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May 24, 2013

Via Electronic Filing

Ms. Betty McCauly
Administration/Docketing
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

Re: Oregon Clean Energy, LLC
Case No. 12-2959-EL-BGN

Dear Ms. McCauly:

In compliance with Condition No. 5 of the May 1, 2013 Opinion, Order and Certificate for the Oregon Clean Energy Center, attached is a copy of the cultural resources report for the project.

If you have any questions please call at the number listed above.

Sincerely,

Sally W. Bloomfield

Attachment

Cc: Chris Cunningham (w/Attachment)



May 23, 2013

Mr. Chris Cunningham
Ohio Power Siting Board
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

Mr. Dave M. Snyder
Ohio Historic Preservation Office
800 E. 17th Avenue
Columbus, OH 43211

Subject: Oregon Clean Energy Center, Case No. 12-2959-EL-BGN; Response to Cultural Resource Condition 5

Dear Mr. Cunningham and Mr. Snyder:

This correspondence responds to Condition 5 of the Certificate of Environmental Compatibility and Public Need to Construct an Electric Generation Facility for the Oregon Clean Energy Center. The Staff Report describes the cultural resources review completed for the project during the application review process, and recommends that additional measures be completed as a means to provide a benefit to the project area. This is in specific response to Condition 5, which reads:

The Applicant shall develop a cultural resources mitigation plan that addresses the concerns outlined in the Staff Report. The plan shall be provided to Staff within 30 days of Board's certification of the facility. Prior to the pre-construction conference, the Applicant shall submit to Staff a final cultural resources report that details the work completed, for review and confirmation that it complies with this condition.

Each recommended measure outlined in the Staff Report is summarized below, with each respective mitigation plan following in blue italics.

- Establish 20 additional Ohio Historic Inventory (OHI) structures in the project area, typifying local architectural forms. Correspondence from the OHPO dated March 1, 2013 further specifies different types of local architecture would be an appropriate focus, for example, 10 examples of Upright and Wing and 10 examples of early 19th century Foursquare and Bungalow styles. Develop an educational booklet on these building styles to disseminate information on historic preservation practice and policy for local homeowners, historical organizations and governments. *The Oregon Clean Energy Center Historic Structure Mitigation Plan, prepared by Vintage Resource Studies LLC, is enclosed. This mitigation plan outlines the planned details of this effort. If no comments are received within two weeks, Oregon Clean*

Tetra Tech, Inc.

160 Federal Street, 3rd Floor

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Energy Center, LLC (OCE) intends to commence preparation of this work in accordance with the outlined mitigation plan.

- Conduct archaeological surveys along the project's raw water line. *The proposed raw water line that will serve the project will be the responsibility of the City of Oregon to complete. OCE will work with the City to provide archaeological review of the selected corridor prior to initiation of construction.*
- Conduct archaeological surveys within the project's construction laydown area. *An archaeological survey of the proposed construction laydown area has been completed and is attached. Should additional area be identified for construction laydown, the need for consideration of archaeological issues will be addressed.*
- Conduct archaeological surveys within the project's substation parcel. *The specific location of the substation will be as requested by First Energy in order to facilitate interconnection with the existing transmission infrastructure. Prior to construction, if electrical structures are proposed in locations not previously studied, OCE will complete an archaeological survey of the area.*
- Engage in further consultation to determine if there is a need for an archaeological survey along the project's gas pipeline right-of-way. *The natural gas pipeline that will serve the project will be the responsibility of others to provide, and will be reviewed through a separate Ohio Power Siting Board application in accordance with Chapter 4906-15. OCE will obtain documentation from the pipeline proponent that appropriate archaeological surveys have been conducted prior to construction or that none were necessary.*

We believe this responds to the recommendations of the Staff Report. If you have any questions or require additional information, please do not hesitate to contact me (978-995-4450 or lynn.gresock@tetrattech.com).

Sincerely,

Tetra Tech, Inc.



Lynn Gresock
Environmental Consultant

Oregon Clean Energy Center Historic Structure Mitigation Plan

City of Oregon, Lucas County Ohio



Prepared by:

Vintage Resource Studies LLC

Worthington, Ohio

Thomas P. Barrett, Historian

April 29, 2013

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Figure 1. 1965 Oregon 7.5" USGS Quadrangle Map with Project Site

Figure 2. Portion of the Illustrated Historical Atlas of Lucas and Part of Wood Counties, Ohio (Andreas & Baskin 1875) showing the approximate location of the Project area

Figure 3. Portion of the 1900 Maumee Bay, Ohio Quadrangle 15 Minute Series (Topographic) map showing the approximate location of the Project area

Purpose of Proposed Study

Vintage Resource Studies LLC (VRS) conducted a Phase I history/architecture survey for the area of potential effect surrounding the proposed Oregon Clean Energy Center – an approximately 800 megawatt natural gas fired power plant – in the City of Oregon, Lucas County, Ohio (see Figures 1, 2 and 3). The lead agency for this undertaking is the Ohio Power Siting Board (OPSB).

In accordance with OPSB guidelines, an 8 kilometer (5 mile) study radius was studied for the area of potential effect (APE). The literature review was completed for the 5-mile study radius and field investigations supplemented the information from the literature review to evaluate potential effects of the project on previously recorded Ohio Historic Inventory forms (OHI); National Register-listed sites, and SHPO determinations of eligibility (DOE) in the study radius.

No further history/architecture survey or mitigation was recommended as a result of the study conducted for the Oregon Clean Energy Center. Based on our research, no further history/architecture survey or mitigation was recommended for the Project. It was noted that the documentation completed for the project would provide a useful foundation for increasing the body of cultural resource knowledge, and could be a base for others to add to in the future. In particular, the benefits of a future comprehensive architectural survey of Upright and Wing houses in the Ohio's northwest counties, as suggested by Glen Harper in his 1988 article (*Upright and Wing: the No-Nonsense House*) were mentioned as a means to document the vernacular's migration from the eastern Great Lakes region of New York and Pennsylvania to its common use in northwest Ohio.

The OPSB's Staff Report of Investigation, dated March 18, 2013, noted that the Ohio Historic Preservation Office (OHPO) proposed that, as a means of preserving the historical significance of local architectural styles, the Applicant establish 20 additional OHI structures in the project area, typifying these local architectural forms. It was noted that the OHPO recommended that the Applicant develop an educational booklet on these building styles and disseminate information on historic preservation practice and policy for local homeowners, historical organizations, and governments.

Correspondence from the OHPO dated March 1, 2013 further specifies that the recommendation for 20 structures should focus on different types of local architecture, for example, 10 examples of Upright and Wing and 10 examples of early 19th century Foursquare and Bungalow.

The Staff Report of Investigation includes a proposed condition that states that: "The Applicant shall develop a cultural resources mitigation plan that addresses the concerns outlined in this staff report. The plan shall be provided to Staff within 30 days of Board Certification of the facility. Prior to the preconstruction conference, the Applicant shall submit to Staff a final cultural resources report that details the work completed, for review and confirmation that it complies with this condition."

This document outlines the planned mitigation activities to complete this obligation on behalf of the Oregon Clean Energy Center.

Upright and Wing Style Houses in Northwest Ohio

One of the most common house types in northwest Ohio is the Upright and Wing or Gable-Front-and-Wing. This L-shaped house has its origins in the building traditions of New England and the Great Lakes region. This may account for its significant numbers in the northern tier of northwest Ohio counties, whose settlers often came from these areas.

The Upright and Wing house consists of a one-and-a-half to two story wing with a front gable roof and perpendicular orientation, and a side wing set at a right angle to it (sometimes known as the kitchen wing), one-half to one story tall, with a side gable and parallel orientation.



The upright element usually has three bays. Early examples contain a door to one side and can probably be traced to earlier gable-front Greek Revival houses. In later examples, particularly after 1850, the upright shrinks to two bays and the main entry shifts to the kitchen wing. This change may have been due to the growing recognition of the first floor of the upright as formal space and the kitchen wing as the informal, everyday center of family activity. Later examples also include a porch in the space provided by the recessed wing.

Because of their origin, these houses sometimes bear evidence of Greek Revival influence. However, northwest Ohio examples are usually simple Folk Victorian or Vernacular types with little or no stylistic influence. Folk Victorian Upright and Wings may include minor detailing in the porch or cornice line, including turned porch supports and bracketed eaves. Both masonry and frame construction were popular.

Upright and Wing houses continued to be built well into the twentieth century. Even some contemporary house plans reveal the influence of this historic house-type. No systematic survey of Upright and Wing houses in northwest Ohio has been conducted (Harper, 1988).

Numerous Upright and Wing houses were identified during the VRS survey and documented in the Section 106 Survey Table included in that report. Although none of the examples recorded in this survey were considered unaltered representations of the type to be considered for the NRHP, this style of home represents an important time of development in the region's history, which corresponds to the drainage of the Black Swamp, making this part of Ohio promptly an attractive place to settle by the late nineteenth century, compelling the need for an enduring, practical farmhouse.

Bungalow Style Houses in Northwest Ohio

The timeline for Craftsman Bungalow house construction spans circa 1905 to about circa 1935.

