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Mitigation Measures

All mitigation measures presented in the Final EIR/EIS are listed below. The four measures at the end of the list would apply only to alternative routes; all other measures apply to the Proposed Project or to all alternatives. Mitigation measure B-16a in the Final EIR/EIS is modified as contained herein.

Measures Applicable to the Proposed Project and All Alternatives

Biological Resources

B-1a Prepare and implement a Habitat Restoration/Compensation Plan. SCE shall restore all areas disturbed by project construction, including temporary disturbance areas around tower construction sites, laydown/staging areas, temporary access and spur roads, and existing tower locations that are removed during construction of the Proposed Project. Where onsite restoration is planned for mitigation of temporary impacts to sensitive vegetation communities, SCE shall identify a qualified Habitat Restoration Specialist to be approved by the CPUC/BLM. Hydroseeding, drill seeding, or an otherwise proved restoration technique shall be utilized on all disturbed surfaces using a locally endemic native seed mix approved by the CPUC/CDFG/AGFD/FWS and BLM. SCE shall flag the limits of disturbance at each construction site. The Plan shall incorporate the measures identified in the June 2006 Memorandum of Understanding regarding vegetation management along rights-of-way for electrical transmission and distribution facilities on Federal lands. In project areas that occur in the WRCMSHCP plan area, SCE shall use the applicable Best Management Practices identified in the WRCMSHCP.

The creation or restoration of habitat shall be monitored for five years after mitigation site construction, or until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring shall extend beyond the five-year period until the criteria are met or unless otherwise noted by the CPUC/BLM.

B-1b Coordinate tower placement with USFWS/BLM. Where the proposed route crosses the Kofa National Wildlife Refuge, SCE shall coordinate with the U.S. Fish and Wildlife Service, Division of Refuges' refuge management personnel to determine specific tower site and spur road locations in order to minimize habitat disturbance and/or the loss of valuable habitat features. SCE shall demonstrate compliance with this measure prior to construction.

B-2a Conduct invasive and noxious weed inventory. SCE shall survey the project corridor, including access roads, for populations of invasive and noxious weeds prior to the start of construction. All populations of invasive and noxious weeds within 500 feet of each tower location shall be flagged prior to construction. The Applicant shall submit a Noxious Weed Control Plan to BLM, CPUC, ADGF, CDFG, and/or USFWS at least 60 days prior to the start of construction. The weed control plan shall specify the location of existing weed populations;

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measures to control introduction and spread of noxious weeds in the project corridor; worker training, specifications, and inspection procedures for construction materials and equipment used in the project corridor; post-construction monitoring for noxious weeds; and eradication and control methods.

Known populations of invasive and noxious weeds in the project corridor shall be evaluated by BLM, CPUC, CDFG, and USFWS to identify candidates for eradication. Selected weed populations shall then be eradicated prior to construction.

All seeds and straw material shall be certified weed free. All gravel and fill material used during project construction and maintenance shall be certified weed free by the local County Agriculture Commissioner's Office.

B-2b Implement control measures for invasive and noxious weeds. SCE shall adhere to the BLM management guidelines for reducing the potential for the introduction of noxious weeds and invasive, non-native plant species by implementation of the following standards:

- **Wash all equipment and vehicles.** Vehicles and all equipment must be washed BEFORE AND AFTER entering all project sites unless otherwise directed in writing by the BLM. This includes wheels, undercarriages, bumpers and all parts of the vehicle. In addition, all tools such as chain saws, hand clippers, pruners, etc., must also be washed BEFORE AND AFTER entering all project areas. For example, vehicles traveling into contaminated areas are the main dispersal mechanism for yellow star-thistle. All washing must take place where rinse water is collected and disposed of in either a sanitary sewer or a landfill.
- **Keep written logs.** When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used and staff present. The log shall contain the signature of the responsible crewmember.
- **Written logs will be available** for CPUC/BLM inspection and shall be turned in to BLM on a weekly basis.
- **Post-construction weed abatement on the Coachella Valley Preserve.** Post-construction follow-up weed abatement will be conducted on the work areas within the Coachella Valley Preserve and Kofa National Wildlife Refuge. Weed abatement will be conducted during the spring following construction and prior to when the weeds establish flowers or produce seeds.

B-5a Conduct pre-construction surveys and monitoring for breeding birds. SCE shall conduct protocol level surveys for nesting birds if construction activities are scheduled to occur during the breeding season for raptors and other migratory birds. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, and access road/spur road locations. SCE shall be responsible for designating a CPUC/BLM-approved qualified biologist who can conduct pre-construction surveys and monitoring for breeding birds. If State or federally listed birds with active nests are found, a biological monitor shall establish a 500-foot buffer around the nest and no activities will be allowed within the buffer until the young have fledged from the nest or the nest fails. The biological monitor shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the 500-foot buffer until the nesting cycle is complete or the nest fails. The biological monitor shall be responsible for documenting the results of the surveys and the

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- ongoing monitoring. A 300-foot buffer shall be implemented in the event that raptors or other species protected under the MBTA are located. This buffer will be evaluated after consultation with the CPUC/BLM/CDFG/and USFWS.
- B-6a Develop a transplanting plan.** In coordination with the BLM, SCE shall prepare a transplanting plan in compliance with both Arizona and California laws and regulations regarding native and sensitive plants, prior to project construction activities. The plan will provide details on the plants being transplanted, including which species and how many individuals of each species; where the plants will be transplanted; how the plants will be transplanted; how the plants will be maintained during the transplanting efforts; and if the plants will be used to re-vegetate disturbed areas of the construction site. As a condition of the plan, a pre-construction survey will be conducted to mark (using bright-colored flagging) all plants that will be transplanted. Some cacti will need to be transplanted facing the same direction as they currently face (in other words, the north side of the plant must stay facing the north); these cacti will be identified in the plan and appropriately marked to identify which side faces north. For listed plant species SCE shall identify if the plants can be avoided. If avoidance is not possible, SCE shall purchase off site mitigation in coordination with the USFWS and CDFG.
- B-7a Avoid Colorado River.** All tower pads, equipment laydown areas, and pulling sites would be located outside flowing portions of the Colorado River and flowing tributaries of the river.
- B-7b Conduct pre-construction tortoise surveys.** Prior to construction, SCE shall survey the transmission line corridor for desert tortoise burrows and pallets within fourteen (14) days preceding construction. Tortoise burrows and pallets encountered within the construction zone (if any) will be conspicuously flagged by the surveying biologist(s) and avoided during all construction activities.
- During construction activities, SCE shall inspect under equipment and vehicles prior to moving equipment. If tortoises are encountered, the vehicle will not be moved until such animals have voluntarily moved to a safe distance away from the parked vehicle or a qualified biologist moves the tortoise.
 - SCE shall monitor construction activities in all areas with the potential to support desert tortoise.
 - Desert tortoises will be handled only by a FWS/CDFG permitted and authorized tortoise handler and only when necessary. New latex gloves will be used when handling each desert tortoise to avoid the transfer of infectious diseases between animals. Desert tortoises will be moved the minimum distance possible within appropriate habitat to ensure their safety. In general, desert tortoises will not be moved in excess of 1,000 feet for adults and 300 feet for hatchlings.
 - Desert tortoises that are found above ground and need to be moved will be placed in the shade of a shrub. All desert tortoises removed from burrows will be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. All excavation of desert tortoise burrows will be done using hand tools, either by, or under the direct supervision of, an authorized tortoise handler. If an existing burrow is unavailable, an authorized tortoise handler will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original burrow. Desert tortoises moved

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during inactive periods will be monitored for at least two days after placement in the new burrows to ensure their safety. An authorized tortoise handler will be allowed some judgment and discretion to ensure that survival of the desert tortoise is likely.

- If desert tortoises need to be moved at a time of the day when ambient temperatures could harm them (less than 40 degrees F or greater than 90 degrees F), they will be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized tortoise handler under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes will be appropriately discarded after one use.
- All desert tortoises moved will be marked for future identification. An identification number using the acrylic paint/epoxy covering technique should be placed on the fourth costal scute. No notching would be authorized.

B-7c Purchase mitigation lands for impacts to tortoise habitat. Following construction, SCE shall acquire lands to compensate for the loss of tortoise habitat within the Category II and III management areas in Arizona and California. The amount of land to be acquired will depend on the acreage of disturbance within these management areas. Acquired lands will be in a nearby area of good tortoise density and within tortoise habitat. BLM and SCE shall conduct a field inspection of the disturbed areas after completion of construction of the transmission line to determine the exact acreage required for compensation. The lands purchased will be transferred to the United States and be administered by the BLM. Land may be transferred to the BLM and/or incorporated into an existing management area.

B-7d Purchase mitigation lands for impacts to fringe-toed lizard habitat. SCE shall purchase or enhance lands for all permanent loss of habitat that are within the Coachella Valley fringe-toed lizard Critical Habitat unless otherwise directed by the USFWS Biological Opinion for the Proposed Project. Mitigation Lands shall be determined in consultation with the USFWS, CDFG, and CPUC.

Clearing work areas of CVFTL in the Coachella Valley Preserve. A temporary fence or other effective barrier that does not allow lizards to enter the work areas shall be constructed around the perimeter of each of the work areas in the refuge. Any lizards found within the barrier shall be relocated outside of the work areas.

Duration of Surveys for fringe-toed lizard and flat-tailed horned lizard. Surveys for CVFTL and FTHL shall be conducted during the appropriate seasons (May 1 through the end of summer) and conditions for species identification. The duration of the surveys shall coincide with the duration of construction activities in potential habitat for these species (particularly on the Coachella Valley Preserve) that occurs during the summer season. For any areas of suitable habitat, this measure shall apply. Construction shall not occur on the Preserve or in other potential habitat areas outside of the detection period for FTHL.

B-7e Conduct focused surveys for California gnatcatchers. SCE shall conduct protocol level surveys for California Gnatcatchers in all areas supporting suitable coastal sage or Riversidean sage scrub habitats that may be affected by the project (San Bernardino to Vista Substation and San Bernardino Junction to San Bernardino Substation). This will include a minimum 300-foot buffer around construction areas. Presence/absence of this species shall be determined prior to construction activities. If direct impacts to coastal California gnatcatcher

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- occupied habitat cannot be avoided, then impacts to this species shall be addressed through either the Section 7 or Section 10(a)(1)(B) Process under the Federal Endangered Species Act of 1973, as amended and consistent with the WRCMSHCP. SCE shall complete compliance with the Federal Endangered Species Act prior to Project construction. After definition of suitable habitat, the following requirements apply:
- Construction activities shall be restricted within coastal sage scrub habitat during the gnat-catcher breeding season (March 15-July 31);
 - SCE shall implement the applicable Best Management practices in the WRCMSHCP;
 - SCE shall restore, create, or enhance on site coastal sage scrub habitat; and/or
 - SCE shall purchase land or mitigation bank credits at an appropriate ratio to offset impacts to gnatcatchers and their habitat.
- B-7f Conduct focused surveys for Stephens' kangaroo rat and San Bernardino kangaroo rat.** Prior to the implementation of construction in areas that support suitable habitat for Stephens' kangaroo rat and San Bernardino kangaroo rat (Calimesa and San Timoteo Canyon). SCE shall conduct focused surveys to determine if sign (burrows, scat, and etc.) of these species is present in all areas within 100 feet that would be permanently or temporarily affected by construction activities. All surveys shall be conducted by a qualified biologist who holds the appropriate Federal FWS permits to conduct trapping surveys for these species. If sign is found to be present, then SCE shall conduct focused trapping surveys according to accepted protocols to determine presence/absence of these species. If these species are found, then SCE shall implement measure to avoid direct impacts, including the placement of exclusion fencing around work areas where impacts will occur, trapping of animals from inside impact areas, and placement of those animals outside of exclusion fencing until construction is completed. A qualified biological monitor shall be present during construction to ensure that animals are not harmed. Following completion of construction, SCE shall remove all exclusion fencing and recontour the soils to the pre-construction condition.
- B-8a Conduct surveys for listed plant species.** SCE shall conduct focused surveys for listed and sensitive plants prior to construction. Surveys shall be conducted during the appropriate floristic period necessary for the identification of sensitive plant species in all suitable habitat located within the project ROW and within 100' of all surface disturbing activities.
- Populations of sensitive plants shall be flagged and mapped prior to construction. If listed plants are located during the focused surveys, then modification of the placement of towers, access roads, laydown areas, and other ground disturbing activities would be implemented in order to avoid listed plants. If listed plants cannot be avoided, SCE shall be responsible for the translocation of plants and/or collection of seeds from existing populations that would be impacted and the planting/seeding of these plants in adjacent suitable portions of the ROW that would not be affected by Proposed Project construction or maintenance activities.
- B-9a Conduct pre-construction surveys.** SCE shall conduct pre-construction surveys for sensitive wildlife in any area subject to project disturbance. Surveys shall be conducted during a time of year when these species are known to be active. The location of sensitive species identified during the pre-construction surveys shall be identified on project maps.

