

**FINAL ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION
OF A BURIED TELECOMMUNICATIONS LINE IN MARICOPA
COUNTY, ARIZONA: THE SUN VALLEY-LAKE PLEASANT FIBER
LOOP PROJECT**

DOI-BLM-AZ-P010-2010-008-EA

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Phoenix, Arizona 85027-2641

Submitted by:

Tierra Right of Way Services, Ltd.
1575 East River Road, Suite 201
Tucson, Arizona 85718

May 7, 2007

Revised January 21, 2010

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EA#: DOI-BLM-AZ-P010-2010-008-EA

Project Name: Accipiter d/b/a Zona Communications Sun Valley–Lake Pleasant Fiber Loop

Contact Person: Patrick Sherrill

Legal Description and Map Name: Multiple; see Appendix A.

1.0 INTRODUCTION

1.1 *Background*

Jim Weimer of Accipiter d/b/a Zona Communications (Zona) contracted Tierra Right of Way Services, Ltd. (Tierra), to facilitate the acquisition of rights-of-way from multiple agencies for the installation of a telecommunications line named the “Sun Valley–Lake Pleasant Fiber Loop” (Proposed Action). This Proposed Action involves the installation of a buried fiber optic telecommunications line across private, municipal, and county properties, and lands managed by Arizona State Land Department (ASLD) and the Bureau of Land Management (BLM) in Maricopa County, Arizona (Figures 1 and 2). Individual USGS 7.5-minute Quadrangles for the Proposed Action are provided on a compact disk (CD) in Appendix A.

The Proposed Action corridor is 377.0 km (234.3 miles) long and begins approximately 3.0 miles east of Tonopah, Arizona, and extends north and east towards the vicinity of the Lake Pleasant Regional Park. A summary of the total corridor length, temporary construction easement width, permanent right-of-way (ROW) width, and disturbance acreage by management agency is provided in Table 1.1.

Table 1.1. Corridor Length, Easement and ROW Width, and Disturbance Acreage by Management Agency

Management Agency	Corridor Length		Temporary Easement Width		Permanent ROW Width		Disturbance Area ^a	
	km	miles	m	feet	m	feet	ha	acres
ASLD	66.9	41.6	7.6	25.0	3.0	10.0	25.5	63.0
BLM	34.9	21.7	7.6	25.0	3.0	10.0	13.3	32.9
Other (i.e., private, local government)	275.2	171.0	7.6	25.0	3.0	10.0	104.9	259.1
Total	377.0	234.3					143.7	355.0

^a Based on the 10-foot-wide permanent ROW plus 25 percent (25 %) for ancillary facilities. The width of disturbance for plow passage is 10 feet.

1.2 *Need*

The Proposed Action will bring telecommunications services to residents currently not served in the subdivisions of Whispering Ranch, Coyote Ridge, and Crozier. The project will also be positioned to serve proposed new residential planned-communities (such as Festival Ranch) along the Sun Valley Parkway corridor.

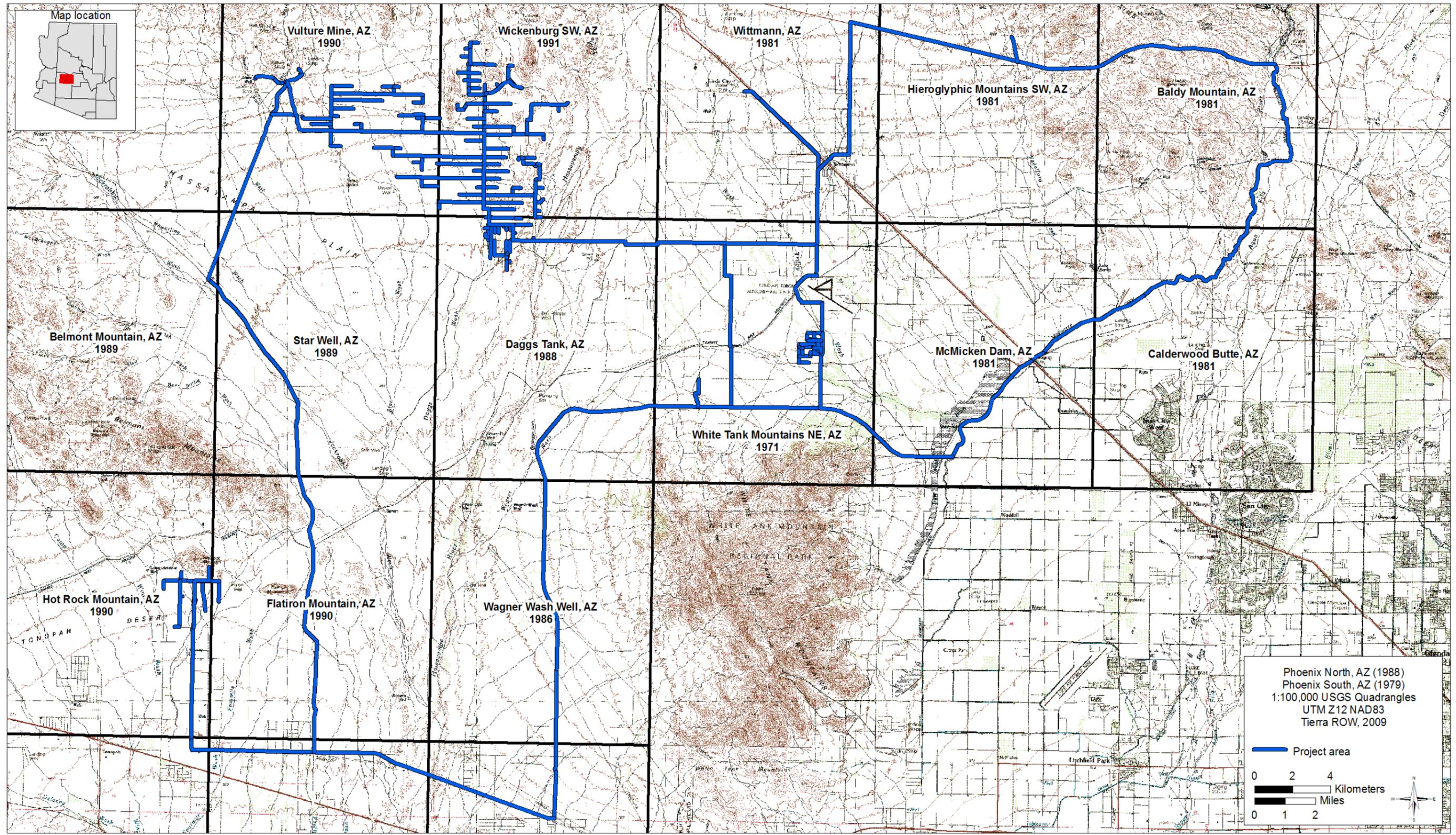


Figure 1. Sun Valley – Lake Pleasant Loop project location.

