

APS Perryville to Valencia 69kV Powerline Project

Open House

WELCOME!
Please Sign In



Project Overview and Need



Project Overview

- Double-circuit 69kV powerline from the planned West Park Substation, near Apache and Southern Roads, to the existing Watson-Valencia 69kV powerline located along Miller Road
- Single-circuit 69kV powerline from the planned West Park Substation to the existing Perryville 69kV powerline located along the Roosevelt Canal
- APS is conducting agency and public involvement outreach as part of their identification of preferred powerline routes

Perryville to Valencia 69kV Project

Conceptual Connections

Alternatives

-  Valencia Connection
-  Perryville Connection

Project Features

-  Project Study Area
-  Substation Siting Area

Existing Electrical Facilities

-  500kV Transmission Line
-  345kV Transmission Line
-  230kV Transmission Line
-  69kV Transmission Line
-  12kV Distribution Line
-  Existing Substation

Reference Features

-  Node
-  Route Segment Identifier
-  Helipad
-  Interstate
-  Major Road
-  Street
-  Railroad
-  Canal

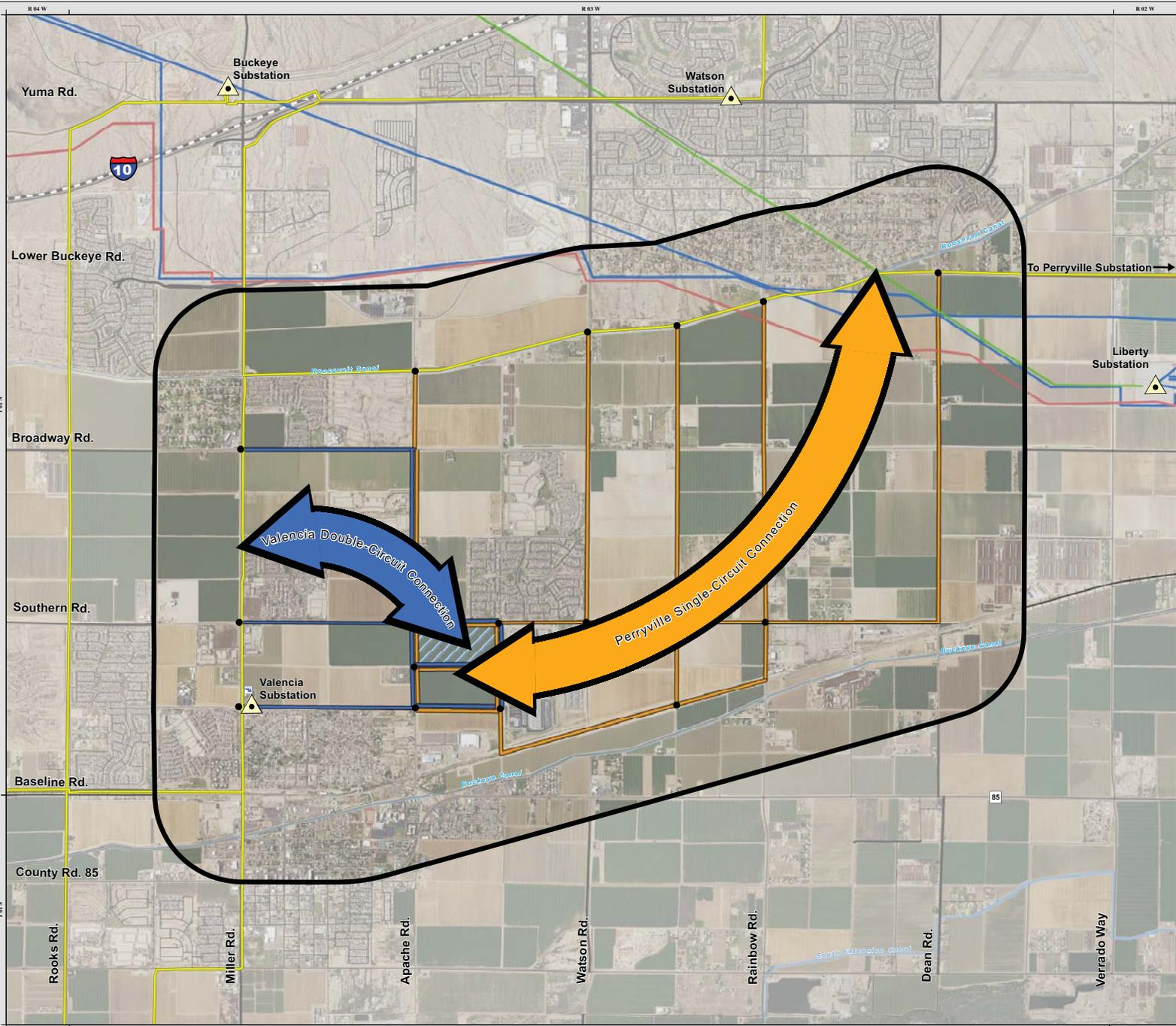


July 2017

Sources: Arizona State Land Department 2007; EPG 2017;
ESRI Street Map 2013; NAIP Aerial Imagery 2015; City of Buckeye 2017



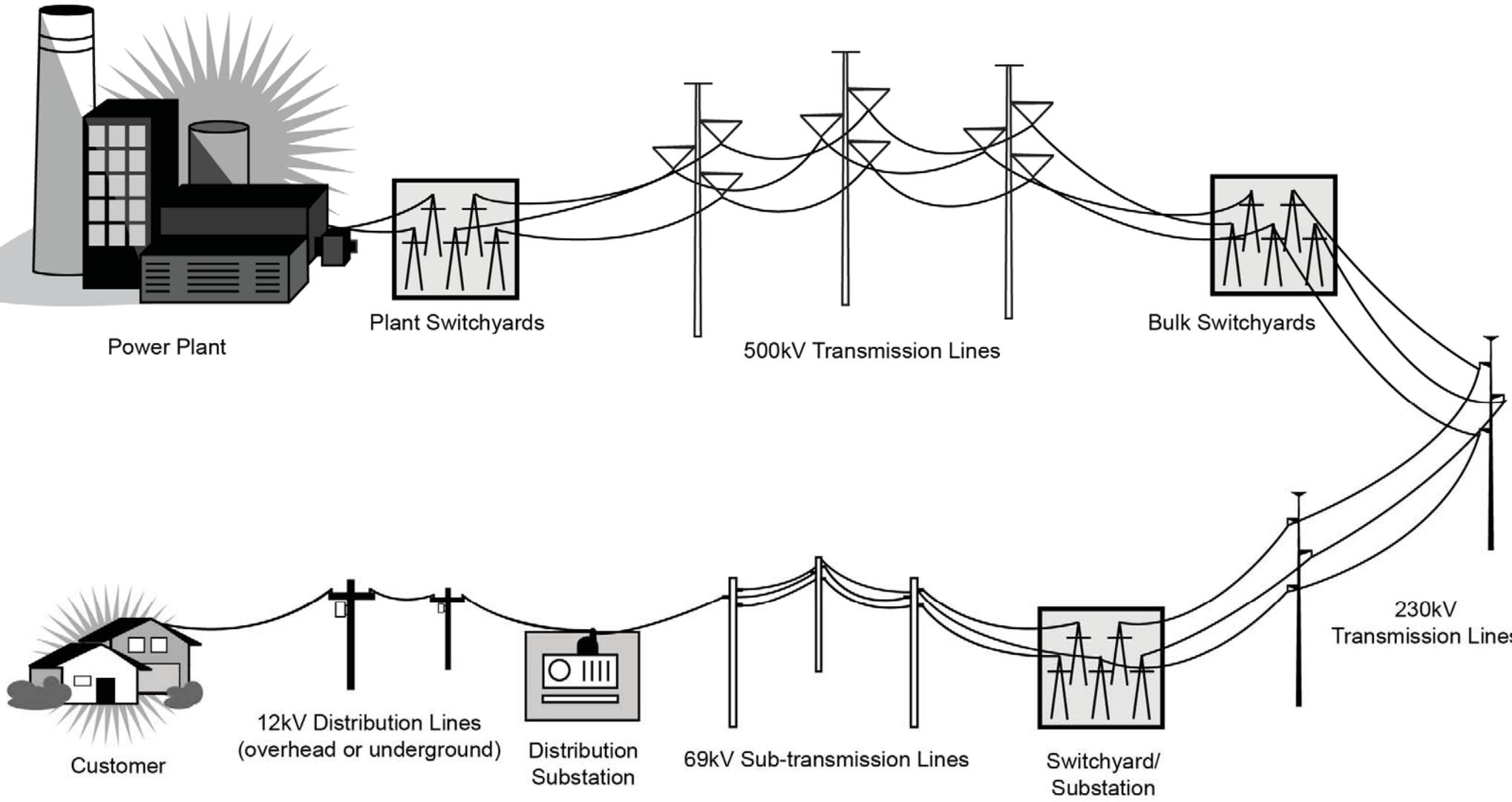
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Project Need

