

# **EXHIBIT E**

## EXHIBIT E – SCENIC AREAS, HISTORIC SITES AND STRUCTURES, AND ARCHAEOLOGICAL SITES

As stated in Exhibit E of Exhibit 1 to the Rules of Practice and Procedure Before Power Plant and Transmission Line Siting Committee:

***“Describe any existing scenic areas, historic sites and structures or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon.”***

The following sub-exhibits include analyses of scenic, historic, and archaeological sites in the vicinity of the CEC Transmission Facilities and anticipated impacts of the Facilities on those resources.

Exhibit E-1	Scenic Areas, Historic Sites and Structures, and Archaeological Sites in the Vicinity of the Nogales Interconnection Project
Exhibit E-1(a)	Scenic Areas in the Vicinity of the Nogales Interconnection Project
Exhibit E-2	Scenic Areas, Historic Sites and Structures, and Archaeological Sites in the Vicinity of the Nogales Tap to Kantor Upgrade Project
Exhibit E-2(a)	Scenic Areas in the Vicinity of the Nogales Tap to Kantor Upgrade Project
Exhibit E-2(b)	Class I Cultural Resources Assessment for the Nogales Tap to Kantor Upgrade Project
Exhibit E-2(c)	Class III Cultural Resources Survey for the Nogales Tap to Kantor Upgrade Project

Pursuant to Footnote 1 of Exhibit 1 to the Rules of Practice and Procedure Before Power Plant and Line Siting Committee, Applicants refer the Committee to the following studies for information pertaining to scenic areas in the vicinity of the Nogales Interconnection Project:

- Exhibit B-1(a): PP EA (Section 3.7)

- Exhibit B-1(b): DOE Draft EA (Sections 3.7 and 4.7)

Applicants further refer the Committee to the following studies for information pertaining to historic and archaeological sites in the vicinity of the Nogales Interconnection Project:

- Exhibit B-1(a): PP EA (Appendix B: Class III Cultural Resources Survey for the Nogales Interconnection Project, Nogales, Santa Cruz County, Arizona)
- Exhibit B-1(b): DOE Draft EA (Sections 3.10 and 4.10)

# **Exhibit E-1 – Scenic Areas, Historic Sites and Structures, and Archaeological Sites in the Vicinity of the Nogales Interconnection Project**

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## **I. SCENIC AREAS**

Exhibit E-1(a) discusses the current visual quality of the Nogales Interconnection Project area and analyzes potential effects of the project on the two potentially scenic areas in its vicinity, the Coronado National Forest (“CNF”) and the Pajarita Wilderness (located inside the CNF). Nogales Transmission’s studies conclude that mitigation measures, including siting of poles in the least intrusive location possible, will reduce the project’s effects on the CNF and that the project is unlikely to impact the visual quality of the Pajarita Wilderness due to its 10-mile distance from the project and intervening vegetation and terrain.

## **II. HISTORIC SITES AND STRUCTURES AND ARCHAEOLOGICAL SITES**

The Class III Cultural Resources Survey for the Nogales Interconnection Project discusses the historic sites and archaeological structures in the vicinity of the project as well as potential effects of the project on these resources. This study is attached as Appendix A to the PP EA (Exhibit B-1(a)). The DOE Draft EA likewise analyzes historic and cultural resources in the vicinity of the project in Sections 3.10 and 4.10 of the DOE Draft EA (Exhibit B-1(b)). These studies are summarized below.

### **A. Class III Cultural Resources Survey**

Prior to conducting fieldwork, archival records were reviewed for information on past projects and known cultural resources in the area. Site and project records were requested from AZSITE, Arizona’s statewide cultural resources database housed at the Arizona State Museum, and from the CNF. In addition, historic maps such as General Land Office plats and aerial photographs were examined to identify historical period land uses of the area. The records check revealed that 28 archaeological surveys have taken place, and 10 sites have been recorded within 0.5 mile of the route segment variations. The previously recorded sites include five prehistoric artifact scatters, rock piles, a circa 1916 National Guard encampment, a historic period residence, and a railroad. Three of the previously recorded sites are within the route segment corridors.

Following the records review, a pedestrian survey was performed to identify cultural resources within the alternative routes. The survey covered 206.7 acres of private land within a 200-foot-wide buffer of most of the route segment variations. The remaining area was not surveyed because right-of-entry had not been obtained from landowners, but additional surveys will be conducted prior to start of construction after approval of a final route by the Commission.

## **B. DOE Draft EA**

The DOE Draft EA analyzes direct impacts to cultural resources within a 100-foot buffer on either side of the alternative route centerlines and indirect impacts within a 0.25 mile buffer around the alternative routes. Cultural resources considered by the DOE include resources that are the physical manifestations of the activities of past or present cultures, including archaeological sites, historic buildings and structures, trails, and other places of traditional cultural or religious importance.

Six sites have been recorded within the DOE Draft EA analysis area, including three prehistoric artifact scatters, rock piles, the Tucson-Nogales Highway, and the New Mexico and Arizona Railroad. Two of the sites are either determined or recommended eligible for the National Register of Historic Places (“NRHP”), three are either determined or recommended not eligible for the NRHP, and one is unevaluated. No NRHP-listed sites or buildings or eligible historic buildings are found within the DOE Draft EA analysis area.

## **C. Impacts**

Based on the available data, no known historic properties would be directly or indirectly affected by the Nogales Interconnection Project. Two historic properties that are eligible for the NRHP, the New Mexico and Arizona Railroad and the Tucson-Nogales Highway, are within 0.1 mile of the eastern terminus of all the alternative routes. However, the proposed transmission line ends within the existing Valencia Substation, which consists of developed transmission infrastructure and would not alter the setting, feeling, or association of the railroad or highway. Therefore, there would be no indirect impacts to known historic properties or other cultural resources.

Furthermore, based on information known to date, no resources important to American Indian tribes have been identified, and activities related to the project are not expected to have a direct adverse impact to known historic properties or resources of

cultural or religious significance to American Indian tribes. However, because a complete survey of historic properties for all alternative routes has not yet been completed, and because formal consultations with American Indian tribes by the DOE (as part of the Presidential Permit application process) are ongoing, it is possible that resources may be identified that could be negatively affected.

Applicants propose to incorporate the following measures into the construction, operation, and maintenance of the Nogales Interconnection Project, which will minimize impacts to cultural resources:

1. Ground-disturbing activities and other proposed project components would be sited to avoid or minimize direct impacts on cultural resources listed as, or potentially eligible for listing as, unique archaeological sites, historical resources, or historic properties.
2. Before construction, Applicants and their construction contractor would provide cultural resources sensitivity training to all construction personnel.
3. A Construction Monitoring and Unanticipated Cultural Resources Discovery Plan would be developed and implemented, as part of the Section 106 Consultation process described above.

## **Exhibit E-1(a) – Scenic Areas in the Vicinity of the Nogales Interconnection Project**

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A desktop study including a combination of Google Earth review and Geographic Information Systems (“GIS”) data research was used to determine the visual quality of the Nogales Interconnection Project area and the project’s potential visual impacts. The following summarizes the results of the studies provided in Section 3.7 of the PP EA (Exhibit B-1(a)) and Section 3.7 of the DOE Draft EA (Exhibit B-1(b)) regarding visual effects on scenic areas. The DOE Draft EA considered a five-mile buffer of the centerline of the proposed routes for its visual impact analysis.

### **I. LANDSCAPE**

The Nogales Interconnection Project is located entirely within the City of Nogales, Santa Cruz County, Arizona. The landscape consists of developed and undeveloped rolling terrain, heavily creased with ridges and washes, surrounded to the east and west by background mountain views of the Huachuca and Patagonia Mountains and Tumacacori Mountains, respectively. Foreground views include the City of Nogales, to the east, and industrial areas and rolling foothills, to the west.

The route segment variations traverse areas of developed and undeveloped land. For the approximate middle third of the project, the route segment variations traverse industrial development, where most of the buildings are large, corrugated metal structures. On the southern side of this area is Mariposa Wash, a sparsely vegetated ephemeral wash. The eastern third of the project traverses undeveloped land behind retail areas that line State Road (“SR”) 189 for approximately two-thirds of a mile. The western third of the project traverses mostly undeveloped land, west and south to the Mexican border. Residential neighborhoods are located approximately 0.5 mile south of the central portion of the project the between the Valencia and Gateway Substations. The dense, downtown portion of the City of Nogales is approximately 1.5 miles southeast of the proposed routes. The proposed Gateway Substation location is an existing graded site used for storing construction materials, behind industrial parcels. A large parcel of land south and west of the substation has been heavily disturbed by mining operations.

## II. VISUAL IMPACTS

Visual impacts on and overall changes in aesthetics of scenic areas would vary depending on the terrain, vegetative cover, viewer's distance from the project, and viewer's sensitivity. Recent research on visibility indicates that monopoles are typically not visible beyond five miles in landscapes similar to that of the project (Sullivan et al. 2014). When applied to the project, the visibility mapping in the DOE Draft EA indicates that the transmission lines would not be visible, or would be negligibly visible, beyond the five-mile threshold. Furthermore, visual details generally become apparent to the viewer when they are observed in the foreground, at a distance of 0.25 to 0.5 mile or less. Therefore, the primary focus of the visual analysis included in the DOE Draft EA is the foreground zone where visual details are most apparent, up to approximately one mile from the project area.

Generally, natural-appearing landscapes are the most valued (USFS 1995). Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features. Viewer concern, or viewer sensitivity, is generally divided into high, moderate, and low categories. Factors considered in assigning categories include viewer activity, view duration, viewing distance, adjacent land use, and special management or planning designation. Viewer concern is based on any known information about the viewing population, existing land uses, and plan or policy designations that might indicate public importance.

Because of the rolling terrain, as a viewer gets farther from the Nogales Interconnection Project, visibility may be limited by changes in topography and natural or human-made objects.

No officially designated scenic areas would be affected by the project. Furthermore, the project is unlikely to visually impact background views of the Patagonia and Tumacacori Mountains given intervening terrain. For viewers in light industrial and commercial areas (i.e., non-scenic areas between the existing Valencia Substation and proposed Gateway Substation), the transmission lines would be an additional element in the existing landscape but would not represent a change, since there are already linear ROWs and utilities, as well as light industrial and commercial facilities, in this portion of the impact analysis area (as well as in the middle ground views). The viewers in these areas generally have low to moderate sensitivity to visual



change. Residents within the Villa San Simone subdivision adjacent to Route Segment Variation 1 would be the most sensitive viewers, because they would spend the most time within view of the action alternatives. However, sensitivity would be low, as there is an existing UNSE easement and transmission line in this area that would be utilized for the proposed project. Two areas with potential scenic value, the Coronado National Forest and the Pajarita Wilderness, are analyzed below.

### **A. Coronado National Forest**

People driving or walking into or out of the eastern border of the CNF would see the power lines. When facing east, the power lines would have the city and Interstate 19 (“I-19”) in the background and thus would appear as an additional urban element. Facing west, into the forest, the view of the power lines would be against undeveloped desert. Route Segment Variations 11, 13, and 15 parallel the border of the CNF for .76, .48, and .65 miles, respectively, making them the most sensitive from a visual perspective when viewed from roads and trails heading west into the forest. Viewers’ concern level in this portion of CNF is likely low, due to the proximity of the urbanized City of Nogales area, other transmission lines, major roads, and the light industrial nature of the Mariposa port of entry vicinity. Because viewer concern level would be considered low, and the change in the visual landscape would be consistent with urban views, direct visual impacts on the landscape from all of the alternative routes would be considered minimal.

### **B. Pajarita Wilderness**

The Pajarita Wilderness, located inside the CNF, is more than 10 miles west of the alternative routes. No designated trails are in or near the alternative routes. As a result, the project is unlikely to visually impact viewers in the Pajarita Wilderness given the distance between the recreation area and the project, as well as intervening vegetation and terrain.

## **III. CONCLUSION**

Impacts to visual resources will be minimized by incorporating the following mitigation measures would be implemented to reduce the project’s effects on scenic areas:

1. Temporary access roads and staging areas would be revegetated following construction.

2. Construction waste would be removed on a regular schedule to minimize short-term visual impacts.
3. Transmission lines would parallel existing ROWs, to the extent practicable.
4. The Applicants would work with the CNF to site poles in the least intrusive locations possible where the ROW is adjacent to the CNF.
5. Transmission lines would parallel existing right-of-ways, to the extent practicable.
6. Towers and structures would have a nonreflective finish.
7. Structures would utilize self-weathering material to blend with or complement the surrounding landscape.

## **REFERENCES**

- Sullivan, R.G., J.M. Abplanalp, S. Lahti, K.J. Beckman, B.L. Cantwell, and P. Richmond. 2014. Electric Transmission Visibility and Visual Contrast Threshold Distances in Western Landscapes. Available at: <http://visualimpact.anl.gov/transvctd/>. Accessed October 2016.
- Department of Energy. July 2017. *Nogales Interconnection Project Draft Environmental Assessment DOE/EA-2042* (DOE Draft EA). Available at: [https://static1.squarespace.com/static/57c08aceb3db2b3f8cd728d2/t/595d18e94c8b036c0f18d4e5/1499273485932/Nogales+Draft+EA\\_070517.pdf](https://static1.squarespace.com/static/57c08aceb3db2b3f8cd728d2/t/595d18e94c8b036c0f18d4e5/1499273485932/Nogales+Draft+EA_070517.pdf).
- U.S. Forest Service (USFS). 1995. Landscape Aesthetics: A Handbook for Scenery Management. Agriculture Handbook No. 701. Available at: [https://www.fs.fed.us/cdt/carrying\\_capacity/landscape\\_aesthetics\\_handbook\\_701\\_no\\_append.pdf](https://www.fs.fed.us/cdt/carrying_capacity/landscape_aesthetics_handbook_701_no_append.pdf) Accessed March 2017

## **Exhibit E-2 – Scenic Areas, Historic Sites and Structures, and Archaeological Sites in the Vicinity of the Nogales Tap to Kantor Upgrade Project**

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### **I. SCENIC AREAS**

Exhibit E-2(a) describes the existing visual quality of the Nogales Tap to Kantor Upgrade Project area and summarizes its potential effects on the nearby scenic area of the Santa Rita Mountains, including Elephant Head and Madera Canyon. UNSE's studies conclude that no substantial disruption to major views would result from the upgrade of the transmission line within any of the proposed alignments.

### **II. HISTORIC SITES AND STRUCTURES AND ARCHAEOLOGICAL SITES**

UNSE's prepared a Class I Cultural Resources Assessment for the Nogales Tap to Kantor Upgrade Project, attached as Exhibit E-2(b), to provide a basis for UNSE to evaluate the proposed alternative alignments. This overview was followed by the Class III Cultural Resources Survey for the Unisource Nogales Tap to Kantor Transmission Line ("Class III Cultural Resources Survey for the Nogales Tap to Kantor Upgrade Project"), which further analyzed existing historic sites and structures as well as archaeological sites in the vicinity of the Nogales Tap to Kantor Upgrade Project (Exhibit E-2(c)).

For Exhibit E-2(b) UNSE reviewed site and project records from AZSITE that indicated that the 37 cultural resources inventory projects conducted within the 0.5 mile buffer surrounding the project alignments have recorded 23 sites within this area. Three of the six sites that intersect the project area have been determined eligible for inclusion in the Arizona and National Registers of Historic Places. Although 37 historical features may potentially be encountered in the project area, many represent in-use infrastructure that are unlikely to be recorded as archaeological sites under recent Arizona State Museum ("ASM") guidelines.

For Exhibit E-2(c), UNSE analyzed prehistoric land use and resource procurement as well as historic period occupation and land use. Prior to conducting a field survey, UNSE reviewed historical maps and aerial photographs to identify historic period features on the landscape that might still exist as archaeological sites. UNSE

then conducted a field survey over eight days, during which pedestrian transects spaced at 20 meters apart were walked over the entire project area. This survey strategy is sufficient to achieve 100% coverage according to current ASM standards.

The Class III Cultural Resources Survey for Nogales Tap to Kantor identified one new archaeological site and 15 isolates, relocated and updated six previously recorded sites, recommended a finding of no historic properties affected for the cultural resources and sites documented in the project area, and recommended no further archaeological investigations in the project area. Four previously recorded sites subjected to data recovery within the project area are void of cultural materials and no longer retain the integrity required for listing on the ARHP/NRHP, and therefore are unlikely to yield information important in prehistory or history beyond the previous data recovery. Two previously recorded historic sites are also recommended ineligible: both are in-use linear sites and would not be considered archaeological sites under new ASM and SHPO policies. The one newly recorded site in the project area is a historic waste dump lacking significance and is recommended ineligible for the ARHP/NRHP. Finally, the 15 isolates lack the quality of significance required under the ARHP/NRHP guidelines, have been adequately recorded, and are recommended ineligible for the ARHP/NRHP. For additional details, refer to the survey results in Exhibit E-2(c).

## **Exhibit E-2(a) – Scenic Areas in the Vicinity of the Nogales Tap to Kantor Upgrade Project**

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### **I. LANDSCAPE**

The Nogales Tap to Kantor Upgrade Project traverses portions of Pima County and Santa Cruz County. The project area consists of open desert, areas of residential development, scenic landscapes composed of mountain ranges and river valleys, and areas with historical and cultural value. The following is a description of the visual quality of the project area and a summary of the project's potential effects on scenic areas.

From Nogales Tap to Kantor Substation the transmission line travels south, crossing through open desert and along the west side of a low-density residential area. South of the residential area, the line extends southwest through primarily undisturbed Sonoran desert of the Santa Rita Experimental Range. The Santa Rita Mountain Range is south and east of the project area, and several desert washes formed by the mountain foothills intersect the landscape. Near the southern end of this section, the proposed alignment passes through a low-density residential area and open desert before terminating at Kantor Substation. West of the proposed alignment, I-19 extends north to south and gradually converges with the transmission line. I-19 passes within two miles of the Kantor Substation.

### **II. VISUAL IMPACTS**

The Santa Rita Mountains are an important scenic area in the vicinity of this segment. The primary recreational areas in the mountains are Elephant Head and Madera Canyon. Elephant Head is a unique ridge formation that juts into the desert forming the western tip of the Santa Rita Mountains. A trail leads to the top of the ridge. Madera Canyon is on the northwest face of the Santa Rita Mountains. The canyon has a number of recreational trails and is renowned for bird watching.

Potential viewers along this segment include local residents, travelers along major roadways, travelers on minor local roads leading to recreational areas, and individuals using the recreational areas. Those traveling to these recreational areas expect pristine natural views due to the nature of their visits. The number of local

viewers is limited near the proposed alignment because there are few residential settlements nearby. The existing line cuts through one low density residential area.

### **III. CONCLUSION**

In conclusion, the visible change that would result from project implementation would be minor, as the new poles would be similar in height and material to the existing transmission line. Scenic views in the area have already been affected and no substantial disruption to major views would result from the upgrade of the transmission line within any of the proposed alignments.

## **Exhibit E-2(b) – Class I Cultural Resources Assessment for the Nogales Tap to Kantor Upgrade Project**

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**CULTURAL RESOURCES ASSESSMENT  
FOR  
TUCSON ELECTRIC POWER'S  
NOGALES TAP TO KANTOR TRANSMISSION LINE  
PIMA AND SANTA CRUZ COUNTIES, ARIZONA**  
Tucson Electric Power

Prepared by:  
Anna M. King

Reviewed and submitted by:  
Fred Huntington

Cultural Resources Report 2017-34

May 4, 2017  
Project Number: 1610.201 Task 5



WestLand Resources



## **STATEMENT OF CONFIDENTIALITY**

Disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.



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## STATE HISTORIC PRESERVATION OFFICE REPORT ABSTRACT

**REPORT TITLE:** Cultural Resources Assessment for Tucson Electric Power's Nogales Tap to Kantor Transmission Line, Pima and Santa Cruz Counties, Arizona

**REPORT DATE:** May 4, 2017

**PROJECT NAME:** TEP NT-Kantor Class I

**PROJECT LOCATION:** Southeast of Tucson, Pima County, to east of Amado, Santa Cruz County, Arizona

**PROJECT LOCATOR UTM:** 3546314m N; 513292m E

**PROJECT SPONSOR:** Tucson Electric Power

**SPONSOR PROJECT NUMBER(S):** n/a

**LEAD AGENCY:** n/a

**OTHER INVOLVED AGENCIES:** n/a

**APPLICABLE REGULATIONS:** n/a

**FUNDING SOURCE:** Private – Tucson Electric Power

**ASLD ROW APPLICATION NUMBER:** n/a

**DESCRIPTION OF THE PROJECT/UNDERTAKING:** Tucson Electric Power (TEP) retained WestLand Resources, Inc. (WestLand), to provide a baseline study for TEP's internal planning purposes for future improvement projects along its extant Nogales tap to Kantor 138-kV transmission line located in Pima and Santa Cruz Counties, Arizona. WestLand was contracted to provide an assessment of the known cultural resources projects, archaeological sites, and potential historical resources that intersect the transmission line corridor (the project area) and within a 0.8-km (0.5-mile) buffer surrounding the project area.

**PROJECT AREA/AREA OF POTENTIAL EFFECTS (APE):** The Nogales tap to Kantor project area is a 100- to 150-foot-wide by 28-mile-long corridor that stretches from an area southeast of Tucson to an area east of Amado along the western bajada of the Santa Rita Mountains in Pima and Santa Cruz Counties, Arizona. The project area encompasses 491.3 total acres.

**LEGAL DESCRIPTION:** Gila and Salt River Baseline and Meridian:

- Township 16 South, Range 14 East, portions of Sections 12, 13, 24, 25, and 36
- Township 16 South, Range 15 East, portions of Sections 7, 18, 19, 30, and 31
- Township 17 South, Range 14 East, portions of Sections 1, 12, 13, 24, 25, and 36
- Township 17 South, Range 15 East, portions of Sections 6, 7, 18, 19, 30, and 31
- Township 18 South, Range 14 East, portions of Sections 1, 2, 10, 11, 15, 21, 22, 28, 29, and 32
- Township 19 South, Range 13 East, portions of Sections 12, 13, 23, 24, 26, 27, 33, and 34
- Township 19 South, Range 14 East, portions of Sections 6, 7, 12, and 13
- Township 20 South, Range 13 East, portions of Sections 4, 8, and 9

**USGS 7.5' QUADRANGLE(S):** Amado, Corona de Tucson, Green Valley, Mount Hopkins, Sahuarita, Tucson, and Tucson SE

**LAND JURISDICTION:** Arizona State Land Department and private

**TOTAL ACRES:** 491.3

**CONSULTANT FIRM/ORGANIZATION:** WestLand Resources, Inc.

**PROJECT NUMBER:** 1610.201 Task 5

**PERMIT NUMBER(S):** 2017-02bl

**NUMBER OF PREVIOUS PROJECTS IN PROJECT AREA:** 25

**NUMBER OF PREVIOUS PROJECTS IN 0.5-MILE BUFFER:** 37

**NUMBER OF SITES IN PROJECT AREA:** 6

**NUMBER OF SITES IN 0.5-MILE BUFFER:** 23

**POTENTIAL HISTORICAL RESOURCES IN PROJECT AREA:** 37

**COMMENTS:** Research conducted using the Arizona State Museum's AZSITE database indicates that 37 cultural resources inventory projects have been conducted within the 0.8-km (0.5-mile) buffer surrounding the project area and that of these, 25 cultural resources inventory projects intersect the project area. The previous surveys have examined approximately 71 percent of the project area, but only 6 percent has been surveyed within the past 10 years.

The AZSITE database shows that 23 sites fall within the 0.8-km (0.5-mile) buffer and that of these, six are located within the project area. The Arizona and National Registers of Historic Places (A/NRHP) eligibility of the sites that intersect the project area was assessed and three of the six sites have been determined eligible for inclusion in the A/NRHP by the Arizona State Historic Preservation Office (Arizona SHPO) under Criterion (d); one site has been recommended eligible for the A/NRHP by its recorders under Criterion (a); and one site has been recommended ineligible by its recorders. The eligibility recommendation for the final site is not recorded on AZSITE.

The historical maps examined by WestLand indicate that 37 historical features may potentially be encountered within the project area; however, many of these represent in-use transportation infrastructure that is unlikely to be recorded as archaeological sites under recent Arizona State Museum guidelines.

WestLand offers the recommendation that the majority of the project area has not been examined by a current survey project (i.e., one within the last 10 years); therefore, a systematic cultural resources inventory of the project area should be completed following current Arizona SHPO standards prior to any future ground-disturbing activities within the project area. Furthermore, the previously recorded archaeological sites identified within the project area as well as any newly identified archaeological sites should be assessed to determine their present condition and evaluated for their eligibility for inclusion in the A/NRHP.



WestLand provides the general recommendation that all ground-disturbing activities have the potential to unearth archaeological sites or human remains, and that all such discoveries identified on Arizona State Land Department-administered land should be treated in accordance with Arizona Revised Statute §41-844. All such discoveries on private land should be treated in accordance with Arizona Revised Statute §41-865.



## INTRODUCTION AND PROJECT BACKGROUND

Tucson Electric Power (TEP) retained WestLand Resources, Inc. (WestLand), to provide a baseline study for TEP's internal planning purposes for future improvement projects along its extant Nogales tap to Kantor 138-kV transmission line located in Pima and Santa Cruz Counties, Arizona (**Figures 1 through 3**). WestLand was contracted to provide an assessment of the known cultural resources projects, archaeological sites, and potential historical resources that intersect the transmission line corridor (the project area) and within a 0.8-km (0.5-mile) buffer surrounding the project area.

The Nogales tap to Kantor project area is a 100- to 150-foot-wide by 28-mile-long corridor that stretches from an area southeast of Tucson to an area east of Amado along the western bajada of the Santa Rita Mountains in Pima and Santa Cruz Counties, Arizona, and encompasses 491.3 total acres. It is located within portions of the following divisions of the Gila and Salt River Baseline and Meridian, Arizona (Amado, Corona de Tucson, Green Valley, Mount Hopkins, Sahuarita, Tucson, and Tucson SE 7.5' USGS quadrangles):

- Township 16 South, Range 14 East, portions of Sections 12, 13, 24, 25, and 36
- Township 16 South, Range 15 East, portions of Sections 7, 18, 19, 30, and 31
- Township 17 South, Range 14 East, portions of Sections 1, 12, 13, 24, 25, and 36
- Township 17 South, Range 15 East, portions of Sections 6, 7, 18, 19, 30, and 31
- Township 18 South, Range 14 East, portions of Sections 1, 2, 10, 11, 15, 21, 22, 28, 29, and 32
- Township 19 South, Range 13 East, portions of Sections 12, 13, 23, 24, 26, 27, 33, and 34
- Township 19 South, Range 14 East, portions of Sections 6, 7, 12, and 13
- Township 20 South, Range 13 East, portions of Sections 4, 8, and 9

### TASK I. BACKGROUND RESEARCH

As part of the cultural resources analysis, an archaeological overview of the project area and a surrounding 0.8-km (0.5-mile) buffer<sup>1</sup> was conducted. Specifically, archaeologists reviewed existing archaeological information in WestLand's in-house database and in the Arizona State Museum's (ASM's) online AZSITE database. WestLand then generated a database for the project area containing all the documented information about each site and each survey conducted in the project area. Additionally, available General Land Office (GLO) plats and historical U.S. Geological Survey (USGS) quadrangle maps were examined for information pertinent to identifying potential historical resources in the project area.

<sup>1</sup> According to 2016 Arizona State Historic Preservation Office standards, for linear projects a 0.8-km (0.5-mile) buffer can be used for Archaeological Records Search research areas rather than the typical 1.6-km (1-mile) buffer (Arizona SHPO 2016).

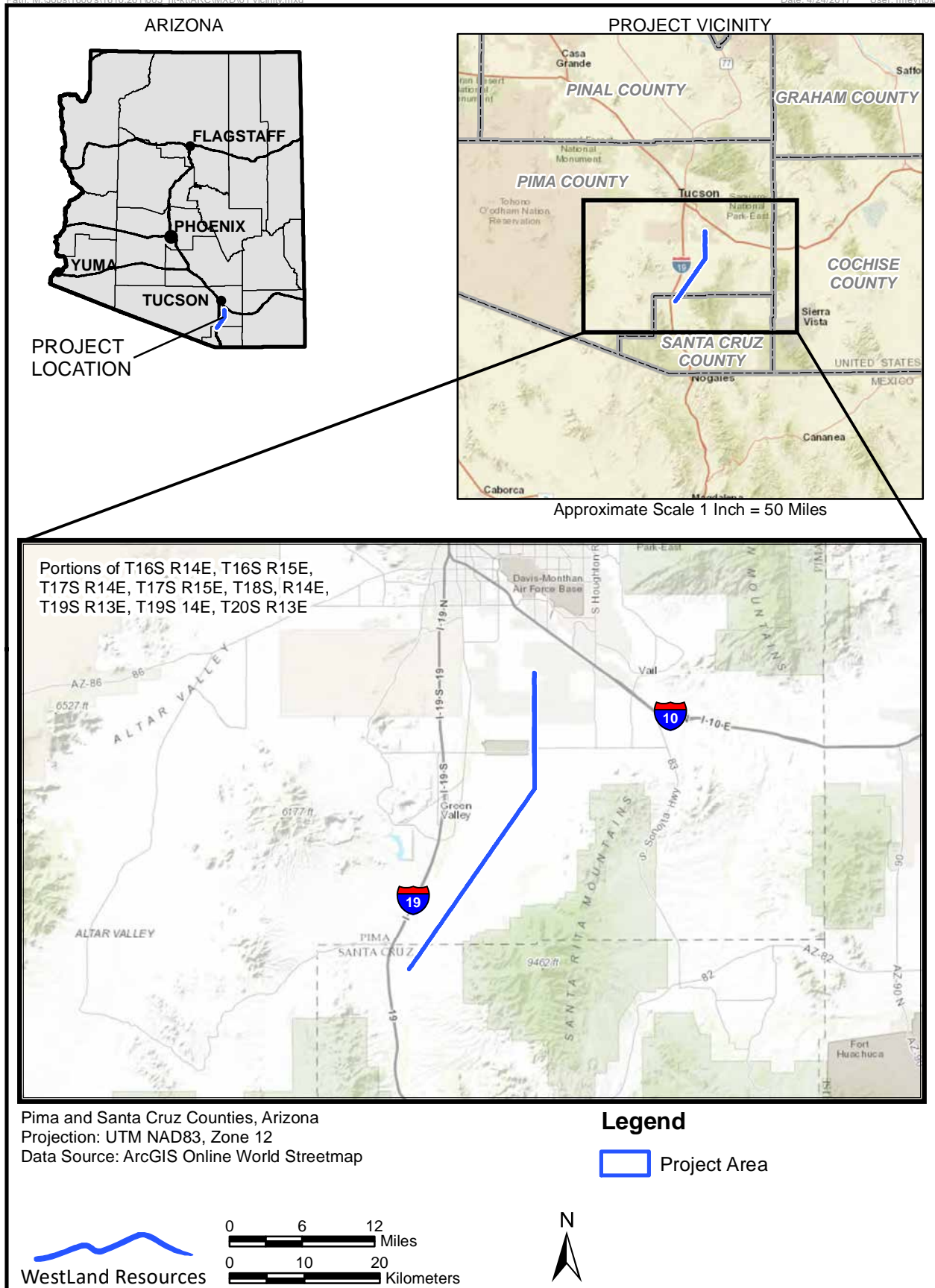


Figure 1. Vicinity map

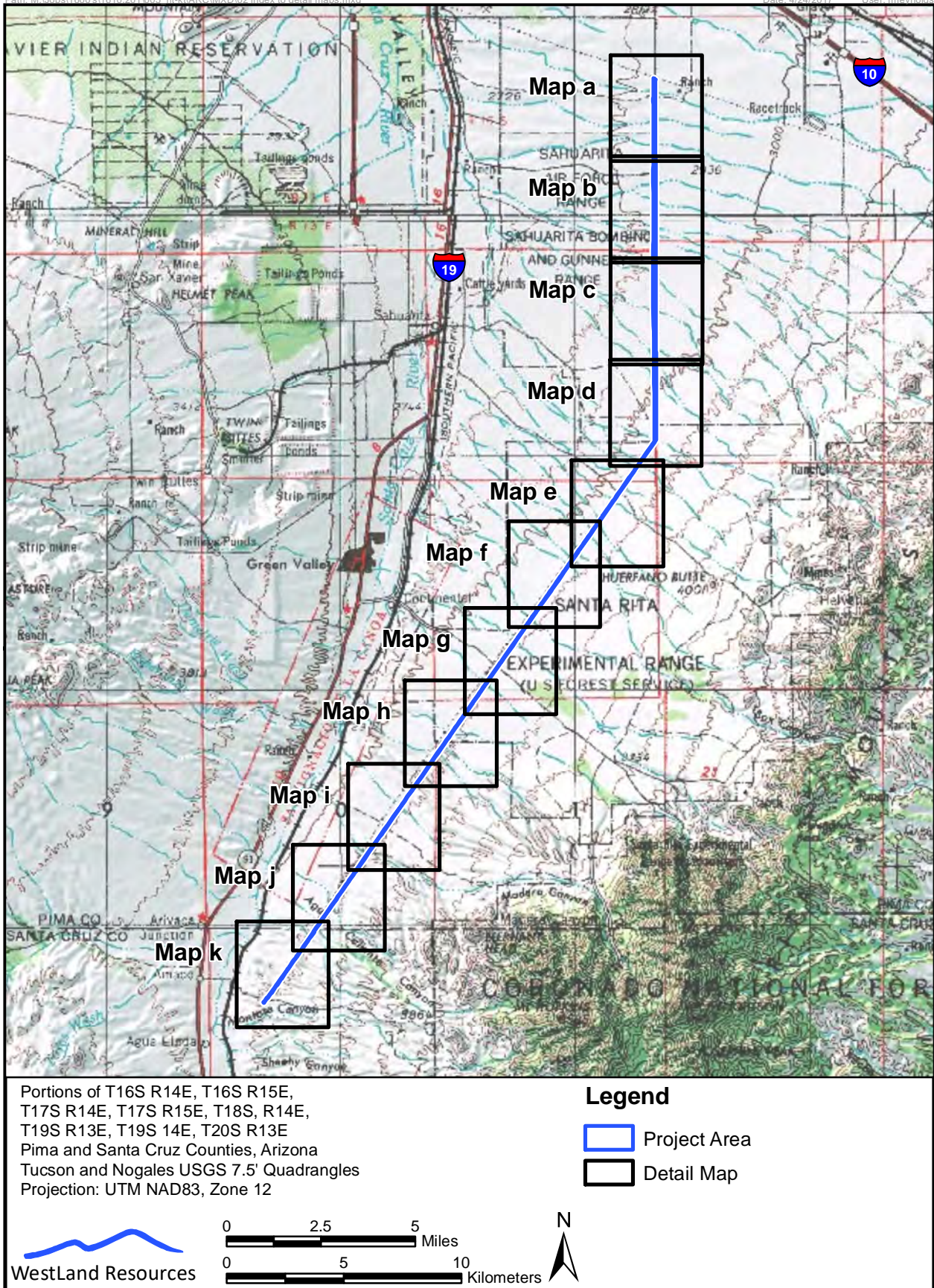
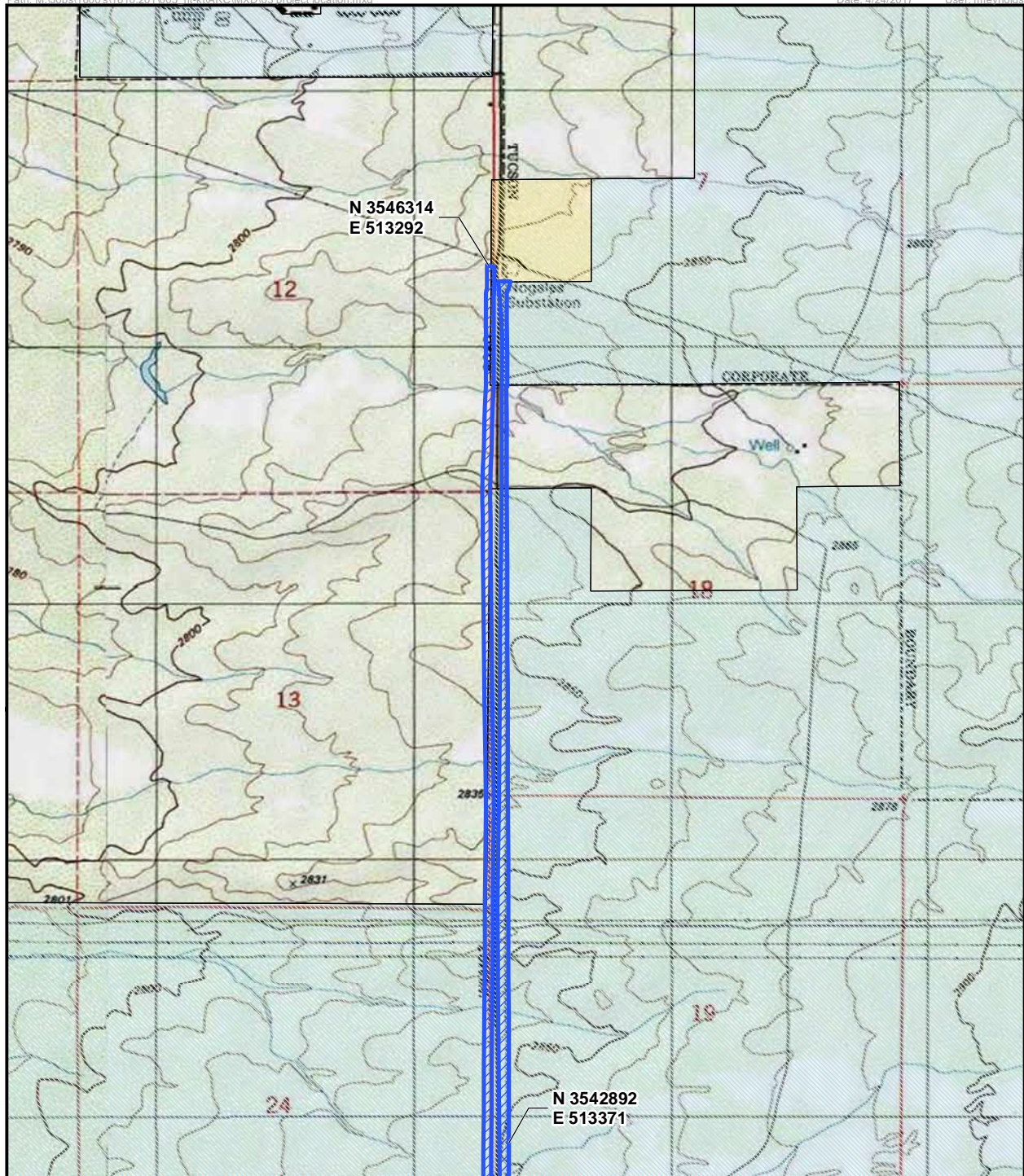



Figure 2. Index to detail maps



T16S, R14E, Portions of Sections 12, 13, and 24,  
 T16S, R15E, Portions of Sections 7, 18, and 19,  
 Pima County, Arizona  
 Tucson, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  Bureau of Land Management (BLM)
-  Private Land (No Color)
-  State Trust Land

WestLand Resources

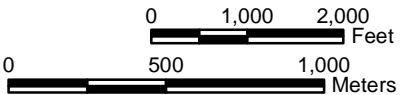
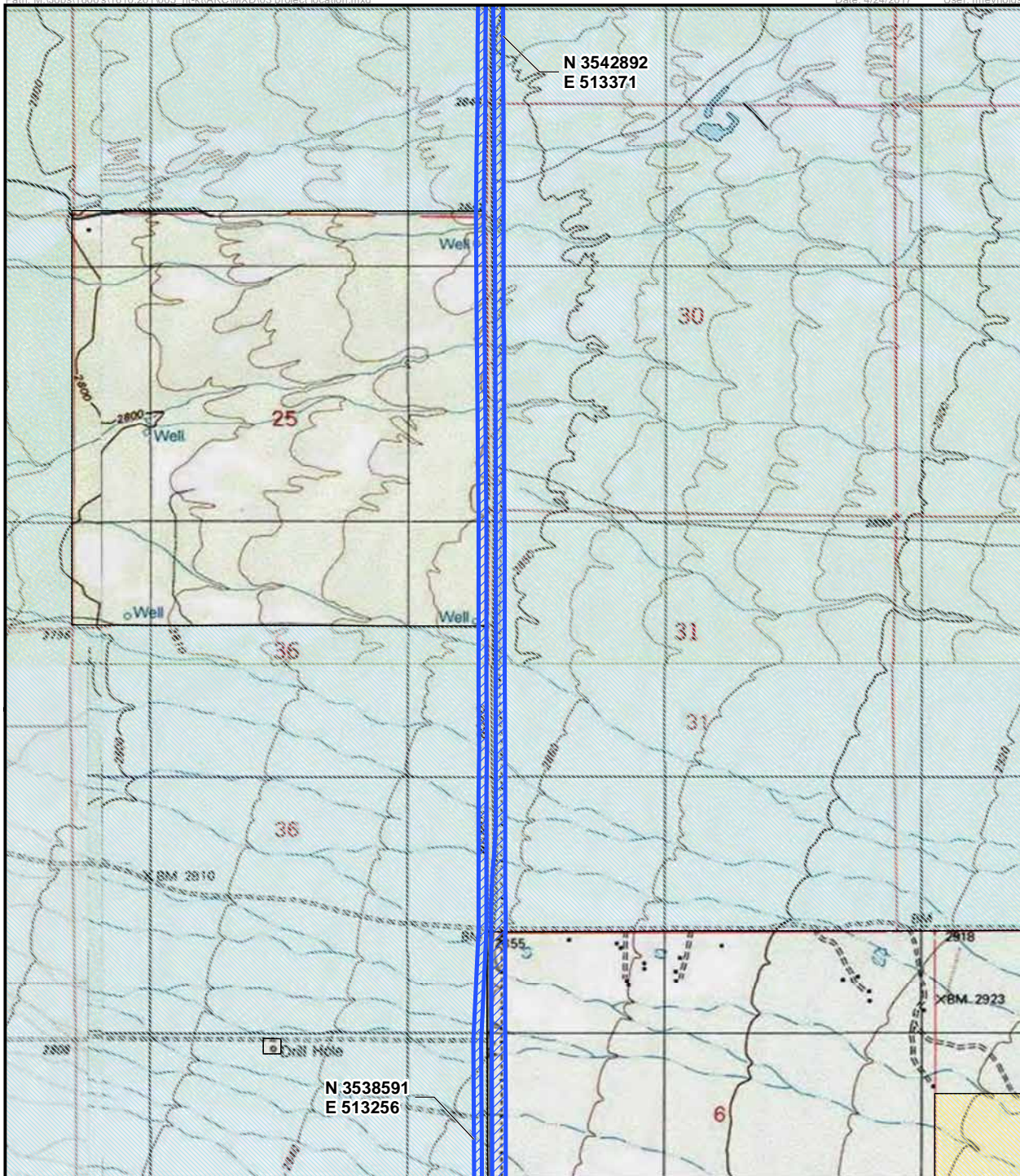






Figure 3a. Project location showing surface management



T16S, R14E, Portions of Sections 24, 25, and 36,  
 T16S, R15E, Portions of Sections 19, 30, and 31,  
 T17S, R14E, Portion of Section 1,  
 T17S, R15E, Portion of Section 6,  
 Pima County, Arizona  
 Tucson SE, AZ and Corona de Tucson, AZ  
 USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  Bureau of Land Management (BLM)
-  Private Land (No Color)
-  State Trust Land

WestLand Resources

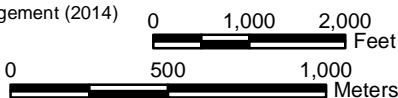
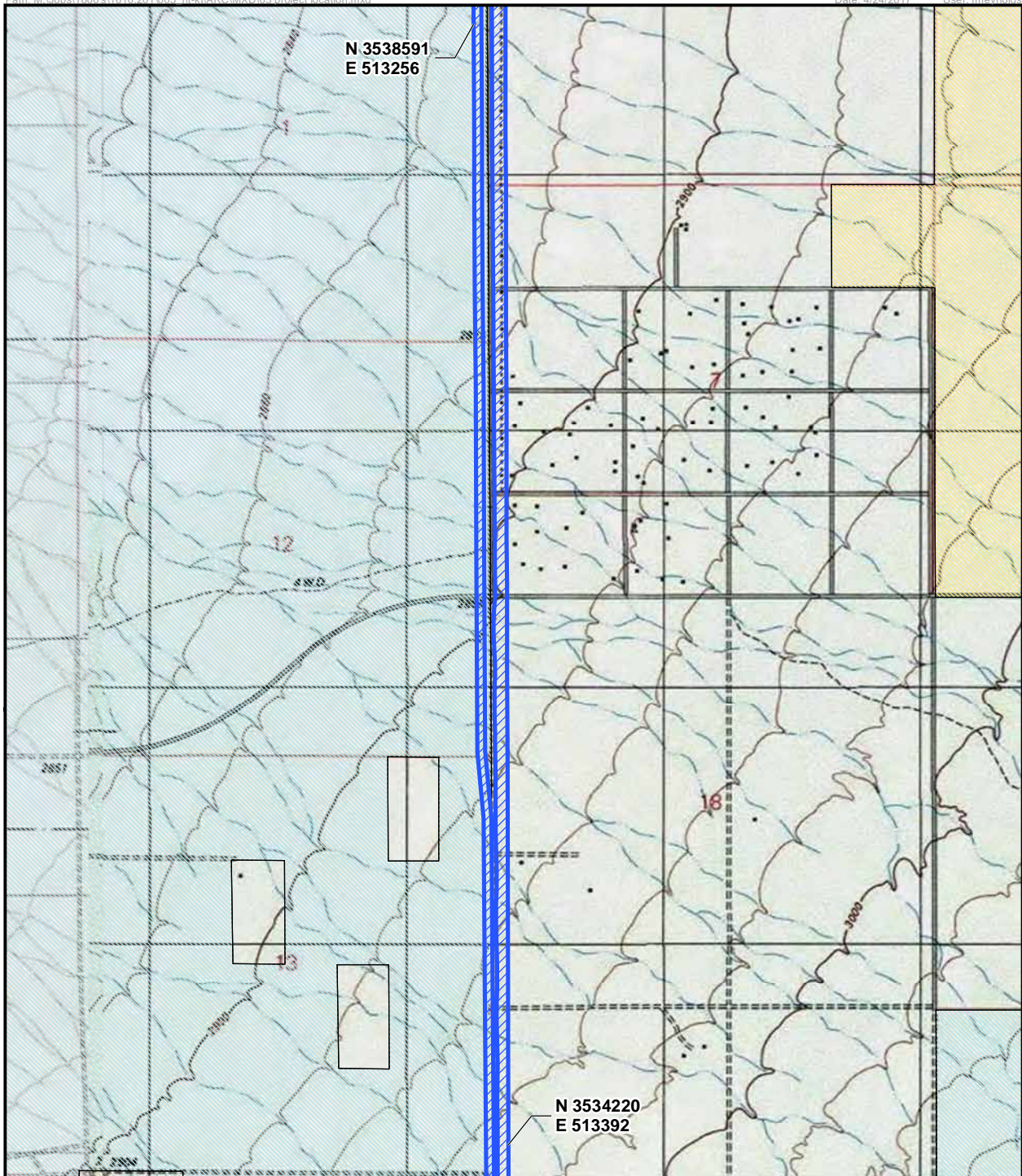






