WEST LANCASTER - WEST MILLERSPORT
TRANSMISSION LINE REBUILD PROJECT

WELCOME TO OUR VIRTUAL OPEN HOUSE

AEP Ohio representatives invite you to attend this open house to learn more. We welcome your feedback via telephone and email as we strive to make informed decisions.

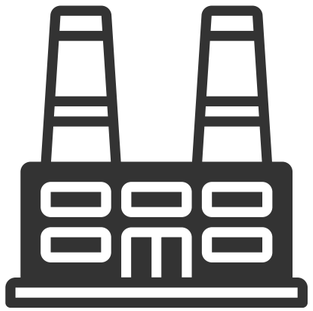
TO NAVIGATE THE SLIDES

USE THE ARROW KEYS ON YOUR KEYBOARD, SWIPE ON MOBILE, OR USE THE ARROWS IN THE LOWER-RIGHT CORNER

HOW THE SYSTEM WORKS

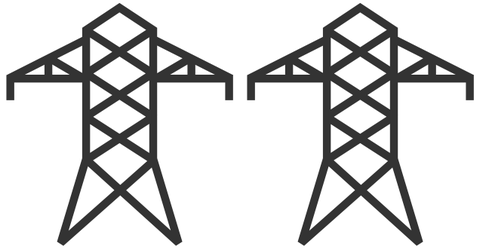
HIGH VOLTAGE

LOCAL TRANSMISSION >>



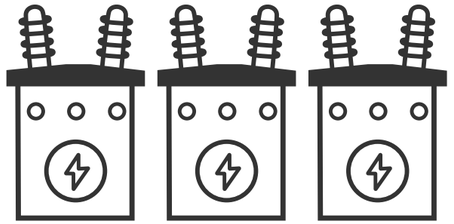
1) GENERATION STATIONS

Utilities produce 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 345 kilovolt (kV), 138 kV, and 69 kV on AEP Ohio's system.



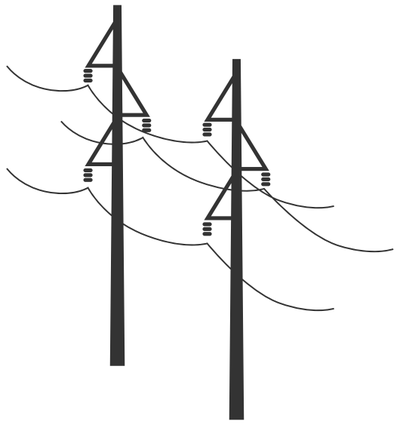
3) SUBSTATIONS

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

HOW THE SYSTEM WORKS

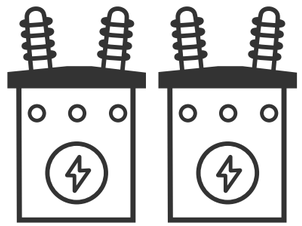
LOCAL TRANSMISSION

DISTRIBUTION >>



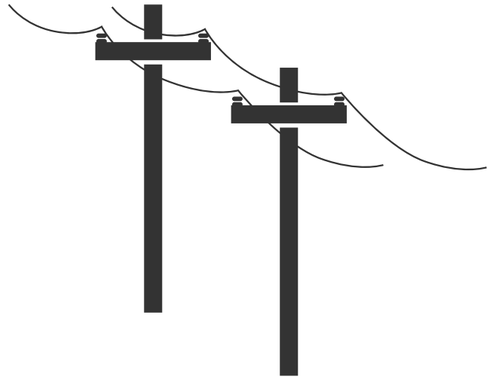
4) LOCAL TRANSMISSION

AEP Ohio typically uses 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.

