
Power Line C157 Alternative Route Analysis
for the
Cleveland National Forest Power Line Replacement Projects

Prepared for:



Prepared by:



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TABLE OF CONTENTS

1 – INTRODUCTION..... 1

2 – EXISTING ALIGNMENT AND REALIGNMENT ALTERNATIVE DESCRIPTIONS 2

 2.0 Existing Alignment Project Description2

 2.1 Realignment Alternative Project Description2

3 – ENVIRONMENTAL RESOURCE COMPARATIVE ANALYSIS 3

 3.0 Air Quality4

 3.1 Biological Resources10

 3.2 Cultural Resources19

 3.3 Fire Hazards20

 3.4 Hydrology and Water Quality24

 3.5 Noise27

 3.6 Transportation and Traffic28

 3.7 Visual Resources31

 3.8 Wilderness and Recreation33

4 – CONCLUSION 35

LIST OF FIGURES

Figure 1: C157 Realignment Alternative Location..... 5

Figure 2: Fire Hazard Severity Map 21

LIST OF TABLES

Table 1: Comparative Impact Summary Table..... 4

Table 2: SDAPCD Criteria Air Pollutant Exceedances During Construction 8

Table 3: Special-Status Plant Species’ Potential to Occur Along the Existing Alignment 11

Table 4: Special-Status Wildlife Species’ Potential to Occur Along the Existing Alignment 14

Table 5: Vegetation Community Impacts of the Existing Alignment and the Realignment
Alternative in Approximate Acres 16

Table 6: Temporary and Permanent Impacts to RCAs and Riparian Areas 25

Table 7: Public Roadways Providing Access to the Existing Alignment 29

LIST OF ATTACHMENTS

- Attachment A: Existing Alignment Detailed Route Map
- Attachment B: Realignment Alternative Detailed Route Map
- Attachment C: Representative Photographs

1 – INTRODUCTION

In September 2012, San Diego Gas & Electric Company (SDG&E) submitted a Preliminary Plan of Development (POD) to the United States (U.S.) Forest Service (USFS), along with a Standard Form (SF) 299 Application for Transportation and Utility Systems and Facilities on Federal Lands, to combine over 70 existing use permits and easements for 69 kilovolt (kV) power line and 12 kV distribution line (collectively, electric line) facilities and appurtenant facilities within the Cleveland National Forest (CNF) into one Master Special Use Permit (MSUP) to be issued by the USFS.

In April 2013, SDG&E submitted a Revised POD in response to comments received from USFS and California Public Utilities Commission (CPUC) staff. USFS staff requested, among other things, that SDG&E evaluate the potential relocation of a portion of one 12 kilovolt (kV) distribution line, C157, from its existing alignment to an alternative location. The new alignment would pass through previously undisturbed land within the Cleveland National Forest (CNF) and private properties. SDG&E's plan for C157 under the CNF Power Line Replacement Projects (Proposed Projects) includes fire hardening this line within its existing alignment, which is partially located within the Pine Creek Wilderness Area and the Hauser Wilderness Area. At the USFS' request, SDG&E has identified a possible alternative location for the segment of C157 between poles P278722 and P278741 (referred to in this document as the Existing Alignment). SDG&E has not determined that the relocation is "feasible" or "reasonable" as defined under both the National Environmental Policy Act or California Environmental Quality Act, which require consideration of a number of factors (e.g., technological, legal, environmental, social, and economic factors.) The Alternative Route Analysis for C157 provided herein is made without prejudice to, and is not a waiver of, SDG&E's right to rely on other facts or documents in these proceedings or object to the relocation of any of SDG&E's existing facilities. SDG&E expressly reserves the right to supplement, clarify, revise, or correct any or all of the relevant information for this alternative, and to assert additional objections or arguments including, but not limited to, the feasibility or reasonableness of relocating the already existing C157 in these or other proceedings. As the USFS and CPUC evaluate the feasibility of this possible alternative location, SDG&E will continue to explore other solutions that allow for continued use of the Existing Alignment. In the event that the USFS concludes that it legally cannot approve the fire hardening of C157 within the Existing Alignment, SDG&E may request that the USFS seek Congressional authority to adjust the Pine Creek and Hauser wilderness area boundaries to exclude the existing power line, which predates the wilderness designation.

This analysis describes a potential overhead alternative between the wilderness areas and includes a high-level and preliminary analysis of potential environmental impacts that may result from the relocation of C157. The design for the alternative is preliminary, and the location and number of poles, stringing sites, and work areas are subject to change. The following sections describe the Existing Alignment and alternative in greater detail, as well as describe and compare the potential impacts from the alternative with those previously identified for the Existing Alignment in the Revised POD.

2 – EXISTING ALIGNMENT AND REALIGNMENT ALTERNATIVE DESCRIPTIONS

Using available existing topographical, road, parcel, land use, and environmental resource data, SDG&E identified and displayed in the Revised POD three preliminary overhead realignment alternatives and one preliminary underground realignment alternative within the revised study corridor that could potentially be constructed. After further review of these four alternatives, SDG&E conducted surveys in January 2014 to gather additional data regarding biological and cultural resources, vegetation communities, hydrological features, and other pertinent environmental resources within the potential alternative location for C157. Based on the existing information and additional data gathered since the time of the Revised POD's submittal in June 2013, SDG&E did not carry forward three realignment locations—previously identified as Alternatives 2, 3, and 4 in the Revised POD—due to existing site conditions and the potential challenges to construction, operation, and maintenance posed by topography and the lack of existing access to these areas. The Realignment Alternative was analyzed further for its construction potential and associated environmental impacts relative to those posed by the Existing Alignment. The following subsections describe in greater detail the Existing Alignment, as well as the Realignment Alternative.

2.0 EXISTING ALIGNMENT PROJECT DESCRIPTION

As described in the Revised POD, the Existing Alignment includes the wood-to-steel conversion of approximately 57 existing wood poles along an approximately 3.5-mile-long 12 kV distribution alignment within existing SDG&E rights-of-way (ROWs) from Skye Valley Road, near Lyons Valley Road, and east to Skye Valley Ranch. Approximately 1.8 miles of the Existing Alignment crosses USFS-administered land. Outside of the CNF, C157 crosses approximately 1.7 miles of private land.

More specifically, the line travels northeast from Skye Valley Road for approximately 0.2 mile before entering the CNF. The line then travels for approximately 0.6 mile southeast through the CNF along Skye Valley Road. The line then exits the CNF and continues southeast for approximately 0.5 mile through private land before crossing Skye Valley Road. From Skye Valley Road, the line crosses private land for approximately 0.6 mile and enters the CNF just east of Barrett Lake. From Barrett Lake, the line crosses Skye Valley Road and travels for approximately 0.1 mile southeast through the Pine Creek Wilderness Area, continues approximately 0.1 mile southeast through the CNF, then enters the Hauser Wilderness Area. The line continues southeast through the Hauser Wilderness Area for approximately 0.5 mile, continues southeast approximately 0.4 mile through the CNF, and then travels northeast for approximately 0.5 mile through private land to terminate at Skye Valley Ranch. A detailed route map is provided in Attachment A: Existing Alignment Detailed Route Map.

2.1 REALIGNMENT ALTERNATIVE PROJECT DESCRIPTION

The Realignment Alternative would relocate approximately 1.1 miles of the Existing Alignment from poles P278722 to P278741 to avoid the Pine Creek and Hauser wilderness areas. As part of the Realignment Alternative, existing wood poles would be removed along this portion of the

Existing Alignment, and new steel poles would be installed along the Realignment Alternative alignment. The remaining wood poles of the C157 alignment would be converted to steel poles in locations identified for the Existing Alignment. The Realignment Alternative, as depicted in Figure 1: C157 Realignment Alternative Location, would measure approximately 4.1 miles in total length. Approximately 1.8 miles of the Realignment Alternative would cross USFS-administered land and would be located outside of designated wilderness areas.

The Realignment Alternative travels northeast from Skye Valley Road for approximately 0.2 mile before entering the CNF. The line then travels for approximately 0.6 mile southeast through the CNF along Skye Valley Road. The line then exits the CNF and continues southeast for approximately 1.1 miles through private land before crossing the northern inlet of Barrett Lake. The line continues east for approximately 0.2 mile before entering the CNF, and then travels through the CNF along Forest Route 17504 for approximately one mile. The line exits the CNF for less than 0.1 mile, then continues through the CNF for approximately 0.4 mile. The line travels northeast through private land for approximately 0.5 mile to terminate at Skye Valley Ranch. A detailed route map is provided in Attachment B: Realignment Alternative Detailed Route Map.

3 – ENVIRONMENTAL RESOURCE COMPARATIVE ANALYSIS

The following subsections describe the potential environmental impacts that may result from construction, operation, and maintenance of the Existing Alignment of C157, as well as the potential impacts that may result from constructing, operating, and maintaining the Realignment Alternative. SDG&E has included methodology and assumptions for each environmental resource area, as necessary, to create as close a comparative analysis as possible at this time. The resource areas addressed include air quality, biological resources, cultural resources, fire hazards, hydrology and water quality, noise, transportation and traffic, visual resources, and wilderness and recreation. In the following subsections, the impacts of the Existing Alignment are described first, followed by a comparison of impacts associated with the Realignment Alternative. As shown in Table 1: Comparative Impact Summary Table, impacts associated with the Realignment Alternative are generally greater than those anticipated for the Existing Alignment.

Table 1: Comparative Impact Summary Table

Resource Area	Realignment Alternative Impact Summary Compared to the Existing Alignment
Air Quality	Greater
Biological Resources	Greater
Cultural Resources	Similar
Fire Hazards	Similar
Hydrology and Water Quality	Greater
Noise	Similar
Transportation and Traffic	Similar
Visual Resources	Similar
Wilderness and Recreation	Less

3.0 AIR QUALITY

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to air quality that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.0.0 Methodology and Assumptions

The methodology used to compare anticipated impacts from the Existing Alignment and the Realignment Alternative is the same as the methodology that was used to assess potential impacts from the Proposed Projects in the Revised POD. Potential impacts to air quality were assessed by using the San Diego Air Pollution Control District's (SDAPCD's) emission thresholds. As part of the Realignment Alternative, approximately 14 existing wood poles would be removed along a portion of the Existing Alignment from poles P278722 to 278741, and new steel poles would be installed along the Realignment Alternative alignment from poles P1 to P29. The remaining wood poles of the C157 alignment would be converted to steel poles. With the Realignment Alternative, the C157 alignment would measure approximately 4.1 miles in overall length.

Six crews were assumed to be required for construction of the Existing Alignment in the Revised POD; for the purposes of this analysis, the Realignment Alternative was also assumed to require six crews. Construction of the Realignment Alternative was also assumed to commence in March 2016, consistent with the existing construction schedule for C157. If the Realignment Alternative is selected, the construction of the alternative would be conducted by the same crews as for the remainder of C157 as part of construction for the overall line. Selection of the Realignment Alternative would not lengthen the overall schedule for C157. In addition, it is assumed that removal of dense vegetation, as described in Section 3.1 Biological Resources, would be required for construction of the Realignment Alternative through previously undisturbed areas, based on vegetation cover data collected during pedestrian surveys conducted

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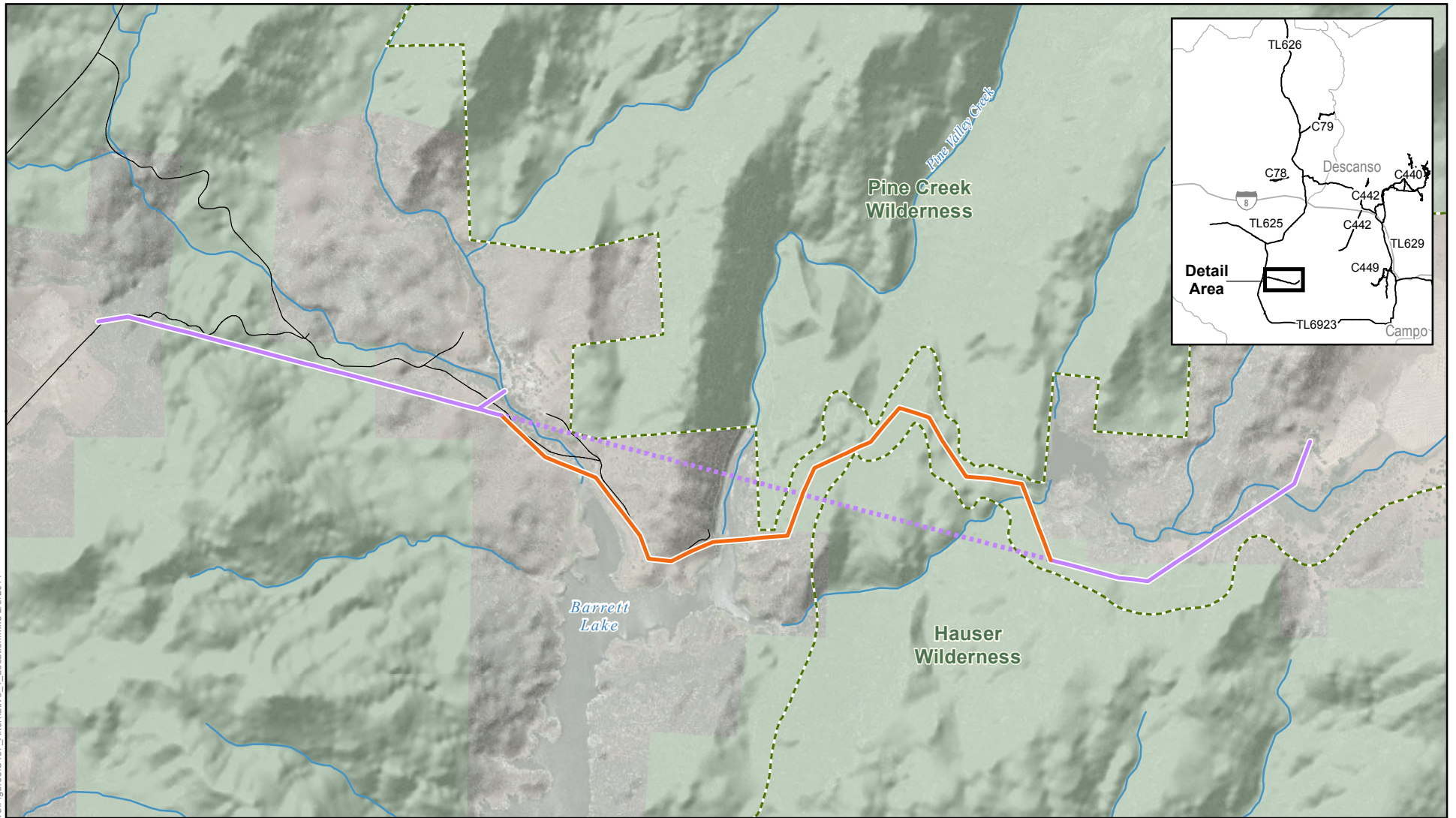
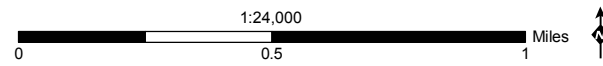


Figure 1: C157 Realignment Alternative Location

Distribution Line C157 Alternative Route Analysis

- Existing Alignment/Realignment Alternative
- Realignment Alternative Reroute
- ⋯ Remove Existing Alignment
- - - United States Forest Service
- - - Wilderness Boundary
- Road
- ~ Stream



in January 2014. Tree removal is not anticipated to be required for construction of the Existing Alignment.

