



Minnesota Department of Transportation

Office of Environmental Stewardship

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September 26, 2016

Chad Hanson  
MnDOT District 6  
2900 48<sup>th</sup> Street NW  
Rochester, MN 55901

Re: S.P. 2514-114. TH 61/Spring Creek Avenue intersection reconstruction, Goodhue County

Dear Mr. Hanson:

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the 2005 Section 106 Programmatic Agreement between the FHWA and the Minnesota State Historic Preservation Office (SHPO). The Section 106 review fulfills MnDOT's responsibilities under the Minnesota Historic Sites Act (MS 138.665-.666), the Field Archaeology Act of Minnesota (MS 138.40); and the Private Cemeteries Act (MS 307.08, Subd. 9 and 10).

This project will reconstruct the TH 61/Spring Creek Avenue (CR 53) intersection and related roads in Red Wing. An archaeological survey of the area of potential effects (APE) was undertaken in 2016 by Two Pines Resource Group, LLC. In a report entitled *Phase I Archaeological Survey for the TH 61/Spring Creek Avenue Project, Goodhue County, Minnesota*, they concluded that there were no archaeological sites identified during the survey. A records search and field review of the APE in 2016 by MnDOT cultural resources unit staff did not identify any eligible or potentially eligible architectural properties.

Based on our existing programmatic agreements with various tribal groups, there are no tribes that want to be consulted on projects in this area of the state and/or projects with the proposed scope of work.

The finding of this office is that there will be **no historic properties affected** by the project as currently proposed. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Johnson'.

Craig Johnson  
Archaeologist  
Cultural Resources Unit (CRU)

Attachment

cc: MnDOT CRU Project File

## **MANAGEMENT SUMMARY**

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In August of 2016, Two Pines Resource Group, LLC (Two Pines) completed a Phase I archaeological survey for the planned Trunk Highway (TH) 61 and Spring Creek Avenue Project within the city of Red Wing in Goodhue County, Minnesota. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resource Unit (CRU) of the department. The proposed project will improve safety of the TH 61/Spring Creek Avenue intersection through reconstruction and access management.

The purpose of the Phase I archaeological survey was to determine if the project's area of potential effects (APE) contains any intact archaeological resources that may be eligible for listing on the National Register of Historic Places. The APE for the archaeological survey are the planned construction limits as indicated on the plan set dated March 18, 2016. The APE includes portions of Sections 23, 26, and 27 of T113, R15W. While the project is located within an area known for having significant precontact archaeological resources, due to past disturbance from highway construction; as well as commercial and residential development, the majority of the project APE has a low potential for containing intact archaeological resources. The project area is located within the Southeast Riverine East sub-region. Dr. Michelle Terrell served as the Principal Investigator.

During the Phase I archaeological survey for the TH 61/Spring Creek Avenue Project, no archaeological sites were identified within the project APE. Based on these findings, Two Pines does not recommend any additional archaeological investigations prior to or during the TH 61/Spring Creek Avenue Project.



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## INTRODUCTION

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In August of 2016, Two Pines Resource Group, LLC (Two Pines) completed a Phase I archaeological survey for the planned Trunk Highway (TH) 61 and Spring Creek Avenue Project within the city of Red Wing in Goodhue County, Minnesota. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resource Unit (CRU) of the department. The purpose of the Phase I archaeological investigations was to determine if the project's area of potential effects (APE) contains any intact archaeological resources that may be eligible for listing on the National Register of Historic Places (NRHP).

### PROJECT DESCRIPTION

The TH 61/Spring Creek Avenue Project is located within the city of Red Wing in Goodhue County, Minnesota. The undertaking will reconstruct the above intersection to improve safety. The proposed project will improve safety of the TH 61/Spring Creek Avenue intersection through reconstruction and access management. Per the early notification memo for the project, "the project involves closure of one public street and two private accesses on TH 61, realignment of the skewed Spring Creek Avenue intersection, traffic signal installation, and several frontage and local road improvements."

