CALGARY FLOOR INSTALLERS

Subfloor Preparation

Subfloor repair, levelling, moisture barriers, and preparation for new flooring in Calgary homes

21 Expert Answers from Floor IQ

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Q1

Can I encapsulate old asbestos tile in my Calgary basement instead of removing it?

Yes, encapsulation is often the preferred approach for asbestos-containing floor tiles in Calgary basements. Encapsulating (covering) intact asbestos tiles is generally safer, more cost-effective, and less disruptive than removal, provided the existing tiles are in good condition and firmly adhered to the subfloor.

Encapsulation involves installing new flooring directly over the existing asbestos tiles using appropriate underlayment and installation methods. This approach leaves the asbestos undisturbed, which eliminates the risk of airborne fiber release that occurs during removal. Many Calgary homes built in the 1960s and 1970s have 9x9-inch vinyl floor tiles containing asbestos, and encapsulation has become the standard recommendation when these tiles are discovered during basement renovations.

The key requirements for successful encapsulation include ensuring the existing tiles are firmly bonded (no loose or lifting tiles), the surface is clean and level, and you use flooring materials and installation methods that won't require future penetration of the asbestos layer. Floating floors like luxury vinyl plank (LVP), engineered hardwood, or laminate work exceptionally well for encapsulation because they don't require nails, screws, or adhesives that would penetrate the asbestos tiles. A quality underlayment creates an additional barrier between the old and new flooring.

Calgary's climate actually favors encapsulation over removal because basement moisture conditions can make asbestos removal more complex and expensive. Removal requires complete containment, negative air pressure systems, and specialized disposal - costs that often run $8-15 per square foot before you even install new flooring. Encapsulation typically adds only $1-2 per square foot to your flooring project for appropriate underlayment and preparation.

Important limitations exist for encapsulation. If any tiles are loose, cracked, or lifting, those areas must be professionally addressed before encapsulation. You cannot encapsulate if the floor level will create problematic transitions to adjacent rooms or if ceiling height becomes an issue. Future renovations become more complex because any work that disturbs the encapsulated layer requires asbestos protocols.

Professional assessment is essential even for encapsulation projects. A qualified asbestos consultant should confirm the tiles contain asbestos, evaluate their condition, and provide written recommendations for encapsulation methods. This documentation protects you if you sell the home and ensures proper disclosure to future owners.

For Calgary basement conditions specifically, LVP or SPC flooring over a moisture-resistant underlayment provides excellent encapsulation while handling basement humidity and potential moisture migration through the

concrete slab. This combination gives you a beautiful, durable floor while safely managing the asbestos tiles underneath.

Need help finding a flooring installer experienced with encapsulation projects? Calgary Floor Installers can match you with contractors familiar with asbestos protocols and proper encapsulation methods.

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Q2

How much does subfloor replacement cost in Calgary?

Subfloor replacement in Calgary typically costs between $4 and $8 per square foot for materials and labour, with most full-home projects landing in the $5,000 to $12,000 range depending on the scope of work. That price includes removing the existing subfloor, inspecting and repairing joists as needed, and installing new plywood or OSB sheathing to create a solid foundation for your finished flooring.

The biggest cost variable is whether the joists underneath are in good condition or need repair. If the subfloor plywood is damaged from moisture or age but the joists are sound, you are looking at the lower end of that range — roughly $4 to $6 per square foot installed. However, if joists need sistering (adding a new joist alongside a damaged one for structural reinforcement) or full replacement, costs can climb to $8 to $12 per square foot or more. Joist repair alone runs $100 to $300 per joist depending on accessibility. In older Calgary neighbourhoods like Ramsay, Inglewood, Killarney, and Bowness, subfloor replacement is more common because many of these homes were built in the 1940s through 1960s with thinner plywood or even plank-style subfloors that have deteriorated over decades of Calgary's extreme temperature swings.

Material costs for the subfloor sheathing itself are relatively modest — 3/4-inch tongue-and-groove plywood runs about $1.50 to $2.50 per square foot at Calgary building supply stores, while 3/4-inch OSB is slightly cheaper at $1.00 to $1.80 per square foot. The labour to tear out old subfloor, clean up, inspect framing, and install new sheathing is where most of the cost lies. Expect $2.50 to $5.00 per square foot for labour alone, with the higher end reflecting difficult access (tight basements, multi-storey homes) or extensive joist work.

Additional costs to budget for include disposal of the old subfloor material ($300 to $800 for a bin rental in Calgary), any necessary structural engineering assessment if significant joist damage is found ($500 to $1,500), and the building permit fee if structural modifications are involved (typically $150 to $400 through the City of Calgary). If the old subfloor was concealing moisture issues — common in Calgary basements where slab moisture migrates upward — you may also need mould remediation before the new subfloor goes down.

Subfloor replacement is not a DIY project for most homeowners. It involves structural framing knowledge, proper fastening patterns, and ensuring the finished surface is flat to within 3mm over 1.8 metres for the new flooring to perform correctly. A professional installer will also check that the subfloor is properly secured to prevent squeaking down the road. If you are planning a flooring renovation and suspect your subfloor needs attention, getting a professional assessment before choosing your finished flooring is the smartest first step. Browse flooring contractors in the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring to get matched with installers who can assess your subfloor and provide an accurate quote.

Q3

How do I know if my Calgary home's subfloor needs replacing before new flooring?

The most reliable signs that your subfloor needs replacing are soft or spongy spots when you walk across the floor, visible water damage or staining on the underside, persistent squeaking that does not respond to screw-down repairs, and noticeable dips or humps that you can feel through the existing flooring. Any of these indicate the subfloor has been compromised and should be addressed before new flooring goes down — installing over a failing subfloor is a recipe for premature failure of your new floor.

The walk test is your simplest diagnostic tool. Remove the existing flooring (or walk on it carefully if it is still in place) and pay attention to how the floor feels underfoot. A solid subfloor should feel firm and uniform. If you feel soft spots, bouncing, or flexing between joists, the plywood or OSB has likely delaminated from moisture exposure. This is particularly common in Calgary homes where basement moisture has wicked up into the subfloor over

years, or where a plumbing leak went unnoticed. Calgary's extreme dry winters followed by humid spring thaw create a seasonal moisture cycle that stresses subfloor materials, especially in homes without proper vapour barriers.

Visible damage indicators include dark staining (water damage), white or greenish patches (mould), swollen or crumbling edges on OSB panels, and delamination where the layers of plywood are separating. Pull up a section of old flooring in a suspect area and inspect the subfloor surface directly. In older Calgary neighbourhoods — Hillhurst, Sunnyside, Capitol Hill, Forest Lawn — homes built before the 1970s sometimes have plank-style subfloors made of individual boards rather than sheet goods. These plank subfloors often have gaps between boards, are not tongue-and-groove, and may be too uneven for modern floating floors without overlaying with new plywood.

The straightedge test checks for flatness. Lay a 6-foot straightedge or level across the subfloor in multiple directions. For floating floors like LVP, laminate, or engineered hardwood, the subfloor must be flat to within 3mm over 1.8 metres. For tile, the tolerance is even tighter. If you find dips or humps beyond these tolerances, the subfloor may need patching with self-levelling compound, sanding down high spots, or replacement of damaged sections.

Moisture testing is essential in Calgary basements and any area where water damage is suspected. A pin-type moisture metre should read below 12% for plywood subfloors before any wood-based flooring is installed. Readings above 14% indicate an active moisture problem that must be resolved before proceeding. Calgary basement slabs are notorious for transmitting moisture upward, especially in spring when snowmelt saturates the soil around foundations.

