PHASE I CULTURAL RESOURCES SURVEY AND RECONNAISSANCE ARCHITECTURAL REVIEW OF PROPERTIES WITHIN .4 KM (.25 MI) FOR THE WEST VIKING ROAD INDUSTRIAL PARK, CEDAR FALLS TOWNSHIP, BLACK HAWK COUNTY, IOWA

Section 34, T89N, R14W

BCA 2909

THIS REPORT MAY CONTAIN SITE LOCATION INFORMATION NOT FOR PUBLIC DISTRIBUTION

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MANAGEMENT SUMMARY

This report presents the results of a Phase I cultural resources survey and reconnaissance level architectural review of properties within .4 km (.25 mi) of the West Viking Road Industrial Park for the City of Cedar Falls by Bear Creek Archeology, Inc., Cresco, Iowa. The project area occupies portions of the W½ of Section 34, T89N, R14W, Cedar Falls Township, Black Hawk County, Iowa. The project area covers an 80.9 ha (200 ac) tract of land located southwest of the intersection of Viking Road and South Union Road. The fieldwork portion of this investigation was conducted June 2021.

A prefield record review indicated no previously recorded surveys, archeological sites, or historic properties within the project area. No structures were observed in the project area on historic plat maps. The geomorphic evaluation consisted of a review of current and older aerial imagery, visual assessment, and the extraction of six hand probes, all recorded as representative profiles. This evaluation identified that the project area encompasses eroded uplands landforms comprised of loamy sediments over glacial till that have been disturbed by decades of agricultural practices. Soil profiles displayed plowzones truncating subsoil horizons. Due to the eroded nature of the project area any archeological sites, should they be present, would be visible on the ground surface and identifiable through pedestrian survey. A pedestrian survey was conducted across the entire project area, and no archeological deposits were identified. An intensive architectural evaluation was conducted on one property (Patrick Finnegan Property, 07-15664) immediately adjacent to the project area. This evaluation found that this property had undergone significant alterations over time. Bear Creek Archeology, Inc. recommends that the property is not eligible for nomination to the National Register of Historic Places. Bear Creek Archeology, Inc. recommends no further cultural resources work for the project area.

Information contained in this report relating to the nature and location of archeological sites is considered private and confidential and not for public disclosure in accordance with Section 304 of the National Historic Preservation Act (54 U.S.C § 307103); 36 CFR Part 800.6(a)(5) of the Advisory Council on Historic Preservation's rules implementing Sections 106 and 110 of the National Historic Preservation Act; Section 9(a) of the Archaeological Resource Protection Act (54 U.S.C. § 100707), and Chapter 22.7, subsection 20 of the Iowa Code.

TABLE OF CONTENTS

MANAGEMENT SUMMARY	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iii
LIST OF FIGURES	iii
INTRODUCTION	1
PROJECT LOCATION	1
INVESTIGATION PREMISES	1
GENERAL INVESTIGATION METHODOLOGY	2
ENVIRONMENTAL CONTEXT	3
Upland Landform Model	3
Project Area Soils and Landscape Analysis	
ARCHIVAL REVIEW RESULTS	5
Previously Recorded Cultural Resources	5
Historic Maps and Aerial Photographs	5
Archeological Archival Summary	6
SURVEY RESULTS	6
Geomorphic Evaluation	6
Archeological Survey	
RECONNAISSANCE LEVEL ARCHITECTURAL REVIEW	11
Extant Properties Within a .4 km (.25 mi) Buffer of the Project area	11
Architectural Review	
Patrick Finnegan Property (07-15664)	
SUMMARY AND RECOMMENDATIONS	_
REFERENCES CITED.	15
TABLES	18
FIGURES	
APPENDIX A: National Archaeological Database Form	
APPENDIX B: Iowa Site Inventory Form	71

LIST OF TABLES

Table 1. Soil information for the project area	19
Table 2. Extant properties within a .4 km (.25 mi) buffer of the project area	
LIST OF FIGURES	
Figure 1. Physiographic location of the project area	24
Figure 2. Topographic coverage of the project area	
Figure 3. Scale map of the project area	
Figure 4. Diagram of potential landform components	
Figure 5. Soil map of the project area	
Figure 6. Lidar image of the project area	
Figure 7. 1846 map of the project area	
Figure 8. 1875 map of the project area	
Figure 9. 1896 map of the project area	
Figure 10. 1910 map of the project area	
Figure 11. 1937 aerial photograph of the project area	
Figure 12. 1970 aerial photograph of the project area	
Figure 13. 1982 aerial photograph of the project area	
Figure 14. 1994 aerial photograph of the project area	
Figure 15. 2004 aerial photograph of the project area	
Figure 16. 2007 aerial photograph of the project area	
Figure 17. 2013 aerial photograph of the project area	40
Figure 18. Western boundary of the project area within mown hay field.	
View to the north	41
Figure 19. Southern boundary of the project area within mown hay field.	
View to the east	41
Figure 20. Southwestern portion of the project area within mown hay field.	
View to the northeast	42
Figure 21. Southern boundary of the project area within mown hay field.	
View to the west	
Figure 22. Western boundary of the project area within mown hay field.	
View to the north	43
Figure 23. Southeastern portion of the project area within mown hay field.	
View to the northwest	43
Figure 24. Central portion of the project area within mown hay field.	
View to the west	44
Figure 25 Central portion of the project area within mown hay field.	
View to the east	44
Figure 26. Western boundary of the project area within mown hay field.	
View to the north	45

LIST OF FIGURES, continued

Figure 27. Eastern boundary of the project area within mown hay field.	
View to the north	45
Figure 28. Northern portion of the project area within mown hay field.	
View to the west	46
Figure 29. Eastern boundary of the project area within mown hay field.	
View to the south	46
Figure 30. Drainage channel in the northern project area where SPs 1 and 2	
were taken. View to the southwest	47
Figure 31. Ridge spur where SP 3 was taken. View to the southwest	47
Figure 32. Upland summit where SP 4 was taken. View to the east	48
Figure 33. Footslope where SP 5 was taken. View to the north	48
Figure 34. Footslope where SP 6 was taken. View to the west	49
Figure 35. Ground surface visibility within the mown hay field	49
Figure 36. Extant properties within a 0.4 km (0.25 mi) buffer of the project area	50
Figure 37. Coverage of Olander, Graham and Ladage Farmstead (Map ID 1).	
View to the north	51
Figure 38. Coverage of Robert and Sandra Jones Property (Map ID 2).	
View to the east	51
Figure 39. Coverage of Patrick Finnegan Property (Map ID 3). View to the north	52
Figure 40. Coverage of Thomas and Melinda Greiner Farmstead (Map ID 4).	
View to the west	52
Figure 41. Coverage of Hempen Equipment Corp Property (Map ID 5).	
View to the west	53
Figure 42. Coverage of Scott and Nancy Scholz Property (Map ID 6).	
View to the west	53
Figure 43. Coverage of City of Cedar Falls Property (Map ID 7).	
View to the northeast	54
Figure 44. Coverage of Dennis and Linda Nebbe Property (Map ID 8).	
View to the east	54
Figure 45. Coverage of Johansen and Kalkhoff Property (Map ID 9).	
View to the north	55
Figure 46. Coverage of Troy and Andrea Schlotman Property (Map ID 10).	
	55
Figure 47. Coverage of Michael and Lynnette Hanger Property (Map ID 11).	
View to the north	56
Figure 48. Coverage of Matthew and Sarah Schultes Property (Map ID 12).	
View to the north	
Figure 49. Coverage of Robert Zay Property (Map ID 13). View to the north	57
Figure 50. Coverage of Randall and Patricia Lorenzen Property (Map ID 14).	
View to the north	57
Figure 51. Coverage of Stephen and Janice Riggs Property (Map ID 15).	
View to the north	
Figure 52. Coverage of Alice Bullers Property (Map ID 16). View to the east	58

LIST OF FIGURES, continued

Figure 53.	Coverage of Knutson and Deutsch Property (Map ID 17).
View to	the northwest59
Figure 54.	Coverage of David Campbell Property (Map ID 18). View to the north59
	Coverage of Jacob and Jessica Nauholz Property (Map ID 19).
	the south60
Figure 56.	Coverage of M. and Linda Jernigan Property (Map ID 20).
View to	the south60
Figure 57.	Coverage of Bruce and Marilyn Baridon Property (Map ID 21).
View to	the south61
Figure 58.	Coverage of Marvin and Jean Mc Elvain Property and
Dreyer	and Knudtson Property (Map ID 22 and 38). View to the southwest61
Figure 59.	Coverage of Rebecca Dickinson Property (Map ID 23). View to the south 62
_	Coverage of Stecker Well Drilling Inc (Map ID 24).
	the southwest62
	Coverage of Meac LLC (Map ID 25). View to the southwest
_	Coverage of Fn Investors LLC (Map ID 26). View to the northwest63
Figure 63.	Coverage of Winning Million, S LLC (Map ID 27).
	the northwest64
_	Coverage of Ice Investments LLC (Map ID 28). View to the northwest64
Figure 65.	Coverage of Katz Properties LLC (Map ID 29). View to the west65
	Coverage of Strickler Properties Lc (Map ID 30). View to the west65
	Coverage of Ds Wareshouse Ii LLC (Map ID 31). View to the east66
	Coverage of Acoh LLC (Map ID 32). View to the west66
	Coverage of Willow Bend Properties LLC (Map ID 33). View to the east 67
_	Coverage of Dlndj LLC (Map ID 34). View to the southeast
_	Coverage of Broadstone BCI Iowa LLC (Map ID 35).
	the northeast68
-	Coverage of D La Porte Properties LLC (Map ID 36). View to the south68
-	Coverage of Bossard U S Holdings Inc (Map ID 37).
	the northwest69
_	Coverage of Marvin and John and Nancy Muncy Property (Map ID 39).
View to	the north69

INTRODUCTION

Bear Creek Archeology, Inc. (BCA) of Cresco, Iowa, was contracted by the City of Cedar Falls of Cedar Falls, Iowa, to conduct a Phase I cultural resources survey of the proposed West Viking Road Industrial Park and a reconnaissance level architectural review of properties within .4 km (.25 mi) of the proposed West Viking Road Industrial Park. The West Viking Road Industrial Park is located in Cedar Falls Township, Black Hawk County, Iowa. Specifically, this Phase I cultural resources investigation was conducted as part of the site certification program for the Iowa Economic Development Authority (IEDA) and was conducted in accordance with the Memorandum of Understanding (MOU) between IEDA and State Historic Preservation Office (SHPO). The Phase I Cultural Resources investigation was conducted in accordance with the National Historic Preservation Act (Advisory Council of Historic Preservation [ACHP] 2004, 2016) and the Secretary of the Interior's standards for the identification of historic properties (National Park Service [NPS] 1983), the investigation meets or exceeds the guidelines for Iowa archeological investigations offered by the Association of Iowa Archaeologists (AIA; 2020). This report details the information gathering process concerning cultural resource properties that may exist in or near the project area, provides descriptions of cultural resources when encountered, their natural contexts, and recommendations concerning the potential impact of the proposed development on existing cultural resources. This investigation included archival research and landform evaluations in addition to a pedestrian survey. fieldwork portion of this investigation was conducted by BCA personnel in June 2021.

PROJECT LOCATION

The project area is located in central Iowa within the physiographic region known as the Iowan Surface (Prior 1991; Figure 1). As legally described, the project area occupies portions of the W½ of Section 34, T89N, R14W, Cedar Falls Township, Black Hawk County, Iowa (Figure 2). The project area is roughly rectangular in shape, but is irregular, and covers 80.9 ha (200 ac) in total. The project area is located southwest of the intersection of Viking Road and South Union Road, and at present the project area consists of hay fields (Figure 3).

INVESTIGATION PREMISES

The purpose of this investigation is to document the cultural resources within the project area at the Phase I level of investigation and document above ground cultural resources at a reconnaissance level within a .4 km (.25 mi) radius of the project area. The goals of the Phase I survey are based on the Secretary of the Interior's Standards and Guidelines for the Identification of Archeological Properties (NPS 1983:44716–44728). These standards are summarized and annotated within the archeological guidelines for Iowa (AIA 2020). Phase

I surveys are intended to provide basic data on the occurrence, location, and identification of cultural resources within a given area. The purpose of a reconnaissance survey is to examine all or part of an area in sufficient detail to make generalizations about the types and distribution of historic properties that may be present (NPS 1983: 44739).

