



# Welcome

Cypress to Legend 500 kV Transmission Line Project



# Purpose and need

## Cypress to Legend 500 kV Transmission Line Project

### What is the Cypress to Legend 500 kV Transmission Line Project?

Entergy Texas proposes to add new electric transmission infrastructure in Hardin and Jefferson Counties. Entergy Texas is planning to construct a new single-circuit 500 kilovolt (kV) electric transmission line approximately 35 miles in length (depending on the final route) that would connect the existing Cypress Substation to the new Legend 500 kV Substation (the “Project”). The existing Cypress Substation is located approximately 2.8 miles southeast of the intersection of Texas State Highway (SH) 327 and United States Highway 287. The new Legend 500 kV Substation will be located approximately 1.5 miles southwest of the intersection of SH 73 and SH 82. The study area and approximate locations of the proposed end points and existing transmission line facilities are shown on the map on the website <https://www.energy-texas.com/transmission/cypress-legend>.

The proposed single-circuit transmission line would be erected utilizing steel structures within a right-of-way that would be up to 225 feet wide.

### What is the purpose and need of the Cypress to Legend 500 kV Transmission Line Project?

The primary purpose of the Project is to provide electric service to support the load growth in Hardin, Orange, and Jefferson Counties in Southeast Texas. The new line will provide greater reliability to the Southeast Texas region by adding a new transmission source into the growing area.

### The proposed project will require the following scopes of work:

**1) Design and build the new Legend 500 kV Substation:** The new Legend 500 kV Substation will be a 500/230 kV substation that will facilitate the installation of the proposed new 500 kV line extension.

**2) Design and build the new Cypress to Legend 500 kV Transmission Line:** The connecting transmission line will be a single-circuit 500 kV transmission line, primarily using steel structures, that will extend from ETI’s existing Cypress Substation and connect into the new Legend 500kV Substation.

# Certification process

## Cypress to Legend 500 kV Transmission Line Project

### Project development

- Identify project study area.
- Gather environmental and cultural data.
- Contact federal, state and local agencies.
- Identify routing constraints.
- Develop preliminary alternative route segments.
- Identify current landowners within 500 ft of alternative routes.
- Solicit public input via open house meetings. **(We Are Here)**
- Evaluate preliminary alternative routes and identify primary alternative routes.

