

MUSEUM OF NEW MEXICO

OFFICE OF ARCHAEOLOGICAL STUDIES

**AN ARCHAEOLOGICAL SURVEY OF 4.85 MILES (7.8 KM)
OF WATER AND SEWER LINE EASEMENTS FOR TANO
SANTA FE SUBDIVISION IN NORTHWEST SANTA
FE, SANTA FE COUNTY, NEW MEXICO**

by

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ARCHAEOLOGY NOTES 209

ADMINISTRATIVE SUMMARY

Between September 11 and October 16, 1996, the Office of Archaeological Studies of the Museum of New Mexico examined 4.85 mi (7.8 km) of utility easements in northwest Santa Fe for the Tano Santa Fe Development. Easements varied between 20 ft (6 m) and 25 ft (7.6 m) in width, and a total of 12.59 acres (5.09 ha) of land was examined. Most of the land crossed by the easements was private, owned by the City of Santa Fe, or were through-easements held by the City of Santa Fe. A small section of state land within the NM 84 right-of-way was also examined (920 ft, 280 m). Five new sites and three that were recorded and treated by previous projects were encountered. In addition, fifteen isolated occurrences and seven modern engineering features were also recorded. No further work is recommended for any of the sites, isolated occurrences, or modern engineering features.

State of New Mexico Blanket Survey Permit NM-96-027 (expires 12-31-96)

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INTRODUCTION

At the request of Mr. Malcolm Dunlevie of the Tano Santa Fe Development, the Office of Archaeological Studies (OAS) of the Museum of New Mexico conducted an archaeological survey of water and sewer line easements in northwest Santa Fe, Santa Fe County, New Mexico. Field work was sporadic, and was completed between September 11 and October 16, 1996, by James L. Moore, Sonya Urban, and David Hayden of the OAS. Initial work was under the supervision of Timothy D. Maxwell, who is on the list of approved archaeological contractors for the City of Santa Fe. After September 19, the project was under the supervision of James L. Moore, who was added to the list of approved archaeological contractors on that date. Yvonne R. Oakes, assistant director of the OAS, acted as principal investigator. The report was edited by Robin Gould, and illustrations were produced by Ann Noble. This project was initiated to comply with the Santa Fe Archaeological Review Districts Ordinance (Ord. #1987-40, §1); the area examined was in the Suburban District. Site location information is provided in Appendix 1, but is not for public distribution.

A total of 4.85 mi (7.8 km) of utility easements was examined. Easement width varied from 20 ft (6 m) to 25 ft (7.6 m), as detailed in a later section of the report, and 12.59 acres (5.09 ha) of land were examined. Eight archaeological sites, fifteen isolated occurrences, and seven modern engineering features were recorded during the course of this study. Of the sites, five were located and recorded by this project including LA 115535, LA 115536, LA 115537, LA 115538, and LA 115539. Two of the newly recorded sites were artifact scatters (LA 115535 and LA 115536), and three were isolated checkdams of probable historic date (LA 115537, LA 115538, and LA 115539). A check at the Archeological Records Management Section of the Historic Preservation Division showed that three previously recorded sites extend into the survey corridor. Those sites (LA 61318, LA 61320, and LA 61321) were recorded during investigations along the Santa Fe Relief Route (Maxwell 1988), and were not re-recorded during the current project. All three have undergone subsequent testing, and data recovery has been performed at LA 61321 (Post 1996a; Wolfman et al. 1989).

Field recording is considered to have exhausted the research potential of all five sites located and recorded during this survey (LA 115535, LA 115536, LA 115537, LA 115538, and LA 115539) as well as the isolated occurrences. No further work is recommended for these cultural properties. Testing and data recovery projects associated with archaeological investigations along the Santa Fe Relief Route has exhausted the research potential of the three previously recorded sites (LA 61318, LA 61320, and LA 61321), and no further work is recommended for those cultural properties. The seven modern engineering features are associated with the Camino Encantado roadbed and are still in use. While these features are adjacent to the utility easement, they will be avoided by construction activities. Thus, no further work is recommended for them. Survey records and photographs are on file at the Archeological Records Management Section of the Historic Preservation Division.

PHYSICAL ENVIRONMENT

The contemporary environment of the Santa Fe Basin has been thoroughly reviewed in a study by Kelley (1980) as part of the Arroyo Hondo Archaeological Project. The reader is referred to this monograph for the wealth of detail it contains. Maxwell (1988:8-9) summarized portions of that report for the contemporary environment of the Santa Fe region, and that material is used as the basis for this discussion.

The project area is located within a structural subdivision of the Southern Rocky Mountain physiographic zone known as the Española Basin. That basin is bounded on the west by the Jemez Mountains and on the east by the Sangre de Cristo Mountains. An alluvial plain, which is dissected by numerous arroyos, stretches westward from the foothills at the base of the Sangre de Cristo Mountains.

Local topography alternates among nearly level plains, rolling terraces, and steep, rocky slopes. The main drainage is the Santa Fe River, though the project corridor also intersects major tributary arroyos such as Arroyo de La Piedra, Arroyo Ranchito, and Arroyo Barranca. These tributaries have fairly wide, level floodplains, while smaller tributary arroyos have cut deeply into the alluvial plain, forming steeply sided valleys.

Alluvial deposits of ancient and modern gravels are found in arroyos and on adjacent terraces. Tertiary volcanic deposits, Cenozoic sediments, and Precambrian rock are exposed in surrounding areas and, when combined with these alluvial deposits, provide most of the materials needed for lithic artifact production. In particular, chert is available in the Ancha formation (Kelley 1980:11-12), and sandstone, siltstone, andesite, basalt, and silicified wood occur in other nearby formations (Hannaford 1986:4). The most commonly used chert in the study area outcrops in the Madera limestone formation, and occurs in local gravel deposits. Small amounts of obsidian are found scattered along the basalt-capped mesas to the west of Santa Fe (Kelley 1980:12).

Local flora and fauna are typical of Upper Sonoran grasslands. The piñon-juniper community thins as it descends from the Sangre de Cristo foothills and grades into shortgrass plains containing scattered juniper midway between the foothills and the Santa Fe River (Kelley 1980:61-62). The open grass-covered valleys contain grama grass, muhly, Indian ricegrass, galleta grass, soapweed yucca, one-seed juniper, Colorado piñon, occasional Gambel's oak, and small stands of mountain mahogany. Arroyo bottoms contain various shrubs such as fourwing saltbush, Apache plume, rabbitbrush, big sagebrush, and wolfberry.

Regional fauna includes desert cottontail, black-tailed jackrabbit, and Gunnison's prairie dog. A complete list of flora and fauna found in the area is contained in Kelley (1980).

The project area has a semiarid climate. Most precipitation occurs as intense summer thunderstorms that produce severe runoff and reduce usable moisture. The area receives an average of 229 to 254 mm (9.02 to 10 inches) of precipitation per year and a mean snowfall of 356 mm (14.02 inches) (Kelley 1980:112). The growing season ranges between 130 and 220 days, and averages 170 days. The last spring frost usually occurs in the first week of May, and the first fall frost occurs around the middle of October. The mean yearly temperature is 10.5 degrees C (50.9 degrees F).

CULTURAL RESOURCE OVERVIEW

This overview of Santa Fe area culture history is a summary of prehistoric and historic occupations. Information on trends in settlement and subsistence was determined from large-scale survey and excavation reports. Data on regional cultural development is primarily derived from Maxwell and Post (1992) and Post and Snow (1992).

Paleoindian Period (9500 to 5500 B.C.)

A striking characteristic of Santa Fe culture history is the paucity of evidence for occupation during the Paleoindian period (9500 to 5500 B.C.). The two reported occurrences are isolated late Paleoindian Cody Complex artifacts from the Galisteo Basin near San Cristobal (Lang 1977) and Galisteo Reservoir (Honea 1971).

For New Mexico in general, the most extensive and spectacular evidence for Paleoindian occupation are the remains of killed and butchered large mammals (Stuart and Gauthier 1981). Evidence for hunting smaller mammals and plant gathering is rare and largely inferential. The only potential Paleoindian structures found to date are in the middle Rio Grande Valley south of Albuquerque (Judge 1973). Kill and butcher sites have the highest archaeological visibility and therefore are the most frequently reported.

Part of the problem might be that Paleoindian remains from hunting and gathering activities are masked by later Archaic and Anasazi components. Geomorphological factors may also contribute to low Paleoindian site visibility. Surfaces or strata containing the earliest remains may be deeply buried, and exposures that contain Paleoindian materials may be difficult to identify or missed by traditional pedestrian surveys (Cordell 1979:6). The two identified Cody Complex components may be evidence for a changing adaptation that focused more on hunting smaller mammals and plant gathering than was the case in previous periods.

Archaic Period (5500 B.C. to A.D. 600)

The Archaic period in the Santa Fe area has been defined according to Oshara and Cochise traditions (Biella and Chapman 1977; Cordell 1979; Lang 1977). These traditions span the period between 5500 B.C. and A.D. 400, and are primarily distinguished by morphologically and temporally distinct projectile points and to some extent stone tool assemblages and site structure (Irwin-Williams 1973, 1979). Most Archaic sites identified in the area have been assigned to the Oshara tradition, and date from the Bajada phase (4800 to 3200 B.C.) to the En Medio or Basketmaker II period (800 B.C. to A.D. 400 or 600).

Archaic adaptations in the Santa Fe area have been most intensively studied at Cochiti Dam and in the eastern Galisteo Basin, with smaller numbers of sites identified southwest (Dickson 1979; Hannaford 1986; Lent 1988; Scheick and Viklund 1989) and southeast of Santa Fe. Lang (1977) found 13 Middle to Late Archaic sites and 53 nondiagnostic lithic artifact scatters in the eastern Galisteo Basin; some of the nondiagnostic scatters are probably also Archaic in age. He

interprets the Archaic occupation as one of ". . . relatively limited, seasonal, upslope-downslope movement of San Jose microbands between different communities and biomes of the basin, and a more expansive seasonal movement of specialized hunting groups corresponding to deep population movements" (Lang 1977:16).

Two sites with projectile points diagnostic of the Chiricahua and San Pedro phases of the Cochise tradition were identified by Lang (1977:17). Those phases date roughly between 1500 B.C. and A.D. 1 (Sayles 1983). Lang suggests that these sites are evidence of a population intrusion from the south. This interpretation is suspect because side-notched Chiricahua-style projectile points are found all over the San Juan Basin. This broad northern distribution suggests they are a poorly documented part of the northern Archaic adaptation rather than diagnostic of a Cochise population (Post n.d.).

Late Archaic period (1500 B.C. to A.D. 400) sites were less common in the eastern Galisteo Basin and north of La Bajada escarpment, with only eight sites assigned to this period by Lang (1977). Late Archaic sites with hearth and pit features and relatively abundant stone artifacts were found on the southwest periphery of Santa Fe by Hannaford (1986:23-24) and Lent (1988). These sites were probably short-term residences or base camps. The accumulation of features and artifacts indicated repeated occupations.

Further south at Cochiti Reservoir, Biella and Chapman (1977:201) suggest that most of their 90 nonstructural artifact scatters with hearths date to the Late Archaic, with no evidence for Early to Middle Archaic occupations found. This is in marked contrast to the low numbers of Late Archaic sites in the eastern Galisteo Basin (Lang 1977). Archaeological evidence for Archaic occupation at Cochiti Reservoir was summarized as a

. . . picture of short-term residential occupations by very small complements of commensal groups, which characterize the late Archaic adaptation within the Cochiti Reservoir locale. Considerable redundancy for site location is evident in all aspects of subsistence-related behavior, including strategies of food resource processing and consumption; strategies of raw material selection for tool manufacture; reduction trajectories involved in tool manufacture; and the character of site space utilization. (Chapman 1977:72)

Archaeological evidence for seasonal movement within and between different environmental zones was scarce because floral and faunal remains were poorly preserved or absent (Chapman 1977:73).

An explanation for differences in Archaic period site frequencies between the eastern Galisteo Basin and Cochiti Reservoir is lacking. Different spatial-temporal distributions could result from changes in the environment that required periodic shifts in subsistence strategies. They could also arise from variation in settlement systems; sites along the Rio Grande were reoccupied often, resulting in greater artifact and feature accumulations. Less frequent reoccupation and a more dispersed settlement pattern would produce sites with lower archaeological visibility, like those in the eastern Galisteo Basin.

