APPENDIX D6 – SIMULATIONS

APPENDIX D6 – TABLE OF CONTENTS

Map – Simulation Points

Simulation 1a (KOP SO2a) Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (Link E80C)

Simulation 1b (KOP SO2b) Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (Link E81)

Simulation 2a (KOP SO4) WSMR P Route 7 Residence (Standard Mitigation)

Simulation 2b (KOP SO4) WSMR P Route 7 Residence (Selective Mitigation)

Simulation 3 (KOP SO9) Quebradas Back Country Byway (South)

Simulation 4a (KOP SO11) WSMR S Route 3607/Stallion WSA (Standard Mitigation)

Simulation 4b (KOP SO11) WSMR S Route 3607/Stallion WSA (Selective Mitigation)

Simulation 5a (KOP SO14) Gordy's (Johnson) Hill SRMA (Standard Mitigation)

Simulation 5b (KOP SO14) Gordy's (Johnson) Hill SRMA (Selective Mitigation)

Simulation 6 (KOP SO15) Quebradas Back Country Byway (North)

Simulation 7 (KOP SO16) Rio Grande

Simulation 8 (KOP SO17) New Mexico SR 408 (El Camino Real National Scenic Byway)

Simulation 9 (KOP SO20) New Mexico SR 1 (West of San Antonio, New Mexico)

Simulation 10 (KOP SO22) US Route 380/San Pedro ACEC

Simulation 11 (KOP SO30) New Mexico SR 1 (El Camino Real National Scenic Byway)

Simulation 23 (KOP LC19) I-25 (El Camino Real National Scenic Byway)

Simulation 24 (KOP LC22) Lake Valley Back Country Byway/Geronimo National Scenic Byway

Simulation 27 (KOP LC26) Butterfield Trail

Simulation 28 (KOP LC27) Deming, New Mexico/US Route 180

Simulation 29 (KOP LC28) Unnamed County Road at Hidalgo Substation

Simulation 30 (KOP LC30) Lordsburg, New Mexico

Simulation 31 (KOP LC31) Continental Divide National Scenic Trail (South)

Simulation 32 (KOP SA4) Artesia, Arizona/Quatro Cerros Road

Simulation 33a (KOP SA5) Swift Trail Parkway (Standard Mitigation)

Simulation 33b (KOP SA5) Swift Trail Parkway (Selective Mitigation)

Simulation 34a (KOP SA14) Rug Road (Standard Mitigation)

Simulation 34b (KOP SA14) Rug Road (Selective Mitigation)

Simulation 35 (KOP TU2) Mammoth, Arizona/Arizona SR 77

Simulation 36 (KOP TU4) Oracle, Arizona

Simulation 37a (KOP TU5) Tiger Mine Trailhead on the Arizona National Scenic Trail (Standard Mitigation)

Simulation 37b (KOP TU5) Tiger Mine Trailhead on the Arizona National Scenic Trail (Selective Mitigation)

Simulation 38 (KOP TU6) San Pedro River Valley Northeast of San Manuel, Arizona

Simulation 39 (KOP TU10) Cascabel Road

Simulation 40a (KOP TU13) Cienega Creek Natural Preserve from the Arizona National Scenic Trail (Standard Mitigation)

Simulation 40b (KOP TU13) Cienega Creek Natural Preserve from the Arizona National Scenic Trail (Selective Mitigation)

Simulation 41 (KOP TU14) Arizona SR 83 near Vail, Arizona

Simulation 42 (KOP TU16) Saguaro National Park East

Simulation 43 (KOP TU19) Santa Cruz River Park from the Juan Bautista de Anza National Historic Trail

Simulation 44 (KOP TU21) Mehl Park

Simulation 45 (KOP TU25) Saguaro National Park West

Simulation 46a (KOP TU33) Earley Road Residences (Links C850, C880, and C880a)

Simulation 46b (KOP TU33) Earley Road Residences (Links C860, C890, and C880a)

Simulation 47a (KOP SO31) Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (Links E83, E85, and E80d)

Simulation 47b (KOP SO31) Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (Links E84b, E85, and E80d)

Simulation 47c (KOP SO31) Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (Links E86a)

Simulation 48 (KOP RP3) Salt Missions Scenic Byway (Link E84b)

Simulation 49 (KOP RP4) County Road B001 Residence

Simulation 50 (KOP LC33) Continental Divide National Scenic Trail (North)

Note: Simulations 12-22, 25, and 26 were prepared for Route Group 2 alternatives, and are not included in this volume.

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SUNZIA SOUTHWEST TRANSMISSION PROJECT

Simulation Points

Project Features

- Route Group 1
- Route Group 3
- Route Group 4
- Eliminated Routes
- Simulation Points
- Substation Site

General Reference Features

- City
- State Highway
- U.S. Highway
- Interstate
- County Boundary
- Lake/Reservoir

Land Ownership

- Bureau of Land Management
- U.S. Department of Defense
- McGregor Range Withdrawal
- National Park Service
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- U.S. Bureau of Reclamation
- Federal (Other)
- Indian Reservation
- State
- Private/Other

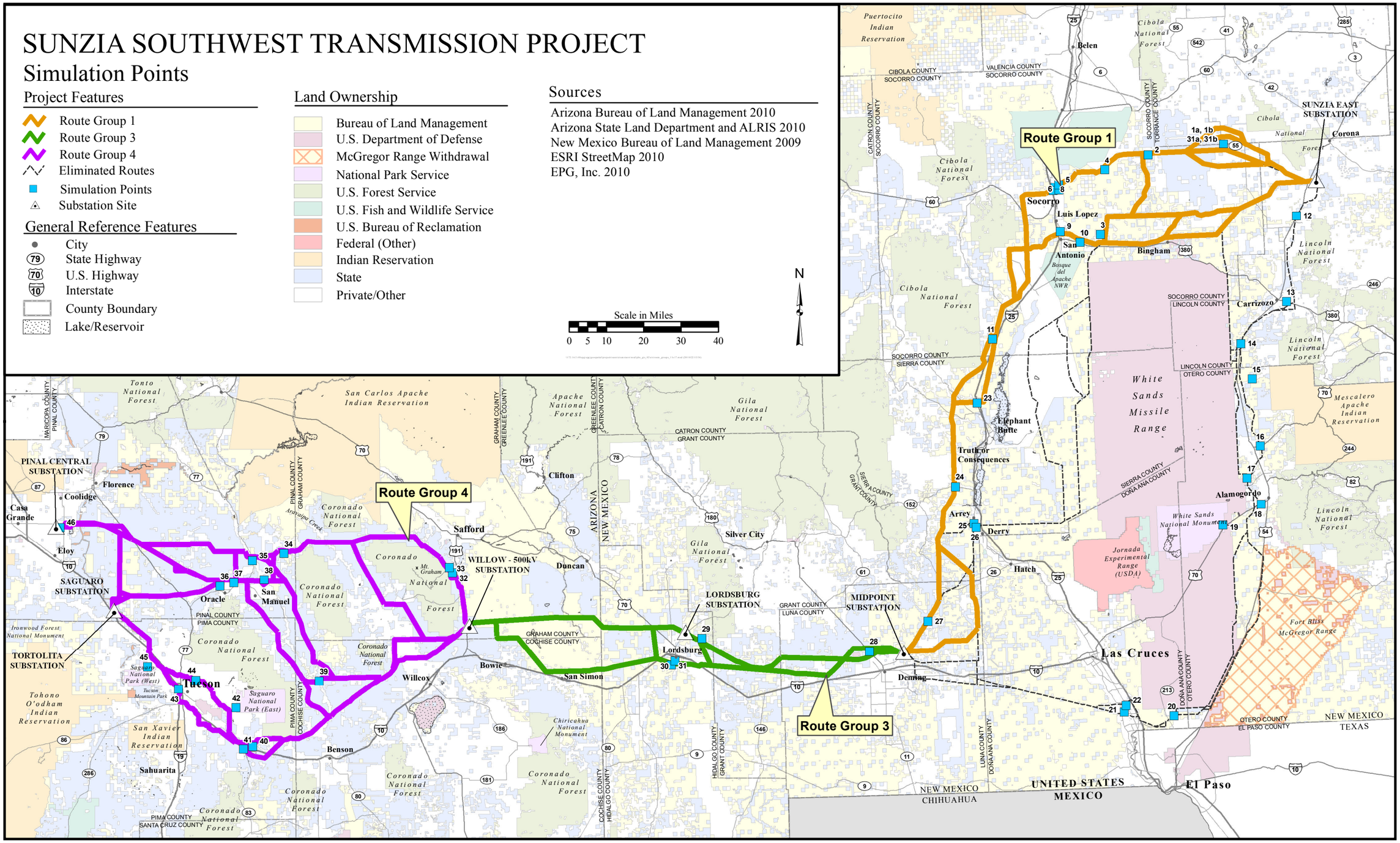
Sources

Arizona Bureau of Land Management 2010
Arizona State Land Department and ALRIS 2010
New Mexico Bureau of Land Management 2009
ESRI StreetMap 2010
EPG, Inc. 2010

Scale in Miles

0 5 10 20 30 40

N



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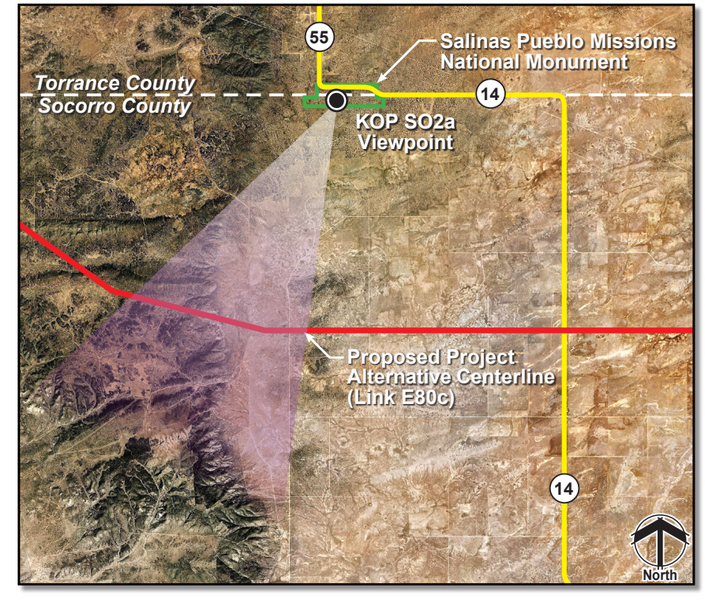
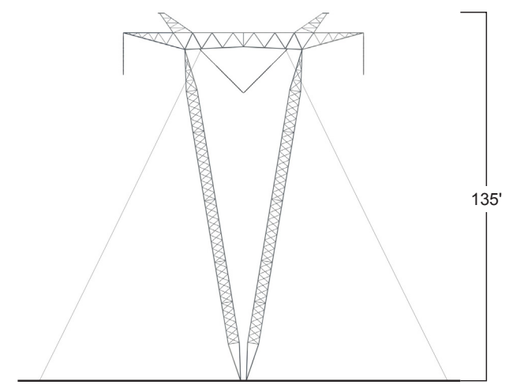


Existing Condition – View southwest from the Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (KOP SO2a) toward Chupadera Mesa.

Photograph Location: Viewpoint is approximately 6.0 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram) based on standard mitigation measures and typical spans. Portions of the Project would be seen from a superior viewing position in a setting where cultural modifications are not evident.

Photo Date and Time: 2-16-11, 10:18 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 1a

January 2012

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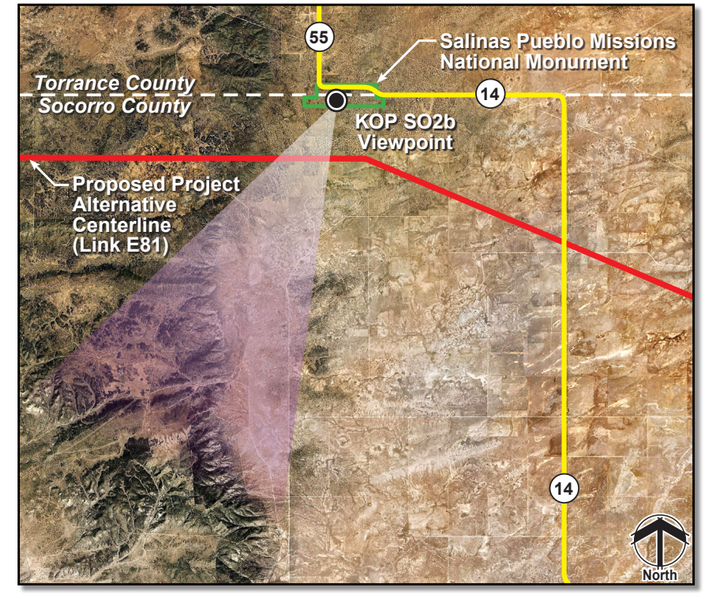
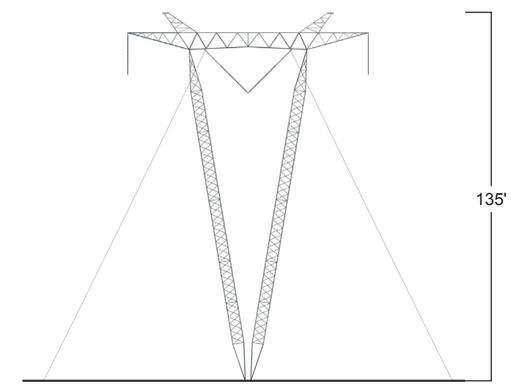


Existing Condition – View southwest from the Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (KOP SO2b) toward Chupadera Mesa.

Photograph Location: Viewpoint is approximately 2.0 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram) based on standard mitigation measures and typical spans. Portions of the Project would be seen from a superior viewing position in a setting where cultural modifications are not evident.

Photo Date and Time: 2-16-11, 10:18 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 1b

January 2012

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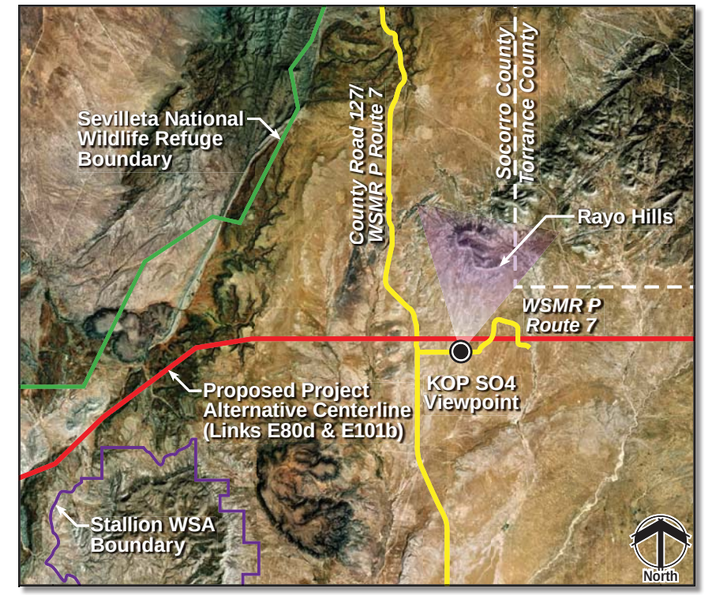
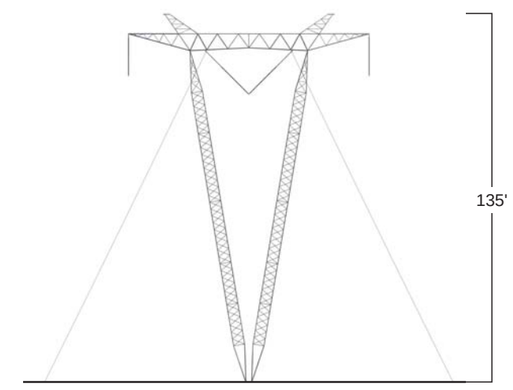


Existing Condition – View north from a residence along WSMR P Route 7 (KOP SO4) located east of the Sevilleta NWR. Adjacent scenery includes Rayo Hills.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be seen crossing BLM Class IV land in a partially skylined condition. Recommended selective mitigation measure #7 would reduce visual contrast.