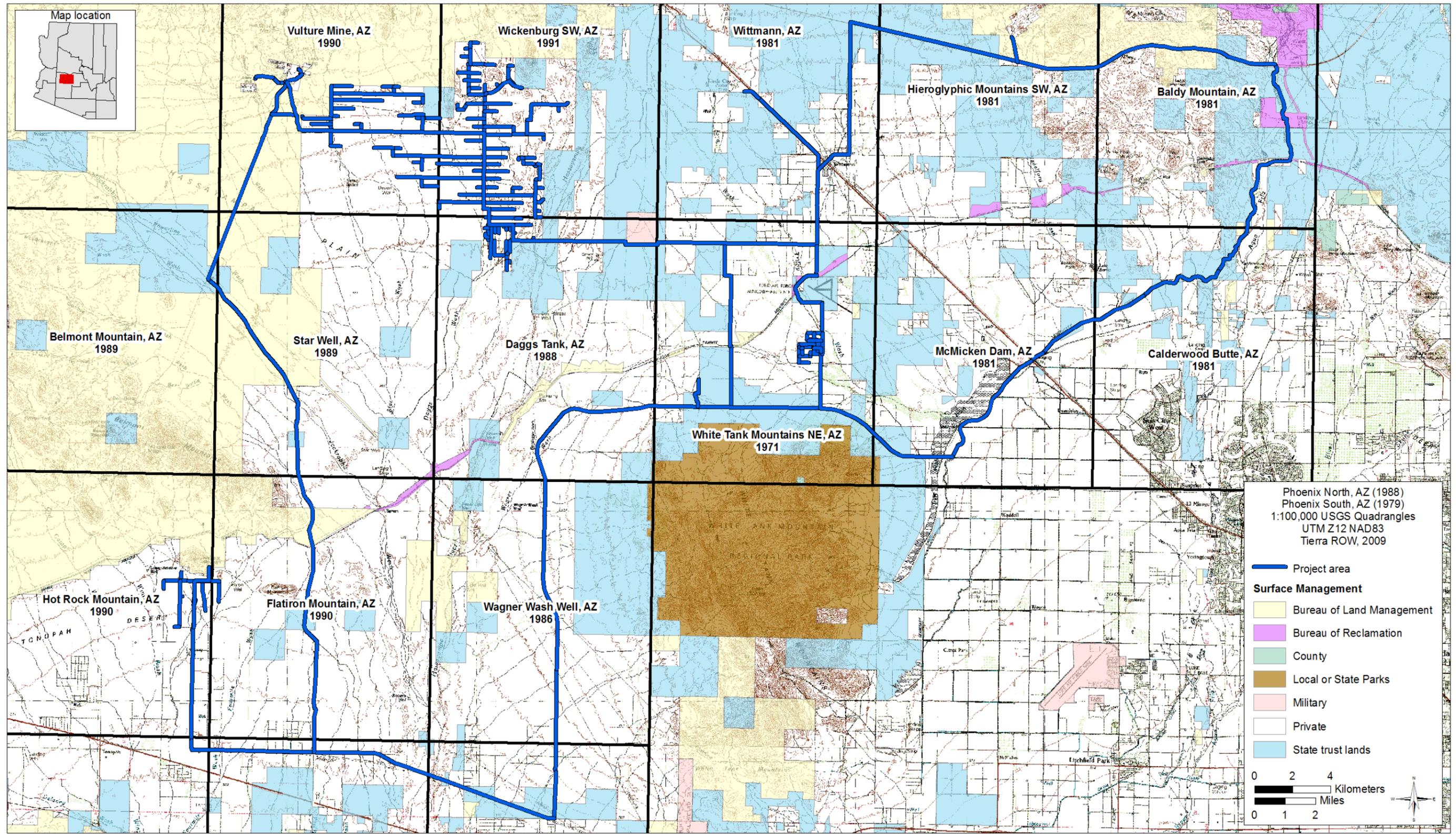


Figure 2. Sun Valley – Lake Pleasant Loop project location and land ownership.

1.3 Conformance with Land Use Plan

The Proposed Action is subject to the *Phoenix Resource Management Plan* (RMP), approved in September 1989 (USDOI 1988b), and the *Lower Gila North Management Framework Plan* (MFP), approved in March 1983 (USDOI 1981). This Proposed Action has been reviewed to determine if it conforms to the land use plans terms and conditions required by 43 CFR 1610.5, BLM MS 1617.3.

Portions of the Proposed Action are located in the Lake Pleasant Special Management Area within a BLM Resource Conservation Area. No portions of the Proposed Action occur within a BLM Area of Critical Environmental Concern (ACEC).

As stated in the Right-of-Way Development section of the RMP and the Lands section of the MFP, utility distribution system development will be authorized when consistent with environmental and land use considerations. Therefore, the proposed action conforms to the land use terms and conditions of the RMP and MFP.

1.4 Relationship to Statutes, Regulations or Other Plans or Policies

By virtue of being in conformance with the Phoenix RMP and the Lower Gila North MFP, the Proposed Action is in general conformance with associated statutes, regulations, and other plans.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Description of the Proposed Action

Zona Communications proposes the installation of a buried fiber optic telecommunications line on private land and on lands managed by the Bureau of Land Management, the State of Arizona, and other municipalities.

Trenching and boring techniques will be used for cable installation. All washes and waterways and some roads will be bored beneath. Specific installation techniques will be addressed in a Plan of Development (POD).

2.2 No Action Alternative

Under the No Action Alternative, Zona Communications will not install a buried fiber optic telecommunications line.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The Proposed Action is located within the Arizona Upland and Lower Colorado Subdivisions of the Sonoran Desertscrub Formation as described by Brown (1994). Elevation ranges from 1,070 to 2,080 feet (326 to 634 m) above mean sea level (AMSL).

Vegetation in the Proposed Action area is representative of both the Arizona Upland and Lower Colorado biotic communities. Dominant overstory species include *Parkinsonia microphylla* (Foothills Palo Verde) and *Prosopis velutina* (Velvet Mesquite). Common shrubs include *Larrea tridentata* (Creosote Bush), *Hymenoclea monogyra* (Burrobrush), *Bebbia juncea* (Chuckwallas' Delight), and *Acacia constricta* (Whitethorn Acacia). Dominant cacti species include *Opuntia acanthocarpa* (Buckhorn Cholla),

Mammillaria microcarpa (Pincushion), *Echinocereus boyce-thompsonii* (Hedgehog), *Carnegia gigantea* (Saguaro), and *Ferocactus wislizenii* (Fishhook Barrel). Common forbs include *Ambrosia deltoidea* (Triangle-leaf Bursage), *Encelia farinosa* (Brittlebush), *Cassia covesii* (Desert Senna), and *Stephanomeria pauciflora* (Desert Straw). Vegetation is structurally diverse and density is low to moderate, with upland areas exhibiting greater density and larger overstory species.

Common wildlife in the Proposed Action area includes *Amphispiza bilineata* (Black Throated Sparrow), *Poliophtila melanura* (Black-tailed Gnatcatcher), *Campylorhynchus brunneicapillus* (Cactus Wren), *Pipilo fuscus* (Canyon Towhee), *Corvus corax* (Common Raven), *Toxostoma curvirostre* (Curve-billed Thrasher), *Callipepla gambellii* (Gambel's Quail), *Eremophila alpestris* (Horned Lark), *Carpodacus mexicanus* (House Finch), *Zenaida macroura* (Mourning Dove), *Cathartes aura* (Turkey Vulture), *Sturnella neglecta* (Western Meadowlark), *Zonotrichia leucophrys* (White-crowned Sparrow), *Cnemidophorus* sp. (whiptail lizard), *Callisaurus draconoides* (Zebra-tail Lizard), *Lepus californicus* (Black-tailed Jackrabbit), *Canis latrans* (Coyote), *Sylvilagus audubonii* (Desert Cottontail), *Neotoma albigula* (White-throated Woodrat), and *Spermophilus tereticaudus* (Round-tailed Ground Squirrel). A complete list of wildlife observed can be found in Ericson et al. (2006:Appendix C).

3.1 Critical Elements

This section provides an analysis of the critical elements identified in the Phoenix RMP and the Lower Gila North MFP and their relationships to the Proposed Action. Table 3.1 lists those critical elements that are not affected by the Proposed Action because they either do not occur in the Proposed Action area or are outside the nature of the Proposed Action.

