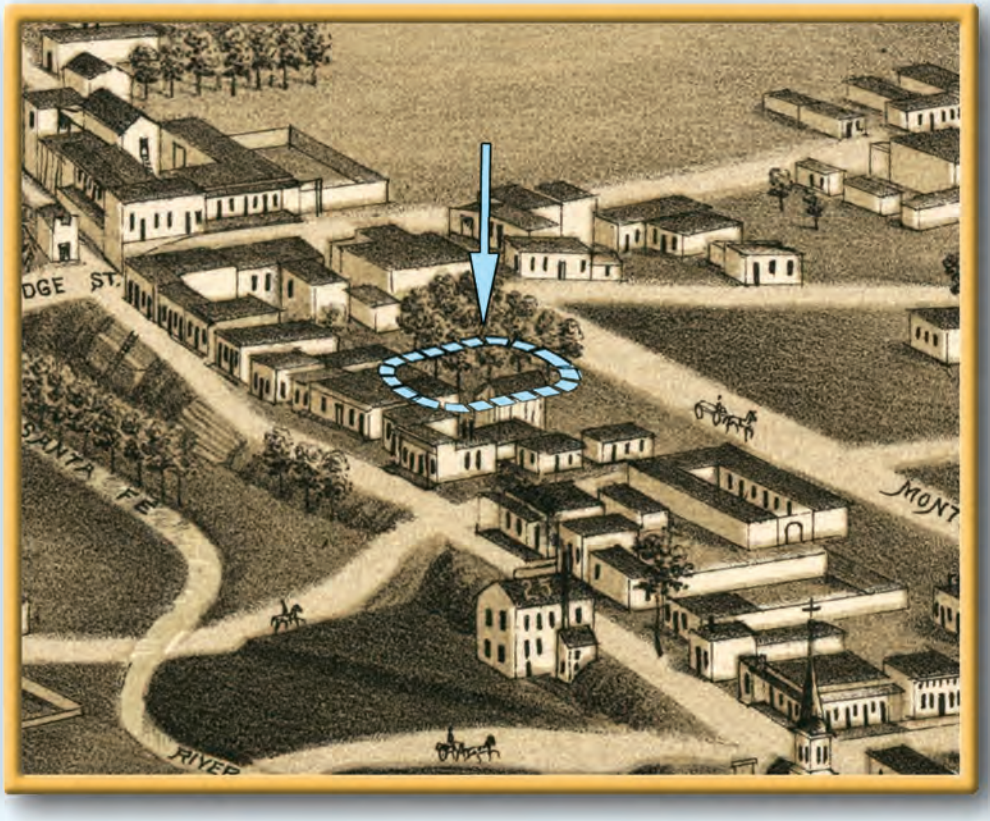
The Santa Fe County District Attorney Complex Renovation:

Research Design and Data Recovery Plan at LA 156207, Santa Fe County, New Mexico

Eric Blinman

This is an Updated Resubmission of the 2014 Archaeology Note 467



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The Santa Fe County District Attorney Complex Renovation: Research Design and Data Recovery Plan at LA 156207, Santa Fe County, New Mexico

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Administrative Summary

At the request of Brad M. Isaacson, Project Manager for the Projects Division of the Santa Fe County Public Works Department, the Office of Archaeological Studies (OAS) has prepared a research design and data recovery plan for archaeological investigations in advance of planned renovations of the Santa Fe County District Attorney Complex. Paul M. Olafson, formerly Deputy Director, Projects, Facilities and Open Space Division, Public Works Department, Santa Fe County, initiated this project in 2014, and site-specific excavation and burial permits were requested at that time. Funding for the project was subsequently deferred, and we are reapplying for permits at this time.

The District Attorney Complex is toward the center of the modern Santa Fe city block defined by Montezuma Avenue, Cerrillos Road, Galisteo Street, DeVargas Street, and Sandoval Street. The complex is adjacent to the recently constructed First Judicial District Courthouse. Reconnaissance prior to courthouse construction (NMCRIS Activity No. 104955) resulted in the definition of LA 156207 and the determination that the site was eligible for inclusion on the *National Register of Historic Places* (36 CFR Part 60.4). In conformance with 4.10.16 NMAC, OAS then created a research design and executed a data recovery plan at LA 156207 (NMCRIS Activity No. 110197) under permits SE-262 and ABE-09-027 and monitoring permit NM-09-027-M. The discovery of hydrocarbon contamination during courthouse construction resulted in the need for additional monitoring during the installation of remediation infrastructure, which OAS conducted under permits ABE-10-027 and NM-10-027-M (NMCRIS Activity No. 117636).

Initial data recovery at LA 156207 treated all archaeological resources within the courthouse site, but the discoveries during the remediation monitoring extended the boundary of LA 156207 to the north of the District Attorney Complex onto adjacent private land. The LA 156207 boundary probably extends eastward from the District Attorney Complex onto other parcels of adjacent private land, but no confirmatory investigations have been conducted, and the boundary is currently limited to the eastern edge of the county-owned parcel. The prior investigations at LA 156207 yielded archaeological evidence of precontact (AD 1275–1400) Native American occupations and a progression of historic occupations spanning an undated irrigation channel and Railroad-era refuse pits (ca. 1890s) through 1930s buildings, including features related to the Santa Fe Maternal Health Center (AD 1933–1940). Uninvestigated areas of LA 156207, including those areas only investigated by monitoring for the hydrocarbon remediation, remain eligible for inclusion on the *National Register of Historic Places* (36 CFR Part 60.4).

The District Attorney Complex renovations involve three areas of anticipated subsurface disturbance within the boundaries of LA 156207. The first area is the location of planned security fence construction along the public-private property line adjacent to the northern edge of the northeastern corner of the existing building. Based on observations during the monitoring of hydrocarbon remediation trenches on adjacent private land, intact archaeological deposits may be present, including both historic and precontact features and deposits. The other two areas involve the redesign of the main building entry and associated landscaping and the installation of new utilities within an existing utility corridor. Prior construction in these two areas is likely to have compromised the integrity of subsurface deposits, and monitoring of the planned construction is proposed.

The following data recovery plan is based on the completed data recovery excavations and archival research for the encompassing First Judicial District Courthouse Complex Project. This provides a cultural-historical context for the planned archaeological excavation and examination of any structures, features, deposits, and artifacts that will be encountered as part of the Santa Fe County District Attorney Complex investigations. The research design for the Santa Fe County District Attorney Complex maintains the same social and economic perspectives as the courthouse project, building on an elaborating the results of both the courthouse excavations and hydrocarbon monitoring investigations.

The proposed data recovery project will be conducted by the Office of Archaeological Studies for Santa

Fe County. The investigation schedule will be determined by the completion of architectural plans (Area 1) and the pacing of construction activity (monitoring in Areas 2 and 3). Area 1 excavation is anticipated to commence as early as mid-June 2016, and monitoring phases of the project will continue through the completion of the renovations which may not be until spring 2017. Laboratory and report production tasks are anticipated to proceed concurrently with monitoring, and report submission and artifact curation should be completed by June 2018. This research design is intended to accommodate the full range of potential deposits that may exist in the project area.

NMCRIS Activity No.: [pending]
MNM Project No. 41.1009
NM (Project-Specific) Excavation Permit No.: SE- [pending]

Acknowledgments

Preparation of this research design and data recovery plan have been facilitated by the work of Steve Lakatos, Chuck Hannaford, and the OAS staff and consultants who were involved in the First Judicial District Courthouse Complex Project and subsequent monitoring of hydrocarbon remediation efforts at that location. Robert Turner and Lynne Arany provided organizational, graphic, and editorial support.

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1 | Introduction

This document is a research design and data recovery plan for additional investigations at LA 156207 in the vicinity of the previously uninvestigated Santa Fe County District Attorney Complex.

In March 2016, Brad M. Isaacson, Project Manager for the Projects Division of the Santa Fe County Public Works Department, requested assistance from the Office of Archaeological Studies (OAS) regarding proposed renovations of the Santa Fe County District Attorney Complex. The planned renovations include limited areas of subsurface disturbance within the boundaries of the previously defined archaeological site, LA 156207 (the Santa Fe County Courthouse Site). The presence of intact cultural resources outside of the original courthouse construction area means that the site remains eligible for inclusion on the *National Register of Historic Places* (36 CFR Part 60.4), and the data recovery program proposed in this plan is designed to allow Santa Fe County to comply with state regulations concerning cultural resources (4.10.16 NMAC) .

The project area is on unplatted land (USGS 7.5′ Santa Fe Quadrangle, UTM Zone 13 [NAD 27], E414698, N3949220), toward the center of the modern Santa Fe city block defined by Montezuma Avenue, Cerrillos Road, and Galisteo Street, West DeVargas Street, and Sandoval Street, within the boundary of the Historic Downtown District (NM 260) of Santa Fe, New Mexico (Fig. 1, 2; Appendix 2). This urban setting is characterized by paved parking surfaces, roadways, and modern buildings, preventing surface observations of the existence, nature, and extent of cultural resources. Reconnaissance of the then proposed First Judicial District Courthouse location (Hannaford 2007) identified cultural resources in a series of backhoe trenches, resulting in the definition of site LA 156207. At the time of the courthouse data recovery investigation, the boundary of LA 156207 was limited to the area of Santa Fe County land that had been investigated, including the Santa Fe County District Attorney building. The nature and extent of the cultural resources were sufficient to warrant a data recovery program within the footprint of the courthouse construction zone (Lakatos 2008, 2011a). Although adjacent to the First Judicial District Courthouse location on the Santa Fe County parcel, the District Attorney Complex (Fig. 3) was not involved in the courthouse construction or the archaeological data recovery investigations.

During courthouse construction, liquid hydrocarbon contamination of the construction site required remediation, and after data recovery had been completed, archaeological monitoring was carried out for remediation pipeline trenches and well locations outside of the Santa Fe County parcel (Lakatos 2011b). The monitoring identified an additional archaeological site (LA 167408) to the southeast of the courthouse and a series of historic and precontact features and deposits on private land to the north. The private land features and deposits were continuous with those within the courthouse parcel, and the LA 156207 site boundary was extended to the north as a result of the monitoring effort (see Fig. 2).

With the completion of the First Judicial District Courthouse complex, Santa Fe County has initiated plans for renovation of the District Attorney Complex building and immediately adjacent grounds. Most of the renovation involves the building interiors, but the architectural plan has identified three areas of subsurface disturbance (Fig. 4). The first area is where an exterior security fence will be built on the property boundary to the north of the northeastern corner of the building. The second area involves demolition and replacement of the existing entry, moving the entry to the former reception area on the interior and

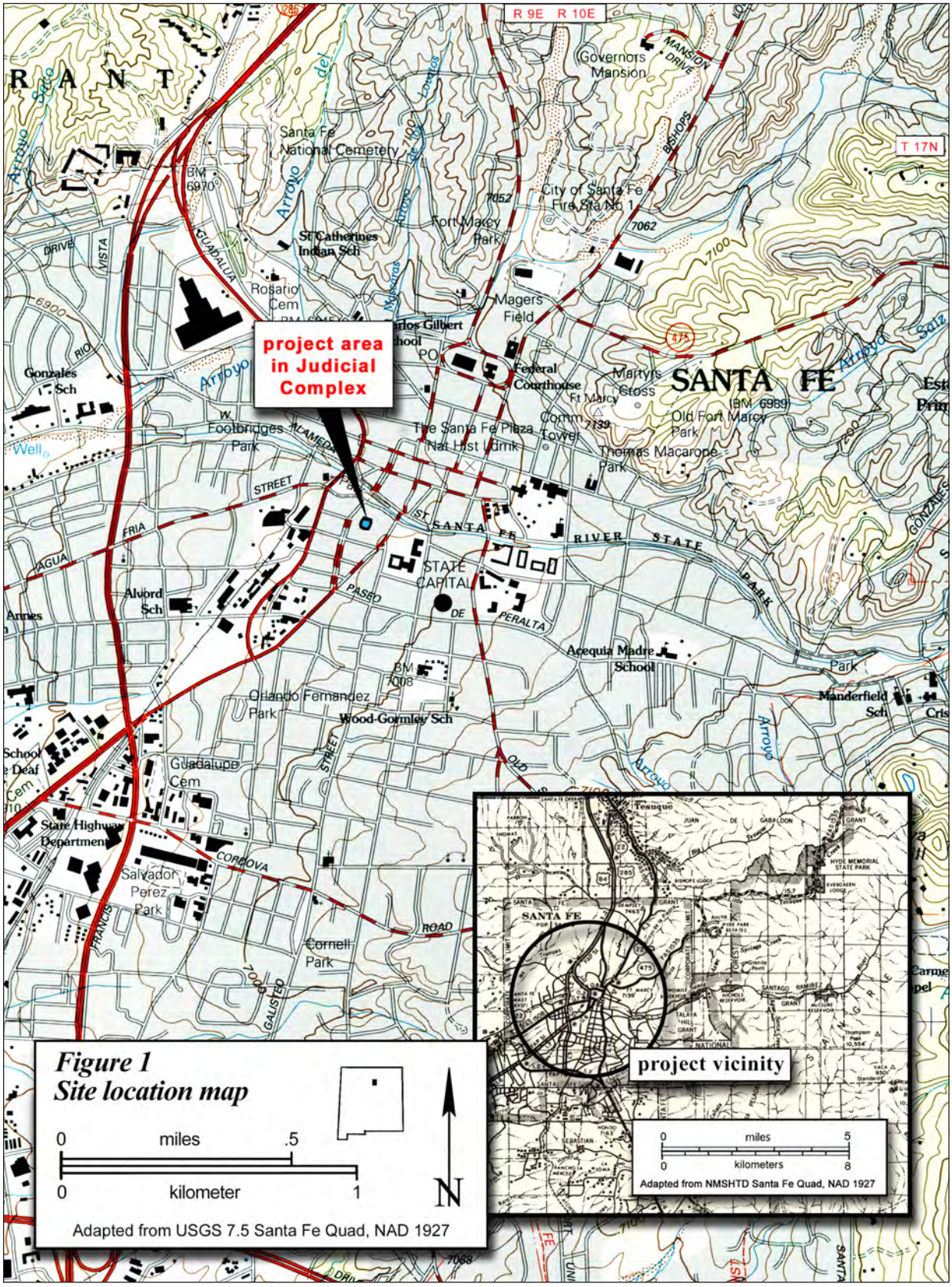

Figure 1. Project location map.

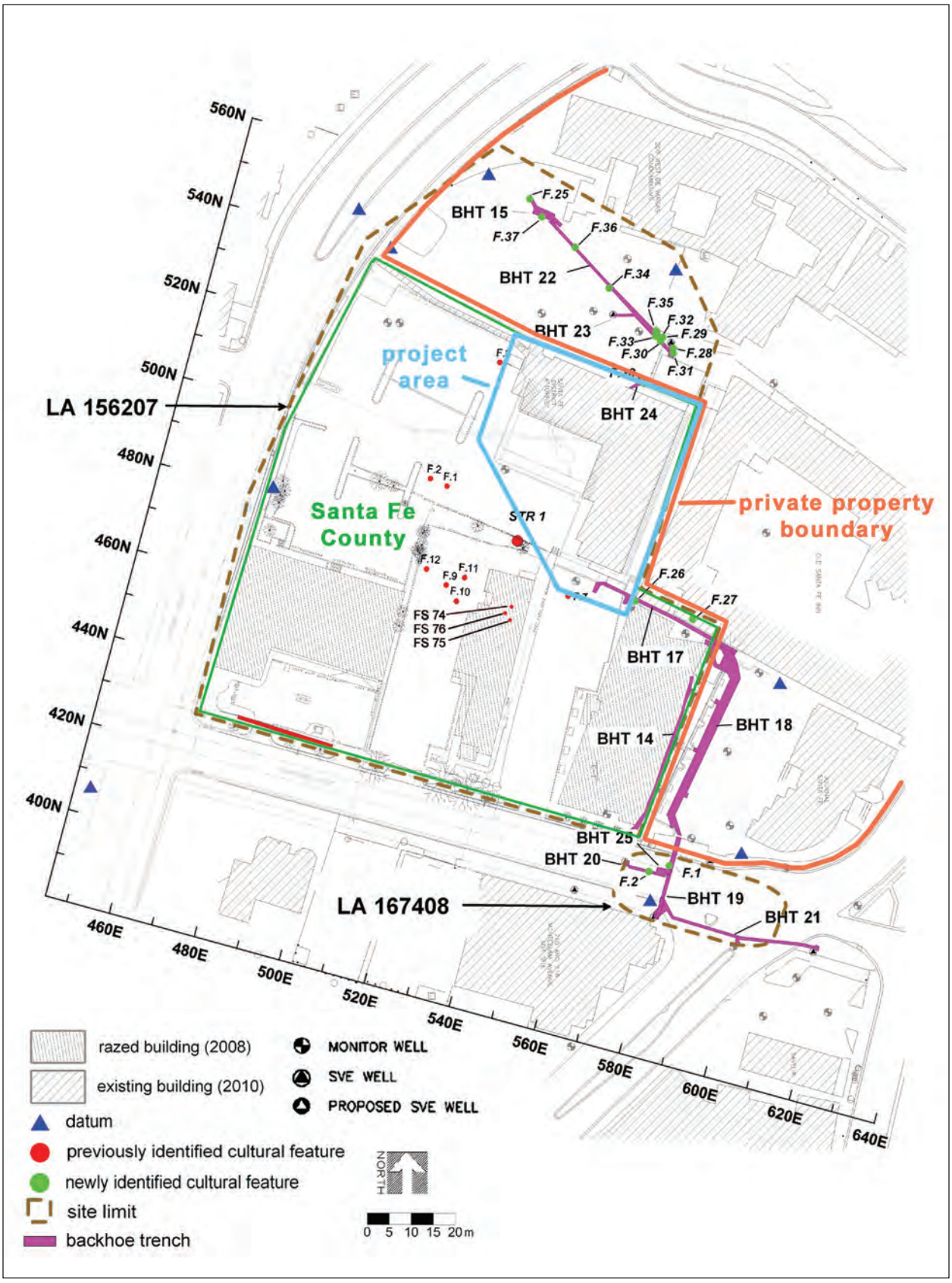

Figure 2. Land status within the project area.

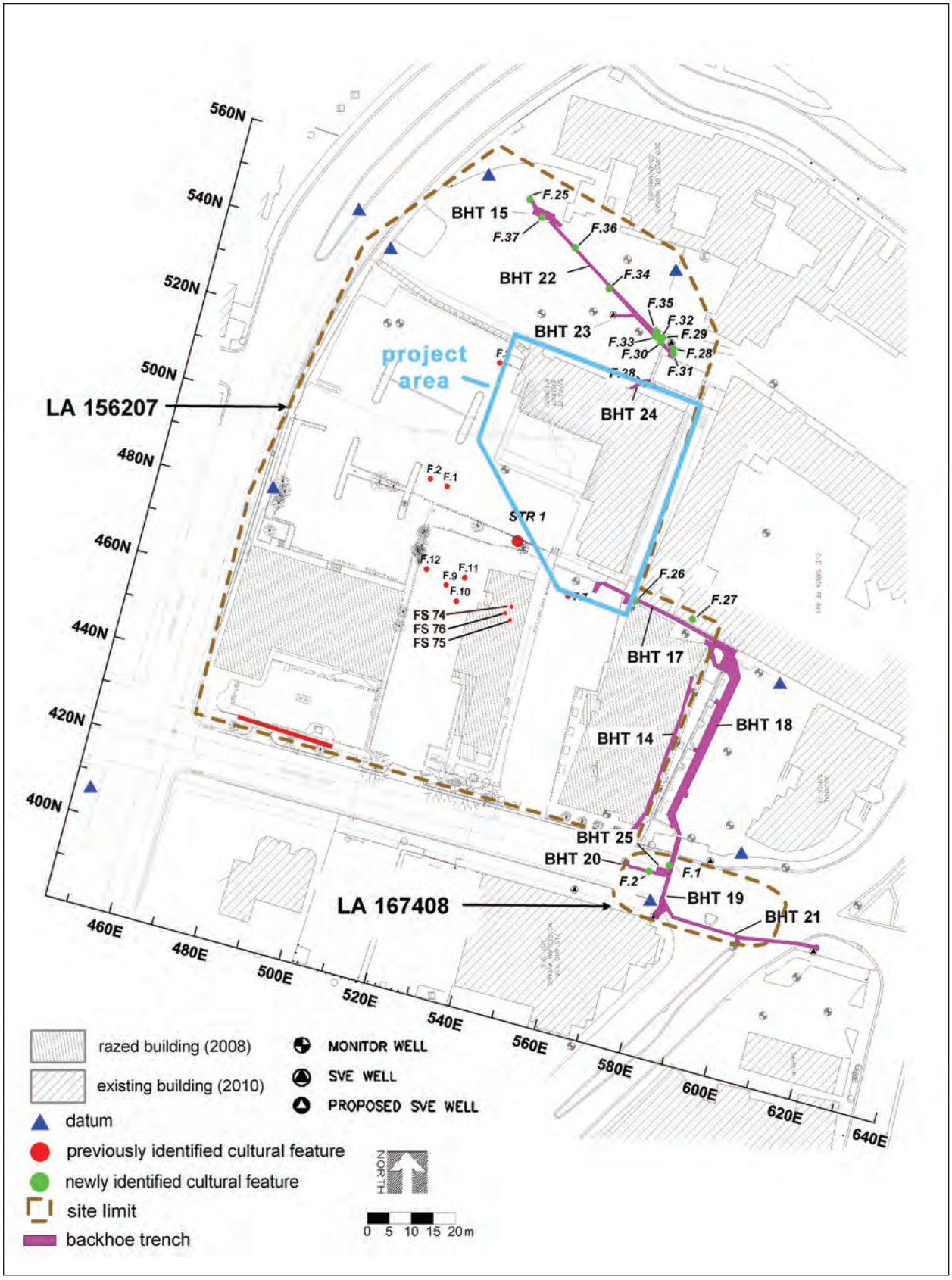

Figure 3. The District Attorney Complex project area within LA 156207.

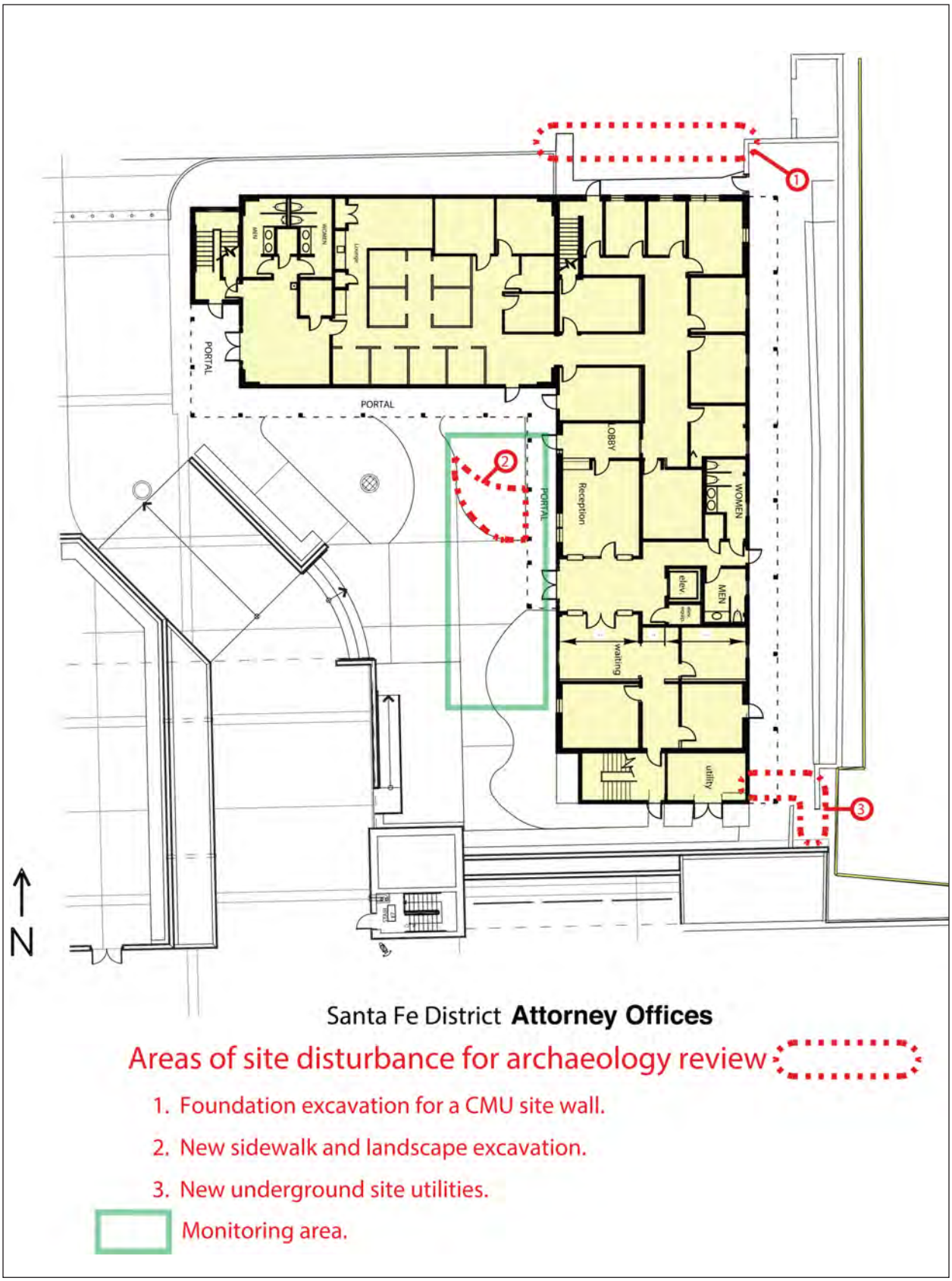

Figure 4. Anticipated subsurface disturbance areas of the renovation project.

adjusting the exterior entry location and surrounding landscaping. The third area is the installation of new utilities that are being brought underground into the southeastern corner of the building, generally within a preexisting utility corridor. OAS recommends monitoring for the subsurface work within areas two and three, due to the likelihood that the original building construction in these areas has compromised the integrity of any cultural resources in the locations. However, OAS recommends that the first area be investigated as part of an archaeological data recovery effort.

The first area is adjacent to monitoring backhoe trench 24, which transected feature 38, an apparent historic cobble foundation (Lakatos 2011b:52). The first area is also approximately 10 m to the south of precontact deposits and a cluster of features associated with the southeastern end of monitoring trench 22, including a burial, a small pit structure, and a possible surface structure (Lakatos 2011b:37–43). Although the original construction of the District Attorney Complex may have truncated some intact deposits in the vicinity of the proposed security fence, the fence is located at the property line, away from the building footprint. It is likely that intact cultural resources, precontact and historic, are present.

This research design and data recovery plan are intentionally consistent with the data recovery plan for the First Judicial District Courthouse Complex project (Lakatos 2008) and with the monitoring plan for the hydrocarbon remediation trenching.

2 | Natural Environment and Cultural Setting

(adapted from Steven A. Lakatos 2011b)

This chapter draws heavily from Lakatos (2011a) and Hannaford (2007), and from relatively recent large-scale data recovery projects conducted by the OAS in downtown Santa Fe and the surrounding area, including the Santa Fe Railyard (Badner et al. 2014), Santa Fe Community Convention Center (Lentz 2011), the Capitol Complex Historic Neighborhood (Barbour 2012, 2014), and the Santa Fe to Pojoaque Corridor (Boyer and Lakatos 2000). These nearby projects help to place the Santa Fe County District Attorney Renovation project within broader regional environmental and cultural contexts. The various temporal components and feature types identified during these projects are contemporaneous with and relevant to the cultural resources that may be encountered during the Santa Fe County District Attorney Complex Renovation project.

Natural Environment
(adapted from Hannaford 2007)

The Santa Fe area has a semiarid climate. Most of the local precipitation occurs as intense summer thunderstorms that produce severe runoff and reduce usable moisture. The area generally receives between 229 to 254 mm of precipitation per year and a mean snowfall of 356 mm (Kelley 1980:112). The growing season ranges from 130 to 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.