If your subfloor shows any of these warning signs, have a professional flooring installer assess the situation before committing to new flooring. A thorough subfloor inspection typically costs nothing as part of a flooring estimate, and it can save you thousands in avoided failures. Calgary Floor Installers can match you with local flooring professionals who will evaluate your subfloor and recommend the right preparation for your project.

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Q4

Does Calgary's 1.2 metre frost depth cause basement slab cracking that affects flooring?

Yes, Calgary's deep frost penetration — exceeding 1.2 metres in most of the city — absolutely contributes to basement slab cracking, and those cracks can directly affect the performance and longevity of flooring installed over the slab. Frost heave occurs when moisture in the soil around and beneath the foundation freezes and expands, exerting enormous pressure on the concrete. While modern footings are poured below frost depth to prevent structural movement, the basement slab itself is a relatively thin concrete pour (typically 3 to 4 inches) that sits on or near grade and is susceptible to cracking from soil movement, settlement, and seasonal freeze-thaw cycling.

Calgary's climate makes this problem more pronounced than in many other Canadian cities. The combination of deep frost, clay-heavy soils in many Calgary communities (particularly in the south — Shawnessy, Sundance, Cranston, Auburn Bay — and northwest — Tuscany, Rocky Ridge), and dramatic chinook-driven temperature swings means the soil beneath and around your foundation is in constant seasonal motion. Chinooks can swing temperatures 20 to 30 degrees Celsius in a matter of hours, causing rapid surface thaw followed by refreezing. Over years, this cycling creates and widens hairline cracks in basement slabs.

How slab cracks affect different flooring types varies significantly. **Tile and stone** are the most vulnerable — cracks in the slab will telegraph directly through rigid tile installations, cracking grout lines and sometimes splitting tiles themselves. This is why an anti-crack membrane like Schluter Ditra or a comparable crack isolation product is strongly recommended for any tile installation over a Calgary basement slab. The membrane absorbs minor slab movement without transmitting it to the tile above. Budget an extra $2 to $4 per square foot for a quality crack isolation membrane. **LVP and floating floors** are far more forgiving because they are not bonded to the slab — they float above it and can accommodate minor slab movement without damage. This is one of the many reasons LVP is the go-to basement flooring recommendation in Calgary. **Engineered hardwood glued to concrete** falls somewhere in between — the adhesive bond can be stressed by slab movement, potentially causing boards to pop loose over time.

Hairline cracks (less than 1/8 inch wide) in a Calgary basement slab are extremely common and generally not a structural concern. They do not necessarily prevent flooring installation, but they should be assessed for moisture migration — water can wick through even hairline cracks. **Larger cracks** (wider than 1/4 inch), cracks with vertical displacement (one side higher than the other), or cracks that are actively growing indicate more significant foundation movement and should be evaluated by a structural engineer before any flooring work proceeds.

Before installing flooring over a cracked Calgary basement slab, patch cracks with a flexible polyurethane or epoxy filler, conduct a moisture test (calcium chloride or relative humidity probe), and install an appropriate moisture

barrier. For floating floors, a 6-mil polyethylene vapour barrier is the minimum. For glue-down installations, a moisture-mitigating primer or membrane may be required. A professional flooring installer experienced with Calgary basement conditions will know exactly how to assess and prepare your slab. Find local flooring contractors through the Calgary Construction Network at calgaryconstructionnetwork.com/directory?trade=flooring.

Q5

What subfloor preparation is needed before installing flooring on a Calgary basement concrete slab?

Every Calgary basement slab requires at minimum a moisture test, crack repair, levelling assessment, and a vapour barrier before any flooring goes down — skipping any of these steps is the most common cause of basement flooring failures in Calgary. The specific preparation beyond these basics depends on the flooring type you are installing, but the fundamentals are the same whether you are putting down LVP, engineered hardwood, tile, or carpet.

Step one is always moisture testing. Calgary basement slabs transmit moisture upward from the surrounding soil, and this moisture can destroy flooring from underneath without any visible warning until it is too late. The two standard tests are the calcium chloride test (measures moisture vapour emission rate — anything above 3 lbs per 1,000 square feet per 24 hours requires mitigation) and the relative humidity probe test (readings above 75% RH within the slab require mitigation). You can buy calcium chloride test kits at Calgary building supply stores for about $25 to $40 each — use at least three kits per 1,000 square feet, placed in different areas. Do not skip this step even if the basement has never flooded. Subsurface moisture migration is invisible and constant.

Step two is crack repair and patching. Fill any cracks with a flexible polyurethane crack filler — not rigid epoxy, which will crack again as the slab moves seasonally from Calgary's freeze-thaw cycling and chinook temperature swings. Chip away any loose concrete, vacuum out debris, and fill. For larger cracks (over 1/4 inch wide) or cracks with vertical displacement, consult a foundation specialist before proceeding.

Step three is levelling. Check the slab for flatness using a 6-foot straightedge or level. Most floating floors require the slab to be flat within 3mm over 1.8 metres. Tile is even more demanding. Low spots and high spots are corrected with self-levelling compound ($2 to $5 per square foot depending on thickness needed) or grinding. Calgary basement slabs, particularly in homes built before the 1990s, are frequently out of level by significant margins.

Step four is the vapour barrier or moisture mitigation layer. For floating floors (LVP, laminate, engineered hardwood), a 6-mil polyethylene vapour barrier is the minimum — lay it across the entire slab with seams

overlapped 6 to 8 inches and taped. Many quality underlayments designed for basement use have an integrated vapour barrier. For glue-down engineered hardwood, a moisture-mitigating primer or membrane rated for the slab's moisture level is required instead, since a loose poly sheet would prevent adhesion. For tile, the thinset and an anti-crack membrane like Schluter Ditra provide both crack isolation and moisture management. For carpet, a quality moisture-barrier pad specifically rated for concrete slab installation is essential to prevent musty odours.

Optional but recommended: insulated subfloor panels. Products like Dricore or similar raised subfloor systems provide an air gap above the slab, built-in moisture management, and thermal insulation. They add $3 to $5 per square foot but make the basement floor significantly warmer underfoot — a meaningful comfort upgrade during Calgary's five-month winter. If you are planning a flooring project on a Calgary basement slab, getting a professional assessment of your slab conditions is the smartest starting point. Get matched with a flooring professional for a free estimate through Calgary Floor Installers.

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Q6

Should I use a plywood subfloor or Dricore panels in my Calgary basement?

For most Calgary basements, Dricore panels are the better choice — they install faster, provide built-in moisture management, and deliver superior thermal comfort compared to a traditional plywood-over-sleeper subfloor. That said, plywood subfloors have their place, particularly if you are installing a nail-down or heavily glued flooring that requires a continuous plywood surface. The right choice depends on your finished flooring type, budget, and basement conditions.

Dricore panels are engineered specifically for basement slab installations. Each 2x2-foot panel consists of an OSB or engineered wood top bonded to a dimpled plastic moisture barrier on the bottom. The dimples create a small air

gap (roughly 1/4 inch) above the concrete, allowing moisture vapour to dissipate rather than getting trapped against the flooring. This air gap also provides a thermal break that makes the floor noticeably warmer underfoot — a significant advantage during Calgary's long winters when basement slabs stay cold for months. Dricore panels interlock with tongue-and-groove edges, sit directly on the slab without fasteners, and can be installed in a typical Calgary basement (600 to 800 square feet) in a single day. At roughly $3.50 to $5.00 per square foot for the panels themselves, plus minimal labour if you hire a professional, total installed cost runs about $4.50 to $7.00 per square foot. They work beautifully under LVP, laminate, engineered hardwood (floating), and carpet.

