

If you are planning to dig in Orange County, the law is very clear: in most cases, you must contact 811 before you put a shovel, auger, trenching machine, or excavator into the ground. This is not just a “good safety practice.” In California, calling 811 is a legal requirement tied to real penalties, liability, and project risk.

I work with excavation and underground utility issues often enough to know that the confusion rarely comes from bad intentions. Homeowners think, “It’s just a small trench for irrigation.” Contractors assume, “We’re only going down a foot, we’ll be fine.” Then a buried electrical line, gas main, or fiber optic cable proves otherwise.

This guide walks through what the law actually requires in California, how 811 fits into that, what 811 does not locate, and when you should hire a private utility locator in Orange County. Along the way, I will explain how utility locating works in the field, what the color markings mean, and what really happens if you hit a line.

Is Calling 811 the Law in California?

Yes. For almost all types of excavation, calling 811 is the law in California.

The requirement comes from California Government Code section 4216, which covers “excavators.” That term is broad. If you disturb the soil using power tools or heavy equipment, or even by hand in some contexts, you are an excavator under the law.

You must notify the regional notification center, which in Orange County is Underground Service Alert of Southern California (commonly called DigAlert), before you dig. The free, public number for that is 811.

The timing is specific. In most cases, you must:

1. Call (or submit an online ticket) at least two working days before excavation.
2. Not call more than 14 calendar days before work, or the ticket expires.

Weekends and holidays do not count as working days. If you call on a Friday, you should not plan to dig Monday morning at 7 a.m. Without double checking ticket validity and marking completion.

If you skip this step and dig anyway, you are violating state law. That matters if something goes wrong, but it also matters even if “nothing happens.” You could still face enforcement if an incident later traces back to work you did without a ticket.

Is It Illegal to Dig Without Calling 811 in California?

For any planned excavation that might affect underground utilities, yes, digging without calling 811 is illegal. The law carves out small exceptions, such as some farming activities or very shallow gardening, but the moment you start using power tools, augers, or machinery, you are almost always in regulated territory.

Enforcement in California can include:

- Administrative penalties and fines, which can reach into five figures for serious violations.
- Increased civil liability if you damage a utility line.
- Involvement of the California Underground Facilities Safe Excavation Board in serious cases.

More practically, if you hit a line, the question of “Did you call 811?” will come up immediately. If you did not, the presumption tends to be that you are at fault, even if facility maps were imperfect or the line was shallower than it should have been.

Who Do I Call Before Digging in Orange County?

In Orange County, you contact Underground Service Alert of Southern California by dialing 811 or submitting a ticket at digaalert.org. This triggers notifications to member utility operators who own or maintain buried public facilities in your dig area.

That includes typical public utilities such as:

- Gas distribution lines.
- Electric distribution and service laterals.
- Public water and reclaimed water mains and some service laterals.
- Sewer mains.
- Telecommunications and fiber optic cables that are part of provider networks.

The key point is ownership and maintenance responsibility, not simply the presence of a line. That leads directly into the difference between public and private utility locating.

Public vs Private Utility Locating in California

This is one of the most misunderstood parts of the 811 system. People often assume that if they called 811, "everything underground has been marked." That is not how it works.

Public utility locating occurs when utility operators respond to your 811 ticket and mark the lines they own and maintain up to their demarcation point. For example, an electric utility will typically mark up to the meter. A water utility will mark to the water meter or point of service. A telecom provider will usually mark to the network interface point at the building.

Private utility locating covers anything buried on private property that is not owned or maintained by a public utility or other 811 member. These private facilities can include:

- Power lines from the meter to detached structures, parking lot lighting, or signs.
- Water, fire, and irrigation lines from the meter into private property.
- Private gas lines feeding a pool heater, outdoor kitchen, or guest house.
- Private sewer lines, septic tank laterals, and storm drains on the property.
- Private fiber, data, or security conduit between buildings.

The core difference between public and private utility locating is who does the work and who pays. Public locating in California, triggered by 811, is free to the excavator because utilities fund it. Private locating is not covered by 811; you hire a utility locating company and pay directly.

