



# Ranchtown Substation Project

## Public Input Meeting

November 13, 2012

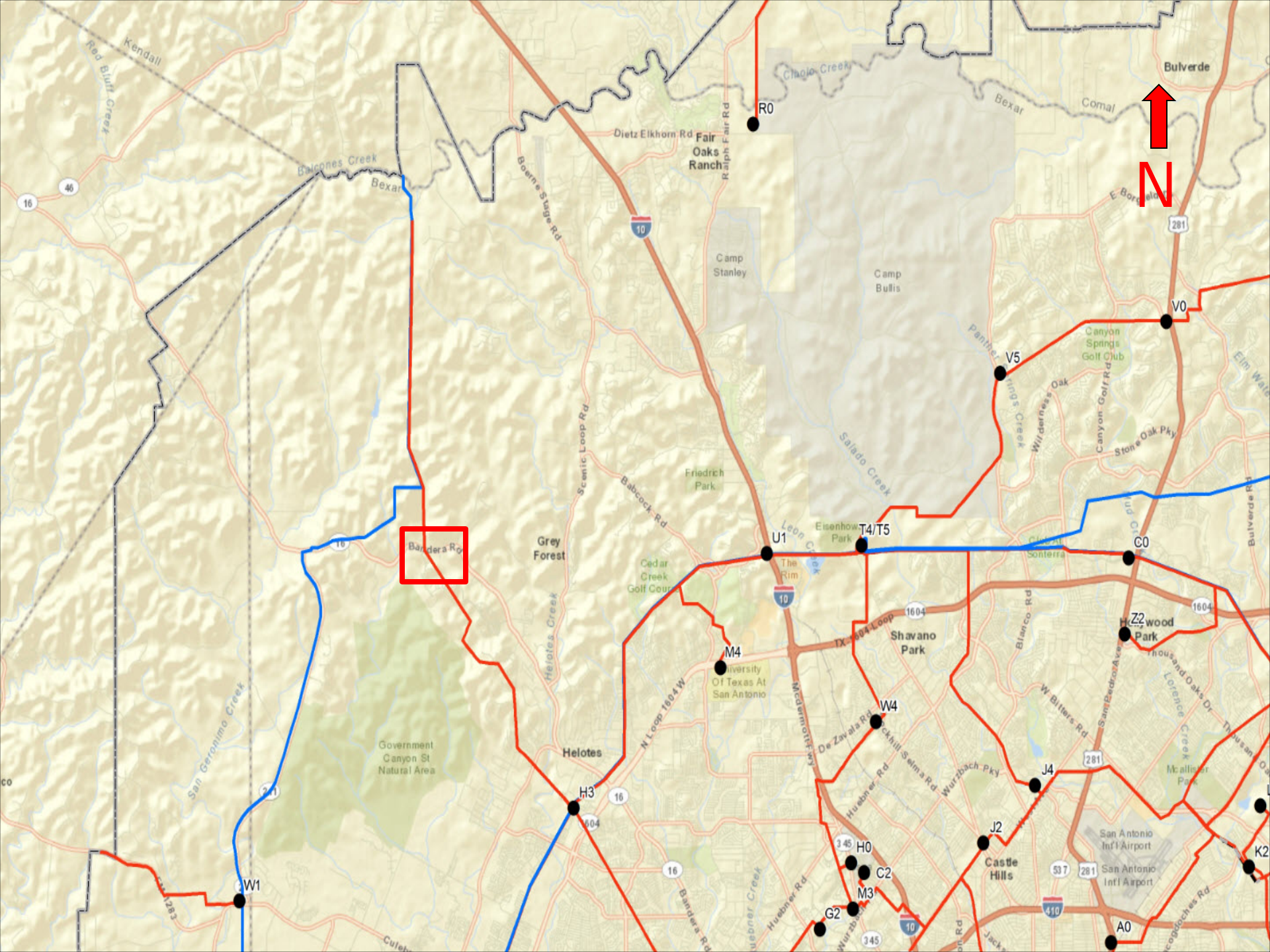
David Luschen

Director of Construction & Maintenance



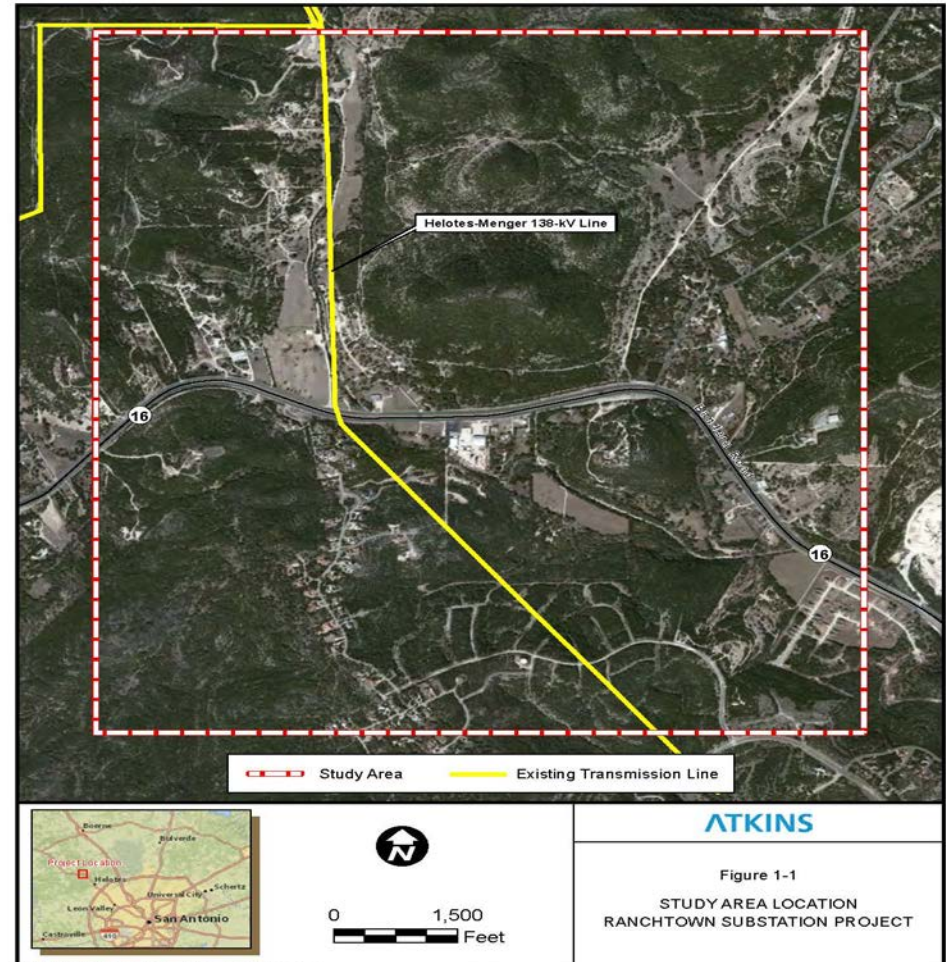
# Agenda

- Scope & Need for the Project
- Routing/Siting Process
- Site Evaluations
- Questions



# Scope of the Project

- Construct a new three unit substation with two 50 MVA transformers and one four-feeder switchgear.
- Construct a short transmission line to connect the new Ranchtown Station to the existing Helotes-Menger transmission line.
- Construct 3 new 35kV distribution circuits from the station

