

**AN ARCHAEOLOGICAL INVENTORY OF ADDITIONAL  
AREAS ASSOCIATED WITH THE PROPOSED U.S. 287  
LAMAR BYPASS IN PROWERS COUNTY, COLORADO**

by

**Erik M. Gantt  
Christian J. Zier**

**Prepared for**

**Colorado Department of Transportation  
Environmental Programs Office  
Denver, Colorado**

**Prepared by**

**Centennial Archaeology, Inc.  
300 East Boardwalk, Building 4-C  
Fort Collins, Colorado 80525**

**(Principal Investigator: Christian J. Zier)**

**CDOT Project No. C 2871-026**

**November 2003**

## Colorado Cultural Resource Survey

### Cultural Resource Survey Management Information Form

*Please Complete this form and attach a copy behind the Table of Contents of each standard survey report*

#### I Project Size

|  |                              |
|--|------------------------------|
| Total federal acres in project: _____        | Acres surveyed: _____        |
| Total state acres in project: _____          | Acres surveyed: _____        |
| Total private acres of project: <u>1,041</u> | Acres surveyed: <u>1,041</u> |
| Other: <u>Prowers County</u> : _____         | Acres surveyed: _____        |
| Total acres surveyed <u>1,041</u>            |                              |

#### II Project Location

County: Prowers Principal Meridian 6<sup>th</sup>

USGS 7.5' Quad map name(s) and date(s): Lamar East, Colo. (1953 Photorevised 1979)

NOTE: The legal location information below is meant to summarize the location of the survey and does not need to be precise.

Township: 22S Range: 46W Sec: 19, 20, 21, 30, 32, 33, 34

Township: 22S Range: 47W Sec: 24, 25

Township: 23S Range: 46W Sec: 4, 17, 19, 20, 29, 30, 31, 32

#### III. Sites

| Smithsonian Number | Resource Type |            |                 |         | Eligibility |              |           |                        | Management Recommendations |                |         |      |          |                   |       |
|--------------------|---------------|------------|-----------------|---------|-------------|--------------|-----------|------------------------|----------------------------|----------------|---------|------|----------|-------------------|-------|
|                    | Prehistoric   | Historical | Paleontological | Unknown | Eligible    | Not Eligible | Need Data | Contributes to NR Dist | No Further Work            | Preserve/Avoid | Monitor | Test | Excavate | Archival Research | Other |
| NONE               |               |            |                 |         |             |              |           |                        |                            |                |         |      |          |                   |       |

#### IV. Isolated Finds

Please note that by definition IFs are not eligible to the National Register and require no further work.

| Smithsonian Number | Resource Type |            |                 |         |
|--------------------|---------------|------------|-----------------|---------|
|                    | Prehistoric   | Historical | Paleontological | Unknown |
| NONE               |               |            |                 |         |

## ABSTRACT

Centennial Archaeology, Inc., under contract to the Colorado Department of Transportation, conducted an intensive archaeological inventory along additions to the right-of-way (ROW) for the proposed U.S. 287 bypass around Lamar, Colorado. Additionally, two small parcels within the originally proposed ROW where permission to enter had only recently been received were surveyed. The total acreage surveyed was 1,041, all of which is privately owned land. At this time the entire proposed corridor has been surveyed for cultural resources. Fieldwork was carried out between October 29 and 31 and November 12, 2003. No sites or isolated finds were recorded during the current inventory. It is recommended that, prior to construction, a 3-mile segment of the route on the south side of the Arkansas River be subjected to discontinuous, deep backhoe trenching. This segment traverses a dune field that may contain buried archaeological materials.

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## **INTRODUCTION**

### **Project Description and Objectives**

The Colorado Department of Transportation (CDOT) is planning to construct a bypass on U.S. 287 around the city of Lamar, Colorado (Figures 1 and 2). This project is intended to improve traffic safety by reducing the current volume of truck traffic along the main street through the city. The preferred corridor, located on the eastern side of Lamar, extends approximately 9 miles from the southern end near County Road (C-C), north across the Arkansas River, and connects to State Highway (SH) 196 on the northern side of Lamar. The northern end of the corridor varies between 1500 and 2400 ft wide (Figure 2, Sheet 1), the central portion of the corridor varies between 600 and 1500 ft wide (Figure 2, Sheet 2 and Sheet 3), and the southern end of the corridor varies between 600 and 1700 ft wide (Figure 2, Sheet 4). A single centerline has been developed for the corridor, except for a 1.25-mile segment starting at SH 196 and running south to just south of the Arkansas River. This segment has a double centerline. Three interchanges are proposed: the north interchange, the east interchange, and the south interchange (Figure 2, Sheets 1, 2, 4).

An archaeological inventory of the project corridor, as initially identified by CDOT, was conducted by Centennial Archaeology, Inc. (Centennial) in February of 2003 (Gantt et al. 2003). The current inventory reflects changes in the original corridor configuration. Archaeological investigations conducted by Centennial included both Class I archival research and Class III field survey. Specifically, survey was conducted of three large additions to the original project corridor, and on two small parcels where permission to enter had previously been denied. The additions to the project corridor and the two small parcels within the original corridor cover 1,041 acres, all of which were surveyed. All lands within the current inventory are privately owned.

The objectives of the cultural resource investigations are: (1) to provide Class I inventory data, and to familiarize the archaeological study team with the existence of prior inventories and previously recorded sites that might be affected by the project; (2) to conduct a Class III inventory of the corridor for archaeological and historical sites; and (3) to assess all sites per eligibility criteria of the National Register of Historic Places (NRHP) and determine the nature of project impacts to sites. The scope of the project did not include all historic sites. Major historic sites such as irrigation canals, railroads, trails and standing structures are to be documented under a separate inventory by Steven F. Mehls of Western Cultural Resource Management, Inc.

### **Administrative Data**

Archaeological investigations were conducted by Centennial Archaeology, Inc. under contract to CDOT, Denver, Colorado. Daniel A. Jepson of the CDOT Environmental Programs Office acted as a liaison between Centennial and CDOT and provided direction to Centennial throughout the project. Christian J. Zier was the principal investigator for Centennial. Erik M. Gantt acted as field