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- B-9b** **Conduct biological monitoring.** SCE shall conduct biological monitoring of the project area including the laydown, staging, access roads, and any area subject to project disturbance. The biological monitor shall look for sensitive wildlife species (including forest watch list animals and Forest Service Region 5 sensitive species) that may be located within or immediately adjacent to the construction areas. If sensitive species are found, the biological monitor shall move them out of harm's way (listed species require take authorization) to avoid direct impacts to these species. In the event that the wildlife species may cause harm to the biologist, the biologist shall notify the construction crews and monitor the species until it moves out of harms way. The results of all monitoring shall be recorded in daily monitoring notes that shall be included as part of the required monitoring reports for the project. The SCE shall notify the CPUC/BLM if any sensitive species are located during construction of the project. SCE shall notify the Forest Service of all sensitive species found on Forest Service land.
- B-9c** **Implement a Worker Environmental Awareness Program.** A Worker Environmental Awareness Program (WEAP) shall be implemented for construction crews by a qualified biologist(s) provided by SCE and approved by the CPUC/BLM prior to the commencement of construction activities. Training materials and briefings shall include but not be limited to, discussion of the Federal and State Endangered Species Acts, the consequences of noncompliance with these acts, identification and values of sensitive plant and wildlife species and significant natural plant community habitats, fire protection measures, sensitivities of working on forest service lands and identification of Forest Service sensitive species and MIS wildlife species, hazardous substance spill prevention and containment measures, and review of mitigation requirements. Training materials and a course outline shall be provided to the CPUC and BLM for review and approval at least 30 days prior to the start of construction. Training materials and updates of training materials shall also be provided to the Forest Service for review and comment. SCE shall provide to the CPUC and BLM a list of construction personnel who have completed training, and this list shall be updated by SCE as required when new personnel start work. No construction worker may work in the field for more than 5 days without receiving the WEAP.
- B-9d** **Conduct pre-construction reptile surveys.** Prior to construction, SCE shall conduct surveys in areas of suitable habitat for Sonoran desert tortoise, common chuckwalla, banded Gila monster, and desert rosy boa within 48 hours prior to the start of construction activities. If common chuckwallas, banded Gila monsters and/or desert rosy boas are found on the construction site, they will be relocated to nearby suitable habitat outside the construction area. Following the clearance surveys, exclusion fencing will be erected or a biological monitor will be onsite during construction activities.
- If potentially suitable burrows or rock piles are found, they will be checked for occupancy. Occupied burrows will be flagged and avoided (employing a 50-foot buffer) during construction. If the burrow cannot be avoided, it will be excavated and the occupant relocated to an unoccupied burrow outside the construction area and of approximately the same size as the one from which it was removed. If an existing burrow is unavailable, the biologist will construct or direct the construction of a burrow of similar shape, size, depth, and orientation as the original. Trenches, holes, or other excavations will be examined for banded Gila monster prior to filling. If individuals are found, the biological monitor will relocate them to nearby suitable habitat.
 - During construction, if a common chuckwalla, banded Gila monster, and/or desert rosy boa occur on the project site, construction activities adjacent to the individual's location

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will be halted and the animal will be allowed to move away from the construction site. If the individual is not moving, a qualified biologist will relocate it to nearby suitable habitat outside the construction area. It shall be placed in the shade of a shrub. The Forest Service will be notified of any sensitive wildlife identified on NFS lands. Also during construction, if a Sonoran desert tortoise occurs on the project site, construction activities adjacent to the individual's location will be halted and the *Guidelines for Handling Sonoran Desert Tortoises Encountered During Construction Projects* will be followed by qualified personnel.

B-9e Conduct pre-construction surveys and owl relocation. Prior to construction, SCE shall conduct pre-construction surveys for the western burrowing owl. Surveys shall be conducted prior to ground disturbance activities in appropriate areas within the potential impact areas of the project to determine the presence of burrowing owls and to ensure clearance of these areas. If active owl burrows are discovered during pre-construction surveys, owls would be evicted from the burrows using either active or passive techniques as recommended by the BLM and Burrowing Owl Consortium. Owl relocation, as well as discouragement of owls from returning to the site, will occur in the following manner:

- During the non-breeding season (September 1 through January 31), burrowing owls occupying the Proposed Project site will be evicted by passive relocation. Passive relocation would include installation of one-way doors on burrow entrances that would let owls out of the burrow but would not let them back in.
- If construction is to occur during the breeding season (February 1 through August 31) and prior to the relocation of the owls, 75-meter (246-foot) protective buffers would be maintained around burrows occupied by owls until a BLM approved biologist approves other action. Other actions could include passive relocation if it is determined that owls have not begun laying eggs or postponement of construction in the area until the young are fledged and no longer dependent upon the nest burrow.
- Once fledglings are capable of independent survival and adult non-breeding owls have successfully been relocated offsite, potential owl habitat (squirrel burrows) would be collapsed in order to keep the owls from returning. Ground squirrels would be removed from the site by trapping and relocation or by other approved means. Following squirrel removal, existing ground squirrel burrows would be destroyed.

B-9f Perform construction outside of breeding and lambing period. Construction activities conducted within suitable habitat near Burnt Mountain, Harquahala Mountain, and Kofa NWR shall not occur during the period of the year when bighorn sheep are lambing (from January 1 to April 30). A pre-construction survey for bighorn sheep shall be conducted on Forest Service lands prior to construction and maintenance of the transmission lines. If bighorn sheep are found, then SCE shall consult with the Forest Service, USFWS, and Bighorn Institute to identify appropriate avoidance measures.

B-9g Conduct pre-construction surveys and relocation for American badger. Prior to construction, SCE shall conduct pre-construction surveys for American badger. Surveys will be conducted prior to ground disturbance activities in areas that contain habitat for this species. Badger dens located outside the project area shall be flagged for avoidance. Unoccupied dens located in the right of way shall be covered to prevent the animal from re-occupying the den prior to construction. If occupied dens are identified in the area of the ROW that must be disturbed,

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- the CDFG/BLM/Forest Service shall be consulted regarding options for action. Hand-excavation is an option if occupied dens cannot be avoided, but alternatives shall be considered due to potential danger to biologists. Dens shall be hand-excavated only before or after the breeding season (February 1–May 30). Any relocation of badgers shall take place after consultation with the BLM, Forest Service, and CDFG.
- B-9h Conduct pre-construction surveys for roosting bats.** SCE shall conduct surveys focused surveys for suitable roosting habitat or nursery sites for sensitive bats at the tower location, access/spur roads, and laydown/staging areas that occur in rocky areas or in areas where caves or old mines are present. If suitable roosting/nursery sites are found, then focused surveys shall be conducted to determine if the sites support sensitive bat species. If sensitive bat species occur at these sensitive roosting/nursery sites, then tower-specific adjustments and adjustments of the locations of access/spur roads and laydown/staging areas shall be made to avoid these sites. If towers, access/spur roads, and/or laydown/staging areas cannot avoid these sites, then construction of the towers, roads, and establishment of laydown/staging areas shall be delayed until the breeding cycles for the sensitive bats are completed. SCE shall consult with a bat specialist in order to determine when the breeding cycle for the sensitive bats are completed. SCE shall document the results of the surveys and any avoidance of roosting/nursery sites for sensitive bats.
- B-9i Schedule construction when the Coachella Valley round-tailed squirrel is dormant.** SCE shall conduct pre-construction surveys for Coachella Round Tailed Squirrels prior to construction to identify locations of nesting colonies. Placement of footings, roads, and laydown areas shall avoid nesting colonies of this species. If this species is identified within the ROW, construction activities shall be scheduled only during periods when this species is dormant (between August 1 and February 28).
- B-13a Demonstrate compliance with the Western Riverside County MSHCP.** SCE shall provide documentation that it has complied with the provisions of the MSHCP.
- B-13b Implement the Best Management Practices required by the Western Riverside County MSHCP.** SCE shall provide documentation that is has implemented the Best Management Practices set forth in Appendix C of the Western Riverside MSCHP.
- B-15a Utilize collision-reducing techniques in installation of transmission lines.** SCE shall install the transmission line utilizing APLIC standards for collision-reducing techniques as outlined in “Mitigating Bird Collisions with Power Lines: The State of the Art in 1994 (APLIC, 1996).”
- Placement of towers and lines will not be located significantly above existing transmission line towers and lines, topographic features, or tree lines to the maximum extent practicable.
 - Overhead lines that occur significantly above the above-mentioned features and that are located in highly utilized avian flight paths will be marked utilizing aerial marker spheres, swinging plates, spiral vibration dampers, bird flight diverters, avifauna spirals, or other diversion device as to be visible to birds and reduce avian collisions with lines.
- B-16a Prepare and implement a raven control plan.** SCE shall prepare a common raven control plan that identifies the purpose of conducting raven control, provides training in how to identify raven nests and how to determine whether a nest belongs to a raven or a raptor species, describes the seasonal limitations on disturbing nesting raptors species (excluding ravens), describes the procedure for obtaining a permit from the USFWS’s Division of Migratory Birds, and describes procedures for documenting the activities on an annual basis. SCE shall gain approval of the plan

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- from the USFWS's Division of Migratory Birds. SCE shall provide this raven control plan to all transmission line companies that conduct operations within the ROW.
- B-18a** **No Activities in Riparian Conservation Areas.** The final project design will include protective measures that prohibit construction activities on NFS lands in Riparian Conservation Areas in compliance with the Forest Plan. Examples of activities that will NOT be allowed include ground disturbance, adding potable water to these areas while implementing erosion control measures, and removing water from the waterways.

Visual Resources

- V-1a** **Reduce visibility of construction activities and equipment.** Substation construction sites and all staging and material and equipment storage areas, including storage sites for excavated materials shall be appropriately located away from areas of high public visibility. If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, construction sites and staging and storage areas shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Additionally, avoid construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use. This measure encompasses BLM permit requirements B-7.1 and B-7.2. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
- V-1b** **Reduce construction night lighting impacts.** SCE shall design and install all lighting at construction and storage yards and staging areas such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Construction Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to the start of construction or the ordering of any exterior lighting fixtures or components, whichever comes first. SCE shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:
- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary
 - All lighting shall be of minimum necessary brightness consistent with worker safety
 - High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.
- V-2a** **Reduce in-line views of land scars.** Construct access or spur roads at appropriate angles from the originating, primary travel facilities to minimize extended, in-line views of newly graded terrain. Contour grading should be used where possible to better blend graded surfaces with existing terrain. SCE shall submit final construction plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.

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- V-2b Reduce visual contrast from unnatural vegetation lines.** In those areas where views of land scars are unavoidable, the boundaries of disturbed areas should be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for on-going operation, maintenance, or access shall be returned to pre-construction conditions. This measure partially encompasses BLM permit requirement BLM B-6.9. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
- V-2c Reduce color contrast of land scars.** In those areas where views of land scars from sensitive public viewing locations are unavoidable, disturbed soils shall be treated with Eonite or similar treatments to reduce the visual contrast created by the lighter-colored disturbed soils with the darker vegetated surroundings. SCE will consult with the Authorized Officer on a site-by-site basis for the use of Eonite. This measure partially encompasses BLM permit requirement BLM B-6.4. SCE shall submit final construction and restoration plans demonstrating compliance with this measure to the BLM and CPUC for review and approval at least 60 days prior to the start of construction.
- V-3a Reduce visual contrast of towers and conductors.** The following design measures shall be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities:
- All new and replacement structures are to as closely as possible match the design of the existing structures with which they will be seen.
 - All new and replacement structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements.
 - All new and replacement structures are to match the heights of the existing DPV1 structures to the extent possible as dictated by variation in terrain.
 - All new and reconducted spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as Salome Highway, I-10, U.S. 95, Colorado River, SR 78, Dillon Road, SR 62, Whitewater Canyon Road, and San Timoteo Canyon Road.
 - All new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast.
 - To the extent feasible, no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for structure skylining.
- V-6a Reduce visual contrast associated with ancillary facilities.** SCE shall submit to BLM and CPUC a Surface Treatment Plan describing the application of colors and textures to all facility structures, buildings, walls, fences, and components comprising all ancillary facilities including substations/switchyards, series capacitor banks, and optical repeater stations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to BLM and CPUC for approval at least 90 days prior to (a) ordering the first structures that are to be color treated

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during manufacture, or (b) construction of any of the ancillary facility component, whichever comes first. If the BLM or CPUC notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include:

- Specification, and 11”x17” color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture
- A list of each major project structure, building, tower and/or pole, and fencing specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation)
- Two sets of brochures and/or color chips for each proposed color
- A detailed schedule for completion of the treatment
- A procedure to ensure proper treatment maintenance for the life of the project.

SCE shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated onsite, until SCE receives notification of approval of the Treatment Plan by the BLM and CPUC. Within 30 days following the start of commercial operation, SCE shall notify the BLM and CPUC that all buildings and structures are ready for inspection.

