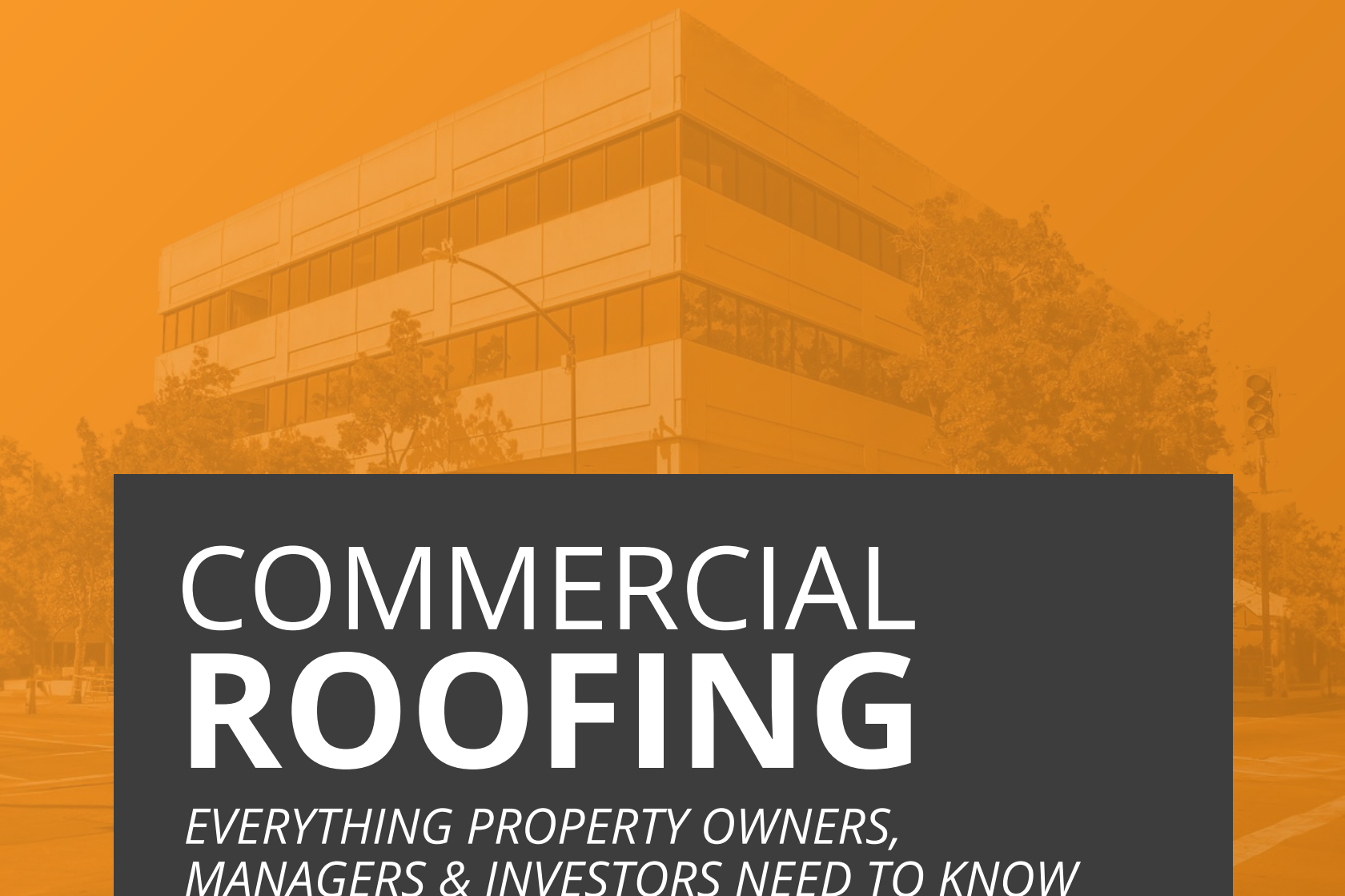
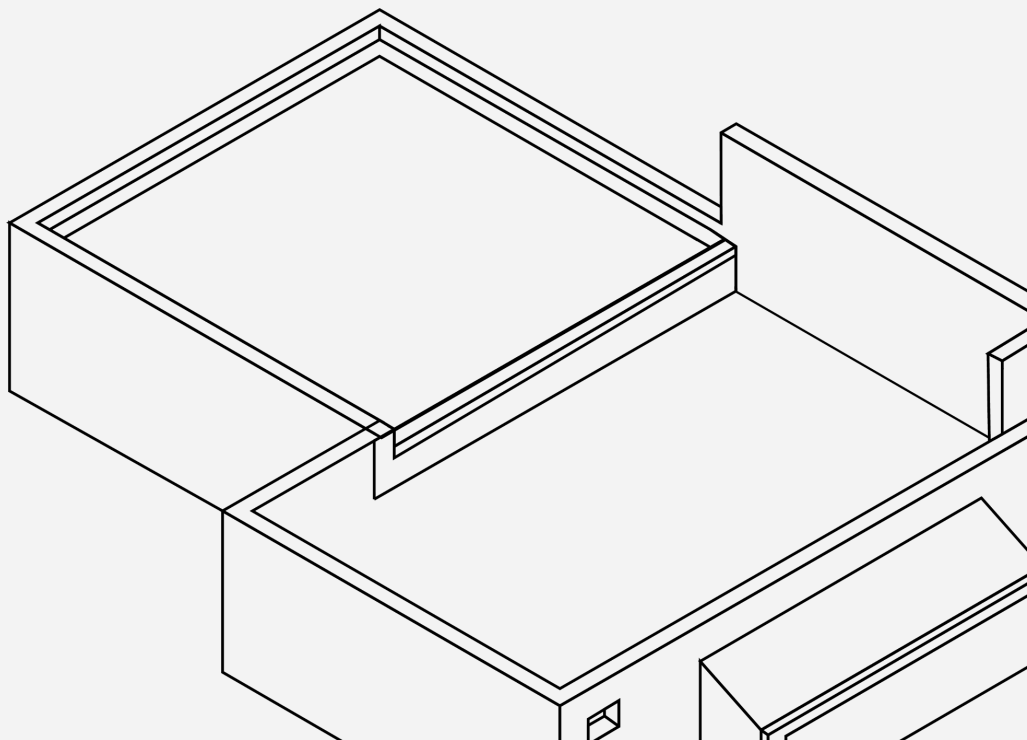




COMMERCIAL ROOFING

*EVERYTHING PROPERTY OWNERS,
MANAGERS & INVESTORS NEED TO KNOW*

**PROPERTY MANAGERS'
EDUCATION GUIDE**



Understanding Your Commercial Roof System





Commercial Property Management

For commercial property managers, investors, and HOAs, being educated on building upkeep and construction—especially on roofing—is crucial for several reasons:



Asset Protection

Prevents costly damages, preserving property value.



Budget Planning

Allows for accurate maintenance budgeting, avoiding surprise expenses.



Tenant Satisfaction

Maintains comfort and prevents issues like leaks, supporting occupancy.



Energy Efficiency

Reduces HVAC costs with informed roofing choices.



Compliance

Ensures adherence to regulations and potentially lowers insurance premiums.



Long-Term Investment

Increases roof lifespan and reduces capital expenses.



Risk Management

Minimizes accidents and liability, enhancing building safety.

Case Studies

Critical Roof Failure

What You Need To Know

Property managers, investors, and building owners must prioritize roof maintenance to safeguard property value, avoid costly repairs, and ensure safety. These case studies highlight the consequences of neglecting proper care:

Key Takeaways for Property Managers:



Plan Maintenance

Regular inspections and upkeep can prevent costly failures and emergencies.



Ensure Safety

Roof integrity directly impacts tenant safety and building reliability.



Be Proactive

Address structural risks early to avoid severe consequences and maintain property reputation.



Freeport Logistics AZ Roof Collapse 2024

► Each year, over 3,000 roof collapses occur in the U.S



**Minneapolis
Metrodome
Roof Collapse
2010**

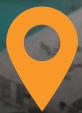
**Hartford Civic
Center Roof
Collapse
1978**

**333 Park Avenue
NJ Roof Collapse
2024**

**Knickerbocker
Theatre Roof
Collapse 1922**

**Randalls
Supermarket
Roof Collapse
2007**

**Champlain Towers
Surfside Disaster
2021**



Champlain Towers Surfside Disaster 2021



**\$1.2B
Settlement**



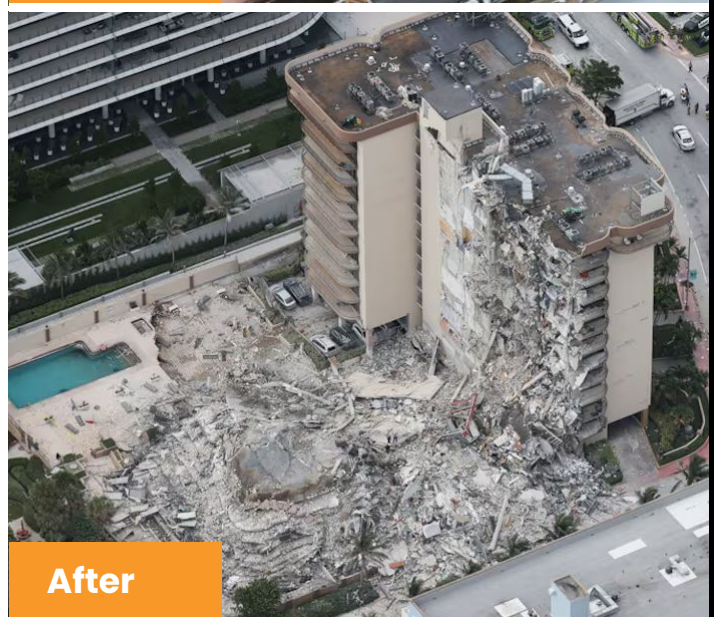
**98
Lives Lost**

In 1981, the Champlain Towers South condominium was built along the coastal shores, a beautiful yet vulnerable location. Over the years, the salty air took its toll, corroding the building's concrete and steel. By 2018, an engineering report revealed **"major structural damage"** in the pool deck and parking garage—crumbling concrete and corroded rebar were serious red flags. Though extensive repairs were recommended, disagreements over costs and funding delays stalled action.