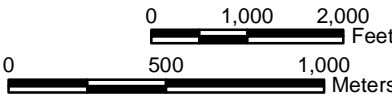
Figure 3b. Project location showing surface management



T17S, R14E, Portions of Sections 1, 12, and 13,  
 T17S, R15E, Portions of Sections 6, 7, 18, and 19,  
 Pima County, Arizona  
 Corona de Tucson, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

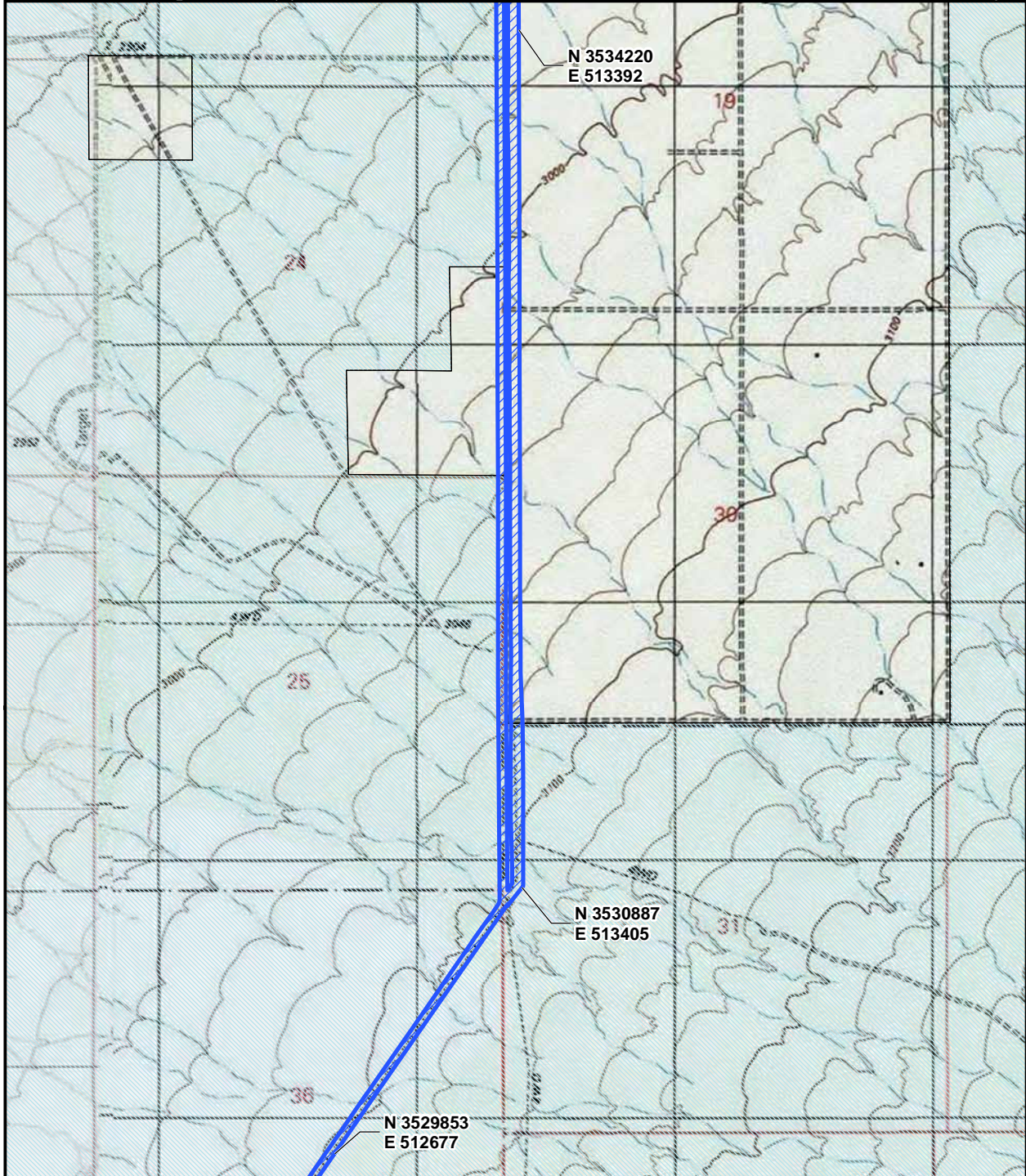
**Legend**

-  Project Area
- Surface Management**
-  Bureau of Land Management (BLM)
-  Private Land (No Color)
-  State Trust Land



**Figure 3c.** Project location showing surface management

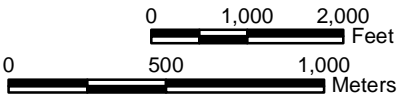




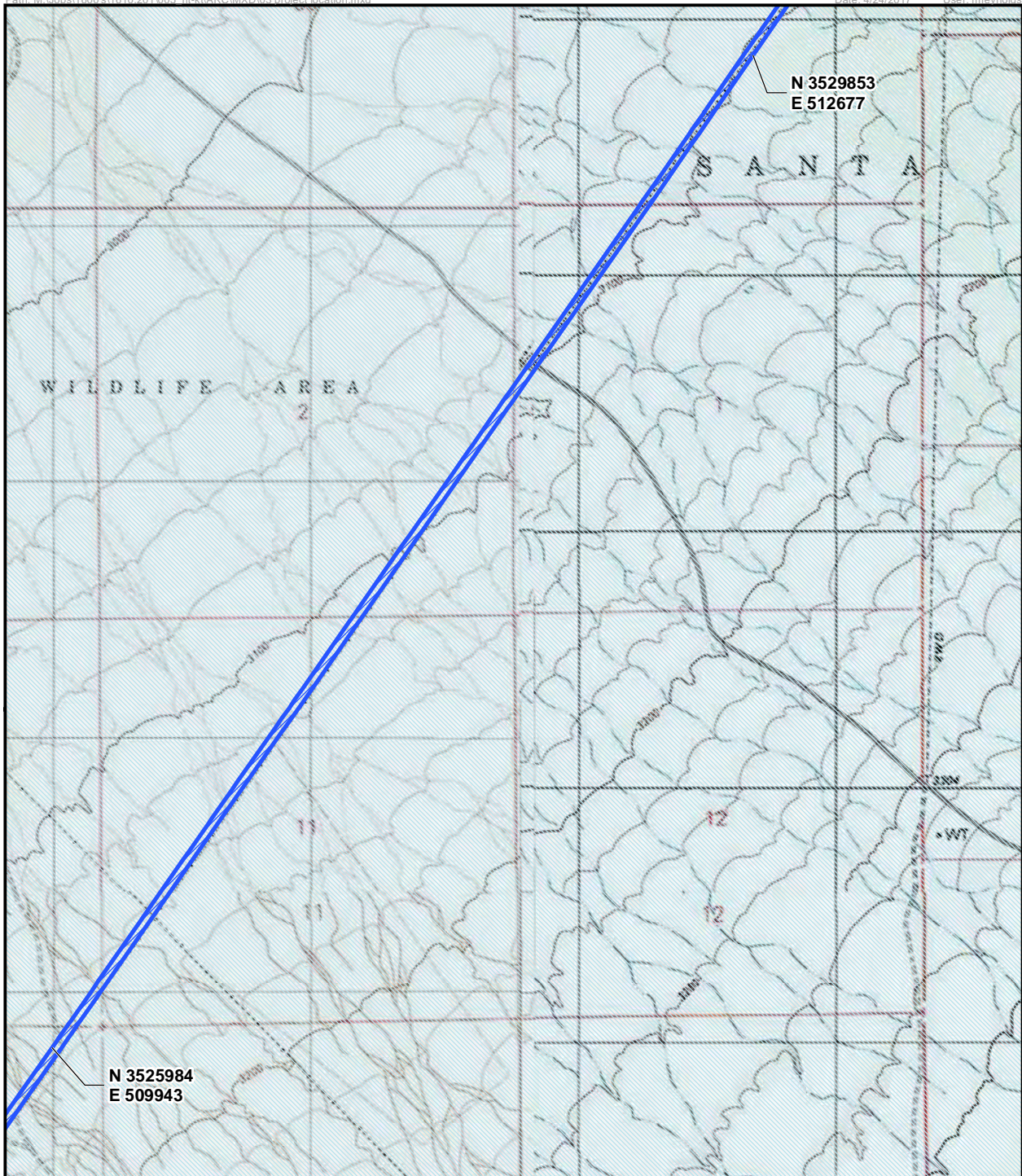
T17S, R14E, Portions of Sections 24, 25, and 36,  
 T17S, R15E, Portions of Sections 19, 30, and 31,  
 Pima County, Arizona  
 Corona de Tucson, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  Private Land (No Color)
-  State Trust Land





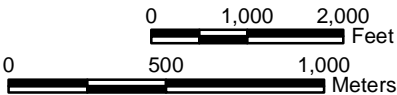
**Figure 3d.** Project location showing surface management



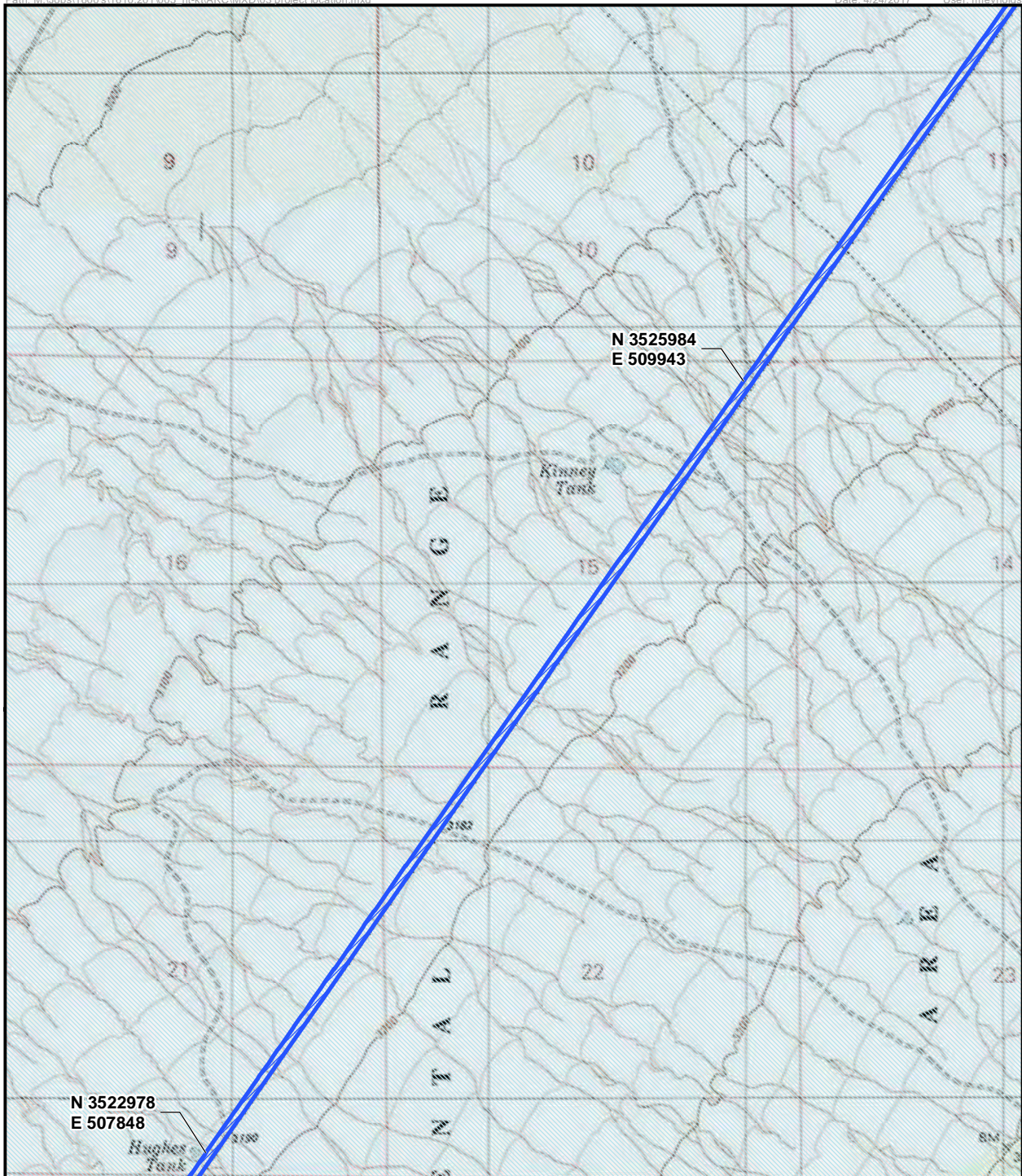
T17S, R14E, Portion of Section 36,  
 T18S, R14E, Portions of Sections 1, 2, 10, 11, and 15,  
 Pima County, Arizona  
 Corona de Tucson, Green Valley, and Sahuarita, AZ  
 USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  State Trust Land





**Figure 3e.** Project location showing surface management



T18S, R14E, Portions of Sections 10, 11, 15, 21, and 22,  
Pima County, Arizona  
Sahuarita and Green Valley, AZ USGS 7.5' Quadrangles  
Projection: UTM NAD83, Zone 12  
Data Source: BLM Surface Management (2014)

### Legend

-  Project Area
- Surface Management**
-  State Trust Land

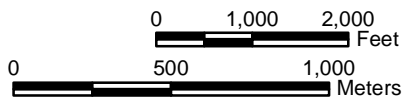
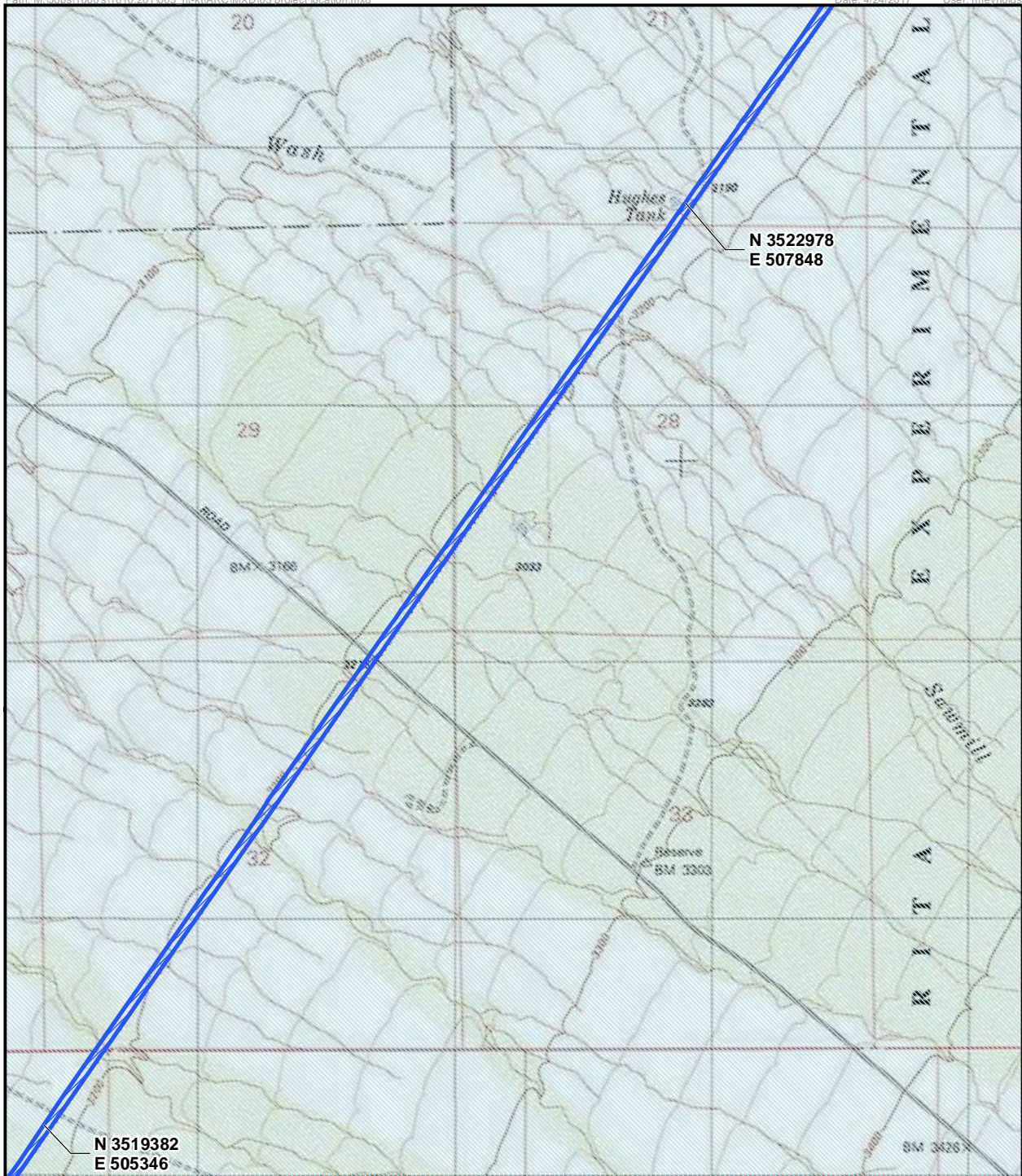




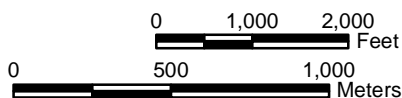
Figure 3f. Project location showing surface management



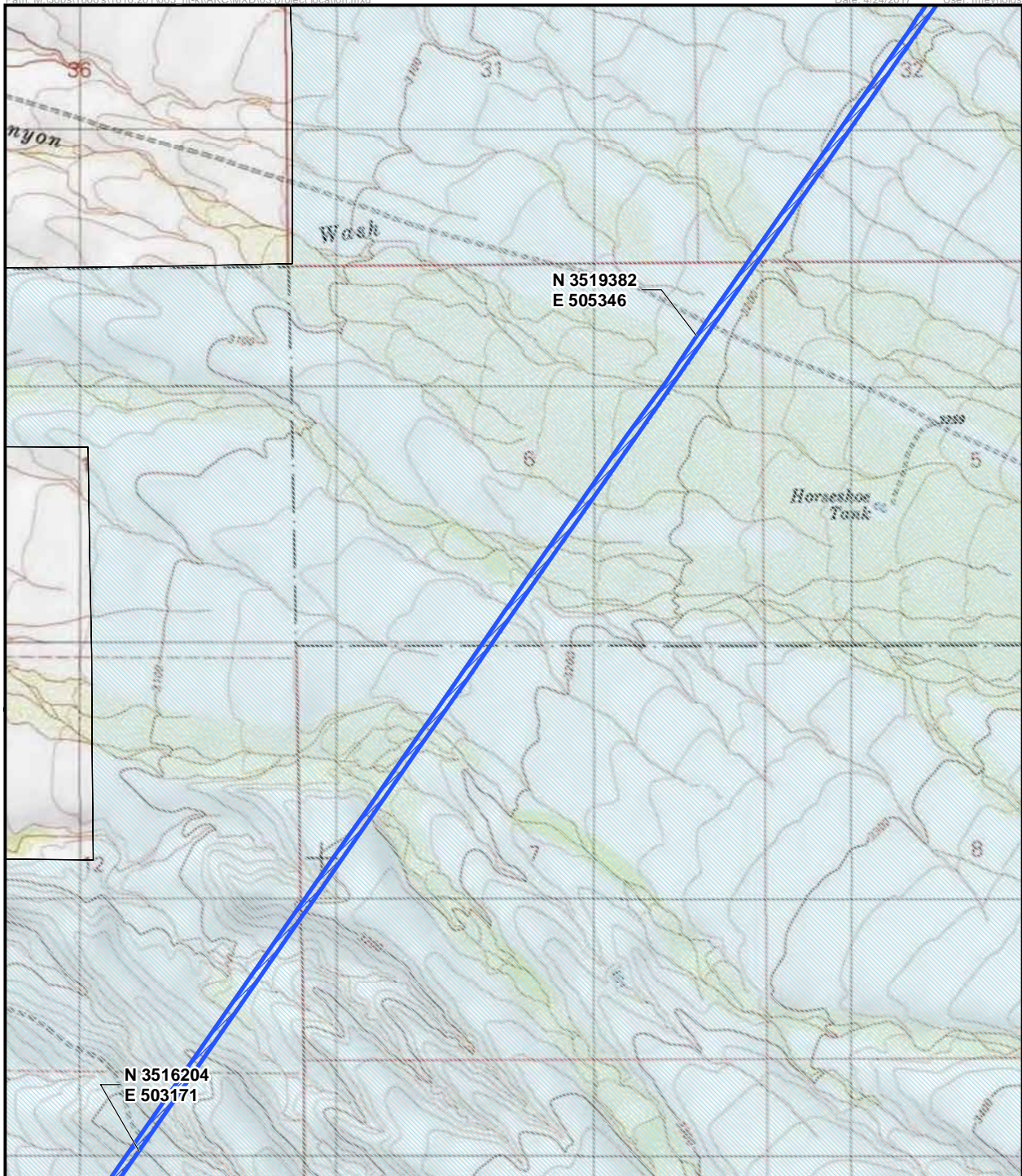
T18S, R14E, Portions of Sections 21, 28, 29, and 32,  
 Pima County, Arizona  
 Green Valley, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  State Trust Land



**Figure 3g.** Project location showing surface management



T18S, R14E, Portions of Section 32,  
T19S, R14E, Portions of Sections 6, 7, 12, and 13,  
Pima County, Arizona  
Green Valley, AZ USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12  
Data Source: BLM Surface Management (2014)

### Legend

-  Project Area
- Surface Management**
-  Private Land (No Color)
-  State Trust Land

  
WestLand Resources

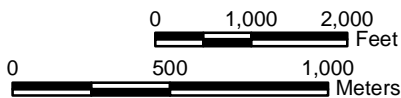


Figure 3h. Project location showing surface management



T19S, R13E, Portions of Sections 12, 13, 23, 24, and 26,  
Pima County, Arizona  
Green Valley, AZ USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12  
Data Source: BLM Surface Management (2014)

### Legend

-  Project Area
- Surface Management**
-  Private Land (No Color)
-  State Trust Land

  
WestLand Resources

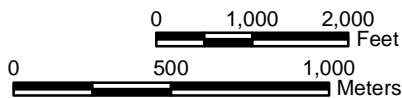


Figure 3i. Project location showing surface management

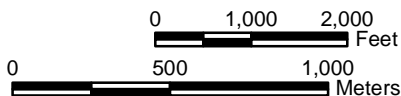


T19S, R13E, Portions of Sections 26, 27, 33, and 34,  
 T20S, R13E, Portion of Section 4,  
 Pima and Santa Cruz Counties, Arizona  
 Amado and Mount Hopkins, AZ USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12  
 Data Source: BLM Surface Management (2014)

**Legend**

-  Project Area
- Surface Management**
-  Private Land (No Color)
-  State Trust Land

  
 WestLand Resources



**Figure 3j.** Project location showing surface management



T19S, R13E, Portion of Section 33,  
T20S, R13E, Portions of Sections 4, 8, and 9,  
Santa Cruz County, Arizona  
Amado, AZ USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12  
Data Source: BLM Surface Management (2014)

### Legend

-  Project Area
- Surface Management**
-  Private Land (No Color)
-  State Trust Land

  
WestLand Resources

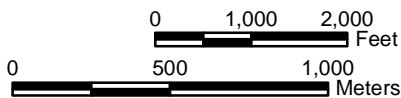


Figure 3k. Project location showing surface management



## TASK 2. FINAL REPORT

This final report of the site files records search and historical map review has been prepared in accordance with the reporting standards developed by the Arizona State Historic Preservation Office (Arizona SHPO 2016) and the ASM, and with the standards specified in Arizona Board of Regents Rules, Chapter 8, Section 200, *et seq.*

As part of the cultural resources analysis, WestLand identified the portions of the project area that had been surveyed in the past and, of those portions surveyed, the ones that had been surveyed within the last 10 years. The 10-year timeframe was used to assess whether the previously conducted surveys in the project area were up to current standards per SHPO guidelines (Arizona SHPO 2004). The project number, project title, and reference for each project were documented when available.

According to the ASM guidelines (ASM 1993, 1995), any cultural resource meeting the following criteria should be assigned status as an archaeological site:

1. Physical remains of past human activity that are at least 50 years old.

Additionally, sites should consist of at least one of the following:

2. 30+ artifacts of a single class (i.e., 30 sherds, 30 lithics, 30 tin cans) within an area 15 m (50 ft) in diameter, except when all pieces appear to originate from a single source (i.e., one ceramic pot, one core, one glass bottle).
3. 20+ artifacts which include at least 2 classes of artifact types (i.e., sherds, ground stone, nails, glass) within an area 15 m (50 ft) in diameter.
4. One or more archaeological features in temporal association with any number of artifacts.
5. Two or more temporally associated archaeological features without artifacts.

As part of the analysis, WestLand documented the number of previously recorded sites in the project area and within a surrounding 0.8-km (0.5-mile) buffer, including each site's ASM site number, site type, and age and cultural affiliation. When a reference for a site was available, this information was also provided.

Additionally, the Arizona and National Registers of Historic Places (A/NRHP) eligibility of all previously recorded sites within the project area was documented, if known. The criteria for evaluating the eligibility of a site for inclusion in the NRHP are specified in the Code of Federal Regulations (36 CFR 60.4). The pertinent criteria, as specified in the federal regulations, are excerpted and presented below.

The quality of significance in American history, architecture, archaeology, engineering, 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.

Lastly, WestLand examined historical maps of the project area to determine whether historical features were depicted on the landscape within the area of interest that could now be considered archaeological sites. Typically such features consist of linear infrastructure such as roads, pipelines, and transmission lines, but structures, homesteads, or other non-linear features are sometimes depicted as well. Where possible using recent aerial photographs available from Google Earth, WestLand assessed whether the linear historical infrastructure features were still in use, as such features are unlikely to be recorded as archaeological sites during future projects. This is in accordance with an interim policy adopted by the Arizona SHPO and the ASM that states that in-use linear infrastructure shall not be recorded as archaeological sites.

## **PREVIOUS SURVEY COVERAGE WITHIN THE PROJECT AREA**

A total of 37 cultural resources inventories have been conducted within 0.8 km (0.5 mile) of the project area. Of these, 25 projects intersect the project area (**Table A.1; Figures A.1.a through A.1.k** [Appendix A]). These inventories were conducted over the past several decades for various purposes, including utility improvements (the majority), road surveys, mining facilities, residential developments, and research.

Examination of the previous survey projects conducted within the project area shows that 71 percent of the project area has been surveyed in the past; however, only 6 percent of the project area has been surveyed within the past 10 years.

## SITES WITHIN THE PROJECT AREA

According to the AZSITE database and internal WestLand records, 23 archaeological sites are located within 0.8 km (0.5 mile) of the project area. Six sites have been identified within the project area (**Table A.2; Figures A.2.a through A.2.k** [Appendix A])<sup>2</sup>. The sites in the vicinity of the project area represent human occupation spanning the undifferentiated Prehistoric period, the Archaic and Formative periods, and the Historic period of human history and are related to the cultural traditions of the indeterminate Native American, Archaic, Hohokam, and Euroamerican cultures.

As part of WestLand's analysis, the A/NRHP eligibility status of the six sites within the project area was assessed. Three of the six sites that intersect the project area have been determined eligible for inclusion in the A/NRHP by the Arizona SHPO under Criterion (d); one site has been recommended eligible for the A/NRHP by its recorders under Criterion (a); and one site has been recommended ineligible by its recorders. The eligibility recommendation for the final site is not recorded on AZSITE.

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<sup>2</sup> **NOTICE:** Figures A.2.a through A.2.k have been redacted because the disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.

## HISTORICAL RESOURCES WITHIN THE PROJECT AREA

An examination of historical (50+ years old) GLO plats and USGS quadrangle maps was conducted in order to identify potential historical features that might be encountered in the project area. The historical features depicted on the maps all meet the minimum threshold for being considered archaeological sites according to the ASM criteria; however, in accordance with a current provisional policy adopted by the Arizona SHPO and the ASM, in-use linear infrastructure shall not be recorded as archaeological sites. Current aerial photographs were used to preliminarily assess whether the historical features depicted on the maps were still present and in use on the landscape. WestLand examined the following maps as part of this assessment:

- GLO plat for Township 16 South, Range 14 East, officially filed in 1873
- GLO plat for Township 16 South, Range 15 East, officially filed in 1897
- GLO plat for Township 17 South, Range 14 East, officially filed in 1947
- GLO plat for Township 17 South, Range 15 East, officially filed in 1933
- GLO plat for Township 18 South, Range 14 East, officially filed in 1873
- GLO plat for Township 19 South, Range 13 East, officially filed in 1885
- GLO plat for Township 19 South, Range 14 East, officially filed in 1926
- GLO plat for Township 20 South, Range 13 East, officially filed in 1886
- USGS Patagonia, Arizona 30' (1:125,000) series quadrangle edition of 1905
- USGS Tucson, Arizona 30' (1:125,000) series quadrangle edition of 1905
- USGS Tubac, Arizona 15' (1:62,500) series quadrangle edition of 1943
- USGS Tucson, Arizona 15' (1:62,500) series quadrangle edition of 1948
- USGS Mount Wrightson, Arizona 15' (1:62,500) series quadrangle edition of 1958
- USGS Sahuarita, Arizona 15' (1:62,500) series quadrangle edition of 1958
- USGS Tubac, Arizona 15' (1:62,500) series quadrangle edition of 1957
- USGS Tucson, Arizona 15' (1:62,500) series quadrangle edition of 1957

Overlays of the project area on a selection of these maps are shown in [Appendix B](#). The features identified on the historical maps are outlined in [Table 1](#) [next page].

Overall, the historical map review identified 37 potential historical features intersecting the project area, the majority of which are roads that are still in use. Accounting for features shown on several subsequent map editions, WestLand identified 16 individual features that are no longer in use and may potentially be recorded as archaeological sites. All of these are roads. Their status, which is not apparent from the aerial photos, cannot be known without ground-truthing. The remaining 21 features consist of in-use roads and the in-use Nogales tap to Kantor transmission line itself, which first appears on the 1957 and 1958 editions of the 15' USGS quadrangles.

**Table I. Features depicted as falling within the project area on historical maps**

Map Name	Date	Feature	Location	Current Status based on Aerial Photo Review
Township 16 South, Range 15 East GLO plat	1897	Road	T16S, R15E, S 18	No longer in use
Township 16 South, Range 15 East GLO plat	1897	Road	T16S, R15E, S 30	No longer in use
Township 16 South, Range 15 East GLO plat	1897	Road	T16S, R15E, S 31	No longer in use
Township 17 South, Range 14 East GLO plat	1947	Road	T17S, R14E, S 1	In-use road
Township 17 South, Range 14 East GLO plat	1947	Road	T17S, R14E, S 12	No longer in use
Township 17 South, Range 14 East GLO plat	1947	Road	T17S, R14E, S 13	No longer in use
Township 17 South, Range 14 East GLO plat	1947	Road	T17S, R14E, S 25	In-use road
Township 17 South, Range 15 East GLO plat	1933	Road	T17S, R15E, S 7	In-use road
Township 17 South, Range 15 East GLO plat	1933	Road	T17S, R15E, S 31	In-use road
Township 18 South, Range 14 East GLO plat	1873	"Road to Saint Rita Sawmill"	T18S, R14E, S 21	No longer in use
Township 19 South, Range 13 East GLO plat	1885	Road	T19S, R13E, S 23	In-use road
Township 19 South, Range 13 East GLO plat	1885	Road	T19S, R13E, S 26	No longer in use
Township 19 South, Range 14 East GLO plat	1926	Road	T19S, R14E, S 6	In-use road
Township 19 South, Range 14 East GLO plat	1926	Road	T19S, R14E, S 7	No longer in use
Tucson 30' USGS quadrangle	1905	Road	T16S, R15E, S 19	No longer in use
Patagonia 30' USGS quadrangle	1905	Road	T17S, R15E, ~S 7	No longer in use
Patagonia 30' USGS quadrangle	1905	Road	T17S, R15E, ~S 19	No longer in use
Patagonia 30' USGS quadrangle	1905	Road	T18S, R14E, ~S 15	In-use road
Patagonia 30' USGS quadrangle	1905	Road	T19S, R14E, ~S 6	In-use road
Patagonia 30' USGS quadrangle	1905	Road	T19S, R13E, ~S 23	No longer in use
Patagonia 30' USGS quadrangle	1905	Road	T19S, R13E, ~S 23	No longer in use
Tucson 15' USGS quadrangle	1948	Road	T16S R14E, S 12 and T16S R15E, S 18	In-use road
Tubac 15' USGS quadrangle	1943	Road	T20S R13E, S 8	In-use road
Mount Wrightson, Sahuarita, Tubac, and Tucson 15' USGS quadrangles	1957, 1958	Transmission line	Entire project area	In-use transmission line: Nogales tap to Kantor line
Tucson 15' USGS quadrangle	1957	Road	T16S R14E, S 12 and T16S R15E, S 18	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T16S R14E, S 36 and T16S R15E S 31	No longer in use
Sahuarita 15' USGS quadrangle	1958	Road	T17S R14E S 1 and S 12, T17S R14E S 7	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 1	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 11	No longer in use
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 15	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 22	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 28	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 28	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T18S R14E S 32	In-use road
Sahuarita 15' USGS quadrangle	1958	Road	T19S R13E S 23	No longer in use
Sahuarita 15' USGS quadrangle	1958	Road	T19S R14E S 6	In-use road
Tubac 15' USGS quadrangle	1958	Road	T20S R13E, S 8	In-use road

## **ASSESSMENT OF EFFECT AND RECOMMENDATIONS**

Research conducted using the ASM's AZSITE database indicates that 37 cultural resources inventory projects have been conducted within the 0.8-km (0.5-mile) buffer surrounding the project area and that of these, 25 intersect the project area. The previous surveys have examined approximately 71 percent of the project area, but only 6 percent has been surveyed within the past 10 years.

The AZSITE database shows that 23 sites fall within the 0.8-km (0.5-mile) buffer and that of these, six are located within the project area. The A/NRHP eligibility of the sites that intersect the project area was assessed and three of the six have been determined eligible for inclusion in the A/NRHP by the Arizona SHPO under Criterion (d); one site has been recommended eligible for the A/NRHP by its recorders under Criterion (a); and one site has been recommended ineligible by its recorders. The eligibility recommendation for the final site is not recorded on AZSITE.

The historical maps examined by WestLand indicate that 37 historical features may potentially be encountered within the project area; however, many of these represent in-use infrastructure that is unlikely to be recorded as archaeological sites under recent ASM guidelines.

WestLand offers the recommendation that the majority of the project area has not been examined by a current survey project (i.e., one within the last 10 years); therefore, a systematic cultural resources inventory of the project area should be completed following current Arizona SHPO standards prior to any future ground-disturbing activities within the project area. Furthermore, the previously recorded archaeological sites identified within the project area as well as any newly identified archaeological sites should be assessed to determine their present condition and evaluated for their eligibility for inclusion in the A/NRHP.

WestLand provides the general recommendation that all ground-disturbing activities have the potential to unearth archaeological sites or human remains, and that all such discoveries identified on Arizona State Land Department-administered land should be treated in accordance with Arizona Revised Statute §41-844. All such discoveries located on private land should be treated in accordance with Arizona Revised Statute §41-865.

## REFERENCES

Arizona State Historic Preservation Office (Arizona SHPO)

2004 *SHPO Position on Relying on Old Archaeological Survey Data*. SHPO Guidance Point No. 5. Arizona State Parks, Phoenix.

2016 *Standards for Inventory Documents Submitted for SHPO Review in Compliance with Historic Preservation Laws*. Arizona State Parks, Phoenix.

Arizona State Museum (ASM)

1993 *Archaeological Site Recording Manual, Version 1.1*. Arizona State Museum, University of Arizona, Tucson.

1995 *Revised Site Definition Policy*. Arizona State Museum, University of Arizona, Tucson.



# APPENDIX A

## ARCHAEOLOGICAL RECORDS SEARCH

Table A.1. Previous archaeological surveys within the project area and vicinity

Table A.2. Known archaeological sites within the project area and vicinity

Class I References

Figure A.1. Previous archaeological surveys within 0.8 km (0.5 mile) of the project area

Figure A.2. Previously recorded archaeological sites within 0.8 km (0.5 mile) of the project area [redacted]

### NOTICE:

- The information contained in this appendix is considered sensitive; may be protected under federal, state, and local laws; and may be removed from the report.
- Figures A.2.a through A.2.k have been redacted because the disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.

**Table A.1. Previous archaeological surveys within the project area and vicinity**

Agency Project No.	Project Name	Reference
12-108.BLM	1 Unknown	Not recorded
1980-164.ASM	2 TRICO Survey	Creel (1980)
1982-211.ASM	3 Right-of-way through Sahuarita Gunnery Range	Saul (1982)
1983-127.ASM	4 State Land Survey	Lange (1983)
1987-264.ASM	5 Investigations into Prehistoric Settlement and Subsistence on the Santa Rita Experimental Range	Buttery (1987)
1988-215.ASM	6 Santa Cruz 115-kV Transmission Line Upgrade	Bruder (1988)
1988-240.ASM	7 Preliminary Survey for the Roadway Alignment Alternatives within the Sahuarita Corridor Study	Stephen (1990a)
1989-28.ASM	8 Proposed Materials Source (Pit 8703) in Agua Caliente Canyon East of Arivaca Junction	Bontrager (1989)
1996-204.ASM	9 Mt. Hopkins Survey	Heuett (1996a)
1997-257.ASM	10 Pantano to Bicknell/Vail to Bicknell	Tucker (1998)
1998-481.ASM	11 Nogales Tap Expansion Project	Barger (1999)
1999-284.ASM	12 Tucson Prison Expansion II	Dosh (1998)
1999-297.ASM	13 Wilmot Road Utilities Survey	Stull (1999)
2000-485.ASM	14 Sahuarita Corridor Survey	J. Hesse (2001)
2003-197.ASM	15 TRICO Corona de Tucson Tie Line Survey	I. Hesse (2002); I. Hesse et al. (2002)
2005-446.ASM	16 Tucson-Apache 115-kV Transmission Line Project	Goldstein (2008)
2005-715.ASM	17 Cantor Substation Survey	Williams and Lascaux (2005)
2008-446.ASM	18 Rosemont Copper Mine Survey	Ezzo et al. (2009)
2009-578.ASM	19 SWTC Pantano to Sahuarita	Barr (2009)
2009-830.ASM(a)	20 Rosemont Utility Corridor	Sheehan et al. (2011)
2010-368.ASM	21 Rosemont Alternatives	Barr (2010)
2013-385.ASM	22 UNS Vail to Valencia Pima County Survey	King (2013a)
2013-409.ASM	23 UNS Vail to Valencia Santa Cruz County Survey	King (2013b)
2014-405.ASM	24 SWTC Bicknell to Vail Survey	Jerla (2014)
Transcon 2012	25 Survey of Kantor Substation and South	Not recorded
10.2324.SHPO	26 Unknown	Not recorded
1982-207.ASM	27 Tucson-Apache 115-kV Transmission Line	Hammack (1983)
1985-172.ASM	28 Cellular Telephone	Madsen (1985)

**Table A.1. Previous archaeological surveys within the project area and vicinity**

Agency Project No.	Project Name	Reference
1986-187.ASM 29	ADOT Material Pit 7489 near Amado, Santa Cruz County	Bontrager (1986)
1989-127.ASM 30	Santa Cruz 115-kV Transmission Line Conductor Replacement: Amado to Tubac Segment	O'Brien et al. (1990)
1990-37.ASM / 12.50.SHPO 31	State Lease 23-98551 Archaeological Exploration (PAST Job No. 90247)	Stephen (1990b)
1991-13.ASM 32	Range Improvement Projects on the Santa Rita Experimental Range	Madsen (1991)
1993-82.ASM 33	Rancho Nuevo Survey	Phillips (1993)
1995-210.ASM 34	Elephant Head Road Survey	Slawson (1995)
1999-23.ASM 35	Archaeology Survey of the Public Safety Academy Land Acquisition Project	Ruble (1999)
2007-588.ASM 36	Montosa Ranch Survey	Plescia (2006)
SHPO-2008-0131 37	Unknown	Not recorded

Note: The projects **in the project area** are listed first.

**Table A.2. Known archaeological sites within the project area and vicinity**

Site Number (ASM)	Site Type	Age & Cultural Affiliation	Reference	NRHP Eligibility
AZ BB:13:643 1	Rock features and artifact scatter	Prehistoric, 12,000 B.C.–A.D. 1450; Native American Culture	Jones (2002)	Determined eligible (d) by SHPO 2008
AZ DD:8:138 2	Artifact scatter	Prehistoric, 12,000 B.C.–A.D. 1450; Native American Culture	Levstik and Lascaux (2005)	Determined eligible (d) by SHPO 2009
AZ DD:8:193 Amado Montosa Road 3	Linear site: road	Historic, A.D. 1922–present; Euroamerican	Williams and Lascaux (2005); King (2013b)	Recommended eligible (a) by recorders 2005; 2013
AZ DD:8:259 4	Linear site: transmission line	Historic, A.D. 1958–present; Euroamerican	King (2013a, 2013b)	Recommended ineligible by recorders 2013
AZ EE:1:161 5	Rock features and artifact scatter	Prehistoric, 12,000 B.C.–A.D. 1450; Native American Culture	Heuett (1994); Huckell et al. (1987)	Determined eligible (d) by SHPO 2009
AZ EE:1:463 6	Not recorded	Not recorded	Rawson and Waldron (2012)	Not recorded
AZ BB:13:562 7	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998); Goldstein (2008); Jones (2002)	
AZ BB:13:563 8	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998); Jones (2002)	
AZ BB:13:564 9	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:566 10	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998); Jones (2002)	
AZ BB:13:567 11	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:570 12	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998); Jones (2002)	
AZ BB:13:571 13	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:572 14	Rock feature and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:573 15	Rock feature and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:574 16	Rock feature and artifact scatter	Formative, A.D. 1–1450; Hohokam	Dosh (1998)	
AZ BB:13:621 17	Rock features and artifact scatter	<ul style="list-style-type: none"> <li>• Archaic, 8500 B.C.–A.D. 1; Native American Culture</li> <li>• Formative, A.D. 1–1450; Hohokam</li> </ul>	Doelle et al. (1995)	
AZ CC:13:80 18	Linear site: transmission line	Historic, A.D. 1950–present; Euroamerican	Goldstein (2008)	
AZ DD:8:155 19	Artifact scatter	Archaic, 8500 B.C.–A.D. 1; Native American Culture	Heuett (1996a, 1996b)	
AZ EE:1:155 20	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Adams and Hoffman (1995); Heuett (1994); Huckell et al. (1987)	
AZ EE:1:156 21	Rock features and artifact scatter	Formative, A.D. 1–1450; Hohokam	Heuett (1994); Huckell et al. (1987)	
AZ EE:1:167 22	Artifact scatter	Prehistoric, 12,000 B.C.–A.D. 1450; Native American Culture	Bruder (1988)	
AZ EE:1:168 23	Artifact scatter	Prehistoric, 12,000 B.C.–A.D. 1450; Native American Culture	Bruder (1988)	

Note: The sites in the project area are listed first.

