



Tucson Electric Power

Kino to DeMoss Petrie 138 kV Transmission Line Project

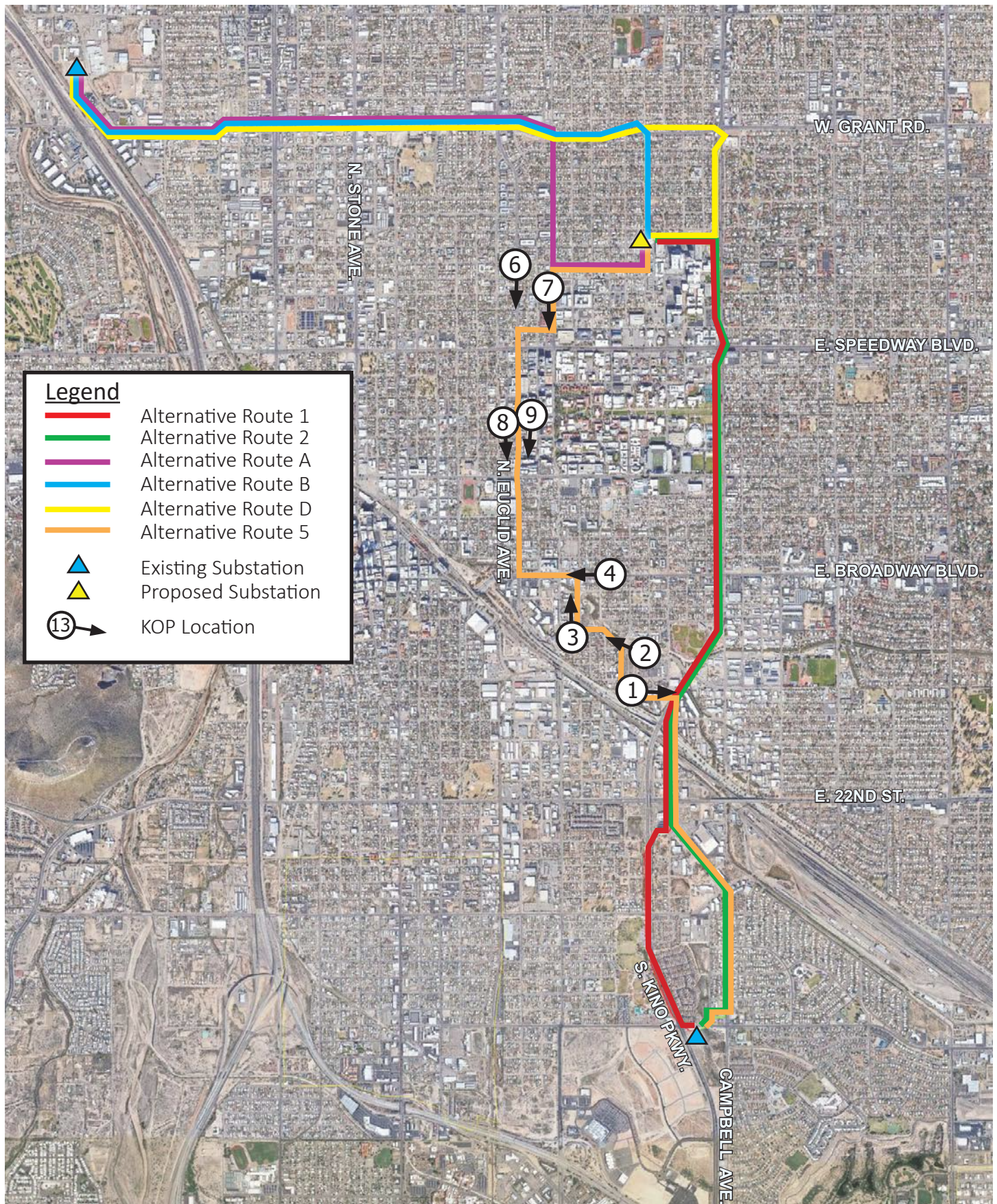
*Visual Simulation Package
Alternative 5*

Prepared By:
Jeremy Palmer | Sole Proprietor

August 18, 2021

Kino to DMP 138 kV Transmission Line Project

Key Observation Point (KOP) - Key Map



Legend

- Alternative Route 1
- Alternative Route 2
- Alternative Route A
- Alternative Route B
- Alternative Route D
- Alternative Route 5
- Existing Substation
- Proposed Substation
- KOP Location