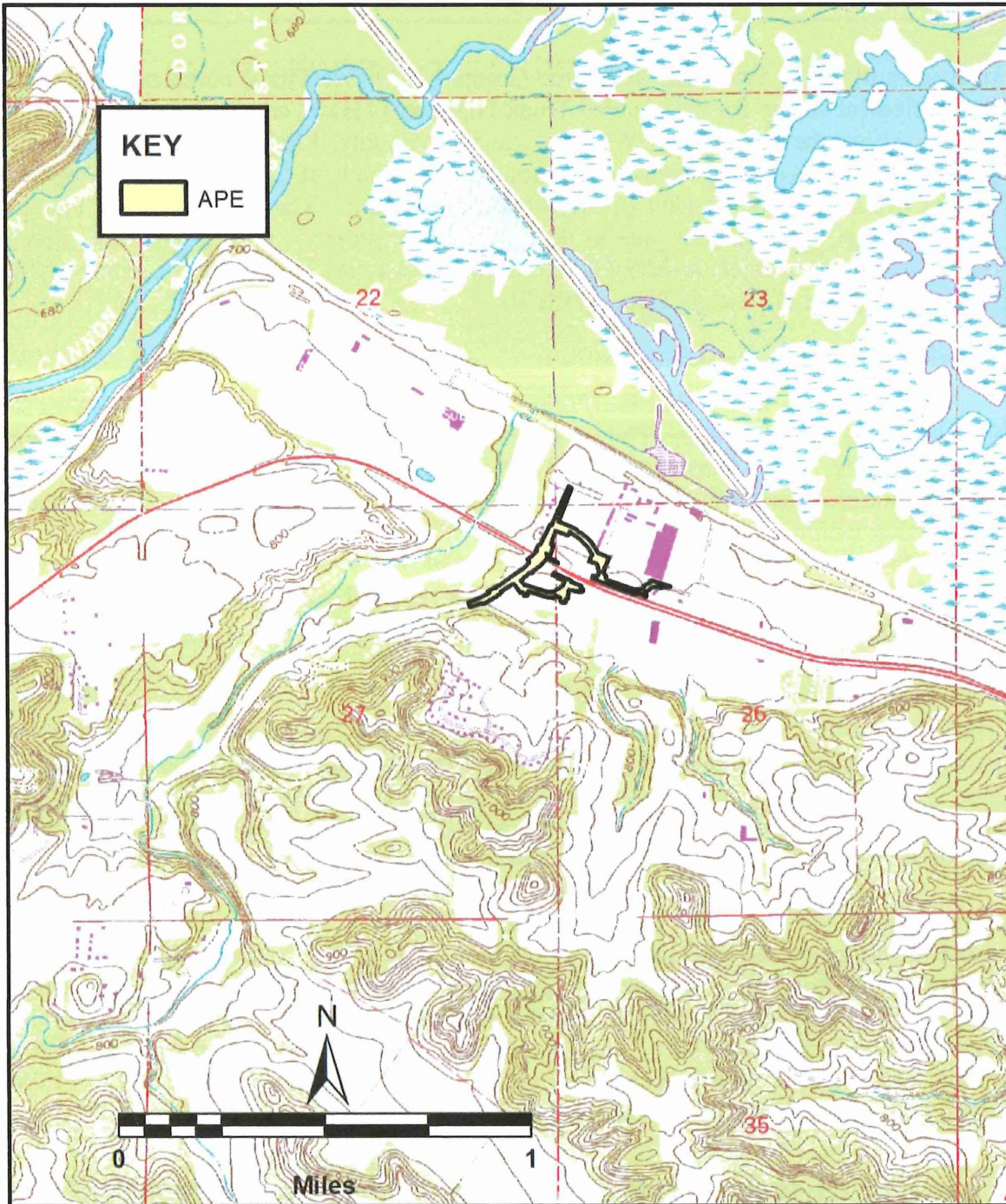
### AREA OF POTENTIAL EFFECTS (APE)

The APE for the archaeological survey is the proposed construction limits within the existing and planned right-of-way (ROW) at the intersection of TH 61, and Spring Creek Road/Avenue and any construction easements associated with the realignment of the intersections and associated frontage roads as indicated on the draft layout dated March 18, 2016 (Figure 1). The project APE is located within an urban environment.

The UTM (NAD 83, Zone 15) coordinates of the project area are as follows: the westernmost point along TH 61 – 4935285E 532297N; the southernmost point along Spring Creek Road S – 4935084E 532047N; northernmost point along Spring Creek Avenue N – 4935546E 532453N; and the easternmost point along the North Service Drive – 4935155E 532830N. These coordinates were determined electronically using Acme Mapper. The APE includes portions of Sections 23, 26, and 27 of T113, R15W. Legal locations for the APE are provided in Table 1.

