

* Satellite image from Google



Ohio State 4-H Green Building Project

FIGURE 2.

Drawn By: cornell
Date: 2006/07/26

Nationwide and Ohio Farm Bureau 4-H Center,
Project Site*

Legend

-  Project Site
-  Proposed Building





Ohio State 4-H Green Building Project

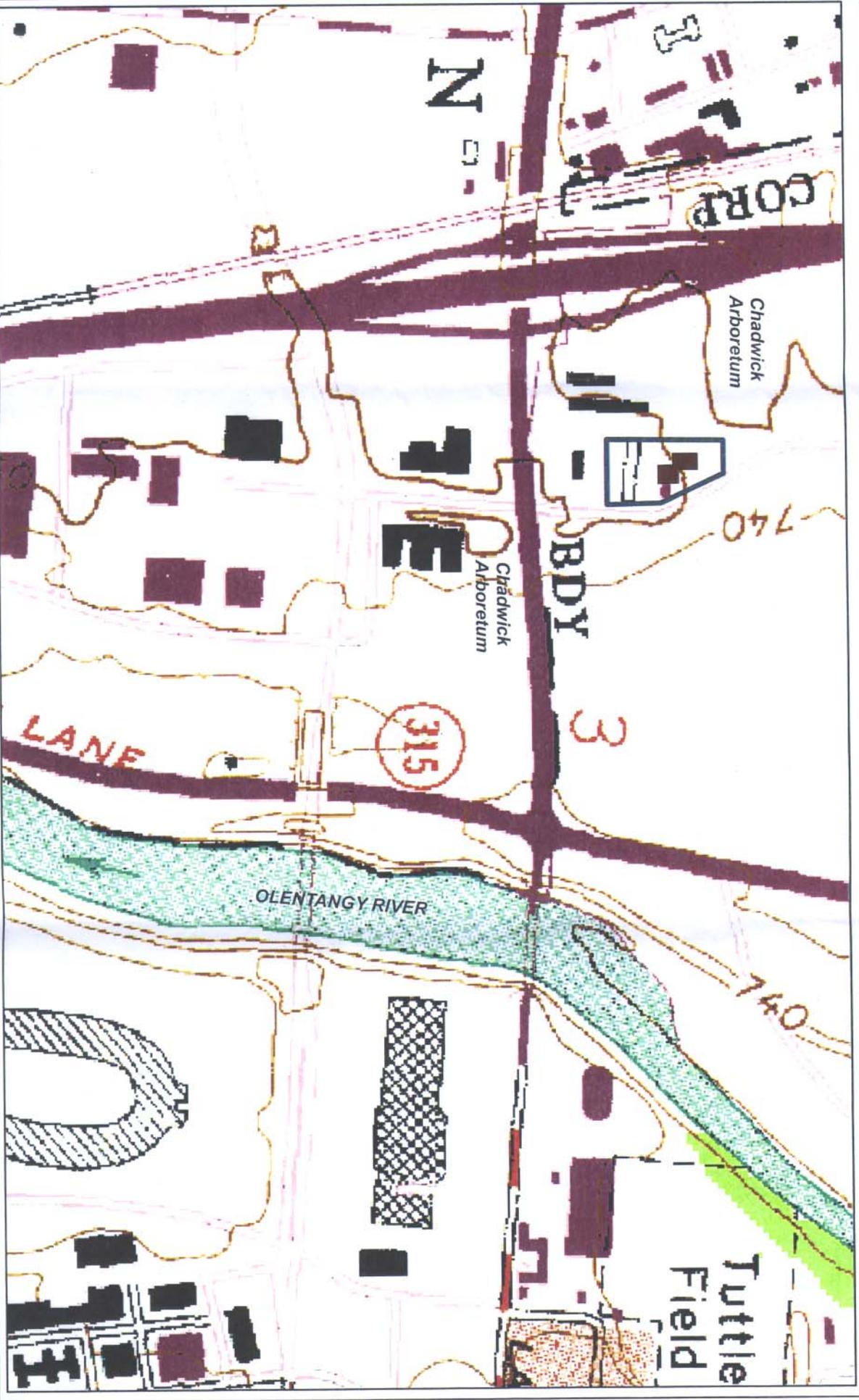
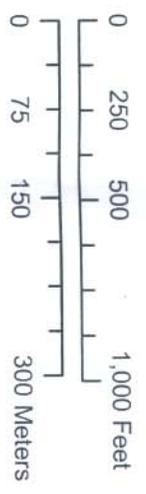
Drawn By: cornield
Date: 2006/07/26

FIGURE 3.