The project area is within a structural subdivision of the Southern Rocky Mountain physiographic zone (Folks 1975:110) on the nearly level southern terrace of the Santa Fe River within the Inner Valley or Airport physiographic surface (Spiegel and Baldwin 1963:56) at an elevation of 6,975 ft (2,126 m). The basin is bounded on the west by the Jemez Mountains and on the east by the Sangre de Cristo Mountains. The city of Santa Fe is on the dissected piedmont plain of the western flank of the Sangre de Cristo Mountains. The ancient alluvial fan upon which the city lies was deposited by the Santa Fe River, which passes 0.2 km to the north of the project area as it flows west southwest to the Rio Grande.

Soils are formed from reworked, mixed alluvial material of the Tertiary/Quaternary-period Santa Fe Formation (Folks 1975). The major soil association of the immediate project area is Bluewing gravelly sandy loam (Folks 1975:15–16). This soil occurs on 0–5 percent slopes and may co-occur with Pojoaque and Fivemile soils, well-drained soils that formed in alluvium of mixed origin along terraces and floodplains. The gravelly sandy loam has rapid permeability with medium runoff and severe erosion hazard.

Paleoenvironment

Paleoenvironmental data for the Santa Fe area are generally derived from several highly correlated studies (i.e., Dean and Funkhouser 1995; Orcutt 1999; Rose et al. 1981), which have been recently summarized and

evaluated by Allen (2004). While Rose et al. (1981) focused on annual fluctuations in precipitation and temperature starting in the late AD 900s, Dean and Funkhouser (1995) and Orcutt (1999:231) used the Palmer Drought Severity Index (PDSI) to evaluate paleoclimatic conditions to model demographic changes in the Jemez Mountains, Pajarito Plateau, and Northern Rio Grande beginning in the AD 1100s. The PDSI estimates the amount of available moisture by taking precipitation and temperature into account.

Allen's (2004) evaluation and analysis of the paleoenvironmental conditions indicates that the results of these independent studies generated similar trends in precipitation and effective moisture. In addition, Allen found that the annual precipitation reconstruction produced by Grissino-Mayer (1995, 1996) for El Malpais National Monument mimicked the decadal trends of the other regional precipitation reconstructions at least for the post–AD 1100 period. While some similarities between studies can be attributed to the use of similar data sources, the consensus among researchers using a range of data and analytical methods indicates that the trends in available moisture presented by Rose et al. (1981) for the Santa Fe area are accurate representations of past climatic conditions.

Assuming the trends in past environmental conditions are accurate, both PDSI and soil type are key factors that influence the distribution, availability, and productivity of biotic resources (Orcutt 1991). In addition to affecting distribution of natural resources, these factors also influence the distribution of arable land and the success of various farming techniques employed by Native American groups inhabiting the area (Post 1996). Given the fluctuations in the availability of subsistence resources, it follows that variations in past environmental conditions also influenced settlement patterns and, perhaps, population size (Orcutt 1991).

During the late AD 900s fluctuations in precipitation remained within one standard deviation of the mean, offering a predictable amount of annual precipitation, but available spring moisture was on the decline (Rose et al. 1981). During this time (AD 900–1000) populations expanded above La Bajada into upland riverine settings of the Santa Fe area and southern Tewa Basin (Lakatos 2003). Population remained dispersed perhaps to exploit arable land adjacent to the perennial and seasonal watercourses to offset the lack of overall precipitation (Orcutt 1999:233, Table 5.2).

Precipitation again became more predictable until the late AD 1000s (Rose et al. 1981) (Fig. 5). During this 85-year period, agricultural productivity and availability of natural biotic resources would have been high, fueling population growth. As population grew, settlement expanded north, settling many of the arable riverine settings between La Bajada and Velarde, New Mexico (Dickson 1979). A higher population density combined with a downturn in annual and spring precipitation during the late 1000s may have provoked some segments of the population to expand north, inhabiting similar riverine settings such as the Taos Valley (Boyer et al. 2010; Lakatos 2007).

Unlike previous precipitation patterns, a relatively long deep drought in the mid-AD 1100s was followed by precipitation patterns, which fluctuated between wet and dry every three to five years. Given the higher population density, longer drought cycles, and persistently drier conditions compared to previous precipitation patterns, some families may have been compelled to move out of the prime lowland riverine settings into more marginal upland areas such as the Pajarito Plateau and along the margins of the Galisteo Basin (Orcutt 1999:244), perhaps conditioned by seasonal rainfall patterns.

By the early AD 1200s both the precipitation data and the PDSI reflect less annual variation of precipitation within persistent periods of favorable conditions punctuated by a period of less effective moisture. Decades of relatively favorable environmental conditions would have resulted in continued population growth resulting in more pressure on existing arable settings. The combined effect of high population and strained suitable habitation locations "necessitated organizational and settlement changes" (Orcutt 1999:240). In the greater Santa Fe area, a qualitative change in climate (Dean and Funkhouser 1995) resulted in the opening of large areas of the Galisteo Basin to agriculture (Blinman 2010), while aggregation occurred on the Pajarito Plateau during the AD 1250–1300 period.

Sustained periods of moisture at or below the mean probability resulted in less agricultural production, particularly in areas relying on dry farming techniques, and the spotty availability of wild natural resources. It is about this time that some population shifted off the Pajarito Plateau (Orcutt 1999) and smaller

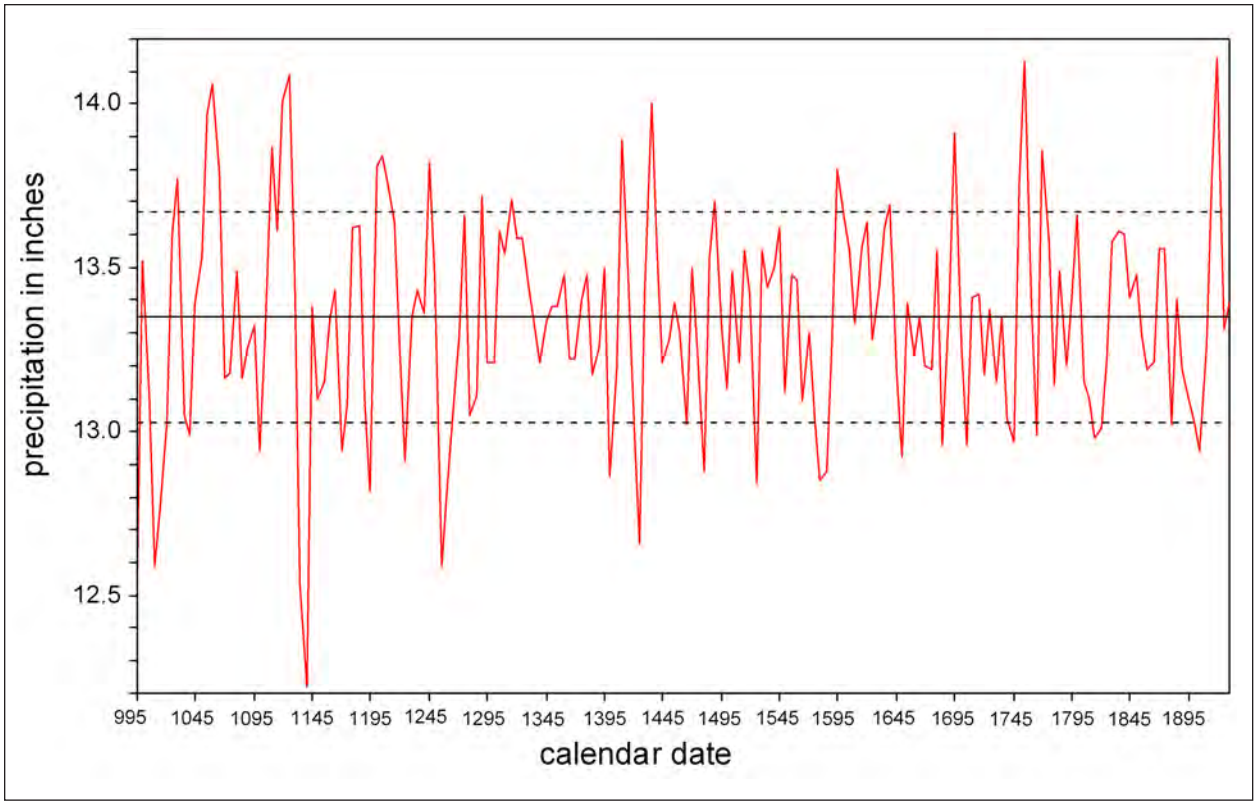

Figure 5. Precipitation levels, 10-year running average (adapted from Rose et al. 1981).

settlements along the margins of the Galisteo Basin such as Burnt Corn aggregate into larger villages. Also during this time the aggregated settlements of Pindi Pueblo (LA 1) near the village of Agua Fria, LA 1051 near the Santa Fe Plaza, and Arroyo Hondo (LA 12), all near perennial water sources, expanded.

From AD 1300 to 1350 annual and spring precipitation increased, leading once again to more agriculturally productive farming plots, greater availability of natural resources, and in turn population growth in the northern Rio Grande, reflected as an increase in settlement size and the reoccupation of the Pajarito Plateau (Dean et al. 1994; Orcutt 1999). This period of relatively favorable conditions is punctuated by a brief but sharp downturn in moisture between AD 1360 and 1370. As land-intensive settlement strategies replaced land-extensive practices, the adaption of more elaborate features such as grid gardens and gravel mulch were needed to increase agricultural productivity to support growing aggregated settlements. In AD 1370–1450 the interval between dry years shortened, offering more available moisture with only a brief dry period during the early fifteenth century. The AD 1400 threshold marks the Coalition-to-Classic transition from scattered hamlets to large villages in the adjacent Galisteo Basin (Blinman et al. 2011), as abundant annual and perhaps seasonal moisture (Dean and Funkhouser 1995) provided support for aggregated settlements in sparsely settled marginal settings within the Chama and Pecos River Valleys. From 1450 to 1520 there were more poor years than good, including the end of the qualitative change noted by Dean and Funkhouser (1995); by the time of the Spanish colonization in the late sixteenth century, an even deeper, prolonged drought (Rose et al. 1981) forced the abandonment of many villages on the Pajarito Plateau and in the Galisteo Basin. Orcutt's population reconstructions for the northern Rio Grande Valley (Dean et al. 1994) suggest a loss of as much as three-quarters of the total Native American population by AD 1600 and the initiation of Spanish colonization.

Over the next 50 years, until roughly the mid-seventeenth century, precipitation was typically above the mean with less annual fluctuation. This period saw the founding and colonization of Santa Fe and the initial development of the acequia system used to irrigate fields of New World crops used to support an increasingly larger population. The subsequent 40 or so years were not as favorable and may have, in part, contributed to the social unrest that led to the Pueblo Revolt in 1680 (Weber 1992:133). Coincidentally, the Reconquest of New Mexico in 1692 occurred during a brief period of above-average precipitation followed by another 50-year cycle of low precipitation levels. As Santa Fe grew during remainder of the eighteenth century and into the early nineteenth century, the acequia system also expanded to water the increased land under cultivation. During this period precipitation patterns were more regular, fluctuating between short intervals of above- and below-average precipitation followed by a deep drought that lasted until Mexican Independence.

Along with Mexican Independence came the opening of the Santa Fe Trail and a prolonged period of above-average precipitation that lasted through the beginning of the Territorial period. Although precipitation patterns were less than predictable and below average during much of late nineteenth century, Santa Fe residents had become increasingly more dependent on commercially produced foodstuffs, signaling the decline of the local acequia system and agrarian communities.

Modern Environment

The Santa Fe area has a semiarid climate. Most of the local precipitation occurs as intense summer thunderstorms that produce severe runoff and reduce usable moisture. The area generally receives between 229 and 254 mm of precipitation per year and a mean snowfall of 356 mm (Kelley 1980:112). The growing season ranges from 130 to 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.

The project area falls within Great Basin Conifer Woodland ecological zone (Brown 1982). This area supports a plant community similar to the rabbitbrush community of the arroyo channels and terrace slopes described by Kelley (1980). Affected by runoff, flooding, erosion, arroyo channels, and terraces, the rabbitbrush community tends to support the grasses, shrubs, and succulents that favor disturbed conditions, including prickly pear, yucca, *Chenopodium* sp., *Amaranthus* sp., and Indian ricegrass. The arroyo channels or terraces also may have been historically dry-farmed, which also created disturbed soils zones encouraging colonization by nonnative species when left uncultivated. Today LA 156207 is within an urban setting characterized by paved parking surfaces and associated modern buildings. Given this active urban setting, few native floral or faunal species presently inhabit the project area.

Cultural Setting

Many works have dealt with the precontact and postcontact culture history, archival documentation, and architectural history of the Santa Fe Capitol Neighborhood and Railyard Districts, including the proposed project area (Barbour 2012, 2014; Colby 2004; Deyloff 2004; Scheick 2003; C. Snow 1995; Sze and Spears 1988). Specifically, previous data recovery and monitoring at the First Judicial District Courthouse Complex by OAS archaeologists have studied the nature and temporal placement of the cultural deposits associated with LA 156207, including interpretive summaries (Lakatos 2011a and 2011b). These investigations documented an intact precontact Native American horizon (AD 1250–1450) containing thermal features (Feature 9), the remains of both burned and dismantled jacal surface structures, a small pit structure (Structure 1), several human burials, and numerous artifacts. In addition, postcontact cultural features, including two post-1940 refuse pits (Features 7 and 12), a ca. 1930–1948 refuse pit (Feature 1) and privy vault (Feature 2), and an irrigation channel of indeterminate age (Feature 10) were identified (Lakatos 2009).

Previous archival research described the project area as an agrarian setting until the Territorial period

(ca. 1880), when land speculators began subdividing the area into residential building lots. Archival research provided details about land ownership and the use of different land tracts in the project area and provided detailed information on the nature of the archaeological remains. Finally, copies of Sanborn Fire Insurance Company maps at the Fray Angélico Chávez History Library and the New Mexico State Library were used to generate composite overlay maps helpful in identifying individual structures, land use, and development patterns.

Pre-European Contact Period
9500 BC to AD 1540
(adapted from Boyer and Lakatos 2000)

Two general developmental/chronological frameworks are commonly used to order and classify archaeological sites and materials in the Northern Rio Grande region. One is the Pecos Classification (Kidder 1924; see Cordell 1984:55–59); the other is what Peckham (1984) referred to as the Rio Grande Classification, developed by Wendorf (1954) and Wendorf and Reed (1955). Although several other frameworks have been presented for specific subregions and to refine various temporal phases (e.g., Dickson 1979; McNutt 1969; Wetherington 1968), this study follows the Rio Grande Classification (Wendorf 1954; Wendorf and Reed 1955).

The Rio Grande chronological framework, as defined by Wendorf and Reed (1955), begins with the Preceramic period, which includes occupations dating from the Paleoindian period (ca. 9500 BC) through the end of the Archaic period (ca. AD 400–600). The beginning of the Pueblo period is punctuated by the appearance of corn, pottery, and regularly patterned pit structures. The Pueblo-period chronology spans from AD 600 to 1600 and is subdivided into the Developmental, Coalition, Classic, and Historic periods (Wendorf 1954; Wendorf and Reed 1955).

Preceramic Period

Paleoindian period (ca. 9500 to 6000 BC). Although earlier North American populations are gaining acceptance, the earliest well-documented occupation of the American Southwest was by mobile big-game hunters referred to collectively as Paleoindians. Evidence of Paleoindian occupation in the Northern Rio Grande region is rare, and typically consists of diagnostic projectile points and butchering tools found on the modern ground surface or in deflated settings (Acklen et al. 1990). More recently, two Clovis-period components were reported in the Jemez Mountains (Evaskovich et al. 1997; Turnbow 1997), and late Paleoindian material was reported along the eastern flank of the Rio Grande west of Santa Fe (Dello-Russo 2008). Data recovery at one Clovis-period component identified two medial Clovis point fragments associated with a thermal feature and tool manufacture debitage (Evaskovich et al. 1997). Identification of Paleoindian occupations within a montane setting may suggest a changing subsistence adaptation or environmental conditions. An increased focus on hunting smaller game and gathering wild plants compared to previous periods may reflect changes in climate toward the end of the Paleoindian period (Haynes 1980; Wilmsen 1974).

The paucity of reported Paleoindian remains around Santa Fe may be attributed to low visibility of these remains rather than a lack of occupation. Paleoindian remains may be masked by later Archaic and Puebloan occupations. Poor visibility of these remains may also be attributed to geomorphological factors. Surfaces or strata containing Paleoindian remains may be deeply buried and only visible in settings where these geological deposits are exposed (Cordell 1978). Finally, given the land-use patterns in the area over the last 400 years, it is no surprise that Paleoindian sites have not been reported from the Santa Fe metro area.

Archaic period (ca. 6000 BC to AD 600). The term *Archaic* applies to the broad-spectrum hunting and foraging populations exploiting local topography and wild food sources. Most Archaic sites in the region date from the Bajada phase (4800 to 3200 BC) to the En Medio phase (800 BC to AD 1), identified by distinctive projectile point types, scrapers, knives, and grinding stones. However, relatively few Early and Middle Archaic sites have been identified. Most were reported from along the Santa Fe River and its primary tributaries south of the city (Post 2001, 2010) and from the piedmont northwest of town (Lakatos et al. 2001). These occupations were represented by a variety of thermal features, shallow house foundations, and scattered lithic, ground stone, and fire-cracked rock artifacts. The variety of feature types combined with evidence for dwellings and patterned artifact distributions indicates the annual reoccupation of favorable camp locations adjacent to a range of subsistence resources during this time (Post 2008).

Consistent with the broader regional data, evidence supports an increase in occupation of the Santa Fe area during the Late Archaic period (Acklen et al. 1997; Lang 1997; Post 1996, 2001, 2010). This increase in occurrences may be attributed to changes in settlement and subsistence patterns identified during the Armijo phase (1800 to 800 BC; Irwin-Williams 1973). Settlement changes include evidence of seasonal aggregation, longer periods of occupation, and the exploitation of a broader range of environmental settings, while changes in subsistence practices include the adoption of horticulture, identified at a limited number of sites south of La Bajada around the Albuquerque area. In the Santa Fe area, Armijo-phase sites have been identified in the piedmont and along the Santa Fe River (Post 1996; Schmader 1994). These sites range from small foraging camps to larger base camps with shallow structures. Radiocarbon dates obtained from thermal features suggest these sites were occupied between cal 1750 and 900 BC (Post 1996; Lakatos et al. 2001; Schmader 1994).

En Medio phase (cal 800 BC to AD cal 400) sites are the most numerous Archaic-period sites reported in the Santa Fe area. These sites are found in riverine, piedmont, foothill, and montane settings (Acklen et al. 1997; Kennedy 1998; Post 1996, 1999, 2010; Schmader 1994). En Medio–phase sites range from isolated occurrences to limited-activity sites to base camps with well-defined structures, intramural and extramural features, and patterned artifact distributions. Increased diversity in settlement patterns and site types suggests population increase, longer or reduced time between occupations, and truncated foraging range.

Although many of these sites contained structures, formal features, and grinding implements, evidence of horticulture remains absent. Excavators of En Medio sites from the Las Campanas project (Post 1996) recovered diagnostic projectile point types with date ranges that overlap between AD 500 and 850 (Irwin-Williams 1973; Thoms 1977). This temporal observation and the paucity of sites with evidence of horticulture indicate that Archaic subsistence strategies (generalized foraging) may have extended into the early or middle AD 900s north of La Bajada (Dickson 1979; McNutt 1969; Post 1996). No Archaic-period sites are found in the immediate vicinity of the project area.

Pueblo Period

The Pueblo period is subdivided into the Developmental (AD 600–1200), Coalition (AD 1200–1325), and Classic (AD 1325–1600) periods. The Developmental period in the Northern Rio Grande spans AD 600 and 1200. This period is further subdivided into the early Developmental (AD 600 to 900) and late Developmental (AD 900–1200) periods. The early Developmental corresponds temporally with the Basketmaker III and Pueblo I periods of the Pecos Classification and the late Developmental with the Pueblo II and early Pueblo III periods of the Pecos Classification. The Coalition (AD 1200–1325) period follows the Developmental period and corresponds with the late Pueblo III period. The subsequent Classic period (AD 1325–1600) and Historic period AD (1600–1912) are associated with the Pueblo IV and Pueblo V Pecos periods, respectively.

Early Developmental (AD 600 to 900). Most reported early Developmental sites are south of La Bajada, primarily in the Albuquerque area, with a few reported at higher elevations along the Tesuque, Nambe, and Santa Fe river drainages (Peckham 1984; Skinner et al. 1980; Wendorf and Reed 1955). Pueblo sites dating prior to AD 900 are relatively rare in the Santa Fe area, but Pueblo occupations became more numerous after AD

900. These occupations are typically represented by limited-activity areas and small residential settlements along low terraces overlooking primary and secondary tributaries of the Rio Grande. These locations may have been chosen for their access to water and arable farming land (Cordell 1978). Terrace locations may also have provided access to environmental zones with a wide range of foraging resources (Anschuetz et al. 1997).

Early Developmental residential sites typically consisted of one to three shallow, circular pit structures with little or no evidence of associated surface structures (Allen and McNutt 1955; Peckham 1954, 1957; Stuart and Gauthier 1981). Excavation data indicate a suite of characteristics were employed to construct these early structures. Typically, structures were excavated up to 1 m below ground surface and were commonly 3 to 5 m in diameter. Walls were sometimes reinforced with vertical poles and adobe (Lakatos 2006). Walls, floors, and internal features commonly lacked plaster. Ventilators were commonly located along the east to southeast wall of the structures. Common floor features included central hearths, ash-filled pits, deflectors, ladder sockets, and four postholes. Less common floor features included features identified as sipapus, warming pits, and pot rests, as well as subfloor pits of various sizes and depths (Allen and McNutt 1955; Hammack et al. 1983; Peckham 1957).

Ceramics associated with early Developmental sites include plain gray and brown wares, red slipped brown wares, and San Marcial Black-on-white (Allen and McNutt 1955). These types persist through the early Developmental phase, with the addition of neck-banded types similar to Alma Neckbanded and Kana'a Gray, and Kiatuthlanna Black-on-white, La Plata Black-on-red, and Abajo Red-on-orange through time (Wendorf and Reed 1955). The accumulation of pottery types and surface textures, as opposed to sequential types and textures, appears to be characteristic of the Rio Grande Developmental, as well as of the Mogollon area (see Wilson 2003). Decorated pottery at early Developmental-period sites may suggest cultural affiliation with people to the west and northwest. However, early Developmental assemblages also contain red and brown pottery, suggesting interaction with Mogollon populations to the south and southwest (Cordell 1978). Although cultural affiliation may seem more secure in assemblages clearly dominated by specific ware groups, cultural affiliation is difficult to determine at early Developmental sites that exhibit various frequencies of gray, brown, and white wares.

Late Developmental (AD 900 to 1200). Late Developmental sites have been identified from the Albuquerque area to the Taos Valley. This period is marked by an increase in the number and size of residential sites, habitation of a broader range of environmental settings, and the appearance of Kwahe'e Black-on-white (Cordell 1978; Mera 1935; Peckham 1984; Wendorf and Reed 1955; Wetherington 1968). Late Developmental populations expanded into higher elevations, settling along the Rio Grande, Tesuque, Nambe, and Santa Fe river drainages (Allen 1972; Ellis 1975; McNutt 1969; Peckham 1984; Skinner et al. 1980; Wendorf and Reed 1955). Commonly along low terraces overlooking primary and secondary tributaries of these rivers, these locations provided access to water, arable farming land (Cordell 1978), and a variety of foraging resources (Anschuetz et al. 1997). Although late Developmental sites are more common at higher elevations than early Developmental sites, there is little evidence for late Developmental occupation of the Pajarito Plateau (Kohler 1990; Orcutt 1991).

Reported late Developmental period sites typically consist of a residential unit comprised of one to two pit structures, sometimes associated with a surface structure having 5 to 20 rooms, and a shallow midden (Ellis 1975; Peckham 1984; Stubbs 1954; Stuart and Gauthier 1981; Wendorf and Reed 1955). These residential sites occur as single units or in clusters of units referred to as communities (Anschuetz et al. 1997; Wendorf and Reed 1955).

Surface structures were commonly constructed of adobe with some rock incorporated into the adobe walls or upright slabs used as wall foundations or footers (McNutt 1969; Stubbs 1954). Walls were constructed with multiple courses of adobe, with or without rock; waddle and daub (jacal); or combinations of these techniques. Contiguous rectangular rooms often lacked floor or wall features, and floors were unplastered, with a few reported examples of adobe, cobble, or slab floors. Subrectangular and D-shaped rooms were also reported but less common (Ahlstrom 1985; Boyer and Lakatos 1997; Ellis 1975; McNutt 1969; Stubbs 1954; Skinner et al. 1980).

Variety in size, shape, depth, and construction techniques is typical of late Developmental pit struc-

ture construction. Circular pit structures were the most common, followed by subrectangular structures. Pit structure depths ranged from 30 cm to 2 m below ground surface and between 3 and 5 m in diameter. Walls of subsurface structures vary from the unplastered surface of the original pit excavation to construction techniques using multiple courses of adobe, with or without rock; waddle and daub; upright slabs used as foundations; adobe reinforced with vertical poles; or combinations of these techniques (Ahlstrom 1985; Boyer and Lakatos 1997; Allen and McNutt 1955; Lange 1968; Stubbs 1954; Stubbs and Stallings 1953).

Floors ranged from compact use-surfaces to well-prepared adobe surfaces. Common floor features include central hearths, upright "deflector" stones, ash-filled pits, ventilator complexes, ladder sockets, and four postholes toward the interior of the structure. Other, less common floor features include sipapus, subfloor channels, pot rests, and subfloor pits of various sizes and depths. Ventilators were constructed by connecting the exterior vent shaft to the interior of the structure with a tunnel or a narrow trench. This trench was subsequently roofed using latillas, effectively creating a tunnel. Exteriors of shallow structures were connected to the interior through an opening in the wall. Ventilators were commonly oriented to the east and southeast (Boyer and Lakatos 1997; Allen and McNutt 1955; Lange 1968; Stubbs 1954).

Utility ware ceramics associated with late Developmental sites include types with corrugated and incised exteriors in addition to the plain gray, brown, and neck-banded and polished/smudged types associated with the early Developmental period. Decorated white wares are both imported and manufactured locally. Common types include Red Mesa Black-on-white, Gallup Black-on-white, Escavada Black-on-white, and Kwahe'e Black-on-white. Less common types include Socorro Black-on-white, Chupadero Black-on-white, Chaco Black-on-white, and Chuska Black-on-white (Allen 1972). Although decorated red wares are found at late Developmental sites, they are reported in very low frequencies originating from the Upper San Juan, Tusayan, and Cibola regions. Imported ceramic types suggest late Developmental inhabitants obtained limited amounts of pottery from the Mogollon, San Juan Basin, and Upper San Juan regions (Cordell 1978).

An example of a late Developmental site near downtown Santa Fe is the KP Site (LA 46300). At this site, Wiseman (1989) identified a trash-filled and burned structure with a variety of imported and locally produced decorated and utility ware pottery types. Obsidian predominated in the flaked stone assemblage, although local chert types, particularly red jasper, were also reported. The subsistence economy consisted of a wide variety of plant and animal remains, including corn, squash, beeweed, deer, antelope, and cottontail (Wiseman 1989:139). Tree-ring and radiocarbon data indicate that the structure was occupied in the mid to late AD 1000s and the fill accumulated in the early AD 1100s.

