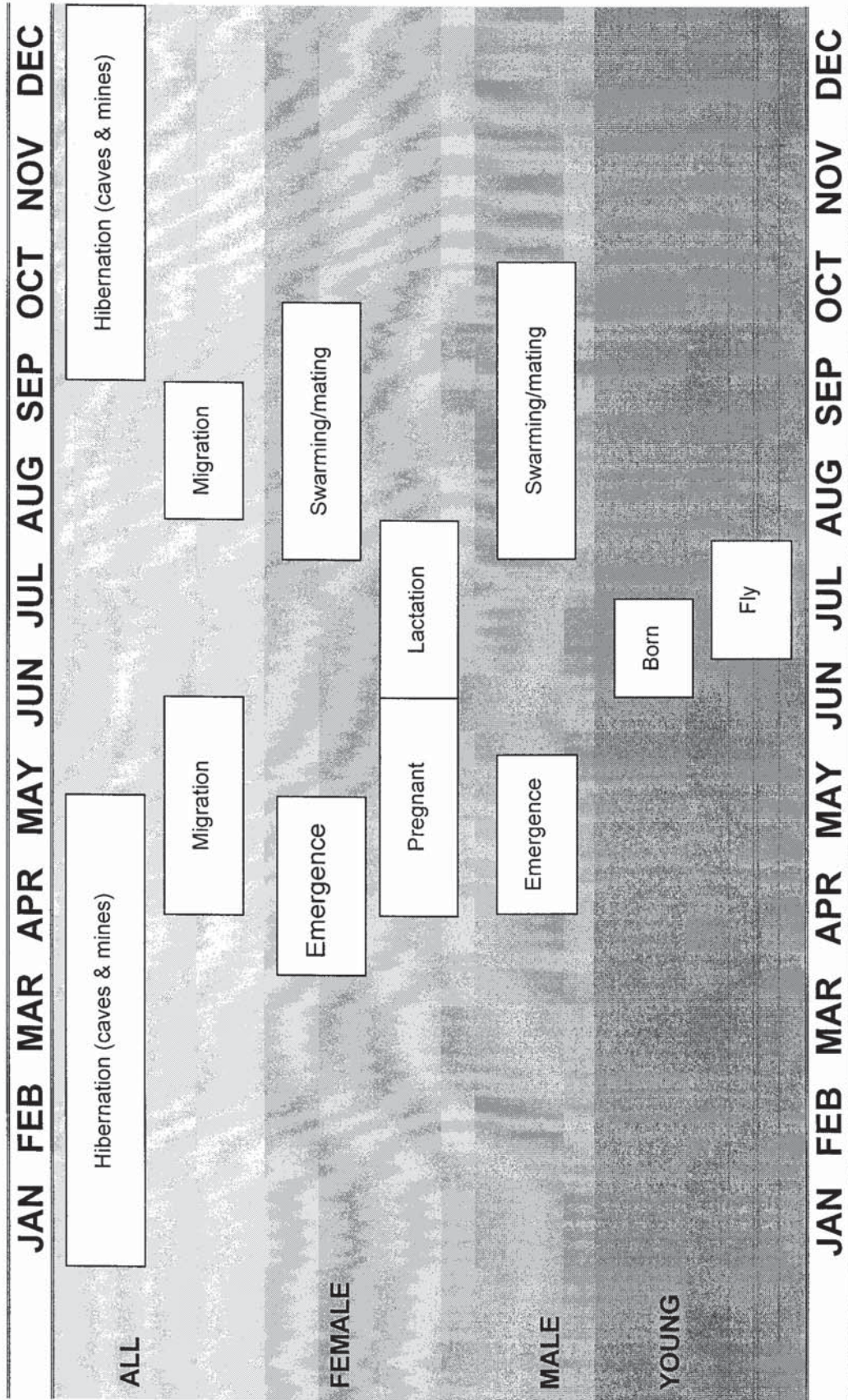
The winter range of the Indiana bat is restricted to regions of well-developed limestone caverns, which serve as hibernacula. Most hibernacula are in caves, but abandoned mines are sometimes used. There are large populations of Indiana bats in only a few caves; most hibernacula contain only a few bats. Large populations of bats hibernate in caves in Indiana, Kentucky, and Missouri (over 82% of the known population). Smaller populations are known from Alabama, Arkansas, Connecticut, Georgia, Illinois, Iowa, Maryland, Massachusetts, Mississippi, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and West Virginia. Although the winter range is large, the species is restricted to approximately 135 known hibernacula.



Brack (3D/I, 1996) documented a population of nearly 9,300 Indiana bats hibernating in a mine in Preble County, Ohio. The most recent survey (ESI-Brown and Brack 2002) indicated that the number of bats hibernating in the mine has remained stable since first discovered. Spring (ESI-Little et al., 2001) use of coal mines by the Indiana bat in Virginia, and autumn use in Ohio (ESI-Brack and Little, 2001) have recently been documented. Such use may be associated with autumn swarming, winter hibernation, and spring staging, or it may represent use during seasonal



Figure 3. Seasonal chronology of Indiana bat activities.





migration or simply occasional visitation unrelated to specific seasonal events (i.e., vagrants). In Ohio, sampling of the mine the following spring failed to produce any Indiana bats, thereby failing to support the hypothesis that the mine is a hibernaculum. In Indiana and Virginia, individual Indiana bats have been found wintering in caves that were not subsequently used by any Indiana bats for hibernation, indicating that individual Indiana bats, like many species of bats, are occasionally found in caves and mines that are not suitable for or support populations of hibernating bats (Brack et al., 2003; ESI Brack, 2000).

Indiana bats hibernate from mid-November to mid-April. Hibernating Indiana bats usually form dense clusters on cave ceilings in portions of the cave where winter temperatures are suitable. Initially this temperature was believed to be 4 - 8°C during mid-winter, but was supported with scant data. Recent analysis of long-term data in hibernacula with increasing numbers of bats indicates the optimal range appears to be closer to 6 - 8°C (Brack and Dunlap 2003). Clusters are not sexually segregated.

Hibernation by bats is an adaptation that allows for survival through the winter months when food and water are not available. Mammalian hibernation consists of periods of hibernation interrupted by periodic, spontaneous arousals. Bats frequently move during arousal, and thus are able to change the microenvironment to which they will be exposed during the next period of hibernation. The duration of the period of hibernation between arousals varies by species (Brack, 1979; Brack and Twente, 1985; Twente et al., 1985), and is affected by temperature.

Female Indiana bats leave hibernacula earlier in spring (beginning in mid-April) than do males (peak of departure in early May). This part of spring activity is referred to as staging. Some males remain near hibernacula throughout summer while others migrate to distant areas (Whitaker and Brack, 2002). When female Indiana bats emerge from hibernation, they migrate up to several hundred miles to maternity colonies. Females form nursery colonies under exfoliating bark of dead trees, or living trees such as shagbark hickory (*Carya ovata*) in upland or riparian forests. A single maternity colony typically consists of 25 to 100 adult females. Maternity colonies have been found in many species of trees, indicating that it is tree form, not species that is important for roosts. Some species of trees in which roosts have been documented include slippery elm (*Ulmus rubra*), American elm (*U. americana*), cottonwood (*Populus deltoides*), northern red oak (*Quercus rubra*), post oak (*Q. stellata*), white oak (*Q. alba*), shingle oak (*Q. imbricaria*), sassafras (*Sassafras albidum*), sugar maple (*Acer saccharum*), silver maple (*A. saccharinum*), green ash (*Fraxinus pennsylvanica*), and bitternut hickory (*Carya cordiformis*).

Since Indiana bat roosts typically are located in dead or dying trees, they are often ephemeral. Roost trees may be habitable for one to several years, depending on the species and condition of the tree (Callahan et al., 1997). In addition, a single colony of bats moves among roosts within a season. Therefore, numerous suitable roosts



may be needed to support a single nursery colony (Foster and Kurta, 1999; Kurta et al., 1993). It is not known how many alternate roosts are required to support a colony within a particular area, but large tracts of mature forest containing large trees increases the probability that suitable roost trees are present. Indiana bats exhibit strong site fidelity to summer roosting and foraging areas, returning to the same area year-after-year.

Reproductive phenology is likely dependent upon seasonal temperatures and the thermal character of the roost (Humphrey et al., 1977). Like many other bats, Indiana bats are thermal conformists (Henshaw, 1965), with prenatal, neonatal, and juvenile development heavily temperature dependent (Racey, 1982). Cooler summer temperatures associated with latitude or altitude likely affect reproductive success and therefore the summer distribution of the species (Brack et al., 2002).

Females are pregnant when they arrive at maternity roosts. Fecundity of the species is low with females producing only one young per year. Parturition typically occurs between late June and early July. Lactating females have been caught from 11 June to 29 July in Indiana, from 26 June to 22 July in Iowa, and between 11 June and 6 July in Missouri (Brack, 1983; Clark et al., 1987; Humphrey et al., 1977; LaVal and LaVal, 1980). Juveniles become volant between early July and early August.

Indiana bats may travel several miles to forage. Instances where individuals from maternity colonies traveled 2.5 miles in Illinois (Gardner et al., 1991), and summer males traveling 3.1 miles in Missouri (LaVal and LaVal, 1980) have been documented. Brack (1983) observed foraging light-tagged bats within 2 miles of caves used during the autumn swarming period.

Indiana bats forage in upland and floodplain forest (Brack, 1983; Humphrey et al., 1977; LaVal et al., 1977; LaVal and LaVal, 1980; Gardner et al., 1991). Foraging activity is concentrated around the foliage of tree crowns, and although the bats may forage in other areas, it is quantitatively and qualitatively less important (Brack, 1983). Indiana bats often use stream corridors and other linear woodland openings as flight corridors from roosts to foraging areas.

Brack and LaVal (1985) referred to the Indiana bat as a selective opportunist that often eats similar types of prey when readily available. However, components of the diet do vary by habitat, geographic location, season, and sex or age of the bat (Kurta and Whitaker, 1998; Brack and LaVal, 1985; Brack, 1983; Belwood, 1979). In Missouri, Brack and LaVal (1985) noted that terrestrial-based insects, e.g., moths (Order Lepidoptera) and beetles (Coleoptera), were most often eaten, logically as a result of treetop foraging. The proportion of aquatic insects eaten [e.g., flies (Diptera), caddisflies (Trichoptera), and stoneflies (Plecoptera)] was small and influenced by the lunar cycle.

Indiana bats begin to arrive at hibernacula in late August (Figure 3) and engage in a behavior referred to as swarming (Cope and Humphrey, 1977). Early during autumn swarming, bats visit hibernacula at night but may day-roost in woodlands. As the season progresses, more bats roost in hibernacula caves. Males become active first in mid-August. Females begin arriving in late August. By September, numbers of swarming females peak, although the male may be more common since males frequent the swarming site more than females. By late September, many females are hibernating; males remain active until mid-October or later, apparently in an effort to breed late-arriving females. Swarming chronology likely is influenced by temperature and precipitation.

Swarming is an important part of the Indiana bat's life cycle and is when most copulation occurs (Hall, 1962). However, Richter et al. (1993) postulated that males lacking sufficient fat to survive winter hibernation may remain active, seeking opportunities to mate well into the winter in a final effort to reproduce before they die. Females store sperm through winter hibernation, and fertilization is delayed until spring (Wimsatt, 1944). It is not known whether juvenile females mate their first autumn. Limited mating may occur in spring (Hall, 1962).



## 4.0 Methods

### 4.1 Site Selection

Survey sites were selected to provide broad coverage of the project area, focusing on areas that provided larger trees and riparian corridors suitable for travel and forage. Sites were selected using topographic maps, aerial photographs, and reconnaissance survey information on potential Indiana bat habitat collected by CH2MHill biologists. Sites were also interspersed with 10 sites previously netted (ESI-Schwierjohann and Brack, 2003).

### 4.2 Mist Netting

Efforts to survey for endangered bats are difficult to standardize because of the large amount of variability that exists in a field situation. However, a number of practices used for summer surveys for Indiana bats have provided structure for implementation of netting guidelines provided by the U.S. Fish and Wildlife Service (1999) in the most recent (Agency Draft) revision of the Indiana Bat Recovery Plan. Those guidelines (Table 1) were employed at the 11 net sites surveyed.

Eleven mist net sites were selected and operated for two nights each from 26 July to 6 August 2003. Each site consisted of two net sets run for two nights, for a total of four net nights per site. Net placement was based upon canopy cover, presence of a flight corridor, water, and conditions near the site. Nets were set to maximize coverage of flight paths used by Indiana bats along suitable corridors. Site selection was based upon an expectation of greatest bat activity and an effort to provide survey coverage of the permit area. Nets are often placed over streams, which are used as travel corridors and sometimes for foraging. In upland areas, road ruts or other areas of standing water frequently produce high capture rates. The location and specific orientation of each net was determined in the field.

Mist net sites were also selected based upon habitat characterizations described for the Indiana bat in current literature and experience of ESI personnel capturing this species. Habitat with the following characteristics were selected to the degree they were available:

- Large trees (>16 inches dbh) for maternity roosts
- An open canopy, apparently important for warming roost sites
- An open, uncluttered understory, used for travel and forage



To insure compliance with weather conditions outlined in the Table 1, temperature, percent cloud cover, wind, and rainfall were monitored and recorded hourly while mist netting.

Table 1. Netting guidelines.

<ol style="list-style-type: none"><li>1. Netting Season: 15 May to 15 August, when Indiana bats occupy summer habitat.</li><li>2. Equipment (Mist Nets): constructed of the finest, lowest visibility mesh commercially available – monofilament or black nylon – with the mesh size approximately 1½ inch (1¼ – 1¾) (38 mm).</li><li>3. Net Placement: mist nets extend approximately from water or ground level to tree canopy and are bounded by foliage on the sides. Net width and height are adjusted for the fullest coverage of the flight corridor at each site. A “typical” net set consists of three (or more) nets “stacked” on top of one another; width may vary up to 60 feet (20 m).</li><li>4. Net Site Spacing:<ul style="list-style-type: none"><li>◆ Streams – one net site per 0.5 mile (1 km)</li><li>◆ Land Tracts – two net sites per 250 acres (1 square km)</li></ul></li><li>5. Minimum Level of Effort Per Net Site:<ul style="list-style-type: none"><li>◆ Two net locations (sets) per net site, with locations (sets) at least 100 feet (30 m) apart</li><li>◆ Two (calendar) nights of netting</li><li>◆ At least three net-nights (1 net-night = 1 net set deployed for 1 night); typically, two net sets are deployed at one site for two nights, resulting in four net-nights</li><li>◆ Sample Period: begin at dusk and net for 5 hours (approximately 0200h)</li><li>◆ Nets are monitored at approximately 20-minute intervals</li><li>◆ No disturbances near the nets between checks</li></ul></li><li>6. Weather Conditions: net only if the following weather conditions are met:<ul style="list-style-type: none"><li>◆ No precipitation</li><li>◆ Temperature <math>\geq 10^{\circ}\text{C}</math> (50°F)</li><li>◆ No strong winds</li></ul></li><li>7. Moonlight: avoid net sets with direct exposure to a moon ½ -full or greater – typically by utilizing forest canopy cover</li></ol>
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Source: U.S. Fish and Wildlife Service, 1999

### 4.3 Bat Capture

The netting setup allows bats to be caught live and released unharmed near the point of capture. Bats were identified to species using a combination of morphological characteristics (e.g., ear and tragus, calcar, pelage, size/weight, length of right forearm, and overall appearance of the animal). The species, sex, reproductive condition, age, weight, length of right forearm, and time and location/net site of



capture were recorded for all bats captured. Age (adult or juvenile) of bats is determined by examining ephiphyseal-diaphyseal fusion (calcification) of long bones in the wing. Weight was measured to 0.1 grams using a Pesola spring scale. Length of the right forearm of each bat was measured to the nearest 1.0 mm using either dial calipers or metric ruler. The reproductive condition of captured bats was classified as non-descended male, descended male, non-reproductive female, pregnant female (based on gentle abdominal palpation), lactating female, or post-lactating female.

Bats were not banded. Bat processing and data collection was typically completed within 30 minutes of the time the bat was removed from the net. Data, recorded in the field are provided in Appendix A.

#### **4.4 Habitat Characterization of Net Sites**

Habitat assessment at net sites focused on features indicative of suitability for Indiana bats. A habitat description of each net location was completed (Appendix A). The emphasis of this description was habitat form: size and relative abundance of large trees and snags that potentially serve as roost trees, canopy closure, understory clutter/openness, distance to water, stream or pond characteristics (if a net was placed over them), and flight corridors. Habitat form was emphasized because the Indiana bat roosts in many species of trees. Tree species composition was included because it provides insight to edaphic conditions of each site.

Habitat characterization identifies components of canopy and subcanopy layers. Trees that reach into the canopy are canopy trees, regardless of their diameter/size. As defined in the Indiana Bat Habitat Suitability Index Model (3D/Environmental 1995), dominant trees are the large trees in the canopy (>16" dbh) that have the greatest likelihood of being used by maternity colonies of Indiana bats. Many smaller trees are often also found in the canopy, and in some situations, the canopy can be entirely composed of small-diameter trees. ESI's habitat characterization identifies dominant and subdominant elements of the canopy.

The subcanopy vegetation layer is well defined in classical ecological literature. It is that portion of the forest structure between the ground vegetation (to approximately 2 feet (0.6 m) and the canopy layers, usually beginning at about 25 feet (7.6 m).

Vegetation in the understory may come from:

- Lower branches of overstory trees
- Young overstory trees
- Small trees and shrubs that are confined to the understory

The amount of vegetation in the understory is termed clutter. Many species of bats, including the Indiana bat, tend to avoid areas of high clutter.

Other site-specific parameters pertinent to assessing the quality of the habitat were also recorded such as distance to water, stream habitat (if present), standing water in an upland site, and travel corridors – or lack thereof.

Each net site was documented with a sketch.

#### **4.5 Investigations at a Cave in the Project Area**

During summer netting surveys, people living in the project area directed us to a cave that was in the project vicinity. This “bat cave” as it was known by local people, was located at 38°45’51.4” north latitude and 82°52’40.3” west longitude in a bluff of a railroad cut (Figure 4). Because the entrance to the cave was on the bluff face, it could not be readily trapped or netted so vertical caving equipment was used to enter the cave. On 27 September 2003, the cave was surveyed to determine if bats were currently or could potentially use the cave, e.g., the presence of bats, droppings, air movement, obstructions that might hinder use by bats, or indications that bats had not used the cave such as undisturbed spider webs.

#### **4.6 Statistical Analysis of Capture Data**

The species diversity in the project area was examined with the species diversity index (SDI) =  $1/\sum P_i^2$ , where  $P_i$  is the proportion of bats belonging to species  $i$ , (MacArthur, 1972). This index has an advantage over other commonly used indices in that it provides an estimate of the number of equally represented species in the catch. Chi-square analysis was used to compare the catch of males and females.



## 5.0 Results

### 5.1 Weather and Temperature

In general, precipitation, humidity, and cloud cover were higher than normal for the Portsmouth area during the survey period (Weather Underground, 2003), as they were for most of the 2003 netting season.

Start/End Dates (2003)	High Temp. °F	Low Temp. °F
26 July	80	67
6 Aug	76	63

Nevertheless, weather parameters were within netting guidelines. Days were sometimes overcast, humid, and rainy. Rain sometimes occurred in late afternoon, prior to netting. Evening skies sometimes were overcast and fog occurred upon occasion. Nighttime lows ranged from 62 to 73°F, and high temperatures ranged from 68 to 84°F during the project period. The spread of temperatures between high and low ranged from 2 to 13 degrees. Appendix A contains completed Weather Data Sheets.

### 5.2 Mist Netting and Site Selection

Eleven net sites were surveyed for a total of 44 net nights. Survey sites were selected to provide broad coverage of the project area, focusing on areas that provided larger trees and riparian corridors suitable for travel and forage. Sites were selected using topographic maps, aerial photographs, and on-site reconnaissance survey, and were interspersed with 10 sites previously netted (ESI-Schwierjohann and Brack, 2003). Sites were numbered beginning at 11 (Figure 4).

### 5.3 Bat Captures

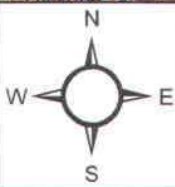
No endangered bats were captured.

A total of 30 bats of four species were captured at 11 net sites (Table 2). Most reproductive adult females had completed lactation, and capture of juveniles indicated that young of the year were volant. The big brown bat (*Eptesicus fuscus*) was the most frequently captured species, followed by the red bat (*Lasiurus borealis*), eastern pipistrelle (*Pipistrellus subflavus*), and little brown bat (*Myotis lucifugus*). Species diversity was relatively low with a Diversity Index value of 3.5. Nine reproductive females (all species combined) were captured versus six adult males, which is not significantly different than random ( $\bar{x} = 0.6000$ ;  $P = 0.4386$ ).





Figure 4. Summer 2003 Indiana bat survey sites for Portsmouth bypass project, Scioto County, Ohio.



- ◆ Survey Site Location
- ▲ Cave Location
- ▭ Valley Alternative
- ▭ Hill Alternative

Project No. 096  
Task 04

Base Map: USGS 30 x 60 Minute Series (1:100,000)  
Topographic Map - Ironton, OH-KY-WV (enlarged)

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Table 2. Bat captures from 26 July to 6 August 2003 for the Portsmouth bypass project, Scioto County, Ohio (sites 11 – 21).

Species	Male	Female				Escape <sup>5</sup>	Total
		L <sup>1</sup>	PL <sup>2</sup>	NR <sup>3</sup>	Juv. <sup>4</sup>		
<i>Eptesicus fuscus</i>	5		6	2	2	1	16
<i>Pipistrellus subflavus</i>		1			2		3
<i>Myotis lucifugus</i>	1		1	1			3
<i>Lasiurus borealis</i>			1	2	4	1	8
<b>Total</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>8</b>	<b>2</b>	<b>30</b>

<sup>1</sup>L=lactating; <sup>2</sup>PL=Post lactating; <sup>3</sup>NR=non-reproductive; <sup>4</sup>Juv = Juvenile; <sup>5</sup>Escape=escaped from net before processing was completed

Two bats escaped before sex and morphometric data were collected, although they were identified to species.

#### 5.4 Habitat Assessment

Approximately half of the project area is forested. The remaining area is heavily affected by suburban development and agricultural operations. Net sites were over travel corridors formed by stream or other linear openings such as roadways. Net sites were typically near developed areas and/or agricultural operations. Overall, net sites were classified as having open to moderately closed canopies, moderately closed understories, and a relatively low abundance of large trees. Based on these net site characteristics, the habitat is viewed as being poor to moderate with low roost site potential. Appendix A contains completed Net Site Habitat Description Data Sheets.

#### 5.5 Cave Habitat

The cave consisted of two side-by-side openings. Facing into the cave, the opening on the left was about 4 feet in diameter and unobstructed by vegetation. This passage narrowed quickly and ended within approximately 30 feet. No air was moving into or out of the passage. No bats were found in the passage. Several (<10), relatively fresh, feces were found scattered within the entrance. These were probably from one or a couple bats that had recently night-roosted within the entrance.

The second (right) entrance was similar in size. No bats or feces were found, and no air movement was detected. The total length was two to three times that of the left side, and included two vertical drops of 6 to 10 feet each. Most of the passage was extremely narrow, barely allowing passage of surveyors. The passage was explored until the end could be seen.



## 6.0 Discussion and Conclusions

Netting efforts provided no evidence that endangered Indiana bats use the project area during summer months. The species complement, diversity, and number of bats captured in the project area was less than in earlier studies (ESI-Schwierjohann and Brack, 2003), but was nevertheless relatively typical for the geographic location and type of habitat. The disparity between the relative bat capture success of the two study periods may be explained by the fact that the "choicest" habitat was surveyed during the first set of netting. All species caught were also caught during earlier sampling. Perhaps the most surprising absence is the northern bat (*M. septentrionalis*), which was relatively common in the earlier sample and is typically a common bat in many woodland habitats. The little brown bat (*M. lucifugus*) does form maternity colonies in trees and sometimes uses habitat similar to that of the Indiana bat, although this species often roosts in man-made structures and sometimes shows a propensity to foraging near or otherwise using streams and other bodies of water. One species, the silver-haired bat (*Lasionycteris noctivagans*) is a migrant that would not be present during the time sampling was completed.

No bats were found in the cave, although evidence of meager night roosting use was found. The cave does not possess the physical characteristics typical of hibernacula used by populations of bats. The length and volume are generally unsuited for producing an environment suitable for hibernation. One or a couple big brown or eastern pipistrelle bats may occasionally use the cave during hibernation. Studies suggest that both species are very variable in the winter habitats they use, and in Indiana, Brack et al. (2003) found eastern pipistrelles in a greater diversity of cave types than any other species.

Bryan and Kiser (1996) caught 11 bats of three species over three nights of netting north of the Portsmouth bypass project site in Pike County. All three species (big brown bat, eastern red bat, and eastern pipistrelle) were also caught during the current project and all are commonly found in a variety of habitats, including open/edge and developed areas. They do not form maternity colonies in large trees, as does the Indiana bat (*M. sodalis*).

In contrast to the earlier study in the project area, more reproductive females were captured than males, although the difference was not significant. Nevertheless, poorer habitats sometimes produce fewer reproductive females with a higher energy and nutritional demand. A low female capture rate may indicate a poor quality of habitat.

Habitat for the Indiana bat within the project area at sites netted was of relatively low value. Ecological impacts from natural and man-made disturbances were evident throughout the project area. An ice storm during the previous season destroyed much of the forest canopy in many areas. The storm also felled many snags that could have served as potential roost sites. Due to storm damage and the early successional stage of most forested areas, understory clutter was typically high and unfavorable for bat activity.

Streams in the project area were heavily impacted by land use in surrounding areas. All showed signs of erosion and some streams had been dredged. Cattle often had access to streams, leading to high sediment loads. ATV trails along and through streams also increased sediment loads and erosion. Many streams had only narrow bands (sometimes a single row) of small- to medium-sized trees buffering them from agricultural fields and or maintained areas (e.g., roads, lawns, parking areas). Some had no buffer. cursory examination of flora and fauna of the stream ecosystem revealed apparent low diversity and density.



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## **Appendix A**

Completed project data sheets



# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 27 July 2003 Biologist: LaMountain, Jeffcott  
 State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 53' 44.1" Longitude: W 82° 58' 27.2"  
 Site Name#: 11 Waypoint Name: ODOT14  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: \_\_\_\_\_

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_  
 Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_  
 Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

### VEGETATION:

Estimated Canopy Closure:  Closed  Moderate  Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 12 dbh Sm 9 dbh

1. Acer saccharum
2. \_\_\_\_\_
3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Acer saccharum
2. \_\_\_\_\_
3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 85% vs. 15%

Description of Overstory Habitat Form:

Mixed deciduous

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Acer saccharum
  2. Oxydendrum arboreum
  3. \_\_\_\_\_

Description of Habitat Form:

Herbaceous Cover: Polygonum sp., Poison Ivy, Stinging Nettle, Bottlebrush grass, Christmas fern

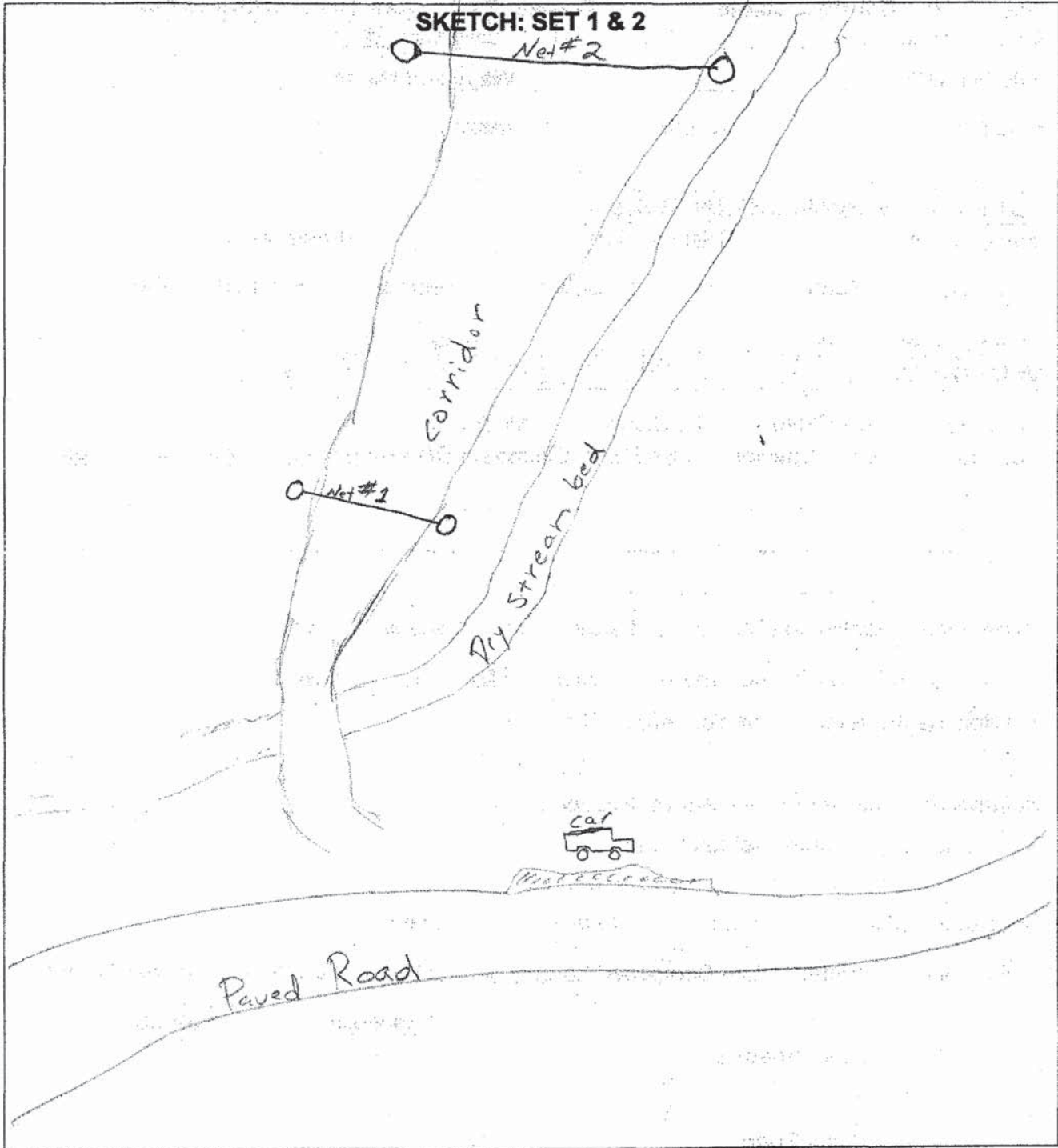




**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/ #: \_\_\_\_\_ Waypoint Name: ODOT 14



**COMMENTS**

\_\_\_\_\_

\_\_\_\_\_



# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill

Date: 02 August 2003 Biologist: Lamountain, Jeffcott

State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_

GPS: Latitude: N 38° 52' 44.0" Longitude: W 82° 50' 25.0"

Site Name/#: 12 Waypoint Name: ODOT 17

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: \_\_\_\_\_

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: 0.5m Channel Width: 18 ft Stream Width: 15 ft

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 1 ft Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 16 dbh Sm 12 dbh

1. Acer saccharum
2. Plantanus occidentalis
3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Fagus americana
2. \_\_\_\_\_
3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 90% vs 10%

Description of Overstory Habitat Form: \_\_\_\_\_

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

Dominant Understory Species: 1. Acer saccharum

2. \_\_\_\_\_
3. \_\_\_\_\_

Description of Habitat Form: \_\_\_\_\_

Herbaceous Cover: \_\_\_\_\_



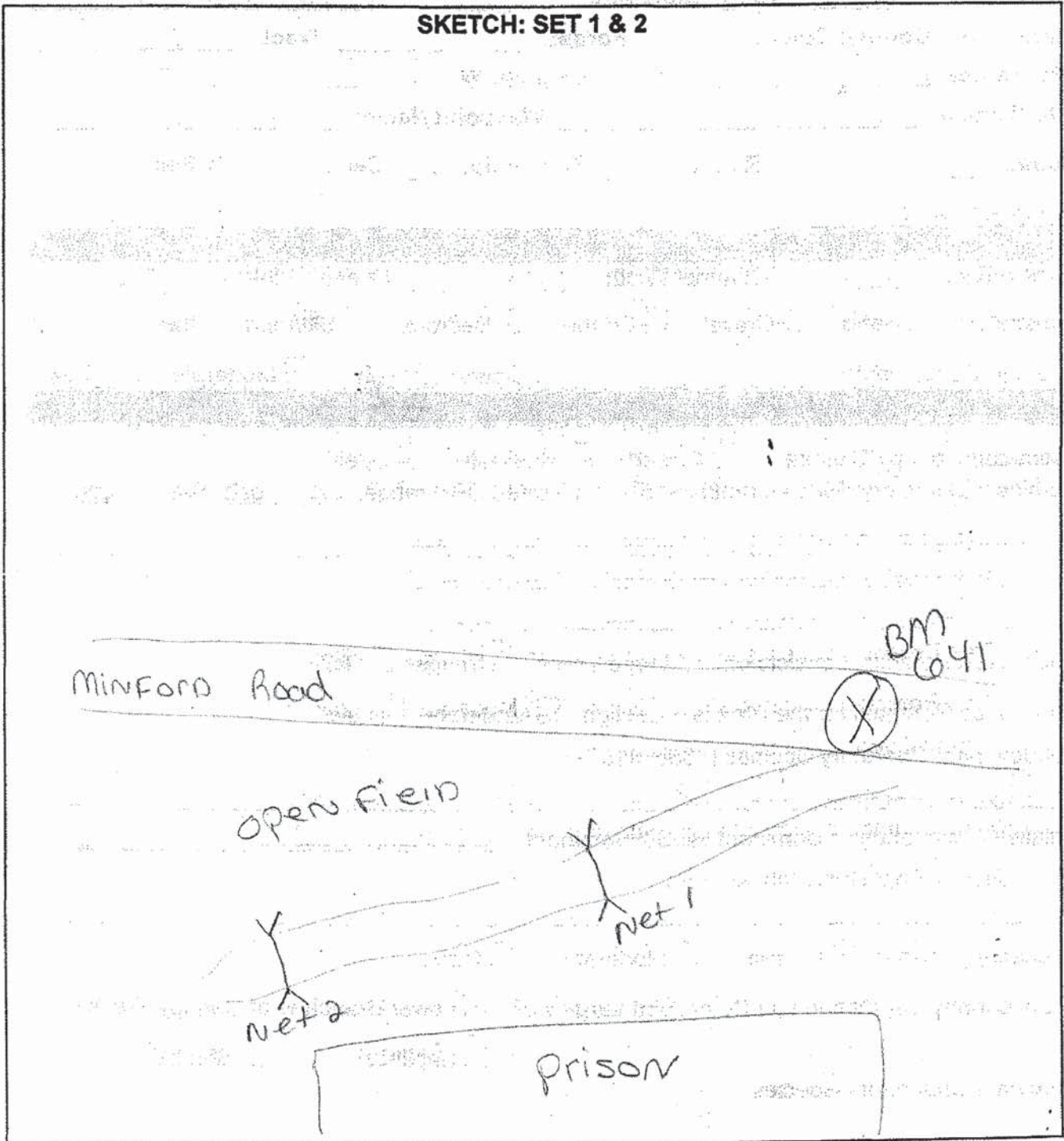


**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/#: 12 Waypoint Name: ODOT 17

**SKETCH: SET 1 & 2**



**COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 31 July 2003 Biologist: LaMountain, Jeffcott  
 State: OH County: Scioto Forest: XXXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 52' 07.4" Longitude: W 82° 57' 33.6"  
 Site Name/#: 13 Waypoint Name: ODOT 16  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water:

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: 1.5m Channel Width: 20 feet Stream Width: 2 to 20 feet  
 Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_  
 Average Water Depth: 1m Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: dbh Sm dbh

1. Platanus occidentalis
2. Betula nigra
3. Carya ovata

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Acer saccharum
2. \_\_\_\_\_
3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 85% vs 15%

Description of Overstory Habitat Form:

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Betula nigra
  2. Acer saccharum
  3. Carya ovata

Description of Habitat Form:

Herbaceous Cover: Multifloral rose, Polygonum sp., wild lettuce, Coreopsis major,  
Virginia creeper,



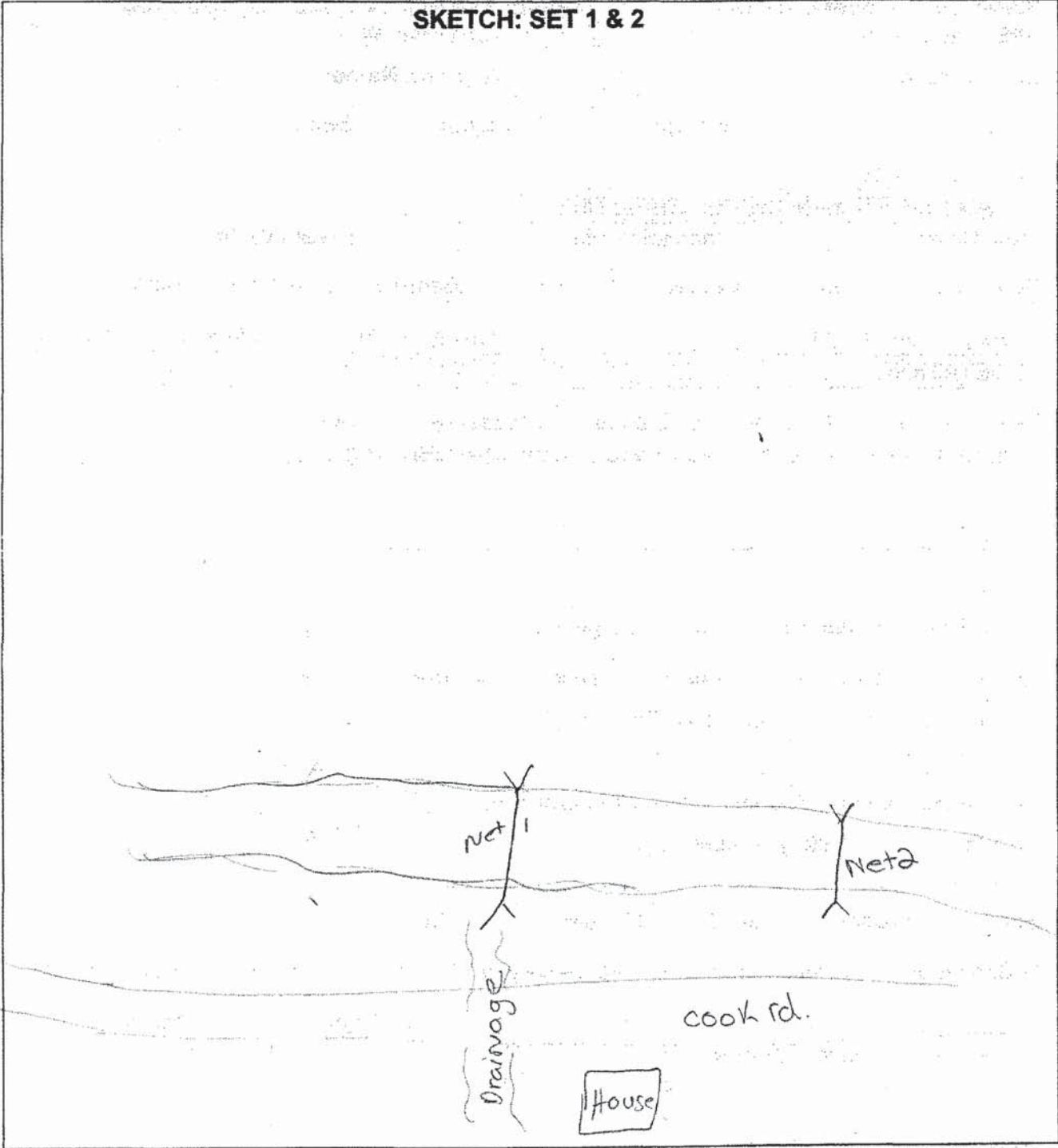


**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/#: 13 Waypoint Name: ODOT 16

**SKETCH: SET 1 & 2**



**COMMENTS**

\_\_\_\_\_



### NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096, 04 Project Name: ODOT CH2MHill  
Date: 29 July 2003 Biologist: LaMountain, Jeffcott  
State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXXXX  
GPS: Latitude: N 38° 52' 36.3" Longitude: W 82° 54' 43.4"  
Site Name/#: 14 Waypoint Name: ODOT15  
Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ ¼ Sec.: \_\_\_\_\_

Distance to water:

#### ESTIMATED STREAM CHARACTERISTICS

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_  
Substratum: Sand Gravel Cobble Bedrock Silt/mud other \_\_\_\_\_  
Average Water Depth: \_\_\_\_\_ Clarity: High Moderate Low

#### VEGETATION

Estimated Canopy Closure: Closed Moderate Open  
Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 16 dbh Sm 12 dbh

- Acer saccharum
- Acer rubrum
- \_\_\_\_\_

Roost Tree Potential consists of: Large Trees Snags Both

Roost Tree Potential for the Area is: High Moderate Low

Subdominant Overstory Species (<38cm/15"):

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 50/50

Description of Overstory Habitat Form:

Subcanopy Clutter: Closed Moderate Open

Is Subcanopy Vegetation Lay Comprised Largely of: Lower Branches of Canopy Trees?

Saplings Shrubs

- Dominant Understory Species:
- A. saccharum
  - A. rubrum
  - \_\_\_\_\_

Description of Habitat Form:

Herbaceous Cover: Christmas fern, stinging nettle, (very sparse vegetation)



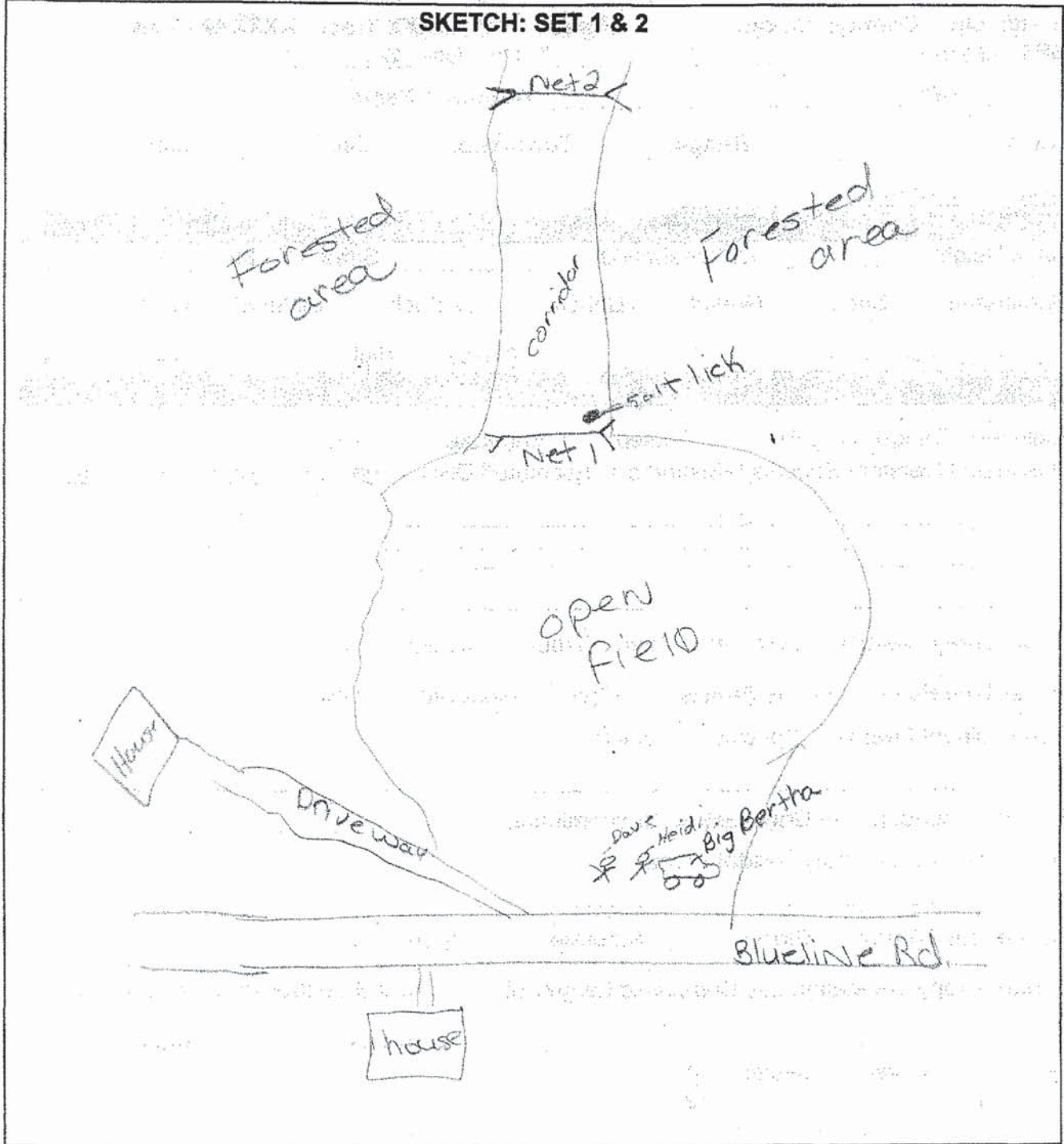


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: 14 Waypoint Name: ODOT 15

SKETCH: SET 1 & 2



### COMMENTS



## NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 04 August 2003 Biologist: H. Lammourain, D. Jeffcott  
 State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_  
 GPS: Latitude: N 38° 50' 04.8" Longitude: W 82° 52' 57.4"  
 Site Name/#: 15 Waypoint Name: ODOT 18  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water:

ESTIMATED STREAM CHARACTERISTICS  
 Bank Height: 1m Channel Width: 15ft Stream Width: 15ft

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 1m Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 15dbh Sm 10dbh

1. Acer saccharum
2. Plantanus occidentalis
3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. A. saccharum
2. P. occidentalis
3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 50/50

Description of Overstory Habitat Form:

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

Dominant Understory Species: 1. A. saccharum

2. \_\_\_\_\_
3. \_\_\_\_\_

Description of Habitat Form:

Herbaceous Cover: Poison Ivy, Clearweed, Polygonum sp, Stinging nettle  
Jewelweed, Multiflora rose.



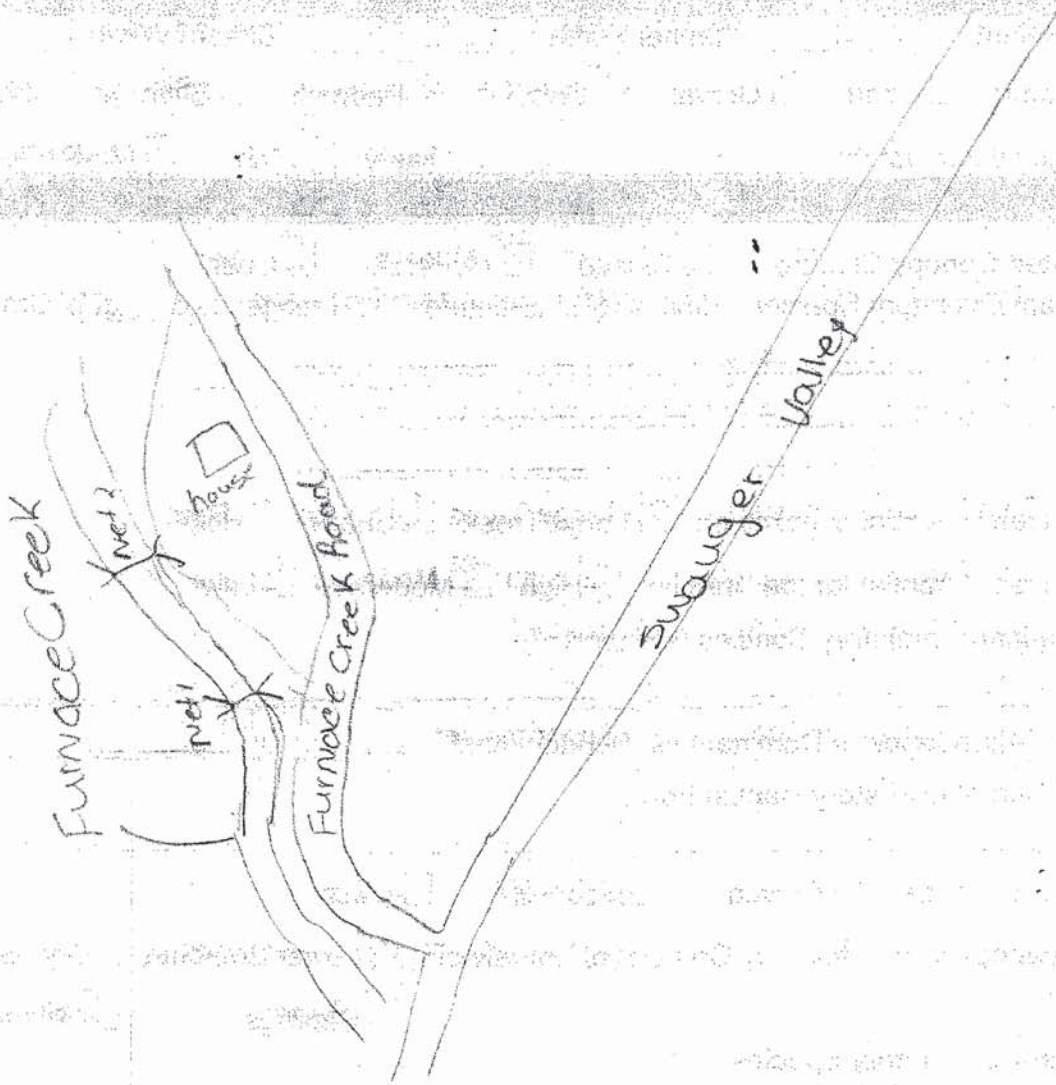


### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/ #: 15 Waypoint Name: \_\_\_\_\_

#### SKETCH: SET 1 & 2



#### COMMENTS





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 31 July 2003 Biologist: J. Schwienjohann/J. Duffley  
 State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 49' 41.2" Longitude: W 82° 50' 57.6"  
 Site Name/#: SA 16 Waypoint Name: 007/GPS#10  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: In stream / Intermittent

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: 48" Channel Width: 15' Stream Width: 2'  
 Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_  
 Average Water Depth: 2" Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate →  Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 16" dbh Sm: 20" dbh

1. Platanus occidentalis
2. Juglans nigra
3. Acer negundo

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):  
 1. Acer negundo 2. Juglans nigra 3. Acer saccharinum

Relative Abundance of Dominant vs. Subdominant: 1:1

Description of Overstory Habitat Form:  
Thin riparian, Few large trees, Canopy 75% closed over corridor,

Subcanopy Clutter:  Closed  Moderate →  Open open outside corridor

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?  
 Saplings  Shrubs

Dominant Understory Species:  
 1. Lindera benzoin  
 2. Ulmus americana  
 3.

Description of Habitat Form:  
Intermittent stream w/ thin riparian in agricultural land

Herbaceous Cover: Phlox maculata, Urtica dioica, Impatiens pallida

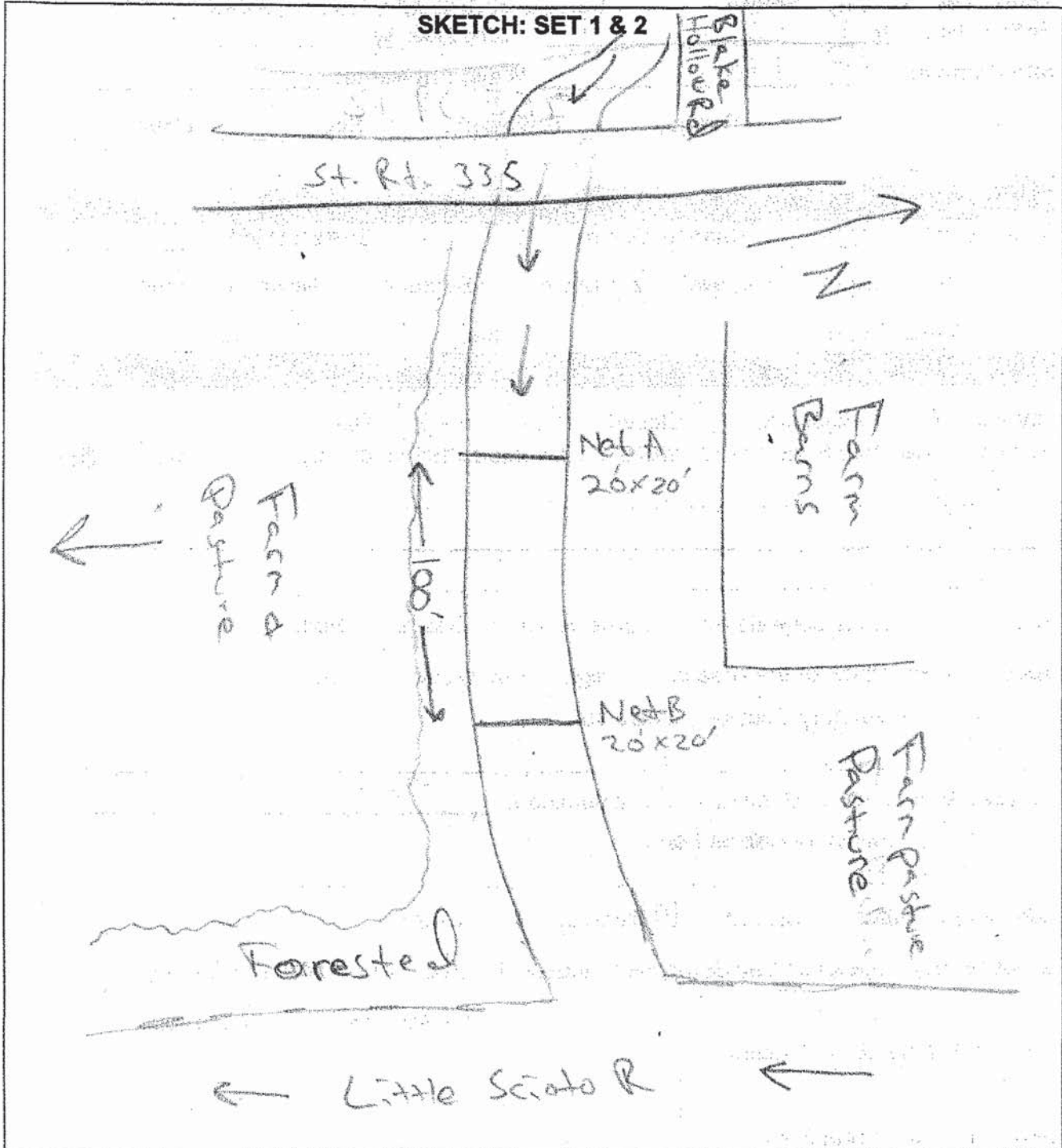




### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/#: ZA-160 Waypoint Name: \_\_\_\_\_



#### COMMENTS





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
Date: 29 July 2003 Biologist: J. Schwierjohann/J. Duffey  
State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX  
GPS: Latitude: N 38° 48' 25.9" Longitude: W 82° 50' 48.5"  
Site Name/##: TA 17 Waypoint Name: 006 GPS #10

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 300' culverted under site

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 28" dbh Sm 16" dbh

- Platanus occidentalis
- Liriodendron tulipifera
- Quercus rubra, Carya ovata (8" DBH)

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

- Ulmus americana
- Juglans nigra
- Gliditsia trinacanthos

Relative Abundance of Dominant vs. Subdominant: 1:3

Description of Overstory Habitat Form:

Older dominant trees on E corridor. W is development/pasture

Subcanopy Clutter:  Closed  Moderate  Open  
E. Corridor W. Corridor

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
- Acer rubra
  - Lindera benzoin
  - \_\_\_\_\_

Description of Habitat Form:

Dry road corridor between residential + pasture near RR

Herbaceous Cover: Urtica dioica, Impatiens pallida, Rhus radicans  
Hemerocallis fulva, Parthenocissus quinquefolia

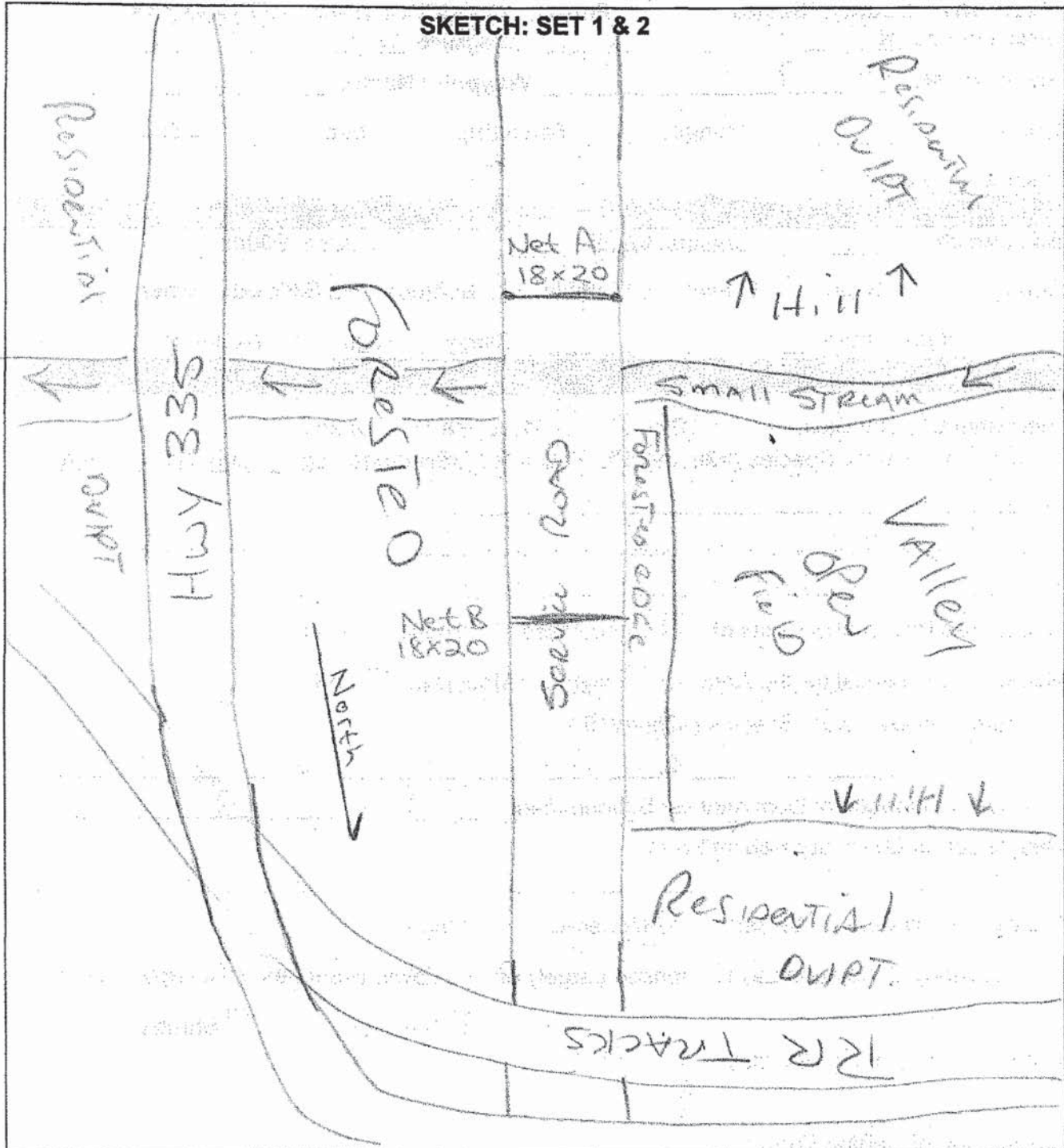




### NET SITE HABITAT DESCRIPTION (Continued)

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/ #: HA 17 Waypoint Name: \_\_\_\_\_



### COMMENTS





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
Date: 3 Aug 2003 Biologist: J. Schwierjohann/J. Duffey  
State: OH County: Scioto Forest: XXXXXXXXX Tract: XXXXXXXXXX  
GPS: Latitude: N 38° 47' 31.2" Longitude: W 82° 51' 25.0"  
Site Name/ #: 3A18 Waypoint Name: 008/GPS#10

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 150'

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg. 20" dbh Sm 15" dbh

1. Quercus alba
2. Quercus montana (Prinos)
3. Fraxinus americana

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Acer rubra
2. Juglans nigra
3. Quercus alba

Relative Abundance of Dominant vs. Subdominant: 1:5

Description of Overstory Habitat Form:

Moderate 2<sup>nd</sup> successional closed corridor adj. to pasture

Subcanopy Clutter:  Closed  Moderate  Open light tree damage creating snags

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Nyssa sylvatica
  2. Sassafras albidum
  3. Fagus grandifolia

Description of Habitat Form:

Upland hardwood edge, uniform aged,

Herbaceous Cover: Smilax spp., Rubus spp., Conococera japonica

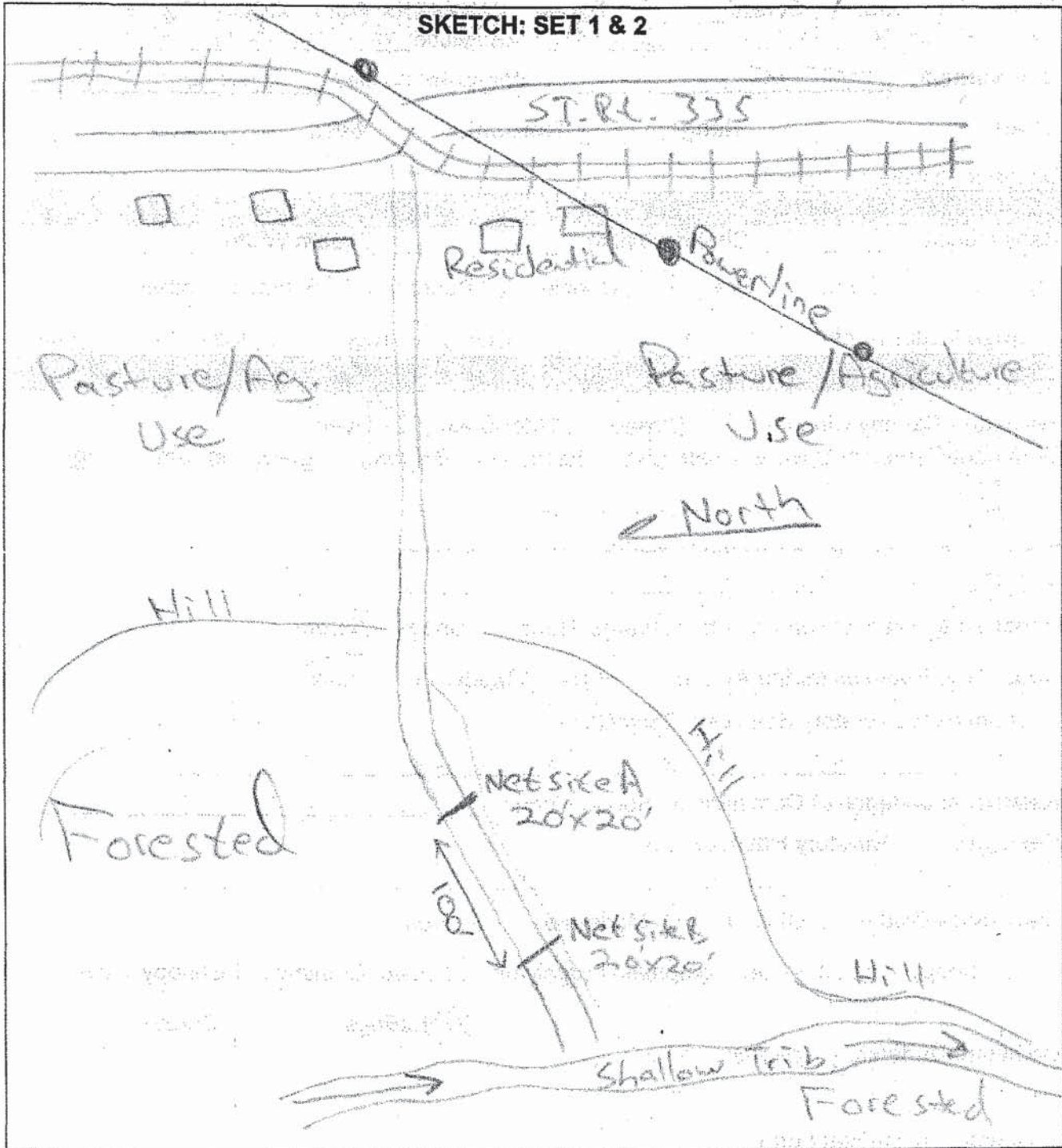




**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/ #: SA 18 Waypoint Name: 008/GPS #10



**COMMENTS**

Bat capture corridor on edge of forested upland (→ 50 acres)





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 6 Aug 2003 Biologist: J. Schwierjohann / J. Duffley  
 State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 46' 03.4" Longitude: W 82° 52' 22.4"  
 Site Name/ #: SA 19 Waypoint Name: 010 / GPS #10

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 1 mile.

**ESTIMATED STREAM CHARACTERISTICS**

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_  
 Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_  
 Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

**VEGETATION**

Estimated Canopy Closure:  Closed  Moderate  Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 16" dbh Sm 15" dbh

1. Robinia pseudoaccacia
2. \* Few dominant trees
3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"): 4. Acer saccharum 5. Fraxinus americana

1. Liquidambar styraciflua
2. Juglans nigra
3. Robinia pseudoaccacia

Relative Abundance of Dominant vs. Subdominant: 1:50

Description of Overstory Habitat Form:

Uniform aged young trees, moderately closed corridors

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Binia pseudoaccacia
  2. Rhus spp.
  3. Platanus occidentalis

Description of Habitat Form:

2° successional, Recently heavily logged open area with corridors

Herbaceous Cover: Common ragweed, Common plantain (leading to forested area)  
Milkweed, Joe-pye weed, Rosa multiflora  
Fescue

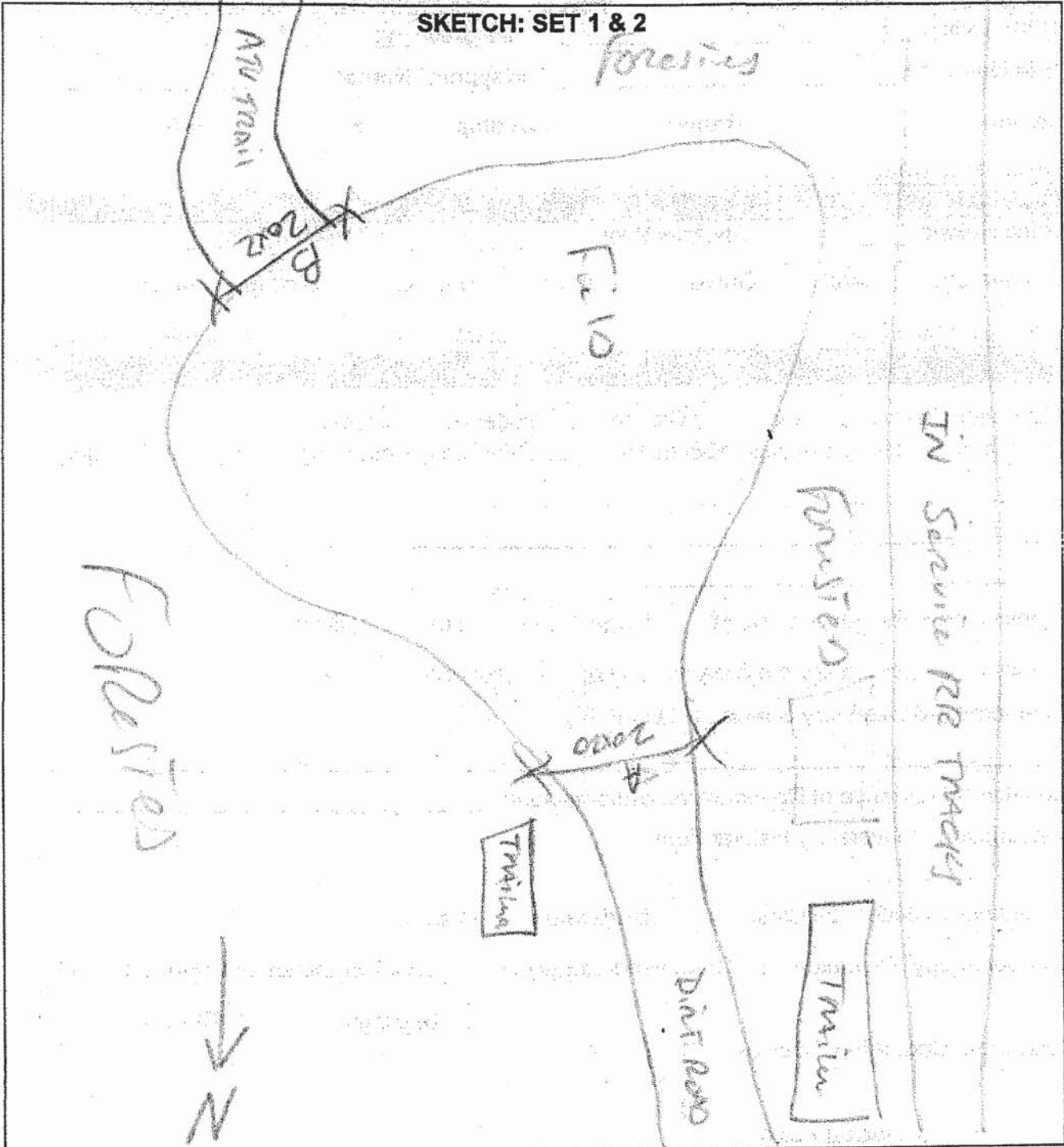




**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/#: SA 19 Waypoint Name: OLD GPS #10



**COMMENTS**



# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill

Date: 02 August 2003 Biologist: M. LaMountain, D. Jeffcott

State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_

GPS: Latitude: N 38° 45' 12.3" Longitude: W 82° 50' 56.4"

Site Name/ #: Shela Rd. #20 Waypoint Name: ODOT 19

Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: \_\_\_\_\_

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: 0.5m Channel Width: 15ft Stream Width: 15ft

Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_

Average Water Depth: 1 inch Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open

Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 36" dbh Sm 8" dbh

1. Platanus occidentalis

2. Acer saccharum

3. \_\_\_\_\_

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"): \_\_\_\_\_

1. Fagus americana 2. \_\_\_\_\_ 3. \_\_\_\_\_

Relative Abundance of Dominant vs. Subdominant: 75% vs 25%

Description of Overstory Habitat Form: \_\_\_\_\_

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

Dominant Understory Species: 1. Acer saccharum  
2. Fagus americana  
3. \_\_\_\_\_

Description of Habitat Form: \_\_\_\_\_

Herbaceous Cover: Jewelweed, Clearweed, Stinging nettle, Polygonum sp.,  
Winged Monkey flower 1 of 2



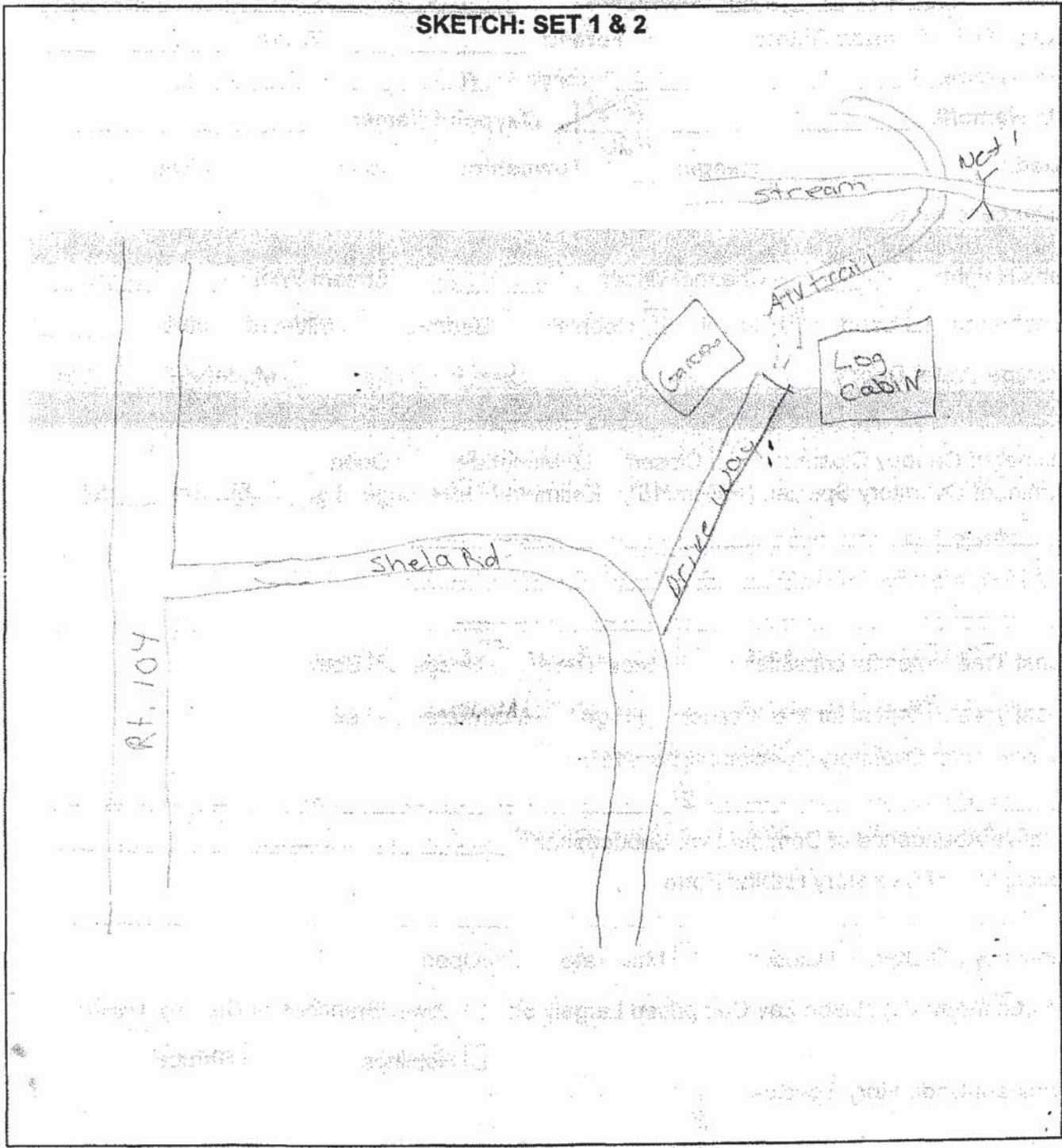


**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096

Site Name/#: Shela Rd #21 Waypoint Name: ODOT 19

**SKETCH: SET 1 & 2**



**COMMENTS**





# NET SITE HABITAT DESCRIPTION

Project No.: Pesi 096.04 Project Name: ODOT CH2MHill  
 Date: 4 AUG 2003 Biologist: Schwendhamer; Duffey  
 State: OH County: Scioto Forest: XXXXXXXX Tract: XXXXXXXXXX  
 GPS: Latitude: N 38° 45' 32.9" Longitude: W 82° 52' 49.9"  
 Site Name/#: 417 22 #21 Waypoint Name: 009 GPS #10  
 Quad.: \_\_\_\_\_ Range: \_\_\_\_\_ Township: \_\_\_\_\_ Sec.: \_\_\_\_\_ 1/4 Sec.: \_\_\_\_\_

Distance to water: 500 YRDS

### ESTIMATED STREAM CHARACTERISTICS

Bank Height: \_\_\_\_\_ Channel Width: \_\_\_\_\_ Stream Width: \_\_\_\_\_  
 Substratum:  Sand  Gravel  Cobble  Bedrock  Silt/mud other \_\_\_\_\_  
 Average Water Depth: \_\_\_\_\_ Clarity:  High  Moderate  Low

### VEGETATION

Estimated Canopy Closure:  Closed  Moderate  Open  
 Dominant Overstory Species (>38cm/15"): Estimated DBH range: Lg: 30<sup>cm</sup> dbh Sm: 15<sup>cm</sup> dbh

1. Ulmus Americanus
2. Ulmus nigra
3. Quercus rubra

Roost Tree Potential consists of:  Large Trees  Snags  Both

Roost Tree Potential for the Area is:  High  Moderate  Low

Subdominant Overstory Species (<38cm/15"):

1. Acer Rubrum
2. Ulmus Americanus
3. Robinia Pseudacacia

Relative Abundance of Dominant vs. Subdominant: 1:4

Description of Overstory Habitat Form:

Uneven, somewhat cluttered, no real gaps

Subcanopy Clutter:  Closed  Moderate  Open

Is Subcanopy Vegetation Lay Comprised Largely of:  Lower Branches of Canopy Trees?

Saplings  Shrubs

- Dominant Understory Species:
1. Liriodendron Tozoid
  2. Acer Rubrum
  3. Ulmus Americanus

Description of Habitat Form:

Herbaceous Cover:



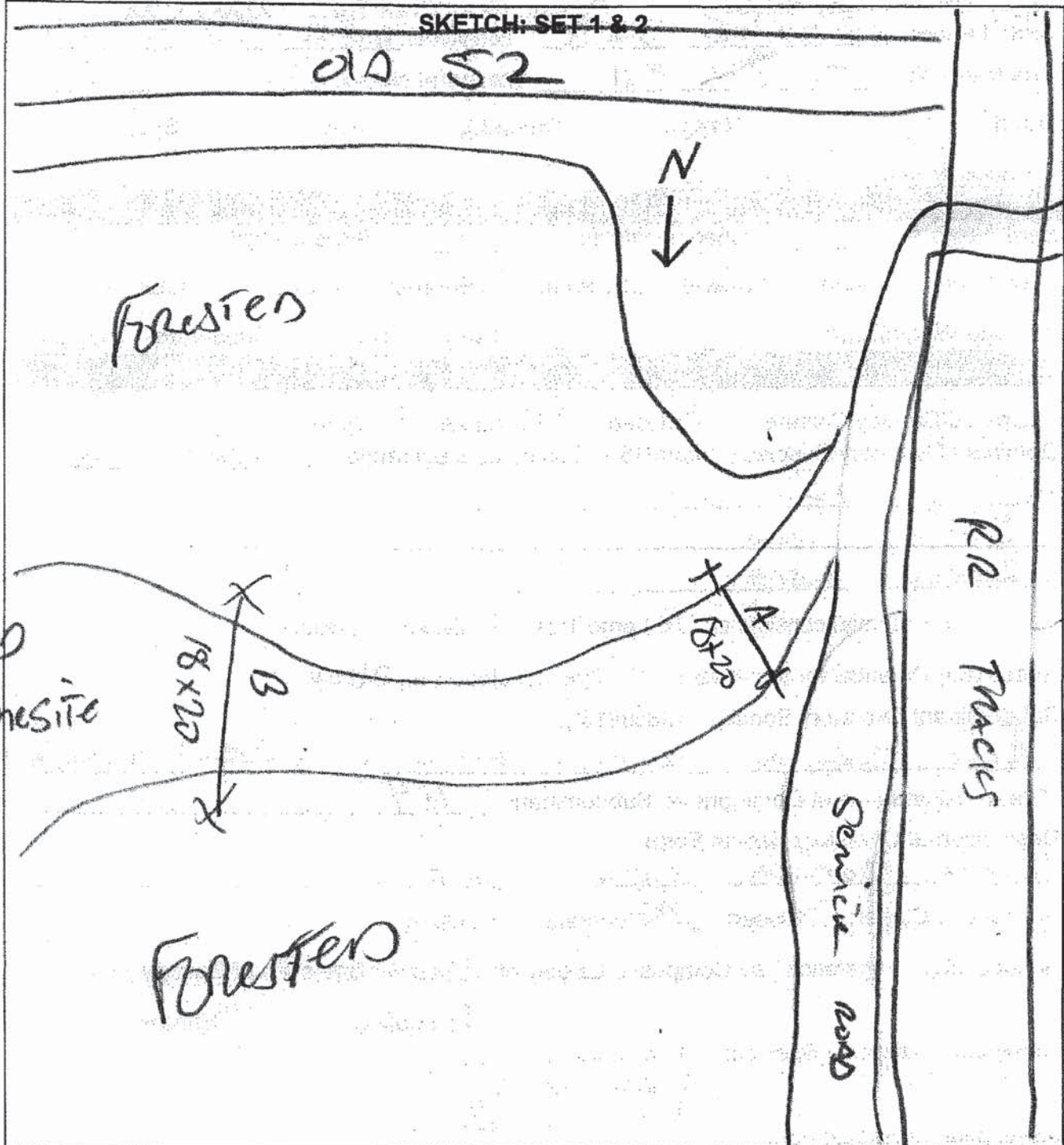


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**NET SITE HABITAT DESCRIPTION (Continued)**

State: OH County: Scioto Project Name and #: ODOT CH2Mhill/ Pesi 096.04

Site Name/ #: 4A 20 Waypoint Name: 009 / GPS #10



**COMMENTS**

































# WEATHER DATA SHEET

Project No.: Pesi 096.01 Project Name: ODOT CH2MHill  
 Date: 02 August 2003 Biologist: Lamountain, Jeffcott  
 State: OH County: Scioto Forest: \_\_\_\_\_ Tract: \_\_\_\_\_  
 GPS: Latitude: N 38° 52' 44.0" Longitude: W 82° 58' 25.0"  
 Site Name/#: 12 Waypoint Name: ODOT 17  
 Comments: \_\_\_\_\_

**WIND SPEED (Circles)**

Time (2400 h)	Temp (°C/F)	Wind Speed (estimated— see chart)	Wind Direction:		% Cloud Cover (estimated)	Comments
			From	to		
20:40	78°F	0	—	—	100%	
21:40	74°F	0	—	—	100%	
22:40	72°F	0	—	—	100%	
23:40	72°F	0	—	—	100%	light rain lasted for a few minutes
24:40	72°F	0	—	—	100%	
01:40	72°F	0	—	—	100%	

-lightning  
-some  
thunder

























































































# BAT CAPTURE DATA

Project No.: Pesj 096.04 Project Name: ODOT CH2MHill Page 1 of 1

Date: 3 Aug 2003 Biologists: J. Schwiegershan/J. Duffay Camera # 4

State: OH County: Scioto Forest: XXXXXXXXXX Tract: XXXXXXXXXX Site Name #: SA 18

GPS: Latitude: N 38° 42' 31.2" Longitude: W 82° 51' 25.0" Waypoint Name: ODS/GPS#10

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
1	A	Mono / Old Nylon / <u>New Nylon</u>	<u>20'</u>	<u>20'</u>	<u>2030</u>	<u>0130</u>
2	B	Mono / Old Nylon / <u>New Nylon</u>	<u>20'</u>	<u>20'</u>	<u>2030</u>	<u>0130</u>
3		Mono / Old Nylon / <u>New Nylon</u>				

Site Description/Comments:

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L /PL; M=↑/↓)	Wt (g)	RFA (mm)	Belly: F, M, E	Net #	Location in net
<u>No Bats Captured</u>										

ESI 096.04 CH2MHill













# BAT CAPTURE DATA

Project No.: Pesl 096.04      Project Name: ODOT CH2MHill      Page 1 of 1

Date: 6 Aug 2003      Biologists: J. Schwierjohn / J. Duffey      Camera # 4

State: OH      County: Scioto      Forest: XXXXXXXXXX Tract: XXXXXXXX      Site Name#: SA 19

GPS: Latitude: N 38° 46' 03.4"      Longitude: W 82° 53' 22.4"      Waypoint Name: 010/GPSA10

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
1	A	Mono / Old Nylon / New Nylon	20'	20'	2020	0130
2	B	Mono / Old Nylon / New Nylon	20'	20'	2020	0130

Site Description/Comments: Fitzgerald Property near opening by house

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L/PL; M=1/↓)	Wt (g)	RFA (mm)	Belly: F, M, E	Net #	Location in net
1	<i>Eptesicus fuscus</i>	2150	Ad	M	↑	20	48.7	F	A	Top Right
2	<i>Lasivus borealis</i>	2355	Ad	F	NR	11	39.2	M	A	Top Right

2003 08 06 15:22:24

















# BAT CAPTURE DATA

Project No.: Pesl 096.04      Project Name: ODOT CH2MHill      Page 1 of 1

Date: 4 Aug 2003      Biologists: J. Schwiegershans / J. Duffey      Camera # 4

State: OH      County: Scioto      Forest: XXXXXXXXXX Tract: XXXXXXXXXX      Site Name#: 4A 20

GPS: Latitude: N 38° 45' 32.3"      Longitude: W 82° 52' 49.9"      Waypoint Name: 009 / GPS#10

Trap #	Net #	Net type	Length	Height	Time Up	Time Down
1	A	Mono / Old Nylon / <u>New Nylon</u>	<u>20'</u>	<u>20'</u>	<u>2030</u>	<u>0136</u>
2	B	Mono / Old Nylon / <u>New Nylon</u>	<u>20'</u>	<u>20'</u>	<u>2030</u>	<u>0150</u>
3		Mono / Old Nylon / New Nylon				

Site Description/Comments: Forested corridor adj. to RR tracks. South side  
NORMA

Capt #	Species	Time (2400)	Age Ad or Jv	Sex M or F	Reprod F=(NR/PG/L /PL; M=↑/↓)	Wt (g)	RFA (mm)	Belly: F, M, E	Net #	Location in net
1	<u>Eptesicus Sausus</u>	<u>2130</u>	<u>JV</u>	<u>M</u>	<u>A</u>	<u>15.5</u>	<u>47.7</u>	<u>E</u>	<u>A</u>	<u>Top Center</u>
	<u>Glaucomys Volans</u>	<u>2155</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>A</u>	<u>TOP LEFT</u>

BY: WILSON, J. DUFFEY































# Indiana Bat Mist-net Survey

Approximately 26.28 Kilometers  
Ohio Department of Transportation Portsmouth Bypass  
(SCI-823-0.00/6.81, PID 19415)  
Scioto County, Ohio  
ES Project # 637-3880

Prepared for:

**ASC Group, Inc.**  
800 Freeway Drive North, Suite 101  
Columbus, Ohio 43229  
Work: (614) 643-3205

Prepared by:



EnviroScience, Inc., 3781 Darrow Road, Stow, Ohio 44224  
(800) 940-4025 [enviroscienceinc.com](http://enviroscienceinc.com)

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Revised-24 October 2011



### **STATEMENT OF CERTIFICATION**

*The analyses, opinions and conclusions in this report are based entirely on EnviroScience's unbiased, professional judgment. EnviroScience's compensation is not in any way contingent on any action or event resulting from this study. Neither EnviroScience nor any EnviroScience employee has any vested interest in the property examined in this study.*

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Figure 2. Ohio Biodiversity Database Indiana Bat Records Map.

Figure 3. Net Site Locations within the Portsmouth Bypass Corridor.

### Appendix B: Reference Bat Species Photographs

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## 1.0 INTRODUCTION

ASC Group contacted EnviroScience Inc. to assist with issues pertaining to the potential to adversely affect an endangered species in the course of construction of the proposed Ohio Department of Transportation (ODOT) Portsmouth Bypass Corridor (SCI-823-0.00/6.81, PID 19415) project.

The purpose of the project is to connect Ohio State Route 23 directly to Ohio State Route 52 and avoid the downtown portion of the City of Portsmouth. Involved in the construction of the bypass is the clearing of forested areas that the U.S. Fish and Wildlife Service (USFWS) has identified as potential summer roosting and foraging habitat for the Federally Endangered Indiana bat (*Myotis sodalis*). An Indiana bat mist-net survey was conducted in July and August of 2011 in accordance with the protocols and requirements of the USFWS for Indiana Bat presence/ probable absence surveys. A description of the project site, a description of the species of concern, the survey methods used, the results found, and a brief discussion of the survey follow, as well as mapping of the site and net site photographs.

## 2.0 SITE DESCRIPTION

The Portsmouth Bypass corridor is located in Scioto County and is approximately 16.33 miles (26.28 kilometers) in length. The corridor begins just north of Lucasville and spans east to Minford, then south to Wheelersburg (see Figure 1; Appendix A).

The corridor is currently composed of residential, agricultural, and undeveloped land uses, with undeveloped forested land being the most prevalent. EnviroScience analysis of current aerial mapping, along with field verification, showed that approximately 11.58 miles (18.64 km) of the corridor is forested (see Figure 3; Appendix A).

Vegetative communities found within the corridor vary from areas of open field and agriculture to second-growth and mature forest. Areas that are of concern for potential habitat for the Indiana bat consist of successional, second growth, and mature forest. The forested areas on the corridor were composed of mainly deciduous hardwood species including *Acer negundo* (boxelder), *Acer saccharum* (sugar maple), *Acer saccharinum* (silver maple), *Acer rubrum* (red maple), *Platanus occidentalis* (sycamore), *Quercus alba* (white oak), *Prunus serotina* (black cherry), *Ulmus americana* (American elm), *Carya ovata* (shagbark hickory), *Juglans nigra* (black walnut), *Fraxinus americana* (white ash), *Fraxinus pennsylvanica* (green ash), *Liriodendron tulipifera* (tulip tree), and *Robinia pseudoacacia* (black locust).

Topography within the corridor varies from rolling hilltops to stream valley bottoms and elevations range from approximately 1000 AMSL to 500 AMSL. The majority of the corridor is in the Little Scioto-Tygart Watershed (HUC # 05090103), but the far western portion near Lucasville is in the Lower Scioto Watershed (HUC # 05060002). The entire site is in the Allegheny Plateau Physiographic region and the Western Allegheny Plateau Ecoregion.

ODOT requested a review of the ODNR Ohio Biodiversity Database records in order to assess the existence of known or suspected habitat for the Indiana Bat on the site. The ODNR places the corridor within 10 miles of a known or suspected hibernacula (see attached Figure 2; Appendix A). The proposed corridor does not fall within 5 miles of any summer capture records of the Indiana bat.

No caves, mine portals, or other features that could be acting as potential Indiana Bat hibernacula were found within the corridor.

### 3.0 SPECIES DESCRIPTION

The Indiana Bat is in the genus *Myotis*. Within the range of the Indiana bat (Appendix B: Photos 1-3) two similar appearing bats from this genus are encountered, the Little Brown Bat (*Myotis lucifugus*; Appendix B: Photo 4) and the Northern Long-eared bat (*Myotis septentrionalis*; Appendix B: Photo 5). Size, length, and habitat requirements are similar for these three species. Each of these three species could be encountered foraging in habitats like those found on the Portsmouth Bypass corridor and each could be encountered roosting under exfoliating bark or in tree crevices in such areas. At this time accurate identification between these species can only reliably be made by capturing and direct examination of these bats. For this reason, the USFWS requests mist-net surveys on tree-clearing areas to assure that the Indiana Bat is not present.

The Indiana bat is distinguishable from the other local members of its genus, in that the Northern Long-eared bat has a longer and more pointed tragus in its ear pinna (Appendix B: Photo 5) than the Indiana Bat. The Little Brown bat has some scattered, longer toe hairs, which the Indiana bat lacks (Appendix B: Photo 6). The Indiana bat has a “keeled calcar” along the trailing edge of its interfemoral membrane (Appendix B: Photo 2), which the Little Brown Bat does not have. The pelage color of the Indiana Bat is a dull grayish color instead of the bronze color of the other two bats (Appendix B: Photos 1, 3, 4, and 5).

Also commonly encountered within Ohio are the Hoary Bat (*Lasiurus cinereus*; Appendix B: Photo 6), the Silver-haired bat (*Lasionycteris noctivagans*; Appendix B: Photo 7), the Eastern Red Bat (*Lasiurus borealis*; Appendix B: Photo 8), Big Brown Bat (*Eptesicus fuscus*; Appendix B: Photo 9), the Tri-color Bat (*Pipistrellus subflavus*; Appendix B: Photo 10), the Evening Bat (*Nycticeius humeralis*; Appendix B: Photo 11), Rafinesque's Big-eared Bat (*Corynorhinus rafinesquii*; Appendix B: Photo 12), and the Eastern Small-Footed Bat (*Myotis leibii*; Appendix B: Photo 13). A photograph of a bat captured in a mist-net is also included as Photo 14 in Appendix B. Photographs included in Appendix B are for reference and are not bats actually captured on-site, Photographs of bats actually captured the Portsmouth Bypass corridor are included at the end of Appendix D.

### 4.0 MATERIALS AND METHODS

According to the USFWS protocol for Indiana Bat mist-net surveys, minimum effort for surveys within linear corridors is one net site (with two net locations, surveyed for two nights) per kilometer of potential habitat. The Portsmouth Bypass corridor was found to



contain 18.64 km of potential habitat and would therefore require 19 net sites to comply with protocol.

Prior to initiation of the survey, EnviroScience biologists performed field reconnaissance and determined the best locations for net site placement. This involved driving and walking the corridor to identify areas that contain good potential travel corridors for the Indiana Bat, such as streams, logging roads, trails, and other corridors with closed canopies that will funnel bats to perpendicularly set nets. Particular attention was given to sites that offered additional habitat features, such as streams or ponds as water sources, wetlands or ephemeral puddles that may produce emerging insects, and live or dead trees that could serve as summer roosts. EnviroScience then composed and submitted a study plan to the USFWS for site specific authorization. The USFWS accepted the plan as written (see Appendix C for Approval).

The bat survey was accomplished by mist netting within the project corridor on the evenings of July 18<sup>th</sup> through 25<sup>th</sup> and August 2<sup>nd</sup> through 14<sup>th</sup>, 2011. The surveys were conducted by three federally permitted biologists; Gary Libby- Federal Permit # TE156392-1, Michelle Malcosky- Federal Permit # TE08603A-0, and Michael Whitby- Federal Permit # TE02560A-0), along with qualified assistants (Jamie Willaman, Krista Tomasello, Dave Czayka, Tim Ator, and Julia Nawrocki). Each permitted biologist and assistant surveyed only one net site per night.

A total of 38 mist net sets were placed at 38 net locations (19 net sites; 72 net nights). Each mist net set consisted of one to three 38 mm mesh, 75 denier, 2 ply black polyester 2.6 to 7.8 meters (single, double, or triple) high by 2.6 to 18 meters wide from Avinet, Inc., Dryden, New York and were placed so that they completely spanned corridor openings. Nets were stretch between either fixed or telescoping poles with rope and pulley systems to facilitate raising and lowering of the nets.

Net site placement is shown in Appendix A; Figure 3, and details of the survey at each site including date surveyed, number and type of nets used, coordinates of the site, the biologists conducting the survey, start and end times, start and end temperatures, weather conditions, and a brief site description, can be found on Table 1.

Nets were spread each evening at sunset and lowered after over five hours of netting. Nets were checked every 10 minutes for the presence of captured bats. The area was regularly checked with an acoustic bat detector to identify any bats navigating in the survey area and to make sure net placement was optimal.

All captured bats were be identified to species, weighed, measured, assessed for age, sex, and reproductive status, photographed, and released within 30 minutes of capture.

All current USFWS protocols to prevent the spread of White Nose Syndrome (WNS) were strictly observed.

Equipment on hand in anticipation of captured Indiana Bats included ODNR aluminum wing bands, Holohil LB-2 Transmitters (band width 172), a Wildlife Materials TRX 1000S Receiver, and a 3-element Yagi directional folding handheld antenna.

At the end of the survey all materials (nets and poles) were removed from the site.



**Table 1. Net Site Summary.**

Net Site	Net	Date Surveyed	Set Size	Site Coordinates	Permittee/ Assistant	Start Time	Start Temp. (F)	End Time	End Temp. (F)	Weather Notes	Site Description
1	A	7/18/2011	Triple High-2.6m x 6m	-82.99718404W, 38.891956N	Malcosky/Czayka	20:50	84	3:25 AM	75	Precipitation: Mist from 9:54-10:10 pm; Moon: 3 days after full moon; Wind: 1-3mph wind; Cloud Cover: variable (hazy to 100%)	Flight corridor within woods Within wood line across potential travel corridor
	B		Triple High-2.6m x 12m								
1	A	7/19/2011	Triple High-2.6m x 6m	-82.99718404W, 38.891956N	Malcosky/Czayka	21:05	78	2:35 AM	70	Precipitation: none; Moon: 4 days after full moon; Wind: 1-3mph; Cloud Cover: 25-75%	Flight corridor within woods Within wood line across potential travel corridor
	B		Triple High-2.6m x 12m								
2	A	7/20/2011	Triple High-2.6m x 9m	-82.97291550W, 38.896737N	Malcosky/Czayka	21:00	75	2:05 AM	74	Precipitation: none; Moon: 3 days before last quarter; Wind: 1-3mph; Cloud Cover: 75%	Intersection of ATV trail and small shallow stream Across trail and flyway leading to/away from pond
	B		Triple High-2.6m x 9m								
2	A	7/21/2011	Triple High-2.6m x 9m	-82.97291550W, 38.896737N	Malcosky/Tomasello	21:00	85	3:00 AM	78	Precipitation: none; Moon: 2 days before last quarter; Wind: 1-3mph wind; Cloud Cover: 0%	Intersection of ATV trail and small shallow stream Across trail and flyway leading to/away from pond
	B		Triple High-2.6m x 9m								
3	A	8/10/2011	Double High-2.6m x 18m	-82.95347439W, 38.892884N	Whitby/Nawrocki	20:45	72	2:00 AM	66	Precipitation: none; Moon: 3 days before full moon; Wind: 0-5mph; Cloud Cover: 50%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 9m								
3	A	8/11/2011	Double High-2.6m x 18m	-82.95347439W, 38.892884N	Whitby/Nawrocki	20:45	72	2:00 AM	64	Precipitation: none; Moon: 2 days before full moon; Wind: 0-5mph; Cloud Cover: 0%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 9m								
4	A	7/22/2011	Triple High-2.6m x 6m	-82.94905988W, 38.863696N	Malcosky/Tomasello	21:00	77	2:05 AM	72	Precipitation: none; Moon: 1 day before last quarter; Wind: 1-3mph; Cloud Cover: 0-30%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 6m								
4	A	7/23/2011	Triple High-2.6m x 6m	-82.94905988W, 38.863696N	Malcosky/Tomasello	21:00	78	2:05 AM	75	Precipitation: none; Moon: last quarter; Wind: 1-3mph; Cloud Cover: 0%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 6m								
5	A	7/24/2011	Triple High-2.6m x 12m	-82.93654426W, 38.870109N	Malcosky/Tomasello	21:00	75	2:30 AM	72	Precipitation: none; Moon: 1 day after last quarter; Wind: 1-3mph; Cloud Cover: 50%	Across intersection of two roads and adjacent to entrenched creek Across a logging road through woods adjacent to entrenched creek
	B1		Double High-2.6m x 6m								
5	A	7/25/2011	Triple High-2.6m x 12m	-82.93654426W, 38.870109N	Malcosky/Tomasello	21:00	82	2:30 AM	74	Precipitation: none; Moon: 2 days after last quarter; Wind: 1-3mph; Cloud Cover: 0-50%	Across intersection of two roads and adjacent to entrenched creek Across a logging road through woods adjacent to entrenched creek
	B2		Double High-2.6m x 6m								
6	A	8/2/2011	Triple High-2.6m x 6m	-82.90875784W, 38.868183N	Malcosky/Tomasello	21:00	82	2:05 AM	75	Precipitation: none; Moon: 3 days after last quarter; Wind: 1-3mph; Cloud Cover: 0%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 6m								
6	A	8/3/2011	Triple High-2.6m x 6m	-82.90875784W, 38.868183N	Malcosky/Tomasello	20:55	75	2:05	73	Precipitation: none; Moon: 3 days before 1st quarter; Wind: 1-3mph; Cloud Cover: 50%	Across a logging road within woods Across a logging road within woods
	B		Double High-2.6m x 6m								
7	A	8/4/2011	Triple High-2.6m x 12m	-82.89599503W, 38.863998N	Malcosky/Tomasello	21:00	80	2:15	68	Precipitation: none; Moon: 2 days before 1st quarter; Wind: none/calm; Cloud Cover: 0%	Across grassy access drive at narrowing point of trees between fields Set end to end across grassy access drive between tree row
	B		2 (Triple High-2.6m x 9m)								
7	A	8/5/2011	Triple High-2.6m x 12m	-82.89599503W, 38.863998N	Malcosky/Tomasello	21:00	80	2:00	75	Precipitation: gentle drizzle from 11:20 pm to 12:00 am; Moon: 1 day before 1st quarter; Wind: none/calm; Cloud Cover: 100%	Across grassy access drive at narrowing point of trees between fields Set end to end across grassy access drive between tree row
	B		2 (Triple High-2.6m x 9m)								
8	A	8/6/2011	Triple High-2.6m x 6m	-82.88693079W, 38.857525N	Malcosky/Tomasello	20:50	82	2:10	75	Precipitation: none; Moon: 1st quarter; Wind: none/calm; Cloud Cover: 0-75%	Across an opening in woods leading to ATV trails Across ATV trail in woods
	B		Triple High-2.6m x 6m								



**Table 1. Net Site Summary.**

Net Site	Net	Date Surveyed	Set Size	Site Coordinates	Permittee/ Assistant	Start Time	Start Temp. (F)	End Time	End Temp. (F)	Weather Notes	Site Description
8	A	8/7/2011	Triple High-2.6m x 6m	-82.88693079W, 38.857525N	Malcosky/Tomasello	20:50	79	2:05	72	Precipitation: gentle drizzle from 12:35 am to 12:30 am; Moon: 1 day after 1st quarter; Wind: 0-3mph; Cloud Cover: 50%	Across an opening in woods leading to ATV trails Across ATV trail in woods
	B		Triple High-2.6m x 6m								
9	A	8/8/2011	Triple High-2.6m x 9m	-82.86728733W, 38.848867N	Malcosky/Tomasello	20:50	73	2:05	71	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 2 days after 1st quarter; Wind: 0-7mph; Cloud Cover: 50-100%	Across driveway between woods edge and abandoned house Clearing within woods travel corridor Woods opening along driveway
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 6m								
9	A	8/9/2011	Triple High-2.6m x 9m	-82.86728733W, 38.848867N	Malcosky/Tomasello	21:10	77	2:15	75	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 3 days after 1st quarter; Wind: 0-5mph; Cloud Cover: variable 0-100%	Across driveway between woods edge and abandoned house Clearing within woods travel corridor Woods opening along driveway
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 6m								
10	A	8/12/2011	Double High-2.6m x 6m	-82.85875392W, 38.837084N	Malcosky/Ater	20:50	70	2:00	62	Precipitation: none; Moon: 1 day before full moon; Wind: 1-3mph; Cloud Cover: 0%	Across grassy road through woods on steep slope Across grassy path through woods
	B		Double High-2.6m x 6m								
10	A	8/14/2011	Double High-2.6m x 6m	-82.85875392W, 38.837084N	Malcosky/Tomasello	20:45	70	2:15	63	Precipitation: none; Moon: 1 day after full moon; Wind: none/calm; Cloud Cover: 0-20%	Across grassy road through woods on steep slope Across grassy path through woods
	B		Double High-2.6m x 6m								
11	A	8/13/2011	Double High-2.6m x 9m	-82.85297203W, 38.828371N	Malcosky/Ater	22:30	73	3:45	60	Precipitation: light rain from 8:30-9:30 PM, dry for remainder of evening; Moon: full moon; Wind: 1-5mph; Cloud Cover: 90-100%	Across Blake Hollow Road, ~30m west of R.R. overpass/tunnel Across opening in woods and parallel to Blake Hollow Road
	B		Triple High-2.6m x 9m								
11	A	8/14/2011	Double High-2.6m x 9m	-82.85297203W, 38.828371N	Libby/Williaman	21:00	68	2:15	61	Precipitation: none; Moon: 1 day after full moon; Wind: none/calm; Cloud Cover: 0-20%	Across Blake Hollow Road, ~30m west of R.R. overpass/tunnel Across opening in woods and parallel to Blake Hollow Road
	B		Double High-2.6m x 6m								
12	A	8/10/2011	Single High-2.6m x 6m	-82.85478723W, 38.821908N	Libby/Tomasello	21:00	71	2:00	60	Precipitation: none; Moon: 3 days before full moon; Wind: 0-5mph; Cloud Cover: 50%	Across gravel road within woods
	B		Double High-2.6m x 6m								
	C		Double High-2.6m x 6m								
12	A	8/11/2011	Single High-2.6m x 6m	-82.85478723W, 38.821908N	Libby/Tomasello	21:00	65	2:00	55	Precipitation: none; Moon: 2 days before full moon; Wind: 0-5mph; Cloud Cover: 0%	Across gravel road within woods
	B		Double High-2.6m x 6m								
	C		Double High-2.6m x 6m								
13	A1	8/10/2011	Double High-2.6m x 6m	-82.85763338W, 38.816956N	Malcosky/Williaman	21:00	75	2:30	64	Precipitation: none; Moon: 3 days before full moon; Wind: 0-5mph; Cloud Cover: 50%	Across shallow gravel stream/road under complete canopy closure Across shallow gravel stream/road at point of tree overhangs
	B		Double High-2.6m x 6m								
13	A2	8/11/2011	Double High-2.6m x 6m	-82.85763338W, 38.816956N	Malcosky/Williaman	20:45	71	2:15	58	Precipitation: none; Moon: 2 days before full moon; Wind: 0-5mph; Cloud Cover: 0%	Across shallow gravel stream/road under complete canopy closure Across shallow gravel stream/road at point of trees overhangs
	B		Double High-2.6m x 6m								
14	A	8/6/2011	Double High-2.6m x 9m	-82.86196386W, 38.801159N	Whitby/Nawrocki	20:30	82	2:00	72	Precipitation: none; Moon: 1st quarter; Wind: none/calm; Cloud Cover: 0-75%	Across gravel stream with closed canopy Across gravel stream with closed canopy Across intersection of gravel stream and ATV trail
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 6m								

**Table 1. Net Site Summary.**

Net Site	Net	Date Surveyed	Set Size	Site Coordinates	Permittee/ Assistant	Start Time	Start Temp. (F)	End Time	End Temp. (F)	Weather Notes	Site Description
14	A	8/7/2011	Double High-2.6m x 9m	-82.86196386W, 38.801159N	Whitby/Nawrocki	20:45	78	2:00	68	Precipitation: gentle drizzle from 12:35 am to 12:50 am; Moon: 1 day after 1st quarter; Wind: 0-3mph ; Cloud Cover: 50%	Across gravel stream with closed canopy
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 6m								
15	A	8/6/2011	Double High-2.6m x 6m	-82.86230691W, 38.800329N	Libby/Wilaman	20:45	83	2:00	73	Precipitation: none; Moon: 1st quarter; Wind: none/calm; Cloud Cover: 0-75%	Across closed canopy road
	B		Single High-2.6m x 6m								
	C		Double High-2.6m x 9m								
15	A	8/7/2011	Double High-2.6m x 6m	-82.86230691W, 38.800329N	Libby/Wilaman	21:00	78	2:00	65	Precipitation: gentle drizzle from 12:35 am to 12:50 am; Moon: 1 day after 1st quarter; Wind: 0-3mph ; Cloud Cover: 50%	Across closed canopy road
	B		Single High-2.6m x 6m								
	C		Double High-2.6m x 9m								
16	A	8/8/2011	Double High-2.6m x 5.5m	-82.86533255W, 38.790128N	Whitby/Nawrocki	21:00	76	2:30	70	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 2 days after 1st quarter; Wind: 0-7mph ; Cloud Cover: 50-100%	Across a logging road within woods
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 5m								
16	A	8/9/2011	Double High-2.6m x 5.5m	-82.86533255W, 38.790128N	Whitby/Nawrocki	21:00	74	2:30	68	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 3 days after 1st quarter; Wind: 0-5mph ; Cloud Cover: variable 0-100%	Across a logging road within woods
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 5m								
17	A	8/8/2011	Double High-2.6m x 18m	-82.87259463W, 38.772265N	Libby/Wilaman	21:00	81	2:00	66	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 2 days after 1st quarter; Wind: 0-7mph ; Cloud Cover: 50-100%	Across the Scioto River
	B		Double High-2.6m x 12m								
17	A	8/9/2011	Double High-2.6m x 18m	-82.87259463W, 38.772265N	Libby/Wilaman	21:00	79	2:30	64	Precipitation: gentle drizzle from 12:20 am to 12:30 am; Moon: 3 days after 1st quarter; Wind: 0-5mph ; Cloud Cover: variable 0-100%	Across the Scioto River
	B		Double High-2.6m x 12m								
18	A	8/4/2011	Double High-2.6m x 6m	-82.87284931W, 38.757229N	Whitby/Nawrocki	20:45	80	2:00	67	Precipitation: none; Moon: 2 days before 1st quarter; Wind: none/calm; Cloud Cover: 0%	Across a logging road within woods
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 2.6m								
18	A	8/5/2011	Double High-2.6m x 6m	-82.87284931W, 38.757229N	Whitby/Nawrocki	20:30	80	2:00	65	Precipitation: gentle drizzle from 11:20 pm to 12:00 am; Moon: 1 day before 1st quarter; Wind: none/calm; Cloud Cover: 100%	Across a logging road within woods
	B		Double High-2.6m x 6m								
	C		Single High-2.6m x 2.6m								
19	A	8/4/2011	Single High-2.6m x 18m	-82.87401466W, 38.755406N	Libby/Wilaman	21:00	80	2:00	68	Precipitation: none; Moon: 2 days before 1st quarter; Wind: none/calm; Cloud Cover: 0%	Across mitigation pond/wetland
	B		Double High-2.6m x 6m								
19	A	8/5/2011	Single High-2.6m x 18m	-82.87401466W, 38.755406N	Libby/Wilaman	20:45	80	2:00	65	Precipitation: gentle drizzle from 11:20 pm to 12:00 am; Moon: 1 day before 1st quarter; Wind: none/calm; Cloud Cover: 100%	Across mitigation pond/wetland
	B		Double High-2.6m x 6m								



## 5.0 RESULTS

The 38 nights of sampling resulted in the capture of 121 bats representing 6 species. A summary of the capture data is in Table 2 below, and a detailed record of the bat capture data is in Table 3. Field datasheets can be found in Appendix D and photographs of each Net Site are in Appendix E. No Indiana Bats (*Myotis sodalis*) were captured during this survey.

**Table 2. Captured Species Summary.**

Species	Sites of Capture	Female / Male / Escape	# of Captures
<i>Eptesicus fuscus</i>	1, 2, 3, 5, 6, 15, 16, 17, 18, 19	15 / 20 / 3	38
<i>Lasurius borealis</i>	2, 5, 7, 8, 10, 11, 12, 13, 14, 15, 17, 19	18 / 15 / 3	36
<i>Myotis septentrionalis</i>	2, 3, 5, 11, 12, 13, 14, 15, 16	7 / 24 / 0	31
<i>Myotis lucifugus</i>	12, 13, 17	3 / 4 / 0	7
<i>Perimyotis subflavus</i>	1, 13, 15	1 / 5 / 0	6
<i>Lasurius cinereus</i>	2, 13	1 / 1 / 1	3
<b>Total</b>			<b>121</b>

The weather and timeline protocols adhered to those set forth by the USFWS and the conditions of the site specific authorization.

## 6.0 DISCUSSION

This survey was completed with the appropriate level of effort required by the established guidelines set forth for ODOT projects as well as a project-specific level of effort agreed upon by USFWS and OES. No Indiana bats were captured during this survey. It is presumed that Indiana bats are either not present on the site, or are present in very low numbers. Based on these results, it is reasonable to conclude this project “may affect, but is not likely to adversely affect” the Indiana bat.

The overall capture numbers and diversity of species caught shows bats are using the forested areas. Big Brown bats were found to be the most numerous, while Eastern Red bats were found at the most net sites. Despite the USFWS notification that the Northern Myotis may warrant federal protection, this survey showed that this area has a large population, mainly males.

Several of the survey sites had no captures through the two nights of survey and these sites were monitored with acoustic detectors to see if a change in net placement would result in better results, but it was found that bat activity was extremely low in these areas. Net Site 13 at Dan White Hollow proved to be the most productive site in both capture number and species diversity.

Very few notes of damage to captured bats were made, indicating that for the moment the cave dwelling bats of this area may not be affected by the spread of WNS.

Table 3. Bat Capture Details.

Site	Net #	Date	Time	Species	Sex: M(ale) or F(emale)	Age: A(adult) or J(uvenile)	Reproductive Status: N(on)-R(eproductive), A(ctive), P(regnant), L(actating), or P(ost)-L(actating)	Forearm Length (mm)	Weight (g)	Band Number/Additional Notes
1	B	7/18/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	44	12	-
1	B	7/18/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	P	44	13	-
1	B	7/18/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	44	12	Small hole in left wing
1	B	7/18/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	P	47	14	-
1	B	7/19/2011	21:40	big brown bat ( <i>Eptesicus fuscus</i> )	M	J	N/R	46	14	-
1	B	7/19/2011	22:00	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	47	17.5	-
1	B	7/19/2011	22:00	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	P	47	19	-
1	B	7/19/2011	22:10	tri-colored bat ( <i>Perimyotis subflavus</i> )	M	A	N/R	32.5	5.5	-
2	A	7/20/2011	21:50	hoary bat ( <i>Lasurus cinereus</i> )	-	-	-	-	-	Escaped while lowering net
2	A	7/20/2011	21:50	big brown bat ( <i>Eptesicus fuscus</i> )	-	-	-	-	-	Escaped while lowering net
2	A	7/20/2011	21:50	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	P	46	15	-
2	B	7/20/2011	0:50	eastern red bat ( <i>Lasurus borealis</i> )	M	A	N/R	44	9.5	-
2	A	7/21/2011	21:20	eastern red bat ( <i>Lasurus borealis</i> )	M	J	N/R	41	9	-
2	A	7/21/2011	21:40	eastern red bat ( <i>Lasurus borealis</i> )	M	J	N/R	39	8	-
2	A	7/21/2011	22:00	northern myotis ( <i>Myotis septentrionalis</i> )	F	J	N/R	35	8	-
2	B	7/21/2011	22:30	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	41	11.5	-
2	B	7/21/2011	0:30	eastern red bat ( <i>Lasurus borealis</i> )	M	A	A	40	11.5	-
2	A	7/21/2011	1:10	eastern red bat ( <i>Lasurus borealis</i> )	F	A	A	39	17	-
3	A	8/10/2011	23:00	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	36	5.5	Band # ODNR 10827
3	B	8/11/2011	22:00	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	48	18	Band # ODNR 22329; wing discoloration
3	B	8/11/2011	22:00	big brown bat ( <i>Eptesicus fuscus</i> )	M	J	N/R	47	17.25	Band # ODNR 22328
3	A	8/11/2011	23:00	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	47	19.25	Band # ODNR 22327
5	A	7/24/2011	21:30	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	42	15.5	-
5	A	7/24/2011	22:30	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	46	20	-
5	A	7/24/2011	1:30	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	36	7	-
5	B1	7/25/2011	21:47	eastern red bat ( <i>Lasurus borealis</i> )	M	-	-	-	-	Escaped from net, not well-tangled
5	B1	7/25/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	48	17.5	-
5	B1	7/25/2011	22:10	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	42	15	-
5	B1	7/25/2011	22:18	eastern red bat ( <i>Lasurus borealis</i> )	M	A	N/R	40	11	-
5	A	7/25/2011	23:50	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	L	48	19.5	Abnormal growth on right wing (7mm diameter)
5	B1	7/25/2011	0:30	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	44	18	-
5	B1	7/25/2011	0:30	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	47	21.5	-
5	B1	7/25/2011	0:30	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	48	19.5	-
5	B1	7/25/2011	0:30	eastern red bat ( <i>Lasurus borealis</i> )	M	-	-	-	-	Escaped from net, not well-tangled
6	A	8/2/2011	0:30	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	45	14	-
7	A	8/4/2011	21:45	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	37	9	-
7	A	8/4/2011	2:15	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	38	11.5	-
8	A	8/6/2011	21:00	eastern red bat ( <i>Lasurus borealis</i> )	F	A	N/R	43	12	-
8	A	8/6/2011	21:05	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	37	8.5	-
8	A	8/6/2011	0:30	eastern red bat ( <i>Lasurus borealis</i> )	M	J	N/R	39	9.5	-



Table 3. Bat Capture Details.

Site	Net #	Date	Time	Species	Sex: M(ale) or F(emale)	Age: A(adult) or J(uvenile)	Reproductive Status: N(on)-R(eproductive), A(ctive), P(regnant), L(actating), or P(ost)- L(actating)	Forearm Length (mm)	Weight (g)	Band Number/Additional Notes
8	A	8/6/2011	0:30	eastern red bat ( <i>Lasurus borealis</i> )	M	-	-	-	-	Escaped from net, not well-tangled
8	A	8/7/2011	22:24	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	43	12	Same size as capture from previous night
8	A	8/7/2011	1:25	eastern red bat ( <i>Lasurus borealis</i> )	F	-	-	-	-	Escaped from net, not well-tangled
10	A	8/14/2011	2:00	eastern red bat ( <i>Lasurus borealis</i> )	F	A	PR	43	15	-
11	A	8/13/2011	23:10	eastern red bat ( <i>Lasurus borealis</i> )	M	A	A	40	9.5	-
11	A	8/13/2011	23:55	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	33	6	-
11	A	8/14/2011	22:30	eastern red bat ( <i>Lasurus borealis</i> )	F	A	N/R	41	10.5	-
11	A	8/14/2011	22:30	eastern red bat ( <i>Lasurus borealis</i> )	M	A	A	39	10.5	-
12	A	8/10/2011	21:00	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	35	5.7	Band # ODNR 10847
12	B	8/10/2011	21:30	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	36	6.7	Band # ODNR 10848
12	B	8/10/2011	21:30	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	35	5.9	Band # ODNR 10849
12	B	8/10/2011	0:00	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34	5.7	Band # ODNR 10850
12	B	8/10/2011	1:00	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	36	6.5	Band # ODNR 10831
12	B	8/10/2011	1:40	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	35	5.8	Band # ODNR 10832
12	A	8/11/2011	10:20	eastern red bat ( <i>Lasurus borealis</i> )	M	A	N/R	41	9.6	Band # ODNR 22333
12	B	8/11/2011	11:40	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34	5.3	Band # ODNR 10833
12	C	8/11/2011	11:45	little brown bat ( <i>Myotis lucifugus</i> )	M	A	N/R	36	6.8	Band # ODNR 10834
13	B	8/10/2011	21:15	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	39	9	-
13	B	8/10/2011	21:15	eastern red bat ( <i>Lasurus borealis</i> )	F	-	-	-	-	Escaped from net, not well-tangled
13	B	8/10/2011	21:25	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	33	7	-
13	B	8/10/2011	21:25	eastern red bat ( <i>Lasurus borealis</i> )	M	A	N/R	39	11	-
13	B	8/10/2011	22:50	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	33	7.5	-
13	B	8/10/2011	23:45	tri-colored bat ( <i>Perimyotis subflavus</i> )	M	J	N/R	33	9.5	Pin-sized holes in wings
13	B	8/10/2011	0:20	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	42	11	-
13	B	8/10/2011	0:20	tri-colored bat ( <i>Perimyotis subflavus</i> )	M	A	N/R	36	7	-
13	B	8/10/2011	0:20	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	45	17	-
13	B	8/10/2011	0:20	tri-colored bat ( <i>Perimyotis subflavus</i> )	M	J	N/R	33.5	6.5	-
13	B	8/10/2011	0:45	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	45	16.5	-
13	B	8/10/2011	1:20	big brown ( <i>Eptesicus fuscus</i> )	M	A	A	44	16.5	-
13	B	8/10/2011	1:35	tri-colored bat ( <i>Perimyotis subflavus</i> )	M	J	N/R	32	6	-
13	B	8/10/2011	2:05	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	41	12	-
13	B	8/10/2011	2:05	little brown bat ( <i>Myotis lucifugus</i> )	M	A	A	34	7	-
13	B	8/10/2011	2:10	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	A	34	6	-
13	A2	8/11/2011	21:40	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34.5	6.5	-
13	B	8/11/2011	21:50	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	34.5	6.5	-
13	A2	8/11/2011	22:45	big brown ( <i>Eptesicus fuscus</i> )	M	A	A	48.5	17	-
13	B	8/11/2011	22:50	hoary bat ( <i>Lasurus cinereus</i> )	M	A	N/R	59	24.5	-
13	B	8/11/2011	22:50	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	40	14	-
13	A2	8/11/2011	0:30	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	45	15.5	-
13	A2	8/11/2011	0:30	eastern red bat ( <i>Lasurus borealis</i> )	-	-	-	-	-	Escaped from net, not well-tangled
13	A2	8/11/2011	1:00	hoary bat ( <i>Lasurus cinereus</i> )	F	A	A	55	26	-

Table 3. Bat Capture Details.

Site	Net #	Date	Time	Species	Sex: M(ale) or F(emale)	Age: A(adult) or J(uvenile)	Reproductive Status: N(on)-R(eproductive), A(ctive), P(regnant), L(actating), or P(ost)-L(actating)	Forearm Length (mm)	Weight (g)	Band Number/Additional Notes
13	B	8/11/2011	1:00	northern myotis ( <i>Myotis septentrionalis</i> )	M	J	N/R	33	6.5	-
14	A	8/6/2011	21:03	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	33	5.25	
14	C	8/6/2011	21:25	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	33	5.75	
14	B	8/6/2011	21:36	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	35	6	
14	A	8/6/2011	21:50	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	35	5.75	
14	B	8/6/2011	22:40	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	35	7	
14	A	8/6/2011	23:00	eastern red bat ( <i>Lasurus borealis</i> )	M	-	-	-	-	
14	A	8/6/2011	0:55	eastern red bat ( <i>Lasurus borealis</i> )	M	J	N/R	40	11.25	
14	A	8/6/2011	0:55	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34	5.5	
14	A	8/6/2011	1:35	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	35	6	Escaped from net, not well-tangled
14	A	8/7/2011	1:11	northern myotis ( <i>Myotis septentrionalis</i> )	F	A	N/R	35	6.25	
15	C	8/6/2011	21:32	eastern red bat ( <i>Lasurus borealis</i> )	F	J	N/R	39	11	
15	C	8/6/2011	21:55	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	37	6.5	
15	A	8/6/2011	22:01	tri-colored bat ( <i>Perimyotis subflavus</i> )	F	J	N/R	36	6	
15	C	8/6/2011	22:53	big brown bat ( <i>Eptesicus fuscus</i> )	F	J	N/R	46	11.5	
15	C	8/6/2011	0:01	northern myotis ( <i>Myotis septentrionalis</i> )	M	J	N/R	36	5.5	
15	A	8/7/2011	1:40	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34.5	6.3	Band # ODNR 10841
16	A	8/8/2011	0:15	northern myotis ( <i>Myotis septentrionalis</i> )	M	J	N/R	33	5	Band # ODNR 10830
16	B	8/8/2011	0:30	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34	5.5	Band # ODNR 10829; Wing discoloration spots
16	B	8/9/2011	23:25	northern myotis ( <i>Myotis septentrionalis</i> )	M	A	N/R	34	5.5	Band # ODNR 10828
16	B	8/9/2011	23:48	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	47	17.25	Band # ODNR 22330
17	A	8/8/2011	21:38	eastern red bat ( <i>Lasurus borealis</i> )	F	A	N/R	40	16.7	Band # ODNR 22331; Wing discoloration spots
17	B	8/8/2011	21:51	eastern red bat ( <i>Lasurus borealis</i> )	-	-	-	-	-	Escaped from net, not well-tangled
17	A	8/9/2011	21:10	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	44	10.5	Band # ODNR 22332
17	A	8/9/2011	22:49	eastern red bat ( <i>Lasurus borealis</i> )	-	-	-	-	-	Escaped from net, not well-tangled
17	A	8/9/2011	0:15	little brown bat ( <i>Myotis lucifugus</i> )	F	A	N/R	36	10.6	Band # ODNR 10842; Bed Bugs on wings
17	A	8/9/2011	0:15	little brown bat ( <i>Myotis lucifugus</i> )	M	J	N/R	37	7.3	Band # ODNR 10843
17	A	8/9/2011	1:28	little brown bat ( <i>Myotis lucifugus</i> )	F	A	N/R	37	9.8	Band # ODNR 10844
17	A	8/9/2011	1:30	little brown bat ( <i>Myotis lucifugus</i> )	M	A	A	36.5	7.8	Band # ODNR 10845
17	A	8/9/2011	2:05	little brown bat ( <i>Myotis lucifugus</i> )	F	A	N/R	37	7.4	Band # ODNR 10846
18	B	8/5/2011	22:15	big brown bat ( <i>Eptesicus fuscus</i> )	F	J	N/R	47	18	
18	A	8/5/2011	22:17	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	45	16.5	
19	A	8/4/2011	21:40	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	A	48.5	13.4	
19	A	8/4/2011	21:40	big brown bat ( <i>Eptesicus fuscus</i> )	-	-	-	-	-	Escaped from net, not well-tangled
19	A	8/4/2011	22:00	big brown bat ( <i>Eptesicus fuscus</i> )	M	A	N/R	44	17.2	
19	A	8/4/2011	22:45	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	49	21.8	
19	A	8/4/2011	23:15	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	48	16.2	
19	A	8/4/2011	23:15	big brown bat ( <i>Eptesicus fuscus</i> )	F	A	N/R	45	11.7	
19	A	8/5/2011	21:30	big brown bat ( <i>Eptesicus fuscus</i> )	-	-	-	-	-	Escaped from net, not well-tangled
19	A	8/5/2011	22:45	eastern red bat ( <i>Lasurus borealis</i> )	F	A	PR	46	17.2	



## Appendix A: Figures

Figure 1. Location of the Portsmouth Bypass Corridor in Scioto County, Ohio.

Figure 2. Ohio Biodiversity Database Indiana Bat Records Map.

Figure 3. Net Site Locations within the Portsmouth Bypass Corridor.

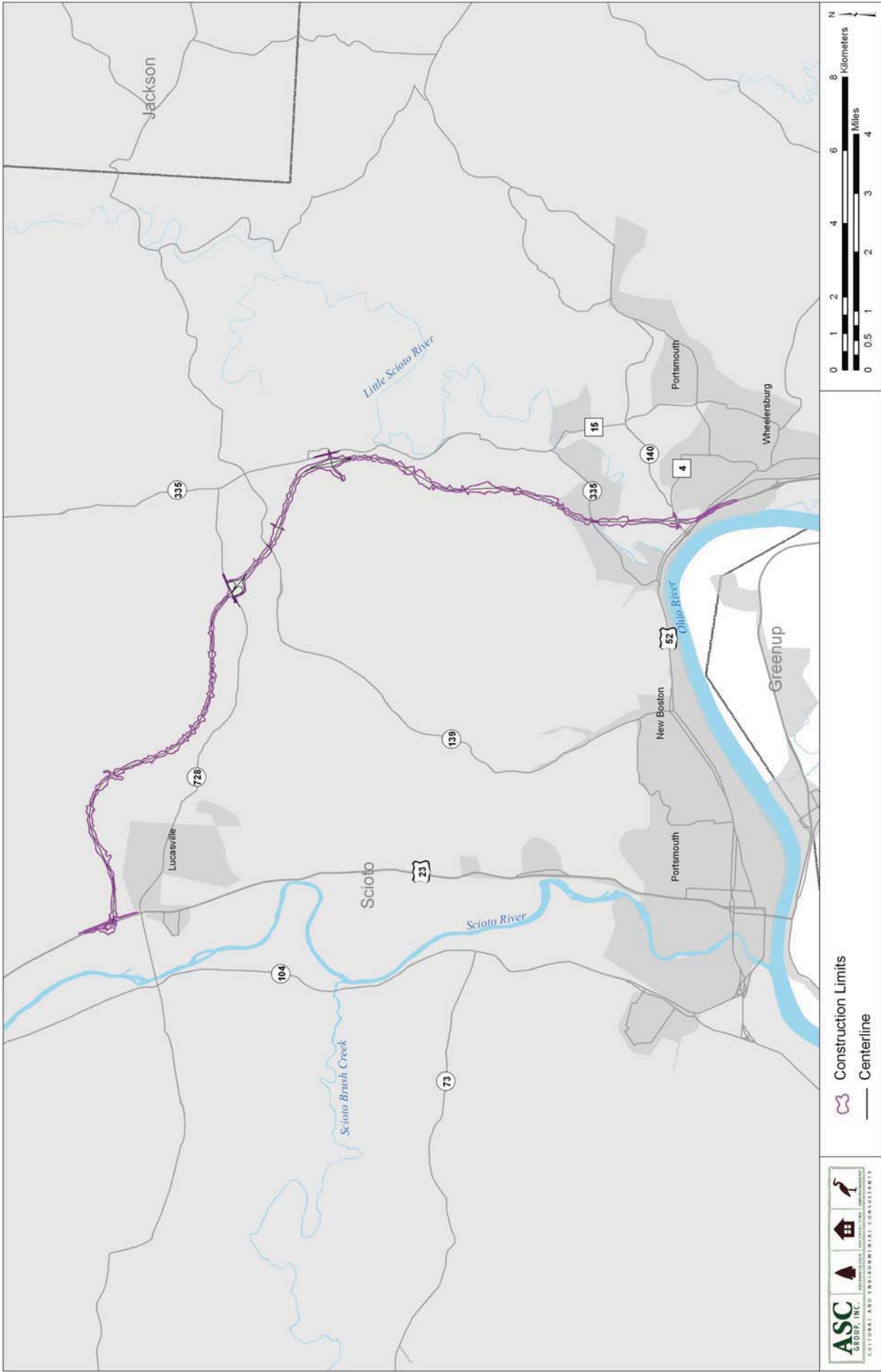
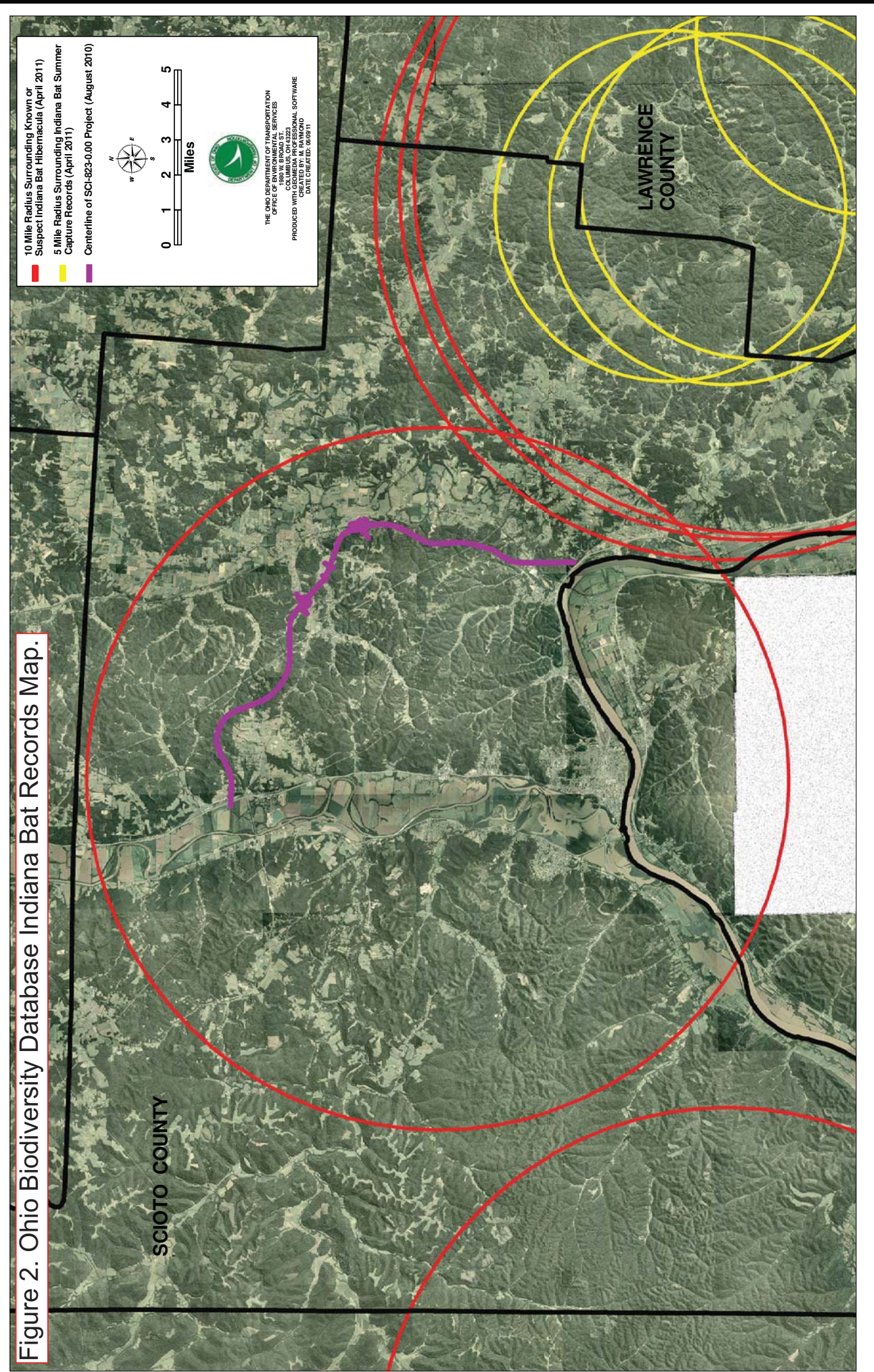


Figure 1. SCI-823-0.00 Portsmouth Bypass-Preferred Alternative location.



