

# Welcome to the Central Substation meeting

## Project overview

Our community needs a new electrical substation to modernize and improve the reliability of electrical service in your area. This project consolidates three aging facilities into one modern substation. It will improve system resiliency, reliability and efficiency, and allow for expansions and technologies to better serve customers.

## Location

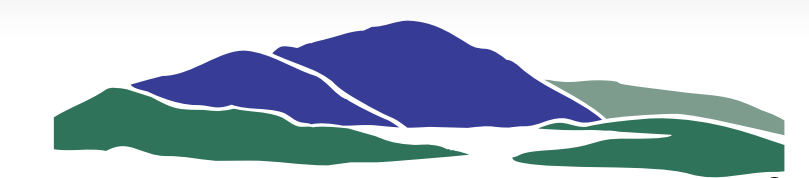
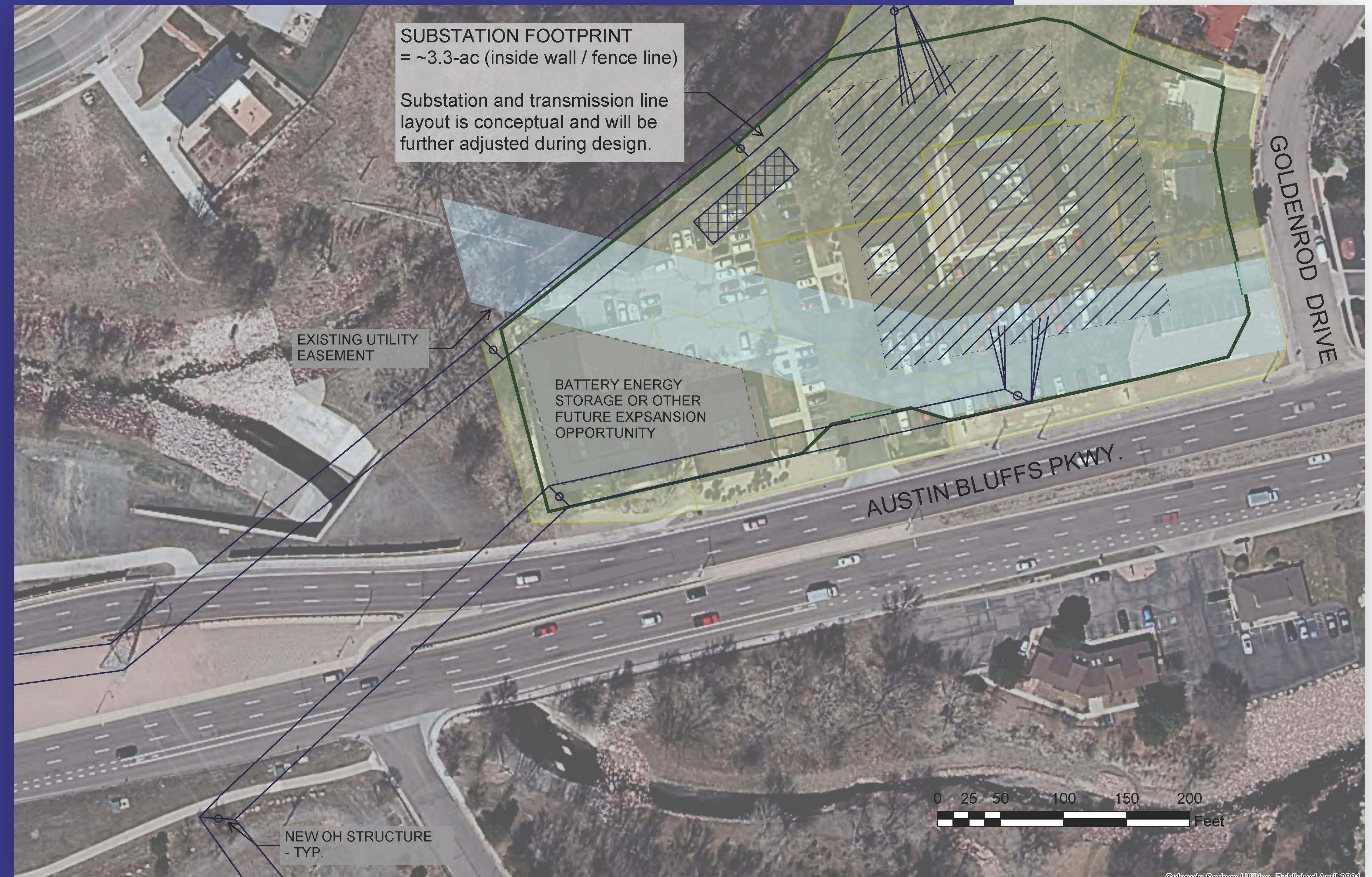
This project is planned at Austin Bluffs Parkway and Goldenrod Drive. This site is considered the most operationally and economically compatible with the needs of our community.