Nationwide and Ohio Farm Bureau 4-H Center,
Project Site on U.S.G.S. Topographic Map

Legend

-  Project Site
-  Proposed Building
-  Interstate/Highway
-  Road





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 10, 2006

Ms. Hallie Serazin
SAIC
4700 Lakehurst Court, Suite 110
Dublin, OH 43016

TAILS#: 31420-2006-FA-0295/TA-0831

Dear Ms. Serazin:

This is in response to the Department of Energy's July 31, 2006 letter, received on August 7, requesting U.S. Fish and Wildlife Service (Service) technical assistance regarding the Ohio State 4-H Green Building Project with Geothermal Mechanical Systems in Franklin County, Ohio.

There are no Federal wilderness areas, wildlife refuges, or designated Critical Habitat within the vicinity of the proposed site.

ENDANGERED SPECIES COMMENTS: The proposed project lies within the range of the Federally-listed endangered **Indiana bat** (*Myotis sodalis*), **clubshell** (*Pleurobema clava*), **northern riffleshell** (*Epioblasma torulosa rangiana*), and **Scioto madtom** (*Noturus trautmani*), and the **rayed bean** (*Villosa fabalis*), a Federal Candidate mussel species. Due to the project type, size, and location, the project, as proposed, should not impact these species or their habitat.

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 (ESA), 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 letter provides technical assistance only and does not serve as a completed section 7 consultation document.

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 Angela Zimmerman at extension 22 in this office.

Sincerely,

for Mary Knapp, Ph.D.
Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH



Ohio Department of Natural Resources

BOB TAFT, GOVERNOR

SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas & Preserves

Tom Linkous, Chief

2045 Morse Rd., Bldg. F-1

Columbus, OH 43229-6693

Phone: (614) 265-6453 Fax: (614) 267-3096

August 9, 2006

Hallie Serazin
Science Applications International Corporation
4700 Lakehurst Ct., Suite 110
Dublin, OH 43016

Dear Ms. Serazin:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species within one half mile of the Science Applications International Corporation Ohio State 4-H Center project. The site is located 0.2 mi. NE. of the junction of Lane Ave. and St.Rt. 315, Clinton Twp., Franklin Co., Northwest Columbus Quadrangle.

There are no existing or proposed state nature preserves at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations, state parks, scenic rivers, state nature preserves, state forests, or wildlife areas within the project area.

Our inventory program has not completely surveyed Ohio 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. Although we inventory all types of plant communities, we only maintain records on the highest quality areas. For National wetlands Inventory maps, please contact Madge Fitak in the Division of Geological Survey at (614) 265-6576. Aerial photos may be obtained from ODOT at (614) 275-1369. USGS maps can be requested directly from the U.S. Geological Survey at 1-888-275-8747.

Please contact me at (614) 265-6409 if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Butch Grieszmer".

Butch Grieszmer, Data Specialist
Resource Services Group

Serazin, Hallie J.

From: Sanders, Randy [Randy.Sanders@dnr.state.oh.us]
Sent: Tuesday, August 22, 2006 11:12 AM
To: serazinh@saic.com
Subject: 06-0200; Ohio State 4-H Building Project with Geothermal Mechanical Systems

ODNR COMMENTS TO Steve Blazek, NEPA Compliance Officer, Department of Energy, Golden Field Office, 1617 Cole Boulevard, Golden, Colorado 80401-3393.

Location: The site is located 0.2 miles northeast of the junction of Lane Avenue and State Route 315, Clinton Township, Franklin County, Northwest Columbus Quadrangle.

Project: The Ohio State University plans to construct the Ohio State 4-H Green Building on its Columbus, Ohio Campus. The center will be the first "green" building on OSU campus and will utilize a hybrid geothermal mechanical system. The building would be approximately 50,000 gross square feet. The Department of Energy is requesting input on the NEPA process, proposed action and alternatives, and the environmental issues to be addressed in the EA.

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.

Rare and Endangered Species: The ODNR, Division of Natural Areas and Preserve, Natural Heritage Database contains no records of rare species or unique natural features within the proposed project, and there are no state nature preserves or scenic rivers in the vicinity of the site.

Fish and Wildlife: The ODNR, Division of Wildlife (DOW) has the following comments.

This project is in the historical range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. If it is necessary to remove any trees to complete the project, it is recommended the applicant first contact the U.S. Fish and Wildlife Service for guidance.

The project is also in the historical range of the Clubshell mussel (*Pleurobema clava*), a state and federally endangered species, the Northern riffleshell mussel (*Epioblasma torulosa rangiana*), a state and federally endangered species, the Rayed bean mussel (*Villosa fabalis*), a state endangered and federal candidate species, and the Scioto madtom (*Noturus trautmani*), a state and federally endangered fish species. If it is necessary to do in-water work to complete the project, it is recommended the applicant first contact the U.S. Fish and Wildlife Service for guidance.