- Provide an additional, separate, 69kV power source, allowing the system to serve new development and for increased electricity use within existing developments
- Improve reliability in the area by helping to prevent potential outages that result from the loss of other 69kV powerlines that serve the area
- Provide operating flexibility by creating a new loop and source into the area

Electricity From the Power Plant to the Customer



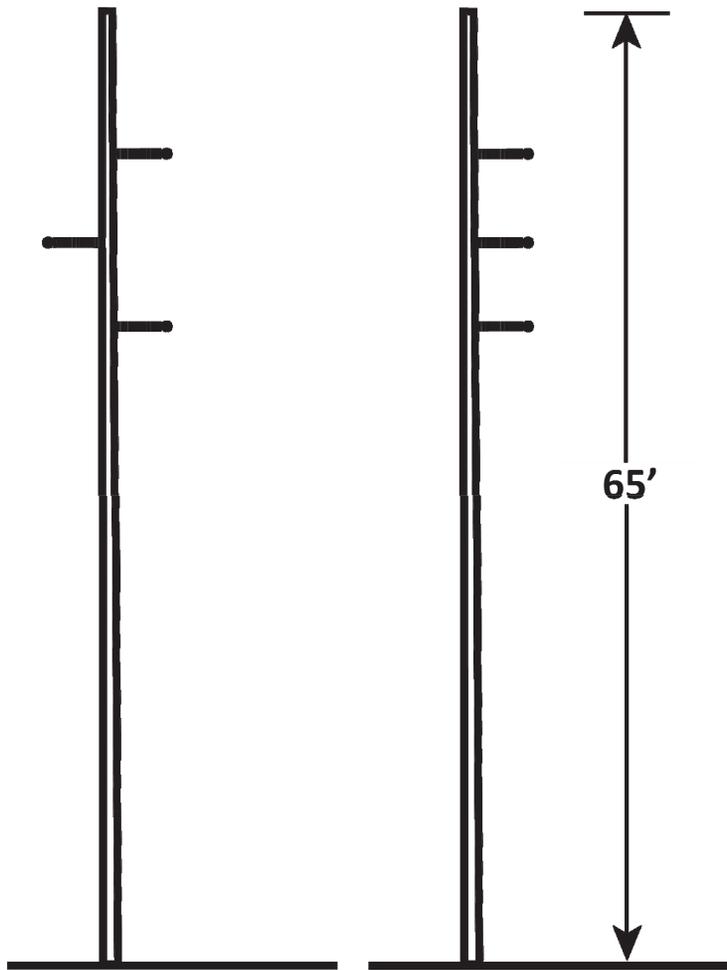
Project Description and Design Considerations



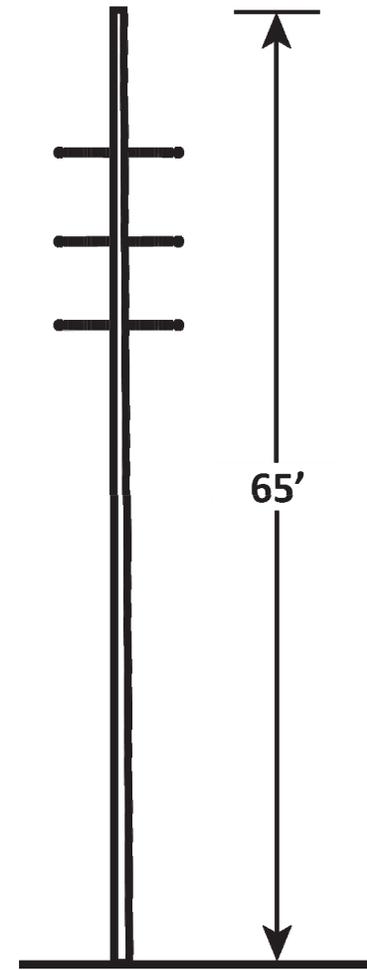
Project Description

- Double-circuit 69kV powerline, approximately 1 to 3 miles in length, from the planned West Park Substation, near Apache and Southern Roads, to the existing Watson-Valencia 69kV powerline located along Miller Road
- Single-circuit 69kV powerline, approximately 2 to 6 miles in length, from the planned West Park Substation to the existing Perryville 69kV powerline located along the Roosevelt Canal
- In-service date summer 2018
- A new line route will require right-of-way or easement up to 40 feet wide
- Will require construction of new steel monopoles approximately 65 feet tall (may include 12kV underbuild)

Typical Structures



Single-circuit 69kV Structures



Double-circuit 69kV Structure

Typical Structures



Technical Considerations



Electric and Magnetic Fields (EMF)

Electric Field

Fields created by voltage on the transmission line that can cause an electric charge to build up on insulated objects near the line. This can create nuisance shocks (much like walking across carpet and touching a door handle) to individuals touching grounded objects near the line.

The standard for maximum electrical field value outside of the powerline right-of-way is 5.0kV/m. The value calculated for this project is less than 0.5kV/m.

Magnetic Field

Fields that are created by ALL devices that use, carry, or generate electricity. Magnetic fields drop off dramatically as distance from the source increases. To date, no federal or Arizona state standards have been established for magnetic field levels.

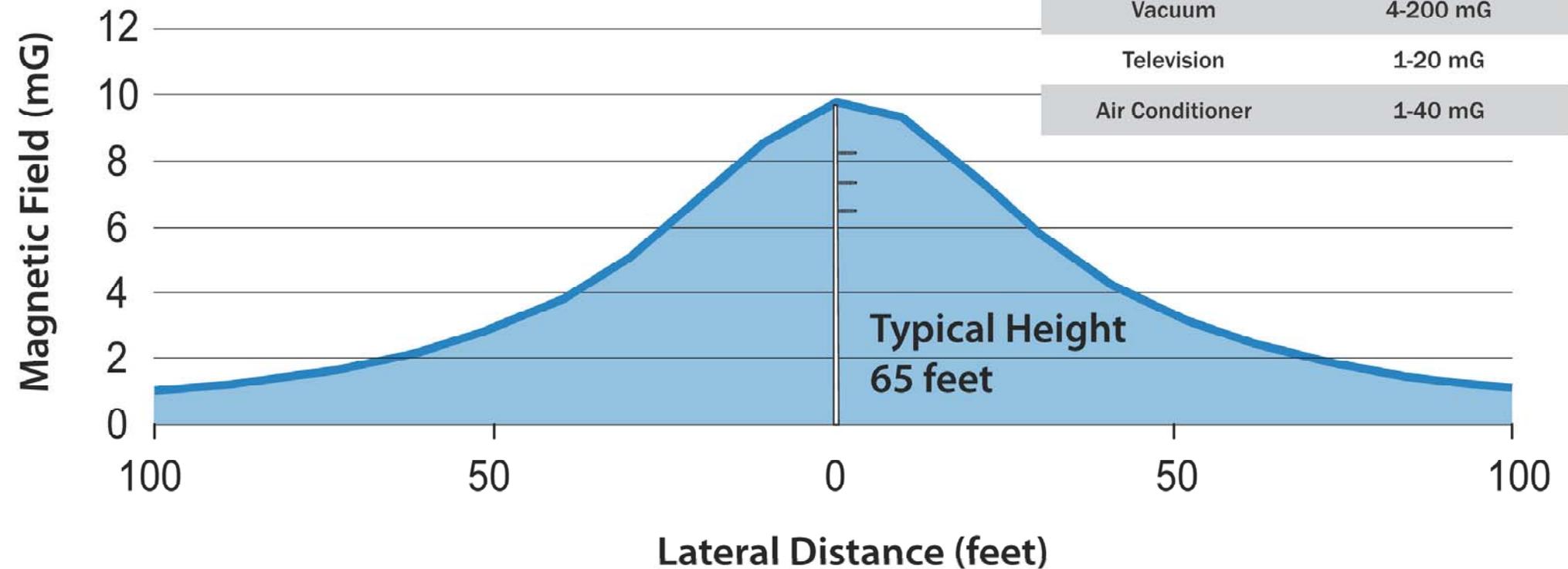
APS recognizes the public concern for magnetic fields and has included those considerations in the design of this project. For this project, the calculated value for magnetic field at the edge of the right-of-way is approximately 9mG.

APS continues to monitor U.S. and international studies regarding EMF, and offers free in-home measurements of EMF levels to all APS customers.