### Certificate of convenience and necessity (CCN) application process

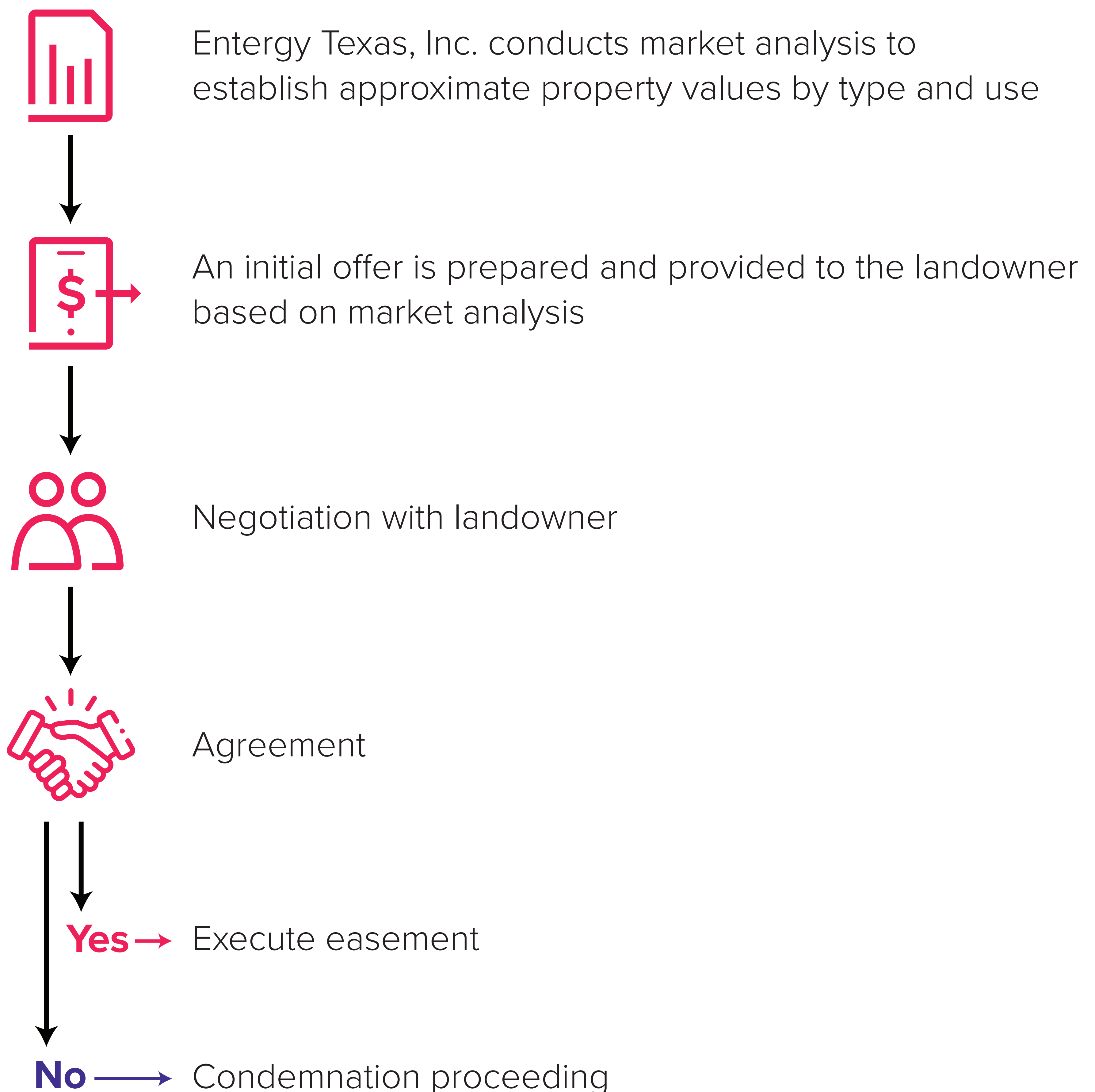
- Submit CCN Application to the Public Utility Commission of Texas (PUCT), including an adequate number of alternative routes.
- Send notices to landowners within 500 ft. of an alternative route, municipalities, counties, electric utilities, Department of Defense, and pipeline owners in the area.
- All routes and route segments included in this notice are available for selection and approval by the PUCT. If approved, only one route (consisting of multiple route segments) from the existing Cypress Substation to the new Legend 500 kV Substation will be selected by the PUCT.
- Interested parties may file comments or a motion to intervene and participate in the PUCT proceeding (Intervention Period – 30 days)
  - If application is uncontested: application approved administratively in 80 days.
  - If application is contested: application processed within 180 days and could include a hearing.

### PUCT decision and next steps

- Approves or denies application.
- If approved, selects location of final approved route.
- Approval provides Entergy Texas, Inc. with the authorization to build the new transmission line along the route approved by the PUCT.
- Notices will be sent to landowners who received notice of Entergy Texas, Inc.'s application advising them of the decision and next steps.

# Right-of-way (ROW) acquisition process

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# Right-of-way (ROW) clearing