As time passed, some repairs began, but many **critical issues remained unresolved**. Then, in June 2021, disaster struck. The building collapsed, claiming the lives of 98 residents and leaving a community shattered.



Before



After



Prevention: Had the property managers and owners acted decisively on the 2018 report, the collapse might have been averted. Proactive management isn't just about following recommendations; it involves establishing a continuous plan for maintenance and inspections to address issues like concrete spalling, rebar corrosion, and water intrusion before they escalate.



Impact: \$1.2 billion settlement, the largest in U.S. history for a construction disaster. This disaster has caused nationwide updates to building codes and policies. The settlement was paid to the families of the 98 people who died and the survivors of the collapse.



Minneapolis Metrodome Roof Collapse 2010

The Metrodome, home to various sports events, relied on an inflatable roof—a **cost-effective but weather-sensitive design**. In December 2010, a heavy snowstorm blanketed the roof, exceeding its weight capacity. The accumulation tore the roof membrane, leading to a dramatic collapse. Luckily, the incident occurred overnight, avoiding injuries.

-  **Cause:** Snow load overwhelmed the roof's capacity.
-  **Prevention:** Regular snow removal and a design tailored to handle the region's extreme winter conditions. A structural upgrade could have mitigated risk.
-  **Impact:** \$18.3 million for roof replacement and significant revenue loss.



Randalls Supermarket Roof Collapse 2007

During Tropical Storm Erin, heavy rain caused the roof over the loading dock at a Randalls Supermarket in Texas to collapse, tragically killing two workers. Investigations revealed inadequate structural reinforcements to handle extreme weather.

-  **Cause:** Structural failure under heavy rainfall.
-  **Prevention:** Regular structural assessments and reinforcements in regions prone to severe storms could have prevented the collapse.
-  **Impact:** Loss of two lives, repair costs, business interruptions, and potential lawsuits.



Freeport Logistics AZ Roof Collapse 2024

In Phoenix, Arizona, a severe monsoon storm produced microburst winds of up to 70 mph, causing the partial collapse of a warehouse roof. Tragically, a forklift operator was trapped and killed. Investigations found the roof was not equipped to handle such extreme conditions.

-  **Cause:** Roof failure under high wind loads.
-  **Prevention:** Regular structural assessments to ensure roofs meet current wind resistance standards.
-  **Impact:** Loss of life and ongoing reconstruction costs.



333 Park Avenue NJ Roof Collapse 2024

Heavy rainfall in Newark, New Jersey, caused the partial collapse of an apartment building roof. Flooding compromised hallways and stairwells, forcing the evacuation of 64 residents. The root cause was inadequate drainage systems that allowed water to pool and weaken the structure.

- ✗ **Cause:** Poor drainage and water pooling during heavy rain.
- 🔧 **Prevention:** Installing proper drainage systems, such as scuppers and downspouts, to prevent water accumulation.
- 💰 **Impact:** Emergency repairs, temporary housing costs, and property damage.



Hartford Civic Center Roof Collapse 1978

Just hours after a hockey game, the roof of the Hartford Civic Center collapsed under the weight of snow. The investigation revealed design flaws and deviations during construction, which contributed to the failure. Fortunately, the arena was empty at the time.

- ✗ **Cause:** Structural and design deficiencies combined with snow load.
- 🔧 **Prevention:** Thorough structural analysis, adherence to design standards, and regular inspections.
- 💰 **Impact:** Major reconstruction costs and a two-year closure, leading to event cancellations and lost revenue.



Knickerbocker Theatre Roof Collapse 1922

Following a record-breaking blizzard in Washington, D.C., the roof of the Knickerbocker Theatre collapsed, killing 98 people and injuring 133. Investigations attributed the disaster to the roof's flat design, which failed to shed the weight of accumulated snow.

- ✗ **Cause:** Inadequate roof reinforcement and snow overload.
- 🔧 **Prevention:** Reinforcing roofs in snowy regions and improving snow management practices.
- 💰 **Impact:** Loss of life, legal costs, and widespread grief, prompting stricter building codes.

Types of Commercial Roofs

Sloped Roofs

Sloped roofs are common on multifamily apartments and some commercial buildings, as well as most residential roofing projects. While a few residential homes have flat sections or entirely flat roofs, sloped roofs are far more typical.

The most common materials used for these sloped roof projects are:



Shingle



Metal



Tile



VS

Low Slope

Commercial projects usually have a low slope or flat roof and are much larger than residential projects. Commercial projects are typically categorized as multifamily buildings, warehouses, factories, apartments, retail stores, malls, and similar structures.

These are the most common systems for commercial projects:



Single-Ply



Coating



MBR



Metal



BUR



The History of Flat Roofs

Historical Milestones

1840s



The **Built-Up Roofing (BUR)** system was developed, with tar paper layers providing durability. Innovators like the Warren brothers in Cincinnati advanced its use. BUR systems became a standard for providing multiple protective layers.

1920s



The introduction of **Asphalt-Based Roofing** systems modernized BUR by enhancing waterproofing and resistance to extreme weather. These advancements paved the way for more reliable flat roofing in urban areas.

1970s



The invention of **PVC (Polyvinyl Chloride)** roofing membranes introduced a durable, flexible, and chemical-resistant single-ply roofing option. PVC remains widely used in commercial applications today.

1860s



Slag Roofing, patented by Michael Ehret in 1868, added a hard aggregate layer for durability and weather resistance. This improvement solidified flat roofs as a preferred option for commercial buildings.

1950-60s



Early versions of **EPDM (Ethylene Propylene Diene Monomer)** emerged, initially used as a supplemental layer over BUR systems. **Spray Foam Roofing** gained popularity but required UV-resistant coatings to counteract degradation. Innovations in coatings during this time extended the lifespan of commercial roofs.

The Evolution of Flat Roofs: Key Milestones for Property Managers

Flat roofs became widely adopted with advancements in construction materials like concrete, steel, and waterproofing systems. Initially limited to dry climates due to drainage challenges, flat roofs gained popularity as technology improved.

Why It Matters:

For property managers, understanding the history of flat roof systems helps in making informed decisions about maintenance, upgrades, and replacements. Each milestone reflects improvements in durability, energy efficiency, and cost-effectiveness, ensuring safer and more reliable roofing solutions for commercial properties.

1980s



1980s

The advent of **Modified Bitumen Roofing** combined the durability of BUR with the flexibility of modern polymers. This system became a favorite for low-slope commercial roofs.



1990s

TPO (Thermoplastic Polyolefin), invented by Dow Chemical, offered a lightweight, heat-reflective, and easy-to-install solution. It quickly became one of the most popular single-ply systems for commercial roofs.



2000s

The growth of **cool roof technologies**, including reflective coatings and membranes, helped property managers reduce energy costs by improving heat resistance and energy efficiency.



2010s

Innovations in **Roof Coatings** led to advanced materials that provide waterproofing, UV resistance, and cost-effective maintenance solutions for aging flat roofs.