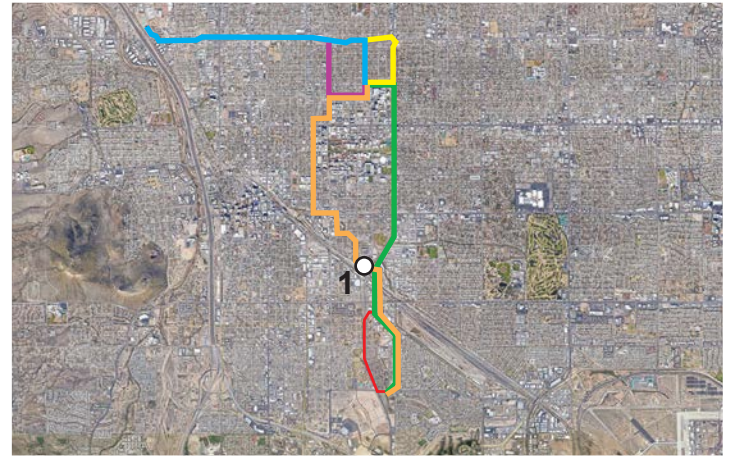


Kino to DMP 138 kV Transmission Line Project

General Project Notes

- Simulations shown do not represent a final design. All simulations are based on the best information available and are preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.
- Simulations along Grant Road, in the area of the Grant Road Widening Project are based on preliminary design plans provided by City of Tucson Department of Transportation.
- Possible distribution relocation as shown on the map below.
- Conductors and wires in “Enhanced Simulations” are shown thickened/darkened to indicate location and does not reflect real world conditions.
- * Relocation of existing distribution contingent upon available space, cooperation with landowners, cooperation with existing utility attachers and lack of conflicts with other utilities.

Key Observation Point (KOP) # 1



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: Residents, vehicle and pedestrian travelers looking east on E. 17th Street
- Location: 1377 E. 17th Street
- Latitude: 32.213511° N; Longitude: 110.950786° W
- View Point Elevation at Eye Level: 2,438 ft.
- Looking: east

- Poles Visible: Alternative 5 Structures 36-38
- Image File Name: KOP1_photo3.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 9:30 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 335 feet west of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #1



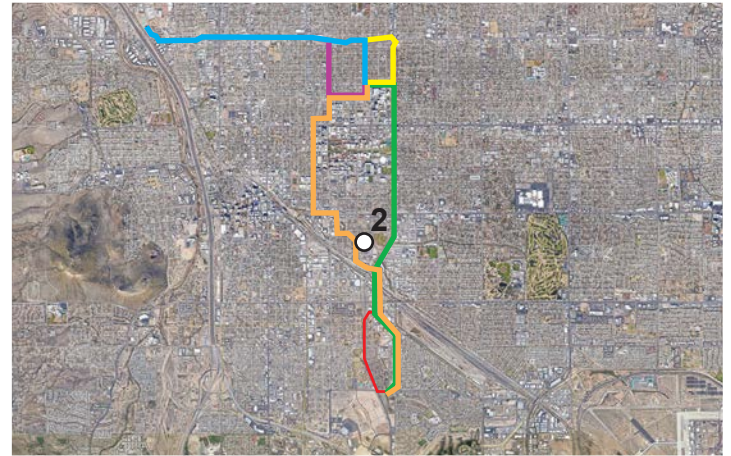
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 2



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: recreational user of the shared-use path at S. Curtis Ave. looking northwest across wash
- Location: 509 S. Curtis Avenue
- Latitude: 32.216172° N; Longitude: 110.950531° W
- View Point Elevation at Eye Level: 2,432 ft.
- Looking: northwest

- Poles Visible: Alternative 5 Structures 28-31
- Image File Name: KOP2_photo4.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 9:34 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 333 feet southeast of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #2