The Craftsman style was a product of the British Arts and Crafts movement. As a reaction to the industrial revolution and the excesses of the Victorian era, emphasis was placed on simple design, honesty in construction, and fine craftsmanship. In America, the Arts and Crafts movement was led by furniture maker Gustav Stickley who began promoting the style in 1903 through his magazine, *The Craftsman*. By 1912 he had published two books of Craftsman home plans which emphasized hearth, home, and family. The style also drew upon elements of Prairie and Oriental architecture, reflected in the work of California architects Henry M. and Charles S. Greene. Numerous house plan books, architectural magazines, and manufacturers of pre-fabricated "kit houses" such as Sears, Roebuck and Co. and The Aladdin Co. further popularized the style. The Craftsman style remained popular to about 1930.



Though Craftsman buildings and two-story houses are plentiful, the most common expression of the Craftsman style is the "bungalow." This term came from India (via England), and refers to a low house surrounded by porches or galleries. Bungalows are one or one-and-a-half story houses of modest size with low-gabled roofs and wide porches, which are often integrated into the structure. Because of their affordable size, yet fashionable appeal, Craftsman Bungalows were widely popular

in America's growing middle class neighborhoods of the early twentieth century.

Craftsman houses and buildings are simple in detail and massing, placing emphasis on "honesty" in their materials and construction. Craftsman houses feature a broad, low-pitched, roof (usually gabled) with wide, open eaves; exposed structural elements such as rafters, roof beams, vergeboards, and knee braces; and square or battered porch piers. Brick, stone, stucco, wood siding, and shingles were all common exterior materials. Houses feature open interiors with a prominent hearth, built-in furniture, and natural woodwork. Craftsman commercial buildings are usually brick, with accents of stone, terra cotta, or decorative brick patterns. (City of Ft. Wayne, *Architectural Styles*, accessed April 30, 2013)

American Foursquare Style Houses in Northwest Ohio

The timeline for American Foursquare house spans from circa-1900 to around 1935.

At the turn of the twentieth century, builders chose an eclectic blend of styles based on historical themes and later period revivals and modern stylistic interpretations. Though many of these are high style examples, many more are modest examples displaying only minor characteristics of these styles.

An unknown number reflect the influence of nineteenth century architectural pattern books and the early twentieth catalogue and mail order house industry. Approximately one million of Ohio's housing units were built before 1940. Many of these houses exhibit significant examples of early twentieth century architectural styles, the growth of the pre-fabricated mail order housing industry and development patterns tied to new modes of transportation and industrial expansion. Domestic architectural properties are concentrated in metropolitan core counties located in Cuyahoga, Franklin, Hamilton, Summit, Montgomery and Lucas counties and in mid-size cities across the state (OSHPO 2010, pp. 34-35).



The American Foursquare began appearing in neighborhoods across the United States around 1900, and it was built in great numbers through the 1920s. Many considered it the best blend of practicality, simplicity, and value in a family home. Interior plans were open and efficient, utilizing all available space. Exteriors are box-like in shape, with two full stories, a hipped roof with a front-facing dormer, and a comfortable porch. Many examples rely only upon shape and proportion for visual impact, although the simple form could be dressed in a variety of popular period styles. Colonial Revival examples are common, but Craftsman and Prairie-influenced homes are also typical (City of Ft. Wayne, Architectural Styles, accessed April 30, 2013).

Scope of Study

In order to comply with the above OPSB application recommendations for cultural resource mitigation, VRS has developed a comprehensive approach to implement the mitigation plan by selecting representative structures from those previously identified in the Phase I History/Architecture survey entitled Revised Appendix A History/Architecture Survey for Properties Outside of the 30 Acre Parcel for the Oregon Clean Energy, Gas-to-Electricity, Project, in the City of Oregon, Oregon Township Lucas Count, Ohio, completed by VRS on February 12, 2013.

Numerous Upright and Wing houses were identified in the Phase 1 survey. A selection will be made, comprised of ten examples that appear to have the least amount of alterations will be used in the mitigation plan.

The Upright and Wing style houses will be photographed and inventoried to the OHI standards, and reviewed by the OHPO for final submission into the OHPO database. This documentation will help to preserve and record the continued meaningfulness of extant agricultural settlement patterns of Oregon, following the drainage of the Great Black Swamp, prior to the area's transition into a more industrialized zone, with extensive oil and gas well development at the turn of the twentieth century.

The mitigation plan includes the identification of representative Foursquare and Bungalow homes identified in the Phase I survey. The Foursquare and Bungalow style houses will be photographed and inventoried to the OHI standards, and reviewed by the OHPO for final submission into the OHPO database. This documentation will help to preserve and record the continued meaningfulness of the early twentieth century transition of Oregon from an agrarian-based economy, to more suburbanized industrial, with small and medium-sized single family dwellings, dotting its gridded roadways.

All of the property owners will receive an information package to include: contact information for local historical organizations, and certified local governments (CLGs); a bulletin on the proper maintenance and treatment of older properties and their respective building materials, based on the National Park Services guidelines; and literature on available federal and state tax credits for the rehabilitation of historic properties.

VRS will produce a brief monograph of the building types of the area, focusing on the "no-nonsense" Upright and Wing house; its dissemination from the eastern Great Lakes to northwestern Ohio farms in the late nineteenth century. Also, drawing from the Phase 1 survey findings, the monograph will include a brief history of the relatively humble Bungalow and American Foursquare catalogue homes that were built during the region's oil and gas development, which started in the early 1900's. The document format will be is expected to be a 6 to 8 page, high-quality color brochure. An electronic version will also be produced.

Public Distribution

The Oregon-Jerusalem Historical Society at 1133 Grasser Street, Oregon, Ohio 43616 will receive printed copies of the Ohio Historic Inventory forms along with the associated document. A copy of the monograph will also be sent to the City of Oregon Public Library; Ohio Historic Preservation Office; the State Library of Ohio Archives Library; and any local historical associations. An electronic version of the materials will be available for email distribution.

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Attachment A

Figures

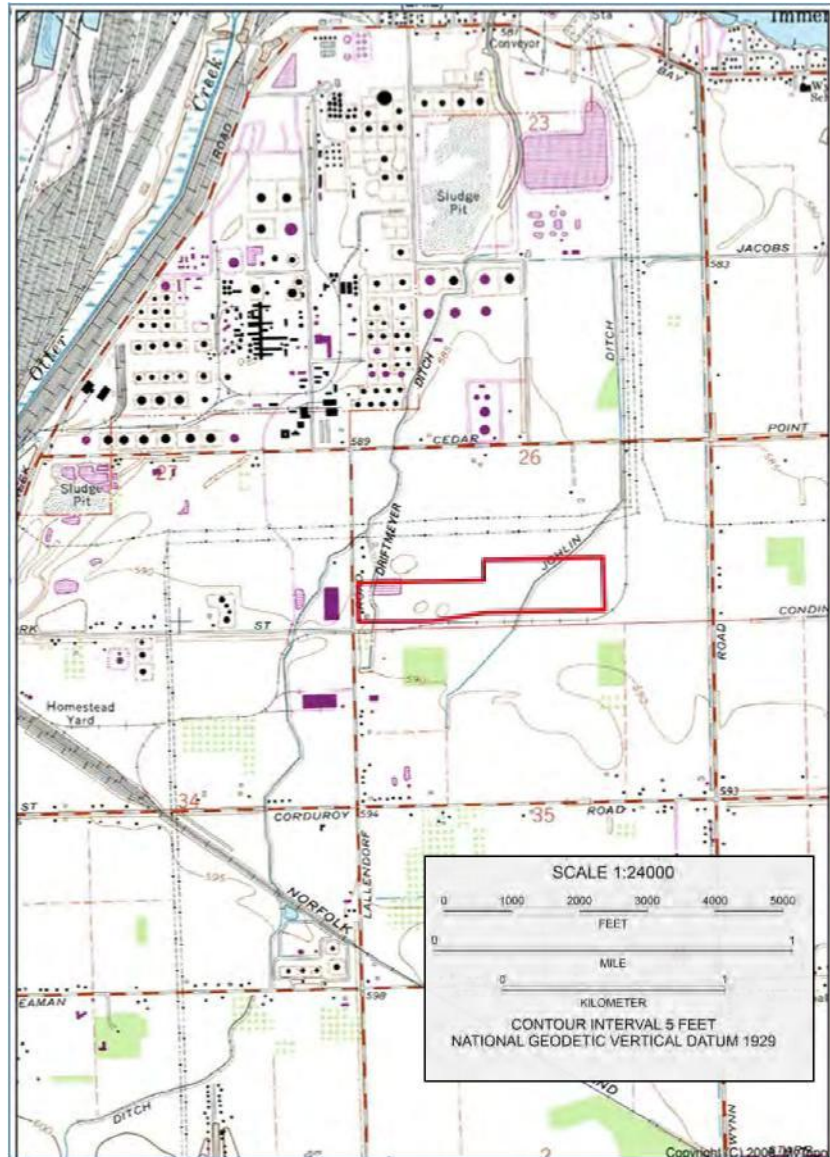


Figure 1. Project area on 1965 Oregon USGS 7.5 Minute Quadrangle Map



**Phase I Archaeological Survey for the Approximately 7.3 ha
(18.15 ac) Oregon Clean Energy Center Site Laydown Area in
Oregon Township, Lucas County Ohio**

Ryan Weller

April 19, 2013

1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485.9435
Fax: 614.485.9439
Website: www.wellercrm.com

**Phase I Archaeological Survey for the Approximately 7.3 ha
(18.15 ac) Oregon Clean Energy Center Site Laydown Area in
Oregon Township, Lucas County Ohio**

By

Ryan Weller

Submitted By:

**Ryan Weller, P.I.
Weller & Associates, Inc.
1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485. 9435 Fax: 614.485. 9439**

Prepared For:

**Tetra Tech, Inc.
160 Federal Street, Third Floor
Boston, MA 02110**

Lead Agency:

Ohio Power Siting Board (OPSB)



Ryan Weller, P.I.