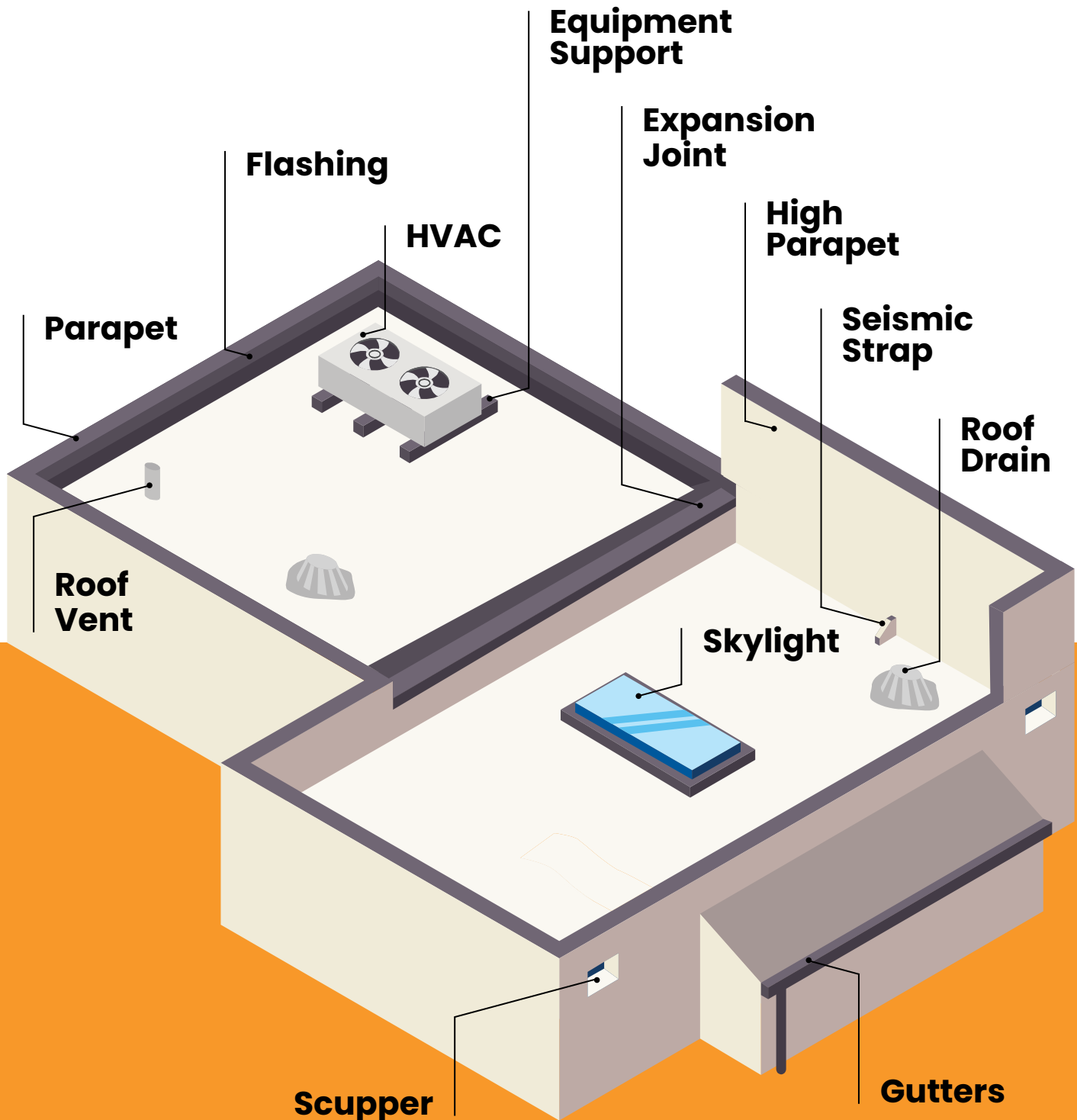


Today

Modern Flat Roofing systems offer diverse, tailored solutions for various property needs. Advanced coatings and sustainable materials provide long-lasting, budget-conscious options while supporting environmental goals.

Parts of a Commercial Roof

Commercial roofs come in a variety of shapes and sizes. The following are common parts of a commercial roof system.





Equipment Support

Platforms elevate heavy equipment like HVAC units, preventing ponding and supporting weight. Ensure proper flashing around supports.



Expansion Joint

Allows structures to expand and contract without damage.



Flashing

Weatherproof material installed to keep moisture away, particularly around supports, equipment, or roof penetrations.



Gutter

Metal troughs at roof eaves or connected to scuppers, directing water to downspouts.



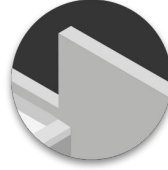
HVAC

Essential roof-mounted systems for temperature, humidity, and air quality. Proper accommodation is crucial during roof installation.



Parapet

Low walls around roof edges, protecting against wind forces and accidental falls. High parapets may offer added protection or aesthetic appeal.



High Parapet

Some commercial structures will have varying heights of parapet walls. These may just be a design choice or additional wind/accidental fall protection.



Roof Drain

Internal drains channel water through pipes to the building's drainage system.



Roof Vent

Vents like stacks or pipes ensure proper gas and air circulation.



Scupper

Backup drainage integrated into walls or parapets to handle stormwater overflow.



Seismic Strap

Braces parapet walls against earthquakes or strong winds.

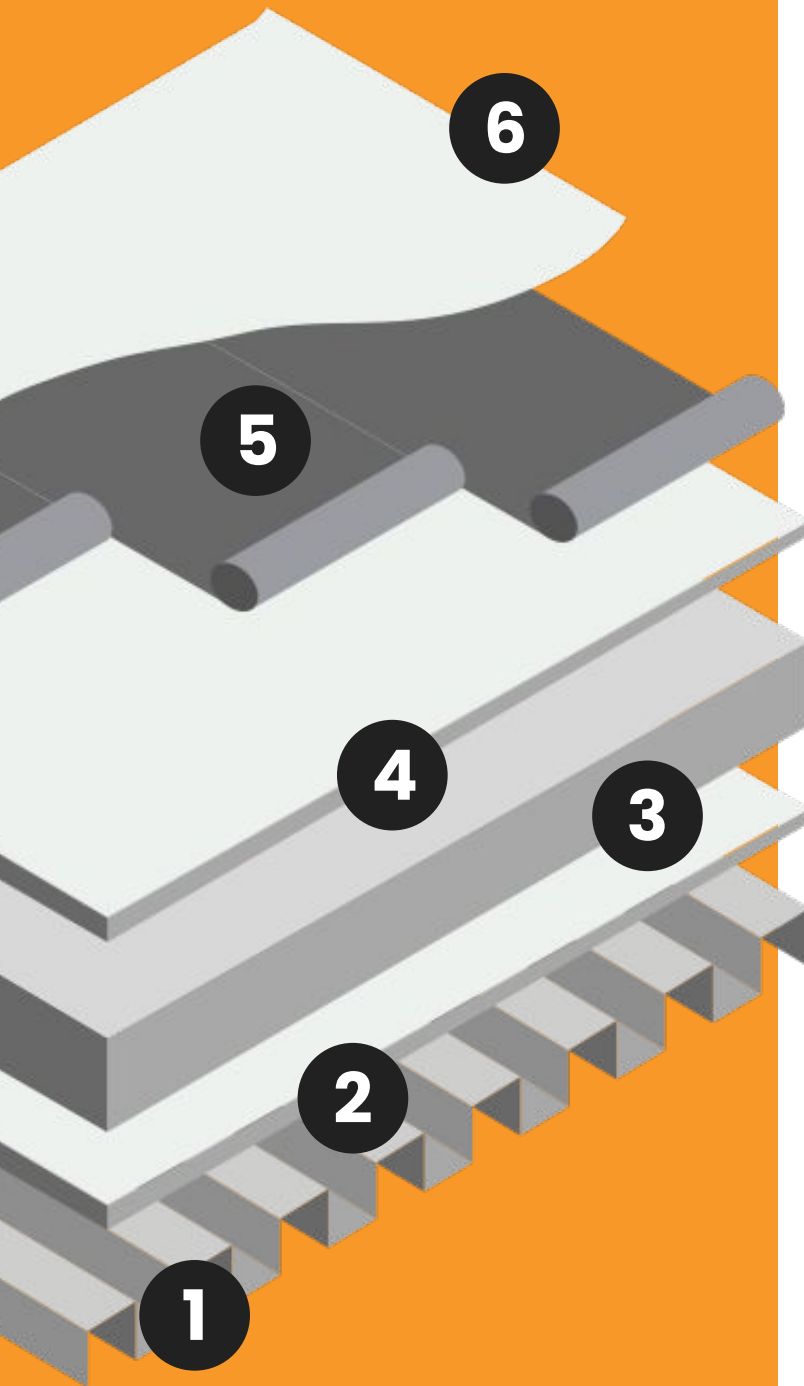


Skylight

Roof structures that admit natural light, common in both residential and commercial buildings.

Layers of a Commercial Roof

Commercial roof layers vary depending on previous systems. Here's a breakdown:



1 Base

Starts with steel roof decking, typically corrugated steel panels supported by trusses, purlins, anti-sag rods, and knee bracing.

2 Vapor Barrier (Optional)

Installed if the building requires AC or is in a humid climate, offering added moisture protection.

3 Roof Insulation

Essential for regulating heat and moisture on flat roofs that receive consistent sunlight.

4 Deck

An extra layer for additional support between insulation and membrane.

5 Membrane/Asphalt

The primary waterproofing layer, including systems like TPO, EPDM, PVC, or asphalt options like BUR.

6 Coating

Protects and extends roof life by up to 10 years, offering waterproofing and insulation at half the cost of replacement.

Parts of the Drainage System

Flat roof drainage systems come in two main types—siphonic and gravity—both using similar components:

Interior Drains

Installed across the roof, these work best on roofs shaped to channel water to specific drainage points. They may include high-capacity or dual-outlet drains for faster water removal and sump pans to direct water to hard-to-reach drains. **Components include:**

- Dome strainer/cover
- Flashing or clamp ring
- Outlet (connects to pipes)
- Air baffle (for siphonic systems)

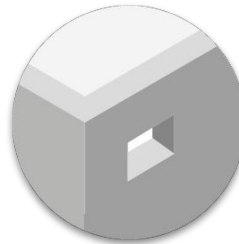


Types of Drains:



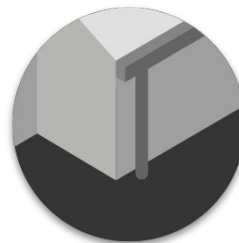
Edge Drains

Collect water at the roof's edge to prevent overflow onto building sides or sidewalks, directing it through controlled channels.