So when you ask, "Does 811 locate private lines?" the honest answer is: generally no. The phrase "What does 811 not locate?" usually boils down to "Anything the public utilities do not own."

Is Utility Locating Free in California?

If you are talking about the 811 service for public utilities, yes, that utility locating is free in California. You do not pay for the locators who show up to mark gas, electric, and telecom lines that belong to member operators.

You do, however, pay for private utility locating. That includes:

- Lines on the property side of the meter or demarcation point.

- Private campus or HOA infrastructure.
- Private fire or irrigation mains.
- Building-to-building communication or power lines.

For homeowners, the practical takeaway is that calling 811 is always the first step, and it costs nothing. After the public utility markings are done, you evaluate whether you should bring in a private utility locator to find what 811 did not mark.

How Much Does Utility Locating Cost in Orange County?

Public utility locating via 811 is free to you. Utility owners pay for that service as part of their operations.

Private utility locating in Orange County, which is a separate service, typically follows one of two pricing models.

For small residential jobs, like locating private power to a detached garage or verifying a suspected septic tank, many companies use a flat minimum fee. In Orange County, that often falls in the range of a few hundred dollars, depending on travel time and complexity.

For larger or more complex projects, such as **Orange County Utility Potholing** mapping an entire commercial lot or conducting subsurface utility engineering, pricing tends to be hourly or daily. In practice, it is not uncommon to see rates in the low hundreds of dollars per hour, or a day rate that might run into the low thousands for a full day with ground penetrating radar and multiple technicians.

“How much does private utility locating cost?” depends on:

- Site size and access.
- The number and types of utilities suspected.
- Surface conditions (asphalt vs grass vs dense urban clutter).
- Whether you need a formal CAD deliverable or just field markings.

What often surprises people is how cheap locating looks compared with repair costs if you guess wrong.

What Happens If You Cut a Utility Line?

The short answer is that it can be dangerous, expensive, and legally complicated.

If you cut an electrical line, you can cause outages, arcs, and severe injury. If you damage a buried gas line, you risk leaks, evacuations, fire, or explosion. Hitting a fiber optic cable can take down internet service for entire blocks of customers, with associated business losses.

From a cost perspective, “How much does it cost to repair a damaged utility line?” varies wildly. A minor nick to a residential lateral might run a few hundred to a couple thousand dollars. Damaging a major fiber backbone, gas main, or high voltage line can easily reach tens of thousands of dollars, sometimes more, especially if emergency crews are dispatched and roads are closed.

Liability usually lands on the excavator if:

- You failed to call 811.
- You ignored utility markings.
- You did not use reasonable care when digging near marked lines.

So when you ask “Who is liable if I hit a utility line?” the law and the utilities will first look at your 811 ticket history and your excavation practices.

What Is Utility Locating, Really?

Utility locating is the process of finding, identifying, and marking underground infrastructure before excavation. On paper it sounds straightforward. In the field it can be messy and nuanced.

A utility locator’s job is to interpret records, use electronic locating equipment, sometimes use ground penetrating radar, and make judgment calls about where buried pipes and cables run.

A typical workflow looks like this:

1. Review maps or system records when available.
2. Establish known access points, such as manholes, valves, meters, pedestals, or transformers.
3. Use locating equipment to trace lines between points, marking location and sometimes approximate depth.
4. Use different colors of paint and flags to indicate utility type so excavators can understand the site at a glance.

Utility locating matters because buried utilities rarely match old drawings exactly. Construction changes, private additions, and decades of repairs can leave utilities in unexpected places. I have seen situations where a gas lateral passed diagonally across what everyone assumed was a “clear” backyard.



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How Does Utility Locating Work?

Most locating for metallic utilities relies on electromagnetic (EM) locating. The locator either connects a transmitter to a conductive line, such as a cable or metal pipe, or uses induction to energize the line indirectly. A receiver then

picks up the signal and guides the locator along the line.

