

Project Need

Midtown Tucson is served by an aging 46 kV sub-transmission system. Due to increasing power demands in central Tucson, the current system is reaching capacity which reduces electric reliability and risks long power outages.

Project Benefits

The Vine substation will strengthen midtown energy infrastructure and increase service reliability for customers.

Special Exception Land Use Request

TEP is requesting relief from the maximum wall height of 10 feet and the 6 foot landscape border on the east side, to maintain the safety and general welfare of the community surrounding the substation. TEP Security Standard requires a minimum 12 - foot-high masonry security wall, and the Vine Substation will have a 13.5-foot-high security wall.

TEP is requesting relief from the 20-foot setback requirement in order to maintain critical safety clearances from energized equipment within the walls of the substation.

Vine 138 kV Substation

Special Exception Land Use Permit Timeline



August 2025

September 2025

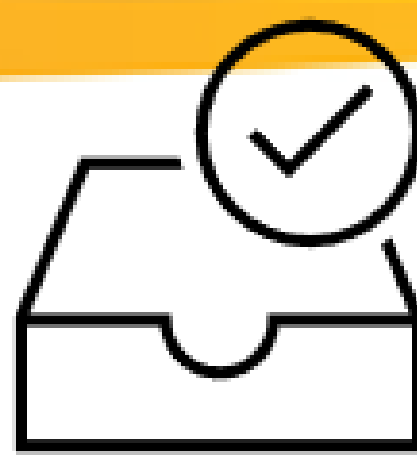
Spring 2027



Neighborhood Meeting



Design Review Board Hearing



Development Plan Submittal

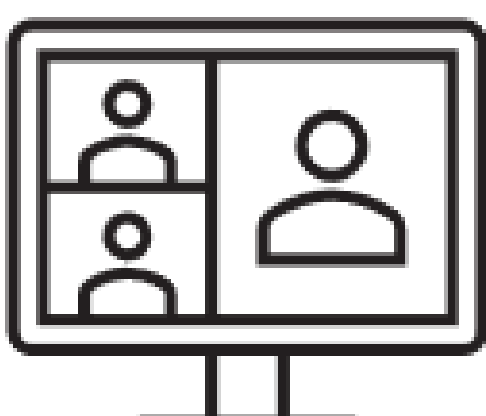


2025

2027



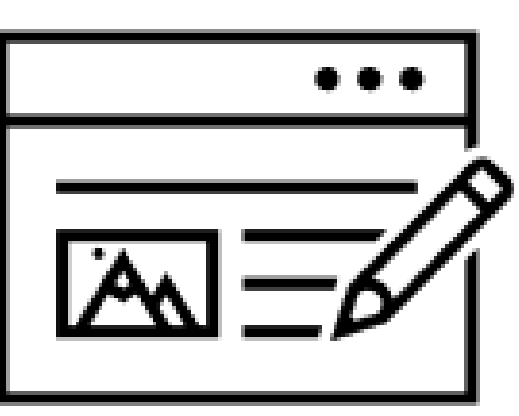
Pre -Application Meeting



June 2025



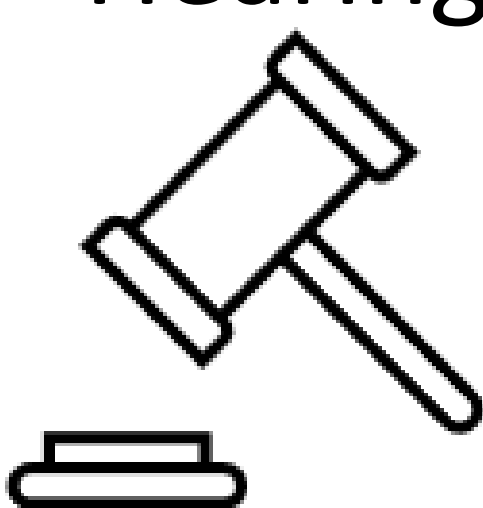
Application Submittal



August 2025



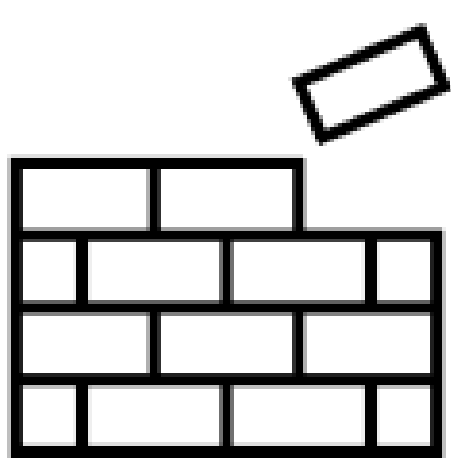
Zoning Examiner Hearing



November 2025



Substation Construction Begins