April 19, 2013

i. Abstract

In April of 2013, Weller & Associates, Inc. conducted Phase I archaeological survey for the approximately 7.3 hectare (ha) (18.15 acre [ac]) Oregon Clean Energy Center site laydown area in Oregon Township, Lucas County Ohio. The lead agency for this undertaking is the Ohio Power Siting Board (OPSB). An archaeological survey was deemed necessary to identify any sites or properties and to evaluate them for the National Register of Historic Places (NRHP). The work involved a literature review and field investigations. The archaeological investigations of this laydown area failed to identify any cultural resources.

The laydown area is a rectangular parcel that is bordered by Johlin Ditch at an angle on the northern edge and a Norfolk & Western Railroad spur to the south. The eastern side of the project is bordered by soybean stubble field the same as that encountered within the laydown area. The western boundary of the laydown area is the parcel containing the proposed power generating facility that the laydown area will be utilized during the construction of the facility. This western parcel has been subjected to previous survey by Weller in October of 2012 (Weller 2012). The surrounding area is mixed in use, largely consisting of extensive industrial developments. The project conditions consist of upland, flat agricultural field covered in soybean stubble.

The literature review for this project did not identify any recorded cultural resources within the laydown area; however, there were two previously recorded archaeological sites and three OHI resources within the study radius. There were no NRHP properties/districts or DOE resources located within the study radius. There have been four CRM surveys conducted within the study radius that did not impact the proposed project. Reviews of atlas and cartographic information did not indicate that any buildings formerly existed in the laydown area.

These investigations involved surface collection and visual inspection. The undertaking will not involve any buildings that are older than 50 years. The fieldwork did not result in the identification of any cultural resources. A finding of no historic properties affected as outlined by 36 CFR § 800.4 and 36 CFR § 800.5 is considered appropriate. No further work is deemed necessary for this project.

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Introduction

In April of 2013, Weller & Associates, Inc. (Weller) conducted Phase I archaeological survey for the approximately 7.3 hectare (ha) (18.15 acre [ac]) Oregon Clean Energy Center site laydown area in Oregon Township, Lucas County Ohio (Laydown Area; Figures 1-3). The work was completed for Tetra Tech, Inc. These investigations were necessary to identify any sites or properties and to evaluate them for the National Register of Historic Places (NRHP) pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (16 United States Code [U.S.C.] 470 [36 Code of Federal Regulations [CFR] 800]). The lead agency for this undertaking is the Ohio Power Siting Board (OPSB). This report summarizes the results of the fieldwork and literature review. The report format and design is similar to that established in *Archaeology Guidelines* (Ohio Historic Preservation Office [OHPO] 1994).

The laydown area is a rectangular parcel that is bordered by Johlin Ditch at an angle on the northern edge and a Norfolk & Western Railroad spur to the south. The eastern side of the project is bordered by soybean stubble field the same as that encountered within the laydown area. The western boundary of the laydown area is the parcel containing the proposed power generating facility that the laydown area will be utilized during the construction of the facility. This western parcel has been subjected to previous survey by Weller in October of 2012 (Weller 2012). The surrounding area is mixed in use, largely consisting of extensive industrial developments. The project conditions consist of upland, flat agricultural field covered in soybean stubble.

The literature review was conducted by Chad Porter in April of 2013. Ryan Weller served as the Principal Investigator and project manager. The field crew included Seth Cooper, Justin Zink, Todd Hawes, and Ryan Weller. The report preparation was by Ryan, with Justin completing the figures.

The following sections provide an overview of the environmental setting of the Laydown Area and its surroundings to provide a physical context for the assessment; a description of the cultural setting; a discussion of the research design for the Phase I assessment; a summary of literature supporting field efforts for the Phase I assessment; findings of the field reconnaissance; and an analysis of the potential effects associated with the Laydown Area.

Environmental Setting

Climate

Lucas County, like all of Ohio, has a continental climate with hot and humid summers and cold winters. About 79 centimeters (cm) (31 inches [in]) of precipitation falls annually on the county with the average monthly precipitation about 6.6 cm (2.6 in). February is the driest month, while June is the wettest month (United States Department of Agriculture, Soil Conservation Service [USDA, SCS] 1980).

Physiography, Relief, and Drainage

Lucas County is located within the Huron-Erie Lake Plains physiographic region of Ohio (Brockman 1998). According to Brockman (1998), the Laydown Area is located on the Maumee Lake Plains. This region is characterized by “flat-lying Ice-age lake basin with beach ridges, bars, dunes, deltas, and clay flats; contained the former Black Swamp, slightly dissected by modern streams; elevation 570-800 ft” [Brockman 1998].

The major watersheds in the county are Lake Erie and the Maumee River. Other larger streams that flow through the county include the Ottawa River, Ten Mile Creek, Duck Creek, Otter Creek, Swan Creek, and Crane Creek. The Laydown Area is drained by Johlin Ditch.

Geology

Lucas County is comprised of Late Wisconsinan-age sand over clay till and lacustrine deposits. Below the till and lacustrine deposits are Devonian-age carbonate rocks and shales. The Laydown Area is contained within an area of Silurian and Devonian-age carbonate rocks (Brockman 1998; USDA, SCS 1980).

Soils

The Laydown Area is located in the Latty-Toledo-Fulton association. This association is characterized by “level to gently sloping, very poorly drained and somewhat poorly drained soils that formed in clayey glacial lake sediment” (USDA, SCS 1980). There are two specific soils encountered within the Laydown Area (Table 1).

Table 1. Soils in the Project.			
Soil Symbol	Soil Name	% Slope	Location
FuA	Fulton silty clay loam	0-2	Lake Plains
Lc	Latty silty clay	0-2	Lake Plains

Flora

There is or at least was great floral diversity in Ohio. This diversity is relative to the soils and the terrain that generally includes the till plain, lake plain, terminal glacial margins, and unglaciated plateau (Forsyth 1970). Three major glacial advances, including the Kansan, Illinoian, and Wisconsinan, have affected the landscape of Ohio. The effects of the Wisconsin glaciation are most pronounced and have affected more than half of the state (Pavey et al. 1999). The following provides comparable context to demonstrate how the Laydown Area is similar or differentiated within the framework to that of Ohio as a whole.

The least diverse part of Ohio extends in a belt from the northeast below the lake-affected areas through most of western Ohio (Gordon 1966). These areas are part of the late Wisconsin ground moraine and lateral end moraines. It is positioned between the lake plains region and the terminal glacial moraines. This area included broad forested areas of beech maple forests interspersed with mixed oak forests in elevated terrain or where relief is greater (Forsyth 1970; Gordon 1966). Prairie environments such as those

in Wyandot and Marion County areas would contain islands of forests, but were mostly expansive open terrain dominated by grasses.

The Laydown Area is located in northwestern Ohio. The northwestern Ohio terrain is nearly flat because of ancient glacial lakes and glaciation, which affected the flora. However, the vegetation was more diverse than the till plain to the south and east because of the variety of factors that contributed to its terrain. Forests within the Black Swamp were generally comprised of elm/ash stands; however, entrenched stream valleys and drier, elevated areas from beach deposits would contain mixed forests of oak and hickory (Gordon 1966, 1969). There was little upland floral diversity in the lake plains (Black Swamp region) except for the occasional patches of oak and hickory. Floral variety was most evident in narrow sleeves along larger stream valleys where there is relief.

The most biological diversity in Ohio is contained within the Allegheny Plateau, which encompasses the southeastern two-thirds of the state (Sheaffer and Rose 1998). Because this area is higher and has drier conditions, it is dominated by mixed oak forests. Some locations within the central part of this area contain beech and mixed mesophytic forests. There are large patches of oak and sugar maple forests to the south of the terminal moraine from Richland to Mahoning County (Gordon 1966).

Southwestern Ohio from about Cincinnati to Bellefontaine east to the Scioto River historically contained a very diverse floral landscape. This is an area where moraines from three glacial episodes are prevalent (Pavey et al. 1999). Forests in this area include elm-ash swamp, beech, oak-sugar maple, mixed mesophytic, prairie grasslands, mixed oak, and bottomland hardwoods (Core 1966; Gordon 1966, 1969). These forest types are intermingled with prairies being limited to the northern limits of this area mostly in Clark and Madison Counties.

Generally, beech forests are the most common variety through Ohio and could be found in all regions. Oak and hickory forests dominated the southeastern Ohio terrain and were found with patchy frequency across most of northern Ohio. Areas that were formerly open prairies and grasslands are in glacial areas, but are still patchy. These are in the west central part of the state. Oak and sugar maple forests occur predominantly along the glacial terminal moraine. Elm-ash swamp forests are prevalent in glaciated areas including the northern and western parts of Ohio (Gordon 1966; Pavey et al. 1999).

Northeastern Lucas County, including the laydown area, is generally within what is considered to be an elm-ash swamp and mixed oak forest area (Gordon 1966).

