

ORIGINAL



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SALT RIVER PROJECT

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Manager, Regulatory Affairs & Contracts

January 31, 2005

Arizona Corporation Commission
DOCKETED

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AZ CORP COMMISSION
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Mr. Ernest Johnson
Director, Utilities Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Re: Ten-Year Plan, Docket No. E-00000D-05-0040

Dear Mr. Johnson:

Enclosed are an original and thirteen (13) copies of The Salt River Project's 2005-2014 Ten-Year Plan filed pursuant to A.R.S. Section §40-360-02.

Please contact Mr. Robert Kondziolka, Manager, Transmission Planning Department at (602) 236-0971 if you have any questions concerning this plan.

Sincerely,

Kelly J. Barr

KJB/bjh

Enclosures (14)

SALT RIVER PROJECT
10 YEAR PLAN
2005 — 2014

04-2834-01 01/05

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SALT RIVER PROJECT

TEN-YEAR PLAN

2005 - 2014

Prepared for the

Arizona Corporation Commission

January 2005

SALT RIVER PROJECT
OVERALL TRANSMISSION REVIEW
2005 - 2014

This report updates and replaces the ten-year transmission plan of the Salt River Project Agricultural Improvement and Power District (SRP), submitted January 2004 pursuant to A.R.S. Section 40-360.02. The following general review is intended to complement and clarify the individual tabular pages included herein.

Any future facilities which might have appeared in previous ten-year plans, but which are not shown in this plan, are either completed, no longer scheduled in the period covered, or are no longer required to be part of the ten-year plan.

REGIONAL PLANNING FORUMS

SRP participates in numerous regional planning organizations. Through membership, participation, and leadership in the various regional planning organizations, the needs of SRP and the other utilities and transmission dependent entities within the region can be better achieved. The primary goal of all the regional planning entities is to achieve better utilization of the existing transmission system and to identify, study, and develop expansion plans that will maximize the effectiveness and utilization of new projects. The regional planning organizations operate in public forums, perform the study work cooperatively, and develop plans in a collaborative fashion. Load growth and generation dispatch dynamics continue to be the most challenging issues facing SRP. The regional planning organizations are addressing these challenges and SRP relies on the results generated through these organizations to develop and submit its ten-year plan.

Some of the regional planning organizations that SRP participates in are Western Electricity Coordinating Council (WECC), Southwest Area Transmission Planning Group (SWAT), Southwest Expansion Planning Group (STEP), and the Seams Steering Group-Western Interconnection (SSG-WI) Planning Work Group. Due to the broadening of the regional planning processes, the Central Arizona Transmission System (CATS) study group is no longer an independent regional planning entity, but is now a technical study work group within the SWAT organization. However, the CATS-Extra High Voltage (EHV) and CATS-High Voltage (HV) work groups still address the transmission issues within their defined areas in Arizona.

As a member of the SWAT regional planning organization, SRP has participated in various SWAT subcommittees: SWAT Arizona-New Mexico, SWAT Colorado River Transmission, SWAT Central Arizona Transmission EHV, SWAT Central Arizona Transmission HV and SWAT New Mexico. Each one of these subcommittees has been involved in various study efforts such as investigating wind energy, coal generation, and transmission studies to enhance and utilize existing transmission. Study work is complete and a draft SWAT report is being finalized at this time but is not included in this submittal. The final SWAT report will be filed as an addendum at a later date upon its completion. The SWAT report will describe the study effort and results (ongoing and completed) that fall under the SWAT organization.

500kV TRANSMISSION

The SRP 500kV transmission system is shown on Attachment A. This system provides major support to SRP's local transmission network and its ability to deliver power and provide service to its customers.

Hassayampa - Pinal West (Formerly Palo Verde – Pinal West)

In May 2004, SRP, acting as project manager (for SRP, Arizona Public Service, Tucson Electric Power Company, Santa Cruz Water and Power Districts Association, Southwest Transmission Cooperative, and Electric District 2), received a Certificate for Environmental Compatibility (CEC) (Case No. 124) for two parallel single circuit 500V transmission lines from the Palo Verde hub (Hassayampa Switchyard) to a new Pinal West Substation in the Maricopa/Stanfield area. Either or both lines may be looped into the Jojoba Switchyard. The first line is projected to be complete by 2007. The second line is currently beyond the ten-year planning time frame; the timing of the second line will be dependent on load growth and location of future generation.

Pinal West – Southeast Valley/Browning

In October 2004, SRP, again acting as project manager, applied for a CEC for the Pinal West to Southeast Valley (SEV)/Browning Project (Case No. 126). The CEC for this project is pending. Participants in this project include: SRP, Arizona Public Service, Santa Cruz Water and Power Districts Association, Tucson Electric Power Company, Southwest Transmission Cooperative, and Electric District 2.

If approved, current planning is for this project to be completed in stages with the first segment, Pinal West to the existing APS Santa Rosa Substation, targeted for completion in 2007. A new 500/230kV substation will be constructed at the Santa Rosa Substation. The 230kV portion from Browning to the proposed RS19 Substation in the southeast valley is being planned for a 2008 completion date. A new 230/69kV substation will be constructed at the proposed RS19 substation site. The remainder of the EHV project, a 500kV transmission line from Santa Rosa to Browning, is being planned for a 2011 completion date. The project also includes provisions for a new 500/230kV substation (SEV), a possible Pinal South 500/230/115/69kV substation, a new 230/69kV substation (RS22), and a 230kV transmission line (RS19 to RS22) that are currently

beyond the ten-year planning horizon. Development of the Pinal South Substation is dependent upon the final routing of the transmission line.

Palo Verde - TS5, TS5 - Raceway

SRP is participating in the initial siting and permitting work for two new 500kV lines. If approved, the first line will interconnect from the Palo Verde Nuclear Generating Station to a new 500/230kV station, TS5, to be located on the south side of the Central Arizona Project near the Hassayampa Pump Station (approximately T4N, R4W). The second line will emanate from TS5 and terminate at a new 500kV station to be sited near the existing Raceway 230kV Substation in northwest Phoenix. APS will be the project manager. This project is reflected in three separate detail sheets: Palo Verde-TS5, Raceway Loop-in of Navajo-Westwing 500kV Line and TS5-Raceway. Palo Verde – TS5 is expected to be in service in 2007. The TS5 – Raceway line completion date is projected to be 2010.

Raceway – Pinnacle Peak

SRP is also participating in the conceptual plan for a new 500kV line from the proposed APS Raceway substation to a newly developed 500kV station at the Pinnacle Peak Substation. APS is serving as project manager and has shown a 2012 in service date.

Second Knoll

APS has made a request to interconnect into SRP's Coronado – Cholla 500kV line to provide service to a new 69kV distribution substation north of St. Johns, Arizona. The new station is tentatively called Second Knoll. The expected completion date for this project is 2009. SRP is showing this in its ten-year-plan for informational purposes only as this is an APS project.

230kV TRANSMISSION

SRP's 230kV transmission network is used to transmit power from the bulk power stations on the periphery of the Phoenix metropolitan area to the various load centers in SRP's service territory (Attachment B). Additional transmission capacity will be required during the next ten years to meet load growth and for system reliability.

Rudd Loop-in of Liberty - Orme and Anderson - Orme

Two 230kV projects have been identified in this year's plan. Both are expected to be in service during 2007. The first project is a loop-in of the existing Liberty – Orme 230kV line into the Rudd Substation. Because this requires station work only, a CEC is not required. The second project is a new circuit from the Anderson Substation in south Phoenix to the Orme Substation in southwest Phoenix. The current transmission line between the two substations is already built double circuit with the two circuits paralleled. Reconfiguring the current facilities will create the new circuit. While no new structures will be needed, bundling will be required. A CEC is not required.