Photo Date and Time: 5-5-11, 11:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 2a

January 2012

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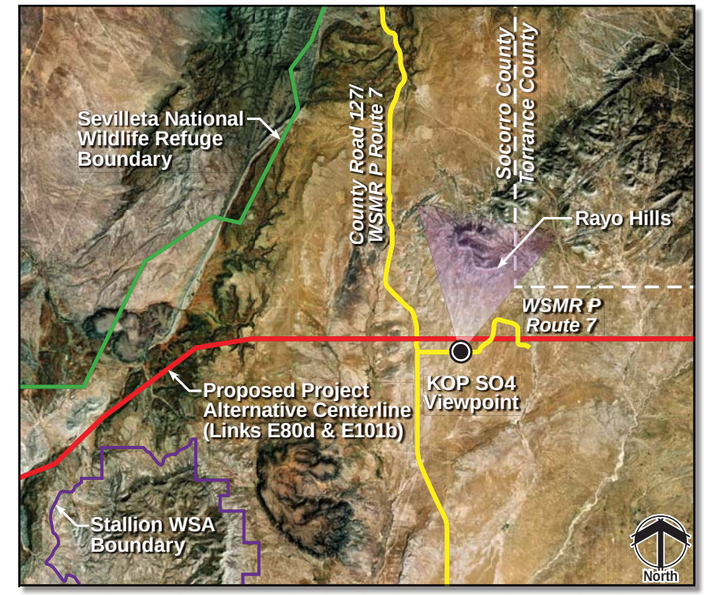
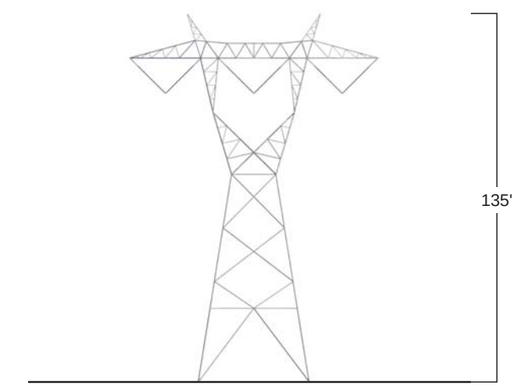


Existing Condition – View north from a residence along WSMR P Route 7 (KOP SO4) located east of the Sevilleta NWR. Adjacent scenery includes Rayo Hills.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures and typical spans. Portions of the Project would be seen crossing BLM Class IV land in a partially skylined condition.

Photo Date and Time: 5-5-11, 11:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 2b

January 2012

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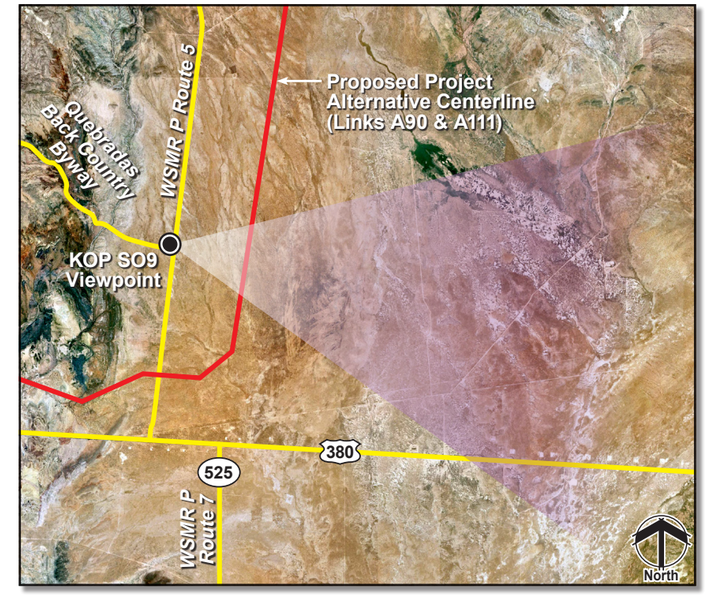
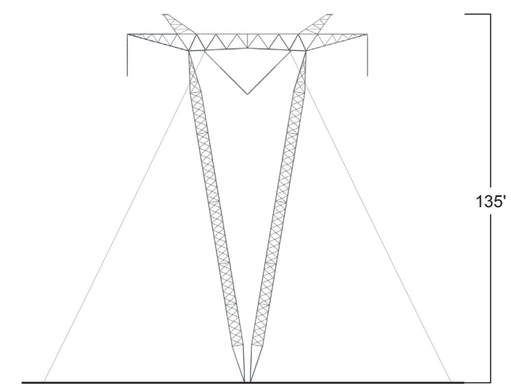


Existing Condition – View east from the Quebradas Back Country Byway near its intersection with WSMR P Route 5 (KOP SO9). Adjacent scenery includes the Oscura Mountains.

Photograph Location: Viewpoint is approximately 1.2 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Structures would be seen as the Project crosses BLM Class III Land.

Photo Date and Time: 5-6-11, 12:14 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 3

January 2012

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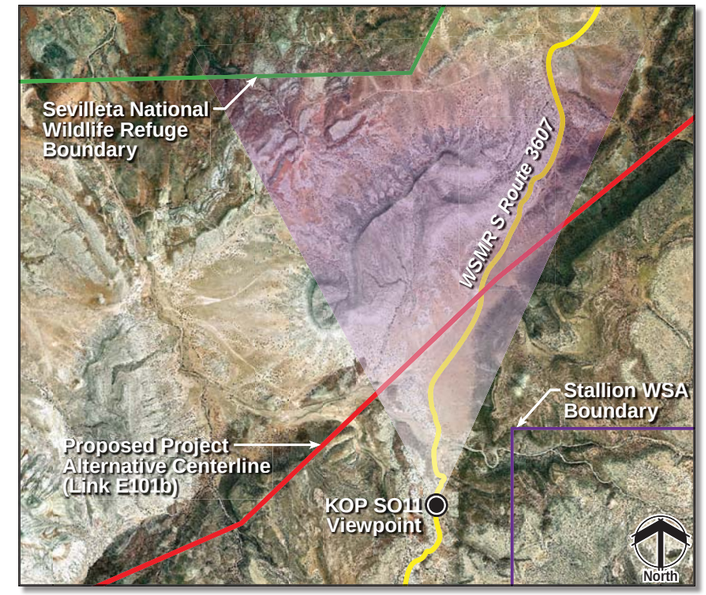
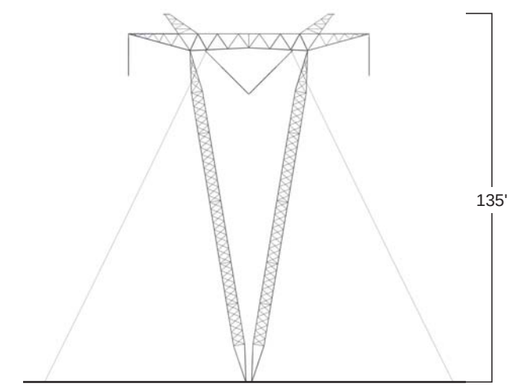


Existing Condition – View north from WSMR S Route 3607 (KOP SO11), of landforms south of the Sevilleta National Wildlife Refuge and west of the Stallion WSA.

Photograph Location: Viewpoint is approximately 0.9 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be skylined with remaining portions backdropped. Structures would be seen as the Project crosses BLM Class III Land. Recommended selective mitigation measure #7 would reduce visual contrast.

Photo Date and Time: 5-5-11, 10:22 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 4a

January 2012

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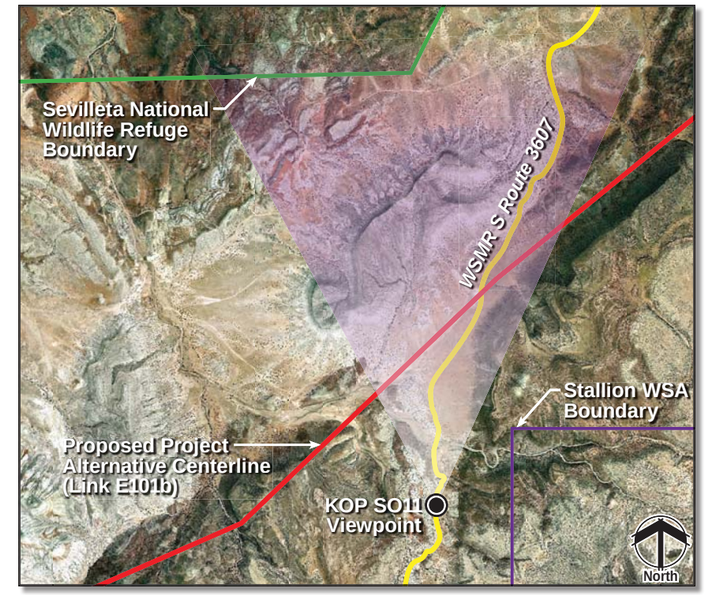
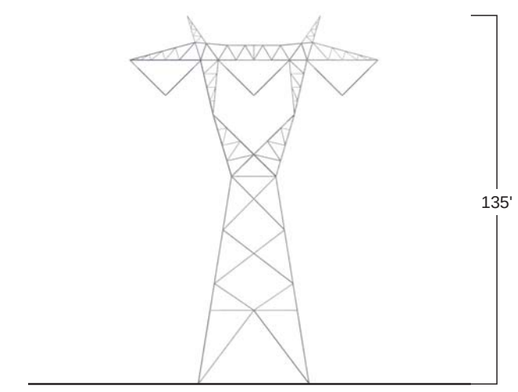


Existing Condition – View north from WSMR S Route 3607 (KOP SO11), of landforms south of the Sevilleta National Wildlife Refuge and west of the Stallion WSA.

Photograph Location: Viewpoint is approximately 0.9 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures and typical spans. Portions of the Project would be skylined with remaining portions backdropped. Structures would be seen as the Project crosses BLM Class III Land.

Photo Date and Time: 5-5-11, 10:22 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 4b

January 2012

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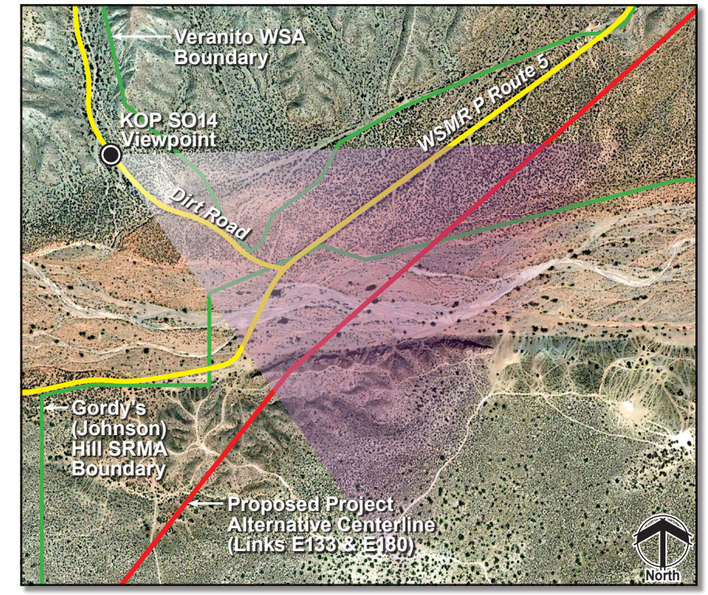
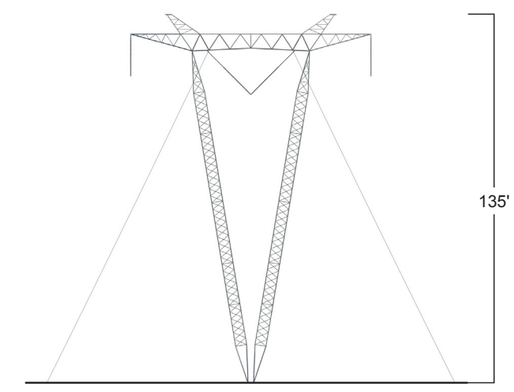


Existing Condition – View traveling southeast toward WSMR P Route 5 and Gordy's (Johnson) Hill SRMA (KOP SO14).

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be skylined within the SRMA. Recommended selective mitigation measure #7 would reduce visual contrast.

Photo Date and Time: 5-6-11, 12:58 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 5a

April 2012

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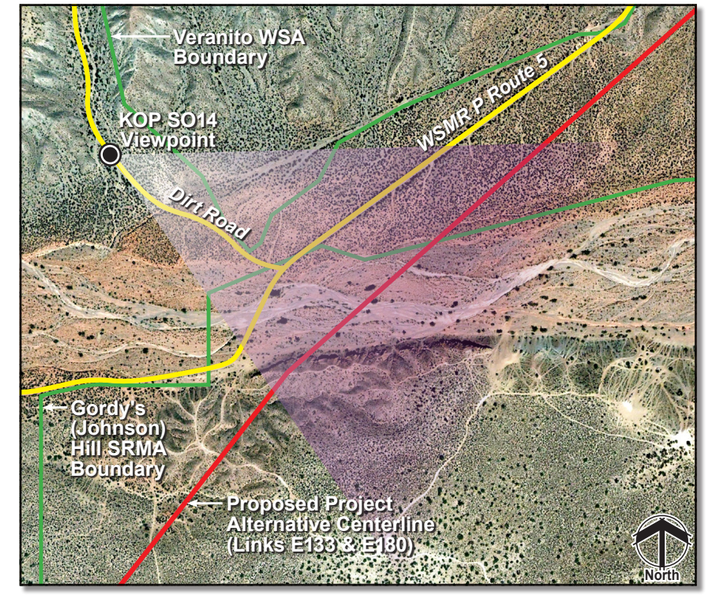
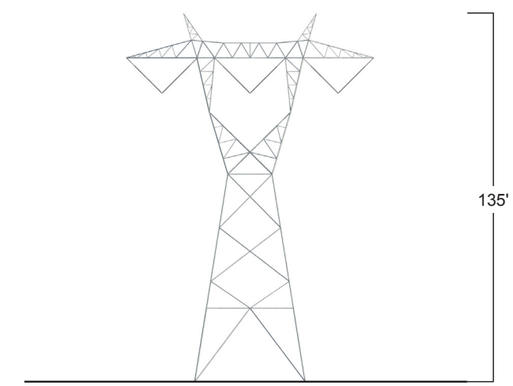


Existing Condition – View traveling southeast toward WSMR P Route 5 and Gordy's (Johnson) Hill SRMA (KOP SO14).

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures and typical spans. Portions of the Project would be skylined within the SRMA.

Photo Date and Time: 5-6-11, 12:58 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 5b

April 2012

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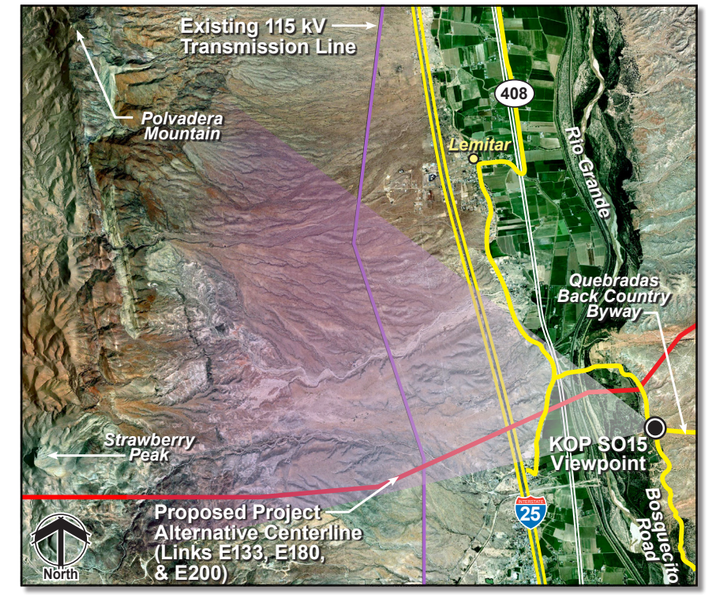
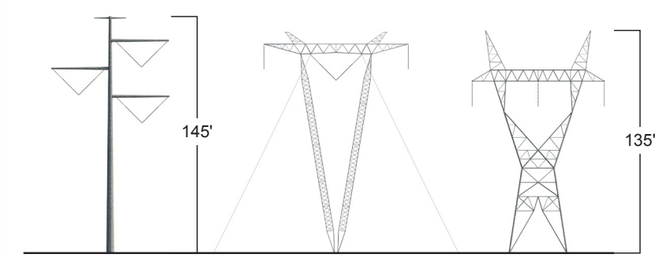


Existing Condition – View northwest toward the Rio Grande Valley north of Socorro, New Mexico, from the Quebradas Back Country Byway (KOP SO15). Adjacent scenery includes the Rio Grande Valley, Strawberry Peak, Polvadera Mountain, and portions of the Magdalena Mountains.