3.0.1 Existing Alignment Analysis

The primary source of criteria air pollutant emissions during construction activities for the Existing Alignment would stem from the use of heavy equipment, including crew trucks, compressors, drilling rigs, and helicopters. A list of equipment anticipated to be used during construction is provided in the Revised POD. Each phase of construction would require different equipment, and often multiple pieces of equipment would be required to operate simultaneously. In addition, many pieces of equipment require engine-idling to provide energy for equipment operation, such as for truck-mounted drills or compressors. Helicopters would be used to deliver personnel and equipment and position poles during construction where truck access is not available—particularly for that portion of the line east of the bridge on Skye Valley Road, which has very limited load-bearing capacity—and would also be used to string new conductors and position aerial markers, where necessary.

As part of the Existing Alignment construction, SDG&E would replace approximately 57 existing wood poles with steel poles. Because of the amount of equipment required to operate during construction activities, pollutant emissions are anticipated to occur, but would be dispersed throughout the air basin according to the specific locations of construction.

Based on the currently anticipated schedule and construction equipment required, the Existing Alignment would emit a maximum of approximately 0.5 ton per year of volatile organic compounds (VOCs), well below the General Conformity applicability *de minimis* threshold for VOCs. In addition, construction of the Existing Alignment would emit a maximum of approximately 2.3 tons per year of carbon monoxide (CO), which also falls below the General Conformity applicability *de minimis* threshold for CO. The largest emission would be of nitrogen oxides (NO_x); the maximum annual emission of this pollutant would be approximately 4.3 tons per year, which is also well below the federal threshold of 100 tons per year that would be applied were San Diego County (County) a nonattainment area for this pollutant.

Maximum daily pollutant emissions resulting from heavy equipment used during construction are anticipated to exceed levels established by the SDAPCD for VOCs, NO_x, CO, and particulate matter (PM) less than 2.5 microns in diameter (PM_{2.5}). Table 2: SDAPCD Criteria Air Pollutant Exceedances During Construction lists the threshold and maximum daily emissions rate (lbs/day) during the approximately three-month construction schedule for all criteria air pollutants, as well as the approximate emissions during construction of the Existing Alignment.

Table 2: SDAPCD Criteria Air Pollutant Exceedances During Construction

Pollutant	Threshold (lbs/day)	Project-Wide Maximum (lbs/day)	Existing Alignment Maximum (lbs/day)
VOCs	75	136.56	39.24
NO _x	250	1,082.4	14.88
CO	550	571.08	169.20
Sulfur Dioxide (SO ₂)	250	1.52	0.48
PM less than 10 microns in diameter (PM ₁₀)	100	71.18	15.96
PM _{2.5}	55	63.18	15.96

In addition to emissions from heavy equipment use, wood-to-steel pole replacement would involve a relatively small amount of daily ground disturbance, which would contribute to an increase of fugitive dust in the vicinity of the Existing Alignment. The majority of ground disturbance and the potential for fugitive dust would result from the establishment and use of temporary work areas, including staging and stringing sites, pole work areas, and fly yards. According to the design of the Existing Alignment, however, a total of only approximately 0.86 acre of temporary ground disturbance would occur from construction activities. Because ground disturbance would be relatively small in size at each construction location and fugitive dust emissions would be limited to the areas surrounding the Existing Alignment work areas, impacts from PM_{2.5} resulting from fugitive dust emissions are anticipated to be minor.

Potential air quality impacts from airborne dust may occur as a result of the use of existing access roads and temporary work areas. However, airborne dust generated during access road use would be limited to the immediate vicinity of the access road and would occur only instantaneously as vehicles traverse the access roads. For temporary work areas, airborne dust would be controlled using water application, as described in the Revised POD. As previously noted, tree removal is not anticipated to be required for construction of the Existing Alignment.

Following construction, operation and maintenance of the Existing Alignment would occur similarly to those activities currently conducted for the existing power line. The only operation and maintenance emissions associated with the Existing Alignment would be from crew trucks, helicopters, and other equipment accessing the electric lines to perform periodic inspections and maintenance activities. These inspections and maintenance activities currently occur annually and are not anticipated to increase in frequency following the completion of the Existing Alignment. As a result, the Existing Alignment activities are not expected to exceed the SDAPCD's operational emission thresholds, and no operational impact to air quality is anticipated. Because the Existing Alignment is shorter than the Realignment Alternative, thus requiring that fewer poles be maintained, operational emissions for this alternative would be slightly lower than those anticipated for the Realignment Alternative.

3.0.2 Realignment Alternative Analysis

The Realignment Alternative would relocate approximately 1.1 miles of the Existing Alignment between the Pine Creek and Hauser wilderness areas, beginning at approximately pole P278722, following Skye Valley Road for approximately 2,000 feet before crossing the northern inlet of Barrett Lake, then following Forest Route 17504 for approximately one mile before connecting with the existing alignment at approximately pole P278741. The Realignment Alternative would measure approximately 4.1 miles in total. Construction activities for the Realignment Alternative would include the replacement of 36 wood poles with steel poles. Approximately 1.1 miles of existing ROW would be restored for the Realignment Alternative. Construction equipment required would be similar to that used for the Existing Alignment.

The timing to construct the Realignment Alternative may overlap with portions of the activities associated with the Existing Alignment. Given the potential for overlapping activities and the greater level of effort required during construction of the Realignment Alternative, pollutant emissions from the use of heavy equipment would be greater than the emissions resulting from construction activities associated with the Existing Alignment. The exact pollutant emissions are unknown at this time due to the lack of a complete construction schedule and power line design; however, it is anticipated that the inclusion of the Realignment Alternative could be constructed using a similar number of crews and equipment used for the remainder of C157. It is also anticipated that the Realignment Alternative would be constructed using a phased approach. When considered alone, the replacement of the Existing Alignment with the Realignment Alternative is not anticipated to trigger additional exceedances of the established SDAPCD thresholds for VOCs, NO_x, CO, SO₂, PM₁₀, and PM_{2.5}.

In addition to emissions from heavy equipment use, construction of the Realignment Alternative would involve establishing approximately 1.07 acres of temporary work areas, resulting in additional ground disturbance in previously undisturbed areas and an increase of fugitive dust from earthmoving activities. Due to the increased amount of ground disturbance required to establish work areas along the Realignment Alternative, fugitive dust emissions would be greater than those associated with the Existing Alignment. Because the increased level of ground disturbance would be relatively small in size and limited to small portions of the Proposed Projects each day, and because the fugitive dust emissions would typically be limited to the areas surrounding each work area, impacts from increased levels of PM₁₀ and PM_{2.5} are anticipated to be minor. Although no additional access roads are currently anticipated to be required for the Realignment Alternative, if additional roads are later determined to be necessary then impacts to air quality would increase.

No tree removal is anticipated to be required for construction of the Realignment Alternative. As a result, the Realignment Alternative would not result in additional greenhouse gas emissions when compared to the Existing Alignment.

The only operational emissions associated with the Realignment Alternative would be from crew trucks, helicopters, and other equipment accessing the power line to perform periodic inspections and maintenance activities. There would be no increase in the frequency of inspections and maintenance activities following construction of the Realignment Alternative. As a result, the Realignment Alternative is not expected to exceed the SDAPCD's operational emission

thresholds and no impact to air quality is anticipated from operation and maintenance of this alternative.

Because the Realignment Alternative would require additional ground disturbance and construction vehicle operation time, air quality impacts would be greater than those anticipated for the Existing Alignment.

3.1 BIOLOGICAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to biological resources that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.1.0 Methodology and Assumptions

Methods for identifying sensitive biological resources and potential impacts to species resulting from the construction of the Existing Alignment and the Realignment Alternative are detailed in the Revised POD. From 2010 to 2012, focused surveys for targeted rare plant and wildlife species were conducted for the Existing Alignment. Focused surveys for targeted rare plant and wildlife species have not been conducted for the Realignment Alternative. Instead, general field reconnaissance data on vegetation communities and habitat types for the Realignment Alternative were collected during pedestrian surveys in January 2014. Based on the results of these surveys and the proximity of known species occurrences, SDG&E assumed for the purposes of this analysis that the potential for species to occur along the Realignment Alternative would be similar to those identified for the Existing Alignment. Should the Realignment Alternative be selected, additional field surveys would be required to fully capture the potential impacts to biological resources from the alternative.

3.1.1 Existing Alignment Analysis

The Existing Alignment is situated between 1,600 feet and 2,500 feet above mean sea level. Six vegetation communities occur within the Existing Alignment: mixed oak woodland, native grassland, non-native grassland, semi-desert chaparral, southern mixed chaparral, and southern riparian forest. The Existing Alignment is located within critical habitat designated by the U.S. Fish and Wildlife Service (USFWS) for arroyo toad (*Anaxyrus californicus*).

Based on the proximity of known species occurrences and the results of focused surveys conducted for the existing alignment of C157, four special-status plant species and five special-status wildlife species were determined to be present within the ROW or have a high potential to occur based on the specific habitat types and elevations found along the ROW. These species, their respective listing statuses, and their inclusion under SDG&E's Natural Community Conservation Plan (NCCP) and the Low-Effect Habitat Conservation Plan (HCP) for the Quino Checkerspot Butterfly (QCB) are shown in Table 3: Special-Status Plant Species' Potential to Occur Along the Existing Alignment and Table 4: Special-Status Wildlife Species' Potential to Occur Along the Existing Alignment.

Construction of the Existing Alignment would result in temporary disturbances to and permanent loss of vegetation. Temporary disturbances include short-term impacts during installation of new steel poles and removal of existing wood poles, improvements to existing access roads, and

Table 3: Special-Status Plant Species' Potential to Occur Along the Existing Alignment

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
San Diego thornmint ² <i>Acanthomintha ilicifolia</i>	FT, CE, USFS S 1B.1 BLM S	✓	No
Dean's milk-vetch ² <i>Astragalus deanei</i>	USFS S 1B.1 BLM S		Present
Jacumba milk-vetch ² <i>Astragalus douglasii</i> var. <i>perstrictus</i>	USFS S 1B.2 BLM S		Present
San Diego milk-vetch ² <i>Astragalus oocarpus</i>	USFS S 1B.2 BLM S		Present
Orcutt's brodiaea ² <i>Brodiaea orcuttii</i>	USFS S 1B.1 BLM S	✓	No
Dunn's mariposa lily ² <i>Calochortus dunnii</i>	USFS S 1B.2 BLM S	✓	No
Payson's jewel-flower ² <i>Caulanthus simulans</i>	USFS S 4.2	✓	No

¹ Explanation of state and federal listing codes

Federal listing codes:

FE: Federally listed as Endangered
 FT: Federally listed as Threatened
 USFS S: USFS Sensitive
 BLM S: Bureau of Land Management (BLM) Sensitive Species
 BGEPA: Bald and Golden Eagle Protection Act

California listing codes:

CE: State-listed as Endangered
 CT: State-listed as Threatened
 Rare: State-listed as Rare
 FPS: State-listed Fully Protected
 SSC: State Species of Special Concern

California Native Plant Society lists:

1B.1: Rare, threatened, or endangered in California or elsewhere; seriously threatened in California
 1B.2: Rare, threatened, or endangered in California or elsewhere; fairly threatened in California
 1B.3: Rare, threatened, or endangered in California or elsewhere; not very threatened in California
 2.1: Rare, threatened, or endangered in California only; seriously threatened in California
 2.2: Rare, threatened, or endangered in California only; fairly threatened in California
 2.3: Rare, threatened, or endangered in California only; not very threatened in California
 3: Plants that are on a review list and require additional information
 4.1: Uncommon in California; seriously threatened in California
 4.2: Uncommon in California; fairly threatened in California
 4.3: Uncommon in California; not very threatened in California

² Special-status species that were targeted during focused surveys.

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Long-spined spineflower ² <i>Chorizanthe polygonoides</i> var. <i>longispina</i> ³	1B.2		No
Delicate clarkia ² <i>Clarkia delicata</i> ³	1B.2		Present
Tecate tarplant ² <i>Deinandra floribunda</i>	USFS S 1B.2 BLM S		No
Variiegated dudleya <i>Dudleya variegata</i>	1B.2 BLM S	✓	Low
Vanishing wild buckwheat ² <i>Eriogonum evanidum</i>	USFS S 1B.1		No
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE, Rare 1B.1 BLM S		No
Palmer's grappling-hook <i>Harpagonella palmeri</i>	4.2	✓	Low
Tecate cypress ² <i>Hesperocyparis forbesii</i>	USFS S 1B.1 BLM S	✓	No
Cuyamaca cypress ² <i>Hesperocyparis stephensonii</i>	USFS S 1B.1		No
Ramona horkelia ² <i>Horkelia truncata</i>	USFS S 1B.3		No
Parish's meadowfoam ² <i>Limnanthes gracilis</i> ssp. <i>parishii</i>	USFS S CE 1B.2 BLM S		No
Orcutt's linanthus ² <i>Linanthus orcuttii</i>	USFS S 1B.3 BLM S		No
Felt-leaved monardella ² <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	USFS S 1B.2	✓	No
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	1B.3		Low
San Felipe monardella <i>Monardella nana</i> ssp. <i>leptosiphon</i>	1B.2 BLM S		Low

³ This species was removed from the Regional Forester's Sensitive Species List in 2013.