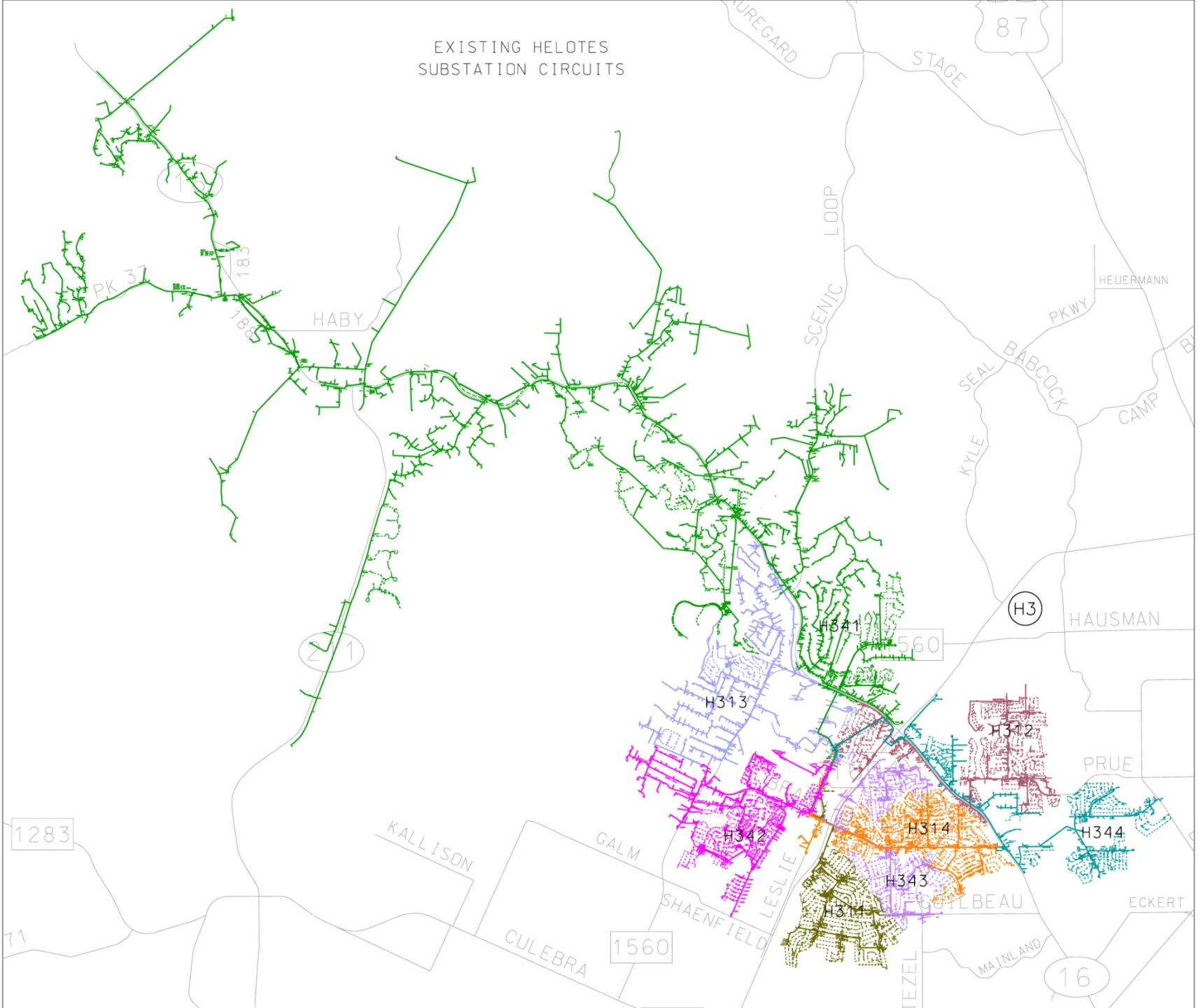




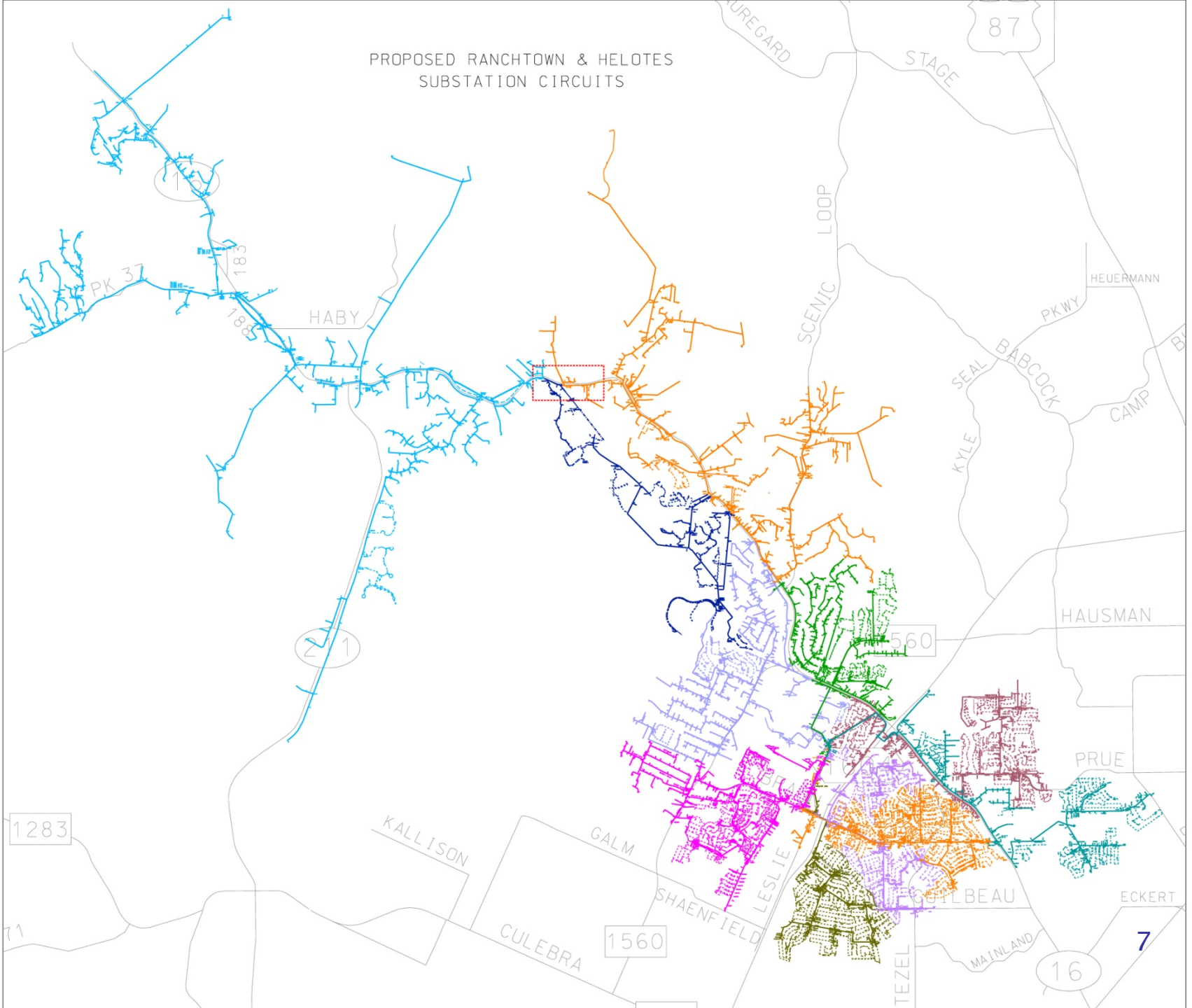
# Need For Project

- The existing circuit has more overhead line miles than any in our system and is more than ten times longer than the typical circuit
- The new substation is needed to improve reliability for this area 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
- If this project is not completed, the power transformers at Helotes substation will be at risk of