The survey strategy of the Phase I investigation portion of the investigation was based on an analysis of the project area and landforms that exist within it. Archeological sites are integrated into the environment by natural surficial and formation processes and may be viewed not only as cultural remains, but also as geologic deposits. The geographic and pedologic character of a region is conditioned by geological processes, and an awareness of these site formation processes is fundamental to any evaluation of the archeological record. Landform and soil attributes have a strong influence on the presence, absence, and distribution of the plant and animal populations utilized by human groups. Geological processes affect not only the patterns of human habitation and environmental exploitation, but they are also largely responsible for the preservation, destruction, and manipulation of the archeological record. Therefore, archeological sites should be viewed as a product of both cultural and geological processes (Bettis and Green 1991).

This perspective on site location takes into account both the geological processes and cultural interactions of an area, allowing archeologists to use landform modeling to predict site occurrence and patterned distributions within a given region (Bettis and Benn 1984; Bettis and Thompson 1981). Such an approach also proves useful in investigator recognition of post-settlement alluvium (PSA), made land, plowzones (Ap horizons), and other disturbances that may have modified the area under investigation.

As a tool of cultural resource management, this type of landform modeling is critical to the development and implementation of survey strategies. More sensitive strategies toward geomorphological context allow the investigator to focus on those areas where the probabilities of site occurrence are highest. This reduces or eliminates the cost of surveying areas where sites should not sensibly occur in situ (e.g., made land, heavily disturbed areas, and landforms consisting entirely of recent alluvium, etc.). Informed survey strategies such as outlined above allow for the determination of the depth and distribution of subsurface tests necessary for the detection of buried cultural resource deposits. Additionally, the nature of the proposed impacts can be assessed in terms of the landforms present.

GENERAL INVESTIGATION METHODOLOGY

Prior to beginning the fieldwork, on-line site and previous survey records at the Office of the State Archaeologist (OSA) in Iowa City were examined to determine if previously reported properties are recorded within or near the project area. To check for potential historic properties and non-extant structures, digital copies of nineteenth century and early twentieth century General Land Office (GLO) maps, historic plat maps, and 1939–2017 aerial photographs stored on the BCA server were also consulted.

Also preceding the fieldwork, a brief geomorphic review was conducted to assess the general landform context of the survey area. A 3.2 cm hand probe was used to inspect subsurface deposits and monitor the depth of the plowzone and other modern impacts. Representative soil profiles were recorded for various landscape positions, supplemented by visual assessments of the project area. Field investigations were then conducted as needed based upon the findings of the archival review, geomorphological evaluation, and followed the guidelines for archeological investigations in Iowa offered by the AIA (2020).

ENVIRONMENTAL CONTEXT

The project area is located in the physiographic region known as the Iowan Surface (Prior 1991; Figure 1). The Iowan Surface is described as slightly inclined to gently rolling with long slopes, low topographic relief, and extended views to the horizon. Iowan Surface hillslopes are described as gradually multi-leveled or stepped surfaces that progress outwardly to drainage divides (Prior 1991:68). A well-defined valley edge is generally difficult to distinguish, and the drainage networks are well established and have low topographic relief (Prior 1991:69). According to Prior (1991), this physiographic region experienced its last glaciation during the pre-Illinoian period and has since been subjected to episodes of weathering, development of soils, loess deposition, and erosion.

The erosional surface complex advanced gradually from stream valleys to the adjacent interstream divides, leaving residual concentrations of coarse pebbles, clays, silts, and sands on each developing surface level. Processes such as flowing water, slope wash, and wind deflation eroded these residual deposits during the same period that loess was being deposited upon the landscape. Thick loess accumulations occur on undisturbed topographic highs consisting of elongated ridges and isolated oblong hills known as "pahas" and interstream divides (Prior 1991).

Upland Landform Model

The upland landform model (Figure 4) used in this report is based on Ruhe's (1969) analysis of hillslope evolution detailing the erosional and depositional sequences of upland components. Hillslopes are divided into five components (listed in descending order): summit, shoulder, sideslope, footslope, and toeslope. Not all components, however, may be present on a given hillslope.

Summits comprise the upper portion of the uplands and tend to be stable but are subjected to minor deposition and erosion by eolian processes. Shoulders form by the gradual back cutting of hillslopes at summit margins and are generally convex in cross-section with a low degree of slope. Comprised of backslope, headslope, and noseslope subcomponents, sideslopes are erosional features formed by the back cutting of valley walls. Footslopes, the lower remnants of hillslopes, are eroded and often covered by colluvial deposits derived from the shoulder and backslope. Toeslopes are found at the base of the upland landform and consist almost entirely of colluvial deposits.

Due to their low degree of erosion and relative flatness, summits and shoulders have high potential for containing prehistoric sites that, at times, may be intact and shallowly buried. Footslope and toeslope areas also have a good prehistoric site potential because they represent depositional features (i.e., they are time transgressive in terms of stability), generally have a low degree of slope (Van Nest 1993) and may be relatively close to water. Sideslopes, because of their steeper inclines and higher rates of erosion, rarely contain intact prehistoric materials. Finally, historic archeological sites can be found on any upland landform component.

When using this model, it is important to account for agriculturally induced wind and water erosion. For example, all cultivated upland components have been subjected to erosional pressures. Consequently, summit, shoulder, footslope, and toeslope positions that have undergone decades of cultivation typically possess lower potential for intact sites.

Project Area Soils and Landscape Analysis

According to the Natural Resources Conservation Service (NRCS) and soil surveys of Black Hawk County (NRCS 2021; Steckly 2006; Web Soil Survey 2021), there are eight soil units mapped in the project area consisting of Sparta, Kenyon, Dinsdale, Maxfield, Aredale, Colo and Maxmore series soils as well as Clyde-Floyd soil complex (Table 1; Figure 5). Most of the project area, approximately 55.3%, is made up of the moderately well drained Kenyon series soils associated with summits, shoulders, and backslopes of interfluves. These soils form in loamy sediments over till and are generally associated with being shallow to till (Artz 2005). The poorly drained Maxfield soil makes up 18.4% of the project area and is associated with flats along uplands summits. This soil forms in loess over till and generally associated with being shallow to till (Artz 2005). The poorly drained Clyde-Floyd soil complex makes up approximately 12% of the project area and is associated with footslopes of upland drainageways. This soil complex forms in loamy sediments over till and is generally associated with being shallow to till (Artz 2005). The poorly drained Maxmore soil makes up approximately 5.8% of the project area and is associated with the summit of interfluves. This soil forms in loess over glacial till and generally associated with being shallow to till (Artz 2005). The excessively drained Sparta soil makes up approximately 4.7% of the project area and associated with dunes positioned along the shoulder and backslopes of interfluves. This soil forms in sandy eolian deposits and generally associated with eolian sand (Artz 2005). The well drained Aredale soil series makes up approximately 2.9% of the project area and associated with the summit of interfluves. This soil forms in loamy sediments over glacial till and generally associated with being shallow to till (Artz 2005). The moderately well drained Dinsdale soil series makes up approximately 0.8% of the project area and associated with the summit of interfluves. This soil forms in loess over glacial till and is generally associated with being shallow to till (Artz 2005). Individual soil horizontal limits across the survey area are illustrated in Figure 5 and Table 1 summarizes their general characteristics.

A review of the topographic map (Figure 2) and lidar image (Figure 6) indicates the project area extends across mostly level to moderately sloping upland landforms, including several upland drainages, which confirms the soils data. Specifically, the project area extends

across an upland ridge positioned between the Dry Run drainage to the north-northwest and an unnamed perennial drainage to the south-southeast. The ridge landform along which the project area is set extends roughly from the southwest to northeast and is incised by several small upland drainages that empty into both drainages. Given the presence of nearly level upland landforms overlooking two perennial drainages, the project area is interpreted to have moderate to high overall archeological potential. Archeological potential along any given landform decreases relative to increased slope and/or poorer drainage, and with this in mind the more steeply sloped backslopes as well as baseslope components adjacent to upland drainage bottoms and the upland drainage bottoms proper are interpreted as having low archeological potential.

ARCHIVAL REVIEW RESULTS

Previously Recorded Cultural Resources

Prior to fieldwork, information regarding former surveys, documented archeological sites, and historic properties within or near the project area was obtained from the on-line resource managed by OSA. The archival search indicated the presence of no previously recorded surveys, archeological sites, or historic properties within the project area.

The archival search indicated the presence of two previously recorded surveys, no archeological sites, one historic property, and no notable locations within a 1.6 km (1 mi) radius of the project area. The previously recorded survey were Phase I investigations conducted for a telecommunications tower (Kooiman 2001) and a road corridor project (Mendel 1985). Neither of the surveys identified any archeological sites. The historic property within the 1.6 km (1 mi) radius of the project area is the Field barn (07-00067), which has not been evaluated for the National Register of Historic Places (NRHP).

Historic Maps and Aerial Photographs

Several historic maps and aerial photographs were used to identify potential historic structures and/or other historic features that once occurred or potentially remain in or near the project area. These maps and aerial photographs were also used to determine historic land use practices and identify any significant landscape modification that occurred during the historic era. A GLO map and three state atlases were consulted to identify potential historic properties within or directly adjacent to the project area (Andreas 1875; GLO 1846; Huebinger 1910; Kace Publishing Company 1896; Figures 7–10).

No potential historic properties or roads appear within the project area on the 1852 GLO map, however, a school can be seen plotted directly northwest of the project area on the 1875 (Andreas) map (Figures 7 and 8). No structures are plotted within the project area on the 1896 (Kace Publishing Company) or 1910 (Huebinger) plat maps (Figures 9 and 10). On these maps the school is still present in the vicinity of the project area, with multiple houses also plotted in the vicinity of the project area.

Historic aerial photographs from 1937–1970 were reviewed to determine if any previous unrecorded historic buildings or structures once occurred or potentially remain in or near the project area (Figures 11 and 12). These images were also reviewed to gain a better understanding of historic modifications and the land use practices within the project area since 1937. The 1937 aerial photograph shows the project area has been utilized as cultivated fields with no structures within the project area, however multiple farmsteads can be seen within the vicinity of the project area, with a few farmsteads directly adjacent to the western boundary of the project area (Figure 11). This continues through the 1970 aerial photograph (Figure 12).

Aerial photographs from 1982–2017 were also consulted to gain a better understanding of the landscape changes and land use within the project area (Figures 3, 13, and 14). The 1982 aerial photograph shows that the project area continues to be used as agricultural fields with no structures present (Figure 13). The 1994 aerial photograph shows that the project area continues to be used for agricultural fields, however the northern portion of the project area appears to have been terraced between the 1982 and 1994 aerial photographs. These terraces appear to have not been maintained throughout time and are only visible through the 2007 aerial photograph before they are obliterated (Figures 15 and 16). The project area continues to be used as an agricultural field throughout 2013–2017 with no structures present within the project area (Figures 3 and 17). The area surrounding the project area has been developed, with some of the farmsteads remaining throughout time in addition to new homes and commercial properties.

Archeological Archival Summary

The review of the available archival materials indicates there have been no previously recorded surveys, archeological sites, or inventoried properties within the project area. Furthermore, the archival review of historic maps and aerial photographs indicate that throughout time the project area has been used as cultivated farm fields, and that no structures have been historically present within the project area.

SURVEY RESULTS

Geomorphic Evaluation

Based on the landscape evaluation, the project area is positioned along an excessively to poorly drained level to moderately sloping upland landforms, including several upland drainages. Given this information, the project area is interpreted as having moderate to high overall archeological potential due to the landforms present and its position on the landscape. To begin the field investigation, a geomorphic evaluation was conducted across the project area. The geomorphic evaluation began with a visual assessment of the project area, which revealed that the entire project area was within a level to moderately sloping upland landforms, including several upland drainages that at the time of the survey was utilized as a hay field that had recently been mown (Figures 18–29). Six locations were

selected for soil cores to be extracted, resulting in a total of six representative profiles being recorded (Figures 30–34). Landforms and soil profile (SP) locations are reproduced in Figure 3.

The geomorphic analysis started along the upland drainageway in the northern portion of the project area. SP 1 was recorded near on the footslope south of the drainageway and SP 2 was recorded on the footslope north of the drainageway. Both profiles were moderately disturbed due to decades of cultivation, demonstrating multiple Ap soil horizons. Under the Ap soil horizons SP 1 demonstrated a Bw-2Bw soil sequence overlying till, and SP 2 demonstrated multiple Bw soil horizons over a BC soil horizon overlying till. Both profiles indicate a truncated poorly developed soil sequence. Due to this there is a low potential for identifying intact archeological deposits below the plowzone. Any archeological deposits found in these areas would likely be present at or directly below the ground surface.

