LA PALMA - KINGFISHER

TRANSMISSION IMPROVEMENTS PROJECT

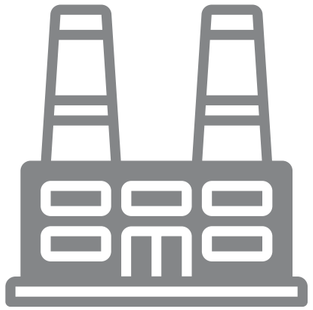
WELCOME TO OUR VIRTUAL OPEN HOUSE

As a result of the COVID-19 pandemic and social distancing recommendations made by the Centers for Disease Control and Prevention (CDC), AEP Texas invites you to attend this virtual open house in order to minimize in-person contact. AEP Texas remains committed to listening to your concerns and answering your questions, but we are also committed to keeping our customers and employees safe and healthy. We welcome your feedback via telephone and email as we strive to make the most informed decisions possible.

HOW THE SYSTEM WORKS

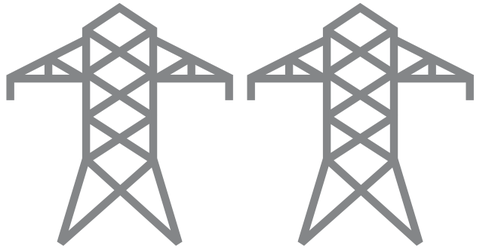
HIGH VOLTAGE

LOCAL TRANSMISSION >>



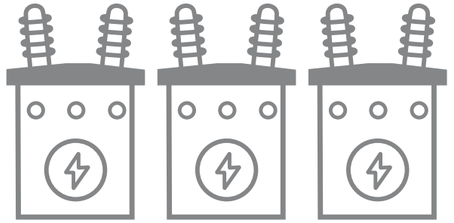
1) GENERATION STATIONS

AEP Texas produces electricity at coal, natural gas, nuclear, wind and hydro-electric power stations and then transports it long distances over transmission lines.



2) EHV TRANSMISSION

Extra High Voltage (EHV) electric transmission lines are generally 765 kilovolt (kV), 500 kV, and 345 kV on AEP Texas' system.



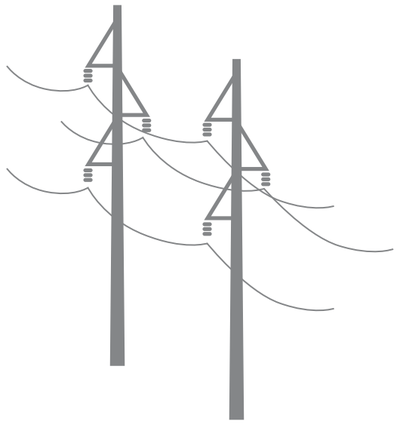
3) SUBSTATIONS

Substations direct the flow of electricity and either decrease or increase voltage levels for transport.

HOW THE SYSTEM WORKS

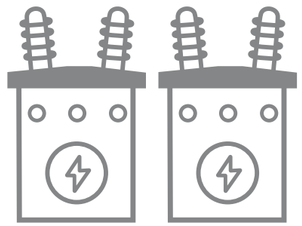
LOCAL TRANSMISSION

DISTRIBUTION >>



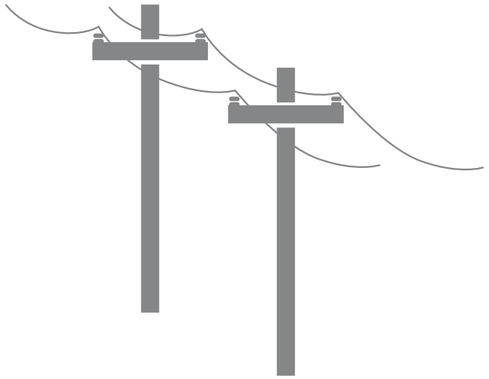
4) LOCAL TRANSMISSION

AEP Texas typically uses 69 kV and 138 kV transmission lines to move power shorter distances - for example, to different parts of a city or county.



5) SUBSTATION

Substations transform 69 kV and 138 kV electricity into lower distribution level voltages such as 34.5 kV, 12 kV, or 7.2 kV.