Magnetic Fields

Examples of Other Typical Magnetic Field Strengths (within 2-3" of appliance)

Domestic Appliance	Strength of Magnetic Field
Hair Dryer	1-70 mG
Microwave	10-200 mG
Vacuum	4-200 mG
Television	1-20 mG
Air Conditioner	1-40 mG



Planning Process





TASK 4
Public
Involvement

TASK 1

Project Start-up

- Finalize purpose and need statement
- Finalize project description
- Review and approve study area
- Participate in agency briefings

- Define study area
- Prepare study area base map
- Collect and map secondary data for study area

- Conduct community leader briefings

TASK 2

Preliminary Alternatives Analysis

- Provide general engineering costs and construction input
- Review and approve preliminary alternatives

- | | |
|---|--|
| <p>Task 2.1 – Opportunities and Constraints Analysis</p> <ul style="list-style-type: none"> • Develop preliminary alternatives siting criteria • Identify environmental opportunities and constraints | <p>Task 2.2 – Preliminary Alternatives Development</p> <ul style="list-style-type: none"> • Identify preliminary alternatives |
|---|--|

- | | |
|--|--|
| <ul style="list-style-type: none"> • Develop comment tracking database • Track and respond to comments • Prepare and distribute newsletter #1 • Prepare for and conduct public open house meeting #1 | <ul style="list-style-type: none"> • Conduct community leader briefings |
|--|--|

TASK 3

Detailed Analysis and Route Comparison

- **Prepare engineering, construction, operation, and maintenance data**
- **Identify preferred alternative(s)**
- **Participate in public open house**
- **Review and provide input on selected alternative(s)**
- **Review and approve siting narrative**

- **Collect data for alternatives**
- **Conduct field surveys to support resource inventory**
- **Review route alternatives**
- **Participate in public open house**
- **Identify environmentally preferred alternative(s)**
- **Prepare draft siting narrative**
- **Finalize siting narrative**

- **Prepare and distribute newsletter #2**
- **Prepare for and conduct public open house meeting #2**
- **Conduct community leader briefings**
- **Track and respond to comments**

TIMELINE

JANUARY – FEBRUARY 2017

JANUARY – APRIL 2017

APRIL – AUGUST 2017

* Current status of planning process

SCOPE OF WORK



Steps Completed, and Next Steps in Planning Process

- ✓ *Alternative route identification – April-May 2017*
- ✓ *Complete detailed inventory*
- ✓ *Impact assessment*
- Collect, respond, and document public and agency comments - ongoing
- Alternative route comparison
- Final route selection – August 2017

Environmental Studies Overview

- Land Use – existing/future land use and jurisdictional planning guidelines
- Visual – sensitive viewers (residences, parks, and travel routes)
- Cultural – minimal cultural or archaeological sensitivity, based on existing urban development
- Biology – minimal sensitive habitat, based on existing urban development

Perryville to Valencia 69kV Project

Existing Land Use

Existing Land Use

-  Residential, Low Density
-  Residential, Medium Density
-  Residential, High Density
-  Residential, Mobile Home/RV Park
-  Residential, Under Construction
-  Commercial
-  Industrial
-  Utilities/Canal
-  Public/Quasi-Public (Cemetery, Church, Government Building)
-  School/Educational Facilities
-  Open Space/Recreation
-  Parks/Preservation
-  Agriculture
-  Vacant/Undeveloped

Project Features

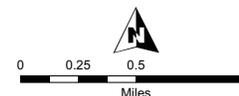
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-  Potential Substation Siting Area

Existing Transmission Facilities

-  500kV Transmission Line
-  345kV Transmission Line
-  230kV Transmission Line
-  69kV Transmission Line
-  Existing Substation

Reference Features

-  Interstate
-  Major Road
-  Street
-  Railroad
-  Canal

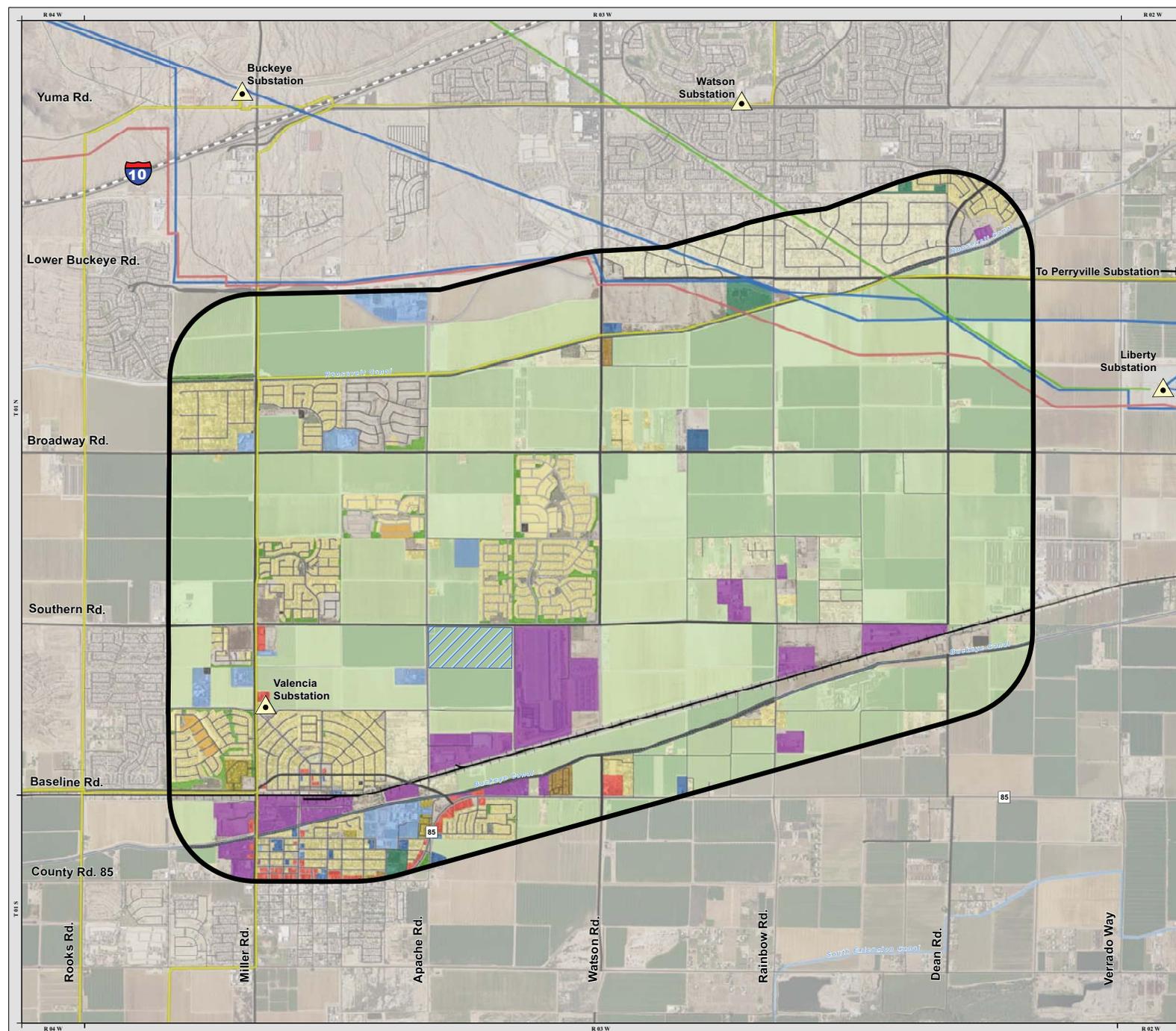


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Sources: Arizona State Land Department 2007; EPG 2017;
ESRI Street Map 2013; NAIP Aerial Imagery 2015; City of Buckeye 2017



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Perryville to Valencia 69kV Project

Future Land Use

Future Land Use

-  Residential, Low Density
-  Residential, Medium Density
-  Residential, High Density
-  Residential, Mobile Home/RV Park
-  Residential, Under Construction
-  Commercial
-  Industrial
-  Utilities/Canal
-  Public/Quasi-Public (Cemetery, Church, Government Building)
-  School/Educational Facilities
-  Open Space/Recreation
-  Parks/Preservation
-  Agriculture