Photograph Location: Viewpoint is approximately 1.1 miles from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures and typical spans. The Project would be seen from a superior viewing condition crossing BLM Class IV Land.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Photo Date and Time: 5-4-11, 9:25 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 6

January 2012

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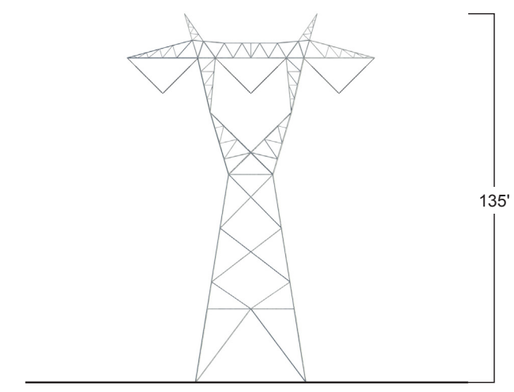
Existing Condition – View south down the Rio Grande (KOP SO16) from Bosquecito Road, part of the Chaparral Loop Bridge, north of Socorro. Recreation viewers along the river are associated with a high concern level.

Photograph Location: Viewpoint is approximately 0.3 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be seen above and through breaks in the riparian vegetation, resulting in partially skylined conditions. Selective mitigation measures #10 and #14 would reduce visual contrast (shown).

Photo Date and Time: 2-17-11, 8:23 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 7

January 2012

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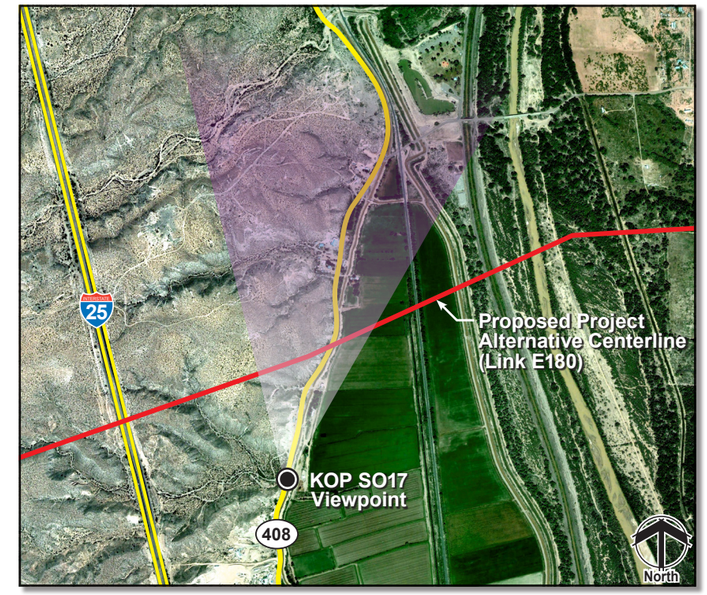
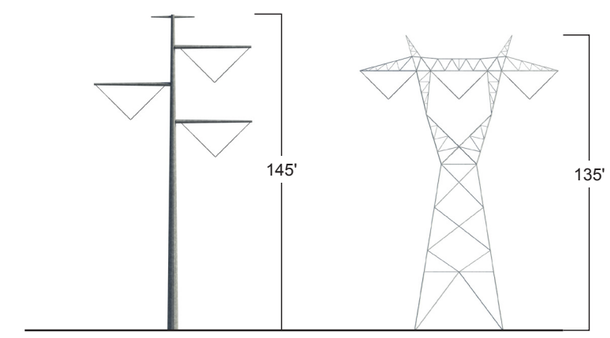


Existing Condition – View north from New Mexico SR 408 (KOP SO17), part of the El Camino Real National Scenic Byway, north of Socorro.

Photograph Location: Viewpoint is approximately 0.3 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures and typical spans. Portions of the Project would be skylined as it crosses BLM VRM Class IV designated land in a modified landscape setting. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 5-5-11, 8:12 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 8

January 2012

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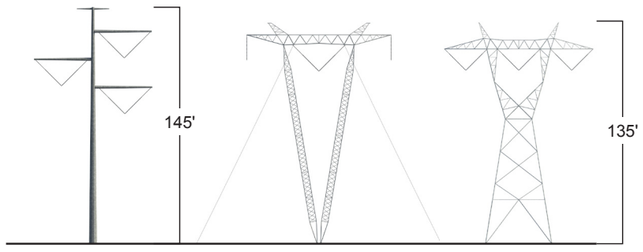
Existing Condition – View southeast toward residences through the Rio Grande Valley north of San Antonio, New Mexico, along SR 1 (KOP SO20). Existing distribution lines, residences, and agricultural development modify the existing landscape setting within the river valley with a natural landscape setting on the east of the valley, as the Project traverses BLM VRM Class II lands.

Photograph Location: Viewpoint is approximately 0.7 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be partially backdropped, with a portion of the Project skylined and construction access visible through the BLM VRM Class II lands.

Photo Date and Time: 2-17-11, 3:16 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 9

January 2012

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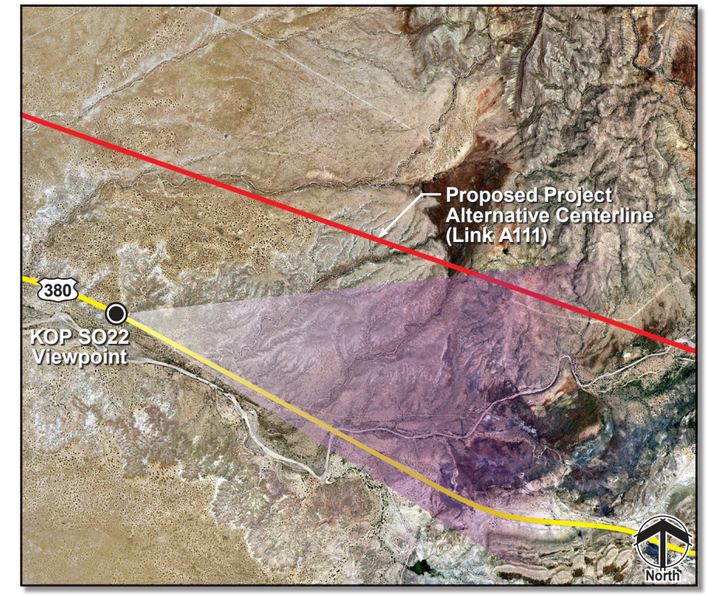
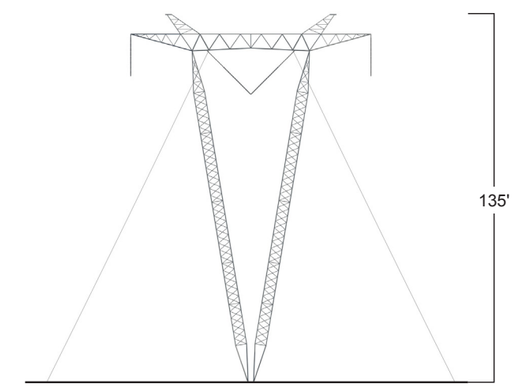


Existing Condition – View east from US Route 380 (KOP SO22), within the San Pedro ACEC, east of San Antonio, New Mexico.

Photograph Location: Viewpoint is approximately 1.6 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. The Project is intermittently screened as it parallels US Route 380 through BLM VRM Class II and III designations.

Photo Date and Time: 5-6-11, 12:03 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 10

January 2012

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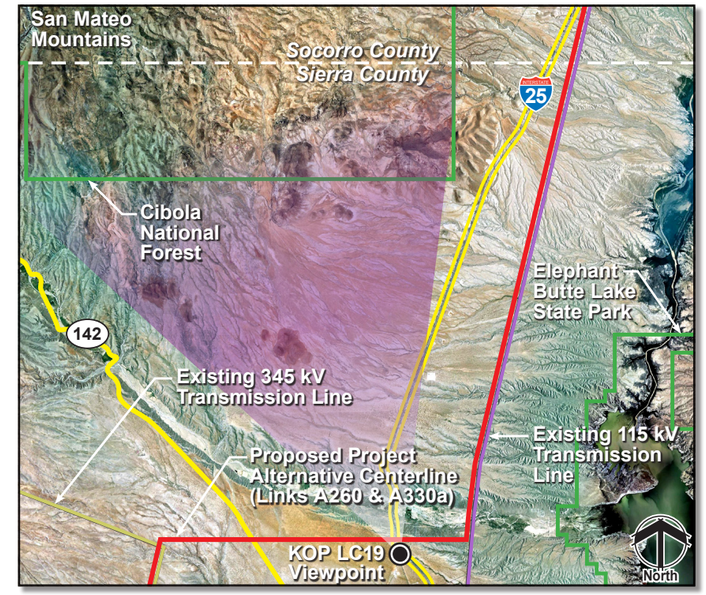
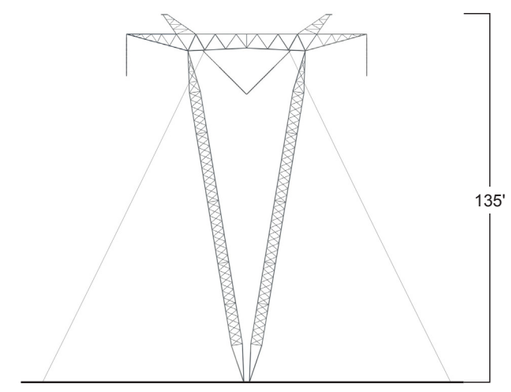


Existing Condition – View north from I-25 (KOP LC19), which is part of the El Camino Real National Scenic Byway, from BLM VRM Class III land. Adjacent terrain includes the San Mateo Mountains, Vicks Peak, and Monticello Canyon.

Photograph Location: Viewpoint is approximately 0.2 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be skylined when crossing this scenic travel route on BLM VRM Class III land. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 2-18-11, 8:36 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 23

January 2012

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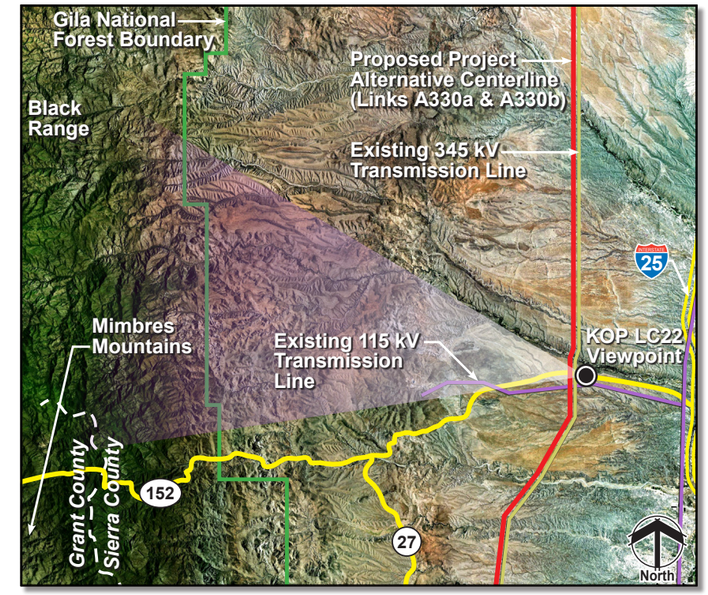
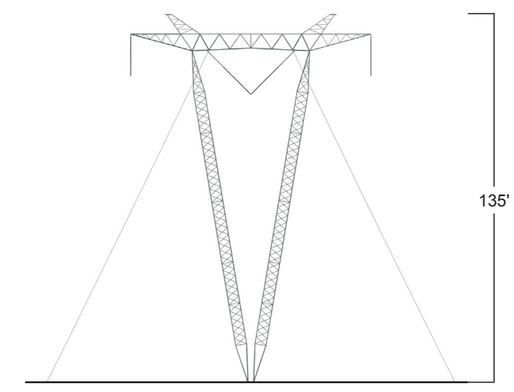


Existing Condition – View west from Lake Valley Back Country Byway/Geronimo National Scenic Byway (KOP LC22) from BLM VRM Class III land. Existing 345 kV and 115 kV transmission lines cross and parallel this travel route. Adjacent scenery includes the Mimbres Mountains within the Black Range.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. The Project would parallel an existing 345 kV transmission line when crossing this scenic travel route on BLM VRM Class III land; however, a portion of the route would be skylined. Selective mitigation measure #10 would reduce visual contrast.

Photo Date and Time: 2-18-11, 9:28 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 24

January 2012

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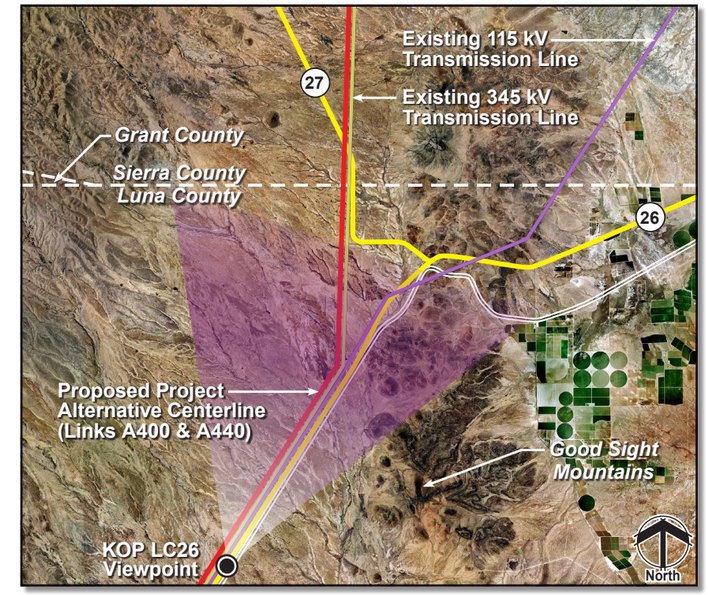
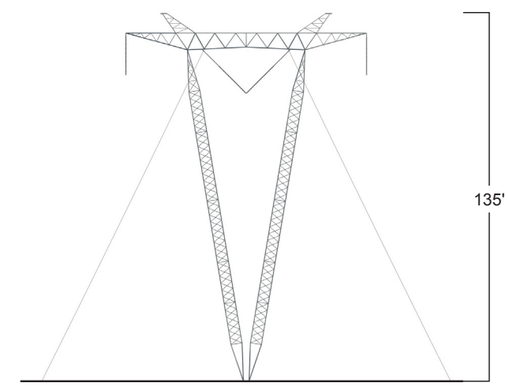


Existing Condition – View northeast along SR 26 (KOP LC26), where the historic Butterfield Trail crosses BLM VRM Class II land. Existing 115 kV and 345 kV transmission lines parallel this travel route. Adjacent scenery includes Cookes Range and the Good Sight Mountains.

Photograph Location: Viewpoint is approximately 0.2 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. The Project would parallel existing transmission lines when crossing the historic Butterfield Trail on BLM VRM Class II land; however, the Project would be skylined. The Project would cross BLM VRM Class III lands for other portions of this alternative link.

