

# Homeowners Tips Sheets

# Power Drops

## Electrical Service Entrances



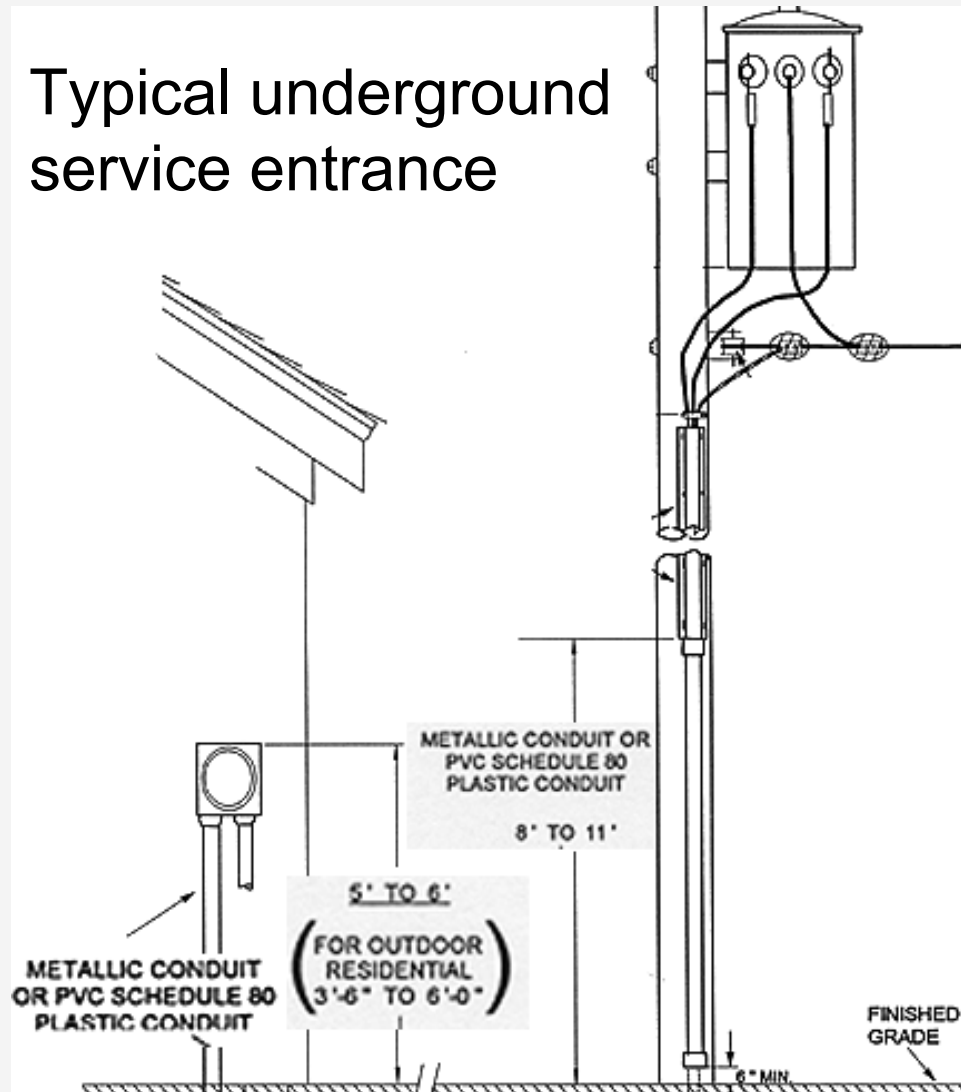
**School of  
Professional  
Home Inspection**

This document is a  
sample from the Home  
Inspections  
Fundamentals class

Learn more about  
becoming a Licensed  
Home Inspector at  
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# Service Entrance