**TABLE 1. LEGAL LOCATIONS FOR THE TH 61/SPRING CREEK AVENUE PROJECT APE**

Township	Range	Section	Quarter Sections
113N	15W	23	SW-SW-SW
113N	15W	26	NW-NW
113N	15W	27	NE-NE



**FIGURE 1. PROJECT LOCATION ON COMPOSITE USGS 7.5 MINUTE TOPOGRAPHIC MAP SERIES**

## RESEARCH DESIGN

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All work was conducted in accordance with the *MnDOT's Cultural Resources Unit Project and Report Requirements* (MnDOT 2015), the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), the *State Archaeologist's Manual for Archaeological Projects in Minnesota* (Anfinson 2011), and the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (National Park Service 2002).

### OBJECTIVES

The purpose of the Phase I archaeological survey was to determine whether the project's APE contains any intact archaeological resources that may be potentially eligible for listing on the NRHP. The NRHP criteria, summarized below, were used to assess the significance of documented archaeological sites. While all four criteria are considered, archaeological sites are typically eligible for listing in the NRHP under Criterion A or D.

- Criterion A – association with events that have made a significant contribution in our past;
- Criterion B – association with the lives of persons significant in our past;
- Criterion C – embodiment of the distinctive characteristics of a type, period, or artistic values; or representation of the work of a master; possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D – potential to yield information important to prehistory or history (National Park Service 2002).

### LITERATURE SEARCH

Prior to fieldwork, staff from Two Pines conducted background research in the holdings of the State Historic Preservation Office (SHPO) and Minnesota Historical Society (MNHS). Sources examined during this research included files of previously identified archaeological sites within a one-mile (1.6 km) radius of the project area, reports documenting previous surveys, and historical maps of the study area. Additional historical maps, as well as historical aerial photographs and current topographic maps were reviewed online. This research was conducted in order to identify those portions of the project area that have a higher potential for containing intact archaeological resources.

### PHASE I ARCHAEOLOGICAL SURVEY

The Phase I archaeological survey commenced with visual inspection of the entire project corridor. The purpose of this inspection was to identify any surface features, such as extant foundations within the project area, as well as to assess those portions of the project area that have a moderate to high potential for containing intact archaeological



sites. In general, areas considered to have moderate to high archaeological potential include any undisturbed portions of the project area that are:

- within 500 feet (ft.) (150 meters [m]) of an existing or former body of water of 40 acres (19 hectares) or greater in size;
- within 500 feet (ft.) (150 meters [m]) of an existing or former perennial stream;
- located on a topographically prominent landscape feature; or
- located within 300 ft. (100 m) of a previously reported site or a former or existing historic structure or feature.

Portions of the project area that are considered to have low archaeological potential include soils that are inundated, slopes of greater than 20 degrees, previously disturbed areas, and areas where the naturally occurring post-glacial soils and sediments have been removed (Anfinson 2005:29).

Those portions of the project area that were assessed as having the potential to contain intact archaeological sites but which afforded less than 25 percent surface visibility underwent systematic shovel testing. Shovel tests are 30 to 40 centimeter (cm) (12 to 15 inch) in diameter holes manually excavated at regular intervals along evenly spaced transects in order to identify subsurface archaeological resources. During this project, a 15-meter (m) shovel-testing interval was used. All soils removed from excavated shovel tests were screened through ¼-inch mesh. Shovel tests were excavated through all post-glacial soils and sediments to culturally sterile subsoil or to a maximum depth of 100 centimeters below the surface (cmbs) depending on which condition was first encountered.

Data gathered during the survey were recorded on shovel test forms and in the field notebook of the Principal Investigator. Items noted included: the location of survey areas; the location of individual shovel tests; the depth of each shovel test and its associated soil profile; the presence or absence of cultural materials within each test; and the excavated soil texture, inclusions, and Munsell color.

#### **GEOGRAPHIC INFORMATION SYSTEM DATA**

A geographic information system (GIS) data layer was created during the course of the archaeological investigations. The locations of all individual shovel tests, excavations trenches, and surface finds were recorded using a Trimble GeoXT<sup>®</sup> GPS Unit. The data were differentially corrected using a National Geodetic Survey (NGS) continuously operating reference station (CORS).

#### **LABORATORY ANALYSIS AND CURATION**

No artifacts were recovered from within intact deposits during this survey.