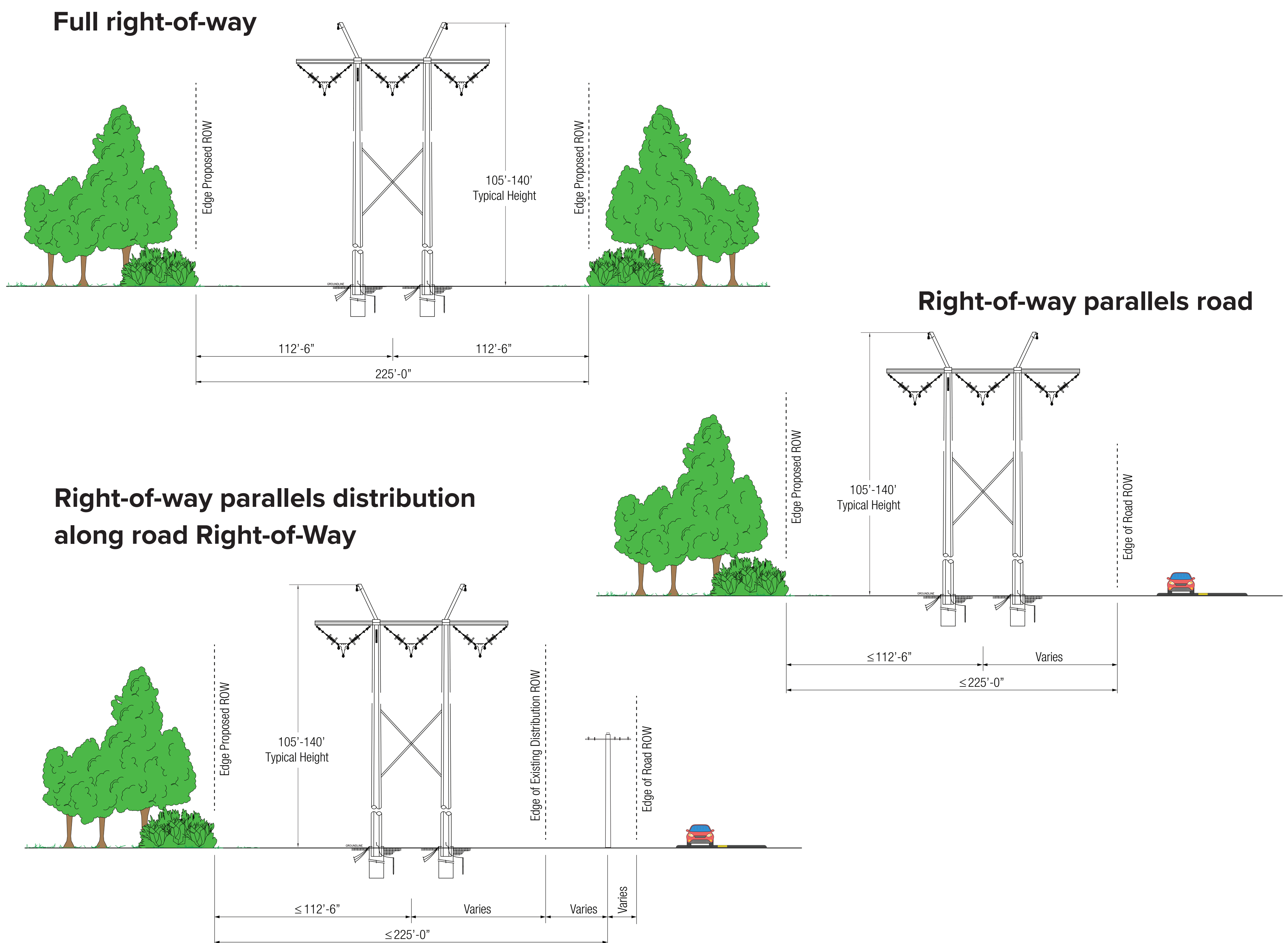
## Cypress to Legend 500 kV Transmission Line Project

### About right-of-way clearing

- Trees and branches near or touching power lines can cause service interruptions.
- Electricity can arc or “flashover” from wires to nearby trees before actual contact is made, causing electric current to flow through the trees into the ground.
- To ensure everyone’s safety, Texas, like most states, has adopted the National Electrical Safety Code.
- The code establishes mandatory clearances to be maintained around power lines.

### Typical cross sections

Dimensions may vary depending on location and spatial constraints.



