Termites do not chew evenly. They tunnel along grain lines, hollow out compression zones, and ignore the parts we would prefer they leave alone. A floor that once felt crisp and quiet can start to bounce, a baseboard separates from the wall, or a door rubs its jamb because the floor under that wall sagged a half inch. When a structural member is still mostly there but no longer trustworthy, sistering becomes one of the most practical ways to restore capacity without dismantling half the house.

I have crawled my share of tight, dusty crawl spaces and low basements where termite galleries look like brown lace. The good news is that floor systems are forgiving if you respect load paths and connections. With a solid plan and the right sequence, you can repair termite damage to a house efficiently, often in a day or two per section, and with minimal disruption upstairs.

## What termites do to joists and why sistering works

Subterranean termites prefer moist, protected timber. Floor joists live between a damp crawl and a conditioned room, which makes them prime targets. Instead of a clean, visible notch, termite damage shows up as softened fibers, fluted surfaces under the subfloor, or galleries hidden behind a webby mud veneer. The wood might look intact on the outside, yet lose half its crush strength and shear resistance.

Sistering works because it restores capacity by sharing load along the span. Rather than trying to rebuild the eaten portion piece by piece, you add a new member that carries the same load path the old one did. When the new joist bears on solid support at each end and is well attached along its length, the composite pair behaves like a healthy joist. It is efficient, less invasive than a full replacement, and often the most cost effective termite damage restoration option.

That said, not every joist should be sistered. If more than about two thirds of the depth is destroyed at midspan, or if the ends have turned to sponge where they sit on a sill plate or in a hanger, replacement or engineered reinforcement may be safer. The entire choice lives in details: extent of damage, span, tributary load, and whether the supports themselves are compromised.

## Confirm the extent before you plan the fix

Termite damage rarely stops where your flashlight beam ends. I carry a scratch awl and a moisture meter, and I use both. A dull awl that sinks in past 1/4 inch into fir or pine tells you the fibers have let go. Moisture above 16 percent invites new infestation and fungal decay, so repair is only half the job if you leave moisture problems in place. Pull a few short runs of insulation, probe both sides of each suspect joist, and look hard at bearing ends, rim joists, and the underside of the subfloor.

If the surface mud trails make it tough to judge, lightly scrape a 12 inch strip along the joist to fresh wood and probe there. Gently tap the subfloor from below with a hammer; hollow drumming often means termite subfloor repair will also be on the list. If a wall sits directly over the joist bay, check studs above for plumb and any cracks in the drywall. Whenever damage reaches a sill or beam, widen your inspection. Termite sill plate repair or termite beam repair can change the repair strategy entirely, because joists cannot do their job without a sound support to bear on.

Coordinate with pest control first. There is no point in a pristine sister if a live colony keeps feeding. After treatment, expect to find brittle mud tubes and dead galleries. Some companies will schedule a post treatment clearance visit, which is useful documentation for permits and resale.

## When sistering is the right call

Sistering is usually appropriate when the following are true:

- Damage is localized, not uniform along the entire span.
- The joist still has some sound wood to fasten to along most of its length.
- The ends can either bear properly on solid support or be reestablished with hangers and blocking.
- Loads are typical residential, not special cases like a heavy masonry hearth or a large aquarium.
- Access allows you to position and fasten full length or near full length sisters.

Many homes do well with full length sisters that match the original joist species and size, often SPF No. 2 or better in tract homes, sometimes Douglas fir in older builds. Engineered lumber like LVL or LSL stays straight and offers high strength in a tighter dimension, which is handy in cramped spaces. Steel angles or channels can be practical for short reinforcement near points of high shear or where clearances forbid new full depth wood, but steel demands careful corrosion protection in damp spaces and isolation from pressure treated lumber to avoid galvanic issues.

## Load paths matter more than brand names

Think like gravity. Every pound from above wants to travel down through flooring, subfloor, joists, and into beams, sills, and foundation. Sistering only works if you reestablish that continuous path. This shows up in three places:

- Bearing: The sister should bear fully at each end, on a sill, beam, or in a properly installed hanger. Floating a sister in the middle of nowhere turns it into an expensive stiffener, not a structural member.
- Lapping: If you cannot reach full bearing because of ducts or masonry, lap at least 3 to 4 feet past the worst damage in each direction, more on longer spans. When in doubt, overreach, because fasteners transfer load gradually.
- Connections: The interface between old and new must be tight, mechanically fastened, and ideally glued with a construction adhesive rated for wood to wood structural use. Screws or bolts do the heavy lifting across the shear plane.