Pueblo Period (A.D. 600 to 1540)

Developmental Period (A.D. 600 to 1200)

The Developmental period (Wendorf and Reed 1955) is divided into Early (A.D. 600 to 900), Middle (A.D. 900 to 1000), and Late (A.D. 1000 to 1200) subperiods. Early Developmental sites are uncommon in the northern Rio Grande (Wendorf and Reed 1955:138). Surveys at Cochiti Reservoir found only 12 sites that could be assigned to this period (Biella and Chapman 1977:203). McNutt (1969:70) located no Early Developmental components north of La Bajada escarpment and White Rock Canyon. Only two nonresidential components from the Early Developmental period have been recorded in the south Santa Fe area (Dickson 1979; Scheick and Viklund 1989). In the eastern Galisteo Basin only five components may date to this period (Lang 1977; Scheick and Viklund 1989). The lack of extensive sedentary settlement suggests that there was a long-term hunter-gatherer pattern in the Northern Rio Grande. This continued focus on hunting and gathering may be in part attributed to the rich resource diversity of the Northern Rio Grande Valley, forestalling an early reliance on small-scale farming (Cordell 1979:2).

The Middle Developmental period (A.D. 900 to 1000) showed an increase in sites in the Northern Rio Grande. Excavations in the Santa Fe and Tesuque valleys revealed pithouses associated with contiguous surface rooms, and perhaps a kiva (Honea 1971; McNutt 1969:58). These sites do not necessarily suggest a population increase. Instead, the settlement and subsistence pattern may have shifted from one of considerable residential mobility, which left ephemeral archaeological remains, to a more sedentary lifestyle that left substantial structural remains and artifact accumulations. The overall picture during this period was probably one of low population density.

The Late Developmental period (A.D. 1000 to 1200) showed the first substantial population increase in the Santa Fe area, as inferred from increased site numbers and sizes (Wendorf and Reed 1955:140-141). For the first time, larger sites indicate village-size settlements with year-round residential occupation. The predominant pottery was Kwahe'e Black-on-white, originally identified by Mera (1935) as a local Rio Grande variant of Chaco-style pottery. Site size ranged from 1 to 100 rooms. Known villages include LA 835 north of Santa Fe; LA 114 (Arroyo Negro) along the Santa Fe River; and LA 191 (Mocho) along the Arroyo Hondo south of Santa Fe, which is one of the largest sites in the area (Stuart and Gauthier 1981). Pindi Pueblo (LA 1) had a minor Late Developmental component, suggesting that some large Coalition villages had their origins in Developmental period settlements (Wiseman 1989:5). McNutt (1969:76-77), in providing a detailed description of this period, noted an abundance of manos, trough metates, and animal bones at the Tesuque Bypass Site, suggesting that farming and hunting were subsistence mainstays.

Coalition Period (A.D. 1200 to 1325)

The Coalition period is marked by three major changes in the Northern Rio Grande: (1) a significant increase in the size and number of sites, suggesting an increase in population and an extension of the early village-level organization that began during the Late Developmental period; (2) pithouses were replaced as domiciles by contiguous adobe and masonry surface rooms; and (3) pottery decoration changed from mineral to organic paint. These changes were of sufficient import to warrant definition of a new period which was divided into two phases: Pindi (A.D. 1220

to 1300) and Galisteo (A.D. 1300 to 1325) (Wendorf and Reed 1955). Decorated pottery was divided into Santa Fe Black-on-white and all its local variants for the Pindi phase (Stubbs and Stallings 1953), and Galisteo Black-on-white for the later phase (Mera 1935). Most large sites were established during the Pindi phase, and the largest continued to grow during the Galisteo phase. Sites ranged in size from 2 to 200 rooms, but most contained 15 to 30 rooms (Stuart and Gauthier 1981:51). Site frequencies increased greatly in all parts of the Northern Rio Grande during this phase (Biella and Chapman 1977:203; Lang 1977; McNutt 1969; Orcutt 1991).

In the south Santa Fe area, villages were established at Upper Arroyo Hondo Pueblo (LA 76), Arroyo Hondo Pueblo (LA 12), Pueblo Alamo (LA 8), Chamisa Locita (LA 4), and Peña Negra (LA 235) (Allen 1973; Dickson 1979). Previously uninhabited resource areas probably came into use as each village claimed the land and resources necessary for survival (Dickson 1979:79-81). Small sites that reflect a logistical resource procurement and processing strategy (Binford 1980) occur within a 2 km (1.2 mile) radius of Chamisa Locita (Viklund and Scheick 1989) and Arroyo Hondo Pueblo (Dickson 1979; Ware 1991).

Upper Arroyo Hondo, Pueblo Alamo, and Chamisa Locita were occupied contemporaneously during the Pindi phase. Continued growth occurred at Arroyo Hondo and Chamisa Locita during the Galisteo phase, but upper Arroyo Hondo and Pueblo Alamo were abandoned.

Classic Period (A.D. 1325 to 1600)

Wendorf and Reed (1955) mark the beginning of the Classic period (A.D. 1325 to 1600) by the appearance of Glaze A and locally manufactured red-slipped pottery (see also Mera 1935; Warren 1979). During this period, regional populations reached their maximum size, and large communities with multiple plaza and room block complexes were established. Although reasons for the appearance and proliferation of glaze wares are debatable, many researchers believe that the similarity of this new pottery to White Mountain Redware is evidence for large-scale immigration into the area from the San Juan Basin and Zuni region (Eggan 1950; Hewett 1953; Mera 1935, 1940; Reed 1949; Stubbs and Stallings 1953; Wendorf and Reed 1955). However, Steen (1977) argues that the changes seen during this period resulted instead from rapid indigenous population growth. He believes that population growth was enabled by favorable climatic conditions, allowing Rio Grande populations to practice dry farming in previously unusable areas, and suggests that there was free and open trade between the Northern Rio Grande and other areas, accounting for observed changes in Classic Period material culture.

Thus, it is unclear how much of the population increase during this period resulted from immigration or internal growth. In addition to populations migrating from the west, it has been suggested that people came from the Jornada branch of the Mogollon to the south, and perhaps from northern Mexico (Schaafsma and Schaafsma 1974). However, good evidence for population movement from these areas is lacking.

Large villages of this period include the Agua Fria School House Site (LA 2), Arroyo Hondo (LA 12), and Cieneguilla (LA 16). However, by the time Glaze B pottery appeared (ca. 1425), only Cieneguilla Pueblo was still occupied by a substantial population. Dickson (1979) believes that abandonment of the large villages was due to drought and subsequent agricultural failure.

Historic Period (A.D. 1540 to Present)

The Historic period spans more than 400 years of interaction among Native American, Spanish, and Anglo-American cultures. A detailed summary of historical events and trends for the Middle Rio Grande and the Santa Fe area is beyond the scope of this report. Interested readers are referred to the many sources that detail events and patterns of the historic period (Athearn 1989; Bannon 1979; Jenkins and Schroeder 1974; Kessell 1979; Lamar 1966; Larson 1968; Noble 1989; Pratt and Snow 1988; Swadesh 1974; Twitchell 1925; Wilson 1981).

Except for the period of Spanish exploration, the historic era is divided into periods that reflect changes in political control in New Mexico. The Spanish Exploration period extends from Coronado's *entrada* in 1540 to 1542, and the colonization of New Mexico in 1598 by Don Juan de Oñate. The early Spanish Colonial period extends from the initial colonization of New Mexico to the Pueblo Revolt (1599 to 1680). The return to Native American self-determination lasted from 1680 to 1696. The late Spanish Colonial period extends from the Reconquest of New Mexico in 1693 to 1821, the year of Mexican independence from Spain. This was a time of settlement growth and expansion in New Mexico. The Mexican period lasted from A.D. 1821 to 1846. This period was a short interlude with minor changes in social and political life, and included the initiation of trade with the United States and the official opening of the Santa Fe Trail. The American Territorial period began in 1846, with the conquest of New Mexico by the United States, and continued the expansion of the Anglo-American social, economic, and political system that had begun with the opening of the Santa Fe Trail. This period ended when New Mexico was granted statehood in 1912. From that date until World War II (1912 to 1945), New Mexico continued to become integrated into the national political, economic, and social system. Education and economic opportunity outside New Mexico and the steady flow of Anglo-Americans into New Mexico combined to crystallize the tricultural traditions that are a recognized part of New Mexico today.

An important aspect of New Mexico's integration into the national system was the extension of federal programs into the state. One of the most successful of these was the Civilian Conservation Corps (CCC) of the 1930s and early 1940s. In association with the Soil Conservation Service (SCS), the CCC operated out of camps located on both private and federal land (Martinez 1996; Spivey 1996). An example in Santa Fe County was a camp enumerated as Santa Fe-SCS-ECW-5-N (FLY), occupied in 1935 (Spivey 1996). Work conducted in the Santa Fe Grant by residents of this camp consisted of fencing and constructing checkdams, probably including those recorded during this project.

Cultural Resources near the Project Area

A search of records at the Archeological Records Management Section of the Historic Preservation Division shows that over 100 sites are recorded within a mile (1.6 km) of the project area. Several are very near or within project limits. Three previously recorded sites extend within project limits. LA 61318 is a lithic and ceramic artifact scatter containing checkdams that has been dated to the Pueblo III or IV period. LA 61320 is a lithic and ceramic artifact scatter that contains a single checkdam. No temporal or cultural affiliation could be assigned to this site. LA 61321 is a lithic and ceramic artifact scatter containing hearths and dated to the Pueblo III period. These sites are discussed in detail in a later section of the report.

Several sites are situated nearby, but outside project limits (Fig. 10; Appendix 1). LA 61323 is a Pueblo III lithic and ceramic artifact scatter containing fire-cracked rock areas. LA 61322 is a Pueblo IV lithic and ceramic artifact scatter that also contains a historic hearth. Two sites (LA 102413 and LA 102414) are low frequency lithic artifact scatters that lack diagnostic artifacts or features.

A large-scale archaeological survey, testing, and data recovery project has been completed near the project area. Investigations at Las Campanas de Santa Fe, a 4,700 acre (1,902 ha) subdivision to the west of our study area encountered 255 sites, of which 125 have been tested or excavated. The sites reflect seasonal occupation or short duration, low impact economic exploitation of the piñon-juniper piedmont between 3300 B.C. and A.D. 1900. Most of the dated pre-Territorial period sites date to the Coalition and early Classic periods of the Rio Grande sequence. The late Territorial to World War II sites are ranching and livestock-raising, and transportation activities related to the Denver and Rio Grande Railroad (The Chili Line) (Post 1996a; Lang 1996).

ARCHIVAL RESEARCH

A variety of archival materials was consulted in order to determine historic land-use patterns along the survey corridor, and whether there was any association with important events or persons in the history of Santa Fe. To summarize, until recently the northern part of the Santa Fe Grant appears to have been mostly used as open space. With the exception of a few roads and trails, there was little construction and few improvements in this area until the twentieth century. Several recent transient camps were seen in the west half of the project area (west of US 84/285), as were numerous trash disposal areas. Most of that part of the grant remains open space to this day, though plans for road construction and residential development will soon change that pattern. The eastern half of the project (east of US 84/285) contains many residences, all dating later than the 1930s. Much of this part of the alignment follows existing utility easements, some dating to the mid-1930s.

Historic Maps and Aerial Photographs

A number of historic maps were reviewed at the Fray Angélico Chávez History Library and Photographic Archives in Santa Fe. A problem we encountered was that maps of Santa Fe often do not extend far enough north to show our project area. For example, Gaynor's (1882) and Hartman's (1886) maps of Santa Fe did not show the northern edge of the Santa Fe Grant where our project was located. Emory and Gaynor's (1846) map of Santa Fe also did not extend as far north as our project area, though it was interesting to note that they labeled the northwest part of their map "Barren Hills." Fortunately, several maps did extend far enough north to show our survey area and provide information on historic land-use patterns.

The common thread that binds most maps of the northern part of the Santa Fe Grant together is that they illustrate Old Taos Highway and Bishop's Lodge Road closely following their current routes. A plat of the Santa Fe Grant produced by Griffin and McMullen (1877) shows no settlement in the northern part of the grant through which our survey extended. The San Ildefonso Trail appears to have passed through the Santa Fe Grant just west of our survey area. White's (1890a, 1890b) maps both extend to the northern edge of the Santa Fe Grant. His sketch map (White 1890a) indicates that our survey crossed several Spanish land grants including those of Juan Lucero de Godoi, Antonio Lucero de Godoi, and El Pino. His more formal map (White 1890b) indicates that the eastern end of our survey crossed the Roque Lobato Grant.

