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## Precious Cargo Below: Replacing the Roof on a Veterans Hospital

BY **CLAIRE TRAGESER**  
PHOTOS COURTESY **JR & CO**

**I**n the time of the COVID-19 pandemic, hospital beds are an extremely valuable commodity and not something that should be wasted or left unavailable for even a short amount of time. That is true across the country, and it was certainly true in Topeka, Kan., in the summer of 2020.

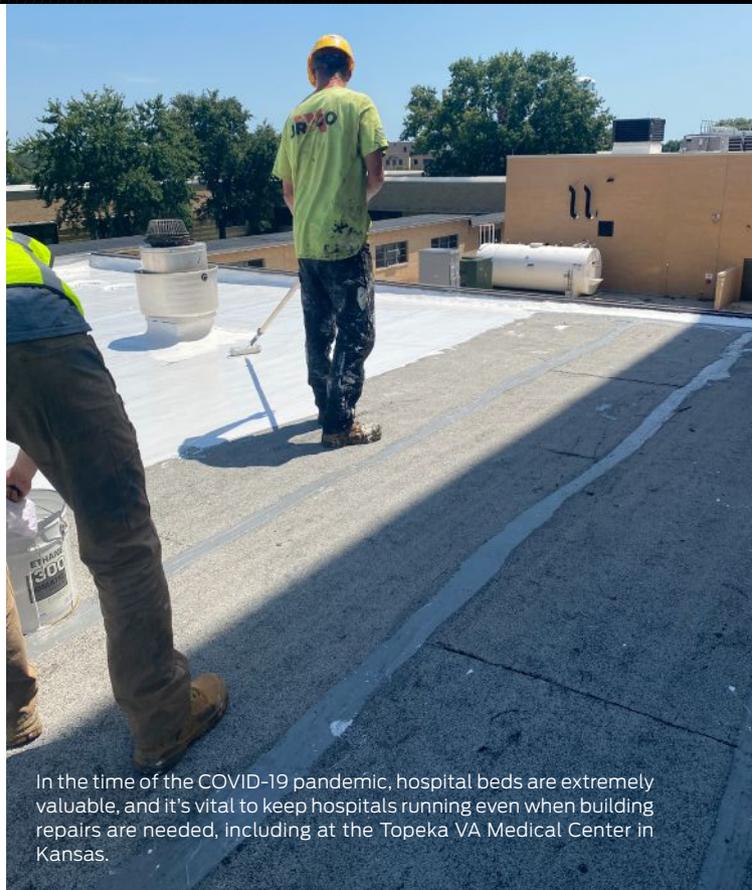
At the time of this writing, the state had more than 118,000 COVID-19 cases and more than 1,250 COVID-19-related deaths. About 60 percent of the state's intensive care unit hospital beds were filled.

The seriousness of the COVID-19 situation in Kansas and the limited resources to care for patients meant that, when the Colmery-O'Neil Veterans' Administration (VA) Medical Center, also known as the Topeka VA Medical Center, needed repairs on part of its roof, the hospital could not stop seeing patients inside. The hospital has been serving veteran patients since 1946 as part of the VA Eastern Kansas Health Care System (VAEKHCS). The system serves 39 counties in Kansas and Missouri, where more than 100,000 veterans live, and it currently provides care to approximately 36,000 veterans.