Scuppers

Integrated into walls or parapets, often as backup drainage to manage stormwater overflow. Many roofs use multiple scuppers.



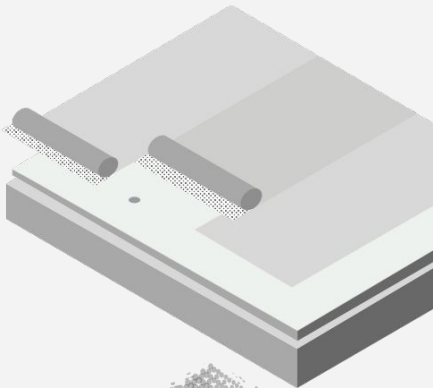
Gutters & Downspouts

Common in residential settings but also used in commercial roofs when sloped to drain water to an edge.

Cost-effective pipes that channel water from scuppers or drains to the ground without structural changes.

Single-Ply Membrane Adherence

Adhered



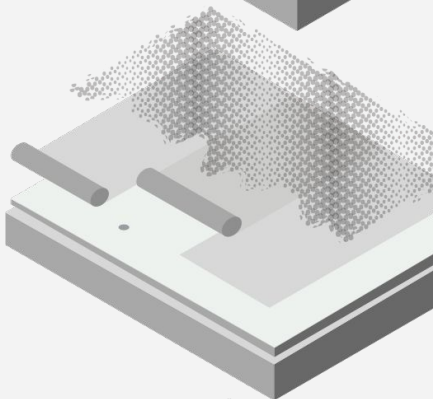
When considering the adhesive method to use for a commercial project, it's key to educate property owners on what's available and what solution best fits their needs.

Following are the industry standards for single-ply membrane adherence and the key features of each.

Fully-adhered means that the roofing material is adhered to the roof deck substrate with an adhesive. It is recommended for roofs with impermeable roof decks and areas with frequent high winds.

- ✓ **Uplift Protection**
- ✓ **High Stability**
- ✗ **Labor Intensive**

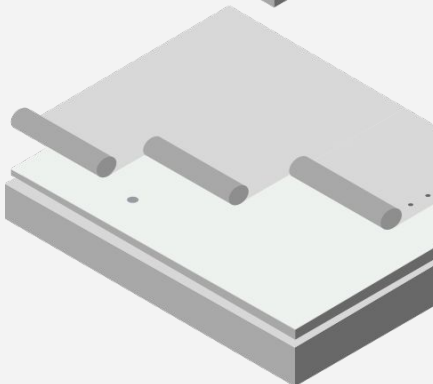
Ballasted



Ballasted means that the roofing material membrane is loosely laid upon the roof deck, not fastened into place with glue or screws, but instead weighed down.

- ✓ **Easy Install**
- ✓ **Lower Cost**
- ✗ **Higher Roof Weight**

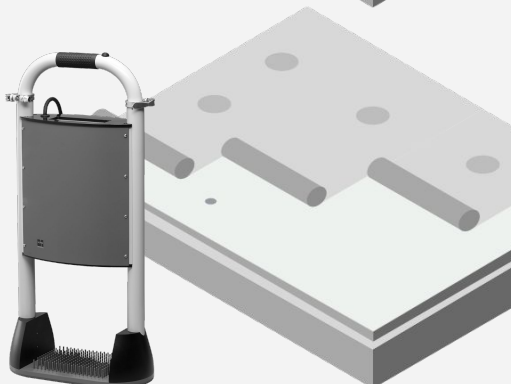
Mechanical



Mechanically applied means that it is adhered to the roof deck with heavy duty screws and metal plates. This method is preferred in areas with moderate winds.

- ✓ **Uplift Protection**
- ✓ **Attached to Deck**
- ✗ **Install Issues**

Induction Weld



This method is sometimes used on TPO and PVC systems. It's similar to mechanically fastened systems but uses plates and an induction welding tool to secure both the membrane and insulation.

- ✓ **Less Fasteners Needed**
- ✓ **Uplift Protection**
- ✗ **Higher Cost**

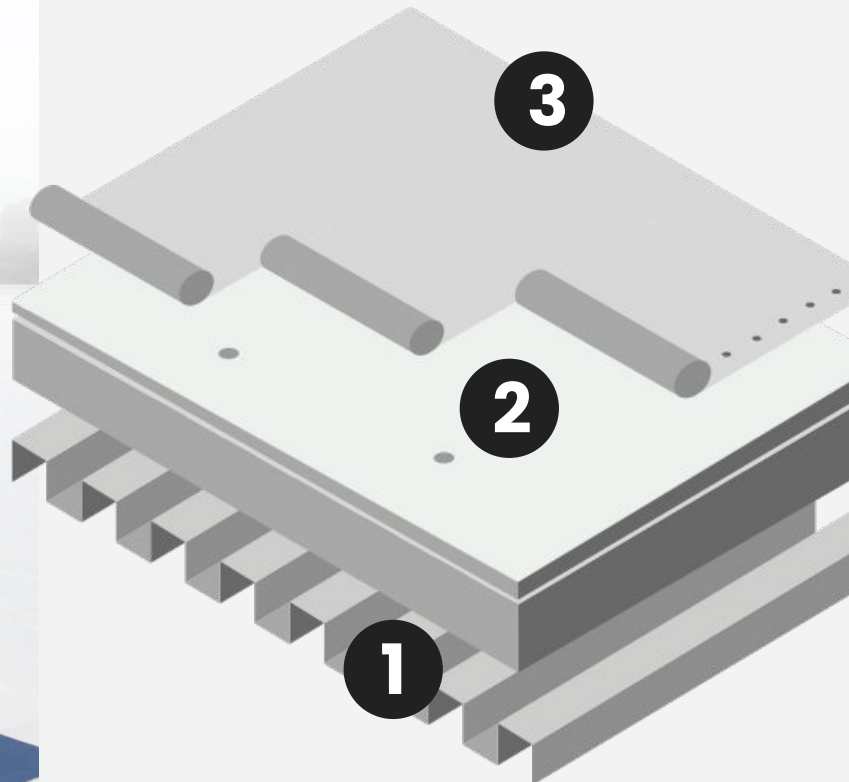
TPO Roofing Systems

TPO (thermoplastic polyolefin) is a single-ply roofing material covering 40% of the commercial roofing market. Its popularity is due to its durability, eco-friendly composition (free of plasticizers), and energy-efficient properties.

- Thickness Options:** Available in 40 to 80 mils; thicker membranes offer greater durability.
- Eco-Friendly:** Reflects heat, reducing energy costs and supporting sustainability goals.
- Resilient:** Provides strong resistance to UV rays, ozone, and chemicals, ensuring long-term performance.
- Ease of Installation:** A favorite among contractors for its reliability and efficiency during installation.
- Fungi resistant**

TPO Layers

- 1 Base Prep**
Clean or remove the existing roof system, then install the insulation layer.
- 2 Fasteners**
Secure insulation using approved fasteners as per manufacturer specifications.
- 3 Apply Membrane**
Install the TPO membrane and seal the seams using one of the following methods: Mechanically fastened (shown in graphic), Ballasted, Fully adhered, or Induction welded. Ensure all protruding roof elements are properly sealed around.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*



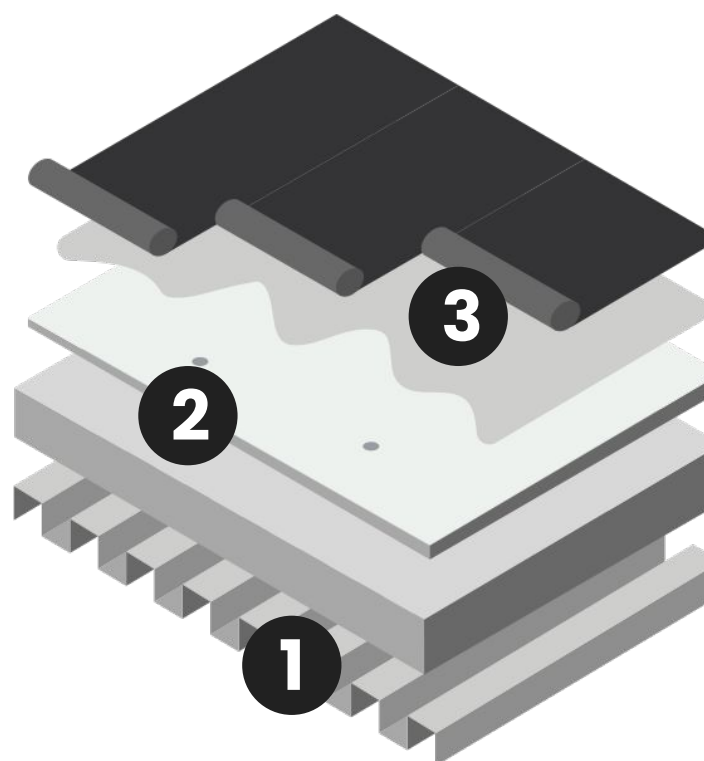
EPDM Roofing Systems

EPDM (ethylene propylene diene monomer), or rubber roofing, is a durable, cost-effective single-ply option for flat roofs. Its seamless design simplifies installation without the need for torches or hot asphalt.