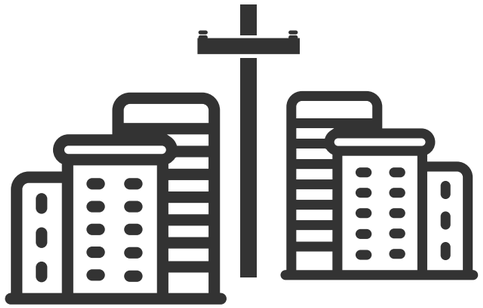


6) PRIMARY DISTRIBUTION

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

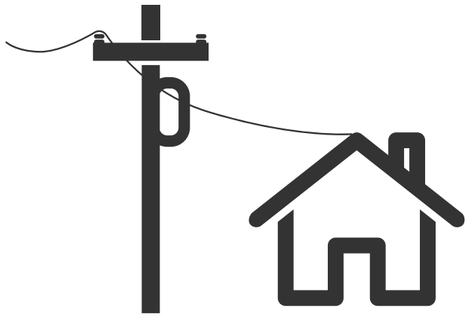
HOW THE SYSTEM WORKS

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

WHY IS THE PROJECT IMPORTANT TO OUR COMMUNITY?

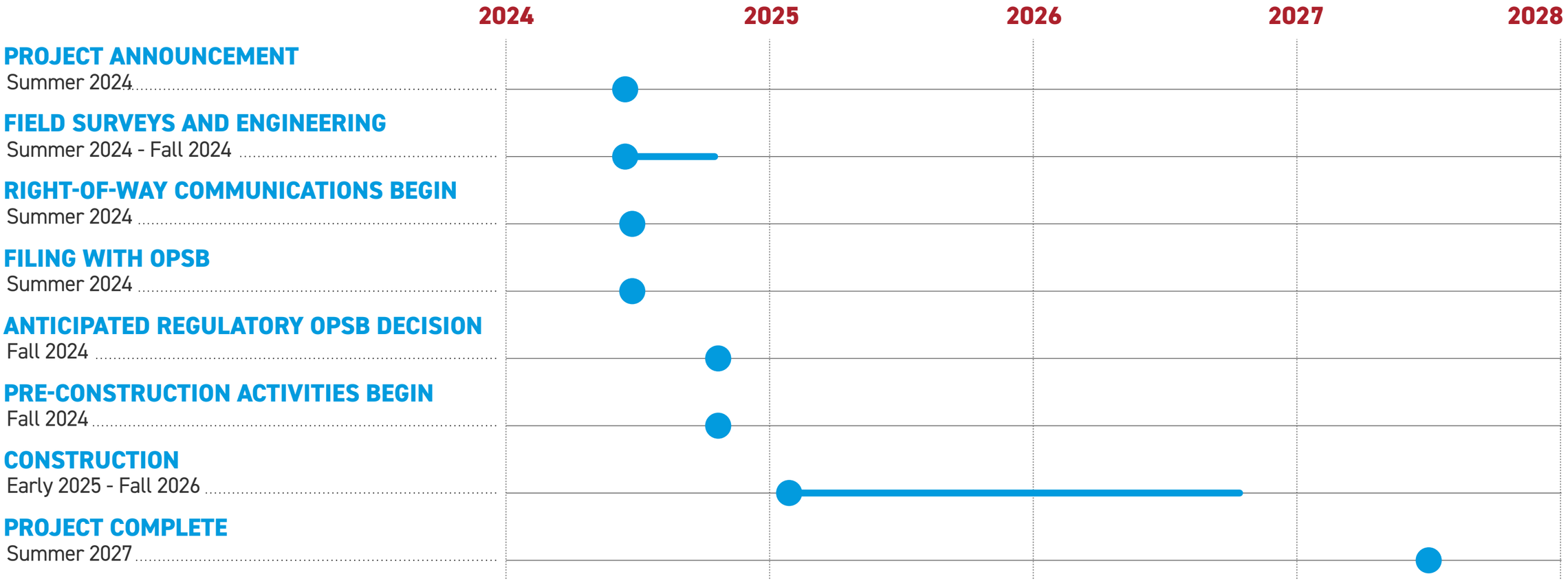
THE PROJECT INVOLVES

- Replacing approximately 15 miles of 138-kilovolt transmission line from southwest Lancaster to southwest Millersport.
- Replacing deteriorating wooden poles with single steel poles.
- Upgrading the West Lancaster and South Baltimore substations.

WHY IS THE PROJECT IMPORTANT TO OUR COMMUNITY?