Coalition period (AD 1200 to 1325). Several researchers assert that the Coalition period is marked by three major changes reflected in the archaeological record: an increase in the number and size of residential sites, contiguous surface rooms used more often as domiciles than in previous periods, and a shift from mineral paint to vegetal-based paint for decorating pottery (Cordell 1978; Peckham 1984; Stuart and Gauthier 1981; Wendorf and Reed 1955). An increase in the number and size of residential sites during this period suggests population increase and extension of village-level community organization identified during the late Developmental period. Although there is an apparent increase in the number of Coalition-period sites in upland areas that had limited occupation during the Developmental period, like the Pajarito Plateau, the southern Tewa Basin could be the source of this population. Coalition-period sites, whether at higher elevations or in the Tewa Basin, are situated along terraces or mesas overlooking the Rio Grande, Tesuque, Nambe, Santa Fe, and Chama river drainages (Cordell 1978; Dickson 1979). These locations provided access to water, arable farming land, and a variety of foraging resources (Cordell 1978).

Coalition-period residential units typically consisted of one to two pit structures associated with 10 to 20 surface rooms, and a shallow midden (Peckham 1984; Stuart and Gauthier 1981; Wendorf and Reed 1955). Surface structures often consisted of small linear or L-shaped roomblocks oriented north–south. These roomblocks are one or two rooms deep, with a pit structure or kiva incorporated into or east of the roomblock (Kohler 1990; Steen 1977, 1982). Sites that exhibit this layout are generally considered to date earlier in the Coalition period. Although most Coalition-period sites are relatively small, some are reported to contain up to 200 ground floor rooms (Stuart and Gauthier 1981). These larger sites are commonly

U-shaped, enclosing a plaza or plazas to the east. Generally, large Coalition-period sites with an enclosed plaza are considered to be a later development (Steen 1977; Stuart and Gauthier 1981).

Various construction techniques are identified in excavated Coalition-period surface and subsurface structures. Walls were constructed with adobe, with or without rock masonry. On the Pajarito Plateau, adobe construction incorporated unshaped tuff into the adobe walls. Masonry consists of unshaped or cut tuff block fastened with adobe mortar and sometimes chinked with small tuff fragments (Kohler 1990). Contiguous, rectangular rooms are the most common, with a few reported examples of subrectangular and D-shaped rooms (Kohler 1990; Steen 1977, 1982; Steen and Worman 1978).

Variety in size, shape, and depth of pit structure construction is common during the Coalition period. Circular pit structures are most common, followed by subrectangular structures. Pit structure depths ranged from 30 cm to 2 m below ground surface and were commonly 3 to 5 m in diameter. Walls of pit structures were constructed using the techniques described for surface room construction. Common floor features include central hearths, "deflector" stones, ash-filled pits, ventilator complexes, and four postholes toward the interior of the structure. Other, less common floor features include sipapus, entryways, pot rests, and subfloor pits of various sizes and depths. Ventilators were constructed by connecting the exterior vent shaft to the interior of the structure with a tunnel. Exteriors of shallow structures were connected to the interior through an opening in the wall. Ventilators were commonly oriented to the east or southeast (Kohler 1990; Steen 1977, 1982; Steen and Worman 1978; Stuart and Gauthier 1981; Stubbs and Stallings 1953; Wendorf and Reed 1955).

Utility ware ceramics include types with corrugated, smeared corrugated, and plain exteriors. Less common utility ware types include striated, incised, or tooled exteriors. Decorated white wares include Santa Fe Black-on-white, Galisteo Black-on-white, and Wiyo Black-on-white, and very low percentages of Kwahe'e Black-on-white. Few trade wares are reported from Coalition-period sites compared to previous periods; those that are found are White Mountain Redware (Kohler 1990; Steen 1977, 1982; Steen and Worman 1978).

Inhabiting higher elevations during the Coalition period may have been afforded by changes in precipitation patterns and access to unclaimed farming land. However, innovative methods were needed for producing sufficient crops in these cooler settings (Anschuetz et al. 1997). Intensification of water management and agricultural practices through the use of check dams, reservoirs, and grid gardens, especially during the later part of this period and the succeeding Classic period, are examples of this intensification (Anschuetz et al. 1997; Maxwell and Anschuetz 1992).

In the Santa Fe area, large villages such as the Agua Fria School House (LA 2), LA 109, LA 117, LA 118, and LA 119 were established during the early Coalition period. Other large Coalition sites, such as Pindi (LA 1), Tsogue (LA 742), and Tesuque Valley Ruin (LA 746), appear to have been established during the late Developmental period and grew rapidly during the Coalition period (Ahlstrom 1985; Stubbs and Stallings 1953). Near downtown Santa Fe, numerous Coalition-period sites have been recorded. Excavations at the old San Miguel Church site identified deposits dating to the fourteenth and seventeenth centuries (Stubbs and Ellis 1955). Excavations at LA 132712, near the intersection of Guadalupe Street and Johnson Street, had a Coalition component represented by a trash concentration, pits, and burials (Scheick 2003). A Coalition-phase pit structure and associated artifacts were found in the west courtyard of the Federal Courthouse (Scheick 2005). Other sites with Coalition or Coalition-Classic–period materials in the downtown area include LA 1051 (Lentz 2011), LA 114261 (Hannaford 1997), LA 930 (Peckham 1977; Post and Snow 1982), LA 120430 (Post et al. 1998), LA 125720 (Snow 1999), LA 126709 (Viklund 2001), and LA 111 (Snow and Kammer 1995). Previous data recovery at the First Judicial District Courthouse complex around the District Attorney Complex Renovation project documents a farmstead use of the local landscape, beginning in the late Coalition period (Lakatos 2011).

Classic period (AD 1325 to 1600). Wendorf and Reed (1955:53) characterize the Classic period as "a time of general cultural fluorescence." Occupation shifted away from the uplands and began to concentrate along the Rio Grande, Chama, and Santa Cruz Rivers, as well as in the Galisteo Basin. Large villages containing multiple plazas and roomblocks were built, and regional populations peaked. The construction of

large, multi-plaza communities supersedes the village-level community organization identified during the late Developmental and early Coalition periods. In the Santa Fe area, large villages such as the Agua Fria School House (LA 2), Arroyo Hondo (LA 12), Cieneguilla (LA 16), LA 118, LA 119, and Building Period 3 at Pindi (LA 1) flourished during the early part of this period. Although these large villages grew rapidly during the early Classic, only Cieneguilla remained occupied after AD 1425.

Regional ceramic trends include the continued use of carbon-painted pottery, commonly referred to as Biscuit wares, in the north, such as the Tewa Basin and Rio Chama Valley; and the adoption of glaze wares in southern areas, including the Galisteo Basin, and the production of Jemez Black-on-white in the Jemez Mountains. Along with the development of large aggregated sites, Glaze A, a red-slipped locally manufactured pottery type, was introduced. Although reasons for the appearance and proliferation of glaze-painted pottery from the Santa Fe River south are ambiguous, many researchers believe it developed from White Mountain Redware. Similarities between types in the two regions are viewed as evidence for large-scale immigration into the Northern Rio Grande from the Zuni region and the San Juan Basin (Mera 1935, 1940; Reed 1949; Stubbs and Stallings 1953; Wendorf and Reed 1955). Other researchers attribute the changes seen during this period to expanding indigenous populations (Steen 1977) or the arrival of populations from the Jornada branch of the Mogollon in the south (Schaafsma and Schaafsma 1974). For whatever reason, this was a time of village reorganization.

Sites such as Pindi (LA 1) and Arroyo Hondo (LA 12) experienced reoccupation of older portions of the pueblo during this time (Creamer 1993; Stubbs and Stallings 1953). Intracommunity changes are also suggested by decreasing kiva-to-room ratios (Lipe 1989; Stuart and Gauthier 1981) and the revival of circular subterranean pit structures with an assemblage of floor features reminiscent of the late Developmental period (Peckham 1984). More clearly delineated plaza space and "big kivas" (Peckham 1984:280) suggest social organization that required emphasizing centrally located communal space.

Emphasizing communal space may have been a means to integrate aggregated populations through ceremonial functions. The need to enhance communal space using architectural units may also be related to the introduction of the Katsina Cult into the Northern Rio Grande during this time (Schaafsma and Schaafsma 1974). A shift from geometric designs to masked figures and horned serpents in kiva murals (Hayes et al. 1981; Hibben 1975) and the occurrence of shield-bearing anthropomorphic rock art figures (Schaafsma 1992) suggest the acceptance of new ideological concepts. Changes in community structure and settlement patterns during the Classic period may reflect indigenous inhabitants adapting to or adopting new populations, ideological elements, and organizational systems.

One of the few Classic-period sites that have been excavated in the immediate vicinity of the project area is LA 1051, the Santa Fe Community Convention Center (Lentz 2011). Although excavation data are few, Classic-period structural remains and abundant artifacts have consistently been encountered in the Santa Fe area, suggesting that this temporal component is masked by subsequent land use and development (Deyloff 1998; Drake 1992; Mera 1934; Peckham 1977; Tigges 1990). At the First Judicial District Courthouse complex around the District Attorney Complex Renovation project, the data recovery and monitoring documented the persistence of farmstead use of the landscape into the early Classic period (Lakatos 2011).

Post–European Contact Period Overview
AD 1539 to 1955
(adapted from Wenker 2005a)

Spanish Contact/Pueblo Revolt
(AD 1539 to 1680)

The first European contact with the Northern Rio Grande Valley Tewa occupants occurred in the late winter or early spring of 1541, when a foraging party of Coronado's men set up camp near Ohkay Owingeh (San Juan Pueblo) (Hammond and Rey 1953:244, 259). Having heard of Coronado's earlier plundering

farther south, these pueblos were hastily abandoned by their occupants and subsequently looted by the Spaniards (Ortiz 1979:280; Winship 1896:476). After the Spanish entradas of the mid and late sixteenth century, Native American groups underwent significant changes in lifestyle, social organization, and religion. Contributing to these changes were the introduction of new crops and livestock that modified subsistence practices, as did the mission programs, which taught new industries such as metal smithing and animal husbandry, meant to wean the Pueblo people away from traditional ways (Simmons 1979a:181).

In 1591 Ohkay Owingeh was visited by the Gaspar Castaño de Sosa expedition. Castaño de Sosa erected a cross, received obedience to the king of Spain, and appointed a governor, a mayor, and various other administrators (Schroeder and Matson 1965:121, 129; Lentz 1991:7). With the goals of missionization, territorial expansion, and mineral wealth, the colonizing expedition of Don Juan de Oñate arrived at Okay Owingeh on July 11, 1598, and proclaimed it the capital of the province. During the winter of 1600–1601, the Spaniards moved across the river to a partially abandoned 400-room pueblo village, which they renamed San Gabriel de los Caballeros.

The first Catholic mission church, called San Miguel, was built at the southern end of the village. Soon, New Mexico was divided into seven missionary districts. A Spanish alcalde (magistrate) was appointed for each pueblo, and all were under Oñate's leadership (Spicer 1962:156). In January 1599, in retaliation for the death of Juan de Zaldivar (one of two of Oñate's nephews), 70 of Oñate's men attacked Acoma Pueblo. After a three-day battle, the Spanish troops prevailed. In retribution, 500 Acoma prisoners over the age of 25 had one foot severed and were sentenced to 20 years of hard labor in the mines of Zacatecas. The Spanish colony at San Gabriel did not survive the first decade of the seventeenth century.

Oñate returned to Mexico in disgrace, and in 1610 the capital was moved from San Gabriel to the current site of Santa Fe by Oñate's successor, Don Pedro de Peralta (Ortiz 1979:281; Pearce 1965:146; Spicer 1962:157). During the next 20 years, churches were built in all the pueblos. Native American secular and church officers were also established in each village. These included governors, alcaldes, and fiscales (tax collectors).

During the 1620s the villages were peaceful, population grew, and conversions to the Catholic Church increased. By 1630, 50 Franciscan missionaries were working in 25 missions, and a school was operating in each (Spicer 1962:158). In 1676 there began a series of events that ultimately led to the Pueblo Revolt of 1680. Forty-seven Pueblo religious leaders were jailed and flogged in Santa Fe for their adherence to traditional Pueblo beliefs. Among them was the San Juan moiety chief, Popé, under whose leadership the Pueblo Revolt was subsequently planned and carried out (Spicer 1962:162–163).

Following the Pueblo Rebellion on August 10, 1680, 21 of the Franciscan friars in the territory were killed, along with 400 Spaniards. Santa Fe was besieged by an alliance of Pueblo forces, and on August 21, 1680, Governor Otermín was forced to surrender and evacuate the city (Hackett and Shelby 1942:11, 56–57; Lentz 2004). Coincidentally, a similar insurrection successfully ousted the Spanish from the Isthmus of Tehuantepec, Mexico, that same year. The Pueblos held firm to their independence for 12 years. During the winter of 1681–1682, an attempted reconquest by Governor Otermín was turned back. Otermín managed to sack and burn most of the pueblos south of Cochiti before returning to Mexico. Aided by inter-Pueblo factionalism, the definitive reconquest was initiated in 1692 by Don Diego de Vargas (Dozier 1970:61; Simmons 1979b:186).

Spanish Colonial Period
(1692 to 1821)

During this period, Spain under Hapsburg (until 1700) and Bourbon (1700–1821) rulers was changed from a world empire to a second-tier political and economic power as its European landholdings dissolved, its New World riches were spent, and the social hold of its missionization effort was diminished (Kamen 2003). At the height of its empire early in the eighteenth century, Spain had economic ties covering three-quarters of the known world. The empire was based on economic superiority gained through alliances with the rich bankers and royalty of the Italian city-states, with the Flemish, and with its neighbor Portugal, a sea

power. New Spain and New Mexico were affected by imperial trends as the structure of the government, the focus of the economy, and pressures on the imperial borderlands changed.

New Mexico and Santa Fe were on the frontier of the Spanish Empire and at the end of the Camino Real, the main communication and transport route for public, governmental, and ecclesiastic institutions and individuals. Pressured for most of a century by the French and English advances into the North American interior until 1789, Santa Fe soon felt the social and economic pressures brought on by the growing pains of the United States and its rapid institution of Manifest Destiny. These pressures were exerting tremendous influence on New Mexico as Mexico gained its independence from Spain in 1821.

Government and military. During the eighteenth century and into the early nineteenth century, Santa Fe functioned as the provincial capital of Nuevo Mexico in New Spain. The greater territory and military were administered by the governor and his appointed officials (Jenkins and Schroeder 1974; Kessell 1979; Weber 1992). After 1735 the governor ruled under the Audencia of Mexico and the Viceroy of New Spain (Westphall 1983:16–17). Locally, Santa Fe was governed by an alcalde mayor and cabildo, or town council (Hordes 1990; Snow 1990; Twitchell 1925). The alcalde and cabildo were responsible for carrying out daily operations of the local government, fulfilling the legal requirements of land petitions as assigned by the governor, and the collection of taxes and tithes for the church. These individuals, who were citizens and soldiers, controlled the social and economic well-being and development of the community and surrounding area (Bustamante 1989; Westphall 1983).

After 1722 the alcalde mayor in Santa Fe appointed two *juezes repartidores*, one for each side of the river, to inspect farmlands and acequias and allot water based on need (Baxter 1997:19). Beginning in 1776 and continuing into the 1800s, the presidio system was revamped as the military importance of Santa Fe and New Mexico increased. Until the late 1780s the Santa Fe presidio and the improved and expanded presidio system provided protection against continued Indian raiding of Spanish and Pueblo villages. With a major decrease in the raiding following Governor Juan Bautista de Anza's treaty with the Comanches, the military served as a buffer against French, English, and later American incursions from the north and east (Moorhead 1974; Simmons 1990; Weber 1992). During this time the Spanish governmental organization in Mexico changed three times, but New Mexico remained primarily under its governor, who remained the military commanding officer.

Settlement and economy. Following Don Diego de Vargas's reconquest (1692–1696), both pre–Pueblo Revolt and new settlers returned to Santa Fe and the Rio Grande Valley. They allegedly returned to a villa that had been partially destroyed after the escape of Governor Otermín and the surviving colonists, soldiers, and missionaries. The fact that settlers temporarily moved into the Tano pueblo that occupied the former *casas reales* suggests that most of the residences were destroyed or rendered uninhabitable. Early priorities for the returning colonists and administration were rebuilding the casa reales and the acequia system, reallotting grants to former *encomenderos* and landholders or their surviving family members, and expanding on the pre-Revolt settlement (Kessell 1979; Simmons 1979b).

With the termination of *encomienda*, settlers were expected to be more independent and self-sufficient and to properly compensate the Indians for their labor and goods (Westphall 1983:7). For defensive purposes, settlers were encouraged to settle lands near Santa Fe. However, the quality and quantity of suitable farmland, combined with the practice of living close to their fields, resulted in an elongated and dispersed settlement pattern along the Santa Fe River and adjacent to acequia-irrigated fields as depicted in the 1766–1768 Urrutia map (Simmons 1979b:105–106; Adams and Chávez 1956:40; Moorhead 1975:148–149). Presumably, all families were eligible for the typical town lot, which in the seventeenth century was defined as "two lots for house and garden, two contiguous fields for vegetable gardens, two others for vineyards and olive groves, and in addition four *caballerias* of land; and for irrigation, the necessary water, if available, obligating the settlers to establish residence for ten consecutive years without absenting themselves" (Hammond and Rey 1953:1088).

Land documents from the eighteenth century clearly show that house and garden lots were common and that they were bought and sold regularly, once the ten-year residency requirement had been fulfilled (Tigges 1990). The extent to which vineyards and olive groves were actually introduced is unclear and has

not been addressed archaeologically or been well documented with archival research. Obviously, arable land within the villa was scarce by the middle 1700s. Individual or family grants within the city league that included the full four caballerías of land or explicit access to the *ejido*, common land parcels for livestock grazing, were relatively few. Only 24 are shown on William White's undated sketch map of Grants within the Santa Fe Grant, reflecting land ownership in the early 1890s and coinciding with land claims filed with the Court of Private Land Claims (Westphall 1983:237).

Based on White's 1895 map ("Showing Owners of Land within the Santa Fe Grant Outside of City Limits"), the long-lot land subdivision pattern is clearly evident. These long lots were the basis of the small-scale agro-pastoral economic tradition that typified eighteenth- and early nineteenth-century land use within village or urban settings such as Santa Fe. The residences, which may be termed *ranchos* or *rancherías*, were much smaller in scale than *haciendas* (Simmons 1979b; Payne 1999:100–109). They were sufficient for subsistence but did not lead to economic advantage or prosperity. Long lots allowed access into the ejido for other natural resources, such as wood, game, and stone for construction (Wozniak 1987:23–25). Acequia irrigation, which supported intensive wheat and corn cultivation, was the backbone of successful settlement in New Mexico (Ackerly 1996; Baxter 1997; Snow 1988; Wozniak 1987).

Class and community. During the eighteenth century, Santa Fe and New Mexico was inhabited by a diverse population. It was a socially stratified society with the governor, high-ranking officials, and officers of the presidio in the upper echelon. The middle class farmers and artisans were slightly more prosperous than the common people and the soldiers of the presidio (Bustamante 1989:70). Other divisions within Hispano society reflected a diverse, mixed, and perhaps somewhat discriminatory and arbitrarily defined caste system (Brooks 2002; Bustamante 1989; Frank 2000). Economic-based social stratification was present, but the majority of the population comprised small landholders of Hispano, Mestizo, Genízaro, or Indio castes. The Urrutia map shows the area south of the Santa Fe River and between San Miguel Church and the Guadalupe Church area as the Barrio de Analco, in which the population was partly composed of Tlaxacalan Indians from Mexico (Fig. 6). Men were soldiers, farmers, shepherds, and laborers, with a few skilled blacksmiths, educators, and medical professionals.

During this time, churches and secular *cofradías* remained the main avenues by which social and economically defined groups would cooperate and act as a community (Frank 2000). Until the building of the Sanctuario de Guadalupe in the early 1800s, worship and service were connected with the Parroquía or occurred at San Miguel chapel. With the addition of the Santuario, the area assumed a more communal organization mediated through church membership and lay organizations (Sze and Spears 1988:37).

Mexican Period
1821 to 1846

At the beginning of the nineteenth century, Spain's hold on Mexico and the northern territories had diminished significantly. Recognizing that the citizens of New Mexico could not partake in the normal political, economic, and social activities of the declining empire, Spain allowed New Mexico to operate in virtual independence, except for the most important activities (LeCompte 1989; Westphall 1983). The positive effect was that New Mexico could determine much of its social and economic future. The negative effect was that the economic problems, compounded by limited sources of money, limited access to durable goods, and slow responses to military and administrative issues created a stagnant economic environment. In addition, pressure from the United States to open economic ties, applied through small-scale economic ventures, increased in frequency between 1803 and 1821.

With Mexico's independence from Spain in 1821, New Mexico became a frontier province and an economic avenue to the commercial markets and production centers of the United States. Two major changes instituted by the New Mexican government had important consequences in northern New Mexico. These were the establishment of normal economic relations with the United States through overland trade on the Santa Fe Trail and the abolition of the caste system, which meant that everyone was a Mexican citizen.

Government. The political structure of Santa Fe experienced only minor change with the switch to a

Figure 6. Detail of Urrutia's map of Santa Fe, ca. 1766.

Mexican administration (LeCompte 1989; Pratt and Snow 1988). The abolition of the caste system meant that any citizen had an equal opportunity to hold a public office. Governors were still appointed by Mexico, and the governor continued to be the military commander. He was also responsible for collecting tariffs and regulating the Santa Fe Trail commerce. The town council and *alcalde* still oversaw the town business. Santa Fe was divided into six parishes that formed the nucleus through which issues could be advanced to the council and discussed throughout the community.

Economy. In 1821, with Mexico's independence, the New Mexican frontier was opened to trade with the United States. The Santa Fe Trail, extending from Santa Fe, New Mexico, to Independence, Missouri, became a major trade route for European goods from the East (Jenkins and Schroeder 1974; Simmons 1989). England also opened formal trade relations with Mexico. Due to these improved trade relations, large volumes of Euroamerican manufactured goods were available and filtered north on the Camino Real. By the 1830s, the dominant source of manufactured goods was the Santa Fe Trail, eclipsing the Camino Real in importance. Trade between the United States traders and Mexico did continue, with a special focus on the northern Mexican silver mining region (Scheick and Viklund 2003:14). Americans not only traded in New Mexico but also became involved in the illegal transfer and allotment of large illegal land grants from Mexican officials (Westphall 1983).

New Mexico still remained predominantly an agro-pastoral economy upon the opening of the Santa Fe Trail. Most villages and towns barely felt the effects of the increase in commercial and consumer opportunity, except that basic household and work items were more readily available. The opening of the Santa Fe Trail and the effect that it had on northern New Mexico's economy has been explored by many researchers (LeCompte 1989; Pratt and Snow 1988; Boyle 1997). While not widespread immediately, but with greater effect through time, the Santa Fe Trail trade provided access to durable and manufactured goods in quantities and at lower costs than had been available from Camino Real commerce. Seemingly basic household goods such as window glass, dishware, and hand tools were available to anyone that could afford to buy them or who could open a line of credit based on projected farm and ranch production. The beginnings of a more viable cash economy meant that wage labor added to the available options for supporting a family. It also meant that with cash available, land that could not sustain a family's needs could be sold.

Society in transition. Mexican independence from Spain resulted in limited changes to the family- and church-based social structure of Santa Fe and New Mexico. The abolition of the caste system and the granting of equal citizenship to all Mexicans and New Mexicans potentially allowed for changes in the social status of local and provincial office holders or officials, but there is not strong evidence for such changes in Santa Fe. General descriptions of the postcontact period indicate that under Mexican rule, Santa Fe and New Mexico continued to have considerable autonomy, resulting in strong organizations that governed secular aspects of religion and other aspects of Hispanic organization (LeCompte 1989:83; Abbink and Stein 1977:160; Frank 2000).

Abolition of the caste system and full citizenship had little effect on Hispanic populations but had serious consequences for the Pueblo Indians who had enjoyed special status relative to landholdings under Spanish rule. Their lands could now be sold and were subject to the vagaries of land transactions (Hall 1987). Perhaps the strongest social consequence in Santa Fe resulted from the opening of the Santa Fe Trail. This officially opened New Mexico to influences and settlement by populations from the United States. This added a new layer of cultural diversity to the social setting that would eventually shift the balance of the social and economic relations in Santa Fe and along the Rio Grande.

American Territorial Period
1846–1912

New Mexico's Territorial-period quest for statehood was one of the longest endured by any state of the Union. Following the United States' acquisition of new southwestern and western territories, there was a disorderly and turbulent rush to own or control land and mineral and natural resources. The struggle for control created a political, economic, and social order that still affects how New Mexico functions as a state

today. Two authoritative accounts of this period are Larson (1968) and Lamar (1966). Much of the following summary is derived from those sources and from a history of the Old Pecos Trail in Santa Fe (Maxwell and Post 1992).

Santa Fe Trail and Pre-Railroad times (1846–1879). On July 30, 1846, rumors that the United States would invade Mexican territory became a reality as General Stephen Kearny proclaimed his intention to occupy New Mexico. After possible secret negotiations with General Manuel Armijo, the Army of the West arrived in Santa Fe on August 18, and New Mexico was surrendered to the United States (Jenkins and Schroeder 1974:44). Between 1846 and the ratification of the Treaty of Guadalupe Hidalgo on March 10, 1848, the United States army continued to occupy New Mexico, and a civilian government was installed, including a governor (initially appointed by Kearny) and a territorial assembly. New Mexico changed politically when it was designated a territory of the United States under the Organic Act of 1851 (Lamar 1966:13). The act set up the territorial governorship, from which important appointments were made in the territorial administration. The territorial legislative assembly dealt with issues on a local level, while the territorial governor's job was to ensure that federal interests were served (Lamar 1966:14). The center of government remained in Santa Fe, as it had been during the Spanish and Mexican administrations.

Between 1848 and 1865, the economy continued to focus on Santa Fe Trail trade, with the inclusion of routes from Texas (Scurlock 1988:95–97). Santa Fe continued to be the economic and political center of the territory. In addition to the mercantile trade, the establishment of military forts such as Fort Union and Fort Stanton expanded the economic markets (Jenkins and Schroeder 1974:50; Scurlock 1988:76–88). Local economies continued to be agrarian and pastoral, as plainly illustrated on Gilmer's plan of Santa Fe (Fig. 7).

The large ranches supplied cattle and wool to the eastern markets and, until the end of the Civil War, to Mexico. A full-scale cash and wage economy was not yet in place because New Mexico was still isolated from the rest of the United States by long distances and hostile Indian tribes (Abbink and Stein 1977:167; Fierman 1964:10). Changes in the social structure were gradual before the Civil War.

Early migration by Anglo-American and European entrepreneurs was slow because industries such as mining had only been established on a small scale. As the terminus of the Santa Fe Trail, Santa Fe attracted immigrant Jewish and German merchants, who brought Eastern European business experience into the new territory. These merchants replaced the early traders and established formal businesses (Jenkins and Schroeder 1974:63). Early merchants were not satisfied with dealing only in goods and participated in growing land speculation in Spanish and Mexican land grants. Between 1865 and 1880, the trends that began with establishment of the territory were amplified. Before 1860, U.S. attention was focused on the sectional conflict and the resulting Civil War.

New Mexico was a Union territory, and for a brief period in 1862 the Confederates occupied Santa Fe without a shot being fired from the cannons of Fort Marcy, which overlooked Santa Fe. However, when the Confederate contingent attempted to move north to the Colorado gold mines they were engaged, defeated, and exiled from the territory (Jenkins and Schroeder 1974:50–51). With the end of the Civil War, attention was turned to the settlement of the new territories and their potential for economic opportunity. Military attention turned to pacification of the Native American tribes that roamed New Mexico outside the Rio Grande and its tributaries (Jenkins and Schroeder 1974:51–56).