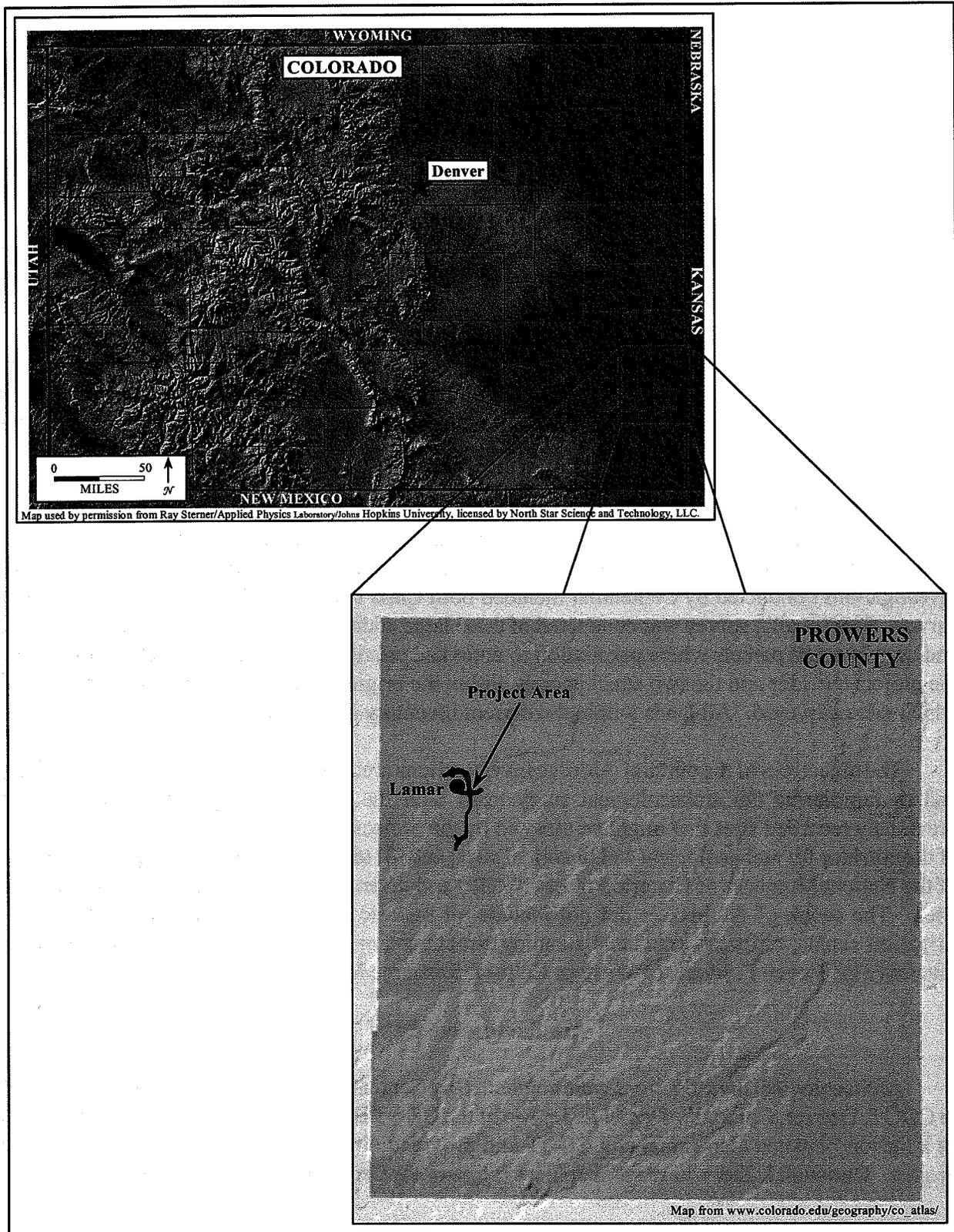


Figure 1. Map of Colorado with inset of Prowers County showing project location.

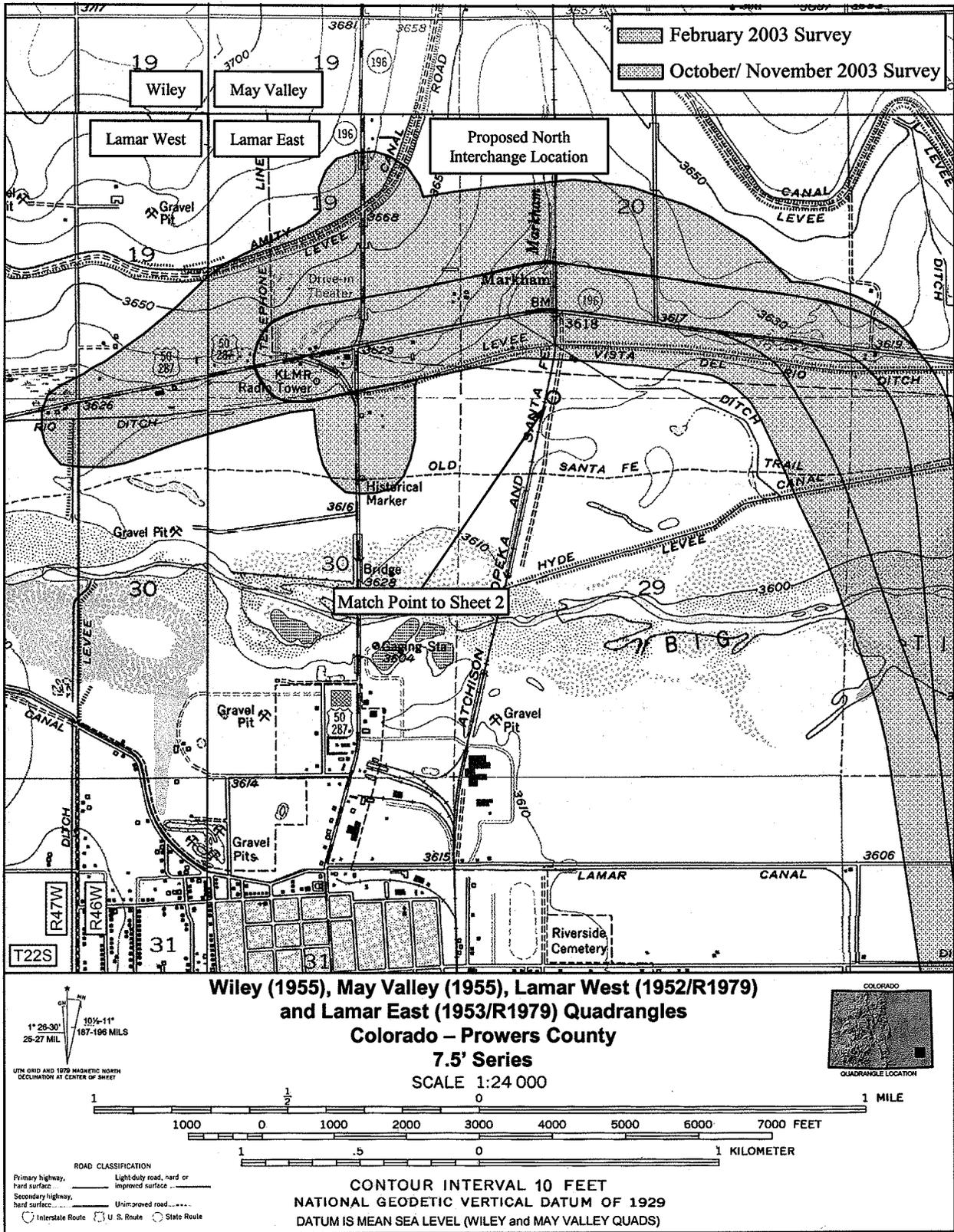


Figure 2, Sheet 1. U.S. 287 Lamar Bypass, map of northern portion of project area.