I have opened floor systems that looked carefully repaired, only to find a sister that stopped 2 feet short of a bearing wall with six nails and hope. It felt stiff for a year, then cracked at the old joist’s weak spot. Avoid that trap by securing end bearing or extending past the damage with a thoughtful connection plan.

## Tools, fasteners, and materials that earn their keep

For termite wood repair in joists, I like structural screws because they are fast, strong, and do not require predrilling in most cases. A 1/4 inch diameter screw, 3.5 to 6 inches long depending on thickness, pulls a sister tight without splitting. Through bolts with washers work well on thicker members or when you need a measurable clamping force, but access to both sides is mandatory. Use exterior rated or hot dipped galvanized hardware, especially when any member is pressure treated. Powder actuated fasteners have no role here.

Wood choice matters. If the joist runs near soil or sits on a masonry ledge that sees ground moisture, use pressure treated for the sister or isolate it with a barrier like a sill gasket. If you attach treated wood to untreated, separate dissimilar metals and use hardware approved for the ACQ chemistry. For long spans or when you need a straighter member, LVL or LSL makes life easier because it will not arrive with a half inch crown that fights you the entire way.



Adhesives belong in the kit. A bead of high quality construction adhesive, applied in a **experienced termite inspector Watsonville** serpentine along the old joist’s face, helps share load and reduce squeaks. In severely checked or locally crushed areas, wood epoxy consolidants can harden the remaining fibers enough to accept fasteners, though do not ask epoxy alone to carry structural loads.

## Safety and shoring before you loosen a single fastener

If a joist has sagged under a load bearing wall, jack it carefully and slowly. I prefer a temporary beam made from doubled 2x8 or a LVL with screw jacks or bottle jacks every 4 to 6 feet, bearing on solid blocking or pads, not dirt. Bring the floor up no more than 1/8 inch per day when realignment is needed. This slow pace prevents cracking tile upstairs or stressing brittle plaster. Even when you are not lifting, shoring under the section you are working on removes surprise from the equation while you cut out rot or drive the first fasteners.

Electric hazards hide in notches and bored holes. Kill circuits feeding that bay, or at least verify wire paths and protect them with nail plates once done. In older homes, knob and tube appears in the strangest places under floors. Respect it, and plan a licensed electrician visit if relocation is required.

## Step by step sistering sequence that works

- Treat and prep: After termite treatment, scrape mud, vacuum dust, then treat adjoining sound wood with a borate solution per label. Let it dry. If the subfloor is punky on the underside, cut back to sound panels and plan for termite subfloor repair along with the joist work.
- Shore and align: Set temporary supports under the span. If needed, apply gentle lift to remove deflection, checking upstairs for doors and finishes as you go.
- Fit the sister: Cut a full length sister if possible. Test fit so it contacts the subfloor tightly along the top edge. Plane high spots on the old joist or shim with structural shims near bearing points, never with a wedge of cedar tacked into the middle of nowhere.
- Glue and fasten: Run adhesive along the old joist. Clamp the sister tight to the old member with bar clamps if space allows. Drive structural screws in a staggered pattern every 8 to 12 inches, starting near one support and working across. Add bolts at midspan on longer sisters if specs or engineering call for them.
- Reestablish bearing and load paths: Set the sister in new hangers at beam pockets or add a ledger and hangers where heads are low. Where the joist bears on a sill, ensure at least 1.5 inches of solid bearing. Add blocking or bridging to tie the bay back into the floor system and reduce twist.

This compact sequence holds up across most termite floor joist repair projects, and it leaves room to adapt to surprises, like a duct shoved through a joist notch that the original framer never should have cut.

## Connection details that separate sturdy from sketchy

The top edge of a sister should be tight against the subfloor. That line of contact keeps the floor flat and shares compression. If the old joist has a pronounced crown or sag, you may need to rip a slight taper on the sister or dress the top edge with a hand plane. Do not rely on a line of shims along the middle of the span; shims belong at supports.

Fastener patterns matter. Drive screws in a gentle zigzag, two per location spaced 1.5 to 2 inches from top and bottom edges. Avoid clustering fasteners, which can split the wood and weaken the net section. Keep a minimum edge distance of about 1.5 inches for 2x framing. If you use bolts, 1/2 inch diameter with washers, spaced 16 to 24 inches along the span, offers solid clamping. Tighten them after the adhesive sets for a squeak free interface.

At supports, use joist hangers sized for both members where possible. Nails or screws must be those the hanger manufacturer specifies. Mixing drywall screws into a structural hanger is a common and dangerous mistake. When bearing on masonry, set a sill gasket under the wood and ensure a flat, clean surface. If the sill or rim shows damage, you may need partial termite sill plate repair before the joist work truly counts.