The geomorphic analysis continued along the upland summits within the project area. SP 3 was taken near the central portion of the project area and SP 4 was taken near the south-central portion of the project area. Both profiles were eroded and displayed multiple Ap soil horizons truncating the underlying subsoil. SP 3 displaying multiple Bw soil horizons transitioning to a BC soil horizon, and the SP 4 displaying a single Bw soil horizon transitioning to the BC soil horizon. Both profiles indicate a truncated and eroded shallow soil sequence. Due to this there is a low potential for identifying intact archeological deposits below the plow zone in this area. Any archeological deposits found in these areas would likely be present at or directly below the ground surface.

The geomorphic analysis concluded along the footslopes of two other drainages within the project area. SPs 5 and 6 identified a truncated and eroded shallow soil sequence. These profiles indicate there is limited overall archeological potential and coupled with the disturbance observed there is low potential for identifying intact archeological deposits below the plowzone. Any archeological deposits found in these areas would likely be present at or directly below the ground surface.

Based on the profiles observed, the project area is positioned along an upland landform, including several upland drainages displaying an eroded and moderately disturbed landform. Due to this there is a low potential for identifying intact archeological deposits. Any archeological deposits found in these areas would likely be present at or directly below the ground surface.

DESIGNATION: SP 1

LANDSCAPE POSITION: footslope

SLOPE: 2-5% slope

PARENT MATERIAL: loess over till

VEGETATION: mown hay, 50–70% ground surface visibility (GSV)

METHOD: hand probe DATE DESCRIBED: 6/23/21

DESCRIBED BY: S. Schultz

COMMENTS: This soil profile was taken along the footslope along the southern bank of the drainageway in the northern portion of the project area. This profile was moderately disturbed from agricultural activities truncating a Bg-Bw soils on top of till.

Depth (cm) Soil Horizon		Description	
0-15	Apl	Black (10YR 2/1) silty clay loam; weak, fine subangular blocky structure; abrupt boundary.	
15-25 Ap2		Very dark brown (10YR 2/2) silty clay loam; weak, fine subangular blocky structure; abrupt boundary.	
25-40	Bg	Very dark grayish brown (10YR 3/2) silty clay loam; weak, medium subangular blocky structure; common, fine, prominent dark yellowish brown (10YR 3/4) mottles, clear boundary.	
40-50 2Bw		Brown (10YR 5/3) loam; weak, course, subangular blocky structure; firm; common, distinct brown (7.5YR 5/6) iron masses. End due to course rocks.	

DESIGNATION: SP 2

LANDSCAPE POSITION: footslope

SLOPE: 2-5% slope

PARENT MATERIAL: loam over till VEGETATION: mown hay, 50–70% GSV

METHOD: hand probe

DATE DESCRIBED: 6/23/21 DESCRIBED BY: S. Schultz

COMMENTS: This profile was taken along the footslope of the northern bank of the drainageway in the northern portion of the project area. This profile is moderately disturbed from agricultural activities truncating multiple Bw horizons over a BC horizon.

Depth (cm) Soil Horizon		Description		
0-15 Ap1		Very dark brown (10YR 2/2) loam; weak, fine, granular structure; abrupt boundary.		
15-30	Ap2	Black (10YR 2/1) loam; weak, fine, granular structure; abrupt boundary.		
30-50	Bw1	Very dark grayish brown (10YR 3/2) clay loam; weak, medium subangular blocky structure; friable; clear boundary.		
50-80	Bw2	Dark brown (10YR 3/3) clay loam; weak, medium subangular blocky structure; common, fine, distinct yellowish brown (10YR 5/4) redoximorphic concentrations; clear boundary.		
80-100	Bw3	Dark brown (10YR 3/3) coarsely mottled with yellowish brown (10YR 5/4) sandy clay loam; weak, medium subangular blocky structure; friable; gradual boundary.		
 100-120+	ВС	Yellowish brown (10YR 5/4) clay loam; weak, course subangular blocky structure; firm. End due to rock.		

DESIGNATION: SP 3

LANDSCAPE POSITION: ridge spur

SLOPE: 5–7% slope

PARENT MATERIAL: fine loamy till VEGETATION: mown hay, 50–70% GSV

METHOD: hand probe

DATE DESCRIBED: 6/23/21 DESCRIBED BY: S. Schultz COMMENTS: This profile was taken along the summit of a ridge spur within the central portion of the project area. This profile was eroded and displayed multiple Ap soil horizons truncating multiple Bw soil horizons over a BC soil horizon.

Depth (cm)	Soil Horizon	Description				
0-20	Ap1	Very dark brown (10YR 2/2) loam; weak, fine subangular blocky structure; abrupt boundary.				
20-25 Ap2		Very dark grayish brown (10YR 3/2) loam; weak, fine subangular blocky structure; abrupt boundary.				
25-35	Bw1	Dark grayish brown (10YR 4/2) loam; weak, fine subangular blocky structure; friable; clear boundary.				
35-60 Bw2		Dark yellowish brown (10YR 4/4) loam; weak, fine subangular blocky structure; firm; gradual boundary.				
60-75+	BC	Yellowish brown (10YR 5/6) loam; weak, medium subangular blocky structure; firm. End.				

DESIGNATION: SP 4

LANDSCAPE POSITION: upland summit

SLOPE: 0-2% slope

PARENT MATERIAL: fine loamy till VEGETATION: mown hay, 50–70% GSV

METHOD: hand probe

DATE DESCRIBED: 6/23/21 DESCRIBED BY: S. Schultz

COMMENTS: This profile was taken along the upland summit in the southern portion of the project area. This profile was eroded and displayed multiple Ap soil horizons truncating a Bw soil horizon over a BC soil horizon.

Ι	Depth (cm) Soil Horizon		Description
0-10 Ap1		Ap1	Black (10YR 2/1) loam; weak, fine subangular blocky structure; abrupt boundary.
	10-25	Ap2	Very dark grayish brown (10YR 3/2) loam; weak, fine subangular blocky structure; abrupt boundary.
	25-40	Bw	Yellowish brown (10YR 5/4) loam; weak, medium subangular blocky structure; friable; clear boundary.
	40-55+	ВС	Yellowish brown (10YR 5/6) sandy loam; weak, medium subangular blocky structure; friable. End due to course rocks.

DESIGNATION: SP 5

LANDSCAPE POSITION: footslope

SLOPE: 2–5% slopes

PARENT MATERIAL: loess over till VEGETATION: mown hay, 50–70% GSV

METHOD: hand probe DATE DESCRIBED: 6/23/21 DESCRIBED BY: S. Schultz

COMMENTS: This profile was taken along the footslope along the southeastern portion of the project area. This profile was moderately disturbed showing multiple Ap soil horizons truncating multiple Btg soil horizons.

Depth (cm) Soil Horizon		Description
0-20 Ap1		Black (10YR 2/1) silty clay loam; weak, fine subangular blocky structure; abrupt boundary.
20-35	Ap2	Very dark brown (10YR 2/2) silty clay loam; weak, fine subangular blocky structural; abrupt boundary.
35-50	Bt1	Dark grayish brown (10YR 4/2) silty clay loam; weak, medium subangular blocky structure; friable; clear boundary.
50-80+	Btg2	Dark gray (10YR 4/1) silty clay loam; weak, medium subangular blocky structure; friable; larger gravels. End due to course rocks.

DESIGNATION: SP 6

LANDSCAPE POSITION: footslope

SLOPE: 2-5% slope

PARENT MATERIAL: loess over till VEGETATION: mown hay, 50–70% GSV

METHOD: hand probe DATE DESCRIBED: 6/23/21 DESCRIBED BY: S. Schultz

COMMENTS: This profile was taken along the footslope within the southwestern portion of the project area. This profile was moderately disturbed showing multiple Ap soil horizons truncating multiple Bg soil horizons.

_	Depth (cm)	Soil Horizon	Description					
	0-15	Apl	Black (10YR 2/1) silt loam; weak, fine subangular blocky structure; abrupt boundary.					
	15-25	Ap2	Very dark brown (10YR 2/2) silt loam; weak, fine subangular blocky tructure; abrupt boundary.					
	25-45	Bt1	Very dark grayish brown (10YR 3/2) clay loam; moderate fine subangular blocky structure; clear boundary.					
	45-70+	Bt2	Dark yellowish brown (10YR 4/3) clay loam; moderate medium subangular blocky structure; firm. End.					

Archeological Survey

Based on the geomorphic assessment, the project area was determined to be comprised of eroded and moderately disturbed upland landforms. The overall archeological potential was determined to moderate to high throughout the project area but given the level of disturbance observed the potential for identifying intact archaeological deposits is considered low throughout the entire project area. Decades of cultivation have truncated and eroded the underlying subsoils across the project area and due to this the likelihood of encountering intact archeological deposits below the plowzone are low, and any cultural materials would likely be present at or directly below the ground surface.

For the purposes of site discovery, a pedestrian survey was utilized as a site discovery method. The entire project area had been utilized as a hay field that was recently mown, resulting in 50–70% GSV (Figure 35). The pedestrian survey transects were conducted at 15m (49.2 ft) intervals throughout the entire project area. The pedestrian survey resulted in negative findings.

RECONNAISSANCE AND INTENSIVE LEVEL ARCHITECTURAL REVIEW

Extant Properties Within a .4 km (.25 mi) Buffer of the Project Area

Based on the archival research conducted prior to the field investigation, there are no standing structures within the project area. There are 39 properties with extant buildings or structures identified within a .4 km (.25 mi) viewshed buffer of the project area (Table 2; Figures 36–74). The archival review identified no inventoried historic properties within this buffer. Of these 39 properties, 31 are considered modern and the remaining eight properties possess buildings or structures older than 45 years. Each property was assigned a corresponding identification number by BCA that is used to identify the properties in Table 2 and on Figure 36.

Architectural Review

Of these 39 identified properties, 31 were considered modern. The other eight properties were identified as being of historic-age based on the evaluation of historic maps and or through the review of the county assessor's records. Historic plat maps of Cedar Falls illustrate seven farmsteads and one school within the .4 km (.25 mi) buffer of the project area (Huebinger 1910; Kace Publishing Company 1896; Figures 9 and 10). Six of the farmsteads (Map ID's 1, 3–5, 8, and 23) and potentially the school (Map ID 9) are extant today. One property was dated to the early 1900s but was not shown on the historic maps (Map ID 39). Due to the age and proximity to the certification area, one property located along the western boundary of the proposed project area (Map ID 3) was recommended for an intensive architectural evaluation by SHPO. Of the additional historic-age properties not intensively surveyed, a reconnaissance level investigation was performed from the road These properties generally lack distinctive architectural right-of-way (Table 2). characteristics or have been significantly altered through the addition of modern exterior elements and structural additions. It is likely that these properties are not eligible for the NRHP, however intensive survey and evaluation is recommended for these properties if they are to be impacted by any proposed undertaking that prompts action under Section 106 of the NHPA. All properties identified within the .4 km (.25 mi) buffer of the project area are identified and briefly described in Table 2 and are depicted on Figure 36.

Intensive architectural evaluation was limited to one property, the Patrick Finnegan Property (07-15664; Map ID 3), located along the western boundary of the proposed project area. The intensive architectural evaluation found the Patrick Finnegan Property (07-15664) was still extant, but did not possess significant architectural characteristics, had been extensively altered through the addition of modern exterior elements and structural additions, and many of its associated structures had been altered or razed. A description and results of the intensive architectural evaluation are presented below.

Patrick Finnegan Property (07-15664)

Cultural affiliation: Euro American USGS 7.5 Quad: Hudson, Iowa

Address: 2603 South Union Road, Cedar Falls Iowa 50613

UTM Center Point: Zone 15, NAD 83, Easting 541,544; Northing 4,702,689

Legal Location: NW¹/₄, NW¹/₄, SW¹/₄ of Section 34, T89N, R14W, Cedar Falls Township,

Black Hawk County, Iowa (Figure 3)

Present Investigation: Located east of South Union Road in Cedar Falls, this one-story side-gabled frame house was built in ca. 1900 (Beacon 2021). The house originally appeared to be a part of a farmstead that was first plotted as early as 1896 (Kace Publishing Company) on the plat map. Aerial photographs from as early as 1937 show the extant house with multiple agricultural outbuildings surrounding it.