Photo Date and Time: 2-18-11, 11:33 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 27

January 2012

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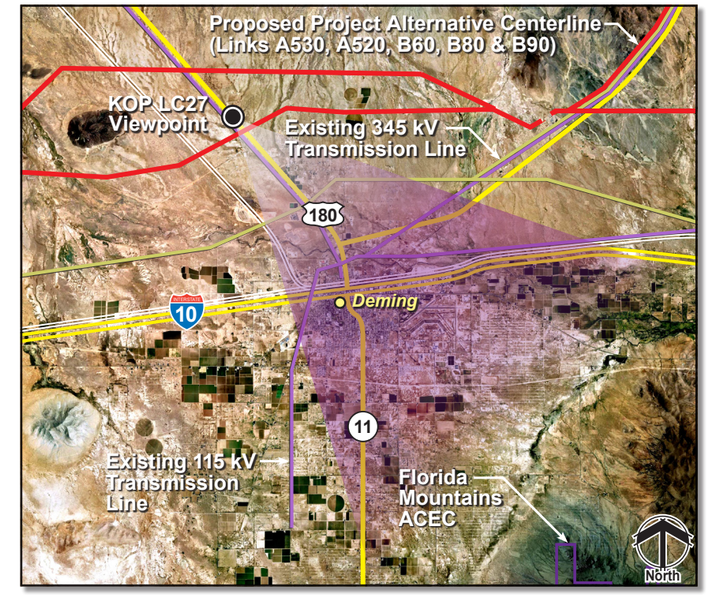
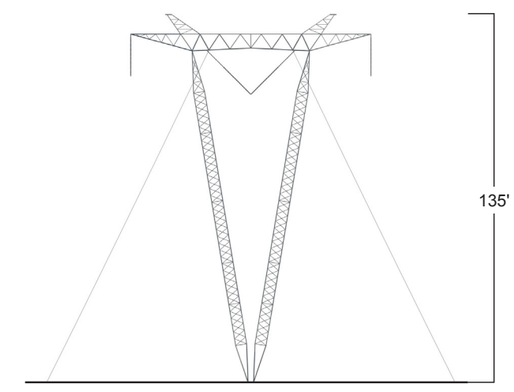


Existing Condition – View southeast along US Route 180 (KOP LC27) toward Deming. Existing distribution lines parallel this travel route. Scenery includes the Florida Mountains southeast of Deming.

Photograph Location: Viewpoint is approximately 1.7 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures and typical spans. Portions of the Project would be skylined when crossing this travel route. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 1-26-11, 4:42 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 28

January 2012

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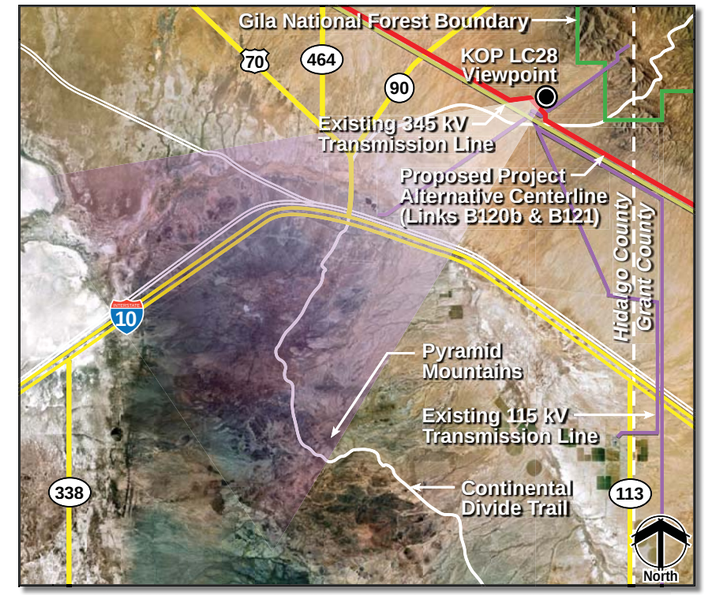
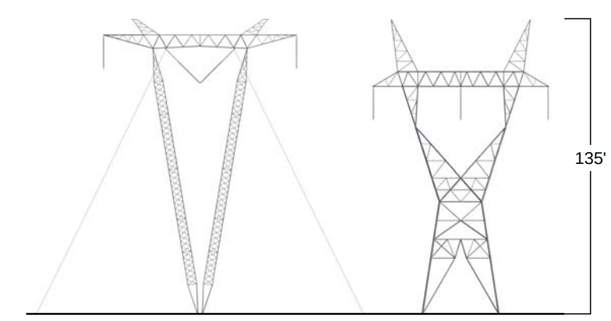


Existing Condition – View southwest from an unnamed county road (KOP LC28) toward the Continental Divide National Scenic Trail and Lordsburg, New Mexico. Adjacent scenery includes the Pyramid Mountains and the Animas Valley.

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be seen from a level viewing position in the context of the existing Hidalgo Substation and existing transmission lines. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 5-13-11, 8:52 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 29

January 2012

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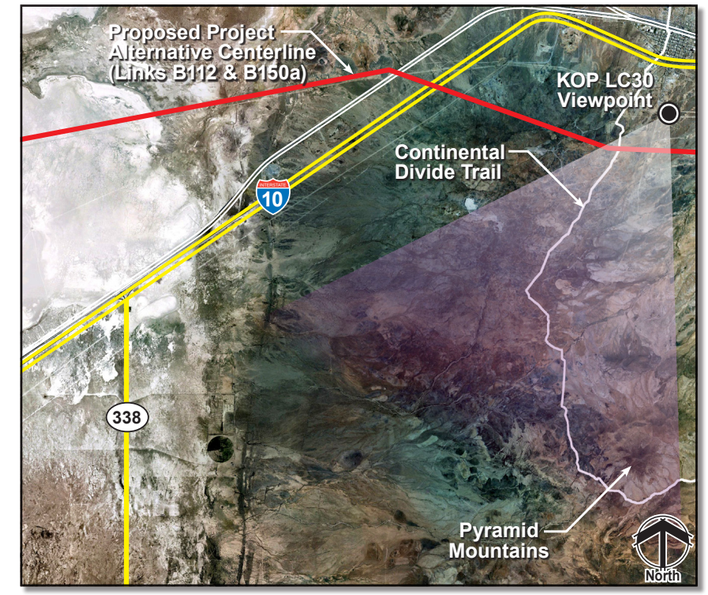
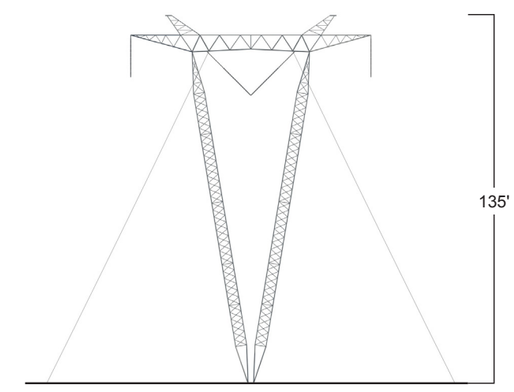
Existing Condition – View southwest from residences in Lordsburg, New Mexico (KOP LC30). Adjacent scenery includes the Pyramid Mountains.



Photograph Location: Viewpoint is approximately 0.8 mile from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Portions of the Project would be seen crossing BLM Class II Land. Cultural modifications include residences, distribution lines, and travel routes.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Photo Date and Time: 2-25-11, 11:04 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 30

January 2012

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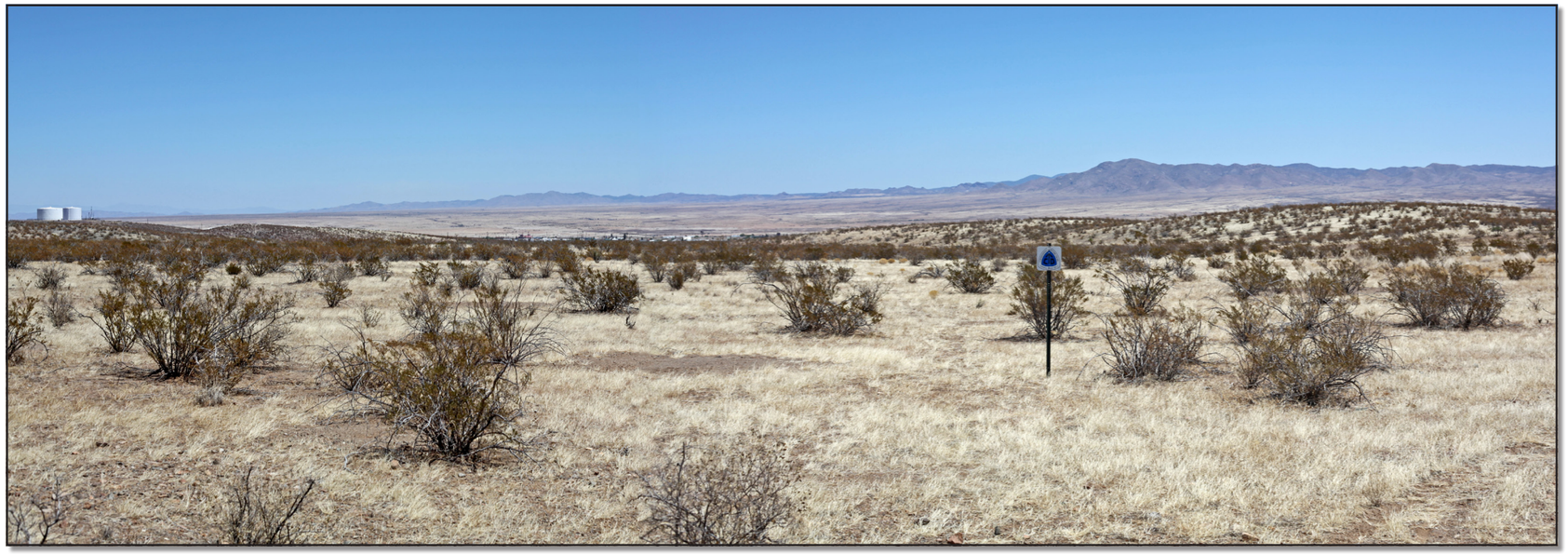
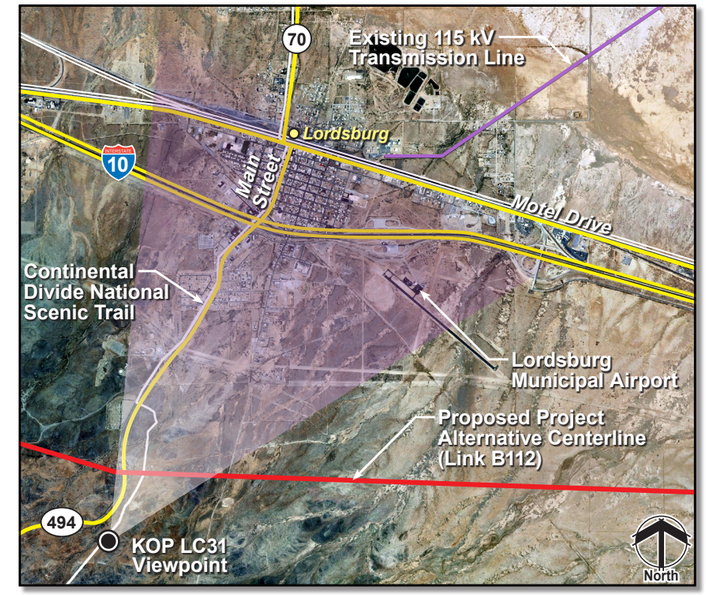
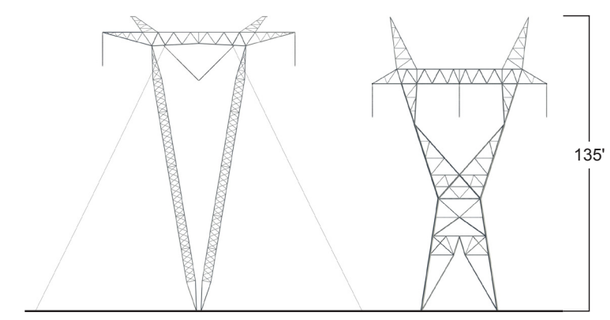




Existing Condition – View northeast from the Continental Divide National Scenic Trail (KOP LC31) toward Lordsburg, New Mexico. Adjacent scenery includes the Big Burro Mountains and Animas Valley.

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. Views of the Project would be partially skylined. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 1-26-11, 3:02 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 31

January 2012

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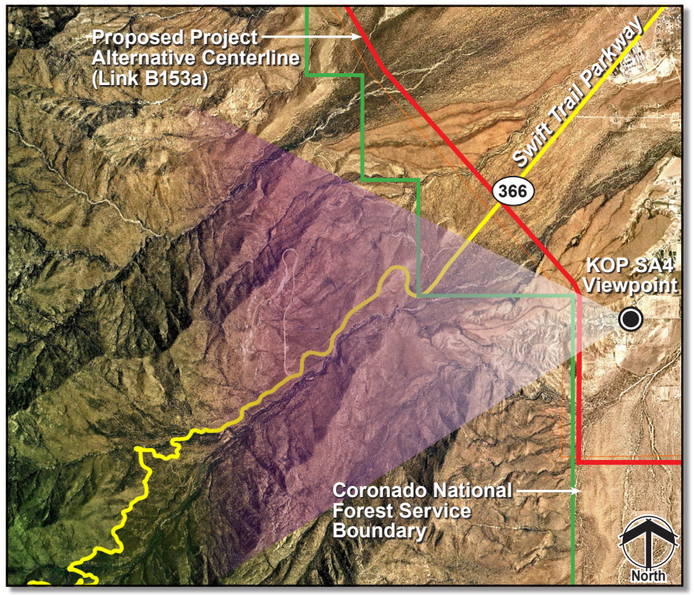
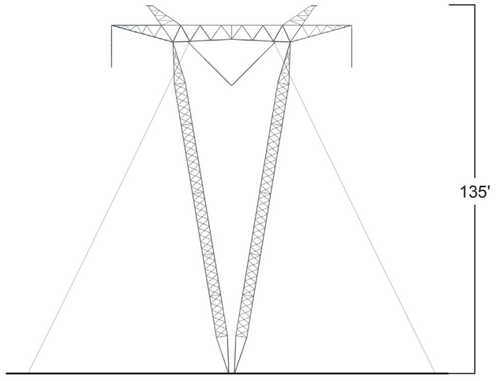


Existing Condition – View west from Quatro Cerros Road (KOP SA4) toward residences near Artesia. Adjacent scenery includes the Pinaleño Mountains, Heliograph Peak, and Mount Graham.

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Inferior view of the Project, which would be partially skylined. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 1-26-11, 11:26 a.m. Focal Length: 50mm
Simulations were prepared using three-val structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 32

January 2012

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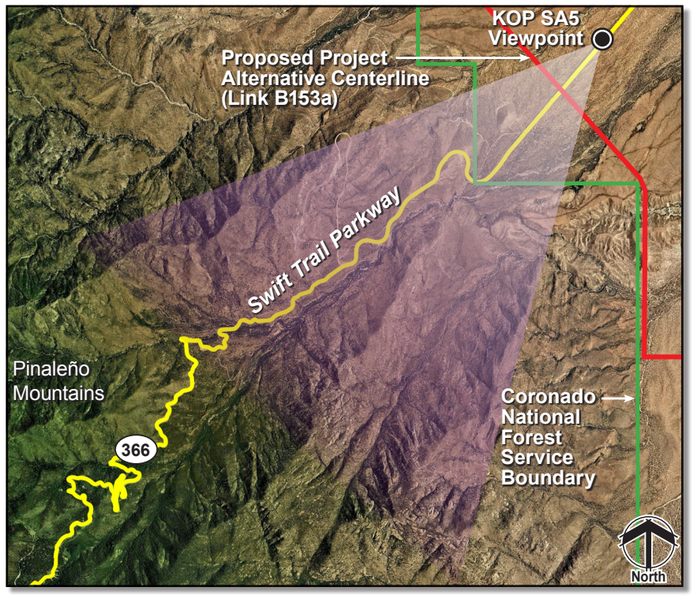
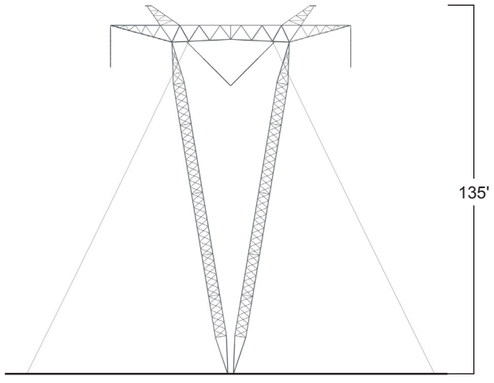


Existing Condition – View southwest from Swift Trail Parkway (KOP SA5), a designated scenic road. This travel route provides primary access to the Coronado National Forest. Adjacent scenery includes the Pinaleño Mountains, Heliograph Peak, and Mount Graham.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Level view of the Project that would be backdropped by adjacent terrain. Selective mitigation measures #7 and #10 would reduce visual contrast.