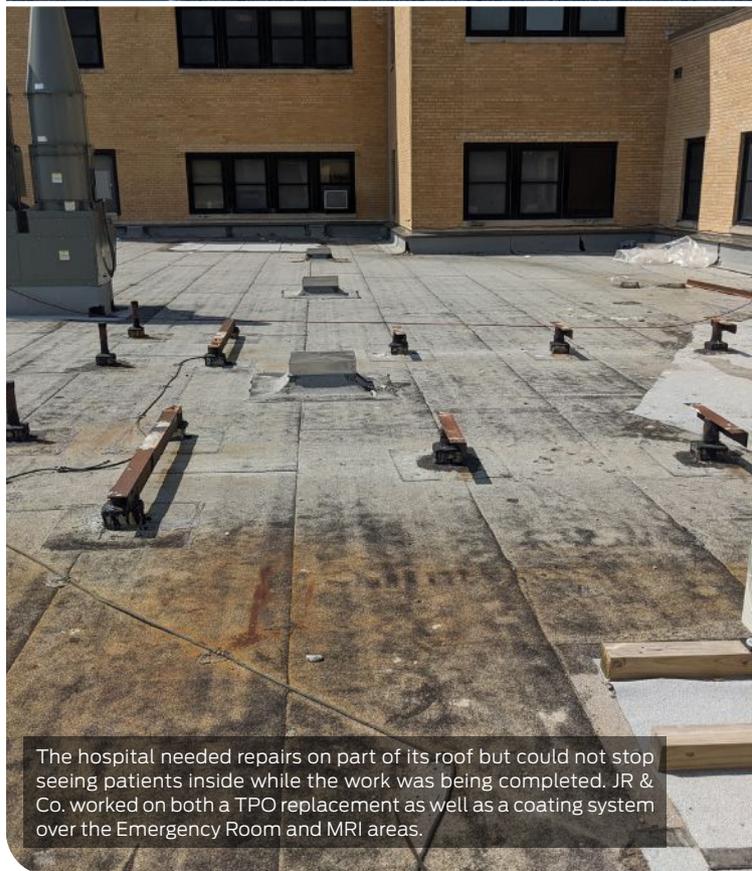
### Business as Usual

Clearly, the job was an important one, and it was one that JR & Co. was proud to be a part of. The roofing contractor, headquartered in Kansas City, Mo., currently has 270 employees spread across branches in Kansas City; Wichita, Kan.; Colorado; Florida; Nashville, Tenn.; Iowa; and Oklahoma. While the company's primary focus is roofing, it also offers a wide variety of services, including sheet metal, tenant finish, federal contracting, solar installation, and more.

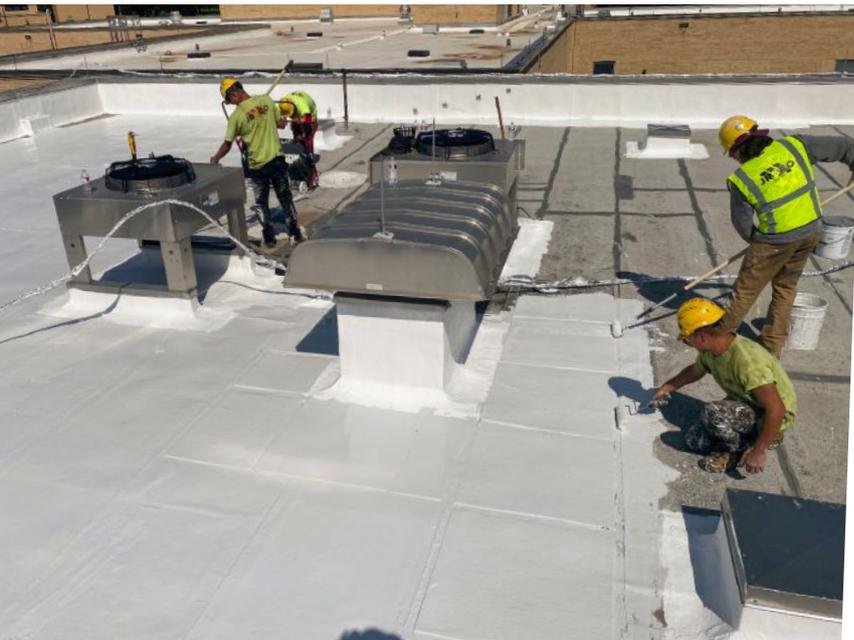
For this job at the Topeka VA Medical Center, JR & Co. used a collaboration of two of its departments. One focused on having tar and gravel membranes removed from some portions of the roof and replaced with a new thermoplastic polyolefin (TPO) roof assembly. The other portion of the project required



In the time of the COVID-19 pandemic, hospital beds are extremely valuable, and it's vital to keep hospitals running even when building repairs are needed, including at the Topeka VA Medical Center in Kansas.



The hospital needed repairs on part of its roof but could not stop seeing patients inside while the work was being completed. JR & Co. worked on both a TPO replacement as well as a coating system over the Emergency Room and MRI areas.



The safety plan on this project included warning lines around the 20,000-square-foot (1,858,1 m<sup>2</sup>) roof area, which was granulated modified bitumen

## Hospital Roof Restored

a roof coating/roof restoration system over the emergency room (ER) and magnetic resonance imaging (MRI) wing of the hospital.

“For the majority of the roof, we did a complete tear-off and installed a new TPO [system],” said Eric Schlossenberg, a division manager at JR & Co. and the contractor on this job. “But for this portion, they couldn’t afford to have a complete tear-off because of the noise and debris, because it’s right on top of the ER. To avoid dirt and debris on the inside, to have no risk of having an open roof, and to ensure patients’ appointments in the ER could stay open, they chose not to do a tear-off and instead did a roof coating system.”

“The roof coating and roof restoration allowed for no tear-off, no disruption of business, and not shutting down the ER and MRI center, so they could stay working,” Schlossenberg added. “They could keep doing MRIs, which is a sensitive process, but we were able to put a roof right on top of that and put a 20-year warranty on it, so it’s a very robust system.”

