ORIGINAL

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Arizona Corporation Commission
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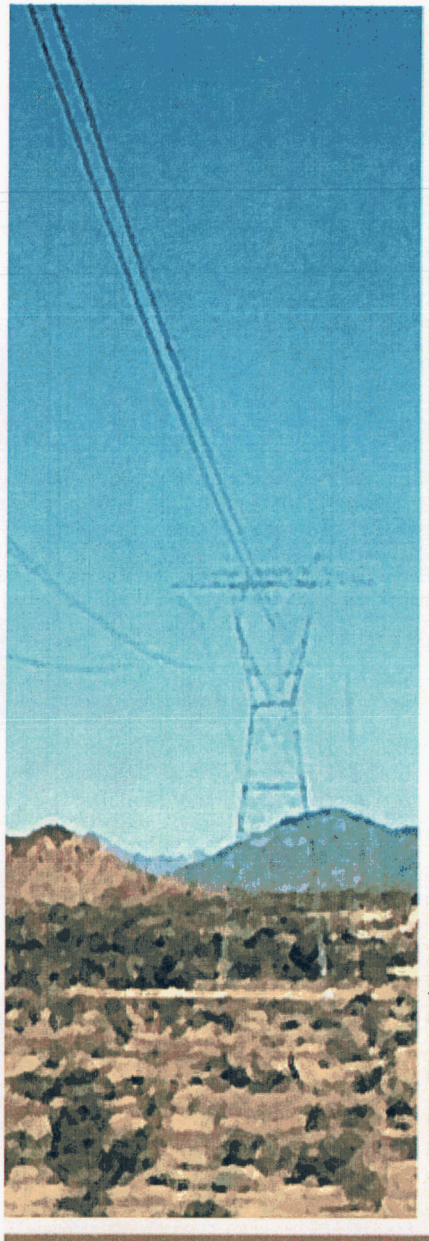


Palo Verde Hub to TS-5
500kV Transmission Project

Application for a Certificate of Environmental Compatibility Case No. 128

Prepared for
Arizona Corporation Commission

Arizona Power Plant and Transmission Line Siting Committee

June 6 and 7, 2005

APS

Introduction

- The Palo Verde Hub to TS-5 Project helps meet a significant need for more power in the fast growing West Valley
- The Palo Verde Hub to TS-5 Project is environmentally compatible
- The Palo Verde Hub to TS-5 Project is the result of a public process

APS

Witnesses

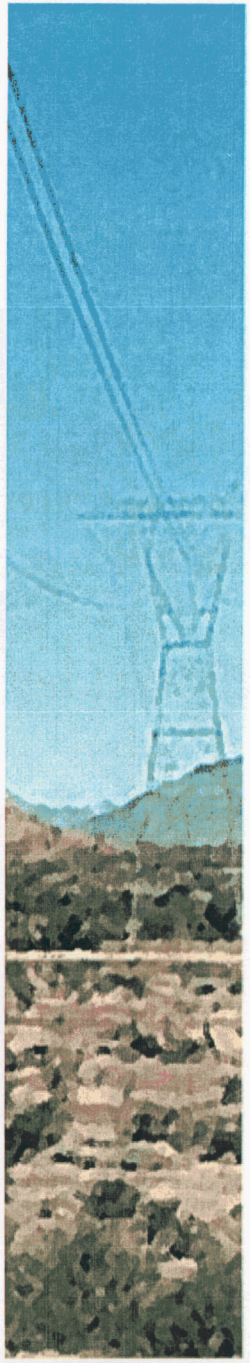
- Paul Herndon – Project Description
- Paul Trenter – Environmental Studies
- Bob Smith – Transmission System

Paul Herndon

Arizona Public Service Company

Project Manager

Transmission and Facility Siting



Witness Background

- APS Siting Project Manager
  - Responsible for all recent APS 500kV line siting projects and numerous sub-transmission line sitings
- Professional Background
  - 29 years of electric utility experience at APS
  - Approximately 15 years of experience in transmission line siting
  - Senior Right-of-Way Professional and former Local Chapter President, Director, and member of the International Utility Committee with the International Right-of-Way Association
  - Extensive Real Estate education and experience
  - Testified in Case Numbers 85, 89, 102, and 115

APS

Outline of Testimony

- Project description
- Project need and benefits
- Selection process
- Public participation

Project Description

- Proposed Route
- Alternative Route
- Palo Verde Hub Interconnection Alternatives
  - Existing PVNGS Switchyard
  - New Arlington Switchyard
- Harquahala Junction Switchyard
- Jurisdiction and land ownership

APS

Project Description

Facilities

- Transmission Structures
  - Monopole and lattice
  - Special structures
  - Typical height
  - Typical span
  - Materials
- Switchyards
  - Size
  - Equipment

APS

Project Description

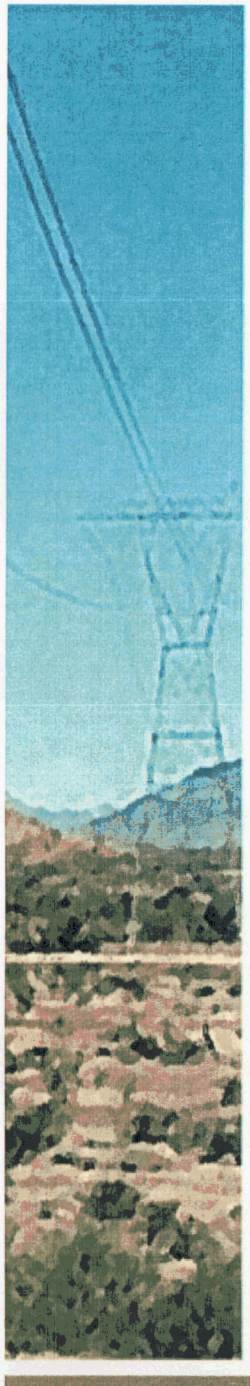
Schedule

- Right-of-way acquisition in 2005 – 2006
- Begin construction in 2006
- Construction completed in 2007

Project Cost

	Total Length of Transmission Line (miles)	Right-of-Way Costs ($ million)	Construction Costs ($ million)	Total of Right-of-Way and Construction Costs ($ million)
Proposed Route (PVNGS Switchyard Interconnection)	43.1	$12.9	$68.0*	$80.9
Proposed Route (Arlington Switchyard Interconnection)	42.1	$12.5	$66.5*	$79.0

*The Proposed Alternate Route adds $500,000 in construction costs.



Project History

- ACC 10 Year Plans
- BLM Resource Management Plans

Project Benefits and Need

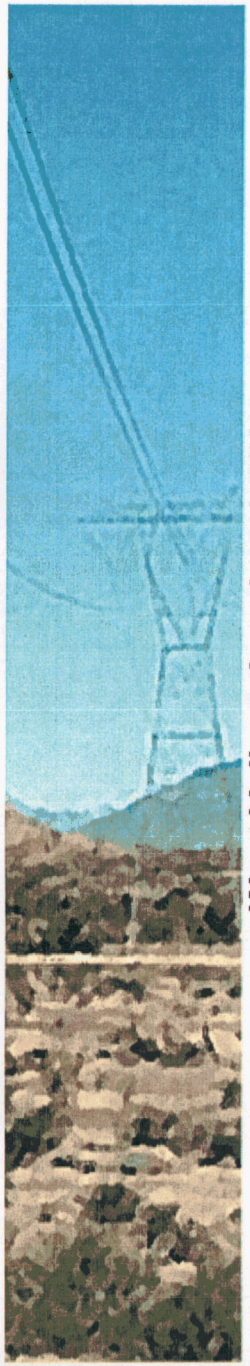
- Support load growth in West Valley
- Increase overall reliability
- Increase Phoenix area import capability
- Increase export capability from the Palo Verde Hub

Population Growth Projections

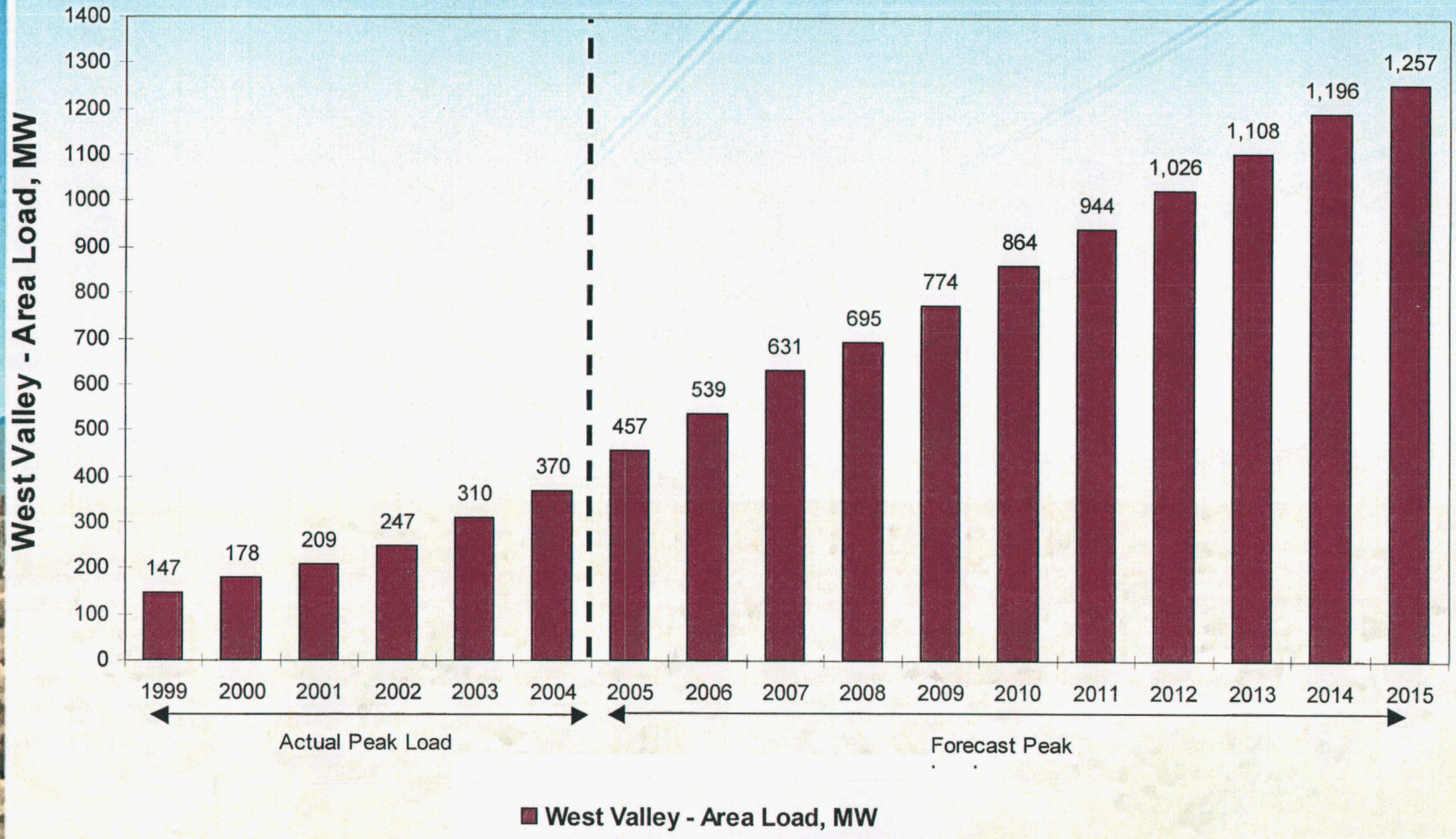
Year vs. Jurisdiction	2004	2010	2020	2025	2030
Town of Buckeye	14,505	58,600	153,400	275,500	380,600
Maricopa County	3,524,175	4,134,400	5,164,100	5,664,000	6,140,000

Source: Maricopa County Association of Governments 2003 and 2004

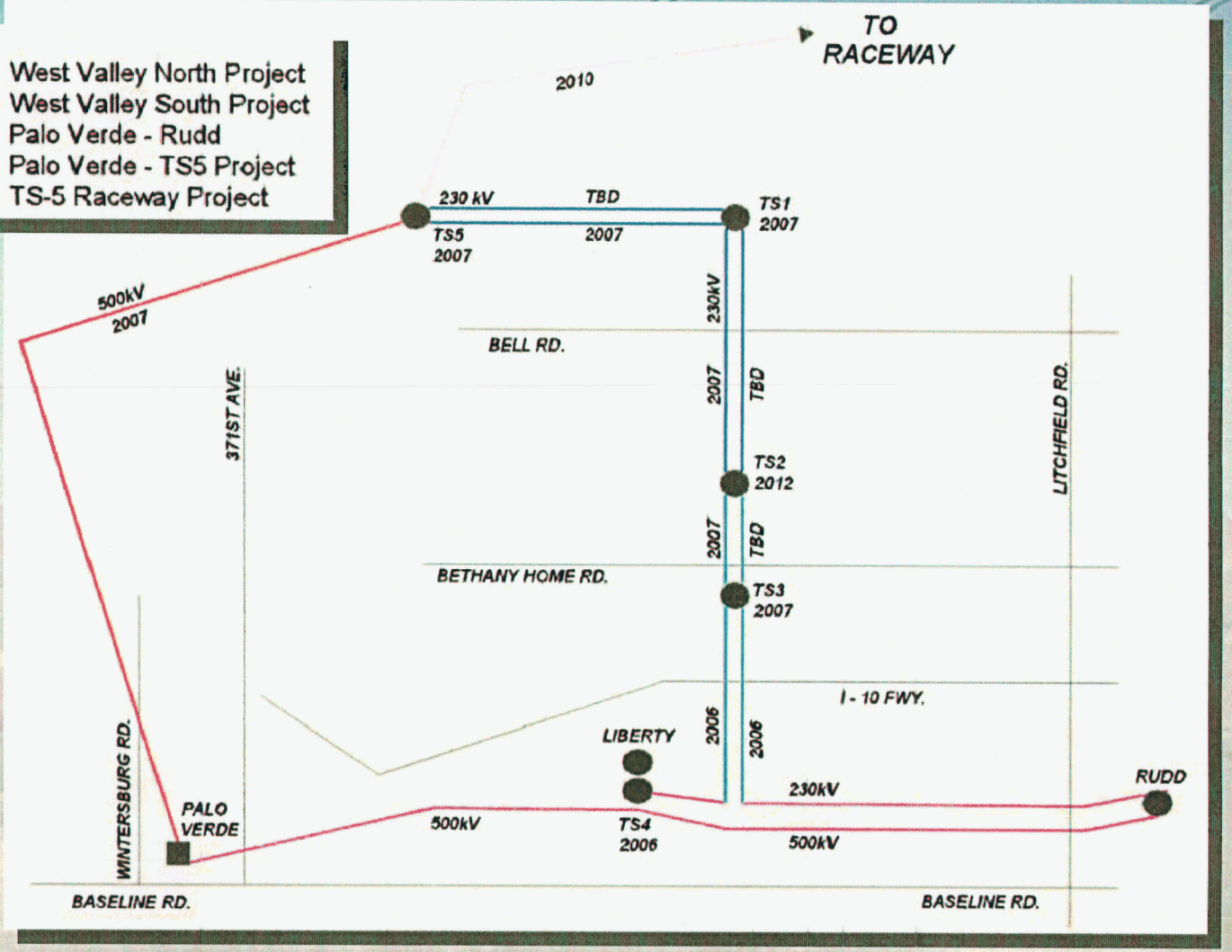
APS



West Valley - Area Loads



West Valley Transmission Projects



Selection Criteria

- Environmental compatibility
- Right-of-way acquisition
- Public and jurisdictional input
- Engineering
- Cost
- Ability to meet in-service date
- Linear features
- Utility corridors

Public Participation

- Jurisdictional and stakeholder meetings
- Public open house
- Newsletters
- Website
- Telephone information line (602-794-9000)
- Written notice
  - BLM informational letters
  - Exhibit H letters
- Publication of notice of hearing
- Print media
- Signs

Paul Herndon

Arizona Public Service Company

Project Manager

Transmission and Facility Siting

Paul Trenter

Environmental Planning Group (EPG)

Project Manager

Witness Background

- Professional Credentials
  - BS, Landscape Architecture, University of Wisconsin
  - Principal at EPG
  - 17 years of experience in siting and environmental work with major utility projects
  - Managed or participated in over 30 major transmission line projects
  - Previously testified before the Siting Committee in Case Numbers 86, 89, 97, 115, and most recently the APS North Valley Project (Case No. 120)

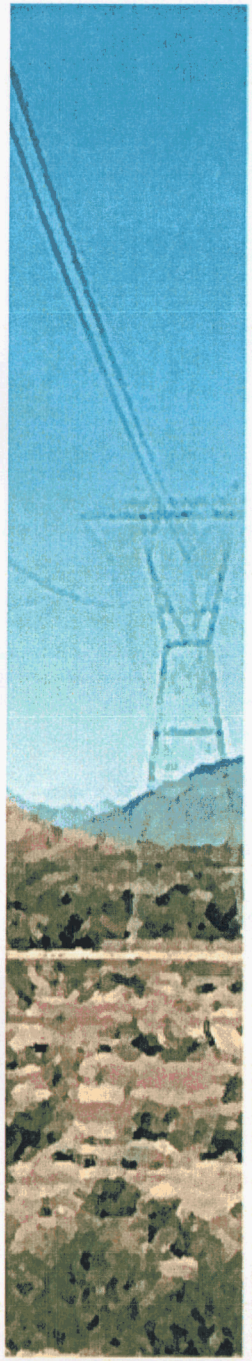
Outline of Testimony

- Overview of the environmental studies
- Virtual tour of proposed and alternative routes
- Environmental resource analysis and environmental compatibility

Overview of the Environmental Studies

- BLM utility corridor identification
- Initial study of a broad range of transmission line alternatives and sites
- Prepared Environmental Assessment
- Prepared environmental exhibits for the Certificate of Environmental Compatibility Application
- Public and agency input was considered throughout the planning process

APS



BLM Utility Corridor Identification

- Developed in response to Resource Management Plan updates
- Conducted regional utility corridor analysis
- Proposed Route was identified within the preferred utility corridor in the regional analysis

Preliminary Alternative Siting Criteria

Exclusion Areas

- Airports / Heliports - 1/2-mile buffer
  - Mauldin Airstrip
  - Tonopah Airfield
  - Watts Airfield
  - Toon Tail Heliport
- National Monuments
- Town of Buckeye No-build Zone
- Wilderness Areas
  - Big Horn Mountains Wilderness
- OHV Classes
  - Closed
- ROS Classes
  - Primitive
  - Semi-Primitive Non-Motorized
- VRM Classes
  - Class I
- Land Use Categories
  - Educational
  - Airports

High Sensitivity Areas

- Regional Parks
- ACEC/T&E Habitat
  - Select Riparian Habitat
- Cultural Sites
  - National Register Districts
- Scenic Highways
- VRM Classes
  - Class II
- Existing Land Use Categories
  - High Density Residential
  - Medium Density Residential
  - Low Density Residential
  - Parks

Moderate Sensitivity Areas

- Biological Areas/Species Requiring Monitoring
  - Bighorn Sheep Habitat
  - Sonoran Desert Tortoise Habitat
- Mixed Palo Verde Vegetative Communities
- Riparian Deciduous Woodland
- Cultural Sites
  - State Listed Sites
- ROS Classes
  - Roaded Natural
  - Semi-Primitive Motorized
- VRM Classes
  - Class III
- Existing Land Use Categories
  - Commercial
  - Office/Commercial
  - Public/Quasi Public
  - Recreation
  - Agriculture
  - River/Desert Wash
- Planned Land Use Categories
  - Residential - Platted and Approved

Low Sensitivity Areas

- VRM Classes
  - Class IV
- Existing Land Use Categories
  - General Industrial
  - Light Industrial
  - Other Employment
  - Transportation
  - Vacant
- Planned Land Use Categories
  - Residential- General Plan/Preliminary Approval
  - Commercial - General Plan
  - Mixed Use - General Plan
  - Industrial - General Plan
  - Open Space - General Plan

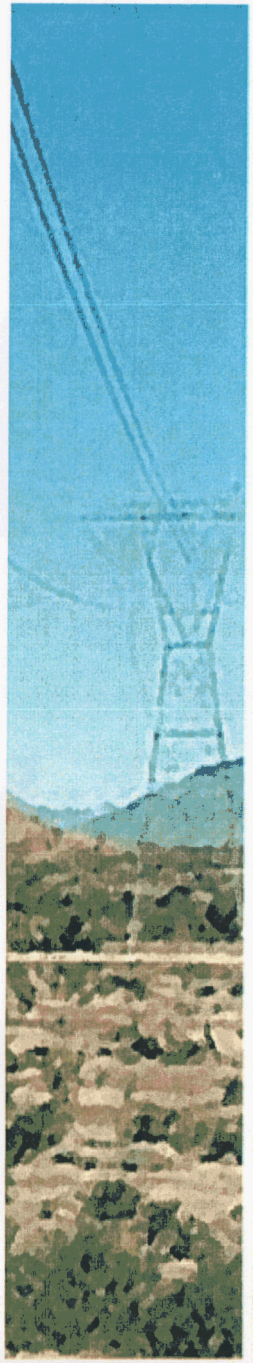
Siting Opportunities

- Interstates, Highways (major transportation)
- Existing transmission lines
- Existing pipelines
- CAP (and secondary CAP canals)
- Railroads
- Existing designated utility corridors on BLM lands

Alternatives Considered and Eliminated

- Western Alternative Routes
  - Potential land use and visual impacts in residential areas without an existing major linear feature
  - Most expensive route – 20 miles longer than any other alternative
- Central Alternative Routes
  - Potential land use and visual impacts in residential areas without an existing major linear feature
  - Largest amount of high sensitivity areas crossed by any of the alternatives
- Eastern Alternative Routes
  - Potential for increased electrical outages in Phoenix metropolitan area from an outage of multiple transmission lines in the same utility corridor
  - Potential residential takes

APS



Environmental Assessment

- BLM, Phoenix Field Office – lead federal agency
- NEPA compliance required prior to granting of federal right-of-way

Environmental Assessment

- Land use and recreation
- Biological resources
- Cultural resources and Native American concerns
- Visual resources
- Socioeconomics
- Earth and water resources
- Health and safety

Key Features

- BLM-designated utility corridors
  - Palo Verde – Devers Utility Corridor
  - CAP Utility Corridor
- Existing high-voltage transmission lines
- CAP Canal
- Palo Verde Hub
- Harquahala Generating Station
- Interstate 10 and Wickenburg Road
- Hassayampa Pumping Station
- TS-5 Substation

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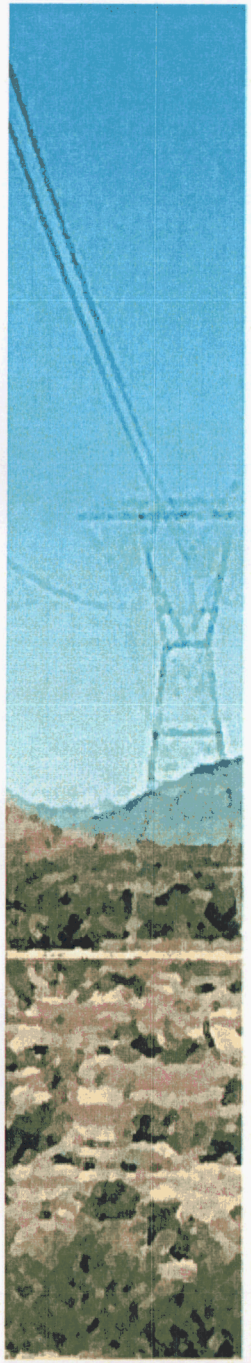
Land Use Summary

- Existing Land Use
  - Conforms with BLM resource management plans
  - Primarily located on public land
  - Parallels existing linear features for entire length
  - Sparsely populated, primarily undeveloped study area
  - Minimal residential impact
    - 4 residences within ½ mile
    - Nearest residence is ~1,000' from Proposed Route



Land Use Summary

- Planned Land Use
  - No master planned developments under construction
  - Minimal impact on planned land uses based on coordination with local developers and jurisdictions
  - Use of steel monopole structures

Biological Resources Summary

- Conducted field review and contacted BLM, AGFD, USFWS, and Arizona Department of Agriculture
- Mitigation
  - Project will comply with current BLM tortoise policy
  - Native plant survey to be conducted on BLM and state lands prior to construction
  - Restoration and reseeding
- No adverse effects to special status or unique habitats
- Minimal impacts on biological resources

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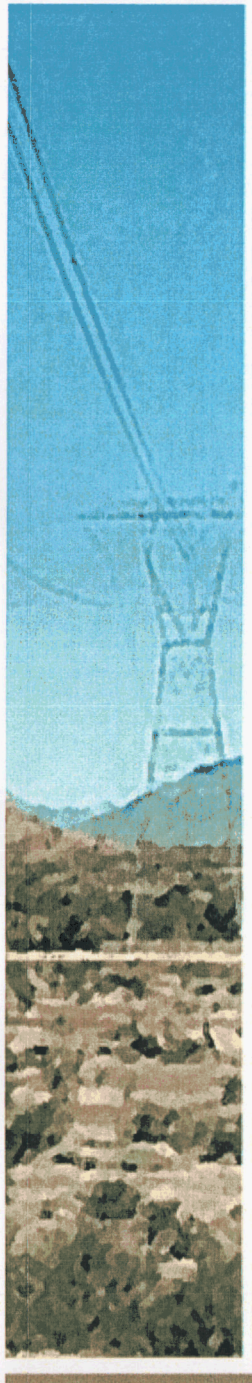
Cultural Resources Summary

- Records search at SHPO, AZSITE, BLM, and BOR
- Cultural survey along proposed routes
- Survey report submitted and reviewed by BLM, BOR, and ASLD
- Consultation with Native American tribes initiated by BLM
- Consultation with SHPO initiated by BLM and ASLD

APS

Cultural Resources Summary

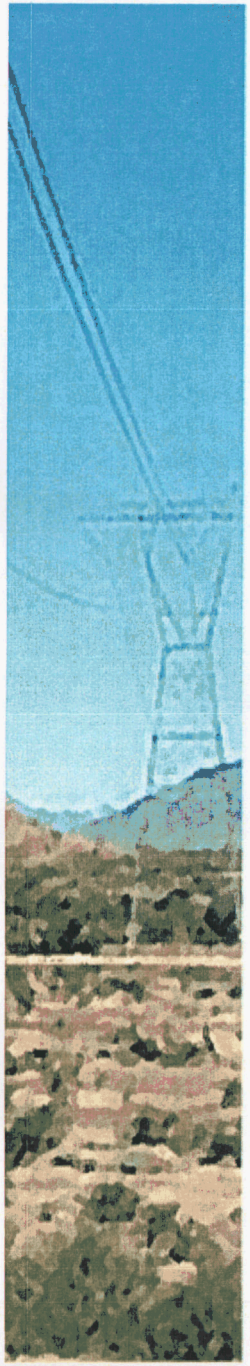
- 13 sites within or immediately adjacent to the proposed routes
- All sites can potentially be avoided
- Construction monitoring as required by BLM
- Minimal impacts on cultural resources



Visual Resources Summary

- Utilized BLM Visual Resource Management System
- Proposed Route located within BLM-designated utility corridors
- Parallels existing 500kV transmission line and the CAP Canal
- Proposed Route primarily crosses areas of average to low scenic quality
- Key Observation Points include:
  - Residences (4 residences within ½ mile)
  - Travel Routes (I-10, Salome Highway, Wickenburg Road, Sun Valley Parkway)
  - Recreation (dispersed recreation on BLM land)

APS



Visual Resources Summary

- Use of mitigation
  - Match existing structure spans
  - Match existing structure types
  - Dulled steel structures and non-specular conductors
  - Use existing access roads
- Photo simulations depict both of the proposed routes
- Minimal impacts on visual resources

Paul Trenter

Environmental Planning Group (EPG)

Project Manager

Bob Smith

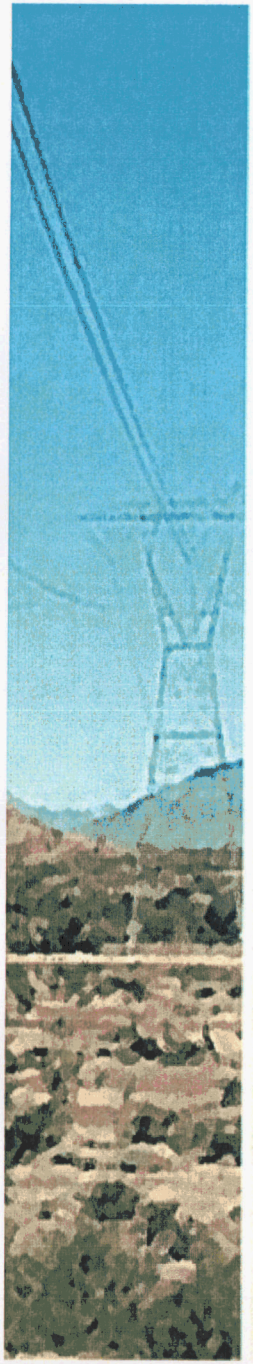
Arizona Public Service Company

Manager, Transmission Planning

Witness Background

- Educational Background
  - BS Pharmacy, University of Utah
  - MSEE, New Mexico State University
- Professional Background
  - APS transmission operations manager 1997-2002
  - APS transmission planning manager since November 2002
  - 18 years experience in electric utility industry transmission operations and planning
  - Arizona registered professional engineer
  - 12 years extensive involvement with WECC
  - Member of various planning committees, e.g. SWAT and STEP

