

TABLE OF CONTENTS

1.0	PEA SUMMARY	1-1
1.1	PROJECT LOCATION	1-1
1.2	PROPOSED PROJECT COMPONENTS	1-1
1.2.1	TL 637 Wood-to-Steel.....	1-1
1.2.2	Substation Work	1-2
1.2.3	New Fiber Optic Line.....	1-2
1.3	PROJECT NEED AND RANGE OF ALTERNATIVES CONSIDERED	1-2
1.4	PROPOSERS ENVIRONMENTAL ASSESSMENT CONTENTS.....	1-3
1.4.1	PEA	1-3
1.4.2	Other PEA Requirements	1-4
1.5	MAJOR PEA CONCLUSIONS	1-5
1.5.1	Resource Areas with No Impact or Less than Significant Impacts	1-5
1.5.2	Significant, Unavoidable Impacts	1-6
1.5.3	CEQA Compliance.....	1-6
1.6	PUBLIC OUTREACH EFFORTS AND LETTERS OF SUPPORT	1-8
1.7	INTER-AGENCY REVIEW AND COORDINATION.....	1-8
1.7.1	California Public Utilities Commission	1-8
1.7.2	Bureau of Land Management and the County of San Diego	1-8
1.7.3	Cleveland National Forest	1-9
1.7.4	Federal Aviation Administration.....	1-9
1.7.5	Regional Water Quality Control Board, California Department of Fish and Wildlife and the U.S. Army Corps of Engineers.....	1-9
1.7.6	California Department of Transportation	1-9
1.8	AREAS OF CONTROVERSY.....	1-10
1.9	ISSUES TO BE RESOLVED.....	1-10
2.0	PROPOSED PROJECT PURPOSE AND NEED.....	2-1
2.1	OVERVIEW OF PROJECT NEED.....	2-1
2.2	PROPOSED PROJECT OBJECTIVES.....	2-2
2.2.1	Objective 1: Increase the Fire Safety and Service Reliability of TL 637.....	2-3
2.2.2	Objective 2: Minimize Potential Adverse Environmental Effects	2-3
2.2.3	Objective 3: Locate Proposed Facilities within Existing Utility Corridors to the Extent Feasible	2-4
2.3	CONCLUSION.....	2-4