RS19

During the RS18 (Browning Substation) work, SRP identified the need for an additional 230/69kV RS19 Receiving Station in the southeast valley. RS19 will be a key facility in the ability to serve load in the eastern Queen Creek and southern Apache Junction areas. As mentioned in the Pinal West – Southeast Valley/Browning 500kV project description, SRP plans to serve this station from the Browning Substation in Mesa with an expected in-service date of 2008.

Fountain Hills

SRP has identified the need for a 345/69kV, 230/69kV or 115/69kV receiving station in the Fountain Hills area. Studies indicate that the projected load in the area will grow significantly and

the system will need to be expanded to accommodate the growth prior to 2014. Supporting documentation can be found in Appendix 1.

Three methods of serving this station are being investigated. One method is to use the 115kV system and to construct a line from either Goldfield or Stewart Mountain into the Fountain Hills area. Another possibility is to construct a 230kV line from Goldfield (along the Salt River) into the Fountain Hills area. The third alternative is to interconnect to the APS Cholla-Pinnacle Peak 345kV line that runs north of the Rio Verde area. The final line routing will be determined through a public and environmental process to support preparation of an application for a CEC.

RS17 Loop-in

SRP has identified the need for the future RS17 230/69kV Receiving Station in the Gilbert/Queen Creek area to support the forecasted customer load growth for the area. However, the need date has moved beyond SRP's ten-year planning window. The station site was established during a previous environmental study for the RS16 (Schrader) transmission line siting process (Case No. 86). Initial service to the RS17 receiving station will utilize existing transmission lines constructed in 1998 for the Schrader project.

RS19 – RS23

In this year's report, SRP has also included a potential line from the proposed RS19 Receiving Station to the proposed RS23 Receiving Station. This project would support the future load growth requirements in the east valley/north Pinal County portion of SRP's service territory. While the anticipated need for this project is beyond SRP's ten-year planning window, SRP is including this project in the event the project schedule is accelerated.

Potential Future Projects

A key element of SRP's transmission planning function is to utilize existing transmission corridors and open circuit positions on existing transmission structures, where feasible. The following projects have been included in this plan as informational items that may become firm plans, as system studies look farther into the future. These potential projects include:

- Rogers to Browning
- Silver King to Browning
- Silver King to Browning 230kV/Superior tie
- Westwing to Pinnacle Peak
- Pinnacle Peak to Brandow with a possible loop into Rogers or Thunderstone
- Rogers to Corbell

When system conditions are such that these facilities are needed, more definitive descriptions and schedules will be provided.

115kV TRANSMISSION

Carrel

A new 115/12kV distribution substation, designated as the Carrel Substation, is in the plan this year to provide service to growing loads east of Apache Junction area. SRP is planning to loop the existing Spurlock to Goldfield line into this new substation. Current planning indicates this project will be completed by 2006. Supporting documentation can be found in Appendix 1. A CEC is required.

EASTERN MINING AREA TRANSMISSION

Additional transmission facilities may eventually be required in SRP's Eastern Mining Area (Attachment C). If mining loads increase between Superior and Hayden, a 230kV line from Silver

King to New Hayden may be required. Depending on where new load is added, this 230kV line may have an intermediate termination at the Knoll Station area. The line may be constructed in phases, with the Silver King to Knoll line being constructed first, followed by Knoll to New Hayden line, when required. The existing 115kV line from Kearny to Hayden would be looped into the New Hayden Station. The in-service dates for these lines are contingent upon customer need, but are currently projected beyond the ten-year plan.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2006

LINE DESIGNATION: Carrel 115/12kV Distribution Substation

SIZE:

- (a) Voltage 115kV
- (b) Capacity 28MVA
- (c) Point of Origin Carrel Substation
SEC 34, T1N, R9E
- (d) Point of Termination N/A
- (e) Length Less than one mile

ROUTING: From the existing Spurlock to Goldfield 115kV line to the proposed station site immediately adjacent to the transmission line corridor.

PURPOSE: Serve the increasing load in the Pinal County/Gold Canyon Ranch area.

DATE:

- (a) Start ROW/Property Acquisition: 2003
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2006

NOTES:

SRP will prepare an application for a CEC for this project.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2007

LINE DESIGNATION: Hassayampa - Pinal West

SIZE:

- (a) Voltage 500kV
- (b) Capacity 1200MVA
- (c) Point of Origin Hassayampa Switchyard
SEC 15, T1S, R6W
- (d) Intermediate Point Jojoba Switchyard
SEC 25, T2S, R4W
- (e) Point of Termination Pinal West Substation
SEC 6, T5S, R1E
- (f) Length Approximately 52 Miles

ROUTING: South and east of the Hassayampa Switchyard along the existing Palo Verde-Kyrene 500kV line to a point where the gas pipeline splits from the transmission line, then generally along the pipeline (except in the Maricopa County Mobile Planning Area) to the new Pinal West Substation.

PURPOSE: The Central Arizona Transmission System Study identified a number of system additions necessary to accommodate load growth and access to energy sources in the central Arizona area. This project, comprised of two transmission lines, is one of the first segments of a series of transmission lines to serve the central Arizona region.

DATE:

- (a) Right of Way/Property Acquisition: 2004
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2007 (1st line)
To be determined (2nd line)

NOTES:

CEC for Case No. 124 was awarded May 2004 (ACC Decision # 67012).

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2007, 2011

LINE DESIGNATION:	Pinal West – Southeast Valley/Browning
SIZE:	
(a) Voltage	500kV / 230kV
(b) Capacity	1200MVA
(c) Point of Origin	Pinal West Substation SEC 6, T5S, R1E
(d) Intermediate Point	Santa Rosa Substation SEC 30, T5S, R4E
(e) Potential Intermediate Point	Future Pinal South Substation TBD
(f) Intermediate Point	Future RS22 and Southeast Valley Substation TBD
(g) Intermediate Point	Future RS 19 Substation TBD
(h) Point of Termination	Browning Substation SEC 12, T1S, R8E
(g) Length	Approximately 75 to 100 miles, depending on final route

ROUTING: Dependent upon final approval by Arizona Corporation Commission, but generally east from Pinal West through the Casa Grande/Coolidge/Florence area then north to the existing Browning Substation.

PURPOSE: The Central Arizona Transmission System Study identified a number of system additions necessary to accommodate load growth and access to energy sources in the central Arizona area. This transmission line is the second segment of a series of transmission lines to serve the central Arizona region. This segment will initially provide an interconnection with the Palo Verde market area to market power to the Phoenix and central Arizona areas, and to accommodate the growth in development and population in Pinal County. Inclusion of the Pinal South Substation is dependent upon the final routing of the transmission line.

DATE:

- (a) Right of Way/Property Acquisition: 2005
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date for Pinal West to Santa Rosa: 2007
- (d) Estimated In-Service for Browning to RS19: 2008
- (e) Estimated In-Service for RS19: 2008
- (f) Estimated In-Service for Santa Rosa to Browning: 2011
- (g) Estimated In-Service for RS22: To be determined
- (h) Estimated In-Service for RS19 to RS22: To be determined
- (i) Estimated In-Service for SEV: To be determined
- (j) Estimated In-Service for Pinal South: To be determined

NOTES:

SRP applied for a CEC for this project in October 2004. The project was assigned Case No. 126.

SRP is lead and project manager. Participants are SRP, Arizona Public Service, Santa Cruz Water and Power Districts Association, Tucson Electric Power Company, Southwest Transmission Cooperative, and Electric District 2.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2007

- LINE DESIGNATION: Palo Verde-TS5
- SIZE:
- (a) Voltage 500kV
 - (b) Capacity To be determined
 - (c) Point of Origin Palo Verde Switchyard or nearby 500kV substation
TBD
 - (d) Point of Termination TS5 500/230kV substation to be constructed
Approximately T4N, R4W
 - (e) Length Approximately 45 miles of single-circuit line

ROUTING: Generally west from Palo Verde/Hassayampa and then north and east for approximately 45 miles.

