Phase I Archaeological Survey for the Carver Crossing of Maplewood Project, Maplewood, Ramsey County, Minnesota

Submitted to
CoPar Development, LLC

Submitted by
Summit Envirosolutions, Inc.

October 2005

Summit Envirosolutions

Phase I Archaeological Survey for the Carver Crossing of Maplewood Project
Maplewood, Ramsey County, Minnesota

SHPO No. pending
Summit Project No. 1834-001

Submitted to:
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8677 Eagle Point Boulevard
Lake Elmo, MN 55042

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October 2005

MANAGEMENT SUMMARY

CoPar Development, LLC (CoPar) is proposing to construct the Carver Crossing of Maplewood (Carver Crossing) residential development in the city of Maplewood, Ramsey County, Minnesota. Because the development will impact wetlands, the Carver Crossing project will require a permit from the U.S. Army Corps of Engineers and must, therefore, comply with Section 106 of the National Historic Preservation Act of 1966, as amended. CoPar contracted with Summit Envirosolutions, Inc. (Summit) to identify any archaeological sites or burial mounds that might be present in the project area through a Phase I archaeological survey of the proposed development area. The purpose of this survey was to identify any archaeological sites that are potentially eligible for inclusion in the National Register of Historic Places (NRHP). Andrea Vermeer, M.A., served as Principal Investigator.

The project area is located in Section 24 of Township 28N, Range 22W, and is within the Central Lakes Deciduous East archaeological sub-region. The area of potential effect (APE) is commensurate with the project area and includes the maximum potential construction limits for buildings, ponds, and roads, landscaping, and any other possible ground-disturbing activities. Standard field methodologies, including systematic pedestrian survey, shovel testing, and soil auger testing, were conducted as appropriate to determine whether significant, intact cultural resources were present.

During the Phase I survey, two archaeological sites were identified. The first, 21RA0053 (CoPar I), consisted of a single flake located in an area that had been cut and filled. Because it consists of a non-diagnostic, isolated find within a disturbed context, 21RA0053 is recommended as **not eligible** for listing in the NRHP. Summit therefore recommends that no further archaeological work is necessary for this site.

The second site, 21RA0054 (CoPar II), consists of a moderately dense concentration of cord-impressed ceramic fragments and lithic debitage. The majority of these artifacts are from within intact soil horizons. Because this site contains a moderate density of generally diagnostic artifacts (cord-marked pottery) within what appear to be intact soils, it is recommended as potentially eligible for listing in the NRHP. CoPar has **revised construction plans to avoid the location of this archaeological site**; therefore, it is recommended that no further archaeological work is necessary for this site in relation to the Carver Crossing project. If in the future, project plans change and the site will be affected, Summit recommends that Phase II archaeological testing be conducted to evaluate the eligibility of the site for inclusion in the NRHP.

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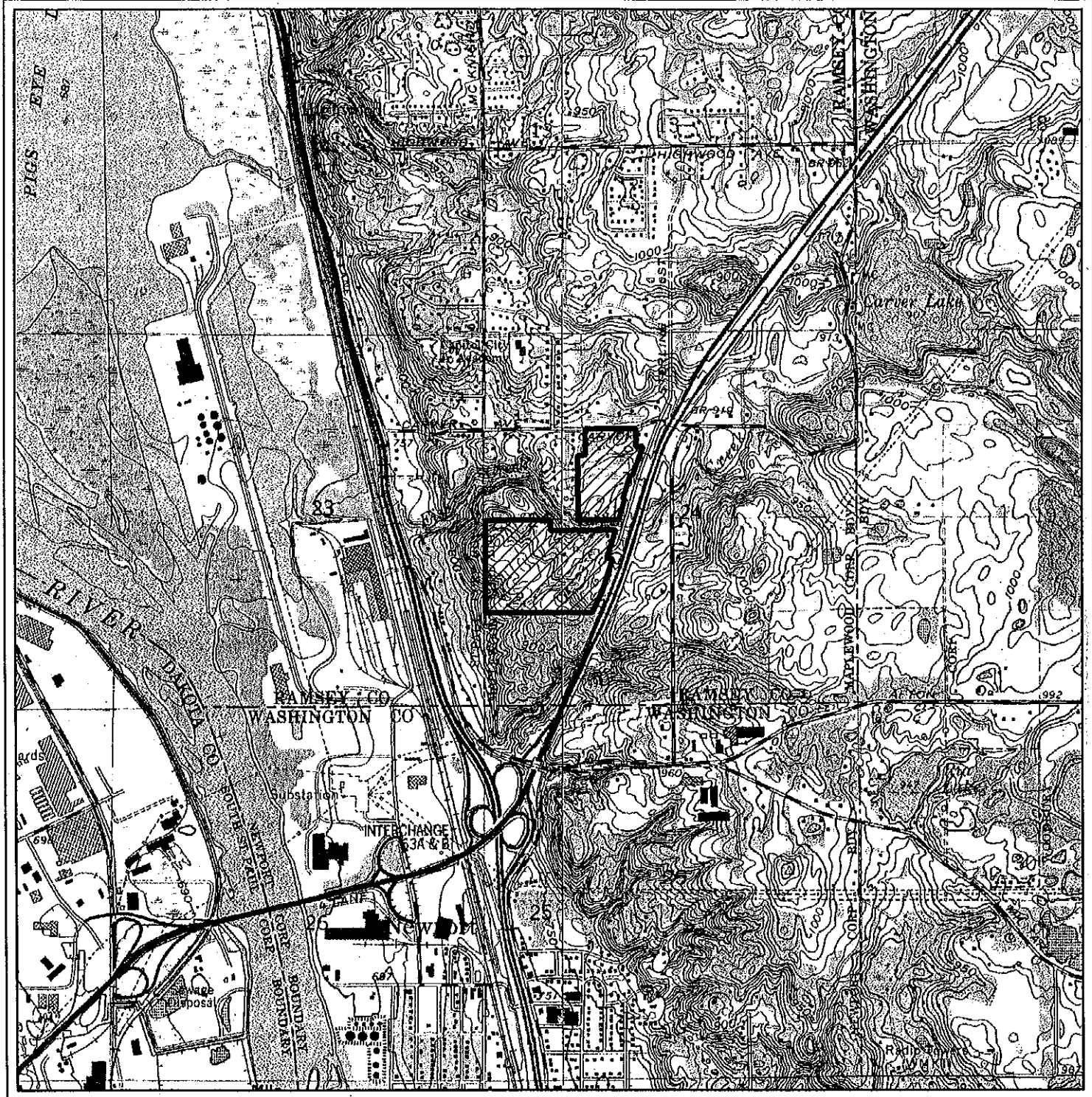
1.0 INTRODUCTION

CoPar Development, LLC (CoPar) is proposing to construct the Carver Crossing of Maplewood (Carver Crossing) residential development in the city of Maplewood, Ramsey County, Minnesota. Because the development will impact wetlands, the Carver Crossing project will require a permit from the U.S. Army Corps of Engineers and must, therefore, comply with Section 106 of the National Historic Preservation Act of 1966, as amended. CoPar contracted with Summit Envirosolutions, Inc. (Summit) to identify any archaeological sites or burial mounds that might be present in the project area through a Phase I archaeological survey of the proposed development area. The purpose of this survey was to identify any archaeological sites that are potentially eligible for inclusion in the National Register of Historic Places (NRHP).

The project area is located in the N ½ of the SW ¼ and in the SE ¼ of the NW ¼, Section 24 of Township 28N, Range 22W, and it consists of approximately 69 acres (28 hectares) within the Central Lakes Deciduous East archaeological sub-region (Figure 1). The area of potential effect (APE) is commensurate with the project area and includes the maximum potential construction limits for buildings, ponds, and roads, landscaping, and any other possible ground-disturbing activities. The UTM coordinates for the APE are Zone 15, northwest corner: E 500098 N 4971804; southwest corner: E 499667 N 4970996; northeast corner: E 500291 N 4971804; southeast corner: E 500114 N 4970996. UTM coordinates were obtained from Topozone (http://www.topozone.com). The Phase I archaeological survey of the APE consisted of standard field methodologies, including systematic shovel testing and soil auger testing, to determine whether significant, intact cultural resources were present.

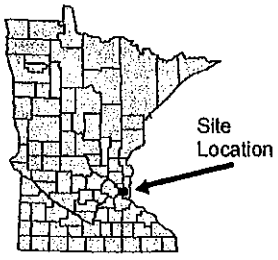


Map adapted from USGS 7.5 minute topographic maps: Lake Elmo and Saint Paul East, Minnesota.

LEGEND

Project Location

N



0 1,000 2,000 Feet

0 250 500 Meters

PROJECT LOCATION MAP

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions

Figure 1

File: fig1_prj_loc.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/17/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

2.0 METHODS

2.1 Introduction

The principal objectives of the Phase I archaeological survey are twofold: 1) to identify previously recorded cultural resources within the APE that are listed in or are eligible for listing in the NRHP, and 2) to identify, to the extent possible by means of systematic in-field inspection and testing, other potentially NRHP-eligible archaeological resources within the APE.

Summit's investigation was guided by the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716) and by the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2001). Fieldwork, laboratory analysis, and preparation of the final report with recommendations were accomplished or directly supervised by a professional archaeologist meeting the standards set forth in 36 CFR 61.

2.2 Literature Search

Research to identify previously recorded archaeological sites within one mile of the APE and archaeological surveys previously conducted within the project area was performed in July of 2005 by staff of The 106 Group during a cultural resources assessment for the Carver Crossing project area (Bradley and Wright 2005). Summit submitted a request to the SHPO for an updated list of previously recorded sites within one mile of the project area.

2.3 Field Methods

The archaeological field investigation consisted of systematic pedestrian survey, systematic shovel testing, and soil auger testing. The use of these methods was based on local ground surface visibility, slope, distance to water, degree of previous disturbance, terrain, and vegetation as found within the survey areas.

Areas demonstrably disturbed through previous construction or other modern land-use practices were excluded from survey unless the potential existed for intact cultural deposits beneath the disturbance. In addition, permanently wet areas (wetlands, lakes, ponds, streams) and slopes greater than 20 percent were excluded from survey because they are generally inhospitable to human occupation and are unlikely to contain cultural resources.

Visual reconnaissance of the APE was conducted during the Phase I archaeological survey to identify aboveground archaeological features or other indicators of the presence of past peoples, such as burial mounds. Areas of moderate to high archaeological potential exhibiting 25 percent or more surface visibility were examined through a systematic pedestrian survey. A systematic pedestrian survey is a visual examination of the ground surface, during which field personnel walk across the project area at regular intervals to observe the surface for the presence of cultural remains. Areas of moderate

to high archaeological potential exhibiting less than 25 percent surface visibility were examined through systematic shovel testing. Systematic shovel testing involves the manual excavation of small holes 30 to 40 centimeters in diameter, typically at regular intervals of 15 meters (50 feet), to identify subsurface archaeological materials.

In areas where archaeological sites were identified, shovel testing was also used to define the boundaries of those sites within the APE. Shovel tests were excavated 5 or 10 meters from all positive shovel tests in the cardinal directions until two consecutive negative shovel tests spaced 5 meters apart were encountered or until the APE boundary was encountered. In the latter case, it cannot be assumed that the site does not extend beyond the boundary of the APE.

Shovel tests were excavated through all soil horizons with the potential for containing cultural remains and into the underlying sterile subsoil (C horizon), or to a maximum depth of one meter (three feet), depending on which condition was first encountered. Excavated soils were passed through ¼-inch hardware mesh to ensure consistency in the recovery of cultural materials. Shovel test data were recorded on standardized forms. Recorded information included: 1) the designated field area within which each test was located; 2) the location of each shovel test in relation to natural or cultural features, or to other shovel tests, as appropriate; 3) a description of soil horizons, including depth, texture, and Munsell® color designation; and 4) the nature and depth of natural or cultural inclusions. The locations of all shovel tests were recorded using a Trimble Pro-XRS®.

When archaeological sites were encountered during fieldwork, they were documented and given a unique field number. Site locations, characteristics, and conditions were recorded manually and digitally. GPS coordinates were recorded for each site, and each site was recorded on a 7.5-minute USGS quadrangle map of the project area.

