

# Environmental and Land Use Criteria

## Land Use

Number of:

- Habitable Structures<sup>1</sup> within 300 ft
- Schools within 1,000 ft
- Parks/recreational areas<sup>2</sup> within 1,000 ft
- FAA-registered airports within 20,000 ft
- Private airstrips within 10,000 ft
- Heliports within 5,000 ft
- Commercial AM radio transmitters within 10,000 ft
- FM radio transmitters and other electronic installations within 2,000 ft

## Aesthetics

Site within foreground visual zone<sup>3</sup> of:

- U.S. and State Highways
- Parks/recreational areas<sup>2</sup>
- Churches, Schools, and Cemeteries

## Ecology

Site in:

- Potential Golden Cheeked Warbler/Black Capped Vireo Habitat
- Within 300 ft of potential Golden Cheeked Warbler/Black Capped Vireo Habitat
- Potential wetlands
- Areas known or having a high probability of endangered karst invertebrate species
- Edwards Aquifer Recharge Zone
- 100-year floodplains

## Cultural Resources

- Recorded historic and prehistoric sites within 1,000 ft
- National register-listed or determined-eligible sites within 1,000 ft
- Percent of site within areas of high archeological/historical site potential

<sup>1</sup>Residences, businesses, schools, churches, hospitals, nursing homes, etc.

<sup>2</sup>Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.

<sup>3</sup>One-half mile, unobstructed.

## **Scope**

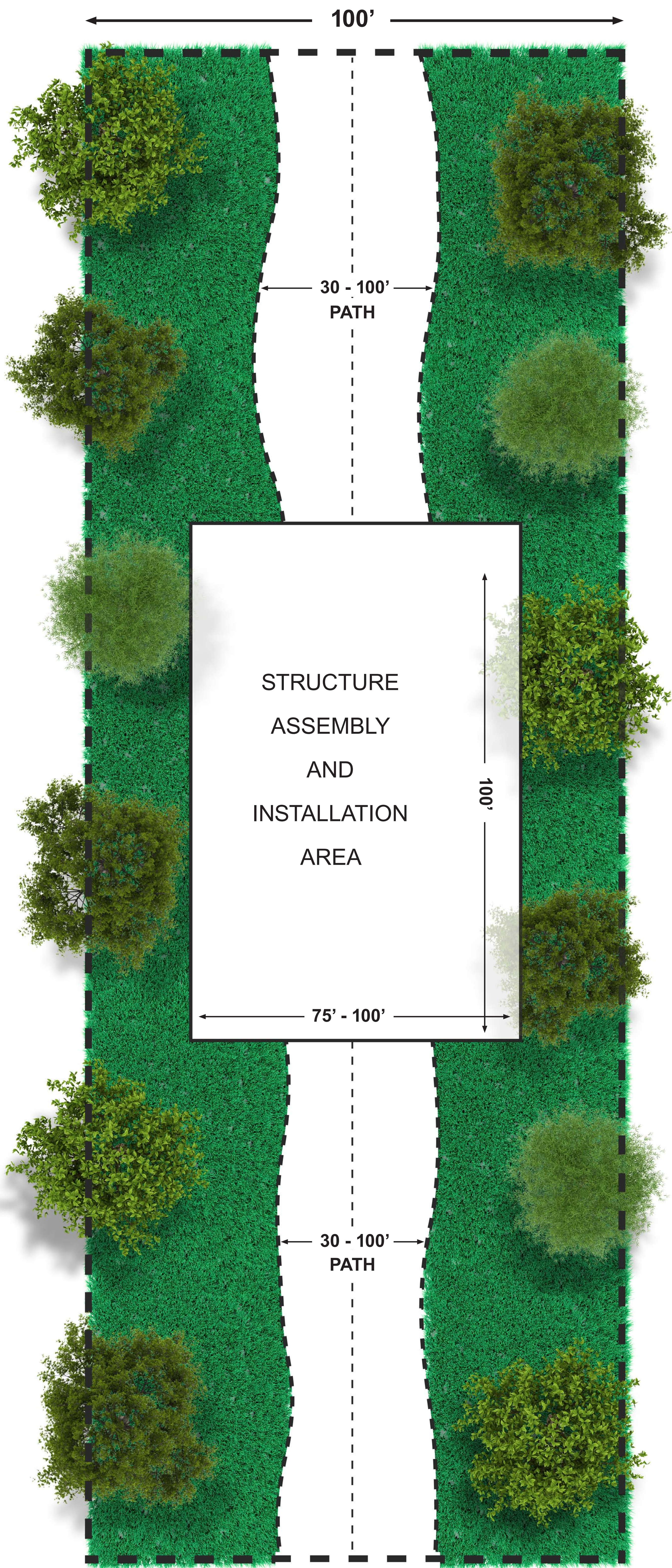
- Construct a new substation with one initial power transformer and one four-feeder 35kV distribution switchgear N of San Antonio in the vicinity of US 281 and FM 1863
- Connect to the existing Stonegate-Green Mountain transmission line to serve the new substation.
- Sized for two line terminals, three power transformers and 138kV capacitor bank