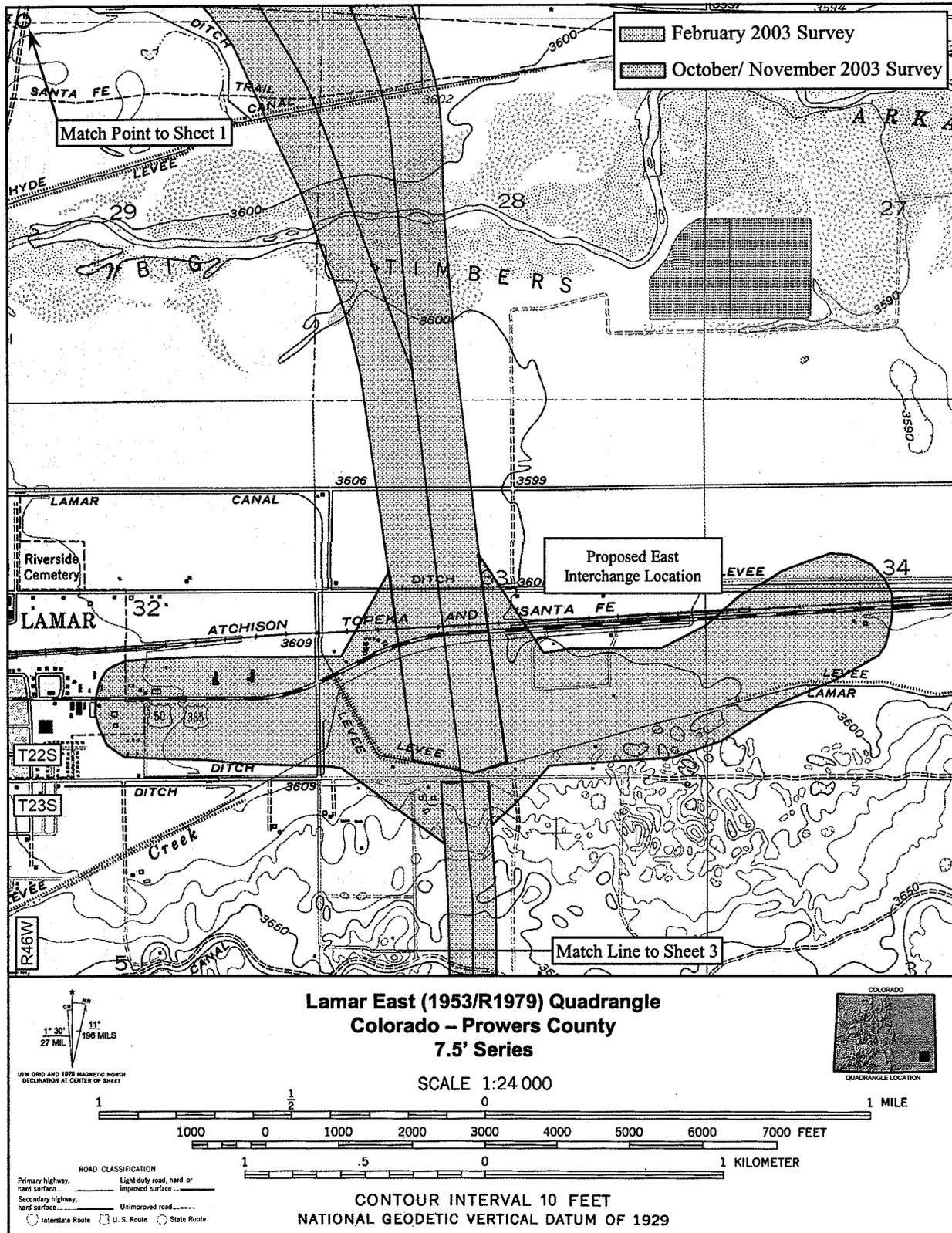


Figure 2, Sheet 2. U.S. 287 Lamar Bypass, map of north-central portion of project area.

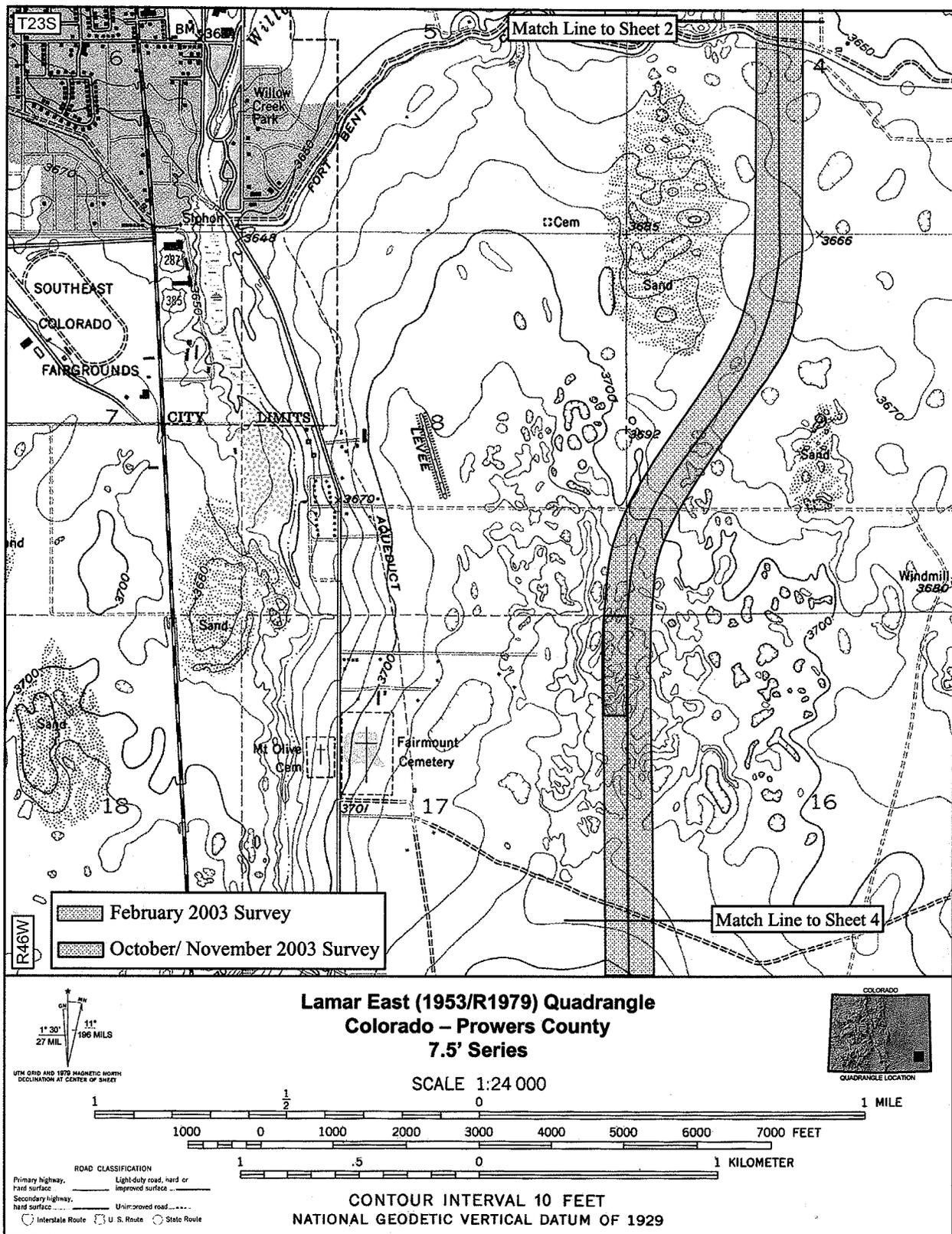


Figure 2, Sheet 3. U.S. 287 Lamar Bypass, map of south-central portion of project area.