APS



Project Benefits and Need

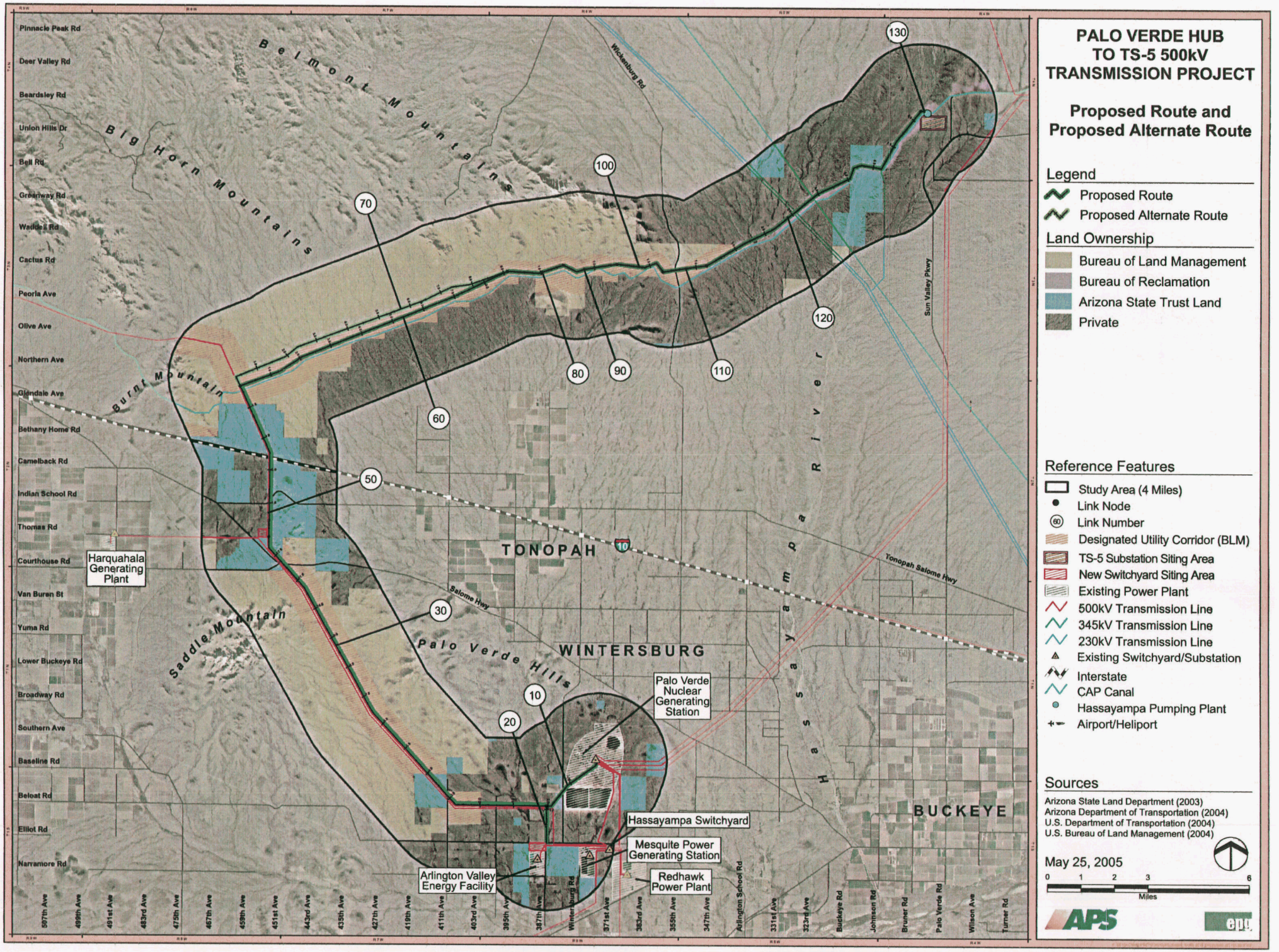
- Support load growth in West Valley
- Increase overall reliability
- Increase Phoenix area import capability
- Increase export capability from the Palo Verde Hub

Bob Smith

Arizona Public Service Company

Manager, Transmission Planning

2


PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Proposed Route and
Proposed Alternate Route
Legend
Proposed Route
Proposed Alternate Route
Land Ownership
Bureau of Land Management
Bureau of Reclamation
Arizona State Trust Land
Private
Reference Features
Study Area (4 Miles)
Link Node
Link Number
Designated Utility Corridor (BLM)
TS-5 Substation Siting Area
New Switchyard Siting Area
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Existing Switchyard/Substation
Interstate
CAP Canal
Hassayampa Pumping Plant
Airport/Heliport
Sources
Arizona State Land Department (2003)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)
May 25, 2005
0 1 2 3 6
Miles
APS
TONOPAH
WINTERSBURG
BUCKEYE
Harquahala Generating Plant
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Mesquite Power Generating Station
Redhawk Power Plant
Arlington Valley Energy Facility
Belmont Mountains
Big Horn Mountains
Burnt Mountain
Saddle Mountain
Palo Verde Hills
Hassayampa River
Salome Hwy
Tonopah Salome Hwy
Wickenburg Rd
Sun Valley Pkwy
Pinnacle Peak Rd
Deer Valley Rd
Beardsley Rd
Union Hills Dr
Bell Rd
Greenway Rd
Waddell Rd
Cactus Rd
Peoria Ave
Olive Ave
Northern Ave
Glendale Ave
Bethany Home Rd
Camelback Rd
Indian School Rd
Thomas Rd
Courthouse Rd
Van Buren St
Yuma Rd
Lower Buckeye Rd
Broadway Rd
Southern Ave
Baseline Rd
Beloat Rd
Elliot Rd
Narramore Rd
130
100
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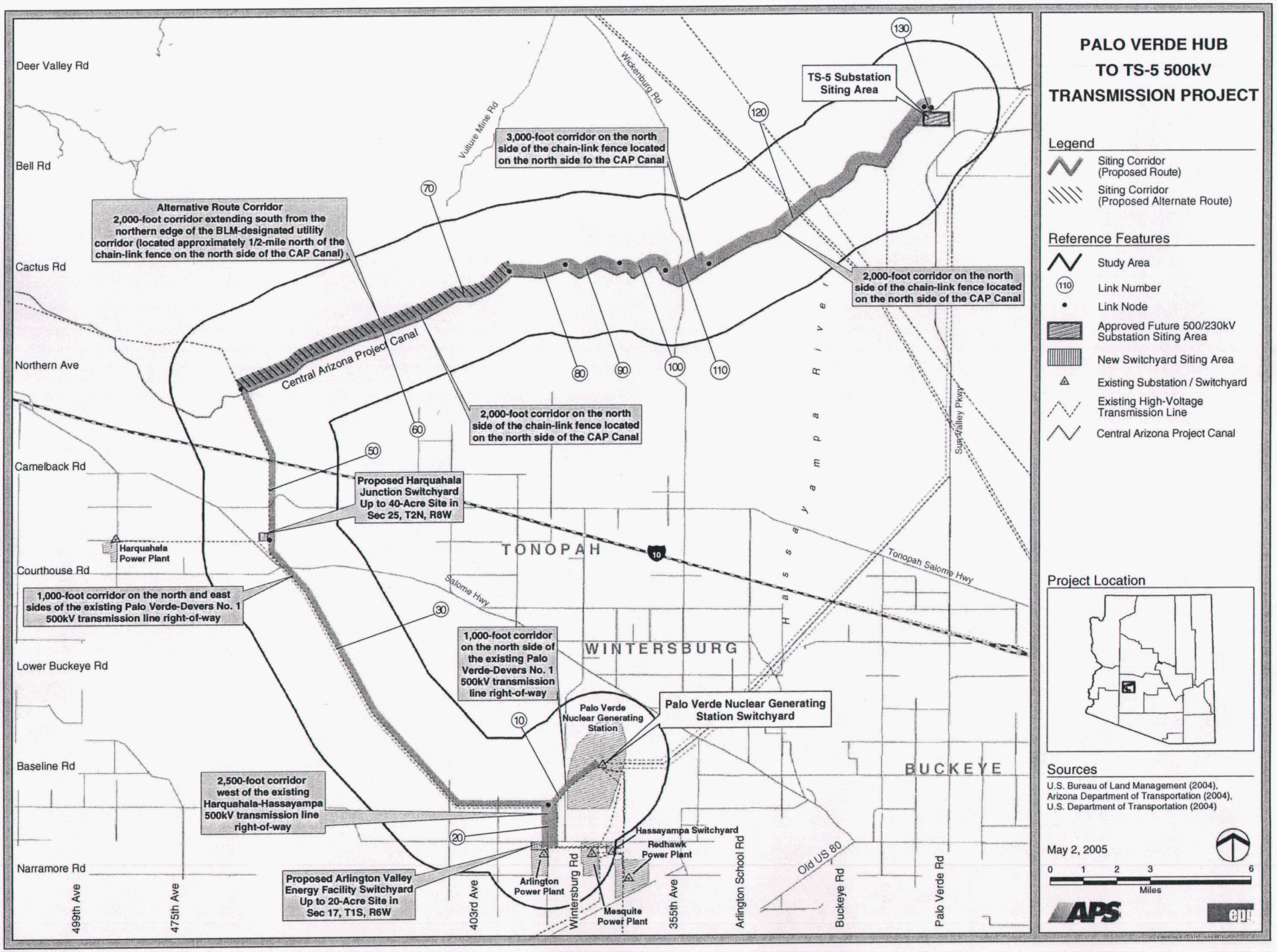
PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Legend
Siting Corridor (Proposed Route)
Siting Corridor (Proposed Alternate Route)
Reference Features
Study Area
Link Number
Link Node
Approved Future 500/230kV Substation Siting Area
New Switchyard Siting Area
Existing Substation / Switchyard
Existing High-Voltage Transmission Line
Central Arizona Project Canal
Project Location
Sources
U.S. Bureau of Land Management (2004), Arizona Department of Transportation (2004), U.S. Department of Transportation (2004)
May 2, 2005
0 1 2 3 6
Miles
APS
SRP
TS-5 Substation Siting Area
3,000-foot corridor on the north side of the chain-link fence located on the north side fo the CAP Canal
Alternative Route Corridor
2,000-foot corridor extending south from the northern edge of the BLM-designated utility corridor (located approximately 1/2-mile north of the chain-link fence on the north side of the CAP Canal)
2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal
2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal
Proposed Harquahala Junction Switchyard Up to 40-Acre Site in Sec 25, T2N, R8W
1,000-foot corridor on the north and east sides of the existing Palo Verde-Devers No. 1 500kV transmission line right-of-way
1,000-foot corridor on the north side of the existing Palo Verde-Devers No. 1 500kV transmission line right-of-way
Palo Verde Nuclear Generating Station Switchyard
2,500-foot corridor west of the existing Harquahala-Hassayampa 500kV transmission line right-of-way
Proposed Arlington Valley Energy Facility Switchyard Up to 20-Acre Site in Sec 17, T1S, R6W
Harquahala Power Plant
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Redhawk Power Plant
Arlington Power Plant
Mesquite Power Plant
Central Arizona Project Canal
Hassayampa River
TONOPAH
WINTERSBURG
BUCKEYE
Deer Valley Rd
Bell Rd
Cactus Rd
Northern Ave
Camelback Rd
Courthouse Rd
Lower Buckeye Rd
Baseline Rd
Narramore Rd
Vulture Mine Rd
Wickenburg Rd
Salome Hwy
Tonopah Salome Hwy
Sun Valley Pkwy
Old US 80
Wintersburg Rd
Arlington School Rd
Buckeye Rd
Palo Verde Rd
499th Ave
475th Ave
403rd Ave
355th Ave
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120
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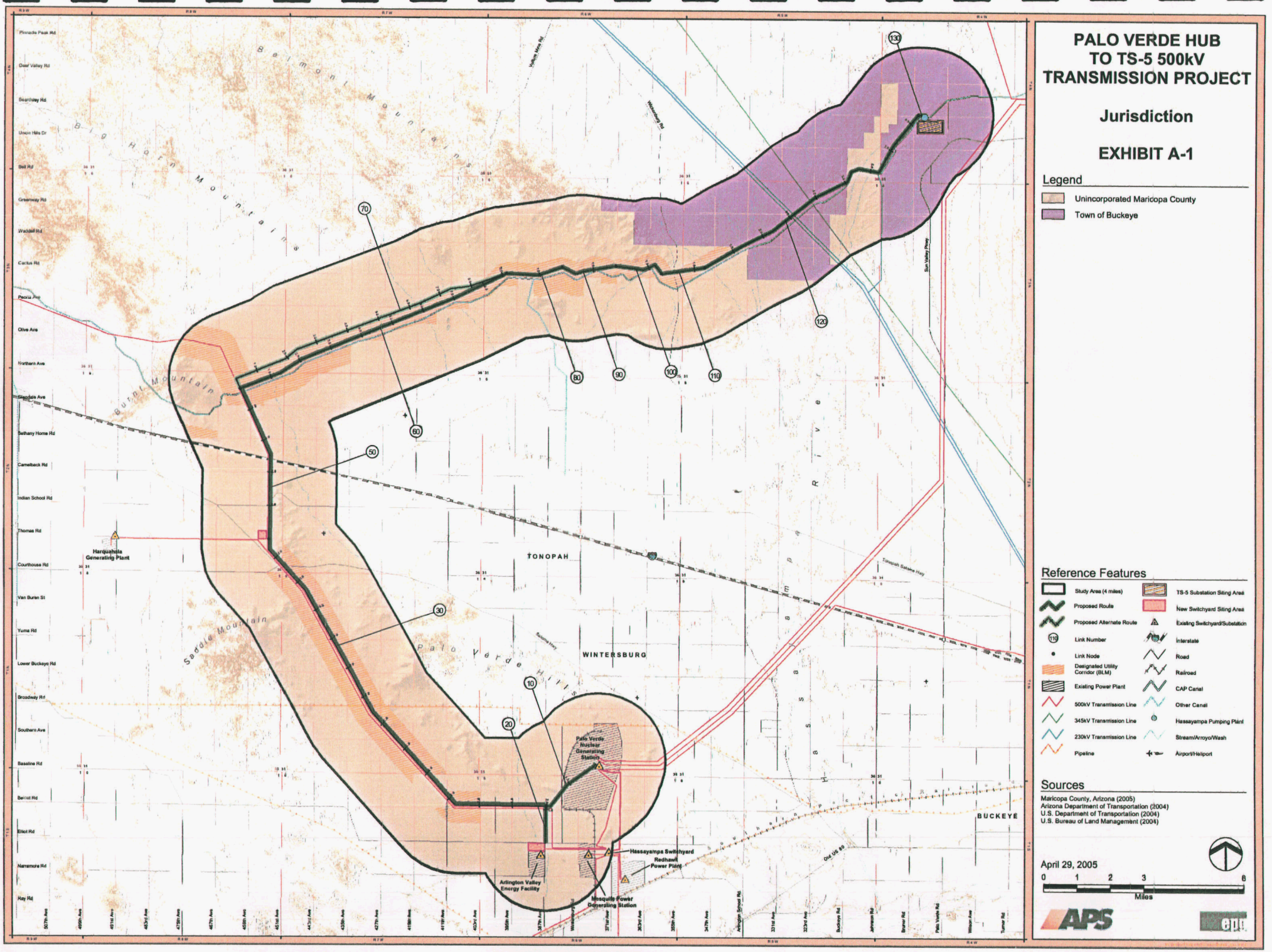
PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Jurisdiction
EXHIBIT A-1
Legend
Unincorporated Maricopa County
Town of Buckeye
Reference Features
Study Area (4 miles)
Proposed Route
Proposed Alternate Route
Link Number
Link Node
Designated Utility Corridor (BLM)
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Pipeline
TS-5 Substation Siting Area
New Switchyard Siting Area
Existing Switchyard/Substation
Interstate
Road
Railroad
CAP Canal
Other Canal
Hassayampa Pumping Plant
Stream/Arroyo/Wash
Airport/Heliport
Sources
Maricopa County, Arizona (2005)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)
April 29, 2005
0 1 2 3 6
Miles
APS
Harquahala Generating Plant
TONOPAH
WINTERSBURG
BUCKEYE
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Redhawk Power Plant
Arlington Valley Energy Facility
Mesquite Power Generating Station
Big Horn Mountains
Belmont Mountains
Buttle Mountain
Saddle Mountain
Palo Verde Hills
Hassayampa River
Sun Valley Pkwy
Old US 80
10
20
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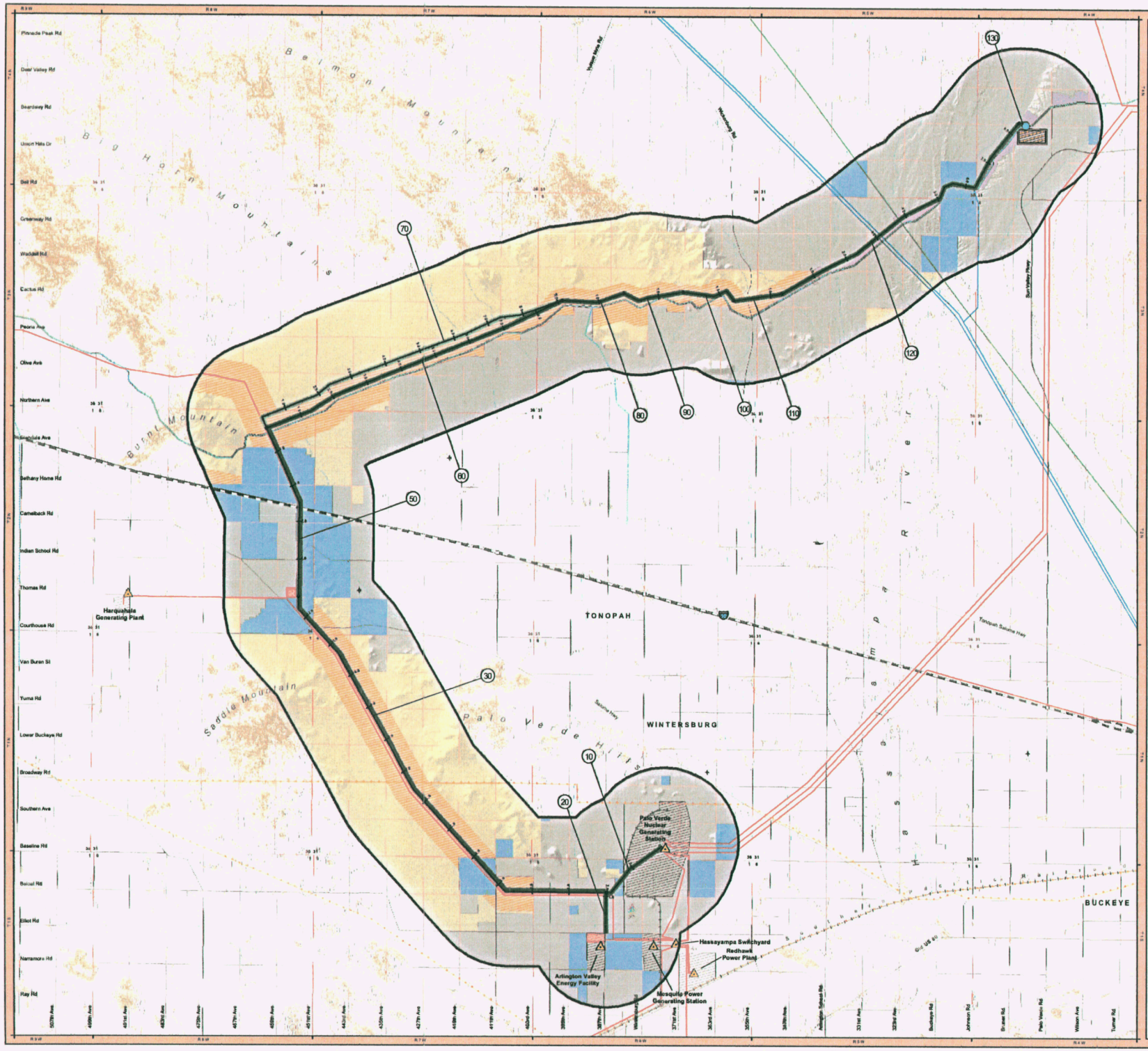
120
130



PALO VERDE HUB TO TS-5 500kV TRANSMISSION PROJECT

Land Ownership

EXHIBIT A-2

Legend

- Bureau of Land Management
- Bureau of Reclamation
- Arizona State Trust Land
- Private

Reference Features

- Study Area (4 miles)
- Proposed Route
- Proposed Alternate Route
- Link Number
- Link Node
- Designated Utility Corridor (BLM)
- Existing Power Plant
- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- Pipeline
- TS-5 Substation Siting Area
- New Switchyard Siting Area
- Existing Switchyard/Substation
- Interstate
- Road
- Railroad
- CAP Canal
- Other Canal
- Hassayampa Pumping Plant
- Stream/Arroyo/Wash
- Airport/Heliport

Sources

Arizona State Land Department (2003)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)

April 29, 2005

0 1 2 3 6
Miles

APS

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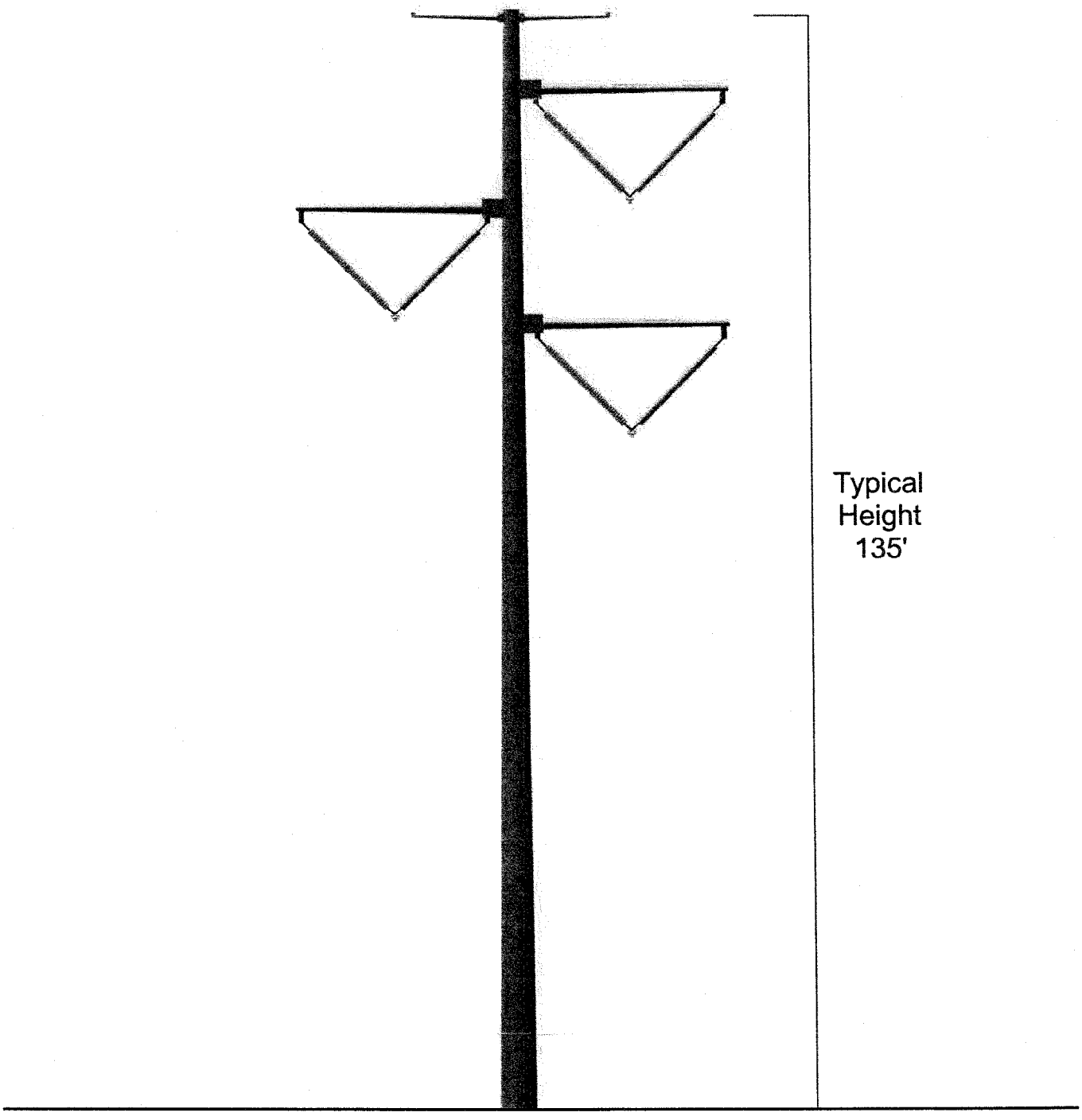


Exhibit G-1

Typical 500kV Single-Circuit Tangent Steel Pole

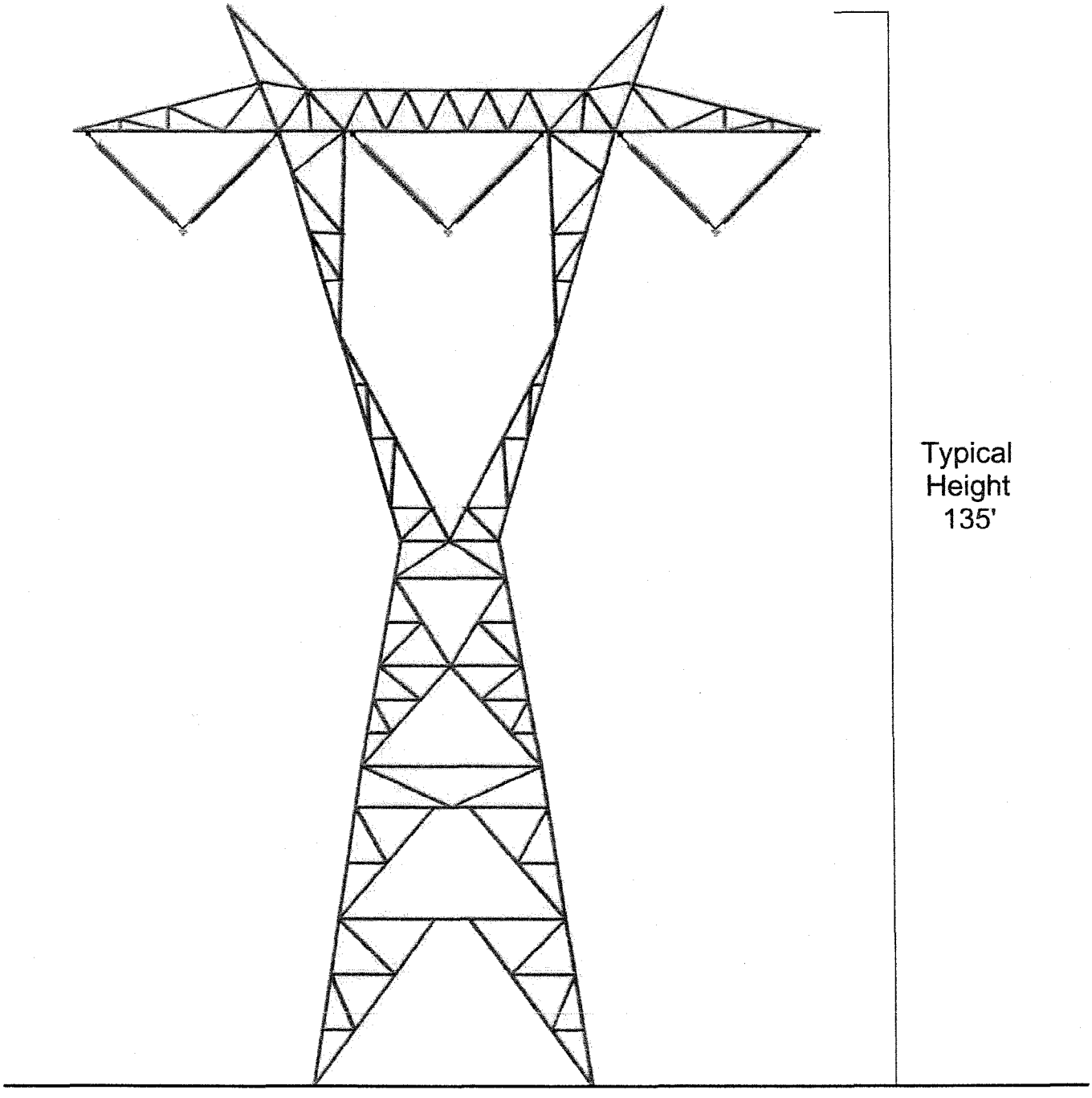
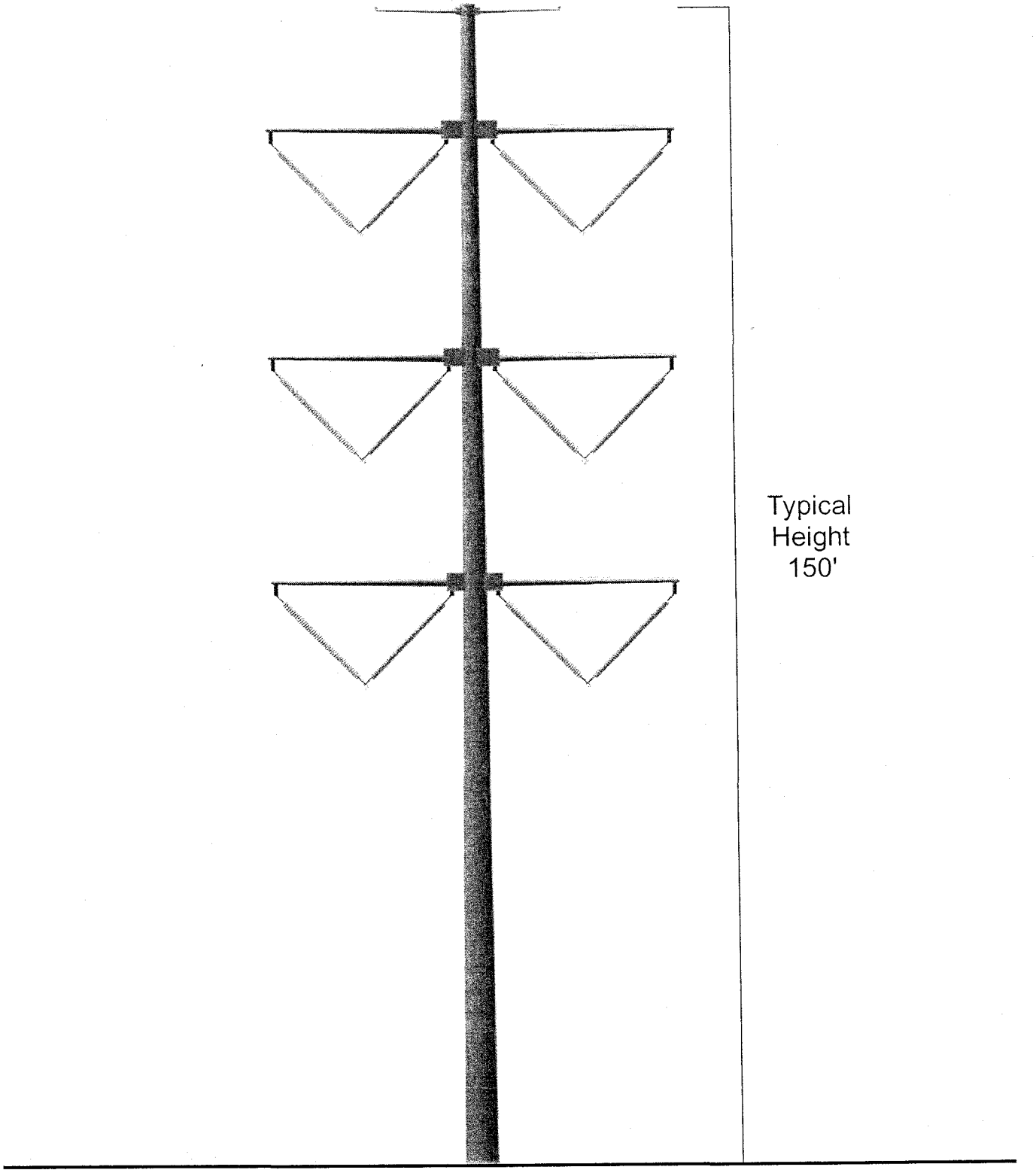