V-6c Reduce night lighting impacts. SCE shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. SCE shall submit a Lighting Mitigation Plan to the BLM and CPUC for review and approval at least 90 days prior to ordering any permanent exterior lighting fixtures or components. SCE shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the BLM and CPUC. The Plan shall include but is not necessarily limited to the following:

- Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources is shielded to prevent light trespass outside the project boundary
- All lighting shall be of minimum necessary brightness consistent with worker safety
- High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.

V-40a Reduce visual contrast of towers and conductors. The following design measures are to be applied to all new structures and conductors in order to reduce the degree of visual contrast caused by the new facilities: **(a)** all new structures are to as closely as possible match the design of the existing structures with which they will be seen; **(b)** all new structures are to be paired as closely as possible with the existing structure(s) in the corridor in order to avoid or reduce the number of off-setting (from existing structures) tower placements; **(c)** all new structures are to match the heights of the existing D-V1 structures to the extent possible as dictated by variation in terrain; **(d)** all new spans are to match existing conductor spans as closely as possible in order to avoid or reduce the occurrence of unnecessary visual complexity associated with asynchronous conductor spans, particularly at sensitive crossings such as SR

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62, I-10, SR 111, SR 243, SR 79, Gilman Springs Road, Ramona Expressway, Meniffee Road, and SR 74; **(e)** all new conductors are to be non-specular in design in order to reduce conductor visibility and visual contrast, and **(f)** no new access roads are to be constructed downhill from existing or proposed towers to reduce the potential for skylining. SCE shall provide to the CPUC, BLM, and Forest Service a Project Design Plan demonstrating implementation of this measure at least 90 days prior to the start of construction, and shall not commence construction until the Project Design Plan has been approved by the CPUC, BLM, and Forest Service.

Land Use

L-1a Prepare Construction Notification Plan. Forty-five days prior to construction, SCE shall prepare and submit a Construction Notification Plan to the CPUC and the BLM for approval. The Plan shall identify the procedures to ensure that SCE will inform property and business owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include template copies of public notices and advertisements (i.e., formatted text). To ensure effective notification of construction activities, the plan shall address at a minimum the following components:

- **Public notice mailer.** Fifteen days prior to construction, a public notice mailer shall be prepared. The notice shall identify construction activities that would restrict, block, or require a detour to access existing residential properties, retail and commercial businesses, wilderness and recreation facilities, and public facilities (e.g., schools and memorial parks). The notice shall state the type of construction activities that will be conducted, and the location and duration of construction. SCE shall mail the notice to all residents or property owners within 300 feet of the right-of-way and to specific public agencies with facilities that could be impacted by construction. If construction delays of more than seven days occur, an additional notice shall be prepared and distributed.
- **Newspaper advertisements.** Fifteen days prior to construction, within a route segment, one round of newspaper advertisements shall be placed in local newspapers and bulletins. The advertisement shall state when and where construction will occur and provide information on the public liaison person and hotline identified below. If construction is delayed as noted above, an additional round of newspaper ads shall be placed to discuss the status and schedule of construction.
- **Public venue notices.** Thirty days prior to construction, notice of construction shall be posted at public venues such as trail crossings, rest stops, desert centers, resource management offices (e.g., Bureau of Land Management field offices, San Bernardino National Forest Ranger Station), and other public venues to inform residents and visitors to the purpose and schedule of construction activities. For public trail closures, SCE shall post information on the trail detour at applicable resource management offices and post the notice within two miles north and south of the detour. For recreation facilities, the notice shall be posted along the access routes to known recreational destinations that would be restricted, blocked, or detoured and shall provide information on alternative recreation areas that may be used during the closure of these facilities.
- **Public liaison person and toll-free information hotline.** SCE shall identify and provide a public liaison person before and during construction to respond to concerns of neigh-

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boring property owners about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SCE shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.

- L-1b** **Coordinate with the Central Arizona Project regarding canal crossings.** Prior to construction, SCE shall coordinate with the Central Arizona Water Conservation District and the BLM Phoenix Field Office, and shall obtain a license from the Central Arizona Water Conservation District for the areas where the project crosses the Central Arizona Project Canal. SCE shall submit the approved license to the CPUC and the BLM 30 days prior to the start of construction activities. The license or license attachments must identify specific locations where the crossings are permitted and any conditions of approval that have been agreed to by SCE, the Central Arizona Water Conservation District, and the BLM Phoenix Field Office.
- L-1c** **Provide proof of resolution of land acquisition issues for crossing of Agua Caliente Band of Cahuilla Indians tribal lands.** SCE shall negotiate in good faith to reach a mutually acceptable agreement with the allottee. If an agreement is reached, SCE shall consult and coordinate with the Planning Department of the Agua Caliente to provide the information and/or fees requested by the Planning Department regarding land use matters. If SCE and the allottee reach an agreement then SCE shall notify the Planning Department of the Agua Caliente, and if SCE and the Planning Department agree on the legal requirements, including appropriate waivers, SCE shall notify the BLM and the CPUC of the agreement; however if SCE and the Planning department are unable to reach an agreement, SCE shall notify the CPUC of the inability to reach agreement and the CPUC may hold a hearing within thirty days of notification. SCE reserves the right to institute eminent domain proceedings. SCE believes that a conditional use permit is not required.
- L-1d** **Coordinate with affected business owners.** Where private parking lots serving businesses would be blocked or partially blocked during construction, SCE shall either make prior arrangements with the business owner(s) to provide alternative parking within a reasonable walking distance (i.e., no more than 1,000 feet), or shall coordinate with affected business owners to arrange the construction schedule to ensure that the functions of the business(es) are not disrupted. Thirty days prior to construction, SCE shall submit documentation to the CPUC and the BLM that outlines the course of action that was taken to reduce impacts to businesses near construction areas.

The following measure applies only to the West of Devers portion of the Proposed Project:

- L-1e** **Coordinate construction schedule with public and community facilities.** SCE shall coordinate with the public and community facilities and services listed below regarding the construction schedule and duration in order to minimize impacts to these land uses. The purpose of this measure is to work with sensitive land uses that would be impacted by construction and to identify construction times/periods that would have the least impact to peak use of these public and community facilities. This coordination could result in limiting or avoiding construction during school sessions, identifying hauling routes that do not conflict with school commute routes, or working with the memorial parks to address funeral procession routes and noise sensitivities. Thirty days prior to construction, SCE shall document its coordination efforts

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including contact persons, information provided, and comments received, and submit this documentation to the CPUC and BLM.

- Schools near the project route: Beaumont Middle School and High School, Calvary Christian School, Chavez Elementary School, Terrace View Elementary School, public elementary school on East Canyon Vista Drive
- San Gorgonio Memorial Park
- Desert Lawn Memorial Park
- Banning Municipal Airport
- Grandview Baptist Church

Wilderness and Recreation

WR-1a Coordinate construction schedule and activities with the authorized officer for the recreation area. No less than 40 days prior to construction, SCE shall coordinate construction activities and the project construction schedule with the authorized officer of the recreation areas listed below. SCE shall schedule construction activities to avoid heavy recreational use periods, including major holidays, in coordination with, and at the discretion of the authorized officer. SCE shall locate construction equipment to avoid temporary preclusion of recreation areas per the recommendations of the authorized officer. SCE shall also prepare a public notice of construction activities consistent with Mitigation Measure L-1a (Prepare Construction Notification Plan). SCE shall document its coordination efforts with the authorized officer, and provide this documentation to the CPUC and the BLM 30 days prior to construction.

WR-2a Coordinate with USFWS to improve impacted areas within Kofa National Wildlife Refuge. SCE shall coordinate with the USFWS to improve impacted areas within the Kofa National Wildlife Refuge (NWR). The implementation of improvements would be conducted at the discretion of the authorized officer for the Kofa NWR, and may include the acquisition of private land in-holdings from willing sellers within the refuge boundaries, and the rehabilitation of abandoned mine sites and old roads within the refuge. SCE shall document its coordination with the authorized officer of the Kofa NWR, and must demonstrate that negotiations and subsequent improvements have been conducted to the satisfaction of the USFWS. Documentation shall be submitted to the CPUC and the BLM at least 30 days prior to operation of the project.

WR-3a Coordinate tower and road locations with the authorized officer for the recreation area. Where the proposed route crosses the recreation areas listed below, SCE shall coordinate with the authorized officer to determine specific tower site and spur road locations in order to minimize impacts to recreational resources. This coordination shall occur no less than 30 days prior to the start of construction. SCE shall document its coordination with the authorized officer and shall submit this documentation to the CPUC and the BLM prior to initiating project construction.

WR-1b Provide a temporary detour for Pacific Crest National Scenic Trail users. No less than 40 days prior to construction, SCE shall coordinate with the USDA Forest Service to establish a temporary detour of the trail to avoid hazardous construction areas. SCE shall prepare a public notice of the temporary trail closure and information on the trail detour consistent with Mitigation Measure L-1a (Prepare Construction Notification Plan). SCE shall document its

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coordination efforts with the USDA Forest Service and submit this documentation to the CPUC and the BLM 30 days prior to construction.

The following measure applies only to the West of Devers portion of the Proposed Project:

WR-1c **Coordinate with local agencies to identify alternative recreation areas.** SCE shall coordinate with the local parks and recreation departments regarding construction activities at the park and recreation facilities listed below, in order to identify alternative recreation sites that may be used by the public. SCE shall post a public notice at recreation facilities to be closed or limited during construction consistent with Mitigation Measure L-1a (Prepare Construction Notification Plan). SCE shall document its coordination with the parks and recreation departments and shall submit this documentation to the CPUC and the BLM 30 days prior to initiating project construction.

- Noble Creek Park
- Hulda Crooks Park
- Oak Valley Golf Club
- City of Loma Linda riding and hiking trail system

Agriculture

AG-1a **Establish agreement and coordinate construction activities with agricultural landowners.** Sixty (60) days prior to the start of project construction, Southern California Edison (SCE) shall secure a signed agreement with property owners of Farmland (Prime Farmland, Farmland of Statewide Importance, Unique Farmland) and Williamson Act lands that will be used for construction and operation of the project, access and spur roads, staging areas, and other project-related activities. The purpose of this agreement will be to set forth the use of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Williamson Act lands during construction in order to: (1) schedule proposed construction activities at a location and time when damage to agricultural operations would be minimized, and (2) ensure that any areas damaged or disturbed by construction are restored to a condition mutually agreed upon by the landowner and SCE.

SCE shall coordinate with the agricultural landowners in the affected areas where Farmland or Williamson Act land will be temporarily disturbed in order to determine when and where construction should occur in order to minimize damage to agricultural operations. This includes avoiding construction during peak planting, growing, and harvest seasons. If damage or destruction does occur, SCE shall perform restoration activities on the disturbed area in order to return the area to a pre-determined condition or the pre-construction condition, whichever option is agreed upon by the landowner and SCE. This could include activities such as soil preparation, regrading, and reseeded. This measure applies to agricultural landowners with land that is impacted by the Proposed Project. SCE shall provide proof of the continued use of Farmland and/or Williamson Act lands through the submittal of a signed agreement between an individual property owner and SCE. The signed agreements shall be submitted to the CPUC and BLM for review and approval prior to the start of construction.

AG-4a **Locate transmission towers and pulling/splicing stations to avoid agricultural operations.** SCE shall site transmission towers and pulling/splicing stations in locations that minimize

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impacts to active agricultural operations. Specifically, SCE shall comply with the following measures when siting transmission towers and splicing/pulling stations within areas where active cultivated farmland would be removed through the presence of structures:

- SCE shall avoid orchards, vineyards, row crops, and furrow-irrigated crops where towers would interfere with irrigation and harvest activities.
- SCE shall avoid irrigation canals and ditches.
- SCE shall align towers adjacent to field boundaries and parallel to rows (if located in row crops), and shall avoid diagonal orientations and angular alignments within agricultural land.
- SCE shall match tower spans with existing DPV1 towers within agricultural land.
- SCE shall construct towers with heights and spacing to minimize safety hazards to aerial applicators flying in the Palo Verde Valley (CA) and other agricultural areas;
- SCE shall consult with the Palo Verde Irrigation District (PVID) regarding tower placement to minimize disruption to PVID facilities;

SCE shall document and provide proof of compliance with the above listed items 90 days prior to the start of Proposed Project construction. This documentation shall be submitted to the CPUC and the BLM for review and approval prior to the start of construction, and reviewed with affected landowners during coordination presented in Mitigation Measure AG-1a (Establish agreement and coordinate construction activities with agricultural landowners).

Cultural and Paleontological Resources

C-1b Avoid and protect potentially significant resources. On the basis of preliminary National Register of Historic Places (NRHP) eligibility assessments (Mitigation Measure C-1a) the BLM and CPUC may require the relocation of the line, ancillary facilities, or temporary facilities or work areas, if any, where relocation would avoid or reduce damage to cultural resource values. Where operationally feasible, potentially NRHP-eligible resources shall be protected from direct project impacts by project redesign.