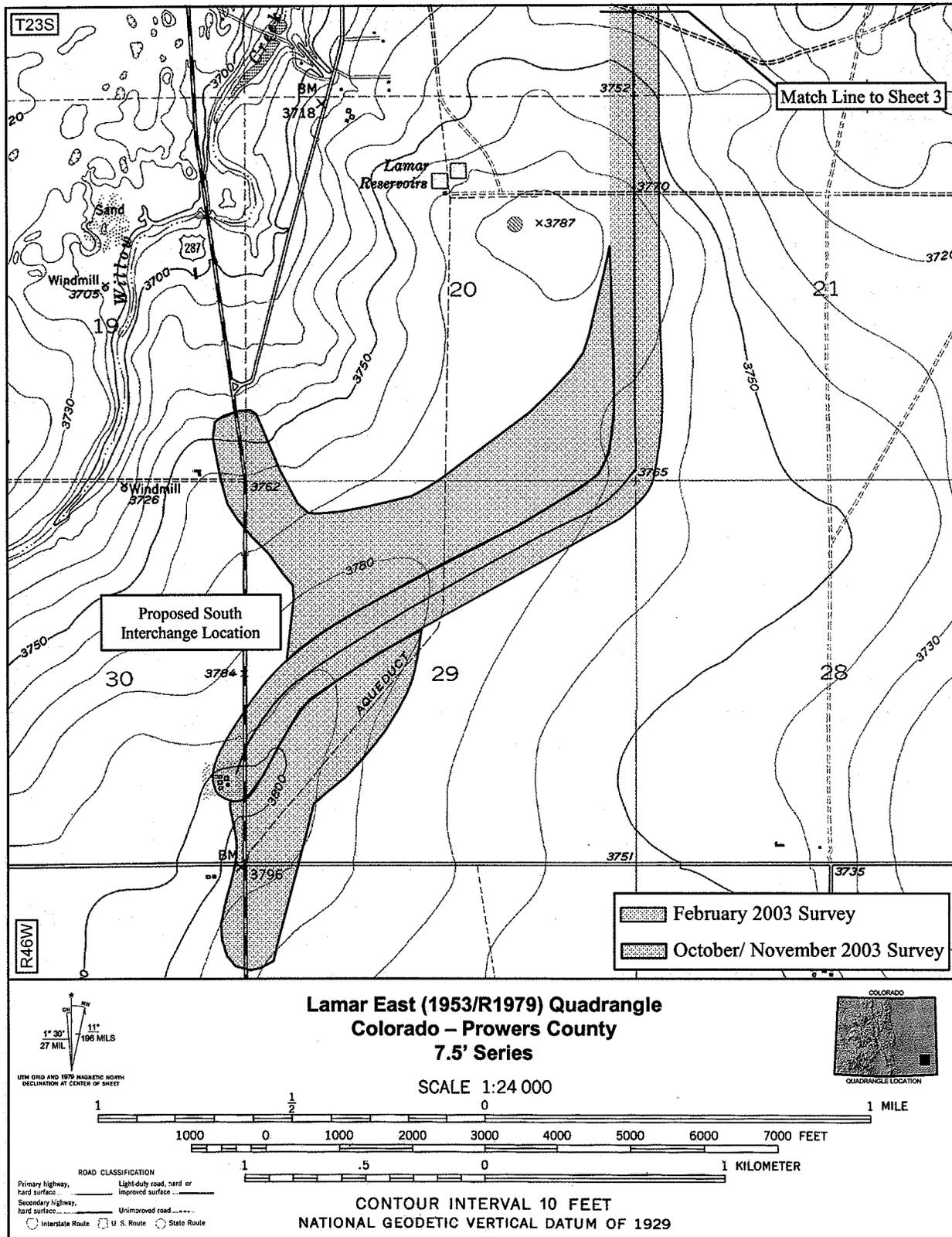


Figure 2, Sheet 4. U.S. 287 Lamar Bypass, map of southern portion of project area.

director and was assisted by crew members Mark Johnson, Gregory Wolff, and Brian Jill. The field inventory was conducted during the period of October 29 - 31, 2003, and November 12, 2003. Original photographic negatives and other project records are retained in the permanent files of Centennial Archaeology, Inc., Fort Collins, Colorado. No artifact collection was conducted.

## **ENVIRONMENTAL SETTING**

### **Climate**

The project area is located in the Arkansas River Valley in southeastern Colorado. The climate of southeastern Colorado is classified as dry continental, and is characterized by low relative humidity, abundant sunshine, low rainfall, moderate to high winds, and a wide range in temperatures. Daily summer maximum temperatures are often above 90° F and winter minimum temperatures often fall below 32° F. For all months except January and December the mean daily maximum is above freezing. The first and last freezes occur in mid-October and early May, respectively ([www.weatherbase.com](http://www.weatherbase.com)).

Average precipitation in the area is about 15.1 inches per year ([www.weatherbase.com](http://www.weatherbase.com)). Approximately three-quarters of the annual precipitation occurs from April through September. Most of the summer precipitation is associated with thunderstorms, while most of the winter and early spring precipitation is in the form of snow. Relative humidity in southeastern Colorado is typically low, averaging on an annual basis 35% in the afternoon and 60% in the early morning. Wind speeds average approximately nine miles per hour; strong winds frequently occur and are most common in the winter and spring. During dry periods, stronger winds can produce dust storms. The most frequent winds are from the west, east-southeast, east, and north (USFS 1993:3-3).

### **Land Use**

Most of the proposed U.S. 287 Lamar Bypass corridor is on private land, but State of Colorado and Prowers County lands are also crossed. Lands surveyed in October and November 2003 are 100% private. Land use along the route includes residential lots, urban commercial lots, both non-irrigated and irrigated farmland, rangeland, and natural areas adjacent to the Arkansas River.

### **Flora**

The vegetation communities occurring within the proposed corridor include prairie grasslands and riparian woodlands (USFS 1993:3-11). The dominant grassland type is shortgrass prairie, with some areas of midgrass prairie also evident. Shortgrass prairie includes predominantly blue grama grass, and in some places buffalo grass. Other species include western wheatgrass, sand dropseed, alkali sacaton, threeawn and bluestem (USFS 1991). Midgrass prairie is usually dominated by sideoats grama, sand lovegrass, bluestem grasses and switchgrass. When climatic conditions are especially favorable, the grasses tend to be taller and exhibit a "bunchgrass" profile. Sandsage and

yucca are common in most of the midgrass areas (USFS 1991). Overgrazing in the prairie grasslands has led to an increase of yucca and other cacti, and an invasion of annual grasses such as bromes, fescues and barleys (Barbour and Billings 1988).

Although the areas crossed by the proposed corridor are dominated by grasslands, several other vegetation types are present in the drainages. Riparian woodlands are found along stream channels and are dominated by cottonwood and willow. Herbaceous plants, such as sedges, may be found in the understory of wooded riparian areas. The key riparian area occurs along the Arkansas River (USFS 1993:4-8).

Agricultural lands have supplanted these native vegetative communities in various segments along the proposed corridor.

### **Fauna**

Each of the habitat types that occurs within the project area supports characteristic faunal species, resulting in a wide diversity of wildlife. Higher species diversity is found where several habitats coincide or overlap.

The grassland habitats crossed by the proposed corridor have been dramatically impacted by both agriculture and overgrazing. However, they still sustain species that include black-tailed prairie dog, long-billed curlew, ferruginous hawk, burrowing owl, lesser prairie chicken, mountain plover and Cassins sparrow (USFS 1993:3-10). The prairie dog, key among these species, has lost vast amounts of viable habitat to modern activity. This has, in turn, resulted in the reduction of other species dependent on the prairie dog colonies, such as black-footed ferret and prairie rattlesnake. Pronghorn antelope are also found within the study area and avail themselves of the winter range that the grassland habitats provide.

Riparian settings typically support the greatest wildlife diversity of any local habitat. The proposed project corridor crosses the Arkansas River, a stream characterized by high, early summer flows and low flows during the remainder of the year. Although much of the water is diverted from this stream for irrigation, it does support limited recreational warm water fisheries. Carp, black bullhead, channel catfish and sunfish are the most important fish to anglers. Other species found in the Arkansas River include the white sucker, flathead chub, sand shiner, fathead minnow, longnose dace, stoneroller, and plains killfish (Colorado Division of Wildlife 1982; USFS 1993:3-11).

A complete list of species that have been inventoried for Comanche National Grassland is applicable to this project area and includes 19 fish, 12 amphibians, 33 reptiles, 277 birds and 59 mammals (USFS 1993:3-9).

## **Geology, Topography and Soils**

The study area is located in the lower Arkansas River Valley of southeastern Colorado, along the approximate boundary between the High Plains Section (to the east) and the Colorado Piedmont section (west) of the Great Plains Physiographic Province (Osterkamp and Gustavson 1987). The lowest elevations in Colorado occur in the valley; they vary between 3600 ft and 3800 ft in the study area, and descend to a low of 3350 ft at the state line. The lower valley is flanked on either side by rocks of Upper Cretaceous age. To the north is the Niobrara Formation, which consists of shales and limestones, while to the south are Carlile Shale, Greenhorn Limestone, and Graneros Shale. A band of Quaternary dunes up to several miles wide borders the inner valley on the south side of the Arkansas River. The modern river channel traverses Holocene alluvial deposits (Tweto 1979).

## **CULTURAL BACKGROUND**

### **Prehistoric Synopsis**

The prehistory of southeastern Colorado has recently been synthesized in a single volume by Zier and Kalasz (1999). The brief culture history that follows, which is abstracted from that volume, is based on data from throughout the Arkansas River drainage basin but emphasizes the area east of the Rocky Mountain front. Three principal stages of human development – Paleoindian, Archaic, and Late Prehistoric – are identified. Each stage has three internal subdivisions called periods.