Figure 2. Ohio Biodiversity Database Indiana Bat Records Map.







Net Site 1

Net Site 2

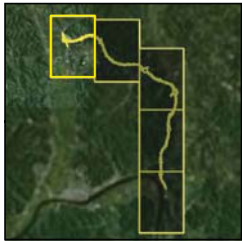


Figure 3.1.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





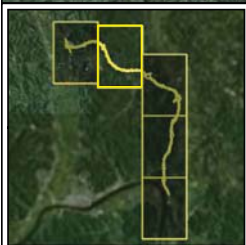
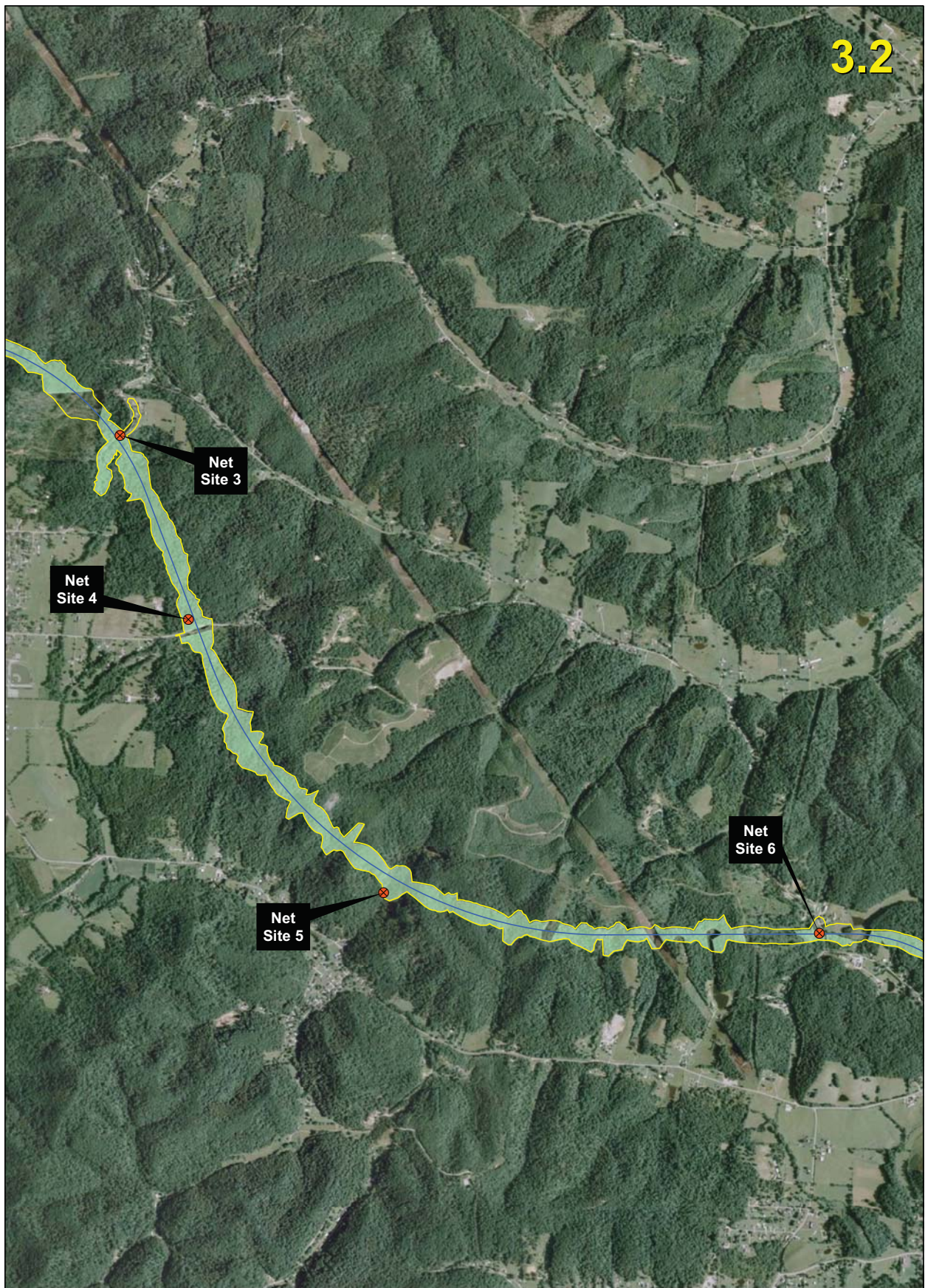


Figure 3.2.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





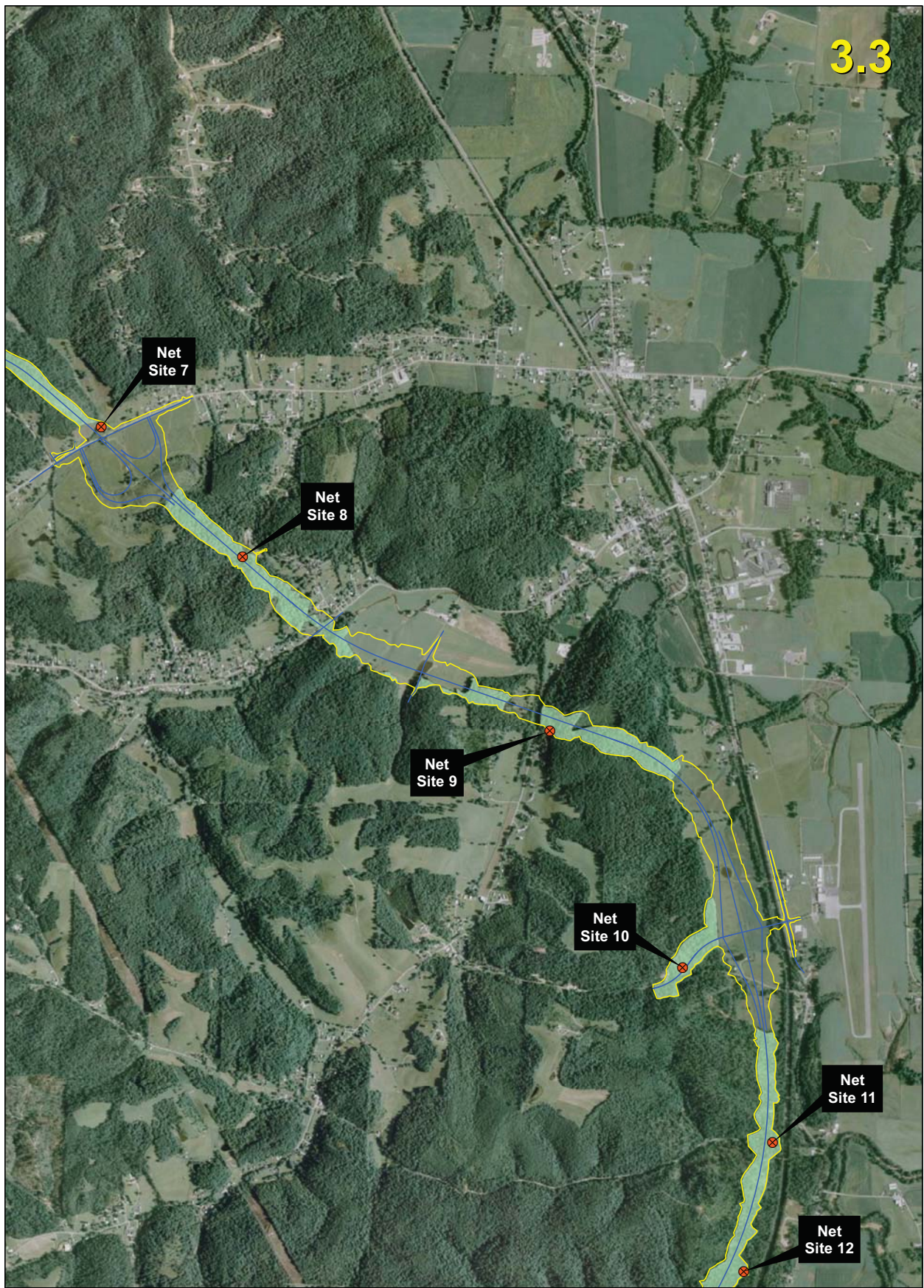


Figure 3.3.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





3.4

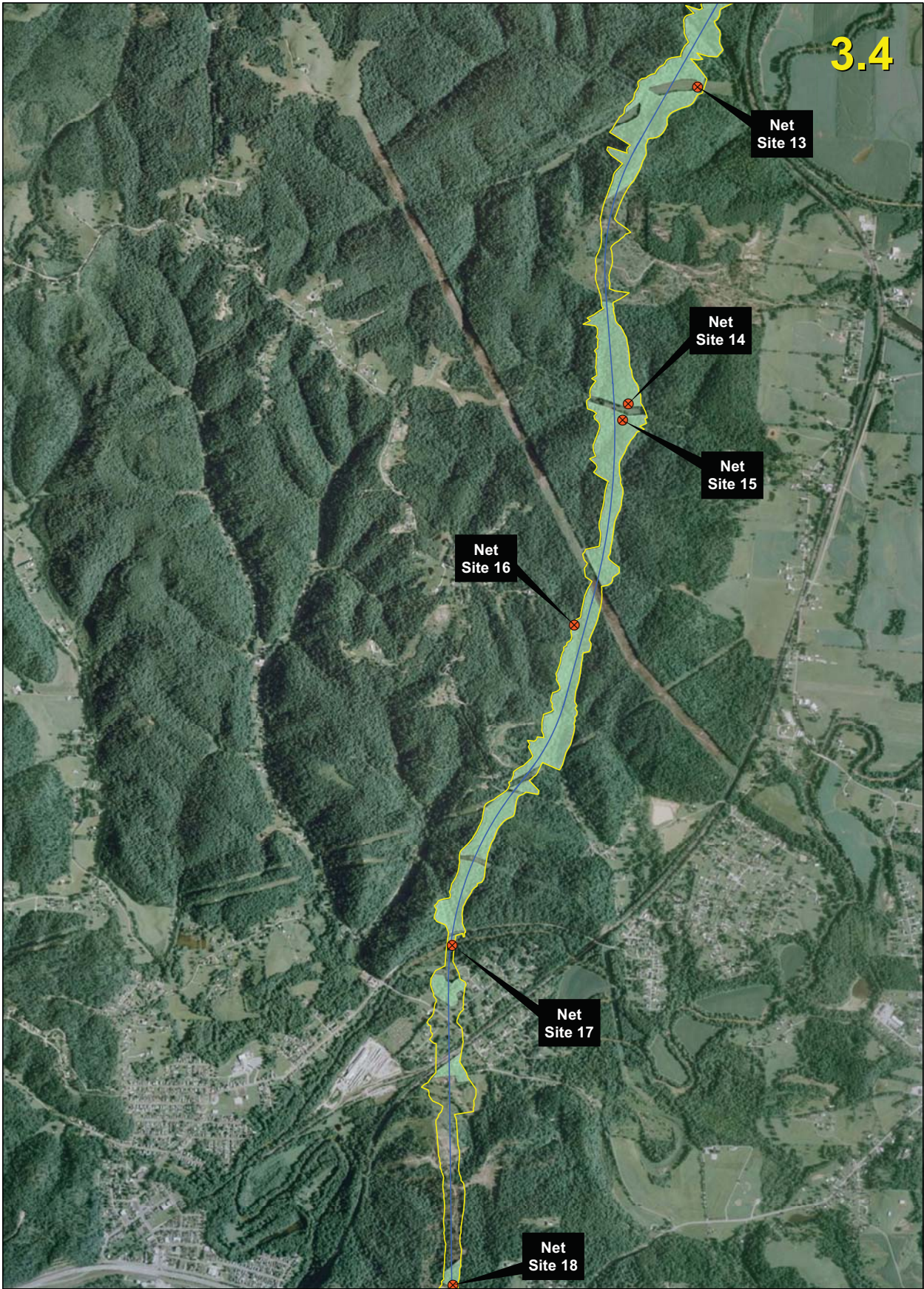






Figure 3.4.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

 Net Site	 Centerline	 Forested Areas
	 Construction Limits	

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.









3.5

Net Site 19



Figure 3.5.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





## Appendix B: Reference Bat Species Photographs



©William R. Elliott, MDC  
 Photo 1: Comparison of Little Brown Bat (*M. lucifugus*) to Indiana Bat (*M. sodalis*).



©William R. Elliott, MDC  
 Photo 2: Keeled calcar and short toe hairs of the Indiana bat.



Photo 3: Indiana Bat showing pink lips, keeled calcar, and dull pelage.



Photo 4: Little Brown bat showing dark lips and bronze pelage.





Photo 5: Northern Long-eared bat (*M. septentrionalis*) showing long ear tragus.



Photo 6: Hoary bat (*Lasiurus cinereus*).



Photo 7: Silver-haired bat (*Lasionycteris noctivagans*).



Photo 8: Eastern Red bat (*Lasiurus borealis*).





Photo 9: Big Brown bat (*Eptesicus fuscus*).



Photo 10: Tri-colored bat (*Pipistrellus subflavus*).



Photo 11: Evening Bat (*Nycticeius humeralis*).



Photo 12: Rafinesque's Big-eared Bat (*Corynorhinus rafinesquii*).





Photo 13: Eastern Small-Footed Bat (*Myotis leibii*).



Photo 14: Bat in Mist-net.

Appendix C:  
Site Specific Authorization and Approval



## Jamie Willaman

---

**From:** Karen\_Hallberg@fws.gov  
**Sent:** Monday, July 18, 2011 2:32 PM  
**To:** Jamie Willaman  
**Cc:** garylibby@windstream.net; Angela\_Boyer@fws.gov; Mike.Pettegrew@dot.state.oh.us  
**Subject:** Re: Revised Portsmouth Scope  
**Attachments:** pic08723.gif; WNSDecontaminationProtocol\_January 25 2011.pdf

Jamie,

Please distribute this email to Michelle Malcosky and Michael Whitby, as I do not have their email addresses.

thanks,  
Karen

---

Dear Mr. Libby, Ms. Malcosky, and Mr. Whitby,

This is in response to your request for an amendment to your Federal Fish and Wildlife Permits (Nos. TE156392-1, TE08603A-0, and TE02560A-0) to conduct a 2011 mist net survey for the Indiana bat (*Myotis sodalis*) at the proposed Portsmouth Bypass (SCI-823-0.00/6.81, PID 19415) project site in Scioto County, Ohio.

This notification serves as written concurrence that Gary Libby, Michelle Malcosky, and Michael Whitby are authorized to proceed with the Indiana bat survey as described in the request. Upon completion of the survey, we request that you submit an electronic copy of the survey results to this office for review. Please include the latitude and longitude coordinates for each survey site in the report. If any Indiana bats are found during the survey, please notify this office within 48 hours.

Due to concerns over White-nose Syndrome, **we are requiring that the White-nose Syndrome Decontamination Protocol be followed for all bat survey work conducted in Ohio.** Please be advised that the current protocol (attached) is subject to revision. Please visit the following link prior to conducting the survey to ensure the most current protocol is being followed.

<http://www.fws.gov/midwest/endangered/mammals/BatDisinfectionProtocol.html>

*(See attached file: WNSDecontaminationProtocol\_January 25 2011.pdf)*

We request that all Indiana bats be banded utilizing the Ohio Department of Natural Resources, Division of Wildlife (DOW) bands. Please contact Jennifer Norris (DOW) to request bands @ (740) 747-2525, ext. 26.

Please carry a copy of this site specific authorization and your Federal permit while conducting the survey. Please contact me if you have questions, or we may be of further assistance in this matter.

Sincerely,  
Karen Hallberg

---

Karen I. Hallberg  
Fish and Wildlife Biologist (Transportation Liaison)

U.S. Fish & Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, OH 43230  
Phone: (614) 416-8993 ext. 23  
FAX: (614) 416-8994  
▼ Jamie Willaman <[jwillaman@enviroscienceinc.com](mailto:jwillaman@enviroscienceinc.com)>

**Jamie Willaman**  
<[jwillaman@enviroscienceinc.com](mailto:jwillaman@enviroscienceinc.com)>

To "[Karen\\_Hallberg@fws.gov](mailto:Karen_Hallberg@fws.gov)"  
<[Karen\\_Hallberg@fws.gov](mailto:Karen_Hallberg@fws.gov)>

07/18/2011 11:43 AM

cc

Subject Revised Portsmouth Scope

Karen,

Attached is the revised scope as we discussed. The main difference is additional permitted biologists and the statement that only one net site will be surveyed per permitted biologist per night (Page 3; paragraph 2). Please call me with any questions and thank you for your assistance.

Sincerely,

Jamie Willaman  
EnviroScience Inc.

412-310-2614 [attachment "Rev\_Portsmouth\_Scope.pdf" deleted by Karen Hallberg/R3/FWS/DOI]



# INDIANA BAT MIST NET SURVEY STUDY PROPOSAL

Presented to:

**ODOT Office of Environmental Services**  
1980 West Broad Street-3rd Floor  
Columbus, OH 43223

for

SCI-823-0.00/6.81 (PID 19145)  
Scioto County, Ohio

*Project # 637-3880*

Prepared by:



**EnviroScience, Inc.**, 3781 Darrow Road, Stow, Ohio 44224  
(800) 940-4025 - 330-688-0111 - FAX: 330-688-5838  
[enviroscienceinc.com](http://enviroscienceinc.com)

---

15 July 2011

## Survey Scope

In order to assess the presence of Indiana bats within the Portsmouth Bypass (SCI-823-0.00/6.81, PID 19415) proposed corridor (corridor), EnviroScience (ES) proposes the following study plan for conducting mist net surveys on the areas of the property identified as potential habitat of the federally endangered *Myotis sodalis* (Indiana Bat). EnviroScience strictly adheres to the protocol and requirements of the U.S. Fish and Wildlife Service (USFWS) for such surveys.

## Initial Site Research

---

EnviroScience GIS Analysts attained mapping of the corridor from ODOT and aerial imagery from NAIP 2009 in order to determine the amount of forested area that occurs on the site. In total the proposed corridor is 26.28 kilometers (km) in length. ES found that **18.64 km** (595.04 acres) is currently forested, see attached Figure 1. Areas found to be forested on the aerial imagery were assessed for accuracy in the field.

Additionally, ODOT requested a review of the ODNR Ohio Biodiversity Database records in order to assess the existence of known or suspected habitat for the Indiana Bat on the site. The ODNR places the corridor within 10 miles of a known or suspected hibernacula see attached Figure 2. The proposed corridor does not fall within 5 miles of any summer capture records of the Indiana bat.

## Site Reconnaissance

---

On May 23<sup>rd</sup> through 27<sup>th</sup> ES biologists conducted a site visit of the proposed corridor to determine potential mist net sites in accordance with the USFWS protocol for site identification. This involved driving and walking the corridor and identification of areas that contain good potential travel corridors for the Indiana Bat, such as streams, logging roads, trails, and other corridors with closed canopies that will funnel bats to perpendicularly set nets. Particular attention was given to sites that offered additional habitat features, such as streams or ponds as water sources, wetlands or ephemeral puddles that may produce emerging insects, and live or dead trees that could serve as summer roosts. Identified areas were photographed and recorded on GPS. In total ES identified 19 net sites possessing the characteristics stated above. Figure 3, attached, shows the location of each of the identified net sites. Table 1, attached, outlines the details of each net site including coordinate location, the vegetation, key habitat features, and how the site is accessed. Photographs of each identified net site are also attached.

Additionally, at the time of site visit, ES searched for any caves or mine portals that may occur on the corridor, in order to identify any potential winter hibernacula that may be affected by the project. No such areas were identified on available secondary resource mapping or identified in the field.





## Survey Protocol

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In order to investigate the site for the presence/absence of the endangered Indiana Bat, EnviroScience proposes 19 net sites (with two net locations each, surveyed for two nights each; 76 net nights). The net sites proposed are detailed on attached Figure 3, Table 1, and Site Photographs.

Surveying will be conducted by Gary Libby (Federal Permit # TE156392-1, attached), Michelle Malcosky (Federal Permit # TE08603A-0, attached), Michael Whitby (Federal Permit # TE02560A-0, attached) and assisted by qualified bat ecologists. No more than one net site will be monitored by each permitted biologist each night of the survey.

The survey will be done in July to August of 2011, on nights with temperatures exceeding 50°F, little to no precipitation, low moonlight, and low winds. Each net site will be surveyed for two consecutive nights and will be checked every ten minutes for captured bats during the 5-6 hour survey period.

All current USFWS protocols to prevent the spread of White Nose Syndrome will be strictly observed.

A total of 38 mist net sets will be placed at 38 net locations (19 net sites). Each mist net set will consist of one to three 38 mm mesh, 75 denier, 2 ply black polyester 2.6 to 7.8 meters (4 to 12 shelves) high by 2.6 to 18 meters wide from Avinet, Inc., Dryden, New York and will be placed so that they completely span the corridor openings. All equipment and decontamination materials will be removed from the net sites at the end of each two day survey period.

All captured bats will be identified to species, weighed, measured, assessed for age, sex, and reproductive status, banded with approved arm bands, photographed, and released within 30 minutes of capture. Any captured Indiana bats will be fitted with a radio transmitter, as required by the USFWS, and tracked to a diurnal roost. Tracking of the radio tagged individual will continue for five days or until the radio device falls off or ceases functions. Upon capture of any Indiana Bat ODOT and the USFWS will be notified immediately.

All survey findings will be summarized in a report that will include a final map of the location of each net site, the conditions which exist during each survey night, the methods and staff utilized at the survey, the amount, species, size, condition, capture location, band number, and photographs of captured individuals, and a discussion of the findings.

Please review the above study plan and contact me at your earliest convenience with any questions, comments, or concerns you may have. I can be reached via email at [jwillaman@envirosciencinc.com](mailto:jwillaman@envirosciencinc.com) or at (412) 310-2614 or. Thank you for your attention to this matter.



# Attachments

## Figures

Figure 1. Forested Areas within Corridor Map

Figure 2. ODNR Bat Records Map

Figure 3. Proposed Net Sites

## Tables

Table 1. Proposed Net Site Details

## Net Site Photographs

Gary Libby, Michelle Malcosky, and Michael Whitby USFWS Federal Permits



# Figures

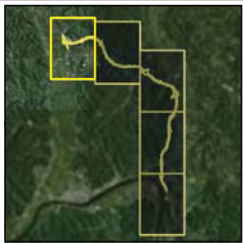


Figure 1.1.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





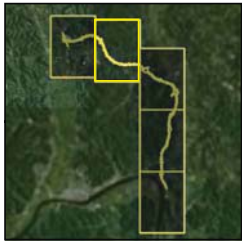
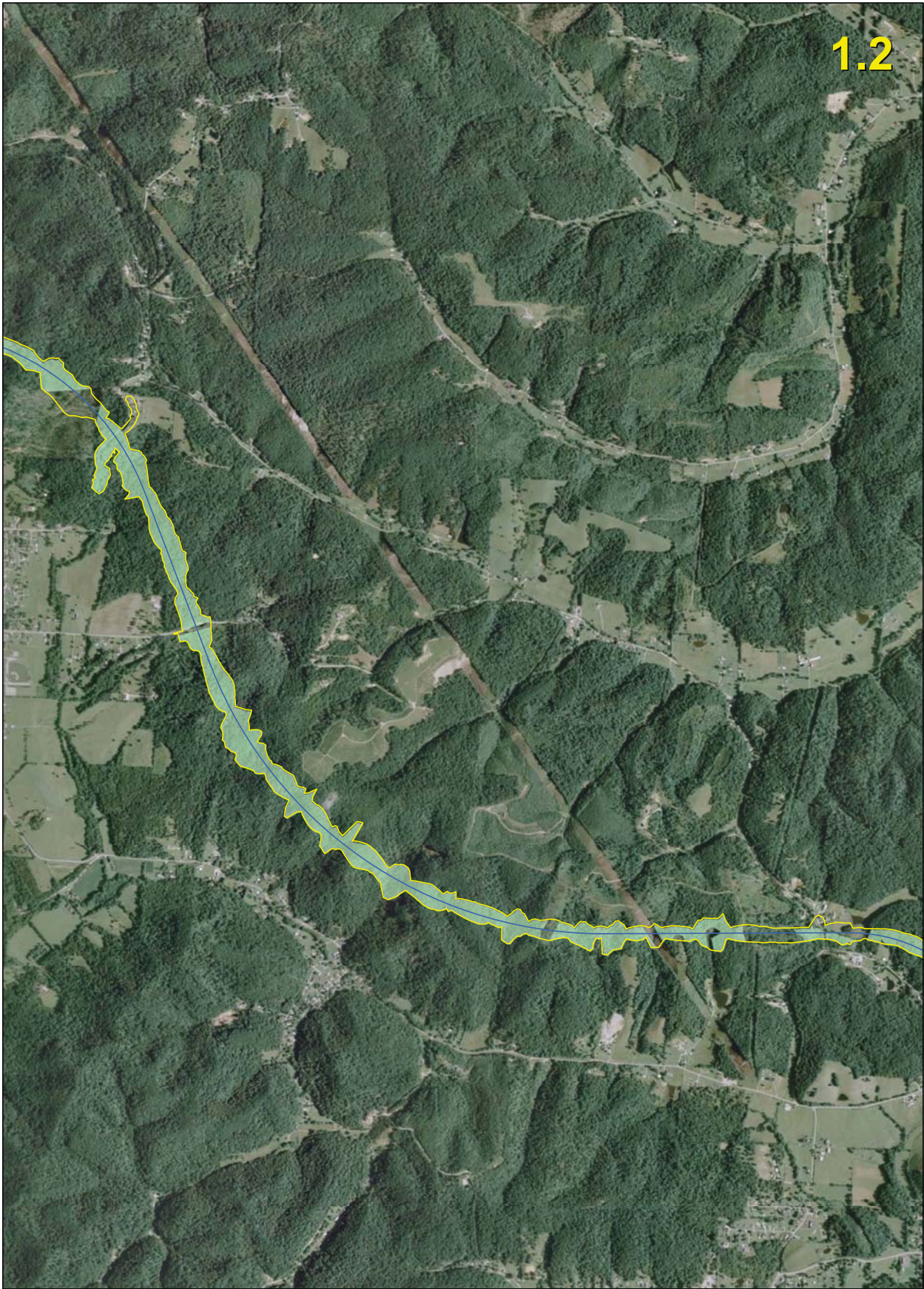


Figure 1.2.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

— Centerline      ■ Forested Areas  
— Construction Limits

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





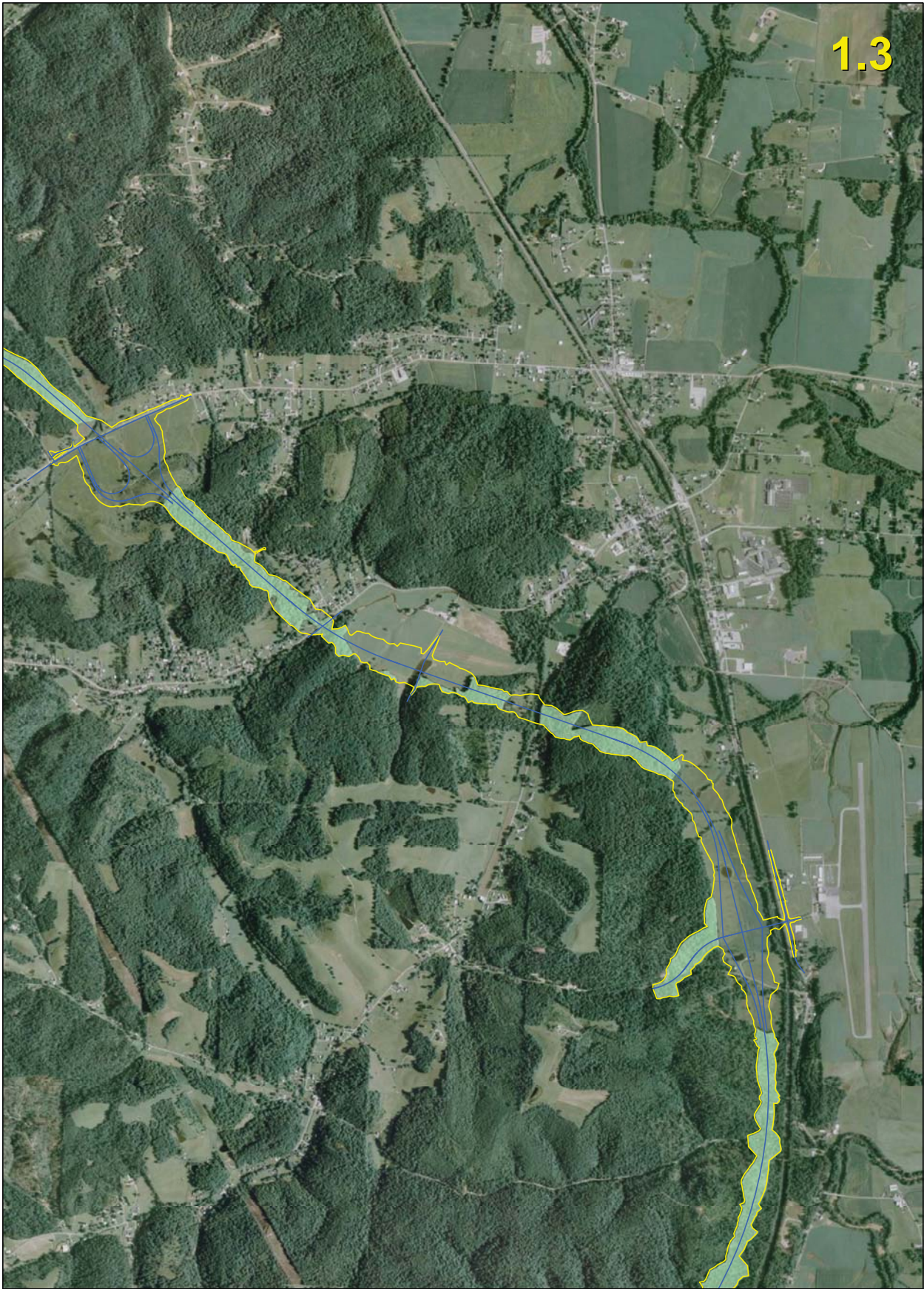
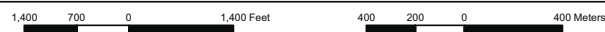


Figure 1.3.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

- Centerline
- Construction Limits
- Forested Areas



Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





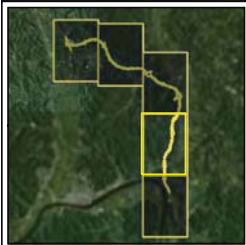


Figure 1.4.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

— Centerline  
 — Construction Limits  
 Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





1.5

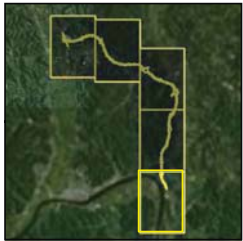


Figure 1.5.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

- 
 Centerline
- 
 Construction Limits
- 
 Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





Figure 2. Ohio Biodiversity Database Indiana Bat Records Map.

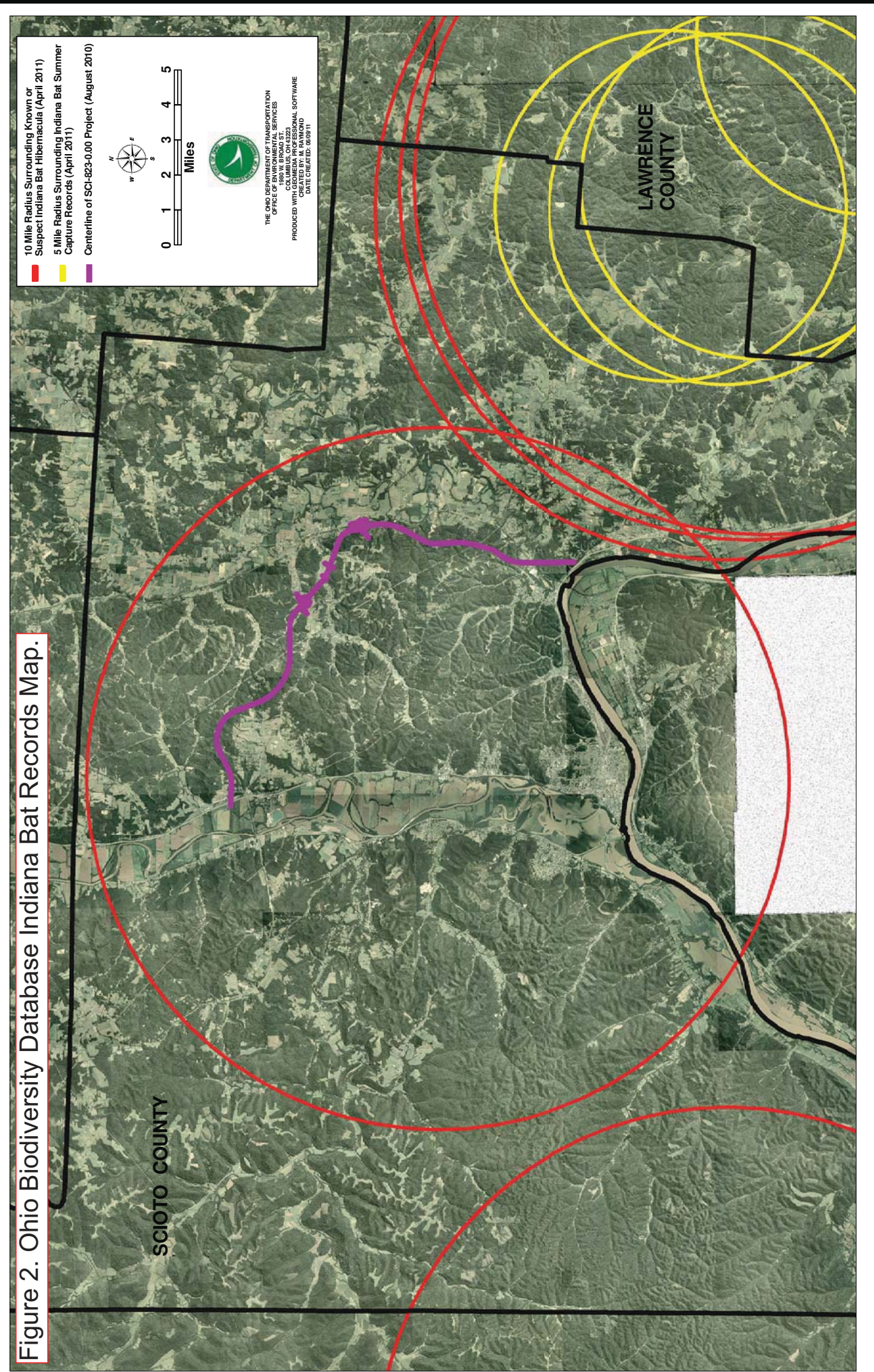
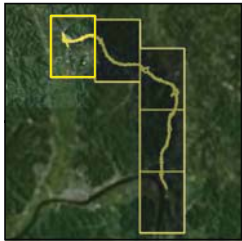






Figure 3.1.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

- ✕ Net Site
- Centerline
- Forested Areas
- Construction Limits



Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





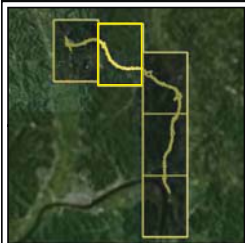
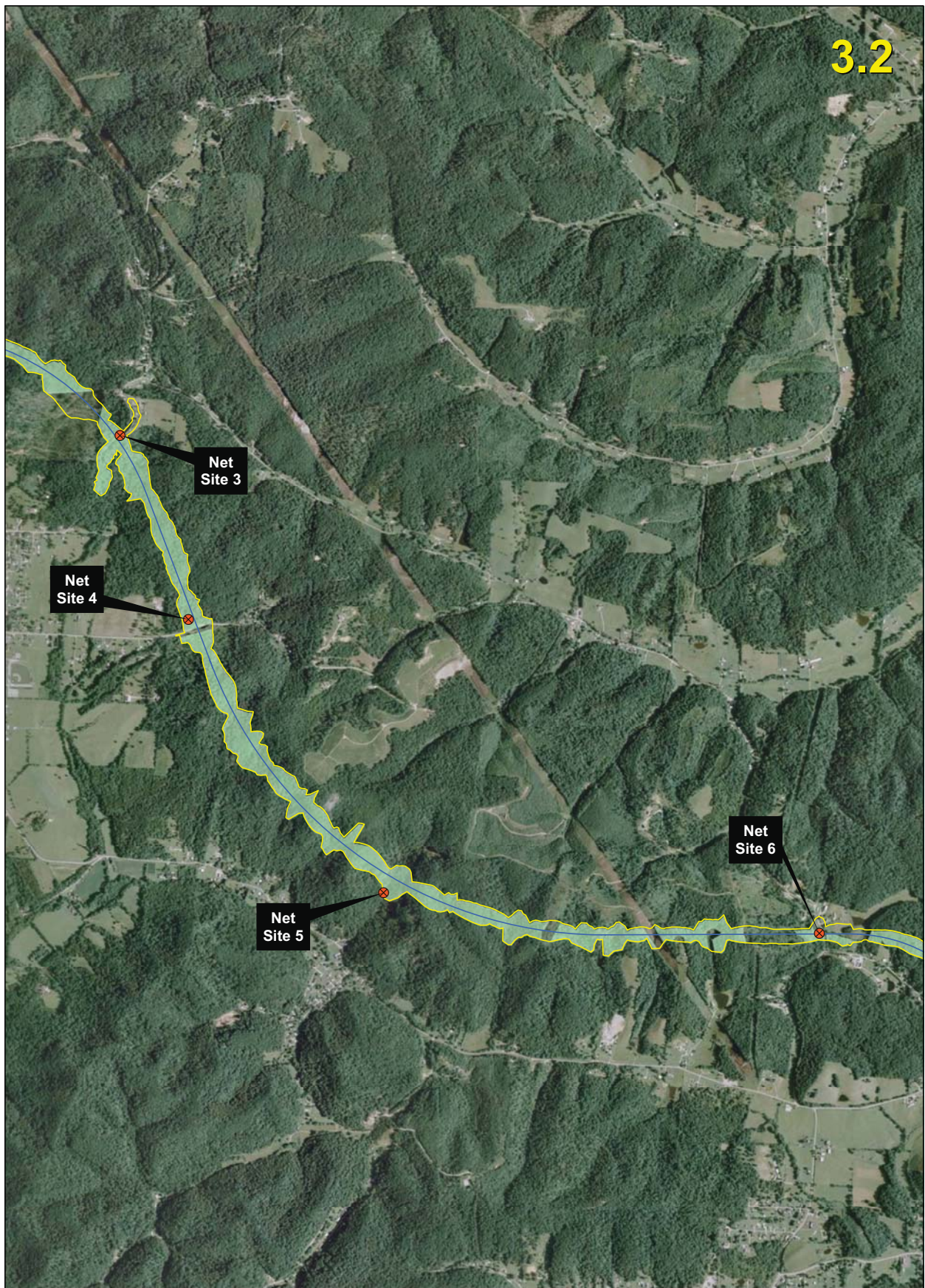


Figure 3.2.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet

Aerial imagery courtesy of NAIP 2009.





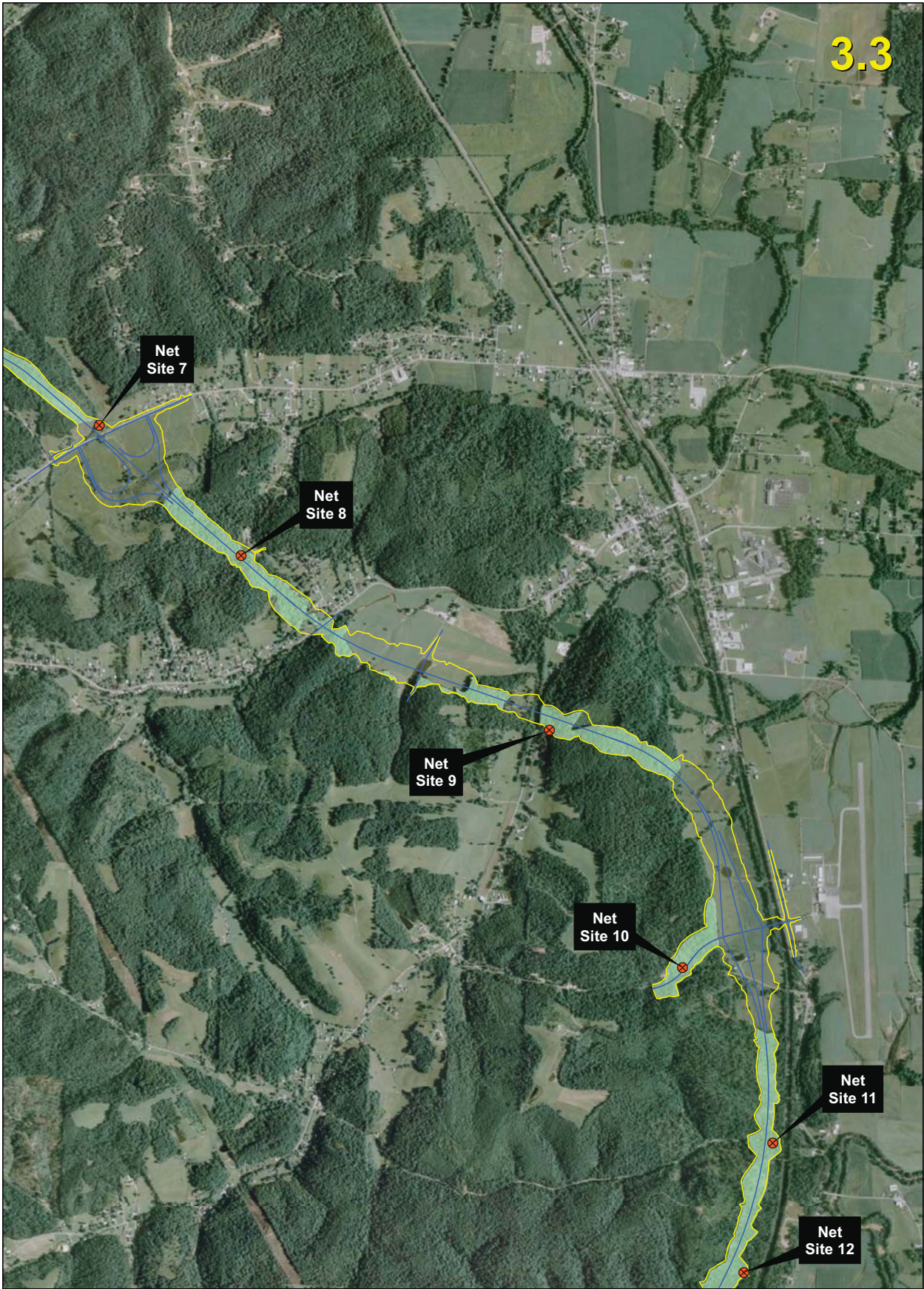


Figure 3.3.  
Site Map showing Forested Areas and Net Sites within Construction Limits.  
SCI - 823 - 0.00/6.81  
Portsmouth Bypass Project (PID 19415).

- Net Site
- Centerline
- Construction Limits
- Forested Areas

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.







Figure 3.4.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

Net Site	Centerline	Forested Areas
	Construction Limits	

1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.

"Excellence in Ecological Monitoring"





3.5

Net Site 19

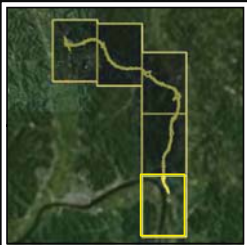


Figure 3.5.  
 Site Map showing Forested Areas and Net Sites within Construction Limits.  
 SCI - 823 - 0.00/6.81  
 Portsmouth Bypass Project (PID 19415).

- ⊗ Net Site
- Centerline
- Forested Areas
- Construction Limits



1,400 700 0 1,400 Feet      400 200 0 400 Meters

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet      Aerial imagery courtesy of NAIP 2009.





# Tables

Table 1. Description of Proposed Netting Sites for the ODOT SCI-823-0.00/6.81 (PID 19145), Scioto County, Ohio Indiana Bat Mist Net Survey.

Site #	Location	Picture #	Vegetation	Features	Access
1	-82.99718404W, 38.891956N	1-3	Second growth forest with no understory and thick herbaceous layer; shagbark hickories, black cherry, silver maple.	Closed canopy openings from continuous forest to agricultural field and roadway. Many shagbark hickories in forest area adjacent to openings.	East from Fairgrounds Road
2	-82.97291550W, 38.896737N	4-5	Second growth forest with medial understory, green ash, sugar maple, and white oak.	Closed canopy old road intersects intermittent stream within forest.	Northeast from bend on Kinsler Road
3	-82.95347439W, 38.892884N	6-7	Second growth forest with thick understory; black locust, sugar maple, tuliptree.	Branching old road corridor with partial closed canopy in upland area parallel to roadway leading from forest to agricultural/residential area.	Northwest parallel to Rose Hill Road
4	-82.94905988W, 38.883696N	8-10	Second growth forest with medial understory, white ash, sugar maple, and shagbark hickory.	Old road corridor with closed canopy leading from forest to roadway with intermittent stream running parallel; shagbark hickories and standing dead adjacent to corridor.	North of Morris Lane
5	-82.93654426W, 38.870109N	11-13	Second growth forest with medial understory, green ash, sugar maple, and black locust. Partially select cut.	Wide timber road corridor with partial clearing and several closed canopy areas; road intersects intermittent stream and has many standing dead.	Timber road extending north from 1249 Lucasville Minford Road
6	-82.90875784W, 38.868183N	14-16	Second growth forest with medial understory, tuliptree, sugar maple, and black locust. Small emergent wetland areas in roadbed.	Old road corridor with closed canopy from forest to abandoned structure with slight guano. Many small wetlands developed in tire ruts, some small open water.	Old road extending southwest from 679 Blues Run Road
7	-82.8959503W, 38.863968N	17-18	Old field with wide second growth forest row surrounding stream to the west and pine stand to the east leading to agricultural field.	Funnel between farm field and old field to stream water source. Closed canopy openings in tree lines.	Small turn-off at 4139 Lucasville Minford Road
8	-82.88693079W, 38.857525N	19-21	Second growth forest with medial understory, sugar maple, white oak, and black locust.	ATV path runs parallel to stream corridor from residential yard into closed canopy forest. Some small wetlands areas adjacent to intermittent stream.	Southwest of driveway at 319 Oliver Road
9	-82.8672873W, 38.848867N	22-24	Second growth forest with sparse understory, white oak, sycamore, and silver maple. Sparse emergent wetland depressions.	Valley closed canopy stream corridor from forest to road. Several small wetlands, a few standing dead, and adjacent to abandoned garage with guano.	North of 6050 Swauger Valley Road
10	-82.85875392W, 38.837084N	25-27	Emergent wetland with second growth forest surrounding; black locust sycamore, sugar maple, and standing dead elm.	Central open wetland with several closed canopy ATV and old road corridors leading to wetland from forest. Several standing dead.	At 850 Shumway Hollow Road, north of roadway
11	-82.85297203W, 38.828371N	28-30	Second growth forest with medial understory; red maple, white oak, sycamore.	Closed canopy abandoned roadway with stream in center and ATV closed canopy paths stemming from it. A few standing dead.	West from SR 335 on Blake Hollow Road, under RR tunnel
12	-82.85478723W, 38.821908N	31-33	Second growth forest with medial understory; sycamore, silver maple, tuliptree, and some standing dead. Open water pond adjacent.	Closed Canopy old road corridor with several standing dead and a pond in the valley adjacent to corridor.	West under RR tunnel at 6117 SR 335



Table 1. Description of Proposed Netting Sites for the ODOT SCI-823-0.00/6.81 (PID 19145), Scioto County, Ohio Indiana Bat Mist Net Survey.

Site #	Location	Picture #	Vegetation	Features	Access
13	-82.85763338W, 38.816956N	34-36	Second growth forest with medial understory extends into a tree row between agricultural fields; silver maple, sycamore, white oak.	Closed canopy old road opens into open fields. In forest road intersects wide intermittent stream corridor. A few standing dead.	Old road under RR tunnel across from 5400 SR 335
14	-82.86196386W, 38.801159N	37-39	Mature forest with thick understory; silver maple, sycamore, box elder, standing dead elm.	Closed canopy intermittent stream corridor with low, wide emergent banks leading through forest to the main stream corridor.	Access road west of 4155 Stewart Ave off Cortell Road
15	-82.86230691W, 38.800329N	40-42	Mature forest with medial understory; silver maple, sycamore, box elder, standing dead elm. Adjacent to agricultural field.	Very wide perennial stream corridor with a closed canopy and several openings/funnels to and from an agricultural field.	Access road west of 4155 Stewart Ave off Cortell Road
16	-82.86533255W, 38.790128N	43-45	Second growth forest with thick shrub understory; sugar maple, tuliptree, and many standing dead with sun exposure.	ATV path through thick understory woods; mainly closed canopy corridor; abandoned old home structure with faint guano and standing dead.	East of driveway at end of Hunts Point Lane
17	-82.87259463W, 38.772265N	46-48	Second growth forest with sparse understory; seep wetland on slope and intermittent stream.	Forested stream valley adjacent to residential housing, forest has two openings/funnels in stream corridor. A seep wetland occurs on the slope adjacent to stream.	Southwest of the cul-de-sac at the end of Highland Avenue
18	-82.87284931W, 38.757229N	49-51	Mature deciduous and pine forest with medial understory; sugar maple, white oak, white ash.	Closed canopy old road runs parallel with intermittent stream and eventually intersects. Many puddles in roadway.	North of Poplar Drive
19	-82.87401466W, 38.755406N	52-54	Mature deciduous and pine forest with medial understory; sugar maple, white oak, white pine.	Old road with closed canopy leads to created wetland with open water, then roads continues into forest northwest.	North of Hartladge Drive

# Net Site Photographs





Photographs 1 and 2. Net Site 1 showing closed canopy exit from woods to agricultural field and Fairgrounds Road.



Photograph 4. Net Site 2 closed canopy road corridor crosses stream.



Photograph 3. Net Site 1 Shagbark Hickories.



Photograph 4. Net Site 2 closed canopy road corridor crosses stream.

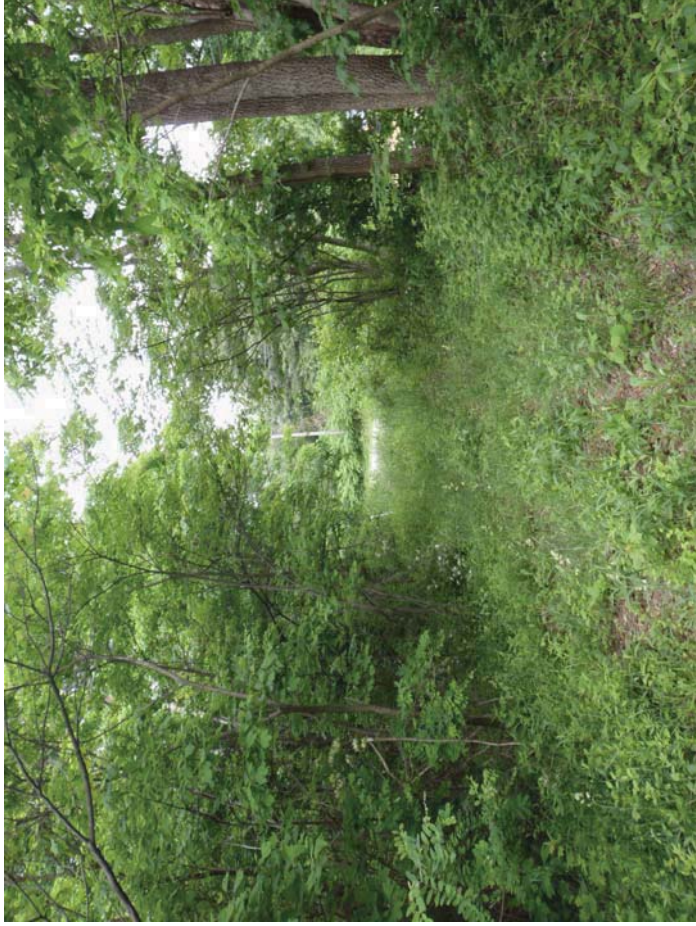




Photograph 5. Net Site 2 stream corridor.



Photograph 6. Net Site 3 upland old road parallel to Rose Hill Road.



Photograph 7. Net Site 3 upland closed canopy to Rose Hill Road.



Photograph 8. Net Site 4 corridor with puddles from Morrison Road.





Photograph 9. Net Site 4 corridor with puddles to Morrison Road.



Photograph 10. Net Site 4 Shagbark Hickories adjacent to corridor.



Photograph 11. Net Site 5 logging road with standing dead in sun.



Photograph 12. Net Site 5 corridor to driveway of Lucasville-Minford Road.

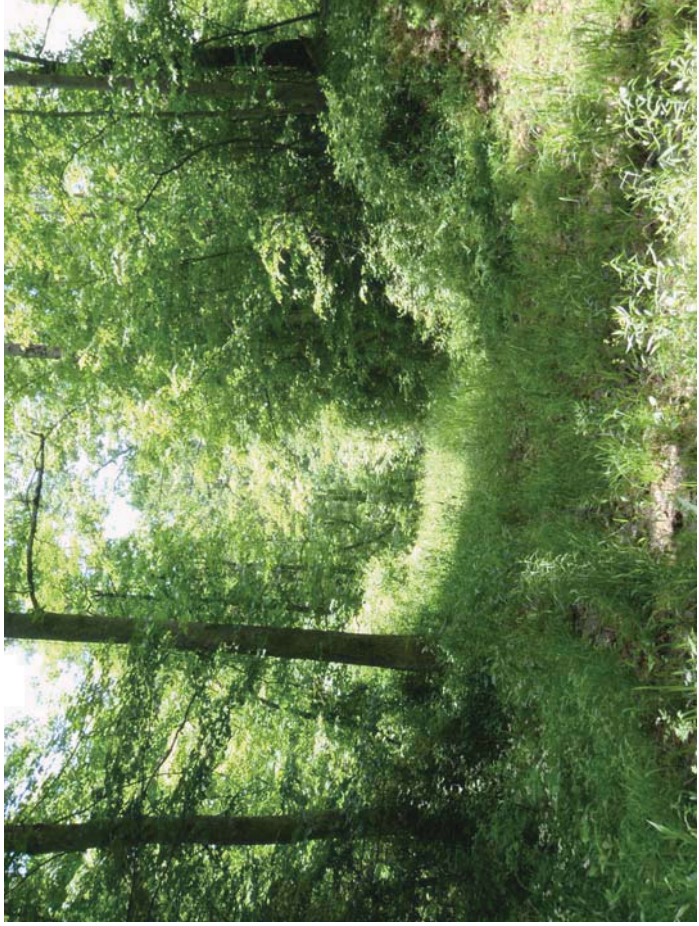




Photograph 13. Net Site 5 logging road intersects stream.



Photograph 14. Net Site 6 corridor to Blue Run Road.



Photograph 15. Net Site 6 corridor from Blue Run Road.



Photograph 16. Net Site 6 small wetlands through corridor.

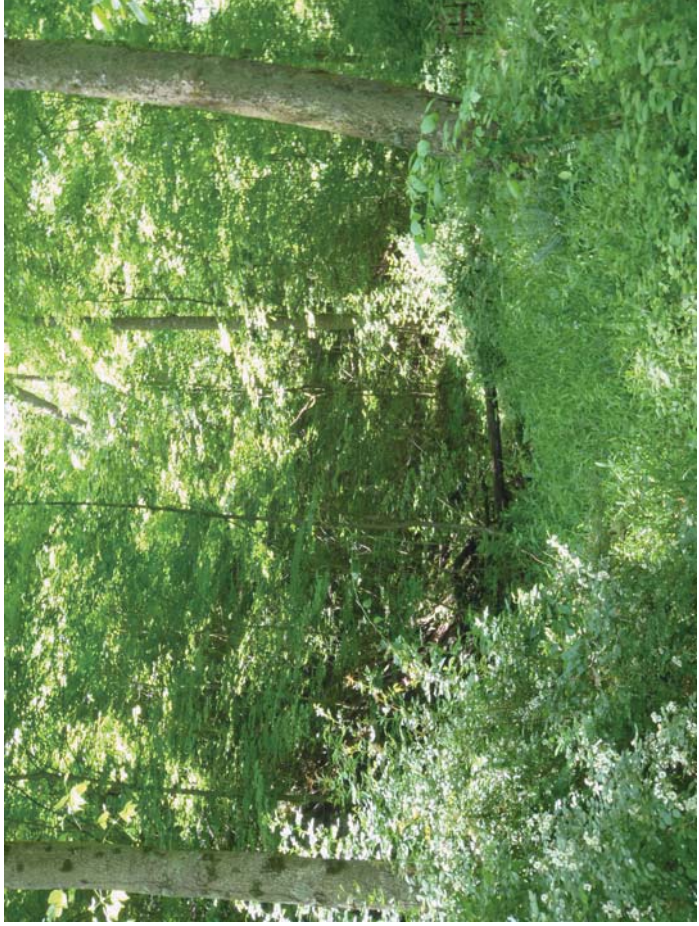




Photograph 17. Net Site 7 stream corridor.



Photograph 18. Net Site 7 corridor funnel between fields.

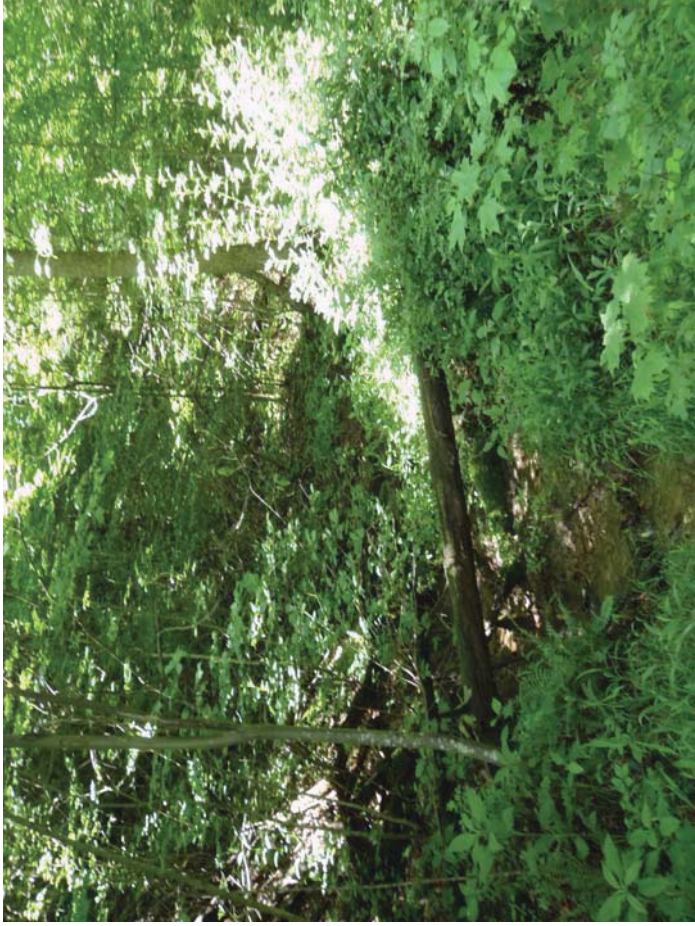


Photograph 19. Net Site 8 closed canopy corridor from Oliver Road.



Photograph 20. Net Site 8 closed canopy corridor to Oliver Road.





Photograph 21. Net Site 8 stream within corridor.



Photograph 22. Net Site 9 valley corridor between stream and slope.



Photograph 23. Net Site 9 stream in corridor.



Photograph 24. Net Site 9 old garage adjacent to corridor with guano.





Photographs 25 and 26. Net Site 10 old road and ATV trails to central open wetland off Shumway Hollow Road.



Photograph 27. Net Site 10 Central wetland with standing dead.



Photograph 28. Net Site 11 abandoned Blake Hollow Road corridor.





Photograph 29. Net Site 11 stream corridor next to Blake Hollow Road.



Photograph 30. Net Site 11 ATV trail off Blake Hollow to stream.



Photograph 31. Net Site 12 rail road maintenance road to SR 335.



Photograph 32. Net Site 12 rail road maintenance road from SR 335.





Photograph 33. Net Site 12 pond adjacent to corridor.



Photograph 34. Net Site 13 old road corridor intersects stream.

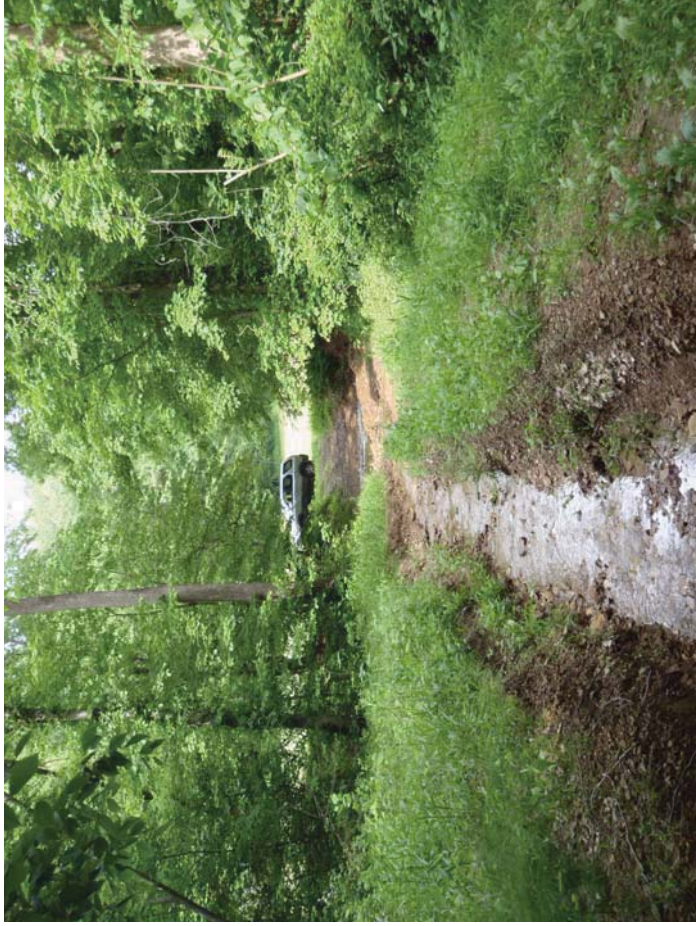


Photograph 35. Net Site 13 road becomes closed canopy.



Photograph 36. Net Site 13 stream corridor next to road.





Photograph 37. Net Site 14 closed canopy stream and ATV corridor.



Photograph 38. Net Site 14 stream corridor.

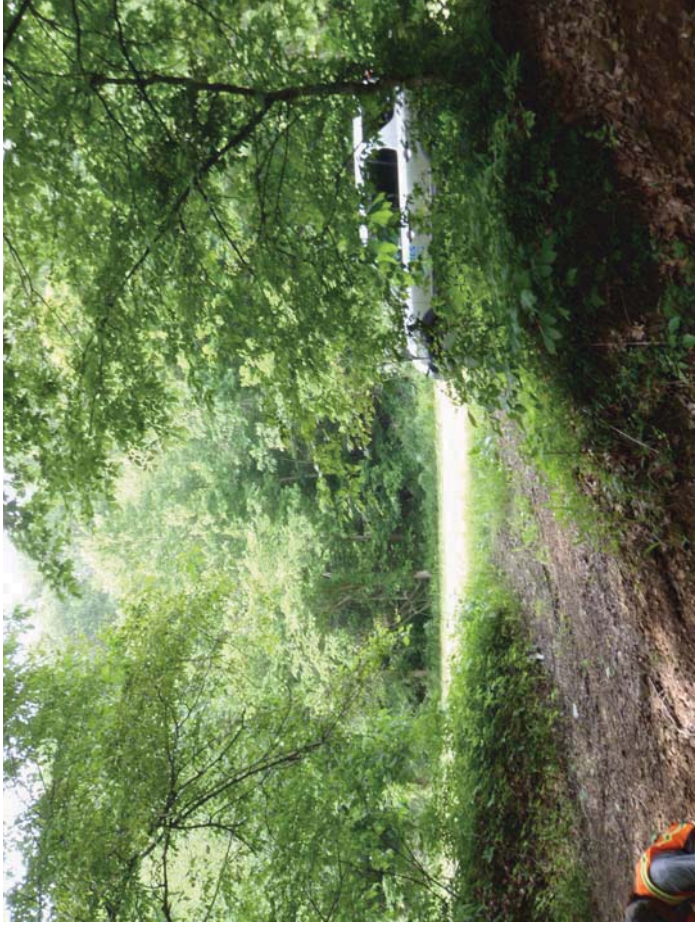


Photograph 39. Net Site 14 corridor stream intersects main creek.



Photograph 40. Net Site 15 low wide creek with closed canopy.





Photograph 41. Net Site 15 funnel from field to stream corridor.



Photograph 42. Net Site 15 stream closed canopy corridor.



Photograph 43. Net Site 16 closed canopy ATV trail.



Photograph 44. Net Site 16 standing dead adjacent to corridor.





Photograph 45. Net Site 16 abandoned structure adjacent to corridor.



Photograph 46. Net Site 17 entrance to stream corridor from residential area.



Photograph 47. Net Site 17 entrance to stream corridor.



Photograph 48. Net Site 17 stream corridor.





Photograph 49. Net Site 18 Stream intersects old road corridor.



Photograph 50. Net Site 18 puddles on old road corridor.



Photograph 51. Net Site 18 stream running adjacent to old road corridor.



Photograph 52. Net Site 19 upland corridor leading to wetland.





Photograph 53. Net Site 19 wetland at the end of upland corridor.



Photograph 54. Net Site 19 corridor leading to wetland.



# USFWS Federal Permit



### FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

SKYBAX ECOLOGICAL SERVICES, LLC  
107 VANWINKLE GROVE  
BEREA, KY 40403  
U.S.A.

2. AUTHORITY-STATUTES  
16 USC 1539(a)  
16 USC 1533(d)

REGULATIONS  
50 CFR 17.22  
50 CFR 17.32  
50 CFR 17.62 & 17.72  
50 CFR 13

3. NUMBER  
**TE156392-1** AMENDMENT

4. RENEWABLE	5. MAY COPY
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> YES
<input type="checkbox"/> NO	<input type="checkbox"/> NO

6. EFFECTIVE  
08/24/2010

7. EXPIRES  
07/31/2012

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

GARY W. LIBBY  
PRINCIPAL ECOLOGIST

9. TYPE OF PERMIT

NATIVE ENDANGERED & THREATENED SP. RECOVERY - E & T  
WILDLIFE; E & T PLANTS

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

**Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee  
Indiana, Ohio, Michigan, Minnesota, Illinois, Wisconsin, Iowa, Missouri, Puerto Rico, Virgin Islands  
Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia, Rhode Island**

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.
- C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

C. CONTINUED: TRAINED ASSISTANTS NOT NAMED ON THIS PERMIT MAY WORK ON PERMITTED BAT ACTIVITIES UNDER THE DIRECT AND ON-SITE SUPERVISION OF THE INDIVIDUALS NAMED ABOVE. HOWEVER, TRAINED ASSISTANTS MAY NOT WORK INDEPENDENTLY AT A SITE. TRAINED ASSISTANTS ARE INDIVIDUALS WHO ARE CONSIDERED QUALIFIED BY THE PERMITTED BIOLOGIST(S) TO SELECT SAMPLING SITES, DEPLOY SAMPLING EQUIPMENT AND NETS, AND HANDLE BATS IN THE FIELD AS STATED IN CONDITION F, BELOW.

D. PERMITTEE IS AUTHORIZED TO TAKE (ACOUSTICAL MONITORING, ENTER HIBERNACULA OR MATERNITY ROOST CAVES, SALVAGE DEAD BATS, CAPTURE WITH MIST NETS OR HARP TRAPS, HANDLE, IDENTIFY, COLLECT HAIR SAMPLES, BAND, TRANSMITTER, LIGHT-TAG, WING-PUNCH, AND SELECTIVELY EUTHANIZE FOR WHITE NOSE SYNDROME TESTING ) INDIANA BATS (MYOTIS SODALIS), GRAY BATS (MYOTIS GRISESCENS) AND VIRGINIA BIG-EARED BATS (CORYNORHINUS TOWNSENDII VIRGINIANUS) WHILE CONDUCTING PRESENCE/ABSENCE SURVEYS, STUDIES TO DOCUMENT HABITAT USE, AND POPULATION MONITORING, AS CONDITIONED BELOW.

I. FOR ALL ACTIVITIES CONSIDERED WITHIN THIS PERMIT, THE **DISINFECTION PROTOCOL FOR BAT FIELD STUDIES** SHALL BE FOLLOWED. YOU ARE REQUIRED TO USE THE MOST RECENT PROTOCOLS AVAILABLE. YOU SHALL CONTACT THE SERVICE'S OFFICE LISTED IN M., BELOW FOR A COPY OF THE PROTOCOL EACH YEAR AND TO DETERMINE IF ANY SITE SPECIFIC MODIFICATIONS ARE REQUIRED.

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

REPORTS WILL BE PROVIDED TO THE U.S. FISH AND WILDLIFE SERVICE OFFICES APPEARING IN CONDITIONS L, M AND N OF THIS PERMIT. REPORTING CONTENT, FORMAT, SUFFICIENCY AND FREQUENCY ARE OUTLINED IN

ISSUED BY

TITLE

*Adm*  
CHIEF, PLANNING & PERMITTING, ECOLOGICAL SERVICES

DATE

08/24/2010



2. UPON DETERMINATION THAT ENDANGERED BATS ARE PRESENT, THE PERMITEE SHALL NOTIFY THE SERVICE FIELD OFFICE IN THE STATE IN WHICH THE SITE IS LOCATED AND THE CORRESPONDING REGIONAL OFFICE.
3. DEAD BATS MAY BE SALVAGED AND IDENTIFIED (INCLUDING PHOTOGRAPHIC DOCUMENTATION), AND SENT TO THE APPROPRIATE LAB FACILITES FOR THE PURPOSES OF EVALUATING IMPACTS FROM THE CAUSE OF DEATH (WHITE-NOSE SYNDROME, WIND ENERGY OPERATIONS, ETC.). ANY DISCOVERY OF FEDERALLY LISTED SPECIMENS SHALL BE REPORTED, WITHIN 48 HOURS OF DISCOVERY, TO THE USFWS FIELD SUPERVISOR IN THE STATE IN WHICH THE SALVAGE OCCURS. YOUR REPORT MUST BE IN WRITING AND MUST INCLUDE INFORMATION ON THE SPECIES, SEX, LOCATION, DATE, TIME, AND ANY OBSERVATIONS ON THE CONDITION OF THE SPECIMEN. SPECIMENS MUST BE CHILLED AND SURRENDERED TO THE OFFICE IN CONDITION M., BELOW, UNLESS OTHERWISE INSTRUCTED BY THAT OFFICE.
4. BATS MAY BE CAPTURED WITH MIST NETS AND HARP TRAPS. THE MONITORING INTERVAL FOR MIST NETS MAY NOT EXCEED 10 MINUTES. BATS MAY BE CAPTURED WITH HARP TRAPS ONLY WITH WRITTEN CONCURRENCE FROM THE FIELD SUPERVISOR IN THE STATE IN WHICH TRAPPING IS PROPOSED. HARP TRAPS MUST BE CONTINUALLY MONITORED. CAPTURED BATS MAY NOT BE HELD FOR MORE THAN 30 MINUTES, UNLESS INJURED. FOR ESA COMPLIANCE PROJECTS INVOLVING SURVEY WORK FOR THE INDIANA BAT IN KENTUCKY, INDIVIDUALS REFERENCED IN CONDITION C. ABOVE MUST FOLLOW THE INDIANA BAT SURVEY GUIDANCE ISSUED BY THE U.S. FISH AND WILDLIFE SERVICE, KENTUCKY FIELD OFFICE AND KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES (ATTACHED). FOR INDIANA BAT SURVEY WORK CONDUCTED IN KENTUCKY, THIS GUIDANCE SUPERCEDES OTHER CONDITIONS LISTED IN THIS PERMIT; THE GUIDANCE MUST BE CURRENT FOR THE YEAR IN WHICH THE SURVEY IS CONDUCTED/REQUIRED.
5. PERMITTEES MAY CARRY OUT NON-INTRUSIVE MEASUREMENTS ON CAPTURED BATS.
6. UNIQUELY NUMBERED, MODERN, LIPPED, CORRECTLY SIZED ALUMINUM BAT BANDS SHALL BE USED. SPLIT-RING, PLASTIC BANDS SHALL BE AVOIDED.
7. PRIOR TO CONDUCTING ACTIVITIES IN NORTH CAROLINA, LOUISIANA, ARKANSAS AND TENNESSEE (FOR TENNESSEE-ONLY WHEN ENTRY OF CAVES IS ANTICIPATED), WRITTEN APPROVAL SHALL BE RECEIVED FROM THE PERMIT COORDINATOR LISTED IN CONDITION N1., BELOW:
8. PRIOR TO CONDUCTING ACTIVITIES IN IOWA, MISSOURI, ILLINOIS, INDIANA, WISCONSIN, MICHIGAN, AND OHIO, WRITTEN APPROVAL SHALL BE RECEIVED FROM THE PERMIT COORDINATOR LISTED IN CONDITION N2., BELOW:
9. PRIOR TO CONDUCTING ACTIVITIES IN WEST VIRGINIA, MASSACHUSETTS, VERMONT, RHODE ISLAND, NEW HAMPSHIRE, AND VIRGINIA, WRITTEN APPROVAL SHALL BE RECEIVED FROM THE PERMITS COORDINATOR LISTED IN CONDITION N3., BELOW.
10. PRIOR TO CONDUCTING ACTIVITIES IN OKLAHOMA, WRITTEN APPROVAL SHALL BE RECEIVED FROM THE PERMITS COORDINATOR LISTED IN CONDITION N4., BELOW.
11. PRIOR TO CONDUCTING ACTIVITIES IN KANSAS, WRITTEN APPROVAL SHALL BE RECEIVED FROM THE PERMITS COORDINATOR LISTED IN CONDITION N5., BELOW.
12. COPIES OF ALL REQUEST AND APPROVAL LETTERS, WITH THE PERMIT NUMBER INCLUDED, SHALL BE FORWARDED TO THE PERMITS COORDINATOR LISTED IN CONDITION L., BELOW.
13. RADIO TRANSMITTERS (TOTAL PACKAGE WEIGHT NOT TO EXCEED 7.5 PERCENT (5 PERCENT RECOMMENDED) OF BODY WEIGHT OR 0.45 GRAM, WHICHEVER IS LESS) MAY BE ATTACHED TO BATS DURING THE SPRING, SUMMER, AND FALL ROOSTING PERIODS BY NONTOXIC SKIN BOND ADHESIVE. BATS CARRYING TRANSMITTERS SHOULD BE MONITORED DAILY FOR AT LEAST FIVE DAYS, OR UNTIL THE TRANSMITTER FALLS OFF, WHICHEVER OCCURS FIRST. RADIO TRANSMITTERS SHALL NOT BE PLACED ON NEWLY VOLANT JUVENILES WITHOUT PRIOR APPROVAL OF THE APPROPRIATE FIELD OFFICE.
14. SURVEYS OF GRAY BAT AND/OR VIRGINIA BIG-EARED BAT MATERNITY ROOSTS AND THEIR OTHER KNOWN SUMMER ROOST SITES SHALL BE CONDUCTED BY OBSERVING THE BATS WITH NIGHT VISION EQUIPMENT AND INFRARED LIGHT SOURCE AS THEY EMERGE FROM THEIR CAVES AND MINE ROOSTS. AT



SITES THAT ARE NOT CURRENTLY KNOWN TO SUPPORT THESE SPECIES THE ACCEPTED METHOD TO DETERMINE IF THEY ARE PRESENT IS TO CAREFULLY AND SLOWLY ENTER THE POTENTIAL ROOST SITE AND VISUALLY CHECK FOR EVIDENCE OF THE PRESENCE OF BATS, SUCH AS SIGNIFICANT QUANTITIES OF GUANO, A STRONG SMELL OF GUANO OR THE AUDIBLE SOUNDS PRODUCED BY BATS ROOSTING AT THE SITE. ONCE ANY OF THE INDICATORS ARE OBSERVED, SURVEY TEAM MEMBERS SHALL EXIT THE ROOST SITE AND MAKE FURTHER OBSERVATIONS FROM OUTSIDE THE ENTRANCE TO THE ROOST. ALL FURTHER OBSERVATIONS (WITH AQUOSTICS AND/OR NIGHT VISION EQUIPMENT AND A SUPPLEMENTAL INFRARED LIGHT SOURCE) SHALL BE MADE FROM THE CAVE OR MINE ENTRANCE DURING THE EVENING EMERGENCE. FOR CAVE ENTRY ACTIVITIES, WRITTEN APPROVAL IS REQUIRED FROM THE U.S. FISH AND WILDLIFE SERVICE FIELD SUPERVISOR FOR THE STATE IN WHICH THE ACTIVITIES ARE PROPOSED.

15. AT SOME SITES, ESPECIALLY ABANDONED MINES, IT IS NOT ADVISABLE TO ENTER A POTENTIAL ROOST BECAUSE OF THE PHYSICAL HAZARDS PRESENT IN THE SITE. ACOUSTICAL MONITORING, MIST NETS, OR HARP TRAPS MAY BE USED OUTSIDE THE ENTRANCE OF THESE SITES TO DETERMINE THE IDENTITY, SEX AND REPRODUCTIVE CONDITION OF BATS USING THE SITE. NETS AND HARP TRAPS SHALL BE CHECKED REGULARLY AND THE MONITORING INTERVAL FOR MIST NETS MAY NOT EXCEED 10 MINUTES. CAPTURED BATS SHALL NOT BE HELD FOR MORE THAN 30 MINUTES, UNLESS INJURED. DATA SHALL BE RECORDED FOR ALL BATS REMOVED FROM THE NET AND/OR TRAP. THESE DATA SHALL INCLUDE SPECIES, SEX, REPRODUCTIVE CONDITION, AND PHYSICAL MEASUREMENTS SUCH AS FOREARM LENGTH, FOOT LENGTH, PRESENCE/ABSENCE OF A KEEL ON THE CALCAR, ETC. BATS MAY BE PHOTOGRAPHED BEFORE RELEASE TO DOCUMENT THEIR PRESENCE AT THE ROOST SITE.
16. IF IT IS DETERMINED TO BE NECESSARY TO DOCUMENT REPRODUCTIVE LEVELS WITHIN A GRAY BAT OR VIRGINIA BIG-EARED BAT MATERNITY ROOST THE ROOST MAY BE ENTERED AFTER THE EVENING EMERGENCE OF ADULTS HAS BEEN COMPLETED. ENTRY SHALL BE LIMITED TO SMALLEST NUMBER OF PEOPLE THAT CAN SAFELY ACCOMPLISH THE SURVEY AND ALL SURVEY TEAM MEMBERS WILL EXIT THE ROOST SITE PRIOR TO THE RETURN OF ADULTS TO THE ROOST. THIS ACTIVITY REQUIRES WRITTEN APPROVAL FROM THE U.S. FISH AND WILDLIFE SERVICE FIELD SUPERVISOR FOR THE STATE IN WHICH ACTIVITIES ARE PROPOSED.
17. SURVEYS CONDUCTED DURING THE WINTER HIBERNATION SEASON SHALL FOLLOW THE GUIDELINES ESTABLISHED IN THE RECOVERY PLANS FOR THESE SPECIES. BATS MAY BE HANDLED DURING WINTER SURVEYS IN ORDER TO COLLECT BAND INFORMATION AND CONFIRM THE IDENTIFICATION OF LISTED SPECIES. DETAILED PHOTOGRAPHS MAY BE TAKEN TO DOCUMENT THE PRESENCE OF LISTED SPECIES. ONLY ONE TRIP TO THE HIBERNATION AREA OF EACH CAVE OR ABANDONED MINE IS AUTHORIZED DURING THE HIBERNATION SEASON. INDIANA BAT, GRAY BAT, AND VIRGINIA BIG-EARED BAT HIBERNATION SITES SHALL ONLY BE SURVEYED ONCE EVERY TWO YEARS. THIS ACTIVITY REQUIRES WRITTEN APPROVAL FROM THE U.S. FISH AND WILDLIFE SERVICE FIELD SUPERVISOR FOR THE STATE IN WHICH ACTIVITIES ARE PROPOSED.
18. WHEN CONDUCTING INDIANA BAT SURVEYS, THE CURRENT MINIMUM SURVEY GUIDANCE CONTAINED IN THE 2007 DRAFT INDIANA BAT RECOVERY PLAN SHALL BE FOLLOWED; HOWEVER, THE PERMITTEE MUST ADHERE TO ANY ADDITIONAL, SPECIFIC GUIDANCE DEVELOPED FOR THE STATE IN WHICH THEIR PROJECT IS LOCATED. DEVIATION FROM THESE GUIDELINES IS NOT AUTHORIZED VIA THIS PERMIT AUTHORIZATION. HOWEVER, IT IS ENCOURAGED THAT ECHOLOCATION DETECTION EQUIPMENT BE USED TO SUPPLEMENT THE INFORMATION GAINED DURING MIST NET SURVEYS. AT THIS TIME ECHOLOCATION DETECTION CAN NOT BE USED TO POSITIVELY IDENTIFY ALL SPECIES OF BATS THAT MAY BE ENCOUNTERED DURING SUMMER SURVEYS AND THEREFORE IT CAN NOT BE USED TO POSITIVELY ESTABLISH PRESENCE WITHIN THE SURVEY AREA. NO TRAPPING ACTIVITIES SHALL OCCUR WITHIN 20 METERS OF AN INDIANA BAT MATERNITY ROOST SITE, UNLESS PERMITTEE RECEIVES WRITTEN APPROVAL FROM THE U.S. FISH AND WILDLIFE SERVICE FIELD SUPERVISOR FOR THE STATE IN WHICH ACTIVITIES ARE PROPOSED.
19. FECAL MATERIAL MAY BE COLLECTED AFTER A BAT IS CAPTURED BY PLACING IT IN A CLOTH BAG FOR A SHORT TIME (NOT TO EXCEED 30 MINUTES) BEFORE IT IS CAREFULLY EXAMINED AND KEY PHYSICAL CHARACTERS DOCUMENTED. FECAL MATERIAL CAN THEN BE REMOVED FROM THE BAG OR COLLECTED OFF THE FUR OF THE BAT.
20. LIGHT TAGS MAY BE ATTACHED TO THE DORSAL FUR OF A BAT WITH A NONTOXIC ADHESIVE THAT WILL QUICKLY DEGRADE AND LOOSE ITS ADHESIVE QUALITIES. THE SMALLEST AND LIGHTEST CYALUME CAPSULES THAT WILL MEET THE PROJECT OBJECTIVES SHALL BE USED.



21. WING PUNCHES MAY BE TAKEN IN SPRING/SUMMER BY PUNCHING A HOLE IN THE WING MEMBRANE, AVOIDING BONES AND MAJOR BLOOD VESSELS. A SEPARATE BIOPSY TOOL MUST BE USED FOR EACH INDIVIDUAL LISTED BAT.
22. UNDER THE FOLLOWING SPECIFIC CONDITIONS RELATED TO WHITE-NOSE SYNDROME, LISTED BATS MAY BE EUTHANIZED: (A) THE SITE OF COLLECTION HAS NOT BEEN PREVIOUSLY DEMONSTRATED TO CONTAIN WNS-INFECTION OR WNS-INFECTED BATS (LISTED AND/OR NON-LISTED), (B) NO OTHER NON-LISTED BATS ARE PRESENT THAT ALSO SHOW SYMPTOMS OF WNS, AND (C) NO OTHER METHOD OF WNS SAMPLE COLLECTION IS POSSIBLE. IN ADDITION, ONLY ONE LISTED BAT OF ANY SPECIES WILL BE COLLECTED AT A SINGLE ROOST SITE AND ONLY IF CRITERIA (A), (B), AND (C) ARE MET AND THOSE CIRCUMSTANCES DOCUMENTED BY THE PERMITTEE IN WRITING TO THE SERVICE.

WHEN MORE THAN ONE LISTED BAT SPECIES IS PRESENT WITHIN A SITE AND SHOWING SYMPTOMS OF WNS, THE FOLLOWING ORDER SHOULD BE USED IN SELECTING WHICH INDIVIDUAL TO SELECTIVELY EUTHANIZE FOR WNS TESTING: GRAY BAT BEFORE INDIANA BAT BEFORE VIRGINIA BIG-EARED BAT BEFORE OZARK BIG-EARED BAT.

23. THE ATTACHED LETTER OF INSTRUCTION, BAT CAVE ADVISORY, AND DISINFECTION PROTOCOL - AND ANY SUBSEQUENT VERSIONS OF THESE ATTACHMENTS SHALL BE FOLLOWED.

E. NO BAT INJURY OR MORTALITY IS ANTICIPATED AS A RESULT OF THE IMPLEMENTATION OF THE AUTHORIZED ACTIVITIES, EXCEPT AS EXPLICITLY STATED IN CONDITION D22 ABOVE. IF ANY INJURY OR MORTALITY DOES OCCUR, THE PERMITTEE SHALL IMMEDIATELY NOTIFY THE APPROPRIATE U.S. FISH AND WILDLIFE SERVICE OFFICES NOTED IN CONDITION M., BELOW. NOTIFICATION SHALL ALSO BE MADE WITHIN 24 HOURS TO THE REGIONAL PERMITS BIOLOGIST, AT THE ADDRESS AND TELEPHONE NUMBER NOTED IN CONDITION L., BELOW. BASED ON DISCUSSIONS WITH THESE OFFICES, A DECISION WILL BE MADE AS TO WHETHER ANY OF THE AUTHORIZED ACTIVITIES CAN CONTINUE. DECISIONS WILL ALSO BE MADE CONCERNING THE DISPOSITION OF ANY DEAD OR INJURED BATS. THE PERMITTEE SHALL PROVIDE A WRITTEN STATEMENT TO THE U.S. FISH AND WILDLIFE SERVICE OFFICES NOTED IN CONDITIONS L. AND M., BELOW, WHICH DOCUMENTS THE CAUSE OF THE INJURY/MORTALITY, AND IDENTIFIES THE REMEDIAL MEASURES EMPLOYED BY THE PERMITTEE TO ELIMINATE FUTURE MORTALITY/INJURY EVENTS. THE FINAL DECISION ON REMEDIAL MEASURES RESTS WITH THE U.S. FISH AND WILDLIFE SERVICE.

F. THIS PERMIT IS NON-TRANSFERABLE, BUT OTHER QUALIFIED PERSONNEL MAY ASSIST IN THE AUTHORIZED ACTIVITIES, SUBJECT TO THE REQUIREMENTS OF §13.25. WHEN ANY SUCH ASSISTANCE IS TO BE PROVIDED, THOSE DESIGNATIONS ARE TO BE MADE BY LETTER FROM THE PERMITTEE TO EACH AGENT. THE LETTER(S) MUST IDENTIFY THE SCOPE AND DURATION OF THE ASSISTANCE TO THE PERMITTEE. COPIES OF SUCH LETTERS WILL BE PROVIDED IMMEDIATELY TO THE U.S. FISH AND WILDLIFE SERVICE'S REPORTING ADDRESSES LISTED IN CONDITIONS L, M. AND N., BELOW, AS APPROPRIATE. THE PERMITTEE MUST BE PRESENT ON SITE AT ALL TIMES WHILE ACTIVITIES AUTHORIZED UNDER THIS PERMIT ARE BEING CARRIED OUT.

G. PERMITTEE MUST CARRY A COPY OF THIS PERMIT AT ALL TIMES WHEN CONDUCTING THE AUTHORIZED ACTIVITIES. SHIPMENTS OF COLLECTED BIOLOGICAL MATERIALS SHOULD ALSO BE ACCOMPANIED BY A COPY OF THIS PERMIT. NOTE THAT THIS PERMIT IS LIMITED TO THE ABOVE ACTIVITIES AND IDENTIFIED SPECIES.

H. ISSUANCE OF THIS PERMIT DOES NOT CONSTITUTE PERMISSION TO CONDUCT THESE ACTIVITIES ON NATIONAL WILDLIFE REFUGES OR ANY OTHER PUBLIC OR PRIVATE LANDS; SUCH PERMISSION MUST BE OBTAINED SEPARATELY FROM THE APPROPRIATE LANDOWNER OR LAND MANAGER BEFORE BEGINNING THESE AUTHORIZED ACTIVITIES. THIS PERMIT, NEITHER DIRECTLY OR BY IMPLICATION, GRANTS THE RIGHT OF TRESPASS.

I. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE AND ITS AUTHORIZED AGENTS UNDERSTAND AND AGREE TO ABIDE BY THE TERMS OF THIS PERMIT AND ALL SECTIONS OF TITLE 50 CODE OF FEDERAL REGULATIONS, PARTS 13 AND 17, PERTINENT TO ISSUED PERMITS. SECTION 11 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED, PROVIDES FOR CIVIL AND CRIMINAL PENALTIES FOR FAILURE TO COMPLY WITH PERMIT CONDITIONS.

J. UPON LOCATING A DEAD, INJURED, OR SICK BAT, OR ANY OTHER THREATENED OR ENDANGERED SPECIES, UNDER CIRCUMSTANCES NOT ADDRESSED IN THIS AUTHORIZATION, INITIAL NOTIFICATION MUST BE MADE IMMEDIATELY TO THE U.S. FISH AND WILDLIFE SERVICE FIELD OFFICE IDENTIFIED IN CONDITION M., BELOW. NOTIFICATION SHOULD ALSO BE MADE BY THE NEXT WORK DAY TO THE U.S. FISH AND WILDLIFE SERVICE OFFICE IDENTIFIED IN CONDITION L., BELOW. CARE SHOULD BE TAKEN IN HANDLING SICK, INJURED, OR DEAD



SPECIMENS TO ENSURE EFFECTIVE TREATMENT OR TO PRESERVE BIOLOGICAL MATERIALS FOR LATER ANALYSIS. IN CONJUNCTION WITH THE CARE OF SICK OR INJURED ENDANGERED OR THREATENED SPECIES, AND THE PRESERVATION OF BIOLOGICAL MATERIALS FROM A DEAD ANIMAL, THE FINDER SHOULD TAKE RESPONSIBLE STEPS TO ENSURE THAT THE SITE IS NOT UNNECESSARILY DISTURBED.

K. AN ANNUAL REPORT SUMMARIZING AUTHORIZED ACTIVITIES MUST BE SUBMITTED BY DECEMBER 31 OF EACH YEAR THIS PERMIT IS VALID. EACH REPORT SHOULD INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:

1. TOTAL NUMBER OF SURVEYS CONDUCTED AND LOCATIONS OF THE TRAPPING AND SURVEY SITES. LOCATIONS SHALL BE NOTED USING FIGURES, MAPS, AND BY REFERENCING THE NAD83 COORDINATE SYSTEM (E.G., DEGREES, MINUTES, SECONDS).
2. A DESCRIPTION OF SAMPLING METHODS, INCLUDING A DESCRIPTION OF AREA SAMPLED AND NOTES ON BIOTIC AND ABIOTIC FEATURES THAT MIGHT INFLUENCE SAMPLE COMPOSITION.
3. A SPECIES LIST FROM EACH COLLECTION SITE, INCLUDING SPECIES ABUNDANCE AND RICHNESS, CONDITION, AGE, AND SEX OF CAPTURED BATS.
4. THE RESULTS OF THE SURVEYS AND RESEARCH, WITH DISCUSSIONS AND INTERPRETATIONS OF THE DATA IN CONTEXT TO RECOVERY OF THE SPECIES.
5. INFORMATION ON INJURIES AND/OR MORTALITIES AND DISPOSITION OF SPECIMENS.
6. LOCATION AND CHARACTERISTICS OF ROOST TREES AND BAT COLONIES.
7. COPIES OF ALL PUBLISHED PAPERS AND REPORTS.

L. FOR PURPOSES OF MONITORING COMPLIANCE AND ADMINISTRATION OF THE TERMS AND CONDITIONS OF THIS PERMIT, THE CONTACT OFFICE OF THE U.S. FISH AND WILDLIFE SERVICE IS:

U.S. FISH AND WILDLIFE SERVICE  
ATTN: PERMIT COORDINATOR  
1875 CENTURY BOULEVARD, SUITE 200  
ATLANTA, GEORGIA 30345-3301  
TELEPHONE: 904/731-3191  
FACSIMILE: 904/731-3045

M. COPIES OF ANNUAL REPORTS SHALL ALSO BE SENT TO THE FOLLOWING:

FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
J.C. WATTS FEDERAL BUILDING  
330 WEST BROADWAY STREET ROOM 265  
FRANKFORT, KENTUCKY 40601  
TELEPHONE: 502/695-0468  
FACSIMILE: 502/695-1024

N. CONTACT INFORMATION FOR U.S. FISH AND WILDLIFE SERVICE STATE FIELD OFFICES AND REGIONS REQUIRING PRIOR APPROVAL;

1. FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
551-F PYLON DRIVE  
P.O. BOX 33726  
RALEIGH, NORTH CAROLINA 27363  
TELEPHONE: 919/856-4520

FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
160 ZILICOA STREET  
ASHEVILLE, NORTH CAROLINA 28801  
TELEPHONE: 828/258-3939

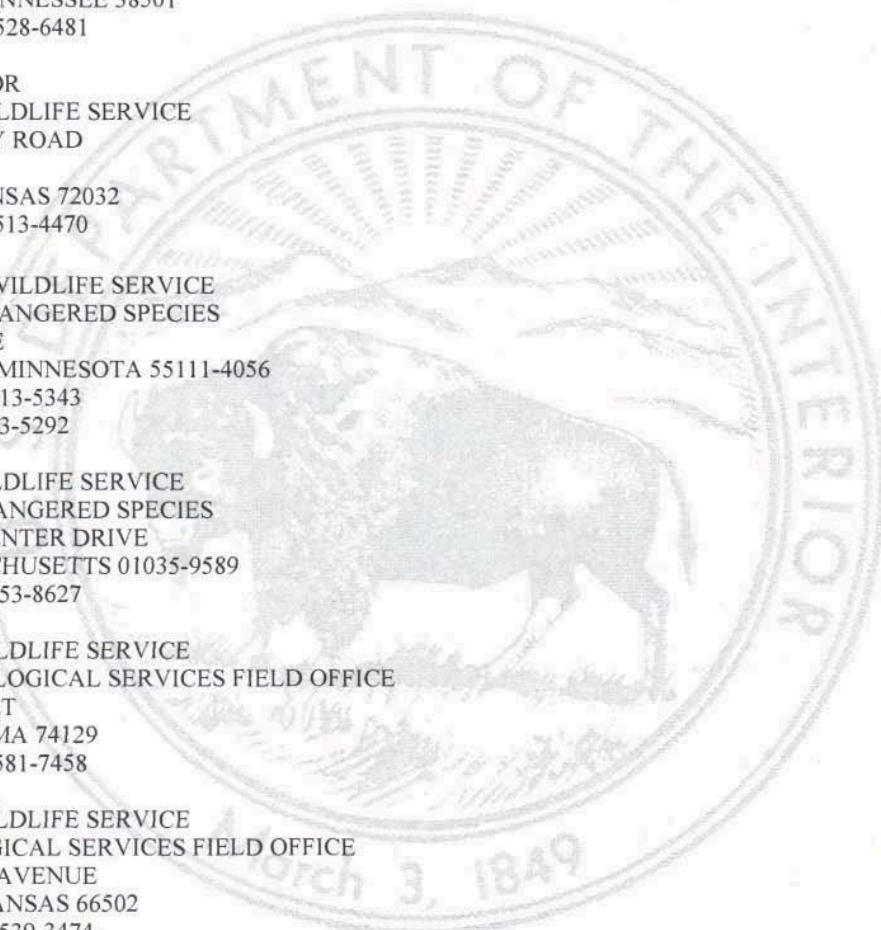


FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
646 CAJUNDOME BOULEVARD  
SUITE 400  
LAFAYETTE, LOUISIANA 70506  
TELEPHONE: 337/291-3124

FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
446 NEAL STREET  
COOKEVILLE, TENNESSEE 38501  
TELEPHONE: 931/528-6481

FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE  
110 SOUTH AMITY ROAD  
SUITE 300  
CONWAY, ARKANSAS 72032  
TELEPHONE: 501/513-4470

2. U.S. FISH AND WILDLIFE SERVICE  
DIVISION OF ENDANGERED SPECIES  
1 FEDERAL DRIVE  
FORT SNELLING, MINNESOTA 55111-4056  
TELEPHONE: 612/713-5343  
FACSIMILE: 612/713-5292
3. U.S. FISH AND WILDLIFE SERVICE  
DIVISION OF ENDANGERED SPECIES  
300 WESTGATE CENTER DRIVE  
HADLEY, MASSACHUSETTS 01035-9589  
TELEPHONE: 413/253-8627
4. U.S. FISH AND WILDLIFE SERVICE  
OKLAHOMA ECOLOGICAL SERVICES FIELD OFFICE  
9014 E. 21<sup>ST</sup> STREET  
TULSA, OKLAHOMA 74129  
TELEPHONE: 918/581-7458
5. U.S. FISH AND WILDLIFE SERVICE  
KANSAS ECOLOGICAL SERVICES FIELD OFFICE  
2609 ANDERSON AVENUE  
MANHATTAN, KANSAS 66502  
TELEPHONE: 785/539-3474





# FEDERAL FISH AND WILDLIFE PERMIT

2 AUTHORITY-STATUTES  
16 USC 1539(a)

REGULATIONS  
50 CFR 17.22

50 CFR 13

3 NUMBER  
TE08603A-0

4. RENEWABLE  
YES  
NO

5. MAY COPY  
YES  
NO

6. EFFECTIVE  
06/11/2010

7. EXPIRES  
12/31/2011

1 PERMITTEE

MICHELLE MALCOSKY  
266 ATTERBURY BLVD  
HUDSON, OH 44236  
U.S.A.

8 NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

9. TYPE OF PERMIT

NATIVE ENDANGERED SP. RECOVERY - E WILDLIFE

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

ON LANDS SPECIFIED WITHIN THE ATTACHED SPECIAL TERMS AND CONDITIONS

11 CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

C.1. VALID FOR USE ONLY BY MICHELLE MALCOSKY.

D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE AND ITS AUTHORIZED AGENTS UNDERSTAND AND AGREE TO ABIDE BY THE TERMS OF THIS PERMIT AND ALL SECTIONS OF TITLE 50 CODE OF FEDERAL REGULATIONS, PARTS 13 AND 17, PERTINENT TO ISSUED PERMITS. SECTION 11 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED, PROVIDES FOR CIVIL AND CRIMINAL PENALTIES FOR FAILURE TO COMPLY WITH PERMIT CONDITIONS.

E. Permittee is authorized to take (capture and release, band, and radio-track) Indiana bats (*Myotis sodalis*) for scientific research aimed at recovery of the species.

F. Activities are authorized at the following locations:

F.1. Locations within Region 3 of the USFWS: Illinois, Indiana, Michigan and Ohio, upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.

F.2. Locations within Region 4 of the USFWS: Kentucky, upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.

F.3. Locations within Region 5 of the USFWS: Pennsylvania and West Virginia, upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

ANNUAL REPORT DUE: 01/31

ISSUED BY

TITLE

CHIEF - ENDANGERED SPECIES

DATE

06/11/2010



- G. Permittee shall notify the USFWS Field Supervisor for the state in which activities are proposed to occur at least 15 days prior to conducting any activities. Contact information is Condition M., below. Your request must be in writing and must indicate:
- G.1. Location of proposed activities, including project site, county, and state.
  - G.2. A description of the activities (i.e., surveys, radio-telemetry studies, etc.).
  - G.3. Dates when the project is proposed to take place.
  - G.4. Evidence that Permittee has received any required contracts to complete the activities.
  - G.5. You may proceed with activities only upon receipt of written concurrence from the applicable USFWS Field Supervisor. *Your concurrence letter must be carried with this permit to authorize site-specific activities.*
- H. The attached "Indiana Bat Mist-Netting Guidelines" shall be followed. Permittee shall also adhere to the following conditions involving capture and handling of bats:
- H.1. Bats may be captured with mist nets. The monitoring interval for mist nets may not exceed 15 minutes. Captured bats should be held for a maximum of 30 minutes, unless injured. In extenuating circumstances, bats shall be held for no longer than 45 minutes.
  - H.2. Permittee may carry out non-intrusive measurements on captured bats. Celluloid split-ring or lipped metal bands having unique identifier may be applied to the forearms of captured bats prior to release.
  - H.3. Holohil Systems, or similar radio transmitters may be attached during the summer roosting period using nontoxic skin bond adhesive (such as colostomy glue). It is recommended that the total weight of the package (transmitter and adhesive) not exceed 5% of the bat's body weight. The lightest transmitters capable of accomplishing the required task should be used, especially with pregnant females and newly volant juveniles. Under no circumstances shall the total weight of the package exceed 0.8 grams or 10% of the bat's weight, whichever is less. Bats carrying transmitters must be monitored daily for at least three days, or until the transmitter falls off, whichever occurs first.
  - H.4. No trapping activities shall occur within 20 meters of a known Indiana bat maternity roost site, either natural or artificial roosts, unless Permittee receives prior written approval from the U.S. Fish and Wildlife Service Field Supervisor for the state in which the activities are proposed to occur.
  - H.5. Equipment used to capture and handle bats shall be cleaned and decontaminated according to the attached "Disinfection Protocol for Bat Field Studies." In addition, you are required to use the most recent handling protocols available by checking the protocols posted on the USFWS Midwest Region website at: <http://www.fws.gov/midwest/Endangered/mammals/BatDisinfectionProtocol.html>. You must visit the web site at least once every six weeks to determine whether new information has been learned regarding appropriate equipment handling to halt the spread of White Nose Syndrome in the bat community.
- I. Upon determination that endangered bats are present at previously undocumented sites, Permittee shall notify the following offices within 48 hours: the U.S. Fish and Wildlife Service Region 3 Office (Condition L.), and the U.S. Fish and Wildlife Service Field Office within the geographic location of study areas (Condition M.).
- J. Accidental mortality may not exceed two specimens. In the event that this number is met, all activities must cease. Any bat mortality or serious injury must be reported within 5 calendar days to the applicable office listed in condition M. and to the nearest U.S. Fish and Wildlife Service Law Enforcement Office (Attachment 2 or on the web at <http://www.fws.gov/offices/directory>). Dead or moribund bats may be retained for further study only with the written permission of the U.S. Fish and Wildlife Service. Any bats that are not authorized for retention are to be chilled and promptly transferred to the U.S. Fish and Wildlife Service for potential necropsy and/or contaminants analysis (Condition L.4.).
- K. Reports are due on January 31 following each year this permit is in effect. At a minimum, your report shall include:
- K.1. The date, time, locations (using UTM, latitude-longitude, section descriptors, or accurately plotted on USGS maps), age, sex, weight of all bats encountered.
  - K.2. Locations surveyed where no bats were encountered.



- K.3. Band numbers of all bats banded.
  - K.4. Information on any injuries and/or mortalities and disposition of specimens.
  - K.5. Location and characteristics of roost trees and bat colonies.
  - K.6. Copies of any separate reports and/or publications resulting from work conducted under the authority of this permit.
  - K.7. A completed INDIANA BAT SURVEY AND BANDING DATA form.
  - K.8. Copies of all site specific authorization letters required under Condition G.
- L. Copies of your reports shall be sent to the offices listed below. When possible, electronic copies shall be submitted in lieu of hard copies in MS Word, Portable Document Format, Rich Text Format, or other file format that is compatible with the receiving office.
- L.1. Pete Fasbender  
U.S. Fish and Wildlife Service  
Ecological Services  
1 Federal Drive  
Fort Snelling, Minnesota 55111-4056  
(612/713-5343; fax 612/713-5292)  
permitsR3ES@fws.gov
  - L.2. Cam Shaw  
U.S. Fish and Wildlife Service  
Attn: Permit Coordinator (AES/TE/P)  
1875 Century Boulevard, Suite 200  
Atlanta, Georgia 30345-3301  
(904/731-3191; fax 404/679-7081)  
permitsR4ES@fws.gov
  - L.3. Alex Hoar  
U.S. Fish and Wildlife Service  
Endangered Species Division  
300 Westgate Center Drive  
Hadley, Massachusetts 01035-9589  
(413/253-8631; fax 413/253-8482)  
permitsR5ES@fws.gov
  - L.4. Lori Pruitt  
Endangered Species Coordinator for Indiana  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
620 S. Walker Street  
Bloomington, Indiana 47403-2121  
(812/334-4261 x1211; fax 812/334-4273)
- M. Additionally, based on geographic area, reports and publications shall be submitted to the following:
- M.1. For studies conducted in Illinois:
    - M.1.a. Jody Millar  
Endangered Species Coordinator for Illinois/Iowa  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
1511 47<sup>th</sup> Ave.  
Moline, Illinois 61265  
(309/757-5800, x202; fax 309/757-5807)



M.1.b. Joe Kath  
Endangered Species Coordinator  
Illinois Department of Natural Resources  
Division of Natural Heritage  
One Natural Resource Way  
Springfield, Illinois 62702-1271  
(217/785-8764; fax 217/785-2438)

M.2. For studies conducted in Indiana:

Katie Gremillion-Smith  
Endangered Species Coordinator  
Indiana Department of Natural Resources  
Division of Fish and Wildlife  
Room W273, 402 W. Washington St.  
Indianapolis, Indiana 46204-2267  
(317/232-8160; fax 317/232-8150)

M.3. For studies conducted in Michigan:

M.3.a. Jack Dingleline  
Endangered Species Coordinator for Michigan  
U.S. Fish and Wildlife Service  
2651 Coolidge Road  
East Lansing, Michigan 48823  
(517/351-6320; fax 517/351-1443)

M.3.b. Christopher Hoving  
Michigan Department of Natural Resources  
Wildlife Division  
5th Floor, Stevens T. Mason Bldg.  
P.O. Box 30028  
Lansing, Michigan 48909  
(517/373-1263; fax 517/373-6705)

M.4. For studies conducted in Ohio:

M.4.a. Angela Boyer  
Endangered Species Coordinator for Ohio  
U.S. Fish and Wildlife Service  
Ohio Ecological Services Field Office  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614/416-8993, x22; fax 614/416-8994)

M.4.b. Carolyn Caldwell  
Endangered Species Coordinator  
Ohio Department of Natural Resources  
Division of Wildlife  
2045 Morse Road  
Building G  
Columbus, Ohio 43229-6693  
(614-265-6329)

M.5. For studies conducted in Kentucky:

Frankfort Field Office  
Lee Andrews, Field Supervisor  
J C Watts Federal Bldg., Rm 265  
330 West Broadway  
Frankfort, KY 40601-8670  
(502) 695-0468

M.6. For studies conducted in Pennsylvania:

Pennsylvania Field Office  
Clint Riley, Field Supervisor  
315 So. Allen Street, Suite 322  
State College, PA 16801-4850  
(814) 234-4090

M.7. For studies conducted in West Virginia:

West Virginia Field Office  
Deborah Carter, Field Supervisor  
Route 250 South, Elkins Shopping Plaza  
694 Beverly Pike  
Elkins, WV 26241  
(304) 636-6586

cc: FWS/Regions 4 and 5 (Attn: Regional Permits Coordinator)  
FWS/ESFOs: IN, IL, MI, OH (Attn: Endangered Species Coordinator)  
DNR/DOCs: IN, IL, MI, OH, (Attn: Endangered Species Coordinator)

END





# FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

TIMOTHY C CARTER  
dba BALL STATE UNIVERSITY  
DEPARTMENT OF BIOLOGY  
CL 121  
BALL STATE UNIVERSITY  
MUNCIE, IN 47306-0440

2. AUTHORITY-STATUTES  
16 USC 1539(a)

REGULATIONS  
50 CFR 17.22

50 CFR 13

3. NUMBER  
**TE02560A-0**

4. RENEWABLE  
 YES  
 NO

5. MAY COPY  
 YES  
 NO

6. EFFECTIVE  
05/15/2010

7. EXPIRES  
12/31/2011

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)

9. TYPE OF PERMIT

NATIVE ENDANGERED SP. RECOVERY - E WILDLIFE

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

ON LANDS SPECIFIED WITHIN THE ATTACHED SPECIAL TERMS AND CONDITIONS

11. CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

C.1. ALSO VALID FOR MICHAEL WHITBY. TRAINED ASSISTANTS MAY WORK ON PERMITTED ACTIVITIES UNDER THE DIRECT AND ON-SITE SUPERVISION OF TIM CARTER OR MICHAEL WHITBY.

D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE AND ITS AUTHORIZED AGENTS UNDERSTAND AND AGREE TO ABIDE BY THE TERMS OF THIS PERMIT AND ALL SECTIONS OF TITLE 50 CODE OF FEDERAL REGULATIONS, PARTS 13 AND 17, PERTINENT TO ISSUED PERMITS. SECTION 11 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED, PROVIDES FOR CIVIL AND CRIMINAL PENALTIES FOR FAILURE TO COMPLY WITH PERMIT CONDITIONS.

E. Permittee is authorized to take (capture, handle, radio-tag, and release) Indiana bats (*Myotis sodalis*) and gray bats (*Myotis grisescens*), for scientific research aimed at recovery of the species: presence/absence surveys, studies to document habitat use, population monitoring, and to evaluate potential impacts.

F. Activities are authorized at the following locations:

F.1. Throughout southern Illinois in conjunction with roosting ecology study on the Shawnee National Forest (U.S. Forest Service Agreement No. 08-PA-11090800-023) upon receipt of written concurrence from Field Supervisor, as outlined in Condition G.

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

ANNUAL REPORT DUE: 01/31

ISSUED BY

TITLE

CHIEF - ENDANGERED SPECIES

DATE

05/12/2010

- F.2. Other locations within Georgia, Illinois, Indiana, Iowa, Michigan, Missouri, Ohio, and Wisconsin upon receipt of written concurrence from Field Supervisor, as outlined in Condition G.
- G. For locations specified in Condition F., Permittee shall notify the Service Field Supervisor for the state in which activities are proposed to occur at least 15 days prior to conducting any activities. Your notification must be in writing and must indicate:
- G.1. Location of proposed activities, including project site, county, and state
  - G.2. A detailed description of the activities (i.e., surveys, radio-telemetry studies, etc.)
  - G.3. Dates when the project is proposed to take place
  - G.4. Evidence that permittee has received any required contracts to complete the activities
  - G.5. This permit is not valid without a concurrence letter from the U.S. Fish and Wildlife Service authorizing the site-specific survey or research activities. You may only proceed with activities upon receipt of written concurrence from the Field Supervisor for the state in which activities are proposed. *Your concurrence letter must be carried with this permit to authorize locations not named in this permit.*
- H. Permittee shall adhere to the following conditions involving capture and handling of bats:
- H.1. Bats may be captured with mist nets. The attached "Indiana Bat Mist-Netting Guidelines" shall be followed. The monitoring interval for mist nets may not exceed 15 minutes. Captured bats should be held for a maximum of 30 minutes, unless injured. In extenuating circumstances, bats shall be held for no longer than 45 minutes.
  - H.2. Bats may only be captured with harp traps with written concurrence from the Field Supervisor in the state in which trapping is proposed. Harp traps must be continually monitored. Captured bats may be held for a maximum of 30 minutes, unless injured. In extenuating circumstances, bats shall be held for no longer than 45 minutes.
  - H.3. Permittee may carry out non-intrusive measurements on captured bats. Celluloid split-ring or lipped metal bands having unique identifier may be applied to the forearms of captured bats prior to release.
  - H.4. Holohil Systems, or similar radio transmitters may be attached during the summer roosting period using nontoxic skin bond adhesive (such as colostomy glue). It is recommended that the total weight of the package (transmitter and adhesive) not exceed 5% of the bat's body weight. The lightest transmitters capable of accomplishing the required task should be used, especially with pregnant females and newly volant juveniles. Under no circumstances shall the total weight of the package exceed 0.8 grams or 10% of the bat's weight, whichever is less. Bats carrying transmitters must be monitored daily for at least three days, or until the transmitter falls off, whichever occurs first.
  - H.5. No trapping activities shall occur within 20 meters of a known Indiana bat roost site, either natural or artificial roosts, unless authorized in writing by the Field Supervisor for the state in which activities are proposed to occur. When so authorized, trapping activities at roost trees shall be limited to those roosts where exit counts from the previous night contained no more than 25 bats. Nets shall be lowered after 20 bats of any species are captured. Trapping shall occur at each roost tree no more than once every 10 days and bats may be captured at night roosts under bridges no more than one time per week per site.
  - H.6. Wing punch tissue samples and guano samples may be collected from each Indiana bat captured. A new, sterile punch must be used for each Federally-listed bat sampled. Boards or any other equipment used to collect samples must be sterilized in accordance with disinfection protocols cited in Condition H.9.
  - H.7. Hibernacula surveys may be conducted with concurrence of the Field Supervisor, as outlined in Condition G. Suitable hibernation sites may be quietly searched by the Permittee and no more than 3 assistants at one time. Where safety conditions allow, individuals entering hibernacula are recommended to utilize night vision goggles or red-filtered light and to remain in the cave/mine no more than 90 minutes to complete the work.
  - H.8. Light tags may not be affixed to bats.
  - H.9. Equipment used to capture and handle bats shall be cleaned and decontaminated according to the attached "Disinfection Protocol for Bat Field Studies." In addition, you are required to use the most recent handling protocols available by checking the protocols posted on the USFWS Midwest Region website at: <http://www.fws.gov/midwest/Endangered/mammals/BatDisinfectionProtocol.html>. You must visit the web site at



least once every six weeks to determine whether new information has been learned regarding appropriate equipment handling to halt the spread of White Nose Syndrome in the bat community.

- I. The following conditions apply to activities involving marking with passive integrated transponder (PIT) tags:
  - I.1. PIT tagging authorization will be determined through coordinated efforts between Permittee and the Service. Permittee may only proceed with PIT tagging activities upon receipt of written concurrence from the Service Office in Condition G.
  - I.2. PIT tagging activities shall be restricted to one maternal roost colony located on Camp Atterbury, Indiana. No more than 20% of the colony may be trapped and marked with PIT tags.
- J. Upon determination that endangered bats are present at previously undocumented sites, permittee shall notify the U.S. Fish and Wildlife Service Region 3 Office (Condition M.1.) and the U.S. Fish and Wildlife Service Field Office within the geographic location of study areas (contact information in Condition M.) within 48 hours.
- K. Accidental mortality may not exceed two specimens. In the event that this number is met, all activities must cease. Any bat mortality or serious injury must be reported within 5 calendar days to the applicable office listed in Condition M. and to the nearest U.S. Fish and Wildlife Service Law Enforcement Office (Attachment 1.). Dead or moribund bats may be retained for further study only with the written permission of the U.S. Fish and Wildlife Service, Ft. Snelling Regional Office. Any bats that are not authorized for retention are to be chilled and promptly transferred to the U.S. Fish and Wildlife Service for potential necropsy and/or contaminants analysis.
- L. Reports are due on January 31 following each year this permit is in effect. At a minimum, your report shall include:
  - L.1. The date, time, locations (using UTM, latitude-longitude, section descriptors, or accurately plotted on USGS maps), age, sex, weight of all bats encountered.
  - L.2. Locations surveyed where no bats were encountered.
  - L.3. Band numbers of all bats banded.
  - L.4. Information on any injuries and/or mortalities and disposition of specimens.
  - L.5. Location and characteristics of roost trees and bat colonies.
  - L.6. Copies of any separate reports and/or publications resulting from work conducted under the authority of this permit.
  - L.7. A completed INDIANA BAT SURVEY AND BANDING DATA form (attached).
  - L.8. Copies of all site-specific authorization letters required under Condition G.
- M. Copies of your reports shall be sent to the offices listed below. When possible, electronic copies shall be submitted in lieu of hard copies in MS Word, Rich Text Format, Portable Document Format or other file format that is compatible with the receiving office.
  - M.1. Pete Fasbender  
Regional Recovery Permits Coordinator  
U.S. Fish and Wildlife Service  
Ecological Services  
1 Federal Drive  
Fort Snelling, Minnesota 55111-4056  
(612/713-5343; fax 612/713-5292)  
email: [permitsR3ES@fws.gov](mailto:permitsR3ES@fws.gov)
  - M.2. Cam Shaw  
U.S. Fish and Wildlife Service  
Attn: Permit Coordinator (AES/TE/P)  
1875 Century Boulevard, Suite 200  
Atlanta, Georgia 30345-3301  
(904/731-3191; fax 404/679-7081)  
[permitsR4ES@fws.gov](mailto:permitsR4ES@fws.gov)

## Appendix D: Net Site Photographs





Photo 1. Site 1; Net A.



Photo 2. Site 1; Net B.



Photo 3. Site 2; Net A.



Photo 4. Site 2; Net B.





Photo 5. Site 3; Net A.



Photo 6. Site 3; Net B.



Photo 7. Site 4; Net A.



Photo 8. Site 4; Net B.





Photo 9. Site 5; Net A.



Photo 10. Site 5; Net B1.



Photo 11. Site 5; Net B2.



Photo 12. Site 6; Net A.





Photo 13. Site 7; Net A.



Photo 14. Site 7; Net B.



Photo 15. Site 8; Net A.

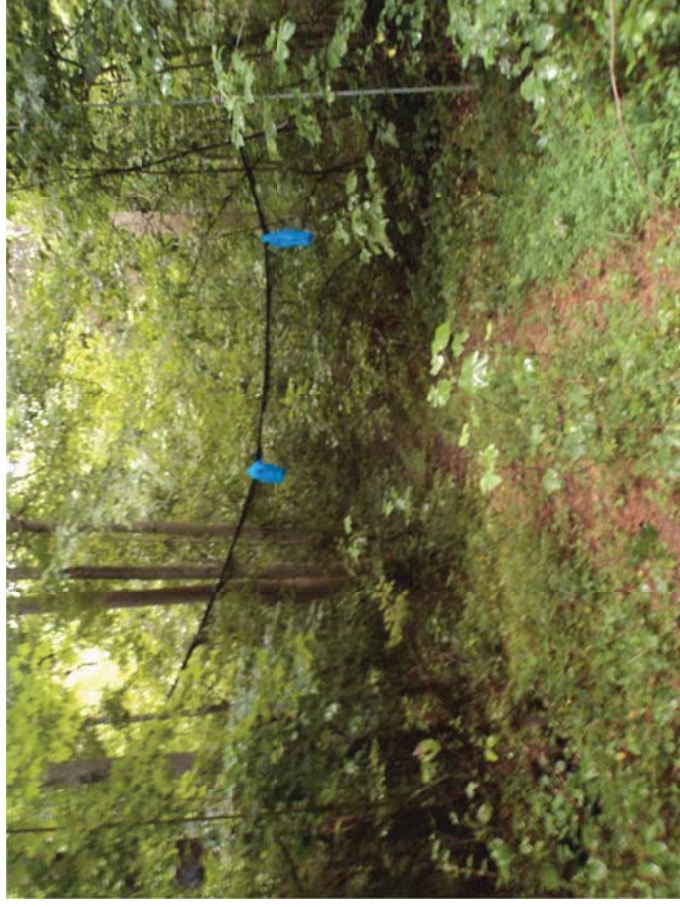


Photo 16. Site 8; Net B.





Photo 17. Site 9; Net A.



Photo 18. Site 9; Net B.

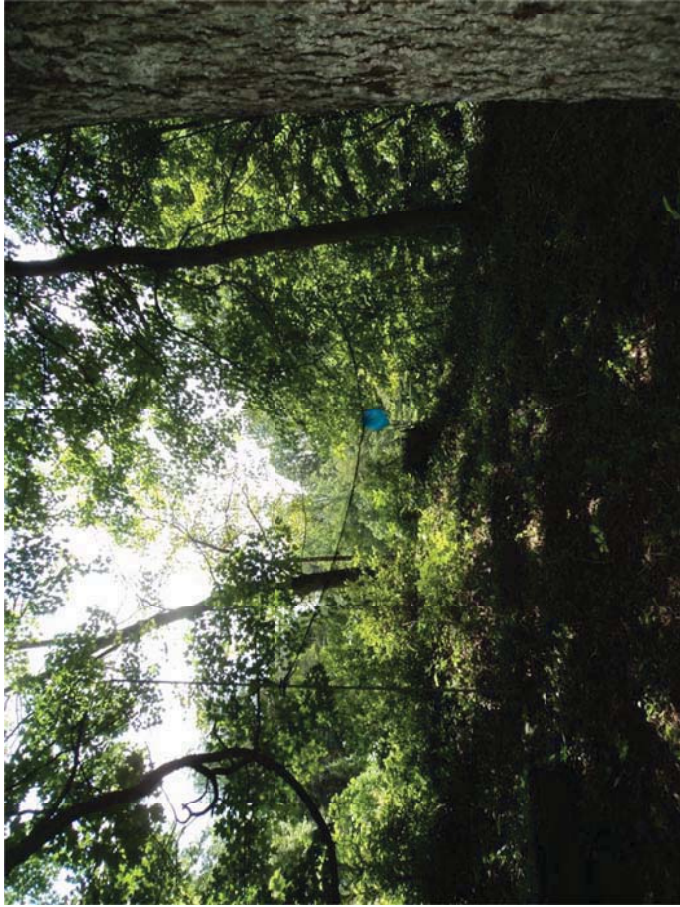


Photo 19. Site 9; Net C.



Photo 20. Site 10; Net A.





Photo 21. Site 10; Net B.



Photo 22. Site 11; Net A.



Photo 23. Site 11; Net B.



Photo 24. Site 12; Net A.





Photo 25. Site 12; Net B.



Photo 26. Site 12; Net C.

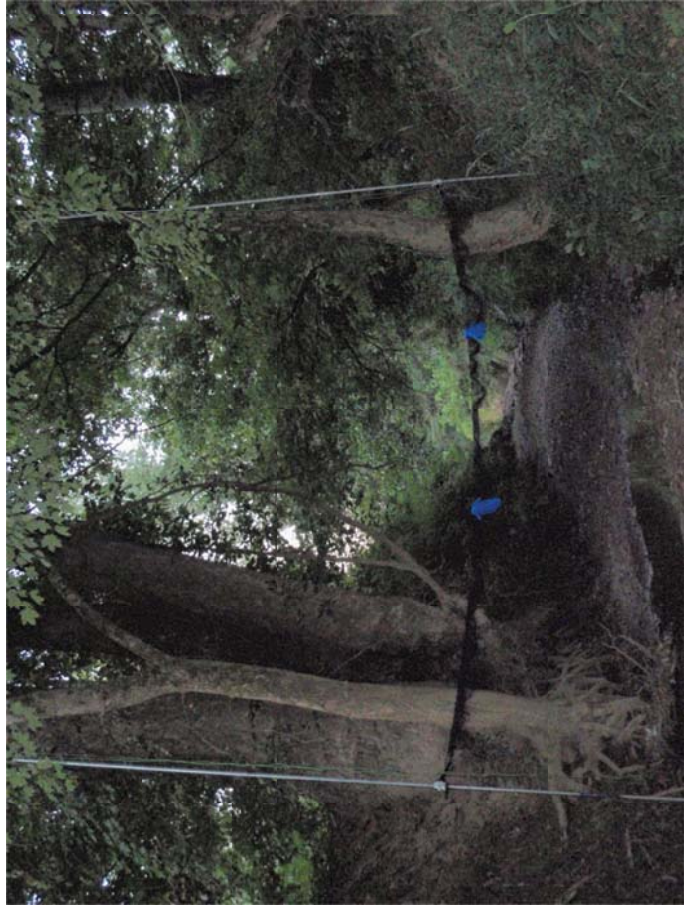


Photo 27. Site 13; Net A1.



Photo 28. Site 13; Net A2.





Photo 29. Site 13; Net B.



Photo 30. Site 14; Net A.



Photo 31. Site 14; Net B.

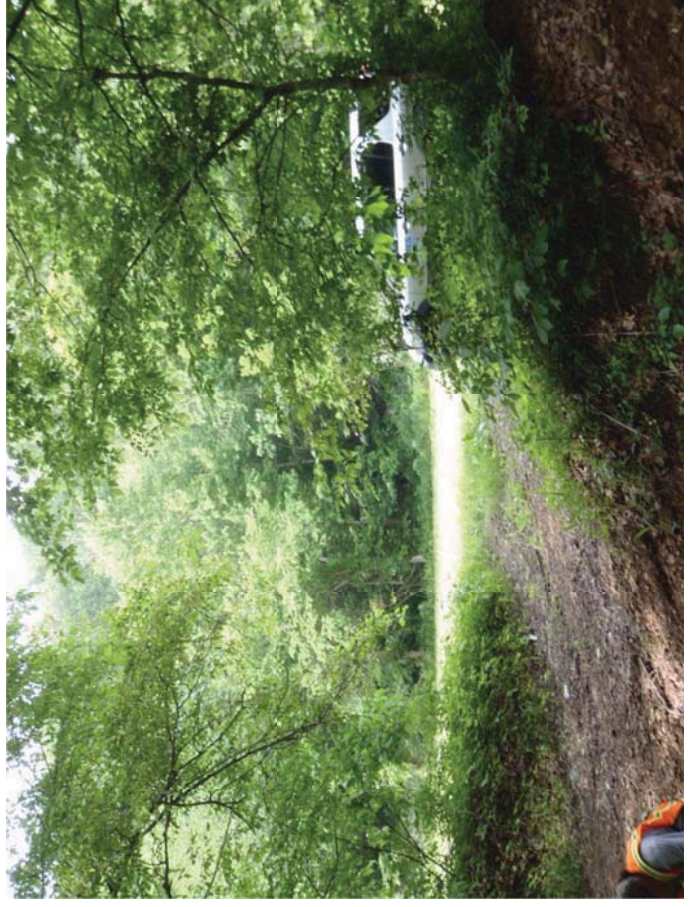


Photo 32. Site 14; Net C.





Photo 33. Site 15; Net A.



Photo 34. Site 15; Net B.



Photo 35. Site 15; Net C.



Photo 36. Site 16; Net A.





Photo 37. Site 16; Net B.



Photo 38. Site 16; Net C.



Photo 39. Site 17; Net A and B.



Photo 40. Site 18; Net A.





Photo 41. Site 18; Net B.



Photo 42. Site 18; Net C.



Photo 43. Site 19; Net A.



Photo 44. Site 19; Net B.





Photo 45. Big Brown Bat captured on the Portsmouth Bypass corridor.



Photo 46. Tri-Color Bat captured on the Portsmouth Bypass corridor.



Photo 47. Eastern Red Bat captured on the Portsmouth Bypass corridor.



Photo 48. Northern Long-eared Bat captured on the Portsmouth Bypass corridor.





Photo 49. Hoary Bat captured on the Portsmouth Bypass corridor.

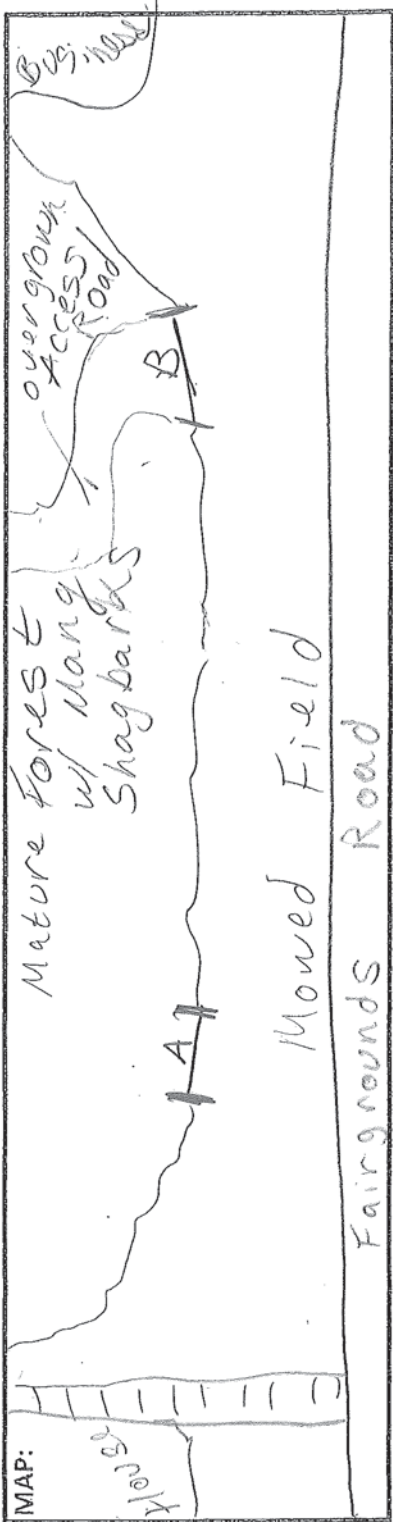


Photo 50. Little Brown Bat captured on the Portsmouth Bypass corridor.