3.0 PROPOSED PROJECT DESCRIPTION3-1

3.1 PROPOSED PROJECT OVERVIEW3-1

3.2 PROPOSED PROJECT LOCATION, REGIONAL CONTEXT, AND REGIONAL ELECTRIC SYSTEM3-1

3.3 PROPOSED PROJECT FACILITIES3-5

 3.3.1 TL 637 Wood-to-Steel Replacement3-5

 3.3.2 Substations3-8

 3.3.3 New SDG&E Fiber Optic Line.....3-9

3.4 CONSTRUCTION METHODS3-10

 3.4.1 Micropile Construction3-10

 3.4.2 Weathering Steel Pole Construction (Directly-Embedded)3-11

 3.4.3 Pole Removal3-12

 3.4.4 Guard Pole Installation3-12

 3.4.5 Conductor Stringing.....3-13

 3.4.6 Dewatering3-13

 3.4.7 Blasting3-14

 3.4.8 Underground Distribution and Fiber Optic Lines3-14

 3.4.9 Temporary Work Areas3-15

 3.4.10 Road Crossings3-19

 3.4.11 Helicopter Usage during Power Line Construction3-20

 3.4.12 Site Cleanup3-20

 3.4.13 Retired Structures/Poles, Materials, and Components.....3-20

 3.4.14 Construction Equipment and Personnel.....3-21

3.5 CONSTRUCTION SCHEDULE.....3-22

3.6 PERMANENT LAND AND RIGHT-OF-WAY REQUIREMENTS3-23

3.7 OPERATION AND MAINTENANCE (EXISTING AND PROPOSED).....3-23

3.8 PROJECT DESIGN FEATURES AND ORDINARY CONSTRUCTION/OPERATING RESTRICTIONS.....3-24

3.9 APPLICANT PROPOSED MEASURES.....3-32

3.10 ELECTRIC AND MAGNETIC FIELDS3-32

3.11 REQUIRED APPROVALS3-32

 3.11.1 Cleveland National Forest.....3-32

 3.11.2 U.S. Bureau of Land Management and County of San Diego.....3-32

3.12 REFERENCES3-35

4.0 ENVIRONMENTAL IMPACT ASSESSMENT (INCLUDING ENVIRONMENTAL SETTING)4-1

4.1 AESTHETICS.....4.1-1

4.1.1 Introduction4.1-1

4.1.2 Methodology4.1-1

4.1.3 Existing Conditions4.1-3

4.1.4 Potential Impacts4.1-29

4.1.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.1-47

4.1.6 Applicant Proposed Measures4.1-47

4.1.7 Detailed Discussion of Significant Impacts4.1-47

4.1.8 References4.1-47

4.2 AGRICULTURE AND FORESTRY RESOURCES.....4.2-1

4.2.1 Introduction4.2-1

4.2.2 Methodology4.2-1

4.2.3 Existing Conditions4.2-2

4.2.4 Potential Impacts4.2-7

4.2.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.2-10

4.2.6 Applicant Proposed Measures4.2-11

4.2.7 Detailed Discussion of Significant Impacts4.2-11

4.2.8 References4.2-11

4.3 AIR QUALITY AND GREENHOUSE GASES.....4.3-1

4.3.1 Introduction4.3-1

4.3.2 Methodology4.3-2

4.3.3 Existing Conditions4.3-2

4.3.4 Potential Impacts4.3-21

4.3.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.3-33

4.3.6 Applicant Proposed Measures4.3-33

4.3.7 Detailed Discussion of Significant Impacts4.3-33

4.3.8 References4.3-33

4.4 BIOLOGICAL RESOURCES.....4.4-1

4.4.1 Introduction4.4-1

4.4.2 Methodology4.4-2

4.4.3 Existing Conditions4.4-6

4.4.4 Potential Impacts4.4-31

4.4.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.4-48

4.4.6 Applicant Proposed Measures4.4-48

4.4.7 Detailed Discussion of Significant Impacts4.4-48

4.4.8 References4.4-48

4.5 CULTURAL RESOURCES.....4.5-1

4.5.1 Introduction4.5-1

4.5.2 Methodology4.5-1

4.5.3 Existing Conditions4.5-3

4.5.4 Potential Impacts4.5-14

4.5.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.5-19

4.5.6 Applicant Proposed Measures4.5-19

4.5.7 Detailed Discussion of Significant Impacts4.5-19

4.5.8 References4.5-19

4.6 GEOLOGY, SOILS AND MINERAL RESOURCES.....4.6-1

4.6.1 Introduction4.6-1

4.6.2 Methodology4.6-2

4.6.3 Existing Conditions4.6-2

4.6.4 Potential Impacts4.6-7

4.6.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.6-13

4.6.6 Applicant Proposed Measures4.6-14

4.6.7 Detailed Discussion of Significant Impacts4.6-14

4.6.8 References4.6-14

4.7 HAZARDS AND HAZARDOUS MATERIALS4.7-1

4.7.1 Introduction4.7-1

4.7.2 Methodology4.7-2

4.7.3 Existing Conditions4.7-2

4.7.4 Potential Impacts4.7-14

4.7.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.7-21

4.7.6 Applicant Proposed Measures4.7-22

4.7.7 Detailed Discussion of Significant Impacts4.7-22

4.7.8 References4.7-22

4.8 HYDROLOGY AND WATER QUALITY4.8-1

4.8.1 Introduction4.8-1

4.8.2 Methodology4.8-2

4.8.3 Existing Conditions4.8-2

4.8.4 Potential Impacts4.8-12

4.8.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.8-19

4.8.6 Applicant Proposed Measures4.8-19

4.8.7 Detailed Discussion of Significant Impacts4.8-19

4.8.8 References4.8-19

4.9 LAND USE AND PLANNING4.9-1

4.9.1 Introduction4.9-1

4.9.2 Methodology4.9-1

4.9.3 Existing Conditions4.9-2

4.9.4 Potential Impacts4.9-11

4.9.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.9-15

4.9.6 Applicant Proposed Measures4.9-15