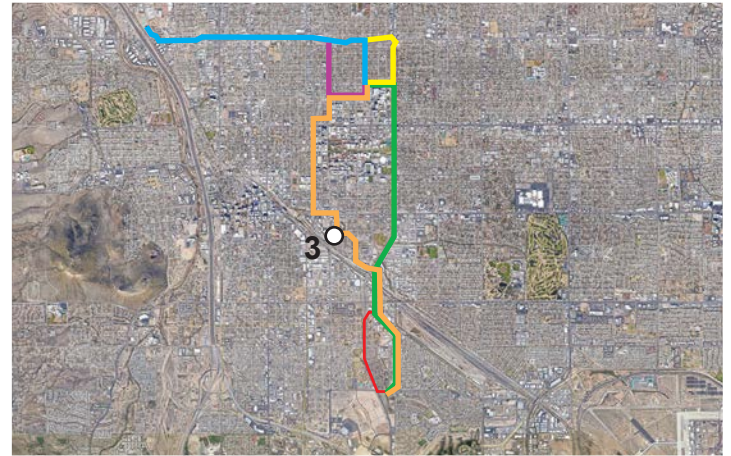
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 3



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: residential/commercial user of S. Fremont Ave. looking north
- Location: 398 S. Fremont Avenue
- Latitude: 32.217839° N; Longitude: 110.954733° W
- View Point Elevation at Eye Level: 2,421 ft.
- Looking: north
- Poles Visible: Alternative 5 Structures 27-29
- Image File Name: KOP3_photo 6.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 9:38 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 670 feet south of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.
- Where distribution is removed, so have individual services; however services to individual residences may have to remain above ground if undergrounding cannot be coordinated with the landowner, requiring the distribution pole holding the individual service to remain in place.

Key Observation Point (KOP) #3



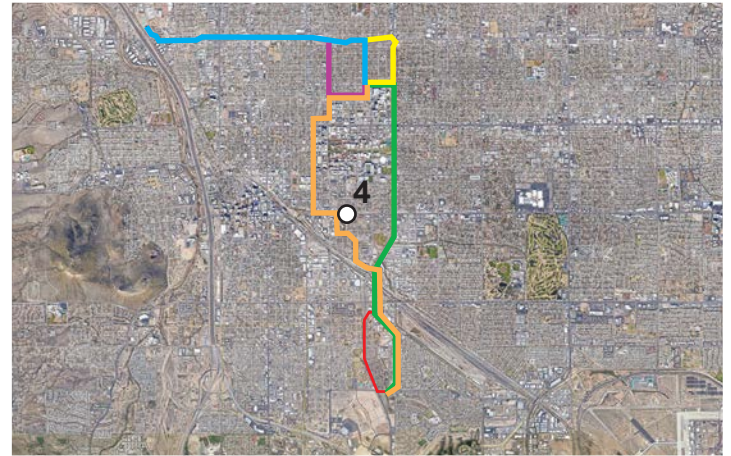
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 4



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: vehicular traffic heading westbound on E. Broadway Blvd.
- Location: 1200 East Broadway Boulevard
- Latitude: 32.221264° N; Longitude: 110.953153° W
- View Point Elevation at Eye Level: 2,425 ft.
- Looking: west

- Poles Visible: Alternative 5 Structures 24-27
- Image File Name: KOP4_photo 8.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 9:53 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 549 feet east of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #4



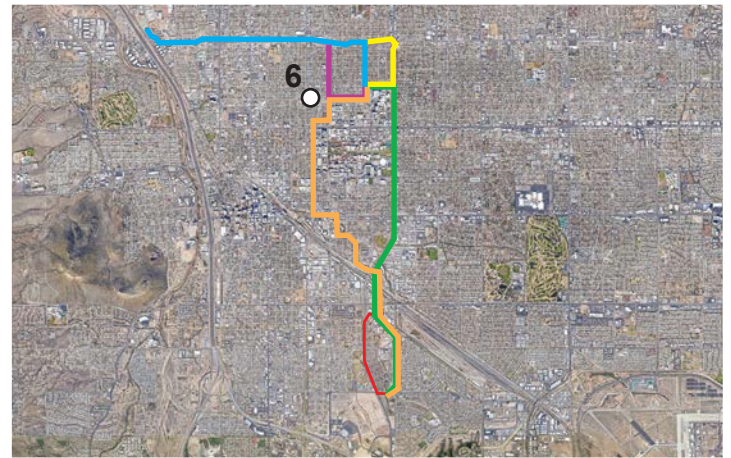
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 6



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: vehicular traffic heading southbound on N. Euclid Ave.
- Location: 1348 North Euclid Avenue
- Latitude: 32.239500° N; Longitude: 110.959661° W
- View Point Elevation at Eye Level: 2,420 ft.
- Looking: south