## **LITERATURE SEARCH RESULTS**

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Prior to fieldwork, staff from Two Pines conducted background research during which resources examined included files of previously identified archaeological sites and survey reports within a one-mile (1.6 km) radius of the project area, and aerial photographs and historical maps of the study area. This research was conducted in order to identify those portions of the project area that have a higher potential for containing intact archaeological sites.

### **PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS**

Background research conducted at the SHPO revealed that the TH 61/Spring Creek Road Project's APE has not undergone any systematic field investigations prior to this study.

In 1984 and 1985, the Institute for Minnesota Archaeology (IMA) conducted an intensive survey and inventory of archaeological sites within the City of Red Wing (Dobbs 1985). During the course of this project, information on previously identified archaeological resources was reviewed, reported sites were field-checked, and an additional 760 acres were surveyed that had not been previously examined. Twenty sites were documented during the course of this survey (Dobbs 1985:2). A map of the IMA's survey locations was not included in the report, but no sites were identified within the project APE during their study.

### **PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES**

Background research conducted at the SHPO revealed that there are no archaeological sites that have been previously recorded within the project APE. Twenty-three previously recorded sites are located within a mile (1.6 km) of the project APE (Table 2).

Of the previously identified 23 sites within a 1-mile radius of the project area, 15 are recorded mound groups and two are mound groups with associated artifact scatters. These mound groups tend to be located along the terrace edge of the Mississippi River floodplain or on uplands overlooking the mouth of the Cannon River. The majority of these earthworks were recorded during the late nineteenth century and reported in Winchell (1911). Other site types included the significant Plains Village/Mississippian Silvernale village site at the mouth of the Cannon River, two additional precontact artifact scatters, two lithic scatters, and a cairn.

Of the previously identified sites, the most proximate to the project APE are 21GD25, 21GD116, and 21GD165. Site 21GD25 is a collection of five mounds located approximately 350 feet north of the closest portion of the project APE (Winchell 1911:159). Located about 775 feet north of the nearest portion of the project, 21GD116 is an artifact scatter documented along the edge of the Mississippi River valley. Recovered pottery sherds indicate Transitional Woodland and probable Mississippian (Silvernale) associations. Site 21GD165 is a sparse lithic scatter consisting of a

**TABLE 2. PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES WITHIN ONE-MILE OF THE APE**

Site No.	T	R	S	¼ Section	Site Type (Site Name)
21GD3	113N	15W	22	S; NW	Multi-component village site (Silvernale)
21GD16	113N	15W	22	SE-SW; SW-SE	Earthwork (A.P. Anderson Park Mounds)
21GD17	113N	15W	22	N-SW; S-NW; SE-SW; W-SE	Earthwork (Silvernale Mound Group / Industrial Park Mounds)
21GD18	113N	15W	26	SE-NE; SW-NE	Earthwork (Riverview Mounds)
21GD21	113N	15W	26	SW-SE	Earthwork (McCrea Mounds)
21GD22	113N	15W	21	SE-SE; SW-SE; NE-SE	Earthwork (Spates Mound Group)
21GD23	113N	15W	27	SW-NE; NW-SE	Earthwork (Red Wing Junction Mounds)
21GD24	113N	15W	25	NW-SW	Earthwork (Hay Creek Mounds I)
21GD25	113N	15W	23	SW-SW; SE-SW	Earthwork (Chicago Great Western Mounds)
21GD27	113N	15W	28	SW-NW	Earthwork (Fox Farm Mounds)
21GD29	113N	15W	27	NE-SW	Earthwork (A. Charlson Mound)
21GD37	113N	15W	27	NW-SW	Earthwork (Serpentine Mounds I)
21GD38	113N	15W	27	SW-SW; SE-SW	Earthwork and artifact scatter (Serpentine Mounds II)
21GD40	113N	15W	34	NW-NE; SE-NE; SW-NE	Earthwork (W. Strusz Mounds II)
21GD54	113N	15W	27	SW-SW	Earthwork (W. Strusz Mounds III)
21GD95	113N	15W	34	NE-NW	Artifact scatter (Strusz Village)
21GD116	113N	15W	23	S-SW-SE-SW	Artifact scatter (Sargent / Chicago Great Western)
			26	N-NE-NW	
21GD155	113N	15W	28	NE-SE; SE-NE	Lithic scatter (Charlson)
21GD165	113N	15W	27	NW-NE	Lithic scatter (E. Tomfohr)
21GD182	113N	15W	22	NW-SE, NE-SE	Earthwork and artifact scatter (Cannon River Drive)
21GD261	113N	15W	34	NW-NE	Earthwork (DNR-SNA Mound 1)
21GD262	113N	15W	34	NW-NE	Earthwork (DNR-SNA Mound 2)
21GD263	113N	15W	34	NW-NE	Cairn (DNR-SNA Cairn 1)

projectile point, a scraper and two flakes located approximately 1600 feet west of the project APE. This site was identified within the Spring Creek Valley during a pedestrian survey conducted during the IMA's survey of the City of Red Wing (Dobbs 1985:34, 91).