4.9.7 Detailed Discussion of Significant Impacts4.9-15

4.9.8 References4.9-15

4.10 NOISE4.10-1

4.10.1 Introduction4.10-1

4.10.2 Methodology4.10-2

4.10.3 Existing Conditions4.10-2

4.10.4 Potential Impacts4.10-6

4.10.5 Project Design Features and Ordinary Construction/Operating Restrictions...4.10-13

4.10.6 Applicant Proposed Measures4.10-13

4.10.7 Detailed Discussion of Significant Impacts4.10-13

4.10.8 References4.10-13

4.11 POPULATION AND HOUSING4.11-1

4.11.1 Introduction4.11-1

4.11.2 Methodology4.11-1

4.11.3 Existing Conditions4.11-1

4.11.4 Potential Impacts4.11-3

4.11.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.11-5

4.11.6 Applicant Proposed Measures4.11-5

4.11.7 Detailed Discussion of Significant Impacts4.11-5

4.11.8 References4.11-5

4.12 PUBLIC SERVICES4.12-1

4.12.1 Introduction4.12-1

4.12.2 Methodology4.12-1

4.12.3 Existing Conditions4.12-1

4.12.4 Potential Impacts4.12-4

4.12.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.12-7

4.12.6 Applicant Proposed Measures4.12-7

4.12.7 Detailed Discussion of Significant Impacts4.12-7

4.12.8 References4.12-7

4.13 RECREATION4.13-1

4.13.1 Introduction4.13-1

4.13.2 Methodology4.13-1

4.13.3 Existing Conditions4.13-1

4.13.4 Potential Impacts4.13-4

4.13.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.13-6

4.13.6 Applicant Proposed Measures4.13-6

4.13.7 Detailed Discussion of Significant Impacts4.13-6

4.13.8 References4.13-6

4.14 TRANSPORTATION AND TRAFFIC4.14-1

4.14.1 Introduction4.14-1

4.14.2 Methodology4.14-2

4.14.3 Existing Conditions4.14-2

4.14.4 Potential Impacts4.14-5

4.14.5 Project Design Features and Ordinary Construction/Operating Restrictions...4.14-11

4.14.6 Applicant Proposed Measures4.14-11

4.14.7 Detailed Discussion of Significant Impacts4.14-11

4.14.8 References4.14-11

4.15 UTILITIES AND SERVICE SYSTEMS4.15-1

4.15.1 Introduction4.15-1

4.15.2 Methodology4.15-2

4.15.3 Existing Conditions4.15-2

4.15.4 Potential Impacts4.15-4

4.15.5 Project Design Features and Ordinary Construction/Operating Restrictions....4.15-9

4.15.6 Applicant Proposed Measures4.15-10

4.15.7 Detailed Discussion of Significant Impacts4.15-10

4.15.8 References4.15-10

4.16 CUMULATIVE IMPACTS4.16-1

4.16.1 Introduction4.16-1

4.16.2 Significance Criteria.....4.16-2

4.16.3 Timeframe of Analysis.....4.16-2

4.16.4 Area of Analysis.....4.16-2

4.16.5 Methodology4.16-2

4.16.6 Existing/Operating Projects.....4.16-3

4.16.7 Foreseeable Projects Inventory4.16-3

4.16.8 Potential Cumulative Impacts4.16-9

4.16.9 Project Design Features and Ordinary Construction/Operating Restrictions...4.16-27

4.16.10 Applicant Proposed Measures4.16-28

4.16.11 References4.16-28

5.0 DETAILED DISCUSSION OF SIGNIFICANT IMPACTS.....5-1

5.1 APPLICANT PROPOSED MEASURES TO MINIMIZE SIGNIFICANT EFFECTS....5-1

5.2 DESCRIPTION OF PROJECT ALTERNATIVES TO MINIMIZE SIGNIFICANT EFFECTS5-1

5.2.1 Introduction5-1

5.2.2 Methodology5-1

5.2.3 Proposed Project Objectives.....5-2

5.2.4 Alternatives Considered but Rejected5-2

5.3 GROWTH-INDUCING IMPACTS.....5-8

5.3.1 Economic or Population Growth.....5-8

5.3.2 New Employment.....5-9

5.3.3 Extended Access or Public Services5-9

5.3.4 Existing Community Services5-10

5.3.5 New Development.....5-10

5.3.6 Conclusion.....5-10

ACRONYMS AND ABBREVIATIONS

LIST OF PEA PREPARERS AND CONTRIBUTORS

LIST OF FIGURES

Figure 3-1: Project Vicinity Map.....3-3

Figure 4.1-1: Regional Landscape Context4.1-5

Figure 4.1-2: Photograph Viewpoint Locations.....4.1-9

Figure 4.1-3a: Photographs 1 and 24.1-11

Figure 4.1-3b: Photographs 3 and 4.....4.1-12

Figure 4.1-3c: Photographs 5 and 64.1-14

Figure 4.1-3d: Photographs 7 and 8.....4.1-15

Figure 4.1-3e: Photographs 9 and 104.1-17

Figure 4.1-3f: Photographs 11 and 12.....4.1-18

Figure 4.1-3g: Photographs 13 and 14.....4.1-20

Figure 4.1-3h: Photographs 15 and 16.....4.1-21

Figure 4.1-3i: Photographs 17 and 18.....4.1-23

Figure 4.1-4: Existing View and Visual Simulation from Creelman Lane east of Keys
Road4.1-35

Figure 4.1-5: Existing View and Visual Simulation from Simon Preserve County Park
Trail.....4.1-37

Figure 4.1-6: Existing View and Visual Simulation from Mt. Gower Preserve Trail4.1-41

Figure 4.1-7: Existing View and Visual Simulation from Inaja Memorial Picnic Ground4.1-43

Figure 4.1-8: Existing View and Visual Simulation from Hwy 78/79 in Santa Ysabel4.1-45