PURPOSE: This line will provide a 230kV interconnection to the APS transmission system and serve projected need for electric energy in the area immediately north and west of the Phoenix Metropolitan area. The project will increase the import capability into the valley and the export capability out of the Palo Verde/Hassayampa area.

DATE:

- (a) Right of Way/Property Acquisition: 2005
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2007

NOTES:

An application for a CEC has not yet been filed.

SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2007

LINE DESIGNATION: Anderson – Orme

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Anderson Substation
SEC 12, T1S, R3E
- (d) Point of Termination Orme Substation
SEC 19, T1N, R2E
- (e) Length Existing, no new construction

ROUTING: Second circuit on the existing Anderson – Orme 230kV line

PURPOSE: Studies indicate that the projected load in the area will grow significantly and the system will need to be expanded to accommodate the growth.

DATE:

- (a) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2007

NOTES:

This project entails breaking the parallel of the existing circuits and adding conductor to the existing circuits. The original construction of this line predates the siting statute. No new transmission line construction is necessary. A CEC is not required for this project.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2007

LINE DESIGNATION: Rudd Loop-in of Liberty – Orme 230kV Line

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Orme Substation
SEC 19, T1N, R2E
- (d) Intermediate Point Rudd Substation
SEC 24, T1N, R1W
- (e) Point of Termination Liberty Substation
SEC 19, T1N, R2W
- (f) Length No additional construction

ROUTING: Loop-in of existing transmission line into an existing station. No new transmission construction.

PURPOSE: Studies indicate that the projected load in the area will grow significantly and the system will need to be expanded to accommodate the growth.

DATE:

- (a) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2007

NOTES:

The construction of this line predates the siting statute. This loop-in is contained within the station site and will not require a CEC.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2009

LINE DESIGNATION: Second Knoll (APS)

SIZE:

- (a) Voltage 500kV
- (b) Capacity To be determined
- (c) Point of Origin A point on the Coronado to Cholla 500kV line
SEC 9, T14N, R21E
- (d) Point of Termination New Second Knoll Substation
SEC 9, T14N, R21E
- (e) Length Loop-in of existing line immediately adjacent

ROUTING: Existing Coronado – Cholla 500kV line.

PURPOSE: Provide service to residential loads in the area.

DATE:

- (a) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: 2007
- (c) Estimated In Service Date: 2009

NOTES:

This project entails building a new station immediately adjacent to an existing line. APS is the lead and project manager for this project. This is included for informational purposes only.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2010

LINE DESIGNATION: Raceway Loop-in of Navajo-Westwing 500kV Line

SIZE:

- (a) Voltage 500kV
- (b) Capacity To be determined
- (c) Point of Origin Navajo-Westwing 500kV line
SEC 4, T5N, R1E
- (d) Point of Termination Raceway 230kV Substation
SEC 4, T5N, R1E
- (e) Length Approximately two one-mile segments of 500kV line

ROUTING: Navajo-Westwing 500kV line

PURPOSE: The loop-in of Raceway 500kV line will be needed to provide contingency support to Raceway and increase system reliability.

DATE:

- (a) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: 2009
- (c) Estimated In-Service Date: 2010

NOTES:

An application for a CEC has not yet been filed.

SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2010

LINE DESIGNATION: TS5 – Raceway

SIZE:

- (a) Voltage 500kV
- (b) Capacity To be determined
- (c) Point of Origin TS5 500/230kV Substation
Approximately T4N, R4W
- (d) Point of Termination Raceway 500kV Substation
SEC 4, T5N, R1E
- (e) Length Approximately 40 miles

ROUTING: North from TS5 substation and then in a northeasterly direction to the Raceway Substation

PURPOSE: This line will be needed to serve projected electric energy load in the area immediately north and west of the Phoenix Metropolitan area.

DATE:

- (a) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: 2008
- (c) Estimated In-Service Date: 2010

NOTES:

An application for a CEC has not yet been filed.

SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2012

LINE DESIGNATION: Raceway – Pinnacle Peak

SIZE:

- (a) Voltage 500kV
- (b) Capacity To be determined
- (c) Point of Origin Raceway 500kV Substation
SEC 4, T5N, R1E
- (d) Point of Termination Pinnacle Peak 500kV Substation
SEC 10, T4N, R4E
- (e) Length Approximately 26 miles

ROUTING: East from Raceway 500kV Substation to a new Pinnacle Peak 500kV Substation

PURPOSE: This line will increase the import capability of the system serving the Phoenix Metropolitan area.

DATE:

- (a) Right of Way/Property Acquisition: TBD
- (b) Construction to Start: 2006
- (c) Estimated In-Service Date: 2012

NOTES:

An application for a CEC has not yet been filed.

SRP is a participant; APS is the lead and project manager.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
2014

LINE DESIGNATION: Fountain Hills Station

SIZE:

- (a) Voltage 115kV, 230kV, or 345kV
- (b) Capacity 560MVA
- (c) Point of Origin To be determined
- (d) Point of Termination Fountain Hills Station
Northeast Scottsdale/Fountain Hills area
- (e) Length To be determined

ROUTING: SRP will embark upon a facilities siting/environmental assessment/public process to determine the location of the station and the transmission lines supplying the station. Contingent upon final plan of service for the station and the transmission lines supplying the station.

PURPOSE: Provide a source for the development occurring in and around the Fountain Hills area, as well as relieve the stress on the lower voltage system currently supplying the Fountain Hills/Rio Verde area.

DATE:

- (a) Right of Way/Property Acquisition: 2008
- (b) Construction to Start: 2012
- (c) Estimated In-Service Date: 2014

NOTES:

SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: RS17 Loop-In

SIZE:

(a) Voltage 230kV

(b) Capacity 875MVA

(c) Point of Origin RS17 Substation
SEC 1, T2S, R6E

(d) Point of Termination RS17 Substation
SEC 1, T2S, R6E

(e) Length To be determined

ROUTING: No new line construction.

PURPOSE: Service to customer load in the Gilbert/Queen Creek area.

DATE:

(a) Construction to Start: To be determined

(b) Estimated In-Service Date: To be determined

NOTES:

Authority for this work is included in the RS16 Project CEC (Case No. 86, Decision Nos. 59791 and 60099).

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

- LINE DESIGNATION: RS19 to RS23
- SIZE:
- (a) Voltage 230kV
 - (b) Capacity 875MVA
 - (c) Point of Origin Future RS19, Queen Creek area
TBD (T2S, R8E)
 - (d) Point of Termination Future RS23, Florence Junction area
TBD (T1 or 2S, R10E)
 - (e) Length To be determined
- ROUTING: Easterly from the future RS19 Substation (Queen Creek area) to the future RS23 Substation (Florence Junction area).
- PURPOSE: To meet expected load growth in the eastern distribution area.
- DATE:
- (a) Right of Way/Property Acquisition: To be determined
 - (b) Construction to State: To be determined
 - (c) Estimated In-Service Date: To be determined

NOTES:

SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Palo Verde – Saguaro Line

SIZE:

- (a) Voltage 500kV
- (b) Capacity 1200MVA
- (c) Point of Origin Palo Verde Generating Station
Switchyard/Hassayampa Switchyard
SEC 15, T1S, R6W
- (d) Intermediate Point Site in the Mobile area
TBD (T4S, R1E)
- (e) Point of Termination Saguaro Substation
SEC 14, T10S, R10E
- (f) Length Approximately 125 miles

ROUTING: Generally south and east from the Palo Verde area to a point near Gillespie Dam, then generally easterly until the point at which the Palo Verde – Kyrene 500kV line diverges to the north and east. The corridor then is generally south and east again adjacent to a gas line corridor until meeting up with the Tucson Electric Power Company's Westwing – South 345kV line. The corridor follows the 345kV line until a point due west of the Saguaro Generating Station. The corridor then follows a lower voltage line into the 500kV yard just south and east of the generating station.