Fauna

The upland forest zone offered a diversity of mammals to the prehistoric diet. This food source consisted of white-tailed deer, black bear, Eastern cottontail rabbit, opossum, a variety of squirrels, as well as other less economically important mammals. Several avian species were a part of the upland prehistoric diet as well (i.e., wild turkey, quail, ruffed grouse, passenger pigeon, etc.). The lowland zone offered significant species diversity as well. Raccoon, beaver, and muskrat were a few of the mammals,

while wood duck and wild goose were the economically important birds. Fishes and shellfish were also an integral part of the prehistoric diet. Ohio muskellunge, yellow perch, white crappie, long nose gar, channel catfish, pike, and sturgeon were several of the fish, while the Ohio naiad mollusc, butterfly's shell, long solid, common bullhead, knob rockshell, and cod shell were the major varieties of shellfish. Reptiles and amphibians, such as several varieties of snakes, frogs, and turtles, were also part of the prehistoric diet (Trautman 1981; Lafferty 1979; Mahr 1949).

Cultural Setting

The first inhabitants of Ohio were probably unable to enter this land until the ice sheets of the Wisconsin glacier melted around 14,000 B.C. Paleoindian sites are considered rare due to the age of the sites and the effects of land altering activities such as erosion. Such sites were mostly used temporarily and thus lack the accumulation of human occupational deposits that would have been created by frequent visitation. Paleoindian artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. In Ohio, major Paleoindian sites have been documented along large river systems and near flint outcrops in the Unglaciaded Plateau (Cunningham 1973). Otherwise, Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds or surface scatters.

The Paleoindian period is characterized by tool kits and gear utilized in hunting Late Pleistocene megafauna and other herding animals including but not limited to short-faced bear, barren ground caribou, flat-headed peccary, bison, mastodon, and giant beaver (Bamforth 1988; Brose 1994; McDonald 1994). Groups have been depicted as being mobile and nomadic (Tankersley 1989); artifacts include projectile points, multi-purpose unifacial tools, burins, graters, and spokeshaves (Tankersley 1994). The most diagnostic artifacts associated with this period are fluted points that exhibit a groove or channel positioned at the base to facilitate hafting. The projectiles dating from the late Paleoindian period generally lack this trait; however, the lance form of the blade is retained and is often distinctive from the following Early Archaic period (Justice 1987).

The Archaic period has been broken down into three sub-categories, including the Early, Middle, and Late Archaic. During the Early Archaic period (ca. 10,000-8000 B.P.), the environment was becoming increasingly arid as indicated by the canopy (Shane 1987). This period of dryness allowed for the exploitation of areas that were previously inaccessible or undesirable. The Early Archaic period does not diverge greatly from the Paleoindian regarding the type of settlement. Societies still appear to be largely mobile with reliance on herding animals (Fitting 1963). For these reasons, Early Archaic artifacts can be encountered in nearly all settings throughout Ohio. Tool diversity increased at this time, including hafted knives that are often re-sharpened by the process of beveling the utilized blade edge and intense basal grinding (Justice 1987). There is a basic transition from lance-shaped points to those with blades that are triangular. Notching becomes a common hafting trait. Another characteristic trait occurring almost exclusively in the Early and Middle Archaic periods is basal bifurcation and large blade serrations. Tool forms begin to vary more and may be a reflection of differential resource exploitation. Finished tools from this period can include bifacial knives, points, drills/perforators, utilized flakes, and scrapers.

The Middle Archaic period (8000-6000 B.P.) is poorly known or understood in archaeological contexts within Ohio. Some (e.g., Justice 1987) regard small bifurcate points as being indicative of this period. Ground stone artifacts become more prevalent at this time. Other hafted bifaces exhibit large side notches with squared bases, but this same trait can extend back to the Paleoindian period. The climate at this time is much like that of the modern era. Middle Archaic period subsistence tended to be associated with small patch foraging that involved a consistent need for mobility with a shift towards stream valleys (Stafford 1994). Demographic mobility was necessary, but there was an increased reliance upon resources associated with riparian-related and ecotones systems. Sites encountered from this time period throughout most of Ohio tend to be lithic scatters or isolated finds. The initial appearance of regional traits may be apparent at this time. Cultural and artifactual phenotypes seem to become cohesive within a specific area and differentiate themselves from others.

The Late Archaic period in Ohio (ca 6000-3000 B.P.) diverges from the previous periods in many ways. Preferred locations within a regional setting appear to have been repeatedly occupied. The more intensive and repeated occupations often resulted in the creation of greater social and material culture complexity. The environment at this time is warmer and drier. This allowed longer occupation and land use of areas that were previously undesirable or inhabited on a logistically and functionally limited basis.

Various artifacts are diagnostic of the Late Archaic period. Often, burial goods provide evidence that there was some long-distance movement of materials, while lithic materials used in utilitarian assemblages are often from a local chert outcrop. There is increased variation in projectile point styles that may reflect regionalism. Slate was often used in the production of ornamental artifacts. Ground and polished stone artifacts reached a high level of development. This is evident in such artifacts as grooved axes, celts, bannerstones, and other slate artifacts.

It is during the Terminal Archaic period (ca 3500-2500 B.P.) that extensive and deep burials are encountered. Cultural regionalism within Ohio is evident in the presence of Crab Orchard (southwest), Glacial Kame (northern), and Meadowood (central to Northeastern). In northern and northwestern Ohio, the Glacial Kame culture dominates the Terminal Late Archaic period. Pottery makes its first appearance during the Terminal Late Archaic.

The Early Woodland period (ca 3000-2100 B.P.) in Ohio is often associated with the Adena culture and the early mound builders (Dragoo 1976). Early and comparably simple geometric earthworks first appear with mounds more spread across the landscape. Pottery at this time is thick and tempered with grit, grog, or limestone; however, it becomes noticeably thinner towards the end of the period. There is increased emphasis on gathered plant resources, including maygrass, chenopodium, sunflower, and squash. Habitation sites have been documented that include structural evidence. Houses that were constructed during this period were circular, having a diameter of up to 18.3 m (Webb and Baby 1963) and often with paired posts that define the walls (Cramer 1989). Artifacts dating from this period include leaf-shaped blades with parallel to lobate hafting

elements, drilled slate pieces, ground stone, thick pottery, and increased use of copper. Early Woodland artifacts can be recovered from every region of Ohio.

In northwest and north-central Ohio, there are not very many mounds or village sites that indicate an Early Woodland occupation. Artifacts from these areas often are reflective of seasonal hunting excursions. Adena-like bifaces and tools are commonly found in river and stream valleys that drain into Lake Erie as well as in the uplands. It is assumed that Early Woodland inhabitants used these areas for little more than a transient hunting-collecting subsistence. One of the best-known Early Woodland sites is the Leimbach site. This site is located where the Huron River empties into Lake Erie (Shane 1975). Early Woodland ceramics and lugged vessels have been recovered from this site. Evidence of Early Woodland activity, such as ceramics, has been encountered infrequently at locations across north central and northwestern Ohio.

The Middle Woodland period (ca 2200-1600 B.P.) is often considered to be equivalent with the Hopewell culture. The largest earthworks in Ohio date from this period. There is dramatic increase in the appearance of exotic materials that appear most often in association with earthworks and burials. Artifacts representative of this period include thinner, grit-tempered pottery, dart-sized projectile points (Lowe Flared, Steuben, Snyders, and Chesser) [Justice 1987], exotic materials (mica, obsidian, and marine shell, etc.). The points are often thin, bifacially beveled, and have flat cross sections. There seems to have been a marked increase in the population as well as increased levels of social organization. Middle Woodland sites seem to reflect a seasonal exploitation of the environment. There is a notable increase in the amount of Eastern Agricultural Complex plant cultigens, including chenopodium, knotweed, sumpweed, and little barley. This seasonal exploitation may have followed a scheduled resource extraction year in which the populations moved camp several times per year, stopping at known resource extraction loci. Middle Woodland land use appears to center on the regions surrounding earthworks (Dancey 1992; Pacheco 1996); however, there is evidence of repeated occupation away from earthworks (Weller 2005). Household structures at this time vary with many of them being squares with rounded corners (Weller 2005). Exotic goods are often attributed to funerary activities associated with mounds and earthworks. Utilitarian items are more frequently encountered outside of funerary/ritual contexts. The artifact most diagnostic of this period is the bladelet, a prismatic and thin razor-like tool, and bladelet cores. Middle Woodland remains are more commonly recovered from central Ohio south and lacking from most areas in the northern and southeastern part of the state.

Little information is known about the Middle Woodland period of western and northwestern Ohio. This may be due to a poor representation of artifacts from this period or because the area is not directly associated with the Hopewell culture. The loosely associated patterns of earthworks to habitation sites that have been identified in central and southern Ohio areas are not present in this region. Sites associated with this period have been identified along the south and western shores of Lake Erie, but they are not common (Stothers et al. 1979; Stothers 1986).

The Late Woodland period (ca A.D. 400-900) is distinct from the previous period in several ways. There appears to be a population increase and a more noticeable aggregation of groups into formative villages. The villages are often positioned along

large streams, on terraces, and were likely seasonally occupied (Cowan 1987). This increased sedentism was due in part to a greater reliance on horticultural garden plots, much more so than in the preceding Middle Woodland period. The early Late Woodland groups were growing a wide variety of crop plants that are collectively referred to as the Eastern Agricultural Complex. These crops included maygrass, sunflower, and domesticated forms of goosefoot and sumpweed. This starch and protein diet was supplemented with wild plants and animals. Circa A.D. 800 to 1000, populations adopted maize agriculture, and around this same time, shell-tempered ceramics appear. Other technological innovations and changes during this time period included the bow and arrow and changes in ceramic vessel forms.