The house is seated on a full basement with asphalt shingling and lapped vinyl siding. Multiple additions have been added to the east side of the house, including a southward facing enclosed shed roof porch and a northward facing one-story front-gabled frame addition. Both the house and enclosed porch have received extensive modifications, including the installation of modern windows, doors, asphalt shingling, and lapped vinyl siding. The house is of vernacular design and lacks distinctive characteristics of any particular style or time period.

Surrounding the house are two detached garages, a corn crib, and a steel utility building. The larger one-story side-gabled single car garage was constructed in 1950, while the smaller one-story side-gabled garage was constructed in 1975 (Beacon 2021). Both garages have asphalt shingling and lapped vinyl siding. The one-story front-gabled corn crib was constructed in 1941 and originally had a wood lap exterior, which has since been covered or replaced with metal siding, and the roof has also been replaced with metal sheeting (Beacon 2021). The one-story side-gabled steel utility building was constructed in 1974 and features four stall garage doors, metal siding, and metal roof. All other structures historically associated with the farmstead have been razed in recent years.

Historically, the parcel was owned by Jas. J. Pomeroy (Kace Publishing Company 1896). The parcel in the 1896 (Kace Publishing Company) plat map contained a residence near the location of the current residence. James Pomeroy is listed on the 1895 Iowa State Census (Familysearch.org 2021a) as living in Cedar Falls Township, Black Hawk County, with an occupation of farming. It is possible that the current structure was originally built in or prior to 1896, as the assessor's information only provides a generic 1900 construction date (Beacon 2021). The 1910 (Huebinger) plat map shows the parcel owned by W. E. Walters. William E. Walters is listed on the 1910 U.S. Census (Familysearch.org 2021b) as living in Cedar Falls Township, Black Hawk County, with an occupation of farming. This investigation did not uncover information on these previous owners to indicate that they were of historical significance to the local community (Hartman 1915a, 1915b; Iagenweb.org 2021; Western Historical Company 1878).

Interpretation: This house has undergone significant alterations in the form of additions, remodeling, and modern external treatments. Further, the house no longer retains any

distinctive characteristics and many of the buildings in the surrounding area have been replaced or substantially altered, including the removal of many of the associated farm outbuildings. Additionally, information uncovered during this investigation does not suggest that people or events of local historical significance occurred on the property.

NRHP Eligibility: Due to the Patrick Finnegan Property's lack of distinctive architectural characteristics and not being associated with any significant people or events, BCA recommends that the Patrick Finnegan Property is not eligible for listing on the NRHP.

Recommendations: No further cultural resources work is recommended for the Patrick Finnegan Property (07-15664).

SUMMARY AND RECOMMENDATIONS

This Phase I cultural resources survey and reconnaissance level architectural review of properties within .4 km (.25 mi) for the proposed West Viking Road Industrial Park was conducted for City of Cedar Falls by BCA. The project area occupies the W½ of Section 34, T89N, R14W, Cedar Falls Township, Black Hawk County, Iowa. The project area consists entirely of mown hayfields. The fieldwork for this investigation was conducted in June 2021.

The geomorphic assessment indicates the project area extends across a sloping upland landform, including several upland drainages. Given this information, the project area is interpreted as having moderate to high overall archeological potential due to the landforms and its position on the landscape. Prefield archival research indicated there was no previously recorded surveys, recorded archeological sites, or inventoried properties within the project area. The archival review of historic maps and aerial photographs indicated that throughout time the project area has been used as cultivated farm fields, and that no structures have been present historically within the project area.

The survey strategy utilized for this investigation was determined by the results of the landscape evaluation, archival review, geomorphic investigation, conditions observed in the field, and the potential of a given landform to contain cultural resources. Subsequent geomorphic evaluations determined there was low potential for the presence of intact archeological deposits throughout the project area. Site discovery investigations utilized pedestrian survey and resulted in negative findings. A reconnaissance level architectural review was conducted for 31 properties within a .4 km (.25 mi) radius of the project area resulting in the identification of eight historic-age properties. An intensive architectural evaluation was conducted on one of these properties, the Patrick Finnegan Property (07-15664), a house immediately adjacent to the project area. The evaluation of the Patrick Finnegan Property (07-15664) resulted in the recommendation that the property is not eligible for nomination to the NRHP and no further work. Based on the aforementioned results, BCA recommends no further work within the project area. However, intensive survey and evaluation is recommended for the remaining seven above ground historic-age properties within the .4 km (.25 mi) buffer area, if they are to be impacted by any proposed undertaking that prompts action under Section 106 of the NHPA.

No technique of modern archeological research is adequate to identify all archeological sites or cultural deposits within a given area. In the event that any cultural materials not recorded by this investigation are discovered in the course of the proposed development activities, the Bureau of Historic Preservation at the State Historical Society of Iowa is to be contacted immediately. The developer is responsible for the protection of cultural resources from disturbance until a professional examination can be made or authorization to proceed is granted by the SHPO or a designated representative.

Information contained in this report relating to the nature and location of archeological sites is considered private and confidential and not for public disclosure in accordance with Section 304 of the National Historic Preservation Act (54 U.S.C § 307103); 36 CFR Part 800.6(a)(5) of the Advisory Council on Historic Preservation's rules implementing Sections 106 and 110 of the National Historic Preservation Act; Section 9(a) of the Archaeological Resource Protection Act (54 U.S.C. § 100707), and Chapter 22.7, subsection 20 of the Iowa Code.

REFERENCES CITED

Advisory Council on Historic Preservation

- 2004 36 CFR Part 800, Protection of Historic Properties; Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites; Final Rule and Notice. *Federal Register* 64:27071–27087.
- 2016 National Historic Preservation Act of 1966, as Amended. Electronic document https://www.achp.gov/sites/default/files/2018-06/nhpa.pdf, accessed February 2020.

Andreas, Alfred T.

1875 Illustrated Historical Atlas of the State of Iowa. Andreas Atlas Company, Chicago.

Artz, Joe A.

2005 Ackmore to Zwingle: Soil Series of Iowa. Electronic document, http://www.iowaisites.com/i-sites/soilseries.htm, accessed April 2020. Office of the State Archaeologist, University of Iowa, Iowa City.

Association of Iowa Archaeologists (AIA)

2020 Association of Iowa Archaeologists Guidelines. Electronic document, http://aiarchaeologist.org/guidelines/, accessed April 2021. Association of Iowa Archaeologists, Office of the State Archaeologist, University of Iowa, Iowa City.

Beacon

2021 Beacon Local Government GIS Website, Black Hawk County Iowa. Electronic document, http://beacon.schniedercorp.com/, accessed June 2021.

Bettis, E. Arthur, III, and David W. Benn

1984 An Archaeological and Geomorphological Survey in the Central Des Moines River Valley, Iowa. *Plains Anthropologist* 29:211–227.

Bettis, E. Arthur, III, and William Green

1991 Part I: Grandview to Kingston. In Paleoenvironments and Archaeology of the Mississippi Valley in Southeastern Iowa. Prepared for the Annual Meeting of the Association of Iowa Archaeologists, Burlington.

Bettis, E. Arthur, III, and Dean M. Thompson

1981 Holocene Landscape Evolution in Western Iowa: Concepts, Methods, and Implications for Archaeology. In *Current Directions in Midwestern Archaeology: Selected Papers from the Mankato Conference*, edited by Scott Anfinson, pp. 1–14. Occasional Publications in Minnesota Anthropology No. 9. Minnesota Archeological Society, St. Paul.

General Land Office (GLO)

1846 Secretary of State Land Survey Records: Description of Lands on the Interior Sectional Lines. T89N, R14W. On file, State Historical Society Library, Iowa City.

Familysearch.org

- 2021a Iowa State Census, 1895. Electronic document, https://www.familysearch.org/ark:/61903/3:1:939V-5G1K-3?i=188&personaUrl=%2Fark%3A%2F61903%2F1%3A1%3AVT3V-GV2, accessed September 2021.
- 2021b U.S. Census, 1910. Electronic document, https://www.familysearch.org/ark:/61903/3:1:33SQ-GRKM-JZH?i=17&cc=1727033&personaUrl=%2Fark% 3A%2F61903%2F1%3A1%3AML1S-2ZR, accessed September 2021.

Hartman, John C. (editor)

- 1915a History of Black Hawk County, Iowa and its People. Vol. I. The S. J. Clarke Publishing Company, Chicago.
- 1915b *History of Black Hawk County, Iowa and its People*. Vol. II. The S. J. Clarke Publishing Company, Chicago.

Huebinger, Melchior

1910 Atlas of Black Hawk County, Iowa. The Iowa Publishing Company, Des Moines.

Iowagenweb.org

2021 Black Hawk County IAGenWeb. Electronic document, http://iagenweb.org/blackhawk/, accessed September 2021.

Kace Publishing Company

1896 *Illustrated Atlas of Black Hawk County, Iowa*. The Kace Publishing Company, Racine, Wisconsin.

Kooiman, Barbara

2001 US Cellular - West Unidome - Trileaf #U-615-2635 Proposed Construction of Telecommunications Tower - 2115 W Ridgeway, Cedar Falls - Sec. 35, T89N R14W. Mississippi Valley Archaeology Center, La Crosse, Wisconsin.

Mandel, Rolfe D.

1985 Greenhill Road Corridor Supplement to Phase I Cultural Resources Investigation Geomorphological Investigation. Brice, Petrides, & Associates, Inc., Waterloo, Iowa.

National Park Service (NPS)

1983 Secretary of the Interior's Standards and Guidelines for Preservation Planning, Identification, Evaluation, and Registration. *Federal Register* 48:44716–44739.

Natural Resources Conservation Service (NRCS)

2021 Soil Survey of Black Hawk County, Iowa. U.S. Department of Agriculture, Washington, DC. Electronic document, http://datagateway.nrcs.usda.gov, downloaded July 2021.

Prior, Jean C.

1991 Landforms of Iowa. University of Iowa Press, Iowa City.

Ruhe, Robert V.

1969 Quaternary Landscapes in Iowa. Iowa State University Press, Ames.

Steckly, Sam R.

2006 Soil Survey of Black Hawk County, Iowa. U.S. Department of Agriculture. Iowa Agriculture Experiment Station. U.S. Government Printing Office, Washington, DC.

Web Soil Survey

2021 Web Soil Survey. Electronic document, https://websoilsurvey.nrcs.usda .gov/app/, accessed May 2021.

Van Nest, Julieann

1993 Geoarchaeology of Dissected Loess Uplands in Western Illinois. *Geoarchaeology* 8:281–311.

Western Historical Company

1878 *The History of Black Hawk County, Iowa*. The Western Historical Company, Chicago.

TABLES

Table 1. Soil information for the project area (NRCS 2021; Steckly 2006; Web Soil Survey 2021)

Symbol/	Project	Landscape	Drainage	Parental	Native	
Soil Name	Area %	Position	Class	Material	Vegetation	Artz 2005
41C Sparta loamy fine sand, 5–9% slopes	4.7	Shoulders and backslopes of interfluves	Excessively drained	Eolian sand	Tall prairie grass	Eolian sand
83B Kenyon loam, 2–5% slopes	45	Summits of interfluves	Moderately well drained	Loamy sediments over glacial till	Tall prairie grass	Shallow to till
83C Kenyon loam, 5–9% slopes	10.3	Shoulders and backslopes of interfluves	Moderately well drained	Loamy sediments over glacial till	Tall prairie grass	Shallow to till
377B Dinsdale silty clay loam, 2–5% slopes	.8	Summits of interfluves	Moderately well drained	Loess over glacial till	Tall prairie grass	Shallow to till
382 Maxfield silty clay loam, 0–2% slopes	18.4	Flats of uplands summits	Poorly drained	Loess over glacial till	Water tolerant tall grasses	Shallow to till
391B Clyde-Floyd complex, 1–4% slopes	12	Footslopes of upland drainageways	Poorly drained	Loamy sediments over glacial till	Water tolerant tall grasses	Shallow to till
426B Aredale loam, 2–5% slopes	2.9	Summits of interfluves	Well drained	Loamy sediments over glacial till	Tall prairie grass	Shallow to till
982 Maxmore silty clay loam, 0–2% slopes	5.8	Summits of interfluves	Poorly drained	Loess over glacial till	Tall prairie grass	Shallow to till

Table 2. Extant properties within a .4 km (.25 mi) buffer of the project area.