overloading. Also, some contingency conditions may lead to customer load at risk of lengthy outages due to exceeding emergency capacity limits.

EXISTING HELOTES  
SUBSTATION CIRCUITS

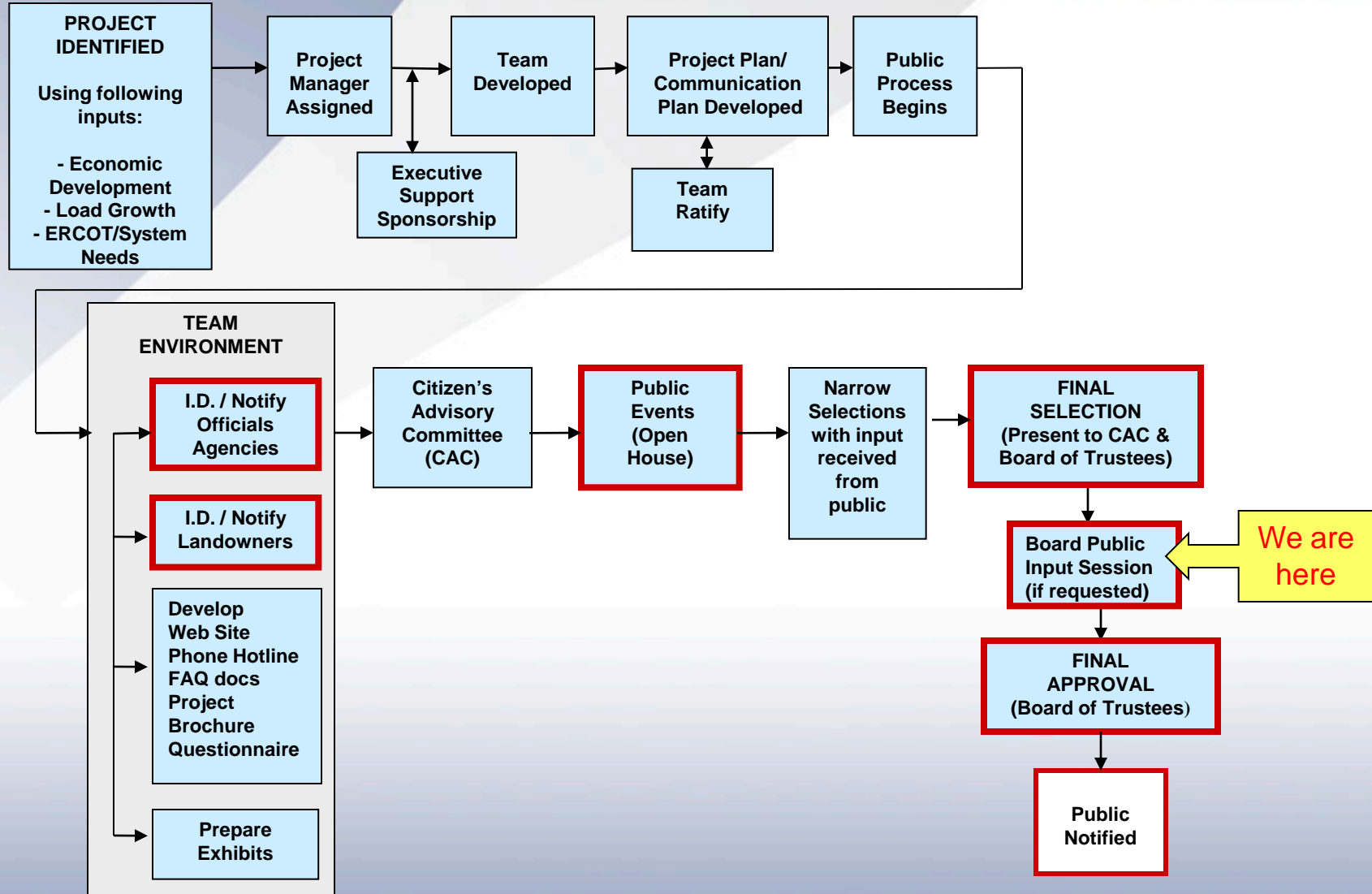


PROPOSED RANCHTOWN & HELOTES  
SUBSTATION CIRCUITS





# Routing & Siting Process Flow





**Figure 2-1**  
**LAND USE AND ENVIRONMENTAL CONSTRAINTS**  
**RANCHTOWN SUBSTATION PROJECT**  
 Van Raub and Helotes Quadrangles  
 Bexar County, Texas