Evidence suggests that the Late Woodland occupations in northern Ohio developed from the Western Basin Middle Woodland tradition. The Late Woodland period in northern Ohio is best defined by ceramic traditions. Western Basin Late Woodland sites have been identified in most of the river valleys in northwestern Ohio such as the Maumee, Auglaize, and the Sandusky Rivers. Radiocarbon dating establishes this Late Woodland occupation at the first century B.C. to A.D. 500 (Pratt and Bush 1981: 88). The Western Basin tradition consists of three primary phases, which include the Riviere au Vase, the Younge (Fitting 1965), and the Springwells phase. Influence from the Cole complex may extend into the area from the south, but this remains theoretical and not well researched.

The Late Prehistoric period in northwest and northern Ohio is often associated with an intensification of the use of plant resources, the presence of large villages, and a steady population increase. Permanent villages were associated with a heavy dependence on farming. These villages were often located on the meander belt zones of river valleys (Stothers et al. 1984: 6). Subsistence of these farming communities relied upon maize, beans, and squash as the major cultigens. Villages were often strategically located on bluff tops. There is a change in social structure to a chiefdom-based society. The Late Prehistoric period in northwest Ohio has been segregated into the Sandusky tradition and smaller phases based largely on age and ceramic assemblage traits.

The Sandusky tradition has been broken up into four phases. These phases are identified (in chronological order) as Eiden, Wolf, Fort Meigs, and Indian Hills. These are often associated with a style of ceramic referred to as Mixter Tool Impressed, Mixter Dentate, Mixter Cordmarked, and Parker Festooned. The Eiden and Wolf phases show a dependence upon fishing, and villages are usually associated with large cemeteries (Schneider 2000; Shane 1967).

The Fort Meigs and Indian Hills phases occur late in the Late Prehistoric period. The Fort Meigs phase may be related to the Wolf phase in that the pottery is similar. Fort Meigs phase occupations are identified by specific rim and neck motifs that are applied to their pottery. The Indian Hills phase is associated with shell-tempered pottery. Some villages show evidence of defensive features such as stockade lines, ditches, or earthen walls (Pratt and Bush 1981: 155). There is little evidence to support inter-village relationships, such as trade; this lack may have been due to competition for localized resources.

Protohistoric to Settlement

By the mid-1600s, French explorers traveled through the Ohio country as trappers, traders, and missionaries. They kept journals about their encounters and details of their travels. These journals are often the only resource historians have regarding the early occupants of seventeenth century Ohio. The earliest village encountered by the explorers in 1652 was a Tionontati village located along the banks of Lake Erie and the Maumee River. Around 1670, it is known that three Shawnee villages were located along the confluence of the Ohio River and the Little Miami River. Because of the Iroquois Wars, which continued from 1641-1701, explorers did not spend much time in the Ohio region, and little else is known about the natives of Ohio during the 1600s. Although the Native American tribes of Ohio may have been affected by the outcome of the Iroquois Wars, no battles occurred in Ohio (Tanner 1987).

French explorers traveled extensively through the Ohio region from 1720-1761. During these expeditions, the locations of many Native American villages were documented. In 1751, a Delaware village known as Maguck existed near present-day Chillicothe. In 1758, a Shawnee town known as 'Lower Shawnee 2' existed at the same location. The French also documented the locations of trading posts and forts, which were typically established along the banks of Lake Erie or the Ohio River (Tanner 1987).

While the French were establishing a claim to the Ohio country, many Native Americans were also entering new claims to the region. The Shawnee were being forced out of Pennsylvania because of English settlement along the eastern coast. The Shawnee created a new headquarters at Shawnee Town, which was located at the mouth of the Scioto River. This headquarters served as a way to pull together many of the tribes which had been dispersed because of the Iroquois Wars (Tanner 1987).

Warfare was bound to break out as the British also began to stake claims in the Ohio region by the mid-1700s. The French and Indian War (1754-1760) affected many Ohio Native Americans; however, no battles were recorded in Ohio (Tanner 1987). Although the French and Indian War ended in 1760, the Native Americans continued to fight against the British explorers. In 1764, Colonel Henry Bouquet led a British troop from Fort Pitt, Pennsylvania to near Zanesville, Ohio.

In 1763, the Seven Years' War fought between France and Britain, also known as the French and Indian War, ended with The Treaty of Paris. In this Peace of Paris, the French ceded their claims in the entire Ohio region to the British. When the American Revolution ended with the Second Treaty of Paris in 1783, the Americans gained the entire Ohio region from the British; however, they designated Ohio as Indian Territory. Native Americans were not to move south of the Ohio River but Americans were encouraged to head west into the newly acquired land to occupy and govern it (Tanner 1987).

By 1783, Native Americans had established fairly distinct boundaries throughout Ohio. The Shawnee tribes generally occupied southwest Ohio, while the Delaware tribes stayed in the eastern half of the state. Wyandot tribes were located in north-central Ohio,

and Ottawa tribes were restricted to northeast Ohio. There was also a small band of Mingo tribes in eastern Ohio along the Ohio River, and there was a band of Mississauga tribes in northeastern Ohio along Lake Erie. The Shawnee people had several villages within Ross County along the Scioto River (Tanner 1987). Although warfare between tribes continued, it was not as intense as it had been in previous years. Conflicts were contained because boundaries and provisions had been created by earlier treaties.

In 1795, the Treaty of Greenville was signed as a result of the American forces defeat of the Native American forces at the Battle of Fallen Timbers. This allocated the northern portion of Ohio to the Native Americans, while the southern portion was opened for Euro-American settlement. Although most of the battles which led up to this treaty did not occur in Ohio, the outcome resulted in dramatic fluctuations in the Ohio region. The Greenville Treaty line was established, confining all Ohio Native Americans to northern Ohio, west of the Tuscarawas River (Tanner 1987).

Ohio Native Americans were again involved with the Americans and the British in the War of 1812. Unlike the previous wars, many battles were fought in the Ohio country during the War of 1812. By 1815, peace treaties began to be established between the Americans, British, and Native Americans. The Native Americans lost more and more of their territory in Ohio. By 1830, the Shawnee, Ottawa, Wyandot, and Seneca were the only tribes remaining in Ohio. These tribes were contained on reservations in northwest Ohio. By the middle 1800s, the last of the Ohio Native Americans signed treaties and were removed from the Ohio region.

Lucas County History

The history of Euroamerican settlement in Lucas County begins with the French. Sometime near 1680, the French are supposed to have built a fort, which acted as a trading post, at the falls of the Maumee River. This may be nothing more than tradition in order to bolster French claims to the region, but certainly the French were active along the Maumee River and used it extensively during the 1700s as a trade route. The first settlers in the county were Jean Baptiste Beaugrand and Gabriel Godfrey, who opened a trading house at the foot of the Maumee rapids in 1790. Other French traders, primarily from Detroit, traded along the Maumee, such as Peter Navarre who lived at the mouth of the river (Killits 1923; Knapp 1872; Scribner 1910; Waggoner 1888; Winter 1917).

The first American families arrived in 1807 and settled on the Maumee River. These early pioneers mainly traded with the Indians just like the French. American settlement of the region did not really grow until after the War of 1812. Increased settlement of the region led to concerns over the state boundaries of the Michigan Territory and the State of Ohio. The disputed boundary was Lucas County's northern border. As Michigan applied for statehood, they claimed land into what were Henry, Wood, and Sandusky Counties, Ohio. In retaliation, Ohio organized a new county named for the incumbent Governor of Ohio, Robert Lucas. This issue, which became a dispute between the two states, was called both "The Toledo War" and the Ohio-Michigan War and almost led to an armed conflict. The lands located in Lucas County that were disputed included Richfield, Sylvania, Washington, Oregon and Jerusalem townships and the northern parts of the townships of Spencer, Springfield and Adams. The disputed

boundaries were peacefully resolved on June 20, 1835, on which day Lucas County was formed and Toledo was made the county seat (Scribner 1910; Waggoner 1888). President Andrew Jackson found in favor of the established state and in reparation, accepted Michigan's bid for admission to the Union (Andreas and Baskin 1875; Howe 1888; Killits 1923; Knapp 1872; Scribner 1910; Waggoner 1888; Way 1896; Winter 1917).

Settlement of Lucas County was hampered throughout the 1800s by the Black Swamp and epidemics of malaria and cholera. Transportation was limited to improved Indian trails and to the principal watercourses, the Maumee, Ottawa, and Swan Rivers. New road construction began in the 1820s. In 1839, work on the canal along the Maumee River began. By 1842, the canal was opened between Toledo and Grand Rapids. The Miami and Erie Canal link up with the Maumee River occurred the following year. Railroads became an increasingly important means of transportation and means of importing and exporting goods after the 1850s. Between 1835 and 1836, a rail line was built between Toledo and Adrian, Michigan. In 1853, the Cleveland and Toledo (Lake Shore) Railroad was completed. By 1910, Toledo was ranked fourth in the nation as a railroad center, having fourteen lines running through it (Scribner 1910).

Toledo is the economic center of the county. The city has grown dramatically in the nineteenth and twentieth centuries and much of this has been caused by its position as an important link between canal traffic, railroads, and lake shipping (Killits 1923; Scribner 1910; Waggoner 1888; Winter 1917).

