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AZ CORP COMMISSION  
DOCKET CONTROL

September 19, 2014

Docket Control  
Arizona Corporation Commission  
1200 W. Washington  
Phoenix, AZ 85007

ORIGINAL

RE: Arizona Public Service Company West Valley South Transmission Line Project  
Docket No. L-00000D-03-0122

Pursuant to Decision No. 66646, Condition 16, dated December 22, 2003, Arizona Public Service Company ("APS") was ordered as follows:

Before construction on the Project may commence, the Applicant must file a construction mitigation and restoration plan with the Commission's Docket Control Office with copies to affected areas of jurisdiction.

On January 19, 2007, APS filed its Construction Mitigation and Restoration Plan ("CMRP"). The attached CMRP is a supplement to the previously filed CMRP. Construction will commence on the TS2 to Palm Valley (formerly named TS3) segment of the West Valley South 230kV Transmission Line Project. Thus, APS submits the attached CMRP for the remaining phases of the West Valley South Transmission Line Project matter. If you have any questions regarding this information, please contact Gregory Bernosky at (602)250-4849.

Sincerely,

Lisa Malagon

LM/sb  
Attachment

cc: Brian Bozzo

Arizona Corporation Commission  
DOCKETED  
SEP 19 2014  
DOCKETED BY

**CONSTRUCTION, MITIGATION, AND RESTORATION PLAN  
("CMRP")**

**FOR THE**

**WEST VALLEY SOUTH 230kV PROJECT**

**TS-2 to Palm Valley (TS-3)**

Decision Nos. 66646 and 73937

Prepared for

**Arizona Corporation Commission**

Prepared by



**Arizona Public Service**

September 2014

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## 1.0 INTRODUCTION

This Construction, Mitigation, and Restoration Plan ("CMRP") is a supplement to the CMRP APS previously filed in Docket No. L-00000D-03-0122<sup>1</sup>. Construction will commence on the TS2 to Palm Valley (formerly named TS3) segment of the West Valley South 230kV Transmission Line Project. Thus, APS submits this CMRP, developed in accordance with Certificate of Environmental Compatibility ("CEC") Condition 16. This condition states that:

*"Before construction on this Project may commence, the Applicant must file a construction mitigation and restoration plan with the Commission's Docket Control Office with copies to affected areas of jurisdiction. The Applicant shall, within one year of completion of construction of the Project, rehabilitate to its original state any native area disturbed by construction of the Project, except for any road that may be necessary to access the transmission lines or substation sites for maintenance and repair."*

The CMRP supports the following goals identified in Condition 16 of the CEC:

- Avoid impacts where practical;
- Where impacts are unavoidable, minimize impacts; and
- Focus on site preparation to facilitate natural processes of revegetation.

In addition to these goals, the CMRP addresses the key elements identified in Condition 16. The following are the key elements set forth in Condition 16 and locations where they are addressed within this document:

- Emphasize final site preparation to encourage natural revegetation – Section 2.3
- Avoid (i.e., preserve), where practical, mature native trees – Sections 2.1.2.1 and 2.2.1
- Stipulate a maximum construction corridor width – Section 2.1.1
- Reserve topsoil and native plant materials from right-of-way before grading, and distribute over the right-of-way after construction is complete – Sections 2.1.2.1 and 2.2.2
- Imprint the reclaimed right-of-way to provide indentations to catch seed and water – Section 2.3.2.1
- Implement best management practices to protect the soil – Sections 2.2.2 and 2.3.2.2
- Apply reclamation methods that have been proven effective in the desert environment – Section 2.3.2
- Prevent, where applicable, the spread of noxious weeds or other undesirable species – Sections 2.1.2.1 and 2.1.3.1

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<sup>1</sup> CMRP for the West Valley South 230kV Project dated January 19, 2007, filed in Docket No. L-00000D-03-0122.