### **Paleoindian Stage**

The Paleoindian stage dates 11,500-7800 B.P. (before present) and is partitioned into the Clovis, Folsom, and Plano periods. A Pre-Clovis period of uncertain time depth (> 11,500 B.P.) has been hypothesized for the New World generally, and there is tantalizing but very limited evidence of early human occupation from both North and South America. While sites of possible pre-Clovis age do occur in northeastern Colorado (Dutton, Selby, Lamb Spring), there is no such evidence in the Arkansas River Basin.

Perhaps for reasons relating mainly to geomorphology and preservation, only limited indications of Paleoindian occupation have been unearthed in southeastern Colorado. Much of what we know about human adaptation during this time, therefore, is based on data from neighboring regions, particularly northeastern New Mexico and the South Platte River Basin of northeastern Colorado. The Clovis period dates 11,500 - 10,950 B.P., with most dated Clovis sites falling within a much tighter, ca. 300-year span from 11,200 and 10,900 B.P. The Clovis period coincides approximately with the initial slackening of Pleistocene climatic conditions, during which time conditions became generally drier and warmer. A vast system of Pleistocene pluvial lakes that developed in western North America during the late Pleistocene turned seasonal as water tables gradually dropped. Grasslands began to expand in eastern Colorado although the flora generally consisted of a mixture of tall- and shortgrass prairies with spruce/pine woodlands. Clovis-period inhabitants of the area existed in small, mobile bands and hunted mammoth, other now-extinct

Pleistocene fauna, and many smaller species, utilizing riverine and lacustrine environments. The archaeological hallmark of the Clovis period is the Clovis projectile point, a large, lanceolate, basally fluted dart point. Clovis toolkits are diverse, and consistently exhibit high-quality lithic materials procured from distant sources.

The subsequent Folsom period dates 10,950 - 10,250 B.P. The climatic shifts that began in the Clovis period continued, resulting in overall warming but also increased seasonality featuring warmer summers and, perhaps, colder winters. Conditions in general were cooler than those of the present day but began to approach modern levels by the end of the period. Eastern Colorado exhibited a mixture of tall- and shortgrass prairies with deciduous woodlands along permanent watercourses. A process of Pleistocene megafaunal extinctions that was begun in Clovis times was largely complete by the end of the Folsom period; and, while overall mammal species diversity was reduced, the ranges of certain grassland-adapted species, such as bison and antelope, increased significantly. Folsom-age demographics were like those of the Clovis period, with small bands of hunter-gatherers exploiting well-watered areas in an increasingly arid environment. Folsom sites are often associated with small-scale kills (up to 25 animals) of a now-extinct form of bison, but an array of smaller mammal forms was exploited as well. Folsom projectile points are smaller than Clovis but exhibit fluting along nearly the length of the blade on both faces. Folsom toolkits are highly diverse and display a range of both formal and expedient forms, and like Clovis show a preference for high-quality lithic materials from widely distributed sources.

During the Plano period, dated 10,250 - 7800 B.P., essentially modern climatic conditions prevailed. Eastern Colorado by 10,000 B.P. had evolved into a land of semiarid to arid, shortgrass prairie with deciduous woodlands along principal streams – a description that could be applied to the area today. Bison continued to diminish in size but increased in absolute numbers and enjoyed an expanded range as grasslands proliferated. Human occupants of eastern Colorado and surrounding areas responded to Plano environmental conditions by becoming highly specialized bison hunters, developing communal hunting techniques that at times resulted in the killing 200 or more animals in a single event. The Plano period is characterized by a series of temporally and geographically overlapping projectile point traditions, and while a good deal of morphological variability is apparent in Plano assemblages, points continued to be generally large and well-made, often from high-quality, non-local materials. Lithic assemblages generally appear as an outgrowth of Folsom industries, but with even greater morphological, and perhaps functional, variability. Bone tools figure prominently into Plano artifact assemblages, but are largely expedient in nature.

### **Archaic Stage**

The Archaic stage has bracketing dates of 7800 - 1850 B.P. and is subdivided into Early, Middle, and Late periods. The Early Archaic period, 7800 - 5000 B.P., is broadly associated with the Altithermal climatic event, a ca. 2500-year period of relatively hot and arid conditions over the western United States. Conditions in eastern Colorado were at least as dry as those of the present, with shortgrass and sagebrush-yucca prairies dominating the landscape. The biomass of plant and animal communities was substantially reduced over that of even the latest Paleoindian period. Early

Archaic sites are uncommon in the vast region surrounding the upper Arkansas River Basin, and are virtually unknown in southeastern Colorado east of the mountain front. Sites of this age do occur in the foothills and mountains, but archaeologists are uncertain if these sites are the manifestation of plains-to-mountains migrations or represent a pre-existing, *in situ* high-altitude cultural tradition. Projectile points of Early Archaic age, where found on the plains, are generally large with low, shallow side notches. High-altitude points sites also yield side-notched points, often serrated, but have also produced stemmed-indent base points as well as other forms.

During the Middle Archaic period, 5000-3000 B.P., climatic conditions are believed to have become more mesic, with wetter and cooler conditions prevailing. Conditions were similar to those of present, and indeed essentially modern flora and fauna were present in the area as evidenced in assemblages from archaeological sites. The climate does not appear to have been static, however; geomorphic evidence indicates that episodes of sand dune activation and dormancy occurred throughout the Middle Archaic and well in to the Late Archaic period, suggesting that fluctuations in effective moisture occurred. Eastern Colorado was fully reinhabited in Middle Archaic times, with sites occurring in a broad range of ecological settings. Both open and sheltered sites are present, and certain favored localities appear to have been occupied repeatedly by small hunter-gatherer bands. Many Middle Archaic sites exhibit substantial, overlying Late Archaic deposits, and in some cases stratigraphically higher materials of Late Prehistoric age. The Middle Archaic economy featured exploitation of a broad range of plant and animal resources from the many niches that comprise the eastern Colorado environment. The Middle Archaic period is associated technologically with dart points of the McKean complex, characterized as both stemmed-indent base and lanceolate forms. Other styles coexist temporally with McKean types, and as was the case in the Early Archaic period, considerable variability exists in the foothills and mountains. The lithic industry of this period may be characterized generally as a combination of intensive and un-intensive core reduction of usually locally-available materials, with assemblages displaying a mixture of formal and expedient tools.

The Late Archaic period, 3000 - 1850 B.P. (A.D. 100), appears in most respects to be a simple outgrowth of the previous period. Virtually all of the ecological niches that were occupied and exploited during the Middle Archaic were still utilized, in many cases more intensively; as noted above, a pattern of reuse of specific sites spans the Middle - Late Archaic boundary. Significant environmental changes are not apparent, and the essentially modern floral and faunal assemblages of Middle Archaic archaeological sites in the region are virtually unchanged in the Late Archaic. While some eolian movement during this time is evident, geomorphic data in general show that regimes of alluvial deposition prevailed, suggesting climatic stability. The fundamental hunter-gatherer economy of previous periods appears unchanged, although there is good evidence that the cultigen maize (corn) entered the area sometime during the Late Archaic. The Late Archaic period witnessed a florescence of projectile point styles with recurrent morphological themes of stemming and corner notching. All are dart points. Late Archaic projectile points from the mountains are less distinct morphologically from plains/foothills counterparts than in earlier periods. Despite a more

comprehensive body of data for the Late Archaic period, lithic industries are virtually indistinguishable from those of the Middle Archaic over most of the Arkansas River Basin.

