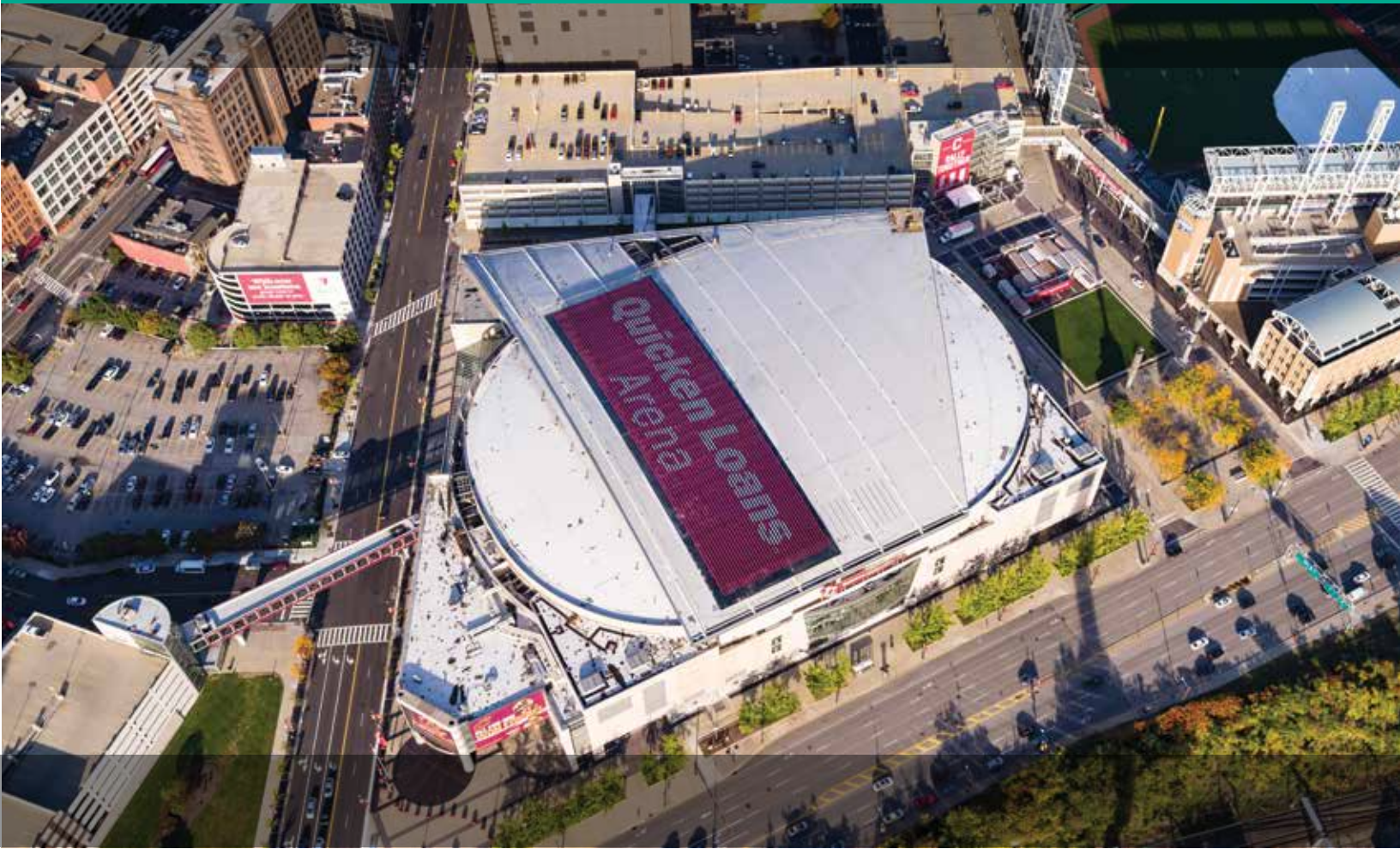


Crowning the Q *with Superior Roofing Protection*



OFFICIAL ROOFING SUPPLIER TO THE
2015-2016 NBA CHAMPION CLEVELAND CAVALIERS AND QUICKEN LOANS ARENA



Sustainable Restoration Revitaliz

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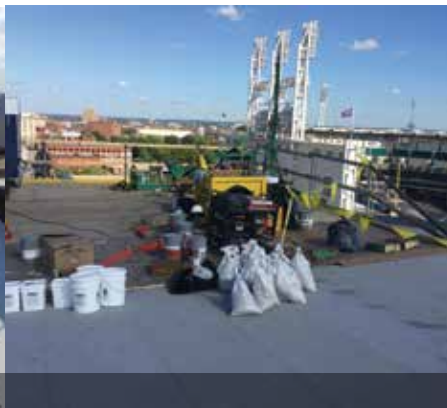


The 24 year old 170,000 square foot original roof of Quicken Loans Arena in Cleveland, Ohio—better known as “The Q”—received a new lease on life thanks to a roof restoration by Beachwood, Ohio-based Tremco Roofing and Building Maintenance and contractor Warren Roofing of Walton Hills, Ohio. The two phase project, completed in the summer of 2017, effectively doubled the service life of the roof with Tremco Roofing’s liquid-applied AlphaGuard® MT roof restoration system.