Turley's (1933) map shows no activities occurring in our project area; the only features presented for that part of the grant are US 84/285, Bishop's Lodge Road, and Camino de la Crucita. Interestingly, Camino Encantado does not appear on this map. This is also the case with a map prepared by the New Mexico State Highway Department in 1938. However, on an aerial photograph taken in 1936 (Soil Conservation Service 1936) the easement for a water line that extends from Nichols Reservoir on the Santa Fe River east of town to the Old Taos Highway is visible. The portion of this easement between Old Taos Highway and Bishop's Lodge Road follows the route that later became Camino Encantado, but at the time this photograph was taken there is only an unimproved dirt track in that area. Much of this easement still exists and was partly followed by our survey (Segment 8 as far east as Paseo del Sur).

Historic Spanish Land Grants

The entire survey area is within the Santa Fe Grant, which was confirmed in 1900. As Post (1993:66) indicates, land grants, homestead patents, and small holding claims were extended to residents of the Santa Fe Grant throughout its history. White's (1890a, 1890b) maps of land ownership in the Santa Fe Grant indicate that our survey corridor crossed several Spanish land grants which extend into or are contained by the Santa Fe Grant including those of Juan Lucero de Godoi, Antonio Lucero de Godoi, El Pino, and Roque Lobato. In addition to these, Bowden's (1969:269) rather confusing map of the same area suggests that the Rio de Tesuque Grant extended into the northeast section of the Santa Fe Grant. While claims were made for these lands with the Surveyor General's office and the judicial system, all were eventually either dropped or denied.

Though Bowden's (1969) study does not include either the Juan Lucero de Godoi or Antonio Lucero de Godoi grants, she discusses the grant of Jose Antonio Lucero (Bowden 1969:350-354), who was a descendent of the Lucero de Godois (also Lucero de Godoy), and whose claim apparently encompassed the same area (Cordelia Snow, pers. comm. 1996). According to Bowden, the Jose Antonio Lucero Grant was made in 1732 and initially contained one *fanega* of land on the north side of the Santa Fe River, but was increased in size during the same year. When his descendants presented their claim to the Surveyor General in 1885, the amount of land encompassed by the grant had increased to about 2.5 sq mi. This claim was never acted upon, and a subsequent claim by a descendent of Lucero for 700 acres was denied because the area lay completely within the Santa Fe Grant, which had already been confirmed.

Juan Lucero de Godoy was active in New Mexico before the Pueblo Revolt of 1680 until 1693 (Chávez 1992:209). He returned during the Reconquest in 1693, and reclaimed his pre-Revolt property, referred to as the "Pueblo Quemado." The pueblo referred to may have been on the site now occupied by Sweeney Center (Cordelia Snow, pers. comm. 1996). Antonio Lucero de Godoy was his son, and also returned during the Reconquest (Chávez 1992:209). Early in the eighteenth century he claimed the lands that had been held by his father. It is unclear whether the Juan Antonio Lucero Grant was this property or another, but the claim submitted by his descendants almost certainly included the Lucero de Godoi grants illustrated by White (1890a).

Bowden (1969:421-422) has little to say concerning the El Pino Grant. Juan Nieto filed suit in 1893, claiming that this grant was made to Cristobal Nieto in 1700 as a revalidation of a concession made in 1697 for which the documents had been lost. Nieto dropped his suit when it came up for trial, and the court entered a decree rejecting the claim. Bowden (1969:422) suggests that the suit was dropped because Nieto's claim was only a small allotment included in the Pueblo of Quemado Grant.

The Roque Lovato Grant (Bowden 1969:413-418) was originally made in 1735, and in 1795 was described as extending as far north as the divide between the Santa Fe and Tesuque Rivers. The grant was sold in 1795 and again in 1852. When a claim to have the grant validated was filed in 1872, a sketch map was produced indicating that the grant contained about 3,840 acres. Though the Surveyor General upheld this claim, Congress failed to act upon it. When suit was again filed in 1893, the plaintiff's petition was dismissed when it was determined that the deed that transferred title from Roque Lovato's widow to the subsequent owner was a forgery.

A petition requesting the Rio Tesuque Grant (Bowden 1969:637-642) was made in 1893 by a community of 55 residents of Santa Fe County, claiming ancestral holdings in a grant that was alleged to have been made in 1745 and contained an estimated 7,300 acres. This claim was confirmed in 1897, but the decision was vacated during a rehearing the next year on the grounds that the plaintiffs were only entitled to the lands they used or lived on, and not to the unallotted lands of the community grant. Thus, while titles to small tracts based on use and possession were protected, the community grant claim was not upheld.

Title Abstract Information

A sample of land title information was obtained from several sources. Mr. Booker Kelly, attorney for Santa Fe Estates, indicates that a title abstract has not yet been developed for that property. According to Mr. Kelly, the Santa Fe Estates property was unused and vacant before 1930. Governor Dempsey brought a quiet title suit in that year, and established title for the City of Santa Fe. In return, he received title to 2,000 acres of the affected land, and an interest in the remainder. Both the property given to Governor Dempsey and his interest in the city property have remained in his family to this date, and his heirs comprise the Santa Fe Estates Corporation. The property has remained vacant since it was acquired by Governor Dempsey, though plans for its development are in the works.

Title information for Sierra del Norte Estates was requested by Ms. Nancy Long, attorney for Tano Santa Fe Partners, from Mr. Ken Cassett, attorney for Sierra del Norte Estates. Mr. Cassett referred us to a survey report prepared for that property by Southwest Archaeological Consultants in 1989 (Lang 1989). Unfortunately, that report contained no information relevant to the ownership history of the property. We attempted a title search at the Santa Fe County Courthouse, but were able to obtain little information. Ownership of the tract was traced back as far as 1965, when it was held by Tano Partners. In that year they conveyed title to several parcels, mostly for use as utility easements. A more recent owner was Piedra Partners, who conveyed title to numerous tracts as the property was developed. We were unable to trace ownership of this tract back any further in time. Our impression, however, was that the area was commercially and residentially undeveloped before that time.

The most complete title information was available for the Seth property, located on the northeast corner of the intersection between Tano Road and US 84/285. Abstracts were examined at the law offices of Catron, Catron, and Sawtell in Santa Fe. This property was originally within the grant claimed by Roque Lovato, discussed above. Roque Lovato was armorer to the military garrison at Santa Fe, and his grant was apparently made in 1785. Ownership of his land was transferred to Josepha Armijo, his widow, who was said to have sold it to Jose Rivera in 1795. However, the documents associated with that transfer were judged to be forgeries in 1893. A deed dated 1852 transferred title to a house and adjoining property to Gaspar Ortiz y Alarid. This property was described as two portions of the Roque Lovato Grant, and the house appears to have been on or near the Santa Fe plaza. This property was deeded to Magdalena Lucero de Ortiz, his wife, in 1873. A deed of conveyence dated 1882 imparted her with sole ownership of the property.

Ortiz sold her land to T. D. Burns in 1909. By quitclaim deed, Burns and his wife conveyed the property to Alois B. Renehan. After Renehan's death in 1928, the property went to his wife, Marietta. In 1930, Marietta Renehan transferred title to John J. Dempsey. Thus far, we have been discussing a larger section of the property area than is represented by the Seth property alone. The

portion of the Roque Lovato Grant owned by the Renehans was part of the Santa Fe Grant, of which Dempsey gained ownership for the City of Santa Fe. Dempsey was deeded large tracts by the City of Santa Fe in 1929 and 1930, and in 1930 brought a quiet title suit to establish ownership.

Dempsey's portion of the Santa Fe Grant was deeded to Santa Fe Estates, a real estate corporation, in 1930. In 1931, J. E Tipton purchased a 5-acre tract north of Tano Road from Santa Fe Estates, and added two smaller adjacent tracts between 1945 and 1950 that extended his property south to Tano Road and east to what would become US 84/285. The property was sold to Ruth L. Alexander in 1951, and was conveyed by the executor of her estate to the Seths in 1963, who have maintained ownership to the present day. According to covenant restrictions placed on the sales to Tipton, it is likely that this particular parcel was not improved until after 1931.

SURVEY METHODS

The utility easement was inspected by two archaeologists walking parallel transects spaced 3 to 6 m (10 to 20 ft) apart. This technique and spacing permitted visual inspection of the entire surface of the survey corridor. The locations of all cultural resources encountered were plotted on project plans and transferred to USGS 7.5' topographic quadrangles. Scatters of nondiagnostic artifacts that numbered less than 10 were designated isolated occurrences (IOs). When diagnostic artifacts were present or the assemblage contained more than 10 artifacts, the manifestation was designated an archaeological site. Modern engineering features (culverts and retaining walls) were structures that remain in use but because of their style of construction may be of historical interest.

Standard Laboratory of Anthropology Site Record forms were completed for each site, sketch plans were drawn, and photographs were taken. All measurements on sketch plans were paced, and engineering or landscape features were included to provide a more accurate location. Isolated occurrences were described, but were not sketched or photographed unless they were culturally or temporally diagnostic. Modern engineering features were located on project plans and USGS topographic quadrangles, and were photographed and described. No site forms were completed for these features.

PROJECT DESCRIPTION

A total of 7.8 km (4.85 mi) of water and sewer line easements was examined by this project, which cross private property, City of Santa Fe land, easements granted to the City of Santa Fe, and State of New Mexico land administered by the New Mexico State Highway and Transportation Department. Utility easement widths varied, with 3.48 mi (5.59 km) having a 20 ft (6 m) width and 1.37 mi (2.21 km) having a 25 ft (7.6 m) width. The project corridor was divided into nine segments of varying length, width, and ownership for ease of description. These segments are described below and are shown in Figure 1. A total of 12.59 acres (5.09 ha) was examined by this project.

Segment 1

Owner: City of Santa Fe
Western end: Zone 13, E413240 N3952630
Eastern end: Zone 13, E413820 N3952870
Width of utility easement: 20 ft (6 m)
Length of utility easement: 1,900 ft (579 m)

Segment 2

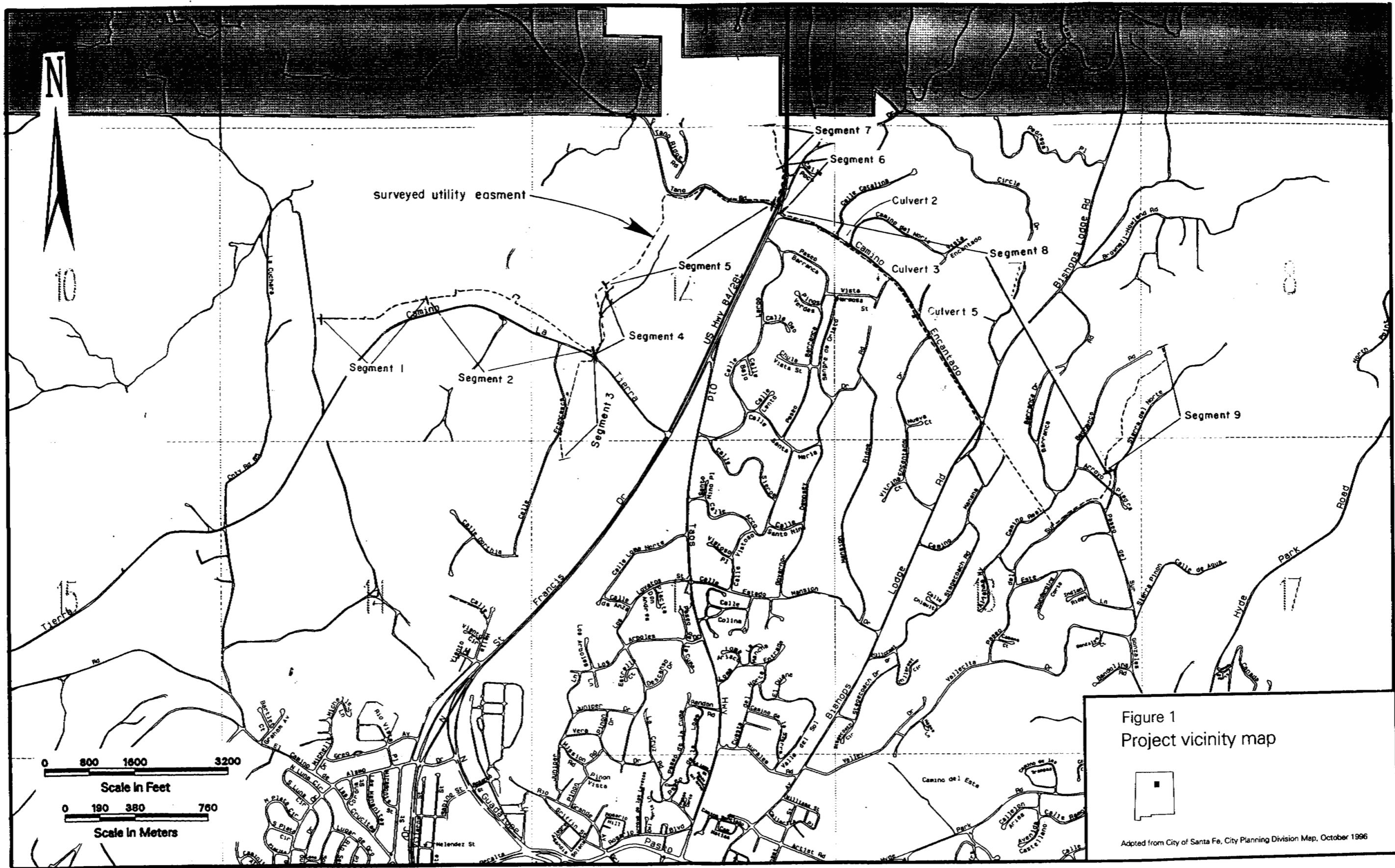
Owner: Santa Fe Estates
Western end: Zone 13, E413820 N3952870
Eastern end: Zone 13, E414350 N3952600
Width of utility easement: 20 ft (6 m)
Length of utility easement: 3,600 ft (1,097 m)