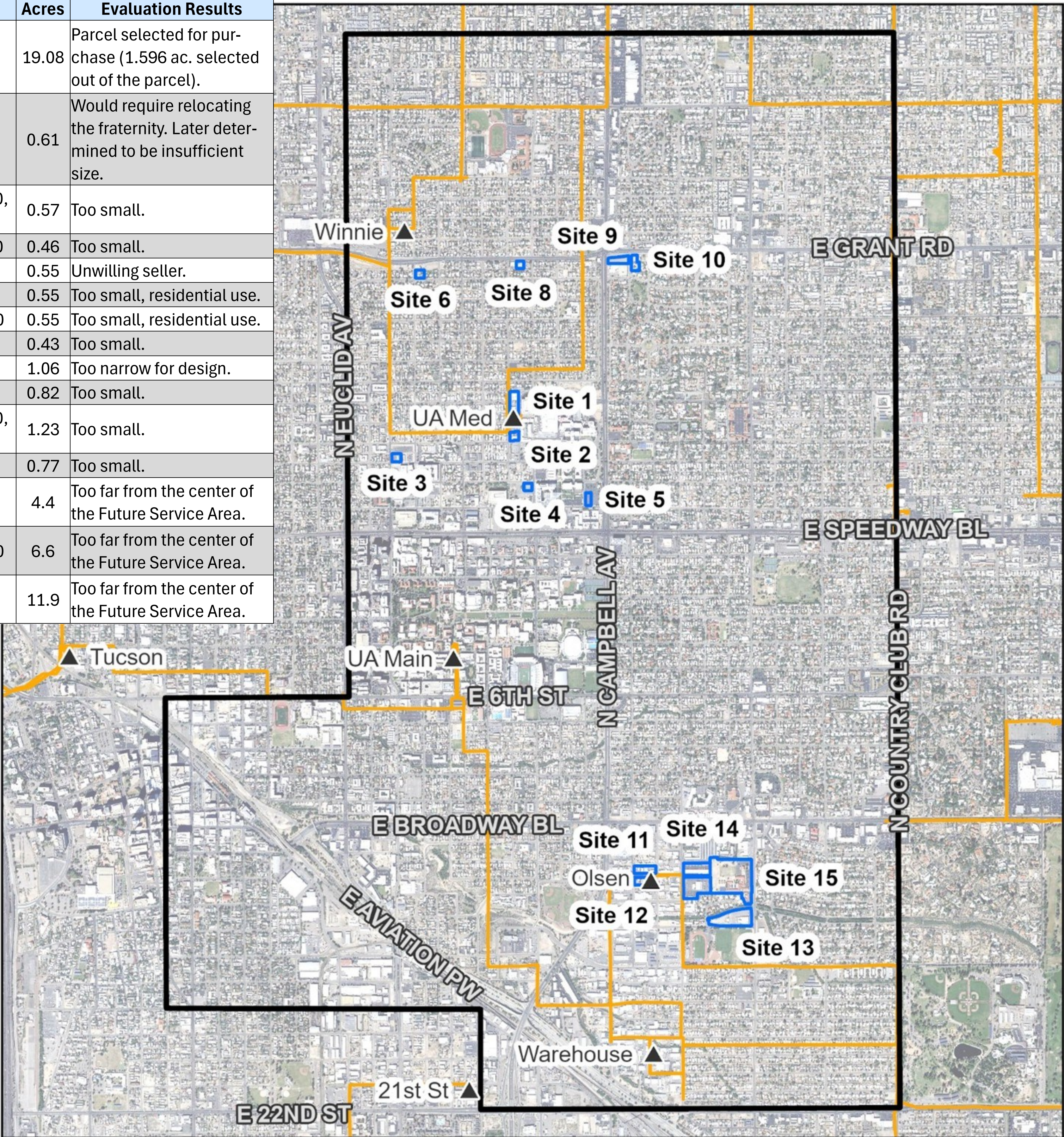


September 2028

Site Selection Results—Why the Vine Location?

TEP’s existing 46 kV system is nearing the end of its useful life and needs replacement as it cannot support increasing demand. TEP land use planners and engineers conducted a detailed study to identify and evaluate potentially suitable sites that would support a new 138 kV substation within the future service area, which encompasses Grant Road to the north, Aviation Parkway to the South, Euclid Avenue to the west, and Country Club Road to the east.

Site #	Parcel #	Acres	Evaluation Results
1	12310001K	19.08	Parcel selected for purchase (1.596 ac. selected out of the parcel).
2	12317252B	0.61	Would require relocating the fraternity. Later determined to be insufficient size.
3	123151490, 123151480, 123151500, 123151510	0.57	Too small.
4	123170990, 123171000, 123171010	0.46	Too small.
5	123180190	0.55	Unwilling seller.
6	123121960, 123121970	0.55	Too small, residential use.
7	12312085A, 123180180, 123180170	0.55	Too small, residential use.
8	123121460, 123121450	0.43	Too small.
9	12305215A	1.06	Too narrow for design.
10	12305011A, 123050120	0.82	Too small.
11	129042190, 129042200, 129042210, 129042220	1.23	Too small.
12	129042640, 129042620	0.77	Too small.
13	12903024C	4.4	Too far from the center of the Future Service Area.
14	12901038A, 129010390, 129010400	6.6	Too far from the center of the Future Service Area.
15	12901036B	11.9	Too far from the center of the Future Service Area.