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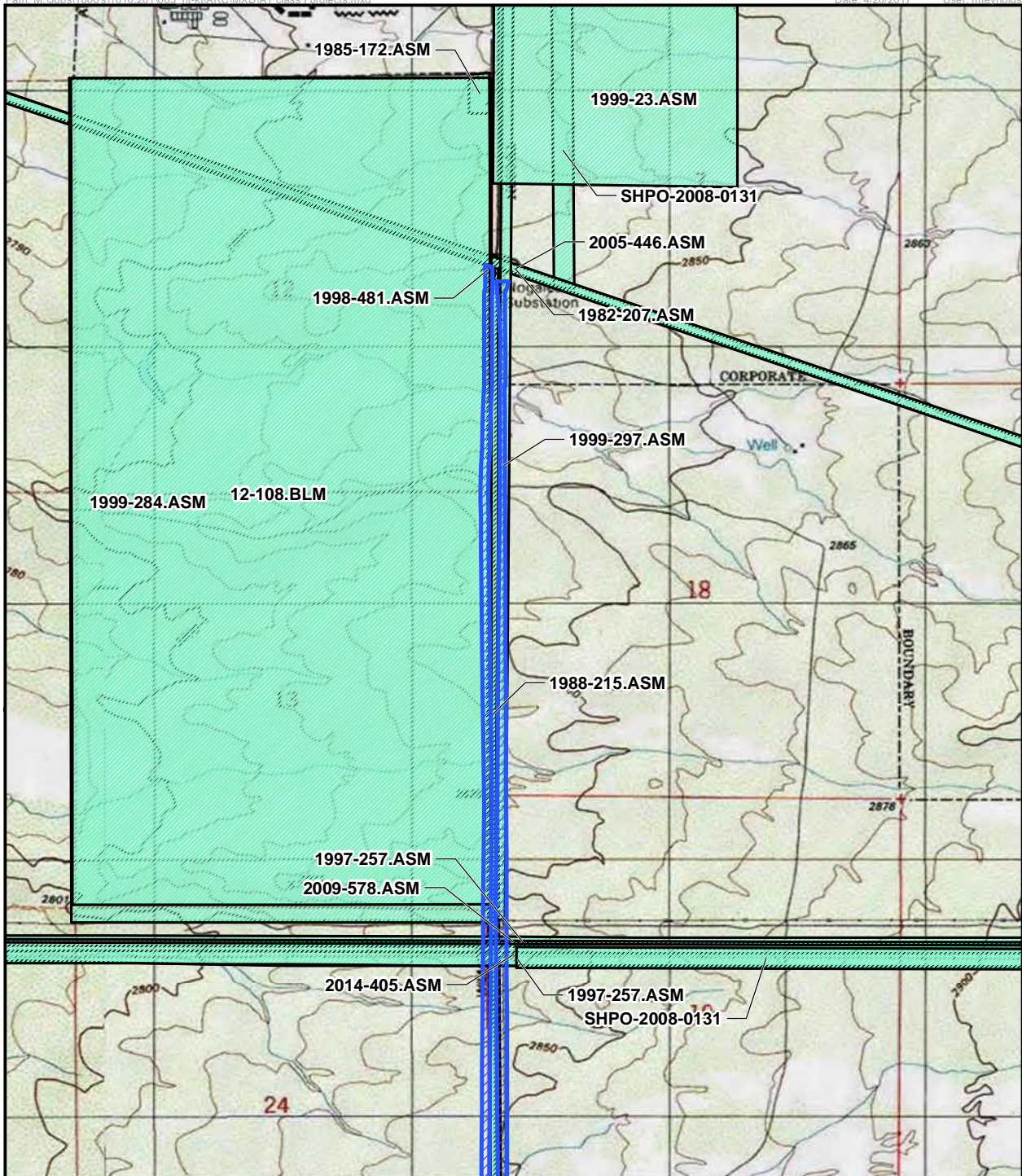


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T16S, R14E, Portions of Sections 12, 13, and 24,  
 T16S, R15E, Portions of Sections 7, 18, and 19,  
 Pima County, Arizona  
 Tucson, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

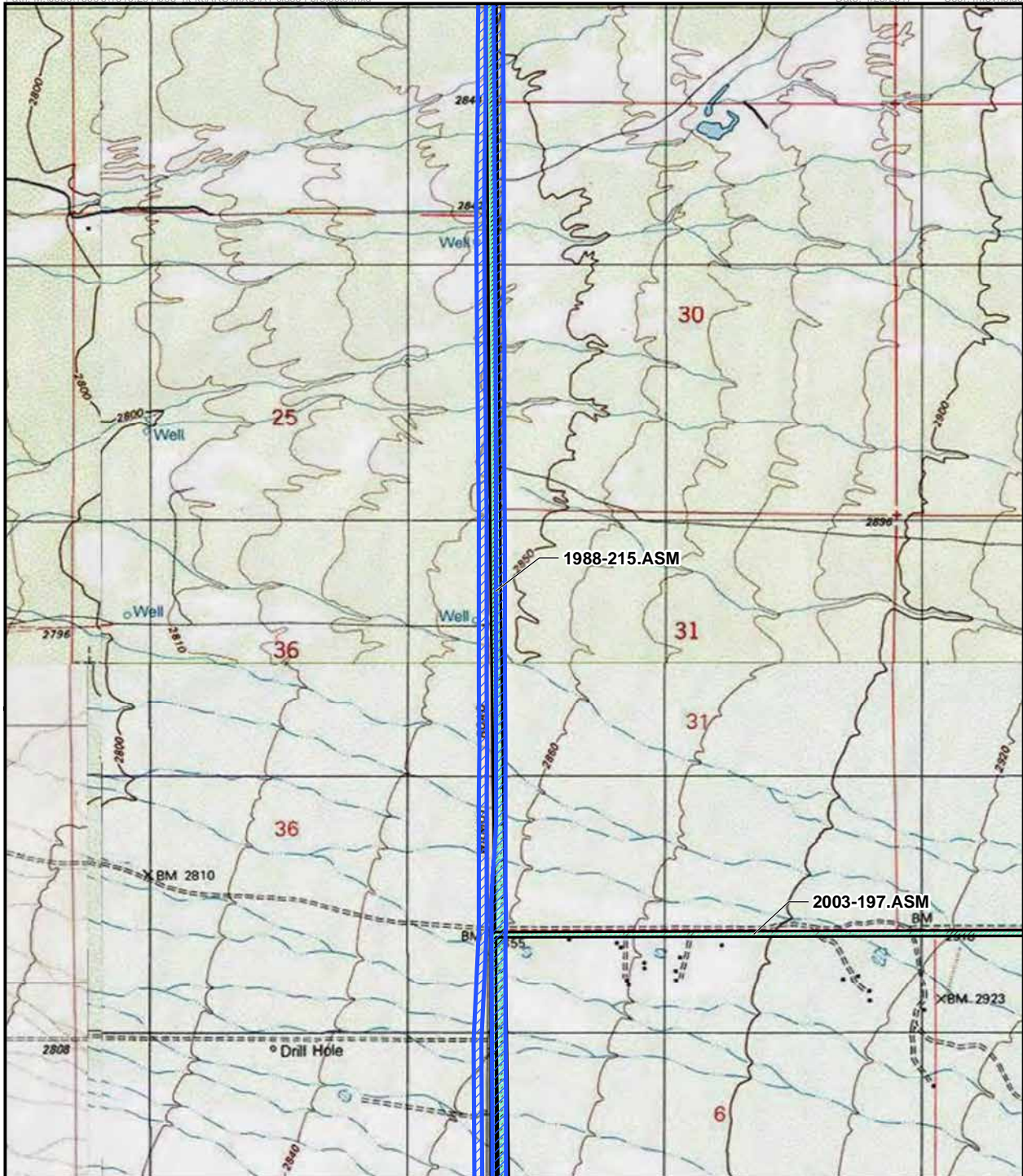


0 1,000 2,000  
 Feet

0 500 1,000  
 Meters





**Figure A.1a.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T16S, R14E, Portions of Sections 24, 25, and 36,  
 T16S, R15E, Portions of Sections 19, 30, and 31,  
 T17S, R14E, Portion of Section 1,  
 T17S, R15E, Portion of Section 6,  
 Pima County, Arizona  
 Tucson SE, AZ and Corona de Tucson, AZ  
 USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

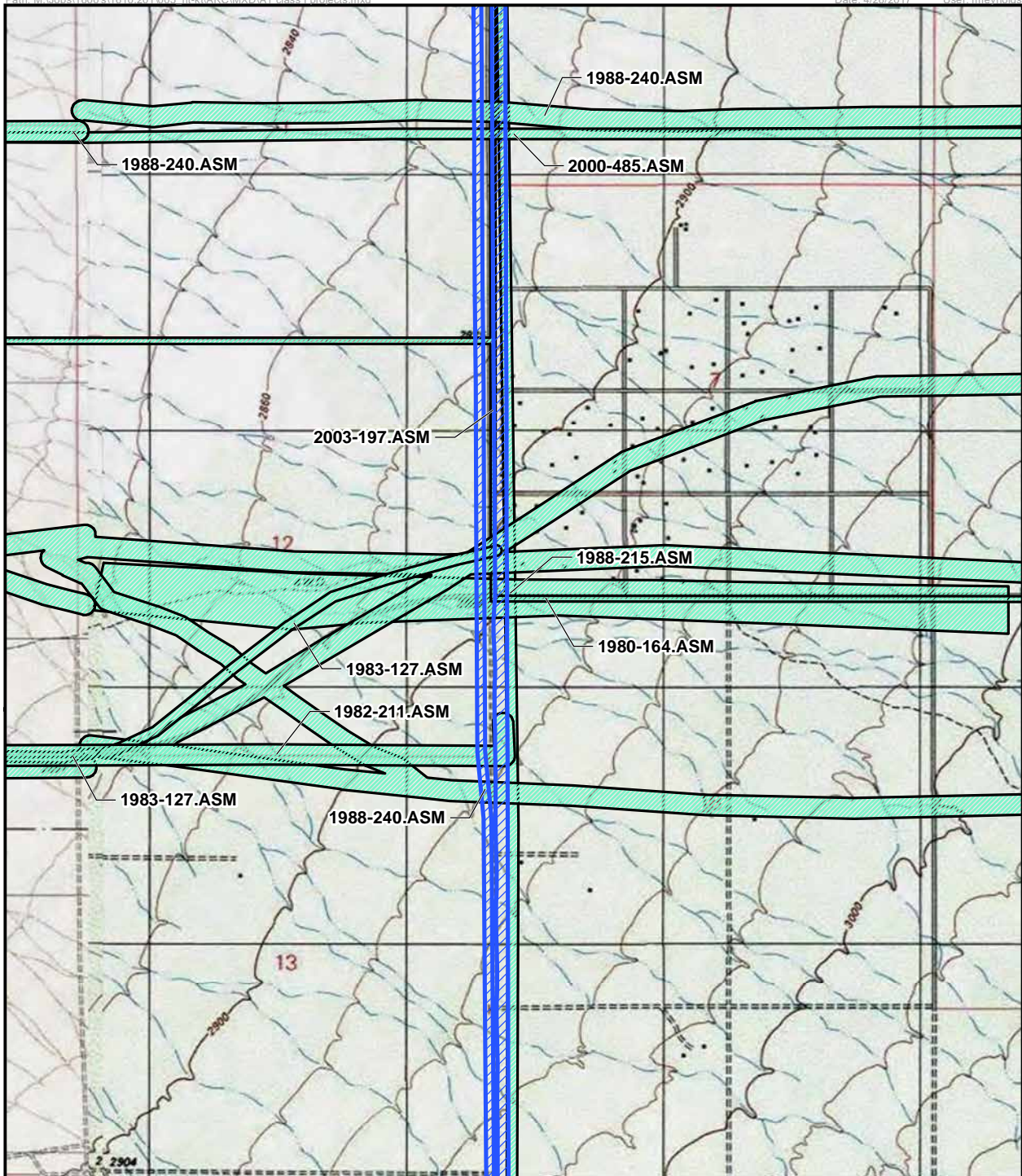
WestLand Resources

0 1,000 2,000 Feet

0 500 1,000 Meters





**Figure A.1b.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T17S, R14E, Portions of Sections 1, 12, and 13,  
 T17S, R15E, Portions of Sections 6, 7, 18, and 19,  
 Pima County, Arizona  
 Corona de Tucson, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

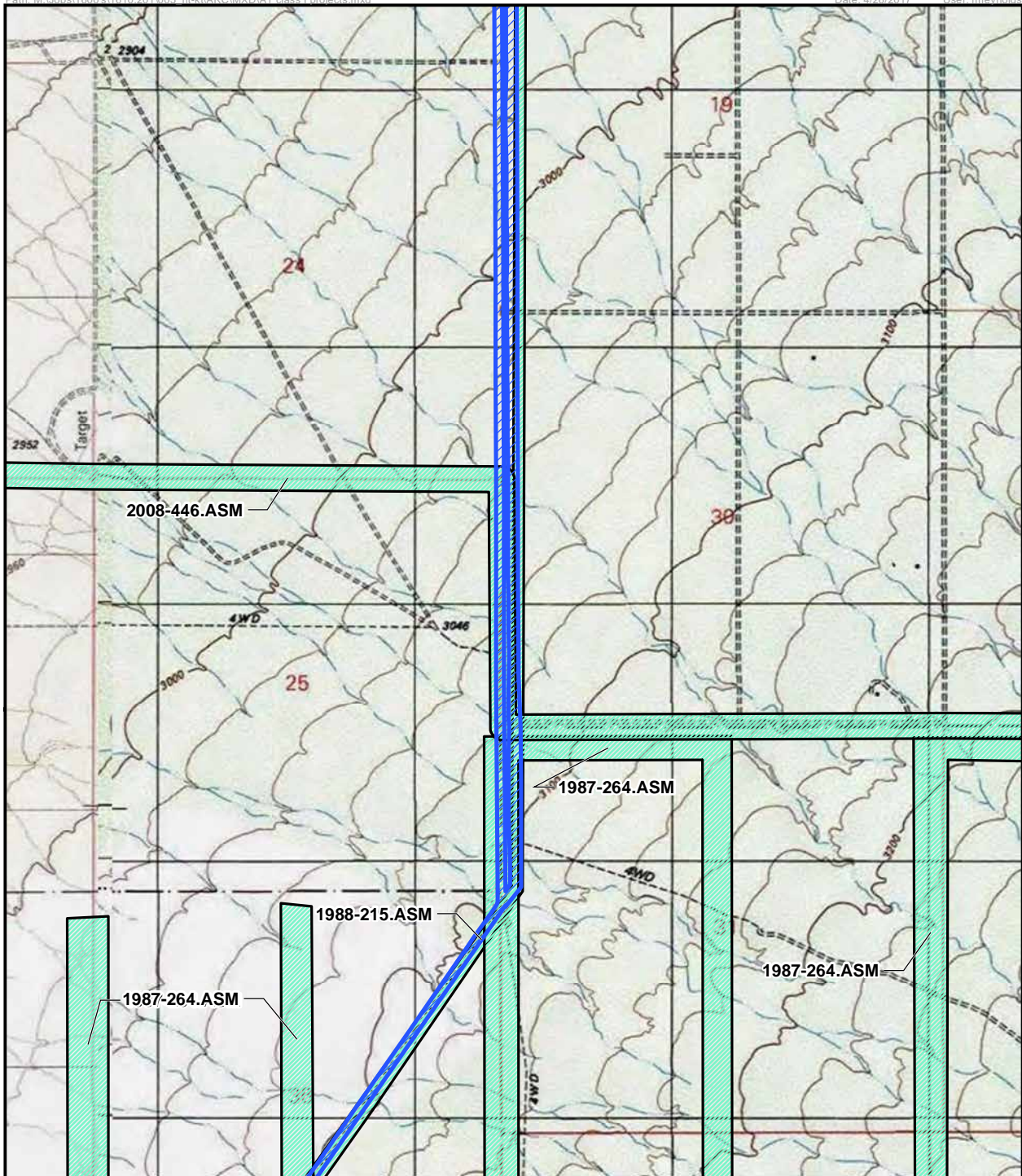
  
 WestLand Resources

0 1,000 2,000  
 Feet

0 500 1,000  
 Meters





**Figure A.1c.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T17S, R14E, Portions of Sections 24, 25, and 36,  
T17S, R15E, Portions of Sections 19, 30, and 31,  
Pima County, Arizona  
Corona de Tucson, AZ USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters





Figure A.1d. Previous archaeological surveys within 0.8 km (0.5 mile) of the project area

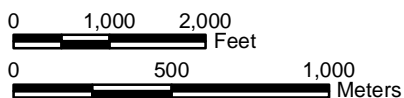


T17S, R14E, Portion of Section 36,  
 T18S, R14E, Portions of Sections 1, 2, 10, 11, and 15,  
 Pima County, Arizona  
 Corona de Tucson, Green Valley, and Sahuarita, AZ  
 USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12

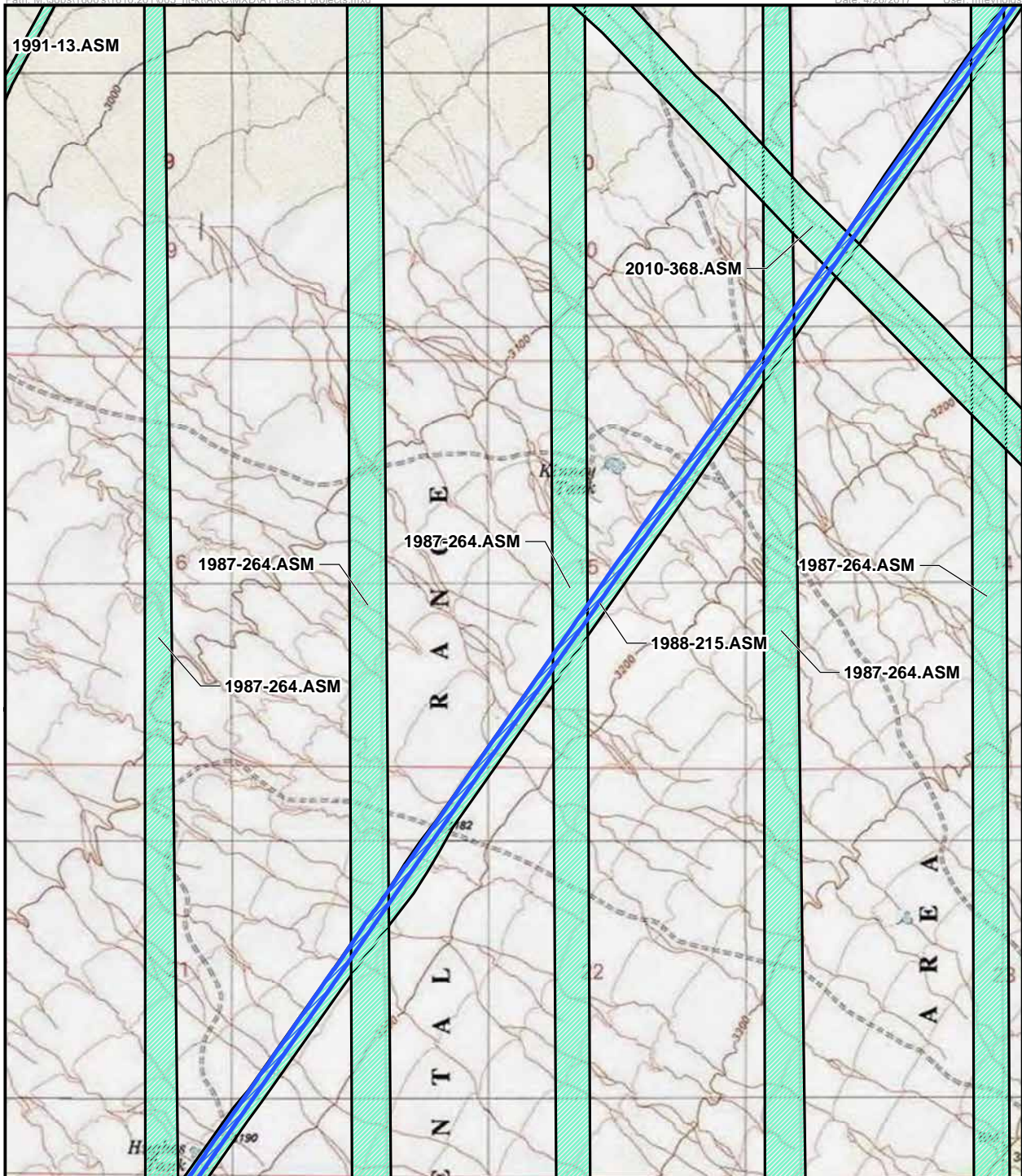
**Legend**

-  Project Area
-  Previous Survey

  
 WestLand Resources





**Figure A.1e.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T18S, R14E, Portions of Sections 10, 11, 15, 21, and 22,  
Pima County, Arizona  
Sahuarita and Green Valley, AZ USGS 7.5' Quadrangles  
Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

  
WestLand Resources

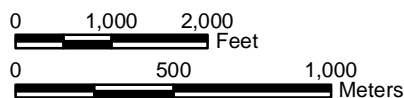
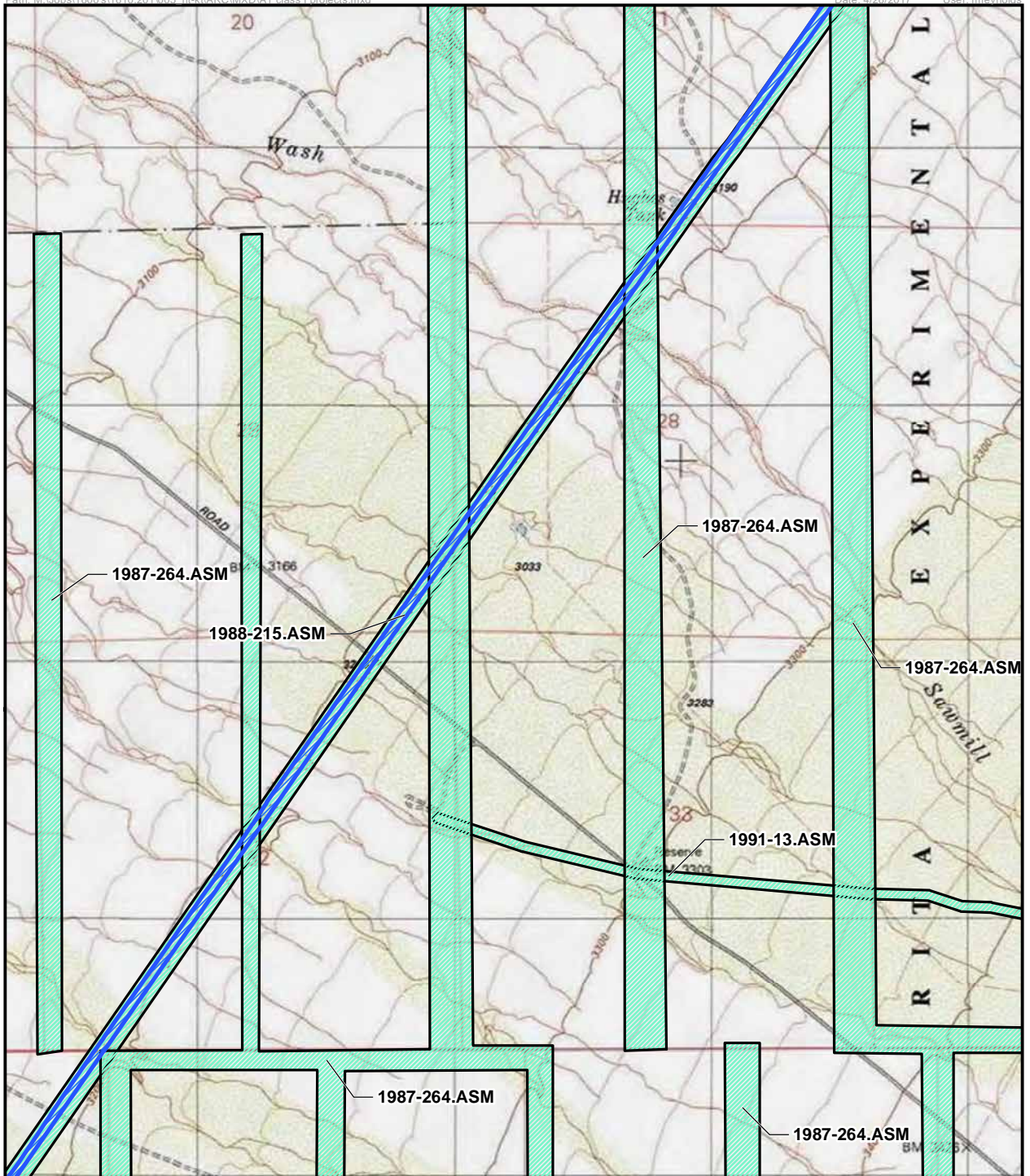




Figure A.1f. Previous archaeological surveys within 0.8 km (0.5 mile) of the project area

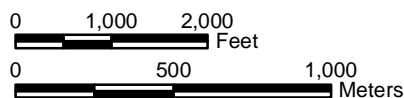


T18S, R14E, Portions of Sections 21, 28, 29, and 32,  
 Pima County, Arizona  
 Green Valley, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12

**Legend**

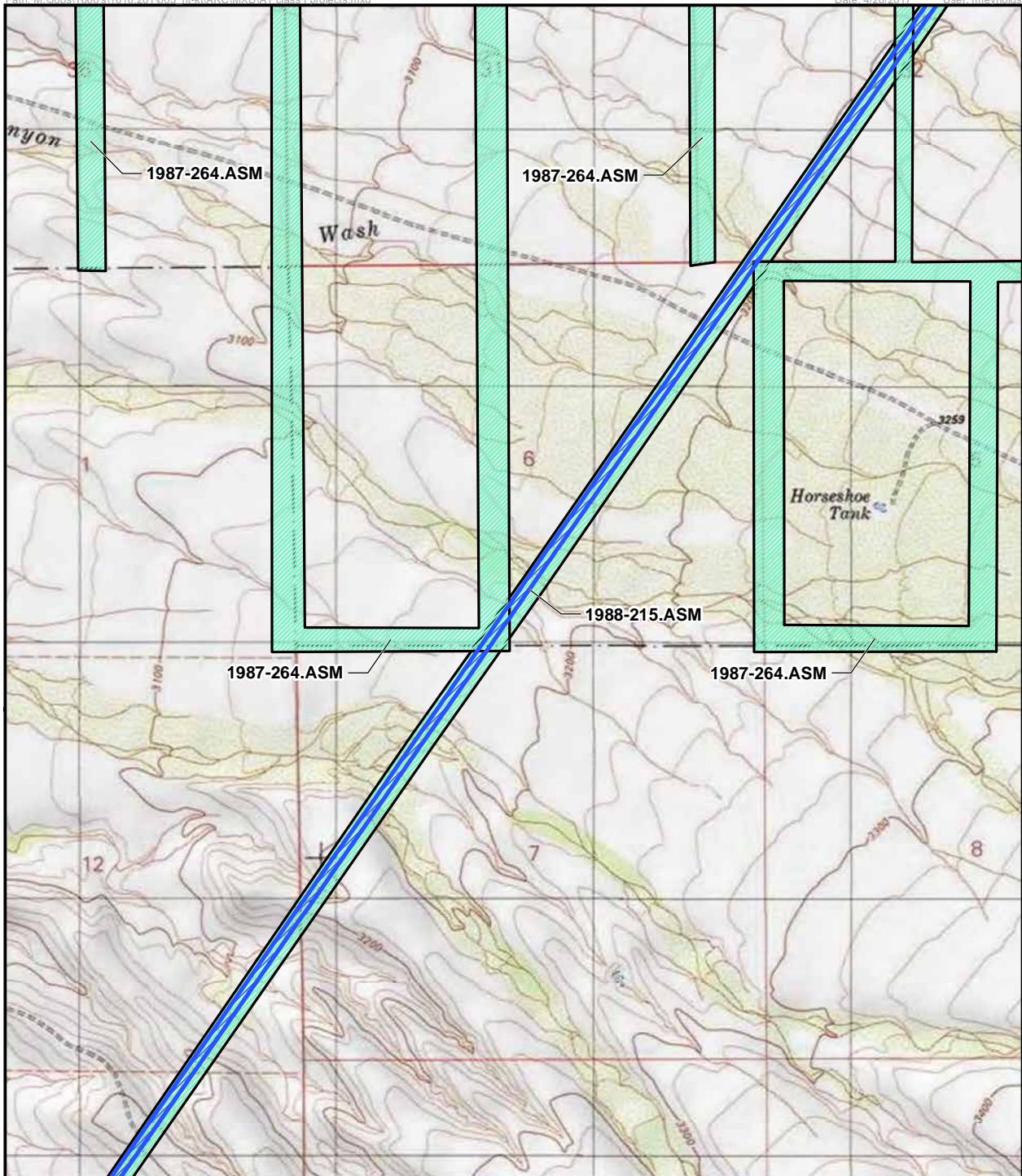
-  Project Area
-  Previous Survey

  
 WestLand Resources





**Figure A.1g.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



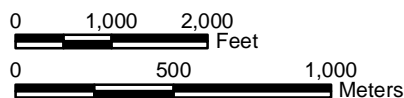


T18S, R14E, Portions of Section 32,  
 T19S, R14E, Portions of Sections 6, 7, 12, and 13,  
 Pima County, Arizona  
 Green Valley, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12

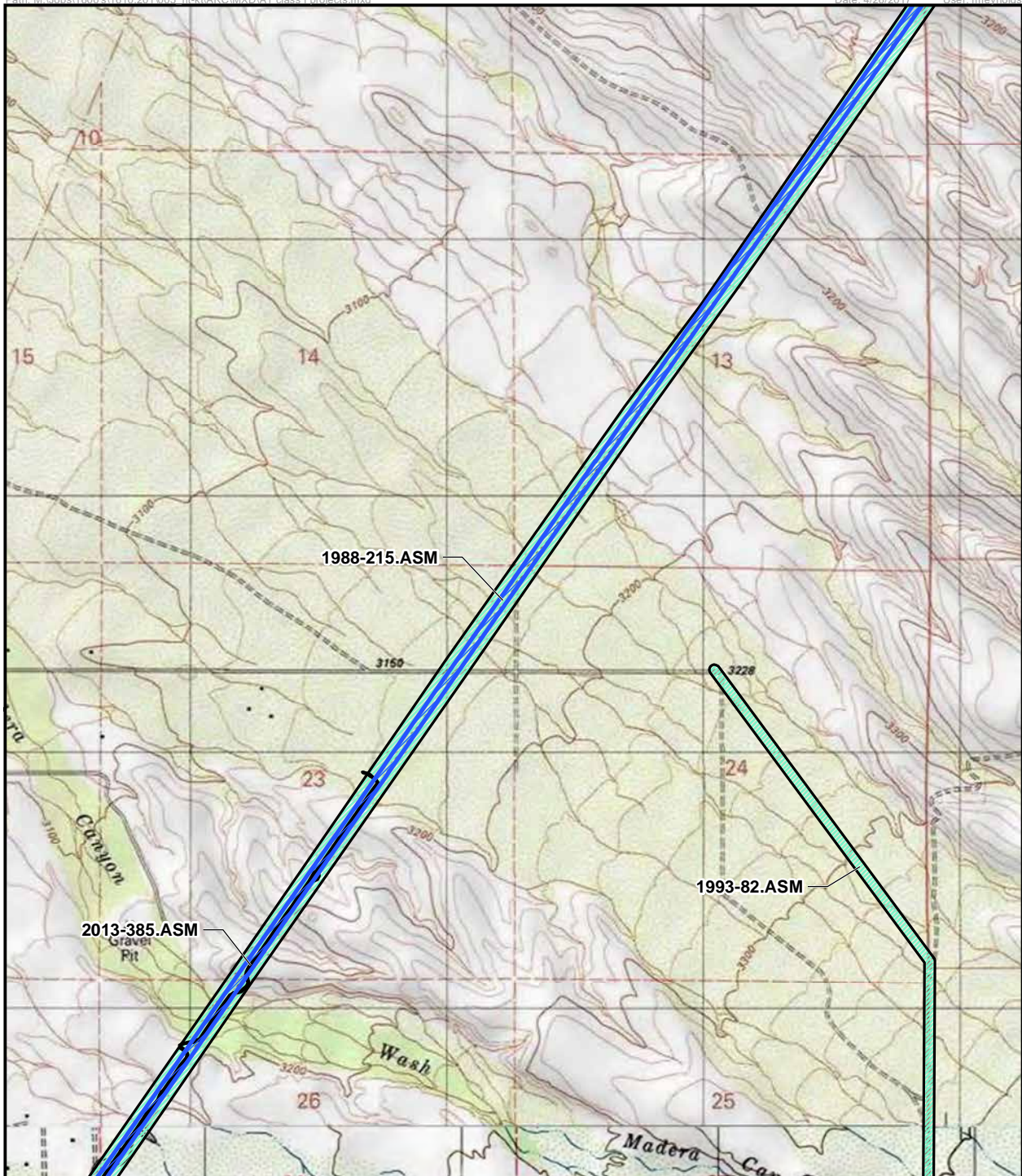
**Legend**

-  Project Area
-  Previous Survey

  
 WestLand Resources





**Figure A.1h.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T19S, R13E, Portions of Sections 12, 13, 23, 24, and 26,  
Pima County, Arizona  
Green Valley, AZ USGS 7.5' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

  
WestLand Resources

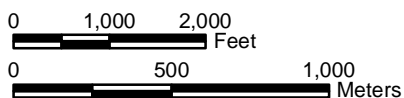
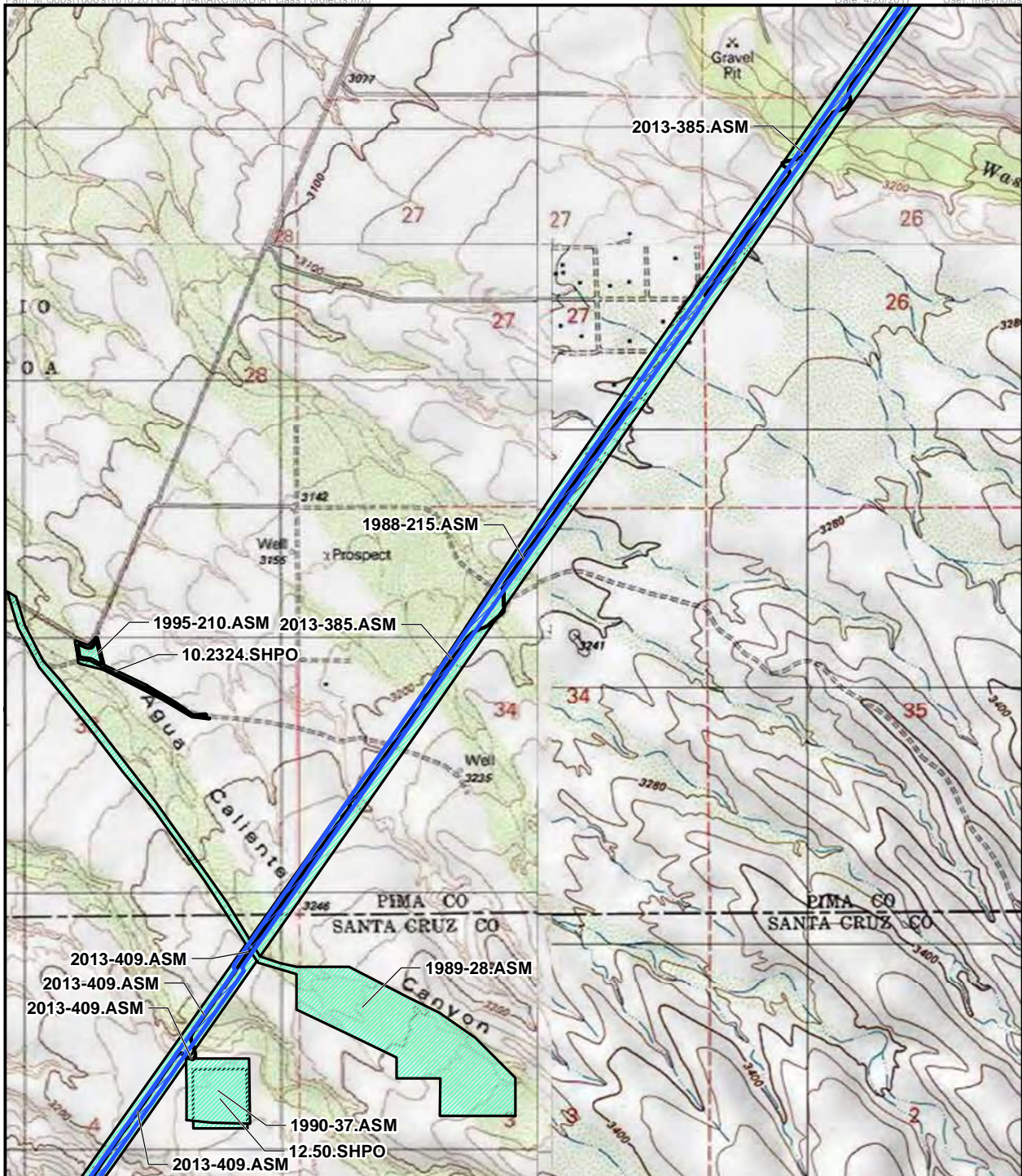




Figure A.1i. Previous archaeological surveys within 0.8 km (0.5 mile) of the project area

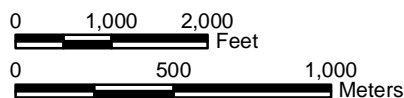


T19S, R13E, Portions of Sections 26, 27, 33, and 34,  
 T20S, R13E, Portion of Section 4,  
 Pima and Santa Cruz Counties, Arizona  
 Amado and Mount Hopkins, AZ USGS 7.5' Quadrangles  
 Projection: UTM NAD83, Zone 12

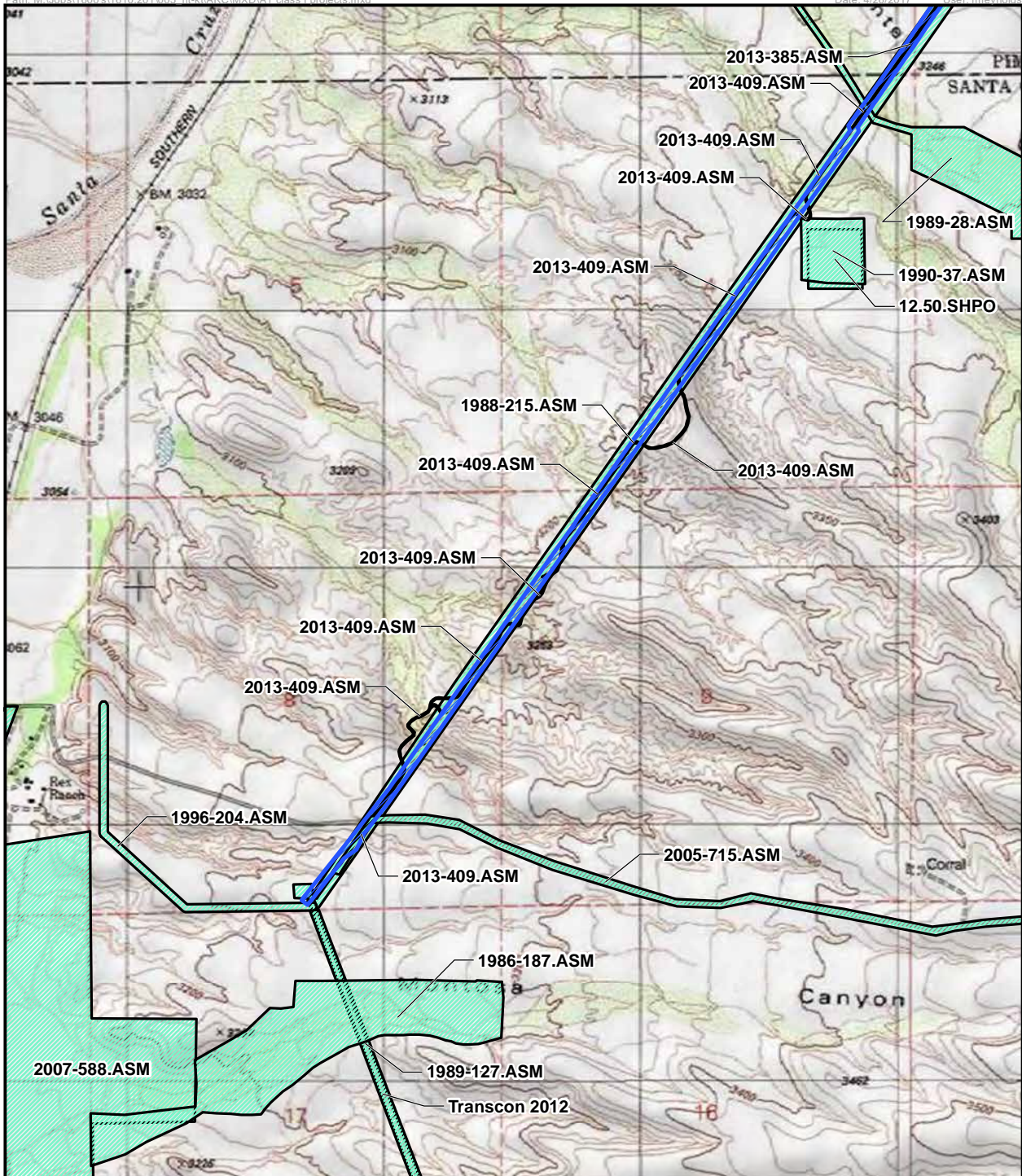
**Legend**

-  Project Area
-  Previous Survey

  
 WestLand Resources





**Figure A.1j.** Previous archaeological surveys within 0.8 km (0.5 mile) of the project area



T19S, R13E, Portion of Section 33,  
 T20S, R13E, Portions of Sections 4, 8, and 9,  
 Santa Cruz County, Arizona  
 Amado, AZ USGS 7.5' Quadrangle  
 Projection: UTM NAD83, Zone 12

**Legend**

-  Project Area
-  Previous Survey

WestLand Resources

0 1,000 2,000 Feet

0 500 1,000 Meters



Figure A.1k. Previous archaeological surveys within 0.8 km (0.5 mile) of the project area

**NOTICE:** Figures A.2.a through A.2.k have been redacted because the disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.

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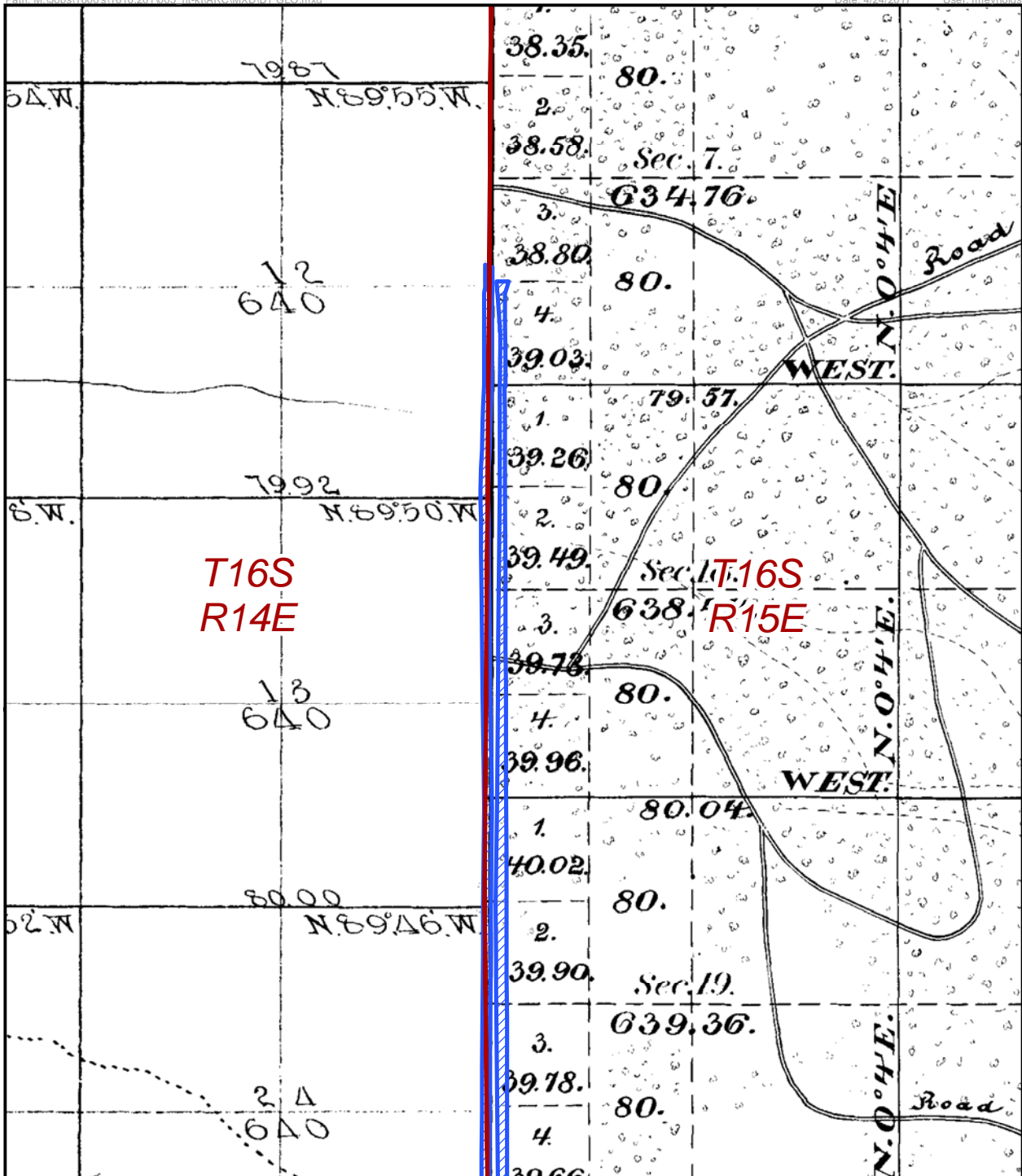
## **APPENDIX B**

### **HISTORICAL MAPS OF THE PROJECT AREA**

Figure B.1. Overlay of project area on  
historical GLO Plats

Figure B.2. Overlay of project area on  
historical 30' USGS  
quadrangles

Figure B.3. Overlay of project area on  
historical 15' USGS  
quadrangles



T16S  
R14E

T16S  
R15E

Pima County, Arizona  
Projection: UTM NAD83, Zone 12

Legend

 Project Area

  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.1a. Overlay of project area on historical GLO Plats