Segment 3

Owner: Santa Fe Estates
Northern end: Zone 13, E414350 N3952600
Southern end: Zone 13, E414200 N3952080
Width of utility easement: 25 ft (7.6 m)
Length of utility easement: 2,050 ft (625 m)

Segment 4

Owner: Santa Fe Estates
Northern end: Zone 13, E414350 N3952600
Southern end: Zone 13, E414790 N3952940
Width of utility easement: 25 ft (7.6 m)
Length of utility easement: 1,350 ft (412 m)



Segment 5

Owner: City of Santa Fe, easements across private property
Southern end: Zone 13, E414790 N3952940
Pivot to east: Zone 13, E415080 N3953430
Eastern end: Zone 13, E415660 N3953350
Width of utility easement: 25 ft (7.6 m)
Length of utility easement: 3,800 ft (1,158 m)

Segment 6

Owner: State of New Mexico; New Mexico State Highway and Transportation Department right-of-way
Northern end: Zone 13, E415700 N3953280
Southern end: Zone 13, E415660 N3953350
Eastern end: Zone 13, E415690 N3953280
Width of utility easement: 25 ft (7.6 m)
Length of utility easement: 920 ft (280 m)

Segment 7

Owner: Santa Fe Estates
Northern end: Zone 13, E415650 N3953730
Southern end: Zone 13, E415700 N3953280
Width of utility easement: 25 ft (7.6 m)
Length of utility easement: 800 ft (244 m)

Segment 8

Owner: City of Santa Fe; easements across private property
Western end: Zone 13, E415690 N3953280
Pivot to north: Zone 13, E417100 N3951650
Northern end: Zone 13, E417400 N3951940
Width of utility easement: 20 ft (6 m)
Length of utility easement: 8,600 ft (2,621 m)

Segment 9

Owner: Sierra del Norte Subdivision Phase 1
Southern end: Zone 13, E417400 N3951940
Northern end: Zone 13, E417100 N3952700
Width of utility easement: 20 ft (6 m)
Length of utility easement: 2,600 ft (793 m)

PROJECT RESULTS

A total of eight archaeological sites, fifteen isolated occurrences (IOs), and seven modern engineering features were encountered and recorded during survey. Three of the sites were recorded by earlier surveys and have undergone further treatment as discussed below. The five remaining sites were recorded and sketch mapped during this project. Recommended treatments are included in the last section of the report.

Newly Recorded Sites

LA 115535

Cultural/temporal affiliation. Unknown.

Site type. Lithic artifact scatter.

Elevation. 2,202 m (7,225 ft).

Site size. 32 by 42 m; 1344 sq m (105 by 138 ft; 14,490 sq ft).

Land ownership. City of Santa Fe.

Description. This site consists of a lithic scatter covering 1,344 sq m (14,490 sq ft) on a south-facing hill slope (Fig. 2). Artifacts are scattered over the area, with one cluster defined in the southwest part of the site. LA 115535 is situated in an area containing a considerable outcrop of cobbles and gravels. Available materials noted included quartzite, Madera chert, gray chert, basalt, and low-grade silicified wood. The surface of the site is heavily eroded. Cultural materials appear to be surficial, and there was no evidence of subsurface cultural deposits. No features or diagnostic artifacts were found. A route that would allow LA 115535 to be avoided if necessary was examined along the north edge of the site, as shown in Figure 2. No cultural materials were encountered in this zone.

A total of 67 chipped stone artifacts was examined in the field during survey. The assemblage contained 60 pieces of debitage, 6 cores, and 1 ground stone axe. The most common material type encountered was Madera chert, which occurs as outcrops in local Madera limestone deposits. Erosion has dispersed this material throughout the region, and it is common in gravel deposits in and around the project area. This variety of chert makes up 66.7 percent of the 66 chipped stone artifacts analyzed. The remaining part of this assemblage was comprised of quartzite (16.7 percent), various other cherts (13.6 percent), and Polvadera Peak obsidian (1.5 percent). Since only waterworn cortex was observed on artifacts, local gravel deposits appear to have been the source of materials used at the site, with the exception of a single piece of Polvadera Peak obsidian. This material had to have been transported to the site because there are no sources of it nearby.

Debitage was comprised entirely of core flakes ($n = 43$) and angular debris ($n = 17$), and no modified platforms were noted. Thus, core reduction dominated chipped stone reduction activities, and there was no evidence for formal chipped stone tool manufacture. The only formal tool found

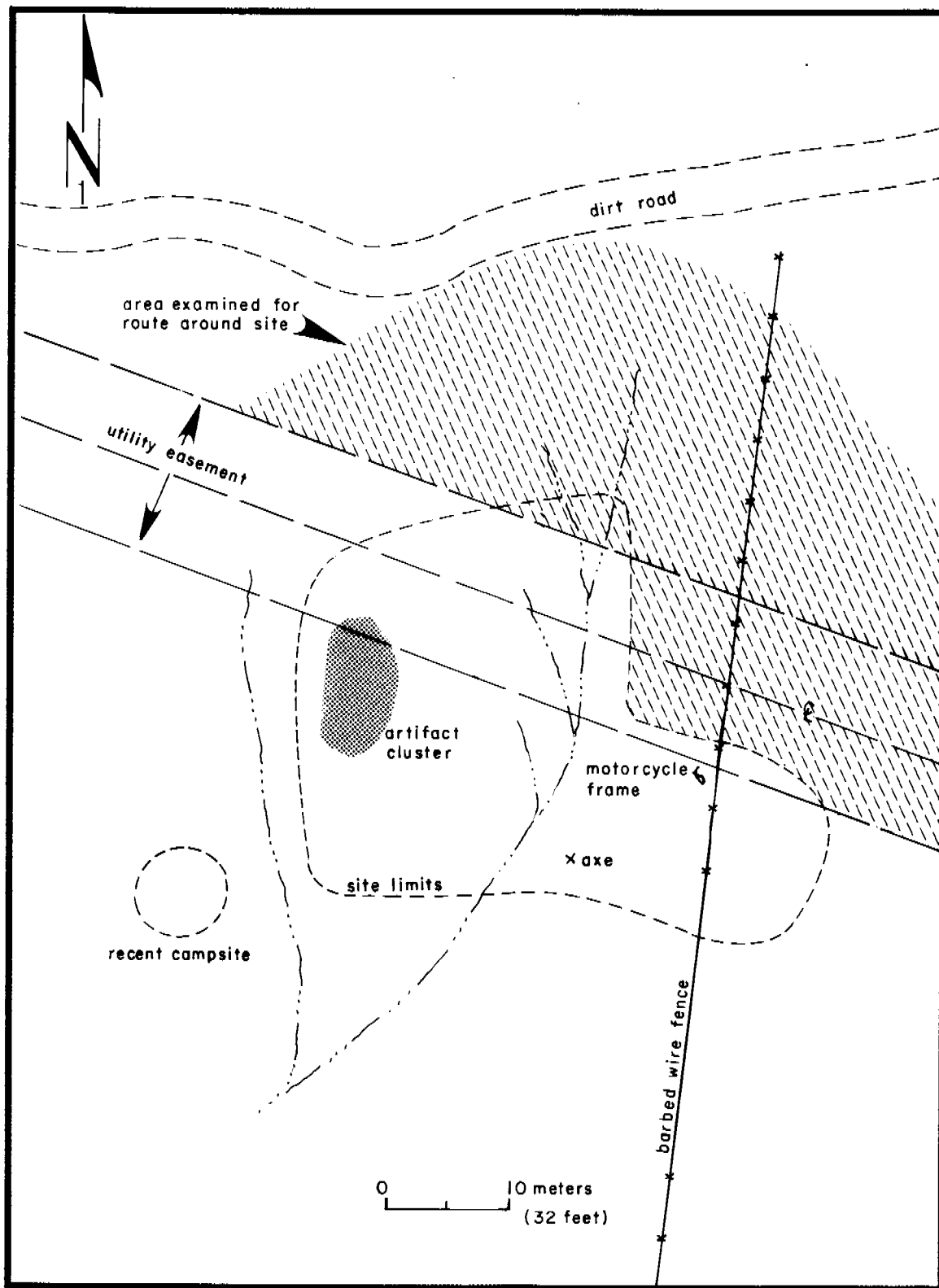


Figure 2. LA 115535 site plan.

was a basalt axe, which was shaped by grinding. This tool was fragmentary, having been split in half as well as being broken at one end. The character of the assemblage, lack of features, and common occurrence of materials suitable for chipping in the area suggests that the site was used for only a short period of time. Quarrying of local materials, either for use at the site or transport elsewhere, seems to have been the main activity. The presence of an exotic material (Polvadera Peak obsidian) indicates that at least some artifacts were carried in. The occurrence of an axe in the assemblage suggests that other resource extractive tasks were also conducted at this location.

LA 115535 probably represents a short-term camp at which local resources were exploited, either for immediate use or transport to another locale. While the absence of flakes struck from large bifaces might suggest that the site was occupied by a sedentary farming population and is thus indicative of post-Archaic use, this is by no means certain. Thus, the lack of diagnostic artifacts precludes assignment of any accurate date.

LA 115536

Cultural/temporal affiliation. Pueblo; ca. A.D. 600 to 1540.

Site type. Lithic artifact scatter.

Elevation. 2,208.28 m (7,245 ft).

Site size. 36 by 22 m; 792 sq m (118 by 72 ft; 8,496 sq ft).

Land ownership. City of Santa Fe.

Description. This site consists of a lithic scatter covering 792 sq m (8,496 sq ft) on a south-facing hill slope (Fig. 3). The assemblage is very scattered, with an isolated chipping station in the northern part of the site. LA 115536 runs in a generally north-to-south direction, and is located in an area containing considerable deposits of cobbles and gravels. Available materials noted were quartzite, Madera chert, gray chert, basalt, and low-grade silicified wood. The site is heavily eroded, with no subsurface deposition or other features noted. It contains two clusters of artifacts that may represent different components. Cluster 1 is on the south side of the site, and measures 22 by 17 m (72 by 56 ft). A single plain gray utility ware sherd was noted in this area, suggesting that Cluster 1 dates to the Pueblo period. Cluster 2 is an isolated chipping station on the north side of the site, and measures 5 by 2 m (16 by 7 ft). This cluster may represent a separate chipping episode that is not associated with Cluster 1. A route that would allow LA 115536 to be avoided if necessary was examined along the north edge of the site, as shown in Figure 3. No cultural materials were encountered in this zone.

