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BEFORE THE ARIZONA CORPORATION COMMISSION

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GARY PIERCE- Chairman
BOB STUMP
SANDRA KENNEDY
PAUL NEWMAN
BRENDA BURNS

Arizona Corporation Commission
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IN THE MATTER OF THE APPLICATION OF
UNS ELECTRIC, INC. FOR A CERTIFICATE
OF ENVIRONMENTAL COMPATIBILITY
FOR THE VAIL TO VALENCIA 115 KV TO
138 KV TRANSMISSION LINE UPGRADE
PROJECT, ORIGINATING AT THE EXISTING
VAIL SUBSTATION IN SEC. 4, T.16S., R.15E.,
PIMA COUNTY, TO THE EXISTING
VALENCIA SUBSTATION IN SEC. 5, T. 24S.,
R.14E., IN THE CITY OF NOGALES, SANTA
CRUZ COUNTY, ARIZONA.

Docket No. L-00000F-09-0190-00144
Case No. 144

**NOTICE OF FILING CONSTRUCTION
MITIGATION AND RESTORATION
PLAN**

Pursuant to Decision No. 71282 (October 7, 2009), UNS Electric, Inc. hereby files its
Construction Mitigation and Restoration Plan, attached hereto as Attachment 1, in compliance
with Condition No. 13 set forth in the Certificate of Environmental Compatibility.

RESPECTFULLY SUBMITTED this 19th day of September 2012.

UNS ELECTRIC, INC.

By *Marcus Jorden*
Marcus Jorden
Senior Counsel
UNS Electric, Inc.
88 E. Broadway Blvd., P.O. Box 711
Tucson, Arizona 85702

1 Original and 13 copies filed
2 this 19th day of September 2012, with:

3 Docket Control
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington Street
6 Phoenix, Arizona 85007

7 A copy of the foregoing was hand-delivered/mailed
8 this 19th day of September 2012 to:

9 Chairman John Foreman
10 Arizona Power Plant and Transmission Line Siting Committee
11 Arizona Attorney General Office
12 1275 West Washington Street
13 Phoenix, Arizona 85007

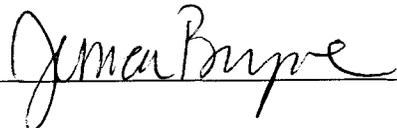
14 Marshall Magruder
15 P. O. Box 1267
16 Tubac, Arizona 85646-1267

17 Elizabeth Buchroeder-Webb
18 17451 E. Hilton Ranch Rd.
19 Vail, Arizona 85641

20 Janice M. Alward, Esq.
21 Chief Counsel, Legal Division
22 Arizona Corporation Commission
23 1200 West Washington Street
24 Phoenix, Arizona 85007

25 Steve Olea
26 Director, Utilities Division
27 Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Compliance Section
Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

25
26 By 
27

ATTACHMENT

1

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Construction Mitigation and Restoration Plan

September 2012

Prepared by UNS Electric, Inc.

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1.0 – Introduction

The construction and mitigation requirements described in this Plan apply to all work performed as part of the Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project, consisting of the following:

1. Interconnect the northern end of the line with Tucson Electric Power's Vail Substation instead of the Nogales Tap.
2. Upgrade the voltage of the existing 115 kV line to 138 kV.
3. Replace aging wooden H-frame structures with steel monopoles.
4. Removal of unused facilities and relinquishment of right-of-way.

UNS Electric will implement the construction and mitigation requirements contained in this Plan to the extent that they do not conflict with the requirements of any applicable federal, state, or local rules and regulations and other permits obtained for the project.

2.0 – Construction and Access Plan

2.1 Construction Plan

UNS Electric designs, constructs, operates, and maintains transmission lines to meet or exceed the requirements of the National Electrical Safety Code (NESC), US Department of Labor Occupational Safety and Health Standards, NERC and FERC requirements, and UNS Electric's own policies for safety and protection of landowners, their property, and the public. All permanent improvements in proximity to the transmission line, such as fences, metal gates, and metallic structures, will be grounded in accordance with existing codes.

Permitting

Appropriate right-of-way authorizations from federal, state, and private landowners will be obtained for the proposed transmission line.

Surveying and Engineering

Survey and preliminary engineering work will locate the transmission line centerline, determine accurate topographical profiles along the centerlines, and determine the exact location of structures. Topography, soils, and man-made features will determine transmission line structure design and location.

Vegetation Removal and Access Road Grading, and Construction

Areas around tower sites and associated with pulling and tensioning activities will be cleared of taller vegetation. Tree and shrub trimming may be required along and within the permanent right-of-way to control vegetation that may jeopardize the maintenance, safety, or reliability of the line. The vegetation will be cut to a height of approximately four to six inches above groundline. The proposed transmission line route will follow existing roadways and utility access roads where available. Some ground and vegetation clearing will be necessary, particularly where access roads do not exist or are inadequate for construction activities. In general, access roads required for the project are 16 feet-wide to allow for construction equipment to access the structures and conductors. In general the proposed project replaces an existing transmission line in-place and where primary access is available. New access roads for the portion of the proposed project that do not follow existing transmission lines or other linear infrastructure will be entirely within the proposed 100 foot-wide right-of-way or other rights-of-way as obtained.

Material Staging and Lay-down

Material staging will occur off-site in UNS Electric storage yards or other previously disturbed areas. Material lay-down areas along and within the transmission line right-of-way will occur at each transmission line structure site. An area as large as 150 feet by 50 feet is typically needed for this activity and may require clearing tall vegetation. The lay-down materials will include steel poles and arms, insulators, and associated assembly hardware. These construction materials will be transported to the project area by trucks. To the extent possible, construction lay-down areas will be located in previously disturbed areas, although some vegetation clearing may be necessary in these areas.

Assembly

Assembly includes assembling pole sections, in the case of multiple segment poles, mounting hardware and insulators, and to extent required arms, to the poles. Structure assembly will take place at each structure location.

Hole Auguring

For each tangent structure, construction will require auguring a single five-foot diameter hole to a depth of approximately 16 feet. This diameter allows for replacement and compaction of removed soils around

the pole. Dead-end and angle structures will be set on concrete pier foundations that will be poured in-place. Foundations will be excavated to a depth from 15 to 60 feet and approximately 9 feet in diameter. Spoils at foundations will be spread on-site to a depth no greater than 6 inches deep. A 50 foot-wide radius around each structure will be cleared of tall vegetation using a brush hog.

Structure Erection

Erection of the structures will require a crane to lift the assembled structure from the ground and set it into the augured hole or onto the foundation; augured holes will then be backfilled. In relatively level areas of the project, it is anticipated that grading will not be required for this activity. However, in areas where terrain is more severe, level pads for the cranes will need to be constructed. These pads will be approximately 30 feet by 50 feet in size, located adjacent to each structure.

Stringing and Tensioning

In order to string and tension the transmission line conductors, an all-wheel drive vehicle will drive down the center of the transmission line right-of-way pulling ropes, which have been threaded through pulleys at the end of each insulator string on each structure. As an alternative, a helicopter may be used in place of an all-wheel drive vehicle to accomplish this activity. The rope is attached to a cable, which in turn is attached to conductors on truck-mounted reels. The rope, cable, and conductor are pulled through the pulley system and pulled to the appropriate tension using a conductor puller and truck-mounted tensioning rig, temporarily anchored to the ground at pulling and tensioning locations.

Pulling locations typically require an area about 100 feet by 200 feet and tensioning locations require an area about 100 feet by 300 feet. The majority of this area will not be disturbed and minimal or no brush clearing will be required. When pulling is complete, the conductors are clamped to the bottom of each insulator.

Removal of Unused Facilities

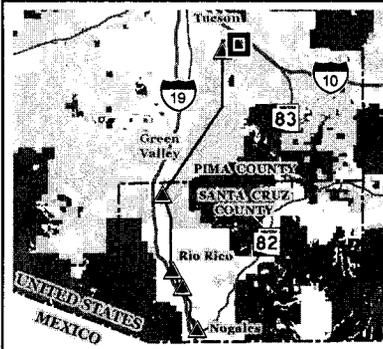
Once the 138kV transmission line is in commercial operation, UNS Electric will remove all unused facilities and relinquish the existing 115kV rights-of-way where no distribution is attached to the existing transmission line. Existing H-frame transmission line structures with distribution attached will have one leg of the structure removed, and all facilities will be moved to the remaining leg of the structure. The remaining pole will then be topped just above the point of attachment.