- Study Area
  - Potential Substation Site (All sites approximately 5 acres)
  - Potential Transmission/Dist. Line
  - Existing Transmission Line
  - 50' Contour
  - Parcel Boundary (approximate)
  - Edwards Aquifer Recharge Zone
  - Park/Recreation Area
  - 100 Year Floodplain
  - SARA 1% Future Conditions
  - Critical Habitat Area (*Ciurina mada*, *Rhadine exilis*, *Rhadine internalis*)
  - Karst Zone Boundary
- Zone 1 = Areas known to contain endangered karst invertebrate features.
- Zone 2 = Areas having a high probability of containing suitable habitat for endangered karst invertebrate species.
- Zone 3 = Areas that probably do not contain endangered karst invertebrate species.
- Zone 4 = Areas that require further research but are generally equivalent to Zone 3, although they may include sections that could be classified as Zone 2 or Zone 5 as more information becomes available.



0 250 500 1,000 1,500 Feet

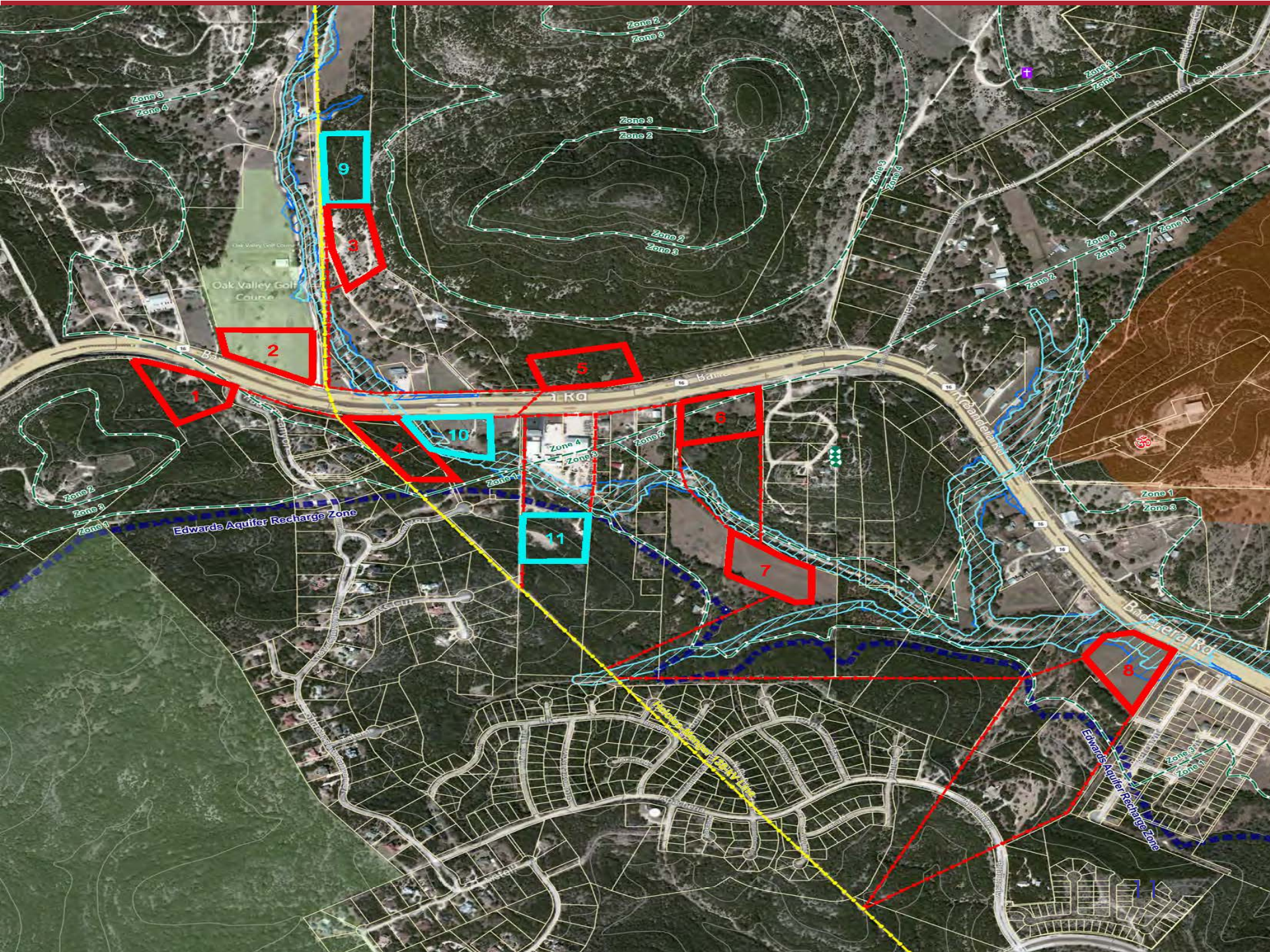
**ATKINS**



# Open House Highlights



- 50 attendees
- 21% of those receiving invitations
- Added 3 new sites



**Figure 2-1**  
**LAND USE AND ENVIRONMENTAL CONSTRAINTS**

**RANCHTOWN SUBSTATION PROJECT**

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 Bexar County, Texas



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- 50' Contour
- Parcel Boundary (approximate)
- Edwards Aquifer Recharge Zone
- Park/Recreation Area
- 100 Year Floodplain
- SARA 1% Future Conditions
- Critical Habitat Area (*Crotalus madus*, *Rhadinae exilis*, *Rhadinae infernalis*)
- Karst Zone Boundary

- Zone 1 = Areas known to contain endangered karst invertebrate species.
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Vicinity Map



0 250 500 1,000 1,500 Feet

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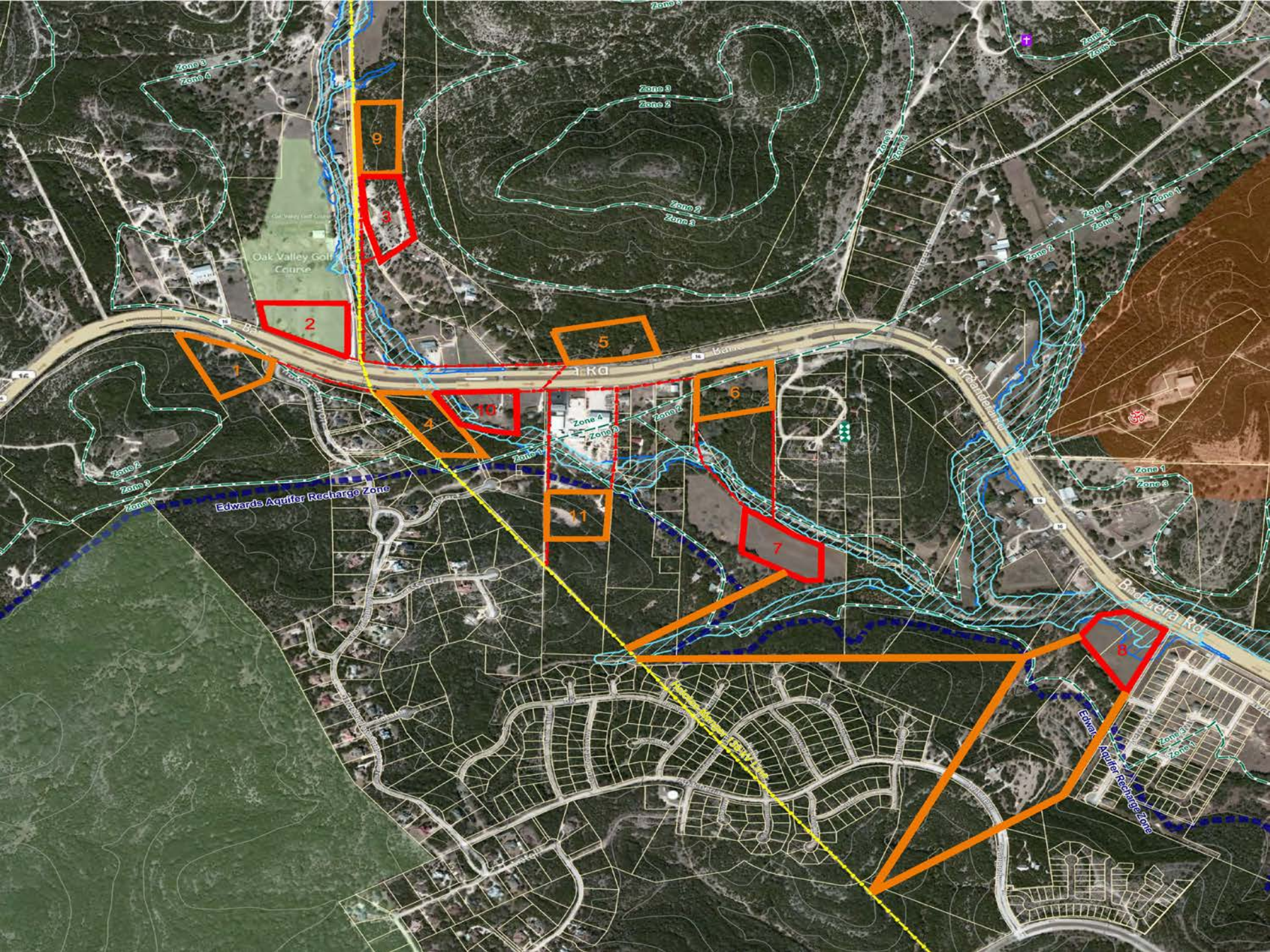
# Evaluation Matrix