The new western territories were perceived as a place where lives ruined by the Civil War could be renewed. Eastern professionals with all kinds of expertise were encouraged by associates to come to New Mexico, where the political and economic field was wide open (Lamar 1966). Much of this migration centered on Santa Fe, which continued to be the economic and political center of the territory. The newcomers joined forces with and embraced the patron system, thereby gaining acceptance into the existing cultural setting. These alliances were referred to as "rings." The rings were informal organizations of lawyers, cattlemen, mining operators, landowners, merchants, and government officials (Larson 1968:137). Their common goal was to provide a favorable environment for achieving economic and political aims. The most well known was the Santa Fe Ring, which included territorial governors, land registrars, newspaper owners, lawyers, and elected and appointed officials. Important persons in New Mexico history belonged to the Santa Fe Ring, including Stephen Elkins (secretary of war and U.S. senator), Thomas Catron (territorial delegate and

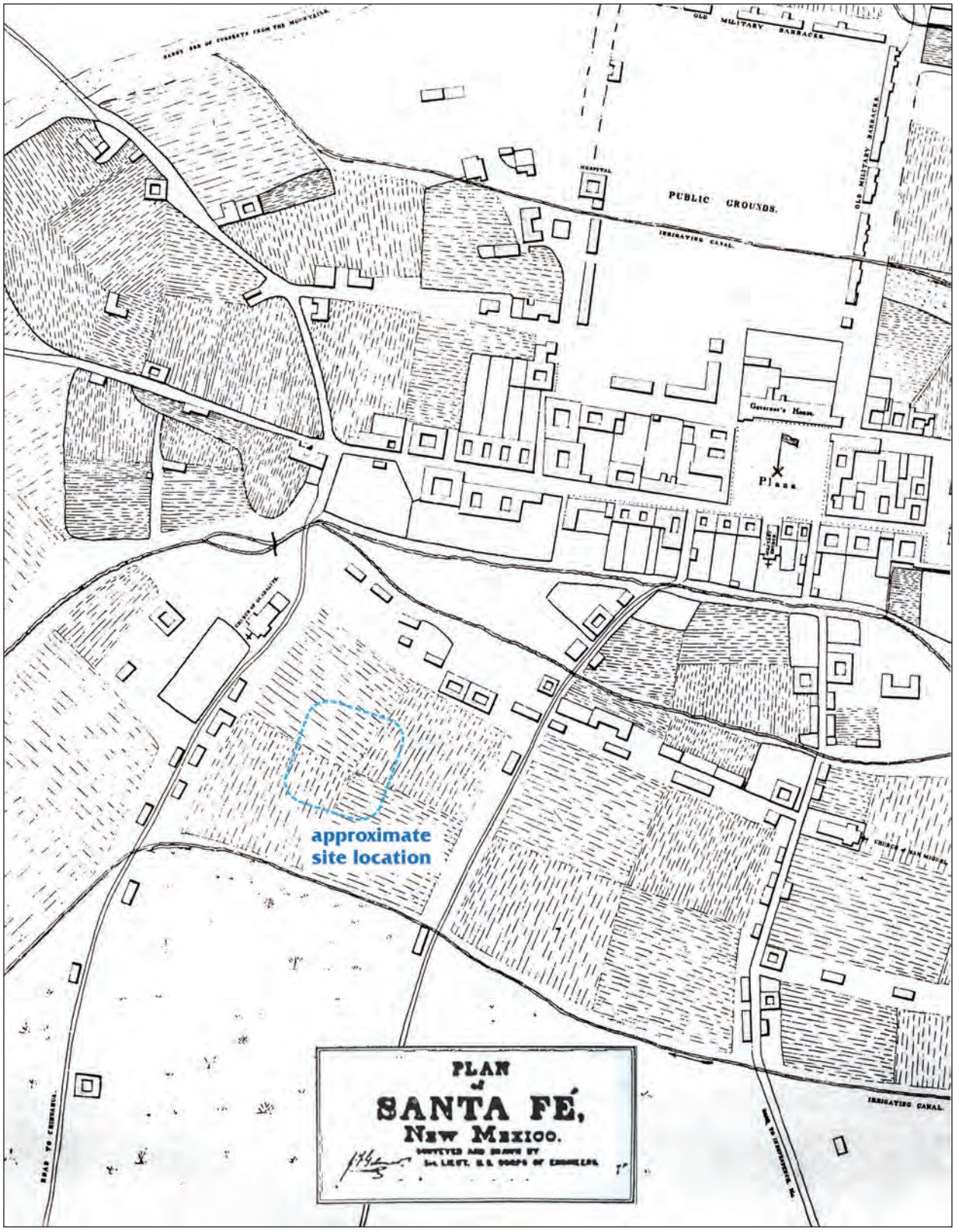

Figure 7. Detail of Gilmer's map of Santa Fe, 1846–1847.

U.S. senator), L. Bradford Prince (U.S. senator and territorial governor), Francisco Chavez (president of the Territorial Assembly), and M. W. Mills (territorial governor), to name a few (Larson 1968:142–144).

The Santa Fe Ring crossed party lines and was extremely fluid in its membership; disloyalty resulted in ostracization and often in political or economic ruin. Opposition to the ring was suppressed by law and violence, as demonstrated by the Lincoln and Colfax County wars in the 1870s (Larson 1968:137–140). The alliances between the new political and economic entrepreneurs and the old power structure came to dominate the territorial legislature, which through time passed an increasing number of laws benefiting the new structure, to the detriment of the Spanish and Native American populations (TANM Roll 102, Frames 78–95). The new Westerners often had contacts in Washington through which they influenced territorial political appointments and disbursement of economic aid (Lamar 1966:169–170). Perhaps the greatest lure in the New Mexico territory was land. Ownership of large tracts of land was intensely sought by Santa Fe Ring members, a pattern typified by Thomas Catron, who was one of largest landholders in the United States by 1883, only 16 years after arriving in the territory (Larson 1968:143).

To land speculators, most of New Mexico was unsettled and unused. This was an illusion promoted by the frontier subsistence economy of low-density, land-extensive farming and ranching, which had prevailed before the Territorial period. Lack of transportation to markets, conflicts with Indians, and a general lack of funds had retarded New Mexico's cattle, lumber, and mining industries. Under the Spanish land grants, non-arable land was a community resource and was therefore not overexploited. It was the community land that land speculators obtained, to the detriment of New Mexico's rural economy and social structure (Van Ness 1987). New Mexico's economy changed after the Civil War because of increases in the number of military forts and the growing Anglo-controlled mining and ranching industries. A mercantile system that had focused on Mexican and California trade now supplied the military and transported precious ores from the gold and silver mines of the Santa Rita and Ortiz Mountains to national markets. A marginal cash economy grew as the federal government spent money on military forts and the Indian campaigns. The Santa Fe, 15 California, and Texas trails were the main routes for goods. The Chihuahua trade died after the Civil War (Jenkins and Schroeder 1974:61–62).

The early Railroad era (1879–1912). Between 1879 and 1912, political power was concentrated in the Santa Fe Ring, which consisted of several Santa Fe politicians. The group controlled territorial and local political appointments through a system of patronage and effectively blocked legislation proposed by its opponents. In 1885 Edmund G. Ross was appointed territorial governor and was asked to end the political and economic control of the Santa Fe Ring, a task he was unable to complete. National attention on New Mexico focused on the continued abuses of the land grant situation. Between 1870 and 1892, the Santa Fe Ring was able to manipulate land grant speculation to their advantage. Surveyors general were usually appointed with the blessing of the ring and were often involved in land deals with ring members (Westphall 1965). William Julian was appointed surveyor general and given the job of halting the land grant abuses, which he carried out in spectacular if not overzealous fashion. His inclination was to deny all claims as fraudulent and recommended very few to Congress for confirmation. The grants within and on the periphery of Santa Fe were at both ends of the spectrum. Julian recommended the Sebastián de Vargas Grant, on the southeast boundary of Santa Fe, for confirmation, even though it lacked the proper documents (Court of Private Land Claims). On the other hand, the Salvador Gonzáles Grant, within the northeast corner of the Santa Fe Grant, became the focal point for a national lambasting by Julian (1887) of the abuses of the land grant situation.

To the Santa Fe Ring, Julian was an obstructionist who used his position to advance personal vendettas (Bowden 1969). At stake in the land grab were millions of acres that would leave private control and enter the public domain if they could not be confirmed as part of a land grant. Julian and Ross believed the public domain should be available to small landholders (Lamar 1966). The Santa Fe Ring supported large-scale ranching and mining interests. Because Santa Fe was the political and economic center of the territory, the land around it was valuable, and large tracts not legitimately included in the Spanish land grants were falsely claimed. From 1880 to 1912, economic growth in the Santa Fe area began to lag as other areas of the state—Las Vegas, the Mesilla Valley, and Albuquerque—grew in importance. Much of the economic slowdown can be ascribed to the lack of a through railroad (Elliott 1988:40). Santa Fe was no longer an important

economic center, but became only a stop at the end of a spur on the Atchison, Topeka and Santa Fe Railway. Although it was also the terminus of the Denver and Rio Grande Railway, which had local and regional significance, that route had little national importance because it did not tie in directly to the east-west transportation corridor (Pratt and Snow 1988:419). In a move to spur economic growth, a concerted effort was made to advertise Santa Fe and New Mexico as a tourist and health destination. Sanitariums sprang up all across New Mexico, even in remote locations such as Folsom, in the northeast corner of the state.

The trip on the Denver and Rio Grande Railway was described as an excellent remedy for lung problems (Nims 1881; Williams 1986:129–131). New Mexico's unique cultural heritage was recognized as an important tourist draw. Preservation and revival of traditional examples of architecture and Native crafts and ceremony were encouraged. Large-scale tourist corporations such as the Harvey Corporation invested heavily in Native American crafts. Tourism and economic development became a dichotomy of economic goals. The tourist industry emphasized the old and romantic, while the economic development interests portrayed New Mexico as booming and vital, embodying the modern values embraced by the eastern establishment (Wilson 1981:105–159). As the seat of territorial government, Santa Fe maintained economic stability. The city acquired many federal and territorial expenditures and jobs. Attempts to move the capital to Albuquerque in the early 1880s were defeated, which proved critical to the long-term economic stability of Santa Fe (Lamar 1966). Another choice made by legislators interested in Santa Fe's economic growth was to locate the penitentiary in Santa Fe. As a tradeoff, Albuquerque, Las Cruces, Las Vegas, and Socorro received colleges. The penitentiary was viewed as economically more valuable than schools.

Statehood to Modern Times
1912–Present

New Mexico was delayed in its quest for statehood by eastern politicians who viewed the small population, the arid climate, and a Spanish-speaking majority as liabilities. Most New Mexicans favored statehood but had different conditions under which they would accept it. Some citizens feared statehood because of the potential for increased taxation, domination by one ethnic group over another, and the loss of federal jobs under a state-run system. These factors, combined with political factionalism in New Mexico, resulted in the struggle (Larson 1968:302–304). On January 6, 1912, New Mexico was admitted into the Union as a state. After statehood, the patterns that were established in the Territorial period continued. New Mexico experienced only slow population growth, with most settlement concentrated along the Rio Grande corridor and in the southeast around Roswell. More than half the state land had a population density of fewer than five people per square mile (Williams 1986:135), partly because of the large area that was part of the National Trust and could not be settled.

The major industries continued to be mining, ranching, lumber, farming within the Pecos and Rio Grande irrigation districts, and tourism. These industries, except the irrigation projects, were well established before statehood and continue to be important today (Jenkins and Schroeder 1974:77). In Santa Fe the absence of a major spur into the national railroad lines proved to be a detriment to industrial growth. Instead, development in Santa Fe focused its state and federal administrative centers and the tourism and art trade (Pratt and Snow 1988; Wilson 1981). The lack of industry that had retarded Santa Fe's growth was turned into a positive situation. Without heavy industry and the accompanying population density that accompanies it, quality of life became a draw for people seeking to escape the increasingly crowded and polluted cities. As part of the quality of life and the uniqueness of Santa Fe, its multicultural heritage continued to be emphasized. Today, Santa Fe is the centerpiece of a tourism industry that brings more than $1 billion into the state every year. Municipal ordinances and efforts of the art and anthropological community to preserve Santa Fe's cultural heritage in the 1920s and 1930s have made it a desirable location for second residences and professional people who supply services to the national markets. Rapid growth in the 1970s combined a blue collar and lower economic population with residents of a higher economic class (Williams 1986:244).

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3 | Archival Research

(adapted from Hannaford 2007)

Archival research began with a query of the New Mexico Cultural Resources Information System (NMCRIS) database for sites recorded within 500 m of the project area (Table 1). These summarized data provide an initial view of settlement context and an understanding of the range of temporal and functional site types that may contribute archaeological material to the project area. A total of 129 sites, represented by both prehistoric and historic components, have been recorded in the designated 500 m area. The District Attorney Complex project area lies within LA 156207 as defined during the First Judicial District Courthouse investigations (Hannaford 2007; Lakatos 2011a, 2011b). No properties listed on the *National Register of Historic Places* or the *State Register of Cultural Properties* are located within the project area. LA 20195 (SR 156), the Second Ward School, is located west of Sandoval Street near the northwest corner of the courthouse area. This one-room historic stone schoolhouse was erected in 1886 and is recorded on the *State Register of Cultural Properties.* The standing structure is currently unoccupied. Two archaeological sites are located about one block to the southeast. LA 113736/LA 137737 (identical site) is at the current location of the Villagra Building to the southeast. Excavations at this site found at least eight features consisting of trash-filled pits and a well attributed to the late nineteenth and early twentieth centuries (Duncan et al. n.d.). LA 112663 is located about one block to the southwest. This site is a Hispanic single residence with an AD 1880 to AD 1996 temporal affiliation (Viklund 1996). Features associated with this site include an L-shaped brick and concrete structure, an outhouse, three ash and coal dumps, and a brick cistern. The remaining sites are over 250 m from the project area. LA 1876 is the nearest prehistoric site located about 400 m to the northeast of the courthouse area and on the north terrace of the Santa Fe River. This poorly documented site was recorded in 1935 by the Laboratory of Anthropology and was assigned an AD 1100 to AD 1600 temporal affiliation. Associated features included one human burial.

No previously recorded Paleoindian or Archaic period manifestations are represented in the 500 m radius around the project area. The Prehistoric period is represented by 28 temporal components. The sites overlap the earlier and later time periods somewhat, depending on the ceramic types recorded at the sites. In general, the sites are located north of the Santa Fe River and are represented mainly by artifact scatters along with one larger residential site. Additional prehistoric sites are located along the higher terrace north and outside of the area.

The remaining sites are Pueblo, Hispanic, Anglo-Euroamerican, and Unknown, dating mainly from the Historic period. The sites document the intense urban occupation of the Historic Downtown District from the founding of Santa Fe to the present. Over 40 of the sites are located north of the Santa Fe River depicting the initial Hispanic settlement around the plaza including the entire range of governmental, military, religious, and residential structural types. The single Pueblo occupation is represented by Pueblo groups occupying the Palace of the Governors during the Pueblo Revolt. The Hispanic and Anglo-Euroamerican periods are represented by a similar number of almost identical site types as earlier Spanish Colonial sites were reoccupied and utilized by Anglos during the later Territorial and Statehood periods. The project area is nearly equidistant between San Miguel Chapel to the east and Guadalupe Chapel to the west with most of the early structures growing up along both sides of the Santa Fe River northeast and northwest of the project area. The Anglo-Euroamerican period has several additional transportation-related sites centering mainly around railroad activities located several blocks to the west. Although no archaeological sites are

Table 1. Project area sites, with site type and period component.

	LA No.	Occupation*	Site Type**
1	609	H	N
2	930	P + H	S
3	1051	P + H	S
4	1111	P + H	S
5	1742	H	S
6	1838	H	N
7	1876	P	S
8	1890	P	S
9	4449	P	N
10	4450	P + H	S
11	4451	H	S
12	8770	H	S
13	9077	H	S
14	20195	H	S
15	35100	P + H	S
16	46174	H	S
17	47034	P + H	S
18	47695	P	S
19	54000	H	S
20	54312	H	S
21	55368	H	S
22	65040	H	N
23	65501	P	S
24	67063	H	S
25	69193	H	S
26	70092	H	S
27	71605	H	S
28	71825	H	S
29	72268	P + H	S
30	80000	H	S
31	101300	P + H	S
32	101303	H	S
33	101307	P + H	N
34	103293	H	S
35	103294	H	S
36	103295	H	N
37	104605	H	S
38	106568	H	S
39	109088	H	S
40	111322	P + H	S
41	112258	H	S
42	112663	H	S
43	113838	H	S
44	114208	P	N
45	114210	H	S
46	114212	H	N
47	114213	H	N
48	114215	unk	N
49	114216	unk	N
50	114217	unk	S
51	114218	H	N
52	114219	H	N
53	114220	H	N
54	114221	H	S
55	114222	n/a	N
56	114224	H	N
56	114225	P + H	S
57	114230	P + H	N
58	114231	H	S
59	114232	H	N
60	114233	H	N
61	114234	P	N
62	114235	H	S
63	114236	H	S
64	114237	H	S
65	114239	H	S
66	114241	H	S
67	114243	unk	S
68	114244	H	N
69	114245	H	S
70	114246	H	S
71	114247	P	N
72	114248	H	N
73	114249	H	S
74	114250	P + H	N
75	114251	H	S
76	114255	H	S
77	114257	n/a	N
78	114265	P + H	S
79	120279	P + H	S
80	120282	H	S
81	122227	H	S
82	125367	H	S
83	126709	H	S
84	127276	H	S
85	129141	H	S
86	129648	H	S
87	132265	H	S
88	132712	P + H	S
89	137736	H	S
90	138659	H	S
91	143543	H	N
92	143810	H	N
93	144329	P + H	N
94	146042	H	S
95	146402	H	S
96	146402	H	S
97	146403	H	S
98	146404	H	N
99	146405	H	S
100	146406	H	S
101	146407	H	S
102	146408	H	S
103	146409	H	S
104	146410	H	S
105	146411	H	S
106	146412	H	N
107	148067	P + H	S
108	148141	H	N
109	148216	H	S
110	149445	H	S
111	149909	H	S
112	149910	H	S
113	149911	H	S
114	149912	H	S
115	149913	H	S
116	149914	H	S
117	149915	H	S
118	149916	H	S
119	149917	H	S
120	153442	H	S
121	153992	H	S
122	154742	H	S
123	155109	H	N
124	155456	H	S
125	156207	P + H	S
126	158037	H	N
127	161535	H	S
128	167408	H	S
129	175893	P	S

*Occupation: P = Prehistoric; H = Historic; P + H = both Prehistoric and Historic; unk = unknown; n/a = not available.
**Site Type: S = Structural; N = Nonstructural.

Totals for Occupation Types:
Prehistoric sites = 9
Historic sites = 96
Sites with both Prehistoric and Historic components = 19
Site information unknown = 4
Site information not available = 2

located in the near proximity, a wide range of temporal and functional site types from the Historic period could potentially have contributed archaeological material to the project area.

Historic maps show that the immediate project area followed a trend characterized by open farm land with structures mainly hugging the Santa Fe River. The ca. 1766 Joseph Urrutia Map (Fig. 6, Chapter 2, this report) shows structures related to the Barrio de Analco strung along the Santa Fe River both east and west of the Camino de Galisteo. The area behind the structures including the project area is depicted as fields. The Barrio de Analco Historic Neighborhood is one of the oldest residential areas of Santa Fe, having been settled by Tlaxcalan Indian servants who accompanied the Spanish Colonists from Mexico (Sze and Spears 1988:21). The south boundary of the Barrio Analco is just north of the project area.

The 1846–1847 Gilmer map (Fig. 7, Chapter 2, this report) shows a similar pattern of land use and settlement. The project area is dominated by open fields behind the houses fronting the Santa Fe River. Residential development appears along Guadalupe Street in the vicinity of the Guadalupe Chapel. The 1885–1886 Hartmann map (Fig. 8) shows that the project area is still open land, but with residential growth along Galisteo Street in addition to the dwellings north of the project area along the river. LA 20195, the Second Ward one-room schoolhouse, is depicted west of Hancock Street (currently Sandoval Street). This map also shows that the open lots containing the project area were owned by Luciano Baca, and Benigño Ortega, with adjoining land owned by Abraham Staab and Antonio Ortiz y Salazar.

The Sanborn Insurance maps supply additional information on the land use and settlement of the project area. The 1883 Sanborn map continues to document vacant land. The 1890 Sanborn map (Fig. 9) notes that six adobe dwellings are located on the block containing the project, but their locations are not depicted because of their adobe construction. The land remains open until the Hondo Pine Lumber Company appears at the corner of Montezuma Avenue and Hancock Street (Sandoval Street) on the 1921 Sanborn map (Fig. 10). An orchard is depicted at the locality of the Santa Fe County Utility office building and parking lot. This orchard is also depicted on the J. J. Stoner 1882 Bird's Eye View map of Santa Fe (Fig. 11). The 1930 Sanborn map (Fig. 12) shows that the Hondo Pine Lumber Company has been replaced by the Montezuma Avenue Subdivision composed of long, narrow, north–south running lots. An additional five, mainly adobe, structures of various sizes are scattered across the courthouse area. The 1930–1948 Sanborn map (Fig. 13) shows additional growth. An auto sales and service building appears at the current location of the Santa Fe County Utility Building offices. Several new buildings are scattered across the courthouse area and several buildings from the 1930s show accretional growth. The original construction of the Santa Fe County District Attorney Complex building and the adjacent parking lot (now replaced by the First Judicial District Courthouse) destroyed the other buildings depicted on the map. The approximate relationships between the razed Sanborn map structures from 1930 and 1930–1948 and the project area are depicted in Fig. 14. No historic photographs were found in the photo archives of the immediate project area.

An examination of the 1848–1934 direct and indirect deed books at the Santa Fe County Courthouse revealed that Antonio Ortiz y Salazar was one of the largest landowners in the area with over 70 transactions recorded in the direct index. Salazar was the largest landowner in the greater courthouse area with lands extending north to the river and west to the railyard. Salazar sold the southwest corner of the courthouse property to Zadoc Staab in 1881. However, no additional transactions are recorded in these deed books for A. Staab, L. Baca, or B. Ortega for the 1848–1934 time period.

Finally, the Hudspeth Santa Fe City Directories were examined from 1928 to 1948. These were the primary years showing the construction of buildings in the courthouse area. Unfortunately, the various small structures constructed in the 1930s and 1940s could not be associated with specific businesses, although numerous individuals are listed over the years that may have rented residences in the area.

In summary, land use in the greater project area was primarily open land with development confined mainly along De Vargas Street to the north and Galisteo Street to the east. Land use probably centered around farming and also an orchard. The property was essentially a large open back lot behind the structures facing the streets to the north and east. The area sees development in the 1930s and 1940s with the construction of several dwellings of various sizes across the locality. The area finally becomes a parking lot with the construction of the Santa Fe County Law Enforcement Complex building bordering the east side of the property.

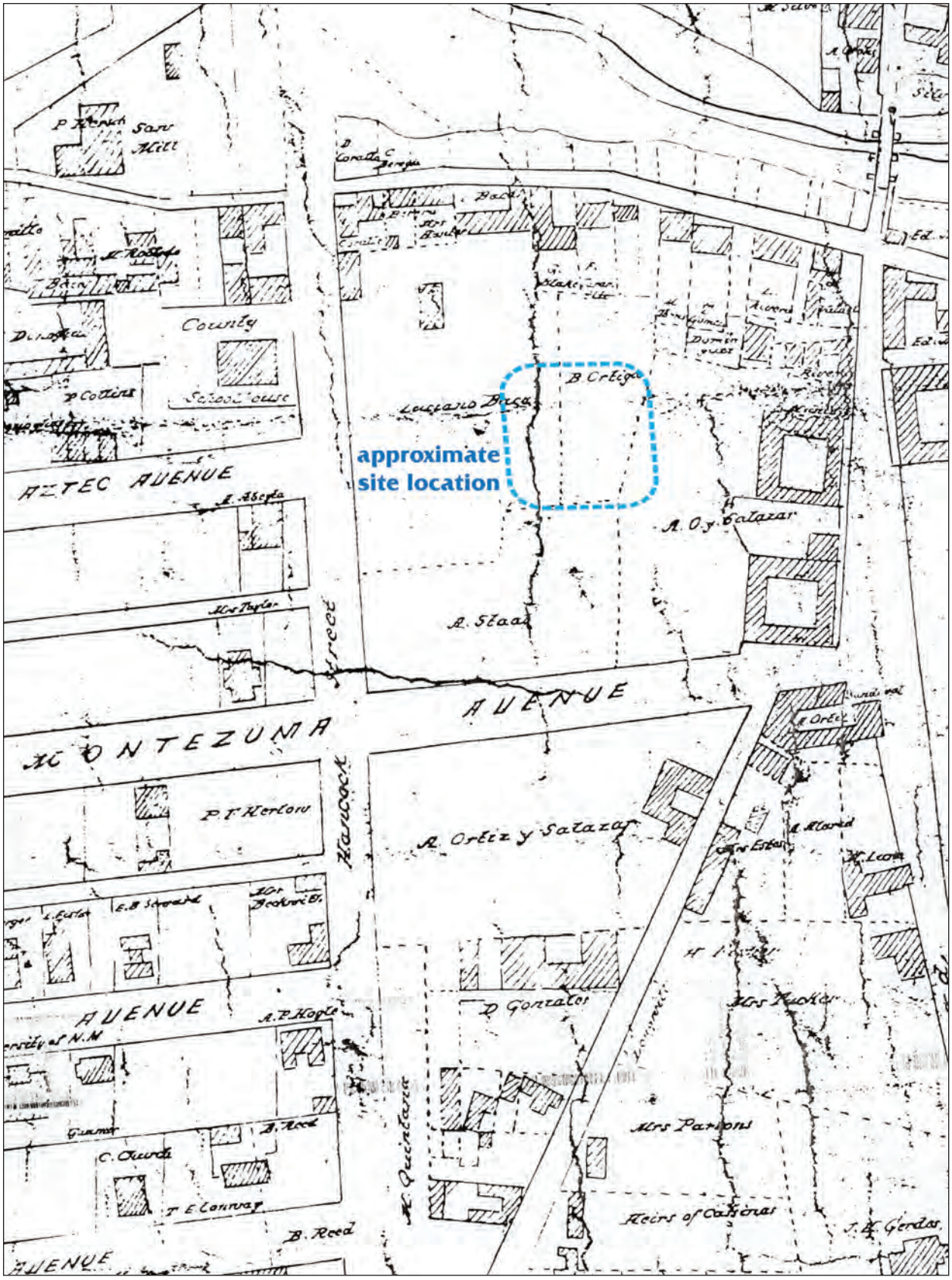

Figure 8. Detail of Hartmann's map, 1885–1886.

