MUSEUM OF NEW MEXICO

OFFICE OF ARCHAEOLOGICAL STUDIES

# Monitoring for Subsurface Cultural Deposits at the Bosque Redondo Memorial, De Baca County, New Mexico

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# *Administrative Summary*

The New Mexico State Monuments Division of the Museum of New Mexico, Department of Cultural Affairs, is constructing the Bosque Redondo Memorial on property adjacent to Fort Sumner State Monument, De Baca County, New Mexico. The visible surface manifestation of Fort Sumner (LA 8777) is listed in the *State Register of Cultural Properties* and the *National Register of Historic Places*, but the full subsurface extent of associated cultural features and deposits is unknown. Because of the potential for subsurface deposits within the construction zone of the Memorial, monitoring of subsurface excavations was conducted to determine if subsurface deposits were present and, if so, to investigate their nature and extent. Monitoring consisted of surface observation prior to construction and observation of backhoe trenching and blading during the construction of the Memorial building and its utility trenches. Monitoring was conducted by the Office of Archeological Studies during three phases of subsurface construction work on December 8 and 9, 2003; January 6, 7, 8, 12, and 13, 2004; and September 9, 13, 14, and 15, 2004.

No cultural features or structures were observed on the site of the Bosque Redondo Memorial, and no additional investigations are required at that location.

MNM Project No 41.738 (Bosque Redondo Memorial).
State of New Mexico Excavation Permit No. SE-208.
NMCRIS Activity No. 92568.

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# *Introduction*

The New Mexico State Monuments Division of the Museum of New Mexico, Department of Cultural Affairs, is constructing the Bosque Redondo Memorial on property adjacent to Fort Sumner State Monument, De Baca County, New Mexico (Fig. 1). The visible surface manifestation of Fort Sumner (LA 8777) is listed in the *State Register of Cultural Properties* and the *National Register of Historic Places*, but the full subsurface extent of associated cultural features and deposits is unknown. Because of the possibility that subsurface deposits associated with Fort Sumner were within the construction zone of the Memorial (Fig. 2), monitoring of subsurface excavations was required by the New Mexico State Historic Preservation Division. The monitoring was conducted to determine if subsurface deposits were present and, if so, to investigate their nature and extent. Monitoring consisted of surface observation prior to construction, and observation of backhoe trenching and blading during the construction of the Memorial building and its utility trenches.

Monitoring was conducted by the Office of Archeological Studies during three phases of subsurface construction work at the site: (1) The ground surface was observed prior to construction, followed by observation of blading and the construction of pads for the buildings; (2) excavation of utility trenches; (3) excavation for a septic system. The three phases took place on the following dates: December 8 and 9, 2003; January 6, 7, 8, 12, and 13, 2004; and September 9, 13, 14, and 15, 2004.

Several isolated occurrences of historic artifacts were noted, but no cultural features or deposits were present in the construction area.