	1 1	\ -		1 2			
			Associated	ъ.			
Map	D	Address	Buildings/	Date Constructed	Reconnaissance Observations	Recommendation ¹	E: #
ID 1	Property Name Olander, Graham and		Structures 9	1900-1982		More research recommended	Figure #
1	Ladage Farmstead	6512 W Ridgeway Avenue	9	1900-1982	Likely ineligible (Lacks distinctive characteristics)	for evaluation	3/
_	ě			10=0 -015	,		• •
2	Robert and Sandra Jones Property	2617 S Union Road	4	1978-2016	Modern	Not eligible	38
3	Patrick Finnegan Property	2603 S Union Road	3	1900-1974	Inventoried (See Appendix B)	Not eligible (See Appendix B)	39
4	Thomas and Melinda Greiner Farmstead	2536 S Union Road	19	1911-2015	Likely ineligible (Modern exterior/additions)	More research recommended for evaluation	40
5	Hempen Equipment Corp Property	2418 S Union Road	9	1903-1995	Likely ineligible (Lacks distinctive characteristics)	More research recommended for evaluation	41
6	Scott and Nancy Scholz Property	2342 S Union Road	3	1990-2010	Modern	Not eligible	42
7	City of Cedar Falls Property	2233 S Union Road	4	2016	Modern	Not eligible	43
8	Dennis and Linda Nebbe Property	2027 S Union Road	7	1899-2001	Likely ineligible (Modern exterior/additions)	More research recommended for evaluation	44
9	Johansen and Kalkhoff Property	6920 Viking Road	2	1900-1975	Likely ineligible (Lacks distinctive characteristics)	More research recommended for evaluation	45
10	Troy and Andrea Property	6910 Viking Road	1	2006	Modern	Not eligible	46
11	Michael and Lynnette Hanger Property	6830 Viking Road	3	2004-2010	Modern	Not eligible	47
12	Matthew and Sarah Schultes Property	6810 Viking Road	4	1975-2020	Modern	Not eligible	48
13	Robert Zay Property	6728 Viking Road	5	1971-2018	Modern	Not eligible	49
14	Randall and Patricia Lorenzen Property	6716 Viking Road	2	1974-1999	Modern	Not eligible	50
15	Stephen and Janice Riggs Property	6702 Viking Road	3	1973-2016	Modern	Not eligible	51

Table 2. Extant properties within a .4 km (.25 mi) buffer of the project area, continued.

	2. Exame properties wi		Associated		Reconnaissance		
Map ID	Property Name	Address	Buildings/ Structures	Date Constructed	Observations	Recommendation ¹	Figure #
16	Alice Bullers Property	6616 Viking Road	3	1975-1976	Modern	Not eligible	52
17	Knutson and Deutsch Property	6620 Viking Road	3	1973-1974	Modern	Not eligible	53
18	David Campbell Property	6314 Viking Road	2	1998	Modern	Not eligible	54
19	Jacob and Jessica Nauholz Property	6421 Viking Road	2	1974-1975	Modern	Not eligible	55
20	M. and Linda Jernigan Property	6415 Viking Road	1	1975	Modern	Not eligible	56
21	Bruce and Marilyn Baridon Property	6337 Viking Road	1	1996	Modern	Not eligible	57
22	Marvin and Jean Mc Elvain Property	6211 Viking Road	3	1985-2015	Modern	Not eligible	58
23	Rebecca Dickinson Property	6317 Viking Road	5	1900-1995	Likely ineligible (Modern exterior/additions)	More research recommended for evaluation	59
24	Stecker Well Drilling Inc.	2916 Venture Way	1	2008	Modern	Not eligible	60
25	Meac LLC	3016 Venture Way	1	2009	Modern	Not eligible	61
26	Fn Investors LLC	3019 Venture Way	1	2018	Modern	Not eligible	62
27	Winning Million, S LLC	3109 Venture Way	1	2013	Modern	Not eligible	63
28	Ice Investments LLC	3201 Venture Way	1	2018	Modern	Not eligible	64
29	Katz Properties LLC	6317 Development Drive	1	2016	Modern	Not eligible	65
30	Strickler Properties Lc	6415 Development Drive	1	2020	Modern	Not eligible	66
31	Ds Wareshouse Ii LLC	3105 Capital Way	1	2014	Modern	Not eligible	67
32	Acoh LLC	6601 Development Drive	1	2018	Modern	Not eligible	68
33	Willow Bend Properties LLC	3120 Capital Way	1	2012	Modern	Not eligible	69

Table 2. Extant properties within a .4 km (.25 mi) buffer of the project area, continued.

Мар			Associated Buildings/	Date	Reconnaissance		
ID	Property Name	Address	Structures	Constructed	Observations	Recommendation ¹	Figure #
34	Dlndj LLC	3121 Capital Way	1	2016	Modern	Not eligible	70
35	Broadstone Bci Iowa LLC	2900 Capital Way	1	2018	Modern	Not eligible	71
36	D La Porte Properties LLC	3116 Technology Parkway	1	2016	Modern	Not eligible	72
37	Bossard U S Holdings Inc	6521 Production Drive	1	2004	Modern	Not eligible	73
38	Dreyer and Knudtson Property	6321 Viking Road	3	1993	Modern	Not eligible	58
39	John and Nancy Muncy Property	6206 Viking Road	3	1900-1911	Likely ineligible (Modern exterior/additions)	More research recommended for evaluation	74

¹ More research and evaluation are recommended for properties if they are to be impacted by any proposed undertaking that prompts action under Section 106 of the NHPA.

FIGURES

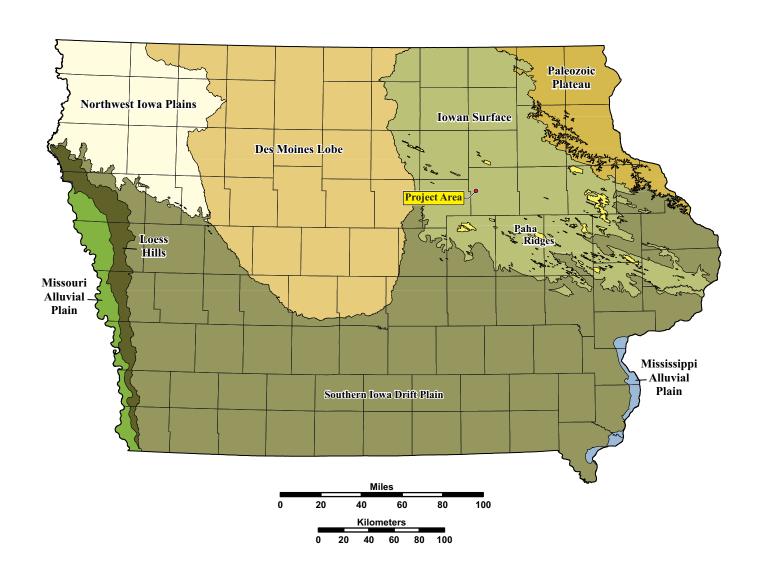


Figure 1. Physiographic location of the project area (adapted from Prior [1991:31]).

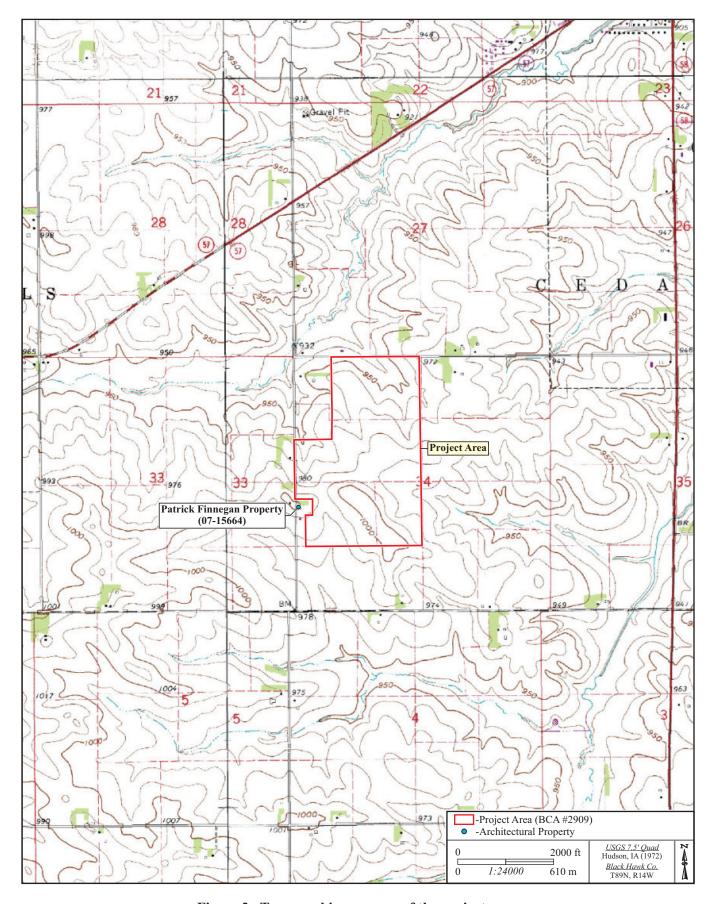


Figure 2. Topographic coverage of the project area.

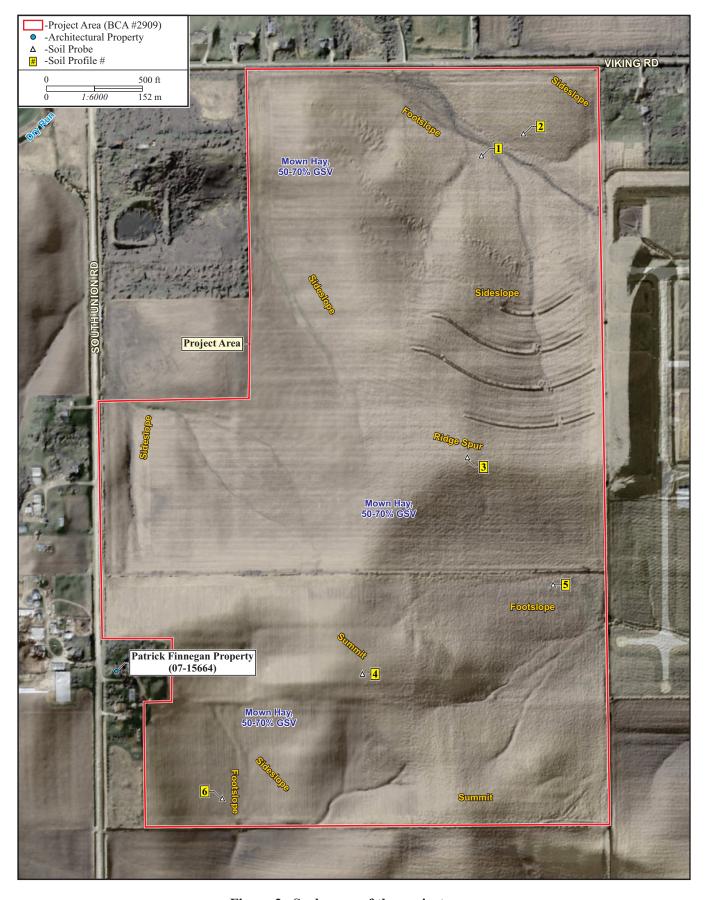


Figure 3. Scale map of the project area.

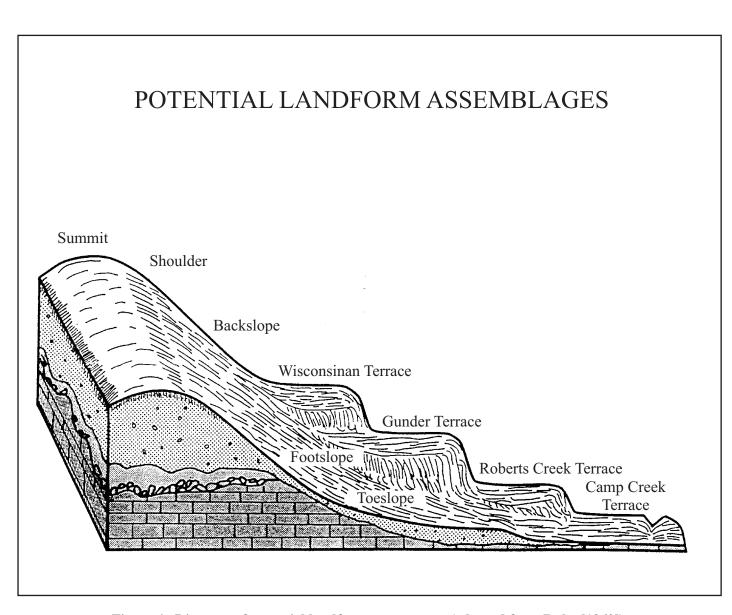


Figure 4. Diagram of potential landform components (adapted from Ruhe [1969]).