- +** **Affordable & Long-Lasting:** Competitive pricing and low labor costs, with warranties up to 30 years and a lifespan of 50+ years with proper maintenance.
- +** **Flexible:** Adapts to building movements and seasonal expansion/contraction.
- +** **Durable:** Resists UV damage, punctures, and tears, thanks to its strong fleece backing.
- +** **Easy to Source & Install:** Readily available and simple to apply, saving time and effort.

EPDM Layers

- 1 Base Prep**
Clean or remove the existing roof system. The base layer needs to be fully dry, then install the insulation layer.
- 2 Fasteners**
Secure insulation using approved fasteners as per manufacturer specifications.
- 3 Apply Membrane**
Install the EPDM membrane and seal the seams using one of the following methods: Mechanically fastened, Ballasted, or Fully adhered (shown in graphic.) EPDM is typically black, but can be painted white to keep it cooler.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*

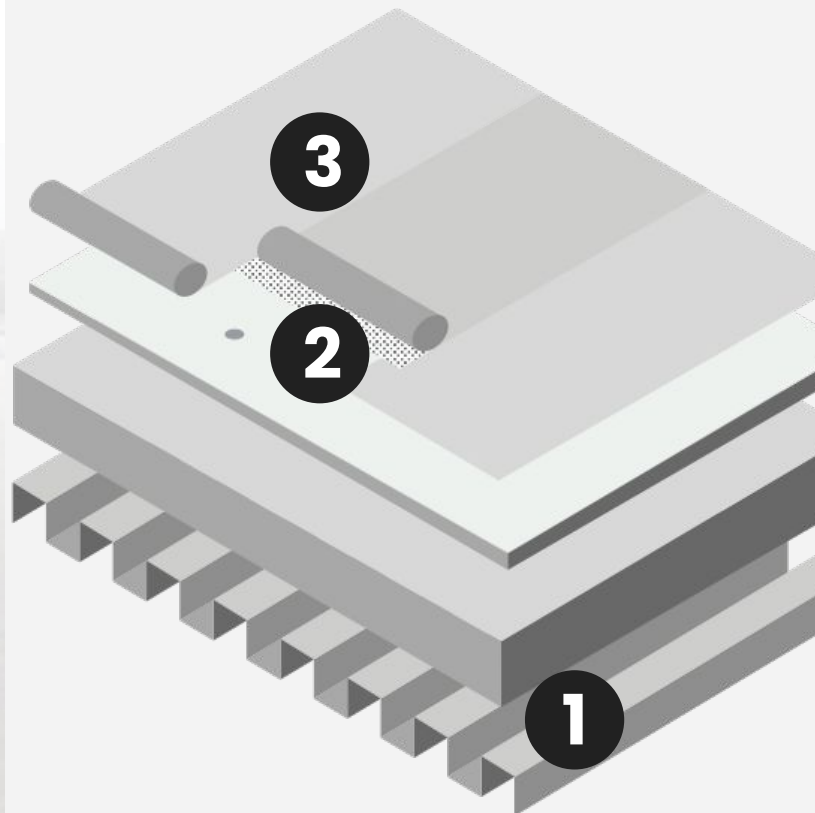
PVC Roofing Systems

PVC (polyvinyl chloride), or vinyl roofing, is a durable and versatile single-ply option for commercial properties. Made with less oil and petroleum than TPO or EPDM, it's both efficient and eco-conscious.

- Structure:** Composed of two PVC layers over a reinforced fabric core. Installed via adhesion, mechanical fastening, or ballasting with seam welding.
- Durability:** Resistant to wind, fire, moisture, and UV exposure.
- Flexibility:** Adapts to thermal expansion and contraction.
- Energy-Efficient:** Naturally light-colored, promoting heat reflection and reducing energy costs.
- Waterproof:** Excellent performance in preventing leaks.

PVC Layers

- 1 Base Prep**
Clean or remove the existing roof system, then install the insulation layer.
- 2 Fasteners**
Secure insulation using approved fasteners as per manufacturer specifications.
- 3 Apply Membrane**
Install the PVC membrane and seal the seams using one of the following methods: Mechanically fastened, Ballasted, or Fully adhered (shown in graphic.) PVC shows a bleed out when it's properly adhered.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*

MBR/BUR Membrane Adherence



For Modified Bitumen Roofing Systems there are several application types for adhering the system to the roof like peel-and-stick, hot mopped, cold-applied, and torched. Roofers using torches must have CERTA certification (certified roofing torch applicator), and some areas restrict torch use due to fire risks.

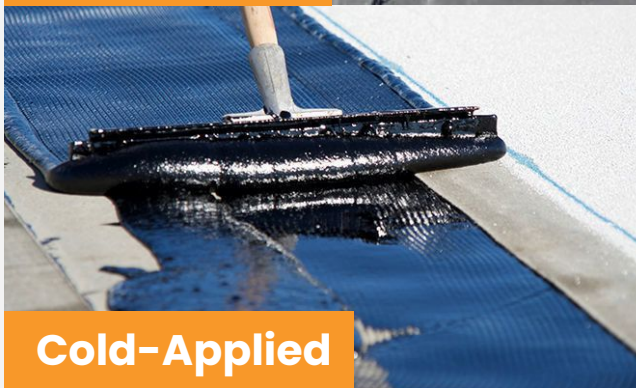
This fast growing asphaltic installation method involves rolling out a membrane and peeling the film backing to adhere the membrane. This increases the speed of installation and does not produce unpleasant odors.

- ✓ **Easy Install**
- ✓ **Simple and Clean**
- ✗ **Risk of Leaks**



One of the oldest application methods still used today, involves melting blocks of asphalt in a large kettle and spreading the melted asphalt on the roof with mops.

- ✓ **Thick Application**
- ✓ **Less chance of leaks**
- ✗ **Old school/Labor Intensive**



The installer will attach the roofing membrane by applying a liquid adhesive with a tool, such as a notched squeegee or applicator gun to the previously applied layer of roofing material.

- ✓ **Safer for Crew**
- ✓ **Low Odor**
- ✗ **Long cure time**



Using a torch, the installer will melt the asphalt on the underside of the membrane. This will allow the sheet to adhere to the substrate below.

- ✓ **Time efficient**
- ✓ **Less chance of leaks**
- ✗ **Higher Risk/Need Certification**

MBR Systems

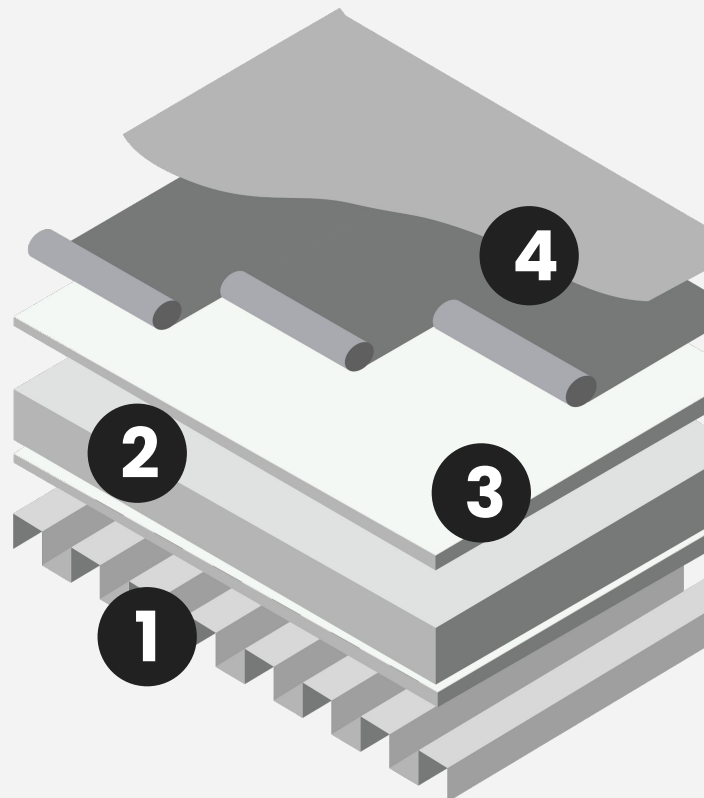
Modified Bitumen Roofing (MBR) offers a flexible, durable option for commercial properties. Installed as peel-and-stick rolled sheets over a base membrane, MBR systems are lightweight and perform well in cold climates, thanks to modifiers like APP (Atactic polypropylene) and SBS (Styrene-butadiene-styrene).

- +** **Flexible:** Adapts well to varying temperatures.
- +** **Impact Resistant:** Durable against physical damage.
- +** **Efficient Installation:** Requires fewer layers, reducing installation time and labor costs.
- +** **Cost-Effective:** Smaller crews often suffice, lowering overall expenses.