## **Purpose and Need**

- The new substation is needed to maintain electrical reliability and improve this area's electric system with shorter circuits that reduce exposure to outages. The new circuits also create strong backbones and sufficient field ties to adjacent substation circuits that will prevent major loss of customer load in faulted conditions.
- The new substation will help relieve load from other surrounding substations and reduce the risk of overloading circuits.
- The new substation is needed to meet an increasing demand for electricity in the area.



# Sample Easement Clearing





# Substation Facts

## Existing Substations

- As of 2012, there are 103 existing substations in the CPS Energy service area.
- Substations operate on either 345-kV or 138-kV transmission voltages and either 34.5-kV or 13.2-kV distribution voltages.

## New Substations

- The general location for a substation is determined by the demand for electricity in that area.
- A substation site must have access to public roadway.
- A substation site must have access to transmission and distribution lines.
- Site conditions for a substation are:
  - Location –not located in a floodplain
  - Size –approximately 5 acres
  - Terrain –relatively flat
  - Soil –natural soil, void of fill and waste

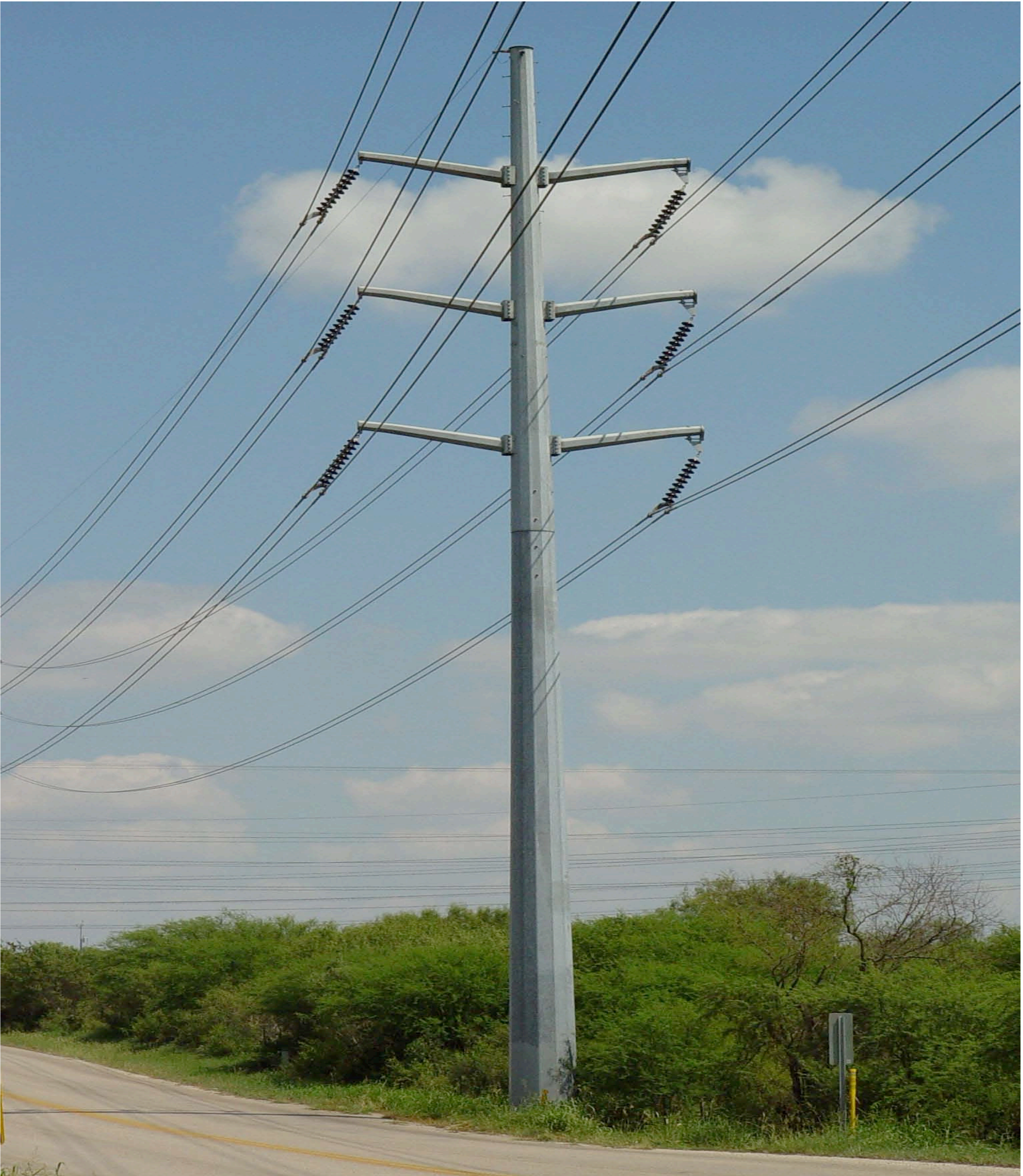


# Typical Substations

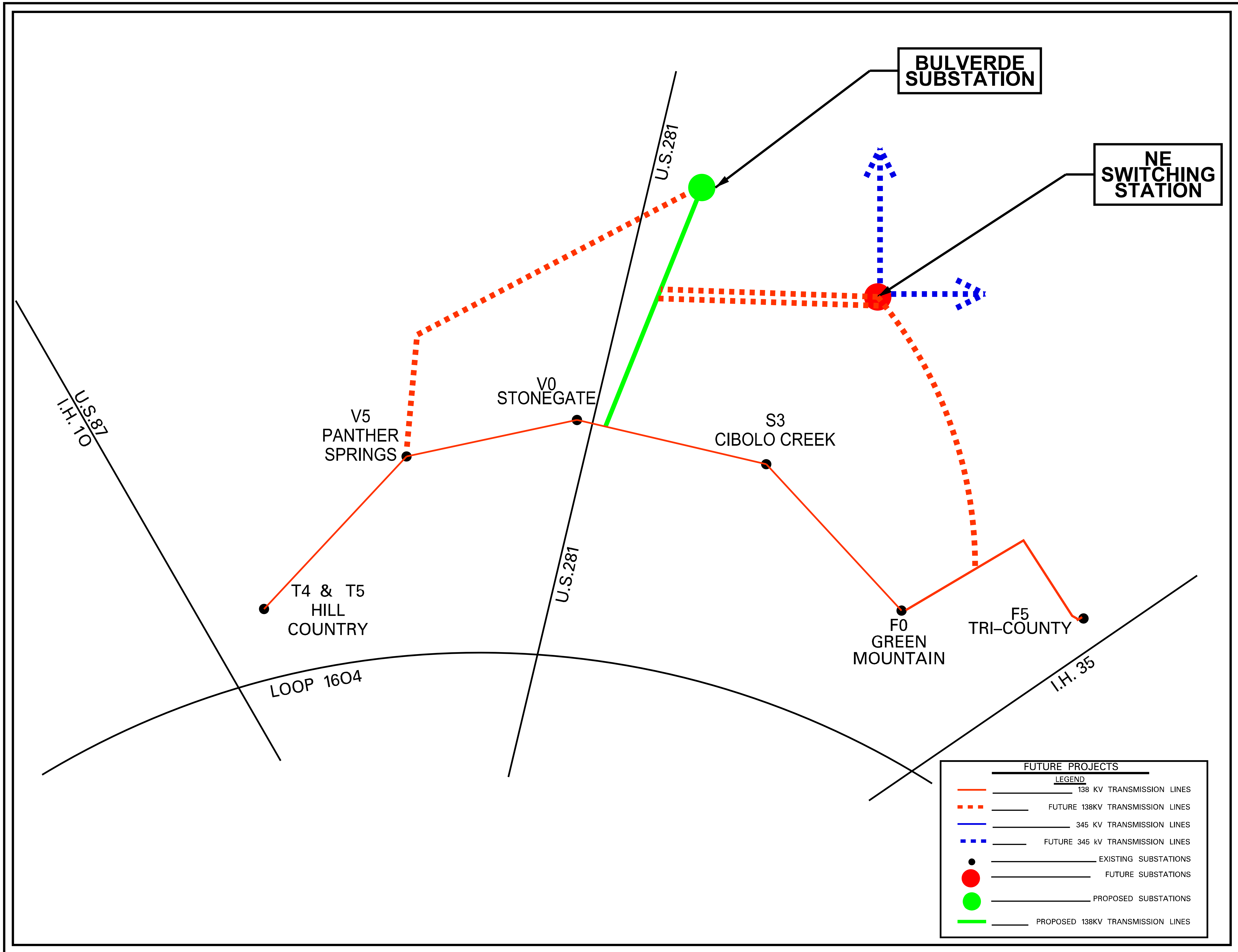




# Typical Transmission Structure







FUTURE PROJECTS	
LEGEND	
	138 KV TRANSMISSION LINES
	FUTURE 138KV TRANSMISSION LINES
	345 KV TRANSMISSION LINES
	FUTURE 345 KV TRANSMISSION LINES
	EXISTING SUBSTATIONS
	FUTURE SUBSTATIONS
	PROPOSED SUBSTATIONS
	PROPOSED 138KV TRANSMISSION LINES



# Local, State and Federal Agencies Contacted/Notified

## Local

- City of San Antonio: Mayor, Council Members, Capital Improvement Management Services (CIMS), Public Works, Public Utilities, and the Chief Financial Officer
- City of Bulverde
- City of Garden Ridge
- San Antonio River Authority
- Area School Districts
- Alamo Area Council of Governments (AACOG)
- San Antonio Conservation Society
- San Antonio Water System (SAWS)
- Bexar Metropolitan Water District
- Bexar County: Judge, Commissioners, Chief of Staff, Floodplain Coordinator, Infrastructure Services, Government Relations, Economic Development and Special Programs
- Edwards Aquifer Authority