A plywood subfloor over sleepers is the traditional approach and still has advantages in certain situations. Pressure-treated 2x4 sleepers are laid flat on the slab (shimmed as needed for level), a 6-mil poly vapour barrier goes over the slab between the sleepers, and 3/4-inch tongue-and-groove plywood is screwed to the sleepers. This creates a more robust, fully structural subfloor that can accept nail-down hardwood installation — something Dricore cannot do. However, it is more labour-intensive, takes longer to install, and eats up more headroom (about 1.5 inches of total height versus Dricore's approximately 1 inch). Material and labour costs for a plywood-over-sleeper subfloor in Calgary run about $5 to $9 per square foot installed. Some homeowners also add rigid foam insulation between the sleepers for additional thermal performance, which adds another $1 to $2 per square foot.

Calgary-specific considerations favour Dricore in most situations. Calgary basement slabs are prone to moisture migration year-round, and the Dricore air gap is purpose-built to handle this. The thermal break is genuinely appreciated when your slab is cold from October through April. And since most Calgary homeowners are choosing LVP or engineered hardwood for basements — both of which work perfectly over Dricore — the plywood-over-sleeper approach is often overkill. However, if you want to install solid-look nail-down engineered hardwood, or if your slab is severely uneven and needs a structural subfloor to create a level surface, plywood over sleepers is the better path.

Whichever system you choose, always start with a moisture test of the slab and address any cracks or active water issues before installation. If you need help deciding which approach is right for your basement, Calgary Floor Installers can connect you with local flooring professionals who assess Calgary basements every day.

- Canadian Closet

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Q7

How much does it cost to level a subfloor in a Calgary home before new flooring?

Subfloor levelling in Calgary typically costs between $2 and $6 per square foot, with most projects falling in the $1,500 to $5,000 range for a typical room or basement area. The final cost depends heavily on how uneven the subfloor is, the size of the area, and whether you are working on a concrete slab or a wood-framed subfloor — each requires different techniques and materials.

Self-levelling compound over concrete is the most common levelling method for Calgary basements and slab-on-grade homes. The compound is mixed to a pourable consistency and flows across the slab, filling low spots and creating a flat, smooth surface. Material cost for self-levelling compound runs about $1.50 to $3.00 per square foot at 1/4-inch thickness — thicker pours cost proportionally more. Professional labour adds $2 to $4 per square foot, bringing the total installed cost to roughly $3 to $6 per square foot depending on the thickness needed and the complexity of the pour. A 500-square-foot Calgary basement that needs an average of 1/4 to 1/2 inch of levelling compound would run approximately $1,500 to $3,000 all in. The compound needs 4 to 24 hours to cure depending on the product and thickness before flooring can be installed.

Levelling a wood-framed subfloor is a different process. Minor high spots on plywood or OSB subfloors can be sanded or planed down ($1 to $2 per square foot). Low spots between joists are shimmed from below or filled with patching compound from above. If the subfloor is severely uneven due to deflecting joists, the joists themselves may need sistering (reinforcing with new lumber), which is more involved and can run $100 to $300 per joist. In older Calgary homes — particularly bungalows in communities like Banff Trail, Capitol Hill, Haysboro, and Acadia built in the 1950s and 1960s — the original subfloor is often thinner than modern standards and may have developed significant unevenness over six or seven decades of settlement.

The tolerance you need to hit depends on your flooring type. Floating floors (LVP, laminate, engineered hardwood) require the subfloor to be flat within 3mm over 1.8 metres. Tile demands even tighter flatness — lippage in the subfloor translates directly to lippage in the finished tile. Carpet is the most forgiving, but even carpet will show bumps and dips if the subfloor is badly uneven.

Factors that increase levelling costs include: very thick pours (anything over 1 inch of self-levelling compound may need to be done in multiple lifts), contaminated concrete that requires grinding or priming for the compound to bond, and difficult access (second-storey subfloors requiring materials to be carried upstairs). Also be aware that moisture testing should always be done on a concrete slab before pouring levelling compound — if the slab is too wet, the compound can fail to bond or trap moisture beneath the finished floor.

Subfloor levelling is a professional task in most cases. While small patches are manageable for a handy homeowner, pouring self-levelling compound over a large area requires speed, proper mixing, and experience to get right — the compound sets quickly and mistakes are difficult to fix. Browse flooring contractors in the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring for professionals who can assess your subfloor and provide an accurate levelling estimate.

Q8

Can I install flooring directly on a Calgary basement slab or do I need a vapour barrier?

You absolutely need a vapour barrier — installing any flooring directly on a bare Calgary basement slab without moisture protection is one of the most common and costly mistakes homeowners make. Calgary basement slabs transmit moisture upward from the surrounding soil constantly, even if the basement has never had visible water or flooding. This moisture vapour migration is invisible but relentless, and it will damage flooring from underneath over time if not properly managed.

Why Calgary slabs are especially prone to moisture issues: Calgary sits on clay-heavy soils in many areas, and the deep frost line (exceeding 1.2 metres) means the soil around your foundation goes through dramatic freeze-thaw cycles every year. When frozen soil thaws in spring, moisture content around the foundation increases significantly. Even in summer, the temperature differential between the cool slab and the warmer interior air creates condensation at the slab surface. Many Calgary homes built before the 1990s have slabs that were poured without an underslab vapour barrier — a practice that was common at the time but means these older slabs transmit more moisture than newer construction.

The minimum vapour barrier for floating floors (LVP, laminate, floating engineered hardwood) is a 6-mil polyethylene sheet laid across the entire slab with seams overlapped 6 to 8 inches and sealed with poly tape. This is an inexpensive but essential layer — a roll of 6-mil poly costs about $50 to $100 for a typical basement and takes under an hour to install. Many quality underlayment products designed for basement use include an integrated vapour barrier on the bottom face, which simplifies installation by combining the moisture protection and cushion layers into one product. If your underlayment has an integrated vapour barrier, you do not need a separate poly sheet.

For glue-down engineered hardwood, you cannot use a loose poly sheet because the flooring needs to bond to the slab through adhesive. Instead, apply a moisture-mitigating primer or membrane specifically rated for concrete slab applications. Products like Bona R410, Mapei Planiseal VS, or similar primers seal the slab surface and

prevent moisture from reaching the adhesive and wood. These primers run $0.50 to $1.50 per square foot for material and should be applied by a professional.

For tile installations, the thinset mortar itself provides some moisture resistance, but an anti-crack membrane like Schluter Ditra (which also provides moisture management) is strongly recommended on Calgary basement slabs. The membrane handles both moisture and the minor slab cracking that Calgary's frost-heave cycling causes.

For carpet, use a quality moisture-barrier carpet pad rated for concrete slab installation. Standard carpet padding will trap moisture against the carpet backing, leading to mould growth and musty basement odour — a problem that is very common in Calgary basements where the wrong pad was used.

Before choosing your vapour barrier approach, always start with a moisture test of the slab. If moisture levels are elevated (above 3 lbs per 1,000 sqft on a calcium chloride test, or above 75% RH on an in-slab probe test), you may need more aggressive moisture mitigation beyond a basic poly sheet. Need help assessing your basement slab conditions? Calgary Floor Installers can match you with local flooring professionals who specialize in Calgary basement installations.

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Q9

What moisture level is too high for the subfloor before installing hardwood in Calgary?

For a plywood subfloor, moisture content above 12% is a concern and above 14% is too high for hardwood installation. For a concrete slab, moisture vapour emission above 3 lbs per 1,000 square feet per 24 hours (calcium chloride test) or relative humidity above 75% within the slab (in-situ probe test) means the slab is

too wet for hardwood. These are the industry-standard thresholds that most hardwood manufacturers require to maintain their warranty, and they are especially important in Calgary where moisture conditions can be deceptive.