2.4 Laboratory Methods

Artifacts collected during the survey were bagged by provenience, assigned a unique field number, and returned to Summit for processing, analysis, and temporary curation. Artifacts were processed according to current professional standards and state repository guidelines. Processing included cleaning and cataloging. Artifacts were analyzed with reference to type, material, function, and cultural association.

The project is located on private land; therefore, after temporary curation at Summit, a formal letter will be sent to the landowner regarding final disposition of the artifacts. If the landowner chooses to donate the artifacts to the Minnesota Historical Society (MHS), copies of field notes, laboratory records, maps, slides or photographs, site forms, the project report, and other relevant records associated with the sites will be permanently curated at MHS along with the artifacts. If the landowner chooses to retain the artifacts, they will be thoroughly documented prior to return, and documentation will be kept on file at Summit.

3.0 LITERATURE SEARCH RESULTS

3.1 Previously Recorded Archaeological Sites and Previous Archaeological Surveys

As of July of 2005, one archaeological site, 21RA0003 (Red Rock Mound), had been previously recorded within one mile of the project area. While there "has been some discrepancy as to the location of this mound within the SHPO filing system, and no formal site form exists" (Bradley and Wright 2005:5), it was recorded in 1887 by surveyor Alfred Hill as being in the NE ¼ of the SE ¼ of Section 23, Township 28N, Range 22W, and he noted that "it had been dug into far enough to disclose human bones" (Winchell 1911:267). While the assessment report notes the presence of "human bones, bone fragments, pottery and projectile points at a depth from 4 to 16 feet below the surface" (Bradley and Wright 2005:5) for 21RA0003, re-examination of the literature (Winchell 1911:266-267) indicates that this information was actually recorded by Hill for a mound near Long Lake, located well outside of the Carver Crossing project area in Township 30N, Range 23W. The assessment correctly states, however, that Hill recorded 21RA0003 as being bisected by a Chicago, Burlington and Northern Railway line (Winchell 1911:267). A request submitted by Summit to the SHPO for an updated list of previously recorded sites within a mile of the project area indicated that no sites have been recorded in that radius since the time of the assessment.

No archaeological surveys occurred in the project area prior to July of 2005 (Bradley and Wright 2005:5), nor have any occurred since that time, prior to the current survey.

3.2 Cultural Overview

The following is a brief overview of what is known about the precontact (before ca. 375 years ago) archaeology of North America in general, and the Upper Midwest in particular. It covers a period of more than 11,000 years, and is divided into a number of periods and sub-periods, which are the bases of the historic contexts established by the SHPO. These historic contexts are research themes under which archaeological sites can be evaluated for their NRHP significance. Because only precontact sites were encountered during the survey, overviews related to the contact (A.D. 1630-1820) and post-contact (A.D. 1820-present) periods would be extraneous to this report and are not, therefore, provided here.

3.2.1 First Settlement of North America (before circa 11,500 years ago)

It is not clear when the first human populations arrived in the Americas. At one time, archaeologists believed that the first settlers were the Clovis people, who arrived between 11,500 and 11,000 years ago. Many archaeologists, however, question this assertion because a small but growing number of sites appear to be older than Clovis, based primarily on stratigraphic context and a handful of radiometric dates. Unfortunately, because only a few such sites have been discovered to date, they do not give us a clear idea of who these settlers were or how they lived.

Based on the limited evidence discovered to date, it is possible that the first human groups lived in the Americas more than 13,000 years ago, and possibly 30,000 years ago

or earlier. Some archaeologists suggest that these groups entered North America across a land bridge from Siberia to Alaska. Others suggest that they took a coastal route instead, travelling along the coast from northeast Asia to northwest North America. Still others suggest that the first groups might have crossed the south Pacific, arriving in southern South America and spreading north from there.

No "pre-Clovis" sites have been identified in Minnesota. The closest possibilities are a series of sites in southeastern Wisconsin, in and near Kenosha. These sites, which have been dated to between 13,500 and 12,200 years ago, contain butchered mammoth remains and a few stone artifacts (Overstreet and Kolb 2003). Another regional possibility is the Shequiandah site on Manitoulin Island, Ontario, at the northern end of Lake Huron (Lee 1954a, 1954b). Artifacts at this site appear to be mixed into glacial till, and some evidence indicates that the earliest artifacts from the site could be older than 30,000 years in age.

3.2.2 . Paleoindian Period (circa 11,500 to 8,500 years ago)

Sites dating to the Paleoindian period mark the earliest clear and undisputed evidence for humans living in the Americas, and the earliest have been dated to approximately 11,500 years ago. Although Paleoindian sites are not common when compared with the number of sites from later periods, many have been found, and a number have been excavated. The evidence from these sites indicates that Paleoindian peoples were big game hunters. Their prey included animals that are now extinct, including the mammoth. It appears that they traveled long distances in pursuit of game and other resources. The total population was relatively small compared to later time periods.

Distinctive Paleoindian artifacts include large lanceolate, or "leaf shaped," projectile points, presumably used to arm spears and probably also as knives. These points are noteworthy for their fine craftsmanship. Chipped stone axes and adzes, large "turtleback" scraping tools, and trihedral blades are also characteristic of the Paleoindian period. Trihedral blades are long, parallel-sided stone tools made by very careful preparation of a core, or larger piece of toolstone. Most of the work goes into shaping the core; the final blade is detached with one final blow. These tools were used for a variety of tasks.

In this region, the Paleoindian period is commonly divided into Early and Late stages. Early Paleoindian sites in Minnesota are very rare, and most are no more than discoveries of a distinctive Early Paleoindian projectile point either found in isolation, or mixed in with artifacts from a later time period. Late Paleoindian sites are somewhat more common. Excavated examples include 21ML0042 (Bradbury Brook site) and 21TR0005 (Browns Valley site). Site 21ML0042 was a Late Paleoindian stone quarry and tool-making site located a few miles south of Mille Lacs Lake, and it dates to about 9,200 years ago (Malik and Bakken 1999). Site 21TR0005 was a burial discovered in a gravel pit on the west central Minnesota border, which dated to about the same time period (Dawson 1990, Jenks 1937).

3.2.3 Archaic Period (circa 8,500 to 2,500 years ago)

The beginning of the Archaic period is marked by two main changes in technology. The first is that large, lanceolate projectile points were replaced by various types of smaller points. Some of these smaller points have stems, others have side notches, and still others are simply triangular. Some of these may have been spear points, but others were probably dart points. The second major technological change was the replacement of chipped stone axes and adzes by groundstone adzes, axes, and other groundstone tools.

As the name suggests, groundstone tools are made, or at least finished, by grinding. To make an Archaic ax, for example, an artisan might choose a cobble that is as close as possible to the shape of the final ax. The overall shape could be improved by striking off a few chips, commonly called flakes. Finer shaping is done by pecking at the surface of the cobble with a hard hammerstone. These blows are not hard enough to detach pieces, just to crush the surface a little bit at a time. This gradual method finally reduces the cobble to the desired ax shape. At that point, the surface is ground smooth, probably by using an abrasive such as sand. Such groundstone tools are slow to make, but they are also very durable.

Other significant, non-technological changes occurred between the Paleoindian and Archaic periods. Archaeological evidence indicates that Archaic peoples were not as mobile as their predecessors and did not cover such large territories in search of game or other resources. They did not hunt mammoth or other large ice-age animals, since such creatures had become extinct. Instead, they hunted the more familiar bison, deer, elk, and moose, as well as smaller animals.

The Archaic period is commonly divided into Early, Middle, and Late stages. In this region, it is sometimes difficult to distinguish between stages. Some archaeologists instead prefer to divide the Archaic geographically, into Shield, Prairie, Lake-Forest, and Riverine Archaic, emphasizing environmental zones rather than chronological differences. Overall, Archaic-period sites are more common than sites from earlier periods. Excavated Archaic-period sites in Minnesota include 21CE0001 (Itasca Bison Kill site) (Shay 1971) and 21NR0009 (Canning site) (Michlovic 1986). Site 21CE0001 was excavated from a bog and hillside in Itasca State Park. It dated to approximately 7,000 years ago, or the Early Archaic stage. Site 21NR0009, a bison butchering site, was found under a field and eroding from the banks of the Red River north of Moorhead. This site dated to about 4,000 years ago, putting it in the Middle to Late Archaic stages.

3.2.4 Woodland Period (beginning circa 2,500 years ago)

The beginning of the Woodland period is marked by three main changes that appear in the archaeological record. Two are technological: people in this region begin making pottery and growing crops. The third is spiritual: people begin building earthen mounds in which to bury the dead.

In the United States, pottery making began in what is now the southeastern part of the country. It spread somewhat gradually, and arrived in what is today Minnesota by no later than 2,500 years ago. The earliest ceramic vessels tended to be conical, or cone

shaped. They had a wide mouth, tapered to a blunt point or a small flattened bottom, and were commonly one to two feet tall. Later styles added a straight-sided neck above the body of the vessel; the neck, which was only a few inches tall, was narrower in diameter than the body of the pot. Both the earlier and later styles were probably built from coils of clay, laid one on top of the other and then smoothed together with a scraping tool. Even later pots were shaped more like a globe or slightly flattened globe, generally with a smaller mouth and a short neck. Some of these globular pots also had handles near the top of the pot.

All of these pots were fired in open-air fires rather than closed kilns, resulting in pots that were somewhat softer than familiar modern ceramics but still quite tough and durable. It is easy to decorate moist clay, and a wide variety of decorations were used on precontact ceramics. The combination of decoration and overall vessel form are the two most important characteristics in helping to determine the age of the ceramics. Several dozen distinct kinds of ancient pottery have been discovered in Minnesota. Each has its own time period and geographic range.

Mound building also spread into Minnesota from other areas. It began at about the same time as pottery making, around 2,500 years ago. Most mounds were used as burial places, although a few elaborate mounds were built in the form of animals, or as platforms for ceremonial buildings. Thousands of mounds have been found in Minnesota. Some were excavated by earlier archaeologists, into the 1970s. Many were destroyed by development, plowing, or other activities that affect the landscape. Currently, mounds are protected as cemeteries under state law and may not be disturbed.

At some point during the Woodland period, people began growing crops. In some cases, this amounted to intensive gardening, or horticulture. In other cases, it was still more intensive and is more properly called agriculture. Important crops included corn, many kinds of squash and gourds, and various kinds of beans. Corn, or maize, was first domesticated in Central America and was gradually spread into North America. Squash and beans may have been first domesticated in the area that is now the southeastern United States, and spread from there. In northern Minnesota, north of the climatic limit for growing these ancient corn varieties, a different practice developed. There, people began intensive harvesting of wild rice, which grows in shallow lakes. Although this plant was not domesticated, it may have been deliberately spread to new areas. In all parts of the state, this changed relationship with food plants allowed the population to increase, and also allowed people to stay in one location for longer parts of the year because more food could be raised in that area.

The Woodland period is commonly divided into Early, Middle, and Late stages. Some archaeologists question whether these divisions are appropriate in Minnesota, however, and prefer to divide the Woodland into Initial and Terminal stages. The Early-Middle and Middle-Late divisions occurred at around 2,100 and 1,300 years ago, respectively. The Initial-Terminal division occurred around 1,300 years ago. More Woodland sites have been discovered in the state than have sites from other time periods or cultures. One interesting example in southeastern Minnesota is the 21WN0001 (LaMoille Rock

Shelter). This site contained stratified deposits and yielded most of a reconstructible ceramic vessel. The vessel was large, with thick walls, a wide mouth, and a generally conoidal shape except for its flat bottom. It is the type specimen for LaMoille Thick Ware, and likely represents one of the earlier ceramic wares in the state (Wilford 1954, Anfinson 1979). A second example, 21ML0033 (Crozier Cemetery site), comes from central Minnesota, near Mille Lacs Lake. This site also yielded a reconstructible ceramic vessel, in addition to other Woodland-period artifacts (Mather 1991). The vessel, categorized as Sandy Lake Ware, was a smaller, round, and thin-walled vessel that may have been formed using a fabric bag as a mold.