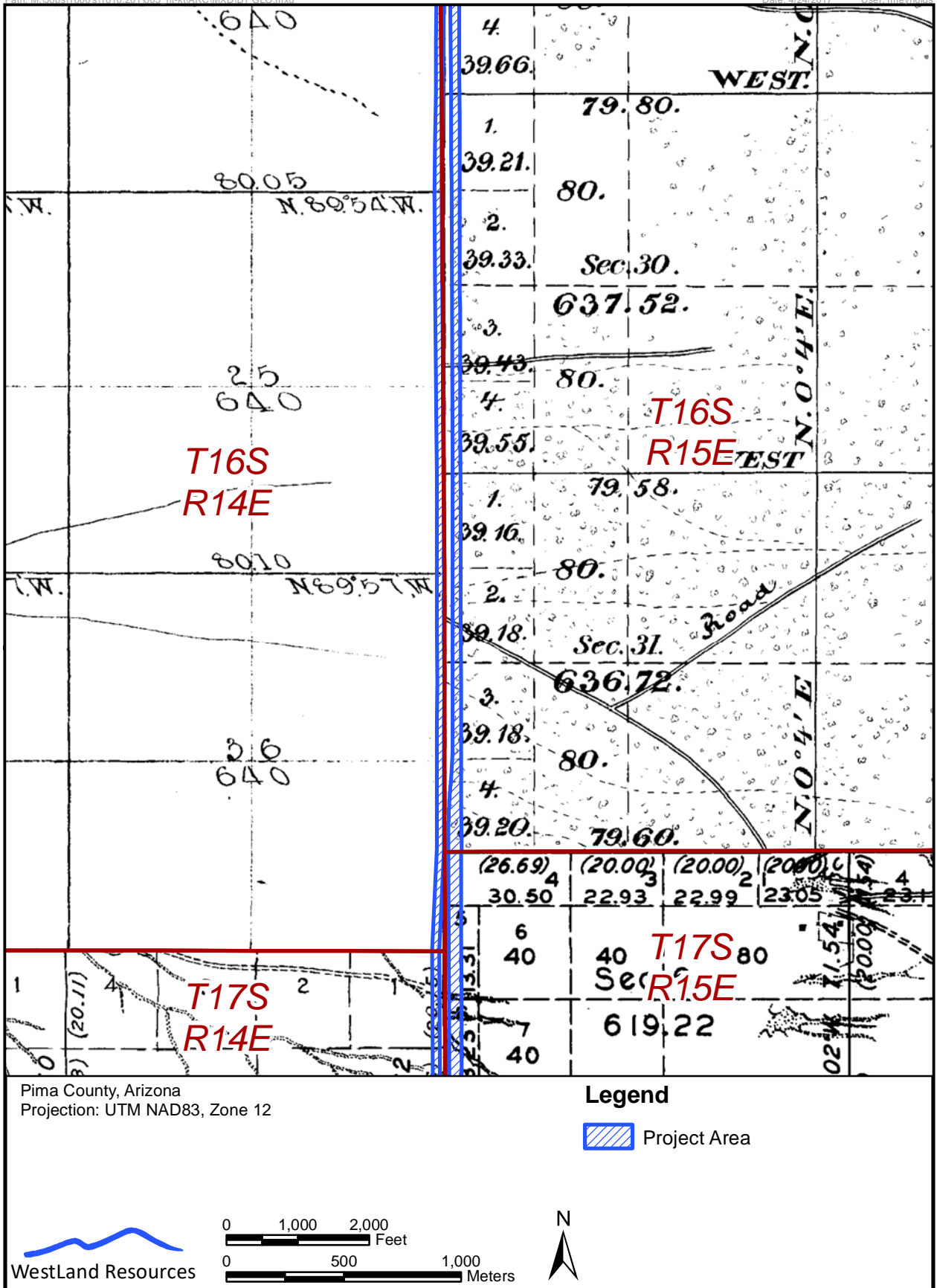
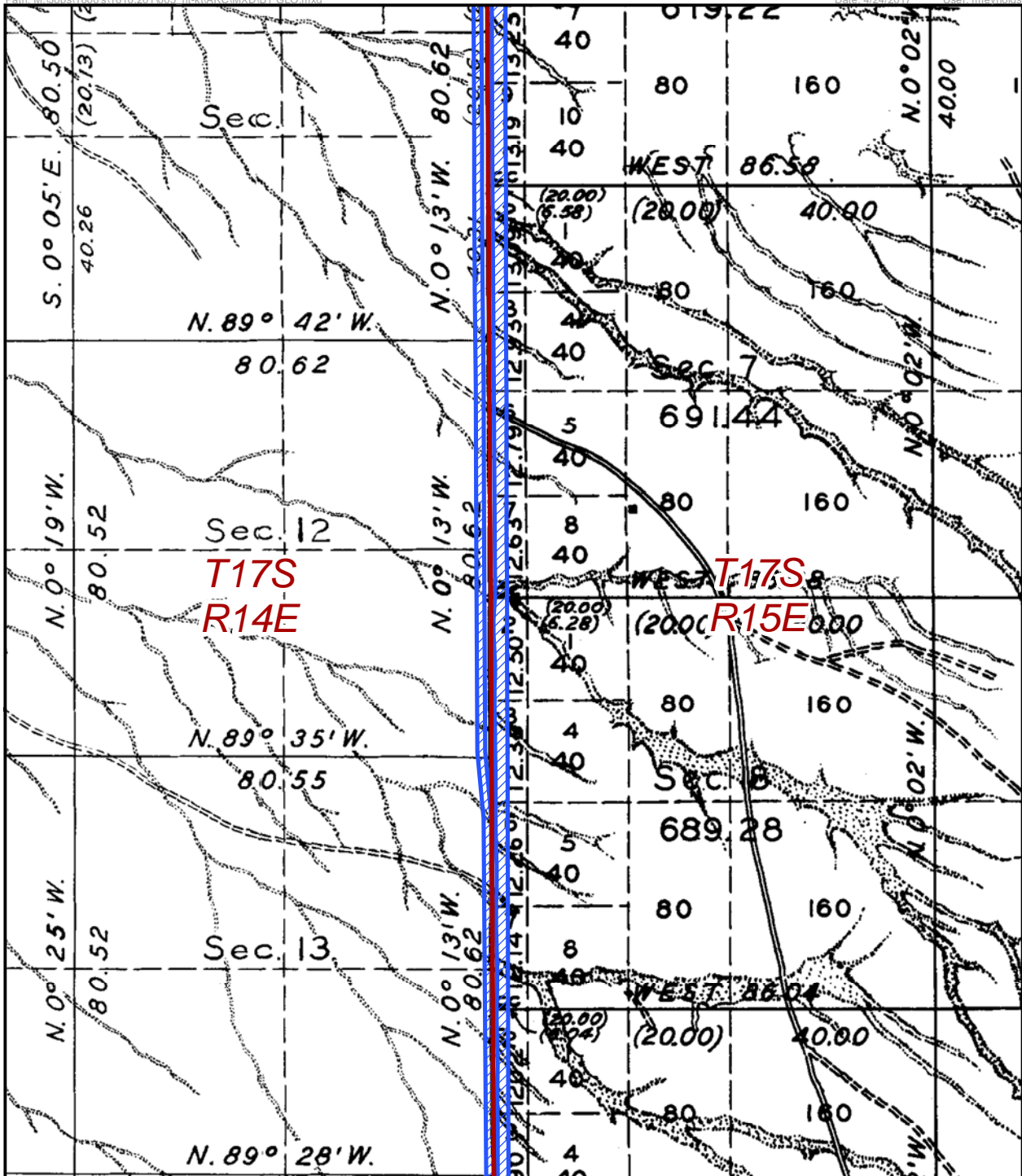


Figure B.1b. Overlay of project area on historical GLO Plats





Pima County, Arizona  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

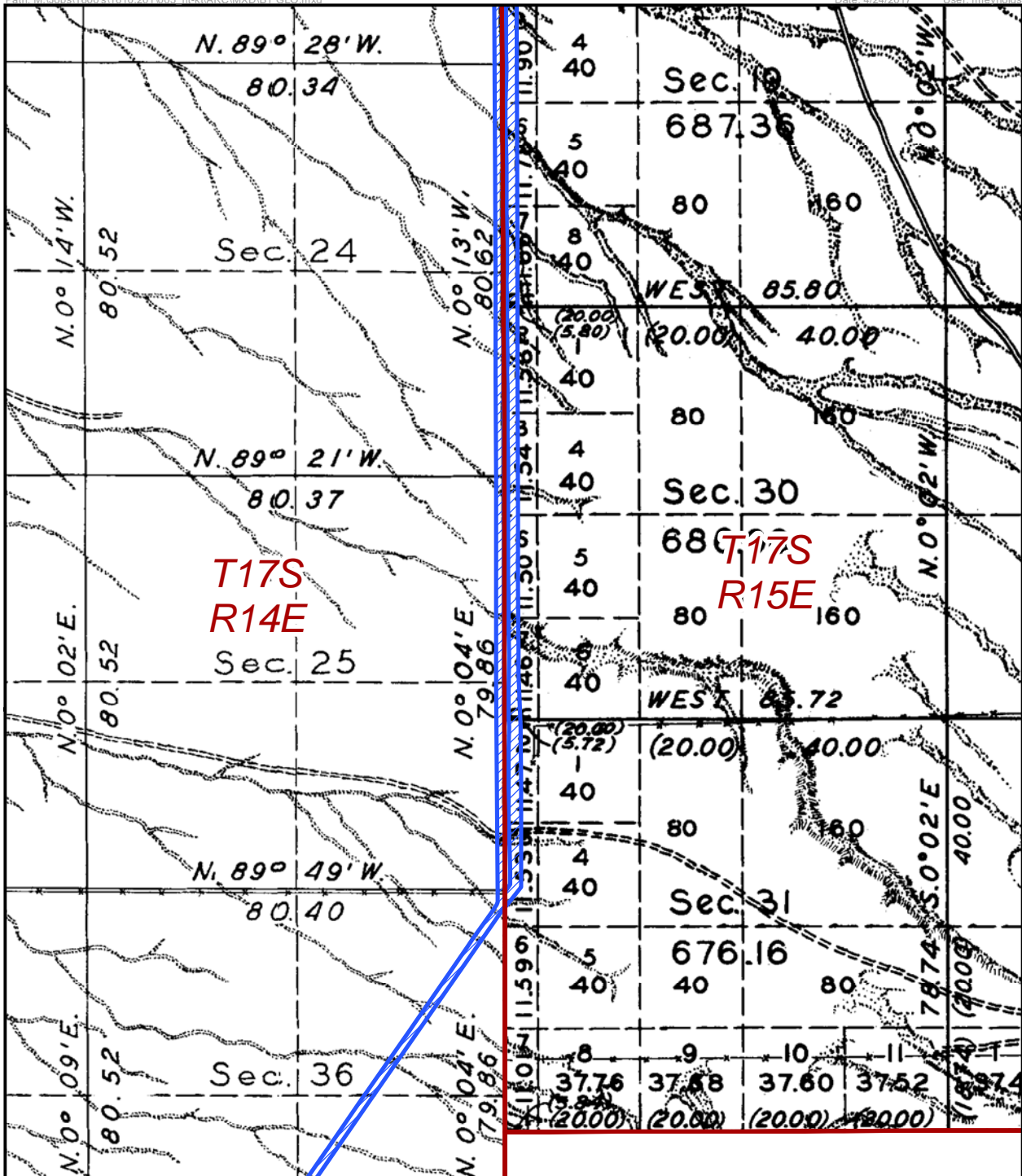
  
WestLand Resources

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Feet

0 500 1,000  
Meters



Figure B.1c. Overlay of project area on historical GLO Plats



Pima County, Arizona  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

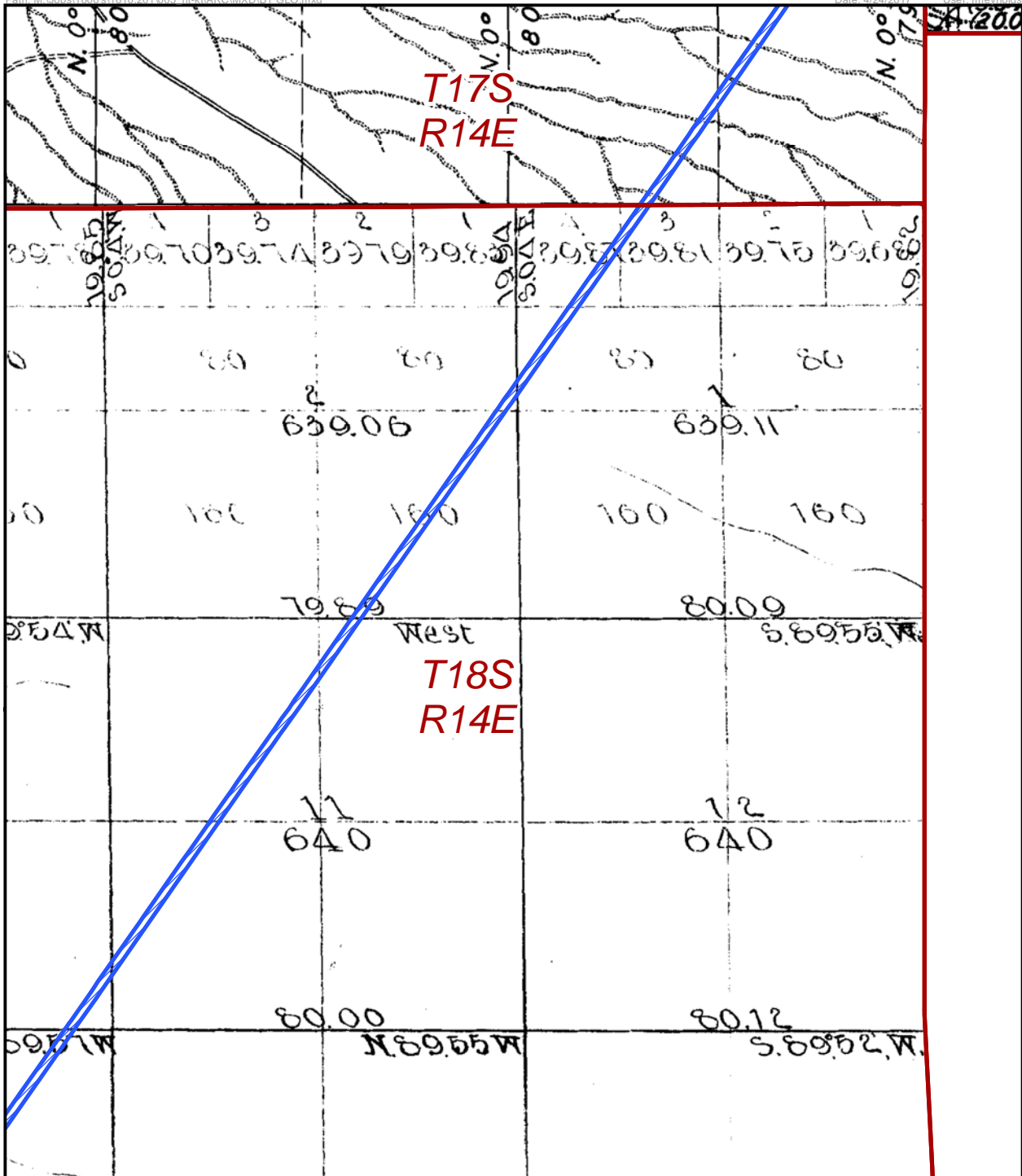
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.1d. Overlay of project area on historical GLO Plats



Pima County, Arizona  
 Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
 WestLand Resources

0 1,000 2,000  
 Feet

0 500 1,000  
 Meters



**Figure B.1e.** Overlay of project area on historical GLO Plats

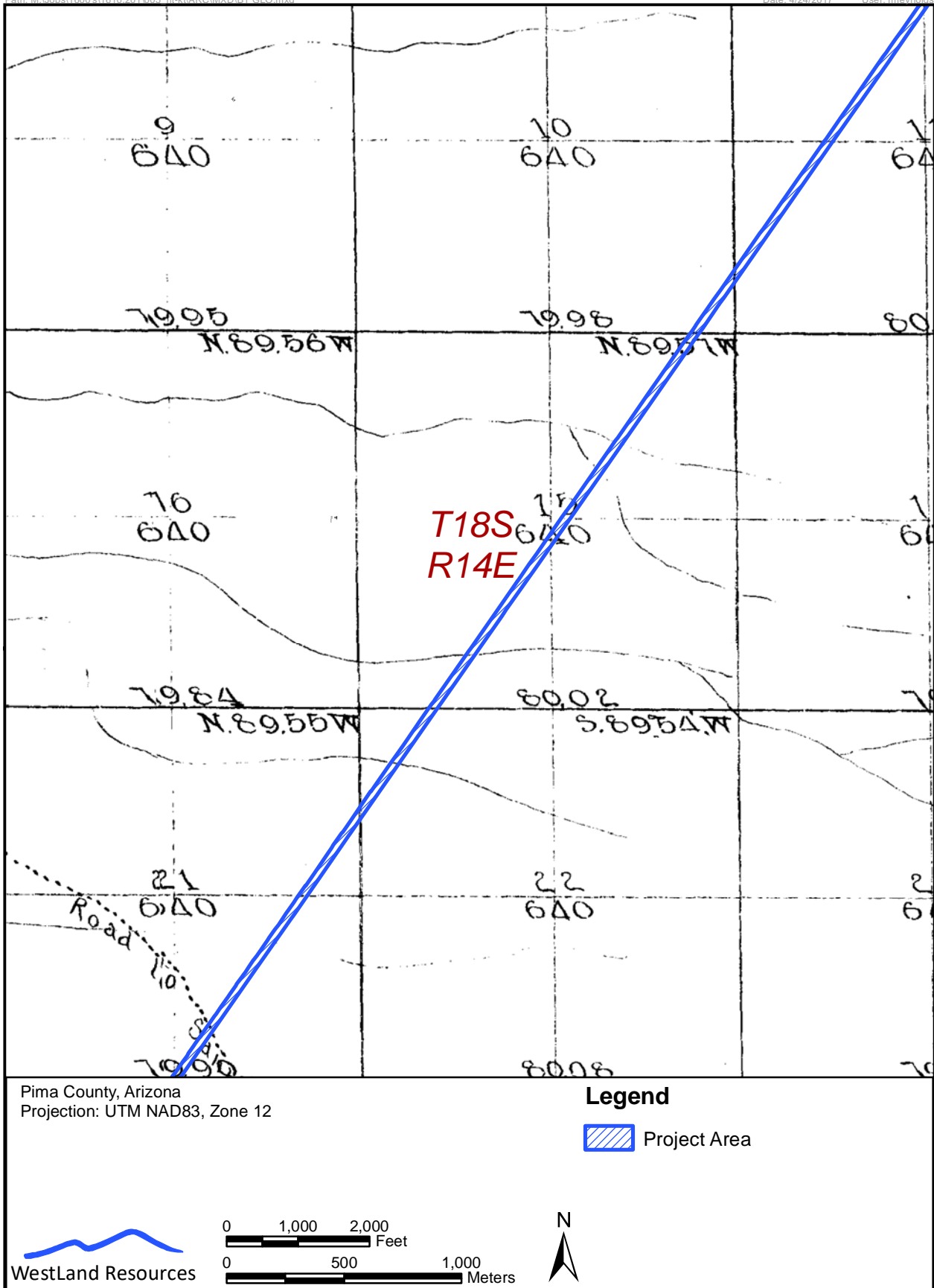
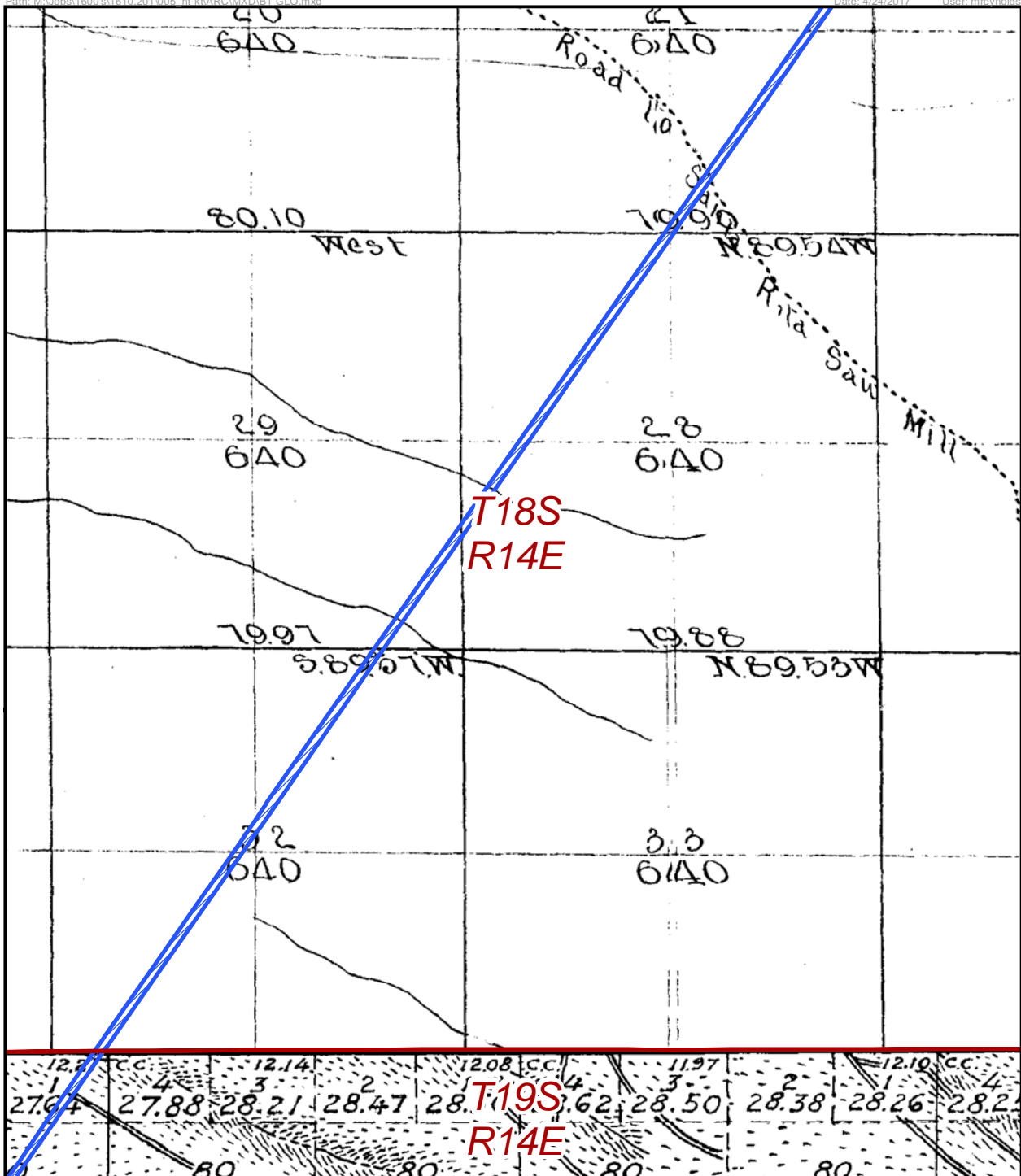


Figure B.1f. Overlay of project area on historical GLO Plats



Pima County, Arizona  
 Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

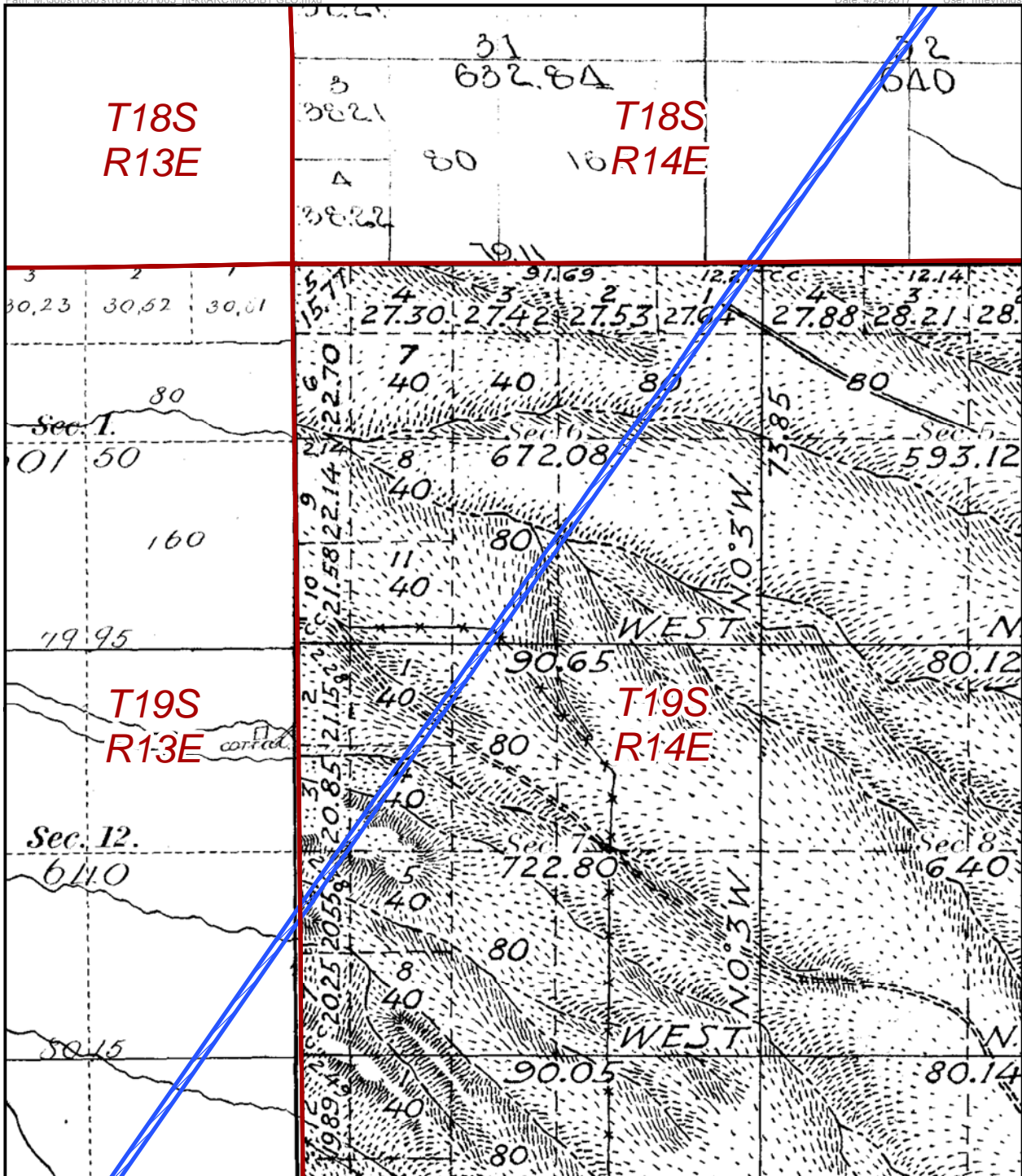
  
 WestLand Resources

0 1,000 2,000  
 Feet

0 500 1,000  
 Meters



Figure B.1g. Overlay of project area on historical GLO Plats



Pima County, Arizona  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.1h. Overlay of project area on historical GLO Plats

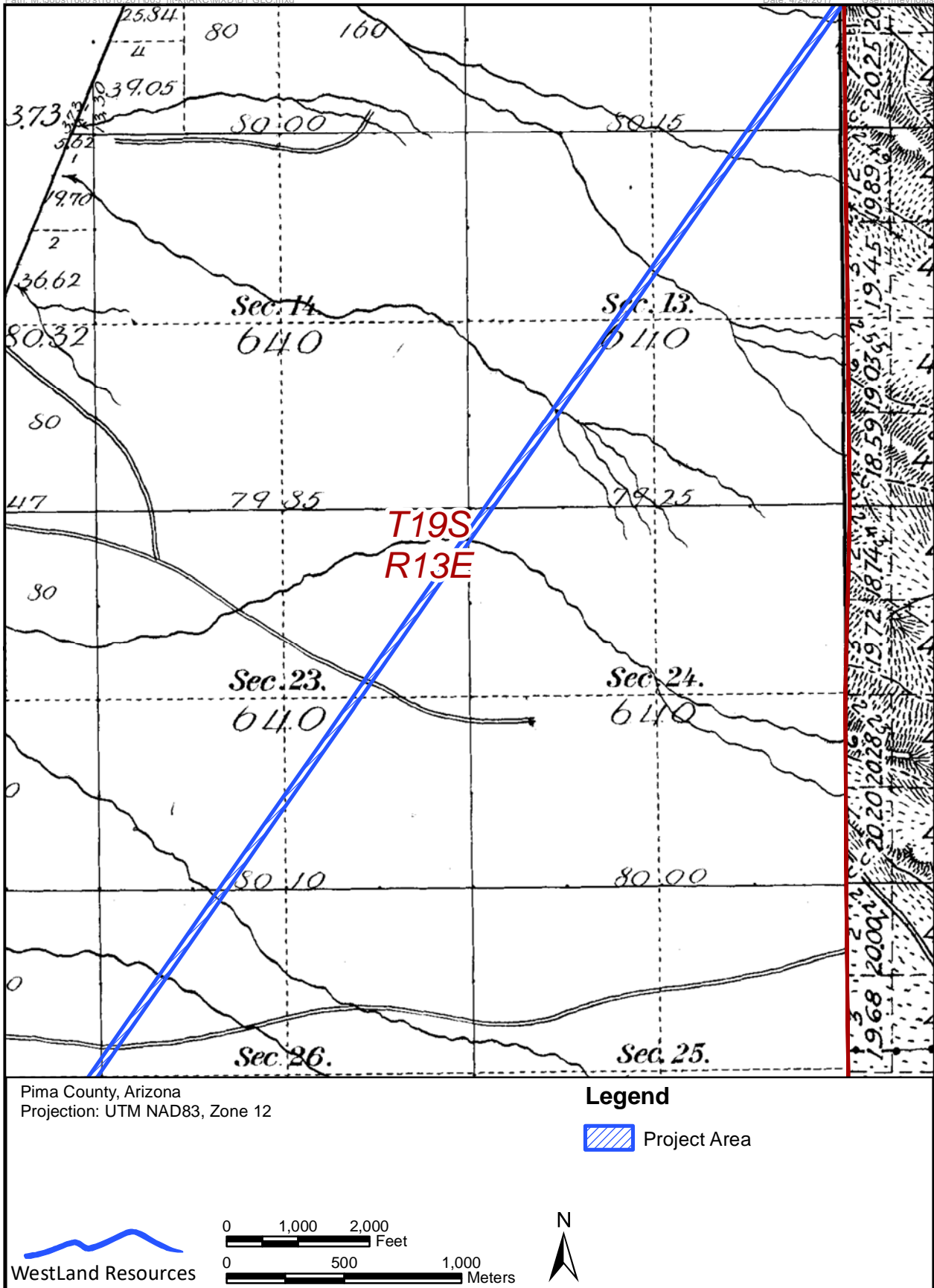


Figure B.1i. Overlay of project area on historical GLO Plats

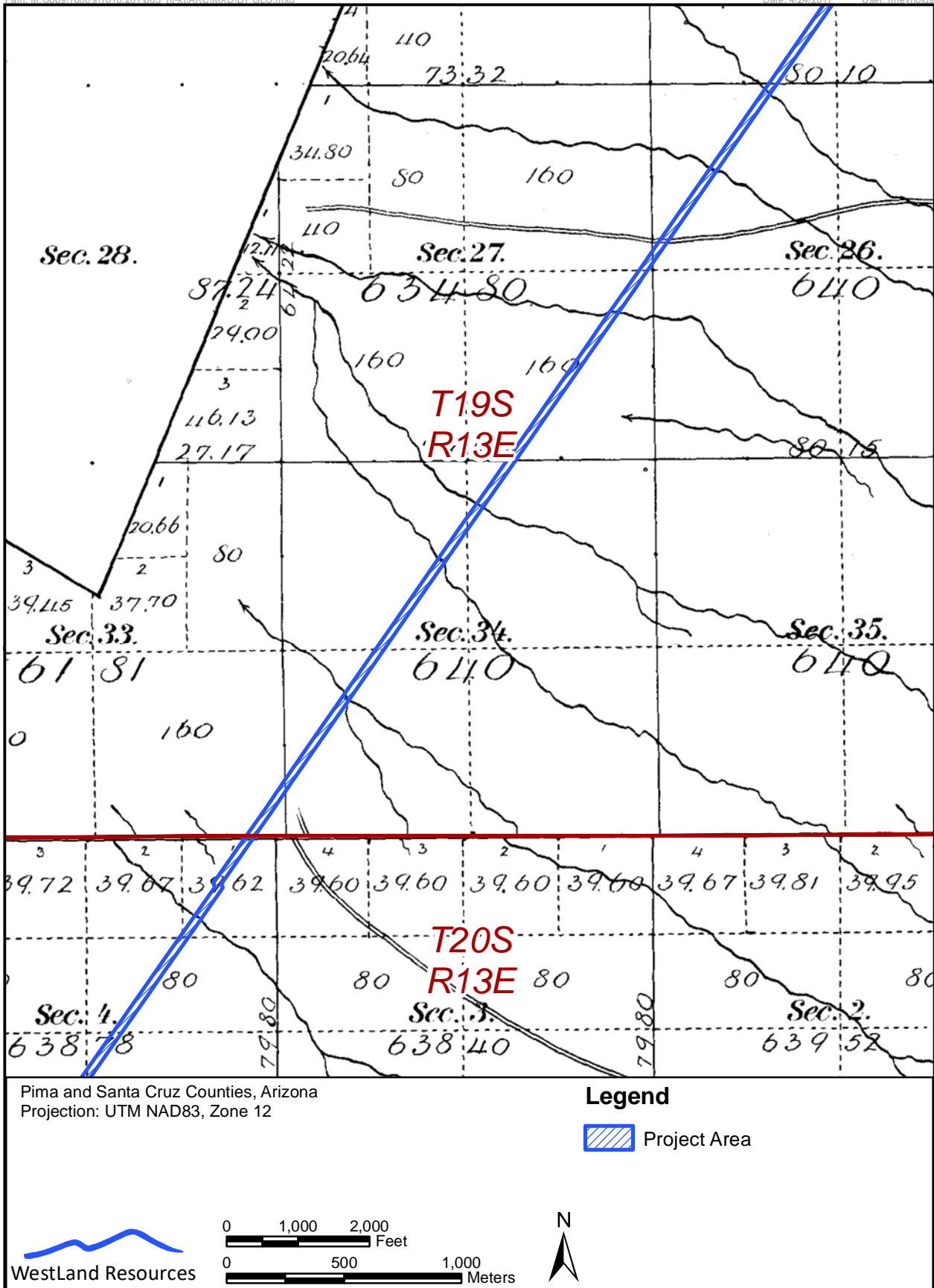
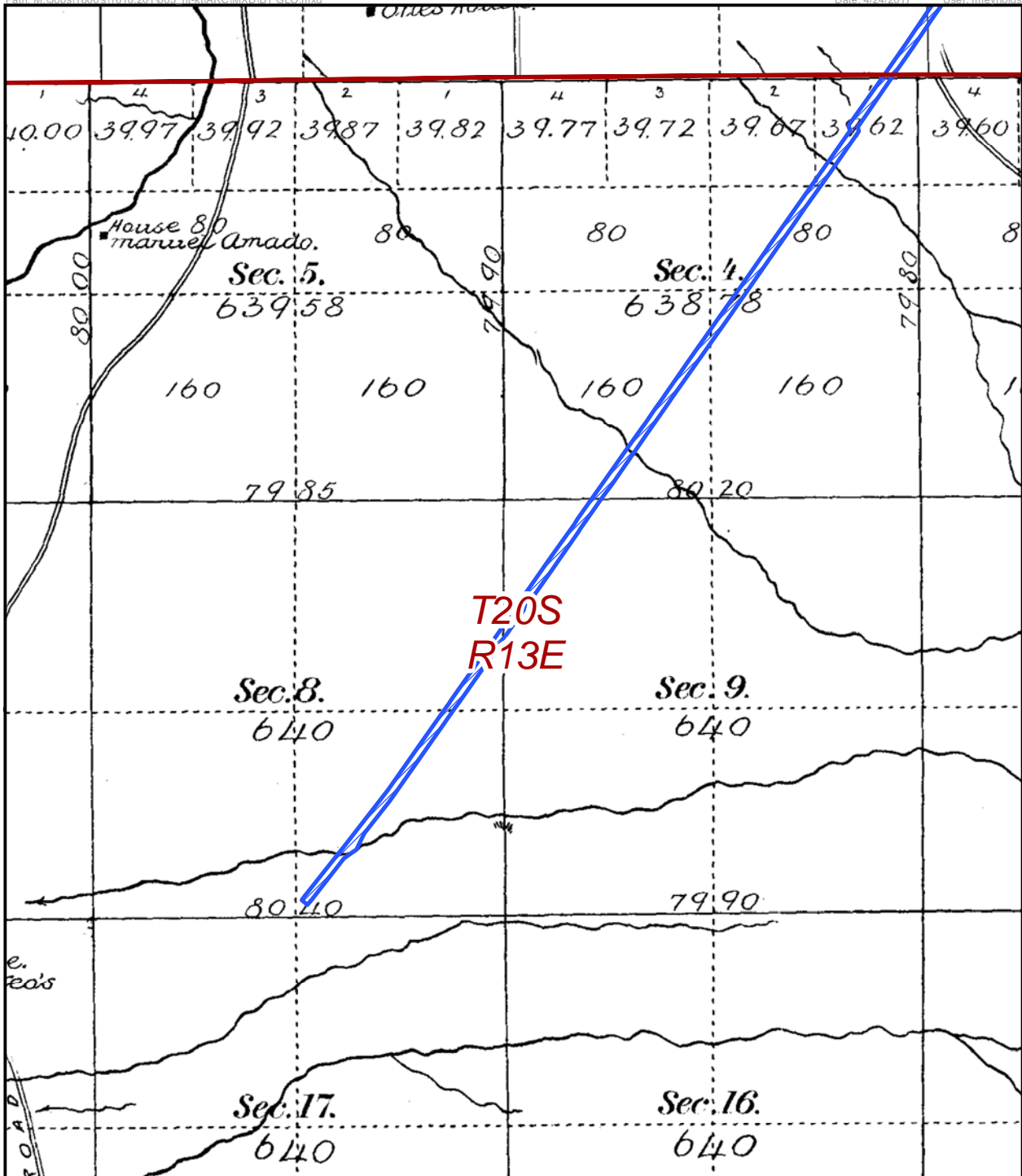


Figure B.1j. Overlay of project area on historical GLO Plats





Santa Cruz County, Arizona  
 Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

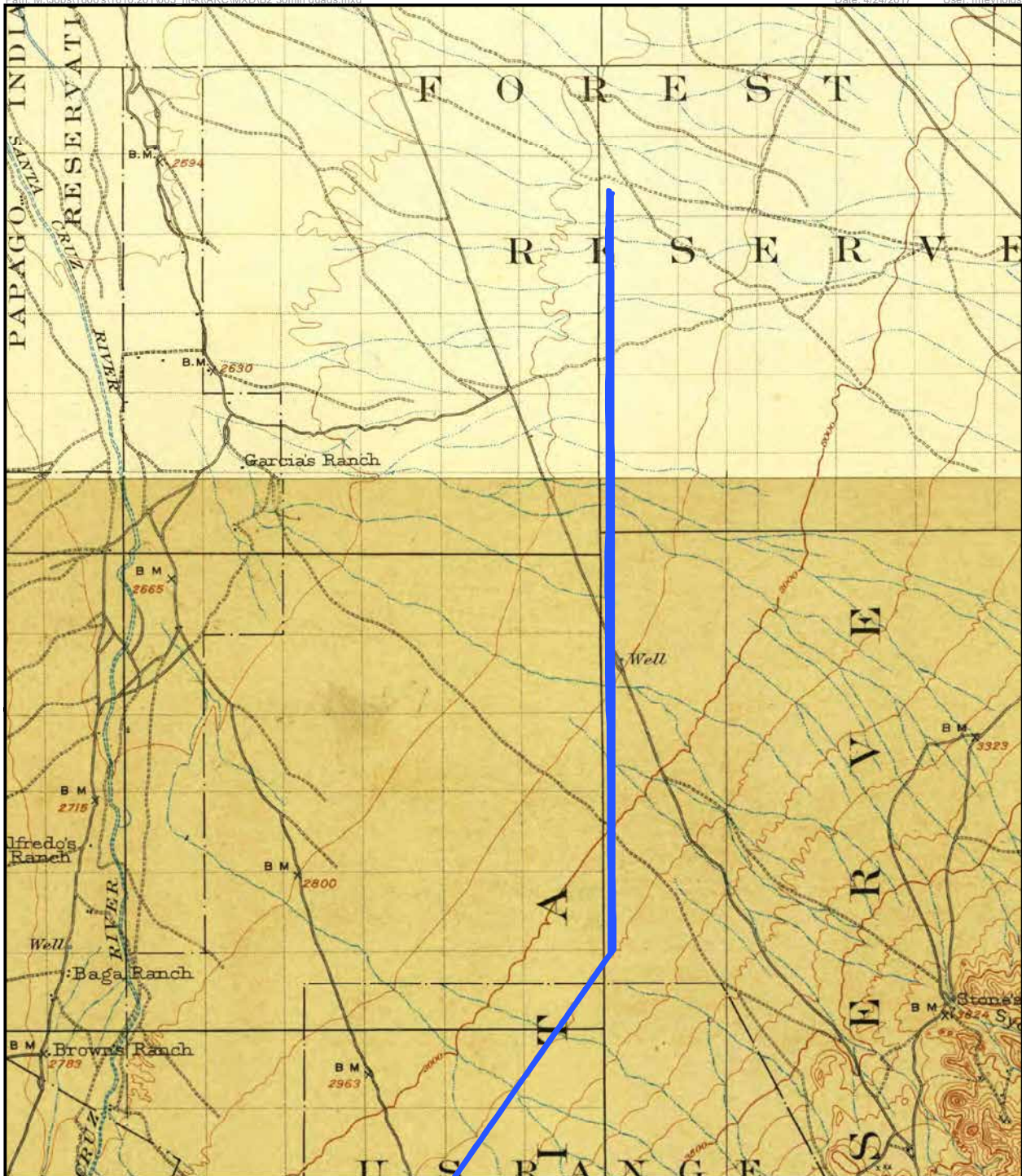
  
 WestLand Resources

0 1,000 2,000  
 Feet

0 500 1,000  
 Meters



Figure B.1k. Overlay of project area on historical GLO Plats



Tucson, AZ 1905 and Patagonia, AZ 1905 USGS 30' Quadrangles  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

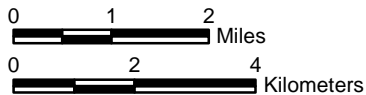
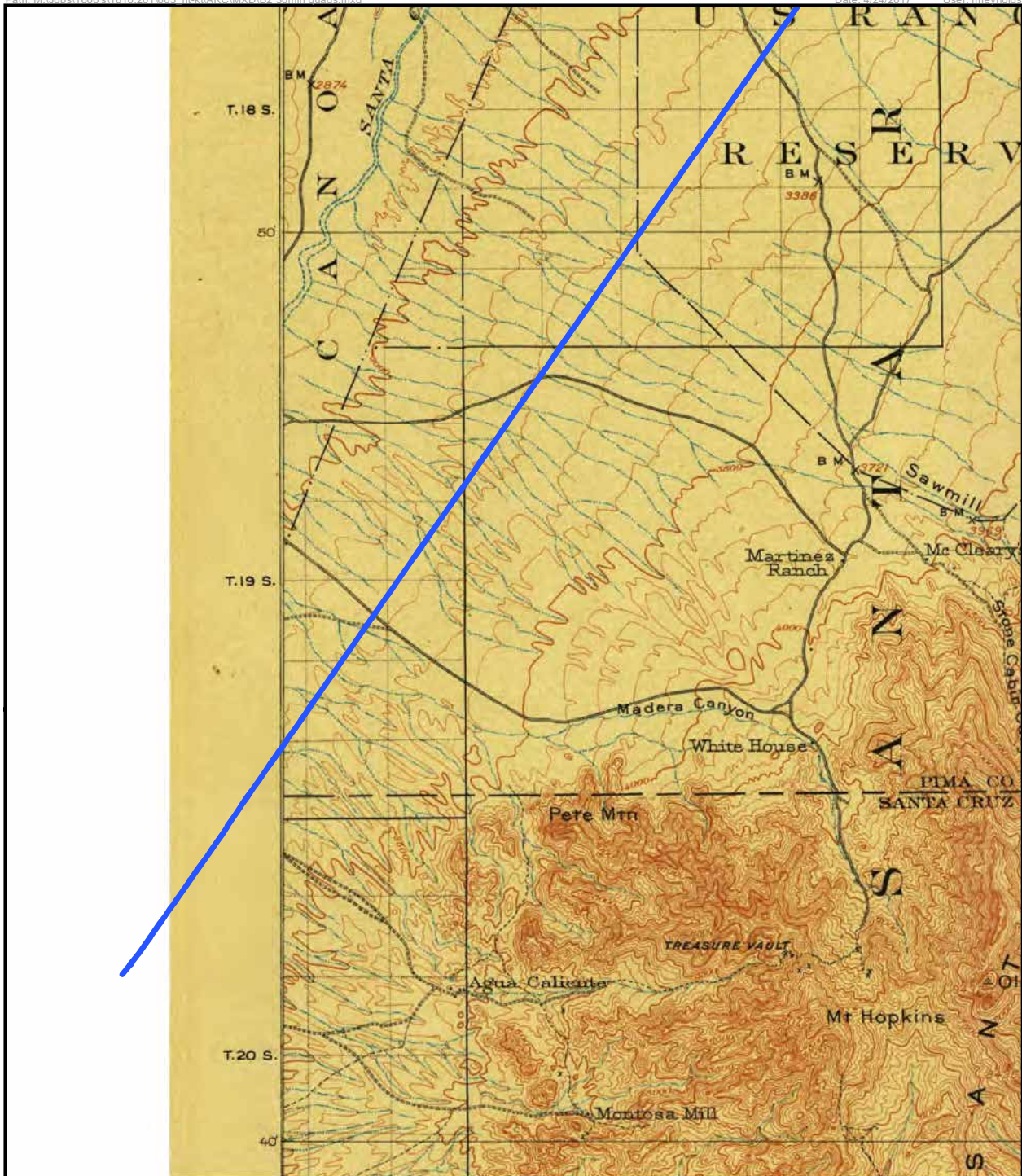


Figure B.2a. Overlay of project area on historical 30' USGS quadrangles



Patagonia, AZ 1905 USGS 30' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

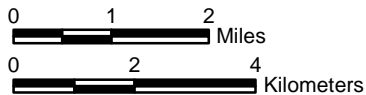
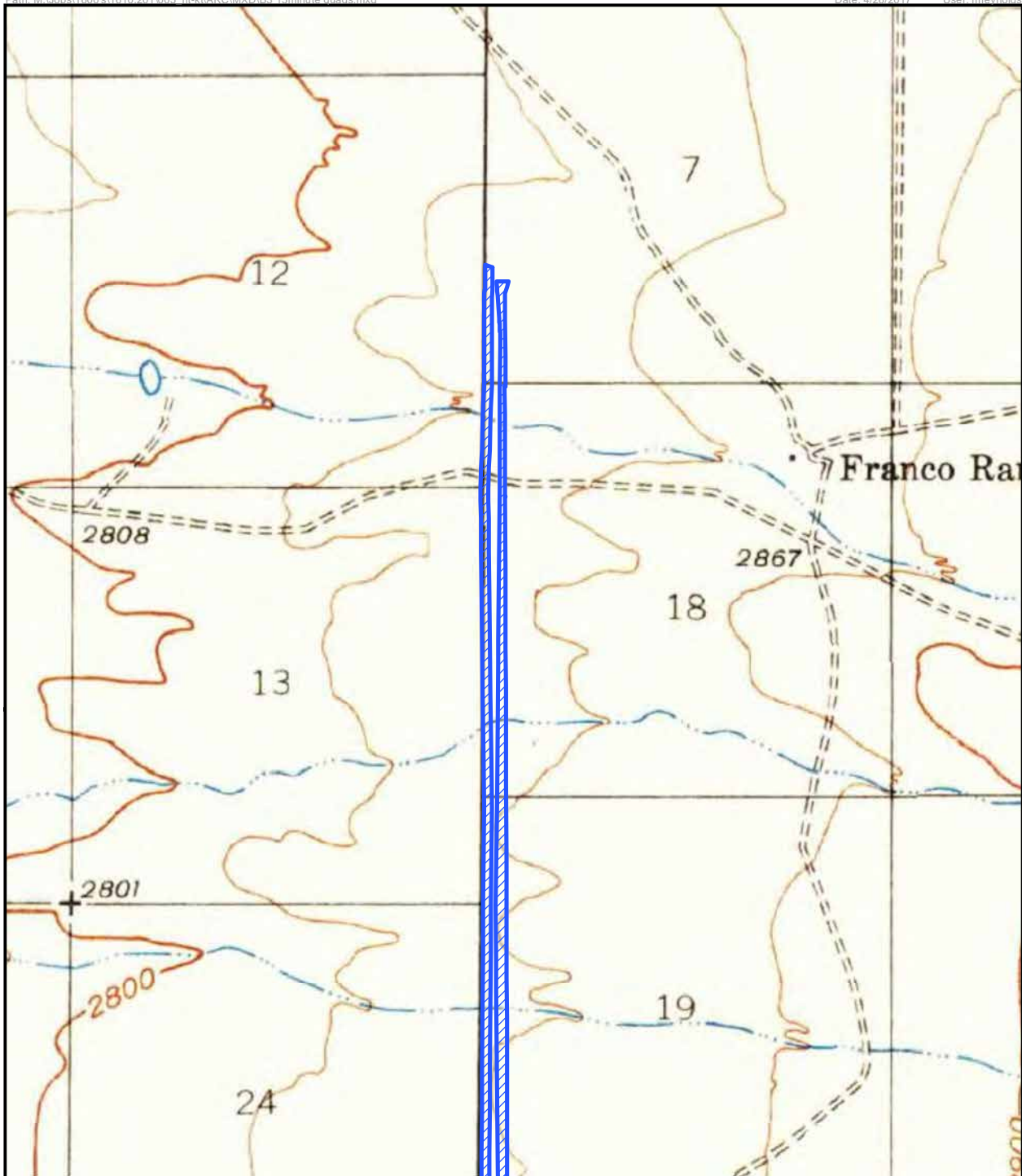