## Existing homes and businesses

We are working with property owners and tenants to acquire land for the project.

## Timeline

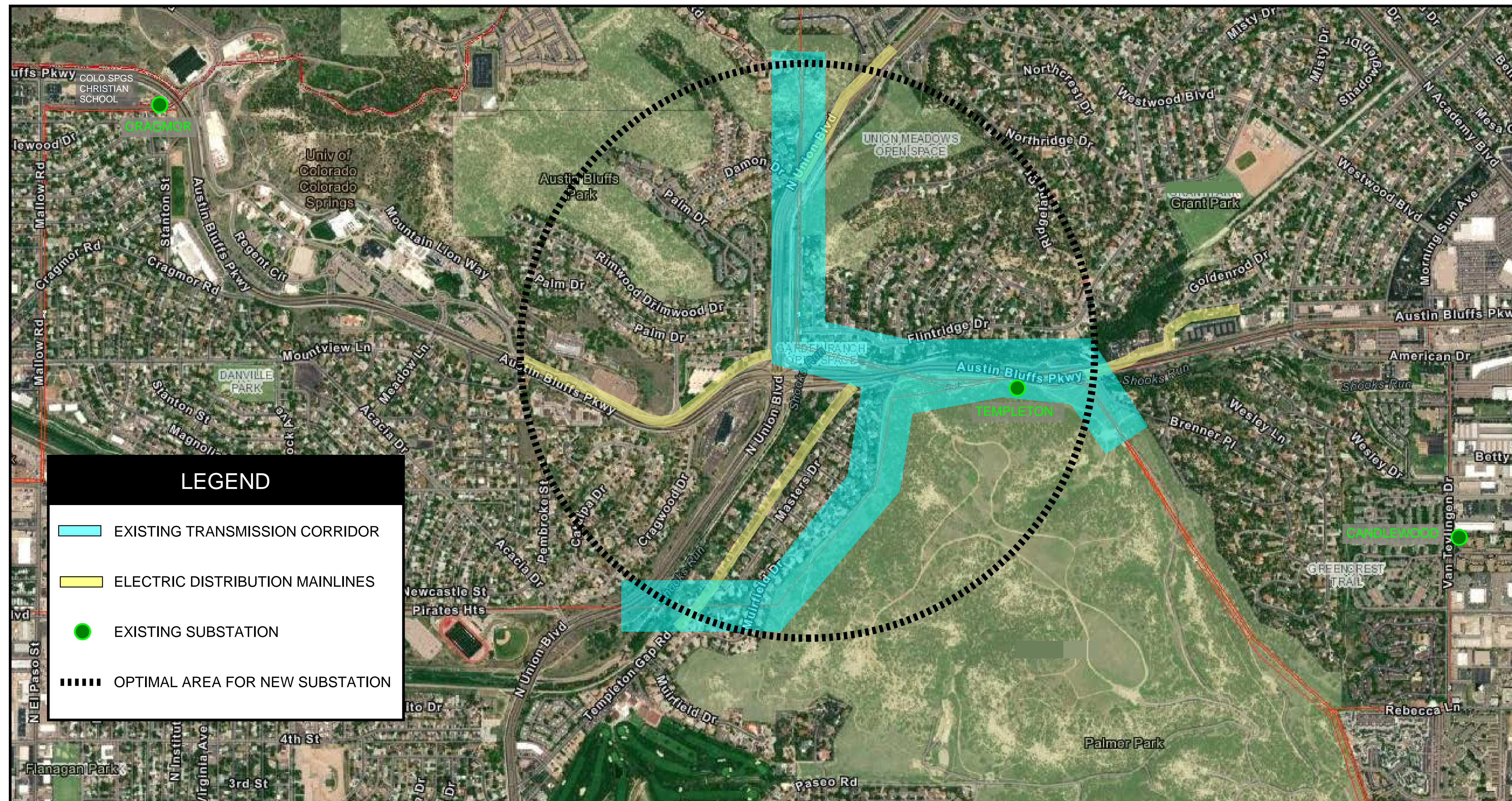
Construction is planned for spring 2024 and is expected to continue for about two years.