Exhibit G-2

Typical 500kV Single-Circuit Tangent Steel Lattice Structure



Typical 500kV/230kV Double Circuit Tangent Steel Pole

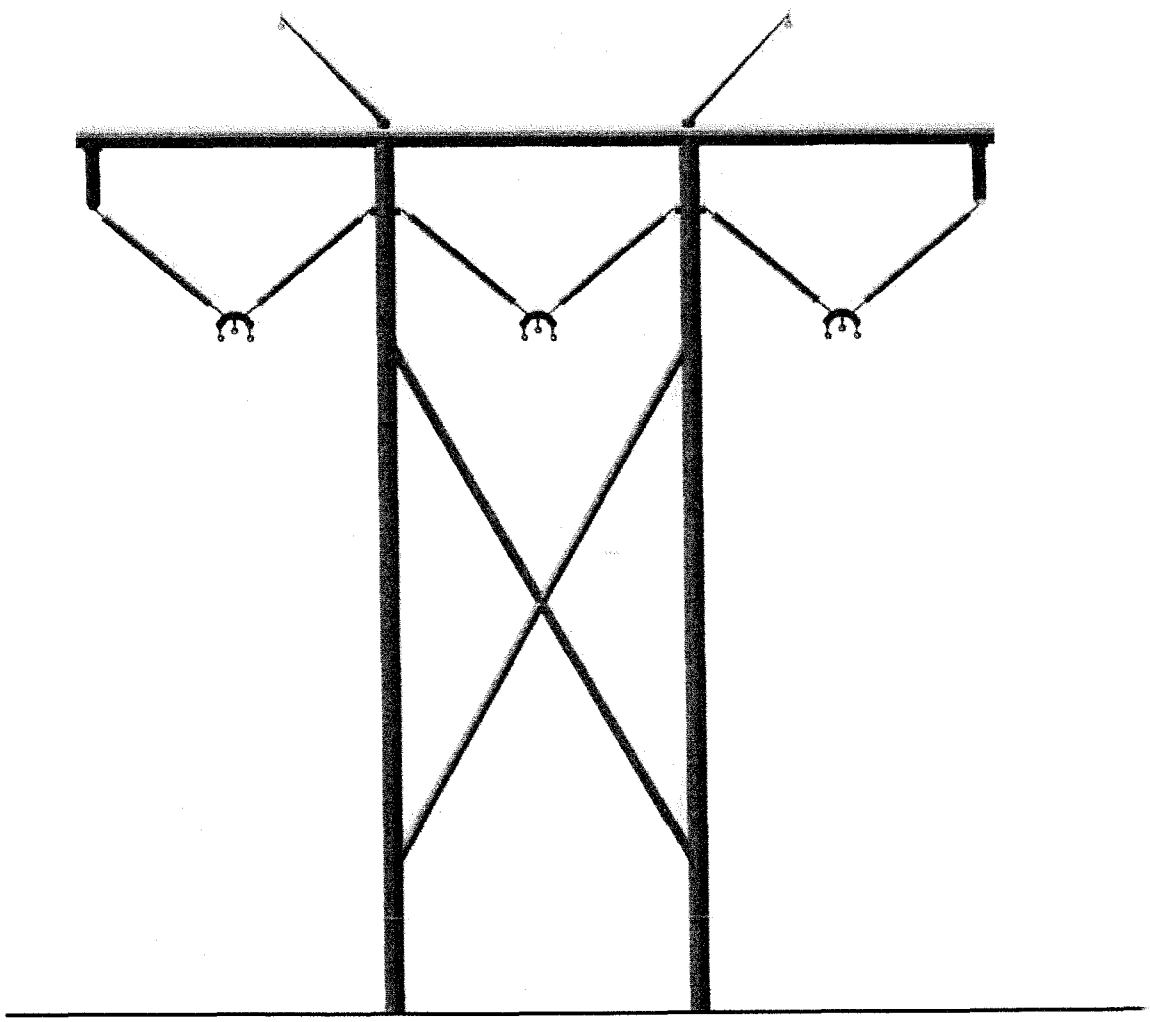


Exhibit G-5

Modified 500kV Single-Circuit Steel H-Frame Structure

Please attend the upcoming

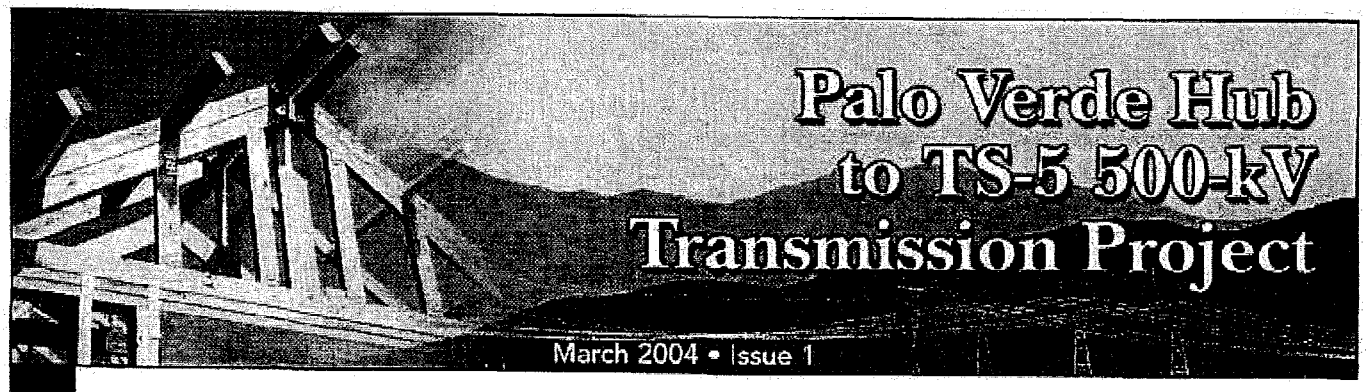
PUBLIC INFORMATION OPEN HOUSE

6 - 8 p.m., Tuesday, March 30, 2004
Ruth Fisher Elementary School
38201 W. Indian School Road

APS is planning to build new facilities to enable us to provide safe, reliable electric service to the rapidly growing West and Northwest valley. The Palo Verde Hub to TS-5 500-kilovolt (kV) Transmission Project is our plan to accommodate growth and increase the overall reliability of the APS transmission system.

For more information please call us at (602) 794-9000

J



Palo Verde Hub to TS-5 500-kV Transmission Project

March 2004 • Issue 1

APS Proposes New Transmission Facilities

APS has plans to build a new 500-kilovolt (500-kV) transmission line and substation in the far west and northwest areas of the valley, where unprecedented growth is occurring.

According to a February 2004 issue of *The Phoenix Business Journal*, the West Valley will be home to about 250,000 new homes over the next 50 years. In addition, the average household usage of electricity in Arizona has increased about 21 percent over the past decade. Growth figures like these underscore the need to build new electrical facilities.

APS' 500-kV project will provide the electrical transmission infrastructure that will bring bulk power into this high-growth area. It provides the electrical source to feed the 230-kV transmission system that will be needed in the area. The project also will strengthen the entire APS transmission system by providing an additional high-voltage transmission source to the Phoenix Metropolitan area, allowing the import of power from generating sources at, or around, the Palo Verde Nuclear Generating Station (PVNGS).

Project Description

The proposed transmission line will be between 40 to 45 miles in length and will be constructed on either tubular steel poles or lattice towers, typically between 130 to 150 feet high. The project will begin at the PVNGS hub and will terminate at a new 500/230-kV substation in the Sun Valley area (see map in this newsletter).

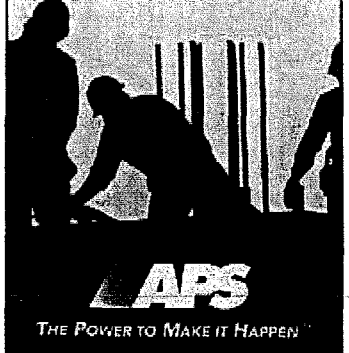
State and Federal Components of Project

In the first quarter of 2003, APS began working with the Bureau of Land Management (BLM), Phoenix Field Office. The

In This Issue

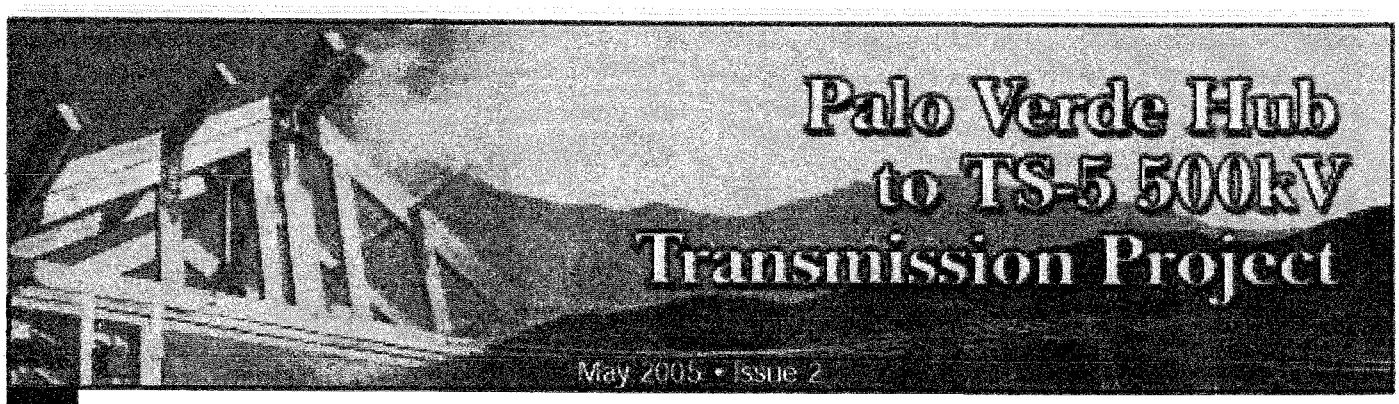
- Project Description
- State and Federal Components
- Proposed Route
- Environmental Process
- Public Participation
- Project Schedule

For More Information visit the Project Web site at http://siting.apsc.com or call the project information line at (602) 794-9000.



APS

THE POWER TO MAKE IT HAPPEN



Palo Verde Hub to TS-5 500kV Transmission Project

May 2005 • Issue 2

Project Update

This newsletter is intended to update you on the progress of the Palo Verde Hub to TS-5 500-kilovolt (kV) Transmission Project. In a prior newsletter (dated March 2004, Issue 1), APS provided information on a proposed transmission line route and facilities to meet future power demands in the Valley's west and northwest areas. The newsletter also discussed the federal and state requirements to obtain approval for the project.

A copy of the March 2004 newsletter can be found under Current Projects, Palo Verde to TS-5, on the project's Web site.

Federal Process

Under the direction of the Bureau of Land Management (BLM) Phoenix Field Office, an Environmental Assessment (EA) for the project was prepared. An EA report describes the project and potential impacts the project may have on the environment. The analysis was required because more than 60 percent of the proposed transmission line would be located on federal lands, within designated utility corridors.

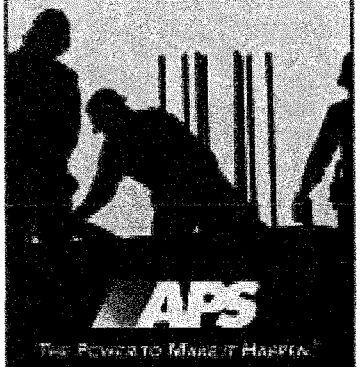
APS retained an outside environmental consulting firm, the Environmental Planning Group (EPG), based in Phoenix, to conduct the required environmental analysis on the project. In preparing the EA, EPG conducted four primary tasks:

1. Regional study/identification of preliminary alternatives;
2. Detailed inventory;
3. Impact assessment and mitigation planning; and
4. Environmental assessment report preparation.

In This Issue

- Project Update
- Federal Process
- Project Description
- State Process

For More Information visit the Project Web site at http://siting.aps.com



Questions? Call (602) 794-9000

APS

TRANSMISSION & FACILITY SITING DEPARTMENT

current projects

» Blue Ridge 69kV
» Chino Valley/ Williamson Valley
» North Valley
» Palo Verde to TS-5
» Paulden/Yavapai
» West Valley - North
» West Valley - South
» Wickenburg

completed projects

» North Central
» Northeast Phx
» Northwest Valley
» Saddle Mtn.
» Southwest Valley
» Tonto Power Line
» Vista to Copper Mtn

» Siting Home Page

Palo Verde Hub to TS-5 500kV Project

The West Valley is experiencing tremendous growth, with numerous master planned communities and thousands of homes in the development stages. APS is currently pursuing plans to expand its electrical system in the area to meet current and future increase in electrical usage.

The Palo Verde Hub to TS-5 Project includes plans for a new 500kV transmission line approximately 40 miles in length, and a new 500/230kV substation in the Sun Valley area (see Proposed Route Map). The project is currently scheduled to be in service in 2007.

If you have questions, would like to provide comments on the project, or would like to be added to the project mailing list, please contact us at the project information line, **(602) 794-9000** or fill out our **Public Comment Form.**

✔ LATEST**NEWS**

» New! **Public Hearing Dates Scheduled**

» New! **Public Hearing Notice**

✔ PROJECT**MAPS**

[for PDFs, download Get Adobe Acrobat Reader]

» New! **Proposed Corridor Map**

» New! **Proposed Route Map**

✔ FACTSHEET**ARCHIVE**

To catch up on past issues of the Palo Verde Hub to TS-5 Facilities Siting Project factsheets, click on an issue title, below:

» **Newsletter #1: 03/04**

APS

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BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

Docket No. L-00000D-05-0128, Case No. 128

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES SECTION 40-360, et seq., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE PALO VERDE HUB TO TS-5 500kV TRANSMISSION PROJECT WHICH INCLUDES A 500kV TRANSMISSION LINE AND ASSOCIATED FACILITIES AND INTERCONNECTIONS ORIGINATING FROM EITHER THE PALO VERDE NUCLEAR GENERATING STATION SWITCHYARD, SECTION 34, TOWNSHIP 1 NORTH, RANGE 6 WEST, G&SRB&M, OR A NEW SWITCHYARD AT THE ARLINGTON VALLEY ENERGY FACILITY, SECTION 17, TOWNSHIP 1 SOUTH, RANGE 6 WEST, G&SRB&M, EACH LOCATED SOUTH OF INTERSTATE 10 NEAR WINTERSBURG ROAD IN AN UNINCORPORATED AREA OF MARICOPA COUNTY, ARIZONA, TO THE TS-5 SUBSTATION NEAR THE HASSAYAMPA PUMPING PLANT ALONG THE CENTRAL ARIZONA PROJECT CANAL, IN THE TOWN OF BUCKEYE, MARICOPA COUNTY, ARIZONA, AT SECTION 29, TOWNSHIP 4 NORTH, RANGE 4 WEST, G&SRB&M

NOTICE OF HEARING

A PUBLIC HEARING WILL BE HELD before the Arizona Power Plant and Transmission Line Siting Committee ("Committee") regarding the Application of Arizona Public Service Company ("APS") for a Certificate of Environmental Compatibility authorizing the Palo Verde Hub to TS-5 Substation 500kV Transmission Project ("Project") in Maricopa County, Arizona. The hearing will be held at the Hampton Inn and Suites, 2000 North Litchfield Road, Goodyear, Arizona 85338, beginning on June 6, 2005 at 9:30 a.m. and continuing on June 7, 2005, at 9:30 a.m. The hearings will adjourn at approximately 5:00 p.m. Additional hearing days, if necessary, will be noticed on the Project and Arizona Corporation Commission ("ACC") websites. The Project website is http://siting.apsc.com. The ACC website is www.cc.state.az.us/utility/electric/linesiting-calendar.htm.

Public comment will be taken at the beginning of each hearing day. Public comment also will be taken in a special evening session on June 6, 2005 beginning at 6:30 p.m. at the Hampton Inn and Suites, 2000 North Litchfield Road, Goodyear, Arizona 85338.

The Committee may conduct a tour of the Project area, proposed route and proposed alternative route on a future date. The map and itinerary for the tour will be available at the hearings and posted on the Project website. Members of the public may follow the Committee in their own private vehicles. During any tour, the Committee will not discuss or deliberate in any manner concerning the Application.

The Project consists of approximately 43 miles of 500kV transmission lines and two new switchyards: the Arlington Valley Energy Facility switchyard and the Harquahala Junction switchyard.

The Proposed Route originates at either the PVNGS Switchyard (Line Siting Case Nos: 22 and 24) located in Section 34, Township 1 North, Range 6 West or at a new switchyard at the Arlington Valley Energy Facility (Line Siting Case No: 98) located in Section 17, Township 1 South, Range 6 West. If the route originates at the PVNGS Switchyard, the Applicant requests a 1,000-foot corridor on the north side of the existing Palo Verde-Devers No. 1 500kV transmission line (Line Siting Case Nos: 34 and 48) right-of-way for this portion of the route (Link 10 as depicted on the attached map). If the route originates at a new switchyard at the Arlington Valley Energy Facility, the Applicant requests a 2,500-foot corridor west of the existing Harquahala-Hassayampa 500kV transmission line (Line Siting Case No: 96) right-of-way (Link 20). Both interconnection options proceed to a common point approximately ½ mile west of Wintersburg Road. From this location, the route proceeds west and then northwest, paralleling the existing Palo Verde-Devers No. 1 and Harquahala-Hassayampa 500kV transmission lines to the proposed Harquahala Junction Switchyard located in Section 25, Township 2 North, Range 8 West near 451st Avenue and the Thomas Road alignment (Link 30). For this portion of the route, the Applicant requests a 1,000-foot corridor on the north and east side of the existing Palo Verde-Devers No. 1 500kV transmission line right-of-way. Links 10 or 20 and Link 30 of the Proposed Route would be built in a later phase if the proposed Harquahala Junction Switchyard is built as part of the initial project construction. If the proposed Harquahala Junction Switchyard is not built as part of the initial project construction, Links 10 or 20 and Link 30 would be constructed as part of the initial construction.

From the proposed Harquahala Junction Switchyard, the route proceeds generally north across I-10 and the Central Arizona Project ("CAP") Canal parallel to the Palo Verde-Devers No. 1 500kV transmission line (Link 50). The Applicant requests a 1,000 foot corridor on the east side of the existing transmission line right-of-way for this portion of the Proposed Route. At this point, the route turns easterly and would be located on the north side of the CAP Canal (Links 60, 80, 90 and 100) near the foothills of the Belmont Mountains to a point approximately ½ mile west of Wickenburg Road. The Applicant requests a 2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal for this portion of the Proposed Route. At this point, the Proposed Route continues in an easterly direction and crosses Wickenburg Road approximately ½ mile north of the CAP Canal to a point approximately 1 mile east of Wickenburg Road (Link 110). A 3,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal is requested for this portion of the Proposed Route. From this point, the route turns northeast and crosses two existing 230kV and one existing 345kV transmission lines as well as the Hassayampa River before paralleling the north and west sides of the CAP Canal until it crosses the CAP into the TS-5 Substation (Line Siting Case No: 127) located in Section 29, Township 4 North, Range 4 West (Links 120 and 130). The Applicant requests a 2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal for this portion of the Proposed Route and a corridor on the south side of the CAP Canal adjacent to the TS-5 substation sufficient to interconnect with the TS-5 substation.

The Application also sets forth a Proposed Alternative Route. The Proposed Alternate Route shares the same alignment as the Proposed Route previously described, with the exception of an approximately 9-mile segment immediately east of the Palo Verde-Devers No. 1 500kV transmission line and north of the CAP Canal (Link 70). In this area, the Proposed Alternate Route would be located approximately ½ mile north of the CAP Canal. The Applicant requests a 2,000-foot corridor extending south from the northern edge of the Bureau of Land Management ("BLM") designated utility corridor (located approximately ½ mile north of the chain-link fence located on the north side of the CAP Canal). All other segments of the Proposed Alternate Route would be similar to the Proposed Route.

A general location map of the Project study area, Applicant's Proposed Route and Proposed Alternative Route containing references to the Links described above is set forth below.

More complete maps, along with more detailed textual descriptions of the proposed and alternative alignments are available in the Application itself and on the Project website. The Application, including detailed maps of the proposed Project, is on file with the Docket Control Center of the Arizona Corporation Commission, 1200 West Washington Street, Suite 108, Phoenix, Arizona 85007. Copies of the Application also are available for inspection at the following locations:

- Maricopa County Library District, Northwest Regional Library, 16089 N. Bullard Ave., Surprise
- Buckeye Public Library, 310 North 6th Street, Buckeye

Depending on the issues raised and the number of intervenors appearing during the hearing, the Committee may deem it appropriate at some point to recess the hearing to a time and place to be announced during the hearing, or to be determined after the recess. These dates and places will be posted on the Project and ACC websites. At the discretion of the Committee, such resumed hearing may be held at a date, time and place designated by the Committee or its Chairman.

NOTE: NOTICE OF SUCH RESUMED HEARING WILL BE GIVEN. PUBLISHED NOTICE OF SUCH RESUMED HEARING IS NOT REQUIRED.

Each county and municipal government and state agency interested in the proposed Project and desiring to become a party to the proceeding, shall, not less than ten (10) days before the date set for hearing, file with the Director of Utilities, Arizona Corporation Commission, 1200 West Washington, Phoenix, Arizona, 85007, a notice of its intent to be a party.

Any domestic, non-profit corporation or association, formed in whole or in part to promote conservation of natural beauty, to protect the environment, personal health or other biological values, to preserve historical sites, to promote consumer interests, to represent commercial and industrial groups or to promote the orderly development of the area in which the Project is to be located and desiring to become a party to the certification proceeding, shall, not less than ten (10) days before the date set for hearing, file with the Director of Utilities, Arizona Corporation Commission, 1200 West Washington, Phoenix, Arizona 85007, a notice of its intent to be a party.

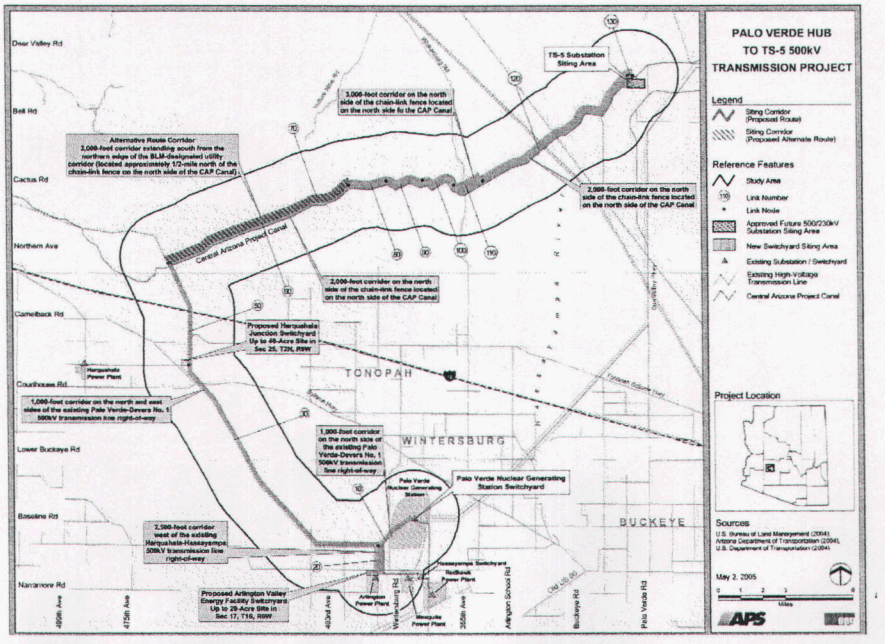
The Committee or its Chairman, at any time deemed appropriate, may make other persons parties to the proceedings.

Any person may make a limited appearance at the hearing by filing a statement in writing with the Director of Utilities, Arizona Corporation Commission, 1200 West Washington, Phoenix, Arizona 85007, not less than five (5) days before the date set for hearing. A person making a limited appearance shall not be a party or have the right to present testimony or cross-examine witnesses.

This proceeding is governed by Arizona Revised Statutes Sections 40-360 to 40-360.13 and Arizona Administrative Code Rules R14-3-201 to R14-3-219. The written decision of the Committee shall be submitted to the Arizona Corporation Commission pursuant to Arizona Revised Statutes Section 40-360.07. Any person intending to be a party before the Arizona Corporation Commission must be a party to the certification proceedings before the Committee.

ORDERED this 3rd day of May, 2005.