Figure B.2b. Overlay of project area on historical 30' USGS quadrangles



Pima County, Arizona  
Tucson, AZ 1948 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

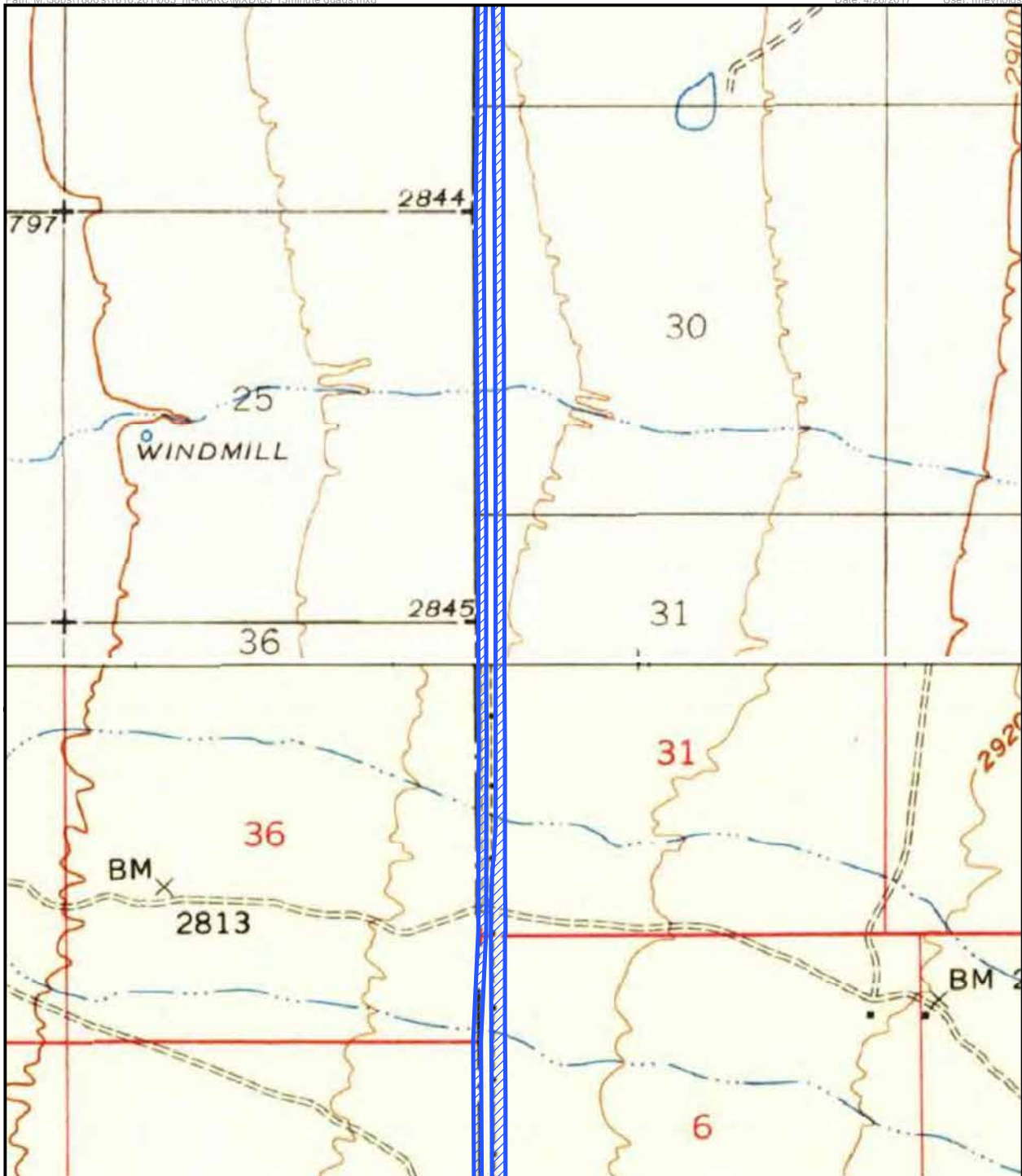
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3a. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Tucson, AZ 1948 and Sahuarita, AZ 1958 USGS 15' Quadrangles  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

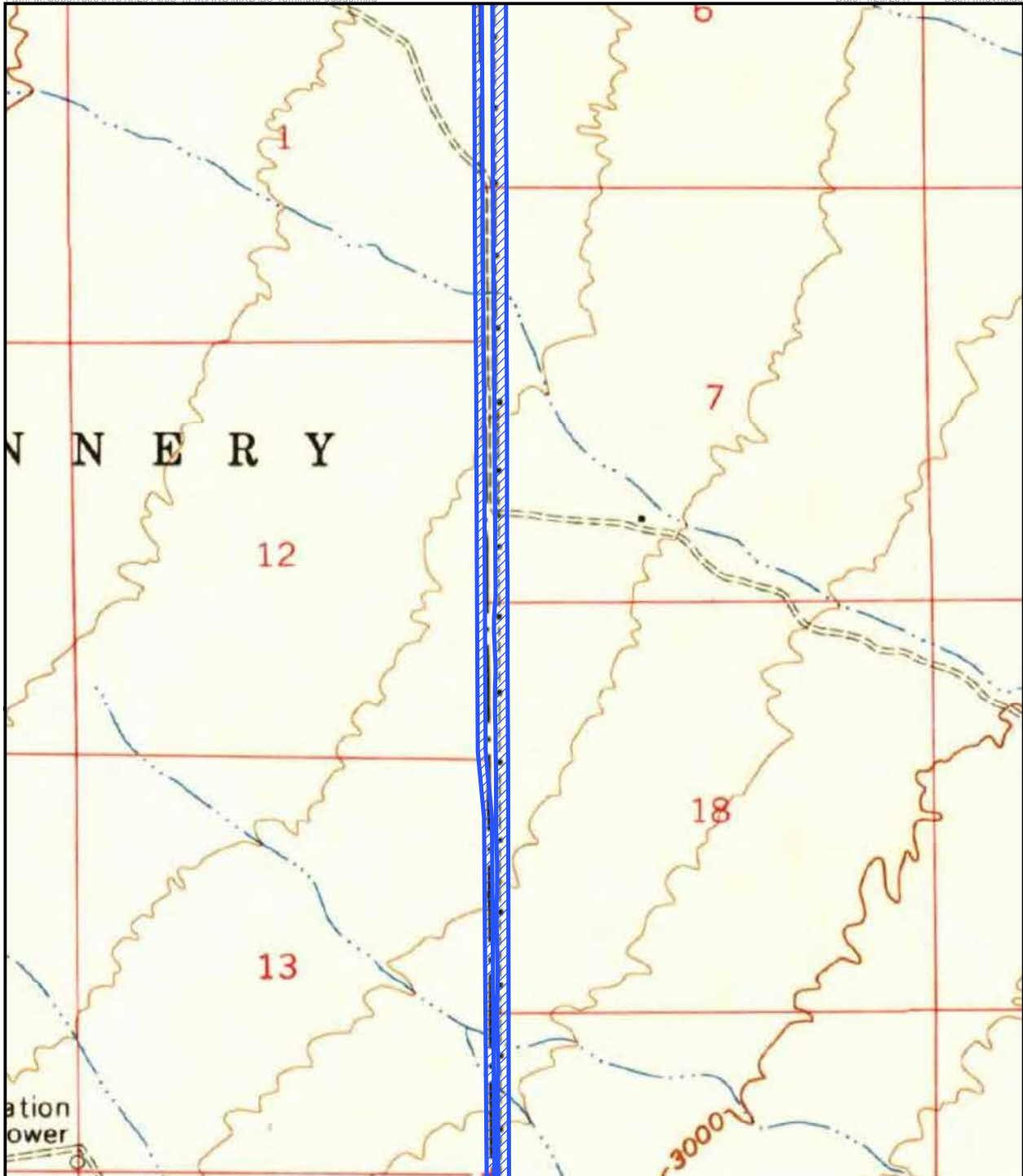
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3b. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

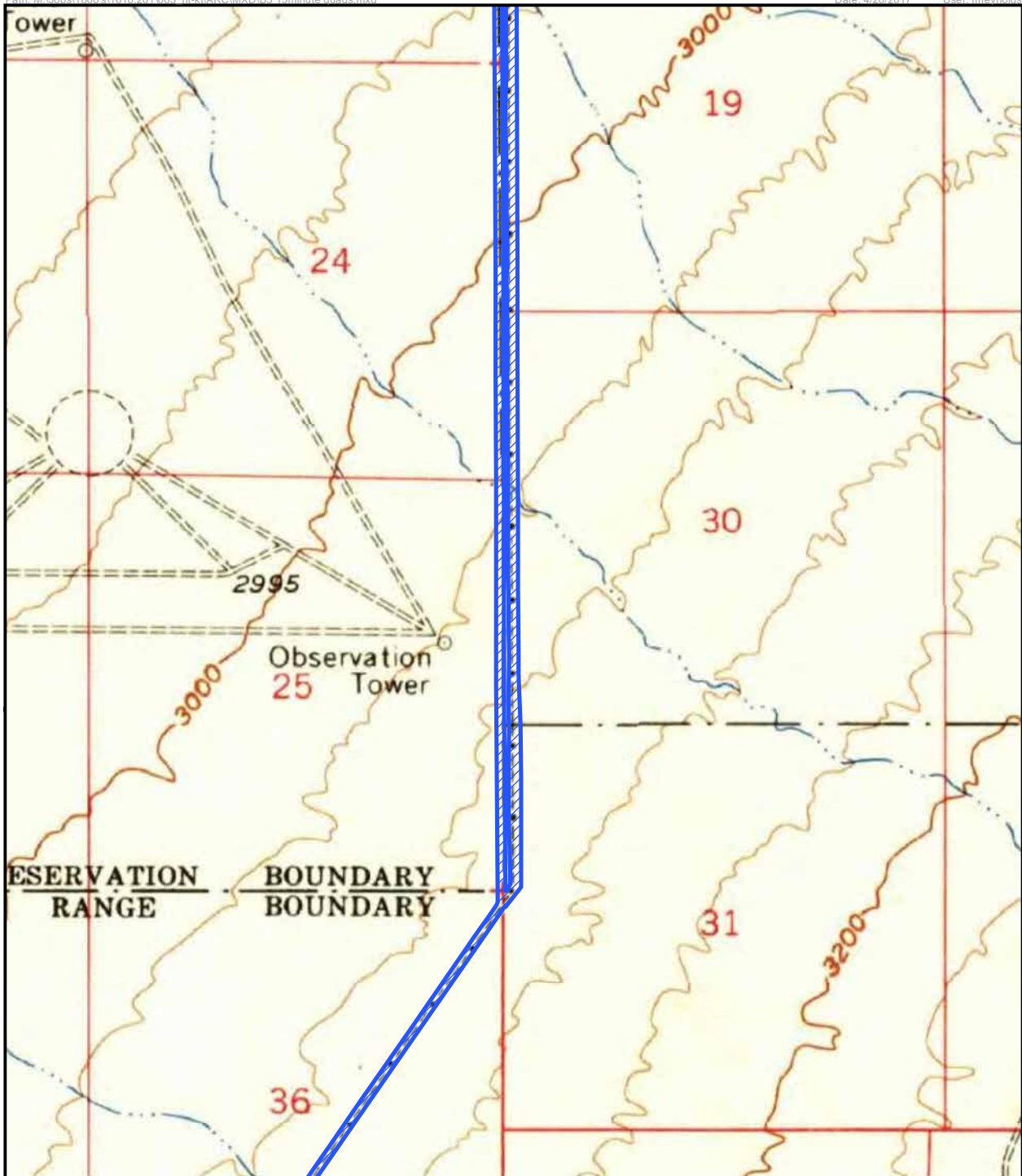
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3c. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

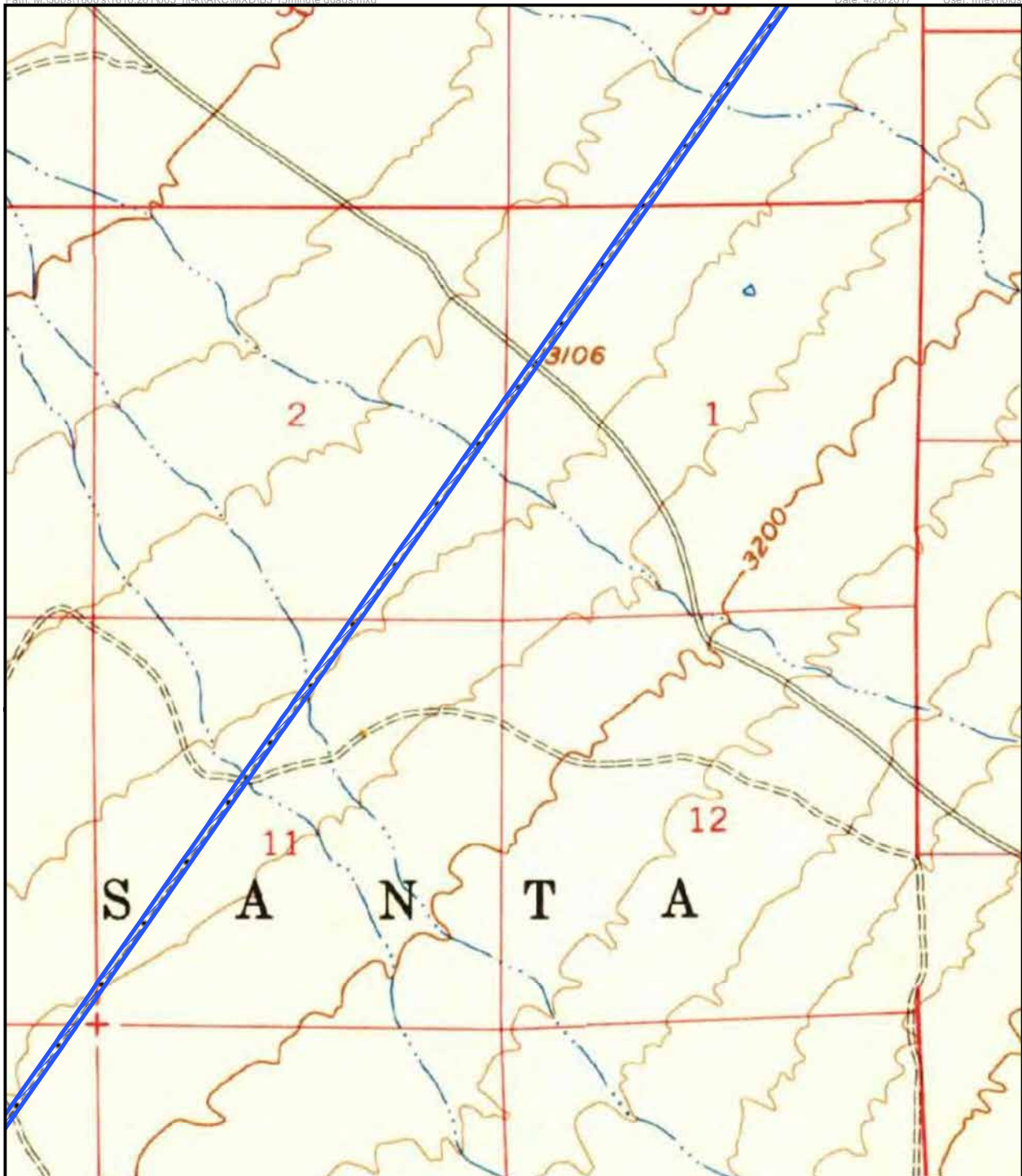
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3d. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

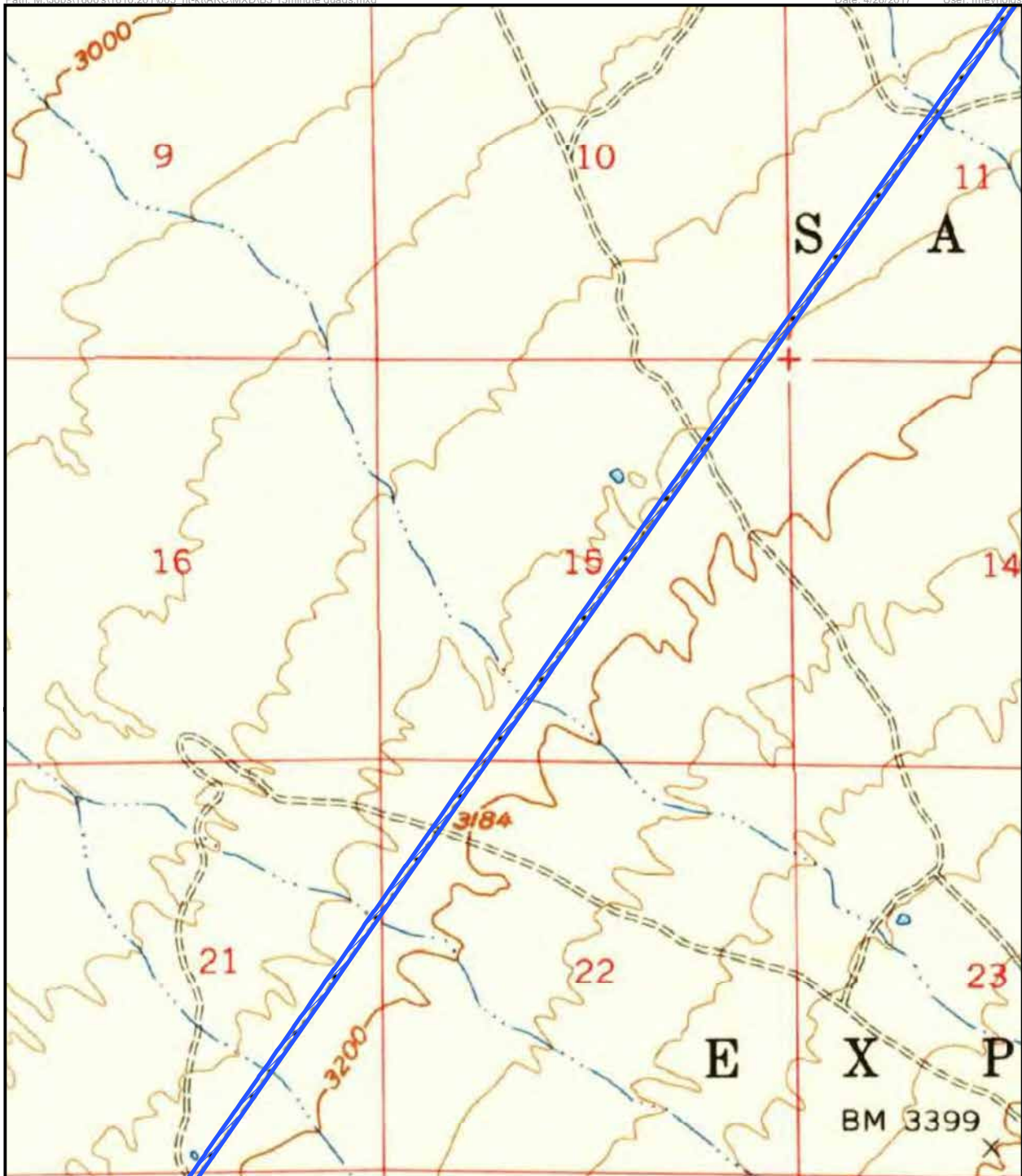
0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3e. Overlay of project area on historical 15' USGS quadrangles





Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

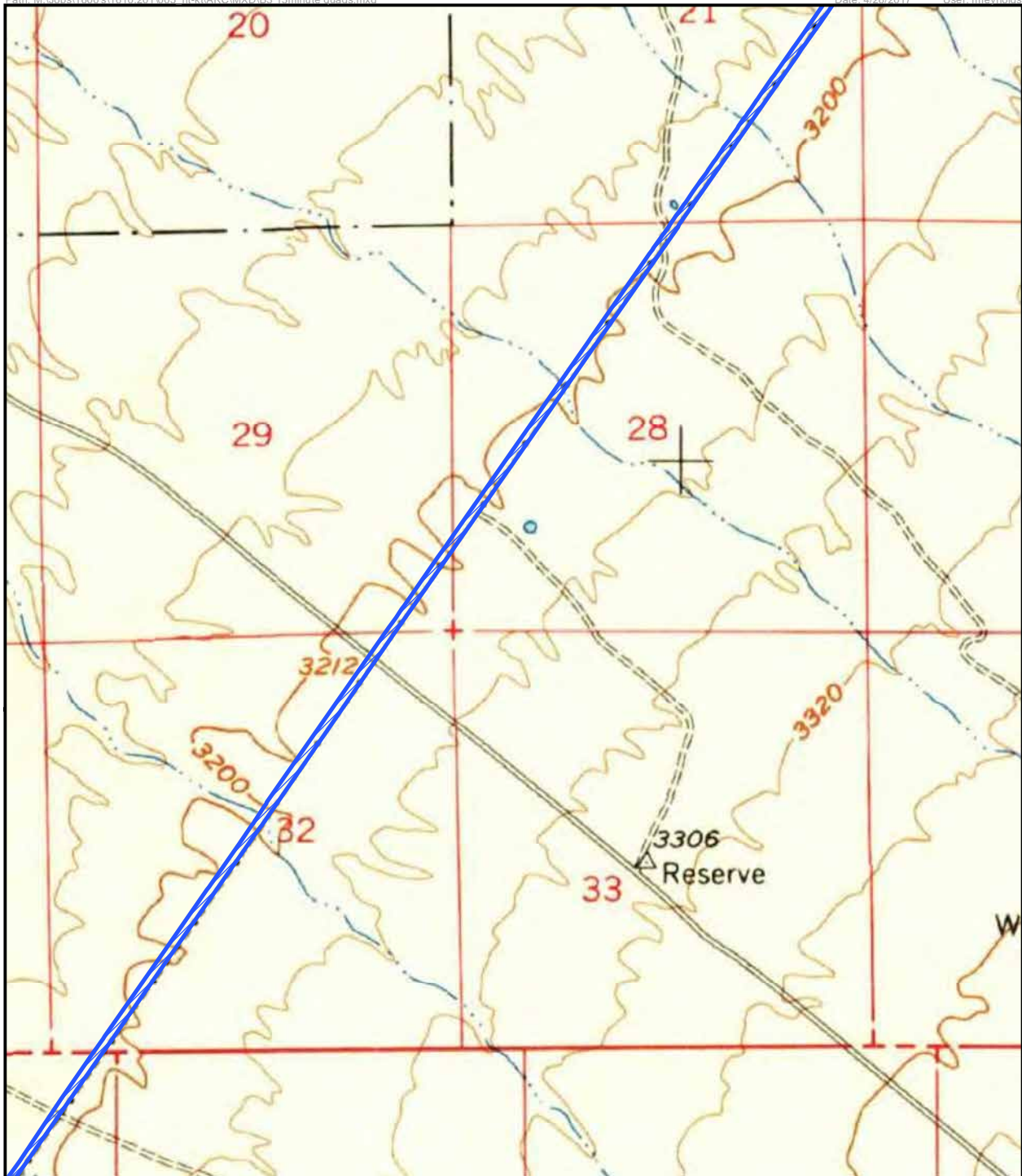
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3f. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

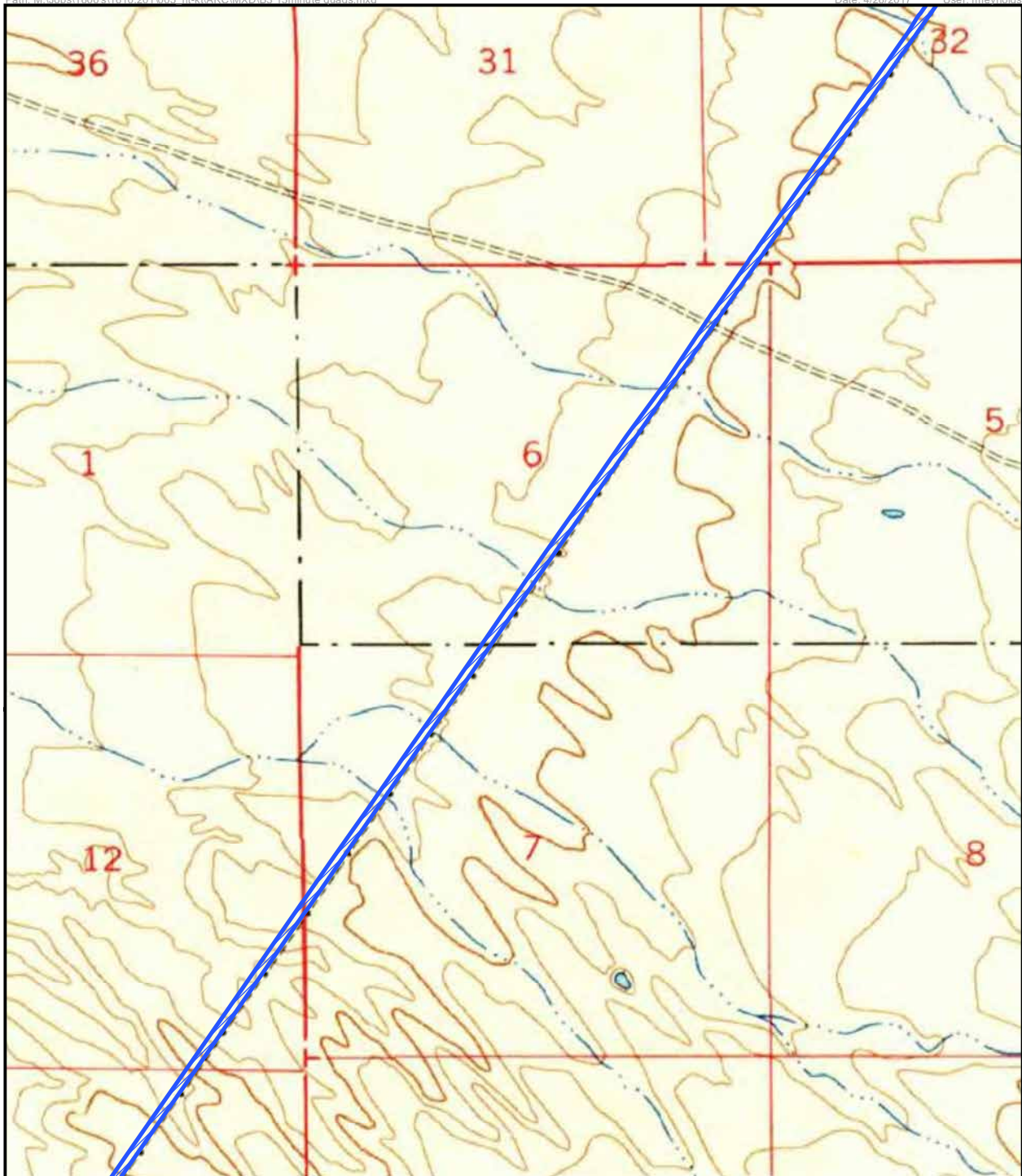
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3g. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

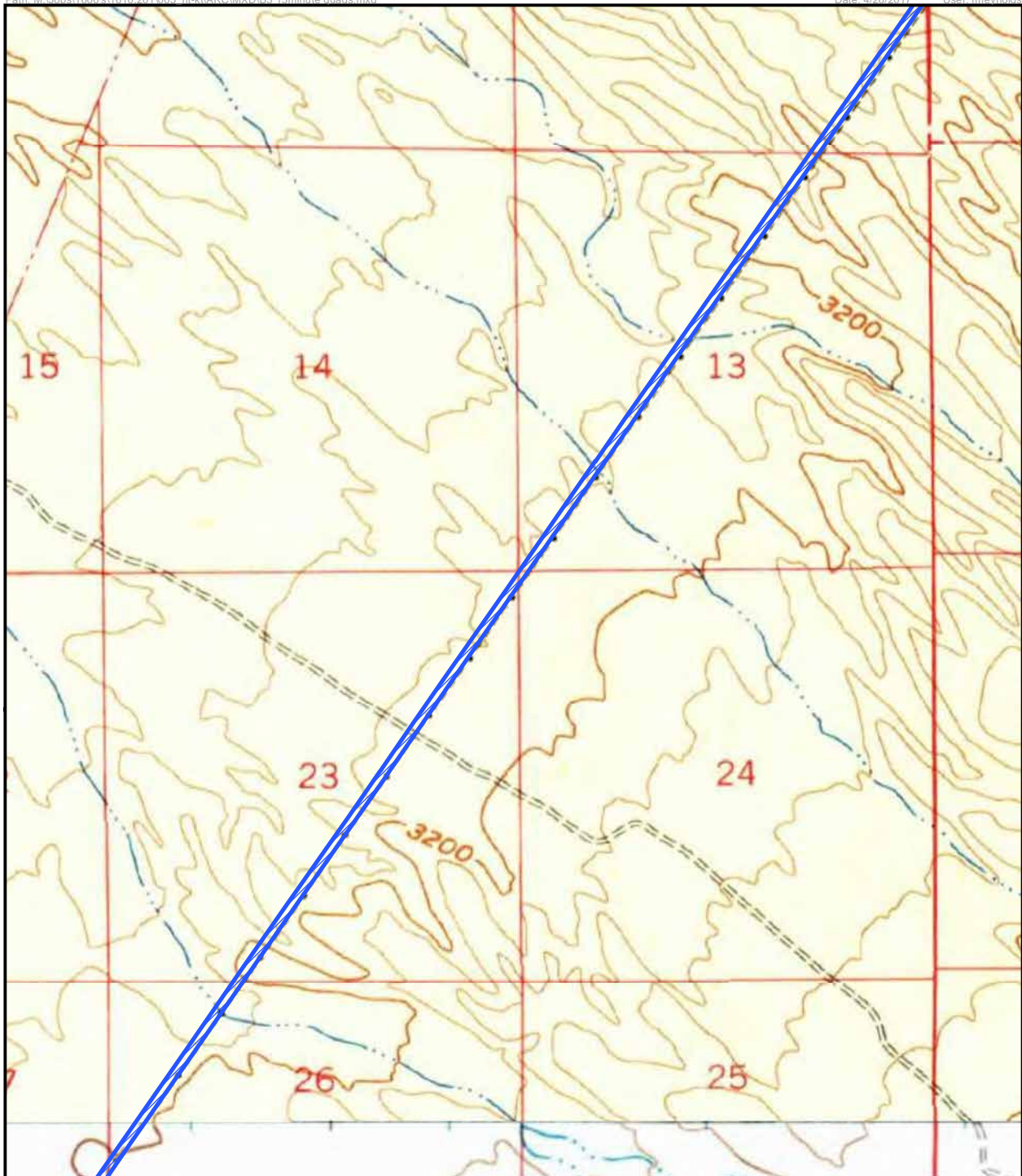
  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3h. Overlay of project area on historical 15' USGS quadrangles



Pima County, Arizona  
Sahuarita, AZ 1958 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3i. Overlay of project area on historical 15' USGS quadrangles

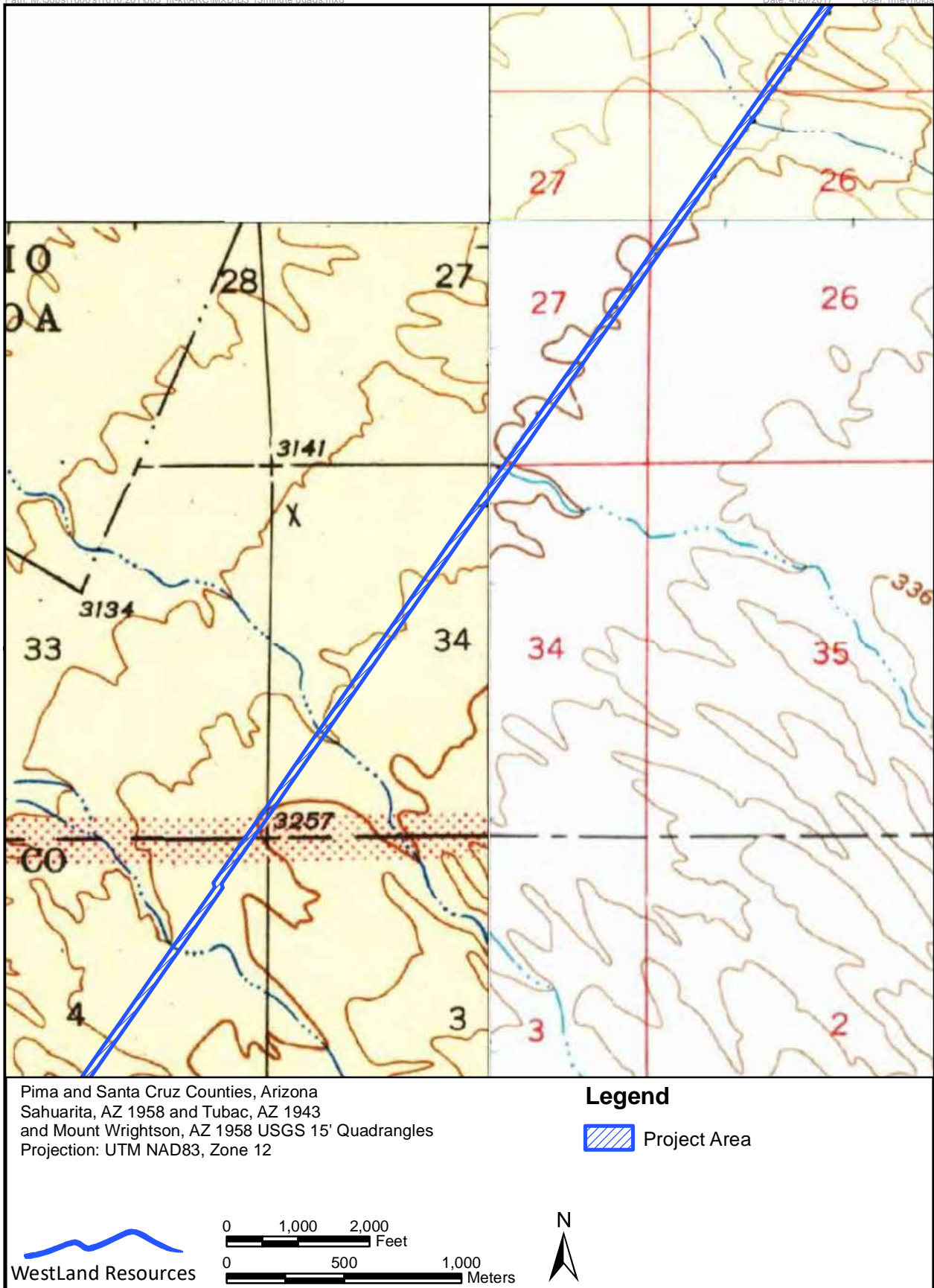
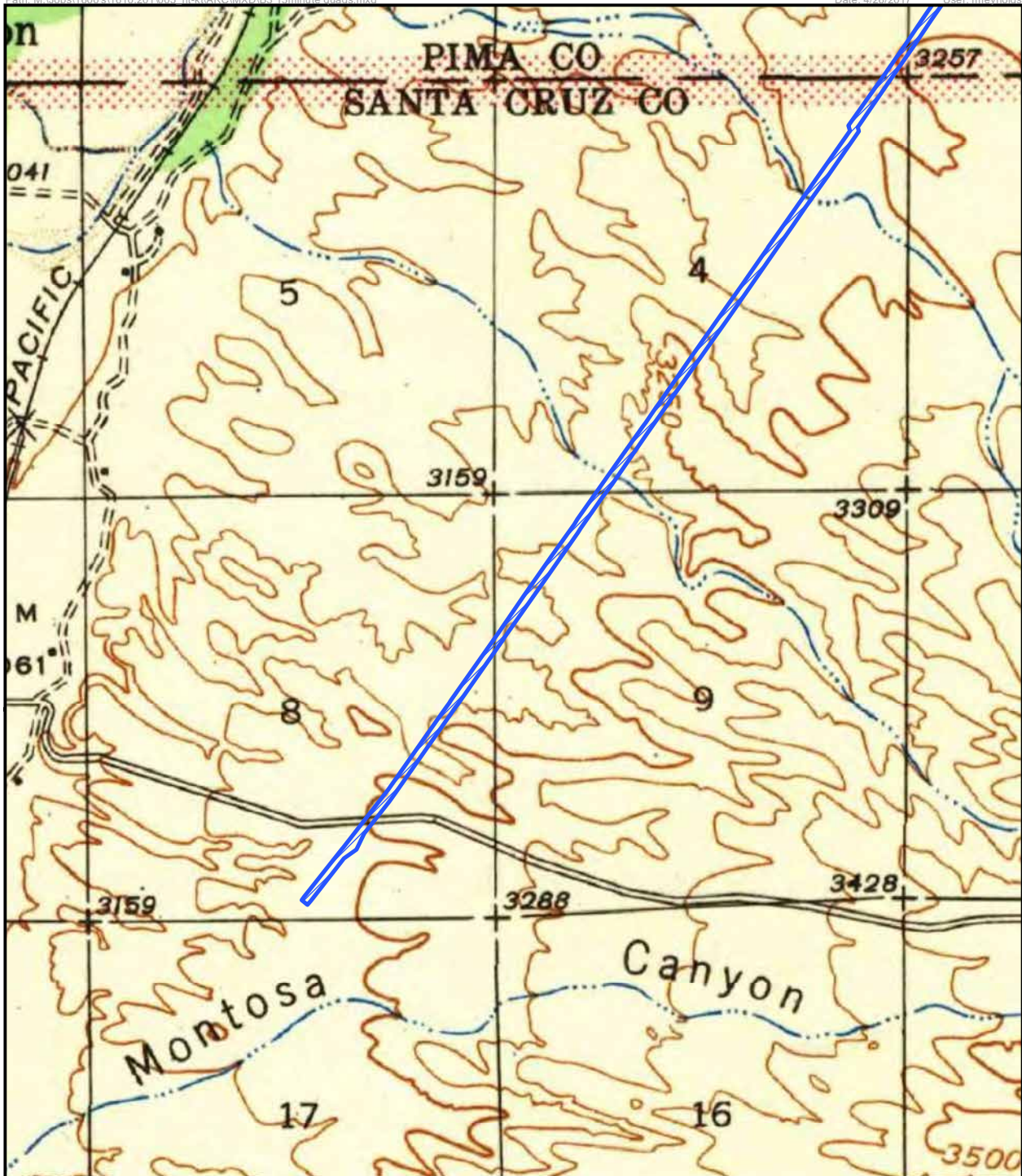


Figure B.3j. Overlay of project area on historical 15' USGS quadrangles



Santa Cruz County, Arizona  
Tubac, AZ 1943 USGS 15' Quadrangle  
Projection: UTM NAD83, Zone 12

**Legend**

 Project Area

  
WestLand Resources

0 1,000 2,000  
Feet

0 500 1,000  
Meters



Figure B.3k. Overlay of project area on historical 15' USGS quadrangles

## **Exhibit E-2(c) – Class III Cultural Resources Survey for the Nogales Tap to Kantor Upgrade Project**

---

# A CLASS III CULTURAL RESOURCES SURVEY FOR THE UNISOURCE NOGALES TAP TO KANTOR TRANSMISSION LINE, PIMA AND SANTA CRUZ COUNTIES, ARIZONA

Prepared for:

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P.O. Box 711  
Mail Stop HQE613  
Tucson, Arizona 85702

Prepared and submitted by:

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MCA Cultural Resources Report No. 2017.034  
Arizona Antiquities Act Blanket Permit No. 2017-021bl

July 7, 2017

**MCA Consulting**  
Professional Archaeological Services  
Tucson, Arizona





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## ABBREVIATIONS

<b>ASM</b>	Arizona State Museum
<b>AAA</b>	Arizona Antiquities Act
<b>ASLD</b>	Arizona State Land Department
<b>ARHP</b>	Arizona Register of Historic Places
<b>AZSITE</b>	Arizona State Museum Online Archaeological Database
<b>BLM</b>	Bureau of Land Management
<b>GLO</b>	General Land Office
<b>GPS</b>	Global Positioning System
<b>MCA</b>	MCA Consulting
<b>NAD</b>	North American Datum
<b>NAGPRA</b>	Native American Graves Protection and Repatriation Act
<b>NHPA</b>	National Historic Preservation Act
<b>NRHP</b>	National Register of Historic Places
<b>SHPO</b>	State Historic Preservation Office
<b>USGS</b>	U.S. Geological Survey
<b>UNSE</b>	UniSource Energy Services
<b>UTM</b>	Universal Transverse Mercator
<b>TEP</b>	Tucson Electric Power

# ABSTRACT

**Report Title:** A Class III Cultural Resources Survey for the UniSource Nogales Tap to Kantor Transmission Line, Pima and Santa Cruz Counties, Arizona

**Project Name:** UniSource Nogales Tap to Kantor Class III Cultural Resources Survey

**Project Location:** Southeast of Tucson, Pima County, to east of Amado, Santa Cruz County, Arizona

**Project Locator UTM:** 513408 m E3530892 m N, Zone 12 N (NAD 83)

**Project Sponsor:** Bowers Environmental

**Lead Agency:** Arizona State Land Department (ASLD)

**Other Involved Agencies:** Arizona State Historic Preservation Office (SHPO), Arizona State Museum (ASM)

**Applicable Regulations:** A.R.S. § 41-841 et seq., A.R.S. § 41-861 et. seq.

**Funding Source:** Private

**Description of the Project/Undertaking:** The proposed undertaking consists of upgrading a portion of the Vail to Valencia substation 138kV transmission line located on private land, and three existing Rights-of-Ways (ROWs) on Arizona State Trust Land, between the Nogales Tap and Kantor substations. ROW 14-97502 is currently 50 feet wide, ROW 14-110981 is currently 100 feet wide, and ROW 14-117730 is currently 50 feet wide. UniSource Energy Services (UNSE) proposes to upgrade this portion of the transmission line, in response to a requested interconnection project near the Valencia substation in Nogales, Arizona. The scope of work would include construction of a new 138kV transmission line within or adjacent to the existing facilities, and removal of the existing transmission line. Construction activities would include the maintenance and construction of access roads; grading and installing steel poles, stringing the new transmission line and fiber optic cable; and removing the existing towers and conductor wire.

**Project Area:** The project area consists of a 50-to-100-foot-wide by 27.7-mile-long corridor that stretches from an area southeast of Tucson to an area east of Amado. The project area is located on the western bajada of the Santa Rita Mountains in Pima and Santa Cruz Counties, Arizona. Approximately 10 kilometers (6.2 miles) of the project area easement crosses over private land. The remaining portion is located on Arizona State Trust Land, including a ten-mile easement which crosses through the Santa Rita Experimental Range (SRER).

**Legal Description:** Zone 12 (NAD 83) (G&SRB&M) (*Amado, Mount Hopkins, Green Valley, Sahuarita, Corona de Tucson, and Tucson SE, Ariz.* 7.5' USGS Quadrangles):

- Township 16 South Range 15 East, portions of Sections 7, 18, 19, 30, and 31
- Township 17 South Range 15 East, portions of Sections 6, 7, 18, 19, 30, and 31
- Township 17 South Range 14 East, portions of Section 36

- Township 18 South, Range 14 East, portions of Sections 1, 2, 10, 11, 15, 21, 22, 28, 29, and 32
- Township 19 South, Range 14 East, portions of Sections 6 and 7
- Township 19 South, Range 13 East, portions of Sections 12, 13, 23, 24, 26, 27, 33, and 34
- Township 20 South, Range 13 East, portions of Sections 4, 8, and 9

**Land Jurisdiction:** Arizona State Trust Land (198 acres) and private (74 acres)

**Total Acres:** 272

**Acres Surveyed:** 272

**Acres Not Surveyed:** 0

**Consultant Firm:** MCA Consulting

**Project Number:** MCA 2017.034

**Permit Number(s):** Arizona Antiquities Act (AAA) Permit No. 2017-021bl

**ASM Accession Number:** 2017-0246

**Dates of Fieldwork:** June 7-13<sup>th</sup> and June 28<sup>th</sup>, 2017

**Number of IOs Recorded:** 15

**Number of Sites Recorded:** 6

**Eligible Sites:** 0

**Ineligible Sites:** 6

**Unevaluated Sites:** 0

**Sites Not Relocated:** 0

**Site Summary Table:**

Land Jurisdiction	Identification Status	Site Number	Eligibility/Status/ Criteria	Recommended Treatment
ASLD	Newly recorded	AZ DD:8:261(ASM)	Ineligible	No further treatment
Private	Previously recorded	AZ EE:1:161(ASM)	Ineligible	No further treatment
ASLD	Previously recorded	AZ EE:1:167(ASM)	Ineligible	No further treatment
ASLD	Previously recorded	AZ EE:1:168(ASM)	Ineligible	No further treatment
ASLD	Previously recorded	AZ DD:8:138(ASM)	Ineligible	No further treatment
ASLD and private	Previously recorded	AZ DD:8:193(ASM)	Ineligible individually	No further treatment
ASLD	Previously recorded	AZ DD:8:259(ASM)	Ineligible	No further treatment

**Comments:** This report follows the *Standards for Inventory Documents Submitted for SHPO Review in Compliance with Historic Preservation Laws* set forth by the Arizona State Historic Preservation Office (Arizona State Historic Preservation Office 2016). Style and technical format follow guidelines published by the Arizona State Historic Preservation Office, Society for American Archaeology (2014), and the Arizona State Museum (Gifford and Heathington 1989). Some figures and tables in this report contain sensitive spatial information regarding the location of archaeological sites or historic properties. This information is presented in Appendices to facilitate review, and so that they may be easily redacted for Freedom of Information Act (43 CFR Part 2) or state-level requests (Public Records Requests).

## PROJECT DESCRIPTION AND LOCATION

On behalf of Bowers Environmental, MCA Consulting (MCA) conducted a Class I (previous records review) and a Class III (intensive) non-collection pedestrian cultural resources assessment survey of 272 acres located in both Pima County and Santa Cruz County, Arizona. The project area consists of a 50-to-100-foot-wide by 27.7-mile-long corridor that stretches from an area southeast of Tucson to an area east of Amado (**Figure 1**). The project area is located on the western bajada of the Santa Rita Mountains and follows an existing power line.