Testing a plywood subfloor is straightforward with a pin-type moisture metre, which you can buy for $30 to $80 at Calgary building supply stores or borrow from a flooring installer. Insert the pins into the plywood in multiple locations — focus on areas near exterior walls, beneath windows, around plumbing, and anywhere you suspect past water exposure. The critical number is the **moisture content differential** between the subfloor and the hardwood you are installing. The two should be within 2 to 4 percentage points of each other. In Calgary's dry winter climate, your hardwood may acclimate to 6 to 8% moisture content indoors, so a plywood subfloor reading 10 to 12% is within acceptable range. But a subfloor reading 15% or higher has an active moisture problem that must be identified and resolved before installation.

Testing a concrete slab requires either a calcium chloride test kit or a relative humidity probe test. The calcium chloride test (ASTM F1869) measures how much moisture vapour the slab emits over 72 hours — the threshold for most hardwood adhesives is 3 lbs per 1,000 sqft per 24 hours, and many are rated for up to 5 lbs with a moisture-mitigating primer. The RH probe test (ASTM F2170) measures relative humidity at 40% depth within the slab — readings above 75% RH indicate the slab is too wet. The RH probe test is generally considered more accurate and is the preferred method among Calgary flooring professionals. Either test should be conducted with the home's HVAC system running at normal conditions for at least 48 hours beforehand.

Calgary-specific moisture challenges make testing even more critical here than in most cities. Spring snowmelt saturates the soil around foundations, temporarily increasing slab moisture levels even in basements that are otherwise dry. Calgary's clay soils hold water and release it slowly, so moisture problems can persist for weeks after spring thaw. And older Calgary homes — particularly those in established inner-city neighbourhoods like Mount Pleasant, Altadore, Marda Loop, and Kensington — may have basement slabs poured without modern underslab vapour barriers, meaning they transmit more moisture year-round.

If moisture is too high, you have several options: install a moisture-mitigating primer on concrete (adds $0.50 to $1.50 per square foot), use a vapour barrier membrane rated for elevated moisture, switch from solid hardwood to engineered hardwood (which tolerates higher moisture than solid), or address the underlying moisture source (exterior drainage, weeping tile, dehumidification). Never proceed with hardwood installation over a subfloor or slab that exceeds moisture thresholds — the hardwood will cup, buckle, or develop mould underneath, and the manufacturer's warranty will be void. Find flooring professionals who can conduct proper moisture testing through the Calgary Construction Network at calgaryconstructionnetwork.com/directory?trade=flooring.

Q10

How do I fix squeaky subfloors in my Calgary home before installing new flooring?

The most effective fix for squeaky subfloors is driving screws through the subfloor into the joists from above — this pulls the subfloor tight to the framing and eliminates the movement that causes the squeak. Squeaks happen when the subfloor has pulled away from the joist slightly, allowing the plywood or OSB to flex and rub against the nail or the joist when you walk over it. Calgary's extreme seasonal humidity swings — from 15 to 20% relative humidity in winter up to 40 to 50% in summer — cause the subfloor and joists to expand and contract at slightly different rates, which loosens the original nails over time. This is why squeaky floors are so common in Calgary homes, even relatively new ones.

The screw-down method from above is the standard fix and works in the vast majority of cases. Use #8 or #10 wood screws, 2.5 to 3 inches long, driven through the subfloor into the centre of the joist below. Space screws every 8 to 12 inches along the joist in the squeaky area. The screws pull the subfloor down tight and hold it there permanently — unlike nails, screws resist backing out. To locate joists, look for the existing nail lines in the subfloor (they follow the joists), use a stud finder, or tap the floor and listen for the solid sound that indicates a joist below. A typical Calgary home with squeaky areas in the hallway and a couple of bedrooms might need 50 to 100 screws, costing about $15 to $30 in materials and taking a couple of hours.

If you have access from below (unfinished basement ceiling), the fix is even easier. Have someone walk on the squeaky spot while you watch from below to identify exactly where the subfloor is moving. Then drive screws up through a block of wood into the subfloor, or use construction adhesive along the joist-to-subfloor gap, or insert wooden shims coated in carpenter's glue into gaps between the joist and subfloor. The advantage of working from below is that you do not disturb the subfloor surface.

For squeaks in a specific spot, speciality products like Squeeeeek No More and Counter-Snap screws are designed for driving through existing finished flooring (including carpet and hardwood) without visible damage. These breakaway screws snap off below the surface. They are available at most Calgary hardware stores for about $25 per kit.

When squeaks indicate a bigger problem: If the squeak is accompanied by a noticeable bounce or flex in the floor — if you can feel the floor deflect when you step on it — the issue may be an undersized joist, a damaged joist, or inadequate bridging between joists. This is more common in older Calgary homes from the 1950s and 1960s where joist spans were sometimes pushed to their limits. Excessive deflection requires structural reinforcement (sistering joists or adding support posts), which is a professional job and may require a building permit from the City of Calgary if structural modifications are involved.

Fix squeaks before your new flooring goes in, not after. Once new flooring is installed over a squeaky subfloor, the squeaks will continue — and fixing them afterward means potentially damaging the new floor. If you are having professional flooring installed, a good installer will address squeaks as part of the subfloor preparation. Need help finding an installer who takes subfloor prep seriously? Calgary Floor Installers can match you with local professionals for a free estimate.

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Q11

What is the price to install a plywood subfloor over concrete in a Calgary basement?

Installing a plywood subfloor over concrete in a Calgary basement typically costs $5 to $9 per square foot fully installed, which works out to $3,000 to $7,200 for a typical 600 to 800 square foot basement. This includes pressure-treated sleepers, vapour barrier, insulation (optional but recommended), 3/4-inch plywood sheathing, and professional labour.

Here is how the costs break down. Pressure-treated 2x4 sleepers laid flat on the slab run about $0.50 to $1.00 per square foot in material. A 6-mil polyethylene vapour barrier between the slab and the sleeper assembly costs $0.10 to $0.20 per square foot. Rigid foam insulation between the sleepers (1.5-inch XPS or EPS) adds $1.00 to $2.00 per square foot and is highly recommended in Calgary — without it, the basement floor will be noticeably cold from October through April despite the plywood layer. The 3/4-inch tongue-and-groove plywood sheathing runs $1.50 to $2.50 per square foot. Fasteners, adhesive, shims, and miscellaneous materials add another $0.30 to $0.50 per square foot. So total material cost is roughly $3.50 to $6.00 per square foot.

Professional labour for a plywood-over-concrete subfloor installation in Calgary runs about $2.00 to $4.00 per square foot, depending on the basement complexity (obstructions, posts, irregular shapes, plumbing penetrations). The work includes levelling the sleepers with shims to create a flat surface, cutting and fitting the plywood with proper expansion gaps, and securing everything. A professional crew can typically complete a 600 to 800 square foot basement in one to two days.

Additional costs that often apply: If the concrete slab has significant cracks or unevenness, it may need patching or grinding before the sleepers go down ($1 to $3 per square foot for affected areas). If the slab has elevated moisture levels — test first with a calcium chloride kit or RH probe — you may need a more robust moisture mitigation system than basic poly sheeting. Disposal of any existing basement flooring that needs to be removed first adds $1 to $3 per square foot for tearout and a bin rental ($300 to $600 in Calgary).

Compare this to Dricore panels at roughly $4.50 to $7.00 per square foot installed. Dricore is faster to install, provides a built-in moisture management air gap, and is sufficient for floating floors like LVP, laminate, and floating engineered hardwood. The traditional plywood-over-sleeper approach makes more sense if you want the option of nail-down engineered hardwood, if you want to add insulation between sleepers for maximum warmth, or if the slab is severely uneven and the sleeper system allows you to level the new subfloor while compensating for the slab's irregularities.