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
California orcutt grass <i>Orcuttia californica</i>	FE, CE 1B.1	✓	Low
Gander's ragwort ² <i>Packera ganderi</i>	USFS S Rare 1B.2 BLM S	✓	No
Moreno currant ² <i>Ribes canthariforme</i>	USFS S 1B.3 BLM S		No
Southern skullcap ² <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	USFS S 1B.2		No
Laguna Mountains jewelflower ² <i>Streptanthus bernaldenis</i> ³	4.3		No
Southern jewelflower ² <i>Streptanthus campestris</i>	USFS S 1B.3		No
San Bernardino aster ² <i>Symphyotrichum defoliatum</i>	1B.2 BLM S		No
Velvety false-lupine ² <i>Thermopsis californica</i> var. <i>semota</i>	USFS S 1B.2		No

Table 4: Special-Status Wildlife Species' Potential to Occur Along the Existing Alignment

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Invertebrates			
Quino checkerspot butterfly ² <i>Euphydryas editha quino</i>	FE	✓	No
Hermes copper butterfly ² <i>Lycaena hermes</i>	Not currently listed		High
Laguna Mountains skipper <i>Pyrgus ruralis lagunae</i>	FE		No
Fish			
Arroyo chub <i>Gila orcutti</i>	USFS S SSC		No
Amphibians			
Arroyo toad ² <i>Anaxyrus californicus</i>	FE, SSC	✓	High
Large-blotched salamander <i>Ensatina klauberi</i>	USFS S SSC		Low
Reptiles			
California legless lizard <i>Anniella pulchra</i>	SSC USFS S		Low
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	SSC	✓	Low
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	SSC, USFS S	✓	Present
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	SSC	✓	Low
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	SSC, USFS S		Low
Coastal rosy boa <i>Lichanura trivirgata roseofusca</i>	BLM S, USFS S	✓	Low
Coast (San Diego) horned lizard <i>Phrynosoma coronatum blainvillii</i>	SSC, USFS S	✓	High
Coronado Island Skink <i>Plestiodon (Eumeces) skiltonianus interparietalis</i>	SSC	✓	Low

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i>	SSC	✓	Low
Two-striped garter snake <i>Thamnophis hammondi</i>	SSC, BLM S USFS S	✓	Low
Birds			
Tricolored blackbird – nesting colony <i>Agelaius tricolor</i>	SSC	✓	Low
Golden eagle <i>Aquila chrysaetos</i>	FPS BGEPA	✓	No
Southwestern willow flycatcher ² <i>Empidonax traillii extimus</i>	FE	✓	No
Coastal California gnatcatcher ² <i>Poliophtila californica californica</i>	FT, SSC	✓	Low
California spotted owl ² <i>Strix occidentalis occidentalis</i>	SSC, USFS S		No
Least Bell's vireo ² <i>Vireo bellii pusillus</i>	FE, CE	✓	High
Mammals			
Pallid bat <i>Antrozous pallidus</i>	SSC, USFS S BLM S		Low
Dulzura (California) pocket mouse <i>Chaetodipus californicus femoralis</i>	SSC	✓	Low
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	SSC	✓	Low
Pallid San Diego pocket mouse <i>Chaetodipus fallax pallidus</i>	SSC	✓	No
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC, USFS S BLM S		Low
Stephens' kangaroo rat ² <i>Dipodomys stephensi</i>	FE, CT	✓	No
Western red bat <i>Lasiurus blossevillii</i>	SSC, USFS S		Low
California leaf-nosed bat <i>Macrotus californicus</i> ³	SSC		No
American badger <i>Taxidea taxus</i>	SSC	✓	Low

work at staging/laydown areas, stringing sites, and landing zones. Permanent impacts would result in an area roughly the diameter of the replacement poles where steel poles would be installed. The Existing Alignment would result in a temporary impact area of approximately 0.87 acre, and a permanent impact area of less than approximately 0.01 acre. These temporary and permanent impacts are summarized by habitat type in Table 5: Vegetation Community Impacts of the Existing Alignment and the Realignment Alternative in Approximate Acres.

Table 5: Vegetation Community Impacts of the Existing Alignment and the Realignment Alternative in Approximate Acres

Habitat Type	Existing Alignment		Realignment Alternative	
	Permanent	Temporary	Permanent	Temporary
Mixed Oak Woodland	<0.01	0.02	<0.01	0.02
Native Grassland	<0.01	0.16	<0.01	0.17
Non-Native Grassland	<0.01	0.19	<0.01	0.25
Semi-Desert Chaparral	<0.01	0.09	<0.01	0.09
Southern Mixed Chaparral	<0.01	0.39	<0.01	0.52
Southern Riparian Forest	<0.01	0.02	<0.01	0.02
Total	<0.01	0.87	0.01	1.07

Potential impacts to special-status plant species may include the temporary or permanent loss of habitat, including loss of habitat that supports the species, and loss of potential seed bank due to the excavation of pole holes, consistent with construction activities conducted for other similar wood-to-steel replacement projects. Other impacts may include potential crushing by equipment, vehicles, and personnel working within suitable or occupied habitat. Equipment and vehicles for the Proposed Projects may introduce noxious weeds that compete with special-status species, or may result in petroleum product or other chemical spills that negatively affect special-status plant species and habitat. In addition, impacts such as an increase in fugitive dust could reduce the growth and vigor of special-status plant species. However, these impacts would be avoided and/or minimized with the implementation of the measures in the NCCP and QCB HCP.

One special-status invertebrate species—Hermes copper butterfly (*Lycaena hermes*)—may be impacted by the construction of the Existing Alignment. Impacts to this species include potential crushing of larvae or adults by equipment, vehicles, and personnel working within suitable habitat. Other impacts may include the permanent and temporary loss of habitat, including loss of vegetation (larval host plants and adult nectaring plants) that support the species. Vehicles and equipment may introduce noxious weeds, which have the potential to out-compete host and nectar plants. In addition, an increase in fugitive dust could reduce the growth and vigor of host

and nectar plant species. In order to minimize these potential impacts, SDG&E would implement all appropriate measures in the NCCP.

Construction of the Existing Alignment would likely impact habitat for one special-status amphibian species, the arroyo toad. Water features within the immediate vicinity of the ROW may provide suitable habitat for arroyo toad and USFS “occupied” records exist in Pine Valley Creek with a location documented approximately two miles upstream of the Existing Alignment. Construction of the Existing Alignment may impact this special-status amphibian species by temporarily and permanently affecting suitable and occupied habitat. Temporary impacts to arroyo toad may also be caused by the disruption of hibernating, feeding, and breeding from increased human activity; an increase in vehicles and equipment noise; direct mortality by vehicles; and crushing or removal of subterranean refuge. Amphibians have the potential to fall into and become trapped within the pole excavation areas. Impacts to water features from pole replacement on the Existing Alignment could result from the degradation of water quality from the introduction of sediment or hazardous materials. Permanent impacts may also result from the loss of suitable upland habitat since arroyo toads are known to disperse up to one mile from breeding habitat. However, permanent impacts from the construction of the Existing Alignment would be limited because the percentage of suitable habitat that would be removed is extremely small in comparison to the total amount of available habitat for this species in the area. In addition, C157 crosses USFWS-designated arroyo toad critical habitat. However, no poles or work areas are located within arroyo toad critical habitat; therefore, there would be no impacts to critical habitat along the Existing Alignment.

Construction of the Existing Alignment may impact two special-status reptiles: southwestern pond turtle (*Clemmys marmorata pallida*), and coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii*). Impacts to reptiles may include disturbance caused by the increase of vehicles and equipment noise. Human activity may also disrupt hibernating, feeding, and breeding behavior. Direct mortality may be caused by crushing from vehicles and equipment. Construction activity may also result in the removal of burrows these species often utilize. Impacts to water features that these species use could result from the degradation of water quality from the introduction of sediment or hazardous materials during construction. In addition, removal of vegetation may reduce the amount of cover that reptile species have to avoid predators. Other permanent impacts from the construction of the Existing Alignment would be minor given the total size of permanent impacts with respect to the amount of suitable habitat in the area.

Construction activities could also potentially impact nesting raptors, passerines, and other special-status bird species. Least Bell’s vireo (*Vireo bellii pusillus*) was determined to have a high potential to occur within the Existing Alignment. This species is typically associated with riparian areas; therefore, suitable nesting and foraging habitat for least Bell’s vireo may be temporarily lost as a result of tree-trimming activities within riparian areas. However, impacts would be limited because the percentage of suitable habitat that would be removed is extremely small in comparison to the total amount of available riparian habitat for this species in the Existing Alignment area. General impacts to all avian species may include the removal of potential nesting and cover habitat and the disruption of nesting behavior due to a temporary increase in noise from construction equipment and vehicles. Construction activities could also potentially impact foraging raptors. Impacts may include minor degradation of foraging habitat,

removal of some food sources, and the disruption of foraging behavior due to a temporary increase in noise from construction equipment and vehicles. Other permanent impacts on avian species from the construction of the Existing Alignment would be minor because no trees would be removed, and because the total size of permanent impacts would be minimal with respect to the amount of suitable nesting and foraging habitat for these species in the area.

Concerns regarding potential electrocution and collision impacts to wildlife species from electric lines are primarily focused on avian species. Electrocution of avian species can occur from wing contact as avian species perch, land, or take off from a utility pole by coming into simultaneous contact with two conductors to complete the electrical circuit; simultaneous contact with energized phase conductors and other equipment; and simultaneous contact with energized wires and a grounded wire. Electrocution of avian species is more of a potential hazard to larger birds, such as raptors, because their body size and wing span are large enough to span the distance between the conductor wires and, thus, complete the electrical circuit. Potential impacts to avian species resulting from collisions with power lines, poles, and other facilities include bird injury and mortality. All structures would be constructed in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines in order to avoid or minimize bird electrocutions and collisions. The Existing Alignment includes only the replacement of existing electric lines and does not include the construction of any new electric lines; therefore, the electrocution and collision risk would not increase from that posed by the existing lines.

Following completion of construction activities, operation and maintenance of the Existing Alignment facilities would occur in the same manner that is currently conducted for the existing facilities. In addition, the replacement steel poles would require less frequent inspection, repairs, and routine maintenance than the existing wood poles. As a result, any potential impacts to biological resources from operation and maintenance of the Existing Alignment facilities would be less than those presented by the facilities currently in operation.

3.1.2 Realignment Alternative Analysis

The Realignment Alternative is located approximately 0.25 mile from the existing alignment at its farthest point. It is situated at the same elevation as the Existing Alignment. Vegetation communities along the Realignment Alternative are similar to those found along the Existing Alignment. Based on the similarity of habitat and the proximity of known species occurrences, it is anticipated that special-status plant and wildlife species have a similar potential to occur on the Realignment Alternative as they do along the Existing Alignment, as shown in Table 3: Special-Status Plant Species' Potential to Occur Along the Existing Alignment and Table 4: Special-Status Wildlife Species' Potential to Occur Along the Existing Alignment. As previously noted, however, focused surveys for targeted rare plant and wildlife species have not been conducted for the Realignment Alternative. Therefore, additional surveys would be needed to determine the presence or absence of special-status species along the Realignment Alternative.

Due to the similar vegetation and species present on both alignments, many of the potential impacts of the Realignment Alternative would be similar to those described for the Existing Alignment. However, because the Realignment Alternative would also include the removal of existing wood poles in the Existing Alignment, as well as the installation of new steel poles in a previously undisturbed area, there would be slightly more temporary impacts associated with the

Realignment Alternative as opposed to the Existing Alignment. The Realignment Alternative would result in a temporary impact area of approximately 1.07 acres, and a permanent impact area of approximately 0.01 acre. These temporary and permanent impacts are summarized by habitat type in Table 5: Vegetation Community Impacts of the Existing Alignment and the Realignment Alternative in Approximate Acres. In addition, the Realignment Alternative has two poles that are located within USFWS-designated arroyo toad critical habitat. Therefore, construction of the Realignment Alternative would result in a temporary impact area of approximately 0.14 acre and a permanent impact area of less than 0.01 acre to arroyo toad critical habitat. No impacts to arroyo toad critical habitat are anticipated along the Existing Alignment. Although no additional access roads are currently anticipated to be required for the Realignment Alternative, if additional roads are later determined to be necessary then impacts to biological resources would likely increase.

Following the completion of construction activities, operation and maintenance of the Realignment Alternative would occur in the same manner in which it is currently conducted for the Existing Alignment. Therefore, potential impacts to biological resources from operation and maintenance of the Realignment Alternative would be similar to those for the Existing Alignment.

3.2 CULTURAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to cultural resources that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.2.0 Methodology and Assumptions

SDG&E previously conducted a records search and intensive pedestrian surveys for cultural resources in the vicinity of the existing C157. Details regarding the methods used and results of the records search and pedestrian surveys are detailed in Section 10.2 Cultural Resources in the Revised POD. Pedestrian surveys for cultural resources were conducted at each pole location for the Realignment Alternative in January 2014.

3.2.1 Existing Alignment Analysis

As described in the Revised POD, one previously recorded archaeological resource was identified within 300 feet of proposed pole locations and work areas along the Existing Alignment and required specific impact avoidance measures in the Revised POD. One additional archaeological resource was identified during surveys for the Existing Alignment; however, landowner access was not granted and proper documentation of the site could not be conducted. During the initial assessment for C157, a sacred lands search was conducted at the Native American Heritage Commission and letters were sent to the local tribes. No tribal concerns or traditional cultural properties were identified for the Existing Alignment.

Intensive pedestrian surveys are recommended in the eastern portion of the Existing Alignment—where access was denied—to ensure cultural resources are not impacted. Implementation of avoidance measures would ensure that impacts to sensitive cultural resources are avoided or minimized.

Construction, operation, and maintenance of the Existing Alignment would also continue to utilize existing access roads that have been established over an extended period of time and maintained under SDG&E's existing authorizations. Because no new access roads would be needed for the Existing Alignment, and because the proposed design has already incorporated changes to avoid known cultural resources in the vicinity of the alignment, no impacts to cultural resources would likely occur along the Existing Alignment during construction. Similarly, operation and maintenance of the Existing Alignment would continue to occur consistent with existing practices under SDG&E's standard operation restrictions for the current alignment. As a result, no impacts to cultural resources from operation and maintenance activities are anticipated to occur for the Existing Alignment.