Typical underground service entrance

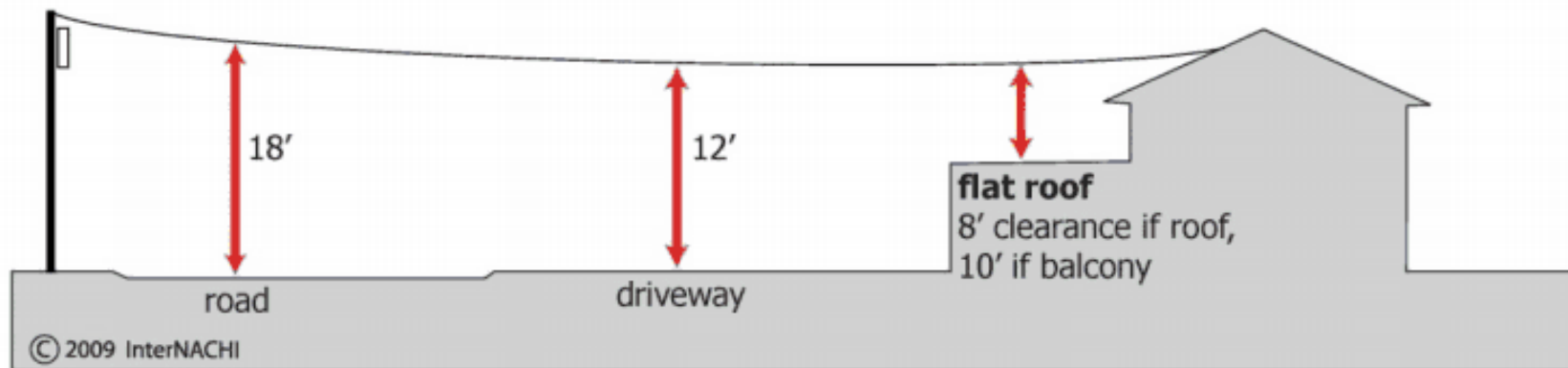
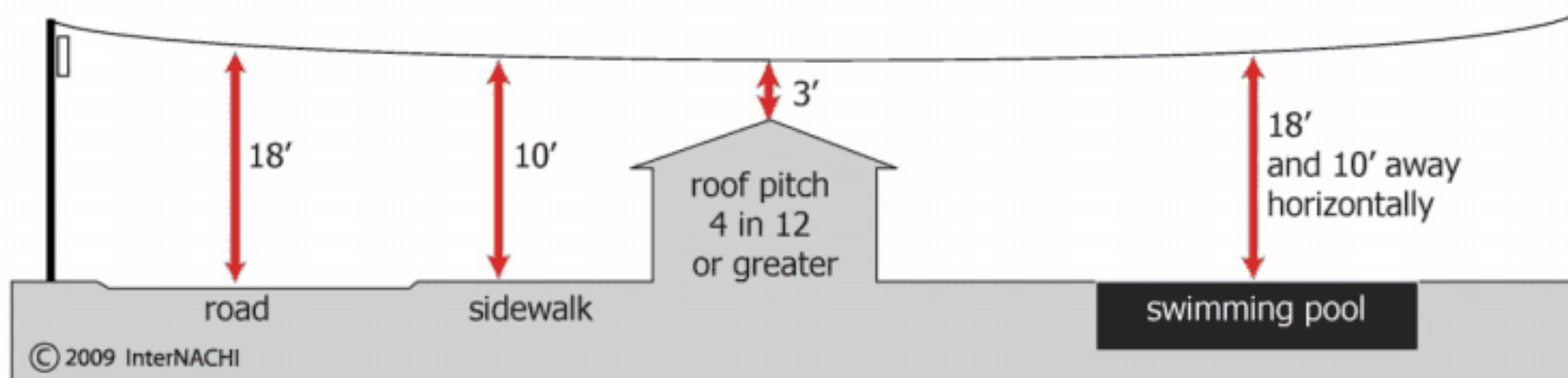


Electrical service may be underground or overhead.

Underground services are not visible and therefore have minimal inspection.

