

Roof Replacement Solutions

Retro-Master[®]

High Performance Retrofit Roof Systems

Transform any existing flat or sloped roof into a sophisticated, long-lasting, and efficient new metal roof.

ms metal sales[™]
manufacturing corporation

Retro-Master[®]

from Metal Sales

Retro-Master[®] is a complete retrofit roof system that easily and affordably transforms any old or failing roof into a new, sophisticated, code-compliant and energy-efficient sloped metal roof.

With its projected average lifespan exceeding 45 years and limited maintenance requirements, a Retro-Master metal roof system is the most economically sensible decision for any building owner in need of a roof replacement solution.

Depending on your needs, Retro-Master provides every element required for a retrofit, including structural framing, subframing and your new metal roof. If required, steel posts and beams or subpurlins are first installed to form the structure for a new, sloped metal roof. Next, Metal Sales roof panels and accessories are installed to complete a high-quality Retro-Master roof system.

As a single-source solution from the nation's leader in commercial metal roofing and wall systems, a Retro-Master retrofit roof system is backed by a 20 year weathertight warranty¹ and an industry-leading 45 year finish warranty.

Retro-Master from Metal Sales is the ideal solution for schools and universities, retail centers and stores, industrial or office buildings, military and other public facilities, or any building in need of a new, long-lasting high-performance roof.

¹ Available on select products. Contact a Metal Sales representative for more information.

Why Retrofit?

Like an old high-mileage car, eventually it costs more to maintain an old roof than to replace it. But apart from roof failure and damage from water infiltration, there are many other reasons to retrofit a roof.

- Beautify a building and increase its value
- Enhance the thermal efficiency of a building by adding insulation
- Meet or exceed new building codes for wind uplift and thermal performance
- Lower energy costs by taking advantage of new cool roofing technology
- Choose roofing materials and systems that last longer and require less maintenance
- Affordably rehabilitate an existing structure rather than build new



Why Metal?

Metal is the fastest growing category of roofing in North America.

- Lasts three times longer than built-up, membrane, shake or asphalt shingle roofs
- Costs the least to maintain of any roofing material
- Can increase the appreciable value of a building
- May qualify for reduced insurance premiums
- Integrates most easily with renewable energy systems – photovoltaic panels, micro wind turbines, solar heating systems (convective air and hot water)
- Made from materials with up to 30% recycled content and are 100% recyclable



Why Retro-Master?

Architects, contractors and owners prefer Retro-Master.

- Network of certified installers
- Industry-leading 45 year warranty on coating integrity
- In-house design and engineering by Metal Sales technical team
- 21 manufacturing facilities nationwide to ensure on-time delivery
- Does not require the removal of the existing roof
- Minimal disruption to building operations
- More metal roofing profile options to meet your design and budget criteria
- All colors are ENERGY STAR® listed, cool roof compliant, and many are CRRC listed
- Best overall value



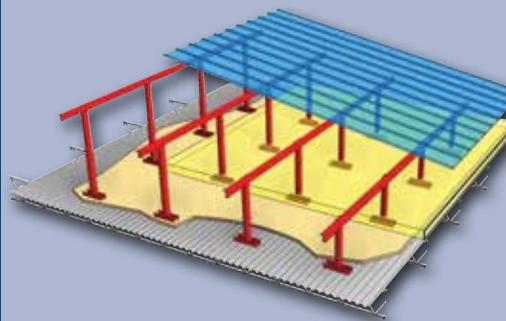
Flat

Retrofit existing flat roof

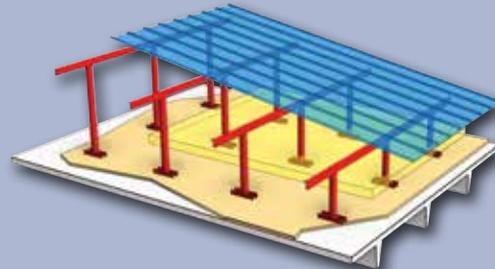
Square wheels and flat roofs – you won't go far with either. For a roof to perform its best, it must shed water away from a building quickly, completely and reliably every time. Flat roofs can't do this. Without diligent and costly maintenance, drains clog, water ponds and membranes crack under UV radiation and the continual seasonal freeze and thaw.