Site	1	2	3	4	5	6	7	8	9	10	11
Total Cost	2	11	7	6	3	5	9	4	8	1	10
Transmission Maintenance	1	1	2	1	1	1	2	2	2	1	2
Customer Input	1	1	1	0	1	0	1	0	0	0	0
Environmental Ranking	5	2	1	10	8	6	4	7	9	3	11
Total Score	10	16	11	17	14	12	17	13	19	5	23
Consensus	2	7	3	9	6	4	7	5	10	1	11



# Site Evaluation

Site	1	2	3	4	5	6	7	8	9	10	11
Total Cost	2	11	7	6	3	5	9	4	8	1	10
Transmission Maintenance	1	1	2	1	1	1	2	2	2	1	2
Customer Input	1	1	1	0	1	0	1	0	0	0	0
Environmental Ranking	5	2	1	10	8	6	4	7	9	3	11
Total Score	10	16	11	17	14	12	17	13	19	5	23
Consensus	2	7	3	9	6	4	7	5	10	1	11





# Site Evaluation

Site	2	3	10
Total Cost	11	7	1
Transmission Maintenance	1	2	1
Customer Input	1	1	0
Environmental Ranking	2	1	3
Total Score	16	11	5
Consensus	3	2	1





# Site Evaluation

<b>Site</b>	<b>3</b>	<b>10</b>
<b>Total Cost</b>	<b>7</b>	<b>1</b>
<b>Transmission Maintenance</b>	<b>2</b>	<b>1</b>
<b>Customer Input</b>	<b>1</b>	<b>0</b>
<b>Environmental Ranking</b>	<b>1</b>	<b>3</b>
<b>Total Score</b>	<b>11</b>	<b>5</b>
<b>Consensus</b>	<b>2</b>	<b>1</b>