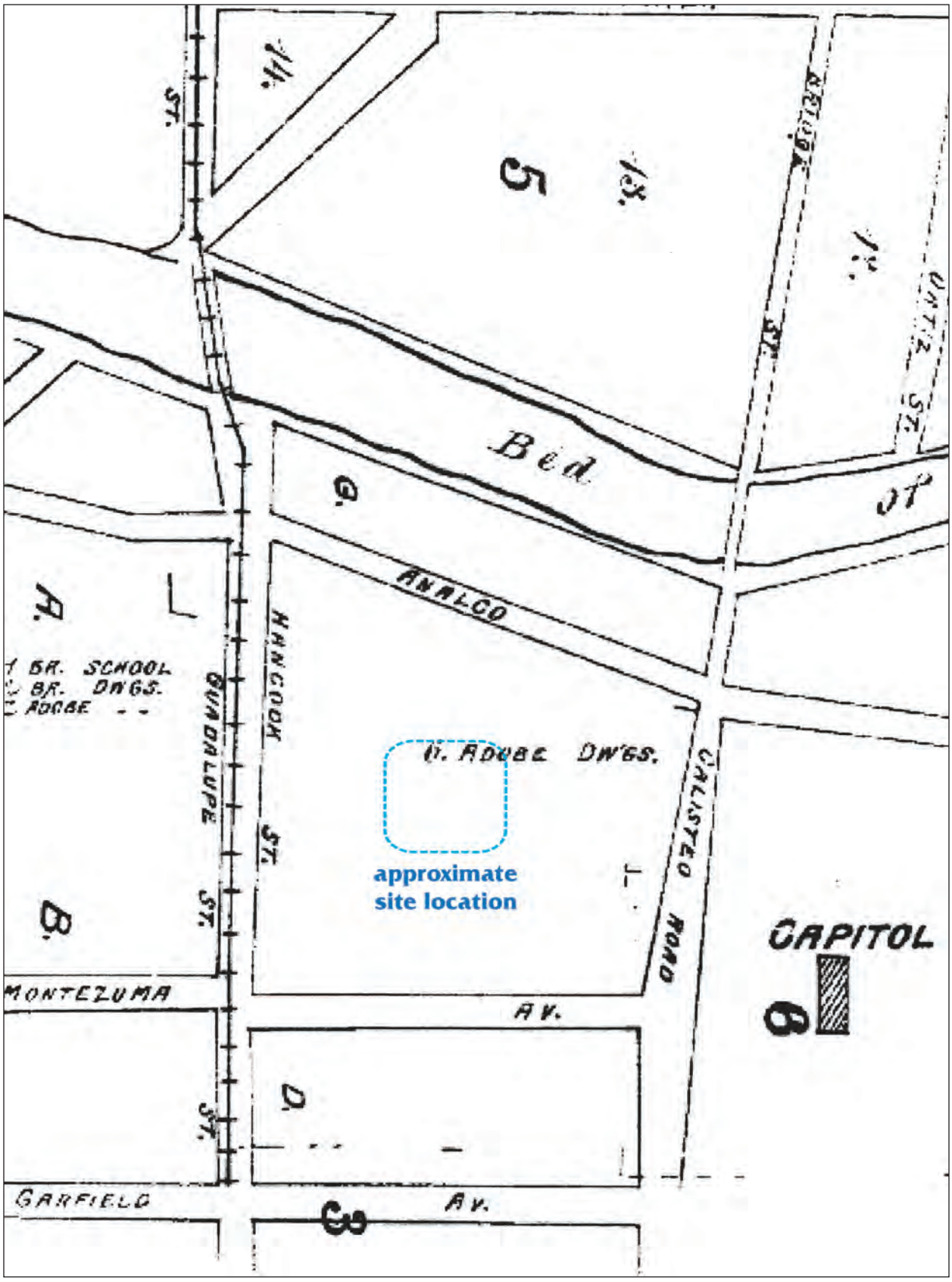

Figure 9. Sanborn Insurance Map, detail, 1890.

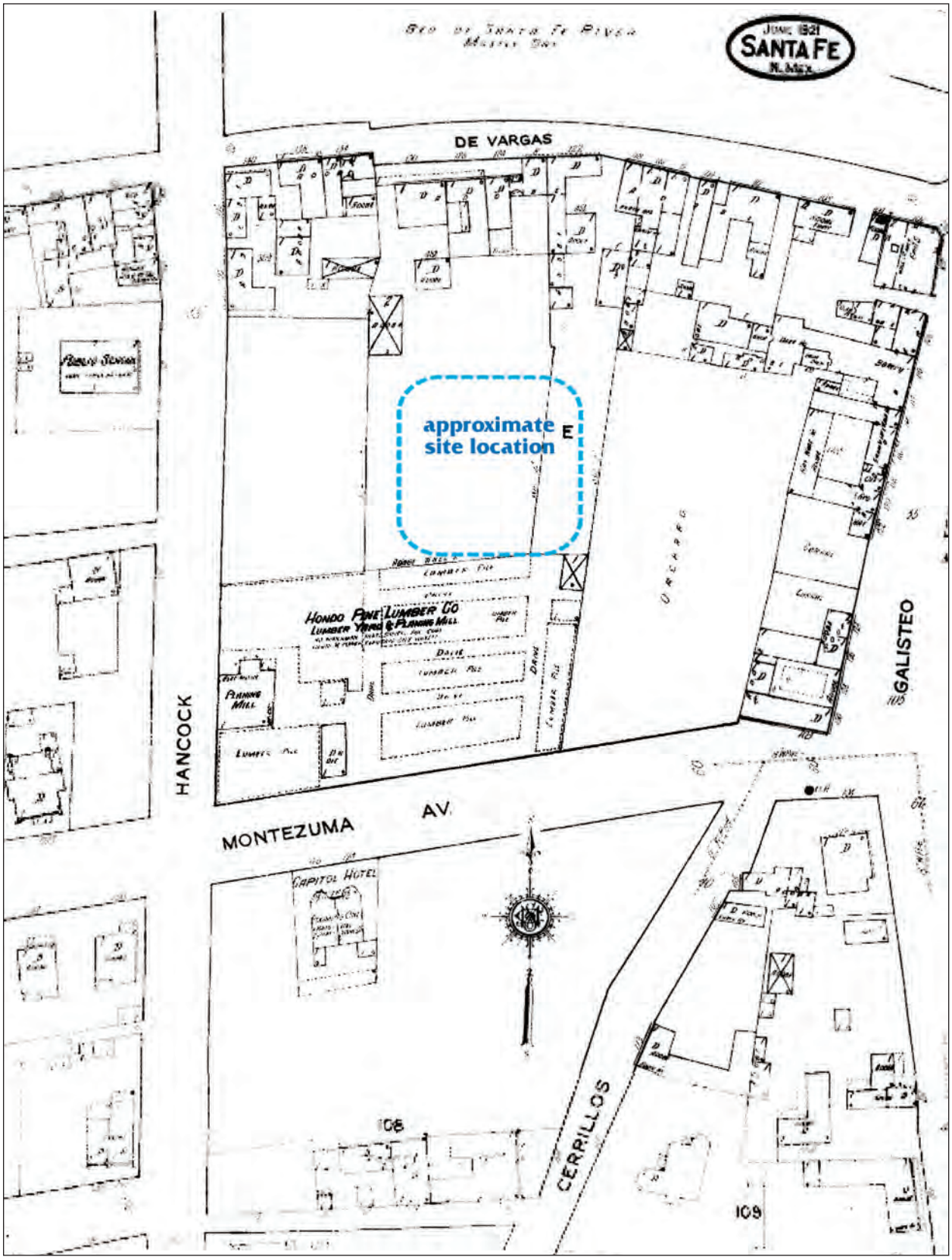

Figure 10. Sanborn Insurance Map, detail, 1921.

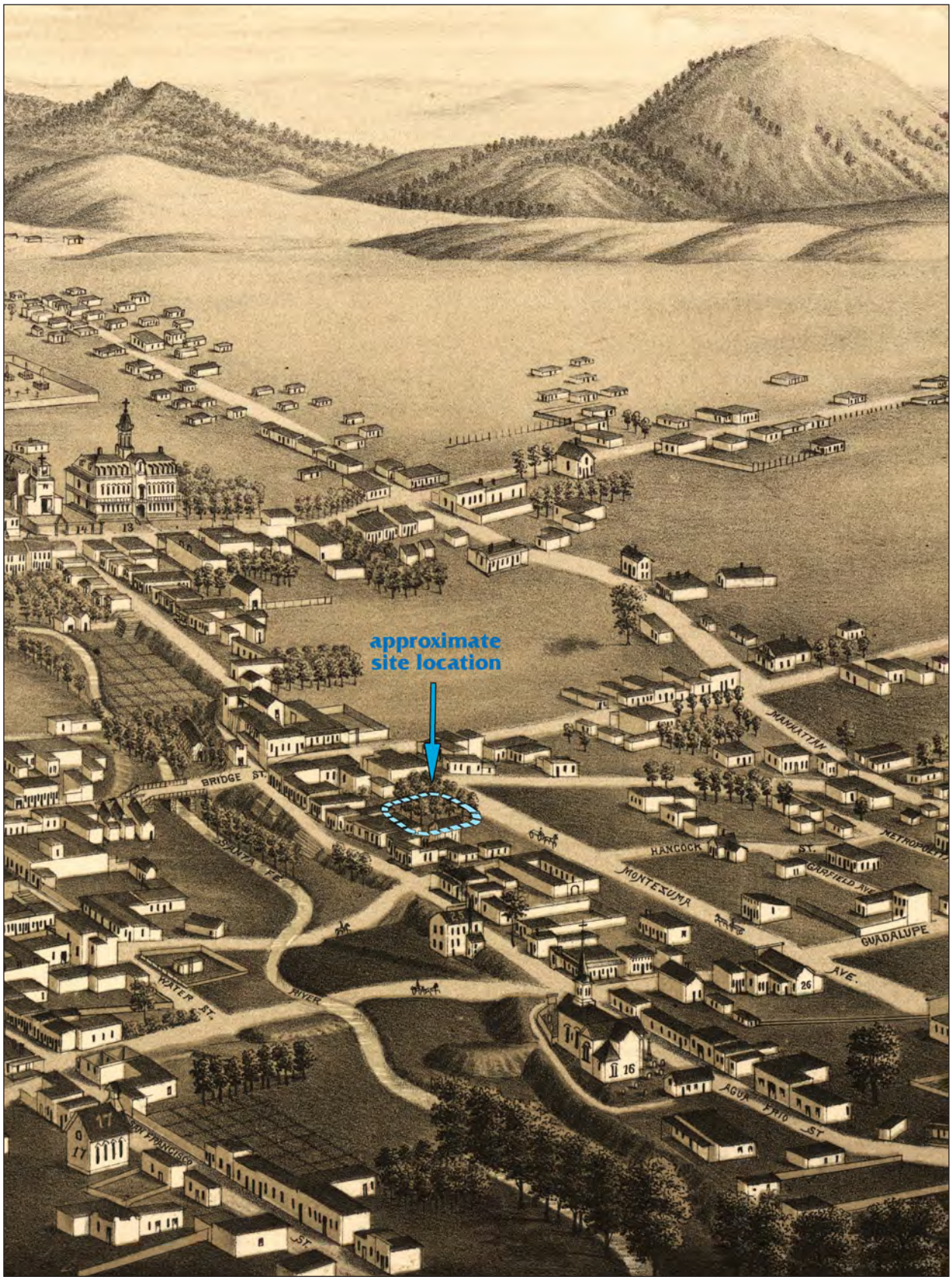

Figure 11. Detail of Stoner's Bird's Eye view, 1882.

Figure 12. Sanborn Insurance Map, detail, 1930.

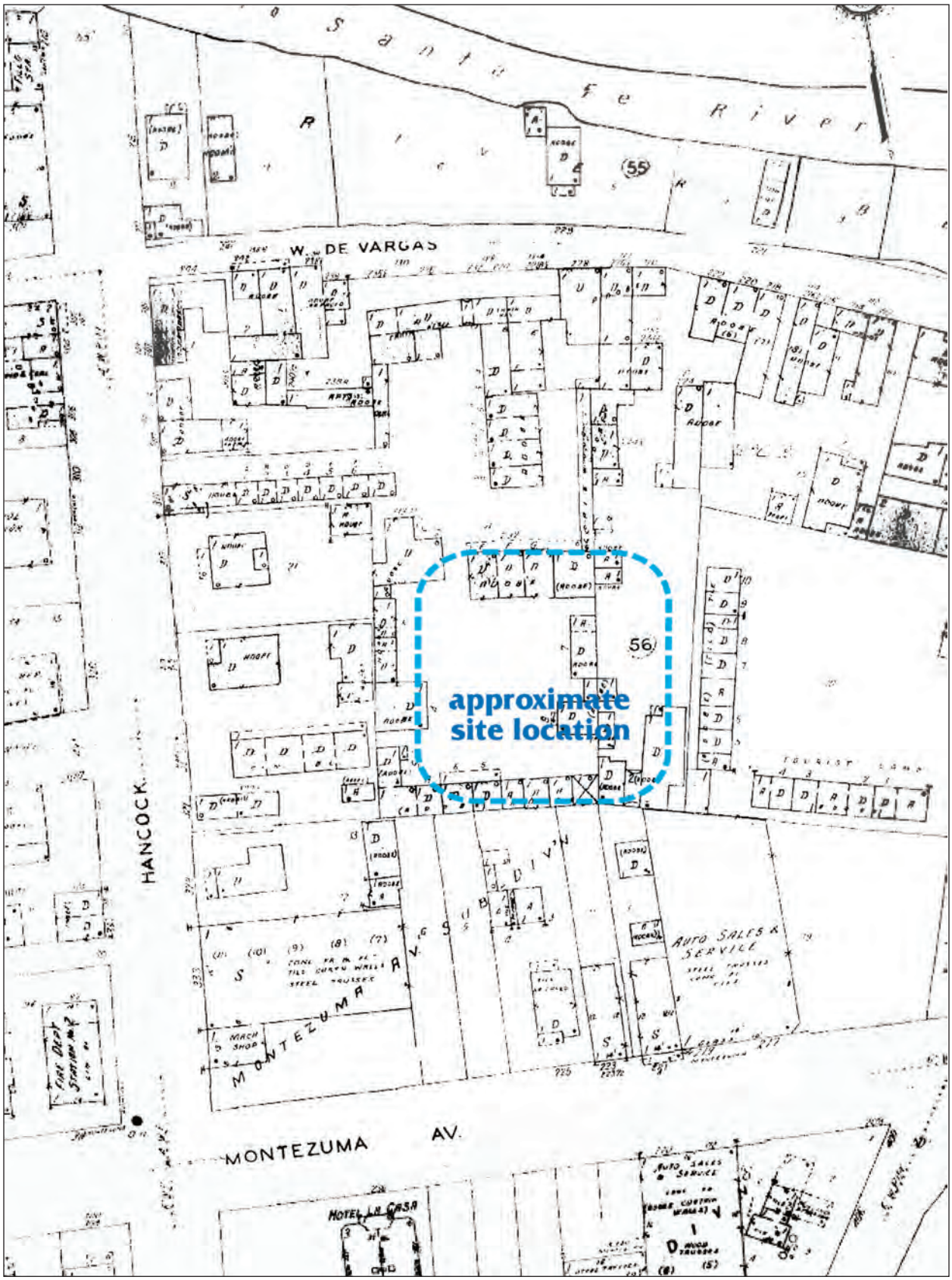

Figure 13. Sanborn Insurance Map, detail, 1930–1948.

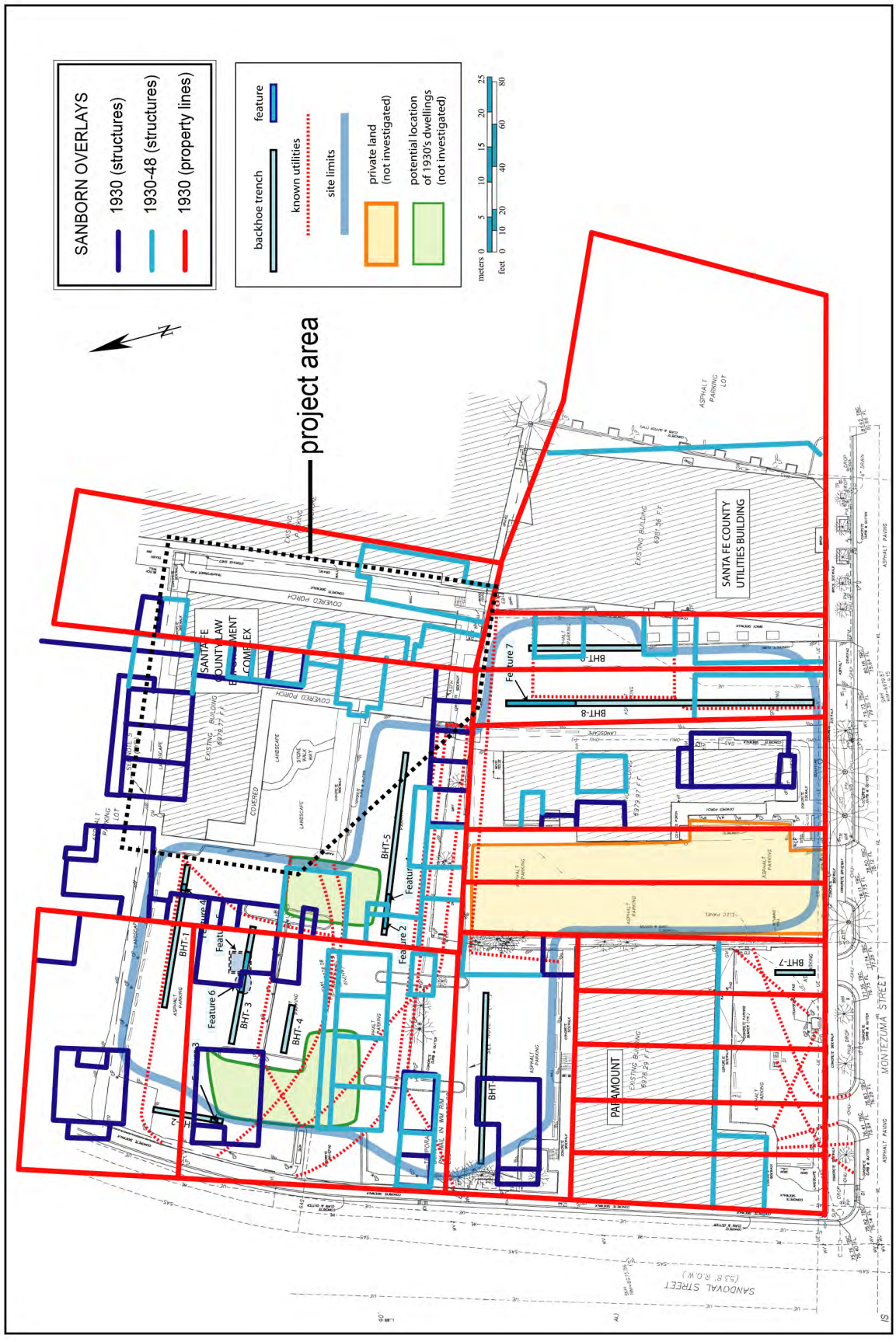

Figure 14. Overlay of Sanborn structures and property lines on the courthouse area and project area.

4 | Previous Research

(adapted from Hannaford 2007 and Lakatos 2011a and 2011b)

The greater courthouse complex area was a classic example of an urbanized built environment prior to OAS reconnaissance, data recovery, and monitoring investigations, complete with asphalt-paved parking lots, modern buildings, and a complex web of marked and unmarked subsurface utilities that masked the presence of any archaeological deposits. Reconnaissance consisted of backhoe trenches placed at locations that had potential for subsurface deposits based on the archival records search. Trench locations were constrained by utility lines and standing buildings. Mechanically excavated trenches determined that sterile sediments were encountered across the site within 1.4 m (4.5 ft) of the surface, and the trench profiles provided a generalized stratigraphic context for multiple archaeological components within these relatively shallow subsurface deposits.

Summary of Archaeological Deposits Within LA 156207

Seven generalized strata were defined during the investigations of LA 156207, although they vary in depth or thickness and the sequence is not complete where penetrated by the foundations of modern buildings (Hannaford 2007:35–37). The upper three strata are historic in their genesis, including Stratum 1, the modern ground surface, whether asphalt, cement walkways, or landscaping. The surface is supported by imported fill (such as base course) that forms Stratum 2 over much of the original site area. Beneath Stratum 2 can be a layer of compacted demolition fill (Stratum 3), resulting from the demolition of the 1930s built environment and the preparation of the landscape for the historic buildings, including the District Attorney Complex, that preceded the construction of the First Judicial District Courthouse.

Stratum 4 is a moist, consolidated clay loam with a small amount of gravel and a few artifacts represented by occasional fragments of recent glass. The stratum generally extends from 40 cm to 50 cm below the surface and averages from 10 to 30 cm thick. Stratum 4 represents low-energy alluvial sediment most likely deposited in association with flooding activities along the Santa Fe River terrace. The upper portion of the stratum was the surface of origin for the historic structures and activities within the greater Courthouse complex area. The upper portion has been cut by the leveling activities associated with the post-1930s demolition and the construction of the pre-Courthouse structures and parking lots. The bottom boundary of Stratum 4 is slightly wavy and rests on the lower cultural stratum (Stratum 5).

Stratum 5 is a precontact surface and accumulation of culturally influenced deposits with abundant charcoal flecking. Where preserved, it ranges from 20 to 70 cm in thickness, and the structures, features, and deposits encountered in the data recovery and monitoring investigations date to the late Coalition and very early Classic periods (circa AD 1275–1375) (Lakatos 2011a, 2011b). This prehistoric horizon appears to be related to farming activities along the Santa Fe River terrace, with single individual or small family structures as compared with nearby residential villages such as LA 1051 (Lentz 2011).

The remaining strata are alluvial in origin, representing low-energy deposition of finer silty clay

(Stratum 6) and high-energy deposition of large cobbles (Stratum 7). Stratum 6 is analogous to Stratum 4, with Stratum 5 defined as a period of anthropogenic contributions within a longer period of slow floodplain aggradation along the Santa Fe River. Although pre-Coalition period structures, features, or deposits could be present within Stratum 6, none has been identified within the Courthouse complex area.

Observations Adjacent to the District Attorney Complex

Previous archaeological investigations relevant to the District Attorney Complex within the greater Courthouse complex are Backhoe Trenches (BHT) 17, 22, and 24, all excavated as part of the hydrocarbon monitoring phase of the LA 156207 investigations (Lakatos 2011b).

BHT 17 (see Fig. 3, Chapter 1, this report) extends roughly east–west, originating outside of and adjacent to the southeast corner of the District Attorney Complex project area (Fig. 15). Feature 26, exposed along the south wall of BHT 17 (but not the north wall), was a large pit constructed by excavating a broad steep-sided basin through Stratum 5 and into Stratum 6. This feature was filled with Territorial through Statehood domestic refuse along with along with more recent materials introduced during construction and demolition activities immediately preceding the archaeological investigations. Easily recognizable household items included broken condiment and medicine bottles, ceramic dishes, and saw-cut animal bone. Construction debris included fragments of concrete and brick, pipe fittings, and tile. The mixture and diversity of artifacts from a broad time range reflect initial refuse disposal followed by the construction of nearby buildings and their demolition in 2008.

BHT 22 is on private land to the north of the District Attorney Complex project area (see Fig. 3, Chapter 1, this report). The southeast end of the trench is approximately 10 meters to the north of the proposed wall construction associated with the renovation plan. In this area, BHT 22 encountered Features 28, 29, 30, 31, 32, 33, and 35.

The precontact features were within a substantially intact area of Stratum 5 (Fig. 16). The features included Feature 30, a large pit or small pit structure, which, following abandonment was filled with native ceramics, flaked stone, and faunal remains in addition to burned adobe, charcoal, and ground stone. The limits of this feature were clearly delineated in both the vertical and horizontal exposures of BHT 22 (Lakatos 2011b:Fig. 11). A relatively dense concentration of burned adobe, combined with charcoal stained sediment and the variety and quantity of artifacts, suggest this feature was intentionally filled. Diagnostic native ceramic types (e.g., Santa Fe Black-on-white and smeared indented utility wares) are consistent with late Coalition/early Classic period (AD 1275–1375) components identified elsewhere at LA 156207.

Feature 33 was a human burial at the east end of BHT 22; it was spatially associated with Features 30 and 35. A 1 by 2 m excavation unit was established (536N/546E southwest corner) to define the horizontal limits of the burial pit. Systematic excavation identified an oval basin with gently sloping sides excavated into Stratum 6, which contained the remains of an elderly (60+ years) male individual. The body was flexed, with its head to the north and extremities and face oriented to the east. The few artifacts recovered from the sediment surrounding this individual consisted of smeared indented utility ware sherds and organic-painted white wares, suggesting it is contemporaneous with other late Coalition/early Classic period (AD 1275–1375) features. Feature 33 was excavated in its entirety, and these remains were reinterred with other individuals recovered from LA 156207 during the Courthouse data recovery and monitoring investigations.

Feature 35 is tentatively interpreted as a surface structure spatially associated with Features 30 and 33 (see Fig. 3, Chapter 1, this report). This feature was exposed in the northwest corner of the 1 m by 2 m excavation unit used to define Feature 33. Feature 35 was constructed using unmodified river cobbles and adobe, which formed the structure walls, measuring a maximum of 20 cm thick. Only a small portion of this feature was exposed. The exterior limits of the cobbles (one upright) and melted adobe were distinct from Stratum 6, the natural sterile substrate, suggesting the presence of an intramural area. No artifacts

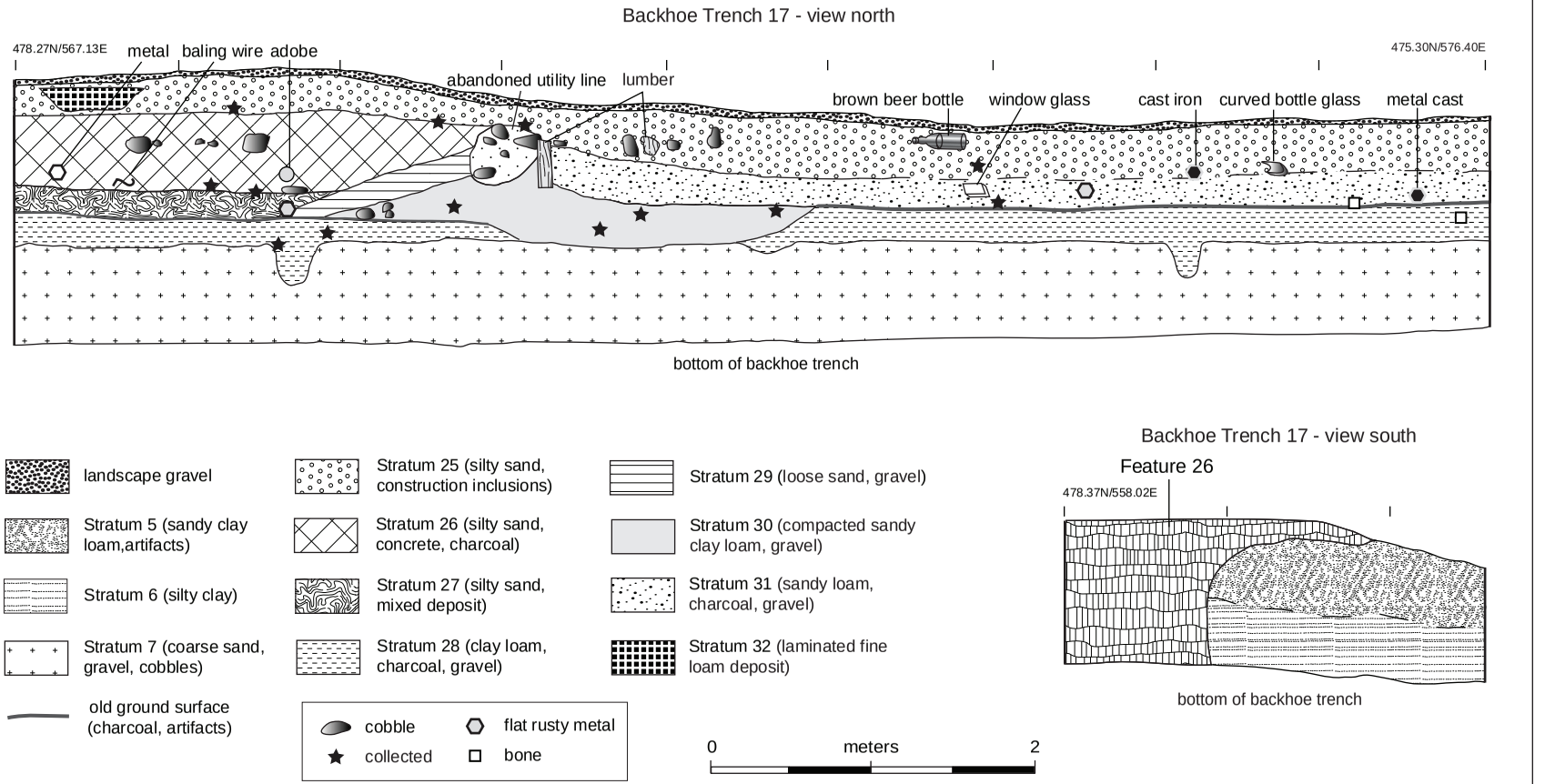

Figure 15. Stratigraphic profile of Backhoe Trench 17.