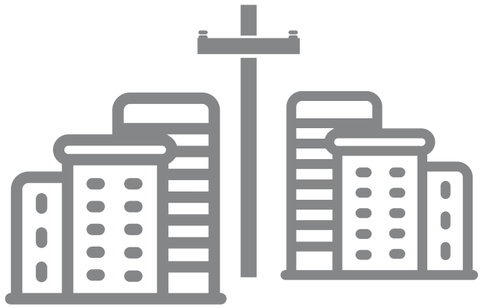


6) PRIMARY DISTRIBUTION

These main lines (also called circuits) connect substations to large parts of the community.

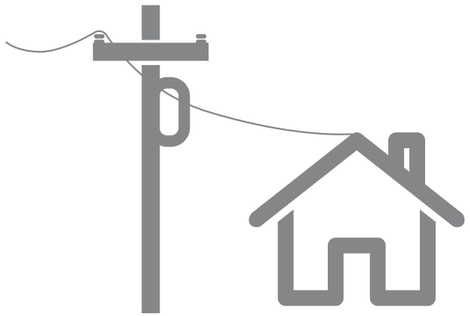
HOW THE SYSTEM WORKS

DISTRIBUTION



7) LATERAL DISTRIBUTION

These smaller capacity lines deliver electricity to neighborhoods and other smaller groups of customers.



8) INDIVIDUAL SERVICE

Smaller transformers step down voltage to levels customers can use 120/240 volts is typical for an individual residence.

TO USE AN ANALOGY, ELECTRIC TRANSMISSION IS SIMILAR TO OUR NATIONAL ROAD SYSTEM. THREE KINDS OF POWER LINES EXIST BETWEEN POWER PLANTS AND HOMES AND BUSINESSES:

- Extra-high Voltage (EHV) lines are like electrical interstate highways.
- High-voltage local transmission lines are like four-lane roads.
- Distribution lines are like two-lane roads that eventually connect to your driveway.

PROJECT NEED & BENEFITS

WHY IS THE PROJECT IMPORTANT TO OUR COMMUNITY?

IMPROVES REGIONAL RELIABILITY

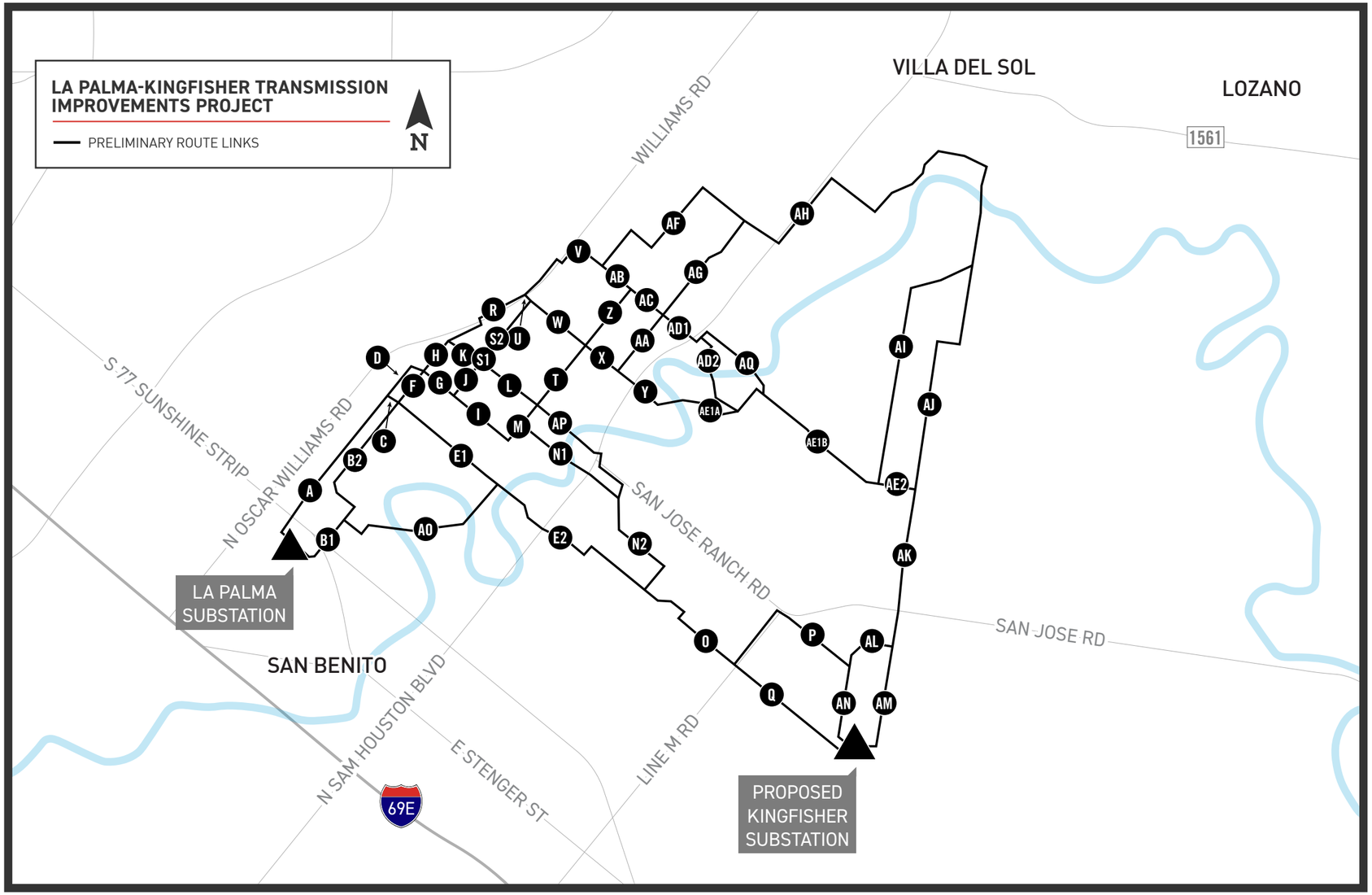
The PUC, a state agency created by the Texas legislature to provide statewide regulation of rates and services of certain utilities, ordered this project to support the electric transmission service needs in the Lower Rio Grande Valley.