### ERSystems Above the ER

Schlossenberg said that JR & Co. found the job on its bid list. “We submitted proposals based off of specifications that were already provided, and we won the project,” he said. The company



After using 4,000 psi (27.6 MPa) Mi-T-M rotary walk-behind pressure washers, blemishes were repaired and ERSYSTEMS’ H.E.R. polyurethane sealant was applied to field and lap seams and other protrusions.

worked in conjunction with Won Freedom Construction, LLC, the general contractor on the job.

So how did they do it? Very carefully. They opted to use a urethane roof coatings system from ERSYSTEMS with a 20-year labor and material manufacturer’s warranty.

“The urethane coating was chosen for its high tensile

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# JOB AT A GLANCE



A urethane basecoat was applied to all areas at 2 gallons per square foot (7.6 L/0.1 m<sup>2</sup>). An intermediate coat was put down at the same thickness, finished with a topcoat at 1.5 gallons (4.7 L) per square foot.

strength, long-term weatherability, and superb adhesion to the existing granulated modified bitumen roof membrane,” Schlossenberg explained.

To start the project, Schlossenberg’s six-man crew used rotary walk-behind pressure washers from Mi-T-M to pressure wash and clean the roof. They were 28-inch (71.1 cm) pressure washers operating at 4,000 psi (27.6 MPa).

“The roofs were washed and rinsed clean,” Schlossenberg said. “From there, we started to repair any blemishes in the existing granulated modified roof system, such as blisters, loose seams, punctures, ball and curve flashings, and roof drains. We had to remove and reset the lightning rod protection system that was installed across the roof substrate. There were approximately 12 existing roof penetrations that had to be removed and replaced with in-kind materials. There were five to six different roof facets, or roof areas, that we completed,” Schlossenberg said, but they did it all within three weeks.

Next, the crew applied ERSystems’ H.E.R. moisture-cure polyurethane sealant to all field seams, lap seams, ball seams, curve flashings, pipe flashings, and other roof protrusions. Then they installed six-ply drain details to all 14 interior drains using a combination of the H.E.R. sealant and ERSystems’ Polyurethane 300 Aromatic Base Coat. The crew also used the H.E.R. sealant to encapsulate the edges of the existing walk track, making it seamless with the rest of the roof system.

“JR & Co. chose the roof coating manufacturer ERSystems because we have had excellent success and performance from their Polyurethane 300 Aromatic Base Coat and Aliphatic Finish Coat,” Schlossenberg stated. The ERSystems brand is manufactured by ITW Polymers Sealants North America.

The crew put down three total coats. “Using a Super Spreader, we backrolled and applied ERSystems’ urethane basecoat at 2 gallons per square foot [7.6 L/0.1 m<sup>2</sup>],” said Schlossenberg. “We applied the basecoat to the entire substrate, including walls, curves, and flashings.”

An intermediate coat was put down using the same product at the same thickness, and it was finished with a topcoat for

## PROJECT:

Install a roof restoration system over the emergency room and MRI wing of a Topeka, Kan., veterans hospital

## COATINGS CONTRACTOR:

JR & Co.  
Kansas City, MO  
(816) 587-6148  
L: jrcousa  
<https://jrcousa.com>

## SIZE OF CONTRACTOR:

270 employees

## SIZE OF CREW:

6 people

## PRIME CLIENT:

Colmery-O’Neil Veterans’ Administration Medical Center  
Topeka, KS  
(785) 350-3111  
@DeptVetAffairs  
[www.topeka.va.gov](http://www.topeka.va.gov)

## SUBSTRATE:

Granulated modified bitumen roof membrane

## CONDITION OF SUBSTRATE:

Granule loss in some areas

## SIZE OF JOB:

20,000 sq. ft. (1,858.1 m<sup>2</sup>)

## DURATION:

3 weeks

## UNUSUAL FACTORS/CHALLENGES:

- » The hospital continued to see patients during the work, so the crew was careful to avoid debris and noise.
- » The job took place during an unusually rainy summer.
- » The crew had to be careful not to disturb other trades also onsite.

## MATERIALS/PROCESSES:

- » Cleaned the roof surface using 28-inch (71.1 cm) Mi-T-M pressure washers operating at 4,000 psi (27.6 MPa)
- » Repaired any blemishes in the existing granulated modified roof system, such as blisters, loose seams, punctures, flashings, and roof drains
- » Applied ERSystems’ H.E.R. moisture-cure polyurethane sealant to all field seams, lap seams, ball seams, curve flashings, pipe flashings, and other roof protrusions
- » Backrolled and applied two coats of ERSystems’ urethane base coat at 2 gallons per square foot (7.6 L/0.1 m<sup>2</sup>) per coat using a modified Super Spreader from Rooftop Equipment Inc.
- » Backrolled and applied one coat of ERSystems’ Aliphatic Finish Coat at 1.25 gallons per square foot (4.7 L/0.1 m<sup>2</sup>) using the same method