A total of 38 chipped stone artifacts was examined in the field during survey: 31 in Cluster 1 and 6 in Cluster 2. The Cluster 1 assemblage contained 28 pieces of debitage and 3 cores; only debitage was found in Cluster 2. Madera chert dominated both assemblages, comprising 61.3 percent of Cluster 1 and 83.3 percent of Cluster 2. Various other cherts were next in abundance, making up 22.6 and 16.7 percent of the Cluster 1 and 2 assemblages, respectively. Other materials found in Cluster 1 included quartzite (9.7 percent) and a glassy basalt (6.5 percent). Because only waterworn cortex was observed on artifacts, local gravel deposits appear to have been the source of materials used at the site.

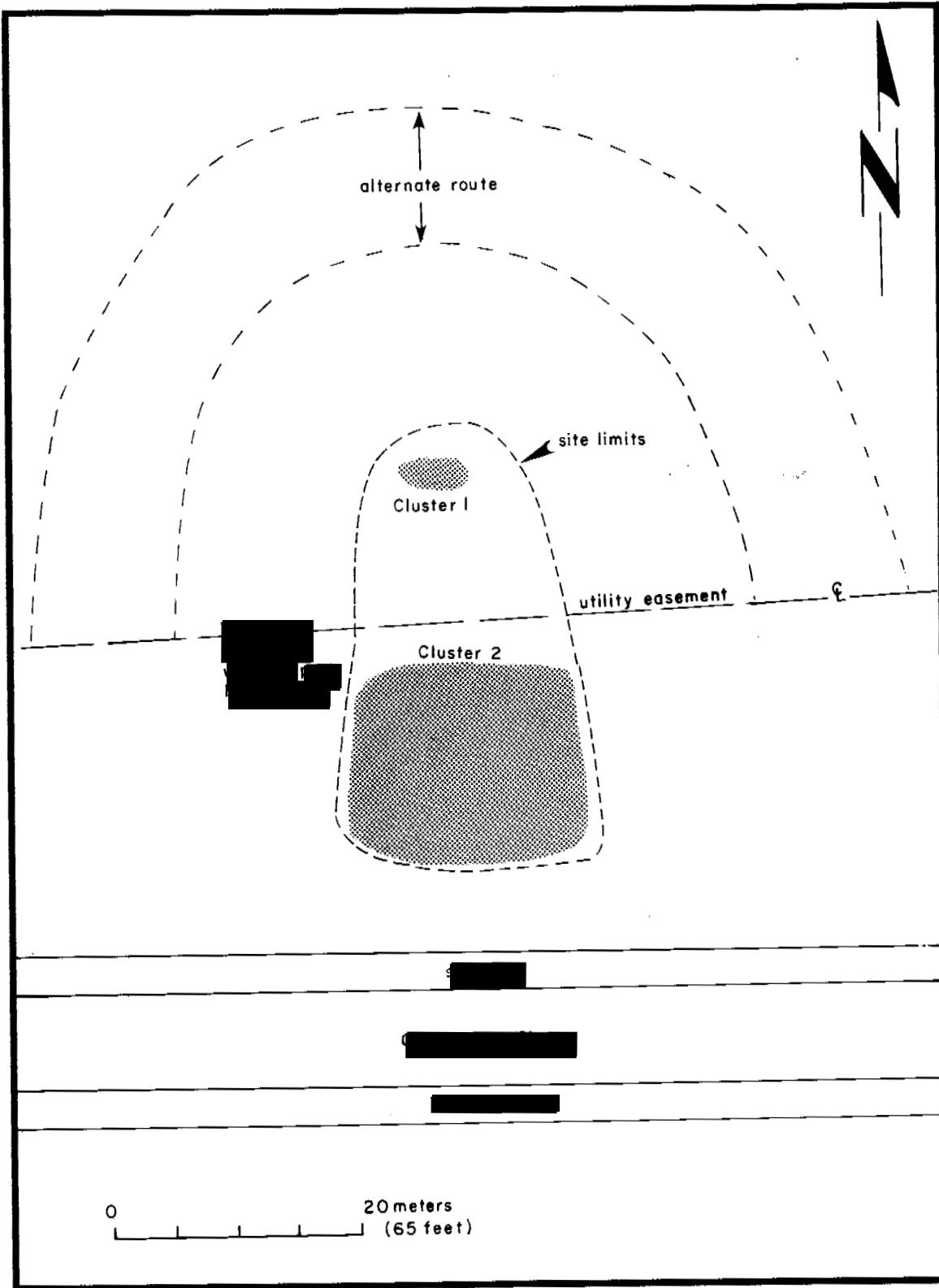


Figure 3. LA 115536 site plan.

Debitage was comprised of core flakes (17 in Cluster 1, 4 in Cluster 2) and angular debris (11 in Cluster 1, 2 in Cluster 2); no modified platforms were noted. Thus, core reduction dominated chipped stone reduction activities. The character of the assemblage, lack of features, and common occurrence of materials suitable for chipping in the area suggest that LA 115536 was used for only a short period of time for the quarrying of local materials, either for use at the site or transport elsewhere.

The presence of two distinct clusters of materials suggests that multiple uses are likely. While only two such uses may be represented, it is possible that Cluster 1 represents several similar overlapping uses. The presence of a single utility ware sherd suggests that the main part of the site (Cluster 1) was used during the Pueblo period (A.D. 600 to 1540). The lack of diagnostic artifacts in Cluster 2 precludes assignment of an accurate date to that component. While it could represent a separate chipping episode occurring concurrent with occupation of Cluster 1, it is equally plausible that it represents use at a different time. Because of the surficial nature of this site it is unlikely that more intensive investigation could resolve this question. The resemblance of this assemblage to that found at LA 115535 suggests that it served a similar purpose--use as a short-term camp at which local resources were exploited, either for immediate use or transport to another locale.

LA 115537

Cultural/temporal affiliation. Historic (?).

Site type. Checkdam.

Elevation. 2,202 m (7,225 ft).

Site size. 1.4 by .25 m; .35 sq m (4.6 by .8 ft; 3.68 sq ft).

Land ownership. City of Santa Fe.

Description. This site consists of a checkdam of unknown cultural affiliation or time period (Fig. 4). The alignment runs northeast to southwest, and is 1.4 m (4.6 ft) long and .25 m (.8 ft) wide. IO-6 was located nearby, but is of questionable affiliation. The checkdam runs across a small gully; no other dams or artifacts were found in association. The dam is a single course high and wide; there may have been a second course in places, but this is uncertain. The dam is breached in the center, and soil has built up behind it through natural erosion. The similarity of this checkdam to many others in the region suggests it was built during the 1930s by Civilian Conservation Corps personnel.

LA 115538

Cultural/temporal affiliation. Historic (?).

Site type. Checkdam.

Elevation. 2,207 m (7,240 ft).

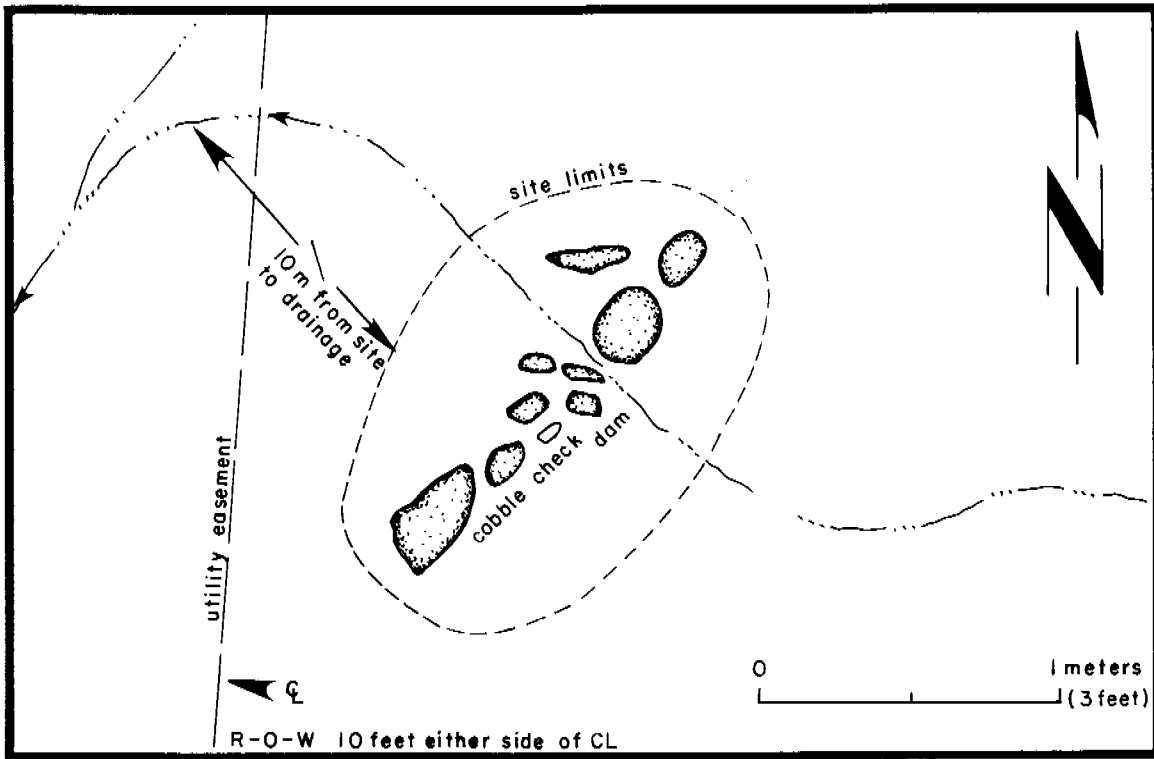


Figure 4. LA 115537 site plan.

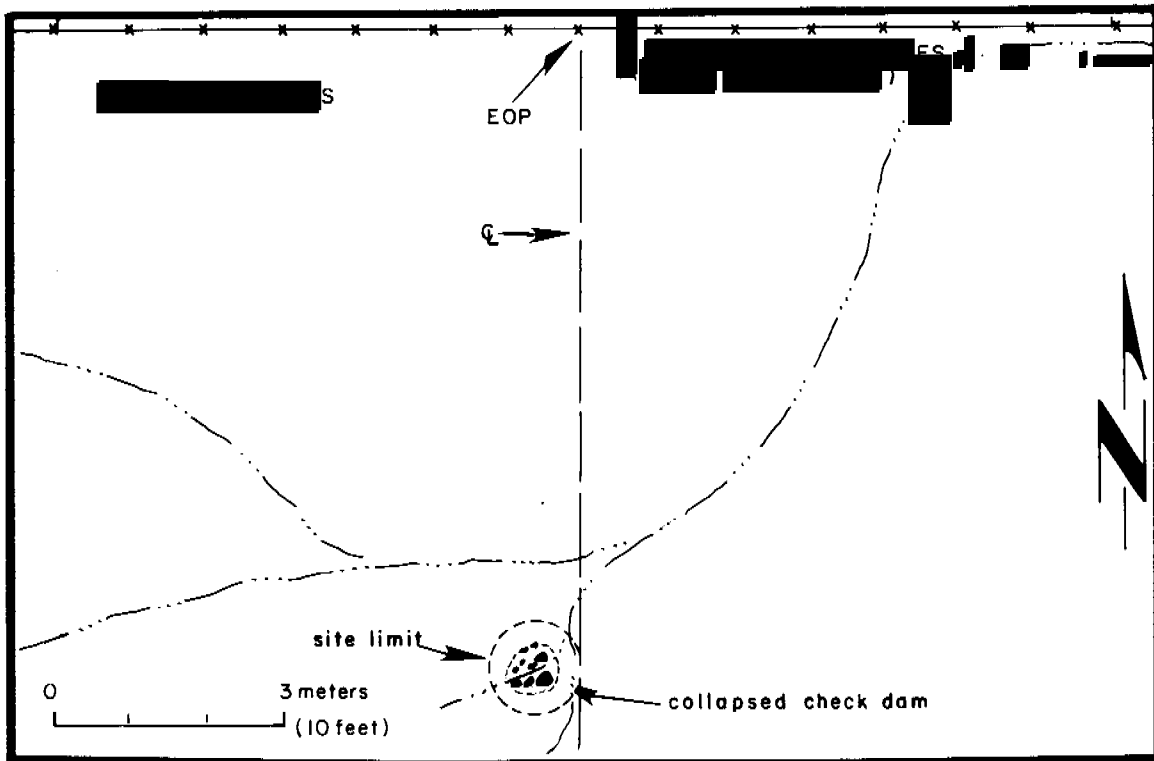


Figure 5. LA 115538 site plan.

