

This appendix presents SCE’s Spur Road Restoration Plan for the proposed Antelope Transmission Project – Segment 1. This restoration plan for access spur roads applies to applicable T/L tower access spur roads in the Angeles National Forest.

Three spur roads are needed to provide access points along the transmission line right-of-way during Project construction activities. These spur roads are existing roads. This plan describes road maintenance to allow construction, followed by decommissioning at the conclusion of the Project. In general, the three spur roads have been damaged due to some combination of lack of maintenance, inadequate design, or unanticipated natural events. Examples include roads that have washed away by gully processes, buried or moved by landslides, trenched by channel erosion or culvert washouts, or overgrown by vegetation.

Once the project has been completed, these spur roads will be decommissioned. Formally decommissioning roads can reduce or eliminate the risk of long-term environmental impacts from abandoned roads, such as elevated rates of erosion, sedimentation in aquatic stream networks, reduction in water quality, increased landslide risks, and other factors.

This plan describes the following four phases:

- Phase 1 – Inventory Existing Road Condition
- Phase 2 – Identify Itemized Road Improvements
- Phase 3 – Reconstruct & Operate Road
- Phase 4 – Formal Road Decommissioning

Phase 1 – Inventory Existing Road Condition

The objective of this step is to identify those features of the road that must be addressed in the maintenance, or in the decommissioning. Such features include existing washouts, landslides, culverts, stream crossings, seeps or springs, abrupt changes in gradient, fillslope scarps, or similar features.

Although each road exists along the desired corridor, they are inaccessible due to slides or washouts. The existing road alignment will be walked and surveyed by a geomorphologist or hydrologist with knowledge in forest road design. Sites will be identified by GPS coordinates or a compass/stringbox stationing. Features will be noted by their field station and will be flagged in the field.

In addition to this specific information, data for topography, geology, landslides, stream locations, isohyetal precipitation maps, soils, and transmission line information will be used in the following phase.

Phase 2 – Design Road Maintenance

The information developed during Phase 1 will be used to design spur road maintenance necessary to support operations during the October through April. Improvements must be sufficient to support two construction seasons. The roads will be designed to avoid erosion, sedimentation, or hydrological impacts during its planned lifespan. Consultation with a Forest Service geomorphologist/hydrologist with forest road experience will ensure that designs meet these criteria.

Generally, the existing alignments will be maintained except where modified in the field to accommodate the existing terrain. Exceptions may be warranted if landslides have sufficiently modified the terrain in such a way that the existing alignments are too costly or too dangerous to repair.

A road design will be developed for each spur road that will address construction, operation, maintenance, and decommissioning activities.

Design objectives for construction, operation and maintenance include the need to prevent excessive erosion, limit sediment delivery to the active channel and/or runoff network, maintain stability and safety of the road prism, efficiently remove water from the road prism, and suitably manage vegetation along the road.

Design objectives of the decommissioned road include preventing future vehicular access, removing long-term erosion hazards, preventing delivery of erosion products from the stream network, minimizing long-term hydrological impacts, and restoring native growing conditions to the road bed. Elements of the decommissioning design may include removal of culverts, re-contouring the hillslope, pullback of fillslopes, restoring natural runoff patterns, removal of surface rock and/or ballast, ripping the running surface, and re-vegetating the road bed. Designs should include appropriate BMPs for construction and deconstruction phases.

Phase 3 – Reconstruct & Operate Road

The road will be constructed using the planned design. During construction, appropriate BMPs will be employed to meet the objectives identified above.

Phase 4 – Formal Road Decommissioning

The road will be decommissioned following the design identified in Phase 2. Each road will be decommissioned beginning at the end of the road, and will work toward the mainline road.

Repairs may be necessary to restore condition of sensitive features like streams or unstable slopes that may have been modified as a result of inappropriate design, poor maintenance, or unforeseen natural events.

Road decommissioning will be supervised by a geomorphologist or hydrologist to ensure that the decommissioned roads will co-exist with natural geomorphic and hydrologic processes. Once the road is decommissioned, access via heavy equipment is virtually impossible.