Table 3.1. Critical Elements Not Affected by the Proposed Action

Issue	Reason for No Effect
Land Status (RMP, MFP)	No land status changes (sale/exchange) are anticipated.
Mineral Development (RMP, MFP)	No concerns were identified.
Fire Protection (MFP)	No concerns were identified.
Riparian Habitat (RMP)	No riparian areas are located within the Proposed Action area.
National Energy Policy	No concerns were identified.
Environmental Justice	The proposed action does not disproportionately affect minorities or low-income populations.
Rangeland Management	No concerns were identified

The following elements are addressed in the EA:

- Watershed (RMP, MFP)
- Threatened and Endangered Species (RMP, MFP)
- Wildlife Habitat and Special Status Species (RMP, MFP)
- Wild, Free-Roaming Burros (RMP, MFP)
- Cultural Resources (RMP, MFP)
- Visual Resources (RMP)
- Recreation (RMP, MFP)
- Special Status Plants (RMP, MFP)
- Vegetation (RMP, MFP)

-
- Noxious Weeds
 - Soils
 - Air Quality
 - Water Quality

3.1.1 Watershed

Management goals concerning watershed condition are primarily in the areas of maintaining or increasing soil cover and infiltration, thereby reducing erosion, sediment yield, peak flows, and dust emissions. In some cases soil productivity is to be maintained, and in other cases stream flow is to be enhanced.

Numerous washes intersect the project corridor. Directional boring will be used to install cable at all wash crossings.

3.1.1.1 *Impacts of the Proposed Action*

Installation of the buried fiber optic line will result in vegetation removal, thereby reducing soil cover. However, the project corridor is limited in width and will be reseeded after construction is complete. Additionally, during construction, appropriate Best Management Practices (BMPs) as outlined in a forthcoming Storm Water Pollution Prevention Plan (SWPPP) will be followed. These SWPPP guidelines, when followed, will help minimize erosion by stabilizing the soil disturbed by construction activities, therefore impacts on watershed condition due to the Proposed Action will be minimal.

All washes that the project corridor crosses will be bored beneath, thereby resulting in no impacts to potential Waters of the United States.

3.1.1.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no new buried fiber optic line being installed. Watershed condition in the area of the Proposed Action would remain as it is at the present time.

3.1.2 Threatened and Endangered Species

Priority species are those species considered sensitive, threatened, or endangered by federal and state regulatory agencies. Priority species were determined through a review of the US Fish and Wildlife Service (FWS) online county list (Ericson et al. 2006:Appendix D; this document, Appendix C); by contacting the Arizona Game and Fish Department (AGFD) for special status species information (Ericson et al. 2006:Appendix E); and by reviewing the BLM priority species list from the Agua Fria and Bradshaw-Harquahala Draft Resource Management Plan and Environmental Impact Statement (Ericson et al. 2006:Appendix F). This list was utilized, as opposed to the approved Phoenix Resource and Lower Gila Management Framework Plans, because it is up to date regarding priority species. A compilation of species gathered from these three sources is presented in Table 4 of the Biological Evaluation and Assessment.

Of the 42 priority species identified as potentially occurring in the general project area, 15 are listed as endangered or threatened, two are candidates for listing, and one is listed as proposed threatened on the FWS database. However, the Cactus Ferruginous Pygmy-owl, Brown Pelican, and Arizona Agave have been recently delisted. Current federally listed species warrant full protection under the

Endangered Species Act (ESA). The remaining species are afforded protection by the BLM on BLM managed lands and by the State of Arizona on state lands.

3.1.2.1 *Impacts of the Proposed Action*

Research, field investigation, and reporting determined the potential for two federally listed threatened and endangered species to occur in the Proposed Action area including the Bald Eagle and the Lesser Long-nosed Bat. However, these species were assessed in the Biological Evaluation and Assessment and it was determined that the Proposed Action will not affect individuals or habitat of these two listed species.

3.1.2.1.1 Bald Eagle

Bald Eagles are known to occur in the area of Lake Pleasant, mostly during the winter months (AGFD 2002). Although no Bald Eagles were identified in the Proposed Action area, it is recommended that construction along Highway 74 not take place during the winter months when roadside habitat may be utilized for perching/foraging.

3.1.2.1.2 Lesser Long-nosed Bat

FWS recognizes a foraging distance of 50 miles from roost sites for Lesser Long-nosed Bat and the nearest known Lesser Long-nosed Bat roost site in relation to the Proposed Action area is located at the Old Mammon Mine in the Slate Mountains of Pinal County. While areas with bat forage plants (saguaro) are found along the project route, these are over 90 miles from this roost. Therefore, project related disturbances to individual Lesser Long-nosed Bats and their habitat are not expected as potential forage plants (agave and saguaro) located greater than 50 miles from a roost site do not constitute suitable foraging habitat for Lesser Long-nosed Bats. Consequently, the Proposed Action will not affect Lesser Long-nosed Bat individuals, roost sites, or habitat.

3.1.2.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no negative impacts to threatened and endangered species as a result of the Proposed Action.

3.1.3 Wildlife Habitat and Special Status Species

As discussed in Section 3.1.2, 42 priority species were identified as potentially occurring in the Proposed Action area and assessed in the Biological Evaluation and Assessment. Of these, 34 species were removed from further consideration because there was not suitable habitat in the project area and/or the species distribution did not include the project area. Of the remaining eight (8) species, two (2) were discussed in Section 3.1.2. The remaining six (6) species are listed BLM sensitive and are discussed below.

3.1.3.1 *Impacts of the Proposed Action*

The Proposed Action will negatively impact approximately 355 acres of wildlife habitat within a narrow corridor. Avian, mammalian, and reptilian species could expect a reduction in available foraging and nesting habitat.

It is expected that mobile species will be able to relocate in response to the Proposed Action to some extent. However, the mortality of some individuals will be unavoidable as a result of the Proposed Action. Therefore, the Proposed Action will have a moderate impact on wildlife habitat.

3.1.3.1.1 Desert Tortoise

Portions of the Proposed Action are located within areas classified as Category 2 or Category 3 Desert Tortoise habitat by the BLM. The Category 3 habitat type has an associated categorical goal of limiting tortoise habitat and population declines to the extent possible by mitigating impacts. The categorical goal of Category 2 habitat is to maintain stable, viable populations and to halt further declines in tortoise habitat values. The primary criterion of Category 3 is that the habitat it describes is not essential to the maintenance of viable populations, while Category 2 habitat may be essential to the maintenance of viable populations (USDOI 1988a).

During Tierra's surveys, two weathered tortoise burrows were observed on state land adjacent to a drainage that crossed Highway 74 (USGS Hieroglyphic Mts. SW quad). The burrows were located next to a culvert and were approximately one meter above the floor of the wash in a vertical wall. These are most likely historic burrows based on their present position in relation to the floor of the wash. Therefore, even though the project area is located within BLM Category II and III habitats and retains some characteristics of suitable Desert Tortoise habitat, it is no longer suitable due to existing disturbances and the proximity of improved roads along the construction corridor. Additionally, no other sign (e.g., scat, shell fragments, or live tortoises) was observed during the survey. Therefore, the Proposed Action may impact individual Desert Tortoise, but is not likely to result in a trend toward federal listing or loss of viability. Nor will the project result in a net loss of quantity or quality of desert tortoise habitat (Ericson et al. 2006).

3.1.3.1.2 Western Burrowing Owl

Western Burrowing Owl, a BLM Sensitive species, may occur in the project area. No impacts are anticipated for Western Burrowing Owl because no individuals or utilized burrows were observed in the area of the Proposed Action.