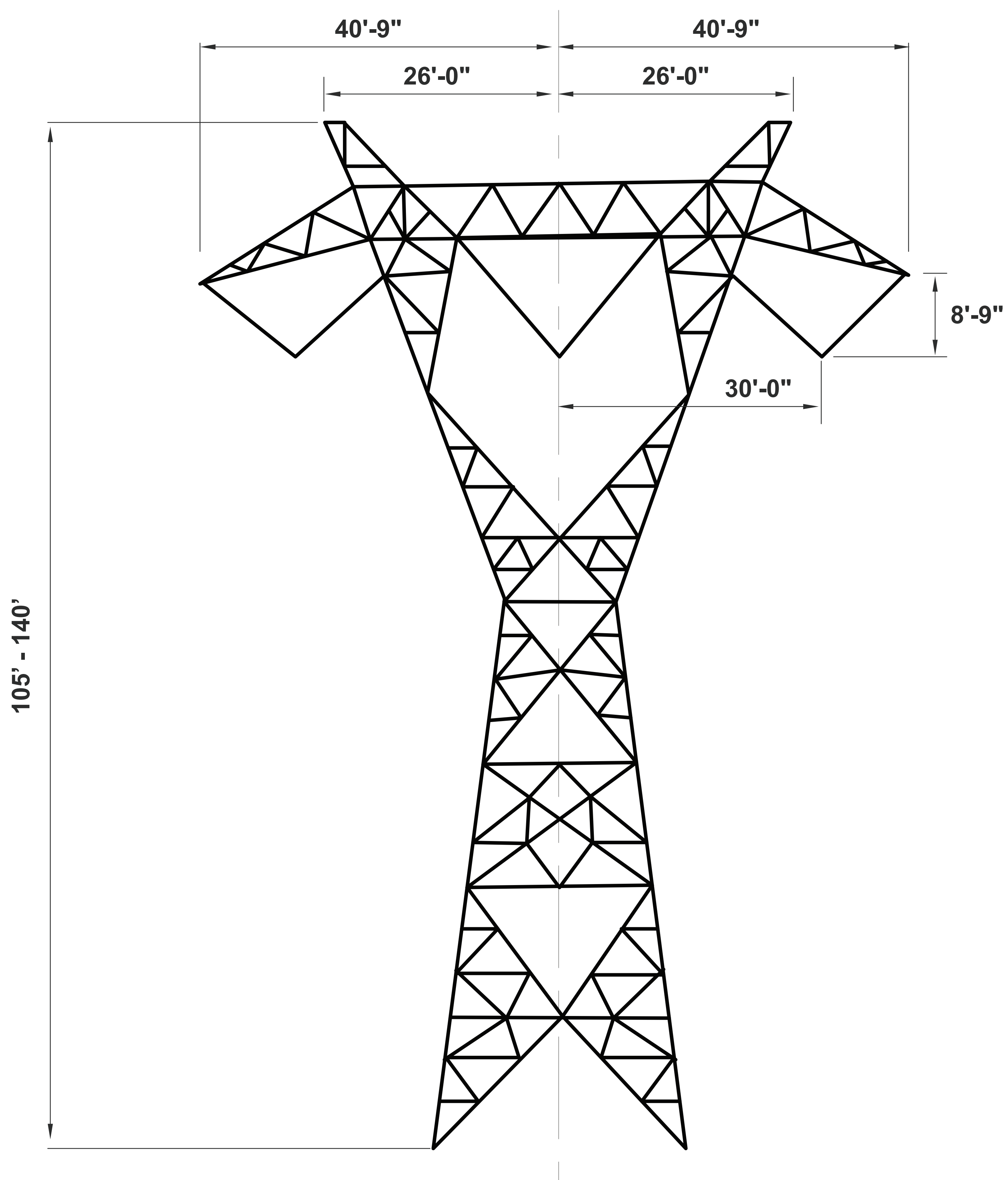
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# Typical structure