## **ARCHAEOLOGICAL SITE POTENTIAL**

The assessment of an area's potential to contain archaeological resources consists of an analysis of terrain, water sources, and other environmental and landscape conditions in and adjacent to that area as they were historically. Areas that were occupied by water, permanently or frequently inundated (e.g., wetlands, floodplains), poorly drained, or exhibited slopes of greater than 20 percent would have been inhospitable to human occupation and are therefore considered to have low potential for containing archaeological resources.

### ***Precontact Site Potential***

Generally, areas with greater potential for containing precontact archaeological resources are in proximity, typically less than 500 ft., to a water source or wetland, though the

applicability of this condition varies depending on the nature of the water source (perennial versus intermittent), the size of the body of water, the extent of the floodplain, and the availability of other water sources in the vicinity, i.e., proximity to a small pond may be less indicative of archaeological potential if a large lake is nearby. Topographic prominence is also frequently indicative of high precontact archaeological potential, though relative topographic prominence as a gauge of archaeological potential often is tied to other conditions, such as proximity to water. Proximity to previously recorded precontact archaeological sites often suggests high potential for precontact resources, insomuch as previously recorded sites may not have been fully defined or as the areas around previously recorded sites are typically subject to similar environmental/landscape conditions. The absence, however, of precontact archaeological sites in an area does not necessarily point to low archaeological potential, given that that area may not have been subject to previous survey.

The previous identification of numerous precontact archaeological sites within a one-mile (1.6 km) radius of the project area indicates a potential for sites of this type to be present within the TH 61/Spring Creek Road Project APE. Earthworks are present on the surrounding uplands and terrace edges, while the multi-component Silvernale site is located to the west of the project area overlooking the junction of the Cannon River with the Mississippi River valley. Due to the proximity of the project area to Spring Creek and the Mississippi River valley, undisturbed portions of the project APE have moderate to high potential to contain precontact archaeological resources.

#### ***Historical-Period Site Potential***

Areas nearest to former and/or existing historical-period buildings, structures, or other features are generally considered to have higher potential for containing historical-archaeological resources. These areas are not limited to the locations of buildings, as often the most important information comes from deposits within associated features, such as privies, cisterns, or middens, which were located away from primary buildings, usually to the rear of the dwelling or business structures.

No historical-archaeological sites have been previously recorded in, or within one mile of, the TH 61/Spring Creek Road Project APE. While the project area is located along an historic roadway, this region to the west of Red Wing remained rural until residential tracts and industries were developed along this section of the highway beginning in the mid-twentieth century. A review of historical maps and aerial photographs did not indicate the presence of any potentially significant historical-period archaeological resources within the project area. Residences that have or will be taken for the project date to 1949, 1956, and 1988. Based on the results of the literature search, the TH 61/Spring Creek project APE has a low potential for containing intact archaeological deposits related to the early history of the Red Wing area.

## **DEVELOPMENT OF TRUNK HIGHWAY 61**

According to the 1854 General Land Office plat map of the TH 61/Spring Creek Road project area, the section of TH 61 within the APE follows the alignment of the original "Road from St. Paul to Red Wing." The MnDOT project construction logs indicate that the roadway was incorporated into the state's highway system in 1920 and was upgraded within the project area to a divided highway in 1952/53. In 1983, the turn lanes and shoulders along this section were modified.

## **ENVIRONMENTAL HISTORY**

The TH 61/Spring Creek Road Project is located within the Southeast Riverine East archaeological sub-region. The following environmental history of this sub-region is based largely on information contained in Borchert and Gustafson's (1980) *Atlas of Minnesota Resources and Settlement* and an overview entitled "Minnesota's Environment and Native American Culture History" by Gibbon et al. (2002).

The Southeast Riverine region covers most of southeastern Minnesota and continues into the adjacent corners of Wisconsin and Iowa. This region was not glaciated during the Late Wisconsin Ice Age and is characterized by a stream-dissected terrain. The Southeast Riverine East sub-region parallels the Mississippi River south from its junction with the St. Croix River and includes portions of Dakota, Goodhue, Wabasha, Winona, and Houston counties.