## When termites picked on more than the joists

Joists rarely live alone. Here is how adjacent elements complicate or guide the plan:

- Subfloor: If the underside crumbles under a putty knife, cut back to clean wood. For 3/4 inch subfloor, tie new panels back to a joist or add 2x cleats to carry the patch edges. Fasten the subfloor to the new sister to pull everything flat. This is where termite subfloor repair protects your new work from bending under a weak skin.
- Walls: A nonbearing partition that sits between joists will not mind mild floor movement. A bearing wall that rides directly over a joist needs careful shoring and may need supplemental studs below or a short beam if joist spacing changed. Termite wall repair usually involves sistering studs or replacing plates above where the joist failed.
- Drywall and finishes: After treatment and repair, expect some nail pops or minor cracks. Termite drywall repair after termite treatment is usually light, but budget time for it, especially if you lifted a sagged floor back into plane.
- Beams and sills: If a girder shows termite galleries, plan reinforcement first there. A healthy joist on a rotted beam is a strong leg on a broken stool. Sistering beams can mean flitch plates, LVLs, or a parallel wood member with proper posts and footings. Termite structural repair that includes sills can involve jacking the house, temporary cribbing, and segmented plate replacement. That crosses into the realm where a structural termite repair specialist or engineer becomes essential.
- Attic and other framing: Where colonies spread, you may see termite attic wood repair needs as well, especially around eaves that saw roof leaks. The sistering logic is the same, but the loads, spans, and fire blocking rules change. Keep that in mind if you coordinate a whole house termite framing repair effort.

## Moisture control and prevention, the unsung half of the job

Termites love moisture. Without addressing it, even the best carpentry becomes a bandage. Fix plumbing leaks. Regrade soil so water runs away from the foundation. In a crawl space, lay a continuous vapor barrier, at least 6

mil poly, taped at seams, and consider closing vents and adding a dehumidifier if you live in a humid climate. In dry climates, vented crawls can work if ducts are sealed and ground moisture is low. Where wood bears directly on concrete or masonry, isolate with a proper barrier and keep grade below sill height.

Borate treatments applied to accessible wood provide long term protection. They diffuse into the wood and deter both termites and many fungi. Follow label rates and do not paint or seal treated members until the chemical has migrated and dried per instructions.

## Permits, engineering, and code checkpoints

Many jurisdictions consider sistering like for like a minor repair, while others require a permit when you touch structural elements. If the repair involves more than a few joists, if you are altering load paths, or if you are raising the floor level, call the building department. An inspector who understands termite repairs will ask about the pest clearance, fastener types, and whether the sisters bear correctly. In older homes with questionable spans, a quick check against span tables or a short consult with an engineer can prevent future sag and callbacks.

Do not notch or bore a sister beyond code limits. Holes belong in the middle third of the depth and away from top and bottom edges. Notches near supports are restricted and often not allowed in engineered lumber. These rules keep capacity where it belongs, and ignoring them can undo the point of the repair.

## Costs, time, and what a realistic day looks like

Costs vary by access and scope. In a straightforward crawl with a single compromised joist, sistering with framing lumber, hangers, adhesive, and fasteners might run a few hundred dollars in materials and several hours of labor. Add subfloor patches, drywall touch up, and pest treatment, and a small project lands in the 800 to 2,000 dollar range. If multiple joists under a kitchen sink rotted over years of leaks, the tally climbs quickly to 3,000 to 7,000 dollars because cabinets and flooring complicate access. Termite beam repair or sill plate segments push higher, often requiring multiple days, jacks, and temporary walls.

Timeline wise, a crew of two can often treat, shore, sister one or two joists, and button up minor subfloor repairs in a day, not counting pest control lead time. Add a day for drying after borates or consolidants if needed, and another for finishes. Expect more time if you need engineered lumber deliveries or custom hangers.

## Hiring help and finding the right local expertise

Search phrases like termite repair near me or termite damage contractor near me will produce a mix of pest control companies and carpenters. You want both, and you want them to coordinate. A competent wood repair contractor experienced with termite damage will talk in specifics about shoring, bearing, fasteners, and moisture control. Ask to see pictures of past termite floor joist repair jobs, not just deck rebuilds. If you suspect structural complexity, look for structural termite repair near me and confirm they have an engineer on call.

Local termite damage repair pros should be comfortable with permits in your town. They should volunteer to check the sill and beam where the joists land, and not just the obvious soft spots. If a company promises miracle foams or magic sprays after which no carpentry is needed, be wary. Termite repair services and termite wood repair go hand in hand. Pest treatment starves the colony, carpentry restores structure, and both are needed to repair termite damage to a house well.