Figure 5. Soil map of the project area (NRCS 2021).



Figure 6. Lidar image of the project area.

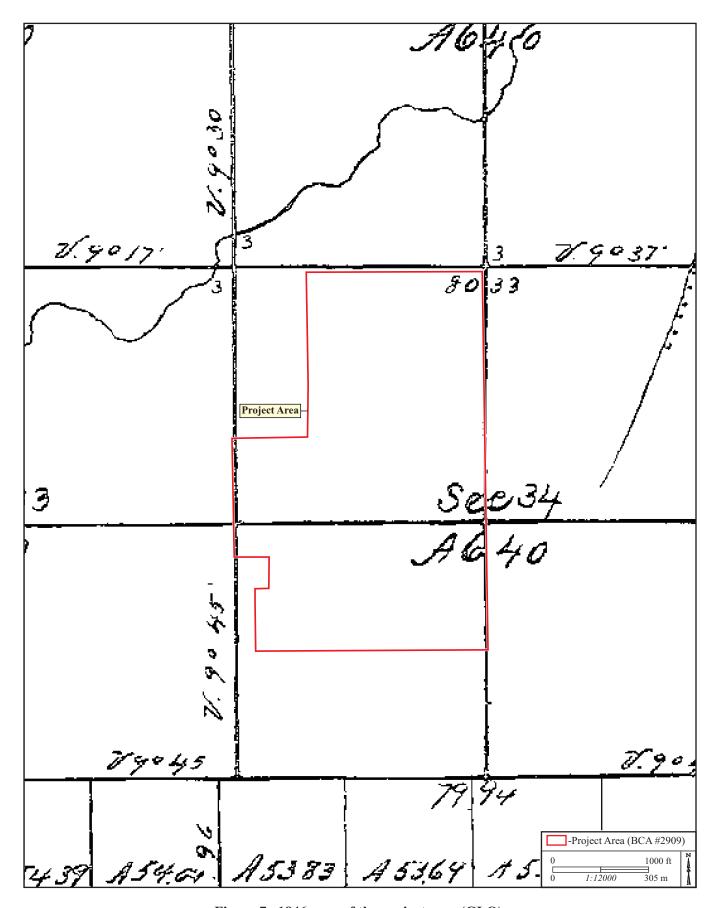


Figure 7. 1846 map of the project area (GLO).

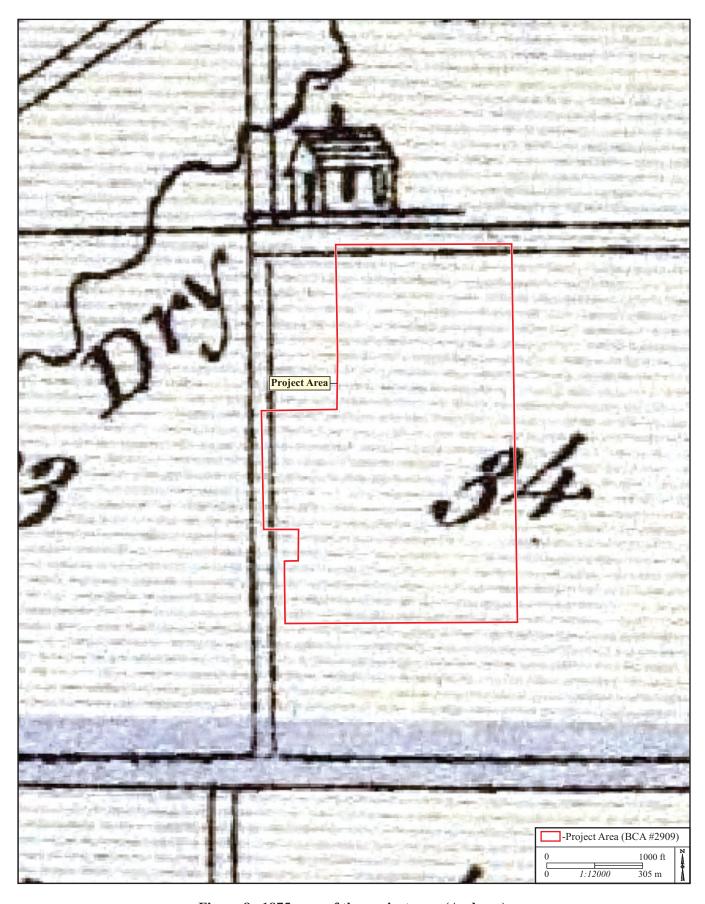


Figure 8. 1875 map of the project area (Andreas).

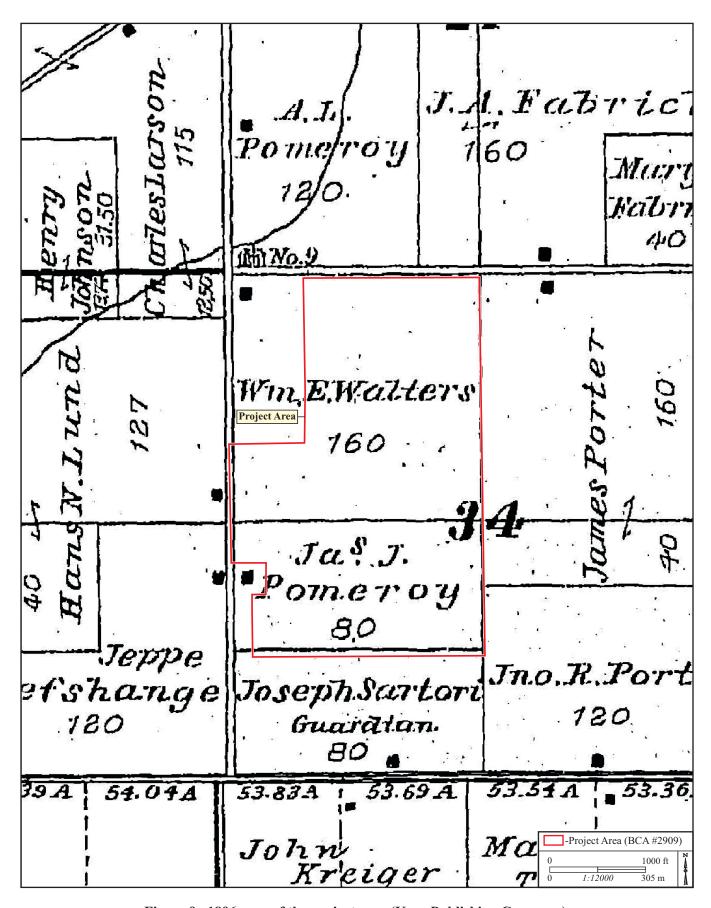


Figure 9. 1896 map of the project area (Kace Publishing Company).

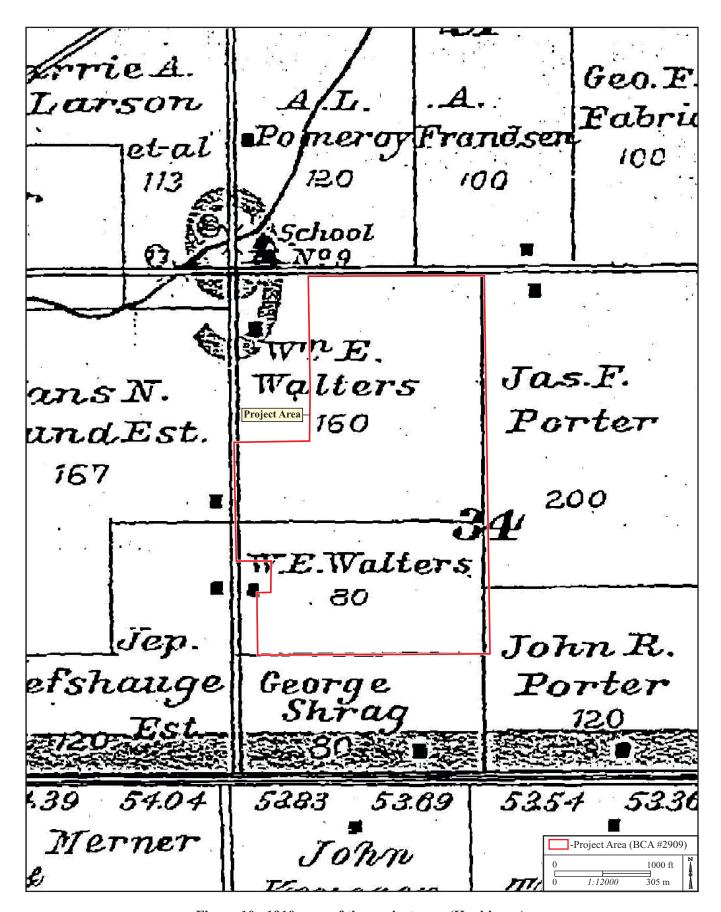


Figure 10. 1910 map of the project area (Huebinger).



Figure 11. 1937 aerial photograph of the project area.



Figure 12. 1970 aerial photograph of the project area.

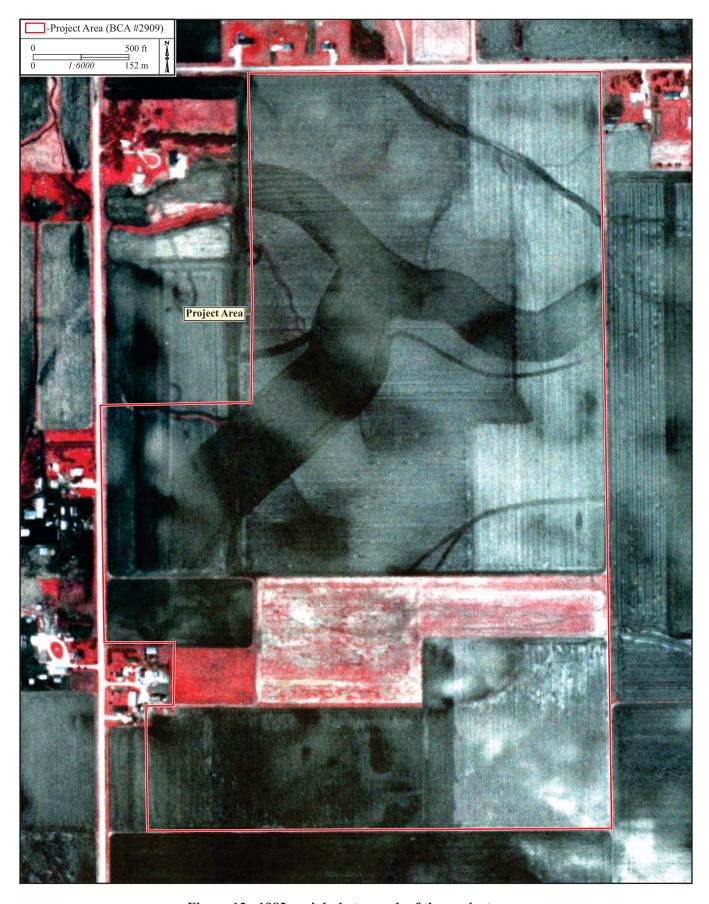


Figure 13. 1982 aerial photograph of the project area.



Figure 14. 1994 aerial photograph of the project area.



Figure 15. 2004 aerial photograph of the project area.