MBR Layers

- 1 Base Prep**
Clean or remove the existing roof system, then install the insulation layer.
- 2 Fasteners**
Secure insulation using approved fasteners as per manufacturer specifications.
- 3 Base Sheets**
Modified base sheets or plies are required layers for MBR systems after the insulation because of the “hot” application method.
- 4 Apply Membrane**
The preferred membrane material is rolled onto the roof and adhesion is applied by Hot Mopping, Torchign, or a simple Peel-and-stick method. If necessary the contractor will apply a coating layer to the top for additional protection.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*

BUR Systems

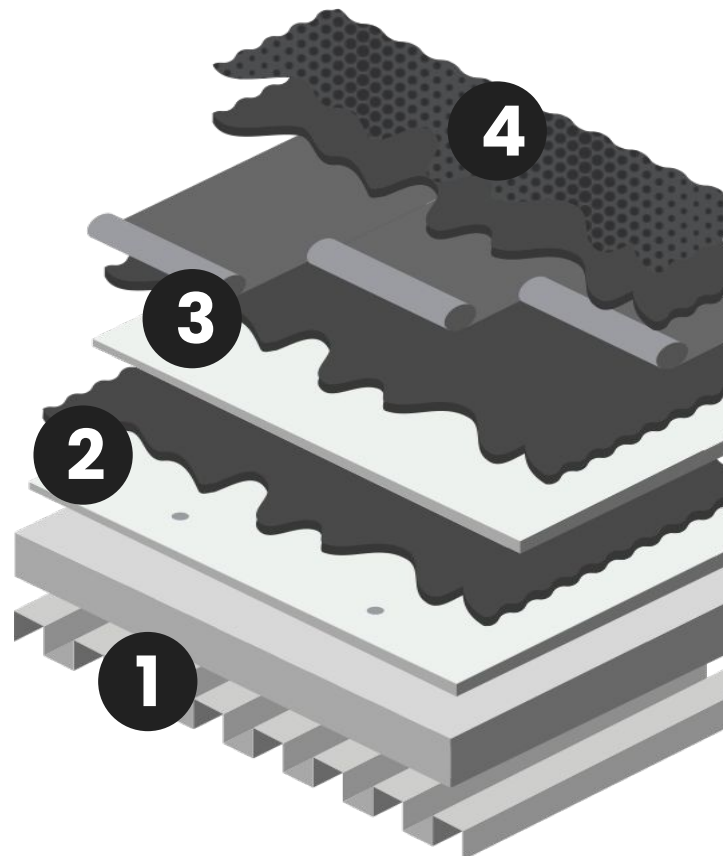
Built-Up Roofing (BUR) is a time-tested system for flat and low-slope roofs. It consists of alternating layers of reinforcing fabric and asphalt, topped with an aggregate like gravel. Modern BUR systems now include rigid insulation for enhanced energy efficiency.

-  **Waterproofing:** Provides a seamless, sealed surface.
-  **UV Protection:** Resists sun damage effectively.
-  **Fire Resistance:** The aggregate top layer enhances fire safety.
-  **Durability:** Low maintenance with a long lifespan.



BUR Layers

- 1 Base Prep**
Clean or remove the existing roof system, then install the insulation layer.
- 2 Fasteners**
Secure insulation using approved fasteners as per manufacturer specifications.
- 3 Adhesion**
Apply felt layers using tar, concrete, adhesive, or asphalt. BUR systems typically consist of 3-5 layers for added durability, sealed with a final asphalt layer. Adhesion methods can be hot or cold.
- 4 Gravel Layer**
A top layer of gravel protects against moisture, foot traffic, and weather damage. Ballasted BUR systems use larger stones to hold the layers in place, eliminating the need for lower-layer fasteners.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*

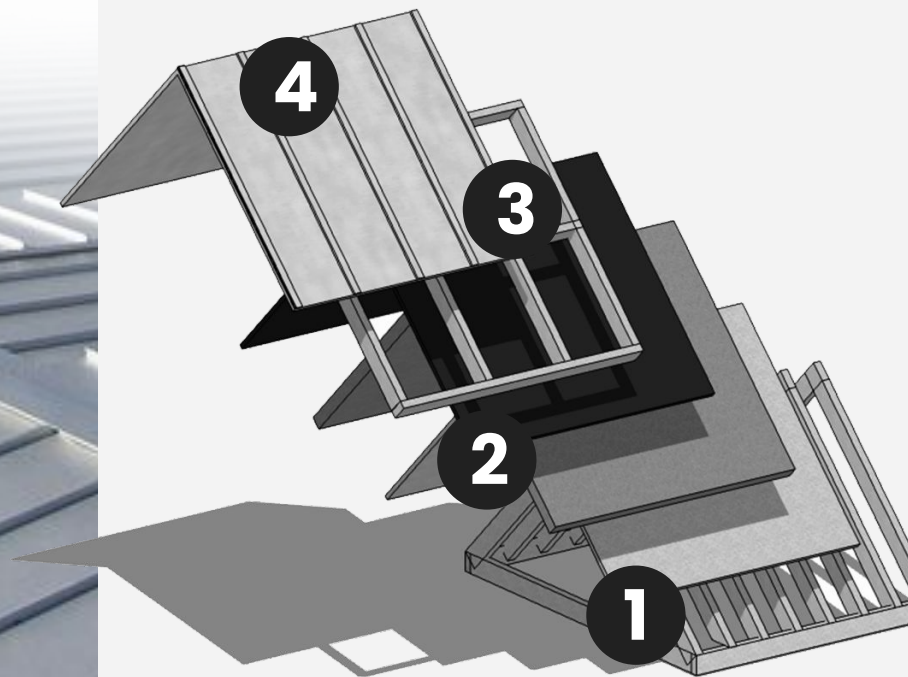
Metal Roofing Systems

Metal roofing has long been a reliable choice for commercial buildings, offering durability, efficiency, and a sleek appearance. Two main types of metal roofing include **corrugated panels** and **standing seam systems**.

- Fire Retardant:** Metal naturally resists fire.
- Durable:** Raised seams and interlocking panels enhance strength.
- Energy-Efficient:** Reflective coatings reduce heat absorption.
- Low Maintenance:** Minimal upkeep required compared to other systems.
- Versatile Aesthetic:** Complements both modern and traditional architecture.

Metal Layers

- 1 Decking**
The base layer, typically made of wood, sits atop the attic structure and serves as the foundation for the roofing system.
- 2 Vapor Barrier**
A protective membrane prevents moisture vapor from penetrating, controlling condensation and protecting insulation and structural components.
- 3 Nailing Planks**
Horizontal boards or metal strips fastened to the decking ensure proper alignment and provide a secure base for attaching metal roofing panels.
- 4 Roofing Panels**
Durable metal sheets, often made of steel or aluminum, form the outermost layer, offering weather resistance and aesthetic appeal while protecting the underlying structure.



**The layers of the roofing system will vary depending on the manufacturer. Outlined here is a standard procedure for installation.*

Commercial Coatings

What are Roof Coatings?

Roof coatings protect roofs from natural elements like ice, water, UV sunlight, and wind while extending their lifespan. Made with elastic resins, coatings form a durable, leak-proof layer that fills small cracks and seams in flat roof systems.

Key Features:

- **Types:** Asphalt, polyurethane, acrylic, and silicone coatings are common. See chart for more details.
- **Applications:** Suitable for existing roofs (e.g., MBR, BUR, single-ply, foam, metal) and new construction.
- **Cost-Effective:** At about half the cost of a roof replacement, coatings can add up to 10 years of life to a flat roof.



Roller



Spray



Brush

Roof Coating Benefits



Reduce Energy Costs

- Better insulation by blocking UV
- Less energy used to cool/heat building



Keeps Roofs Cool

- Coating reflects sun rays
- UV rays are not absorbed



Protect Against Leaks

- Coating seals the roof system
- Adds a waterproof barrier



Sustainability

- Increase in sustainable mindfulness
- Low-impact alternative to replacement

Types of Coatings

Roof coatings offer tailored solutions for protecting and extending the life of commercial roofs. Here's a breakdown of the most common types and their applications:

Type	Composition	Best For	Application	Benefits
Acrylic	Water, acrylic polymer resin, calcium carbonate, and titanium dioxide	Most Substrates	Brush, roller, or spray; requires temperatures above 50°F (10°C)	- Elastomeric - Widely Adaptable
Silicone	Crystalline silica, titanium dioxide, and petroleum hydrocarbon distillates.	Metal, EPDM, PVC, TPO, and existing coatings	Brush, roller, or spray; works above 35°F (1.7°C)	- Highly flexible - Weather Resistant
Polyurethane	Aromatic: Durable for various substrates including BUR, MBR, and metal. Aliphatic: Offers superior UV resistance and flexibility.	Most Substrates	Brush, roller, or spray; ideal between 40°F (4.5°C) and 100°F (38°C)	- Strong Impact Resistance - Adaptability
Asphalt	Cutback: Solvent-based, bonds well to asphalt roofs. Emulsion: Water-based for smooth-surfaced asphalt and metal.	Asphalt and Metal	Brush, roller, or squeegee; above 40°F (4°C)	Cost-Effective for Asphalt Roof Maintenance
Butyl	Petroleum resin, polybutene, titanium dioxide, and xylene	Metal, modified bitumen, PVC, and TPO.	Brush, roller, or spray	- Excellent Vapor Barrier - Durability
Coal Tar	Refined coal tar pitch, aromatic solvent, and clay stabilizer.	Coal tar built-up roofing and concrete.	Squeegee or brush; above 40°F (4°C)	- Long-Lasting - Weather Resistant
Soy	Soy-derived polymers blended with polyurethanes or acrylics.	Renewable option for general roof coatings.	Brush, roller, or spray	- Eco-Friendly - Elastomeric



Commercial Inspections

Our commercial roofing inspections focus on identifying immediate issues, planning for future needs, and delivering exceptional service to property managers. We aim to be your trusted partner for all roofing solutions, building trust through reliability and professionalism.