The soils in the eastern part of the region are fine-textured forest and prairie soils formed on loess deposits over Paleozoic bedrock. The climate within this region has an average annual precipitation range of 28 and 30 inches. January highs average 23 degrees Fahrenheit (F), while July highs average 85 degrees F. The frost-free season averages 160 days.

During the Late Holocene, forests of elm, ash, and cottonwood lined the river lowlands, while "Big Woods" forests of maple, elm, and basswood occupied the uplands near the Mississippi River. Within the current project area, mixed grassland and hardwood forest was present at the time of initial EuroAmerican contact.

Late Holocene subsistence resources in this region consisted of deer, elk, and occasional bison in the uplands. Mussels, fish, waterfowl, and edible aquatic plants were available in the bottomlands, particularly along the Mississippi River, while prairie turnips and acorns were present on the uplands and savannas of the region.

## PHASE I ARCHAEOLOGICAL SURVEY RESULTS

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The Phase I archaeological fieldwork for the TH 61/Spring Creek Avenue Project was conducted in August of 2016. The following archaeological work summary consists of a description of the fieldwork results by survey area.

### OVERVIEW

The proposed TH 61/Spring Creek Avenue Project will reconfigure the intersections of TH 61 with Spring Creek Avenue and Carol Lane. Historical aerial photographs indicate that due to past disturbance from commercial development, utility installation, road construction, as well as residential development, the majority of the proposed project APE has a low potential for containing intact archaeological resources. However three open parcels with the potential to contain intact archaeological resources underwent archaeological survey.