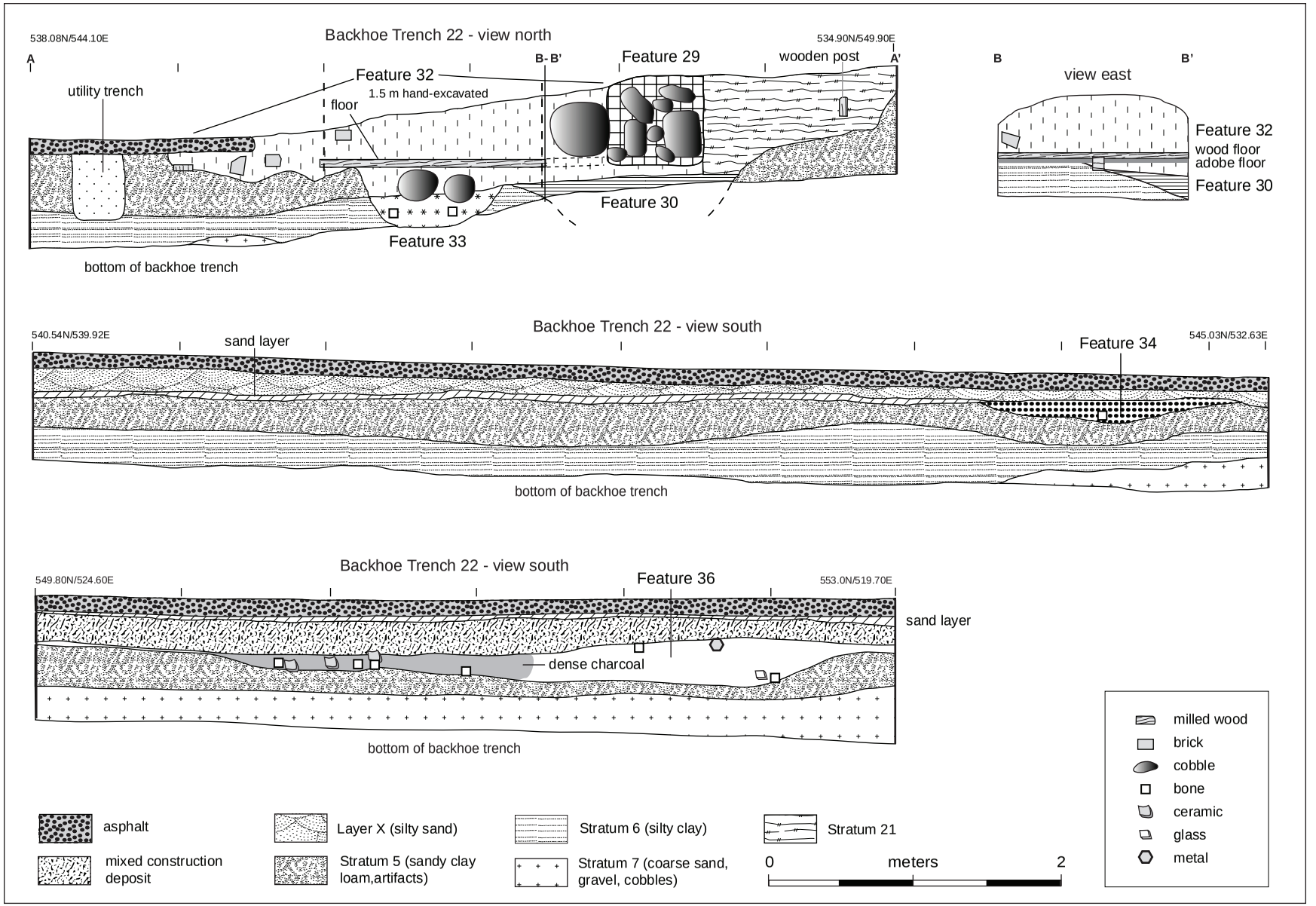

Figure 16. Stratigraphic profile of Backhoe Trench 22.

were recovered in direct association with this feature. However, based on construction technique and materials and its close spatial association with Features 30 and 33, it is presumed to be contemporaneous with the late Coalition/early Classic period (AD 1275–1375) component present at LA 156207.

Features 28, 29, 31, and 32 were historic (see Fig. 3, Chapter 1, this report). Feature 28 was along the east wall of BHT 22 and consisted of a steep-sided basin containing a concentrated deposit of charcoal and artifacts. Artifacts observed in direct association with this feature included machine-manufactured bottle glass, flatware, shoe parts, saw-cut bone, dinnerware, and electrical fuses. Based on the types of artifacts observed in the field, Feature 28 represents a 1930s–1940s domestic refuse pit.

Feature 29 was at the east end of BHT 22 and consisted of a foundation constructed of river cobbles stacked a minimum of three courses high. This foundation was visible on either side of the trench in profile and on the present ground surface, indicating a north–south orientation. No artifacts were observed in direct association with this feature. However, an adobe surface and wooden floor (Feature 32) adjacent to the western edge of this feature suggested Feature 29 may have been the foundation of a building. Although archival maps showed no buildings in this area until 1930, an earlier map (ca. 1880) refers to six adobe dwellings but does not show their locations. Alternatively, Feature 29 may represent a wall built along an existing property line depicted on the 1902 Sanborn map. This property line and wall were in the same area and oriented in a similar direction as Feature 29.

Feature 31 was also along the extreme east end of BHT 22 and consisted of a relatively deep pit filled with loosely consolidated sediments containing charcoal, gravel, and a mixture of late Territorial- to early Statehood-period debris and a few Native American ceramic artifacts. Items observed in this feature include machine-made aqua bottle glass, window glass, saw-cut animal bone, and polished red and plain gray Native American ceramics. The precontact plain gray Native American pottery likely originated from the late Coalition/early Classic–period component identified immediately west of this feature.

Feature 32 was at the east end of BHT 22 and consisted of an adobe surface overlain by a floor constructed of milled lumber. The adobe surface was 2–3 cm thick, and it capped the precontact Native American horizon. This surface was in a relatively good state of preservation and clearly defined along its southern limit. This surface underlies a structure constructed of milled lumber, square nails, and other building materials observed in the overlying fill. This feature was covered with loosely consolidated sediments containing abundant construction debris, including brick fragments, pentile, mortar, and tarpaper. In situ wooden remains of Feature 32 consisted of vertical and horizontal lengths of dimensional lumber representing framing, floor joists, and decking. Like the adobe surface, they were most clearly evident along the southern limits of BHT 22. Together these architectural elements likely represent the remains of a small outbuilding constructed during the late Territorial to early Statehood period. Also, the close spatial association between Features 32 and 29 suggests the latter may have may formed the east wall of the outbuilding.

BHT Trench 24 (see Fig. 3, Chapter 1, this report) was an extremely short trench extending from the District Attorney Complex building northeastwardly toward the boundary of the Santa Fe County parcel and the private land parcel to the north. A single feature was encountered within this trench. Feature 38 was at the north end of the trench and consisted of a foundation made of river cobbles stacked a minimum of two courses wide. This foundation was visible in profile on either side of the trench, indicating an east–west orientation. No artifacts were observed in direct association with this feature; however, it may be related to a covered coal and wood storage area depicted on the 1930 Sanborn map (see Fig. 12, Chapter 3, this report).

Summary

The observations from BHT 17 are directly relevant to the area of the proposed utility replacement portion of the District Attorney Complex renovations. Stratum 5 is present in this area of the site, although truncated in discrete areas by historic features. No historic features are known to extend into the area of the utility replacement, but such features are possible.

Observations from BHTs 22 and 24 are directly relevant to the area of the proposed security fence construction at the northeast corner of the District Attorney Complex. Remains of a probable storage area structure from the 1930s are probably within the fence construction area, and these preserved traces suggest that other historic features probably survived the demolition that occurred prior to construction of the current District Attorney Complex buildings. Along with the known historic structure, Stratum 5 is probably preserved within the fence construction area. The density of AD 1275–1375 structures, features, and deposits within 10 m to the north of the fence construction suggests that the probability of encountering intact precontact archaeological resources is high.

No previous archaeological observations, other than the overall site characterization, are directly relevant to the proposed entryway and landscaping modifications of the District Attorney Complex renovations. Prior construction disturbance in the entry area and the construction disturbance of the proposed renovation will be approximately the same depth and have the same spatial limits, and intact deposits are not expected. If intact deposits are present, they are unlikely to include evidence of historic structures based on the Sanborn maps (see Fig. 14, Chapter 3, this report), but historic features may be present. A precontact structure was identified about 25 m to the southwest of the entry area, and precontact cultural materials may be associated with Stratum 5 if it has been preserved in the entry area.

5 | Research Design for LA 156207: Household Subsistence and Economy

Since archaeological data recovery in advance of the Santa Fe County District Attorney Complex renovations is sensible only within the greater context of the First Judicial District Courthouse investigations as a whole, the data recovery framework from the latter project will be adopted for the current project. This will ensure consistent and efficient information collection and interpretation, taking advantage of the strengths of the more substantial Courthouse data recovery and monitoring results to provide context for the more limited investigation potential of the District Attorney Complex renovation.

As described by Badner et al. (2014), Santa Fe represents one of the oldest continuously occupied non-mission communities in the Southwest. As such, it has presented archaeologists, anthropologists, and historians with the opportunity for studying the ancient past, military campaigns and engagements, American Territorial frontiers, and more recently the Atchison, and Topeka and Santa Fe Railway. As Santa Fe grew from a peripheral European settlement to an international destination, its identity developed "in such a way that the particulars of the past were lost to idealized views" (Wenker et al. 2005). These idealized and romanticized expressions of Santa Fe are no more clearly represented in the project area than by the street names and neighborhood layout illustrated as Valuable Building Lots Adjoining [the] AT&SF Depot in the 1880s (C. Snow 1995; Sze and Spears 1988:65). Fittingly these "valuable" lots were to be sold by Bradford Prince, Territorial Supreme Court Justice. Recent studies have reexamined the process by which Santa Fe changed as a community, as a population, and as a cultural icon (Wilson 1981). However, the details of individual households contributing to the local cultural environment often yield to the examination of broader regional economic and social trends (Barbour 2012, 2014). The archaeological deposits identified at LA 156207 provide us with the opportunity to examine the temporal placement of cultural features and the "particulars" of household complexion during the 1930s.

Archaeological test excavations and data recovery at the First Judicial District Courthouse Complex property in Santa Fe, New Mexico, identified a multicomponent archaeological site, LA 156207. The cultural features previously investigated on that parcel have been significant because they have contributed to our understanding of the prehistory and history of Santa Fe. Several additional small portions of LA 156207 are anticipated to be affected during the renovation of the existing Santa Fe County District Attorney Complex, therefore, these areas of the site require impact-mitigation treatment through the implementation of a research design and data recovery plan.

Archaeological excavations and monitoring on and adjacent to the First Judicial District Courthouse Complex parcel have revealed an array of structures, features, and cultural deposits suited for addressing a wide range of research themes pertaining to the late prehistoric period and early twentieth-century household economy. Variability in feature function, content, and age should facilitate comparisons of social and economic status as the Judicial Complex property changed from agricultural-residential to residential-commercial in nature. To facilitate this study, the research is divided into two domains: late prehistoric subsistence activities and early twentieth-century household economy. These research domains are to be examined using data from the archaeological field excavation and laboratory analysis in combination with previously completed archival research for the Courthouse parcel as a whole (Snow and Barbour 2011).

The components of Depression-era archaeology in this section involve those created by residential and commercial activities that were attracted to the Railyard and Capitol Complex Historic Neighborhood areas (Badner et al. 2014; Barbour 2012, 2014). Most of the archaeological data that are expected to be yielded by the structures, features, and deposits of this period relate to data from associated artifact assemblages. Even in the limited areas of the District Attorney Complex investigations, the most useful types of proveniences that may be encountered would be refuse pits and privies. The remains of this era represent unique phenomena in the historical archaeology of Santa Fe in a variety of senses. In one sense, each residence was unique within a neighborhood, and all were complementary parts of a functioning whole. In another sense, the project area is unique in that it was developed by early land speculators to take advantage of the anticipated population growth with the coming of the railroad in the 1880s, but the area was only marginally occupied until the 1930s.

Theoretical Perspective

The nature of the deposits and project area in some ways limits the types of synchronic or diachronic comparisons that can be drawn among the Judicial Complex remains and the rest of the city. These types of pattern-recognition comparisons, which would inform processual or evolutionary archaeological perspectives, are not readily applied because we cannot compare like with like. Instead, in many ways, these features must be considered and evaluated in a particularistic paradigm (South 1977:8–10), which emphasizes individualistic analysis and synthesis and the intensive study of individual cases such as events, dates, individuals, and significant items.

From this perspective, the archaeological investigation of Depression-era remains provides data to be used, along with archival documents, to complement and elaborate the historical record of the Railyard District (Gorman 1982:67) and the Capitol Complex Historic Neighborhood (Barbour 2012, 2014). Fleshing out our knowledge of household configuration and socioeconomic status and, possibly, identifying late Spanish colonial deposits, are all worthwhile goals of the District Attorney Complex project that help personalize the historic period in the area. Promotion of a humanistic viewpoint will certainly enhance the knowledge of the city's historical character and will lend to the appreciation of the archaeological significance by the general public.

Research Domain 1: Prehistoric Component

This research is focused on further developing our understanding of the nature, extent, and temporal placement of the precontact occupations that compose Stratum 5 of the Judicial Complex area (Hannaford 2007; Lakatos 2011a, 2011b). While isolated structures and features of the Late Coalition-/Early Classic-period occupation were identified in the original First Judicial District Complex investigations, a more substantial and more coherent component of this period was encountered during monitoring just north of the Judicial Complex boundary. This area is immediately adjacent to the first excavation area associated with District Attorney Complex renovations. Because the monitoring observations were limited, we have a glimpse of what may be short-term and agricultural field-oriented residences associated with one of the more substantial contemporary villages (such as LA 1051) elsewhere along the Santa Fe River. The northern District Attorney Complex excavation area will provide an opportunity for a more controlled and systematic approach to characterizing this component.

Research Questions

Lakatos (2011b) describes a probable pithouse and surface structure, along with a human burial, in the monitoring area, however, the full nature of this component could not be systematically evaluated due to the constraints of the monitoring effort. With this in mind, if intact AD 1275–1375 deposits extend from the monitoring area into the northern excavation area of the District Attorney Complex renovations, a range

of research questions can be proposed regarding the nature, integrity, chronology, and function of this occupation.

Research Question 1: What is the integrity and extent of Stratum 5? Are there additional features or structures associated with this layer?

Stratum 5 represents a prehistoric horizon identified across much of the project area, with a particularly strong expression adjacent to the proposed data recovery effort north of the District Attorney building. However, this layer was likely compromised through continuous development and the installation of utilities beginning in the 1920s. These questions focus investigations where portions of Stratum 5 remain intact within the project area and in addressing how these manifestations relate to the components that have been identified outside the project area.

Research Question 1 Data Needs. In order to address the question presented above, it will first be necessary to systematically expose this layer and excavate by hand to sample the content and frequency of material culture items. After overlying demolition deposits have been removed by mechanical equipment, any overlying historic features or deposits will be excavated to expose Stratum 5. If hand excavations document that this layer is an intact cultural deposit, the upper limits of Stratum 5 will be exposed to delineate the extent of this deposit and to identify additional features. Finally, the distribution of inclusions, such as charcoal and artifacts, associated with this layer may reveal the sources for this deposit.

Research Question 2: What is the temporal placement of Stratum 5 and associated feature(s)?

Although ceramics diagnostic of the late Coalition to early Classic periods have been identified in this layer, they may not be representative of all temporal components contributing to the formation of this layer. Other occupations particularly those associated with the Spanish Colonial component of the Barrio de Analco to the north may also be represented in this deposit (Moore 2003; Deyloff 1999)

Research Question 2 Data Needs. Primarily chronometric data are needed to address questions of temporal placement and sequence. Recovering chronometric samples or temporally diagnostic artifacts from reliable contexts will be the focus of data recovery efforts. Radiometric data, archaeomagnetic samples, tree-ring samples, or temporally sensitive artifacts can all inform on the temporal placement of particular deposits, structures, and features. Radiocarbon and tree-ring samples can help establish an occupational date, but problems can develop when wood was salvaged and reused. Similarly, archaeomagnetic data contributions are dependent on coherent pole positions, and imprecise pole locations will result in less precise or ambiguous date range estimates. Because of these potential problems, radiocarbon, tree-ring, and archaeomagnetic dates are acceptable only when corroborated by other data such as diagnostic artifacts.

Charcoal samples for standard or AMS radiometric analyses will be recovered, although the source of any charcoal may be suspect given the high potential for water transport and redeposition of cultural materials and inclusions. Contexts to be targeted for all archaeomagnetic and radiocarbon sampling will primarily include strata or features that are positioned to provide chronometric data on the potentially earliest and latest use periods of the sampled contexts.

Research Question 3: Feature Nature and Function. What can features tell us about the exploitation of biotic resources, craft specialization, economic activity and organization, and the local environmental setting?

Intact features have the potential to provide basic information about the types of activities that were part of subsistence-level economic pursuits. Combined with temporal data, feature function can be placed within a regional context of economy and resource exploitation. Design and investment in facilities can contribute to their role in overall social and economic systems, especially in terms of the contrast between potential field (seasonal) facilities in the context of contemporary villages.

Research Question 3 Data Needs. Data recovery will record in detail feature contents, condition, and morphology in addition to any other pertinent information that can be used to infer feature function. Through comparative analysis of morphology, condition, and content, subsistence strategies can be inferred to address the role of this location in the local economy. For example, analyses of recovered plant and faunal remains can be used to argue if specialized or more general economic strategies were used to exploit the natural environment. Features may also contain artifacts that were cached for use in specific contexts such as butchering, rendering plant parts, or field preparation and maintenance. Deposits within and adjacent to these fortuitously preserved contexts will be hand excavated to provide the stratigraphic and contextual basis for assessing the potential dating reliability of the recovered artifacts. Expected temporally diagnostic artifact types may include Pueblo-made pottery from the late Prehistoric period or perhaps the late Spanish Colonial period (Moore 2003).

Research Domain 2: Depression-Era Households

Archival research identified that the project area was the location of several residential buildings constructed beginning in the 1890s in an area slated for commercial development. However the transition from residential to commercial was not realized until the early 1920s.

Prior to the establishment of twentieth-century commercial enterprises, several adobe residential buildings are reported (Hannaford 2007). Sze and Spears (1988:68–69) state that this neighborhood never thrived like local businessmen had hoped and by the early twentieth century was occupied by "the families of clerks, teachers, salesman, and merchants—mostly Anglo—who often rented rather than owned their homes." The location and nature of the archaeological deposits provide an opportunity to compare and contrast the archival and archaeological records (Deyloff 1999). The nature of historical refuse pits' contents (Lakatos 2011a) have already contributed to our understanding of the domestic occupation and of the women's health clinic that was located on the Courthouse parcel. Any additional refuse pit data may be relevant to household activities that could be compared and contrasted against other residential refuse pits at sites such as LA 110432 on lower Agua Fria (Post 1999) and residential refuse pits excavated at the Santa Fe Railyard (Badner et al. 2014). The OAS standardized Euroamerican artifact analysis is particularly well-suited to generating material culture data for comparison between contemporaneous assemblages, presumably generated by a similar range of activities.

As the upper layers of Depression-era pits were filled with mixed post-abandonment overburden, including demolition debris, the artifact assemblages contained in this overburden have no apparent bearing on the use or function of the associated buildings. Therefore, we plan to minimize the controlled recovery of artifacts from these mixed architectural contexts, targeting temporally or functionally relevant assemblages. Removal of these mixed deposits will be conducted by mechanical means while exposing the intact strata and feature outlines. The field excavation will be supplemented by additional archival research that will focus on sources that were consulted for the reconnaissance study, but not fully pursued, or information sources that may become available during the course of the excavation.

Research Questions

<u>Research Question 4</u>. What was the complexion of the household? For example, given that many of the residents reportedly rented, is the frequency, type, or variety of consumer goods more representative of a nuclear family, single parent families, or another type of configuration? What was the socioeconomic status of the families in this neighborhood?

The 1930 Sanborn map shows dwellings and spatially associated private garages and stables suggesting that automobiles were within the means of the residents, supporting documentation of working middle class families (Sze and Spears 1988:68–69). Yet, stables and corrals are also depicted, indicating lower income levels and perhaps a more subsistence-based existence. Monitoring adjacent to the northern excava-

tion area of the District Attorney Complex transected a cobble foundation, and data recovery excavations may be able to confirm the presence of, and to describe the nature of, the possible structure.

Research Question 4 Data Needs. The data needed to test our ideas on household complexion and socioeconomic status will be derived through analysis of various artifact assemblages. In particular, the analysis will attempt to distinguish handcrafted or repaired artifacts with the frequency and types of store-bought items to address questions concerning consumption and source of manufactured goods. This artifact category can also provide important temporal data, which can be used to augment archival sources. Other data sets can be used to amplify the results of these analyses, and to provide general information concerning Depression-era life in Santa Fe. For example, botanical and faunal samples should demonstrate that households were committed to commercially produced food stuffs. The identification of wild plant species recovered from flotation samples or hand-butchered bone of domestic and wild species will also provide information on household economic status.

In earlier periods, the use of domestic versus wild fauna varied according to social and economic status (Reitz and Cumbaa 1983). Higher status households used a wider range of domestic as well as wild animal species; middle-class households mostly exploited domestic animals for food, but there was some use of wild terrestrial species; lower class households exploited a wider variety of species, modified to some extent by use of domestic animals (Reitz and Cumbaa 1983:166). Thus, the variety and variation of wild and domestic species in an assemblage can be used to support arguments concerning the economic status of households and their level of access to manufactured goods.

Excavation results that include historic structures and features will be compared with the archival research already completed for the property (Snow and Barbour 2011). Diagnostic artifacts can also be used to estimate periods of occupation. Other chronometric data may be collected, but will likely have limited use. By focusing on the patterning of commercially manufactured goods and documentary information, temporal data necessary to establish the comparability of these remains with other sites from New Mexico, and to place them in the proper historical setting, will be retrieved. Relative frequencies of different artifact classes in combination with datable artifacts may provide the best potential for dating and sequencing the use of the features.

Research Question 5. Is there a distinction between commercial and residential refuse disposal patterns? If so, in what kinds of commercial activities were residents participating?

As the Depression wore on, more families took on work that they could conduct in their homes, such as domestic services, auto repairs, or craft production. Comparison of feature contents should be particularly interesting for identifying differences in residential patterns of rubbish disposal that may provide a look at variation in occupational activities as the result of a cottage industry.

Research Question 5 Data Needs. By comparing the types and distributions of artifacts recovered from pit features, we may be able to determine whether refuse was strictly residential or if other commercial activities were conducted at the household level. The refuse pits identified at LA 156207 during the Courthouse data recovery effort contained evidence of both domestic and specialized activities. The contents of any additional pits will be examined for differences between residential and commercial artifact types and frequencies, to infer differences in household level commercial activities. Even if the data recovered from this study provides no definitive answers to the questions posed above, they should contribute a great deal of information that can be used to further explore these topics by future researchers. By pursuing this examination in such a way that necessitates comparisons with other Depression-era deposits, we may be able to address how this economic pressure affected people in Santa Fe.

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6 | Data Recovery Plan for LA 156207 within the District Attorney Complex

Archival Research

Many reports have summarized the prehistoric and historic culture history, archival documentation, and architectural history of the Santa Fe Railyard District, including the proposed project area (Badner 2014; Colby 2004; Deyloff 2004; Scheick 2003; C. Snow 1995; Sze and Spears 1988). Additional resources of archival material were sought as part of the encompassing First Judicial District Courthouse Complex investigations (Snow and Barbour 2011).

Local archival resources that were consulted in addition to those consulted by Hannaford (2007) include the Archives of the Archdiocese of Santa Fe, the Spanish Archives of New Mexico, Santa Fe County Deed Books, *Hudspeth's Santa Fe City Directories*, and documents on file at the Center for Southwest Research.

Copies of original Sanborn Fire Insurance Company maps at the Fray Angélico Chávez History Library or at the New Mexico State Library were also examined. Composite overlays generated from these maps (see Fig. 14, Chapter 3, this report) are helpful in identifying individual structures and land use and development patterns.

Specific Field Excavation Strategies

The total area of LA 156207, as currently defined, is 10,682 sq m. Of this total, 2,512 sq m is on private land, and 8,170 m is on State land (Santa Fe County). Of the total site area, 6,467 sq m on State land was subjected to investigation by Steve Lakatos as part of the Santa Fe County Courthouse testing and data recovery excavations (Lakatos 2011a). An additional 67 sq m on private land was subject to monitoring as part of hydrocarbon remediation related to Courthouse construction (Lakatos 2011b). Of the 1,703 sq m of LA 156207 on State land that has not been previously investigated, the majority coincides with the previously disturbed construction footprint of the Santa Fe County District Attorney Complex building.

Figure 17. View west of Area 1, the northeast corner of the District Attorney building.

The investigations proposed here are at the margin of this existing building, and this permit request includes:

1) Excavation of between 8 and 22 sq m at the security fence footing locations within Area 1 (depending on whether an existing sidewalk will be subject to demolition as part of the renovation).

2) Entry-area monitoring will be conducted where existing landscaping and sidewalk portions will be relocated, potentially exposing previously minimally disturbed areas of the site. The maximum area that will be monitored at the entry would be 70 sq m, depending on the final architectural plan, but the only construction disturbance greater than 20 cm depth may be limited to tree planting.

3) Utility corridor monitoring will be conducted within the existing (previously disturbed) utility corridor for the building. The maximum area of monitoring will be 25 sq m, depending on the final architectural plan.

The area subjected to total excavation will be approximately 0.10 percent of the total site or 0.13 percent of the portion of the site on State land, or 0.65 percent of the portion of the site that remains uninvestigated (most of which is occupied by the building). The total area of the proposed monitoring will be up to 95 sq m, or as much as 0.89 percent of the total site or 1.47 percent of the portion of the site on State land, or 5.58 percent of the portion of the site that remains uninvestigated. All of these areas are subject to minor adjustment upon completion of the final architectural plan.

The field strategies proposed here reflect the occupation, development, and construction sequence for the Judicial Complex as a whole, including the nature of the prehistoric horizon and the expected location of intact archaeological remains. Working from preliminary investigations (Hannaford 2007), data recovery investigations at the Courthouse complex surrounding the District Attorney Complex (Lakatos 2011a), and perspectives gained through the monitoring of hydrocarbon remediation trenches within ad-

Figure 18. View north of Area 2, the existing entry and landscaping of the District Attorney building.

Figure 19. View west toward Area 3. The utility replacement will be conducted at the far end of the walled area.

jacent private land properties (Lakatos 2011b), two approaches to the subsurface work at the District Attorney Complex are proposed. Area 1 (Fig. 17), at the northeast corner of the existing District Attorney building, has the greatest probability of including intact subsurface deposits of both historic and precontact occupations. Full data recovery excavations will be conducted in this area. Subsurface construction in Area 2 (the building entry and landscaping; Fig. 18) and in Area 3 (the area for utility replacements; Fig. 19) will affect deposits that have been previously disturbed by the original District Attorney Complex construction, and we recommend that these areas be monitored rather than excavated.

In Area 1, all public and private utility lines will be spotted prior to commencing excavation. A series of pre-excavation photographs will be generated during this initial stage of investigation and horizontal and vertical control will be established from a main datum. Mechanical equipment will be used to remove an overlying deposit of cobbles that were used to armor the landscaping grade in this location. Cobble removal will be monitored, and if it falls within the final wall construction plan, the backfill from monitoring Backhoe Trench 24 will be removed, exposing the cobble foundation remnant (Feature 38) and stratigraphy at the western end of the data recovery excavations. Any clearly defined demolition or leveling deposits that date to the construction of the District Attorney Complex buildings and infrastructure will be removed with mechanical equipment under the guidance of a monitor, using at least two exploratory trenches to investigate the nature of the historic stratigraphy prior to the delineation of any demolition or level deposits. Intact historic deposits, structures, and features will be investigated by hand excavation. Following treatment of the historic archaeological deposits, structures, and features, the precontact horizon (Stratum 5) will be exposed and assessed for its integrity. Intact precontact deposits will be excavated by hand until culturally sterile floodplain and river channel deposits are reached.