### **Late Prehistoric Stage**

This final stage of human occupation spans the 1850 - 225 B.P. (A.D. 100 - 1725) time range and is broken into the Developmental, Diversification, and Protohistoric periods. The starting date for the Late Prehistoric stage coincides with the earliest appearance of the bow and arrow, which supplanted the atlatl and dart within a few centuries. The Developmental period, which runs 1850 - 900 B.P. (A.D. 100 - 1050), may be characterized generally as a time when new technologies were superimposed on a well-established Archaic mode of existence. Ceramic technology appears in southeastern Colorado during the early-to-middle part of the Developmental period, following the introduction of the bow and arrow by several centuries. Eastern Colorado during the first millennium A.D. was probably somewhat cooler and wetter than at present although departures from modern conditions were not at all dramatic. Plant and animal remains from archaeological sites throughout the area indicate exploitation of species that are found in the area today. Maize increases in frequency in archaeological contexts but still comprised a very small component of the human diet, and it does not appear that significant changes in the hunter-gatherer economy occurred. Indeed, Developmental period sites tend to occur in the same areas habituated by Middle and Late Archaic peoples, although the sheer volume of cultural materials suggests greater population densities. Open and sheltered architectural sites begin to appear with some regularity (especially the latter), but are nowhere as common as in the subsequent period. Projectile point size is dramatically reduced with the shift from dart to arrow use; shape is less changed, as small corner-notched forms become common. In most other ways, Developmental period chipped stone technology appears to be a continuum of that associated with the Archaic stage.

Two distinct but related cultural traditions are apparent in the Diversification period, which dates 900 - 500 B.P. (A.D. 1050 - 1450). Both traditions are believed to have evolved from a local population base and do not represent influxes of new people, although some relationships with outside groups are apparent. Climatically, there is evidence that progressively xeric conditions affected eastern Colorado and in particular the adjacent southern plains sometime after A.D. 1000, and although the timing of this climatic deterioration has been argued, stress-inducing conditions were apparently severe enough that the plains portion of the Arkansas Basin in Colorado was abandoned by human populations sometime between A.D. 1400 and 1500. The first tradition, known as the Apishapa phase, was centered in the canyon country of the lower Purgatoire, Apishapa, and other rivers entering the south side of the Arkansas River in southeastern Colorado; it also extended north along the Front Range as far as the vicinity of present Fort Carson Military Reservation. Its bracketing dates coincide with those of the Diversification period. Apishapa occupation is archaeologically salient due to the presence of abundant architectural remains, highly variable in morphology but usually involving dry-laid masonry. Sites tend to be clustered and suggest semi-sedentism (but not true villages), and perhaps a greater level of social organization that existed in earlier times. The economy still was rooted in hunting and gathering of locally available resources, but with maize horticulture as a supplement or hedge against failure of traditional foods.

Bison were a major food source on the plains, and communal bison kills are known to have occurred. Lithic assemblages are generalized and do not vary significantly from those of the preceding Developmental period; they tend to reflect the broad-spectrum nature of the Apishapa economy. Small-side notched arrow points are abundant at many Apishapa sites. A common and highly varied bone tool industry was also in place. Ceramics are common at some sites and absent or rare at others, and nearly always consist of cord-marked wares of the sort that were widespread at this time on the high plains.

The second cultural tradition of the Diversification period, the Sopris phase, dates A.D. 1050 - 1200. Sopris phase habitation in southeastern Colorado is associated with the Park Plateau and thus extends into northeastern New Mexico; in Colorado it is best known from the Trinidad Lake area near the city of Trinidad. Sopris peoples inhabited multiroom masonry structures that were distinctly Southwestern in appearance, and produced a diversity of ceramic wares that include types with both high plains and Puebloan Southwest associations. A dual subsistence strategy was practiced that included hunting and gathering on the one hand and maize horticulture, supplemented with the raising of beans and squash, on the other. Sopris lithic assemblages tend to be characterized by informally modified flakes struck from prepared cores; prepared bifaces and other formal tools comprise relatively small parts of assemblages. Projectile points are morphologically variable and include small corner-notched, side-notched, tri-notched (base and sides), and unnotched forms. Sopris phase occupation of southeastern Colorado was short-lived. Architecture-dwelling residents of the Park Plateau had abandoned the area by ca. A.D. 1200, at least two centuries prior to the final abandonment of the Apishapa area.

The final period of the Late Prehistoric stage, the Protohistoric, dates 500 - 225 B.P. (A.D. 1450 - 1725). This period encompasses the latter portion of the possibly lengthy episode of xeric climatic conditions described for the Diversification period, and the onset, around A.D. 1650, of substantially cooler and moister conditions (known as the Neo-Boreal or Little Ice Age) that endured until A.D. 1850. The onset of this period corresponds with the hypothesized arrival of Athapaskan groups in the area, and the termination date with the withdrawal of those same groups and concomitant increase in Spanish expeditions and Comanche incursions. Ethnographically, the identifiable Athapaskan (or Apachean) groups in the general area included the Carlana, Penxayes, Cuertelejos, and Palomas. Archaeologically, Apachean occupation is manifested as the Dismal River aspect. Apacheans are believed to have migrated into the central and southern plains from the north - originally, western Canada - although the route(s) and timing of such movements are uncertain. The earliest Apachean groups had a nomadic, hunting and gathering subsistence economy that emphasized bison procurement. There is evidence that, by A.D. 1700, some were practicing maize-beans-squash horticulture. Dwelling types used by Apacheans ranged from hide lodges (tipis) to so-called "rancherias" that could include multiroom masonry structures and semi-subterranean earthlodge-like houses. Little is known of the tool industries, with the exception of pottery. Several ceramic wares may be identified with Apachean habitation and include a series of micaceous types. Projectile points include large dart points (possibly curated) and small, triangular, unnotched and side-notched forms.

## Historic Synopsis

The earlier portion of the historic era, A.D. 1725 - 1867, is dominated by Native American occupation. However, the archaeological manifestation of such occupation is poorly known. Historical records indicate that, in southeastern Colorado, this particular span of time is characterized by successive incursions and withdrawals by various tribes battling for lands beyond the sphere of Spanish protection. The short-lived Ute/Comanche alliance that successfully pushed the Apache south disintegrated by the late 1740s (Anderson 1989). The Comanche subsequently controlled southeastern Colorado until they were pushed south by the Kiowa and Kiowa Apache in the late 1780s (Jones et al. 1998). A later alliance among the Comanche, Kiowa, and Kiowa Apache was, in turn, challenged by Cheyenne and Arapaho entering the region in the first quarter of the nineteenth century. During this rather turbulent period of history, however, trade networks between aboriginal and European groups became well established despite the ongoing hostility. Trade and travel routes such as the Santa Fe Trail prompted the creation of posts and stockades in southeastern Colorado, the most famous of which was Bent's Fort near the modern-day town of Las Animas. Between 1840 and 1855 a number of settlements geared toward trade and agriculture were built in the Arkansas River Basin, including Pueblo, Hardscrabble, Greenhorn, and Huerfano (Anderson 1989; Lecompte 1978).

Most significantly, the Louisiana Territory encompassing lands between Louisiana and the Pacific Ocean passed from Spanish to French and, finally, to United States ownership in 1803. As of 1819 the Arkansas River served as the boundary between Spain and the United States. But shortly thereafter, in 1821, the Mexican revolution ended the region's Spanish rule. Subsequently, the 1844-1848 war fought between the United States and Mexico concluded with the Treaty of Guadalupe-Hidalgo. This treaty enabled the United States to annex land south of the Arkansas River (Anderson 1989:37). Also, despite other treaties designed to avoid conflict with Native Americans, by the middle of the eighteenth century the combined effect of settlers and gold miners began to grate on the various aboriginal groups occupying Colorado. A series of clashes ultimately resulted in the 1864 depredations at Sand Creek, where more than 100 Indian men, women, and children were killed, and the sacking of Julesburg, Colorado by Cheyenne, Arapaho, and Sioux attackers (Anderson 1989). However, the continuous strife, as well as disease and hunger, took their toll on the Native American populations. The Medicine Lodge Treaty of 1867 provided for the final removal of the various plains tribes to reservations located primarily in Oklahoma.