### SURVEY AREAS

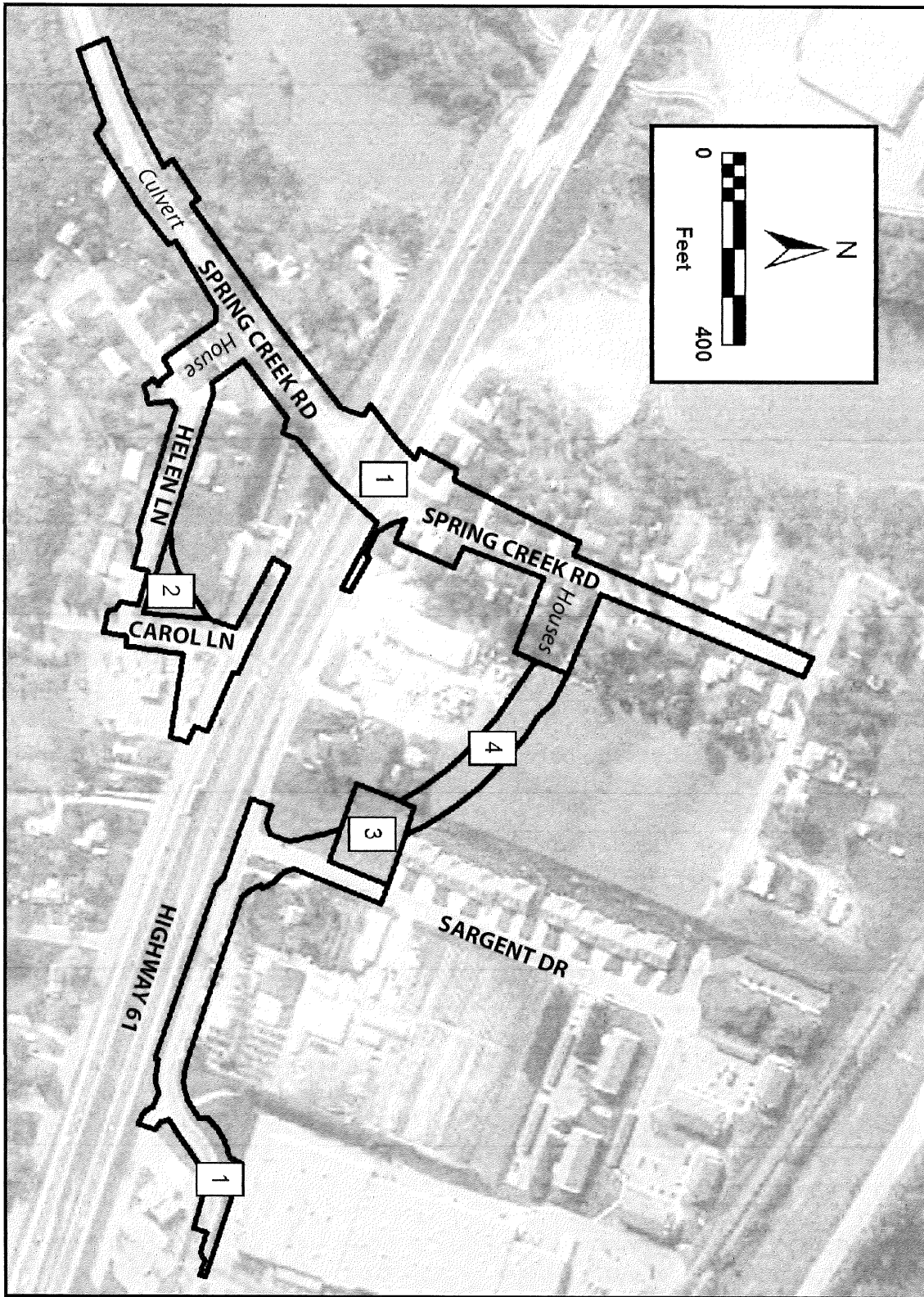
#### *Area 1*

Area 1 consists of the entire project APE with the exception of Area 2-4 discussed below (Figure 2). This portion of the APE is confined to existing ROW and/or has been disturbed by past commercial or residential development as well as the installation of associated utilities. Field examination of a widening within the APE along Spring Creek Road revealed a culvert and associated gully to the east and west of the roadway (see Figure 2). Commercial and residential development within the APE occurred during the twentieth century when city utilities such as sewer and trash service were in use (Figure 3). Due to this past disturbance and the low archaeological potential of Area 1, no subsurface testing took place within this portion of the project APE.

#### *Area 2*

Area 2 is an open manicured lawn located to the south of the Parkway Motel in the NW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 26 and the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 27, Township 113N, Range 15 W (Figures 2 and 3). Historic plats and aerials indicated the former presence of motel cabins just to the north of the testing area, while the survey area itself was formerly cultivated according to the 1938 and 1949 aerial photographs. Area 2 was selected for survey, because other than agricultural activities it appears to be undisturbed. However, the topography of the parcel suggests possible grading, with the lot appearing to lie beneath the elevations of Carol Lane on the east and Helen Lane on the South (see Figure 3). The elevation change to the west and north is less distinct.

Four shovel tests were excavated at 15-m intervals within Area 2. Three shovel tests were excavated along a single transect running from northeast to southwest along the proposed center line of the proposed South Service Drive, with a fourth test (ST 4) placed in the southeast corner of the lot to provide coverage for the revised Carol Lane alignment. All four shovel tests exhibited a profile consisting of an average of 22 cm of a



**FIGURE 2. SURVEY RESULTS**  
**(USDA-FSA AERIAL PHOTOGRAPHY FIELD OFFICE 2000)**





**FIGURE 3. TEST AREA 2, VIEW TO SOUTHWEST**

very dark grayish brown (10YR 3/2), clay loam A horizon overlying a dark brown (10YR 3/3) clay loam containing mottles of dark yellowish brown (10YR 4/6) clay subsoil, which gave way to subsoil at an average depth of 50 cm below the surface of the A horizon. In ST 1 and ST 4, which were located closest to Carol Lane, this profile was capped by an average of 12 cm of modern, very dark grayish brown (10YR 3/2) topsoil, over a 9-cm thick lens of gravels presumably associated with the construction of the roadway. All shovel tests were negative for cultural material save two pieces of slag and a piece of brown bottle glass in the shovel tests proximate to Carol Lane. The documented shallow soil profile within Area 2 is indicative of an area that has been intensively cultivated in the past with the entire soil profile exhibiting evidence of having been disturbed to subsoil by plowing. No further archaeological work is recommended at this location.