3.2.2 Realignment Alternative Analysis

Pedestrian surveys were conducted in January 2014 of proposed pole locations along the Realignment Alternative. These surveys did not identify any potential cultural resources in the immediate vicinity of the pole locations and associated work areas; however, intensive pedestrian surveys would be required and monitoring during construction activities would occur to confirm that any potential cultural resources are avoided.

With the inclusion of the ordinary operating procedures and applicant-proposed measures identified in the Revised POD, no impacts to cultural resources are anticipated to occur during construction of the Realignment Alternative. Following construction, operation and maintenance of the Realignment Alternative would occur in a manner and frequency consistent with existing operation and maintenance activities along C157; therefore, no impacts to cultural resources are anticipated to occur.

3.3 FIRE HAZARDS

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts from fire hazards that could result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.3.0 Methodology and Assumptions

The methodology used to compare anticipated impacts from the Existing Alignment and the Realignment Alternative is the same that was used in the Revised POD. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) classifications were used to assess the fire severity zones and fire threat to people along the Existing Alignment and the Realignment Alternative.

3.3.1 Existing Alignment Analysis

As depicted in Figure 2: Fire Hazard Severity Map, approximately 99 percent of Existing Alignment components would be located in a very high fire hazard severity zone, while the remaining one percent would be located in a high fire hazard severity zone. FRAP classifies the entire area of the Existing Alignment as having an extreme fire threat to people.

As described in the Revised POD, the County supports dense, drought-adapted shrub lands that are highly flammable as a result of its Mediterranean-type climate. Santa Ana winds create

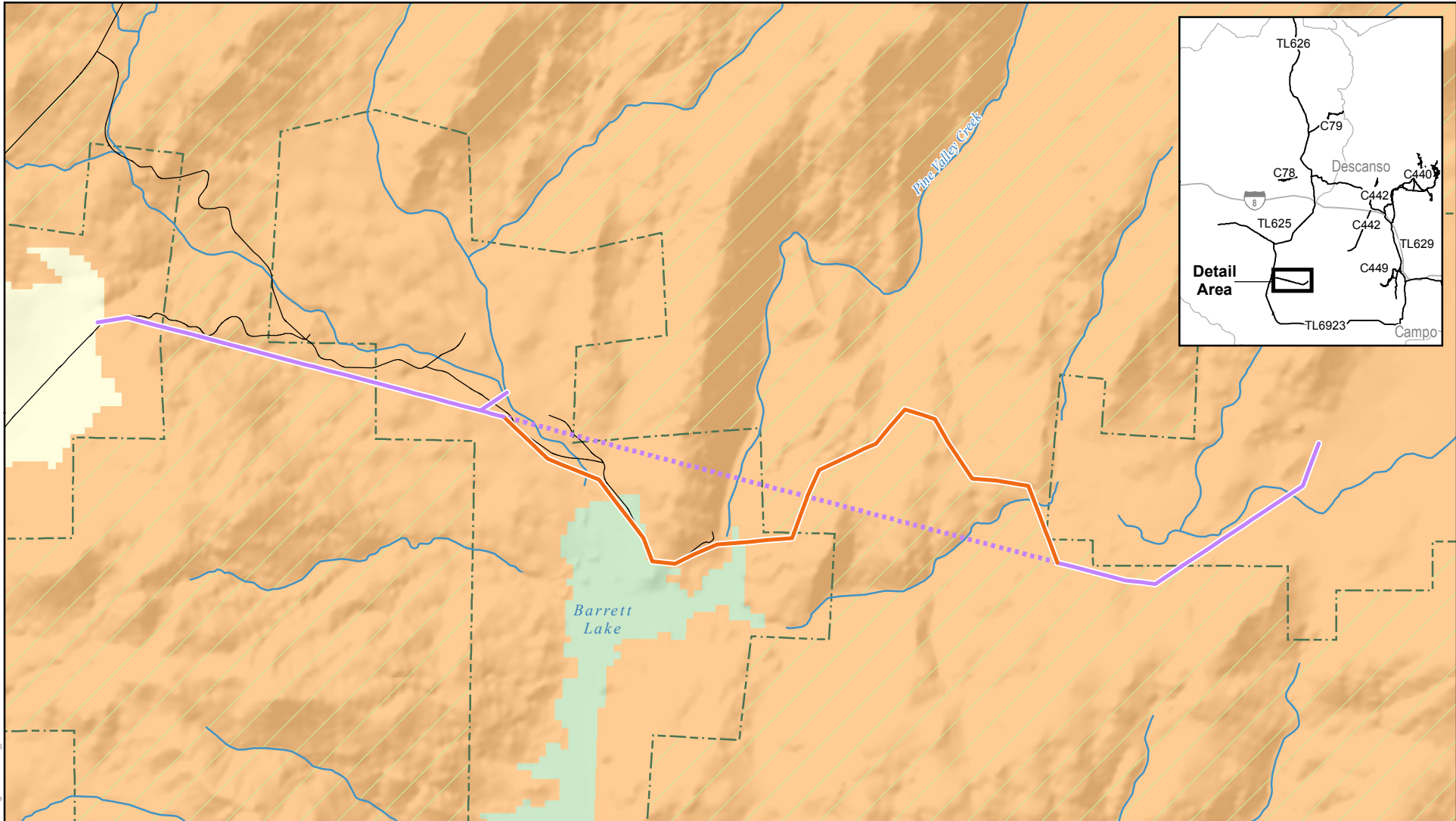
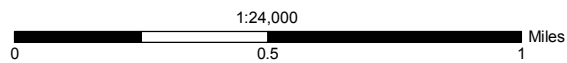


Figure 2: Fire Hazard Severity Map

Distribution Line C157 Alternative Route Analysis

- | | | |
|-----------------------|--|------------------------------|
| Fire Severity* | Existing Alignment/Realignment Alternative | United States Forest Service |
| Very High | Realignment Alternative Reroute | Road |
| High | Remove Existing Alignment | Stream |
| Moderate | | |

*FRAP data displayed is a composite of the most recent recommended and approved hazard classifications, composed of 2007 and 2008 datasets.



extremely dangerous fire conditions, which can cause electric lines to touch, fall, or come in contact with adjacent vegetation, causing sparks which could ignite potentially damaging wildfires. SDG&E has developed operating protocols and safety standards that minimize the risk of wildland fires during SDG&E construction activities. Specifically, wildland fire prevention during construction is governed internally by SDG&E through implementation of Electric Standard Practice (ESP) No. 113-1 Wildlife Fire Prevention & Fire Safety, as described in Section 7.4 Fire Preparedness of the Revised POD.

Fire hardening of the Existing Alignment is being undertaken in part to minimize the risk of wildfires that exists when certain atmospheric conditions occur within geographic areas designated as having high- to extreme-risk fire threats. The Existing Alignment is consistent with SDG&E's long-term plan to improve service reliability in fire-prone areas through system hardening or other enhancements. Consistent with the requirements of California Public Utilities Commission General Order 95, construction of the Existing Alignment would include the following:

- replace existing wood poles with new steel poles designed to withstand higher wind speeds;
- increase conductor spacing to maximize line clearances;
- install new conductors and remove potentially weak spliced locations; and
- install longer polymer insulators to minimize contamination, which would improve system reliability during extreme weather conditions and reduce potential fire hazards from the power line.

There is one private residence located less than approximately 15 feet from the Existing Alignment. The Camp Barrett Juvenile Correctional Facility is located approximately 150 feet from the Existing Alignment. With these design features and the minimal number of structures in close proximity to the Existing Alignment, exposure of people or structures to loss, injury, or death involving wildland fires would not pose a significant risk, but would, in fact, be significantly reduced by comparison to the existing conditions.

Construction activities have the potential to start a fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated fire hazard severity. In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. As described in the Revised POD, SDG&E would implement ESP No. 113-1 and SDG&E Electric Distribution Operation (EDO) Procedure 3017 EDO's Requirements During SDG&E Fire Conditions, as well as the SDG&E Operation and Maintenance Project Fire Plan (CNF Fire Plan), to assist in safe practices to prevent fires.

Operation and maintenance of the power lines included in the Existing Alignment would not differ from those of the existing facilities. Potential fire hazards would be reduced following fire hardening of the Existing Alignment. SDG&E would continue to implement ESP 113-1, EDO Procedure 3017, and the CNF Fire Plan—as described in Section 7.4 Fire Preparedness of the

Revised POD—to ensure that the proper steps are taken to maintain fire safety while meeting all operational and service requirements.

3.3.2 Realignment Alternative Analysis

The possible causes and types of potential impacts from fire hazards due to construction, operation, and maintenance of the Realignment Alternative would be similar to those described for the Existing Alignment. Approximately 94 percent of new construction for the Realignment Alternative would be located in a very high fire hazard severity zone, less than approximately one percent would be located in a high fire hazard severity zone, and approximately six percent would be located in a moderate fire severity zone, as depicted in Figure 2: Fire Hazard Severity Map. Operation and maintenance activities would generally be the same as for the Existing Alignment. The Realignment Alternative alignment would also be located completely within an extreme high fire threat classification area. As with the Existing Alignment, one private residence is located less than approximately 15 feet from the Realignment Alternative alignment, and the Camp Barrett Juvenile Correctional Facility is located approximately 150 feet from the Realignment Alternative alignment. Although the Realignment Alternative would require a greater number of work areas compared to the Existing Alignment, the potential fire hazard impacts would be similar in nature and severity to those anticipated for the Existing Alignment.

3.4 HYDROLOGY AND WATER QUALITY

The following subsections describe the methods and assumptions used to analyze potential impacts, describe water resources, and provide potential impacts to hydrology and water quality that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.4.0 Methodology and Assumptions

The methods for identifying water resources and potential impacts to hydrology and water quality that may result from the construction of the Existing Alignment and the Realignment Alternative are the same as those detailed in the Revised POD. Field surveys to identify potentially jurisdictional wetlands or waters of the U.S. within 50 feet of pole locations and work areas were conducted for the Existing Alignment in February and April 2012. Field surveys for potentially jurisdictional wetlands or waters of the U.S. were conducted for the Realignment Alternative in January 2014. Results of field surveys and data from the USFS on riparian conservation areas (RCAs) were used for this comparison of impacts.

3.4.1 Existing Alignment Analysis

Approximately half of the Existing Alignment is located within the CNF. The Existing Alignment crosses USFS-identified RCAs and RCAs only occur on USFS land; however, similar riparian areas to RCAs are located outside of the CNF boundary within the ROW of the Existing Alignment. As a result, the Existing Alignment would temporarily impact approximately 0.27 acre of RCAs and similar riparian areas during construction, and would permanently impact less than approximately 0.01 acre of these areas from the installation of the replacement steel poles. Table 6: Temporary and Permanent Impacts to RCAs and Riparian Areas describes these potential impacts in greater detail. The Existing Alignment is located approximately 0.4 mile north of Barrett Lake and crosses over Pine Valley Creek. In addition, a few unnamed,

Table 6: Temporary and Permanent Impacts to RCAs and Riparian Areas

Line	Approximate Number of Direct-Bury Poles	Approximate Number of Poles to be Removed	Approximate Number of Work Areas	Approximate Temporary Impact (acres)	Approximate Permanent Impact (acres)
Existing Alignment	30	30	1	0.27	<0.01
Realignment Alternative	36	33	1	0.30	<0.01

intermittent creeks and drainages are present throughout the Existing Alignment ROW. No hydrological features were identified within pole work areas, stringing sites, or fly yards along the Existing Alignment. Impacts to nearby hydrological features have the potential to occur from sediment runoff or erosion resulting from clearing and grading activities associated with the creation of work areas, pole installation and removal, vegetation clearing, and changing runoff patterns during rain and snowmelt if temporarily disturbed areas are not stabilized. Impacts to water features could also result from the degradation of water quality from the introduction of sediment.

The installation of direct-bury poles requires the excavation of holes for pole-setting. Poles that encounter groundwater during excavation may require dewatering, which can increase the potential for sedimentation if not performed properly. However, dewatering would not likely be necessary due to the small diameter of the excavation holes and the location of the groundwater table in the vicinity of the Existing Alignment.

A portion of the Existing Alignment is within a watershed that drains to Barrett Lake, which is a 303(d)-listed waterbody. Specific requirements would be incorporated into the Storm Water Pollution Prevention Plan—including appropriate best management practices and a sampling and monitoring plan—to mitigate potential impacts to waterbodies. Implementation of site-specific erosion and sediment control devices and the proper handling of potentially hazardous materials would ensure that the work does not contribute to the pollutant load for Barrett Lake.

The operation and maintenance activities required for the Existing Alignment would be similar to those currently conducted for the existing distribution line. In addition, less frequent maintenance of the electric lines would be required in comparison to what is currently needed for the existing wood poles. Following construction, the ROW, work areas, stringing sites, staging areas, and fly yards would be returned to pre-construction conditions, where feasible, which would include re-establishing drainage patterns and vegetation. Existing access roads would be utilized to access the replacement poles where helicopter-only access is not required. Because no new roads would be constructed and temporary work areas would be returned to pre-construction conditions, there would be no new impacts associated with operation and maintenance of the Existing Alignment.

3.4.2 Realignment Alternative Analysis

Water resources and potential impacts to hydrology and water quality resulting from construction, operation, and maintenance of the Realignment Alternative are similar to those described for the Existing Alignment. However, since the Realignment Alternative also involves the removal of existing wood poles in the Existing Alignment and installation of new steel poles in a previously undisturbed area, more impacts would result from the Realignment Alternative as opposed to the Existing Alignment.

Construction of the Realignment Alternative would result in slightly more impacts to RCAs and riparian areas than the Existing Alignment, as shown in Table 6: Temporary and Permanent Impacts to RCAs and Riparian Areas. Construction of the Realignment Alternative would result in approximately 0.3 acre of temporary impacts and less than approximately 0.01 acre of permanent impacts to riparian areas.