Where the BLM and CPUC decide that potentially NRHP-eligible cultural resources cannot be protected from direct impacts by project redesign, the Applicant shall undertake additional studies to evaluate the resources' NRHP-eligibility and to recommend further mitigative treatment. The nature and extent of this evaluation shall be determined by the BLM in consultation with the CPUC and the appropriate State Historic Preservation Officer (SHPO) and shall be based upon final project engineering specifications. Evaluations will be based on surface remains, subsurface testing, archival and ethnographic resources, and in the framework of the historic context and important research questions of the project area. Results of those evaluation studies and recommendations for mitigation of project effects shall be incorporated into a Historic Properties Treatment Plan consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).

All potentially NRHP-eligible resources (as determined by the BLM and CPUC) that will not be affected by direct impacts, but are within 50 feet of direct impact areas will be designated as Environmentally Sensitive Areas (ESAs). Protective fencing, or other markers, at the BLM's

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discretion, shall be erected and maintained to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. Construction personnel and equipment shall be instructed on how to avoid ESAs. ESAs shall not be identified specifically as cultural resources. A monitoring program shall be developed as part of the Historic Properties Treatment Plan and implemented by the Applicant to ensure the effectiveness of ESAs.

C-1c Develop and implement Historic Properties Treatment Plan. Upon approval of the inventory report and the National Register of Historic Places (NRHP)-eligibility evaluations by the BLM and CPUC, consistent with Mitigation Measures C-1a (Inventory and evaluate cultural resources in Final APE) and C-1b (Avoid and protect potentially significant resources), the Applicant shall prepare and submit for approval a Historic Properties Treatment Plan (HPTP) for NRHP-eligible cultural resources to mitigate or avoid identified impacts. Treatment of cultural resources shall follow the procedures established by the Advisory Council on Historic Preservation for compliance with Section 106 of the National Historic Preservation Act and other appropriate State and local regulations. Avoidance, recordation, and data recovery will be used as mitigation alternatives. The HPTP shall be submitted to the BLM and CPUC for review and approval.

As part of the HPTP, the Applicant shall prepare a research design and a scope of work for evaluation of cultural resources and for data recovery or additional treatment of NRHP-eligible sites that cannot be avoided. Data recovery on most resources would consist of sample excavation and/or surface artifact collection, and site documentation. A possible exception would be a site where burials, cremations, or sacred features are discovered that cannot be avoided.

The HPTP shall define and map all known NRHP-eligible properties in or within 50 feet of all project APEs and shall identify the cultural values that contribute to their NRHP-eligibility. A cultural resources protection plan shall be included that details how NRHP-eligible properties will be avoided and protected during construction. Measures shall include, at a minimum, designation and marking of Environmentally Sensitive Areas (ESAs), archaeological monitoring, personnel training, and effectiveness reporting. The plan shall detail: what measures will be used; how, when, and where they will be implemented; and how protective measures and enforcement will be coordinated with construction personnel.

The HPTP shall also define any additional areas that are considered to be of high-sensitivity for discovery of buried NRHP-eligible cultural resources, including burials, cremations, or sacred features. The HPTP shall detail provisions for monitoring construction in these high-sensitivity areas. It shall also detail procedures for halting construction, making appropriate notifications to agencies, officials, and Native Americans, and assessing NRHP-eligibility in the event that unknown cultural resources are discovered during construction. For all unanticipated cultural resource discoveries, the HPTP shall detail the methods, the consultation procedures, and the timelines for assessing NRHP-eligibility, formulating a mitigation plan, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries shall be approved by the BLM and CPUC, appropriate local governments, appropriate Native Americans, and the appropriate State Historic Preservation Officer prior to implementation.

The HPTP shall include provisions for analysis of data in a regional context, reporting of results within one year of completion of field studies, curation of artifacts (except from private land)

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- and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by BLM, and dissemination of reports to local and State repositories, libraries, and interested professionals. The BLM will retain ownership of artifacts collected from BLM managed lands. The Applicant shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. The HPTP shall specify that archaeologists and other discipline specialists conducting the studies meet the Secretary of the Interior's Standards (per 36 CFR 61).
- C-1d Conduct data recovery to reduce adverse effects.** If National Register of Historic Places (NRHP)-eligible resources, as determined by the BLM and SHPO, cannot be protected from direct impacts of the Proposed Project, data-recovery investigations shall be conducted by the Applicant to reduce adverse effects to the characteristics of each property that contribute to its NRHP-eligibility. For sites eligible under Criterion d, significant data would be recovered through excavation and analysis. For properties eligible under Criteria a, b, or c, data recovery may include historical documentation, photography, collection of oral histories, architectural or engineering documentation, preparation of a scholarly work, or some form of public awareness or interpretation. Data gathered during the evaluation phase studies and the research design element of the Historic Properties Treatment Plan (HPTP) shall guide plans and data thresholds for data recovery; treatment will be based on the resource's research potential beyond that realized during resource recordation and evaluation studies. If data recovery is necessary, sampling for data-recovery excavations will follow standard statistical sampling methods, but sampling will be confined, as much as possible, to the direct impact area. Data-recovery methods, sample sizes, and procedures shall be detailed in the HPTP consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan) and implemented by the Applicant only after approval by the BLM and CPUC. Following any field investigations required for data recovery, the Applicant shall document the field studies and findings, including an assessment of whether adequate data were recovered to reduce adverse project effects, in a brief field closure report. The field closure report shall be submitted to the BLM and CPUC for their review and approval, as well as to appropriate State repositories and local governments. Construction work within 100 feet of cultural resources that require data-recovery fieldwork shall not begin until authorized by the BLM or CPUC, as appropriate.
- C-1e Monitor construction.** The Applicant shall implement archaeological monitoring by a professional archaeologist during subsurface construction disturbance at all locations identified in the Historic Properties Treatment Plan (HPTP). Full-time monitoring shall occur when ground-disturbing activities take place at all archaeological High-Sensitivity Areas described above and at all cultural resource Environmentally Sensitive Areas (ESAs). These locations and their protection boundaries shall be defined and mapped in the HPTP. Intermittent monitoring may occur in areas of moderate archaeological sensitivity at the discretion of the BLM and CPUC. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historical and prehistoric resources that could be encountered within the project, and under direct supervision of a principal archaeologist. The qualifications of the principal archaeologist and archaeological monitors shall be approved by the BLM and CPUC. A Native American monitor may be required at culturally sensitive locations specified by the BLM following government-to-government consultation with Native American tribes. The monitoring plan in the HPTP shall indicate the locations where Native American monitors will be required and shall specify the tribal affiliation of the required Native American monitor for each location. The Applicant shall retain and schedule any required Native American monitors.

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Compliance with and effectiveness of the cultural resources monitoring plan shall be documented by the Applicant in a monthly report to be submitted to the BLM and CPUC, and, on San Bernardino National Forest, to the USFS, and on Agua Caliente land to the THPO, for the duration of project construction. In the event that cultural resources are not properly protected by ESAs, all project work in the immediate vicinity shall be diverted by the archaeological monitor until authorization to resume work has been granted by the BLM and CPUC. The Applicant shall notify the BLM of any damage to cultural resource ESAs. The Applicant shall consult with the BLM and CPUC to mitigate damages and to increase effectiveness of ESAs. At the discretion of the BLM and CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.

C-1f Train construction personnel. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources.
- The Applicant shall provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources.
- Upon discovery of potential buried cultural materials by archaeologists or construction personnel, or damage to an ESA, work in the immediate area of the find shall be diverted and the Applicant's archaeologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's archaeologist will consult with the BLM or CPUC, as appropriate, to make the necessary plans for evaluation and treatment of the find(s) or mitigation of adverse effects to ESAs.

C-1g Minimize impacts at Harquahala Peak. SCE shall consult with BLM's Phoenix Area Office to define and implement the most effective actions to reduce impacts of the proposed

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telecommunications tower at Harquahala Peak on cultural, visual, and recreational resources. Options for consideration shall include the following:

- SCE shall work with BLM to evaluate and analyze different locations for the communications facility, and shall document each site as to its adequacy for SCE's needs. If a different site (or sites) appears to be feasible and acceptable to BLM, SCE shall complete biological and cultural resources surveys and provide reports to BLM.
- SCE shall design and finish the tower for the proposed new facility to emulate the existing facilities. In addition, the location of the proposed new tower shall be relocated to the place determined by BLM to minimize effects on the interpretive site.
- SCE shall provide visitor facilities or enhanced historic interpretive information in order to better convey to the public the scientific contributions that the Observatory has made to history, and which make it worthy of NRHP listing under Criterion a.
- SCE shall consult with CAP and BLM to develop a co-located communications facility requiring only one tower to serve both parties.
- Based on consultation with BLM, SCE shall relocate the laydown area to a site that minimizes effects on visitors to Harquahala Peak.

After consultation with BLM on the options defined above, SCE shall submit a revised description of the Harquahala Peak facilities and laydown area along with detailed construction plans for review and approval by BLM's Phoenix Area Office at least 60 days prior to the start of construction.

C-2a Consult agencies and Native Americans. If human remains are discovered during construction, all work will be diverted from the area of the discovery and the BLM authorized officer will be informed immediately. The Applicant shall follow all State and federal laws, statutes, and regulations that govern the treatment of human remains. The Applicant shall assist and support the BLM in all required government-to-government consultations with Native Americans and appropriate agencies and commissions, as requested by the BLM. The Applicant shall comply with and implement all required actions and studies that result from such consultations, as directed by the BLM.

C-3a Complete consultation with Native American and other Traditional Groups. The Applicant shall provide assistance to the BLM, as requested by the BLM, to complete required government-to-government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994 and Section 106 of the National Historic Preservation Act) and other Traditional Groups to assess the impact of the Proposed Project on Traditional Cultural Properties or other resources of Native American concern. As directed by the BLM, the Applicant shall undertake required treatments, studies, or other actions that result from such consultation. Written documentation of the completion of all pre-construction actions shall be submitted by the Applicant and approved by the BLM at least 30 days before commencement of construction activities. Actions that are required during or after construction shall be defined, detailed, and scheduled in the Historic Properties Treatment Plan and implemented by the Applicant, consistent with Mitigation Measure C-1c (Develop and implement Historic Properties Treatment Plan).

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- C-4a** **Inventory paleontological resources in Final APE.** Prior to construction and all other surface-disturbing activities, the Applicant shall have conducted and submitted for approval an inventory of potentially significant paleontological resources, based on field inspection of areas of high or undetermined paleontological sensitivity that will be affected by the project as determined by the BLM and CPUC. As part of the inventory report, the Applicant shall evaluate and refine the paleontological sensitivity modeling of sediments that will be affected.
- C-4b** **Develop Paleontological Monitoring and Treatment Plan.** The Applicant shall, upon approval of the paleontological inventory report by the BLM and CPUC, prepare and submit for approval a plan to mitigate identified impacts. The Paleontological Monitoring and Treatment Plan shall identify construction impact areas of high sensitivity for encountering significant resources and the depths at which those resources are likely to be discovered. The Plan shall outline a coordination strategy to ensure that all construction disturbance in high sensitivity sediments will be monitored full-time by qualified professionals. Sediments of undetermined sensitivity will be spot-checked. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, post-excavation preparation and analysis of specimens, final curation of specimens at a federally recognized, accredited facility, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the Applicant on public land shall be carried out by qualified professionals on a currently valid Paleontological Collecting Permit for the appropriate State. Notices to proceed will be issued by the BLM and CPUC following approval of the Paleontological Monitoring and Treatment Plan.
- C-4c** **Monitor construction for paleontology.** Based on the paleontological sensitivity assessment and Monitoring and Treatment Plan consistent with Mitigation Measure C-4b (Develop Paleontological Monitoring and Treatment Plan), the Applicant shall conduct full-time construction monitoring in areas where and when sediments of high paleontological sensitivity will be disturbed. Construction activities shall be diverted when data recovery of significant fossils is warranted.
- C-4d** **Conduct paleontological data recovery.** If avoidance of significant paleontological resources is not feasible or appropriate, treatment (including recovery, specimen preparation, data analysis, curation, and reporting) shall be carried out by the Applicant, in accordance with the approved Treatment Plan per Mitigation Measure C-4b (Develop Paleontological Monitoring and Treatment Plan).
- C-4e** **Train construction personnel.** All construction personnel shall be trained regarding the recognition of possible buried paleontological resources and protection of all paleontological resources during construction, prior to the initiation of construction or ground-disturbing activities. The Applicant shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas (ESAs) must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of federally protected fossils on or off the right-of-way by the Applicant, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the

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issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction:

- All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried paleontological deposits, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.
- The Applicant shall provide a background briefing for supervisory construction personnel describing the potential for exposing paleontological resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.
- Upon discovery of potential buried paleontological materials by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and the Applicant's paleontologist notified. Once the find has been inspected and a preliminary assessment made, the Applicant's paleontologist will notify the BLM and CPUC and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure C-4b (Develop Paleontological Monitoring and Treatment Plan).