PURPOSE: Provide for the delivery of power and energy from the Palo Verde area into the central and southern portions of Arizona.

DATE:

- (a) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In-Service Date: To be determined

NOTES:

A CEC was applied for and granted in 1974 for this line (Case No. 24). SRP is including this description sheet as a CATS participant with no definite in-service date.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Rogers – Browning

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Rogers Substation
SEC 13, T1N, R5E
- (d) Point of Termination Browning Substation
SEC 12, T1S, R7E
- (e) Length Approximately 9 miles

ROUTING: To be determined through environmental and public processes, but generally east and south from Rogers, using existing right of way, where possible.

PURPOSE: Provide adequate transmission facilities to deliver reliable power and energy to SRP's customers in the eastern valley area.

DATE:

- (a) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In Service Date: To be determined

NOTES:

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Silver King to Browning

SIZE:

(a) Voltage 230kV

(b) Capacity 875MVA

(c) Point of Origin Silver King Substation
Parts of SEC 15 & 16, T1S, R13E

(d) Point of Termination Browning 500/230kV Substation
SEC 12, T1S, R7E

(e) Length 38 miles*

ROUTING: From Silver King in a westerly direction to Browning

PURPOSE: To deliver Coronado or other power in eastern Arizona into SRP's distribution service territory

DATE:

(b) Right of Way/Property Acquisition: To be determined

(b) Construction to Start: To be determined

(c) Estimated In Service Date: To be determined

NOTES:

A CEC exists for the segment of this line from the Browning Substation to a point on the Silver King – Kyrene 500kV line corridor in Apache Junction (T1S, R8E, Section 11 & 12) (Case No. 20).

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

* SRP proposes stringing 17 miles of conductor on existing lattice towers on Forest Service lands on structures built by Federal permit predating the AZ CEC process. The remaining 21 miles of the line will be new construction.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

- LINE DESIGNATION: Silver King-Browning 230kV/Superior Tie
- SIZE:
- (a) Voltage 230kV
 - (b) Capacity 875MVA
 - (c) Point of Origin Point on the Silver King to Browning 230kV transmission line
SEC 34, T1S, R12E
 - (d) Point of Termination Superior Substation
SEC 34, T1S, R12E
 - (e) Length Approximately 1/2 mile
- ROUTING: Southeast from the proposed Silver King to Browning Line to the existing Superior Substation.
- PURPOSE: To provide adequate transmission capacity to meet future load growth and/or to improve electric system reliability in SRP's eastern distribution service area.
- DATE:
- (c) Right of Way/Property Acquisition: To be determined
 - (b) Construction to Start: To be determined
 - (c) Estimated In Service Date: To be determined

NOTES:

SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Westwing to Pinnacle Peak

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Westwing Substation
SEC 12, T4N, R4E
- (d) Point of Termination Pinnacle Peak Substation
SEC 10, T4N, R4E
- (e) Length Approximately 22 miles

ROUTING: Second circuit on APS Westwing- Pinnacle Peak 230kV transmission line (APS's North Valley Project).

PURPOSE: To provide additional transfer capability from the northwest Phoenix area to the northeast Phoenix area.

DATE:

- (d) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In Service Date: To be determined

NOTES:

A CEC for this route was issued 6/18/03 (Case No. 120, Decision No. 65997). APS is project manager and lead for this project.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Pinnacle Peak to Brandow (with future tie into Rogers or Thunderstone)

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Pinnacle Peak Substation
SEC 10, T4N, R4E
- (d) Point of Termination Brandow Substation
SEC 11, T1N, R4E
- (e) Length To be determined

ROUTING: Use of available circuit position on existing SRP Pinnacle Peak – Papago Buttes 230kV structures from Pinnacle Peak to Brandow; easterly from a point on that line to a termination at either Rogers or Thunderstone.

PURPOSE: Provide adequate transmission capacity to accommodate SRP customer load.

DATE:

- (e) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In Service Date: To be determined

NOTES:

A CEC was awarded for this circuit as a part of Case No. 69, Pinnacle Peak – Brandow/Papago Buttes 230kV line, dated 1/85.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Rogers to Corbell

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Rogers Substation
SEC 13, T1N, R5E
- (d) Point of Termination Corbell Substation
SEC 10, T1S, R5E
- (e) Length Approximately 12 miles

ROUTING: Use of available circuit position on existing 230kV structures in the area.

PURPOSE: Provide adequate transmission capacity to accommodate future load growth.

DATE:

- (f) Right of Way/Property Acquisition: N/A
- (b) Construction to Start: To be determined
- (c) Estimated In-Service Date: To be determined

NOTES:

SRP will be using existing structures for its entirety.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Silver King to Knoll to New Hayden

SIZE:

- (a) Voltage 230kV
- (b) Capacity 875MVA
- (c) Point of Origin Silver King Substation
Parts of SEC 15 & 16, T1S, R13E
- (d) Intermediate Termination Knoll Substation
SEC 23, T3S, R13E
- (e) Point of Termination New Hayden Substation
SEC 7, T5S, R15E
- (f) Length Approximately 35 miles

ROUTING: South from Silver King, looped into Knoll, continuing to the Hayden area.

PURPOSE: To increase the transmission capacity to serve a new mining load.

DATE:

- (a) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In Service Date: Contingent upon customer need

NOTES:

SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.

SALT RIVER PROJECT
TEN-YEAR PLAN
TRANSMISSION FACILITIES
TBD

LINE DESIGNATION: Point on the Kearny-Hayden 115kV line to New Hayden; double circuit loop

SIZE:

- (a) Voltage 115kV
- (b) Capacity 190MVA
- (c) Point of Origin Point on Kearny to Hayden 115kV Line, SEC 7, T5S, R15E
- (d) Point of Termination New Hayden Substation SEC 7, T5S, R15E
- (e) Length Approximately 0.75 miles

ROUTING: Southwest from the existing Kearny-Hayden 115kV line to the New Hayden Transmission Station.

PURPOSE: To increase the transmission capacity to serve a new mining load.