## Appendix E: Field Datasheets



Date: 7-18-11 Project/Area: Portsmouth Site Name/County: #1, Scioto w/ UTMs (E/N): 82.997184, 38.891956  
 Location: Woodlot east of Fairgrounds Road Weather (wind/moon/precip): Wind 1-3mph; Moon - 3day postfull; Mist 16m  
 Start/End Time: 8:50/3:25 Start/End Temp: 84 / 75 Personnel: Michelle Malcosky, Dave Czajka

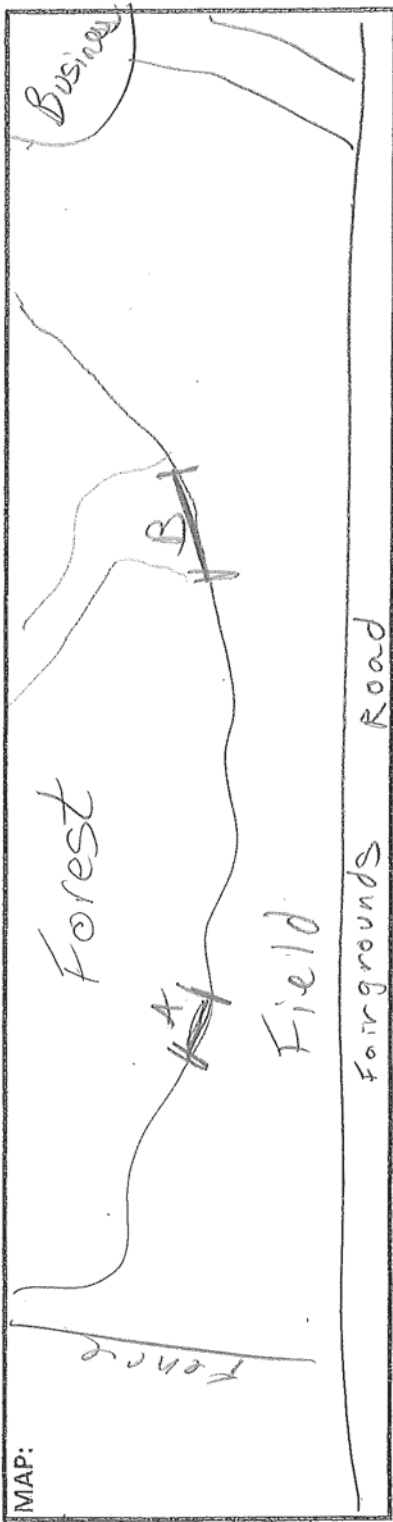


Net	# High	Length	Feature
A	3	6	Corridor
B	3	12	Woodline
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	10:10	EPFU	M-A	A	12	44	0	-	B	-	-	-	
2	10:16	EPFU	F-P	A	13	44	0	-	B	-	-	-	
3	10:10	EPFU	M-NR	A	12	44	P	-	B	-	-	-	
4	10:10	EPFU	F-P	A	14	47	0	-	B	-	-	-	Small hole Lt wing
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 7-19-11 Project/Area: Portsmouth Bypass Site Name/County: #1 Scioto UTMs (E/N): 82.997184 / 38.891956  
 Location: Woodlot East of Fairgrounds Road Weather (wind/moon/precip): W=1-3 mph, M=4 Full, P=None  
 Start/End Time: 9:05 a:35 Start/End Temp: 78 / 70 Personnel: M. Malcosky, D. Czajka



MAP:

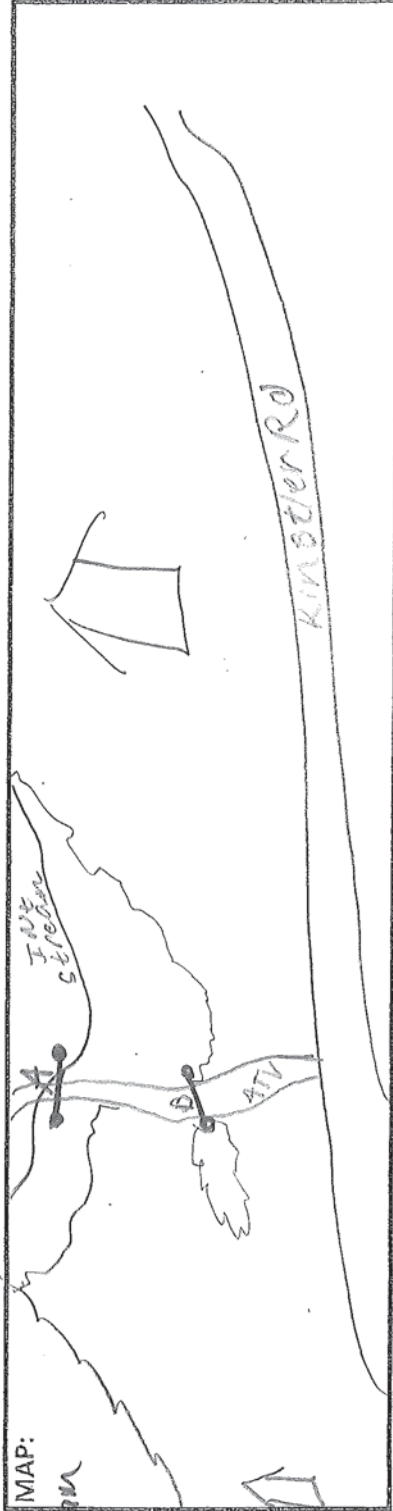
Net	# High	Length	Feature
A	3	6m	corridor
B	3	12m	wood line
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:40	EPFU	M-M	J	14	46	0	-	B	-	-	-	
2	10:00	EPFU	M-A	A	17.5	47	0	-	B	-	-	-	
3	10:00	EPFU	F-F	A	19	47	0	-	B	-	-	-	
4	10:10	PESU	M-M	A	55	32.5	0	-	B	-	-	-	
5													
6													
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15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm; necrotic tissue, membrane loss; P=physical impact damage



Date: 7-20-11 Project/Area: Portsmoath Boggs Site Name/County: #2 Scioto UTMs (E/N): 82.972915T 32.896737  
 Location: Woods North of Kinstler Rd. Weather (wind/moon/precip): W=1-3 mph, M=3, I=0, G=0, P=None  
 Start/End Time: 9:00-1:05 Start/End Temp: 75/74 Personnel: M. Malcosky, D. Crayak



Net	# High	Length	Feature
A	3	9m	Trail/Stream
B	3	9m	Trail
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:50	LACTI	-	-	-	-	-	-	A	-	-	-	ESCARO
2	9:50	EPFU	-	-	-	-	-	-	A	-	-	-	ESCARO
3	9:50	EPFU	F-P	A	15	46	0	-	A	-	-	-	
4	12:50	LACTI	M-N	A	9.5	44	0	-	B	-	-	-	
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 7-21-11 Project/Area: Portsmouth Bypass Site Name/County: #2, Scioto UTMs (E/N): -82,972,915 / 38,896,737  
 Location: Woods north of Kinster's rd. Weather (wind/moon/precip): W=1-3mph, M=-2; Last quarter; P=none  
 Start/End Time: 9:00-3:00am Start/End Temp: 85 / 78 Personnel: M. Malcosky, K. Tamaseillo

Net	# High	Length	Feature	MAP:
A	3	9m	Trail/Stream	
B	3	9m	Trail	
C				
D				
E				
F				
G				

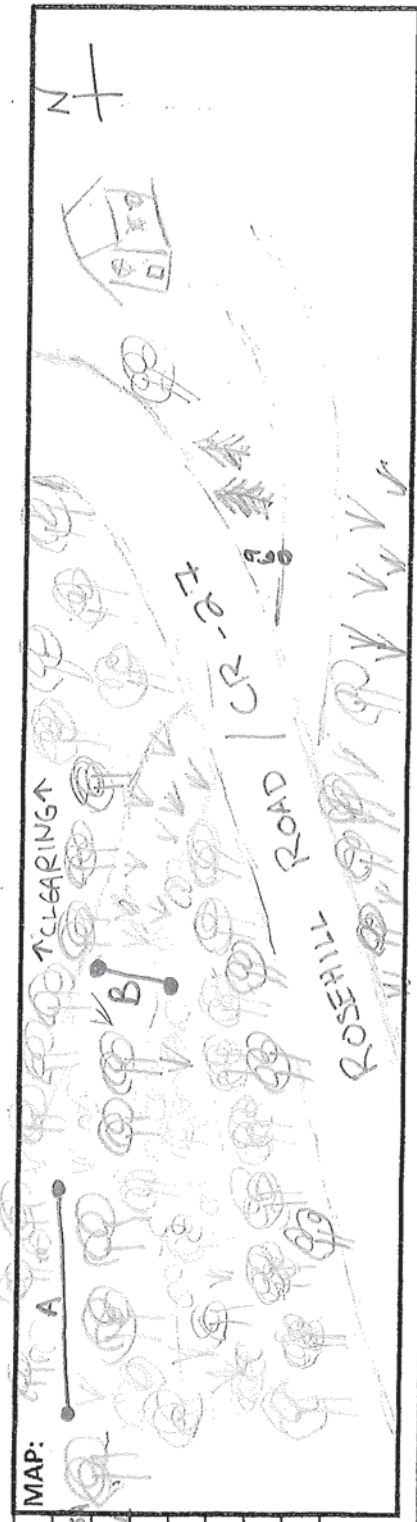
See Day 1

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:20am	LABO	M-N/R	J	9	41	0	-	A	-	-	-	
2	9:40am	LABO	M-N/R	J	8	39	0	-	A	-	-	-	
3	10:00am	MYSE	F-N/R	J	8	35	0	-	A	-	-	-	
4	10:30am	LABO	F-N/R	J	11.5	41	0	-	B	-	-	-	
5	12:30am	LABO	M-A	A	11.5	40	0	-	B	-	-	-	
6	1:10am	LABO	F-A	A	17	39	0	-	A	-	-	-	
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitting, holes <5mm; 3=holes ≥5mm; necrotic tissue, membrane loss; P=physical impact damage



Date: 8/10/2011 Project/Area: Portsmouth Super Site Name/County: #3 Ste UTM's (E/N): [S 0330487 / 4306696]  
 Location: Clearing & old Road off Roschill Rd Weather (wind/moon/precip): 1-3 / FULL / NONE  
 Start/End Time: 20:45/0200 Start/End Temp: 72° / 66° Personnel: MICHAEL WHITBY & JULIA NAVIROCKI

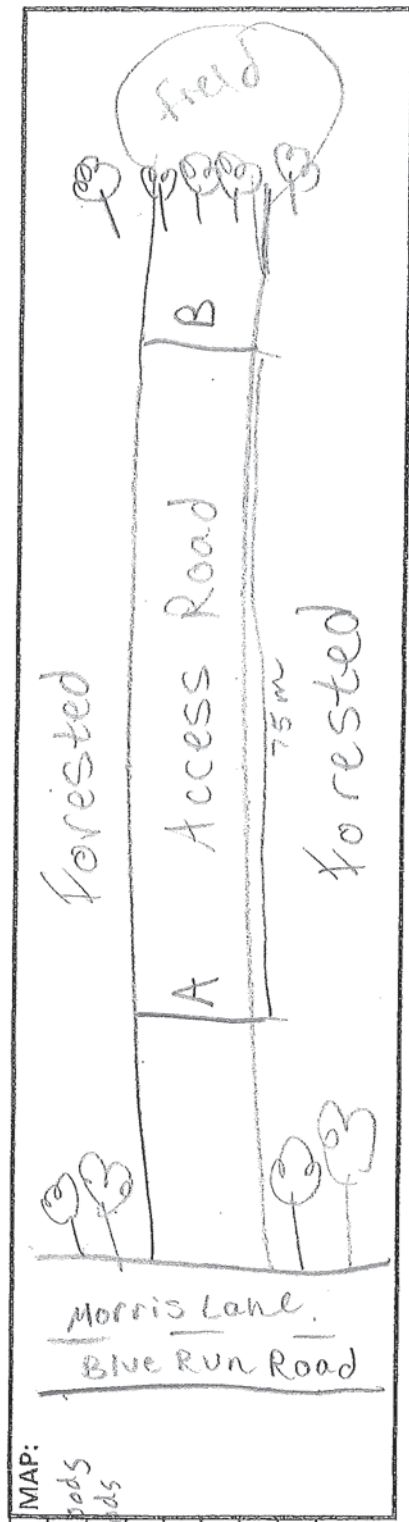


Net	# High	Length	Feature
A	2	18 m	FOREST ED GE-15
B	2	9 m	OLD ATV TRAIL
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.) ODNR	Net / Height (Grec)	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2300	MYSE	M/NR	A	5.5	36	0	10827	A/S				Day 1
2													
3													
4													
5	8/11 2011												
6					Start Temp 72°								
7					Time 2045								
8	22:00	EPFU	F/NR	A	18	48	1	22329	B/4				Day 2
9	22:00	EPFU	M/NR	JV	17.25	47	0	22328	B/5				
10	2300	EPFU	M/NR	A	19.25	47	0	22327	A/4				
11													
12													
13													
14													
15													
16													
17													
18													

AWING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 7-22-11 Project/Area: Portsmouth Bulls Site Name/County: #4, Scioto UTMs (E/N): 82.9419059 / 38.883696  
 Location: Woods north of Morris Lane - Blue Run Road Weather (wind/moon/precip): h/e/3 mph, M = 1 day before last quarter, P = none  
 Start/End Time: 9:00 / 2:05 am Start/End Temp: 77 / 72 Personnel: M. Malcesky, K. Tomassella



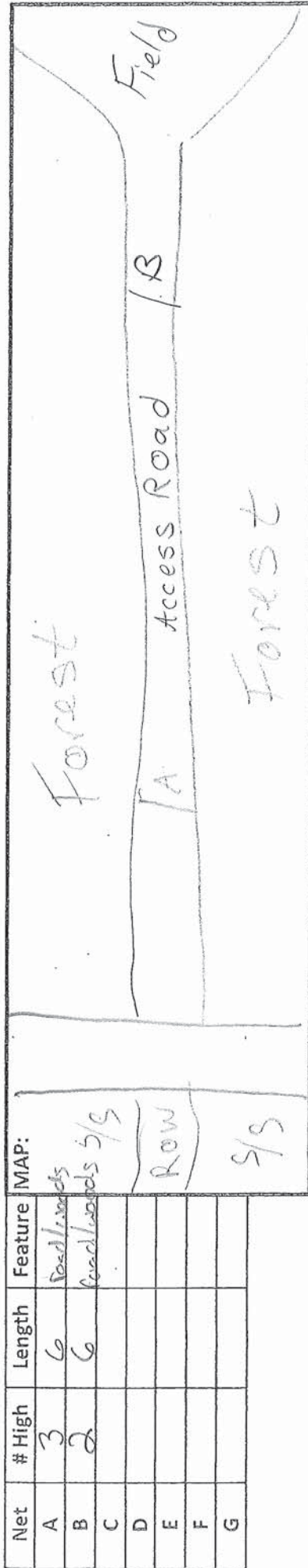
Net	# High	Length	Feature	MAP:
A	3	6m	road/woods	
B	2	6m	road/woods	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



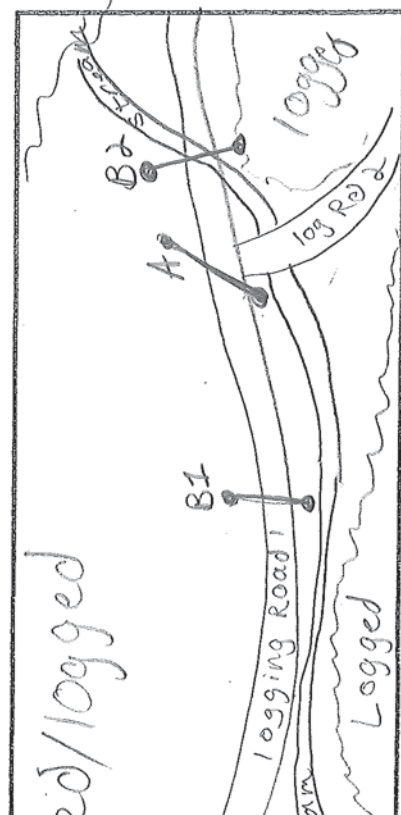
Date: 7-23-11 Project/Area: Pittsboro Bypass Site Name/County: #4, Scioto UTMs (E/N): -82949059 / 38883696  
 Location: Woods North of Martins Lane - Blue Run Road Weather (wind/moon/precip): (W)=1-3 mph, M=last quarter, P=no ne  
 Start/End Time: 9:09 2:05 or Start/End Temp: 77 / 75 Personnel: M. Malcosky, K. Tomaseillo



Net	# High	Length	Feature	MAP:	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
A	3	6	road/woods										
B	2	6	road/woods S/S										
C													
D													
E													
F													
G													
1													No captures
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 7-24-11 Project/Area: Pattsmouth Bypass Site Name/County: #5, Scioto UTM's (E/N): -82936544 / 38.870109  
 Location: Access road adjacent to entrenched creek Weather (wind/moon/precip): W-E 1-3 mph, M=+1 last quarter, P=none  
 Start/End Time: 9:00/2:30am Start/End Temp: 75 / 72 Personnel: M. Malcosky, K. Tameselle



Net	# High	Length	Feature	MAP:
A	3	12	Seedlings	
B	2	6	Seedlings	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:30	EPFU	M-A	A	15.5	42	0	-	A	-	-	-	
2	10:30	EPFU	F-NIR	A	20	46	0	-	A	-	-	-	
3	1:30	MYSE	M-A	A	7	36	0	-	A	-	-	-	
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitting, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 7-25-11 Project/Area: Portsmouth Bypass Site Name/County: #5, Scioto UTM's (E/N): 82936544 / 38876109  
 Location: Access road adjacent to extended creek Weather (wind/moon/precip): W=1-3 mph, M=+2 days last quarter, P=none  
 Start/End Time: 9:00-2:30 am Start/End Temp: 82 / 74 Personnel: M. Matelesky, K. Tam = see below

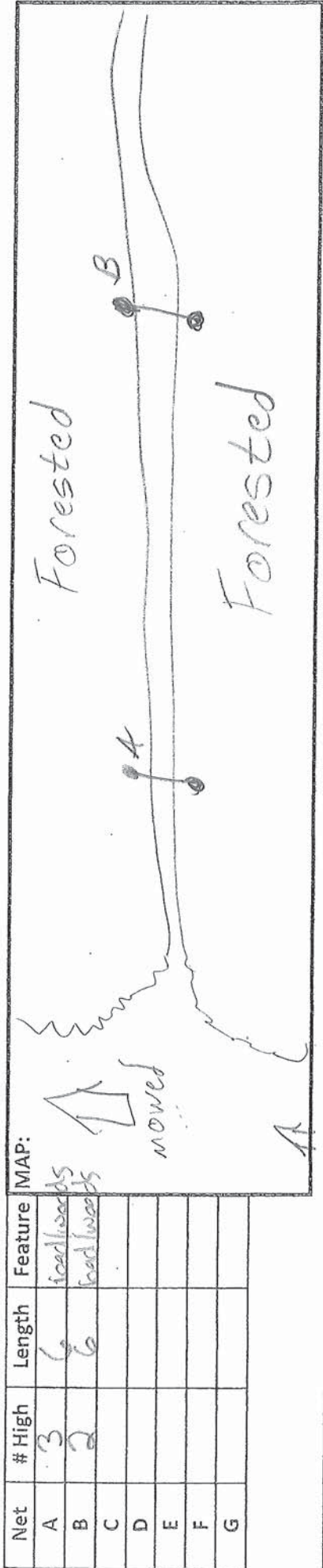
Net	# High	Length	Feature	MAP:
A	3	12	100% wood	
B	2	6	100% wood	
C				
D				
E				
F				
G				

See Day 1.

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:47	LABO	M	-	-	-	-	-	B1	-	-	-	Escaped
2	10:10	EPFU	M-N/R	A	17.5	48	0	-	B1	-	-	-	
3	10:10	EPFU	M-N/R	A	15	42	0	-	B1	-	-	-	
4	10:18	LABO	M-N/R	A	11	40	0	-	B1	-	-	-	
5	11:50	EPFU	F-L	A	19.5	44	0	-	A	-	-	-	Abnormal growth on fighting (Tom)
6	12:30	EPFU	M-A	A	18	44	0	-	B1	-	-	-	
7	12:30	EPFU	F-N/R	A	21.5	47	0	-	B1	-	-	-	
8	12:30	EPFU	F-N/R	A	19.5	44	0	-	B1	-	-	-	
9	12:30	LABO	M	-	-	-	-	-	-	-	-	-	Escaped
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 08-02-11 Project/Area: Patterson Bypass Site Name/County: #6 Scioto UTMs (E/N): 82, 908757 / 38, 88183  
 Location: Across logging road with woods Weather (wind/moon/precip): W-13 mph M=-3 days later after P=none  
 Start/End Time: 9:00 / 2:05 am Start/End Temp: 82 / 75 Personnel: M. Malcosky, K. Tanase



Net	# High	Length	Feature	MIAP:
A	3	6	scallwads	
B	2	6	scallwads	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	12:30	EPFU	M-MR	A	14	45	—	—	A	—	—	—	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 08-03-11 Project/Area: Portsmouth Bypass Site Name/County: #6, Scioto UTMs (E/N): 82.908757 / 38.868183  
 Location: Access logging road within woods Weather (wind/moon/precip): W = E3 mph, M = 3 days first quarter, P = none  
 Start/End Time: 8:55 / 2:05 Start/End Temp: 75 / 73 Personnel: M. Malcomby, K. Tamaseila

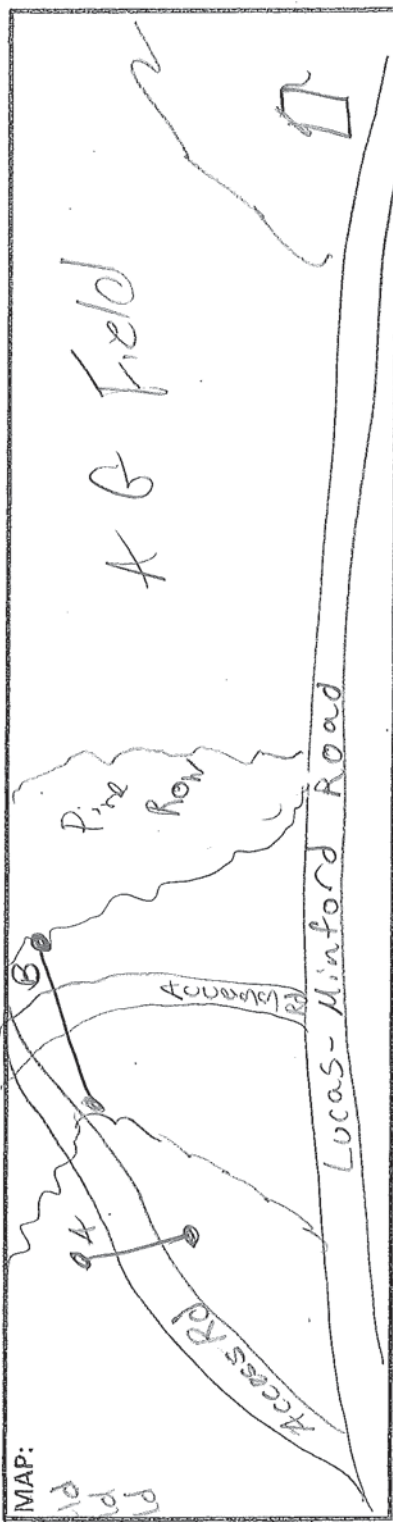
Seeday I

Net	# High	Length	Feature	MAP:
A	3	6	road/woods	
B	2	6	road/woods	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													No captures
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 08-04-11 Project/Area: Bitsworth Bypass Site Name/County: #7 Skio to UTMs (E/N): 12,85995 / 38,813968  
 Location: Access across AVE between fields and tree row Weather (wind/moon/precip): w-none, M=2 days first quarter, P=none  
 Start/End Time: 9:00/2:15 Start/End Temp: 80 / 68 Personnel: M Malcesky, K Zambello



Net	# High	Length	Feature	MAP:
A	3	12	Road/field	
B	3	9	Road/field	
C	3	9	Road/field	
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:45	LABO	F-NR	J	9	37	-	-	A	-	-	-	
2	2:15pm	LABO	F-NR	J	11.5	38	-	-	A	-	-	-	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splutching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 08-05-11 Project/Area: Pet's mouth Bypass Site Name/County: #7, Sicoto UTMs (E/N): -82.595995 / 39.863968

Location: Access across dive between fields and the canal Weather (wind/moon/precip): W=None, M=-1 day first quarter, P=gentle drizzle  
 Start/End Time: 9:00 / 2:00 am Start/End Temp: 80 / 75 Personnel: M. Malcosky, K. Tamsella 11:20-12am  
 Cloudy

Net	# High	Length	Feature	MAP:
A	3	12	Dead/fred	See day 7o
B	3	9	Dead/fred	
C	3	9	Dead/fred	
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 08-06-11 Project/Area: Portsmouth Bypass Site Name/County: #9 Scinto UTMs (E/N): 82,886830 / 38,957525  
 Location: Access ATV trails in woods Weather (wind/moon/precip): W=none, M=first quarter, P=none  
 Start/End Time: 8:50/2:10am Start/End Temp: 82 / 75 Personnel: M Malcosky, K Tomasek



Net	# High	Length	Feature	MAP:
A	3	6	Hail/Woods	
B	3	6	Hail/Woods	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:00	LABO	F-NR	A	12	43	---	---	A	---	---	---	
2	9:05	LABO	F-NR	S	8.5	37	---	---	A	---	---	---	
3	12:30am	LABO	M-NR	S	9.5	39	---	---	A	---	---	---	
4	12:30am	LABO	M	-	-	-	---	---	A	---	---	---	escaped
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 08-07-11 Project/Area: Portsmouth Bypass Site Name/County: HB, Seoto UTMs (E/N): -82, 886930 / 38, 857525  
 Location: ALCOA S. ATV trails in woods Weather (wind/moon/precip): W=0-3mph, M=H first quarter, P=gentle drizzle from 12:35am to 12:50am  
 Start/End Time: 8:50/2:05 am Start/End Temp: 79 / 72 Personnel: M Malosky, K. Ginesello

Net	# High	Length	Feature	MAP:
A	3	4	trail/woods	
B	3	6	trail/woods	
C				
D				
E				
F				
G				

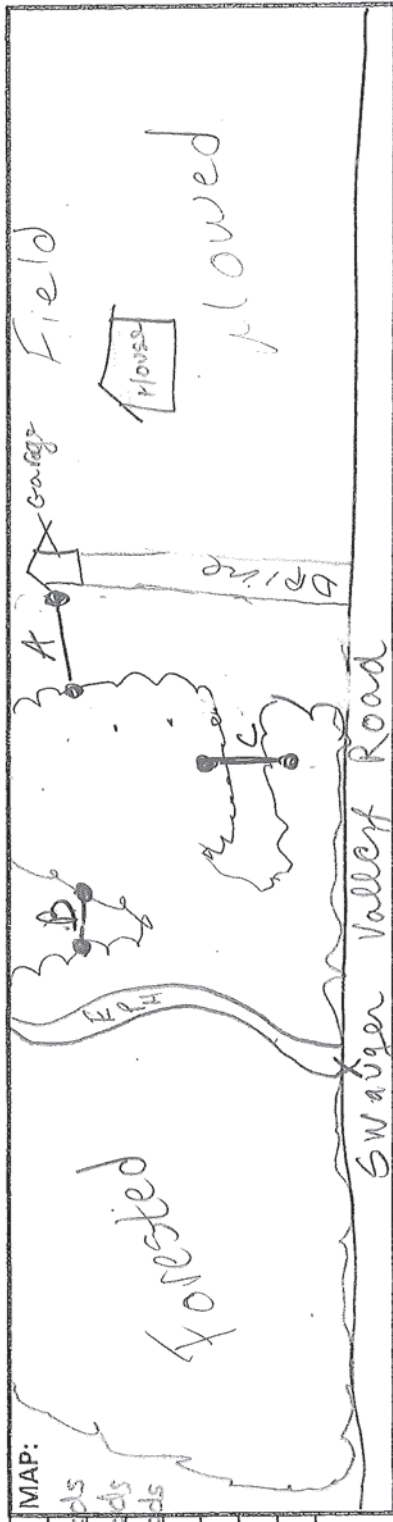
See day I.

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	10:24	LABO	F-MIR	J	12	43	-	-	A	-	-	-	Same size as capture from previous night
2	1:25	LABO	F	-	-	-	-	-	A	-	-	-	Escaped
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 08-08-11 Project/Area: Polksumouth Bypass Site Name/County: H.9 Scioto UTMs (E/N): -82.867287 / 38.848867

Location: Across driveway clearing within woods Weather (wind/moon/precip): W=0-7mph, M=+2 first quarter, P=gentle drizzle 6:00am  
 Start/End Time: 8:50/2:05 Start/End Temp: 73/71 Personnel: M. Malcomsky, K. Tamasek  
12:00am to 12:30am



Net	# High	Length	Feature	MAP:
A	3	9	road/woods	
B	2	6	road/woods	
C	1	6	road/woods	
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm; necrotic tissue, membrane loss; P=physical impact damage



Date: 08-09-11 Project/Area: Pittsforth Bypass Site Name/County: #9 Scoto UTM's (E/N): 88.86787 / 38.848867  
 Location: Access drive way, clearing within woods Weather (wind/moon/precip): W=0-Smb, M=+3-first quarter, P=gehd, r=26  
 Start/End Time: 9:10/2:15 Start/End Temp: 77 / 75 Personnel: M. Malcosky, K. Tomasetto from 11:20am - 12:30am

Net	# High	Length	Feature	MAP:
A	3	9	local woods	
B	2	6	local woods	
C	1	6	local woods	
D				
E				
F				
G				

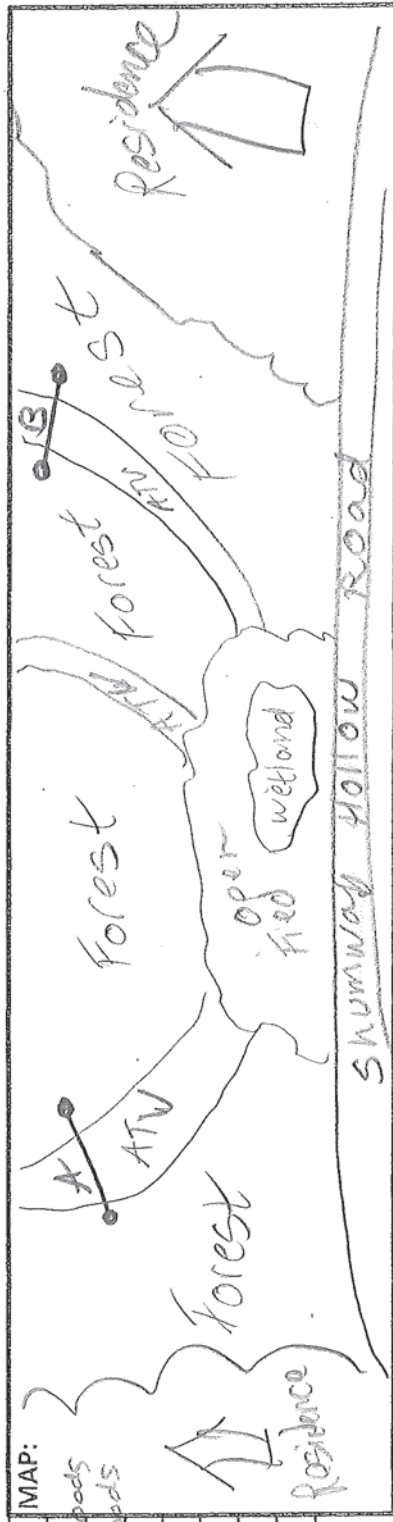
see day 1

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

No captures

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 08-12-11 Project/Area: Pittmanth Bypass Site Name/County: #10, Scioto UTMs (E/N): -8,8853 / 38,837084  
 Location: Access road through woods Weather (wind/moon/precip): W=1-3mph, M=1-6, P=none  
 Start/End Time: 8:50/2:00pm Start/End Temp: 70/62 Personnel: M. Malcosky, T. Ates



Net	# High	Length	Feature	MAP:
A	2	6	road/woods	
B	2	6	road/woods	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 08-14-11 Project/Area: Patsmouth Bypass Site Name/County: #10, Scioto UTMs (E/N): 888753 / 38.837084  
 Location: Across road through woods Weather (wind/moon/precip): Windy, M+H Fall, Precip  
 Start/End Time: 8:49-2:15 Start/End Temp: 70 / 63 Personnel: M. Malcom Ky, K. Tomasevic

Net	# High	Length	Feature	MAP:
A	2	6	road/woods	See day 1.
B	2	6	road/woods	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Cond.	Age	Mass (g)	Forearm (mm)	Wing Cond. ^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2:00pm	LABG	F-PR	A	15	43			A				
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 06-13-11 Project/Area: Portsmouth Bypass Site Name/County: #11, Scioto UTMs (E/N): 82, 82972 / 38, 829371  
 Location: Across road and opening in woods Weather (wind/moon/precip): W = 15 mph, M = full, P = light rain 8:30-9:30pm  
 Start/End Time: 10:30/3:45 am Start/End Temp: 73 / 60 Personnel: M. Malcosky, T. Atef

Net	# High	Length	Feature	MAP:
A	2	9	road/tunnel	
B	3	9	road/woods	
C				
D				
E				
F				
G				

see day 2

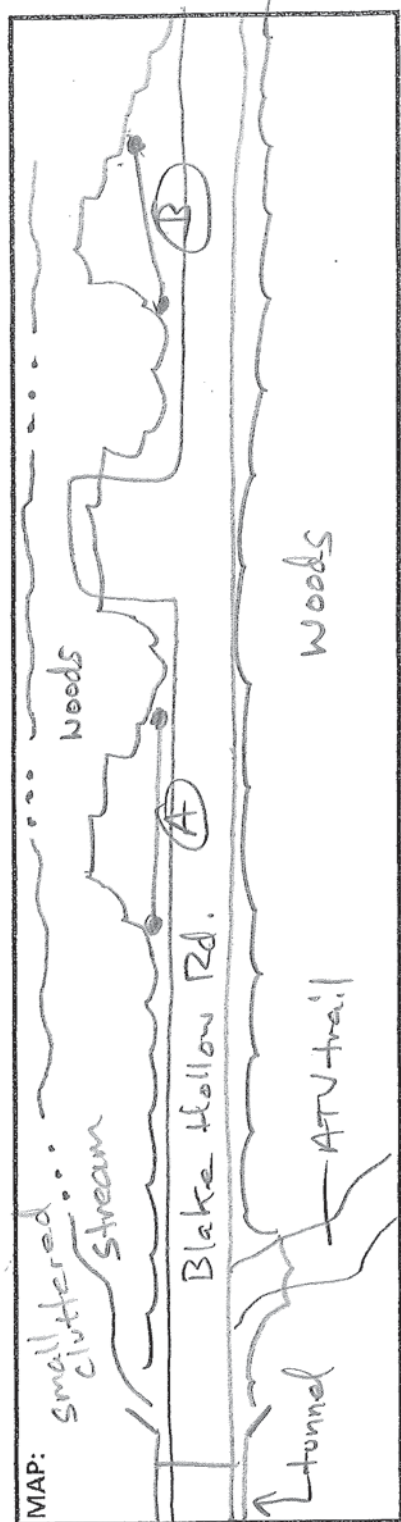
	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	11:10	LABO	M-A	A	9.5	40	---	---	A	---	---	---	
2	11:55	MYSE	M-A	A	6	33	---	---	A	---	---	---	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage.



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Date: 6/14/11 Project/Area: Portsmouth Site Name/County: #11 / Scioto UTM's (E/N): 0339068 / 4799384  
 Location: Blake Hollow Weather (wind/moon/precip): calm & clear  
 Start/End Time: 2100 / Start/End Temp: 68° / 61° Personnel: G. Libby, J. Williamson

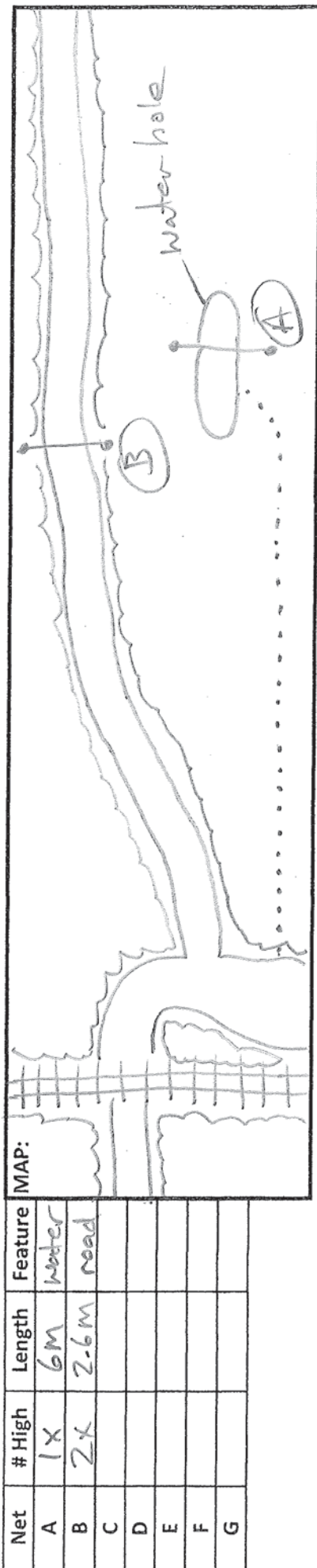


Net	# High	Length	Feature
A	2x	9m	gap
B	2x	6m	gap
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2130	LABO	F/N	A	10.7	41	0	DNB	A/T4	--	--	--	
2	2130	LABO	M/ser	A	16.4	39	0	DNB	A/T6	--	--	--	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splutching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 8/10/11 Project/Area: Portsmouth, OH Site Name/County: #12/Scioto  
 Location: W under RR tunnel @ 6117 SR 335  
 Start/End Time: 2100/0200 Start/End Temp: 71.0E/60.0F Personnel: G. Libby & K. Tomasetto  
 UTM's (E/N): 0339052 / 4298657  
 Weather (wind/moon/precip): calm / partly cloudy



Net	# High	Length	Feature
A	1X	6M	water
B	2X	2.6M	road
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	alum. Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2100	MYSE	M/Sc	A	5.7	35	0	10847 CDNR	A/T2				
2	2130	MYSE	F/N	A	6.7	36	0	10848	B/T3				
3	2130	MYSE	M/N	A	5.9	35	0	10849	B/T4				
4	000	MYSE	M/N	A	5.7	34	0	10850	B/T3				
5	100	MYSE	F/N	A	6.5	36	0	10831	B/T2				
6	140	MYSE	M/N	A	5.8	35	0	10832	B/T3				
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



17S

Date: 8/11/11 Project/Area: Portsmouth, OH Site Name/County: #12/Scioto Co. UTM's (E/N): 0339052/4298657  
 Location: W under RR tunnel @ 6117 SR 335 Weather (wind/moon/precip): Cool + clear  
 Start/End Time: 2:00 / 2:00 Start/End Temp: 65° / 55° Personnel: G. Libby + K. Tomasello

MAP:  
 See sketch from 8/10/11  
 Plus additional 2X 6M on rd below RR tracks  
 (flying squirrel + 1 MYLV)

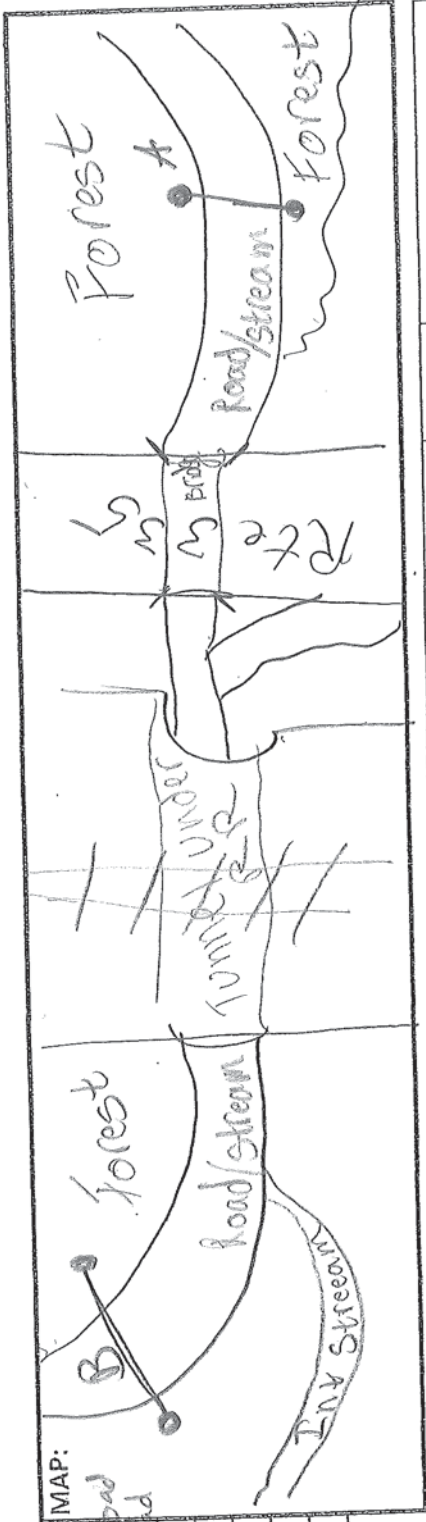
Net	# High	Length	Feature
A			
B			
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Alum. Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2220	LABO	M/N	A	9.6	41	0	0 DNR 22333	A/T2	--	--	--	
2	2340	MYSE	M/N	A	5.3	34	0	10833	B/T4	--	--	--	
3	2345	MYLV	M/N	A	6.8	36	0	10834	C/T6	--	--	--	
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING: condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm; necrotic tissue, membrane loss; P=physical impact damage

Date: 08-10-11 Project/Area: Portsmouth Bypass Site Name/County: #13, Scioto  
 Location: Across shallow gravel stream/road under canopy Weather (wind/moon/precip): W=0-Sun, M=3 full, P=none  
 Start/End Time: 9:00/2:30 Start/End Temp: 75/64 Personnel: M. Matcosky, S. Willard

UTMs (E/N): 92857633 / 38816956



MAP:

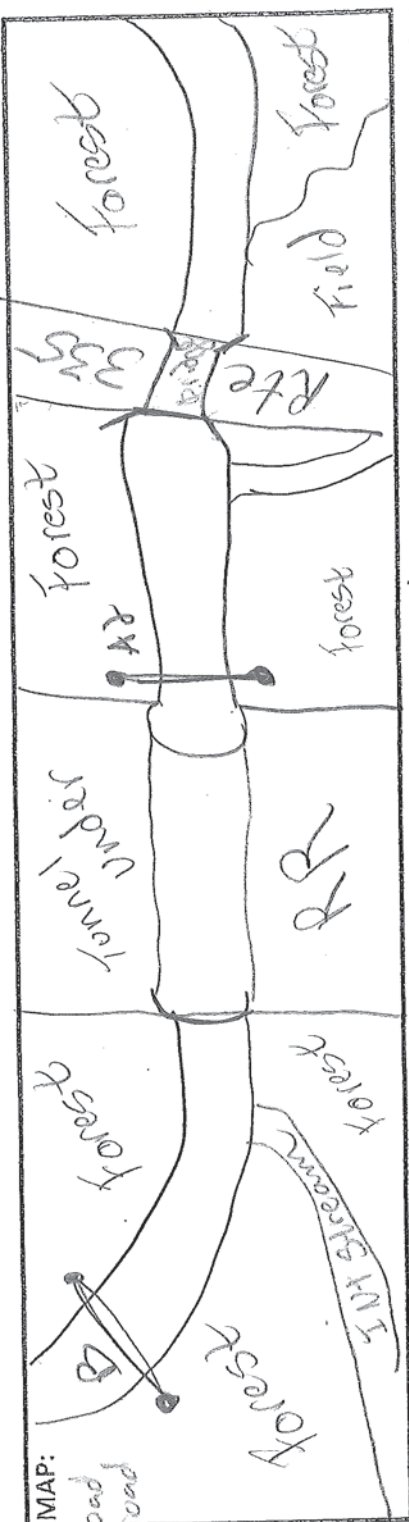
Net	# High	Length	Feature
A	2	6	Stream/road
B	2	6	Stream/road
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:15	LABO	F-MR	J	9	39	—	—	B	—	—	—	
2	9:15	LABO	F-MR	—	—	—	—	—	B	—	—	—	
3	9:25	MVSE	M-A	A	7	33	—	—	B	—	—	—	
4	9:25	LABO	M-MR	A	11	39	—	—	B	—	—	—	
5	10:50	MVSE	M-A	A	7.5	33	—	—	B	—	—	—	
6	11:45	PE SU	M-MR	S	9.5	33	2	—	B	—	—	—	Pin-sized holes
7	12:00	LABO	F-MR	S	11	40	—	—	B	—	—	—	
8	12:00	PE SU	M-MR	A	7	36	—	—	B	—	—	—	
9	12:00	EPFU	M-A	A	17	45	—	—	B	—	—	—	
10	12:20	PE SU	M-MR	S	6.5	33.5	—	—	B	—	—	—	
11	12:45	EPFU	M-A	A	16.5	45	—	—	B	—	—	—	
12	1:20	EPFU	M-A	A	16.5	44	—	—	B	—	—	—	
13	1:35	PE SU	M-MR	S	6	32	—	—	B	—	—	—	
14	2:05	LABO	F-MR	S	12	41	—	—	B	—	—	—	
15	2:05	MVLU	M-A	A	7	34	—	—	B	—	—	—	
16	2:10	MVSE	M-A	A	6	34	—	—	B	—	—	—	
17													
18													

<sup>^</sup>WING condn damage: 0=none, 1=less than 50% pigment loss, 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 08-11-11 Project/Area: Putnam Pass Site Name/County: # B, Seido UTM's (E/N): 22, 85, 123 / 38, 81, 6958  
 Location: Pass shallow stream/road under canopy Weather (wind/moon/precip): W=0-5mph, M=2 full, P=none  
 Start/End Time: 8:45/2:15 Start/End Temp: 71 / 54 Personnel: M. Malcomsky, S. Williams

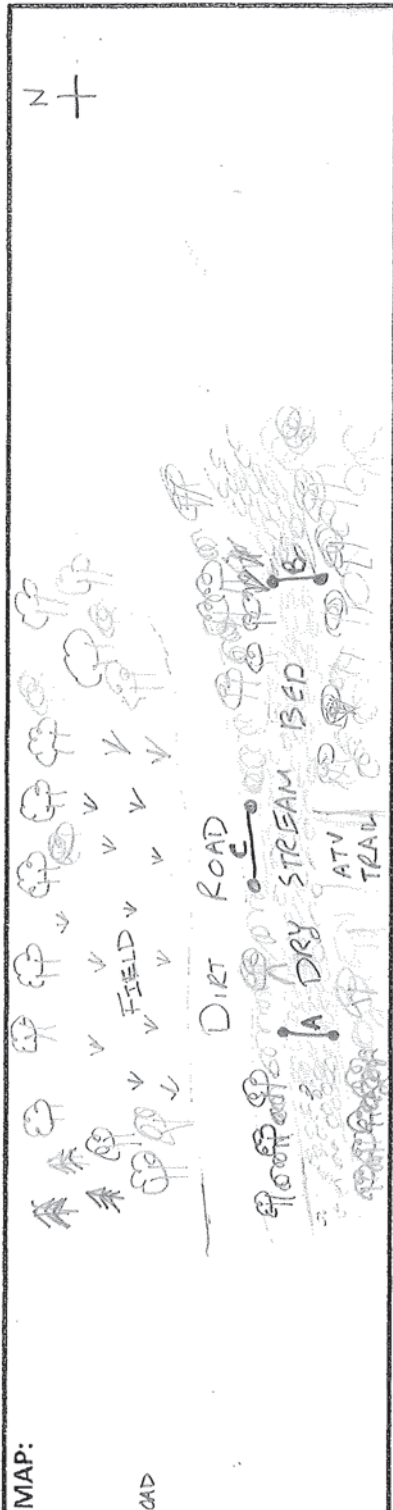


Net	# High	Length	Feature	MAP:
A	2	6	Stream/road	
B	2	6	Stream/road	
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:40	MYSE	M	A	6.5	34.5	---	---	A2	---	---	---	
2	9:50	MYSE	F	A	6.5	34.5	---	---	A2	---	---	---	
3	10:45	EPFU	M	A	17	48.5	---	---	B	---	---	---	
4	10:50	LACT	M	A	24.5	59	---	---	B	---	---	---	
5	10:50	LARO	F	S	14	40	---	---	B	---	---	---	
6	12:30	EPFU	M	A	15.5	45	---	---	A2	---	---	---	
7	12:30	LARO	-	-	-	-	---	---	A2	---	---	---	Escaped
8	1:00	LACT	F	A	26	55	---	---	A2	---	---	---	
9	1:00	MYSE	M	S	6.5	33	---	---	B	---	---	---	
10													
11													
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holus ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 8/6/2011 Project/Area: Rocks Mouth Pipes Site Name/County: #14 Site UTMs (E/N): 17SO338327/ 42916298  
 Location: Stewart Ave, off Conell Rd Weather (wind/moon/precip): 0 mph / HALF MOON / NONE  
 Start/End Time: 2030/2200 Start/End Temp: 82° / 72° Personnel: Michael Whitby, J. Nawrocki



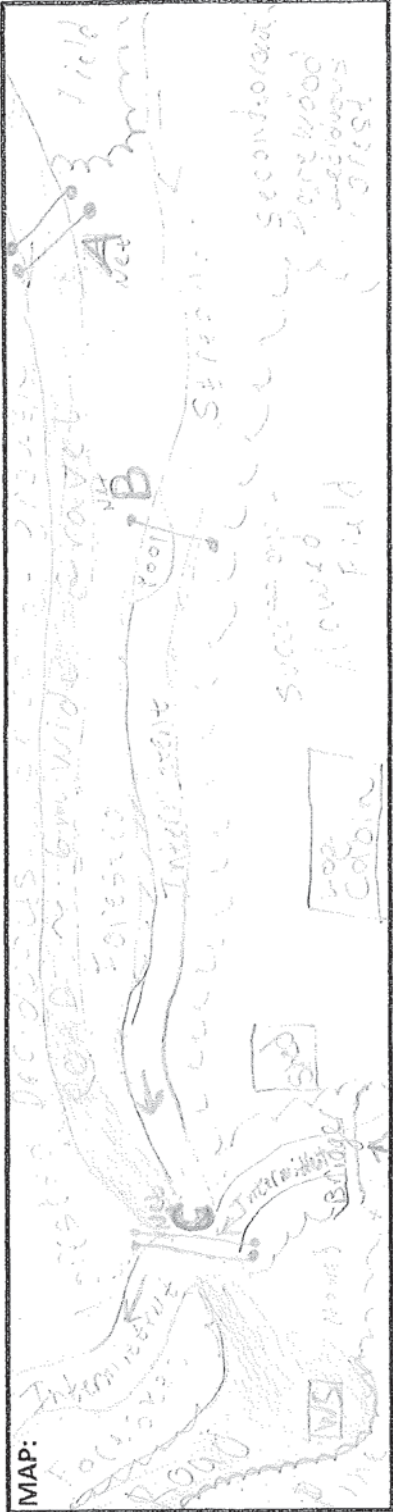
Net	# High	Length	Feature
A	2	9m	DRY STREAM
B	2	6m	DRY STREAM
C	1	5m	ATV TRAIL/ROAD
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height (cm)	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	21:03	MYSE	M/NR	A	5.25	33	0		A/2				
2	21:25	MYSE	M/NR	A	5.75	33	0		C/3				
3	21:36	MYSE	F/NR	A	6.0	35	0		B/3				
4	21:50	MYSE	M/NR	A	5.75	35	0		A/2				
5	22:40	MYSE	F/NR	A	7.0	35	0		B/2				
6	23:00	LABO	M						A/5				ESCAPED
7	00:55	LABO	M/NR	J	11.25	40	0		A/2				
8	00:55	MYSE	M/NR	A	5.5	34	0		A/1				
9	01:35	MYSE	M/NR	A	6.0	35	0		A/2				
10	<del>11:00 - 11:00</del>												
11	8:07	START			20:45	780							
12													wind 1-3 mph (light breeze)
13	01:11	MYSE	F/NR	A	6.25	35	0		A/4				Precip T-storm by and after netting but no rain during
14													
15													
16													
17													Moon Half
18													

<sup>^</sup>WING cwnn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm; necrotic tissue, membrane loss; P=physical impact damage



Date: 8-6-11 Project/Area: Portsmouth Bay Pops Site Name/County: Site 15 / Sciota UTM's (Easting): 72.8623069, 38,800329  
 Location: Stewart Ave, off Coaches Rd, Portsmouth, Very Humid No Wind, 1/2 Moon  
 Start/End Time: 8:49-2:00am Start/End Temp: 83°F / 73°F Personnel: J. Williams, A. N. 88, G. Libby



Net	# High	Length	Feature
A	2	6	Road
B	1	6	Stream
C	2	9	Stream
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net/ Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:32	LARD	F-NR	J	11	39	0	-	C-76	-	-	-	
2	9:55	MYSE	M-NR	A	6.5	37	0	-	C-73	-	-	-	
3	10:01	PESU	F-NR	J	6	36	0	-	A-72	-	-	-	
4	10:53	FPEU	F-NR	J	11.5	46	0	-	C-74	-	-	-	
5	12:01	MYSE	M-NR	J	5.5	36	0	-	C-73	-	-	-	
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WINGI condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm; necrotic tissue, membranous loss; P=physical impact damage

Date: 8/7/11 Project/Area: Portsmouth OH Site Name/County: #15/Scioto Co. UTMs (E/N): 82.86230891 / 38.800329  
 Location: W of 4155 / Stewart Ave off Coriell Rd. Weather (wind/moon/precip): damp / calm  
 Start/End Time: 2100 / 0200 Start/End Temp: ~75° / ~65° Personnel: G. Libby / J. Williams

MAP:  
 See sketch from 8/6/11

Net	# High	Length	Feature
A			
B			
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	140	MUSE	M-UR	A	6.3	39.5	0	ODVR 1084	A/T3				guano
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



UTMs (E/N): 50337720 / 4295305

#16

Pocksmouth By Falls

Date: 8/8/2011 Project/Area: HUNTS POINT LAND

Weather (wind/moon/precip): 1-3 / half moon / none - 2 to 3 periods rain

Location: HUNTS POINT LAND Personnel: Michael Whitney, J. N.

Start/End Time: 2100/2232 Start/End Temp: 76° / 70°



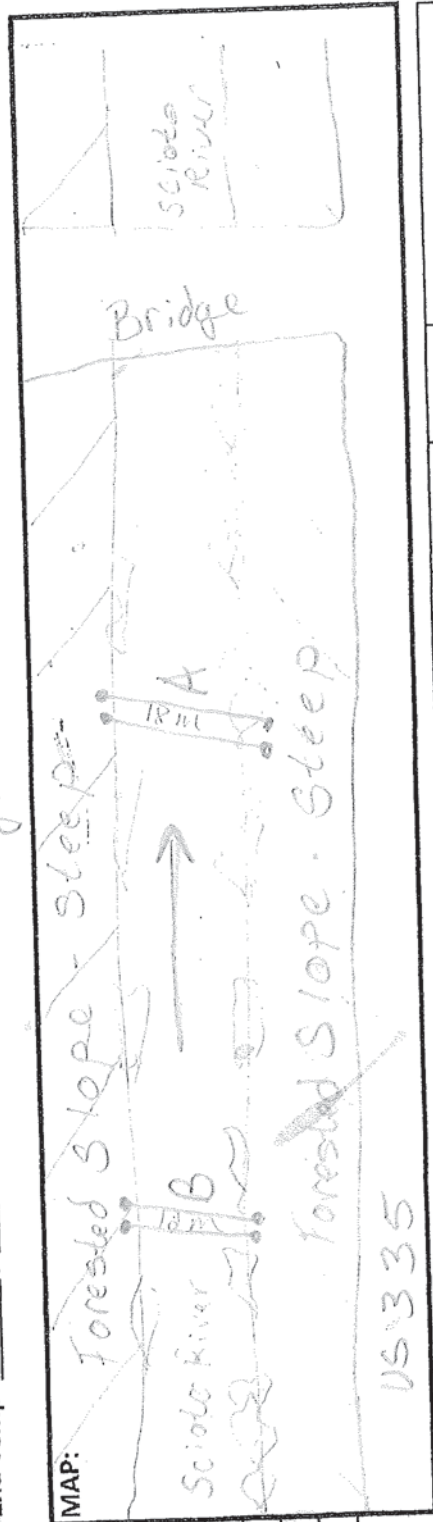
Net	# High	Length	Feature
A	2	5.5m	logging road
B	2	6m	logging road
C	1	5m	road
D			
E			
F			
G			

Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height (Tie)	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1 0015	MYSE	M/NR	J	5.0	33	0	90830	A/B				left wing edge damage
2 0030	MYSE	M/NR	A	5.5	34	1	10829	B/5				dissertation in membrane to body
<del>3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18</del>												
5												
6												
7												
8												
9 2325	MYSE	M/NR	A	5.5	34	0	10828	B/3				
10 2340	EPFU	F/NL	A	17.25	47	0	22330	B/4				
11												
12												
13												
14												
15												
16												
17												
18												

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/sploching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage.

2007  
Guthrie Spots

Date: 8-8-11 Project/Area: Parksmouth Site Name/County: # 17, Scioto Co. UTM's (E/N): 38.77277 / 92.87666  
 Location: Scioto River Weather (wind/moon/precip): Humid, overcast  
 Start/End Time: 9pm/2am Start/End Temp: 81°F / 66° Personnel: G. Libby / J. Williams



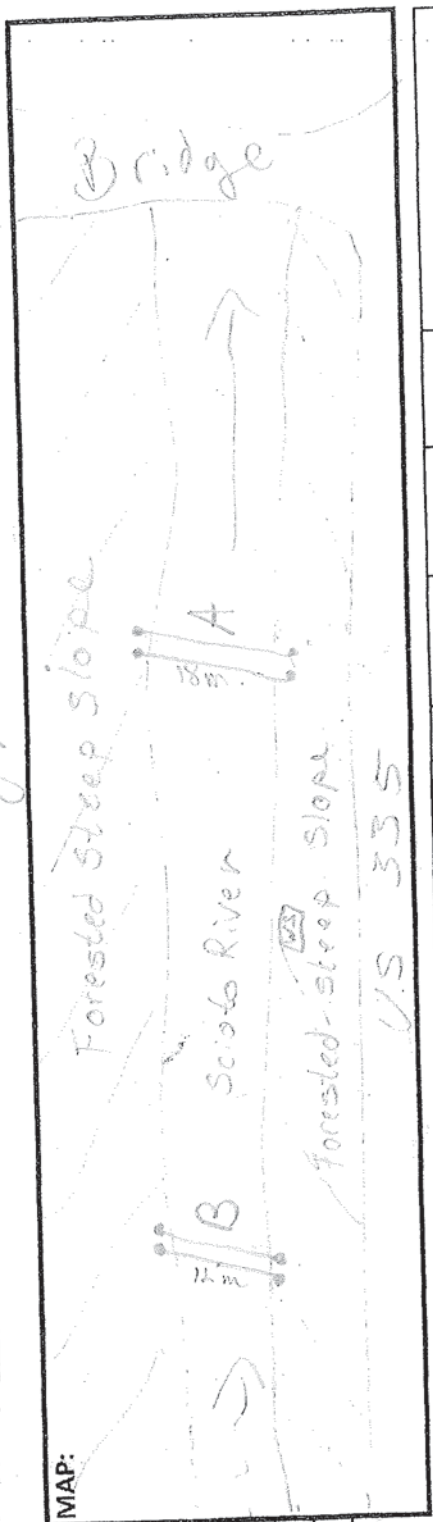
Net	# High	Length	Feature
A	2	18m	River
B	2	12m	River
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	9:35pm	LARVA	F- NR	A	16.7	40	1	001R22331	A-13	-	-	-	
2	9:57pm	LARVA	-	-	-	-	-	-	B-15	-	-	-	EXAGRATED
3													
4													
5													
6													
7													
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9													
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11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 8-9-11 Project/Area: Portsmouth Bypass Site Name/County: #17/Scioto R. UTM's (E/N): 38.77277 / 82.87666  
 Location: Scioto River Weather (wind/moon/precip): Clear  
 Start/End Time: Apr/ 2:30 am Start/End Temp: 79°E / 64° Personnel: G. Libby / J. Williams



MAP:

Net	# High	Length	Feature
A	2	18m	River
B	2	12m	River
C			
D			
E			
F			
G			

US 335

Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
9:10am	EPFU	M-NR	A	10.5	44	0-P	00NR 223302	A-75	-	-	-	2 birds on rd wing
10:40am	LABO	-	-	-	-	-	00NR 10842	A-78	-	-	-	Escaped
12:00pm	MYLU	F-NR	A	10.6	36	0	00NR 10843	A-73	-	-	-	CAUGHT IN RAIN
12:15pm	MYLU	M-NR	J	7.3	37	0	00NR 10844	A-74	-	-	-	CAUGHT IN RAIN
1:28pm	MYLU	F-NR	A	9.8	37	0	00NR 10845	A-73	-	-	-	
1:30	MYLU	M-S	A	7.8	36.5	0	00NR 10846	A-77	-	-	-	
2:05pm	MYLU	F-NR	A	7.4	37	0	00NR 10847	A-74	-	-	-	
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

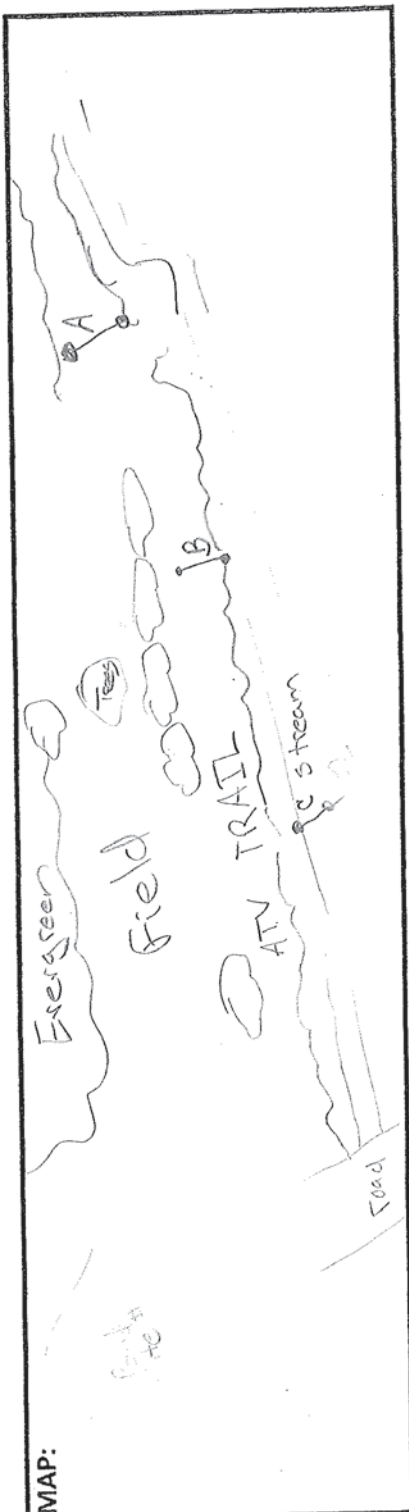
18 Sites

UTMs (E/N): -82.87284971 38.755486

Date: 08-04-2011 Project/Area: Portsmouth, OH Site Name/County: \_\_\_\_\_

Location: North of Poplar Dr. Weather (wind/moon/precip): Overcast, No moon, No Precip

Start/End Time: 20:45/22:00 Start/End Temp: 80°F / 67°F Personnel: Michael Whitby, Julie Nawrocki



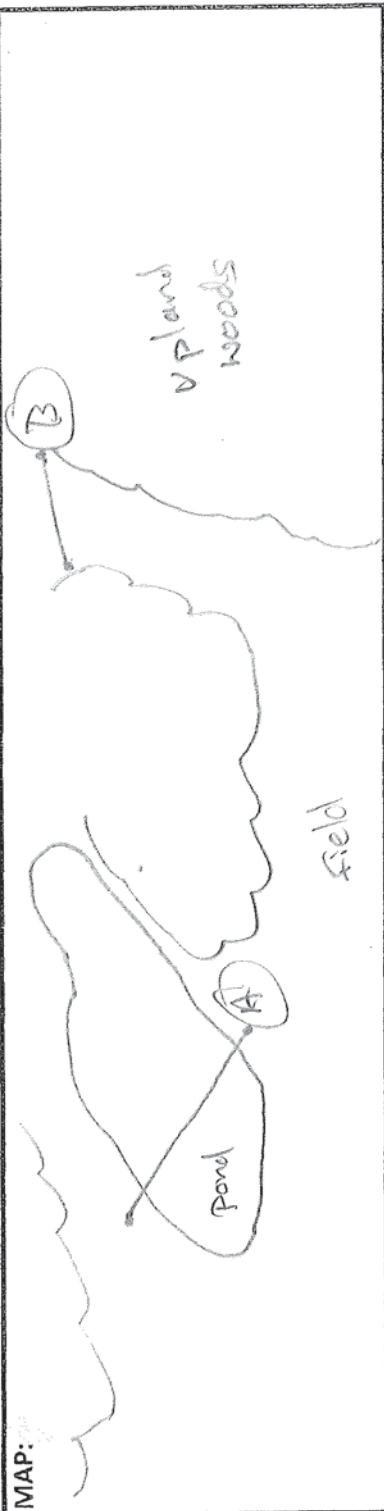
Net	# High	Length	Feature	MAP:
A	2	6	ATV TRAIL	
B	2	6	ATV TRAIL	
C	1	2.6	Stream	
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn.^	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1													
2													
3													
4													
5													
6													
7													
8													
9													
10	21:30	W/6M	2	JV	18	49	0	B-05-2011	B 4 ties				
11	22:15	EPFU	N/A	JV	16.5	45	0		A 2 ties				
12													
13													
14													
15													
16													
17													
18													

^WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splitching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



Date: 8/4/11 Project/Area: Portsmouth OH Site Name/County: #19/Scioto Co. UTM's (E/N): 82.8740Z /38-75541  
 Location: N of Hartledge Drive Weather (wind/moon/precip): warm/calm  
 Start/End Time: 2100/0200 Start/End Temp: 80°F / 68°F Personnel: G. Libby / J. Willemen



MAP:

Net	# High	Length	Feature
A	X1	18M	Pond
B	X2	5M	road
C			
D			
E			
F			
G			

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net/ Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2140	EPU	M/S	A	13.4	48.5	0	DNB	A/T2	N	N	—	
2	2140	EPU	V	V	V	V	V	DNB	A/T2	N	N	—	escaped
3	2200	EPU	M/N	A	17.2	44	0	DNB	A/T2	N	N	—	
4	2245	EPU	F/N	A	21.8	49	0	DNB	A/T2	N	N	—	
5	2315	EPU	F/N	A	16.2	48	0	DNB	A/T1	N	N	—	
6	2315	LARG	F/N	A	11.7	45	0	DNB	A/T2	N	N	—	
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage

Date: 8/5/11 Project/Area: Portsmouth OH Site Name/County: #19/Scioto Co. UTMs (E/N): 82.87462 / 38.75541  
 Location: N of Hartledge Drive Weather (wind/moon/precip): calm / clear  
 Start/End Time: 2045/0200 Start/End Temp: 28.0 / ~65.0 F Personnel: G. Libby & J. Williams

Net	# High	Length	Feature	MAP:
A				See sketch from 8/4/11
B				
C				
D				
E				
F				
G				

	Time	Species	Sex / Reprod. Condn.	Age	Mass (g)	Forearm (mm)	Wing Condn. <sup>^</sup>	Band (Type/No.)	Net / Height	DNA Punch #	Hair Sample #	Trans. Freq.	Comments
1	2130	EPFU	U	U	U	U	U	DNB	A/T5	-	-	-	Escaped
2	2245	EPFU	F/PL	A	17.2	46	0	DNB	A/T2	-	-	-	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

<sup>^</sup>WING condn damage: 0=none; 1=less than 50% pigment loss; 2=greater than 50% scarring/splotching, holes <5mm; 3=holes ≥5mm, necrotic tissue, membrane loss; P=physical impact damage



# **Appendix D:**

# **Environmental Impact Statement**

# **Reevaluations**



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Ohio Division

April 5, 2012

200 North High Street, Rm 328  
Columbus, Ohio 43215  
614-280-6896  
614-280-6876

In Reply Refer To:  
HDA-OH

Jerry Wray  
Director  
Ohio Department of Transportation  
1980 West Broad Street  
Columbus, OH 43223

Dear Director Wray:

This letter is in response to your March 28, 2012 request for FHWA Ohio Division review and approval of the *SCI-823-6.81 Portsmouth Bypass Phase 1 (PID 19415) Environmental Reevaluation* document dated March 20, 2012. The proposed undertaking involves the construction of three miles of a four-lane, divided, limited access highway on new alignment in Scioto County, Ohio.

The Record of Decision (ROD) for the SCI-823 Portsmouth Bypass project was issued on June 9, 2006. Since that time, the project has been split into three separate phases for final design and construction. Operational independence for Phase 1 was approved by FHWA on September 15, 2011. The ROD for the proposed undertaking has been reevaluated for Phase 1 to reflect changes since its original issuance. Phases 2 and 3 will be reevaluated separately.

Based on the documentation presented and our involvement in the project's development, FHWA approves the *Environmental Reevaluation* document and concurs with ODOT that the June 9, 2006 Record of Decision remains valid for the Portsmouth Bypass Phase 1 project.

If you have any questions, please contact Ronald J. Garczewski, Transportation Engineer, at (614) 280-6840 or [ron.garczewski@dot.gov](mailto:ron.garczewski@dot.gov).

Sincerely,

Laura S. Leffler  
Division Administrator



ecc: Tim Hill, ODOT OES  
Carmen Stemen, ODOT OES  
Tom Barnitz, ODOT District 9  
Doug Buskirk, ODOT District 9  
Greg Manson, ODOT District 9  
Dave Snyder, FHWA  
Andy Blalock, FHWA  
Ron Garzewski, FHWA

File: SCI-19415/NEPA/Reevaluation

**Portsmouth Bypass  
Environmental Reevaluation  
Phase 1**

**SCI-823-6.81  
PID 19415**



**March 20, 2012**

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Appendix A Agency Correspondence

Appendix B SR 335 Documentation





## 1. Introduction

On June 9, 2006, the United States Department of Transportation, Federal Highway Administration (FHWA) issued a Record of Decision (ROD) for the SR 823 Portsmouth Bypass Project, PID 19415. The ROD was based upon the *Draft Environmental Impact Statement (DEIS)* dated January 2005 and *Final Environmental Impact Statement (FEIS)* dated August 2005.

Since 2005, the Portsmouth Bypass project has been divided into three projects for design and construction (see Figure 1-1).

- Phase 1, SCI-823-6.81 (PID 19415) – Shumway Hollow Road (TR 234) Interchange near the Scioto County Airport to Lucasville-Minford Road (CR 28) Interchange. Phase 1 is 3 miles in length and contains three bridges and two interchanges.
- Phase 2, SCI-823-10.13 (PID 79977) – Lucasville-Minford Road (CR 28) Interchange to US 23 Interchange. Phase 2 is 7.4 miles in length and contains ten bridges and one interchange.
- Phase 3 SCI-823-0.00 (PID 77366) – Sciotoville Interchange (US 52) to Shumway Hollow Road (TR 234) Interchange near the Scioto County Airport. Phase 3 is 5.6 miles in length and contains six bridges and two partial interchanges.

In addition to the break-out of the Portsmouth Bypass project into three phases, proposed improvements along SR 335 near the Shumway Hollow Road intersection are now included as part of the Phase 1 project. Approximately 1,990 feet of SR 335 will be reconstructed to shift the centerline eastward. This modification will provide a better connection with the proposed Shumway Hollow Road intersection and a right-turn lane in the southbound direction. This improvement will require an additional 0.9 acres of new right-of-way.

This project is consistent with Ohio's Long Range Transportation Plan and Phase 1 is included in the fiscally constrained FY 2012-2015 State Transportation Improvement Program (STIP) for Scioto County.

This environmental reevaluation has been performed to confirm the ROD is applicable to the Phase 1 design and construction project, SCI-823-6.81 (PID 19415). The remaining two projects, listed above, will be reevaluated separately.

### Project Description

The SR 823 Portsmouth Bypass will be a four-lane, divided, limited access facility connecting US 52 near Wheelersburg to US 23 just north of Lucasville, Ohio. It will be approximately 16 miles in length, bypassing approximately 26 miles of US 52 and US 23 through Portsmouth, Ohio. The design year traffic is projected to be 26,000 vpd with 14% trucks when all three phases are completed.

The proposed project is approximately 90 miles south of Columbus, Ohio and 45 miles northwest of Huntington, West Virginia. Other nearby towns include Wheelersburg and Ironton, Ohio, and Ashland and Greenup, Kentucky. Existing transportation facilities in the

region include US 23, US 52, SR 32, Kentucky's A-A Highway, Norfolk Southern Railway, CSX Railroad, Amtrak service, Scioto County Airport, and Ohio River barge shipping.

The southern terminus of Phase 1 is a new interchange at Shumway Hollow Road (TR 234) near the Scioto County Airport. From the interchange, the four-lane divided highway extends approximately 3 miles to a proposed interchange with Lucasville-Minford Road (CR 28). At each terminus, only a partial interchange will be constructed as part of Phase 1 to provide access to/from the new roadway. These interchanges will be completed as part of the adjacent phases.

#### Preferred Alternative

The Preferred Alternative, known as the "Hill Alternative", consists of the Hill 1, Hill/Valley2, Hill 3, and Hill 4 segments. The new roadway will include interchanges at five locations including US 52 in Sciotoville, SR 140, relocated Shumway Hollow Road (TR 234), Lucasville-Minford Road (CR 28), and US 23 in Lucasville. See Figure 1-1 for the Preferred Alternative alignment.

Since the initial evaluation of the Preferred Alternative, several modifications to the project have been made. Each of these modifications listed below are within the environmental footprint of the Preferred Alternative.

- At the Lucasville-Minford Road (CR 28) interchange, the interchange location was shifted approximately 300 feet closer to CR 28 to reduce excavation waste;
- The vertical profile was modified to reduce excavation waste;
- At the Shumway Hollow Road (TR 234) Northbound On-ramp, the acceleration lane was extended for truck merging maneuvers; and
- The SR 335 intersection was shifted east to minimize railroad impacts.

As noted previously, approximately 1,990 feet of SR 335 will be reconstructed to shift the centerline eastward. This improvement was not included in the DEIS or approved as part of the June 2006 ROD. This reevaluation identifies and documents changes since the approval of the ROD in June 2006, including impacts related to the SR 335 reconstruction. Unless specifically noted otherwise, the evaluation of the SR 335 reconstruction is included within the Phase 1 analysis and studies.

#### Purpose and Need

The Purpose and Need for this project was prepared as part of the *Feasibility Study Report for US Route 23 Portsmouth Transportation Study*, dated April 2001. As independent projects, each phase still satisfies the Purpose and Need of the Portsmouth Bypass project. The key evaluation factors of the Purpose and Need are listed below:

- Deficiencies of the existing system;
- Regional mobility;
- Economic issues;
- Traffic volumes and levels of service; and
- Safety.



### Operational Independence

Operational independence and significance for Phase 1 of the Portsmouth Bypass project has been established based on the project's ability to increase safety; provide a shorter route between endpoints, thus reducing emissions and fuel consumption; and improve traffic operations. Phase 1 will be constructed to meet current highway design standards and can operate independently from the other two phases.

On September 15, 2011, FHWA approved the operational independence of Phase 1 of the Portsmouth Bypass project.

## 2. Public Involvement

A series of public meetings were conducted throughout the development of the project. These meetings were held at critical steps during the process to present feasible alternatives, impacts, and the recommended Preferred Alternative. A Stakeholder group was also formed to provide input on the project. This group included representatives from local jurisdictions, public and private organizations, and community groups. ODOT continues to maintain a project website ([www.portsmouthbypass.com](http://www.portsmouthbypass.com)) to provide a venue for interested parties to review project information, schedule, and project status.

Five public involvement meetings were held throughout the development of the project and are listed below in chronological order. For detailed information on the comments received at these meetings, refer to the DEIS and FEIS.

- June 22, 2000 – Public meeting held during the Feasibility Study phase to present the needs assessment and conceptual alternatives;
- November 13, 2002 – Public meeting to present the Preliminary Feasible Alternatives;
- November 19, 2003 – Public meeting to present the Refined Feasible Alternatives addressing comments received in November 2002. The project was divided into four sections with two alternatives/section for Sections 1, 3, and 4. The alternatives were identified as either the Hill or Valley Alternative. Section 2 had only one combined Hill/Valley Alternative. The individual alternatives in each section had the same termini and therefore, could be joined in any combination;
- August 19, 2004 – Public meeting to present the recommended Preferred Alternative known as the “Hill” Alternative and associated impacts;
- February 10, 2005 – Public Hearing for the DEIS;
- December 6, 2005 – Public meeting for noise wall; and
- March 9, 2006 – Public meeting to present modifications to CR 28.

ODOT District 9 reports that no comments on the project have been received since the ROD was signed in June 2006. The local newspaper, Portsmouth Daily Times, recently published several articles providing an update on the project. On April 30, 2010 the newspaper covered a Legislative Day and Transportation Roundtable meeting. At this meeting, ODOT District 9 Deputy Director provided an update to the Portsmouth Bypass project and noted funding for Phase 1. On March 27, 2011, the Portsmouth Daily Times reported that Phase 1 is set to begin in construction in January 2012. Most recently, on September 14, 2011, the Scioto County Commissioners passed a resolution adopting the ODOT route designation of SR 823 for the new roadway. The online archives for ODOT Central Office and ODOT District 9 press releases were reviewed back to 2005. Since the approval of the ROD in June 2006, there have been no ODOT published press releases regarding this project.

It has been determined that no additional public involvement is required as part of this reevaluation.



### 3. Reevaluation

This section presents the reevaluation for Phase 1 of the Portsmouth Bypass project, including impacts associated with the SR 335 reconstruction. The remaining phases will be reevaluated separately. The purpose of the reevaluation is to identify and document any changes to the impacts since the approval of the ROD in June 2006.

As part of this reevaluation, an *Ecological Survey Report*, dated September 19, 2011, was prepared by ASC Group, Inc. This report included a literature review of ecological features, terrestrial habitat, plant species, and impact summaries for each resource. The ecological features, including wetlands, streams, ditches, and ponds, were evaluated for the Phase 1 project area only. However, potential effects on fourteen federally listed threatened and endangered species were evaluated for the entire Portsmouth Bypass Preferred Alternative Phases 1, 2, and 3, and additional detailed surveys were conducted for five of these species.

#### 3.1. Natural Environment

##### 3.1.1. Geology, Soils, and Erosion

The project area is located within the Shawnee-Mississippian Plateau of the unglaciated portion of the Appalachian Plateau Physiographic region. Minford Complex soils, which have a high water content, are located within the project area. Anticipated impacts include landslides, settlement, and instability; however, through design these impacts can be mitigated by using appropriate slope designs, wick drains, staged construction, over-excavation, undercutting, and drainage blankets.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

##### 3.1.2. Floodplains

As reported in the 2005 DEIS, the estimated floodplain impacts for the Preferred Alternative (Phases 1, 2, and 3) is 47.58 acres. Of this total, 10.63 acres are perpendicular encroachments and 36.95 acres are longitudinal encroachments.

As shown in Figure 3-1, the Phase 1 project area is located within the 100-year floodplain of Long Run, just south of Minford. Based on the revised FEMA maps dated April 2011, this project is within a Special Flood Hazard Area of Long Run, Zone A with no base flood elevations. Phase 1 will result in a temporary construction impact and minor fill and excavation within the floodplain. Neither of these impacts results in a rise in water surface elevation. There will be no permanent impacts within the floodplain. Coordination was initiated with the local community floodplain administrator during development of the Phase 1 plans. The Flood Hazard Development Permit for Phase 1 was approved on February 13, 2012.

The permit will be incorporated into the construction contract documents. There are no other floodplain impacts; therefore, this reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### 3.1.3. Groundwater/Sole Source Aquifer

As reported in the 2005 DEIS, there are no public water systems, private wells, or sole source aquifers within the project area. A water source protection area for the Scioto County Regional Water Authority's well field is located just east of Lucasville, outside of the Phase 1 project.

The Scioto County Drinking Water Source Protection Areas, and Public Water System Wells and Intakes map (OPEA Division of Drinking and Ground Waters) dated July 13, 2010 was reviewed. There are no changes to this resource since the preparation of the June 2006 ROD; therefore, no impacts to drinking water resources are expected by the Phase 1 project.

#### *Cumulative Impacts*

Potential cumulative impacts include possible contamination to groundwater resources due to accidental spills of hazardous materials, such as fuel, or from erosion materials being exposed during earthwork activities. Groundwater resources may also be impacted when construction activities encounter small, private wells in unknown locations adjacent to designated wellhead isolation zones and local aquifers.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### 3.1.4. Wetlands

The *Ecological Survey Report*, prepared in May 2004 for the 2005 DEIS, identified wetlands present within the project area. The 2005 DEIS also identified 1.27 acres of jurisdictional wetlands present within the Preferred Alternative (Phases 1, 2, and 3).

As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an *Ecological Survey Report*, dated September 19, 2011, for the Phase 1 project area only. The previously identified wetlands were reevaluated and additional wetlands were identified. A Jurisdictional Determination meeting with United States Army Corp of Engineers (USACE) was held on September 7, 2011. Appendix A includes email correspondence from the USACE regarding provisional jurisdiction for the Phase 1 project.

As shown in Table 3-1 and Figure 3-2 Sheets 1 through 5, Phase 1 will impact 31 jurisdictional wetlands, totaling 3.893 acres. Of this total, 2.527 acres are considered Ohio Rapid Assessment Method (ORAM) Category 2 non-forested wetlands and 1.366 acres are ORAM Category 1 non-forested wetlands.



Table 3-1: Summary of Wetland Impacts

Wetland Identifier	2005 DEIS Impact <sup>1</sup> (acres)	Reevaluation Impact		
		Category	Hydrologic Connection	Impacts (acres)
1	-	1/ORAM 23.5	Adjacent	0.141
2/3	-	Modified 2/ORAM 31.5	Abutting	0.517
4	-	Modified 2/ORAM 30.5	Adjacent	0.089
W8 WL6	0.09	Modified 2/ORAM 32.5	Abutting	0.221
W8 WL 8	0.10	1/ORAM 28.5	Abutting	0.020
5/W8 WL 7	0.05	Modified 2/ORAM 39.5	Abutting	0.066
6	-	Modified 2/ORAM 30.5	Adjacent	0.018
7	-	1/ORAM 21	Adjacent	0.108
8	-	Modified 2/ORAM 30.5	Adjacent	0.028
9	-	Modified 2/ORAM 35.5	Adjacent	0.073
10 <sup>2</sup>	-			
11 <sup>2</sup>	-			
12	-	Modified 2/ORAM 39	Adjacent	0.811
13	-	Modified 2/ORAM 35	Adjacent	0.233
14	-	1/ORAM 19.5	Adjacent	0.010
15	-	Modified 2/ORAM 33.5	Adjacent	0.041
16	-	1/ORAM 26	Abutting	0.036
17	-	Modified 2/ORAM 35.5	Adjacent	0.001
18/W9 WL2	0.06	Modified 2/ORAM 35.5	Abutting	0.038
19	-	2/ORAM 49	Abutting	0.180
20	-	Modified 2/ORAM 37	Adjacent	0.062
21	-	1/ORAM 28	Adjacent	0.082
W9 WL4	0.13	Modified 2/ORAM 34	Adjacent	0.029
22	-	1/ORAM 28	Adjacent	0.344
23 <sup>2</sup>	-			
24	-	1/ORAM 29	Adjacent	0.069
25 <sup>2</sup>	-			
26	-	1/ORAM 29	Adjacent	0.483

Wetland Identifier	2005 DEIS Impact <sup>1</sup> (acres)	Reevaluation Impact		
		Category	Hydrologic Connection	Impacts (acres)
27 <sup>2</sup>	-			
28	-	Modified 2/ORAM 34	Abutting	0.101
29	-	1/ORAM 12.5	Abutting	0.001
30	-	1/ORAM 12.5	Adjacent	0.011
31	-	1/ORAM 12.5	Adjacent	0.027
32	-	2/ORAM 53	Abutting	0.019
33	-	1/ORAM 26	Adjacent	0.021
34	-	1/ORAM 13	Adjacent	0.013
<b>Totals</b>	<b>0.43</b>			<b>3.893</b>

Notes:

1 – Data is from Table 3-8 of the DEIS dated January 2005

2 – Wetlands 10, 11, 23, 25, and 27 were determined to no longer be wetlands on September 7, 2011

As shown in Table 3-2, the wetland impact as a result of the Phase 1 project has increased from 0.43 acres to 3.893 acres since the preparation of the 2005 DEIS. This increase may be influenced by several contributing factors including the changing landscape in the Phase 1 project area. These changes are a result of logging activities on private properties and increased use of properties as pastureland. As a result, the hydrology of these areas has been substantially altered. These open areas are conducive to the development of wetlands and as a result additional wetlands were identified. Although the total impact for Phase 1 has increased, it should be noted that none of the impacted wetlands are considered high quality.

**Mitigation**

All wetlands with a hydrologic connection to a traditional navigable water (TNW) are regulated as “waters of the United States” pursuant to the Clean Water Act. Therefore, all impacts to jurisdictional wetlands require a USACE Section 404 permit and Ohio Environmental Protection Agency (OEPA) Section 401 permit. An initial permit for the entire project (Phases 1, 2, and 3) was prepared on September 10, 2010 and was subsequently withdrawn. The impacts to streams and wetlands were documented as a new Individual Section 404/401 permit for Phase 1 only, which was submitted on October 4, 2011.

Mitigation will be required for wetlands and the proposed mitigation will be developed in coordination with USACE and OEPA. As noted in the Individual Section 404/401 permit, at a minimum ODOT will provide 7.107 acres of wetland mitigation in accordance with the off-site mitigation ratios. All proposed wetland impacts are to emergent wetlands. ORAM Category 1 impacts will be mitigated at a 1.5 to 1 ratio and ORAM Category 2 impacts will be mitigated at a 2 to 1 ratio. Mitigation sites are in the process of being identified.





**Secondary Impacts**

As a result of this project, there is the potential for secondary development adjacent to the roadway which may impact additional wetlands beyond the Phase 1 project footprint. Currently, there are no known proposed developments or zoning changes in the area.

**3.1.5. Streams, Rivers, and Water Bodies**

The *Ecological Survey Report*, prepared in May 2004 for the 2005 DEIS, identified streams, rivers, and other water bodies present within the project area. The 2005 DEIS identified 20,881 feet of stream impacts and 2.93 acres of pond impacts for the Preferred Alternative (Phases 1, 2, and 3). A Section 404/401 permit application was initially prepared on September 10, 2010 and reported 5,421 feet of stream impacts and 3.284 acres of pond impacts for the Phase 1 project.

As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an *Ecological Survey Report*, dated September 19, 2011, for the Phase 1 project area only. The previously identified streams, ponds, and ditches were reevaluated and additional resources were identified.

A Jurisdictional Determination meeting with USACE was held on September 7, 2011. During this meeting, the Phase 1 impacts were reviewed and determinations were made as to quality, use, and jurisdiction for the streams, ponds, and ditches. Each of these resources is discussed in more detail as follows.

As shown in Table 3-2 and Figure 3-2 Sheets 1 through 5, Phase 1 will impact nineteen jurisdictional stream channels, totaling 9,525 feet. Of this total, there are 78 feet of permanent impacts to Warmwater Habitat (WWH) streams, 8,999 feet of Class II Primary Headwater Habitat (PHWH) streams, and 448 feet of Class I PHWH streams. There are also 300 feet of temporary impacts to WWH streams.

**Table 3-2: Summary of Streams Impacts**

Stream Identifier	Quality	Impact (feet)		Proposed Action
		Permanent	Temporary	
17-1-1	Class I PHWH/HHEI 22	73	0	Cut Section
17a/b	Modified Class II PHWH/HHEI 55	898	0	Culverted
17c	Modified Class II PHWH/HHEI 47	960	0	Modification
17c-1	Modified Class II PHWH/HHEI 43	394	0	Fill Section
17d	Modified Class II PHWH/HHEI 59	294	0	Culverted



Stream Identifier	Quality	Impact (feet)		Proposed Action
		Permanent	Temporary	
18 (Long Run)	Warmwater Habitat/ QHEI 78.5	55	150	Bridged
18-1	Modified Class II PHWH/HHEI 39	417	0	Culverted
18-2 <sup>1</sup>				
18-2-1 <sup>1</sup>				
18b	Modified Class II PHWH/HHEI 39	244	0	Modification
19	Modified Class II PHWH/HHEI 69	530	0	Modification
19-1	Modified Class II PHWH/HHEI 52	662	0	Culverted
20	Modified Warmwater Habitat/ QHEI 58.5	23	150	Bridged
20-1	Class II PHWH/HHEI 47	720	0	Bridge Fill
20-2	Modified Class I PHWH/HHEI 23	375	0	Culverted
21	Modified Class II PHWH/HHEI 49	802	0	Culverted
21a	Modified Class II PHWH/HHEI 36	745	0	Culverted
22a/b	Modified Class II PHWH/HHEI 67	1,267	0	Culverted
22a-1	Modified Class II PHWH/HHEI 43	318	0	Cut Section
23/k	Class II PHWH/HHEI 53	415	0	Culverted
24-1	Modified Class II PHWH/HHEI 36	333	0	Culverted
<b>Totals</b>		<b>9,525</b>	<b>300</b>	

Notes:

1 – Streams 18-2 and 18-2-1 were determined non-jurisdictional

Five ponds were also identified within the Phase 1 area and shown in Figure 3-2. Each pond was considered a non-isolated pond and has a hydrologic connection to the Ohio River. Table 3-3 summarizes the pond hydrologic connection, receiving waters, and impact.





**Table 3-3: Summary of Pond Impacts**

<b>Pond Identifier</b>	<b>Hydrologic Connection</b>	<b>Receiving Waters</b>	<b>Function</b>	<b>Impact (acres)</b>
4	Non-isolated	Stream 18b	Agriculture	1.418
5	Non-isolated	Stream 20	Agriculture	0.034
6	Non-isolated	Wetland 18/W9 WL2	Agriculture	0.189
7	Non-isolated	Outlet tiles to Railroad Ditch 1 to Stream 22 a/b	Agriculture	0.592
8	Non-isolated	Stream 22a/b	Aesthetics	0.467
<b>Total</b>				<b>2.70</b>

Eleven potentially jurisdictional ditches were identified within the Phase 1 area and are shown in Table 3-4 and Figure 3-2. Ditches 1 through 9 were considered Non-Relatively Permanent Water (Non-RPW) and Railroad Ditches 1 and 2 were considered seasonal Relatively Permanent Waters (RPW) with ordinary high water marks. During the Jurisdictional Determination meeting with USACE on September 7, 2011, Ditches 1 through 9 were determined to be non-jurisdictional.

**Table 3-4: Summary of Ditch Impacts**

<b>Ditch Identifier</b>	<b>Receiving Waters</b>	<b>USACE Flow Characteristics</b>	<b>Impact (feet)</b>	<b>Impact Type</b>
1 <sup>1</sup>	Stream 19	Non-RPW	-	Culverted
2 <sup>1</sup>	Stream 19	Non-RPW	-	May not be impacted
3 <sup>1</sup>	Stream 20-1	Non-RPW	-	Culverted
4 <sup>1</sup>	Stream 17a/b	Non-RPW	-	Culverted
5 <sup>1</sup>	Stream 17a/b	Non-RPW	-	Culverted
6 <sup>1</sup>	Stream 17a/b	Non-RPW	-	Culverted
7 <sup>1</sup>	Stream 22a/b	Non-RPW	-	Culverted
8 <sup>1</sup>	Stream 22a/b	Non-RPW	-	Culverted
9 <sup>1</sup>	Railroad Ditch 1	Non-RPW	-	Culverted
Railroad Ditch 1	Stream 22a/b	Seasonal RPW	0	Undetermined
Railroad Ditch 2	Stream 22a/b	Seasonal RPW	0	Undetermined
<b>Total</b>			<b>0</b>	

Notes:

1 – Ditches 1 to 9 were determined to be Non-Relatively Permanent Waters

**Summary**

As a result of the Phase 1 project, streams and other water bodies will be permanently impacted. The impacts reported in the 2005 DEIS were not segregated by individual water body/phase; however, as part of the Section 404/401 permit application dated September 20, 2010, 5,421 feet of stream



impacts and 3.284 acres of pond impacts were identified for Phase 1. As shown in Table 3-2, the stream impact has increased from 5,421 feet to 9,525 feet of permanent stream impacts. None of the impacted streams identified are considered high quality. This increase may be influenced by several contributing factors including the changing landscape in the Phase 1 area. These changes are a result of logging activities on private properties, increased use of the properties as pastureland and the resulting modifications of drainage patterns by owners. As a result, the hydrology of these areas has been substantially altered. In addition, changes in Section 404 regulation, as a result of the Rapanos case, redefines how streams are identified as jurisdictional. As shown in Table 3-3, the pond impacts decreased from 3.284 to 2.70 acres. This is a result of ponds naturally becoming smaller and converting to wetlands as a result of the changing landscape and human interference.

### ***Mitigation***

During the design process, efforts were made to minimize the impacts to streams. The impacts were documented in a single Individual Section 404/401 permit which was submitted on October 4, 2011. No in-stream work below the ordinary high water mark will be conducted between April 15 and June 30 for Stream 18. All in-stream work will be performed in accordance with Memorandum of Agreement (MOA) Number 16472 between ODOT, ODNR, FHWA and USF&WS.

Mitigation will be required for streams and the proposed mitigation will be developed in coordination with USACE and OEPA. As noted in the Individual Section 404/401 permit, ODOT proposes to preserve 14,738 feet of streams and their riparian buffers to offset the impact at a 1.5 to 1 ratio. Stream mitigation sites are in the process of being identified. No formal mitigation is proposed for the ponds or non-jurisdictional ditches.

### ***Secondary and Cumulative Impacts***

As a result of this project, there is the potential for secondary development adjacent to the roadway which may impact the surface streams. Potential impacts include loss of the natural channel or degradation due to riparian clearing and runoff. These impacts are expected to be minor. Currently, there are no known proposed developments or zoning changes in the area.

Cumulative impacts include short-term adverse impacts to the water quality of surface streams due to erosion from excavation and placement of fill and construction materials. These impacts include temporary increases in dissolved solids, suspended soils, settleable solids turbidity, and conductivity. The installation of culverts and piers will result in similar water quality impacts; direct destruction of the stream bottom and aquatic habitat; and destruction or displacement of aquatic biota.



### 3.1.6. Wildlife, Vegetation, and Threatened and Endangered Species

The *Ecological Survey Report*, prepared in May 2004, identified wildlife and vegetation in the project area along with threatened and endangered species which potentially occur within the Preferred Alternative. As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an *Ecological Survey Report*, dated September 19, 2011, for Phase 1 of the Portsmouth Bypass project area. Also, specific studies were performed for several Federally listed species including the Indiana bat (*Myotis sodalis*), eastern hellbender (*Cryptobranchus a. alleganiensis*), various mussel species, small whorled pogonia (*Isotria medeoloides*), and running buffalo clover (*Trifolium stoloniferum*) for the entire Portsmouth Bypass project area (Phases 1, 2, and 3). Each of these species studies is documented in more detail in separate reports and summarized in the *Ecological Survey Report*, dated September 19, 2011. The state listed species studies and observations were conducted for Phase 1 only.

#### Wildlife

Wildlife observed during the ecological survey included numerous mammal, bird, reptile, and amphibian species which are common throughout southern Ohio. The *Ecological Survey Report*, dated September 19, 2011, contains the complete listing of wildlife observed within the Phase 1 project area.

Construction of this project will impact terrestrial habitat. However, due to the abundance of similar habitat in the vicinity of the project, this loss should not result in a decline in these species populations.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Vegetation

The *Ecological Survey Report*, dated September 19, 2011, contains the complete listing of vegetation observed within the Phase 1 project area. The land cover within the project area is primarily comprised of upland forest (38%), grassland/herbaceous (34%), pasture/hay (9%), barren land (7%). The remaining 12% consists of developed open space, cultivated crops, scrub/shrub, and open water.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Threatened and Endangered Species

The *Ecological Survey Report*, dated September 19, 2011, identified both State and Federally listed threatened and endangered species. Species specific studies on potentially suitable habitats were performed for several species within the Preferred Alternative for the Portsmouth Bypass project area (Phases 1, 2, and 3): the Federally endangered Indiana bat; Federally listed species of concern/State listed endangered eastern hellbender; Federally threatened small whorled pogonia and running buffalo clover; and various species of mussels. The State listed

species surveys and observations were performed for the Phase 1 project area only.

On December 5, 2011, ODOT prepared responses to Ohio Department of Natural Resources' (ODNR's) comments dated September 21, 2011 regarding the determination of effect for the listed species. As per email correspondence dated December 19, 2011, ODNR had no further comments. Consultation with USF&WS on the Federally listed species was initiated on November 9, 2011. Concurrence from USF&WS on the determination of effect was received on March 12, 2012.

#### *Indiana Bat (Myotis sodalis)*

Mist net surveys for the federally endangered Indiana bat were conducted between July 1 and August 15, 2011 for the entire Portsmouth Bypass project area (Phases 1, 2, and 3). No Indiana bats were captured during the survey. Due to the forested nature of the project area, potential roosting habitat is prevalent throughout the corridor; however, no potential hibernacula were found within the project area. The results of the surveys suggest that Indiana bats were not present in the project area, or were present in very low numbers. Suitable habitat for this species will be impacted as part of this project. To avoid direct take of bats, trees will be cleared for the project only between September 30<sup>th</sup> and April 1<sup>st</sup>. It is reasonable to conclude this project may affect, but is not likely to adversely affect this species.

#### *Eastern Hellbender (Cryptobranchus a. alleganiensis)*

A specific species study was performed for the federal species of concern eastern hellbender for the entire Portsmouth Bypass project area (Phases 1, 2, and 3). No suitable habitat was identified for this species in the Phase 1 project area. No impacts to this species are anticipated as a result of this project as there are no streams large enough to support the species. As such, this project is expected to have no effect on this species.

#### *Running Buffalo Clover (Trifolium stoloniferum)*

During the ecological surveys, the presence of federally endangered running buffalo clover was not identified within the Portsmouth Bypass project area (Phases 1, 2, and 3). Due to the absence of the species, but the presence of potentially suitable habitat within the project area, this project may affect but is not likely to adversely affect the species.

#### *Mussels*

In August 2011, mussel surveys were conducted in the Little Scioto River, which is part of the Phase 3 project. Species of interest included the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis abrupta*), the endangered rayed bean mussel



(*Villosa fabalis*), the proposed endangered sheepsnose mussel (*Plethobasus cyphus*), and the endangered snuffbox mussel (*Epioblasma triquetra*). Live mussels, including the black sandshell (*Ligumia recta*), an Ohio threatened species, were identified within the Little Scioto River, which is part of Phase 3. However, no federally listed species were observed at this location. No suitable habitat was identified for any mussel species in the Phase 1 project area. No direct impacts to these species are anticipated as a result of this project. As a result, the proposed project should have no effect on these species.

*Bald Eagle (Haliaeetus leucocephalus)*

The bald eagle is protected under the Bald and Golden Eagle Protection Act which prohibits taking bald eagles, including disturbance. The nearest bald eagle nest is approximately 3.9 miles northwest of the project area along the Scioto River. No impacts to bald eagles are anticipated as a result of this project. As such, this project is expected to have no effect on this species.

*Small Whorled Pogonia (Isotria medeoloides)*

During the ecological surveys, the presence of the federally threatened small whorled pogonia was not identified within the entire Portsmouth Bypass project area (Phases 1, 2, and 3). No direct impacts to small whorled pogonia are anticipated as a result of this project. Suitable habitat for this species will be impacted as part of this project. As such, this project may affect, but is not likely to adversely affect this species.

*Virginia Spirea (Spiraea virginiana)*

Additional studies for the federally threatened Virginia spirea were deemed not necessary as the previous studies completed in 2003 were considered to still be valid. Although potentially suitable habitat was identified, the studies previously completed did not identify any plant individuals. This reevaluation does not change the findings documented in the June 2006 ROD for this resource. Due to the absence of the species, the presence of potentially suitable habitat within the project area, this project may affect but is not likely to adversely affect the species.

*Timber Rattlesnake (Crotalus horridus)*

It was noted that although habitat for the federal species of concern timber rattlesnake is present within the project area, the Ohio Division of Natural Resources (ODNR) agreed in 2003 that the timber rattlesnake was very unlikely to inhabit the project area due to human disturbances. Additional studies for this species were deemed not necessary as the previous studies completed in 2003 were considered to still be valid as this species was not encountered during the previous species specific study or updated Ecological Survey Report. This reevaluation does not change the findings documented in the June 2006 ROD for this resource. Due to the absence of the species, the presence of potentially suitable habitat within the project area, this project may affect but is not likely to adversely affect the species.

*Southern Monkshood (Aconitum uncinatum)*

During the ecological surveys, several individuals of the state endangered southern monkshood were identified along Long Run (Stream 18) during the initial ecological surveys. On October 24, 2011, additional field work was conducted to look for additional individuals. Since the time of the initial surveys, the area has been cleared and a logging road has been constructed where this species was previously identified. The additional field work identified a small population of this species, with an estimated 20 to 30 stems. Each of these individuals will be impacted as a result of this project.

*American Chestnut (Castanea dentate)*

During the ecological surveys, one young American chestnut tree (state potentially threatened) was found within the project area on the east side of Swauger Valley Road. This individual will be impacted as a result of this project. Suitable habitat for the American chestnut is prevalent in the vicinity of the project area.

*Spanish Oak (Quercus falcate)*

During the ecological surveys, no Spanish oaks (state threatened) were found within the project area. Suitable habitat for the Spanish oak will be impacted as a result of this project; however, this project should not have an adverse affect on this species due to the potential habitat located in the vicinity of the project area.

*Eastern Box Turtle (Terrapene carolina carolina)*

During the ecological surveys, several individuals of the eastern box turtle (state species of concern) were identified. It is likely impacts will occur to this species as a result of the project; however, the impact is negligible since the eastern box turtle is prevalent throughout the project area and southern Ohio.

*Primrose-leaved violet (Viola primulifolia)*

During the ecological surveys, several individuals of the state endangered primrose-leaved violet were identified along the edges of several logging roads. It was also identified in adjacent areas outside of the project area. It is likely impacts will occur to this species as a result of the project.

***Summary of Impacts***

In summary, this project is expected to impact the habitat for several species, including the Indiana bat, running buffalo clover, small whorled pogonia, Spanish oak, and primrose-leaved violet. Direct impacts to several species are anticipated, including the southern monkshood, American chestnut, eastern box turtle. The direct impacts to the American chestnut and eastern boxturtle are expected to be negligible since the species are either prevalent throughout the project area and Southern Ohio and/or suitable habitat remains.



### ***Mitigation***

The following mitigation is proposed for the wildlife, vegetation, and threatened and endangered species:

- No specific mitigation measures are proposed for vegetative communities; however, stormwater best management practices will be incorporated into the construction and design of this project to minimize run-off impacts to adjacent land and waterways.
- To minimize the impacts to the Indiana bat habitat, potential roosting trees will only be cleared after September 30 and before April 1.
- ODOT will attempt to relocate the southern monkshood population prior to construction; however, no suitable habitat is known within the project area. ODOT requested assistance from ODNR to locate suitable habitat for this species.
- ODOT will attempt to relocate the primrose-leaved violet population prior to construction; however, no suitable habitat is known within the project area. ODOT requested assistance from ODNR to locate suitable habitat for this species.
- To minimize stream impacts to aquatic species, no in-stream work will be performed in streams classified as Warmwater Habitat (WWH) from April 15 to June 30.

Additional specific mitigation measures to minimize impacts, if required, will be incorporated into the project plans.

### ***Secondary Impacts***

As a result of this project, there is the potential for secondary development adjacent to the roadway which may impact the potential habitat for wildlife, vegetation, and threatened and endangered species. These impacts are expected to be minor. Currently, there are no known proposed developments or zoning changes in the area.

#### **3.1.7. Forest Fragmentation**

The *Ecological Survey Report*, prepared in May 2004, reported that 493 acres (53%) of the Portsmouth Bypass project area was standing forest, none of which was considered to be virgin or old growth forest. The *Ecological Survey Report*, dated September 19, 2011, reported approximately 123 acres of forested areas will be impacted as a result of the Phase 1 project. This accounts for 38% of the Phase 1 project area.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### **3.1.8. Farmlands**

As reported in the 2005 DEIS, the Preferred Alternative is expected to impact 769 acres of agricultural cropland, timberland, and pastureland. This represents a total

of 0.7% of the total farmland (106,000 acres) in Scioto County. Since the preparation of the 2005 DEIS, the total farmland in Scioto County has been reduced to approximately 103,000 acres of farmland as per the Ohio Department of Development, 2011 Scioto County Profile.

The Phase 1 project will impact approximately 43 acres of agricultural lands, which includes 0.3 acres associated with the SR 335 reconstruction, including active cropland and pasture/hay (see Figure 3-3). This accounts for approximately 13% of the land impacted by the Phase 1 project. An additional 113 acres is grassland/herbaceous which represents former agricultural fields and pastures which have been abandoned and are no longer maintained or grazed.

There is a minor increase in impacted farmlands due to the SR 335 reconstruction; however, there are an additional 113 acres which are no longer maintained as farmland. This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### **3.1.9. Natural Environment Secondary Impacts**

The secondary impacts to the natural environment are discussed individually in each of the previous sections.

## **3.2. Social Environment**

### **3.2.1. Land Use and Growth Trends**

There are no significant changes in the land use and growth trends in the Phase 1 project area. The evaluation prepared for the DEIS and FEIS is still valid.

This reevaluation does not change the findings documented in the June 2006 ROD for land use and growth trends.

### **3.2.2. Population, Housing, and Residential Property Impacts**

Population, housing, and residential property trends were evaluated in the DEIS and FEIS using 2000 US Census data. Since the June 2006 ROD, the United States has undertaken a new census and the 2010 US Census data was released in 2011.

#### Population

According to US Census Bureau data, the Scioto County population increased from 79,125 in 2000 to 79,499 in 2010. This represents an increase of 0.5%. This is compared to an increase in the State of Ohio population from 11,353,140 in 2000 to 11,536,504 in 2010, which represents a growth of 1.6%. Over 23% of the residents in Scioto County lived below the poverty level in 2010 which is above the 19.3% rate reported in 2000. Within the State of Ohio, 15.1% of the residents live below the poverty level.

The demographics indicate Scioto County is predominately white, accounting for 94.4% of the total population. In Scioto County, minorities account for 5.6% of



the population. In comparison, the State of Ohio is comprised of 82.7% white and 17.3% minority persons. This trend is similar to the data reported in the June 2006 ROD.

Based on Civilian Labor Force Estimates from January 2012, Scioto County has an above average unemployment rate of 12.7% when compared to the State of Ohio's rate of 8.6%. The January 2005 DEIS reported unemployment rates from August 2000 as 8.3%, which was more than twice the statewide average of 3.9% at that time. Since the approval of the June 2006 ROD, the unemployment in Scioto County has increased by 53%.

In addition to above average unemployment rates, Scioto County has below average per capita income. The 2010 US Census data reports a per capita income of \$17,547 for Scioto County and \$24,830 for the State of Ohio. This trend is similar to the data reported in the June 2006 ROD.

#### Housing

As reported in the 2010 Census data, there were 34,769 housing units in Scioto County. This represents an increase of 715 units or 2% since 2000. The median home value, as reported in the 2010 Census data, was \$82,600. This represents an increase of \$19,200 since 2000. The median home value for the State of Ohio is reported as \$134,500 in 2010. This trend is similar to the data reported in the June 2006 ROD.

#### Property Impacts and Relocations

The 2005 DEIS reported the Preferred Alternative is expected to result in the relocation of 64 residences of varying types and 14 barns/farm buildings. Also 435 parcels would be landlocked as a result of the Portsmouth Bypass project (Phases 1, 2, and 3).

In the Phase 1 project area, there was an early acquisition of 22 parcels, 11 of which were residential properties in the Teays Valley Estates development. Subsequently, there will be an additional 2 property total takes and 5 residential relocations. Also 12 parcels will be landlocked in Phase 1.

This reevaluation does not change the findings documented in the June 2006 ROD for property impacts and relocations.

#### Summary

There are no significant changes in the population and housing trends in the project area since the preparation of the DEIS and FEIS, with the exception of the increased unemployment rate in Scioto County. This reevaluation does not change the findings documented in the June 2006 ROD for population, housing, and residential property impacts.

**3.2.3. Economy and Employment/Business Relocations**

There are no significant changes in the economic conditions in the Phase 1 project area since the approval of the ROD in 2006. Phase 1 will not require the displacement of any existing businesses. The evaluation prepared for the DEIS and FEIS is still valid.

This reevaluation does not change the findings documented in the June 2006 ROD for relocations.

**3.2.4. Municipal Finance**

There are no significant changes in the municipal finance trends in the Phase 1 project area since the approval of the ROD in 2006. As reported in the DEIS, this project is expected to have a positive impact on finance issues in Scioto County. The Phase 1 project, which links Shumway Hollow Road (TR 234) near the Scioto County Airport to Lucasville-Minford Road (CR 28), will provide access to developable land by providing better highway access. The evaluation prepared for the DEIS and FEIS is still valid.

This reevaluation does not change the findings documented in the June 2006 ROD for municipal finance.

**3.2.5. Community Facilities and Services**

The DEIS reported that no community facilities, such as churches, cemeteries, or libraries are within the right-of-way for the Preferred Alternative. Nor were there impacts to fire services, emergency services, or school transportation. Figure 3-1 locates miscellaneous features in the project vicinity, including community facilities. Based on the current right-of-way plans, there is one impacted church, located along SR 335 near the Scioto County Airport. This impact will require a right-of-way acquisition of 0.2163 acres.

This reevaluation has identified a direct impact to one community facility, the Church of Christ.

**3.2.6. Visual Resources**

The Phase 1 project is located primarily in a wooded area; therefore visual impacts are expected to be minimal to the residential areas.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

**3.2.7. Utility Coordination**

The anticipated utility impacts, as a result of the Phase 1 project, have not been modified since the June 2006 ROD. The SR 335 reconstruction will include the relocation of aerial telephone and electric service lines line on the eastern side of SR 335 and a new sewer line will be constructed for the Church of Christ.



This reevaluation does not change the findings documented in the June 2006 ROD for utility coordination.

**3.2.8. Environmental Justice**

Population trends were evaluated in the DEIS and FEIS using 2000 US Census data. The Environmental Justices analysis indicated the project is unlikely to have any disproportionately high impacts on minority populations, since the presence of minorities is low in the study area. However, the analysis indicated the presence of low-income populations within the study vicinity.

A comparison of 2000 and 2010 US Census data related to environmental justice is provided in Table 3-5. In reviewing the population and employment trends based on 2010 US Census data, the project area has not dramatically changed in terms of minority populations. However, the numbers of persons living below the poverty level in Scioto County has increased from 19.3% to 23.5% based on a comparison of the 2000 and 2010 US Census data. The number of persons in Scioto County living below the poverty level is 23.5% while the State of Ohio average is 15.1%. This trend is similar to the data reported in the June 2006 ROD.

**Table 3-5: Summary of 2000 and 2010 US Census Data**

	<b>2000 Census Data</b>	<b>2010 Census Data</b>
<b>Scioto County</b>		
Minority Population	5.1%	5.6%
Persons Below Poverty Level	19.3%	23.5%
Per Capita Income	\$15,408	\$17,547
<b>State of Ohio</b>		
Minority Population	13.9%	17.3%
Persons Below Poverty Level	10.6%	15.1%
Per Capita Income	\$21,003	\$24,830

As per the US Department of Health and Human Services, the 2010 poverty guideline was \$10,830 for the first individual and \$22,050 for a family of four. Phase 1 is located within US Census Tracts 21 and 26. Based on the 2006-2010 American Community Survey (ACS) 5-Year Estimates, the per capita income of Tract 21 is \$18,880 while Tract 26 is \$17,227. Tract 21 is above the average per capita income for Scioto County and Tract 26 is slightly below. The ACS also reports 18.2% and 24.7% of persons are living below the poverty level within the last twelve months in Tract 21 and 26, respectively.

The Phase 1 project is not likely to have any disproportionately high impacts on minority or low-income populations. The Phase 1 project will be funded, in part, with Appalachian Development Highway System (ADHS) funding. This funding program is designated to generate economic development in previously isolated areas, supplement the interstate system, connect Appalachia to the interstate system, and provide access to areas within the Appalachian region, as well as, to markets in the rest of the nation. It is likely that Environmental Justice



populations will benefit from the improved highway system and the use of ADHS funds.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### ***Secondary Impacts***

No secondary impacts to minority or low-income populations are expected as a result of secondary development which occurs as a result of the Phase 1 project.

### **3.2.9. Social Environment Secondary Impacts**

The secondary impacts to the social environment are discussed individually in each of the previous sections, as appropriate.

## **3.3. Cultural Resources**

### **3.3.1. Archaeological Resources**

A *Phase I Archaeological Reconnaissance Survey* was conducted in June 2004 for the Portsmouth Bypass area. Seven previously unrecorded archaeological sites were identified within the preferred alternative. Of these sites, six were determined not to have the information potential to meet the eligibility criteria for the National Register of Historic Places (NRHP). Additional work was performed on the remaining site. The site yielded artifacts; however, few were diagnostic and there was no evidence for subsurface features. On October 28, 2004, the Ohio State Historic Preservation Office (OSHP) concurred no further archaeology work was warranted.

On April 24, 2006, ODOT prepared a reevaluation of the project titled *SCI-823-0.00 Summary of Cultural Resources in Scioto County, Ohio, Extended Planning Study Footprint*. This summary was prepared to account for a modification in the original construction limits which surpassed the 400 foot corridor previously studied. This study found that no new archaeological sites were identified and no further work recommended. OSHP was provided an opportunity to comment and no objections to this finding were received.

On November 23, 2011, ODOT completed an archaeological field review for the SR 335 reconstruction area. The majority of the area has been previously disturbed by modern development. Three agricultural fields were investigated further using shovel tests and pedestrian surveys. No archaeological remains were identified during the pedestrian survey and the shovel tests identified levels of disturbance. No further work was recommended. OSHP was provided an opportunity to comment and no objections to this finding were received.

Based on field reconnaissance during various trips to the project area, there have been minimal changes to the existing area since completion of the initial surveys in 2004, re-evaluation in 2006, and SR 335 reconstruction field review. Phase 1, including the SR 335 reconstruction, will not impact any archaeological



resources. This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### 3.3.2. Historical Resources

The Phase I Historic Resource studies resulted in the determination that no properties meet the eligibility criteria for the National Register of Historic Places (NRHP). The Ohio Historic Preservation Office concurred with this finding on July 1, 2004. Phase 1 will not impact any resources.

As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared a Phase I History/Architecture Reevaluation Survey for Phase 1, dated January 13, 2012. The Area of Potential Effect (APE) for Phase 1 includes the construction limits for this phase and the parcels adjacent to the construction limits.

The literature review determined that no properties in the APE have been listed in or determined eligible for listing in the National Register of Historic Places since the finding of No Historic Properties Affected in 2004. Several buildings in the Area of Potential Effect have turned 50 years of age or otherwise were not identified in the original surveys. None of these buildings are significant under the National Register of Historic Places Criteria for Evaluation and all are recommended as not eligible for the National Register of Historic Places. In accordance with 36 CFR Part 800, FHWA, with ODOT as their agent, considered the effect of the subject undertaking on historic properties within the area of potential effects pursuant to the *Programmatic Agreement Among the Federal Highway Administration, The Advisory Council on Historic Preservation, the State Historic Preservation Office, and the State of Ohio, Department of Transportation Regarding Implementation of the Federal-Aid Transportation Program in Ohio (Agreement Number 126734)*, executed November 30, 2011. On February 13, 2012, ODOT determined a finding of “no historic properties affected” is applicable to the subject undertaking in accordance with 36 CFR Section 800.4(d)(1) and the *Section 106 Programmatic Agreement (Agreement Number 126734)*, executed November 11, 2011. The Ohio State Historic Preservation Office received a copy of this determination on February 14, 2012 (included in Appendix A). As of March 12, 2012, no comment or objection has been received. This completes the Section 106 process unless the magnitude of the undertaking were to change.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### 3.4. Section 4f

The DEIS indicated there are no parks, recreation areas, or natural and wildlife areas present or planned within the Portsmouth Bypass Preferred Alternative footprint. Figure 3-1 locates miscellaneous features in the project vicinity, including Section 4(f) properties. No Section 4(f) properties are located within the footprint of the Phase 1

project area. Google Earth currently shows the “Hidden Hills Golf Course” as being located east of the bypass along Shumway Hollow Rd., although it has been confirmed that no such resource exists in that location. The Hidden Hills Golf Course, which was located outside of the Phase 1 project area, has been closed for several years. What was the golf course has reverted to grassland, bushes, etc. and the location is now private, non-public property. The land it had occupied is not impacted by the current project and there are no Section 4(f) properties in this location.

Overall, there have been no significant changes in existing or planned land use in the project area since the preparation of the DEIS and FEIS. Therefore, Phase 1 will not impact any Section 4(f) properties. This reevaluation does not change the findings documented in the June 2006 ROD for these resources.

### 3.5. Technical Issues

#### 3.5.1. Air Quality

Scioto County, Ohio is not an air quality nonattainment or maintenance area. Project 1 will not have a substantial impact on air quality. The projected design year traffic for the Portsmouth Bypass project (all three phases) is 26,000 vpd with 14% trucks. It is anticipated the Phase 1 traffic volumes will be significantly lower as an independent project. A qualitative Mobile Source Air Toxics (MSAT) Analysis was prepared and submitted to OEPA on September 14, 2011. On October 11, 2011, OEPA approved the MSAT Analysis. Correspondence dated October 12, 2011 received from the OEPA confirmed the Phase 1 project is not a project of concern and no hot-spot analysis for PM<sub>2.5</sub> is required. In addition, USEPA concurred the project is not a project of air quality concern relative to PM<sub>2.5</sub> on October 24, 2011.

The constructed project will not result in an increase in ADT of more than 10,000 vpd within 10 years of the completion date. Also, the project does not involve a new project right-of-way that will have an ADT increase of more than 20,000 vpd within 10 years of construction. Hence, no Carbon Monoxide studies were required. This reevaluation does not change the findings documented in the June 2006 ROD for air quality.

#### 3.5.2. Noise

As per the 2005 DEIS, one noise barrier was considered cost-effective and was recommended for further public involvement. This barrier, known as H9-2, was located in Section 9 of the Hill Alternative. Subsequent to the ROD, an *Analysis of Traffic Noise Impact and Abatement Measures* report was prepared by TransSystems in July 2006. This report identified sensitive receptors along SR 139 within the Phase 1 project area. A noise barrier, identified as NSA 4, was found to be feasible and reasonable. This barrier, located on SR 823, began at approximately Station 480+00 and extended northward for 3,073 feet. Subsequent to this report, an addendum was prepared for NSA 4 based on more detailed roadway profile data. The revised barrier length was reduced by 223 feet to a length of 2,850 feet to avoid a rock cut. The revised barrier was determined to be



feasible and reasonable. Final design of this noise wall includes both a wall portion on the proposed bridge and noise mounds.

This reevaluation does not change the findings documented in the June 2006 ROD or *Analysis of Traffic Noise Impact and Abatement Measures Addendum* report for noise.

### **3.5.3. Energy**

As per the 2005 DEIS, the proposed “airport bypass” concept would result in a decrease of 10,557 vehicle miles traveled per day on opening day. For trips between the termini of the Phase 1 project, the number of vehicles miles per trip would be reduced since the Portsmouth Bypass Phase 1 project is a shorter distance between those two termini. This reduction in vehicle miles would result in an energy savings.

This reevaluation does not change the findings documented in the June 2006 ROD for energy.

### **3.5.4. Municipal, Industrial, and Hazardous Waste**

An Environmental Site Assessment (ESA) screening, dated August 2002, identified sites that may have impacts caused by wastes or hazardous materials. A Phase 1 ESA was prepared for seven sites within the Preferred Alternative and concluded with a recommendation for a Phase II ESA for one location, the McGuire Property, which is located outside of this proposed project.

Based on field reconnaissance during various trips to the project area, there have been minimal changes to the existing land uses since completion of the ESA screening and Phase 1 ESA. None of the changes in land use represent sites which would normally be considered of interest during the screening process or recommended for further study. Therefore, this reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### **3.5.5. Long-term Construction Impacts**

Construction of the Phase 1 project will result in long-term impacts due to the conversion of land to highway use. The project will expend both construction materials and funding resources. These impacts are irreversible and irretrievable.

This reevaluation does not change the findings documented in the June 2006 ROD for long-term construction impacts.

### **3.5.6. Short-term Construction Impacts**

Construction of the Phase 1 project will result in short-term impacts to air quality, noise levels, water quality/aquatic habitat, groundwater/floodplains, and traffic maintenance. The short-term impacts are expected to be minor and minimized by adhering to ODOT standard specifications.

This reevaluation does not change the findings documented in the June 2006 ROD for short-term construction impacts.

**4. Environmental Commitments**

A summary of environmental commitments for Phase 1 of the Portsmouth Bypass project are listed in Table 4-1.

**Table 4-1: Summary of Environmental Commitments for Phase 1**

Environmental Impact or Issue	Environmental Commitment Disposition
Floodplain Impacts	<p>During the design process, the local community floodplain administrator was contacted to coordinate project details.</p> <p>The Flood Hazard Development Permit will be incorporated into the construction contract documents.</p>
Groundwater/Aquifer Protection	No commitments at this time.
Stream Impact Mitigation	<p>As noted in the Individual Section 404/401 permit, ODOT proposes to preserve 14,738 feet of streams and their riparian buffers to offset the impact at a 1.5 to 1 ratio. Stream mitigation sites are in the process of being identified.</p> <p>To minimize stream impacts, no in-stream work below the ordinary high water mark will be performed in Stream 18 from April 15 to June 30.</p>
Wetland Impact Mitigation	<p>As noted in the Individual Section 404/401 permit, at a minimum ODOT will provide 7.107 acres of wetland mitigation in accordance with the off-site mitigation ratios. All proposed wetland impacts are to emergent wetlands. ORAM Category 1 impacts will be mitigated at a 1.5 to 1 ratio and ORAM Category 2 impacts will be mitigated at a 2 to 1 ratio. Mitigation sites are in the process of being identified.</p>
Wildlife and Threatened and Endangered Species	<p>To minimize impacts to the Indiana bat habitat, potential roosting trees will be cleared only after September 30 and before April 1.</p> <p>To minimize stream impacts, no in-stream work below the ordinary high water mark will be performed in Stream 18 from April 15 to June 30.</p> <p>ODOT will attempt to relocate the southern monkshood and primrose-leaved violet populations prior to construction; however, no suitable habitat is known within the project</p>





Environmental Impact or Issue	Environmental Commitment Disposition
	<p>area. ODOT requested assistance from ODNR to locate suitable habitat for this species.</p> <p>If any listed endangered species are identified during construction, the USF&amp;WS's Endangered Species Coordinator will be notified immediately.</p>
Terrestrial Habitats	No commitments at this time.
Farmland	A cattle crossing will be constructed under the proposed roadway in the bisected property of Mr. Ken Rase.
Hazardous Materials Handling and Containment	No commitments at this time.
Residential/Business Relocations and Property Impacts	Acquisitions and relocations for all residences displaced for right-of-way will be conducted in accordance with all applicable state and federal laws.
Environmental Justice/Community Issues	No commitments at this time.
Section 106 Consultation	No commitments at this time.
Archaeology Sites/Section 4(f)/Section 106 Consultation	No commitments at this time.
Historic Architecture Sites/Section 4(f)/Section 106 Consultation	No commitments at this time.
Section 4(f) Public Lands	No commitments at this time.
Air Quality	No commitments at this time.
Noise Impacts and Abatement	Noise wall NSA 4 will be constructed.
Construction Impacts	No commitments at this time.
Traffic Maintenance	<p>A maintenance of traffic plan was prepared in accordance with ODOT Standard Specifications, latest edition, for Maintenance of Traffic (ODOT Item 104.04), Public Convenience and Safety (ODOT Item 107.07), and Maintaining Traffic (ODOT Item 614).</p> <p>During construction, ODOT will coordinate with local schools, emergency response agencies, and other services to notify them of any changing traffic patterns and identify alternative access roads.</p>
Public Involvement	No commitments at this time.
Utilities	During the design process, representatives from the utility companies were contacted to inform them of the project and coordination meetings were held.
Coordination with Other Transportation Modes	No commitments at this time.



## 5. Conclusion

The purpose of the reevaluation is to identify and document any changes to the impacts since the approval of the ROD in June 2006. As a result of the additional study, the following changes to the Phase 1 area were identified:

- The wetland impacts increased from 0.43 acres to 3.893 acres;
- The stream impacts increased from 5,421 feet (based on the Section 404/401 permit application dated September 10, 2010) to 9,525 feet;
- The pond impacts decreased from 3.284 (based on the Section 404/401 permit application dated September 10, 2010) to 2.70 acres;
- There is a property acquisition impact for one community facility, the Church of Christ, located on SR 335;
- The unemployment rate in Scioto County has increased to 12.7% based on January 2012 data. This represents a 53% increase since June 2006.
- The numbers of persons living below the poverty level in Scioto County has increased from 19.3% to 23.5% in Scioto County since 2000;
- The farmland impact increased by 0.3 acres as a result of the SR 335 reconstruction, which is now part of Phase 1; and
- Additional utility impacts as a result of the SR 335 reconstruction include the relocation of aerial telephone and electric service lines and construction of a new sewer line.

Based upon this Environmental Reevaluation and Environmental Commitments, the Record of Decision (ROD) issued by the United States Department of Transportation, Federal Highway Administration (FHWA) on June 9, 2006 for the Portsmouth Bypass project, SCI-823-0.00, PID 19415 is applicable to the Phase 1 project.



**Appendix A**  
**Agency Correspondence**

**Staud, Amy**

---

**From:** Jason Earley [jearley@ascgroup.net]  
**Sent:** Friday, October 21, 2011 9:17 AM  
**To:** Staud, Amy  
**Subject:** FW: Portsmouth Bypass - Phase 1 - PJD field review summary - 7 Sept 2011 (UNCLASSIFIED)

Amy:

Here is the email we used as the provisional JD.

Jason

-----Original Message-----

**From:** Latta, Brett C LRH [<mailto:Brett.C.Latta@usace.army.mil>]  
**Sent:** Thursday, September 08, 2011 2:15 PM  
**To:** [Mike.Pettegrew@dot.state.oh.us](mailto:Mike.Pettegrew@dot.state.oh.us); [Adrienne.Smith@dot.state.oh.us](mailto:Adrienne.Smith@dot.state.oh.us)  
**Cc:** [Stacy.Schimmoeller@dot.state.oh.us](mailto:Stacy.Schimmoeller@dot.state.oh.us); Jason Earley  
**Subject:** Portsmouth Bypass - Phase 1 - PJD field review summary - 7 Sept 2011 (UNCLASSIFIED)

**Classification:** UNCLASSIFIED  
**Caveats:** NONE

All:

Below is a summary of requested changes to the ESR based on our field review yesterday for the subject project.

Stream Table:

Stream 17c-1 - change "Stream Hydrology Type" to ephemeral Stream 18-1 - change "Stream Hydrology Type" to ephemeral Stream 19 - change "USACE Flow Characteristics" to RPW perennial Stream 19-1 - change respective columns to intermittent / RPW seasonal Stream 24-1 - change "Stream Hydrology Type" to ephemeral

Wetland Table / Figure 11:

Wetland 2/3 - add additional acreage; update table/Figure 11 Wetland 9 - make "Hydrologic Connection" abutting and not adjacent Wetland 10 - lack of dominant hydrophytes (apparently due to temporal shift)...area does not seem likely to collect or concentrate water; remove from table/Figure 11 Wetland 11 - lack of dominant hydrophytes (apparently due to temporal shift)...area does not seem likely to collect or concentrate water; remove from table/Figure 11 Wetland 13 - add additional acreage; update table/Figure 11 Wetlands 12/15 - connection to TNW should be east toward Sweet Run (please draw an approximate drainage divide for wetland complex on Figure 11, Sheet

1)

Wetland 16 - connection to TNW should be revised (I think this was just a copy and paste error Jason and I talked about) Wetland 21 - the connection to TNW should just say Wetland 21 slopes off-site toward Stream 21a (not toward Wetland 20) Wetland 23 - lack of dominant hydrophytes (apparently due to temporal shift)...area does not seem likely to collect or concentrate water; remove from table/Figure 11 Wetland 24 - connection to TNW should be revised to go from RR Ditch 1 south to Stream 22a/b (please draw an approximate drainage divide between Stream

21



and Wetland 24 on Figure 11, Sheet 3)  
Wetland 25 - lack of dominant hydrophytes (apparently due to temporal shift)...area does not seem likely to collect or concentrate water; remove from table/Figure 11  
Wetland 26 - connection to TNW should be revised (I think this was just a copy and paste error Jason and I talked about - flow connection should be south and then east to off-site RR ditches [not thru Pond 8])  
Wetland 27 - lack of dominant hydrophytes (apparently due to temporal shift)...area does not seem likely to collect or concentrate water; remove from table/Figure 11  
Other - add abutting wetland acreage around fringe of Pond 5; update table/Figure 11  
Other - potential adjacent wetland between trailer and Stream 19 (to be determined)

Ditches / Figure 11:

Ditches 1-9: are non-RPWs; remove from table/Figure 11  
RR Ditches 1-2: are seasonal RPWs with OHWMs; update table and leave RR Ditches as they are on Figure 11, Sheet 3

Pond Table:

Pond 7 - "Receiving Waters" column should be changed to "Outlet tiles to RR Ditch 1 to Stream 22 a/b" and acreage within project area should be 0.60 (not 0.59)

Other General Comments:

- \* Remember to include any new/additional routine data forms and photos, where appropriate, with the final ESR.
- \* Please be certain the revised ESR has the most up-to-date work limit boundaries and that all stream LF / wetland acreage / ditch dimensions reflect those boundaries --- if the total land area changes from 310 acres let me know.
- \* I would like to receive 1 set of hard copy replacement pages for what I already have. I request 3 extra hard copy sets of the revised Figure 11 only (Sheets 1 through 4).
- \* I am wondering if the final ESR, in its entirety, can be posted on the ODOT extranet.
- \* I did not see any resources that were obviously isolated, so it appears that USACE can move forward with a PJD for all resources within the Phase 1 construction limits.