3.1.3.1.3 Loggerhead Shrike

A Loggerhead Shrike was observed on August 24, 2006, approximately 3 km (1.8 miles) north of Sun Valley Parkway on 243rd Avenue (USGS White Tank Mts. NE quad) flying along the road in front of the field vehicle. The bird then landed in a Creosote east of the ROW, facilitating positive identification. Just north of the sighting, a low area containing *Canotia*, an especially thorny shrub, was observed. Another Loggerhead Shrike was spotted in the same general area on February 28, 2006. It is possible that these two sightings both involve the same bird, and if so, would indicate that the bird might be a resident. In addition, a Loggerhead Shrike was observed on September 25, 2009, north of the intersection of 219th Avenue and Pinnacle Peak Road (USGS White Tank Mts. NE quad), approximately 2–3 miles east of the original sighting (see Appendix C). However, in both locations, no nest sites were observed in or immediately adjacent to the project area, and habitat impact due to construction activities should be minimal. Therefore, the Proposed Action may impact individuals of Loggerhead Shrike, but is not likely to result in a trend toward federal listing or loss of viability (Ericson et al. 2006).

3.1.3.1.4 Rosy Boa

Although no individuals or sign of Rosy Boa was identified in the project area, the site is located within the known range of and in habitat consistent with this species. Therefore, the Proposed Action may impact individual Rosy Boas, but is not likely to result in a trend toward federal listing or loss of viability.

3.1.3.1.5 California Leaf-nosed Bat

California Leaf-nosed Bats likely occur in the general project area and utilize prey-inhabiting vegetation in the areas to be disturbed. The Proposed Action is not likely to impact individuals as there will be no disturbance to mines, caves, rock outcrops, or buildings. However, the Proposed Action will remove vegetation and thus may indirectly impact California Leaf-nosed Bat prey in the areas to be disturbed. These impacts are minor, as most insects will respond to construction equipment by leaving the immediate area, although insect larvae may be lost. Therefore, the Proposed Action may indirectly impact individuals of California Leaf-nosed Bats, but is not likely to result in a trend toward federal listing or loss of viability.

3.1.3.1.6 Cave Myotis

Known locations of Cave Myotis near the project area include: north of Lake Pleasant in the vicinity of Governors' Peak; the Hieroglyphic Mountains south of Highway 74; the Vulture Mountains; and the Belmont Mountains. Although the Proposed Action is located adjacent to these areas, it likely will not impact individuals as there will be no disturbance to mines, caves, rock outcrops, or buildings. The Proposed Action will remove vegetation and, thus, may indirectly impact Cave Myotis prey in the areas to be disturbed. These impacts are minor, as most insects will respond to construction equipment by leaving the immediate area, although insect larvae may be lost. Therefore, the Proposed Action may indirectly impact individuals of Cave Myotis, but is not likely to result in a trend toward federal listing or loss of viability.

3.1.3.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no negative impacts to wildlife habitat as a result of the Proposed Action.

The No Action Alternative would result in no negative impacts to Sonoran Desert Tortoise, Loggerhead Shrike, Burrowing Owl, Rosy Boa, California Leaf-nosed Bat, or Cave Myotis as a result of the Proposed Action.

3.1.4 Wild, Free-roaming Burros

The BLM is currently managing a herd of approximately 200 wild burros in a Special Management Area within the Lake Pleasant Resource Conservation Area.

3.1.4.1 *Impacts of the Proposed Action*

The portion of the Proposed Action adjacent to Lake Pleasant will be restricted to a narrow corridor located within the Highway 74 ROW. Impacts to wild burros or their potential forage due to the Proposed Action will be minimal because the ROW is separated from BLM land by a barrier in the form of a barbed wire ROW fence. However, a determined wild burro could breach this fence.

3.1.4.2 *Impacts of the No Action Alternative*

The No Action Alternative would have the same result as the Proposed Action because no impacts to Wild, Free-roaming Burros are expected occur.

3.1.5 Cultural Resources

Tierra conducted a Class III (intensive) systematic, non-collection pedestrian cultural resources assessment survey of a proposed buried fiber optic telecommunications line across private, municipal, and county properties, and properties managed by Arizona State Land Department

(ASLD) and the Arizona Bureau of Land Management in Maricopa County, Arizona (Klucas 2007; Doak 2009; see this document, Appendix B). The survey documented the existence of 30 archaeological sites, which included 22 sites that had been previously recorded, either within or adjacent to the project area. A total of four sites were found within the portion of the inspected corridor managed by the BLM. Two of these were previously determined eligible for inclusion in the National Register of Historic Places (NRHP) by the Arizona State Historic Preservation Office (SHPO) and two were recommended ineligible for inclusion in the NRHP.

3.1.5.1 *Impacts of the Proposed Action*

One NRHP eligible site, AZ T:3:4(ASM), is located on BLM land within the State Route 74 ROW south of Lake Pleasant. Data recovery excavations were conducted at the portion of the site within the Area of Potential Effect (APE) prior to the widening of State Route 74 and the likelihood of encountering uninvestigated architectural features in this area is low. Tierra recommended that any effect installation of the buried fiber optic cable may have had on AZ T:3:4(ASM) was resolved during the previous data recovery investigations. Human remains, however, may still be present.

The second NRHP eligible site, AZ T:3:55(ASM), also known as the Beardsley Canal, crosses BLM-managed land in the South ½ of Section 4, T5N, R1E. The proposed cable will be buried within a service road and any scars produced during those operations will be removed by ongoing and constant canal maintenance. Therefore, Tierra recommended installation of the buried fiber optic cable will have no adverse effect on the historical canal.

The two NRHP ineligible sites, AZ T:5:43(ASM) and AZ T:5:45(ASM), are both historical roads. The portions of these roads within the inspected corridor have been destroyed by modern grading and road maintenance and, therefore, no longer maintain integrity. Tierra recommended installation of the buried fiber optic cable will have no adverse effect on either of these roads.

A BLM concurrence letter to the State Historic Preservation Officer states that given the proposed avoidance to NRHP-eligible sites, the BLM believes that “this proposed undertaking warrants a determination of no adverse effects to historic properties” (Cohn 2010).

3.1.5.2 *Impacts of the No Action Alternative*

The No Action Alternative would have the same result as the Proposed Action because no impacts to cultural resources would occur.

3.1.6 Visual Resources

The BLM utilizes a visual management system to regulate potential aesthetic impacts to public lands. Management classes describe the degree of landscape modification permissible. The Visual Resources Management (VRM) system identifies all agency-owned lands within four VRM classes. The most restrictive classification in the BLM’s system is Class 1. Class 1 VRM ratings preserve the existing character of the landscape. Natural changes and limited disturbances are allowed.

Class 2 VRM ratings strive to maintain the existing character of the landscape. Changes within these areas can be seen, but should not attract the attention of the casual observer. Additionally, all changes should repeat the basic elements of form, line, color, and texture that are found in the predominant natural features of the surrounding characteristic landscape.

Class 3 and 4 VRM ratings are less restrictive, but are still managed for visual impacts. Class 3 VRM ratings partially retain the existing character of the landscape. The activity may attract the attention of the casual observer, but should not dominate the view. Class 4 VRM ratings allow for major modification of the landscape and may dominate the view of the landscape (USDOI 1988b). The Proposed Action is located in a Class 3 rated area.

3.1.6.1 *Impacts of the Proposed Action*

The Proposed Action involves the installation of a buried telecommunications line within existing highway, road, and utility ROWs. Impacts will include a temporary scar where the fiber optic line is trenched. This scar will gradually fade as reseeding takes effect. Within two years it is expected that the casual observer will not notice the alignment. In addition, the presence of construction equipment during construction will significantly impact views. This will be temporary and will not leave any lasting visual impacts on the area. No permanent impacts to visual resources are expected as a result of the Proposed Action.

3.1.6.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no changes to the present visual resources found in the area of the Proposed Action.