One important note: a plywood subfloor over concrete raises the floor height by approximately 1.5 to 2 inches (sleepers plus plywood), plus the thickness of your finished flooring on top. In Calgary basements with standard 7-foot ceilings, this height loss can feel significant. Verify your basement ceiling height before committing to this approach — the Alberta Building Code requires a minimum clear ceiling height for habitable rooms, and losing 2 inches plus flooring thickness could be a factor. Get matched with a flooring professional through Calgary Floor Installers who can assess your basement and recommend the most cost-effective subfloor approach for your situation.

Q12

Should I test my Calgary basement slab for moisture before choosing flooring?

Yes — moisture testing your Calgary basement slab before choosing flooring is one of the most important steps you can take, and skipping it is one of the most common causes of basement flooring failure in the city. The test results directly influence which flooring materials will perform well in your basement and what preparation the slab needs. A $30 to $80 test can save you thousands in avoided flooring replacement.

Every Calgary basement slab transmits moisture to some degree. Concrete is porous, and moisture from the surrounding soil migrates upward through the slab as vapour — a process called moisture vapour transmission. This happens continuously, even in basements that have never had a flood or visible water. Calgary's clay-heavy soils in many communities (especially in the south and southeast — Mahogany, Walden, Legacy, Seton) hold moisture and release it slowly, keeping the soil around foundations damp well into summer. Spring snowmelt is the peak risk period, when saturated soil pushes moisture through the slab at elevated rates. And older Calgary homes built before the mid-1980s often lack an underslab vapour barrier, meaning moisture transmission is significantly higher than in newer construction.

Two standard moisture tests are used. The **calcium chloride test** (ASTM F1869) involves placing a sealed dish of calcium chloride crystals on the clean slab for 60 to 72 hours and measuring weight gain from absorbed moisture. Results are expressed as pounds of moisture per 1,000 square feet per 24 hours. Most flooring manufacturers require readings below 3 lbs for wood-based products and below 5 lbs for LVP and vinyl. You can buy test kits at Calgary building supply stores for $25 to $40 each — use at least three per 1,000 square feet, placed in different areas of the basement. The **relative humidity probe test** (ASTM F2170) involves drilling holes in the slab and inserting RH probes to measure humidity at 40% depth within the concrete. Readings above 75% RH indicate the slab is too wet for most flooring without mitigation. This test is more accurate but requires professional equipment.

How the results guide your flooring choice: If moisture levels are low (under 3 lbs or 75% RH), you have the widest range of options — engineered hardwood, LVP, laminate, tile, and carpet all work with appropriate vapour barriers. If moisture is moderate (3 to 5 lbs), LVP and tile are excellent choices, engineered hardwood can work with a moisture-mitigating adhesive or primer, but laminate and carpet carry higher risk. If moisture is high (above 5 lbs), tile with a crack isolation membrane, LVP with a quality vapour barrier, or a raised subfloor system like Dricore are your safest bets — and you should also investigate whether the high readings indicate a drainage or waterproofing issue that needs addressing.

Test under realistic conditions. Run your HVAC system for at least 48 hours before testing, and ideally test in spring (April or May) when soil moisture is highest. A test done in mid-winter with the furnace running constantly will

show drier readings than your slab actually experiences during spring thaw. A professional flooring installer experienced with Calgary basements will conduct moisture testing as part of their assessment. Get matched with a local flooring professional through Calgary Floor Installers for a free estimate that includes proper slab testing.

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Q13

How thick should self-levelling compound be for an uneven Calgary basement floor?

Most self-levelling compounds can be poured from a feathered edge (nearly zero) up to about 1 inch in a single pour, with the typical Calgary basement floor needing between 1/4 inch and 1/2 inch to achieve the flatness required for modern flooring. If you need more than 1 inch of levelling, you will need to either do multiple pours (allowing each layer to cure fully before the next) or use an extended-pour product designed for thicker applications, some of which can go up to 2 inches or more in a single lift.

The flatness tolerance you need to achieve depends on your flooring type. Floating floors (LVP, laminate, engineered hardwood) require the slab to be flat within 3mm over 1.8 metres — roughly 1/8 inch over 6 feet. Tile requires even tighter flatness, particularly with large-format tiles (24x24 inch and larger) where any subfloor irregularity causes lippage between tiles. Carpet is the most forgiving, but even carpet will telegraph significant humps and dips through the padding. Before pouring any compound, use a 6-foot straightedge to map the floor and identify the high and low spots. This tells you exactly how thick the pour needs to be and where.

Standard self-levelling compounds available at Calgary building supply stores include brands like Mapei Novoplan 2 Plus, Henry 555 Level Pro, and Ardex K-301. These products are designed to be mixed to a pourable consistency, dumped onto the floor, and spread — gravity does most of the work, as the compound naturally flows to fill low spots and create a level surface. At 1/4-inch thickness, material cost runs about $1.50 to $2.50 per square foot. At 1/2-inch thickness, figure $2.50 to $4.00 per square foot. At a full inch, you are looking at $4.00 to $6.00 per square foot just in material. Professional labour to prep the slab, prime it, mix, pour, and finish adds $2 to $4 per square foot.

Calgary-specific considerations for self-levelling compound. First, the slab must be clean and properly primed — most self-levelling compounds require a latex or acrylic primer to ensure a proper bond to the concrete. Paint, adhesive residue, or efflorescence (white mineral deposits common on Calgary basement slabs) must be removed or the compound will delaminate. Second, temperature matters — most products require the slab and room temperature to be between 10 and 30 degrees Celsius during pouring and curing. In a Calgary basement in January, the slab surface temperature may be below 10 degrees unless the home has been well heated for several days. Follow manufacturer requirements carefully. Third, conduct a moisture test before pouring — self-levelling compound over a slab with excessive moisture vapour emission can fail to cure properly or trap moisture beneath the finished floor.

For severely uneven Calgary basement floors — those with dips or humps exceeding 1 to 2 inches — self-levelling compound alone may not be the most cost-effective solution. At that level of unevenness, a plywood-over-sleeper subfloor system allows you to shim the sleepers to create a level surface while also adding insulation and a

moisture barrier. Your flooring professional can help you determine which approach makes more sense for your specific situation. Find local flooring contractors through the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring.

Q14

Can I put a floating subfloor over a Calgary slab that has minor cracks?

Yes, you can install a floating subfloor system over a Calgary basement slab with minor cracks — and in fact, floating systems are one of the best approaches for cracked slabs because they are not bonded to the concrete and can tolerate minor slab movement without damage. The key is to properly assess the cracks, repair them appropriately, and install a moisture barrier before the floating subfloor goes down.

First, define what counts as a minor crack. Hairline cracks and cracks up to about 1/8 inch wide that are flush (no vertical displacement — meaning one side of the crack is not higher than the other) are considered minor and are extremely common in Calgary basement slabs. Calgary's deep frost line, clay-heavy soils, and dramatic chinook-driven temperature cycling put continuous stress on basement slabs, and minor cracking is a normal response. These cracks do not indicate a structural problem, but they can be pathways for moisture migration and should be addressed before any flooring work.

Repair minor cracks before installing the subfloor. Clean out each crack with a vacuum, then fill with a flexible polyurethane crack filler — not rigid epoxy. Polyurethane stays flexible and accommodates the continued slight movement that Calgary's freeze-thaw cycling causes. Rigid fillers will just crack again. For hairline cracks, a liquid crack sealer brushed into the crack is sufficient. This repair costs about $20 to $50 in materials for a typical basement and takes a couple of hours.

Install a vapour barrier over the repaired slab. Even with cracks sealed, moisture can still migrate through the concrete itself. A 6-mil polyethylene vapour barrier laid across the entire slab with overlapped and taped seams is the minimum. If you are installing Dricore panels, many versions have an integrated moisture barrier on the bottom, but an additional poly sheet underneath provides extra protection — especially over a cracked slab where moisture migration may be higher.