These improvements ensure safe reliable power to customers in far south Texas.

IMPROVES DEPENDABILITY

The project establishes a second power line to ensure customers continue to receive power if the other area transmission line experiences an extended outage.

PROJECT MAP


LA PALMA-KINGFISHER TRANSMISSION IMPROVEMENTS PROJECT
PRELIMINARY ROUTE LINKS
N
VILLA DEL SOL
LOZANO
1561
WILLIAMS RD
S 77 SUNSHINE STRIP
N OSCAR WILLIAMS RD
SAN JOSE RANCH RD
SAN JOSE RD
LINE M RD
E STENGER ST
N SAM HOUSTON BLVD
69E
SAN BENITO
LA PALMA SUBSTATION
PROPOSED KINGFISHER SUBSTATION
A
B1
B2
C
D
E1
E2
F
G
H
I
J
K
L
M
N1
N2
AO
AP
S1
S2
R
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V
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AB
AC
AD1
AD2
AE1A
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AF
AG
AH
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AJ
AK
AL
AM
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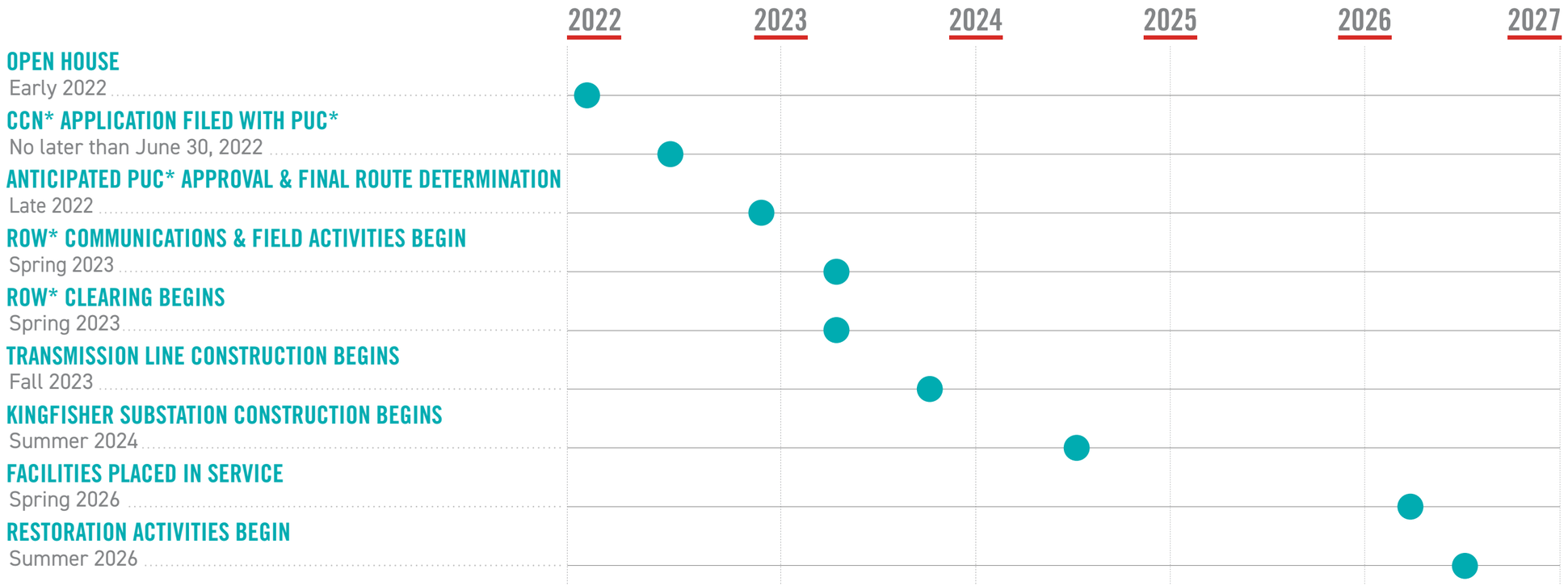
O
P
Q