One hydrologic feature is located within pole work areas, stringing sites, and fly yards for the Realignment Alternative due to an ephemeral drainage located approximately 10 feet north of pole P13. Potential impacts to this hydrologic feature may result from sediment runoff or erosion resulting from clearing and grading activities associated with the creation of the work area, pole installation, vegetation clearing, and changing run-off patterns during rain and snowmelt if temporarily disturbed areas are not stabilized. Prior to construction, this drainage would be mapped and avoided, and impacts would be minimized to the extent feasible. Although no additional access roads are currently anticipated to be required for the Realignment Alternative, if additional roads are later determined to be necessary then impacts to hydrology and water quality would likely increase.

Following the completion of construction activities, operation and maintenance of the Realignment Alternative would occur in the same manner in which it is currently conducted for the Existing Alignment. Therefore, potential impacts to hydrology and water quality from operation and maintenance of the Realignment Alternative would be similar to those for the Existing Alignment.

Because the Realignment Alternative would have more impacts to RCAs and riparian areas and may potentially impact one hydrologic feature, potential impacts to hydrological resources would be greater for the Realignment Alternative than for the Existing Alignment.

3.5 NOISE

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts from noise that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.5.0 Methodology and Assumptions

Because the noise measurement location used for the Existing Alignment is close to the Realignment Alternative alignment, no additional noise surveys were conducted. Construction equipment and schedules are anticipated to be approximately the same.

Similar to the analysis provided in the Revised POD, SDG&E assumed for this analysis that all new steel poles along the Realignment Alternative alignment would be helicopter-set, direct-bury poles, which have the greatest potential construction noise levels. As described in the Revised POD, residences may be exposed to eight-hour average noise levels in excess of 75 A-weighted decibels (dBA) during pole installation and removal activities if they are located within 190 feet of truck-set, direct-bury pole installation or 330 feet of helicopter-set, direct-bury pole installation. In addition, any residences located within approximately 100 feet of stringing sites along the power lines may be exposed to eight-hour average noise levels in excess of 75 dBA during conductor-stringing activities.

3.5.1 Existing Alignment Analysis

One residence and Camp Barrett Juvenile Correctional Facility are located along the Existing Alignment and would be exposed to eight-hour average noise levels in excess of 75 dBA.

Some of the equipment used during construction may cause groundborne vibrations and groundborne noise; however, this equipment would be used intermittently throughout the duration of construction. As described in the Noise Study Report, residences within approximately 60 feet of most construction activities would exceed the annoyance threshold for vibration impacts. One residence is within this distance from the Existing Alignment.

The Existing Alignment would continue to operate at its current voltages and with its current number of circuits; therefore, the audible corona noise from this line would not change from the existing condition. Because operation and maintenance activities would not change from the existing practices, there would be no change in noise levels from what currently exists.

Due to the short-term nature of noise impacts, potential noise impacts resulting from construction, operation, and maintenance of the Existing Alignment would be minor.

3.5.2 Realignment Alternative Analysis

Compared to the Existing Alignment, the Realignment Alternative would expose the same number of sensitive receptors to eight-hour average noise levels in excess of 75 dBA—a total of one residence. Groundborne vibrations and groundborne noise from the Realignment Alternative would be similar to those described for the Existing Alignment due to the remoteness of the area and the distance to residents. Although no additional access roads are currently anticipated to be required for the Realignment Alternative, if additional roads are later determined to be necessary then impacts to noise would likely increase during construction of these roads.

Compared to the Existing Alignment, the Realignment Alternative would have similar operational impacts due to audible corona noise, vegetation clearance, and annual inspections because the alternative would not be located closer to sensitive receptors. Therefore, potential noise impacts on sensitive receptors due to the Realignment Alternative would be similar to those anticipated to occur for the Existing Alignment.

3.6 TRANSPORTATION AND TRAFFIC

3.6.0 Methodology and Assumptions

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to transportation and traffic that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative. Existing conditions related to transportation and traffic in the vicinity of C157 are documented in the Revised POD, which provides a basis for this analysis. Additional County resources were also consulted for this analysis, including the County's General Plan Update Environmental Impact Report and the County's Level of Service (LOS) standards for unincorporated roadways.

3.6.1 Existing Alignment Analysis

The Existing Alignment, which involves the wood-to-steel replacement of 57 poles, spans one Permanent Road Division (PRD)/municipal/private roadway—Skye Valley Road—and one USFS roadway—Forest Route 17504. C157 runs east-to-west between Interstate (I-) 8 to the north and State Road (SR-) 94 to the south. The line runs from Skye Valley Road, near Lyons

Valley Road, east to Skye Valley Ranch. The line travels northeast from Skye Valley Road for approximately 0.2 mile before entering the CNF. The line then travels for approximately 0.6 mile southeast through the CNF along Skye Valley Road. The line then exits the CNF and continues southeast for approximately 0.5 mile through private land before crossing Skye Valley Road. From Skye Valley Road, the line crosses private land for approximately 0.6 mile and enters the CNF just east of Barrett Lake. From Barrett Lake, the line crosses Skye Valley Road and travels for approximately 0.1 mile southeast through the Pine Creek Wilderness Area, crosses Forest Route 17504, continues approximately 0.1 mile southeast through the CNF, then enters the Hauser Wilderness Area. The line continues southeast through the Hauser Wilderness Area for approximately 0.5 mile, continues southeast approximately 0.4 mile through the CNF, crossing Forest Route 17504, then travels northeast for approximately 0.5 mile through private land, crossing Skye Valley Road, and terminates at Skye Valley Ranch. Table 7: Public Roadways Providing Access to the Existing Alignment lists the major and local roadways that would be used for access during wood-to-steel pole replacement, the number of lanes, daily and peak trips, and the LOS associated with each, where available.

Table 7: Public Roadways Providing Access to the Existing Alignment

Roadway	Classification	Number of Lanes	Average Daily Trips	Peak Hour Trips	LOS
I-8	Expressway/Freeway	4 to 6	21,181	2,183	A-C
SR-78	Collector Urban	2	4,663	738	A-C
SR-94	Community Collector	2	2,025	215	A-C
Skye Valley Road	PRD/Municipal/ Private Road	1	--	--	--
Lyons Valley Road	Collector Rural	2	--	--	A-C

Sources: San Diego County, 2006, 2008, 2010, and 2011; California Department of Transportation, 2008 and 2009

Other roadways anticipated to be affected by construction of the Existing Alignment include an existing, unpaved SDG&E access road and a USFS road, Forest Route 17504. Although portions of the CNF are not currently served by roads, the Existing Alignment is generally located within close proximity to existing access roads or unimproved roads. The Existing Alignment crosses Skye Valley Road between poles P278707 and P278708, P278724 and P278725, P278730 and P278732, and P278747 and P278750. Portions of the segment also run roughly parallel to Skye Valley Road between poles P278708 and P278724. Portions of the Existing Alignment also cross Forest Route 17504 between poles P278732 and P278733, and P278743 and P278744. Construction activities associated with the Existing Alignment would utilize these roadways and previously existing overland access connections to access pole sites, stringing sites, and other temporary construction areas, and would not require the construction of new access roads. SDG&E maintains approximately 0.2 mile of an existing access road along the length of the Existing Alignment to provide access for maintenance of these poles.

During construction activities, personnel would generally drive to the work site at the beginning of the day and leave at the end of the day, with vehicles traveling to and from the work site

periodically throughout the day. This would result in two to four personnel vehicle trips per day during peak construction times and would only slightly increase the existing daily traffic in the area. In addition to personnel travel, four to eight truck trips per day would be required during construction of the Existing Alignment to transport construction materials; provide water for construction, dust suppression, and fire safety; remove existing wood poles and conductors; or perform other construction-related tasks. The number of vehicle trips on public roadways during construction would not appreciably increase as a result of the Existing Alignment, and no reduction in LOS is expected.

On Skye Valley Road and Forest Route 17504, traffic associated with personnel and construction equipment would be more noticeable due to lower numbers of daily trips on the rural roadway. Temporary travel delays could occur when poles on either side of Skye Valley Road and Forest Route 17504 are replaced. Line crossing of roadways is anticipated to be facilitated by the use of temporary crossing structures; however, if the use of crossing structures is not feasible, temporary lane closures may be required to ensure public safety during conductor installation and removal. Where temporary lane closures are required, the lanes would generally be closed for 10 to 15 minutes during the stringing of each conductor, for a total of three closures at each crossing. No complete road closures would be required.

Helicopters would be used in part along the Existing Alignment when removing existing wood poles or installing new steel poles and stringing new conductors in areas of rugged terrain, which would temporarily increase air traffic and encroach on navigable air space. The Existing Alignment involves 44 sites that would require helicopter usage. Consistent with SDG&E's current operational procedures, SDG&E would coordinate flight patterns with local air traffic control and the Federal Aviation Administration (FAA) prior to construction to prevent any adverse impacts due to increased air traffic. The wood-to-steel pole replacement and installation of new steel poles in the Existing Alignment would not be considered by the FAA to be a potential obstruction, as the poles would not exceed 200 feet in height, and the Existing Alignment would not be located within 10,000 feet of a public or military-use airport or within 5,000 feet of a public-use heliport.

The proposed work within the Existing Alignment is more likely to affect transportation facilities or increase traffic during the construction phase than during operation and maintenance, as only a very limited amount of surface activity is typically required to maintain an electric line. Further, the lines already exist in the area and no increase in activity is expected once construction is complete.

3.6.2 Realignment Alternative Analysis

The Realignment Alternative would reroute a portion of C157 overhead alignment between the Pine Creek and Hauser wilderness areas, beginning at approximately pole P278722, following Skye Valley Road for approximately 2,000 feet before crossing the northern inlet of Barrett Lake, then continuing along Forest Route 17504 for approximately one mile before connecting with the existing alignment at approximately pole P278741. The Realignment Alternative would consist of the installation of approximately 32 new steel poles. Pole installation would be completed by helicopter in areas without ground access and by helicopter/boom truck where sites can be accessed via roadway.

Helicopters would make multiple trips per pole site to drop off and pick up equipment and to set poles in rugged terrain. SDG&E has not yet determined the number of poles that would require helicopter use during construction, but anticipates that approximately the same number would be required as that identified for the Existing Alignment.

The anticipated impacts to transportation and traffic resulting from the Realignment Alternative would be similar to those anticipated for the Existing Alignment.

3.7 VISUAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to visual resources that may result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.7.0 Methodology and Assumptions

The methodology used to evaluate the potential impacts to visual resources for the Existing Alignment and the Realignment Alternative is the same as the methodology described in the Revised POD—namely, application of the USFS’s Scenery Management System and its Scenic Integrity Objectives (SIOs). No visual simulations were created for this analysis. Instead, representative photographs were collected in the vicinity of the Realignment Alternative alignment, which are provided in Attachment C: Representative Photographs.

3.7.1 Existing Alignment Analysis

SDG&E would replace existing wood poles along the Existing Alignment with steel poles at an approximately one-to-one ratio. In general, these activities would involve incremental and minor changes to a sparsely settled landscape. The Existing Alignment crosses approximately 0.6 mile of CNF land with USFS SIOs that are classified as Very High, approximately 1.2 miles of CNF land with USFS SIOs that are classified as High, and less than approximately 0.1 mile of CNF land with USFS SIOs that are classified as Moderate. However, where C157 crosses through the Pine Creek Wilderness Area and Hauser Wilderness Area, the landscape setting does not appear unaltered and, therefore, the area does not currently achieve the SIO “Very High” visual management goal.

The Existing Alignment may be visible from one scenic vista—Los Pinos Mountain—which is approximately 3.9 miles northeast of the eastern end of the Existing Alignment. The replacement of existing 40- to 90-foot-tall wood poles with reddish-brown, weathered steel poles up to 62 feet tall would not result in a noticeable change in visual contrast with regard to line, form, or color from the existing view, which includes the existing poles along the length of C157. Therefore, the Existing Alignment components would not cause a perceptible deviation to the intactness of the existing landscape character. The Existing Alignment would not substantially affect the existing visual character of the scenic vista because existing poles would be replaced by somewhat taller poles, which represents a minor incremental change, and the taller poles would be located approximately four miles from Los Pinos Mountain. In addition, the Existing Alignment would not be visible from eligible state scenic highways or County scenic routes.

To varying degrees, construction activity would be noticeable to local residents, motorists, and recreational visitors. Construction-related visual impacts would result from the presence of equipment, materials, and work crews along the Existing Alignment, temporary staging areas, and stringing sites. Construction activities would take place over an approximately three-month period, but the construction timeframe would be considerably shorter in duration at individual locations. Minor disturbances of land within and along the Existing Alignment would occur as a result of activity required for removing and replacing poles. In addition, minor land disturbance may occur at some of the temporary construction areas that would be established as part of the Existing Alignment construction; these areas would generally be located near or along the Existing Alignment. A limited degree of visual contrast could occur as a result of land disturbance activity, such as creation of newly exposed soil areas along the Existing Alignment; however, all disturbed terrain would be restored to near pre-construction conditions.

The majority of construction activities would take place during daylight hours; however, some construction along the Existing Alignment may be required or finished at night; these activities would require lighting for safety. Any required lighting would be limited to an individual pole work area of approximately 312 square feet and would not exceed two hours per evening for more than four evenings. No new permanent lighting would be required for the Existing Alignment. No new glare would be created along the Existing Alignment due to the use of non-specular conductors and reddish-brown, weathered-steel poles, which have non-reflective finishes. These visual changes would be consistent with the USFS aesthetic management standards for the CNF and would meet the SIOs. Therefore, a decrease of more than one SIO level is not anticipated for the Existing Alignment.

3.7.2 Realignment Alternative Analysis

As part of the Realignment Alternative, SDG&E would install new steel poles in a previously undisturbed and predominantly undeveloped location, replace existing wood poles with steel poles at an approximately one-to-one ratio from Skye Valley Road east to pole P278752, and relocate approximately 1.1 miles of the Existing Alignment along Skye Valley Road from poles P278722 to P278741. In general, these activities would involve slight changes to a sparsely settled landscape and would place new steel poles in closer proximity to Skye Valley Road and Forest Route 17504. Portions of the Realignment Alternative would also cross approximately 1.9 miles of CNF land with USFS SIOs that are classified as High and approximately 0.1 mile of CNF land with USFS SIOs that are classified as Moderate. Although the Realignment Alternative would be located outside of the Hauser Wilderness Area and Pine Creek Wilderness Area, the distribution line would still be visible from these wilderness areas.