C-5a Protect and monitor NRHP-eligible properties. The Applicant shall design and implement a long-term plan to protect National Register of Historic Places (NRHP)-eligible sites from direct impacts of project operation and maintenance and from indirect impacts, such as erosion that result from the presence of the project. The plan shall be developed in consultation with the BLM to design measures that will be effective against project maintenance impacts and project-related vehicular impacts. The plan shall also include protective measures for NRHP-eligible properties within the DPV corridor that will experience operational and access impacts as a result of the Proposed Project. The proposed measures may include restrictive fencing or gates, permanent access road closures, signage, stabilization of erosion, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting NRHP-eligible properties. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to NRHP-eligible properties. The plan shall be submitted to the BLM and CPUC for review and approval at least 30 days prior to project operation.

Monitoring of selected sites shall be conducted annually by a professional archaeologist for a period of five years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photomonitoring stations and written observations. A monitoring report shall be submitted to the BLM and CPUC within one month following the annual resource monitoring. The report shall indicate any properties that have been impacted by erosion or vehicle or maintenance impacts. For properties that have been impacted, the Applicant shall provide recommendations for mitigating impacts and for improving protective measures. After the fifth year of resource monitoring, the BLM or CPUC, as appropriate, will evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the BLM or CPUC may require that the Applicant revise or refine the protective measures, or alter the monitoring protocol or schedule. If the BLM does not authorize alteration of the monitoring protocol or schedule, those shall remain in effect for the duration of project operation.

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If the annual monitoring program identifies adverse effects to National Register of Historic Places (NRHP)—eligible properties from operation or long-term presence of the project, or if, at any time, the Applicant, BLM or CPUC become aware of such adverse effects, the Applicant shall notify the BLM and CPUC immediately and implement mitigation for adverse changes, as directed by the BLM and CPUC. At the discretion of the BLM and CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.

Noise

- N-1a Implement best management practices for construction noise.** SCE shall employ the following noise-suppression techniques to minimize the impact of temporary construction noise and avoid possible violations of local rules, standards, and ordinances:
- Construction noise shall be confined to daytime, weekday hours (e.g., 7:00 a.m. to 6:00 p.m.) or an alternative schedule established by the local jurisdiction;
 - Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer;
 - Construction traffic shall be routed away from residences and schools, where feasible;
 - Unnecessary construction vehicle use and idling time shall be minimized to the extent feasible. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. A “common sense” approach to vehicle use shall be applied; if a vehicle is not required for use immediately or continuously for construction activities, its engine should be shut off. (Note: certain equipment, such as large diesel-powered vehicles, require extended idling for warm-up and repetitive construction tasks.)

Transportation & Traffic

- T-7a Repair roadways damaged by construction activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such features are damaged by the project’s construction activities, as determined by the CPUC Environmental Monitor or the affected public agency, SCE shall coordinate repairs with the affected public agencies and ensure that any such damage is repaired to the pre-construction condition within 60 days from the end of all construction within each affected county.
- T-13a Coordinate helicopter operations with Kofa NWR personnel.** SCE shall develop a plan defining coordination with Kofa NWR personnel to ensure that no conflicts occur between construction helicopter operations and NWR rescue helicopter operations. The plan shall be submitted to the Kofa NWR at least 60 days before the start of construction for review and approval.
- T-14a Consult with Kofa NWR personnel.** SCE shall provide adequate signage at both ends of the utility road segment and work with Kofa NWR law enforcement personnel to prohibit public use of the road. SCE shall consult with Kofa NWR law enforcement personnel at least 60

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days prior to the start of construction to develop appropriate measures to prevent inadvertent use of this road segment.

Public Health and Safety

P-1a Develop Hazardous Substance Control and Emergency Response Plan. A Hazardous Substance Control and Emergency Response Plan shall be prepared for the project, and a copy shall be kept on site (or in vehicles) during construction and maintenance of the project. SCE shall document compliance by submitting the plan to the CPUC or BLM or USFWS, as appropriate, for review and approval at least 60 days before the start of construction.

P-1b Conduct environmental training and monitoring program. An environmental training program shall be established to communicate environmental concerns and appropriate work practices, including spill prevention, emergency response measures, and proper Best Management Practice (BMP) implementation, to all field personnel prior to the start of construction. The training program shall emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of potentially hazardous substances) and shall include a review of all site-specific plans, including but not limited to, the project's Storm Water Pollution Prevention Plan and the Hazardous Substances Control and Emergency Response Plan. SCE shall document compliance by (a) submitting to the CPUC or BLM or USFWS, as appropriate, for review and approval an outline of the proposed Environmental Training and Monitoring Program, and (b) maintaining for monitor review a list of names of all construction personnel who have completed the training program.

Best Management Practices, as identified in the project Storm Water Pollution Prevention Plan and the Hazardous Substances Control and Emergency Response Plan, shall be implemented during the construction of the project to minimize the risk of an accidental release and provide the necessary information for emergency response.

P-1c Ensure proper disposal of construction waste. All non-hazardous construction and demolition waste, including trash and litter, garbage, and other solid waste shall be disposed of properly. Petroleum products and other potentially hazardous materials shall be removed to a hazardous waste facility permitted or otherwise authorized to treat, store, or dispose of such materials.

P-1d Maintain emergency spill supplies and equipment. Hazardous material spill kits shall be maintained at all construction sites for small spills. This shall include oil-absorbent material, tarps, and storage drums to be used to contain and control any minor releases. Emergency spill supplies and equipment shall be kept adjacent to all work areas and staging areas, and shall be clearly marked. Detailed information for responding to accidental spills and for handling any resulting hazardous materials shall be provided in the project's Hazardous Substances Control and Emergency Response Plan.

P-2a Identify pesticide/herbicide contamination. Soil samples shall be collected in construction areas where the land has historically or is currently being farmed to identify the possibility of and to delineate the extent of pesticide and/or herbicide contamination. Excavated materials containing elevated levels of pesticide or herbicide will require special handling and disposal procedures. Standard dust suppression procedures (as defined in Mitigation Measure AQ-1a)

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shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the states of Arizona or California (as appropriate) and the appropriate county shall be contacted to provide oversight regarding the handling, treatment, and/or disposal options.

- P-3a** **Observe exposed soil for evidence of contamination.** During grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials. Additionally, in the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the CPUC or BLM, describing proposed actions. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CPUC or BLM.
- P-4a** **Prepare Spill Prevention, Countermeasure, and Control Plans.** To minimize, avoid, and/or clean up unforeseen spill of hazardous materials during operation of the proposed facilities, SCE shall update or prepare, if necessary, the Spill Prevention, Countermeasure, and Control plan for each substation, series capacitors, and the switchyard. SCE shall document compliance by providing a copy of the Spill Prevention, Control, and Countermeasures plans to the CPUC or BLM or USFWS, as appropriate, for review and approval at least 60 days before the start of operation.
- PS-1a** **Limit the conductor surface electric gradient.** As part of the design and construction process for the Proposed Project, the Applicant shall limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.
- PS-1b** **Document and resolve electronic interference complaints.** After energizing the transmission line, SCE shall respond to and document all radio/television/equipment interference complaints received and the responsive action taken. These records shall be made available to the CPUC for review upon request. All unresolved disputes shall be referred by SCE to the CPUC for resolution.
- PS-1c** **Coordinate with Kofa NWR to prevent radio interference.** Prior to construction, SCE shall coordinate with Kofa National Wildlife Refuge to determine any additional design, planning, or shielding measures that are necessary to prevent radio interference within the Refuge.
- PS-2a** **Implement grounding measures.** As part of the siting and construction process for the Proposed Project, SCE shall identify objects (such as fences, metal buildings, and pipelines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with SCE's standards. The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.

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Air Quality

- AQ-1a Develop and Implement a Fugitive Dust Emission Control Plan.** SCE shall develop and implement a Fugitive Dust Emission Control Plan (FDECP) for construction work. Measures to be incorporated into the plan include, but are not limited to the APMs (A-1 and A-5 through A-7) and the following, which also incorporate and revise the requirements of APMs A-2 through A-4 to make them definitive and enforceable:
- CARB certified non-toxic soil binders shall be applied to all active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction (as allowed by responsible agencies such as the BLM or USFWS) in amounts meeting manufacturer's recommendations to meet the CARB certification fugitive dust reduction efficiency of 84 percent.
 - Water the disturbed areas of the active construction sites, where CARB certified soil binders have not been applied, at least three times per day.
 - Enclose, cover, water three times daily, or apply non-toxic soil binders according to manufacturer's specifications to exposed piles with a five percent or greater silt content.
 - Install wheel washers/cleaners or wash the wheels of trucks and other heavy equipment where vehicles exit the site or unpaved access roads and sweep paved streets daily with water sweepers if visible soil material from the construction sites or unpaved access roads are carried onto adjacent public streets.
 - Establish a vegetative ground cover or allow natural revegetation to occur on temporarily disturbed areas following the completion of construction (in compliance with biological resources impact mitigation measures), or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites within 21 days after active construction operations have ceased.
 - Increase the frequency of watering, or implement other additional fugitive dust mitigation measures, to all disturbed fugitive dust emission sources when wind speeds (as instantaneous wind gusts) exceed 25 miles per hour (mph).
 - Travel route planning will be completed to identify required travel routes to minimize unpaved road travel to each construction site to the extent feasible.
- AQ-1b Use ultra low-sulfur diesel fuel.** CARB-certified ultra low-sulfur diesel (ULSD) fuel containing 15 ppm sulfur or less shall be used in all diesel-powered construction equipment.
- AQ-1c Restrict engine idling.** Diesel engine idle time shall be restricted to no more than a 10 minutes duration.
- AQ-1d Use lower emitting offroad diesel-fueled equipment.** All offroad construction diesel engines not registered under CARB's Statewide Portable Equipment Registration Program, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, section 2423(b)(1) unless that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any offroad engine larger than 100 hp, that engine shall be equipped with a Tier 1 engine. In the event a Tier 1 engine is

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- not available for any offroad engine larger than 100 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers that the use of such devices is not practical for specific engine types. Equipment properly registered under and in compliance with CARB's Statewide Portable Equipment Registration Program are considered to comply with this mitigation measure.
- AQ-1e Use onroad vehicles that meet California onroad standards.** All onroad construction vehicles working within California shall meet all applicable California onroad emission standards and shall be licensed in the State of California. This does not apply to construction worker personal vehicles.
- AQ-1f Use lower emitting offroad gasoline-fueled equipment.** All offroad stationary and portable gasoline powered equipment shall have EPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in effect two years prior to the initiating project construction.
- AQ-1g Reduce helicopter use during construction.** Helicopter use in California shall be limited to that necessary for conductor installation, using helicopters of the smallest practical size; and helicopters shall not be used for delivering supplies or personnel within California federal or State ozone nonattainment areas except as specifically excepted by the CPUC due to limitations in road access and/or to reduce other adverse environmental impacts associated with road construction/travel (such as to biological resources or cultural resources).
- AQ-1h Schedule deliveries outside of peak hours.** For marshalling and construction yards west of the eastern border of the City of Indio, all material deliveries to the yards and from the yards to the construction sites shall be scheduled to occur outside of peak "rush hour" traffic hours (7:00 to 10:00 a.m. and 4:00 to 7:00 pm) to the extent feasible, and other truck trips during peak traffic hours shall be minimized to the extent feasible.
- AQ-1i Obtain NOx emission offsets.** SCE shall obtain NOx emission reduction credits or offsets in sufficient quantities to offset construction emissions of NOx that exceed the South Coast Air Basin ozone nonattainment area federal General Conformity Rule applicability threshold as determined in the General Conformity analysis for the project. The emission offset method shall comply with SCAQMD rules and regulations, and offsets shall be obtained by SCE prior to construction.

Hydrology and Water Resources

- H-6a Design diversion dikes or other site remediations to avoid damage to adjacent property.** Where diversion dikes are required to protect towers or other project structures from flooding or erosion, these dikes shall be designed to avoid increasing the risk of erosion or flooding onto adjacent areas where life or property could be threatened. Diversion dike designs shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to construction.
- H-1a Restore disturbed soil with re-vegetation or construction of permanent erosion-control structures.** Soil disturbance at towers and access roads shall be the minimum necessary and designed to prevent long-term erosion through revegetation or construction of permanent erosion

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control structures according to plans to be reviewed and approved by the U.S. Forest Service. Copies of the final approved plans shall be submitted to the CPUC/BLM for their files.