Photo Date and Time: 1-26-11, 11:49 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 33a

January 2012

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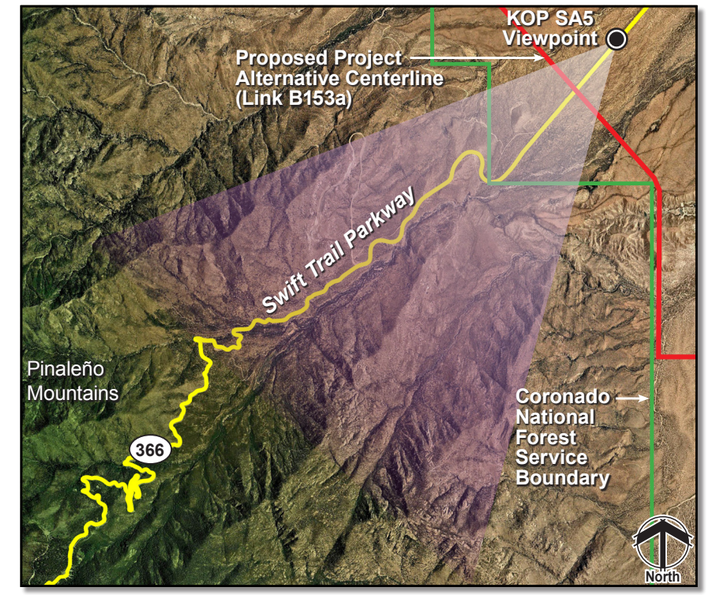
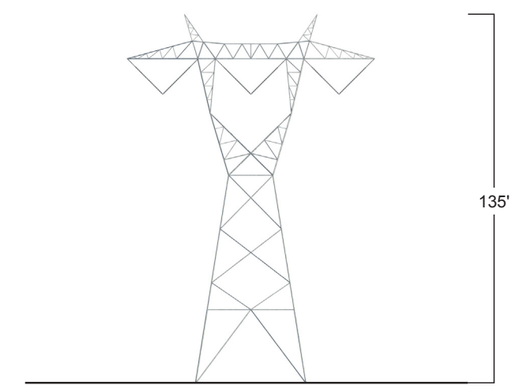


Existing Condition – View southwest from Swift Trail Parkway (KOP SA5), a designated scenic road. This travel route provides primary access to the Coronado National Forest. Adjacent scenery includes the Pinaleño Mountains, Heliograph Peak, and Mount Graham.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures. Level view of the Project that would be backdropped by adjacent terrain.

Photo Date and Time: 1-26-11, 11:49 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 33b

January 2012

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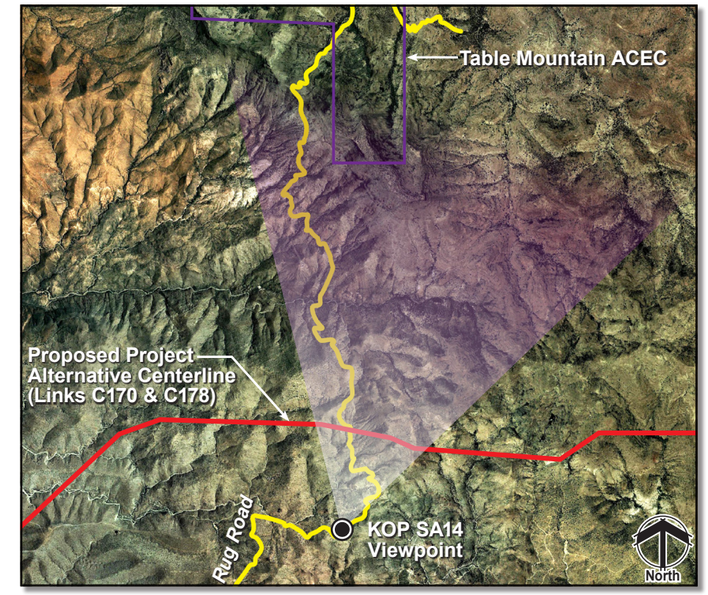
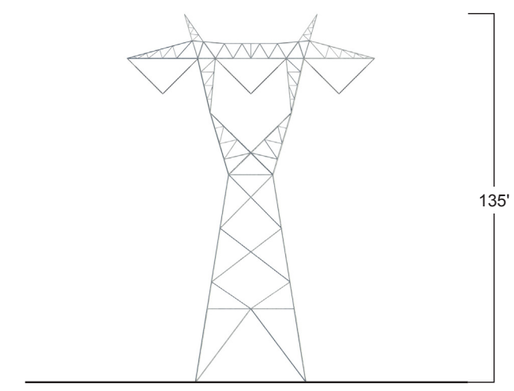


Existing Condition – View north from Rug Road (KOP SA14), a recreation access road for Aravaipa Canyon Wilderness, toward Table Mountain ACEC.

Photograph Location: Viewpoint is approximately 0.75 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized
self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Inferior view of the Project crossing steep terrain where portions would be skylined. Selective mitigation measures #10, #11, and #13 would reduce visual contrast.

Photo Date and Time: 4-14-10, 1:24 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 34a

January 2012

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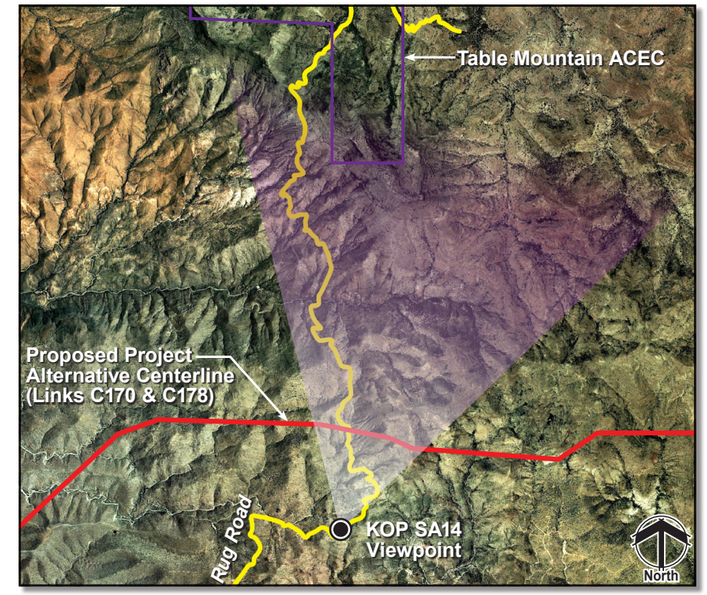
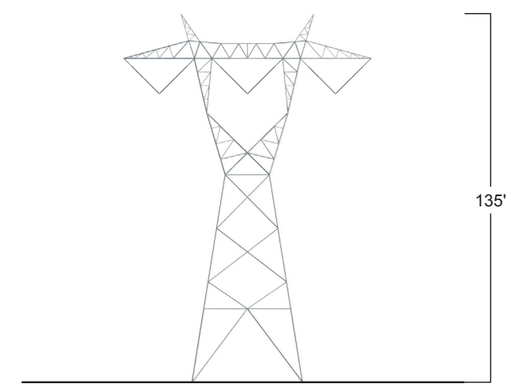


Existing Condition – View north from Rug Road (KOP SA14), a recreation access road for Aravaipa Canyon Wilderness, toward Table Mountain ACEC.

Photograph Location: Viewpoint is approximately 0.75 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized
self-supporting lattice tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures. Inferior view of the Project crossing steep terrain where portions would be skylined.

Photo Date and Time: 4-14-10, 1:24 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 34b

January 2012

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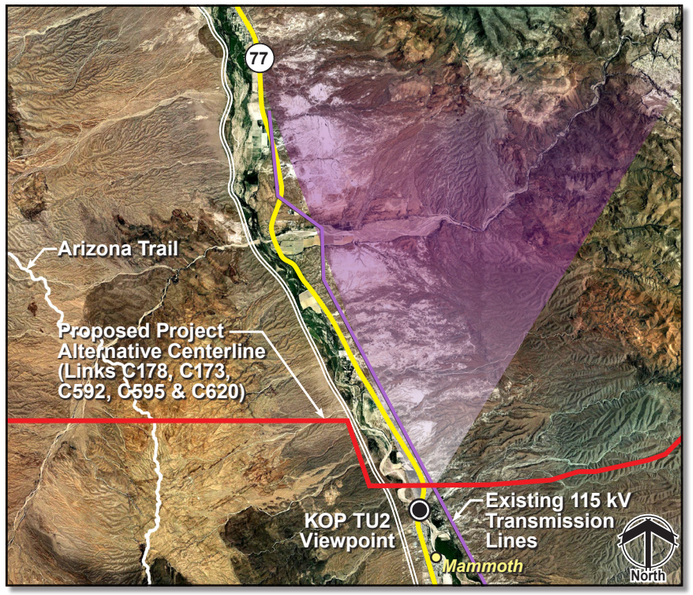
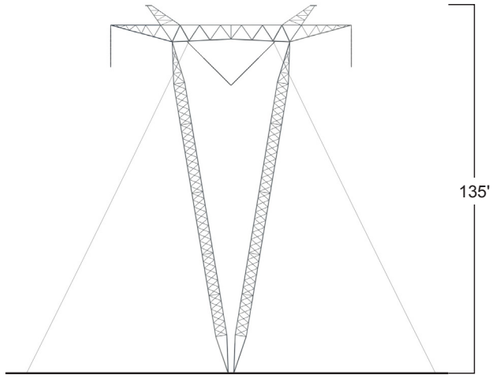


Existing Condition – View north from SR 77 (KOP TU2) in Mammoth, Arizona. This travel route provides access to residents in the northern part of the San Pedro River Valley.

Photograph Location: Viewpoint is approximately 0.8 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Portions of the Project would be skylined when crossing the San Pedro River Valley. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 1-25-11, 12:05 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 35

January 2012

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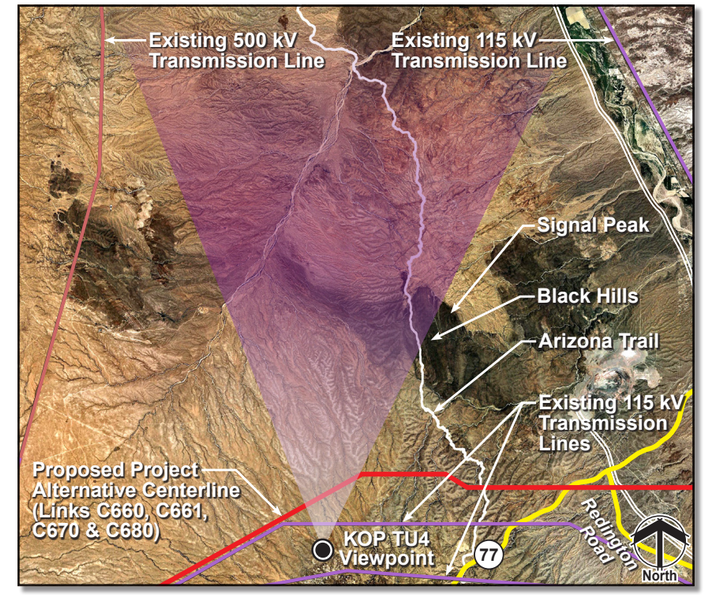
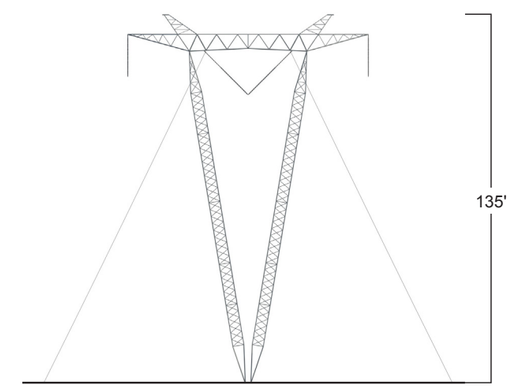
Existing Condition – View north from residences near Oracle (KOP TU4) toward an existing 115 kV transmission line. Adjacent scenery includes Signal Peak and the Black Hills.



Photograph Location: Viewpoint is approximately 1.0 mile from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. The Project would be backdropped by adjacent terrain and viewed in context with an existing 115 kV transmission line.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Photo Date and Time: 1-25-11, 12:48 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 36

January 2012

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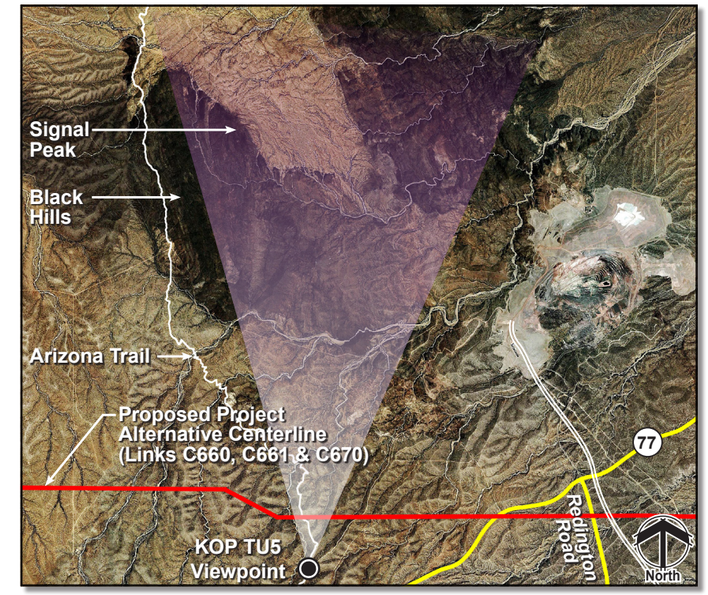
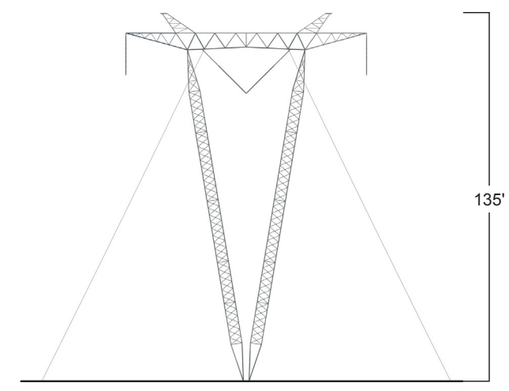


Existing Condition – View north from the Tiger Mine Trailhead on the Arizona Trail (KOP TU5), a nationally designated scenic trail. Terrain in this viewshed includes Signal Peak and Pinal Peak, which are associated with the Black Hills north of Oracle.

Photograph Location: Viewpoint is approximately 0.7 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. The Project would be backdropped by adjacent terrain. Selective mitigation measures #7 and #10 would reduce visual contrast.