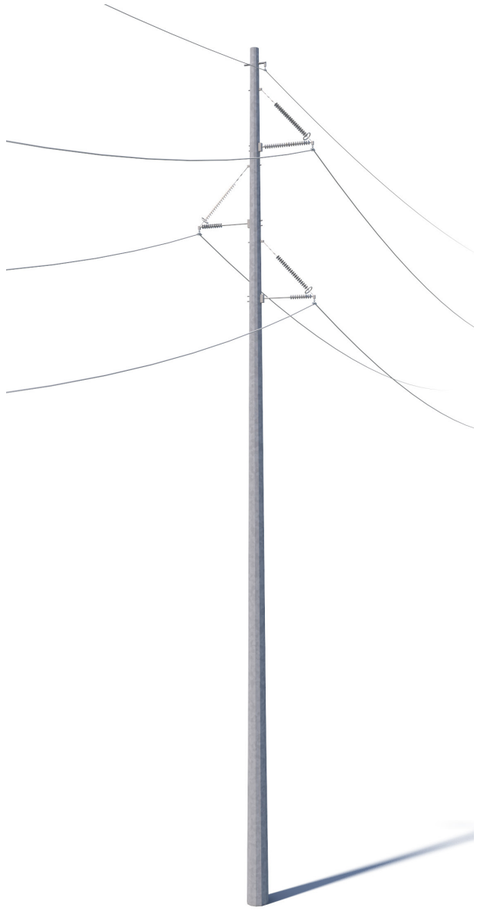
- Modernizes the transmission system originally build in the 1950s.
- Improves reliable electricity for area customers.
- Enhances the line's operational capacity to meet the growing area's power demand.

PROJECT SCHEDULE



*Timeline subject to change.

TYPICAL STRUCTURES



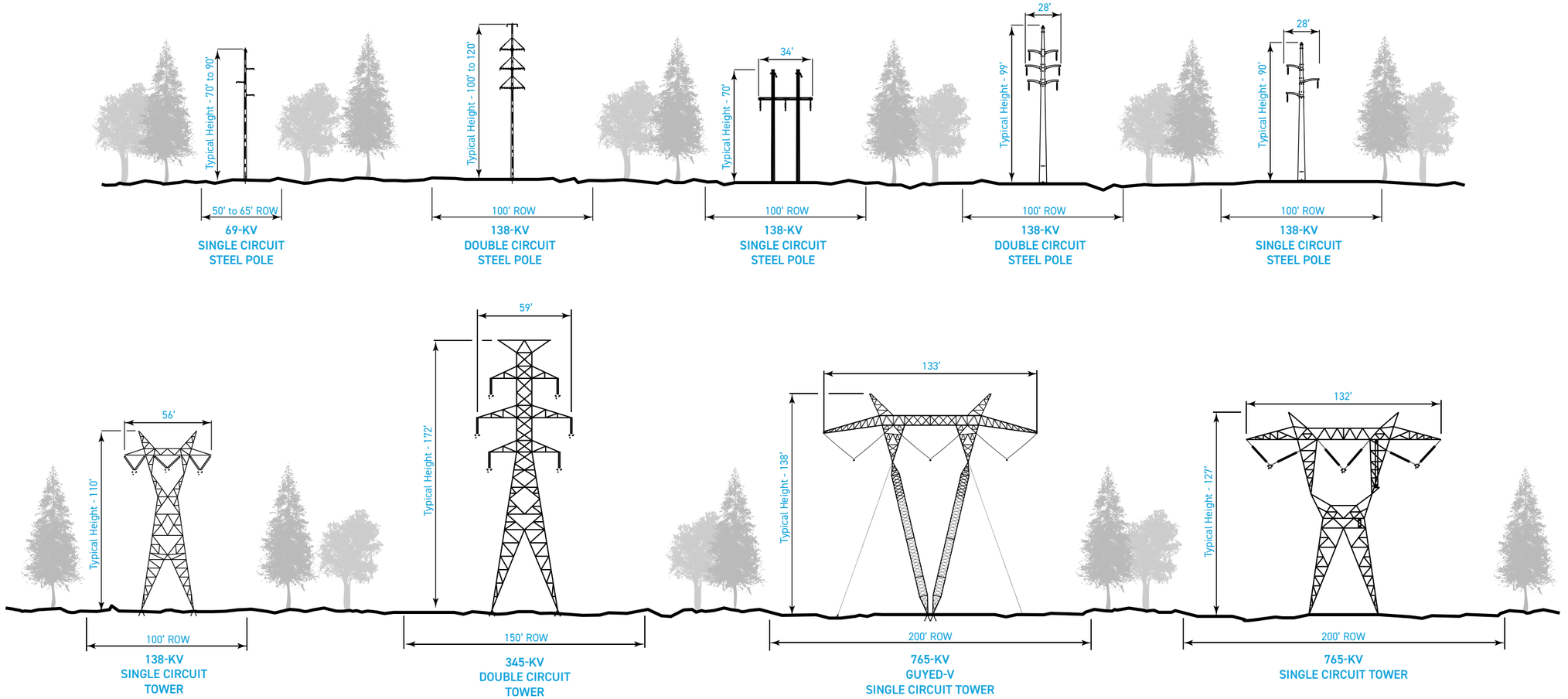
The project involves the use of steel single pole structures.