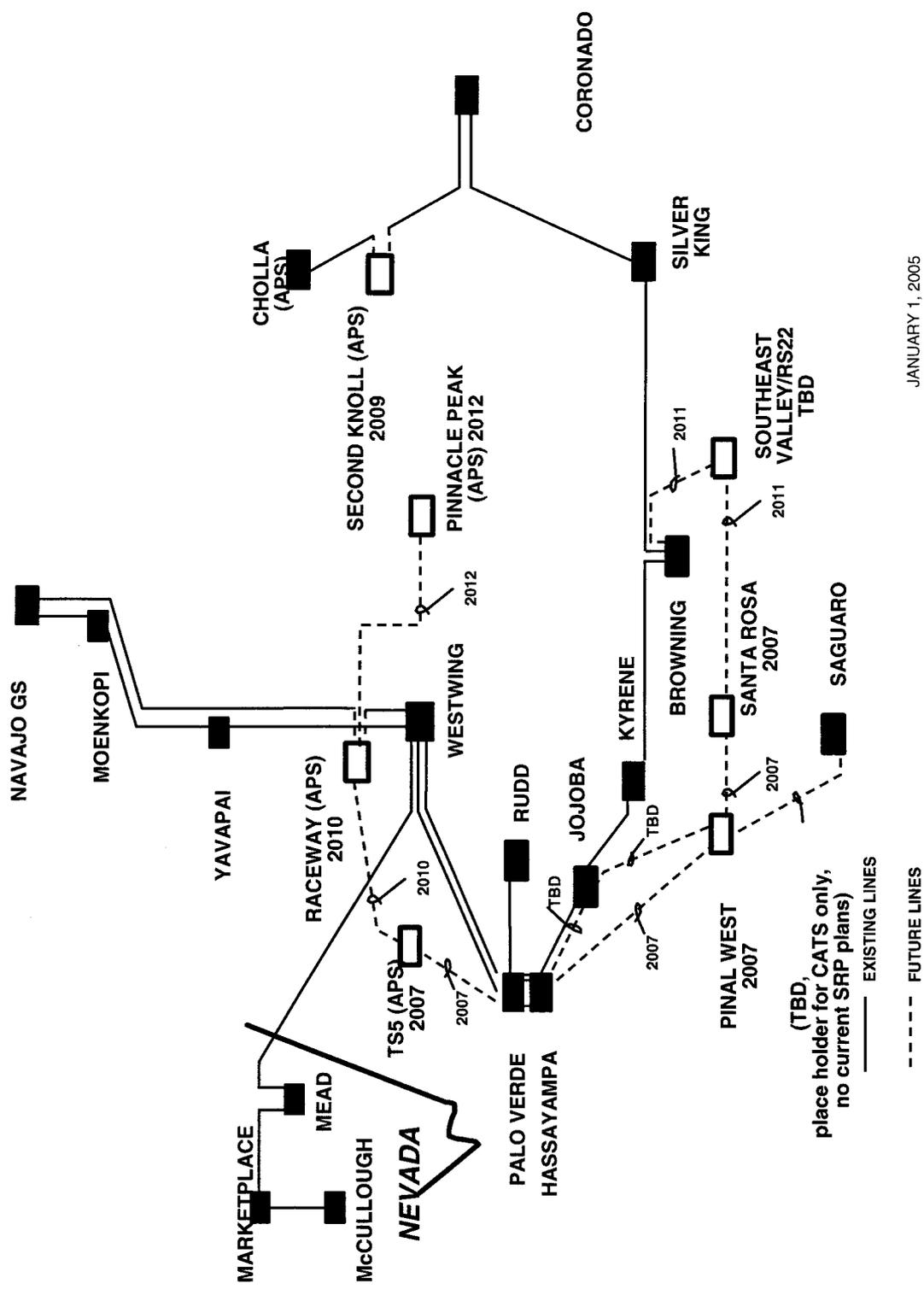
DATE:

- (a) Right of Way/Property Acquisition: To be determined
- (b) Construction to Start: To be determined
- (c) Estimated In Service Date: Contingent upon customer need

NOTES:

SRP does not hold a CEC for this project, but will be seeking a Certificate subsequent to an environmental and public process to site the line.

This information is included in this ten-year plan because the in-service date could advance into the ten-year reporting period.



JANUARY 1, 2005

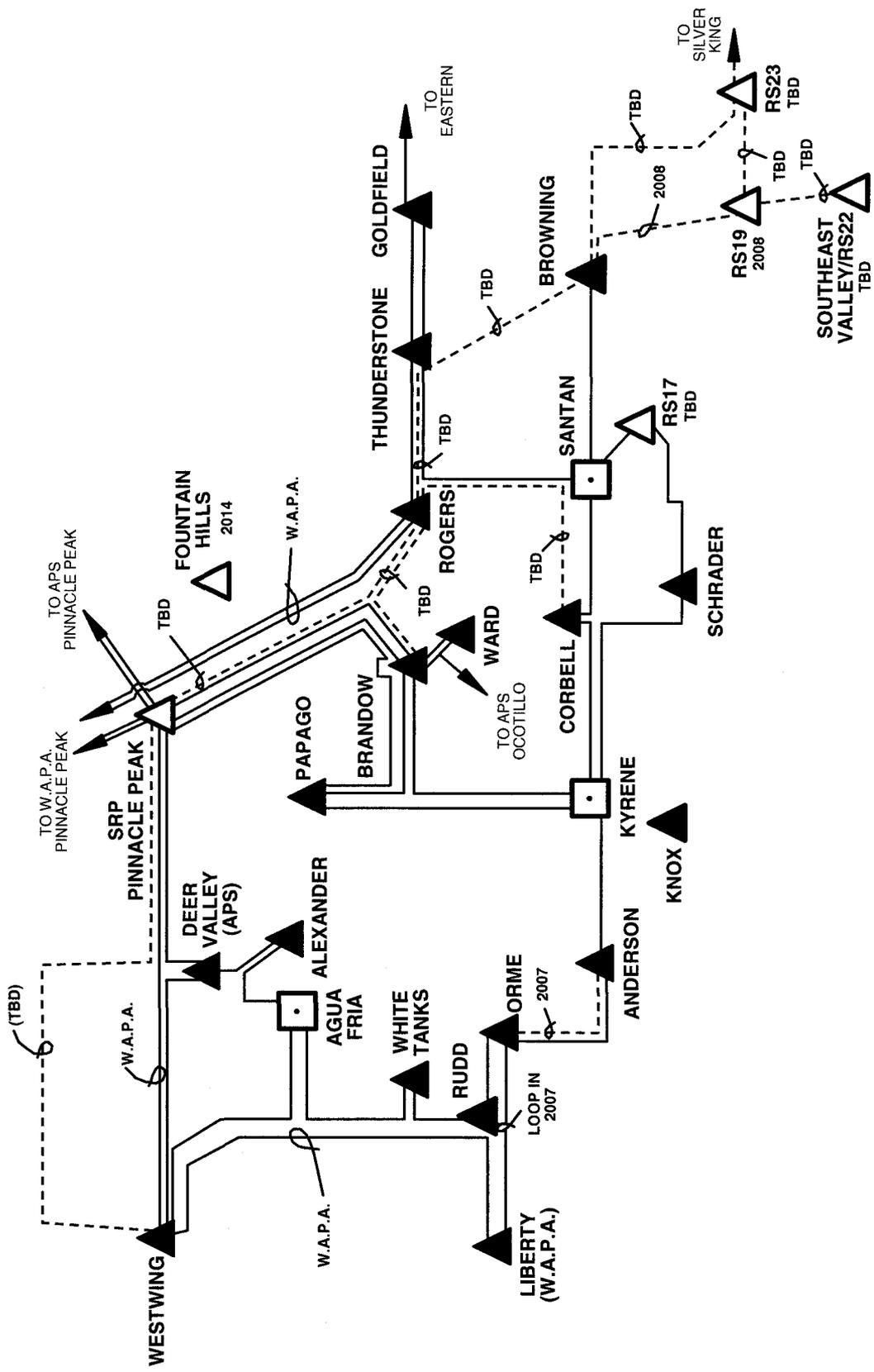
**SALT RIVER PROJECT
500KV SYSTEM**

ATTACHMENT A

- EXISTING 500KV SUBSTATION
- FUTURE 500KV SUBSTATION

(TBD,
place holder for CATS only,
no current SRP plans)

