

If you have ever seen crisp white lines sprayed across a lawn, driveway, or sidewalk right before a construction or landscaping job, you have already seen the first step of safe excavation. That white paint is not graffiti or a random contractor habit. It is a legal and practical part of the utility locating process that keeps people safe and prevents very expensive mistakes.

In Orange County, where nearly every inch of ground hides some mix of power, gas, water, sewer, communications, and irrigation, understanding what those marks mean is not optional. It is the difference between a smooth project and a day with the fire department on your front yard.

This guide walks through what that white paint means, how utility locating works here in California, when 811 is enough, when you need a private utility locator, and what happens if you ignore the rules.

What the White Paint Actually Means

The white paint you see on the ground before digging is called “white lining.” It is used to show the proposed excavation area so utility locators know exactly where to search for buried utilities.

In practice, that can look like:

- A rectangle outlining a building addition or pool.
- A series of arrows and notes such as “TRENCH 24" DEEP” or “PLANTER.”
- Letters like “EXC” or “SAW CUT” near sidewalks or driveways.

Contractors use white paint because that color is reserved, by standard, for “proposed excavation.” It tells the 811 system and any locator: “Look here. This is where we plan to dig.”

Without white paint, locators have to guess where your work is happening. On a busy street or a large property, guessing is a shortcut to missed lines. In California, if an excavator does not mark the dig area adequately, the utility company has more room to argue that you did not give proper notice if something is hit.

So when you see white paint appear before a project in Orange County, that is usually a sign that someone has either:

- Submitted a ticket to 811, or
- Hired a private utility locating company, or
- Both.

What Is Utility Locating, Really?

Utility locating is the process of finding and marking underground pipes, cables, and other buried infrastructure [Orange County Utility Locating](#) before digging. In simple terms, it answers the question: “What am I about to hit if I put a bucket, auger, or shovel in this spot?”

Locators identify and mark:

- Electric power lines.
- Natural gas and oil lines.
- Water mains and service lines.
- Sewer and storm drains.

- Communication and fiber optic cables.
- In some cases, private infrastructure such as irrigation, private electrical feeds, and septic systems.

The goal is not just to put paint on the ground. The goal is to create a reasonable, accurate picture of what lies below the surface so the excavation can be planned, adjusted, or redesigned if there is a conflict.

From the field side, good locating work looks like this: the locator walks the outlined area with a receiver, transmitter, often a ground penetrating radar (GPR) cart, checks existing records, talks with the site contact, and then marks each utility with the correct color, depth estimate when possible, and notes where lines change direction or go deeper.

Who Does What: 811 vs Private Utility Locators

In Orange County, two types of utility locating services operate side by side: public utility locating through 811, and private utility locating companies you hire directly.

What does 811 do?

811 is the statewide “call before you dig” system [Orange County Utility Potholing](#) in California. When you call 811 or submit a ticket online, your request is routed to the public utility owners with facilities in your work area. They either send their own locators or contract locator firms to mark their lines.

Here are the key points that matter on real projects:

- Is utility locating free in California through 811?

Yes, for public utilities. The service that 811 coordinates is free for the excavator, whether that is a homeowner, landscaper, or contractor. You do not receive a bill from the utility for those marks.

- Does 811 locate private lines?

No. 811 does not locate privately owned lines. That typically includes things like electric from the house to a detached garage, pool equipment power, landscape lighting, private fire lines, irrigation, and many building service lines past the meter.

- What does 811 not locate?

Common examples in Orange County include sprinkler systems, private gas lines on large properties, private sewer laterals on private land, communication lines inside private campuses, and abandoned or undocumented utilities. Anything past the point of ownership transfer from utility to property owner is usually your responsibility.

- Is calling 811 the law in California?

Yes. California Government Code 4216 requires excavators to notify the regional notification center (811) before excavation. “Excavation” is defined fairly broadly. It includes more than just big machines; even using power augers or trenchers can qualify.

- How far in advance do you need to call before digging?

In California, you must notify 811 at least two working days, but not more than 14 calendar days, before you start digging. In practice, most contractors in Orange County call about 3 to 5 working days ahead to leave room for scheduling and weather.

If you are only relying on 811, remember: you are only covered for the facilities that the participating public utilities own and that they can actually locate reliably.

What does a private utility locator do?

A private utility locator is a company you hire directly to locate utilities that 811 does not cover or to provide a higher level of accuracy and mapping.

Private locators in Orange County typically:

- Locate private lines such as electric feeds to outbuildings, parking lot lighting, private gas, irrigation, and private communications.
- Use a wider range of tools, including ground penetrating radar, to find non-metallic lines.
- Work off detailed scopes, often as part of subsurface utility engineering (SUE) for commercial or public projects.
- Provide deliverables like CAD drawings, GPS data, and reports, not just paint on the ground.