Additionally, the project is within the historical range of the Peregrine falcon (*Falco peregrinus*), a state endangered bird species, and the Golden-winged warbler (*Vermivora chrysoptera*), a state endangered bird species. If either of these species is encountered during construction of the project, work should immediately be stopped, and the DOW should be contacted.

Geological Survey: The ODNR, Division of Geological Survey has reviewed maps and data concerning the geology beneath The Ohio State University 4-H green building project. The geology consists of Pleistocene glacial deposits over Devonian and Silurian limestone and dolomite. The glacial deposits are dominantly clayey to silty till with interbeds of unconsolidated sand and gravel. Data indicate that these deposits are 60 feet thick. The surficial deposits can be water bearing, particularly the sand and gravel deposits present at depth.

A well drilled to 280 feet below surface at this site will penetrate the entire thickness of glacially derived surficial material and continue through an estimated 220 feet of bedrock to total depth. Maps on file at the Division of Geological Survey indicate that the Devonian-age Delaware Limestone will be the first unit encountered and only an estimated thickness of 10 feet of the unit will be present (total thickness of the Delaware Limestone is estimated at 30 feet). The Devonian-age Columbus Limestone will be the second bedrock unit encountered and will have a thickness of approximately 90 feet. Beneath the Columbus Limestone is the finely crystalline dolomite of the Silurian-age Salina Group. The Salina will not be entirely penetrated by the wells because it has a thickness of over 250 feet.

The Columbus Limestone is water bearing. The Delaware Limestone and the Salina Group dolomite may also contain water

9/7/2006

particularly along fractures in the rock. A test well drilled 6,000 feet to the southwest of this site encountered paleokarst (caverns and solution-widened fractures) during drilling and had to be abandoned because of loss circulation problems caused by the cavern. A prior core hole had been successfully drilled very close to the failed hole, demonstrating the erratic distribution of paleokarst features in the carbonate bedrock. Similar geologic settings are found at the 4-H green building project site. This situation may prove to be troublesome for the drilling contractor and should be considered in the design and planning for a geothermal system. It would seem inevitable that some of the 72 holes to be drilled will encounter some paleokarst.

Soil and Water Conservation: The ODNR, Division of Soil & Water Conservation has no comments.

Special Flood Hazard Area: The proposed project may or may not be located in a Special Flood Hazard Area. To assist you in this determination, please contact the community's floodplain administrator. A list of community floodplain administrators can be found on the ODNR - Division of Water website at <http://www.dnr.state.oh.us/water/floodpln/>. To view a copy of a Flood Insurance Rate Map for your project area, you can either contact the community floodplain administrator, or obtain a copy online from the FEMA Flood Map Store at <http://store.msc.fema.gov/>.

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

APPENDIX B

OHIO HISTORIC PRESERVATION OFFICE RESOURCE PROTECTION AND REVIEW LETTER

- **State Historic Preservation Officer Concurrence Letter**
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October 6, 2006

Steve Blazek
 NEPA Compliance Officer
 U.S. Department of Energy
 Golden Field Office
 1617 Cole Boulevard
 Golden, Colorado 80401-3393

Dear Mr. Blazek:

Re: Ohio State 4-H Green Building Project, West Lane Avenue and Fred Taylor Drive, Columbus, Ohio

This is in response to correspondence, received on August 7, 2006, regarding the above referenced project. My comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated regulations at 36 CFR Part 800.

The U.S. Department of Energy, in compliance with the National Environmental Policy Act (NEPA), will be preparing an Environmental Assessment (EA) for the Ohio State 4-H Green Building Project with Geothermal Mechanical Systems, a construction project at the corner of West Lane Avenue and Fred Taylor Drive in Columbus, Ohio. The agency seeks our comments regarding "known resources that could be affected by construction of the 4-H center" to assist in the preparation of the EA.

A check our records reveals that there are no properties included in the Ohio Historic Inventory, Ohio Archaeological Inventory, or National Register of Historic Places in the immediate vicinity of the project area. Large construction projects, including the adjacent Schottenstein Center and State Route 315, have drastically altered the setting of this area over the past several decades. As a result, the area retains very little historic integrity. Therefore, we feel that a finding of "no historic properties affected" is appropriate for this project.

If you have any questions regarding our review of this project, please contact me by phone at (614) 298-2000 or by e-mail at jcook@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Justin M. Cook, History Reviews Manager
 Resource Protection and Review

Copy: Hallie J. Serazin, Senior Risk Assessment Scientist, Science Applications International Corporation, 4900 Blazer Parkway, Dublin, Ohio 43017

1007682

OHIO HISTORICAL SOCIETY

Ohio Historic Preservation Office

567 East Hudson Street, Columbus, Ohio 43211-1030 ph: 614.298.2000 fx: 614.298.2037