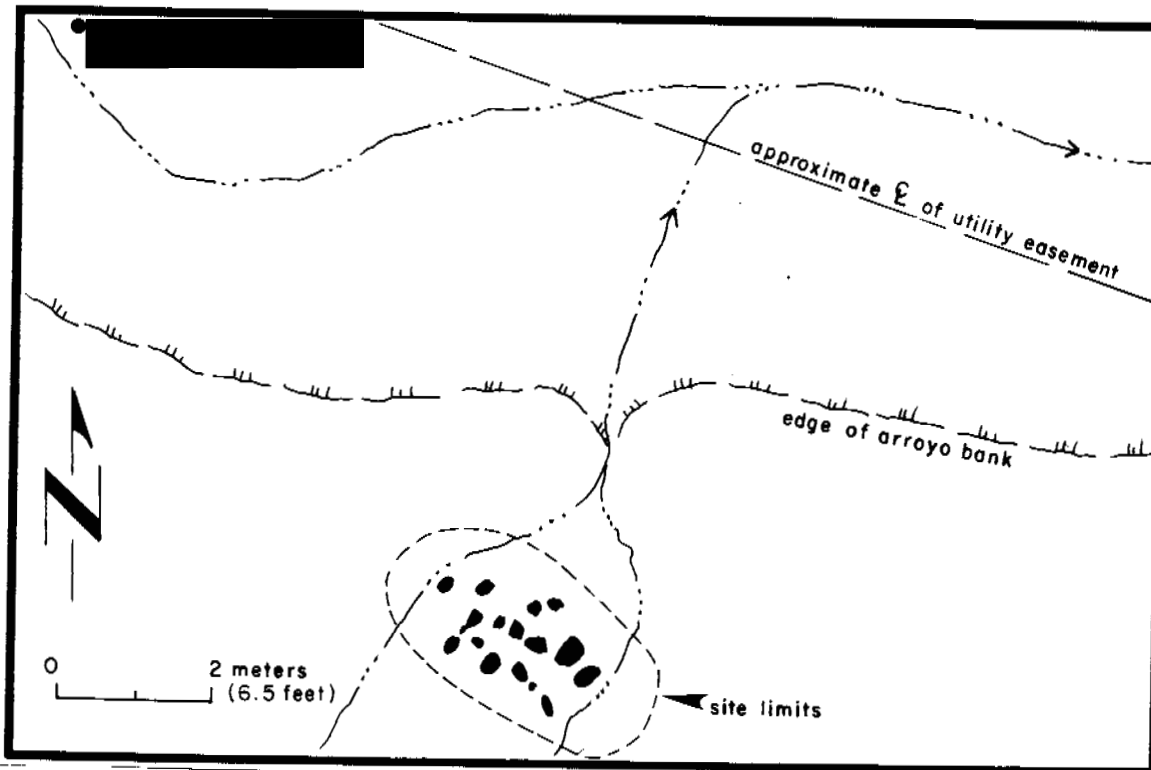


Figure 6. LA 115539 site plan.

Site size. 0.55 by 0.55 m; .30 sq m (1.8 by 1.8 ft; 3.24 sq ft). Land ownership. Santa Fe Estates.

Description. This site contains the remains of an eroded checkdam that has been nearly completely destroyed by erosion (Fig. 5). It now consists of a collection of rocks measuring 0.55 m (1.8 ft) in diameter. The original configuration could not be determined, but probably consisted of an alignment one course high and wide. No soil buildup remains behind this feature. There were no other associated features or artifacts, and no cultural affiliation could be determined. However, the similarity of this feature in construction and placement to others recorded in the area suggests it may have been built during the 1930s by Civilian Conservation Corps personnel.

LA 115539

Cultural/temporal affiliation. Historic (?).

Site type. Checkdam.

Elevation. 2,215 m (7,267 ft).

Site size. 4 by 2 m; 8 sq m (13.1 by 6.6 ft; 86.46 sq ft).

Land Ownership. Santa Fe Estates.

Description. This site consists of a checkdam of unknown cultural affiliation or date (Fig. 6). It runs northwest-southeast across a small gully, and no other features or associated artifacts were noted nearby. The dam was probably originally a single course high and wide, but is now scattered by erosion, and there is no soil buildup behind it. The stone alignment has been bypassed by the gully, which now runs around both ends of it. Because of its similarity to other features in the area, LA 115539 was probably built during the 1930s by Civilian Conservation Corps personnel.

Previously Recorded Sites

LA 61318

Cultural/temporal affiliation. Anasazi, Pueblo III/IV.

Site type. Lithic and ceramic artifact scatter, checkdams.

Elevation. 2,195 m (7,200 ft).

Site size. 130 by 65 m (427 by 213 ft).

Land ownership. Santa Fe Estates.

Description. LA 61318 was recorded and tested during archaeological investigations for the Santa Fe Relief Route (Wolfman et al. 1989:89-92). It is situated on top of a small finger ridge oriented east-west in an area dissected by numerous small southeast-trending gullies (Fig. 7). Six features were recorded including five checkdams and a possible hearth. A total of 96 lithic and 21 ceramic artifacts was collected and analyzed. The chipped stone assemblage was dominated by cherts, with quartzite, silicified wood, and obsidian also occurring. No tools or evidence for their manufacture was found. Ceramic types encountered included Tesuque Smearred indented, Santa Fe Black-on-white, and unclassifiable gray and white wares.

Eight 1-by-1-m (3.3 by 3.3 ft) test pits were excavated. A single artifact was recovered from Test Pit 2, and the hearth was determined to be surficial, with no buried charcoal or evidence of a pit being found. Thus, other than the checkdams, this site appeared to have little potential to provide further information on local prehistory. Wolfman et al. (1989:92) concluded that investigation of those features had the potential to yield further information on prehistoric land use in the area, and recommended that data recovery be conducted if construction activities were to occur. However, in a letter from the OAS to the New Mexico State Highway and Transportation Department (Maxwell and Post 1995), these conclusions were amended. As noted in the letter:

The data recovery plan suggests that these features may have been built by prehistoric farmers to enhance the immediate environment making it more suitable for planting or to control water run-off to protect or enhance field locations downstream from the dams. Recent studies of check dams located along the Arroyo de los Frijoles and Arroyo Calabasas drainages 4 miles to the west of the project area have determined that these features are not large enough to significantly modify the surrounding environment for agriculture, show no direct association with other aspects of prehistoric farming

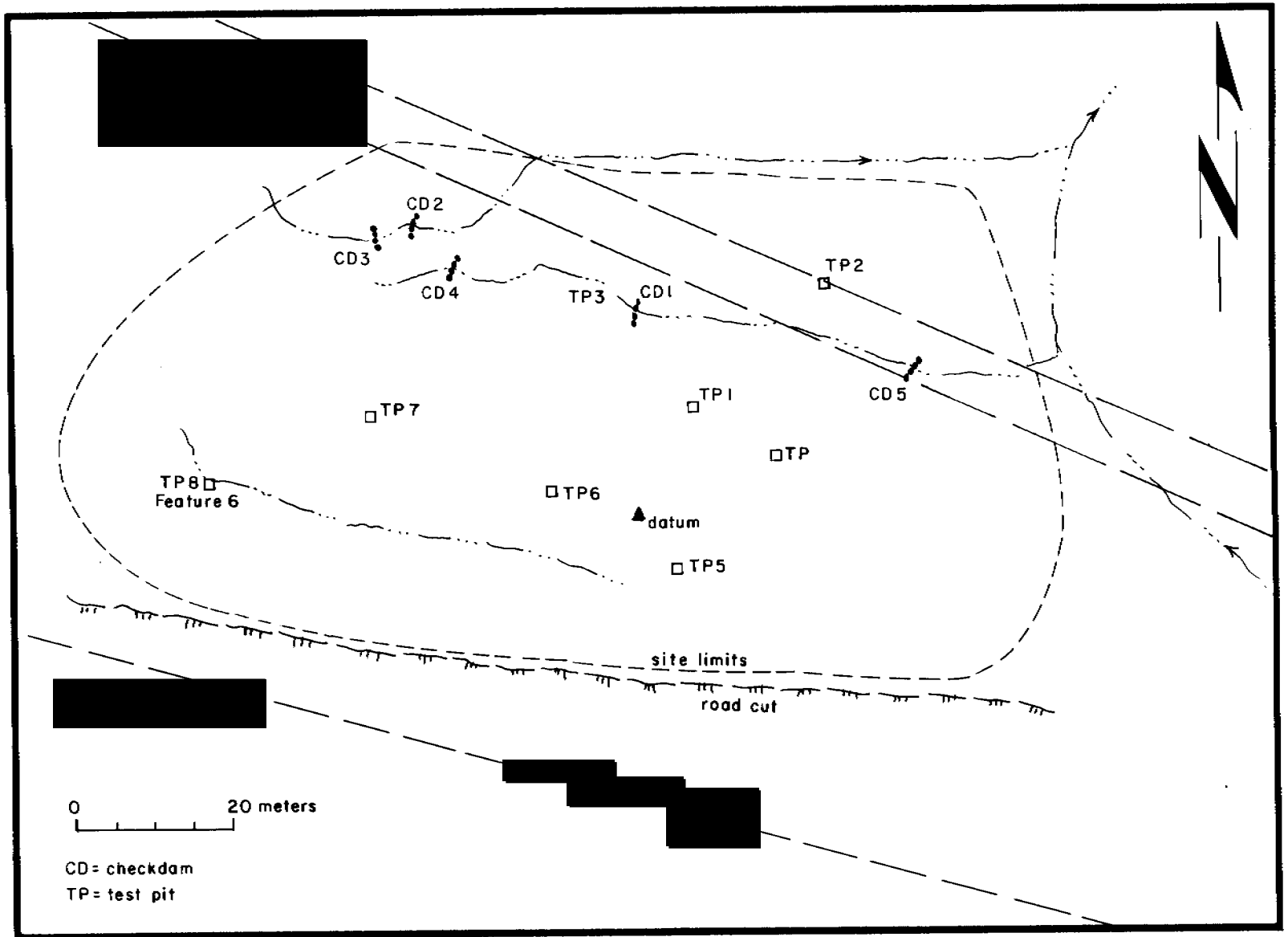


Figure 7. LA 61318 site plan.

strategies, and that they correspond closely with work conducted by the Civilian Conservation Corps for the Soil Conservation Service during the late 1930s or early 1940s. These factors combined with the good quality of the recording that exists for these features influence are [sic] recommendation that LA 61318 be considered to not have the potential to yield additional information on the prehistory of the Santa Fe area and the Northern Rio Grande region. (Maxwell and Post 1995:1-2)

These recommendations were concurred with by the Cultural Properties Review Committee (Reiley 1995). Thus, as amended, recommendations for LA 61318 for construction along the Santa Fe Relief Route were that no further work was needed since the site does not have potential to provide further information on local prehistory.

LA 61320

Cultural/temporal affiliation. Unknown.

Site type. Lithic and ceramic artifact scatter, checkdam.

Elevation. 2,192 m (7,190 ft).

Site size. 87 by 77 m (285 by 253 ft).

Land ownership. Santa Fe Estates.

Description. LA 61320 was recorded and tested during archaeological investigations for the Santa Fe Relief Route (Wolfman et al. 1989:95-97). It is situated on a north-facing slope that is heavily dissected by moderate to deep gullies (Fig. 8). Two features were recorded--a checkdam and possible hearth. A total of 81 lithic and 9 ceramic artifacts was collected and analyzed. The chipped stone assemblage contained chert, quartzite, quartzitic sandstone, and silicified wood debitage and cores. No tools or evidence for their manufacture were recovered. Ceramic types encountered included Santa Fe Black-on-white and unclassifiable white and red wares.

Four 1-by-1-m (3.3 by 3.3 ft) test pits were excavated to examine subsurface deposits. While artifacts were recovered from three test pits, they all came from the upper 10 cm (3.9 in) of fill, and were not indicative of buried cultural deposits. The possible hearth consisted of a charcoal stain that extended 15 cm (5.9 in) below the surface. It was concluded that if a hearth existed at this location, it was eroded away (Wolfman et al. 1989:95). LA 61320 contained no evidence of substantial subsurface remains, and this site was concluded to have little potential for providing further information on local prehistory. Because of this, no further work was recommended.