3.2.5 Village Cultures (beginning ca. 1,100 years ago)

In some parts of the state, Woodland cultures were succeeded by Village cultures. The latter generally spread along major rivers, especially the Mississippi and Minnesota. The Village cultures practiced a mixed foraging and farming economy. Their crops allowed them to build larger, semipermanent village sites, sometimes protected by earthen banks and log palisades. They too made pottery and built mounds, in complexes of up to more than one hundred mounds. Villagers engaged in seasonal movement and activities that included planting villages in the summer, deer hunting camps in the fall, winter camps during the cold months, and muskrat camps and sugar maple camps in the spring.

Three main Villager groups are notable to Minnesota: Mississippian, Oneota, and Plains Village. The Mississippians spread from the southeast and eventually covered much of what is now the eastern United States. In Minnesota, they were present in the southeastern part of the state. The Oneota either came in along the Mississippi River from the south and replaced the Mississippians, or were their descendants. The Plains Villagers came from the west, and were generally restricted to parts of southwestern Minnesota.

One of the best known Village culture site complexes is found in and near Red Wing, in southeastern Minnesota. It includes a number of large and small villages on both the Wisconsin and Minnesota sides of the Mississippi River. Some of the villages may have had populations of several hundred people.

3.3 Environmental Overview

Most of the natural Minnesota landscape was formed primarily by glaciation. For the region surrounding the project area, three glacial episodes were important in shaping the current landscape. First was the formation, at least 20,000 years ago, of the St. Croix terminal moraine, which marks the furthest extent of the combined Superior and Rainey ice lobes (Wright 1972a: 530, 1972b: 570). These lobes deposited stone-rich, reddish till. The St. Croix moraine was later overrun by the Grantsburg sublobe, which advanced from the southwest after splitting off from the southward-flowing Des Moine lobe (Wright 1972a:534-535, 1972b:569-570). The Grantsburg sublobe deposited brown, calcareous till, although this was diluted by the reddish, stone-rich till previously deposited in the St. Croix moraine. Finally, as the Grantsburg sublobe retreated, meltwater streams covered the area with sand and created the Anoka sandplain (Wright 1972b:569-570). Wright (1972b:570) notes that the Anoka sandplain is not featureless,

but includes "regions of uplands [that] represent areas of till that were not buried by the outwash sand," as well as sand dunes, lakes, and marshes formed by the melting of buried ice blocks, and subglacial tunnel valleys trending to the southwest.

As the glacial ice retreated, plants and animals began to re-colonize the newly exposed landscape. Although the details of paleoenvironmental history vary from one place to another, the following general history applies to most of Minnesota. Initially, the area around ice margins would have resembled tundra, with small hardy vegetation. As the climate warmed, the tundra-like environment would have been replaced by spruce forest. Additional warming brought either deciduous forest or prairie, depending on such factors as annual rainfall. According to Coffin (1988), the pre-settlement vegetation in the Carver Crossing project area was Oak Woodland and Brushland, with typical vegetation including bur oak and pin oak, aspen and hazel thickets, and prairie openings.

Soils in the project area belong primarily to the Mahtomedi series, which Vinar (1977) characterizes as excessively drained, rapidly permeable soils on glacial ground moraine consisting of noncalcareous sand to gravelly sand outwash, and having low to steep relief. A typical soil profile consists of an A horizon from 0 to 8 inches, dark grey loam sand, with ca. 10 percent coarse fragments; a B horizon from 8 to 30 inches, dark brown gravelly coarse sand, with ca. 20 to 35 percent coarse fragments, some 3 or more inches in diameter; and a C horizon from 30 to 60 inches, red brown gravelly sand, with ca. 15 to 27 percent coarse fragments, a few 3 or more inches in diameter.

Because the site is located within the footprint of the Grantsburg sublobe, lithic raw materials associated with both the Western and Eastern raw-material resource regions should be available in the general area of the site (Bakken 1997). The Western materials were carried in by the Grantsburg sublobe, while the Eastern materials came from the underlying St. Croix moraine that was mixed into the original Grantsburg till. Locally available raw materials should thus include, but are not limited to Swan River chert, Red River chert, Tongue River silica, quartz, Knife Lake siltstone, Lake Superior agate, and basaltic rock.

4.0 FIELD RESULTS

4.1 Introduction

Fieldwork was completed on October 5-7, 2005. Andrea Vermeer served as Principal Investigator and conducted the fieldwork with Kent Bakken, Ora Elquist, and Jon Turner.

The areas surveyed were based largely on the results of the assessment conducted for this project in July of 2005. The assessment indicated that the Carver Crossing project area was considered to have little to no potential for containing historical (post-1820) archaeological sites. At that time, it was determined that all structures visible in historical maps and aerial photographs within the project area were still extant as architectural history properties, all of which were recommended as not eligible for inclusion in the NRHP. Since that time, most of these structures have been razed, though historical archaeological sites related to these farmsteads may remain. Because, however, these properties had "a low potential for association with significant historic patterns or persons" (Bradley and Wright 2005:15) as architectural history properties, they would also have low potential for the same associations as archaeological sites. Generally, if archaeological sites cannot be associated with a significant historical event or pattern, such as the settlement of a particular ethnic group, or cannot be associated with a significant individual, then they generally cannot answer important research questions. If these associations cannot be made and the site cannot answer important research questions, the site does not meet the NRHP criteria of significance for listing in the NRHP. For this reason, based on the results of the previous cultural resources assessment, the property is considered to have low potential for containing significant historical archaeological sites.

The assessment indicated that several portions of the Carver Crossing project area had high potential for containing precontact archaeological sites. During the Phase I investigation, these areas were slightly refined based on field observations. For ease of reference in the field, locations with high precontact archaeological potential were designated Areas A-F (Figure 2). The results of the survey of each of these areas are presented below.

4.2 Area A

Area A is a rolling, fallow agricultural field located at the top of a high bluff overlooking the Mississippi River and Pigs Eye Lake (see Figure 2). Based on its topographic prominence and its proximity to these bodies of water, it was considered to have high potential for containing precontact archaeological resources.

The rolling nature of the field results in the presence of several rises that are relatively high in relation to their surroundings. Eleven shovel tests were excavated at 15-meter intervals along single transects that were established to follow those three rises closest to the bluff edge. In addition, five shovel tests were excavated at 15-meter intervals along a

Map adapted from USGS 7.5 minute topographic maps: Lake Elmo and Saint Paul East, Minnesota.

LEGEND

Survey Area

N

Site Location

0 250 500 Feet

0 250 500 Meters

ARCHAEOLOGICAL SURVEY AREAS

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions

Figure 2

File: fig2_surveyed.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/17/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

single transect in a relatively low portion of the field, but one which paralleled and was adjacent to the bluff edge. Soil profiles varied between some shovel tests, but the majority of the tests contained a dark yellowish brown (10YR 3/4 to 4/4), loamy sand Ap horizon with an average depth of 33 centimeters over a brown (7.5YR 5/4), loamy to clayey sand, glacial till C horizon. These profiles indicate that soils in this area are largely not intact. No cultural materials were found within Area A.

4.2.1 Recommendations

Based on the lack of intact soils and the absence of cultural materials in this location, no further archaeological work is recommended for Area A.

4.3 Area B

Area B is a high, large grassy hill that overlooks the Mississippi River and Pigs Eye Lake, located to the southeast of Area A (see Figure 2). It is located on the same bluff as and just slightly further back from the bluff edge than Area A. Based on its topographic prominence and proximity to the river and lake, Area B was considered to have high potential for containing precontact archaeological resources.

Five shovel tests were excavated at 15-meter intervals along two single transects. One transect was located on a lower rise near the base of the hill, and the second transect on the highest part of the hill. Soil profiles in these shovel tests indicated erosion, containing a dark brown to brown (10YR 3/3 to 10YR 4/3) loamy sand, similar to the Ap horizon in Area A, to a depth of approximately 30 centimeters over a brown (7.5YR 5/4), loamy sand, glacial till C horizon. No cultural materials were found within Area B.

4.3.1 Recommendations

Based on the lack of intact soils and the absence of cultural materials in this location, no further archaeological work is recommended for Area B.

4.4 Area C

Area C consists of a fairly level terrace and adjacent hill to the south of and overlooking Fish Creek (see Figure 2). Based on its topographic position and proximity to Fish Creek, Area C was considered to have high precontact archaeological potential.

Four shovel tests were excavated at 15-meter intervals along a single north-to-south-running transect that followed the west side of the hill, west of the former house location. A fifth shovel test was excavated in what appeared to be a relatively undisturbed area to the south of the former house. Soil profiles within all five shovel tests were similar, generally containing a dark brown (10YR 3/3) sandy loam that extended to an average depth of 26 centimeters and rested upon a brown (7.5YR 5/4), loamy to clayey sand subsoil. No cultural materials were found within any of the shovel tests.

The terrace contains a former unpaved driveway that leads to and encircles the hill, the site of a recently demolished house. The driveway contains several long and deep ruts, which had been amplified by rushing water due to severe storms that occurred just prior

to the survey. The deep cuts and erosion of the driveway surface provided excellent surface visibility along the driveway. For this reason, systematic pedestrian reconnaissance at close intervals was used to survey this portion of Area C. During pedestrian survey, a single artifact was located.

4.4.1 Site 21RA0053

Site 21RA0053 (CoPar I) consists of a single Prairie du Chien chert flake (Figure 3). Intensive surface survey in the vicinity of the flake located no other artifacts. A single shovel test was excavated in the location of the flake. No additional artifacts were observed in the shovel test, and the obviously redeposited sandy soils within the test confirmed that the location had been heavily cut and filled through past water action. Based on the lack of intact soils in the project area, it was determined that even if the flake originated close to the location in which it was found, the site would have extremely poor integrity; therefore, no additional shovel tests were excavated in the driveway. It was suspected that if the flake had washed into the location in which it was discovered, its likely origination point would have been the hill upon which the former house was located. As noted above, however, all shovel tests excavated on this hill were negative for cultural materials.

4.4.2 Recommendations

Site 21RA0053 is a non-diagnostic artifact that cannot be associated with a specific historic context. For this reason, and because the site is so heavily disturbed, 21RA0053 is recommended as **not eligible** for listing in the NRHP. Because no additional cultural materials were found in the vicinity of the flake or in any of the shovel tests excavated on the hill, most of which was heavily disturbed by the former house, no further archaeological work is recommended for Area C.

4.5 Area D

Area D is a high hill to the south of and overlooking Area C (see Figure 2). Based on the presence of the flake in Area C and the unknown source of its origination, Area D, having topographic prominence and proximity to Area C, was considered to have high precontact archaeological potential.

Three shovel tests were excavated at 15-meter intervals along a single transect within Area D. Soils within these shovel tests consisted generally of a mixed-looking, dark brown (10YR 3/3) A or Ap horizon with an average depth of 27 centimeters overlying a brown (7.5YR 5/4), sandy loam to sandy clay C horizon. In one of the shovel tests, fill was present over the A/Ap horizon. All shovel tests were negative for cultural materials.

4.5.1 Recommendations

Based on the lack of intact soils and the absence of cultural materials in this location, no further archaeological work is recommended for Area D.

Map adapted from 2003 FSA Orthophoto of Ramsey County.