Safety Program

UNS Electric, or its construction contractor, will prepare and conduct a safety program in compliance with all applicable federal, state, and local safety standards and requirements, and UNS Electric's general practices and policies. The safety program will include, but not be limited to, procedures for accident prevention, use of protective equipment, medical care of injured employees, safety education, fire protection, and general health and safety of employees and the public. UNS Electric will also establish provisions for taking appropriate actions in the event the contractor fails to comply with the approved safety program.

2.2 Access Plan

The proposed transmission line route will follow existing roadways and utility access roads where available. In general, access roads required for the project are 16-feet wide to allow for construction equipment to access the structures and conductors. In general the proposed project replaces an existing transmission line in-place and primary access is available. New access roads for the portion of the proposed project that do not follow existing transmission lines or other linear infrastructure will be entirely within the proposed 100 foot-wide right-of-way. Access roads permitted and proposed for project use are illustrated in Figures 1-10.

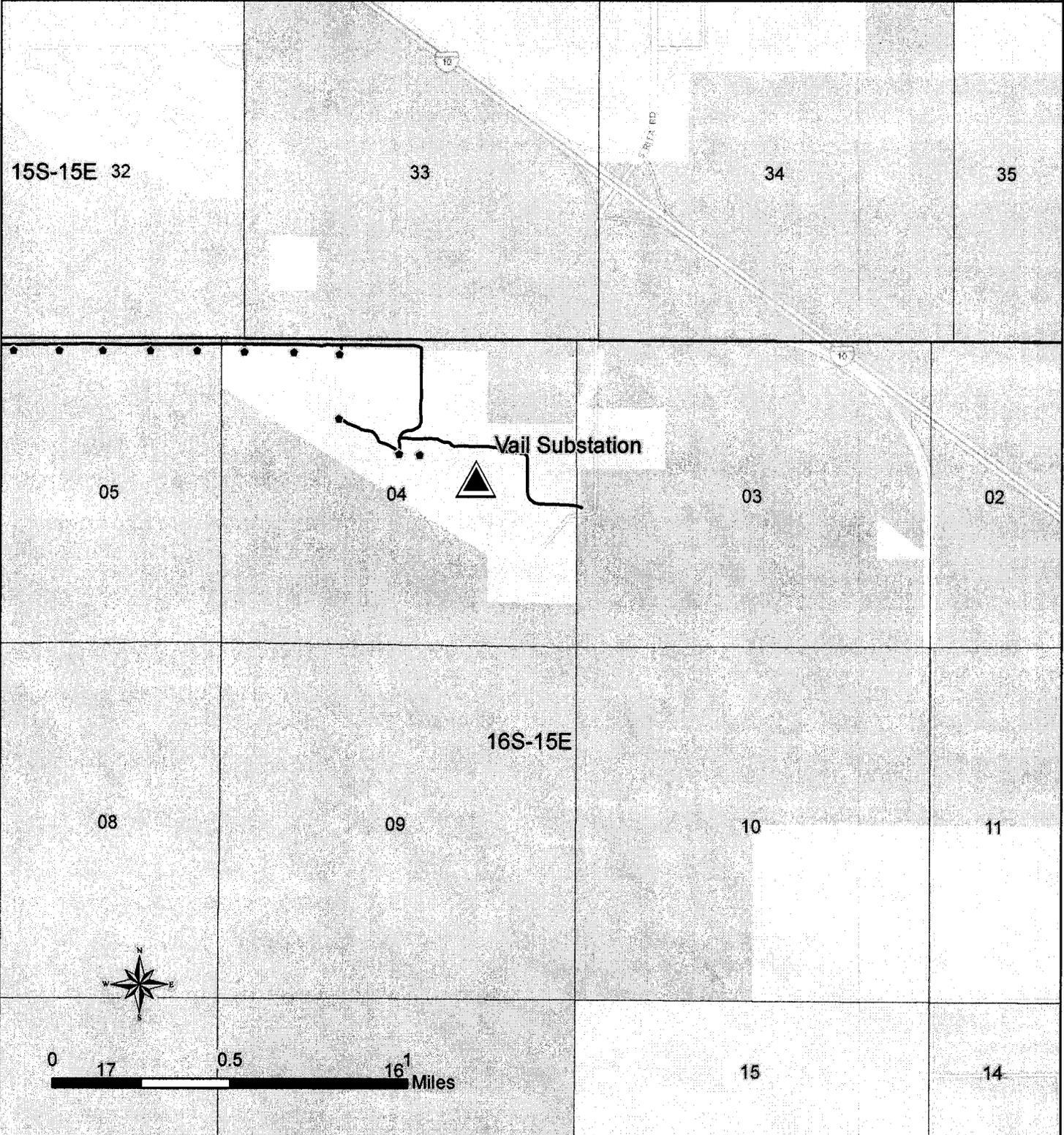


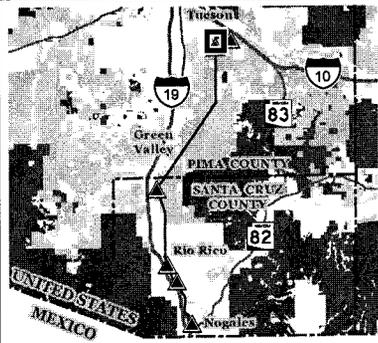
ACCESS PLAN - FIGURE 1

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private



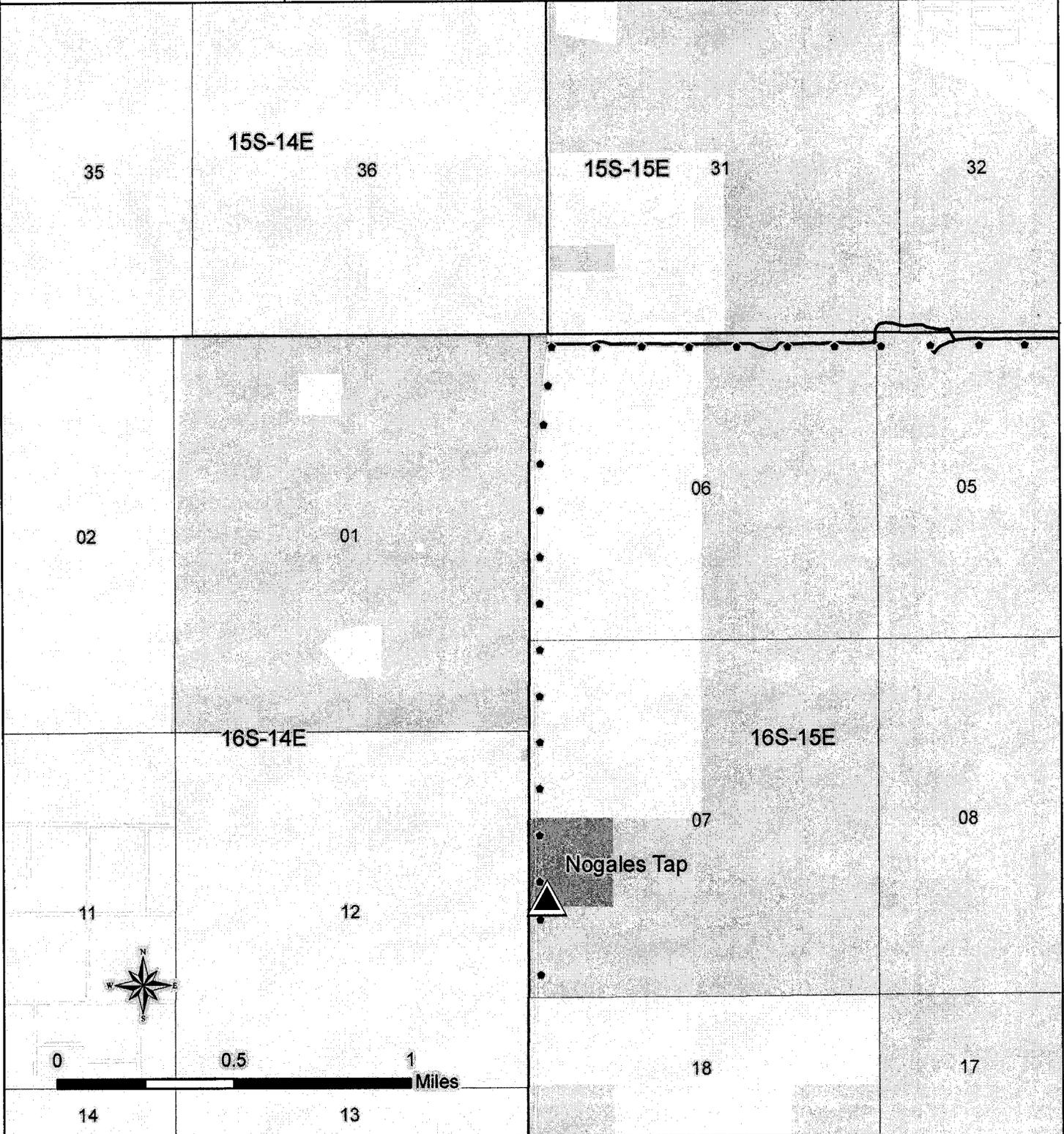


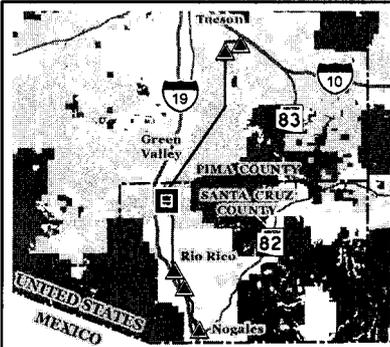
ACCESS PLAN - FIGURE 2

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private



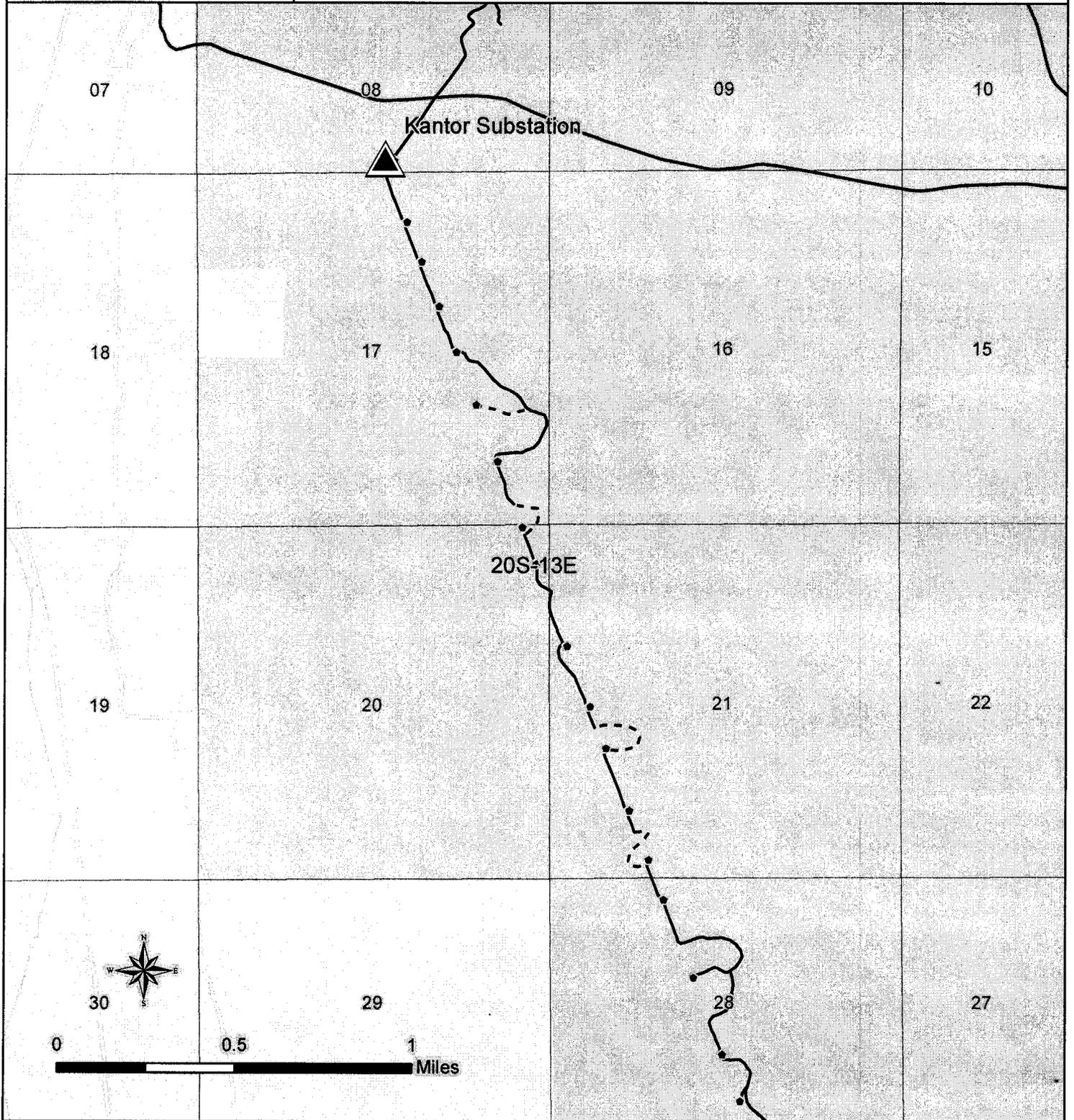


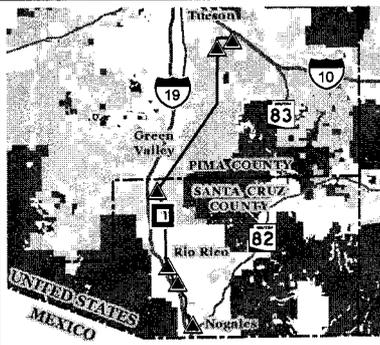
ACCESS PLAN - FIGURE 3

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private





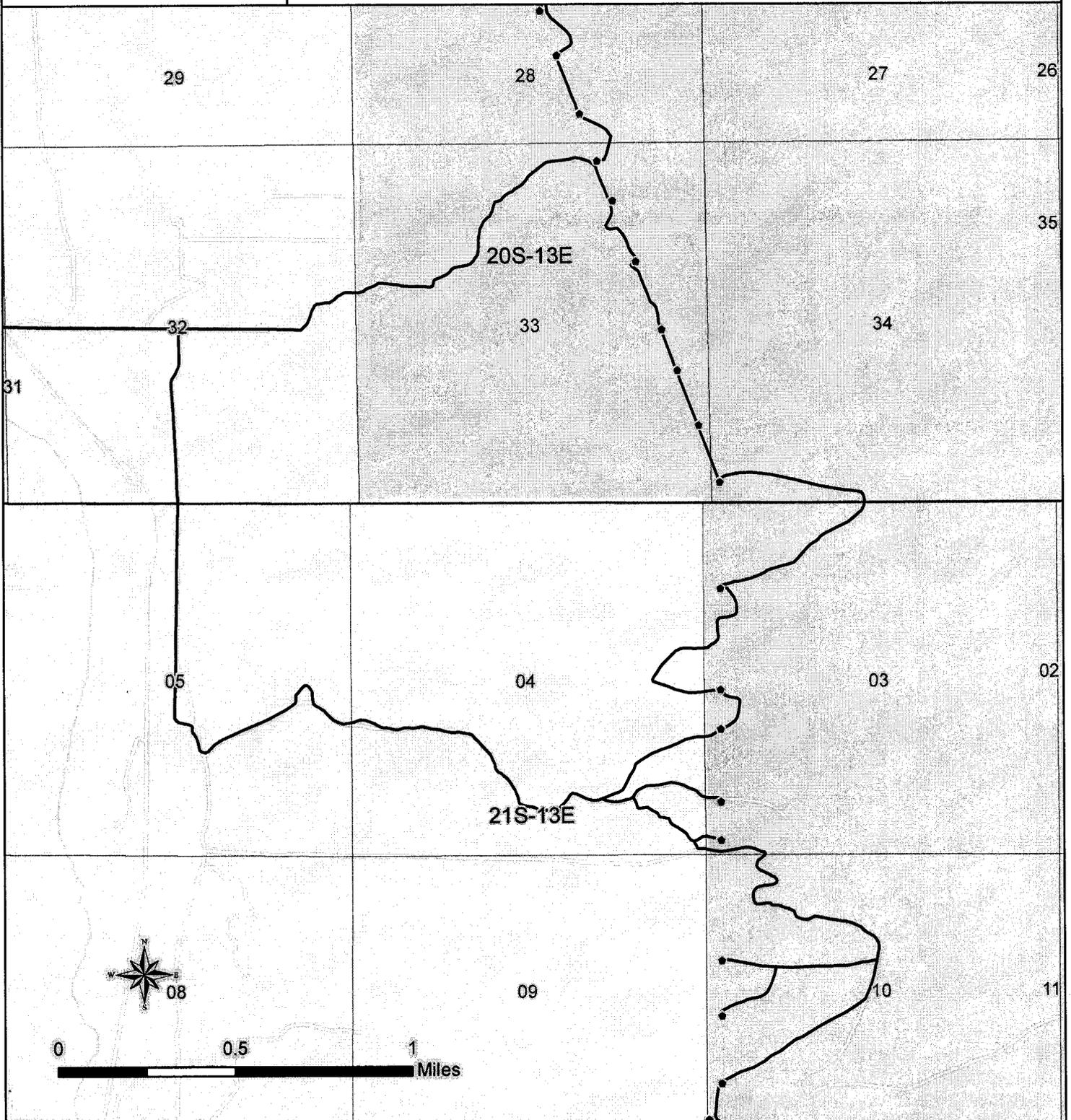
ACCESS PLAN - FIGURE 4

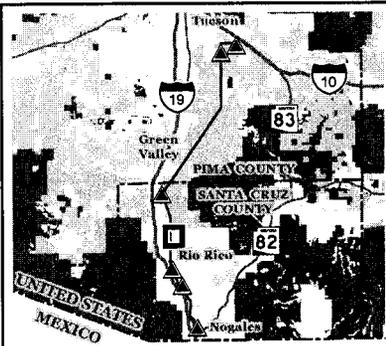
Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- - - Proposed Road
- Preliminary Structure Location
- ▲ Substation
- Federal
- ▨ State
- Private