Development Status

-  Preliminary Plat
-  Final Plat

Project Features

-  Project Study Area
-  Potential Substation Siting Area

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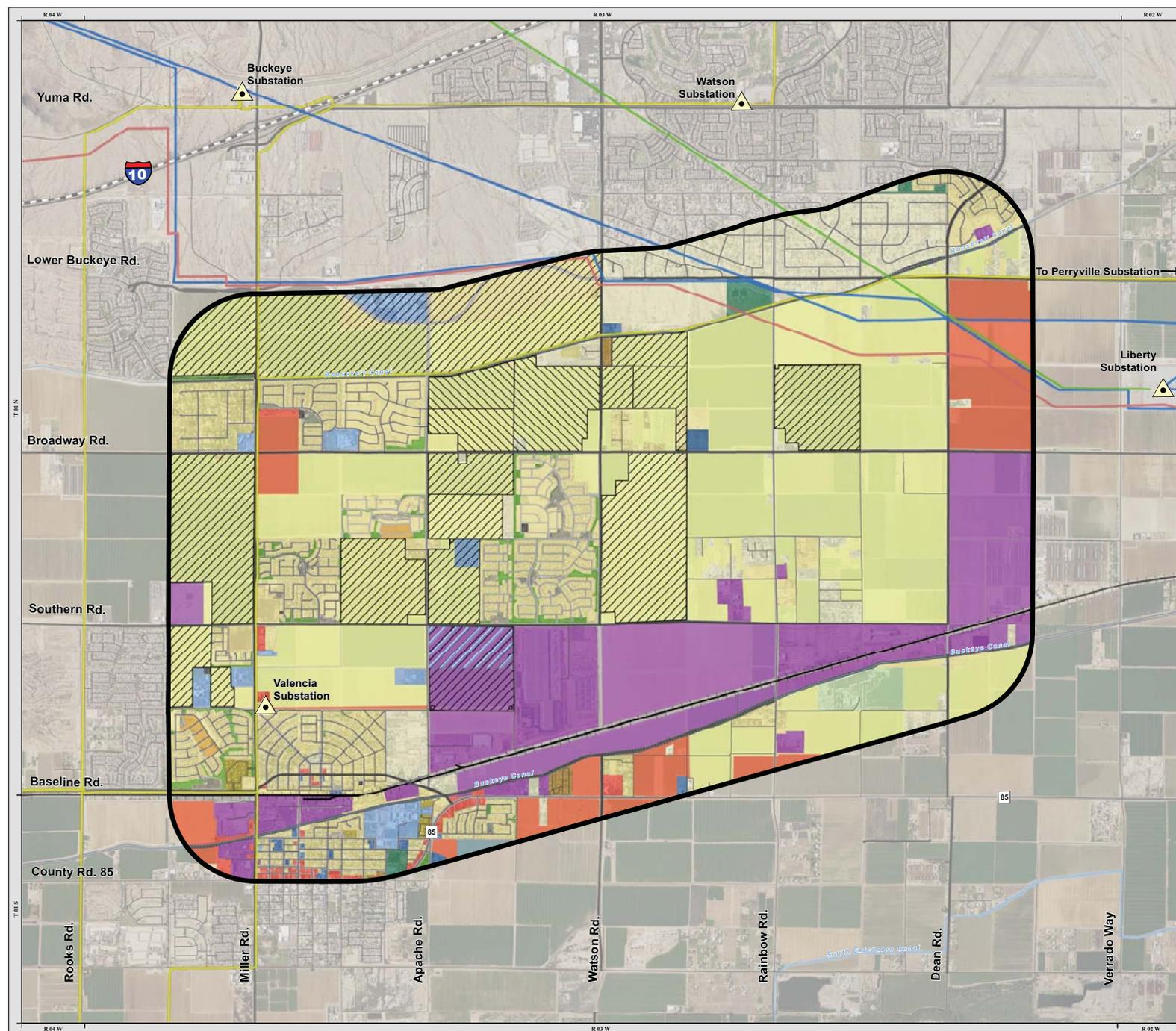


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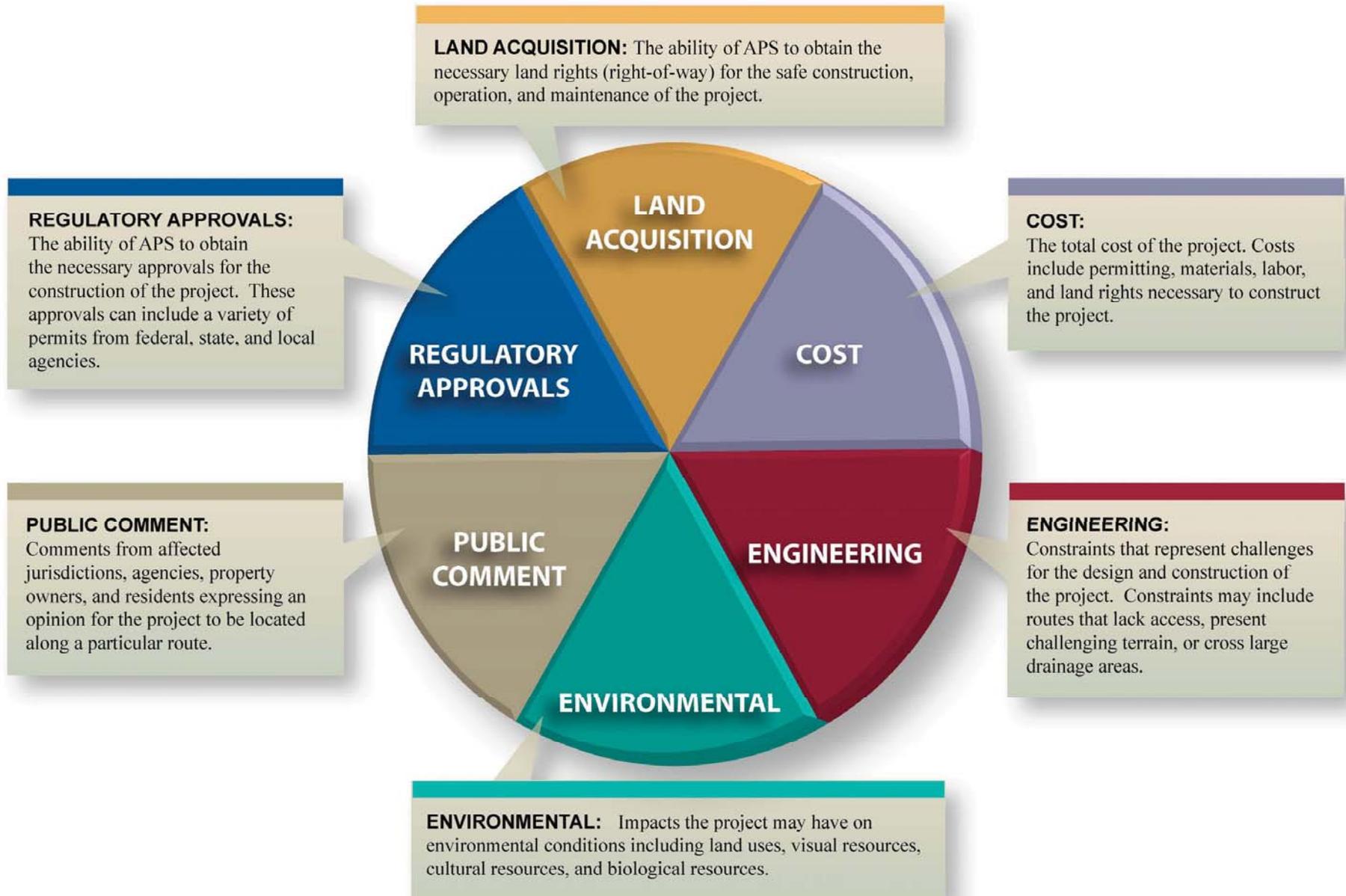
Public Comment Summary

- Approximately 20 comments received to date
- Commenters expressed a preference for placement on existing distribution line rights-of-way, with many comments requesting that the line not be placed along Maricopa Rd.
- Comments included an appreciation for increased reliability in the area; and concerns regarding aesthetics, property values, perceived impacts to health and farming

Factors Considered in Route Identification

- Maximize use of siting opportunities
 - Parallel existing linear features, including roads, powerlines, canals, and drainage facilities
- Minimize impact to sensitive resource areas
 - Avoid densely developed areas to the extent practicable

Transmission Line Siting Considerations



Impact Assessment



Perryville to Valencia 69kV Project

Land Use Impacts

Impact Levels

-  High
-  Moderate
-  Low

Existing Land Use

-  Residential, Low Density
-  Residential, Medium Density
-  Residential, High Density
-  Residential, Mobile Home/RV Park
-  Residential, Under Construction
-  Commercial
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Project Features