Monitoring of construction excavation in Areas 2 and 3 will be conducted consistent with procedures

and decision criteria for the monitoring effort of the adjacent hydrocarbon remediation trenches (Lakatos 2011b). Judgmental collection of artifacts from previously disturbed deposits will be made. Construction will be stopped if intact cultural deposits, structures, or features are encountered, and hand excavation will be pursued within the limits of the planned construction area. Exposed profiles of the construction excavations will be assessed for their potential to contribute to the understanding of the archaeological sequences in the two areas, and if the profiles include documentation of land use prior to the construction of the District Attorney Complex, the profiles will be recorded. Any exposed features will be documented, and any in situ cultural deposits, features, or structures will be hand excavated per standards for the data recovery effort in Area 1.

7 | General Excavation and Laboratory Methods and Procedures

General Field Excavation Methods and Procedures

Archaeological deposits varied in depth, nature, and extent from an ephemeral cultural horizon to well-delineated historic structures and features. The frequency and intensity of materials recovered from this project will add to our growing knowledge about the inhabitants of the Santa Fe from precontact agriculturists to the end of the Great Depression. Excavation methods will follow standard modern archaeological procedures (e.g., Joukowsky 1980), especially the OAS excavation, sampling, and proveniencing procedures outlined by Boyer et al. (2000), to maintain comparability of data collected from the District Attorney Complex with the surrounding Judicial Complex and with other OAS project data from the Capitol Complex Historic Neighborhood (Barbour 2012, 2014), from the Railyard (Badner et al. 2014), and from LA 1051 (Lentz 2011; Lentz and Barbour 2011). In addition, the procedures in the OAS safety manual (OAS 1995) will also be followed. The nature of some of the archaeological remains and the use of mechanical excavation during this project does warrant some additions and alterations to the general OAS strategy.

Mapping and Locational Controls

The corners of all hand-excavation units, backhoe excavations, elevation-datum stakes, and other points of interest will be mapped with a Nikon DTM-330 Total Station and referenced to GIS control points. The project grid system will be aligned with the horizontal control established for the First Judicial District Courthouse data recovery effort.

Provenience Control

A field specimen (FS) list will be maintained to catalog all artifacts and samples collected from excavation contexts. Each unique excavated context (e.g., a 10 cm thick level, or the loose backdirt from a backhoe trench, or a single item extracted from a specific stratum in a trench wall) will be assigned a separate FS number that identifies the recovery context of the associated artifacts and samples.

Excavation Units

The initial step of fieldwork will involve identifying and marking all known utility lines in each area. The complex overlay of modern permanent, immovable landscape features such as utility lines, buildings, or related facilities will dictate to some extent the areas available for excavation as described above. Temporary landscape features such as asphalt and concrete pads, parking curbs, fence lines, and vegetation will be retained whenever possible, but archaeological excavation may require the dismantling of these types of features. Mechanical and manual excavation procedures are outlined below. Before it is possible to delimit the extent and nature of soil or sediment strata, it will be necessary to examine them in cross section. This requires the excavation of exploratory units, mechanically or by hand.

Mechanical excavation. Mechanical excavation with a backhoe will be limited to the monitored removal of overlying landscaping deposits, limited trenching to determine the depth of demolition and leveling deposits in Area 1, and the monitored removal of those deposits, if present. After excavation of trenches for the purpose of characterizing deposits, loose and smeared soil will be cleaned off of the trench walls with hand tools, and trench walls will be closely examined for exposed cultural deposits or features. The stratigraphic character and cultural content of each backhoe trench will be documented on a standardized excavation form. Artifacts found in situ in trench walls may be point-provenienced. Horizontal proveniences of mechanical excavations will be maintained by assigning each a unique number.

The mechanical removal of recent and mixed overburden, as well as of other bulk deposits, will be conducted by removing relatively thin (5 to 10 cm thick), sequential sediment layers from horizontal expanses of the site area. The primary use of this method is expected to be the removal of modern and mixed post-abandonment overburden (Strata 1 through 3, as previously identified; Lakatos 2011b) from Area 1. An archaeologist will always monitor and direct removal activities with the goal of identifying intact deposits that will define the lower limits of mechanical excavation. Functionally or temporally diagnostic artifacts will be opportunistically collected from backdirt as they are observed. Artifacts found in situ in scraped exposures may be point-provenienced.

Manual Excavation. Because of the restricted nature of the Area 1 investigations, excavation units will be either 1 by 1 m or 1 by 2 m in size. Hand-excavation units will be determined by the locations and spacing of security-fence footings in the architectural plans. These grid excavations will be linked to the Cartesian grid system and identified by the grid lines that intersect at their southwest corners. Excavation units will be sized, placed, and oriented to maximize their data recovery potential. Upon excavation, the corners of all excavation units will be mapped and plotted on site and feature maps.

The standard procedure for the hand excavation of bulk sediments will be by 10 cm thick arbitrary levels, unless natural or cultural stratigraphic layers are discernable. If natural or cultural stratigraphic layers are thicker than 10 cm, each thick stratum will be excavated in separate 10 cm thick levels with one exception. If historic demolition strata greater than 10 cm thick are confidently identified in excavated units, those strata will be excavated in 20 cm thick levels when encountered in adjacent units. Unless previously determined to be modern or recent overburden or historic demolition strata, all hand-excavated fill will be screened through 1/4-inch mesh hardware cloth. After any historic demolition strata are identified in an initial excavation unit, if those strata are identified in adjacent units, only one-half of the occurrences of the strata (alternate excavation units) will be screened. All artifacts will be collected and bagged for processing and analysis unless the fill is not screened. In unscreened proveniences, functionally or temporally diagnostic artifacts will be opportunistically collected as they are observed. Bulk construction materials (such as milled lumber or bricks related to a feature's construction) will be described by type and quantity and will be noted in the excavation notes, but only a representative sample of each unique type will be collected for curation. Subdatums will be established across the site to provide control for each of the three investigation areas. All vertical measurements will be recorded in meters below datum (mbd).

Non-standardized hand-excavated trenches of varying widths and lengths may also be used to expose architectural details, or as exploratory trenches in areas where mechanical excavation is not feasible or safe. These non-standard units will be subdivided so that no maximum dimension exceeds 1 m. This is particularly true when working in areas where there are known utilities or when removing fill from structures or other large features down to just above the floor or base where grid units provide a greater level of horizontal and vertical control. Trenches may be vertically divided into levels or strata, or they may be excavated as a full-cut unit, combining the deposits from top to bottom in one bulk excavation unit. Screening of the fill will also depend on the nature of the excavated deposits as well as the intent and goal of the trenches.

Recording Excavation Units. A grid-unit excavation form will be completed for each hand-excavated level, describing the soil or sediment matrix, inventory cultural materials recovered, and other observations considered important by the excavator or site supervisor, including depths mbd, stratum, and level. The description of the soil or sediment matrix includes information on cultural and noncultural inclusions,

presence of building rubble, evidence of disturbance, and how artifacts are distributed if variations are noticed.

Vertical treatment of deposits will vary according to their nature. Outside exploratory grid units, strata will be used as the main units of vertical excavation. Cultural deposits will be carefully excavated to preserve as much of the vertical relationship between materials as possible. Although the relationship among artifacts in noncultural deposits is rarely meaningful, horizontal and vertical control will be maintained when appropriate. For example, cultural deposits require careful excavation to preserve the relationship between artifacts discarded at different times. Noncultural deposits tend to be jumbled or mixed, and the relationships between artifacts are almost always obscured (i.e., moved from their original contexts and redeposited). While we will always attempt to excavate cultural deposits by stratum, that level of control will only be attempted in noncultural strata if it appears it will provide data of potential importance to site interpretation. Excavation by strata is considered optimal in cultural deposits. Exceptions include noncultural deposits and cultural strata that are very thick and need to be subdivided in arbitrary vertical levels to provide greater provenience control.

Recovery of Cultural Materials. Most artifacts will be recovered in two ways: visual inspection of fill layers as they are mechanically excavated, and screening though variable-sized mesh. Other materials will be collected as bulk samples that will later be processed in the laboratory. Regardless of how cultural materials are collected, they will all be inventoried and assigned an FS number, which is listed in a catalog and recorded on all related excavation forms and bags of artifacts. The FS number is the primary tool allowing for the maintenance of the relationship between recovered materials and associated spatial information. FS numbers are tied to proveniences, so that all materials collected from the same three-dimensional unit receive the same FS number, including any samples taken from that three-dimensional space.

Most artifacts will be recovered by systematically screening soil removed from excavation units. All soil from exploratory grids and features will be passed through one of two sizes of screen, 1/4-inch or 1/8-inch mesh. While most artifacts from historic components should be large enough to be recovered by 1/4-inch mesh, some artifacts from the prehistoric component may be too small to be retrieved by that size of screen. For this reason, soil from at least 25 percent of the excavation units used to investigate Stratum 5 (as previously identified; Lakatos 2011b) will be screened through 1/8-inch screen during excavation of Area 1 for artifacts that may better inform on the activities conducted in the area (such as stone tool production or rejuvenation). The recovery method will be evaluated and adjusted to provide the best resolution for certain types of pre-Territorial period features and from floor or living surface contexts.

Other cultural materials, such as macrobotanical samples, will be recovered from bulk soil samples. In general, samples for flotation analysis will be collected from culturally deposited strata and features and should contain at least 2 liters of soil (or the full volume of features if less than 2 liters). Macrobotanical materials like corn cobs, piñon shells, wood samples for identification, charcoal, etc., will be collected as individual samples whenever found.

Feature Excavation

Features will be documented in three dimensions. The feature cross section will be examined and the testing notes will be updated, if necessary. Features constitute individual horizontal provenience units and will be assigned sequential numbers as they are encountered at the site. Feature numbers will be recorded on a feature log and feature excavation information recorded on a feature form that describes, in detail, its shape, content, use history, construction detail, and inferred function. All features will be photographed using digital images as part of the excavation process

For small features, those less than 1 m in diameter, the feature boundaries (as exposed by mechanical scraping or manual excavation) will be used as the horizontal unit of excavation control. To efficiently define internal stratigraphy, half of the feature will be excavated in a single level to expose a cross section for documentation. The second half will be removed by defined internal strata. After all the fill is removed, a second cross section perpendicular to the soil profile will be drawn illustrating the feature's vertical mor-

phology. In addition, a scale plan of the feature showing the grid location, size, and location of profile lines will be drawn.

For larger features, those larger than 1 m in diameter, the feature will be sampled by excavating one-quarter or one-half of the feature depending on the overall feature dimensions, targeting sample sizes no less than 2 percent of the overall feature area. Manual excavation will proceed through the feature fill in arbitrary 10 cm thick levels, unless stratigraphic layers are encountered during excavation. Natural or cultural stratigraphic layers thicker than an average of 20 cm will be excavated in separate 10 cm thick levels. All excavated fill will be screened through 1/4-inch mesh unless it consists of post-abandonment overburden. All artifacts will be collected and bagged for processing and analysis. Bulk construction materials (such as milled lumber or bricks related to a feature's construction) may not be collected or may only be sampled, but their type and quantity will be described in the excavation notes.

As outlined below for architectural features, mechanical scraping will be conducted over, within, and around structural features to remove the bulk of modern and mixed post-abandonment overburden. The fill will be mechanically and manually removed from the structures in stages, which will allow the recording of cross section and profile drawings along the short and long axes of each structure, when appropriate. Archaeologists will always monitor these activities, and manual excavation of the overburden in these areas will be conducted in sensitive or fragile locations, particularly during the final stages of an architectural feature's excavation, when subfeatures or intact deposits may be encountered. The modern and mixed overburden will not be screened, but temporally or functionally diagnostic artifacts will be collected opportunistically. Once the internal contents and layout of the structures are known, subfeatures or intact deposits will be evaluated for excavation.

After, or during, a structure's complete excavation, a strip up to 4 m wide around the perimeter of the structure will be scraped to the top of the culturally sterile substrate. This procedure will be used to locate any extramural subfeatures or structural components, which will be evaluated and excavated according to standard procedures. Most excavation will be accomplished using hand tools. However, in some cases mechanical equipment will be used to expedite the removal of noncultural deposits such as striping noncultural overburden from buried extramural cultural strata, and in areas where surface remains are absent.

Structures. Individual numeric designations will be assigned to structures on a site, as well as to the contiguous rooms they contain (e.g., Structure 1, Room 2). The excavation of structural elements will begin by digging an exploratory trench completely across the room. The initial exploratory trench will be mechanically excavated or hand excavated by grid unit to provide controlled samples and cross sections of the deposits. In some cases, this procedure will be repeated, perpendicular to the initial trench, to provide additional information on the filling processes. The exploratory cross section(s) will be mapped and the nature of the fill defined. Remaining fill will be excavated by quadrant determined by the locations of grid lines or exploratory trench(es) and will not always be the same size.

At least one quadrant, whether cultural or noncultural in nature, will be excavated by the defined strata. This method provides a sample of materials associated with these strata, allowing for a more comprehensive understanding of the filling sequence. The quadrant(s) selected for sampling will be assumed to provide the most information. Factors that determine quadrant(s) selection include the presence of representative strata, obtaining a representative sample of associated materials, and the discretion of the site supervisor. Remaining fill will be removed without screening, though artifacts will be collected when observed.

Excavation will be halted approximately 5 cm above the floor to prevent damage to its surface during excavation. At this time, the grid system will be reestablished to permit more systematic sampling of materials near or in direct contact with the floor surface. This arbitrary layer, referred to as floor fill, will be removed by grid unit and screened through 1/8-inch mesh. Finer control in recovering materials from these contexts was necessary since they are the most likely to have been deposited at or soon after the time of abandonment. Artifacts in direct contact with the floor surface will be mapped, collected, and assigned an FS number unique from the floor fill level.

Following complete excavation of a structure, architectural details will be recorded on a series of forms.

Building elements and construction methods encountered during excavation will be mapped, described, and sampled for species identification or chronometric data. Descriptions of individual rooms will include information on wall dimensions, construction materials and techniques, and associated features. In addition, scaled plan and profile maps of each structure will be drawn, detailing the locations of rooms and internal features, and any other details considered important. A series of 35 mm black-and-white photographs will be completed for each structure showing its overall form, individual rooms, construction details, and the relationship of features with other architectural elements. In addition, photographs (including 35 mm color slides and digital images) will be taken at the discretion of the site supervisor documenting the excavation process.

Site Documentation Methods

Site-specific master lists will track the sequential identification numbers of all trenches, excavation areas, features, strata, and photographic exposures. As noted above, an FS list will be maintained to catalog all artifacts and samples recovered from the site.

Information to be recorded for all excavation units, features, and structures will include sediment descriptions using a Munsell Color Chart and standard geomorphological descriptors, notes on artifact variety and frequency, evidence of disturbance, horizontal and vertical locations and associations, excavation technique, and temporal associations. Written descriptions will be recorded on standardized forms. Plan, profile, and elevation drawings will include a scale, north arrow, and key to abbreviations and symbols. A final site map will document excavation limits, architectural and other cultural features, and modern features adjacent to the excavation area.

Excavation records will include photographs of the features, taken during and at the conclusion of excavation. Photographs will include a metric scale, north arrow, and label board with the LA and feature number and date. Photographs will also be taken of the general site and of selected excavation units and all features found within the units.

Geomorphological Field Methods

During the geomorphological examination of the exposed sediments, detailed technical drawings of selected cross sections will be recorded to document fill characteristics, subfeatures, artifact content, and condition in an effort to determine the source of the fill.

Charcoal samples for radiometric analysis will be recovered from strata that are best positioned to provide chronometric data on potentially the earliest and latest use periods of the sampled features.

Archaeobotanical Sampling

This sampling procedure is primarily adapted from Toll and McBride (2000), although it is focused on the sampling of residential sites. It is helpful to recognize a fundamental difference between floral data collected in soil samples and virtually every other artifact category. Standard field procedure now dictates collection and curation with provenience information of every artifact encountered during most excavation situations; sampling of this universe may take place later in the lab. Doing the equivalent for botanical materials would mean bringing home the entire site, a ludicrous proposition. This makes every soil sample collected in the field a sampling decision. Samples not taken are generally gone forever. On the other hand, a systematic decision to sample widely and intensively to guard against such information loss can generate hundreds or even thousands of unanalyzed samples. Lacking infinite time and resources, we must try to garner maximal information from judicious sampling.

Two aspects hallmark the most effective sampling protocols: awareness of which depositional contexts are most productive of floral remains, and recognition of site areas from which subsistence data will be of most interpretive use for the research foci of the project. Both are fundamentally selection processes.

The following guidelines for sampling specific provenience categories provide some simple directives for choosing flotation and pollen sampling locations.

Excavators should concentrate on covering the most informative contexts. By coping with less informative proveniences with minimal sampling (a small number of well-placed samples), we can maintain the option of sampling more complex and informative proveniences in greater detail, generating finer scale information where it will be appropriate and helpful.

Prime among differentiated, potentially informative contexts are intact interior floor surfaces protected by fill and roof fall. If structures are encountered, sampling multiple locations on interior floors contributes data for mapping cultural activities involving plant materials. This patterning informs on the organization of economic and cultural behavior at a household level. Analogous exterior surfaces, such as extramural work areas with associated cooking and storage features, are of equal interpretive interest, but tend to have very poor preservation of perishable remains, and consequently do not merit intensive sampling.

Trash fill and roof fall, voluminous and originating from cultural behavior, are of considerable interest as an entity. Except in the rare case of a burned roof falling intact on the floor below and being quickly covered by protective fill, horizontal differences in floral debris are really only a sampling problem. Sampling from contexts without good cultural affiliation (for example, disturbed areas) will be minimized.

Botanical samples from floors can be a very important source of information, especially when taken from around thermal features. However, data from other work areas that might not be as well defined is also desired. For a clearer picture of what plant materials are associated with specific work areas, we need samples from floor contents unassociated with feature concentrations. The best way to ensure adequate coverage is to take samples from alternate grids with the idea that analysts will later be able to select floor loci that will represent major activity areas, as well as one or more controls.

A single sample will be taken from near the bottom of primary deposits in interior features. Multiple samples will only be taken when primary deposits are clearly stratified. Samples may be taken from secondary deposits, with the understanding that they do not reflect the function of the feature itself. Single 2-liter samples will also be taken from roof fall zones, and from trash deposits, if well-linked to a later or continuing occupation of the site.

Extramural features will be sampled in the same way as features inside structures: a single sample will be taken from near the bottom of primary deposits, and multiple samples will only be obtained when primary deposits are clearly stratified. Outbuildings like cellars, sheds, or stables are particularly important because of their association with the storage of plant foods for people and/or livestock. Floor fill will be sampled for these types of nonresidential structures, and multiple samples will be taken if warranted (for instance, if a shelf or banco is present). Stables and extramural middens will be sampled similarly. In both cases, a single 2-liter sample will be obtained from each clearly definable cultural stratum. If the sample is large enough and was taken accurately from the proveniences it is meant to represent, multiple samples from the same stratum are redundant. Archaeobotanical samples may be collected from highly specific contexts such as thermal or refuse deposits rich in organic material. It is expected that only a small number of samples may be collected during the excavation. Pollen sampling will complement or accentuate the above-described methods.

Human Remains

Human remains were discovered during both the data recovery and the monitoring phases of the encompassing First Judicial District Courthouse Complex project, and a site-specific burial excavation permit is being requested out of caution for the District Attorney Complex renovation project. If human remains are encountered, the following process will be implemented. On all lands of the State of New Mexico and on all private lands in the State of New Mexico, state law (NMSA Chapter 18-6-11.2, 1989 and HPD Rule 4 NMAC 10.11) requires a permit for excavation of unmarked burials. Following the permit provisions, if human remains are discovered, HPD and City of Santa Fe law enforcement will be notified. Upon release of the burial as a potential crime-scene, excavation of the burial will begin. OAS will work with Santa Fe

County, HPD, and any descendant consultants to determine a disposition plan. If a final report cannot be completed within a year of the completion of fieldwork, an interim report will be submitted along with an estimated completion date for a final report.

Isolated Human Bones. When an isolated and disarticulated human bone or bones are recognized in context and we have clearance to proceed from the applicable agencies, the element(s) will be located vertically and horizontally on a detailed plan map and photographed. The plan will include a point plot number and sufficient detail to determine the orientation, possible associations, and whether the interment was natural or intended. The excavator will pay exceptional attention to recording observations that may be pertinent to interpreting how the element came to rest in this location. Any evidence of rodent, insect, root, carnivore, or other types of disturbance will be recorded in detail. If large numbers (10 or more) of disarticulated or partially articulated human bones are found, the excavation will stop until personnel trained in human osteology can aid in the excavation. If human bones are found in the screen, excavation in that unit will be conducted by trowel until it is determined that it is indeed an isolated incident.

Human Burials. As soon as a burial is suspected and is sufficiently exposed, calls to the appropriate agency officials will be initiated. Once these officials have concurred with the excavator, the following procedures will be followed.

To the extent possible, the burial pit will be defined by clearing the area of the pit and sufficient working space to a uniform level as near the point of origin of the pit as possible. During this clearing the excavator will observe and record any information pertinent to the origin of the pit with respect to other features and surfaces at the site. Grid corners or other datums for use in locating the burial in three dimensional space will be established. Once an outline has been defined, the pit will be photographed.

Once the pit is defined, a line will be established though the center of the long axis and half of the pit will be excavated. Fill will be carefully removed with tools that will not damage the bone. Broad-tipped bamboo and wooden tools are preferred along with fine-tipped metal tools. Pointed wooden tools leave marks that are more difficult to distinguish from old marks than those left by metal tools that leave a black or metal signature. To the extent possible, bones will be left in place, excavating only enough to expose the outline of the element. A profile along the pit axis will be drawn. This may have to be in stages, progressing as the entire burial is exposed and layers of elements are removed. Pollen and flotation samples will be taken from near the head and in the stomach area.

Once the profile is recorded, the other half of the pit will be excavated, again exposing the bones only to the extent necessary for recording the burial. When the burial is adequately exposed, digital and black-and-white photographs will be taken. These photos will record the burial from a number of angles, including directly above to help clarify the field drawings. A detailed plan of the burial, burial goods, areas of disturbance, and aspects of the pit will be drawn and, when possible, a print of the digital photograph will be extensively annotated.

Forms that will be completed concerning the burial include the usual feature form to detail the attributes of the burial pit, fill, and other information in the same format as other pit excavations. The OAS Burial Form, which is completed for every burial, incorporates the following information: project, site, recorder, and other tracking information; detailed provenience information, details concerning the grave or feature where the burial was found (relationship to primary feature, placement in the feature, soil matrix the feature or grave is excavated into, pit description, dimensions, construction, sealing or plugging, pit fill description); characteristics of the burial (whether it is primary, secondary, etc., details concerning the body position and orientation of the individual); details concerning the position of each major element or part (e.g., left leg and foot); estimates as to the age and sex of the individual; comments concerning the preservation of the bone and any disturbance noted during the excavation; a list of all material recovered from the burial excavation both as point plots and screening; the size of screen used and how much fill was screened through that size; and a list of all plans, plots, photographs, and other documentation. Another set of forms, the Human Field Inventory and Disturbance, lists each bone or type of bone (e.g., right ribs) and records the presence, type of disturbance, and location of disturbance.

During the recording process, bones will be removed carefully without excessive cleaning and wrapped

in acid-free tissue. Related elements, e.g., the left arm bones, will be placed in bundles, especially when fragmentary, to aid in identification of small fragments. These will be placed in an individual box containing only the burial and transported to locked storage at OAS.

Personnel and Schedule

The fieldwork schedule will be determined by the architectural design and construction schedule for the renovations. Santa Fe County currently anticipates that architectural design for Area 1 will be completed to guide the data recovery excavations in that area by mid-June 2016. Data recovery in that area will need to be completed by mid-September 2016. Monitoring in areas 2 and 3 will be determined by the contractor's construction schedule and may not occur until spring 2017. The data recovery plan described in this document will be implemented by OAS. Eric Blinman will serve as the project's principal investigator. Jessica A. Badner will serve as the project director and will supervise the daily excavation proceedings, laboratory procedures, and report production activities. Curriculum vitae for these project staff are on file with HPD. Ann L. W. Stodder will supervise any burial excavation, if required.

An OAS operational archaeologist will serve part-time in a dual role as laboratory director and as crew chief. OAS basic archaeologists and laborers will fill the roles of crew members. Laboratory and report production tasks (as discussed below) are anticipated to proceed through June 2018, at which time we expect to submit artifacts and records to the Archaeological Research Collections of the Museum of Indian Arts and Culture.

Archival studies have already been completed for this project as part of the encompassing studies of the First Judicial District Courthouse Complex (Snow and Barbour 2011).

Laboratory Analysis Methods and Procedures

When brought in from the field, the FS logs and bags will be compared, and the artifacts will be washed or cleaned, sorted, and catalogued. Artifacts and samples will be temporarily curated at the OAS laboratory during analysis and will be prepared for permanent curation.

Laboratory analysis will be conducted by the staff of OAS and by specialized professional consultants, where necessary. Analysis procedures will follow the standards established by OAS, many of which have been developed for historic sites in the Northern Rio Grande area. These discussions are primarily adapted from Moore (2000).

Ceramic Analysis

Pueblo-made ceramics recovered by the excavations will be analyzed at the Office of Archaeological Studies laboratory. Both historic and lesser amounts of prehistoric Native American-made pottery may be recovered, in addition to a range of Euroamerican ceramics. Euroamerican ceramics will be analyzed as part of the historic artifact analysis.

Detailed and systematic examination of various attributes is needed to fully determine the timing and nature of the deposits and features that may be exposed by the excavations. Ceramic studies may contribute to these studies by using distributions of ceramic types and attribute classes from dated contexts to examine patterns related to ethnic affiliation, place of origin, form, and use of ceramic vessels. In order to examine these issues, it is necessary to record a variety of data in the form of both attribute classes and ceramic type categories. These technological and stylistic attributes apply to pottery from all periods.

Attribute categories used in this study are similar to those employed in recent OAS projects in the Northern Rio Grande (Wilson 2004). All sherds will be examined and recorded for temper type, paint type,

surface manipulation, modification, and vessel form, and the results will be entered into a computerized database for analysis and interpretation.

Traditional typologies will be used to classify sherds where possible. Examples of known typologies for Ancestral Puebloan pottery that will be employed include the Rio Grande, Jemez, Pajarito, Galisteo, and Pecos series (as defined by Habicht-Mauche 1993) for matte-paint pottery. For Ancestral Puebloan and early historic Pueblo glaze-paint pottery, the Rio Grande Glaze Ware series as defined by Mera (1940) and refined by Warren (1979) will be employed. For the late Ancestral Puebloan and historic Pueblo matte-paint pottery traditions, the Tewa series as defined by Harlow and revisited by McKenna and Miles (1990) will be used. In addition, recent efforts by OAS analysts will be incorporated into both prehistoric and historic pottery-based dating (Wilson 2000).

Other studies planned for data recovery involve more detailed characterizations of selected subsamples of sherds. Such studies will include analysis of refired paste color, petrographic characterizations, design style, and construction methods. Studies of the distributions of these descriptive attributes will be used to examine various issues discussed below.

Trends that reflect chronology and economic patterns can also be examined using ceramic type categories. Ceramic types, as used here, refer to groupings identified by various combinations of paste and surface characteristics with known temporal, spatial, and functional significance. Sherds are initially assigned to specific traditions based on the probable region of origin as indicated by paste and temper. They are then placed in a ware group on the basis of general surface manipulation and form. Finally they are assigned to temporally distinctive types previously defined within various tradition and ware groups.