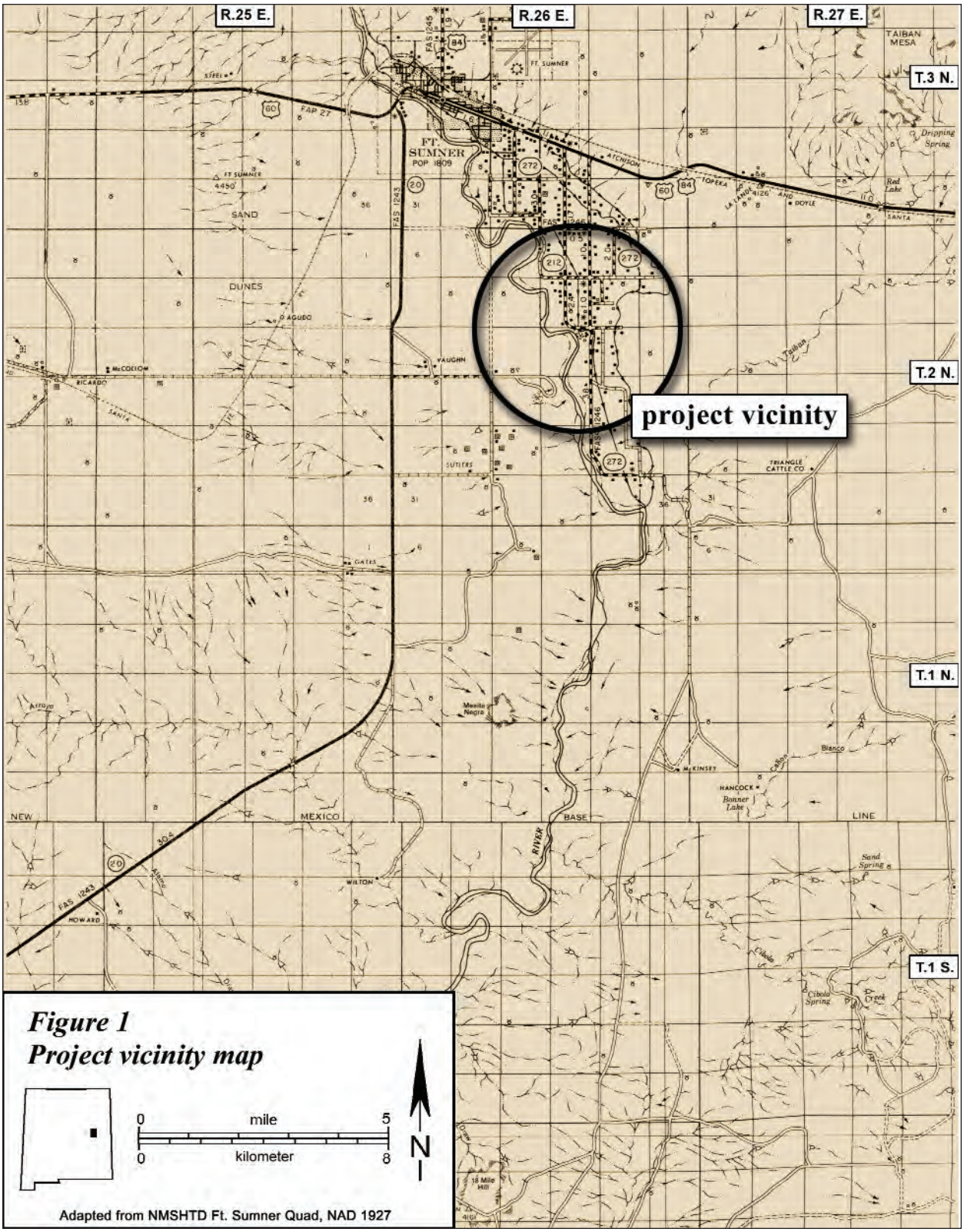


***Figure 1***
***Project vicinity map***

Adapted from NMSHTD Ft. Sumner Quad, NAD 1927

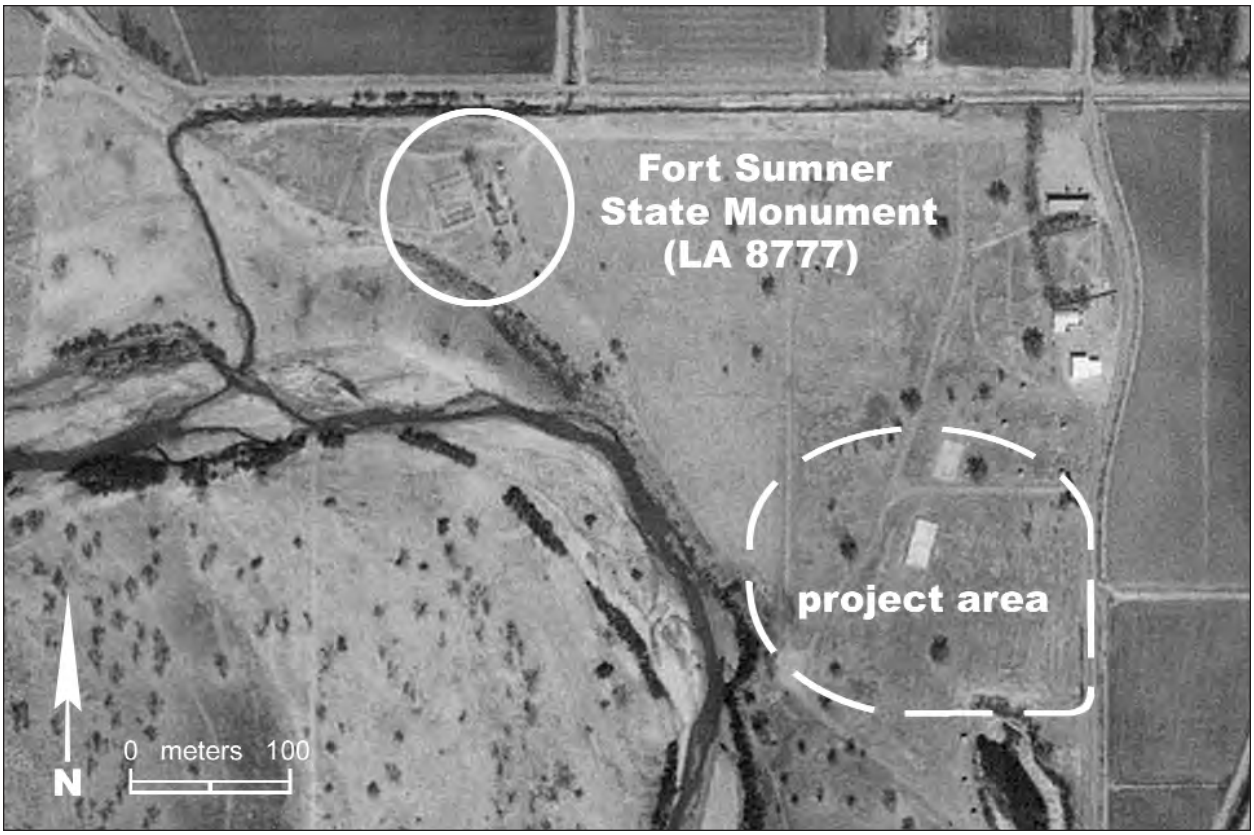


*Figure 2. Aerial photo of Fort Sumner State Momument and project area.*

# *Environment*

The project area is southeast of the Pecos River in the Pecos River Valley. The elevation of the project area ranges from 4,020 ft (1,255 m) to 4,050 ft (1,234 m). The countryside in the area of Ft. Sumner is rolling mixed grassland (Castetter 1956). The project area is in a large field adjacent to the Fort Sumner State Monument that was farmed and grazed for many years before the current construction.

## Geology

Part of the Great Plains province, the Pecos River Valley is a long trough between the High Plains (Llano Estacado) to the east and the Basin and Range province to the west. This valley cuts through an alluvial-filled basin that represents the eroded extension of the High Plains to the Diamond A Plain to the west. The terrain of the valley is characterized at the local level by its underlying material. In the Fort Sumner area, the Pecos Valley has an uneven surface resulting from the degradation of the underlying deposits of limestone, sandstone, shales, and gypsum (Fenneman 1931:47-49).

The Fort Sumner area is pivotal in the major shift that occurred in the course of the Pecos River during the late Pleistocene Tahoka Subpluvial period (Reeves 1965:45). The Pecos River north of Fort Sumner originally formed part of the upper Brazos River system of central Texas, flowing through Blackwater Draw, the Portales Valley, and present-day Lubbock, Texas. Near Fort Sumner, the Pecos River was diverted south and integrated into the lower Pecos River system during the late Pleistocene by a series of solution cavities, still visible as a series of river basins, that developed in the soluble subsurface rocks of the region (Jelinek 1967:5-7; Sebastian and Larralde 1989:7).