The Realignment Alternative may also be visible from one scenic vista—Los Pinos Mountain. The Realignment Alternative would not be visible from eligible state scenic highways. Compared to the Existing Alignment, the Realignment Alternative would result in a greater visual contrast with regard to line, form, and color, as well as a greater perceptible deviation to the intactness of the existing landscape character because a new power line would be installed in a sparsely settled landscape where none currently exist, which would have a greater impact on the visual character of the scenic vista than that presented by construction of the Existing Alignment.

Compared to the Existing Alignment, the Realignment Alternative would also result in greater land disturbance, resulting in a greater impact on the visual character of the area. In addition, the Realignment Alternative would be closer to motorists along Skye Valley Road and Forest Route 17504, which would result in a greater impact to the visual character during construction, operation, and maintenance compared to the Existing Alignment.

The lighting requirements for the Realignment Alternative would be similar to the Existing Alignment, but would occur in closer proximity to local residents and motorists. Because SDG&E would use the same reddish-brown, weathered steel poles and other materials designed to minimize glare, potential impacts from glare would be similar to those identified for the Existing Alignment.

Overall, visual resource impacts from the Realignment Alternative would be similar to the Existing Alignment.

3.8 WILDERNESS AND RECREATION

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to wilderness and recreation that could result from construction, operation, and maintenance of the Existing Alignment and the Realignment Alternative.

3.8.0 Methodology and Assumptions

The methodology used to evaluate the potential impacts to wilderness and recreation for this analysis is the same as the methodology described in the Revised POD.

3.8.1 Existing Alignment Analysis

The Existing Alignment, C157, which was originally constructed between 1920 and 1960, crosses both the Pine Creek Wilderness Area and the Hauser Wilderness Area, which were designated in 1984 after the distribution lines and ancillary facilities were already in place. Approximately 0.5 mile of the Existing Alignment, including seven existing poles, is located within the Hauser Wilderness Area, which encompasses approximately 13,000 acres. Recreational activities within the wilderness area include hiking, backpacking, climbing, kayaking, canoeing, rafting, horseback riding, bird watching, and stargazing. Approximately 0.1 mile of the Existing Alignment, including two existing poles, is located within the Pine Creek Wilderness Area, which encompasses approximately 7,547 acres. Recreational activities in the Pine Creek Wilderness Area include hiking, backpacking, climbing, kayaking, canoeing, hunting, horseback riding, bird watching, and stargazing.

The wood-to-steel replacement of the existing wood poles along the Existing Alignment is proposed as a fire safety measure, consistent with authorizing statutory authority contained in both the Wilderness Act and the California Wilderness Act of 1984. These provisions state that the Secretary concerned may take “such measures as are necessary in the control of fire, insects and diseases, subject to such conditions as he deems desirable.” Any associated impacts from the fire hardening of the Existing Alignment would be expected to occur during construction activities, would be short-term and temporary in nature, and would improve the existing condition from a fire safety perspective, consistent with the CNF Fire Plan. As described in

Section 4.1.0 Pole Installation of the Revised POD, approximately 10 existing wood poles would be replaced with steel poles within these wilderness areas, resulting in temporary impacts of approximately 0.1 acre and permanent impacts of less than approximately 0.1 acre. As a result, any potential impacts to wilderness areas resulting from the fire hardening of the Existing Alignment would be minor.

Wood-to-steel pole replacement and conductor-stringing activities could also result in temporary restrictions of recreational activities in limited areas elsewhere within the CNF when new or existing poles are located within or adjacent to recreational facilities, such as trails or campgrounds. Other recreational facilities within the vicinity may be utilized in the event of unlikely, temporary trail or campground closures, which could potentially increase the use of such recreational facilities and result in greater physical deterioration than previously experienced. However, as restrictions would be temporary and short term, generally lasting one to two days per recreational facility, impacts would be minimal.

Operation and maintenance of the Existing Alignment would not change from those activities already occurring along the existing lines. After completion of construction, the electric lines would be operated and maintained by SDG&E at existing staffing levels and no additional staff would be hired to maintain the electric lines. Operation and maintenance activities would not result in an increase in local population in the vicinity of the CNF or in the usage of the CNF; therefore, the use of existing recreational facilities would not be increased, no additional deterioration of such facilities would occur, and no additional impacts from operation and maintenance would occur.

3.8.2 Realignment Alternative Analysis

The Realignment Alternative would relocate approximately 1.1 miles of the Existing Alignment to a rerouted segment measuring approximately 1.7 miles in length between the Pine Creek Wilderness Area and the Hauser Wilderness Area, approximately 1 mile of which crosses the CNF. The entirety of the rerouted segment in the Realignment Alternative would be located outside of any designated wilderness area. The Realignment Alternative would involve the removal of approximately 0.6 mile of the Existing Alignment, including nine existing poles, from designated wilderness areas, resulting in temporary impacts in these areas during pole removal.

Along the Realignment Alternative alignment, pole installation and conductor-stringing activities could result in temporary restrictions of recreational activities within the CNF along this portion of the alignment during construction activities; however, no campgrounds, trails, or other established facilities are located in the vicinity of the Realignment Alternative that would require closure. Similar to the Existing Alignment, no additional local population would result from construction, operation, or maintenance of the Realignment Alternative. Because the Realignment Alternative would be located outside the area identified by the USFS as Wilderness, and because no closures of existing recreational facilities or additional local population would occur, the Realignment Alternative would not pose any impacts to wilderness or recreation within the CNF.

In comparison with the Existing Alignment, the Realignment Alternative would reduce the acreage of designated wilderness currently crossed by C157. However, the Realignment

Alternative would have greater impacts to wild, undeveloped, and forested areas by placing permanent impact areas (e.g., pole locations and temporary work areas) in currently undeveloped areas.

4 – CONCLUSION

Based on the preliminary fieldwork and analysis described in the previous subsections, construction of the Realignment Alternative would have potentially greater impacts to air quality, biological resources, and hydrology and water quality than those posed by the Existing Alignment due to the installation of a larger number of poles, the disturbance of previously undisturbed areas and greater overall amount of temporary land disturbance, and the removal of previously undisturbed native vegetation to accommodate the new overhead alignment. In addition, construction of the Realignment Alternative would require new ROWs on USFS and private lands, which would impact the future use of these properties. Reconstruction of the Existing Alignment, which has established access roads and work areas, would not require removal of undisturbed native vegetation, and would be preferential from an environmental resources perspective to the construction of a new alignment in a location where none currently exists.

ATTACHMENT A: EXISTING ALIGNMENT DETAILED ROUTE MAP

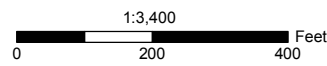
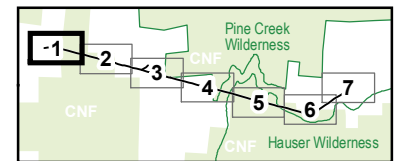
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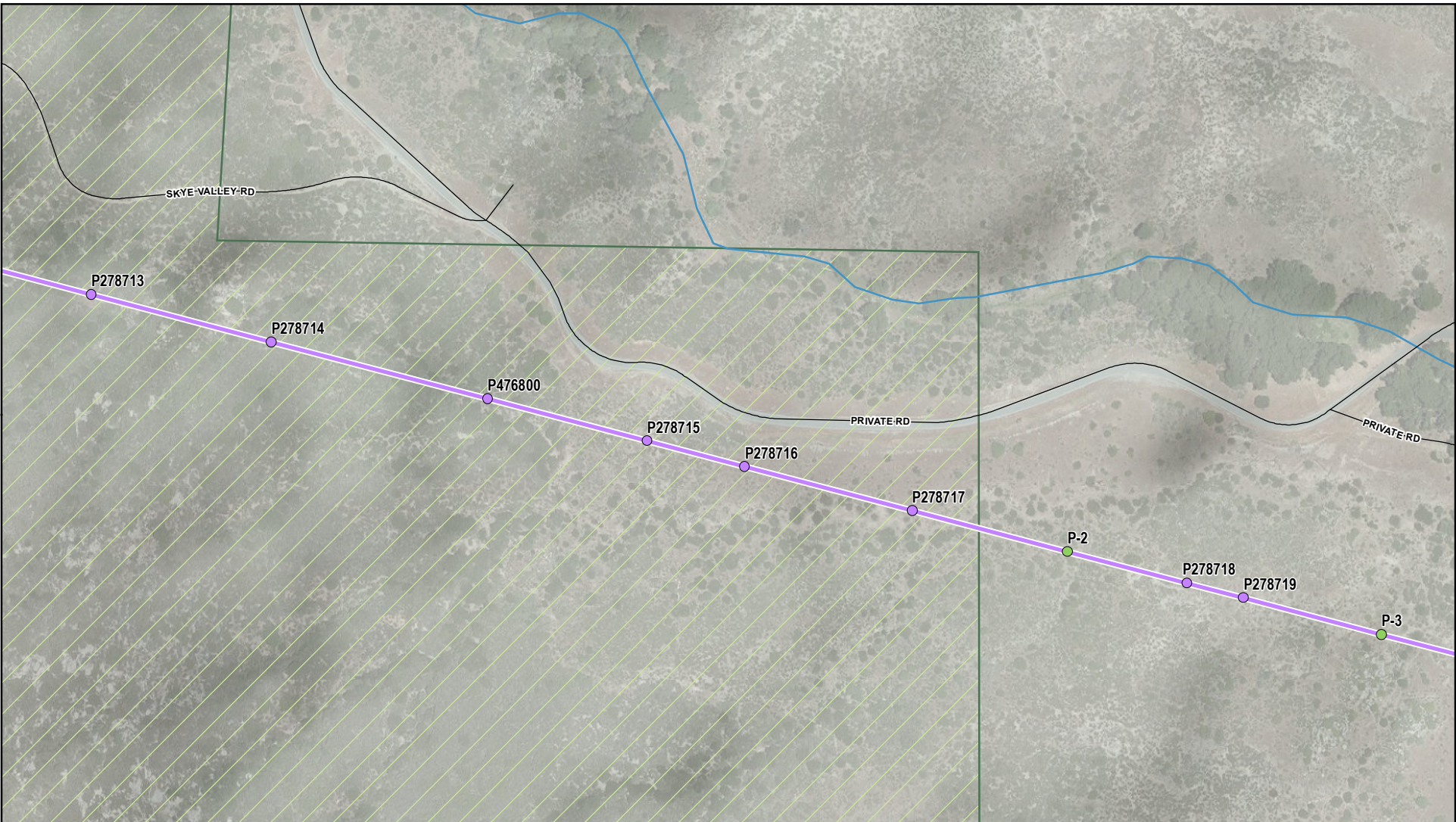
Attachment A: Existing Alignment Detailed Route Map 1 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream



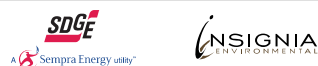
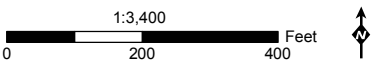
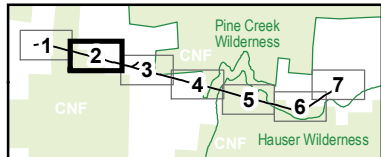
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Attachment A: Existing Alignment Detailed Route Map 2 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream

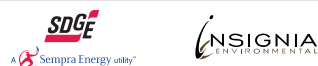
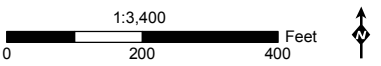
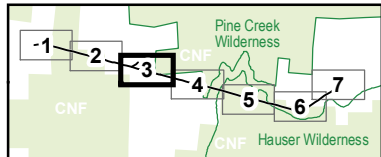




Attachment A: Existing Alignment Detailed Route Map 3 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream



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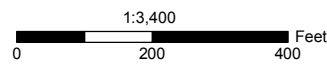
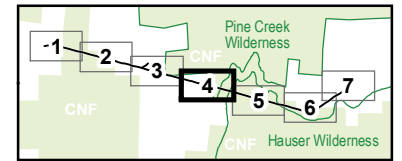
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Attachment A: Existing Alignment Detailed Route Map 4 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream

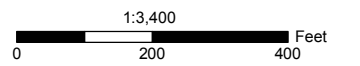
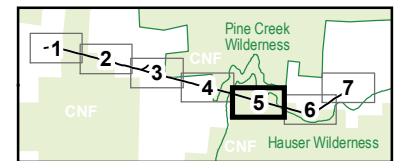