- Poles Visible: Alternative 5 Structures 13-18
- Image File Name: KOP6_photo 15.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 10:19 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 829 feet north of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #6



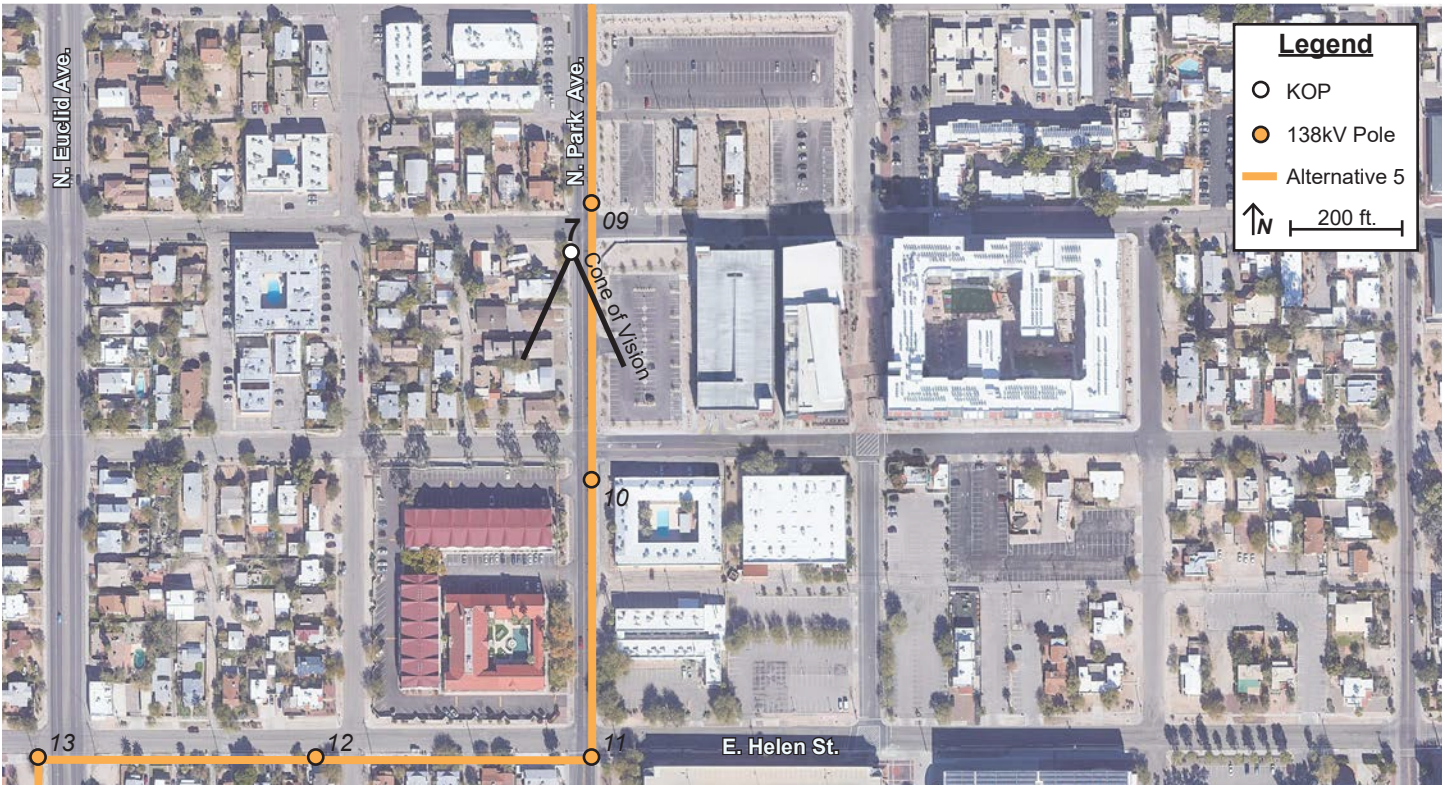
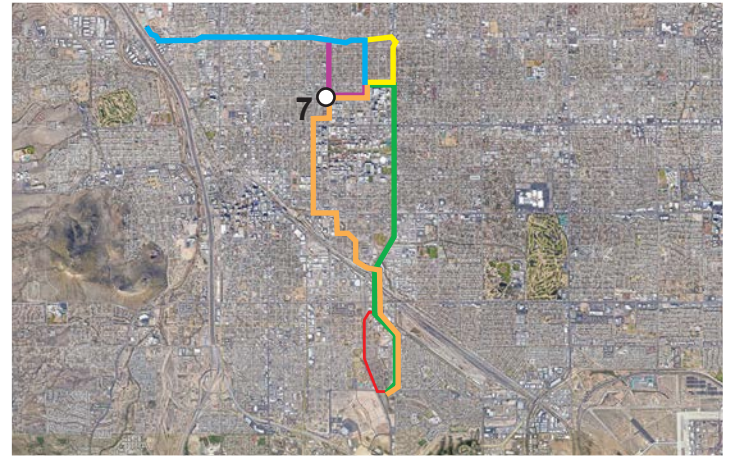
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 7