— EXISTING LINES
- - - - FUTURE LINES

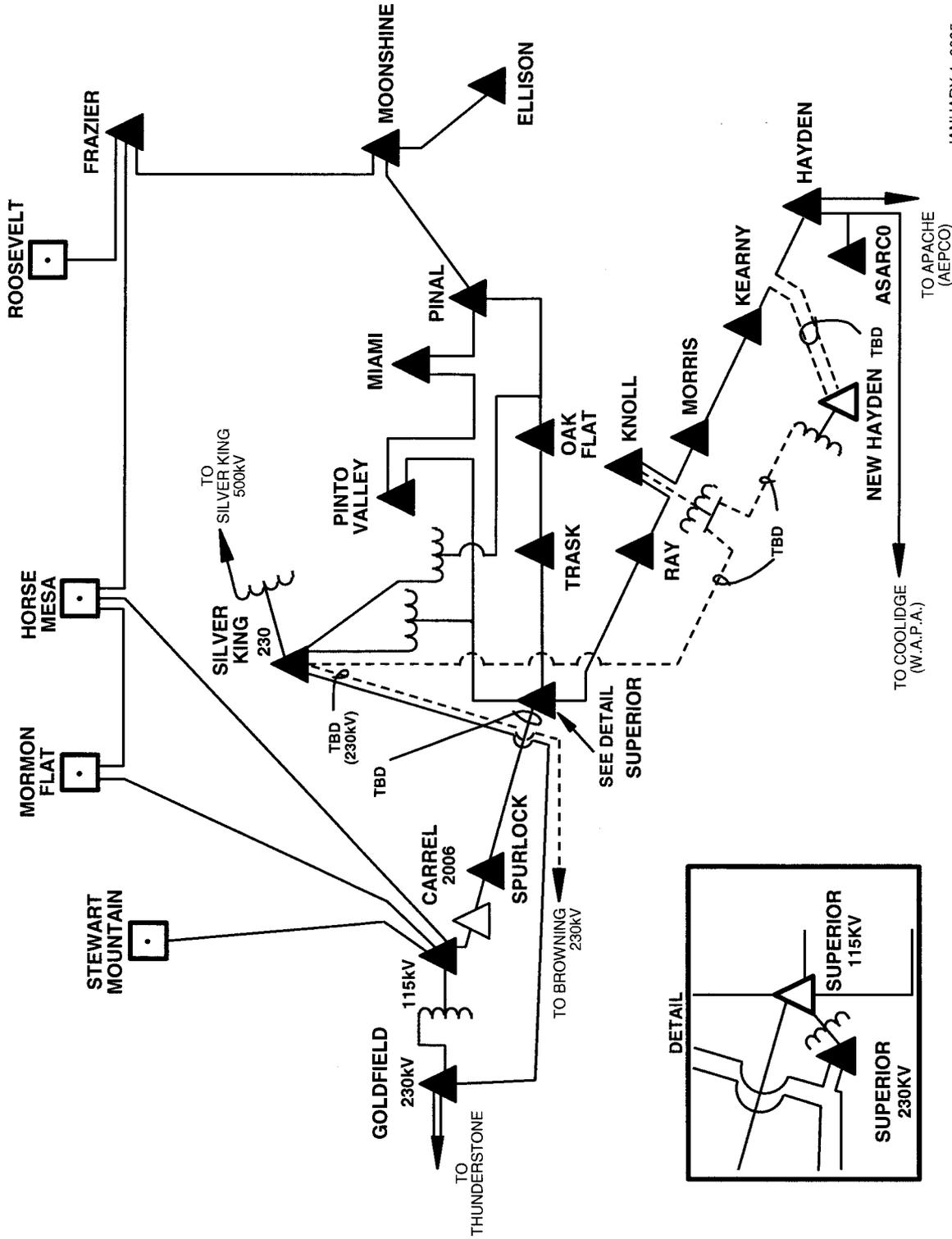


JANUARY 1, 2005

**SALT RIVER PROJECT
230KV SYSTEM**

ATTACHMENT B

- ▲ EXISTING 230KV SUBSTATIONS
- △ FUTURE 230KV SUBSTATIONS
- GENERATING STATION
- EXISTING 230KV CIRCUIT
- - - FUTURE 230KV CIRCUIT

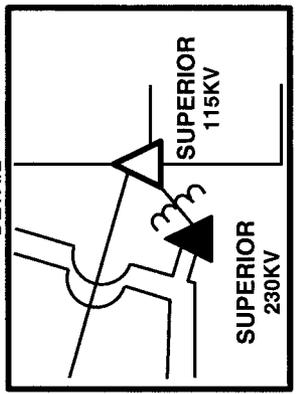


JANUARY 1, 2005

**SALT RIVER PROJECT
EASTERN MINING
AREA SYSTEM**

ATTACHMENT C

1/28/2005 000705-3



SALT RIVER PROJECT

**SUMMARY OF SRP'S
SIX-YEAR PLANNING WORK**

APPENDIX 1



2005 CAPITAL PROJECT DESCRIPTION



Budget Year 2013/2014

EHV Diagrams 115, 230 & 500kV
Area Switching Diagrams fountain2.pdf
Rec. Station Diagrams
Dist. Station Diagrams

Date: January 24, 2005

Location: Fountain/Rio Verde Area

Job Title: New Receiving Station in the Fountain/Rio Verde area

Project Summary: Construct a new Fountain Area Receiving Station with 1-280MVA 345/69kV(or 230/69kV) transformer and connect it to 33E-25N 69kV substation by 5/2014.

Description of Work:

FOUNTAIN HILLS 345(230)KV RECEIVING STATION WORK

- Build two 345kV(230kV) buses with 6" EHPS AL tubing, bays 1-3.
- Install 3-345kV(230kV) 3000A breakers & 7-345kV(230kV) 3000A disconnects.
- Install 1-280MVA 345/69kV(230/69kV) transformer in the bay 2.

345kV(230kV) RECEIVING STATION SUBTOTAL \$6,000,000

FOUNTAIN HILLS 69 KV RECEIVING STATION WORK

- Build two 69kV buses with 6" EHPS AL tubing, bays 1-3.
- Install 2-69kV 3000A, 44kA I.C. breakers & 4-69kV 3000A disconnects.
- Terminate 69kV line from 33E-25N into bay 2.

69KV RECEIVING STATION SUBTOTAL \$670,000

33E-25N 69kV SUBSTATION WORK

- Install 1-69kV 2000A, 40kA I.C. breaker & 2-69kV 2000A disconnects.

33E-25N STATION SUBTOTAL \$245,000

69KV LINE WORK

- Build 1-954ACSS 69kV line from the new receiving station to 33E-25N substation.
- The furthest location of the Receiving Station from 33E-25N is 8 miles.

69KV LINE MAX. SUBTOTAL \$2,000,000

ESTIMATED TOTAL \$8,915,000

In-Service Date: April 30, 2014

Manager

Date

Load Growth Project, TSP Contact Eldin Dizdarevic (69kV)

Justification:

- During summer peak loading with all projects in, the voltage in the Fountain area falls below the minimum acceptable level at several 69kV stations for an Evergreen/Pima outage. A new receiving station and associated 69kV line work in the area will provide more long-term voltage support than the addition of capacitor banks.

2005 CAPITAL PROJECT DESCRIPTION



Budget Year 2013/2014

Date: January 24, 2005

Location: Fountain/Rio Verde Area

Job Title: New Receiving Station in the Fountain/Rio Verde area

Project Summary: Construct a new Fountain Area Receiving Station with 1-280MVA 345/69kV(or 230/69kV) transformer and connect it to 33E-25N 69kV substation by 5/2014.

	Voltage @ Evergreen & Wheeler for outage of Evergreen-Pima 69kV line			
	without the Fountain Hills Rec. station		with the Fountain Hills Rec. station	
Year	2014	2015	2014	2015
Evergreen	0.949pu	case diverges	0.993pu	0.988pu
Wheeler	0.950pu	case diverges	0.992pu	0.987pu