Photo Date and Time: 1-25-11, 1:05 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 37a

January 2012

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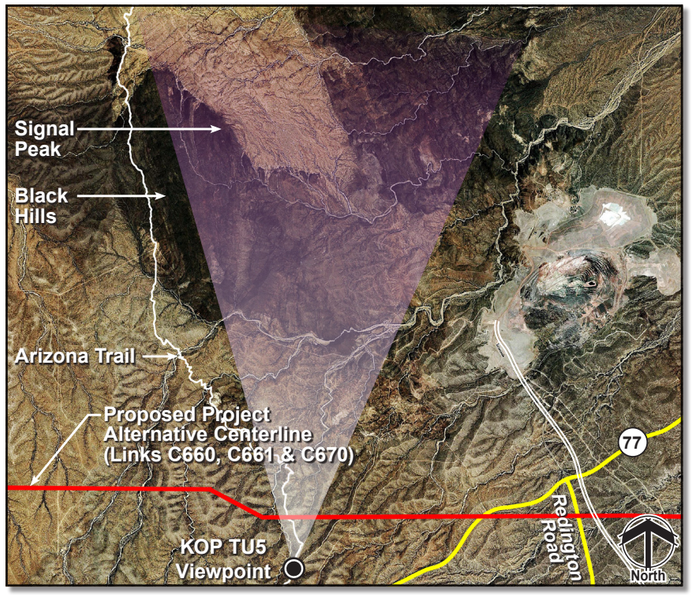
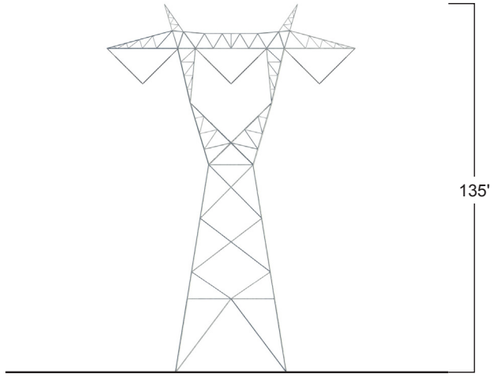
Existing Condition – View north from the Tiger Mine Trailhead on the Arizona Trail (KOP TU5), a nationally designated scenic trail. Terrain in this viewshed includes Signal Peak and Pinal Peak, which are associated with the Black Hills north of Oracle.



Photograph Location: Viewpoint is approximately 0.7 mile from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including selective mitigation measures. The Project would be backdropped by adjacent terrain.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure height is typical.

Photo Date and Time: 1-25-11, 1:05 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 37b

January 2012

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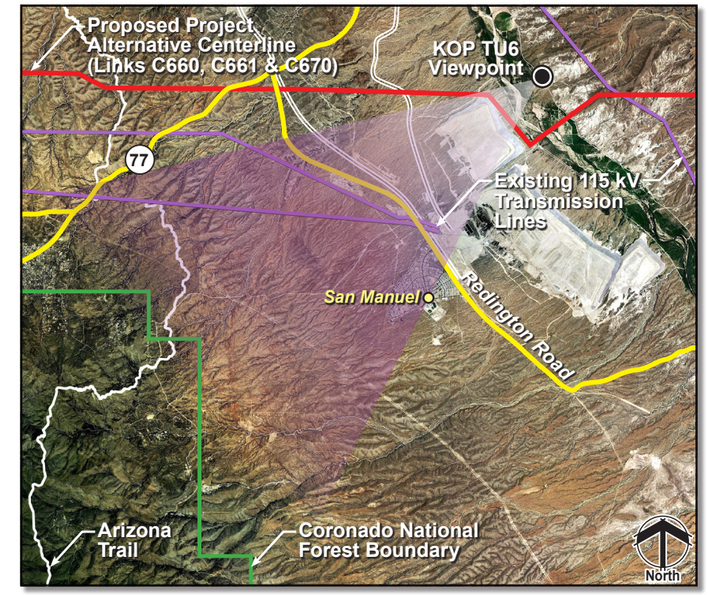
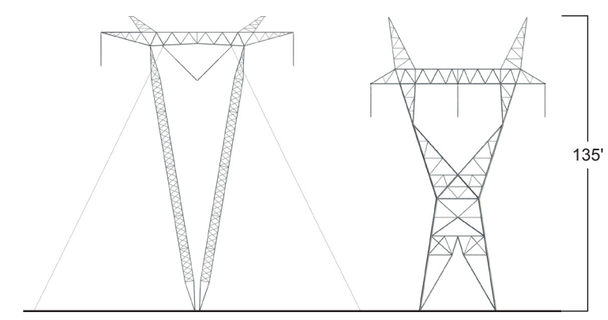


Existing Condition – View southwest from a residence within the San Pedro River Valley northeast of San Manuel (KOP TU6). Existing cultural modifications include a mine, which is evident from this residence.

Photograph Location: Viewpoint is approximately 1.0 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be viewed in a modified setting where an existing mine dominates the view.

Photo Date and Time: 1-25-11, 10:55 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 38

January 2012

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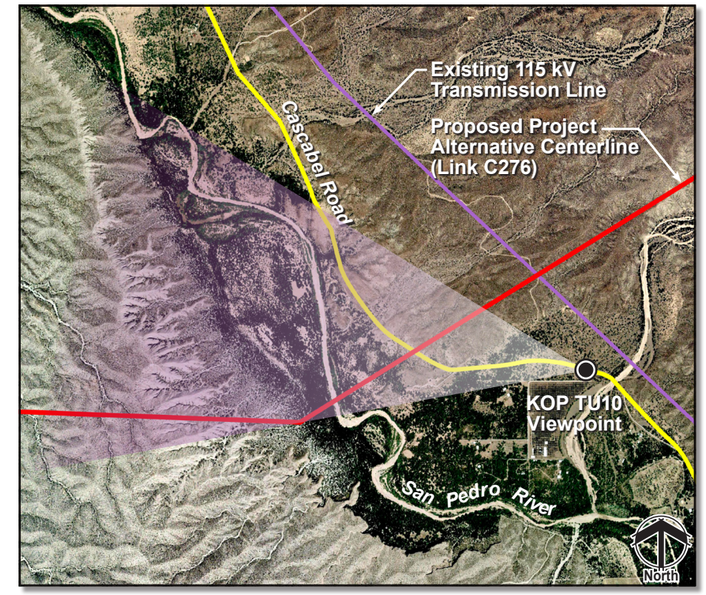
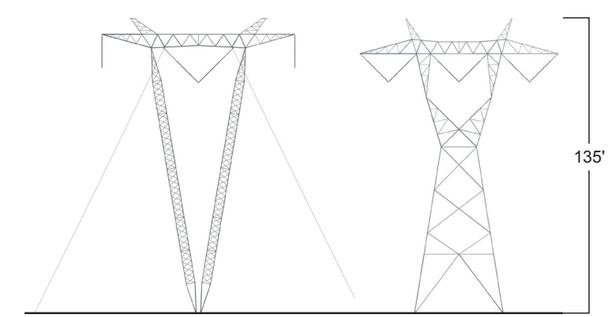


Existing Condition – View west from Cascabel Road (KOP TU10) within the San Pedro River Valley. Cascabel Road provides access for residents in the San Pedro River Valley area.

Photograph Location: Viewpoint is approximately 0.5 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. Portions of the Project would be skylined while crossing elevated terrain through the San Pedro River Valley. Selective mitigation measures #7 and #10 would reduce visual contrast (shown).

Photo Date and Time: 1-26-11, 8:42 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 39

January 2012

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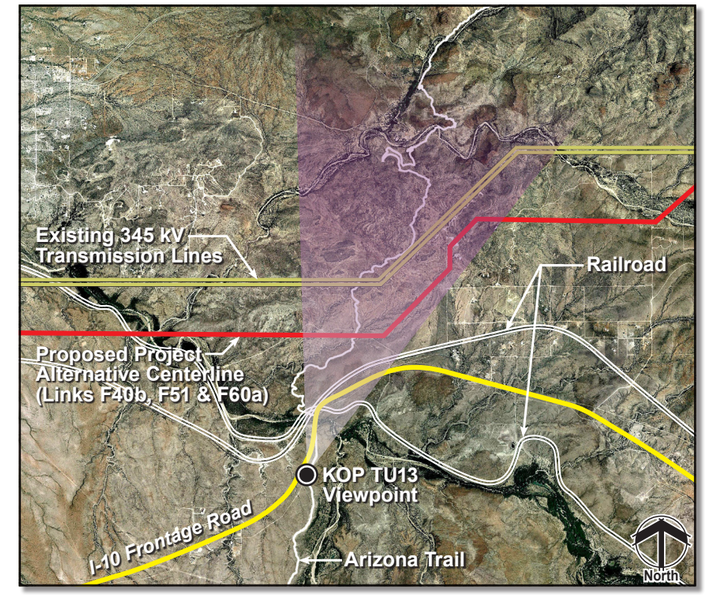
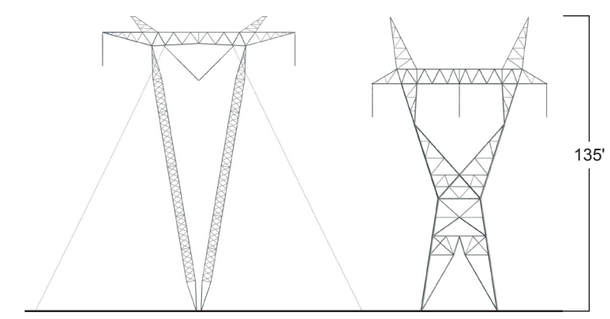


Existing Condition – View northeast from the Davidson Trailhead on the Arizona Trail through the Cienega Creek Natural Preserve (KOP TU13) toward two existing 345 kV transmission lines. The Arizona Trail is a nationally designated scenic trail. Surrounding terrain includes the Rincon Mountains, Tanque Verde Peak, and Duckbill Mountain.

Photograph Location: Viewpoint is approximately 1.0 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be backdropped by adjacent terrain and viewed in the context of existing transmission lines. Selective mitigation measures #5 and #7 would reduce visual contrast.

Photo Date and Time: 1-21-11, 1:02 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 40a

January 2012

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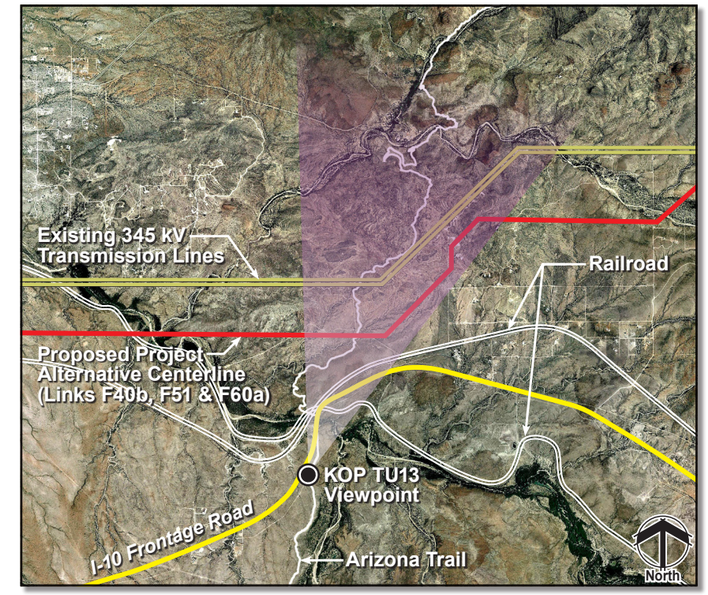
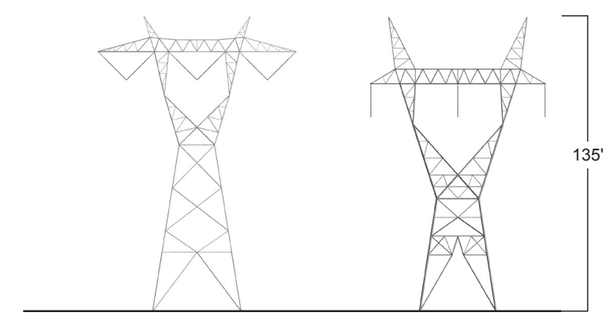


Existing Condition – View northeast from the Davidson Trailhead on the Arizona Trail through the Cienega Creek Natural Preserve (KOP TU13) toward two existing 345 kV transmission lines. The Arizona Trail is a nationally designated scenic trail. Surrounding terrain includes the Rincon Mountains, Tanque Verde Peak, and Duckbill Mountain.

Photograph Location: Viewpoint is approximately 1.0 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including selective mitigation measures. The Project would be backdropped by adjacent terrain and viewed in the context of existing transmission lines.

Photo Date and Time: 1-21-11, 1:02 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 40b

January 2012

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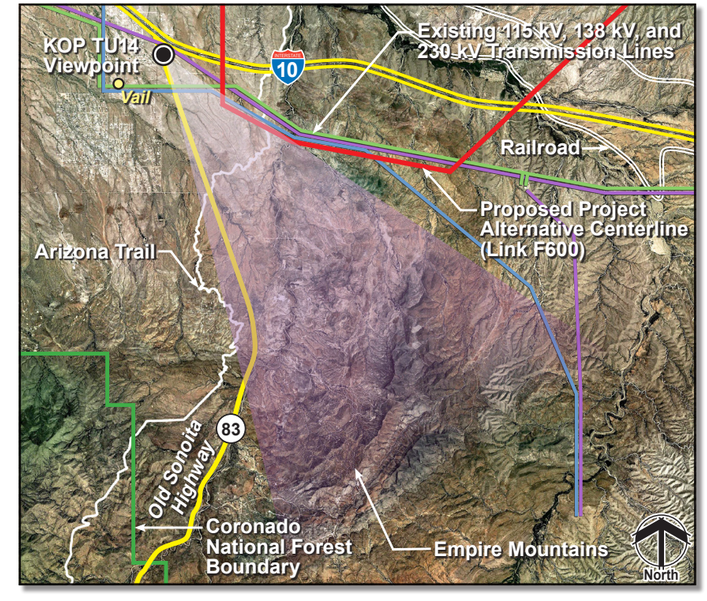
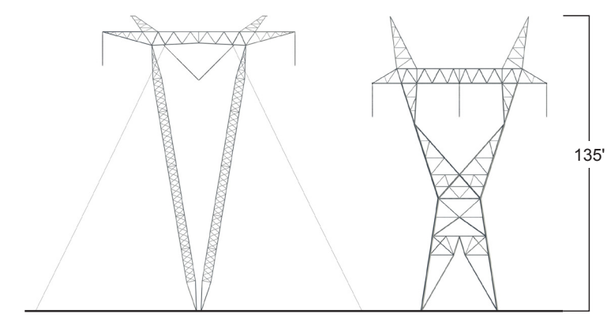


Existing Condition – View southeast from SR 83 (KOP TU14), a designated scenic road, at the exit ramp from I-10 toward existing 138 kV and 230 kV transmission lines. Adjacent scenery includes the Empire Mountains and Apache Peak.

Photograph Location: Viewpoint is approximately 1.5 miles from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be backdropped by adjacent terrain and viewed in the context of existing transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Photo Date and Time: 1-21-11, 12:39 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 41

January 2012

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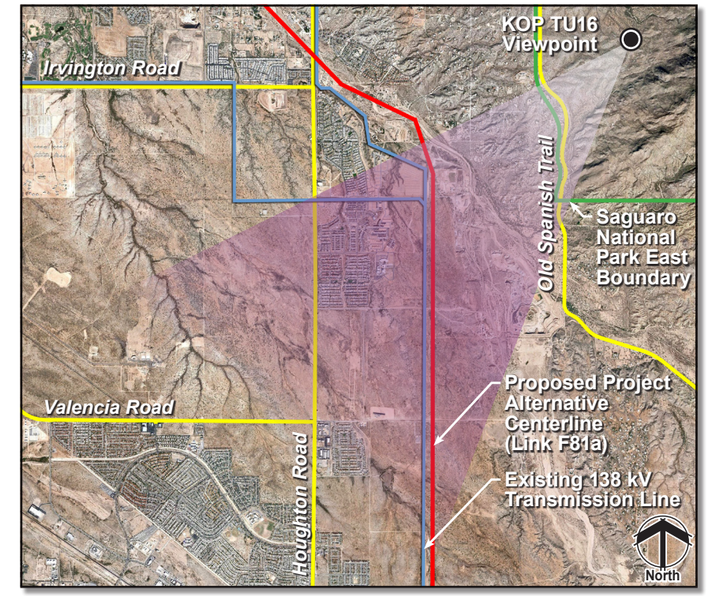
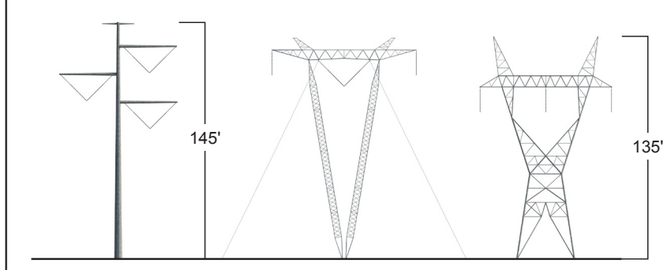


Existing Condition – View southwest from Tanque Verde Ridge Trailhead and picnic area within Saguaro National Park East (KOP TU16), toward an existing 138 kV transmission line and the developed area of the Rincon Valley, south of Tucson.