/s/ Laurie A. Woodall
Assistant Attorney General
Chairman, Arizona Power Plant and
Transmission Line Siting Committee



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PUBLIC HEARING

APS – Palo Verde Hub to TS-5
Transmission Project
Arizona Corporation Commission Docket No. L-00000D-05-0128

The public is invited to participate at a public hearing before the Arizona Power Plant and Transmission Line Siting Committee
Commencing on:
June 6, 2005 at 9:30AM
(Special Public Comment Session at 6:30PM)
June 7, 2005 at 9:30AM
Hampton Inn and Suites
2000 North Litchfield Road
Goodyear, Arizona 85338

APS INFO: 623-932-6729 or http://siting.apsc.com
ACC INFO: http://www.cc.state.az.us/utility/electric/linesiting-faqs.htm

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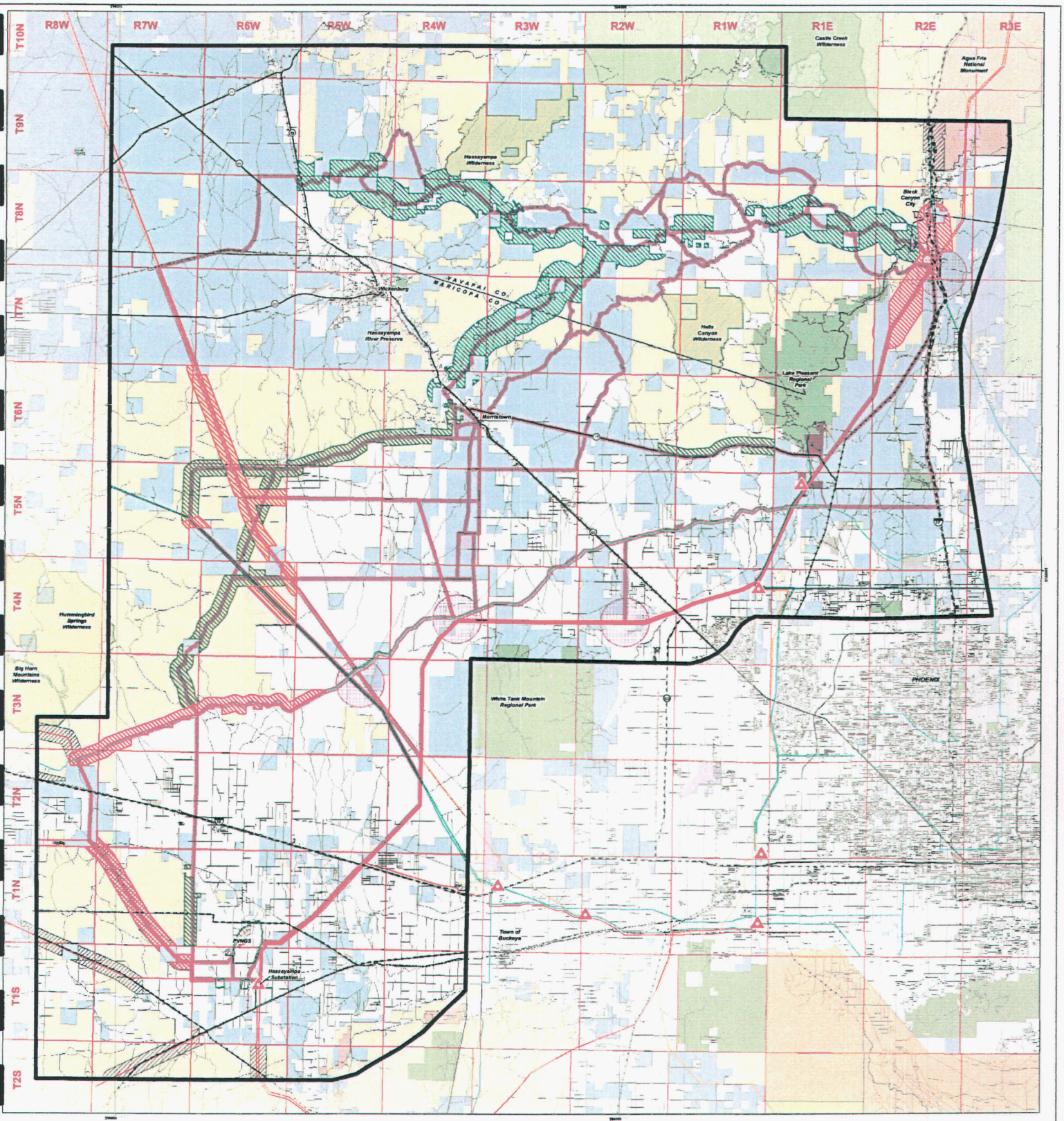

Arizona Public Service (APS)
Hassayampa to Table Mesa Project

Preliminary Alternative Corridors

APS Preliminary Utility Corridors
- First Priority
- Second Priority
- Third Priority
- Fourth Priority
- Existing BLM Utility Corridors
- Preliminary Alternatives
- Preliminary Substation Sites

Land Ownership
- State
- BLM
- Private
- BOR
- USFS
- Indian Lands
- Military
- City, County, & State Parks
- County Lands
- State & County Parks
- State Wildlife Area

General Reference Features
- Study Area Boundary
- Wilderness Area
- National Monument
- Nature Conservancy Preserve
- County Boundaries
- Township & Range
- Existing Generation and Substations
- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- Central Arizona Project (CAP)
- Substation
- Interstate
- Highways
- Roads
- Railroads
- Pipelines

Map Scale: 1:125,000

Map Prepared By: EPG Inc. March 26, 2003
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APS

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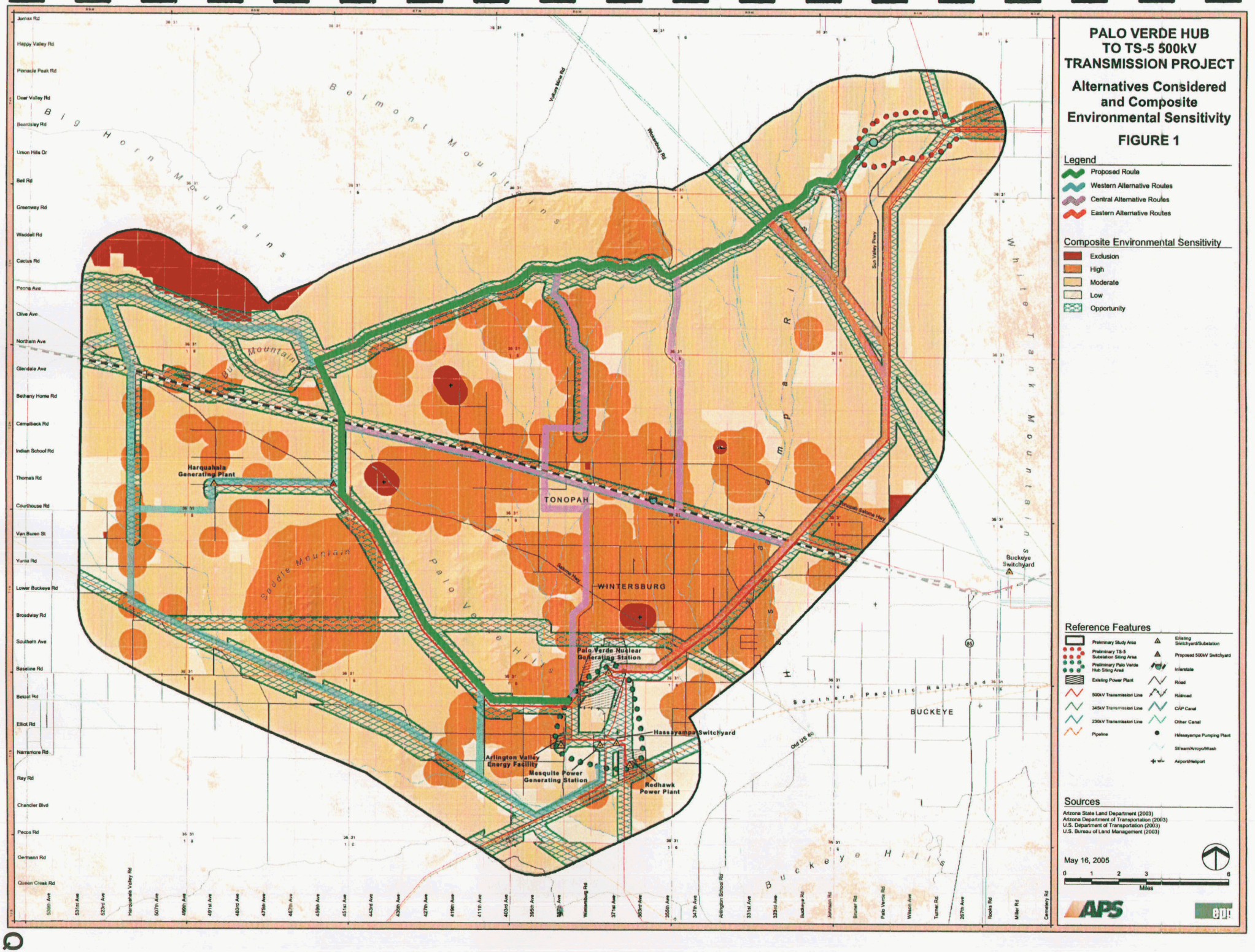
PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Alternatives Considered
and Composite
Environmental Sensitivity
FIGURE 1
Legend
Proposed Route
Western Alternative Routes
Central Alternative Routes
Eastern Alternative Routes
Composite Environmental Sensitivity
Exclusion
High
Moderate
Low
Opportunity
Reference Features
Preliminary Study Area
Preliminary TS-5 Substation Siting Area
Preliminary Palo Verde Hub Siting Area
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Pipeline
Existing Switchyard/Substation
Proposed 500kV Switchyard
Interstate
Road
Railroad
CAP Canal
Other Canal
Hassayampa Pumping Plant
Stream/Arroyo/Wash
Airport/Heliport
Sources
Arizona State Land Department (2003)
Arizona Department of Transportation (2003)
U.S. Department of Transportation (2003)
U.S. Bureau of Land Management (2003)
May 16, 2005
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APS
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Harquahala Generating Plant
TONOPAH
WINTERSBURG
BUCKEYE
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Arlington Valley Energy Facility
Mesquite Power Generating Station
Redhawk Power Plant
Buckeye Switchyard
Big Horn Mountains
Belmont Mountains
White Tank Mountains
Buckeye Hills
Sierra Estrella
Saddle Mountain
Palo Verde Hills
Southern Pacific Railroad
Hassayampa River
Sun Valley Pkwy
Wickenburg Rd
Vulture Mine Rd
Old US 80
Jomax Rd
Happy Valley Rd
Pinnacle Peak Rd
Dear Valley Rd
Beardsley Rd
Union Hills Dr
Bell Rd
Greenway Rd
Waddell Rd
Cactus Rd
Peoria Ave
Olive Ave
Northern Ave
Glendale Ave
Bethany Home Rd
Camelback Rd
Indian School Rd
Thomas Rd
Courthouse Rd
Van Buren St
Yuma Rd
Lower Buckeye Rd
Broadway Rd
Southern Ave
Baseline Rd
Beloat Rd
Elliot Rd
Narramore Rd
Ray Rd
Chandler Blvd
Pecos Rd
Germann Rd
Queen Creek Rd
Harquahala Valley Rd
Arlington School Rd
Rudasill Rd
Johnson Rd
Bruner Rd
Palo Verde Rd
Wilson Ave
Turner Rd
Rooks Rd
Miller Rd
Cemetery Rd

ENVIRONMENTAL PERMITTING TASKS

	TASK 1 REGIONAL STUDY/IDENTIFICATION OF PRELIMINARY ALTERNATIVES	TASK 2 DETAILED INVENTORY	TASK 3 IMPACT ASSESSMENT AND MITIGATION PLANNING	TASK 4 ENVIRONMENTAL ASSESSMENT PREPARATION	TASK 5 PREPARATION OF THE CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY APPLICATION (CEC)
BLM	• Approve Cost Recovery Agreement • Establish ID Team • Review preliminary plan of development • Review preliminary alternatives • Participate in public meeting • Determine alternative for detailed evaluation in EA	• Provide data • Review inventory • Attend ID Team meeting	• Review and approve impact assessment and mitigation measures • Attend ID Team meeting	• Review and approve final plan of development • Input, review, and approve preliminary and final EA • Attend ID Team meeting • Participate in public meeting • Prepare and sign Finding of No Significant Impact (FONSI) • Prepare and sign Decision Record	• No action
APS	• Submit preliminary right-of-way application • Prepare Cost Recovery Agreement • Develop purpose and need statement • Prepare preliminary plan of development • Provide system alternatives information • Review and approve regional study area • Review preliminary alternatives • Attend meeting with local jurisdictions • Establish mailing list • Prepare Newsletter #1 • Conduct public meeting	• Provide engineering design and cost data • Review inventory • Attend ID Team meeting	• Provide engineering construction, operation, and maintenance data • Review impact assessment and mitigation measures • Attend ID Team meeting	• Review final plan of development • Input and review preliminary and final EA • Attend ID Team meeting	• Prepare CEC application • Review and approve final CEC application • File and notice CEC application • Prepare and provide testimony for Arizona Power Plant and Transmission Line Siting Committee hearings • Prepare Newsletter #2
EPG, INC.	• Define regional study area • Prepare regional base map • Collect secondary data for regional study area • Identify opportunities and constraints • Identify preliminary alternatives • Prepare preliminary plan of development • Organize meeting with local jurisdictions • Establish information line • Establish website/database • Participate in public meeting	• Contact agencies • Prepare alternative(s) corridor base map • Data collection • Map data • Detailed cultural surveys • Attend ID Team meeting • Monitor informational line and website	• Develop impact assessment and mitigation criteria • Conduct impact assessment and mitigation planning • Attend ID Team meeting	• Finalize plan of development • Identify environmentally preferred route • Prepare preliminary draft EA • Finalize, print, and distribute final EA • Attend ID Team meeting	• Prepare environmental portions of CEC application • Prepare and provide testimony for Arizona Power Plant and Transmission Line Siting Committee hearings

APS epg

PALO VERDE HUB TO TS5 500kV
TRANSMISSION PROJECT

MAY 2005

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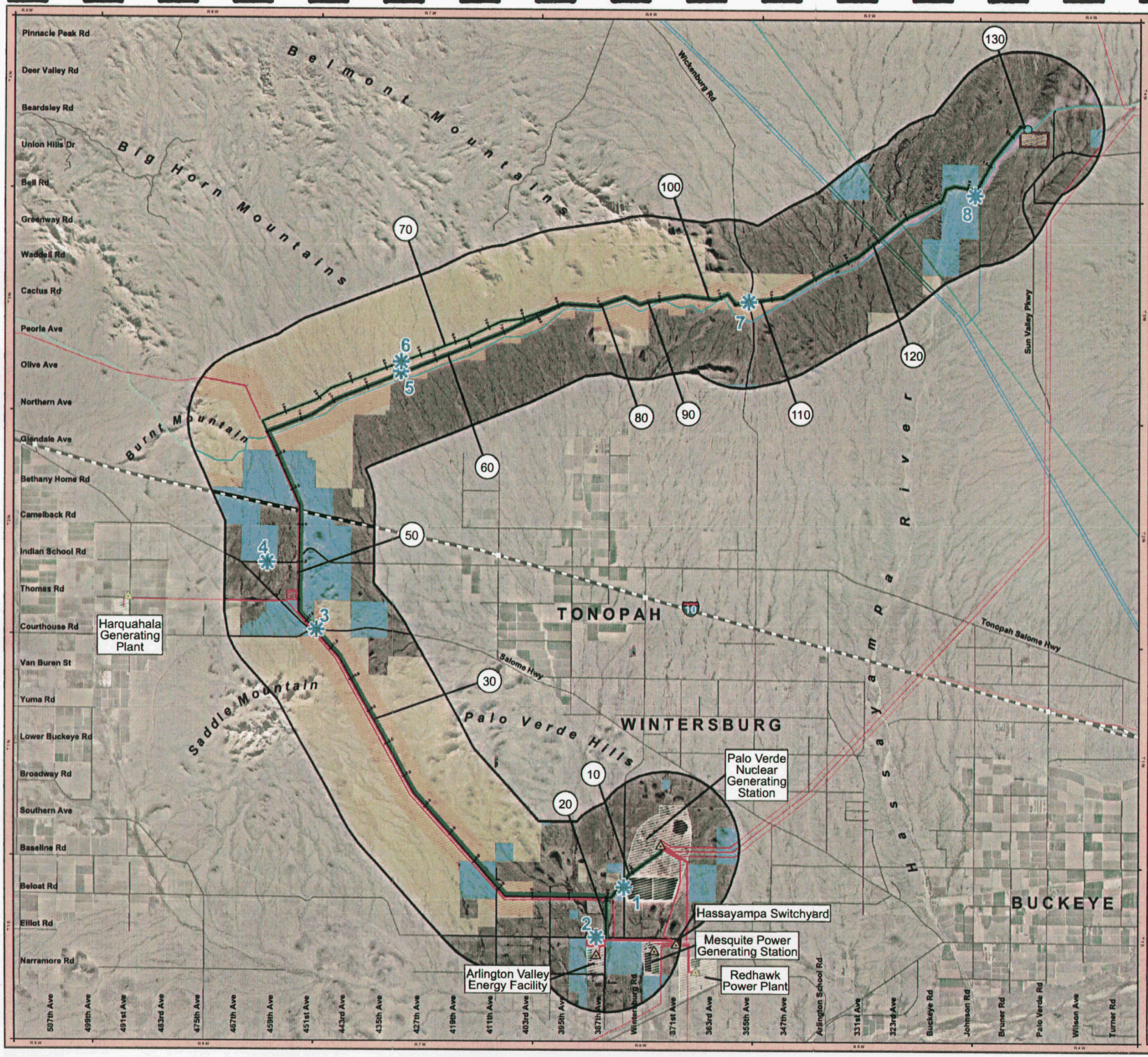

PALO VERDE HUB TO TS-5 500kV TRANSMISSION PROJECT

Virtual Route Tour

Legend

- Point of Interest

Land Ownership

- Bureau of Land Management
- Bureau of Reclamation
- Arizona State Trust Land
- Private

Reference Features

- Study Area (4 Miles)
- Proposed Route
- Proposed Alternate Route
- Link Node
- Link Number
- Designated Utility Corridor (BLM)
- TS-5 Substation Siting Area
- New Switchyard Siting Area
- Existing Power Plant
- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- Existing Switchyard/Substation
- Interstate
- CAP Canal
- Hassayampa Pumping Plant
- Airport/Heliport

Sources

Arizona State Land Department (2003)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)

May 25, 2005

0 1 2 3 6
Miles

APS

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #1**

APS

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View looking north along Wintersburg Road of the Palo Verde-Devers No. 1 500kV transmission line and Palo Verde Nuclear Generating Station (Link 10).

Palo Verde Hub to TS-5 Transmission Project | Point of Interest #1

View looking southwest along WIntersburg Road of the Palo Verde-Devers No. 1 (foreground) and Harquahala-Hassayampa 500kV transmission lines (Link 10).

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #2**

View looking southeast to northeast from Elliot Road toward the Palo Verde Nuclear Generation Station and Arlington Valley Energy Facility (Link 20).

APS

epg

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Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #3**

View looking south from Salome Highway of the existing BLM-designated utility corridor including the Palo Verde-Devers No. 1 and Harquahala-Hassayampa 500kV transmission lines (Link 30).

W

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #4**

View looking south from the Tonopah Salome Highway of the existing BLM-designated utility corridor including the Palo Verde-Devers No. 1 and Harquahala-Hassayampa 500kV transmission lines (Link 50).

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #5**

View looking north from the 427th Avenue Alignment crossing of the CAP Canal of the existing BLM-designated utility corridor (Links 60 and 70).

APS

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Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #5**

View looking west from the 427th Avenue Alignment at the CAP Canal crossing of the existing BLM-designated utility corridor (Links 60 and 70).

APS epg

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Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #5**

View looking east from the 427th Avenue Alignment at the CAP Canal crossing of the existing BLM-designated utility corridor (Links 60 and 70).

AA

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #6**

View looking west from the 427th Avenue Alignment north of the crossing of the CAP Canal of the existing BLM-designated utility corridor (Link 70).

BB

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #6**

View looking east from the 427th Avenue Alignment north of the CAP Canal toward the existing BLM-designated utility corridor (Link 70).

CC

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #7**

View looking west from Wickenburg Road of the existing BLM-designated utility corridor and the foothills of the Belmont Mountains (Link 110).

DD

Palo Verde Hub to TS-5 Transmission Project | **Point of Interest #7**

View looking east from Wickenburg Road of the existing BLM-designated utility corridor (Link 110).

APS

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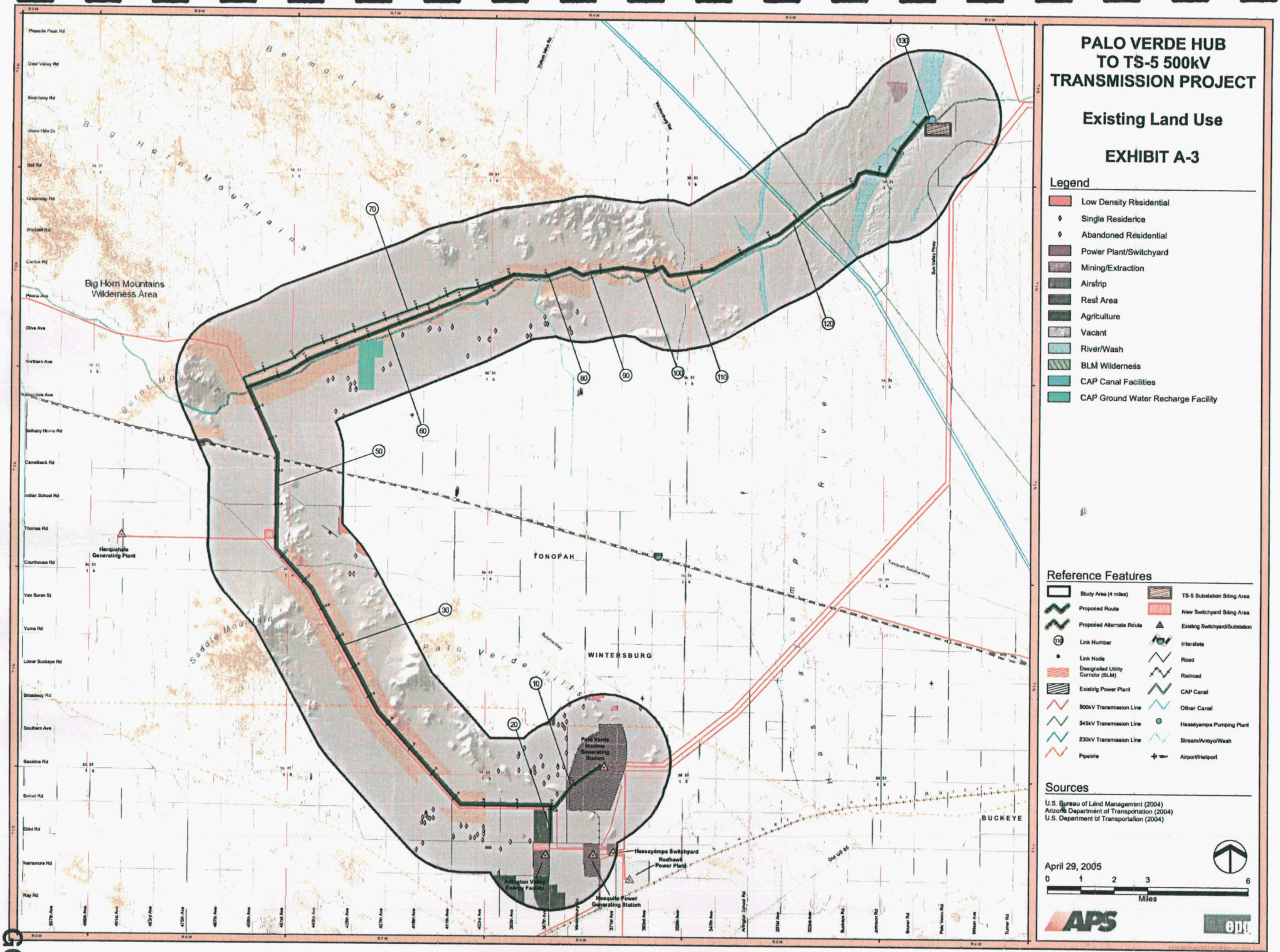
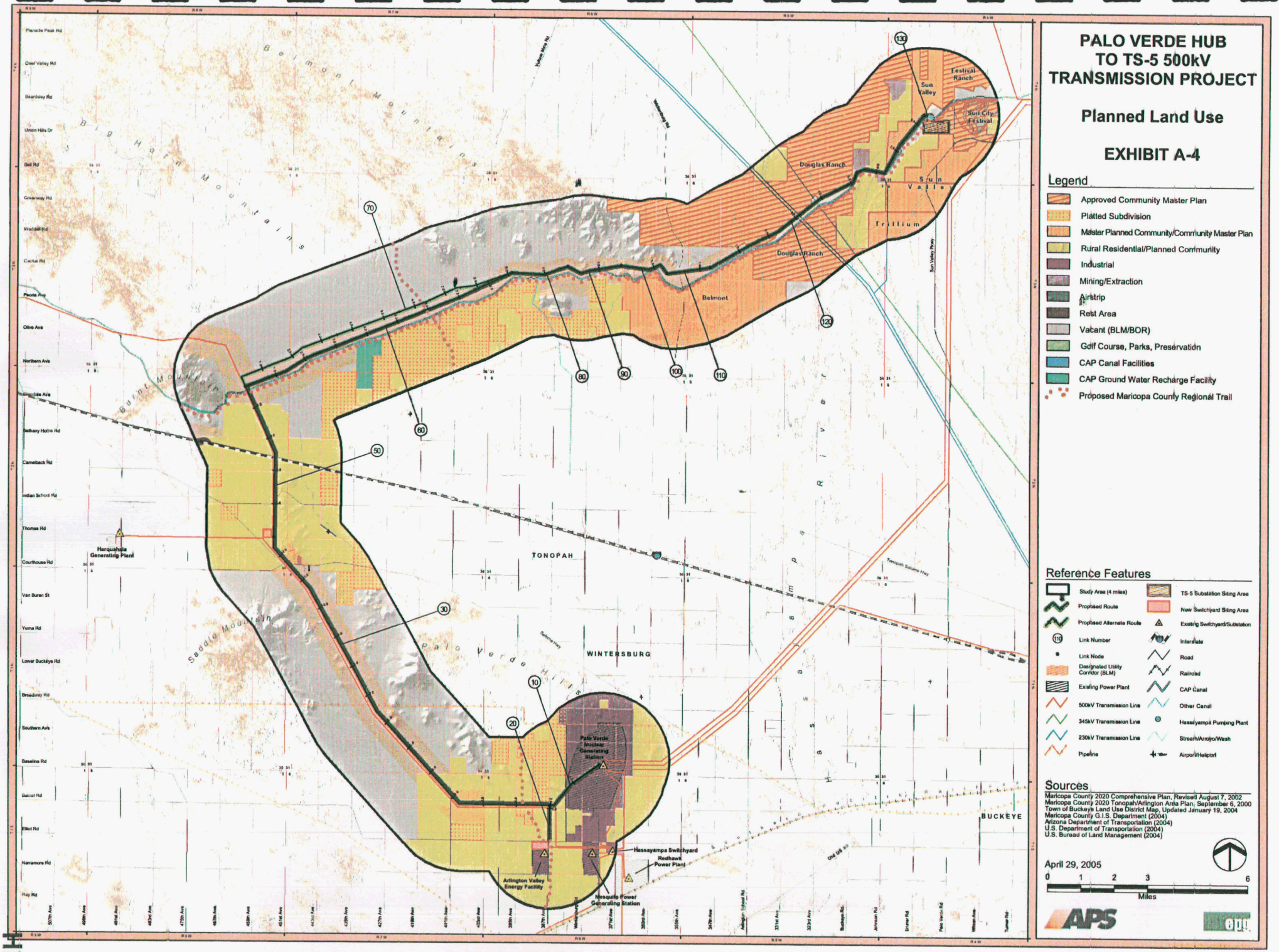
EE

Palo Verde Hub to TS-5 Transmission Project | Point of Interest #8

View looking west from the CAP Canal maintanance road of the Hassayampa River crossing and the CAP Canal (Link 120).