**Figure 2-1**  
**LAND USE AND ENVIRONMENTAL CONSTRAINTS**

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 Bexar County, Texas



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Vicinity Map

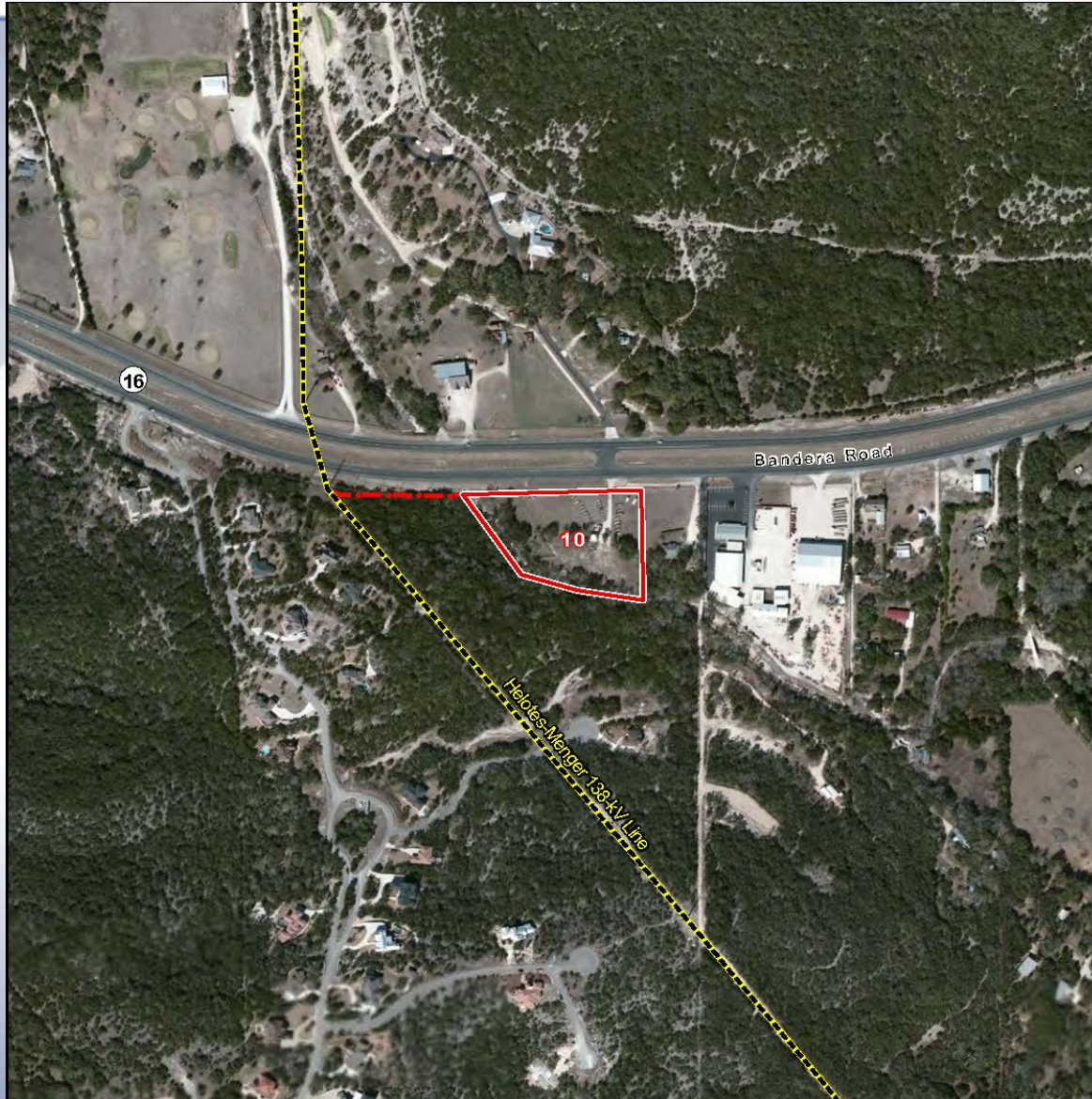


0 250 500 1,000 1,500 Feet

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Microsoft Corporation, DigitalGlobe, Bing Maps Aerial, 2010, 1:6,000; generated by Grant Cox using ArcMap. http://www.bing.com/maps (22 May 2012)  