LEGEND

21RA0053

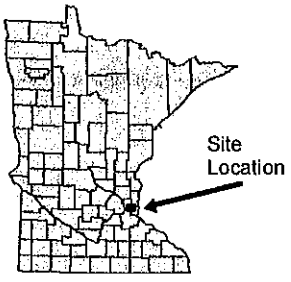
Negative Shovel Test

Surface Find

N

0 50 100 Feet

0 25 50 Meters



21RA0053

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions

Figure 3

File: fig3_21ra0053_sf.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/17/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

4.6 Area E

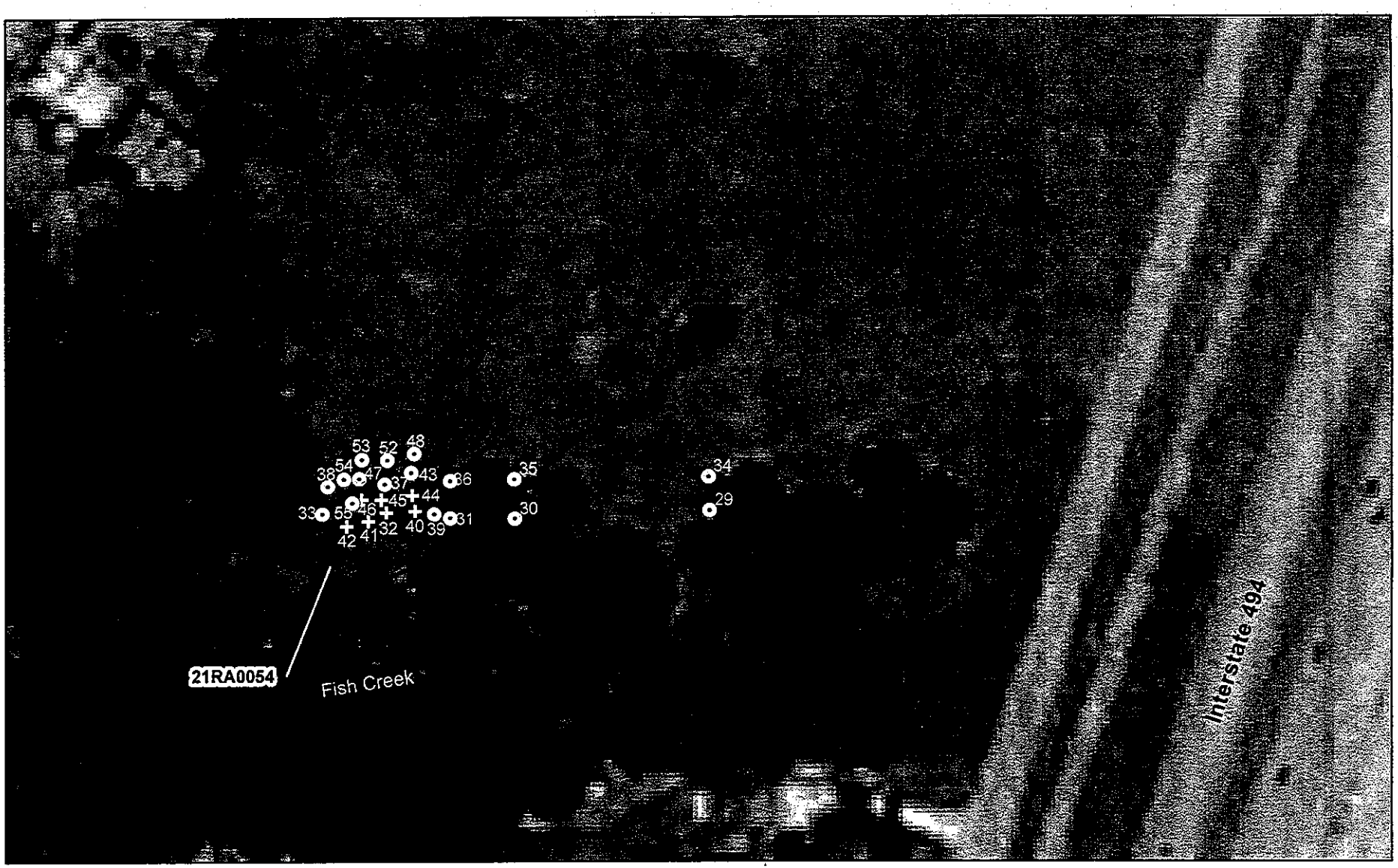
Area E is a level terrace on the north side of Fish Creek, opposite Area C (see Figure 2). Based on its topographic position and proximity to the creek, it was considered to have high precontact archaeological potential.

Initially, 10 shovel tests (5 per transect) were excavated at 15-meter intervals along two east-to-west-running transects spaced 15 meters apart. The transect farthest from the creek, which was in a fallow field or former pasture, was negative for cultural materials. Soils within this transect were variable in profile. In two of the shovel tests, they consisted of a dark brown (10YR 3/3), clay loam Ap horizon, averaging 23 centimeters in depth, over a brown (7.5YR 4/3 to 10YR 5/3), clayey sand, glacial till C horizon. In the three remaining shovel tests, the Ap horizon was underlain by a B horizon, which in turn overlay the C horizon. The B horizon ranged in depth from 11 to 20 centimeters, and differed in each of the tests in which it was present. In one test it was a dark yellowish brown (10YR 4/4) sandy clay loam; in the second, a brown (7.5YR 4/2) silty sand; and in the third, a dark brown (7.5YR 3/3) sandy loam. In the transect nearest the creek, which was located outside of the field, soils in most of the tests appeared more intact, and in one of the shovel tests, a grit-tempered, cord-marked body sherd was encountered. Shovel testing was therefore conducted in the cardinal directions from this shovel test and, subsequently, from other positive shovel tests within the APE to define the site boundaries. The area within these boundaries was designated as 21RA0054.

4.6.1 Site 21RA0054

Site 21RA0054 (CoPar II) is a subsurface artifact scatter located approximately 100 feet north of Fish Creek (Figure 4). Its eastern and northern boundaries were identified through shovel testing in these directions until two consecutive negative shovel tests were excavated at five-meter intervals. The western boundary of the site is known to extend at least as far as the edge of the APE in the area of the site. It is likely that the site extends further west, but because CoPar does not own the property to the west of the APE, no shovel testing could be conducted to confirm this possibility. The southern boundary of the site is the edge of the deeply incised, steep-sided creek valley, and it is possible that what was once the southernmost portion of the site has eroded into the creek valley by slumping and slope creep along the valley sides. The site measures approximately 25 by 30 meters (82 by 98 feet), with artifacts occurring as deep as 90 centimeters (2.95 feet) below the surface.

The site was identified through eight shovel tests that produced cultural materials. Seventeen precontact artifacts were recovered, including ceramics (n = 12), lithics (n = 4), and faunal remains (n = 1). The ceramic artifacts included six grit-tempered, cord-marked body sherds, two grit-tempered body sherds with indeterminate surface treatment, three sand-tempered, smoothed-over-cord-marked body sherds, and one sand-tempered body sherd with indeterminate surface treatment. One of the ceramic body sherds is well worn, as if it had been in an erosive environment such as a stream channel or beach.



Map adapted from 2003 FSA Orthophoto of Ramsey County.

LEGEND

21RA0054

Negative Shovel Test

Positive Shovel Test

N

0 100 200 Feet

0 37.5 75 Meters

Figure 4

Summit Envirosolutions

21RA0054

Carver Crossing of Maplewood
Maplewood, Minnesota

File: fig4_21ra0054_l.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/17/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

The lithic artifacts included two pieces, one quartz and one jasper, of flaking debris and two pieces, one quartz and one chert, of possible flaking debris. The two pieces of possible flaking debris resemble common stone artifacts in their form, but they are thoroughly worn or weathered over their entire surfaces. Such wear or weathering can indicate that the pieces are naturally occurring rocks that coincidentally resemble artifacts, or the wear or weathering could occur on real artifacts that have been in an erosive environment such as a stream channel or beach. It is difficult to determine which scenario is more likely without additional information on the site and depositional conditions there. The faunal remains included one piece of tooth enamel from an ungulate.

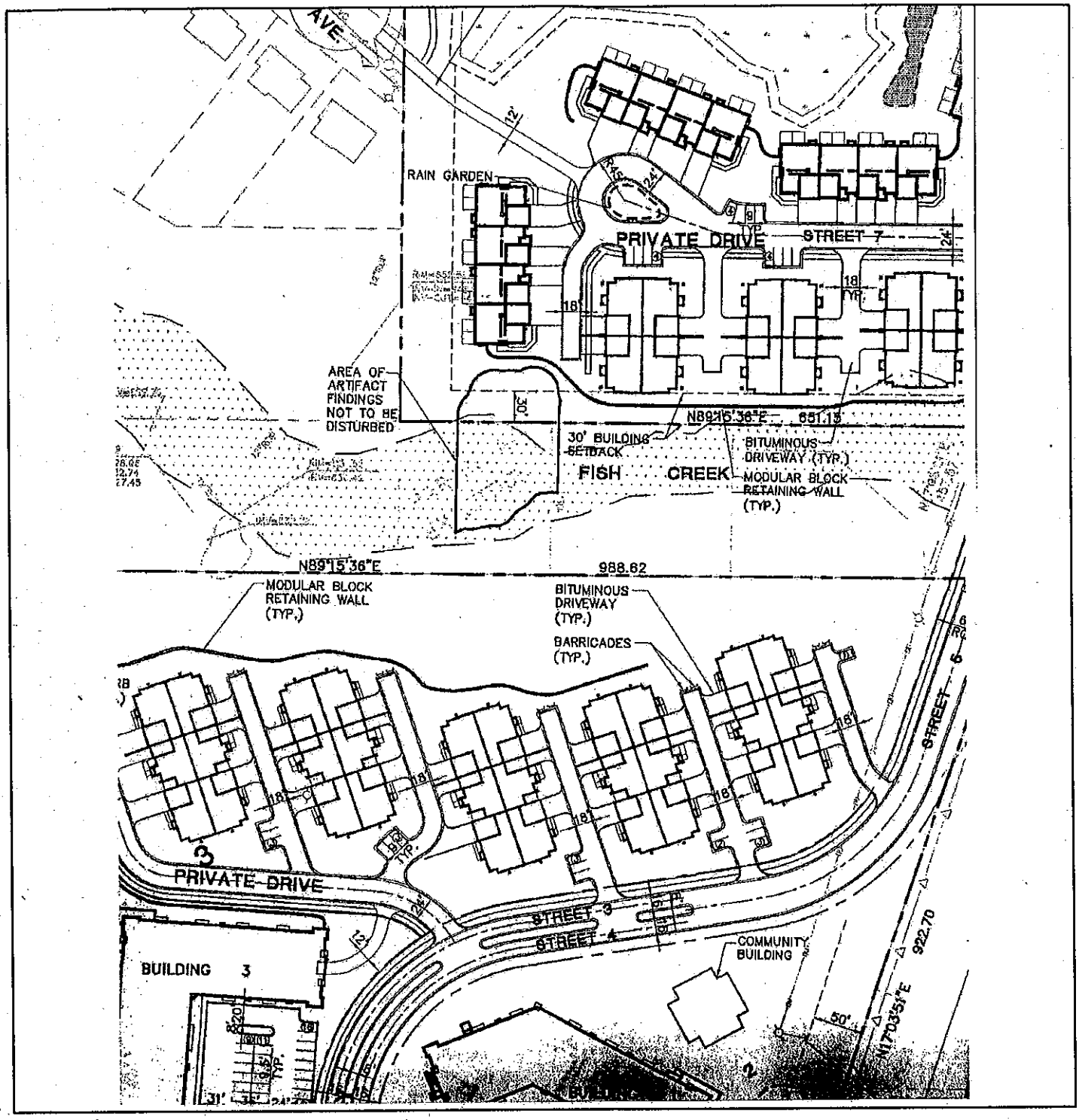
The stratigraphy of the site was unexpectedly complex. Some shovel tests encountered shallow soil profiles. A typical example might have a plowzone about 15 centimeters deep; a shallow truncated B horizon in some cases, about 5 centimeters thick; and a C horizon of undetermined depth below this. The soils in such shovels tests were commonly somewhat reddish (in the 7.5 YR range) and rich in gravel. Other shovel tests, however, encountered deep soil profiles. A typical example might include a plowzone 15 to 25 centimeters deep; a sub-plowzone stratum continuing to a depth of 60 to 90 centimeters or more; and in most cases, a pale C horizon of undetermined depth below this point. The soils in these shovel tests were commonly very dark (in the 10 YR range) and also sandy, with relatively little gravel. Most of the positive shovel tests were in the deep, sandy soils rather than the shallow, gravelly soils. The basic stratigraphic information provided by the shovel tests, however, is not adequate to evaluate the potentially complex stratigraphy of this landscape and site.