After 1867 the non-Indian settlement of southeastern Colorado progressed rapidly. The Homestead Act and Desert Land Act provided incentives for land ownership, and transportation and communication lines improved dramatically. In particular, the earlier wagon and stage routes began to be replaced by railroads in the 1870s and 1880s. During the early years of this initial settlement period Hispanic settlers from northern New Mexico were prominently represented in the Arkansas River Basin. These people largely practiced subsistence farming and sheepherding. In contrast, Anglo homesteaders tended to be cattle ranchers (Anderson 1989; Murray 1978). Many of the initial settlers were forced out by a combination of droughts, blizzards, and a depressed national economy in the late 1880s and 1890s. Survivors subsequently acquired and consolidated the vacated land

holdings. However, the mining industry during the latter part of the nineteenth century expanded greatly because of the region's steadily improving rail service. "By the year 1900, mines in the Trinidad, Colorado area employed over 8,000 men and the smaller operations at Walsenburg, Colorado around 300" (Murray 1978:59). The coke ovens associated with the town of Cokedale, Colorado are still visible along Highway 12 west of Trinidad, Colorado. Furthermore, as noted by Carrillo et al. (1991:22), in the 1870s the city of Pueblo began to establish itself as an important regional hub, particularly with regard to industrial endeavors:

With the establishment of the Denver and Rio Grande Railroad (D&RG) in 1872 and the Atchison, Topeka, and Santa Fe (AT&SF) in 1876, Pueblo began to profit from its favorable location as a trade center. The railroad facilities, together with the proximity to available ores and fuel, led to the successful development of the iron and steel industry. Pueblo at this time aspired to become the "Pittsburgh of the West" (Van Hook 1933:426, cited by Carrillo et al. 1991:22).

The twentieth century in southeastern Colorado witnessed another influx of settlers between 1916 and 1930, and a continuation of the mining efforts first established in the nineteenth century. The settlers were motivated by the Enlarged Homestead Act of 1909 and the Stock Raising Act of 1916. Such legislation permitted claims of homestead parcels up to 640 acres. The short-lived boom ended because of the effects of the national economic collapse known as the Great Depression, and the drought that led to the infamous "dust bowl" conditions of the region. Again, the ensuing abandonment prompted another period of land consolidation and, in many instances, the reversion of parcels to government ownership.

Mining demands in southeastern Colorado necessitated the recruitment of immigrant laborers from many different countries (Mehls and Carter 1984:II-88). Poor working conditions and low wages prompted considerable labor unrest and the eventual unionization of the work force. A massive regional strike by the United Mine Workers of America (UMWA) in 1913 precipitated clashes among laborers, strikebreakers and the Colorado National Guard which eventually resulted in the violent "Ludlow Massacre" events of 1914 (Mehls and Carter 1984; Painter et al. 2001). Seven men, two women, and 12 children were killed when a UMWA tent colony just north of Trinidad, Colorado was torched and fired upon by the National Guard. Despite the turmoil, mining endeavors continued to prosper until the 1930s when the Great Depression had a pronounced effect on product demand. The downturn was reversed when World War II provided the impetus for increased levels of production. The reversal was short-lived, however, as post-war demands tapered off.

Although energy-related concerns continue to be an economic force in southeastern Colorado, agriculture remains the most significant source of local revenue. Livestock and farming operations, as well as the various storage and transportation enterprises supported by them, are ubiquitous throughout the region.

## CLASS I INVENTORY RESULTS

### File Search Methods and Information Services

Class I research was conducted for the current project at the Colorado Historical Society's Office of Archaeology and Historic Preservation (OAHP) in Denver. This research included a computer file search in February, 2003 for all previous cultural resource inventories and all known prehistoric and historic sites occurring within the proposed route. The Class I data were updated via an on-line file search in October of 2003; no new information was obtained. Known sites were plotted on the USGS 7.5' Lamar East, CO. quadrangle map. All tables and maps generated during Class I research are on file at Centennial Archaeology, Inc. in Fort Collins, Colorado.

### Class I Inventory Summary

#### Known Cultural Resources

Not including the February, 2003 survey of the Lamar Bypass conducted by Centennial Archaeology, Inc. (Gantt et al. 2003) five cultural resource surveys have been conducted previously in or near the project area. Three of these surveys were conducted by CDOT personnel (Angulski 1985; Hand 1998; Wallace 1984), one was by the University of Southern Colorado (Buckles 1980), and one was by Centennial Archaeology, Inc. (Kalasz et al. 2002). Four sites have been recorded previously in or near the project area (Table 1). Two sites are within the project area, namely the Big Timbers Museum and a protohistoric American Indian burial. The other two sites are near the project area but outside the proposed corridor. These sites consist of a segment of the historic Santa Fe Trail and a Late Archaic lithic scatter.

**Table 1. Previously Recorded Cultural Resources in the Vicinity of the U.S. 287 Lamar Bypass Project**

| SITE NO. | SITE TYPE          | AGE           | NRHP STATUS        | In Corridor |
|----------|--------------------|---------------|--------------------|-------------|
| 5PW4     | Lithic Scatter     | Late Archaic  | Unevaluated        | No          |
| 5PW57    | Santa Fe Trail     | Historic      | Field Not Eligible | No          |
| 5PW58    | Big Timbers Museum | Historic      | Field Not Eligible | Yes         |
| 5PW79    | Burial             | Protohistoric | Field Not Eligible | Yes         |

## **FIELD METHODS**

### **Site and Isolated Find Definitions**

A prehistoric site is defined as any locality containing structures or features, or exhibiting five or more artifacts within a restricted area that have an apparent association with one another. A locality with fewer than five artifacts may be defined as a site if there is evidence of buried materials or if the locality has been disturbed and there is evidence that other artifacts have been removed. Localities with four or fewer artifacts and no structures or features are defined as prehistoric isolated finds (IFs). Historic sites are defined as loci of patterned historic activity; these would include structures and structural remnants, trash concentrations or scatters suggesting repeated use of the area, established refuse dumps, and historic linear features such as irrigation ditches, railroads, and trails. Historic IFs are individual artifacts and small clusters of artifacts that are not obviously established refuse dumps. The minimum age for historic sites and IFs is 50 years.

### **Field Inventory Methods**

The additions to the proposed bypass corridor were surveyed in their entirety. With the completion of survey on the two small parcels where permission to enter had recently been granted the entire project corridor has now been inventoried for archaeological resources. The corridor was surveyed by a four-person field crew walking parallel, back-and-forth transects with spacing between individual transects not exceeding 65 ft (20 m).

## **CRITERIA FOR SIGNIFICANCE EVALUATION**

Cultural resources are regarded as significant if they are enrolled in, or meet the eligibility criteria of, the National Register of Historic Places (NRHP). NRHP eligibility criteria are enumerated in 36 CFR 60 and are described as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or,

(b) that are associated with the lives of persons significant in our past; or,

(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and

distinguishable entity whose components may lack individual distinction; or,

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

In order to qualify for NRHP eligibility, then, a property must meet two separate types of requirements. It must exhibit integrity of location, design, materials, etc.; and, it must meet one or more of the four additional criteria. The National Historic Preservation Act makes clear that a site need not be of national historic significance to be considered eligible; sites of local, state, and regional importance may also be listed, and thus are significant in the legal sense. The phrasing of the National Historic Preservation Act is critical with respect to actual management of cultural resources. A site does not have to be included on the NRHP to receive protection under the law, but must simply meet the requirements of eligibility.

In order to bring the NRHP evaluation process into better focus the Colorado OAH has produced a series of regional prehistoric and historic contexts (Mehls and Carter 1984; Zier and Kalasz 1999). These documents identify pertinent research themes and attendant deficiencies in current prehistoric and historic data bases. Sites that have the potential to yield information important to one or more research themes, and that exhibit physical integrity, are most likely to be judged eligible for the NRHP.

