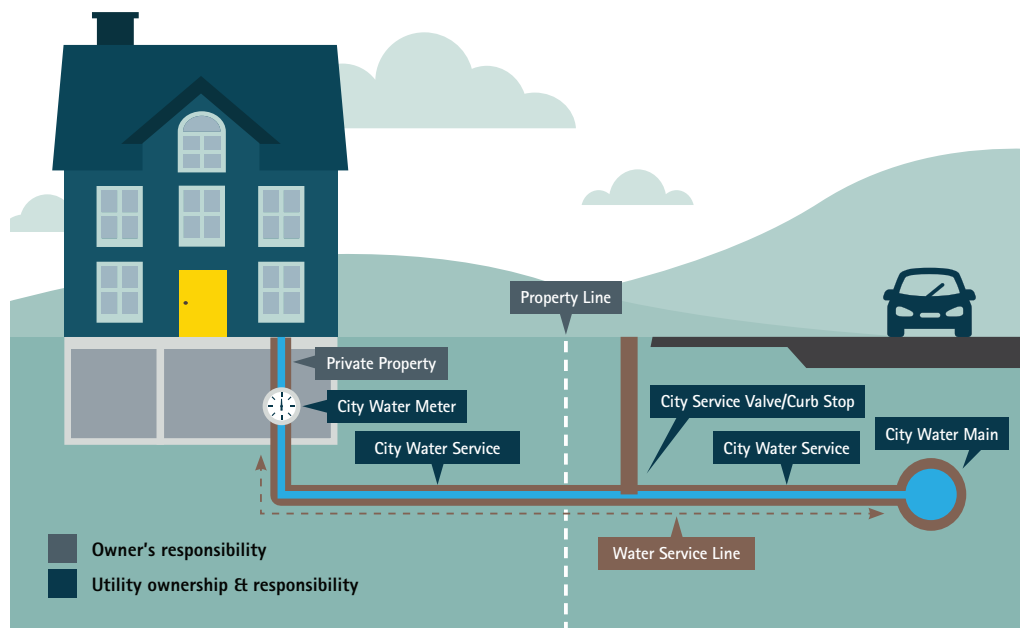




What to Look for when Replacing Lead Service Lines

There is no acceptable level of lead exposure when it comes to our drinking water, yet millions of Americans still receive their water from service lines made of lead, a toxic metal which can lead to serious health effects or death. The long-term solution to protect public health is to remove all lead pipes and replace them with copper, the preferred material for lead replacement projects for its longevity, corrosion resistance, formability, resiliency, and sustainability.



Cities and communities handle lead service line replacement responsibilities differently. Some are doing the entire line (from city water main through the private property), others are requiring owners to financially cover a certain portion within their private property.

Proper material and connections / joints

When replacing lead service lines, it is crucial to do a complete service line replacement. Both the city and the homeowner lines. A partial replacement will exacerbate the issue and likely elevate lead levels due to disturbance of the line.

- ASTM B88 Type K annealed (soft) coils are the most commonly used for water service lines.
- Proper sleeving and wrapping in soil and when penetrating through house foundation.
- Best practice for making connections is using flare fittings.

Key Visual Indicators

For proper copper service line installation, adhere to the following directives. Improper installation techniques can lead to failure or unnecessary repair:



Figure 1

Figure 2

1. No material pipe-joint compound should be applied to matting surface for flare fitting and flared tube before attaching flare nut (See Figure 1).
2. Position the copper piping in the "3 o'clock" position (also known as a goose neck or pig tail) to ensure the backfill and soil packing process does not loosen flare connection (See Figure 2).
3. Best option for installing copper underground is to bury it in direct contact with the soil or bedding. If wrapping is required, ensure proper sealing and protection is applied to eliminate any water or moisture from getting trapped between the wrap and copper service line.

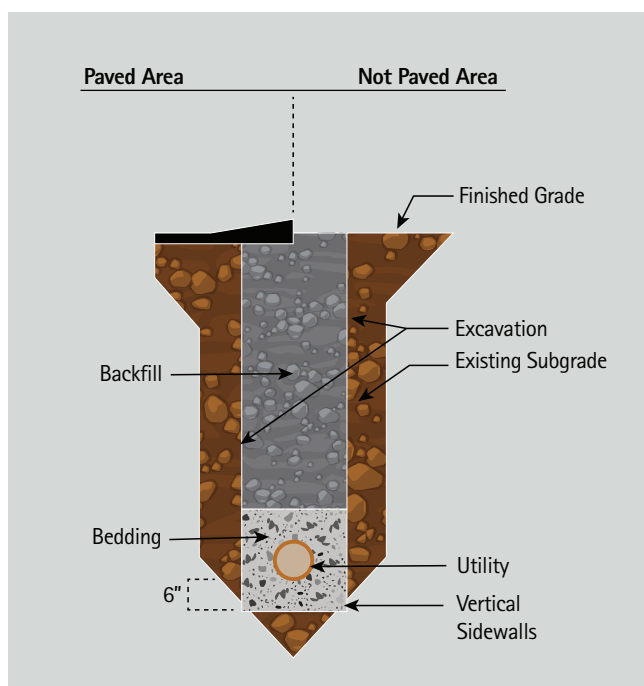


Figure 3

4. Directional (trenchless) boring or pulling diameters are as close to the outside diameter of copper tube.
5. In open trenching/excavation the copper service line should not lay directly on undisturbed or unexcavated soil at bottom of trench (See Figure 3).
6. Sleeving through foundations and walls must be sealed watertight (See Figure 4). Do not use caulks or spray insulation that contains ammonia or methanol. Sleeves can be sealed with Fernco™ electrometric clamps (See Figure 5) or electrician's duct seal (See Figure 6).

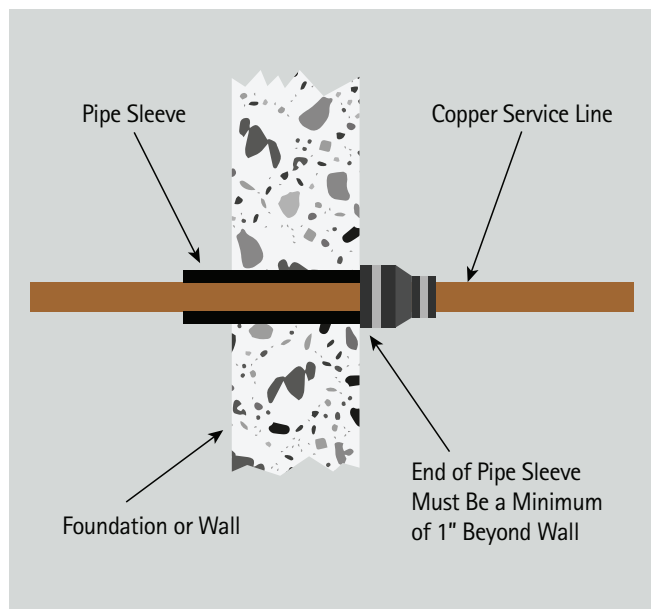


Figure 4



Figure 5



Figure 6