Thank you,

Brett C. Latta, CPG  
Regulatory Project Manager  
United States Army Corps of Engineers  
DSCC, Building 10, Section 10  
3990 East Broad Street  
Columbus, OH 43218  
Phone: (614) 692-4672  
E-mail: [Brett.C.Latta@usace.army.mil](mailto:Brett.C.Latta@usace.army.mil)

Classification: UNCLASSIFIED  
Caveats: NONE

## INTER-OFFICE COMMUNICATION

Division of Air Pollution Control

---

**TO:** Noel Alcala, Office of Environmental Services, ODOT  
**FROM:** Frederick Jones, DAPC, ATU, OEPA  
**DATE:** October 12, 2011  
**RE:** SCI-823-0.00 Portsmouth Bypass Phase 1, PID 19415 Qualitative Mobile Source Air  
Toxics (MSAT) Analysis Report.

---

**Mobile Source Air Toxic (MSAT) Analysis Document Review**

Document Reviewed:

Qualitative MSAT Analysis Report SCI-823-0.00 Portsmouth Bypass Phase 1, PID 19415

Comments:

Upon Review, Ohio EPA does not have additional comments on the MSAT Analysis Report: SCI-823-0.00 Portsmouth Bypass Phase 1, PID 19415. The Average Daily Traffic and the Vehicle Miles Traveled described in the report, is in accordance with the ODOT Technical Guidance for Analysis of Mobile Source Air Toxics to be categorized as a "Low MSAT effect" project.

The report identifies the limitation in predicting project specific health impacts through vehicle emissions and provides information in accordance to CEQ regulations 40 CFR 1502.22(b) regarding unavailable or incomplete information for a Low MSAT effect project.

**cc:** Paul Koval Supervisor, DAPC/ATU



**Alcala, Noel**

---

**From:** Morris.Patricia@epamail.epa.gov  
**Sent:** Monday, October 24, 2011 1:41 PM  
**To:** Alcala, Noel  
**Cc:** Oesterling, Leigh; Braun, Paul  
**Subject:** RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level Conformity Determination Request for Nonexempt Project

Noel,  
I also concur that this is not a project of air quality concern based on this information.  
Pat

Patricia Morris  
Environmental Scientist  
USEPA Region 5  
(312) 353-8656  
morris.patricia@epa.gov

-----"Braun, Paul" <Paul.Braun@epa.state.oh.us> wrote: -----

To: "Alcala, Noel" <Noel.Alcala@dot.state.oh.us>, Patricia Morris/R5/USEPA/US@EPA, "Oesterling, Leigh" <leigh.oesterling@dot.gov>  
From: "Braun, Paul" <Paul.Braun@epa.state.oh.us>  
Date: 10/12/2011 08:55AM  
Cc: "Manson, Greg" <Greg.Manson@dot.state.oh.us>, "Stemen, Carmen" <Carmen.Stemen@dot.state.oh.us>, "Schneider, Erica" <Erica.Schneider@dot.state.oh.us>, "amy.staud@hdrinc.com" <amy.staud@hdrinc.com>  
Subject: RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level Conformity Determination Request for Nonexempt Project

Thank you Noel for this information. When added to the information already provided, I would agree that this is not a project of concern and that no hot-spot analysis should be required.

Thanks  
Paul

Paul J. Braun, P.E.  
State Implementation Plan Development and Rulemaking  
Ohio EPA, Division of Air Pollution Control  
614-644-3734

-----Original Message-----

From: Alcala, Noel  
Sent: Wednesday, October 12, 2011 9:47 AM  
To: Morris.Patricia@epamail.epa.gov; Braun, Paul; Oesterling, Leigh  
Cc: Manson, Greg; Stemen, Carmen; Schneider, Erica; amy.staud@hdrinc.com  
Subject: FW: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level Conformity Determination Request for Nonexempt Project

Leigh, Patricia, and Paul:

The design year info, as presented, is the maximum ADT expected on this phase of the project at any time (including when all 3 phases are complete). The provided design year ADT on the Phase 1 section will not go up, when people can use the whole bypass. When Phase 1 is constructed and opened minus the other phases, the opening year ADT will be significantly lower than the provided design year ADT. Please let me know if you agree that this project is not a project of air quality concern and no PM2.5 hotspot analysis is required so that we can complete our environmental document for this project. Thanks!

If you have any questions or concerns, please do not hesitate to contact me by phone or email.

Noel Alcalá, P.E.  
Noise and Air Quality Coordinator  
ODOT-Office of Environmental Services  
1980 W. Broad Street  
Columbus, OH 43223  
614-466-5222  
Noel.alcala@dot.state.oh.us

-----Original Message-----

From: Manson, Greg  
Sent: Wednesday, October 12, 2011 9:22 AM  
To: Alcalá, Noel; Stemen, Carmen; amy.staud@hdrinc.com  
Cc: Oesterling, Leigh; Schneider, Erica  
Subject: RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level  
Conformity Determination Request for Nonexempt Project

Sorry Noel! I just confirmed with Tom Barnitz that the design year ADT of 26,000 with 14% trucks is for the entire project (all three phases). Let me know if you need anything else. Thanks.

Greg Manson  
Ohio Department of Transportation  
District 9 Environmental Coordinator  
740-774-8976

-----Original Message-----

From: Alcalá, Noel  
Sent: Wednesday, October 12, 2011 8:23 AM  
To: Manson, Greg; Stemen, Carmen; amy.staud@hdrinc.com  
Cc: Oesterling, Leigh; Schneider, Erica  
Subject: RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level  
Conformity Determination Request for Nonexempt Project

We are still awaiting the answer to the question below from OEPA so we can wrap up PM2.5. Thanks.

If you have any questions or concerns, please do not hesitate to contact me by phone or email.

Noel Alcalá, P.E.  
Noise and Air Quality Coordinator  
ODOT-Office of Environmental Services  
1980 W. Broad Street  
Columbus, OH 43223  
614-466-5222  
Noel.alcala@dot.state.oh.us

-----Original Message-----



From: Braun, Paul  
Sent: Wednesday, September 21, 2011 1:26 PM  
To: Alcala, Noel; Morris.Patricia@epamail.epa.gov  
Cc: Oesterling, Leigh; Manson, Greg; Stemen, Carmen; Schneider, Erica  
Subject: RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level  
Conformity Determination Request for Nonexempt Project

Noel,

My primary concern is that, when all 3 phases are complete, the ADT on the Phase 1 section will go up because people can use the whole bypass. If the 26K cars and 14% truck is the greatest that is ever expected on this section, then I would probably concur, even though the truck % is >8%. Can you give me some kind of information confirming that the design year info, as presented, is the maximum ADT expected on this phase of the project at any time?

Thanks  
Paul

Paul J. Braun, P.E.  
State Implementation Plan Development and Rulemaking Ohio EPA, Division of Air Pollution Control  
614-644-3734

-----Original Message-----

From: Alcala, Noel  
Sent: Wednesday, September 21, 2011 12:42 PM  
To: Morris.Patricia@epamail.epa.gov  
Cc: Braun, Paul; Oesterling, Leigh; Manson, Greg; Stemen, Carmen; Schneider, Erica  
Subject: RE: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level  
Conformity Determination Request for Nonexempt Project

Patricia:  
The other 2 phases have very similar (if not the same) ADT levels and truck percentages. They will be coordinated with you for conformity in the coming months. Can you approve Phase 1 in light of this coordination plan?

If you have any questions or concerns, please do not hesitate to contact me by phone or email.

Noel Alcala, P.E.  
Noise and Air Quality Coordinator  
ODOT-Office of Environmental Services  
1980 W. Broad Street  
Columbus, OH 43223  
614-466-5222  
Noel.alcala@dot.state.oh.us

-----Original Message-----

From: Morris.Patricia@epamail.epa.gov [mailto:Morris.Patricia@epamail.epa.gov]  
Sent: Wednesday, September 21, 2011 11:09 AM  
To: Alcala, Noel  
Cc: Braun, Paul; Oesterling, Leigh; Manson, Greg; Stemen, Carmen; Schneider, Erica  
Subject: Re: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project Level  
Conformity Determination Request for Nonexempt Project

Noel,  
Thank you for sending this project for our review. I have some questions/concerns about the project.

The current information appears to be only for phase 1 of the project and has a 14% truck component. Although phase 1 is below the ADT levels that would be considered to be a project of air quality concern, I have no information on the other phases of the project and what the ADT levels and truck percentages will be with the additional phases of the project. Please provide additional information. When will the other phases of the project be reviewed for conformity?

Pat

Patricia Morris  
Environmental Scientist  
USEPA Region 5  
(312) 353-8656  
morris.patricia@epa.gov

From: "Alcala, Noel" <Noel.Alcala@dot.state.oh.us>  
To: Patricia Morris/RS/USEPA/US@EPA, "Braun, Paul"  
<Paul.Braun@epa.state.oh.us>, "Oesterling, Leigh"  
<leigh.oesterling@dot.gov>  
Cc: "Manson, Greg" <Greg.Manson@dot.state.oh.us>, "Stemen,  
Carmen" <Carmen.Stemen@dot.state.oh.us>, "Schneider, Erica"  
<Erica.Schneider@dot.state.oh.us>  
Date: 09/21/2011 08:48 AM  
Subject: SCI-823 Portsmouth Bypass Phase 1- PID 19415 - PM2.5 Project  
Level Conformity Determination Request for Nonexempt Project

Leigh, Patricia, and Paul:

The subject nonexempt project is a project that we believe is not a project of air quality concern and has met the statutory requirements of the Clean Air Act and is exempt from PM2.5 Hotspot Analysis. The SR 823 Portsmouth Bypass will be a four-lane, divided, limited access facility connecting US 52 near Wheelersburg to US 23 just north of Lucasville, OH. The overall 3-phase project will be approximately 16 miles in length, bypassing approximately 26 miles of US 52 and US 23 through Portsmouth, OH. The subject project is Phase 1 which is 3 miles in length and contains 3 bridges and 2 intersections. The purpose of the project is to increase regional mobility and improve traffic flow and Level Of Service (LOS). The project is located in Scioto County, Ohio in the City of Portsmouth. The project is set in a predominantly rural, residential area. See project location mapping contained in the attached MSAT analysis.

This project is listed on the STIP. This project does not have an ADT >125,000 AND diesel trucks >8% in the design year. This project requires a project level conformity determination from FHWA in accordance with 40CFR93 and the FHWA and EPA Transportation Conformity Guidance for Qualitative Hot Spot Analysis in PM2.5 and PM10 Nonattainment and Maintenance Areas. Below is the traffic information for the project. As you can see, the traffic volumes are low. Please let me know if you agree that this project is not a project of air quality concern and no PM2.5 hotspot analysis is required so that we can complete our environmental document for this project. A response by September 28, 2011 (1 week) would be greatly appreciated. Thanks.



Dis	Project	P	C	Project Description	Sponsoring Agency	Fiscal Year	Type	Truc	Die	Ty	Truc	Dis
is	ect	I	O		nsorin	al	pe	uc	sel	pe	uc	es
t		D	u		g	Year	A	k	Tru	A	k	el
.		t	n		Age	for	Ex	%	cks	De	%	Tr
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9	SCI-823	1	S	Construct a new 4-lane highway from the new TR234 interchange near the Scioto County Airport to a new interchange at CR28 (Lucasville-Minford Rd)	ODOT	2012	0	0	0	26,832	14	4,368

If you have any questions or concerns, please do not hesitate to contact me by phone or email.

Noel Alcala, P.E.  
 Noise and Air Quality Coordinator  
 ODOT-Office of Environmental Services  
 1980 W. Broad Street  
 Columbus, OH 43223  
 614-466-5222  
 Noel.alcala@dot.state.oh.us  
 [attachment "SCI-823-0.00 Portsmouth Bypass Phase 1 PID 19415 Qual MSAT Analysis.doc"  
 deleted by Patricia Morris/R5/USEPA/US]

**From:** [Raymond, Matt](#)  
**To:** [Bamitz, Tom](#); [Stemen, Carmen](#); [Pettegrew, Mike](#); [Cody, Bill](#); [Fahey, Adrienne](#); [Manson, Greg](#)  
**Cc:** [Hyer, Brad](#); [Staud, Amy](#)  
**Subject:** ODNR Comments on Federally listed species reports for SCI-823-0.00  
**Date:** Tuesday, December 20, 2011 1:21:11 PM

---

ODNR's response to our coordination of the Federally listed species reports. This response should be included and referenced in the environmental document for the project.

Please contact me if you have any questions or concerns

Matt Raymond, Environmental Specialist  
Office of Environmental Services  
Ohio Department of Transportation  
1980 W. Broad Street  
Columbus, OH 43223  
(614) 466-5129

---

**From:** Mitch, Brian [<mailto:Brian.Mitch@dnr.state.oh.us>]  
**Sent:** Monday, December 19, 2011 12:31 PM  
**To:** Michael, Megan; Raymond, Matt  
**Cc:** Pettegrew, Mike; Raymond, Matt  
**Subject:** Portsmouth Bypass

Hi Megan,

The Ohio Department of Natural Resources, Division of Wildlife (DOW) has reviewed the "Eastern Hellbender Survey Report for the SCI-823-0.00-6.81 (PID 19415) Preferred Alternative for the Portsmouth Bypass over the Little Scioto River, Scioto County, Ohio", the "Threatened and Endangered Species Survey Report for the Federally Endangered Running Buffalo Clover (*Trifolium stoloniferum*) for the Preferred Alternative of the Portsmouth Bypass (SCI-823.0.00/6.81 (PID 19415) Scioto County, Ohio", the "Threatened and Endangered Species Survey Report for the Federally Endangered Small Whorled Pagonia (*Isotria medeoloides*) for the Preferred Alternative of the Portsmouth Bypass (SCI-823-0.00 (PID 19415), Scioto County, Ohio", the "Indiana Bat Mist-net Survey, Approximately 26.18 Kilometers, Ohio Department of Transportation Portsmouth Bypass (SCI-823-0.00/6.81, PID 19415), Scioto County, Ohio", and the "Mussel Survey Report for the SCI-823-0.00/6.81 (PID 19415) Preferred Alternative for the Portsmouth Bypass over the Little Scioto River, Scioto County, Ohio."

After review of these reports, the DOW has no additional comments.

Thanks,

Brian

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

March 12, 2012

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03EI5000-2012-I-0581 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

RE: **SCI-823-0.00 Portsmouth Bypass**, Phase 1 (PID 19415), Phase 2, and Phase 3

Dear Mr. Hill,

This is in response to your November 9, 2011 letter received in our office on November 15, 2011 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act section 7(a)(2) effects determination for federally listed species in the SCI-823-0.00 Portsmouth Bypass project area. The project proposes to establish a 17-mile long bypass, to be constructed in three phases, with Phase 1 (the middle portion of the 3-phase project) to be built first. The construction schedule for the entire project is approximately 13 years. The Ohio Department of Transportation (ODOT) and the Federal Highway Administration (FHWA) have determined that each phase of the project has independent utility. Phase 1 includes interchanges with TR 234 (Shumway Hollow Road) and CR 28 Lucasville-Minford Road) and is approximately 3 miles long. According to Public Notice 2011-00646-OHR, recently issued by the U.S. Army Corps of Engineers (USACE) (Huntington District), the proposed work on Phase 1 would result in permanent discharge of approximately 1,381 cubic yards of fill material into 9,525 linear feet (1.22 acre) of streams; 5,076 cubic yards of fill material into 3.89 acres of emergent wetlands, and 26,137 cubic yards of fill material into 2.70 acres of ponds. Approximately 1,175 cubic yards of temporary fill material will be discharged 300 linear feet (0.26 acre) of stream for bridge construction access and staging areas.

This project lies within the range of the **Indiana bat** (*Myotis sodalis*), **sheepnose mussel** (*Plethobasus cyphus*), **running buffalo clover** (*Trifolium stoloniferum*), **snuffbox mussel** (*Epioblasma triquetra*), **rayed bean** (*Villosa fabalis*), **fanshell** (*Cyprogenia stegaria*), **northern riffleshell** (*Epioblasma torulosa rangiana*), **pink mucket pearlymussel** (*Lampsilis abrupta*), **clubshell** (*Pleurobema clava*), all federally endangered species; **small whorled pogonia** (*Isotria medeoloides*) and **Virginia spiraea** (*Spiraea virginiana*), both federally threatened plant species; and the **bald eagle** (*Haliaeetus leucocephalus*), **timber rattlesnake** (*Crotalus horridus*), and **eastern hellbender** (*Cryptobranchus a. allegamiensis*), federal species of concern.

Although only activities associated with Phase 1 have been public noticed for permitting by the USACE, ODOT chose to consult with the Service and address potential impacts to federally listed species within the entire bypass project corridor. Therefore, those impacts are addressed in this letter. However, if construction of the subsequent phases of the project is delayed for three or more years, ODOT/FHWA should re-initiate consultation with the Service to address any potential changes in species distributions or occurrence records within the Phase 2 and Phase 3 project areas.

As discussed during an interagency meeting held on February 10, 2011 between the Service, FHWA, ODOT, and USACE, suitable habitat streams for sheepsnose, pink mucket, fanshell, snuffbox, and northern riffleshell mussels are not present within the bypass project area. Therefore, no impacts to these species are anticipated. During the February 2011 meeting, the Service also informed ODOT/FHWA that no surveys, in addition to those conducted in 2004, would be required for the timber rattlesnake or Virginia spiraea, as the earlier survey results are still valid.

A survey for federally listed mussel species was conducted in the Little Scioto River by Dr. Michael Hoggarth, a federally permitted malacologist, during the 2011 summer season. None of the federally listed mussel species were found during this survey. Based on the results of this survey and other less intensive surveys conducted in the other streams within the project area, as well as current records of species occurrence, impacts to the clubshell are not anticipated. Although no rayed bean mussels were discovered during Dr. Hoggarth's survey or the other less intensive surveys, suitable habitat for the species was present in the Little Scioto River. Therefore, it is possible that the species could occur in other reaches of the stream. Based on this information, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* the rayed bean. The Service concurs with this determination.

Surveys for running buffalo clover and small whorled pogonia were conducted in May and June 2011. No individuals of either species were identified during these surveys; however, suitable habitat for each species was present within the project corridor. Therefore, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* running buffalo clover and small whorled pogonia. The Service concurs with this determination.

On August 16, 2011, Greg Lipps, a professional herpetologist, surveyed the reach of the Little Scioto River that will be impacted by the bypass project for suitable habitat for the eastern hellbender. Although the hellbender is known to occur in the Little Scioto, no suitable habitat for the species was identified at or near the proposed crossing for the bypass. Therefore, no impacts to this species are anticipated.

The corridors associated with the proposed alignment of the bypass, both currently and in 2003, were surveyed for Indiana bat. Twenty-one net sites were surveyed in 2003 and Nineteen net sites were surveyed in 2011. No Indiana bats were captured during either survey, suggesting that the species is not present in the project area or occurs at very low density. Therefore, ODOT has determined that the project *may affect but is not likely to adversely affect* the Indiana bat. The Service concurs with this determination. We also appreciate ODOT's commitment to conduct tree clearing activities only between September 30 and April 1 to avoid direct take of bats during their summer brood-rearing season.

Although the bald eagle is known to occur in Scioto County, the nearest nest to the project construction limits is 3.9 miles from the northwestern project terminus along the Scioto River. Therefore, no impacts to this species are anticipated.

Our office has received copies of all the survey reports for the surveys conducted in 2011. As stated above, additional surveys may be necessary if construction on some or all of the bypass project does not occur for three or more years. Although no federally listed species were identified, the Service

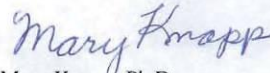


recommends that best management practices (BMPs) be implemented to minimize impacts to water quality. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species. Also, **Please note that if** the applicant plans to clear trees prior to issuance of a 404 and/or 401 permit: 1) Section 7 consultation with the Service must be completed; and 2) No tree clearing on any portion of the project should occur until both the U.S. Army Corps of Engineers and Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the project as a whole is imminent. This will ensure that clearing will be limited to the footprint of the alternative that is ultimately permitted, and that no unnecessary clearing will occur.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy. This concludes consultation on this action as required by section 7(a)(2) of the Endangered Species Act. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,



Mary Knapp, Ph.D.  
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH (*email only*)  
USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
OEPA, Columbus, OH (*email only*)



## OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

November 9, 2011

Mary Knapp, Supervisor  
U.S. Fish and Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230

Re: SCI-823-0.00, Portsmouth Bypass Project, Phase 1 (PID 19415) , Phase 2, and Phase 3  
Consultation on Federally Listed Species

Dr. Knapp:

Enclosed for your review in accordance with the Fish and Wildlife Coordination Act (16 U.S.C 661 et seq.) and the Endangered Species Act of 1973 (as amended), are five survey reports discussing potential impacts to federally listed species that may result from the construction of all three phases of the Portsmouth Bypass project. The purpose of the project is to establish a new divided, four-lane, limited access highway in Scioto County, Ohio.

Ecological and Endangered Species impacts associated with the project were previously coordinated with the U.S. Fish and Wildlife Service (Service) for the entire bypass project area (all three phases) in 2004. The Service provided concurrence (attached correspondence dated August 25, 2004) that the project may affect but is unlikely to adversely affect the three federally listed species that were known from Scioto County at that time (the Indiana bat- *Myotis sodalis*, Virginia Spirea - *Spiraea virginiana*, and Small Whorled Pogonia- *Isotria medeoloides*), and that the project would have no effect on the timber rattlesnake (*Crotalus horridus horridus*). The Final Environmental Impact Statement (FEIS) for the project was completed in August 2005, and the Record of Decision was received for the project in June 2006. A delay in the implementation of the project has resulted in the need to re-evaluate the project's Final Environmental Impact Statement (FEIS). A component of this re-evaluation includes an update of the inventory and impact assessment to ecological resources, including endangered species, within the project area. Since more than seven years have passed since ecological surveys were conducted for the project, and additional listed species and species records are now known from Scioto County, the Ohio Department of Transportation (ODOT) committed to update the inventory of ecological resources and to conduct additional surveys for selected federally listed species.

Scioto County is now known to be within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered running buffalo clover (*Trifolium stoloniferum*), the federally endangered clubshell mussel (*Pleurobema clava*), the federally endangered fanshell mussel (*Cyprogenia stegaria*), the federally endangered northern riffleshell mussel (*Epioblasma torulosa rangiana*), the federally endangered pink mucket pearly mussel (*Lampsilis abrupta*), the proposed endangered rayed bean mussel (*Villosa fabalis*), the proposed endangered sheepnose mussel (*Plethobasus cyphus*), the proposed endangered snuffbox mussel (*Epioblasma triquetra*), the federally threatened small whorled pogonia (*Isotria medeoloides*), the federally threatened Virginia spiraea (*Spiraea virginiana*), the federal species of concern bald eagle (*Haliaeetus leucocephalus*), the federal species of concern eastern hellbender (*Cryptobranchus alleghaniensis*), and the federal species of concern timber rattlesnake (*Crotalus horridus horridus*).

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During an interagency meeting held on February 10, 2011 between the Service, the Federal Highway Administration, the U.S. Army Corps of Engineers (USACE), and ODOT, the Service indicated that additional survey work would be needed in suitable habitats to determine the presence and possible effects that the project may have on the rayed bean and clubshell mussels, the small whorled pogonia, the running buffalo clover, the eastern hellbender, and the Indiana bat. It was also determined that no additional survey work would be needed for the timber rattlesnake or Virginia spiraea (as the previous surveys conducted were still valid), or for the sheepsnose mussel, pink mucket pearly mussel, fanshell Mussel, snuffbox mussel and northern riffleshell mussel (as suitable habitat streams for these species are not known to be within the project area). An ecological survey report that updated the inventory of ecological resources within the construction limits of Phase 1 of the selected alternative for the project was coordinated with the Service on August 16, 2011. While federally listed species were briefly discussed within the revised ecological survey report, the discussion did not provide a detailed description of the habitats or additional survey work conducted for these species.

The enclosed species specific reports detail the survey results for the rayed bean mussel, clubshell mussel, small whorled pogonia, running buffalo clover, eastern hellbender, and Indiana bat. The following effect determinations for species known from Scioto County are based on the contents of the enclosed reports, previous consultation and coordination efforts, and the suitability of the habitats found within the proposed project area. These effect determinations are applicable to the Portsmouth Bypass project in its entirety (all three phases).

**Bald eagle** (*Haliaeetus leucocephalus*) - The bald eagle is protected under the Bald and Golden Eagle Protection Act which prohibits taking bald eagles, including disturbance. The preferred habitat includes mature forests adjacent to open water for nesting and foraging. No nests for this species were encountered during any of the ecological surveys. Additionally, the preferred habitat of the bald eagle does not occur within the study area; therefore, this bird is not likely to be encountered within study limits. The nearest active bald eagle nest location is located approximately 3.9 miles from the northwestern project terminus along the Scioto River. As such, the project is expected to have **no effect** on this species.

**Clubshell mussel** (*Pleurobema clava*) - The clubshell mussel prefers clean, loose sand and gravel in medium to small rivers and streams. This mussel will bury itself in the bottom substrate to depths of up to four inches. Within Scioto County the species is known from the Ohio River. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area, including the survey of the Little Scioto River (see enclosed report). As a result, the proposed project should have **no effect** on the species.

**Eastern hellbender** (*Cryptobranchus alleghaniensis*) - The eastern hellbender inhabits well-oxygenated flowing waters where large rocks are available for shelter and nesting. Within the proposed project area it was determined that the only stream with potentially suitable habitat for the species was the Little Scioto River. Additionally, the eastern hellbender is known from the Little Scioto River, with capture records for the species as recent as 2009. During 2011, Ohio herpetologist Gregory Lipps conducted a survey for the eastern hellbender and its habitat within the Little Scioto River at the location of the proposed bridge crossing for the project (see enclosed report). The survey did not find any individuals of the species, and determined that this segment of the Little Scioto River did not contain suitable habitat for the species. Due to the lack of suitable habitat for the species within the proposed project area, it is anticipated that the project will have **no effect** on the species.

**Fanshell mussel** (*Cyprogenia stegaria*) - The fanshell mussel is found in shallow to deep water living on a coarse sand and gravel substrate in swift currents. The species appears to be restricted to free flowing

reaches of medium to large rivers. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Indiana bat** (*Myotis sodalis*) – The Indiana bat life cycle requires suitable summer roosting and brood rearing habitat (which includes living or standing dead trees or snags with exfoliating, peeling or loose bark, split trunks and/or branches, or cavities) and suitable hibernacula during the winter months (typically caves, or abandoned mines that provide cool, humid, stable conditions for hibernation). The nearest known record for the Indiana bat was a suspected hibernacula located approximately 5.75 miles from the project area. No caves, mine portals, or other features that could be acting as potential Indiana bat hibernacula were found within the project area. Approximately 493 acres of successional, second growth, and mature forested habitats will be impacted by the proposed project (all three phases). Mist net surveys for Indiana bats were conducted in 2003 within the preliminary project alternatives (21 net sites), and again in 2011 (enclosed report) within the selected alternative for the project (19 net sites). No Indiana bats were captured during either survey. Although the proposed project will result in the removal of multiple acres of trees possessing potential Indiana bat roost and maternity roost habitat characteristics, the results of the surveys suggest that Indiana bats were not present in the project area, or were present in very low numbers. To avoid direct take of bats, trees will be cleared for the project only between 30 September and 1 April. Based on the results of the survey, and the commitment to avoid the direct take of Indiana bats by implementing seasonal cutting restrictions, it is reasonable to conclude this project **may affect, but is not likely to adversely affect** the Indiana bat.

**Northern riffleshell mussel** (*Epioblasma torulosa rangiana*) – This species prefers riffles composed of firmly packed fine gravel in swift flowing shallow water. Within Scioto County the species is only known from the Scioto River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Pink mucket pearly mussel** (*Lampsilis abrupta*) - The pink mucket pearly mussel is a moderate to large river species that is generally found in gravel-cobble-boulder substrates associated with riffle and run habitats. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Rayed bean mussel** (*Villosa fabalis*) –The rayed bean generally lives in smaller, headwater creeks, but they are sometimes found in large rivers and wave-washed areas of glacial lakes, including Lake Erie. They prefer gravel or sand substrates, and are often found in and around roots of aquatic vegetation. Within Scioto County the species is known from the Scioto River and the Scioto Brush Creek. However, the species is considered potentially present within any streams in the County that possess its preferred habitat, including the Little Scioto River. Although suitable habitat for the species was present, no specimens of rayed bean were found during the survey of the Little Scioto River (see enclosed report) or any other mussel surveys conducted during the ecological surveys of the project area. It is unlikely that the species is present within the proposed project area and that it will be impacted by proposed construction activities. As a result, the proposed project **may affect, but is not likely to adversely affect** the species.

**Running buffalo clover** (*Trifolium stoloniferum*) – Running buffalo requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe



disturbance. Potential areas of running buffalo clover habitat include partially shaded woodlots, periodically mown areas (lawns, parks, cemeteries), and partially shaded woods along streams and trails. The nearest record for the running buffalo clover is located approximately 11 miles from the project area within Lawrence County. A survey for this species was conducted in 2011(see enclosed report). Although this species was not identified within the project study area during any of the survey, suitable habitats for the species, partially shaded woodlots along streams and maintained lawns and trails, were present within the project area. Due to the absence of the species, but the presence of potentially suitable habitat within the project area, ODOT believes that the project **may affect but is not likely to adversely affect the species.**

**Sheepnose mussel (*Plethobasus cyphus*)** – The sheepnose mussel lives in larger rivers and streams where they are usually found in shallow areas with moderate to swift currents flowing over coarse sand and gravel. Sheepnose have also been found in mud, cobble, and boulders. In larger rivers they may be found in deep runs. Within Scioto County the species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have **no effect** on the species.

**Small whorled pogonia (*Isotria medeoloides*)** –The small whorled pogonia prefers “upland sites in mixed-deciduous or mixed deciduous/coniferous forests that are generally in second- or third-growth successional stages,” in areas that “include sparse to moderate ground cover in the species’ microhabitat, a relatively open understory canopy, and proximity to features that create long persisting breaks in the forest canopy” (*Small Whorled Pogonia Recover Plan*, von Oettingen, 1992). This species typically flowers from mid-May through mid-June, however, flowering occurs only for a period of about one week, and the plant may not flower on an annual basis. In addition, it is believed that this species may be capable of extended periods of dormancy, and that it may not emerge within a given year. The inconsistent, sporadic, nature of this species, as well as the similarity in morphological appearance to large-whorled pogonia (*I. verticillata*) and sterile individuals of the abundant Indian cucumber-root (*Medeola virginiana*), makes it difficult to survey for within the project area. Records for the small whorled pogonia within Scioto County are located approximately 17.5 miles west of the proposed project study area. Surveys for this species were conducted in 2003, 2004, and 2011(see enclosed report). While the species was not found within the project study area during any of the field surveys, suitable habitats for *I. medeoloides* were observed. Due to the presence of potentially suitable habitat for the species, the proximity to a known location for the plant, and the potential difficulties associated with surveying for this species (short flowering period, similarity in appearance to sterile plants of Indian cucumber-root, and potential periods of dormancy) the species cannot be completely discounted from being present within the study area. As a result, ODOT believes that the project **may affect, but is not likely to adversely affect** the species.

**Snuffbox mussel (*Epioblasma triquetra*)** - The snuffbox mussel is usually found in small to medium-sized creeks in areas with a swift current, although it is also found in Lake Erie and some larger rivers. Adults often burrow deep in sand, gravel or cobble substrates, except when they are spawning or the females are attempting to attract host fish. Within Scioto County the species is known from the Ohio River, Scioto Brush Creek, and the South Fork Scioto Brush Creek. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area. As a result, the proposed project should have **no effect** on the species.

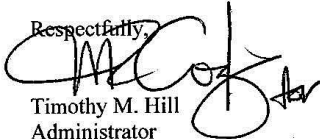
**Timber rattlesnake (*Crotalus horridus horridus*)** - These snakes are a woodland species. In addition to using wooded areas, timber rattlesnakes also utilize sunlit gaps in the canopy for basking and deep rock crevices for overwintering (den sites). Individuals may make larger movements between various sites in

the summer. A survey for this species was conducted by herpetologist Doug Wynn during 2003. The Service and Doug Wynn both concurred that updated surveys for this species were unnecessary to make an effect determination for this species. The 2003 survey found that suitable habitat for this species is present within the proposed project area, however, signs of major human disturbance were common, and it was determined to be very unlikely that the species inhabits or utilizes the surveyed area. This species was not encountered during the species specific survey (conducted in 2003) or during any of the previous or updated ecological surveys. Due to the presence of suitable habitat for the species, but the lack of evidence of timber rattlesnakes using the habitat, the proposed project **may affect, but is not likely to adversely affect** the species.

**Virginia spiraea** (*Spiraea virginiana*) -- Habitat for the Virginia spiraea is usually rocky, flood scoured banks of high energy (high gradient) streams or rivers. This species is currently only known in Scioto County along Scioto Brush Creek, west of the Scioto River. During the 2003 ecological survey (as well as the 2011 ecological survey on Phase 1) each perennial stream located within the proposed project area was reviewed for habitat for the Virginia spiraea. The conditions along the Little Scioto River at the proposed crossing did not appear suitable for the plant. While several of the other perennial streams within the project area appeared to have satisfactory habitat conditions for this shrub species, none of the plants were found. Due to the presence of suitable habitat for the species, but the lack of evidence that the plant is within the proposed project area, the proposed project **may affect, but is not likely to adversely affect** the species.

If a listed or proposed species is subsequently found to occur in the project area, the Federal Highway Administration will initiate coordination with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended.

The Service's concurrence and/or comments on the effect determinations for listed species would be appreciated as soon as possible. If comments or notification of when comments will be furnished are not received within 30 days, we will proceed with project development. If you have any questions or concerns, please call Matt Raymond, Environmental Specialist, at (614) 466-5129.

Respectfully,  
  
Timothy M. Hill  
Administrator  
Office of Environmental Services

Enclosure  
c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Ron Garczewski, FHWA -  
File





**OHIO DEPARTMENT OF TRANSPORTATION**  
**INTEROFFICE COMMUNICATION**  
**Office of Environmental Services**

**DATE:** December 5, 2011

**TO:** Brian Mitch, Division of Engineering, ODNR

**FROM:** *Timothy M. Hill* for  
Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Listed Species Coordination

**PROJECT:** SCI-823-0.00, Portsmouth Bypass Project (PID 19415)

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On August 16, 2011, ODOT coordinated an ecological survey report for Phase 1 of the Portsmouth Bypass project with ODNR. The ecological survey report and coordination letter updated the inventory of ecological resources within the construction limits of the first phase of the proposed project, and discussed the potential impacts to State listed species. As noted in the coordination letter, the ecological survey of Phase 1 of the project area identified the presence of the state endangered southern monkshood (*Aconitum uncinatum*), the state endangered primrose-leaved violet (*Viola primulifolia*), the state potentially threatened American chestnut (*Castanea dentata*), and the state species of concern eastern box turtle (*Terrapene carolina carolina*). Within the coordination letter, ODOT also acknowledged that the proposed project had the potential to impact several other State and Federally listed species, and that species specific surveys were being conducted to determine the potential presence of these species within the entire Portsmouth Bypass project area (all three phases). These additional species included the rayed bean mussel (*Villosa fabalis*), clubshell mussel (*Pleurobema clava*), small whorled Pogonia (*Isotria medeoloides*), running buffalo clover (*Trifolium stoloniferum*), eastern hellbender (*Cryptobranchus alleghaniensis*), and Indiana bat (*Myotis sodalis*). Additional surveys for two other listed species within the range of the proposed project, the timber rattlesnake (*Crotalus horridus horridus*) and the Virginia spiraea (*Spiraea virginiana*), were not deemed necessary, as the previous surveys conducted in 2003 were considered valid by the USFWS and the approved herpetologist that conducted the timber rattlesnake survey (Doug Wynn). The enclosed reports discuss the potential for aforementioned listed species to be present within the project area.

The attached letter to the USFWS outlines ODOT's determination of effect to these listed species, as well as effect determinations on all other Federally listed species known from Scioto County. These effect determinations were based on the enclosed survey reports and the anticipated impacts resulting from completion of all three phases of the Portsmouth Bypass Project.

While the mussel survey of the Little Scioto River did not find any evidence of federally listed species, the State Threatened black sandshell (*Ligumia recta*) was encountered. The find represents a new species record for the Little Scioto River. This species was encountered downstream of the project's proposed bridge crossing, and outside of proposed construction limits. Only one live mussel and no

mussel beds were encountered within the primary impact area of the proposed bridge. The bridge over the Little Scioto River would be constructed during Phase 3 of the project. As such, the determination of impacts to this species will occur during coordination of Phase 3 of the proposed project.

In addition to transmitting the enclosed species survey reports, ODOT would like to address the comments ODNR provided to ODOT on the proposed project on September 21, 2011.

**ODNR Comment:** The Record of Decision for the Portsmouth Bypass, SCI-823-0.00, ODOT Project Identification Number 19415, Scioto County, Ohio (Record of Decision) indicates that to minimize potential impacts on the Indiana bat, potential roost trees will be cleared within the project construction limits and ancillary work areas only after September 15 and before April 15. The DOW recommends the dates be updated to indicate after September 30 and before April 1.

**ODOT Response:** ODOT will follow the revised dates. To avoid direct take of bats, trees will be cleared for the project only between 30 September and 1 April.

**ODNR Comment:** The DOW would like to remind ODOT that we recommend no in-stream work in Class III Primary Headwater Habitat Streams that support fish or mussel communities, or any other stream classified as having an assigned or provisional aquatic life use designation of Warmwater Habitat or better, from April 15 to June 30. This did not appear to be specifically addressed in the updated ES or in the Record of Decision.

**ODOT Response:** Environmental commitments are not typically included in the Ecological Survey Report (ESR); rather they are detailed in the NEPA environmental document. In-stream work restrictions will be followed when appropriate in accordance with the timeframes established within the Memorandum of Agreement between ODOT and ODNR, and will be specified in the project contract plans as the special provisions.

**ODNR Comment:** The Record of Decision indicates ODOT will plan the project such that no in-stream work in Class III Primary Headwater habitat streams that may support freshwater mussel communities may be conducted between April 15 and June 30 and will be conducted in a way that does not impact freshwater mussels that may be in the area. To reduce impacts to indigenous freshwater mussels, the DOW recommends no in-stream work at any time in any stream that may support freshwater mussel communities.

**ODOT Response:** ODOT understand ODNR's concern, however, ODOT's mission is to construct and maintain Ohio's roadways. A complete ban on in-stream work in streams capable of supporting freshwater mussel communities is simply not feasible for this project, nor typically any other project that involves the construction or replacement of a bridge or large culvert structure. ODOT will commit to reduce the level of impact as much as practicable by conducting a thorough mussel survey to determine presence, and will relocate the mussels located in harms way when necessary.

**ODNR Comment:** The project is within the range of the Eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered amphibian currently being evaluated for Federal Candidate status. The ES indicates no streams were identified in the project area large enough to support the Eastern hellbender. The DOW recommends that the proposed project be developed to minimize indirect stream impacts (e.g., preserve wide riparian buffers, maximize erosion control, and maximize permeable surfaces and storm-water retention). In addition, if any in-water work is proposed in the Little Scioto River, we recommend examining the project site and surrounding area for suitable



hellbender habitat (multiple large flat rocks generally over 42 inches along the longest axis). If suitable habitat is present, we recommend that a survey for hellbenders be completed by a herpetologist approved by the DOW.

**ODOT Response:** ODOT will only impact the land area that is necessary to construct the project. No suitable habitat for the eastern hellbender was identified in the small streams located in Phase 1 of the proposed project, and the Little Scioto River (located in Phase 3 of the project) is the only stream large enough within the project area to have potential habitat for the hellbender. This stream was surveyed by herpetologist Gregg Lipps on August 16, 2011. Mr. Lipps indicated that the Little Scioto River does not contain suitable habitat for the species within this reach, and that the construction of the proposed bridge at this site is expected to have no direct impact on the species (see enclosed report).

**ODNR Comment:** The ODOT indicates that several other federal and state listed species have the potential to be within the project area. These species include the rayed bean mussel, clubshell mussel, Eastern hellbender, and Indiana bat. ODOT indicates that specific surveys for these species have been conducted or are in the process of being conducted for the entire Portsmouth Bypass project area, and any reports detailing the survey results and any potential impact to these species will be coordinated in a future submission. The DOW requests the opportunity to review the survey reports.

**ODOT Response:** The reports have been enclosed for ODNR's review and comment.

**ODNR Comment:** The Ohio Biodiversity Database shows the SCI-823-0.00 (PID 19415) Portsmouth Bypass Phase I project area passes through populations of two state endangered plants: Southern Monkshood (*Aconitum uncinatum*) and Primrose-leaved Violet (*Viola primulifolia*). The Southern Monkshood is known from four sites in Ohio with few plants at each site. Three of the sites are within the Scioto Brush Creek watershed. The fourth and most recent record was found in 2011 during a survey for this project and is directly within the project path. It is the only population known within the Little Scioto River watershed. The DOW recommends a survey be performed in the project vicinity for additional populations of and suitable habitat for this species. If additional plants are found, we recommend the new population be protected with a conservation easement. We also request the plants within the project path be transplanted to the easement site. Because the survival potential of transplanted Southern Monkshood is not well understood, we recommend the transplanted plants be monitored for a period of three years to determine transplant success rate. It is important that the conservation easement site be in the same watershed as the affected population.

**ODOT Response:** On October 24, 2011, the project consultant (ASC) revisited the population of southern monkshood located within the project area to look for additional individuals in the project vicinity. The team botanist (Len Mikles) searched approximately 450 ft. upstream and 300 ft. downstream of the project area along Long Run. Since the ecological survey, there has been significant disturbance in the project area where ASC had previously identified many southern monkshood plants. The area where the plants were located has been cleared, and a logging road has been constructed (by the current property owner). Pictures of the disturbance are provided in the attached photo log. During ASC's search, they did identify a small patch of monkshood in an area, approximately 5 ft. by 12 ft., that had not been graded. ASC estimated that there are approximately 20 to 30 stems that are still located in the project area. The population is centered at Latitude 38.8536 and Longitude 82.8818 (NAD 1927). The population is indicated with a red star on the attached photo log. ASC's search efforts up and downstream did not reveal any new individuals. The area downstream of the project area does not provide suitable habitat for the monkshood. The area downstream consists of a heavily grazed pasture. Upstream of the project area, along the southern stream bank, steep, vertical embankments with

sandstone rock outcropping are present. The upper slope areas have been logged. The northern bank of Long Run is covered with a shrubby thicket of vegetation. No new individuals were identified in these habitats during the upstream investigation. ODOT is willing to work with ODNR to relocate the remaining southern monkshood plants from the project area prior to construction, and will attempt to find a suitable location to move the plants to. However, we are currently unaware of any suitable sites for the transplant. There will not likely be any suitable locations within the proposed construction limits of the project, and ODOT does not have the authority to relocate the plants to suitable habitat that is not owned by ODOT without property owner permissions. It is possible that the plants will need to be relocated outside of the watershed on other State owned property. ODOT is requesting that ODNR assist in finding a suitable location for the plants.

**ODNR Comment:** The Primrose-leaved Violet is known from eight sites in Ohio. However, one site was likely lost to habitat destruction, another site could not be relocated in 2003 due to natural succession, and two other sites have not been relocated since 1980 and 1988. This leaves four recent records, all located in 2011 during a survey for this project and within the project boundaries. The DOW recommends a survey be performed to determine the full extent of the populations of this plant both within the project area and outside the project impact zone. If the number of plants to be impacted represents 50% or more of the total number of plants, we recommend the plants to be impacted be transplanted to adjacent suitable habitat and protected with a conservation easement. If there are plants on the edge of potential impact zones, we request they be clearly marked and avoided during construction. Please continue to coordinate this phase of the project with the Ohio Biodiversity Database. We are willing to assist with coordinating volunteers to transplant plants to suitable sites.

**ODOT Response:** Due to the timing of the receipt of ODNR's comments, it was too late in the 2011 growing season to conduct additional surveys for the primrose-leaved violet. As such, it is unknown whether the plants found within construction limits represent 50% or more of the total number of plants in the population. If necessary, ODOT is willing to work with ODNR to relocate the primrose-leaved violet plants from the project area prior to construction, and will attempt to find a suitable location to move the plants to. However, we are currently unaware of any suitable sites for the transplant. There will not likely be any suitable locations within the proposed construction limits of the project, and ODOT does not have the authority to relocate the plants to suitable habitat that is not owned by ODOT without property owner permissions. It is possible that the plants will need to be relocated outside of the watershed on other State owned property. ODOT is requesting that ODNR assist in finding a suitable location for the plants.

**ODNR Comment:** According to the HHEI Manual, Figure 15 Flowchart, Stream 22a/b should be considered a Class 3 perennial stream since it has >20% substrates from bedrock, boulders and cobbles, is a flowing stream with greater than 0.1 sq mile watershed and has been identified as recovered/recovering.

**ODOT Response:** Stream 22 a/b is a recovering channel. It is a captured stream that has not recovered any channel sinuosity or riparian vegetation characteristics typical of a natural channel (please refer to Table 3 of the PHWH Manual, v 2.3). As such, it was evaluated answering "NO" for the "Natural Channel" question on the HHEI classification flow chart (Figure 15). As the stream has an HHEI score > or = 30, but < or = 70, it was appropriately assigned a designation of Modified Class II PHWH within the project area. For assessing a modified channel, "Substrate Types" (>= 10% bedrock, boulder, bolder/slab, and coble) does not apply.



**ODNR Comment:** Also, the location of the sampling site, does not appear representative of the stream's potential. We recommend sampling further upstream in the forested portion of Shumway Hollow. This stream is proposed for the greatest amount of impacts (1,764 ft) and since it is proposed to be relocated and culverted,

**ODOT Response:** ODOT does not determine the impacts to a stream based on its "potential" outside of a proposed project area. Impacts are assessed based on a stream's actual functions and values within the proposed construction limits for a project. When applicable, compensatory mitigation for stream impacts will be based on the actual aquatic life use designation for a stream within the impacted reach. Compensatory mitigation for stream impacts will be done in accordance with existing 404/401 guidelines.

**ODNR Comment:** we recommend mitigation in the amount of 1.68 acres of low wet width be provided to make up for the loss of ecological services provided from Stream 22a/b, and its drainages (Ditch 7 and 8).

**ODOT Response:** Mitigation will be done in accordance with existing Clean Water Act 404/401 guidelines and will be subject to approval by the Ohio EPA and the USACE (the agencies in Ohio with regulatory authority over such matters). This will not likely include acreage of low wet width. No mitigation will be provided for non-jurisdictional drainages (Ditches 7 and 8).

**ODNR Comment:** Stream 20.1 was assessed upstream of Swauger Rd in what appears to be a human disturbed environment. The pictures of this reach (photos 151 and 152) indicate that this stream may be a class 3 headwater. Was the HHEI done close to a road culvert? The HHEI manual recommends "a multiple number (3-5) of discrete 200 ft stream reach assessments should be conducted along the length of the mainstem PHWH channel. Areas of recent habitat modification should be avoided in these types of PHWH assessments." Since this is a flowing stream with less than a 0.1 square mile drainage it should be evaluated as a rheocrene.

**ODOT Response:** Stream 20-1 is an ephemeral stream channel. This flow regime was confirmed by the USACE during a jurisdictional determination field review. Additionally, both Photos 151 and 152 show stream 20-1 without water, and in an area that appears to have minimal human disturbance. As noted in the PHWH Manual v 2.3 (October 2009), a stream channel must be a perennial water to be Class III PHWH. The HHEI score calculated during the ecological survey characterized the stream as a Class II PHWH. This designation is likely overestimating the stream's actual aquatic life use designation. Due to the lack of hydrology, Stream 20-1 would have been more appropriately classified as a Class I PHWH stream (a stream must be perennial or intermittent to be Class II).

**ODNR Comment:** Impacts to Vegetative Communities- 329.10 acres of land are proposed from conversion from crops, open space, pasture/hay, scrub/shrub and forest to Developed Open Space. What mitigation will be provided to ensure that the water quality is not impacted by this development?

**ODOT Response:** No mitigation will be provided for impacts to upland vegetative communities. The project will incorporate both construction and post-construction storm water BMPs to reduce the impacts of storm water runoff to adjacent waterways.

**ODNR Comment:** The 22.93 acres of Barren Land identified (east of Swauger Rd) on Figure 10 appears to be forested land. Why was this classification given? Was it clear cut recently?

**ODOT Response:** ODNR's assumption is correct. Since the first ecological survey work had been completed in 2004 several areas have been clear cut by private property owners. Since much of the

timber harvest has been recent, many of these areas appear to be forested on the available aerial photography. The vegetative communities indicated on Figure 10 of the ESR depict the vegetative communities that were present within the construction limits at the time of the survey (June/July 2011).

Thank you for ODNR's comments and interest on this project. Should the project change in such a way that anticipated impacts to State listed species differs substantially from what was presented in the August 16, 2011 Ecological Survey Report (for Phase 1) or this letter, ODOT will submit additional information regarding the changes in impacts. Furthermore, ODOT will continue to coordinate future phases of the Portsmouth Bypass project as additional plans and surveys are completed.

If you have any questions or concerns contact Matt Raymond, Environmental Specialist, at (614) 466-5129.

TMH:MAP:mwr

Enclosure

c: Greg Manson, District 9 – Tom Barnitz, District 9 – Carmen Stemen, OES – Ron Garczewski, FHWA  
- File





## OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

### INTER-OFFICE COMMUNICATION OFFICE OF ENVIRONMENTAL SERVICES

**TO:** Vaughn Wilson, District 9 Deputy Director  
Attn: Greg Manson, District Environmental Coordinator

**DATE:** February 13, 2012

**FROM:** Timothy M. Hill, Administrator, Office of Environmental Services  
*Susan Gasbarro, OES*

**SUBJECT:** Section 106 Consultation-36 CFR Section 800.4(d)(1) No Historic Properties Affected

**PROJECT:** SCI-SR335 (Phase I Portsmouth Bypass), PID: 19415

The ODOT Office of Environmental Services (OES) cultural resource staff received a report titled "Phase I History/Architecture Survey for Phase I of the SCI-823 Portsmouth Bypass Project (SCI-823-0.00; PID:19415) in Harrison, Jefferson, and Madison Townships, Scioto County, Ohio" for proposed undertaking. This report addresses a portion of the Area of Potential Effects (APE) that was coordinated previously. This portion of the APE is shown in Figure 2 of the attached report. The re-evaluation was completed in order to provide updated information due to the lapse in time since the December 3, 2004 Section 106 finding of "No Historic Properties Affected".

Phase I of the Portsmouth Bypass includes the segment of the original road project on a new alignment from the Shumway Hollow Road (TR 234) interchange north to the Lucasville-Minville Road (CR 28) interchange. The project area includes the properties evaluated in the Inter Office Communication dated November 29, 2011, as well as those included in the attached report. A road detour is proposed during construction that will be near the property at 7748 SR 139.

#### Attached are the following:

Attachment 1: The above referenced report  
Attachment 2: The Section 106 Records check from the Ohio Historic Preservation Office web site  
Attachment 3: An Inter-Office Communication (IOC) dated November 29, 2011, which addressed the portions of the APE not included in the report in Attachment 1.

#### Area of Potential Effects (APE)

The Area of Potential Effects (APE) is shown in Figure 2 of the attached report. An additional area outside the project corridor has been identified for History/Architecture investigation due to a proposed detour route that has the potential to temporarily affect historic properties, if they were present. The building at 7748 SR 139 was included in the report due to the proposed detour route. The APE for this phase of the project also includes the properties that were discussed in our Interoffice Communication dated November 29, 2011.

#### Section 106 Records Check

The electronic literature review conducted by ODOT-OES staff on February 9, 2012 did not identify any previously recorded resources within or adjacent to the APE that were determined eligible for the National Register of Historic Places (NRHP), as shown in Attachment 2. This area was surveyed as part of the previous History/Architecture report-Phase I History/Architecture Survey for the Proposed Portsmouth Bypass (SCI-823-

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0.00, PID: 19415) in Porter, Harrison, Madison, Jefferson, and Valley Townships, Scioto County, Ohio, dated June 27, 2002, and subsequent Section 106 consultation.

**Archaeology**

This area was included in earlier coordination for this undertaking, and no further archaeological investigations are recommended unless the project scope changes.

**History/Architecture**

Five properties were identified and evaluated in the attached report:

- 7748 SR 139 is a service station built in 1958.
- 371 Oliver Road is a single story frame house that was built in 1952.
- 115 Oliver Road is a frame single family house that was built in 1947.
- 97 Oliver Road is a modern house with an outbuilding that was built in 1940.
- 6000 Swauger Valley Road is a frame single family house built in 1945.

No properties in the APE have been listed in or determined eligible for listing in the NRHP since the 2003 effect finding for this undertaking. Several buildings in the APE have turned 50 years old since 2004 or otherwise were not identified in the original surveys. None of these buildings is significant under the NRHP Criteria for Evaluation and all are recommended as not eligible for the NRHP.

**Cultural Resource Recommendation**

Based on the scope of the undertaking, the results of the literature review, and field photos, no cultural resources eligible for or listed in the NRHP will be adversely affected by the undertaking. Therefore, in accordance with Stipulation 4B of the *Section 106 Programmatic Agreement, (Number 16734)*, Executed 11/30/11, and in compliance with 36 CFR Section 800.4(c), ODOT-OES has determined that a finding of "No Historic Properties Affected" is applicable to the proposed undertaking.

This completes the Section 106 review and no further cultural resource investigations are required pending completion of the 15 day review and comment period at the State Historic Preservation Office (SHPO) with no comments or objections received from the SHPO during that period, pursuant with the Programmatic Agreement. You may then process the environmental document with no further comment or involvement from ODOT-OES unless the scope of the proposed undertaking changes. If the SHPO has comments on or objects to the undertaking, ODOT-OES will work with your office to respond to the SHPO prior to finalization of the environmental document. In some instances it may be necessary to handle such responses as environmental commitments in the environmental document.

The environmental document should note the date of this IOC for project Section 106 clearance. The environmental document should also note the date of the *Section 106 Programmatic Agreement, (Number 16734)*, Executed 11/30/11, as the basis for the Section 106 approval. A copy of this IOC, and any subsequent consultation as a result of SHPO comments, should be attached to the appropriate environmental document.

Forward questions or concerns to Monica Bruns, Staff Historian, at 614-466-6981.

TMH:mb  
Enclosure

C: Project File, w/attachments, Mark Epstein, SHPO, w/attachments, Carmen Stemen, ODOT-OES



**Appendix B**  
**SR 335 Documentation**



## OHIO DEPARTMENT OF TRANSPORTATION

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JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

### INTER-OFFICE COMMUNICATION OFFICE OF ENVIRONMENTAL SERVICES

**TO:** Vaughn Wilson, District 9 Deputy Director  
Attn: Greg Manson, District Environmental Coordinator

**DATE:** November 29, 2011

**FROM:** *Susan Carlson, for*  
Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Section 106 Consultation-36 CFR Section 800.4(d)(1) No Historic Properties Affected

**PROJECT:** SCI-SR335 (Phase I Portsmouth Bypass), PID: 19415

The ODOT Office of Environmental Services (OES) cultural resource staff received a "Cultural Resources Coordination Submission" for proposed undertaking. This area on State Route (SR) 335 around the 8.5 mile mark is outside the original environmental study area for the EIS that was prepared for the Portsmouth Bypass Project (PID: 19415). The centerline of the existing SR 335 will be shifted to the east approximately ten feet to provide a better alignment with the new intersection with Shumway Hollow Road. This shift in the roadway will require the acquisition of approximately 0.9 acres of new right of way. The length of the project on SR 335 is approximately 1,950 feet.

There will also be a new 8" sanitary sewer line installed along the south side of the existing roadway (Barklow Road) leading back to Portsmouth Regional Airport. The new sewer line will be installed on the southern side of the trees lining the roadway and will connect with an existing pump station located to the east of the Sunshine Church of Christ (7330 SR 335)(the Church) and to the south of the airport terminal. The new sewer line will provide service to the Church. The existing septic tank, which is located between the Church and SR 335 will be decommissioned and removed. The work on the new sewer line and septic tank will require approximately 0.62 acres of temporary right of way at the southeast corner of SR 335 and Barklow Road. See the attached plan and profile sheets (Attachment 3).

The project is located in a rural area with most of the surrounding area consisting of agricultural fields and residential lawns. The area immediately west of the project area along SR 335 is CSX railroad land, which is wooded and sloping between the road and the railroad tracks.

Attached are the following:

Attachment 1- A project description and project mapping.

Attachment 2- The results of an electronic literature review based on the Ohio Historic Preservation Office's web site, and a map from a History/Architecture report referenced below showing the current APE for this project overlaid on the limits of the previous project.

Attachment 3-A Supplemental Photo log for History/Architecture resources keyed to plan sheets of the project area

Attachment 4- An Archaeology Field Review Inter-Office Communication (IOC) dated November 29, 2011

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**Area of Potential Effects (APE)**

The Area of Potential Effects for this project is shown on a map in Attachment 1. It includes the existing roadway and all of the adjacent parcels to the east of the roadway, because the road is being shifted 10 feet to the east.

**Section 106 Records Check**

The electronic literature review conducted by ODOT-OES staff on November 8, 2011 did not identify any previously recorded cultural resources within or adjacent to the APE, as shown in Attachment 2. This area was not surveyed as part of the previous History/Architecture report-Phase I History/Architecture Survey for the Proposed Portsmouth Bypass (SCI-823-0.00, PID: 19415) in Porter, Harrison, Madison, Jefferson, and Valley Townships, Scioto County, Ohio, dated June 27, 2002. A map from that report is in Attachment 2.

**Archaeology**

The Office of Environmental Services completed an archaeological field review for the SCI-335-Phase I Portsmouth Bypass project on November 23, 2011. Visual inspection and soil coring determined that the vast majority of the project area had been previously disturbed by modern development, parking lot construction, railroad development, grading, and ditch, septic system and underground utility installation. Three agricultural fields were subject to further investigation: a total of ten shovel test units were excavated across two fallow fields and one cultivated soy bean field was subject to surface survey. The test units identified levels of disturbance across the two fallow fields and no archaeological remains were identified during the pedestrian survey across the cultivated field. The negative results of the archaeological testing and the presence of disturbance throughout the project area indicates that no intact and significant archaeological resources will be affected by the proposed project. No further archaeological investigations are recommended unless the project scope changes.

**History/Architecture**

There are five parcels that are within the APE that contain buildings that are over fifty years old. The rest of the buildings shown in the Supplemental photograph log (found in Attachment 3) are under fifty years in age, but were included to show the context of the properties that are being evaluated. The photo log in Attachment 1 contains photos showing the setting of these buildings as well. Additional photographs of the project area are also attached to the Archaeology Field Review IOC (Attachment 4).

1. The farm at 7570 SR 335 contains several outbuildings that date from the 19<sup>th</sup> and possibly the early 20<sup>th</sup> centuries. The house that was associated with this farm has been replaced with a late 20<sup>th</sup> century brick ranch (see photographs 1-4 in Attachment 3).
2. Just south of the above farm is a one story white frame house with an unknown address on SR 335. According to the Auditor's web site, it was built in 1950. It has a few related outbuildings (on parcel ID 07-0800.000) (see photographs 5-7 in Attachment 3)
3. There is a masonry outbuilding behind a modern house just south of the Church of Christ building (photograph 10 in Attachment 3). The outbuilding is shown in photograph 11 in Attachment 3.
4. The house at 7322 SR 335 (the Shumway residence) was built in 1950, according to the County Auditor's web site. See photograph 14 in attachment 3.
5. At least one building on a parcel owned by the Portsmouth Regional Airport is over fifty years old. One of them dates from 1958, based on County Auditor's web site. The parcel containing the airport extends west to SR 335 just north of Barklow Road. (see photographs 15-16 in Attachment 3).

None of the parcels contains buildings that are significant for their architectural design. The outbuildings on the farm at 7570 SR 335, and the one behind the house in photo 11 have lost their integrity of association, since their associated farm house has been demolished. The two mid-twentieth century houses are not distinctive examples of any type or style of architecture, and are not part of a larger subdivision. The buildings observed at the Portsmouth Regional Airport are well removed from the new right of way take on SR 335, and are not

November 29, 2011

distinctive types or styles of architecture. They are utilitarian buildings that are part of a complex of buildings that have been expanded over time to meet the needs of the airport.

None of the buildings appears to be significant under any Criteria under the National Register of Historic Places. No further History/Architecture investigations are recommended.

**Cultural Resource Recommendation**

Therefore, in accordance with Stipulation 4B of the *Programmatic Agreement Among The Federal Highway Administration, The Advisory Council On Historic Preservation, The Ohio Historical Society, State Historic Preservation Office, And The State Of Ohio, Department Of Transportation Regarding The Implementation Of The Federal-Aid Highway Program In Ohio (Agreement No. 12642)* executed July 17, 2006; the First Amendment to the Programmatic Agreement...No.12642 recently executed July 12, 2011 extending the duration of the original agreement, and in compliance with 36 CFR Section 800.4(d)(1), ODOT-OES has determined that a finding of "no historic properties affected" is applicable to the proposed highway project.

This completes the Section 106 review and no further cultural resource investigations are required pending completion of a 15 day review and comment period at the State Historic Preservation Office (SHPO). If no comments or objections are received from the SHPO during that period, pursuant with the Programmatic Agreement, you may then process the environmental document with no further comment or involvement from ODOT-OES unless the scope of the proposed undertaking was to change.

If the SHPO has comments on, or objects to, the finding, ODOT-OES will work with your office to respond to the SHPO prior to finalization of the environmental document. In some instances it may be necessary to handle such responses as environmental commitments in the environmental document. The environmental document should note the date of this IOC for project Section 106 clearance. The environmental document should also note the date of the July 12, 2011 *Programmatic Agreement Amendment* as the basis for the Section 106 approval. A copy of this IOC, and any subsequent consultation as a result of SHPO comments, should be attached to the appropriate environmental document.

Forward questions or concerns to Monica Bruns, Staff Historian, at 614-466-6981, or Jason Watkins, Staff Archaeologist, at 614-466-5105.

TMH:mb/jw  
Enclosure

C: Project File, w/attachments, Mark Epstein, SHPO, w/attachments, Carmen Stemen, ODOT-OES



**Environmental Site Assessment Screening Sheet**

Name/Title:  Date:

County/Route/Section:  District:

**Project Description:**

This area was outside the original environmental study area for the EIS prepared for the Portsmouth Bypass project.

**Parcel No./Owner/Address:**

**Project Right-of-Way (Row) Requirements From Parcel:**

No New ROW  Strip ROW  Minor Take  Whole Parcel Take  Not Available

**Land Use**

Current Land Use (For commercial/industrial, provide current tenant's name and type of business)

Past Land Use (For commercial/industrial, provide current tenant's name and type of business)

Environmental Records	Date Queried	Result
National Priority List (NPL)	12/13/11	No results
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	12/13/11	No results
OEPA Master Site List (MSL)	12/13/11	No results
Resource Conservation and Recovery Act (RCRA)	12/13/11	No results
Bureau of Underground Storage Tank Regulation (BUSTR)	12/13/11	No results
Other State/Local Lists		

NPL/CERCLIS/OEPA MSL in vicinity (type of facility and location in relation to project)

**Visual Inspection**

UST's	<input type="text" value="No"/>	Surface Staining	<input type="text" value="No"/>
AST's	<input type="text" value="No"/>	Sheens	<input type="text" value="No"/>
Drums	<input type="text" value="No"/>	Damaged Vegetation	<input type="text" value="No"/>
Landfills	<input type="text" value="No"/>	Odors	<input type="text" value="No"/>
Pond/Lagoon	<input type="text" value="No"/>	Other(specify)	<input type="text" value="No"/>

Phase I ESA required Yes  No



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Ohio Division**

April 16, 2014

200 North High Street, Rm 328  
Columbus, Ohio 43215  
614-280-6896  
614-280-6876

In Reply Refer To:  
HDA-OH

Jerry Wray  
Director  
Ohio Department of Transportation  
1980 West Broad Street  
Columbus, OH 43223

Dear Director Wray:

This letter is in response to your March 26, 2014 request for the Federal Highway Administration (FHWA) Ohio Division review and approval of the *SCI-823-0.00 Portsmouth Bypass Phases 2 & 3 (PID 19415) Environmental Reevaluation* document dated March 2014. The proposed undertaking involves the construction of a four-lane, divided, limited access highway on new alignment in Scioto County, Ohio.

The Record of Decision (ROD) for the SCI-823 Portsmouth Bypass project was issued on June 9, 2006. Phase 1 Reevaluation was approved on April 5, 2012. The project is now being delivered as one single phase, using a public/private partnership approach, and Phases 2 and 3 need to be reevaluated. The ROD for the proposed undertaking has been reevaluated for Phases 2 and 3 to reflect changes since its original issuance.

Based on the documentation presented and our involvement in the project's development, FHWA approves the *Environmental Reevaluation* document and concurs with ODOT that the June 9, 2006 Record of Decision remains valid for the Portsmouth Bypass Phases 2 and 3.

If you have any questions, please contact Daniel A. Brodhag, Transportation Engineer, at (614) 280-6849 or [daniel.brodhag@dot.gov](mailto:daniel.brodhag@dot.gov).

Sincerely,

Laura S. Leffler  
Division Administrator



ecc: Tim Hill, ODOT OES  
Heather McColeman, ODOT OES  
Mike Wawzkiewicz, ODOT DID  
Tom Barnitz, ODOT District 9  
Dave Snyder, FHWA  
Andy Blalock, FHWA  
Daniel Brodhag, FHWA

File: SCI-19415/NEPA/Reevaluation



U.S. Department of Transportation  
**Federal Highway  
Administration**

# **Environmental Impact Statement Reevaluation**

## **Portsmouth Bypass – Phases 2 and 3**

SCI-SR 823-0.00  
PID 19415

April 2014

**Prepared By:**





**Portsmouth Bypass – Phases 2 and 3  
Environmental Impact Statement Reevaluation**

**SCI-SR 823-0.00  
PID 19415**

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## **1.0 – INTRODUCTION**

On June 9, 2006, the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA) issued a Record of Decision (ROD) for the SR-823 Portsmouth Bypass Project, Ohio Department of Transportation (ODOT) PID 19415. The ROD was based upon the Draft Environmental Impact Statement (DEIS) dated January 2005 and Final Environmental Impact Statement (FEIS) dated August 2005.

During the early phases of the project, the Portsmouth Bypass was not divided into phases. Therefore, the FEIS encompassed the entire length of the project. However, in 2005, the project was divided into three phases for design and construction. The phases are identified below (see Figure 1):

- Phase 1, SCI-823-6.81 (PID 19415) – Shumway Hollow Road (TR-234) Interchange near the Scioto County Airport to Lucasville-Minford Road (CR-28) Interchange. Phase 1 is 3 miles in length and contains three bridges and two interchanges.
- Phase 2, SCI-823-10.13 (PID 79977) – Lucasville-Minford Road (CR-28) Interchange to US-23 Interchange. Phase 2 is 7.4 miles in length and contains ten bridges and one interchange.
- Phase 3 SCI-823-0.00 (PID 77366) – Sciotoville Interchange (US-52) to Shumway Hollow Road (TR-234) Interchange near the Scioto County Airport. Phase 3 is 5.6 miles in length and contains six bridges and two partial interchanges.

To facilitate the project schedule and phasing, Phase 1 was revisited and an environmental reevaluation was completed in March of 2012. The Environmental Reevaluation was approved by the FHWA on April 5, 2012.

Currently, all phases of the Portsmouth Bypass project are to be completed using a public/private partnership approach. Using this approach, the project will be delivered as one complete project. The project will not be opened to traffic until it is constructed in its entirety. However, reevaluation of the remaining phases is necessary to update the remaining project area not included in the 2010 reevaluation. For the purposes of clarity, this reevaluation will refer to Phases 2 and 3 only to identify the portions of the project being discussed. This reevaluation identifies and documents any changes to the Preferred Alternative and/or Social, Economical, or Environmental (SEE) resources since the approval of the ROD in June 2006 and has been performed to confirm the ROD is applicable with respect to the former Phases 2 and 3 and to reflect changes due to modification of the vertical profile for the proposed SR 823 alignment.

This project is consistent with Ohio's Long Range Transportation Plan and the project is included in the fiscally constrained FY 2014-2017 State Transportation Improvement Program (STIP) for Scioto County. The project is identified as SCI-SR 823-0.00, PID 19415 in the STIP.

### **Project Description**

The SR-823 Portsmouth Bypass will be a four-lane, divided, limited access facility connecting US-52 near Wheelersburg to US-23 just north of Lucasville, Ohio. It will be approximately 16 miles in length, bypassing approximately 26 miles of US-52 and US-23 through Portsmouth, Ohio. The design year traffic is projected to be 26,000 vehicles per day (vpd) with 14 percent trucks when all three phases are completed.





The proposed project is approximately 90 miles south of Columbus, Ohio and 45 miles northwest of Huntington, West Virginia. Other nearby towns include Wheelersburg and Ironton, Ohio, and Ashland and Greenup, Kentucky. Existing transportation facilities in the region include US-23, US-52, SR-32, Kentucky's A-A Highway, Norfolk Southern Railway, CSX Railroad, Amtrak service, Scioto County Airport, and Ohio River barge shipping.

The northern terminus of Phase 2 is a new Interchange at US-23 northwest of Lucasville. From the interchange, the four-lane divided highway travels east/southeast approximately seven miles to a proposed interchange with Lucasville-Minford Road (CR-28), connecting to the northern terminus of Phase 1. The Phase 3 southern terminus is located at a new interchange with US-52 north of Wheelersburg. From the interchange, the highway travels north approximately six miles to a new interchange at Shumway Hollow Road (TR-234) near the Scioto County Airport, connecting to the southern terminus of Phase 1.

The project will improve travel and regional mobility, avoiding a significant number of traffic signals, intersections, and driveways over the current 26 mile route using US-52 and US-23. The proposed 16-mile new route is estimated to provide travel time savings of up to 16 minutes per trip over the current route using US-23 and US-52. The large number of access points and traffic signals currently compromise the ability of US-23 and US-52 to safely and efficiently serve their intended function of a primary arterial.

Since the issuance of the ROD, ODOT has determined that the most efficient method to construct the project is to use a Design-Build-Finance-Operate-Maintain (DBFOM) approach. Under the DBFOM approach, the responsibilities for design, construction, financing, and operation of the facility are bundled together and transferred to private sector partners. Typically, the DBFOM approach is more efficient than the traditional Design-Bid-Build process, because in the DBFOM process the final design and construction for the project is combined into a single contract. The contract is awarded to a team consisting of a design firm and construction contractor with financial backing to expedite the completion of the project. This method results in significant time savings by eliminating the lead time necessary to contract a design engineer, and then accept bids from contractors to build the design. Under this scenario projects move from design seamlessly into construction in the DBFOM contract. In addition, because the design engineer and the contractor work as a single entity, any design changes can be incorporated into the final design phase, which eliminates the need for costly and time consuming changes once construction has commenced. This also allows ODOT to estimate the project cost earlier in the project development process, which results in a more efficient budgeting process.

ODOT evaluated the use of a Public-Private Partnership (P3) procurement approach and compared this to a Public Sector Comparator (PSC) using a traditional Design-Bid-Build approach (SCI-823 Portsmouth Bypass - Project Delivery Alternatives Analysis). The evaluation indicated that there is value in using P3 procurement. Efficiency in costs, time (no lead time for contract and bidding), and budgeting (costs are identified early in the project development process) are achieved.

ODOT has identified a set of advantages that would result from using the DBFOM structure with this project including:

- Complete construction of a high-quality highway maximizing value for the money and taking advantage of innovative approaches and a favorable bidding environment;
- Achieve economies of scale from the project work;
- Minimize the cost of the project and the amount of state funds used on the project to allow a greater proportion of ODOT's work program to be delivered;



- Maximize quality in construction and maintenance approach;
- Project construction within a five year time frame;
- Provide schedule and cost certainty;
- Maximize market interest and competition in the project; and
- Complete a major section of the Appalachian Development Highway System (ADHS) for which ODOT was previously allocated funds by the Appalachian Regional Commission (ARC).

### **Preferred Alternative**

The Preferred Alternative, known as the “Hill Alternative”, consists of the Hill 1, Hill/Valley2, Hill 3, and Hill 4 segments. The Hill Alternative generally runs through the Study Area’s more rugged, undeveloped, and hilly terrain. The Hill 4 segment starts at the northern terminus of the Preferred Alternative at a new interchange on US 23 south of the Scioto County Fairgrounds. From the interchange the alignment proceeds in an easterly direction between SR-728 and the Scioto County Fairgrounds toward Lucasville-Minford Road (CR-28) and ends near CR-455. The Hill 3 segment continues from CR-455 southeast to SR-139. This segment includes an interchange at Lucasville-Minford Road, which is located just west of the intersection of Lucasville-Minford Road with Rases Mountain Drive (TR-1570). The Hill/Valley2 alignment continues in an easterly direction toward the county airport. The alignment then curves to the south adjacent to SR-335 to an interchange with Shumway Hollow Road (TR-234). The alignment then continues south generally parallel to SR-335 on the west side of SR-335 and terminates near the intersection of CR-489 and SR-335. The Hill 1 segment continues south towards Highland Bend. On the west side of Highland Bend the alignment crosses over SR-335 and continues in a southerly direction toward Scioto Dale. At the southern terminus of the Preferred Alternative, the alignment ties back into US-52 on the west side of Scioto Dale. The new roadway will include interchanges at four locations, including US-52 near Wheelersburg, SR-140, relocated Shumway Hollow Road (TR-234), and US-23 northwest of Lucasville. See Figure 1 for the Preferred Alternative alignment.

Since the initial evaluation of the Preferred Alternative, the vertical profile was modified to reduce excavation waste and cost. This is a relatively minor modification to the Preferred Alternative alignment from the 2006 ROD and the majority of the environmental footprint for Phases 2 and 3 is the same as the Preferred Alternative cleared in the 2006 ROD.

### **Purpose and Need**

The Purpose and Need for this project was prepared as part of the *Feasibility Study Report for US Route 23 Portsmouth Transportation Study*, dated April 2001. The key evaluation factors of the Purpose and Need are listed below: The Purpose and Need for the project is consistent with the 2006 ROD and the Phase 1 Reevaluation.

**Deficiencies of the existing system.** Currently, the existing US-23/US-52 corridor contains several physical limitations. These include steep grades, excessive curves, and numerous intersections and driveways that access onto US-23/US-52. These limitations restrict US-23/US-52’s ability to function as a primary arterial, which is the movement of through traffic.

**Regional mobility.** The Appalachian Regional Commission funding of the Appalachian Highway System is intended to provide improved transportation infrastructure to impoverished areas. *Access Ohio*, ODOT’s long range transportation plan, contains similar goals to improve mobility and foster economic development. Within the Study Area, there exists a “missing link” in the Appalachian corridor from Asheville, North Carolina to Columbus, Ohio. The goal of the project is to close the gap in a multi-state corridor and provide a nearly complete controlled-access alternative to I-77 and I-75 between Orlando, Florida and Columbus, Ohio.





**Economic issues.** Scioto County is economically distressed, with above average unemployment rates and below average per capita income compared to Ohio overall. This condition results from a comparatively low share of manufacturing within the county. In order to enhance the region's competitive advantage for new and expanding business, the goals of the project is to provide improved highway access within the region and provide Scioto County with the necessary transportation infrastructure to help them compete in the marketplace.

**Traffic volumes and levels of service.** The proposed Portsmouth Bypass will reduce the travel time between Wheelersburg and Lucasville by approximately 16 minutes. A motorist making that trip twice each workday would save nearly 140 hours per year. With over 17,000 vehicles per day currently making this trip, that would add up to more than 1.5 million hours saved by motorists each year. The design year traffic is projected to be 26,000 VPD with 14 percent trucks when the project is completed.

The LOS for the Proposed Portsmouth Bypass is A for both current and design year, using the highest volume of traffic on existing routes. Therefore, the proposed project will provide an improved LOS above the use of existing roads for both current and design year. Therefore, the proposed Portsmouth Bypass will provide an improved LOS above the use of existing roads for both current and design year.

**Safety.** In the last three years of accident history on the pertinent segments of CR-28 and SR-335, safety records show a total of 65 crashes of various types ranging from angle, rear-end, overturning, and sideswipe to fixed object and animal. Based upon ODOT's relative crash severity index, this represents a cost to society of over \$2.25 million, which would likely be significantly reduced if not mostly eliminated by the use of the new highway in lieu of existing roads. This is due to the fact that the new highway will be designed per today's roadway design standards, eliminating the need for a user to negotiate the existing substandard roads that were not designed as highways, but simply historically traveled ways that were paved over time and evolved into roads.

The goal of the project is to decrease the accident rate of the overall system by diverting traffic from the local roads to the new bypass. The decrease in volume on the high accident routes will decrease the likelihood of collisions on the existing routes. Therefore, the accident rate of the system overall is likely to decrease. However, the accident rate on individual existing links will likely remain the same as no improvements are planned for the existing facilities.



## 2.0 – PUBLIC INVOLVEMENT

A series of public meetings were conducted throughout the development of the project. These meetings were held at critical steps during the process to present feasible alternatives, impacts, and the recommended Preferred Alternative. A Stakeholder group was also formed to provide input on the project. This group included representatives from local jurisdictions, public and private organizations, and community groups.

A number of public involvement meetings were held throughout the development of the project and are listed below in chronological order. For detailed information on the comments received at these meetings, refer to the DEIS and FEIS.

- June 22, 2000 – Public meeting held during the Feasibility Study phase to present the needs assessment and conceptual alternatives;
- November 13, 2002 – Public meeting to present the Preliminary Feasible Alternatives;
- November 19, 2003 – Public meeting to present the Refined Feasible Alternatives addressing comments received in November 2002. The project was divided into four sections with two alternatives/section for Sections 1, 3, and 4. The alternatives were identified as either the Hill or Valley Alternative. Section 2 had only one combined Hill/Valley Alternative. The individual alternatives in each section had the same termini and therefore, could be joined in any combination;
- August 19, 2004 – Public meeting to present the recommended Preferred Alternative known as the “Hill” Alternative and associated impacts;
- February 10, 2005 – Public Hearing for the DEIS;
- December 6, 2005 – Public meeting for noise wall; and
- March 9, 2006 – Public meeting to present modifications to CR-28.

The local newspaper, Portsmouth Daily Times, has published several articles providing an update on the project. On April 30, 2010 the newspaper covered a Legislative Day and Transportation Roundtable meeting. At this meeting, ODOT District 9 Deputy Director provided an update to the Portsmouth Bypass project and noted funding for Phase 1. On March 27, 2011, the Portsmouth Daily Times reported that Phase 1 was set to begin in construction in January 2012. On September 14, 2011, the Scioto County Commissioners passed a resolution adopting the ODOT route designation of SR-823 for the new roadway.

Since the 2006 ROD, several letters have been received from the public and have been included in Appendix A.

On August 14, 2013, the Portsmouth Daily Times reported that the Portsmouth City Council voted against a resolution in support of constructing the Portsmouth Bypass. The article indicated that the city was not satisfied with the public involvement process and the city’s lack of opportunity to comment on the project. A copy of the article has been included in Appendix A.

Since that time, representatives from ODOT District 9 gave a presentation to the City Council providing additional information and answered questions regarding the project. An article from the Portsmouth Daily Times summarizing the meeting can be found in Appendix A.

On October 28, 2013 the City Council approved an ordinance “Authorizing approval of the preliminary legislation submitted by the Ohio Department of Transportation (ODOT) proposing to construct a new





Bypass...” The Scioto County Board of Commissioners approved a resolution supporting the project on July 19, 2013. A copy of both documents has been included in Appendix A.

On June 7, 2013, ODOT issued a request for qualifications (RFQ) to potential contractors for several aspects of the Portsmouth Bypass. On July 22, 2013, Ohio’s Governor John Kasich announced The Ohio Jobs and Transportation Plan for improving Ohio’s transportation system by allowing the state to eliminate decades long delays on some 41 new construction projects. As part of the announcement, it was noted that the Portsmouth Bypass Project will remain on schedule and begin as early as 2014. The plan was subject to Transportation Review Advisory Council (TRAC) approval. On July 26, 2013, ODOT announced that TRAC gave preliminary approval to The Ohio Jobs and Transportation Plan thus allowing for construction of the Portsmouth Bypass.

Since completion of the 2006 ROD, a Public Information Meeting was held on December 10, 2013. The purpose of the meeting was to provide an update of the project and answer any questions the public had regarding the status of the project. Information from the meeting can be found in Appendix A. Six people attended the meeting and no written comments were provided during the meeting. After the Public Information Meeting, a 30-day comment period was held for the public to provide additional comments. No comments were received during this time period.

Formal meetings and negotiations have occurred with property owners regarding right-of-way acquisitions throughout the project. A summary table of right-of-way acquisitions is provided in Appendix A.



### 3.0 – REEVALUATION

This section presents the reevaluation for Phases 2 and 3 of the Portsmouth Bypass project, including impacts associated with the modification of the vertical profile. Phase 1 was reevaluated separately in March of 2012. The purpose of the reevaluation is to identify and document any changes to the impacts since the approval of the ROD in June 2006.

As part of this reevaluation, an Ecological Survey Report, dated June 20, 2013, was prepared by ASC Group, Inc. This report included a literature review of ecological features, terrestrial habitat, plant species, and impact summaries for each resource. The ecological resources, including wetlands, streams, ditches, and ponds, were evaluated for the Phase 2 and 3 project areas. Surveys for several state and federally listed threatened and endangered species were also conducted.

#### **3.1 – Natural Environment**

##### **3.1.1. Geology, Soils, and Erosion**

The project area is located within the Shawnee-Mississippian Plateau of the unglaciated portion of the Appalachian Plateau Physiographic region. Minford Complex soils, which have a high water content, are located within the project area. Anticipated impacts include landslides, settlement, and instability; however, through design these impacts can be mitigated by using appropriate slope designs, wick drains, staged construction, over-excavation, undercutting, and drainage blankets.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

##### **3.1.2. Floodplains**

As reported in the 2005 DEIS, the estimated floodplain impacts for the Preferred Alternative (Phases 1, 2, and 3) is 47.58 acres. Of this total, 10.63 acres are perpendicular encroachments and 36.95 acres are longitudinal encroachments.

As shown in Figure 3, Phases 2 and 3 of the project area are located within the 100-year floodplain of the Scioto River just west of Lucasville and the Little Scioto River north of Sciotoville. Based on the revised FEMA maps dated April 18, 2011, Phase 2 of the project is within a Special Flood Hazard Area of the Scioto River, Zone AE with base flood elevations. Phase 3 of the project is within a Special Flood Hazard Area of the Little Scioto River, Zone AE with base flood elevations. Phases 2 and 3 will result in a temporary construction impact and minor fill and excavation within the floodplain. Neither of these impacts results in a rise in water surface elevation. There will be no permanent impacts within the floodplain. The developer awarded the project will be responsible for floodplain coordination and obtaining the Flood Hazard Development Permit prior to beginning construction activities. The permit will be incorporated into the construction contract documents.

There are no other floodplain impacts; therefore, this reevaluation does not change the findings documented in the June 2006 ROD for this resource.

##### **3.1.3. Groundwater/Sole Source Aquifer**

As reported in the 2005 DEIS, there are no public water systems, private wells, or sole source aquifers within the project area. The Scioto County Drinking Water Source Protection Areas, and Public Water System Wells and Intakes map, prepared by the Ohio Environmental Protection Agency (OEPA) Division of Drinking and Ground Waters (dated July 13, 2010), was reviewed. A water source protection area for the Scioto County Regional Water Authority's well field is located just west of Lucasville and a Public Water System Well is located north of Lucasville, both of which are outside of the Phase 2 project area.





There are no changes to this resource since the preparation of the June 2006 ROD; therefore, no impacts to drinking water resources are expected by Phases 2 and 3 of the project.

Cumulative Impacts

Potential cumulative impacts include possible contamination to groundwater resources due to accidental spills of hazardous materials, such as fuel, or from erosion materials being exposed during earthwork activities. Groundwater resources may also be impacted when construction activities encounter small, private wells in unknown locations adjacent to designated wellhead isolation zones and local aquifers.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

**3.1.4. Wetlands**

The Ecological Survey Report, prepared in May 2004 for the 2005 DEIS, identified wetlands present within the project area. The 2006 ROD also identified 5.55 acres of jurisdictional wetlands present within the Preferred Alternative (Phases 1, 2, and 3).

As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an Ecological Survey Report, dated June 20, 2013, for the Phase 2 and 3 project areas. The previously identified wetlands were reevaluated and additional wetlands were identified. An Approved Jurisdictional Determination (AJD) on isolated waters and a Preliminary Jurisdictional Determination (PJD) on waters of the U.S. was received from the United States Army Corp of Engineers (USACE) on March 6, 2014. Appendix B includes email correspondence from the USACE regarding provisional jurisdiction for Phases 2 and 3 of the project, as well as the AJD-PJD letter for Phases 2 and 3.

As shown in Table 3-1 and Figure 3, Phases 2 and 3 would impact a total of 6.538 acres of jurisdictional wetlands. Of this total, 4.047 acres are classified as Palustrine System Emergent (PEM) wetlands, 1.458 acres are classified as PEM/ scrub-shrub (SS) wetlands, and 1.033 acres are classified PEM/SS/forested (FO) wetlands.

**Table 3-1 – Summary of Jurisdictional Wetland Impacts**

<b>Wetland Identifier</b>	<b>Hydrologic Connection</b>	<b>Dominant Wetland Type</b>	<b>Impacts</b>
Wetland 1	Abutting	PEM/SS	1.007
Wetland 2	Abutting	PEM	0.270
Wetland 3	Adjacent	PEM	0.610
Wetland 4	Adjacent	PEM	0.019
Wetland 5	Adjacent	PEM	0.038
Wetland 6	Abutting	PEM	0.003
Wetland 7	Abutting	PEM	0.195
Wetland 9	Abutting	PEM	0.237
Wetland 10	Abutting	PEM	0.028
Wetland 11	Adjacent	PEM/SS	0.018
Wetland 12	Abutting	PEM/SS	0.074
Wetland 13	Abutting	PEM	0.013
Wetland 14	Abutting	PEM	0.004
Wetland 15	Abutting	PEM	0.012
Wetland 16	Adjacent	PEM	0.051
Wetland 17	Abutting	PEM	0.041
Wetland 18	Abutting	PEM/SS/FO	0.827
Wetland 20	Abutting	PEM/RAB	0.064



<b>Wetland Identifier</b>	<b>Hydrologic Connection</b>	<b>Dominant Wetland Type</b>	<b>Impacts</b>
Wetland 22	Adjacent	L2EM	0.031
Wetland 23	Adjacent	PEM	0.010
Wetland 24	Adjacent	PEM	0.053
Wetland 24A	Adjacent	PEM	0.006
Wetland 24B	Adjacent	PEM	0.780
Wetland 25	Abutting	PEM/SS/FO	0.206
Wetland 25A	Abutting	PEM/SS	0.041
Wetland 27	Adjacent	PEM	0.063
Wetland 28A	Adjacent	PEM	0.009
Wetland 28B	Adjacent	PEM	0.027
Wetland 28C	Adjacent	PEM	0.031
Wetland 28D	Adjacent	PEM	0.037
Wetland 29	Abutting	PEM	0.297
Wetland 30	Abutting	PEM	0.294
Wetland 31	Adjacent	PEM	0.003
Wetland 33	Adjacent	PEM	0.009
Wetland 34	Abutting	PEM/SS	0.318
Wetland 35	Adjacent	PEM	0.801
Wetland 36	Adjacent	PEM	0.011
<b>TOTAL</b>			<b>6.538</b>

**Table 3-2 – Summary of Isolated Wetland Impacts**

<b>Wetland Identifier</b>	<b>Hydrologic Connection</b>	<b>ORAM Category</b>	<b>Impacts</b>
Wetland 19	Isolated	PEM	0.024
Wetland 21	Isolated	PEM	0.014
Wetland 32	Isolated	PEM	0.009
<b>TOTAL</b>			<b>0.047</b>

As shown in Table 3-2, three isolated PEM wetlands totaling 0.047 acres would be impacted.

Phases 2 and 3 of the project would impact a total of 6.585 acres of jurisdictional and isolated wetlands, an increase of 1.465 acres since the preparation of the 2006 ROD. This increase may be influenced by several contributing factors, including the changing landscape in the project area. These changes are a result of logging activities on private properties and increased use of properties as pastureland. As a result, the hydrology of these areas has been substantially altered. These open areas are conducive to the development of wetlands and as a result additional wetlands were identified during field studies for the updated Ecological Survey Report. The USACE has added supplements to the USACE Wetland Delineation Manual which has brought more wetland areas into jurisdiction. In addition, changes in Section 404 regulation, as a result of the Rapanos case, redefines how jurisdictional wetlands are identified.

The increase in wetland impacts is also directly related to an increase in the project footprint as a result of the design build process noted in Section 1.0 which has had the most significant influence on increasing the wetland impacts. Since Phases 2 and 3 of the project will be developed using the design build process no detailed designs have been completed, and precise construction limits are unknown. Therefore, it is assumed that everything within the Phase 2 and 3 ROW footprint will be impacted. In reality, the final footprint of Phases 2 and 3 will be smaller than the ROW footprints. Calculating impacts based on a





smaller footprint would likely require multiple permit modifications as the final designs are developed to account for the change in impacts. Any permit modifications would likely require the contractor to halt construction in these areas while waiting for the modification to be processed, which would cause project delays and cost overruns from idling equipment, construction delays, and construction staging issues. The inevitable delays that would result from a permit modification would prevent ODOT from achieving the goals for the project, which would defeat the purpose of using the design built process for the project.

Using the ROW limits results in a conservative estimate in the amount of resources to be impacted as a result of the proposed project and actual impacts that will result from the project will be less than what is reported in the reevaluation.

In addition to the increase in total wetland impacts, three wetlands (24, 24A, and 24B) were identified as high quality wetlands due to the presence of the state threatened plant species riverbank paspalum (*Paspalum repens*).

#### Wetland Mitigation

All wetlands with a hydrologic connection to a traditional navigable water (TNW) are regulated as “waters of the United States” pursuant to the Clean Water Act. Therefore, all impacts to jurisdictional wetlands require a USACE Section 404 permit and OEPA Section 401 permit. Isolated wetlands not connected to other surface waters are regulated by the OEPA, Division of Surface Water, Section 401 Wetlands and Streams Permitting Section. All impacts to isolated wetlands require an Isolated Wetland Permit from OEPA.

The impacts to streams and wetlands were documented as a new Individual Section 404/401 and OEPA Isolated Wetland permit for Phases 2 and 3, which was submitted on October 25, 2013.

To compensate for the discharge of fill material into 6.54 acres of wetlands, ODOT proposes to preserve 2.52 acres of high quality wetlands in Green Township, Ross County, Ohio. The preservation wetlands are located in the Lower Scioto River (05060002) watershed on a 51-acre tract identified as the Rupiper Property, which would be protected in perpetuity through an agreement with the Ross County Park District. In addition, the applicant proposes to purchase a minimum of 11.44 acres of wetland mitigation credits at the Red Stone Farm Wetland Mitigation Bank in the adjacent Ohio Brush-White Oak (05090201) watershed in Perry Township, Pike County, Ohio.

#### Secondary Impacts

As a result of this project, there is the potential for secondary development adjacent to the roadway which may impact additional wetlands beyond the Phase 2 and 3 project footprint. Currently, there are no known proposed developments or zoning changes in the area.

### **3.1.5. Streams, Rivers, and Water Bodies**

The Ecological Survey Report, prepared in May 2004 for the 2005 DEIS, identified streams, rivers, and other water bodies present within the project area. The 2005 DEIS identified 20,881 feet of impacts to 37 streams and 2.93 acres of pond impacts for the Preferred Alternative (Phases 1, 2, and 3).

As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an updated Ecological Survey Report, dated June 20, 2011, for the Phase 2 and 3 project areas. The previously identified streams, ponds, and ditches were reevaluated and additional resources were identified. The Section 404/401 permit application reported 67,535 feet of impacts to 126 streams and 1.041 acres of pond impacts for Phases 2 and 3 of the project.



An Approved Jurisdictional Determination (AJD) on isolated waters and a Preliminary Jurisdictional Determination (PJD) on waters of the U.S. was received from the United States Army Corp of Engineers (USACE) on March 6, 2014. Determinations were made as to quality, use, and jurisdiction for the streams, ponds, and ditches. Each of these resources is discussed in more detail as follows.

As shown in Table 3-3 and Figure 3, Phases 2 and 3 will impact 126 jurisdictional stream channels for 67,535 feet total. Of this total, there are permanent impacts to 2,355 feet of Warmwater Habitat (WWH) streams, 1,722 feet of Class III Primary Headwater Habitat (PHWH) streams, 34,758 feet of Class II PHWH streams, and 28,700 feet of Class I PHWH streams.

There are also temporary impacts to 170 feet of WWH streams, 30 feet of Class III PHWH streams, 400 feet of Class II PHWH streams, and 800 feet of Class I PHWH streams.

**Table 3-3 – Summary of Stream Impacts**

<b>Stream I.D.</b>	<b>Use Designation</b>	<b>USACE Flow Characteristics</b>	<b>Impacts (ft.)</b>
Stream 1	Modified Class II PHWH	Relatively Permanent Water- Seasonal	2,187
Stream 2	Modified Class I PHWH	Relatively Permanent Water- Seasonal	1,472
Stream 3	Modified Class II PHWH	Relatively Permanent Water- Seasonal	1,098
Stream 4	Modified Class II PHWH	Relatively Permanent Water- Seasonal	341
Stream 5	Modified Class IIIA PHWH	Relatively Permanent Water- Perennial	469
Stream 5A	Class I PHWH	Relatively Permanent Water- Seasonal	237
Stream 5B	Class I PHWH	Non-Relatively Permanent Water	249
Stream 5C	Modified Class I PHWH	Non-Relatively Permanent Water	153
Stream 6	Class II PHWH	Relatively Permanent Water- Perennial	731
Stream 6A	Class II PHWH	Relatively Permanent Water- Seasonal	620
Stream 6B	Class IIIA PHWH	Relatively Permanent Water- Seasonal	689
Stream 6B1	Class I PHWH	Non-Relatively Permanent Water	198
Stream 6B2	Class I PHWH	Non-Relatively Permanent Water	294
Stream 7	Modified Class I PHWH	Relatively Permanent Water- Seasonal	441
Stream 8	Modified Class I PHWH	Relatively Permanent Water- Seasonal	1,170
Stream 9	Class II PHWH	Relatively Permanent Water- Seasonal	789
Stream 10	Modified Class II PHWH	Relatively Permanent Water- Seasonal	1,020
Stream 10A	Modified Class I PHWH	Non-Relatively Permanent Water	229
Stream 10B	Modified Class I PHWH	Non-Relatively Permanent Water	708
Stream 10C	Modified Class I PHWH	Non-Relatively Permanent Water	112
Stream 10D	Modified Class I PHWH	Non-Relatively Permanent Water	128
Stream 11	Class II PHWH	Relatively Permanent Water- Seasonal	1,050





**Table 3-3 – Summary of Stream Impacts**

<b>Stream I.D.</b>	<b>Use Designation</b>	<b>USACE Flow Characteristics</b>	<b>Impacts (ft.)</b>
Stream 11A	Class I PHWH	Non-Relatively Permanent Water	606
Stream 11B	Class I PHWH	Non-Relatively Permanent Water	379
Stream 11C	Class I PHWH	Non-Relatively Permanent Water	431
Stream 11D	Class I PHWH	Non-Relatively Permanent Water	570
Stream 11E	Class II PHWH	Non-Relatively Permanent Water	317
Stream 11F	Class I PHWH	Non-Relatively Permanent Water	742
Stream 12	Class II PHWH	Relatively Permanent Water- Seasonal	671
Stream 13	Class II PHWH	Non-Relatively Permanent Water	624
Stream 14	Modified Class I PHWH	Non-Relatively Permanent Water	697
Stream 15	Class I PHWH	Non-Relatively Permanent Water	1,040
Stream 15A	Class I PHWH	Non-Relatively Permanent Water	330
Stream 15B	Class I PHWH	Non-Relatively Permanent Water	317
Stream 16	Class II PHWH	Relatively Permanent Water- Seasonal	1,042
Stream 16A	Modified Class I PHWH	Non-Relatively Permanent Water	310
Stream 17	Class II PHWH	Relatively Permanent Water- Seasonal	1,018
Stream 17A	Class I PHWH	Non-Relatively Permanent Water	91
Stream 17B	Class II PHWH	Non-Relatively Permanent Water	783
Stream 17C	Class II PHWH	Non-Relatively Permanent Water	551
Stream 17C1	Class I PHWH	Non-Relatively Permanent Water	130
Stream 18	Class II PHWH	Non-Relatively Permanent Water	712
Stream 18A	Class I PHWH	Non-Relatively Permanent Water	79
Stream 18B	Class I PHWH	Non-Relatively Permanent Water	172
Stream 19	Class II PHWH	Non-Relatively Permanent Water	917
Stream 19A	Class I PHWH	Non-Relatively Permanent Water	210
Stream 19B	Class I PHWH	Non-Relatively Permanent Water	631
Stream 20	Modified Class II PHWH	Relatively Permanent Water- Seasonal	1,014
Stream 20-1	Modified Class I PHWH	Non-Relatively Permanent Water	204
Stream 21	Modified Class II PHWH	Non-Relatively Permanent Water	717
Stream 21A	Class I PHWH	Non-Relatively Permanent Water	102



**Table 3-3 – Summary of Stream Impacts**

<b>Stream I.D.</b>	<b>Use Designation</b>	<b>USACE Flow Characteristics</b>	<b>Impacts (ft.)</b>
Stream 22	Class II PHWH	Relatively Permanent Water- Seasonal	913
Stream 22A	Modified Class I PHWH	Non-Relatively Permanent Water	710
Stream 22B	Modified Class I PHWH	Non-Relatively Permanent Water	189
Stream 22C	Class I PHWH	Non-Relatively Permanent Water	382
Stream 23	Class II PHWH	Relatively Permanent Water- Seasonal	863
Stream 23A	Class I PHWH	Non-Relatively Permanent Water	467
Stream 23B	Class I PHWH	Non-Relatively Permanent Water	231
Stream 24	Class II PHWH	Non-Relatively Permanent Water	775
Stream 24A	Class I PHWH	Non-Relatively Permanent Water	66
Stream 25	Modified Class I PHWH	Relatively Permanent Water- Seasonal	298
Stream 26	Modified Class I PHWH	Relatively Permanent Water- Seasonal	934
Stream 26A	Modified Class I PHWH	Non-Relatively Permanent Water	472
Stream 27	Modified Class II PHWH	Relatively Permanent Water- Seasonal	727
Stream 27B	Class I PHWH	Relatively Permanent Water- Seasonal	652
Stream 28	Class I PHWH	Non-Relatively Permanent Water	231
Stream 29	Class IIIA PHWH	Relatively Permanent Water- Perennial	564
Stream 30	Class II PHWH	Non-Relatively Permanent Water	440
Stream 31	Modified Class II PHWH	Non-Relatively Permanent Water	511
Stream 31A	Modified Class I PHWH	Non-Relatively Permanent Water	189
Stream 32	Class II PHWH	Relatively Permanent Water- Seasonal	830
Stream 32A	Class I PHWH	Non-Relatively Permanent Water	160
Stream 32B	Class I PHWH	Non-Relatively Permanent Water	142
Stream 32C	Class I PHWH	Non-Relatively Permanent Water	186
Stream 32D	Class I PHWH	Non-Relatively Permanent Water	245
Stream 32D1	Class I PHWH	Non-Relatively Permanent Water	245
Stream 33	Class II PHWH	Relatively Permanent Water- Seasonal	999
Stream 33A	Class I PHWH	Non-Relatively Permanent Water	145
Stream 33A1	Class I PHWH	Non-Relatively Permanent Water	3
Stream 33A2	Class I PHWH	Non-Relatively Permanent Water	106
Stream 33B	Class I PHWH	Non-Relatively Permanent Water	41





**Table 3-3 – Summary of Stream Impacts**

Stream I.D.	Use Designation	USACE Flow Characteristics	Impacts (ft.)
Stream 34	Warmwater Habitat	Relatively Permanent Water- Perennial	2,084
Stream 34A	Class II PHWH	Relatively Permanent Water- Seasonal	405
Stream 34B	Class I PHWH	Non-Relatively Permanent Water	391
Stream 34B1	Class I PHWH	Non-Relatively Permanent Water	348
Stream 34B2	Class I PHWH	Non-Relatively Permanent Water	309
Stream 35A	Class II PHWH	Non-Relatively Permanent Water	435
Stream 35A1	Class I PHWH	Non-Relatively Permanent Water	111
Stream 36	Class II PHWH	Relatively Permanent Water- Seasonal	1,054
Stream 36A	Class I PHWH	Non-Relatively Permanent Water	1,233
Stream 36A1	Modified Class I PHWH	Non-Relatively Permanent Water	86
Stream 36C	Class II PHWH	Relatively Permanent Water- Seasonal	1,146
Stream 36C2	Modified Class II PHWH	Non-Relatively Permanent Water	386
Stream 36C3	Class I PHWH	Non-Relatively Permanent Water	184
Stream 36C4	Class I PHWH	Non-Relatively Permanent Water	41
Stream 37	Class II PHWH	Relatively Permanent Water- Seasonal	691
Stream 37A	Class I PHWH	Non-Relatively Permanent Water	549
Stream 38	Class II PHWH	Relatively Permanent Water- Seasonal	1,600
Stream 38A	Class II PHWH	Relatively Permanent Water- Seasonal	1,755
Stream 38A1	Class I PHWH	Non-Relatively Permanent Water	247
Stream 38A2	Class I PHWH	Non-Relatively Permanent Water	72
Stream 38A3	Class I PHWH	Non-Relatively Permanent Water	111
Stream 38A4	Class I PHWH	Non-Relatively Permanent Water	161
Stream 38A5	Modified Class I PHWH	Non-Relatively Permanent Water	134
Stream 38A6	Class I PHWH	Non-Relatively Permanent Water	107
Stream 38B	Modified Class II PHWH	Non-Relatively Permanent Water	681
Stream 38B1	Modified Class I PHWH	Non-Relatively Permanent Water	398
Stream 38D	Modified Class II PHWH	Non-Relatively Permanent Water	548
Stream 39	Modified Class II PHWH	Relatively Permanent Water- Seasonal	1,095
Stream 39A	Modified Class I PHWH	Non-Relatively Permanent Water	925
Little Scioto River	Warmwater Habitat	Relatively Permanent Water- Perennial	0



**Table 3-3 – Summary of Stream Impacts**

Stream I.D.	Use Designation	USACE Flow Characteristics	Impacts (ft.)
Stream 40	Class I PHWH	Relatively Permanent Water- Seasonal	810
Stream 40A	Class I PHWH	Non-Relatively Permanent Water	188
Stream 40B	Class I PHWH	Non-Relatively Permanent Water	183
Stream 41	Modified Class I PHWH	Non-Relatively Permanent Water	215
Stream 42	Modified Class I PHWH	Non-Relatively Permanent Water	510
Stream 42A	Modified Class I PHWH	Non-Relatively Permanent Water	142
Stream 43	Modified Class I PHWH	Relatively Permanent Water- Seasonal	1,044
Stream 44	Modified Class II PHWH	Relatively Permanent Water- Seasonal	1,436
Stream 45	Modified Class I PHWH	Non-Relatively Permanent Water	438
Stream 46	Class II PHWH	Relatively Permanent Water- Seasonal	1,231
Stream 46A	Modified Class I PHWH	Non-Relatively Permanent Water	205
Stream 47	Modified Class II PHWH	Relatively Permanent Water- Seasonal	470
Stream 48	Warmwater Habitat	Relatively Permanent Water- Perennial	271
Stream 48A	Modified Class I PHWH	Non-Relatively Permanent Water	247
Stream 49	Class I PHWH	Relatively Permanent Water- Seasonal	350
<b>TOTAL</b>			<b>67,535</b>

Two ponds were also identified within Phases 2 and 3 and are shown in Figure 3 (sheets 19 and 30). Each pond was considered a non-isolated pond. Pond 1 has a hydrologic connection to the Slab Run and Pond 3 is assumed to eventually drain to the Ohio River. Table 3-4 summarizes the pond hydrologic connection, receiving waters, and impact.

**Table 3-4 – Summary of Pond Impacts**

Pond Identifier	Hydrologic Connection	Receiving Waters	Impact Type	Impact (acres)
Pond 1	Non-Isolated	Slab Run	Excavated	0.141
Pond 3	Non-Isolated	Assumed to eventually drain to the Ohio River	Partially filled	0.900
<b>TOTAL</b>				<b>1.041</b>

Three potentially jurisdictional ditches were identified within the Phase 2 and 3 project area and are shown in Table 3-5 and Figure 3-2 (sheets 14, 15, and 28). Ditches 1, 2, and 3 were considered seasonal Relatively Permanent Water (RPW) with ordinary high water marks. A PJD on waters of the U.S., received from the USACE on March 6, 2014, confirmed the ditches as water of the U.S.





**Table 3-5 – Summary of Ditch Impacts**

Ditch Identifier	Receiving Waters	USACE Flow Characteristics	Impact (acres)	Impact Type
PJD 1	Stream 46	Relatively Permanent Water-Seasonal	0.015	Relocated/ Culverted
PJD 2	Stream 49	Relatively Permanent Water-Seasonal	0.029	Relocated
PJD 3	Stream 27	Relatively Permanent Water-Seasonal	0.023	Partially Relocated/ Culverted
<b>TOTAL</b>			<b>0.067</b>	

As part of the Preferred Alternative, ditches will be constructed to maintain existing drainage patterns. No formal mitigation is proposed for the ponds or non-jurisdictional ditches; though new ditches will likely be constructed within the project limits and designed to maintain drainage patterns.

Summary

As a result of Phases 2 and 3 of the project, streams and other water bodies will be permanently impacted. The impacts reported in the 2005 DEIS were not segregated by individual water body/phase; however, as part of the Section 404/401 permit application for Phases 2 and 3, 67,535 feet of stream impacts, 1.041 acres of pond impacts, and 0.067 acres of jurisdictional ditches were identified for Phases 2 and 3. As shown in Table 3-3, the stream impact has increased from 15,460 feet to 67,535 feet of permanent stream impacts for Phases 2 and 3 of the project.

This increase is influenced by several contributing factors including the changing landscape in the Phase 2 and 3 areas. These changes are a result of logging activities on private properties, increased use of the properties as pastureland, and the resulting modifications of drainage patterns by owners. As a result, the hydrology of these areas has been substantially altered. In addition, changes in Section 404 regulation, as a result of the Rapanos case, redefines how jurisdictional streams are identified. Additionally, as noted in Section 1.0, stream impacts were calculated using the ROW limits for Phases 2 and 3 while the impacts calculated for the June 2006 ROD were based on the construction footprint of the proposed improvements and resulted in a significant increase in the amount of streams identified in the project areas during the reevaluation. Using the ROW limits results in a conservative estimate in the amount of resources to be impacted as a result of the proposed project and actual impacts that will result from the project will likely be less than what is reported in the reevaluation.

As shown in Table 3-4, the pond impacts decreased from 8.616 to 1.041 acres. This is a result of ponds naturally becoming smaller and converting to wetlands as a result of the changing landscape and human interference.

Stream Mitigation

During the design-build process, efforts will be made to minimize the impacts to streams. The potential impacts were documented in a single Individual Section 404/401 permit, which was submitted in October 2013. No in-stream work below the ordinary high water mark will be conducted between April 15 and June 30 for any stream designated Class III PHWH or WWH. All in-stream work will be performed in accordance with Memorandum of Agreement (MOA) Number 16472 between ODOT, Ohio Department of Natural Resources (ODNR), FHWA, and U.S. Fish & Wildlife Service (USFWS).

As noted in the Individual Section 404/401 permit, ODOT proposes to preserve 36,029 feet of high quality headwater streams and their riparian buffers in the Lower Scioto River (05060002) watershed at the General Electric Test Operations Facility in the Village of Peebles, Adams County, Ohio to offset a



portion of the total stream impacts at a 1.5 to 1.0 ratio. The Ohio Department of Natural Resources would be the third party easement holder for long-term protection.

ODOT is also exploring an opportunity with Wetland Resource Center (WNC) to secure additional stream mitigation credit within the Lower Scioto River and Little Scioto-Tygart (05090103) watersheds. ODOT would provide an additional 65,296 feet of stream mitigation credit, of which 70% (45,707 feet) would be stream preservation and 30% (19,589 feet) would be stream restoration.

#### Secondary and Cumulative Impacts

As a result of the projects, there is the potential for secondary development adjacent to the roadway which may impact the surface streams. Potential impacts include loss of the natural channel or degradation due to riparian clearing and runoff. These impacts are expected to be minor. Currently, there are no known proposed developments or zoning changes in the area.

Cumulative impacts include short-term adverse impacts to the water quality of surface streams due to erosion from excavation and placement of fill and construction materials. These impacts include temporary increases in dissolved solids, suspended soils, settleable solids, turbidity, and conductivity. The installation of culverts and piers will result in similar water quality impacts; direct destruction of the stream bottom and aquatic habitat; and destruction or displacement of aquatic biota.

### **3.1.6. Wildlife, Vegetation, and Threatened and Endangered Species**

The Ecological Survey Report, prepared in May 2004, identified wildlife and vegetation in the project area along with threatened and endangered species which potentially occur within the Preferred Alternative. As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared an Ecological Survey Report, dated June 20, 2013, for Phases 2 and 3 of the Portsmouth Bypass project area. Each species studied is documented in more detail in a separate report and all reports are summarized in the Ecological Survey Report, dated June 20, 2013.

#### Wildlife

Wildlife observed during the ecological survey included numerous mammal, bird, reptile, and amphibian species which are common throughout southern Ohio. The Ecological Survey Report, dated June 20, 2013, contains the complete listing of wildlife observed within the Phase 2 and 3 project area. Construction of this project will impact terrestrial habitat. However, due to the abundance of similar habitat in the vicinity of the project, this loss should not result in a decline in these species populations.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Vegetation

The Ecological Survey Report, dated June 20, 2013, contains the complete listing of vegetation observed within the Phase 2 and 3 project area. The land cover within the project area is primarily comprised of upland forest (64%), grassland/herbaceous (22%), pasture/hay (1%), barren land (8%). The remaining 5% consists of developed open space, cultivated crops, scrub/shrub, and open water.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Threatened and Endangered Species

Threatened and endangered species for the Portsmouth Bypass were originally coordinated with the USFWS and ODNR in 2004. Due to the time elapsed between the original species coordination and the submittal of this application, the USFWS required additional species coordination for some of the federally listed species.





During the summer of 2011, representatives of ODOT conducted additional species surveys for federally listed mussel species, the federally endangered Indiana bat (*Myotis sodalis*); federally listed species of concern/state-listed endangered Eastern hellbender (*Cryptobranchus alleganiensis*); federally threatened small whorled pogonia (*Isotria medeoloides*), and federally endangered running buffalo clover (*Trifolium stoloniferum*).

In a letter dated November 6, 2012 from the ODNR Division of Wildlife (DOW), records from the Natural Heritage Database reported 19 state-listed species within 1 mile of Phases 2 and 3. The 19 listed species included in this letter are included in Table 3-6 below.

On October 1, 2013 the U.S. Fish and Wildlife Service proposed endangered status for the northern long-eared bat (*Myotis septentrionalis*). Individuals of this species were caught throughout the proposed project area for all three Phases of the Portsmouth Bypass project during surveys that were being conducted for the Indiana bat in 2011. This species will likely be listed as endangered by the U.S. Fish and Wildlife Service prior to, or in the early stages of, construction of the project.

The Ecological Survey Report, dated June 20, 2013, identified both state and federally listed threatened and endangered species. During the Ecological Survey, surveys for both state and federally listed species were conducted in and around the limits of Phases 2 and 3 of the Portsmouth Bypass. Surveys for listed species were completed in conjunction with the aquatic and terrestrial surveys completed on various occasions by ODOT and /or their representatives. No federally listed species were found within the limits of Phase 2 or 3 of the Portsmouth Bypass during any surveys, with the exception of the proposed endangered northern long-eared bat, which was found within the project area during the 2011 survey conducted for the Indiana bat. At the time, this species was not proposed for federal or state listing. During the threatened and endangered species surveys, representatives of ODOT identified populations of the state-endangered primrose-leaved violet (*Viola primulifolia*), the state-threatened riverbank paspalum (*Paspalum repens*), and the state-threatened black sandshell mussel (*Ligumia recta*).

A supplemental survey was also conducted for the state endangered Eastern spadefoot toad (*Scaphiopus holbrookii*) in September 2013. No suitable habitat was found within the Phase 2 and 3 project area.

The ODNR also provided review comments on the *Level 2 Ecological Survey Report SCI-823-0.00 – Phases 2 and 3 (PID 19415)* [ASC Group 2013] on June 13, 2013. The letter included an additional review by the ODNR-DOW-Fish and Wildlife, which identified additional species with ranges within the Portsmouth Bypass Project Area. This letter is included in Appendix B.

A summary of the federal and state listed species with known ranges near the project is provided in Table 3-6.

**Table 3-6 – Federal and State Listed Species**

Species		Group	Federal Status	State Status
Scientific Name	Common Name			
<i>Aneides aeneus</i> <sup>1</sup>	Green Salamander	Amphibian	Not Listed	Endangered
<i>Crotalus horridus</i> <sup>1</sup>	Timber Rattlesnake	Reptile	Species of Concern	Endangered
<i>Cryptobranchus alleganiensis</i> <sup>1</sup>	Eastern Hellbender	Amphibian	Species of Concern	Endangered
<i>Cycleptus elongatus</i> <sup>2</sup>	Blue Sucker	Fish	Not Listed	Threatened
<i>Cyprogenia stegaria</i> <sup>1</sup>	Fanshell	Mollusk	Endangered	Endangered
<i>Ellipsaria lineolata</i> <sup>1, 2</sup>	Butterfly	Mollusk	Not Listed	Endangered



Table 3-6 – Federal and State Listed Species

Species		Group	Federal Status	State Status
Scientific Name	Common Name			
<i>Elliptio crassidens</i> <sup>1,2</sup>	Elephant-ear	Mollusk	Not Listed	Endangered
<i>Epioblasma rangiana</i> <sup>1</sup>	Northern Riffleshell	Mollusk	Endangered	Endangered
<i>Epioblasma triquetra</i> <sup>1</sup>	Snuffbox	Mollusk	Endangered	Endangered
<i>Erythroecia hebardii</i> <sup>1</sup>	Hebard's Noctuid Moth	Insect	Not Listed	Endangered
<i>Fusconaia ebenus</i> <sup>1,2</sup>	Ebonyshell	Mollusk	Not Listed	Endangered
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Bird	Species of Concern	Threatened
<i>Hiodon alosoides</i> <sup>1</sup>	Goldeye	Fish	Not Listed	Endangered
<i>Isotria medeoloides</i>	Small Whorled Pogonia	Plant	Threatened	Endangered
<i>Lampsilis orbiculata</i> (= <i>L. abrupta</i> ) <sup>1</sup>	Pink Mucket Pearly Mussel	Mollusk	Endangered	Endangered
<i>Ligumia recta</i> <sup>2,3</sup>	Black Sandshell	Mollusk	Not Listed	Threatened
<i>Magnolia tripetala</i> <sup>2</sup>	Umbrella Magnolia	Plant	Not Listed	Potentially Threatened
<i>Megaloniais nervosa</i> <sup>1,2</sup>	Washboard	Mollusk	Not Listed	Endangered
<i>Moxostoma carinatum</i> <sup>2</sup>	River Redhorse	Fish	Not Listed	Concern
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Mammal	Proposed Endangered	Concern
<i>Myotis sodalis</i> <sup>1</sup>	Indiana Bat	Mammal	Endangered	Endangered
<i>Neotoma magister</i> <sup>1</sup>	Allegheny Woodrat	Mammal	Not Listed	Endangered
<i>Noturus eleutherus</i> <sup>1</sup>	Mountain Madtom	Fish	Not Listed	Endangered
<i>Noturus stigmosus</i> <sup>1</sup>	Northern Madtom	Fish	Not Listed	Endangered
<i>Obliquaria reflexa</i> <sup>2</sup>	Threehorn Wartyback	Mollusk	Not Listed	Threatened
<i>Paspalum repens</i> <sup>3</sup>	Riverbank Paspalum	Plant	Not Listed	Threatened
<i>Phacelia bipinnatifida</i> <sup>2</sup>	Fern-leaved Scorpion-weed	Plant	Not Listed	Potentially Threatened
<i>Plethobasus cyphus</i> <sup>1,2</sup>	Sheepnose	Mollusk	Endangered	Endangered
<i>Pleurobema clava</i> <sup>1</sup>	Clubshell	Mollusk	Endangered	Endangered
<i>Pleurobema cordatum</i> <sup>1,2</sup>	Ohio Pigtoe	Mollusk	Not Listed	Endangered
<i>Quadrula metanevra</i> <sup>1,2</sup>	Monkeyface	Mollusk	Not Listed	Endangered
<i>Quadrula nodulata</i> <sup>1</sup>	Wartyback	Mollusk	Not Listed	Endangered
<i>Quercus falcata</i> <sup>2</sup>	Spanish Oak	Plant	Not Listed	Threatened
<i>Scaphiopus holbrookii</i> <sup>1</sup>	Eastern Spadefoot Toad	Amphibian	Not Listed	Endangered
<i>Scaphirhynchus platyrhynchus</i> <sup>1</sup>	Shovelnose Sturgeon	Fish	Not Listed	Endangered
<i>Simpsonia ambigua</i> <sup>3</sup>	Salamander Mussel	Mollusk	Not Listed	Concern
<i>Spiraea virginiana</i>	Virginia Spiraea	Plant	Threatened	Endangered
<i>Stenanthium gramineum</i> <sup>2</sup>	Feather-bells	Plant	Not Listed	Potentially Threatened
<i>Terrapene carolina</i> <sup>3</sup>	Eastern Box Turtle	Reptile	Not Listed	Concern
<i>Thryomanes bewickii</i> <sup>1</sup>	Bewick's Wren	Bird	Not Listed	Endangered





**Table 3-6 – Federal and State Listed Species**

Species		Group	Federal Status	State Status
Scientific Name	Common Name			
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	Plant	Endangered	Endangered
<i>Truncilla truncata</i> <sup>2</sup>	Deertoe	Mollusk	Not Listed	Concern
<i>Ursus americanus</i> <sup>1</sup>	Black Bear	Mammal	Not Listed	Endangered
<i>Villosa fabalis</i> <sup>1</sup>	Rayed Bean	Mollusk	Endangered	Endangered
<i>Villosa lienosa</i> <sup>1</sup>	Little Spectaclecase	Mollusk	Not Listed	Endangered
<i>Viola pedata</i> <sup>2</sup>	Birdfoot Violet	Plant	Not Listed	Threatened
<i>Viola primulifolia</i> <sup>2, 3</sup>	Primrose-leaved violet	Plant	Not Listed	Endangered

<sup>1</sup> ODNR-DOW – Fish and Wildlife indicated these species ranges overlap the project area in a letter dated June 13, 2013.

<sup>2</sup> ODNR Natural Heritage Database has indicated that a record of this species is within 1-mile of the Preferred Alternative in letter dated November 6, 2012.

<sup>3</sup> Species identified during ecological or mussel survey.

Informal consultation with the USFWS for the federally listed species completed on March 12, 2012 (TAILS: 03E15000-2012-0581), and again on September 12, 2013, as a result of coordinating the Ecological Survey Report for Phases 2 and 3 of the project. A copy of the USFWS consultation is provided in Appendix B. ODOT/FHWA will initiate formal consultation on the project through the preparation and submission of a Biological Assessment (BA) that addresses all federally listed species, and includes a formal conference for the Northern long-eared bat. This BA will reiterate the effect determinations that were made for federally listed species through informal consultation, and will indicate that the project is likely to adversely affect the northern long-eared bat. It is not anticipated that there will be a change in the effect determinations for any of the federally listed species previously consulted on informally.

**Federally Listed Species**

**Bald Eagle (*Haliaeetus leucocephalus*) – Species of Concern**

The bald eagle was delisted in 2007 due to its recovery but is still protected by a number of laws, including the Bald and Golden Eagle Protection Act. As of January 30, 2013, the nearest active bald eagle nest is located approximately five miles southwest of the center of the Phase 2 project area and approximately nine miles west of the northern terminus of the Phase 3 project area. As such, ODOT determined that the project is expected to have no effect on this species.

**Clubshell Mussel (*Pleurobema clava*) – Endangered**

While the Little Scioto River may provide potentially suitable habitat for the clubshell, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area, including the survey of the Little Scioto River done in 2011. As a result, ODOT determined that the proposed project should have no effect on the species.

**Eastern Hellbender (*Cryptobranchus alleganiensis alleganiensis*) – Species of Concern**

It was determined that the only stream with potentially suitable habitat for the species was the Little Scioto River. Additionally, the Eastern hellbender is known from the Little Scioto River, with capture records for the species as recent as 2009. On August 16, 2011, Ohio herpetologist Greg Lipps conducted an Eastern hellbender habitat survey in the Little Scioto River at the location of the proposed bridge crossing for the project. The survey did not find any individuals of the species, and it was determined that this segment of the Little Scioto River did not contain suitable habitat for the species. Due to the lack of



suitable habitat for the species within the proposed project area, it was determined by ODOT that the project will have no effect on the species.

Fanshell Mussel (*Cyprogenia stegaria*) – Endangered

Within Scioto County the fanshell species is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, ODOT determined that the proposed project should have no effect on the species.

Indiana Bat (*Myotis sodalis*) – Endangered

Mist net surveys for the Indiana bat were conducted between July 1 and August 15, 2011, for the entire Portsmouth Bypass Project area. No Indiana bats were captured during the survey. Due to the forested nature of the project area, potential roosting habitat is prevalent throughout the limits of the project corridor. Potentially suitable habitat for this species will be impacted as part of this project. In a letter dated March 12, 2012, the USFWS concurred that the proposed project may affect, but it is not likely to adversely affect, the Indiana bat.

Northern Riffleshell Mussel (*Epioblasma torulosa rangiana*) – Endangered

Within Scioto County the Northern riffleshell is only known from the Scioto River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project was determined by ODOT to have no effect on this species.

Northern Long-eared Bat (*Myotis septentrionalis*) – Proposed Endangered

On October 1, 2013 the USFWS proposed endangered status for the northern long-eared bat. Individuals of this species were caught throughout the proposed project area for all three Phases of the Portsmouth Bypass project during surveys that were being conducted for the Indiana bat in 2011. This species will likely be listed as endangered by the USFWS prior to, or in the early stages of construction of the project.

During winter, northern long-eared bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

- Roosting habitat in dead or live trees and snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, which may be used as maternity roost areas;
- Foraging habitat in upland and lowland woodlots and tree lined corridors;
- Occasionally they may roost in structures like barns and sheds

According to the USFWS's notification for listing, the primary threat to the northern long-eared bat is a disease, white-nose syndrome, which has killed an estimated 5.5 million cave-hibernating bats in the Northeast, Southeast, Midwest, and Canada. Populations of the northern long-eared bat in the Northeast have declined by 99 percent since symptoms of white-nose syndrome were first observed in 2006. Due to the forested nature of the project area, potential roosting habitat is prevalent throughout the limits of the project corridor. Additionally, northern long-eared bats were captured within the project area during sampling conducted in 2003 and 2011. Suitable habitat for this species will be impacted as part of this project. As the project is likely to adversely affect the species, ODOT/FHWA will initiate a formal conference on the species with the USFWS.

Pink Mucket Pearly Mussel (*Lampsilis abrupta*) – Endangered

Within Scioto County the pink mucket pearly mussel is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no





suitable habitat for this species was encountered within the proposed project area. As a result, ODOT determined the proposed project should have no effect on the species.

Rayed Bean Mussel (*Villosa fabalis*) – Endangered

Within Scioto County the rayed bean mussel is known from the Scioto River and Scioto Brush Creek. However, the species is considered potentially present within any streams in the county that possess its preferred habitat, including the Little Scioto River. Although suitable habitat for the species was present, no specimens of rayed bean were found during the survey of the Little Scioto River or any other mussel surveys conducted during the ecological surveys of the project area. It is unlikely that the species is present within the proposed project area and that it will be impacted by proposed construction activities. As a result, ODOT determined that the proposed project may affect, but is not likely to adversely affect, the species. The USFWS provided concurrence on this determination through informal consultation.

Running Buffalo Clover (*Trifolium stoloniferum*) – Endangered

The nearest record for running buffalo clover is located approximately 11 miles from the project area within Lawrence County. A survey for this species was conducted in 2011. Although this species was not identified within the project study area during any of the surveys, suitable habitats for the species, including partially shaded woodlots along streams and maintained lawns and trails, were present within the project area. Due to the absence of the species, but the presence of potentially suitable habitat within the project area, ODOT determined that the project may affect, but is not likely to adversely affect, running buffalo clover. The USFWS provided concurrence on this determination through informal consultation.

Sheepnose Mussel (*Plethobasus cyphus*) – Endangered

Within Scioto County the sheepnose mussel is only known from the Ohio River. This species was not encountered during any mussel surveys conducted within the proposed project area, and no suitable habitat for this species was encountered within the proposed project area. As a result, the proposed project should have no effect on the species.

Small Whorled Pogonia (*Isotria medeoloides*) – Threatened

During the ecological surveys, small whorled pogonia was not identified within the Preferred Alternative project area. No direct impacts to small whorled pogonia are anticipated as a result of this project. Potentially suitable habitat for this species will likely be impacted as part of the construction of Phases 2 and 3 of the Portsmouth Bypass. Due to the presence of potentially suitable habitat for the species, the proximity to a known location for the plant, and the potential difficulties associated with surveying for this species (short flowering period, similarity in appearance to sterile plants of Indian cucumber-root, and potential periods of dormancy) the species cannot be completely discounted from being present within the study area. As a result, ODOT determined that the proposed project may affect, but is not likely to adversely affect, the species. The USFWS provided concurrence on this determination through informal consultation.

Snuffbox Mussel (*Epioblasma triquetra*) – Endangered

Within Scioto County the snuffbox mussel is known from the Ohio River, Scioto Brush Creek, and the South Fork Scioto Brush Creek. While the Little Scioto River may provide potentially suitable habitat for this species, it is not known within the drainage. This species was not encountered during any mussel surveys conducted within the proposed project area. As a result, ODOT determined that the proposed project should have no effect on the species.



Timber Rattlesnake (*Crotalus horridus*) – Species of Concern

A survey for this species was conducted by herpetologist Doug Wynn during 2003. The USFWS and Doug Wynn both concurred that updated surveys for this species were unnecessary to make an effect determination for this species. The 2003 survey found that suitable habitat for this species is present within the proposed project area; however, signs of major human disturbance were common, and it was determined to be very unlikely that the species inhabits or utilizes the surveyed area. This species was not encountered during the species specific survey (conducted in 2003) or during any of the previous or updated ecological surveys. Due to the presence of suitable habitat for the species, but the lack of evidence of timber rattlesnakes using the habitat, ODOT determined that the proposed project may affect, but is not likely to adversely affect the species. The USFWS provided concurrence on this determination through informal consultation.

Virginia Spiraea (*Spiraea virginiana*) – Threatened

The original survey for the Virginia spiraea did not identify any individuals within the survey area. The USFWS agreed that this species is not likely found within the project area and an additional species survey was not requested in 2011. Due to the presence of suitable habitat for the species, but the lack of evidence that the plant is within the proposed project area, ODOT determined that the project may affect, but is not likely to adversely affect the species. The USFWS provided concurrence on this determination through informal consultation.

**State-Listed Species**

Allegheny Woodrat (*Neotoma magister*) – Endangered

The project is within the range of the Allegheny woodrat, a state endangered mammal. This mammal has experienced marked declines in its Ohio distribution and is presumed to occupy forested areas within rock outcrops primarily in Adams County and extreme western portions of Scioto County. Based on known locality records and habitat utilized by this species, the project is not likely to affect this species.

Bewick's Wren (*Thryomanes bewickii*) – Endangered

The project is within the range of the Bewick's wren, a state endangered bird. A statewide survey has not been completed for this species and a lack of records does not indicate the species is absent from the area. Therefore, the ODNR-DOW recommends that tree removal should not occur during the species' nesting period of April 1 to August 31 to minimize impacts to the species.

Birdfoot Violet (*Viola pedata*) – Threatened

Preferred habitat for the state-threatened birdfoot violet includes well-drained, sunny, open situations, on rocky or sandy, often acidic, soil; open woods, fields, prairie remnants; along paths and roadsides, especially on road cuts through shale and sandstones. Potential habitat for this species is common in the project area; however, this species was not identified during the ecological survey of the project area. The project is not likely to have an impact on this species.