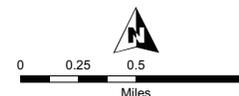
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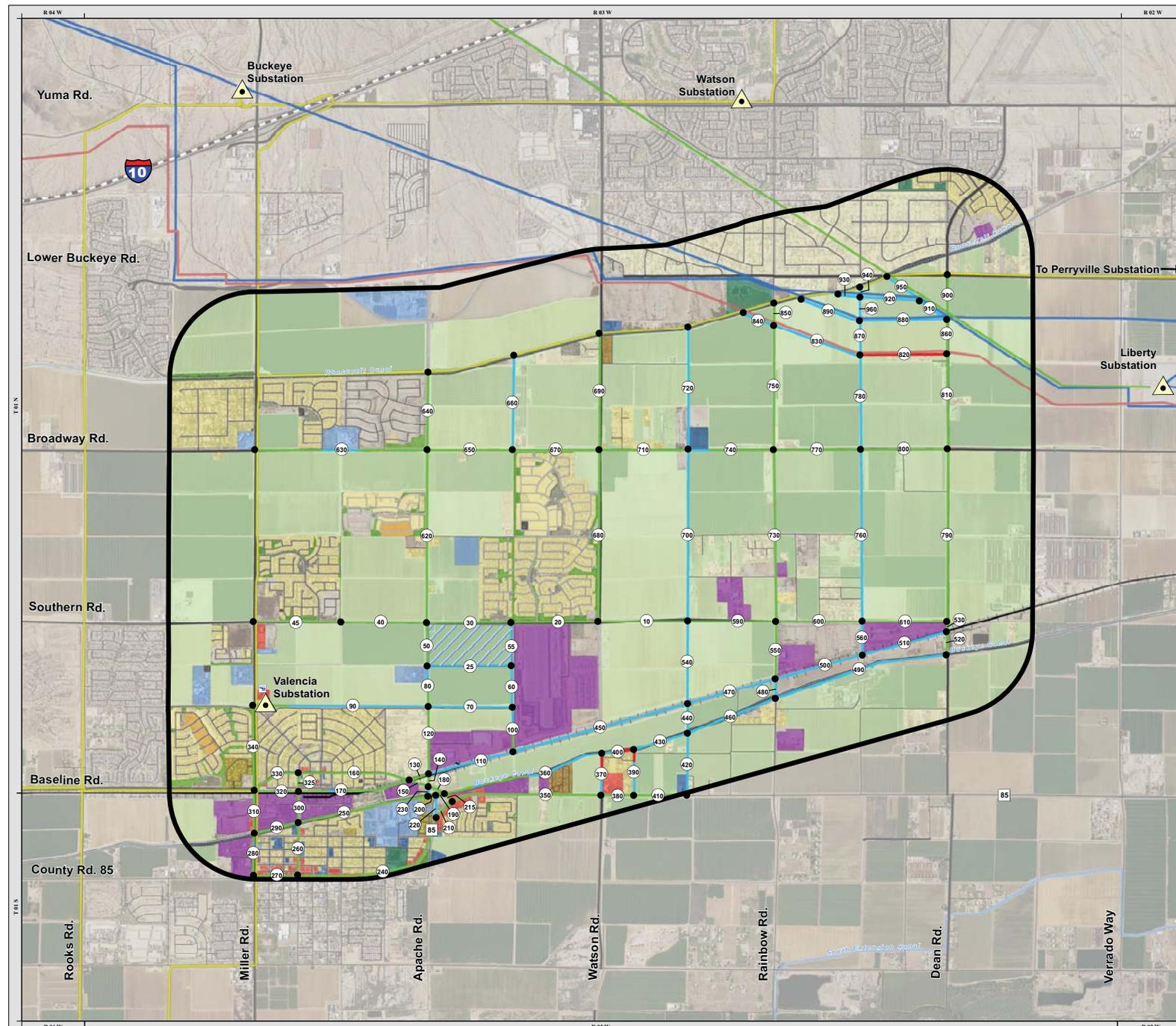


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Visual Impacts

Impact Levels

- High
- Moderate
- Low

Sensitive Viewers

- High Sensitivity Viewers
- Moderate-High Sensitivity Viewers
- Moderate Sensitivity Viewers
- Moderate Sensitivity Travel Routes

Distance Zones (miles)

- 0 - 1/8
- 1/8 - 1/4
- 1/4 - 1/2
- 1/2 - 1
- 1 - 2

Project Features

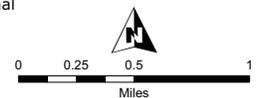
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Existing Electrical Facilities

- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- 69kV Transmission Line
- 12kV Distribution Line
- ▲ Existing Substation

Reference Features

- Node
- # Link Identifier
- Helipad
- ↗ Interstate
- ↘ Major Road
- Street
- Railroad
- Canal

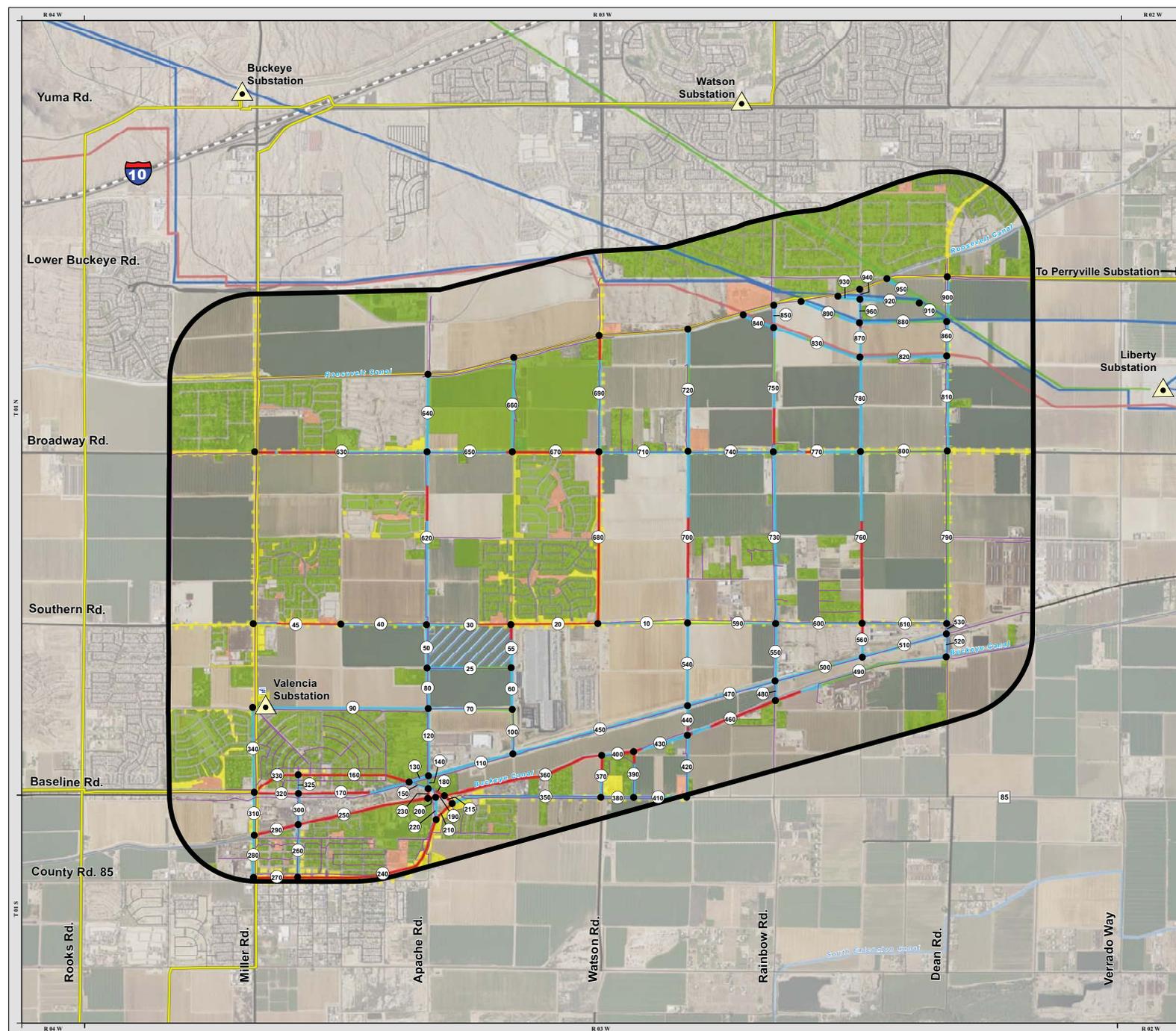


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Perryville to Valencia 69kV Project

Preliminary Link Compatibility

Compatibility Levels

- 1
- 2
- 3
- 4
- 5

Project Features

- Project Study Area
- Potential Substation Siting Area

Existing Electrical Facilities

- 500kV Transmission Line
- 345kV Transmission Line
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Reference Features