Other conditions of the CEC also are addressed in this CMRP. These conditions are generally described below, along with the corresponding locations of where they are located in the CMRP:

- Condition 6: Minimize or avoid impacts to cultural sites – Section 2.1.2.2 and 2.2.7
- Condition 6: Develop treatment plans for cultural sites – Section 2.1.2.2 and 2.2.7
- Condition 8: Retain cultural monitors in appropriate areas – Section 2.2.7
- Condition 12: Utilize existing roads and minimize vegetation disturbance – Sections 2.1.1, 2.1.2.1, and 2.2.1
- Condition 14: Identify informational sign locations – Section 2.1.2.4
- Condition 17: Retain biological monitors, if needed – Section 2.2.6

## **2.0 CONSTRUCTION MITIGATION AND RESTORATION**

This CMRP outlines a general sequential description of the transmission line construction activities:

- Right-of-Way Preparation and Pre-Construction Activities
- Construction Activities
- Restoration and Post-Construction Activities

### **2.1 Right-of-Way Preparation and Pre-Construction Activities**

Right-of-way preparation and pre-construction activities include the following:

- Surveying for transmission line design;
- Designation of: access and spur roads, structure construction work areas, conductor stringing, tensioning, and pulling areas;
- Pre-construction resource surveys and staking;
- Noxious weed treatment;
- Topsoil and plant material segregation;
- Providing notice and securing permits that will be necessary before construction.

#### **2.1.1 Surveying and Staking the Centerline, Access Roads, Other Project Features and Work Areas**

##### *Centerline*

A ground survey and staking will be performed to verify and locate the centerline of the transmission line route, structure locations, and right-of-way boundaries. The right-of-way width will not exceed 200 feet. Activities will be limited to access and spur roads; designated structure construction staging

areas; and conductor stringing, pulling and tensioning areas. These construction activity areas are identified in the attached plan and profiles.

#### *Access Roads*

Where practicable, existing paved and unpaved highways and roads will be used for the initial transportation of materials and equipment from the construction yard and storage areas to locations where they will be needed along the transmission line right-of-way. Where the proposed transmission line parallels existing transmission lines or other features, existing access roads will be used, and new spur roads to structure sites will be constructed (as appropriate). Spur roads are short segments of road off of existing roads or access roads to structure locations. Access and spur roads will be approximately 24 feet wide. If necessary, the existing roads will be upgraded, and permanent roads utilized will be left in a condition equal to or better than their condition prior to construction. Any access not needed for the maintenance of the transmission line will be designated temporary access and will be restored to pre-construction conditions (see Section 2.3). All access to be used for the construction of the Project are delineated in the attached plan and profiles.

#### *Other Project Features and Work Areas*

Work areas, also called, construction staging areas, are used for structure assembly and erection. Construction staging areas will be located at each structure site. The size of the construction staging area depends on the type of structure used. At the tower locations, construction staging areas will be approximately 150 by 200 feet. Exceptions to these construction staging area dimensions may occur due to environmental constraints. All structure locations and construction staging areas will be delineated in the attached plans and profiles. Conductor stringing, tensioning, and pulling areas will be located at approximately 9,000-foot intervals between structures along the right-of-way. These areas will be approximately 150 feet by 600 feet. Exceptions to dimensions may occur due to environmental constraints. All conductor stringing, tensioning, and pulling areas will be delineated in the attached plan and profiles.

### **2.1.2 Pre-construction Resource Surveys and Staking**

Pre-construction resource surveys and staking activities focus on the protection of sensitive areas and resources identified for preservation or avoidance during construction. Disturbance related to Project construction may begin after all right-of-way preparation and pre-construction actions have been completed.

#### **2.1.2.1 Vegetation Avoidance, Sensitive Plant and Weed Identification**

Right-of-way preparation also includes the identification of plants to avoid, weed infested areas, and storage areas for windrowed plant and soil materials. Natural vegetation along the right-of-way will be avoided to the extent practicable. However, some pruning of natural vegetation will be required for land surveying activities, construction purposes (access and structure sites), clearances for electrical safety, long-term maintenance, and the reliability of the transmission line. Qualified biologists conducted field

surveys to identify any necessary pruning of mesquite, ironwood, saguaro and/or palo verde trees. Sensitive plants, native salvage plants, and noxious weeds within or adjacent to the right-of-way and areas of construction were identified in accordance with a flagging, fencing, and signage protocol.