PROJECT SCHEDULE



*CCN: Certificate of Convenience and Necessity; PUC: Public Utlity Commission of Texas; ROW: Right-of-Way

**Timeline subject to change.

PROPOSED STRUCTURES

AEP Texas and Sharyland plan to use steel monopoles.

Typical Height: 155 feet*
Typical Distance Between Structures: 700-800 feet*
Typical Right-of-Way Width: 150 feet*

*Exact structure height, span and right-of-way width requirements may vary

ENVIRONMENTAL AND LAND USE CRITERIA

FOR TRANSMISSION LINE EVALUATION

LAND USE

Length of Alternative Route
Number of habitable structures[1] within 500 feet of the right-of-way (ROW) centerline
Length of ROW using existing transmission line ROW
Length of ROW parallel to existing transmission line ROW
Length of ROW parallel to other existing compatible ROW (roads, highways, etc.)
Length of ROW parallel to approximate property lines (not following existing ROW)[2]
Length of ROW across parks/recreational areas[3]
Number of additional parks/recreational areas[3] within 1,000 feet of the ROW centerline
Length of ROW across cropland
Length of ROW across pasture/rangeland
Length of ROW across cropland or pastureland with mobile irrigation systems
Length of ROW across gravel pits, mines, or quarries
Length of ROW parallel to existing pipeline ROW, within 500 ft of existing centerlines
Number of pipeline crossings
Number of transmission line crossings
Number of U.S and state highway crossings
Number of FM/RM road crossings
Number of FAA registered airfields within 20,000 ft of ROW centerline (with runway <3,200 ft)
Number of FAA registered airfields within 10,000 ft of ROW centerline (with runway <3,200 ft)
Number of private airstrips within 10,000 feet of the ROW centerline
Number of heliports within 5,000 feet of the ROW centerline
Number of commercial AM radio transmitters within 10,000 feet of ROW centerline
Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline

AESTHETICS

Estimated length of ROW within foreground visual zone[4] of U.S. and state highways
Estimated length of ROW within foreground visual zone[4] of FM/RM roads
Estimated length of ROW within foreground visual zone[4] of park/recreational areas[3]

ENVIRONMENTAL AND LAND USE CRITERIA

FOR TRANSMISSION LINE EVALUATION

ECOLOGY

Length of ROW through upland woodlands/brushlands
Length of ROW through bottomland/riparian woodlands
Length of ROW across potential wetlands[5]
Length of ROW across known habitat of endangered or threatened species
Number of stream crossings
Length of ROW parallel to (within 100 ft) streams
Length of ROW across open water (tanks, ponds, lakes, etc.)
Length of ROW across100-year floodplains

CULTURAL RESOURCES

Number of recorded cultural sites crossed by ROW
Number of additional recorded cultural sites within 1,000 feet of ROW centerline
Number of National Register of Historic Places (NRHP)-listed or determined-eligible sites crossed by ROW
Number of additional NRHP-listed or determined-eligible sites within 1,000 feet of ROW centerline
Length of ROW crossing areas of high archeological/historical site potential
Number of cemetaries within 1,000 ft or ROW centerline

[1] Single-family and multi-family dwellings and related structures, mobile homes, apartments buildings, commecial , commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis.