Cypress to Legend 500 kV Transmission Line Project

## Typical 500 kV Lattice Tangent Structure



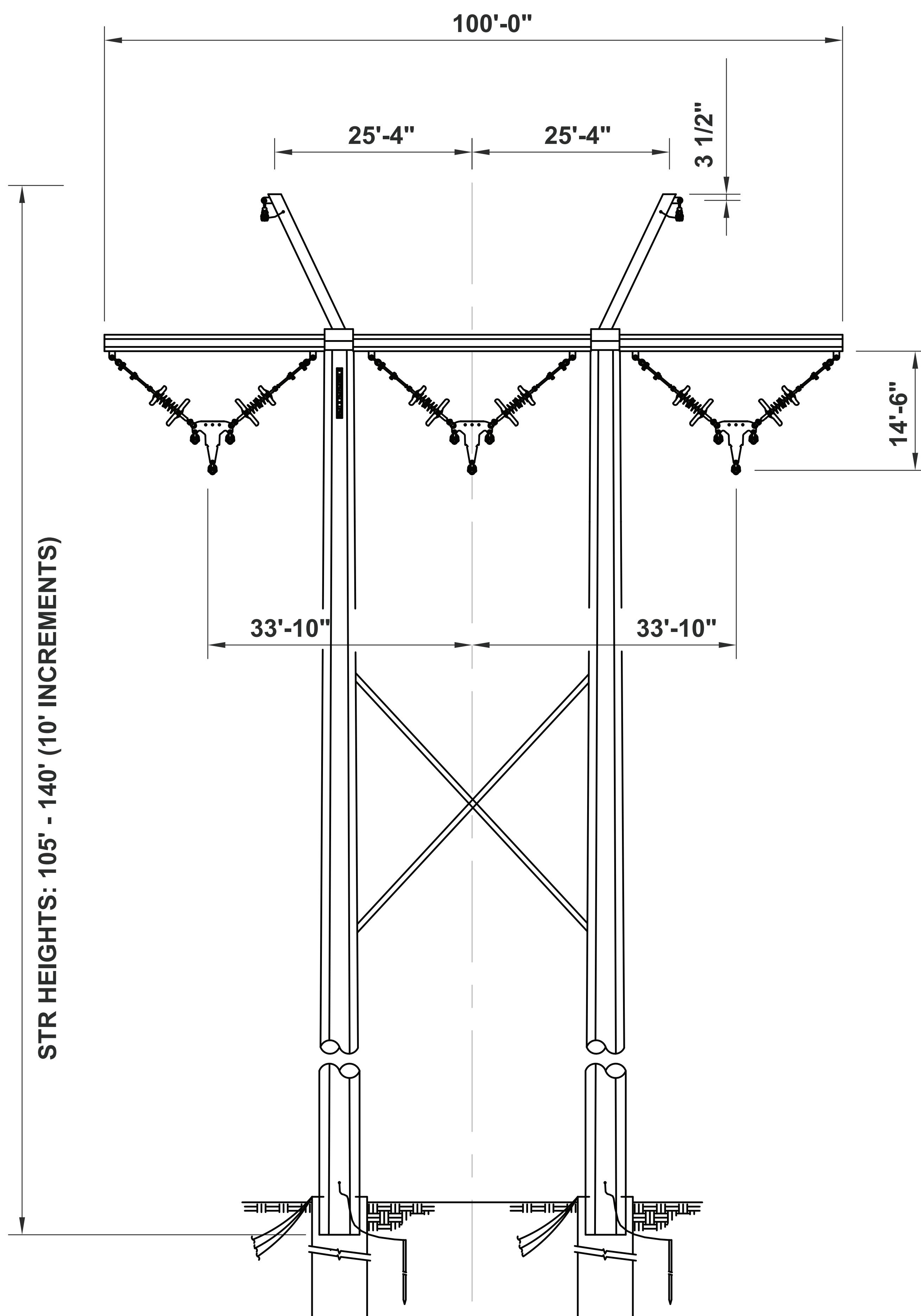
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# Typical structure

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## Typical 500 kV H-Frame V-String Structure