Oregon Township History

Oregon Township was created on June 11, 1837 from Port Lawrence and Manhattan Townships. In 1840, seven sections from the northwest portion of the township were annexed to the township of Manhattan. Then, both in 1856 and 1872, the township had its area further reduced, ceding land to the city of Toledo and the township of Port Lawrence. However, in 1874, a portion of Manhattan Township outside of Toledo was annexed back to Oregon Township increasing its size. Again in 1893, more land was taken to create Jerusalem Township (Scribner 1910; Waggoner 1888). In 1957, Oregon Township became the City of Oregon by way of popular vote. This action allowed the City of Oregon to own and operate its own wastewater treatment plant (City of Oregon 2012).

The City lies in the area once known as the "Black Swamp" and is located in the Maumee Lake Plains physiographic region. The topography is nearly level with a slight slope north toward Lake Erie (Waggoner 1888). The earliest documented occupation of present-day City of Oregon was an Ottawa village near the mouth of the Maumee River. The French had a trading post in the same vicinity as the Native American village with French settlers coming to the area around the year 1808. Among the French families to come to the area, the Navarre family still had descendents living in the county in 1910. The next Euro-Americans to settle the area were of English descent. This occurred during the 1820s and 1830s. Joseph Prentice came to the area and settled on the east side of the Maumee River in 1825. Luther Whitmore arrived next in 1829, then Robert Gardner in 1830 (Waggoner 1888).

Early Euro-American inhabitants found valuable timber in the Black Swamp area. The land was cleared and was subsequently drained by the creation of ditches in order to make it suitable for agriculture (Scribner 1910). Charles Jenison built the first steam powered saw mill in Oregon in the year 1836 on the Maumee River. The first road in the area ran from the Maumee River at Toledo to Woodville where it met up with the Maumee and Western Reserve Road. This road was known as the Woodville Road. At the road's intersection with the Maumee River, Herman Crane operated a flat-bottomed scow ferry. The first school in the City was built in 1834 on the Woodville Road. It was a log structure with classes taught by Elizur Stevens (Scribner 1910).

In the late 19th Century and early 20th Century, the oil industry began to develop in the area. The area possesses oil resources as well as a broad range of transportation resources including the Maumee River, extensive railroads, canals, and highways. These circumstances lead to two large oil refineries being established in the city and becoming the two largest employers in the area in recent years (City of Oregon 2012).

Phase I Survey Research Design

The purpose of a Phase I survey is to locate and identify cultural resources that will be affected by the planned laydown area. This includes archaeological deposits that may be found on the site, as well as architectural properties within the Area of Potential Effect (APE) that are older than 50 years. No surrounding buildings will be directly affected by the project.

Once cultural resources are identified and sampled, they are evaluated for their eligibility or potential eligibility to the National Register of Historic Places (NRHP). These investigations are directed to answer or address the following questions:

- 1) Did the literature review reveal anything that suggests the Laydown Area had been previously surveyed and, if so, what is the relationship of previously recorded properties to the Laydown Area?
- 2) Are cultural resources likely to be encountered in the Laydown Area?
- 3) Will the planned undertaking affect any archaeological or architectural properties?
- 4) Will any NRHP eligible sites or properties be affected by the Laydown Area?

Archaeological Field Methods

The survey conducted within the Laydown Area used two methods of sampling and testing to identify and evaluate cultural resources. The literature review did not indicate that any area had been previously surveyed and there are no previously recorded sites in this area. Atlas review failed to indicate any residences formerly located in the laydown area. Standard methods of survey and documentation are appropriate for the archaeological investigation of this area. These included surface collection and visual inspection.

Surface collection. This method was conducted for the entirety of the laydown area, which is in active agricultural use as a soybean field. Pedestrian transects

were spaced at 5 m intervals throughout this area as the bare ground surface visibility ranged from 35-70 percent. The closer interval was selected to increase the coverage despite the unlikelihood of identifying significant prehistoric cultural deposits in this upland, lake plain setting. Historic period materials are not anticipated as there are no residences depicted on cartographic map resources.

Visual inspection. Locations where cultural resources were not expected, such as disturbed areas and low/wet areas were walked over and visually inspected. This method was used to verify the absence or likelihood of any cultural resources being located in these areas. This method was also utilized to document the general terrain and the surrounding area and inspect the buildings and nature of the APE.

The application of the resulting field survey methods was documented in field notes and field maps.

Curation

There were no cultural resources identified during these investigations. Notes and maps affiliated with this project will be maintained at Weller & Associates, Inc. files.

Literature Review

The literature review study area is defined as a 1 mile radius from the center of the project. In conducting the literature review, the following resources were consulted at OHPO and the State Library of Ohio:

- 1) *Archeological Atlas of Ohio* (Mills 1914);
- 2) OHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) OHPO Cultural Resource Management (CRM)/contract archaeology files; and
- 8) Lucas County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s).

A review of the *Atlas* (Mills 1914) was conducted. There were no resources situated within or adjacent to the laydown area.

The OHPO topographic maps indicated two previously recorded archaeological sites within the study radius (Table 2). These sites were identified by Weller during the 2012 survey for the adjoining power generating facility parcel to the west. Neither site is located within or adjacent the proposed laydown area, nor will they be impacted by the project.

Table 2. Previously Recorded Archaeological Sites Located in the Study Radius.			
Site Number	Site Type	Temporal Association	Site Size
LU801	Historic Scatter	19 th – 20 th Century	6,039 sq m
LU802	Historic Scatter	Unknown historic period	1,393 sq m

A review of the OHI files was conducted. There are no recorded OHI resources located within or adjacent the laydown area; however there are three resources within the study radius (Table 3). Two of the resources were recorded during the 2012 survey (Weller 2012) for the adjacent western parcel and are located along Lallendorf Road.

Table 3. Previously OHIs Located in the Study Radius.			
OHI #	Present Name	Address	Style/Date
LUC-254-10	Pearl Schmidt House	910 N Lallendorf Road	Vernacular/1850
LUC-4628-10	House 1	816 North Lallendorf Road	Upright and Wing/1887
LUC-4629-10	House 2	816 North Lallendorf Road	Vernacular/1954

A review of the NRHP files and OHPO consensus determination of eligibility files was conducted. There were no properties or sites located within or adjacent to the laydown area listed in these files. There are none listed in the study radius.

A review of the CRM/contract files indicates that there have been four surveys conducted within the study radius of this project (Gibbs and O'Donnell 1996; Pratt 1980; Latham 2010; Weller 2012). The Weller 2012 survey was conducted for the proposed power generating facility that the laydown area will be utilized to store equipment and materials during its construction activities. This survey identified two archaeological sites and two OHIs, all of which are located to the west of the proposed laydown area by at least 1,100 feet. The other surveys were conducted for projects well to the west of the laydown area.

Historical atlases were reviewed for this project. *An Illustrated Historical Atlas of Lucas and part of Wood Counties, Ohio* (Andreas & Baskin 1875) indicates that S. Plumey was the property owner with no residences indicated within the laydown area (Figure 4). Neither the USGS *1900 Maumee Bay, Ohio Quadrangle 15 Minute Series (Topographic)* [Figure 5] nor the modern topographic map (Figure 2) indicates any residences within the project. The 15 minute topographic map does indicate one oil well within the northwestern part of the laydown area (Figure 5).

Evaluation of Research Questions 1 and 2

There were two questions presented in the research design that will be addressed at this point. These are:

- 1) Did the literature review reveal anything that suggests the Laydown Area had been previously surveyed and, if so, what is the relationship of previously recorded properties to the Laydown Area?
- 2) Are cultural resources likely to be encountered in the Laydown Area?

The literature review did not indicate any surveys or previously identified sites within or immediately adjacent to the laydown area. Oil wells are noted within the

laydown area, as well as in the surrounding area. The topography in the upland aspect of this region is very flat, which is reflective to this project. It is not well drained. It is considered unlikely prehistoric materials would be identified in this setting. Historic period materials are also considered unlikely given the absence of any structures within the parcel being indicated on historic atlases.

Fieldwork Results

The field investigations for this project were conducted on April 16, 2013. The fieldwork involved surface collection and visual inspection. The weather at the time of survey was overcast and seasonal (approximately 60°F) and heavy rain had recently fallen. The weather did not hinder the completion of the fieldwork. The entirety of the laydown area was surface collectable that is, not severely disturbed or steeply sloped. There were no cultural materials identified during these investigations.

The laydown area was located within an agricultural field that had recently been used for soybean cultivation (Figures 6-14). Soybean stubble was strewn across the surface of the laydown area with varying degrees of visibility. In the northeastern and north central aspects of the project the visibility was approximately 70 percent since the heavy rains had dispersed the stubble to a point where the majority of the ground surface was visible, except the small areas where the chaff had piled/collected during the runoff (Figure 11). The southern portion of the project contained had surface visibility that ranged from 35-55 percent with more stubble/chaff collecting near the railroad spur disturbance (Figure 12). The remaining majority of the laydown area had surface visibility that was approximately 60-65 percent visibility (Figure 13). The surface collection strategy involved north-south transects spaced 5 m apart and collected in an east to west manner across the laydown area. The visibility averaged 60 percent across the laydown area. The very poorly drained nature of the area had allowed for the ponding of water in a couple aspects of the project; however these areas were narrow enough to not impede the collection of the surrounding transects.

There were no cultural materials identified during these investigations. The terrain that was investigated is nearly level and very poorly drained. There were no unique or elevated situations present in the laydown area, which is the type of situation where cultural materials would have been anticipated.

Evaluations of Research Questions 3 & 4

There were two questions presented in the research design that will be addressed at this point. These are:

- 3) Will the planned undertaking affect any archaeological or architectural properties?
- 4) Will any NRHP eligible sites or properties be affected by the Laydown Area?

