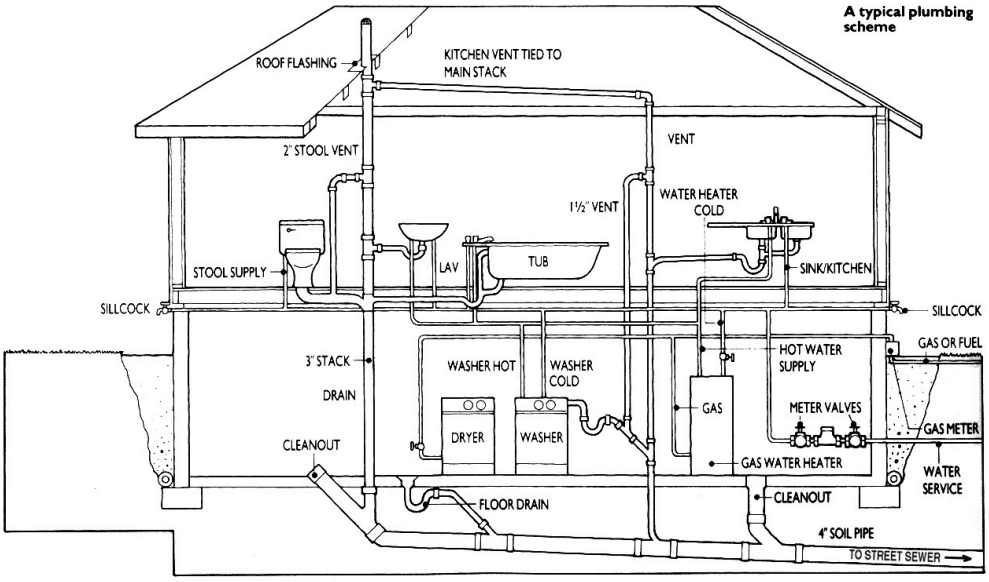
HOMEOWNER REPAIR GUIDE

WHEN TO UPDATE

Your plumbing system

People generally take their plumbing for granted. They expect that, when they turn on a faucet, water will appear, and when they open a drain, water will flow out. But, problems can occur in water supply and drain lines, problems that prevent the free movement of water through the pipes.



A typical plumbing scheme

WATER SUPPLY LINES

MATERIAL	WHAT TO KNOW
Copper	Most newer water lines are made of **copper**, and seldom become obstructed. The only time you will usually need to deal with copper pipe is when you are changing a valve or re-routing a water line. Lengths of copper pipe are soldered together, although you can use **compression fittings** – a more expensive option – to join them if you don't want to use a propane torch.
PEX or CPVC	Even newer plastic materials (**PEX** or **CPVC**) can now be used for water supply lines in residential buildings in many communities, including Cleveland Heights. PEX stands for "cross-linked polyethylene," and CPVC stands for "chlorinated polyvinyl chloride."
Galvanized iron or lead	Older water lines are usually made of **galvanized iron** or, in some homes, of **lead**.

ELECTRICAL GROUNDING

Since metal piping was often used to ground the electrical system in many older homes, an installer of plastic water lines will usually be required to have an electrician certify that there is an adequate ground connection to provide safety.

PROBLEMS WITH GALVANIZED PIPES

All kinds of problems can occur in galvanized pipes.

1. First, these lines commonly become obstructed over the years, to a point where the space left for water to flow through may be only a small part of the original diameter of the pipe – significantly reducing the water pressure.
2. Second, any time you physically disturb a galvanized pipe, unseen leaks may be created in other parts of the line, so you have to take extreme care when working on this kind of system.
3. Third, if your water system is a combination of galvanized and copper lines, you need to make sure that, anywhere the two dissimilar metals meet, they have been separated with a **dielectric union** (to prevent a chemical reaction that will cause the pipes to deteriorate).

DRAIN LINES

Galvanized iron was also used for older drain lines. Obstructions in these lines can reduce the flow of wastewater. Galvanized drains can also deteriorate, creating leaks into the ceiling below. Some older bathtub drain lines contain a **“drum trap,”** a coffee-can-shaped reservoir commonly sunken into the bathroom floor. Not only do drum traps make clearing obstructed lines difficult, but they can also rust through and cause leaks.

Most people use **PVC**, a kind of plastic pipe, for new drain lines or to replace old galvanized ones. PVC is quite simple to cut (using a hacksaw or miter saw) and connect (using a primer, followed by an adhesive). You will need special fittings to connect new PVC pieces to old galvanized drain lines or to cast iron stack pipes.

WHEN SHOULD YOU REPLACE THEM?

So, if you have older water supply and drain lines, when should you replace them with newer materials?

FIX LEAKS RIGHT AWAY

Certainly, any time you have a leak, you should deal with that right away – water intrusion can damage wood, plaster and other materials, causing a much more expensive repair.

UPDATE BEFORE AN EMERGENCY

But, you might be wise to update your system *before* an emergency occurs. In addition to preventing water leaks, such an update can improve your daily life. Replacing galvanized water lines will usually increase water pressure (you'll have a better shower!) And PVC drains don't tend to clog as often as galvanized, so you won't need to be on a first name basis with Mr. Plumber.

Home Repair Resource center

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

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