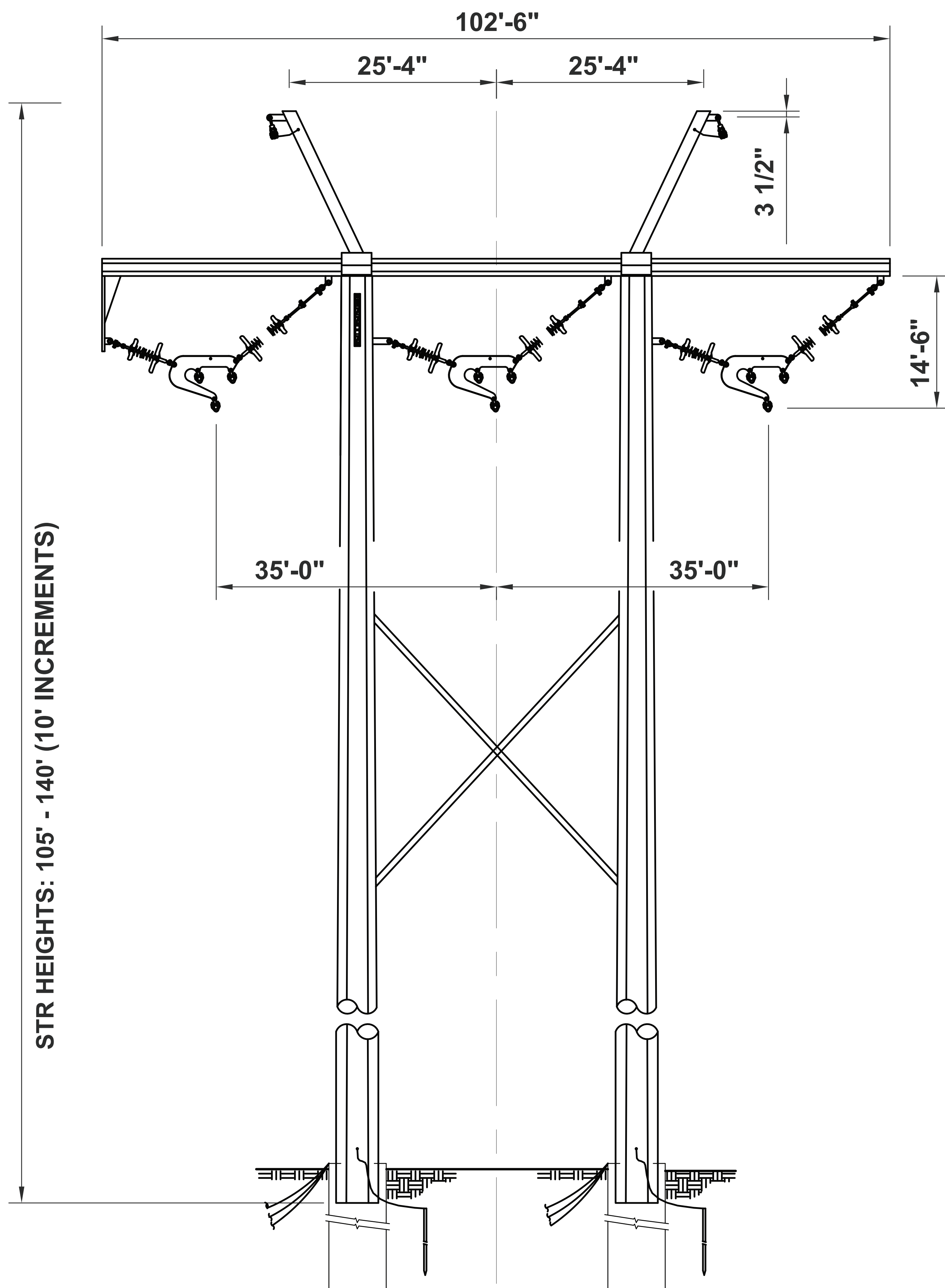
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# Typical structure

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## Typical 500 kV H-Frame Running Angle Structure