The development will not impact any archaeological sites or any buildings. The laydown area is planned in an area to the east of Toledo that has a heavy industrial

presence intermixed with rural settings. The construction involved in this undertaking and subject to the surveyed laydown area will not impact any historic properties.

APE Definition and NRHP Determination

The APE is a term that must be applied on an individual project basis. The nature of the project or undertaking is considered in determining the APE. This may include areas that are off the property or outside of the actual project's boundaries to account for possible visual impacts. When construction is limited to underground activity, the APE may be contained within the footprint of the laydown area. The APE includes the footprint of the project and a limited area surrounding it.

The literature review did not identify any previously recorded cultural resources within or immediately adjacent to laydown area. The plans to utilize the parcel as a laydown/staging area to park equipment/heavy machinery and store construction materials will have a very limited impact to the natural and man-made setting in this area. It will have very limited impact to anything but the footprint of its planned construction area since it is a ground-level development with temporary parking/storage. Therefore, the APE is regarded as the footprint of the laydown area. The plans do not involve the removal, relocation, or demolition of any buildings. No aboveground structures will be constructed, thus limiting the APE. These investigations did not identify any cultural deposits and a finding of no historic properties affected is deemed appropriate.

Recommendations

In April of 2013, Weller & Associates, Inc. completed a Phase I archaeological survey for the approximately 7.3 hectare (ha) (18.15 acre [ac]) Oregon Clean Energy Center site laydown area in Oregon Township, Lucas County Ohio. The investigations involved surface collection and visual inspection. The fieldwork did not result in the identification of any cultural resources. Therefore, it is opinion of the Principal Investigator this undertaking will not adversely affect any historic properties. If the agency is in agreement with these findings, then a recommendation of no further work is considered and "no historic properties affected" is appropriate.

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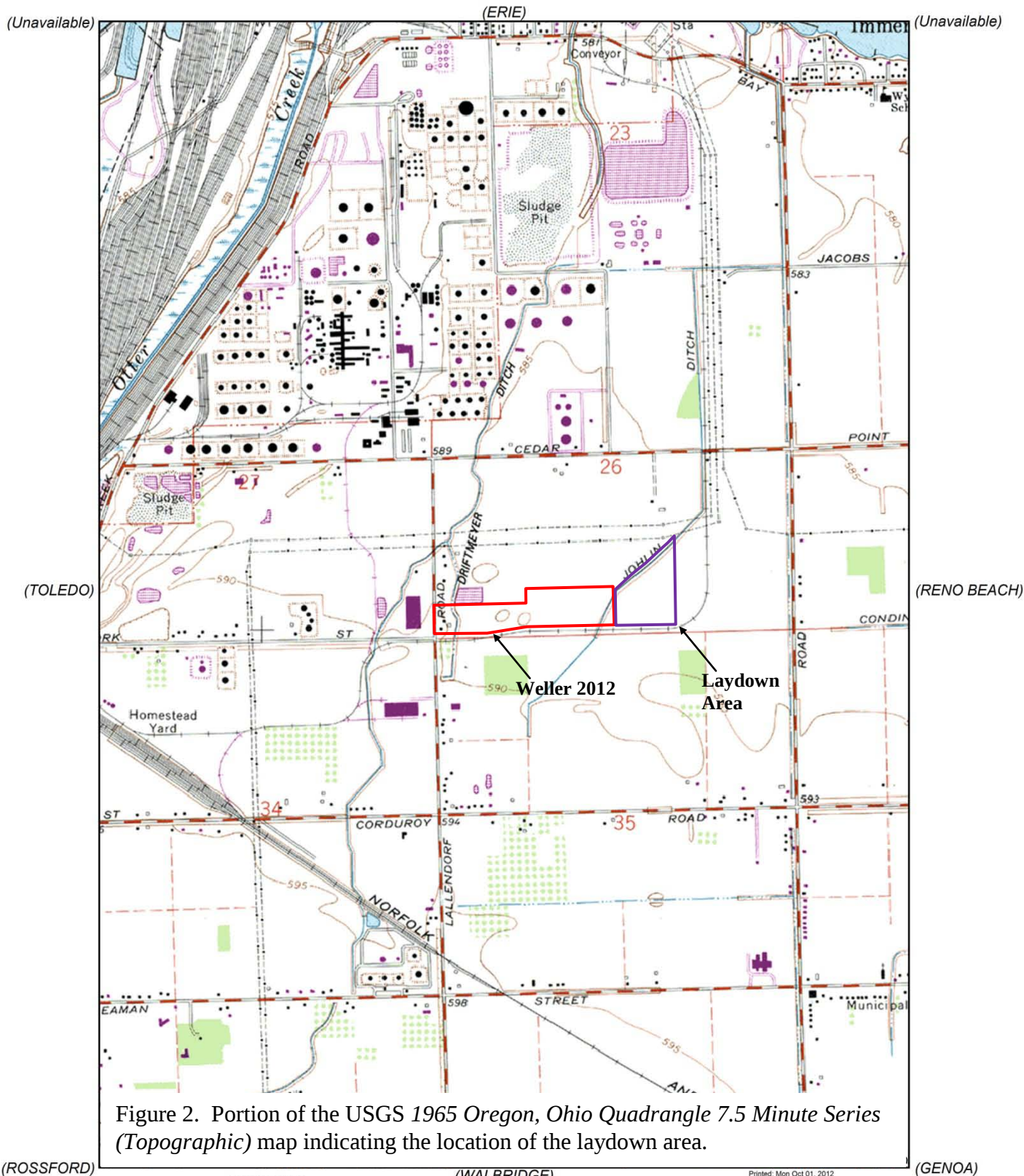
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Figures



Figure 1. Political map of Ohio showing the approximate location of the project.



Weller
& Associates, inc.

Declination
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MN
GN 1.62° W
MN 6.80° W

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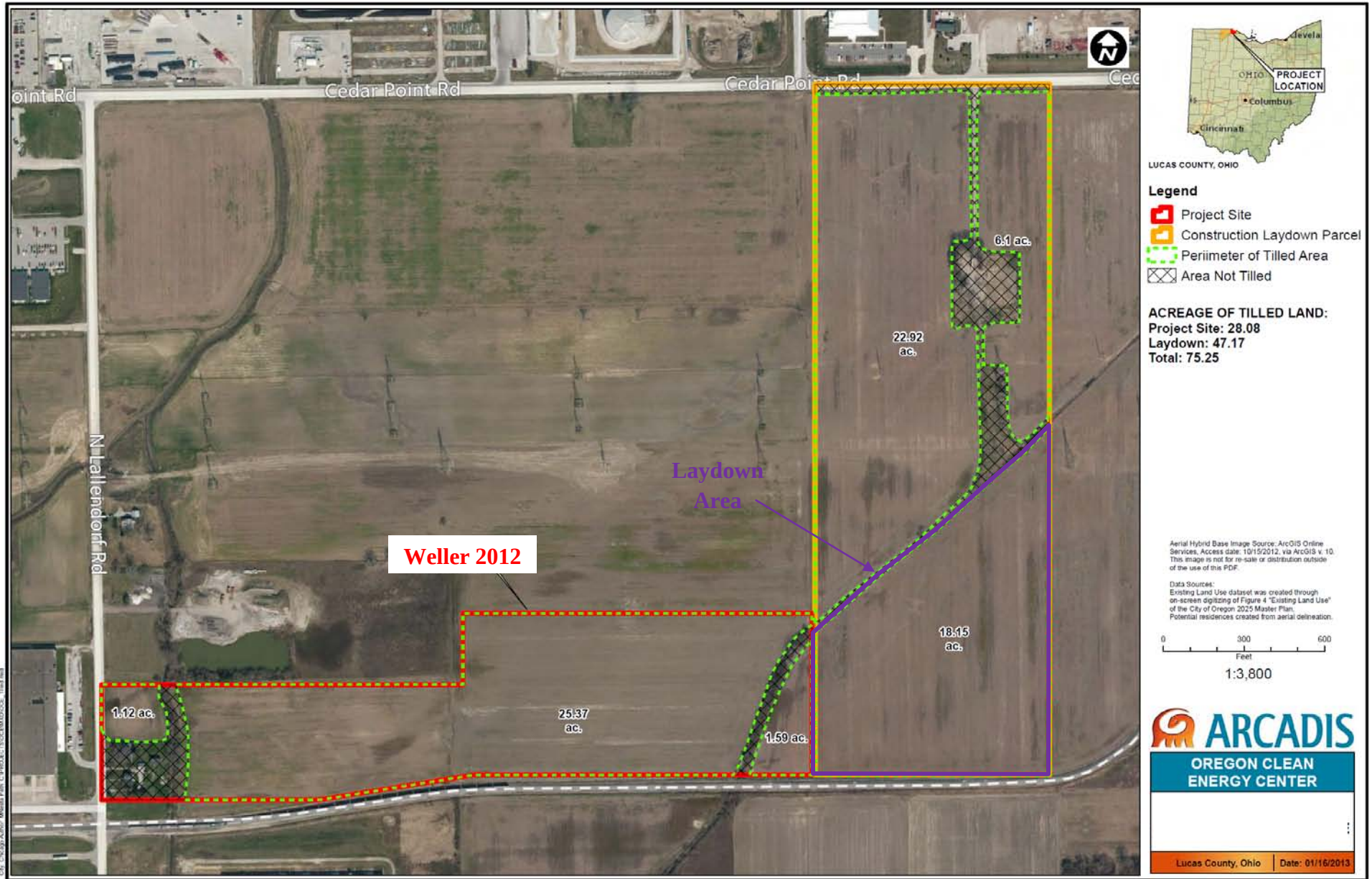


Figure 3. Aerial photograph showing the location of the project and the Weller 2012 survey.