A sparse scatter of more recent, historical materials were noted in the upper levels of some shovel tests. These pieces did not appear to document any substantial post-contact habitation or other activity, and they were not collected. Some precontact artifacts were recovered from the plowzone, which varied in depth between approximately 15 and 25 centimeters below the surface. Other artifacts were, however, recovered in undisturbed soils beneath the plowzone, indicating that the site has the potential for containing well preserved cultural remains. It should be noted, however, that sandy soils such as those encountered in parts of the site are relatively dynamic; that is, the soils are relatively easily moved around by processes such as freezing and thawing, animal burrows, insect and worm activity, and tree falls. Such conditions can lead to the movement and mixing of artifacts or features, compromising the integrity of archaeological remains.

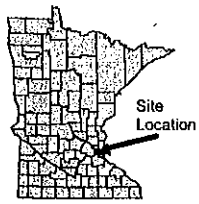
The presence of precontact ceramics indicates that the site dates between 2,500 and 375 years ago. Based on the limited information obtained during the Phase I survey, the site appears to represent a temporary campsite.

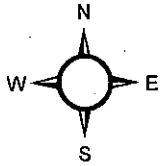
4.6.2 Recommendations

Based on the presence of intact soils and a moderate density of generally diagnostic artifacts in the form of cord-marked ceramics, 21RA0054 is recommended as **potentially eligible** for listing in the NRHP. CoPar has revised construction plans to avoid the location of this archaeological site (Figure 5); therefore, it is recommended that no further



Source: CoPar Development, LLC





REVISED CONSTRUCTION PLANS

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions®

Figure 5

File: fig5_rev_const_plans.mxd
Summit Proj. No.: 1834-001
Plot Date: 10-31-05
Arc Operator: MDK
Reviewed by: ACV

archaeological work is necessary for this site in relation to the Carver Crossing project. If in the future, project plans change and the site will be affected, Summit recommends that Phase II archaeological testing be conducted to evaluate the eligibility of the site for inclusion in the NRHP.

The remainder of Area E, which is located in former agricultural fields or a pasture, does not contain intact soil horizons. Based on the lack of cultural materials in and the disturbance to this location, no further archaeological work is recommended for the portion of Area E outside of 21RA0054.

4.7 Area F

Area F is a high grassy ridge to the north of Area E and an adjacent wetland (see Figure 2). Based on its topographic prominence and the proximity of this landform to 21RA0054 and to a large wetland, Area F was considered to have high archaeological potential.

Three shovel tests were excavated at 15-meter intervals along a single east-to-west-running transect that followed the top of the ridge. Soil profiles in these shovel tests were completely inconsistent in color, texture, and depth, and the westernmost test contained cobbles and heavy gravel down to 55 centimeters below the surface, where a C horizon similar to that in the rest of the project area was encountered. Based on the soil makeup in this area, it appeared that the soils in this landform had been extensively moved or perhaps filled in. No artifacts were present in any of the shovel tests.

4.7.1 Recommendations

Based on the lack of intact soils and the absence of cultural materials in this location, no further archaeological work is recommended for Area F.

5.0 RECOMMENDATIONS

The majority of the areas identified as having high potential for containing precontact archaeological resources were either negative for cultural materials, previously disturbed by natural forces or recent human activity, or a combination of both. Based on these conditions, it is recommended that no further archaeological work is necessary within the Carver Crossing APE outside of 21RA0054. Site-specific recommendations are provided below.

5.1 Sites Recommended as Not Eligible for Listing in the NRHP

Site 21RA0053 (CoPar I) is an isolated, non-diagnostic flake that cannot be associated with a specific historic context. For this reason, and because the site is so heavily disturbed, 21RA0053 is recommended as not eligible for listing in the NRHP. No further archaeological work is recommended in relation to this site.

5.2 Sites Recommended as Potentially Eligible for Listing in the NRHP

Based on the presence of intact soils and generally diagnostic artifacts in the form of cord-marked ceramics, 21RA0054 (CoPar II) is recommended as potentially eligible for listing in the NRHP. CoPar has **revised construction plans to avoid the location of this archaeological site**; therefore, it is recommended that no further archaeological work is necessary for this site in relation to the Carver Crossing project. If in the future, project plans change and the site will be impacted, Summit recommends that Phase II archaeological testing be conducted to evaluate the eligibility of the site for inclusion in the NRHP.

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APPENDIX I: LIST OF PROJECT PERSONNEL

Principal Investigator	Andrea Vermeer, M.A., RPA
Field Archaeologists	Kent Bakken, M.A. Oralee Elquist, B.A. Jon Turner, B.A. Andrea Vermeer, M.A., RPA
GIS/Graphics Specialist	Heidi Voth-Gaedy M.S.

APPENDIX II: MINNESOTA ARCHAEOLOGICAL SITE FORMS

Rev.: 03.31.97

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411

STATE HISTORIC PRESERVATION OFFICE
345 Kellogg Boulevard W., St. Paul, MN 55102 (651) 296-5434

OSA License #: **N/A**

SHPO RC #: **pending**

Date(s) of Fieldwork: **October 6 and 7, 2005**

X New Site _ Site Update

SITE #: 21RA0053 Site Name: **CoPar I** Field #: **FS 1**

LOCATIONAL INFORMATION *(attach USGS topographic quad and sketch map with site location outlined)*

County: **Ramsey** City/Twp. Name: **Maplewood** SHPO Region: **4e**

USGS 7.5' Quadrangle Map *(name and year):* **Lake Elmo, Minn. 1967 (revised 1993)**

Township: **28N**	Range: **22W**	Section: **24**	3 Sections (at least 2): **NW-NE-SW**
Township:	Range:	Section:	3 Sections (at least 2):
Township:	Range:	Section:	3 Sections (at least 2):

UTM Site Coordinates *(use 1927 datum; identify center point only):*
Zone **15** Easting **500115** Northing **4971335**

Other locational information: **The site is located in an informal two track road on a high terrace just south of Fish Creek. It is approximately 300 feet west of Henry Lane S. and approximately 100 feet south of Fish Creek**

SITE CHARACTERISTICS

Acreage: **<.01** Site Dimensions *(both horizontal and vertical/depth, in metric):* **horiz. = <0.1m by <0.1m; vert. = 0 cmbs (isolated surface find)**

Features (*T all that apply*): **N/A**
_ earthwork _ depression _ foundation _ other _ none
describe:

Site Description *(T all that apply and describe):*
X single artifact _ artifact scatter _ lithic scatter _ earthwork/mound
_ structural ruin _ rock alignment _ rock art _ cemetery/burial
_ standing structure (SHPO structure # if known): _ other:
describe: **Site consists of single flake found on surface of washed-out dirt road.**

Inferred Site Function (*must specify*): **unknown—isolated find**

Current Land Use *(T all that apply):*
_ cultivated _ woodland _ commercial _ unknown
_ fallow _ recreational _ industrial _ other:
_ grassland X road _ residential

Surface Visibility
X excellent _ good _ fair _ poor _ none

Degree of Disturbance *(T and describe):*
_ minimal _ moderate _ heavy X destroyed _ unassessed
describe disturbance type(s): **Road is heavily rutted and has been washed out several times over.**

Current Threats to Site:
X erosion X development _ agricultural _ none known _ other:

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0053 Site Name: **CoPar I** Field #: **FS 1**

CULTURAL/TEMPORAL AFFILIATION *(T all that apply; include level of certainty: 1 = confirmed; 2 = probable):*

Period:
__ indeterminate
2 Pre-Contact (9500 BC - 1650 AD)
__ Contact (1650-1837)
__ Post-Contact (1837-1945)

Pre-Contact Context: *(if unable to discern specific context, check here N/A)*

PaleoIndian Tradition
__ indeterminate __ Folsom __ Lanceolate Point
__ Clovis __ Eastern Fluted __ other:

Archaic Tradition
__ indeterminate __ Prairie __ Riverine
__ Shield __ Lake-Forest __ other:

Woodland Tradition
__ indeterminate __ Fox Lake __ Laurel __ Early
__ Transitional __ Lake Benton __ Brainerd __ Kathio
__ Psinomani/Sandy Lake __ Black Duck __ Havana Related
__ Southeastern MN Late __ other:

Plains Village
__ indeterminate __ Cambria __ other:
__ Great Oasis __ Big Stone

Mississippian Tradition __ indeterminate __ Silvernale __ other:

Oneota Tradition __ indeterminate __ Blue Earth __ Orr __ other:

Contact Context: *(if unable to discern specific context, There __)*

American Indian
__ indeterminate __ Eastern Dakota __ other:
__ Ojibwe __ Western Dakota

EuroAmerican
__ indeterminate __ British __ other:
__ French __ Initial US

Post-Contact Context: *(if unable to discern specific context, check here N/A)*
__ Indian Communities & Reservations (1837-1934)
__ Early Agriculture & River Settlement (1840-1870)
__ Northern MN Lumbering (1870-1930s)
__ Tourism & Recreation (1870-1945)
__ St. Croix Triangle Lumbering (1830s-1900s)
__ Railroads & Agricultural Development (1870-1940)
__ Iron Ore Industry (1880s-1945)
__ Urban Centers (1870-1940)

Dating Methods *(T all that apply):*
X artifact style/cross dating __ radiocarbon __ historic accounts __ Andreas atlas (1874)
__ Sanborn maps (list years): __ plat maps (list years):
__ other(s) *(specify)*:
Specify context dates *(if radiometric, cite lab no. and uncalib. date; note if AMS):*

MATERIALS PRESENT

Material Classes *(T all that apply):*

Ceramics	*Lithics*	*Biological Remains*	*Other Materials*
__ Aboriginal	__ projectile points	__ animal	__ glass
__ EuroAmerican	__ other flaked stone tools	__ human	__ metal
	X debitage	__ unidentified bone	__ FCR
	__ ground/pecked stone	__ floral	__ other:

Additional information *(e.g., temper, charcoal type, raw material, etc.):* **flake of Prairie du Chien chert**

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0053 Site Name: **CoPar I** Field #: **FS 1**

Major Exotic Materials *(i.e., "exotic" relative to local area; T all that apply):* **N/A**

_ catlinite _ native copper _ Hixton orthoquartzite
_ Knife River Flint _ obsidian _ other:

Diagnostic Type/Information *(e.g., Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):* **N/A**

Ceramic:
Lithic:
Glass:
Metal:
Other:
Additional information: **N/A**

ENVIRONMENTAL DATA

Major Drainage System

_ Cedar River _ Des Moines River _ Lake Superior _ Minnesota River
X Mississippi River *(N of MN River)* _ Red River _ Rainy River
_ Mississippi River *(S of MN River)* _ Missouri River _ St. Croix River

Watershed Index Map no. (MnDNR, Division of Waters): **20—Mississippi River**

Distance to Existing Water Source *(per USGS topographic map, in feet or miles):* **100 feet to Fish Creek**

Ancient/Former Water Feature *(name, type and distance to such feature):* **N/A**

Topographic Setting *(T all that apply):*

Upland	*Riverine*	*Lacustrine*
_ general upland	_ alluvial fan	_ inlet/outlet
_ bluff edge	X terrace (creek)	_ peninsula
_ hilltop	_ stream-stream junction	_ island
_ glacial beach ridge	_ bluff-base	_ isthmus
_ wetland	_ cave/rockshelter	_ shoreline
_ other:	_ other:	_ other:

HISTORIC SITES ONLY: **N/A**

Historic setting: _ *rural* _ *urban* _ *other:*

Type(s):

_ *industrial* _ *commercial* _ *domestic* _ *government* _ *other:*

Historic transportation route (e.g., road, waterway, rail); identify type, direction & distance:

OWNERSHIP INFORMATION

Ownership Type *(T all that apply):*

_ federal _ state _ local _ tribal X private _ unknown

Land Owner *(name and address):* **CoPar Companies, 8677 Eagle Point Blvd., Lake Elmo, MN 55042**

Significant historic owner(s) and period(s) of ownership, if known: **N/A**

Year and Source of Ownership Information *(e.g., plat map, recorder's office, etc.):* **2005, CoPar Companies**

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0053 Site Name: **CoPar I** Field #: **FS 1**

INVESTIGATOR/REPORTER INFORMATION

Type(s) of Investigation *(Tall that apply):*
X reconnaissance __ evaluation __ data recovery __ other:

Methods/techniques employed *(Tall that apply):*
__ informant report
X surface survey
X shovel testing
__ excavation units
__ small diameter soil coring (. 1" diameter)
__ geomorphological survey *(specify)*:
__ geophysical survey *(specify)*:
__ other(s):

Informant Name and Address: **N/A**

Artifact Repository *(name and accession nos.):* **pending landowner permission, Minnesota Historical Society (accession no. pending**

Report Citation: **2005** ***Phase I Archaeological Survey for the Carver Crossing of Maplewood Project, Maplewood, Ramsey County, Minnesota*** **by Andrea Vermeer and Kent Bakken.**

Major Bibliographic Reference(s) to Site: **N/A**

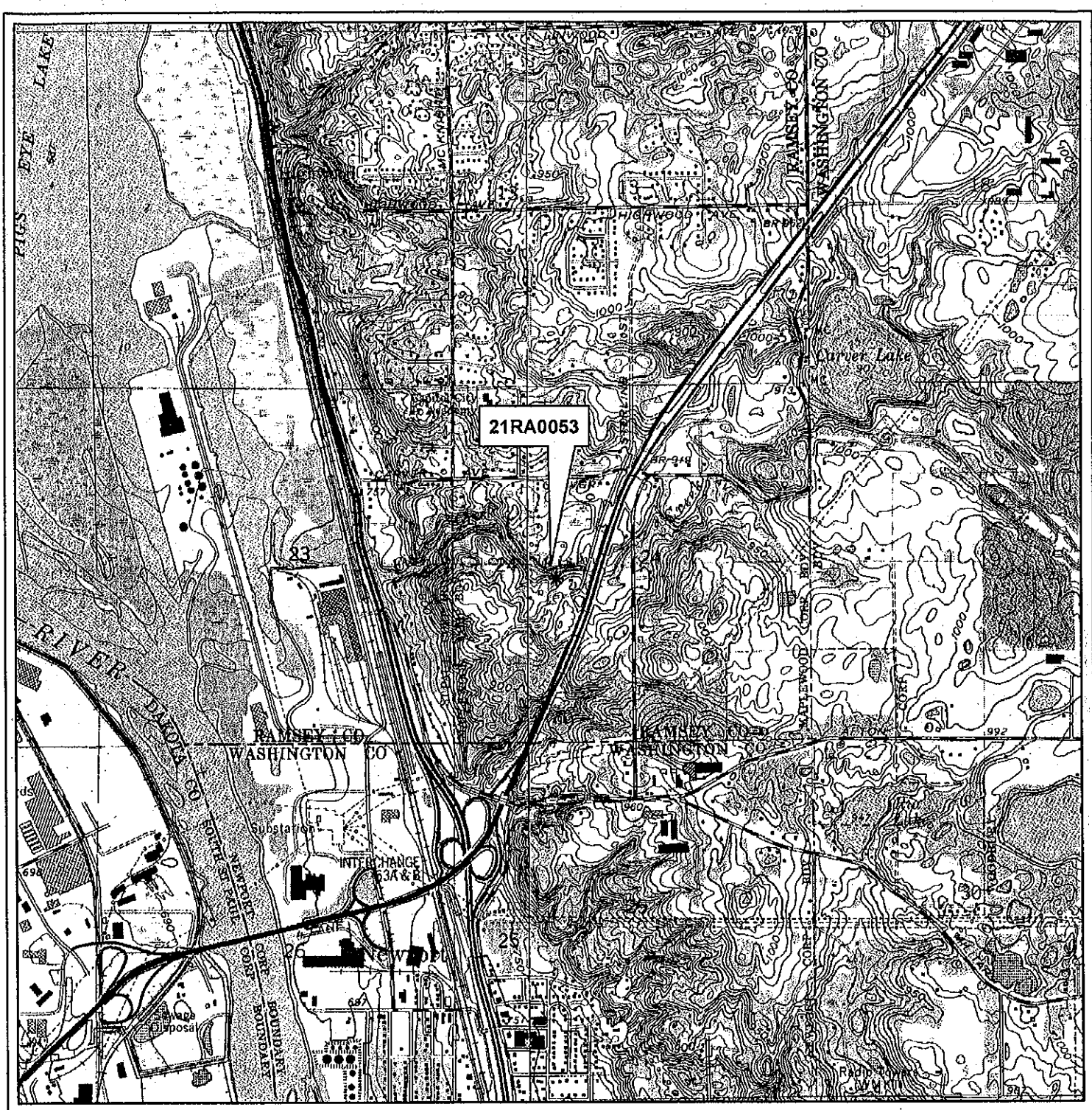
Principal Investigator *(name and affiliation):* **Andrea Vermeer, Summit Envirosolutions, Inc.**

ADDITIONAL NOTES *(use space below or attach extra sheets, as needed)*

The southern terrace of Fish Creek contains a former unpaved driveway that leads to and encircles a hill that is the site of a recently demolished house. The driveway contains several long and deep ruts, which had been amplified by rushing water due to severe storms that occurred just prior to the survey. The deep cuts in and erosion of the driveway surface provided excellent surface visibility along the driveway. For this reason, systematic pedestrian reconnaissance at close intervals was used to survey the driveway. During pedestrian survey, a single Prairie du Chien chert flake was located on the exposed surface of the driveway. A single shovel test was excavated in the location of the flake, and the soils within the test confirmed that the location had been heavily cut and filled through water action in the past. Based on the lack of intact soils in the project area, it was determined that even if the flake originated close to the location in which it was found, the site would have extremely poor integrity; therefore, no additional shovel tests were excavated.

MAPS *(attach USGS topographic quad and sketch map with site location outlined)*

Form Completed by *(name and date):* **Ora Elquist and Andrea Vermeer, October 20, 2005**



Map adapted from USGS 7.5 minute topographic maps: Lake Elmo and Saint Paul East, Minnesota.

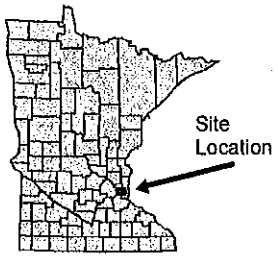
LEGEND

* 21RA0053

N

0 500 1,000 2,000 Feet

0 250 500 Meters



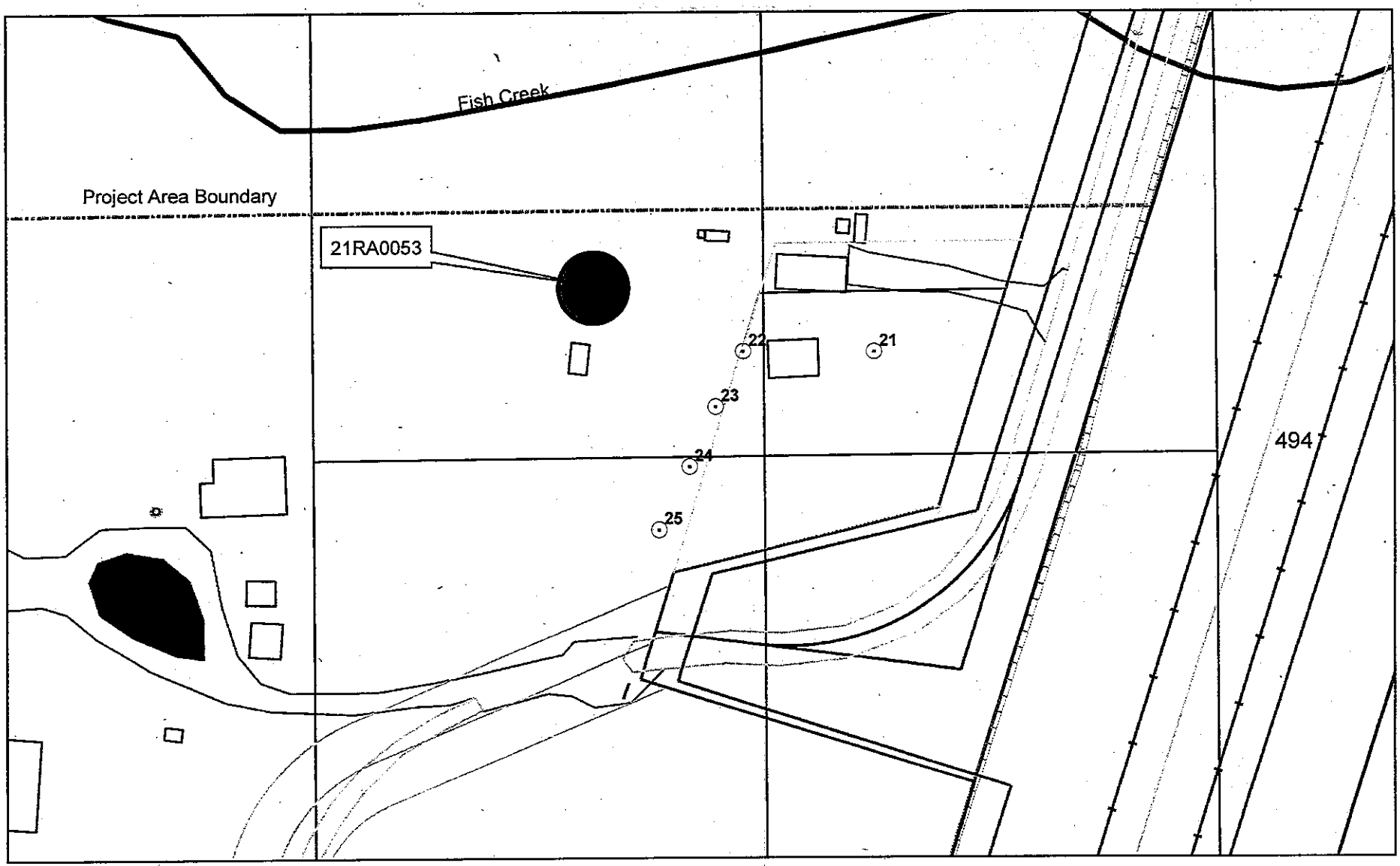
21RA0053 LOCATION MAP

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions

Figure 1

File: OSA1_21ra0053.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/21/05
Arc Operator: HRVG
Reviewed by: OAE/ACV



Map adapted from MFRA Cad Map.

LEGEND

21RA0053

Negative Shovel Test

Positive Shovel Test

Surface Find

N

0 50 100 200 300 Feet

0 50 100 Meters

Figure 2

Summit Envirosolutions

21RA0053 SKETCH MAP

Carver Crossing of Maplewood
Maplewood, Minnesota

File: OSA2_21ra0053_sf.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/21/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

Rev.: 03.31.97

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST
Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411

STATE HISTORIC PRESERVATION OFFICE
345 Kellogg Boulevard W., St. Paul, MN 55102 (651) 296-5434

OSA License #: N/A

SHPO RC #: **pending**

Date(s) of Fieldwork: **October 6 and 7, 2005** X New Site __ Site Update

SITE #: 21RA0054 Site Name: **CoPar II** Field #: **FS 2**

LOCATIONAL INFORMATION *(attach USGS topographic quad and sketch map with site location outlined)*

County: **Ramsey** City/Twp. Name: **Maplewood** SHPO Region: **4e**

USGS 7.5' Quadrangle Map *(name and year):* **Lake Elmo, Minn. 1967 (revised 1993)**

Township: **28N**	Range: **22W**	Section: **24**	3 Sections (at least 2): **SW-SE-NW**
Township:	Range:	Section:	3 Sections (at least 2):
Township:	Range:	Section:	3 Sections (at least 2):

UTM Site Coordinates *(use 1927 datum; identify center point only):*
Zone **15** Easting **500085** Northing **4971399**

Other locational information: **The site is located in a fallow field on a high terrace just north of Fish Creek. It is approximately 400 feet west of Henry Lane S. and approximately 100 feet north of Fish Creek.**

SITE CHARACTERISTICS

Acreage: **0.17** Site Dimensions *(both horizontal and vertical/depth, in metric):* **horiz. = 30 by 25 m; vert. = 0-90 cmbs**

Features (*Tall that apply*): **N/A**
__ earthwork __ depression __ foundation __ other __ none
describe:

Site Description *(Tall that apply and describe):*
__ single artifact X artifact scatter __ lithic scatter __ earthwork/mound
__ structural ruin __ rock alignment __ rock art __ cemetery/burial
__ standing structure (SHPO structure # if known): __ other:
describe: **Site consists of 14 ceramic sherds, four flakes, one bipolar core, and one tooth enamel fragment.**

Inferred Site Function (*must specify*): **possible campsite**

Current Land Use *(Tall that apply):*
__ cultivated __ woodland __ commercial __ unknown
X fallow __ recreational __ industrial __ other:
X grassland __ road __ residential

Surface Visibility
__ excellent __ good __ fair __ poor X none

Degree of Disturbance *(Tand describe):*
X minimal __ moderate X heavy __ destroyed __ unassessed
describe disturbance type(s): **The area of the site closest to the creek appears undisturbed, but the area immediately north has undergone plowing, and contains very little intact sediments.**

Current Threats to Site:
__ erosion __ development __ agricultural X none known __ other:
CoPar Companies is revising construction plans to avoid the site.