## Climate

The climate of the project area is semiarid continental. The average annual precipitation in this part of the Pecos River Valley is 35.6 cm (14 inches), most of which falls in the summer months (Gabin and Lesperance 1977:103; Jelinek 1967; Maker et al. 1974:47-48; Tuan et al. 1973: Fig. 2). The average number of days without frost is 200 (Anonymous 1975:9; Tuan et al. 1973: Fig. 48). The growing season averages 280 days (Smith 1920:276-278).

## Flora and Fauna

The environmental zones in the project area provide a variety of plant and animal resources. The two life zones in the project area are the Upper Sonoran (grasslands) and Lower Sonoran (the corridor of the Pecos River Valley (Anonymous 1975:5). The grazing of livestock has modified the vegetation in the vicinity of the project (Castetter 1956:261-262). The previously heavy grass cover of blue grama, hairy grama, Indian rice grass, and side-oats grama has been all but eliminated, and mesquite, yucca, prickly pear, and sagebrush now dominate the vegetation in the Fort Sumner area (Castetter 1956:266-267; Jelinek 1967:37,40). However, the construction area is in a field that still supports mostly grasses.

Historically, bison were present in the Fort Sumner area. Animals are abundant along the river, and smaller numbers are present in the grasslands bordering the valley. Deer, wild turkeys, and cottontail rabbits live in the floodplain, and pronghorn and jackrabbits are common in the grassland areas (Anonymous 1975:37, 40). A wide variety of small rodents and birds live in the area, as well as various fish and shellfish in the Pecos River (Jelinek 1967:40).