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SERVICES



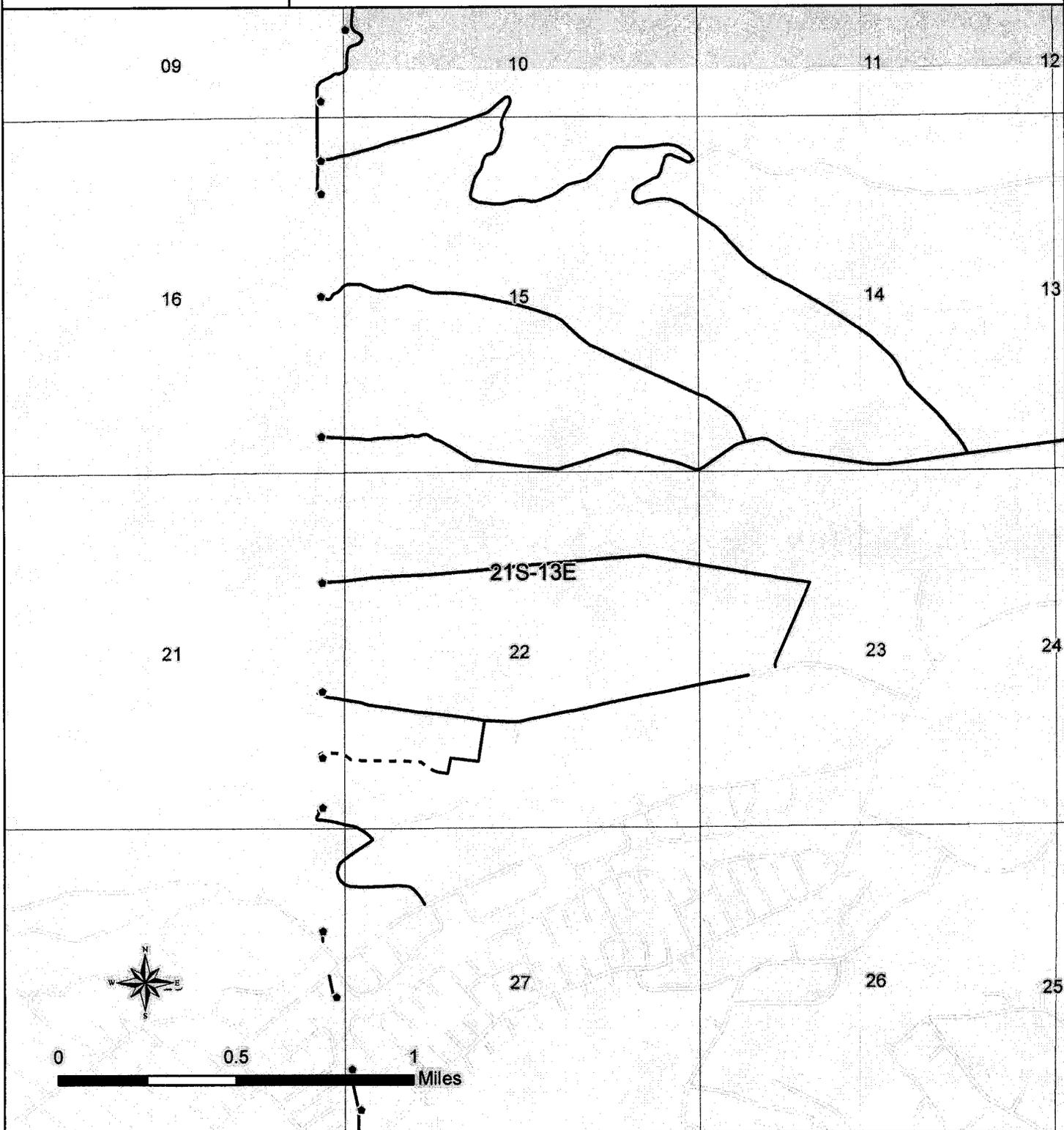


ACCESS PLAN - FIGURE 5

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private



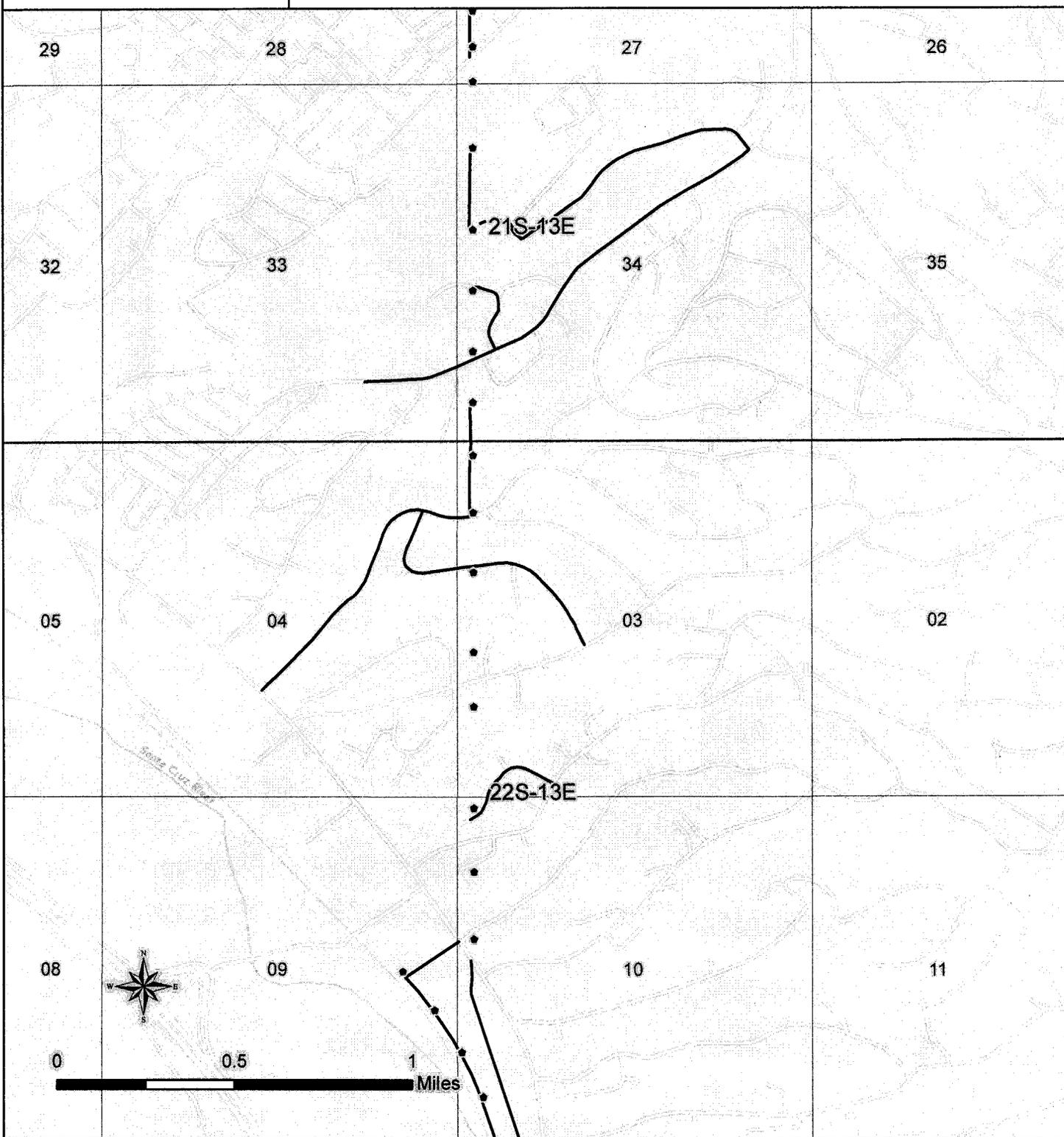


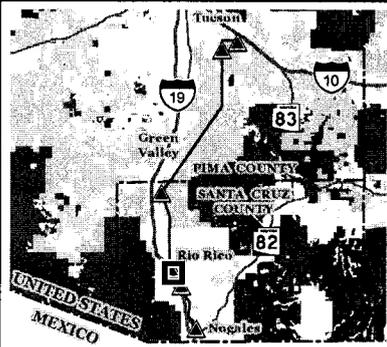
ACCESS PLAN - FIGURE 6

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- - - Proposed Road