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 32 mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: residential/commercial user of N. Park Ave. looking south
- Location: 1398 N Park Avenue
- Latitude: 32.239467° N; Longitude: 110.956856° W
- View Point Elevation at Eye Level: 2,429 ft.
- Looking: south
- Poles Visible: Alternative 5 Structures 10,11
- Image File Name: KOP7_photo 16.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 10:26 am
- The image is based on a single photo and represent approximately 58.3 degree horizontal field of view.
- This view is approximately 380 feet north of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.
- Where distribution is removed, so have individual services; however services to individual residences may have to remain above ground if undergrounding cannot be coordinated with the landowner, requiring the distribution pole holding the individual service to remain in place.

Key Observation Point (KOP) #7



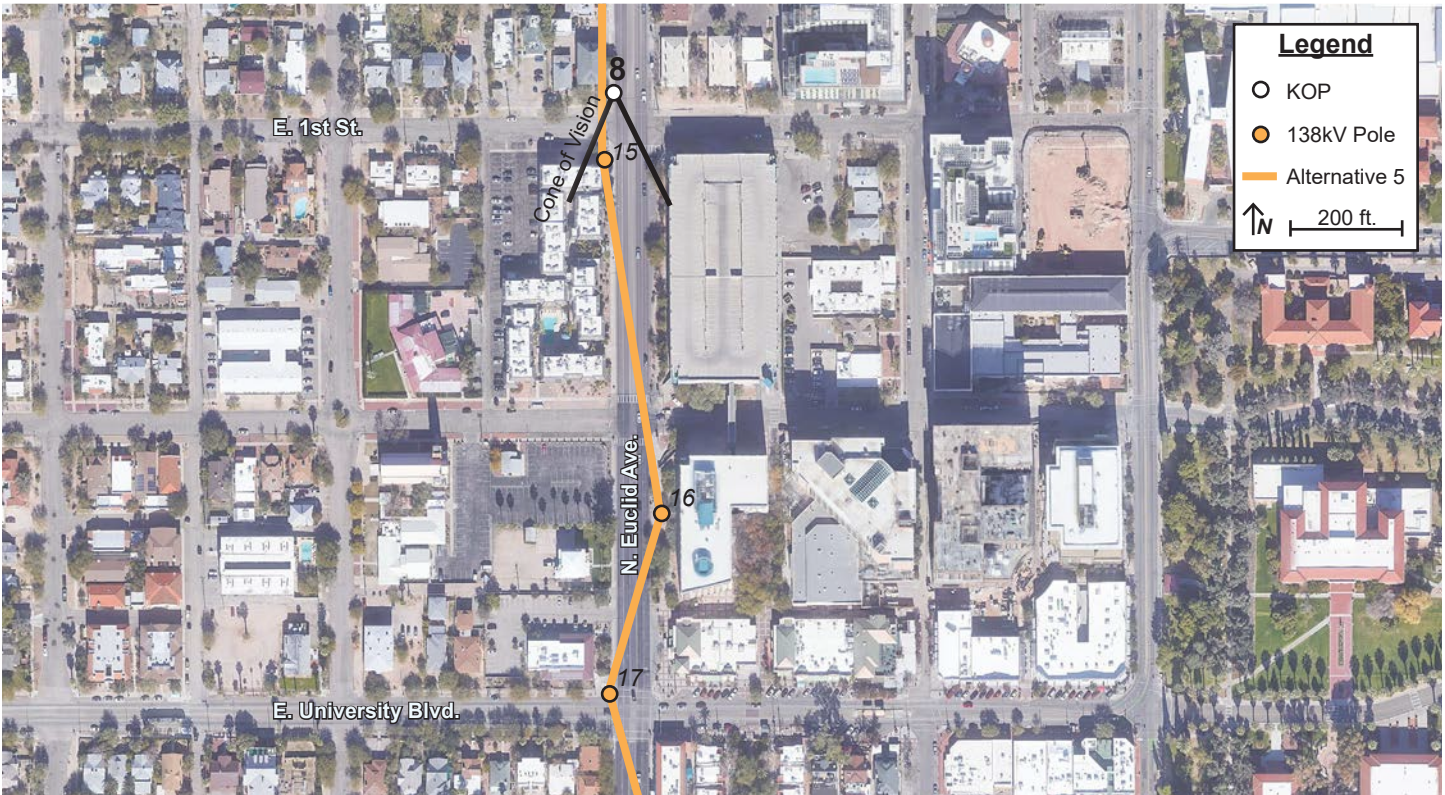
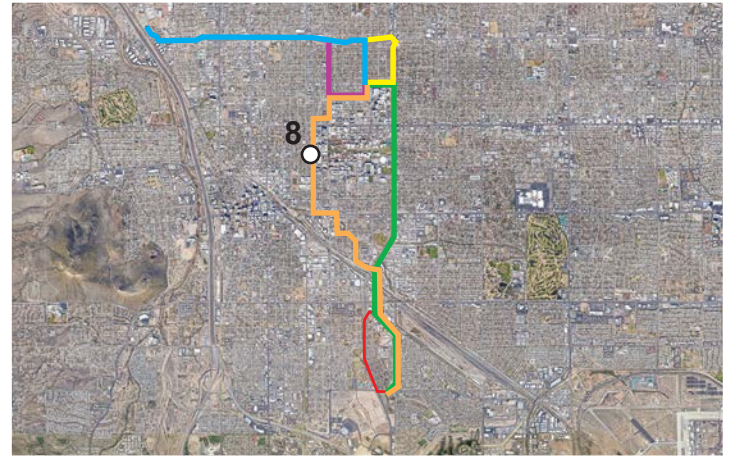
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 8