LA 61321

Cultural/temporal affiliation. Anasazi.

Site type. Lithic and ceramic artifact scatter, hearths.

Elevation. 2,213 m (7,260 ft).

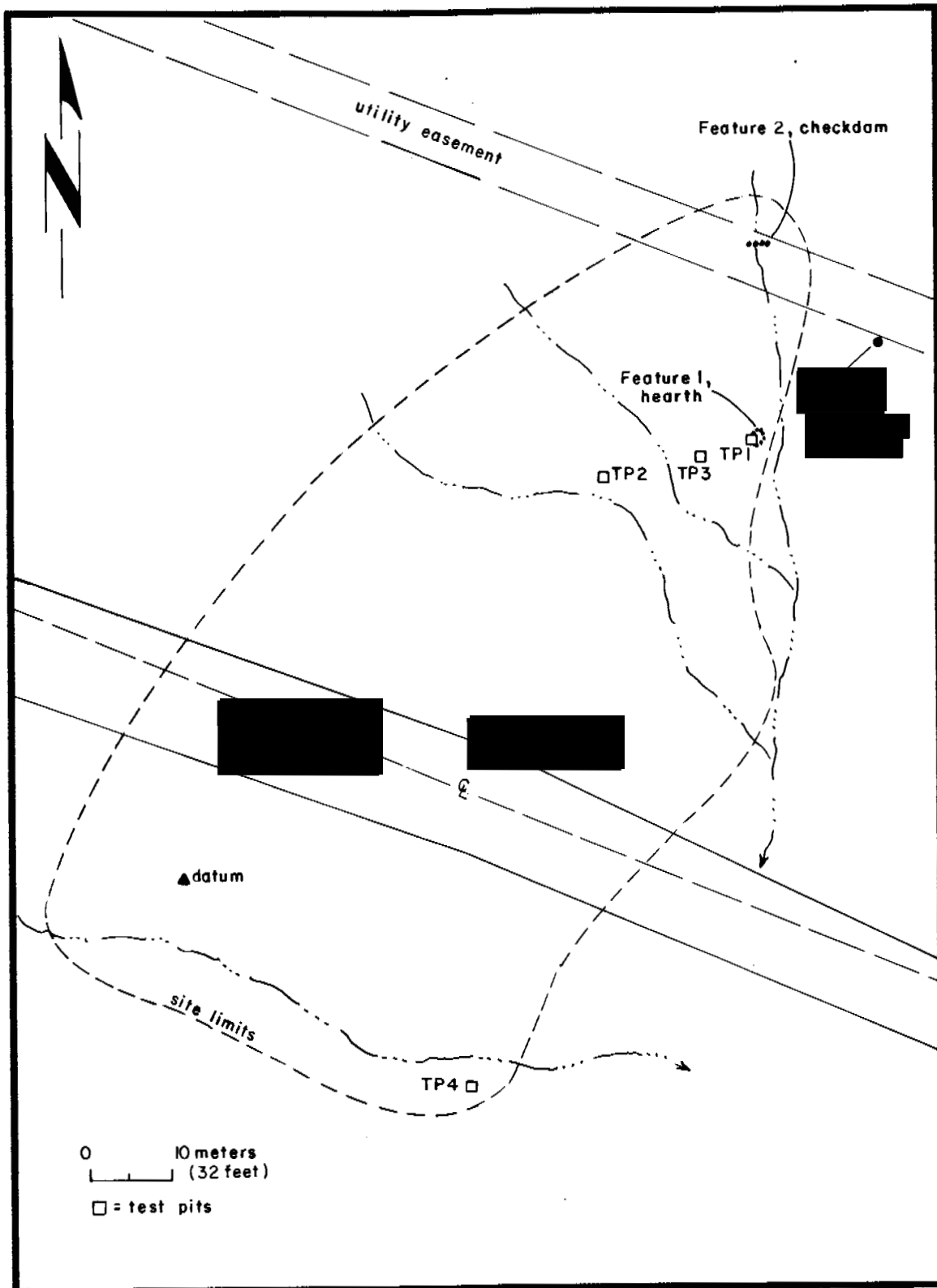


Figure 8. LA 61320 site plan.

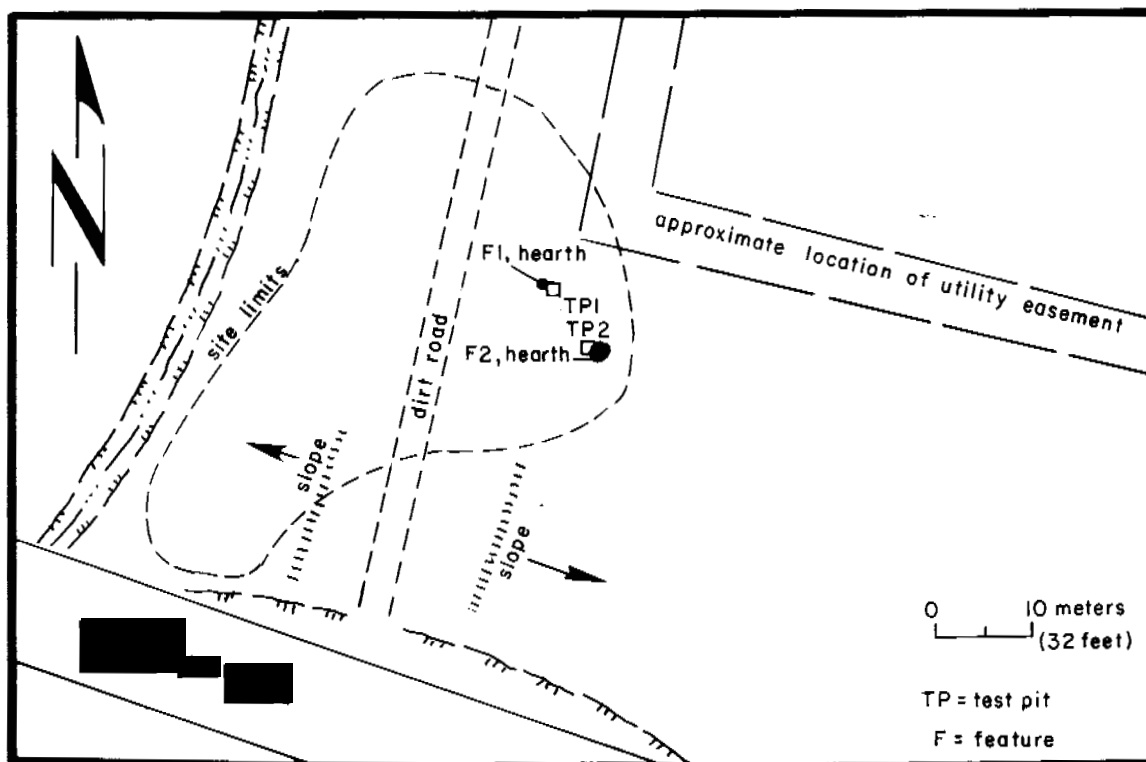


Figure 9. LA 61321 site plan.

Site size. 110 by 90 m (361 by 295 ft). Land ownership. Santa Fe Estates.

Description. LA 61321 (Fig. 9) was studied during archaeological investigations for the Santa Fe Relief Route (Wolfman et al. 1989:97-99). That study concluded that more intensive investigations might provide further information on local prehistory, and data recovery efforts were conducted in 1995 (Post 1996b). Site limits were redefined and expanded to 9,900 sq m (106,566 sq ft). Shallow cultural deposits were found in one portion of the site (Area 1), while a second zone that was thought to contain cultural deposits (Area 2) was determined to be a noncultural charcoal stain. A total of 197 artifacts was piece-plotted, and 40 to 50 chipped stone artifacts were recovered during excavation of Area 1. Data recovery efforts at this site were summarized as follows:

LA 61321 was redefined as a spatially extensive chipped stone scatter with two surface hearths, one of which, Feature 2, was excavated. A second potential activity area was investigated, but determined to be a natural deposit. Feature 2 lacked associated, temporally diagnostic artifacts and could not be assigned to a particular period. The abundant fire-cracked rock combined with the large, but shallow dimensions suggest brief, low level use of the area for diurnal foraging. The shallow, but large feature, and the abundant core reduction debris is a pattern most often associated with Pueblo occupation. Though diagnostic artifacts were not recovered, the site most probably dates to the mid to late Pueblo period. (Post 1996b:15)

It was felt that these investigations exhausted the potential of LA 61321 to provide information on the prehistory of the Santa Fe area. No further archaeological investigations at this site were considered necessary (Post 1996b:15).

Isolated Occurrences

IO-1

Cultural/temporal affiliation. Unknown.

Elevation. 2,196 m (7,205 ft).

Land ownership. City of Santa Fe.

Description. Two chipped stone artifacts were identified, including a whole Madera chert core flake with a single facet platform, and the distal portion of a red chert core flake. Both flakes had waterworn dorsal cortex.

IO-2

Cultural/temporal affiliation. Unknown.

Elevation. 2,199 m (7,215 ft).

Land ownership. City of Santa Fe.

Description. Three chipped stone artifacts were identified, including the proximal portion of an obsidian core flake with a collapsed platform, the medial portion of an obsidian core flake, and the distal portion of a Madera chert core flake. No cortex occurred on any of these artifacts.

IO-3

Cultural/temporal affiliation. Unknown.

Elevation. 2,200 m (7,218 ft).

Land ownership. City of Santa Fe.

Description. The medial portion of a yellow and red chert core flake with waterworn dorsal cortex was identified.

IO-4

Cultural/temporal affiliation. Unknown.

Elevation. 2,204 m (7,230 ft).

Land ownership. City of Santa Fe.

Description. Four pieces of debitage were identified including a whole Madera chert core flake with cortical platform, the proximal portion of a red chert core flake with cortical platform, a piece of Madera chert angular debris, and a piece of yellow chert angular debris. Waterworn cortex occurred on the dorsal surfaces of both flakes.

IO-5

Cultural/temporal affiliation. Unknown.

Elevation. 2,204 m (7,230 ft).

Land ownership. City of Santa Fe.

Description. A whole Madera chert core flake with a multifacet platform and no dorsal cortex was identified.

IO-6

Cultural/temporal affiliation. Classic Period Pueblo, ca. A.D. 1425 to 1475.

Elevation. 2,202 m (7,225 ft).

Land ownership. City of Santa Fe.

Description. Four Biscuit B bowl sherds were identified.

IO-7

Cultural/temporal affiliation. Unknown.

Elevation. 2,173 m (7,130 ft).

Land ownership. Santa Fe Estates.

Description. A whole chalcedony core flake with a single-facet platform and waterworn dorsal cortex was identified.

IO-8

Cultural/temporal affiliation. Unknown.

Elevation. 2,204 m (7,230 ft).

Land ownership. Santa Fe Estates.

Description. A whole Madera chert core flake with a single-facet platform and no cortex was identified.

IO-9

Cultural/temporal affiliation. Unknown.

Elevation. 2,201 m (7,220 ft).

Land ownership. Santa Fe Estates.

Description. Three pieces of chipped stone were identified including a whole Madera chert core flake with a single-facet platform, a piece of red and gray angular debris, and a whole gray chert core flake with a single-facet platform. No cortex occurred on these artifacts.

IO-10

Cultural/temporal affiliation. Unknown.

Elevation. 2,219 m (7,280 ft).

Land ownership. Santa Fe Estates.

Description. A whole Madera chert core flake with a single-facet platform and no cortex was identified.

IO-11

Cultural/temporal affiliation. Unknown.

Elevation. 2,221 m (7,285 ft).

Land ownership. Santa Fe Estates.

Description. Two chipped stone artifacts including a whole Madera chert core flake with a cortical platform, and a whole Madera chert flake with a collapsed platform were identified. Waterworn cortex occurred on the dorsal surfaces of both flakes.

IO-12

Cultural/temporal affiliation. Unknown.

Elevation. 2,216 m (7,270 ft).

Land ownership. Santa Fe Estates.

Description. A whole Madera chert core flake with a cortical platform and dorsal cortex of an indeterminate nature was identified.

IO-13

Cultural/temporal affiliation. Unknown.

Elevation. 2,214 m (7,265 ft).