Our commercial roofing assessments ensure accuracy with a comprehensive inspection kit, including:

- A **drone** for high-quality aerial roof images.
- A **thermal camera** to detect hidden moisture and damage.
- A **core cutter** for structural sample analysis.
- A **smartphone camera** for detailed visuals.

These tools enable precise evaluations and proactive solutions.

Inspection Process

1 Thorough Assessment

Evaluate the roof's condition, identifying damage, safety concerns, and overall health.

2 Lifespan Projection

Estimate the remaining life of the roof and recommend tailored solutions for repairs or maintenance.

3 Budget Planning

Help you plan for costs, determining whether replacement is needed in 2-5 years or if maintenance can extend its life for 10+ years.

4 Immediate Solutions

Address emergency leaks on-site and provide quotes for urgent repairs.

5 Drainage Check

Inspect water ponding areas to prevent structural damage or potential roof collapse.

6 Customized Plan

Develop a repair, replacement, or maintenance program based on findings.

Core Samples

Core sampling is an essential part of commercial roof inspections, offering a detailed assessment beyond the surface to determine the roof's overall condition and lifespan.

Coating

Asphalt

Membrane

Deck

Insulation

Base

Collecting The Sample



Extraction

A core cutter tool removes a sample of the roof's layers.



Analysis

Layers are inspected for roofing history, moisture levels, insulation condition, and potential hazards.



Resealing

The sample area is securely resealed to maintain the roof's watertight integrity.

Core Inspection Points



System Diagnosis

Identifies whether the roof needs reinforcement or a full replacement by evaluating layers, previous systems, and age.



Roof History

Reveals details about the original structure, valuable for property owner education and insurance reporting.

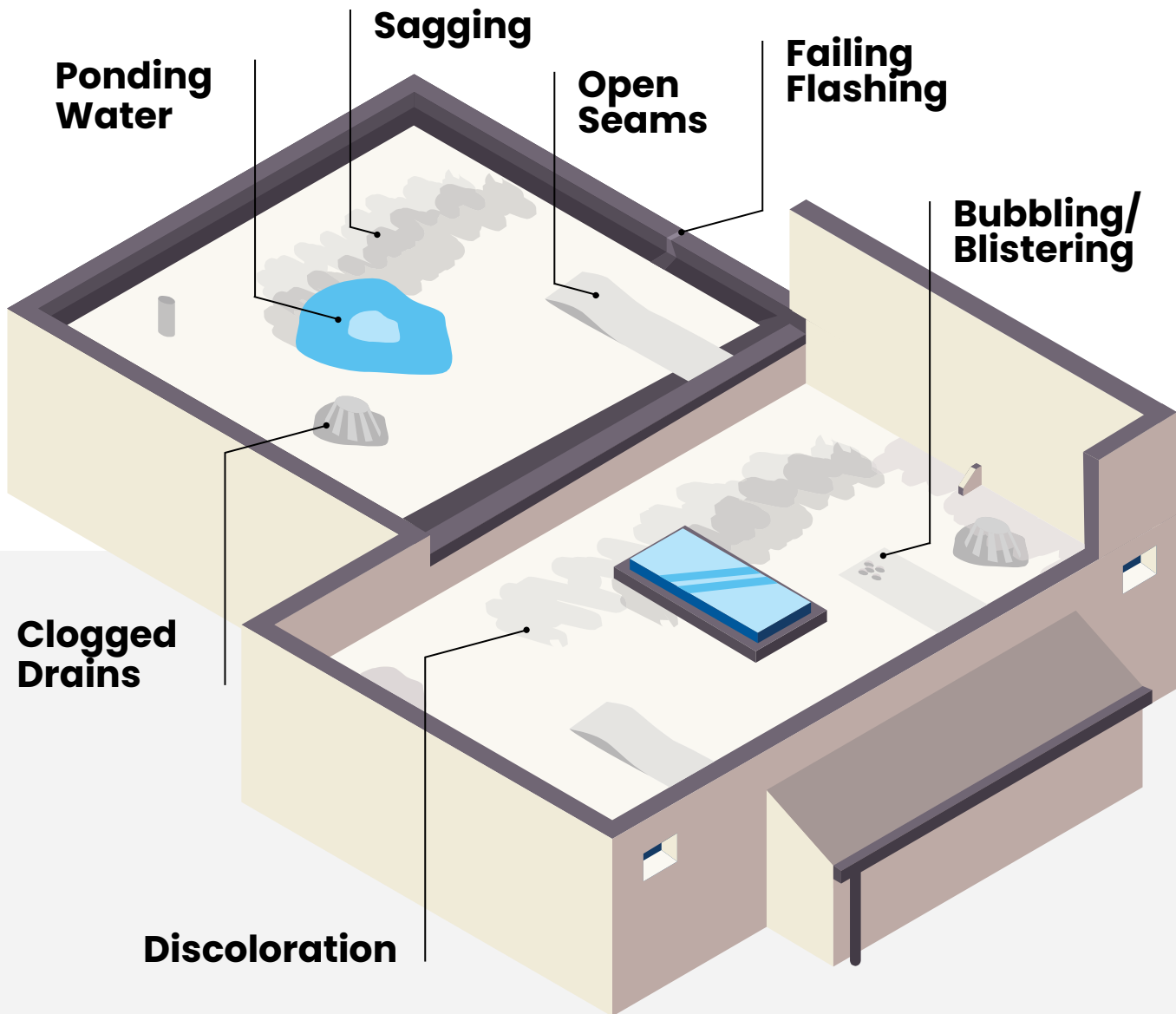


Water Damage

Detects trapped moisture or mold through odor and insulation condition, helping prevent further system failure.

Signs of Commercial Roof Damage

An aging or damaged commercial roof system will exhibit some or all of the damage indicated below.



Types of Damage

- Ceiling stains, pest issues, or mold/bad odors may signal roof moisture problems.
- Rising energy bills could indicate poor roof insulation or cooling.
- Sagging or low roof areas suggest water damage and weakened support.
- Blisters or bubbles in the roof surface indicate trapped moisture.
- Ponding water suggests drainage issues from clogged drains.
- Moisture can lead to plant growth or roof discoloration.
- Open seams or exposed flashing signal the need for roof repairs.

Flat Roof Warning Signs

Common Damage



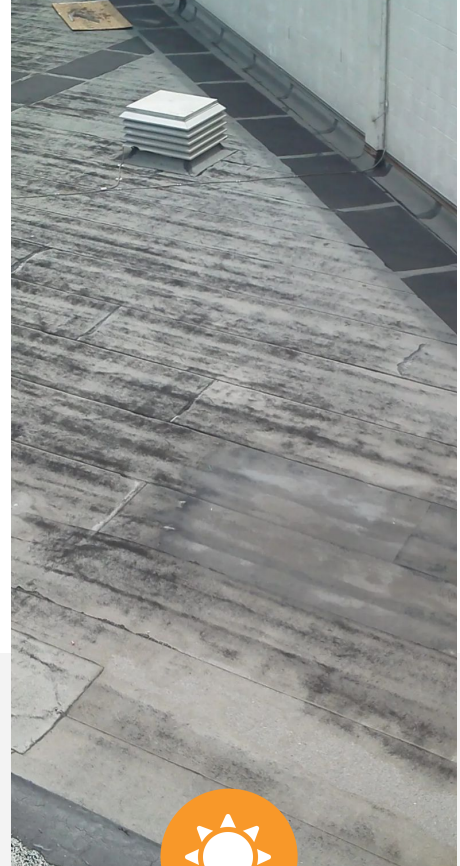
HAIL DAMAGE

- Deteriorated pipe boots, seals, and brackets around protrusions.
- Rusted, loosened, or missing fasteners.
- Warped roof decking or buckling of roof membrane, causing "ponding" of water.
- Loose flashing around roof penetrations, such as vents and skylights.
- Water stains on the interior walls or ceiling.



WIND DAMAGE

- Located loose flashing around roof penetrations, valleys and other vulnerable roof parts.
- Identified leak risks near skylights, vents, HVAC, and roof membrane issues.
- Tested the drainage system, ensuring scuppers, gutters, and downspouts are clear and functioning properly.
- Checked for interior ceiling stains as signs of potential roof leaks.



UV DAMAGE

- On-going repair of leaks and leak threats
- Removal and disposal of accumulated roof debris
- Caulking, coating and sealing of all flashing conditions
- Sealing and top-off of all pitch pans

The Commercial



1. Property Assessment

We begin with a thorough inspection of your property. This involves documenting the current condition of the roof and surrounding areas to identify any issues that need addressing.



3. Restoration Strategy

We will discuss your investment strategy, whether you're looking to hold, restore, or flip the asset. Based on this strategy, we help you determine a budget that maximizes your return on investment.



5. Scope & Timeline

We create a detailed construction timeline that aligns with your expectations. This timeline outlines allowable working hours and addresses any specifications unique to your project.