Each structure site will become a small work area as materials for foundations, structures, and assemblies are delivered and erected. The trimming and crushing of brush and small trees will be done rather than uprooting them to protect the root crown for regrowth. Any trees with at least a 4-inch-caliper trunks requiring removal will be salvaged in accordance with the Arizona Native Plant Law and will be used for reclamation near their original locations. Storage areas for salvaged plant material also will be identified and flagged on a site-specific basis to the extent necessary. Location of temporary plant storage sites shall provide ease of care and maintenance (i.e., close to watering truck routes) for the plant material, as well as provide protection from construction activities until final planting. Plants salvaged from areas of permanent disturbance will only be moved once, and replanted as described under Section 2.3.

#### **2.1.2.2 Cultural Resources Clearance**

There are no cultural resources eligible for the Arizona Register of Historic Places identified by the cultural resource survey conducted to support the Project. The CEC<sup>2</sup> stipulated that construction plans be reviewed to determine whether additional archaeological studies or mitigation efforts were warranted. Comparison of the construction plans with the extent of cultural resource survey conducted to support the Project identified no areas where supplemental cultural resource survey is needed. If undiscovered cultural resources are encountered and negative impacts are determined, a treatment plan will be developed to minimize impacts.

#### **2.1.2.3 Jurisdictional Washes**

No jurisdictional washes will be crossed by the Project.

#### **2.1.2.4 Informational Signs**

Informational signs were placed along the right-of-way to provide notice of the future transmission line.

### **2.1.3 Additional Pre-construction Activities**

#### **2.1.3.1 Noxious Weed Management**

If noxious weed locations are identified, control measures will be implemented to prevent the spread of weeds during construction. The management of noxious weeds will be considered throughout all stages of the Project including:

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<sup>2</sup> Decision Nos. 66646 and 73937

- Educating all construction personnel regarding the identified problem areas and the importance of preventive measures and treatment methods;
- Specific preventative measures to prevent the spread of noxious weeds;
- Pre-and post-construction treatment methods to be applied to areas of noxious weed infestation.

## **2.2 Construction Activities**

This portion of the CMRP addresses construction clearing requirements, grading, and monitoring. Prior to the commencement of construction activities, a qualified environmental professional will instruct all construction personnel in cultural and biological sensitivity. The environmental professional will provide information on biological and cultural resource preservation and avoidance of specific areas identified in the plans and profiles.

### **2.2.1 Vegetation Clearing**

Vegetation clearing is expected in only a few, isolated areas. The clearing will be performed in a manner that will maximize the preservation of the landscape and conservation of natural resources and minimizing disturbance/scarring. In construction areas where recontouring is not required, shrubs and small trees will be crushed or trimmed and left in place, and the original contour will be maintained to avoid excessive root damage and allow for resprouting. Plants identified for salvage shall be removed by a contractor specializing in salvage removal prior to the commencement of construction activities.

If removal is necessary for trees with less than a 4-inch-caliper trunk, these trees will be flagged for identification and removal. The removal of these trees will be accomplished by cutting as near to the surrounding grade as possible and will not exceed 8 inches above the grade when measured on the downhill side of the tree, and 2 inches on the uphill side of the tree. When possible, the entity specializing in salvage removal shall prune trees instead of cutting trees. Additionally, where possible trees with less than a 4-inch caliper trunk will be cut rather than bulldozed. Pruning will be accomplished by the use of pruning saws, power saws, nippers, bow saws, or cross-cuts. Limbs will be pruned flush with the trunk of the tree, except for portions of the overhanging limbs. The use of axes for trimming will be prohibited. Saguaros will not be trimmed or cut.

### **2.2.2 Topsoil and Plant Material Segregation**

This activity includes the separation of topsoil from subsoil which contains organic material, including seeds of plants growing on the site, to be set aside for post-construction replacement. The construction contractor will conduct topsoil salvage and include all plant material. The topsoil and plant materials will be protected from erosion and used as fill. When stockpiled in designated areas, handling will be kept to a minimum and may require watering to minimize erosion.