- Preliminary Structure Location
- ▲ Substation
- Federal
- ▨ State
- Private



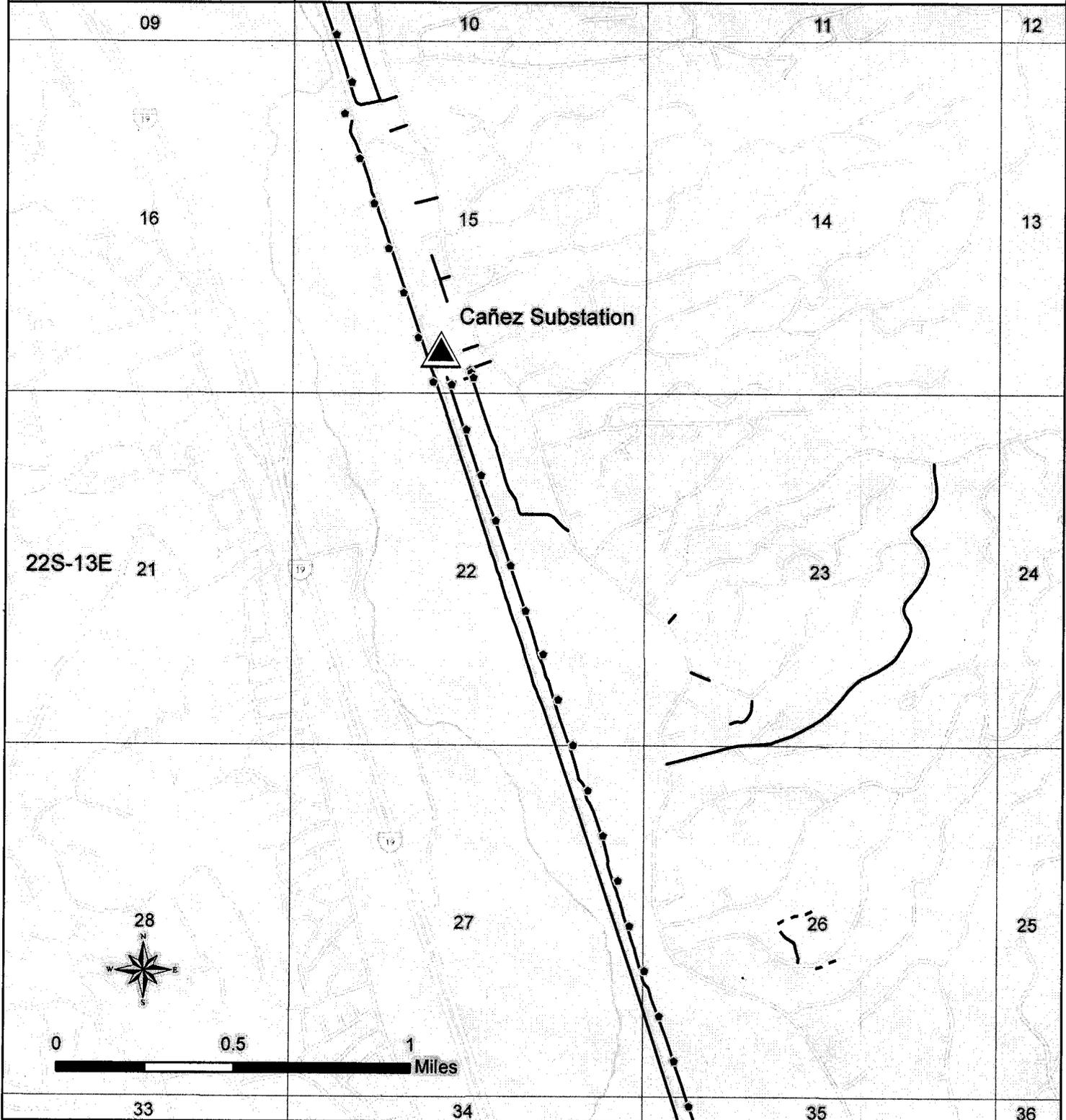


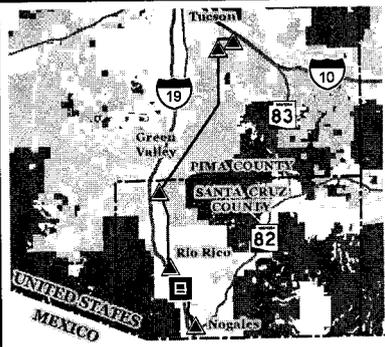
ACCESS PLAN - FIGURE 7

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- - - Proposed Road
- Preliminary Structure Location
- ▲ Substation
- Federal
- ▨ State
- Private