That is “active” locating, where the locator intentionally puts a signal on one line. There is also “passive” locating that listens for existing signals such as power or radio frequencies. Passive methods are useful for scanning an area quickly but can be less precise.

“How deep can utility locators detect?” depends on several factors: soil conditions, conductor size, frequency used, and equipment quality. Under good conditions, EM locators can identify utilities several meters deep, but accuracy on depth readings tends to degrade with increasing depth and signal noise.

For non-metallic utilities like plastic pipes or some concrete conduits, traditional EM locating cannot directly pick up the line unless a tracer wire was installed. To locate plastic water lines or PVC sewer lines, locators often:

- Insert a traceable rod with a wire inside the pipe and then locate the wire.
- Use a sonde, a small transmitting beacon, pushed through the pipe and tracked from the surface.
- Use ground penetrating radar to see anomalies consistent with buried utilities.

So if you are asking, “Can utility locators find plastic pipes?” the honest, field-tested answer is: often yes, but it requires different tools and techniques, and there are circumstances where certain plastics, depths, or soil conditions make it difficult.

What Is Ground Penetrating Radar Used For?

Ground penetrating radar, or GPR, is a common tool in private utility locating and subsurface utility engineering. A technician moves a cart or antenna across the surface, and the device sends radar pulses into the ground. Reflections from changes in material, such as a pipe, duct bank, or void, return to the antenna and are interpreted in real time or later in software.

GPR is used to:

- Detect non-metallic utilities such as PVC, some concrete pipes, and empty conduits.
- Map trenches, duct banks, and unknown structures.
- Identify voids, buried tanks, and sometimes the approximate location of a septic tank.

“How accurate is ground penetrating radar?” depends heavily on soil conditions, depth, and operator skill. In sandy, dry soils with shallow utilities, it can be very effective and provide good horizontal accuracy. In clayey, wet, or highly conductive soils, penetration depth and signal clarity drop. It is also less precise on depth estimates for deeper targets.

A seasoned technician treats GPR as a powerful complement to EM locating, not a magic x-ray that reveals everything underground.

How Accurate Is Utility Locating?

Accuracy is always a combination of equipment capability, site conditions, and human judgment.

For standard EM-based public utility locating in Orange County, horizontal accuracy in the field is often within a foot or so under good conditions, but no locator will guarantee pinpoint precision. That is why the “tolerance zone” around a marked line exists, and why hand digging or vacuum excavation is required within that zone for sensitive work.

Subsurface utility engineering (SUE) for major projects uses a more formal quality level system, with Quality Level A requiring actual exposure of the utility (potholing or vacuum excavation) to confirm position and depth. Quality Levels B, C, and D rely more on surveying marked lines and interpreting records.

If a locator tells you the mark is within an approximate range and you are trenching close to it, you should assume that some deviation is possible and adjust your excavation method accordingly.

What Do Utility Marking Colors Mean?

When locators paint the ground or place flags, they follow standardized color codes. You can think of these markings as a visual language. Reading them correctly makes a difference.

Instead of another table or long list, focus on a few that come up most in Orange County:

If you see red paint or red utility flags, that typically indicates electric power. So, “What does red paint mean on the ground?” Almost always, it is a warning that electrical lines or lighting cables are beneath that route.

Orange markings point to communication, alarm, signal lines, and fiber optic cables. That is where “What do orange utility flags mean?” comes in. Orange usually means telecom, internet, or related conduits.

Blue is for potable water. Green marks sewer and drain lines. Yellow is used for gas, oil, and other flammable materials. Purple often marks reclaimed water in Southern California, and pink or white can be used for survey and excavation limits.

Which leads naturally to the question: “What is the white paint on the ground for?” White is used to outline the proposed excavation area. In many cases, you must pre-mark your dig area in white before you call 811, so locators know exactly where to focus.

How Long Does Utility Locating Take?

On the public side, once you have a valid 811 ticket, member utilities in California generally have two working days to respond with markings or a “no conflict” notice if they have no facilities in your dig area.