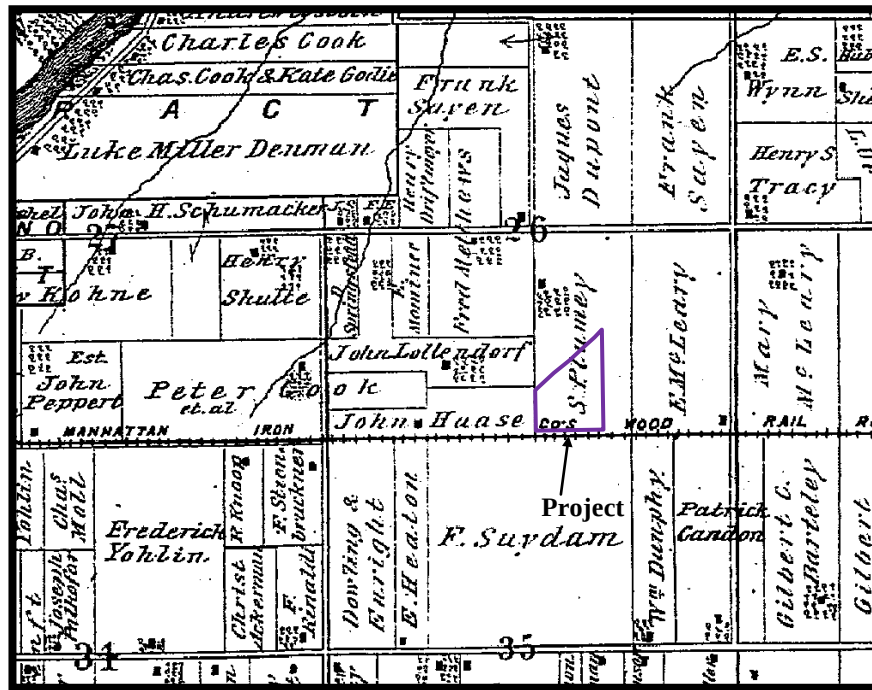


Figure 4. Portion of the *Illustrated Historical Atlas of Lucas and Part of Wood Counties, Ohio* (Andreas & Baskin 1875) showing the approximate location of the project area.

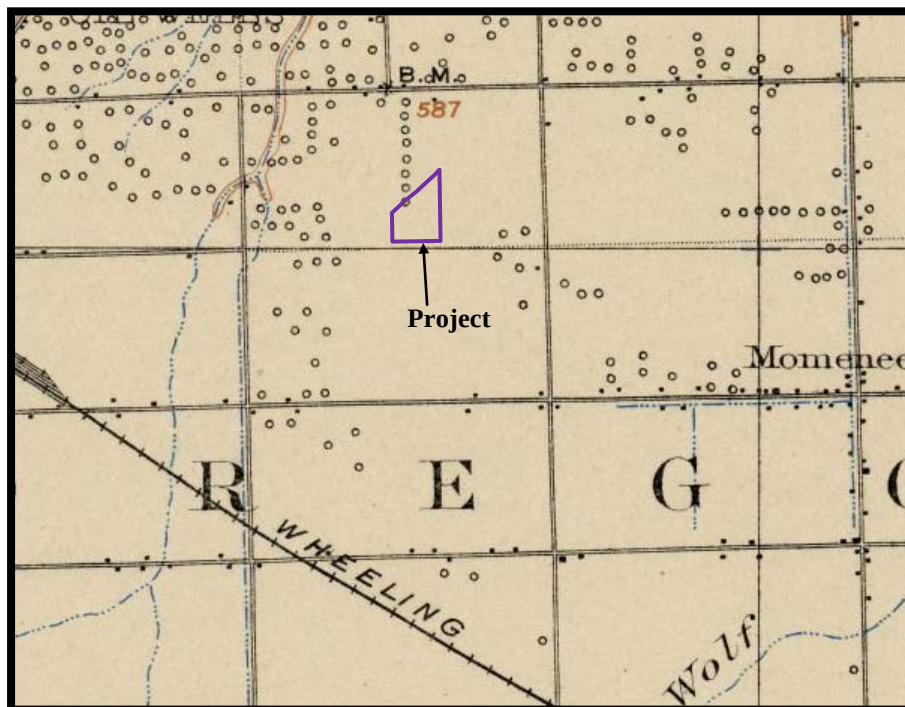


Figure 5. Portion of the 1900 Maumee Bay, Ohio Quadrangle 15 Minute Series (Topographic) map showing the approximate location of the project area.

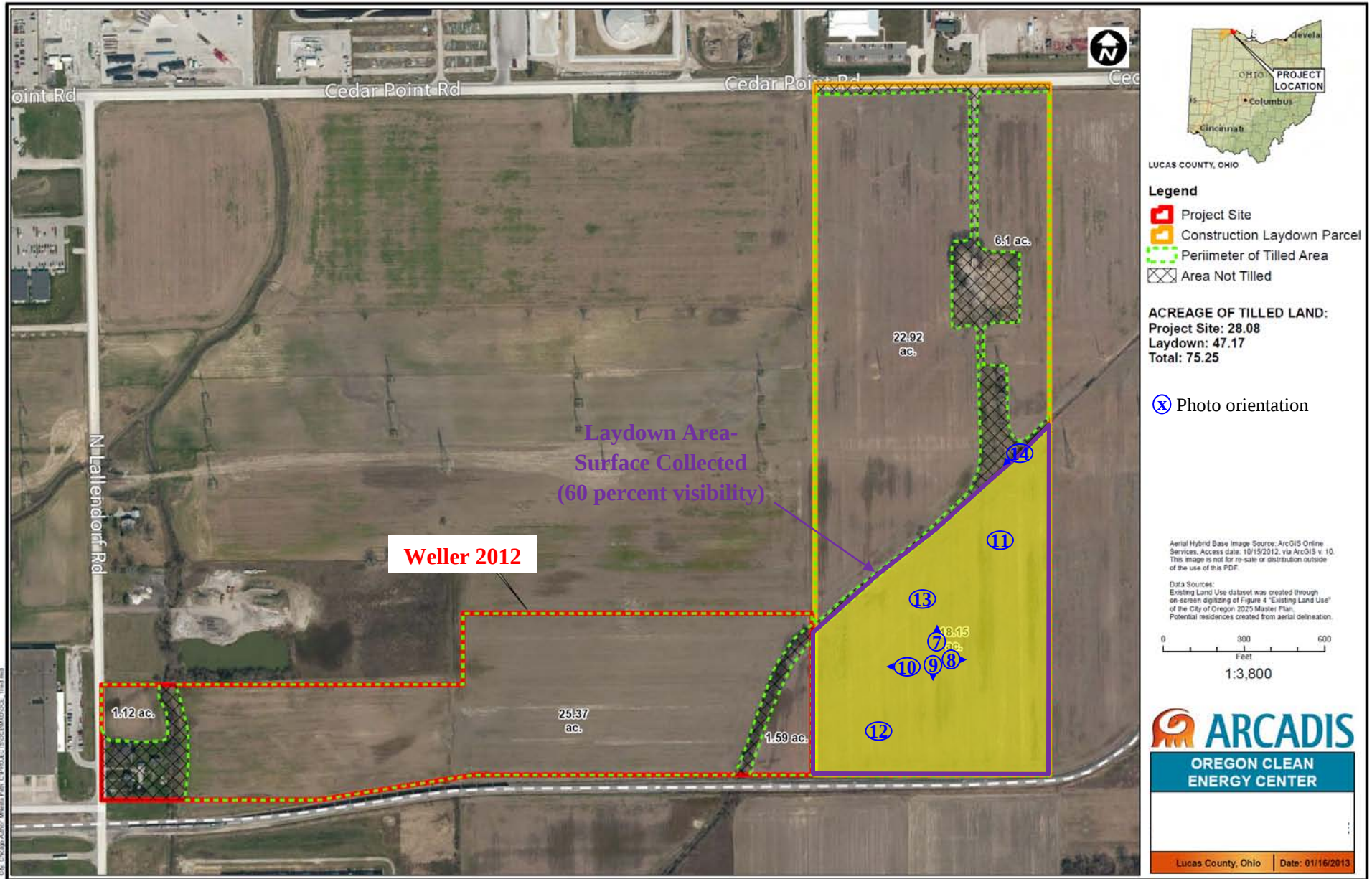


Figure 6. Fieldwork schematic depicting the testing conducted and photographic orientations.



Figure 7. View north from the center of the laydown area.



Figure 8. View east from the center of the laydown area.



Figure 9. View south from the center of the laydown area.



Figure 10. View west from the center of the laydown area.



Figure 11. View of the surface visibility at the time of survey showing the higher end of visibility.



Figure 12. View of the surface visibility at the time of survey showing the average visibility.



Figure 13. View of the surface visibility at the time of survey showing the lower end of visibility.



Figure 14. View of the ditch along the northern edge of the laydown area.

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Summary: Correspondence of Oregon Clean Energy Transmitting copy of cultural resources report electronically filed by Teresa Orahod on behalf of Sally Bloomfield