FF


PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Existing Land Use
EXHIBIT A-3
Legend
Low Density Residential
Single Residence
Abandoned Residential
Power Plant/Switchyard
Mining/Extraction
Airstrip
Rest Area
Agriculture
Vacant
River/Wash
BLM Wilderness
CAP Canal Facilities
CAP Ground Water Recharge Facility
Reference Features
Study Area (4 miles)
Proposed Route
Proposed Alternate Route
Link Number
Link Node
Designated Utility Corridor (BLM)
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Pipeline
TS-5 Substation Siting Area
New Switchyard Siting Area
Existing Switchyard/Substation
Interstate
Road
Railroad
CAP Canal
Other Canal
Hassayampa Pumping Plant
Stream/Arroyo/Wash
Airport/Heliport
Sources
U.S. Bureau of Land Management (2004)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
April 29, 2005
0 1 2 3 6
Miles
APS
Big Horn Mountains Wilderness Area
Belmont Mountains
Big Horn Mountains
Burnt Mountain
Saddle Mountain
Palo Verde Hills
Hassayampa River
TONOPAH
WINTERSBURG
BUCKEYE
Harquahala Generating Plant
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Redhawk Power Plant
Arlington Valley Energy Facility
Mesquite Power Generating Station
Pleasant Peak Rd
Deer Valley Rd
Beardsley Rd
Union Hills Dr
Bell Rd
Greenway Rd
Waddell Rd
Cactus Rd
Peoria Ave
Olive Ave
Northern Ave
Glendale Ave
Bethany Home Rd
Camelback Rd
Indian School Rd
Thomas Rd
Courthouse Rd
Van Buren St
Yuma Rd
Lower Buckeye Rd
Broadway Rd
Southern Ave
Baseline Rd
Beloat Rd
Elliot Rd
Narramore Rd
Ray Rd
Salome Hwy
Tonopah Salome Hwy
Old US 80
Arlington School Rd
Johnson Rd
Bruner Rd
Palo Verde Rd
Wilson Ave
Turner Rd


PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Planned Land Use
EXHIBIT A-4
Legend
Approved Community Master Plan
Platted Subdivision
Master Planned Community/Community Master Plan
Rural Residential/Planned Community
Industrial
Mining/Extraction
Airstrip
Rest Area
Vacant (BLM/BOR)
Golf Course, Parks, Preservation
CAP Canal Facilities
CAP Ground Water Recharge Facility
Proposed Maricopa County Regional Trail
Reference Features
Study Area (4 miles)
Proposed Route
Proposed Alternate Route
Link Number
Link Node
Designated Utility Corridor (BLM)
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Pipeline
TS-5 Substation Siting Area
New Switchyard Siting Area
Existing Switchyard/Substation
Interstate
Road
Railroad
CAP Canal
Other Canal
Hassayampa Pumping Plant
Stream/Arroyo/Wash
Airport/Heliport
Sources
Maricopa County 2020 Comprehensive Plan, Revised August 7, 2002
Maricopa County 2020 Tonopah/Arlington Area Plan, September 6, 2000
Town of Buckeye Land Use District Map, Updated January 19, 2004
Maricopa County G.I.S. Department (2004)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)
April 29, 2005
0 1 2 3 6
Miles
APS
Douglas Ranch
Sun Valley
Festival Ranch
Sun City Festival
Trillium
Belmont
TONOPAH
WINTERSBURG
BUCKEYE
Harquahala Generating Plant
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Redhawk Power Plant
Arlington Valley Energy Facility
Mesquite Power Generating Station
Big Horn Mountains
Belmont Mountains
Buret Mountain
Saddle Mountain
Palo Verde Hills
Gila River
Hassayampa River
Tonopah Salome Hwy
Salome Hwy
Old US 80
Sun Valley Pkwy
Jackrabbit Trail
Watson Rd
Perryville Rd
Pinnacle Peak Rd
Deer Valley Rd
Beardsley Rd
Union Hills Dr
Bell Rd
Greenway Rd
Waddell Rd
Cactus Rd
Peoria Ave
Olive Ave
Northern Ave
Glendale Ave
Bethany Home Rd
Camelback Rd
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Elliot Rd
Narramore Rd
Ray Rd
Jackrabbit Trail
Watson Rd
Perryville Rd
Wilson Ave
Turner Rd
Johnson Rd
Buckeye Rd
Bruner Rd
Palo Verde Rd
Arlington School Rd
Tonopah Salome Hwy
Old US 80
Salome Hwy
Gila River
Hassayampa River
Big Horn Mountains
Belmont Mountains
Buret Mountain
Saddle Mountain
Palo Verde Hills
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Perryville Rd
Pinnacle Peak Rd
Deer Valley Rd
Beardsley Rd
Union Hills Dr
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Greenway Rd
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Cactus Rd
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Buckeye Rd
Bruner Rd
Palo Verde Rd
Arlington School Rd
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Old US 80
Salome Hwy
Gila River
Hassayampa River
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Belmont Mountains
Buret Mountain
Saddle Mountain
Palo Verde Hills
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Jackrabbit Trail
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Perryville Rd
Pinnacle Peak Rd
Deer Valley Rd
Beardsley Rd
Union Hills Dr
Bell Rd
Greenway Rd
Waddell Rd
Cactus Rd
Peoria Ave
Olive Ave
Northern Ave
Glendale Ave
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Perryville Rd
Wilson Ave
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Buckeye Rd
Bruner Rd
Palo Verde Rd
Arlington School Rd
Tonopah Salome Hwy
Old US 80
Salome Hwy
Gila River
Hassayampa River
Big Horn Mountains
Belmont Mountains
Buret Mountain
Saddle Mountain
Palo Verde Hills
Sun Valley Pkwy
Jackrabbit Trail
Watson Rd
Perryville Rd
Pinnacle Peak Rd
Deer Valley Rd
Beardsley Rd
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Waddell Rd
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Watson Rd
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Bruner Rd
Palo Verde Rd
Arlington School Rd
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Old US 80
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Gila River
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Saddle Mountain
Palo Verde Hills
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Watson Rd
Perryville Rd
Pinnacle Peak Rd
Deer Valley Rd
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Union Hills Dr
Bell Rd
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Waddell Rd
Cactus Rd
Peoria Ave
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Ray Rd
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Perryville Rd
Wilson Ave
Turner Rd
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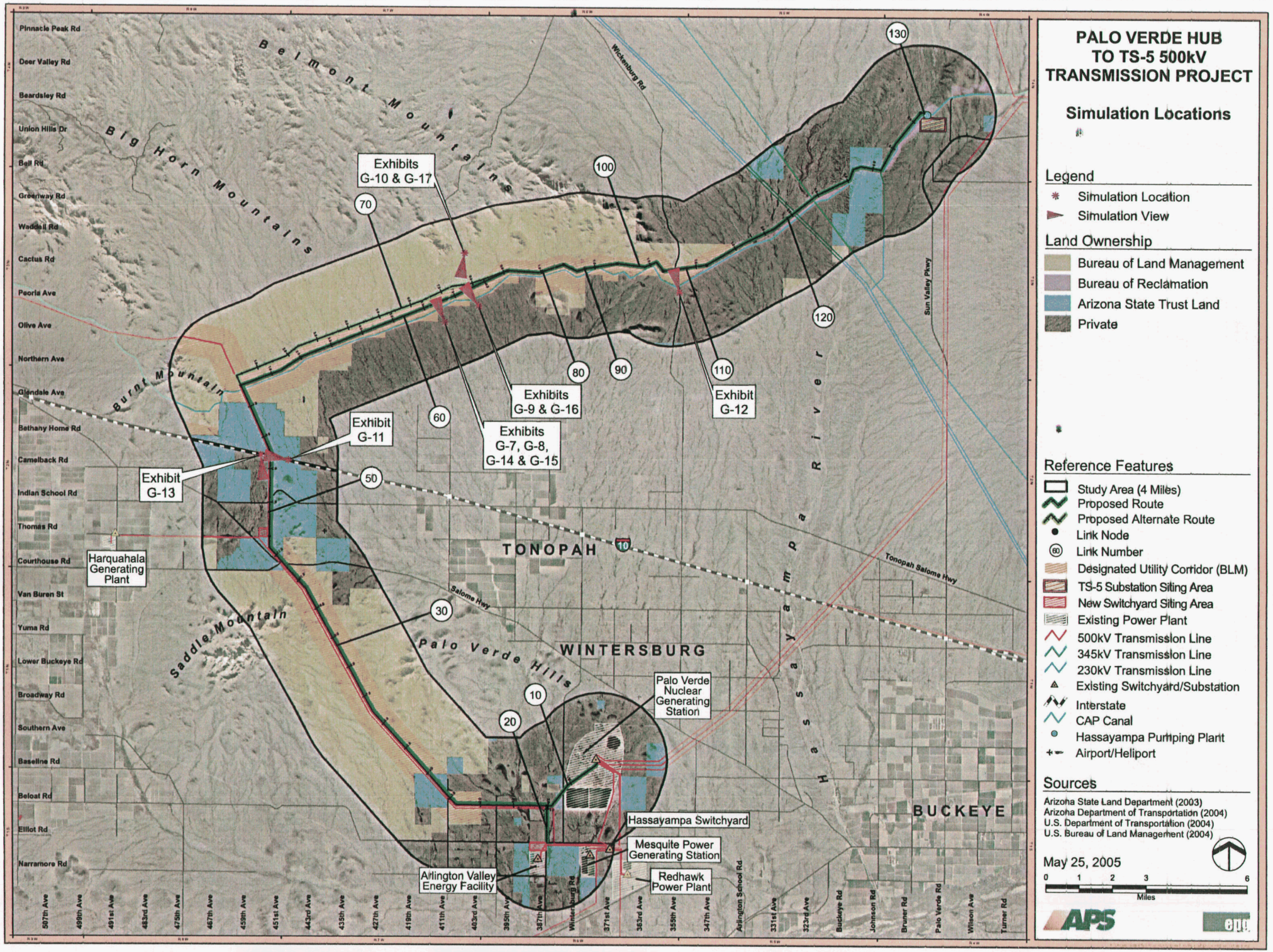
Buckeye Rd
Bruner Rd
Palo Verde Rd
Arlington School Rd
Tonopah Salome Hwy
Old US 80
Salome Hwy
Gila River
Hassayampa River
Big Horn Mountains
Belmont Mountains
Buret Mountain
Saddle Mountain
Palo Verde Hills


PALO VERDE HUB
TO TS-5 500kV
TRANSMISSION PROJECT
Simulation Locations
Legend
Simulation Location
Simulation View
Land Ownership
Bureau of Land Management
Bureau of Reclamation
Arizona State Trust Land
Private
Reference Features
Study Area (4 Miles)
Proposed Route
Proposed Alternate Route
Link Node
Link Number
Designated Utility Corridor (BLM)
TS-5 Substation Siting Area
New Switchyard Siting Area
Existing Power Plant
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
Existing Switchyard/Substation
Interstate
CAP Canal
Hassayampa Pumping Plant
Airport/Heliport
Sources
Arizona State Land Department (2003)
Arizona Department of Transportation (2004)
U.S. Department of Transportation (2004)
U.S. Bureau of Land Management (2004)
May 25, 2005
0 1 2 3 6
Miles
APS
Exhibits G-10 & G-17
Exhibits G-9 & G-16
Exhibits G-7, G-8, G-14 & G-15
Exhibit G-11
Exhibit G-12
Exhibit G-13
Harquahala Generating Plant
Palo Verde Nuclear Generating Station
Hassayampa Switchyard
Mesquite Power Generating Station
Redhawk Power Plant
Arlington Valley Energy Facility
TONOPAH
WINTERSBURG
BUCKEYE
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Saddle Mountain
Palo Verde Hills
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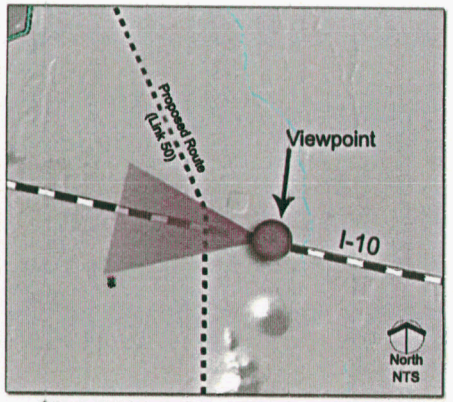
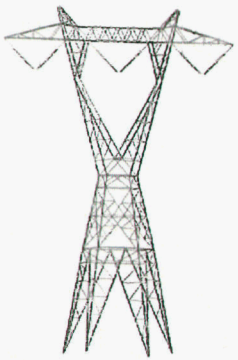
Broadway Rd
Southern Ave
Baseline Rd
Beloat Rd
Elliot Rd
Narramore Rd
507th Ave
499th Ave
491st Ave
483rd Ave
475th Ave
467th Ave
459th Ave
451st Ave
443rd Ave
435th Ave
427th Ave
419th Ave
411th Ave
403rd Ave
395th Ave
387th Ave
Wintersburg Rd
371st Ave
363rd Ave
355th Ave
347th Ave
Arlington School Rd
331st Ave
323rd Ave
Buckeye Rd
Johnson Rd
Bruner Rd
Palo Verde Rd
Wilson Ave
Turner Rd

Existing Conditions - View looking west towards the existing 500kV transmission line crossing Interstate 10.
Photograph taken 7/26/04 at 12:26 p.m. using a 50mm focal length.



Viewpoint located approximately 3,200 feet east of Proposed Route along westbound Interstate 10 (Link 50).

Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line paralleling east of the existing 500kV transmission line (Link 50).



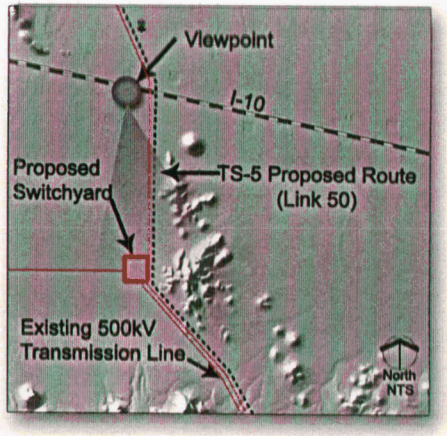
Typical 500kV single-circuit steel lattice tower simulated to match existing tower heights and spans

Palo Verde Hub to TS-5
500kV Transmission Project

APS epg

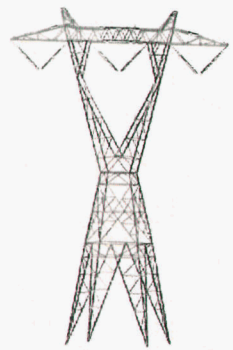
Exhibit G-11

Existing Conditions - View looking south on Interstate 10 towards Saddle Mountain.
Photograph taken 1/11/05 at 1:17 p.m. using a 50mm focal length.



Viewpoint located approximately 2.5 miles north of the proposed Harquahala Junction Switchyard along eastbound Interstate 10 (Link 50).

Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line connecting into the proposed Harquahala Junction Switchyard (Link 50).



Typical 500kV single-circuit steel lattice tower simulated to match existing tower heights and spans

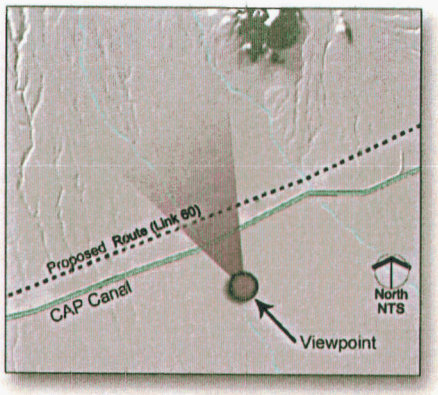
Palo Verde Hub to TS-5 500kV Transmission Project

APS epg

Exhibit G-13

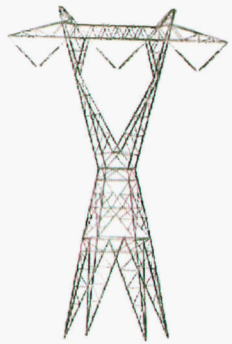
KK

Existing Conditions - View looking north towards CAP Canal berm and the Belmont Mountains.
Photograph taken 8/15/04 at 12:27 p.m. using a 50mm focal length.



Viewpoint located adjacent to a residence approximately 3,300 feet south of the Proposed Route (Link 60).

Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line north of the CAP Canal (Link 60) within a BLM-designated utility corridor.

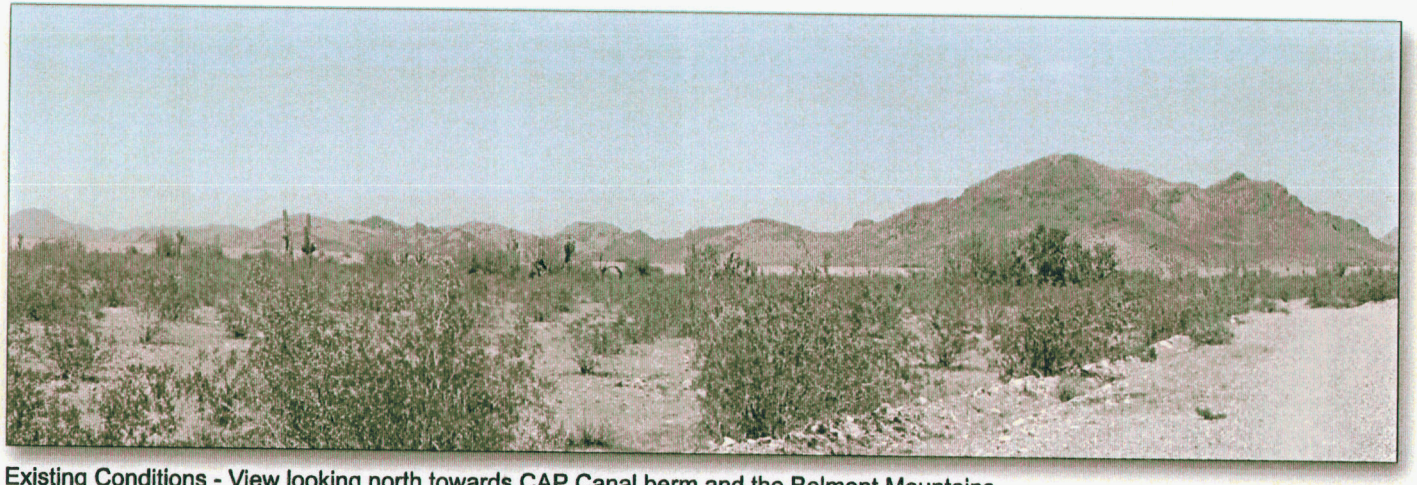


Typical 500kV single-circuit 135' steel lattice tower used in simulations

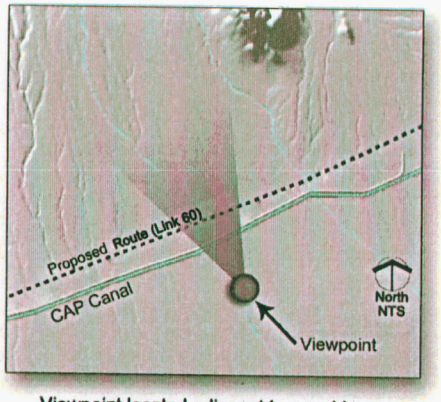
Palo Verde Hub to TS-5
500kV Transmission Project

APS epg

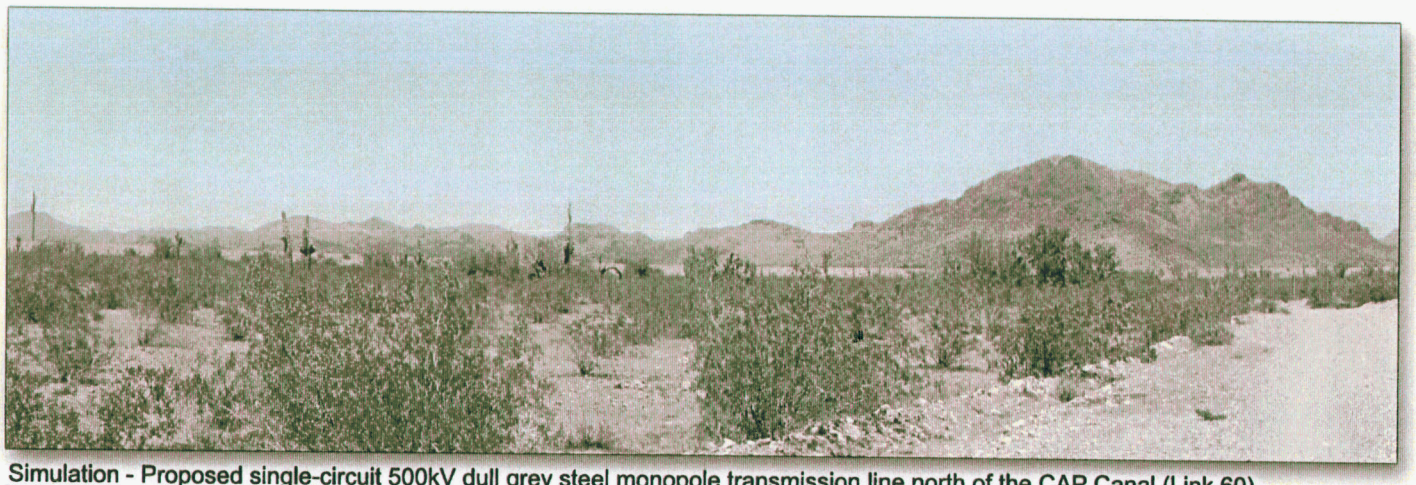
Exhibit G-7



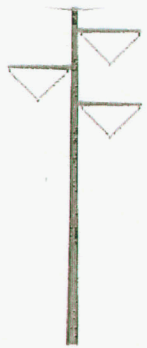
Existing Conditions - View looking north towards CAP Canal berm and the Belmont Mountains.
Photograph taken 8/15/04 at 12:27 p.m. using a 50mm focal length.



Viewpoint located adjacent to a residence approximately 3,300 feet south of the Proposed Route (Link 60).



Simulation - Proposed single-circuit 500kV dull grey steel monopole transmission line north of the CAP Canal (Link 60) within a BLM-designated utility corridor.



Typical 500kV single-circuit 135' steel mono pole used in simulations

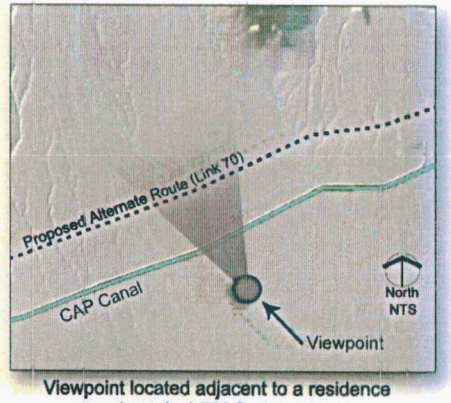
Palo Verde Hub to TS-5
500kV Transmission Project

APS epg

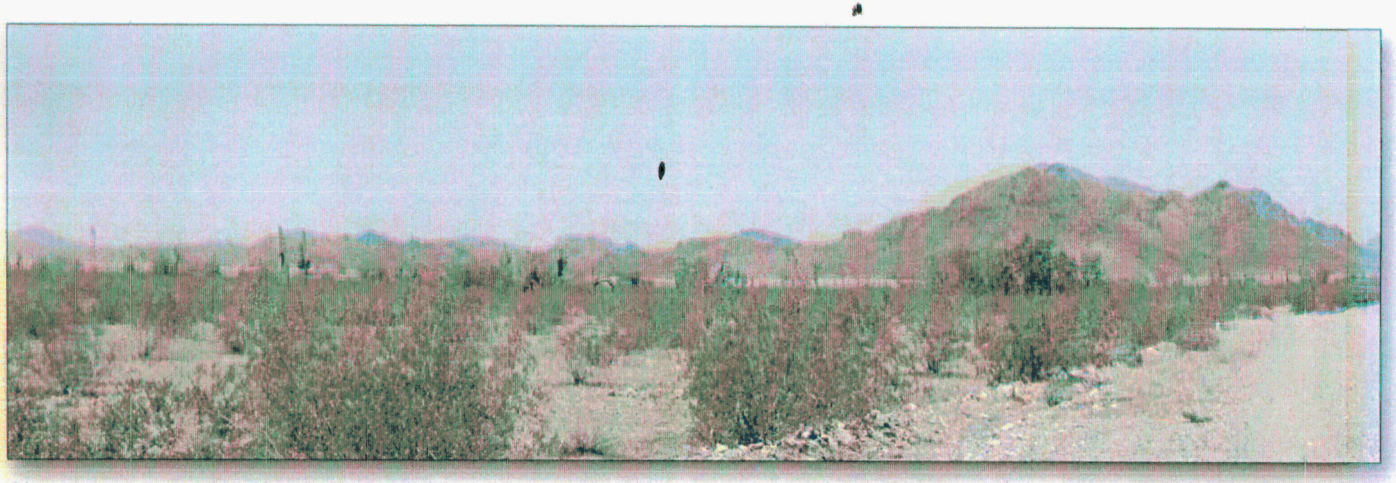
Exhibit G-8

MM

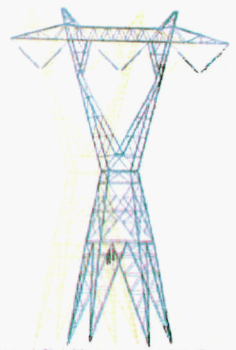
Existing Conditions - View looking north towards CAP Canal and the Belmont Mountains.
Photograph taken 8/15/04 at 12:27 p.m. using a 50mm focal length.



Viewpoint located adjacent to a residence approximately 4,500 feet south of the Proposed Alternate Route (Link 70).



Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line north of the CAP Canal (Link 70) within a BLM-designated utility corridor.



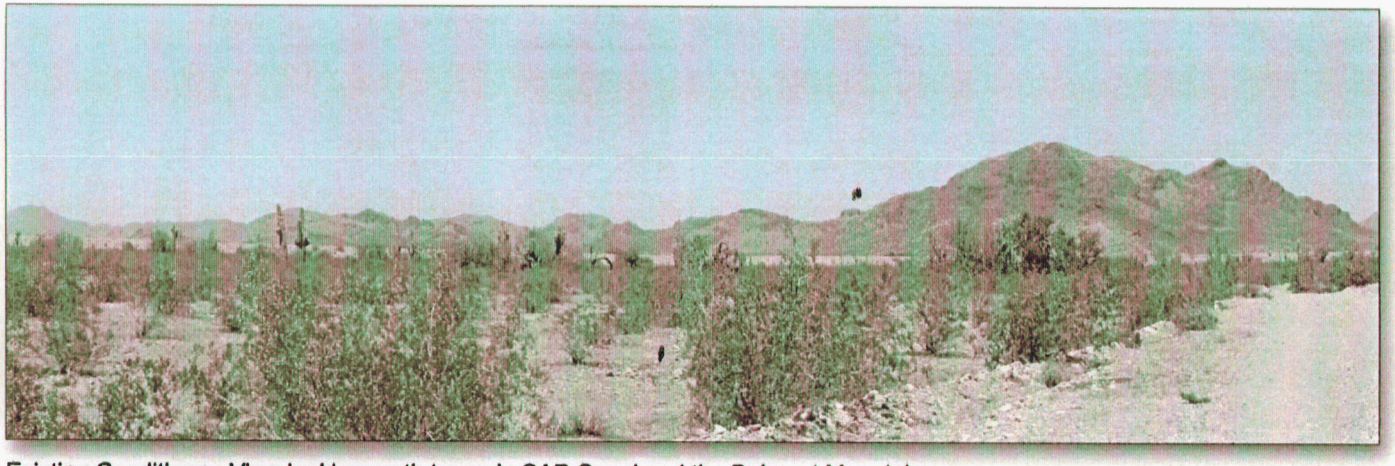
Typical 500kV single-circuit 135' steel lattice tower used in simulations

Palo Verde Hub to TS-5
500kV Transmission Project

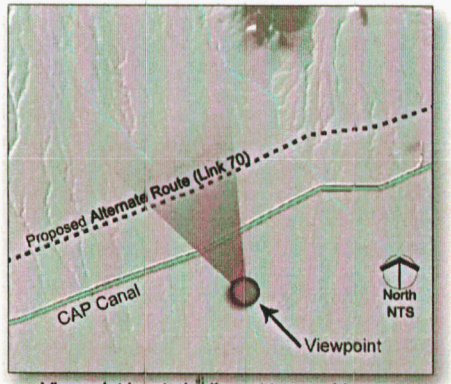
APS eepg

Exhibit G-14

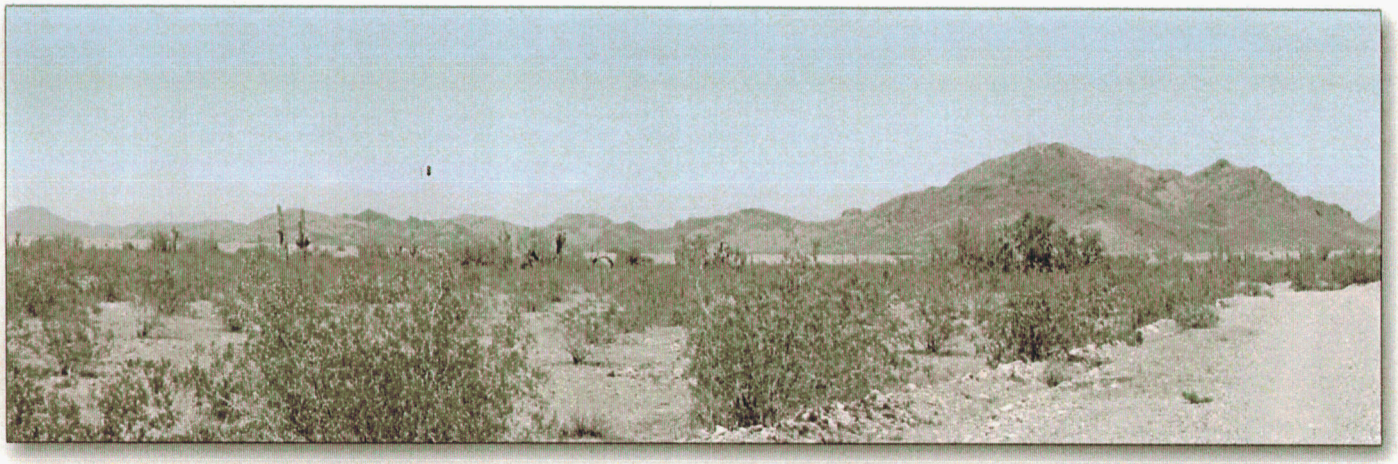
NN



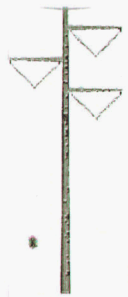
Existing Conditions - View looking north towards CAP Canal and the Belmont Mountains.
Photograph taken 8/15/04 at 12:27 p.m. using a 50mm focal length.