If you are a homeowner adding a pool where multiple contractors have touched the yard over the years and “as-built” drawings are missing or wrong, a private locator is often the only practical way to know what is out there.

Public vs Private Utility Locating: Why the Difference Matters

The difference between public and private utility locating comes down to who owns the facility and who is responsible for its protection.

Public utility locating (through 811) focuses on utility-owned facilities: street-to-meter electric, gas in the street and up to the meter, water mains and service lines up to the meter or property line, and main sewer or storm systems in public right of way.

Private utility locating covers everything on the customer side of that ownership break: from the meter to the building, power across a business campus, private fire lines, private sewer, and other on-site infrastructure.

On a typical Orange County single-family property, you might have:

- Utility-located lines: electric service from the street to the meter, gas from the main to the meter, water from the main to the meter.
- Privately owned lines: electric from the meter panel to the house and detached structures, gas from the meter to the pool heater or outdoor kitchen, water from the meter to hose bibs and irrigation, sewer laterals on your lot, septic lines if present.

811 covers the first group. A private utility locator is needed for the second group.

If you ignore this distinction, you can have a site that is covered in colored paint and still hit a private gas stub or electrical conduit the first time you trench.

How Utility Locating Works on the Ground

The field work falls into two main techniques: electromagnetic locating and ground penetrating radar, with other specialized tools layered in as needed.

Electromagnetic locating

This is the bread and butter of utility locating. A transmitter applies a signal to a conductive utility, either by direct connection to a tracer wire or pipe, or by induction. A receiver picks up that signal at the surface, letting the locator follow the line's path.

This technique works very well on:

- Metallic pipes (steel, iron, copper).
- Cables with metallic sheathing.
- Non-metallic pipes that have a tracer wire installed.

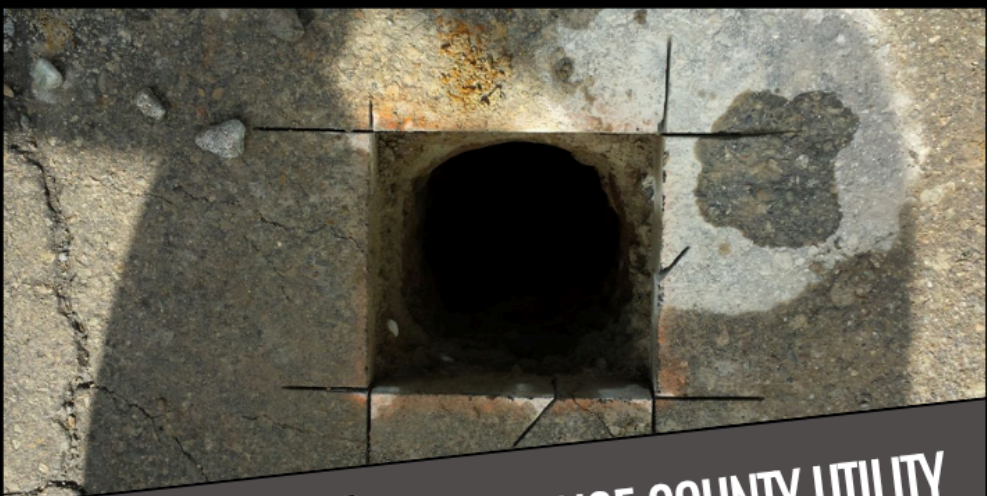
Its limits show up when you ask: how deep can utility locators detect using electromagnetic tools alone? In typical Orange County soil conditions, a strong signal on a metallic line can often be traced 10 to 15 feet deep, sometimes more, but accuracy begins to fall off as depth increases and as congested areas introduce interference.

Electromagnetic locating struggles with plastic pipes without tracer wire, some older repairs, and crowded corridors where signal bleed and coupling mislead inexperienced operators.

Ground penetrating radar: what it is used for

Ground penetrating radar (GPR) sends high frequency radio waves into the ground and measures the reflected energy from subsurface changes. Think of it as a way to see density changes in slices. Pipes, ducts, voids, and buried objects often show up as characteristic "hyperbolas" in the data.

In utility work, GPR is used for:



ORANGE COUNTY UTILITY LOCATING

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- Locating non-metallic pipes such as PVC water and sewer when conditions allow.
- Confirming depth and alignment where electromagnetic methods are uncertain.

- Mapping congested corridors and complex sites.
- Supporting subsurface utility engineering (SUE) for design-level mapping.

How accurate is ground penetrating radar? That depends heavily on soil conditions, depth, and operator skill. In Orange County, coastal sands and fill can be favorable, while clay-rich or saturated soils reduce clarity. Horizontally, GPR can often place a feature within several inches to a foot. Depth estimates are usually within about 10 to 20 percent in good conditions, but that is not guaranteed.