Geology, Mineral Resources, and Soils

- G-1a Protect desert pavement.** Grading for new access roads or work areas in areas covered by desert pavement shall be avoided if possible. If avoidance of these areas is not possible, the desert pavement surface shall be protected from damage or disturbance from construction vehicles by use of temporary mats on the surface. A plan for identification and avoidance or protection of sensitive desert pavement shall be prepared and submitted to the CPUC, BLM, and USFWS for review and approval at least 60 days prior to start of construction.
- G-2a Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design.** Design-level geotechnical studies shall be performed by the Applicant to identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Study results and proposed solutions shall be provided to the CPUC and BLM, as appropriate, for review and approval at least 60 days before construction.
- G-3a Conduct geotechnical surveys for landslides.** The Applicant shall perform design-level geotechnical surveys in areas crossing and adjacent to hills and mountains. These surveys will acquire data that will allow identification of specific areas with the potential for unstable slopes, landslides, earth flows, and debris flows along the approved transmission line route and in other areas of ground disturbance, such as grading for access and spur roads. The investigations shall include an evaluation of subsurface conditions, identification of potential landslide hazards, and provide information for development of excavation plans and procedures. Where landslide hazard areas cannot be avoided, appropriate engineering design and construction measures shall be incorporated into the project designs to minimize potential for damage to project facilities. A report documenting these surveys and design measures to protect structures shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction.
- G-5a Design project facilities to avoid impact from ground failure.** Since seismically induced ground failure has the potential to damage or destroy project components, the Applicant shall complete design-level geotechnical investigations at tower locations in areas with potential liquefaction-related impacts. These studies shall specifically assess the potential for liquefaction and lateral spreading hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures shall be incorporated into the project designs. A report documenting results of the geotechnical surveys shall be submitted to the CPUC and BLM for review and approval at least 60 days before construction.

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- G-6a** **Coordinate with quarry operations.** Operations and management personnel for the Indio Pit quarry shall be consulted regarding locations of active mining and for coordination of construction activities in and through those areas. A plan to avoid or minimize interference with mining operations shall be prepared in conjunction with mine/quarry operators prior to construction. SCE shall document compliance with this measure prior to the start of construction by submitting the plan to the CPUC and BLM for review at least 60 prior to the start of construction.
- G-7a** **Minimize project structures within active fault zones.** SCE shall perform a geologic/geo-technical study to confirm the location of mapped traces of active and potentially faults crossed by the project route. For crossings of active faults, the towers shall be placed as far as feasible outside the area of mapped fault traces. Compliance with this measure shall be documented to the CPUC and BLM in a report submitted for review and approval at least 60 days prior to the start of construction.

Socioeconomics

- S-2a** **Recycle construction waste.** To comply with the Integrated Waste Management Act of 1989, during project construction SCE and/or its construction contractor shall recycle a minimum of 50 percent of the waste generated during construction activities. Prior to the start of construction, SCE shall provide the CPUC/BLM with a letter explaining how it will comply with this requirement.

Measures Applicable to the Devers-Valley No. 2 Alternative

- V-40b** **Reduce visual contrast of towers and conductors on San Bernardino National Forest land.** The following design measures are to be applied to all new structures and conductors on SBNF land based on SCE's consultation with SBNF staff prior to completion of final design. The details of these measures shall be developed:

In all areas:

- Transmission lines should have a permanent coloring of dark gray.
- All towers not back-dropped on mid-slope should have permanent coloring of cool mid-gray (battleship gray).

In mid-slope areas (as defined by SBNF):

- All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.
- Tower pads should be left uneven without leveling.
- No construction roads shall be built.
- Towers shall be constructed by air support.

At ridge crossing and mid-slope (as defined by SBNF):

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- Towers should be constructed of lower profile to closer “hug” the top of the ridge to avoid tower silhouetting.
 - Graphic studies from dominant view sites should be used to best place towers where they would be best back-dropped from expected viewing points.
 - All towers and concrete bases on slopes which could serve as backdrops (mid-slope) should be painted olive drab.
 - Tower pads should be left uneven without leveling.
 - No construction roads shall be built.
 - Towers should be constructed by air support.

V-40c Reduce visual contrast of towers and conductors near the Pacific Crest Trail. For towers located south of I-10 and outside of the SBNF, the following provisions apply:

- Where towers could be practicably back-dropped, utilize mitigation suggested for mid-slope and Ridge Crossing on SBNF lands (as defined in Mitigation Measure V-40b).
- The PCT shall not be crossed with construction roads.
- Locate towers so that the PCT is in the middle of the span (if this does not involve placement of extra or taller span towers to accomplish such action).

Measures Applicable to the Harquahala Junction Switchyard Alternative

V-6b Screen ancillary facilities. For the Harquahala Junction Switchyard Alternative, SCE shall provide a Screening Plan for screening vegetation, walls, and fences that reduces visibility and helps the facility blend in with the landscape. The use of berms to facilitate project screening may also be incorporated into the Plan. SCE shall submit the Plan to the BLM for review and approval at least 90 days prior to installing the landscape screening. If the BLM notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to:

- An 11”x17” color simulation of the proposed landscaping at 5 years
- A plan view to scale depicting the project and the location of screening elements
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity.

SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the BLM within seven days after completing installation of the screening, that the screening components are ready for inspection.

V-35a Screen alternative switchyard site from Salome Highway views. This measure is required to augment and not replace Mitigation Measure V-6b in order to provide more detailed direction pertaining to the planting of roadside screening vegetation along Salome Highway. Screening vegetation shall be planted along the east side of Salome Highway between mile markers 39 and 40. Vegetation shall be comprised of native species and shall be selected to achieve

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heights and screen effectiveness comparable to that shown in Figure D.3-30B (see enclosed CD). SCE shall submit a Screening Plan demonstrating compliance with this measure to the BLM for review and approval at least 90 days prior to installing the landscape screening. If the BLM notifies SCE that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SCE shall prepare and submit for review and approval a revised Plan. The Screening Plan shall include but not necessarily be limited to:

- An 11"x17" color simulation of the proposed landscaping at 5 years
- A plan view to scale depicting the project and the location of screening elements
- A detailed list of any plants to be used; their size and age at planting; the expected time to maturity, and the expected height at five years and at maturity

SCE shall complete installation of the screening prior to the start of project operation. SCE shall notify the CPUC within seven days after completing installation of the screening, that the screening components are ready for inspection.

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Applicant Proposed Measures

The following notes apply to the tables below.

- 1 APM refers to Applicant Proposed Measures. If there is a measure in the 1989 BLM ROW Grant that is not identified in the PEA as an APM, this FLM Grant measure is listed at the end of the table and is labeled BLM followed by its reference in the ROW Grant.
- 2 Refers to the Devers-Harquahala 500 kV transmission line.
- 3 Refers to the West of Devers 230 kV transmission line upgrade.
- 4 Reference in parentheses denotes the origin of the APM. “(SCE)” is a Proponent’s mitigation measure. “(BLM)” is a Proponent’s measure derived from a requirement in the BLM Right-of-Way Grant 1989. Numbers such as B-4.1 refer to the specific BLM measure in the 1989 Grant.
- 5 Holder is BLM’s reference to the ROW Grant holder. Holder is SCE, the project proponent.

Applicant Proposed Measures – Biology

Measure Number and Description ¹		Applicable To	
		500 kV Transmission Line ²	230 kV Upgrade ³
APM B-1 Vegetation	Avoid direct disturbance of highly sensitive features (as identified in E. Linwood Smith's (1985) Impact Assessment/Mitigation Planning Chart; see Appendix E) with spanning and careful local adjustment in tower footing placement. (BLM B-5.1 Vegetation) ⁴ [Note: The reference to Appendix E is unknown. There is no Appendix E as part of the BLM right-of-way grant (provided from PEA Appendix A). However, the Smith report itself is found in FSEIS (1988) as Appendix B, Study of Desert Bighorn Sheep.]	✓	
APM B-2 Vegetation	Avoid the introduction of noxious weeds and/or other invasive species through standard noxious weed measures. This will benefit most of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan. (SCE)	✓	
APM B-3 Vegetation	Vehicular travel must be on established roads to the maximum extent practicable. Any off-road vehicle use should be strongly discouraged. This will benefit many of the species covered by the [Coachella Valley Multiple Species Habitat Conservation] plan. (SCE)	✓	
APM B-4 Vegetation/ Wildlife	Avoid sand compaction at all sites in the Coachella Valley. This will benefit such species as the giant sand treader cricket, Coachella Valley Jerusalem cricket, and Coachella Valley milkvetch. (SCE)	✓	

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Applicant Proposed Measures – Biology

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM B-5 Vegetation/ Wildlife	✓	
Copper Bottom Pass:		
• Maintenance of low speed limit on right of way ROW to protect desert animals and reduce dust		
• Continuous application of water to ROW roads to reduce dust		
• Requirement that stopped vehicles stop engines if stationary for a determined period of time		
• Requirement that operators of vehicles, if stopped for longer than a determined period of time, inspect under their vehicles to ensure that no animals have taken shelter from the sun; this requirement has been implemented before by requiring that vehicles with stopped engines have their keys placed under the vehicle thus forcing the operator to inspect		
• Flagging of all disturbed areas if needed to clarify drive-able or walk-able areas		
• Tight control of the Copper Bottom Pass area to ensure that only planned construction traffic is allowed in the area and that minimal trips are planned		
• Restricted use of the area to periods outside of any animal breeding seasons		
• Tight control on electrical workers for approved hours of access		
• Ensure that all workers accessing this area have completed environmental awareness training for biological and cultural sensitivities; all trained workers would be equipped with stickers for their hardhats to provide for easy-to-spot inspection		
• Removal of all construction debris from the area at the conclusion of the work		
APM B-6 Vegetation	✓	
Avoid vehicular travel in washes to protect triple-ridged milkvetch. (SCE)		
APM B-7 Vegetation/ Wildlife	✓	
No activities whatever should occur in wetland areas. (SCE)		
APM B-8 Vegetation	✓	
Provide additional detailed surveys and tower-specific adjustments as needed prior to construction for major sensitive feature sites (e.g., concentrations of sensitive plants, individual palm trees, woody dune or wash communities) which cannot be easily avoided by spanning. (See Appendix B of the Devers–Palo Verde No. 2 EIR [1987] and Appendix E of the SEIS [1988].) The methodologies and results of these surveys must be submitted to and approved in writing by the BLM Authorized Officer. (BLM B-5.2 Vegetation)		
APM B-9 Vegetation	✓	
Initiate transplant efforts for <i>Ferocactus</i> and <i>Coryphantha</i> as soon as probable losses can be determined. Any plans for transplanting must be developed in consultation with a BLM botanist and approved in writing by the BLM Authorized Officer. (BLM B-5.4 Vegetation)		
APM B-10 Vegetation	✓	
The right-of-way Holder ⁵ will have the Arizona State Department of Agriculture and Horticulture identify native plants that would otherwise be destroyed by construction and sell them to the Holder. (BLM B-5.5 Vegetation)		
APM B-11 Vegetation	✓	
The Authorized Officer may require vegetation in certain areas to be cleared by hand tools. Scalping of top soil and removal of low growing vegetation will not be allowed unless authorized by the Authorized Officer. (BLM B-5.6 Vegetation)		
APM B-12 Vegetation	✓	
Where possible, towers or access roads will be located so as to avoid sensitive plants or plant communities. Where this is not feasible, affected individual plants will be transplanted. Towers will also be placed so that lines will span critical wildlife habitat. (BLM B-5.7 Vegetation)		

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Applicant Proposed Measures – Biology

Measure Number and Description ¹		Applicable To	
		500 kV Transmission Line ²	230 kV Upgrade ³
APM B-13 Vegetation	Tower sites will be selected to allow maximum spacing of sensitive features. (BLM B-5.8 Vegetation)	✓	
APM B-14 Vegetation	Minimize the area needed for equipment operation and material storage and assembly. (BLM B-5.3 Vegetation)	✓	
APM B-15 Wildlife	In the vicinity of the Colorado River, existing tower spacings and conductor heights will be matched to the greatest extent practical. This would reduce the potential for bird collisions with the power line. (BLM B-5.1 Wildlife)	✓	
APM B-16 Wildlife	Surveys – When access along the utility corridor already exists, pre-construction surveys for transmission lines should provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines should follow standard protocol for linear projects. (SCE)	✓	✓
APM B-17 Wildlife	Access – To the maximum extent possible, access for transmission line construction and maintenance should occur from public roads and designated routes. (SCE)	✓	✓
APM B-18 Wildlife	Disturbed areas – To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites should be sited in a manner that avoids desert tortoise burrows. (SCE)	✓	✓
APM B-19 Wildlife	Restoration – Whenever possible, spur roads and access roads and other disturbed sites created during construction should be recontoured and restored. (SCE)	✓	✓
APM B-20 Wildlife	Ravens – All transmission lines should be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company should remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from USFWS's Division of Migratory Birds to take common ravens or their nests. (SCE)	✓	✓
APM B-21 Wildlife	No clearing of or other disturbance to riparian habitats. If unavoidable, riparian habitats must be replaced or restored. This action will benefit several riparian bird species including summer tanager, yellow warbler, yellow breasted chat, least Bell's vireo, and southwestern willow flycatcher. (SCE)	✓	
APM B-22 Wildlife	Avoid impact to mesquite-dominated habitats to protect crissal thrasher. (SCE)	✓	
APM B-23 Wildlife	Minimize impact to or removal of creosote bush to benefit LeConte's thrasher. (SCE)	✓	
APM B-24 Wildlife	Avoid any alterations to the vegetation structure of Washington fan palm oases to benefit southern yellow bat. (SCE)	✓	
APM B-25 Wildlife	Avoid any alterations of mesquite hummock habitat to benefit Coachella Valley round-tailed ground squirrel. (SCE)	✓	
APM B-26 Wildlife	Wash communities along the entire route and sand dune communities in the Coachella Valley (see Map 10-AZ in the Draft SEIS and Figure 4.5-1 in the CPUC Draft EIR, 1987) will be spanned to the extent possible. (BLM B-5.2 Wildlife)	✓	
APM B-27 Wildlife	Prior to construction activities, the Holder shall have a qualified tortoise biologist present a class or briefing to construction workers. Subjects addressed shall include tortoise sensitivity to human disturbance, daily and seasonal activity patterns, and proper handling for removal from roadways. (BLM B-5.4 Wildlife)	✓	