Viewpoint located adjacent to a residence approximately 4,500 feet south of the Proposed Alternate Route (Link 70).



Simulation - Proposed single-circuit 500kV dull grey steel monopole transmission line north of the CAP Canal (Link 70) within a BLM-designated utility corridor.

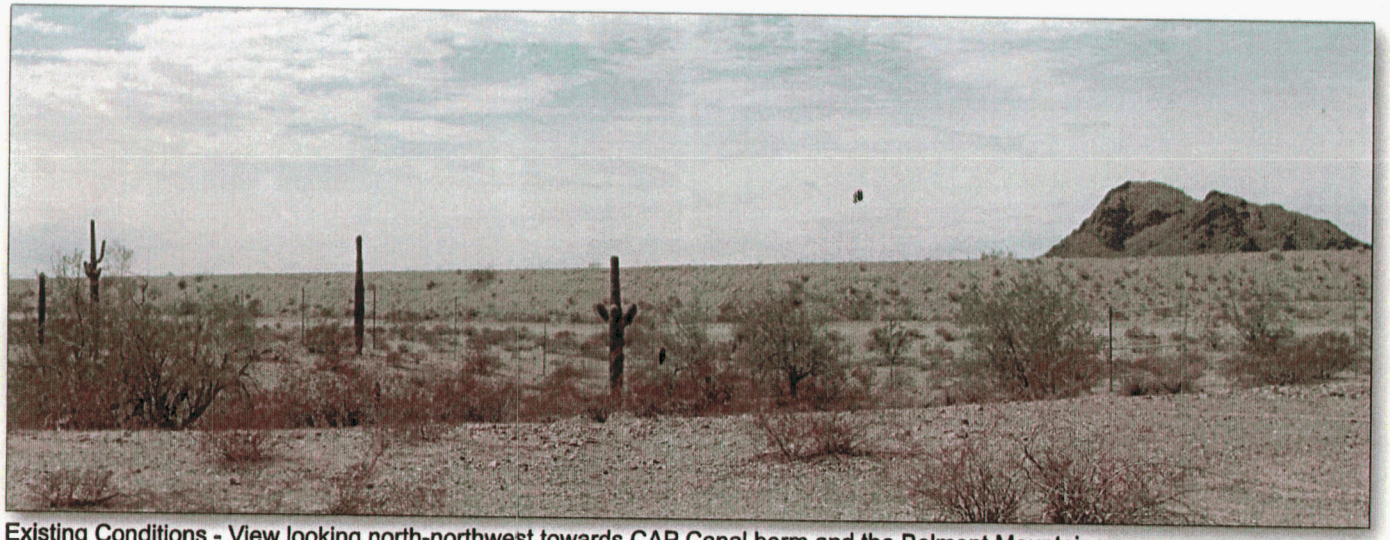


Typical 500kV single-circuit 135' steel monopole used in simulations

Palo Verde Hub to TS-5
500kV Transmission Project

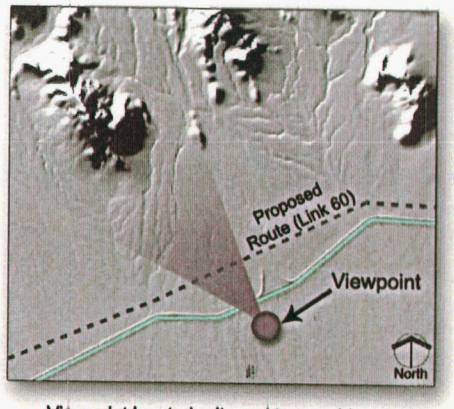
APS epg

Exhibit G-15

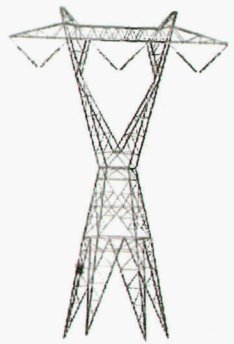


Existing Conditions - View looking north-northwest towards CAP Canal berm and the Belmont Mountains.
Photograph taken 8/19/04 at 2:28 p.m. using a 50mm focal length.

Simulation - Proposed 500kV single-circuit steel lattice tower transmission line (Link 60).



Viewpoint located adjacent to a residence approximately 2,350 feet south of Proposed Route (Link 60).



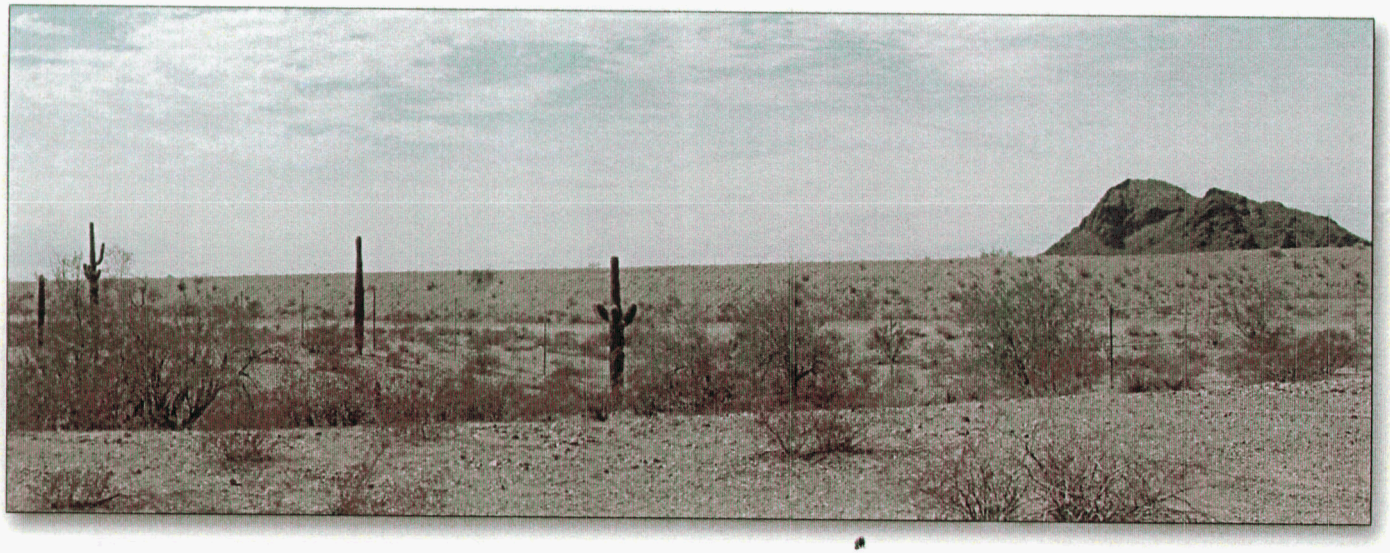
Typical 500kV single-circuit 135' steel lattice tower used in simulations

Palo Verde Hub to TS5
500kV Transmission Project

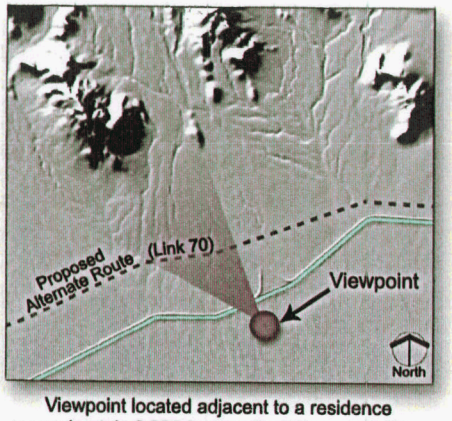
APS epg

Exhibit G-9

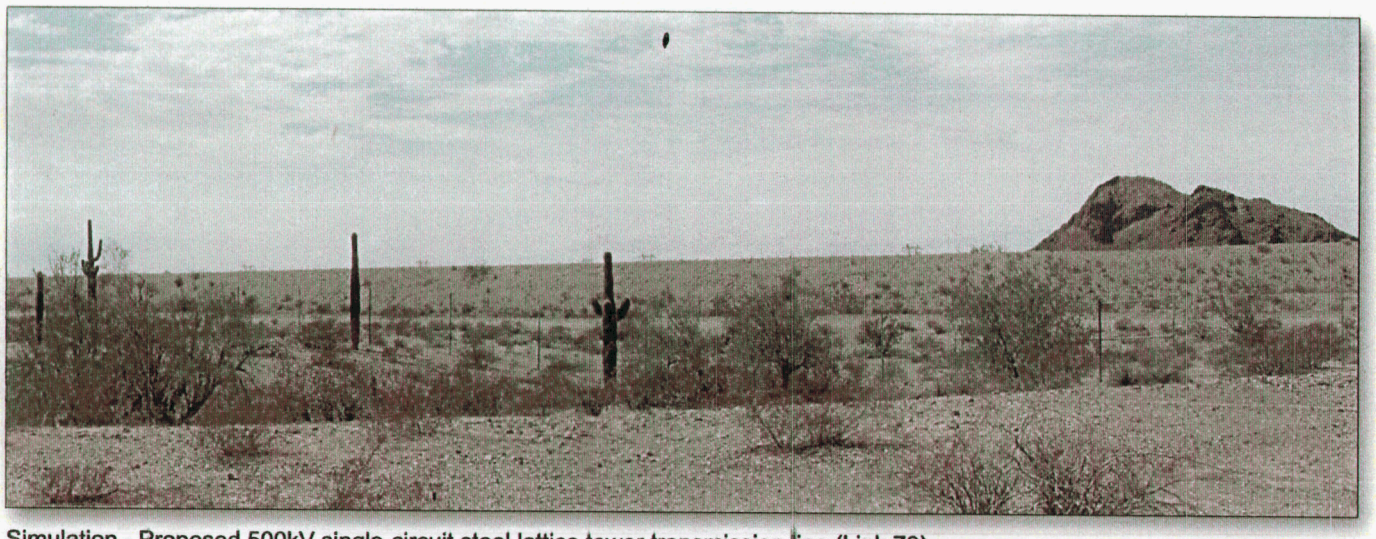
PP



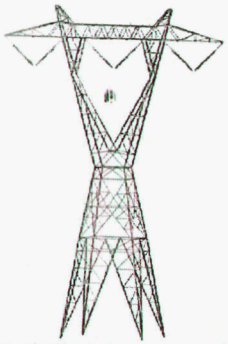
Existing Conditions - View looking north-northwest towards CAP Canal berm and the Belmont Mountains.
Photograph taken 8/19/04 at 2:28 p.m. using a 50mm focal length.



Viewpoint located adjacent to a residence approximately 2,950 feet south of Proposed Alternate Route (Link 70).



Simulation - Proposed 500kV single-circuit steel lattice tower transmission line (Link 70).



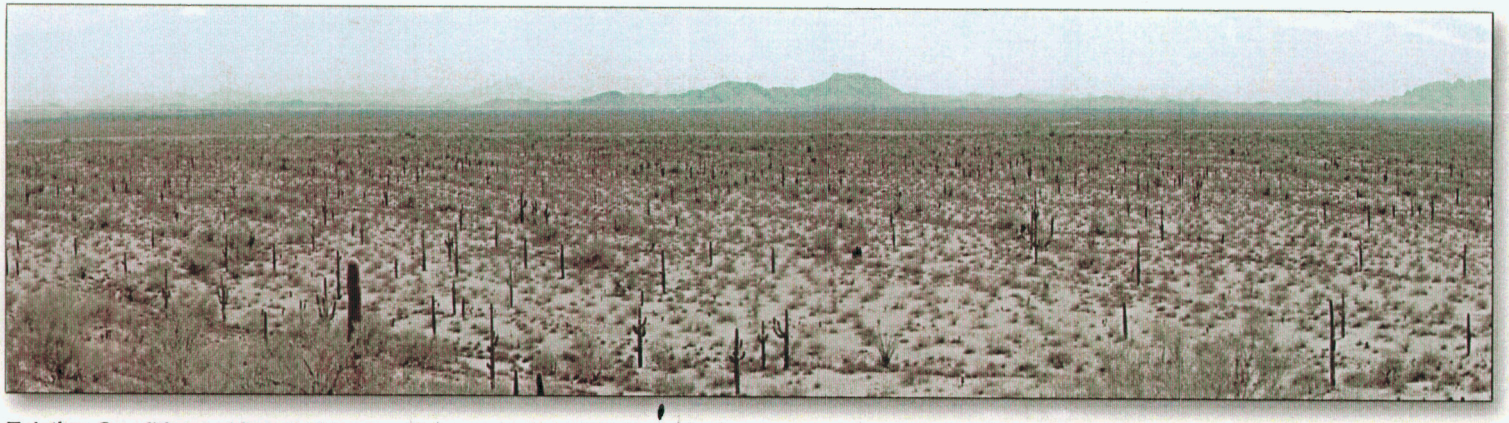
Typical 500kV single-circuit 135' steel lattice tower used in simulations

Palo Verde Hub to TS5
500kV Transmission Project

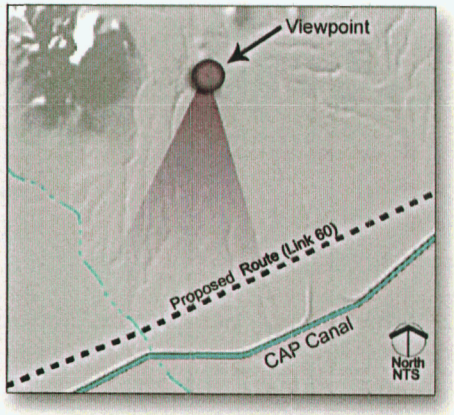
APS epg

Exhibit G-16

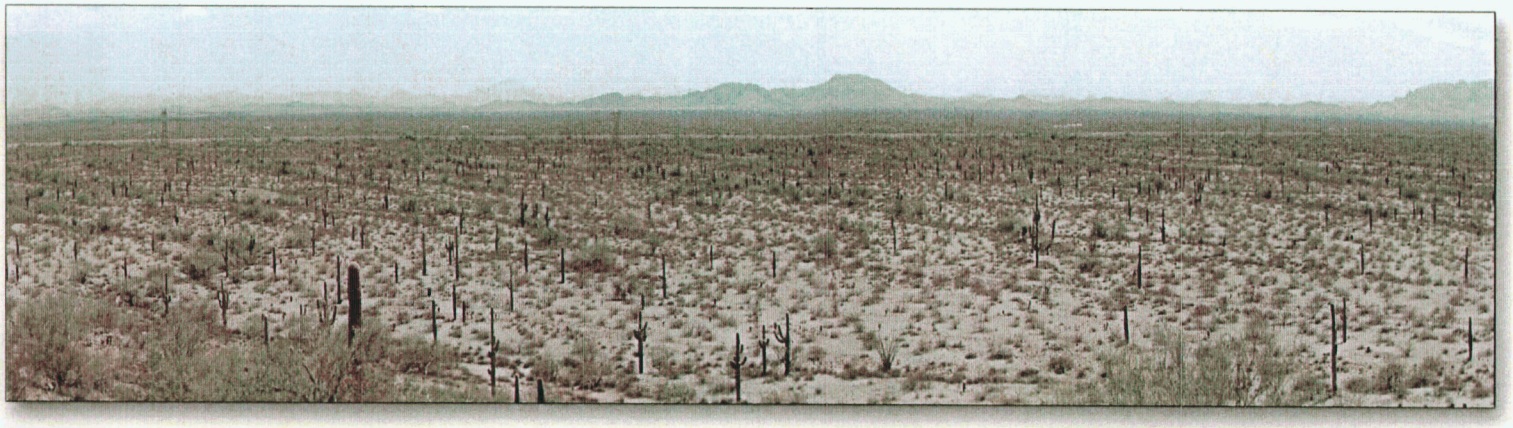
QQ



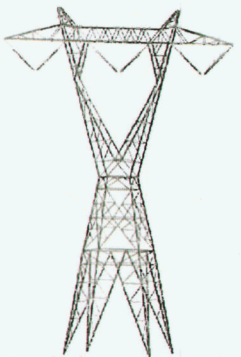
Existing Conditions - View looking south towards the CAP Canal in the desert plains with the Palo Verde Hills in the background.
Photograph taken 8/15/04 at 2:15 p.m. using a 50mm focal length.



Viewpoint located approximately 5,400 feet north of the Proposed Route (Link 60).



Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line north of the CAP Canal (Link 60) within a BLM-designated utility corridor.



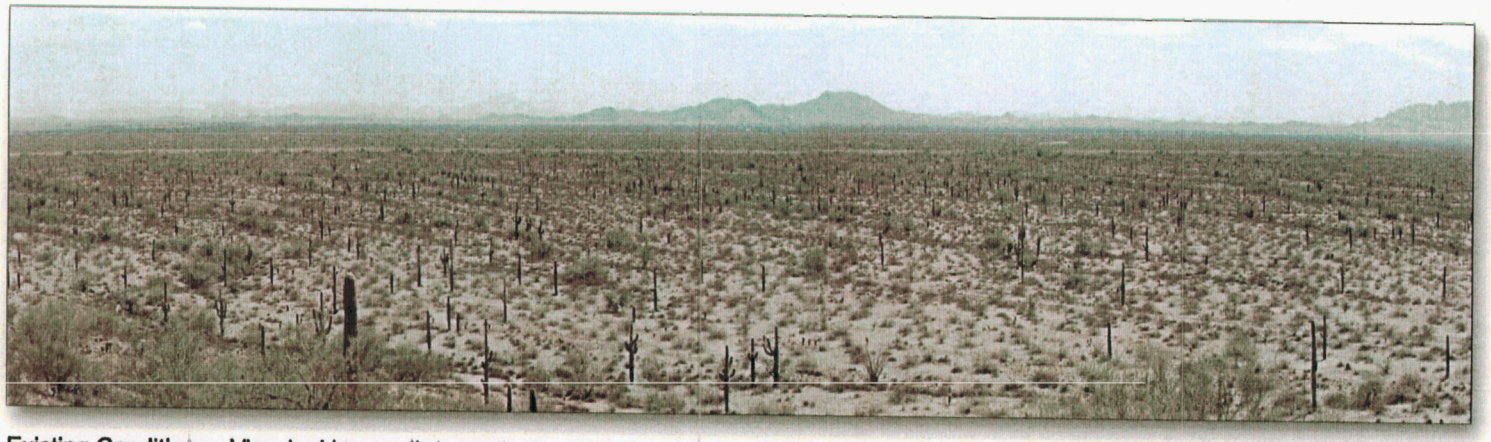
Typical 500kV single-circuit 135' steel lattice tower used in simulations

Palo Verde Hub to TS-5 500kV Transmission Project

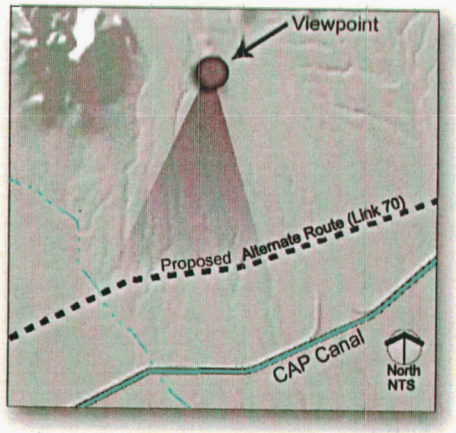
APS epg

Exhibit G-10

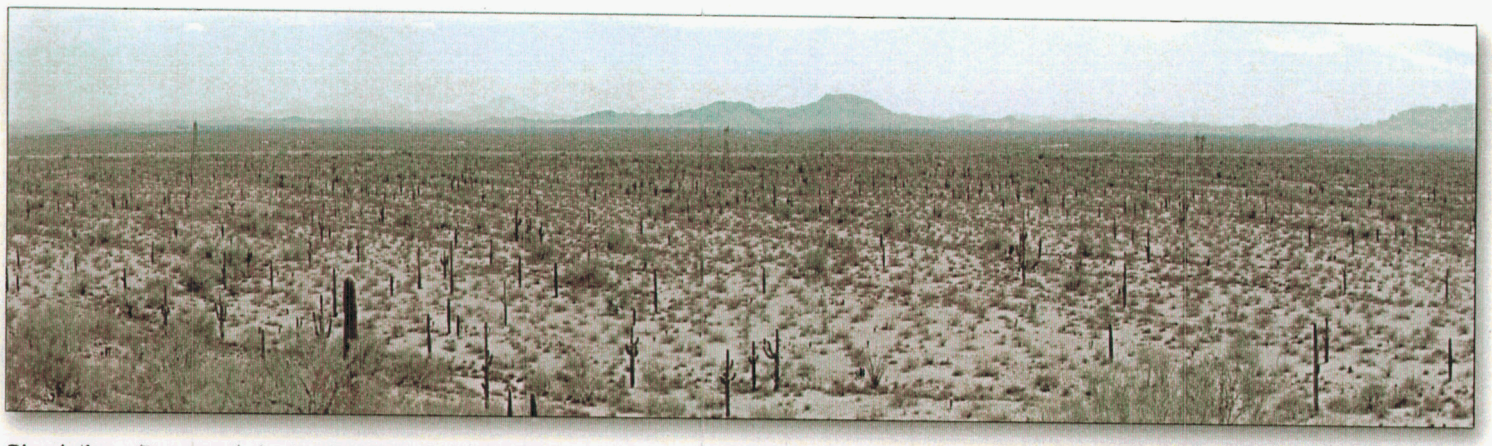
RR



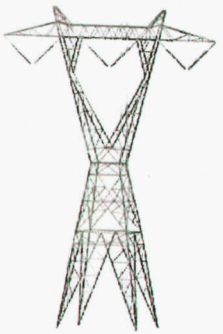
Existing Conditions - View looking south towards the CAP Canal in the desert plains with the Palo Verde Hills in the background.
Photograph taken 8/15/04 at 2:15 p.m. using a 50mm focal length.



Viewpoint located approximately 4,800 feet north of the Proposed Alternate Route (Link 70).



Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line north of the CAP Canal (Link 70) within a BLM-designated utility corridor.



Typical 500kV single-circuit 135' steel lattice tower used in simulations

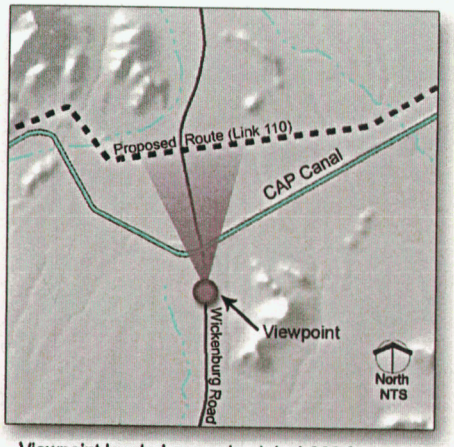
Palo Verde Hub to TS-5
500kV Transmission Project

APS epg

Exhibit G-17

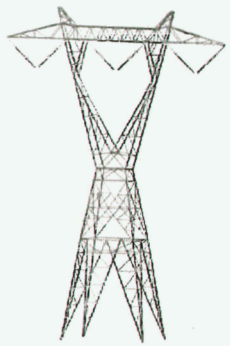
SS

Existing Conditions - View looking north on Wickenburg Road towards CAP Canal.
Photograph taken 8/4/04 at 11:41 a.m. using a 50mm focal length.



Viewpoint located approximately 4,000 feet south of the Proposed Route along northbound Wickenburg Road (Link 110).

Simulation - Proposed single-circuit 500kV dull grey steel lattice transmission line crossing Wickenburg Road north of the CAP Canal within a BLM-designated utility corridor (Link 110).



Typical 500kV single-circuit 135' steel lattice tower used in simulations

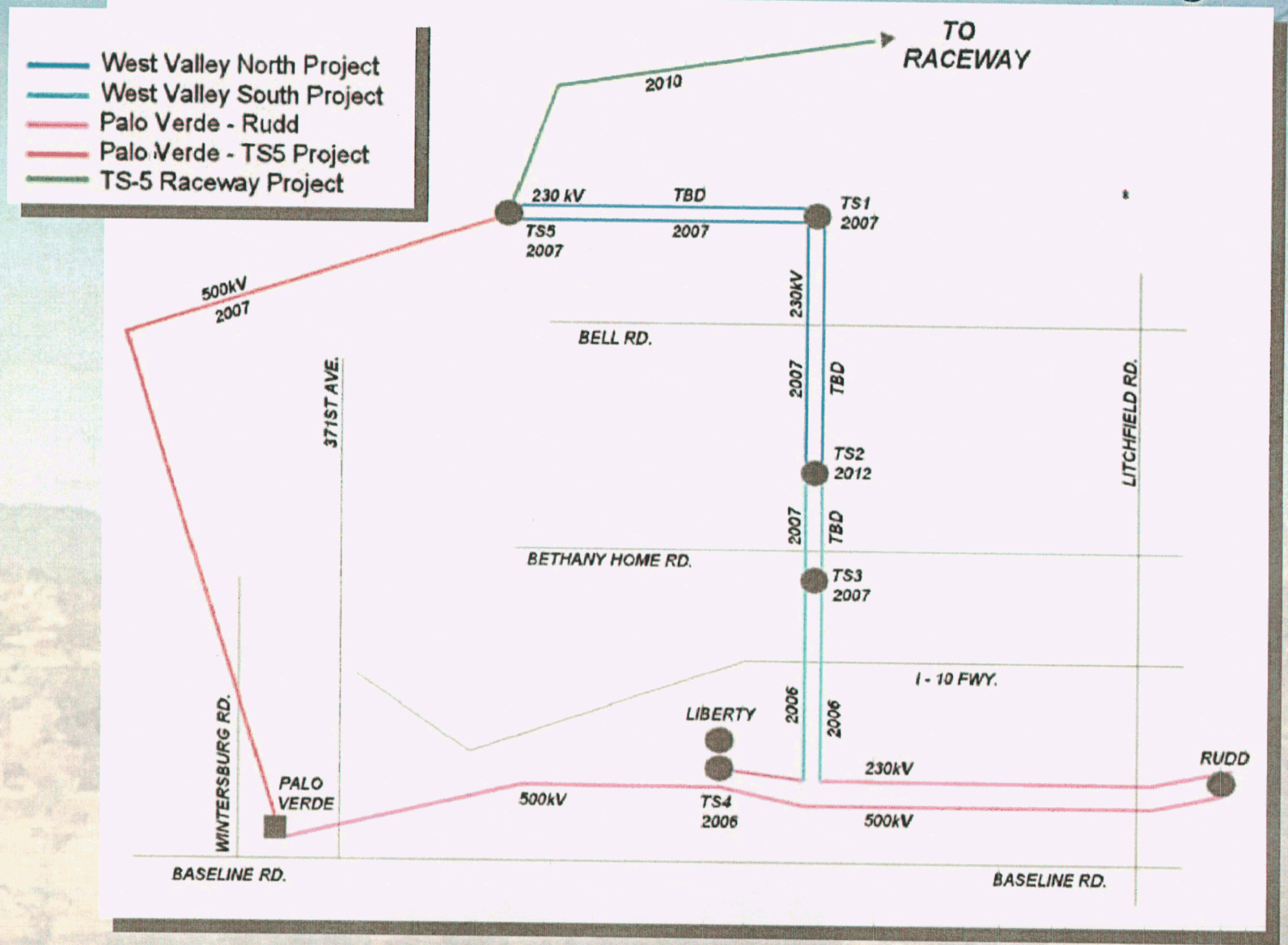
Palo Verde Hub to TS-5
500kV Transmission Project