# Overhead Service Entrances

Service Drop Clearances





# Overhead Service Entrances

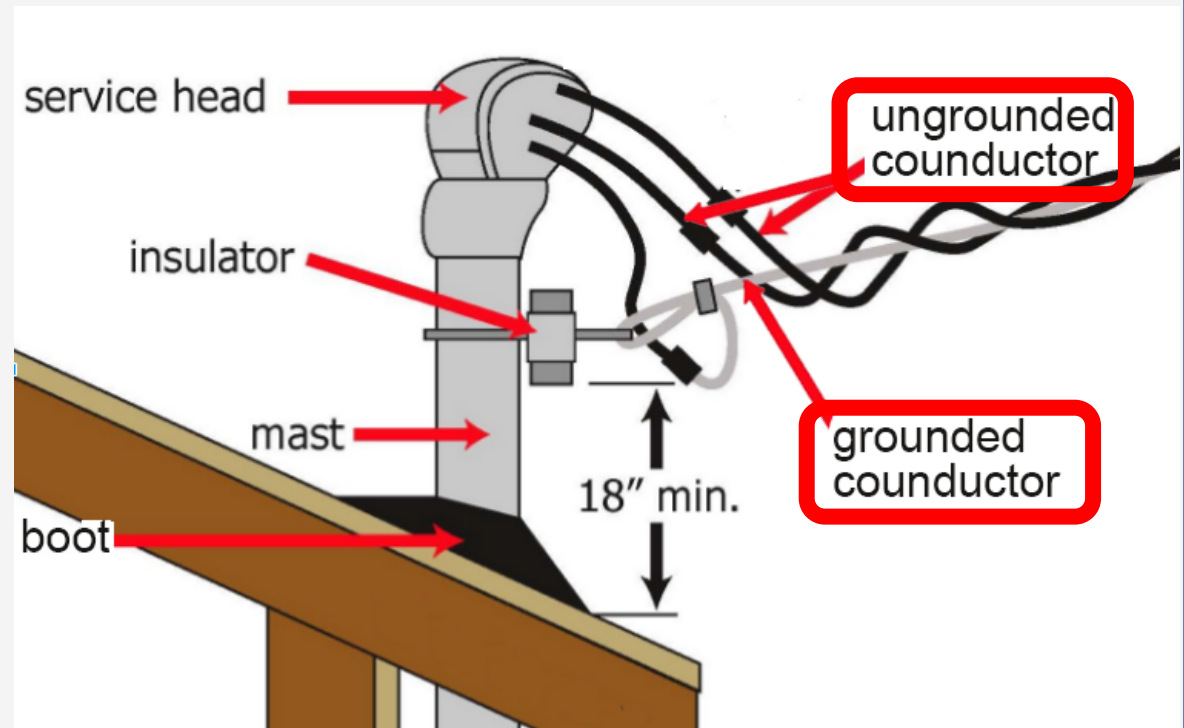
Overhead services have many components and must be **carefully checked**

Overhead drop height clearance minimums:

- 18 feet - roadways
- 12 feet - driveways
- 10 feet - areas with pedestrian-only access
- 8 feet - flat roofs (unless used as deck)
- 3 feet - pitched roofs 4:12 or above
- 3 feet - bottom, sides and front of windows

# Service Voltage

Most residential buildings are supplied with 120/240-volts. This power drop is made up of two live conductors, each supplying 120 volts, and one neutral or grounded conductor acting as the return.





# Overhead Service Entrances

There should be **drip loops** where the conductors enter the service mast. This prevents rain from running down into the masthead.

In this picture, there is no drip loop caused by a failure of the cable assembly connection to the home.

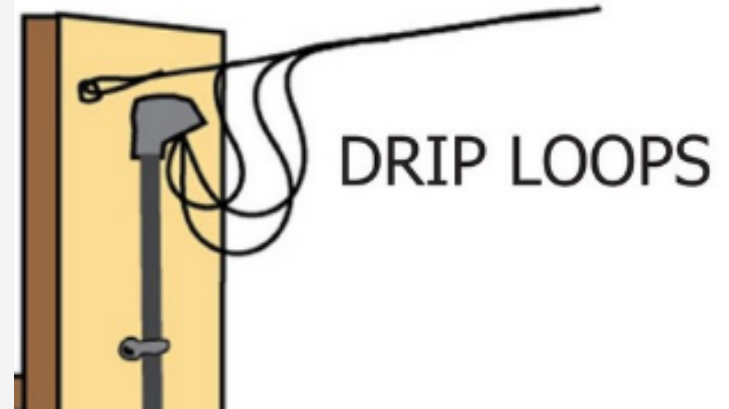


Photo by David Macey



# Very Old Power Drop

The oldest power drops are separate lines, notice the insulation is missing and no drip loop!





# 120v Service Entrances

There are, of course exceptions to this. It is not unusual to see one of the live conductors not connected at the power drop.

This is indicative of a 120-volt-only supply, which is still in some older properties, garages, apartments and condos.





# Overhead Service Entrances

## Inspecting the Service Entrance

- Condition of conductors and insulation
- Broken masthead, meters/bases, conduit
- Loose clamps and connectors
- Attachments of mast and components
- Heights and clearances from trees, etc.
- Rooftop service masts must be waterproof



# Overhead Service Entrances

The diameter of the conduit in which the main service wire is located determines the **MAXIMUM** amperage its rated for:

**2-inch is 200 amp max**

**1 1/4-inch is 100 amp max**

**1-inch 60 amp max**

**REMEMBER!** Of course this means conduits may be oversized, so it's possible to have a 60 amp service entering your house in a 2-inch conduit

# Overhead Service Inspection

How would you report this?



Thank You

Learning today  
Leading tomorrow



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