[2] Property lines created by existing road, highways, or railroad ROW are not “double-counted” in the “length of route parallel to property lines” criterion.

[3] Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church.

[4] One-half mile, unobstructed.

[5] As mapped by the U.S. Fish and Wildlife's National Wetland Inventory

[6] One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of parks/recreational areas may overlap with the total length of ROW within the foreground visual zone of interstates, US and state highway criteria and/or with the total length of ROW within the foreground visual zone of RM roads criteria

AGENCIES CONTACTED

FEDERAL

- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers (USACE)
- U.S. Environmental Protection Agency (EPA)
- Federal Aviation Administration (FAA)
- National Park Service (NPS)
- Department of Defense Siting Clearinghouse (DOD)
- U.S. International Boundary and Water Commission (USIBWC)
- U.S. Customs and Border Protection (CBP)

STATE

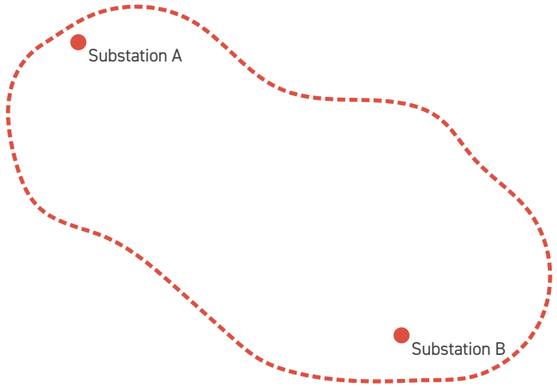
- Railroad Commission of Texas
- Texas Comission of Environmental Quality
- Texas Department of Transportation
    - Aviation Division
    - District Engineer
    - Environmental Affairs Division
    - Planning and Programming
- Texas General Land Office (GLO)
- Texas Historical Commision (THC)
- Texas Parks and Wildlife Department (TPWD)
- Texas Water Development Board (TWDB)

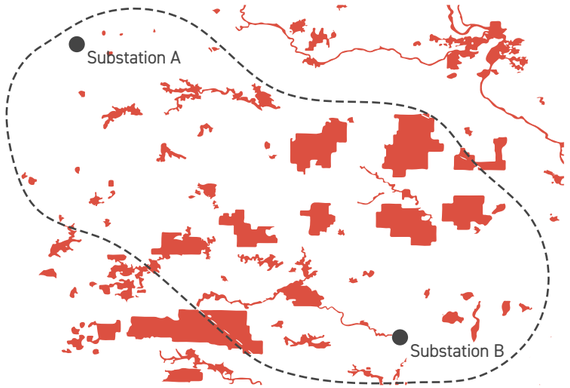
LOCAL

- Cameron County Officials
- City of San Benito
- Area School Districts
- Coastal Bend Council of Governments

ROUTING PROCESS

AEP Texas implements a comprehensive siting process that takes into account land use, the environment, public input, and engineering guidelines to develop a transmission line route. This process is inherently iterative with route segments changing over time as more information is gathered. Below is a discussion of the terminology used at each stage in the process.





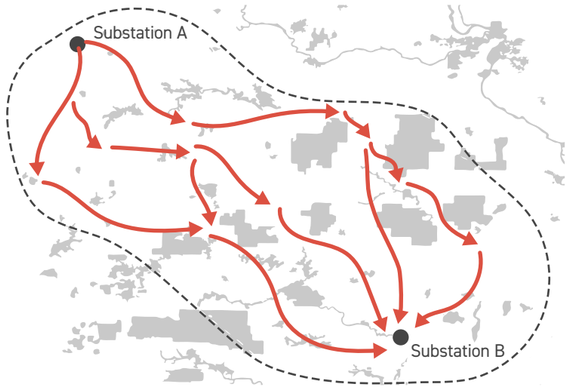
1) STUDY AREA

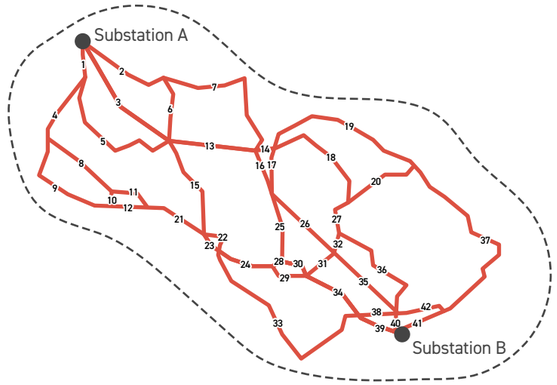
AEP Texas develops a Study Area for the Project that incorporates the two endpoints and the area in between.