## State

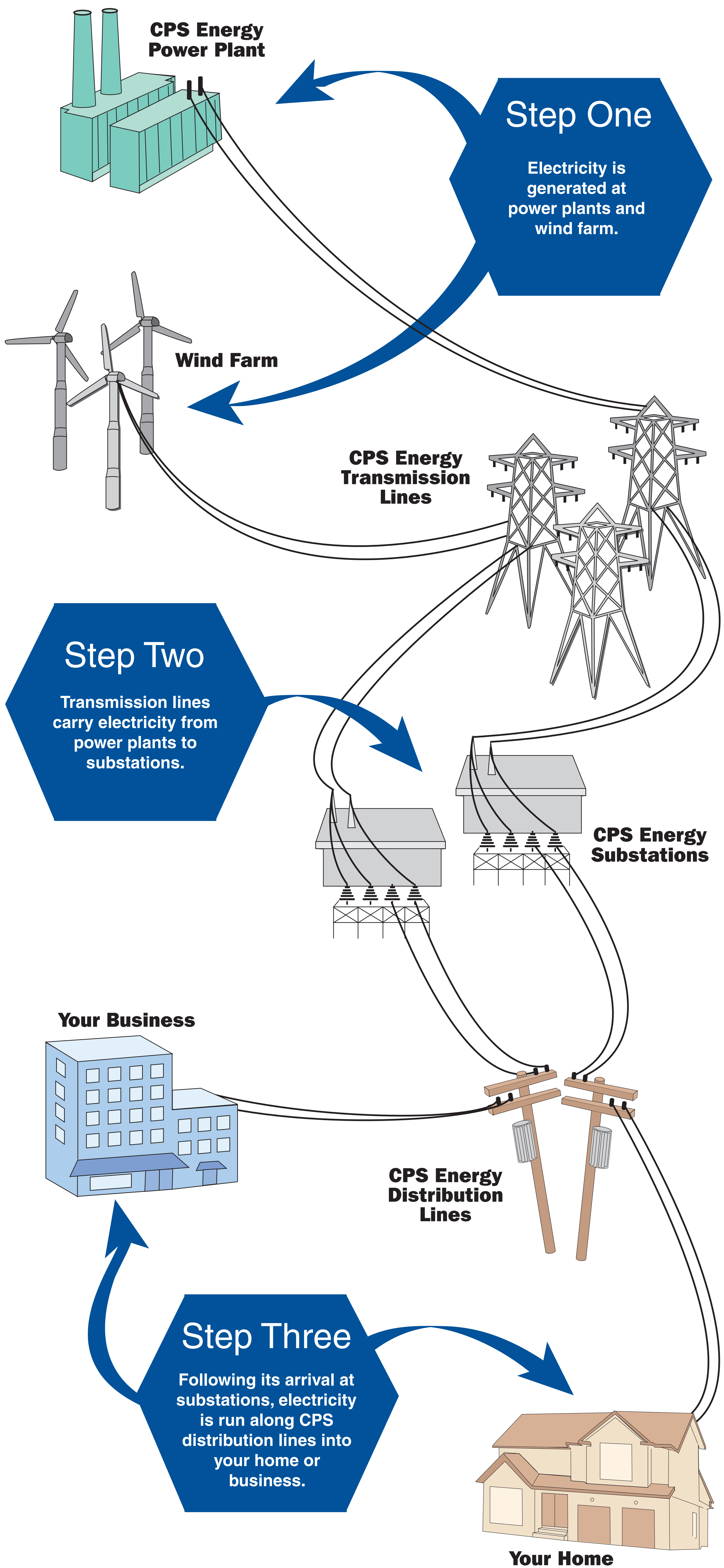
- Texas Department of Transportation: Aviation Division and Environmental Affairs Division
- Texas Parks and Wildlife Department
- Texas Water Development Board
- Texas Commission on Environmental Quality
- Texas Historical Commission
- Texas Senate
- Texas House of Representatives

## Federal

- U.S. Army Corps of Engineers
- Federal Aviation Administration
- U.S. Environmental Protection Agency
- Federal Emergency Management Agency
- U.S. Fish & Wildlife Service
- Natural Resources Conservation Service
- U.S. House of Representatives



# Generation to Customer Diagram





# Acquisition

- Mail “Bill of Rights” letter to affected landowners
- Contact property owner
- Obtain permission to conduct survey(s)
- Survey establishes boundaries of substation/easements  
(Simultaneously perform environmental/cultural surveys)
- Substation/easement area is defined described by Registered Professional Land Surveyor
- Value of substation/easements established by independent appraiser
- Negotiate with property owner for substation site/easement or right-of-way for utility use



# Timeline

**Gather information and land use data**

**In Progress**

**Send letters to landowners**

**September 25,  
2013**

**Hold Open House**

**October 15, 2013**

**Complete evaluation of:  
Public input, environment, land use  
and engineering**

**December 2013**

**Recommend route to the  
CPS Energy Board of Trustees  
Notify landowners and interested parties**

**January 2014**

**Apply for City Ordinance**

**March 2014**

**Start construction**

**Late 2015**

**Complete construction**

**Mid 2017**



# Sample Structure With Easement Clearing