Floating subfloor options for cracked Calgary slabs include Dricore panels ($3.50 to $5.00 per square foot), plywood-over-sleeper systems ($5 to $9 per square foot installed), and simply installing a floating finished floor (LVP, laminate, or floating engineered hardwood) directly over a quality underlayment with vapour barrier on the slab. The last option is the simplest and most affordable — a good underlayment with integrated vapour barrier runs $0.50 to $1.50 per square foot, and the floating floor sits on top without any fastening to the slab. Minor slab

movement below is completely invisible.

When cracks are NOT minor: If cracks are wider than 1/4 inch, if one side of a crack is higher than the other (vertical displacement), if cracks appear to be growing, or if you see water seeping through cracks, these indicate more significant foundation movement or hydrostatic pressure. Have the cracks assessed by a foundation specialist or structural engineer before investing in flooring. Active water infiltration through slab cracks must be resolved — typically through exterior drainage improvements, weeping tile repair, or interior waterproofing — before any flooring goes in. Get matched with a flooring professional through Calgary Floor Installers who can assess your slab cracks and recommend the right approach for your basement.

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Q15

How much does self-levelling compound cost per square foot in Calgary?

Self-levelling compound in Calgary costs approximately $1.50 to $3.00 per square foot for materials at a standard 1/4-inch pour thickness, with total installed cost (materials plus professional labour) running $3.50 to $7.00 per square foot depending on thickness, area size, and slab conditions. These costs are based on current Calgary market rates and assume a standard concrete slab requiring moderate levelling.

Material costs scale with thickness. A 50-lb bag of quality self-levelling compound covers approximately 25 to 50 square feet at 1/4-inch thickness, depending on the product. At Calgary building supply stores, a 50-lb bag of a mid-range product (such as Mapei Novoplan 2 Plus, Henry 555 Level Pro, or CTS Rapid Set TRU Self-Leveling) runs $35 to $55. Premium products rated for thicker pours or faster cure times can run $50 to $75 per bag. For a 1/4-inch pour, figure roughly $1.50 to $2.50 per square foot in compound alone. For a 1/2-inch pour, double that to

$3.00 to $5.00 per square foot. A full inch (which often requires a deep-fill product or two separate pours) runs $5.00 to $8.00 per square foot in material.

Do not forget the primer. Self-levelling compounds require a bonding primer applied to the concrete first — without it, the compound can delaminate and crack. Primer costs $0.15 to $0.40 per square foot in material. Some products are self-priming, but most require a separate primer coat that dries for 2 to 6 hours before the pour.

Professional labour for a self-levelling pour in Calgary runs $2.00 to $4.00 per square foot. This includes slab preparation (cleaning, scraping loose material, filling large cracks), priming, mixing, pouring, and finishing. Self-levelling compound requires speed and experience — once mixed, you have 15 to 30 minutes of working time before it starts to set, and a large pour requires mixing and dumping multiple batches in rapid succession. Uneven mixing, slow pouring, or insufficient material mid-pour can result in ridges, low spots, or seams that defeat the purpose of levelling. This is one of those tasks where professional skill makes a significant difference in the result.

Total project cost examples for Calgary basements:

A 500-square-foot basement needing 1/4-inch average levelling: materials $750 to $1,250, labour $1,000 to $2,000, total $1,750 to $3,250. A 500-square-foot basement needing 1/2-inch average levelling: materials $1,500 to $2,500, labour $1,200 to $2,500, total $2,700 to $5,000. These estimates include primer, compound, and labour but not the moisture testing or finished flooring on top.

When self-levelling compound is not the best investment: If your slab needs more than 1 inch of levelling in large areas, a plywood-over-sleeper subfloor system may be more cost-effective because the sleepers can be shimmed to create a level surface without massive volumes of compound. And if you are installing a relatively forgiving floating floor like LVP over underlayment, minor unevenness within the 3mm-per-1.8-metre tolerance may not require levelling compound at all — a good underlayment can bridge very small imperfections. A professional assessment will tell you whether self-levelling compound is necessary and how much you actually need. Browse flooring contractors in the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring for free estimates.

Q16

What type of vapour barrier do I need on a Calgary basement slab for LVP?

For LVP (luxury vinyl plank) over a Calgary basement slab, you need at minimum a 6-mil polyethylene vapour barrier — and in many cases, a quality underlayment with an integrated vapour barrier is the smartest single investment you can make for the long-term performance of your basement floor. The vapour barrier prevents moisture migrating up through the concrete from reaching the underside of your LVP, where it can cause mould, mildew, musty odours, and adhesive degradation on click-lock joints.

The 6-mil polyethylene sheet is the baseline standard. It is inexpensive ($0.10 to $0.20 per square foot), widely available at Calgary building supply stores, and effective as a moisture vapour retarder. Lay it across the entire slab with seams overlapped at least 6 to 8 inches and sealed with poly tape or sheathing tape. Run the poly up the walls about 2 inches (it will be concealed behind the baseboards). This creates a continuous moisture barrier between the slab and whatever goes on top.

Underlayment with integrated vapour barrier is the preferred approach for LVP installations and is what most Calgary flooring professionals recommend. Products like Floor Muffler UltraSeal, QuietWalk Plus, and First Step are underlayments that combine a cushion layer (for comfort and minor imperfection bridging) with a built-in poly or film vapour barrier on the bottom face. These run $0.50 to $1.50 per square foot and eliminate the need for a separate poly sheet. The underlayment seams are overlapped and taped, creating a continuous barrier. Some of these products also provide acoustic benefits — relevant if you have living space above.

Important note about LVP with attached backing. Many LVP products come with a cork, foam, or IXPE backing already attached to each plank. If your LVP has an attached backing, you generally do NOT install an additional underlayment on top of a separate poly sheet — putting cushioned underlayment under LVP that already has a built-in pad can cause the floor to feel too soft and stress the click-lock joints. In this case, the 6-mil poly sheet alone (or a thin vapour-barrier-only membrane without cushion) is all you need under the LVP. Check your LVP manufacturer's installation guide for their specific recommendation — installing over unapproved underlayment can void the warranty.

Calgary-specific considerations make vapour barriers even more critical here than in drier-substrate regions. Spring snowmelt drives soil moisture levels up around foundations, increasing vapour transmission through slabs from April through June. Older Calgary homes (pre-1990s) often lack underslab vapour barriers, so moisture transmission rates are higher than in newer construction. Clay soils in many Calgary communities hold moisture and release it slowly. And Calgary's cold winters mean slab surfaces stay cool, creating a temperature differential that promotes condensation even without direct moisture migration.

If your moisture test shows elevated readings (above 3 lbs on a calcium chloride test or above 75% RH on an in-slab probe), a basic 6-mil poly sheet may not be sufficient. In these cases, a heavier-duty moisture mitigation system — such as a moisture-barrier epoxy primer on the slab surface, or a Dricore raised subfloor system that creates an air gap above the slab — provides more robust protection. Address the root cause of elevated moisture as well (exterior grading, weeping tile, dehumidification). If you need help assessing your slab conditions and choosing the right vapour barrier approach for your LVP installation, Calgary Floor Installers can match you with local flooring professionals for a free estimate.

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Q17

Is OSB or plywood better for subfloor replacement in a Calgary home?

Plywood is the better choice for subfloor replacement in Calgary — it handles moisture exposure more gracefully, holds fasteners more securely over time, and performs better under Calgary's extreme seasonal humidity swings. While OSB is less expensive and widely used in new construction, plywood is the preferred material when you are replacing a subfloor and want maximum long-term durability, especially in areas with any moisture risk.