Can utility locators find plastic pipes?

The short answer: often, but not always.

If the plastic line has a tracer wire, electromagnetic locating works very well. Without a tracer wire, a locator may:

- Use GPR where soil conditions are favorable.
- Use acoustic or pressure methods on some water lines.
- Use experience and site clues to narrow down paths.

On a residential Orange County property, locating all plastic irrigation lines accurately is usually unrealistic, but main feeds and critical private services can often be found to a useful degree.

How accurate is utility locating, overall?

Good locators in typical conditions can usually put the centerline of a buried utility within 6 to 18 inches horizontally. Depth readings, when provided, are estimates. Locating is a risk reduction process, not a guarantee that you can trench blindly with a bucket edge right on the paint line.

This is why “potholing” or soft digging is still required near critical lines even after locating. Hand digging, vacuum excavation, or careful hydro excavation confirms the actual position and depth before you cut across a marked line.

What the Utility Marking Colors Mean

The paint you see on the ground after locating follows a standard color code. These colors are not random; they are tied to specific types of utilities.

Color	Meaning	----- -----	White	Proposed excavation (your white paint)
Red	Electric power lines and lighting	Orange	Communications, cable TV, fiber optic	Yellow
Gas, oil, steam, and other fuels	Blue	Potable water	Green	Sewer and drain lines
Purple	Reclaimed water, irrigation, slurry	Pink	Temporary survey markings	

So, what does red paint mean on the ground? It indicates electric lines. That can include primary power, secondary service lines, or site lighting circuits.

What do orange utility flags or orange paint mean? Orange marks telecom and fiber optic communications lines. Cutting an orange-marked line tends to trigger angry calls from internet providers and, in some cases, expensive repair bills.

White, again, is your reminder that someone is planning to disturb the soil.

Finding Specific Types of Buried Utilities

Homeowners and contractors often have very specific questions, like “How do you locate a buried water line?” or “Can you locate a septic tank?” The processes differ for each type of utility, although the tools overlap.

For buried water lines to a house, locators may use a combination of electromagnetic tracing on tracer wires, clamp-on transmitters at valves or meters, and sometimes acoustic leak detection or GPR if the water line is plastic and tracer-less.

To locate a buried gas line on private property, the locator usually attaches a transmitter near the meter or a known fitting if metallic, then traces with a receiver. For plastic gas with tracer wire, the same approach works on the wire. Because gas strikes are so serious, confirming with potholing near conflict points is standard practice.

Sewer lines are often cast iron close to the building and then transition to clay or plastic. Locators may use:

- A small transmitter (sonde) pushed through the sewer with a camera or rod and tracked from the surface.
- GPR for larger mains or in areas where electromagnetic methods are not available.

Yes, it is often possible to locate a septic tank. Locators may combine GPR, probe rods, and line tracing from the house out to the tank. On older Orange County properties that were once rural, locating septic systems before a remodel can save huge headaches when converting to sewer or doing additions.

Buried electrical lines on a property are usually straightforward for a professional locator if they are metallic or have detectable characteristics. They use a transmitter and receiver to trace the line. Fiber optic cables often have metallic tracer wires or armored sheathing that can be located electromagnetically. Where they do not, GPR becomes the tool of choice, sometimes combined with record research and site interviews.

How Long Does Utility Locating Take?

On a simple residential Orange County property, public locates through 811 typically happen within two working days of your ticket. The actual time on site for each utility can be 30 minutes to a couple of hours, depending on complexity and congestion.

A private utility locating visit for a single home might take 2 to 4 hours if you want a careful sweep and GPR in key areas. Commercial and municipal projects can stretch to days or weeks of fieldwork when full subsurface utility engineering is required.

The practical takeaway: do not schedule excavation for the same day your locates are supposed to happen. Leave a buffer so that if a locator has trouble with access, traffic, or weather, you are not forced into a bad choice between delaying the job and digging blind.

What Is Subsurface Utility Engineering (SUE)?

Subsurface utility engineering is a more formal, engineering-driven process for managing underground utility risk, especially on design projects.

It combines:

- Records research and surveys.
- Field locating using EM and GPR.
- Test holes and vacuum excavation to confirm critical lines.
- Mapping utilities into CAD or BIM with assigned quality levels.

Agencies and larger Orange County projects rely on SUE to reduce change orders and surprises during construction. For example, a new road widening might require full SUE to identify every conflicting utility within the work envelope so designers can shift alignments or plan relocations before the first excavator shows up.

Cost: Who Pays, and How Much?

The question “Who pays for utility locating?” has two distinct answers.

For public utility locating through 811 in California, the utility owners fund the system. The excavator does not pay a direct fee. Residential homeowners get marks at no charge before digging. This is one reason there is very little sympathy from inspectors or investigators when someone digs without calling 811: the safe option was free.