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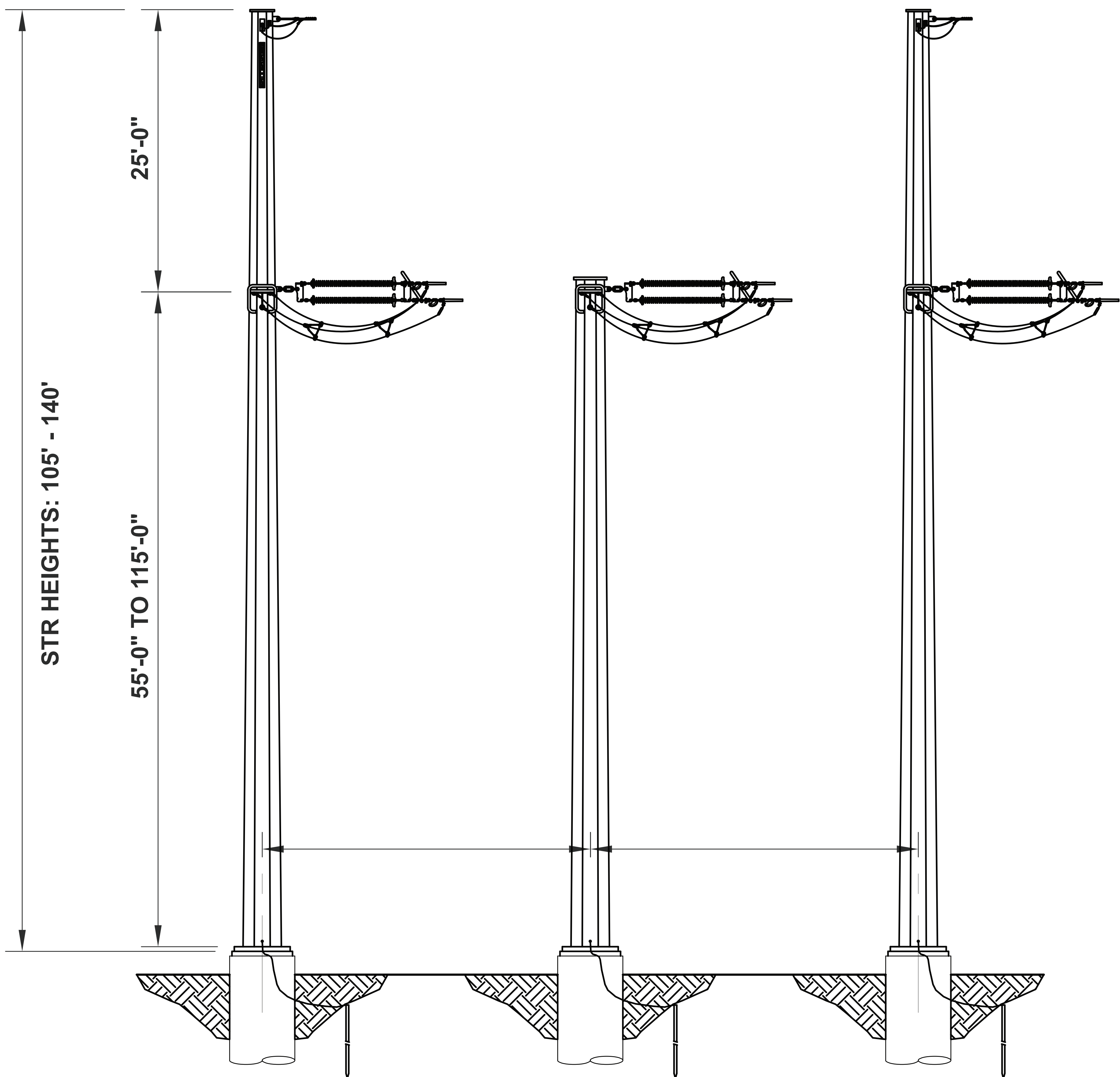




# Typical structure

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Typical 500 kV  
3-Pole Structure



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# Typical substation

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# Agencies contacted

## Cypress to Legend 500 kV Transmission Line Project

### Federal

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Federal Aviation Administration  
Federal Emergency Management Agency  
National Parks Service  
Natural Resource Conservation Service  
U.S. Army Corps of Engineers  
Military Aviation and Installation Assurance Siting Clearinghouse  
U.S. Environmental Protection Agency  
Big Thicket National Preserve

### State

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Railroad Commission of Texas  
Texas Commission on Environmental Quality  
Texas Department of Transportation

- Aviation Division
- Environmental Affairs Division
- Transportation Planning & Programming
- Beaumont District Engineer

Texas General Land Office  
Texas Parks and Wildlife Department  
Texas Water Development Board  
Texas Historical Commission  
Lower Neches Valley Authority  
J.D. Murphree Wildlife Management Area

### Local

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Hardin and Jefferson County Judges  
Hardin and Jefferson County Commissioners  
Jefferson County Engineering Department  
City of Lumberton Officials  
City of Bevil Oaks Officials  
City of China Officials  
City of Beaumont Officials  
City of Nederland Officials  
City of Port Arthur Officials  
Jefferson County Drainage Districts No. 6 & No. 7  
Hardin and Jefferson County Historical Commission Chair  
Superintendent of Hardin-Jefferson ISD  
Lumberton ISD  
Kountze ISD  
Beaumont ISD  
Port Arthur ISD  
Hamshire-Fannett ISD  
Sabine Pass ISD

### Non-Governmental Organizations

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Texas Agricultural Land Trust  
Texas Land Conservancy  
Texas Land Trust Council  
The Nature Conservancy, Texas  
South East Texas Regional Planning Commission