3.1.7 Recreation

The eastern end of the Proposed Action area is located just south of the Lake Pleasant Regional Park.

3.1.7.1 *Impacts of the Proposed Action*

The Proposed Action involves the installation of a telecommunications line within existing highway, road, and utility ROWs. Recreation activities typically do not occur along highways and roads, other than sightseeing in a vehicle. Therefore, the Proposed Action will have a negligible and temporary impact on recreation in the form of the visual presence of construction equipment as the telecommunications line is being installed.

3.1.7.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no changes to the present visual recreational resources found in the Proposed Action area.

3.1.8 Socio-Economics

Socio-Economics address the human concerns of social and economic effects.

3.1.8.1 *Impacts of the Proposed Action*

The Proposed Action will have a positive affect on the socio-economics in the area by providing telecommunications service to residential, commercial, and industrial customers that currently have either no or limited service.

3.1.8.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no changes to the current socio-economic status in the area of the Proposed Action.

3.1.9 Special Status Plants

The BLM maintains lists of special status plants that are to be protected, conserved, and managed. Special status plants found in the Phoenix RMP and the Lower Gila North MFP include Peebles Navajo Cactus, Tumamoc Globeberry, Nichol Turk's Head Cactus, Thornber Fishhook Cactus, Sword Milkvetch, Paperspined Cactus, Bigelow Onion, Flannelbush, Murphy Agave, Woolly Heads, Wiggins Cholla, and Linearleaf Sand Spurge. A single federally endangered plant, Arizona Cliffrose, appears on the FWS Maricopa County, Arizona, list.

3.1.9.1 *Impacts of the Proposed Action*

None of the above listed special status plants were observed in the area of the Proposed Action. Therefore, the Proposed Action will have no impact on BLM or FWS special status plants.

3.1.9.2 *Impacts of the No Action Alternative*

The No Action Alternative would have the same result as the Proposed Action, since none of the BLM or FWS listed plants were observed in the area of the Proposed Action.

3.1.10 Vegetation

Vegetation will be removed as a result of the Proposed Action. Typical vegetation found in the Proposed Action area is described on Page 4 and a complete list of species identified can be found in Ericson et al. (2006:Appendix B) and in Appendix D of this document.

3.1.10.1 *Impacts of the Proposed Action*

Approximately 355 acres of land will be disturbed as a result of the Proposed Action. This represents a negative impact to vegetation in the Proposed Action area that will be partially mitigated by reseeded efforts after construction activities are complete.

3.1.10.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no changes to the vegetation in the area of the Proposed Action.

3.1.11 Noxious Weeds

Noxious weeds listed by the Arizona Department of Agriculture and by the Arizona Wildlands Invasive Plant Working Group were identified in the Proposed Action area during field surveys. These include Puncture Vine (*Tribulus terrestris*), Sahara Mustard (*Brassica tournefortii*), Bermudagrass (*Cynodon dactylon*), Weeping Lovegrass (*Eragrostis curvula*), and Buffelgrass (*Pennisetum ciliare*). Additionally, Mediterranean Grass (*Schismus barbatus*), a weed species listed on the Federal BLM Weed Species of Concern list, was identified on BLM-administered land in the area of the Proposed Action.

3.1.11.1 *Impacts of the Proposed Action*

The Proposed Action will disperse weed seeds during construction activities. Appropriate measures will be taken to minimize or eradicate weed species in the Proposed Action area to avoid the negative impact of weed propagation in the surrounding areas.

3.1.11.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in the noxious weed status remaining as it currently stands in the area of the Proposed Action.

3.1.12 Soils

Soils in the project area are predominantly old mixed alluviums classified as part of the Gunsight-Rillito-Pinal Association (Hendricks 1985:78) that represent the Holocene floodplain of the Hassayampa River. In upland areas near the Belmont and White Tank mountains, the corridor passes through soils weathered from granitic rocks, schists, volcanic tuffs and conglomerates, basalt, shale, and sandstone that are classified as a part of the Lithic Camborthids-Rock Outcrop-Lithic Haplargids Association (Hendricks 1985:80).

3.1.12.1 *Impacts of the Proposed Action*

The Proposed Action involves the disturbance of a narrow corridor by the installation of a buried telecommunications line. Therefore, the Proposed Action would impact soils in the Proposed Action area.

3.1.12.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no soil impacts in the Proposed Action area due to the proposed Action.

3.1.13 Air Quality

The Federal Government has enacted, and the State of Arizona has adopted, National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) as the region's air quality criteria. Primary standards were established to protect public health while secondary standards provide protection for the public's welfare including wildlife, climate, recreation, transportation, and economic values.

Regulations under the Clean Air Act (CAA) Prevention of Significant Deterioration (PSD) provisions (40 CFR Part 52-PSD of Air Quality) were enacted to maintain or improve the existing air quality in all Intrastate Air Quality Control Regions (IAQCRs) and national rural and wilderness areas by creating various classifications using the existing NAAQS pollutants. These classifications relate to the allowable increment above an established baseline concentration of a pollutant within which some increase would be allowed, with Class 1 being the most restrictive (smallest allowable increment) and Class 3 being the least restrictive (largest allowable increment).

The majority of the Proposed Action is located within Particulate Matter (PM₁₀) and 8-hour Ozone Non-attainment Areas. Since 1990, the EPA has designated portions of Maricopa County as a PM₁₀ Non-attainment Area. This status reflects Maricopa County's inability to attain the minimum NAAQS set forth by the EPA for atmospheric particulate matter 10 microns or less in size (dust). Likewise, portions of Maricopa County are in an EPA Non-attainment Area for 8-hour Ozone. Ozone is a pollutant consisting of three bound oxygen atoms that forms when atmospheric oxygen (O₂) reacts with volatile organic compounds (VOCs) or oxides of nitrogen (NO_x). The 8-hour standard is the way the EPA averages ozone monitoring measurements; in this case, a three year average of the fourth highest daily maximum 8-hour average ozone concentration measured at each monitoring site within an area over each year must not exceed 0.08 parts per million (ADOT 2000, EPA 2007).

Zona Communications will obtain a Dust Control Block Permit from the Maricopa County Air Quality Department prior to the start of construction. The Proposed Action will observe all stipulations of this Permit.

3.1.13.1 *Impacts of the Proposed Action*

Construction equipment used in the Proposed Action area will be diesel- and gasoline-powered. All diesel and gasoline engines produce pollutants as by-products of combustion, or more accurately, incomplete combustion. If combustion were complete, the only by-products of burning hydrocarbon-based fuels such as gasoline or diesel would be water vapor and carbon dioxide. These pollutants are hydrocarbons (HC), carbon monoxide (CO), NO_x, and various other organic compounds.

Hydrocarbons present in the exhaust of internal combustion engines are simply unburned fuel that result from rich (excess fuel, little air) mixtures. Carbon monoxide forms from partially combusted fuel. Oxides of nitrogen are formed when lean (little fuel, excess air) mixtures raise the temperature of combustion to the point where nitrogen, a normally very stable and nonreactive element, begins to bond with the excess oxygen molecules in the combustion chamber.

Diesel engines typically run on leaner mixtures than their gasoline counterparts and, therefore, have low HC emissions. CO and NO_x are still an issue with diesel fuel combustion, as well as particulates (smoke). Sulfur dioxide (SO₂) is also present in diesel exhaust because it is present in the diesel fuel that is currently available in the United States. There is current legislation to lower the allowable sulfur levels in diesel fuel because SO₂ has been shown to be a major contributor (along with NO_x) to the formation of acid rain. Properly maintained diesel (and gasoline) engines will produce a minimum of pollutants.