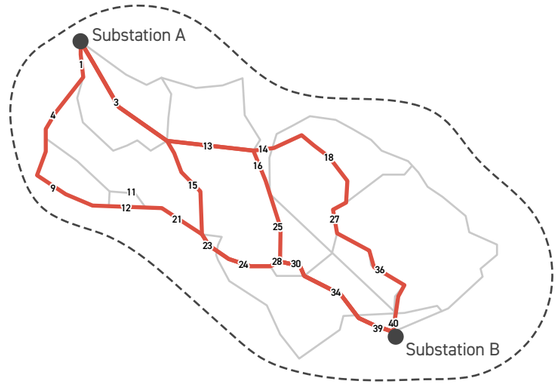
2) DATA GATHERING

Data is gathered for the defined study area including environmental, land use, historic and cultural resources, existing infrastructure and sensitive areas.

ROUTING PROCESS







3) CONCEPTUAL ROUTES

The Routing Team uses this information to develop Conceptual Routes adhering to a series of general routing and technical guidelines.

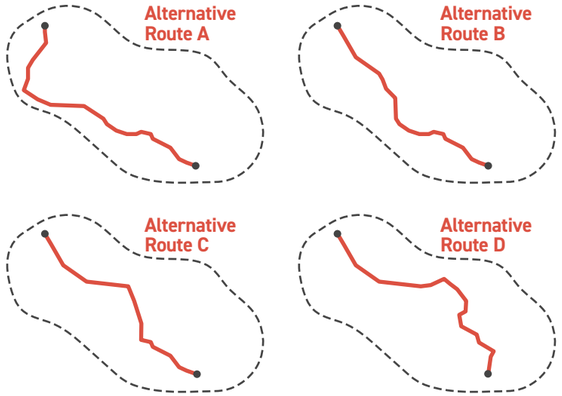
4) STUDY SEGMENTS

Where two or more Potential Study Segments intersect, a node is created, and between two nodes, a link is formed. Together, the network formed by these links is referred to as Potential Study Segments.

5) REFINED STUDY SEGMENTS

As more information is gathered, the Study Segments are refined. Some Study Segments are eliminated or modified, leaving the Refined Study Segments for further consideration.

ROUTING PROCESS



6) ALTERNATIVE ROUTES

After public input is incorporated, the Refined Study Segments are further evaluated and a selection of the most suitable segments is assembled into Alternative Routes.

PROJECT REVIEW PROCESS

A transmission addition is determined necessary for service reliability or connection of new load/generation.

TRANSMISSION ROUTING PROCESS:

ENVIRONMENTAL ASSESSMENT AND ROUTING STUDY

- Define study area
- Identify routing link constraints

ESTABLISH PRELIMINARY ROUTING LINKS

- Invite public involvement (tonight's Open House)
- Finalize links, develop routes

SELECT ALTERNATIVE ROUTES FOR FILING

PROJECT REVIEW PROCESS

PUBLIC UTILITY COMMISSION OF TEXAS (PUC) APPROVAL PROCESS:

AEP TEXAS FILES APPLICATION AT PUC

- Direct mail notice of application to landowners, local public officials, and electric utilities
- Publication of notice in local newspaper
- 45-Days intervention period

ESTABLISH PRELIMINARY ROUTING LINKS

- Invite public involvement (tonight's Open House)
- Finalize links, develop routes

SELECT ALTERNATIVE ROUTES FOR FILING

- Landowner compensation
- Terms and conditions of easement
- Width of the right-of-way

RIGHT-OF-WAY

AEP TEXAS HAS TWO KEY PHILOSOPHIES THAT PERTAIN TO POWER LINE RIGHTS-OF-WAY:

1 Routes should cause the least possible disturbance to people and the environment.

2 Property owners should be fairly compensated for any land rights that must be acquired.

RIGHT-OF-WAY

AEP Texas studies the land and, wherever possible, proposes routes that reduce impacts on property owners. AEP Texas reaches out to landowners in the following ways:

TO GAIN RIGHT-OF-ENTRY TO BEGIN:

- Environmental assessments
- Appraisal work
- Land surveying, soil boring and below grade study
- Cultural and historic resource reviews

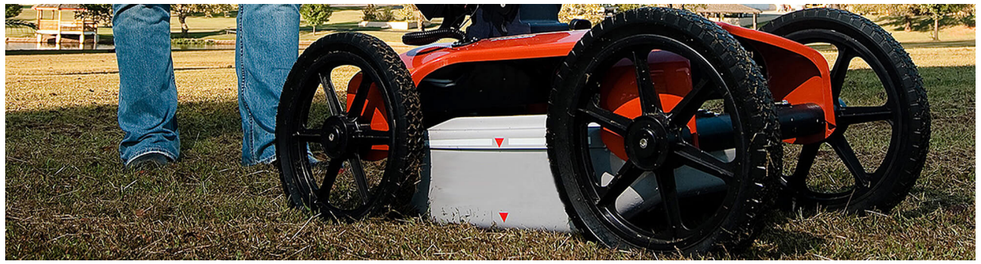
TO SECURE RIGHT-OF-WAY AND COMMUNICATE:

- Landowner compensation
- Terms and conditions of easement
- Width of the right-of-way

TO OUTLINE AEP TEXAS' CONSTRUCTION PROCESS WITH A SPECIFIC FOCUS ON:

- Property restoration
- Damage mitigation as appropriate

FIELD ACTIVITIES



GROUND PENETRATING RADAR

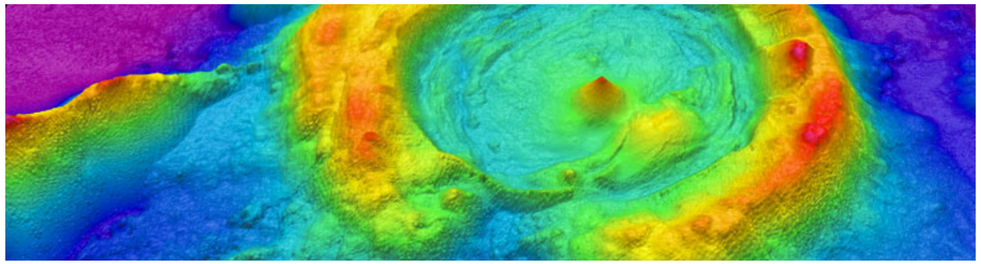
Ground Penetrating Radar (GPR) helps identify the location of underground utilities. A device that looks similar to a lawnmower, and is nondestructive to the soil, uses radio frequencies to detect objects below the ground's surface. Maps and images are created from the data.

HELICOPTER

Challenging terrain or other restrictions/obstructions can make accessing certain parts of a project area difficult. In these locations, crews use helicopters to install structures, string conductors, per form line work and maintain electric facilities. Company representatives work with local media out lets to communicate these activities to the public.

HYDRO EXCAVATION

Crews use hydro excavation (hydrovac) in areas where many underground utilities are located near each other. This process involves using pressurized water to break down soil to expose underground utilities. Afterward, crews backfill the area. The process helps prevent damage to underground infrastructure while gathering important information.



LIDAR

LiDAR (Light Detection and Ranging) uses laser pulses to measure the distance of an object to the source. The data points result in digital 3D maps for accurate design and engineering. LiDAR surveying crews use mobile (car or aerial vehicle) or static (tripod) equipment.

FIELD ACTIVITIES

SOIL BORINGS

Field crews use a drill to bring up soil samples and then backfill the holes. Testing the core samples helps determine soil conditions in the area. Soil conditions and types can affect structure location and foundation design.

CULTURAL RESOURCE SURVEY

Field crews walk the area and conduct multiple excavation tests to identify historical and archaeological artifacts. Landowners also provide information about their property to survey crews.

ENVIRONMENTAL SURVEY

Surveyors collect information about the habitats and physical attributes of the project area. They also look for ecological concerns like wetlands, flood plains and forests. This process can help protect endangered species, such as the Indiana Bat and American Burying Beetle.

