

Green Bay winters present impressive education. When the bay crusts over and the wind funnels down from Door County, roofs start out speaking. You listen a faint drip within a soffit after sundown, or discover a scalloped ridge of ice thickening along the eaves. Left on my own, these symptoms most likely cease with stained ceilings, popped drywall tape, ruined insulation, and once in a while hidden rot in the sheathing. As a roofing contractor who has worked as a result of tons of January thaws and late March refreezes from Howard to Allouez, I choose to lay out what without a doubt causes ice dams, tips to avoid them on each residential roofing and commercial roofing, and why a disciplined mindset beats any system.

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## **Why ice dams type in our climate**

Ice dams are usually not random. They are the predictable result of heat loss, asymmetric roof deck temperatures, and freeze-thaw cycles. Snow on a roof melts from below when attic or ceiling warmth warms the deck, then refreezes at the colder eaves where the deck overhangs the partitions. The refrozen ice bureaucracy a ridge that traps further meltwater, which backs up beneath shingles and unearths nail holes, seams, and vulnerable spots. In Green Bay, swings from 10 tiers to the mid 30s inner a week are wide-spread, so dams can develop unusually quick.

The neighborhoods around Astor Park and Navarino, with older housing stock and captivating 1.5 story capes, see more ice matters than many more recent houses in Bellevue or Ledgeview. That's not due to the fact the houses had been built poorly. It's due to the fact that part-reviews, knee partitions, and chopped-up attic areas create hot zones which might be tough to ventilate calmly. On the west side near Lambeau Field, the place you discover higher ranches and break up-degrees, the troubles differ. Broad eaves assemble extra snow and gutters deliver water over lengthy runs, so the dam menace shifts to size and exposure. Each roof tells a one-of-a-kind story, however the physics remain the same.

## **What a roofing proficient seems for on a winter provider call**

When anyone calls after recognizing icicles along their eaves or water spots close a bay window, we start by using asking approximately the home, now not simply the roof. The roof is a symptom. Insulation thickness, air leaks, louver vent routing, soffit and ridge vent steadiness, and even the place of recessed lighting fixtures and attic hatches all alternate the temperature field below the deck.

I avoid a quick psychological guidelines. How so much snow is on the roof and where does it float? What is the attic temperature when compared to out of doors air? Are soffit vents easy, frivolously spaced, and unobstructed by using insulation? Is the ridge vent steady and well baffled to avoid snow out and pull air thru? If the home is in Allouez near

the Fox River, wind exposure is likely to be the different from a similar plan tucked in the back of tree hide in Schmitt Park. The wind scours some roofs and creates drifts on others, which influences the melt development.

Inside the attic, I watch for frost on the bottom of the roof deck. That factors to air leakage from the residing area. I also observe the coloration and condition of the sheathing. Dark streaks or warped edges close the eaves are pink flags. If bog fans discharge into the attic rather than by means of the roof or a wall cap, the nice and cozy wet air turbocharges ice formation and will load the insulation with moisture. I do no longer bet. I use a thermal digicam to identify hot spots, and a smoke pencil to check suspect transitions like can lights and chimney chases.

## **Ice and water barrier is coverage, no longer a cure**

Many home owners ask whether a more advantageous shingle or extra ice and water look after will end ice dams. Those supplies are quintessential, however they are the seat belt, not the steering wheel. A first-class roofing supplier installs a self-adhered ice barrier in any case 24 inches contained in the outdoors wall line of the heated house, in step with Wisconsin code. In observe, on cut down slopes or in houses with deeper overhangs, we expand that barrier farther up the roof to seize any backup. It reduces the hazard of indoors leaks when a dam varieties, and buys time to top the underlying trigger.

Premium architectural shingles and exact flashed valleys, skylights, and chimneys remember too. They make a change in how lengthy a roof resists bizarre climate. But in case your attic leaks heat like a sieve, no shingle will rewrite physics. The balance is perpetually insulation, ventilation, and air sealing first, then [roof repair](#) strong roofing substances to deal with the inevitable extremes.

## **Air sealing beats uncooked R-value**

Insulation simplest works when air is still. In drafty attics, loose-fill cellulose or fiberglass batts lose efficiency. Warm indoors air sneaks by way of ceiling penetrations and pushes across the attic, carrying moisture. Before we communicate approximately including insulation above R-38 or R-forty nine, we goal leaks. That approach sealing best plates, wiring penetrations, bath fan bins, flue chases, and the attic hatch. In older houses in the Whitney Park location, we in many instances discover tongue-and-groove ceiling boards less than drywall. Those gorgeous historical details leak like loopy round fixture penetrations unless they've a non-stop air barrier.