# *Cultural History*

## Paleoindian Period

The Paleoindian period (10,000-5,000 B.C.) was first recognized in 1926 at the Folsom site in northeastern New Mexico (Wormington 1947:20). A series of Paleoindian traditions have since been defined, beginning with Clovis and continuing through Plano (Stuart and Gauthier 1981:294-300). Although it was originally believed that Paleoindian people developed largely on big-game hunting, the importance of plant gathering and small-animal hunting to Paleoindian subsistence is now recognized (McGregor 1965:120; Willey 1966:38; Jennings 1968:78-79; Wilmsen 1974:115; Cordell 1979:19-21; Stuart and Gauthier 1981:31-33). Arguments for a pre-Clovis human occupation of North America have been made (Dixon 1999), but no pre-Clovis sites have yet been found in northeastern New Mexico.

## Archaic Period

Levine and Mobley (1975) date the Archaic occupation of northeastern New Mexico from 5000 B.C. to A.D. 1000, but a local chronology has not yet been developed for the project area. The Oshara tradition best defines the Archaic period in northeastern New Mexico (Irwin-Williams 1973). This period is distinguished by distinctive projectile points and lithic artifact scatters, including grinding implements and fire-cracked rock, and a lack of ceramics. The Oshara tradition is divided into five phases: Jay (5500-4800 B.C.), Bajada (4800-3200 B.C.), San Jose (3200-1800 B.C.), Armijo (1800-800 B.C.), and En Medio (800 B.C.-A.D. 400) (Irwin-Williams 1973).

## Pueblo Period

The recorded pueblos closest to the Fort Sumner area are at Pintada Canyon, 72 km (45 miles) to the west. These Puebloan sites date from A.D. 1200 to 1400. Ceramic assemblages are dominated by Chupadero Black-on-white and brown utility wares (Stuart and Gauthier 1981). Jornada Mogollon ceramics also occur in northeastern New Mexico, and a number of possible Jornada Mogollon sites have been recorded north of the Fort Sumner area (Harlan et al. 1986; Levine and Mobley 1975). Jornada Mogollon sites with structures have been recorded in the area of Fort Sumner (Corley 1965; Jelinek 1967: 119-124) and at Sumner Lake (Kemrer 1994).

## Plains Indian Period

Southern Athabaskan groups appear to have moved into eastern New Mexico during the late protohistoric period. Apachean sites are scattered throughout southeastern New Mexico as well as the central plains, and they may date anywhere from the late 1400s to the late 1800s (Harlan et al. 1986:52). Comanches moved into the Southern Plains about 1700-1715. Along with other Plains Indian groups, by 1875 they had moved away because of the extermination of the buffalo herds and pressure from the American military (Schemer 1981).

## Hispanic Period

Mobile and potentially hostile Apaches and, later, Comanches limited Hispanic settlement along the upper Pecos River until the beginning of American control in the late 1850s. By 1860, 16 Hispanic settlements had been built on the Pecos River land grants (Harlan et al. 1986:58). By the 1880s, Hispanic settlements were well established on Pintada Arroyo and Puerto de Luna on the Pecos River. No permanent settlement took place in the Fort Sumner area until the establishment of Fort Sumner in 1862.

## Anglo-American Period

The Fort Sumner area was licensed as a place to trade with Plains Indian tribes in 1851 (Anonymous 1954:4) by James S. Calhoun, the first civilian territorial governor of New Mexico

(Gonzales 1993). In 1862, Fort Sumner, named for Gen. Edmond Vose Sumner (Pearce 1965:59), was established to guard a reservation for Navajos and Apaches at Bosque Redondo, on the east side of the Pecos River and south of the present town of Fort Sumner. In 1862 an estimated 400 Mescalero Apaches were moved to the reservation from the Sacramento Mountains to the southwest. In 1864 about 9,000 Navajos were forced to march to Fort Sumner in the Long Walk. In 1868 the reservation was dissolved, and the Navajos were allowed to return to their homeland. The Mescaleros had left a year earlier (Kues 1985:67-68).