The moisture performance difference is the key factor in Calgary. When OSB gets wet — whether from a plumbing leak, a spill, condensation, or moisture migration through a basement slab — the edges swell permanently. You have probably seen this on older OSB subfloors: the edges of the panels are visibly raised and swollen, creating a waffle-like pattern that telegraphs through the finished flooring. Once OSB edge swelling occurs, it does not go back to flat when the material dries. Plywood, by contrast, swells uniformly when wet and returns much closer to its original dimensions when it dries. In Calgary, where indoor humidity swings from 15 to 20% in

winter up to 40 to 50% in summer (and drops and rises rapidly during chinooks), subfloor material is under constant moisture stress. Plywood handles this cycling better over decades.

For subfloor replacement, use 3/4-inch (23/32-inch) tongue-and-groove plywood. The tongue-and-groove edges prevent differential movement between panels and create a stiffer, more uniform subfloor. In Calgary, 3/4-inch T&G plywood runs about $1.50 to $2.50 per square foot at building supply stores, while 3/4-inch T&G OSB runs $1.00 to $1.80 per square foot. The price difference is roughly $0.50 to $0.75 per square foot — on a 1,000-square-foot subfloor replacement, that is $500 to $750 more for plywood. Given the superior moisture performance and longevity, that premium is well worth it for a replacement subfloor that you plan to live with for decades.

When OSB is acceptable. In new construction where the building envelope is intact and the subfloor will be protected from moisture from day one, OSB performs well and is the standard choice for most Calgary home builders due to cost. It also provides slightly better shear strength than plywood, which is why structural engineers specify it for certain applications. If you are replacing a subfloor in a main-floor or upper-floor area with no history of moisture issues and no reason to expect future moisture exposure, OSB is a reasonable choice that saves money.

When plywood is strongly recommended. Any subfloor near a bathroom, kitchen, laundry room, or entry — anywhere that water exposure is possible. Any basement application over concrete (where moisture migration is always a concern in Calgary). Any replacement of a subfloor that failed due to moisture damage (using OSB to replace moisture-damaged OSB is asking for a repeat failure). And any situation where the subfloor might be exposed to weather during construction — plywood tolerates rain exposure during a renovation far better than OSB, which can swell permanently from a single heavy rain if the edges are exposed.

Fastening is also important. Whether you choose plywood or OSB, use screws rather than nails for subfloor replacement. Screws hold the panels tight to the joists and resist backing out as the wood expands and contracts seasonally — this prevents the squeaking that plagues nail-down subfloors after a few years of Calgary temperature cycling. Use #8 or #10 wood screws, 2 to 2.5 inches long, spaced 6 inches along panel edges and 12 inches in the field. A professional flooring installer in Calgary will handle all of this as part of the subfloor preparation. Need help finding one? Browse the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring.

Q18

How much does it cost to rip out old subfloor and start fresh in a Calgary renovation?

A complete subfloor tearout and replacement in Calgary runs approximately $6 to $12 per square foot total, including demolition, disposal, joist inspection and repair, and new subfloor installation — putting a typical full-home project (1,200 to 1,800 square feet) in the $7,200 to $21,600 range. The wide range reflects the enormous variability in what installers find once the old subfloor comes up — clean joists in good condition on the low end, and rot, mould, structural damage, or asbestos on the high end.

Demolition and removal of the existing subfloor costs $1 to $3 per square foot for labour, depending on the material and how it was fastened. Screwed-down plywood is the easiest to remove. Nailed-down plywood or OSB takes longer. Subfloors that have been glued and nailed (common in newer Calgary homes) are the most labour-intensive to tear out. If the existing subfloor has multiple layers — for example, an original plank subfloor with a plywood overlay added later — demolition costs increase. Old vinyl tile or adhesive on the subfloor surface may contain asbestos in homes built before 1985, which requires professional abatement before demolition can proceed ($8 to $15 per square foot for asbestos removal in Calgary).

Disposal costs in Calgary include bin rental and dump fees. A 12 to 20 cubic yard bin (appropriate for a full-home subfloor tearout) runs $350 to $700 in Calgary depending on size and the waste company. Subfloor material, old underlayment, and demolished finish flooring add up to significant volume and weight.

Joist inspection and repair is the critical step between tearout and reinstallation. Once the old subfloor is removed, you can see the full condition of the joists. In older Calgary neighbourhoods — Bankview, Bridgeland, Crescent Heights, Brentwood, homes from the 1940s through 1960s — joists may show signs of moisture damage, insect damage, notching for plumbing that has weakened them, or general deterioration. Sistering damaged joists (bolting a new joist alongside the damaged one) runs $100 to $300 per joist. Replacing severely damaged joists or adding additional support is more involved and may require a building permit and structural engineering input ($500 to $1,500 for an engineer's assessment).

New subfloor installation using 3/4-inch tongue-and-groove plywood costs $3 to $5 per square foot for materials and labour. This includes fitting the panels, screwing them to the joists at proper spacing, and ensuring the finished surface is flat within the tolerances required for your chosen flooring. Adding construction adhesive between the joists and the new plywood panels (about $0.20 per square foot extra) prevents future squeaking — highly recommended given Calgary's seasonal wood movement.

A realistic budget for common scenarios. A 1,000-square-foot main floor in a 1960s Calgary bungalow with original plywood subfloor in fair condition, no asbestos, and joists needing minor repairs: tearout $1,500 to $2,500, disposal $400 to $600, joist repair $500 to $1,500, new plywood $3,000 to $5,000, total $5,400 to $9,600. Add 10 to 15% contingency for surprises. The same project in a newer home (1990s or later) with clean conditions could come in closer to $5,000 to $7,000.

This is professional work — subfloor tearout and replacement involves structural assessment, proper fastening, and achieving the flatness tolerances that your finished flooring requires. Get matched with experienced flooring professionals through Calgary Floor Installers for a free assessment and accurate quote on your renovation.

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Q19

Do older Calgary homes from the 1960s typically need subfloor replacement for new flooring?

Not always, but 1960s-era Calgary homes are among the most likely to need subfloor repair or partial replacement before new flooring goes in — roughly half of the subfloor assessment jobs that Calgary flooring installers encounter in these vintage homes reveal at least some areas that need attention. The good news is that full replacement is not always necessary; many 1960s subfloors can be repaired, reinforced, or overlaid to provide a solid foundation for new flooring.

What you are dealing with in a 1960s Calgary home. Most houses from this era in neighbourhoods like Haysboro, Acadia, Southwood, Willow Park, Lake Bonavista, Brentwood, Charleswood, and University Heights were built with either plank-style subfloors (individual boards, often 1x6 or 1x8 spruce, laid diagonally across the joists) or early sheet subfloors (typically 1/2-inch or 5/8-inch plywood — thinner than the 3/4-inch standard used today). After 60-plus years of Calgary's extreme seasonal humidity cycling, chinook-driven temperature swings, and the general wear of daily life, these subfloors commonly show several issues.

Common problems in 1960s subfloors. Plank subfloors often have gaps between boards, loose or squeaky boards, and surface unevenness from individual boards cupping or warping over decades. These plank subfloors are generally too uneven for modern floating floors (which need flatness within 3mm over 1.8 metres) without overlaying with new plywood. Thin plywood subfloors (1/2-inch) may have too much flex between joists for tile installation and can feel bouncy underfoot even under floating floors. Water damage in kitchens, bathrooms, and around exterior doors is common — 60 years of minor leaks, condensation, and seasonal moisture can take a toll. And in basements, the original concrete slab may have cracked from decades of frost-heave cycling.