Attachment A: Existing Alignment Detailed Route Map 5 of 7

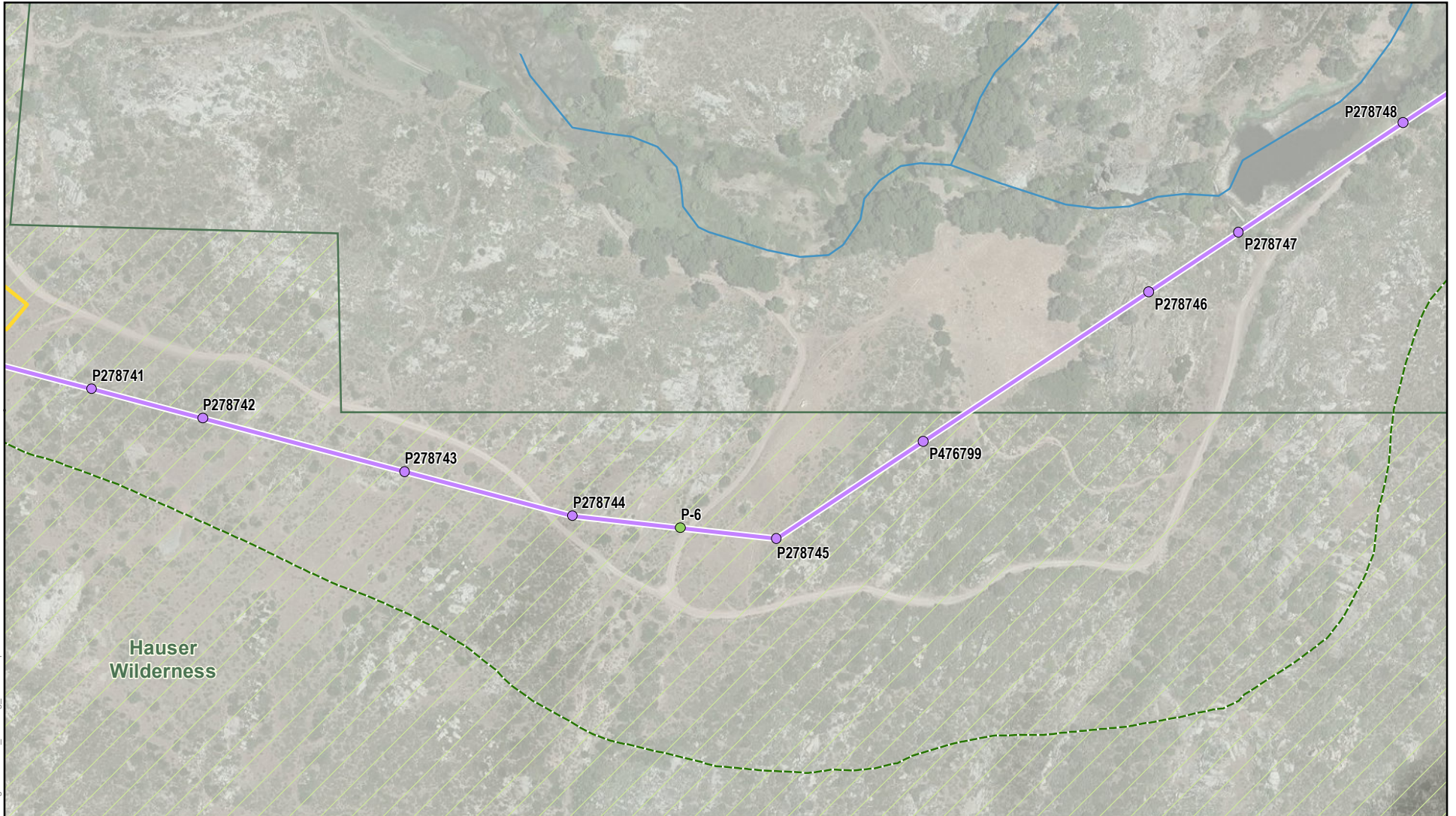
Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream



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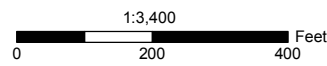
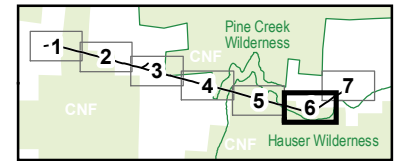
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Attachment A: Existing Alignment Detailed Route Map 6 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
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- Road
- Stream



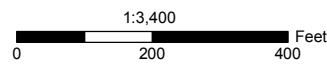
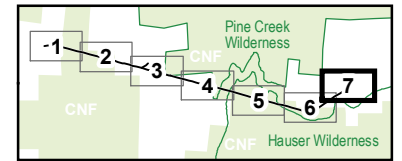
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Attachment A: Existing Alignment Detailed Route Map 7 of 7

Distribution Line C157 Alternative Route Analysis

- Wood-to-Steel Replacement
- New Steel
- Existing Alignment
- Staging Area
- Stringing Site
- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream



ATTACHMENT B: REALIGNMENT ALTERNATIVE DETAILED ROUTE MAP

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Attachment B: Realignment Alternative Detailed Route Map 1 of 9

Distribution Line C157 Alternative Route Analysis

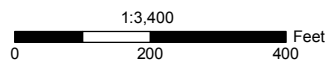
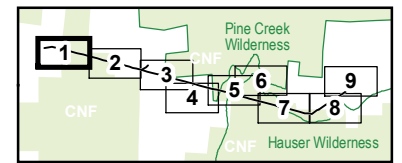
Pole Locations

- Wood-to-Steel Replacement
- New Steel
- Remove Existing Wood

- Existing Alignment/Realignment Alternative
- Realignment Alternative Reroute
- Remove Existing Alignment

- Staging Area
- Stringing Site

- United States Forest Service
- Wilderness Boundary
- Road
- Stream



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Attachment B: Realignment Alternative Detailed Route Map 2 of 9

Distribution Line C157 Alternative Route Analysis

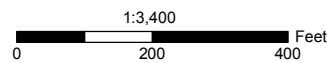
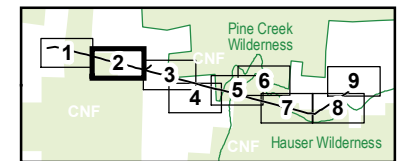
Pole Locations

- Wood-to-Steel Replacement
- New Steel
- Remove Existing Wood

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- Realignment Alternative Reroute
- Remove Existing Alignment

- Staging Area
- Stringing Site

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- Wilderness Boundary
- Road
- Stream



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Attachment B: Realignment Alternative Detailed Route Map 3 of 9

Distribution Line C157 Alternative Route Analysis

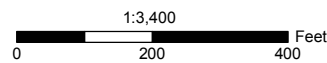
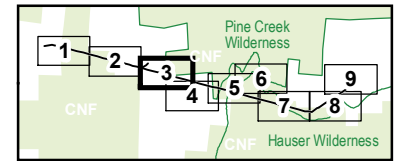
Pole Locations

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- New Steel
- ✕ Remove Existing Wood

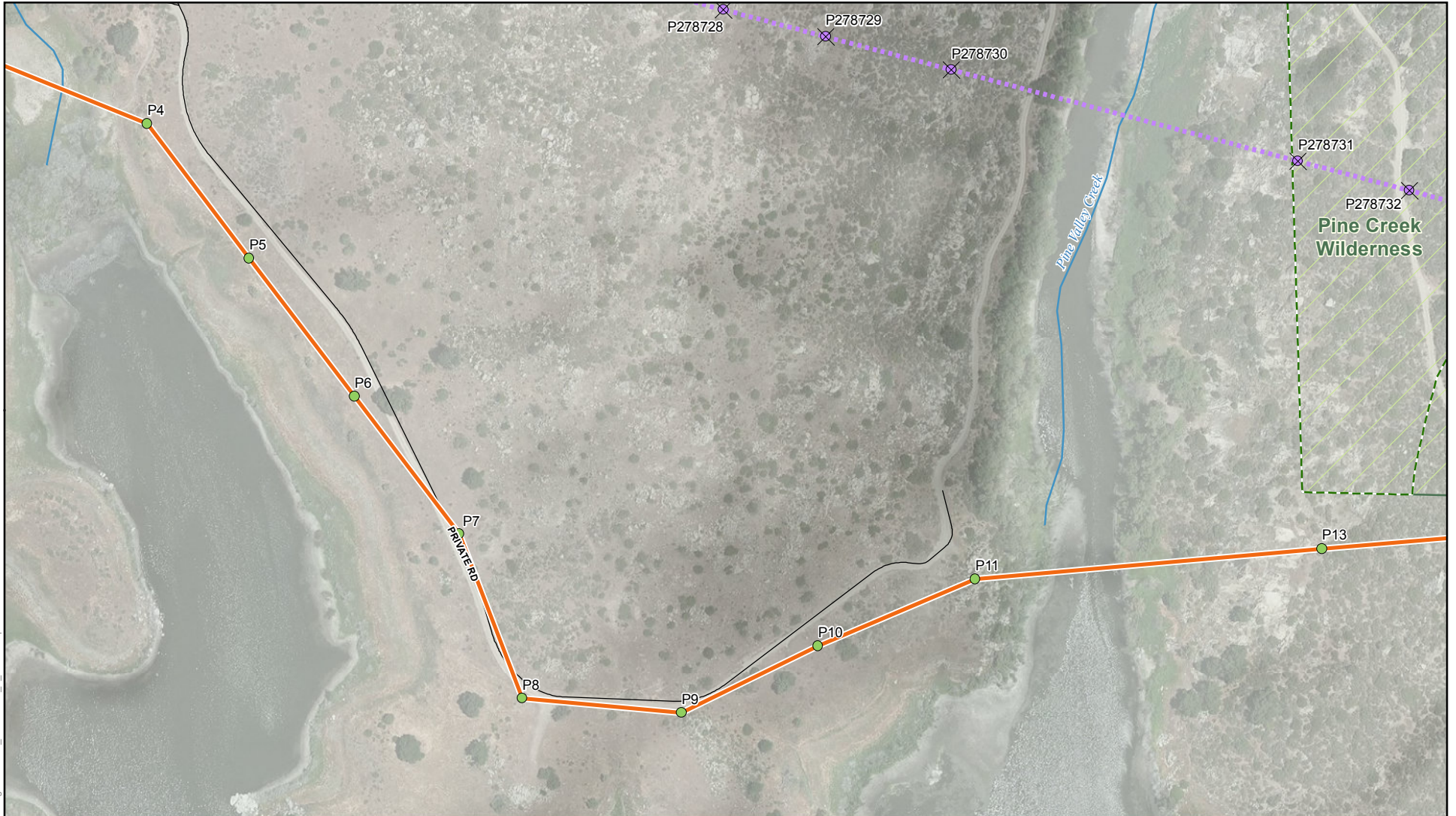
- Existing Alignment/Realignment Alternative
- Realignment Alternative Reroute
- - - Remove Existing Alignment

- Staging Area
- Stringing Site

- United States Forest Service
- Wilderness Boundary
- Road
- ~ Stream



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Attachment B: Realignment Alternative Detailed Route Map 4 of 9

Distribution Line C157 Alternative Route Analysis

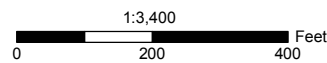
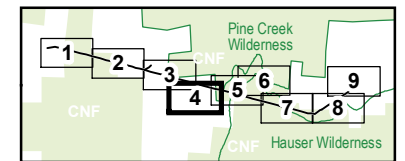
Pole Locations

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- Remove Existing Wood

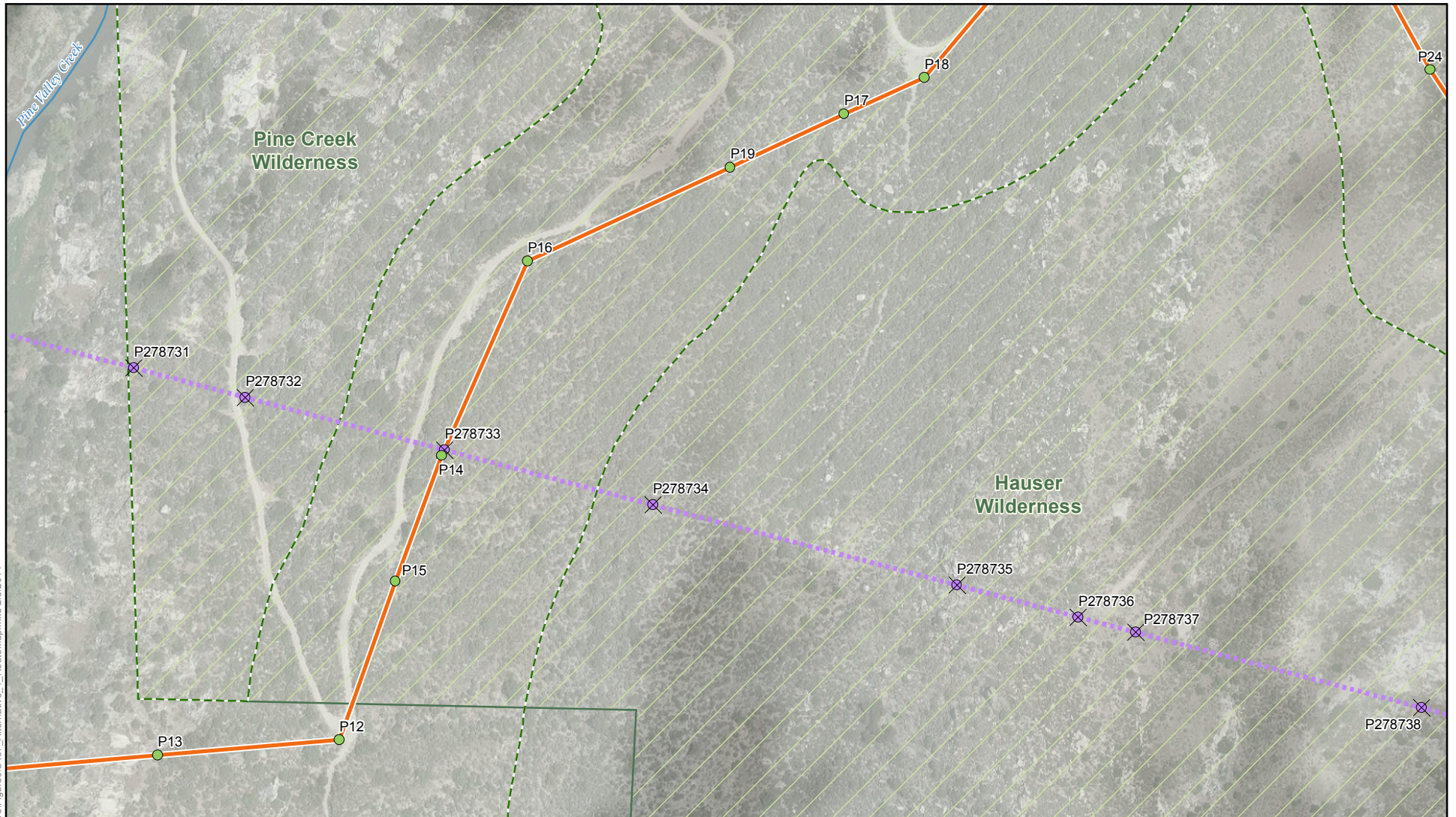
- Existing Alignment/Realignment Alternative
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Attachment B: Realignment Alternative Detailed Route Map 5 of 9

Distribution Line C157 Alternative Route Analysis

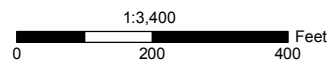
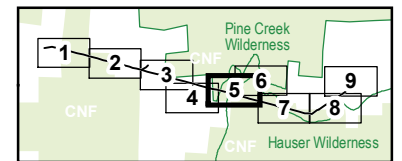
Pole Locations

- Wood-to-Steel Replacement
- New Steel
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- Realignment Alternative Reroute
- Remove Existing Alignment

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- Stringing Site

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- Wilderness Boundary
- Road
- Stream



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Attachment B: Realignment Alternative Detailed Route Map 6 of 9