The legal description is Zone 12 (NAD 83) (G&SRB&M) (*Amado, Mount Hopkins, Green Valley, Sahuarita, Corona de Tucson, and Tucson SE, Ariz.* 7.5' USGS Quadrangles):

- Township 16 South Range 15 East, portions of Sections 7, 18, 19, 30, and 31
- Township 17 South Range 15 East, portions of Sections 6, 7, 18, 19, 30, and 31
- Township 17 South Range 14 East, portions of Section 36
- Township 18 South, Range 14 East, portions of Sections 1, 2, 10, 11, 15, 21, 22, 28, 29, and 32
- Township 19 South, Range 14 East, portions of Sections 6 and 7
- Township 19 South, Range 13 East, portions of Sections 12, 13, 23, 24, 26, 27, 33, and 34
- Township 20 South, Range 13 East, portions of Sections 4, 8, and 9

The project area consists of linear easements running through Arizona State Trust Land and private land (**Figures 2-12**). The project is subject to compliance with the Arizona Antiquities Act and State Historic Preservation Act (A.R.S. § 41-841 et seq., A.R.S. § 41-861 et. seq.). The proposed undertaking consists of upgrading a portion of the Vail to Valencia substation 138kV transmission line located on private land, and three existing Rights-of-Ways (ROWs) on Arizona State Trust Land, between the Nogales Tap and Kantor substations. ROW 14-97502 is currently 50 feet wide, ROW 14-110981 is currently 100 feet wide, and ROW 14-117730 is currently 50 feet wide. UniSource Energy Services (UNSE) proposes to upgrade this portion of the transmission line, in response to a requested interconnection project near the Valencia substation in Nogales, Arizona. The scope of work would include construction of a new 138kV transmission line within or adjacent to the existing facilities, and removal of the existing transmission line. Construction activities would include the maintenance and construction of access roads; grading and installing steel poles, stringing the new transmission line and fiber optic cable; and removing the existing towers and conductor wire.

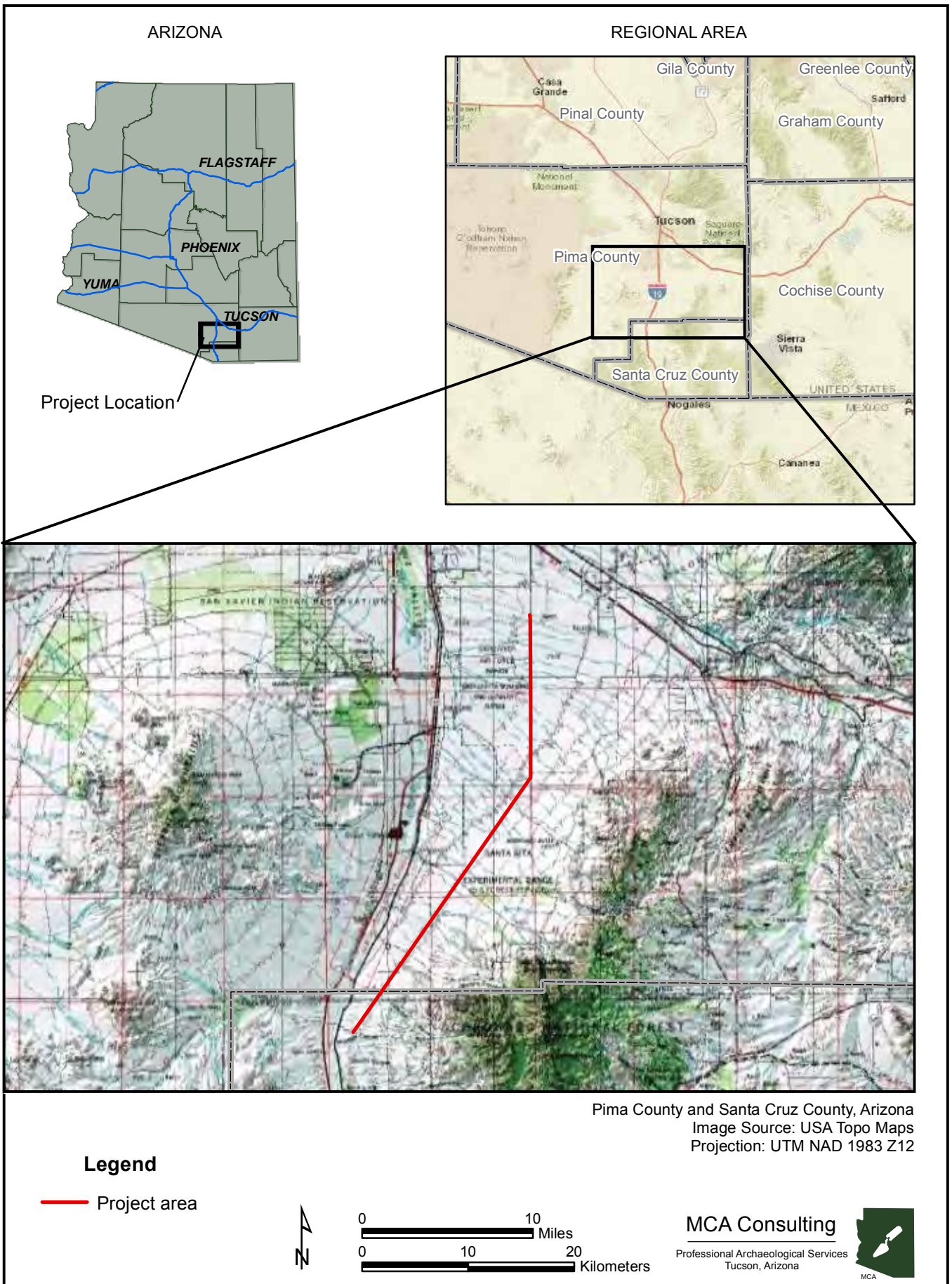
This project was sponsored to consider what impact such activities would have on historic properties present within the project area. These historic properties may include historic period sites, prehistoric archaeological sites, or isolated cultural resources (artifacts or features). All identified cultural resources observed during the project were assessed for inclusion on the Arizona



## UniSource Nogales Tap to Kantor Class III Cultural Resources Survey

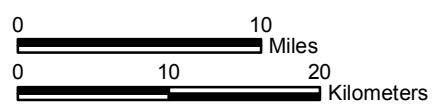
Register of Historic Places (ARHP) and National Register of Historic Places (NRHP), and recommendations were made as to the potential for further investigation.

Michael Cook is principal investigator for this project. Fieldwork was conducted by Michael Cook on June 7-13<sup>th</sup> and June 28<sup>th</sup>, 2017. The survey identified one new archaeological site and 15 isolates. Six previously recorded sites were relocated and updated. WestLand Resources, Inc. (WestLand) completed a Class I sites files search and literature review for the current project area on May 4, 2017 (King 2017). UniSource then retained MCA to complete the remaining portion of the Class III cultural resources survey. Given small differences in the project area studied by WestLand and the current project area, some modifications were necessary to accurately present the Class I data. Accordingly, portions of the Class I have been amended and supplemented in this report. Further detail is provided in the Class I section presented in this report and in Appendix B.



Pima County and Santa Cruz County, Arizona  
 Image Source: USA Topo Maps  
 Projection: UTM NAD 1983 Z12

**Legend**  
 — Project area



**MCA Consulting**  
 Professional Archaeological Services  
 Tucson, Arizona



Figure 1. Vicinity map

Date: 6/30/2017 Path: C:\Users\mihira\_000\Documents\MCA2\_MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile11.MXD\Fig\_2\_land\_overview.mxd

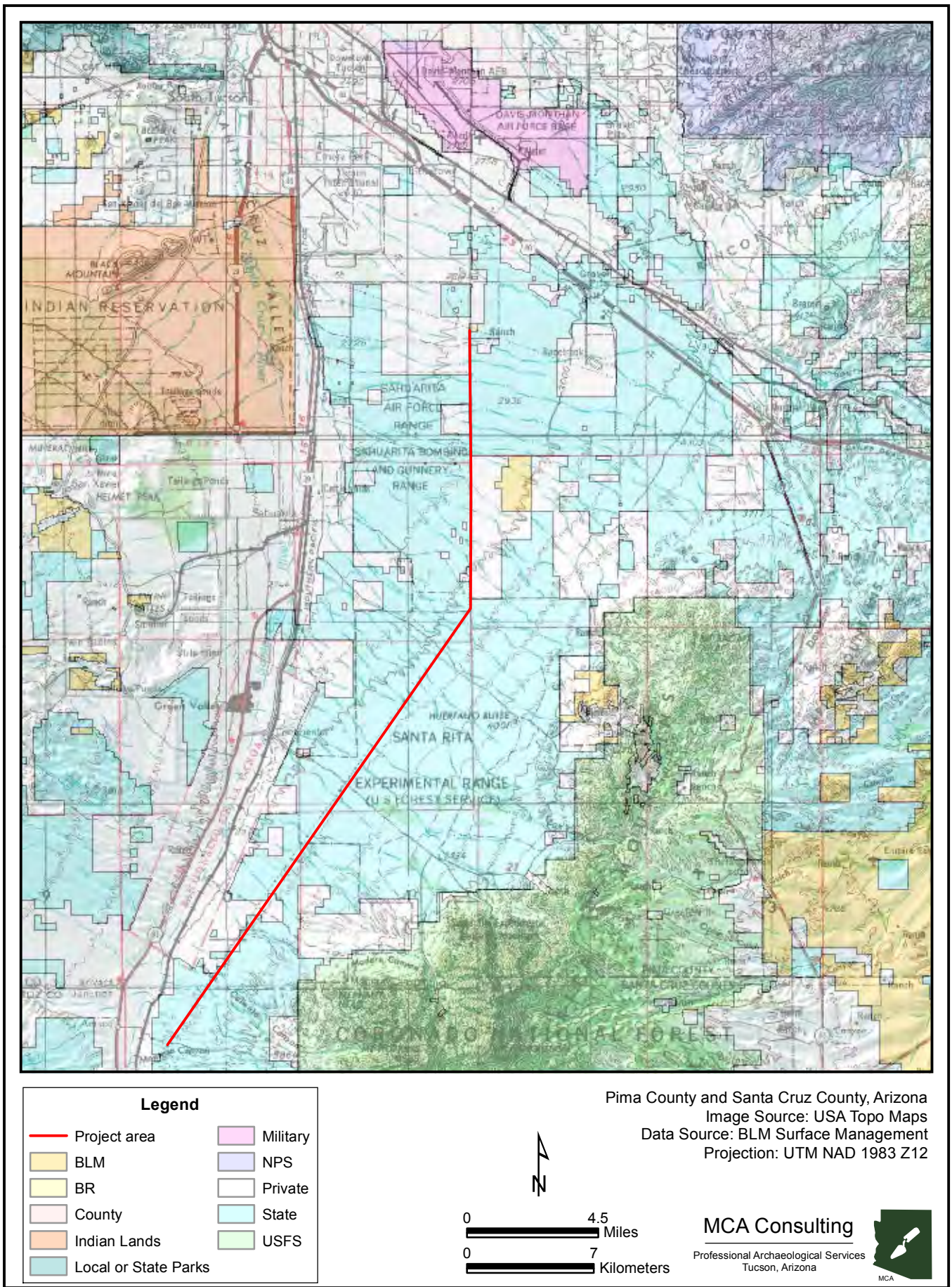


Figure 2. Land management, 1:250:000 scale (see Figures 3-12 for 1:24:000 scale land management maps).

Path: C:\Users\mihira\_000\Documents\NCA\2. MAPS\PROJECT MAPS\MCA\_2017\_004\_TEP\_27\_Mile1.1\_MXD\Fig\_3\_land.mxd  
Date: 6/29/2017

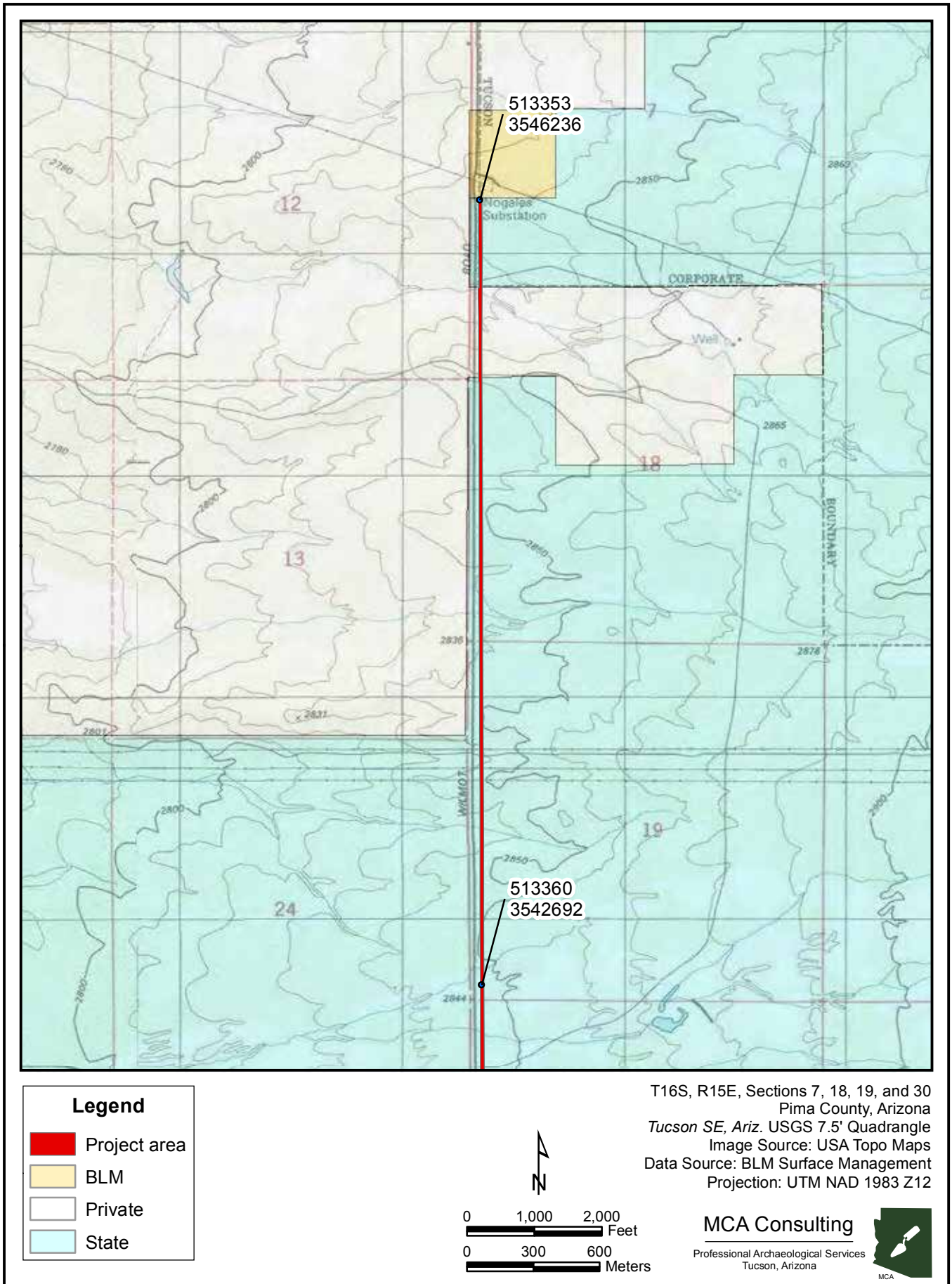
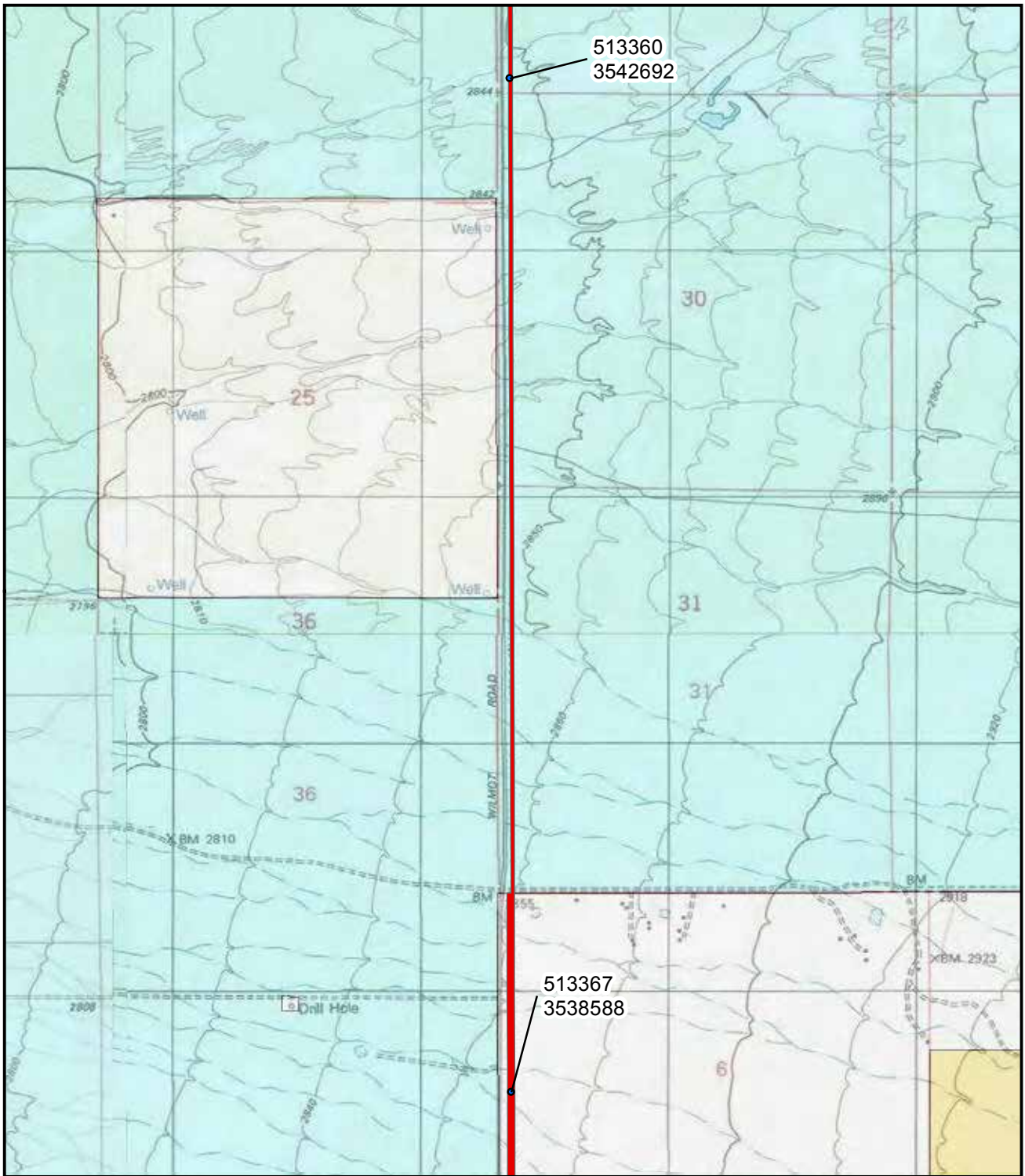


Figure 3. Land jurisdiction map.

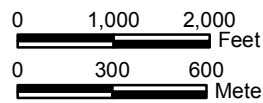
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Date: 7/6/2017



**Legend**

- Project area
- BLM
- Private
- State

T16S, R15E, Sections 19, 30 and 31; T17S, R15E, Section 6  
Pima County, Arizona  
Tucson SE, Ariz. and Corona de Tucson, Ariz. USGS 7.5' Quadrangles  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12

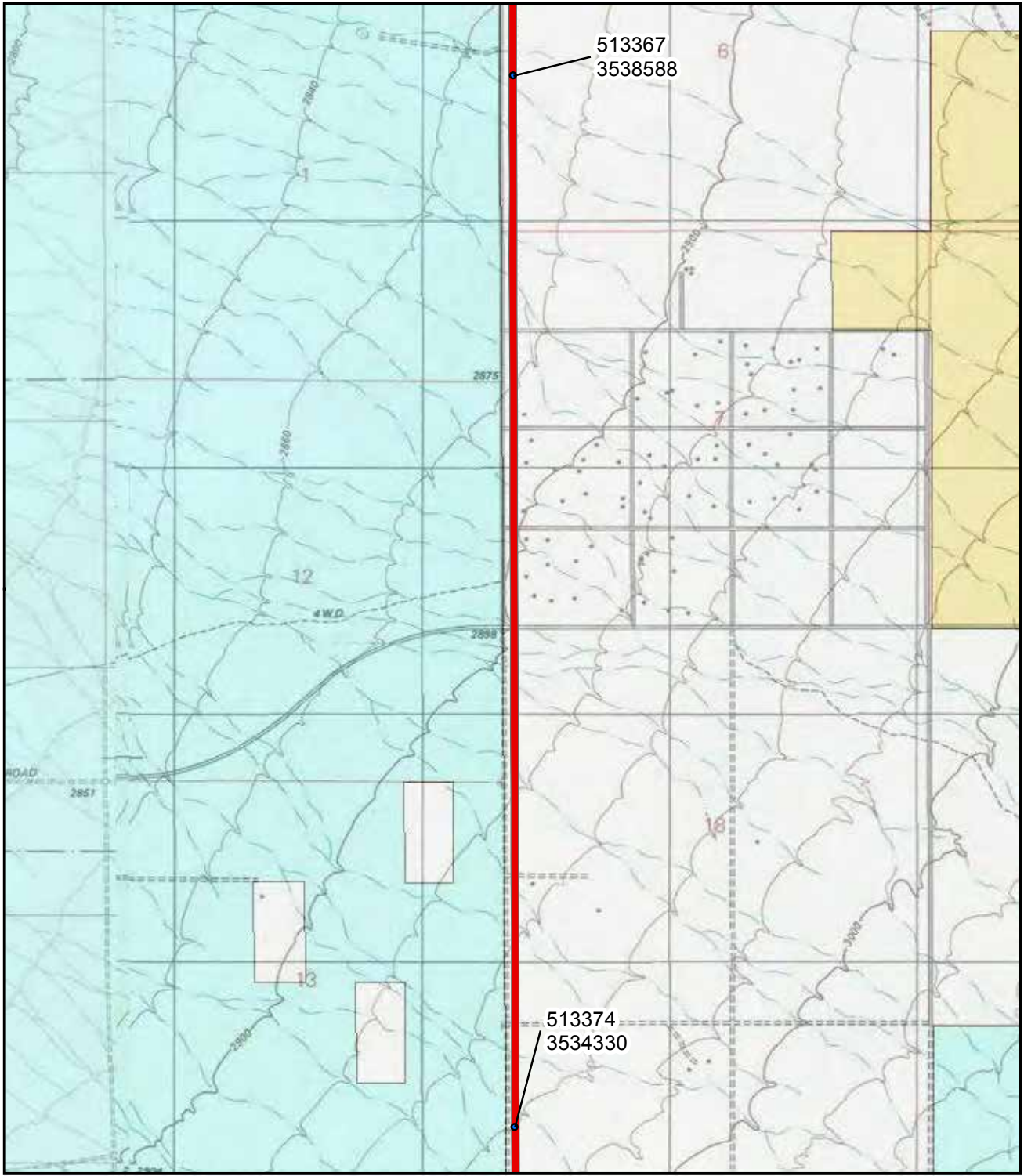


**MCA Consulting**  
Professional Archaeological Services  
Tucson, Arizona



Figure 4. Land jurisdiction map.

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Date: 7/6/2017



**Legend**

- Project area
- BLM
- Private
- State

0 1,000 2,000 Feet  
0 300 600 Meters

T17S, R15E, Sections 6, 7, 18, and 19  
Pima County, Arizona  
Corona de Tucson, Ariz. USGS 7.5' Quadrangle  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12

**MCA Consulting**  
Professional Archaeological Services  
Tucson, Arizona

Figure 5. Land jurisdiction map.

Path: C:\Users\mihira\_000\Documents\NCA\2. MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile1.1\_NXD\Fig\_6\_land.mxd  
Date: 6/29/2017

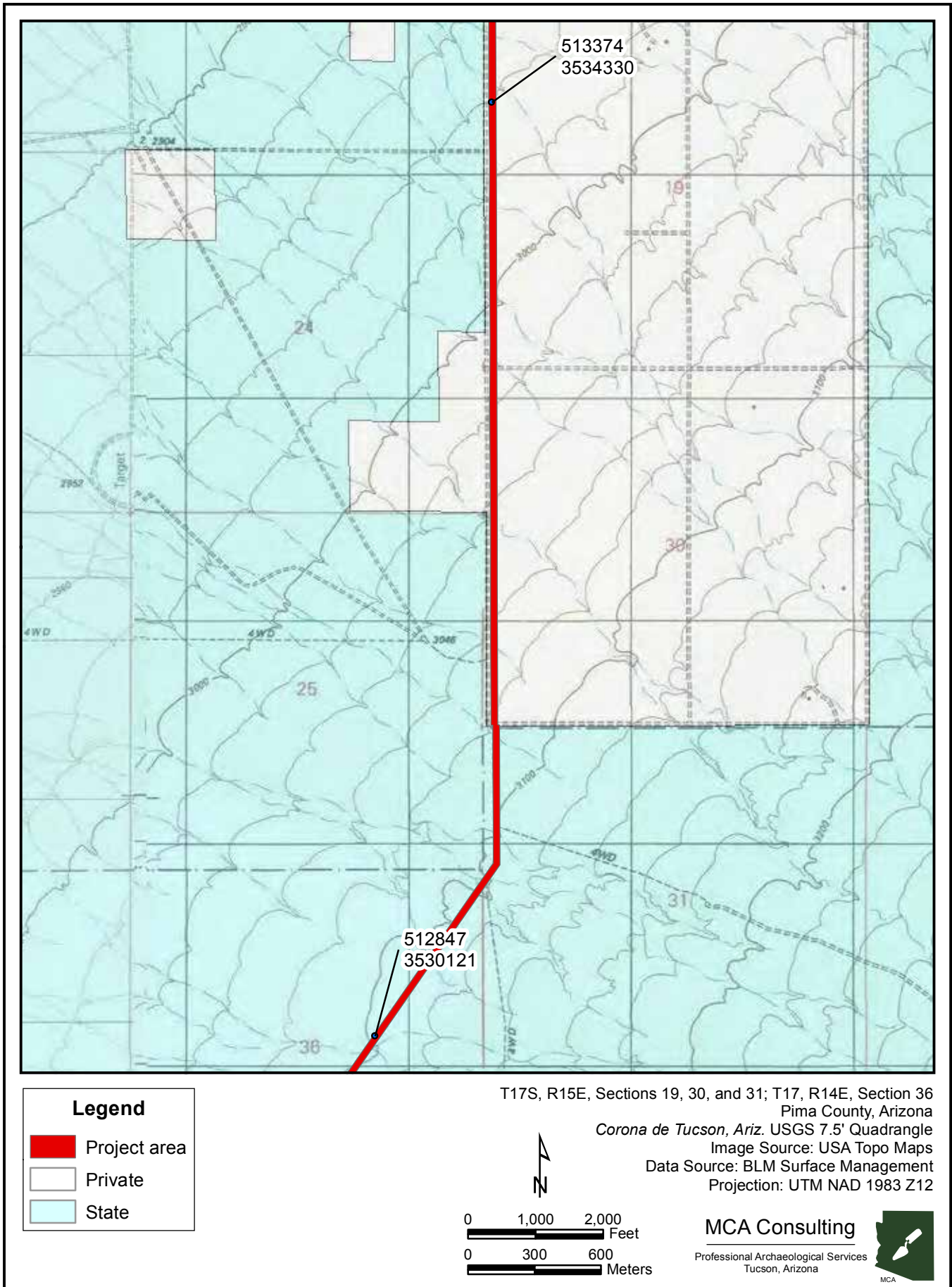
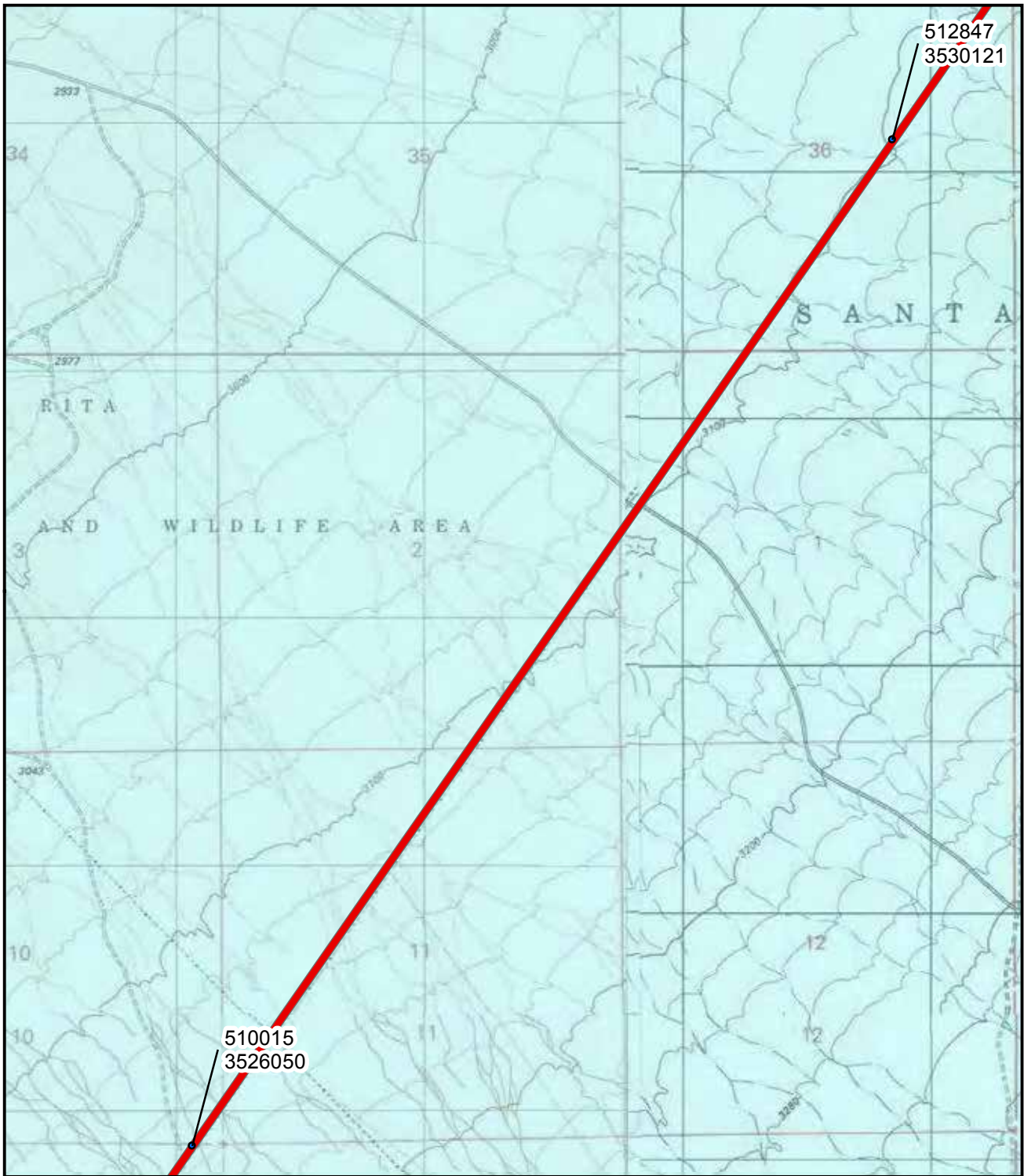




Figure 6. Land jurisdiction map.

Date: 6/29/2017 Path: C:\Users\mihira\_000\Documents\MCA2\_MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile11\_NXD\Fig\_7\_land.mxd

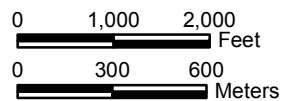


**Legend**

-  Project area
-  State



T17, R14E, Section 36; T18S, R14E, Sections 1, 2, 10, 11, 15  
Pima County, Arizona  
Sahuarita, Ariz. and Corona de Tucson, Ariz. USGS 7.5' Quadrangle  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12



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Figure 7. Land jurisdiction map.



Path: C:\Users\mihiera\_000\Documents\NICA2\_MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile11\_NXD\Fig\_8\_land.mxd  
Date: 6/29/2017

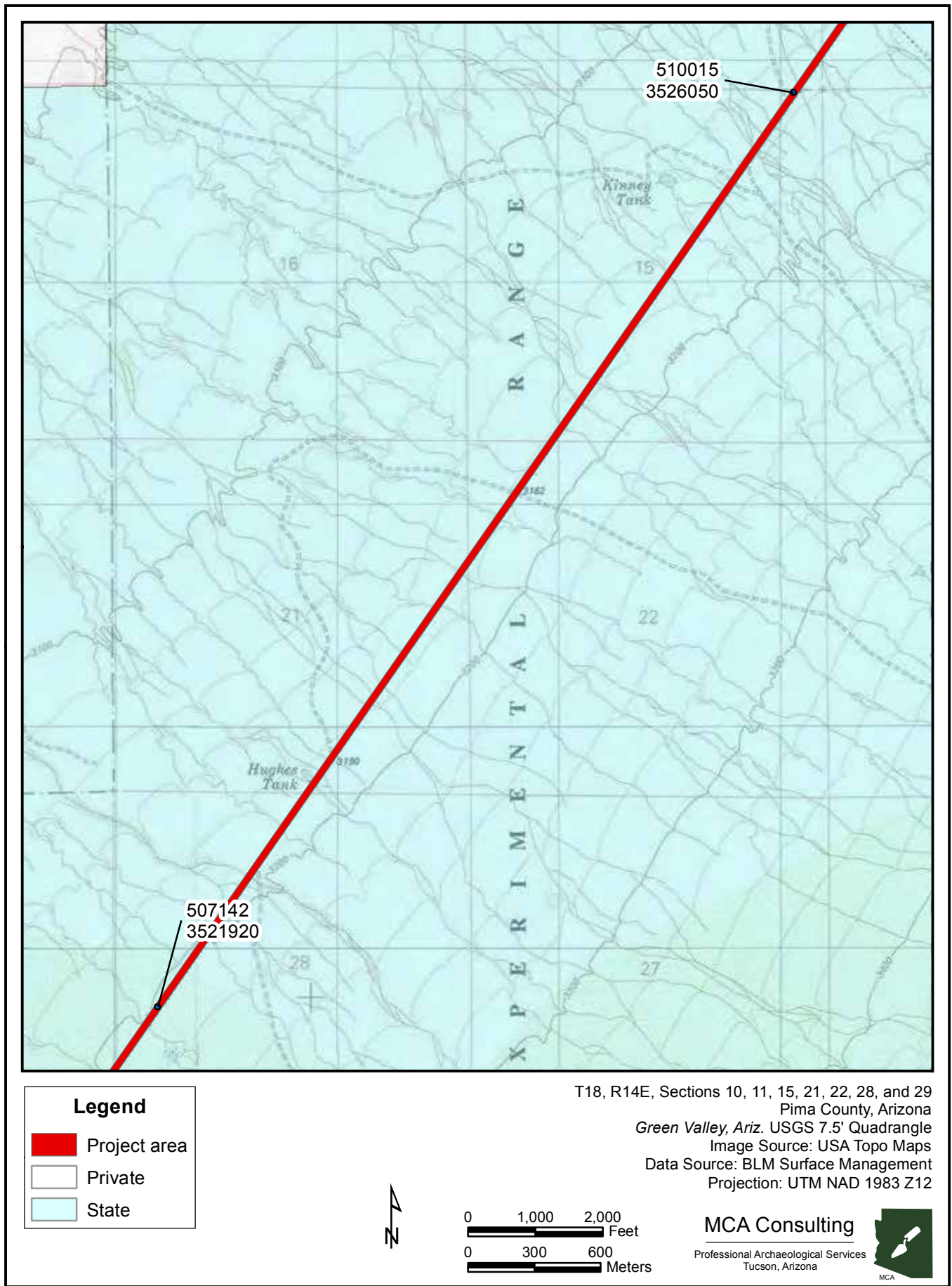
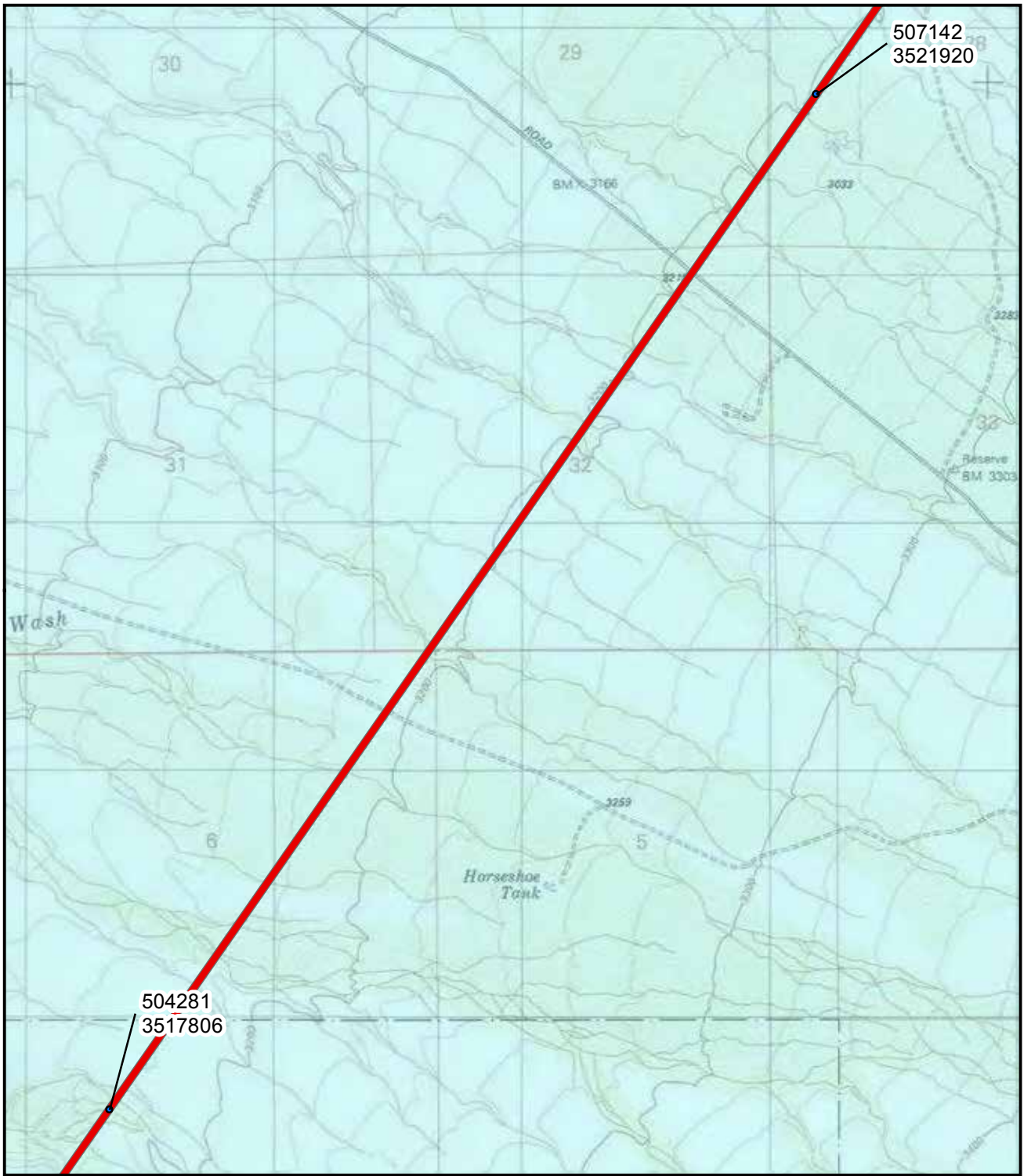




Figure 8. Land jurisdiction map.

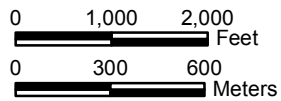
Path: C:\Users\mihira\_000\Documents\NCA\2. MAPS\PROJECT MAPS\MCA\_2017\_004\_TEP\_27\_Mile1.1\_NXD\Fig\_9\_land.mxd  
Date: 6/29/2017



**Legend**

-  Project area
-  State

T18S, R14E, Sections 28, 29, 32; T19S, R14E, Sections 6 and 7  
Pima County, Arizona  
Green Valley, Ariz. USGS 7.5' Quadrangle  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12

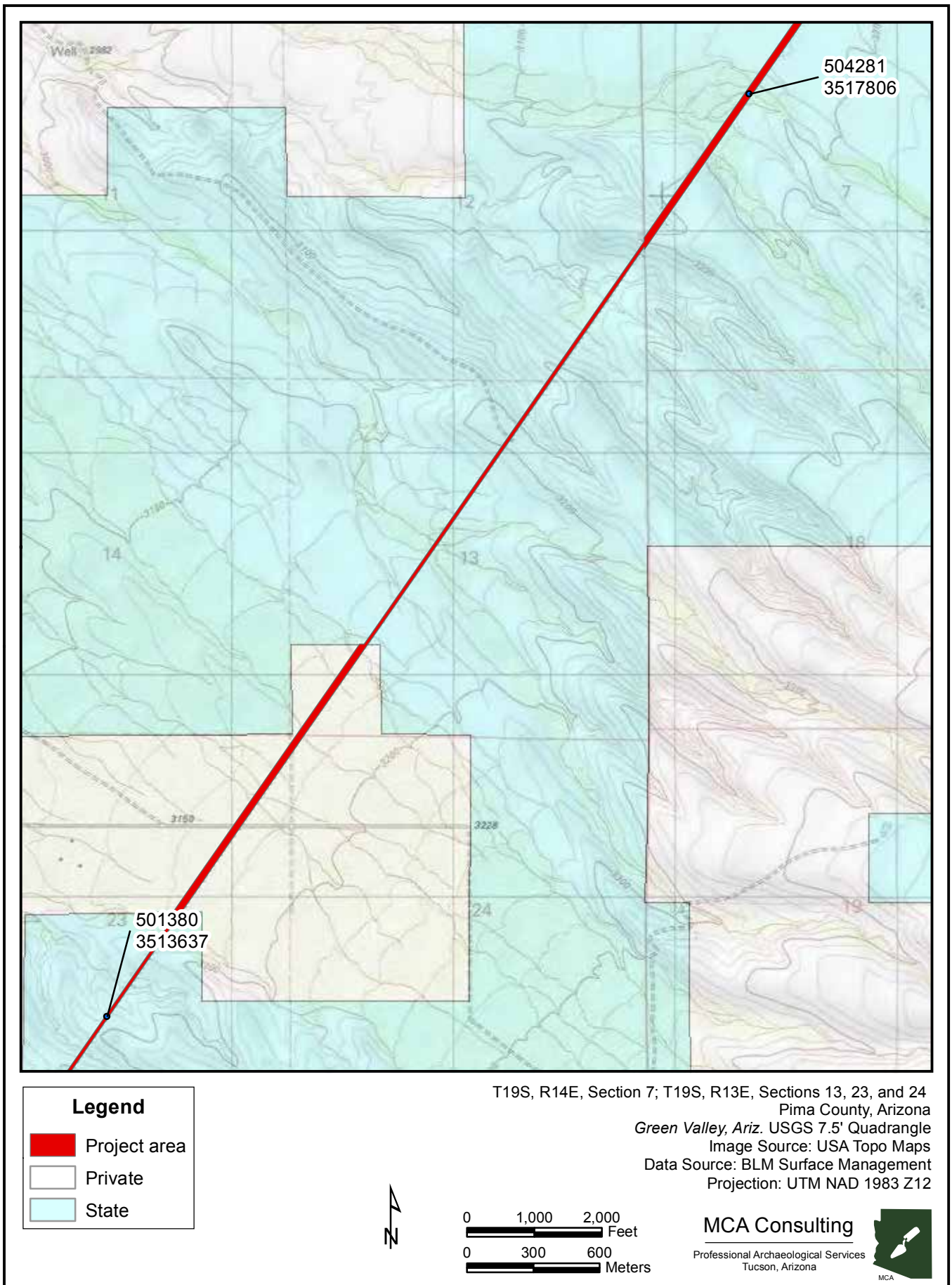


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Tucson, Arizona



Figure 9. Land jurisdiction map.

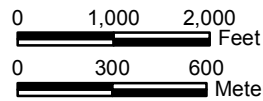
Path: C:\Users\mihira\_000\Documents\NCA\2. MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile1.1\_NXD\Fig\_10\_Land.mxd  
Date: 6/29/2017



**Legend**

-  Project area
-  Private
-  State

T19S, R14E, Section 7; T19S, R13E, Sections 13, 23, and 24  
Pima County, Arizona  
Green Valley, Ariz. USGS 7.5' Quadrangle  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12



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Tucson, Arizona



**Figure 10.** Land jurisdiction map.

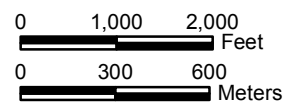
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Date: 7/7/2017



**Legend**

- Project area
- Private
- State

T19S, R13E, Sections 23, 26, 27, 33, and 34;  
T20S, R13E, Section 4; Pima County and Santa Cruz County, Arizona  
Amado, Ariz. and Mount Hopkins, Ariz. USGS 7.5' Quadrangle  
Image Source: USA Topo Maps  
Data Source: BLM Surface Management  
Projection: UTM NAD 1983 Z12



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Tucson, Arizona



Figure 11. Land jurisdiction map.

Path: C:\Users\mihira\_000\Documents\MCA2\_MAPS\PROJECT MAPS\MCA\_2017\_034\_TEP\_27\_Mile11\_NXD\Fig\_12\_Land.mxd  
Date: 7/7/2017

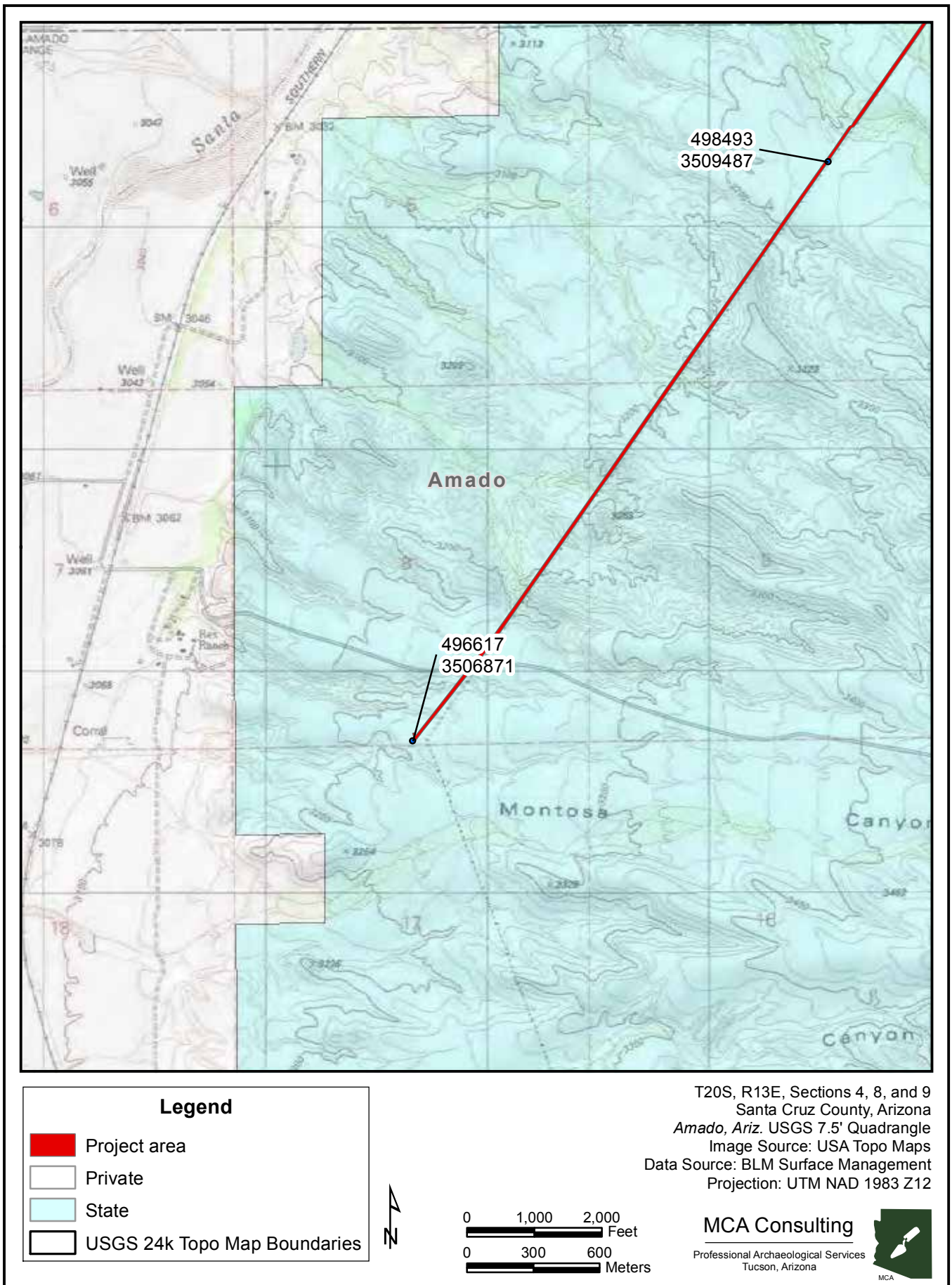


Figure 12. Land jurisdiction map.