▲ Existing TEP Substations

— Existing 46 kV Lines

□ Site Selection Parcels

▭ UA North Service Area - Future

Sources: Esri, UNS, TEP, and Pima County GIS.
Projection: NAD 1983 UTM Zone 12 N
Basemap: PAG Imagery 2019

03,000

Feet

1 Inch = 3,000 Feet

▲

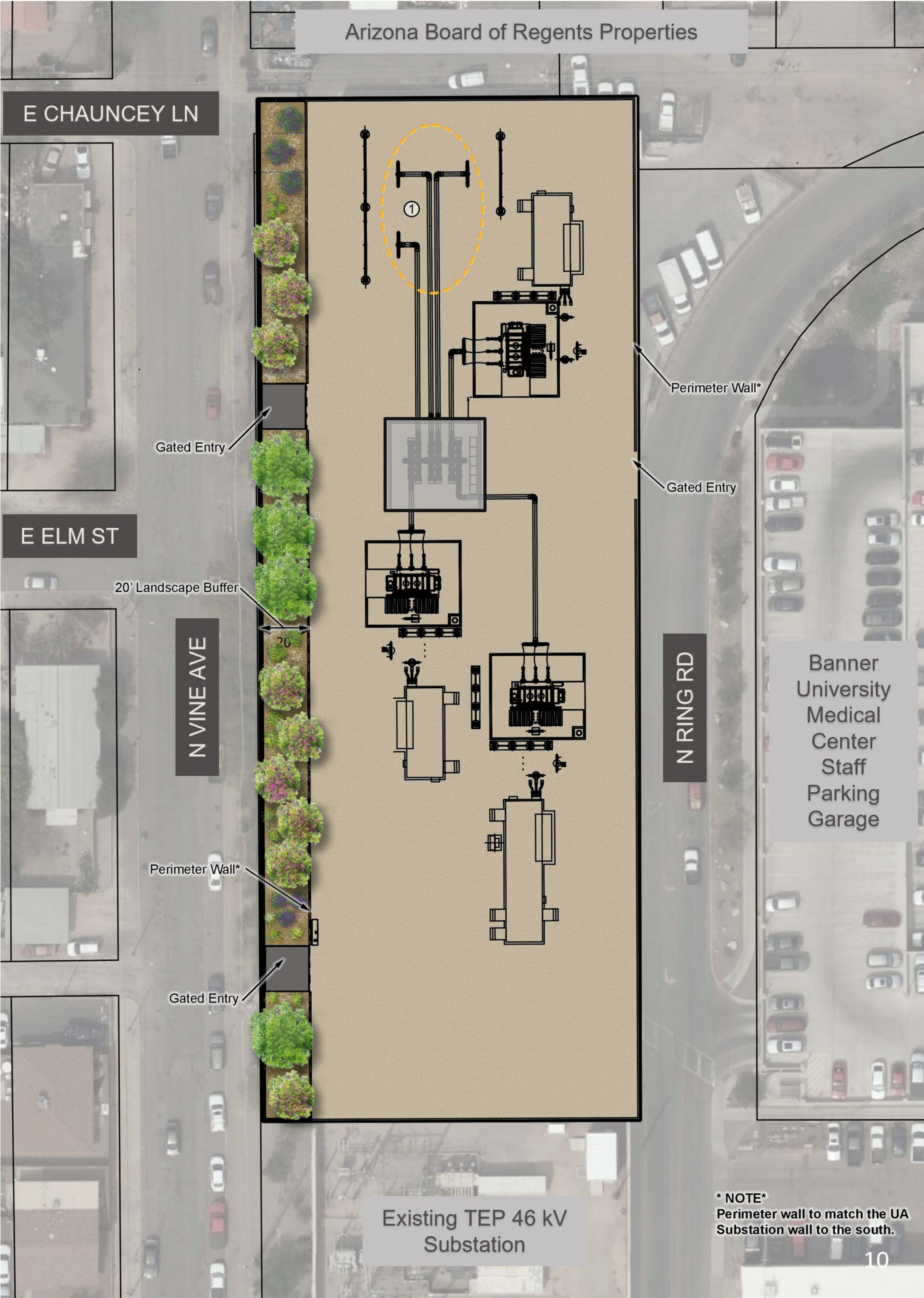
N

Vine 138 kV Substation

Special Exception Land Use Permit



- Gas Insulated Substation (GIS)
 - Located on a 1.6- acre site
 - 13.5 foot decorative masonry block wall
 - Perimeter landscaping
- The substation will contain:
 - Three—75 MVA transformers
 - Switchgear
 - Static Masts



Vine 138 kV Substation

Special Exception Land Use Permit



Vine Substation

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- Located on a 1.6- acre site
- The substation will contain:
 - Three—75 MVA transformers
 - Switchgear
 - Static Masts
 - Structural Canopy
- 13.5 foot decorative masonry block wall
- Perimeter landscaping

VIEW POINT



EXISTING CONDITIONS



PHOTO SIMULATION