APS epg

Exhibit G-12

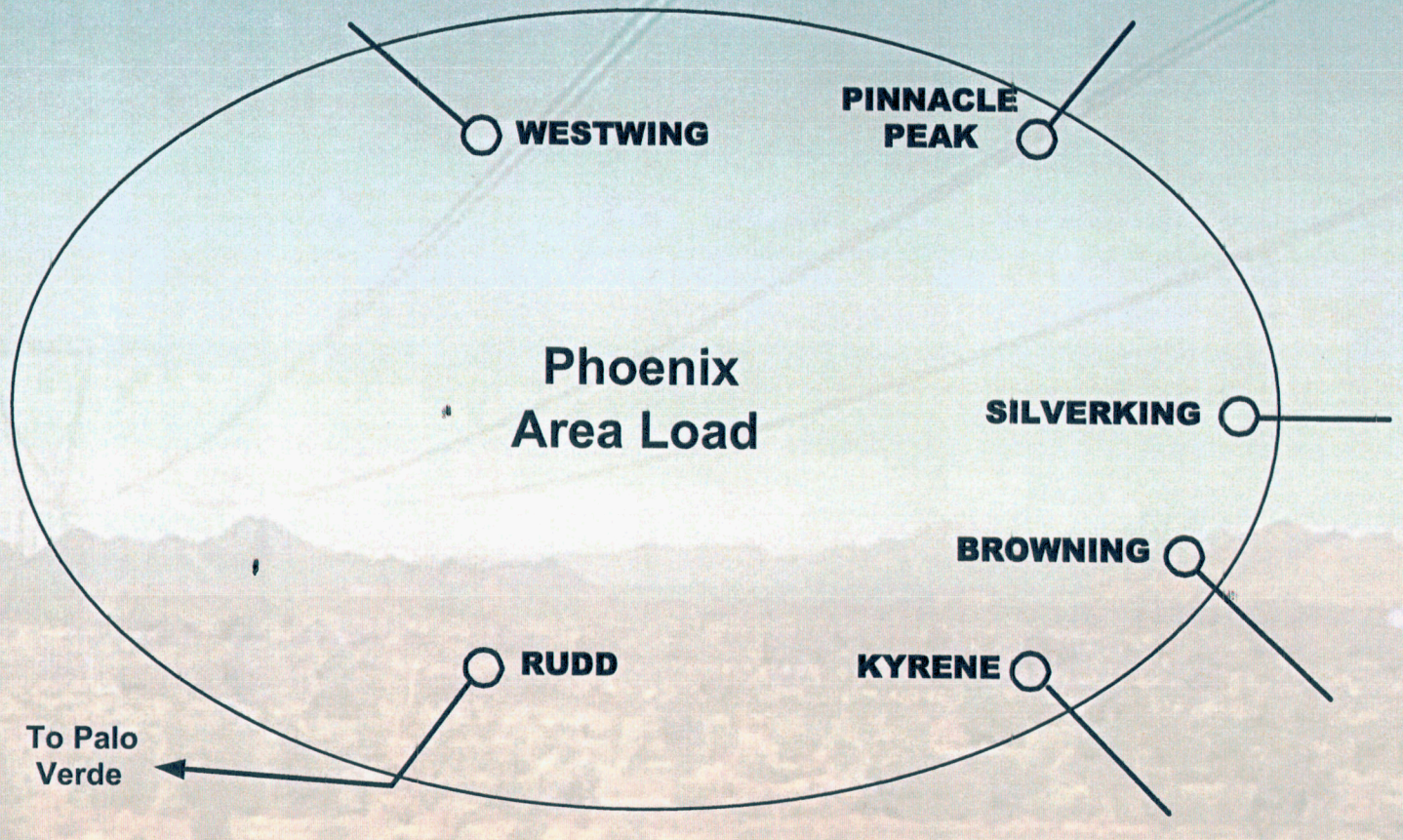
LT

West Valley Transmission Projects



APS

2008 Phoenix Area without TS-5

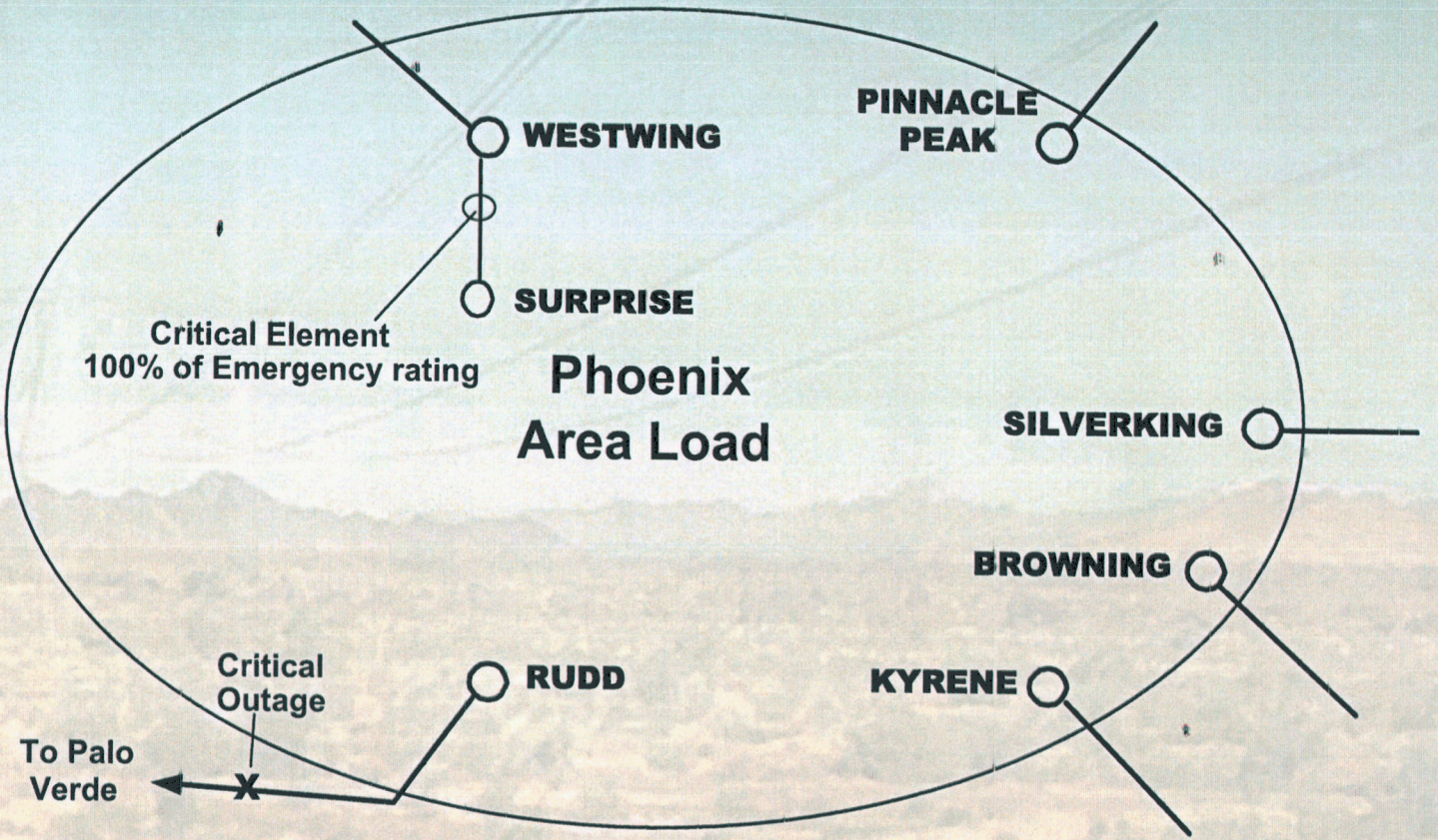


EHV Import Paths into Phoenix Area

APS

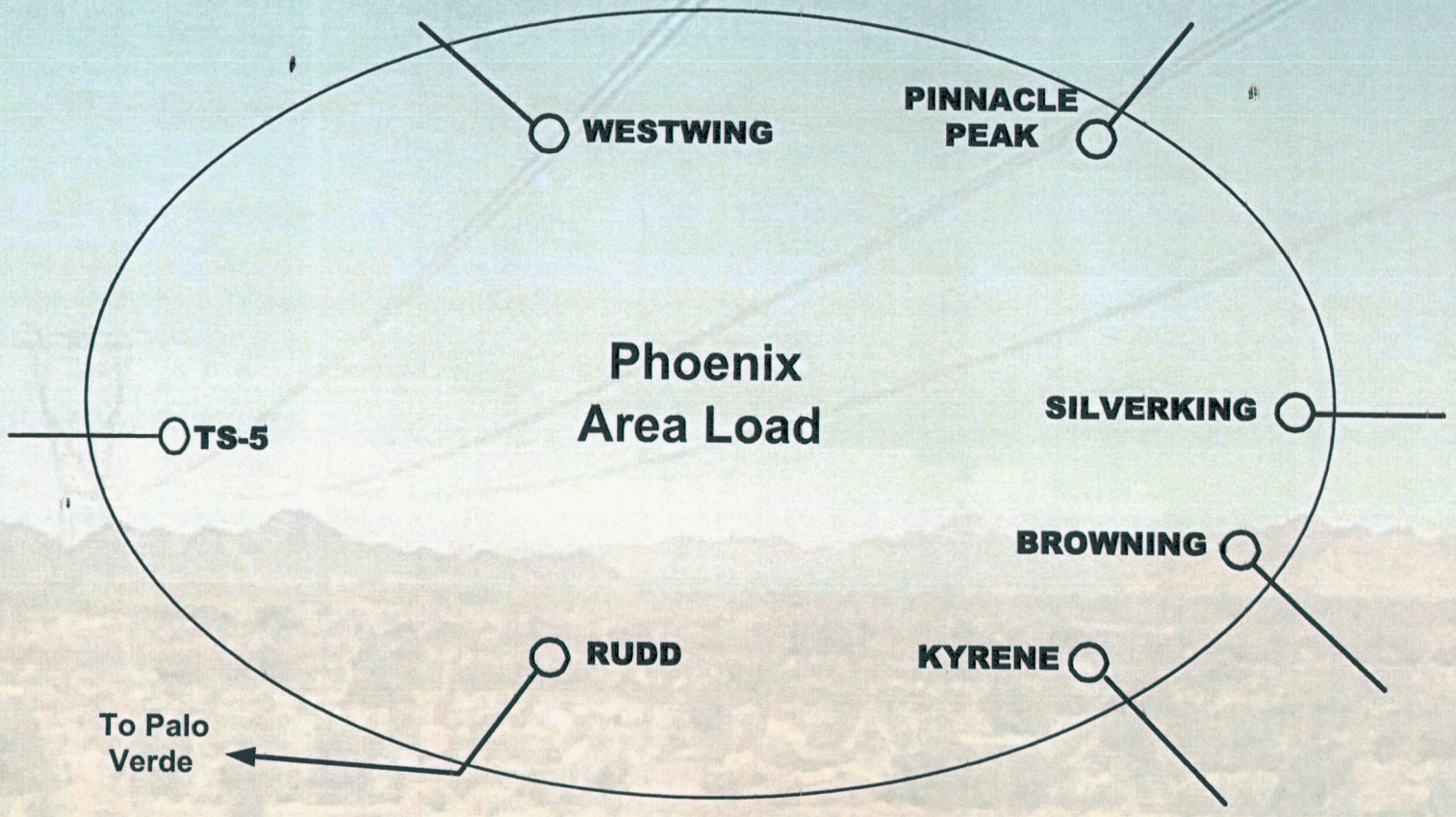
2008 Phoenix Area without TS-5

Import Capability = 9,725 MW



EHV Import Paths into Phoenix Area

2008 Phoenix Area with TS-5

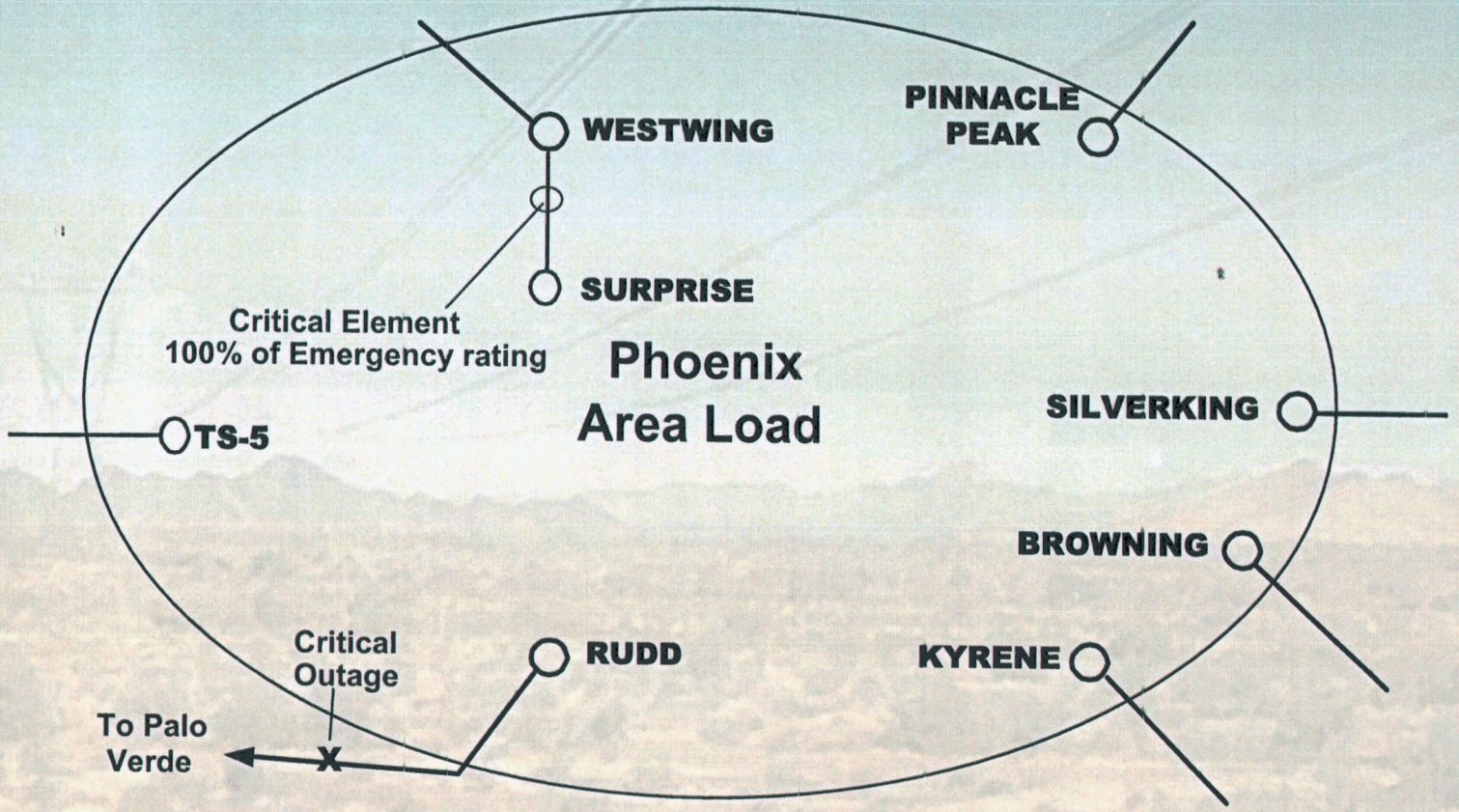


EHV Import Paths into Phoenix Area

APS

2008 Phoenix Area with TS-5

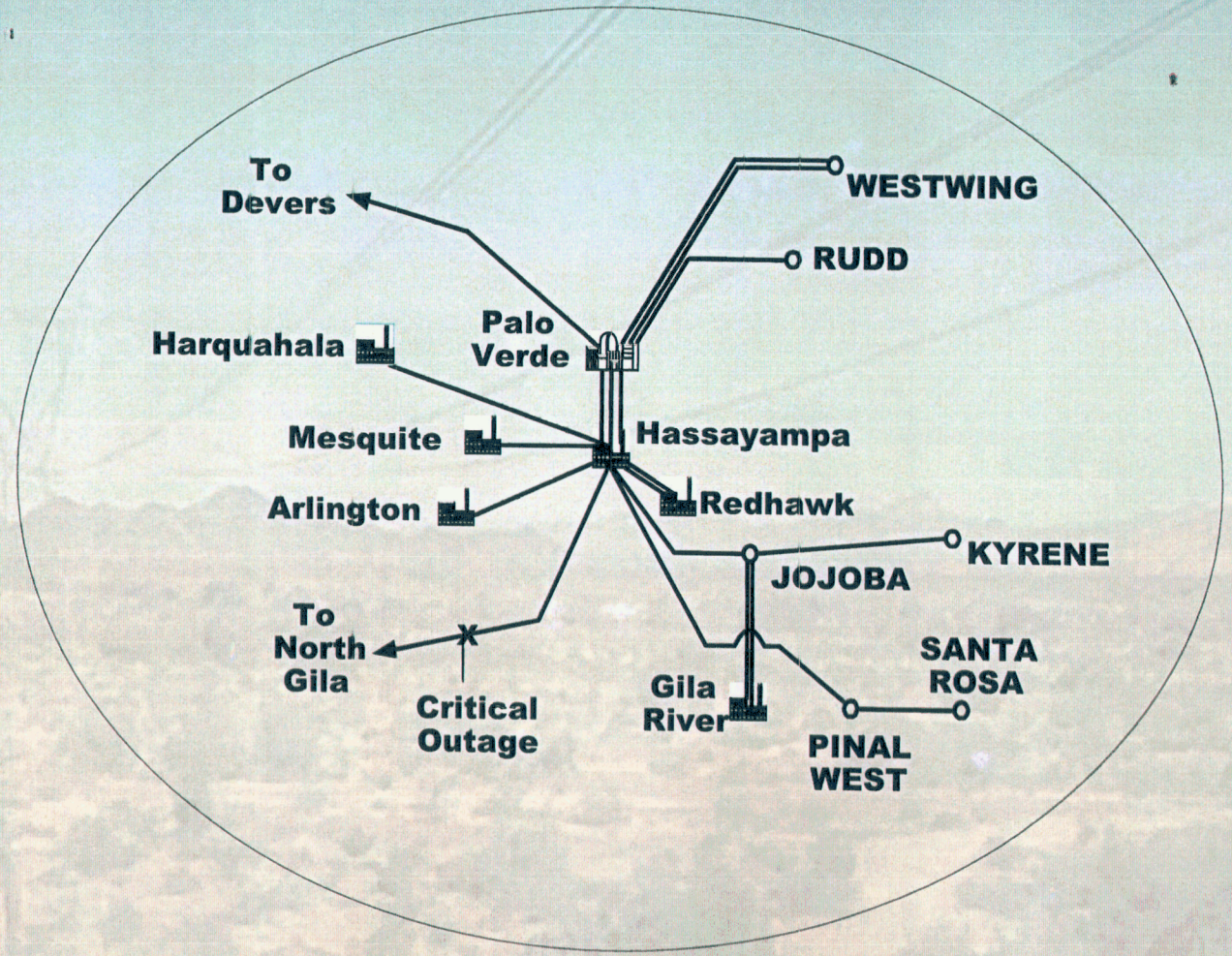
Import Capability = 10,407 MW



EHV Import Paths into Phoenix Area

APS

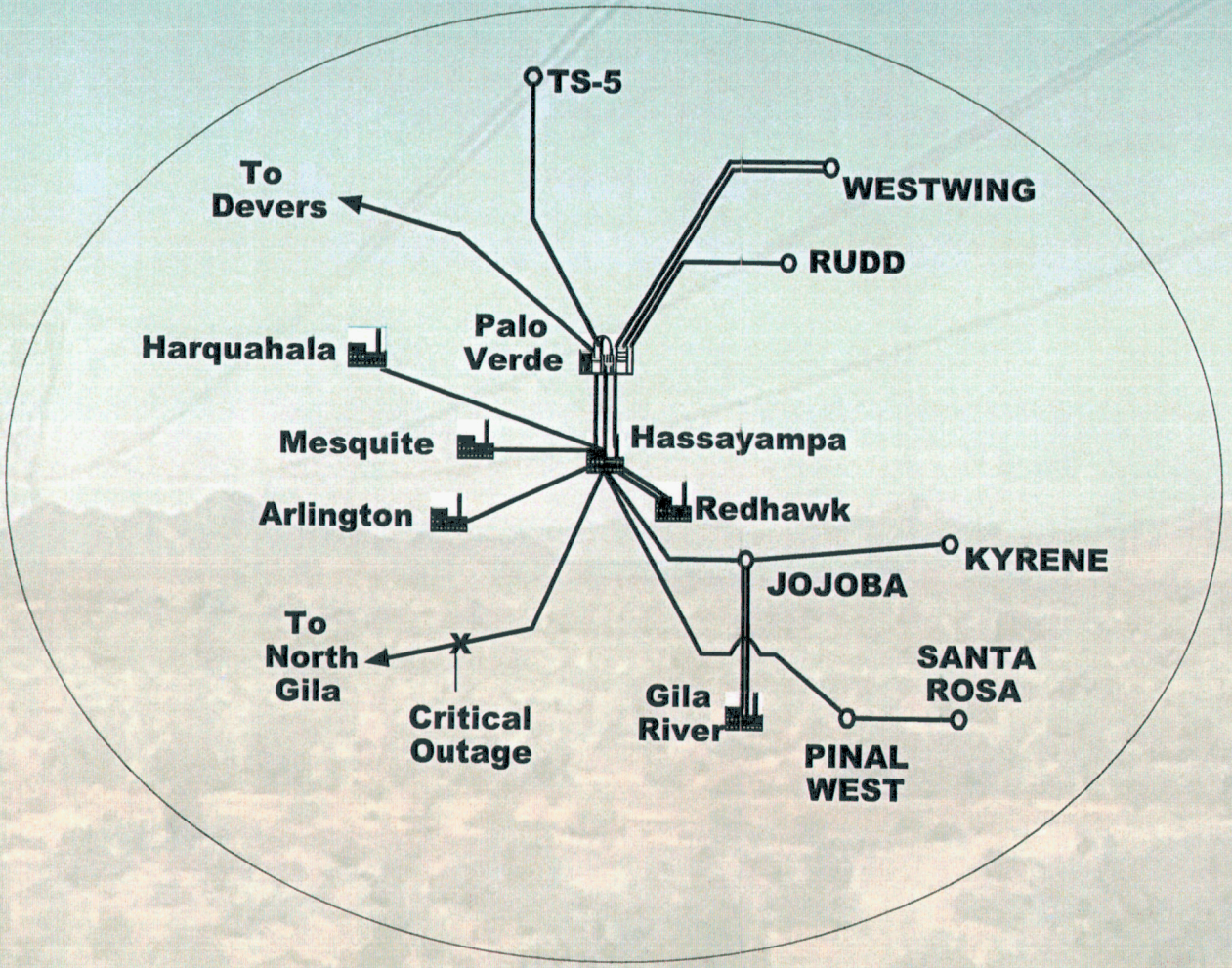
2008 Palo Verde Hub Export Limit without TS-5



Export Limit = Approximate 10,500 MW

APS

2008 Palo Verde Hub Export Limit with TS-5



Export Limit = Approximate 11,000 MW

APS

AAA

3

In May 2005, letters were sent to the individuals listed in Table S-1 to provide project information and to request additional information on planned developments as necessary. A sample letter is included in this section as well as all project correspondence received from Table S-1 letter recipients throughout the duration of the project.

TABLE S-1
LETTER RECIPIENTS

Contact Name and Title	Jurisdiction/Agency
Camille Champion Project Manager	Bureau of Land Management
Ron Connelly Public Utilities Specialist	Bureau of Reclamation
David Harlow	U.S. Fish and Wildlife Service
Cindy Lester Chief, Arizona Section Regulatory Branch	U.S. Army Corps of Engineers
Rusty Mitchell Director, Community Initiatives Team	Luke Air Force Base
James E. Gross Rights of Way Administrator	Arizona State Land Department
Gerry Ramirez Yuma District Permits	Arizona Department of Transportation, Intermodal Transportation Division
Matthew Bilsbarrow Compliance Specialist	Arizona State Historic Preservation Office
Bob Broscheid	Arizona Game & Fish Department
Gary Ijams Power Program Manager	Central Arizona Water Conservation District
Matthew Holm Planner	Maricopa County Planning and Development
Robert Woodring Project Management Specialist	Maricopa County Department of Transportation, Transportation Planning Division
Dennis Smith Associate Director	Maricopa Association of Governments
Carroll Reynolds Town Manager	Town of Buckeye
Dick Maes Infrastructure Management	Sun Valley
Kelly House	El Dorado Holdings

May 11, 2005

Name
Title
Address

Dear Sir or Madam:

On May 2nd, Arizona Public Service Company (APS), on behalf of itself, the Salt River Project Agricultural Improvement and Power District (SRP), and the Central Arizona Water Conservation District as operator of the Central Arizona Project Canal, filed with the Arizona Power Plant and Transmission Line Siting Committee (Siting Committee) an Application for a Certificate of Environmental Compatibility (Application) for the Palo Verde Hub to TS-5 500kV (kilovolt) Transmission Project. This project primarily involves a single-circuit 500kV electric transmission line and up to two new 500kV switchyards.

In addition to the environmental and public planning processes conducted for the project by the consulting firm, Environmental Planning Group, APS has evaluated engineering, construction, right-of-way, and cost considerations of the remaining alternatives. The result of this analysis is the Proposed Route and Proposed Alternate Route that are shown on the enclosed map. APS will request Siting Committee approval for either of the two routes as both routes were identified as being environmentally compatible and would adequately address the project need.

Arizona Administrative Code Rule R14-2-219 directs an applicant to include in its Application an Exhibit H addressing the following:

"To the extent the applicant is able to determine, state the existing plans of the State, local government and private entities for other developments at or in the vicinity of the proposed site or routes."

This letter is a request for any information or comments that your organization wishes to provide regarding development plans for inclusion in the Application. Specifically, please advise me of any existing or future plans that may have changed since the completion of our data collection efforts in April 2005.

For your correspondence to be included in the Application, please forward them to me no later than Wednesday, May 25th, at the address above.

Thank you for your cooperation.

Sincerely,

Paul J. Trenter, Project Manager
Environmental Planning Group

cc: Paul Herndon, APS Project Manager

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Phoenix Field Office
21605 North 7th Avenue
Phoenix, AZ 85027

RECEIVED
5-20-05

In reply refer to:

2800 (210)
AZA-32639

May 18, 2005

Ms. Laurie A. Woodall, Chairperson
Power Plant and Transmission Line Siting Committee
Assistant Attorney General, Environmental Enforcement Section
Office of the Attorney General
1275 West Washington
Phoenix, Arizona 85007

Dear Ms. Woodall:

This letter is being sent to you to confirm a pending application filed by Arizona Public Service (APS) with the Bureau of Land Management (BLM) and the BLM's review of an Environmental Assessment (AZ-020-2004-0056) that addresses the impacts of the proposed Palo Verde Hub to TS-5 Substation 500 kV transmission project.

The BLM Phoenix Field Office is currently involved with what is anticipated to be the final administrative review of the Environmental Assessment, which is being prepared for the BLM by Environmental Planning Group, Inc.

Barring any unforeseen or irresolvable issues, this office will be in a position to issue/sign a Finding of No Significant Impact, sign a Decision Record for the Environmental Assessment for this project, and offer Arizona Public Service a right-of-way grant for the Palo Verde Hub to TS-5 Substation transmission project by the summer of this calendar year, 2005.

If you have any questions, please contact Camille Champion at (623) 580-5526 or Jim Andersen at (623) 580-5570.

Sincerely,

for Teresa A. Raml
Field Manager

cc: Mr. Paul Herndon
Arizona Public Service
P.O. Box 53933 Station 3016
Phoenix, Arizona 85072-3933

Mr. Paul Trenter
Environmental Planning Group
4350 East Camelback Road, Suite G200
Phoenix, Arizona 85018

Maricopa County
Planning & Development Department

RECEIVED
5-19-05

411 North Central, 3rd Floor.
Phoenix, Arizona 85004-2191
Phone: (602) 506-3301
Fax: (602) 506-3601
www.maricopa.gov/planning

May 18, 2005

Paul Trenter, Project Manager
Environmental Planning Group
4350 East Camelback Road, Suite G200
Phoenix, AZ 85018

Dear Paul:

Thank you for your May 11, 2005 letter regarding the status of the Palo Verde Hub to TS-5, 500kV Transmission Project. In your letter, you requested information regarding any existing or future plans that may have changed since the completion of your data collection efforts in April 2005. I am not aware of any new applications for entitlement changes since April 2005 in your study area. However, given the potential impacts that this project will have on the subject region, we encourage you to coordinate closely with the Maricopa County Board of Supervisors regarding routing and siting decisions.

Please feel free to contact me if I can provide you with other information regarding your study area.

Sincerely,

Matthew Holm, AICP
Principal Planner

4

PALO VERDE HUB TO TS-5 SUBSTATION 500kV TRANSMISSION PROJECT
ROUTE TOUR ITINERARY

May 25, 2005

The following itinerary describes the APS Proposed Route and Proposed Alternative Route for the 500kV transmission line as they originate at the Palo Verde Hub, proceed west and north parallel to an existing 500kV transmission line(s), and then east along the CAP Canal terminating at the TS-5 Substation.

Note: If weather conditions or access prevents accessing the CAP Canal, this portion of the route tour may be omitted (Route Tour Stop #4).

Start of Tour:
Wintersburg General Store
2614 S. Wintersburg Road,
Tonopah, Arizona 85354
Phone: (623) 386-1601

Additional questions can be referred to Paul Herndon at (602) 319-7635

The route tour will begin at the Wintersburg General Store south of I-10, just south of the intersection of Wintersburg Road and Salome Highway in Tonopah, Arizona. A pilot car will lead the route tour.

ROUTE TOUR STOP #1
PVNGS Switchyard Area and Wintersburg Road Crossing

From the Wintersburg General Store, proceed south on Wintersburg Road towards the Palo Verde Nuclear Generating Station (PVNGS). Route Tour Stop #1 is the location where the Palo Verde – Devers No. 1 500kV transmission line crosses Wintersburg Road (from northeast to southwest) just south of the Baseline Road alignment. The corridor from the PVNGS Switchyard (Link 10) to the intersection with the Harquahala – Hassayampa 500kV transmission line (Link 30) can be viewed from Route Tour Stop #1.