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Applicant Proposed Measures – Biology

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM B-28 Wildlife	The Holder shall hire a qualified tortoise biologist to conduct daily inspections of roads and work areas within tortoise habitat during the tortoise season of activity (February 15 to June 15, July 15 to October 15). Tortoises found to be in jeopardy will be removed to a nearby site. Tortoises may be held for short periods, if judged necessary, to allow construction crews to pass through an area. The Holder will provide proper facilities for such temporary holding. (BLM B-5.6 Wildlife)	
APM B-29 Wildlife	The Holder shall restrict the speed on all roads within tortoise habitat to a maximum of 25 miles per hour. The Holder is responsible for ensuring compliance with this limit by its employees. (BLM B-5.6 Wildlife)	
APM B-30 Wildlife	Within tortoise habitat in California, spur roads shall not be bladed except where necessary to allow access for construction vehicles. Required vehicles shall enter on one pathway which is flagged and developed only by the passage of vehicles crushing vegetation. The spur shall be flagged by a qualified tortoise biologist prior to use. The spur shall avoid tortoise burrows and large perennial plants, yet be as short as possible within these requirements. Due to the presence of silty soils in Arizona, blading may occur. (BLM B-5.7 Wildlife)	
APM B-31 Wildlife	Any desert tortoise observed on access roads or work areas will be moved immediately away from the roadway into safe areas. (BLM B-5.8 Wildlife)	
APM B-32 Wildlife	In areas considered to comprise suitable tortoise habitat, or other areas where tortoise are observed, all access roads and tower construction sites will be surveyed by a qualified biologist to delineate burrows or individuals for protection. Burrows near construction sites will be clearly delineated on the ground. Road, footing, and work area alignments should be modified to the extent possible to avoid adversely affecting any tortoise burrows encountered during these surveys. Where tortoise burrows will be unavoidably destroyed, they should be excavated carefully using hand tools, under the supervision of a field biologist with demonstrated prior experience with this species. See Map 11-AZ in Appendix F in the Draft EIS (1988) and Figure 4.5-2 in the Devers–Palo Verde No. 2 EIR (1987). Also see Appendix E for link and milepost descriptions and mitigation measures. (BLM B-5.9 Wildlife)	
APM B-33 Wildlife	If possible, no new roads, tower sitings, or spur roads will be built in blow sand areas. However, if new spur roads are required through wind-blown sand habitat, the road will be returned to natural conditions and effectively closed (gated or bermed) following construction. Pre-construction surveys will identify wind-blown sand dune habitats. (BLM B-5.10 Wildlife)	

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Applicant Proposed Measures – Biology

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM B-34 Wildlife	✓	
<p>Where the project crosses through the Coachella Valley Preserve, the Holder will cooperate with the Preserve in closing (gating) existing access roads. (a) A qualified biologist will also be present with work crews to survey and clear work areas daily for Coachella Valley fringe-toed lizard (CVFTL), flat-tailed horned lizard (FTHL), and other sensitive species in the Preserve and sand dune communities from Link 14 (Milepost 7.6) to Link 16 (Milepost 5.0) to identify if any additional areas of occupied CVFTL and FTHL habitat are present along the route or at construction staging areas. (b) This survey will be conducted during appropriate seasons (March 15 to May 15) and conditions for species identification. For any areas of suitable habitat, this measure will apply.</p> <p>In the Coachella Valley, compacted soils should be scarified and seeded with a mix of native plant seeds, including bugseed (<i>Dicoria canescens</i>), to promote revegetation of plant species valuable to the lizard.</p> <p>Construction activity and surface disturbance will be prohibited during the period from January 1 to March 31 for the protection of the bighorn sheep lambing areas. These areas along the proposed route include Link 2 (Milepost 29.0 to 34.0) and Link 6 (Milepost 0.0 to 6.0). (BLM B-5.11 Wildlife)</p>		
APM B-35 Wildlife	✓	
<p>Avoid upland areas where desert tortoises might occur and/or have a biologist present during construction activities that involve earth moving in order to move any tortoises (in burrows or cover-sites, or on the surface) that would likely be impacted. (BLM B-5.17 Wildlife)</p>		
APM B-36 Wildlife	✓	
<p>Avoid construction activities that would tend to create wind barriers that might result in sand stabilization in order to minimize impacts to populations of the Coachella Valley fringe-toed lizard. (BLM B-5.18 Wildlife)</p>		
APM B-37 Wildlife		✓
<p>Mitigation for the coastal California gnatcatcher should include protocol-driven pre-construction surveys. If gnatcatchers are found to be present, suitable habitat should be avoided, including relocating towers and access. If habitat cannot be avoided, SCE should either restore damaged habitat, as at the Weapons Support Facility, Fallbrook Detachment, San Diego County (Soil Ecology and Research Group, 2004), or participate in land set-aside programs such as the Natural Community Conservation Planning program (NCCP). Another potential mitigation action would be that of assisting in the provision of funding for monitoring programs that may be undertaken through the Western Riverside County Multiple Species Habitat Conservation Plan. (SCE)</p>		
APM B-38 Wildlife		✓
<p>For least Bell's vireo, suitable habitat would be completely avoided by relocating tower sites and/or associated access roads. There would be approximately 0.8 acres of suitable habitat potentially affected by the proposed west of Devers 230 kV upgrade; this small area should be entirely avoided. If avoidance is not possible and the habitat is damaged or lost, SCE should participate in habitat banking programs or provide funding through the Western Riverside County Multiple Species Habitat Conservation Plan for plan-related monitoring of this species. (SCE)</p>		
APM B-39 Wildlife		✓
<p>Stephens' kangaroo rat habitat would be avoided, where possible. (SCE)</p>		

Source: SCE, 2005.

ATTACHMENT A

Applicant Proposed Measures – Cultural Resources

Measure Number and Description ¹		Applicable To	
		500 kV Transmission Line ²	230 kV Upgrade ³
APM C-1	Prior to construction and all other surface disturbing activities, the Holder ⁵ shall have conducted and submitted for approval by the Authorized Officer an inventory of cultural resources within the project's APE. The nature and extent of this inventory shall be determined by the Authorized Officer in consultation with the appropriate State Historic Preservation Officer (SHPO) and shall be based upon project engineering specifications. (BLM B-9.1) ⁴	✓	
APM C-2	As part of the inventory, the Holder shall conduct field surveys of sufficient nature and extent to identify cultural resources that would be affected by tower pad construction, access road installation, and transmission line construction and operation. At a minimum, field surveys shall be conducted along newly proposed access roads, new construction yards, and any other projected impact areas outside of the previously surveyed corridor. Site-specific field surveys also shall be undertaken at all projected areas of impact within the previously surveyed corridor that coincide with previously recorded cultural resource locations. The selected right-of-way shall be staked prior to the cultural resource field surveys. (BLM B-9.2)	✓	
APM C-3	As part of the inventory report, the Holder shall evaluate the significance of all affected cultural resources and provide recommendations with regard to their eligibility for the NRHP. Determinations of NRHP eligibility will be made by the Authorized Officer in consultation with the appropriate SHPO. (BLM B-9.3)	✓	
APM C-4	Upon approval of the inventory report by the Authorized Officer, the Holder shall prepare and submit for approval a cultural resource treatment plan for NRHP-eligible cultural resources to mitigate identified impacts. Avoidance, recordation, and data recovery will be used as mitigation alternatives. (BLM B-9.4)	✓	
APM C-5	The Authorized Officer may require the relocation of the line, ancillary facilities, or temporary facilities or work areas, if any, where relocation would avoid or reduce damage to cultural resource values. (BLM B-9.5)	✓	
APM C-6	If avoidance of specific cultural resources is not feasible, treatment shall be carried out as determined by the Authorized Officer in consultation with the appropriate SHPO. (BLM B-9.6)	✓	
APM C-7	When necessary to relocate the proposed line, ancillary facilities, temporary facilities, or work areas as a result of inventory, onsite avoidance decisions, or the Holder's approved request for relocation, the Holder shall inventory the proposed new locations for cultural resources and provide inventory results to the Authorized Officer prior to construction. Any mitigation deemed necessary by the Authorized Officer shall be completed prior to undertaking any surface disturbing activities. (BLM B-9.7)	✓	
APM C-8	All cultural resource work undertaken by the Holder on public lands shall be carried out by qualified professionals designated on a currently valid Cultural Resource Use Permit for the appropriate state. (BLM B-9.8)	✓	
APM C-9	Notices to proceed will be issued following completion, and approval by the Authorized Officer, of any fieldwork determined necessary through the inventory, evaluation, and consultation process described above. (BLM B-9.9)	✓	
APM C-10	Vehicles and equipment shall be confined and operated only within areas specified by the Authorized Officer. (BLM B-9.10)	✓	

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Applicant Proposed Measures – Cultural Resources

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM C-11 Unauthorized collection of artifacts or other cultural materials on or off the right-of-way by the Holder, his representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws. Unauthorized collection may constitute grounds for the issuance of a stop work order. (BLM B-9.11)	✓	

Source: SCE, 2005.

Applicant Proposed Measures – Paleontological Resources

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM P-1 Impacts to significant paleontological resources will be mitigated by conducting a pre-construction survey in areas of high or undetermined paleontological sensitivity to identify and collect surface specimens that could be affected by project construction. Paleontological monitoring of earth-disturbing construction activities and salvage of significant specimens will occur in project areas of high sensitivity. (SCE)		✓

Source: SCE, 2005.

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Applicant Proposed Measures – Air Quality

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM A-1 Heavy duty off-road diesel engines would be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations. (SCE) ⁴	✓	✓
APM A-2 Water or chemical dust suppressants would be applied to unstabilized disturbed areas and/or unpaved roadways in sufficient quantity and frequency to maintain a stabilized surface. (SCE)	✓	✓
APM A-3 Water or water-based chemical additives would be used in such quantities to control dust on areas with extensive traffic including unpaved access roads; water, organic polymers, lignin compounds, or conifer resin compounds would be used depending on availability, cost, and soil type. (SCE)	✓	✓
APM A-4 Surfaces permanently disturbed by construction activities would be covered or treated with a dust suppressant after completion of activities at each site of disturbance. (SCE)	✓	✓
APM A-5 Vehicle speeds on unpaved roadways would be restricted to 15 miles per hour. (SCE)	✓	✓
APM A-6 Vehicles hauling dirt would be covered with tarps or by other means. (SCE)	✓	✓
APM A-7 Site construction workers would be staged offsite at or near paved intersections and workers would be shuttled in crew vehicles to construction sites. As part of the construction contract, SCE would require bidders to submit a construction transportation plan describing how workers would travel to the job site. (SCE)	✓	✓
APM A-8 Emissions credits would be purchased to offset any emissions levels which are over the emissions thresholds. (SCE)	✓	✓

Source: SCE, 2005.

Applicant Proposed Measures – Water Resources

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM W-1 During the first year following construction, potential soil erosion sites will be inspected by the Holder ⁵ after each major rainstorm as access permits. For the purpose of this measure, a major rainstorm is defined as any singular storm where the total precipitation exceeds the arithmetic mean for similar events in the area and results in flooding. Examples include cloudbursts (high quantity – short duration) or storms where saturated soils produce runoff (high quantity – long duration). (BLM B-4.1) ⁴	✓	
APM W-2 Construction equipment will be kept out of flowing stream channels except when absolutely necessary to construct crossings. (BLM B-4.2)	✓	
APM W-3 Erosion control and hazardous material plans will be incorporated into the construction bidding specifications to ensure compliance. (BLM B-4.3)	✓	
APM W-4 Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, will be used to prevent scour and/or inundation by a 100-year flood. (BLM B-4.4)	✓	
APM W-5 Towers will be located to the extent feasible to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows. (BLM B-4.5)	✓	

ATTACHMENT A

Applicant Proposed Measures – Water Resources

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM W-6 Diversion dikes or other structural enhancements will be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided; and (b) where there is a very significant flood scour/deposition threat, unless specifically exempted by the BLM Authorized Officer. (BLM B-4.6)	✓	
APM W-7 Runoff from roadways will be collected and diverted from steep, disturbed, or otherwise unstable slopes. (BLM B-4.7)	✓	
APM W-8 Ditches and drainage concourses will be designed to handle the concentrated runoff, will be located to avoid disturbed areas, and will have energy dissipations at discharge points. (BLM B-4.8)	✓	
APM W-9 Cut and fill slopes will be minimized by a combination of benching and following natural topography where possible. (BLM B-4.9)	✓	
APM W-10 Construction equipment would be kept out of flowing stream channels except when absolutely necessary to construct crossings. (SCE)		✓
APM W-11 Erosion control and hazardous material plans would be incorporated into the construction bidding specifications to ensure compliance. (SCE)		✓
APM W-12 Appropriate design of tower footing foundations, such as raised foundations and/or enclosing flood control dikes, would be used to prevent scour and/or inundation by a 100-year flood. (SCE)		✓
APM W-13 Towers would be located to avoid active drainage channels, especially downstream of steep hillslope areas, to minimize the potential for damage by flash flooding and mud and debris flows. (SCE)		✓
APM W-14 Diversion dikes would be required to divert runoff around a tower structure if (a) the location in an active channel cannot be avoided, and (b) where there is a very significant flood scour/deposition threat. (SCE)		✓
APM W-15 Runoff from roadways would be collected and diverted from steep, disturbed, or otherwise unstable slopes. (SCE)		✓
APM W-16 Ditches and drainage concourses would be designed to handle the concentrated runoff, would be located to avoid disturbed areas, and would have energy dissipations at discharge points. (SCE)		✓
APM W-17 Cut and fill slopes would be minimized by a combination of benching and following natural topography where possible. (SCE)		✓

Source: SCE, 2005.