Land ownership. Santa Fe Estates.

Description. A whole quartzite core flake with a multifacet platform and no dorsal cortex was identified.

IO-14

Cultural/temporal affiliation. Unknown.

Elevation. 2,213 m (7,260 ft).

Land ownership. Santa Fe Estates.

Description. Seven Madera chert core flakes were identified that appear to represent a single reduction episode. Four of the flakes were whole, and three were represented by proximal portions. Only single-facet (n = 4) and multifacet (n = 3) platforms occurred. No cortex was found on any of these flakes, but two of the whole flakes were highly patinated.

IO-15

Cultural/temporal affiliation. Prehistoric Pueblo, ca. A.D. 600 to 1540.

Elevation. 2,207 m (7,242 ft).

Land ownership. Santa Fe Estates.

Description. A plain gray utility ware sherd from a jar neck was identified.

Modern Engineering Features

Several stone masonry culverts were recorded along both sides of Camino Encantado Road (Appendix 1, Fig. 10). These features are of general historical interest. According to information obtained during a study of historic maps and aerial photographs, they were built sometime after 1936, and thus are not old enough to receive a site designation. All of these features remain in

use and will be avoided by construction activities. Brief descriptions are provided, and photographs of these features are on file at the Archeological Records Management Section of the Historic Preservation Division.

Culvert 1

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of a 36-inch-diameter (0.91 m) cement pipe. Up to five courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 1.28 m (4.2 ft) tall and 3.65 m (12.0 ft) long. Stones range in size from 10 by 8 cm (4 by 3 inches) to 60 by 25 cm (24 by 10 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout. The stones used in this structure are limestone, some of which contain fossils.

The culvert has up to six courses showing on the south side of Camino Encantado Road. There, the structure is up to 1.42 m (4.66 ft) tall and 3.0 m (9.8 ft) long. The stones used in this part of the structure are limestone and quartzite, and range in size from 20 by 8 cm (8 by 3 inches) to 40 by 30 cm (16 by 12 inches). No chinking stones were used in this section of the structure.

Culvert 2

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of a 60-inch-diameter (1.52 m) corrugated metal pipe. Up to ten courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 3.2 m (10.5 ft) tall and 9.8 m (32.1 ft) long. Stones range in size from 10 by 6 cm (4 by 2 inches) to 44 by 39 cm (17 by 15 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout. The stones used in this structure are limestone (some of which contain fossils) and quartzite.

The culvert has up to 11 courses showing on the south side of Camino Encantado Road. There, the structure is up to 3.78 m (12.4 ft) tall and 7.0 m (23.0 ft) long. The stones used in this part of the structure are limestone, and range in size from 7 by 5 cm (3 by 2 inches) to 51 by 40 cm (20 by 16 inches). No chinking stones were used in this section of the structure, and the base and sides are eroding away on this side.

Culvert 3

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of a 26-inch-diameter (0.66 m) cement pipe. Up to three courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 1.02 m (3.35 ft) tall and 3.08 m (10.1 ft) long. Stones range in size from 9 by 8 cm (3.5 by 3 inches) to 44 by 29 cm (17 by 11 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout. The stones used in this structure are limestone, and some contain fossils.

The culvert has up to four courses showing on the south side of Camino Encantado Road. There, the structure is up to 1.3 m (4.3 ft) tall and 3.29 m (10.8 ft) long. The stones used in this part of the structure are limestone (some of which contain fossils), and range in size from 12 by 5 cm (5 by 2 inches) to 67 by 38 cm (26 by 15 inches). No chinking stones were used in this section of the structure, and the base is eroding away on this side.

Culvert 4

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of a 36-inch-diameter (0.91 m) cement pipe. Up to seven courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 2.1 m (6.9 ft) tall and 5.0 m (16.4 ft) long. Stones range in size from 18 by 16 cm (7 by 6 inches) to 54 by 26 cm (21 by 10 inches). No chinking stones were noted. The stones used in this structure are limestone, and some contain fossils. Several 20-by-15-cm (8 by 6 inches) blocks of wood were placed opposite the culvert in an attempt to improve drainage, and appear to be of more recent origin.

The culvert has up to four courses showing on the south side of Camino Encantado Road. There, the structure is up to 1.34 m (4.4 ft) tall and 5.0 m (16.4 ft) long. The stones used in this part of the structure are limestone (some of which contain fossils) and quartzite, and range in size from 12 by 5 cm (5 by 2 inches) to 55 by 35 cm (22 by 14 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout.

Culvert 5

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of three cement pipes, each 36 inches (0.91 m) in diameter. Up to five courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 1.47 m (4.82 ft) tall and 9.4 m (30.8 ft) long. Stones range in size from 24 by 16 cm (10 by 6 inches) to 50 by 42 cm (20 by 17 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout. The stones used in this structure are limestone, some of which contain fossils.

The culvert has up to six courses showing on the south side of Camino Encantado Road. There, the structure is up to 1.48 m (4.86 ft) tall and 9.1 m (29.9 ft) long. The stones used in this part of the structure are limestone (some of which contain fossils), and range in size from 20 by 13 cm (8 by 5 inches) to 52 by 36 cm (21 by 14 inches). No chinking stones were used in this section of the structure.

Culvert 6

This structure consists of a retaining wall that occurs on the south side of Camino Encantado Road only. It is of stone masonry construction with cement mortar between courses, and is shaped like an elongated U. Stones are variably sized, and up to two courses are showing. The remaining portion is up to 1.1 m (3.6 ft) tall and 7 m (23 ft) long. The stones used in this structure are limestone (some of which contain fossils), and range in size from 20 by 8 cm (8 by 3 inches) to 38 by 25 cm (15 by 10 inches). Small chinking stones were used between the larger stones in a

few places, but do not occur consistently throughout. One edge of this structure is in an arroyo, and it shows some signs of erosion.

Culvert 7

This structure has openings on both sides of Camino Encantado Road, with coursed stonework supporting the ends of a 36-inch-diameter (0.91 m) cement pipe. Up to five courses of stonework are visible on the north side of the culvert. The remaining portion is a maximum of 2.33 m (7.64 ft) tall and 7.7 m (25.3 ft) long. Stones range in size from 7 by 5 cm (3 by 2 inches) to 55 by 27 cm (22 by 11 inches). Small chinking stones were used between the larger stones in a few places, but do not occur consistently throughout. The stones used in this structure are limestone (some of which contain fossils) and quartzite. The sides of this end of the culvert are collapsing and eroding away.

The culvert has seven courses showing on the south side of Camino Encantado Road. There, the structure is up to 2.2 m (7.2 ft) tall and 7.5 m (24.6 ft) long. The stones used in this part of the structure are limestone (some of which contain fossils) and quartzite, and range in size from 20 by 14 cm (8 by 6 inches) to 55 by 27 cm (22 by 11 inches). No chinking stones were used in this section of the structure. The sides of this end of the culvert are also rapidly eroding away.

RECOMMENDATIONS

Eight sites, fifteen isolated occurrences, and seven modern engineering features were encountered during this study. Three sites (LA 61318, LA 61320, and LA 61321) were recorded and tested during investigations along the Santa Fe Relief Route (Wolfman et al. 1989), and LA 61321 was excavated during data recovery efforts along the same route (Post 1996b). Five new sites were located and recorded by this study, including two scatters of chipped stone artifacts (LA 115535 and LA 115536) and three isolated checkdams (LA 115537, LA 115538, and LA 115539).

New Sites

Under provisions of the Santa Fe Archaeological Review Districts Ordinance (Ord. #1987-40, §1), none of the sites that were newly recorded by this project should be considered significant. LA 115535 and LA 115536 are both over 75 years old, but appear to have little potential to provide further information that may be important to understanding the prehistory of the Santa Fe area. Both sites are scatters of artifacts that are exposed on gravel deposits in areas which evidence considerable erosion, both slope wash and gullying. No features, either intact or eroded, were found on these sites. All visible artifacts were recorded in the field, and there is little potential for the existence of intact subsurface deposits. It is likely that more intensive investigations would simply replicate data that have already been gathered. Thus, we feel that no further work is needed at these sites. However, in the event this recommendation was not considered acceptable, steps were taken that would allow both sites to be avoided. Site boundaries were marked with wooden lathe, and 70 ft (21.3 m) wide alternate routes were examined. This distance places a 50-ft (15.2 m) wide buffer between the 20-ft (6.1 m) wide utility easement and site boundaries. For both sites, the alternate routes run along the north side of the artifact scatters and are shown in Figures 2 and 3. By re-routing the utility easement around these sites in the manner described, potential impact to cultural resources could be avoided, if this were considered necessary.

No definite date or cultural affinity could be assigned to any of the isolated checkdams (LA 115537, LA 115538, and LA 115539). Only two of these sites are within the actual utility easement; LA 115539 lies slightly outside it. Recent studies in the Santa Fe area suggest that most local sites of this type are the result of Civilian Conservation Corps efforts to control erosion and improve soil conditions for the Soil Conservation Service during the 1930s (Martinez 1996; Spivey 1996). All three checkdam sites are badly damaged by erosion, and have no other features or artifacts in direct association. We feel that survey recording has exhausted their potential to provide information on the history of this area, and that no further investigations are warranted. Thus, we recommend no special stipulations for these sites.

Previously Recorded Sites

Three sites encountered within the utility easement were previously recorded, and each has undergone more intensive investigation. LA 61318 was tested and initially determined to have potential to provide more information on local prehistory or history (Wolfman et al. 1989:92). However, a reexamination of the site altered that assessment, which was based on the presence

of checkdams that were at first thought to be of prehistoric origin. During the reassessment it was decided that the checkdams were historic, and were most likely built by the CCC during the 1930s or early 1940s (Maxwell and Post 1995). Testing had already established the surficial nature of the prehistoric component and determined that those materials possessed little potential for providing further data on the prehistoric occupation of the area.

LA 61320 was also tested during archaeological studies along the Santa Fe Relief Route (Wolfman et al. 1989:95-97). These investigations determined that LA 61320 is surficial, and has little potential to provide further information on local prehistory. Thus, no work beyond testing was considered necessary. Similarly, LA 61321 was recorded and tested during the same project (Wolfman et al. 1989:97-99). The presence of possible cultural features led to a data recovery phase, which was completed in 1995 (Post 1996a). Site boundaries were expanded during data recovery and extend into current project limits. Consultation with the archaeologist who directed that study indicates that this area contains a diffuse artifact scatter and lacks the features and denser artifact scatter that were treated by data recovery (S. Post, pers. comm. 1996).

Since both LA 61318 and LA 61320 have been previously studied and found to have no potential to provide further information on local prehistory or history, we feel that the current project will not cause adverse impact to those cultural resources. Similarly, both testing and data recovery investigations have been completed at LA 61321, and the diffuse scatter of materials that remains in that area does not appear to have further potential to provide information on local prehistory.

Isolated Occurrences and Modern Engineering Features

A total of fifteen isolated occurrences and seven modern engineering features were also recorded during this study. The process of recording isolated occurrences is considered sufficient to exhaust their information potential. The modern engineering features include six culverts and one retaining wall associated with the Camino Encantado roadbed. These features are all still in use and appear to have been built by the CCC. While interesting, they did not warrant separate designations as sites. Since they are still in use, they will be avoided by construction and should not be adversely affected by this project.

Summary

All five newly recorded sites (LA 115535, LA 115536, LA 115537, LA 115538, and LA 115539) appear to have had their information potential exhausted by recording. Alternate routes were examined around LA 115535 and LA 115536 in the event that avoidance was deemed desirable; however, we feel that avoidance of these sites is not necessary because they have little potential for providing further information on the prehistory of the Santa Fe area.

Three sites (LA 61318, LA 61320, and LA 61321) that extend into the utility easement have already had their potential to provide information exhausted by testing or data recovery investigations. We feel that no further work needs to be performed at these sites. The information potential of the isolated occurrences is also considered to have been exhausted by field recording. Modern engineering features were not recorded as sites, and will be avoided by construction

activities.

We recommend that this project be granted archaeological clearance. If avoidance of LA 115535 and LA 115536 is necessary, alternate routes have been examined and marked, as discussed above. However, it is our opinion that avoidance of these sites is unnecessary since they have little potential to provide further information. Thus, this project should not have an adverse effect on any of the cultural resources encountered during this study, and we recommend clearance with no further stipulations.

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