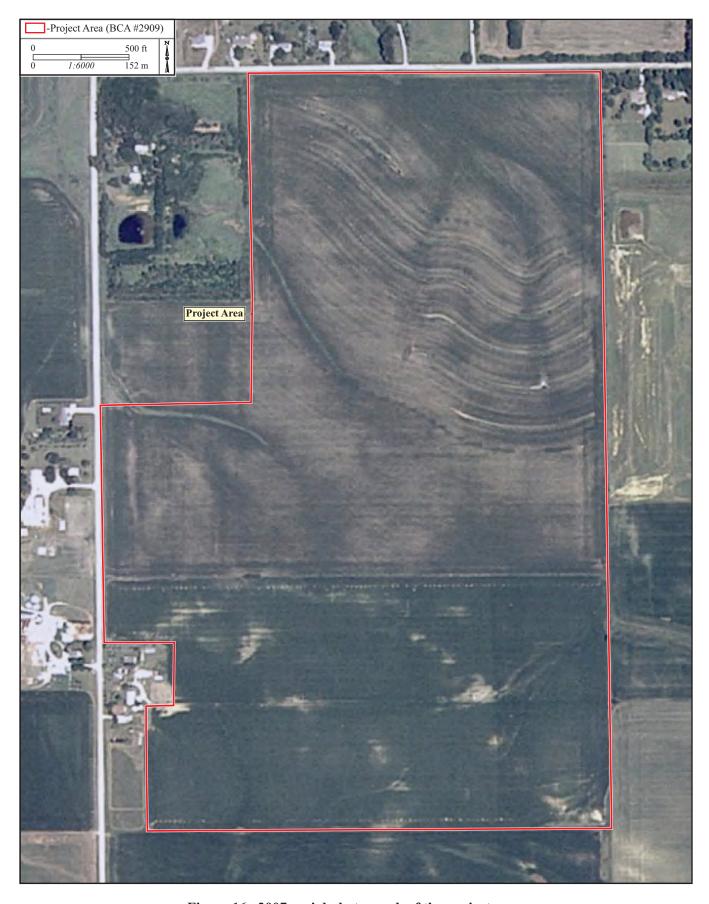


Figure 16. 2007 aerial photograph of the project area.

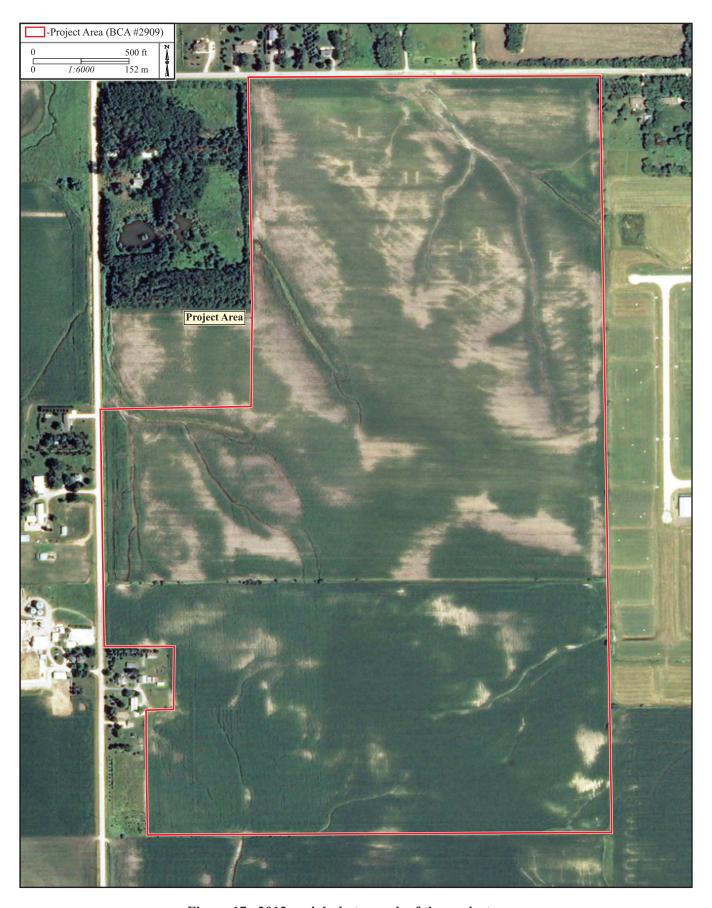


Figure 17. 2013 aerial photograph of the project area.



Figure 18. Western boundary of the project area within mown hay field. View to the north (6/23/21).



Figure 19. Southern boundary of the project area within mown hay field. View to the east (6/23/21).



Figure 20. Southwestern portion of the project area within mown hay field. View to the northeast (6/23/21).



Figure 21. Southern boundary of the project area within mown hay field. View to the west (6/23/21).



Figure 22. Western boundary of the project area within mown hay field. View to the north (6/23/21).



Figure 23. Southeastern portion of the project area within mown hay field. View to the northwest (6/23/21).



Figure 24. Central portion of the project area within mown hay field. View to the west (6/24/21).



Figure 25. Central portion of the project area within mown hay field. View to the east (6/24/21).



Figure 26. Western boundary of the project area within mown hay field. View to the north (6/24/21).



Figure 27. Eastern boundary of the project area within mown hay field. View to the north (6/24/21).



Figure 28. Northern portion of the project area within mown hay field. View to the west (6/25/21).



Figure 29. Eastern boundary of the project area within mown hay field. View to the south (6/25/21).



Figure 30. Drainage channel in the northern project area where SPs 1 and 2 were taken. View to the southwest (6/25/21).



Figure 31. Ridge spur where SP 3 was taken. View to the southwest (6/24/21).



Figure 32. Upland summit where SP 4 was taken. View to the east (6/23/21).



Figure 33. Footslope where SP 5 was taken. View to the north (6/23/21).



Figure 34. Footslope where SP 6 was taken. View to the west (6/23/21).



Figure 35. Ground surface visibility within the mown hay field (6/24/21).

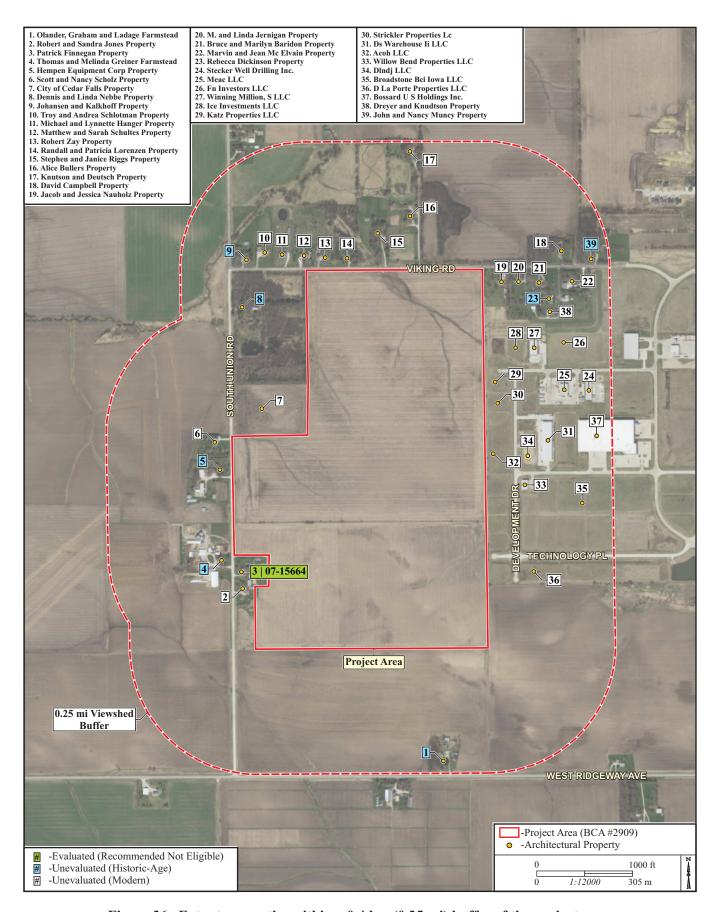


Figure 36. Extant properties within a 0.4 km (0.25 mi) buffer of the project area.



Figure 37. Coverage of Olander, Graham and Ladage Farmstead (Map ID 1). View to the north (6/22/21).



Figure 38. Coverage of Robert and Sandra Jones Property (Map ID 2). View to the east (6/22/21).



Figure 39. Coverage of Patrick Finnegan Property (07-15664; Map ID 3). View to the north (6/25/21).



Figure 40. Coverage of Thomas and Melinda Greiner Farmstead (Map ID 4). View to the west (6/22/21).



Figure 41. Coverage of Hempen Equipment Corp Property (Map ID 5). View to the west (6/22/21).



Figure 42. Coverage of Scott and Nancy Scholz Property (Map ID 6). View to the west (6/22/21).



Figure 43. Coverage of City of Cedar Falls Property (Map ID 7). View to the northeast (6/22/21).



Figure 44. Coverage of Dennis and Linda Nebbe Property (Map ID 8). View to the east (6/22/21).



Figure 45. Coverage of Johansen and Kalkhoff Property (Map ID 9). View to the north (6/22/21).



Figure 46. Coverage of Troy and Andrea Schlotman Property (Map ID 10). View to the north (6/22/21).



Figure 47. Coverage of Michael and Lynnette Hanger Property (Map ID 11). View to the north (6/22/21).



Figure 48. Coverage of Matthew and Sarah Schultes Property (Map ID 12). View to the north (6/22/21).



Figure 49. Coverage of Robert Zay Property (Map ID 13). View to the north (6/22/21).



Figure 50. Coverage of Randall and Patricia Lorenzen Property (Map ID 14). View to the north (6/22/21).



Figure 51. Coverage of Stephen and Janice Riggs Property (Map ID 15). View to the north (6/22/21).



Figure 52. Coverage of Alice Bullers Property (Map ID 16). View to the east (Beacon 2021).



Figure 53. Coverage of Knutson and Deutsch Property (Map ID 17). View to the northwest (Beacon 2021).



Figure 54. Coverage of David Campbell Property (Map ID 18). View to the north (6/22/21).



Figure 55. Coverage of Jacob and Jessica Nauholz Property (Map ID 19). View to the south (6/22/21).



Figure 56. Coverage of M. and Linda Jernigan Property (Map ID 20). View to the south (6/22/21).



Figure 57. Coverage of Bruce and Marilyn Baridon Property (Map ID 21). View to the south (6/22/21).



Figure 58. Coverage of Marvin and Jean Mc Elvain Property and Dreyer and Knudtson Property (Map ID 22 and 38). View to the southwest (6/22/21).

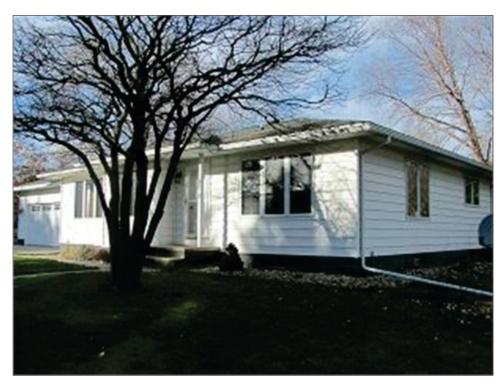


Figure 59. Coverage of Rebecca Dickinson Property (Map ID 23). View to the south (Beacon 2021).



Figure 60. Coverage of Stecker Well Drilling Inc. (Map ID 24). View to the southwest (6/22/21).



Figure 61. Coverage of Meac LLC (Map ID 25). View to the southwest (6/22/21).



Figure 62. Coverage of Fn Investors LLC (Map ID 26). View to the northwest (6/22/21).



Figure 63. Coverage of Winning Million, S LLC (Map ID 27). View to the northwest (6/22/21).



Figure 64. Coverage of Ice Investments LLC (Map ID 28). View to the northwest (6/22/21).



Figure 65. Coverage of Katz Properties LLC (Map ID 29). View to the west (6/22/21).



Figure 66. Coverage of Strickler Properties Lc (Map ID 30). View to the west (6/22/21).



Figure 67. Coverage of Ds Warehouse Ii LLC (Map ID 31). View to the east (6/22/21).



Figure 68. Coverage of Acoh LLC (Map ID 32). View to the west (6/22/21).



Figure 69. Coverage of Willow Bend Properties LLC (Map ID 33). View to the east (6/22/21).



Figure 70. Coverage of Dlndj LLC (Map ID 34). View to the southeast (6/22/21).



Figure 71. Coverage of Broadstone BCI Iowa LLC (Map ID 35). View to the northeast (6/22/21).



Figure 72. Coverage of D La Porte Properties LLC (Map ID 36). View to the south (6/22/21).



Figure 73. Coverage of Bossard U S Holdings Inc. (Map ID 37). View to the northwest (6/22/21).



Figure 74. Coverage of John and Nancy Muncy Property (Map ID 39). View to the north (Beacon 2021).