Photograph Location: Viewpoint is approximately 2.0 miles from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be backdropped by surrounding terrain and viewed in the context of existing transmission lines and the developed area of Tucson.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Photo Date and Time: 1-21-11, 11:38 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 42

January 2012

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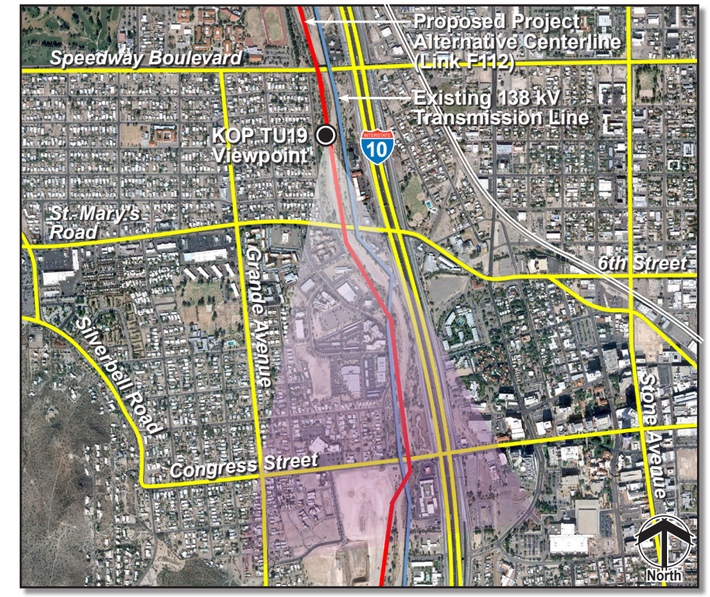
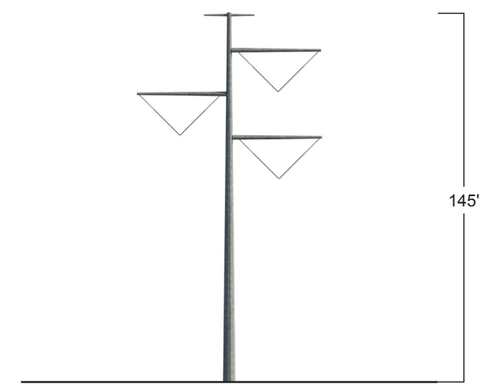


Existing Condition – View south from the Santa Cruz River Park (KOP TU19), which also includes the Juan Bautista de Anza National Historic Trail, adjacent to the Santa Cruz River. This river park is paralleled by an existing 138 kV transmission line and the developed area of Tucson, including I-10.

Photograph Location: Viewpoint is immediately adjacent to proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. The Project would be viewed in the context of an existing transmission line and the developed area of Tucson.

Photo Date and Time: 1-21-11, 10:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 43

January 2012

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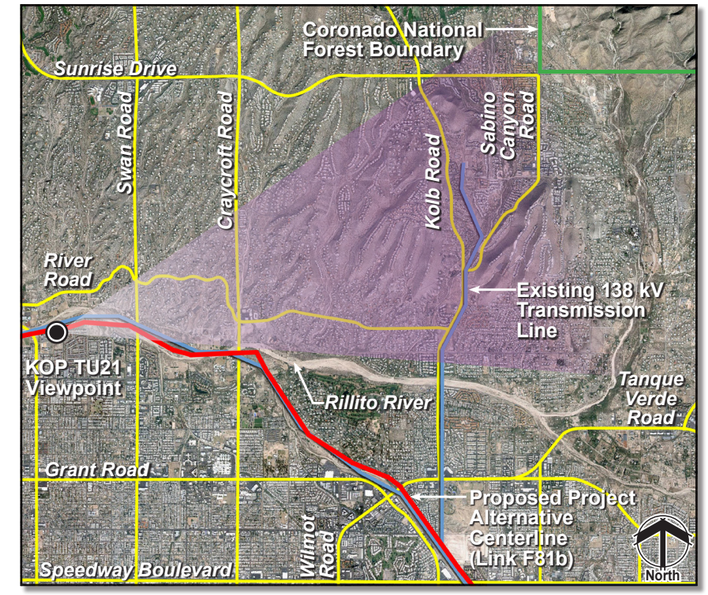
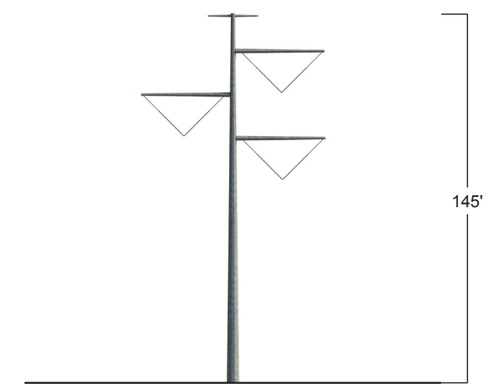


Existing Condition – View east from Mehl Park along Rillito River (KOP TU21) toward Agua Caliente Hill. Recreation viewers and adjacent residences have views of the Santa Catalina Mountains.

Photograph Location: Viewpoint is immediately adjacent to proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. The Project would be partially skylined from a level viewing condition with minimal screening.

Photo Date and Time: 1-21-11, 2:15 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 44

January 2012

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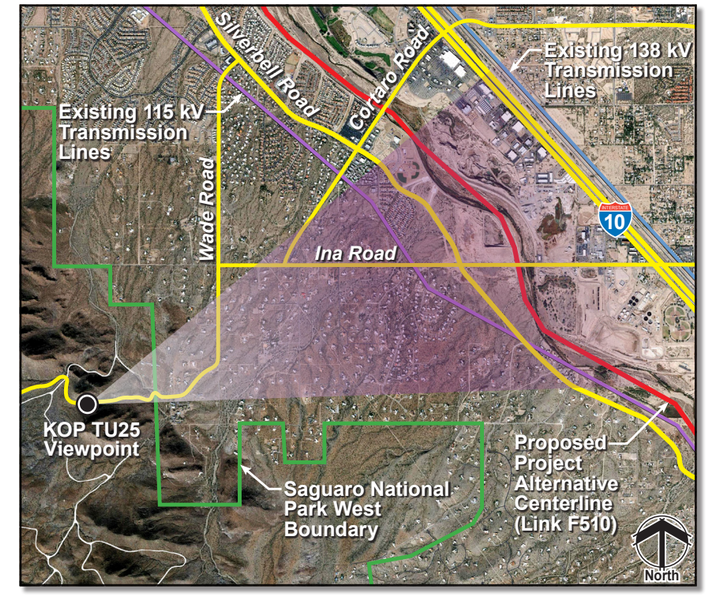
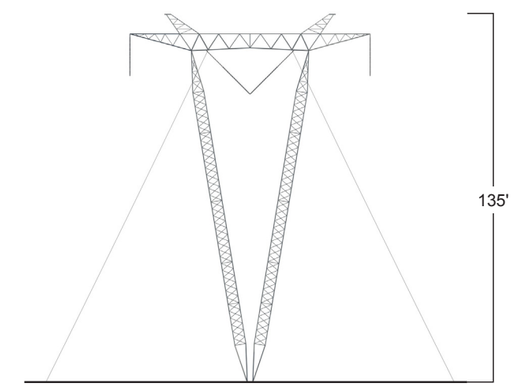


Existing Condition – View east from West Picture Rocks Road within Saguaro National Park West (KOP TU25), a nationally important recreation area near Tucson, Arizona. Adjacent scenery includes the Santa Catalina Mountains.

Photograph Location: Viewpoint is approximately 2.6 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Superior views of the Project would be viewed in the context of the developed area of Tucson, Arizona.

Photo Date and Time: 1-21-11, 3:47 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 45

January 2012

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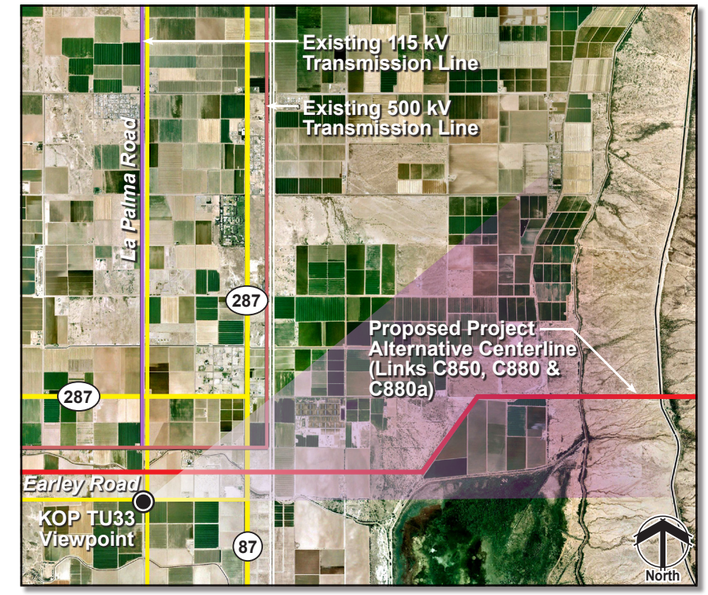
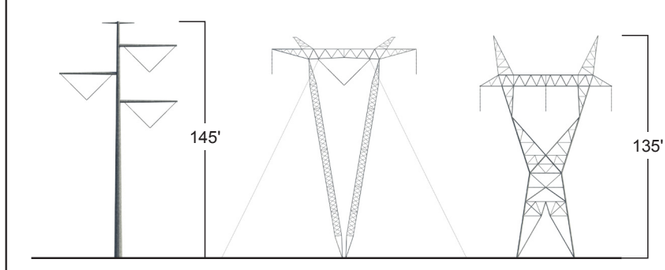
Existing Condition – View northeast toward residences on Earley Road (KOP TU33). Existing distribution lines, a 500 kV transmission line, and agriculture modify the landscape setting.



Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be minimally screened and partially skylined.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Photo Date and Time: 1-21-11, 4:57 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 46a

January 2012

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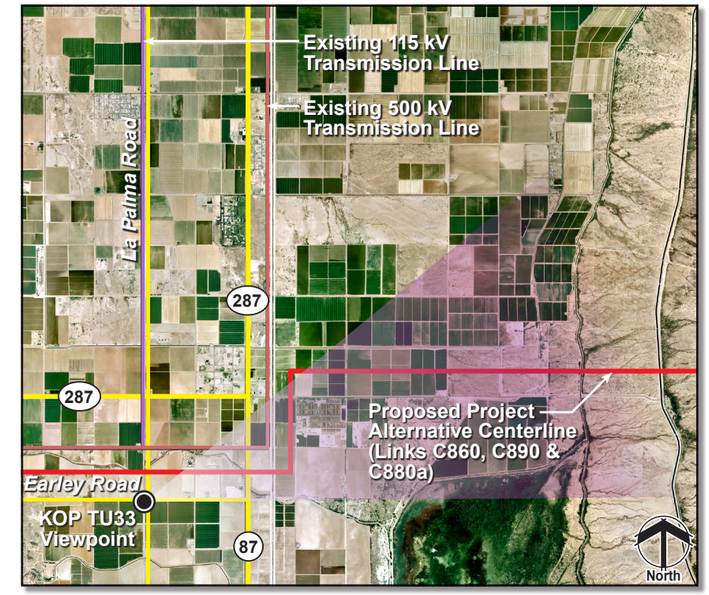
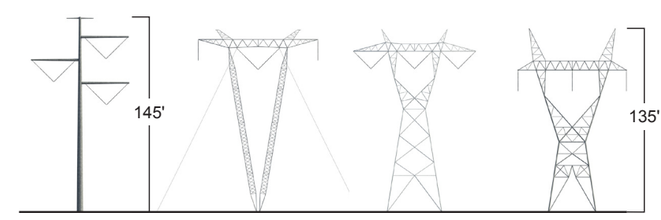


Existing Condition – View northeast toward residences on Earley Road (KOP TU33). Existing distribution lines, a 500 kV transmission line, and agriculture modify the landscape setting.

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized self-supporting tubular tangent transmission tower.

Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice tangent transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be minimally screened and partially skylined.

Photo Date and Time: 1-21-11, 4:57 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 46b

January 2012

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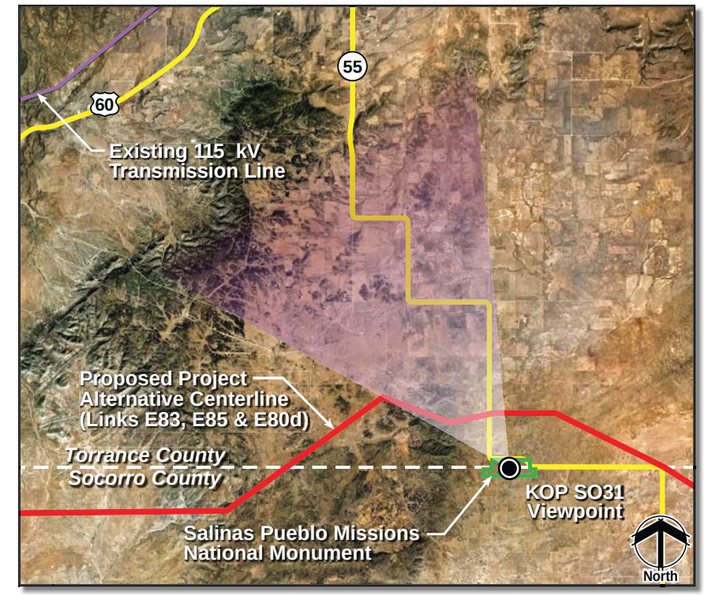
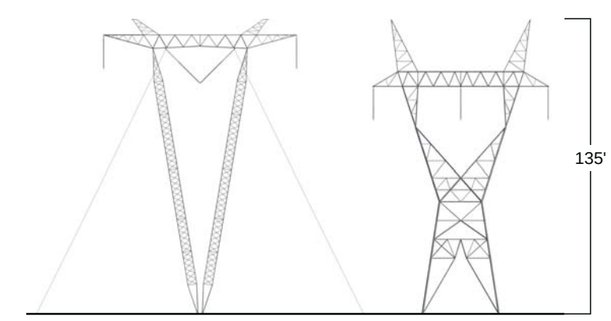


Existing Condition – View northwest from the Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (KOP SO31).

Photograph Location: Viewpoint is approximately 2.0 miles from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure height is typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams) based on standard mitigation measures and typical spans. Portions of the Project would be seen from a superior viewing position in a setting where cultural modifications are present but minimal.