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0054 Site Name: **CoPar II** Field #: **FS 2**

CULTURAL/TEMPORAL AFFILIATION *(T all that apply; include level of certainty: 1 = confirmed; 2 = probable):*

Period:
__ indeterminate
1 Pre-Contact (9500 BC - 1650 AD)
__ Contact (1650-1837)
__ Post-Contact (1837-1945)

Pre-Contact Context: *(if unable to discern specific context, check here __)*

PaleoIndian Tradition
__ indeterminate __ Folsom __ Lanceolate Point
__ Clovis __ Eastern Fluted __ other:

Archaic Tradition
__ indeterminate __ Prairie __ Riverine
__ Shield __ Lake-Forest __ other:

Woodland Tradition
1 indeterminate __ Fox Lake __ Laurel __ Early
__ Transitional __ Lake Benton __ Brainerd __ Kathio
__ Psinomani/Sandy Lake __ Black Duck __ Havana Related
__ Southeastern MN Late __ other:

Plains Village
__ indeterminate __ Cambria __ other:
__ Great Oasis __ Big Stone

Mississippian Tradition
__ indeterminate __ Silvernale __ other:

Oneóta Tradition
__ indeterminate __ Blue Earth __ Orr __ other:

Contact Context: *(if unable to discern specific context, check here N/A)*

American Indian
__ indeterminate __ Eastern Dakota __ other:
__ Ojibwe __ Western Dakota

EuroAmerican
__ indeterminate __ British __ other:
__ French __ Initial US

Post-Contact Context: *(if unable to discern specific context, check here N/A)*
__ Indian Communities & Reservations (1837-1934)
__ Early Agriculture & River Settlement (1840-1870)
__ Northern MN Lumbering (1870-1930s)
__ Tourism & Recreation (1870-1945)
__ St. Croix Triangle Lumbering (1830s-1900s)
__ Railroads & Agricultural Development (1870-1940)
__ Iron Ore Industry (1880s-1945)
__ Urban Centers (1870-1940)

Dating Methods *(T all that apply):*
X artifact style/cross dating __ radiocarbon __ historic accounts __ Andreas atlas (1874)
__ Sanborn maps (list years): __ plat maps (list years): __ other(s) *(specify)*:

Specify context dates *(if radiometric, cite lab no. and uncalib. date; note if AMS):* **2500 B.C.-A.D. 1650 (general precontact, but post-Archaic)**

MATERIALS PRESENT

Material Classes *(T all that apply):*

Ceramics	*Lithics*	*Biological Remains*	*Other Materials*
X Aboriginal	__ projectile points	X animal	__ glass
__ EuroAmerican	__ other flaked stone tools	__ human	__ metal
	X debitage	__ unidentified bone	__ FCR
	__ ground/pecked stone	__ floral	__ other:

Additional information *(e.g., temper, charcoal type, raw material, etc.):* **The lithics consist of a quartz bipolar core and flakes of quartz (n=2), jasper (n=1), and non-descript chert (n=1). The ceramics consist of cord-marked wares (n=11) and sherds with indeterminate surface treatment (n=3). The cordmarked sherds are grit tempered (n=7), and sand tempered (n=4). The indeterminate sherds are grit tempered (n=2) and sand tempered (n=1). The single tooth enamel fragment is from an ungulate.**

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0054 Site Name: **CoPar II** Field #: **FS 2**

Major Exotic Materials *(i.e., "exotic" relative to local area; T<u>all</u> that apply):*
__ catlinite __ native copper __ Hixton orthoquartzite
__ Knife River Flint __ obsidian __ other: **The jasper flake may possibly be of Hartville variety (Black Hills)**

Diagnostic Type/Information *(e.g., Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):*
Ceramic: **cord-marked sherds**
Lithic:
Glass:
Metal:
Other:
Additional information:

ENVIRONMENTAL DATA

Major Drainage System
__ Cedar River __ Des Moines River __ Lake Superior __ Minnesota River
X Mississippi River *(N of MN River)* __ Red River __ Rainy River
__ Mississippi River *(S of MN River)* __ Missouri River __ St. Croix River

Watershed Index Map no. (MnDNR, Division of Waters): **20—Mississippi River**

Distance to Existing Water Source *(per USGS topographic map, in feet or miles):* **100 feet to Fish Creek**

Ancient/Former Water Feature *(name, type and distance to such feature):* **N/A**

Topographic Setting *(T<u>all</u> that apply):*

<u>Upland</u>	*<u>Riverine</u>*	*<u>Lacustrine</u>*
__ general upland	__ alluvial fan	__ inlet/outlet
__ bluff edge	X terrace (**creek**)	__ peninsula
__ hilltop	__ stream-stream junction	__ island
__ glacial beach ridge	__ bluff-base	__ isthmus
__ wetland	__ cave/rockshelter	__ shoreline
__ other:	__ other:	__ other:

HISTORIC SITES ONLY: **N/A**

Historic setting: __ *rural* __ *urban* __ *other:*

Type(s):
__ *industrial* __ *commercial* __ *domestic* __ *government* __ *other:*

Historic transportation route (e.g., road, waterway, rail); identify type, direction & distance:

OWNERSHIP INFORMATION

Ownership Type *(T<u>all</u> that apply):*
__ federal __ state __ local __ tribal X private __ unknown

Land Owner *(name and address):* **CoPar Companies, 8677 Eagle Point Blvd., Lake Elmo, MN 55042**

Significant historic owner(s) and period(s) of ownership, if known: **N/A**

Year and Source of Ownership Information *(e.g., plat map, recorder's office, etc.):* **2005, CoPar Companies**

MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21- Site Name: **CoPar II** Field #: **FS 2**

INVESTIGATOR/REPORTER INFORMATION

Type(s) of Investigation *(T all that apply):*
X reconnaissance _ evaluation _ data recovery _ other:

Methods/techniques employed *(T all that apply):*
_ informant report
_ surface survey
X shovel testing
_ excavation units
_ small diameter soil coring (. 1" diameter)
_ geomorphological survey *(specify)*:
_ geophysical survey *(specify)*:
_ other(s):

Informant Name and Address: **N/A**

Artifact Repository *(name and accession nos.):* **pending landowner permission, Minnesota Historical Society (accession no. pending**

Report Citation: **2005** ***Phase I Archaeological Survey for the Carver Crossing of Maplewood Project, Maplewood, Ramsey County, Minnesota*** **by Andrea Vermeer and Kent Bakken.**

Major Bibliographic Reference(s) to Site: **N/A**

Principal Investigator *(name and affiliation):* **Andrea Vermeer, Summit Envirosolutions, Inc.**

ADDITIONAL NOTES *(use space below or attach extra sheets, as needed)*

Site 21RA0054 is a subsurface artifact scatter located just north of Fish Creek. The site measures approximately 30 by 25 m, with artifacts occurring to a minimum depth of 90 cm (3 feet). The site's southern boundary is the edge of the deeply incised, steep sided creek valley, and it seems likely that some of the site has eroded into the creek valley by slumping and slope creep along the valley sides. The site's northern boundary lies only about 25 m north of the valley edge. Site 21RA0054 may be a small temporary campsite.

The site was identified by 8 shovel tests that produced cultural materials in and below the plowzone. Seventeen precontact artifacts were recovered, including ceramics (n=12), lithics (n=4), and faunal remains (n=1). The ceramic artifacts included 6 grit-tempered, cord-marked ceramic body sherds; 2 grit-tempered, indeterminate surface treatment ceramic crumbs; 3 sand-tempered, smoothed-over cord-marked body sherds; and 1 sand-tempered, indeterminate surface treatment ceramic crumb. One of the ceramic body sherds is well worn, as if it had been in an erosive environment such as a stream channel or beach. The lithic artifacts included 2 pieces of lithic flaking debris (quartz=1, jasper=1), and 2 pieces of possible flaking debris (quartz=1, chert=1). The 2 pieces of possible flaking debris resemble common stone artifacts in their form, but they are thoroughly worn or weathered over their entire surfaces. Such wear or weathering can indicate that the pieces are naturally occurring rocks that coincidentally resemble artifacts, or the wear or weathering could occur on real artifacts that have been in an erosive environment such as a stream channel or beach. It is difficult to determine which scenario is more likely without additional information on the site and depositional conditions at the site. The faunal remains included 1 piece of tooth enamel from an ungulate. No temporally or culturally diagnostic artifacts were recovered, except that the presence of precontact ceramics indicates that the site dates from some time in approximately the last 2,500 years. A sparse scatter of recent historical materials were noted but not collected; these pieces did not appear to document any substantial post-contact habitation or other activity. Some artifacts were recovered from the plowzone, which varied in depth between approximately 15 and 25 cm below surface. Other artifacts were recovered in undisturbed soils beneath the plowzone, indicating that the site has the potential for containing well-preserved cultural remains. It should be noted, however, that sandy soils such as those encountered in parts of the site are relatively dynamic; that is, the soils are relatively easily moved around by processes such as freezing and thawing, animal burrows, insect and worm activity, and tree falls. Such conditions can lead to the movement and mixing of artifacts or features, making it less likely that well preserved archaeological remains will be found.