UNMANNED AERIAL VEHICLES (DRONES)

Unmanned aerial vehicles (UAVs), or drones, perform aerial inspections and safely gather data and detailed images of electric facilities. Company employees and vendors comply with all commercial Federal Aviation Administration (FAA) guidelines. Company representatives work with local media outlets to communicate these activities to the public.

FIELD ACTIVITIES

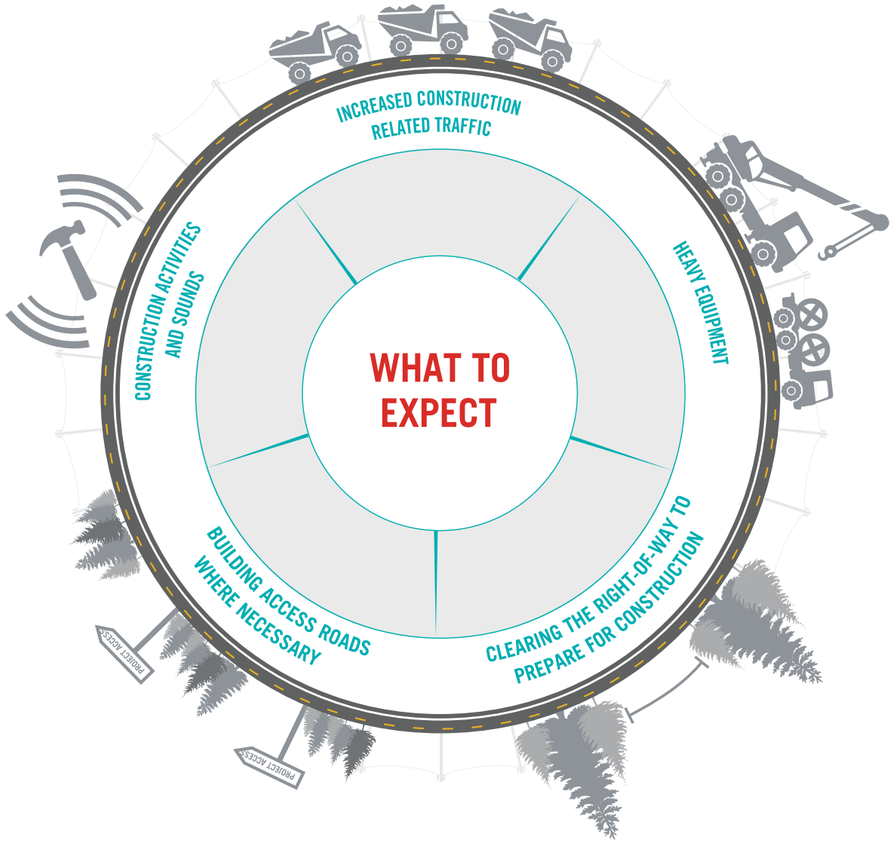
STAKING

- Field crews use staking to mark the project area, identify utility equipment and pinpoint future structure locations. This process essentially transfers engineering and construction plans to the field.
- Right-of-way crews use staking to identify parcel boundaries, easement boundaries and other utility locations within the company's rights-of-way.
- Environmental crews use staking to identify wetlands or other environmentally sensitive areas.

FIELD SURVEY

- Field survey crews help determine an appropriate route for a new transmission line by identifying constraints within the project area.
- Engineers conduct extensive studies of the terrain and soil to determine what types of structures and foundations are most suitable. They also gather information to create digital 3D maps of the project area to help engineer and design the project.

CONSTRUCTION PROCESS



AEP Texas understands the work related to transmission grid improvements can sometimes be an inconvenience. That's why we make every effort during the construction process to be respectful of the environment and our neighbors, while safely working to ensure reliable electric service.

AEP Texas plans to work with individual property owners throughout the construction process. Team members will provide details of upcoming work and listen to customer feedback on how we can lessen the impact of our work. In the event damages should occur during the construction process, we will work to restore property as close to its original state as possible.

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TRANSMISSION IMPROVEMENTS PROJECT

THANK YOU!

Thank you for visiting the project virtual open house. For more information and project updates please visit the project website, or contact us with any additional questions.

REPLAY OPEN HOUSE

DOWNLOAD SLIDE DECK

CONTACT US

VISIT PROJECT WEBSITE