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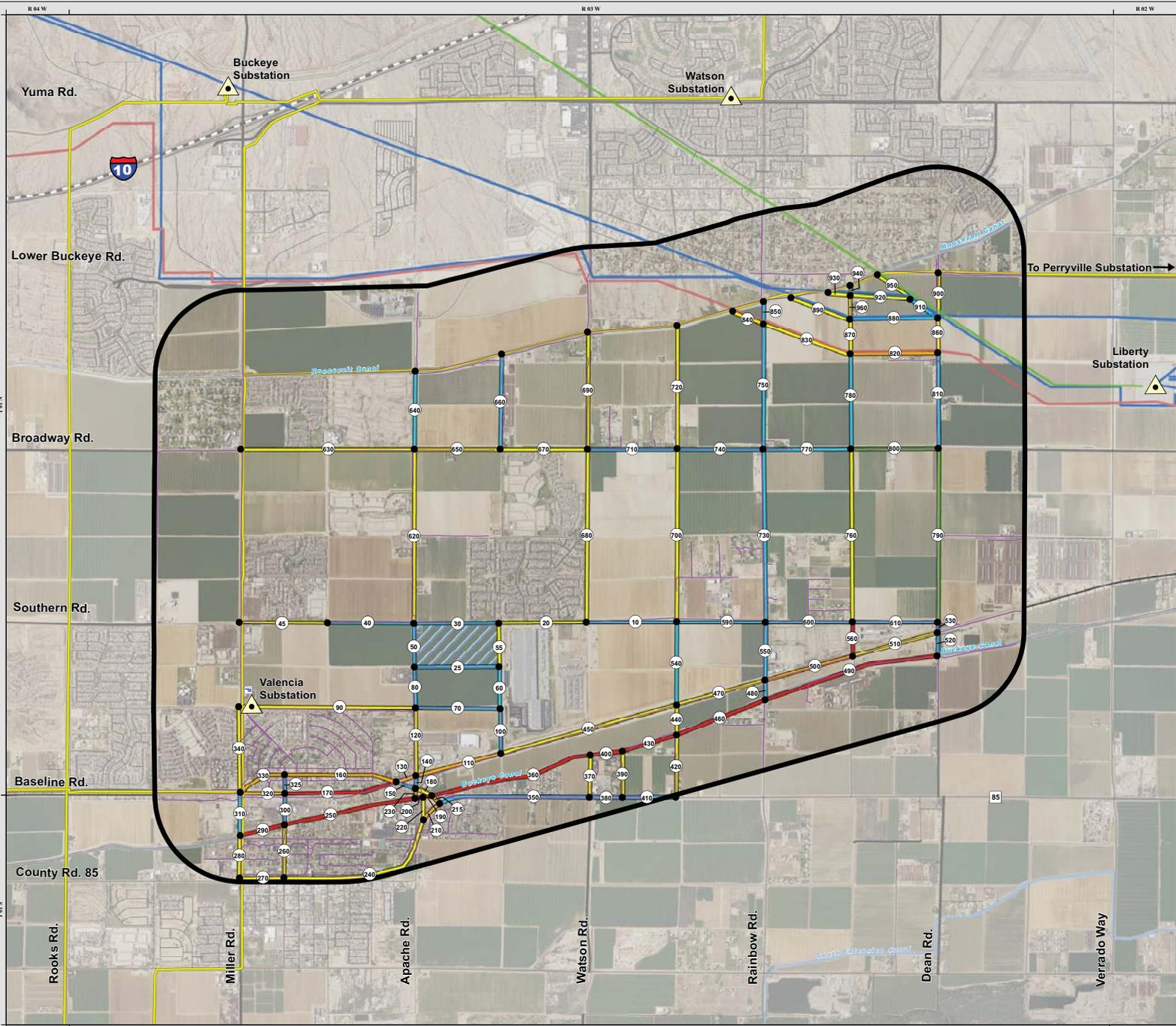


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APS Perryville to Valencia 69-kV Siting Project Link Comparison Table