Black Bear (*Ursus americanus*) – Endangered

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

Black Sandshell Mussel (*Ligumia recta*) – Threatened

Two live specimens and one dead specimen of the state-threatened black sandshell mussel were collected upstream and downstream of the proposed Little Scioto River bridge crossing during the 2011 mussel survey. The presence of this species was a new record for the Little Scioto River. The mussel survey report indicated that “*this species appears to be increasing its range and abundance in the state,*





apparently including its distribution in the Little Scioto River.” Impacts to individuals and habitat may occur as a result of this project; however, due to the increasing abundance of this species in Ohio and amount of potentially suitable habitat for this species upstream and downstream of the impact area, these impacts would likely be insignificant. Furthermore, to minimize impacts to this species a professional malacologist will collect and relocate the mussels to suitable and similar habitat upstream of the proposed project prior to construction.

Blue Sucker (*Cypleptus elongatus*) – Threatened

The state-threatened blue sucker was reported from the Scioto River, east of the project area. Suitable habitat for this species is not likely present in the project area, as their preferred habitat includes deep, swiftly flowing chutes or channels of large rivers. The project is not likely to have an impact on this species.

Butterfly Mussel (*Ellipsaria lineolata*) – Endangered

The state-endangered butterfly mussel’s preferred habitat includes sand and gravel in large rivers. Suitable habitat may be present in the Little Scioto River if it is determined to be large enough. This species was not collected during the mussel survey in 2011. The project is not likely to have an impact on this species.

Deertoe Mussel (*Truncilla truncata*) – Species of Concern

Suitable habitat for the state species of concern deertoe mussel includes mud, sand, or gravel substrates in medium to large rivers. Potential habitat is likely present in the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Eastern Box Turtle (*Terrapene carolina carolina*) – Species of Concern

During the ecological survey, several individuals of the eastern box turtle were identified throughout the project area. It is likely impacts will occur to this species as a result of the project; however, the impact is negligible since the eastern box turtle is abundant throughout the project area and southern Ohio.

Eastern Spadefoot Toad (*Scaphiopus holbrookii*) – Endangered

The project is within the range of the Eastern spadefoot toad, a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. A habitat survey was completed in September 2013 and no suitable habitat for the Eastern spadefoot toad was identified within the project area. Based on known locality records and habitat utilized by this species, the project is not likely to affect this species.

Ebonysell Mussel (*Fusconaia ebanus*) – Endangered

Suitable habitat for the state endangered ebonysell mussel includes sand and gravel in large rivers. Suitable habitat may be present within the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Elephant-Ear Mussel (*Elliptio crassidens*) – Endangered

Suitable habitat for the state endangered elephant-ear mussel includes mud, sand, or fine gravel in large rivers. Potentially suitable habitat was identified within the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey of the project area. The project is not likely to have an impact on this species.



Feather-Bells (*Stenanthium gramineum*) – Potentially Threatened

The habitat preference for the state threatened feather-bells includes moist rocky woods and rich wooded slopes; it is most frequently found on acid soils. Potential habitat for this species is present within the project area; however, it was not identified during the ecological survey of the project area. The project is not likely to have an impact on this species.

Fern-Leaved Scorpion-Weed (*Phacelia bipinnatifida*) – Potentially Threatened

The most common habitat of the state potentially threatened fern-leaved scorpion-weed is deciduous alluvial woods, generally on basic soils. However, Ohio collections have also been made from fields and roadsides. Suitable habitat for this species is abundant throughout the project area; however, it was not identified during the ecological survey of the project area. The project is not likely to have an impact on this species.

Goldeye (*Hiodon alosoides*) – Endangered

The project is within the range of the goldeye, a state endangered fish. The ODNR-DOW recommends no in-water work in perennial WWH streams and Class III primary headwater streams from April 15 to June 30 to reduce potential impacts to indigenous aquatic species and their habitat. The project is not likely to have an impact on this species.

Green Salamander (*Aneides aeneus*) – Endangered

The project is within the range of the green salamander, a state endangered amphibian. Based on known locality records, habitat utilized by this species, and that this species was not identified during the ecological survey, the project is not likely to impact this species.

Hebard's Noctuid Moth (*Erythroecia hebari*) – Endangered

The project is within the range of the Hebard's noctuid moth, a state endangered moth. Due to the habitat used by this species and the type of work proposed, the project is not likely to impact this species.

Little Spectaclecase (*Villosa lienosa*) – Endangered

The project is within the range of the little spectaclecase, a state endangered mussel. Potential habitat is likely present in the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Monkeyface Mussel (*Quadrula metanevra*) – Endangered

Suitable habitat for the state endangered monkeyface mussel consists of mud, sand, or gravel substrates in medium to large rivers. Potential habitat is likely present within the project area at the Little Scioto River. This species was not collected during the mussel survey at this location in 2011. The project is not likely to have an impact on this species.

Mountain Madtom (*Noturus eleutherus*) – Endangered

The project is within the range of the mountain madtom, a state endangered fish. The ODNR-DOW recommends no in-water work in perennial WWH streams and Class III primary headwater streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. The project is not likely to have an impact on this species.

Northern Madtom (*Noturus stigmosus*) – Endangered

The project is within the range of the Northern madtom, a state endangered fish. The ODNR-DOW recommends no in-water work in perennial WWH streams and Class III primary headwater streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. The project is not likely to have an impact on this species.





Ohio Pigtoe Mussel (*Pleurobema cordatum*) – Endangered

Suitable habitat for the state endangered Ohio pigtoe mussel includes sand or gravel in areas with moderate flow in medium to large rivers. Potentially suitable habitat is likely present within the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Primrose-Leaved Violet (*Viola primulifolia*) - Endangered

During the ecological surveys, several individuals of the primrose-leaved violet were identified along the edges of several logging roads. It was also identified in adjacent areas outside of the project area. It is likely impacts will occur to this species as a result of this project.

River Redhorse (*Moxostoma carinatum*) – Species of Concern

The state species of concern river redhorse was reported from the Scioto River, east of the project area. Suitable habitat for this species is not likely present in the project area as the river redhorse is found in only the largest rivers of the Ohio River drainage systems. They are typically found in deep pools with moderate current over bedrock or gravel substrate. The Little Scioto River within the project area did not appear to provide suitable habitat for this species. The project is not likely to have an impact on this species.

Riverbank Paspalum (*Paspalum repens*) – Threatened

Several individuals of the state threatened riverbank paspalum were identified in the Wetland 24 complex along the Little Scioto River. Southern Ohio is the northern extent of this species. Potential impacts to individuals will most likely occur where the project crosses the Little Scioto River; however, there is suitable habitat in the immediate vicinity of the crossing.

Salamander Mussel (*Simpsonaias ambigua*) – Species of Concern

Suitable habitat for the state species of concern salamander mussel includes mud or gravel bars in medium to large rivers. Potential habitat is likely present in the project area at the Little Scioto River. However, this species was not collected during the mussel survey at this location in 2011. The project is not likely to have an impact on this species.

Shovelnose Sturgeon (*Scaphirhynchus platyrhynchus*) – Endangered

The project is within the range of the shovelnose sturgeon, a state endangered species. The ODNR-DOW recommends no in-water work in perennial WWH streams and Class III primary headwater streams from April 15 to June 30 to reduce potential impacts to indigenous aquatic species and their habitat. The project is not likely to have an impact on this species.

Spanish Oak (*Quercus falcata*) – Threatened

A record for the state-threatened Spanish oak was returned within 1 mile of the Portsmouth Bypass Project Area. During the ecological survey no Spanish oaks were identified within the proposed project area. Suitable habitat for the Spanish oak will be impacted as a result of this project; however, this project should not have an adverse affect on this species due to the potential habitat located in the vicinity of the project area.

Threehorn Wartyback Mussel (*Obliquaria reflexa*) – Threatened

Suitable habitat for the state threatened threehorn wartyback mussel includes sand and gravel in large rivers. Suitable habitat may be present within the project area at the Little Scioto River. However, this species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.



Umbrella Magnolia (*Magnolia tripetala*) – Potentially Threatened

The state potentially threatened umbrella magnolia was observed during the T&E survey in 2011 in a second-growth upland forest. Suitable habitat for this species is abundant throughout the area; however, it was not identified during the ecological survey for Phases 2 and 3 of the Portsmouth Bypass. The project is not likely to have an impact on this species.

Washboard Mussel (*Megalonaias nervosa*) – Endangered

Suitable habitat for the state endangered washboard mussel includes mud, sand, or gravel primarily in large rivers or medium-sized streams with a good current. Suitable habitat may be present in the project area at the Little Scioto River. However, this species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Wartyback (*Quadrula nodulata*) – Endangered

The project is within the range of the wartyback, a state endangered mussel. Potential habitat is likely present in the project area at the Little Scioto River. This species was not collected during the 2011 mussel survey. The project is not likely to have an impact on this species.

Summary of Impacts

In summary, this project is expected to impact the habitat for several species, including the Indiana bat, running buffalo clover, small whorled pogonia, northern long-eared bat, Spanish oak, and primrose-leaved violet. Direct impacts are anticipated for the Eastern box turtle, Riverbank Paspalum, Primrose-Leaved Violet, and Black Sandshell. These impacts are expected to be negligible since the species are either prevalent throughout the project area and Southern Ohio and/or abundant suitable habitat remains within and near the project area.

Mitigation

The following mitigation is proposed for the wildlife, vegetation, and threatened and endangered species:

- No specific mitigation measures are proposed for vegetative communities; however, stormwater best management practices will be incorporated into the construction and design of this project to minimize run-off impacts to adjacent land and waterways.
- To minimize the impacts to Indiana bat and northern long-eared bat habitat, potential roosting trees will only be cleared after September 30 and before April 1.
- The project will implement conservation measures to avoid and minimize impacts to the northern long-eared bat that will be established through the formal conference on the species with the USFWS.
- ODOT will attempt to relocate the primrose-leaved violet population prior to construction; however, no suitable habitat is known within the project area. ODOT requested assistance from ODNR to locate suitable habitat for this species.
- To minimize stream impacts to aquatic species, no in-stream work will be performed in streams classified as Class III PHWH or Warmwater Habitat (WWH) from April 15 to June 30.
- To minimize impacts to the state endangered Bewick's wren, tree removal will not occur during the species' nesting period of April 1 to August 31.
- Due to mussels being found the Little Scioto at the proposed bridge crossing, a professional malacologist will collect and relocate the mussels to suitable and similar habitat upstream of the proposed project. Surveys will be done in accordance with the Ohio Mussel Survey Protocol. Should any federal listed species be encountered, the work must cease and the U.S. Fish and Wildlife Service must be contacted for consultation.





- At the U.S. Fish and Wildlife Service's request, all documentation and consultant certifications prepared to clear all properties utilized by the Contractor outside the project Right-of-Way for all environmental resource impacts prior to the beginning of work must be provided to the USFWS.

Additional specific mitigation measures to minimize impacts, if required, will be incorporated into the project plans.

#### Secondary Impacts

As a result of this project, there is the potential for secondary development adjacent to the roadway which may impact the potential habitat for wildlife, vegetation, and threatened and endangered species. These impacts are expected to be minor. Currently, there are no known proposed developments or zoning changes in the area.

#### **3.1.7. Forest Fragmentation**

The Ecological Survey Report, prepared in May 2004, reported that 493 acres (53%) of the Portsmouth Bypass project area was standing forest, none of which was considered to be virgin or old growth forest. Of these 493 acres, 370 acres were located within the anticipated construction limits for Phases 2 and 3. The Ecological Survey Report, dated June 20, 2013, reported approximately 688 acres of forested areas will be impacted as a result of Phases 2 and 3 of the project. This accounts for 64% of the Phase 2 and 3 project area.

The increase in forest impacts is directly related to an increase in the project footprint as a result of the design build process of the project. Since Phases 2 and 3 of the project will be developed using the design build process no detailed designs has been completed, and precise construction limits are unknown. Therefore, it is assumed that everything within the Phase 2 and 3 ROW footprint will be impacted. In reality, the final footprint of Phases 2 and 3 will be smaller than the ROW footprint. Calculating impacts based on a smaller footprint would likely require multiple permit modifications as the final designs are developed to account for the change in impacts. Any permit modifications would likely require the contractor to halt construction in these areas while waiting for the modification to be processed, which would cause project delays and cost overruns from idling equipment, construction delays, and construction staging issues. The inevitable delays that would result from a permit modification would prevent ODOT from achieving the goals for the project, which would defeat the purpose of using the design built process for the project.

Using the ROW limits results in a conservative estimate in the amount of resources to be impacted as a result of the proposed project and actual impacts that will result from the project will be less than what is reported in the reevaluation.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### **3.1.8. Farmland**

Based on original investigations conducted in 2003, impacts to farmlands were evaluated in accordance with the Farmland Policy Protection Act (FPPA) and the implementing regulations at 7 CFR Part 658. The Farmland Conversion Impact Rating (FCIR) Form was completed (dated 10/6/2003) and coordinated with the Natural Resource Conservation Service (NRCS). Based on the information submitted, the total site assessment scored less than 160, therefore, no further coordination or consideration of additional alternatives was needed.

Since the time of original coordination, the scope of the proposed project changed to include impacts associated with Phase 2 and Phase 3. The change in additional farmland impacts has increased to



approximately 39 acres. An updated FCIR Form was provided to the NRCS on February 12, 2014. Based on the assessment, a total of 78 acres of prime or unique farmland will be impacted. However, the total site assessment for each phase scored less than 160, therefore, no further coordination or consideration of additional alternatives is needed. The reevaluation conducted for farmland does not change the original findings documented in the June 2006 ROD.

### **3.1.9. Natural Environment Secondary Impacts**

The secondary impacts to the natural environment are discussed individually in each of the previous sections.

## **3.2. Social Environment**

### **3.2.1. Land Use and Growth Trends**

Approximately eight percent of the project area is categorized as developed open space, three percent is designated as farmland and the remaining 89 percent is designated as natural areas (wetlands, forest, open water, etc.). Since completion of the 2006 ROD, the project area has experienced a loss of forested areas due to recent logging activities. The total farmland acreage has also decreased as former agricultural fields and pastures have been abandoned and are no longer maintained or grazed

Population in Scioto County has increased by 0.5 percent since completion of the 2006 ROD. This reevaluation does not change the findings documented in the June 2006 ROD for land use and growth trends. The evaluation prepared for the DEIS and FEIS is still valid.

### **3.2.2. Population, Housing, and Residential Property Impacts**

Population, housing, and residential property trends were evaluated in the DEIS and FEIS using 2000 U.S. Census data. Since the June 2006 ROD, the United States has undertaken a new census and the 2010 U.S. Census data was released in 2011.

#### Population

According to U.S. Census Bureau data, the Scioto County population increased from 79,125 in 2000 to 79,499 in 2010. This represents an increase of 0.5%. This is compared to an increase in the State of Ohio population from 11,353,140 in 2000 to 11,536,504 in 2010, which represents a growth of 1.6%. Over 23% of the residents in Scioto County lived below the poverty level in 2010, which is above the 19.3% rate reported in 2000. Within the State of Ohio, 15.1% of the residents live below the poverty level.

The demographics indicate the race of Scioto County is predominately white, accounting for 94.4% of the total population. In Scioto County, minorities account for 5.6% of the population. In comparison, the State of Ohio is comprised of 82.7% white and 17.3% minorities. This trend is similar to the data reported in the June 2006 ROD.

Based on Civilian Labor Force Estimates from January 2012, Scioto County has an above average unemployment rate of 12.7% when compared to the State of Ohio's rate of 8.6%. The January 2005 DEIS reported unemployment rates from August 2000 as 8.3%, which was more than twice the statewide average of 3.9% at that time. Since the approval of the June 2006 ROD, the unemployment in Scioto County has increased by 53%.

In addition to the above average unemployment rates, Scioto County has below average per capita income. The 2010 US Census data reports a per capita income of \$17,547 for Scioto County and \$24,830 for the State of Ohio. This trend is similar to the data reported in the June 2006 ROD.





### Housing

As reported in the 2010 Census data, there were 34,769 housing units in Scioto County. This represents an increase of 715 units or 2% since 2000. The median home value, as reported in the 2010 Census data, was \$82,600. This represents an increase of \$19,200 since 2000. The median home value for the State of Ohio is reported as \$134,500 in 2010. This trend is similar to the data reported in the June 2006 ROD.

### Property Impacts and Relocations

The 2006 ROD reported the Preferred Alternative is expected to result in the relocation of 74 residences (52 relocations for Phases 2 and 3) of varying types and 14 barns/farm buildings. Also, 435 acres of land from 45 properties would be landlocked as a result of the Portsmouth Bypass project (Phases 1, 2, and 3).

Since the 2006 ROD, the number of residential relocations has decreased from 52 to 28, while the number of landlocked parcels has decreased from 33 to 22 parcels. In Phases 2 and 3 of the project, there was an early acquisition and relocation of 25 residential properties. Subsequently, there will be 3 residential relocations remaining.

### Summary

As described above, the population and housing units in the project area have increased slightly, while the unemployment rate has increased by over 50 percent in Scioto County since the preparation of the DEIS and FEIS. This reevaluation does not change the findings documented in the June 2006 ROD for population, housing, and residential property impacts.

#### **3.2.3. Economy and Employment/Business Relocations**

As described in Section 3.2.2, the median home value has increased, while the percent of people living in poverty and the unemployment rate in the project area has increased since the approval of the ROD in 2006. Construction of Phases 2 and 3 will require the displacement of one existing business which was not included in the 2006 ROD.

A Marathon gas station, located at 315 State Route 140, was constructed in late 2004 and opened in the spring of 2005. As the FEIS was completed in August of 2005, this property was not in operation at the time field work was conducted for the environmental document. Therefore, this business was not included as an impact in the original document. The property site is approximately 1.4 acres in size and is being purchased to allow for the construction of the southbound Bypass off ramp onto SR 140.

#### **3.2.4. Municipal Finance**

There are no significant changes in the municipal finance trends in the Phase 2 and 3 project areas since the approval of the ROD in 2006. As reported in the DEIS, this project is expected to have a positive impact on finance issues in Scioto County. The project will provide access to developable land by providing better highway access. The evaluation prepared for the DEIS and FEIS is still valid.

This reevaluation does not change the findings documented in the June 2006 ROD for municipal finance.

#### **3.2.5. Community Facilities and Services**

The DEIS reported that no community facilities, such as churches, cemeteries, or libraries, are within the right-of-way for the Preferred Alternative. Nor were there impacts to fire services, emergency services, or school transportation. Figure 3-1 locates miscellaneous features in the project vicinity, including community facilities. Based on the current right-of-way plans, there are no community facilities with the Phase 2 or 3 project area.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.



### 3.2.6. Visual Resources

Phases 2 and 3 of project are located primarily in wooded areas; therefore visual impacts are expected to be minimal to the residential areas. Although, the northern (near Lucasville) and southern termini (near Highland/Sciotoale) of the of the Phase 2 and 3 project, respectively, are more urbanized and populated compared to the majority of the project area, visual impacts are expected to be minimal as the Preferred Alternative would not alter the project area significantly due to the urban setting.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### 3.2.7. Utility Coordination

The anticipated utility impacts, as a result of Phases 2 and 3 of the project, have not been modified since the June 2006 ROD.

This reevaluation does not change the findings documented in the June 2006 ROD for utility coordination.

### 3.2.8. Environmental Justice

As shown on the Environmental Justice (EJ) mapping attached in Appendix C, there are no block groups with an EJ (minority or low-income) population of 40 percent or greater. Therefore, the proposed project will have no disproportionately high and adverse impacts to minority or low-income populations. No EJ issues were raised as a result of public involvement activities conducted as part of the proposed project. Therefore, in accordance with the protections of Executive Order 12898 and FHWA Order 6640.23A, no further EJ analysis is required.

Phases 2 and 3 will be funded, in part, with Appalachian Development Highway System (ADHS) funding. This funding program is designated to generate economic development in previously isolated areas, supplement the interstate system, connect Appalachia to the interstate system, and provide access to areas within the Appalachian region, as well as, to markets in the rest of the nation. It is likely that Environmental Justice populations will benefit from the improved highway system and the use of ADHS funds.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Secondary Impacts

No secondary impacts to minority or low-income populations are expected as a result of secondary development which occurs as a result of the Phase 2 and 3 project.

### 3.2.9. Social Environment Secondary Impacts

The secondary impacts to the social environment are discussed individually in each of the previous sections, as appropriate.

### 3.2.10 Cultural Resources

#### Archaeological Resources

A Phase I Archaeological Reconnaissance Survey was conducted in June 2004 for the Portsmouth Bypass area. Seven previously unrecorded archaeological sites were identified within the area of the Preferred Alternative. Of these sites, six were determined not to have the information potential to meet the eligibility criteria for the National Register of Historic Places (NRHP). Additional work was performed on the remaining site. The site yielded artifacts; however, few were diagnostic and there was no evidence





for subsurface features. On October 28, 2004, the Ohio State Historic Preservation Office (OSHP) concurred no further archaeology work was warranted.

On April 24, 2006, ODOT prepared a reevaluation of the project entitled *SCI-823-0.00 Summary of Cultural Resources in Scioto County, Ohio, Extended Planning Study Footprint*. This summary was prepared to account for a modification in the original construction limits which surpassed the 400-foot corridor previously studied. This study found that no new archaeological sites were identified and no further work recommended. OSHP was provided an opportunity to comment and no objections to this finding were received.

Based on field reconnaissance during various trips to the project area, there have been minimal changes to the existing area since completion of the initial surveys and reevaluation in 2013. Phases 2 and 3 will not impact any archaeological resources. This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### Historical Resources

The Phase I Historic Resource studies resulted in the determination that no properties meet the eligibility criteria for the NRHP. The OSHP concurred with this finding on July 1, 2004. As a follow-up to the initial studies and findings presented in the June 2006 ROD, ASC Group, Inc. prepared a Phase I History/Architecture Reevaluation Survey for Phases 2 and 3. The Area of Potential Effect (APE) for Phases 2 and 3 includes the ROW limits for Phases 2 and 3 and the adjacent parcels.

On November 10, 2013, ASC Group, Inc. completed a historic/architecture survey for Phases 2 and 3 of the project titled *Phase 1 History/Architecture Reevaluation for Phases 2 & 3 of the SCI-823 Portsmouth Bypass project in Harrison, Jefferson, Madison, Porter, and Valley Townships, Scioto County, Ohio*. The purpose of the survey was to identify properties listed on or eligible for listing on the NRHP that may have turned 50 years of age or old since the original survey. The literature review determined that no properties in the APE have been listed in or determined eligible for listing in the National Register of Historic Places since the finding of No Historic Properties Affected in 2004. Ten buildings in the APE have turned 50 years of age or otherwise were not identified in the original surveys. None of these buildings are significant under the NRHP and all are recommended as not eligible for the NRHP.

In accordance with 36 CFR Part 800, FHWA, with ODOT as their agent, considered the effects of the subject undertaking on historic properties within the area of potential affects pursuant to the Programmatic Agreement Among the FHWA, The Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Office (SHPO), and the State of Ohio, Department of Transportation Regarding Implementation of the Federal-Aid Transportation Program in Ohio (Agreement Number 126734), executed November 30, 2011. On May 10, 2013, ODOT determined a finding of “no historic properties affected” is applicable to the subject undertaking in accordance with 36 CFR Section 800.4(d)(1) and the Section 106 Programmatic Agreement (Agreement Number 126734), executed November 11, 2011. The Ohio State Historic Preservation Office received a copy of this determination on May 11, 2013 (included in Appendix A). As of September 10, 2013, no comment or objection has been received. This completes the Section 106 process unless the undertaking was to change.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

#### **3.2.11 Section 4(f)**

The DEIS indicated there are no parks, recreation areas, or natural and wildlife areas present or planned within the Portsmouth Bypass Preferred Alternative footprint. No Section 4(f) properties are located within the footprint of the Phase 2 and 3 project area. There have been no changes in existing or planned

land use in the project area since the preparation of the DEIS and FEIS. Therefore, Phases 2 and 3 will not impact any Section 4(f) properties.

This reevaluation does not change the findings documented in the June 2006 ROD for this resource.

**3.2.12 Air Quality**

Scioto County, Ohio is an air quality nonattainment area. The projected design year traffic for the Portsmouth Bypass project (all three phases) is 26,000 vpd with 14 percent trucks. It is anticipated the Phase 2 and 3 traffic volumes will be lower as an independent project as traffic would disperse throughout the existing roadway network between Phase 2 and 3. The design year traffic data is the maximum Average Daily Traffic (ADT) expected on the project at any time (including when all three phases are complete). OEPA concurred on October 12, 2011, and USEPA concurred on October 24, 2011, that the design year ADT and truck percentage for this project were not considered a project of air quality concern and no hotspot analysis is required.

A qualitative Mobile Source Air Toxics (MSAT) Analysis was prepared and submitted to OEPA on September 6, 2013, as part of the Phase 2 and 3 Reevaluation. On October 1 2013, OEPA approved the MSAT Analysis. A copy of the OEPA IOC has been included in Appendix B.

The constructed project will not result in an increase in ADT of more than 10,000 vpd within 10 years of the completion date. Also, the project does not involve a new project ROW that will have an ADT increase of more than 20,000 vpd within 10 years of construction. Hence, no Carbon Monoxide studies were required.

This reevaluation does not change the findings documented in the June 2006 ROD for air quality.

**3.2.13 Noise**

As per the 2005 DEIS, seven noise barriers were analyzed for Phases 2 and 3 of the project and one noise barrier in Phase 3 was considered cost-effective and was recommended for further public involvement. This barrier, known as NSA 2 East (NSA2E), is located in Phase 3 of the project area in Highland Bend. Since the 2005 DEIS, ODOT has revised its noise abatement criteria, *Standard Procedure for Analysis and Abatement of Highway Traffic Noise, June 7, 2011*.

As shown in Table 3-7, the noise analysis has been updated to reflect the 2011 ODOT Noise Procedure. Based on the updated ODOT noise procedures and as shown in Table 3-7, barriers NSA 1, NSA 2 West, NSA 5, and NSA 6 are not reasonable and/or feasible. No noise impacts were identified in NSA 7 or 8.

**Table 3-7 – Noise Wall Summary**

Barrier	Barrier Length	Average Barrier Height	Estimated Barrier Cost <sup>1</sup>	Benefitted Receptors <sup>2</sup>	Cost per Benefitting Receptor	Effectiveness		Barrier Recommended
						Feasible	Reasonable	
NSA 1	3,387	16.03	\$1,357,340	8	\$169,667	Y	N	N
NSA 2 West	1,261	15.05	\$474,451	1	\$474,451	N <sup>3</sup>	N	N
NSA 2 East	3,225	12	\$2,540,000	46	\$55,217	Y	N	N
NSA 5	1,709	13.34	\$569,951	2	\$284,975	Y	N	N
NSA 6	1,108	11.10	\$307,470	4	\$76,867	Y	N	N
NSA 7	No noise impacts identified							
NSA 8	No noise impacts identified							

<sup>1</sup> Barrier cost = \$25.00 per square foot

<sup>2</sup> Noise receptor receiving a 5dB(A) reduction or greater

<sup>3</sup> Does not provide a minimum 5 dB(A) reduction for 40% of the impacted receptors





A re-analysis was conducted for NSA2E in November 2013. The re-analysis was triggered because of the significant reduction in the design year ADT since the previous 2006 noise analysis. The re-analysis identified 42 impacted noise sensitive dwelling units as a result of the Preferred Alternative. A barrier analysis was conducted to evaluate noise barrier feasibility and reasonableness to reduce noise levels at the impacted dwelling units.

The results of the analysis indicated that barrier NSA2E was feasible but did not meet ODOT criteria for reasonableness due to the elevated cost of building noise walls on structures. Therefore, no noise abatement measures are recommended. See Appendix B for the ODOT IOC, dated November 21, 2013, regarding the noise re-analysis.

### **3.2.14 Energy**

As per the 2005 DEIS, the proposed “airport bypass” concept would result in a decrease of 10,557 vehicle miles traveled per day on opening day. This reduction in vehicle miles would result in an energy savings.

This reevaluation does not change the findings documented in the June 2006 ROD for energy.

### **3.2.15 Municipal, Industrial, and Hazardous Waste**

An Environmental Site Assessment (ESA) screening, dated August 2002, identified sites that may have impacts caused by wastes or hazardous materials. A Phase 1 ESA was prepared for seven sites within the Preferred Alternative and concluded with a recommendation for a Phase II ESA for one location, the McGuire Property, which is located outside of this proposed project. An underground storage tank system at the Chevron Station site located at the proposed SR-140 interchange area will need to be removed.

Based on field reconnaissance during various trips to the project area, there have been minimal changes to the existing land uses since completion of the ESA screening and Phase 1 ESA. None of the changes in land use represent sites which would normally be considered of interest during the screening process or recommended for further study. Therefore, this reevaluation does not change the findings documented in the June 2006 ROD for this resource.

### **3.2.16 Long-term Construction Impacts**

Construction of Phases 2 and 3 of the project will result in long-term impacts due to the conversion of land to highway use. The project will expend both construction materials and funding resources. These impacts are irreversible and irretrievable.

This reevaluation does not change the findings documented in the June 2006 ROD for long-term construction impacts.

### **3.2.17 Short-term Construction Impacts**

Construction of Phases 2 and 3 of the project will result in short-term impacts to air quality, noise levels, water quality/aquatic habitat, groundwater/floodplains, and traffic maintenance. The short-term impacts are expected to be minor and minimized by adhering to ODOT standard specifications.

This reevaluation does not change the findings documented in the June 2006 ROD for short-term construction impacts.



#### 4.0 – ENVIRONMENTAL COMMITMENTS

A summary of environmental commitments for Phases 2 and 3 of the Portsmouth Bypass project are listed in Table 4-1.

**Table 4-1 – Summary of Environmental Commitments for Phases 2 and 3**

Floodplain Impacts	<p>During the design process, the local community floodplain administrator will be contacted to coordinate project details.</p> <p>The Flood Hazard Development Permit will be incorporated into the construction contract documents.</p>
Stream Impact Mitigation	<p>As noted in the Individual Section 404/401 permit, ODOT proposes to preserve 36,029 feet of streams and their riparian buffers at the GE Test Facility to offset the impact at a 1.5 to 1.0 ratio.</p> <p>ODOT is also working with Wetland Resource Center (WRC) to secure an additional 65,296 feet of stream mitigation credit, of which 70% (45,707 feet) would be stream preservation and 30% (19,589 f) would be stream restoration. Stream mitigation credit would occur within the Lower Scioto River and Little Scioto-Tygart (05090103) watersheds.</p> <p>No piers shall be constructed in the Little Scioto River.</p> <p>To minimize stream impacts, no in-stream work below the ordinary high water mark will be conducted between April 15 and June 30 for any stream designated Class III PHWH or WWH. All in-stream work will be performed in accordance with Memorandum of Agreement (MOA) Number 16472 between ODOT, Ohio Department of Natural Resources (ODNR), FHWA, and U.S. Fish &amp; Wildlife Service (USFWS).</p>
Wetland Impact Mitigation	<p>ODOT will preserve 2.52 acres of high quality wetlands in Green Township, Ross County, Ohio. The preservation wetlands are located in the Lower Scioto River (05060002) watershed on a 51-acre tract identified as the Rupiper Property.</p> <p>In addition, ODOT proposes to purchase a minimum of 11.44 acres of wetland mitigation credits at the Red Stone Farm Wetland Mitigation Bank in the adjacent Ohio Brush-White Oak (05090201) watershed in Perry Township, Pike County, Ohio.</p> <p>For Isolated wetland, ODOT will provide a minimum of 0.094 acre of wetland mitigation.</p>





<p>Wildlife and Threatened and Endangered Species</p>	<p>To minimize impacts to Indiana bat and northern long-eared bat habitat, potential roosting trees will be cleared only after September 30 and before April 1.</p> <p>The project will implement conservation measures to avoid and minimize impacts to the northern long-eared bat that will be established through the formal consultation/conference on the species with the USFWS.</p> <p>To minimize impacts to stream species, no in-stream work below the ordinary high water mark will be conducted between April 15 and June 30 for any stream designated Class III PHWH or WWH. All in-stream work will be performed in accordance with Memorandum of Agreement (MOA) Number 16472 between ODOT, Ohio Department of Natural Resources (ODNR), FHWA, and U.S. Fish &amp; Wildlife Service (USFWS).</p> <p>To minimize impacts to the state endangered Bewick's wren tree removal will not occur during the species' nesting period of April 1 to August 31.</p> <p>A professional malacologist must collect and relocate the mussels in the Little Scioto River to suitable and similar habitat upstream of the proposed project. Surveys will be done in accordance with the Ohio Mussel Survey Protocol. Should any federal listed species be encountered, the work must cease and the U.S. Fish and Wildlife Service must be contacted for consultation.</p> <p>ODOT will attempt to relocate the primrose-leaved violet populations prior to construction; however, no suitable habitat is known within the project area. ODOT requested assistance from ODNR to locate suitable habitat for this species.</p> <p>A formal consultation/conference between ODOT, FHWA, and USFWS discussing all federally listed species within the project area, including the northern long-eared bat, will be initiated. The project will implement conservation measures to avoid and minimize impacts to the northern long-eared bat that will be established through the formal conference on the species with the USFWS.</p> <p>If any listed endangered species are identified during construction, the USFWS's Endangered Species Coordinator will be notified immediately.</p>
<p>Hazardous Materials Handling and Containment</p>	<p>An underground storage tank system at the Chevron Station site located at the proposed SR-140 interchange area will need to be removed</p>
<p>Residential/Business Relocations and Property Impacts</p>	<p>Acquisitions and relocations for all residences displaced for right-of-way will be conducted in accordance with all applicable state and federal laws.</p>
<p>Construction Impacts</p>	<p>Construction activities shall comply with Section 107.10 (Protection and Restoration of Property) of the ODOT 2013 Construction And Material Specifications (CMS) manual.</p>



	<p>No staging areas, storage of materials and equipment, or borrow or waste materials will be located in areas labeled as environmental resource areas.</p> <p>All documentation and consultant certifications prepared to clear all properties utilized by the Contractor outside the project Right-of-Way for all environmental resource impacts prior to the beginning of work (as required by Section 107.10 of the ODOT 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS), must be provided to the USFWS.</p>
<p>Traffic Maintenance</p>	<p>A maintenance of traffic plan was prepared in accordance with ODOT Standard Specifications, latest edition, for Maintenance of Traffic (ODOT Item 104.04), Public Convenience and Safety (ODOT Item 107.07), and Maintaining Traffic (ODOT Item 614).</p> <p>During construction, ODOT will coordinate with local schools, emergency response agencies, and other services to notify them of any changing traffic patterns and identify alternative access roads</p>
<p>Utilities</p>	<p>During the design process, representatives from the utility companies will be contacted to inform them of the project and coordination meetings will be held.</p>





## 5.0 – CONCLUSION

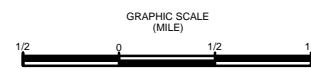
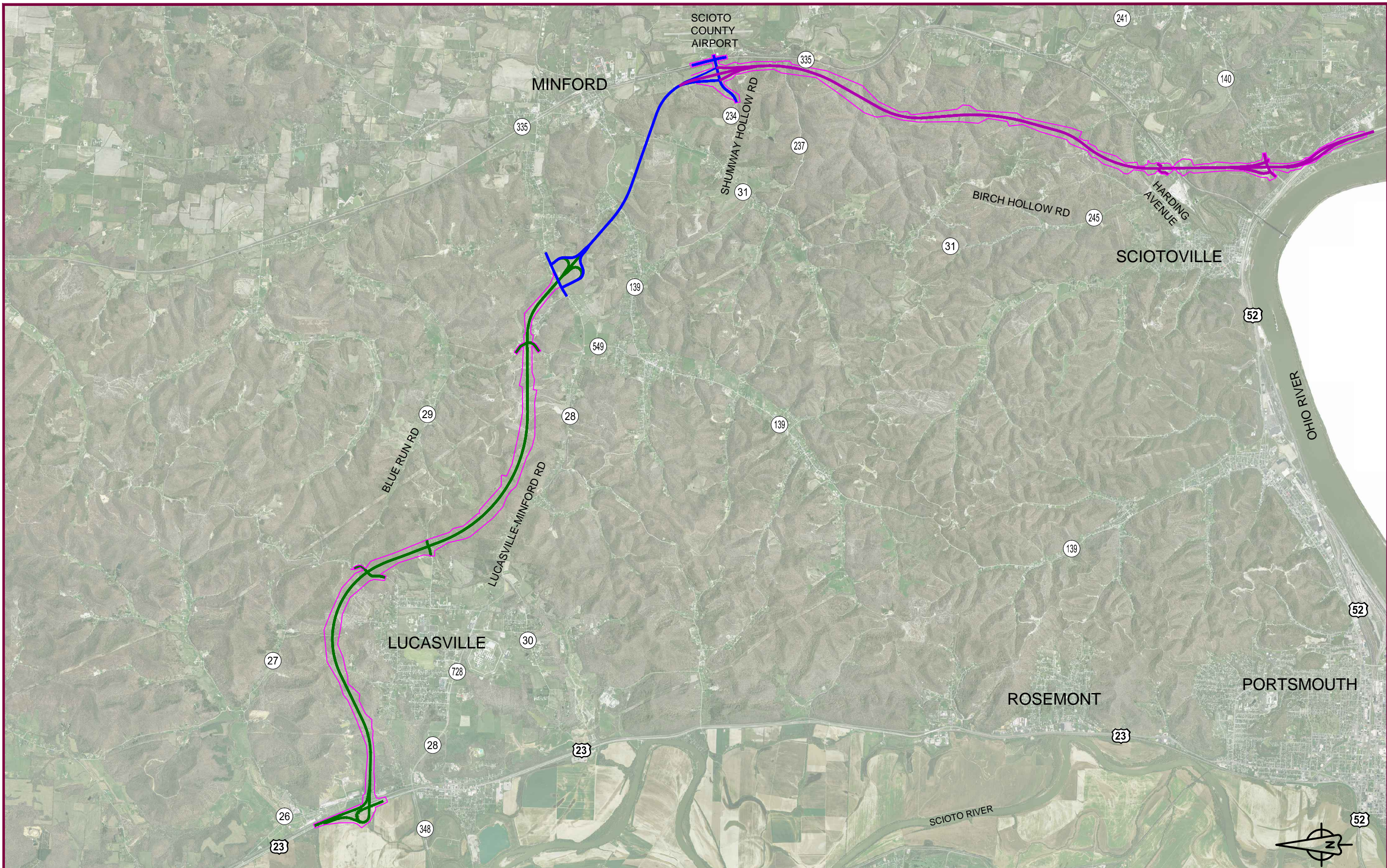
The purpose of the reevaluation is to identify and document any changes to the impacts since the approval of the ROD in June 2006. As a result of the additional studies, the following changes to the Phase 2 and 3 areas were identified:

- Wetland impacts increased from 5.120 acres to 6.585 acres;
- Stream impacts increased from 15,460 feet to 67,535 feet;
- Forest impacts increased from 370 acres to 688 acres;
- Pond impacts decreased from 8.616 to 1.041 acres;
- Farmland impacts increased from 37.5 acres to 39.0 acres;
- One business relocation.

Based on this Reevaluation of the Environmental Impact Statement (EIS) and Record of Decision (ROD) issued by FHWA on June 9, 2006 for the Portsmouth Bypass project, SCI SR 823-0.00, PID 19415, the findings of the original EIS and ROD remain valid and a Supplemental EIS is not required for the proposed action.







Legend

- Phase 1
- Phase 2
- Phase 3

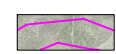
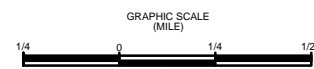
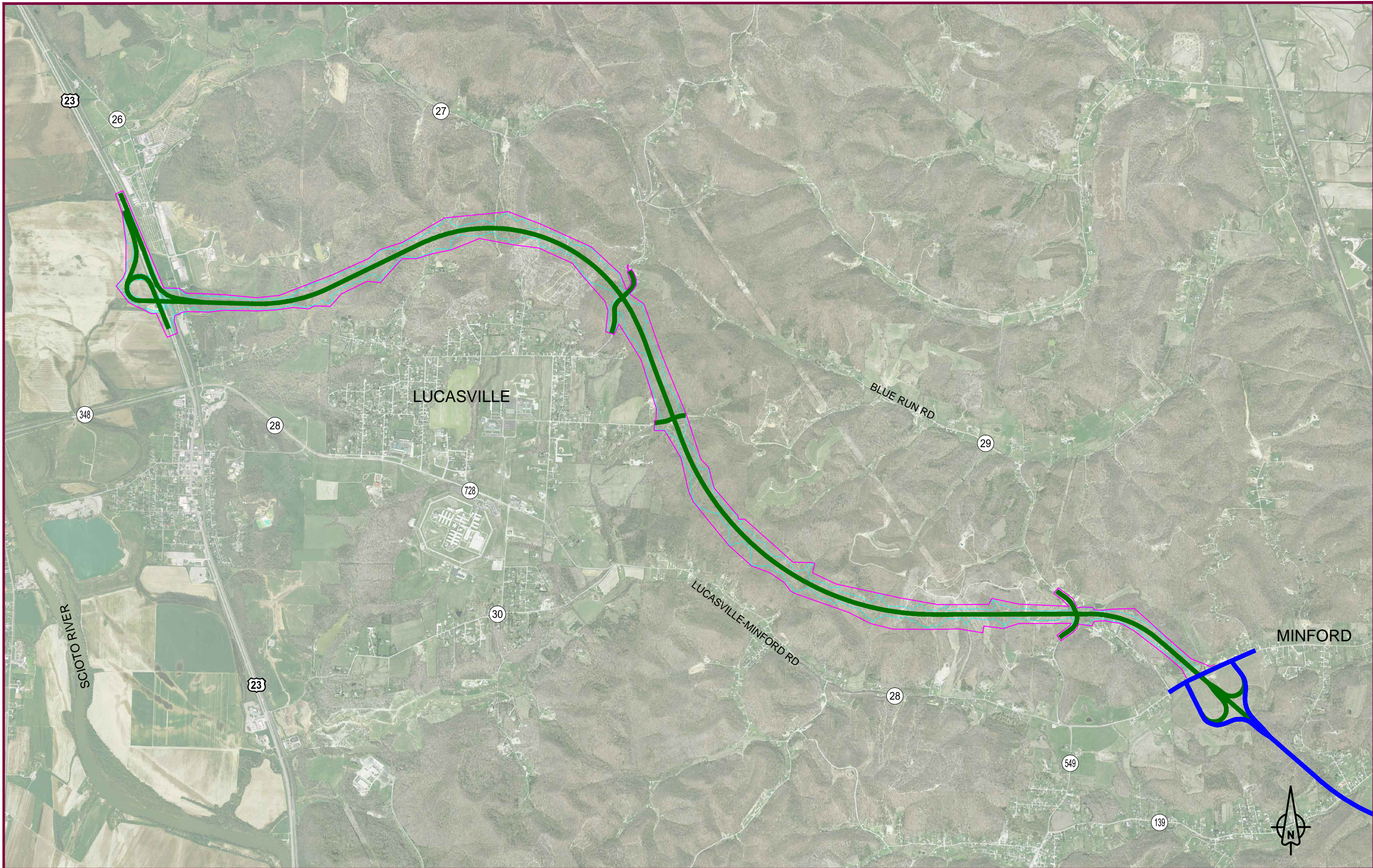
 Preferred Alternative Right-Of-Way

Figure 1  
Preferred Alternative  
Alignment  
*(sheet 1 of 3)*



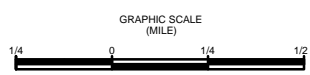
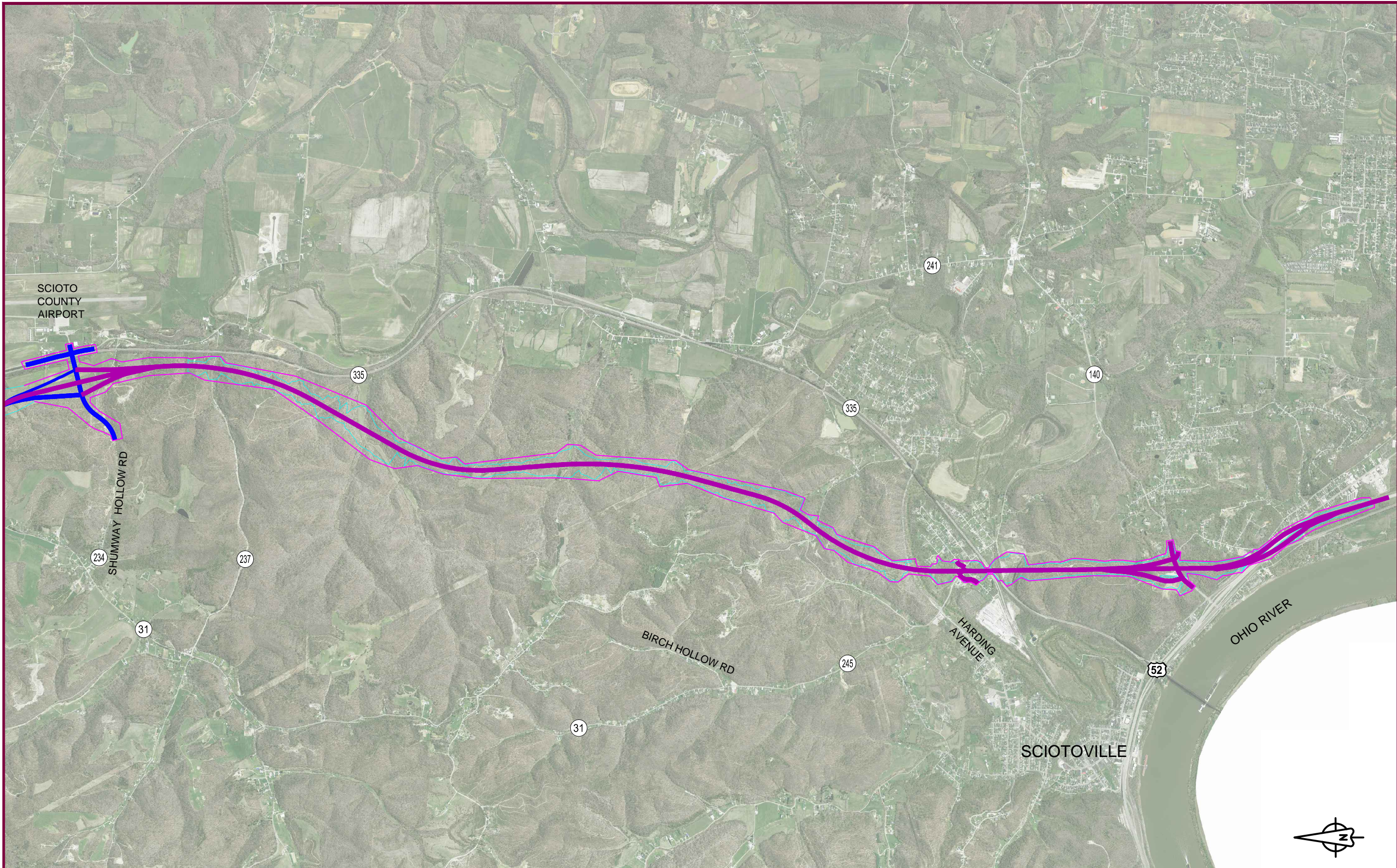


Legend

- Phase 2
- Construction Foot Print
- Preferred Alternative Right-Of-Way
- Phase 1 (Cleared in Separate Reevaluation-March 2012)

Figure 1  
 Preferred Alternative  
 Phase 2  
 (sheet 2 of 3)



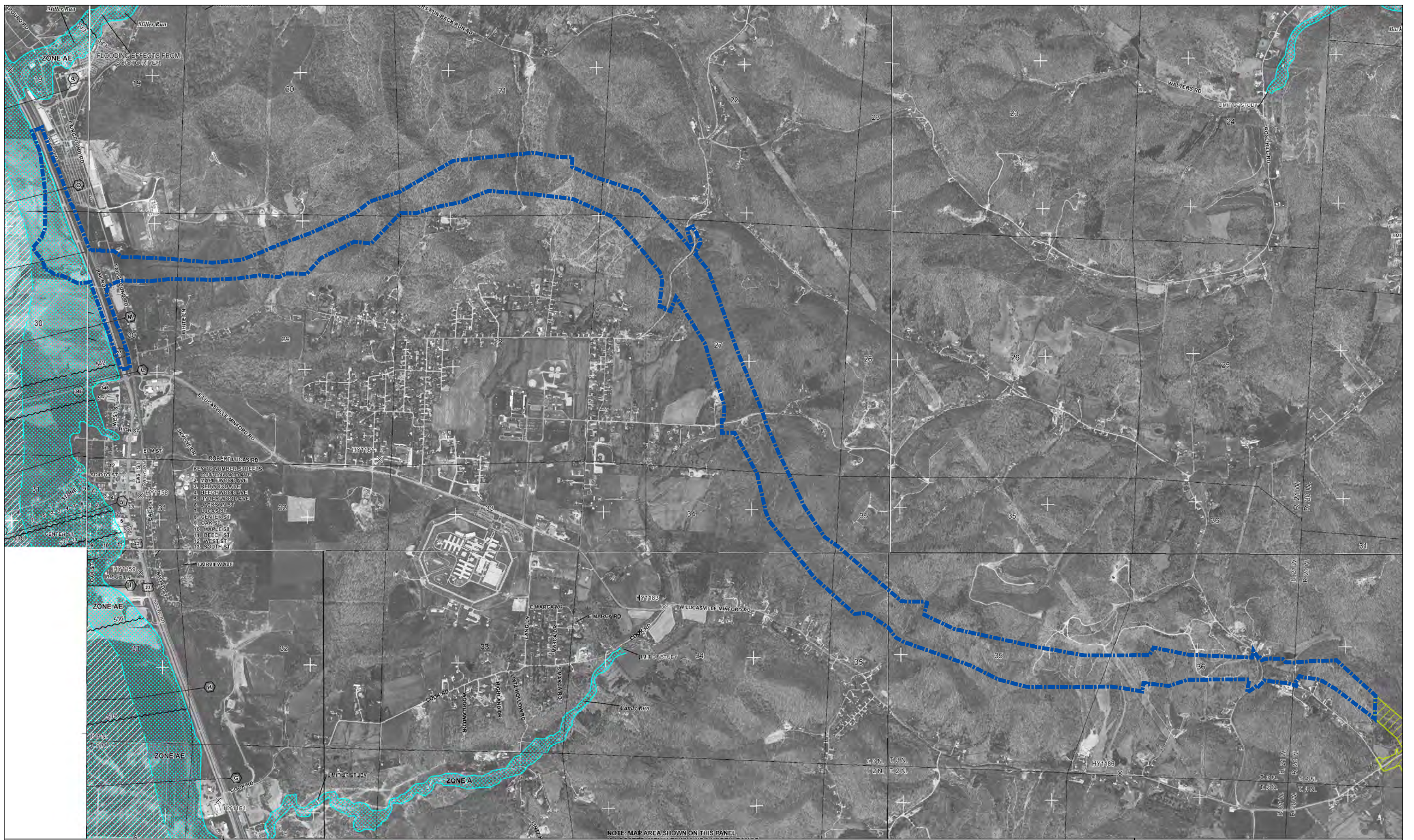


Legend

- Phase 3
- Construction Foot Print
- Preferred Alternative Right-Of-Way
- Phase 1 (Cleared in Separate Reevaluation-March 2012)

Figure 1  
 Preferred Alternative  
 Phase 3  
*(sheet 3 of 3)*

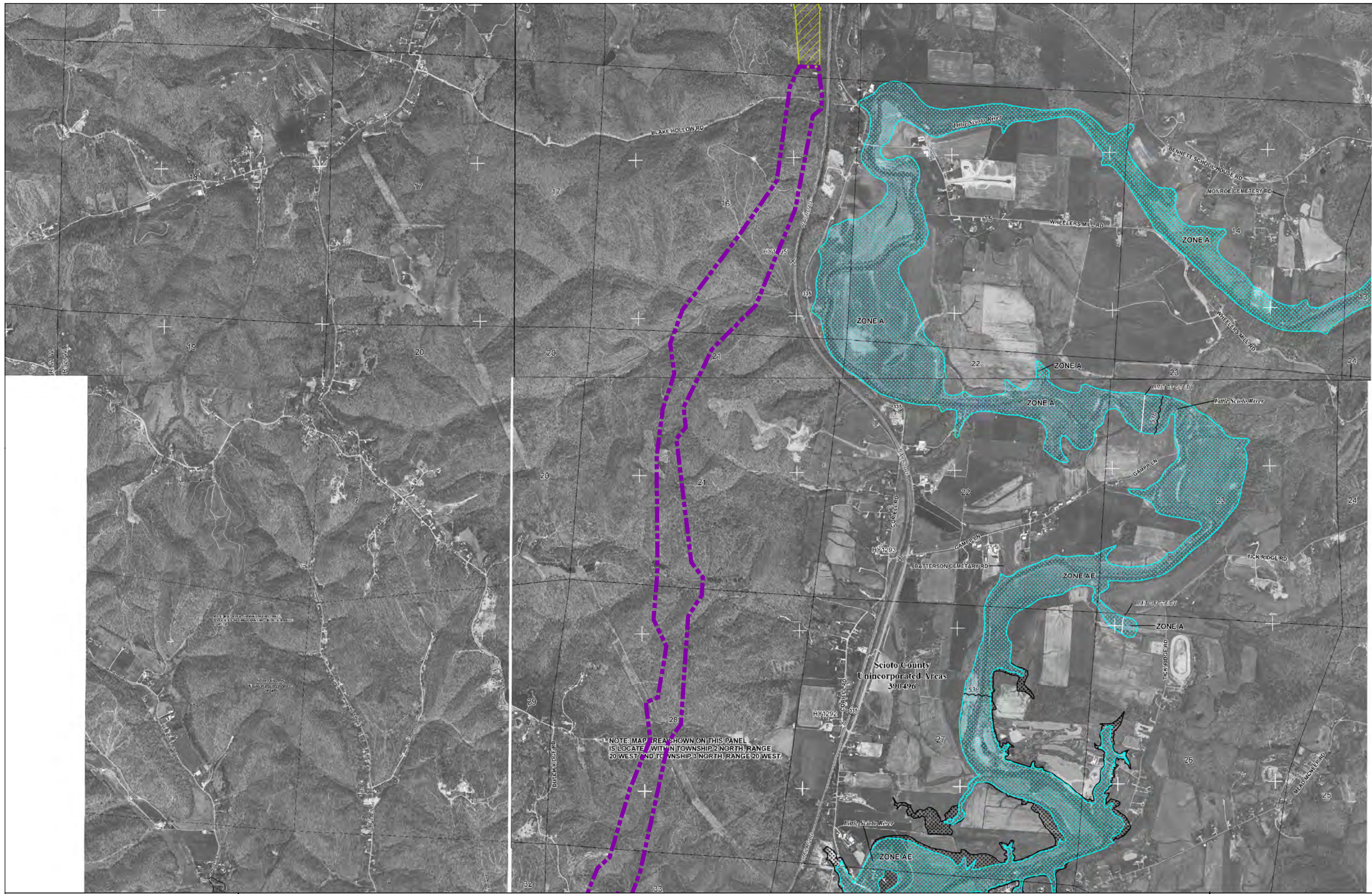




<p>CULTURAL AND ENVIRONMENTAL CONSULTANTS</p>	<p> Phase 2 project area</p> <p> Phase 3 project area</p> <p> Approximate Phase 1 construction limits</p>	<p> Special Flood Hazard Areas (SFHAs) Subject to inundation by the 1% annual chance flood</p>	<p>0 200 400 600 800 1000 Meters</p> <p>0 500 1000 2000 3000 Feet</p> <p>N</p>
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Figure 2 FEMA map.





<p>ASC GROUP, INC. ARCHAEOLOGY ARCHITECTURAL HISTORY ENVIRONMENT CULTURAL AND ENVIRONMENTAL CONSULTANTS</p>	<p> Phase 2 project area</p> <p> Phase 3 project area</p> <p> Approximate Phase 1 construction limits</p>	<p> Special Flood Hazard Areas (SFHAs) Subject to inundation by the 1% annual chance flood</p>	<p>0 200 400 600 800 1000 Meters</p> <p>0 500 1000 2000 3000 Feet</p> <p>N</p>
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Figure 2 FEMA map.





  Phase 2 project area    
   Phase 3 project area    
   Approximate Phase 1 construction limits

  Special Flood Hazard Areas (SFHAs) Subject to inundation by the 1% annual chance flood

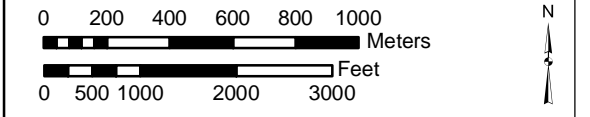


Figure 2 FEMA map.



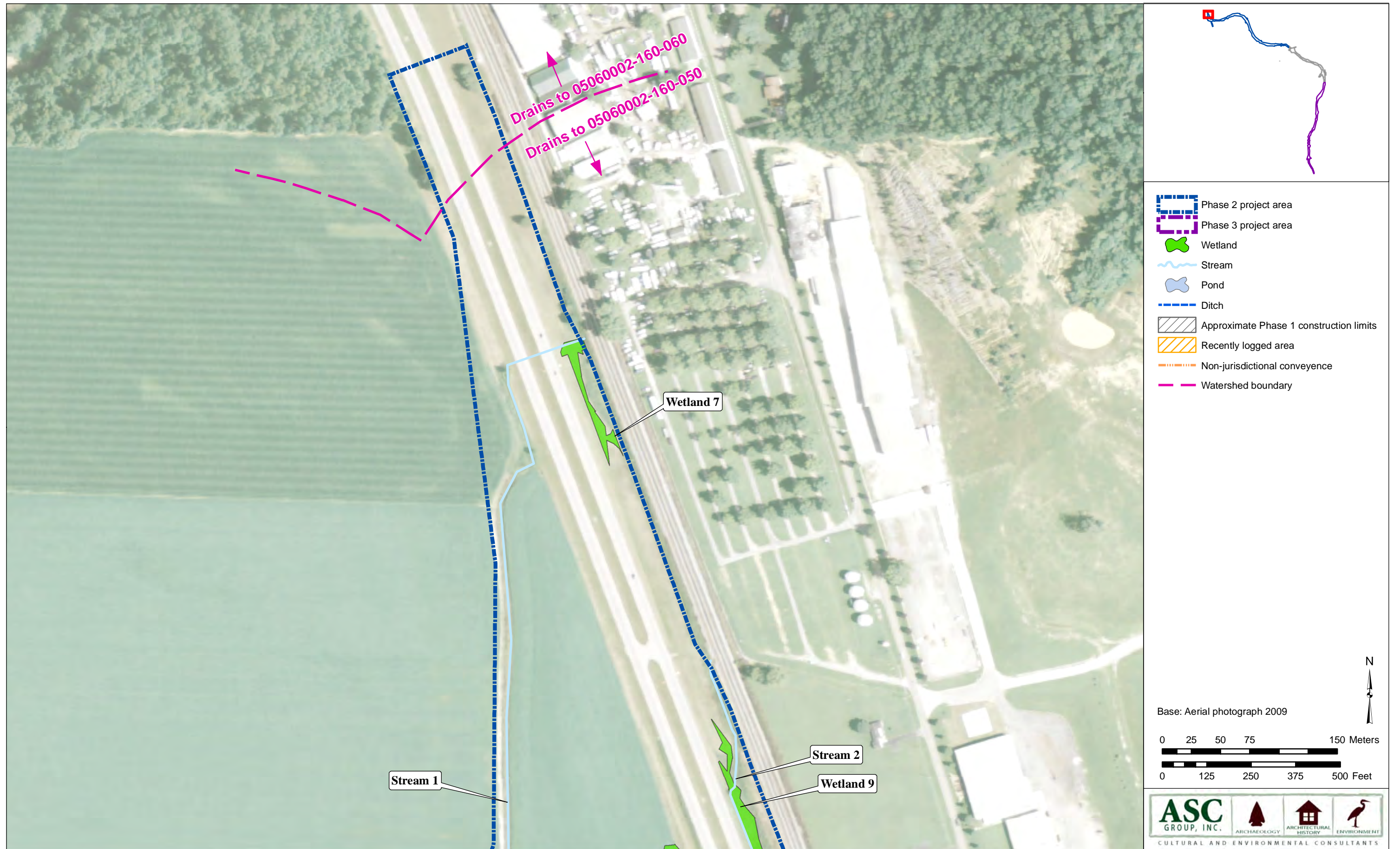


Figure 3 Survey Results. (30 sheets)





Figure 3 Survey Results. (30 sheets)





Figure 3 Survey Results. (30 sheets)





Figure 3 Survey Results. (30 sheets)



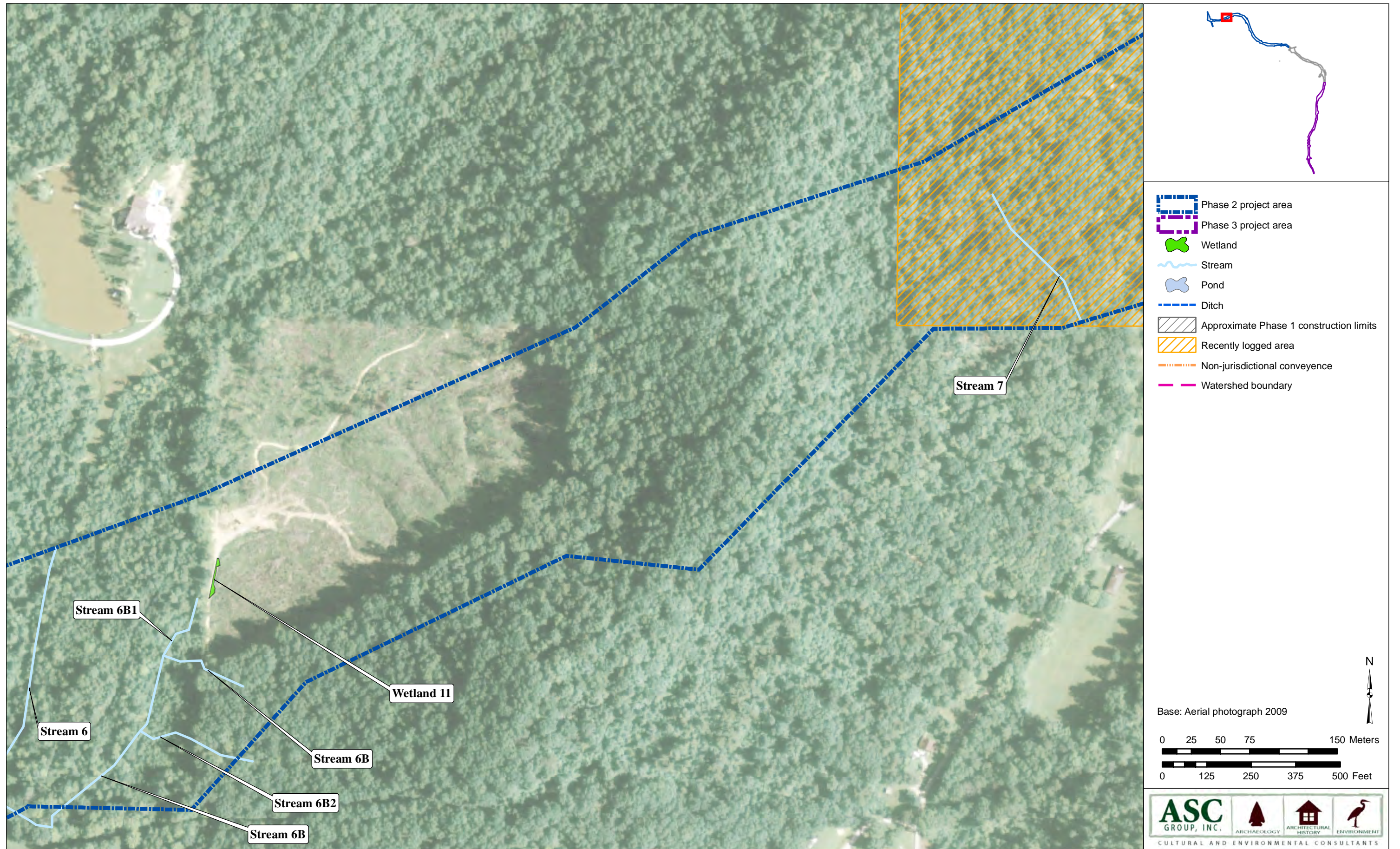


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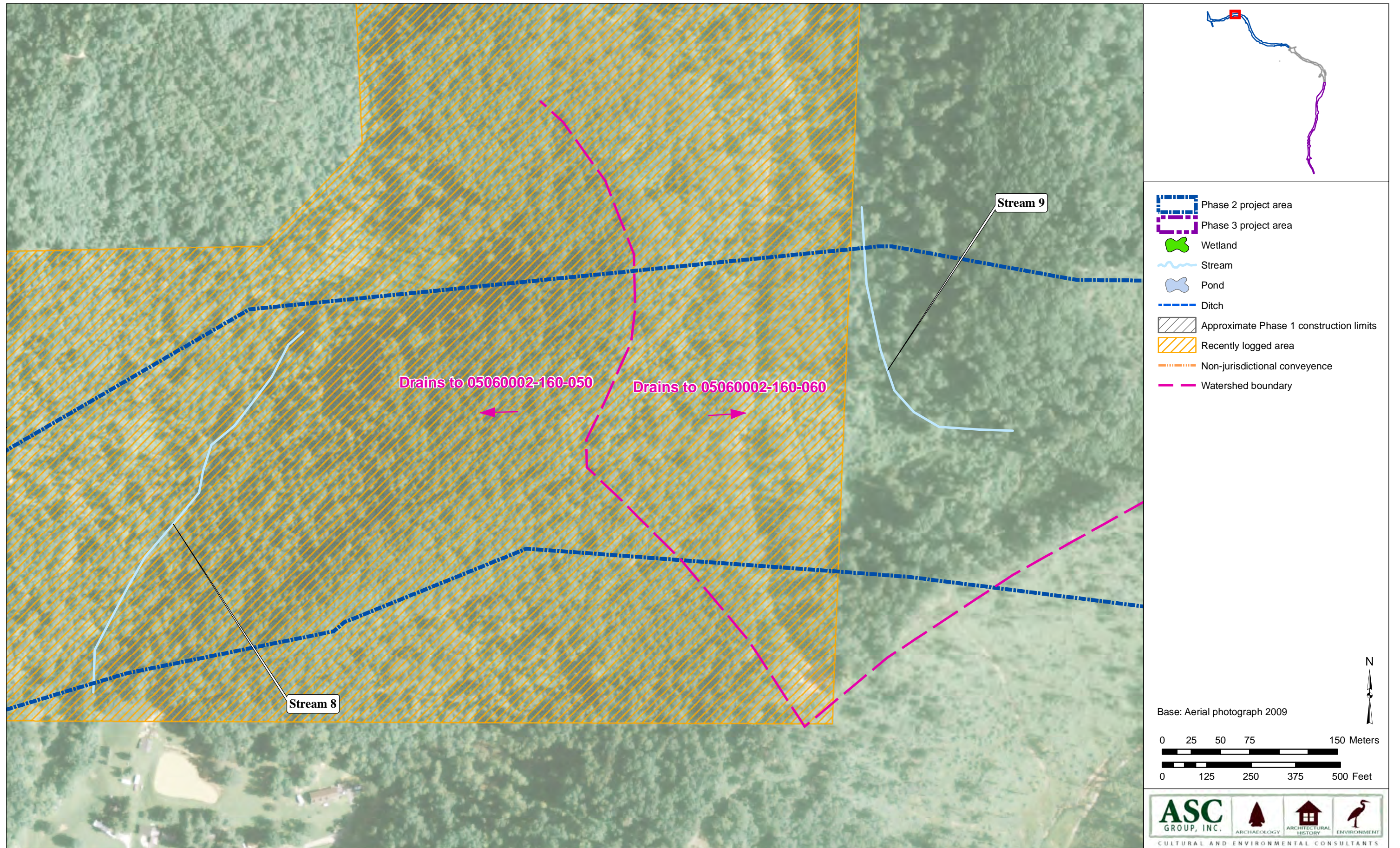


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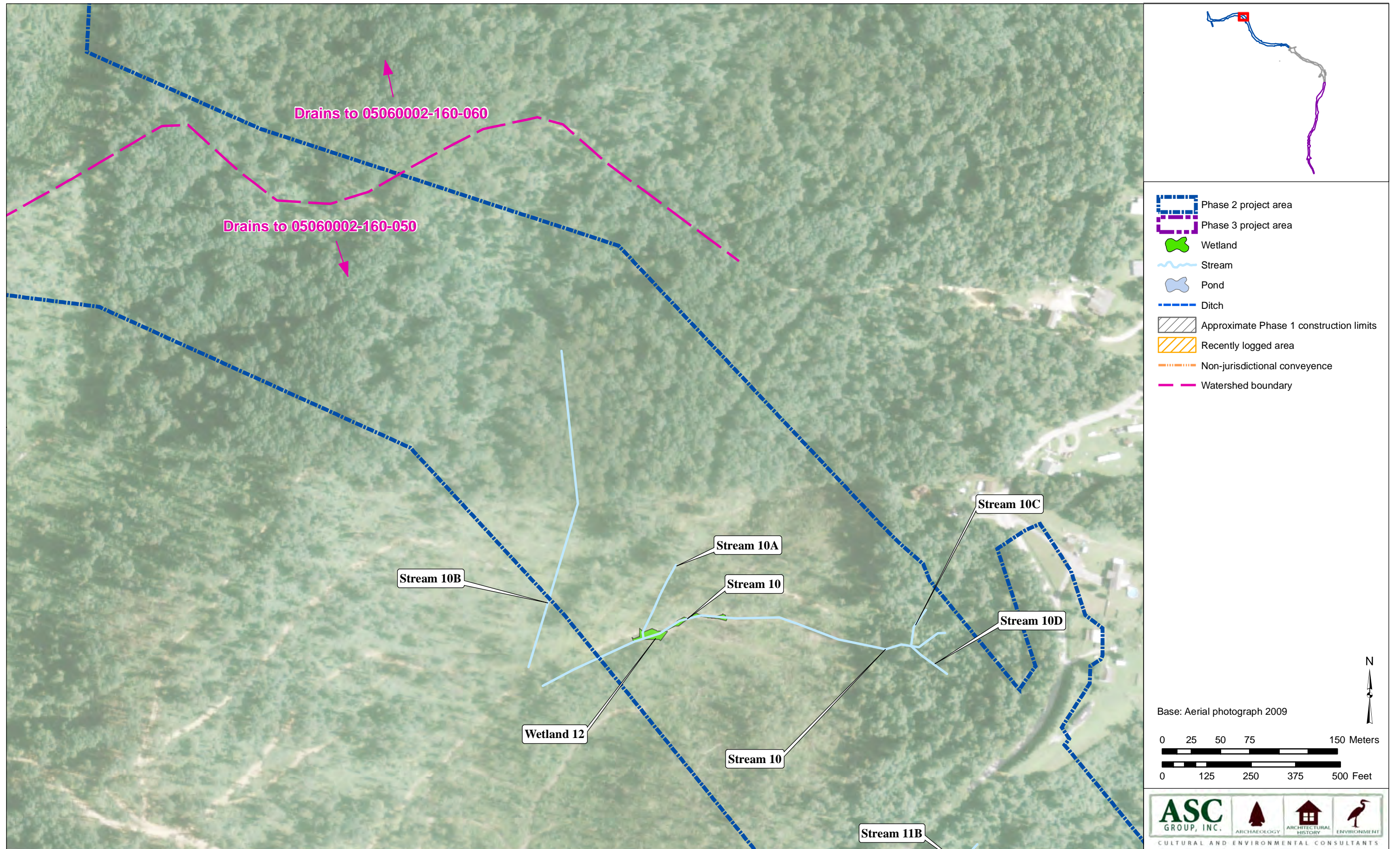


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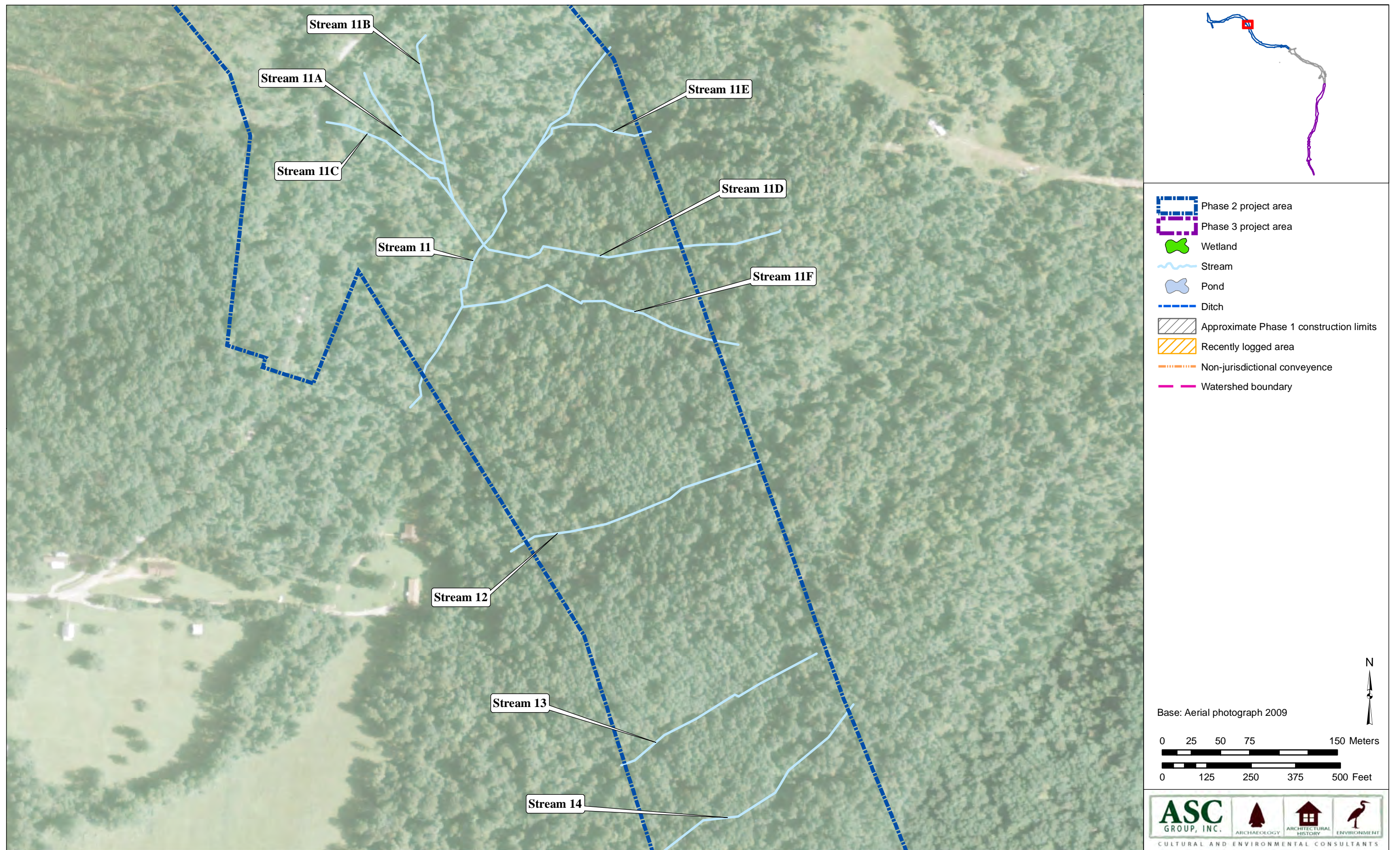


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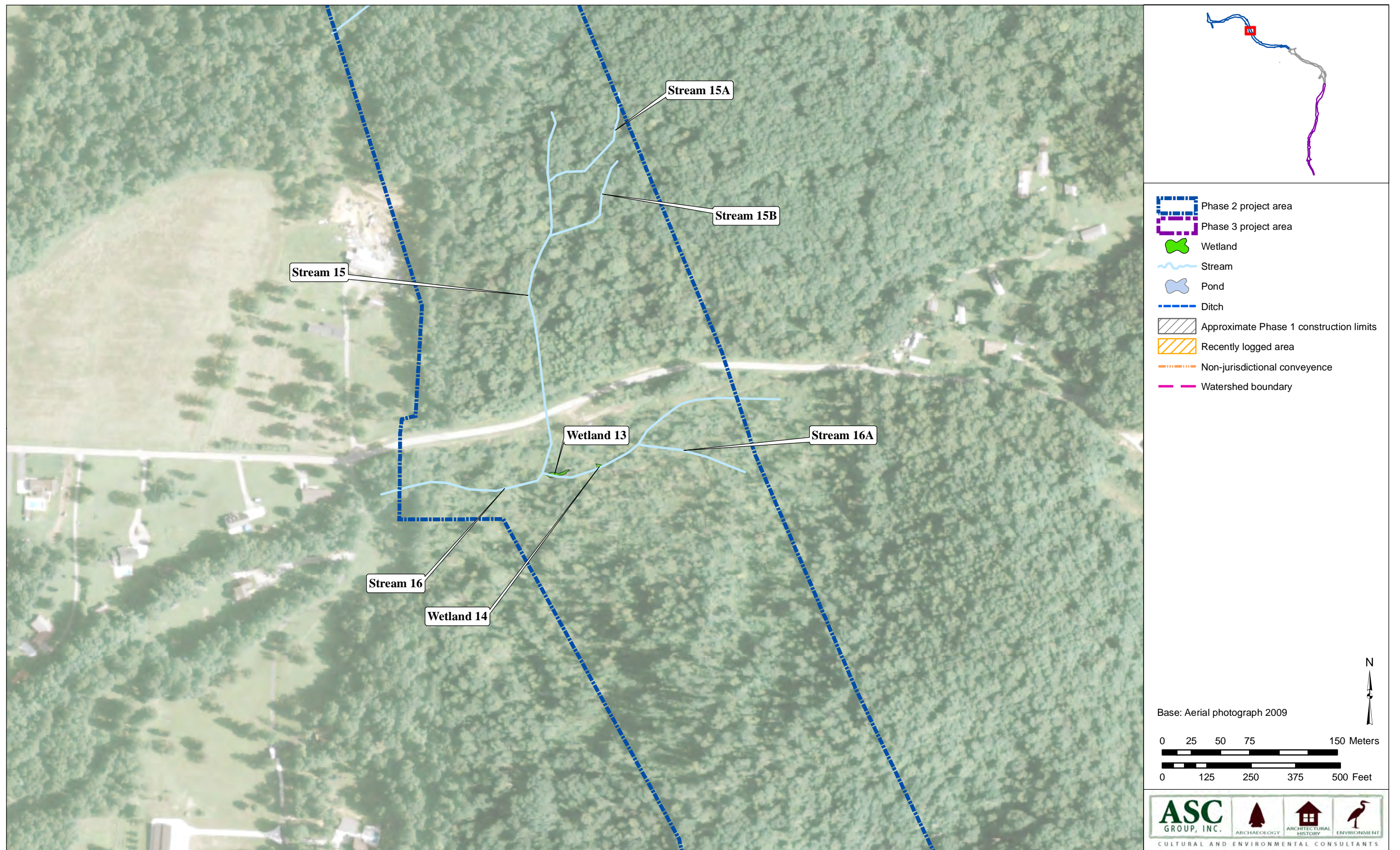


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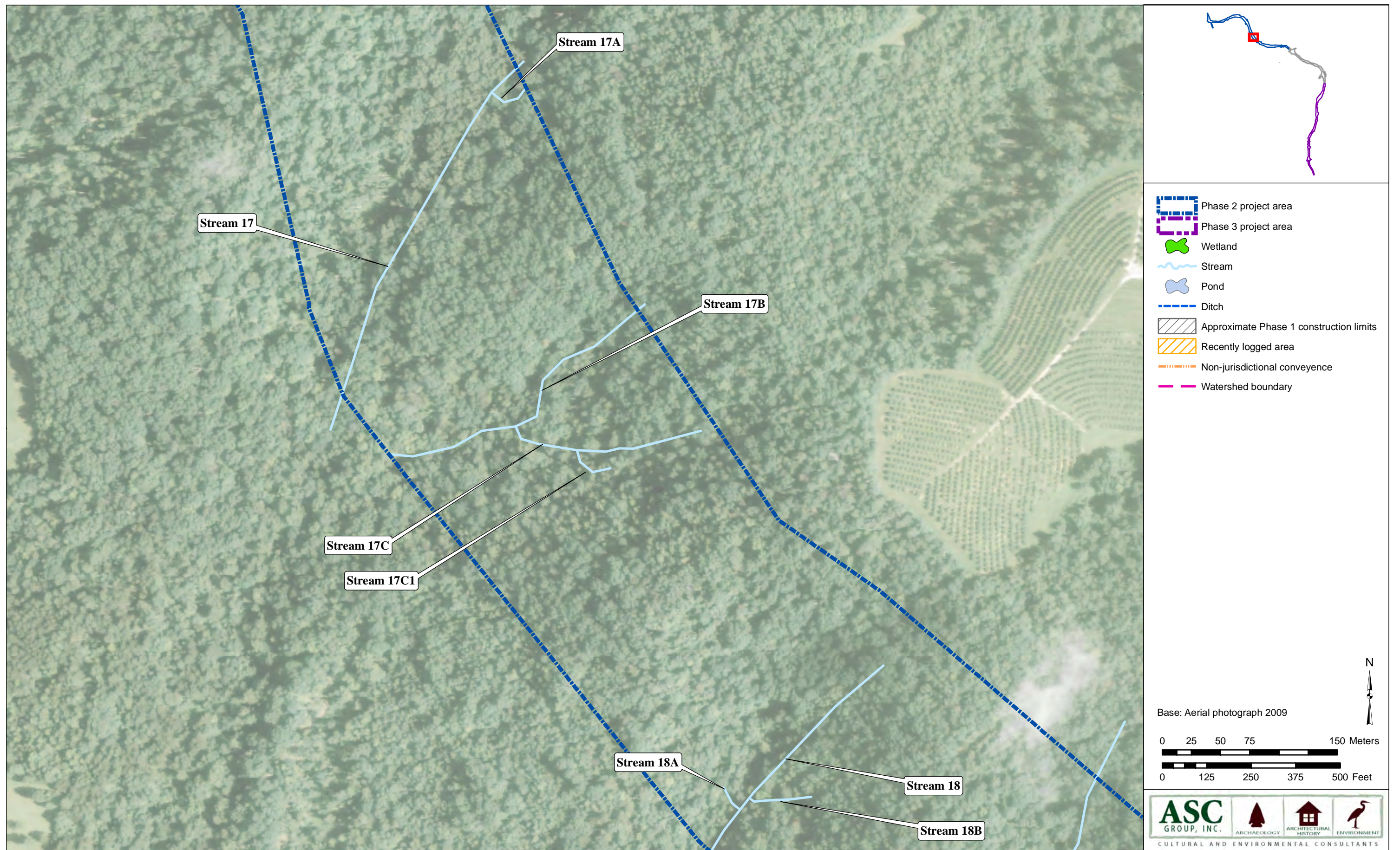


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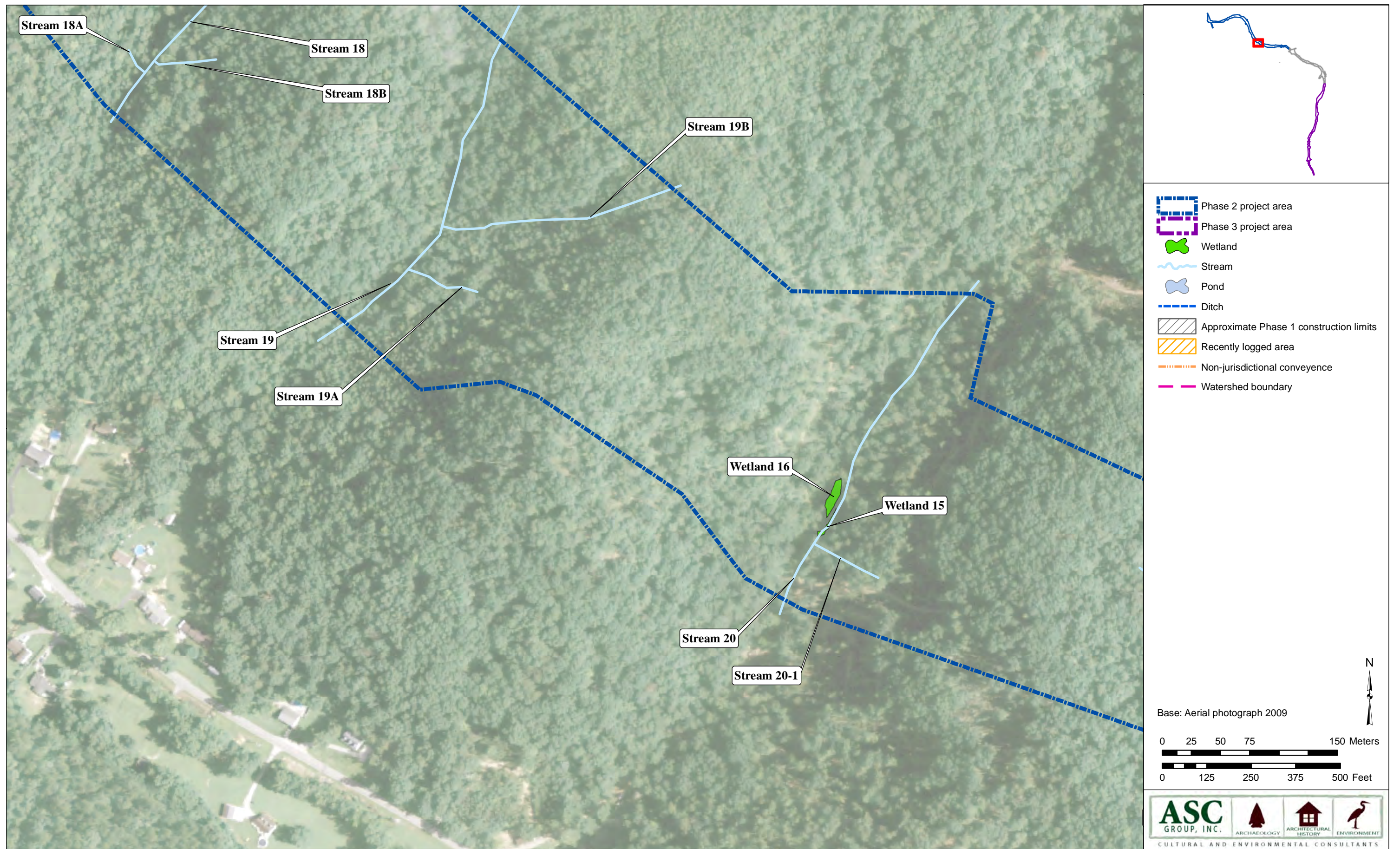


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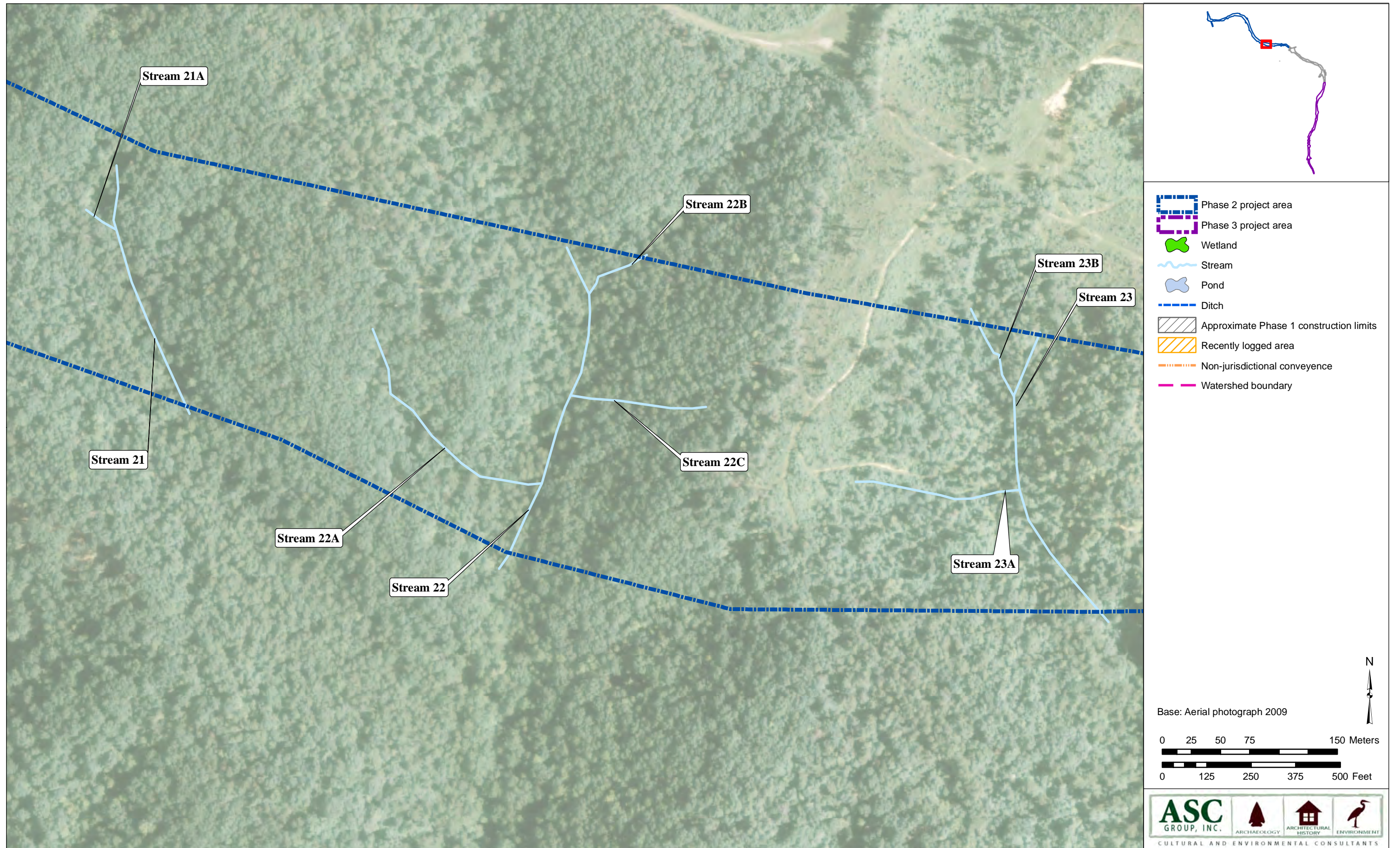


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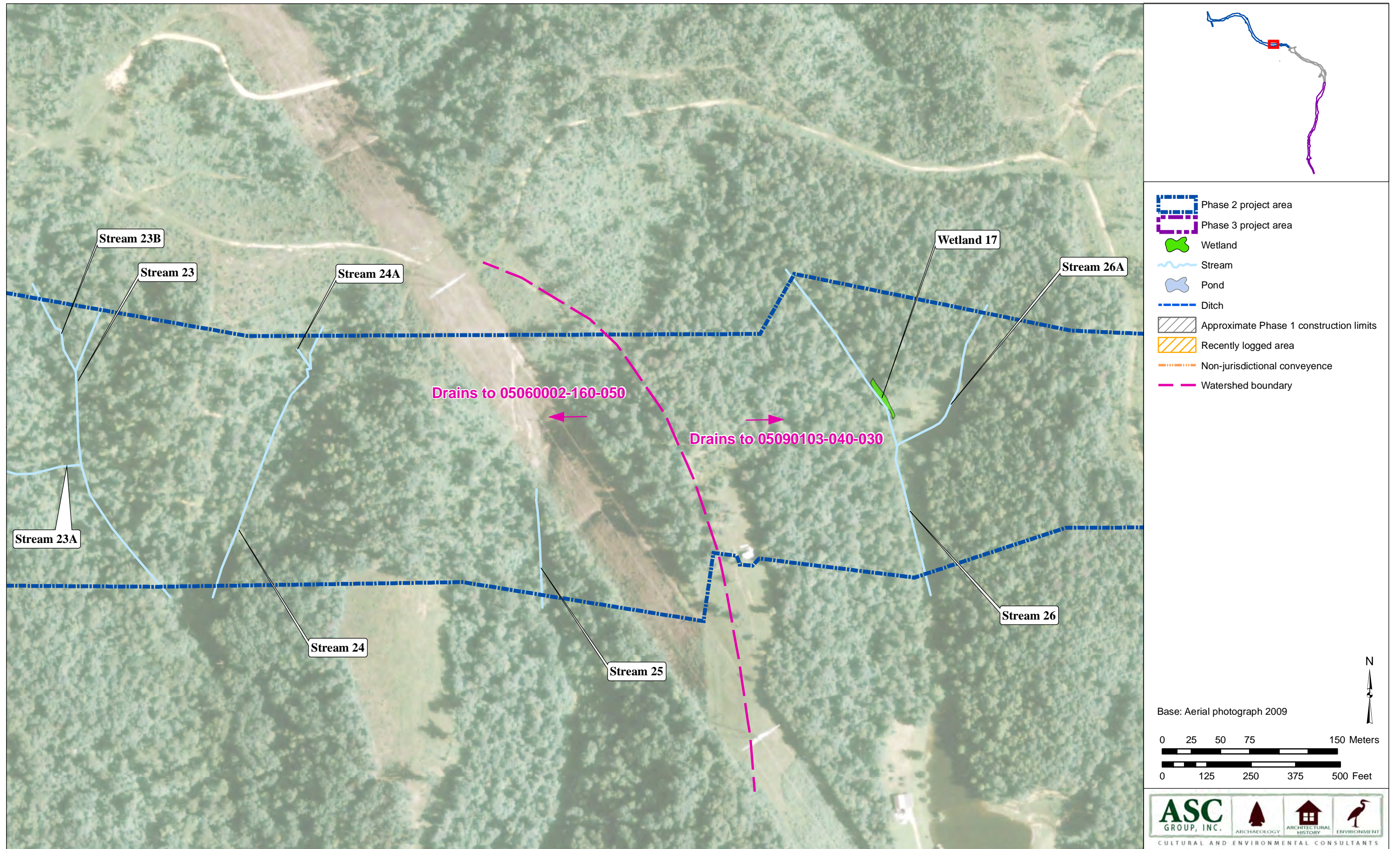


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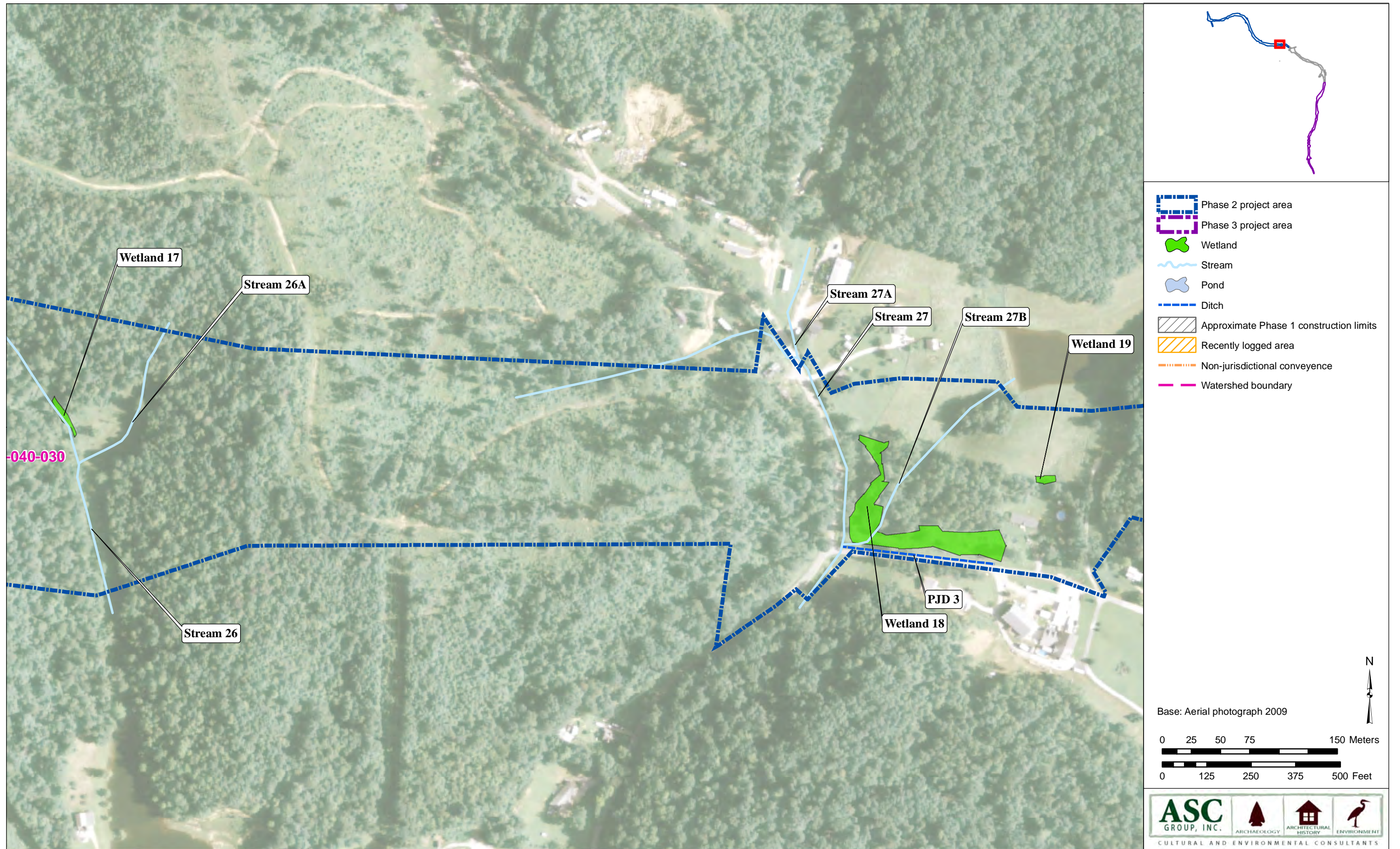


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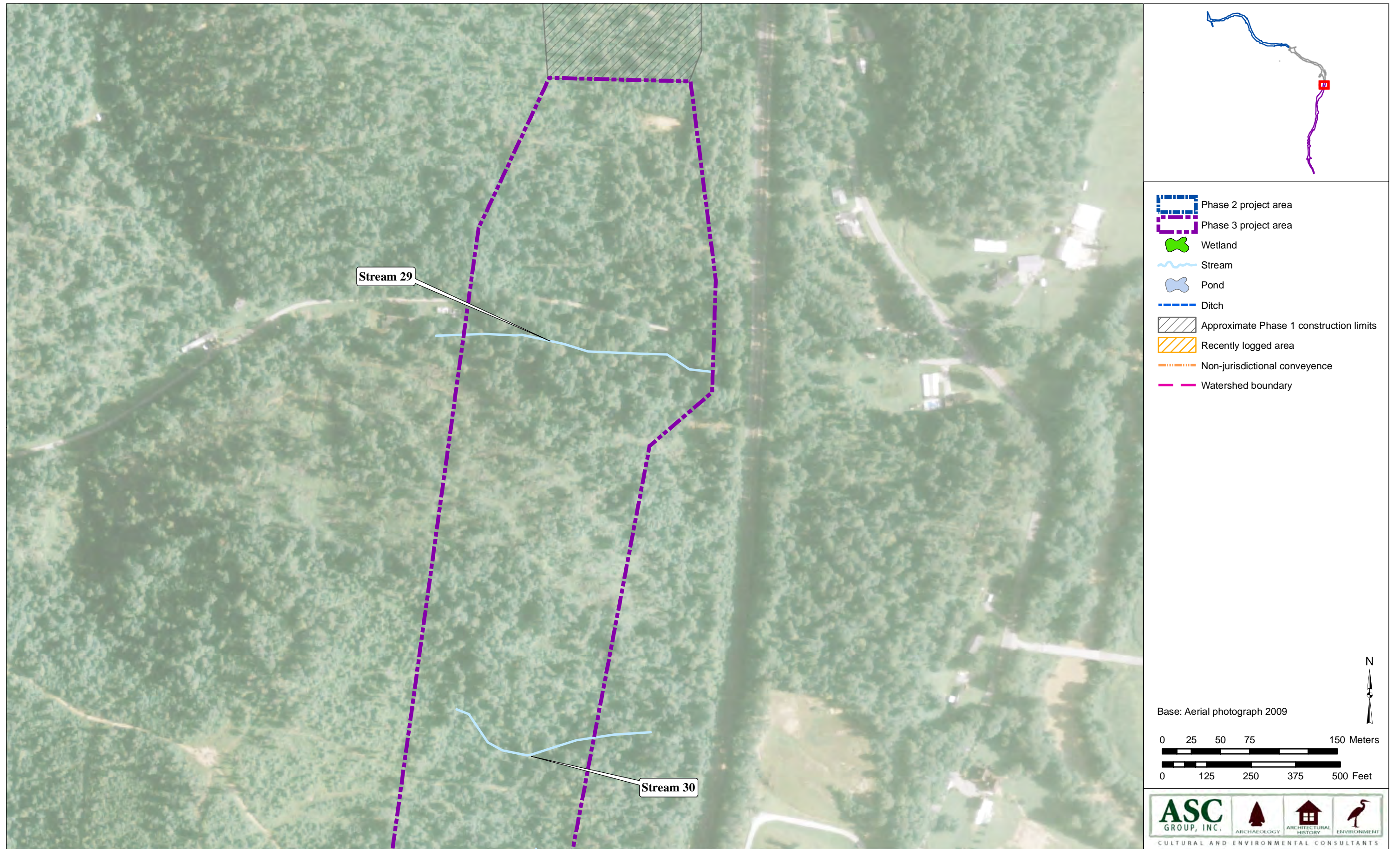


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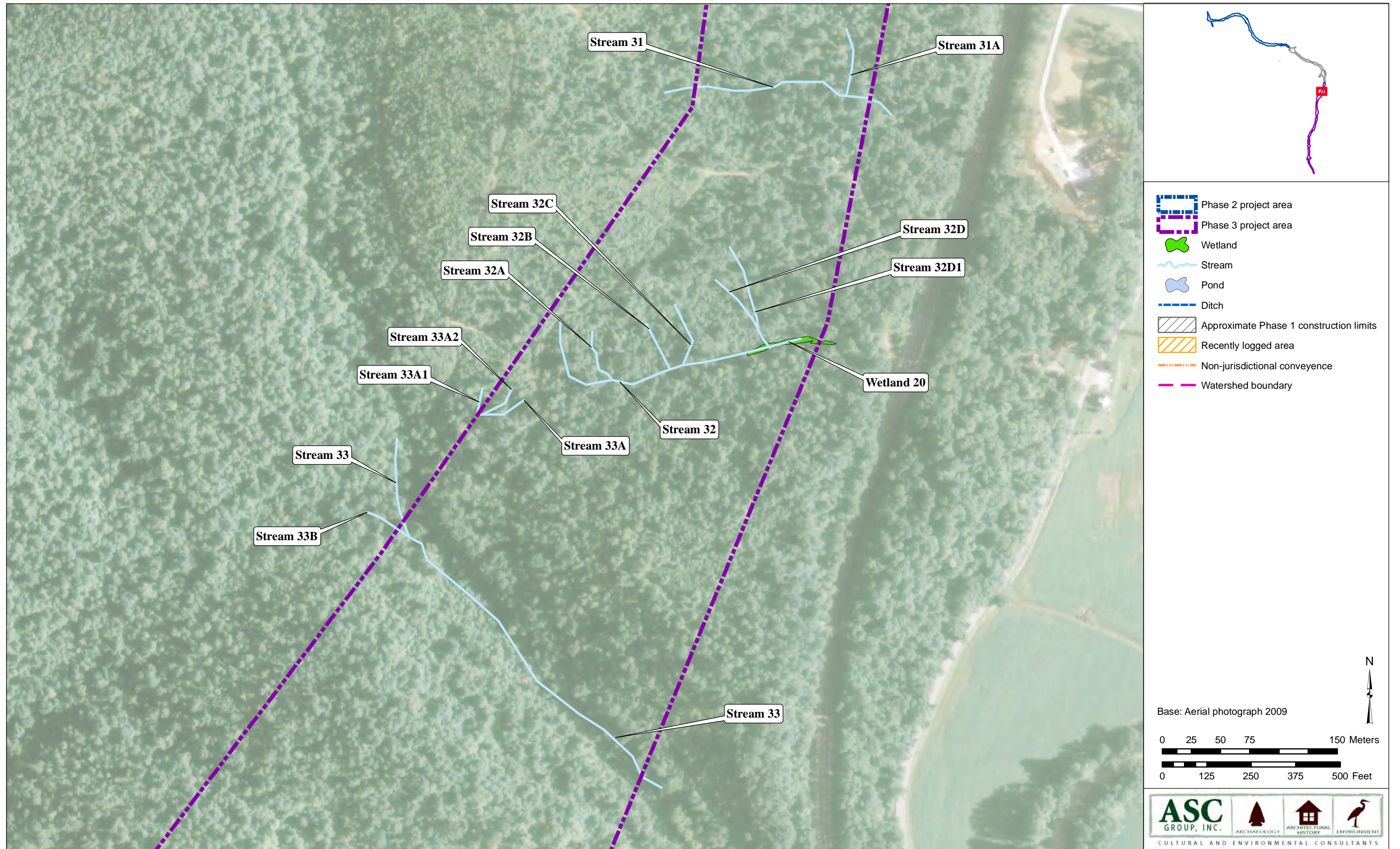


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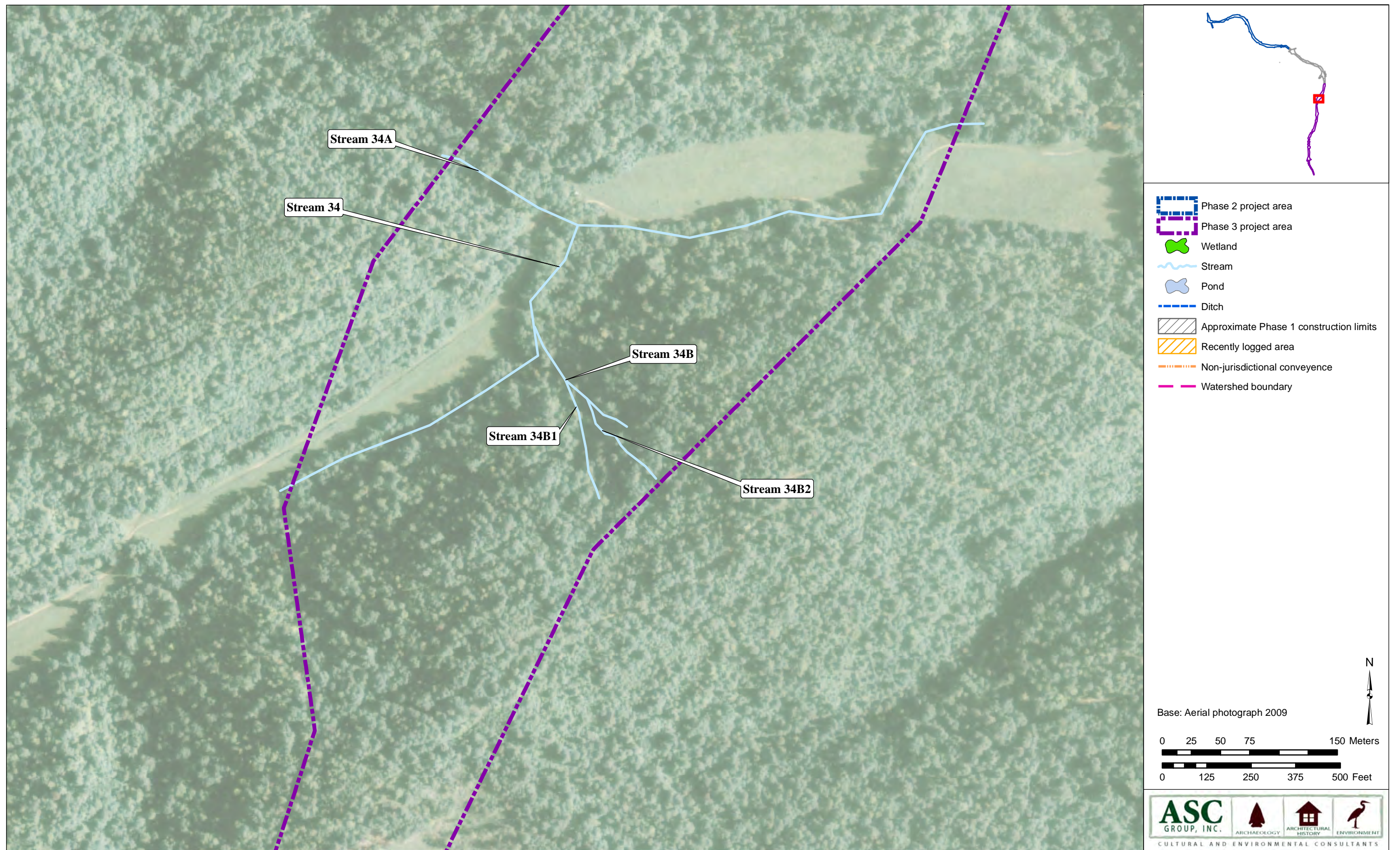


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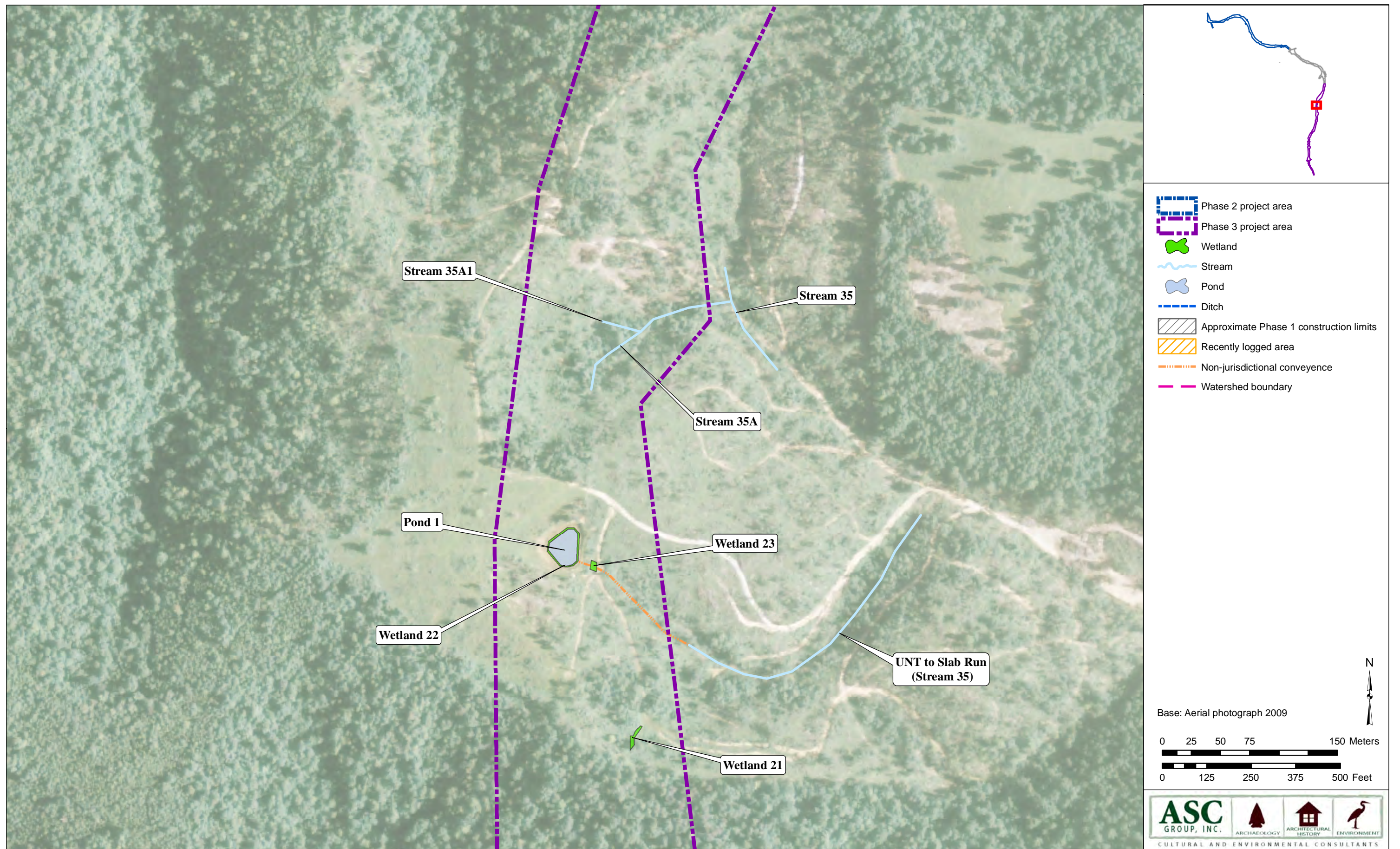


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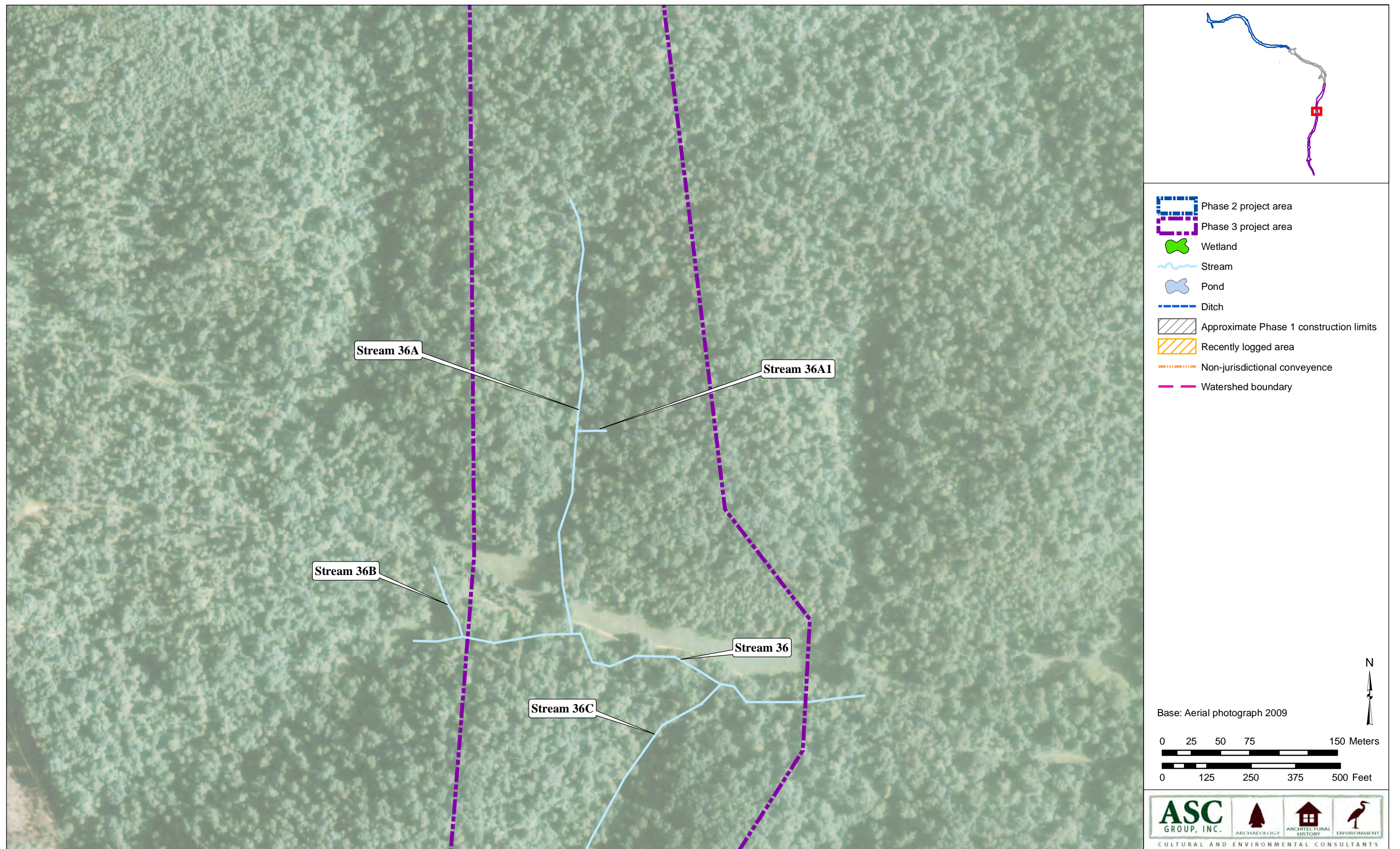


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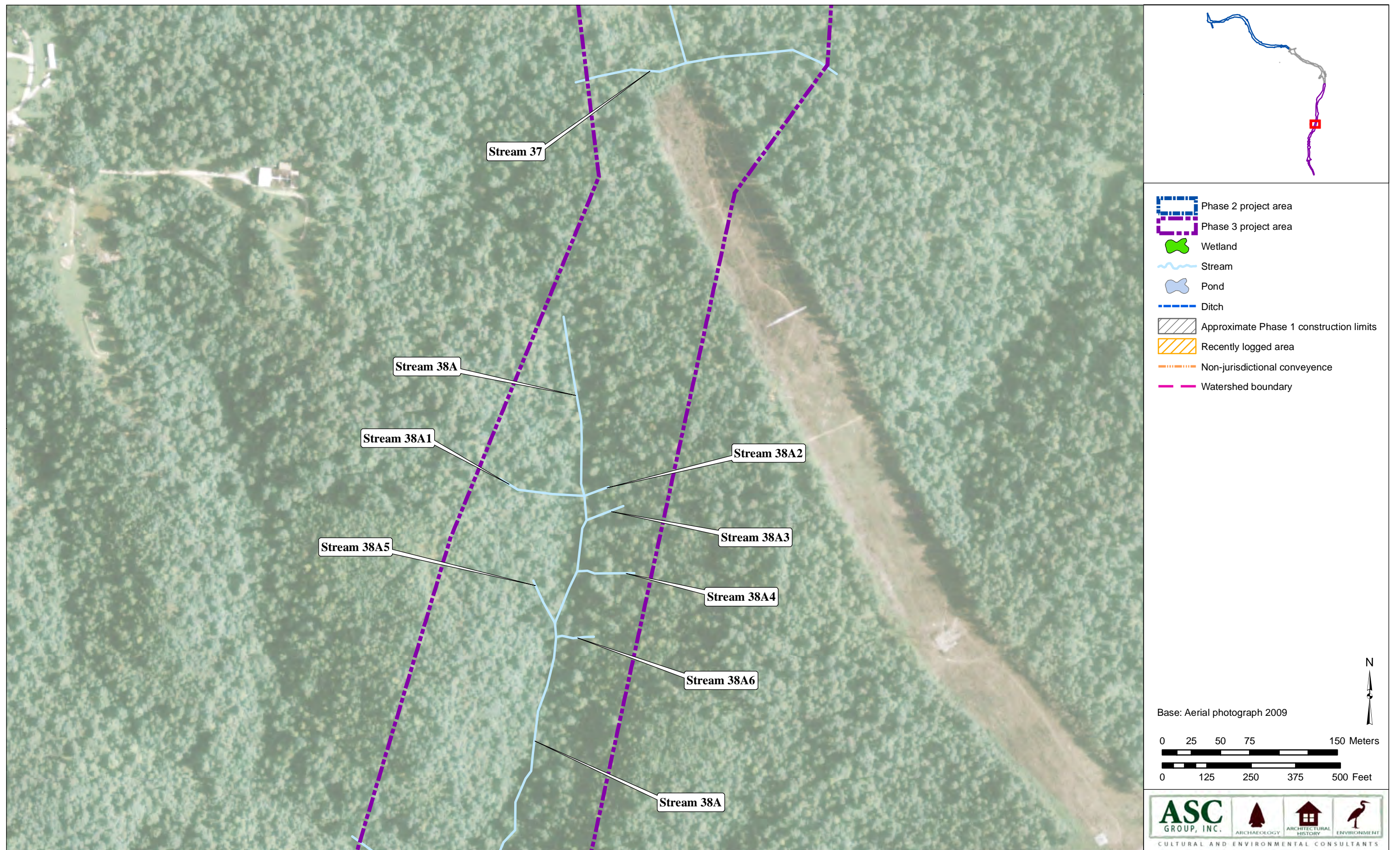


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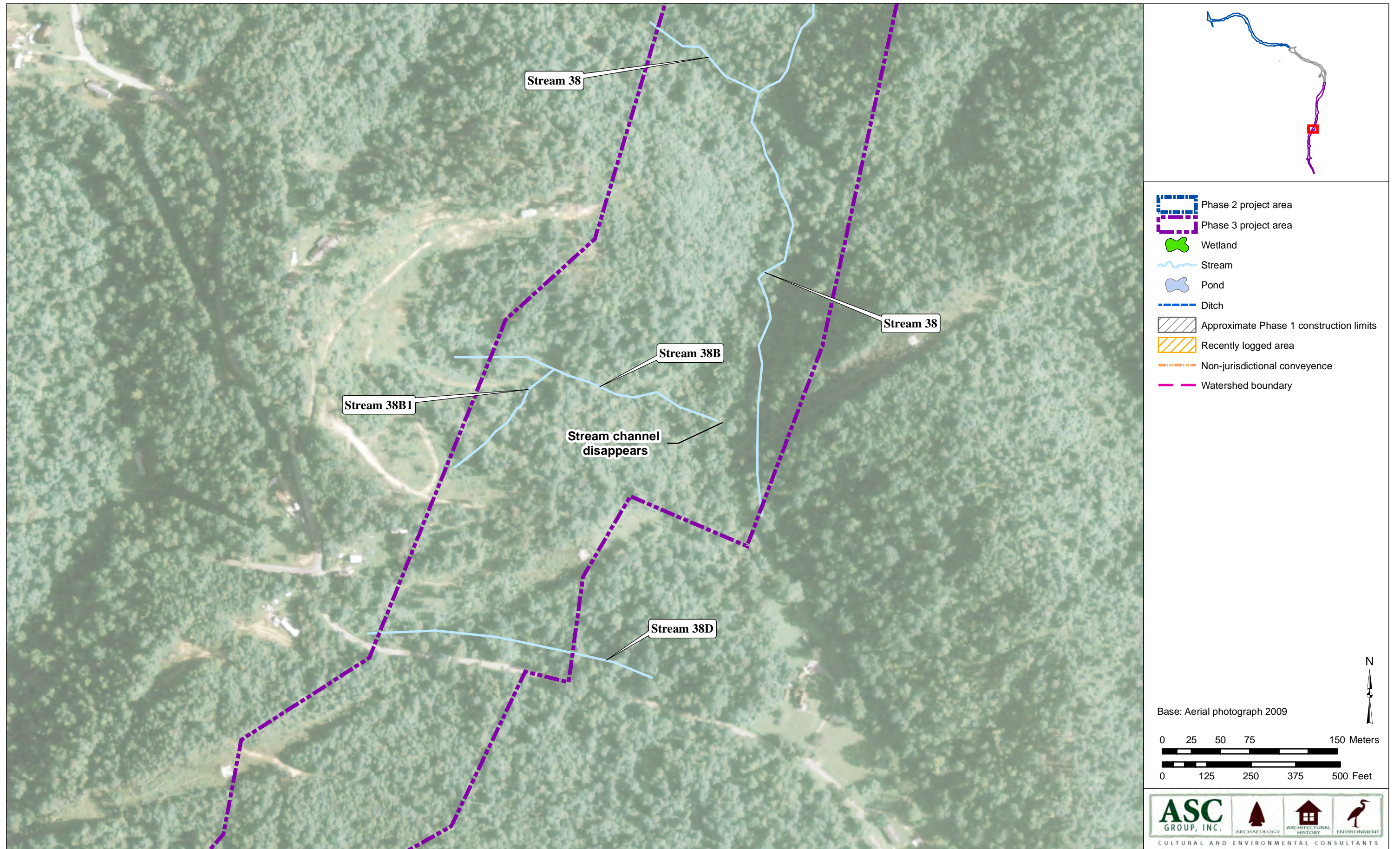


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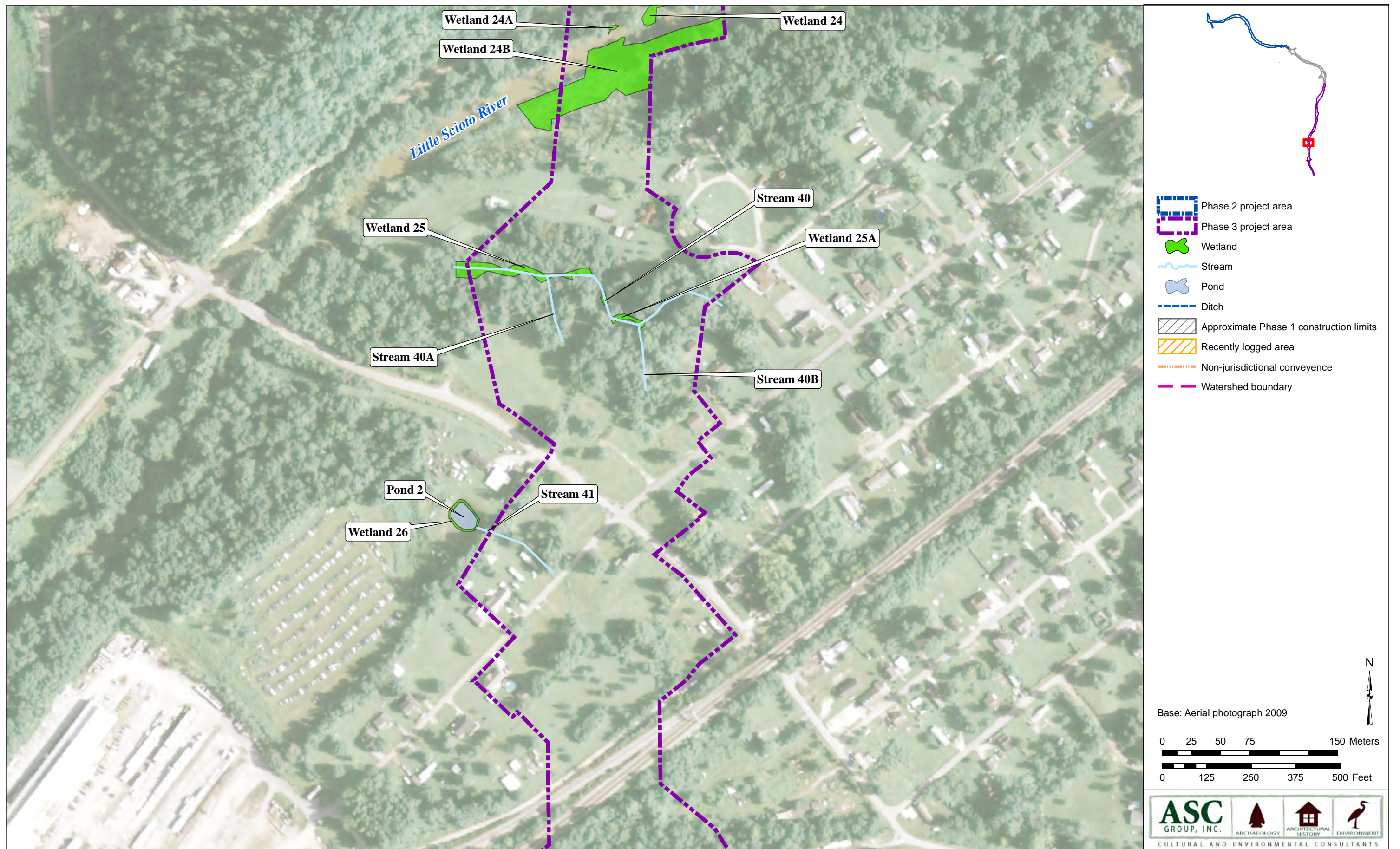


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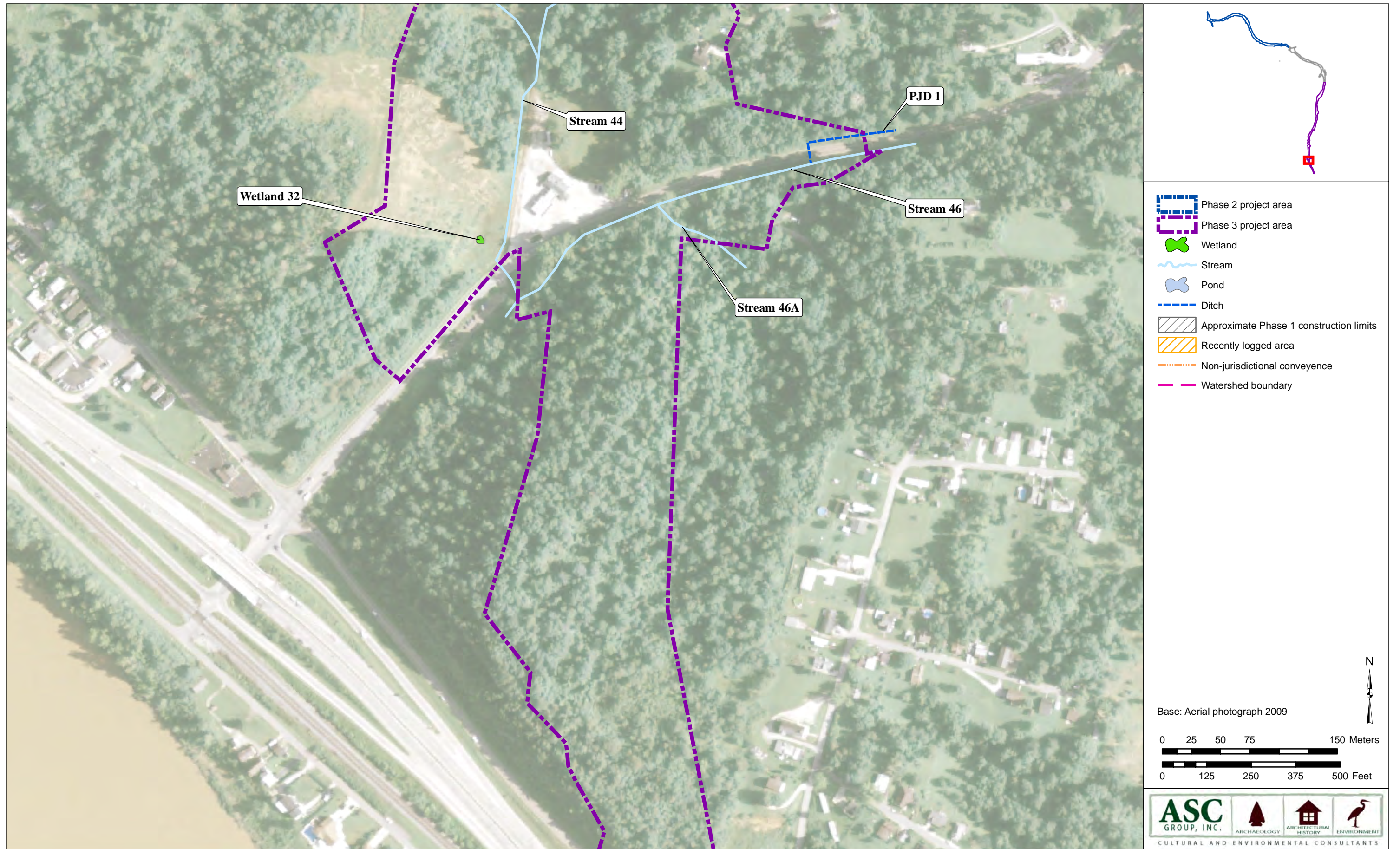


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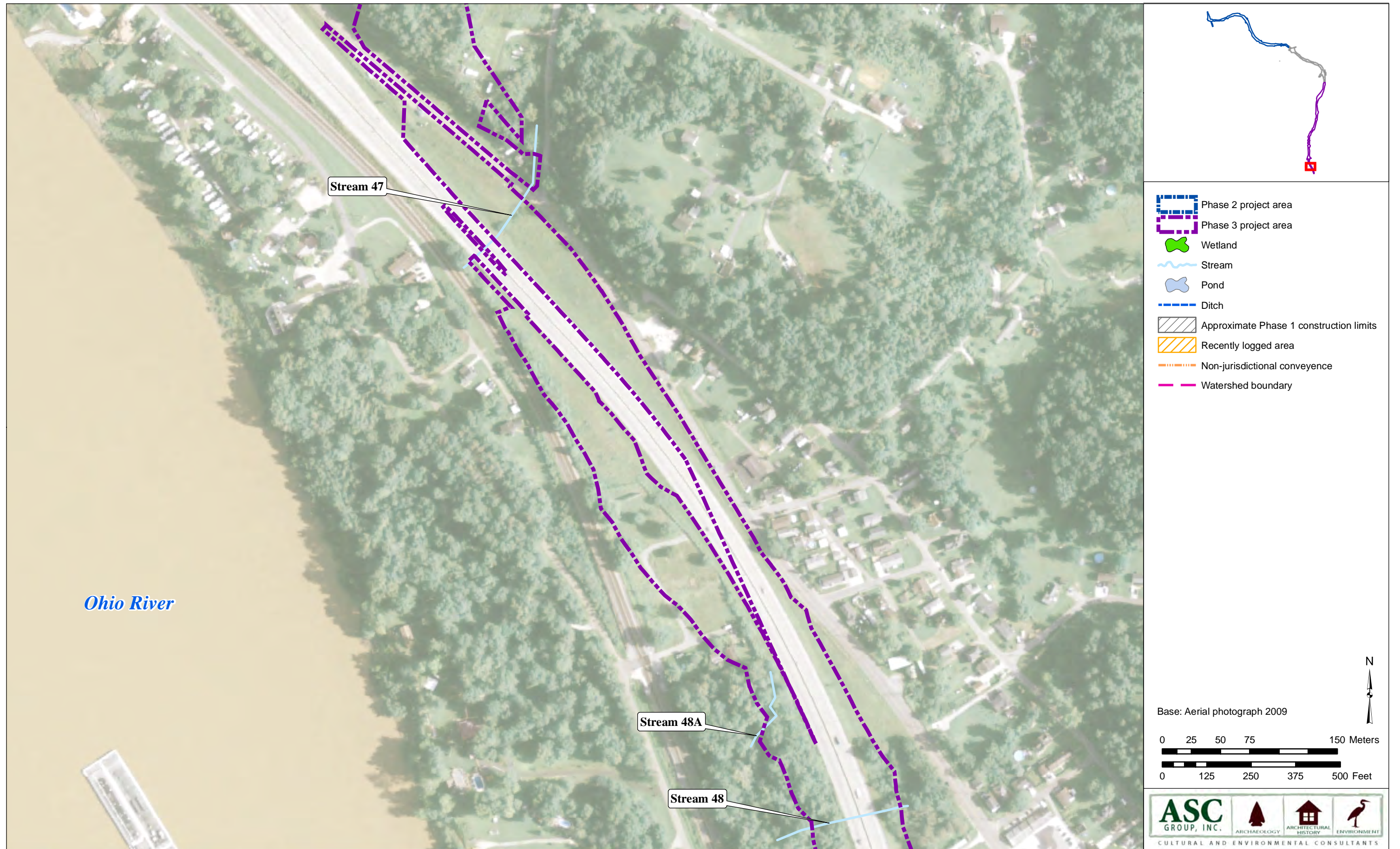


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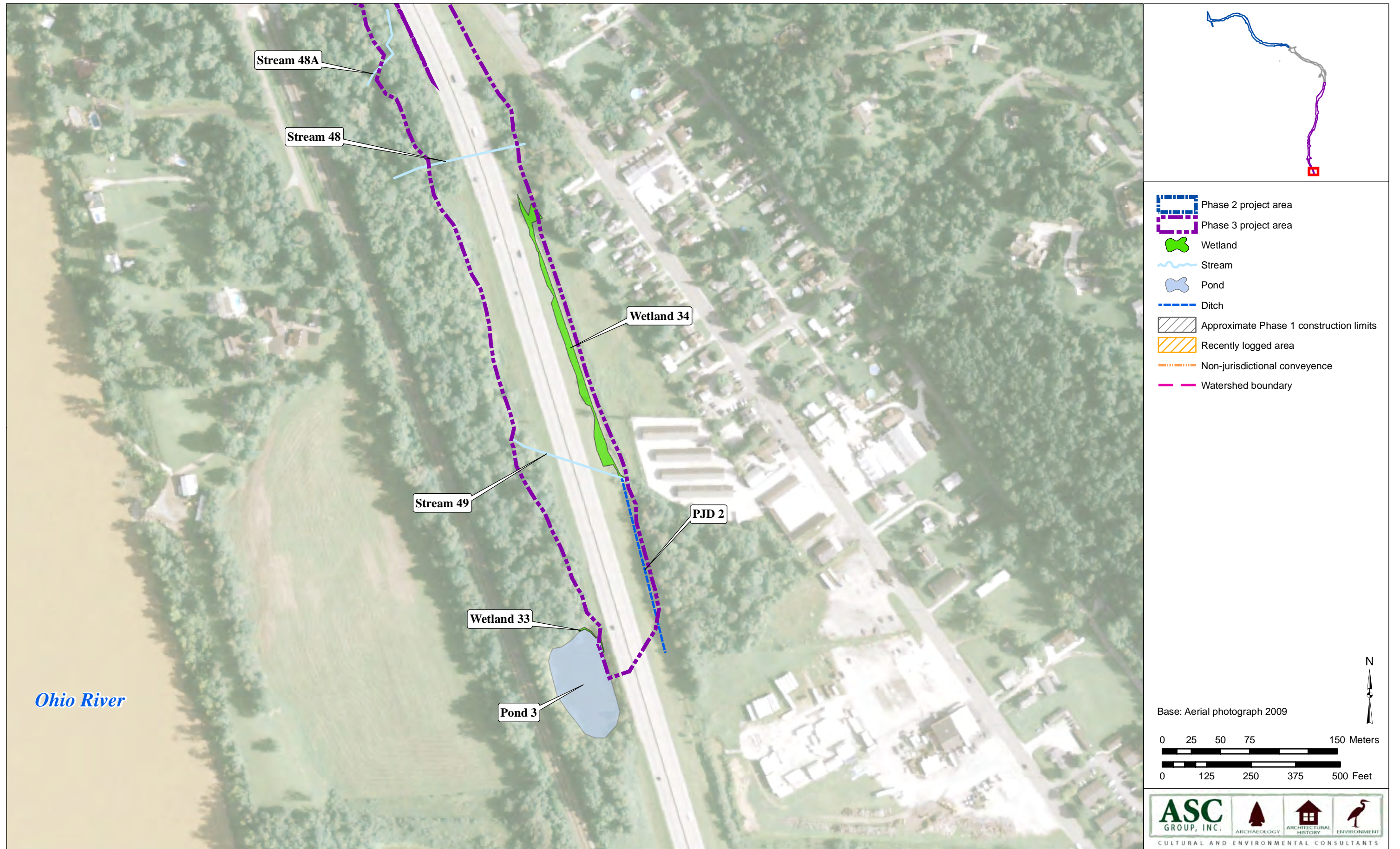


Figure 3 Survey Results. (30 sheets)

## Appendix A - Public Involvement



**APPENDIX 7-2**

**RIGHT OF WAY STATUS CHART**

**SCI-823-0.00 PORTSMOUTH BYPASS**

**PID Number: 19415**

**Revision Date: 12/06/2013**

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated) A ( Actual)				E (Estimated) A (Actual)		
1A	WL	DOROTHY PFEIFER	SIGNED	A	3/7/2014			A	3/7/2014	
310	WL	LINNIE STEWART , ASSIGNS & HEIRS								
325	WL	C. DAVID GODDARD	APPROPRIATION	E	3/7/2014			E	3/7/2014	
325	WD	C. DAVID GODDARD	APPROPRIATION	E	3/7/2014			E	3/7/2014	
327	WL	MICHAEL G. RIDER & REGINA RIDER GAIL A. LAW & MARK W. LAW	APPROPRIATION	E	3/7/2014			E	3/7/2014	
328	WL	BLUEMONT CORPORATION	SIGNED	A	3/7/2014			A	3/7/2014	
329	WL	LANDON W. & TONYA A. EVANS	SIGNED	A	3/7/2014			A	3/7/2014	
331	WL	PAUL SOLTIS	APPROPRIATION	E	3/7/2014			E	3/7/2014	
333	WL	MARK FITZGERALD								

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
336	WL	GREGORY W MILLER, FLORENCE SOLTIS	APPROPRIATION	E	3/7/2014			E	3/7/2014	
337	WL	PAUL SOLTIS	APPROPRIATION	E	3/7/2014			E	3/7/2014	
341	SH1	CSX TRANSPORTATION								
341	SH2	CSX TRANSPORTATION								
342	SH	MATTHEW LILLICH								
343	SH	JOHN LILLICH								
344	WL	DAVID McQUIRE	SIGNED	A	3/7/2014			A	3/7/2014	
345	SH1	CSX TRANSPORTATION INC.								
345	SH2	CSX TRANSPORTATION INC.								
345	A	CSX TRANSPORTATION INC.								
345	T	CSX TRANSPORTATION INC.								



PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated) A (Actual)				E (Estimated) A (Actual)		
346	WL	HERSCHEL E. BURKE	SIGNED	A	3/7/2014			A	3/7/2014	
346	T	HERSCHEL E. BURKE	SIGNED	A	3/7/2014			A	3/7/2014	
354	WD	JUDITH K. DALTON	SIGNED	A	3/7/2014			A	3/7/2014	
355	WD	JUDITH KAY TAYLOR AKA JUDITH KAY DALTON	SIGNED	A	3/7/2014			A	3/7/2014	
363	WL	MICHAEL & CHERYL MUSSER	SIGNED	A	3/7/2014			A	3/7/2014	
363	WD	MICHAEL & CHERYL MUSSER	SIGNED	A	3/7/2014			A	3/7/2014	CONSTRUCT 12' GRAVEL RESIDENCE DRIVE WITHIN 20' R/W PROVIDED FROM PERSHING AVE TO PCL 346
365	WL	ROBERT & MARY LOU DIALS	SIGNED	A	3/7/2014			A	3/7/2014	
365	WD	ROBERT & MARY LOU DIALS	SIGNED	A	3/7/2014			A	3/7/2014	
370	WD	LEWIS M. KENT	APPROPRIATION	E	3/7/2014			E	3/7/2014	
371	WD	JAMES MICKLES	SIGNED	A	3/7/2014			A	3/7/2014	
379	WL	ERIC & LAURA STILTNER	SIGNED	A	3/7/2014			A	3/7/2014	

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
381	WL	DENNIS & JOYCE JORDAN	APPROPRIATION	E	3/7/2014			E	3/7/2014	
382	WL	BLUEMONT CORP.	APPROPRIATION	E	3/7/2014			E	3/7/2014	
383	WL	Rose O'Brien, Patricia R. Turner, Pamela O'Brien, John David O'Brien, Margaret Elizabeth Turner, Edward A. Turner								
389	WL	C.W.G. HANNAH, (Heirs)	APPROPRIATION	E	3/7/2014			E	3/7/2014	
391	WL	ANDREW L. ELDRIDGE	SIGNED	A	3/7/2014			A	3/7/2014	
392	WL	DON HADSELL								
393	WL	PEGGY A. POTTERS	SIGNED	A	3/7/2014			A	3/7/2014	
394	WL	KIMBERLY R. SANSON	APPROPRIATION	E	3/7/2014			E	3/7/2014	
395	WL	JAMES & SYLVIA MUNION								
396	WL	CARL E. & MARK E. DAVIS	APPROPRIATION	E	3/7/2014			E	3/7/2014	
397	WL	RONALD D. CORIELL	SIGNED	A	3/7/2014			A	3/7/2014	



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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
398	WL	MICHAEL E. BLACKBURN	SIGNED	A	3/7/2014			A	3/7/2014	
399	WL	MELISSA K. MUNION (STILTNER)	SIGNED	A	3/7/2014			A	3/7/2014	
402	WL	SAMUEL & JILL WILLIAMS	SIGNED	A	3/7/2014			A	3/7/2014	
403	WL	MICHAEL E. BLACKBURN	SIGNED	A	3/7/2014			A	3/7/2014	
404	WL	RONALD CORIELL & EDITH KITZLER TRUSTEE								
405	WL	WILLIAM T. BRYAN, HAROLD R. BRYAN, BETTY GAY MAIDEN, PAMELA JOY BRYAN, PATRICIA FAYE GILLILAND, RAYMOND EUGENE BRYAN	APPROPRIATION	E	3/7/2014			E	3/7/2014	
406	WL	Harold Gampp, Ronald L. Gampp, Dale L. Gampp, Ralph W. Gampp								
407	WL	HAROLD G. WILLIAMS								
408	WL	DOUG & ERIC McLAUGHLIN	APPROPRIATION	E	3/7/2014			E	3/7/2014	
409	WL	LINDA & LYNN WESSEL	APPROPRIATION	E	3/7/2014			E	3/7/2014	
410	WL	Roger Clifford Coriell Jr., Raymond Francis Coriell, Randall Joseph Coriell, Robert Bennett Coriell, Kenneth R. Coriell Trustee of the Kenneth R. Coriell Revocable Trust U/A JUNE 11, 2004								

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
412	WL	Linda C. Wessel and Lynn R. Wessel	APPROPRIATION	E	3/7/2014			E	3/7/2014	
415	WL	David K. Coriell and Marsha K. Coriell	APPROPRIATION	E	3/7/2014			E	3/7/2014	
416	WL	Heer & Company nka Bluemont Company, Bluemont/Reynolds & Company	APPROPRIATION	E	3/7/2014			E	3/7/2014	
417	WL	CRAIG & GAYLE VEACH								
418	WL	TINA LOUISE ELDRIDGE	SIGNED	A	3/7/2014			A	3/7/2014	
419	WL	Victor D. Knore and Elsie A. Knore								
421	WL	Richard Bobst, Wanda Bobst, Jeanie Bobst								
501	WD	ODOT / JOHN MCHENRY	SIGNED	A	9/12/2007		prior to 2010	A	3/7/2014	
501A	WL	SHEELA GAST & JOHN & CANDACE McHENRY								
514	WD	ODOT / ELSA SLONE	SIGNED	A	3/15/2007		prior to 2010	A	3/7/2014	
515	WD	ODOT / JOHN EDWARDS	SIGNED	A	8/24/2007		prior to 2010	A	3/7/2014	



PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
519	WL	WILMA WALTERS	SIGNED	A	3/7/2014			A	3/7/2014	
520	WL	PAM SPURGEON	APPROPRIATION	E	3/7/2014			E	3/7/2014	
521	WL	ODOT / TERRY BLACKBURN	SIGNED	A	1/10/2008		prior to 2010	A	3/7/2014	
522A	WL	ODOT / JAMES F & ELLEN MICKLES	SIGNED	A	9/18/2007		prior to 2010	A	3/7/2014	
522B	WL	ODOT / JAMES F & ELLEN MICKLES	SIGNED	A	9/18/2007		prior to 2010	A	3/7/2014	
523	WL	ODOT / SANDRA K FETTY	SIGNED	A	11/16/2007		prior to 2010	A	3/7/2014	
524	WD	ODOT / ROBERT & MARY LOU DIALS	SIGNED	A	4/11/2007		prior to 2010	A	3/7/2014	
525	WL	ODOT / DAVID RAY KITCHEN	SIGNED	A	7/19/2007		prior to 2010	A	3/7/2014	
526	WD	ODOT / RAYMOND & IRENE BARNETT	SIGNED	A	8/15/2007		prior to 2010	A	3/7/2014	
528	WL	RONDA K. STURGILL	APPROPRIATION	E	3/7/2014			E	3/7/2014	
529	WL	GARY LEE & ANNETTE BENNETT								

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
530	WL	GARY L. & HENRIETTA FAYE BENNETT								owners will vacate the house on or before 4/1/2014
531	WL	DEBORAH M. ADAMS	SIGNED	A	3/7/2014			A	3/7/2014	
532	WL	WILLIAM L. & HILDA M. SPENCE								
533	WL	ODOT / JUDY CONLEY	SIGNED	A	5/7/2007		prior to 2010	A	3/7/2014	
534	WL	ODOT / JAMES & PAMELA KURTZ	SIGNED	A	6/5/2007		prior to 2010	A	3/7/2014	
535A	WL	ODOT / RAYMOND C & LINDA BROWN	SIGNED	A	6/22/2007		prior to 2010	A	3/7/2014	
535C	WL	ODOT / RAYMOND C & LINDA BROWN	SIGNED	A	6/22/2007		prior to 2010	A	3/7/2014	
535D	WL	ODOT / RAYMOND C & LINDA BROWN	SIGNED	A	5/14/2007		prior to 2010	A	3/7/2014	
535E	WL	ODOT / RAYMOND C & LINDA BROWN	SIGNED	A	5/14/2007		prior to 2010	A	3/7/2014	
542	WL	ODOT / PATRICIA LOUISE BURKE	SIGNED	A	4/30/2008		prior to 2010	A	3/7/2014	
543	WL	ODOT / TIMOTHY RAY COLLEY	SIGNED	A	11/18/2008		prior to 2010	A	3/7/2014	



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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
544	WL	ODOT / CONNIE S COOPER	SIGNED	A	7/30/2009		prior to 2010	A	3/7/2014	
545	WL	ODOT / MELVIN G & BETTY J DANIELS	SIGNED	A	8/19/2008		prior to 2010	A	3/7/2014	
546	WL	ODOT / CATHY LYNN HOLLAND	SIGNED	A	5/30/2008		prior to 2010	A	3/7/2014	
547	WL	ODOT / EDITH P HELLER	SIGNED	A	5/8/2008		prior to 2010	A	3/7/2014	

**SCI-823-10.13 PORTSMOUTH BYPASS**

**PID Number: 19415**

**Revision Date:12/06/2013**

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated) A (Actual)				E (Estimated) A (Actual)		
36		ROY LEE GAHM, SR	SIGNED	A	5/20/2004		PRIOR TO 2010	A	3/7/2014	
201	WL	Brian L. & Brenda S. Burchett	SIGNED	A	3/7/2014			A	3/7/2014	
202	WL	Rebecca R. Butcher	SIGNED	A	3/7/2014			A	3/7/2014	
203	WL	Raymond E. & Patricia L. Bryan	SIGNED	A	3/7/2014			A	3/7/2014	
204	WL	Raymond E. & Patricia L. Bryan	SIGNED	A	3/7/2014			A	3/7/2014	
205	WL	James & Merina Howard	SIGNED	A	3/7/2014			A	3/7/2014	
207	WL	Charles K. Carol J. Witt, Trustees								
207	WD	Charles K. Carol J. Witt, Trustees								IF DRIVE IS IMPACTED BY DESIGN, REPLACE IN KIND. MAINTAIN ACCESS TO BLUE RUN AT RESIDENCE DRIVE AT STA 19+65 RT
208	WL	Lorenzo J. & Amanda R. Bentley	SIGNED	A	3/7/2014			A	3/7/2014	
213	WL-1,	Norman A., Dennis Lee, Anthony Wayne, Kevin Paul Kenneth Dean Meadows	SIGNED	A	3/7/2014			A	3/7/2014	
213	WL-2	Norman A., Dennis Lee, Anthony Wayne, Kevin Paul Kenneth Dean Meadows	SIGNED	A	3/7/2014			A	3/7/2014	
214	WL	Virgil L. & Cheryl A. Laxton	APPROPRIATION	E	3/7/2014			E	3/7/2014	



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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
214	T	Virgil L. & Cheryl A. Laxton	APPROPRIATION	E	3/7/2014			E	3/7/2014	
215	WL	Linda G. Cox, trustee	APPROPRIATION	E	3/7/2014			E	3/7/2014	
216	WL	Danny E. Flowers	SIGNED	A	3/7/2014			A	3/7/2014	
217	WL	Shirley P. Dailey	APPROPRIATION	E	3/7/2014			E	3/7/2014	
218	WL	Joseph Ramsey	SIGNED	A	3/7/2014			A	3/7/2014	
219	WL	Curtis & Glenna Schuler Hannah	SIGNED	A	3/7/2014			A	3/7/2014	
220	WL	Charles Dean Schuler	SIGNED	A	3/7/2014			A	3/7/2014	
221	WL	Mary Jane & Stephen E. Burchett								
222	WL	Mike & Kim Bradley; John W. & Sharon L. Pick	SIGNED	A	3/7/2014			A	3/7/2014	
223	WL	J&J Shelton Family, LLC								
224	WL	Leanne M. & Paul W. Fuhrmann, Trustee								
226	WL	Phyllis J. Wills & Lanette Wagner								

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
227	WL1	Robert R. & Donna M Adkins	SIGNED	A	3/7/2014			A	3/7/2014	
227	WL2	Robert R. & Donna M Adkins	SIGNED	A	3/7/2014			A	3/7/2014	
228	WL	Donald E. Stambaugh	SIGNED	A	3/7/2014			A	3/7/2014	
229	WL	Bert K. & Carla K. Carter								
230	WL	Forrest S. & Evelena Baur								
230	WD	Forrest S. & Evelena Baur								
231	WL	Steven R., Mark B. & Michael J. Reinhardt	SIGNED	A	3/7/2014			A	3/7/2014	
231	WD	Steven R., Mark B. & Michael J. Reinhardt	SIGNED	A	3/7/2014			A	3/7/2014	
231	T1	Steven R., Mark B. & Michael J. Reinhardt	SIGNED	A	3/7/2014			A	3/7/2014	CONSTRUCT 12' RESIDENCE DRIVEWAY AT STA. 22+50 RT
231	T2	Steven R., Mark B. & Michael J. Reinhardt	SIGNED	A	3/7/2014			A	3/7/2014	CONSTRUCT 12' RESIDENCE DRIVEWAY AT STA. 25+25 RT
232	WD	Jeffrey A & Deborah L Lewis	SIGNED	A	3/7/2014			A	3/7/2014	
233	WL	Joseph C. Bennett Jr	SIGNED	A	3/7/2014			A	3/7/2014	



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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
233	WD	Joseph C. Bennett Jr	SIGNED	A	3/7/2014			A	3/7/2014	
234	WD	George J. Amanda L Mayo	SIGNED	A	3/7/2014			A	3/7/2014	MAINTAIN ACCESS TO PCL 234 UTILIZING EXISTING GRAVEL DRIVES AT STA 27+00 RT AND 29+50 RT
236	WL	Eric C. Humstom	SIGNED	A	3/7/2014			A	3/7/2014	
237	WL	Scott & Ronnie West	SIGNED	A	3/7/2014			A	3/7/2014	
238	WL	Wilcox Land Finance Co., LLC	SIGNED	A	3/7/2014			A	3/7/2014	
239	WL	Laura Walters								
239	WD	Laura Walters								
240	WL	Randy Anderson	SIGNED	A	3/7/2014			A	3/7/2014	
242	WL	Wesley C. Mildred I Gammon	SIGNED	A	3/7/2014			A	3/7/2014	
244	WL1	Shirley E Newton								
244	WL2	Shirley E Newton								
245	WL	Merina J. Howard								

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
246	WL	Randy Spriggs & Betty Spriggs	APPROPRIATION	E	3/7/2014			E	3/7/2014	
247	WL	Randall Spriggs & Betty Spriggs	APPROPRIATION	E	3/7/2014			E	3/7/2014	
249	WL	Southern Ohio Mangement Corporation	APPROPRIATION	E	3/7/2014			E	3/7/2014	
250	WL	Gahm Properties, LLC	APPROPRIATION	E	3/7/2014			E	3/7/2014	
250	CH	Gahm Properties, LLC	APPROPRIATION	E	3/7/2014			E	3/7/2014	
251	WL	Darren Lebrun & Courtney Lebrun	SIGNED	A	3/7/2014			A	3/7/2014	
252	WL	Donald E. Walters & Suzanne Walters	APPROPRIATION	E	3/7/2014			E	3/7/2014	
252	CH	Donald E. Walters & Suzanne Walters	APPROPRIATION	E	3/7/2014			E	3/7/2014	
254	SH1	Norfolk Southern Railway Company								
254	SH2	Norfolk Southern Railway Company								
254	SH3	Norfolk Southern Railway Company								
254	SH4	Norfolk Southern Railway Company								



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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
254	SH5	Norfolk Southern Railway Company								
254	SH6	Norfolk Southern Railway Company								
254	SH7	Norfolk Southern Railway Company								
254	A1	Norfolk Southern Railway Company								
254	A2	Norfolk Southern Railway Company								
254	A3	Norfolk Southern Railway Company								
254	S	Norfolk Southern Railway Company								
254	CH1	Norfolk Southern Railway Company								
254	CH2	Norfolk Southern Railway Company								
254	T1	Norfolk Southern Railway Company								
254	T2	Norfolk Southern Railway Company								
257	WL	Carol & Kiyoko Lyon as trustees of Carl Lyon								

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
258	WL	Howard Brothers Farms, LLC								CONSTRUCT A 12' FIELD ACCESS DRIVE NEAR 642+50 LT ON US 23, CONSTRUCT A PAVED STANDARD U-TURN MEDIAN OPENING AT SAME STATION AS THE FIELD DRIVE. PAVEMENT COMPOSITION TO MATCH US 23
259	WL	Norman A. Meadows, Dennis L. Meadows, Anthony W. Meadows, Kevin P. Meadows, Kenneth D. Meadows, Emogene C. Pollard, Audrey Arthur, Glenn E. Meadows, Ralph Meadows, Pamela A. Smith, Curtis Meadows, Larry Meadows, Barbara Meadows Johnson, Elbert O. Meadows, Tim Coldiron, Jeanette Wildermuth								
260	WL	Audie Swartz and Tammy Swartz	SIGNED	A	3/7/2014			A	3/7/2014	
539	WL	ODOT / GARY SEXTON	SIGNED	A	12/29/2010		PRIOR TO 2012	A	3/7/2014	



**SCI-823-6.81 PORTSMOUTH BYPASS**

**PID NUMBER: 19415**

**REVISION DATE:12/6/2013**

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
1	WL	PFEIFER, DOROTHY JANICE	SIGNED	A	3/7/2014			A	3/7/2014	
1	T	PFEIFER, DOROTHY JANICE	SIGNED	A	3/7/2014			A	3/7/2014	
3	WD	BENNET, EVERETT A. & ERIC D. & BENTLEY, JENNIFER	SIGNED	A	9/21/2011			A	9/21/2011	
3	WL	BENNET, EVERETT A. & ERIC D. & BENTLEY, JENNIFER	SIGNED	A	9/21/2011			A	9/21/2011	
4	WD	MECHANICAL CONSTRUCTION CO INC	SIGNED	A	5/11/2011			A	5/11/2011	
6	WD	FAULKNER, PAUL	APPROPRIATION	E	3/7/2014			E	3/7/2014	
7	WD	OHIO RECREATIONAL PROPERTIES INC	SIGNED	A	3/24/2011			A	3/7/2014	
9	WL	LESTER, GWEN, SUCCESSOR	SIGNED	A	5/3/2012			A	3/7/2014	
9	WD	LESTER, GWEN, SUCCESSOR	SIGNED	A	5/3/2012			A	3/7/2014	
9	WD1	LESTER, GWEN, SUCCESSOR	SIGNED	A	5/3/2012			A	3/7/2014	
9A	WD	LESTER, GWEN	SIGNED	A	2/9/2012			A	3/7/2014	

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				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
9A	T	LESTER, GWEN	SIGNED	A	2/9/2012			A	3/7/2014	
9B	WD	LESTER, GWEN	SIGNED	A	3/12/2012			A	3/7/2014	
9B	T	LESTER, GWEN	SIGNED	A	3/12/2012			A	3/7/2014	
9C	WD1	LESTER, GWEN	SIGNED	A	3/12/2012			A	3/7/2014	
9C	WD2	LESTER, GWEN	SIGNED	A	3/12/2012			A	3/7/2014	
11	WL	JENKINS, DARREN C. & KIMBERLY S.	SIGNED	A	8/30/2011			A	3/7/2014	
12	WL	LESTER, JOHN S. & PATRICIA ANN	SIGNED	A	5/10/2012			A	3/7/2014	
12	SHV	LESTER, JOHN S. & PATRICIA ANN	SIGNED	A	5/10/2012			A	3/7/2014	
13	WL	ODOT / PATRICIA ADAMS	SIGNED	A	1/25/2011			A	3/7/2014	
13	SHV	ODOT / PATRICIA ADAMS	SIGNED	A	2/9/2012			A	3/7/2014	CONSTRUCT ACCESS DRIVE FOR AIRPORT BEACON WITH 6" OF CRUSHED AGGREGATE
14	WL	SAMSON, DAVID R.	SIGNED	A	8/5/2011			A	3/7/2014	
15	WL	ODOT / SPARKS, TIMOTHY R & AMBER D	SIGNED	A	11/15/2010			A	3/7/2014	



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				E (Estimated) A (Actual)				E (Estimated) A (Actual)		
15	SHV	ODOT / SPARKS, TIMOTHY R & AMBER D								CONSTRUCT ACCESS DRIVE FOR AIRPORT BEACON
22	WL	SMITH, CHARLES, CONKEL, JOSH & MICHAEL, DROUGHET, JUANITA, ET AL	SIGNED	A	8/22/2012			A	3/7/2014	
23	WL	KEN RASE REAL ESTATE	APPROPRIATION	E	3/7/2014			E	3/7/2014	
24	WL	RASE, KENNETH R.	APPROPRIATION	E	3/7/2014			E	3/7/2014	CONSTRUCT CATTLE CROSSING UNDER SR823 PER APPENDIX 7-5
24	T	RASE, KENNETH R.	APPROPRIATION	E	3/7/2014			E	3/7/2014	
26	WL	TROWBRIDGE, RICHARD, JAMES & ROBERT	APPROPRIATION	E	3/7/2014			E	3/7/2014	
27	WL	PRESTON, JOSEPH & CRYSTAL	APPROPRIATION	E	3/12/2012			E	3/7/2014	
27	T	PRESTON, JOSEPH & CRYSTAL	APPROPRIATION	E	3/12/2012			E	3/7/2014	
27	T2	PRESTON, JOSEPH & CRYSTAL	APPROPRIATION	E	3/12/2012			E	3/7/2014	
28	WL	TROWBRIDGE, RICHARD & BARBARA	SIGNED	A	9/14/2011			A	3/7/2014	
28	T	TROWBRIDGE, RICHARD & BARBARA	SIGNED	A	9/14/2011			A	3/7/2014	

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
29	WL	WEEKLY, JOSEPH D. & BETH A.	SIGNED	A	3/15/2011			A	3/7/2014	
31	WL	TROWBRIDGE, RICHARD W. & BARBARA J.	SIGNED	A	9/14/2011			A	3/7/2014	
32	WL	OLIVER, ELMER JR. & VIRGINA LEE	APPROPRIATION	E	3/7/2014			E	3/7/2014	
32	CH	OLIVER, ELMER JR. & VIRGINA LEE	APPROPRIATION	E	3/7/2014			E	3/7/2014	
34	WL	OLIVER, SCOTT D. & JANICE M.	SIGNED	A	3/15/2011			A	3/7/2014	
40	WL	YEAGLE, ANGELA SUE	SIGNED	A	5/12/2011			A	3/7/2014	
40	T	YEAGLE, ANGELA SUE	SIGNED	A	5/12/2011			A	3/7/2014	CONSTRUCT 12' RESIDENCE DRIVE FROM T.R.381
40	T1	YEAGLE, ANGELA SUE	SIGNED	A	5/12/2011			A	3/7/2014	DECOMMISSION SEPTIC SYSTEM
42	WD	DODRIDGE, RANDALL D. & SHERRY L.	SIGNED	A	4/12/2011			A	3/7/2014	
54	WL	KELLY, MARLENE	SIGNED	A	4/13/2011			A	3/7/2014	



PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
55	WD1	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	
55	WD2	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	
55	SV1	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	CONSTRUCT NEW SANITARY SEWER PER APPENDIX 7-6
55	SV2	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	CONSTRUCT NEW SANITARY SEWER PER APPENDIX 7-6
55	SV3	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	CONSTRUCT NEW SANITARY SEWER PER APPENDIX 7-6
55	T1	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	
55	T2	BOARD OF COUNTY COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/10/2012			A	3/7/2014	
56	A	CSX TRANSPORTATION INC	SIGNED	A	4/4/2012			A	3/7/2014	
56	SH1	CSX TRANSPORTATION INC	SIGNED	A	4/4/2012			A	3/7/2014	
56	SH2	CSX TRANSPORTATION INC	SIGNED	A	4/4/2012			A	3/7/2014	
56	SL1	CSX TRANSPORTATION INC	SIGNED	A	4/4/2012			A	3/7/2014	
56	SL2	CSX TRANSPORTATION INC	SIGNED	A	4/4/2012			A	3/7/2014	

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
57	T	VEACH, LARRY E. & CAROLYN SUE	SIGNED	A	2/23/2011			A	3/7/2014	
60	WL	BRINGER, ADAM & DONAFAYE, TRUSTEES	SIGNED	A	3/10/2011			A	3/7/2014	
61	PRE	BOARD OF COMMISSIONERS OF SCIOTO COUNTY	SIGNED	A	5/4/2011			A	3/7/2014	
63	WD	SHUMWAY, MACIE L.	SIGNED	A	8/29/2011			A	3/7/2014	
63	T	SHUMWAY, MACIE L.	SIGNED	A	8/29/2011			A	3/7/2014	
64	WD	CHURCH OF CHRIST	SIGNED	A	9/29/2011			A	3/7/2014	
64	T1	CHURCH OF CHRIST	SIGNED	A	9/29/2011			A	3/7/2014	
64	T2	CHURCH OF CHRIST	SIGNED	A	9/29/2011			A	3/7/2014	
65	WD	GAMPP, G. WAYNE & IRMA LEE	SIGNED	A	8/23/2011			A	3/7/2014	
65	T	GAMPP, G. WAYNE & IRMA LEE	SIGNED	A	8/23/2011			A	3/7/2014	
67	WD	CHURCH OF CHRIST, SUNSHINE CONGREGATION	SIGNED	A	5/10/2012			A	3/7/2014	
67	T	CHURCH OF CHRIST, SUNSHINE CONGREGATION	SIGNED	A	5/10/2012			A	3/7/2014	DECOMMISSION SEPTIC TANK AND CONSTRUCT NEW SANITARY SEWER PER APPENDIX 7-6



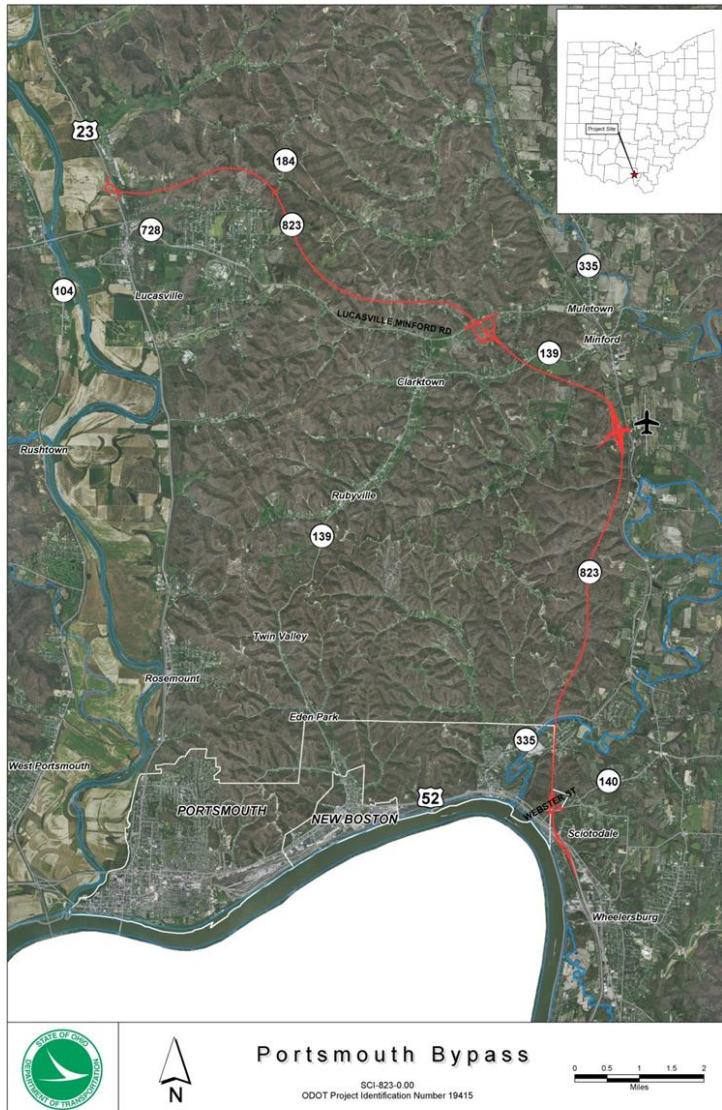
PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
68	WD	LESTER, DONNA G. & JACK E.	SIGNED	A	2/9/2012			A	3/7/2014	
68	T	LESTER, DONNA G. & JACK E.	SIGNED	A	2/9/2012			A	3/7/2014	
502	WL	ODOT / DAVID DEATLEY	SIGNED	A	10/6/2006			A	3/7/2014	
503	WL	ODOT / JACK E & FREDA M FREMONT	SIGNED	A	11/21/2006			A	3/7/2014	
504	WL	ODOT / HELEN STANLEY	SIGNED	A	3/1/2007			A	3/7/2014	
505	WL	ODOT / SONDR A HARPER	SIGNED	A	11/21/2006			A	3/7/2014	
506	WL	ODOT / DEANNA JEAN SHOEMAKER	SIGNED	A	10/25/2006			A	3/7/2014	
507	WL	ODOT / EDWARD & ELIZABETH HOWARD	SIGNED	A	2/20/2007			A	3/7/2014	
508	WL	ODOT / MARTHA K ABDON	SIGNED	A	2/2/2007			A	3/7/2014	
509	WL	ODOT / ADRIAN W & JUANITA R SLUDER, TRUSTEES	SIGNED	A	3/21/2007			A	3/7/2014	
510	WL	ODOT / NKA CAROLYN R HIGBEE	SIGNED	A	10/13/2006			A	3/7/2014	

PARCEL NO.		OWNER/NAME	PARCEL CLEAR METHOD (Signed or Appropriation)	CLEAR DATE		DATE OF 1ST ENTRY ON TO PARCEL	DEMO DATE COMPLETED	DATE AVAILABLE FOR CONSTRUCTION		COMMENTS
				E (Estimated)	A (Actual)			E (Estimated)	A (Actual)	
511	WL	ODOT / JASON W & MELISSA J HERR	SIGNED	A	4/16/2007			A	3/7/2014	
512	WL	ODOT / CINDY TURNER	SIGNED	A	12/28/2006			A	3/7/2014	
516	WL	ODOT / DANNY W & LEAH M CREMEANS	SIGNED	A	2/14/2007			A	3/7/2014	
517	WL	BOUITS, ROBERT R. & ROBIN	SIGNED	A	10/1/2010			A	3/7/2014	
527	WL	ODOT / JAMES & MINERVA HAMMOND	SIGNED	A	10/10/2008			A	3/7/2014	
549	WL	ODOT / FEDERAL NATIONAL MORTGAGE	SIGNED	A	4/10/2008			A	3/7/2014	





# Fact Sheet – Portsmouth Bypass



## Description

- The Portsmouth Bypass is a 16-mile, four-lane, divided, limited-access highway around the city of Portsmouth in Scioto County, Ohio, bypassing 26 miles of U.S. 52 and U.S. 23.
- New connections to existing major thoroughfares will be created via five new interchanges (U.S. 52, S.R. 140, Shumway Hollow Road, Lucasville-Minford Road and U.S. 23).
- The new route will bypass 26 miles of U.S. 52 and U.S. 23 through Portsmouth, avoiding 30 traffic signals, 80 intersections and providing an estimated travel time savings of 16 minutes per trip.

## History

- The Portsmouth Bypass is part of the Appalachian Development Highway System, a 3,000 mile network extending from Mississippi to New York.
- The concept of a bypass around Portsmouth was first put forward in 1964, and the current study, which culminated in the identification of the “Airport Bypass” concept, was initiated in 1999.
- Via a stakeholder-driven approach, ODOT has undertaken the necessary environmental, planning, engineering and right of way activities required to advance the project to the implementation phase.



# PPP Delivery - Portsmouth Bypass



## Purpose and Need

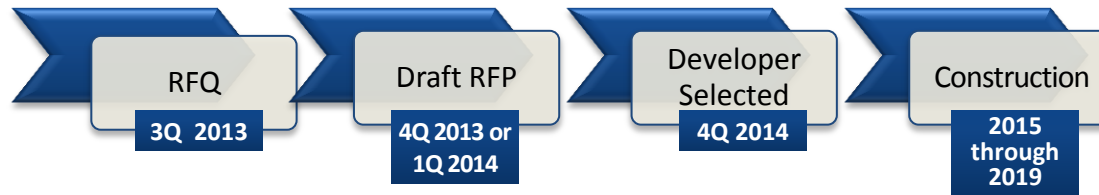
- Construction of the Portsmouth Bypass will address documented long-time geometric and safety concerns, improve regional mobility and serve as a catalyst for economic development.
- The project will improve the quality of life by drawing traffic from existing congested routes and reducing traffic on U.S. 23 and U.S. 52.
- Both the project construction and subsequent development will have a material impact on unemployment in Scioto County.
- The project will decrease the crash rate by placing traffic onto a new facility designed to safely accommodate a large volume of high-speed traffic.

## Scope of Work

- ODOT is using a Public-Private Partnership to deliver the Portsmouth Bypass.
- The selected developer will include a team that will design, build, finance, operate and maintain the bypass in accordance with contract requirements.
- Performance measurements established in the contract will be monitored to ensure that the Portsmouth Bypass will meet various criteria to ensure safety and quality, such as pavement smoothness, throughout the duration of the contract.

## Key PPP Benefits

- Accelerates delivery of project and benefits by 8 years.
- Leverages \$120M Appalachian Development Highway System funds.
- Frees ODOT budget capacity to deliver other near-term projects.
- Maximizes schedule and pricing certainty.



## ORDINANCE

Year - 2013 Number 44

Authorizing approval of the preliminary legislation submitted by the Ohio Department of Transportation (ODOT) proposing to construct a new Bypass beginning at US52, Ramp A SLM 26.59 and Ramp B, SLM 27.27 (SR 823 SLM 0.00), heading north moving in and out of the east corporation limit of the City of Portsmouth and terminating at US23, SLM 11.59 (SR823 SLM 16.78).

Whereas, in Fiscal Year 2015 the Ohio Department of Transportation proposes to construct the Portsmouth Bypass (SR823). This is a measure to expedite the highway project and to promote highway safety. Now, therefore,

BE IT RESOLVED by City Council of the City of Portsmouth, Ohio:

SECTION I. That the approval of the preliminary legislation submitted by the Ohio Department of Transportation (ODOT) proposing to construct a new Bypass beginning at US52, Ramp A SLM 26.59 and Ramp B, SLM 27.27 (SR 823 SLM 0.00), heading north moving in and out of the east corporation limit of the City of Portsmouth and terminating at US23, SLM 11.59 (SR823 SLM 16.78) is hereby authorized.

SECTION II. Consent Statement. Being in the public interest, the City of Portsmouth gives consent to the Director of Transportation to complete the above described project.

SECTION III. Cooperation Statement. The City of Portsmouth shall cooperate with the Director of Transportation in the above described project as follows:

The State shall assume and bear 100% of all the costs of the improvement.

The City of Portsmouth agrees to pay 100% of the cost of those features requested by the City of Portsmouth which are determined by the State and Federal Highway Administration to be unnecessary for the Project.

SECTION IV. Utilities and Right-of-Way Statement. The City of Portsmouth agrees that all right-of-way required for the described project will be acquired and/or made available in accordance with State and Federal regulations. The City of Portsmouth also understands that right-of-way costs include eligible utility costs.

The City of Portsmouth agrees that all utility accommodation, relocation and reimbursement will comply with the current provisions of 23 CFR 645 and the ODOT Utilities Manual.

SECTION V. Maintenance. Upon completion of the project, and unless otherwise agreed, the City of Portsmouth shall not be held accountable for any maintenance of said highway.



SECTION VI. Authority to Sign. That the Mayor of the City of Portsmouth, is hereby empowered on behalf of the City of Portsmouth to enter into contracts with the Director of Transportation which is necessary to complete the above described project.

SECTION VII. This ordinance directing administrative action as provided for in Section 12 of the Charter of the City of Portsmouth, Ohio, shall be in force and effect from and after its passage.

Passed this 28<sup>th</sup> day of October, 2013.

Attest:

  
\_\_\_\_\_  
City Clerk

  
\_\_\_\_\_  
President of Council

# PRELIMINARY LEGISLATION

Consent

Rev. 6/26/00

Ordinance/Resolution #: 44

PID No.: 19415

County/Route/Section: SCI SR 823 0.00 Ports ByPass

The following is a/an ORDINANCE enacted by the City of Portsmouth of  
(Ordinance/Resolution) (Local Public Agency)

Scioto County, Ohio, hereinafter referred to as the Local Public Agency (LPA), in the matter of the stated described project.

## SECTION I - Project Description

WHEREAS, the LPA/STATE has identified the need for the described project:

It is proposed to construct a new Bypass beginning at US52, Ramp A, SLM 26.59 & Ramp B, SLM 27.27 (SR823 SLM 0.00), heading north moving in and out of the east corporation limit of the City of Portsmouth and terminating at US23, SLM 11.59 (SR823 SLM 16.78).

NOW THEREFORE, be it ordained by the City of Portsmouth of Scioto County, Ohio.  
(LPA)

## SECTION II - Consent Statement

Being in the public interest, the LPA gives consent to the Director of Transportation to complete the above described project.

## SECTION III - Cooperation Statement

The LPA shall cooperate with the Director of Transportation in the above described project as follows:

The State shall assume and bear 100% of all of the costs of the improvement.

The LPA agrees to pay 100% of the cost of those features requested by the LPA which are determined by the State and Federal Highway Administration to be unnecessary for the Project.



**SECTION IV – Utilities and Right-of-Way Statement**

The LPA agrees that all existing right-of-way required for the described project will be made available in accordance with current State and Federal regulations.

The LPA agrees that all utility accommodation, relocation and reimbursement will comply with the current provisions of 23 CFR 645 and the ODOT Utilities Manual.

**SECTION V – Maintenance**

Upon completion of the Project, and unless otherwise agreed, the LPA shall not be held accountable for any maintenance of said highway.

**SECTION VI - Authority to Sign**

I, MAYOR of said City of Portsmouth is hereby empowered on  
(Title of Contractual Agent) (LPA)  
behalf of the City of Portsmouth of Scioto County to enter into contracts with the Director of  
(LPA)  
Transportation which is necessary to complete the above described project.

Passed: October 28, 2013.  
(Date)

Attested: Diana Rattiff  
Clerk Signature

[Signature]  
(Signature of Contractual Agent)

Attested: Diana Rattiff  
Clerk Signature

[Signature]  
(Signature of President of Council)

This ORDINANCE is hereby declared to be an emergency measure to expedite the  
(Ordinance/Resolution)  
highway project(s) and to promote highway safety. Following appropriate legislative action, it shall take effect and be in force immediately upon its passage and approval, otherwise it shall take effect and be in force from and after the earliest period allowed by law.

CERTIFICATE OF COPY  
STATE OF OHIO

City of Portsmouth of Scioto County, Ohio  
(LPA)

I, Diana Ratliff, as Clerk of the City of Portsmouth  
(LPA)  
of Scioto County, Ohio, do hereby certify that the foregoing is a true and correct copy  
of ORDINANCE adopted by the legislative Authority of the said  
(Ordinance/Resolution)  
City of Portsmouth of Scioto County on the 28<sup>th</sup> day of October, 2013,  
(LPA)  
that the publication of such ORDINANCE has been made and certified of  
(Ordinance/Resolution)  
record according to law; that no proceedings looking to a referendum upon such  
ORDINANCE have been taken; and that such ORDINANCE  
(Ordinance/Resolution) (Ordinance/Resolution)  
and certificate of publication thereof are of record in ORDINANCE, Page 44  
(Ordinance/Resolution Record No.)

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official  
seal, if applicable, this 28<sup>th</sup> day of October, 2013.

Diana Ratliff  
Clerk

(CITY SEAL)

City of Portsmouth of Scioto County, Ohio.  
(LPA)

(If the LPA is designated as a City then the "City Seal" is required. If no Seal, then a letter stating "no seal" is required to accompany the executed legislation.)

The afore going is accepted as a basis for proceeding with the project herein described.

For the City of Portsmouth of Scioto County, Ohio.

Attested: Diana Ratliff (LPA) Clerk Signature  
[Signature] Signature of Contractual Agent, Date 10/29/13

\*\*\*\*\*

For the State of Ohio

Attest: Kathleen L. Betts  
Jerry Wray New Director, Ohio Department of Transportation, Date 11/15/13





# OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 9 • 650 EASTERN AVENUE • CHILLICOTHE, OHIO 45601 • (740) 773-2691

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR • VAUGHN WILSON, P.E., DISTRICT DEPUTY DIRECTOR

July 24, 2013

Scioto County Board of Commissioners  
602 7<sup>th</sup> Street  
Portsmouth, Ohio 45662

Re: County/Route/Section: SCI SR 823 0.00 Ports ByPass  
PID No.: 19415  
Preliminary Legislation: Consent Legislation

Dear County Engineer and Board of Commissioners:

Attached for your files is a signed original copy of the above mentioned preliminary legislation.

If you have any questions, please contact Toby Smalley at (740) 774-8982.

Thank you for your assistance.

Respectfully,  
Tom Barnitz, Planning & Engineering Administrator

By:  
Toby Smalley, Program Administrator

Cc: File - Legislation File

# PRELIMINARY LEGISLATION

Consent

Rev. 6/26/00

Ordinance/Resolution #: \_\_\_\_\_

PID No.: 19415

County/Route/Section: SCI SR 823 0.00 Ports ByPass

The following is a/an resolution enacted by the Board of Commissioners of  
(Ordinance/Resolution) (Local Public Agency)

Scioto County, Ohio, hereinafter referred to as the Local Public Agency (LPA), in the matter of the stated described project.

## SECTION I - Project Description

WHEREAS, the LPA/STATE has identified the need for the described project:

It is proposed to construct a new Bypass beginning @ US52 (SR823 SLM 0.00), north and terminate @ US23 (SR823 SLM 16.78). The project includes 5 new interchanges and several new bridges. Portsmouth Bypass was previously programmed under 3 PID's. Phase 1 was originally PID 19415 & now includes all 3 phases and originally began at SLM 6.81, Shumway Hollow Rd. and terminated at SLM 10.13 Lucasville-Minford Rd. Phase 2 was under 79977 and began at SLM 10.13 Lucasville-Minford Rd. and terminated at US23 SLM 16.78 and Phase 3 was under 77366 beginning at SLM 0.00, US52 and terminating at Shumway Hollow Rd. SLM 6.81.

NOW THEREFORE, be it ordained by the Board of Commissioners of Scioto County, Ohio.  
(LPA)

## SECTION II - Consent Statement

Being in the public interest, the LPA gives consent to the Director of Transportation to complete the above described project.

## SECTION III - Cooperation Statement

The LPA shall cooperate with the Director of Transportation in the above described project as follows:

The State shall assume and bear 100% of all of the costs of the improvement.

The LPA agrees to pay 100% of the cost of those features requested by the LPA which are determined by the State and Federal Highway Administration to be unnecessary for the Project.



**SECTION VI - Authority to Sign**

Scioto County Engineer  
I, Craig Opperman of said Board of Commissioners is hereby empowered on  
(Title of Contractual Agent) (LPA)  
behalf of the Board of Commissioners of Scioto County to enter into contracts with the Director of  
(LPA)  
Transportation which is necessary to complete the above described project.

Passed: July 9, 2013.  
(Date)

Attested: [Signature]  
Clerk Signature

[Signature]  
(Signature of Contractual Agent)

Attested: [Signature]  
Clerk Signature

[Signature]  
(Signature of President of Council)

This resolution is hereby declared to be an emergency measure to expedite the  
(Ordinance/Resolution)  
highway project(s) and to promote highway safety. Following appropriate legislative action, it shall take effect and be in force immediately upon its passage and approval, otherwise it shall take effect and be in force from and after the earliest period allowed by law.

**APPROVED**  
BOARD OF COUNTY COMMISSIONERS  
SCIOTO COUNTY, OHIO  
Commissioners Journal  
Journal 85 Page 308  
Date 7-9-13

CERTIFICATE OF COPY  
STATE OF OHIO

Board of Commissioners of Scioto County, Ohio  
(LPA)

I, Jane Kitts, as Clerk of the Board of Commissioners  
(LPA)  
of Scioto County, Ohio, do hereby certify that the foregoing is a true and correct copy

of Resolution adopted by the legislative Authority of the said  
(Ordinance/Resolution)

Board of Commissioners of Scioto County on the 9th day of July, 2013,  
(LPA)

that the publication of such Resolution has been made and certified of  
(Ordinance/Resolution)  
record according to law; that no proceedings looking to a referendum upon such

resolution have been taken; and that such resolution  
(Ordinance/Resolution) (Ordinance/Resolution)

and certificate of publication thereof are of record in C.J. 85, Page 308.  
(Ordinance/Resolution Record No.)

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official  
seal, if applicable, this 9th day of July, 2013.

Jane Kitts  
Clerk

(CITY SEAL)

Board of Commissioners of Scioto County, Ohio.  
(LPA)

(If the LPA is designated as a City then the "City Seal" is required. If no Seal, then a letter stating "no seal" is required to accompany the executed legislation.)

The afore going is accepted as a basis for proceeding with the project herein described.

For the Board of Commissioners of Scioto County, Ohio.

Attested: Jane Kitts  
Clerk Signature (LPA)

[Signature], Date 7/9/13  
Signature of Contractual Agent

\*\*\*\*\*

For the State of Ohio

Attest: Kathina L. Betts

[Signature] Date 7/22/13  
Director, Ohio Department of Transportation





portsmouth-dailytimes.com



Very Good things are happening here  
Southern Ohio Medical Center



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## ODOT explains Bypass to City Council

by By Frank Lewis

20 days 2 hours ago | 204 Views | | | |



Frank Lewis  
PDT Staff Writer

The Portsmouth Bypass Project should begin by early 2015 and take approximately five years to complete at a cost of around \$400 million.

Representatives from the Ohio Department of Transportation gave a complete presentation on the project to Portsmouth City Council Monday night. Tom Barnitz, planning and engineering administrator for ODOT District 9, taped a map of the project to the fence in the court room and described the project. The significance of the presentation was that just weeks ago that City Council chose to "take no action," on a resolution supporting the project because they felt slighted by ODOT and other government entities.

Frank Lewis | Daily Times Tom Barnitz, Planning & Engineering Administrator for ODOT District 9, explains the Portsmouth Bypass Project to Portsmou...

Barnitz said the bypass will connect U.S. 52 to U.S. 23, with three full and two partial interchanges over the course of the project. He said the full interchanges will be at U.S. 23, Lucasville-Minford Road and Shumway hollow at the Scioto County Airport. The two partial interchanges will be at Ohio 140 and U.S. 52.

Barnitz said the bypass is a "PP" project, which stands for Public/Private project, meaning it is a joint effort of the state of Ohio and a conglomerate of several private companies. Barnitz said, if the state had gone the project alone, it would have had to have been done in segments and would probably have taken around 13 years, but through the PP system, the project should be completed in about five years. He said the private company would build and maintain the bypass for the next 35 years.

"We issued a Request for Qualifications in August," ODOT District 9 Deputy Director Vaughn Wilson said. "And we had four companies submit their qualifications, their experience, their background in delivering projects of this magnitude. Of those four, we shortened the list down to three. Those three will be asked probably by early 2014 to submit a proposal. In that, they will be telling us how they are going to do this project. How much it's going to cost. Perhaps if there are some innovative things that they are thinking about and trying to incorporate to either save money or time or make it better."

Barnitz said it is important for the public to know that any company selected for the project would have to meet the minimum criteria for the job.

Wilson said those submissions would be evaluated most likely in July of 2014. Then, between July and the end of 2014, the state will try to make a selection, and get all of the documents finalized.

"Hopefully then we would be working sometime perhaps in early '15, or maybe even as early as late 2014, if they so choose to go ahead and start at that point," Wilson said.

President of City Council Steve Sturgill asked Barnitz if he knew of any recent studies concerning the possible economic impact the project will have on the community, specifically the city of Portsmouth. Barnitz said the only such study he was aware of was done in 2006. He said he would check to see if any recent economic impact studies had been done, and would get back with Council. Barnitz said a study has also determined that around 26,000 vehicles a day would use the bypass, but he puts that figure at closer to the 20,000 range.

Both Fifth Ward Councilman Gene Meadows and Portsmouth City Solicitor John Haas brought up the fact that the people employed for the project will most likely be from somewhere else instead of hiring local workers. When Meadows was asked if something could be done to include local employment, Barnitz told him that was not possible, though he added he thought that the companies might need some people familiar with the area to work on the project, thus hiring some local people.

Sturgill asked what kind of feedback ODOT had received from the public.

"We've gotten some negative feedback, but we've also gotten some positive feedback as well," Barnitz said.

Since the legislation came up in the Mayor's Conference Session, First Ward Councilman Kevin W. Johnson moved that Council adopt alternative No. 1, "approve this request." Since the item is a resolution instead of an ordinance, there will be no need for three readings, and Council is expected to adopt the resolution at the next City Council meeting, on Sept. 23.

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### Council miffed over ODOT exclusion

by By Frank Lewis

26 days 1 hours ago | 399 Views | 2 | | |

Frank Lewis

PDT Staff Writer

If the Ohio Department of Transportation and other government bodies need the support of Portsmouth City Council for the Portsmouth Bypass Project, they are apparently not going to get it.

"I think it's the height of arrogance," Portsmouth City Council President Steve Sturgill said, after Portsmouth Mayor David Malone sprung the resolution on them at the last minute following the Portsmouth City Council meeting Monday.

The resolution read in part - "The LPA (city of Portsmouth) agrees that all right-of-way required for the described project will be acquired and/or made available in accordance with current State and Federal regulations. The LPA also understands that right-of-way costs include eligible utility costs. The LPA agrees that all utility accommodation relocation and reimbursement will comply with the current provisions of 23 CFR 645 and the ODOT Utilities Manual."

The resolution continued - "Upon completion of the Project, and unless otherwise agreed, the LPA shall not be held accountable for any maintenance of said highway."

Malone presented the resolution and said ODOT wanted it as an emergency issue. That is when Fifth Ward Councilman Gene Meadows asked, "Mr. Mayor can you tell us why they want our approval now. They didn't seem to want to talk with us about it previously."

The conversation went down hill from there.

The issue centered around what Portsmouth Council President Steve Sturgill said was ODOT's non-response to a request to meet with Council, and his perception that the city was not invited to the meetings, which were by invitation only.

"Actually they have met with me as the representative of the city," Malone said.

"What happens if we say no?" Meadows asked.

"I think the project would still go on," Malone responded.

"It's the height of arrogance, for the Department of Transportation and our State Representative to come and ask us to do something like this, after several of us have asked them to sit and talk with us about this issue," Sturgill added.

Sturgill said he attended one of the meetings after his employer told him he should go to find out what they were talking about.

"I asked them (ODOT) to come and talk to City Council and at least show some respect about - 'hey, the county seat, we're moving through with this bypass, and we'd like to have your concerns and your input,'" Sturgill said. "If this is a matter of formality, after the fact, this makes no sense to me."

Sturgill made reference to - "some public comment meeting that didn't get advertised."

Sturgill continued - "I wrote and asked for an audience - asked them to come here for 15 minutes. Again, they obviously didn't need input to begin with. They're going to do it no matter what we say."

Sturgill referred to the project as "bypassing our community, which is only going to lead to further financial issues for us."

Portsmouth City Solicitor John Haas said the resolution is only that the city would be responsible for anything it wants to do outside the parameters of the project.

"So if we ask for something in our section, we would have to pay for it," Haas said. "That's what we're agreeing to."

One section of the resolution reads - "The State shall assume and bear 100 percent of all of the costs of the improvement. The LPA agrees to pay 100 percent of the cost of those features requested by the LPA which are determined by the State and Federal Highway Administration to be unnecessary for the Project."

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Kevin E. Johnson then put the nail in the coffin - "I make a motion that we go with alternative No. 3 and take no action on this."

The vote was unanimous.

Frank Lewis may be reached at 740-353-3101, ext. 252, or at [flewis@civitasmedia.com](mailto:flewis@civitasmedia.com). For breaking news, follow Frank on Twitter @FrankLewisPDT.

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### ODOT issues RFQ on Portsmouth Bypass

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Wayne Allen  
PDT Staff Writer

On Friday the Ohio Department of Transportation (ODOT) issued a request for qualifications (RFQ) to potential contractors for several aspects of the Portsmouth Bypass.

"This (RFQ) really signifies one of the first major steps in seeking a contractor to design, build, finance, operate and maintain the Portsmouth Bypass," said Steve Faulkner, Press Secretary for ODOT.

The 78-page document outlines the requirements for the project.

In the introduction it states, "ODOT intends to enter into a Public Private Agreement for the design, construction, financing, operation and maintenance of the Portsmouth Bypass. The project will be a four-lane, divided, limited-access highway around the city of Portsmouth in Scioto County. The highway designated State Route 823 is comprised of 16 miles of new highway, bypassing approximately 26 miles of U.S. 52 and U.S. 23 through Portsmouth, Ohio. ODOT also proposes the long-term operations and maintenance of the constructed facility."

Under project description it states the project includes construction of five new interchanges (U.S. 52, S.R. 140, Shumway Hollow Road, Lucasville Minford Road and U.S. 23.)

"The developer will design, construct, finance, operate and maintain the new 16-mile bypass and provide all associated items, including, but not limited to, earthwork, pavements, landscaping, drainage, utilities, guardrail, barrier, retaining and noise abatement walls, bridges, culverts, traffic control, lighting and aesthetic enhancements for to completion of the facility. The developer will enter into an agreement for the project. The term of the agreement will be determined at RFP (Request For Proposals) stage, but is expected to extend up to 40 years from the commencement of the project," the RFQ states.

In section 7.3 titled Procurement Schedule it outlines the timetable moving forward with the project. The RFQ was issued June 7, potential contractors have until June 17 to submit questions about the proposed project. ODOT will have answers to the questions on June 24. Statements of qualification for the project is due July 12 with the announcement of the shortlisted proposers released on August 9.

"These firms have to demonstrate the ability and experience to design and build a construction project along with the ability to finance this construction project," Faulkner said. "We're saying this is a \$600 million dollar project so, the firm or the team that responds with a statement of qualifications must demonstrate the ability to do all of those things."

For more information about the bypass, visit [www.portsmouthbypass.com](http://www.portsmouthbypass.com) or call 888-819-8501, ext. 774-8834.

Wayne Allen may be reached at 740-353-3101, ext. 228, or [tallen@civitasmedia.com](mailto:tallen@civitasmedia.com). For breaking news, follow Wayne on Twitter @WayneallenPDT.

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### ODOT explores funding for Portsmouth Bypass

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Wayne Allen  
PDT Staff Writer

The Ohio Department Of Transportation (ODOT) has expressed interest to the U.S. Department of Transportation in receiving a Transportation Infrastructure Finance and Innovation Act (TIFIA) direct loan to help construct the Portsmouth Bypass.

According to the Federal Highway Administration website, "the TIFIA program provides Federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects of national and regional significance. TIFIA credit assistance provides improved access to capital markets, flexible repayment terms, and potentially more favorable interest rates than can be found in private capital markets for similar instruments. TIFIA can help advance qualified, large-scale projects that otherwise might be delayed or deferred because of size, complexity, or uncertainty over the timing of revenues. Many surface transportation projects - highway, transit, railroad, intermodal freight, and port access - are eligible for assistance. Each dollar of Federal funds can provide up to \$10 in TIFIA credit assistance - and leverage \$30 in transportation infrastructure investment."

ODOT spokesperson Steve Faulkner said some money has been set aside for loans that states can apply for certain projects.

"Something that makes this (Portsmouth Bypass) appealing for this funding is its nature and location geography in southeastern Ohio,"Faulkner said. "We believe seven billion dollars is available through this program and an estimated \$30 billion worth of projects have identified their interest in receiving some kind of money. Not all of the projects may be eligible to receive money. We believe this is a project that could be eligible for a portion of that money."

Faulkner said while ODOT may have identified the total cost of the project at \$819 million, ODOT is only seeking a TIFIA loan to cover 41 percent of the total project cost — which includes \$660 million in construction costs, \$13.1 million in design, \$63.7 million in reserves and \$82 million in estimated finance costs. He said a TIFIA loan is just one of many funding options ODOT is looking into.

"If we are granted the TIFIA loan there is interest on that loan that would need to be payed back. Similarly if there is a design build finance element, we would have to pay some finance charges on that," Faulkner said. "A savings would be incurred when you look at the fact that with a plan like this, we could begin construction on the Portsmouth Bypass as soon as 2014. If we don't pursue innovation or some kind of ultimate funding method. If we stuck with the typical status-quo way of doing things a project like this would be decades into the future."

ODOT announced earlier this year they would be delaying the start of the Portsmouth Bypass to explore a public/private partnership (P3). According to ODOT, the public-private partnerships will allow ODOT to work with the private sector in developing new and innovative ways to develop, finance, maintain or operate a transportation facility. Kathleen Fuller, ODOT District 9 spokesperson, said it would likely be the end of the year before it's known if a public/private partnership is an option for the Portsmouth Bypass.

"I was told a couple of weeks ago we were looking at the end of the year at the earliest and maybe December we would have a decision about the public/private partnership," Fuller said.

Phase 1 of the construction will be from Shumway Hollow Road to Lucasville-Minford Road and is slated to cost an estimated \$83 million with a time frame of three years to complete. Phase 2 of the construction has a five-year time frame for completion. Construction is set to begin at Lucasville-Minford Road to U.S. 23 and is expected to cost an estimated \$242 million. Phase 3 is estimated to begin construction in 2017. Construction is slated for Shumway Hollow Road to U.S. 52. This phase is expected to cost \$281 million.

The construction cost is an estimated \$405 million.

"If we do not do a public/private partnership we are still moving forward with phase one of the project through traditional bidding," Fuller said. "Some time next year we could potentially see construction start on Phase 1. If we go P3 we won't see construction next year because it would be too early because it would be a package deal."

Faulkner said that ODOT is looking at these options because it would otherwise take decades to construct, based upon current funding.

"We are going to continue to look at ways to be innovative when it comes to seeking financing. Even if only a portion of the funding is approved for a TIFIA loan, we would still need to come up with the remaining funding to get that

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7/25/2013

## Kasich's Jobs and Transportation Plan Advances

### TRAC OK's \$3 Billion Plan; Projects Could Begin by the End of this Year

**COLUMBUS** (Thursday, July 25, 2013) – The state's Transportation Review Advisory Council (TRAC) today gave preliminary approval to Gov. John R. Kasich's "Jobs and Transportation Plan" – a robust proposal to create as many as 60,000 new jobs and grow Ohio's economy with a \$3 billion investment that accelerates key highway projects.

"The governor's plan not only helps generate \$3 billion for Ohio's economically-critical highway system, but it accelerates needed projects in some cases by decades and it does it without a tax increase. It's an innovative approach that shakes up the status quo in a way that Ohio needs and I appreciate the TRAC's strong support so the plan can move forward," said ODOT Director and TRAC Chairman, Jerry Wray.

The TRAC voted nine to zero to advance the governor's plan, which includes \$1.5 billion generated by bonds backed by Ohio Turnpike profits. The remaining \$1.5 billion will come from federal, state and local sources.

On Monday, Kasich announced details of his recommendations at the Orlando Baking Company in Cleveland, a longtime family business that will benefit from the improved highway access created by the "Opportunity Corridor." This \$334 million project provides better interstate access to both University Circle and some of Cleveland's lower-income neighborhoods in order to help facilitate job creation. Other projects include:

- The \$440 million Portsmouth Bypass in southeast Ohio;
- The \$107 million MLK Boulevard interchange in southwest Ohio;
- The \$195 million widening of I-75 in northwest Ohio;
- The \$116 million expansion of I-80 in eastern Ohio;
- And the \$235 million next phase of the I-70/I-71 project in central Ohio.

A complete list of all projects TRAC approved for construction throughout the state in the coming years is located [here](#).

Today's TRAC vote automatically launches a written public comment period which ends Friday, August 16, 2013. Written public comments may be sent to the following addresses: [trac@dot.state.oh.us](mailto:trac@dot.state.oh.us), or to the Ohio Department of Transportation, C/O Jim Gates, 1980 West Broad Street, Columbus, Ohio 43223.

ODOT officials will present certain projects to the Ohio Turnpike and Infrastructure Commission in August. The TRAC will then vote to finalize the list in September. Construction for some of the approved projects could begin as early as this year.

The nine-member TRAC was established by the Ohio Revised Code in 1997 and provides guidance for developing a project selection process for ODOT's largest investments of more than \$12 million.

For more information, contact: [Steve Faulkner](#), ODOT Press Secretary, at 614-644-7101,

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JOHN R. KASICH, OHIO GOVERNOR      JERRY WRAY, ODOT DIRECTOR

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### **Kasich's Plan Will Invest \$3 Billion in Ohio's Transportation System**

*Many Central Ohio Projects See 13-Year Delay Eliminated,  
Portsmouth's \$440 Million Bypass Project to Begin Next Year*

**CLEVELAND** (Monday, July 22, 2013) – Gov. John R. Kasich today unveiled a robust plan for improving Ohio's transportation system with a \$3 billion investment in infrastructure over the next several years. Kasich's Jobs and Transportation plan will allow the state to eliminate decades long delays on some 41 new construction projects now slated to begin construction as soon as next year in some cases. Several projects from Columbus to the Appalachia will see long delays wiped out.

"By thinking outside the box we're attacking Ohio's highway budget deficit without a tax increase and keeping Ohio's highways in top condition," Kasich said. "Our agriculture, manufacturing and logistics industries, as well as so many others, depend on our world class highway system for their success and the \$3 billion in new funds made possible from our plan keeps them moving so Ohio's economic recovery can keep moving."

Kasich's plan uses money from the Ohio Turnpike to help build many new projects in northern Ohio and will allow many other projects to proceed much earlier than anticipated. Other central and southeast Ohio projects getting Kasich's green light include:

- Building a new highway bypassing the city of Portsmouth in Scioto County (\$440 million and project will remain on scheduled to begin as early as 2014)
- Reconstructing the interchange at I-270 and U.S. Route 33 in Franklin County (\$93.8 million, 12-year delay eliminated)
- Adding a new interchange on U.S. 33 in Carroll at Winchester Rd. in Fairfield County (\$48.7 million, 12-year delay eliminated)

Kasich's recommendations await a vote by the state's independent Transportation Review Advisory Council (TRAC) which is slated for Thursday, July 25. The TRAC was established in 1997 to provide guidance to the state for reviewing and approving ODOT's largest construction projects.

Some funds for the Jobs and Transportation plan were made possible by an innovative plan to issue bonds backed by Turnpike toll revenue dedicated exclusively to northern Ohio. The plan helps fill ODOT's budget deficit without raising taxes that would kill jobs.

Here is a complete list of projects across the state included in the governor's Jobs and Transportation Plan:

#### **CENTRAL/SOUTHEAST OHIO**

1. **Franklin County North High St. (U.S. 23)** – Add an express lane on U.S. 23 from Flint to Lazelle Rd. **Total project cost** is \$7,800,000. **Construction date under Jobs and Transportation Plan** is 2014, which keeps the **project on schedule**.
2. **Franklin County U.S. Route 23/I-270/SR 315 Interchange** – Reconstruct I-270/SR315, U.S. 23 interchange. **Total project cost** is \$94,800,000. **Construction date under Jobs and**



**Transportation Plan** is 2014, which keeps the **project on schedule**.

3. **Franklin County U.S. Route 23/I-270/SR 315**– Construction of a noise wall at I-270/Linworth Rd. **Total project cost** is \$1,200,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until 2015. **Time saved** is one year.
4. **I-70/71 Reconstruction**
  - a. **Franklin County I-70/I-71 Interchange** – Reconstruction and widening of SR315/I-70/I-71 as part of the I-70/71 project to improve safety and reduce congestion in downtown Columbus. **Total project cost** is \$86,000,000. **Construction date under Jobs and Transportation Plan** is 2017 and **without this plan would not have started** until 2023. **Time saved** is six years.
  - b. **Franklin County I-70/71** – Phase 2 (East Interchange) as part of the reconstruction and widening of I-70 and I-71 near Children’s Hospital. **Total project cost** is \$235,600,000. **Construction date under Jobs and Transportation Plan** is 2017 and **without this plan would not have started** until 2019. **Time saved** is two years.
  - c. **Franklin County I-70** – Construct a new storm sewer along I-70. **Total project cost** is \$4,000,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until 2019. **Time saved** is five years.
5. **Fairfield County U.S. Route 33** – Add a new interchange on U.S. 33 in Carroll at Winchester Rd. **Total project cost** is \$48,700,000. **Construction date under Jobs and Transportation Plan** is 2015 and **without this plan would not have started** until after 2027. **Time saved** is 12+ years.
6. **Franklin County I-270/U.S. 33** – Phase 1 of the reconstruction of the I-270 and U.S. 33 interchange to increase safety and ease congestion. **Total project cost** is \$93,800,000. **Construction date under Jobs and Transportation Plan** is 2015 and **without this plan would not have started** until after 2027. **Time saved** is 12+ years.
7. **Scioto County Portsmouth Bypass** – Construction of a new bypass around the city of Portsmouth. **Total project cost** is \$440,500,000. **Construction date under Jobs and Transportation Plan** is 2014, which keeps the **project on schedule**.

## **NORTHEAST OHIO**

1. **Cuyahoga County Innerbelt Bridge** – Demolition of existing Innerbelt Bridge and construction of eastbound bridge. **Total project cost** is \$340,000,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until 2016. **Time saved** is two years.
2. **Cuyahoga County Cleveland Innerbelt** – As part of the reconstruction of the Cleveland Innerbelt, reconstruct and reconfigure SR14 (Broadway) at I-77 to allow for future widening of I-77. **Total project cost** is \$37,000,000. **Construction date under Jobs and Transportation Plan** is 2016 and **without this plan would not have started** until after 2027. **Time saved** is nine + years.
3. **Cuyahoga County I-77** – Reconstruct, widen and add a lane along I-77. **Total project cost** is

\$47,500,000. **Construction date under Jobs and Transportation Plan** is 2016 and **without this plan would not have started** until after 2027. **Time saved** is nine + years.

4. **Cuyahoga counties I-271**. Reconstruct, widen and add a third lane on I-271 from I-480 East to I-480 West. **Total project cost** is \$131,000,000. **Construction start date with Turnpike funds** is 2016 and **without this plan would not have started** until after 2027. **Time saved** is 11+ years.
5. **Cuyahoga Opportunity Corridor** – Construct a new road that provides access from University Circle to I-490 and I-77 in two phases. **Total project cost** is \$334,000,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until after 2027. **Time saved** is 13+ years.
6. **Cuyahoga County U.S. Route 42** - Widen and reconstruct U.S. Route 42 (Pearl Rd.) from Boston Rd. to Drake Road. **Total project cost** is \$9,300,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until 2015. **Time saved** is one year.
7. **Lorain County U.S. Route 20/SR 113** – Widen Center Ridge Rd. from three to five lanes in the City of North Ridgeville. **Total project cost** is \$48,718,000. **Construction date under Jobs and Transportation Plan** is 2017 and **without this plan would not have started** until after 2027. **Time saved** is 10 years.
8. **Medina County U.S. Route 42** – Widen U.S. Route 42 to five lanes. **Total project cost** is \$47,000,000. **Construction date under Jobs and Transportation Plan** is 2016, which keeps the project on schedule.
9. **Lorain County State Route 57** – Upgrade the existing I-90/SR 57 interchange and improve access to the 49<sup>th</sup> Street bridge in the city of Elyria. **Total project cost** is \$28,800,000. **Construction date under Jobs and Transportation Plan** is 2014 and **without this plan would not have started** until after 2027. **Time saved** is 13+ years.
10. **Mahoning/Trumbull counties I-80** – Widen I-80 to six lanes from I-680 to SR 193. **Total project cost** - \$116,700,000. **Construction date under Jobs and Transportation Plan** is 2015 and **without this plan would not have started** until after 2027. **Time saved** is 12+ years.
11. **Stark County-Stark Mahoning Transit** –Utility relocation to accommodate upgrades to the transit facility and route. **Total project cost** is \$6,300,000. **Construction date under Jobs and Transportation Plan** is 2014, which keeps the project on schedule.
12. **Stark County-Stark Mahoning Transit** – To improve transit facilities and route access. **Total project cost** is \$18,600,000. **Construction date under Jobs and Transportation Plan** is 2015 and **without this plan would not have started** until 2024. **Time saved** is 9 years.
13. **Summit County Main/Broadway Interchange** - Reconstruct I-76 and 77 to improve safety and reduce congestion on the Main/Broadway interchange. **Total project cost** - \$96,400,000. **Construction date under Jobs and Transportation Plan** is 2016 and **without this plan would not have started** until after 2027. **Time saved** is 11+ years.
14. **Summit County I-271** – Reconstruct, widen and add a third lane on I271. **Total project cost** - \$62,500,000. **Construction date under Jobs and Transportation Plan** is 2015 and **without**



**this plan would not have started until after 2027. Time saved is 12+ years.**

## **NORTHWEST OHIO**

1. **Erie County U.S. Route 250** – Widen and improve U.S. Route 250 from U.S. 6 to Bogart Rd. **Total project cost is \$31,700,000. Construction date under Jobs and Transportation Plan is 2015 and without this plan would not have started until after 2027. Time saved is 12+ years.**
2. **Hancock County I-75** – Reconstruct U.S. 224 bridge and interchange with I-75. **Total project cost is \$12,500,000. Construction date under Jobs and Transportation Plan is 2014 and without this plan would not have started until after 2027. Time saved is 13+ years.**
3. **Lucas County McCord Grade Separation** – Rail grade separation at McCord Road (CR 73) to improve safety. **Total Project Cost is \$29,300,000. Construction date under Jobs and Transportation Plan is 2014 and without this plan would not have started until 2015. Time saved is one year.**
4. **Lucas County Interstate 75** – Reconstruct, widen and add a third lane along I-75 from Phillips Rd. to I-280. **Total project cost is \$51,000,000. Construction date under Jobs and Transportation Plan is 2015 and without this plan would not have started until after 2027. Time saved is 12 + years.**
5. **Lucas County Interstate 75** – Reconstruct interchange at I-75 and I-475 to improve safety and reduce congestion. **Total project cost is \$175,900,000. Construction date under Jobs and Transportation Plan is 2015 and without this plan would not have started until after 2027. Time saved is 12+ years.**
6. **Lucas County Interstate 475/U.S. Route 20** – Reconstruct interchange at I-475 and U.S. Route 20 to improve safety. **Total project cost is \$59,000,000. Construction date under Jobs and Transportation Plan is 2015 and without this plan would not have started until after 2027. Time saved is 12+ years.**
7. **Wood County I-75**—Four phases of reconstruction, widening and addition of a third lane along I-75. **Total Project Cost is \$195,600,000. Construction date under Jobs and Transportation Plan is 2014 and without this plan would not have started until after 2027. Time saved is 13 + years.**

## **SOUTHWEST OHIO**

1. **Clark County I-70** – Reconstruct, widen and add a third lane along I-70 near Springfield. **Total project cost is \$19,100,000. Construction start date with Jobs and Transportation Plan is 2014 and without this plan would not have started until after 2027. Time saved is 13+ years.**
2. **Hamilton County I-75** – Add an additional thru lane along I-75 at Glendale/Milford & Shepherd. **Total project cost is \$117,000,000. Construction date under Jobs and Transportation Plan is 2016, which keeps the project on schedule.**
3. **Hamilton County MLK Boulevard**– Construction of a new interchange along I-71 at MLK Boulevard. **Total project cost is \$107,740,000. Construction date under Jobs and**

**Transportation Plan** is 2014 and **without this plan would not have started** until after 2027. **Time saved** is 13+ years.

4. **Hamilton I-75 (Mill Creek Expressway)** – Reconstruct and widen I-75 from Hopple St. to Mitchell (Phase 5). **Total project cost** is \$205,200,000. **Construction date under Jobs and Transportation Plan** is 2017 and **without this plan would not have started** until 2021. **Time saved** is 4 years.
5. **Hamilton I-75 (Mill Creek Expressway)** – Add a fourth lane to Mitchell both northbound and southbound (Phase 7). **Total project cost** is \$41,100,000. **Construction date under Jobs and Transportation Plan** is 2018 and **without this plan would not have started** until 2021. **Time saved** is 3 years.

###

**For more information, contact:** Steve Faulkner, ODOT Press Secretary, at 614-644-7101, [steve.faulkner@dot.state.oh.us](mailto:steve.faulkner@dot.state.oh.us).



LAW OFFICES  
OF  
STANLEY C. BENDER  
707 SIXTH STREET  
P.O. BOX 950  
PORTSMOUTH, OHIO 45662-0950

STANLEY C. BENDER

(740) 353-4191  
TELECOPIER (740) 353-1640

September 11, 2013

**VIA FACSIMILE (740) 775-4889 &  
CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Ohio Department of Transportation, District 9

**Attention: Doug Pack**

650 Eastern Avenue  
Chillicothe OH 45601

Dear Mr. Pack:

As I am sure you know, I represent Town & Country Stores, LLC, which operates JJ's Carry-out pursuant to a written lease with the owners of the fee. As I am also sure you know, the Portsmouth Bypass project is destroying this unique and highly profitable business. We are also in the process of prosecuting an action for specific performance in Scioto County Common Pleas Court to enforce our contractual right to purchase the fee from the current owners. Again, I am sure you know all of this but I enclose a copy of the complaint to place you on notice.

For reasons I cannot explain, ODOT continues to ignore us and the damages caused to us by the anticipated eminent domain proceedings. We understand you are negotiating with the fee owners, although you have not included us in any negotiations. Despite repeated requests by me, representatives from OR Colan have been refused permission by you to even give us copies of appraisals performed by Mr. Brown on behalf of ODOT.

Any title you may acquire from the current fee owners is subject to our contractual rights in the property and any settlement you reach with them subjects you to double payment because we will eventually become fee owners. If ODOT refuses to include us in the anticipated petition for appropriation, we will file an action for mandamus against ODOT in Franklin County Common Pleas Court to force compensation to us by ODOT. You might take a look at *State ex rel. Thielen v. Proctor*, 2006 Ohio App. LEXIS 4539, where ODOT also would not compensate Mr. Thielen for the destruction of his business.

Very truly yours,



Stanley C. Bender

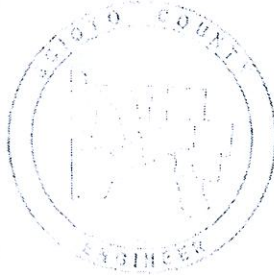
SCB/dp  
Enclosure

cc: Bob Rutman (via facsimile 353-4432)  
Stephen L. Oliver, Esq. (via facsimile 353-2413)

# SCIOTO COUNTY ENGINEER

CRAIG J. OPPERMAN, P.E., P.S.

**COURTHOUSE OFFICE**  
ROOM 106 – COURTHOUSE  
602 SEVENTH STREET  
PORTSMOUTH, OHIO 45662  
PHONE (740) 355-8265  
FAX (740) 355-1428



**GARAGE OFFICE**  
56 S.R. 728 – P.O. BOX 429  
LUCASVILLE, OHIO 45648  
PHONE (740) 259-5541  
FAX (740) 259-4192

July 22, 2013

Mr. Greg Murphy  
Assistant Director, Chief of Staff  
Ohio Department of Transportation  
2nd Floor, Mail Stop 1000  
1980 West Broad Street  
Columbus, Ohio 43223

Subject: Portsmouth Bypass (SR-823)

Greg,

“Thank You” for the opportunity to work with you and the team to help bring the Portsmouth Bypass to fruition. Attached you will find the letter of support for the project which is signed by a distinguished contingent of Scioto County, Lawrence County and Regional representatives. The Portsmouth Bypass and the concerted effort extended to the development of the Airport and Interchange will be integral to the reinvigoration of south central Ohio. These improvements will be the backbone to the increased mobility, economic development and highway safety for Scioto County in the coming decades.

We look forward to working with everyone as this project progresses through construction to completion.

Sincerely,

A handwritten signature in black ink, appearing to read "C. J. Opperman".

Craig J. Opperman, P.E., P.S.  
Scioto County Engineer

c: Jim Riley, Deputy Director of the Division of Innovative Delivery  
Vaugh Wilson, Deputy Director District 9

Attachment:

Scioto & Lawrence Co. Letter of Support



No Letter Attached  
8-5-13  
13



# MCBRAYER, MCGINNIS, LESLIE & KIRKLAND PLLC

W. TERRY McBRAYER  
JOHN R. MCGINNIS  
PHILLIP BRUCE LESLIE<sup>4</sup>  
WILLIAM D. KIRKLAND  
J.D. ATKINSON, JR.  
JAMES G. AMATO  
GEORGE D. GREGORY<sup>1</sup>  
W. BRENT RICE  
JAMES H. FRAZIER III<sup>2,3</sup>  
LISA ENGLISH HINKLE  
BRUCE W. MACDONALD<sup>4</sup>  
KATHRYN W. RYAN  
T. BRUCE SWAMPSON, JR.  
ROBERT E. MACLIN, III<sup>4</sup>  
CHRISTINE N. WESTOVER  
D. LUKE MORGAN  
CHRISTOPHER J. SHAUGHNESSY  
ROBERT WATSON  
STEPHEN G. AMATO  
TERRI R. STALLARD<sup>4</sup>  
MARY ESTES HAGGIN  
DOUGLAS T. LOGSDON<sup>1</sup>  
R. STEPHEN MCGINNIS<sup>7</sup>  
JON A. WOODALL  
DAVID J. GUARNIERI  
JARON P. BLANDFORD  
G. MICHAEL CAIN II  
DAVID A. COHEN  
WHITNEY R. CALVERT  
LUKE A. WINGFIELD  
CHRIS J. GADANSKY  
JASON R. BENTLEY  
BRENDAN R. YATES  
PAUL E. CRAFT<sup>4</sup>  
CHRISTOPHER A. RICHARDSON  
JOSHUA J. MARKHAM  
BENJAMIN L. RIDDLE<sup>4</sup>  
DAMIAN GALLAHER  
BENJAMIN FIECHTER  
RYAN C. DAUGHERTY  
BRITANY N. BLACKBURN  
W. CHAPMAN HOPKINS  
MARTHA "MOLLY" LEWIS  
MATTHEW H. KLEINERT  
PRESTON C. WORLEY

MAIN & HARRISON STREETS

P.O. BOX 280

402 MAIN STREET, SUITE 2

GREENUP, KENTUCKY 41144-0280

606-473-7303

FACSIMILE 606-473-9003

E-MAIL [mmkgreen@zoominternet.net](mailto:mmkgreen@zoominternet.net)

201 EAST MAIN STREET  
SUITE 1000  
LEXINGTON, KENTUCKY 40507  
859-231-8780

300 WHITAKER BANK BUILDING  
P. O. BOX 1100  
FRANKFORT, KENTUCKY 40602-1100  
502-223-1200

GOVERNMENT RELATIONS OFFICE  
STATE NATIONAL BANK BUILDING

SUITE 308  
305 ANN STREET  
FRANKFORT, KENTUCKY 40602-2847  
502-875-1176

9300 SHELBYVILLE ROAD  
SUITE 100  
LOUISVILLE, KENTUCKY 40222  
502-420-1306

November 10, 2011

Jerry Ray  
Ohio Department of Transportation  
1980 W. Broad Street  
Columbus, OH 43223

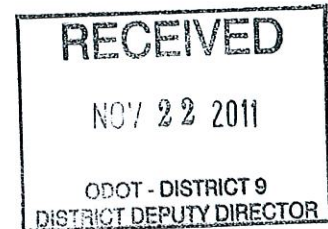
Re: Bruce W. MacDonald 2011

Dear Mr. Ray:

I am writing to express my shock and dismay that ODOT is proceeding forward with the highway project predominantly located in Scioto County Ohio. As a background, I have resided in Scioto County my entire life except when I attended undergraduate college and law school. I attended Portsmouth high school and now live in Wheelersburg Ohio, in the vicinity of where this new highway will join US 52 East as I understand the proposal.

My wife, who is also a Scioto County native and myself never imagined this highway would be constructed. I have been of the opinion ever since this roadway was proposed, that if it was ever constructed, it would be the death nail to Portsmouth Ohio. Please provide to me any study or documentation has been performed justifying or establishing a need for this multi million dollar project. I am also curious as to the current cost estimate of this highway.

I am under the impression the State of Ohio as well as the United States of America is in a huge financial debt crisis. I am flabbergasted the State of Ohio and/or the Federal Government actually can afford to construct a highway for which no real desperate need exists. It will create further financial hardship, devastation and poverty to an already impoverished Scioto County.



- Central Office  
is working on  
response. I per  
K. Fuller  
1-25-12  
(18)

<sup>1</sup>ALSO ADMITTED IN COLORADO; <sup>2</sup>ALSO ADMITTED IN FLORIDA; <sup>3</sup>ALSO ADMITTED IN NORTH CAROLINA; <sup>4</sup>ALSO ADMITTED IN OHIO; <sup>5</sup>ALSO ADMITTED IN TEXAS; <sup>6</sup>ALSO ADMITTED IN GEORGIA;  
<sup>7</sup>ALSO ADMITTED IN WEST VIRGINIA; <sup>8</sup>ALSO ADMITTED IN INDIANA

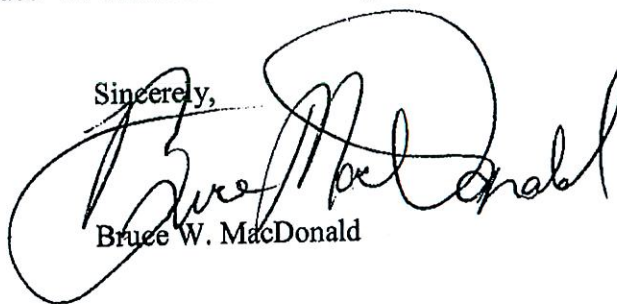
**McBRAYER, McGINNIS, LESLIE & KIRKLAND**

Jerry Ray  
Re: Bruce W. MacDonald 2011  
November 10, 2011  
Page 2

I understand mistakes are made. It would seem to me someone needs to step up to the plate and admit a mistake has been made and nip this multi million or perhaps billion dollar project in the bud. I am certain the State of Ohio and/or the Federal Government do not have funds on hand to pay for this project. If millions of dollars are going to be borrowed and debt is going to be incurred for this project, it is unjustifiable and outrageous.

In closing, I would like to have any and all current cost estimates for the construction of this project and or be provided with any and all studies both favorable and negative concerning the need for this highway. Please consider this a FOIA request/freedom of information act request. Please send these documents to my home of Bruce W. MacDonald 2671 Dogwood Ridge, Wheelersburg, Ohio 45694. Thank you.

Sincerely,



Bruce W. MacDonald

BWM/psb  
Cc: James Barna  
Julie Ray  
Therese Dyer  
Brenda MacDonald



FROM THE DESK OF...

KEN RASE

8/2/11

RECEIVED  
 AUG 04 2011  
 ODOT - DISTRICT 9  
 DISTRICT DEPUTY DIRECTOR

Vaughn,  
 Just a note to  
 Thank you and Doug  
 for your consideration  
 in visiting my farm and  
 seeing the adverse impact  
 of the Bypass.

I appreciate your time.

VK

Rase

Ken Rase  
 612 6th Street  
 Suite C  
 Wadsworth, OH 45662

41660

**KEN RASE**  
612 6<sup>TH</sup> Street, Suite C  
Portsmouth, Ohio 45662  
740-354-2427  
740-285-5296 (Cell)  
740-353-5024 (FAX)

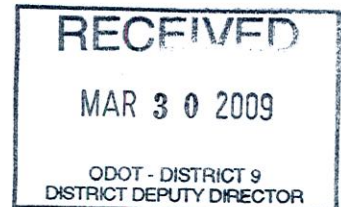
MAR 30 2009

(FYI)

c: *J. Bushart*  
*G. Cochenour*  
*file*

March 25, 2009

Douglas J. Pack, P.S.  
District 9 Real Estate Administrator  
Ohio Department Of Transportation  
650 Eastern Avenue, PO Box 467  
Chillicothe, OH 45601



c: *K. Fuller*

*sent 3-30-09 KB*

Dear Mr. Pack:

I am in receipt of your certified letter dated 03/16/2009 indicating your intention to enter my property within the next 30 days for final engineering design work.

Accordingly I am advising you that my beef cattle herd of over 100 cows are currently having baby calves on or in the immediate vicinity of the proposed Portsmouth Bypass.

I am respectfully requesting that you delay entry on my farm until after the calving and breeding season.

As you are aware the past performance of your sub contractors include unneeded destruction of property, leaving gates open, littering, unannounced entry into livestock occupied areas, driving vehicles on wet ground leaving ruts, plus many other objectionable activities. I recognize your control limitation of the sub contractors and respect and thank you for your past efforts.

Your letter mentions this phase is the final engineering design work.

To date I have not been notified the specific area of my farm to be taken.

I again respectfully request you reconsider the alternate route developed by ODOT across my farm. The alternate route developed by ODOT would leave my lake and drainage unharmed and would not destroy my useable farm land.

I again respectfully call to your attention the fact that the Rase's Mountain exit and the airport exit are duplicate exits less than 1 minute apart on the Bypass. It only takes 3 ½ minutes from the Rase's Mountain exit to get to the airport. The Rase's Mountain exit is actually a more desirable airport exit. It would save \$30 million dollars to eliminate the 2<sup>nd</sup> exit and make the Bypass more safe.

If your letter is correct in stating this is the final design work, then it is not to late to correct the route across my farm.

Family farms matter. Farm land preservation matters. In these economic times farm land preservation matters more than ever.

I would welcome the opportunity to discuss a compromise with the design team that would lessen the impact on my farm and my community.

The land belongs to the future. The highway is forever. Squandering farm land recklessly, with



out all due consideration, has a lasting effect on our inheritance and our society.

It is time for ODOT to work with farmers instead of against them. We should all work together for the betterment of Ohio.

Eminent domain remains a controversial and outrageous law.

While I have been unsuccessful in my efforts to date to get reconsideration, I remain willing to meet any time or place to discuss the "necessity" of the planned route thru my farm.

Respectfully



Ken Rase

cc: Attorney David W. Kuhn  
Kim Harless - Farm Bureau  
Loretta McClure - Farm Bureau President  
Att. Nan Still - Farm Bureau - Director Agricultural Law Information  
Att. Larry Gearhardt - Farm Bureau - Director Local Affairs  
Att. David Pennington - Farm Bureau - Assistant Director Agricultural Law Information  
Rocky Black - Farm Bureau - Senior Director of Policy & Political Affairs  
Ohio Cattleman  
Buckeye Institute  
Wyatt Bates - President, Portsmouth Board of Realtors  
Steve Campbell - ODOT - Chief of Staff  
James Viau - ODOT  
James Beasley - ODOT - Director  
Terra Goodnight -Executive Assistant for Transportation, Taxation, Lottery & Broadband  
Governor Ted Strickland



**Ken Rase Appraisals**  
612 6th Street, Suite C  
Portsmouth, OH 45662  
Phone: 740-354-2427  
Cell: 740-285-5296  
Fax: 740-353-5024  
e-mail: kenrase@midohio.twcbc.com

**KEN RASE**  
26<sup>TH</sup> ST., SUITE C  
SMOOTH, OHIO 45662  
740-354-2427  
740-353-5024 (FAX)

June 19, 2008

Ohio Department of Transportation  
1980 West Broad Street  
Columbus, Ohio 43223

To: Steve Campbell  
James Viar  
Timothy Hill  
Karundi Williams  
Terra Goodnight

Thank you for taking time to listen to the impacts the 823 Bypass will have on my farm, my grandchildren, my community and future farmers.

I sincerely appreciate your reconsideration.

Respectfully,



Ken Rase

RECEIVED  
JUL 15 2008  
*JMS*  
ODOT - DISTRICT 9  
DISTRICT DEPUTY DIRECTOR





*Todd Book*  
*Assistant Minority Leader*

---

07-31

May 17, 2007

Mr. James Beasley, Director  
Ohio Department of Transportation  
1980 W. Broad St.  
Columbus, Ohio 43223

Dear Director Beasley:

Enclosed is a copy of the letter I received from the Scioto Soil and Water Conservation District regarding Ken Rase's farm.

As you can see, the Conservation District has a pick of the routes for the bypass that least disturbs drainage.

Please take the district's views into consideration when deciding on the route.

Sincerely,

*Todd Book*

**REP. TODD BOOK**  
Assistant Democratic Leader  
Ohio House of Representatives  
89<sup>th</sup> House District

Cc: Scioto Soil and Water Conservation District  
Ken Rase

**12167A STATE ROUTE 104  
LUCASVILLE OH 45648**

**740-259-9231  
FAX 740-259-9168**

**www.sciotoswcd.org**



**BOARD OF SUPERVISORS  
DONALD GLEIM JR.  
THOMAS TURNER  
WILLIAM (BILL) LEWIS  
MICHAEL R WRIGHT  
FRANK PERTUSET**

May 8, 2007

Honorable Todd Book  
Ohio House of Representatives  
77 S High St 10<sup>th</sup> Floor  
Columbus, OH 43215-6111

Dear Mr. Book:

This letter is in reference to the Ken Rase Farm located at 9960 State Route 139 Minford, Ohio 45663. The Ken Rase Farm contains 560 contiguous acres which is one of the largest farm's in eastern Scioto County.

The Scioto Soil and Water Conservation District (SWCD) and the Natural Resources Conservation Service (NRCS) formerly the Soil Conservation Service developed a drainage plan for the Rase farm approximately 50 years ago that resulted in 7 ponds being constructed to control the watershed for the several hundred acres. An additional 7000 lineal feet of tile drainage was installed.

In 1997, the Scioto SWCD, NRCS, and the Farm Service Agency planned, designed, and helped implement over 4000 lineal feet of drainage and removal of sediment from the primary pond. The primary pond (first pond behind the residence) required the dam to be redone and spillway to be redesigned. The primary pond serves as the collecting point for several hundred acres of watershed and from other ponds as well as the hillsides and pasture. A sediment pond was designed and constructed to reduce sediment build up in the primary pond. The primary pond is the primary watering source for the front of the farm. Each pond was fenced and waterers were constructed. Over \$100,000 was spent on this project in 1997 with approximately \$65,000 of state and federal funds.

The Scioto SWCD is aware of the 2 routes proposed by the Ohio Department of Transportation (O.D.O.T.) and would like to voice support for the alternate route. The alternate route would least disturb the existing drainage.

The tunnel system proposed by O.D.O.T. will result in drainage restrictions not only now but in the future. Elimination of the pond with the tunnel system will result in construction of a

***Helping to Conserve, Maintain and Improve Scioto County's Natural Resources.***

*add  
para*

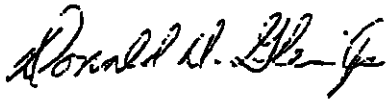


new drainage system all the way to the creek even if a new pond is not constructed. The alternate route would bridge the 2 hills and allow the existing drainage to remain basically unchanged. Not only will the result of the alternative be less evasive to the planned and natural drainage in place, but also would not create new drainage problems. The alternative would also allow wildlife and livestock to transverse naturally.

The hill route taken by O.D.O.T. on the rest of the bypass has resulted in less farmland taken out of production.

We respectfully request that O.D.O.T. reconsider the selected valley route across the Rase Farm and use the alternate hill route as used on the rest of the bypass.

Respectively yours,



DONALD D GLEIM JR  
CHAIRMAN SCIOTO SWCD

Ken Rase  
612 6<sup>th</sup> St., Suite C  
Portsmouth, OH 45662  
740-354-2427  
740-285-5269 (Cell)  
740-353-5024 (Fax)

April 27, 2007

Ted Strickland  
Governor's Office  
Riffe Center, 30<sup>th</sup> Floor  
77 S. High Street  
Columbus, OH 43215-6108

Dear Honorable Governor Strickland:

The purpose of this letter is to request your assistance in the matter of the proposed 823 Portsmouth bypass.

I own 560 acres at 9960 State Route 139, Minford, Ohio, 45653. My beef cattle farm is one of the largest contiguous acreages in Scioto County and is considered by many to be one of the finest farms in southern Ohio.

The proposed bypass bisects my farm. My immediate concern is that the highway goes thru my useable fields and eliminates 2 of the ponds I use as the primary source for watering my cattle. This plan requires a 400 foot tunnel be constructed for drainage and ingress and egress for cattle and machinery to the back of the farm (see green diagram on enclosed map).

O.D.O.T. has developed an alternate plan (see red on map) that also bisects my farm, however, it goes across wooded hill land and doesn't affect my useable land, the natural drainage or my cattle watering source. The alternate route also provides a natural tree buffer for sound reduction and aestic affect. O.D.O.T. has stated that the alternate route is physically possible, but not economically feasible. I have also enclosed the alternate alignment cost analysis which I believe is incorrect. The hill route taken by O.D.O.T. on the rest of the bypass has resulted in less farm ground taken out of production.

The alternate route not only benefits my family, and the community but also future generations of Ohioans. The highway will be there for a very long time. I feel if the officials in charge would physically view this situation they would use the alternate route.

I respectfully request your assistance in reconsideration of the alternate route.

Thank you for any help you can provide. I sincerely appreciate what you have done and are doing for our area and my family.

Respectfully,



Ken Rase



Subject Re: Fw: Other

Just FYI..

Mr. Rase's case is actually an issue out of District 9. Kathleen Fuller, the PIO in District 9, has been putting together a coordinated response, as we expected several messages such as this to go through the department (and the Governor's Office) after a recent heated public meeting. I would suggest maybe Jane and Kathleen offering a response.

THANKS  
Scott

Mandy Kisling/Planning/D06/ODOT



Mandy  
Kisling/Planning/D06/ODOT

04/23/2008 05:17 PM

To John Hart/Administration/D03/ODOT@ODOT

cc Scott Varner/Communications/CEN/ODOT@ODOT

Subject Fw: Other

John,

We received this via the website. Please coordinate a response to this customer with your PIO.

Respectfully,  
Mandy A. Kisling, P.E.  
21st Century Transportation Priorities  
Task Force Manager  
(614) 387-1126

----- Forwarded by Mandy Kisling/Planning/D06/ODOT on 04/23/2008 05:14 PM -----



<Task Force  
Feedback@dot.state.oh.us>

04/21/2008 07:09 PM

Please respond to  
<doctor@bright.net>

To <TransportationForTomorrow@dot.state.oh.us>

cc

Subject Other

ODOT FEEDBACK			
NAME	Brenda J. King	SUBJECT	Other
COMPANY NAME	Land Owner	CONTACT ASAP	YES
TELEPHONE	419-281-5202	DATE	4/21/2008 7:09:25 PM
FAX		LOCAL ADDR	192.168.3.13
EMAIL	doctor@bright.net	REMOTE ADDR	192.168.1.200
REFERRER	http://www.dot.state.oh.us/21ctptf/		

<b>BROWSER</b>	Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.1; .NET CLR 1.0.3705)
<b>COMMENTS</b>	It grieves me greatly to know that ODOT, without permission from owner, Ken Rase, "cases" out his farm for their use. This is essentially an eminent domain battle that none of us farmers ever wants to deal with or fear having our farms taken away from us without our involvement or ODOT's consideration for Mr. Rase's livelihood. I am VERY disappointed that, from what I have seen, you are not willing to take the path of least resistance if you have to use his land for the connection of routes 23 and 52. I would really like to know why you think it is acceptable to strong arm people into submission. We cannot afford to deal with the magnitude of finances that you seem to have available to you, but the "little" people do not, and cannot, afford to fight you. Be assured that we, as farmers in Ashland Country, will be following this situation and make sure that Mr. Rase gets a fair shake from ODOT.



Ohio Department Of Transportation  
District 9#

Dear Sir

I have some very important questions.  
First of all, my cousins who  
live around there bring to our  
attention you all are planning  
to build 'I-73' thru there. Also,  
they claim 'I-74' will go past  
(Cincinnati) to the West Virginia  
state line. Like them, I feel both  
new interstates are worth it. If  
both are true, could you please  
tell me which 'route' they will  
follow? Another thing, will the  
Portsmouth Bypass when finished  
be up to interstate standards?

Write Back soon

Thank You

Andre

RECEIVED

DEC 01 2006

ODOT DISTRICT 9  
STATE OF OHIO

Andre Coe  
3562 Manor Ct.  
Indianapolis, Indiana  
46218

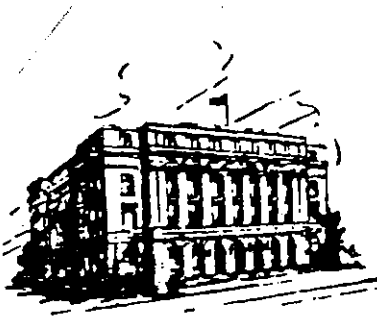
c: J. Barnitz  
J. Long - please prepare  
a response.

sent 12-01-06  
(RB)

#

69

AUG 23 2006



# County of Scioto

Room 1, Courthouse, 602 Seventh Street

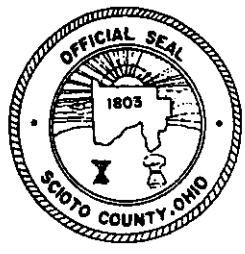
PORTSMOUTH, OHIO 45662

JANE KITTS, CLERK  
HEIDI CRABTREE, DEPUTY CLERK  
JENN SMITH, DEPUTY CLERK

Telephone (740) 355-8313  
Fax (740) 353-7358

OFFICE OF  
COUNTY COMMISSIONERS

TOM REISER, Chairman  
MIKE CRABTREE  
VERN RIFFE, III



August 16, 2006


Gordon Proctor  
Director of Transportation  
Columbus, OH 43223

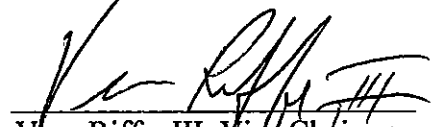
Dear Mr. Proctor:

The Shawnee Recreation Trail Committee is a group of community-minded Portsmouth citizens endeavoring to have a bike/pedestrian trail built in Scioto County. The Committee has been in existence for approximately two years as an incorporated organization and working toward a 501(c)(3) nonprofit status.

The Board of Commissioners believe a venue of transportation along the future Portsmouth Bypass highway will not only afford a means of travel by have the added benefit of improving property values of adjacent land owners as well as improving the health of those who choose to travel on the trail. If you have any questions, please do not hesitate to contact us.

Sincerely,  
BOARD OF SCIOTO COUNTY COMMISSIONERS

  
Tom Reiser, Chairman

  
Vern Riffe, III, Vice Chairman

  
Mike Crabtree, Commissioner





**APPALACHIAN  
REGIONAL  
COMMISSION**

*A Proud Past,  
A New Vision*

November 9, 2005

Mr. Gordon D. Proctor  
Director  
Ohio Department of Transportation  
Central Office  
P.O. Box 899  
Columbus, Ohio 43216-0899

Dear Mr. Proctor:

The Appalachian Regional Commission supports your proposal to construct the Portsmouth Bypass with funds generated through the issuance of Federal Garvee Bonds. Financing the bond repayment (principal and interest) with Appalachian Development Highway funds (80% federal pro-rata) over a ten year period via FHWA's advance construction provisions is within ARC policy (ARC Code, Section 9.4c – Pre-Financing).

Once the Portsmouth Bypass is complete, Ohio would continue to receive Appalachian Development Highway funds for this corridor based on its Status (un-obligated balances/un-authorized status). As part of the 5-year process for determining a State's remaining costs to complete their Appalachian Development Highway System (currently underway for 2007), authorized pre-finance work is subtracted from each Corridor's remaining cost to complete.

Our commitment to this plan is documented via ARC policy (mentioned earlier). One important fact to keep in mind is that Congress determines the funding for the Appalachian Development Highway System. It is currently funded through FY-2009.



*C. T. Long*

*HS*

*sent  
11-25-05  
(initials)*

We agree with the benefits you have identified via the Garvee bond strategy. We are encouraged by ODOT's efforts to find ways to complete the Appalachian Development Highway System and in turn benefit the citizens of Appalachia. Please let me know your final decision.

Respectfully,

A handwritten signature in cursive script that reads "Kenneth Wester".

Kenneth W. Wester, P.E.  
ADHS Program Manager

Cc: Dwight Horne  
Vince Barone  
Dennis Decker  
Dan Dobson  
Jennifer Townley  
John Cartwright



## Appendix B - Agency Correspondence

**FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS**

<b>PART I (To be completed by Federal Agency)</b>		3. Date of Land Evaluation Request <b>10/6/03</b>	4. Sheet 1 of <b>1</b>
1. Name of Project <b>SCI-823-0.00</b>		5. Federal Agency Involved <b>FHWA</b>	
2. Type of Project <b>Highway Corridor</b>		6. County and State <b>Scioto, Ohio</b>	
<b>PART II (To be completed by NRCS)</b>		1. Date Request Received by NRCS <b>2/12/14</b>	2. Person Completing Form <b>Steve Baker</b>
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated   Average Farm Size -   -	
5. Major Crop(s) <b>Hay-Beans-Corn</b>	6. Farmable Land in Government Jurisdiction Acres: <b>101,899</b> % <b>38</b>	7. Amount of Farmland As Defined in FPPA Acres: <b>54,572</b> % <b>20</b>	
8. Name Of Land Evaluation System Used <b>OH</b>	9. Name of Local Site Assessment System -	10. Date Land Evaluation Returned by NRCS <b>2/24/14</b>	

<b>PART III (To be completed by Federal Agency)</b>	<b>Alternative Corridor For Segment</b>			
	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
A. Total Acres To Be Converted Directly	<b>888</b>	<b>941</b>		
B. Total Acres To Be Converted Indirectly, Or To Receive Services	<b>0</b>	<b>0</b>		
C. Total Acres In Corridor	<b>888</b>	<b>941</b>		

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
A. Total Acres Prime And Unique Farmland	<b>51</b>	<b>27</b>		
B. Total Acres Statewide And Local Important Farmland	<b>0</b>	<b>0</b>		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<b>.0009</b>	<b>.0004</b>		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	<b>40</b>	<b>40</b>		

<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
	<b>74</b>	<b>74</b>		

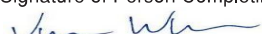
<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	<b>Maximum Points</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
1. Area in Nonurban Use	15	<b>15</b>	<b>15</b>		
2. Perimeter in Nonurban Use	10	<b>10</b>	<b>10</b>		
3. Percent Of Corridor Being Farmed	20	<b>0</b>	<b>0</b>		
4. Protection Provided By State And Local Government	20	<b>10</b>	<b>12</b>		
5. Size of Present Farm Unit Compared To Average	10	<b>0</b>	<b>0</b>		
6. Creation Of Nonfarmable Farmland	25	<b>0</b>	<b>0</b>		
7. Availability Of Farm Support Services	5	<b>1</b>	<b>1</b>		
8. On-Farm Investments	20	<b>5</b>	<b>5</b>		
9. Effects Of Conversion On Farm Support Services	25	<b>0</b>	<b>0</b>		
10. Compatibility With Existing Agricultural Use	10	<b>1</b>	<b>1</b>		
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	<b>160</b>	<b>42</b>	<b>44</b>	<b>0</b>	<b>0</b>

<b>PART VII (To be completed by Federal Agency)</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>
Relative Value Of Farmland (From Part V)	<b>100</b>	<b>74</b>	<b>74</b>	<b>0</b>
Total Corridor Assessment (From Part VI above or a local site assessment)	<b>160</b>	<b>42</b>	<b>44</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>	<b>260</b>	<b>116</b>	<b>118</b>	<b>0</b>

1. Corridor Selected: <b>Corridor A and B</b>	2. Total Acres of Farmlands to be Converted by Project: <b>78 acres</b>	3. Date Of Selection: <b>3/19/2014</b>	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
--	--	---	---

5. Reason For Selection:

**Corridor A and B selected as they score under 160**

Signature of Person Completing this Part:  Jason Whitten Senior Planner / Project Manager, DLZ Inc. DATE **3/19/2014**

NOTE: Complete a form for each segment with more than one Alternate Corridor



## CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

- More than 90 percent - 15 points
- 90 to 20 percent - 14 to 1 point(s)
- Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

- More than 90 percent - 10 points
- 90 to 20 percent - 9 to 1 point(s)
- Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

- More than 90 percent - 20 points
- 90 to 20 percent - 19 to 1 point(s)
- Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

- Site is protected - 20 points
- Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

- (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
- As large or larger - 10 points
  - Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

- Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
- Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
- Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

- All required services are available - 5 points
- Some required services are available - 4 to 1 point(s)
- No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

- High amount of on-farm investment - 20 points
- Moderate amount of on-farm investment - 19 to 1 point(s)
- No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

- Substantial reduction in demand for support services if the site is converted - 25 points
- Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
- No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

- Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
  - Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
  - Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points
-



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
HUNTINGTON DISTRICT, CORPS OF ENGINEERS  
502 EIGHTH STREET  
HUNTINGTON, WEST VIRGINIA 25701-2070

March 6, 2014

Regulatory Division  
South/Transportation Branch  
LRH-2011-00646-OHR – Little Scioto River  
SCI-823-0.00 Portsmouth Bypass Project Phases 2-3 (PID 19415)

Mr. Timothy M. Hill  
Ohio Department of Transportation  
Office of Environmental Services, Mail Stop 4170  
1980 West Broad Street  
Columbus, Ohio 43223

Dear Mr. Hill:

I refer to the Level Two Ecological Survey Report prepared by ASC Group, Inc., received by this office via e-mail on July 9, 2013, and supplemental information received for the proposed Portsmouth Bypass Phase 2 in Valley, Jefferson, and Madison Townships and Phase 3 in Harrison and Porter Townships, Scioto County, Ohio. Phase 2 would be approximately 7.4 miles of new 4-lane roadway and connect United States (U.S.) Route 23 just north of Lucasville to the Phase 1 interchange at Lucasville-Minford Road. Phase 3 would be approximately 5.6 miles of new 4-lane roadway and would connect the Phase 1 Shumway Hollow Road interchange, near the Scioto County Airport, to U.S. 52 near Wheelersburg.

The United States Army Corps of Engineers (Corps) authority to regulate waters of the U.S. is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to discharging dredged or fill material into waters of the U.S., including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for any work in, on, over or under a navigable water.

Representatives of the Corps and the Ohio Department of Transportation conducted field reviews of the site on May 28-29, 2013. Following these reviews, the Corps requested additional information to accurately describe and delineate aquatic resources within the approximate 1,078-acre review area. The attached delineated resource maps correctly describe these waters.

The Corps has previously determined that the Little Scioto River is a Section 10 navigable waterway subject to regulation under Section 10 of the Rivers and Harbors Act, and a Traditional Navigable Water subject to regulation under Section 404 of the CWA. A total of 480 linear feet of the Little Scioto River is present within the review area. The Corps has completed



a preliminary jurisdictional determination (PJD) for portions of the review area characterized by potential waters of the U.S., and an approved jurisdictional determination (AJD) for portions of the review area characterized by non-jurisdictional waters. The AJD review areas are limited to the geographic boundaries depicted on the attached delineated resource maps.

### **Preliminary Jurisdictional Determination (PJD)**

The attached maps correctly describe aquatic resources within the PJD review area. A total of 69,589 linear feet of one hundred and twenty-five (125) streams, 10.554 acres of thirty-seven (37) wetlands, 1.141 acres of two (2) potentially jurisdictional ponds, and 0.067-acre of three (3) potentially jurisdictional ditches are located within the 1077.95-acre PJD review area.

Based on a review of the information provided, site visits conducted on May 28-29, 2013, and other information available to us, this office has determined that the aquatic resources on the attached Tables 1-4 **may** be jurisdictional waters of the U.S. This determination has been made in accordance with the Regulatory Guidance Letter (RGL) for Jurisdictional Determinations issued by the Corps on June 26, 2008 (RGL No. 08-02). As indicated in the guidance, this PJD is non-binding and cannot be appealed (33 CFR 331.2), and only provides a written indication that waters of the U.S., including wetlands, may be present on-site.

You have declined to exercise the option to obtain an approved jurisdictional determination in this instance and at this time for resources that may be jurisdictional waters of the U.S. For the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the aquatic resources described in the attached PJD will be evaluated as if they are waters of the U.S.

Attached please find two copies of the PJD. If you agree with the findings of this PJD and understand your options regarding the same, please sign and date one copy of the form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy to the following address:

Mr. Brett C. Latta, CPG (LRH-2011-00646-OHR)  
U.S. Army Corps of Engineers - Huntington District  
Ohio Regulatory Transportation Office  
Building 10 / Section 10, PO Box 3990  
Columbus, Ohio 43218-3990

### **Approved Jurisdictional Determination (AJD)**

This office has determined that Wetland 19 – Phase 2 (0.024-acre), Wetland 21 – Phase 3 (0.014-acre), and Wetland 32 – Phase 3 (0.009-acre) are surrounded by non-wetland and exhibit no evidence of a hydrological connection to the tributary system. Based on the absence of a hydrological connection or adjacency to a water of the U.S, these waters are isolated with no apparent connection with interstate or foreign commerce, and are therefore not waters of the U.S. Isolated waters are only regulated under Section 404 of the CWA when the use, degradation or

destruction of which could affect interstate or foreign commerce. Isolated Wetland 19 – Phase 2, isolated Wetland 21 – Phase 3, and isolated Wetland 32 – Phase 3 have no substantial connection to interstate or foreign commerce and are not considered to be waters of the U.S. Therefore, no authorization would be required from this office for the discharge of dredged or fill material in these waters. However, you should contact the Ohio Environmental Protection Agency, Division of Surface Water at (614) 644-2001, to determine state permit requirements.

In accordance with the June 5, 2007 Joint Memorandum between the United States Environmental Protection Agency (USEPA) and the Corps and the January 28, 2008 Corps Memorandum regarding coordination on jurisdictional determinations, the isolated wetland determinations were coordinated with the USEPA Region 5 and Corps Headquarters. This coordination was completed on December 23, 2013.

This AJD is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. Should you disagree with our AJD, you have the right to file an administrative appeal under the Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Review Officer  
U.S. Army Corps of Engineers  
Great Lakes and Ohio River Division  
550 Main Street, RM 10-524  
Cincinnati, Ohio 45202-3222  
Phone: (513) 684-6212  
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by May 5, 2014. **It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.**

If you have any questions concerning the above information, please contact Brett Latta at (614) 692-4672 or by e-mail at [Brett.C.Latta@usace.army.mil](mailto:Brett.C.Latta@usace.army.mil).

Sincerely,



Susan A. Porter  
Chief, South/Transportation Branch

Enclosures



Copy furnished w/ enclosures via e-mail:

Joni Lung  
Ohio EPA  
Division of Surface Water  
P.O. Box 1049  
Columbus, Ohio 43216-1049  
[Joni.Lung@epa.state.oh.us](mailto:Joni.Lung@epa.state.oh.us)

Adrienne Earley  
Ohio Department of Transportation  
1980 West Broad Street  
Mail Stop 4170  
Columbus, Ohio 43223  
[Adrienne.Earley@dot.state.oh.us](mailto:Adrienne.Earley@dot.state.oh.us)

Mike Pettegrew  
Ohio Department of Transportation  
1980 West Broad Street  
Mail Stop 4170  
Columbus, Ohio 43223  
[Mike.Pettegrew@dot.state.oh.us](mailto:Mike.Pettegrew@dot.state.oh.us)

**PRELIMINARY JURISDICTIONAL DETERMINATION FORM**

**BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 6 March 2014**

**B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**

Ohio Department of Transportation  
Office of Environmental Services  
1980 West Broad Street, Mail Stop 4170  
Columbus, Ohio 43223

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

Huntington District, SCI-823-0.00 Portsmouth Bypass Project Phases 2 and 3 (PID 19415), 2011-00646-OHR

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**

**State:** Ohio  
**County:** Scioto  
**City:** Phase 2 in Valley, Jefferson, and Madison Townships  
Phase 3 in Harrison and Porter Townships  
**Center coordinates of site:**  
Phase 2: 38.8810 North, 82.9478 West  
Phase 3: 38.7994 North, 82.8633 West

**Name of nearest waterbody:** Little Scioto River

**Identify (estimate) amount of waters in the review area:**

Non-wetland waters: There are one hundred and twenty-five (125) streams with a cumulative total of 69,589 linear feet within the 1077.95-acre review area for the preliminary jurisdictional determination. The Corps has previously determined the Little Scioto River is a Section 10 navigable waterway and a Traditional Navigable Water (TNW) subject to regulation under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 (see Section 10 note on next page). There are also 1.141 acres of two (2) potentially jurisdictional ponds and 0.067-acre of three (3) potentially jurisdictional ditches within the 1077.95-acre review area for the preliminary jurisdictional determination. Refer to the attached tables and maps of this *Preliminary Jurisdictional Determination Form* for a detailed summary.

Wetlands: There are thirty-seven (37) wetlands with a cumulative total of 10.554 acres within the 1077.95-acre review area for the preliminary jurisdictional determination. Each wetland appears to have a continuous surface or shallow subsurface connection and/or



adjacency to a water of the United States (U.S.). Refer to the attached tables and maps of this *Preliminary Jurisdictional Determination Form* for a detailed summary.

**Name of any water bodies on the site that have been identified as Section 10 waters:**

According to the Corps' Huntington District Public Notice 94-40 dated 27 July 1994, the Little Scioto River is a Section 10 navigable waterway and a TNW subject to regulation under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act of 1899 from the mouth at the Ohio River (River Mile [RM] 348.9) upstream to RM 7.0. The review area includes a total of 480 linear feet of the Little Scioto River at RM 2.5.

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination: Date: 23 December 2013

Field Determination: Date(s): 28-29 May 2013

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively

appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):**

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Refer to “Level Two Ecological Survey Report (ESR) for SCI-823-0.00 (Construction Phases 2-3) PID 19415” dated 7 May 2013, revised 20 June 2013, with supplemental information received on 9 July 2013, 22 August 2013, 22 November 2013, and 13 December 2013.

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps:

Corps navigable waters’ study:

U.S. Geological Survey Hydrologic Atlas: 05060002 – Lower Scioto, Ohio and 05090103 - Little Scioto-Tygart. Kentucky, Ohio - HUCs retrieved from ORM database.

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s): Lucasville, Ohio, Minford, Ohio, New Boston, Ohio-Kentucky, Wakefield, Ohio, and Wheelersburg, Ohio-Kentucky 7.5-minute maps retrieved from ORM database.

USDA Natural Resources Conservation Service Soil Survey. Refer to Level Two ESR for SCI-823-0.00 (Construction Phases 2-3) PID 19415, Appendix 1.

National wetlands inventory map(s): Refer to Level Two ESR for SCI-823-0.00 (Construction Phases 2-3) PID 19415, Appendix 1.

State/Local wetland inventory map(s):

FEMA/FIRM maps: Refer to Level Two ESR for SCI-823-0.00 (Construction Phases 2-3) PID 19415, Appendix 1.

100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs:  Aerial (Name & Date): Refer to Level Two ESR for SCI-823-0.00 (Construction Phases 2-3) PID 19415, Appendix 1 – Figure 11 Survey Results (date unknown).

or  Other (Name & Date): Refer to Level Two ESR for SCI-823-0.00 (Construction Phases 2-3) PID 19415, Appendix 2 Photo Log (dates unknown).

Previous determination(s). File no. and date of response letter: According to the Corps’ Huntington District Public Notice 94-40 dated 27 July 1994, the Little Scioto River is a Section 10 navigable waterway and a TNW subject to regulation under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act of 1899 from the mouth at the Ohio River (RM 348.9) upstream to RM 7.0.