Impacts to air quality are expected as a result of the Proposed Action. These impacts will be from vehicle and equipment exhaust, as well as from dust produced by construction activities

3.1.14.2 *Impacts of the No Action Alternative*

The No Action alternative would result in no changes to the current air quality in the area of the Proposed Action.

3.1.14 Water Quality

The Clean Water Act (CWA) is the fundamental surface water quality protection in the United States. The CWA employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways' to finance municipal wastewater treatment facilities; and to manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water" (EPA 2002).

Numerous washes and the CAP canal intersect the proposed project corridor. Directional boring will be used to install cable beneath washes; directional boring or aerial installation will be used where the corridor crosses the CAP canal.

3.1.14.1 *Impacts of the Proposed Action*

The proposed action is not expected to have significant impacts on water quality. All fuels, lubricants, and solid wastes will be located off-site. Additionally, Zona Communications has developed a spill response plan to be enacted in emergency situations. Any accidental spills will be reported to the EPA and the BLM.

All washes that the project corridor crosses will be bored beneath, thereby resulting in no impacts to potential Waters of the United States.

3.1.14.2 *Impacts of the No Action Alternative*

The No Action Alternative would result in no changes to the current water quality in the area of the Proposed Action.

3.2 *Cumulative Impacts*

Cumulative impacts are described as the impact on the natural environment that results from the incremental impact of the Proposed Action when added to other past, present, and foreseeable future actions.

3.2.1 *Cumulative Impacts of the Proposed Action*

The majority of the Proposed Action is located within a disturbed highway ROW. Cumulative impacts to this disturbed ROW should be minimal.

The Proposed Action involves the removal of vegetation. This impact will contribute to the overall cumulative impacts that project area has been subject to.

3.2.2 *Cumulative Impacts of the No Action Alternative*

The No Action Alternative would result in no increased cumulative impacts in the area of the Proposed Action.

3.3 *General Stipulations*

BLM will mandate General Stipulations in draft review.

3.4 *Mitigation Measures*

Mitigation measures are those measures that when implemented can remove or otherwise minimize the effects of an action on affected environmental concerns. Mitigation measures are outlined by concern.

3.4.1 *Threatened and Endangered Species*

Bald Eagle may occur in the area around Lake Pleasant. In order to minimize potential impacts, construction in that area should not occur during the eagles' winter nesting season.

3.4.2 *Special Status Species*

To minimize impacts to the forage base of Cave Myotis and the California Leaf-nosed Bat, reseeded of the project area should be implemented after construction.

Loggerhead Shrike was observed in the area just north of the White Tank Mountains. Work crews should familiarize themselves with the appearance of Loggerhead Shrike and their nests in order to minimize any potential impacts.

Desert Tortoise was historically present in the project area. If a Desert Tortoise is found during construction activities, the guidelines found in Ericson et al. (2006:Appendix I) should be followed to minimize any potential impacts.

3.4.3 Visual Resources

In order to maintain the scenic value of the Highway 74 area, all saguaros should be avoided during trenching and line installation activities. If this is not possible, those saguaros in harms' way should be transplanted to a location adjacent to the ROW.

3.4.4 Invasive and Noxious Weeds

All equipment should be washed off-site prior to delivery to the construction area to eliminate noxious weed dispersal as required by special use permits, easement authorizations, or ROW instruments.

3.4.5 Erosion Control

Disturbed areas and/or designated sections of the project area should be recontoured to restore the site to the approximate preconstruction contour, as specified in use permits or ROW instruments. To the extent feasible, recontouring should be accomplished using topsoil or overburden stockpiled during construction. Revegetation will be as directed in the permits or ROW instruments.

In severely sloping and steep terrain, erosion control structures such as drainage swales, diversion channels, and terraces should be constructed to divert water away from the project area and thereby reduce soil erosion along the corridor.

Typical spacing intervals of erosion control structures are:

<u>Percent Slope</u>	<u>Spacing Interval</u>
Less than 1 percent	400 feet
1 to 5 percent	300 feet
5 to 15 percent	200 feet
15 to 25 percent	100 feet

If diversion of water from the project corridor would result in accelerated erosion in adjacent areas, drainage swales or other diversions shall not be constructed. The authorizing officer shall approve any exceptions to the spacing intervals of erosion control structures.

Suitable mulches and other soil-stabilizing practices should be used on all reseeded and topsoil enhanced areas to: 1) protect them from wind and water erosion; 2) improve water absorption; and 3) prevent degradation of water quality in adjacent fish habitat. These measures shall be specified by the BLM and consistent with the protection of resources.

3.4.7 Material Disposal

Disposal of materials unsuitable for trench backfilling, such as large rocks or excess backfill material should be consistent with the protection of environmental resources. Topsoil should be preserved whenever possible. Disposal sites shall be on private land or on approved sites used and sanctioned by federal and/or state agencies.

3.5 Compliance and Area Monitoring

Zona Communications shall comply with all general stipulations and mitigation measures contained herein. Compliance will be regulated by the BLM and maintained by Patrick Sherrill, Zona Communications' Operations Manager.

Zona Communications will self-monitor their operations and welcomes regular monitoring by the BLM.

3.6 Residual Impacts

Residual impacts are those impacts that remain after the implementation of mitigation. No residual impacts are anticipated.

4.0 PREPARERS AND REVIEWERS

Table 4.1. List of Preparers

Name	Title
Renee Ericson	Principal Ecologist/Tierra Right of Way Services
Jeff Jones	Archaeologist/Tierra Right of Way Services
Tim Jordan	Senior Field Biologist/Tierra Right of Way Services
Rebecca Weaver	Staff Botanist/Tierra Right of Way Services
Jim Weimer	Operations Manager/Zona Communications

Table 4.2. List of Reviewers

Name	Title
Jim Andersen	Lead Realty Specialist/BLM
Nona Baheshone	Project Manager/BLM
Tim Hughes	Wildlife Biologist/BLM
Mary Skordinsky	Recreation Planner/BLM
Connie Stone	Assistant Field Manager (Archaeologist)/BLM
Clay Templin/Steve Cohn	Field Manager/BLM

5.0 PERSONS AND AGENCIES CONSULTED

- USFWS – through online consultation
- AGFD – through online consultation
- BLM – Tim Hughes, Connie Stone, and Clay Templin

6.0 LITERATURE CITED

Arizona Department of Transportation (ADOT)

- 2000 *The Dust Devil Academy: Section 1 of 3*. Arizona State University College of Engineering and Applied Science. 29 pp.

Arizona Game and Fish Department (AGFD)

- 2002 *Haliaeetus leucocephalus*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. 8 pp.

Brown, David E. (Editor).

- 1994 *Biotic Communities: Southwestern United States and Northwestern Mexico*. University of Utah Press, Salt Lake City, UT.

Cohn, Steven

- 2010 Letter from the Bureau of Land Management, Phoenix District, Hassayampa Field Office, to Mr. James Garrison, State Historic Preservation Officer, regarding the Sun Valley-Lake Pleasant Fiber Loop Project. On file, Tierra Right of Way Services, Tucson.

Doak, David P.

- 2009 *Class III Cultural Resource Survey of 4.00 Linear Miles of Fiber-Optic Corridor Northwest of Phoenix, Maricopa County, Arizona*. Tierra Archaeological Report No. 2009-68. Tierra Right of Way Services, Ltd., Tucson.

Ericson, Renee, Cullen Cramer, Tim Jordan, and William Widener

- 2006 *A Biological Evaluation and Assessment of 236.11 Miles (380 Kilometers) of 25-Foot-Wide (7.6-Meter-Wide) Telecommunications Line Right-of-Way in Maricopa County, Arizona: The Sun Valley-Lake Pleasant Fiber Loop Project*. Tierra Right of Way Services, Tucson Arizona.