69-kV Link	Total Length (miles)	Route Segment	Land Use	Environmental Compatibility			Engineering				Public Comments	Project Compatibility	Recommended Link Status	
				Land Use Notes	Visual	Visual Notes	Right-of-Way Notes	ROW	Engineering Notes	Engineering				
10	0.52	D	1	Agriculture on north and south side of the line.	2							2	Carry forward	
20	0.50	L	1	Riata West Community borders to the north, 20 homes back into the link and 4 border it on their sides.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone						2	Carry forward	
25	0.49	B	3	Bordered by agriculture on the north and south sides. Walmart distribution facility is located on the east side of link.	2			Need easement	2			2	Carry forward	
30	0.49	A	1	Bordered by agriculture on the north and south sides. The north side is also bordered by residences from the Riata West Community. 4 homes back into the link and 3 border it on their sides.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone						2	Carry forward	
40	0.5	I	1	North and south of the link is agricultural land.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				Rebuild 12kV		2	Carry forward	
45	0.5	I	1	South of the link is a majority agricultural land, with one small strip mall on the west end of link. The north side of the link is residential and agricultural land. Miller Manor is the development adjacent to the link on the North. 5 homes directly facing the proposed link and 7 are sided by it.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				Rebuild 12kV		3	Carry forward	
50	0.25	D	1	Agricultural land surrounds this link on the east and west.	3	Moderate impact driven by moderate structure contrast within 1/8 and 1/4-mile residential distance zone						2	Carry forward	
55	0.25	E	3	Agricultural land borders this link on the west side, and the Walmart distribution facility borders it on the east.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone			Need easement	3		3	Carry forward	
60	0.25	D	3	Agricultural land borders this link on the west side, and the Walmart distribution facility borders it on the East.	2			Need easement	3			2	Carry forward	
70	0.49	C	3	Bordered on the north and south by agricultural land.	2			Need easement	3			2	Carry forward	
80	0.23	F	2	Bordered on the east by agricultural land, and a school on the west.	3	Moderate structure contrast within residential/school 1/8-mile distance zone.						2	Carry forward	
90	1.02	J	3	Residential area borders it to the south, and agricultural land to the north. 22 homes face the link, and 11 back it.	3	Moderate structure contrast within residential 1/8-mile distance zone			Need ROW	2		3	Carry forward	
100	0.26	M	1	Industrial land bordering it to the east and part of its western border. The remainder of the western side of the link is agricultural land.	1			Need easement	3			2	Carry forward	
110	0.51	-	2	Has industrial land on the north side of this link, and agricultural and residential land to the south.	2					4	4	4	Eliminate	
120	0.39	-	2	This link has residential land to the west of the link with 13 homes facing the link, and agricultural land to the East.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	3	Carry forward	
130	0.12	-	3	Has a residential community north of the link with 4 homes facing the link, and one residential property to the south. Constricted by railroad ROW.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	4	Eliminate	
140	0.07	-	1	This link has residential properties on both the west and east sides of the link with a single residence on each.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	2	Carry forward	
150	0.12	-	1	Has a single residential property on the north side facing the link, and industrial property to the south.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	2	Carry forward	
160	0.65	-	2	This link is bordered on both the north and south side by residences. Industrial uses are also on the south side. 48 homes face this link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	4	4	Eliminate	
170	0.65	-	2	Is bordered to the north by a residential area, and to the south by an industrial area near railroad tracks. 4 homes face the link. Constricted by railroad ROW.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	Lot of angle poles	3	3	Eliminate
180	0.10	-	1	Is bordered on the north side by residential property with one home, and to the south by vacant land.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Carry forward
190	0.05	-	1	Industrial land borders it to the south, and vacant to the north.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Eliminate
200	0.05	-	1	Industrial land borders it to the south, and vacant to the north.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Eliminate
210	0.13	-	1	Vacant land borders its north and west side, and industrial/commercial land to the south and east.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				2	3	4	4	Eliminate
215	0.06	-	1	Vacant land on the west side and one commercial site on the east.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	3	4	4	Eliminate
220	0.13	-	1	Commercial and residential properties on the west side of the link, and a vacant lot on the east. Two residential buildings are adjacent to the link.	3	Moderate structure contrast within residential 1/8-mile distance zone				3		3	3	Carry forward
230	0.06	-	1	Bordered on the east and west by vacant property.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				2	3	4	4	Eliminate
240	0.99	-	2	Bordered on the north and south by commercial properties. 5 homes face the link.	4	Moderate-strong structure contrast within residential 1/8-mile distance zone				3		3	3	Carry forward
250	0.77	-	2	Bordered by industrial property on the north side, and residential to the south as well as a school and library. 30 homes back up to the link as does one high school.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Eliminate
260	0.30	-	2	Bordered on both the east and west by residential properties, with several commercial properties.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	3	3	Carry forward
270	0.24	-	2	Bordered to the north by commercial properties and to the south by commercial and industrial properties.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	3	3	Carry forward
280	0.24	-	2	Bordered by commercial and industrial properties on the west side of the link. Several commercial and residential properties border the East side. 3 homes face the link.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	3	3	Carry forward
290	0.26	-	2	Bordered on the north side by industrial property, and the south by residential property 2 homes face the link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Eliminate
300	0.18	-	1	Bordered by industrial property linked to the rail road, on both the east and west sides.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	2	2	Carry forward
310	0.25	-	1	Bordered by vacant and industrial property with several residential properties on the west side and commercial/industrial property on the east. 2 homes face the link.	3	Moderate structure contrast within residential 1/8-mile distance zone				3	3	2	2	Carry forward
320	0.23	-	1	Bordered by industrial property to the south and residential to the north, 7 homes face the link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	3	4	4	Eliminate
325	0.11	-	1	Bordered by residential properties on the east and west sides of the link. 4 homes face this link and 4 homes are sided up against it.	3	Moderate structure contrast within residential 1/8-mile distance zone				2	3	2	2	Carry forward
330	0.28	-	2	To the north and south of the link is a residential community. 22 homes face this link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	3	4	4	Eliminate
340	0.50	-	2	Bordered on the east and west by apartment buildings, and homes. 12 homes face the link, and 22 back up to the link.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	3	3	3	Carry forward
350	0.87	-	1	Bordered to the north by several commercial and residential properties. Bordered to the south by agricultural land and residential properties. 5 homes face this link, 20 homes back up to this link.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
360	0.95	-	2	Bordered to the north by agricultural land, and to the south by residential homes and several commercial sites. 4 homes are adjacent to this link, with their sides facing the link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3		3	3	Eliminate
370	0.24	-	2	To the west of the link is agricultural land, and to the east is a combination of commercial and residential lands. 2 homes face this link and one home sides it.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	Stick to e/s/o road	2	3	Carry forward
380	0.19	-	1	North of the link is a mix of commercial and residential land with agricultural lands to the south. 2 homes are adjacent to this link, their sides facing.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
390	0.27	-	2	Bordered on the west by commercial and residential properties (10 homes) and to the east by agricultural lands. 5 homes face this link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	2	3	3	Carry forward
400	0.19	-	2	Bordered by agricultural lands, and to the south by commercial and residential lands. 2 homes back up to the link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	3	3	3	Eliminate
410	0.31	-	2	Bordered on the north and south sides by agricultural land, and crosses in front of a church.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
420	0.35	-	2	Bordered on the west by one residence, a church, and agricultural lands, and to the east by agricultural lands.	3	Moderate structure contrast within residential 1/8-mile distance zone				3	2	3	3	Carry forward
430	0.32	-	2	Bordered on the north by agricultural land, and the south by one residence and agricultural land.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	3	3	3	Eliminate
440	0.16	-	1	Surrounded on both sides by agricultural land.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	2	3	3	Carry forward
450	1.05	M	1	Bordered to the north by agricultural land and the Walmart distribution facility. To the south it is bordered by agricultural lands.	3	Moderate structure contrast within residential 1/8-mile distance zone				4	3	3	3	Carry forward
460	0.56	-	2	Bordered to the south by agricultural land and residential land and agricultural property to the north. 5 homes back up to this link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone			Canal easement	3	3	3	3	Eliminate
470	0.53	Q	1	Bordered by agricultural land on both the north and south sides of the link.	3	Moderate structure contrast within residential 1/8-mile distance zone			New easement	3	4	3	3	Carry forward
480	0.11	-	1	Surrounded by agricultural land on both the east and west sides.	3	Moderate structure contrast within residential 1/8-mile distance zone			Canal easement	3		2	2	Carry forward
490	1.03	-	1	Bordered on the north and south by vacant and industrial land, and one residential property that faces the link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				3	4	3	3	Eliminate
500	0.53	-	1	Bordered on the south side by agricultural and vacant land. The north side of the link contains industrial properties.	2					4	4	4	4	Eliminate
510	0.50	-	1	Bordered on the south side by agricultural and vacant land. The north side of the link contains industrial properties.	2					3	4	3	3	Carry forward
520	0.13	-	1	Bordered on the east and west side of the link by vacant land.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	4	2	2	Carry forward
530	0.06	-	1	Bordered on the east and west side of the link by vacant land.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	3	2	2	Carry forward
540	0.48	P	1	Is located on agricultural property immediately east of the Walmart distribution facility. Surrounded by agricultural land.	2					3	3	2	2	Carry forward
550	0.33	Q	1	Bordered on the east by an industrial site and the west by agricultural land.	2					1	2	2	2	Carry forward
560	0.19	-	1	The link has industrial property to the east and vacant land to the west.	2					4	2	2	2	Eliminate
590	0.51	S	1	Agricultural land to the north and south sides, with several residences to the north. 2 homes face this link.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	2	2	2	Carry forward
600	0.50	U	1	Residential and agricultural lands on its northern side, and vacant/industrial lands on its southern side. 7 homes face the link.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	3	2	2	Carry forward
610	0.49	U	1	Industrial land on its southern side, and agricultural land on its northern side.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	12kV south side	3	2	Carry forward
620	1.00	H,K	2	To the west is agricultural land with some residences. To the east is more agricultural land and residences. 8 homes face this link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				1	12kV west side	3	3	Carry forward
630	0.99	H	2	To the south it borders agricultural land, and to the north is a high school and residential development. 18 homes back up to the link and 1 school faces the link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				1	12kV south side	3	3	Carry forward
640	0.45	K	1	To its west it is bordered by agricultural land, a school, and a residential development under construction. To the east it is bordered by agricultural lands.	3	Moderate structure contrast within residential 1/4-mile distance zone				1	3	2	2	Carry forward
650	0.49	-	1	This link has agricultural land on the north side of it, and one residence to the south, which faces the link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				1	12kV south side	2	3	Carry forward
660	0.55	-	1	Has agriculture and residential bordering it to the east and west. 1 home borders the link.	3	Moderate structure contrast within residential 1/4-mile distance zone				3	2	2	2	Carry forward
670	0.50	-	2	Has agriculture to the north and a residential development to the south. 26 homes back up to the link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				1	Rebuild 12kV	3	3	Carry forward
680	0.99	N	2	Bordered to the west by several residential developments, and agricultural lands to the east. 48 homes back up to this link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				1	2	3	3	Carry forward
690	0.68	N	2	10 homes back up to this link, and 4 homes face it.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				1	3	3	3	Carry forward
700	1.00	R	1	It is bordered on both the east and west by agricultural land. 2 homes face this link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				1	2	3	3	Carry forward
710	0.52	-	1	Bordered on the southern side by agricultural land. To the north are several residences and agricultural land. 7 homes face this link.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
720	0.71	R	2	To the east is agricultural land and the west several residences and agricultural land.	3	Moderate structure contrast within residential 1/4-mile distance zone				3	3	3	3	Carry forward
730	0.99	T	1	Bordered by agricultural land and residential land on both the east and west side. 7 homes are immediately adjacent to this link.	3	Moderate structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
740	0.50	-	1	Surrounded by agricultural land on both the north and south side.	3	Moderate structure contrast within 1/4-mile distance zone				1	2	2	2	Carry forward
750	0.74	T	1	Surrounded by agricultural land on all sides.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone				1	2	2	2	Carry forward
760	1.00	-	2	Agricultural land on the east side of the link, and some residential land on the west side. 4 homes are adjacent to this link.	3	High impact driven by strong structure contrast within residential 1/8-mile distance zone				3	12kV west side	2	3	Carry forward
770	0.51	-	1	Agricultural land is located adjacent to the link on the south side, as well as to the north with residences as well. 3 homes face this link.	4	High impact driven by moderate-strong structure contrast within residential 1/8-mile distance zone			Good row to work in	1	12kV rebuild on south side	2	2	Carry forward
780	0.55	-	1	Agricultural land located on both the west and east side of this link. It runs through the middle of several agricultural parcels. 3 homes are adjacent to this link.	3	Moderate structure contrast within 1/4-mile distance zone				3	2	2	2	Carry forward
790	1.00	U	1	Agricultural land on the west side of the link with one residence and 2 residences on the east side of the link.	1				Good ROW to work in	1	12kV west side	2	1	Carry forward
800	0.50	-	1	Bordered by agricultural land on the north and south side of the link.	1					1	2	1	1	Carry forward
810	0.56	U	1	Agricultural land on the west side of the link with one residence and 2 residences on the east side of the link face it.	3	Moderate structure contrast within 1/8-mile distance zone				1	4	2	2	Carry forward
820	0.50	-	1	This link goes directly through agricultural land and residential property.	3	Moderate structure contrast within 1/8-mile distance zone, co-located with 500kV facility								

Perryville to Valencia 69kV Project

Preliminary Links

Alternatives

-  Preliminary Links
-  Links Considered and Eliminated

Project Features

-  Project Study Area
-  Potential Substation Siting Area

Existing Electrical Facilities

-  500kV Transmission Line
-  345kV Transmission Line
-  230kV Transmission Line
-  69kV Transmission Line
-  12kV Distribution Line
-  Existing Substation

Reference Features

-  Node
-  Link Identifier
-  Helipad
-  Interstate
-  Major Road
-  Street
-  Railroad
-  Canal



July 2017

Sources: Arizona State Land Department 2007; EPG 2017;
ESRI Street Map 2013; NAIP Aerial Imagery 2015; City of Buckeye 2017



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Perryville to Valencia 69kV Project

Route Segment Alternatives

Alternatives

-  Valencia 69kV Route Segments
-  Perryville 69kV Route Segments

Note: Where there are route options for both the blue and the orange circuits along the same path segment, only one segment can be built on that alignment. The other circuit would need to take another path to the substation site. For example, if the blue Valencia Segment A is constructed, the orange Perryville connection would need to be made through a path other than the Perryville Segment A.