2. Conditions Report

After the inspection, we compile a detailed condition report. This report includes our recommendations for any deferred maintenance, complete with transparent pricing and samples of the products we suggest.



4. Permitting & Scheduling

Before starting any work, we ensure that all required permits are obtained. We also verify compliance with local building codes to avoid any delays during the project. Then, we schedule the necessary labor and order materials.

Roofing Process



7. Quality Assurance

Throughout the construction process, we implement quality assurance measures. This ensures that all work adheres to established guidelines, allowing us to address any issues that arise promptly.



9. Final Inspection

Upon nearing project completion, we conduct a final inspection and create a punch list to confirm that all work meets your expectations. This includes necessary inspections by manufacturers and adherence to local ordinances.



6. Safety & Compliance

Safety is our priority. We identify all pre-construction safety requirements according to OSHA regulations and designate a contact person for safety oversight during the project.



8. Change Orders

If any changes to the project are necessary during construction, we evaluate and document these change orders. We establish a primary contact for their approval and manage the payment processes associated with them.



10. Completion & Payment

Finally, we compile all closeout documents, register warranties for the work completed, and verify that final payment is collected to officially complete your roofing project.

What's Included in Commercial Roofing Estimate

A good contractor is able to fully assess the amount of work that's required to restore your commercial roof. Our commercial roofing estimates are highly detailed with all materials, labor and the installation timeline. Roofing pros like us are transparent in their manner of conducting business, sharing accurate numbers on material quantity needed and the size of the crew necessary for completing the work within the project timeline.

Typically a commercial roof replacement estimate will include the following items:

- Project Timeline and Milestones
- Size of the crew necessary for the meeting the timeline
- Accurate numbers on materials quantity needed
- Payment due dates and termination policy
- Contractors team and assigned roles
- Materials and product pricing
- Warranty information



Insurance Claims Process



1 Damage Inspection

If you believe that, your roof is damaged, it is important to take the necessary steps to ensure your commercial structure is protected. A roofing specialist will work directly with property owners building, managers, and HOA throughout every step of the insurance claims process to ensure they receive fair compensation from their insurance company.



2 File A Claim

To begin the insurance claims process, notify your insurance company of the potential damage to your roof. Also, filing a claim related to hail or wind damage will not result in your monthly premiums increasing because, by law, insurance carriers cannot raise a policyholders rates due to a "act of God" occurrence.



4 Adjuster Appointment

A predetermined date, an insurance adjuster will arrive at your location inspect the entire property. upon completion, they will notify you of any damage they have found, plus give you more information regarding the next steps.



3 Wait For Insurance Adjuster

Once you file a claim with your insurance company, your agent will send an adjuster to inspect the roof. By this point, it is important that you have selected a contractor, so one of their representatives can be present during the inspection.



5 Scope of Work

Shortly after the adjuster inspects your property, they will create a scope of damages report that they will send to you. You can then relay that information your roofing specialist. They can perform the work with the insurance proceeds. In many cases the insurance company may miss notifying a damaged area of your roof. Your roofing specialist should dispute this with the insurance company.



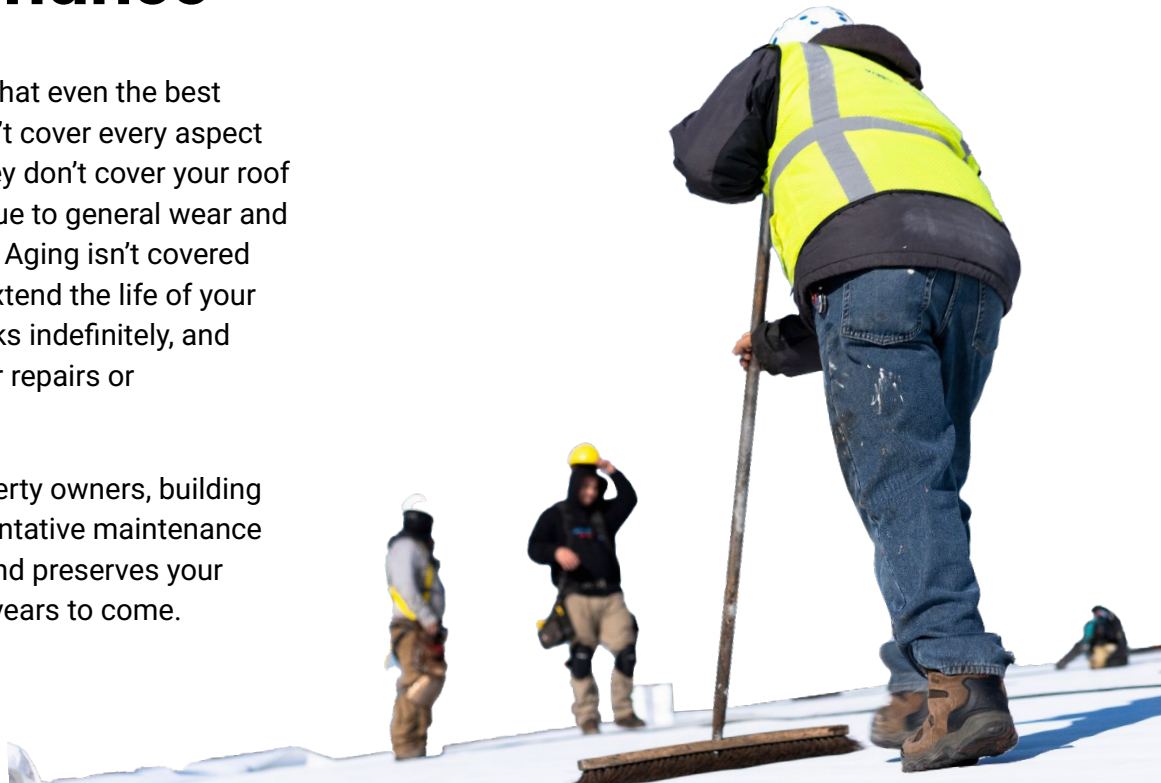
6 Contract Signing

With the insurance scope, indoor estimate hand a roofing specialist can create a contract for the required work. Then, the work can begin without delay. By law, once the contract is signed, we have to wait three days for "ink to dry" on the contract before we can begin! Now, a roofing specialist. Will have you back in business as quickly as possible.

Preventative Roof Maintenance

It's important to understand that even the best manufacturer warranties don't cover every aspect of your roof. For example, they don't cover your roof when materials deteriorate due to general wear and tear like the sun and UV rays. Aging isn't covered either, but there is a way to extend the life of your commercial roof, prevent leaks indefinitely, and save on the expense of major repairs or replacements.

We offer to commercial property owners, building managers, and HOAs a preventative maintenance program that makes sense and preserves your roof's structural integrity for years to come.



Preventative Maintenance Plan

- Annual maintenance check-ups to identify and address potential leak threats.
- Priority service for emergency roof situations.
- Caulking, sealing, and coating of flashing and pitch pans to prevent leaks.
- Leak repairs and debris removal during the maintenance plan term.
- Comprehensive photo documentation of roof conditions.

Project FAQs



Can I re-roof without tearing off my existing commercial roof?

It's possible but it depends on several factors! Age of your roof, number of layers, local codes, etc all impact what solutions are best for your roofing system.



How can I tell if my business needs a new roof?

We provide a free roof assessment to all our clients, which will help them determine the quality of their existing roof. After the evaluation, if the roof has internal damages, such as roof leaks or mold, you may need to replace it.



When should I schedule my roof survey?

Contact us as soon as your property has been impacted by a storm! For regular maintenance it's best to contact a a roofing specialist as soon as spring begins. However, we also offer annual inspections to assess your roof condition and can recommend if it needs any repairs.



How much will my new roof cost?

Many factors contribute to the cost of a commercial roofing system, such as roof size, ease of roof access, condition of the existing roof, ease of roof penetration, type of warranty provided, choice of insulation and membrane, etc.



Why should I have a roof maintenance program?

Scheduled roof maintenance can identify potential issues before they escalate, allowing for planned repairs rather than costly emergency fixes.



How long will my commercial roofing system last?

The lifetime of a commercial roofing system depends on many factors, from roof type to weather conditions. When installed properly, and maintained through annual inspections, your commercial roof should perform well for decades.



How long does it take to install a new commercial roof?

The time taken to complete a commercial roofing project depends on factors such as the size and type of roof, existing damage, inspections, weather, and permits. Each job is unique and could take from a few days to a few weeks.



How do I know which type of roof is right for my business?

Roofing specialists can help you determine the best roofing system for your commercial facility based on energy costs, climate, and facility needs. Ex: Most restaurants need a PVC roof due to cooking grease!



What should I do to preserve my commercial NDL roof warranty?

A structured roof maintenance program will help keep your warranty in force. A roofing specialist can carry out periodic roof check ups to identify and address leak threats and other condition issues.



What should I do if an emergency commercial roof leak happens?

If your commercial roof is leaking, protect the items in your facility and call a roofing specialist as soon as possible.

COMMERCIAL ROOFING

*EVERYTHING PROPERTY OWNERS,
MANAGERS & INVESTORS NEED TO KNOW*

PROPERTY MANAGERS' EDUCATION GUIDE

Thank You

Thank you for taking the time to better understand the commercial roofing process.

If you have any questions about the process or want to get started, give us a call!



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