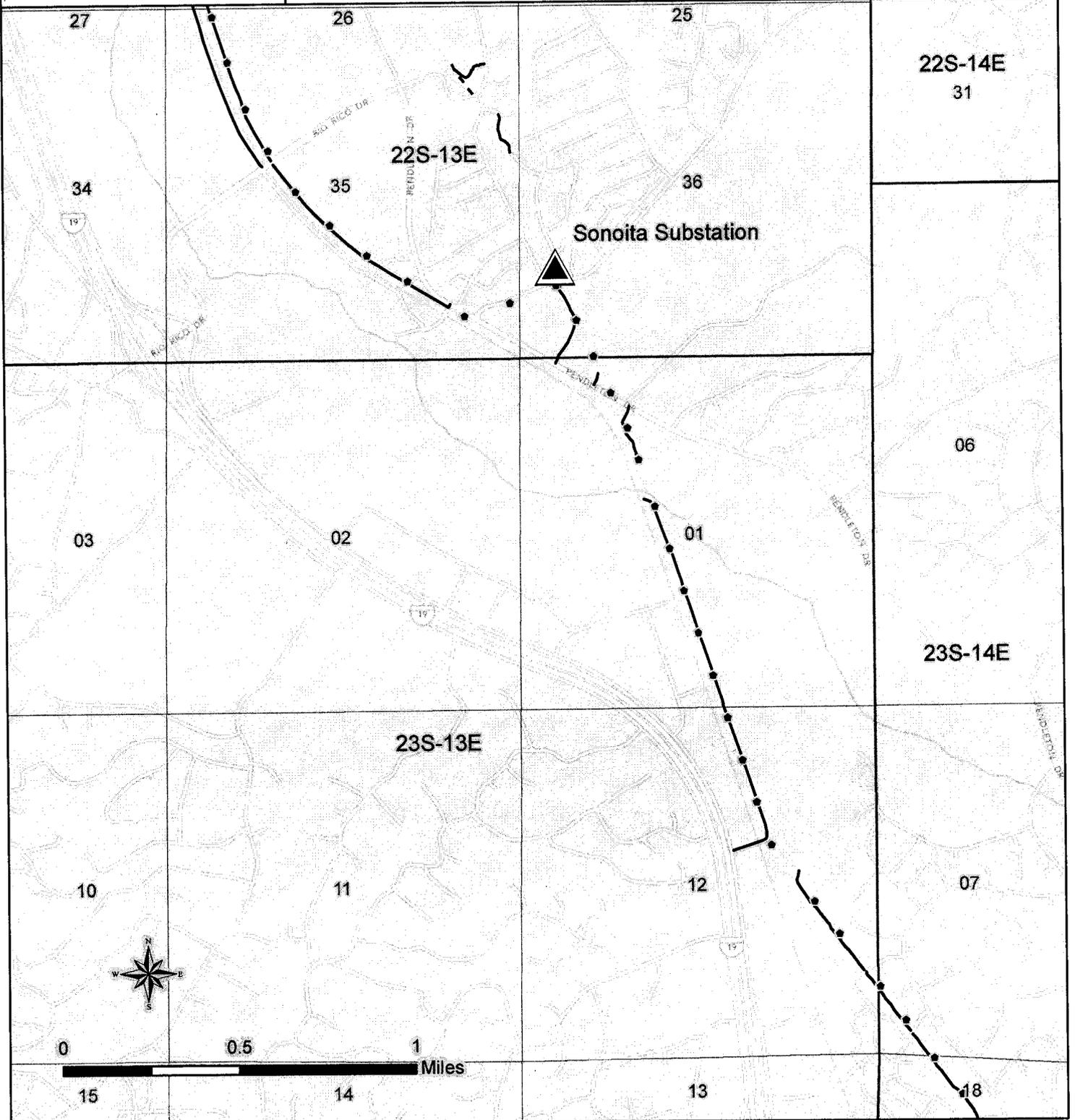


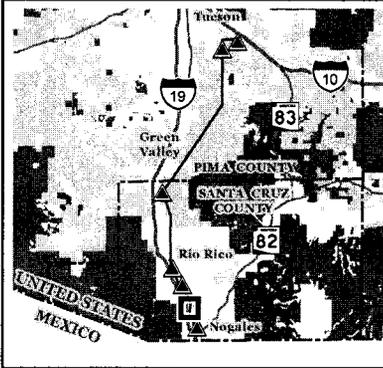
ACCESS PLAN - FIGURE 8

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private



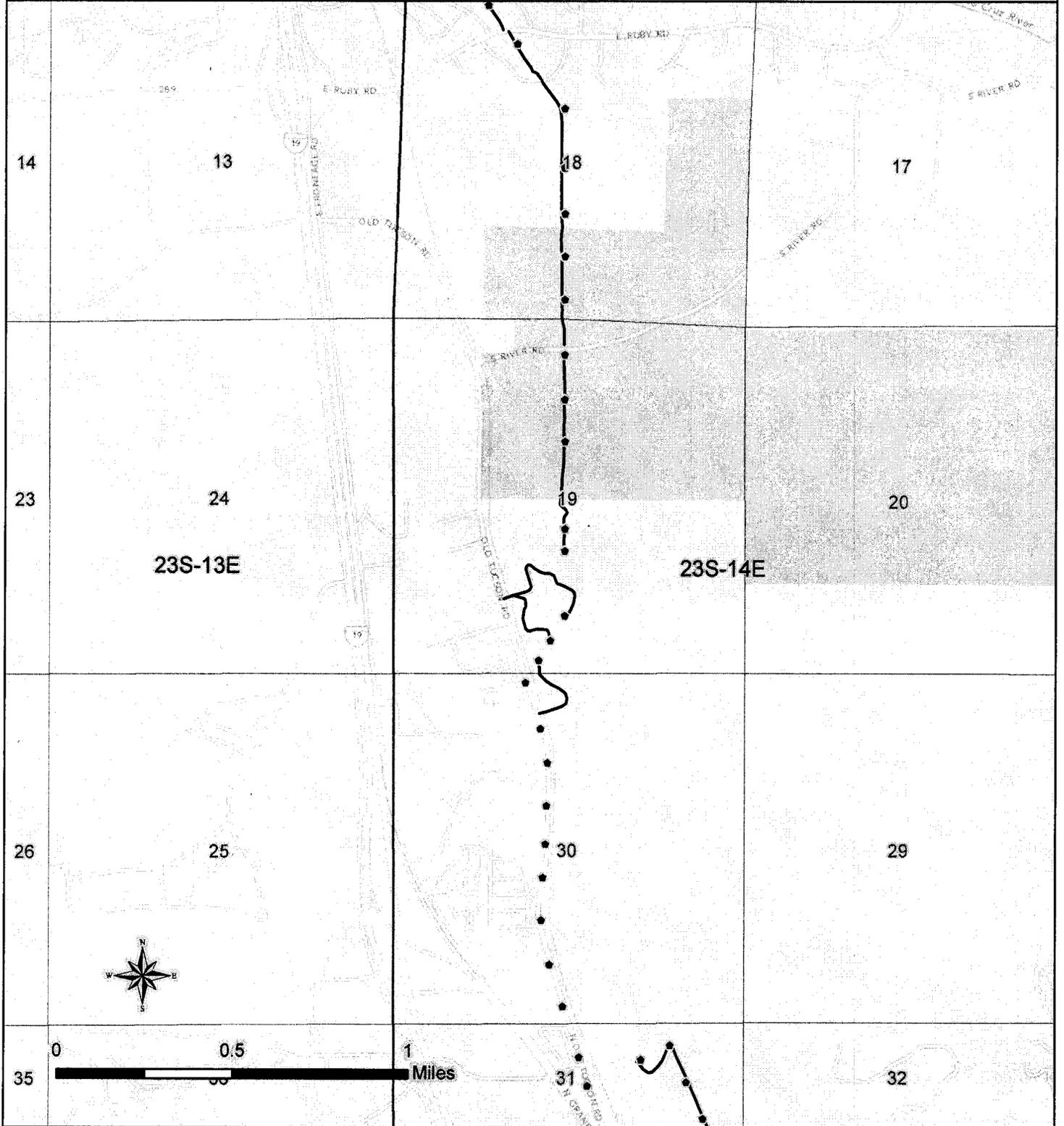


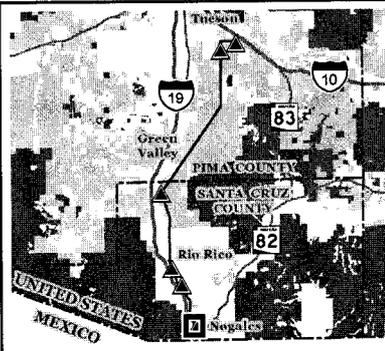
ACCESS PLAN - FIGURE 9

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- Proposed Road
- Preliminary Structure Location
- Substation
- Federal
- State
- Private