Distribution Line C157 Alternative Route Analysis

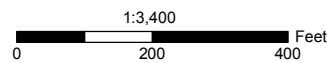
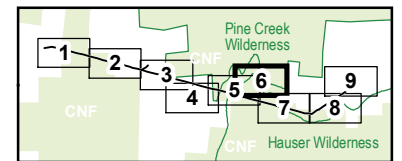
Pole Locations

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- New Steel
- Remove Existing Wood

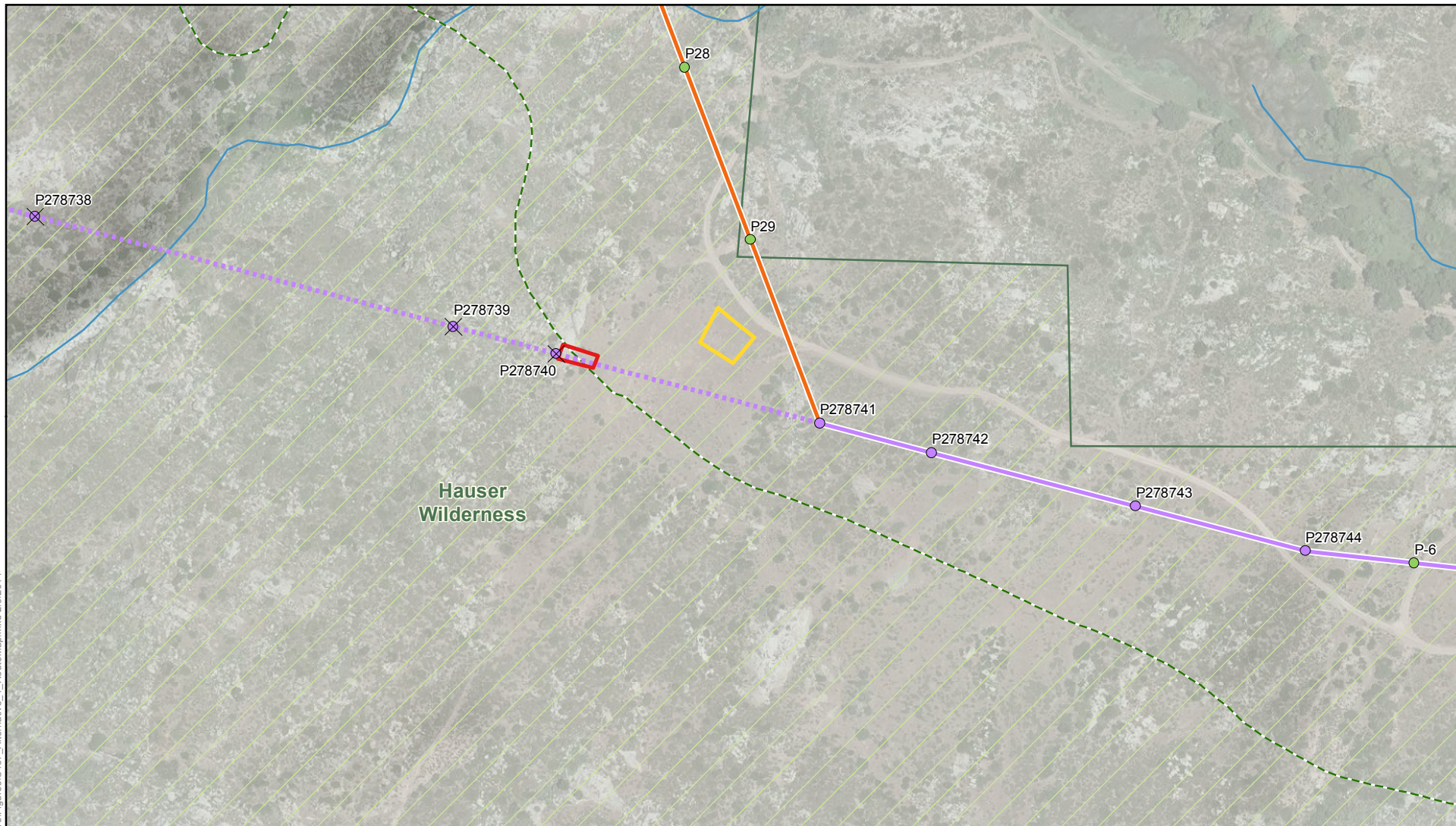
- Existing Alignment/Realignment Alternative
- Realignment Alternative Reroute
- Remove Existing Alignment

- Staging Area
- Stringing Site

- United States Forest Service
- Wilderness Boundary
- Road
- Stream



Z:\Projects\SDGE_CNF_ESRP\WXDs\C157_Alternative\Figures\C157_Alternative_1_RouteMap.mxd 2/3/2014



Attachment B: Realignment Alternative Detailed Route Map 7 of 9

Distribution Line C157 Alternative Route Analysis

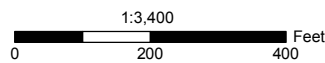
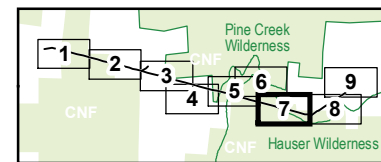
Pole Locations

- Wood-to-Steel Replacement
- New Steel
- Remove Existing Wood

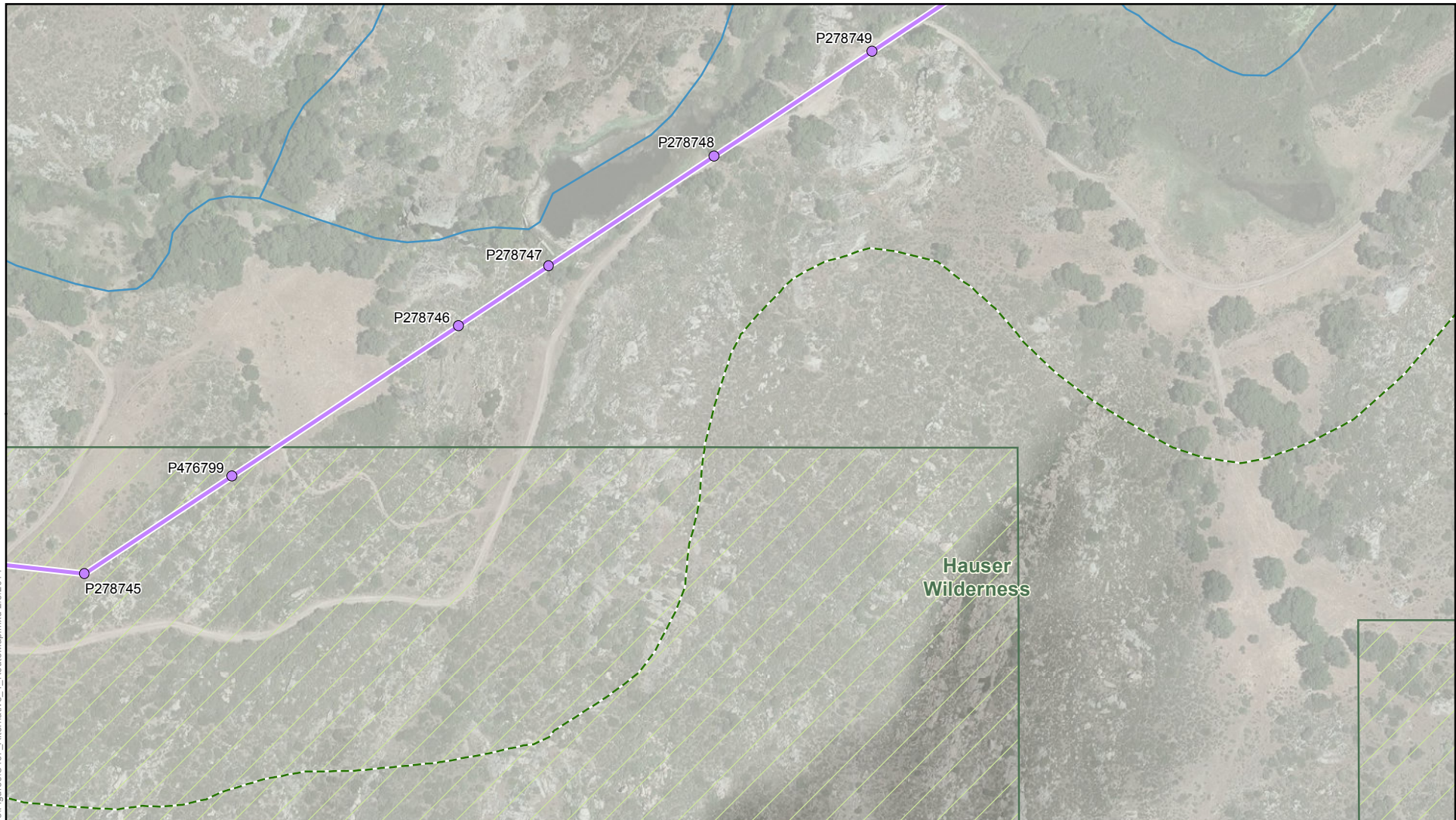
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Attachment B: Realignment Alternative Detailed Route Map 8 of 9

Distribution Line C157 Alternative Route Analysis

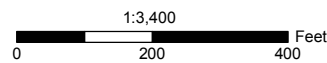
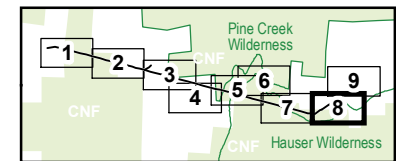
Pole Locations

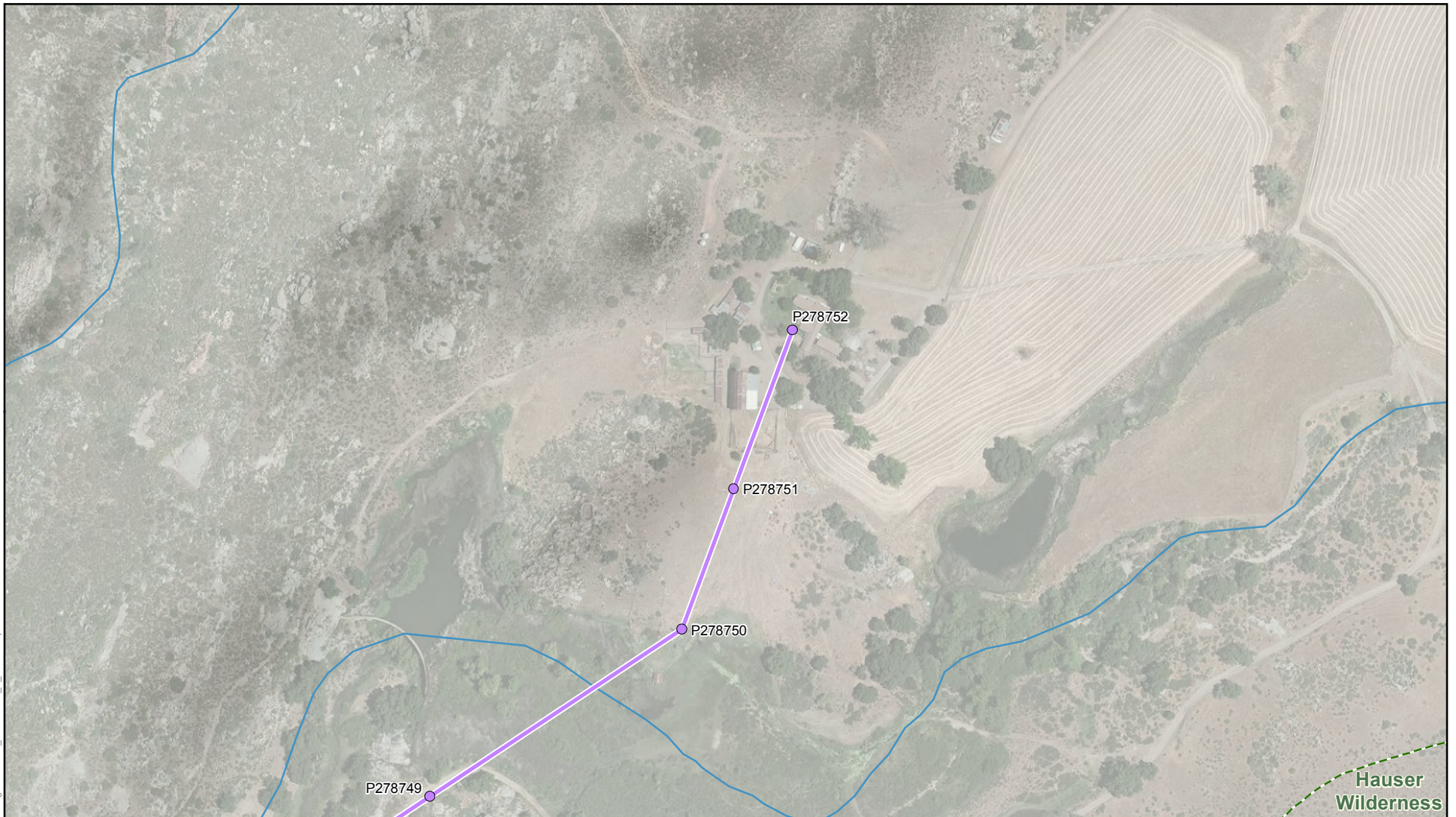
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Attachment B: Realignment Alternative Detailed Route Map 9 of 9

Distribution Line C157 Alternative Route Analysis

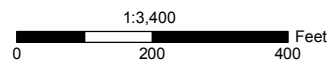
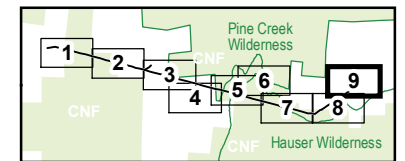
Pole Locations

- Wood-to-Steel Replacement
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ATTACHMENT C: REPRESENTATIVE PHOTOGRAPHS

ATTACHMENT C: REPRESENTATIVE PHOTOGRAPHS



Photograph 1:
View of pole P1 location
south of Skye Valley Road
facing west.



Photograph 2:
View of pole P6 location
north of Lake Barrett facing
southwest.



Photograph 3:
View of pole P12 location
south of Skye Valley Road
and Forest Route 17504
facing southwest.



Photograph 4:
View of pole P25 location
south of Forest Route 17504
facing west.



Photograph 5:
View of pole P29 location
west of Forest Route 17504
and south of an unnamed
pond facing northeast.