### **2.2.3 Removal of Obstructions**

The removal of trees, limbs, brush, and obstructions to access will be limited to those that hang over the roadway, hindering the driver's sight, or those with less than 12 feet of vertical clearance above the access roads. Trimming will be accomplished by use of pruning saws, power saws, nippers, bow saws, or cross-cuts. Limbs will be pruned flush with the trunk of the tree, except for portions of overhanging limbs. The use of axes for trimming will be prohibited. Piling and burning will not be permitted.

### **2.2.4 Construction Area Requirements**

Construction areas include: access roads, structure construction staging areas, and sites for conductor stringing, tensioning, and pulling. Overland travel will be used for the majority of new access required along the transmission line route. Disturbance to access roads (limited to only a few areas), structure construction staging areas, and sites for conductor stringing, tensioning, and pulling will consist of the crushing or trimming of shrubs and small trees at ground level, to allow for re-sprouting, where applicable. Areas that will be disturbed include:

- Permanent and temporary access (including new, upgrades, and spurs)
- Structure construction staging areas (approximately 150 x 200 feet) to allow efficient assembly and erection of structures.
- Sites for conductor stringing, tensioning, and pulling at approximately 9,000-foot intervals and located between structures along the right-of-way (approximately 150 x 600 feet).

### **2.2.5 Grading Activities**

Grading will be limited to the construction of access and spur roads, although most access will be overland or use existing access. The method of reclamation will consist of returning disturbed areas back to their original condition (see Section 2.3).

### **2.2.6 Biological Monitors**

All ground disturbance activities that could affect sensitive species or habitat will be monitored. Where warranted, a qualified biologist will conduct pre-construction activities to minimize or prevent impacts to sensitive species or habitat, and will be required to provide a tortoise education program to all construction employees. APS shall survey or monitor specifically for the Sonoran Desert Tortoise. If Sonoran Desert Tortoise are encountered during construction, Arizona Game and Fish Department's guidelines for handling (*Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects*, October 2007) will be followed. Any features that could entrap tortoises (i.e., trenches, open pits, etc.) shall be checked twice daily. During construction, active raptor nests will be monitored by a qualified biologist.

### **2.2.7 Cultural Resources**

In the event that previously unreported cultural resources are discovered during construction of the transmission line, all work will cease within 100 feet of the discovery and APS will immediately notify the State Historic Preservation Office. If the discovery is on State Trust Land, APS will immediately notify the Arizona State Land Department so that arrangements can be made for archaeological documentation and evaluation. The eligibility of the discovery for the Arizona Register of Historic Places will be evaluated in consultation with the State Historic Preservation Officer and appropriate treatment will be determined and implemented. If the discovery includes human remains, APS will also notify the Arizona State Museum within 24 hours of discovery so that appropriate treatment can be determined pursuant to the Arizona Antiquities Act or Arizona Burial Law (Arizona Revised Statutes § 41-844 and § 41-865). Work shall not resume in the area of a discovery until authorized by the responsible agency. Where warranted, a qualified cultural resource monitor will be present when construction occurs at these locations.

### **2.2.8 Special Conditions**

Dust control measures will be used on all roads when dust creates a nuisance or hazard and will include the following:

- Where necessary, fresh water will be used to control dust when grading roads and will be applied to unpaved roads, a potential source of airborne dust.
- Open-bodied trucks transporting materials that are likely to become airborne when in motion will be covered, and other stockpiles will be enclosed as necessary.
- Earthen and other materials that may become airborne will be removed promptly from paved roads.

## **2.3 Restoration and Post-Construction Activities**

The ultimate success of mitigation measures used for the Project depends to a great extent on the restoration actions taken for lands following construction of facilities. The following describes the stabilization and rehabilitation proposed measures for the construction of the Project.

### **2.3.1 Cleanup of Affected Areas**

Construction sites and access roads will be kept in an orderly condition throughout the construction period. Refuse and trash will be removed from the sites and disposed of in an approved manner (e.g., in an approved landfill).