APPENDIX A National Archaeological Database Form

Database Doc Number:	
NATIONAL ARCHAEOLOGICAL DATABASE – REPORTS; DATA ENTRY FORM	

1.	R and C #:		
2.	Authors:	Schultz, Sarah, Janee Becker, and J	ared A. Langseth
	ar of Publicati Title	Phase I Cultural Resources Survey	and Reconnaissance Architectural Review of r the West Viking Road Industrial Park, Cedar Falls wa
4.	Report Title:	BCA Reports	
		Volume #: Report : Publisher: Bear Creek Archeolog Place: Cresco, Iowa 52136	•••
5.	Unpublished	Sent From: Sent To: Contract #:	
6.	Federal Agen	cy:	
7.	State: County: Town:	Iowa Black Hawk	
	Work Type: Keyword:	31 0 - Types of Resources / Features 2 - Taxonomic Names 4 - Geographic Names / Locations 6 - Project Names / Study Unit Historic sites Iowan Surface 80.9 ha (200 ac)	7 - Other Key Words [0][]
10.	. UTM Zone:	15 Easting:	Northing: Northing: Northing: Northing: Northing: Northing:
11.	. Township: Range:	89N 14W	

Other Publication 12. Monographs:	Name:								
13. Chapter:	In:		Firs	t:		_ La	ast: _		
	Volume:			Issue:			First:		Last:
15. Dissertation:	Degree:	Ph.D.	LL.D.	M.A.	M.S.	B.A.	B.S.	Institute	
16. Paper:	Meeting: Place:								
17. Other:	nce Line: _								
18. Site #:									
19. Quad Map:	Name <u>Hu</u>	dson, Io	wa					Date	1972

APPENDIX B Iowa Site Inventory Form

Iowa Site Inventory Form State Inventory Number: <u>07-15664</u> ⊠ New ☐ Supplemental **State Historic Preservation Office** 9-Digit SHPO Review & Compliance (R&C) Number: ☐ Non-extant Year: _____ (July 2014) Read the lowa Site Inventory Form Instructions carefully, to ensure accuracy and completeness before completing this form. The instructions are available on our website: http://www.iowahistory.org/historicpreservation/statewide-inventory-and-collections/iowa-site-inventory-form.html **Property Name** A) Historic name: Patrick Finnegan Property B) Other names: Location A) Street address: 2603 South Union Road B) City or town: Cedar Falls (Vicinity) County: Black Hawk C) Legal description: Rural: Township Name: Cedar Falls Township No.: 89 Range No.: 14 Section: 34 Quarter: NW of Quarter: SW Urban: Subdivision: ____ Block(s): ____ Lot(s): ____ Classification A) Property category: Check only one B) Number of resources (within property): If eligible property, enter number of: If non-eligible property, □ Building(s) Contributing Noncontributing enter number of: ☐ District ☐ Site Buildings 5 Buildings ☐ Structure Sites Sites ☐ Object Structures Structures Objects Objects Total Total C) For properties listed in the National Register: National Register status: Listed De-listed NHL NPS DOE D) For properties within a historic district: ☐ Property contributes to a National Register or local certified historic district. ☐ Property contributes to a potential historic district, based on professional historic/architectural survey and evaluation. Property *does not* contribute to the historic district in which it is located. Historic district site inventory number: Historic district name: E) Name of related project report or multiple property study, if applicable: MPD title Historical Architectural Data Base # see attached continuation sheet Function or Use Enter categories (codes and terms) from the lowa Site Inventory Form Instructions A) Historic functions **B)** Current functions 01A01 Residence 01A01 Residence 09 Agriculture **Description** Enter categories (codes and terms) from the lowa Site Inventory Form Instructions A) Architectural classification B) Materials 01 No Style Foundation (visible exterior): Walls (visible exterior): Vinyl Roof: Asphalt Other: ____

C) Narrative description ⋈ SEE CONTINUATION SHEETS. WHICH MUST BE COMPLETED

Site Number: 07-15664 Address: 2603 South Union Road	City: Cedar Falls County: Black Hawk District Number:
Statement of Significance A) Applicable National Register Criteria: Mark your opinion Criterion A: Property is associated with significant events. Criterion B: Property is associated with the lives of significant per Criterion C: Property has distinctive architectural characteristics. Criterion D: Property yields significant information in archaeology.	 Yes No More research recommended rsons. Yes No More research recommended Yes No More research recommended
B) Special criteria considerations: Mark any special consult ☐ A: Owned by a religious institution or used for religious purpour ☐ B: Removed from its original location. ☐ C: A birthplace or grave. ☐ D: A cemetery	
C) Areas of significance Enter categories from instructions 01 Agriculture	D) Period(s) of significance
E) Significant dates Construction date 1900 ⊠ check if circa or estimated date Other dates, including renovations	F) Significant person Complete if Criterion B is marked above
G) Cultural affiliation Complete if Criterion D is marked above	H) Architect/Builder Architect
	Builder/contractor
• Geographic Data Optional UTM references ☐ See conting Zone Easting Northing NAD Zone 1 15 541544 4702689 1983 2 4 • Form Preparation	nuation sheet for additional UTM or comments Easting Northing NAD
Name and Title: Sarah Schultz and Jared Langseth Organization/firm: Bear Creek Archeology, Inc. Street address: P.O. Box 347 City or Town: Cresco	Date: 6/29/2021 E-mail:bca@bearcreekarcheology.com Telephone: 563-547-4545 State: lowa Zip code: 52136
unique photo number. 3. Photo key showing each photo number on a manumber to indicate the location and directional views.	in the Iowa Site Inventory Form Instructions: operty/building name, address, date taken, view shown, and op and/or floor plan, using arrows next top each photo
B) For State Historic Tax Credit Part 1 Applications, he See lists of special requirements and attachments in t	istoric districts and farmsteads, and barns:
State Historic Preservation Office (SHPO) Use Only Bo The SHPO has reviewed the Site Inventory and concurs with ab ☐ Yes ☐ No ☐ More research recommen ☐ This is a locally designated property or part of a loc	ove survey opinion on National Register eligibility: nded
Comments:	

Iowa Site Inventory Form State Historic Preservation Office Continuation Sheet

Site Number: <u>07-15664</u> Related District Number:

Page 1

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City

Narrative

Located east of South Union Road, Cedar Falls, Iowa, this one-story side-gabled frame house was built in ca. 1900 (Beacon 2021). The house originally appeared to be a part of a farmstead that was first plotted as early as 1896 (Kace Publishing Company) on the plat map. Aerial photographs from as early as 1937 show the extant house with multiple agricultural outbuildings surrounding it.

The house is seated on a full basement with asphalt shingling and lapped vinyl siding. Multiple additions have been added eastern side of the house, including a southward facing enclosed shed roof porch and a northward facing one-story front-gabled frame addition. Both the house and enclosed porch have received extensive modifications, including the installation of modern windows, doors, asphalt shingling, and lapped vinyl siding. The house is of vernacular design and lacks distinctive characteristics of any particular style or time period.

Surrounding the house are two detached garages, a corn crib, and a steel utility building. The larger one-story side-gabled single car garage was constructed in 1950, while the smaller one-story side-gabled garage was constructed in 1975 (Beacon 2021). Both garages have asphalt shingling and lapped vinyl siding. The one-story front-gabled corn crib was constructed in 1941 and has originally had a wood lap exterior, which has since been covered or replaced with metal siding and the roof has also been replaced with metal sheeting (Beacon 2021). The one-story side-gabled steel utility building was constructed in 1974 and features four stall garage doors, metal siding, and a metal roof. All other structures that historically were associated with the farmstead have been razed in recent years.

Historically, the parcel was owned by Jas. J. Pomeroy (Kace Publishing Company 1896). The parcel in the 1896 (Kace Publishing Company) plat map contained a residence near the location of the current residence. James Pomeroy is listed on the 1895 Iowa State Census (Familysearch.org 2021a) as living in Cedar Falls Township, Black Hawk County, with an occupation of farming. It is possible that the current structure was originally built in or prior to 1896, as the assessor's information only provides a generic 1900 construction date (Beacon 2021). The 1910 (Huebinger) plat map shows the parcel owned by W. E. Walters. William E. Walters is listed on the 1910 United States Census (Familysearch.org 2021b) as living in Cedar Falls Township, Black Hawk County, with an occupation of farming. This investigation did not uncover information on these previous owners to indicate that they were of historic significance to the local community (Hartman 1915a; Hartman 1915b; Iagenweb.org 2021; Western Historical Company 1878).

Statement of Significance

This house has undergone significant alterations in the form of additions, remodeling, and modern external treatments. Further, the house no longer retains any distinctive characteristics and many of the buildings in the surrounding area have been replaced or substantially altered, including the removal of many of the associated farm outbuildings. Additionally, information uncovered during this investigation does not suggest that people or events of local historical significance occurred on the property. It is recommended that the property is not eligible for nomination to the NRHP. No further cultural resources work is recommended.

Iowa Site Inventory Form State Historic Preservation Office Continuation Sheet

Site Number: <u>07-15664</u> Related District Number:

Page 2

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City

References:

Beacon

2021 Beacon Local Government GIS Website, Black Hawk County Iowa Parcel 891434301008. Electronic document, http://beacon.schniedercorp.com/, accessed June 2021.

Familysearch.org

2021a Iowa State Census, 1895. Electronic document, https://www.familysearch.org/ark:/61903/3:1:939V-5G1K-3?i=188&personaUrl=%2Fark%3A%2F61903%2F1%3A1%3AVT3V-GV2, accessed September 2021.

2021b U.S. Census, 1910. Electronic document, https://www.familysearch.org/ark:/61903/3:1:33SQ-GRKM-JZH?i=17&cc=1727033&personaUrl=%2Fark%3A%2F61903%2F1%3A1%3AML1S-2ZR, accessed September 2021.

Hartman, John C. (editor)

1915a History of Black Hawk County, Iowa and its People. Vol. I. The S. J. Clarke Publishing Company, Chicago.

1915b History of Black Hawk County, Iowa and its People. Vol. II. The S. J. Clarke Publishing Company, Chicago.

Huebinger, Melchior

1910 Atlas of Black Hawk County, Iowa. The Iowa Publishing Company, Des Moines.

Iagenweb.org

2021 Black Hawk County IAGenWeb. Electronic document, http://iagenweb.org/blackhawk/, accessed September 2021.

Kace Publishing Company

1896 Illustrated Atlas of Black Hawk County, Iowa. The Kace Publishing Company, Racine, Wisconsin.

Schultz, Sarah, Janee Becker, and Jared A. Langseth

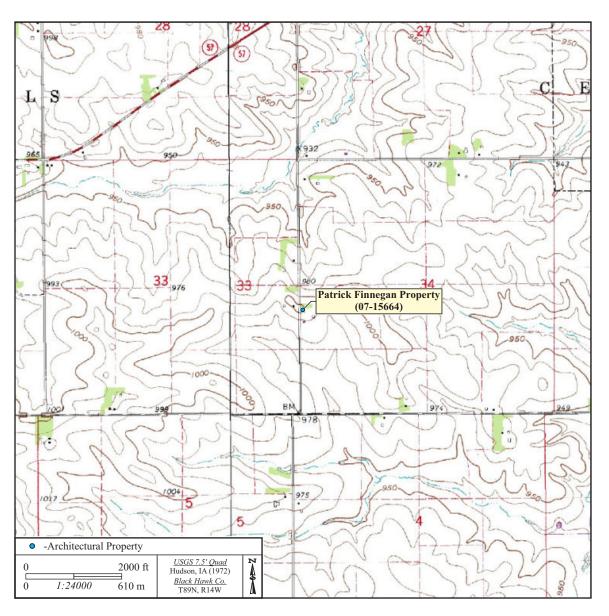
2021 Phase I Cultural Resources Survey and Reconnaissance Architectural Review of Properties Within .4 km (.25 mi) for the West Viking Road Industrial Park, Cedar Falls Township, Black Hawk County, Iowa. BCA 2909. Bear Creek Archeology, Inc., Cresco, Iowa.

Western Historical Company

1878 The History of Black Hawk County, Iowa. The Western Historical Company, Chicago.

Page 3

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Topographic map of the property.

Page 4

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Scale map of the property.

Site Number: <u>07-15664</u> Related District Number:

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Coverage of the house. View to the north (6/25/21).



Coverage of the house. View to the northeast (6/25/21).

Site Number: <u>07-15664</u> Related District Number:

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Coverage of the house. View to the east (6/25/21).



Coverage of the house. View to the southeast (6/25/21).

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Coverage of the house. View to the northwest (6/25/21).



Detached garages located east of the house. View to the north (6/25/21).

Site Number: <u>07-15664</u> Related District Number:

Patrick Finnegan Property	Black Hawk
Name of Property	County
2603 South Union Road	Cedar Falls
Address	City



Corn crib east of the house. View to the northeast (6/25/21).



Steel utility building southeast of the house. View to the south (6/25/21).