To permanently fix a flat roof, Retro-Master is the best solution. With Retro-Master, new steel framing is installed over a failing flat roof and then clad with beautiful, long-lasting and energy-efficient metal roofing. Plus, Retro-Master accommodates any structural framing type of an existing building – steel, concrete and wood.

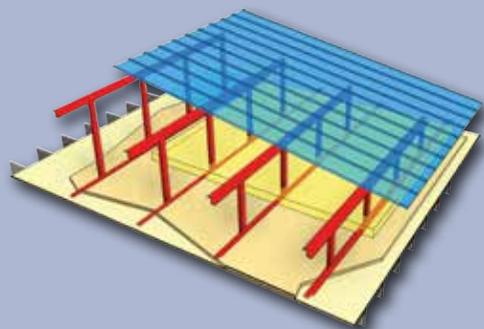
Choose a low-slope design to subtly upgrade the look of your building, or go with a steep slope option for a more dramatic makeover.



Adaptation to steel parallel to joists



Adaptation to concrete



Adaptation to wood

Sloped

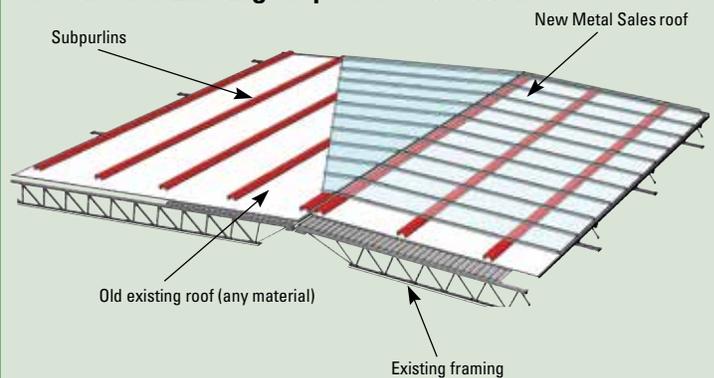
Retrofit existing sloped roof

Have a low-sloped (<2:12) or steep-slope (>2:12) roof that needs to be revitalized and upgraded to meet codes with greater energy efficiency? Whether your existing roof is made from membrane, shingles, modified bitumen or metal, the Retro-Master roof system provides your best and longest term solution.

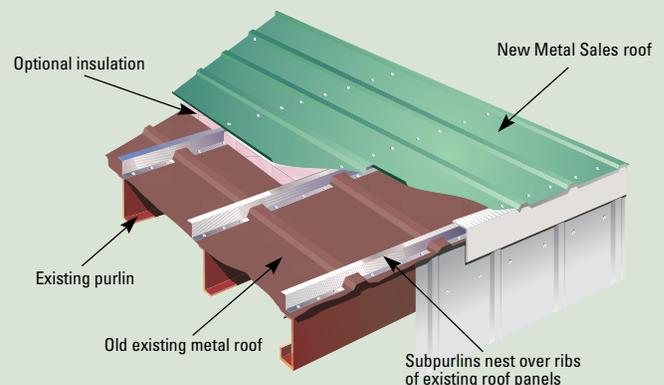
For existing non-metal roofs, Retro-Master provides cold-formed steel subpurlins, including a hat-channel purlin that meets current code requirements, to create the structural base for installing the new high-performance metal roof.

For existing metal roofs, Retro-Master Metal-Over-Metal Re-Roof Solution provides subpurlins that are factory-notched to nest over the ribs of the existing metal roof panels. This method can increase the load carrying capacity of existing building purlins, which accommodates the added weight of the new Retro-Master metal roof system.