Private utility locating is a different story. You hire those companies just like you hire any other professional service.

How much does utility locating cost in Orange County? For a typical residential property, private locating often falls somewhere in the few hundred dollar range, depending on:

- Size of the area.
- Number of utilities and complexity.
- Whether GPR is required.
- Deliverables, such as maps or reports.

Larger commercial and public projects can run into the thousands or tens of thousands of dollars for comprehensive SUE work. The cost is still usually a fraction of a single major utility hit.

How much does private utility locating cost for a small homeowner project like a pool or ADU foundation? Expect that bringing in a reputable local locator for half a day and using both EM and GPR will likely cost less than the low end of a utility repair bill, and usually far less than a serious gas or electric incident.

Compared with the cost to repair a damaged utility line, which can range from a few hundred dollars for a simple residential irrigation repair to many thousands for fiber optic or gas main repairs, utility locating is almost always the cheaper insurance.

Legal and Liability Issues When Things Go Wrong

If you hit a utility line in Orange County, liability depends on what you did beforehand.

Who is liable if you hit a utility line? If you did not call 811 in the required time frame, or you ignored the marks and safe dig practices, you are very likely responsible for the damage. That can include the direct cost of repair, service interruption charges, and in some cases civil penalties.

What happens if you cut a utility line? Practically speaking:

- For power, you can cause outages, arcing, and serious injury or death if equipment is live.
- For gas, you risk fire, explosion, evacuations, and large emergency responses.
- For water or sewer, you can cause flooding, property damage, and contamination.

From a legal perspective, the utility will document the scene, check whether a ticket was called in, and whether the marks and dig practices matched legal standards.

What happens if you dig without calling 811 in California? Beyond the physical risk, you open yourself up to enforcement under the Underground Safety Board and the state one-call law. Investigations can lead to fines, mandatory training, or other enforcement actions, especially for repeat offenders or licensed contractors who should know better.

Is it illegal to dig without calling 811 in California? For covered excavation activities, failing to notify 811 is a violation of state law. On paper, even homeowners planting large trees should be calling before they dig. In practice, enforcement tends to focus more on contractors and larger digs, but that does not change the safety reality: a shovel can hit a gas line just as effectively as an excavator.

Do Homeowners Really Need a Private Utility Locator?

Should homeowners hire a utility locator? It depends on the project and the property history.

If you are:

- Planting shallow shrubs in an area with no known private utilities, and you have had 811 marks done recently, you may be comfortable without an extra survey.
- Installing a new pool, footing, deep tree, or trench where private gas, electric, or irrigation lines are likely, hiring a private locator is usually a sound investment.
- Working on an older Orange County property with conflicting or missing records, outbuildings, and past remodels, you are very likely to benefit from a private locate.

Can you locate your own underground utilities? Homeowners can buy hobby-grade locators or tone generators from hardware stores, but these do not replace a professional with training, better equipment, and insurance. They can be helpful for simple tasks like finding a known sprinkler wire, but they are not suitable when there is real risk involved.

How do you find underground utilities on your property responsibly? The professional sequence usually looks like this:

1. Call 811 and get all public utilities marked.
2. Use records, as-builts, and site knowledge to identify likely private lines.
3. Bring in a private utility locator for the high-risk areas.
4. Pothole to physically verify utilities before crossing them with deep excavation.

That sequence dramatically reduces the odds of a damaging strike.

Practical Steps Before You Dig in Orange County

Here is a simple checklist that reflects how experienced contractors handle underground risk locally:

1. Identify the work area and white-line it clearly with paint or flags.
2. Contact 811 at least two working days before excavation and wait for all utilities to respond.
3. Walk the site with the utility marks and think through where private lines could be, based on meters, panels, and equipment locations.
4. Decide whether the complexity, depth, and consequences justify hiring a private utility locator, especially for gas, power, and major water or sewer.
5. Use careful hand digging or vacuum excavation to expose any line near your planned trench, footing, or pier.

This procedure applies whether you are a homeowner or a general contractor. The difference is that contractors are expected to follow it as part of their professional duty.

Who Do You Call Before Digging in Orange County?

For legal notification and public utilities, you call 811 or submit a ticket online. That is your starting point.

If you need more than that, you then contact a reputable private utility locating company that works in Orange County. Finding “the best utility locating company in Orange County” is partly about reputation and responsiveness, but also about whether they use the full set of tools such as EM locating and GPR, provide clear documentation, and are willing to explain their findings and limitations honestly.

For many homeowners and small contractors, the combination of 811 plus a half-day of quality private locating ends up being the most cost effective way to keep people safe, protect budgets, and avoid turning a simple project into a utilities emergency.

The next time you see white paint marks on the ground, you will know exactly what they are: the visible sign that someone is taking those responsibilities seriously before the first shovel hits the soil.