Other information (please specify): **See the attached maps and Tables 1-4.**

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

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Signature and date of  
Regulatory Project Manager  
(REQUIRED)

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Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining the  
signature is impracticable)

**Table 1 – Potentially Jurisdictional Streams Summary for 2011-00646-OHR:  
SCI-823-0.00 Portsmouth Bypass Project Phases 2-3, PID 19415**

<b>Stream ID</b>	<b>Flow Regime</b>	<b>Watershed (8-digit HUC)</b>	<b>Linear Footage</b>
Stream 1	Seasonal-Intermittent	05060002	2,190
Stream 2	Seasonal-Intermittent	05060002	1,479
Stream 3	Seasonal-Intermittent	05060002	1,100
Stream 4	Seasonal-Intermittent	05060002	341
Stream 5	Perennial	05060002	600
Stream 5A	Seasonal-Intermittent	05060002	237
Stream 5B	Ephemeral	05060002	249
Stream 5C	Ephemeral	05060002	153
Stream 6	Perennial	05060002	862
Stream 6A	Seasonal-Intermittent	05060002	623
Stream 6B	Seasonal-Intermittent	05060002	927
Stream 6B1	Ephemeral	05060002	198
Stream 6B2	Ephemeral	05060002	297
Stream 7	Seasonal-Intermittent	05060002	441
Stream 8	Seasonal-Intermittent	05060002	1,177
Stream 9	Seasonal-Intermittent	05060002	789
Stream 10	Seasonal-Intermittent	05060002	1,025
Stream 10A	Ephemeral	05060002	229
Stream 10B	Ephemeral	05060002	708
Stream 10C	Ephemeral	05060002	112
Stream 10D	Ephemeral	05060002	128
Stream 11	Seasonal-Intermittent	05060002	1,082
Stream 11A	Ephemeral	05060002	606
Stream 11B	Ephemeral	05060002	379
Stream 11C	Ephemeral	05060002	431
Stream 11D	Ephemeral	05060002	580
Stream 11E	Ephemeral	05060002	324
Stream 11F	Ephemeral	05060002	757
Stream 12	Seasonal-Intermittent	05060002	696
Stream 13	Ephemeral	05060002	628
Stream 14	Ephemeral	05060002	706
Stream 15	Ephemeral	05060002	1,040
Stream 15A	Ephemeral	05060002	339



<b>Stream ID</b>	<b>Flow Regime</b>	<b>Watershed (8-digit HUC)</b>	<b>Linear Footage</b>
Stream 15B	Ephemeral	05060002	317
Stream 16	Seasonal-Intermittent	05060002	1,042
Stream 16A	Ephemeral	05060002	310
Stream 17 – Phase 2	Seasonal-Intermittent	05060002	1,046
Stream 17A – Phase 2	Ephemeral	05060002	122
Stream 17B – Phase 2	Ephemeral	05060002	870
Stream 17C – Phase 2	Ephemeral	05060002	553
Stream 17C1 – Phase 2	Ephemeral	05060002	130
Stream 18 – Phase 2	Ephemeral	05060002	716
Stream 18A – Phase 2	Ephemeral	05060002	79
Stream 18B – Phase 2	Ephemeral	05060002	172
Stream 19 – Phase 2	Ephemeral	05060002	940
Stream 19A – Phase 2	Ephemeral	05060002	210
Stream 19B – Phase 2	Ephemeral	05060002	665
Stream 20 – Phase 2	Seasonal-Intermittent	05060002	1,014
Stream 20-1 – Phase 2	Ephemeral	05060002	204
Stream 21 – Phase 2	Ephemeral	05060002	717
Stream 21A – Phase 2	Ephemeral	05060002	102
Stream 22 – Phase 2	Seasonal-Intermittent	05060002	913
Stream 22A – Phase 2	Ephemeral	05060002	710
Stream 22B – Phase 2	Ephemeral	05060002	191
Stream 22C – Phase 2	Ephemeral	05060002	382
Stream 23 – Phase 2	Seasonal-Intermittent	05060002	863
Stream 23A – Phase 2	Ephemeral	05060002	467
Stream 23B – Phase 2	Ephemeral	05060002	232
Stream 24 – Phase 2	Ephemeral	05060002	775
Stream 24A	Ephemeral	05060002	142
Stream 25	Seasonal-Intermittent	05060002	298
Stream 26	Seasonal-Intermittent	05090103	934
Stream 26A	Ephemeral	05090103	474
Stream 27	Seasonal-Intermittent	05090103	1,227
Stream 27B	Seasonal-Intermittent	05090103	655
Stream 28	Ephemeral	05090103	231
Stream 29	Perennial	05090103	718

<b>Stream ID</b>	<b>Flow Regime</b>	<b>Watershed (8-digit HUC)</b>	<b>Linear Footage</b>
Stream 30	Ephemeral	05090103	444
Stream 31	Ephemeral	05090103	511
Stream 31A	Ephemeral	05090103	189
Stream 32	Seasonal-Intermittent	05090103	830
Stream 32A	Ephemeral	05090103	160
Stream 32B	Ephemeral	05090103	142
Stream 32C	Ephemeral	05090103	186
Stream 32D	Ephemeral	05090103	245
Stream 32D1	Ephemeral	05090103	246
Stream 33	Seasonal-Intermittent	05090103	1,000
Stream 33A	Ephemeral	05090103	145
Stream 33A1	Ephemeral	05090103	3
Stream 33A2	Ephemeral	05090103	106
Stream 33B	Ephemeral	05090103	41
Stream 34	Perennial	05090103	2,420
Stream 34A	Seasonal-Intermittent	05090103	405
Stream 34B	Ephemeral	05090103	391
Stream 34B1	Ephemeral	05090103	348
Stream 34B2	Ephemeral	05090103	309
Stream 35A	Ephemeral	05090103	439
Stream 35A1	Ephemeral	05090103	111
Stream 36	Seasonal-Intermittent	05090103	1,054
Stream 36A	Ephemeral	05090103	1,233
Stream 36A1	Ephemeral	05090103	86
Stream 36C	Seasonal-Intermittent	05090103	1,146
Stream 36C2	Ephemeral	05090103	386
Stream 36C3	Ephemeral	05090103	184
Stream 36C4	Ephemeral	05090103	41
Stream 37	Seasonal-Intermittent	05090103	691
Stream 37A	Ephemeral	05090103	549
Stream 38	Seasonal-Intermittent	05090103	1,604
Stream 38A	Seasonal-Intermittent	05090103	1,755
Stream 38A1	Ephemeral	05090103	247
Stream 38A2	Ephemeral	05090103	72



<b>Stream ID</b>	<b>Flow Regime</b>	<b>Watershed (8-digit HUC)</b>	<b>Linear Footage</b>
Stream 38A3	Ephemeral	05090103	111
Stream 38A4	Ephemeral	05090103	161
Stream 38A5	Ephemeral	05090103	134
Stream 38A6	Ephemeral	05090103	107
Stream 38B	Ephemeral	05090103	681
Stream 38B1	Ephemeral	05090103	398
Stream 38D	Ephemeral	05090103	548
Stream 39	Seasonal-Intermittent	05090103	1,095
Stream 39A	Ephemeral	05090103	925
Stream 40	Seasonal-Intermittent	05090103	810
Stream 40A	Ephemeral	05090103	188
Stream 40B	Ephemeral	05090103	183
Stream 41	Ephemeral	05090103	215
Stream 42	Ephemeral	05090103	513
Stream 42A	Ephemeral	05090103	147
Stream 43	Seasonal-Intermittent	05090103	1,044
Stream 44	Seasonal-Intermittent	05090103	1,436
Stream 45	Ephemeral	05090103	438
Stream 46	Seasonal-Intermittent	05090103	1,231
Stream 46A	Ephemeral	05090103	205
Stream 47	Seasonal-Intermittent	05090103	470
Stream 48	Perennial	05090103	379
Stream 48A	Ephemeral	05090103	247
Stream 49	Seasonal-Intermittent	05090103	350
<b>Totals (100%)</b>			<b>69,589</b>
<b><i>Perennial Flow (7%)</i></b>			<b><i>4,979</i></b>
<b><i>Seasonal-Intermittent Flow (50%)</i></b>			<b><i>35,020</i></b>
<b><i>Ephemeral Flow (43%)</i></b>			<b><i>29,590</i></b>

**Table 2 – Potentially Jurisdictional Wetlands Summary for 2011-00646-OHR:  
SCI-823-0.00 Portsmouth Bypass Project Phases 2-3, PID 19415**

<b>Wetland ID</b>	<b>Cowardin Class</b>	<b>Watershed (8-digit HUC)</b>	<b>Acreage</b>
Wetland 1 – Phase 2	PEM/PSS	05060002	4.546
Wetland 2 – Phase 2	PEM	05060002	0.270
Wetland 3 – Phase 2	PEM	05060002	0.610
Wetland 4 – Phase 2	PEM	05060002	0.019
Wetland 5 – Phase 2	PEM	05060002	0.038
Wetland 6 – Phase 2	PEM	05060002	0.003
Wetland 7 – Phase 2	PEM	05060002	0.195
Wetland 9 – Phase 2	PEM	05060002	0.237
Wetland 10	PEM	05060002	0.028
Wetland 11	PEM/PSS	05060002	0.018
Wetland 12 – Phase 2	PEM/PSS	05060002	0.074
Wetland 13 – Phase 2	PEM	05060002	0.013
Wetland 14 – Phase 2	PEM	05060002	0.004
Wetland 15 – Phase 2	PEM	05060002	0.012
Wetland 16 – Phase 2	PEM	05060002	0.051
Wetland 17 – Phase 2	PEM	05090103	0.041
Wetland 18 – Phase 2	PEM/PSS/PFO	05090103	0.827
Wetland 20 – Phase 3	PEM/RAB	05090103	0.064
Wetland 22 – Phase 3	L2EM	05090103	0.031
Wetland 23	PEM	05090103	0.010
Wetland 24 – Phase 3	PEM	05090103	0.150
Wetland 24A	PEM	05090103	0.006
Wetland 24B	PEM	05090103	1.160
Wetland 25	PEM/PSS/PFO	05090103	0.206
Wetland 25A	PEM/PSS	05090103	0.041
Wetland 27	PEM	05090103	0.063
Wetland 28A	PEM	05090103	0.009
Wetland 28B	PEM	05090103	0.027
Wetland 28C	PEM	05090103	0.031
Wetland 28D	PEM	05090103	0.037
Wetland 29 – Phase 3	PEM	05090103	0.297
Wetland 30 – Phase 3	PEM	05090103	0.294
Wetland 31 – Phase 3	PEM	05090103	0.003



<b>Wetland ID</b>	<b>Cowardin Class</b>	<b>Watershed (8-digit HUC)</b>	<b>Acreage</b>
Wetland 33 – Phase 3	PEM	05090103	0.009
Wetland 34 – Phase 3	PEM/PSS	05090103	0.318
Wetland 35 – Phase 3	PEM	05090103	0.801
Wetland 36	PEM	05090103	0.011
<b>Totals</b>			<b>10.554</b>

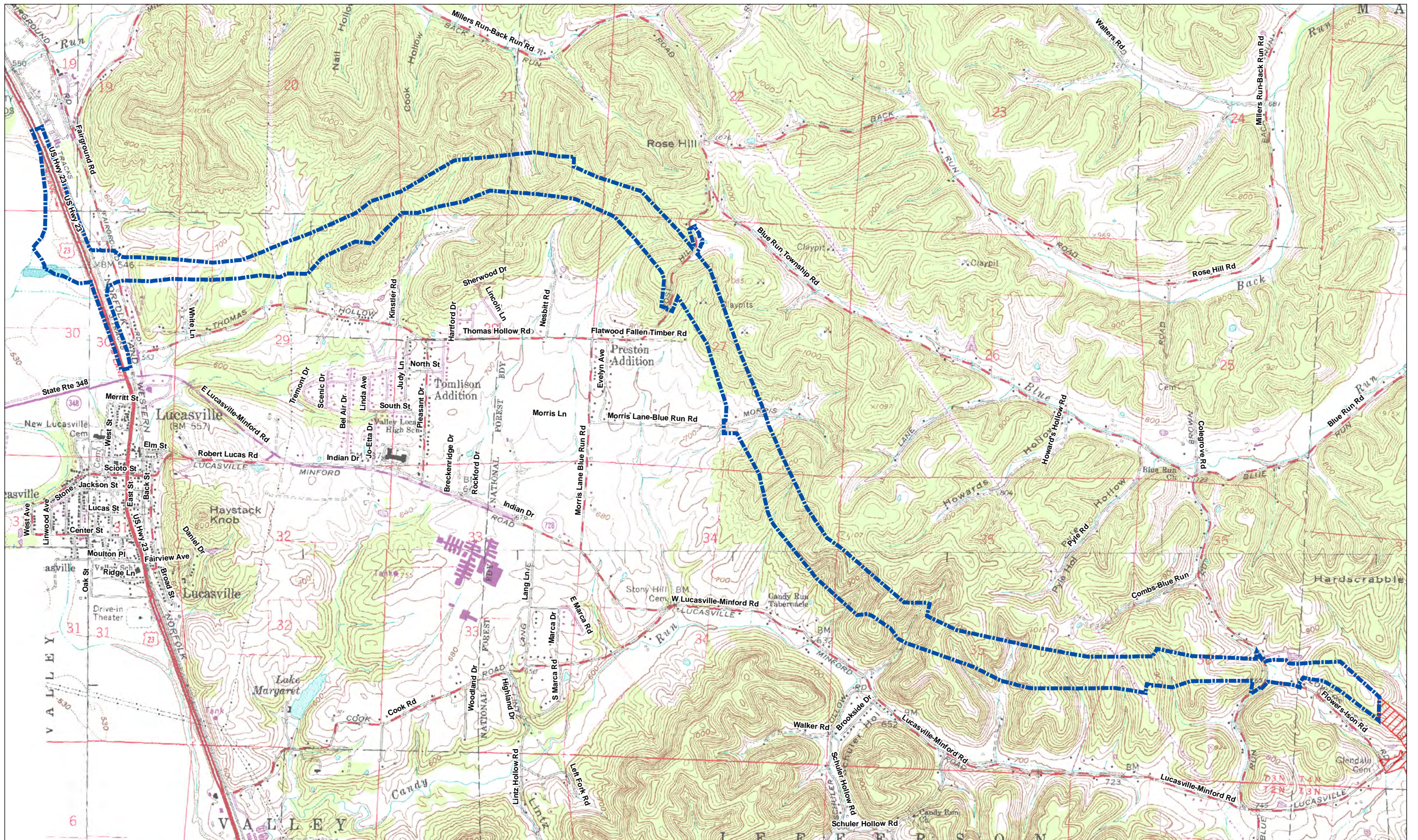
**Table 3 – Potentially Jurisdictional Ponds Summary for 2011-00646-OHR:  
SCI-823-0.00 Portsmouth Bypass Project Phases 2-3, PID 19415**

<b>Pond ID</b>	<b>Watershed (8-digit HUC)</b>	<b>Acreage</b>
Pond 1	05090103	0.141
Pond 3	05090103	1.000
<b>Totals</b>		<b>1.141</b>

**Table 4 – Potentially Jurisdictional Ditches Summary for 2011-00646-OHR:  
SCI-823-0.00 Portsmouth Bypass Project Phases 2-3, PID 19415**

<b>Ditch ID</b>	<b>Flow Regime</b>	<b>Watershed (8-digit HUC)</b>	<b>Acreage</b>
PJD 1	Seasonal-Intermittent	05090103	0.015
PJD 2	Seasonal-Intermittent	05090103	0.029
PJD 3	Seasonal-Intermittent	05090103	0.023
<b>Totals</b>			<b>0.067</b>





  Phase 2 project area  
   Phase 3 project area  
   Approximate Phase 1 construction limits

Base: 1998 Lucasville, 1990 Minford, 1991 Wakefield, Ohio,  
 1988 New Boston, 1985 Wheelersburg, OH-KY,  
 and 1975 Portsmouth KY-OH  
 USGS 7.5' series quadrangles

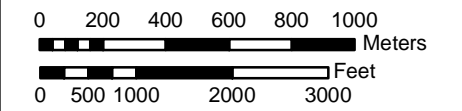
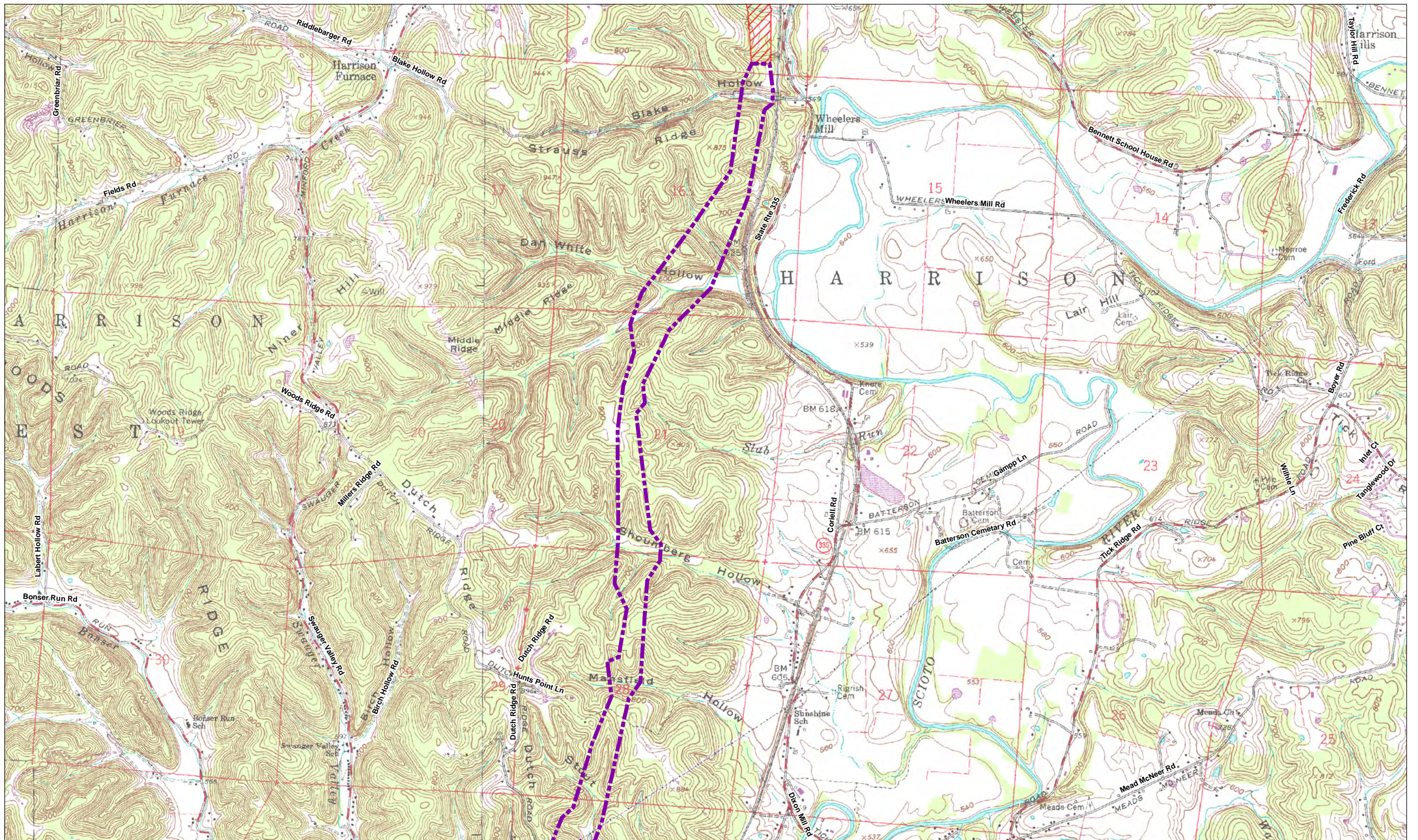


Figure 1. USGS 7.5' topographic maps.





  Phase 2 project area  
   Phase 3 project area  
   Approximate Phase 1 construction limits

Base: 1998 Lucasville, 1990 Minford, 1991 Wakefield, Ohio,  
 1988 New Boston, 1985 Wheelersburg, OH-KY,  
 and 1975 Portsmouth KY-OH  
 USGS 7.5' series quadrangles

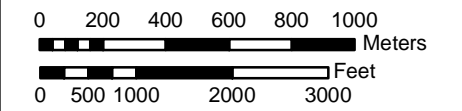
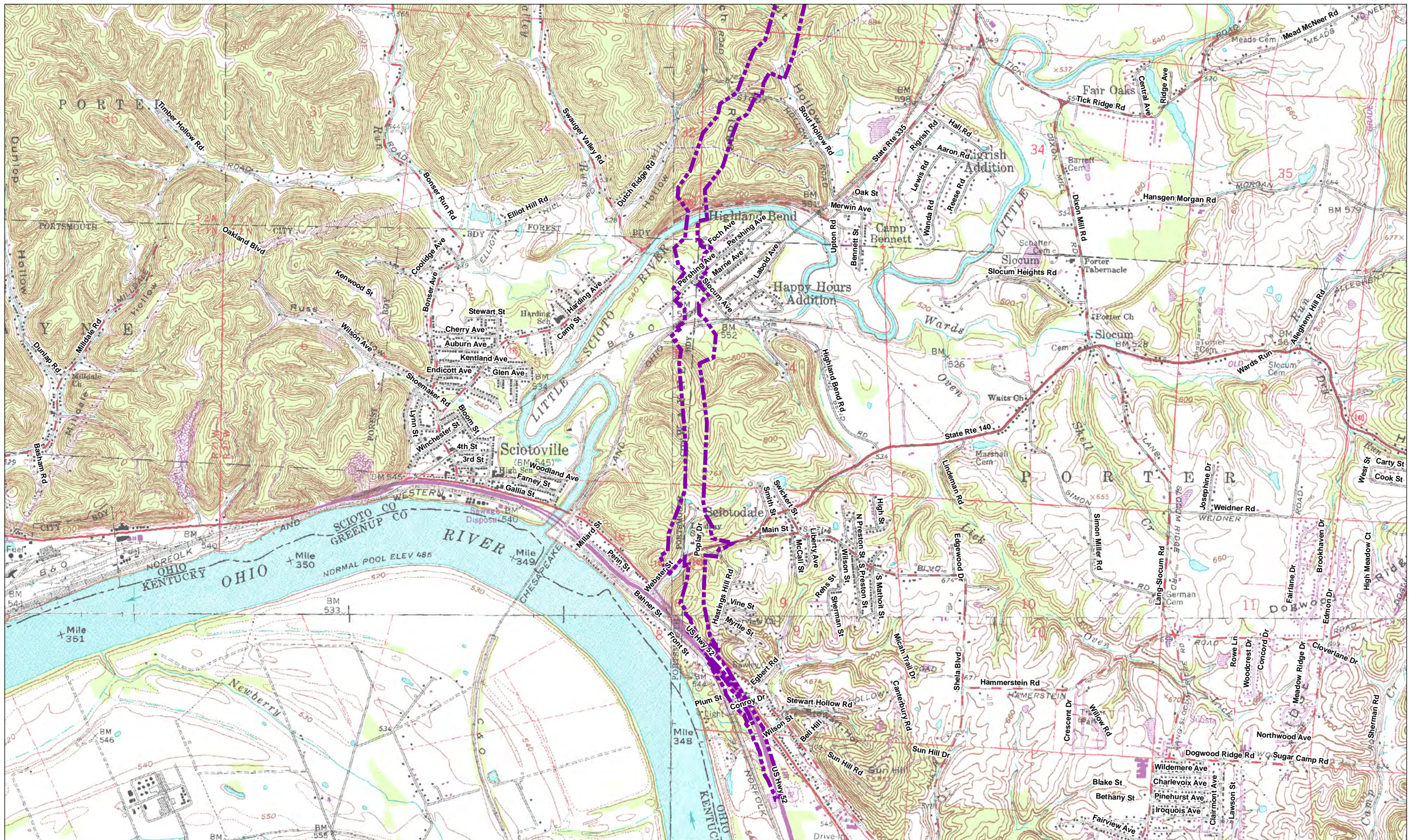


Figure 1. USGS 7.5' topographic maps.





Phase 2 project area
  Phase 3 project area
  Approximate Phase 1 construction limits

Base: 1998 Lucasville, 1990 Minford, 1991 Wakefield, Ohio,  
 1988 New Boston, 1985 Wheelersburg, OH-KY,  
 and 1975 Portsmouth KY-OH  
 USGS 7.5' series quadrangles

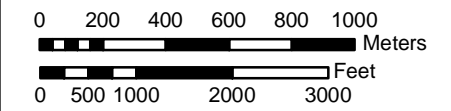


Figure 1. USGS 7.5' topographic maps.



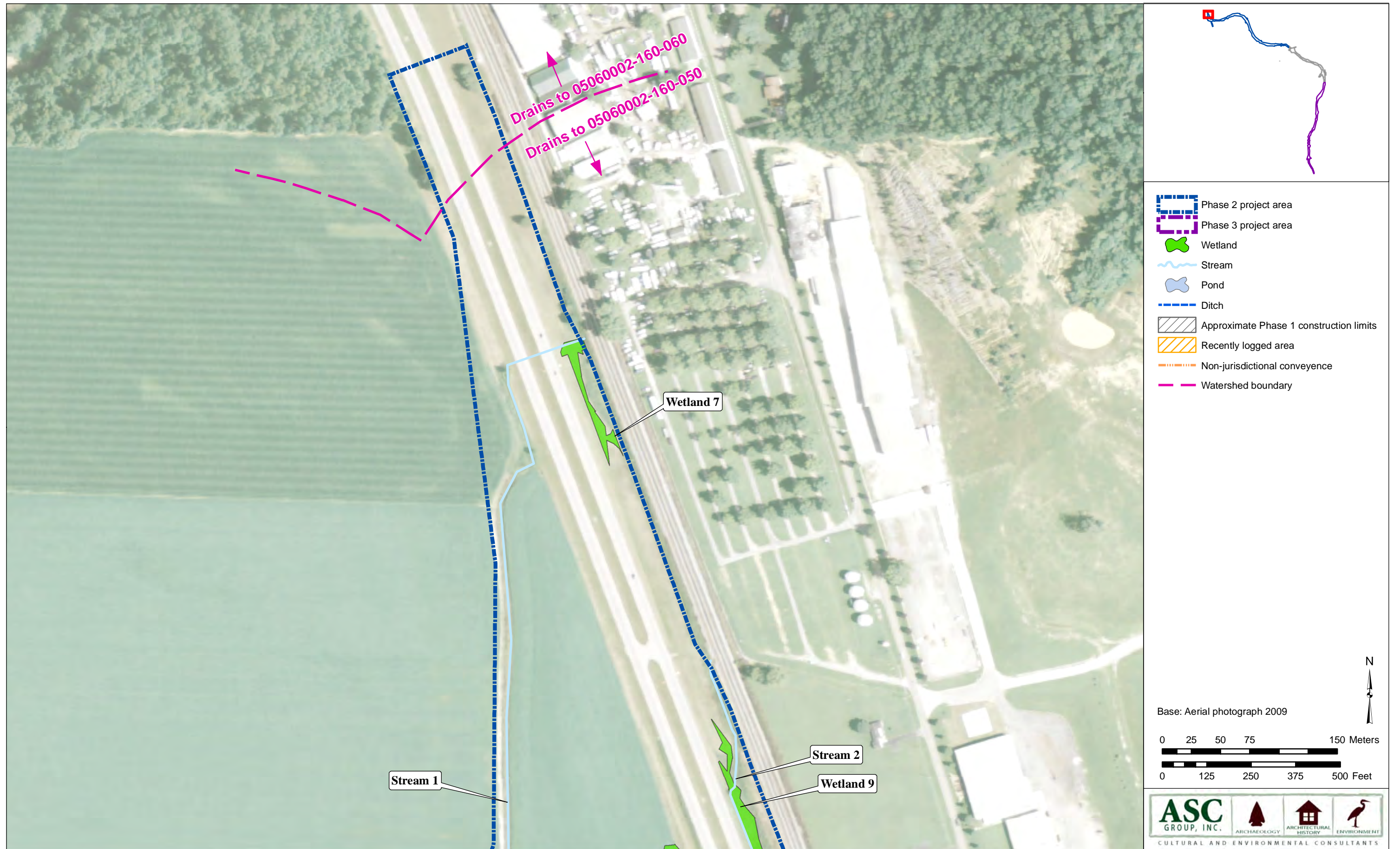


Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)



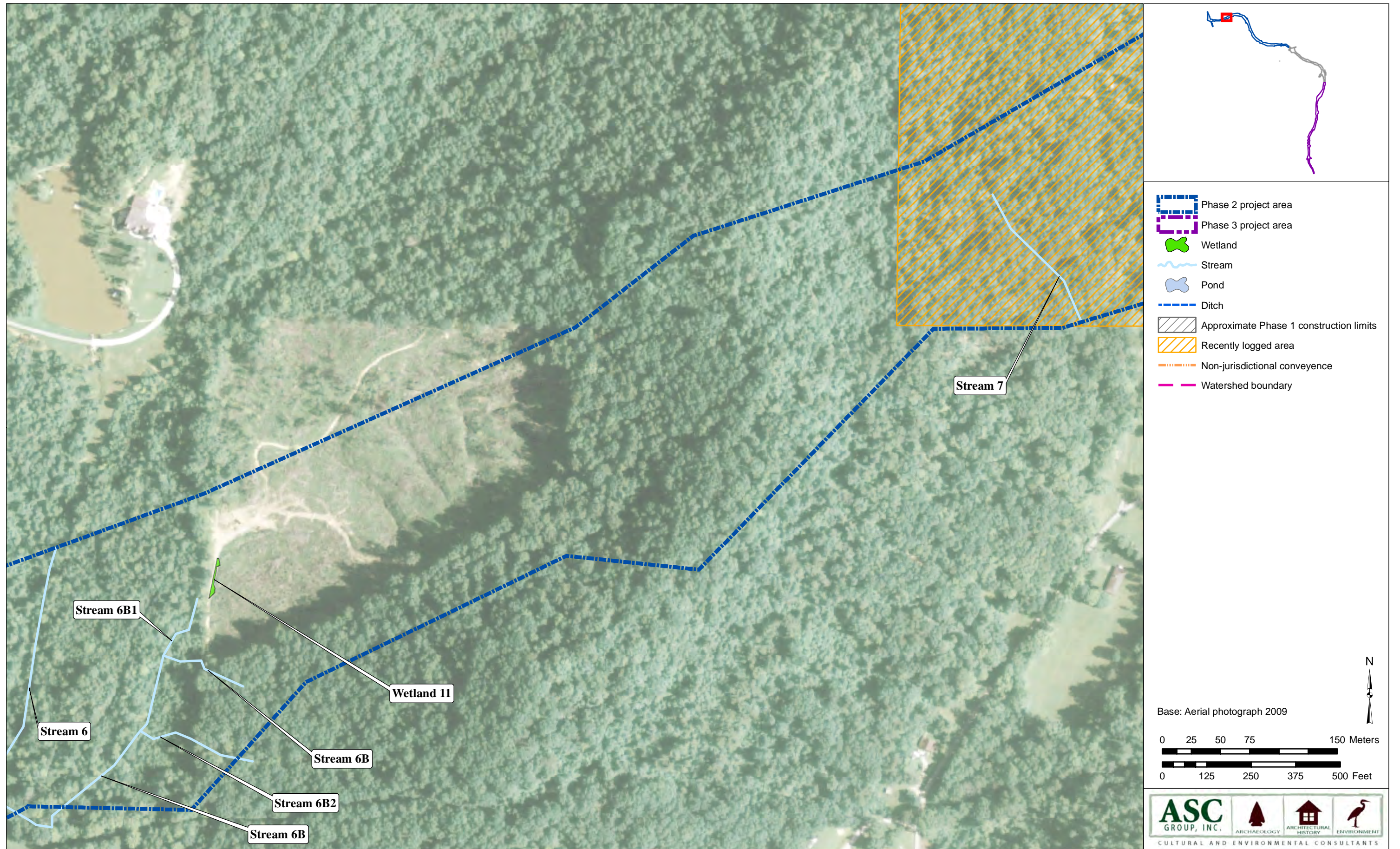


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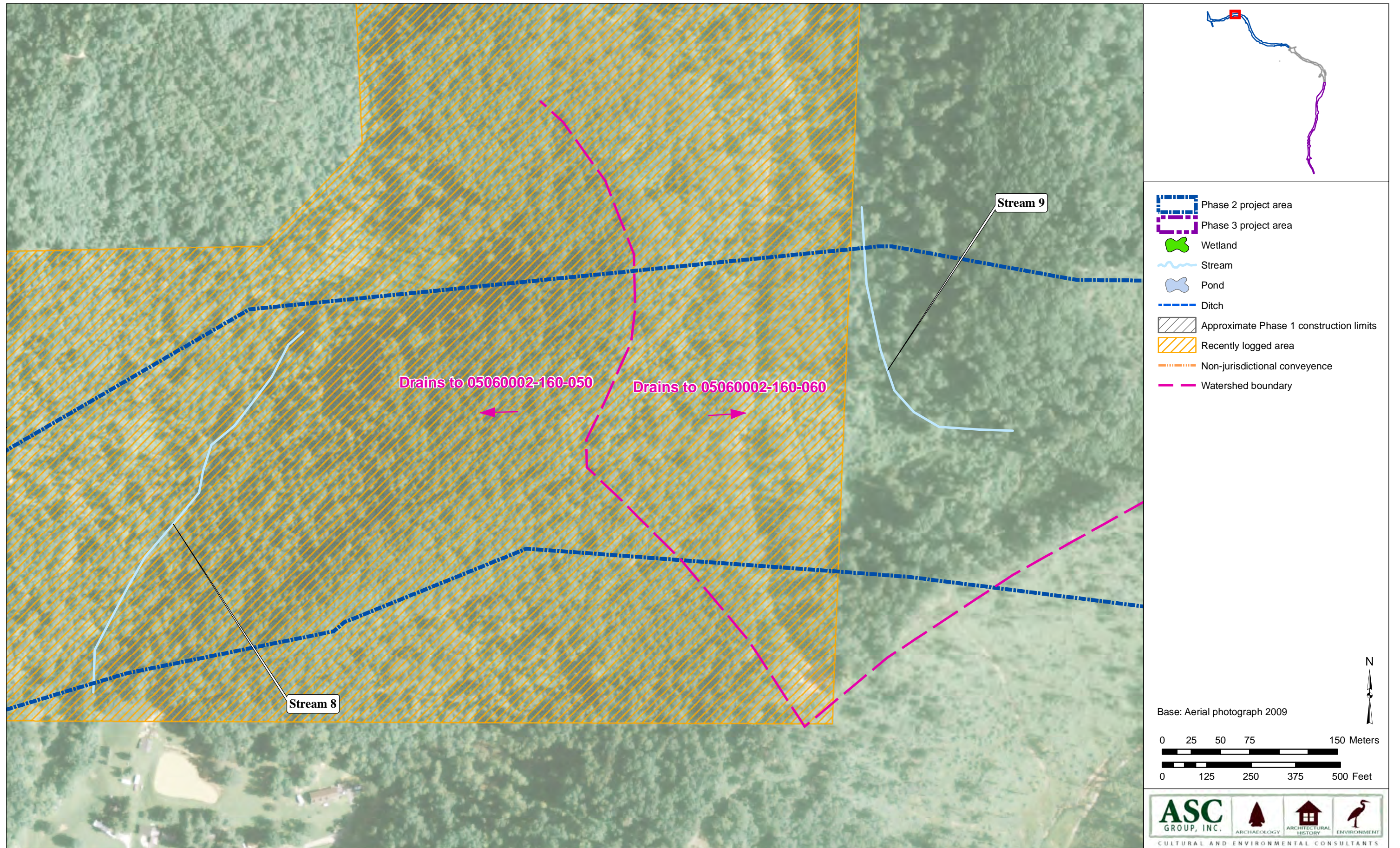


Figure 11. Survey Results. (30 sheets)



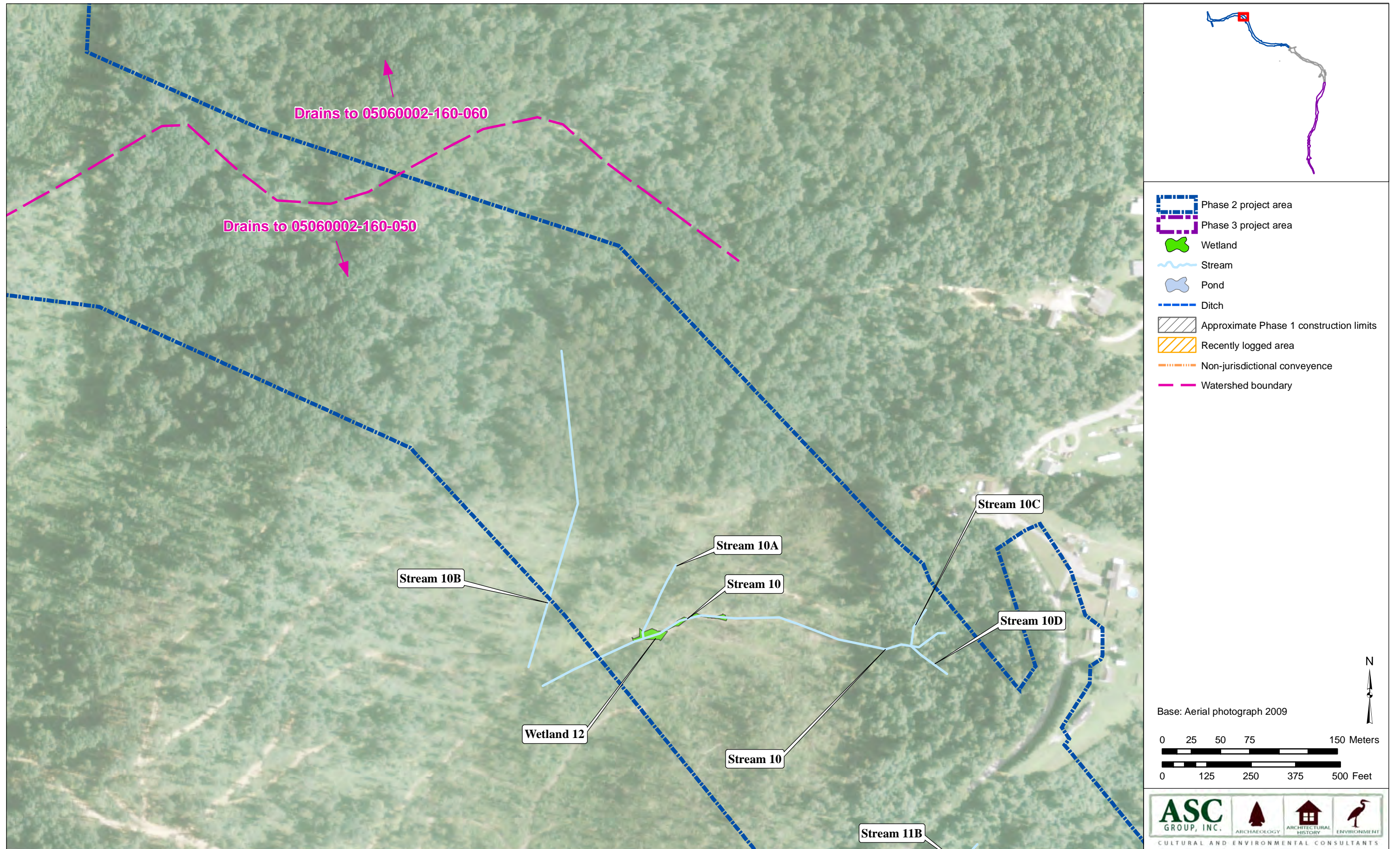


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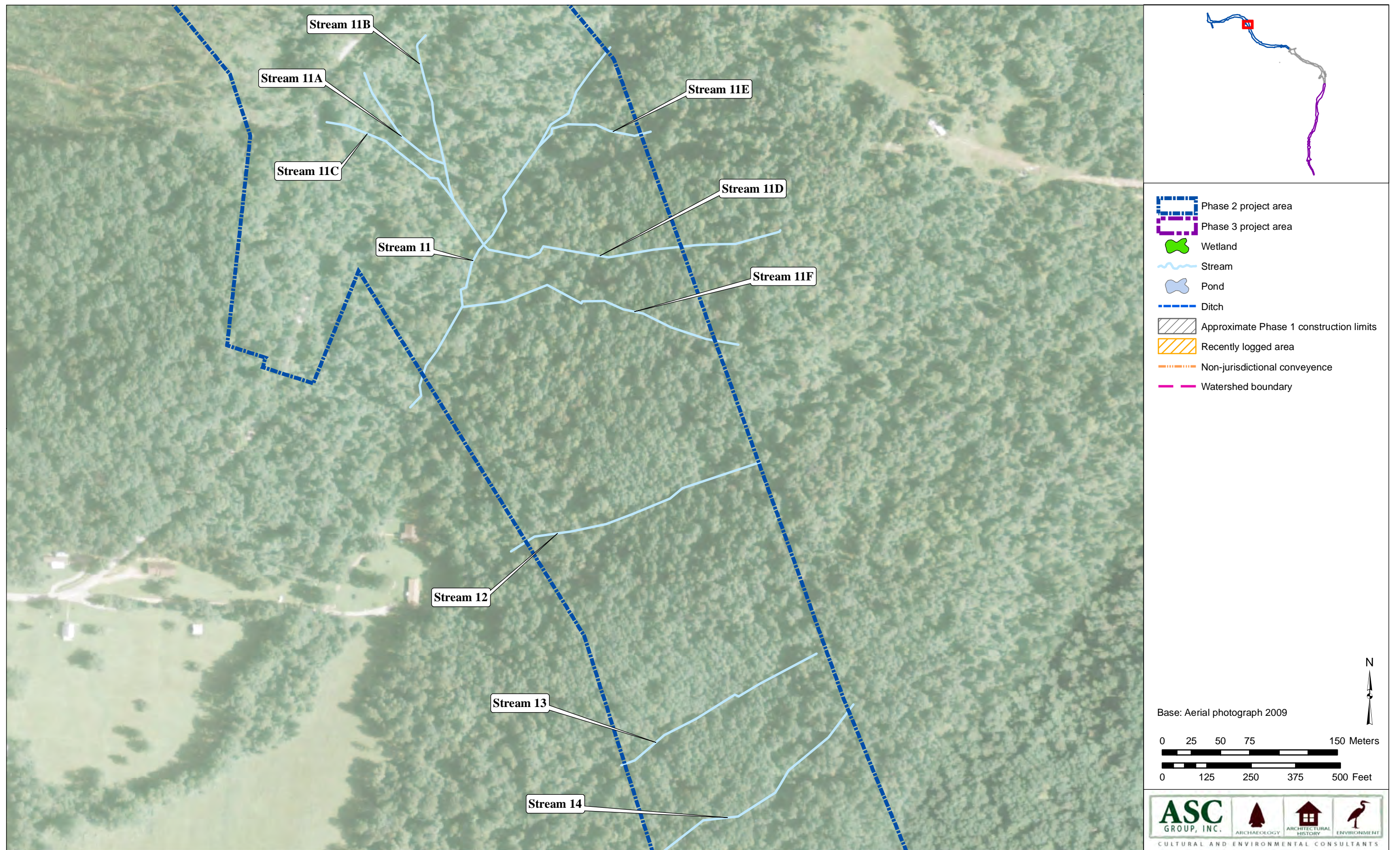


Figure 11. Survey Results. (30 sheets)



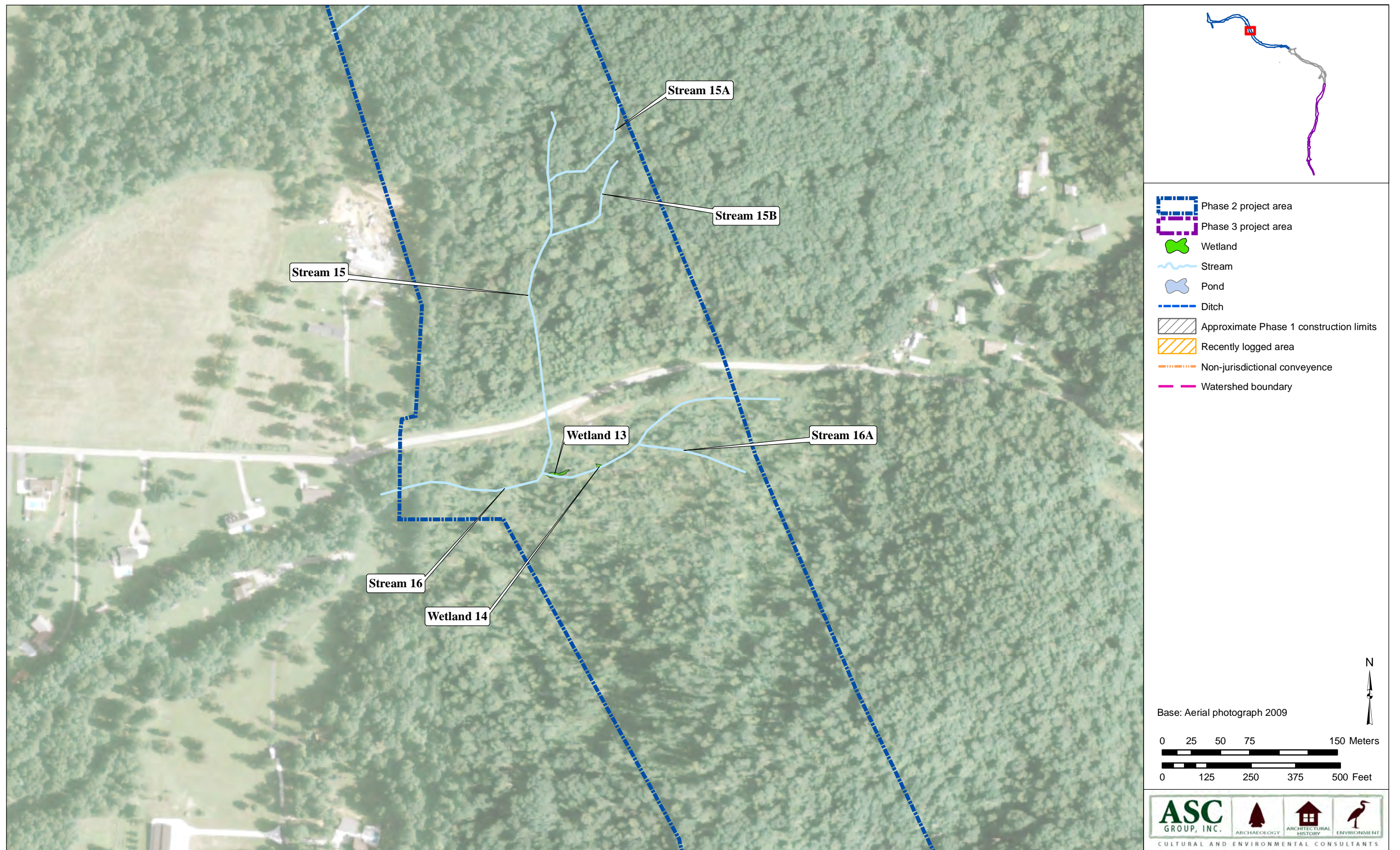


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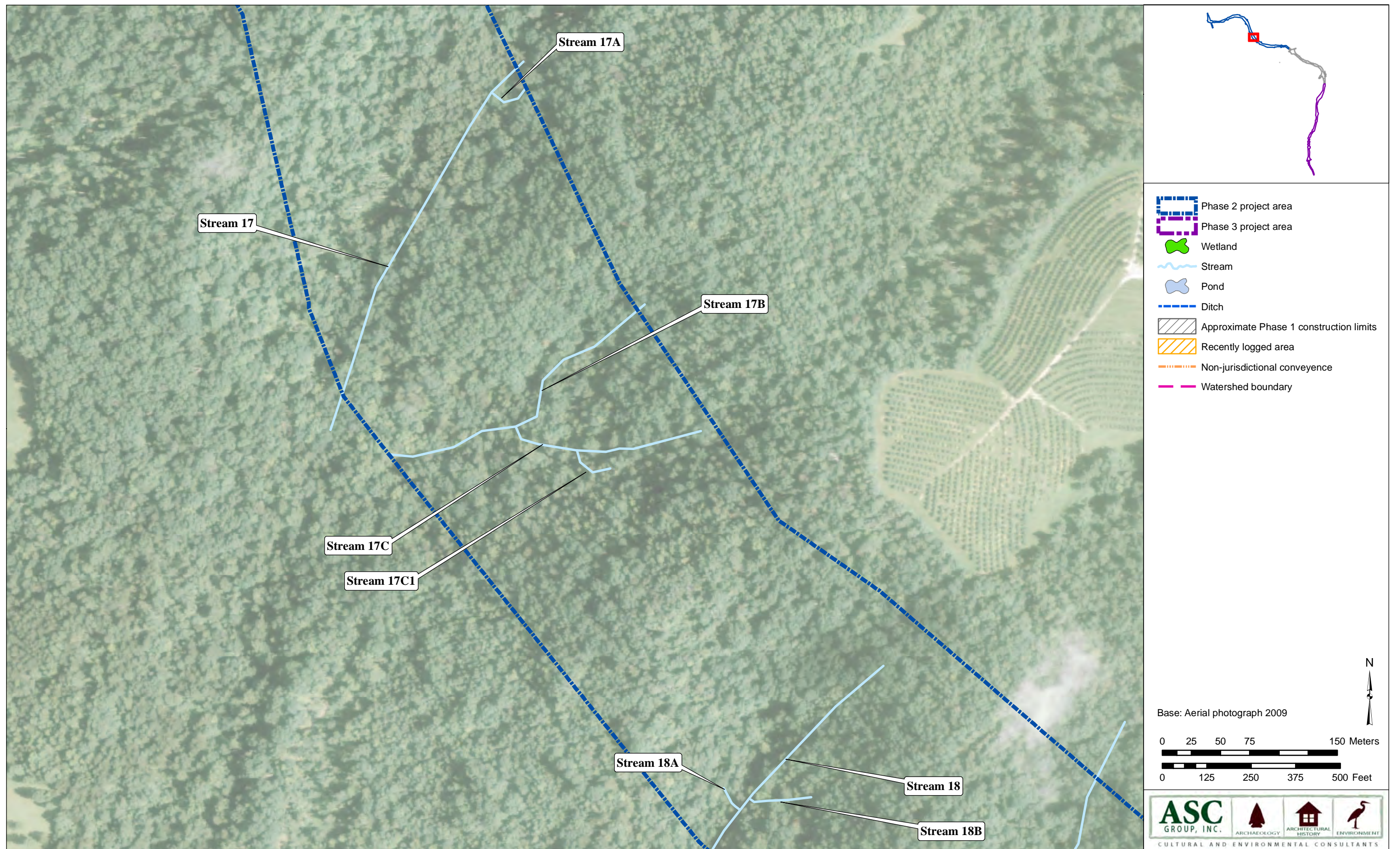


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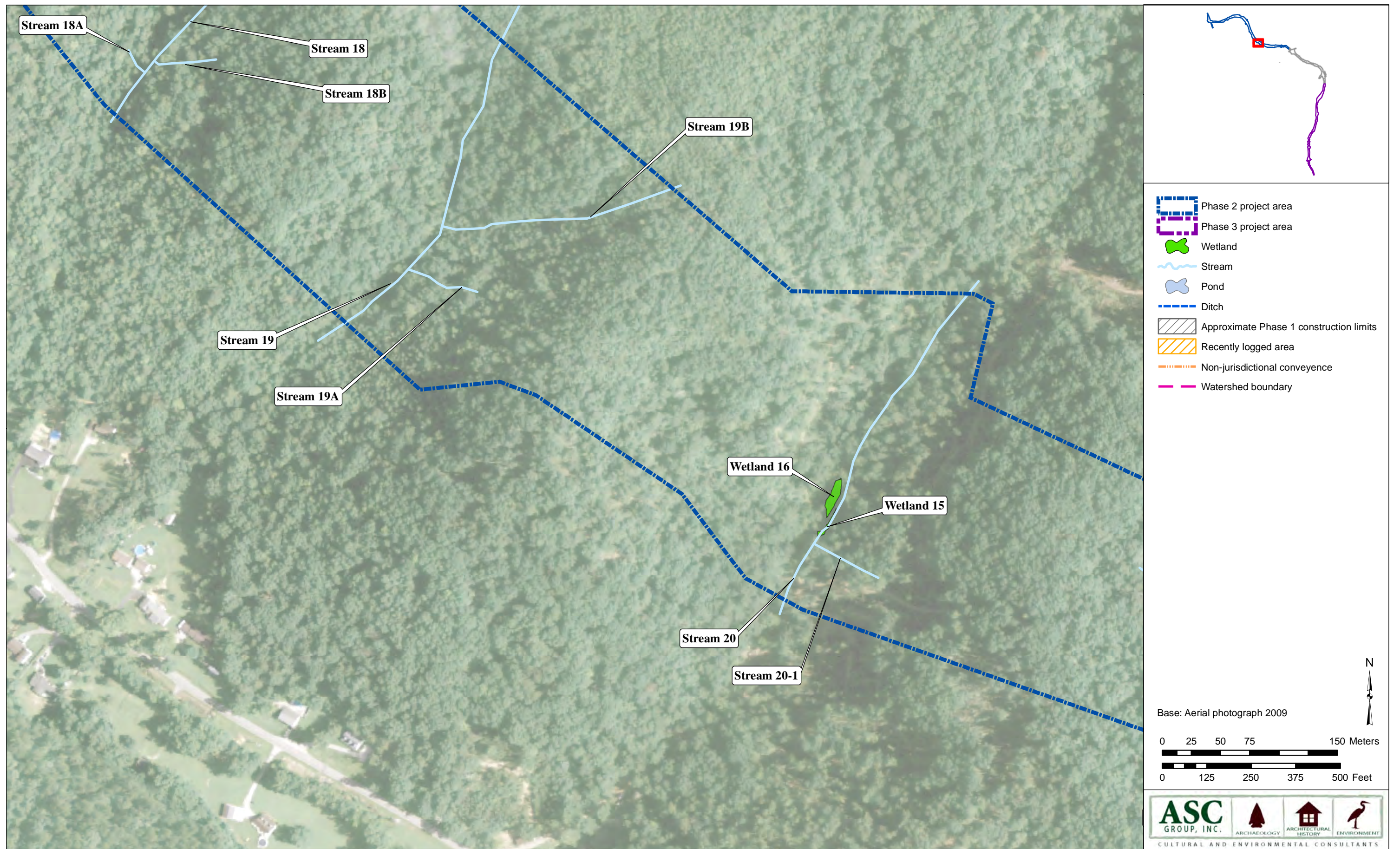


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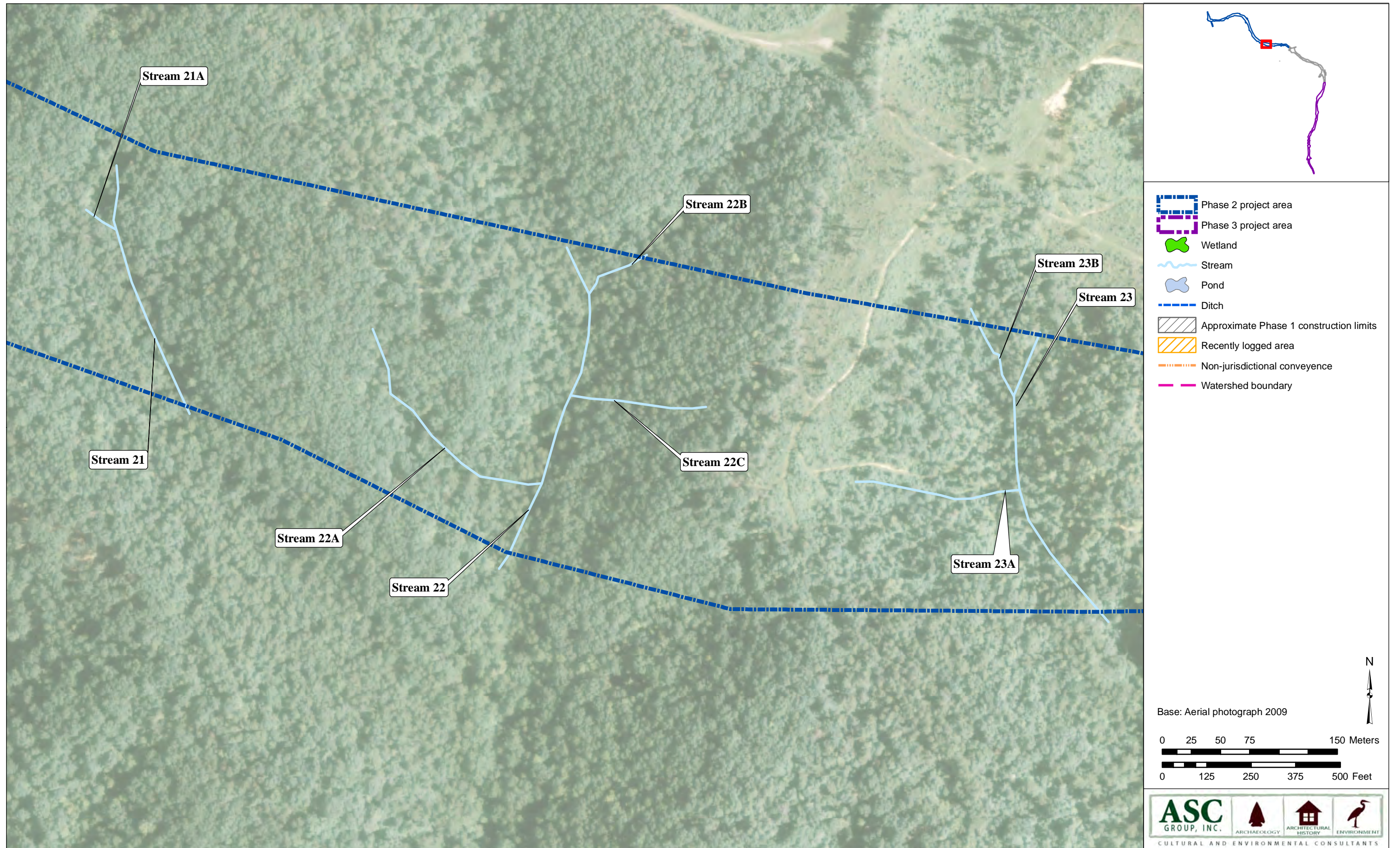


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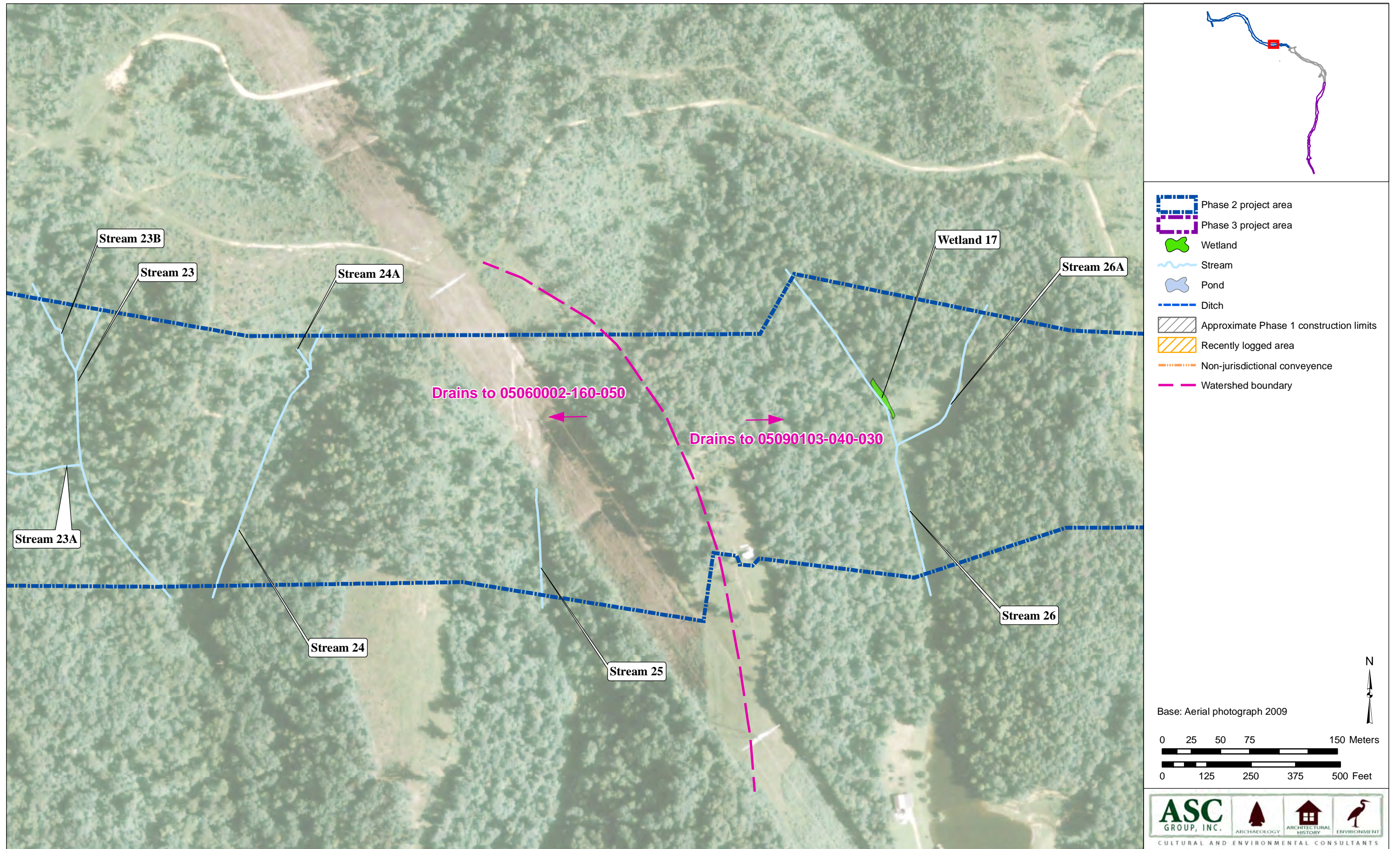


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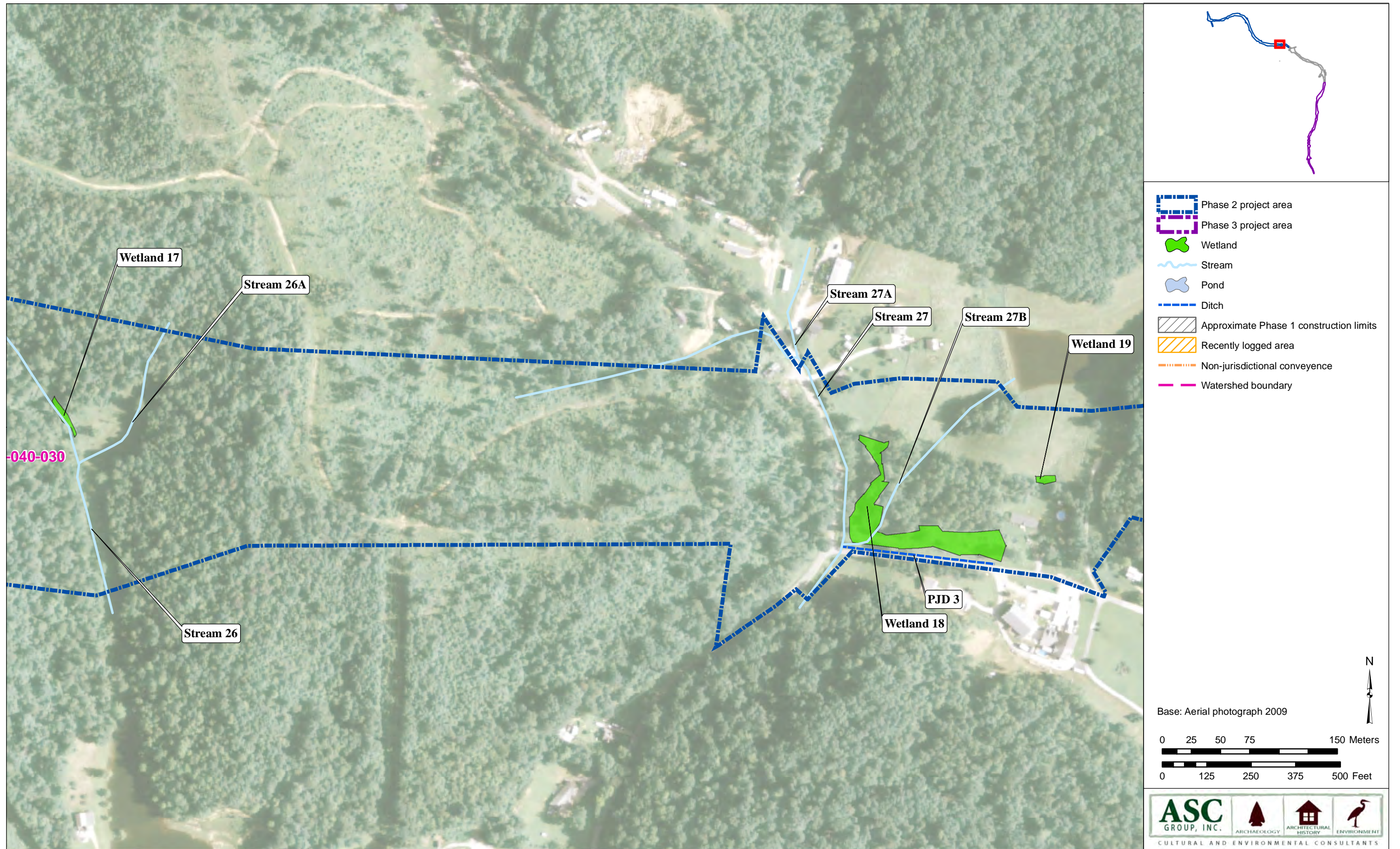


Figure 11. Survey Results. (30 sheets)



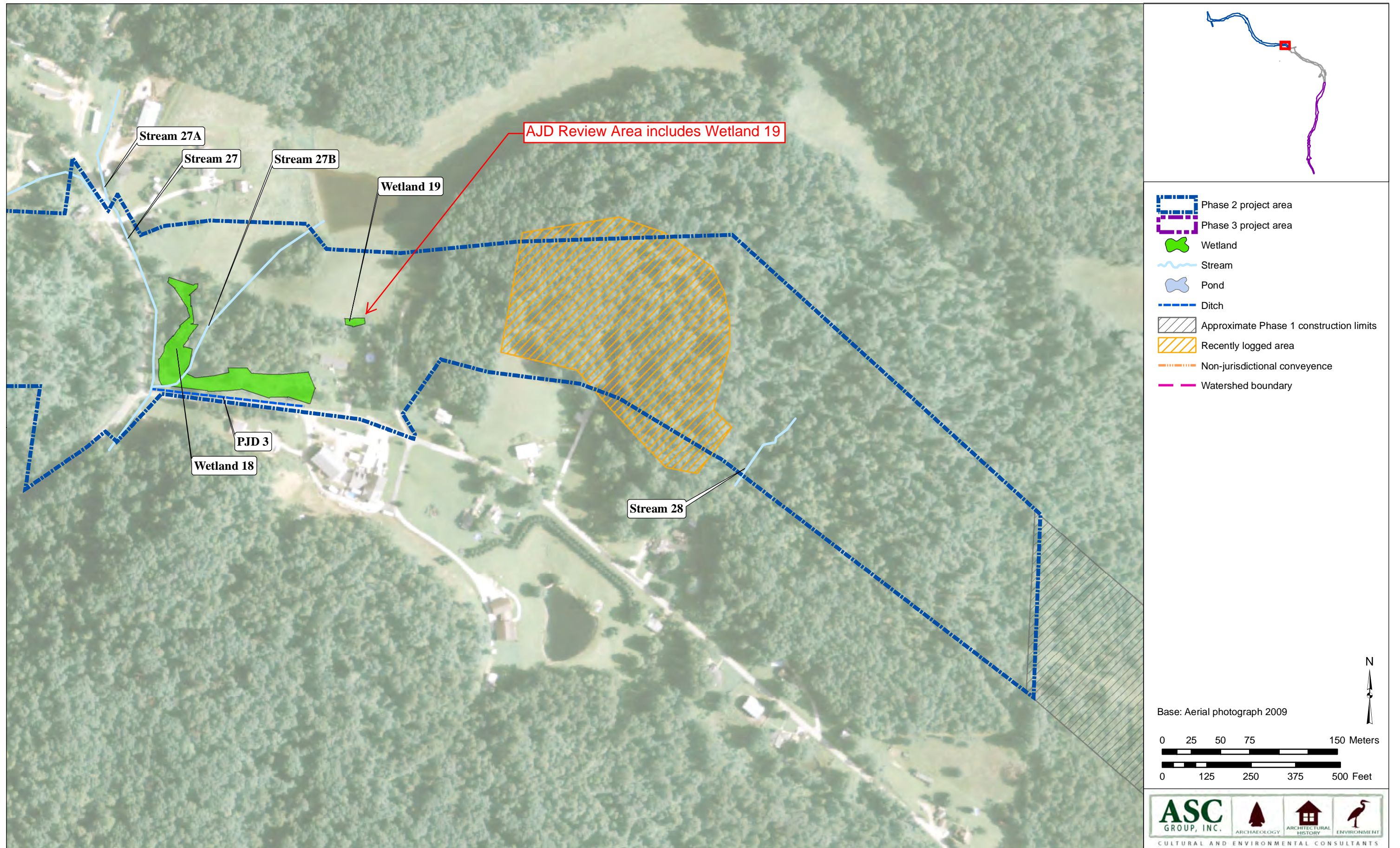


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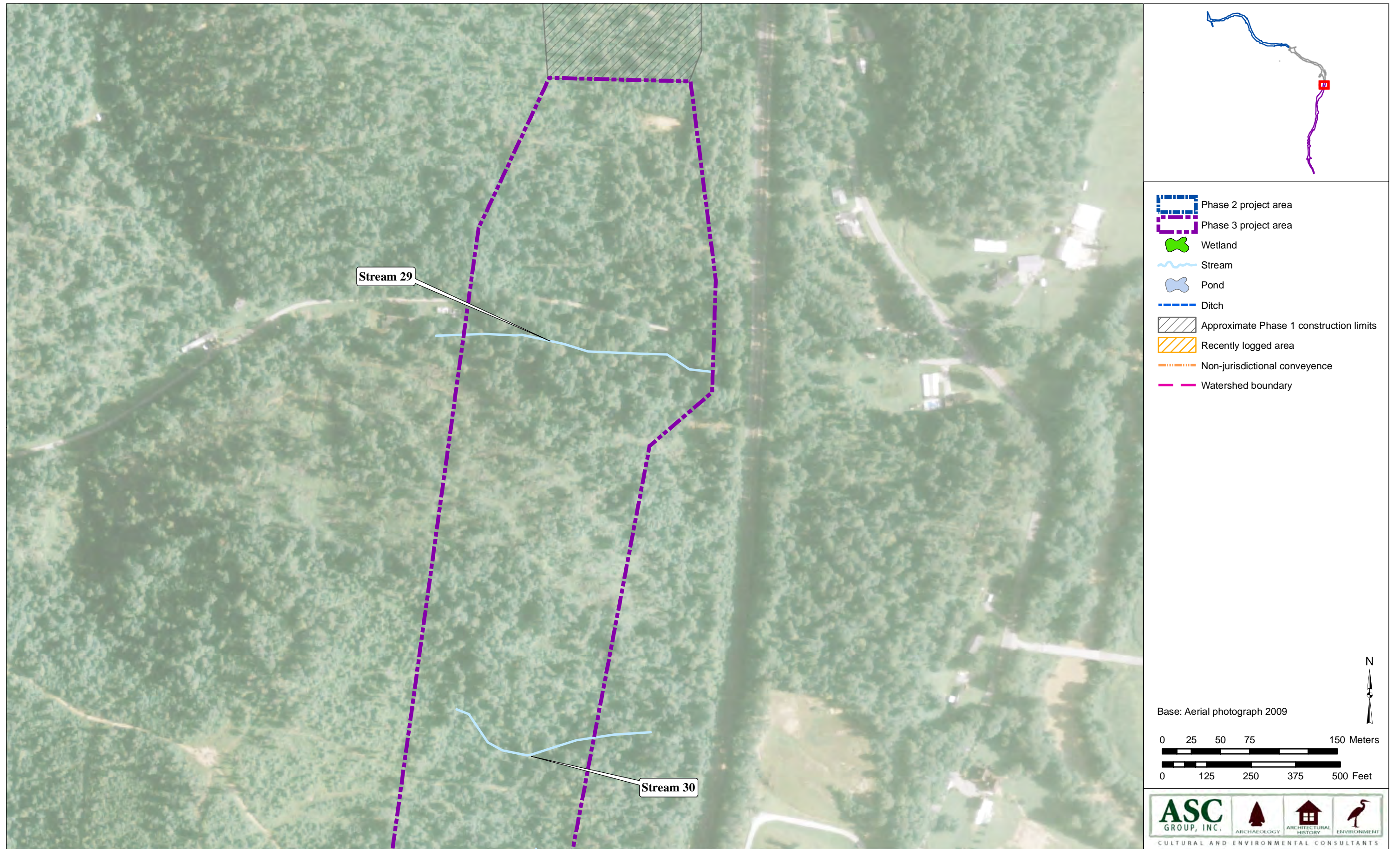


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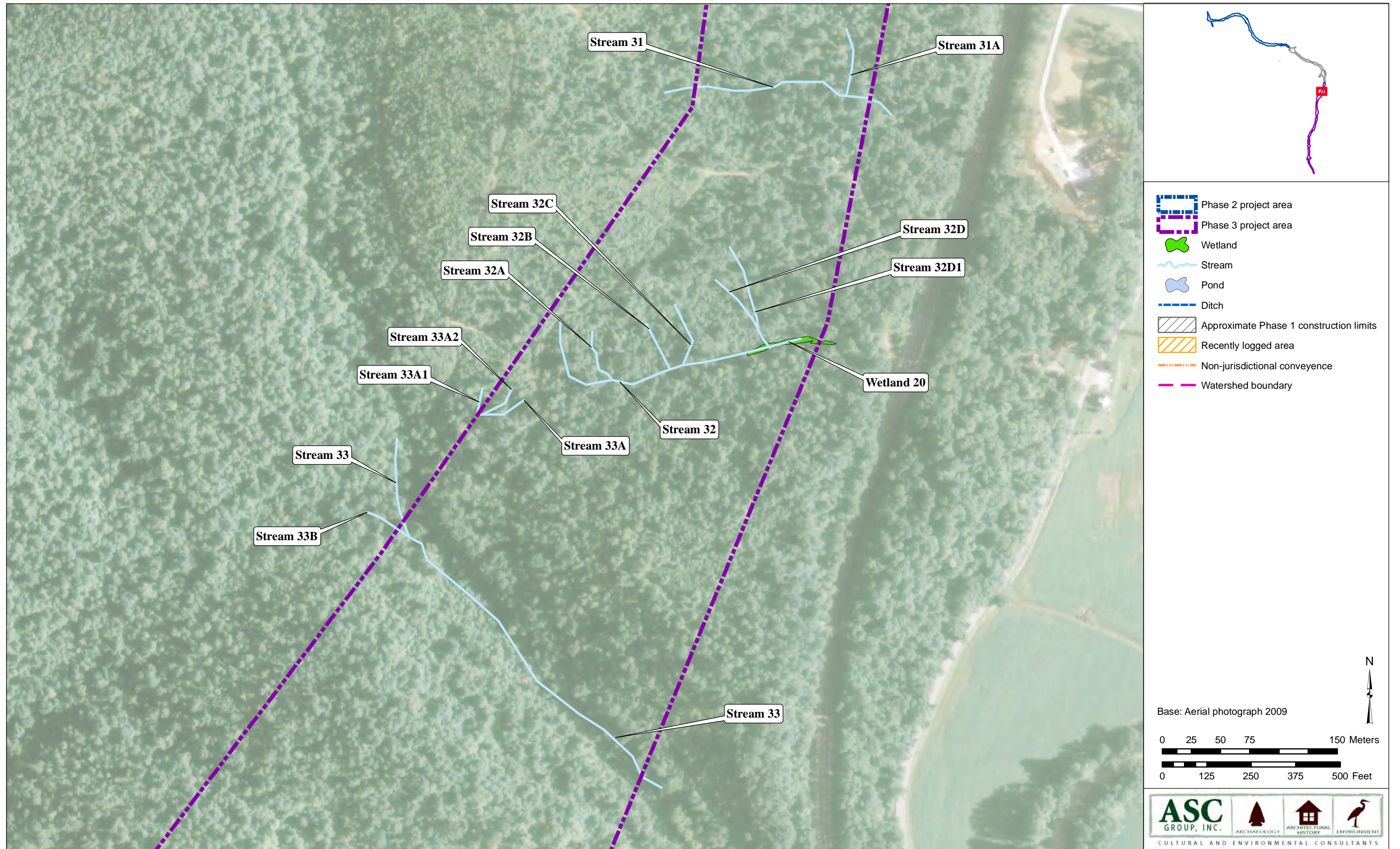


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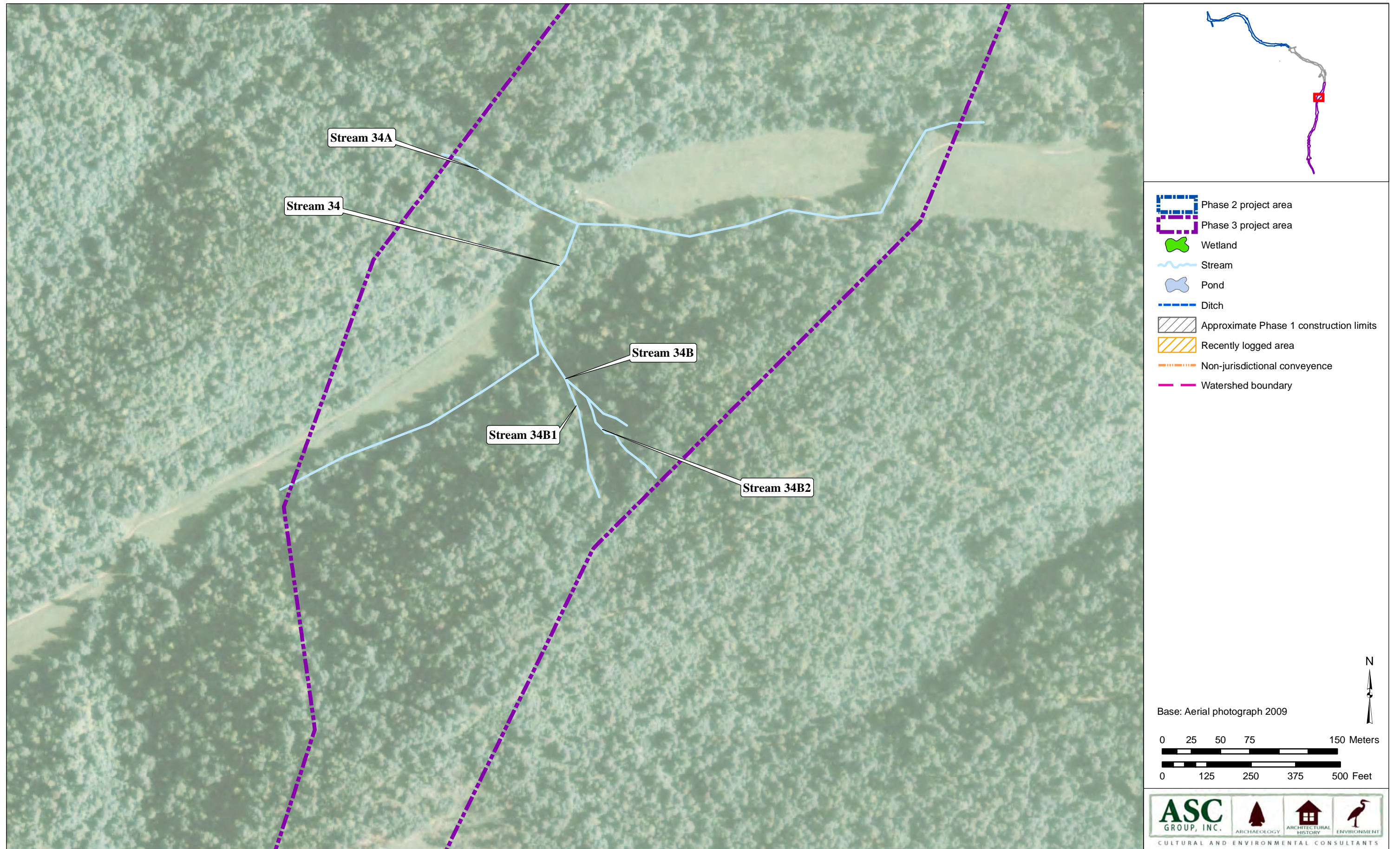


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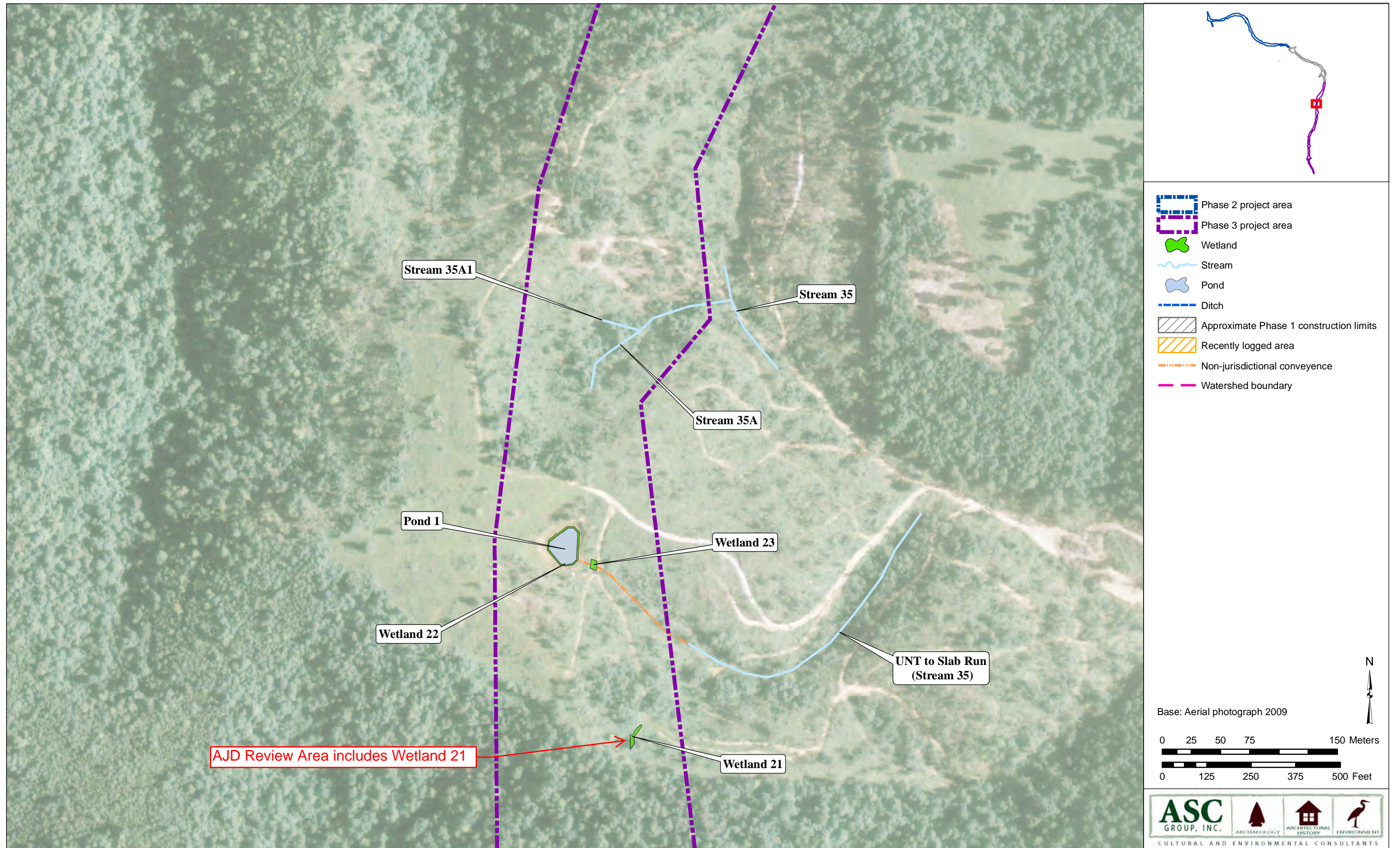


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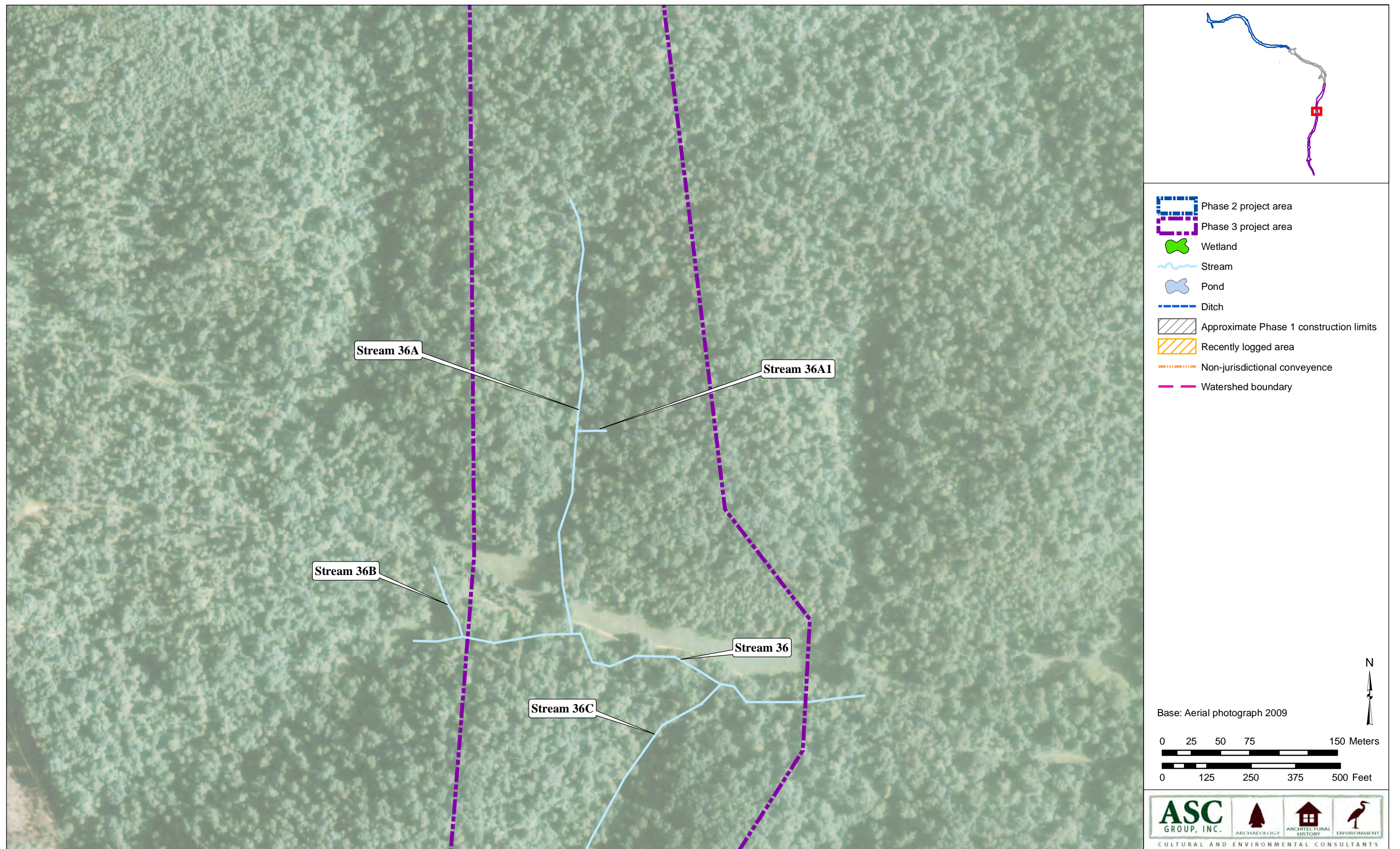


Figure 11. Survey Results. (30 sheets)





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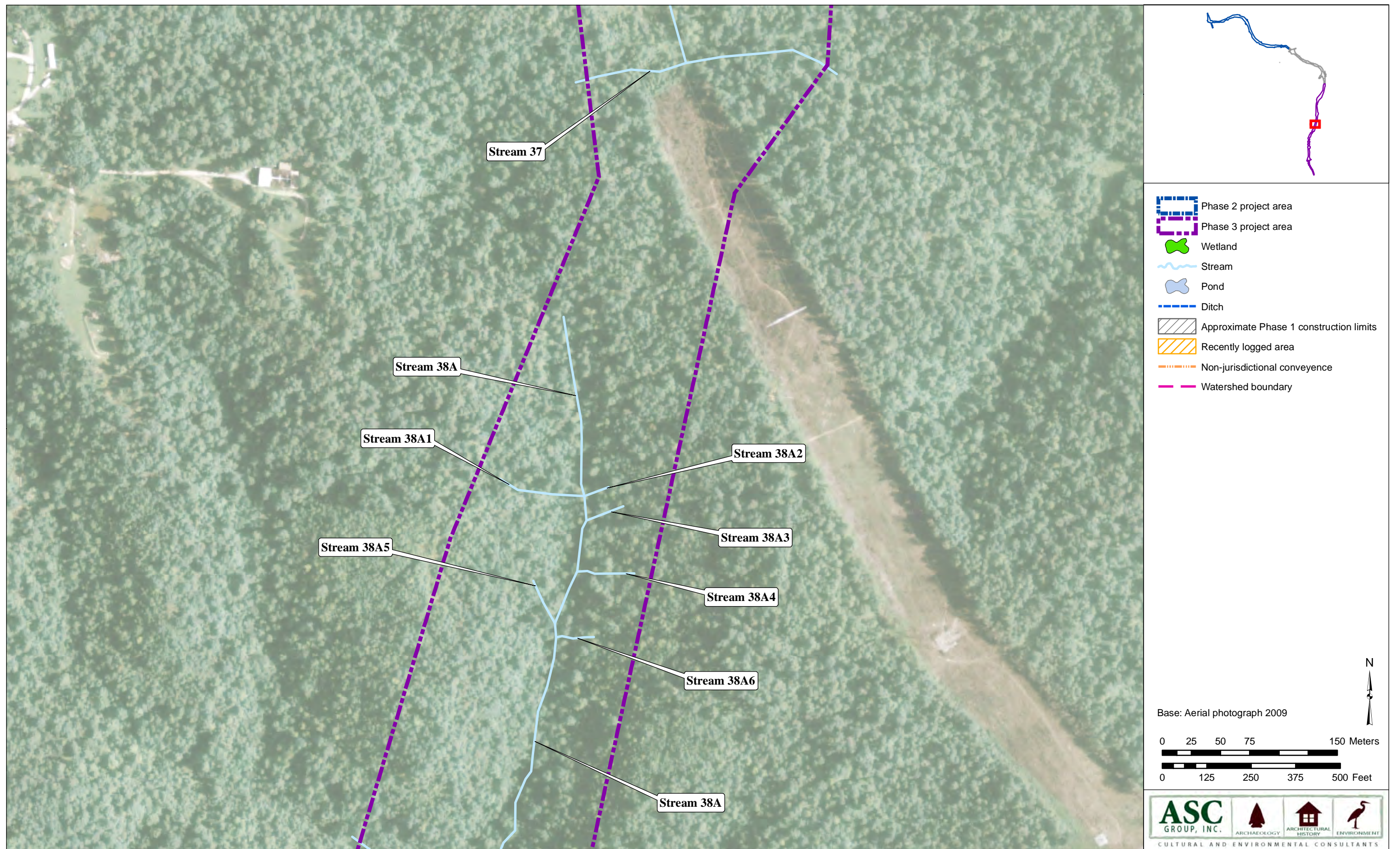


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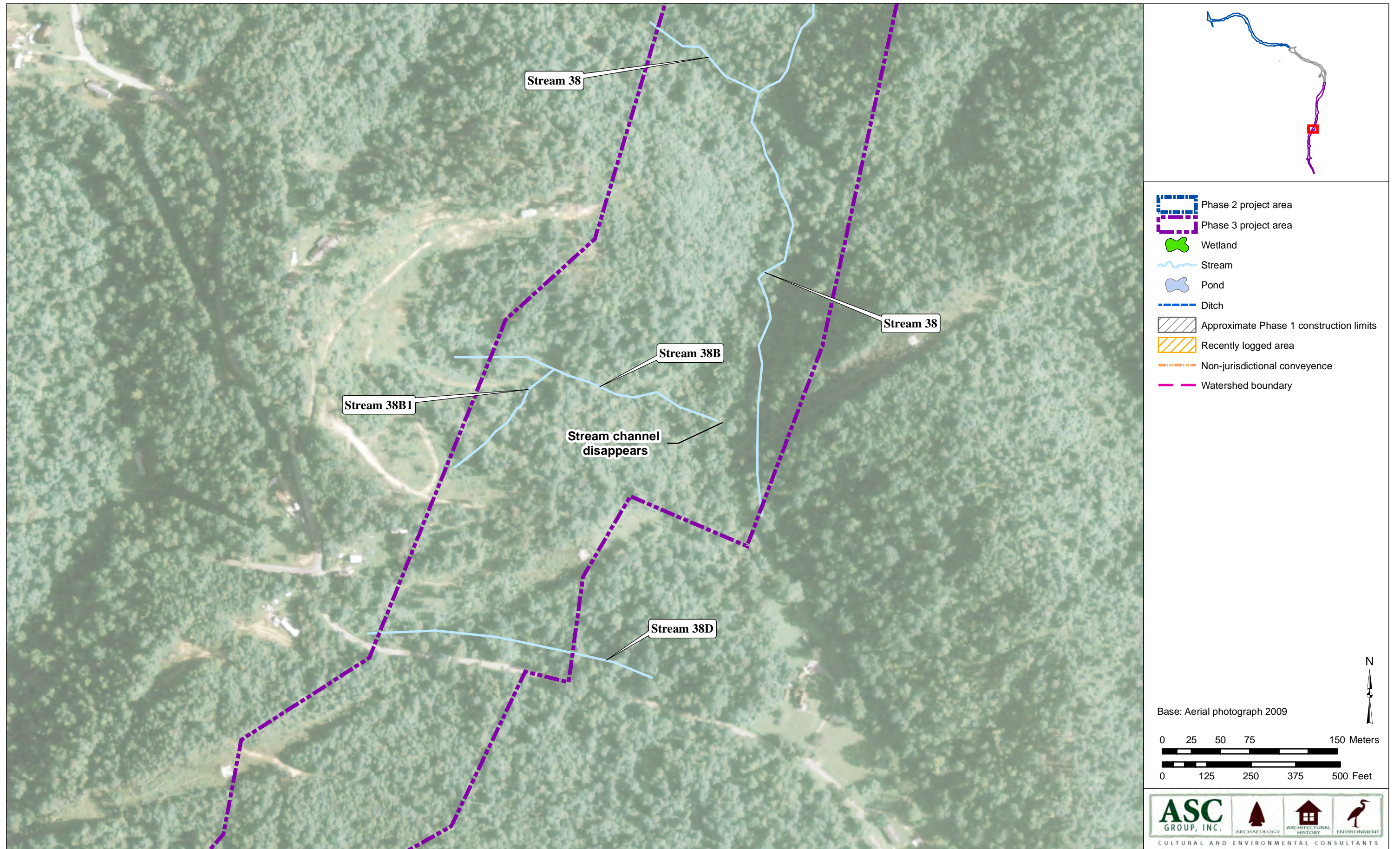


Figure 11. Survey Results. (30 sheets)





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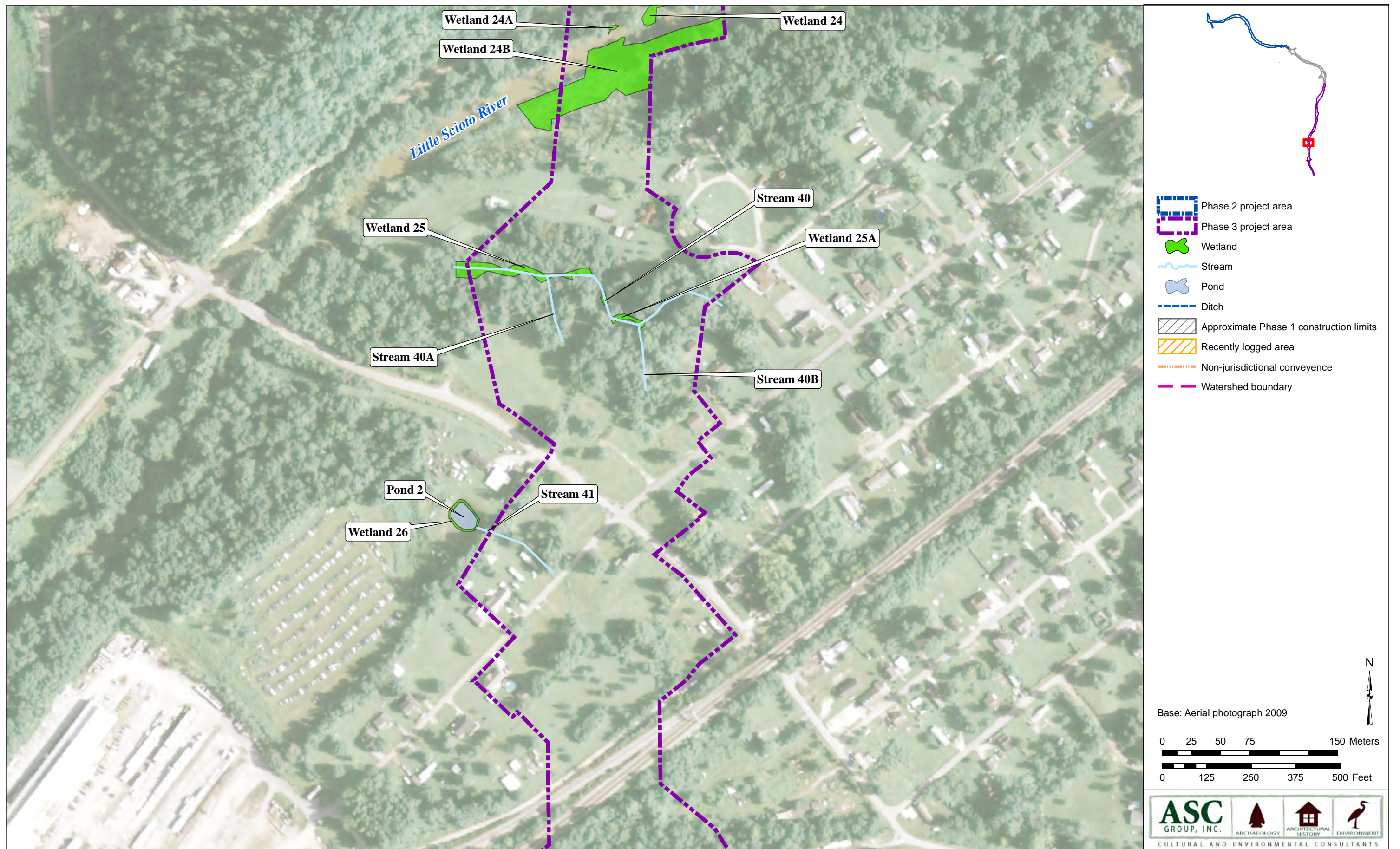


Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)







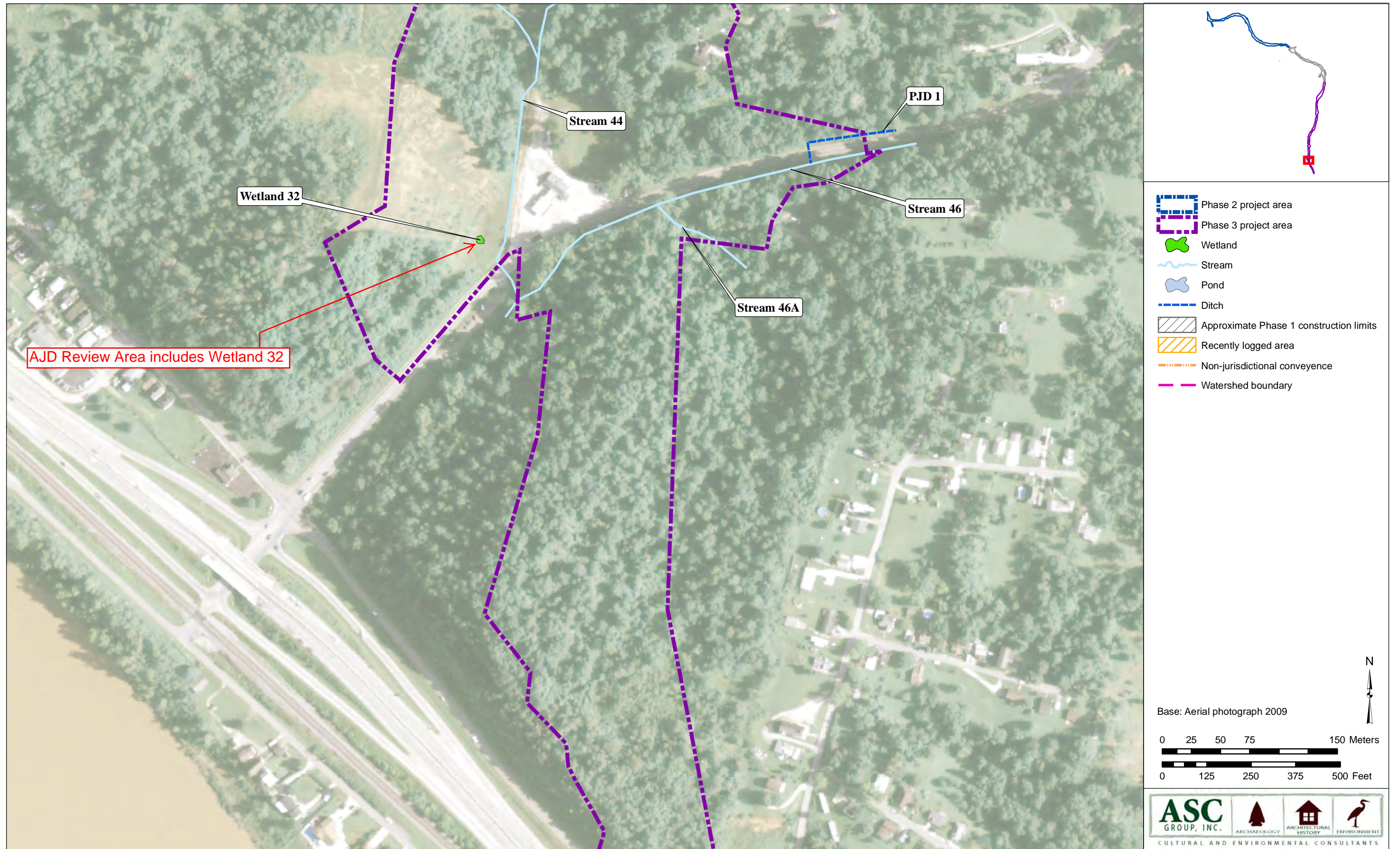


Figure 11. Survey Results. (30 sheets)



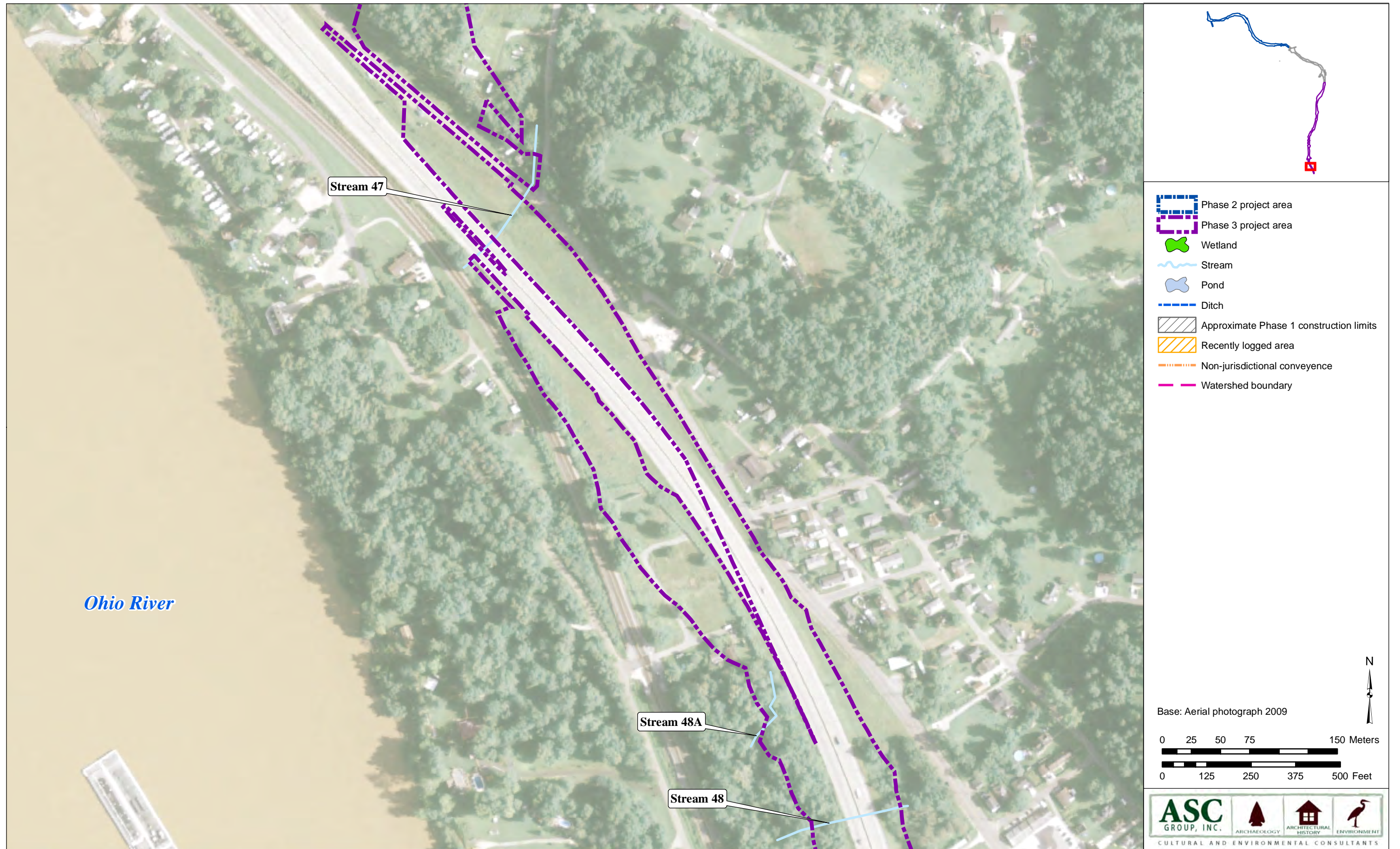


Figure 11. Survey Results. (30 sheets)



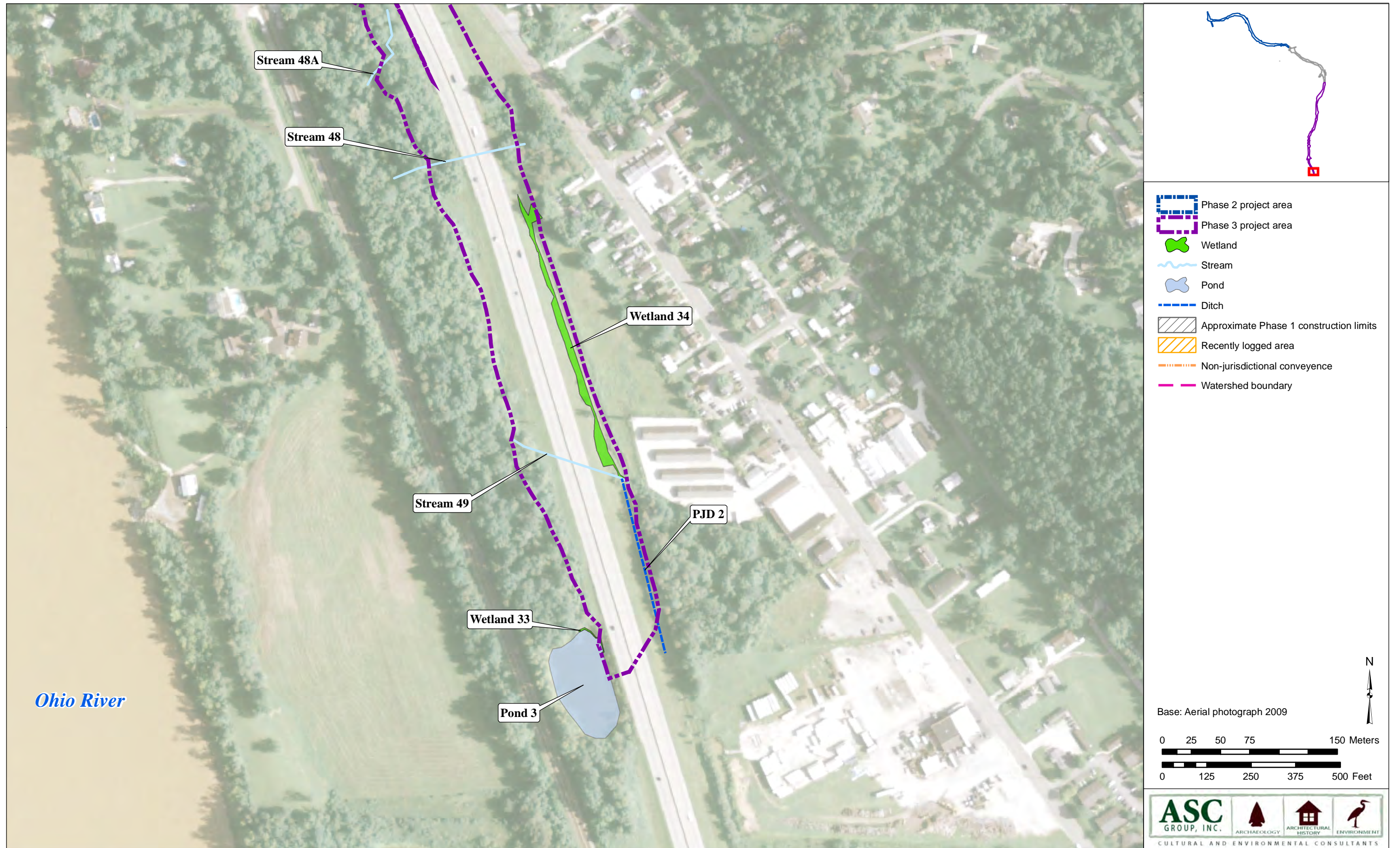


Figure 11. Survey Results. (30 sheets)



## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Ohio Department of Transportation		File Number: 2011-00646-OHR	Date: 6 March 2014
Attached is:		See Section below	
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
X	APPROVED JURISDICTIONAL DETERMINATION	D	
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

**SECTION I -** The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

Ginger Mullins, Chief, Regulatory Division  
(304) 399-5710

Address: U.S. Army Corps of Engineers  
Regulatory Division  
502 8<sup>th</sup> Street  
Huntington, WV 25701

If you only have questions regarding the appeal process you may also contact:

U.S. Army Corps of Engineers  
Great Lakes & Ohio River Division  
Attn: Review Officer  
550 Main Street RM 10-524  
Cincinnati, OH 45202-3222  
Phone: (513) 684-6212  
Fax: (513) 684-2460

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

\_\_\_\_\_  
Signature of appellant or agent.

Date:

Telephone number:





**OHIO DEPARTMENT OF TRANSPORTATION  
INTER-OFFICE COMMUNICATION  
Office of Environmental Services**

**TO:** Vaughn Wilson, District 9 Deputy Director                      **DATE:** November 21, 2013  
**Attention: Greg Manson**

**FROM:** Noel Alcala, Noise and Air Quality Coordinator, Office of Environmental Services  
*Noel Alcala*

**SUBJECT:** Noise Re-Analysis of NSA2E dated November 2013

**PROJECT:** SCI-SR823-0.00 PortsByPass Ph2 (PID 19415); Task POL(DRG)-13-09-01

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We have reviewed the subject document prepared by Burton Planning Services for Davey Resource Group and received by this office on 11/20/13. The preparation of the subject document was triggered because of the significant reduction in the design year ADT since the previous 2006 noise analysis. **We find that our comments dated 11/18/13 were adequately addressed and we deem the document acceptable. Relative to the expediency of the report preparation and the noise exhibits and graphics, the consultant provided an excellent product.**

The analysis identified noise receptors “substantially impacted” by noise where the difference between the existing and design year noise levels was greater than 10 decibels. After consideration of all noise abatement alternatives for those receptors substantially impacted, the results are listed as follows:

- There were 42 impacted noise sensitive dwelling units in the design year.
- A barrier analysis to evaluate noise barrier feasibility and reasonableness was conducted for this area.
- The results of the barrier analysis show that barrier alternatives were feasible but none of the barrier alternatives met the reasonableness criteria, mainly due to the elevated cost of constructing noise walls on structures.
- Other forms of noise abatement were considered but are not recommended.
- No noise abatement measures are recommended for this area.

**No further noise analysis or consideration of noise mitigation is required for NSA2E or the subject project.**

If you have any questions or concerns, please contact Noel Alcala, Noise and Air Quality Coordinator at 614-466-5222.

NAA:naa

c: CE Online System

**WETLAND MITIGATION PURCHASE AGREEMENT  
RED STONE FARM MITIGATION BANK**

**WHEREAS**, the discharge of dredge or fill material into waters of the United States and waters of the State of Ohio, including wetlands, is regulated pursuant to Section 404 of the Clean Water Act, 33 U.S.C. § 1344, and/or Ohio Revised Code Chapter 6111; and

**WHEREAS**, entities planning to place dredged or fill material into waters of the United States or waters of the State of Ohio, including wetlands, must comply with standards and conditions imposed by the Army Corps of Engineers (the "Corps") and/or Ohio Environmental Protection Agency ("Ohio EPA") including, in many cases, the mitigation of wetland impacts; and

**WHEREAS**, efforts to restore wetlands are often most successful when directed toward the establishment of large, varied wetland ecosystems rather than small, isolated wetlands which are often threatened by urban encroachment; and

**WHEREAS**, the Red Stone Farm, LLC has participated in the Interagency Review Team ("IRT") review process and received approval from the IRT (which includes the Corps and Ohio EPA) to establish the Red Stone Farm Mitigation Bank and to sell wetland mitigation credits to entities required to mitigate for impacts to wetlands and other waters pursuant to the Section 404/401 permit process and Ohio's Isolated Wetland Permit process; and

**WHEREAS**, the Corps and the Ohio EPA have agreed to consider the purchase of wetland mitigation credits in an appropriate service area approved by the IRT to fulfill an entity's requirement to mitigate wetland impacts.

**THEREFORE**, The Ohio Department of Transportation ("Client") and Red Stone Farm, LLC agree they will comply with the following guidelines and procedures by which Client will purchase wetland mitigation credits from Red Stone Farm, LLC representing the restoration of wetlands in the State of Ohio which will be permanently maintained and which will serve to mitigate wetland impacts permitted under Sections 404 and 401 of the Clean Water Act and in accordance with ORC Chapter 6111.

**I. RESERVATION OF CREDITS AND PAYMENT TERMS FOR THE CLIENT**

A. Pursuant to the requirements of Sections 401 and 404 of the Clean Water Act and the regulations promulgated thereunder and/or ORC Chapter 6111, Client is obligated to mitigate for impacts to 0.83 acre of forested wetlands and 5.67 acres of impact to non-forested wetlands at its proposed Portsmouth Bypass site located at Lucasville-Minford Road interchange to US 23 interchange and Sciotoville interchange to Shumway Hollow Road interchange near the Scioto County Airport in Scioto County, Ohio. Based on the sale price of \$60,000 per acre of mitigation credit, the Client hereby agrees to pay Red Stone Farm, LLC the amount of \$900,000 in consideration for the purchase of 5 acres of forested wetlands and 10 acres of non-forested wetlands mitigation credits at the Red Stone Farm Mitigation Bank. Red Stone Farm, LLC will reserve the necessary wetland credits (acreage) for a period of 180 days (the "Reservation Period") upon receipt of: a signed Purchase Agreement, record of the LRH or OEPA permit # TBD, and a deposit payment of \$90,000 (equal to 10% of the total sale price).

If Client has not received the necessary approvals pursuant to Section 404 and/or 401 of the Clean Water Act or the Ohio Isolated Wetland Permit program during the Reservation Period, Red Stone Farm, LLC will extend the Reservation Period for an additional 180 days upon receipt of an additional 10% deposit. If the Reservation Period must be extended a third time, the price of credits may be adjusted by Red Stone Farm, LLC to reflect market value. The Reservation Period will not be extended a fourth time. Payment of deposits must be made within 10 days of the due date. Thereafter, a penalty of 2% of the amount due will be levied every 30 days. Once the Reservation Period expires, the wetlands credits will not be reserved for Client but will be available on a first-come basis to all Red Stone Farm, LLC clients.

Red Stone Farm, LLC  
1727 Frost Rd., Hillsboro, Ohio 45133

1 of 46

Date 11/6/13



Please complete the following Credit Calculation Table to confirm credits required:

Impacted Wetland Category	Acres Impacted <i>Completed by Client</i>	Mitigation Ratio	Credits Required (round to nearest tenth acre) <i>Completed by Client</i>
1 non-forested/forested	2.064	1.5	3.1
2 non-forested	2.719	2.0	5.4
2 forested	0.827	2.5	2.1
3 non-forested	0.839	2.5	2.1
3 forested	0	0	0
1 isolated non-forested/forested	0.009	2	0.02
2 isolated non-forested	0.038	2	0.08
2 isolated forested	0	0	0

B. The Client will provide copies of the granted Sections 404 permit from the Corps, the granted Section 401 Water Quality Certification from OEPA, if needed, and the Isolated Wetland Permit from OEPA, if needed, to Red Stone Farm LLC to demonstrate regulatory approval for the Red Stone Farm Wetland Mitigation Bank to meet wetland requirements for the development site designated in paragraph IA.

C. The Client and Red Stone Farm, LLC are aware that the Section 404 permit process, and, if necessary, the Section 401 Certification process, or the Ohio Isolated Wetland Permit program must be completed by the Corps and/or Ohio EPA and that this Wetland Mitigation Agreement will be used by the Corps and/or Ohio EPA to document the Client's mitigation plan. Therefore, the Client's deposit payment(s), as defined in paragraph 1A of this agreement, will be held by Red Stone Farm, LLC until such time as the Corps and/or Ohio EPA issues the requested permits.

D. If within the Reservation Period the Corps or Ohio EPA denies the Client's request for a permit for the wetland impact or if the Client elects to withdraw their permit application, Red Stone Farm, LLC will refund the Client's deposit and provide written notification of the termination of this Agreement to the Corps. If the Reservation Period expires, the Client shall forfeit their deposit payment(s) to Red Stone Farm, LLC. The Client must provide written notification to Red Stone Farm, LLC of the denial of its permit or its intention to withdraw its permit application prior to the expiration of the Reservation Period in order to obtain a refund of its deposit.

E. **Within thirty (30) days of issuance of the Clean Water Act Section 404 permit and, if necessary, the Section 401 Certification or Ohio Isolated Wetland Permit, the Client will tender the outstanding balance of the cost of the mitigation credits.** The Client will also provide Red Stone Farm, LLC with a copy of the Section 404 permit and, if applicable, the Section 401 Certification or the Ohio Isolated Wetland Permit or other approval to proceed. Final receipt for payment in full will not be issued until copy of the above permit is received. If payment is not received by Red Stone Farm, LLC by the end of the thirtieth day after the Permit Issuance Date, the Client will be considered to be in Default of Payment. The Permit Issuance Date is the date of the wetland fill permit (Isolated wetlands Permit, Clean Water Act Section 401/404 permits) issued for the projects. If more than one wetland fill permit is required

for the project identified in this agreement then the date of the most recent permit shall be considered as the Permit Issuance Date.

F. Should the Client be in Default of Payment for greater than 30 days, Red Stone Farm, LLC will have the right to sell the credits reserved by this agreement to other clients on a first come first serve basis or to assess a late payment penalty of \$300 or 2.0% interest per month, whichever is greater, on the outstanding balance from the Permit Issuance Date for each month or portion thereof until payment is received in full. It is the sole responsibility of the Client to ensure that they adhere to the terms of this agreement, including timely payment, and to the terms of permit(s) issued to it for their project. If the Client is in Default of Payment for greater than 90 days and Red Stone Farm, LLC elects to sell the reserved credits to a different client, the Client, the Corps and Ohio EPA shall be notified by Red Stone Farm, LLC that this agreement has been terminated and the credits are no longer held in reserve for the Client. The Client's deposit payment will be forfeited to Red Stone Farm, LLC at this time and may be applied to future mitigation purchases at the discretion of Red Stone Farm, LLC.

G. The Client shall have no other obligation other than the payments detailed in this agreement for future maintenance or remedial measures of the Red Stone Farm Mitigation Bank.

## **II. OBLIGATIONS OF RED STONE FARM, LLC**

A. Red Stone Farm, LLC offers for sale mitigation credits at the Red Stone Farm Mitigation Bank which have been approved by the IRT to mitigate for certain wetland impacts.

B. In consideration for the payment of \$900,000 (plus penalties, if applicable, as per paragraph I.F of this Agreement) by Client, Red Stone Farm, LLC hereby agrees to provide 15 acres of wetlands mitigation credit at the Red Stone Farm Mitigation Bank for the benefit of Client hereunder. Red Stone Farm, LLC shall bear responsibility for assuring the restoration and the monitoring and maintenance of the wetlands as provided herein and in the *Red Stone Farm Wetland Mitigation Bank: Banking Instrument* dated January 2007.

C. Red Stone Farm, LLC will provide written confirmation to the Client that full payment has been made for the purchase of wetland mitigation credits specified in paragraphs IA and IB of this agreement.

D. Client may submit the executed copy of this Agreement to the Corps and/or Ohio EPA with their permit application in order to document its commitment to mitigate anticipated wetland impacts.

## **III. GENERAL PROVISIONS**

A. All fiscal obligations of ODOT shall commence on the date of the last signature hereto and shall expire on June 30, 2015. However, all obligations regarding ODOT's use of mitigation credits and RSF's obligations set forth in Sections I and II of this agreement and the IRT Agreement shall survive the expiration of the fiscal obligations and shall remain in effect until terminated by mutual agreement of both parties.

B. It is expressly understood by the parties that none of the rights, duties, and obligations described in this Agreement shall be binding on either party until all statutory provisions under the Ohio Revised Code, including but not limited to Section 126.07, have been complied with and until such time as all necessary funds are made available and forthcoming from the appropriate state agencies, and, when required, such expenditure of funds is approved by the General Assembly and by the Controlling Board of the State of Ohio or, in the event that federal funds are used, until such time that the State gives RSF written notice that such funds have been made available to the State by the State's funding source.



- C. RSF affirms that, as applicable, no party listed in Division (I) or (J) of Section 3517.13 of the Ohio Revised Code or spouse of such party has made, as an individual, within the two previous years, one or more contributions totaling in excess of \$1,000.00 to the Governor of Ohio or to the Governor's campaign committees.
- D. RSF agrees to adhere to the requirements of Ohio Ethics Law as provided by Chapter 102 of the Ohio Revised Code.
- E. Either party may, at any time during the term of this Agreement, request amendments or modifications. Requests for amendments or modifications shall be in writing and shall specify the requested changes and the justifications of such changes. Should the parties consent to modification of the Agreement, then an amendment shall be drawn, approved, and executed in the same manner as the original Agreement.
- F. Neither this agreement nor any rights, duties, or obligations described herein shall be assigned by either party hereto without the prior express written consent of the other party.
- G. This Agreement and any claims arising out of this Agreement shall be governed by the laws of the State of Ohio. Any provision of this Agreement prohibited by the law of Ohio shall be deemed void and of no effect. Any litigation arising out of or relating in any way to this Agreement or the performance thereunder shall be brought only in the courts of Ohio, and RSF hereby irrevocably consents to such jurisdiction. To the extent that the State is a party to any litigation arising out of or relating in any way to this Agreement or the performance thereunder, such an action shall be brought only in a court of competent jurisdiction in Franklin County, Ohio.
- H. All notices under this Agreement must be in writing and shall be deemed validly given if sent by overnight delivery or regular certified mail, return receipt requested, effective the third day following the date the notice is postmarked. Notices should be addressed as follows:

ODOT: Ohio Department of Transportation  
 Office of Environmental Services  
 1980 West Broad Street, Mail Stop 4170  
 Columbus, OH 43223  
 Attention: Tim Hill  
 Telephone: 614-644-0377

RSF: Redstone Farm  
 1727 Frost Road  
 Hillsboro, Ohio 45133  
 Attention: Drausin Wulsin  
 (740) 634-2440

Either party may change the designated recipient of notices and the address by so notifying the other party in writing.

- I. RSF Shall indemnify and hold harmless ODOT for any and all claims, damages, lawsuits, costs, judgments, expenses or any other liabilities which arise as a result of the services performed by the RSF or its employees or agents which is in any way connected with, or based upon the creation/restoration/enhancement and the monitoring and maintenance of its wetlands.
- J. This Agreement entered into hereunder constitutes the entire agreement of the parties and shall supersede any prior or contemporaneous agreements or negotiations, whether written or oral, between the parties, regarding the subject matter herein.

- K. Nothing in this Agreement entered into hereunder is intended to create any rights in any third parties.
- L. Any person executing this Agreement in a representative capacity hereby warrants that he/she has been duly authorized by his/her principal to execute this Agreement on such principal's behalf.



**RED STONE FARM, LLC**

Signed By: Drausin Wulsin  
Drausin Wulsin, Manager

Date: 11/6/13

**CLIENT** Ohio Department of Transportation

Signed By: Jerry Wang / pp

Printed Name: Jerry Wang by Patrick Piccininni

Title: Director for Chief Legal

Date: 12-3-13

Address: 1980 W. Broad Street  
Columbus, OH 43223

Telephone: (614) 466-7170

Email: \_\_\_\_\_

**CLIENT'S CONSULTING FIRM**

Firm Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

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**From:** Mitch, Brian  
**Sent:** Tuesday, October 15, 2013 9:38 AM  
**To:** Raymond, Matt  
**Cc:** Pettegrew, Mike; Manson, Greg; Perlik, Matthew; Hill, Tim; Earley, Adrienne; Stemen, Carmen  
**Subject:** RE: SCI-823-0.00, Portsmouth Bypass Project, Phase 2 and 3 (PID 19415); Eastern Spadefoot Toad Habitat Survey

Matt,

The DOW concurs that a presence/absence survey is not necessary for any of the three sites, and that the project is not likely to impact the Eastern spadefoot.

Thanks,  
Brian

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**From:** Raymond, Matt  
**Sent:** Friday, October 04, 2013 4:08 PM  
**To:** Mitch, Brian  
**Cc:** Pettegrew, Mike; Manson, Greg; Perlik, Matthew; Hill, Tim; Earley, Adrienne; Stemen, Carmen  
**Subject:** SCI-823-0.00, Portsmouth Bypass Project, Phase 2 and 3 (PID 19415); Eastern Spadefoot Toad Habitat Survey

Brian,

ODOT received the following comment from ODNR, Division of Wildlife (DOW) in a letter dated June 13, 2013, requesting that an Eastern spadefoot toad habitat survey be conducted for the Portsmouth Bypass Project.

*"The project is also within the range of the Eastern spadefoot toad (Scaphiopus holbrookii), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Based on its close proximity to known sites for this species, if the type of habitat described above exists at the project site, the DOW recommends an Eastern spadefoot toad habitat survey be done to determine the potential for impacts to this species. Because of their fossorial habits, unpredictable breeding season, and short larval period, the survey should only be conducted by a herpetologist approved by the ODNR, Division of Wildlife."*



To address DOW's concerns, ODOT hired professional herpetologist Jeffrey G. Davis to conduct a suitable habitat survey for the Eastern spadefoot toad within the proposed project area. The investigation found three sites with low to moderate quality suitable habitat for the species. Mr. Davis found that "There are no indications that activities involved with construction of the Portsmouth Bypass will impact Eastern Spadefoots" at any of the sites. The investigation also concluded that "None of the sites will require a Presence – Absence Survey or further investigation regarding Eastern Spadefoots." Based on results of Mr. Davis's investigation, ODOT believes that the SCI-823-0.00, Portsmouth Bypass Project will have no impact on the Eastern spadefoot toad.

Please review the attached report and provide ODNR's comments on, or concurrence with, the findings of the study conducted by Mr. Davis.

Thank you, and contact me if you have any questions or concerns regarding the survey or its conclusions.

Matt Raymond, Environmental Specialist  
Office of Environmental Services  
Ohio Department of Transportation  
1980 W. Broad Street  
Mail Stop 4170, 3rd Floor  
Columbus, OH 43223  
(614) 466-5129



## INTER-OFFICE COMMUNICATION

Division of Air Pollution Control

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**TO:** Noel Alcala, ODOT, Office of Environmental Services  
**FROM:** Frederick Jones, OEPA, DAPC, ATU  
**DATE:** October 1, 2013  
**RE:** SCI-823 Portsmouth Bypass Phases 2&3 PIDs 79977&77366 Qualitative Mobile Source Air Toxics (QMSAT) Analysis Report.

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### **Mobile Source Air Toxic (MSAT) Analysis Document Review**

#### Document Reviewed:

Qualitative MSAT Analysis Report SCI-823 Portsmouth Bypass Phases 2&3 PIDs 79977&77366

#### Comments:

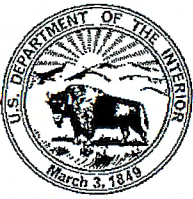
Upon Review, Ohio EPA does not have additional comments on the MSAT Analysis Report: SCI-823 Portsmouth Bypass Phases 2&3 PIDs 79977&77366 Qualitative MSAT Analysis. According to the QMSAT, the estimated VMT under each of the design year Alternatives are the same. Therefore it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020.

Since the stated projected traffic volumes are less than 140,000 ADT this project meets the criteria to be categorized as "Low MSAT effect" project, in accordance with the FHWA Interim Guidance on Air Toxic Analysis in NEPA Documents (February 3, 2006).

In conclusion, the report identifies the limitation in predicting project specific health impacts through vehicle emissions and provides information regarding unavailable or incomplete information for a Low MSAT effect project as required by CEQ regulations 40 CFR 1502.22(b).

**cc:** Paul Koval                      Supervisor, DAPC/ATU  
Mike Riggleman                  Manager, DAPC/mobile sources





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

September 12, 2013

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03E15000-2012-I-0581 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

RE: **SCI-823-0.00 Portsmouth Bypass**, Phase 2 and Phase 3 (PID 19415)

Dear Mr. Hill,

This is in response to your May 20, 2013 letter received in our office on July 9, 2013 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act (ESA) section 7(a)(2) effects determinations for federally listed species within the project area of Phases 2 and 3 of the SCI-823-0.00 Portsmouth Bypass project (PID 19415). The overall Portsmouth Bypass project proposes to establish a 17-mile long bypass around the city of Portsmouth in Scioto County. The bypass is proposed to be constructed in three phases, with Phase 1 (the middle portion of the 3-phase project) to be built first. We have been advised that ODOT and the Federal Highway Administration (FHWA) have determined that each phase of the Bypass project has independent utility. The Ohio Department of Transportation (ODOT) has estimated that the construction schedule for the entire project is approximately 13 years.

Due to a six-year delay in implementation of the project, following issuance of the 2005 Final EIS, ODOT re-evaluated the project impacts in 2011. The Service concurred with ODOT's effects determinations for all federally listed species in the overall project area, as proposed, in March 2012. We understand that the project area and impacts within the Phase limits have not changed since the 2012 consultation. However, your letter indicates that the estimated corridor width for Phase 2 and Phase 3 of the project has been increased to represent the widest possible corridor that may be impacted. We understand that the project will now be contracted as design-build; therefore, the exact construction limits are unknown at this time. The Service appreciates ODOT coordinating the "worst case" impact scenario in consideration of the design-build contract.

The forest habitat impacts, estimated at approximately 316 acres in 2012, are now estimated at approximately 685 acres. This represents an increase of approximately 115 feet to each side of the previously coordinated corridor. This change in corridor width will not require additional survey effort for detection of the **Indiana bat** (*Myotis sodalis*). Therefore, the negative survey results for that species, coordinated with our office in March 2012, are still valid. *Please note, however, that additional surveys*

**may be required for any Phase of the project (Phase 1, Phase 2, or Phase 3) that has not been implemented by April 1, 2014.**

As stated in your earlier coordination with us, we understand and appreciate ODOT's commitment to conduct tree clearing activities only between September 30 and April 1 to avoid direct take of other bat species that occur in the project area during their summer brood-rearing season. **Please note that** no tree clearing should occur until both the U.S. Army Corps of Engineers and Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the action is imminent. This will ensure that clearing will be limited to the footprint of the alternative that is ultimately permitted, and that no unnecessary clearing will occur.

In addition to the federally endangered Indiana bat, the following federally listed species could be present within the Portsmouth Bypass project area: **sheepnose mussel** (*Plethobasus cyphus*), **running buffalo clover** (*Trifolium stoloniferum*), **snuffbox mussel** (*Epioblasma triquetra*), **rayed bean** (*Villosa fabalis*), **fanshell** (*Cyprogenia stegaria*), **northern riffleshell** (*Epioblasma torulosa rangiana*), **pink mucket**, **pearly mussel** (*Lampsilis abrupta*), **clubshell** (*Pleurobema clava*), all federally endangered species; **small whorled pogonia** (*Isotria medeoloides*) and **Virginia spiraea** (*Spiraea virginiana*), both federally threatened plant species; and the **bald eagle** (*Haliaeetus leucocephalus*), **timber rattlesnake** (*Crotalus horridus*), and **eastern hellbender** (*Cryptobranchus a. alleganiensis*), federal species of concern. As referenced above, surveys required for detection of these species were conducted in 2011, and the Service concurred with ODOT's effects determinations based on those surveys in March 2012. Both the surveys and our concurrence are still valid at this time.

As we have discussed during recent meetings, additional bat species may be proposed for federal listing or may become federally listed under the ESA prior to implementation of one or more of the Portsmouth Bypass project phases. Once a proposal or final rule has been published in the Federal Register, conferencing or formal consultation (respectively) with the Service may be required under section 7 of the ESA for projects that *may affect* these species. Although the bat surveys conducted in 2011 did not detect the presence of Indiana bats, 121 bats representing 6 species were captured. We appreciate ODOT's desire to coordinate as soon as possible with the Service should any of these 6 species become officially proposed as federally threatened or endangered prior to or during the course of this action.

Please be aware that the Service is concerned with the following types of associated project activities: 1) borrow sites, 2) burn sites, 3) construction debris waste disposal areas, 4) concrete and asphalt plants, 5) haul roads, 6) stockpiling areas, 7) staging areas, 8) material storage sites, and 9) maintenance. The Service recognizes that it is FHWA's policy not to intervene in the site selection for these activities, but instead consider it the responsibility of the selected contractor to comply with federal environmental statutes and regulations, as stated in Section 107.10 (Protection and Restoration of Property) of the ODOT 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) manual:

The Contractor is responsible for the preservation of all public and private property impacted by the Contractor's operations.