Temporary access roads, structure construction staging areas, and conductor stringing, tensioning, and pulling areas will be restored to their original conditions when construction is complete. After construction, the land will be restored to their original contour to the extent practicable. Disturbance during construction will be minimized by the crushing and trimming of shrubs and small trees in structure construction work areas and conductor stringing, tensioning, and pulling areas, where

applicable. This will increase the chances of vegetation re-establishment in disturbed areas. Revegetation efforts will not be applied to disturbed areas designated as permanent access.

### **2.3.2 Restoration of Affected Areas**

Post-construction restoration actions primarily focus on stabilizing temporary use areas to allow re-occupation of vegetation. Restoration actions shall be implemented by the construction contractor and adjustments may be necessary based on Project conditions.

#### **2.3.2.1 Recontouring of Disturbed Areas**

The construction contractor shall recontour disturbed areas by grading, to restore the site to approximately the original contour of the ground. All disturbed areas will be reshaped to conform to the adjacent terrain as practicable. All site areas that require grading will be sloped to drain appropriately through the installation of erosion control measures (e.g., water bars or other measures). The surface will be imprinted to facilitate revegetation recovery prior to topsoil replacement.

#### **2.3.2.2 Topsoil and Plant Material Replacement and Stabilization**

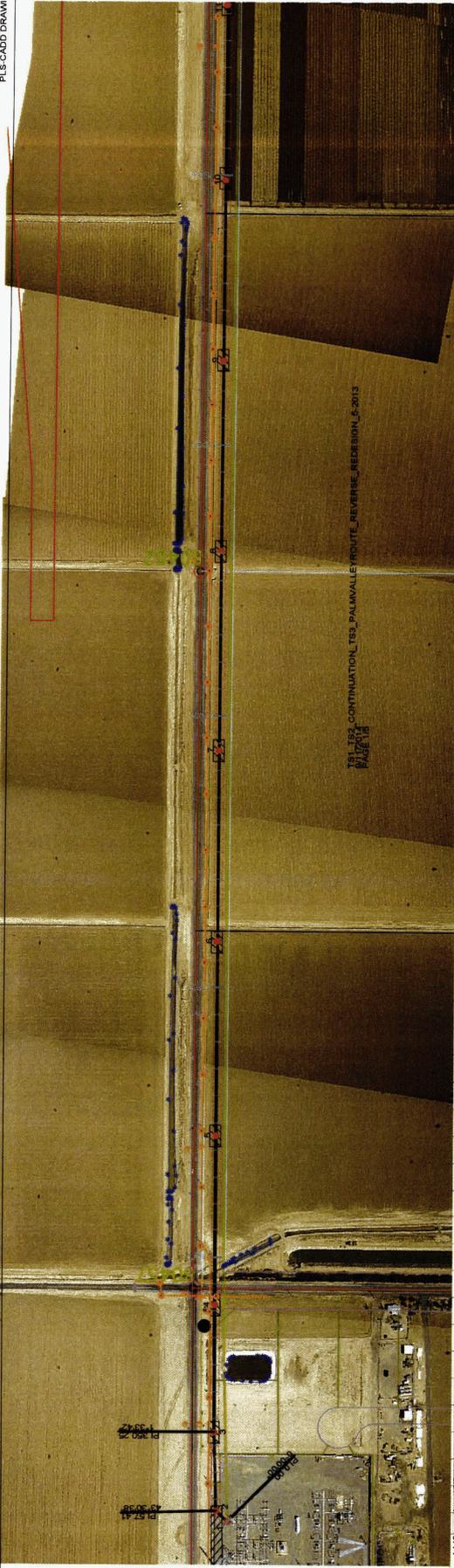
Portions of the Project that require segregation of topsoil and plant materials will be replaced and stabilized. The grading and the movement of earth will be limited to wash crossings, access road areas, and areas where recontouring is necessary.