Metal-Over-Existing Sloped Roof Solution



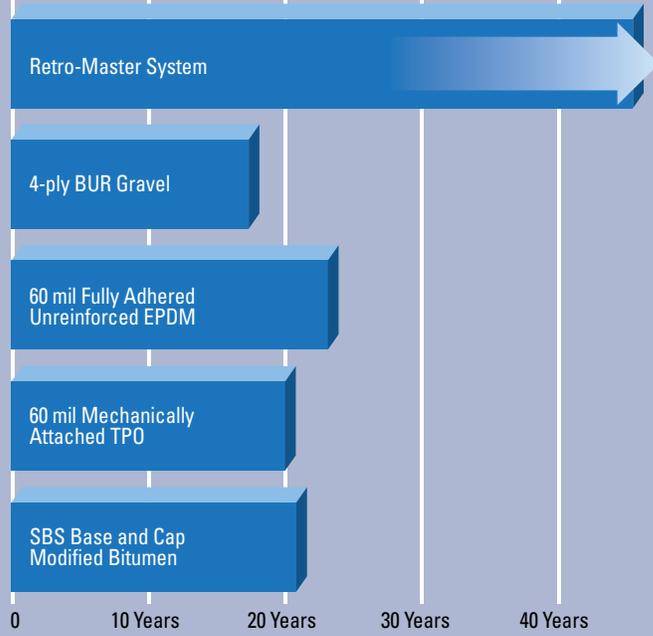
Metal-Over-Metal Re-Roof Solution



Consult an engineering specialist to determine the loads, roof panel selection, and proper subframe spacing to meet building code requirements in your area.

Discover the sustainable and economical solution for retrofitting flat roofs

A Retro-Master retrofit roof system will last 45+ years, outperforming four traditional flat roof replacement options by nearly double the service life.



Sources: RCI Interface/EUAC LCCA Analysis 2007, Ducker Worldwide Survey 2007 and RetroSpec, LLC Life Cycle Costing studies. Costs are based on a 10,000 square foot building with a low slope without rooftop penetrations located in the central United States installed during the year of 2012 and are adjusted for 3% inflation compounded per year.

Now compare the 25 year life cycle cost of these systems. Retro-Master system's low maintenance and 45+ year lifespan translates to significant savings for building owners – less than half the cost of a flat re-roof. Combine these savings with the improved energy-efficiency of a Retro-Master roof and the savings continue to compound – month after month and year after year.



Retro-Master revives these old, damaged, and inefficient sloped metal roofs without requiring their removal. This means a building's interior remains protected with minimal disruption to daily operations. Note the subpurlins, custom-fit to the existing roof, that create space for adding insulation and provide the solid platform for new high-performance Metal Sales roof panels.

Retro-Master is Sensible Sustainability

Retro-Master metal roof retrofit system is the quintessential sustainable building system.

- Promotes rehabilitation, improvement and re-use vs. demolition, landfilling and building new
- Creates the longest lasting roofing solution, 45+ years
- System is 100% steel, the #1 most recycled material in the world
- System is fully recyclable and is made from up to 30% recycled content
- Provides opportunity to dramatically improve a building's thermal performance using cool roofing pigments
- Metal is the best roofing platform to collect rainwater for landscaping and other permissible uses
- May contribute to building certification programs including LEED®

Retro-Master Enables Net-Zero

Retro-Master retrofit system enables roof-located Net-Zero energy conservation and production strategies, such as:

- Convective ventilation to reduce solar heat gain during summer (saving energy for cooling)
- Solar heated make-up air brought in through ventilating equipment in winter months (saving heating costs)
- Solar heated water for year-round energy reductions
- Photovoltaic integration (thin-film laminate and polycrystalline panels) with no roofing penetrations
- Micro wind turbine integration with no roofing penetrations



Metal Sales offers AIA CES presentations on retrofitting with metal and Net-Zero roofing. Call to learn more.

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