Many homeowners prefer a one stop shop. Some outfits bundle pest treatment and termite damage restoration with in house carpentry. If you go that route, confirm that the same team will handle termite sill plate repair, termite subfloor repair, and sistering, not a patchwork of subs who meet each other for the first time under your

home. A local termite damage repair contractor who has worked on your neighborhood’s housing stock understands the quirks that generic crews miss.

## A practical anecdote from the crawl

In a 1950s ranch, a dishwasher leak went unnoticed for months. The subfloor swelled, the joist tops softened, and an interior partition settled half an inch. Termite tubes tracked along the joist sides from a damp crawl. We treated first, then cut back subfloor to clean, square edges. Two joists were eaten at midspan, a third showed damage at the sill. We installed full length LVL sisters on the first two, glued and screwed every 8 inches, and used hangers at both ends. The third got a shorter LVL sister lapped 5 feet past the eaten zone and a new treated ledger to reestablish bearing at the sill where the plate had a bad pocket. We lifted the partition with a temporary wall over two days, 1/8 inch at a time, then tied the new subfloor into the sisters. Upstairs, a single drywall crack at a doorway needed patching. That kitchen has felt solid for six years, and the crawl now wears a poly vapor barrier with a small dehumidifier keeping wood moisture below 12 percent.

The lesson was simple. Respect the load path, go a bit longer rather than shorter on lapping, and never forget the water that invited the termites in the first place.

## A concise kit that simplifies the job

- Structural screws 1/4 inch diameter in 3.5 to 6 inch lengths, hangers and approved fasteners, and 1/2 inch bolts with washers for long spans
- LVL or straight framing lumber for sisters, plus treated stock where wood meets masonry or damp conditions
- High quality construction adhesive and borate wood treatment, with disposable brushes and pump sprayer
- Temporary shoring materials, jacks, pads, and safety gear including eye protection and respirator for dusty crawls
- Cutting and shaping tools, clamps for pull up, a good impact driver, and a sharp hand plane for fine fitting

Keep the kit lean, but do not skimp on clamps or adhesive. Those two make a visible difference in how well the sister bears on the subfloor and how quiet the floor feels later.

## Edge cases and judgment calls

- Very short bearing: In some older basements, the joist sits in a shallow pocket in a stone wall. It may be impossible to slide in a full length sister. A solution is to set a ledger on the wall with wedge anchors and hang both old and sistered members, or to run a parallel beam with posts just inboard of the wall. The decision depends on clearance and whether you want to touch masonry.
- Mechanical clashes: A duct that hogs a third of a joist depth is already a problem. Sistering must restore net section. You may need to move the duct or run a flitch plate on the opposite face to bypass the notch. Coordinate with HVAC rather than forcing the sister to wrap uglily around the conflict.
- Steel reinforcement: Where clearances are tight, a steel angle lagged to the joist’s bottom edge can rescue stiffness. Protect steel from corrosion, and use an isolation strip if the joist or sill is treated. An engineer’s sketch is money well spent here.
- Old growth vs new stock: A 2x8 from 1920 often measures larger and acts stiffer than a modern 2x8. If you sister with equal nominal size today, expect a slight mismatch. Ripping the sister to match height or stepping up to LVL helps keep the subfloor contact even.

- Fire blocking and insulation: After sistering, reinstall fire blocking where it was, and do not stuff batts so tightly that they trap moisture against fresh wood. Air seal plumbing penetrations to reduce future condensation that can invite pests.

## Living with the fix and watching for telltales

Once repaired, the floor should feel crisp again. Keep an eye on humidity, especially in seasons when crawl spaces get damp. A cheap sensor downstairs and one upstairs tells you whether your ventilation or dehumidification plan works. Check the band joist and sill annually for new trails. If you see fine dust near baseboards or wings of swarmer termites in spring, call your pest pro for a checkup. Small vigilance keeps you from needing another round of termite framing repair later.

## Bringing it all together

Sistering is as much about judgment as it is about lumber and screws. It asks you to see the whole structure, to choose where to lap and where to bear, and to pace the work so the house above barely notices. Done right, it integrates with other pieces of termite damage repair, like subfloor patches, sill plate segments, and a little drywall touch up after termite treatment. Whether you take this on yourself with a careful plan or bring in local termite damage repair experts, focus on three anchors: stop the pests, restore the load path, and control moisture. The rest becomes straightforward carpentry, and your floors will thank you with every quiet step.