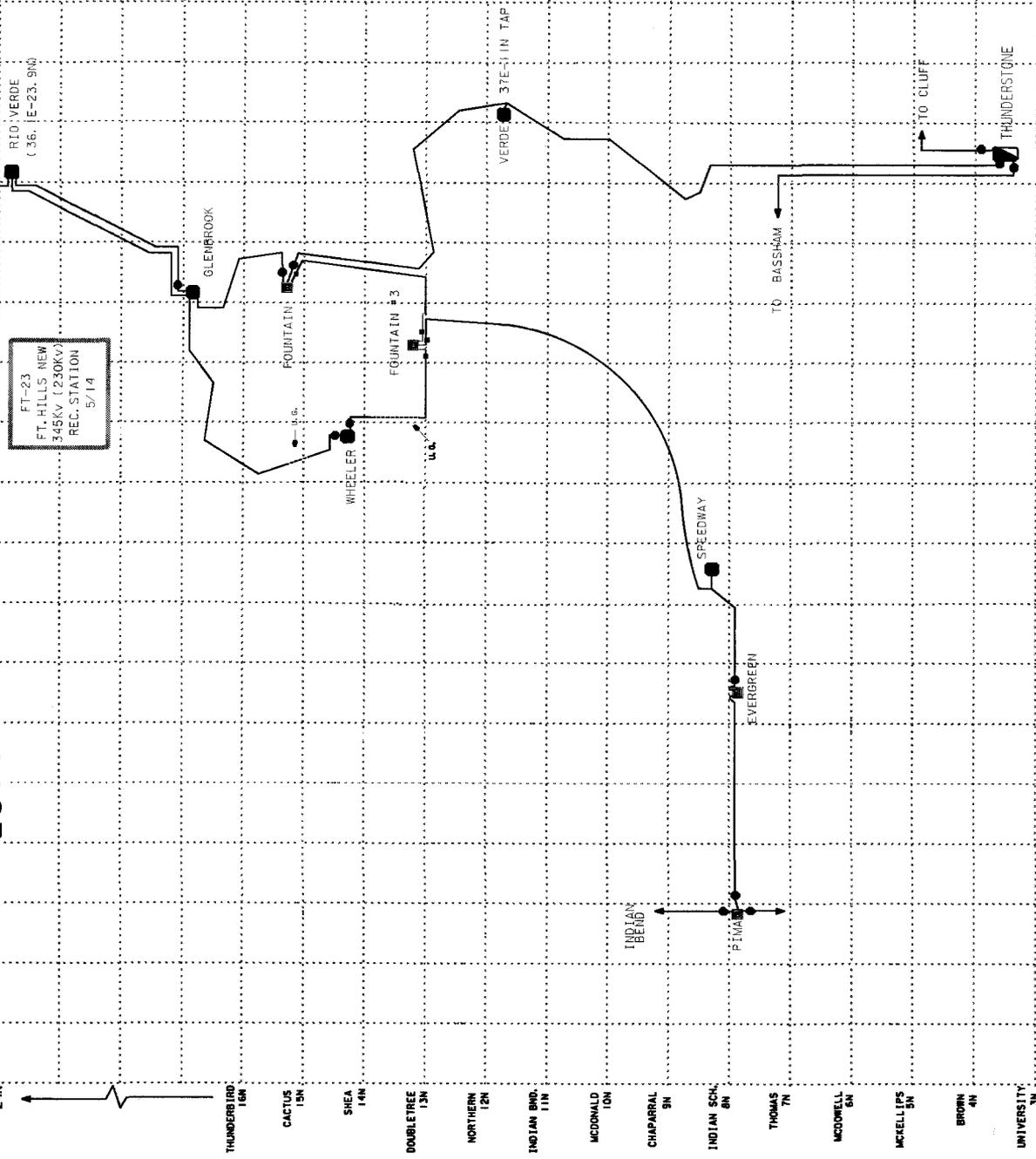
NOTE: The Fountain area has 25MVAR of caps added at 33E-25N in 2010.

2003, 2004 Project Summary: The project was removed from the six-year planning period with the addition of FT#3 switching station and 25MVAR cap bank at 33E-25N.

2002 Project Summary: Construct a new Fountain Area Receiving Station or a new 69kV line of unknown mileage and origin in the Fountain area by 05/08

2001 Project Summary: Construct a new Fountain Area Receiving Station or a new 69kV line of unknown mileage and origin in the Fountain area by 05/07.

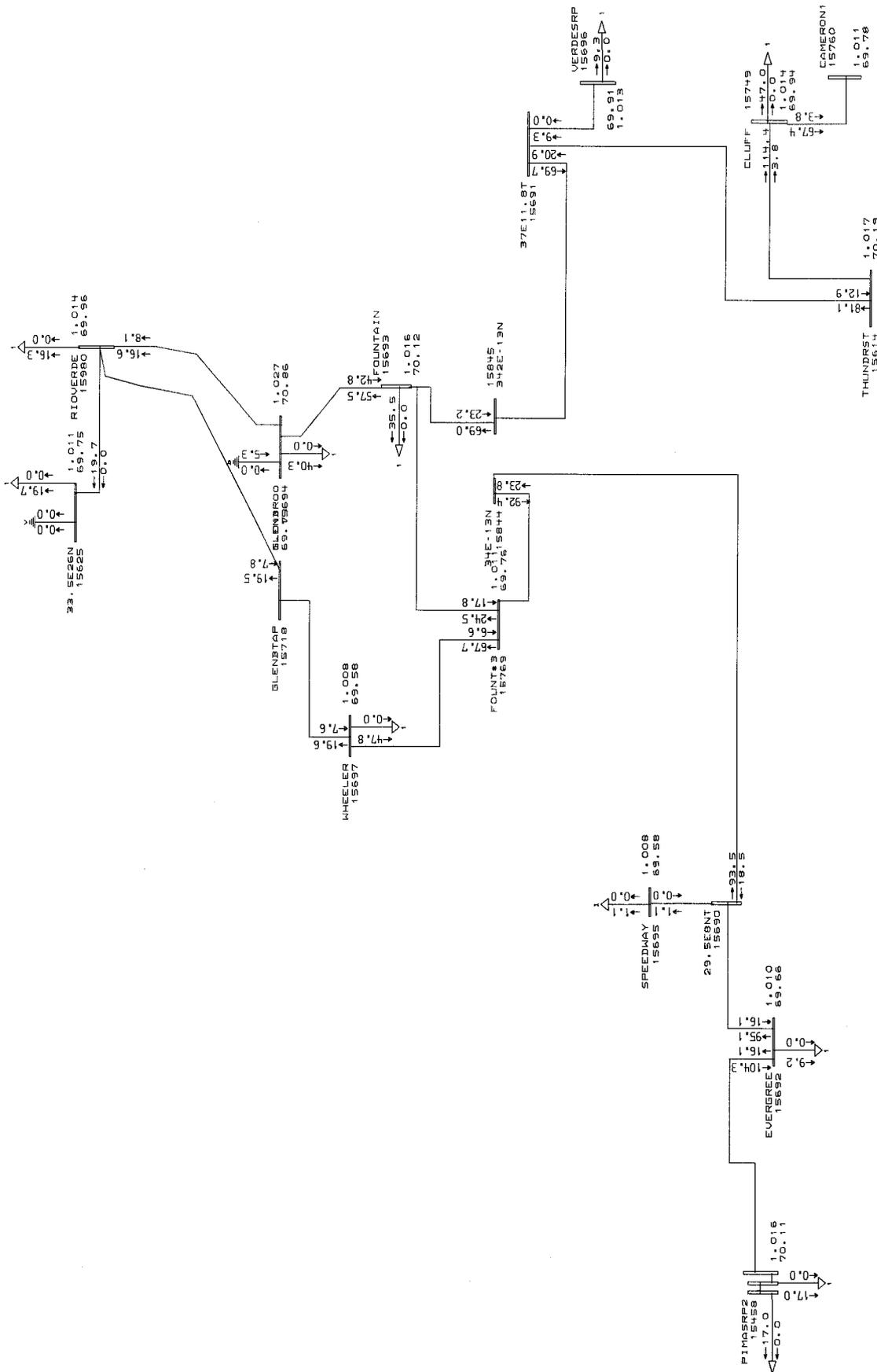
FOUNTAIN 69KV SYSTEM 2014



26N
 26N
 25N
 24N
 THUNDER IRD. 16N
 CACTUS 15N
 SHEA 14N
 DOUBLE TREE 13N
 NORTHERN 12N
 INDIAN BND. 11N
 McDONALD 10N
 CHAPARRAL 9N
 INDIAN SCH. 8N
 THOMAS 7N
 McDOWELL 6N
 McKELLIPS 5N
 BROWN 4N
 UNIVERSITY 3N