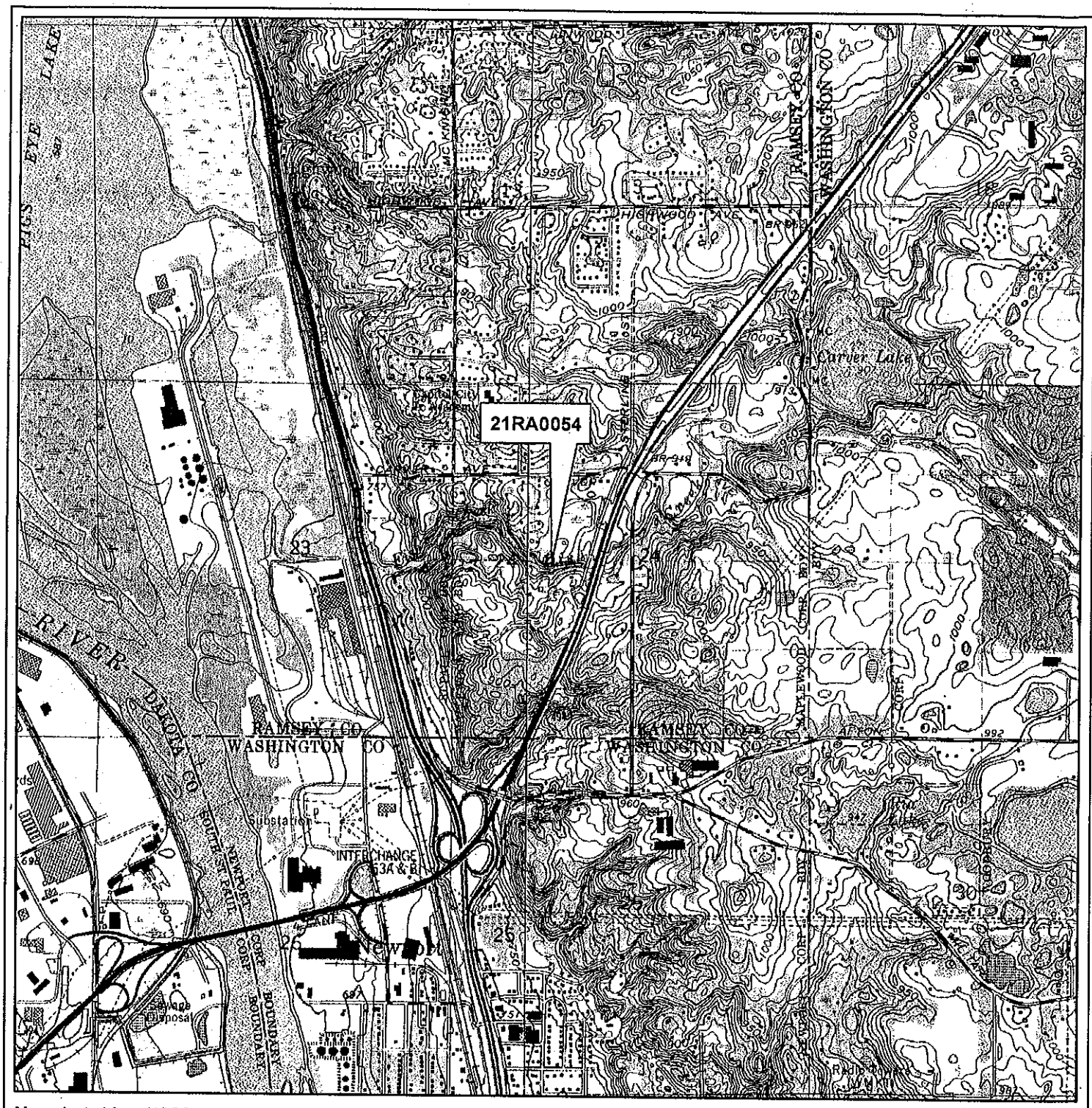
MINNESOTA ARCHAEOLOGICAL SITE FORM

SITE #: 21RA0054 Site Name: **CoPar II** Field #: **FS 2**

The stratigraphy of the site was unexpectedly complex. Some shovel tests encountered shallow soil profiles; a typical example might have a plowzone about 15 cm deep; a shallow truncated B horizon in some cases, about 5 cm thick; and a C horizon of undetermined depth below this. The soils in such shovels tests were commonly somewhat reddish (in the 7.5 YR range), and rich in gravel. Other shovel tests, however, encountered deep soil profiles; a typical example might include a plowzone 15 to 25 cm deep; a sub-plowzone stratum that was almost indistinguishable from the plowzone, continuing to a depth of 60 to 90 cm or more; and in some cases a pale C horizon of undetermined depth below this point (Note that it was seldom possible to excavate these shovel tests below 90 to 100 cm, in part because the soils at this point were saturated from recent heavy rains.) The soils in these shovel tests were commonly very dark (in the 10 YR range) and also sandy, with relatively little gravel. Note that most of the positive shovel tests were in the deep, sandy soils rather than the shallow, gravelly soils. The basic stratigraphic information provided by the shovel tests, however, is not adequate to evaluate the potentially complex stratigraphy of this landscape and site.

MAPS *(attach USGS topographic quad and sketch map with site location outlined)*

Form Completed by *(name and date):* **Ora Elquist and Kent Bakken, October 20, 2005**



Map adapted from USGS 7.5 minute topographic maps: Lake Elmo and Saint Paul East, Minnesota.

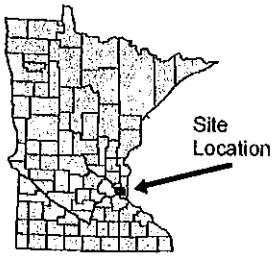
LEGEND

21RA0054

N

0 500 1,000 2,000 Feet

0 250 500 Meters



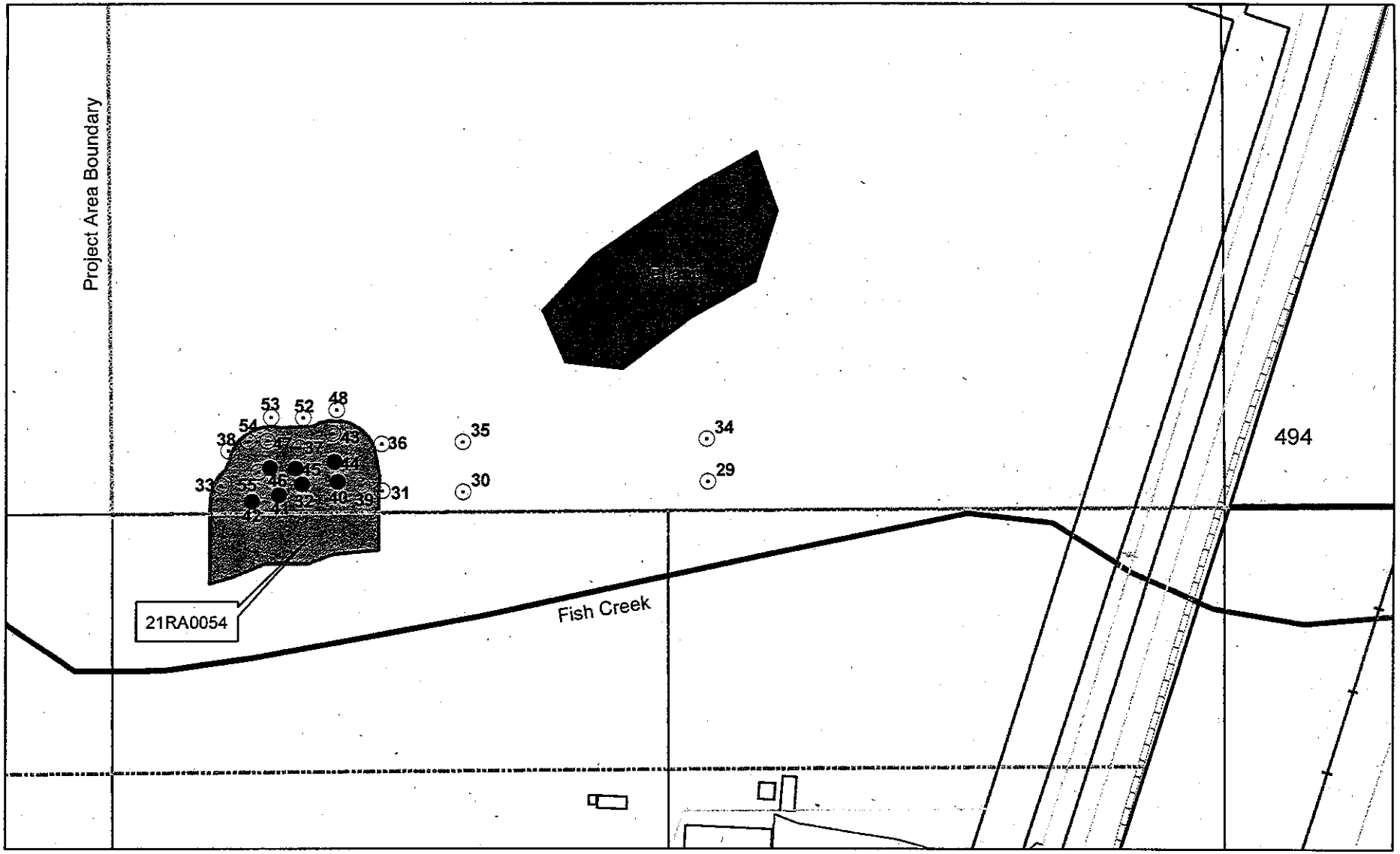
21RA0054 LOCATION MAP

Carver Crossing of Maplewood
Maplewood, Minnesota

Summit Envirosolutions

Figure 1

File: OSA1_21ra0054.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/21/05
Arc Operator: HRVG
Reviewed by: OAE/ACV



Map adapted from MFRA Cad Map.

LEGEND

21RA0054

Negative Shovel Test

Positive Shovel Test

N

0 100 200 Feet

0 37.5 75 Meters

Figure 2

Summit Envirosolutions

21RA0054 SKETCH MAP

Carver Crossing of Maplewood
Maplewood, Minnesota

File: OSA2_21ra0054_l.mxd
Summit Proj. No.: 1834-001
Plot Date: 10/21/05
Arc Operator: HRVG
Reviewed by: OAE/ACV

APPENDIX III: ARTIFACT CATALOGUES

Summit Envirosolutions, Inc.
Artifact Catalog

Site #	FS#	Accession#	Location	Depth	Provenience	Artifact#	Artifact Count	Attribute1	Attribute2	Attribute3	Attribute4	Attribute5	Notes	Weight in grams
21RA53	1		SF 1	surface	1	1	1	lithic	PdC	debitage	C-N	HT-N	1 flake	3.6
21RA54	2		ST 32	ca. 60cmbs	1	1	1	ceramic	bodysherd	grit temper	R-N	cordmarked	1 cordmarked bodysherd	3.2
21RA54	2		ST 40	0-67cmbs	2	1	1	lithic	quartz	debitage	C-N	HT-N	1 flake	.1
21RA54	2		ST 40	0-67cmbs	2	2-5	4	ceramic	bodysherd	grit temper	R-N	cordmarked	4 cordmarked bodysherds	3.7
21RA54	2		ST 40	0-67cmbs	2	6	1	ceramic	bodysherd	sand temper	R-N	cordmarked	1 cordmarked bodysherd; broken into 2 pieces; cf. smoothed-over cordmarking	1.2
21RA54	2		ST 40	0-67cmbs	2	7	1	ceramic	bodysherd	sand temper	R-N	cordmarked	1 cordmarked bodysherd; cf. smoothed-over cordmarking	0.9
21RA54	2		ST 40	0-67cmbs	2	8	1	ceramic	bodysherd	sand temper	R-N	indeterminate	1 bodysherd with indeterminate surface treatment; surface eroded	0.2
21RA54	2		ST 41	25-30cmbs	3	1	1	ceramic	crumb	grit temper	R-N	indeterminate	1 ceramic crumb; indeterminate surface treatment; broken into 2 pieces	0.7
21RA54	2		ST 42	30-70cmbs	4	1	1	lithic	quartz	debitage	C-N	HT-N	1 flake	0.4
21RA54	2		ST 42	30-70cmbs	4	2	1	ceramic	bodysherd	grit temper	R-Y	cordmarked	1 cordmarked bodysherd; sherd may be from neck portion of vessel	3.4
21RA54	2		ST 42	70-90cmbs	5	1	1	ceramic	bodysherd	sand temper	R-N	cordmarked	1 cordmarked bodysherd; cf. smoothed-over cordmarking; coil break apparent;	4.0
21RA54	2		ST 44	0-19cmbs	6	1	1	ceramic	crumb	grit temper	R-N	indeterminate	1 ceramic crumb; indeterminate surface treatment	0.3
21RA54	2		ST 45	0-34cmbs	7	1	1	lithic	jasper	debitage	C-N	HT-N	1 flake; cf. Black Hills - Hartville raw material	0.4
21RA54	2		ST 45	0-34cmbs	7	2	1	lithic	quartz	cf. bipolar core	C-Y	HT-N	1 possible bipolar core; entire surface worn	3.2
21RA54	2		ST 45	0-34cmbs	7	3	1	lithic	chert	cf. debitage	cf. C-Y	HT-Y	1 possible flake; entire surface worn, but has excellent flake morphology	0.2
21RA54	2		ST 45	0-34cmbs	7	4	1	faunal	tooth enamel	molar	artiodactyl	no evident modification	1 tooth enamel fragment from an artiodactyl; cf. tooth calculus present	< 0.1
21RA54	2		ST 46	0-67cmbs	8	1	1	ceramic	bodysherd	sand temper	R-N	cordmarked	1 cordmarked bodysherd	0.5
21RA54	2		ST 46	0-67cmbs	8	2	1	ceramic	bodysherd	grit temper	R-N	cordmarked	1 cordmarked bodysherd	1.9
													Abbreviations Key:	
													PdC = Prairie du Chien Chert	
													C = Cortex	
													HT = Heat treatment	
													Y = Yes	
													N = No	
													R = Residue	