Hendricks, David M.

- 1985 *Arizona Soils*. Centennial Publication. College of Agriculture, University of Arizona, Tucson, Arizona.

Klucas, Eric Eugene (editor)

- 2007 *A Cultural Resources Assessment Survey of 236.11 Miles of 25-Foot-Wide (7.6-Meter-Wide) Telecommunications Line Right-Of-Way in Maricopa County, Arizona: The Sun Valley-Lake Pleasant Fiber Loop Project*. Tierra Archaeological Report No. 2006-18. Tierra Right of Way Services, Ltd., Tucson.

United States Department of the Interior

- 2005 *Agua Fria and Bradshaw-Harquahala Draft Resource Management Plan and Environmental Impact Statement*. Bureau of Land Management, Phoenix District. 807 pp.

- 1988a *Desert Tortoise Habitat Management on the Public Lands: A Rangeland Plan*. Bureau of Land Management. 23 pp.

1988b *Phoenix Resource Management Plan*. Bureau of Land Management, Phoenix District. 232 pp.

1981 *Lower Gila North Management Framework Plan*. Bureau of Land Management, Phoenix District. 458 pp.

United States Environmental Protection Agency (EPA)

2007 Ozone Air Quality Standards. Available at:
<http://www.epa.gov/air/ozonepollution/standards.html>

2002 *Federal Water Pollution Control Act: Sections 101-607*. Washington D.C. 230 pp.

Appendix A
CD with USGS Quadrangle Maps Showing Corridor Segments

Appendix B
Archaeological Survey Update Letter



September 30, 2009

Michael Steele
Director Environmental Planning Division
Tierra Right of Way Services, Ltd.
1575 East River Road, Suite 201
Tucson, Arizona 85718

Re: Supplemental cultural resources survey for the Accipiter project.

Dear Mr. Steele,

Due to slight changes in the overall route of the Accipiter Project route, archeologists from Tierra's Cultural Resources Division conducted a supplemental Class III pedestrian survey of approximately 4 miles of re-routed fiber-optic line corridor. The width of the corridor is 25 feet with a permanent right-of-way of 10 feet. This re-route included two segments, one that follow an existing utility line corridor adjacent to Quintero Lane in Peoria, Arizona. The second segment follows roads maintained by the Maricopa Department of Transportation and includes segments that cross private property and lands administered by the Arizona State Land Department in Surprise, Arizona.

The results of the cultural resources survey are reported in *A Class III Cultural Resource Survey of 4.00 Linear Miles of Fiber-Optic Corridor Northwest of Phoenix, Maricopa County, Arizona*, Tierra Archaeological Report No. 2009-68, by David P. Doak.

The results of the cultural resources survey indicate that the proposed re-routes of the fiber-optic line will have no impact on any significant cultural resources. Tierra recommends that construction of the proposed fiber optic line be allowed to proceed along the re-routed segments without the need for additional cultural resources investigations.

Sincerely,

Fred Huntington
Director Cultural Resources Division

Appendix C
Biological Evaluation Addendum



Michael Steele
Director, Environmental Planning Division
Tierra Right of Way Services, Ltd.
1575 East River Road, Suite 201
Tucson, Arizona 85718

September 29, 2009

RE: Addendum to the Biological Evaluation and Assessment entitled *A Biological Evaluation and Assessment of 236.11 Miles (380 Kilometers) of 25-Foot-Wide (7.6-Meter-Wide) Telecommunications Line Right-of-Way in Maricopa County, Arizona: The Sun Valley-Lake Pleasant Fiber Loop Project*, by Renee Ericson, William Widener, Tim Jordan, and Cullen Cramer, dated October 2, 2006.

Mr. Steele,

Following submittal of the above referenced report, Zona Communications (formerly Accipiter Communications) revised their proposed route and added additional segments of proposed fiber-optic telecommunications corridor. These additional segments were surveyed by Tierra Right of Way Services, Ltd. (Tierra), biology staff. In total, approximately 8.8 miles (14.6 km) of 25-foot-wide (7.6-m-wide) additional corridor were surveyed, for a total surveyed length of 244.9 miles (394.2 km) for the entire proposed telecommunications corridor. The additional corridor segments are shown on the overall project map included in the draft Environmental Assessment and on the White Tank Mountains NE and Hieroglyphic Mountains SW U.S. Geological Survey (USGS) topographic quadrangle maps included in Appendix A of the draft Environmental Assessment.

Based on the results of these surveys (Table 1 and Table 2), the conclusions reached in the original Biological Evaluation and Assessment (Ericson et al. 2006) remain unchanged.

SURVEY LOCATION

Three separate areas were surveyed. The first segment of proposed corridor is an approximately 4.1-mile-long (6.6-km-long) corridor that begins at a junction box just west of the intersection of 219th Avenue and Pinnacle Peak Road and runs cross-country north, west of the section line between Section 11 and Section 12, across private land to just south of the Luke Air Force Base Auxiliary Field. Here, the corridor turns west and continues cross-country north of the section line between Section 2 and Section 11 across Arizona State Land Department (ASLD) managed land to West Jomax Road. The corridor follows the road north and east along the east side of the CAP canal to the intersection of Crozier Road and West Jomax Road just south of the CAP canal. Here, the corridor crosses the CAP canal and runs along the west side of the section line between Section 35 and Section 36 in the Maricopa County Department of Transportation (MCDOT) right-of-way along Crozier Road to its intersection with Patton Road. Specifically, the surveyed area is within a portion of Section 2, Township 4 North, Range 3 West; along the east section line of Section 11, Township 4 North, Range 3 West; and along the east section line of Section 35, Township 5 N, Range 3 West; Gila and Salt River Baseline and Meridian (G&SRB&M), Maricopa County, Arizona,

as indicated on the White Tank Mountains NE, Arizona (1971), 1:24,000 7.5-minute USGS topographic quadrangle map.

The second segment includes approximately 3.8 miles (6.1 km) of road right-of-way within a neighborhood south of Pinnacle Creek Road and west of 219th Avenue. Specifically, the surveyed area is within a portion of Section 14, Township 4 North, Range 3 West, G&SRB&M, Maricopa County, Arizona, as indicated on the White Tank Mountains NE, Arizona (1971), 1:24,000 7.5-minute USGS topographic quadrangle map.

The third segment of proposed corridor consists of a 0.77-mile-long (1.2-km-long) cross-country segment across Bureau of Land Management (BLM) managed land extending from just west of the intersection of Highway 74 and North Quintero Lane north to the Quintero Golf and Country Club. The corridor runs just west of an existing utility corridor that is located west of the access road to the Quintero Golf and Country Club. Specifically, the project area is located within the W ½ of Section 25, Township 6 North, Range 2 West, G&SRB&M, Maricopa County, Arizona, as indicated on the Hieroglyphic Mountains SW, Arizona (1981), 1:24,000 7.5-minute USGS topographic quadrangle.

METHODS

Portions of the proposed corridor were surveyed on November 3, 2008 (survey conducted by Tim Jordan, Senior Biologist), and portions were surveyed on September 25, 2009 (survey conducted by Rebecca Weaver, Staff Botanist). Vegetation that could not be identified in the field was collected for later identification.

Ericson et al.'s 2006 report listed 39 special status species that may occur in the general project area. Thirty-one were removed from further consideration because they are either not known in the specific project area or there is not suitable habitat to support them in the project area. An additional three species listed by the U.S. Fish and Wildlife Service that were not included in Ericson et al.'s analysis were also removed from consideration because they are either not known in the specific project area or there is not suitable habitat to support them in the project area. These species are California Least Tern (*Sterna antillarum browni*), Woundfin (*Plagopterus argentissimus*), and Roundtail Chub (*Gila robusta*). See Table 3 for justification for their exclusion. Prior to conducting the current field survey, the Arizona Game and Fish Department (AZGFD) Heritage Data Management System (HDMS) was consulted to determine which special status species had been previously recorded within 3 miles (4.8 km) of these project areas. The list did not include any additional species that were not addressed in the original Biological Evaluation and Assessment.