When you can save the existing subfloor. If the plywood or plank subfloor is structurally sound (no soft spots, no rot, no significant water damage) but uneven or squeaky, it can often be brought up to standard without full replacement. Squeaks are fixed by screwing the subfloor into the joists ($1 to $2 per square foot). Unevenness on plank subfloors can be addressed by overlaying with 1/4-inch or 3/8-inch plywood ($1.50 to $3.00 per square foot installed), which creates a smooth, flat surface for modern flooring. Minor water-damaged sections can be cut out and patched. Self-levelling compound can fill low spots on plywood subfloors ($2 to $5 per square foot).

When replacement is necessary. If more than 20 to 30% of the subfloor shows water damage, rot, delamination, or structural weakness, full replacement is usually more cost-effective than patching. If the joists underneath are damaged (visible from an unfinished basement), the subfloor must come up to access and repair them. And if you find 9x9-inch vinyl floor tiles or black mastic adhesive on the subfloor — very common in 1960s Calgary homes — test for asbestos before disturbing them. These vintage tiles and adhesives frequently contain asbestos and require

professional abatement if positive.

The best approach is a professional assessment. Have a flooring installer pull up a section of old flooring in a few areas, check the subfloor condition, test moisture levels, and assess flatness. This assessment is typically free as part of a flooring estimate and gives you a clear picture of what preparation your 1960s home needs. Calgary Floor Installers can connect you with experienced local professionals who work with vintage Calgary homes regularly — find them through the Calgary Construction Network directory at calgaryconstructionnetwork.com/directory?trade=flooring.

Q20

What is the cost to insulate and prepare a Calgary basement subfloor for carpet?

Insulating and preparing a Calgary basement slab for carpet typically costs $4 to $9 per square foot total, which works out to $2,400 to $7,200 for a typical 600 to 800 square foot basement. This includes moisture testing, vapour barrier, insulation, subfloor preparation, and the carpet pad — but not the carpet itself or carpet installation labour, which adds another $3 to $8 per square foot on top.

Here is the preparation breakdown. Moisture testing ($75 to $150 for calcium chloride kits to cover the basement, or included free with a professional assessment) comes first. If moisture levels are acceptable, the next layer is a 6-mil polyethylene vapour barrier across the entire slab ($0.10 to $0.20 per square foot). This is essential — carpet over a bare Calgary basement slab without a vapour barrier will develop musty odours within the first year or two as moisture migrates through the concrete and gets trapped in the carpet pad.

Insulation options determine most of the preparation cost. Calgary basement slabs are cold from October through April, and without insulation, a carpeted basement floor will feel cold underfoot despite the carpet and pad. There are three main approaches.

Option 1: Rigid foam directly on the slab ($1.50 to $3.00 per square foot installed). One-inch or 1.5-inch extruded polystyrene (XPS) rigid foam boards are laid over the vapour barrier, seams taped, and then a thin plywood layer (1/4-inch to 3/8-inch) is placed on top to provide a stable surface for carpet stretching. This is a good mid-cost option that adds meaningful thermal comfort without sacrificing much headroom. Total preparation cost with this approach: roughly $3.50 to $5.50 per square foot.

Option 2: Dricore or similar raised subfloor panels ($3.50 to $5.00 per square foot for the panels). These provide an air gap above the slab, built-in moisture management, and modest thermal insulation. They are quick to

install and create a good surface for carpet. Total preparation cost: roughly $4.00 to $6.00 per square foot including vapour barrier and panels.

Option 3: Plywood over insulated sleepers ($5.00 to $9.00 per square foot installed). Pressure-treated 2x4 sleepers are laid flat, rigid foam insulation fills the bays between sleepers, and 3/4-inch plywood goes on top. This provides the best thermal performance and the most headroom-efficient insulation, but it is the most labour-intensive and expensive option. Total preparation cost: roughly $5.50 to $9.50 per square foot.

Carpet pad selection matters enormously in Calgary basements. Use a moisture-barrier carpet pad rated for concrete slab installation — not standard rebond pad. Moisture-barrier pads have a sealed bottom surface that prevents slab moisture from reaching the carpet. They cost $1.00 to $2.00 per square foot compared to $0.50 to $1.00 for standard pad. Skipping this is false economy that leads to mould, mildew, and musty odours that are extremely difficult to eliminate once established.

A realistic total budget for insulating and preparing a 700-square-foot Calgary basement for carpet using the mid-range Dricore approach: vapour barrier $140, Dricore panels $3,150, moisture-barrier carpet pad $1,050, total preparation $4,340. Add carpet ($2 to $5 per square foot) and installation labour ($1 to $2 per square foot) for a complete project cost of roughly $6,400 to $9,200. Need help getting accurate quotes for your basement? Get matched with a flooring professional for a free estimate through Calgary Floor Installers.

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Q21

How do I deal with a Calgary basement slab that sweats moisture in spring?

A sweating basement slab in spring is one of the most common flooring challenges in Calgary, and it must be resolved before any flooring goes down — installing flooring over an actively sweating slab guarantees failure. The moisture you see on the slab surface during spring months comes from two sources: moisture vapour migrating up through the concrete from saturated soil (vapour transmission), and condensation forming when warm, humid spring air contacts the cold slab surface. Both mechanisms are at their peak in April and May when Calgary's snowpack melts and soil moisture levels are highest.

Identify the source first. Tape a 2-foot square piece of clear plastic sheeting tightly to the slab surface and leave it for 48 to 72 hours. If moisture collects on the underside of the plastic (between the plastic and the slab), the source is vapour transmission — moisture is coming up through the concrete from the soil below. If moisture collects on top of the plastic, the source is condensation from the room air. If both, you have both issues. This simple test costs nothing and tells you exactly what you are dealing with.

For vapour transmission (moisture coming through the slab): The long-term solutions involve managing water at the exterior of your foundation. Ensure surface grading slopes away from the house (minimum 2% slope for 2 metres), downspouts discharge at least 2 metres from the foundation, and your weeping tile system is functioning properly. Inside, a moisture-mitigating epoxy or urethane primer applied to the slab surface ($1 to $3 per square foot) can significantly reduce vapour transmission. Products like Mapei Planiseal VS or Ardex MC Rapid are designed specifically for this. For severe cases, an interior drainage system directing water to a sump pit with a pump may be necessary ($3,000 to $8,000 for a Calgary basement, depending on scope).

For condensation (room air moisture collecting on cold slab): A dehumidifier is the immediate solution — run it from April through June during peak condensation season. A quality basement dehumidifier capable of handling 600 to 800 square feet costs $300 to $600 and should maintain relative humidity below 50%. Long-term, insulating the slab surface with Dricore panels or a rigid foam layer creates a thermal break that raises the floor surface temperature and reduces condensation. Improving basement ventilation also helps.

Once you have addressed the moisture source, choose your flooring strategy wisely. LVP (luxury vinyl plank) with a quality vapour barrier underlayment is the safest flooring choice for a Calgary basement with a history of slab sweating — it is 100% waterproof and will not be damaged by residual moisture. Dricore raised subfloor panels create an air gap that allows residual moisture to dissipate without contacting the finished flooring, making them an excellent preparatory layer. Tile with a waterproof crack isolation membrane is another excellent choice for basements with moisture histories. **Avoid solid hardwood, standard laminate, and carpet with non-moisture-barrier pad** in basements with any history of slab sweating.

Timing matters for testing and remediation. If your slab sweats in spring, do your moisture testing in April or May when conditions are worst — testing in January when the soil is frozen will give you falsely optimistic readings. Plan

your flooring installation for late summer or fall after moisture levels have subsided and any remediation measures have had time to prove effective.

A basement slab that sweats seasonally is not a deal-breaker for beautiful flooring — it just requires the right preparation and material choices. Find flooring professionals experienced with Calgary basement moisture challenges through the Calgary Construction Network at calgaryconstructionnetwork.com/directory?trade=flooring.