ROUTE TOUR STOP #2
Proposed Arlington Valley Energy Facility Switchyard and Elliott Road Crossing

From Route Tour Stop #1, drive south to Elliott Road and turn right (west). Proceed west approximately ½ mile to the 387th Avenue alignment, which will be located near the northeast corner of the Arlington Valley Energy Facility and is Route Tour Stop #2. From Route Tour Stop #2, the proposed Arlington Valley Energy Facility switchyard

location can be viewed to the south and the Proposed and Proposed Alternate Route alignments can be viewed to the north (Link 20).

ROUTE TOUR STOP #3
Proposed Harquahala Junction Switchyard and Palo Verde – Devers No. 1 500kV Transmission Line Alignment

From Route Tour Stop #2, proceed east along Elliott Road and turn left (north) on to Wintersburg Road. Proceed north on Wintersburg Road to the Salome Highway and turn left (west). Proceed west/northwest along Salome Highway for approximately 9 miles. The Proposed and Proposed Alternate Route alignments will parallel to the east side of the two existing 500kV transmission lines that are crossed near the intersection of Salome Highway and Courthouse Road. Proceed northwest along Salome Highway to Route Tour Stop #3, which is located at Salome Highway and the Thomas Road alignment. From Route Tour Stop #3, the proposed Harquahala Junction Switchyard would be located to the east, just north of the convergence of the two existing 500kV transmission lines. Links 30 and 50 of the Proposed and Proposed Alternate Route alignments can be viewed from Route Tour Stop #3 looking to the south and north respectively.

REST AREA #1 (OPTIONAL)

An optional rest area is available between Route Tour Stop #3 and Route Tour Stop #4 (or between Route Tour Stop #4 and Route Tour Stop #5) if needed. The rest area is located at one of the gas station / convenience store facilities south of I-10 at the 411th Avenue exit. From Route Tour Stop #3, continue northwest on Salome Highway to the intersection with Indian School Road. Turn right (east) and proceed along Indian School Road to 411th Avenue. Turn left (north) on to 411th Avenue and proceed north to the gas station located on the west side of 411th Avenue, just south of I-10. To reach Route Tour Stop #4, proceed north on 411th Avenue and follow the directions to Route Tour Stop #4 described below.

ROUTE TOUR STOP #4
CAP Canal Crossing and Alignments

From Route Tour Stop #3, continue northwest on Salome Highway to the intersection with the Tonopah Salome Highway. Turn right (east) and proceed along the Tonopah Salome Highway to 411th Avenue. Turn left (north) on to 411th Avenue and proceed north, crossing I-10, to Bethany Home Road. Please note that north of I-10, the roads will no longer be paved and require additional caution when driving. Turn left (west) on to Bethany Home Road and proceed west approximately one mile to 419th Avenue. Turn right (north) on to 419th Avenue and proceed north approximately ½ mile to the Missouri Avenue alignment. Follow Missouri Avenue until reaching the road alignment that trends northwest near the intersection of Missouri Avenue and the 423rd Avenue

alignment. Follow this road north for approximately 3 miles until it crosses the CAP Canal. The crossing of the CAP Canal is Route Tour Stop #4. The Proposed and Proposed Alternate Route alignments (Links 60 and 70) can be viewed to the north from Route Tour Stop #4. The CAP Canal and the Tonopah Recharge Project, characterized primarily by a large area where the vegetation has been cleared, can be viewed to the south.

REST AREA #2 (OPTIONAL)

Note - Rest Area #2 can be accessed between Points of Interest #4 and #5 or Points of Interest #5 and #6, as necessary. Directions to Rest Area #2 from Route Tour Stop #4 is provided below.

From Route Tour Stop #4, reverse the directions followed to reach Route Tour Stop #4 by proceeding southeast along the existing road to the Missouri Avenue alignment. Turn left (east) on to the Missouri Avenue alignment and proceed east to 419th Avenue. Turn right (south) on to 419th Avenue and proceed south to Bethany Home Road. Turn left (east) on to Bethany Home Road and proceed east to 411th Avenue. Turn right (south) on to 411th Avenue and proceed south to I-10. Enter I-10 eastbound from 411th Avenue and proceed 9 miles to the 339th Avenue exit (Exit #103). Rip Griffin's Truck/Travel Center is located south of I-10 at the 339th Avenue exit and has food and restroom facilities available.

ROUTE TOUR STOP #5
Wickenburg Road Crossing

From Route Tour Stop #4, reverse the directions followed to reach Route Tour Stop #4 by proceeding southeast along the existing road to the Missouri Avenue alignment. Turn left (east) on to the Missouri Avenue alignment and proceed east to 419th Avenue. Turn right (south) on to 419th Avenue and proceed south to Bethany Home Road. Turn left (east) on to Bethany Home Road and proceed east to 411th Avenue. Turn right (south) on to 411th Avenue and proceed south to I-10. Enter I-10 eastbound from 411th Avenue and proceed 9 miles to the 339th Avenue exit (Exit #103). Proceed north on 339th Avenue to Indian School Road. Turn left (west) on to Indian School Road and proceed west to 355th Avenue. Turn right (north) on to 355th Avenue, which will become Wickenburg Road. Proceed north to the CAP Canal crossing (approximately 7 miles). Route Tour Stop #5 is approximately ½ mile north of the CAP Canal crossing along Wickenburg Road. The Proposed and Proposed Alternate Route alignments (Link 110) can be viewed to the west and east from Route Tour Stop #5.

To access Route Tour Stop #5 from Rest Area #2, proceed north on 339th Avenue to Indian School Road. Turn left (west) on to Indian School Road and proceed west to 355th Avenue. Turn right (north) on to 355th Avenue, which will become Wickenburg Road. Proceed north to the CAP Canal crossing (approximately 7 miles). Route Tour Stop #5 is

approximately ½ mile north of the CAP Canal crossing along Wickenburg Road. The Proposed and Proposed Alternate Route alignments (Link 110) can be viewed to the west and east from Route Tour Stop #5.

ROUTE TOUR STOP #6
CAP Canal and Hassayampa River Corridor

**Note – If necessary, Rest Stop #2 can be accessed after visiting Route Tour Stop #5 by returning south down Wickenburg Road/355th Avenue and turning left (east) on to Indian School Road. Proceed east on Indian School Road to 339th Avenue and turn right (south) proceeding south and crossing I-10 to access Rest Stop #2 as noted above.*

If proceeding directly to Route Tour Stop #6 after departing Route Tour Stop #5, proceed east from 355th Avenue for approximately 8 miles along Indian School Road (which will become the Tonopah Salome Highway) to Sun Valley Parkway. Turn left (north) on to Sun Valley Parkway and proceed north for approximately 12 miles to an unpaved road located on the west side of Sun Valley Parkway south of the Bell Road alignment. A project sign noticing the CEC hearings is located along Sun Valley Parkway and identifies the entrance to the road that leads to Route Tour Stop #6. To access this road, continue north on Sun Valley Parkway for approximately 1 mile to the next available median crossing, turn around, and proceed south to the road leading to Route Tour Stop #6. Follow this road west for approximately 1 mile until it terminates near the Hassayampa River Crossing. CAP Canal, which is Route Tour Stop #6. The Proposed and Proposed Alternate Route alignments (Link 120) can be viewed to the west and northeast from Route Tour Stop #6. Route Tour Stop #6 is also approximately 2 miles to the southwest of TS-5 Substation Site, which would be located immediately south of the CAP Canal adjacent to the Hassayampa Pumping Plant.

CONCLUSION OF ROUTE TOUR

OVERSIZED MAP

PALO VERDE HUB TO TS-5 500 kV TRANSMISSION PROJECT

ROUTE TOUR MAP

5

BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY IN CONFORMANCE WITH THE REQUIREMENTS OF ARIZONA REVISED STATUTES SECTION 40-360, et seq., FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AUTHORIZING THE PALO VERDE HUB TO TS-5 500kV TRANSMISSION PROJECT, WHICH INCLUDES A 500kV TRANSMISSION LINE AND ASSOCIATED FACILITIES AND INTERCONNECTIONS ORIGINATING FROM EITHER THE PALO VERDE NUCLEAR GENERATING STATION SWITCHYARD, SECTION 34, TOWNSHIP 1 NORTH, RANGE 6 WEST, G&SRB&M, OR A NEW SWITCHYARD AT THE ARLINGTON VALLEY ENERGY FACILITY, SECTION 17, TOWNSHIP 1 SOUTH, RANGE 6 WEST, G&SRB&M, EACH LOCATED SOUTH OF INTERSTATE 10 NEAR WINTERSBURG ROAD IN AN UNINCORPORATED AREA OF MARICOPA COUNTY, ARIZONA, TO THE TS-5 SUBSTATION NEAR THE HASSAYAMPA PUMPING PLANT ALONG THE CENTRAL ARIZONA PROJECT CANAL, IN THE TOWN OF BUCKEYE, MARICOPA COUNTY, ARIZONA, AT SECTION 29, TOWNSHIP 4 NORTH, RANGE 4 WEST, G&SRB&M	Docket No. L-00000D-05-0128 Case No. 128

CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

Pursuant to notice given as provided by law, the Arizona Power Plant and Transmission Line Siting Committee (the "Committee") held public hearings on June 6 and 7, 2005, all in conformance with the requirements of Arizona Revised Statutes § 40-360, *et seq.*, for the purpose of receiving evidence and deliberating on the Application of Arizona Public Service Company ("Applicant") for a Certificate of Environmental Compatibility in the above-captioned case.

The following members and designees of members of the Committee were present at one or more of the hearings for the evidentiary presentations and/or for the deliberations:

Laurie Woodall	Chairman, Designee for Arizona Attorney General, Terry Goddard
Ray Williamson	Designee for Chairman, Arizona Corporation Commission
Paul Rasmussen	Designee for Director, Arizona Department of Environmental Quality
David Eggleston	Designee for Director, Energy Department, Arizona Department of Commerce
Greg Houtz	Designee Director, Arizona Department of Water Resources
Sandie Smith	Appointed Member
Jeff McGuire	Appointed Member
Margaret Trujillo	Appointed Member
A. Wayne Smith	Appointed Member
Michael Whalen	Appointed Member
Michael Palmer	Appointed Member

The Applicant was represented by Thomas H. Campbell of Lewis and Roca LLP and Karilee Ramaley of the Pinnacle West Capital Corporation Law Department. The following parties were granted intervention pursuant to A.R.S. § 40-360.05: Arizona Corporation Commission Staff, represented by Diane Targovnik and Keith Layton.

At the conclusion of the hearings, the Committee, having received the Application, the appearances of the parties, the evidence, testimony and exhibits presented at the hearings, and being advised of the legal requirements of Arizona Revised Statutes §§ 40-360 to 40-360.13, upon motion duly made and seconded, voted unanimously to grant the Applicant a Certificate of Environmental Compatibility (Case No. 128) for authority to

construct the following facilities as requested in the Application: a 500kV transmission line within a corridor as indicated below and depicted on Attachment A, two switchyards and related facilities (the "Project").

The transmission line originates at either the Palo Verde Nuclear Generating Station ("PVNGS") Switchyard (Line Siting Case Nos: 22 and 24) located in Section 34, Township 1 North, Range 6 West or at a new switchyard at the Arlington Valley Energy Facility (Line Siting Case No: 98) located in Section 17, Township 1 South, Range 6 West. If the line originates at the PVNGS Switchyard, the line will be located within a 1,000-foot corridor on the north side of the existing Palo Verde-Devers No. 1 500kV transmission line (Line Siting Case Nos: 34 and 48) right-of-way for this portion of the route (Link 10 as depicted on the attached map). If the route originates at a new switchyard at the Arlington Valley Energy Facility, the line will be located within a 2,500-foot corridor west of the existing Harquahala-Hassayampa 500kV transmission line (Line Siting Case No: 96) right-of-way (Link 20). Both interconnection options proceed to a common point approximately ½ mile west of Wintersburg Road. From this location, the route proceeds west and then northwest, paralleling the existing Palo Verde-Devers No. 1 and Harquahala-Hassayampa 500kV transmission lines to the proposed Harquahala Junction Switchyard located in Section 25, Township 2 North, Range 8 West near 451st Avenue and the Thomas Road alignment (Link 30). For this portion of the route, the line will be located within a 1,000-foot corridor on the north and east side of the existing Palo Verde-Devers No. 1 500kV transmission line right-of-way. Links 10 or 20 and Link 30 of the Proposed Route would be built in a later phase if the Harquahala Junction Switchyard is built as part of this Project. If the Harquahala Junction Switchyard is not built as part of this Project, Links 10 or 20 and Link 30 would be constructed as part of this Project.

From the Harquahala Junction Switchyard, the line proceeds generally north across I-10 and the Central Arizona Project ("CAP") Canal parallel to the Palo Verde-Devers No. 1 500kV transmission line (Link 50) within a 1,000 foot corridor on the east side of the existing transmission line right-of-way. At this point, the route turns easterly and would be located on the north side of the CAP Canal (Links 60, 80, 90 and 100) near the foothills of the Belmont Mountains to a point approximately ½ mile west of Wickenburg Road. This portion of the line will be located within a 2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal.

[Insert if the Proposed Alternate Route is adopted.]

[For an approximately 9-mile segment immediately east of the Palo Verde-Devers No. 1 500kV transmission line and north of the CAP Canal (Link 70) the line will be located approximately ½ mile north of the CAP Canal within a 2,000-foot corridor

extending south from the northern edge of the BLM-designated utility corridor (located approximately ½ mile north of the chain-link fence located on the north side of the CAP Canal.)]

At this point, the line will continue in an easterly direction and cross Wickenburg Road approximately ½ mile north of the CAP Canal to a point approximately 1 mile east of Wickenburg Road (Link 110). This portion of the line will be located within a 3,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal. From this point, the route will turn northeast and cross two existing 230kV and one existing 345kV transmission lines as well as the Hassayampa River before paralleling the north and west sides of the CAP Canal until it crosses the CAP Canal into the TS-5 Substation (Line Siting Case No: 127) located in Section 29, Township 4 North, Range 4 West (Links 120 and 130). This portion of the line will be located within a 2,000-foot corridor on the north side of the chain-link fence located on the north side of the CAP Canal and within a corridor on the south side of the CAP Canal adjacent to the TS-5 substation sufficient to interconnect with the TS-5 Substation.

This Certificate is granted upon the following conditions:

1. The Applicant shall obtain all required approvals and permits necessary to construct the Project.
2. The Applicant shall comply with all existing applicable standards and regulations, and with all existing applicable ordinances, master plans and regulations of the County of Maricopa, the State of Arizona, the United States, and any other governmental entities having jurisdiction including the Bureau of Land Management's Decision Record and Plan of Development.
3. This authorization to construct shall expire (i) 10 years from the date the Certificate is approved by the Arizona Corporation Commission (the "Commission") for that portion of the Project from the Harquahala Junction Switchyard to the TS-5 Substation; and (ii) 20 years from the date this Certificate is approved by the Commission for that portion of the Project from the Palo Verde Hub to the

Harquahala Junction Switchyard, unless construction is completed to the point that the Project is capable of operating by that time; provided however that prior to either such expiration the Applicant or its assignees may request that the Commission extend this time limitation.

4. The Applicant shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the transmission line and related facilities addressed in this Certificate. The Applicant shall maintain written records for a period of five years of all complaints of radio or television interference attributable to operation, together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution shall be noted and explained. The record shall be signed by the Applicant and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

5. The Project shall comply with applicable noise guidelines of the federal Department of Housing and Urban Development and the Environmental Protection Agency.

6. The Applicant shall continue to consult with the State Historic Preservation Office ("SHPO") to reach a determination of any cultural or archaeological impacts as a result of construction activities. The Applicant will provide to SHPO for review and approval a treatment plan (if necessary) to minimize impacts and shall

continue to consult with SHPO to resolve any such impacts. The Applicant shall avoid or minimize impacts to properties considered eligible for inclusion in the State and National Register of Historic Places to the extent practicable.

7. If human remains and/or funerary objects are encountered during the course of any ground disturbing activities relating to the development of the subject property, Applicant shall cease work on the affected area of the Project and notify the Director of the Arizona State Museum in accordance with A.R.S. § 41-865.

8. Applicant shall consult an archeologist during construction activities in applicable areas, as determined by SHPO, to advise them in connection with any additional archeological studies that may be required and any mitigation efforts for archeological sites that may be affected by the construction of the Project.

9. After construction, the Applicant, in conjunction with any applicable land managing agency, shall allow Arizona Site Stewards, a volunteer-staffed SHPO program, to periodically inspect archeological sites within the corridor for vandalism or other damage.

10. The Applicant shall follow the Arizona State Land Department's ("ASLD") instructions, if any, regarding the treatment of State Register of Historic Places-eligible properties situated on Arizona State Land Department land in consultation with SHPO.

11. Where practicable, the Applicant shall use existing roads for construction and access. The Applicant shall minimize vegetation disturbance outside of the power-line right of way, particularly in drainage channels and along stream banks, and shall reseed native

areas of construction disturbance outside of the power-line right of way after construction has been completed.

12. The Applicant shall use non-specular conductor and dulled surfaces for transmission line structures.

13. Within 45 days of securing easement or right of way for the Project on private property, the Applicant shall erect and maintain signs providing public notice that the property is the site of a future transmission line or substation site. Such signage shall be no smaller than a normal roadway sign printed on materials of a color designed to attract attention. The Applicant shall place signs such that the public is notified along the full length of the transmission line until the transmission structures are constructed. There must also be signs at the location of the proposed switchyards. The signs shall advise:

- that the site has been approved for the construction of Project facilities including a 500 kV transmission line, as applicable; to the individual site;
- the size and location of the respective switchyard;
- the expected date of completion of the Project facilities;
- a phone number for public information regarding the Project;
- the name of the Project;
- the name of the Applicant; and
- the Applicant's website.

14. In the event that the Project requires an extension of the term of this Certificate prior to completion of construction, Applicant shall use reasonable means to directly notify all landowners and residents adjacent to the right-of-way for the Project facilities for which the

extension is sought. Such landowners and residents shall be notified of the time and place of the proceeding in which the Commission shall consider such request for extension.

15. Before construction on this Project may commence, the Applicant must file a Plan of Development approved by the Bureau of Land Management ("BLM") with ACC Docket Control with copies to affected areas of jurisdiction.

16. Applicant shall comply with stipulations provided by the Arizona Game and Fish Department ("AGFD").

17. Applicant shall monitor all ground clearing/disturbance activities that could affect sensitive species or habitat. Where warranted, Applicant shall retain a qualified biologist to conduct pre-construction activities to minimize or prevent impacts to sensitive species or habitat. Specifically, Applicant shall survey or monitor for Sonoran desert tortoises. If desert tortoises are encountered during construction, the Applicant shall follow the BLM's *Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona.*

18. Applicant will adhere to Arizona's Native Plant Law.

19. Applicant shall work with the applicable jurisdictions to implement landscaping for the switchyard sites in accordance with municipal planning and zoning requirements.

20. With respect to the Project, Applicant shall participate in good faith in state and regional transmission study forums, and shall coordinate transmission expansion plans related to the Project to resolve transmission constraints in a timely manner.

21. Applicant shall provide copies of this Certificate to appropriate city and county planning agencies, SHPO, AGFD and ASLD.

22. Applicant shall work with developers along the route to encourage them to include the identity and location of the certificated route in the developers' homeowners' disclosure statement.

23. Applicant shall publish a copy of this certificate and the attachments on Applicant's project website within 10 days of approval of the Commission.

24. Applicant shall submit a self-certification letter annually, identifying which conditions contained in the Certificate have been met. Each letter shall be submitted to the Utilities Division Director on December 1, beginning in 2006. Attached to each certification letter shall be documentation explaining, in detail, how compliance with each condition was achieved. Copies of each letter, along with the corresponding documentation, shall also be submitted to the Arizona Attorney General and Department of Commerce Energy Office.

GRANTED this ___ day of _____, 2005.

THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

By:_____

Laurie A. Woodall, Chairman

6

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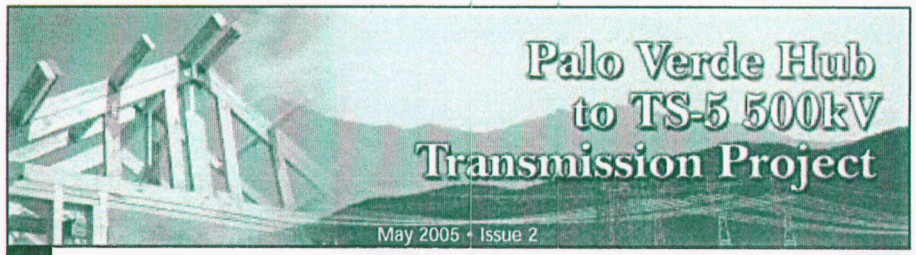
IMPORTANT INFORMATION FOR
PROPERTY OWNERS

Public Hearing

The public is invited to participate at a public hearing before the Arizona Power Plant and Transmission Line Siting Committee on the Palo Verde Hub to TS-5 500-kilovolt (kV) Transmission Project

- June 6, 2005 starting at 9:30 a.m. (Special public comment session at 6:30 p.m.)
- June 7, 2005 starting at 9:30 a.m.

Hampton Inn and Suites
2000 N. Litchfield Road
Goodyear, AZ 85338



Palo Verde Hub to TS-5 500kV Transmission Project

May 2005 • Issue 2

Project Update

This newsletter is intended to update you on the progress of the Palo Verde Hub to TS-5 500-kilovolt (kV) Transmission Project. In a prior newsletter (dated March 2004, Issue 1), APS provided information on a proposed transmission line route and facilities to meet future power demands in the Valley's west and northwest areas. The newsletter also discussed the federal and state requirements to obtain approval for the project.

A copy of the March 2004 newsletter can be found under Current Projects, Palo Verde to TS-5, on the project's Web site.

Federal Process

Under the direction of the Bureau of Land Management (BLM) Phoenix Field Office, an Environmental Assessment (EA) for the project was prepared. An EA report describes the project and potential impacts the project may have on the environment. The analysis was required because more than 60 percent of the proposed transmission line would be located on federal lands, within designated utility corridors.

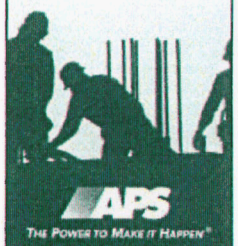
APS retained an outside environmental consulting firm, the Environmental Planning Group (EPG), based in Phoenix, to conduct the required environmental analysis on the project. In preparing the EA, EPG conducted four primary tasks:

1. Regional study/identification of preliminary alternatives;
2. Detailed inventory;
3. Impact assessment and mitigation planning; and
4. Environmental assessment report preparation.

In This Issue

- Project Update
- Federal Process
- Project Description
- State Process

For More Information visit the Project Web site at http://siting.apsc.com



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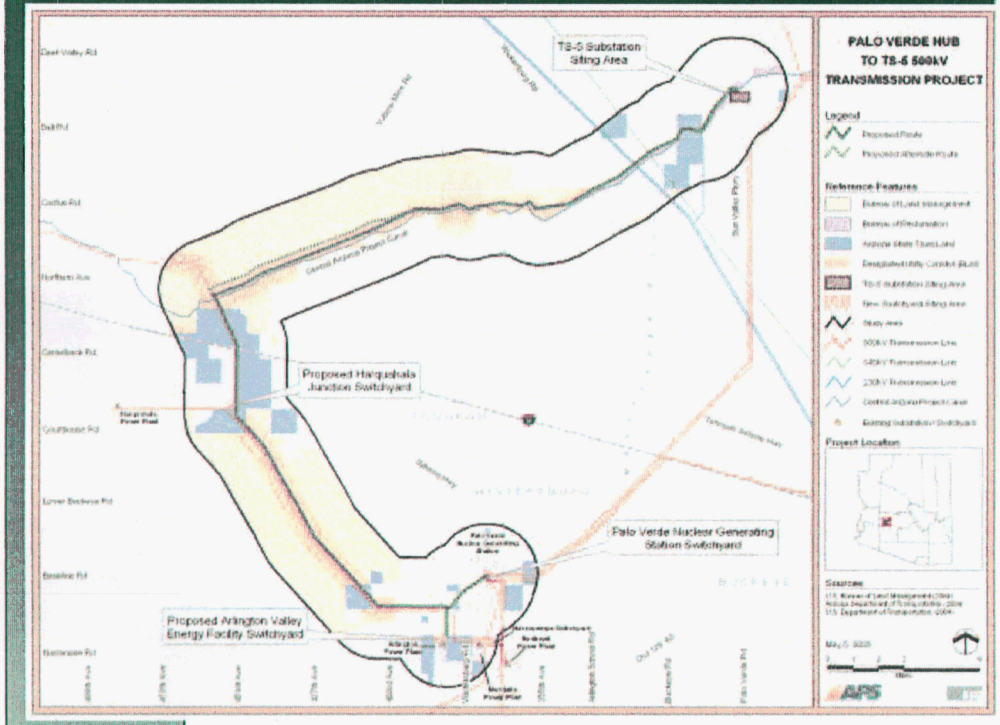
Questions? Call (602) 794-9000

Palo Verde Hub to TS-5 500kV Transmission Project



The BLM must issue a Decision Record for the project to proceed.

Project Description

The proposed transmission line would begin at the Palo Verde Hub at either the Palo Verde Nuclear Generating Station Switchyard or the Arlington Valley Energy Facility and proceed northwest for approximately 20 miles to the north side of the Central Arizona Project (CAP) Canal. The proposed transmission line route would then turn east and parallel the CAP for approximately 23 miles, terminating at the new TS-5 Substation near the Hassayampa Pumping Plant along the CAP.

APS is currently considering two system options for the construction of this project based on continued evaluation of technical and system options for the development of the proposed transmission line. If the first system option is selected, APS would construct the entire route as one continuous project, with an expected in-service date of 2007.

The second option would involve constructing the project in two phases. If this option is selected, the project would originate at a new 500kV switchyard referred to as the Harquahala Junction Switchyard near Thomas Road and 451st Avenue, and proceed 29 miles to the new TS-5 Substation.

The second phase of the project would include constructing the 500kV transmission line from the Harquahala Junction Switchyard back to the Palo Verde Hub and would occur when needed.

State Process

In addition to the federal process, the State of Arizona also must approve the project before it can be constructed. To meet state permitting requirements, APS filed an application for a Certificate of Environmental Compatibility (CEC) for the project on May 2, 2005.

The CEC is a document prepared to demonstrate that the project is environmentally compatible and also contains information on the project need, cost and summarizes project public involvement activity. APS has identified both a Proposed Route and a Proposed Alternate Route in the CEC application to provide the Arizona Power Plant and Transmission Line Siting Committee with an option for the location of the proposed transmission line route.

The Proposed Alternate Route shares the same alignment as the Proposed Route previously described, with the exception of an approximately nine-mile segment immediately north of the CAP Canal. In this area, the Proposed Alternate Route would be located approximately a half mile north of the CAP Canal. All other segments of the Proposed Alternate Route would be the same as the Proposed Route. Both route options were evaluated as part of the federal process. The Arizona Power Plant and Transmission Line Siting Committee will hold public hearings on the project.

The Siting Committee will vote to approve or deny the CEC, and will forward their decision as a recommendation to the Arizona Corporation Commission (ACC).

The Siting Committee will hold public meetings starting at 9:30 a.m., June 6 and 7 at the Hampton Inn and Suites, 2000 N. Litchfield Road, Goodyear, Ariz. to consider the CEC application. The date and location of the public meetings have been posted in local newspapers, on signs along the route and the project Web site.

For general information on line siting in Arizona, view the Arizona Power Plant and Transmission Line Siting Committee's Web site at: http://www.cc.state.az.us/utility/electric/linesiting-faqs.htm.

The APS staff would like to thank members of the public for their participation in this project. We appreciate the time taken by those who attended the open house held at the Ruth Fisher School in Tonopah on March 30, 2004. We value the input we received at the open house, by phone, project Web site, e-mail and mail. All comments were documented, reviewed and considered during the development of this project.

We look forward to the completion of this project to ensure our continued ability to provide affordable, safe and reliable electric service.

Sincerely,

Paul Herndon

Project Manager

epg
environmental planning group
INTERDISCIPLINARY PLANNING, DESIGN, AND PERMITTING

TRANSMITTAL FORM

4350 East Camelback Road, Suite G200 Phoenix, Arizona 85018 P: 602.956.4370 F: 602.956.4374

TO:
Arizona Corporation Commission Docket Control
1200 West Washington
Phoenix, AZ 85007-2996

DOCKET NO: L-00000-05-0128

CASE NO: 128

L-00000D-05-0128

FROM:
Paul Trenter

DATE: May 26, 2005

SUBJECT: Supplemental Package for CEC Filing Case No. 128

DELIVERY METHOD:	☐ overnight	☐ courier	☑ hand delivery	
ACTION REQUIRED:	☐ For Review ☐ Urgent	☐ Please Comment ☐ As Requested	☐ For Approval ☐ Approved as Noted	☐ For Signature ☐ Please Reply

CONTENTS/REMARKS:

Enclosed please find an original submittal and 25 copies of the Supplemental Package for CEC Filing Case No. 128 for the APS Palo Verde Hub to TS-5 Substation 500kV Transmission Project.

If you have any questions please do not hesitate to contact me.

Thank you

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