A life like attitude is to drag back current insulation at primary regions and seal with foam or caulk, then bridge gaps with rigid foam in which considered necessary. The attic hatch or pull-down stair needs to have gasketed weatherstripping and an insulated lid. In a regular 1, six hundred square foot ranch in Ashwaubenon, air sealing can scale down attic temperature via numerous degrees in wintry weather and lower the soften that feeds dams. You additionally toughen comfort and decrease ice on walkways under the eaves in view that fewer icicles kind.

## **Ventilation is a formulation, not a component**

We see many houses with a pleasing ridge vent but plugged soffits, or lots of soffit intake with a cut-up ridge and no baffles. The air trail needs to be continuous. Cold air enters the soffit, rises along the underside of the deck in a explained channel, and exits at the ridge. Without baffles on the eaves, insulation almost always slumps into the soffit bays and chokes off the intake. Conversely, with no an open ridge, the attic breathes by way of random leaks, which amplifies warm loss.

In neighborhoods close Green Bay West High School, publish-conflict bungalows generally don't have any authentic soffit overhang. There, one can set up aspect vents at the scale back fringe of the roof deck to replace for soffits, and pair them with a ridge vent. On gambrel or mansard sections that lack a normal attic, chances are you'll desire low-profile roof vents put strategically. We steer clear of mixing too many vent kinds. Competing exhaust facets can quick-circuit airflow and depart dead zones the place snow melts irregularly.

## **Attic insulation targets that work here**

For Brown County's weather, R-49 to R-60 in a vented attic gives precise price. Blown-in cellulose has an area since it fills gaps and slows air circulate more suitable than fiberglass, yet both can operate if the correct side is sealed. On low-slope roofs average on a few commercial residences alongside Main Street, you many times shift to a "scorching roof" design with spray foam directly below the deck, in particular whilst there is no vent direction. That is a one-of-a-kind equipment with its very own law. For maximum residential roofing in Green Bay, save it straightforward: vented attic, sealed lid, considerable R-price, clean channels.

# Designing roof assemblies that forgive actual weather

A roof that survives Green Bay's winter ought to not call for best possible habit from the occupants. Someone will forget about to run the tub fan. A door might be left cracked. Snow will flow erratically in the course of a nor'easter rolling in off the Bay of Green Bay. A forgiving meeting anticipates these slips.

Several important points escalate resilience. Ice and water preserve prolonged beyond minimum code period allows. Wider drip aspect and suitable sized gutters that do not to come back up into the fascia supply meltwater a direction out. On roofs with lengthy north-dealing with runs, don't forget a darker shingle to take in somewhat greater solar and transparent snow speedier. It is minor, yet it adds up over decades. Finally, shop penetrations to a minimal and flash the ones you may have with a belt and suspenders mentality. A roof informed is aware of which main points fail in February, now not just which ones appearance fantastic in August.

## Snow administration with a faded touch

We get asked regardless of whether to rake the roof. Used sparingly, a roof rake helps. Clearing the primary three feet of snow above the eaves reduces dam conceivable by means of elimination the coldest segment of snow and exposing the deck to colder air, which narrows the temperature gradient. The key's to drag snow down the slope gently. Do not chop or pry. Aggressive raking can loosen shingles, scar granules, and yank fasteners due to sheathing softened with the aid of thaw. We evade chemical deicers. Calcium chloride in socks can stain and corrode metal, and table salt is worse. If an emergency calls for it, expert steaming is the protected formula to put off thick dams with out destroy.

In prepare, in the event you are in a wind-sheltered spot close to the Green Bay Botanical Garden where snow piles deeper, raking after heavy storms is really worth the obstacle. Along more exposed streets near the East River Trail the place the wind scours slopes easy, it may be pointless. Snow behavior is website online express.

## Heat cables: once they make sense and after they do not

Heat cables are traditionally seen as a magic restore. They usually are not. They are a mitigation device for frustrating roof geometries the place highest insulation and ventilation usually are not manageable. Think valleys that feed into brief eaves, dormer returns crowding gutters, or bay window roofs lower than 2nd-story walls. In these tight spots, a zigzag cable can carve a small soften channel to permit water get away. If you install cables, use a thermostat and avoid cable runs on noncombustible surfaces. Plan for the electrical load and examine the lengthy-term working fee, noticeably in the event you are on a broader roof the place tons of photos might be required.