Project Features

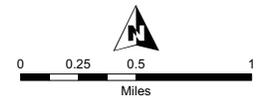
-  Project Study Area
-  Substation Siting Area

Existing Electrical Facilities

-  500kV Transmission Line
-  345kV Transmission Line
-  230kV Transmission Line
-  69kV Transmission Line
-  12kV Distribution Line
-  Existing Substation

Reference Features

-  Node
-  Route Segment Identifier
-  Helipad
-  Interstate
-  Major Road
-  Street
-  Railroad
-  Canal

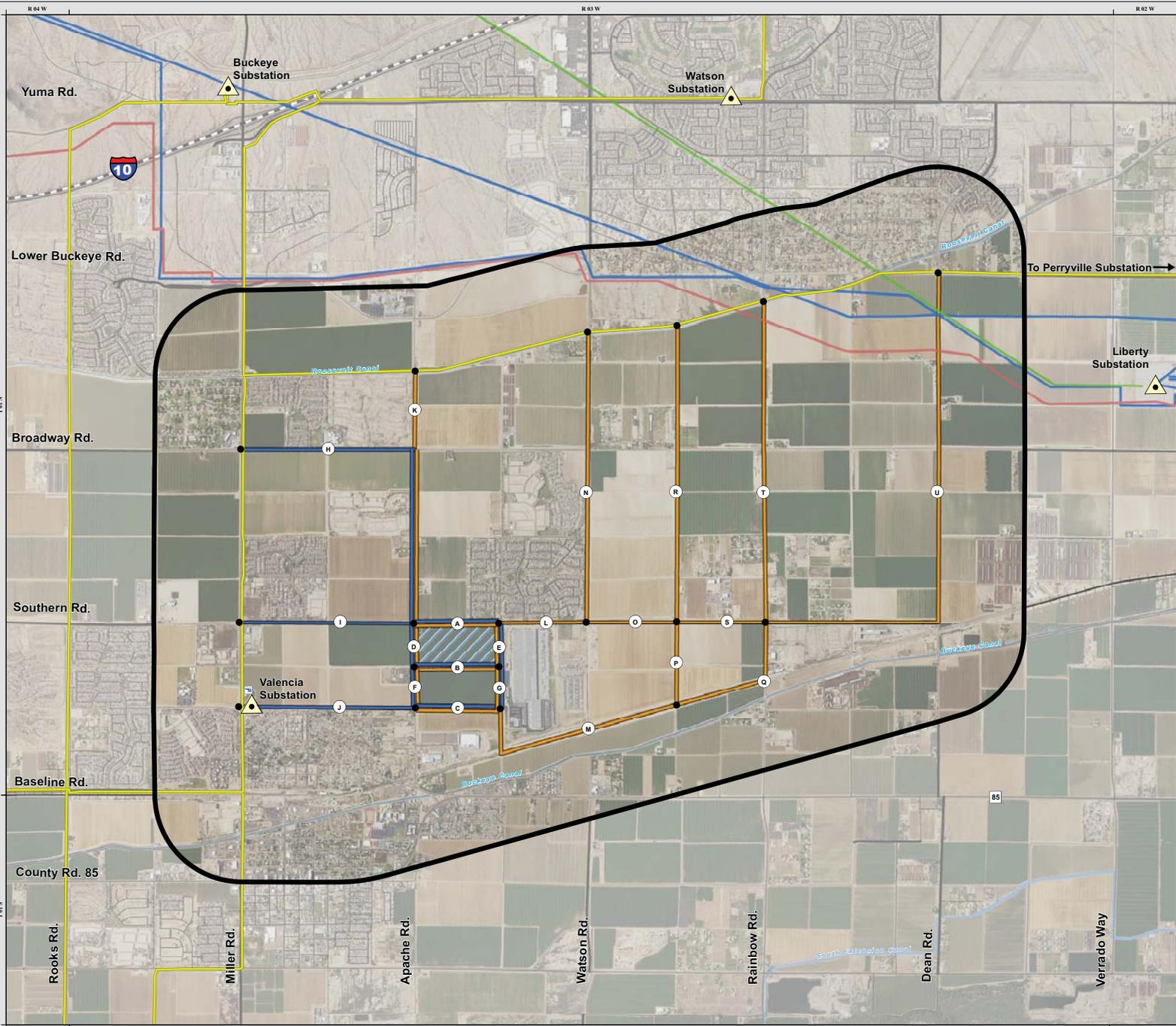


July 2017

Sources: Arizona State Land Department 2007; EPG 2017; ESRI Street Map 2013; NAIP Aerial Imagery 2015; City of Buckeye 2017

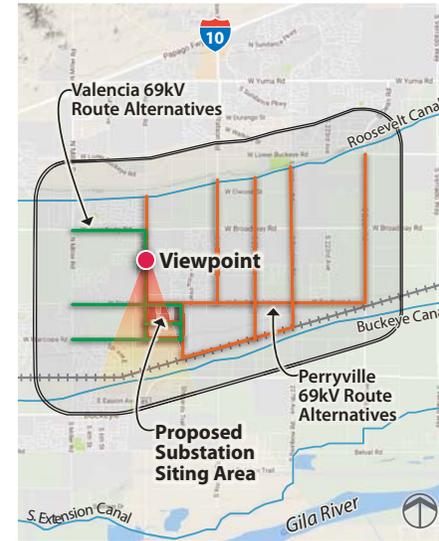


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Existing Condition View looking south along Apache Road toward Southern Avenue



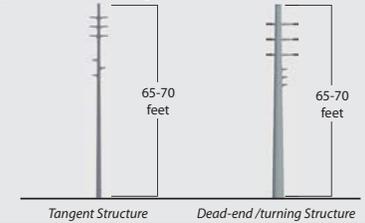
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Simulated Condition View of Valencia Route Segment H, located on the east side of Apache Road

Photo Date and Time: July 7th, 2017, 10:52 a.m.
Focal Length: 50mm

Typical 69kV Monopole Diagram:



Perryville to Valencia 69kV Siting Project

Valencia Route Segment H
Simulation

July 2017



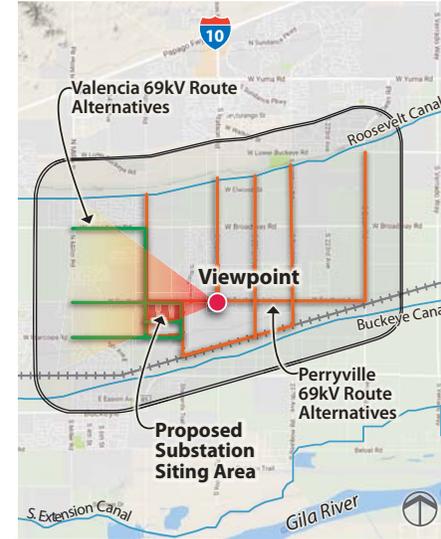


Existing Condition View looking west along Southern Avenue at intersection with Watson Road



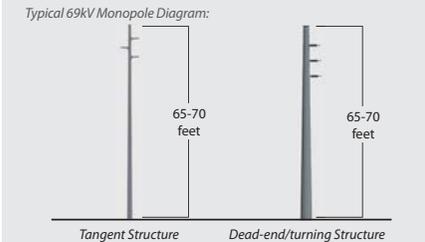
Simulated Condition View of Perryville Route Segment L, located on the south side of Southern Avenue

Simulations were prepared using information provided by APS. Facility locations, colors, and heights may differ based on final engineering and design.



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Photo Date and Time: July 7th, 2017, 10:29 a.m.
 Focal Length: 32mm (The original photographs were taken at 50mm, then stitched together to create this panorama, resulting in an approximately 59-degree field of view)



Perryville to Valencia 69kV Siting Project

Perryville Route Segment L Simulation

July 2017 

Public Comments and Next Steps



Public and Agency Outreach

- City of Buckeye (January, February, and July with City Mayor, Council, and Staff)
- Maricopa County District 4 Supervisor (February)
- Project newsletters (March and July, final newsletter describing the route selection to follow)

Outreach will continue throughout the process.

Opportunities for Public Information and Comment

- Fill out and return a comment form tonight
- Electronic comment forms and project updates available at: **www.aps.com/siting** (see Perryville to Valencia 69kV Project under “Current Siting Projects”)
- APS Project Manager, Kevin Duncan, can be reached at: **1-888-352-4365** or **perryvillevalencia@apsc.com**
- Media briefings (APS)
- Final route selection expected August 2017