## **FIELD INVENTORY RESULTS, MANAGEMENT SUMMARY AND CONCLUSIONS**

No sites or isolated finds were recorded in the course of a survey of additions to the proposed U.S. 287 Lamar Bypass project. The inventory included 1,041 acres of right-of-way that extends from SH 196 on the northern end to U.S. 287 on the southern end. The northern end of the corridor varies between 1500 and 2400 ft wide, the central portion of the corridor varies between 600 and 1500 ft wide, and the southern end of the corridor varies between 600 and 1700 ft wide. The single previously recorded aboriginal site within the project boundaries, 5PW79, was excavated and subsequently reburied in approximately the same location in the mid-1990s by the Colorado OAH. The site is adjacent to a private residence and was not revisited by Centennial personnel.

One segment of the proposed Lamar Bypass corridor is regarded as archaeologically sensitive despite the fact that very little cultural material was found during the February 2003 and October-November 2003 surveys. This segment lies entirely on the south side of the Arkansas River. It originates 1.8 miles north of the southern terminus of the corridor and extends north for 3.0 miles, ending at the northern margin of the Arkansas River floodplain. The sensitivity of this segment owes to the fact that it traverses the Arkansas River dune field, a linear configuration of eolian sands that originates near La Junta and extends eastward well into Kansas, paralleling the Arkansas River on the south side. The Arkansas River dune field is one of seven major eolian sand belts identified in eastern Colorado by Madole (1995). These dunes almost certainly began forming during the late

Pleistocene and have, to an extent varying through time and across space, remained active throughout much of the Holocene (Madole 1995: 164-172). Paleosols ranging in age from terminal Pleistocene to mid-to-late Holocene have been identified. Archaeological materials are known to occur in the Arkansas River dune field, although the results of recent survey transects across the field in the vicinity of Lamar have been variable (Gantt et al. 2003; Kalasz et al. 2002; Zier et al. 1998). It should be noted that surface visibility in the dune field along the Lamar Bypass corridor was poor due to the presence of abundant tumbleweeds. Prior to the onset of highway construction, it is recommended that a discontinuous series of deep backhoe trenches be excavated along the right-of-way centerline and that the open trenches be inspected by an archaeologist.

#### REFERENCES CITED

Anderson, Jane L.

- 1989           Chronological Framework. In *A Chronological Framework of the Fort Carson Pinon Canyon Maneuver Site, Las Animas County, Colorado*, edited by C. Lintz. U.S. Army Fort Carson Pinon Canyon Cultural Resources Project, Contribution No. 2. Center for Archaeological Research, University of Denver, Denver, Colorado.

Angulski, Debra

- 1985           Archaeological Clearance for Highway Project BRF 050-5(26), 0.2 Miles North of Lamar (Arkansas River), Prowers County. Colorado Department of Highways, Denver.

Barbour, M. G., and W. D. Billings

- 1988           *North American Terrestrial Vegetation*. Cambridge University Press, New York.

Buckles, William G.

- 1980           Bioconversion Facility for Lamar Utilities. Department of Anthropology, University of Southern Colorado, Pueblo.

Carrillo, Richard M., Christian J. Zier, and Andrea M. Barnes

- 1991           *The Documentation of Stone City (5PE793): Historical Archaeology on the Fort Carson Military Reservation, Pueblo County, Colorado*. Prepared for the National Park Service, Rocky Mountain Region, Interagency Archaeological Services, Denver, Colorado by Centennial Archaeology, Inc., Fort Collins, Colorado.

Colorado Division of Wildlife

- 1982           Arkansas River Threatened Fishes Survey. *Performance Report SE-8-1*. Nongame Program, Denver, Colorado.

- Gantt, Erk M., Scott A. Slessman, and Christian J. Zier  
 2003 An Archaeological Inventory of the Proposed U.S. 287 Lamar Bypass in Prowers County, Colorado. Prepared for the Colorado Department of Transportation by Centennial Archaeology, Inc., Fort Collins, Colorado.
- Jones, Donald G., Martha Williams, Kathy Stemmler, Michael H. McGrath, and Elizabeth C. Winstead  
 1998 Ethnohistoric and Ethnographic Information Related to the Fort Carson Military Reservation and Pinon Canyon Maneuver Site in Colorado. Prepared for Department of the Army, Corps of Engineers, by R. Christopher Goodwin and Associates, Inc., Frederick, Maryland.
- Kalasz, Stephen M., Erik M. Gantt, Christian J. Zier, G. Robert Phippen, Jr., Michael McFaul, and Scott A. Slessman  
 2002 A Cultural Resource Inventory of the Proposed Western Frontier Project in Eastern Colorado, Southwestern Kansas, and the Oklahoma Panhandle. Prepared for ENSR International and Western Frontier Pipeline Company by Centennial Archaeology, Inc., Fort Collins, Colorado.
- Lecompte, Janet  
 1978 *Pueblo, Hardscrabble, and Greenhorn*. University of Oklahoma Press, Norman.
- Madole, Richard F.  
 1995 Spatial and Temporal Patterns of Late Quaternary Eolian Deposition, Eastern Colorado, U.S.A. *Quaternary Science Reviews* 14:155-177.
- Mehls, Steven F., and Carrol Joe Carter  
 1984 *Colorado Southern Frontier Historic Context*. Office of Archaeology and Historic Preservation, Colorado Historical Society, Denver, Colorado.
- Murray, Robert A.  
 1978 *Las Animas, Huerfano and Custer: Three Colorado Counties on a Cultural Frontier, A History of the Raton Basin*. Cultural Resource Series No. 6, Bureau of Land Management, Denver.
- Hand, O. D.  
 1998 An Intensive Cultural Resource Inventory Along US Highway 50 Between Lamar and Wiley Junction, Prowers County, Colorado (C2871-026). Colorado Department of Transportation, Denver.

- Osterkamp, W. R., and Thomas C. Gustavson  
1987 Chapter 6, Great Plains: Introduction. In, *Geomorphic Systems of North America*, edited by W. L. Graf. *Centennial Special Volume*, No. 2. Geological Society of America, Boulder, Colorado.
- Painter, Mary W., Tania R. Metcalf, Lawrence B. Conyers, G. Robert Phippen, Jr., and Christian J. Zier  
2001 *An Archaeological and Historical Inventory of the Interstate 25 Corridor Through Trinidad, Las Animas County, Colorado*. Prepared for the Colorado Department of Transportation, Denver by Centennial Archaeology, Inc., Fort Collins, Colorado.
- Tweto, Ogden  
1979 *Geological Map of Colorado*. U.S. Geological Survey, Reston, Virginia.
- USFS  
1991 *Final Oil and Gas Leasing Environmental Impact Statement: Pike and San Isabel National Forest, Comanche and Cimarron National Grasslands*. USDA Forest Service.  
1993 *Diamond Shamrock Colorado Springs Pipeline Project: Final Environmental Assessment*. Prepared by L. W. Reed Consultants, Inc. for the USDA Forest Service, Comanche National Grasslands, Springfield, Colorado.
- Van Hook, Joseph O.  
1933 *Settlement and Economic Development of the Arkansas Valley from Pueblo to the Colorado-Kansas Line, 1860-1900*. Unpublished Ph.D. dissertation, Department of History, University of Colorado, Boulder.
- Wallace, Steven M.  
1984 *Highway Department Cultural Resource Negative Reports, January to December 1984*. Colorado Department of Highways, Denver.
- [www.weatherbase.com](http://www.weatherbase.com)
- Zier, Christian J., and Stephen M. Kalasz  
1999 *Colorado Prehistory: A Context for the Arkansas River Basin* (with contributions by Mary W. Painter, Mark Mitchell, Amy Holmes, and Michael McFaul). Colorado Council of Professional Archaeologists, Denver.

Zier, Christian J., Jason Marmor, and Denise Fallon Zier

1998

An Archaeological Inventory of the Enron Communications Denver - Oklahoma City  
Fiber Optic Cable Route between Kit Carson and the Oklahoma Border, Southeastern  
Colorado. Prepared for ENRON Communications, Inc. and David Evans and  
Associates, Inc. by Centennial Archaeology, Inc., Fort Collins, Colorado.