#### **2.3.2.3 Revegetation and Seeding**

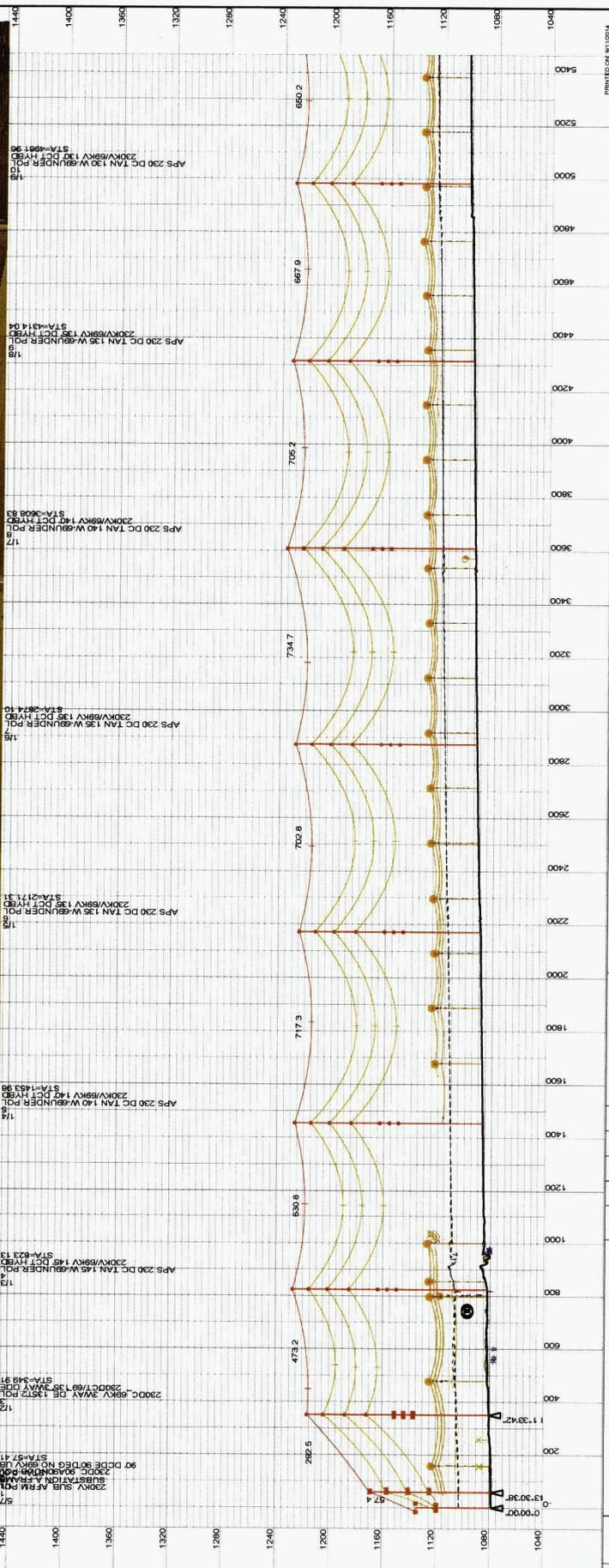
Revegetation and seeding will occur where disturbance to native vegetation has been removed during construction. Reseeding involves planting new seed of indigenous native species to establish desired vegetation within affected vegetation communities. Seed mixtures will be developed close to the time of reclamation to ensure seed availability.

**WEST VALLEY SOUTH 230KV TRANSMISSION LINE PROJECT**  
**CONSTRUCTION, MITIGATION, AND RESTORATION PLAN**  
**PLAN AND PROFILE DRAWINGS**

PLS. CAD DRAWING



131,132 CONTINUATION TSS, PALM VALLEY ROUTE, REVERSE, REVISION\_5-2013



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TRANSMISSION CONSTRUCTION PROJECTS		B-513463	
Palm Valley to Trilby Wash 230KV TRANSMISSION LINE		APPS	
200.0 FT. HORIZ SCALE		40.0 FT. VERT SCALE	
JACOBO ENGINEERING & CONSULTING		REVISION	
NO. DATE		DESCRIPTION	
1	5/13/2014	ISSUED FOR CONSTRUCTION	
2	5/13/2014	ISSUE FOR BID	
3	5/13/2014	ISSUE FOR BID	
4	5/13/2014	ISSUE FOR BID	
5	5/13/2014	ISSUE FOR BID	