While a number of historic Tewa ceramic types have been formally defined and described (Batkin 1987; Frank and Harlow 1990; Harlow 1973; Mera 1939), most of these type definitions are based on whole vessels and tend to emphasize decorated types. Historic Tewa decorated types are often distinguished from each other by characteristics such as overall design field or shape that are only observable in complete vessels. Such distinctions are of limited use in studies of pottery from archaeological assemblages, which tend to be dominated by plain-ware sherds. Thus, this analysis will focus on the definition and use of sherd-based categories more suitable for sherd collections.

Sherd-based definitions of historic Tewa types have been used to examine historic archaeological assemblages (Dick 1968; Lang 1997; D. Snow 1982). In addition, a number of descriptive categories have been proposed for sherds that exhibit ranges of characteristics that differ from those used to define types from whole vessels. These categories are defined by a range of characteristics that may be ultimately connected to but are not necessarily equivalent to types previously defined for whole vessels. The degree of correlation between vessel and sherd-defined categories varies for sherds from vessels of the same type, and depends on how much stylistic or decorative information is present. For example, unpainted sherds from a Powhoge Polychrome vessel would be placed into an Unpainted Historic Slipped category, while sherds exhibiting some paint but without distinct decorations would be classified as "Tewa" Black-on-cream undifferentiated. In such cases, the assignment of sherds to Powhoge Polychrome would be limited to examples with distinct design styles indicative of that type. Still, a broken vessel of a specific pottery type should produce a recognizable pattern of sherds assigned to various formal and informal types. Information on this type of patterning may be derived from looking at how types are assigned to sherds that are eventually reconstructed into whole or partial vessels.

Most informal types reflect a range of characteristics indicative of sherds derived from vessels of previously defined types or groups of types. These characteristics are often self-evident in the type name. They are not described in detail here because of the preliminary nature of this study and the relatively small number of sherds examined. The ceramic report produced from this study will include detailed descriptions of all sherd-based historic types recognized during the project, as well as illustrations and discussions of combinations of characteristics observed for each type. These descriptions will be presented in a manner that should serve as an important source of information for future analysis of historic Northern Rio Grande pottery.

Examination of very basic ceramic patterns may be most efficiently served by creating a small number

of ceramic ware groups by lumping types that share characteristics. Such groups include Decorated "Tewa" Polychrome, red-slipped utility, plain utility, black utility, and micaceous utility, as well as a non-local group. The use of these basic broad categories will permit determination of coarse-grained patterning in ceramic assemblages, as opposed to the more basic patterning available from type distributions.

Flaked Stone Analysis

Flaked stone identification and analysis will be conducted by OAS staff. Flaked stone artifacts will be examined using a standardized analysis format (OAS 1994a). This analytic format includes a series of mandatory attributes that describe material, artifact type and condition, cortex, striking platforms, and dimensions. In addition, several optional attributes have been developed that are useful for examining specific questions. This analysis will include both mandatory and optional attributes. While originally developed for prehistoric lithic assemblages, it has been adapted to include the range of morphological and functional variability representative of Spanish Colonial assemblages.

The primary areas our analysis format explores are material selection, reduction technology, and tool use. These topics provide information about ties to other regions, mobility patterns, and site function. While material selection studies cannot reveal how materials were obtained, they can usually provide some indication of where they were procured. A study of mobility patterns is not integral to this project, but our analysis of the flaked stone assemblages will provide baseline data useful for evaluating information from other sites. By studying the reduction strategy employed at a site it is possible to compare how different cultural groups approached the problem of producing useable flaked stone tools from raw materials. The types of tools in an assemblage can be used to help assign a function and to aid in assessing the range of activities that occurred at a site. Flaked stone tools provide temporal data in some cases, but unfortunately they are usually less time-sensitive than other artifact classes like pottery and wood.

Flaked stone artifacts will be examined using a binocular microscope to aid in defining morphology and material type, examine platforms, and determine whether it was used as a tool. The level of magnification will vary between 20- and 100-power, with higher magnification used for wear pattern analysis and identification of platform modifications. Utilized and modified edge angles will be measured with a goniometer; other dimensions will be measured with a sliding caliper. Analytic results will be entered into a computerized database for analysis and comparison with others on file at the OAS.

Attributes that will be recorded for all flakes, angular debris, cores, and tools include material type, material quality, artifact morphology, artifact function, amount of surface covered by cortex, portion, evidence of thermal alteration, edge damage, and dimensions. Other attributes are aimed specifically at examining the reduction process, and can only be obtained from flakes. They include platform type, platform width, evidence of platform lipping, presence or absence of opposing dorsal scars, and distal termination type.

Ground Stone Analysis

Ground stone tools may be recovered from contexts dating to the late nineteenth century. It is expected that ground stone tools will inform on frontier acculturation. Ground stone identification and analysis will be conducted by OAS staff.

Ground stone artifacts will be examined using a standardized methodology (OAS 1994b), which was designed to provide data on material selection, manufacturing technology, and use. Artifacts will be examined macroscopically, and results will be entered into a computerized database for analysis and interpretation. Several attributes will be recorded for each ground stone artifact, while others will only be recorded for certain tool types. Attributes that will be recorded for all ground stone artifacts include material type, material texture and quality, function, portion, preform morphology, production input, plan view outline, ground surface texture and sharpening, shaping, number of uses, wear patterns, evidence of heating, presence of residues, and dimensions. Specialized attributes that will be recorded in this assemblage include information on mano cross-section form and ground surface cross section.

By examining function(s) it is possible to define the range of activities in which ground stone tools were used. Because these tools are usually large and durable, they may undergo a number of different uses during their lifetime, even after being broken. Several attributes are designed to provide information on the life history of ground stone tools, including dimensions, evidence of heating, portion, ground surface sharpening, wear patterns, alterations, and the presence of adhesions. These measures can help identify post-manufacturing changes in artifact shape and function, and describe the value of an assemblage by identifying the amount of wear or use. Such attributes as material type, material texture and quality, production input, preform morphology, plan view outline form, and texture provide information on raw material choice and the cost of producing various tools. Mano cross-section form and ground surface cross-section are specialized measures aimed at describing aspects of form for manos and metates because as these tools wear, they undergo regular changes in morphology that can be used as relative measures of age.

Historic Artifact Analysis

Euroamerican artifacts that are recovered will be examined using a standardized analysis format (OAS 1994c). OAS analysis format and procedures have been developed over the last 10 years and incorporate the range of variability found in sites dating from the eighteenth to twentieth centuries throughout New Mexico. The detailed recording allows for direct comparisons with assemblages from contemporary sites from other parts of New Mexico and throughout the greater Southwest. Analytical results will be entered into a computerized database for analysis and comparison with others on file at OAS.

The main emphasis will be the identification of artifact function. One of the major benefits of this type of analysis is that "the various functional categories reflect a wide range of human activities, allowing insight into the behavioral context in which the artifacts were used, maintained, and discarded" (Hannaford and Oakes 1983:70). It also avoids some of the pitfalls of an analytic framework that focuses on categorizing artifacts by material type. Material-based analyses frequently include attributes that are appropriate for only some of the functional categories that might be included in a single material class. For instance, variables that are often chosen for analysis of glass artifacts are usually appropriate for glass containers, but may be inappropriate for flat glass, decorative glass, or items like light bulbs.

This analytic framework was designed to be flexible, which hopefully enables it to avoid these and other problems. The function of each artifact is described by a hierarchical series of attributes that classifies it by functional category, type, and specific function. These attributes are closely related, and provide a chain of variables that will specify the exact function of an artifact, if known.

Ten functional categories will be used in this analysis including economy/production, food, indulgences, domestic, furnishings, construction/maintenance, personal effects, entertainment/leisure, communication, and unassignable. Each category encompasses a series of types, and includes classes of items whose specific functions may be different but are related. An example is a pickle jar and a meat tin, both of which would be included in the food category, but which are made from different materials and had different specific functions.

The exact use to which an artifact was put will be recorded as a specific function within a type. In essence, this attribute represents a laundry list of different kinds of artifacts that may be familiar to most analysts, and is the lowest level of the identification hierarchy. Other variables are recorded to amplify the hierarchy of functional variables, and to provide a more detailed description of each artifact that warranted such treatment. Included in this array of attributes are those that provide information on material type, dating, manufacturer, and what part(s) is represented.

Chronological information is available from a variety of descriptive and manufacturing attributes, and especially from the latter. If the array of available variables provides enough information to assign beginning and ending dates to an artifact, it is recorded in the date attribute. Manufacturer is the name of the company that made an artifact, when known. This type of information can be critical in assigning a specific date to an artifact, because dates for the opening and demise of most manufacturing companies are available. A related attribute is the brand name associated with a product. Many brand names also have known

temporal spans. At times, the manufacturer or brand name can be determined from the labeling/lettering present on an artifact, which was used to advertise the brand name or describe its contents or use.

The technique used to manufacture an artifact will be recorded when it can be determined. Because manufacturing techniques have changed through time, this attribute can provide a relative idea of when an artifact was made. A related attribute is seams, which records the way in which sections of an artifact were joined during manufacture. Like manufacturing techniques, the types of seams used to construct an artifact are often temporally sensitive. The type of finish/seal will be recorded to describe the shape of the opening in a container and the means of sealing it. Many finishes and seal types have known temporal spans of limited duration. Related to this attribute is opening/closure, which records the method of retaining or extracting the contents of a container.

In some instances, attributes such as color, ware, and dimensions can provide information on artifact dating. Thus, the current color of an artifact will be recorded if of diagnostic value. A good example of where this attribute applies is glass, where the various colors present at a site can be used to provide some idea of age. Ware refers to ceramic artifacts, and categorizes the specific type of pottery represented, when known. Because temporal information exists for most major ware types, this attribute can provide critical dating information. Dimensions are also of chronologic value, especially when examining artifacts like nails or window glass, where lengths or thicknesses vary through time.

A few attributes will be used to provide information on the manufacturing process. In some instances these attributes also have descriptive value, and can be used to verify functional information. "Material" records the material(s) from which an artifact was made. "Paste" describes the texture of clay used to manufacture ceramic objects, and is differentiated by porosity, hardness, vitrification, and opacity. "Decoration" describes the technique used to decorate an artifact, including pottery. A simple description of the decoration on an artifact is recorded as "Design."

In addition to most of the attributes already discussed, several others will be used to provide a more comprehensive description of each artifact. Fragment/part describes the section of artifact represented. Artifacts or fragments of artifacts within a single excavation unit whose functions and descriptions are identical will be recorded together, and the number of specimens present will be listed under count.

Cultural and environmental changes to an artifact will also be recorded. Reuse describes evidence of a secondary function, and any physical modifications associated with that use will be described as condition/modification. If environmental conditions have had any effect on the surface of an artifact, it will be recorded as aging.

Other variables will be used to describe the appearance of an artifact. "Shape" describes physical contours, and will generally only be recorded if an artifact is whole. Several different measurements will be taken to complete descriptions including volume, length/height, width/diameter, thickness, and weight. Measurements will be taken using industry standards, where appropriate. The entire range of measurements are rarely applicable to a single artifact, and only those that are deemed appropriate will be taken.

Faunal Remains Analysis

Faunal remains will be analyzed at the Office of Archaeological Studies osteology laboratory. Specimens from proveniences chosen for analysis will be identified using the OAS comparative collection, supplemented by that at the Museum of Southwest Biology when necessary. Recording will follow an established OAS computer-coded format that identifies the animal and body part represented, how and if the animal and part was processed for consumption or other use, and how taphonomic and environmental conditions have affected the specimen. Each data line will be assigned a lot number that identifies a specimen or group of specimens that fit the description recorded in that line. Lot numbers also allow for retrieving an individual specimen if questions arise concerning coding or for additional study. A count will also be included to identify how many specimens are described in a data line.

Taxonomic identifications will be made as specific as possible. When an identification is less than certain, this will be indicated in the certainty variable. Specimens that cannot be identified to species, family,

or order will be assigned to a range of indeterminate categories based on the size of the animal and whether it is a mammal, bird, other animal, or cannot be determined. Unidentifiable fragments often constitute the bulk of a faunal assemblage. By identifying these as precisely as possible, information from the identified taxa is supplemented.

Each bone (specimen) will be counted only once, even when broken into a number of pieces during excavation. If the break occurred prior to excavation, the pieces will be counted separately and their articulation noted in a variable that identifies conjoinable pieces, parts that were articulated when found, and pieces that appear to be from the same individual. Animal skeletons will be considered single specimens so as not to inflate the counts for accidentally and intentionally buried taxa.

The skeletal element will be identified then described by side, age, and portion recovered. Side will be recorded for the element itself or for the portion recovered when it is axial, such as the left transverse process of a lumbar vertebra. Age will be recorded at a general level: fetal or neonate, immature, young adult, and mature. Further refinements based on dental eruption or wear will be noted as comments. The criteria used for assigning an age will also be recorded. This will generally be based on size, epiphysis closure, or texture of the bone. The portion of the skeletal element represented in a particular specimen will be recorded in detail to allow determination of how many individuals are present in an assemblage and to investigate aspects of consumer selection and preservation.

Completeness refers to how much of each skeletal element is represented by a specimen. It will be used in conjunction with portion to determine the number of individuals present. It will also provide information on whether a species is intrusive, and will inform on processing, environmental deterioration, animal activity, and thermal fragmentation.

Taphonomy is the study of preservation processes and how they affect the information obtained by identifying some of the nonhuman processes that affect the condition or frequencies found in an assemblage (Lyman 1994:1). Environmental alteration includes degree of pitting or corrosion from soil conditions, sun bleaching from extended exposure, checking or exfoliation from exposure, root etching from the acids excreted by roots, and polish or rounding from sediment movement, when applicable. Animal alteration will be recorded by source or probable source and where it occurs.

Burning, when it occurs after burial, is also a taphonomic process. Burning can occur as part of the cooking process, part of the disposal process, when bone is used as fuel, or after it is buried. Here, the color, location, and presence of crackling or exfoliation will be recorded. Burn color is a gauge of burn intensity. A light tan color or scorch reflects superficial burning, while bone becomes charred or blackened as the collagen is carbonized. When the carbon is completely oxidized, it becomes white or calcined (Lyman 1994:385, 388). Burns can be gradated over a specimen, reflecting the thickness of the flesh covering portions of the bone when burned. Dry burned bone is light on the exterior and black at the core or has been burned from the interior. Graded burns can indicate roasting. Completely charred or calcined bone and dry burns do not occur as part of the cooking process. Uniform degrees of burning are possible only after the flesh has been removed and generally indicate a disposal practice (Buikstra and Swegle 1989:256).

Evidence of butchering will be recorded as various orientations of cuts, grooves, chops, abrasions, saw cuts, scrapes, peels, and intentional breaks. This type of evidence is much less ambiguous in historic assemblages where metal knives, axes, and cleavers leave more distinct marks than stone tools. The location of butchering will also be recorded. Additional detail will be obtained by indicating the exact location on diagrams of the body parts.

Fauna recovered from historic sites is typically so fragmented that few attempts have been made to collect measurement data. Yet this information has the potential to differentiate varieties of sheep and goat, perhaps distinguish beef from draft cattle, and differentiate species of equids, along with the social and economic consequences thereof. Because this data has such potential, all possible measurements will be taken on domestic fauna. Measurements will be taken following von den Driesch (1976), who provides a comprehensive list of measurements for virtually every element. While this project may not provide enough data to confidently answer questions concerning the varieties represented, it may contribute to a useful database for comparisons with earlier and later sites.

Human Remains Analysis

Human remains will be analyzed by Ann L. W. Stodder. The human analysis will follow the procedures set out in Standards for Data Collection from Human Skeletal Remains (Buikstra and Ubelaker 1994). This comprehensive system focuses on the need to gain the maximum amount of comparable information by recording the same attributes using the same standards. Documentation on how these should be recorded includes the following information:

1. A coding procedure for each element that makes up a relatively complete skeleton is provided. Diagrams of skeletons and anatomical parts allow for the location of any observations concerning these parts. Another form codes commingled or incomplete remains.
2. Adult sex is determined by examining aspects of the pelvis and cranium. Age changes are documented on the pubic symphysis using two sets of standards, on the auricular surface of the ilium, and through cranial suture closure.
3. For immature remains, the age-at-death is determined by scoring epiphyseal union, union of primary ossification centers, and measurements of elements.
4. Recording of dental information includes an inventory, pathologies, and cultural modifications. Each tooth is coded and visually indicated for presence and whether it is in place, unobservable, or damaged, congenitally absent, or lost premortem or postmortem. Tooth development is assessed, occlusal surface wear is scored, caries are located and described, abscesses are located, and dental hypoplasias and opacities are described and located with respect to the cemento-enamel junction. Any premortem modifications are described and located.
5. The secondary dentition is measured and dental morphology scored for a number of traits.
6. Measurements are recorded for the cranium (n = 35), clavicle, scapula, humerus, radius, ulna, sacrum, innominate, femur, tibia, fibula, and calcaneus (n = 46).
7. Nonmetric traits are recorded for the cranium (n = 21), atlas vertebra, seventh cervical vertebra, and humerus.
8. Postmortem changes or taphonomy are recorded when appropriate. These include color, surface changes, rodent and carnivore damage, and cultural modification.
9. The palaeopathology section groups observations into nine categories: abnormalities of shape, abnormalities of size, bone loss, abnormal bone formation, fractures and dislocations, porotic hyperostosis/cribra orbitalia, vertebral pathology, arthritis, and miscellaneous conditions. The element, location, and other pertinent information is recorded under each category.
10. Cultural modifications such as trepanation and artificial cranial deformation are recorded in another set of forms.

Buikstra and Ubelaker (1994:174) recommend curating the following samples for future analysis on burials that will be repatriated: the middle portion of a femur midshaft (at least 100 g) that can be used for radiocarbon dating, trace element analysis (diet), stable isotope ratios (climate and diet), strontium (population movement), bone geometry (activity patterns), histomorphometry (age and health), and aspartic acid analysis (age and health); several teeth (the upper central incisor, lower canines and premolars, and lower second molar) for histomorphometric analysis, cementum annulation (root), aspartic acid (dentin), isotope studies (enamel), and future studies of linear hypoplasias and enamel microwear patterning; 5 g of trabecular bone for DNA extraction; the middle third of a clavicle and rib six for age-at-death, health studies, and morphological age assessments; and finally, two sections of the right femur and one section each of the humerus or CT scans of both to assess the level and type of behavior. No samples will be collected without the express permission of the landowner.

Archaeobotanical Analysis

Macrobotanical studies conducted by OAS under the direction of Pamela J. McBride will include

flotation analysis of soil samples, species identification, morphometric measurement of macrobotanical specimens (where appropriate), and species identification of wood specimens from both flotation and macrobotanical samples. Flotation is a widely used technique for the separation of floral materials from the soil matrix. It takes advantage of the simple principle that organic materials (and particularly those that are nonviable or carbonized) tend to be less dense than water, and will float or hang in suspension in a water solution. Each soil sample is immersed in a bucket of water. After a short interval allows heavier sand particles to settle out, the solution is poured through a screen lined with "chiffon" fabric (approximately 0.35 mm mesh). The floating and suspended materials are dried indoors on screen trays, then separated by particle size using nested geological screens (4.0, 2.0, 1.0, and 0.5 mesh) before sorting under a binocular microscope at 7- to 45-power magnification.

This basic method was used as long ago as 1936, but did not become widely used for recovery of subsistence data until the 1970s. Seed attributes such as charring, color, and aspects of damage or deterioration are recorded to help in determining cultural affiliation versus post-occupational contamination. Relative abundance of insect parts, bones, rodent and insect feces, and roots help to isolate sources of biological disturbance in the ethnobotanical record.

All macrobotanical remains collected during excavation will be examined individually, identified, repackaged, and catalogued. Condition (carbonization, deflation, swelling, erosion, damage) will be noted as clues to cultural alteration, or modification of original size dimensions. When less than half of an item is present, it will be counted as a fragment; more intact specimens will be measured as well as counted. Corn remains will be treated in greater detail. Width and thickness of kernels, cob length and mid-cob diameter, number of kernel rows, and several cupule dimensions will be measured. In addition, the following attributes will be noted: overall cob shape, configuration of rows, presence of irregular or undeveloped rows, and post-discard effects.

Pollen samples selected for analysis will complement or accentuate the above-described strategies. Analysis will be conducted by a contracted professional palynologist experienced with prehistoric and historic sites in New Mexico, and particularly, New World domesticates. Pollen analysis methods are not presented here, because they may vary depending on the analyst. The full range of methods that may be applicable to the identification of New and Old World domesticate pollen will be explored in consultation with contract specialists and specialists that are on the OAS staff.

Chronometric Dating

Chronometric samples may be collected and used to define the occupation sequence if other means fail to provide sufficient data. Absolute dating methods that may be used in this project include dendrochronology, archaeomagnetism, and radiocarbon assays. Other relative dating methods that will be used, particularly ceramic stylistic and technological variation and historic artifact manufacture dates and archival records, are discussed in the appropriate analytical sections.

Dendrochronology produces extremely precise and accurate dates when appropriate samples are available. Ideal samples should have 15 to 20 years of growth rings, a sensitivity to climate variation that allows the sample to be matched with the regional chronology of climatic variation, qualities of outer surface that allow the outer ring to be interpreted as the death year of the tree, and an archaeological context that supports a linkage between tree death and the cultural behavior that is the target event of the dating effort. Tree-ring dating is most reliable when multiple samples are collected from structural remains where timbers were cut to length. Although construction timber reuse and stockpiling can cause inaccuracies (Graves 1983), patterns of dates from multiple samples usually reveal the presence of remodeling or reuse of wood. Although wood samples from nonarchitectural contexts can be dated, samples from fuel wood in hearth contexts risk the same "old wood" problem that affects radiocarbon samples (Smiley 1985). The University of Arizona Tree-Ring Laboratory in Tucson is the preeminent laboratory for this method and they will be used if dendrochronological samples are recovered.

Archaeomagnetism does not have either the potential precision or accuracy of tree-ring dating, but it

does have other advantages. Heating allows the field orientations of magnetic particles in earth or rock to become reoriented to the prevailing geomagnetic field when the particles cool (Sternberg 1990; Wolfman 1990). Because the geomagnetic field is constantly changing, features that are burned and cool will retain a distinctive magnetic orientation that is determined by the date of the cooling. Whereas tree-ring dating works best at recording the dates of construction events, archaeomagnetic dates apply to the final use of burned or puddled features, and this procedure is one of the only dating techniques that can inform about abandonment events.

Archaeomagnetic samples are collected from burned cultural features. The orientation of the sample is measured in the laboratory, and the geomagnetic pole recorded by the feature is compared with the regional pattern of polar movement through time. Problems with archaeomagnetism stem from both measurement factors and interpretation factors, both of which can affect the precision and exclusivity of date interpretations. The precision of a given result is determined by the coherence of the orientations of the individual specimens (usually eight) that make up the sample. Variables affecting coherence include the type, size, and density of magnetic minerals in the earth, the temperature of burning, and any sources of post-depositional disturbance of the feature. Even a very coherent result may have imprecise or multiple date interpretations based on the intersection of the result's oval of confidence with the polar curve for the region. A time of particularly slow polar movement can result in a broad date range, or a region of the pole that is transected by several segments of the polar curve will result in multiple possible date ranges. When an archaeomagnetic sample results in multiple date ranges, independent dating evidence will be required to determine which of the possible date ranges is correct. The greatest advantage of this technique is that the sampled material is usually unambiguously related to the component being dated, but potential ambiguity of the technique requires that it be used in conjunction with other sources of chronology. The Office of Archaeological Studies Archaeomagnetic Laboratory directed by Eric Blinman will be used if appropriate contexts are encountered.

Radiocarbon dating has similar limitations as the first two methods, but it has the advantage that carbon is one of the most abundant materials in archaeological contexts (Taylor 2000). Plants incorporate carbon into their tissues through photosynthesis, drawing on the pool of carbon in the atmosphere. Radioactive isotopes of carbon produce cosmic radiation in the upper atmosphere, resulting in a relatively constant proportion of carbon-14 in the atmospheric pool. When plant tissue is no longer actively incorporating carbon, the amount of radioactive carbon declines at a rate consistent with the relatively short half-life of the isotope. The measured amount of radioactive carbon in a sample, the expected amount given the assumed atmospheric pool concentration, and the half-life value for the isotope can be used to calculate a radiocarbon age for the sample. Precision of radiocarbon age estimates is determined by the measurement error associated with determining the radioactive isotope contents. However, the assumption of a constant value for the carbon-14 pool concentration has been shown to be inaccurate, and the radiocarbon age of a sample can only be translated into a calendric age estimate by comparison with carefully derived calibration curves (Stuiver and Reimer 1993). These curves reflect fluctuating pool values, increasing dating accuracy but affecting both precision and exclusivity of radiocarbon date interpretations. A single precise date expressed in radiocarbon years can yield an imprecise calendar date or multiple possible calendar date ranges.

Independent of the technical aspects of dating, radiocarbon samples are not unambiguously associated with cultural contexts. Although unburned organic materials deteriorate in most archaeological sites, charcoal is inert, and once it is produced, it is only subject to physical damage. Most charcoal results from heating and cooking fuel, but it can also result from the burning of structures and artifacts. Individual pieces of charcoal rarely carry any qualities that can be unambiguously related to a particular cultural event, therefore the integrity of potential samples is dependent on feature contexts. If samples are collected from potentially disturbed contexts, then the resulting dates can only be interpreted in relation to other independent dates. Other problems with radiocarbon dating are the "old wood" issue previously mentioned for dendrochronology and cross-section effects. Long-dead (dry) wood tends to be harvested for fuel, and on southwestern landscapes, standing dead trees may be sources of fuel for centuries after their

death (Smiley 1985). In addition, slow-growing species, such as piñon and juniper, can incorporate centuries of growth into small branches (cross-section effect). These qualities can result in erroneously early radiocarbon dates, even though the sampled material is unambiguously associated with a particular cultural feature and behavior. To lessen the potential risks of these problems, the charcoal selected for dating can be sorted by species and plant part. Small twigs or branches contribute less to cross-section effects because they incorporate fewer years of growth and they persist for shorter periods on standing dead trees. Annual plants and perennial shrubs are better material for radiocarbon dating because they incorporate carbon over smaller numbers of years and are not likely to survive on the landscape a long time after dying. Care in collecting, selecting, and characterizing radiocarbon samples will increase their relevance to particular cultural contexts, but the other limitations of the technique and date interpretation will constrain use and interpretation in some contexts. OAS uses BetaAnalytic, Inc., of Coral Gables, Florida, for all radiocarbon dating analyses.

Unanticipated Discoveries and Site Monitoring

Upon the completion of data recovery field work in Area 1, site monitoring of construction activities in Areas 2 and 3 will be carried out by an OAS archaeologist. Site monitoring will occur immediately prior to and during earth-disturbing actions within the portions of the site identified to receive this treatment. In the event of unanticipated discoveries of significant material or features (either during the intentional monitoring, or during unmonitored construction), all construction activities will be halted in the vicinity of the discovery. HPD will be notified to discuss the nature of the discovery and the proposed treatment. Treatments to be applied to significant unanticipated discoveries will follow the feature-specific approaches and general excavation procedures described in this data recovery plan. Results of the monitoring and treatment of unanticipated discoveries (if any) will be reported in the final project report.

Research Results and Project Curation

Preliminary and final reports on the data recovery program, to include any data recovery work conducted in the First Judicial District Courthouse Complex parcel, will be published by the Office of Archaeological Studies in the Archaeology Notes series. These reports will describe the site investigations, report the analysis results, and present interpretive summaries. They will include photographs, site and feature maps, and data summaries. Field maps and notes, analytical data sheets, and photographs will be deposited with the Archeological Records Management Section of the New Mexico Historic Preservation Division. Artifacts will be curated at the Museum of New Mexico Archaeological Research Collection facility. Upon project completion, a popular article will be prepared. We expect reporting and repository submission to be complete by June 2018.

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