Photo Date and Time: 5-25-11, 10:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45 feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 47a

January 2012

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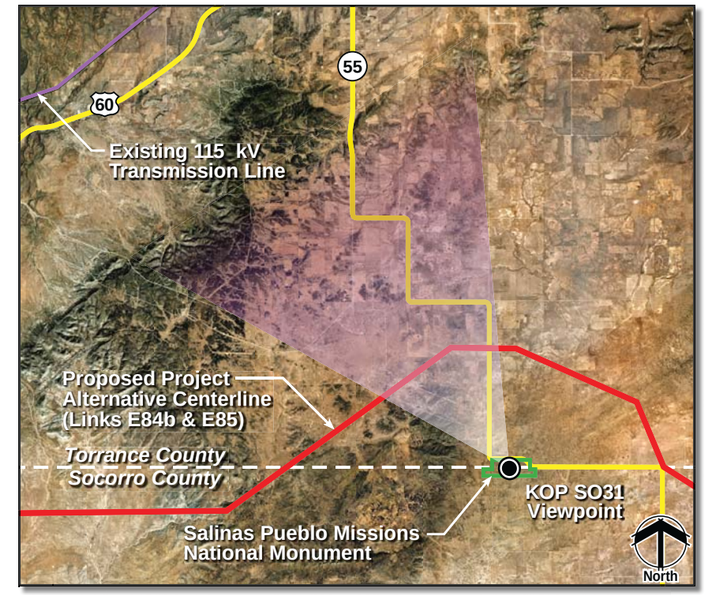
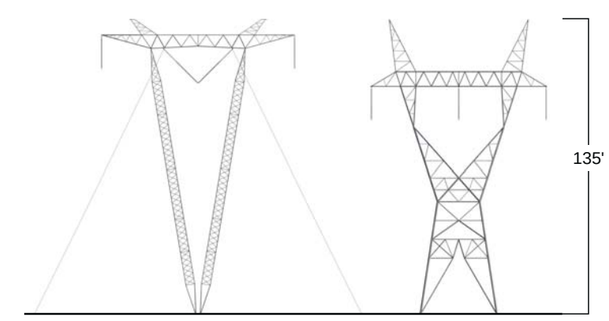
Existing Condition – View northwest from the Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (KOP SO31).



Photograph Location: Viewpoint is approximately 4.3 miles from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams) based on standard mitigation measures and typical spans. Portions of the Project would be seen from a superior viewing position in a setting where cultural modifications are present but minimal.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure height is typical.

Photo Date and Time: 5-25-11, 10:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45 feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 47b

January 2012

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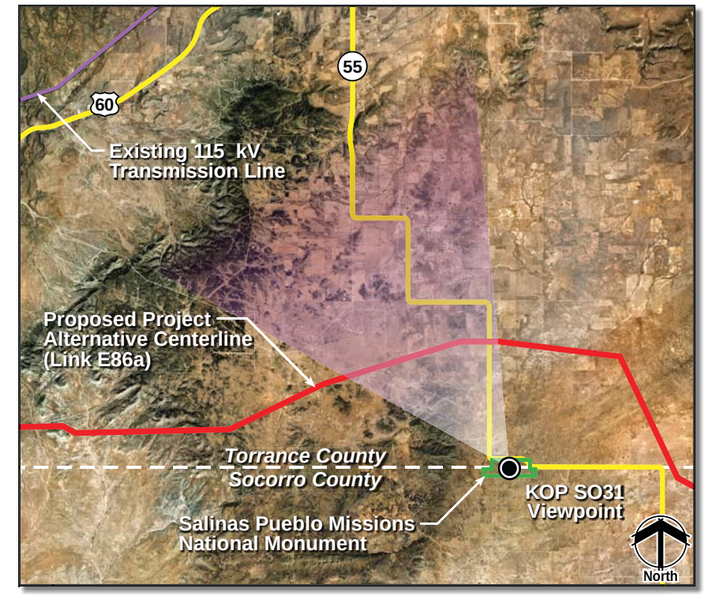
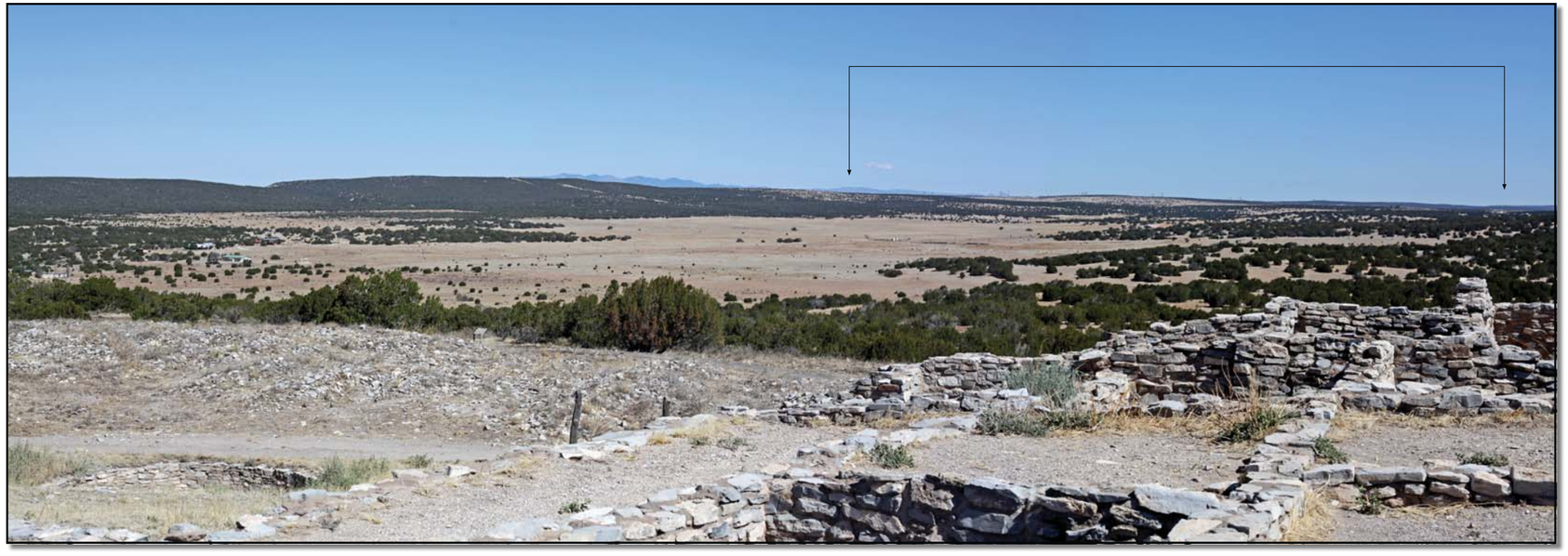
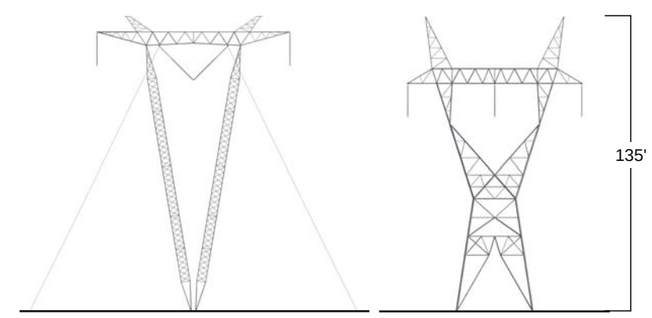


Existing Condition – View northwest from the Gran Quivira Ruins within the Salinas Pueblo Missions National Monument (KOP SO31).

Photograph Location: Viewpoint is approximately 4.7 miles from proposed transmission lines.



AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit
500 kV galvanized
guyed-V lattice
transmission tower.

Typical single-circuit
500 kV galvanized
self-supporting lattice
dead-end transmission tower.

Structure height is typical. Structure diagrams represent structure types that could occur within the right-of-way, but do not represent the simulated right-of-way configuration.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams) based on standard mitigation measures and typical spans. Portions of the Project would be seen from a superior viewing position in a setting where cultural modifications are present but minimal.

Photo Date and Time: 5-25-11, 10:01 a.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45 feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 47c

November 2012

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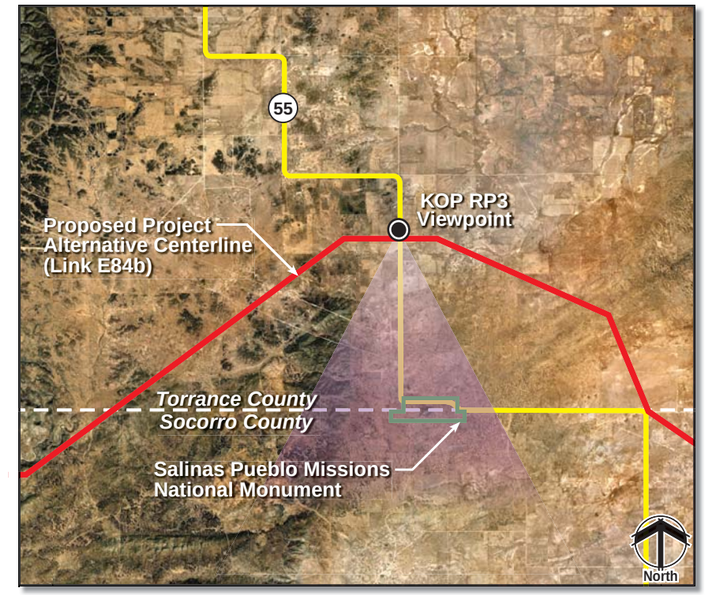
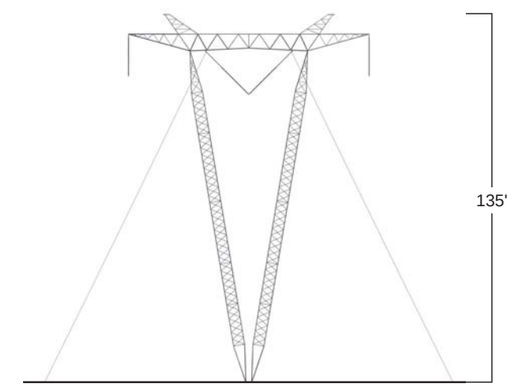


Existing Condition – View south from the Salt Missions Scenic Byway (Hwy 55) toward the Gran Quivira unit of the Salinas Pueblo Missions National Monument (KOP RP3).

Photograph Location: Viewpoint is approximately 0.4 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical. Structure diagrams represent structure types that could occur within the right-of-way, but do not represent the simulated right-of-way configuration.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram) based on standard mitigation measures and typical spans. Portions of the Project would be skylined when crossing this scenic travel route. Selective Mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 9-18-12, 12:34 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Typical structures would range between 125 to 160 feet above ground with a span of 1,000 to 1,500 feet. Typical conductor sag would be 45' feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 48

October 2012

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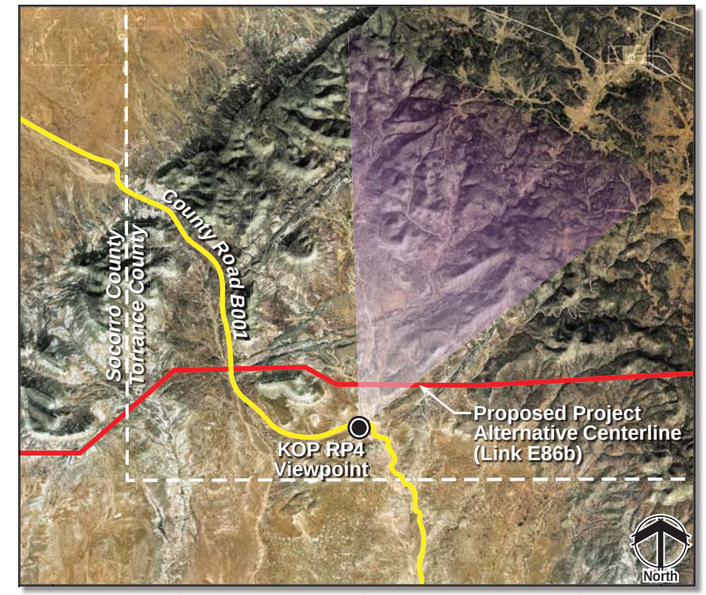
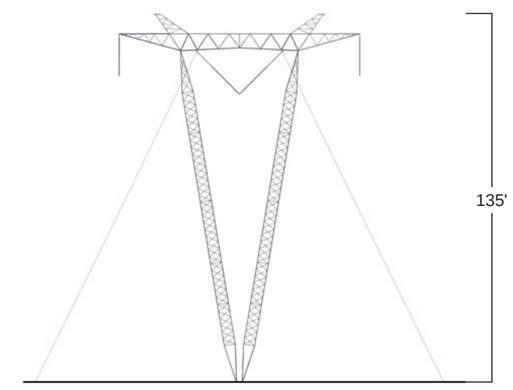
Existing Condition – View north/northeast from a residence along County Road B001 (KOP RP4) in the townsite of Chupadera. Adjacent scenery include the canyon of Chupadera Arroyo within the Chupadera Mesa region.



Photograph Location: Viewpoint is approximately 0.6 mile from proposed transmission lines.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagram), including standard mitigation measures. Portions of the Project would be seen in a partially skylined condition. Recommended selective mitigation measures #7 and #10 would reduce visual contrast.

AC 500 kV TOWER STRUCTURE DIAGRAM



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Structure height is typical.

Photo Date and Time: 9-19-12, 12:40 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 49

March 2013

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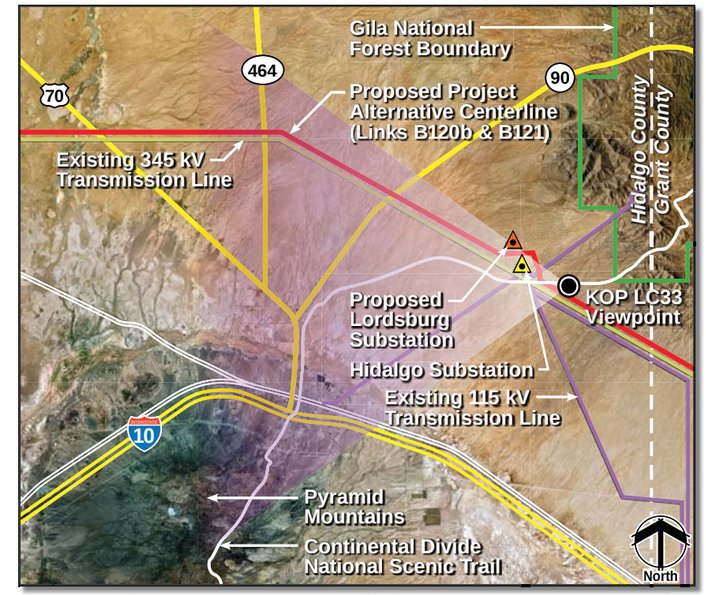
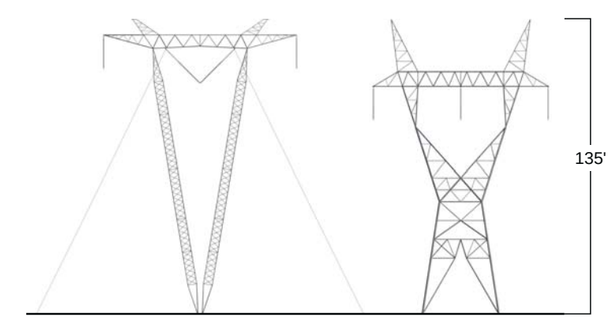


Existing Condition – View west from the Continental Divide National Scenic Trail toward Lordsburg, New Mexico. Adjacent Scenery includes the Pyramid Mountains, the Animas Valley, and the Peloncillo Mountains.

Photograph Location: Viewpoint is approximately 0.3 mile from proposed transmission lines.

AC 500 kV TOWER STRUCTURE DIAGRAMS



Typical single-circuit 500 kV galvanized guyed-V lattice transmission tower.

Typical single-circuit 500 kV galvanized self-supporting lattice dead-end transmission tower.

Structure heights are typical.

Simulation – Proposed Project (see AC 500 kV Tower Structure Diagrams), including standard mitigation measures. The Project would be seen from a level viewing position in the context of the existing Hidalgo Substation and existing transmission lines. Selective mitigation measure #10 would reduce visual contrast (shown).

Photo Date and Time: 3-28-13, 11:33 p.m. Focal Length: 50mm
Simulations were prepared using three-dimensional structure models provided by the owner's engineer.
NOTE: Simulation does not include proposed substation, due to lack of engineering details.
Typical Structures would range between 125 and 160 feet above ground with a span of 1,000 to 1,600 feet. Typical conductor sag would be 45 feet above ground.
Facility locations, colors, and heights will differ based on final engineering and design.

SunZia Southwest Transmission Line Project

Simulation 50

April 2013

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