Typical Pole Height: Approximately 85 feet*
Typical Right-of-Way Width: Approximately 100 feet*

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

STRUCTURE COMPARISON

Typical structure heights are based upon voltage and configuration. Structures are not to scale but are shown in proportion to each other. Actual heights will vary depending on terrain.



RIGHT-OF-WAY

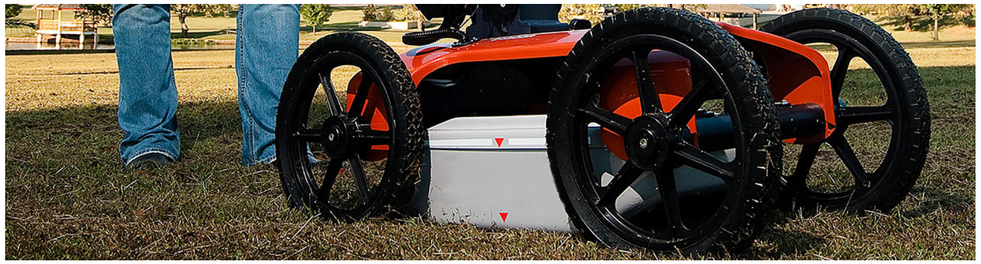
AEP OHIO HAS TWO KEY PHILOSOPHIES THAT PERTAIN TO POWER LINE RIGHTS-OF-WAY:

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.

AEP OHIO
An AEP Company

FIELD ACTIVITIES



GROUND PENETRATING RADAR

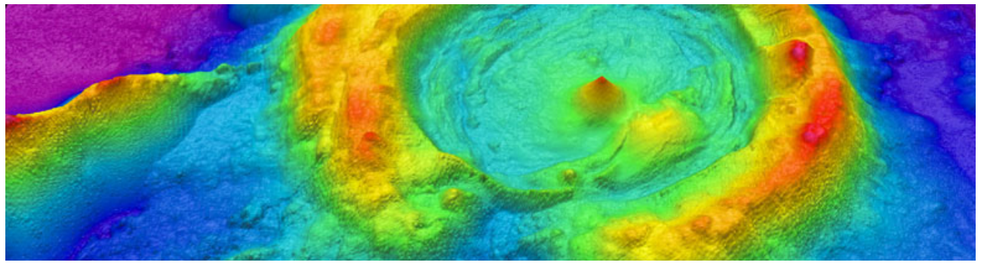
Ground Penetrating Radar (GPR) helps identify the location of underground utilities. A device that looks similar to a lawnmower, and is nondestructive to the soil, uses radio frequencies to detect objects below the ground's surface. Maps and images are created from the data.

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 archaeo logical 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.

VEGETATION MANAGEMENT

WHAT IS VEGETATION MANAGEMENT?

The practice of controlling the growth of trees and other woody stemmed vegetation in line corridors and around substations, while maintaining respect for the environment.