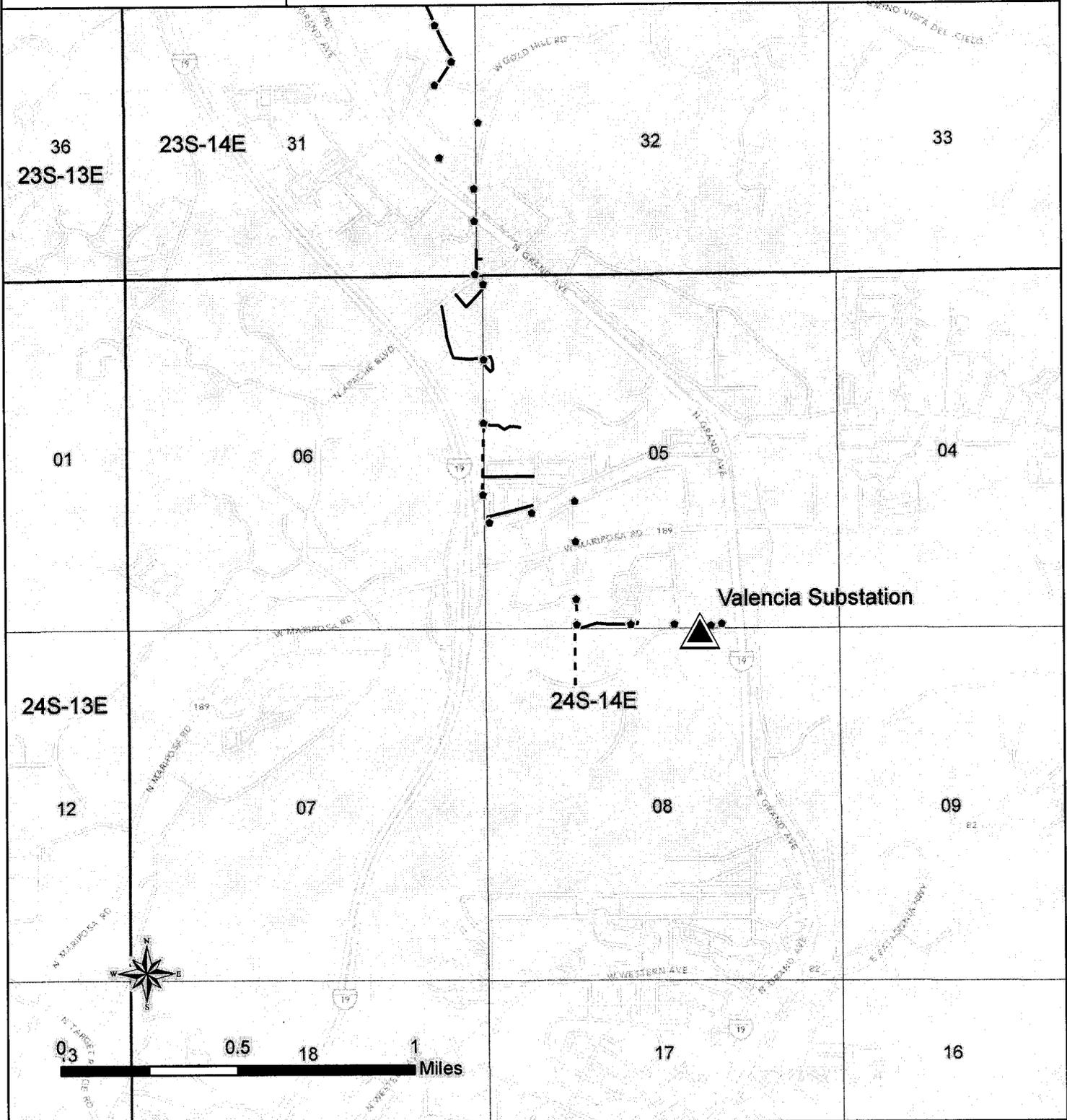


ACCESS PLAN - FIGURE 10

Vail to Valencia 115kV to 138kV Transmission Line Upgrade Project

Legend

- Existing Road
- - - Proposed Road
- Preliminary Structure Location
- ▲ Substation
- Federal
- ▨ State
- Private



3.0 – General Conditions

3.1 Tailboard and Crew Training

- All construction supervisors will be required to attend environmental training prior to project construction. The training will address environmental concerns, applicable environmental laws, and requirements for compliance. The training will highlight the Pima Pineapple Cactus, Yellow-billed Cuckoo, Gila topminnow, Lesser Long-nosed Bat, and Sonoran desert tortoise so that supervisors are aware of the species and measures to be implemented to reduce potential impacts.

3.2 Measures to Minimize Disturbance

- A fire prevention plan will be developed and adhered to by all personnel to prevent an accidental wildfire.
- To avoid the spread of noxious weeds, construction equipment will be washed and inspected prior to entering the work site for the first time and prior to each subsequent return if removed from the project.
- To avoid the spread of noxious weeds, areas requiring vegetation clearing around pole structures will be cleared to ground level but the root system of existing vegetation will be left intact to resprout.
- In order to avoid impacts to drainage channels and stream banks, where feasible UNS Electric will locate structures outside the Ordinary High Water Mark, as determined by the U.S. Army Corps of Engineers.
- If a structure is located within 50' of a wash, the Ordinary High Water Mark will be marked with lath and flagging for avoidance.
- In the event a structure will be located within the Ordinary High Water Mark, as determined by the U.S. Army Corps of Engineers, or access road improvements require a fill, a permit will be obtained in accordance with applicable laws and regulations.
- Access roads crossing washes will be maintained by pulling back stream banks.
- Vegetation removal shall be the minimum necessary to complete the work.

3.3 Cleanup and Restoration

- UNS Electric will ensure construction sites, material storage yards, and access roads are kept in an orderly condition during the construction period.

- Crews will collect waste construction materials and rubbish from all construction areas daily, haul them away, and dispose of them at approved sites.
- All structure assembly and erection pads not needed for normal maintenance will be returned to their original contour and natural drainage patterns will be restored. The intent will be to restore all construction areas as close to their original condition as possible.
- Any damaged gates and fences will be repaired.
- Areas where vegetation has been cleared and no future use is anticipated will be reseeded with appropriate seed mixtures to promote the recovery of native plants.
- If vegetation removal or ground disturbance is required outside UNS Electric's right-of-way, UNS Electric will work with the landowner to restore the area to as close to the original condition as possible.
- All lath and flagging will be removed following the completion of construction activities.
- Once the 138 kV line is in commercial operation, UNS Electric shall remove all unused facilities and relinquish the existing 115 kV rights-of-way where no distribution is attached to the existing transmission line.

3.4 Permits and Conditions

- UNS Electric has completed a Class III Intensive Cultural Resources Inventory and is in the process of consulting with the Arizona State Historic Preservation Office (SHPO) regarding the project. UNS Electric will comply with all recommendations of the SHPO.
- If any archaeological, paleontological or historical site or object that is at least fifty years old is discovered on state, county or municipal land during the construction or operation of the transmission line, UNS Electric shall promptly report the discovery to the Director of the Arizona State Museum, and in consultation with the Director, shall immediately take all reasonable steps to secure and maintain the preservation of the discovery as required under A.R.S. § 41-844.
- If human remains and or funerary objects are encountered on private land during the course of any ground-disturbing activities relating to the construction or operation of the transmission line, the Applicant shall cease work on the affected area of the Project and notify the Director of the Arizona State Museum as required under A.R.S. § 41-865.
- No work will involve the discharge of fill to a potential water of the United States without a 404 Permit issued by the U.S. Army Corps of Engineers. If a 404 Permit is required, UNS Electric will implement all applicable conditions of the permit.