Figure 4.7-1: Fire Hazard Severity Map4.7-11

Figure 4.9-1: Land Ownership Map.....4.9-7

Figure 4.16-1: Foreseeable Projects Map4.16-7

LIST OF TABLES

Table 1-1: PEA Checklist Key Table.....1-11

Table 3-1: Common Destination of Retired Project Components3-20

Table 3-2: Standard Construction Equipment and Usage.....3-21

Table 3-3: Proposed Construction Schedule.....3-22

Table 3-4: Permanent Land and ROW Requirements3-23

Table 3-5: Anticipated Permit, Approval, and Consultation Requirements3-34

Table 4.1-1: Summary of Landscape Units4.1-8

Table 4.1-2: BLM Management Classes and Goals4.1-24

Table 4.1-3: Summary of Simulation Views4.1-33

Table 4.3-1: Air Pollution Control District’s Screening Level Thresholds4.3-4

Table 4.3-2: Global Warming Potentials and Atmospheric Lifetimes of Greenhouse Gases4.3-6

Table 4.3-3: State of California Greenhouse Gases Emissions by Sector4.3-8

Table 4.3-4: National and California Ambient Air Quality Standards4.3-17

Table 4.3-5: Local Air Quality Levels.....4.3-19

Table 4.3-6: Locations That May Include Sensitive Receptors4.3-20

Table 4.3-7: SDAPCD Pollutant Thresholds4.3-22

Table 4.3-8: Preliminary Construction Schedule4.3-24

Table 4.3-9: TL 637 Maximum Daily Construction Air Emissions4.3-25

Table 4.3-10: Greenhouse Gas Construction Emissions.....4.3-32

Table 4.4-1: Vegetation Communities Within the Proposed Project Survey Area.....4.4-15

Table 4.4-2: Anticipated Impact Summary Table.....4.4-33

Table 4.4-3: Anticipated Impacts by Vegetation Community Type.....4.4-34

Table 4.4-4: Anticipated Mitigation Summary Table for Preserve Areas4.4-35

Table 4.5-1: Recorded Cultural Resources within the Proposed Project Area4.5-10

Table 4.6-1: Geologic Units Along the Proposed Project Alignment4.6-3

Table 4.6-2: Pole Locations in Sedimentary Geology4.6-4

Table 4.6-3: Key Faults within the Region.....4.6-5

Table 4.7-1: Hazardous Materials Sites Adjacent to the Proposed Project4.7-10

Table 4.9-1: Designated and Existing Land Uses in the Proposed Project Area.....4.9-9

Table 4.10-1: USEPA Guidelines4.10-2

Table 4.10-2: Human Response to Transient Vibration4.10-4

Table 4.10-3: County of San Diego Sound Level Limits4.10-5

Table 4.10-4: County of San Diego Impulsive Sound Level Limits4.10-5

Table 4.10-5: Typical Construction Sound Levels4.10-7

Table 4.10-6: Construction Sound Levels Adjusted for 8-Hour Day4.10-8

Table 4.10-7: Project Staging Areas4.10-9

Table 4.10-8: Project Helicopter Landing Zones and Associated Sound Levels4.10-10

Table 4.10-9: Vibration Source Levels for Construction Equipment at 50 Feet4.10-11

Table 4.11-1: Total Population4.11-2

Table 4.11-2: Total Housing Units and Vacancy Rates (2010-2012).....4.11-2

Table 4.11-3: Housing Needs Assessment (2011).....4.11-2

Table 4.11-4: Total Employment and Unemployment (2011).....4.11-3

Table 4.11-5: Median Household Income4.11-3

Table 4.14-1: Average Weekday Traffic Volumes for Project Area Major Roadways.....4.14-4

Table 4.14-2: Potential Roadways Impacted by Pole Work.....4.14-7

Table 4.15-1: Capacity of Landfills Serving the Proposed Project4.15-8

Table 4.16-1: Planned and Proposed Projects within One Mile of the Proposed Project
Area4.16-4

LIST OF APPENDICES

Appendix 1-A	Letters of Support
Appendix 1-B	Parcel and Mailing Information for Properties within 300 Feet of the Proposed Project
Appendix 1-C	Existing Power Line Map
<hr/>	
Appendix 3-A	Pole Detail Table
Appendix 3-B	Detailed Route Map
Appendix 3-C	Typical Structure Diagrams and Photographs
Appendix 3-D	Detailed Magnetic Field Management Plan
<hr/>	
Appendix 4.3-A	Emissions Spreadsheets
<hr/>	
Appendix 4.4-A	Biological Technical Report
<hr/>	
Appendix 4.5-A	Paleontological Resources Record Search
<hr/>	
Appendix 4.7-A	Regulatory Database Records
Appendix 4.7-B	Cleveland National Forest Fire Plan
Appendix 4.7-C	TL 637 Project Fire Plan