 Revised 10/4/2014

# Recommended Site





## Next Steps

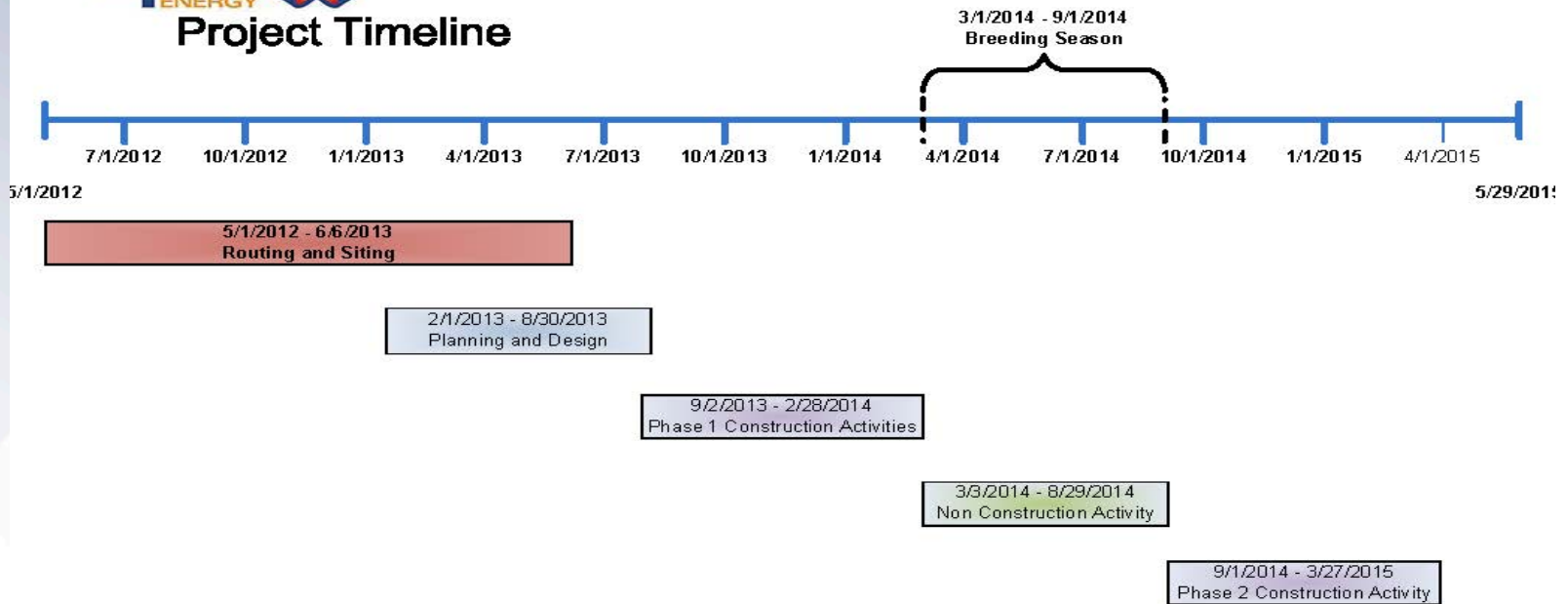
- Board approval December 3, 2012
- Request COSA ordinance December 2012
- Property acquisition complete by June 1, 2013
- Engineering complete July 2013
- Construction time:
  - Phase 1 – Sept 1, 2013 thru March 1, 2014
  - Phase 2 – Sept 1, 2014 thru March 1, 2015
- Substation in service by June 1, 2015



# Project Timeline



## Project Timeline





# Questions