### *Area 3*

Area 3 is an open manicured lawn to the north of the Wet Zone Car Wash in the NW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 26, Township 113N, Range 15 W (see Figures 2 and 4). Area 3 was selected for survey because according to aerial photographs and historic maps the area may retain intact soils. Three shovel tests were excavated at 15-m intervals along a single transect running from northwest to southeast across the lot. The uppermost horizon within all three shovel tests was a layer of fill that consisted of a very dark grayish brown (10YR 3/2) clay loam with mottles of yellowish brown (10YR 5/4) clay. In the westernmost test and the easternmost test, this fill layer had an average thickness of 18 cm and contained less than three modern artifacts per test including plastic, coal, clear glass, and wire. In the central shovel test, the fill layer had a thickness of 40 cm and



contained a mixture of modern and historical-period artifacts including plastic bag pieces, tinfoil, concrete fragments, flat glass, stoneware pottery sherds, bottle glass, and bone in addition to cobbles. An embossed bottle fragment bearing the lettering “CHA[MBERLAIN’S]/ HAND [LOTION] / [AL]CO[HOL] 49%” was manufactured in Des Moines, Iowa c.1911-1929. The mixing within the fill and its varying depth across the lot indicates that it was introduced to the property perhaps during the construction of either the car wash to the south or the residential development to the north, or it may have originated somewhere else within the Red Wing area. The introduced fill capped an intact soil profile consisting of an average of 19 cm of a very dark grayish brown (10YR 3/2), clay loam A horizon overlying a dark brown (10YR 3/3) to brown (10YR 4/3) clay loam containing mottles of yellowish brown (10YR 5/4) clay subsoil, which gave way to subsoil at an average depth of 30 cm below the surface of the A horizon. In the easternmost shovel test (ST 3) closest to Sargent Drive, the A horizon had been entirely removed and the fill gave way abruptly to the dark brown (10YR 3/3) to brown (10YR 4/3) clay loam at a depth of 20 cm and transitioned to subsoil at 25 cm below the surface. No artifacts were recovered from within the natural soil profile. The documented shallow soil profile within Area 3 is indicative of an area that has been intensively cultivated in the past with the entire soil profile exhibiting evidence of having been disturbed to subsoil by plowing. No further archaeological work is recommended at this location.



**FIGURE 4. TEST AREA 3, VIEW TO NORTHWEST**

#### *Area 4*

Area 4, which is located in the NW  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of Section 26, Township 113N, Range 15 W, was planted in alfalfa at the time of the survey (see Figures 2 and 5). According to aerial photographs, Area 4 has been cultivated since at least 1938. Area 4 was selected for survey, because other than agricultural activities it appears to be undisturbed. Eight shovel tests were excavated at 15-m intervals along a single transect running from east to west along the proposed center line of the North Service Drive. In three of the eight shovel tests, the dark brown (10YR 3/3), clay loam plowzone gave way directly to a yellowish brown (10YR 5/6), clay subsoil at an average depth of 26 cm. In four additional shovel tests, the upper dark brown (10YR 3/3), clay loam plowzone, which had an average depth of 28 cm, was separated from the subsoil by a layer of mixing between the topsoil and subsoil. Subsoil within these shovel tests was encountered at an average depth of 43 cm. Shovel Test 5 located to the rear of the auto storage lot was capped by 23 cm of a very dark grayish brown (10YR 3/2), clay loam fill with gravels, overlying a 5 cm thick band of yellowish brown (10YR 5/6) clay. These upper fill layers gave way to 15 cm of a dark brown (10YR 3/3), clay loam plowzone that gave way to a yellowish brown (10YR 5/6), clay subsoil at a depth of 33 cm below the surface. With the exception of a light scatter of modern materials in the ST 5-8 proximate to the auto storage lot, shovel tests were negative for cultural material. The documented shallow soil profile within Area 4 is indicative of an area that has been intensively cultivated in the past with the entire soil profile exhibiting evidence of having been disturbed to subsoil by plowing. No further archaeological work is recommended at this location.



FIGURE 5. TEST AREA 4, VIEW TO NORTHWEST





## **SUMMARY AND RECOMMENDATIONS**

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In August of 2016, Two Pines Resource Group, LLC completed a Phase I archaeological survey for the planned Trunk Highway (TH) 61 and Spring Creek Avenue Project within the city of Red Wing in Goodhue County, Minnesota. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resource Unit (CRU) of the department. The proposed project will improve safety of the TH 61/Spring Creek Avenue intersection through reconstruction and access management. The purpose of the Phase I archaeological survey was to determine if the project's area of potential effects (APE) contains any intact archaeological resources that may be eligible for listing on the National Register of Historic Places.

During the Phase I archaeological survey for the TH 61/Spring Creek Avenue Project, no archaeological sites were identified within the project APE. Based on these findings, Two Pines does not recommend any additional archaeological investigations prior to or during the TH 61/Spring Creek Avenue Project.



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