## PHYSIOGRAPHIC CONTEXT

### *Biotic Community and Vegetation*

The project area overlaps two biotic communities. The northern portion of the project area (11.2 kilometers [7 miles]) falls within the Arizona Upland Subdivision, Sonoran Desertscrub biotic community (Brown 1994). Vegetation identified during fieldwork is characteristic of this biotic community and is dominated by creosote (*Larrea tridentate*). Other vegetation observed during field survey includes palo verde (*Parkinsonia microphylla*), saguaro (*Carnegiea gigantea*), triangle-leaf bursage (*Ambrosia deltoidea*), mesquite (*Prosopis* sp.), octotillo (*Fouquieria splendens*), prickly pear (*Opuntia phaeacantha*), pincushion cactus (*Mammillaria* sp.), cholla (*Opuntia* sp.), barrel cactus (*Ferocactus wislizeni*), and Mormon tea (*Ephedra* sp.). The southern portion of the project area (33.4 kilometers [20.8 miles]) falls within the Semidesert Grassland biotic community. Common vegetation in this part of the project area includes mesquite (*Prosopis* sp.), palo verde (*Parkinsonia* sp.), acacia (*Acacia* sp.), prickly pear (*Opuntia engelmannii*), ocotillo (*Fouquieria splendens*), cholla (*Opuntia* sp.), and barrel cactus (*Ferocactus wislizenii*). Seasonal low shrubs and grasses were intermittent throughout the project area. Ground cover was extremely dense in some areas and completely absent in other areas.

### *Landform*

The project area is located within the Basin and Range physiographic zone of Arizona along the eastern edge of the Upper and Lower Santa Cruz River Valleys. The north end of the project area is located on relatively flat alluvial fans which slope gently to the west. These areas are characterized by large homogenous stretches of creosote flats. Further south, the project area cuts perpendicular across the west-sloping bajada of the Santa Rita Mountains. At the south end, the project area cuts across steep sloping ridges and drainages. Ground surface elevations within the project area range from 2,800 feet (853.4 meters) A.M.S.L. (NAVD 88) at the north end to 3,200 feet (975.3 meters) A.M.S.L. (NAVD 88) at the south end.

### *Surrounding Topographic Features*

The Santa Rita Mountains are 8.3 kilometers (5.1 miles) east of the project area. Prominent peaks visible to the east in this range include Mount Wrightson (4.5 kilometers [9.0 miles] from the project area), Mount Hopkins (12.1 kilometers [7.5 miles] from the project area); and Elephant Head Butte (5.7 kilometers [3.5 miles] from the project area).

### *Drainages*

The project area is oriented roughly parallel to the Santa Cruz River. The southern end of the project area is only 1.0 kilometers (0.6 mile) east of the Santa Cruz. The northern end of the project area is 10.5 kilometers (6.5 mile) east of the Santa Cruz River. Several major west-flowing drainages cut through the southern end of the project area. These include (from south to north): Agua Caliente Canyon Wash, Madera Canyon Wash, Florida Canyon Wash, and Sawmill Canyon Wash. Numerous unnamed small drainages also cut through the northern portion of the project area.

### ***Surficial Geology***

Surficial geologic deposits present within the project area consist of three units (Arizona Geologic Survey 2017). Deposits within the northern part of the project area are Early Pleistocene to Latest Pliocene (0.75-3 Ma) deposits, consisting of coarse relict alluvial fan deposits that form rounded ridges or flat, isolated surfaces that are moderately to deeply incised by streams. These deposits are generally topographically high and have undergone substantial erosion. Deposits are moderately to strongly consolidated, and commonly contain coarser grained sediment than younger deposits in the same area. Soils in the middle segment of the project area are Quaternary Surficial deposits, undivided (0-2 Ma), consisting of unconsolidated to strongly consolidated alluvial and aeolian deposits. This unit includes: coarse, poorly sorted alluvial fan and terrace deposits on middle and upper piedmonts and along large drainages; sand, silt and clay on alluvial plains and playas; and wind-blown sand deposits. Soils in the southern segment of the project area are Early Pleistocene to Latest Pliocene deposits (0.75-3 Ma), consisting of coarse relict alluvial fan deposits that form rounded ridges or flat, isolated surfaces that are moderately to deeply incised by streams. These deposits are generally topographically high and have undergone substantial erosion. Deposits are moderately to strongly consolidated, and commonly contain coarser grained sediment than younger deposits in the same area.

### ***Soils and Deposition***

Natural Resources Conservation Service (NRCS), United States Department of Agriculture (USDA) Soil Survey Soil maps for the project area were obtained from the Soil Survey Geographic Database (NRCS, USDA 2017). Most soils in the project area Sahuarita-Mohave-Cave complex. The Sahuarita series consists of very deep, well-drained soils (coarse-loamy, mixed, superactive, thermic Typic Haplocambids) formed in alluvium from limestone, schist, phyllite and granitic rock. The Mohave series consists of very deep, well drained soils (fine-loamy, mixed, superactive, thermic Typic Calciargids) formed in mixed alluvium. The Cave series consists of very shallow and shallow to a hardpan, well drained soils (loamy, mixed, superactive, thermic, shallow Typic Petrocalcids ) formed in mixed alluvium. A very small segment of the project area near the south end consists of White House-Hathaway-Bernardino complex. The White House series consists of very deep, well drained soils (fine, mixed, superactive, thermic Ustic Haplargids) that formed in fan alluvium from mixed sources. Hathaway series consists of very deep, well drained soils Loamy-skeletal, mixed, superactive, thermic Aridic Calciustolls) that formed in fan alluvium from mixed sources. The Bernardino series consists of very deep, well drained soils (fine, mixed, superactive, thermic Ustic Calciargids) that formed in fan alluvium from igneous and sedimentary rock. Soils observed during fieldwork range from fine to coarse sandy loam with varying amount of gravel inclusions. Naturally-occurring pebbles and cobbles cover patches of the ground surface, especially on finger ridgetops in the southernmost project area. Red-orange argillic clays are exposed on ridge surfaces and in natural drainage exposures.

## CULTURE HISTORY

The project area is located on the western bajada of the Santa Rita Mountains east of the Santa Cruz River. This area and the larger region have been occupied by a wide variety of peoples and cultures for thousands of years. This summary of the cultural history of the project area is based upon the Class I inventory completed during this project and upon information reviewed from archaeological projects conducted in the area.

### *Paleoindian Period (ca. 11,500-8,500 B.C.)*

During the Paleoindian period, the greater southwest was intermittently occupied by small, mobile hunter-gatherer groups occupying temporary campsites and traveling across the broader landscape in search of large game such as mammoths and bison, as well as wild plant foods. Isolated projectile points have been documented across Arizona (Haynes 2011; Agenbroad 1967; Huckell 1982), and Paleoindian sites have been found in southern Arizona (Haury 1953; Haury et al. 1959; Vance Haynes and Huckell 2007). However, archaeological evidence of the Paleoindian Period in the Tucson Basin vicinity is limited to isolated projectile points such as a fluted Paleoindian point found in Rattlesnake Pass (Agenbroad 1967) near the northern end of the Tucson Mountains and a Clovis spear point along the Santa Cruz River at the Valencia site-AZ BB:13:74(ASM) (Doelle 1985:181–182)(Doelle 1985:181–182). For more on the Paleoindian period in southern Arizona, see Mabry (1998) and Huckell (2004).

### **Archaic Period and Early Agricultural Period (ca. 8,500 B.C. - A.D. 1)**

As megafauna had become extinct, new subsistence strategies emerged in which plant resources, especially seeds, were processed and consumed. This led to both a new resource base developed around grinding plant materials and also a reliance upon a broader spectrum of plants and animals for subsistence. Within the southern Basin and Range region of the Southwest, the broad cultural manifestation termed the Archaic is known as the Cochise culture. The Cochise culture is subdivided into three broad temporal divisions: Early, Middle, and Late.

The Early Archaic period of the Cochise culture is referred to as the Sulphur Springs phase. Sayles and Sayles and Antevs (1941) originally defined this phase in the Sulphur Springs Valley in southeastern Arizona. The first appearance of grinding tools such as one-handed manos and slab metates characterize this initial Archaic period (Huckell 1996). The Middle Archaic period (ca. 6,000–1,200 B.C.) of the Cochise culture is referred to as the Chiricahua phase. It is characterized by the addition of shallow basin metates, mortars and pestles, various bifacial tools, and distinctive side-notched projectile points to the tool assemblage (Huckell 1996; Mabry 1998). Regional variations in the material culture across the Southwest became less pronounced during this period. For example, projectile points took on a similarity of design over large geographic regions (Mabry 1998). Although still highly mobile, permanent or semi-permanent domestic architecture first appear in the Middle Archaic. Maize and other Mesoamerican cultigens first arrived in the Southwest by at least 2000 B.C. (Huckell 1996; Mabry 1998). During the Late Archaic/Early Agricultural period (ca. 1200 B.C.–A.D. 1) there was an increased adaptation of agriculture as a



subsistence strategy but also a continued reliance upon hunting-and-gathering practices as a vital subsistence strategy (Diehl 2005). In the Santa Cruz River Valley in Tucson, this period has also been referred to as the Early Agricultural period based on the abundance of irrigation canals and botanical remains indicative of agriculture (Huckell 1996; Mabry 2005).

### ***Early Ceramic Period (ca. A.D. 1-450)***

This period is characterized by the introduction and expanding use of ceramic vessels and the appearance of small seasonally occupied hamlets (Doyel 1993; Mabry 1998; Whittlesey and Ciolek-Torrello 1996; Wallace et al. 1995; Deaver and Ciolek-Torrello 1995). The first widespread use of ceramic containers began during the Red Mountain phase (ca. A.D. 1-350) with the introduction of undecorated plain ware pottery used primarily for dry seed storage (Mabry 2000)(Mabry 2000). Other characteristics of the Red Mountain phase include basin metates, large corner-notched projectile points, and flexed inhumation burials (Doyel 1991)(Doyel 1991). True pit house construction began in the Red Mountain and continued into the subsequent Vahki phase (ca. A.D. 350-450). During the Vahki phase, trough metates and redware ceramics first appeared (Crown 1991)(Crown 1991) along with ground stone palettes, stone bowls, human-shaped clay figurines, and carved shell jewelry. Inhumation burial practices also continued into this phase (Doyel 1991).

### ***The Hohokam (ca. A.D. 450-1450)***

The Tucson Basin Hohokam inhabited a peripheral area linked to the Hohokam core area in the Salt-Gila Basin (Crown 1990). The Hohokam sequence consists of four periods: Pioneer (A.D. 450-750), Colonial (A.D. 750-950), Sedentary (A.D. 950-1150), and Classic (A.D. 1150-1450). Initial Hohokam characteristics include pithouse architecture, irrigation agriculture, cremation burials, decorated ceramics, fired-clay figurines, and ball courts. Red ware, and then red-on-buff ceramics were introduced during the Pioneer as the first large, nucleated villages were constructed along major waterways. Within the Colonial, both irrigation systems and associated villages expanded. Village structure was characterized by pit houses within district courtyards with associated roasting areas and cemeteries, with ball courts (A.D. 800) at some of the larger villages. Settlements increased in size and number during the Sedentary and village structure became more formalized. A major reorganization led to the Classic, resulting in changes including the replacement of ball courts with platform mounds, increased inhumations, and above-ground adobe architecture with compound walls. Buff wares were eventually replaced by red-on-brown, and later, polychrome ceramics. In the northern Tucson Basin, Hohokam have been referred to as the Marana Community(Fish et al. 1992). Numerous agricultural sites with rock features have been recorded on the lower and middle bajadas of the northern Tucson Basin (Madsen et al. 1993). For more on the Tucson Basin Hohokam, see Haury (1976), Bayman (2001), Wallace and Lindeman (2012), and Fish and Fish (2008).

### ***Protohistoric and Historic Periods (ca. A.D. 1450-1950s)***

The Protohistoric period in the Southwest (ca. A.D. 1450–1692) has been defined as the time between the conquest of Mexico and the re-conquest of New Mexico after the Pueblo Revolt, signaling the establishment of a permanent European presence in the New World. Little is known

about the protohistoric period in southern Arizona (Wells 2006; Wilcox and Masse 1981). The Spanish (Father Kino) first arrived in Tucson in 1694. At the time, people living in the Santa Cruz Valley were known as the Sobaipuri, spoke the Piman language, and lived in oval jacal surface dwellings. Between 1770 and 1776, the Spanish constructed San Xavier Mission, San Augustin Mission, and El Presidio of Tucson, thus establishing a substantial Spanish presence in the Tucson Basin. Apache raiding groups has also entered the area by this same time. Mexico's independence from Spain (1821), the abandonment of the San Augustin Mission (1831), the Gadsden Purchase (1853) and the establishment of the U.S. Army's first outpost in Tucson (1856) marked the end of the Spanish and Mexican Periods (1694-1856). The arrival of the railroads in Tucson (1880s), the surrender of Geronimo (1856), and increased homesteading paved the wave for increased population and economic growth into the 1900s.

## **CLASS I SITE FILE AND LITERATURE SEARCH**

Prior to fieldwork, MCA conducted a Class I inventory (records search and literature review) to identify past archaeological survey coverage and generate expectations about the types and frequencies of cultural resources that might be expected during field survey. Specifically, archaeological records and historic documents were located and reviewed to determine the extent of previous archaeological work in the area, to locate previously recorded archaeological sites and historic properties, and to develop research questions. This review provided background information to form survey expectations and relevant historic contexts to evaluate the significance of any archaeological finds made during field survey of the project area.

WestLand also completed a Class I sites files search and literature review for the current project area on May 4, 2017 (King 2017). WestLand's Class I data was derived from their in-house database and from Arizona State Museum's (ASM's) online AZSITE database (King 2017:1). However, WestLand's Class I project area was wider than the current project area, and the relative location of some previously recorded archaeological sites and surveys to the project areas are different. Accordingly, MCA completed new figures depicting these sites and surveys in relation to the current project area (Appendix A). Additionally, research by MCA at the ASM Archaeological Records Office (June 22, 2017), including review of original survey reports, revealed that three previously recorded sites are plotted incorrectly in AZSITE. All three of the sites intersect the project area. The maps in Appendix A depict these sites more accurately based upon a complete review of the site histories. WestLand also reviewed historic GLO plats and USGS topographic maps (King 2017:20). MCA reviewed the original historic maps and conducted field inspections at potential historic features depicted on those maps. WestLand's figures depicting these maps (King 2017:Appendix B) are consistent with MCA's subsequent review, and accordingly the maps are not presented in this report.

### ***Site Files Archaeological Records Search***

Records were reviewed on ASM's AZSITE online archaeological database (AZSITE 2017) and at the ASM Archaeological Records Office (June 22, 2017) to determine whether any previously recorded archaeological sites have been documented within 0.8 kilometers (0.5 mile) of the project area boundaries and whether any archaeological projects have been conducted within this area. As Bureau of Land Management (BLM) land is located within the half-mile study area buffer, a site files search was also conducted (June 12, 2017) at the Tucson BLM Office with BLM Archaeologist Amy Sobiech. One survey project within the half-mile buffer was located in BLM records: 12-108-BLM. However, no further information was available for the survey project other than its location. No additional archaeological sites were found in BLM records within the project area buffer.

Archaeological records indicate that 40 previous Class III cultural resource surveys have been conducted within one mile of the project area (**Table 1; Figures A-1 – A10**). Twenty-eight of these surveys intersected a portion of the project area. A Class III survey of the current project area was conducted almost 30 years ago in the Santa Cruz 115kV Transmission Line Study (Bruder and Rogge 1988). Accordingly, the entire project area had been subjected to archaeological survey. Twenty-two previously recorded archaeological sites have been recorded within the half-mile study area buffer, including six within the current project area (**Table 2, Figures A-11 – A-20**). Significant archaeological projects in relation to the current project are discussed in greater detail below.

**Table 1 Previous archaeological projects within 0.8 km (0.5 mi) of the project area.**

<b>Project Number</b>	<b>Performing Institution</b>	<b>Description (reference)</b>
<b>12-108.BLM</b>	Bureau of Land Management	Unknown, no reference available
<b>1980-164.ASM</b>	Arizona State Museum	TRICO Survey; 3 miles; 1 new site documented: AZ EE:1:89(ASM) (Creel 1980)
<b>1982-211.ASM</b>	Arizona State Museum	Right-of-way through Sahuarita Gunnery Range; 1.5 acres; no new sites documented (Saul 1982)
<b>1983-127.ASM</b>	Arizona State Museum	State Land Survey; 73 acres; no new sites recorded (Lange 1983)
<b>1985-227.ASM</b>	Arizona State Museum	Corona de Tucson Survey; 1,280 acres and powerline road; 3 new sites recorded: AZ EE:1:155, 156, 161(ASM); (Huckell et al. 1987)
<b>1987-264.ASM</b>	University of Arizona	Investigations into Prehistoric Settlement and Subsistence on the Santa Rita Experimental Range (Master's Thesis); 800 acres; 46 new sites recorded: AZ EE:1:231-274(ASM) (Buttery 1987)
<b>1988-215.ASM</b>	Dames & Moore	Santa Cruz 115-kV Transmission Line Upgrade; 28 miles/340 acres; 3 new sites recorded: AZ EE:1:167(ASM), AZ EE:1:168(ASM), AZ DD:8:138(ASM) (Fennicle et al. 1989)
<b>1988-240.ASM</b>	Professional Archaeological Services and Technologies	Preliminary Survey for the Roadway Alignment Alternatives within the Sahuarita Corridor Study; 76 miles/810 acres; 2 new sites recorded: AZ EE:171(ASM), AZ EE:1:172(ASM) (Stephen 1990a)
<b>1989-28.ASM</b>	Archaeological Research Services	Proposed Materials Source (Amado Pit 8703) in Agua Caliente Canyon East of Arivaca Junction; 1.1 miles/35 acres; no new sites recorded (Bontrager 1989)

## UniSource Nogales Tap to Kantor Class III Cultural Resources Survey

<b>1994-485.ASM</b>	Cultural and Environmental Systems, Inc.	Corona de Tucson Survey; 1,280 acres and powerline road; no new sites recorded (Heuett 1994)
<b>1996-204.ASM</b>	Cultural and Environmental Systems, Inc.	Mt. Hopkins Survey; 1 mile; no new sites recorded (Heuett 1996a)
<b>1997-257.ASM</b>	SWCA Environmental Consultants	Pantano to Bicknell/Vail to Bicknell; 63 miles/832 acres; 11 new sites recorded: AZ EE:2:97-99, 133(ASM), AZ BB13:140, 419(ASM), AZ EE:1:99, 171, 195, 197, 199(ASM) (Tucker 1998)
<b>1998-481.ASM</b>	Western Area Power Administration	Nogales Tap Expansion Project; 3 acres; no new sites recorded (Barger 1999)
<b>1999-284.ASM</b>	Kinlani Archaeology	Tucson Prison Expansion II, Arizona Department of Corrections; 1299 acres; 19 new sites recorded: AZ BB:13:557-574(ASM) (Dosh 1988)
<b>1999-297.ASM</b>	Kinlani Archaeology	Wilmot Road Utilities Survey; 4.3 miles; no new sites recorded (Stull 1999)
<b>2000-485.ASM</b>	SWCA Environmental Consultants	Sahuarita Corridor Survey; 18 miles; 7 new sites recorded: AZ EE:1:304-310(ASM) (Hesse 2001)
<b>2003-197.ASM</b>	SWCA Environmental Consultants	TRICO Corona de Tucson Tie Line Survey; 14.9 miles; 3 new sites recorded: AZ EE:351-353(ASM) (Hesse et al. 2002; Hesse 2002)
<b>2005-446.ASM</b>	Transcon Environmental, Inc.	Tucson-Apache 115-kV Transmission Line Project; 80 miles/2,094 acres; 19 new sites recorded: AZ BB:13:758, 759, 761(ASM), AZ BB:723(ASM), AZ BB:16:64, 69(ASM), AZ CC:13:75-809, 82(ASM), AZ EE:2:519, 520, 526, 527(ASM); AZ EE:3:196, 197(ASM) (Goldstein 2008)
<b>2004-607.ASM</b>	Cultural & Environmental Systems, Inc.	Canoa-Mt. Hopkins Utility Line; no new sites recorded (Heuett 2004)
<b>2005-715.ASM</b>	Tierra Right of Way Services	Kantor Substation Survey; 3 miles; 1 new site recorded: AZ DD:8:193(ASM) (Williams and Lascaux 2005)
<b>2008-446.ASM</b>	SWCA Environmental Consultants	Rosemont Copper Mine Survey; 6,104 acres; 26 new sites recorded: AZ EE:1:80, 418-435(ASM), AZ EE:2:537, 540, 542, 544-546 (Ezzo et al. 2009)
<b>2009-578.ASM</b>	SWCA Environmental Consultants	SWTC PPC Pantano to Sahuarita; 15 miles/72 acres; 4 new sites recorded: AZ BB:13:804-807(ASM) (Barr 2009)
<b>2009-830.ASM</b>	Environmental Planning Group	Rosemont Transmission Line; 713 acres; 6 new sites recorded: AZ EE:1:441-446(ASM) (Sheehan et al. 2011)
<b>2010-074.ASM</b>	Tierra Right of Way Services	Canoa Ranch Pole Line (Tucson Electric Power Utility Pole Replacement Monitoring); no new sites recorded; monitoring of previously recorded AZ DD:8:138(ASM) (Levstik and Lascaux 2005)
<b>2010-368.ASM</b>	SWCA Environmental Consultants	Rosemont Transmission Line Additional Survey; 1,375 acres; 13 new sites recorded: AZ EE:2:447-454(ASM) (Swanson et al. 2010)
<b>2013-385.ASM</b>	WestLand Resources, Inc.	UNS Vail to Valencia Pima County Survey; 2.9 miles; 1 new site recorded: AZ DD:8:259(ASM) (King 2013a)
<b>2013-409.ASM</b>	WestLand Resources, Inc.	UNS Vail to Valencia Santa Cruz County Survey; 2.7 miles; report and PRF not available from ASM/AZSITE (King 2013b)
<b>2014-405.ASM</b>	WestLand Resources, Inc.	SWTC Bicknell to Vail Survey; 23 miles/783 acres; 3 new sites recorded: AZ BB:13:869, 870(ASM), AZ EE:1:477(ASM) (Jerla 2014)
10.2324.SHPO	Unknown	Unknown, no reference available
1982-207.ASM	Complete Archaeological Service Associates	Tucson-Apache 115-kV Transmission Line; 2 new sites recorded: AZ EE:2:133(ASM), AZ BB:16:7(ASM) (Hammack 1983)
1985-172.ASM	Arizona State Museum	Tucson Cellular Telephone Systems; 2 acres, no new sites recorded (Madsen 1985)

UniSource Nogales Tap to Kantor Class III Cultural Resources Survey

1986-187.ASM	Archaeological Research Services, Inc.	ADOT-Amado Material Pit 7489 near Amado, Santa Cruz County; 0.5 miles/80 acres; no new sites recorded (Bontrager 1986)
1989-127.ASM	Dames & Moore	Santa Cruz 115-kV Transmission Line Conductor Replacement: Amado to Tubac Segment; 13 miles/158 acres; 1 new site recorded: AZ DD:8:139(ASM) (O'Brien et al. 1990)
1990-037.ASM / 12.50.SHPO	Professional Archaeological Services and Technologies	State Lease 23-98551 Archaeological Exploration (PAST Job No. 90247); no new sites recorded (Stephen 1990b)
1991-13.ASM	Arizona State Museum	Range Improvement Projects on the Santa Rita Experimental Range; 3.6 miles; no new sites recorded (Madsen 1991)
1993-82.ASM	SWCA Environmental Consultants	Rancho Nuevo Survey; 2.9 acres, no new sites recorded (Phillips, David A. 1993)
1995-210.ASM	Aztlan Archaeology, Inc.	Elephant Head Road Survey; 0.5 acres; no new sites recorded (Slawson 1995)
1999-23.ASM	Desert Archaeology Inc.	Archaeology Survey of the Public Safety Academy Land Acquisition Project; 440 acres; 7 new sites recorded: AZ BB:13:616-622(ASM) (Ruble 1999)
2007-588.ASM	WestLand Resources, Inc.	Montosa Ranch Survey (Plescia 2006)
SHPO-2008-0131	Unknown	Unknown, no reference available

Note: Projects located partially within the project area in **bold**.

**Table 2. Previously recorded archaeological sites within 0.8 km (0.5 mi) of the project area.**

Site Number/ Property	Site Type/Cultural- Temporal Affiliation	Reference	AZ/NRHP Eligibility Status
<b>AZ DD:8:138(ASM)</b>	Artifact scatter/ Prehistoric, 12,000 B.C.– A.D. 1450 Native American Culture	Bruder and Rogge 1988; Fennicle et al. 1989; Levstik and Lascaux 2005; Heuett 2004	Determined eligible under Criterion (d) by SHPO 2009
<b>AZ DD:8:193(ASM)</b> <b>Amado Montosa Road</b>	Linear road site/ Historic, A.D. 1922–present Euro American	Williams and Lascaux 2005; King 2013b	Recommended eligible under Criterion (a) by recorder 2005 and 2013
<b>AZ DD:8:259(ASM)</b>	Linear transmission line/ Historic, A.D. 1958 Euro American	King 2013a, 2013b	Recommended ineligible by recorder 2013
<b>AZ EE:1:161(ASM)</b>	Rock features and artifact scatter/ Prehistoric, 12,000 B.C.– A.D. 1450 Native American Culture	Heuett 1994; Huckell et al. 1987	Recommended ineligible by recorder 1988
<b>AZ EE:1:167(ASM)</b>	Artifact scatter/ Prehistoric, 12,000 B.C.– A.D. 1450 Native American	Fennicle et al. 1989; Bruder and Rogge 1988	Recommended ineligible by recorder 1989
<b>AZ EE:1:168(ASM)</b>	A.D. 1450 Native American	Fennicle et al. 1989; Bruder and Rogge 1988	Recommended ineligible by recorder 1989
AZ BB:13:562(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988; Goldstein 2008; Jones 2002	
AZ BB:13:563(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988; Jones 2002	
AZ BB:13:566(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988; Jones 2002	
AZ BB:13:567(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1998	
AZ BB:13:570(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988; Jones 2002	
AZ BB:13:571(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988	

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AZ BB:13:572(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988	
AZ BB:13:573(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988	
AZ BB:13:574(ASM)	A.D. 1 – 1450 Prehistoric	Dosh 1988	
AZ BB:13:621(ASM)	Archaic and Hohokam	Ruble 1999	
AZ CC:13:80(ASM)	Historic, A.D. 1950-present Euro American	Goldstein 2008	
AZ DD:8:155(ASM)	Archaic and Hohokam	Heuett 1996a, 1996b	
AZ EE:1:155(ASM)	Archaic and Hohokam	Adams and Hoffman 1995; Heuett 1994; Huckell et al. 1987	
AZ EE:1:156(ASM)	A.D. 1 – 1450 Prehistoric	Heuett 1994; Huckell et al. 1987	
AZ EE:1:463(ASM)	Hohokam	Rawson and Waldron 2012	
AZ BB:13:643(ASM)	Rock features and artifact scatter; Prehistoric, 12,000 B.C.– A.D. 1450/ Native American Culture	Dosh 1988; Jones 2002	

Note: Sites located within the project area listed first and in **bold**.

*Master's Thesis on Santa Rita Experimental Range (1987)*. In 1985 and 1986, Cynthia Buttery conducted a 15% archaeological survey sample of the 53,159-acre Sant Rita Experimental Range (SRER) (Buttery 1987). Approximately eight miles of the current project intersect the SRER. The survey sampling strategy consisted of north-south transects at one-half mile intervals along the section and half-section lines. The survey encompassed approximately 800 acres. Forty-six prehistoric archaeological sites were recorded. Buttery classified sites as lithic scatters (n=6), garden sites (n=4), limited activity sites (n=7), habitation sites (n=25), and specialized activity sites (n=4). Although some of Buttery's survey transects crossed the current project area, no sites were recorded within or adjacent to the project area. Isolates recorded in the project included ten Archaic period projectile points.

*Corona de Tucson Project (1985-227.ASM and 1994-485.ASM)*. The Corona de Tucson project consisted of the survey of 1,280 acres and a powerline road prior to development of a residential subdivision (Huckell et al. 1987). The land parcels were part of a land exchange with the Bureau of Land Management. Three small prehistoric sites were recorded, including one in the current project area, AZ EE:1:161(ASM). Huckell collected the artifacts from the surface and tested all three fire-cracked rock features at the site. In 1994, the same project area was resurveyed and the three sites were relocated and re-evaluated (Heuett 1994). Heuett noted that the "entire site surface was deflated and eroded by a number of abraded shallow washes" and that "all three features lacked integrity due to sheet wash and erosion" (1994:7).

*Santa Cruz 115-kV Transmission Line Project (1988-215.ASM)*. In May of 1988, Dames & Moore conducted a 100-foot-wide, 28-mile-long archaeological survey along the transmission line for the Santa Cruz 115-kV Transmission Line Project (Bruder and Rogge 1988; Fennicle et al. 1989). The survey was completed prior to upgrading the same transmission line associated with the

current project and followed the pre-existing 1958 transmission line corridor (Bruder and Rogge 1988; Fennicle et al. 1989). The survey essentially overlaps the current project area, with a few minor exceptions. Three new archaeological sites were recorded: AZ EE:1:167(ASM), AZ EE:1:168(ASM), and AZ DD:8:138(ASM). These three sites are all within the current project area. Several additional previously recorded sites were also relocated and tested, including AZ EE:1:161(ASM) which is also in the current project area. Isolates consisted of mostly of prehistoric lithics and included a possible San Pedro style (Archaic) projectile point (Fennicle et al. 1989:6). The following year (February 1989), Dames & Moore conducted data recovery at seven of the sites, including all three that fall within the current project area (AZ EE:1:161[ASM] was not tested given that data recovery was conducted at the site earlier in the Corona de Tucson project. Data recovery in the Santa Cruz 115-kV Transmission Line Project consisted of detailed mapping, surface collection of artifacts, and subsurface test excavations. Subsurface investigations of surface rock features and artifact concentrations revealed a lack of intact subsurface cultural deposits and very little temporal data. Following fieldwork and analysis, Dames & Moore concluded that fieldwork had exhausted the data potential from those portions of the sites located within the right-of-way (Fennicle et al. 1989).

*Kantor Substation Project (2005-715.ASM).* In 2005, Tierra Right-of-Way Services surveyed a three-mile-long transmission line survey for a line connected to the Kantor Substation (south end of the current project area) (Williams and Lascaux 2005). The project area was located primarily along Amado Montosa Road, which runs approximately east-west and bisects the current project area at the south end. The project also covered a small segment (300 meters) from Amado Montosa Road south to the Kantor Substation. This short segment of the survey overlaps the current project area. One site was recorded in the project, the historic Amado Montosa Road-AZ DD:8:193(ASM). This is an unimproved in-use historic linear road lacking any historic features and would not be considered an archaeological site under current Arizona SHPO and ASM policies (Arizona State Museum 2017).

*TEP Transmission Line Pole Replacement Project (2010-074.ASM and 2004-607.ASM).* In 2005, TEP conducted a transmission line pole replacement project which bisected one site in the current project area: AZ DD:1:138(ASM). Prior to the project, a cultural resource assessment was conducted by Cultural and Environmental Systems, Inc. (CES) so that pole locations and access routes could be relocated to avoid any potential cultural resources that may have been present (Heuett 2004). CES recommended avoidance of the site during pole replacements. Tierra Right of Way Services, Ltd. (Tierra) was then retained to monitor the excavation of pits for the replacement of the poles to ensure cultural resources were not impacted (Levstik and Lascaux 2005). Tierra archaeologists observed an extremely low density of artifacts at AZ DD:8:138(ASM) and re-defined (contracted) the site boundaries. Based on the new site boundary, TEP was able to re-route the pole replacements so that the site was completely avoided. No cultural materials were observed during those pole replacements near the site.

*UNS Vail to Valencia Pima County Survey (2013-385.ASM and 2013-409.ASM).* In 2013, WestLand conducted two linear surveys which encompassed the southern end of the current project area (King 2013b, 2013a). The 17.5-foot-wide surveys were conducted along the

transmission line easement. WestLand recorded one new site that falls within the current project area: AZ DD:8:259(ASM). This site is the abandoned transmission line constructed around 1958 and consists of sawed-off wooden power poles, an access road, and a light scatter of metal and ceramic artifacts. Although the historic transmission line extends north (following the current project area for several miles north), the site boundaries were limited to the area surveyed by WestLand.

### ***National Register of Historic Properties Search***

The National Register of Historic Places (NRHP) website was reviewed for historic properties within the project area and within 1.6 kilometers (1 mile) of the project area boundaries (NRHP 2017). No historic properties were located within the project area or study area buffer.

### ***Bureau of Land Management(BLM), General Land Office (GLO) Records Search***

General Land Office (GLO) records available at the Bureau of Land Management (BLM) office in Phoenix and online (BLM 2017) were reviewed to determine original land patents and historic ownership of lands within the project area. Nine historic GLO maps were published for the townships and ranges encompassing and directly adjacent to the project area (**Table 3**). Fourteen historic road features are depicted within the project area (**Table 4**). Maps depicting these features in relation to the project area were prepared by WestLand in their Class I report (King 2017:Appendix B). MCA attempted to locate these features during field survey. The field results are set forth under the Survey Findings section in this report.

**Table 3 Historic GLO plats depicting the project area.**

<b>Date officially filed</b>	<b>GLO plat</b>
1873	GLO plat for Township 16 South, Range 14 East
1897	GLO plat for Township 16 South, Range 15 East
1873	GLO plat for Township 17 South, Range 14 East
1947	GLO plat for Township 17 South, Range 14 East
1933	GLO plat for Township 17 South, Range 15 East
1873	GLO plat for Township 18 South, Range 14 East
1885	GLO plat for Township 19 South, Range 13 East
1926	GLO plat for Township 19 South, Range 14 East
1885	GLO plat for Township 20 South, Range 13 East



**Table 4. Historic features depicted on GLO plats.**

GLO plat	Date	Feature type	Location
T16S, R14E	1897	road	Section 18
T16S, R14E	1897	road	Section 30
T16S, R14E	1897	road	Section 31
T17S, R14E	1947	road	Section 1
T17S, R14E	1947	road	Section 12
T17S, R14E	1947	road	Section 13
T17S, R14E	1947	road	Section 25
T17S, R15E	1933	road	Section 7
T17S, R15E	1933	Road	Section 31
T18S, R14E	1873	Road	Section 21
T19S, R13E	1885	Road	Section 23
T19S, R13E	1885	Road	Section 26
T19S, R14E	1926	road	Section 6
T19S, R14E	1926	road	Section 7

Examination of GLO land patent records indicates that 24 historic period patents have been recorded on land encompassing the project area (**Table 5**). These patents were filed between 1915 and 1959 under authority of the following acts: the 1962 Homestead Entry Original (12 Stat. 392); 1916 Homestead Entry-Stock Raising (39 Stat. 862); 1820 Sale-Cash Entry (3 Stat. 566); 1927 Indemnity Selections (44 Stat. 1022); and the 1910 Quant & Spec Grant Selection (36 Stat. 557).

**Table 5 Land patents filed within the project area.**

Claimant BLM Serial No.	Date	Entry Type*	Township, Range	Section, Aliquot
State of Arizona AZPHX 0022544	1915	QS	16S, 15E	Section 7, NWNW (Lot 1), SWNW (Lot 2), SWSW (Lot 4)
United States AZAR 0009776 01	1956	CE	16S, 15E	Section 7, NWSW (Lot 3)
State of Arizona AZPHX 0022545		QS	16S, 15E	Section 18, SWNW (Lot 2), NWSW (Lot 3), SWSW (Lot 4) Section 19, NWNW (Lot 1), SWNW (Lot 2), NWSW (Lot 3), SWSW (Lot 4)
Espinosa, Pedro AZPHX 0023044	1921	HE	16S, 15E	Section 18, NWNW (Lot 1)
State of Arizona AZPHX 0022546	1914	QS	16S, 15E	Section 30, NWNW (Lot 1), SWNW (Lot 2), NWSW (Lot 3), SWSW (Lot 4) Section 31, NWNW (Lot 1), SWNW (Lot 2), NWSW (Lot 3), SWSW (Lot 4)
Hagler, James P., AZPHX 0067153	1936	HESR	17S, 15E	Section 6, NWNW (Lot 4), SWNW (Lot 5), NWSW (Lot 8), SWSW (Lot 9)
Shein, Benjamin AZAR 0020252	1959	CE	17S, 15E	Section 7, NWNW (Lot 2)
Neilson, Fannie C. and Richard H. AZPHX 0068975	1934	HESR	17S, 15E	Section 7, SWNW (Lot 3), NWSW (Lot 6), SWSW (Lot 7)
State of Arizona AZPHX 0071938	1937	IND	19S, 14E	Section 7, SWNW (Lot 3), NWSW (Lot 6)
State of Arizona AZPHX 0071937	1934	IND	19S, 14E	Section 7, NWNW (Lot 1), SWNW (Lot 4)

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State of Arizona AZPHX 0036851	1919	IND	19S, 13E	Section 12, S½
Amado, Maria E. AZPHX 0042144	1921	CE	19S, 13E	Section 13, SW¼ SW¼ Section 23, NE¼ NE¼ Section 24, N½ NW¼
State of Arizona AZPHX 0036853	1919	IND	19S, 13E	Section 13, N½
State of Arizona AZPHX 0054497	1923	IND	19S, 13E	Section 13, SE¼ SW¼
State of Arizona AZPHX 0036854	1919	IND	19S, 13E	Section 23, E½ SW¼
State of Arizona AZPHX 0036855	1919	IND	19S, 13E	Section 26, entire section
State of Arizona AZPHX 0037380	1919	IND	19S, 13E	Section 27, S½ SE¼
Jenkins, Albert E. AZPHX 0042032	1924	HE	19S, 13E	Section 27, NE ¼, N½ S½
State of Arizona AZPHX 0037381	1919	IND	19S, 13E	Section 33, S½
State of Arizona AZPHX 0037382	1919	IND	19S, 13E	Section 34, S½, NE ¼, SE¼NW¼
State of Arizona AZPHX 0035168 02	1918	IND	20S, 13E	Section 4, NENE (Lot 1), NWNE (Lot 2)
State of Arizona AZPHX 0035169	1918	IND	20S, 13E	Section 4, S ½ N ½, S½
State of Arizona AZPHX 0042269	1922	IND	20S, 13E	Section 8, entire section
State of Arizona AZPHX 0035170	1918	IND	20S, 13E	Section 9, entire section

\* CE: Sale-Cash Entry; HE: Homestead Entry; HESR: Homestead Entry-Stock Raising; QS: Quant & Spec. Grant Selection; IND: Indemnity Selections

### *Historic USGS Maps Search*

The U.S. Geological Service (USGS) Historic Topographic Map Collection includes eight historic topographic maps of the project area (**Table 6**). Twenty-one historic road features are depicted within the project area (**Table 7**). Maps depicting these features in relation to the project area were prepared by WestLand in their Class I report (King 2017:Appendix B). MCA attempted to locate these features during field survey. The field results are set forth under the Survey Findings in this report.

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**Table 6 Historic USGS topographic maps depicting the project area.**

<b>Edition</b>	<b>Description</b>
1905	USGS Patagonia, Arizona 30' (1:125,000) series quadrangle
1905	USGS Tucson, Arizona 30' (1:125,000) series quadrangle
1943	USGS Tubac, Arizona 15' (1:62,500) series quadrangle
1948	USGS Tucson, Arizona 15' (1:62,500) series quadrangle
1958	USGS Mount Wrightson, Arizona 15' (1:62,500) series
1958	USGS Sahuarita, Arizona 15' (1:62,500) series quadrangle
1957	USGS Tubac, Arizona 15' (1:62,500) series quadrangle edition
1957	USGS Tucson, Arizona 15' (1:62,500) series quadrangle

**Table 7 Historic features depicted on USGS maps.**

<b>USGS quadrangle</b>	<b>Date</b>	<b>Feature</b>	<b>Location</b>
Patagonia 30'	1905	Road	T16S, R15E, S 19
Patagonia 30'	1905	Road	T17S, R15E, S 7
Patagonia 30'	1905	Road	T17S, R15E, S 19
Patagonia 30'	1905	Road	T18S, R14E, S 15
Patagonia 30'	1905	Road	T19S, R14E, S 6
Patagonia 30'	1905	Road	T19S, R13E, S 23
Patagonia 30'	1905	Road	T19S, R13E, S 23
Tucson 15'	1948, 1957	Road	T16S, R14E, S 12 and T16S, R15E, S 18
Tubac 15'	1943, 1958	Road	T20S, R13E, S 8
Mount Wrightson 15' Sahuarita 15' Tubac 15' Tucson 15'	1957, 1958	Transmission line	Entire project area
Sahuarita 15'	1958	Road	T16S, R14E, S 36 and T16S, R15, S 31
Sahuarita 15'	1958	Road	T17S, R14E, S 12 and T17S, R15E, S 7
Sahuarita 15'	1958	Road	T18S, R14E, S 1
Sahuarita 15'	1958	Road	T18S, R14E, S 11
Sahuarita 15'	1958	Road	T18S, R14E, S 15
Sahuarita 15'	1958	Road	T18S, R14E, S 22
Sahuarita 15'	1958	Road	T18S, R14E, S 28
Sahuarita 15'	1958	Road	T18S, R14E, S 28
Sahuarita 15'	1958	Road	T18S, R14E, S 32
Sahuarita 15'	1958	Road	T19S, R13E, S 23
Sahuarita 15'	1958	Road	T19S, R14E, S 6

### *Survey Expectations*

The Class I results were used to provide expectations regarding the probability of finding archaeological sites or isolates within the project area. The records review revealed that at least six previously recorded sites would be present and that isolated artifacts would be encountered during field survey. Given the types of sites previously documented in this setting, prehistoric cultural resources were expected to be small, dispersed surface lithic scatters and surface rock features. Specifically, it was expected that small resource procurement and processing sites might be located near or between the larger drainages and on wide ridges. Expected historic resources included features and artifacts related to the 1958 transmission line, AZ DD:8:259(ASM).

## **RESEARCH DESIGN**

Previous archaeological projects within the project area and in the larger vicinity have resulted in the documentation of numerous archaeological sites representing prehistoric and historic use and occupation of the area. Based on the sites files archaeological records search, MCA expected to encounter low-density lithic scatters and fire-affected rock features ranging in age from the Archaic through later ceramic periods. MCA also expected to encounter Euro American historic sites and artifacts related to utilities, transportation, and refuse disposal. The expectation of historic resources was primarily related to the 1958 transmission line (AZ DD:8:259[ASM]) and associated access roads. Other potential historic features included roads traversing the bajada between the lower elevations along the Santa Cruz River up to the Santa Rita Mountains. The roads may have been related to historic activities such as cattle ranching and mining.

### *Research Themes*

#### *Prehistoric Land Use and Resource Procurement*

This research theme is designed to define the nature of prehistoric subsistence practices and land use patterns in the area. The relationship between sites and their placement along certain types of drainages, topographic land forms, and proximity to natural resources such as tool-quality stone will help support models as to how these prehistoric populations used the land for subsistence and survival. The presence of prehistoric cultural resources in the project area may help determine survival strategies for exploiting this environment zone. Research will also be used to help determine what raw materials were procured and processed in the area.

The project area is located upon the bajada emanating from the Santa Rita Mountains. The pattern of prehistoric use of this topographic landform was the primary research issue addressed in early archaeological projects in the vicinity (Buttery 1987; Huckell et al. 1987; Bruder and Rogge 1988; Fennicle et al. 1989). The nearby Santa Rita Mountains provide a wide range of rock types suitable for making tools. From the streambeds along the upper bajada to the cobble-strewn terraces overlooking the Santa Cruz River, an abundant variety of fine-grained materials erodes from drainages and ridgetops. Common stone in the area includes a wide variety of andesite, rhyolite,

chert, and quartzite. A wide range of fine-grained to vesicular basalt could have been used for both flaked and ground stone tools. Lithic scatters previously recorded on the Santa Rita Mountain bajada are characterized by crude tools, cores, flakes, and waste debris. Plant and animal resources relatively abundant on this bajada landform would also be procured and processed.

Archaeological studies by Buttery (1987) provide an early source of information regarding land use on the western bajada of the Santa Rita Mountains. Buttery examined how environmental factors such as landform, soil, hydrology, and vegetation influence prehistoric land use on the Santa Rita Experimental Range. Buttery assigned sites to five categories: (1) lithic scatters, (2) garden sites, (3) limited activity sites, (4) habitation sites, and (5) specialized activity sites. Forty-six sites were recorded by Buttery in the project. The most common type of sites in the vicinity of the project area are lithic scatters and limited activity sites.