In the mid-1860s, Texas cattle ranchers began moving into the area. Charles Goodnight and Oliver Loving were some of the first to arrive in 1866 with a herd of cattle. The Goodnight-Loving Trail eventually ran from Cheyenne, Wyoming, to eastern New Mexico to Belknap, Texas (Harlan et al. 1986:59). Fort Sumner soon became an important stop on the Goodnight-Loving Trail (Kues 1985:68). John Chisum also brought a herd of cattle to Fort Sumner from Paris, Texas in 1866 (Broster 1983:13-14).

A garrison was maintained at Fort Sumner until August 1869, when the fort was closed. In 1870 Lucian Maxwell purchased the land and buildings for $5,000. Maxwell encouraged settlers from the Taos and Cimarron areas to settle in the area of the old reservation, which soon became the town of Fort Sumner. In 1887 and 1889, drought, severe winters, and declining cattle prices destroyed the cattle empires of the Plains (Harlan et al 1986: 57-58). In the 1890s, Fort Sumner declined with the financial collapse of the cattle industry (Anonymous 1995:4).

In 1906 the Belen Cutoff, built by the Eastern Railway, a subsidiary of the Atchison, Topeka & Santa Fe Railroad, was constructed several miles north of town. During construction of the railroad a community called Sunnyside developed along the railroad (Myrick 1990). By 1910 the old town site had been abandoned and Sunnyside became the new Fort Sumner (Julyan 1996:136).

On the 100-year anniversary of their release from the Bosque Redondo reservation, the Navajos returned to Fort Sumner to reenact the Long Walk and the signing of the Treaty of 1868. A tract of land was acquired by the Village of Fort Sumner and deeded to the State of New Mexico. The State of New Mexico designated the tract a state monument, and in 1970 a visitor center was constructed (Smith 2005:44). Planning of a formal memorial for the incarceration of Apache and Navajo peoples at Bosque Redondo began in 1991, and the current construction represents the realization of that effort (Smith 2005:44-45).

## *Monitoring Results*

The first phase of monitoring took place on December 8 and 9, 2003. Heavy equipment bladed 4 inches (10 cm) of topsoil from the construction area (Fig. 3). Monitoring during this phase was conducted to assure that no cultural structures or features would be impacted in the process of removing the topsoil. Some isolated artifacts were collected from the ground surface before the blading. They consisted of a horseshoe, a lithic flake, a piece of slag, a piece of glass, and a Euroamerican ceramic sherd. No features were associated with these artifacts, and no cultural deposits were noted. Blading was completed without any interruptions.

The second phase of monitoring took place on January 6, 7, 8, 12, and 13, 2003. This phase consisted of monitoring the excavation of a utility trench for the Memorial building. The trench started on the west side of NM 272 (Billy the Kid Road), was excavated toward the west for 227 m (744.74 ft), then turned south for 50 m (164.04 ft), all at a depth of 1.22 m (4 ft) and approximately 1 m (3.28 ft) wide. A spur from the trench, excavated toward the north, measured 107 m (351.05 ft) long and 1.22 m (4 ft) deep. The fill consisted of a brown consolidated silty clay in the upper portion of the trench and an alluvial deposit of gravels and cobbles in the lower portion of the trench. Another utility trench, 30 m (98.42 ft) long, 1.22 m (4 ft) deep, and 1 m (3.28 ft) wide, was excavated on the southeast corner of the project area. The fill consisted of a silty loam in the upper portion of the trench and an alluvial deposit of gravels and cobbles in the lower portion of the trench. No cultural features or materials were observed or impacted by these trenches.

The final phase of monitoring took place on September 9, 13, 14, and 15, 2004. This phase consisted of monitoring the excavation of a septic system including a trench from the building to the septic tanks and the leach field. The trench from the building to the septic tanks was 45 m (147.64 ft) long, 1 m (3.28 ft) wide, and 0.91 m (3 ft) deep. The fill consisted of brown compacted clay for 1 m and a silty loam for the remainder of the trench. No cultural material was observed or impacted in this trench. The pit for the septic tanks was 15 m long (49.21 ft) by 10 m (32.81 ft) wide and 2.44-3.05 m (8-10 ft) deep. The fill in this pit was similar to that in the trench, and the silty loam continued to the bottom of the pit. Again, no cultural material was observed or impacted in this pit. The leach lines for this complex consisted of four 30.48 m (100 ft) trenches that ranged in depth from 1.52 m (5 ft) to 2.13 m (7 ft) and 0.61 m (2 ft) wide. The fill in these trenches was similar to that in the septic tank pit. No cultural material was observed in or impacted by these trenches.