## SAFETY CONSIDERATIONS:

- » Set up warning lines and fall arrest systems using choker straps fixed to roof curbs and attached to Guardian cable boxes
- » Wore DBI-Sala safety harnesses, hard hats, cut-resistant gloves, safety glasses, and high-vis shirts or vests
- » Stationed a safety monitor on smaller roof areas; otherwise, kept all personnel within the safety lines or tied off using a fall arrest system

# Hospital Roof Restored

a third and final pass. “We installed ERSystems’ aliphatic urethane finish coat at 1.25 gallons per square foot [4.7 L/0.1 m<sup>2</sup>] to the entire substrate, to include walls, curves, and flashings,” continued Schlossenberg.

## Safety and Equipment

The JR & Co. crew used the same method for all three steps. Schlossenberg described the process: “We used a combination of rollers and brushes to trim parapet walls, roof curves, pipes, and penetrations. To avoid potential issues with overspray and white noise caused by a spray pump engine — and the potential of other trades running over coatings hose — we chose to use a 40-inch [101.6 cm] Super Spreader. Due to the uneven surface of the existing substrate, we could not use the Super Spreader rollers. Instead, we modified the unit to be able to extrude the urethane coatings directly onto the roof surface.” The Super Spreader tank spreader is manufactured by Rooftop Equipment.

Schlossenberg also described how the job was affected by outside influences: “One of the things that was difficult is we had the rainiest July on record, which postponed our production time, as well as made it a challenge to ensure the roof was prepped and dry before each application, so no incoming rain was to affect the application. We also had to work alongside other contractors building brick walls and other add-on structures to the front of the emergency room, so safety was important, as well as not disrupting their work.”

Roof access was achieved using an extension ladder. From that point, a gated entry in the safety flagging system gave workers their access to the work area.

“Our safety plan included warning lines, fall arrest systems



The hospital was able to serve its veteran patients throughout the restoration. And the coatings crew stayed safe throughout too, wearing, hard hats, hi-vis shirts or vests, and fall protection when necessary.

using choker straps fixed to roof curbs and attached to Guardian cable boxes, fire extinguishers, DBI-Sala safety harnesses, hard hats, cut-resistant gloves, safety glasses, and hi-vis shirts or vests,” stated Schlossenberg. “A safety monitor was used on smaller roof areas less than 50 feet [15.2 m] wide. Otherwise, all personnel were within the safety lines or tied off using a fall arrest system.”

## An Opportunity to Serve

The crew started working on the 20,000-square-foot (1,858.1 m<sup>2</sup>) project on July 17, 2020, and because of the rain issues, didn’t finish until August 6. However, their speedy work and minimal disruption to the hospital were extremely important. “COVID-19 patients were coming into the ER while we were working,” Schlossenberg said. “This is a veterans’ hospital, so military veterans from World War II, Korea, and Vietnam were all using the hospital while we were working. We performed this project seamlessly while the hospital was able to serve its veteran patients throughout the entire production process.”

“Had we not been able to do that type of roof system, if the roof wasn’t able to be restored, they would have had to tear the roof off, and that would have left them subject to exposure, and veterans would have had to go to another facility for treatment or care,” Schlossenberg added. “But instead, someone was smart and specified this as a roof restoration, and our crews were swift and quiet to not disturb work that was happening below inside the ER and MRI center.”

For Schlossenberg and much of his crew, the chance to serve veterans was especially important, and even more so during a crisis such as the COVID-19 pandemic.

“All projects are important, but for us at JR & Co., myself, the owner, and many others are U.S. veterans. So for us to have the opportunity to serve a facility such as the Topeka VA Medical Center, it made us proud,” Schlossenberg said. “We have great pride in the accomplishment of our veterans of all branches.” And the crew can be proud of restoring this roof quickly and without disturbance to those who have served. **CP**

## VENDOR TEAM

### **DBI-Sala Fall Protection by 3M**

*Safety equipment manufacturer*

St. Paul, MN  
(800) 364-3577  
@3M  
www.3m.com

### **Mi-T-M**

*Equipment manufacturer*

Peosta, IA  
(800) 553-9053  
@MITMCorporation  
www.mitm.com

### **ERSystems by ITW Polymers Sealants North America**

*Coatings manufacturer*

Houston, TX  
(800) 878-7876  
@ITWSealants  
www.ersystems.com

### **Rooftop Equipment Inc.**

*Equipment manufacturer*

New Wilmington, PA  
(800) 222-6454  
FB: Rooftop-  
Equipment-491406174223392  
www.rooftopequipment.com

### **Guardian Fall Protection**

*Safety equipment manufacturer*

Kent, WA  
(800) 466-6385  
@GuardianFall  
www.guardianfall.com