Two other early projects also helped inform this research issue: the Corona de Tucson Project (Huckell et al. 1987) and the Santa Cruz 115-kV Transmission Line Project (Bruder and Rogge 1988; Fennicle et al. 1989). The four previously recorded lithic scatter sites in the current project area (AZ DD:8:138[ASM], AZ EE:1:161[ASM], AZ EE:1:167[ASM], AZ EE:1:168[ASM]) were all subjected to data recovery in these two projects. Following data recovery, they were interpreted as procurement and processing centers for natural resources (Huckell et al. 1987; Fennicle et al. 1989). It was also suggested that the lithic scatters represented core reduction sites where crude tools were produced for immediate use. Most of the stone tools at these sites were very crude in form- either representing utilized flakes or cobbles with only a few flakes removed to create a working edge. Given the relatively poor quality of the locally-procured stone, archaeologists concluded that the stone was not quarried for transport further away, but was instead used locally (e.g., for procurement and processing of plant resources) (Huckell et al. 1987; Fennicle et al. 1989).

### Chronology

Previously recorded prehistoric cultural resources in the area consist mainly of surface scatters of lithic artifacts, agricultural rock piles, fire-affected rock features, and isolated lithic artifacts. Given the relatively small proportion of ceramics or other temporally diagnostic artifacts, determining the relative age of these resources was a primary research goal. This may allow the cultural resources to be grouped and compared to sites and features both within the project area and the in larger vicinity. The current project area lies within a Hohokam peripheral area, and numerous Hohokam sites have been documented in the larger area around this project. Archaic period cultural resources have also been documented on the western bajada of the Santa Rita Mountains. These include 10 isolated Archaic period projectile points found on the SRER (Buttery 1987) and an isolated San Pedro style projectile point (Fennicle et al. 1989:6). The San Pedro point was found within the current project area boundaries during the original 1988 survey of the transmission line easement (T18S, R14E, SE ¼ of Section 21). Given the predominance of surface lithic scatter sites and a relative paucity of ceramics, it is possible that these sites represent pre-ceramic use and occupation. The presence of temporally diagnostic stone tool types or ceramics may provide data to address chronological issues. The following questions will be examined under this research issue:

Research questions:

1. When were prehistoric archaeological sites within the project area occupied?
2. Is the pattern of land use and occupation similar over time?
3. Do surface lithic scatters represent multiple time periods indicating that the site was used over multiple periods or subjected to continual use?

Typological and Functional Analysis

Previously recorded archaeological sites on the same landform as the project area primarily consist of lithic scatters and rock features. Sites have been interpreted as core reduction sites, lithic (raw material) procurement sites, and plant or animal resource procurement and processing sites. Data collected during field survey may provide further information to characterize the use of these sites and illustrate how prehistoric populations were exploiting this environmental and topographic niche to support survival strategies. The following questions will be examined under this research issue:

Research questions:

1. What type of activities occurred at sites within the project area?
2. Were the sites occupied seasonally or year-round?
3. What were the possible functions of the resource procurement and/or processing sites?
4. Does the character of land use and occupation differ between specific landforms and environmental zones?
5. How does the type of sites in the project area compare with sites in the larger regional settlement system?
6. What resources were collected in this area and how were they utilized?
7. What is the relation between prehistoric and natural resources within the project area and greater topography?
8. Can the locations of certain types of isolated (non-site) cultural resources provide data about the settlement and land use of the area?

*Historic Period Occupation and Land Use*

Previously documented historic cultural resources in the vicinity of the project area are primarily related to the transmission line constructed around 1958. This includes access roads associated with the transmission line. Prior to the transmission line, numerous unimproved roads dissected the western bajada of the Santa Rita Mountains. These roads were associated with activities such as cattle ranching and mining. For example, one previously recorded linear road site crosses the project area at the south end. The Amado Montosa Road-AZ DD:8:193(ASM) was used to access the Montosa mine (1900-1949) and the Glove mine (1911-1972). Most of the roads depicted on historic maps are oriented approximately east-west over the bajada landscape.

Chronology

Previously recorded historic sites in the project area date from the early 1900s (the Amado Montosa Road-AZ DD:8:193[ASM] was constructed prior to 1908) through the 1950s when the

transmission line (AZ DD:259[ASM]) was constructed. The following questions will be examined under this research issue:

Research questions:

1. Are historic features of the previous recording of AZ DD:8:259(ASM) consistent with previous recordings of the transmission line and with archival research? If not, how can these inconsistencies be explained?
2. Are temporally diagnostic artifacts present which are associated with previously recorded historic sites such as AZ DD:8:259(ASM) and AZ DD:8:193(ASM).
3. Are historic roads in the project area consistent with time frames from archival records?
4. Are there historic roads crossing the project area which retain historic attributes that may help confirm or determine their age of construction?

The Built Environment

Previous survey projects have recorded the major portion of the historic built environment within the project area. However, it was possible that unrecorded features such as historic roads and isolated historic artifacts would be encountered. The following questions will be examined under this research issue:

Research questions:

1. Are there previously unrecorded segments of AZ DD:8:259(ASM) transmission line or other roads which are not depicted on historic maps or which have not been previously recorded?
2. Are unrecorded linear features such as roads present within the project area?
3. Are unrecorded historic artifacts or features present that can provide data to reconstruct the historic land use and occupation of the project area?

## **CLASS III FIELD SURVEY**

### ***Survey Methods***

Field survey was conducted over eight days from June 7<sup>th</sup> to 13<sup>th</sup> and June 28<sup>th</sup>, 2017. Pedestrian transects spaced at 20 meters apart were walked over the entire project area. This survey strategy was sufficient to achieve 100 percent coverage according to current ASM standards. Michael Cook served as Field Director. Field methods focused on collecting basic information about the individual artifacts, features, and sites, including their age, cultural affiliation, associated material

culture, and presumed function. Historical maps and aerial photographs were reviewed prior to field survey to identify historic period features on the landscape that might still exist as archaeological sites. These potential historic finds were ground-proofed during field survey to determine if historic features were still present at the location. Field observations, data, and notes were collected using digital tablets with ArcGIS applications designed for field data collection (ArcGIS Survey123 and ArcGIS Explorer). High-resolution digital images were taken with a Canon PowerShot SX40 HS 12.1 MP digital camera. Cultural finds were recorded with an external Garmin GLO global positioning system (GPS) accurate to within one to three meters (initialized to NAD 1983). Backup locational information was also collected with a Garmin GPSMAP64st hand-held global positioning system (GPS) accurate to within three meters. Weather during field survey was clear and dry with no obstructions. No areas of the project area were omitted. No artifact collections were made. Surface visibility within the project area averaged approximately 70%. Ground surface in some areas contained high (up to 2-foot) annual grasses making visibility difficult. Heavy grasses were present in many areas resulting in relatively low visibility compared to other portions of the project area. Portions of the project area easements crossing through privately-owned land were often obscured by residential features such as drive ways, landscaping, and parked vehicles.

Arizona State Museum (ASM) provides guidelines to identify what is minimally considered an archaeological site and guidelines on how to record archaeological sites (Arizona State Museum 1993). According to the Arizona State Museum (1995), a site is any:

1. Physical remains of past human activity that are at least 50 years old.

Additionally, sites should consist of at least one of the following:

2. 30+ artifacts of a single class (i.e., 30 sherds, 30 lithics, 30 tin cans) within an area 15 m (50 ft.) in diameter, except when all pieces appear to originate from a single source (i.e., one ceramic pot, one core, one glass bottle).
3. 20+ artifacts which include at least 2 classes of artifact types (i.e., sherds, ground stone, nails, glass) within an area 15 m (50 ft.) in diameter.
4. One or more archaeological features in temporal association with any number of artifacts.
5. Two or more temporally associated archaeological features without artifacts.

All resources satisfying these minimum criteria were designated as an archaeological site and recorded as specified in the ASM site recording manual (ASM 1993). Archaeological artifacts and features that did not meet these criteria were designated as isolated occurrences and recorded accordingly. Isolated artifacts consist of individual portable objects on the landscape. All non-site archaeological artifacts and isolated features were designated as isolated occurrences. An object or feature is considered archaeological when it is more than 50 years old. Many artifacts of glass, metal, and synthetic material lack diagnostic characteristics to indicate their age. Cultural items



and features were identified as isolated archaeological resources only when clear diagnostic evidence established that they were over 50 years old.

Site recording and data collection consisted of written descriptions, scaled maps, photographs, and locational information. All archaeological resources were mapped and recorded, including individual artifacts, individual features, artifact scatters with or without features, and groupings of features. UTM coordinates were electronically recorded for each site datum with one-meter accuracy and initialized to the NAD83 CONUS datum. Site boundaries were established by the distribution of artifacts and features. Within each archaeological site, the locations of the features and diagnostic tools were mapped.

All known historic features and previously recorded sites in the project area were located and documented. Site boundaries were updated if they differed from originally documented boundaries. All surface cultural features at relocated sites were relocated, mapped, photographed, and described. Site boundaries were compared with previous maps and documentation. Site condition was assessed and compared to previous documentation.

### *Survey Findings*

One new archaeological site was identified and recorded in the project area, AZ DD:8:261(ASM). Six previously recorded archaeological sites were relocated and updated during field survey (**Table 8**). Site descriptions and updates are provided below for each site. Fifteen isolated occurrences (isolates) of artifacts were documented in the project area. Locational information for all sites and isolates is presented in Appendix B.

**Table 8 Archaeological sites documented in the project area.**

Site Number	Site Type
AZ DD:8:261(ASM),	Historic waste dump (newly recorded)
AZ DD:8:138(ASM)	Prehistoric lithic scatter (previously recorded)
AZ DD:8:193(ASM)	Linear road site (previously recorded)
AZ DD:8:259(ASM)	Historic transmission line (previously recorded)
AZ EE:1:161(ASM)	Prehistoric lithic scatter (previously recorded)
AZ EE:1:167(ASM)	Prehistoric lithic scatter (previously recorded)
AZ EE:1:168(ASM)	Prehistoric lithic scatter (previously recorded)

### *Newly Recorded Archaeological Sites*

#### *AZ DD:8:261(ASM)*

**CULTURAL AFFILIATION:** Euro American

**SITE AGE:** Late Historic, A.D. 1930s–1950s

**SITE TYPE:** Historic dump, waste pile

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** SE ¼ of Section 8, T20S, R13E (G&SRB&M) (*Amado, Ariz. 7.5' USGS quadrangle*)

**SITE SIZE:** ~ 10 × 70 meters (32 × 229 feet)

**ELEVATION:** 3,200 feet (975 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP RECOMMENDATION:** Ineligible

**SITE SETTING:** The site is located along the west side of a transmission line road (AZ DD:8:259[ASM]) a few meters north of a steep ridge which slopes down to the north. A plan view site map is presented in Figure B-11 of Appendix B.

**SITE DESCRIPTION:** AZ DD:8:261(ASM) consists of a surface scatter of historic period artifacts which represents a historic dump (waste pile) site. Temporally diagnostic historic artifacts identified during field survey range from the 1930s to the 1950s (**Table 9**). Chronology is based mostly on glass bottle makers' marks and can manufacturing technology. There are two primary concentrations of artifacts. The largest (Feature 1) is at the site's north end near the edge of a north-sloping ridge. This concentration contains the majority artifacts and is approximately 10 meters (32 feet) diameter. The smaller concentration (Feature 2) is at the south end. Feature 2 is approximately 8 meters (26 feet) diameter. Approximately 400 artifacts are spread over the site surface. Artifacts present at the site include approximately 200 glass, 100 metal, and 50 ceramic artifacts along with wood and other miscellaneous types of artifacts. Glass artifacts consist of bottle glass shards (clear, amber, green, and blue glass). Most of the small bottle glass shards are within Feature 1 and likely represent soda and beer bottles. Metal artifacts are mostly represented by tin cans, along with miscellaneous brackets, bolts, and hardware. Historic ceramics at the site include white porcelain and earthenware. These ceramics are all located in Artifact Concentration No. 1.



Figure 13 Overview of AZ DD:8:261(ASM), facing north.

**Table 9 Temporarily diagnostic historic artifacts documented at AZ DD:8:261(ASM).**

Artifact type	Date range	Reference
hole-in-top tin cans (n= 7)	1900-post 1950	Rock 1981:104
sanitary tin cans (n =14)	Post 1904	Rock 1981:105-106
clear glass bottle base, Owens-Illinois Co., <i>NCCo. Dacro</i>	1938	Toulouse 1971:403
Clear glass 12 oz. soda bottles (whole), Owens-Illinois Co., <i>Nesbitt's of California, No Deposit No Return</i> (N = 5)	1945	Toulouse 1971:403
Clear glass 10 oz. soda bottle (whole), <i>AHK No Deposit No Return 20 -70</i> (Alexander H. Kerr & Co.)	Post 1944	Toulouse 1971:44

**Site Condition:** The site is in poor to fair condition. Most glass shards are too small and fragmented to hold any information potential. Modern trash (1970s to present) has also been deposited in the area, and thus many of the glass and metal objects within the site boundary cannot be reliably dated.

**ARHP AND NRHP ELIGIBILITY EVALUATION:** AZ DD:8:261(ASM) is a historic period waste pile likely deposited in the 1930s through 1950s. The artifacts mostly represent domestic trash (food and beverage containers) which may have originated at a home or temporary residence in the near vicinity. If so, it is a secondary disposal area in which trash was removed from the point of generation. Given the quantity and location of the discarded items, the site likely represents small opportunistic episodes of dumping and was not part of a communally recognized garbage disposal area. No archaeological data links the discarded trash to a particular point of origin. Temporal data has been collected from all diagnostic artifacts visible on the site surface. Site recording has exhausted the research potential of the site. MCA recommends that AZ DD:8:261(ASM) is ineligible for inclusion on the Arizona or National Register because it lacks significance under the ARHP/NRHP criteria. More specifically, the site is not (a) associated with events that have made a significant contribution to the broad patterns of our history; the site is not (b) associated with the lives of persons significant in our past; the site does not (c) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; and the site has not (d) yielded, and is not likely to yield, information important in history.

### ***Previously Recorded Archaeological Sites***

#### ***AZ EE:1:161(ASM)***

**CULTURAL AFFILIATION:** Native American

**SITE AGE:** Hohokam, A.D. 450-1450

**SITE TYPE:** Lithic scatter

**LAND STATUS:** Arizona State Trust Land and private

**LOCATION:** SW  $\frac{1}{4}$  of Section 19, T17S, R15E (G&SRB&M) (*Corona de Tucson, Ariz. 7.5' USGS quadrangle*)

**SITE SIZE:** ~ 10 × 25 meters (32 × 82 feet)

**ELEVATION:** 3,000 feet (914.4 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible

**PREVIOUS HISTORY:** AZ EE:1:161(ASM) was originally documented by ASM in the Corona de Tucson Project (Huckell et al. 1987). The site was described as containing three fire-cracked rock clusters, six pieces of chipped stone debitage, and four pieces of ground stone. As part of the project, ASM also conducted subsurface archaeological testing at the site. Testing consisted of the excavation of one test trench across one of the rock features revealing the outline of a burned pit. Flotation samples were taken, and artifacts were collected. Although a few plainware sherds were collected, no additional temporal data was obtained. Based on the testing results, ASM recommended that no further study of the site was necessary. AZ EE:1:161(ASM) was

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subsequently relocated by Dames & Moore in 1988 as part of the Santa Cruz 115kV Transmission Line Study (Bruder and Rogge 1988; Fennicle et al. 1989). However, based on the previous data recovery at the site and the lack of information potential, no further investigation or recording of the site was conducted by Dames & Moore (Fennicle et al. 1989:6).

**SITE DESCRIPTION:** No artifacts or prehistoric features were observed during field survey within the project area.

**SITE SETTING:** AZ EE:1:161(ASM) is located on a broad alluvial fan sloping gradually to the northwest. The Santa Cruz River is 10 kilometers (0.6 mile) to the west. Vegetation at the site is dominated by creosote (*Larrea tridentate*) and short seasonal grasses. Soils observed at the site consist of brown silty-loam with moderate gravel inclusions. The site is within the front yard and drive way of a private residential house.

**SITE CONDITION:** The site is no longer present. During data recovery at the site, one rock feature was excavated and many artifacts were collected (Huckell et al. 1987). Following the data recovery, a private residence was constructed adjacent to AZ EE:1:161 (ASM). Portions of the site may have also been disturbed or removed with installation of the transmission line in the early 1990s and later by a construction of a driveway into a private residential house just east of the recorded site boundaries. There are no artifacts or cultural features present within the previously documented site boundaries. Accordingly, the site retains none its historic integrity.

**ARHP AND NRHP ELIGIBILITY EVALUATION:** AZSITE reflects that AZ DD:8:138(ASM) was recommended eligible individually by SHPO in 2009 (SHPO-2008-0131) under Criterion (d). However, data recovery has exhausted the research potential at AZ EE:1:161(ASM). The site no longer retains integrity as there are no cultural materials currently present on the ground surface. The site is recommended as ineligible for the Arizona and National Register of Historic Places.

### **AZ EE:1:167(ASM)**

**CULTURAL AFFILIATION:** Native American

**SITE AGE:** Prehistoric, 12,000 B.C.– A.D. 1450

**SITE TYPE:** Lithic scatter

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** SW  $\frac{1}{4}$  and SE  $\frac{1}{4}$  of Section 6, T19S, R14E (G&SRB&M) (*Green Valley, Ariz. 7.5'* USGS quadrangle)

**SITE SIZE:** ~ 60 × 110 meters (196 × 360 feet)

**ELEVATION:** 3,180 feet (969 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible

**PREVIOUS HISTORY:** AZ EE:1:167(ASM) was originally recorded by Dames & Moore in March of 1988 as part of the Santa Cruz 115kV Transmission Line Study (Bruder and Rogge 1988). In February of 1989, Dames & Moore conducted data recovery (both surface collections and subsurface excavation) to determine the subsurface extent of the site (Fennicle et al. 1989). Testing was confined to the area within the easement. Approximately half (n= 55) of all surface artifacts were collected from the site surface inside the right-of-way of the 1989 project (Fennicle et al.

1989:11). Test excavations consisted of 1-by-1-meter subsurface units excavated 10 centimeters to a sterile horizon. Eight small flakes were recovered from the units. All three rock features were outside the project area and were not tested.

**SITE SETTING:** The site is located between two west-flowing drainages on a wide south-sloping ridge. The confluence of the two drainages is just west of the site. Vegetation at the site includes mesquite (*Prosopis* sp.), octotillo (*Fouquieria splendens*), prickly pear (*Opuntia phaeacantha*), ocotillo (*Fouquieria splendens*), and cholla (*Opuntia* sp.). Ground cover was sparse and consisted of seasonal low shrubs and grasses. Soils observed at the site consist of reddish-brown silty-clay with a high density of gravel inclusions.

**SITE DESCRIPTION:** No artifacts or prehistoric features were observed during field survey within the project area.



**Figure 14 Overview of AZ EE:1:167(ASM), facing north.**

**SITE INTERPRETATION:** Based on the 1988 subsurface test excavations, artifact collection, and artifact analysis, the site was determined to be a lithic scatter limited to the ground surface (Fennicle et al. 1989:9). AZ EE:1:167(ASM) was interpreted as a resource processing area rather than a lithic procurement area. Analysis of lithic artifacts illustrated that both tool production and core reduction was conducted at the site (Fennicle et al. 1989:13).

**SITE CONDITION:** No portion of the site is present within the project area. During the archaeological testing project in 1989, half of the surface artifacts were collected from within the 100-ft-wide project area easement (corresponding to the current project area). No artifacts were observed within the project area in the current project. The site is currently in very poor condition. Only a few lithic artifacts are present outside of the current project area and within the previously recorded site boundaries. The site's location on a south-sloping ridge has likely caused severe erosion of site. Sheet erosion and small rills are evident on the site's sloping surface. Many of the site's surface artifacts may have washed down into this drainage.

**ARHP AND NRHP ELIGIBILITY EVALUATION:** This site has not been formally evaluated by SHPO and no recommendation has been made regarding State and National Register eligibility. The site no longer retains integrity as there are no cultural materials currently present on the ground surface. Furthermore, previous data recovery has exhausted the research potential at AZ EE:1:167(ASM). The site is recommended as ineligible for the Arizona and National Register of Historic Places.

**AZ EE:1:168(ASM)**

**CULTURAL AFFILIATION:** Native American

**SITE AGE:** Prehistoric, 12,000 B.C.– A.D. 1450

**SITE TYPE:** Lithic scatter

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** SE ¼ of Section 12, T19S, R13E (G&SRB&M) (*Green Valley, Ariz. 7.5'* USGS quadrangle)

**SITE SIZE:** ~ 90 × 240 meters (295 × 787 feet)

**ELEVATION:** 3,120 feet (950 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible

**PREVIOUS HISTORY:** AZ EE:1:168(ASM) was originally recorded by Dames & Moore in March of 1988 as part of the Santa Cruz 115kV Transmission Line Study (Bruder and Rogge 1988). In February of 1989, Dames & Moore conducted data recovery (both surface collections and subsurface excavation) to determine the subsurface extent of the site (Fennicle et al. 1989). Testing was confined to the area within the easement. Test excavations consisted of subsurface excavation of the one rock feature within the easement. The feature was excavated down to 15 cm below the ground surface. No cultural staining, artifacts, or stratigraphic changes were observed within the feature.

**SITE SETTING:** The site is located between two west-flowing drainages on a wide south-sloping ridge. The confluence of the two drainages is just west of the site. Vegetation at the site includes mesquite (*Prosopis* sp.), octotillo (*Fouquieria splendens*), prickly pear (*Opuntia phaeacantha*), ocotillo (*Fouquieria splendens*), and cholla (*Opuntia* sp.). Ground cover was sparse and consisted of seasonal low shrubs and grasses. Soils observed at the site consist of reddish-brown silty-clay with a low density of gravel inclusions.

**SITE DESCRIPTION:** No artifacts or prehistoric features were observed during field survey within the project area.



**Figure 15 Overview of AZ EE:1:168(ASM), facing southeast.**

**SITE INTERPRETATION:** This site was originally described as a diffuse lithic scatter. Features included two surface rock clusters. Lithic tools recorded during the original survey included two choppers, a large biface fragment, a projectile point fragment, and a scraper. Most lithics were made of low grade cream colored and light gray chert, with smaller amounts of quartz, basalt, and quartzite. All material was very low grade. Based on the previous subsurface test excavations, artifact collection, and artifact analysis, the site was determined to be a lithic scatter limited to the ground surface (Fennicle et al. 1989). Analysis of lithic artifacts illustrated that both tool production and core reduction was conducted at the site (Fennicle et al. 1989:14).

**SITE CONDITION:** No portion of the site is present within the project area. During the 1989 archaeological testing project, all surface artifacts were collected from within the 100-ft-wide project area easement. The only feature within the current project area (a rock cluster) was excavated in 1988, and no artifacts or other cultural material were present within or below the feature (Fennicle et al. 1989:13). No artifacts were observed within the project area in the current project. The site is currently in very poor condition. Only a few lithic artifacts are present outside of the current project area and within the previously recorded site boundaries. The site's location on a south-sloping ridge has likely caused severe erosion of site. Sheet erosion and small rills are evident on the site's sloping surface. Many of the site's surface artifacts may have washed down into this drainage.

**ARHP AND NRHP ELIGIBILITY EVALUATION:** This site has not been formally evaluated by SHPO and no recommendation has been made regarding State and National Register eligibility. The site no longer retains integrity as there are no cultural materials currently present on the ground surface. Furthermore, previous data recovery has exhausted the research potential at AZ EE:1:168(ASM). The site is recommended as ineligible for the Arizona and National Register of Historic Places.

**AZ DD:8:138(ASM)**

**CULTURAL AFFILIATION:** Native American

**SITE AGE:** Prehistoric, 12,000 B.C.– A.D. 1450

**SITE TYPE:** Lithic scatter

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** NE ¼ of Section 4, T20S, R13E (G&SRB&M) (*Amado, Ariz.* 7.5' USGS quadrangle)

**SITE SIZE:** 250 meters (820 feet) long by 650 meters (2,132 feet) wide

**ELEVATION:** 3,250 feet (990 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible

**PREVIOUS HISTORY:** AZ DD:8:138(ASM) was originally recorded by Dames & Moore in March of 1988 as part of the Santa Cruz 115kV Transmission Line Study (Bruder and Rogge 1988; Fennicle et al. 1989). In February of 1989, Dames & Moore conducted data recovery (both surface collections and subsurface excavation) to determine the subsurface extent of the site. All surface artifacts within the project area right-of-way were collected and 1-by-1 m test units were excavated within the right-of-way. Dames & Moore concluded that the site had no subsurface component, was not eligible to the NRHP, and that no further work be conducted at this site (Fennicle et al. 1989).

In 2005, TEP conducted a transmission line pole replacement project which crossed over AZ DD:1:138(ASM). Prior to the project, a cultural resource assessment was conducted by Cultural and Environmental Systems, Inc. (CES) so that pole locations and access routes could be relocated to avoid any potential cultural resources that may have been present (Heuett 2004). CES recommended avoidance of the site during pole replacements. Tierra Right of Way Services (Tierra) was then retained to monitor the excavation of pits for the replacement of the poles to ensure that cultural resources were not impacted (Levstik and Lascaux 2005). Tierra archaeologists observed an extremely low density of artifacts at AZ DD:8:138(ASM) and re-defined (contracted) the site boundaries. Based on the new site boundary, TEP re-routed the pole replacements so that the site was completely avoided. No cultural materials were observed during those pole replacements near the site. The newly-defined site boundaries defined by Tierra in 2005 (Levstik and Lascaux 2005:14) are depicted on the previously recorded site maps in Appendix A of this report.

**SITE SETTING:** AZ DD:8:138(ASM) is located on a broad ridge between two northwest-flowing drainages on the lower bajada emanating from the Santa Rita Mountains (**Figure 8**). These drainages, which flow into the Santa Cruz River 2.3 kilometers (1.4 miles) to the west, contain abundant cobbles suitable for stone tool-making. Vegetation at the site is typical of the Semidesert Grassland biotic community. Vegetation at the site is dominated by mesquite (*Prosopis* sp.) and cholla (*Opuntia* sp.). Annual grasses covered much of the ground surface during field survey. Soils observed at the site consist of reddish-brown silty-clay with a high density of gravel inclusions.

**SITE DESCRIPTION:** AZ DD:8:138 consists of a very large, widely dispersed lithic scatter. Surface artifacts observed within the site during the current project were primarily outside the project area. Less than a dozen lithic artifacts were identified within the current project area- all flaked stone debitage of medium grained igneous material. In the original recording of the site (Bruder and



Rogge 1988) hundreds of artifacts were observed across the ground surface. However, all of the surface artifacts (n=66) were collected from within the 100-wide-foot-easement during subsequent data recovery (Fennicle et al. 1989). Given the previous surface collection, few artifacts would be expected. No cultural features were observed within or adjacent to the project area.



**Figure 16 Overview of AZ DD:8:138(ASM), facing south.**

**SITE CONDITION:** A paved road (South Mt. Hopkins Road) runs approximately southeast-northwest through the site. The current transmission line, access road, and former 1958 transmission line (AZ DD:8:259[ASM]) also cut directly through the site. Previous surface collection of artifacts and subsurface investigations within the project area easement have directly affected the site condition within this portion of the site boundaries. Only a few artifacts were observed within the current project area due to the previous artifact collection. Accordingly, the portion of the site with the project area is in poor condition and lacks integrity.

**SITE INTERPRETATION:** Based on the 1989 subsurface test excavations, artifact collection, and artifact analysis, the site was originally determined to be a lithic scatter limited to the ground surface (Fennicle et al. 1989). The site was also interpreted as a resource procurement and processing area. Analysis of lithic artifacts illustrated that both tool production and core reduction was conducted at the site (Fennicle et al. 1989).

**ARHP AND NRHP ELIGIBILITY EVALUATION:** Following the original site documentation and data recovery, Dames & Moore recommended that “fieldwork has exhausted the data potential from those portions of the site[s] located within the right-of-way” (Fennicle et al. 1989:17). However, recommendations for State and National Register eligibility were not presented at the time. AZSITE reflects that AZ DD:8:138(ASM) was recommended eligible individually by SHPO in 2009 (SHPO-2008-0131) under Criterion (d). Given the large undisturbed portions of the site *outside* of the current project area, MCA concurs with this recommendation. MCA also concurs with the original recommendation that the portion of the site within the original easement (and the

current project area) has been thoroughly investigated and documented. Data recovery has exhausted the research potential of the site within the project area. Accordingly, the portion of the site documented in the current project area lacks the qualities necessary for eligibility as it no longer retains its integrity.

**AZ DD:8:193(ASM)**

**CULTURAL AFFILIATION:** Euro American

**SITE AGE:** Historic, ca. A.D. 1908–present

**SITE TYPE:** Linear road (Amado Montosa Road)

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** Sections 8, 9, 14, and 15, T20S, R13E (G&SRB&M) (*Amado, Ariz. and Mt. Hopkins Tucson, Ariz. 7.5'* USGS quadrangle)

**SITE SIZE:** 5.1 kilometers (3.2 miles)

**ELEVATION:** 3,200 feet (975 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible individually

**PREVIOUS HISTORY:** AZ DD:8:193(ASM) was originally recorded by Tierra Right-of-Way Services (Williams and Lascaux 2005). Tierra recommended the site to be eligible for inclusion on the NRHP places under Criterion (a). However, there was a lack of historic features or original design elements present along the road, and therefore no adverse effect on the property.

**SITE SETTING:** The site is located on the middle and lower bajada emanating from the Santa Rita Mountains to the east.

**SITE DESCRIPTION:** AZ DD:8:193(ASM) is a well-maintained unimproved dirt road. The road is oriented east-west and bisects the southern end of the project area. There are no culverts, bridges, or other features present within or adjunct to the project area. The road is currently in-use.

**SITE CONDITION:** Although the road is in good condition, there are no historic artifacts or features present within the project area.

**SITE INTERPRETATION:** Historically, the road was used to access Montosa Canyon and the Montosa mine (1900-1949) and the Glove mine (1911-1972). Historic maps indicate that construction of the road was completed sometime prior to 1908 (Williams and Lascaux 2005:16).

**ARHP AND NRHP ELIGIBILITY EVALUATION:** AZ DD:8:193(ASM) was originally recommended eligible for inclusion on the NRHP places under Criterion (a) due to the road's association with transportation development during the early part of the twentieth century in Arizona (Williams and Lascaux 2005:18). The portion of AZ DD:8:193(ASM) which crosses the project area contains no historic features and is an in-use road. Accordingly, the portion of the site documented in the current project area lacks the qualities necessary for eligibility as it no longer retains its integrity. None of the site's distinctive historic properties or features will be impacted by this project. Accordingly, the site is recommended as ineligible individually for the ARHP/NRHP. Under current ASM policies (Arizona State Museum 2017) regarding in-use historic linear road sites, AZ DD:8:193(ASM) would not be considered an archaeological site (ASM 2017). No portion of this road is abandoned or contains historic features within the current project area.

**AZ DD:8:259(ASM)**

**CULTURAL AFFILIATION:** Euro American

**SITE AGE:** Late Historic, 1958-present

**SITE TYPE:** Linear site, transmission line

**LAND STATUS:** Arizona State Trust Land

**LOCATION:** Sections 23, 26, 27, 33, and 34, T19S, R13E (G&SRB&M) (*Amado, Mt. Hopkins, and Green Valley, Ariz. 7.5' USGS quadrangles*)

**SITE SIZE:** ~15,390 × 12.5 feet (4,691 × 3.8 m)

**ELEVATION:** 2,800 feet (853.4 meters) A.M.S.L. (NAVD 88) to 3,200 feet (975.3 meters) A.M.S.L. (NAVD 88)

**ARHP AND NRHP PLACES ELIGIBILITY RECOMMENDATION:** Ineligible

**PREVIOUS HISTORY:** AZ DD:8:259(ASM) was initially recorded by WestLand (King 2013a). The portion of the transmission line site within WestLand's project area overlaps the southern end of the current project area.

**SITE SETTING:** The site is located along the lower and middle bajada emanating from the Santa Rita Mountains.

**SITE DESCRIPTION:** The site consists of an abandoned historic period transmission line. Features documented include hundreds of wooden power line poles. Although the poles are still upright in the ground, they have all been cut to below three feet above the ground surface. Over 300 poles were recorded along the entire length of the project area. Most of the poles are present as pairs, approximately 12 feet apart. The length between pairs of poles varies, but is typically between 150 to 200 meters. An in-use, maintained dirt access road runs between the old transmission line and the current modern transmission line. The access road averages 12-to-15-feet wide and deviates from the actual transmission line in some areas due to rugged topography. Artifacts associated with the historic transmission line include ceramic insulator fragments and associated metal hardware (bolts, brackets, etc.). These artifacts were most commonly located near the wooden pole stumps.

**SITE INTERPRETATION:** Historical maps suggest that the transmission line was constructed in 1958. The powerline is depicted on the 1958 edition of the Tubac 15-minute USGS quadrangle but not on the 1957 edition. The original transmission line has been replaced by a modern line with metal power poles.

**SITE CONDITION:** The site is in poor condition as the original powerline has been decommissioned and almost entirely removed. The original powerline was replaced by a modern metal-pole line located on the eastern side of the access road. MCA did not site extend the previously-defined site boundaries of AZ DD:8:259(ASM). Historic features associated with the historic transmission line (i.e., sawed off power poles) were typically spaced at least 100 meters apart. Although the access road is also a feature of the transmission line, it is an in-use dirt road with no original design elements or other historic attributes. The decision not to extend the site boundaries was based on discussions with ASM (Todd Pitezal, June 23, 2017) regarding new ASM and SHPO policies for in-use, linear historic roads.

**ARHP AND NRHP ELIGIBILITY EVALUATION:** AZ DD:8:193(ASM) has been twice recommended ineligible for inclusion on the NRHP places (King 2013a, 2013b). MCA concurs with these prior recommendations. The site is not (a) associated with events that have made a significant contribution to the broad patterns of our history; the site is not (b) associated with the lives of persons significant in our past; the site does not (c) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; and the site has not (d) yielded, and is not likely to yield, information important in history. Furthermore, based on current SHPO and ASM policies regarding in-use historic linear features, the transmission line would not be currently documented as an archaeological site.

### *Isolates*

Fifteen isolates were documented during fieldwork (**Table 10**). Appendix B contains maps and locational information for the isolates. Isolates consisted primarily of prehistoric stone artifacts. A few possible historic cans were also recorded as isolates.

**Table 10 Isolates recorded during field survey.**

Isolate No.	Description
1	fine-grained rhyolite core
2	hole-in-top cans (3)
3	meat tin
4	flaked stone debitage, black basalt
5	sanitary can
6	sanitary can
7	6-ft-wooden transmission line pole (not in ground)
8	hole-in-top can
9	flaked stone debitage, black basalt (2), basalt core (1), within 25 m area
10	core, gray basalt
11	fine-grained rhyolite core
12	tested cobble, purple rhyolite
13	fine-grained rhyolite core
14	core, gray basalt with cortex; biface, black basalt, within 10 m area
15	core or tested cobble, purple rhyolite

**Note:** UTM's of all isolates are provided in Appendix B.

### *Review of Historical Maps*

Several historical GLO plat maps and USGS topographic maps were consulted prior to field survey to determine if possible historic features were depicted within the project area. All features on these maps were roads which once intersected the project area. Two of these features have been previously recorded as archaeological sites: AZ DD:8:193(ASM) and AZ DD:8:259(ASM). Based on field reconnaissance, it was determined that the remaining road features are either no longer present or represent a current in-use road (**Tables 11 and 12**).

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**Table 11 Historic features depicted on GLO plats and current status via field inspection.**

GLO plat	Date	Feature type	Location	Field inspection
T16S, R14E	1897	road	Section 18	Not present
T16S, R14E	1897	road	Section 30	Not present
T16S, R14E	1897	road	Section 31	Not present
T17S, R14E	1947	road	Section 1	In-use dirt road
T17S, R14E	1947	road	Section 12	Not present
T17S, R14E	1947	road	Section 13	Not present
T17S, R14E	1947	road	Section 25	In-use dirt road
T17S, R15E	1933	road	Section 7	Not present
T17S, R15E	1933	Road	Section 31	In-use dirt road (ATV use/severe drainage erosion; no historic features)
T18S, R14E	1873	Road	Section 21	In-use road (connects to transmission access road)
T19S, R13E	1885	Road	Section 23	Not present
T19S, R13E	1885	Road	Section 26	Not present
T19S, R14E	1926	road	Section 6	In-use dirt road
T19S, R14E	1926	road	Section 7	Not present

**Table 12 Historic features depicted on USGS maps and current status via field inspection.**

USGS quadrangle	Date	Feature	Location	Field inspection
Patagonia 30'	1905	Road	T16S, R15E, S 19	Not present
Patagonia 30'	1905	Road	T17S, R15E, S 7	Not present
Patagonia 30'	1905	Road	T17S, R15E, S 19	Not present
Patagonia 30'	1905	Road	T18S, R14E, S 15	In-use dirt road
Patagonia 30'	1905	Road	T19S, R14E, S 6	Not present
Patagonia 30'	1905	Road	T19S, R13E, S 23	Not present
Patagonia 30'	1905	Road	T19S, R13E, S 23	Not present
Tucson 15'	1948, 1957	Road	T16S, R14E, S 12 and T16S, R15E, S 18	In-use dirt road
Tubac 15'	1943, 1958	Road	T20S, R13E, S 8	In-use dirt road, "Amado Montosa Road" AZ DD:8:193(ASM) (see site description)
Mount Wrightson 15' Sahuarita 15' Tubac 15' Tucson 15'	1957, 1958	Transmission line	Entire project area	AZ DD:8:259(ASM) (see site description)
Sahuarita 15'	1958	Road	T16S, R14E, S 36 and T16S, R15, S 31	Not present
Sahuarita 15'	1958	Road	T17S, R14E, S 12 and T17S, R15E, S 7	Not present
Sahuarita 15'	1958	Road	T18S, R14E, S 1	In-use dirt road
Sahuarita 15'	1958	Road	T18S, R14E, S 11	Not present
Sahuarita 15'	1958	Road	T18S, R14E, S 15	In-use dirt road
Sahuarita 15'	1958	Road	T18S, R14E, S 22	In-use dirt road
Sahuarita 15'	1958	Road	T18S, R14E, S 28	In-use dirt road
Sahuarita 15'	1958	Road	T18S, R14E, S 28	In-use dirt road
Sahuarita 15'	1958	Road	T18S, R14E, S 32	In-use paved road, "East Whitehouse Canyon Road"
Sahuarita 15'	1958	Road	T19S, R13E, S 23	Not present
Sahuarita 15'	1958	Road	T19S, R14E, S 6	In-use dirt road, "NF 404"

## ***Research Results***

This section addresses the research questions formulated prior to field survey and presented in the Research Design in this report. Field survey results produced very limited data to address the research themes.

### ***Prehistoric Land Use and Resource Procurement***

#### Chronology

1. When were prehistoric archaeological sites within the project area occupied? The project area contained few temporally diagnostic prehistoric artifacts. There were no ceramics or projectile points documented during field survey. Lithic flakes and debitage (and a few possible cores) were the only prehistoric artifacts identified. These lithic artifacts were not indicative of a specific time or culture.
2. Is the pattern of land use and occupation similar over time? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
3. Do surface lithic scatters represent multiple time periods which indicate that the site was used over multiple periods or subjected to continual use? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.

#### Typological and Functional Analysis

1. What type of activities occurred at sites within the project area? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
2. Were the sites occupied seasonally or year-round? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
3. What were the possible functions of the resource procurement and/or processing sites? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
4. Does the character of land use and occupation differ between specific landforms and environmental zones? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
5. How do site types in the project area compare with sites in the larger regional settlement system? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
6. What resources were collected in this area and how were they utilized? No new prehistoric sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
7. What is the relation between prehistoric and natural resources within the project area and greater topography? No new prehistoric sites were documented in project area.

Accordingly, this research question cannot be further addressed with the current survey data.

8. Can the locations of certain types of isolated (non-site) cultural resources provide data about the settlement and land use of the area? Although very few prehistoric isolates were encountered during field survey, most were located in the southern half of the project area between previously recorded lithic scatter sites. These isolates may represent opportunistic procurement or testing of raw materials collected for stone tools.

### *Historic Period Occupation and Land Use*

#### Chronology

1. Are historic features of the previous recording of AZ DD:8:259(ASM) consistent with previous recordings of the transmission line and with archival research? If not, how can these inconsistencies be explained? The northern (previously unrecorded) portion of the 1958 transmission line contains the same feature and artifact types as those documented in previous recordings (King 2013b, 2013a).
2. Are temporally diagnostic artifacts present which are associated with previously recorded historic sites such as AZ DD:8:259(ASM) and AZ DD:8:193(ASM)? One newly recorded historic site, AZ DD:8:261(ASM), was documented in the project area. This site represents a waste dump with artifacts dating from the 1930s-1950s. Although the site is located along the transmission line, most of the artifacts would have pre-dated the 1958 construction of the line. However, the site is located only 130 meters (426 feet) north of AZ DD:8:193(ASM)-Amado Montosa Road. This historic road was constructed in the early 1900s. Opportunistic refuse disposal may have been associated with the remote location of this road.
3. Are historic roads in the project area consistent with time frames from archival records? No new historic road sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.
4. Are there historic roads crossing the project area which retain historic attributes that may help confirm or determine their age of construction? No new historic road sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.

#### The Built Environment

1. Are there previously unrecorded segments of AZ DD:8:259(ASM) transmission line or other roads which are not depicted on historic maps or which have not been previously recorded? Field survey confirmed that features associated with AZ DD:8:259(ASM) span the entire length of the project area. However, site boundaries were not extended in this project based ASM and SHPO policies for in-use, linear historic roads.
2. Are unrecorded linear features such as roads present within the project area? No new historic road sites were documented in project area. Accordingly, this research question cannot be further addressed with the current survey data.

3. Are unrecorded historic artifacts or features present that can provide data to reconstruct the historic land use and occupation of the project area? Other than the newly recorded waste dump site, AZ DD:8:261(ASM), and a few isolated historic artifacts no new data was obtained to shed new light on the historic land use and occupation of the project area.

## ARIZONA AND NATIONAL REGISTER OF HISTORIC PLACES EVALUATIONS

The preceding portions of this report have presented background information and an inventory of the archaeological resources. The cultural resources inventory is based on a review of existing archaeological survey data bolstered by supplemental reviews of archaeological site records and archaeological literature, and a pedestrian field survey of the project area. This section of the report presents the eligibility recommendations, an assessment of the potential adverse effects, and recommendations to avoid, minimize, or resolve the potential adverse effects.

The significance of cultural resources is evaluated according to the implementing regulations of Section 106 of the National Historic Preservation Act. Federal regulation 36 CFR 60.4 defines the criteria for determining whether or not cultural resources have significance in American history. Cultural resources identified during this project were assessed in terms of a property's potential eligibility for inclusion on the Arizona Register of Historic Places (ARHP) and National Register of Historic Places (NRHP). Three key elements for determining site eligibility for listing on the ARHP/NRHP are that the property has integrity, that it possesses historical significance, and that significance be derived from an understanding of historic context. For a site to possess integrity and be historically significant, it must meet one of the National Register criteria listed below.

“The quality of significance in American history, architecture, archeology, engineering, 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 other words, a site's significance is dependent on its *integrity*—its retention of its essential form and construction, and its continued presence in the setting it was intended to occupy—and on its *cultural significance*, whether readily apparent or hidden in its potential to yield information” (National Park Service 1996).



### *Eligibility Recommendations*

MCA recommends that the archaeological sites documented in the project area be considered ineligible for inclusion in the ARHP/NRHP. Specific eligibility evaluations are presented under the individual site descriptions in this report. Four of the previously recorded sites have been subjected to data recovery within the project area: AZ EE:1:161(ASM), AZ EE:1:167(ASM), AZ EE:1:168(ASM), and AZ DD:8:138(ASM). Previous data recovery has exhausted the research potential of these four previously recorded prehistoric sites (within the project area). The portions of these sites within the project area are void of cultural materials and no longer retain the integrity required for listing on the ARHP/NRHP. Accordingly, the portions of those sites located in the current project are unlikely to yield information important in prehistory or history beyond the previous data recovery.

The two previously recorded historic sites are also recommended ineligible: AZ DD:9:193(ASM) and AZ DD:8:259(ASM). Both are in-use linear sites and would not be considered an archaeological site under new ASM and SHPO policies. The one newly recorded site in the project area, AZ DD:8:261(ASM), is an historic waste dump lacking significance and is recommended ineligible for the ARHP/NRHP. The 15 isolates lack the quality of significance required under the ARHP/NRHP guidelines. The isolates have been adequately recorded and are recommended as ineligible for the ARHP/NRHP. By default, isolates are generally not eligible for the ARHP/NRHP.

## SUMMARY AND RECOMMENDATIONS

MCA’s Class III cultural resources survey of the project area resulted in the identification of one new archaeological site and 15 isolates. Six previously recorded sites were relocated and updated. MCA recommends a finding of *no historic properties affected* for the cultural resources and sites documented in the project area. Accordingly, no further archaeological investigations are recommended within the project area. Management recommendations for the treatment of the sites within the project area are presented in **Table 13**.

**Table 13 Site management recommendations.**

Site Number/Type	Location	ARHP/NRHP Eligibility Recommendation	Recommended Treatment	Effect
AZ DD:8:261(ASM) newly recorded	State land	Ineligible	No further investigation	None
AZ EE:1:161(ASM) previously recorded	Private land	Ineligible	No further investigation	None
AZ EE:1:167(ASM) previously recorded	State land	Ineligible	No further investigation	None
AZ EE:1:168(ASM) previously recorded	State land	Ineligible	No further investigation	None
AZ DD:1:138(ASM) previously recorded	State land	Ineligible	No further investigation	None
AZ DD:8:193(ASM) previously recorded	State and private land	Ineligible individually	No further investigation	None
AZ DD:8:259(ASM) (previously recorded)	State land	Ineligible	No further investigation	None

### *Discovery Clauses*

In the event that previously unreported cultural resources are encountered during ground disturbing activities, all work must immediately cease within 30 meters (100 feet) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the Arizona and National Register of Historic Places, as appropriate, in consultation with the lead agency, the Arizona State Land Department (ASLD), the Arizona State Museum (ASM), the SHPO, and Tribes, as appropriate. Work must not resume in this area without approval of the lead agency.

If human remains are encountered during ground-disturbing activities, all work must immediately cease within 30 meters (100 feet) of the discovery. The Arizona State Museum, lead agency, SHPO, and appropriate Tribes must be notified of the discovery within 24 hours. All discoveries will be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (25 USC §§ 3001-3013) and its implementing regulations at 43 CFR Part 10 and with Arizona burial laws (A.R.S. § 41-844 and A.R.S. § 41-865), as appropriate, and work must not resume in this area without proper authorization.

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**APPENDIX A: CLASS I  
LOCATIONAL INFORMATION**

**NOTICE:**

Figures A1 through A20 have been redacted because the disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws may include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.

**APPENDIX B: CLASS III  
LOCATIONAL INFORMATION**

**NOTICE:**

Figures B1 through B11 have been redacted because the disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 U.S.C. 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. §470hh). In Arizona, applicable state laws may include, but may not be limited to, Arizona Revised Statute Title 39, Section 125.