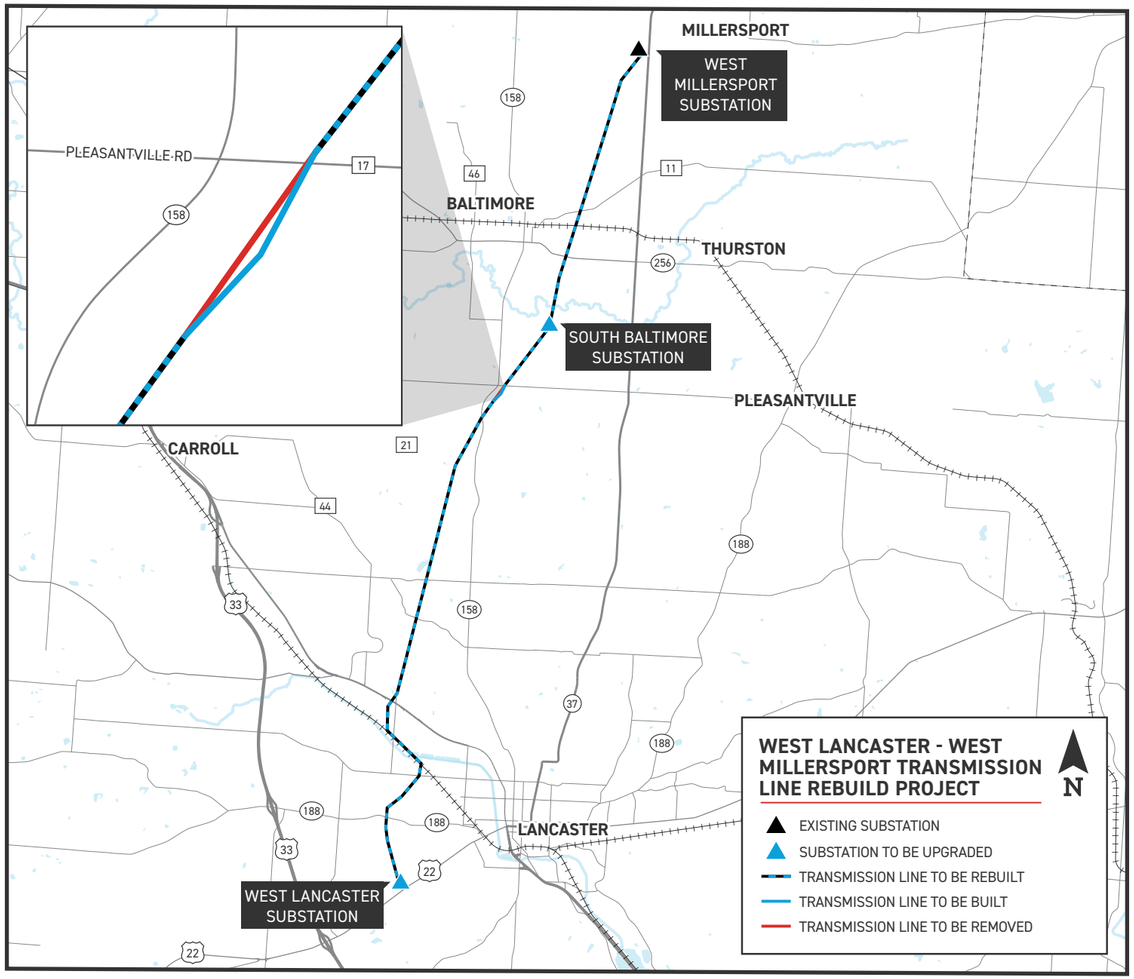
WHY IS IT DONE?

To minimize power outages caused by trees and other plants coming into contact with power lines.

THE GOALS OF AEP OHIO'S VEGETATION MANAGEMENT PROGRAM ARE TO:

- Protect our system and minimize outages
- Minimize any adverse environmental impacts
- Ensure compliance with all applicable laws and regulations
- Perform our work as safely as possible
- Maintain a positive relationship with land owners and the public

PROJECT MAP


MILLERSPORT
WEST MILLERSPORT SUBSTATION
PLEASANTVILLE RD
BALTIMORE
THURSTON
SOUTH BALTIMORE SUBSTATION
PLEASANTVILLE
CARROLL
LANCASTER
WEST LANCASTER SUBSTATION
158
17
46
11
256
21
44
188
33
37
22
WEST LANCASTER - WEST MILLERSPORT TRANSMISSION LINE REBUILD PROJECT
N
EXISTING SUBSTATION
SUBSTATION TO BE UPGRADED
TRANSMISSION LINE TO BE REBUILT
TRANSMISSION LINE TO BE BUILT
TRANSMISSION LINE TO BE REMOVED