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# Project location considerations



- Community impact
- Improve electric reliability
- Accessibility
- Waterway separation
- Support load and allow future expansion
- Support our electrical grid
- Operational ease and safety
- Cost
- Parcel size and shape
- Routing of transmission lines



# View from Austin Bluffs and Goldenrod





# View from Goldenrod to the south





# View from Austin Bluffs to the north





# View from Austin Bluffs to the north





# Transmission line

- Steel double-circuit transmission structures
- Steel monopoles in lieu of older lattice style currently used in area
- Poles will be on concrete pier foundations and/or directly embedded
- Typical pole heights range from 70- 100 feet above ground
- Conductor height is determined using the National Electrical Safety Code
- Pole finish will likely be a galvanized gray
- Line routing will use existing easements, public Right of Way, and/or City parcels



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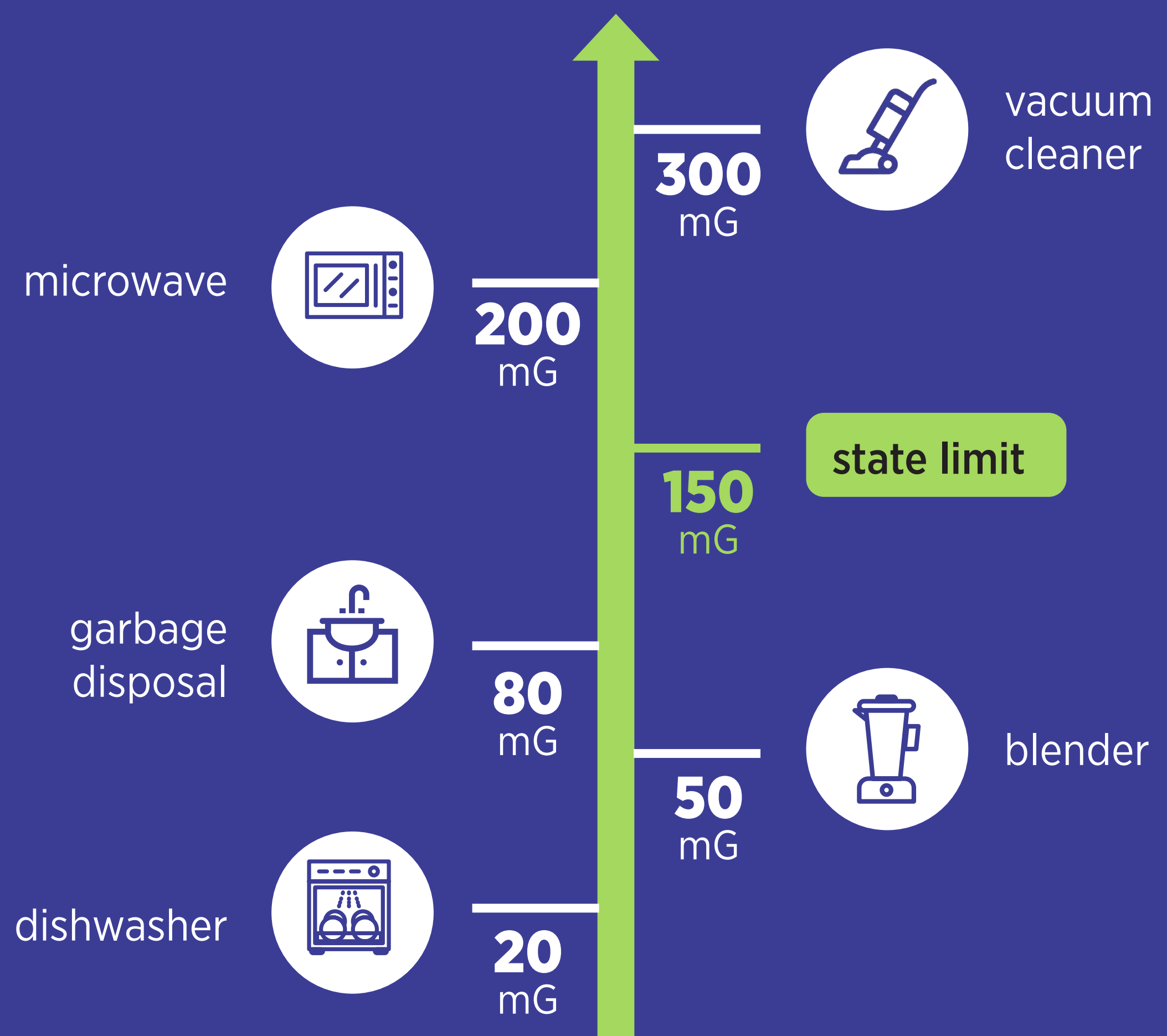


# Magnetic fields and noise

## Magnetic fields

Electromagnetic fields (EMF), measured in milliGauss (mG), are produced by electric current and only exist when an electric appliance is turned on. The strength of an EMF and noise levels dissipate rapidly as you move away from its source.