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 32mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: vehicular traffic heading southbound on N. Euclid Ave.
- Location: 1001 North Euclid Avenue
- Latitude: 32.234472° N; Longitude: 110.959589° W
- View Point Elevation at Eye Level: 2,435 ft.
- Looking: south

- Poles Visible: Alternative 5 Structures 15-18
- Image File Name: KOP8_photo 17.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 10:36 am
- The image is based on a single photo and represent approximately 58.3 degree horizontal field of view.
- This view is approximately 112 feet north of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #8



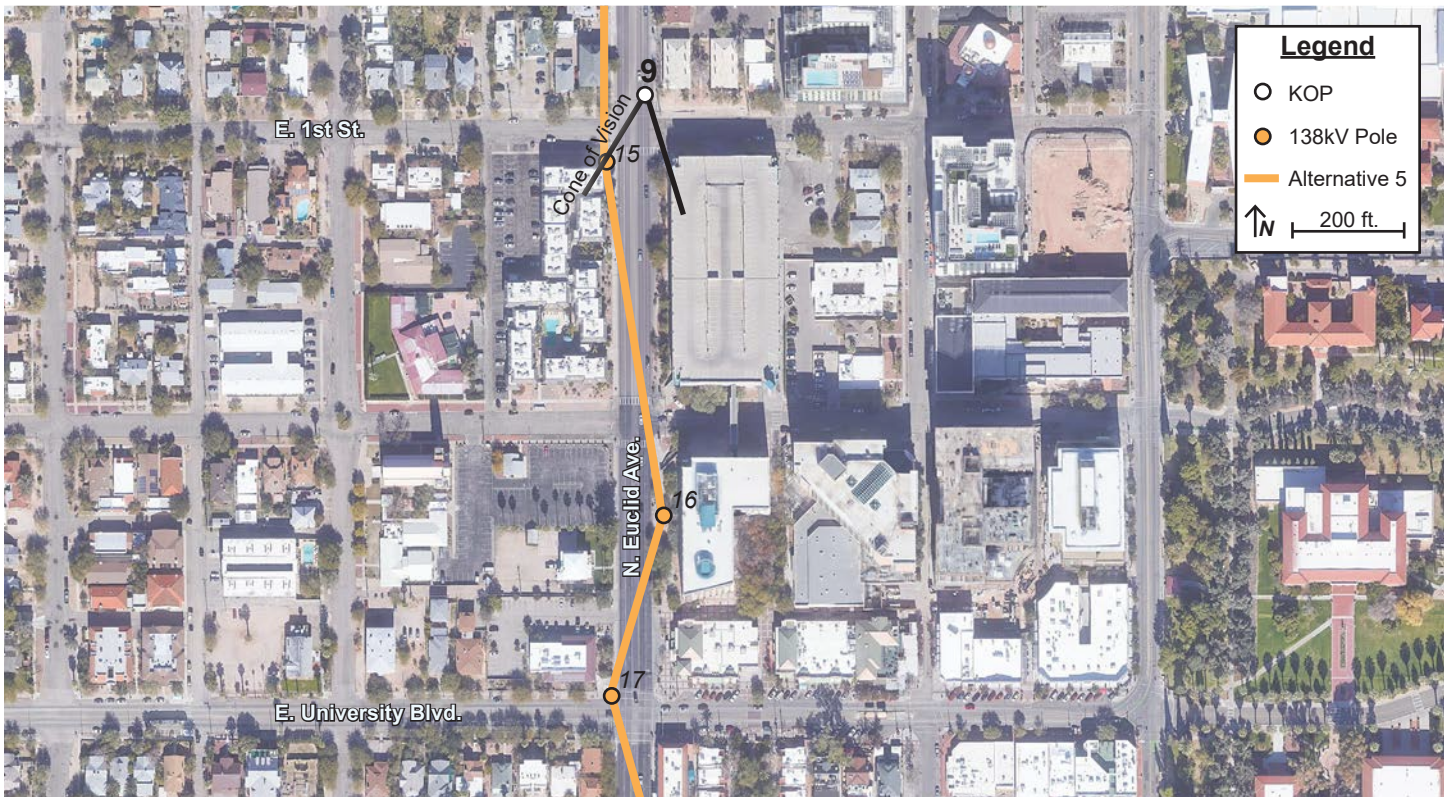
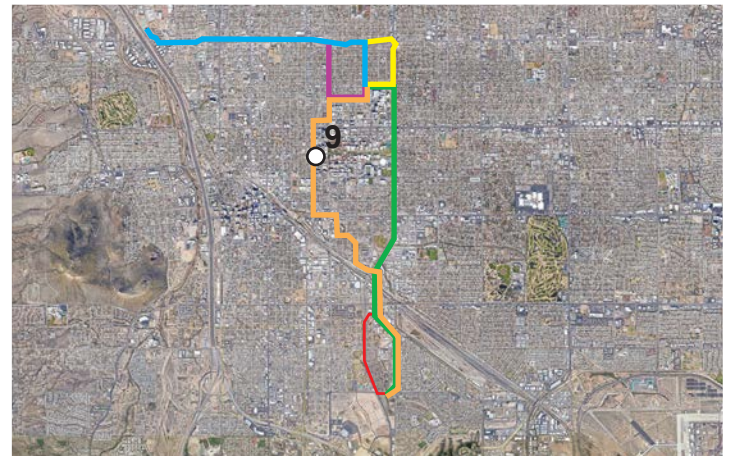
Current Condition



Simulated Condition

Alternative 5

Key Observation Point (KOP) # 9



Notes:

Camera Information

- Type: Canon EOS Rebel T5
- Sensor: CMOS APS-C 22.3mm x 14.9mm
- Lens: Canon RF 18-55mm f/3.5-5.6 IS STM
- 35mm equivalent focal length: 29mm | F-Stop: f/14 | ISO:400
- Dimensions in pixel: 5184 x 3456

KOP

- Representative View for: vehicular traffic heading southbound on N. Euclid Ave.
- Location: 1001 North Euclid Avenue
- Latitude: 32.234456° N; Longitude: 110.959375° W
- View Point Elevation at Eye Level: 2,434 ft.
- Looking: south

- Poles Visible: Alternative 5 Structures 15-18
- Image File Name: KOP9_photo 19.JPG

Simulation Notes

- Photo Taken: July 21st, 2021 at 10:41 am
- The image is based on a single photo and represent approximately 63.6 degree horizontal field of view.
- This view is approximately 130 feet north of the nearest pole represented in the simulation.
- The simulation is based on the best information available and is preliminary. Final alignment and structure locations are subject to change based on final engineering and other factors.

Key Observation Point (KOP) #9



Current Condition



Simulated Condition

Alternative 5