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# Evaluation criteria

## Cypress to Legend 500 kV Transmission Line Project

### Land Use

- 01 Length of alternative route
- 02 Number of habitable structures<sup>1</sup> within 500 feet of the route centerline
- 03 Length of route utilizing existing electric facility right-of-way (ROW)
- 04 Length of route parallel to existing electric facility ROW
- 05 Length of route parallel to other existing compatible ROW (roads, highways, railway, or telephone utility ROW, etc.)
- 06 Length of route parallel to apparent property lines<sup>2</sup> (or other natural or cultural features)
- 07 Sum of evaluation criteria 3, 4, 5, and 6
- 08 Percent of evaluation criteria 3, 4, 5, and 6
- 09 Length of route parallel to pipeline ROW
- 10 Length of route across parks/recreational areas<sup>3</sup>
- 11 Number of additional parks/recreational areas<sup>3</sup> within 1,000 feet of the route centerline
- 12 Length of route across National Park Service Land
- 13 Length of route across cropland
- 14 Length of route across pasture/rangeland
- 15 Length of route across land irrigated by traveling systems (rolling or pivot type)
- 16 Length of route across gravel pits, mines, or quarries
- 17 Number of pipeline crossings
- 18 Number of electric transmission line crossings
- 19 Number of Interstate (IH), US Highway (US Hwy), and State Highway (SH) crossings
- 20 Number of Farm-to-Market (FM) or Ranch-to-Market (RM) road crossings
- 21 Number of private use airstrips within 10,000 feet of the route centerline
- 22 Number of heliports within 5,000 feet of the route centerline
- 23 Number of FAA registered airports<sup>4</sup> (runways >3,200 feet) within 20,000 feet of the route centerline
- 24 Number of FAA registered airports<sup>4</sup> (runways <3,200 feet) within 10,000 feet of the route centerline
- 25 Number of commercial Amplitude Modulation (AM) radio transmitters within 10,000 feet of the route centerline
- 26 Number of Frequency Modulation radio (FM radio), microwave towers, etc. within 2,000 feet of the route centerline
- 27 Number of existing water wells within 200 feet of the route centerline
- 28 Number of oil and gas wells within 200 feet of the route centerline

### Aesthetics

- 29 Estimated length of route within foreground visual zone<sup>5</sup> of US, Interstate, and State highways
- 30 Length of route across Wildlife Management Areas
- 31 Estimated length of route within foreground visual zone<sup>5</sup> of FM/RM roads
- 32 Estimated length of route within foreground visual zone<sup>6</sup> of parks/recreational areas<sup>3</sup>

### Ecology

- 33 Length of route across bottomland/riparian forest
- 34 Length of route across upland forest
- 35 Acreage of route across National Wetland Inventory (NWI) mapped forested or scrub/shrub wetlands
- 36 Acreage of route across NWI mapped emergent wetlands
- 37 Length of route across known critical habitat of federally-listed threatened or endangered species
- 38 Length of route across open water (lakes, ponds, etc.)
- 39 Number of stream/canal crossings
- 40 Length of route across known occupied red-cockaded woodpecker cluster habitat
- 41 Length of route across Coastal Management Zone
- 42 Number of navigable waterway crossings
- 43 Length of route parallel (within 100 feet) to natural streams or rivers
- 44 Length of route across FEMA mapped 100-year floodplains

### Cultural Resources

- 45 Number of cemeteries within 1,000 feet of the route centerline
- 46 Number of recorded historic or archaeological resources crossed by route
- 47 Number of additional recorded historic or archaeological resources within 1,000 feet of route centerline
- 48 Number of resources determined eligible for or listed on the National Register of Historic Places crossed by route
- 49 Number of additional resources determined eligible for or listed on the National Register of Historic Places within 1,000 feet of route centerline
- 50 Length of route across high archaeological/historical site potential

### Notes

- 1 Single-family and multi-family dwellings, and related structures, etc., mobile homes, apartment buildings, 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 within 500 feet of the centerline of a transmission project of 230 kV or more.
- 2 Apparent Property lines created by existing roads, highway, or railroad ROW are not "double-counted" in the length of route parallel to apparent property lines criteria.
- 3 Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.
- 4 As listed in the Chart Supplement South Central U.S. (FAA 2023b formerly known as the Airport/Facility Directory South Central U.S.), FAA 2023a.
- 5 One-half mile, unobstructed. Lengths of ROW within the foreground visual zone of Interstates, US and state highway criteria are not "double-counted" in the length of ROW within the foreground visual zone of FM roads criteria.
- 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 FM roads criteria.

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