36E
 35E
 34E
 33E
 32E
 31E
 30E
 29E
 28E
 27E
 26E
 25E
 24E
 23E

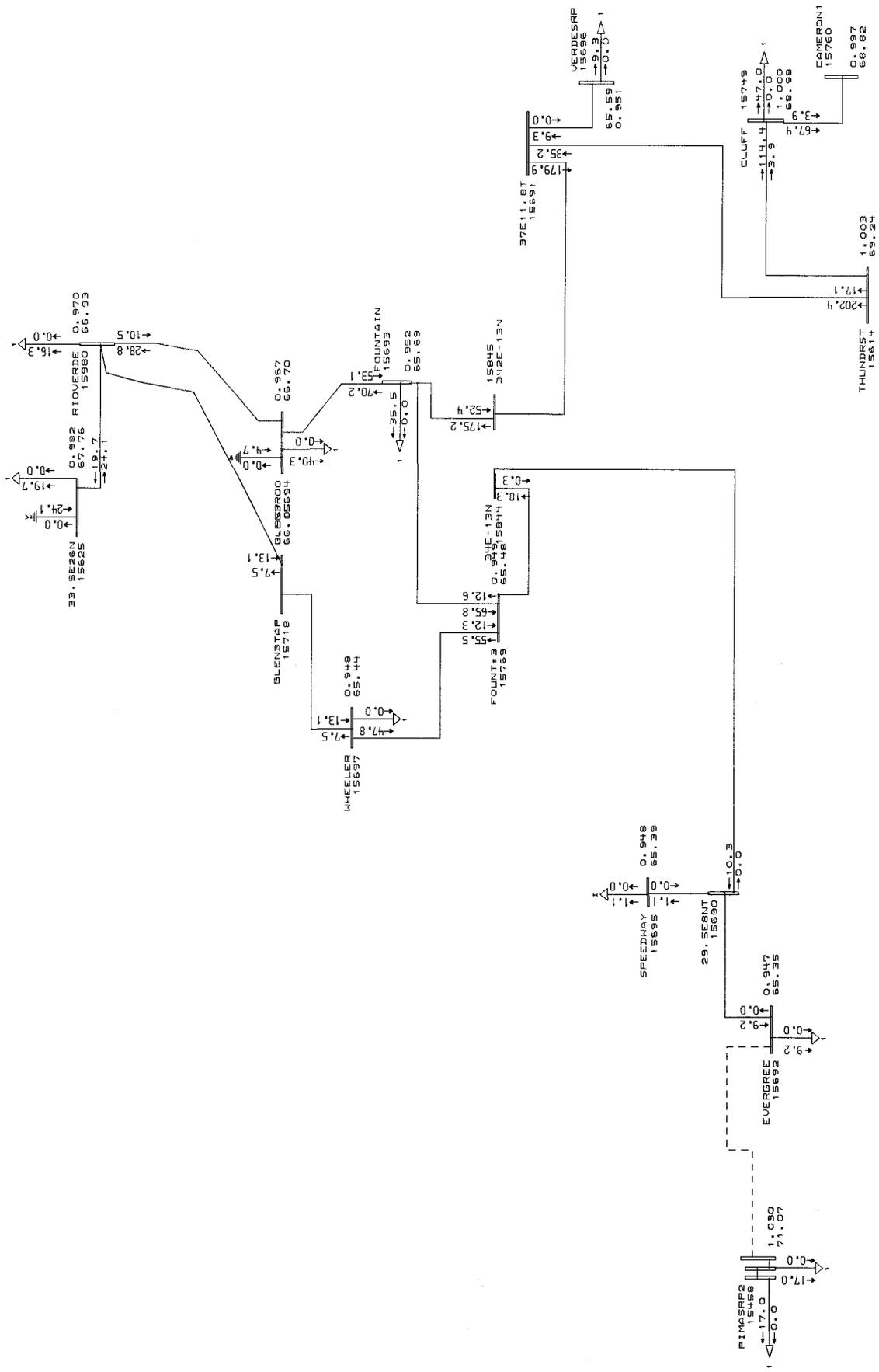
POWER
 RECKER
 HIGLEY
 GREENFIELD
 VAL VISTA
 LINDSAY
 GILBERT
 STAPLEY
 MESA DR.
 COUNTRY CLB.
 ALMA SCH.
 DOBSON
 PRICE/PIMA
 HAYDEN



Fountain Hills 69kV Area

2014 Normal Condition w/o Fountain Hills Receiving Station





Fountain Hills 69KV Area
2014 Outage w/o Fountain Hills Receiving Station

2005 CAPITAL PROJECT DESCRIPTION



Budget Year 2006/2007

EHV Diagrams 115, 230 & 500kV
Area Switching Diagrams emasyst.pdf
Dist. Station Diagrams carrel115b.pdf

Date: October 20, 2004

Location: 47E-0.5N

Job Title: Carrel (47E-0.5N), New Substation, 1st Transformer (28MVA), and Provide 115kV Loop Service.

Project Summary: Construct a new two bay substation. Install 1-115/12.47kV, 28MVA unit transformer and 1-115kV transformer protector in Bay 2 at the new site by 11/06. Provide 115kV double circuit looped service from the Goldfield/Spurlock 115kV line, about 2.5 miles from the Spurlock end.

Description of Work:

STATION WORK

- Construct 115kV Bay 2 & Bay 3.
- Install 1-115/12.47kV, 28MVA unit transformer in Bay 2.
- Install 4-12kV, 1200KVAR capacitor banks (4800KVAR total) in Bay 2.
- Install 1-115kV transformer protector in Bay 2.
- Install 6-115kV Disconnect Switches.

STATION SUBTOTAL \$1,720,000

Note: Although tapped service was initially recommended for load growth, a consideration of reliability, road widening, and criticality of customers, after considering permitting and siting issues of the Goldfield/Spurlock line, looped service is preferred.

12KV LINE WORK

- Construct feeders for Bay 2.

12KV LINE SUBTOTAL \$1,200,000

115KV LINE WORK

- Install 1-115kV double circuit line and two line drops to Bay 2 and perform associated work.

FY05 115KV CEC LINE SITING SUBTOTAL \$100,000

115KV LINE SUBTOTAL \$500,000

R.O.W ACQUISITION \$100,000

ESTIMATED TOTAL \$ 3,620,000

In-Service Date: November 15, 2006

Manager

Date

Load Growth Project, ESP&E Contact: Tom Olivas (12kV), TSP Contact: Tatyana Dhaliwal (69kV, 115kV)

Justification:

- Strong residential development at the base of the Superstition Mountains is expected to continue with service and support needed from this new station. Area developments include: the 870 acre Superstition Mountain and the 800 acre Superstition Gateway Master Planned Communities.
- A new 115kV line must be constructed to serve this new station. Some savings in line construction will be realized because of the proximity of the future substation to Goldfield/Spurlock 115kV line.

2004 Project Summary: Construct a new single bay substation. Install 1-115/12.47kV, 28MVA unit transformer and 1-115kV transformer protector in Bay 2 at the new site by 11/06. Provide 115kV service tapped from the Goldfield/Spurlock 115kV line, about 2.5 miles from the Spurlock end.

Carrel Justification - Spurlock Transformer Loadings

Bay	% Planned Rating	Planned Rating	% Emergency Rating	Emergency Rating	KVA Load
All lines in Service (normal condition)					
Spurlock Bank 2	101.2	22015	86	25900	22286
Spurlock Bank 3	95.7	22015	81.4	25900	21079
Spurlock Bank 3 Out of Service					
Spurlock Bank 2 Loading	197.4	22015	167.8	25900	43454
Spurlock Bank 2 Out of Service					
Spurlock Bank 3 Loading	197.1	22015	167.6	25900	43398