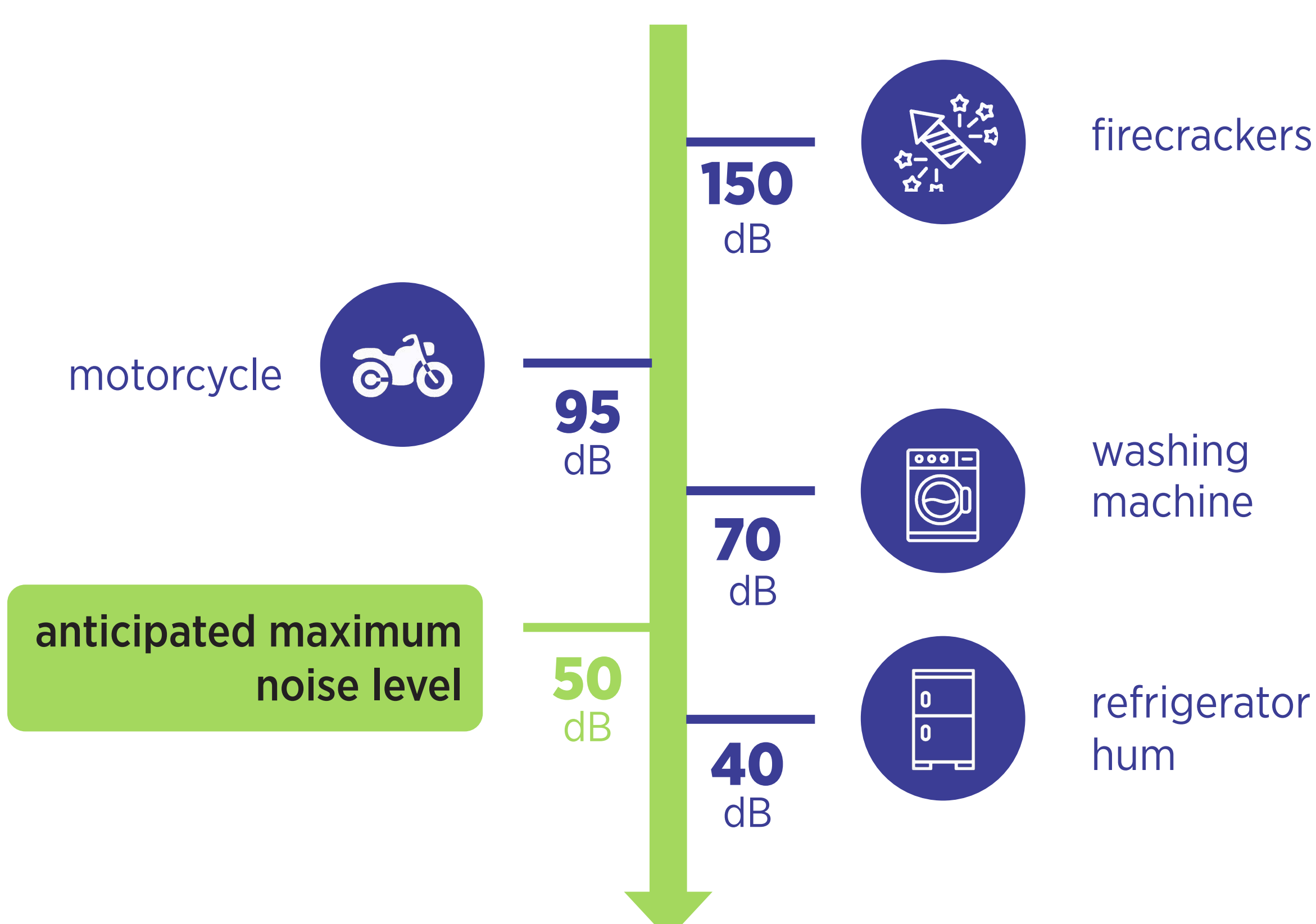
The power line serving your neighborhood produces EMF just like household appliances such as your microwave, blender and dishwasher. Business equipment such as computers, copiers and fluorescent lights also produce EMF.



Typical magnetic fields six inches from common home appliances measured in milliGauss (mG).

## Audible noise

Typical noise levels encountered in common settings measured in decibels (dB).



## Corona

Corona is a phenomenon associated with all transmission lines. It is a small electrical discharge not unlike the static electrical charge you may experience when walking on carpet and touching a metal object. Corona is what creates the hissing or crackling sound that often emanates from transmission lines. It increases substantially in wet weather when water droplets form on the transmission line.



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# Project timeline