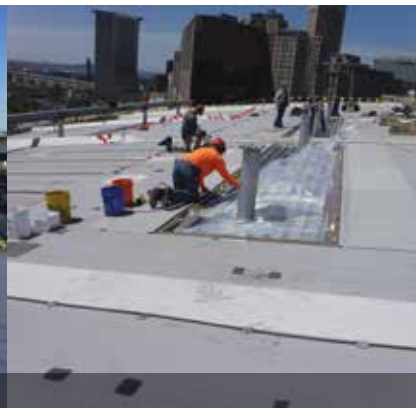
Diagnostics

Upfront diagnostics are crucial to determining if a roof is a candidate for restoration. Visual inspections were made followed by roof moisture analysis using a Troxler meter to identify the location and density of any moisture in the roofing system. This revealed that while there was some damage, more than 90% of the roof could be restored. Areas of wet and warped insulation were marked for replacement.



Staging

The staging area in Gateway Plaza, which is adjacent to Progressive Field, home of the Cleveland Indians, presented a number of logistical and scheduling challenges. The Indians 2016 World Series run and the Cleveland Cavaliers 2016 NBA Championship season meant that Gateway Plaza was host to myriad events which the project could not disrupt. The staging area had to be cleared by 8 AM and space was limited. Material could only be lifted to one section of the roof and then moved by hand. The project also had to be scheduled around the July 2016 Republican National Convention, which was hosted at the Q, dividing it into two phases that year.



Repair and Replace

Areas of damaged insulation were removed and replaced. This involved cutting through the membrane down to the existing vapor barrier, then staggering two layers of new insulation and adhering pieces of EPDM, or where possible, gluing the existing membrane back into place. Also, the fastening of the entire roof membrane was significantly enhanced to meet wind uplift design requirements.



Cleaning

The roof was thoroughly cleaned in sections with Tremco Roofing’s RoofTec™ cleaning system to prepare it for coating. Each of three sections had to be cleaned no more than 30 days before coating began. Using rotating water jets and a small amount of environmentally safe cleaning solution, RoofTec removes dirt, mold and mildew from the roof surface without the negative effects of power washing. It requires little water and recaptures almost all that it does use. The sheer size of the project required 500 feet of hoses to supply water and return it to the ground-level RoofTec truck for filtering.

Restored Roof of Quicken Loans Arena

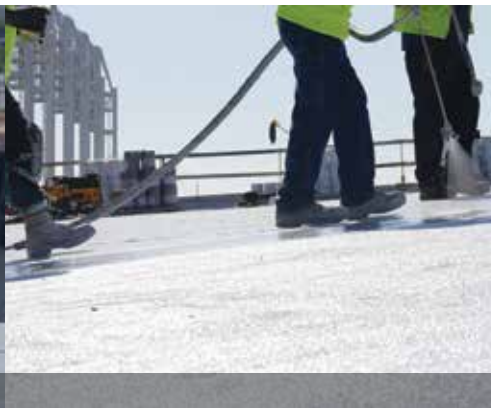
ALPHA GUARD MT ROOF RESTORATION POSSIBILITIES

THE PROBLEM

Twenty four years of Cleveland's infamously unpredictable weather had worn down the original hypalon roof, bringing it close to the end of its service life. Arena owner Gateway Economic Development began investigating roof replacement options, believing a replacement to be the inevitable next step.

THE SOLUTION

After performing extensive diagnostics, Tremco Roofing Field Advisor Joe Slattery and the Tremco team proposed restoring the roof rather than replacing it, using the company's AlphaGuard MT system. The system was ideal to turn the older but still functional roof into a long-lasting, highly efficient weatherproofing system for a fraction of the cost of replacement. What's more, the resulting 20 year warranty effectively doubled the service life of the roof. Restoration costs much less than replacement, significantly reduces landfill waste because so much roofing material can be reused and serves to stop roof deterioration.



AlphaGuard MT Application

Excellent for use in highly sensitive and active areas such as a sports and entertainment complex, the low odor, fast curing AlphaGuard MT system is easy to apply on tough-to-access rooftops and cures quickly to start providing waterproofing protection. The three-step process consisted of a roller-applied primer, followed by a base coat with an embedded fiberglass mat, then a reflective white topcoat applied within 72 hours. Additionally, a second topcoat containing 20/40 silica sand was added for slip protection since the curved roof could not accommodate walk pads.



Special Colors

The restored roof features three different custom coating colors to match the existing roof's color scheme. The main roof area is light gray, complemented by "wing" sections of 2-foot wide stripes. The 30,000 square foot roof area under the arena's 360-by-90-foot LED sign is black, so that the sign will pop when viewed from overhead whether day or night. One of the many challenges of working on the uniquely shaped roof (designed to be the shape of the arena site turned at a 90-degree angle) was access to the roof under the massive sign's steel framing—which crews had to reach on their hands and knees, to apply the coating by hand.

A Championship Performance

While the Cleveland Cavaliers brought home an NBA Championship in 2016, Tremco Roofing helped the Q make its roof a champion performer. Roof restoration—rather than replacement—was a winning move by avoiding the removal and disposal of the old roof. Restoration wins out over replacement in terms of speed of application, less necessary equipment, less noise, and less disruption—which was important in a facility that hosts 200+ events for close to two million guests each year. Quicken Loans Facility Architect Michael Lathrop said, “We were really blown away by the fact we had Tremco coming to us with this solution. First of all, it was a great solution. Secondly, the opportunity to have a Cleveland-based company with a huge footprint here was really exciting.”



About Tremco Roofing & Building Maintenance

Headquartered in Beachwood, Ohio, Tremco Roofing and Building Maintenance helps manage building life cycles for customers in education, healthcare, government, manufacturing, sports and entertainment, and many other industries. It is a division of Tremco Incorporated, which has been in business since 1928. Tremco Roofing and Building Maintenance works closely with Tremco Incorporated subsidiary WTI, which provides general contracting and roofing services, and Canam Building Envelope Specialists, which provides air barrier analysis and solutions.

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