ATTACHMENT A

Applicant Proposed Measures – Geology and Soils

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM G-1 The line will be located to minimize the disruption of any active mining operations. (BLM B-2.1) ⁴	✓	
APM G-2 Individual transmission towers will not be sited on nor straddle the mapped traces of any known fault that has been designated active or potentially active. In areas where known faults are present, the Holder ⁵ will visually check the tower site area before clearing, and will check the tower footing holes for any trace of a previously unmapped fault. If manifestations of a fault are found, construction will immediately stop at that site and the Holder will consult with the Holder's Geologist and the BLM Authorized Officer. The Holder's Geologist and the BLM Authorized Officer will determine if it is a fault trace and if so, will ascertain if it is active, potentially active, or inactive. (BLM B-2.2)	✓	
APM G-3 Towers will be located so that the line will span the surface traces of active and potentially active faults such that a relative lateral surface displacement would shorten the span between towers, and thus avoid potential line breaks. Where this is not feasible, the Holder will incorporate slack spans to bridge the fault(s) such that the projected lateral surface displacement, as forecast by the Holder's Geologist and accepted by the BLM Authorized Officer, will not structurally affect the associated towers. (BLM B-2.3)	✓	
APM G-4 In general, an appropriate tower design which accounts for lateral wind loads and conductor loads exceeds any credible seismic loading (groundshaking). (BLM B-2.4)	✓	
APM G-5 Towers will be located to avoid areas of highly sensitive dune sand areas. Where these areas cannot be avoided, towers will be located to minimize disturbance to the deposits at a site approved by the BLM Authorized Officer. (BLM B-2.5. Note: Text here omits references to specific figures and maps in the original (1987-88) DEIR and DEIS.)	✓	
APM G-6 Wherever feasible to minimize the potential for slope instability, towers will be located to avoid gullies or active drainages, and over-steepened slopes. (BLM B-2.6)	✓	
APM G-7 SCE will provide a list of sites where helicopter construction is recommended. The Authorized Officer may require, on a site-specific basis, helicopter assisted construction in sensitive areas. Sensitive areas are those that exhibit both (1) high erosion potential and/or slope instability; and (2) a lack of existing stub roads within a reasonable distance of the tower site, or existing access that is not suitable for upgrading to accommodate conventional tower construction or line stringing equipment, and where it is determined that, after field review, the issues of erosion and/or slope instability cannot be successfully mitigated through implementation of accepted engineering practices. (BLM B-2.7)	✓	
APM G-8 Mitigation of potentially significant impacts to the western end of the proposed transmission line due to (1) potential surface fault rupture along the Banning, Mission Creek, and Mecca Hills faults, and (2) potential for severe seismic shaking can be achieved by standard design methods listed below: a. Individual towers will be sited so as not to straddle active fault traces. b. The alignment will be designed to cross an active fault such that future rupture on the fault would not cause excessive stress on the line or the towers. c. Standard foundation and structural design measures will be utilized to minimize the impact from severe seismic shaking. (BLM B-2.8)	✓	
APM G-9 Appropriate design of tower foundations will be used to reduce the potential for settlement and compaction. (BLM B-2.9)	✓	

ATTACHMENT A

Applicant Proposed Measures – Geology and Soils

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM G-10 New access roads and soil disturbance will be avoided or minimized in all areas designated as having high erosion hazards or potential slope instability. If the Authorized Officer, after consultation and review of alternatives (including helicopter or helicopter assisted construction), deems the proposed new access road feasible, design plans must be submitted for approval, in writing, prior to construction. (BLM B-3.1. Note: Text here omits references to specific figures and maps in the original (1987-88) DEIR and DEIS.)	✓	
APM G-11 New access roads, which are required, will be designed to minimize ground disturbance from grading. They will follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings will be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line in the area. (BLM B-3.2)	✓	
APM G-12 Side casting of soil during grading will be minimized. Excess soil and excavated soil will be properly stabilized or, dispersed around tower construction sites or on stub or access roads. (BLM B-3.3)	✓	
APM G-13 During grading operations, care would be exercised to minimize side casting. No earth would be removed below final elevations, and no cuts would be made deeper than necessary for clearing and road construction. (SCE)	✓	✓
APM G-14 Upon completion of construction, any drainage deficiencies would be corrected to prevent future erosion. Trees and brush would be cleared only when necessary to provide electrical clearance, line reliability, or suitable access for maintenance and construction. (SCE)	✓	✓
APM G-15 Counterpoise may need to be installed if the local soil conditions indicate that the soil has a resistance above 30 ohms. This is accomplished by attaching a 0.375-inch cable to the tower steel. The cable is installed 1 foot underground and extends approximately 100 feet within the ROW from two or more footings.	✓	✓
APM G-16 The line would be located to minimize the disruption of any active mining operations. (SCE)		✓
APM G-17 Appropriate tower design would be used to mitigate the potential for impacts from very strong seismic groundshaking. In general, an appropriate tower design which accounts for lateral wind loads and conductor loads during line stringing exceeds any credible seismic loading (groundshaking). (SCE)		✓
APM G-18 Whenever possible to minimize the potential for slope instability, towers would be located to avoid gullies or active drainages, and over-steepened slopes. (SCE)		✓
APM G-19 New access roads, where required, would be designed to minimize ground disturbance from grading. They would follow natural ground contours as closely as possible and include specific features for road drainage, including water bars on slopes over 25 percent. Other measures could include drainage dips, side ditches, slope drains, and velocity reducers. Where temporary crossings are constructed, the crossings would be restored and repaired as soon as possible after completion of the discrete action associated with construction of the line. Side casting of soil during grading would be minimized. Excess soil would be properly stabilized, or if necessary, hauled to an approved disposal site. (SCE)		✓

Source: SCE, 2005.

ATTACHMENT A

Applicant Proposed Measures – Visual Resources

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM V-1 Non-specular conductors will be used [to reduce glare and visual contrast]. (BLM B-6.1) ⁴ [bracketed text added by SCE]	✓	✓
APM V-2 For the proposed alignment, tower spacing will correspond to the spacing of the existing transmission line structures. Additionally, new tower heights will be adjusted such that the top elevations of each set of towers (new and existing) are horizontal with each other. This will coordinate perceptions of towers and conductors as one element. Site-specific conditions will determine when such mitigation is feasible. Other exceptions to these two measures are where towers will be sited to avoid sensitive features and/or to allow conductors to clearly span features. (BLM B-6.2) [PEA adds: "SCE will comply with the above mitigation measure to the extent possible. However, the ISO has specified that the capacity of the line be 2700 amps under normal conditions and 3600 amps under emergency conditions. This capacity rating is an increase from the 1988 DPV2 capacity rating. This capacity rating necessitates that the heights of some of the proposed Devers-Harquahala towers be slightly taller than [adjacent towers], and in some locations tower spacing may not correspond to the adjacent DPV1 structures, to provide adequate ground clearance." (PEA, p. 6-31)]	✓	
APM V-3 At all highway and recreation routes-of-travel crossings, including the Colorado River, towers will be placed at the maximum feasible distance, and when feasible, [except in locations where matching existing tower spacing is deemed appropriate]. (BLM B-6.3) [From "and where feasible," the BLM text reads "...at right angles, from the crossing." SCE has replaced this phrase in the bracketed text.]	✓	
APM V-4 Improvements to existing access and new access will be accomplished according to Mitigation Measures 1 and 2 as identified under soils. (BLM B-6.4)	✓	
APM V-5 Standard tower spacing would be modified to correspond with spacing of existing transmission line towers where feasible and within limits of standard tower design to reduce visual contrast. (BLM B-6.8a)	✓	
APM V-6 Towers would be placed so as to avoid features and/or to allow conductors to clearly span the feature (within limits of standard tower design) to minimize the amount of sensitive feature disturbed and/or reduce visual contrast (e.g., avoiding skyline situations through placement of tower to one side of a ridge or adjusting tower location to avoid highly visible locations and utilize screening of nearby land-forms). (BLM B-6.8b)	✓	
APM V-7 The proposed steel lattice towers would be constructed using a dulled galvanized steel finish, which would result in visual contrast reduction. (SCE)		✓
APM V-8 Non-specular conductors would be used to reduce glare and resulting visual contrast. (SCE)		✓
APM V-9 Towers would be located adjacent to existing structures where feasible. Exceptions are at locations where the tower heights and/or spans would be modified based on terrain features allowing for adequate conductor clearance to ground and other facilities within the right-of-way. (SCE)		✓
APM V-10 At all highway and recreation routes-of-travel crossings, including the I-10 crossing, towers would be placed at the maximum feasible distance, except in locations where matching existing tower spacing is deemed appropriate, and when feasible, at 90 degree angles from the crossing. (SCE)		✓

Source: SCE, 2005.

ATTACHMENT A

Applicant Proposed Measures – Land Use

Measure Number and Description ¹		Applicable To	
		500 kV Transmission Line ²	230 kV Upgrade ³
APM L-1	Impacts in crossing of the KOFA NWR (Link 2) would be minimized through utilization of existing utility access (gas and transmission) roads during the construction and operational phases of the project. All vehicular traffic would be limited to approved access or spur roads. (SCE) ⁴	✓	
APM L-2	Although the Holder ⁵ may restore and maintain existing access roads, they cannot be either widened or upgraded without approval of the Authorized Officer. (BLM B-1.1)	✓	
APM L-3	New access road construction will be kept to a minimum. (BLM B-1.2)	✓	
APM L-4	Where feasible, the following additional mitigation measures would be implemented: <ul style="list-style-type: none"> • Matching of tower spans • Aligning towers adjacent to or parallel to agricultural field boundaries • Using tubular steel pole structures in agricultural fields instead of lattice steel towers to reduce the footprint of the structure • Specific tower placement to avoid span-sensitive features. (SCE) 	✓	
APM L-5	Along Link 10 in the Palo Verde Valley, H-frame structures, similar to the existing DPV1 structures, would be installed in this segment to reduce the amount of farmland permanently removed from production and minimize impacts to farm operations. Where feasible, additional mitigation measures would include matching tower spans, and aligning towers adjacent or parallel to field boundaries. (SCE)	✓	
APM L-6	In the agricultural area of the Palo Verde Valley, towers would be located to allow for canal dredging by the Palo Verde Irrigation District. This also could include canal modifications. (SCE)	✓	
APM L-7	Link 10 crosses an (unoccupied) single-family dwelling unit at Milepost 5.3. Two additional single-family dwelling units and one mobile home would be impacted due to the alignment of Link 10 at Milepost 6.2. Mitigation measures would include purchase of the parcel and relocation or, if practical, adjusting the transmission line alignment and placing towers to avoid the affected dwelling units. (SCE)	✓	
APM L-8	Link 14 crosses an open pit gravel operation. Potential impacts would be mitigated during construction by coordinating with the owner/operator to avoid critical mining periods and high volume earth-moving days. Operational mitigation would include spanning the mine. (SCE)	✓	
APM L-9	Link 100 crosses the Pacific Crest National Trail, causing a potential temporary impact during construction. Temporary impacts also may occur where Link 102 crosses Noble Creek Regional Park and the Oak Valley Golf Course. Mitigation for construction includes avoiding high use periods and holidays. Mitigation for operation would require construction using structures placed parallel to existing structures to span and avoid displacement of recreational facilities. (SCE)		✓

Source: SCE, 2005.

ATTACHMENT A**Applicant Proposed Measures – Noise**

Measure Number and Description ¹	Applicable To	
	500 kV Transmission Line ²	230 kV Upgrade ³
APM N-1 The proposed construction would comply with local noise ordinances. There may be a need to work outside of the aforementioned local ordinances in order to take advantage of low electrical draw periods during the nighttime hours. SCE would comply with variance procedures requested by local authorities if required. (SCE) ⁴	✓	✓

Source: SCE, 2005.

(END OF ATTACHMENT A)