We dodge cables as a customary approach in so much complete-residence cases. If your attic runs hot satisfactory to desire cables throughout each and every eave, the vitality expenses and condensation risks are already telling you to restore the construction envelope.

## Commercial roofing and ice dams: a assorted set of problems

Flat or low-slope roofs on commercial buildings in Green Bay face more ponding than damming. But at the sides, in which tapered insulation meets scuppers and gutters, ice can nonetheless choke the trail. The key the following is the taper plan and warmth loss at parapets and mechanical curbs. We layout tapered insulation so water strikes decisively to drains. Heat tracing internal inside drains and scuppers is also brilliant for particular buildings, however returned, that's a system resolution, no longer an afterthought.

An instance: a one-tale retail space off Oneida Street with 12 rooftop devices. Those RTUs leak warmness. Without excellent diminish insulation and walk pads, snow melts around them, then refreezes at nighttime, forming ridges that catch drifting snow. We use upper-density duvet boards, double-seal penetrations, and insulate curbs to lower melt fields. For ideal tier roofing efficient bay commercial roofing, you regulate detailing to the certainty that folks desire to provider machine yr-circular.

## When roof restoration is adequate, and while a roof alternative is smarter

If you might have a unmarried leak at an eave after one grotesque hurricane, a designated roof fix might be all you desire. That may come with including or extending ice and water barrier at a suspect eave or valley, reinstalling a area of soffit insulation with top baffles, and sealing just a few scorching-spot penetrations on the ceiling below. On the flipside, in the event that your roof is prior two decades, shingles are curling, and you've ordinary dams at dissimilar elevations, a

roof substitute opens the door to make upstream fixes. We can pull the deck in strategic regions to cope with baffles and air sealing, set up leading-edge underlayments, and transform flashing small print that under no circumstances met in the present day's requisites.



In neighborhoods with tall trees, like areas of Red Smith and round the University of Wisconsin-Green Bay campus, debris fills gutters and valleys. Clogged gutters do no longer reason ice dams by way of themselves, however they do get worse overflow, which is repeatedly what owners see as drips along siding. When changing a roof, we as a rule pair it with outsized gutters and cleanout recommendations. A regional roof repairer who knows the styles to your block will recommend even if to head from 5-inch to 6-inch gutters and find out how to pitch lengthy runs that pass additions.

## **A owner of a house story from the east side**

A few winters returned, we labored on a tale-and-a-half close to East High School. The homeowners had two dogs, a child, and a parade of buckets on the kitchen counter whenever the temperature jumped above freezing. The roof used to

be not historical, just unlucky. Dormer returns created lifeless-air wallet. The attic had R-19 batts and a great deal of air leaks around can lighting. They had delivered a ridge vent devoid of clearing the soffits, so the attic breathed thru the can lights in preference to the eaves.

We pulled to come back insulation, sealed the lid, put in baffles in each and every bay, and demonstrated soffit openings that have been buried lower than ancient plywood. We improved ice and water membrane to 4 ft above the indoors wall line for the duration of a partial reroof on the dormers, and we re-pitched a stubborn gutter. They nonetheless get snow, nevertheless love their block walks prior Joannes Park, but the buckets have been inside the basement for 2 winters now. It was no longer a glittery machine that solved it. It become a procedure song-up.

## **Roof geometry, sun publicity, and the Green Bay factor**

Roofs dealing with north carry snow longer, fantastically when shaded by way of neighboring buildings or extensive maples. South-dealing with slopes close to downtown in the main transparent rapid via mirrored solar off neighboring constructions, yet west winds can drive drifting on those comparable slopes. If you reside close Bay Beach Amusement Park, you possibly can detect lake-result winds that stride throughout open water and load explicit eaves. In Suamico and Howard, where subdivisions are greater open, wind scours ridges and stacks snow in valleys. These micro-stipulations exchange the alternative of main points. For illustration, we occasionally propose one other direction of ice and water protect on valleys dealing with triumphing winds, or we upload snow guards on steel sections over entryways to control surprising slides.

## **Maintenance rhythms that hinder midwinter emergencies**

Set a winter protection rhythm and you will seize concerns earlier they expand. Clean gutters in overdue fall, after most of the leaves drop. Walk the perimeter after the 1st large snow and lower back after a warm day. You are on the search for uneven soften strains, heavy icicles over explicit rooms, or water stains on soffits. Peek within the attic on a chilly morning. Frost on nail facts is traditional. Frost blanketing sheathing isn't very. Listen for the telltale drip at the eaves while the solar is out. Small sounds now can save a ceiling later.