During the 2008 and 2009 surveys, the project area was assessed for eight special status species identified in the Biological Evaluation and Assessment (Ericson et al. 2006) with potential to occur in the project area, including Western Burrowing Owl (*Athene cunicularia hypugaea*), Loggerhead Shrike (*Lanius ludovicianus*), Bald Eagle (*Haliaeetus leucocephalus*), Rosy Boa (*Charina trivariata*), Desert Tortoise (Sonoran Population) (*Gopherus agassizii*), California Leaf-nosed Bat (*Macrotus californicus*), Lesser Long-nosed Bat (*Leptonycteris curasoae yerbabuena*), and Cave Myotis (*Myotis velifer*).

RESULTS

Vegetation in the first and second (neighborhood) segment areas is representative of both the Arizona Upland and the nearby Lower Colorado biotic communities. Dominant vegetation observed

includes Creosote (*Larrea tridentata*), Brittlebush (*Encelia farinosa*), and Velvet Mesquite (*Prosopis velutina*). Other plant species observed include Canyon Ragweed (*Ambrosia ambrosioides*), Jimmyweed (*Isocoma wrightii*), Cane Cholla (*Cylindropuntia spinosior*), Crowded Rayweed (*Parthenium incanum*), Wolfberry (*Lycium berlandieri*), Fishhook Barrel Cactus (*Ferocactus wislizenii*) and Blue Palo Verde (*Parkinsonia florida*). Tire tracks as well as more developed roads that cross through the project area indicate that the area is used for vehicular recreation. Many portions have limited vegetation and are heavily impacted by vehicle use and refuse dumping. Some areas of roadside rights-of-way in residential areas have limited landscaping.

Vegetation in the third segment is representative of the Arizona Upland biotic community. Dominant vegetation observed includes Foothills Palo Verde (*Parkinsonia microphylla*), Ironwood (*Olneya testosa*), Saguaro (*Carnegiea gigantea*), Hedgehog Cactus (*Echinocerus fasciculatus*), Creosote, Fishhook Barrel Cactus, White-thorn Acacia, and Cat-claw Acacia. The area is actively used to graze cattle, as several trails and cow droppings were identified at the time of the survey.

One special status species was identified in the area of the proposed corridor. A single Loggerhead Shrike was observed in a tree north of the intersection of 219th Avenue and Pinnacle Peak Road; no nests were observed. This observation is located approximately 2–3 miles (3.2–4.8 km) east of where a Loggerhead Shrike was observed in 2006 (Ericson et al. 2006).

Burrows of sufficient size to be potentially used by Western Burrowing Owl were identified adjacent to the road within the road right-of-way along Crozier Road north of the CAP canal. However, there was no evidence that they were occupied.

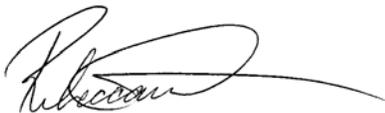
Puncture Vine (*Tribulus terrestris*) was identified in the project corridor adjacent to the road within the road right-of-way along Crozier Road north of the CAP canal. This species is listed as Prohibited and Regulated by the Arizona Department of Agriculture.

A list of all vegetation identified during the 2008 and 2009 surveys is given in Table 1. A list of all wildlife identified during 2008 and 2009 is given in Table 2.

CONCLUSIONS

Based on the results of these surveys, the conclusions reached in the original Biological Evaluation and Assessment (Ericson et al. 2006) remain unchanged.

Sincerely,



Rebecca Weaver
Staff Botanist

Table 1. Vegetation Observed

Scientific Name	Common Name
<i>Acacia constricta</i>	White-thorn Acacia
<i>Acacia greggii</i>	Cat-claw Acacia
<i>Agave</i> sp. (landscape cultivar)	agave
<i>Ambrosia ambrosioides</i>	Canyon Ragweed
<i>Ambrosia deltoidea</i>	Triangle-leaf Bursage
<i>Ambrosia</i> sp.	bursage
<i>Bromus ciliatus</i>	Fringed Brome
<i>Carnegiea gigantea</i>	Saguaro
<i>Cylindropuntia bigelovii</i>	Teddy Bear Cholla
<i>Cylindropuntia echinocarpa</i>	Silver Cholla
<i>Dodonaea viscosa</i> (landscape cultivar)	Hopbush
<i>Echinocereus fasciculatus</i>	Hedgehog Cactus
<i>Encelia farinosa</i>	Brittlebrush
<i>Ferocactus wislizenii</i>	Barrel Cactus
<i>Fouquieria splendens</i>	Ocotillo
<i>Hymenoclea monogyra</i>	Burrobush
<i>Isocoma wrightii</i>	Jimmyweed
<i>Larrea tridentata</i>	Creosote
<i>Lycium berlandieri</i>	Wolfberry
<i>Olneya testosa</i>	Ironwood
<i>Opuntia spinosior</i>	Cane Cholla
<i>Parkinsonia florida</i>	Blue Palo Verde
<i>Parkinsonia microphylla</i>	Foothills Palo Verde
<i>Parthenium incanum</i>	Crowded Rayweed
<i>Pinus</i> sp. (landscape cultivar)	pine
<i>Prosopis velutina</i>	Velvet Mesquite
<i>Sphaeralcea ambigua</i>	Desert Globemallow
<i>Stephanomeria</i> sp.	wirelettuce
<i>Tribulus terrestris</i>	Puncture Vine
<i>Xanthium strumarium</i>	Cocklebur

Table 2. Wildlife Observed

Common Name	Scientific Name	Observation
Black-throated sparrow	<i>Amphispiza bilineata</i>	visual
Common Side-blotched Lizard	<i>Uta stansburiana</i>	visual
Coyote	<i>Canis latrans</i>	scat
Deer	<i>Odocoileus hemionus</i>	scat
Desert Cottontail	<i>Sylvilagus audubonii</i>	visual
Domestic cow	<i>Bos taurus</i>	scat, trail
Domestic horse	<i>Equus caballus</i>	scat
Gila woodpecker	<i>Melanerpes uropygialis</i>	visual
Loggerhead Shrike	<i>Lanius ludovicianus</i>	visual
Mourning Dove	<i>Zenaida macroura</i>	visual
Round-tailed Ground Squirrel	<i>Spermophilus tereticaudus</i>	visual, burrows
Turkey Vulture	<i>Cathartes aura</i>	visual
Verdin	<i>Auriparus flaviceps</i>	visual
Western Kingbird	<i>Tyrannus verticalis</i>	visual
Whiptail	<i>Cnemidophorus</i> sp.	visual

Table 3. Exclusion Justification Table

Scientific Name	Common Name	Status	Habitat/Range	Exclusion Justification
<i>Gila robusta</i>	Roundtail Chub	C (FWS)	Cool to warm waters of rivers and streams, often in the deepest pools and eddies of large streams.	No habitat present.
<i>Plagopterus argentissimus</i>	Woundfin	E (FWS)	Shallow, warm, turbid, fast-flowing water.	No habitat present.
<i>Sterna antillarum browni</i>	California Least Tern	E (FWS)	Open, bare, or sparsely vegetated areas along shorelines of inland rivers, lakes, reservoirs, or drainage systems.	No habitat present.

Note: from U.S. Fish and Wildlife Service (FWS) online county list for Maricopa County