No cultural features or deposits were observed during the monitoring of subsurface excavation during the construction of the Bosque Redondo Memorial. The only diagnostic materials encountered were a few isolated artifacts on the surface, which were collected and turned over to Fort Sumner State Monument for curation.

Based on these observations, it was determined that subsurface archaeological deposits associated with Fort Sumner State Monument (LA 8777) to the west do not extend into the Memorial area.

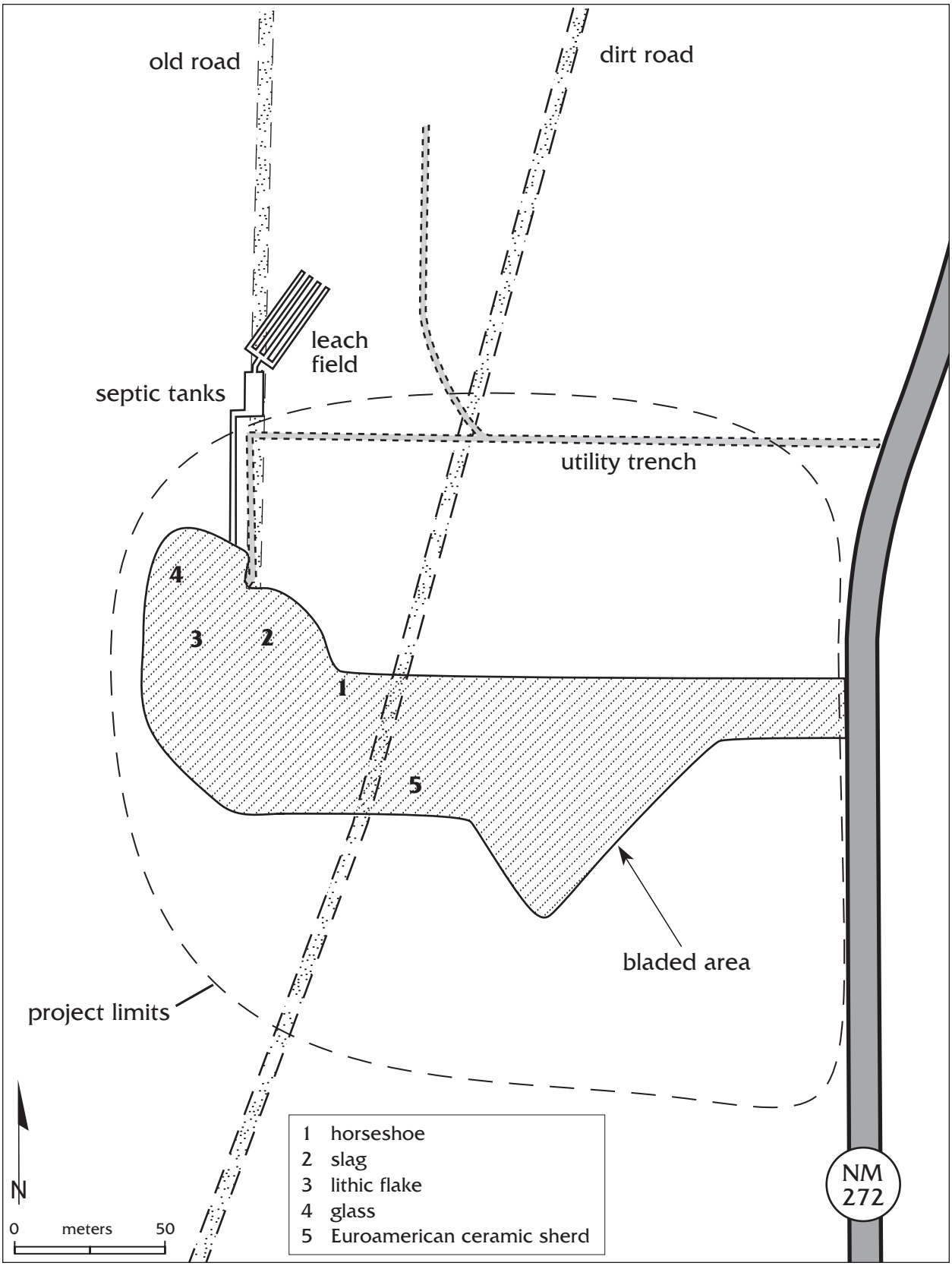


*Figure 3. The construction zone of the Bosque Redondo Memorial.*

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