Do not create staging areas, store materials and equipment, or borrow or waste materials in areas labeled as environmental resource areas in the Contract Documents. All properties to be utilized by the Contractor outside the project Right-of-Way must be cleared for all environmental resource impacts prior to the beginning of work. Environmental resources include but may not be limited to:

1. Cultural Resources
  - a. Buildings, structures, objects, and sites eligible for or listed on the [National Register of Historic Places](#)



- b. Historic or prehistoric human remains, cemeteries, and/or burial sites (pursuant with ORC 2909.05 and 2927.11)
- 2. Ecological Resources
  - a. Wetlands
  - b. Streams
  - c. Wooded areas with trees to be removed in excess of 8 inches diameter at breast height
- 3. Public Lands
  - a. Lands meeting the criteria of 49 U.S.C. 303, 23 CFR 771.135: 4(f).
  - b. Lands meeting the criteria of 16 U.S.C. 4601-4, 36 CFR 59.1: 6(f).
- 4. FEMA Mapped 100 year Floodplains
- 5. Hazardous Waste Areas

Except for locations utilized specifically for parking of equipment between workdays for maintenance type projects, all areas proposed to be utilized by the Contractor outside the project construction limits shall be reviewed by environmental contractor(s) that are prequalified by the Department for each environmental resource. This exception applies to projects with "maintenance" in the project description. Have the consultant(s) certify that the proposed site to be utilized for the contractor will not impact:

- 1. Cultural Resources
- 2. Ecological Resources
- 3. Public Lands
- 4. FEMA Mapped 100 year Floodplains
- 5. Hazardous Waste Areas

Provide all documentation and the consultant certification to the Office of Environmental Services with a copy to the Engineer.

Should the areas proposed for use by the Contractor outside the project right of way limits contain environmental resources the Contractor is responsible to the Department for all environmental clearances and permits prior to the beginning of work.

It is the position of FHWA that the contractor is responsible for consulting with the Service for impacts to federally listed species and federally designated critical habitats for these activities. The Service recommends that ODOT and FHWA ensure that the contractor(s) awarded the SCI-823 Portsmouth Bypass project understands their responsibility to be in compliance with the Endangered Species Act. The Service also respectfully requests that ODOT OES provide our office with copies of the documentation and consultant certification referenced in the CMS, as highlighted in gray above.

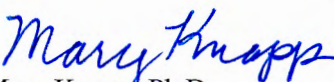
If construction of any phase of the project is delayed for three or more years, ODOT/FHWA should re-initiate consultation with the Service to address any potential changes in species distributions or occurrence records within the Phase 2 and Phase 3 project areas.

Although no federally listed species were identified, the Service recommends that best management practices (BMPs) be implemented to minimize impacts to water quality. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,

  
Mary Knapp, Ph.D.  
Field Supervisor

cc: J. Kessler, ODNR, Office of Real Estate, Columbus, OH (*email only*)  
P. Clingan, USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
J. Lung, OEPA, Columbus, OH (*email only*)  
B. Mitch, ODNR, Office of Real Estate, Columbus, OH (*email only*)





# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

## Office of Real Estate

*Paul R. Baldrige, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
*Phone: (614) 265-6649*  
*Fax: (614) 267-4764*

June 13, 2013

Timothy M. Hill, Environmental Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
1980 West Broad Street  
Columbus, Ohio 43223

**Attn:** Matt Perlik, Mike Pettegrew, Matt Raymond

**Re:** SCI-823-0.00, Portsmouth Bypass Project, Phase 2 and 3 (PID 19415)

**Project:** ODOT will construct a new four-lane limited access highway/bypass of Portsmouth, Ohio as part of the Appalachian Development Highway system.

**Location:** Construction Phase 2 extends from the US 23 Interchange to the Lucasville-Minford Road (CR 28) Interchange, where it will tie into Construction Phase 1 of the. Construction Phase 3 ties into Phase 1 at the Shumway Hollow Road (TR 234) Interchange, near the Scioto County Airport, and extends south to the proposed US 52/Sciotoville Interchange.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. No Indiana bats were captured during the 2011 mist-net survey for the project. Indiana bat surveys are valid for a period of 2 years. If suitable trees occur within the project area, these trees should be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between October 1 and March 31. If suitable trees must be cut during the summer months, a net survey must be conducted between June 15 and July 31, prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site

containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the clubshell (*Pleurobema clava*), a state and federal endangered mussel, the Northern riffleshell (*Epioblasma torulosa rangiana*), a state and federal endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federal endangered mussel, the sheepnose (*Plethobasus cyphus*), a state endangered and federal endangered mussel, the fanshell (*Cyprogenia stegaria*), a state and federal endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state and federal endangered mussel, the washboard (*Megaloniais nervosa*), a state endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federal endangered mussel, the ebonyshell (*Fusconaia ebena*), a state endangered mussel, the butterfly (*Ellipsaria lineolata*), a state endangered mussel, the elephant-ear (*Elliptio crassidens crassidens*), a state endangered mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the wartyback (*Quadrula nodulata*), a state endangered mussel, the little spectaclecase (*Villosa lienosa*), a state endangered mussel, and the monkeyface (*Quadrula metanevra*), a state endangered mussel. Due to mussels being found the Little Scioto at the proposed bridge crossing, the DOW recommends the applicant find an alternative that will avoid the potential taking of mussels. If this is not possible, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the proposed project. Surveys should be done in accordance with the Ohio Mussel Survey Protocol. Should any federal listed species be encountered, the work must cease and the U.S. Fish and Wildlife Service must be contacted for consultation.

The project is within the range of the Eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered amphibian currently being evaluated for Federal Candidate status. On August 16, 2011 Greg Lipps, a DOW approved professional herpetologist, surveyed the reach of the Little Scioto River that will be impacted by the bypass project for suitable habitat for the eastern hellbender. Although the hellbender is known to occur in the Little Scioto, no suitable habitat for the species was identified at or near the proposed crossing for the bypass. Therefore, the project is not likely to impact this species.

The project is within the range of the green salamander (*Aneides aeneus*), a state endangered amphibian. This salamander is one of the most specialized amphibians in Ohio. Their existence relies upon rock outcrops with cracks and fissures allowing for retreat from predators and harsh environmental conditions, as well as providing nesting areas. Rock outcrops shaded by forest would be expected to maintain the moisture and humidity necessary for their cutaneous respiration and incubation of eggs. Based on known locality records and habitat utilized by this species, the project is not likely to impact this species.

The project is also within the range of the Allegheny woodrat (*Neotoma magister*) a state endangered mammal. This mammal has experienced marked declines in its Ohio distribution and is presumed to occupy forested areas with rock outcrops primarily in Adams County and extreme western portions of Scioto County. Based on known locality records and habitat utilized by this species, the project is not likely to impact this species.

The project is within a county where current records exist for the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species. A survey for this species was conducted by herpetologist Doug Wynn during 2003. The USFWS and Doug Wynn both concurred that updated surveys for this species were unnecessary to make an effect determination for this species. The 2003 survey found that suitable habitat for this species is present within the proposed project area; however, signs of major human disturbance were common, and it was determined to be very unlikely that the species inhabits or utilizes the surveyed area. This species was not encountered during the species specific survey (conducted in 2003) or during any of the previous or updated ecological surveys. Due to the presence of suitable habitat for the species, but the lack of evidence of timber rattlesnakes using the habitat, the proposed project is not likely to impact this species.



The project is within the range of the shovelnose sturgeon (*Scaphirhynchus platorynchus*), a state endangered species, the mountain madtom (*Noturus eleutherus*), a state endangered fish, the Northern madtom (*Noturus stigmosus*), a state endangered fish, and the goldeye (*Hiodon alosoides*), a state endangered fish. The DOW recommends no in-water work in perennial WWH streams and Class III primary headwater streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, the project is not likely to have an impact on this species.

The project is within the range of the Bewick's wren (*Thryomanes bewickii*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Therefore, if tree removal is proposed to complete the project, tree removal should not occur during the species' nesting period of April 1 to August 31. If no tree removal is proposed, the project is not likely to impact this species.

The project is also within the range of the Eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Based on its close proximity to known sites for this species, if the type of habitat described above exists at the project site, the DOW recommends an Eastern spadefoot toad habitat survey be done to determine the potential for impacts to this species. Because of their fossorial habits, unpredictable breeding season, and short larval period, the survey should only be conducted by a herpetologist approved by the ODNR, Division of Wildlife.

The project is within the range of the Hebard's noctuid moth (*Erythroecia hebaridi*), a state endangered moth. Due to the habitat used by this species and the type of work proposed, the project is not likely to impact this species.

It should be noted that only the melanistic form of the Eastern Garter Snake (*Thamnophis sirtalis sirtalis*) is considered as a species of concern in Ohio.

The ODNR Natural Heritage Database has no additional records for rare or endangered species at this project site. We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges or other protected natural areas within the project area. Our inventory program does not provide a complete survey of Ohio wildlife, and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

**Geological Survey:** The Division of Geological survey has the following comments.

The project areas include several potential geohazards. There are many areas of mapped and potential landslides. Some oil and gas wells are also present. At lower project elevations, weathered lacustrine clay up to 80 or more feet thick is present. On the highest ridgetops, there may be unmapped abandoned coal mines. The applicant should contact the Division of Geological Survey for details on these potential hazards.

ODNR appreciates the opportunity to provide these comments. Please contact Brian Mitch at (614) 265-6387 if you have questions about these comments or need additional information.

Brian Mitch  
ODNR Office of Real Estate  
2045 Morse Road, Building E-2  
Columbus, Ohio 43229-6693  
(614) 265-6387  
[brian.mitch@dnr.state.oh.us](mailto:brian.mitch@dnr.state.oh.us)





# OHIO DEPARTMENT OF TRANSPORTATION

CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR

## INTER-OFFICE COMMUNICATION OFFICE OF ENVIRONMENTAL SERVICES

**TO:** Vaughn Wilson, District 9 Deputy Director  
Attn: Greg Manson, District Environmental Coordinator

**DATE:** May 10, 2013  
*Greg Manson*

**FROM:** Timothy M. Hill, Administrator, Office of Environmental Services

**SUBJECT:** Section 106 Determination of Effect

**PROJECT:** SCI-823-0.00/10.13 (Phases 2 & 3 Portsmouth Bypass), PID: 19415/77366/79977

**Re:** *Phase I History/Architecture Reevaluation Survey for Phases 2 & 3 of the SCI-823 Portsmouth Bypass project (SCI-823-0.00; PID: 19415) in Harrison, Jefferson, Madison, Porter, and Valley Townships, Scioto County, Ohio, dated March 21, 2013.*

The intent of the subject undertaking is to construct Phases 2 and 3 of the undertaking, SCI-823-0.00/10.13, PID: 19415/77366/79977. The subject Section 106 coordination provides documentation of the agency's efforts to identify properties listed on or eligible for listing on the National Register of Historic Places (NRHP) that have turned fifty years of age or older since the 2001-2002 survey of the area of potential effect. In accordance with the *Section 106 Programmatic Agreement, (Number 16734)*, executed November 30, 2011, the above referenced report and a copy of this Inter-Office Communication are being provided to the Ohio State Historic Preservation Office (OSHP) for review and consideration.

### SCI-823-00 PID: 19415 Corridor Study & Previous Section 106 Consultation

In 2001-2002, an area measuring approximately sixteen miles in length and one to two miles in width was surveyed for the presence of historic cultural resources. This survey encompassed all three phases of the undertaking SCI-823-0.00 PID: 19415. On December 3, 2004, in accordance with 36 CFR § 800.4(d)(1), a finding of "no historic properties affected" was found applicable to the undertaking SCI-823-0.00 PID: 19415 (Exhibit 1).

### **History/Architecture**

On January 16, 2004, the OSHP) concurred five history/architecture properties would require additional investigation if located within the APE of the preferred alternative: 532 Fairgrounds Road,; 295 Lucasville-Minford Road; 4140 Lucasville-Minford Road; 4009 Lucasville-Minford Road; and Stoney Hill Cemetery (Exhibit 2). On July 1, 2004, two of these properties determined to be in close proximity to the preferred alternative were evaluated for National Register eligibility: 4140 Lucasville-Minford Road (SCI-608-5) and 4009 Lucasville-Minford Road (SCI-607-5). Both were found not eligible for inclusion on the NRHP on July 1, 2004 (Exhibit 3). A third property, 532 Fairgrounds Road, was also determined not eligible for inclusion on the NRHP on December 3, 2004.

### **Archaeology**

In regard to archaeological resources, on October 28, 2004, the OSHP) concurred, "Fieldwork was conducted along a project corridor measuring 17 miles (27.4 Km) long which varied in width from 250 to 1000 feet (76 to 305 meter) reflecting the need of roadcuts, grade separations, and interchange areas . . . none of the archaeological resources identified . . . are eligible for the National Register of Historic Places." (Exhibit 4).

**SCI-SR 335 (Phase I Portsmouth Bypass) PID: 19415 & Previous Section 106 Consultation**

On February 13, 2012, in accordance with the *Section 106 Programmatic Agreement, (Number 16734)*, executed November 30, 2011, and 36 CFR § 800.4(d)(1), a finding of "no historic properties affected" was found applicable to Phase 1 of the subject undertaking (Exhibit 5).

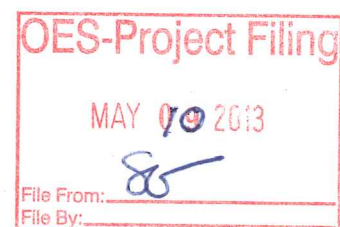
**SCI-823-0.00, PID: 19415 (Phases 2 & 3 Portsmouth ByPass)**

Phases 2 and 3 have now been combined. The area of potential effects (APE) extends from Lucasville-Minford Road to US 23 (Phase 2) and from US 62 to relocated Shumway Hollow Road (Phase 3). The APE was delineated to complement the proposed construction limits and includes the adjacent parcels (Figure 3, Sheets 1-24 of the above referenced survey report). A review of previous consultation and of the Section 106 Records Check did not result in the identification of a historic cultural resource listed on the NRHP or determined eligible for listing on the NRHP within the APE (Exhibit 6).

**History/Architecture**

The history/architecture survey focused on properties that have turned fifty years of age since the completion of the 2001-2002 survey and on properties that may require additional consideration due to new information. The intent of the current history/architecture survey is described, "The goals of this investigation re to determine whether history/architecture resources are present in the study area and, if so, to evaluate whether they are eligible for the NRHP" (Terpsta 2013: 2). All properties identified within the APE that were previously evaluated and determined not eligible for inclusion on the NRHP were not included in the subject report. Properties previously recommended as requiring further consideration resulting from previous consultation were determined to be outside of the subject APE. As illustrated below, ten history/architecture properties were identified that had not been previously evaluated. No history/architecture properties were found eligible for inclusion on the NRHP.

Phase 2 & 3 – Properties fifty years of age or older identified within the APE (excluded from previous consultation):	Year Built	Building type	Eligible for NRHP	Photo. Plate Number
Columbia Gas Substation (Hastings Hill Rd & Gallia Street)	1963	Concrete block, single story, utility building.	No	1
82 Pershing Avenue	1950	Wood frame ranch	No	2
790 Dutch Ridge Road	1920	Single story, frame cottage	No	3
639 Fairground Road	1949	Brick veneer ranch	No	4
627 Fairground Road	1953	Brick veneer ranch	No	5
801 Thomas Hollow Road	1961	Frame ranch	No	6
1119 Flatwood Fallen Timber Rd	Unknown	Frame ranch	No	7
548 Flatwood Fallen Timber Rd	1961	Brick veneer ranch	No	8
2713 Lucasville-Minford Road	1946	Minimal Traditional	No	9
362A Flowers-Ison Road	1958	Concrete block L-plan	No	10





**Cultural Resource Recommendation**

Based the results of previous Section 106 consultation and the current survey, no cultural resources eligible for or listed in the NRHP will be affected by the undertaking. In accordance with Stipulation 4B of the *Section 106 Programmatic Agreement, (Number 16734)*, executed November 11, 2013, and in compliance with 36 CFR § 800.4(d)(1), FHWA, with ODOT as their agent has determined a finding of "No Historic Properties Affected" is applicable to the proposed undertaking based on the following:

- No history/architecture properties eligible or listed on the NRHP will be affected by the undertaking.
- The history/architecture properties identified within the APE are not eligible for inclusion on the NRHP.
- No archaeological sites eligible for inclusion or listed on the NRHP will be affected by the undertaking.

Pursuant to the *Section 106 Programmatic Agreement (Number 16734)*, executed November 11, 2011, if no comments or objections are offered by the OSHPO within the 15 day review period, the environmental document may be processed with no further comment or involvement from the ODOT-OES cultural resource staff. If the OSHPO comments on or objects to the Section 106 finding or eligibility recommendations, ODOT-OES will work with the project team to address the comments prior to finalization of the environmental document. In some instances it may be necessary to handle such responses as environmental commitments. The environmental document should note the date of this Inter-Office Communication for project Section 106 clearance. The environmental document should also note the date of the *Section 106 Programmatic Agreement, (Number 16734)*, executed November 11, 2011 as the basis for the Section 106 approval. Forward questions or concerns to Susan Gasbarro at 614-728-0719.

TMH:mb/sg  
Enclosure

C: Project File; Mark Epstein



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

March 12, 2012

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03E15000-2012-I-0581 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

RE: **SCI-823-0.00 Portsmouth Bypass**, Phase 1 (PID 19415), Phase 2, and Phase 3

Dear Mr. Hill,

This is in response to your November 9, 2011 letter received in our office on November 15, 2011 requesting U.S. Fish & Wildlife Service (Service) concurrence on your Endangered Species Act section 7(a)(2) effects determination for federally listed species in the SCI-823-0.00 Portsmouth Bypass project area. The project proposes to establish a 17-mile long bypass, to be constructed in three phases, with Phase 1 (the middle portion of the 3-phase project) to be built first. The construction schedule for the entire project is approximately 13 years. The Ohio Department of Transportation (ODOT) and the Federal Highway Administration (FHWA) have determined that each phase of the project has independent utility. Phase 1 includes interchanges with TR 234 (Shumway Hollow Road) and CR 28 Lucasville-Minford Road) and is approximately 3 miles long. According to Public Notice 2011-00646-OHR, recently issued by the U.S. Army Corps of Engineers (USACE) (Huntington District), the proposed work on Phase 1 would result in permanent discharge of approximately 1,381 cubic yards of fill material into 9,525 linear feet (1.22 acre) of streams; 5,076 cubic yards of fill material into 3.89 acres of emergent wetlands, and 26,137 cubic yards of fill material into 2.70 acres of ponds. Approximately 1,175 cubic yards of temporary fill material will be discharged 300 linear feet (0.26 acre) of stream for bridge construction access and staging areas.

This project lies within the range of the **Indiana bat** (*Myotis sodalis*), **sheepnose mussel** (*Plethobasus cyphus*), **running buffalo clover** (*Trifolium stoloniferum*), **snuffbox mussel** (*Epioblasma triquetra*), **rayed bean** (*Villosa fabalis*), **fanshell** (*Cyprogenia stegaria*), **northern riffleshell** (*Epioblasma torulosa rangiana*), **pink mucket pearlymussel** (*Lampsilis abrupta*), **clubshell** (*Pleurobema clava*), all federally endangered species; **small whorled pogonia** (*Isotria medeoloides*) and **Virginia spiraea** (*Spiraea virginiana*), both federally threatened plant species; and the **bald eagle** (*Haliaeetus leucocephalus*), **timber rattlesnake** (*Crotalus horridus*), and **eastern hellbender** (*Cryptobranchus a. alleganiensis*), federal species of concern.



Although only activities associated with Phase 1 have been public noticed for permitting by the USACE, ODOT chose to consult with the Service and address potential impacts to federally listed species within the entire bypass project corridor. Therefore, those impacts are addressed in this letter. However, if construction of the subsequent phases of the project is delayed for three or more years, ODOT/FHWA should re-initiate consultation with the Service to address any potential changes in species distributions or occurrence records within the Phase 2 and Phase 3 project areas.

As discussed during an interagency meeting held on February 10, 2011 between the Service, FHWA, ODOT, and USACE, suitable habitat streams for sheepnose, pink mucket, fanshell, snuffbox, and northern riffleshell mussels are not present within the bypass project area. Therefore, no impacts to these species are anticipated. During the February 2011 meeting, the Service also informed ODOT/FHWA that no surveys, in addition to those conducted in 2004, would be required for the timber rattlesnake or Virginia spiraea, as the earlier survey results are still valid.

A survey for federally listed mussel species was conducted in the Little Scioto River by Dr. Michael Hoggarth, a federally permitted malacologist, during the 2011 summer season. None of the federally listed mussel species were found during this survey. Based on the results of this survey and other less intensive surveys conducted in the other streams within the project area, as well as current records of species occurrence, impacts to the clubshell are not anticipated. Although no rayed bean mussels were discovered during Dr. Hoggarth's survey or the other less intensive surveys, suitable habitat for the species was present in the Little Scioto River. Therefore, it is possible that the species could occur in other reaches of the stream. Based on this information, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* the rayed bean. The Service concurs with this determination.

Surveys for running buffalo clover and small whorled pogonia were conducted in May and June 2011. No individuals of either species were identified during these surveys; however, suitable habitat for each species was present within the project corridor. Therefore, ODOT has determined that the bypass project *may affect but is not likely to adversely affect* running buffalo clover and small whorled pogonia. The Service concurs with this determination.

On August 16, 2011, Greg Lipps, a professional herpetologist, surveyed the reach of the Little Scioto River that will be impacted by the bypass project for suitable habitat for the eastern hellbender. Although the hellbender is known to occur in the Little Scioto, no suitable habitat for the species was identified at or near the proposed crossing for the bypass. Therefore, no impacts to this species are anticipated.

The corridors associated with the proposed alignment of the bypass, both currently and in 2003, were surveyed for Indiana bat. Twenty-one net sites were surveyed in 2003 and Nineteen net sites were surveyed in 2011. No Indiana bats were captured during either survey, suggesting that the species is not present in the project area or occurs at very low density. Therefore, ODOT has determined that the project *may affect but is not likely to adversely affect* the Indiana bat. The Service concurs with this determination. We also appreciate ODOT's commitment to conduct tree clearing activities only between September 30 and April 1 to avoid direct take of bats during their summer brood-rearing season.

Although the bald eagle is known to occur in Scioto County, the nearest nest to the project construction limits is 3.9 miles from the northwestern project terminus along the Scioto River. Therefore, no impacts to this species are anticipated.

Our office has received copies of all the survey reports for the surveys conducted in 2011. As stated above, additional surveys may be necessary if construction on some or all of the bypass project does not occur for three or more years. Although no federally listed species were identified, the Service



recommends that best management practices (BMPs) be implemented to minimize impacts to water quality. We support and recommend mitigation activities that reduce the likelihood of invasive plant spread and encourage native plant colonization. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats. All disturbed areas in the project vicinity should be mulched and revegetated with native plant species. Also, **Please note that if** the applicant plans to clear trees prior to issuance of a 404 and/or 401 permit: 1) Section 7 consultation with the Service must be completed; and 2) No tree clearing on any portion of the project should occur until both the U.S. Army Corps of Engineers and Ohio EPA anticipate that issuance of both a 404/NWP and a 401 permit authorizing the project as a whole is imminent. This will ensure that clearing will be limited to the footprint of the alternative that is ultimately permitted, and that no unnecessary clearing will occur.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy. This concludes consultation on this action as required by section 7(a)(2) of the Endangered Species Act. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,



Mary Knapp, Ph.D.  
Field Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH (*email only*)  
USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
OEPA, Columbus, OH (*email only*)



## Jason Whitten

---

**From:** Jason Earley [jearley@ascgroup.net]  
**Sent:** Wednesday, August 07, 2013 8:58 AM  
**To:** Jason Whitten  
**Subject:** FW: Summary for SCI-823-0.00 PID 19415 - JD/PJD field review - Portsmouth Bypass Phases 2/3 (UNCLASSIFIED)  
**Attachments:** Changes to Figure 11 from SCI-823-0.00 Phase 2 and 3 PID Revised Level 2 ESR.pdf

Jason:

Email from the Corps and a JD place holder.

More to follow.

Jason

Jason M. Earley  
Senior Environmental Specialist  
ASC Group, Inc.  
800 Freeway Drive North, Suite 101  
Columbus, Ohio 43229  
Work: (614) 643-3205  
Mobile: (614) 787-3454  
[jearley@ascgroup.net](mailto:jearley@ascgroup.net)

-----Original Message-----

From: Latta, Brett C LRH [<mailto:Brett.C.Latta@usace.army.mil>]  
Sent: Wednesday, June 05, 2013 1:30 PM  
To: Raymond, Matt; Michael, Megan  
Cc: Long, Timothy M LRH; Earley, Adrienne; Jason Earley; Len Mikles; Dunlap, Kathleen; Pettegrew, Mike  
Subject: Summary for SCI-823-0.00 PID 19415 - JD/PJD field review - Portsmouth Bypass Phases 2/3 (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: NONE

Hello:

Requested changes to the ESR based on our site visits are attached. The changes are relatively minor. Please make sure the ESR tables reflect any changes in linear feet or acreage within the review area, where appropriate.

Would it be possible to include the approximate locations of all drainage divides on the Revised Figure 11, similar to what was done for Phase 1? I know there are HUCs on Figure 5, but it would be really helpful for the review.

Please send the extranet link when the ESR revisions are complete. Let me know if there are any questions.

Thank you,

Brett C. Latta, CPG  
Regulatory Project Manager  
U.S. Army Corps of Engineers - Huntington District Building 10 / Section 10 PO Box 3990  
Columbus, OH 43218-3990  
Phone: (614) 692-4672

Classification: UNCLASSIFIED  
Caveats: NONE





Figure 11. Survey Results. (30 sheets)



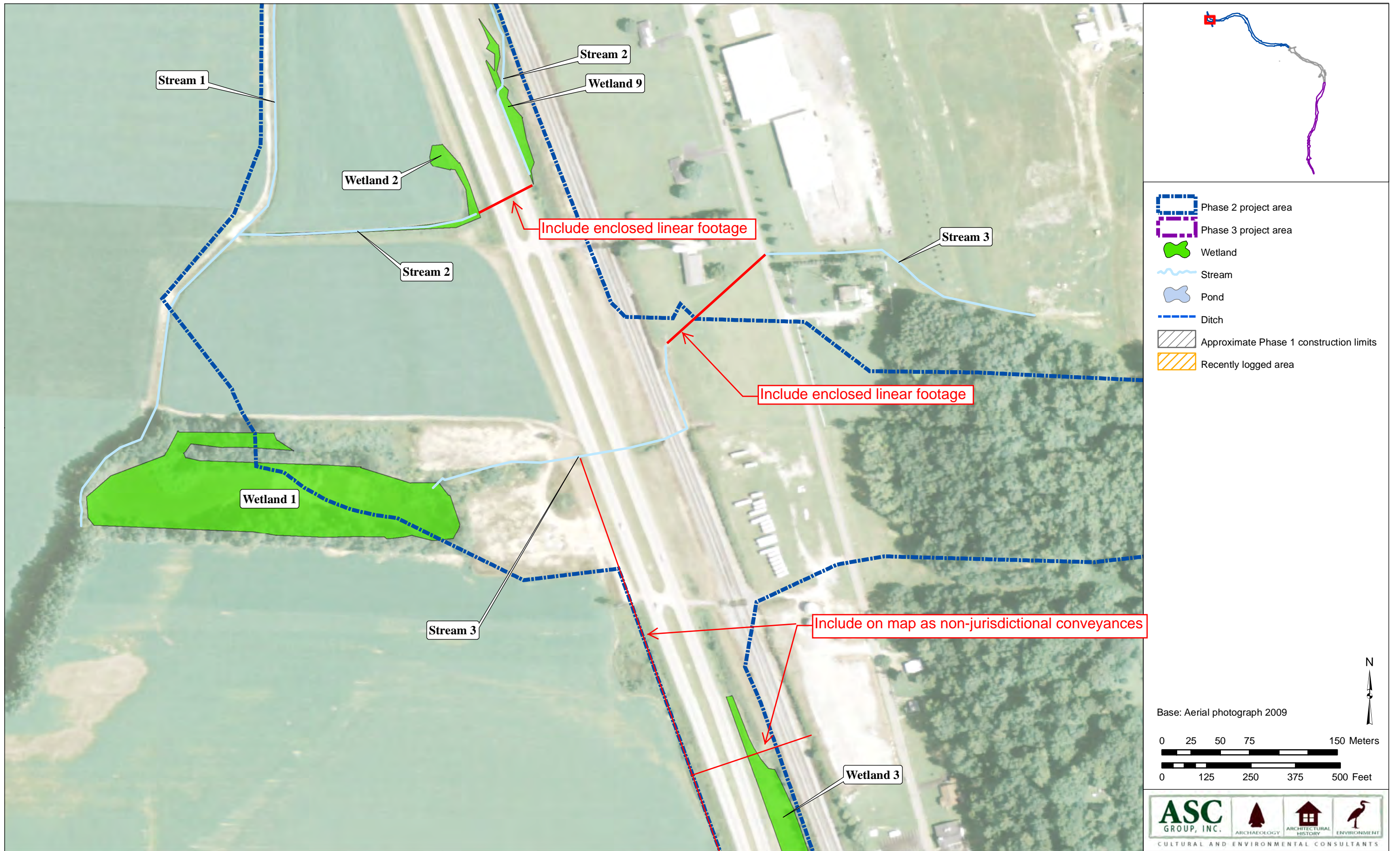


Figure 11. Survey Results. (30 sheets)



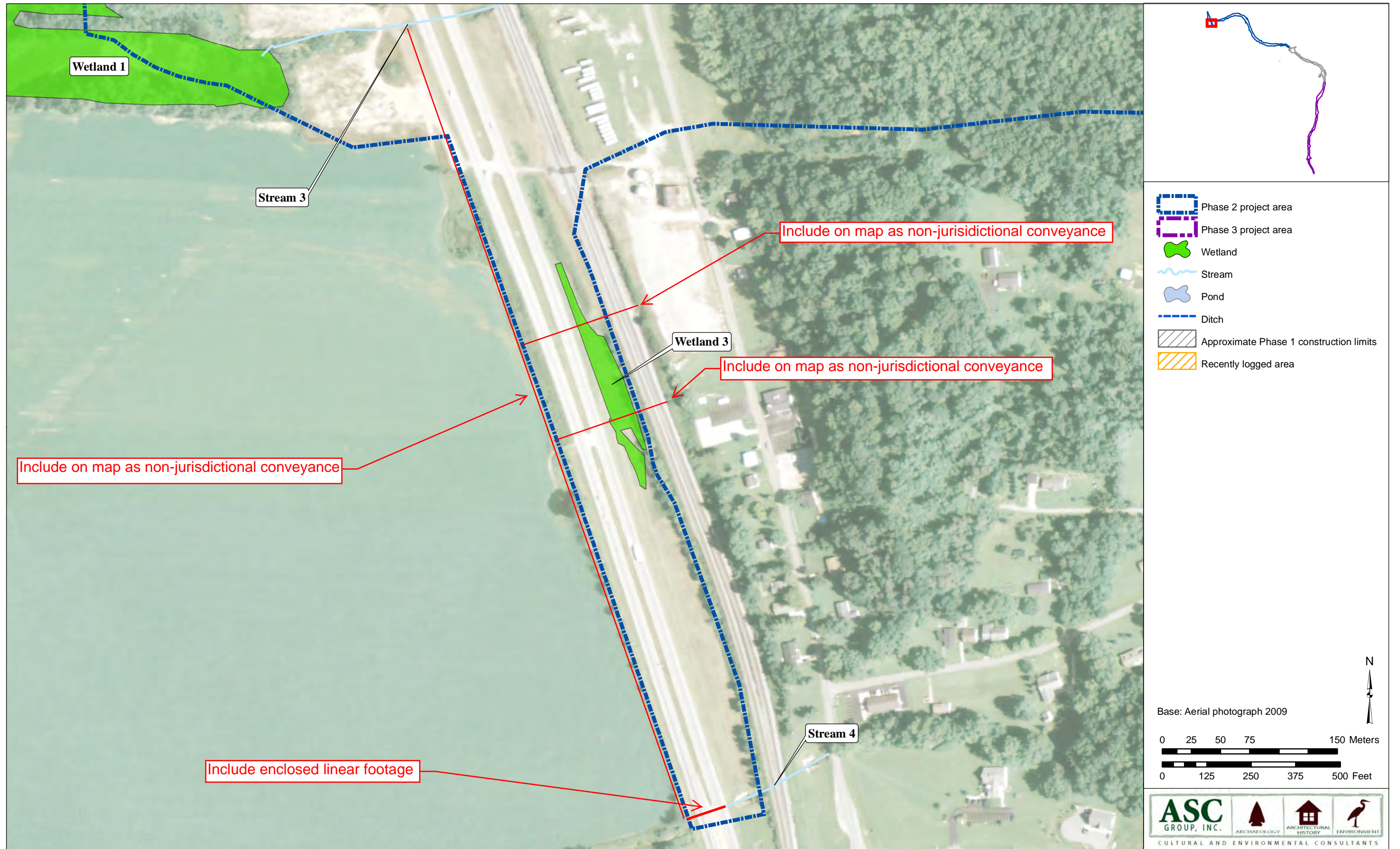


Figure 11. Survey Results. (30 sheets)



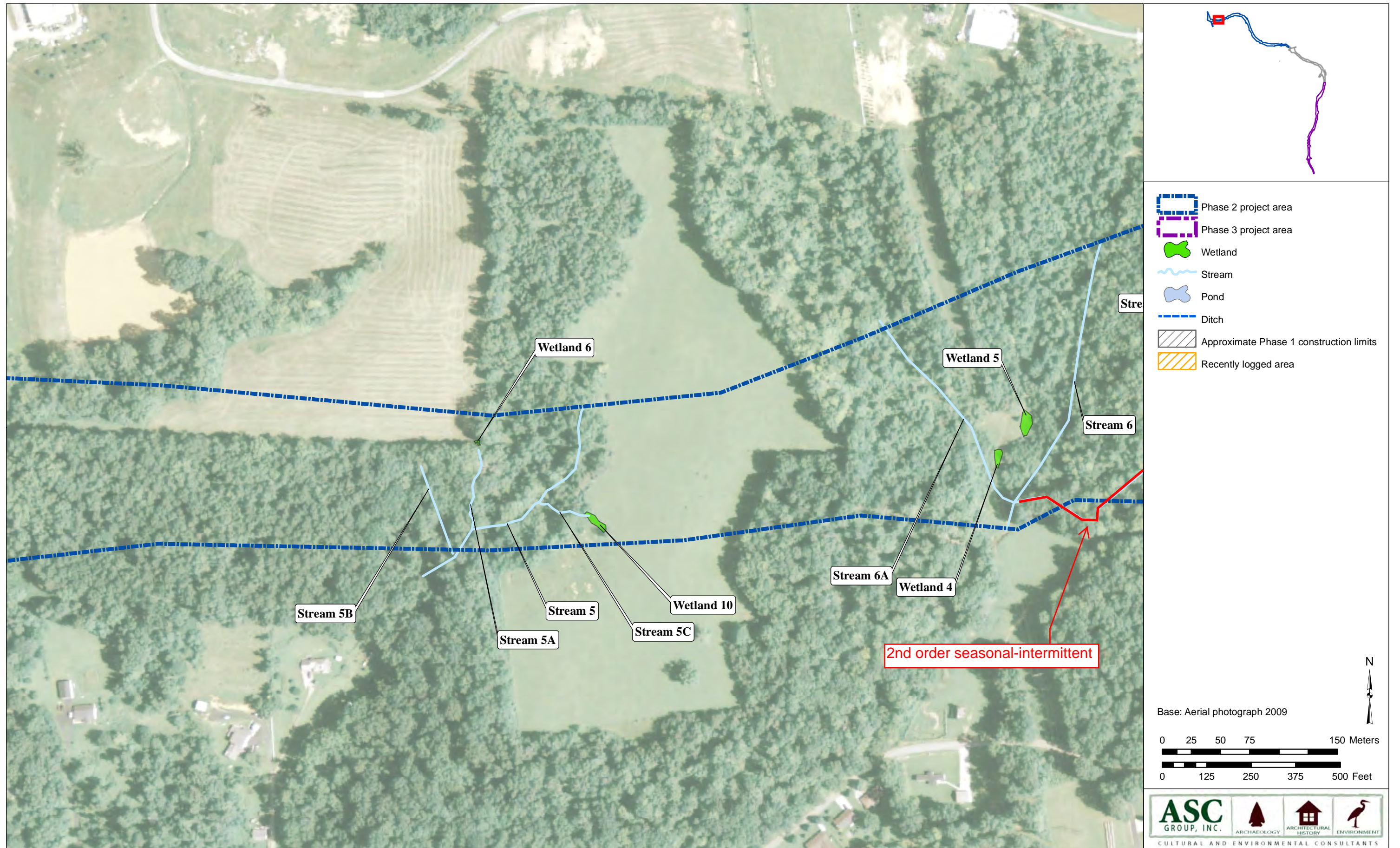


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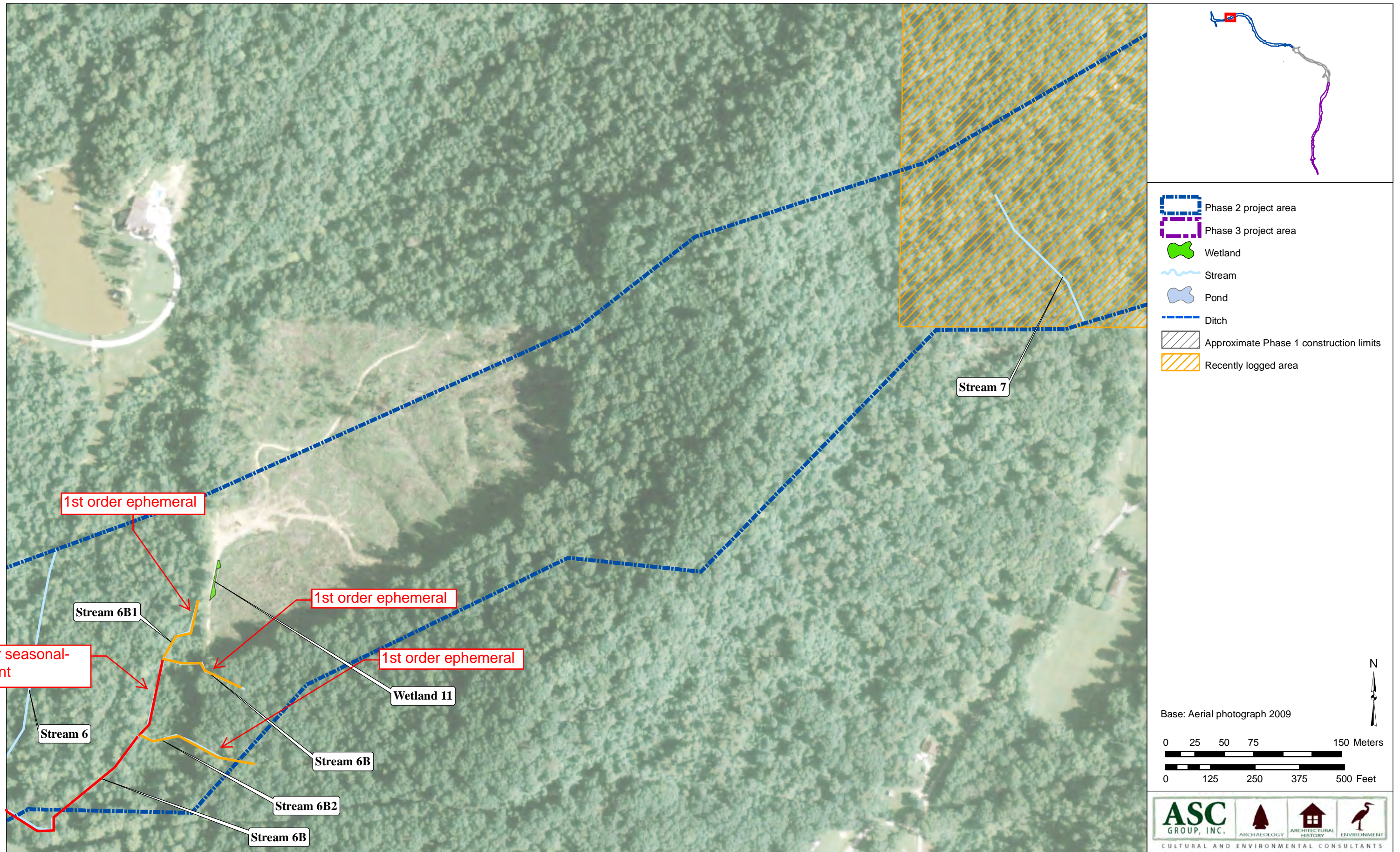


Figure 11. Survey Results. (30 sheets)



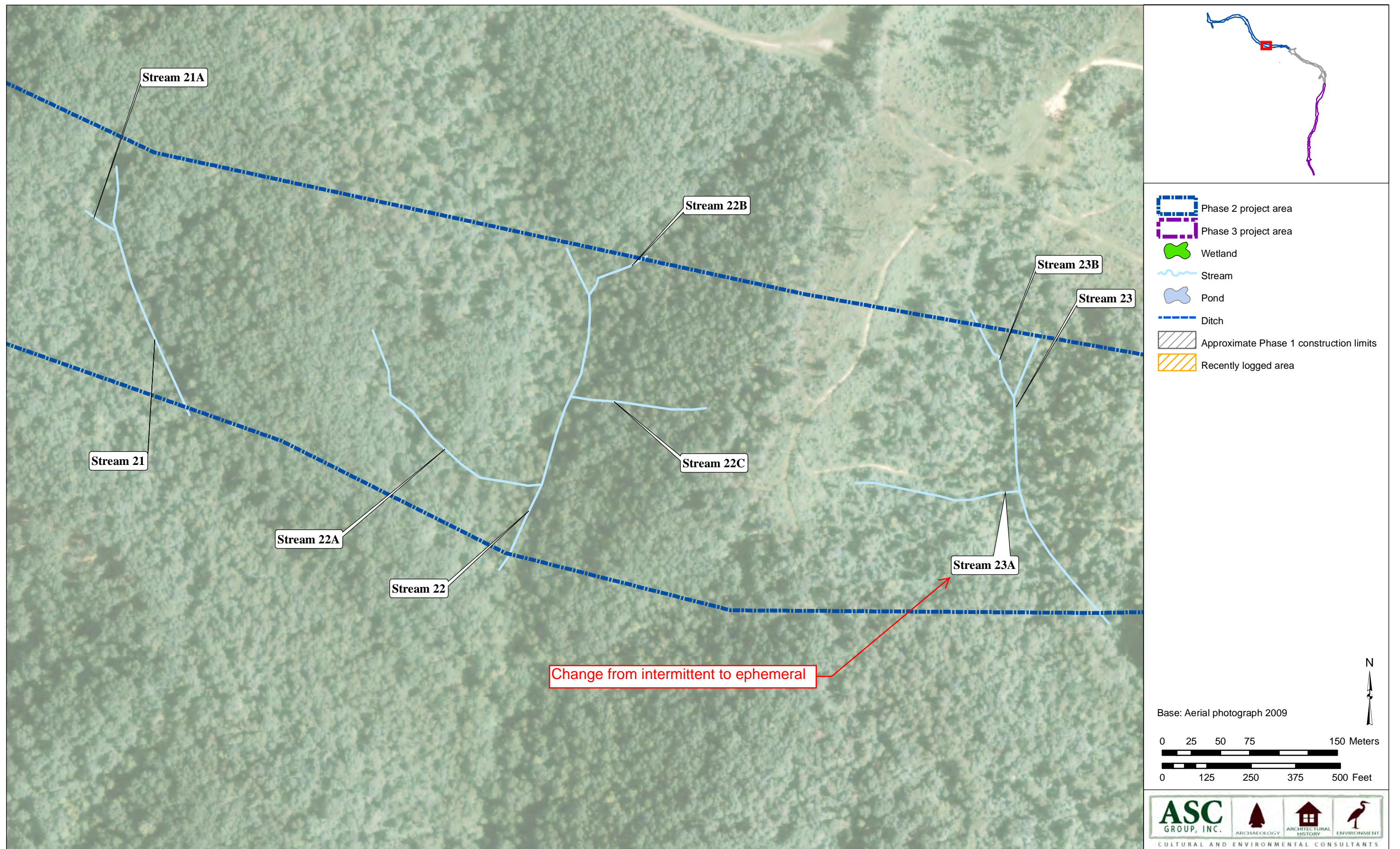


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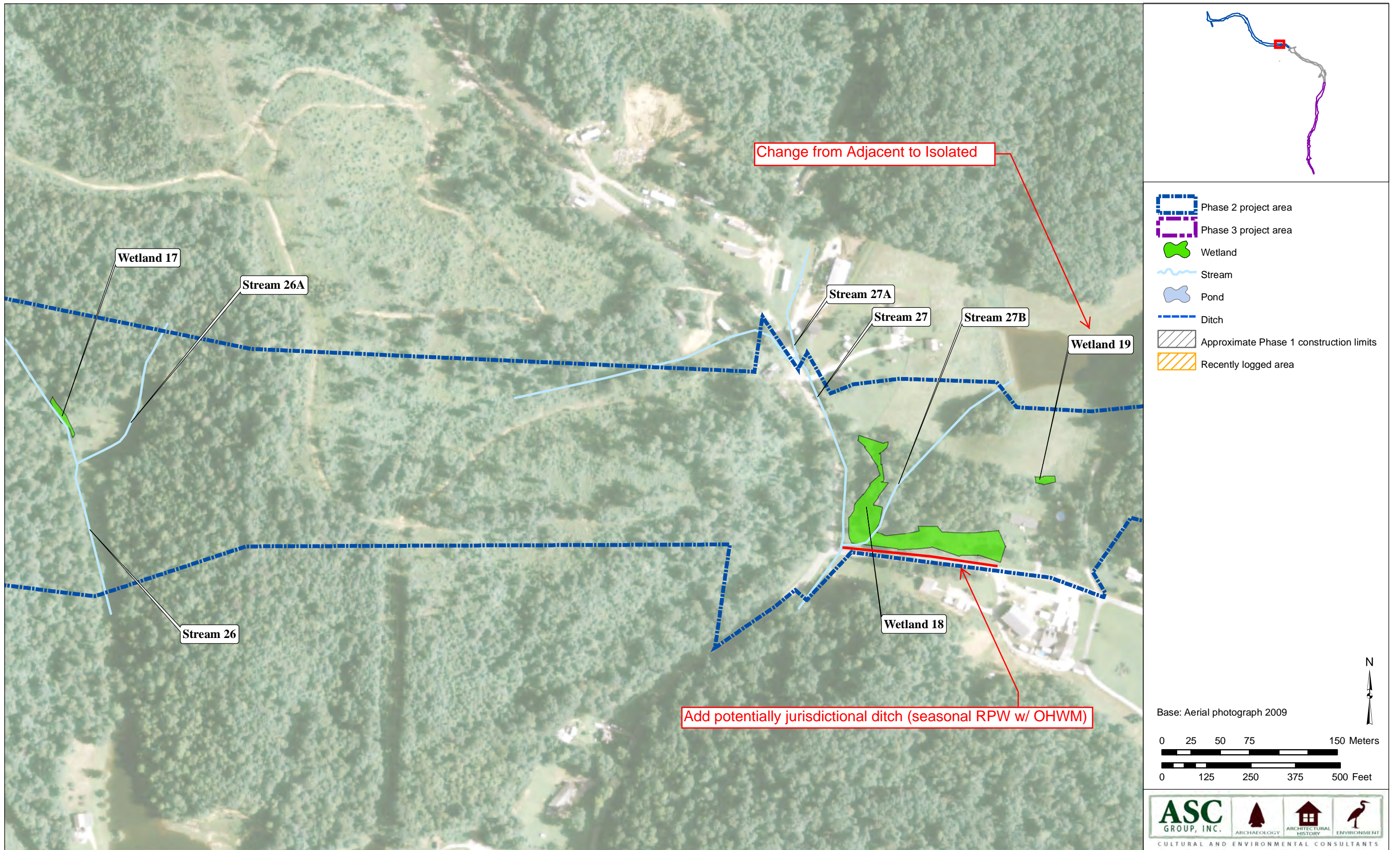


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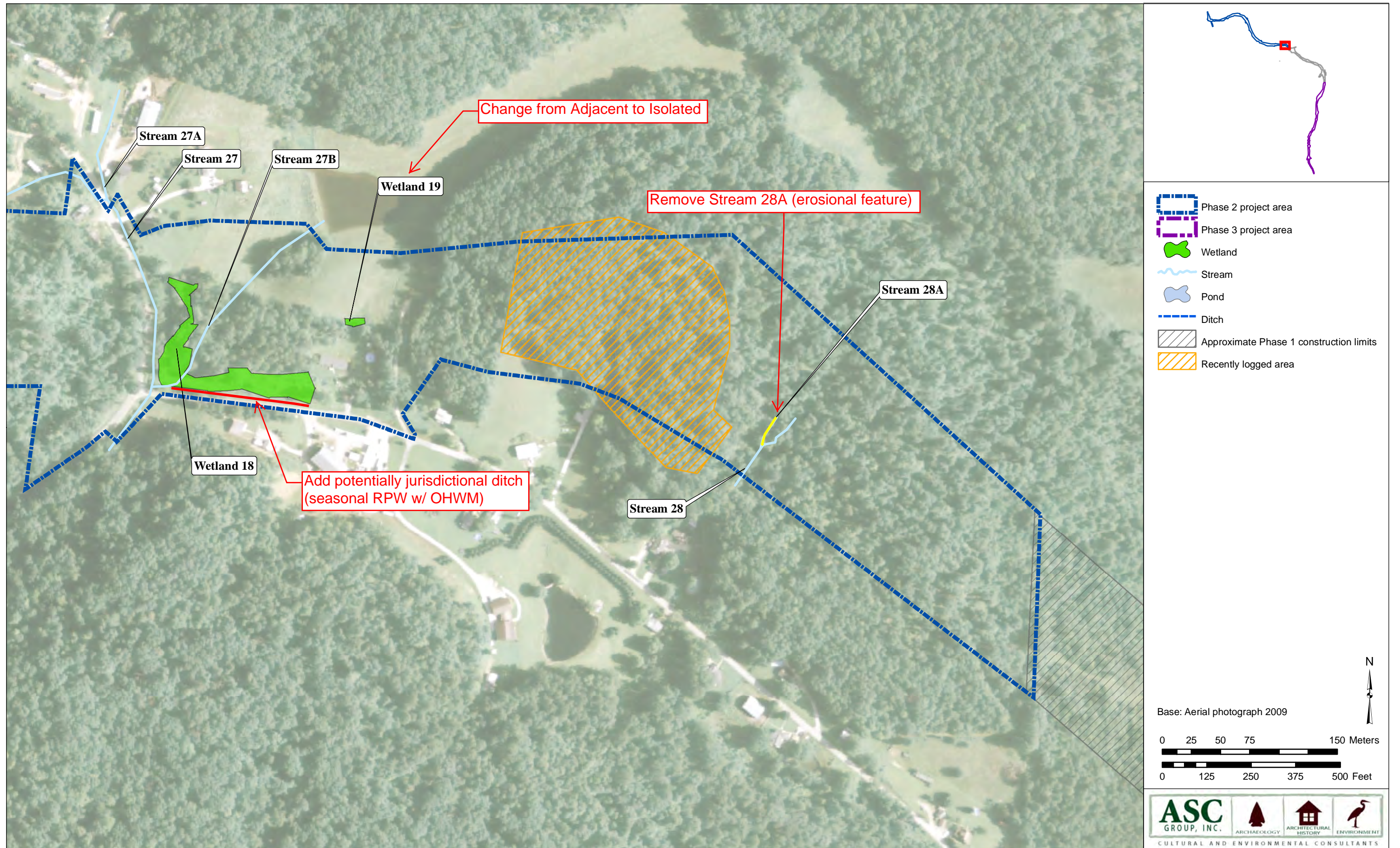


Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)



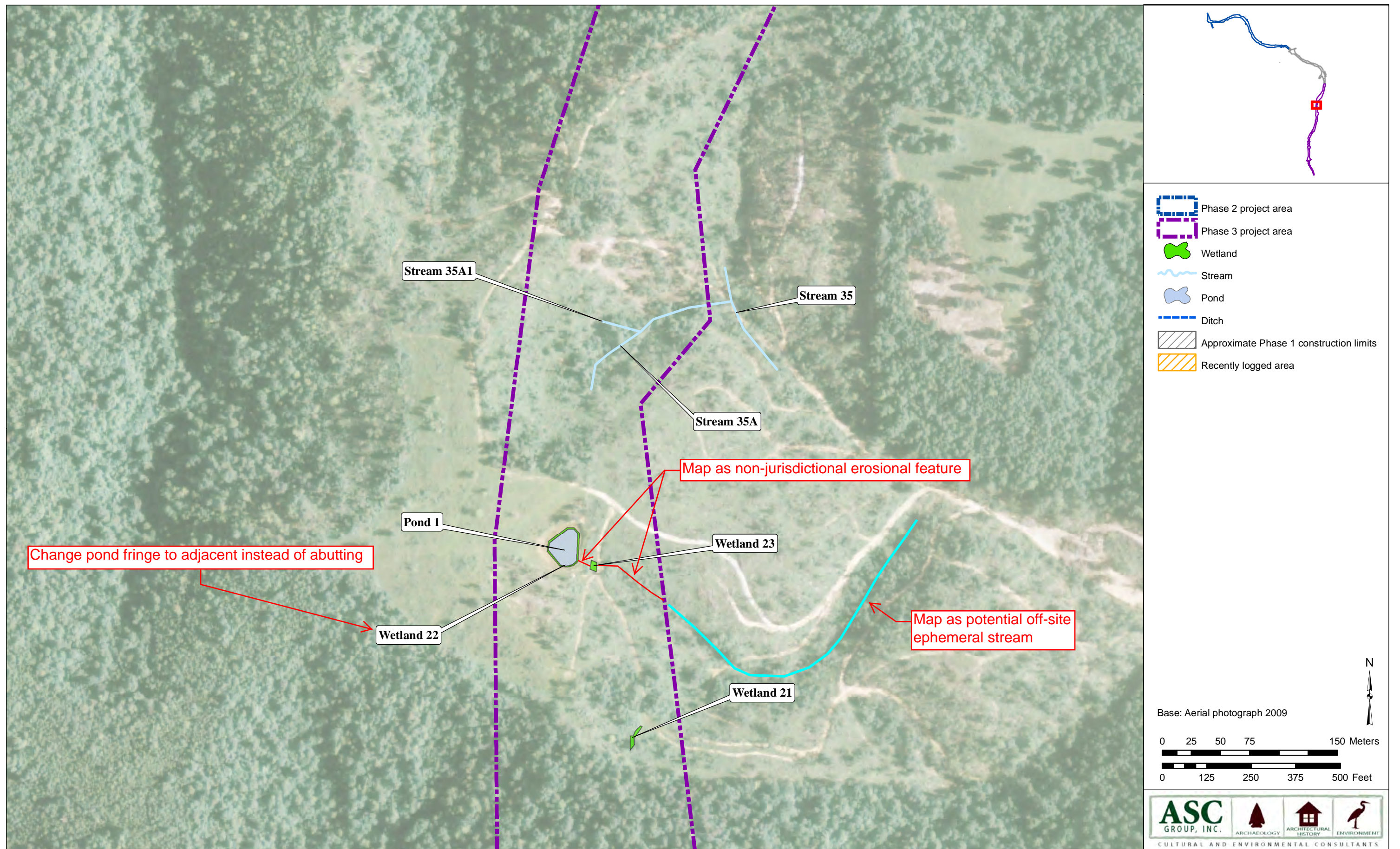


Figure 11. Survey Results. (30 sheets)





Figure 11. Survey Results. (30 sheets)



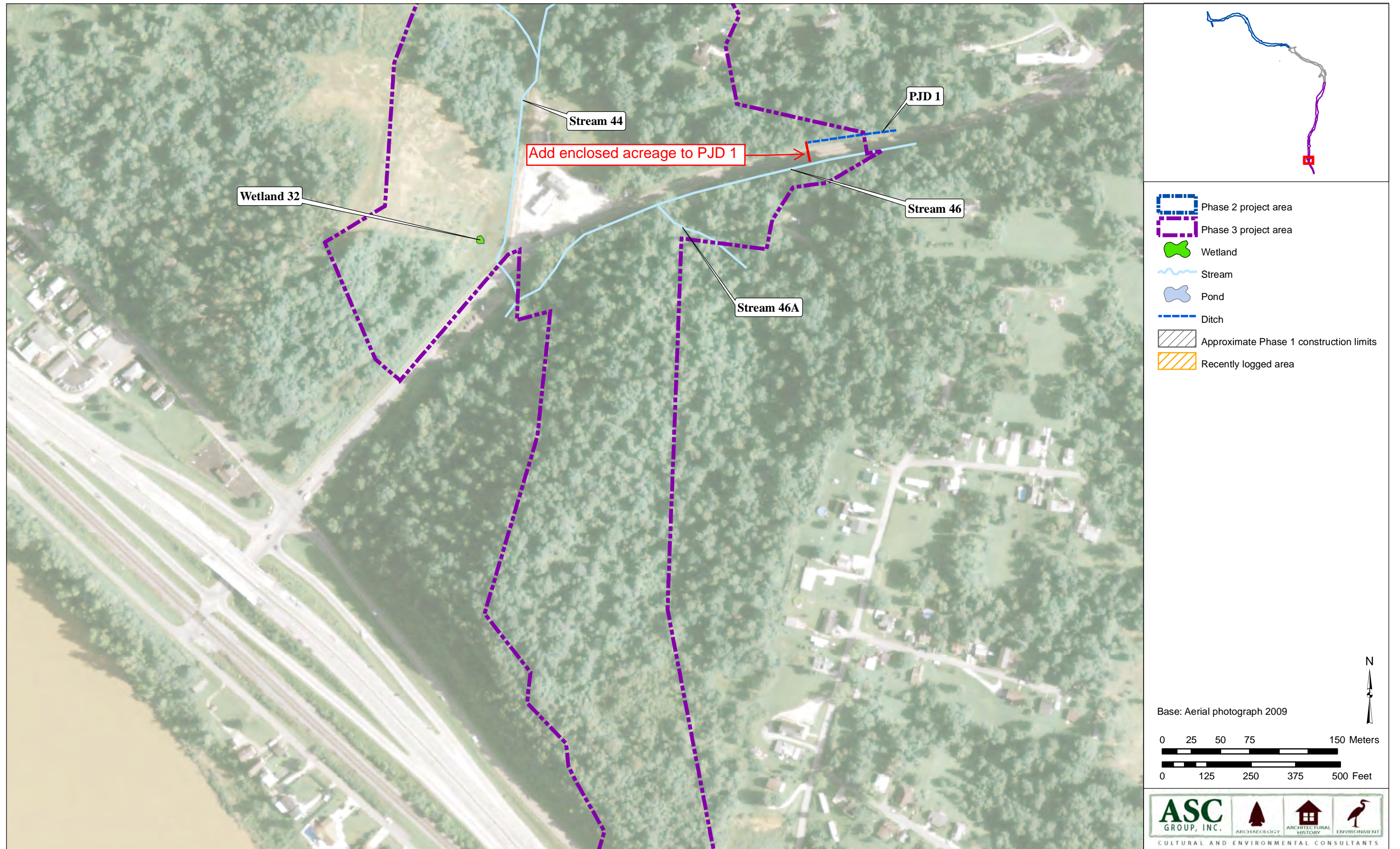


Figure 11. Survey Results. (30 sheets)



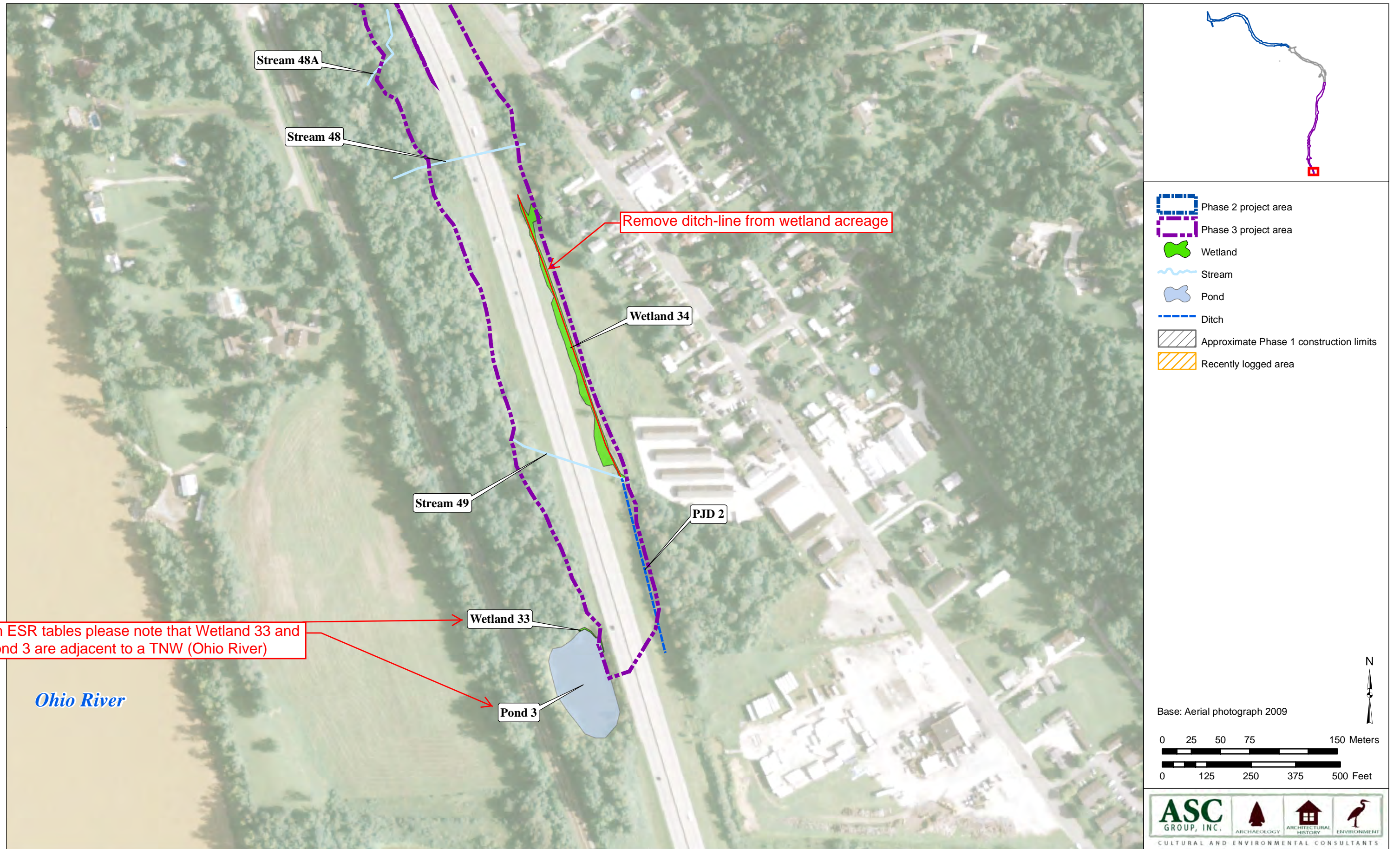
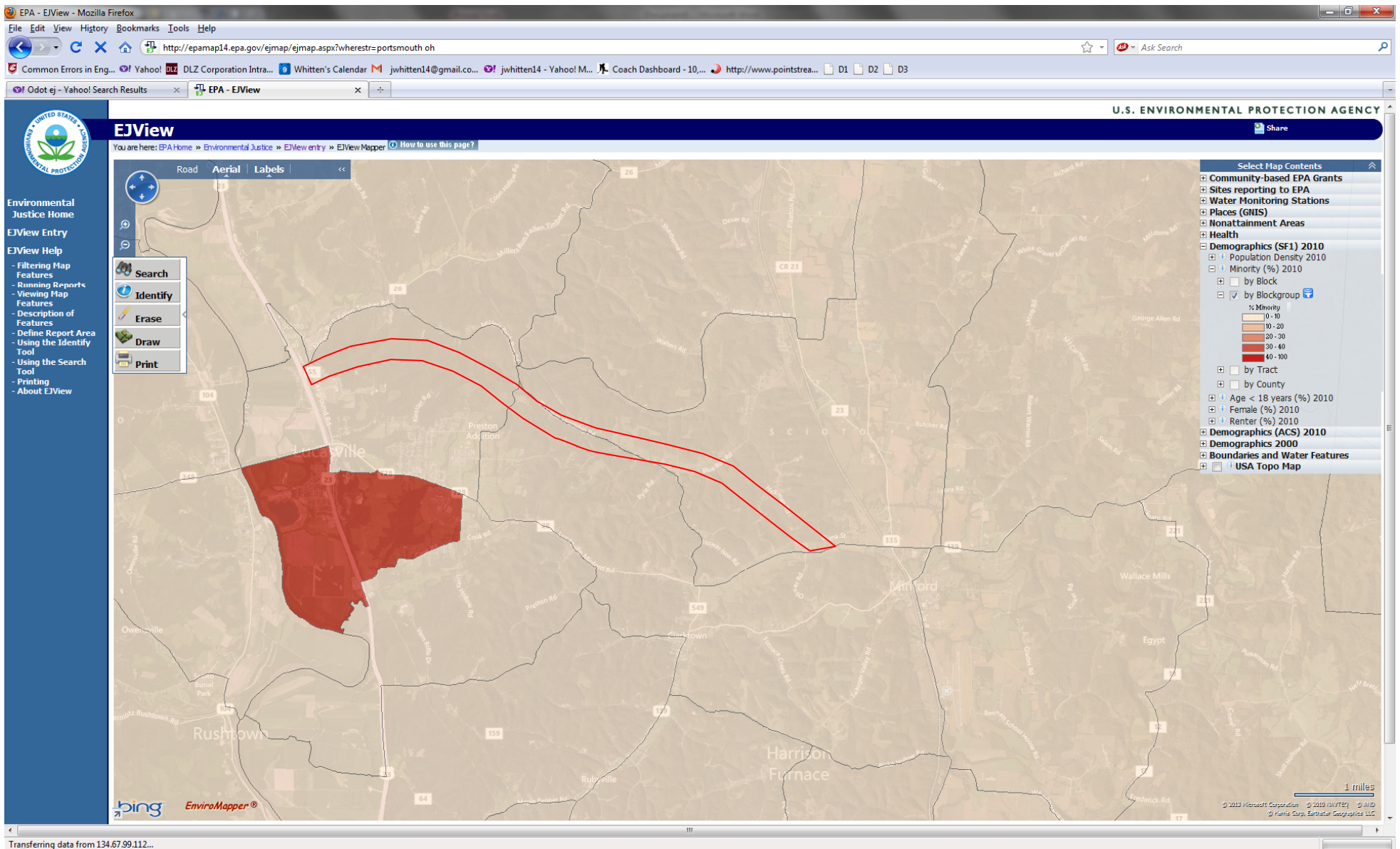


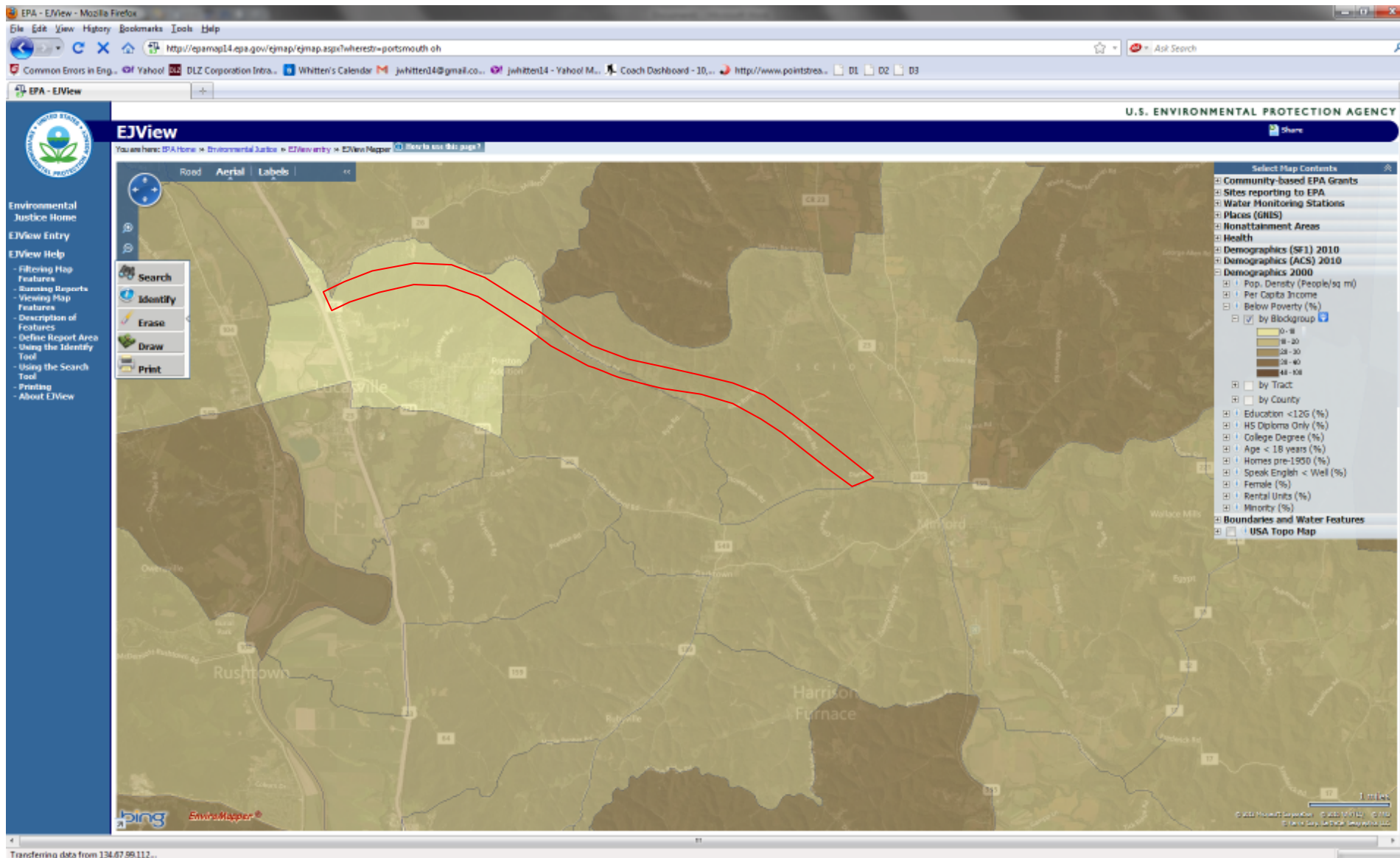
Figure 11. Survey Results. (30 sheets)

## Appendix C - Environmental Justice Mapping



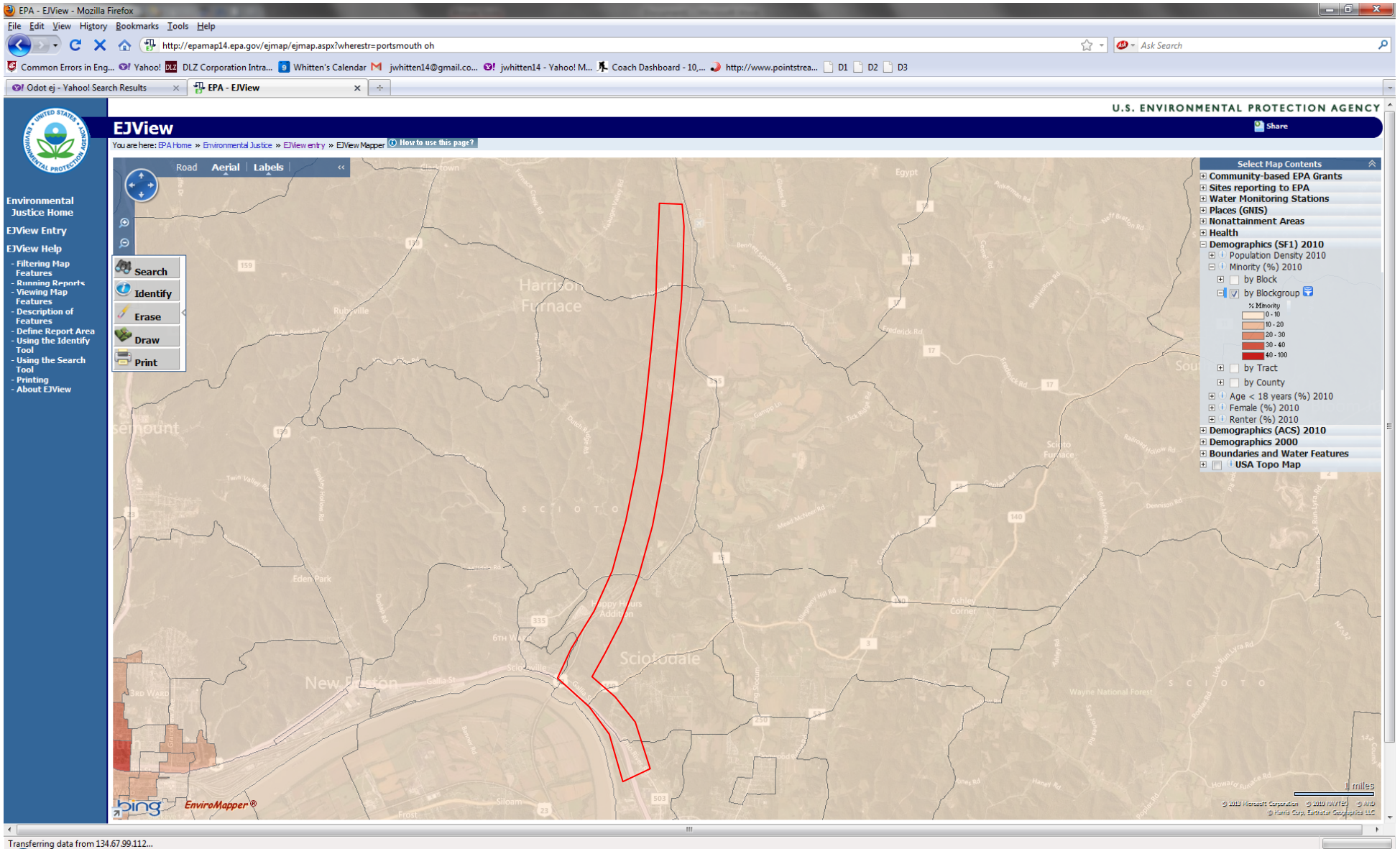


Phase 2 – Minority Populations

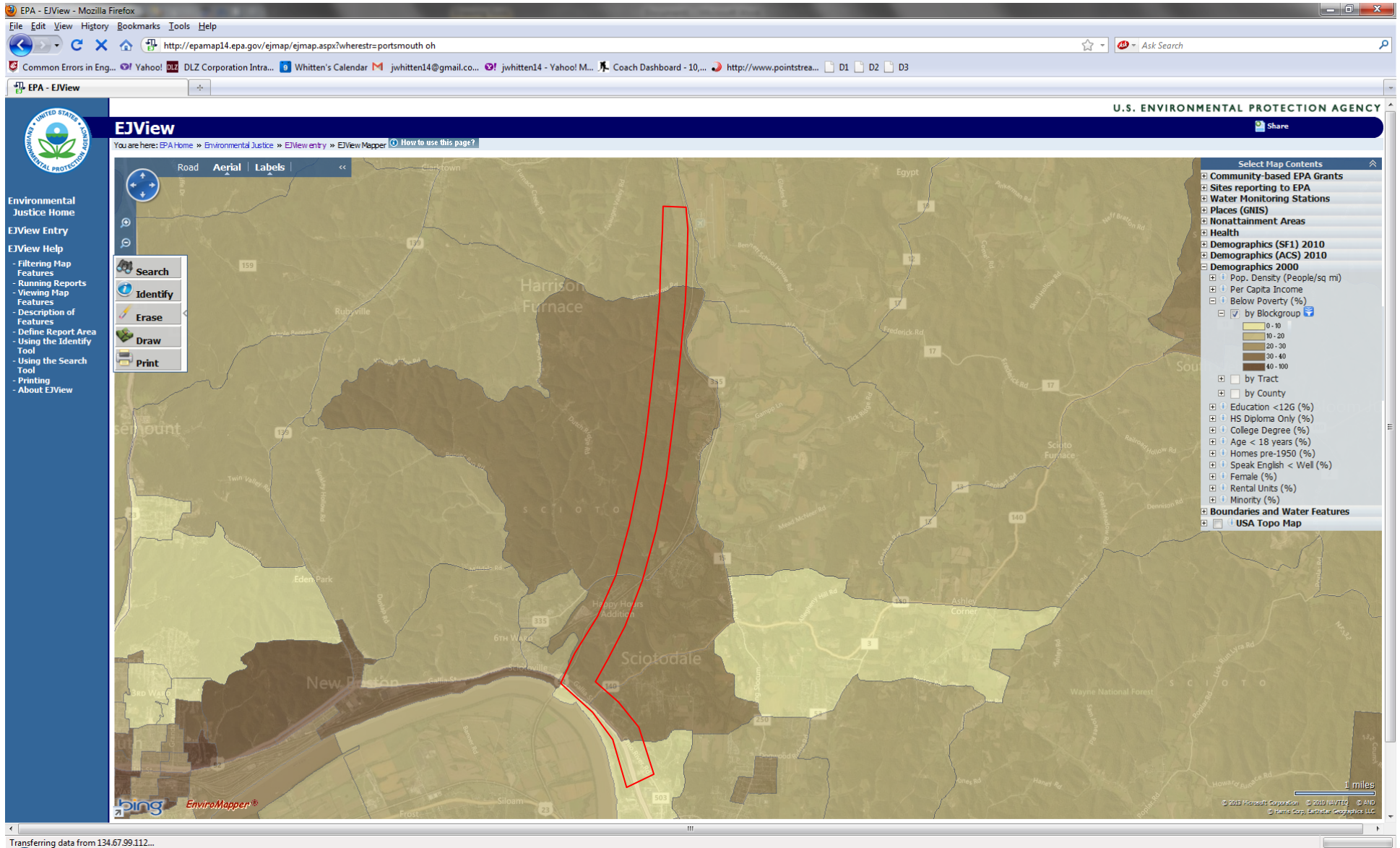


Phase2 – Below Poverty Populations





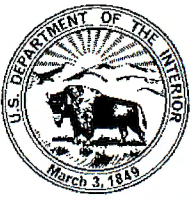
Phase 3 – Minority Populations



Phase 3 – Below Poverty Populations



**Appendix E:**  
**Responses to USFWS May 19, 2014**  
**Questions/Comments on the Mechanisms**  
**for Environmental Compliance for the**  
**Project**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / FAX (614) 416-8994

May 19, 2014

Timothy M. Hill, Administrator  
Office of Environmental Services  
Ohio Department of Transportation  
P.O. Box 899  
Columbus, OH 43216-0899

TAILS: 03E15000-2014-TA-1109 (PID 19415)

Attn: Michael Pettegrew, Matthew Raymond

**RE: SCI-823-0.00 Portsmouth Bypass (PID 19415) – Draft Biological Assessment**

Dear Mr. Hill,

This is in response to your April 17, 2014 email received in our office on April 18, 2014 requesting U.S. Fish & Wildlife Service (Service) comments on the Draft Biological Assessment (DBA) submitted by your office as a component of our ongoing consultation under the Endangered Species Act (ESA) section 7(a)(2) for the SCI-823-0.00 Portsmouth Bypass project (PID 19415). As noted in the DBA, consultation on this project began in November 2000, with the Ohio Department of Transportation's (ODOT) request for review of the project Feasibility Study. The Final Environmental Impact Statement (FEIS) was completed in July 2005, and the Record of Decision (ROD) was issued by the Federal Highway Administration (FHWA) in June 2006. Between issuance of the ROD in 2006 and the present, proposed project impacts and the project's implementation process have changed. The Service understands that some of these modifications and updates include:

- division of the project into three design/construction phases after issuance of the ROD in 2006;
- discovery of additional aquatic resources within the project area, resulting in the U.S. Army Corps of Engineers (USACE) voiding their 2005 Jurisdictional Determination (JD) in 2011;
- NEPA reevaluation of Phase I of the project in 2011;
- approval from FHWA for independent utility of Phase 1 in 2011;
- issuance of a USACE permit for Phase I of the project in 2012;
- consultation with the Service under ESA section 7(a)(2) on all Phases of the project (2011-2012);
- decision to contract the project as design-build-finance-operate-maintain (DBFOM) in 2013;
- reinitiation of ESA consultation with the Service in 2013 due to an increased estimate of forest habitat impacts (from approximately 316 acres (2011 consultation) to approximately 685 acres);
- and
- submission of the DBA to the Service in 2014, due to the proposed federal listing of the northern long-eared bat (*Myotis septentrionalis*) in October 2013.



The DBA currently under review states that the project will be built in a single construction phase, as opposed to the three-phase approach previously coordinated. By this letter, the Service is requesting a meeting with ODOT and FHWA to discuss the DBFOM approach on the Portsmouth Bypass project prior to our providing further comments on the DBA. Among other issues, we would like the following topics addressed at the meeting:

- whether the change to a DBFOM approach does or does not affect the relevancy of the 2005 FEIS and 2006 ROD;
- the level of discretion maintained by FHWA/ODOT to include particular environmental commitments in the project contract and/or project plans; and
- implications of the DBFOM approach on the environmental coordination and permitting process (e.g., explanation/interpretation of "Section 4 – Environmental Compliance" in the Final Project Scope of ODOT's RFP at:  
<http://www.dot.state.oh.us/Divisions/InnovativeDelivery/Pages/PortsmouthDBFOM.aspx>).

We suggest that the other resource and regulatory agencies involved with the Portsmouth Bypass project be invited to this meeting to ensure a shared understanding of the DBFOM contracting approach as it applies to the project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act, of 1973, as amended, and are consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

If you have questions, or if we may be of further assistance in this matter, please contact Karen Hallberg at extension 23 in this office.

Sincerely,



Mary Knapp, Ph.D.  
Field Supervisor

cc: N. Mehlo, FHWA Ohio Division Office, Columbus, OH  
K. Westlake, USEPA, NEPA Implementation Section, Chicago, IL  
J. Kessler, ODNR, Office of Real Estate, Columbus, OH (*email only*)  
P. Clingan, USACE, Ohio Regulatory Transportation Office, Columbus, OH (*email only*)  
J. Lung, OEPA, Columbus, OH (*email only*)  
B. Mitch, ODNR, Office of Real Estate, Columbus, OH (*email only*)

## DBFOM Contract Documents for Portsmouth Bypass - General

It should be noted that the Contract Documents for Portsmouth Bypass consist of multiple separate documents:

- Instructions to Proposers (ITP) – Provided for guidance in development and submittal of a technical and financial proposal to the Department.
- Project Scope and Project Scope Appendices – Provided to convey the technical provisions of the contract that cover the construction and O&M period.
- Public-Private Agreement (PPA) – Provided to convey all other contractual provisions of the documents. The PPA includes language that requires the Developer to comply with environmental laws and requirements. This document also contains definitions for capitalized terms.

All documents can be found through this link:

<http://www.dot.state.oh.us/Divisions/InnovativeDelivery/Pages/PortsmouthDBFOM.aspx>

## Responses to USFWS questions/comments

- **Whether the change to a DBFOM approach does or does not affect the relevancy of the 2005 FEIS and 2006 ROD;**
  - While the Project was originally contemplated with three phases of construction, the use of a single construction phase does not modify the original Project impacts and the requirements to meet environmental commitments have been incorporated into the DBFOM contract documents. In addition, the requirements to address environmental compliance during the construction and O&M portion of the project are conveyed in the contract documents (see PPA, Article 5).
  - Due to the extended period of time that had elapsed between the issuance of the ROD and the proposed construction of the project, the FEIS was reevaluated. The reevaluation included, but was not limited to, updated studies on ecological resources such as state and federally listed species, waters of the U.S., and terrestrial resources. A reevaluation was completed for Phase 1, when it was believed that the project would be constructed in three separate phases, and concurrently for Phases 2 and 3, when it was determined that all three phases would be constructed together using the design, build, finance, operate, and maintain (DBFOM) project delivery approach. The FHWA approved the reevaluation for Phase 1 of the project on April 5, 2012, and the reevaluation for Phases 2 and 3 of the project on April 16, 2014. These approvals determined that the June 9, 2006 Record of Decision remains valid for all three Phases of the Portsmouth Bypass.



- **The level of discretion maintained by FHWA/ODOT to include particular environmental commitments in the project contract and/or project plans; and**
  - Per PPA, Section 5.4 – Developer shall comply with all Environmental Laws, comply with all conditions and requirements imposed by all Environmental Approvals to be obtained by Developer (Environmental Approvals is defined as all Governmental Approvals arising from or required by any Environmental Law in connection with development of the Project (including the NEPA Documents)), comply with the conditions and requirements of the Environmental Approvals to be obtained by the Department to the extent identified in the Project Scope, monitor all commitments and mitigation measures set forth in all Environmental Approvals and provide reasonable assistance to the Department in performing such mitigation measures upon request of the Department and as otherwise set forth in the Project Scope.
  - In addition, per PPA, Article 16, ODOT has the authority to require the Developer to incorporate any commitment or requirement into the Project. If the requirement was not anticipated in the Project Scope or PPA, a Department Change is required and the Department will be responsible to compensate the Developer for the additional contemplated work.
- **Implications of the DBFOM approach on the environmental coordination and permitting process;**
  - The FEIS, Waterway Permits, Waterway Permit Special Provisions, and Environmental Reevaluations are provided as to the Proposers as Contract Documents. Therefore, the requirements and commitments within these documents must be incorporated into the Project by the Developer and are considered contractual requirements.

In addition, ODOT incorporated multiple mechanisms within the contract documents to ensure environmental commitments and constraints were monitored during design and construction to ensure compliance. The following list provides notable items:

- Project Scope, 2.2.5.2 – An Independent Quality Firm is responsible during Construction and Renewal Work (i.e. major maintenance) to ensure the contract requirements, including environmental commitments and constraints are being considered and properly addressed.
- Project Scope, Section 2.2.3.3 – The 60 percent design submittal for each “buildable unit” of the design shall provide for a constructability review, ensure that environmental constraints are addressed, ensure coordination of the involvement of Utility companies, and provide final maintenance and protection of traffic (MPT) proposals.
- Project Scope, Section 2.5 – Requires the Developer to provide an Environmental Consultation Management Plan in accordance with Section 4 of the Project Scope.
- Project Scope, Section 2.11.1 – Requires the Developer to have a dedicated Environmental Compliance Specialist co-located with the Department during construction.

- Project Scope, Section 4.3 – Requires quarterly updates regarding Environmental Compliance.
- Project Scope, Section 4 – First two sentences read as follows, “The Developer shall ensure that the Project is constructed and maintained in accordance with all Environmental Commitments, regulations, and applicable Governmental Approval’s required for the Project. This includes compliance with the environmental regulations and Governmental Approvals described in the Contract Documents and any additional compliance with regulations needed that are not specifically identified in the Contract Documents.”
- Project Scope, Section 4.2 – Identifies qualifications and role for Environmental Compliance Specialist. The Environmental Compliance Specialist shall supervise or conduct all Work during the Construction Period and the O&M Work during the Operating Period, necessary to ensure compliance with all Environmental Commitments, regulations, and Governmental Approval requirements.
- Project Scope, Section 4.2 - The Department’s Office of Environmental Services is responsible for any environmental coordination with the Governmental Entities. Therefore, ODOT still has an active role in what is presented to the resource agencies.
- Project Scope, Section 4.3 - The Developer (Environmental Compliance Specialist) shall prepare and administer a system for documenting and verifying that the Project is in compliance with all Environmental Commitments and Governmental Approval requirements. The ECMP will contain a way to track progress and include the necessary inspection schedules, maintenance checklists, timelines, and standards to assure compliance on all Environmental Commitments and Governmental Approval requirements.
- Project Scope, Section 4.3 - The Developer shall not proceed with activities that do not meet the Environmental Commitments.
- Project Scope, Section 4.3.A-B - The ECMP shall demonstrate how this organization will achieve the Project’s Environmental Commitments. The ECMP shall demonstrate how the Developers will track compliance and demonstrate compliance to the Department.
- Project Scope, Section 4.3.C – The ECMP shall include a system for monitoring the status of all Environmental Commitments, regulations, and Governmental Approval requirements. The ECMP shall also include a system for determining and processing any Governmental Approval modifications or new Governmental Approvals.
- Project Scope, Section 4.4 - Except as otherwise provided in Section 4.4, the Developer shall comply with, confirm and conform to the applicable constraints contained in the Environmental Approvals applicable to the Project. The Developer is responsible for obtaining all Governmental Approvals for Additional Properties and Project Specific Locations. Prior to the beginning of Work on a Project Specific Location or Additional Property, the Environmental



Compliance Specialist shall certify that the Work will not impact environmental resources

- Project Scope, Section 4.4.6 - The Developer shall confirm and conform to the applicable constraints contained in the Environmental Approvals, including, but not limited to, the ecological surveys (included in the Reference Information), waterway permits, and isolated wetland permit applications and permits, the FEIS, the ROD, any Environmental Reevaluations, and all other applicable Environmental Commitments contained in the Contract Documents.
- Project Scope, Section 15.2.4 - The Developer shall comply with the requirements of the waterway permits (404/401) referenced in Section 4 (Environmental Compliance) for the seeding and planting of trees.
- Project Scope, Appendix 7-3 – Provides No-Build Zone exhibits to accommodate requirements of the waterway permits.
- PPA, Article 5 – Provides requirements for the Developer to follow to obtain Governmental Approvals and Environmental Approvals (see Exhibit 1 of the PPA for definitions of these terms).
- PPA, Section 5.2.4 – If the Developer’s design differs from the Reference Design that was part of the original NEPA actions, the Developer must conduct all necessary environmental studies and prepare all necessary environmental documents in compliance with applicable Environmental Laws; obtain and comply with all necessary new Governmental Approvals or amendments to existing Governmental Approvals; obtain and comply with all necessary modifications, renewals and extensions of the existing Governmental Approvals, or of pending applications for Governmental Approvals. The Department and FHWA will independently evaluate all environmental studies and documents and fulfill the other responsibilities assigned to them by 23 CFR Part 771.
- PPA, Section 5.2.6 - If Developer pursues Additional Properties outside the Project Right of Way or any other modification of or deviation from any Governmental Approvals, including Department-Provided Approvals, Developer shall first comply with, and obtain any consent or waiver required pursuant to, then-existing agreements between the Department and such Governmental Entities.
- PPA, Section 5.4 - The Department delegates to Developer, and Developer accepts, all the Department’s obligations, commitments and responsibilities under all Environmental Approvals as set forth in the Project Scope.
- PPA, Section 5.4 – Developer shall comply with all Environmental Laws, comply with all conditions and requirements imposed by all Environmental Approvals to be obtained by Developer, comply with the conditions and requirements of the Environmental Approvals to be obtained by the Department to the extent identified in the Project Scope, monitor all commitments and mitigation measures set forth in all Environmental Approvals and provide reasonable

assistance to the Department in performing such mitigation measures upon request of the Department and as otherwise set forth in the Project Scope.

- PPA Exhibit 15 – Multiple non-compliance events associated with environmental compliance are identified in this Exhibit. The accrual of non-compliance events results in a reduction of the Department’s Payment to the Developer and could ultimately lead to termination of the contract if there are persistent non-compliances.



## **Appendix F:**

# **Section 4: Environmental Compliance Section of the Request for Proposals to Design-Build-Finance-Operate-Maintain Sci- 823-0.00 Portsmouth Bypass, Final Project Scope. April 24, 2014, Addendum Issued June 1, 2014.**

**REQUEST FOR PROPOSALS TO  
DESIGN-BUILD-FINANCE-OPERATE-MAINTAIN  
SCI-823-0.00  
PORTSMOUTH BYPASS  
PID 19415**



**FINAL PROJECT SCOPE  
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION**

*ISSUED: APRIL 24, 2014  
ADDENDUM No.1 ISSUED: JUNE 6, 2014*





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**Section 6: UTILITIES**

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**Section 8: GEOTECHNICAL**

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**Section 15: AESTHETICS AND LANDSCAPING**

NO APPENDICES IN THIS SECTION

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**Section 18:** (not used)

**Section 19: OPERATIONS AND MAINTENANCE**

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**Section 21: HANDBACK**

NO APPENDICES IN THIS SECTION

## **4 ENVIRONMENTAL COMPLIANCE**

The Developer shall ensure that the Project is constructed and maintained in accordance with all Environmental Commitments, regulations, and applicable Governmental Approvals required for the Project. This includes compliance with the environmental regulations and Governmental Approvals described in the Contract Documents and any additional compliance with regulations needed that are not specifically identified in the Contract Documents. Coordination with respect to several specific environmental issues and the status of these items as at the Setting Date is addressed in the remainder of this section. The Developer is responsible for environmental compliance during the Construction Period and Operating Period of the Project.

### **4.1 PROJECT SUMMARY**

On June 9, 2006, the United States Department of Transportation, FHWA issued a Record of Decision (ROD) for the SR 823 Portsmouth Bypass Project, PID 19415, provided as Appendix 4-4. The ROD was based upon the Draft Environmental Impact Statement (DEIS), dated January 2005, and Final Environmental Impact Statement (FEIS), dated August 2005, provided as Appendix 4-3. Since 2005, the Project was divided into three projects for design and construction:

- A. Phase 1, SCI-823-6.81 (PID 19415)—Shumway Hollow Road (TR 234) Interchange near the Airport to Lucasville-Minford Road (CR 28) Interchange. Phase 1 is 3 miles in length and contains three Bridges and two interchanges.
- B. Phase 2, SCI-823-10.13 (PID 79977)—Lucasville-Minford Road (CR 28) Interchange to US 23 Interchange. Phase 2 is 7.4 miles in length and contains ten Bridges and one interchange.
- C. Phase 3 SCI-823-0.00 (PID 77366)—Sciotoville Interchange (US 52) to Shumway Hollow Road (TR 234) Interchange near the Airport. Phase 3 is 5.6 miles in length and contains six Bridges and two partial interchanges.

As part of the National Environmental Policy Act (NEPA) project development process, Environmental Reevaluations are needed at key points in the overall process to establish whether or not the NEPA document, determination, or final project decision remains valid for the subsequent federal action. A reevaluation identifies and documents changes in the design or scope of the project, new or modified laws and regulations, Project Right of Way changes, or new information in general. The finding or conclusion of an Environmental Reevaluation confirms that the NEPA decision remains valid or determines whether additional analysis is required.

As several modifications to the Project have been made since the initial evaluation of the “Preferred Alternative” and the approval of the FEIS and ROD for the Project, an Environmental Reevaluation was completed in 2012 for Phase I provided as Appendix 4-5. The approval of the Phase 1 Environmental Reevaluation is provided as Appendix 4-6. The approval of the Phases 2 and 3 Environmental Reevaluation is provided as Appendix 4-8.



**Table 4-1: Status of Department-Provided Approvals**

<b>Document</b>	<b>Schedule</b>
<b>Draft Environmental Impact Statement</b>	Completed January 2005
<b>Final Environmental Impact Statement</b>	Completed August 2005
<b>Record of Decision</b>	Completed June 2006
<b>Phase I Environmental Reevaluation</b>	Reevaluation completed, submitted and approved in 2012.
<b>Phase II and III Environmental Reevaluation</b>	Reevaluation completed and approved in April 2014.
<b>Phase I Waterway Permit</b>	Governmental Approval Issued and available in Appendix 4-1 and Appendix 4-2 and also Appendix 4-7, Special Provisions..
<b>Phase II and III Waterway Permit</b>	Waterway Permit Applications submitted and applications available in the Reference Information. Approved permits are anticipated by Financial Close. Special Provisions are provided in Appendix 4-9.
<b>NPDES Permit</b>	The Notice of Intent (NOI) for the NPDES Permit was filed in April 2014. The OEPA will wait to process the NOI application until the individual 401 water quality certification is ready to be approved. The Developer shall prepare a Storm Water Pollution Protection Plan (SWPPP) and all other applicable NPDES application materials for the Project. The filing of the NOI is scheduled prior to the Setting Date.

## **4.2 ENVIRONMENTAL COMPLIANCE SPECIALIST**

The Developer shall provide an Environmental Compliance Specialist, who shall report to the Developer and shall not report or work for the IQF. The Environmental Compliance Specialist shall have experience in environmental compliance and be familiar with Governmental Approval requirements in Ohio for such areas as NPDES Permits and Waste Discharge Requirements (WDRs), Clean Water Act (Section 404 and Section 10), Ohio Environmental Protection Agency (OEPA) Section 401 Water Quality Certification, Threatened or Endangered Species, Section 106, Section 4(f), Section 6(f), regulated materials, groundwater, and Governmental Entity coordination. The Environmental Compliance Specialist shall be the POC for the Developer regarding environmental regulatory issues.

The Environmental Compliance Specialist shall supervise or conduct all Work during the Construction Period and the O&M Work during the Operating Period, necessary to ensure compliance with all Environmental Commitments, regulations, and Governmental Approval requirements.

The Environmental Compliance Specialist shall also initiate, develop, and administer any new Governmental Approvals, Governmental Approval modifications, and necessary NEPA documentation during the Construction Period and the Operating Period of the Project.

The Environmental Compliance Specialist shall administer the Environmental Consultation Management Plan (ECMP) to document and track compliance with all Environmental Commitments and Governmental Approval requirements.

Unless specifically stated otherwise, the Department's Office of Environmental Services is responsible for any environmental coordination with the Governmental Entities. The Department's Project Manager is the POC.

### **4.3 ENVIRONMENTAL CONSULTATION MANAGEMENT PLAN**

The Developer (Environmental Compliance Specialist) shall prepare and administer a system for documenting and verifying that the Project is in compliance with all Environmental Commitments and Governmental Approval requirements. This system shall be known as the ECMP. It is expected that the ECMP will be user-friendly, web-based, and linked to the Department's Environmental Commitment Tracking system (ECTS). The ECMP will contain a way to track progress and include the necessary inspection schedules, maintenance checklists, timelines, and standards to assure compliance on all Environmental Commitments and Governmental Approval requirements. Oversight for Environmental Commitment and Governmental Approval compliance during the Construction Period and Renewal Work during the Operating Period will be conducted by the IQF. The Developer shall not proceed with activities that do not meet the Environmental Commitments. The ECMP should be applicable throughout the Term of the Agreement. The ECMP will establish the approach, requirements, and procedures to be employed to protect the environment, both during the Construction Period, as well as during the Operating Period.

The Department will also use this information to track progress. Documentation specifying the elements, relationships, and roles within the ECMP will be submitted to the Department for review and comment, 30 Days after the NTP.

At a minimum, the ECMP shall contain the following parts:

- A. **Organization and Relationships:** The ECMP shall identify all environmental management personnel, their roles, authorities, and line reporting relationships. This part of ECMP shall demonstrate how this organization will achieve the Project's Environmental Commitments. The linkages to, and utility within, ECTS shall also be identified. The Environmental Compliance Specialist shall be responsible for populating data into the ECTS.
- B. **Compliance Submissions:** The ECMP shall include quarterly compliance submissions through meetings with the Department, as necessary. This part of the ECMP shall demonstrate how the Developers will track compliance and demonstrate compliance to the Department.



- C. Training: The ECMP shall provide a description of the Developer’s approach to educate and train all workers to understand the Developer’s management commitment to the Project’s environmental quality.
- D. Environmental Commitment, Regulation, and Governmental Approval Tracking Record: The ECMP shall include a system for monitoring the status of all Environmental Commitments, regulations, and Governmental Approval requirements. The ECMP shall also include a system for determining and processing any Governmental Approval modifications or new Governmental Approvals.
- E. Deliverable Management: The ECMP shall include how environmental deliverables will be produced and coordinated.
- F. Construction Monitoring: The ECMP shall specify the details of construction monitoring.
- G. Schedule: The ECMP shall include a schedule for all relevant compliance events, such as inspections, meetings, construction, and other actions.
- H. Mitigation Planning: Environmental mitigation is a component of the Project’s Environmental Commitments. The ECMP shall track mitigation and ensure the Developer compliance with the requirements and conditions of any applicable mitigation plan. The Developer shall also confirm the status of any applicable mitigation plan prior to any construction.
- I. ECMP Documents: The ECMP shall explain all of the necessary inspection schedules, maintenance checklists, timelines, and compliance tracker documents that will be used to ensure environmental regulatory compliance.

#### **4.4 ENVIRONMENTAL COMMITMENTS AND GOVERNMENTAL APPROVALS**

Except as otherwise provided in Section 4.4, the Developer shall comply with, confirm and conform to the applicable constraints contained in the Environmental Approvals applicable to the Project. For the avoidance of doubt, the right of way acquired and cleared by the Department for the Project as at the Setting Date may not constitute the total extent of the Project Right of Way that may be needed to accommodate the Work (including earthwork generated or required to complete the Construction Work). As described in Section 5.3 of the Agreement, the Developer is responsible for acquiring Additional Properties as needed to accommodate the Construction Work. The Developer is responsible for obtaining all Governmental Approvals for Additional Properties. Prior to the beginning of Work on a Project Specific Location or Additional Property, the Environmental Compliance Specialist shall certify that the Work will not impact environmental resources, including but not limited to:

- 1. Cultural Resources;
  - a. Buildings, Structures, objects, and sites eligible for or listed on the National Register of Historic Places;
  - b. Historic or prehistoric human remains, cemeteries, and/or burial sites (pursuant with ORC 2909.05 and 2927.11)
- 2. Ecological Resources:

- a. Wetlands;
  - b. Streams;
  - c. Wooded areas with trees to be removed in excess of 3 inches diameter at breast height.
3. Public Lands:
    - a. Lands meeting the criteria of 49 U.S.C. 303, 23 CFR 771.135: 4(f);
    - b. Lands meeting the criteria of 16 U.S.C. 4601-4, 36 CFR 59.1: 6(f)
  4. FEMA Mapped 100 year Floodplains
  5. Hazardous Waste Areas
  6. Waste and borrow material – The Developer is responsible to identify Project Specific Locations for the purposes of waste and borrow material. The Developer shall develop any borrow or waste sites in accordance with all appropriate regulations and CMS 105.16.

The Developer shall provide all documentation and the certification of no impact to the Office of Environmental Services with a copy to the Department’s Project Manager.

The remainder of this section addresses some, but not all, of the Environmental Commitments associated with the Project.

#### **4.4.1 Waterway Permits**

The Department has obtained waterway permits covering the area identified as Phase 1 in the Reference Design provided as Appendix 4-1 and Appendix 4-2. The Developer shall comply with the requirements and conditions of the Governmental Approvals for Phase 1 as well as the special provisions associated with the waterway permits for Phase 1 provided as Appendix 4-7. Where there is a conflict in requirements between the Governmental Approvals and the special provisions the more stringent requirements will apply.

The Department is currently in the process of obtaining waterway permits for the areas identified as Phases 2 and 3 in the Reference Design from the U.S. Army Corps of Engineers (USACE) and the OEPA. The special provisions associated with the waterway permits for Phases 2 and 3 have been provided as Appendix 4-9 and shall constitute the baseline conditions and requirements associated with such permits referred to in Section 5.4.1.3 of the PPA.

If the Developer proposes any temporary or permanent fills that have not been permitted; 404-401 Governmental Approval modifications will be required. For any non-permitted impacts, the Developer shall prepare all Governmental Approval modification requests in accordance with the requirements of the Department’s *Waterway Permits Manual* and submit to the Department for review. The Department makes no guarantee to granting the Governmental Approval modification request. The Governmental Approval modifications shall be coordinated by the Department with the USCG, USACE, and OEPA where applicable. The Developer shall notify the Department of any proposed waterway impacts, located outside of the permitted area, at the earliest possible stage.



#### **4.4.2 Wetland and Stream Mitigation**

As part of the waterway permit process, wetland and stream mitigation is required. The Department has established the mitigation requirements for the various areas of the Project Right of Way that are impacted. The Developer shall monitor the status of mitigation negotiations and assist as requested. Subject to the Developer's obligations set forth in Section 5.2 of the PPA as regards differences between Developer's design and the Reference Design, or differences between Developer's construction means and methods and those in any Governmental Approval, the Developer shall not be responsible for wetland and stream mitigation related to the waterway permits currently being obtained to mitigate the impacts of the Environmental Approvals obtained by the Department.

The permits and Special Provisions referred to in Section 4.4.1 include anticipated impacts on streams, wetlands and ponds at specific locations. Notwithstanding that the impacts to such features as a consequence of Developer's Design may reduce impact on any individual stream, wetland or pond feature at any location as compared to the impact shown in the permits and Special Provisions, and notwithstanding that the total impacts in cubic yards of fill and /or acres of impacts, as a consequence of Developer's Design may be less than the total impacts identified in the permits or Special Provisions, if the anticipated impact on any stream, wetland or pond feature at any location as compared to that shown in the permits or Special Provisions is exceeded, this shall trigger the requirement for re-submittal of the relevant Permit as described in Section 5.4.1.5 of the PPA.

#### **4.4.3 National Pollutant Discharge Elimination System Permit**

The Developer is responsible for compliance with Ohio's National Pollutant Discharge Elimination System (NPDES) Construction General Permit, Ohio EPA Permit No. OHC000004 (NPDES Permit), which includes providing and maintaining all temporary sediment and erosion controls. NPDES Permit requirements for post-construction Storm Water Management shall be addressed in accordance with Section 12 of the Project Scope.

The Notice of Intent (NOI) for the NPDES Permit was filed in April 2014. The OEPA will wait to process the NOI application until the individual 401 water quality certification is ready to be approved. The Developer shall submit a co-permittee form as an Operator, as defined in the NPDES Permit to the OEPA, and furnish a copy of the co-permittee NOI approval letter from OEPA prior to earth disturbing activities.

The Developer shall prepare a Storm Water Pollution Protection Plan (SWPPP) in accordance with the NPDES Permit that is signed and sealed by an Engineer who maintains a current certification as a Certified Professional in Erosion and Sediment Control (CPESC). The SWPPP shall be submitted to the Department for review and comment.

All temporary sediment and erosion control work shall comply with the requirements of the NPDES Permit.

The Developer shall perform the required NPDES Permit inspections and prepare the NPDES Inspection Reports. NPDES Permit inspections and NPDES Inspection Reports shall be prepared by one of the following:

- A. CPESC and Engineer who signed and sealed the SWPPP.
- B. CPESC-certified Developer staff serving under the supervision of the CPESC and Engineer who signed and sealed the SWPPP.
- C. Certified Erosion, Sediment, and Storm Water Inspector (CESSWI)-certified Developer staff serving under the supervision of the CPESC and Engineer who signed and sealed the SWPPP.

The Developer's staff preparing NPDES Inspection Reports shall update, amend, and revise the SWPPP as the Developer's operations and site conditions warrant.

The Developer shall submit NPDES Inspection Reports to the IQF every 7 Days and within 24 hours of a 0.5 inch (13 mm) or greater rainfall event. The Developer shall identify all revisions and updates to the SWPPP and indicate what measures will be taken to maintain NPDES Permit compliance in the NPDES Inspection Report. In addition, the Developer shall include the following in the NPDES Inspection Report; the inspection checklist in accordance with NPDES Permit, Part III.G.2.i, a map identifying all Best Management Practices (BMPs) needed, installed, maintained, or removed since the last Inspection Report, certification that all construction activities are compliant with the SWPPP, and the signature of the Developer staff responsible for the inspection.

The Developer shall provide a record of all written questions and comments from the IQF and the Department related to the SWPPP. Include all responses to the IQF's questions and comments in the Inspection Report.

The signature of the CPESC and Engineer who sealed the SWPPP is required as part of the NPDES Inspection Report, on a monthly basis or when modifications to the SWPPP design are made. The Developer shall include the certification requirements according to NPDES Permit (Part V. H.) with all reporting sign offs.

The IQF and the Environmental Compliance Specialist shall monitor compliance with the requirements of the NPDES Permit and this Section 4 of the Project Scope. SWPPP updates and inspections shall be made available to the IQF and the Department.

The ECMP shall include SWPPP updates, inspections, Inspection Reports, maintenance records, and Corrective Actions as directed by the IQF, the Department or any Governmental Entity.

If the IQF, the Department, or any Governmental Entity finds a NPDES Permit violation of the NPDES or Contract Document requirements, or that the BMP are incomplete, or that the SWPPP is incomplete, or that the implementation of the SWPPP is not being performed correctly or completely, the Developer shall correct and mitigate the conditions within 48 hours of notification by IQF, the Department, or



Governmental Entity. In addition, any written correspondence related to the NPDES from a Governmental Entity regarding compliance with the NPDES Permit shall be sent to the Department's Project Manager and the Department Division of Construction Management, Hydraulics, and Erosion Control Construction Specialist.

The Developer shall remove all temporary erosion control items when no longer required and before Final Acceptance. Removed temporary erosion control items become the property of the Developer. The Developer shall dispose of removed temporary erosion control items in accordance with all appropriate laws and environmental regulations.

#### **4.4.4 Floodplain Coordination**

Prior to any construction in a floodplain, the Developer shall compile the necessary information and supporting documentation to identify temporary or permanent impacts to the floodplain. The Developer shall coordinate with the local floodplain administrator to obtain approval. The Developer is responsible to obtain a Flood Hazard Development Permit or any other permits required by the local floodplain administrator. Completion of the coordination process is a condition prior to the commencement of Construction Work. Any additional impacts identified subsequent to approval from the Floodplain Administrator require the Developer to coordinate with the applicable agencies. Section 12 of this Project Scope addresses drainage and should also be considered applicable to this matter.

#### **4.4.5 Construction Noise, Dust, Vibration and Burning**

During the Construction Period and the Operating Period, noise, dust, vibration, and burning from construction activities may impact the Project Right of Way. The Developer shall adhere to all Environmental Commitments associated with noise, dust, vibration, and burning.

The Developer's Construction Work shall adhere to any Local, State, or Federal construction noise, dust, vibration, and burning ordinances.

#### **4.4.6 Threatened or Endangered Species**

Threatened or Endangered Species have been identified in the Project Right of Way. Environmental Commitments are in place to minimize impacts. Wooded areas within the construction limits of the Phase 1 Reference Design with the exception of parcels 23 and 24 (approximate Sta 350+00 to 538+00) will be cut by others to remove trees larger than three inches in diameter measured at a height of three feet from the ground prior to 03/31/15 (the 2014/2015 cutting season). Details in relation to the tree clearing contract for Phase 1 is provided in the Reference Information. The Developer will be required to cut and clear wooded areas in Phases 2 and 3 and clear parcels 23 and 24 within Phase 1 during the next cutting season (10/01/15 through 03/31/16).

The Developer shall confirm and conform to the applicable constraints contained in the Environmental Approvals, including, but not limited to, the ecological surveys (included in the Reference Information), waterway permits, and isolated wetland permit applications and permits, the FEIS, the ROD, any

Environmental Reevaluations, and all other applicable Environmental Commitments contained in the Contract Documents.

If the Developer encounters a Threatened or Endangered Species or an Undisclosed Endangered Species in the Project Right of Way, the Developer shall immediately notify the Department and stop construction.

The addition of species, known to exist in the Project Right of Way, to the list of Threatened or Endangered Species is possible, which may add constraints or additional Environmental Commitments. The Developer shall confirm the status of the endangered species coordination with the Department prior to any construction and annually.

In accordance with Table 4-1 of Appendix 4-5, the Department will relocate the southern monkshood and primrose-leaved violet populations prior to the Construction Period. In accordance with the Environmental Reevaluation for Phases 2 and 3, the Department will relocate the primrose-leaved violet populations prior to the Construction Period.

#### **4.4.7 Regulated Materials**

The Developer shall meet all regulatory conditions imposed at properties with Regulated Materials associated with the Project. These conditions include ensuring that the surrounding properties and populations are not exposed to the Regulated Materials on the site. The Developer shall characterize, collect, contain, and properly dispose of all waste generated or encountered during the Work. The Developer shall ensure that the site is properly contained during construction so that Regulated Materials do not migrate offsite. The Developer shall prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan that provides specific guidance for managing, handling, and disposing of Regulated Materials (and all related Regulated Materials issues) that may be encountered. The SPCC will also protect the health and safety of all onsite personnel and the general public. The SPCC is to be submitted to IQF and the Department for Project records within 30 Days after NTP.

Regulated Materials are identified in the NEPA documents and the Contract Documents.

Undisclosed Regulated Environmental Conditions (including Undisclosed Regulated Materials) may also be present. If any Undisclosed Regulated Environmental Conditions are discovered, the Developer shall notify the Department immediately and shall follow the SPCC Plan, as well as all appropriate regulations.

Any removal and disposal of Asbestos Containing Material (ACM) must comply with the Ohio Administrative Code, Occupational Safety and Health Administration (OSHA) regulations, and the National Emission Standard for Hazardous Air Pollutants (NESHAPS) Standards for Asbestos. The Developer shall complete and submit the OEPA Notification of Demolition and Renovation forms to the appropriate Governmental Entity and the Department, at least 30 Days before demolition. The Developer shall provide a copy of the completed forms to the Department. The Developer shall ensure



that all Regulated Materials are removed and properly disposed. All personnel shall have proper training and certifications.

If the Developer encounters an underground storage tank (UST) within the Project ROW, the Developer shall decommission and remove the UST. The Developer shall follow all applicable rules and regulations associated with UST removal activities. USTs not identified in the Contract Documents are considered Undisclosed Regulated Environmental Conditions.

The Developer shall dispose of solid waste material at approved sites in accordance with all appropriate regulations.

#### 4.4.8 Cultural Resources

If any archaeological sites are encountered during construction, the Developer will notify the Department's Project Manager, Work will be halted in the immediate vicinity until that site can be evaluated. The Department will consult with the State Historic Preservation Office and, if appropriate, Tribal entities prior to proceeding with Work in the area.

#### 4.4.9 Groundwater and Aquifer Protection

Drinking water resources have been identified in the Project Right of Way. The Developer shall confirm the presence through the review of records from OEPA. The Developer shall not allow Project-related chemical storage, refueling, and maintenance activities in the sensitive areas. In addition, spill kits are to be maintained throughout the construction area. Spills of fuels, oils, chemicals, or materials that could pose a threat to the drinking water resources shall be cleaned up immediately and reported to the appropriate regulatory agencies if the spill meets or exceeds the reportable quantity.

#### 4.4.10 Deliverables

Unless otherwise indicated, all Deliverables shall be submitted in both electronic format and hardcopy format. Acceptable electronic formats include Microsoft Word, Microsoft Excel, or Adobe Acrobat (.PDF) files, unless otherwise indicated.

**Table 4-2: Deliverables to the Department**

<b>Deliverables</b>	<b>Schedule</b>	<b>Department Action</b>	<b>Reference Section</b>
ECMP	30 Days after NTP	Review and Comment	4.3
Environmental Compliance Updates	As specified in ECMP (quarterly)	Review and Comment	4.3
Storm Water Pollution Protection Plan and NPDES Permit Application and Materials	Prior to commencement of Construction Work	Review and Comment	4.4.3

Spill Prevention Control and Countermeasures Plan	30 Days after NTP	Review and Comment	4.4.7
Waste and borrow NEPA clearances	As specified in ECMP (quarterly)	Review and Comment	4.4 (6)



## **Appendix G:**

# **Article 5: Project Planning, Conditions and Approvals; Environmental Compliance; Public Information of the Public-Private Agreement (PPA)**

**PUBLIC-PRIVATE AGREEMENT**

**PORTSMOUTH BYPASS**

**BETWEEN**

**THE OHIO DEPARTMENT OF TRANSPORTATION**

**And**

---

Dated as of \_\_\_\_\_, 2014



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**4.6.6** Developer shall schedule all progress and periodic meetings with its Lead Contractor, Lead Designer, Lead Engineer, Lead O&M Contractor(s) and the Independent Quality Firm at a date, time and place reasonably convenient for the Department to attend and except in the case of urgency, shall provide the Department with Notice and an agenda for such meetings at least five (5) Business Days in advance of each meeting or as otherwise provided in the Project Scope. The Department is authorized to attend all such meetings and is permitted to raise any questions, concerns or opinion without restriction.

**ARTICLE 5. PROJECT PLANNING, CONDITIONS AND APPROVALS;  
ENVIRONMENTAL COMPLIANCE; PUBLIC INFORMATION**

**5.1 Preliminary Planning and Engineering Activities**

Developer, through the appropriately qualified and licensed design professionals identified in the Project Management Plan, shall perform or cause to be performed all engineering activities appropriate for development of the Project and the Utility Relocations included in the Design Work and/or the Construction Work in accordance with the Contract Documents and Good Industry Practice, including (a) technical studies and analyses; (b) geotechnical, seismic, flooding and biological investigations; (c) right-of-way mapping, surveying and appraisals; (d) Utility subsurface investigations and mapping; (e) Regulated Materials investigations; and (f) design and construction surveys.

**5.2 Governmental Approvals**

**5.2.1** The Department has obtained, or is in the process of obtaining and shall obtain, on or before March 31, 2015, the Department-Provided Approvals for the Project, in each case based on the Reference Design. Developer acknowledges it has received and is familiar with the applications and supporting documentation for the Environmental Approvals as contained in *Section 4* of the Project Scope.

**5.2.2** Developer shall prepare application submissions for the Environmental Approvals (other than those required to obtain the Department-Provided Approvals), and shall obtain all other Governmental Approvals required in connection with the Project, the Project Right of Way or the Work. The Department will interface with all applicable Governmental Entities in respect of, and reasonably assist Developer in obtaining, all Environmental Approvals in accordance with Section 5.4.1.5.

**5.2.3** Prior to submitting to a Governmental Entity any application for a Governmental Approval (or any proposed modification, renewal, extension or waiver of a Governmental Approval or provision thereof), Developer shall submit the same, together with any supporting environmental studies, analyses and data, to the Department for review and comment, unless a different standard of review is expressly provided in the Contract Documents.

**5.2.4** As between the Department and Developer, Developer shall perform all necessary actions, and shall bear all risk of delay and all risk of increased cost, resulting from or arising out of (a) any differences between Developer's design for any portion of the Project and the Reference Design, or (b) differences between the construction

means and methods (including temporary works) Developer chooses for any portion of the Project and those set forth, referred to or contemplated in any Governmental Approval. Such actions and risks shall include:

**5.2.4.1** Any associated with a change in the Project location;

**5.2.4.2** Other than with respect to Department-Provided Approvals, conducting all necessary environmental studies and preparing all necessary environmental documents in compliance with applicable Environmental Laws;

**5.2.4.3** Subject to Section 5.4.1.5 with respect to Environmental Approvals, obtaining and complying with all necessary new Governmental Approvals or amendments to existing Governmental Approvals;

**5.2.4.4** Subject to Section 5.4.1.5 with respect to Environmental Approvals, obtaining and complying with all necessary modifications, renewals and extensions of the existing Governmental Approvals, or of pending applications for Governmental Approvals; and

**5.2.4.5** All risk and cost of litigation.

The Department and FHWA will independently evaluate all environmental studies and documents and fulfill the other responsibilities assigned to them by 23 CFR Part 771.

**5.2.5** If Developer is unable to obtain any of the items described in Section 5.2.4.3 or 5.2.4.4, then Developer shall design and build the Project according to the requirements of the Project Scope and the construction means and methods (including temporary works) set forth, referred to or contemplated in any Department-Provided Approval, or such other design means and methods for which Developer is able to obtain necessary Governmental Approvals and that comply with the Contract Documents, and no such circumstance shall (a) constitute a Compensation Event, Department Change, Relief Event or other basis for any Claim, or (b) be or be deemed to be a representation or warranty by the Department as to the feasibility, accuracy or completeness of, or absence of errors in, the Project Scope.

**5.2.6** If Developer pursues Additional Properties outside the Project Right of Way or any other modification of or deviation from any Governmental Approvals, including Department-Provided Approvals, Developer shall first comply with, and obtain any consent or waiver required pursuant to, then-existing agreements between the Department and such Governmental Entities.

**5.2.7** At Developer's request and subject to Sections 5.2.8, 5.2.9 and 5.2.10, the Department shall reasonably assist and cooperate with Developer in obtaining from Governmental Entities the Governmental Approvals (including any modifications, renewals and extensions of existing Governmental Approvals from Governmental Entities)



required to be obtained by Developer under the Contract Documents. The Department will, at the reasonable request of Developer and at Developer's cost, and where necessary to obtain, renew, replace, extend the validity of, or arrange necessary amendments to any Governmental Approval:

- a. execute such documents as can only be executed by the Department;
- b. make such applications, either in its own name or jointly with Developer, as can only be made by the Department or in joint names of Developer and the Department, as the case may be; and
- c. attend meetings with appropriately qualified staff and cooperate with approval bodies as reasonably requested by Developer,

in each case within a reasonable period of time of being requested to do so by Developer.

**5.2.8** Except as set forth in Section 5.2.10, the Department and Developer shall work jointly to establish a scope of work and budget for the Department's Recoverable Costs related to the assistance and cooperation the Department will provide for Governmental Approvals (other than Department-Provided Approvals). Except as set forth in Section 5.2.10, subject to any agreed scope of Work and budget and to any rights of Developer in the case of a Compensation Event, Department Change, Relief Event or other Claim, Developer shall fully reimburse the Department for all costs and expenses, including the Department's Recoverable Costs, it incurs in providing such cooperation and assistance, including those incurred to conduct further or supplemental environmental studies (except with respect to the Department's obligation to obtain the Department Provided Approvals based on the Reference Design as set forth in Section 5.2.1). The Developer shall not be responsible for the payment of the Department's Recoverable Costs incurred in obtaining any Department-Provided Approval unless such costs are incurred by the Department as a result of any difference between the Reference Design and the Developer's final design.

**5.2.9** The Department's obligation to assist and cooperate pursuant to Section 5.2.7 shall not require the Department to:

**5.2.9.1** Take a position which it believes to be inconsistent with the Contract Documents, applicable Law, Governmental Approval(s), the requirements of Good Industry Practice, or the Department policy (except policies that are incompatible with the Project's public-private contracting methodology or are inconsistent with the express obligations of the Department hereunder);

**5.2.9.2** Take a position that is not usual and customary for the Department to take in addressing similar circumstances affecting its own projects (except for usual and customary arrangements that are incompatible with the Project's public-private contracting methodology or inconsistent with the express obligations of the Department hereunder); or

**5.2.9.3** Refrain from concurring with a position taken by Governmental Entity if the Department believes that position to be correct.

**5.2.10** Certain Governmental Entities may require that Governmental Approvals from them be applied for or issued in the Department's name and/or that the Department directly coordinates with such Governmental Entities in connection with obtaining Governmental Approvals. In such event, Sections 5.2.8 and 5.2.9 shall apply and Developer, at its own expense, shall provide all necessary support and efforts to apply for and obtain the Governmental Approval.

**5.2.11** Developer shall be solely responsible for compliance with all applicable Laws in relation to Project Specific Locations and for obtaining and maintaining, subject to Section 5.4.1.5, any Governmental Approval required in connection with Project Specific Locations.

### **5.3 Acquisition of Additional Properties**

**5.3.1** All Project Right of Way, including Additional Properties other than temporary interests in property for Project Specific Locations, shall be held or acquired, as applicable, in the name of the Department.

**5.3.2** The Department has completed, or shall undertake and complete at its own cost and expense, not later than March 31, 2015, in accordance with the Project Scope and Section 3.2.2, the acquisition of Project Right of Way. Acquisition of Additional Properties, except those required solely due to a Department Change, shall be solely at Developer's expense as more particularly provided in Section 5.3.5, and Developer shall be solely responsible for acquisition of rights in Project Specific Locations, as more particularly provided in Section 5.3.7.

**5.3.3** If Developer identifies Additional Properties that are permanently needed to construct or maintain the Project, Developer shall submit to the Department in writing a request to acquire such Additional Properties. The request shall include a drawing of the limits necessary for each parcel of Additional Property and the information required under the Project Scope. The request, drawing and information are subject to the Department's Discretionary Approval. The Developer shall undertake and complete acquisition of Additional Properties in the Department's name, in accordance with the Project Scope, after the Department approves Developer's written request, drawing and information for the requested Additional Properties; *provided*, that the Department will undertake eminent domain proceedings, if necessary, in respect of such Additional Properties to the extent set forth in the Project Scope.

**5.3.4** The Department shall not be obligated to approve a request for acquisition of any Additional Property where, in the Department's good faith judgment (a) to do so would materially adversely affect political, community or public relations, or (b) successful timely completion of the acquisition is not likely. Within fourteen (14) days after receipt of a written request from Developer identifying an Additional Property for



acquisition, the Department will state in writing to Developer whether the Department regards acquisition (whether by negotiation or condemnation) of the Additional Property as potentially materially adversely affecting political, community or public relations, or regards successful timely acquisition as not likely. No such statement, or lack thereof, shall preclude the Department from later changing its determination based on changed political, community or public relations events or circumstances.

**5.3.5** Developer shall be responsible for all costs and expenses associated with the Department's acquisition of Additional Properties, except those costs and expenses actually and properly incurred solely due to a Department Change. In paying all such costs and expenses, Developer is not acquiring, and shall not be deemed to be acquiring, any interest in real property for Developer. The Department may submit to Developer, not more often than monthly, invoices for such costs and expenses. Developer shall reimburse the Department within thirty (30) days of the Department's submittal to Developer of each such invoice. Such costs and expenses include, but are not limited to:

**5.3.5.1** The cost of acquisition services (including project management, title research, appraisals, right-of-way plans and legal descriptions, as well as associated survey work, including staking of the Project Right-of-Way) and document preparation;

**5.3.5.2** The cost of negotiations;

**5.3.5.3** The cost of condemnation proceedings handled by the Attorney General of the State of Ohio, jury trials and appeals, including attorneys and expert witness fees, and all fees and expenses for exhibits, transcripts, photos and other documents and materials production;

**5.3.5.4** The purchase prices, settlements, offers of judgment, court awards or judgments, including pre-judgment and post-judgment interest, costs, and attorneys fees, or other consideration for interests in real property for all parcels required for the Project or the Work, whether within or outside of the Project Right of Way;

**5.3.5.5** The cost of permanent or temporary acquisition of leases, easements, rights of entry, licenses and other interests in real property, including for drainage, temporary work space, Project Specific Locations, and any other convenience of Developer;

**5.3.5.6** The cost of permitting;

**5.3.5.7** Closing costs associated with parcel acquisitions; and

**5.3.5.8** Relocation assistance payments and costs, in accordance with the Uniform Act.

**5.3.6** Developer shall solely bear the risk of any time and cost impacts to the Work related to the Department's acquisition of Additional Properties.

**5.3.7** The Department shall not be obligated to acquire or exercise its power of eminent domain in connection with acquisition of any temporary right of interest for Project Specific Locations. The Department shall not have any obligations or responsibilities with respect to the acquisition, maintenance or disposition of such temporary rights or interests, and Developer shall have no obligation to submit acquisition packages to the Department for, or obtain the Department's approval of Developer's acquisition of, any such temporary right or interest.

## **5.4 Environmental Compliance**

**5.4.1** Except as provided otherwise in Section 5.4.3, the Department delegates to Developer, and Developer accepts, all the Department's obligations, commitments and responsibilities under all Environmental Approvals as set forth in the Project Scope. Except as provided otherwise in Section 5.4.3 throughout the Term and the course of the Work, Developer shall:

**5.4.1.1** Comply with all Environmental Laws;

**5.4.1.2** Comply with all conditions and requirements imposed by all Environmental Approvals to be obtained by Developer;

**5.4.1.3** Comply with the conditions and requirements of the Environmental Approvals to be obtained by the Department to the extent identified in the Project Scope;

**5.4.1.4** Monitor all commitments and mitigation measures set forth in all Environmental Approvals and provide reasonable assistance to the Department in performing such mitigation measures upon request of the Department and as otherwise set forth in the Project Scope; and

**5.4.1.5** Prepare all information and submissions required by, or necessary to maintain in full force and effect, all Department-Provided Approvals and maintain in full force and effect all Environmental Approvals to be obtained by Developer; *provided*, that, except as otherwise provided in the special provisions attached as *Appendix 4-9* in the Project Scope, the Department shall interface with all applicable Governmental Entities in respect of the maintenance of such Department-Provided Approvals and shall (a) deliver to such Governmental Entities the information and submittals prepared by the Developer following approval thereof, (b) promptly deliver to the Developer any responses or communications applicable to the Work following receipt thereof from such Governmental Entities and (c) not agree to amend, supplement or modify such Department-Provided Approvals without the prior consent of the Developer.



**5.4.2** Except as provided otherwise in Section 5.4.3 and Section 6.6, Developer shall be solely responsible for payment and performance of the environmental obligations, commitments and responsibilities expressly identified as not delegated to the Department in the Project Scope, including such obligations, commitments and responsibilities to the extent they relate to Project Specific Locations, and shall pay fines assessed by any Governmental Authority as a result of Developer's Noncompliance with such environmental obligations, commitments and responsibilities. The Department shall be responsible for the payment and performance of such environmental obligations, commitments and responsibilities identified as delegated to the Department in the Project Scope.

**5.4.3** The Department shall be responsible for the initial relocation (including obtaining all required Governmental approvals in respect thereof) of the Southern Monkshood (*Aconitum uncinatum*) and the Primrose-leaved Violet (*Viola primulifolia*) located within the Project Right of Way not later than March 31, 2015; *provided*, that the Developer shall be responsible for any relocation of such plants to the extent required by applicable Law or Governmental Approvals if the same are discovered within the Project Right of Way following the Department's satisfaction of its obligations hereunder.

**5.4.4** The Developer shall be responsible for the relocation of mussels in the Little Scioto River as provided in *Appendix 4-9* to the Project Scope.

## **5.5 Third-Party Agreements**

Developer shall not enter into any agreement with any Governmental Entity, Utility, property owner or other third party having regulatory jurisdiction over any aspect of the Project or Work or having any property interest affected by the Project or the Work that in any way purports to obligate the Department, or states or implies that the Department has an obligation, to the third party to carry out any installation, design, construction, maintenance, repair, operation, control, supervision, regulation or other activity during or after the end of the Term, unless the Department otherwise approves in writing in its sole discretion. Developer has no power or authority to enter into any such agreement with a third party in the name or on behalf of the Department.

## **5.6 Community Outreach and Public Information**

Developer shall provide periodic information to the public concerning the development, construction, operation and maintenance of the Project, in accordance with the Project Scope.

# **ARTICLE 6. DESIGN AND CONSTRUCTION**

## **6.1 General Obligations of Developer; Scope of Initial Design and Construction**

**6.1.1** In addition to performing all other requirements of the Contract Documents, Developer shall:

**6.1.1.1** Furnish all design and other services, provide all materials, equipment and labor and undertake all efforts necessary or