If your house has a number of additions, specially a admired structure in materials of the west edge where garages were changed or sunrooms extra, listen in on wherein new roofs tie into historical. Those junctions routinely compress ventilation paths. A seasoned roofing contractor will mean retrofit options, from sensible baffles to brief, dedicated intake vents at choke points.

## **Products and practices we have confidence in our region**

Roofing items needs to tournament both local weather and craft. We pick heavyweight architectural shingles with a strong sealant line for chilly-weather adhesion, paired with synthetic underlayment that resists wrinkling for the duration of freeze-thaw. We use ice and water obstacles rated for low-temperature adhesion and stick them to smooth, dry decks. For air flow, a continual ridge vent with exterior baffles performs at all times in wind. In soffits, we adore sturdy aluminum vent panels with satisfactory loose part to stability the ridge.

On the air sealing the front, closed-cellular foam for complex chases and first-rate hearth-rated sealants round flues and chimneys go a protracted means. We decide upon bath fans with devoted, insulated ducts that terminate at a suitable roof cap with a damper. Shortcuts like venting into a soffit hollow space usually blow moist air true to come back into the attic. On commercial roofs, tapered insulation plans that fall no much less than a quarter inch in line with foot towards drains continue water transferring in chilly snaps.

## **What to do whenever you have already got an ice dam this winter**

If you might be analyzing this with water creeping down an inner wall, your priority is to end the instantaneous injury after which repair the basis purpose. First, safeguard the internal. Move belongings, puncture a small gap in a bulging ceiling bubble to relieve rigidity if vital, and gather water in a box. Second, scale down the melt expense. Drop the thermostat two or three ranges to diminish the attic's warmth load if that you would be able to achieve this correctly and simply. Third, call a roof skilled for riskless ice removal and an evaluate. Professional steaming eliminates ice with no tearing shingles, and a credible local roofing enterprise will not attempt to sell you a complete roof on the first talk over with. The accurate plan is likely to be two-degree: stabilize now, upgrade ventilation and air sealing in the shoulder season, then figure out on roof repair or replacement whilst the weather helps actual paintings.

# Choosing the good spouse for native roofing in Green Bay

Work with a contractor who is aware our blocks, our lake winds, and the way winter sincerely performs out. Ask to look snap shots of prior air flow and insulation improvements, no longer just vibrant shingles. A correct regional roof repairer will talk about air sealing as fluently as flashing. They could have examples from Allouez, Ashwaubenon, Howard, and De Pere, since each neighborhood has its quirks. They will no longer push warmth cables as a cure-all, and they are going to not shrug off bath fan terminations that end within the attic. For residential roofing and advertisement roofing alike, search for a group that treats the roof as section of a constructing formula. That frame of mind prevents ice dams greater reliably than any unmarried product.

As a roofing contractor serving this neighborhood, we feature that techniques angle onto every task. Whether it's major tier roofing efficient bay residential roofing after a hail scare, leading tier roofing eco-friendly bay industrial roofing with tapered insulation round drains, or upper tier roofing efficient bay roof restoration to change chewed-up eave shingles after a obdurate dam, our objective is the related. Make the assembly fair and forgiving. Keep the deck cold and dry. Give meltwater a clean direction out. The best icicles you should always be admiring are those striking from the eaves of the Neville Public Museum all through the vacation gentle reveals, no longer the ones threatening your soffits.

## Key takeaways that you can act in this season

- Seal the lid first: tackle can lighting fixtures, bath fans, attic hatches, and chases previously piling on insulation.
- Confirm continual air flow: clean soffits, set up baffles, and make sure an open ridge vent.
- Extend ice and water barrier for the time of any roof restore or alternative beyond minimal code in which slopes or exposures demand it.
- Manage snow gently: rake the first few toes above the eaves whilst storms stack up, and steer clear of salts.
- Call for aid early: specialist steaming stops spoil, and an intensive review sets up lasting fixes.

Green Bay's winters will dwell fair. Your roof may be, too. If you might be close Tiletown or out by way of the Bay Beach Wildlife Sanctuary and want a grounded plan, our team is able to take a look at the complete picture, from attic to eaves, with recommendations that get up to February and make feel in July.

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