4.0 – Biological Conservation Measures

4.1 General

- The project biologist shall be consulted regarding any modifications to roads or structure locations to appraise the potential impacts to biological resources.
- Wildlife encountered during construction and related activities will be left alone unless it poses a threat to people or may be in danger of harm itself (i.e., resting beneath a truck that needs to move).

4.2 Western-Yellow Billed Cuckoo (YBCU)

- Existing access roads and right-of-way corridors will be used wherever possible for construction and maintenance activities.
- Construction through YBCU habitat should be limited to the period between September 1 and March 1.
- If construction occurs between March 1 and August 31 (breeding season), a preconstruction survey will be performed by a qualified biologist to determine if YBCUs are present along the proposed alignment. If nesting cuckoos are identified, a buffer of 0.1 mile on either side of the nest will be established to avoid disturbing the nesting birds. Monitoring of the nest will occur to allow construction to proceed once the nest is empty.

4.3 Pima Pineapple Cactus (PPC)

- The limits of construction area; new roads, and location of structures will be marked by UNS Electric prior to construction. In areas of suitable PPC habitat, survey(s) will be conducted at locations identified for ground clearing activities (e.g., structure locations) to ensure previously undetected PPC are documented prior to construction.
- All PPC documented during surveys will be clearly marked with lath and flagging prior to and during construction.
- Where feasible, UNS Electric will relocate facilities to avoid the PPC.

4.4 Southwestern Willow Flycatcher (SWWF)

- Existing access roads and right-of-way corridors will be used wherever possible for construction, operation, and maintenance activities.

- Removal of cottonwood trees will be limited to the minimum amount necessary to construct and maintain the transmission line. Breeding and migrant SWWF have not been documented in the area nor identified during surveys conducted as part of project permitting efforts. However, the habitat is unique and could potentially support populations in the future.

4.5 Lesser Long-nosed Bat and Mexican Long-tongued Bat

- All agave and columnar cacti will be avoided to the extent possible during construction. In the event that an agave or saguaro cannot be avoided, mitigation will occur as directed by the land managing agency.

4.6 Gila Topminnow

- No equipment or poles will be allowed within the active flowing channel of the Santa Cruz River.

4.7 Needle-spined Pineapple Cactus

- Needle-spined pineapple cactus will be identified during a preconstruction survey and will be avoided to the extent possible during construction activities.

4.8 Sonoran Desert Tortoise

- Pre-construction survey will be performed within tortoise habitats no earlier than within 48 hours prior to construction to identify desert tortoises or burrows using the desert tortoise survey guidelines (Attachment A).
- A biological monitor will be present during construction through areas where tortoises or burrows have been observed during surveys. The biological monitor will ensure that no tortoises are present in front of the equipment. If tortoises are identified, they will be moved to an appropriate location outside of harm's way. Desert tortoise handling guidelines will be adhered to as outlined in the "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" compiled by the Arizona Game and Fish Department (Attachment A).
- The biological monitor will provide information to crews on appropriate notification measures in the event a tortoise is encountered when a qualified biologist is not present.
- In the event that a desert tortoise needs to be moved from the project alignment the tortoise should be moved at least 500 feet from but no more than 0.25 mile from where it was found. The tortoise shall be moved less than 48 hours in advance of disturbance to minimize the potential of the tortoise returning to the area.

- If tortoise burrows are found within the project alignment and they will be disturbed by construction activities, they shall be cleared of tortoises and then collapsed by a qualified biologist. The tortoise from the burrow is to be moved to a safe location and placed in a natural or artificial burrow.
- If tortoise burrows are found adjacent to the project alignment in a location that will not be directly impacted, burrow entrances may be fenced off temporarily so that tortoises present within the burrow do not wander onto the project alignment.
- If construction is to occur during the active period for the desert tortoise (February 15 to November 15), equipment will be inspected prior to movement to ensure that no tortoises are present.
- Vehicles are to stay on roads whenever possible.
- Vehicles operating on secondary roads within desert tortoise habitat will limit vehicle speeds to 15 mph or less.

4.9 Migratory Bird Treaty Act

- If construction occurs between March 1 and August 31 (breeding season), a preconstruction survey will be performed by a qualified biologist to determine if nesting migratory birds are present. If nesting raptors are identified, the appropriate spatial buffer listed in the USFWS Guidelines for Raptor Protection from Human and Land Use Disturbances (Ramin and Muck 2002) will be established to avoid disturbing the nesting birds. Monitoring of the nest will occur to allow construction to proceed once the nest is empty.
- UNS Electric will remove all heavy vegetation (i.e., mesquite bosques) between September 1 – March 1 as recommended by the U.S. Fish and Wildlife Service.
- UNS Electric will design the transmission line to incorporate reasonable measures to minimize impacts to raptors.

4.10 Arizona Native Plants

- Plants protected under the Arizona Native Plant Law will be avoided wherever feasible (Table 1).

TABLE 1

ARIZONA NATIVE PROTECTED PLANTS OBSERVED IN THE ACTION AREA

Species	Protection
Pima pineapple cactus	Highly Safeguarded
Blue palo verde	Salvage Assessed
Velvet mesquite	Harvest Restricted; Salvage Assessed
Saguaro	Salvage Restricted
Ironwood	Salvage Restricted
Ocotillo	Salvage Restricted
Banana yucca	Salvage Restricted
Sotol	Salvage Restricted
All cacti (cholla, barrel cacti, pincushion, etc.)	Salvage Restricted

Salvage Restricted—Collection by permit only.

Harvest Restricted—Permits required to remove plant by-products (fuelwood).

Salvage Assessed—Plants have a significant value if salvaged; permits required for plant removal and salvage.

Highly Safeguarded—Plants whose prospects for survival in Arizona are in jeopardy or in danger of extinction.

ATTACHMENT A

Desert Tortoise Survey and Handling Guidelines (Developed by Arizona Game and Fish Department)

Desert Tortoise Survey Guidelines for Environmental Consultants
June 2010

The following informal guidelines are intended to aid private consultants surveying for presence of tortoises on development projects in the Sonoran Desert. Following these guidelines will not provide quantified abundance estimates.

- 1) Surveys will be most productive during tortoise activity periods, primarily during the summer monsoon season (July – September) but also in the spring (April) and fall (October). Tortoises are most active in the morning and evening during summer, late morning to afternoon in spring and fall. Results from summer/fall monitoring plots indicate that tortoises are active at temperatures from 20 to 45°C (1cm above ground).
- 2) In the Sonoran Desert, tortoises usually occur on rocky slopes in desert scrub to semidesert grassland, as well as along washes, and extending into creosote bush flats. Burrows typically occur below rocks and boulders and may be irregularly shaped. Soil burrows and those in wash banks may have a 1/2-moon appearance.
- 3) Presence-absence surveys (3 hectare plots) or clearance surveys (100% coverage), depending on project type, are recommended to survey a discrete parcel of land. The number of 3 hectare plots per unit area depends on the desired intensity of the survey.
- 4) Surveyors should record all live tortoises, carcasses, scat, verified burrows (with scat or tortoise inside), and otherwise suitable/potential burrows (empty) and report to the Department.
- 5) Refer to the Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" if handling will be necessary.

CAJ:caj

J:\Amphibians and Reptiles\Turtles Project\Desert Tortoise\Sonoran Desert
Tortoise\Conservation\Threats\Construction Projects\Guidelines and Protocols\Survey Guidelines\2010 Survey
guidelines For Consultants 100623.doc

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES
ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department

Revised October 23, 2007

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

The Sonoran population of desert tortoises occurs south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 40° Celsius (105° Fahrenheit) unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to one-half mile, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 40° Celsius (105° Fahrenheit), the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

These guidelines do not apply to the Mojave population of desert tortoises (north and west of the Colorado River). Mojave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.

These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.

Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.