Field time can be surprisingly short for a simple, accessible site. A small residential yard with straightforward public utilities might be marked in less than an hour by each responding operator.

Private utility locating time can range widely. A homeowner asking “How long does utility locating take?” for one suspected private power line to a backyard shed might be looking at one to two hours of on-site work. A commercial property scan using GPR and EM, with mapping delivered afterward, may take a day or more plus office time.

On larger projects, part of the value a good private utility locating company brings is staging the work in phases so excavation is not delayed unnecessarily.

Can I Locate My Own Underground Utilities?

Homeowners can do a few basic things to get a sense of what might be underground. You can walk the site, look for meters, junction boxes, cleanouts, and obvious utility structures. You can review as-built plans if you have them. Some people use inexpensive “stud finder” style devices that claim to locate pipes or wires, though these are limited and can be misleading.

For professional excavation, “Can I locate my own underground utilities?” is not a practical or legal substitute for calling 811. And for private lines on anything more complex than a very simple site, hiring a professional is almost always cheaper than hitting something you missed.

The more accurate question is, “Should homeowners hire a utility locator?” For small landscape projects away from utility entries, probably not. For pools, room additions, retaining walls, major tree planting, or anything close to where utilities enter the property, a private locator can be a smart investment, especially if the property is older or has seen multiple additions.

Do I Need a Permit to Dig in Orange County?

Permit requirements depend on where you are digging and what you are building. If you dig in the public right of way, such as in a sidewalk or street, you will almost always need a permit from the city or county, and those agencies will have their own conditions about 811 compliance **Orange County Utility Locating** and traffic control.

On private property, smaller projects may not require a building or grading permit, but that does not remove your obligation under state law to call 811. The safe assumption is: permit or not, if you are doing real excavation, you need to contact 811.

For larger earthwork or retaining walls, local building codes and zoning regulations come into play. It is wise to confirm with your city building department before starting any significant digging project in Orange County.

How Do You Find Specific Buried Utilities?

Different utilities require slightly different approaches, but the principles are similar.

To locate a buried water line, locators will often start from the meter box, look for tracer wires, and, if present, clip an EM transmitter onto the metallic component. If the line is plastic without a tracer, they may use a push rod or GPR.

Locating a buried gas line usually begins at the meter or regulator, where metallic components are accessible. Gas lines often have tracer wires if they are plastic. For steel lines, EM locating works quite well.

Sewer lines are trickier. To locate a sewer line, locators might use a flushable sonde inserted from a cleanout, then track it along the pipe path. Septic tanks can sometimes be located via GPR or by tracing the main sewer line and looking for anomalies, but field judgment about soil disturbance and property age also matters.

To find a buried electrical line, a locator will typically connect to the line or its protective sheath at a panel, transformer, or accessible junction box, then trace the EM signal across the site. Locating fiber optic cable usually relies on the metallic sheath or tracer wire associated with the cable, plus telecom records for routing.

No method is perfect. That is why careful excavators expose utilities with hand digging or vacuum excavation once they are in the tolerance zone rather than assuming the marks are exact to the inch.

Why Utility Locating Matters Before Excavation

The legal requirement to call 811 in California exists for good reasons. Striking underground utilities is not just about repair bills. It can put workers, neighbors, and emergency responders at risk. It can shut down businesses, cut off life safety systems, and in extreme cases, cause severe injuries or fatalities.

From a project perspective, accidental hits also kill schedules. You can be shut down for days while repairs take place and investigations run their course. Insurance carriers pay attention to claim histories, especially if they see a pattern of work without valid tickets or poor documentation.

At the same time, expecting 811 to handle everything is unrealistic. Public locators do an essential job, but only within their defined scope. For facilities on the customer side of the meter, for campus systems, or for more detailed mapping, a private utility locator in Orange County fills the gap.

If you remember nothing else, remember a simple sequence:

Call 811 early, mark your dig area in white, wait for responses, then consider whether private utility locating is needed for anything that 811 will not mark. Compared with the legal and practical fallout of hitting a line, those steps are simple, inexpensive, and firmly on the right side of California law.



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