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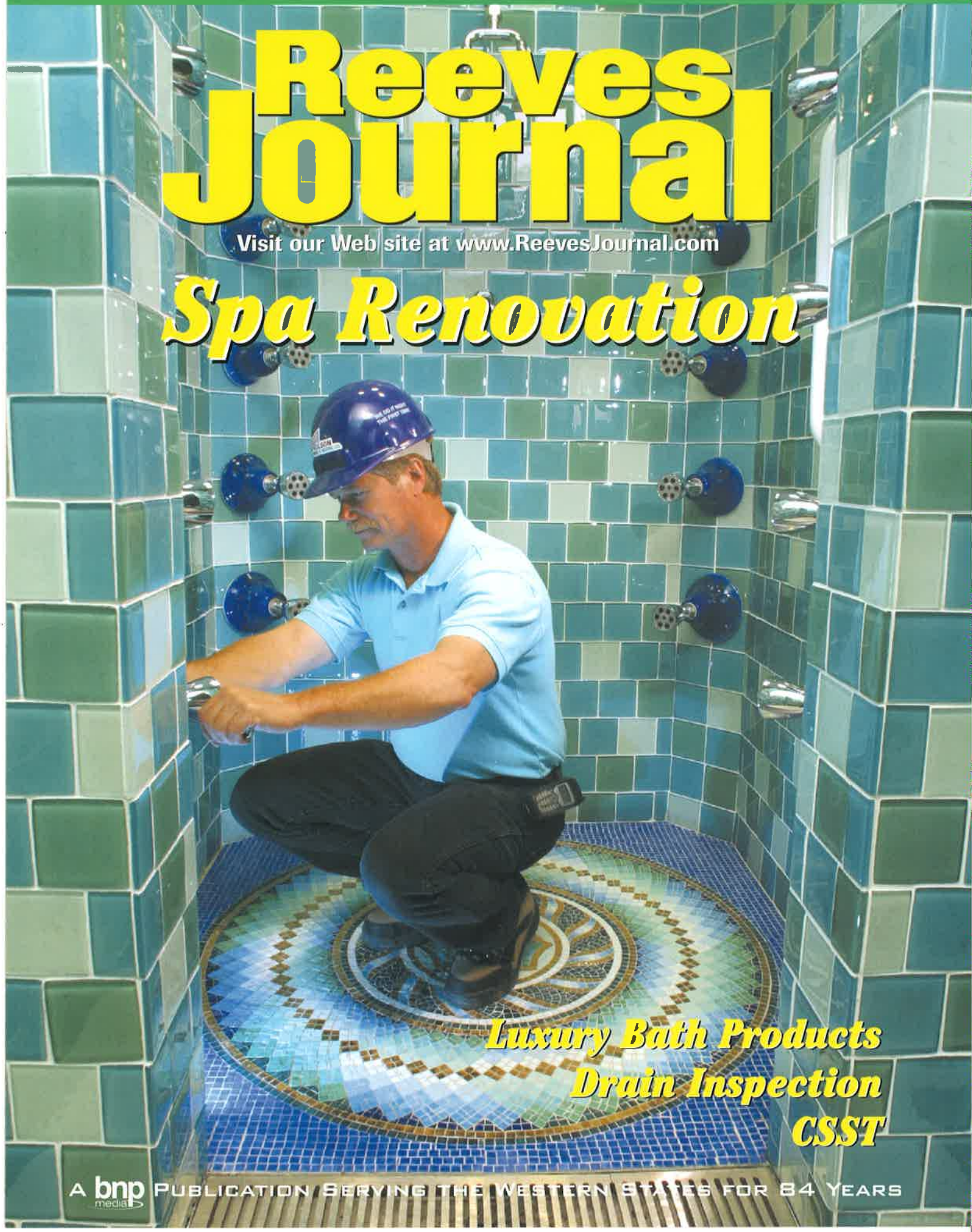
Spa Renovation



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Photos courtesy of Mike Trapp

Renovating The Spa at The Broadmoor

Colorado's world-class hotel spa gets a facelift for customized hydrotherapy treatments.

BY JOHN FULTZ

The Broadmoor, a five-star resort hotel in Colorado Springs, Colo., recently set out to renovate its 10-year-old spa area with the goal of making it "one of the largest and most elegant spas in the industry." Already home to a wide range of massage and body treatments, the owners wanted The Spa at The Broadmoor to become a center for luxurious hydrotherapy treatments. With that goal in mind, they contracted Olson Plumbing and Heating Inc. to help design and install several custom-made hydrotherapy showers and tubs.

Mike Trapp, owner of Olson Plumbing and Heating, took on the challenge with gusto. "Because we did the original job and knew a lot about the building, they asked us to do the renovation," Trapp said. "They decided to add a 3,000-square-foot addition, with most of that being treatment rooms. With the existing tubs, they were 6-1/2-foot standard, 16 inches high. It took too much time to fill and drain those tubs to keep clients coming in. The original tubs didn't have the capability of doing that. So the first meetings were all about how we could pipe the tubs and showers to make them drain quicker and fill faster and whether we had enough existing capacity in the water heating system to take care of all these new features and make all this stuff work faster."

Trapp worked with designer Taylor Galyean of TAG Signature in Chicago to develop two state-of-the-art therapeutic

hydrotherapy experiences in the form of customized tubs and showers. "Mike Trapp and his team are the best-they were fabulous to work with," Galyean said. "This particular hydrotherapy shower is based on a Swiss design featuring 18 showerheads coming at you from all different directions. They have traditionally been used to help a client with circulation, relaxation, muscle tension, etc., but it's all been done with manual valves where all the water's on or all the water's off. [Olson] had to be very precise with their plumbing because all the heights of the pipes and so forth were critical. They basically put in the skeleton for this whole thing, and everything depended on that being precise so everything else could work well. They went above and beyond any expectations. They were superb."

Trapp and Galyean developed a shower incorporating six horizontal zones: lower leg, upper leg, lower torso, upper torso, shoulders and overhead. "In each of those zones, we can control the flow and the temperature," Galyean said. "We can change any zone every 15 seconds, which means we can go from a low-flow to a high-flow and create a massage effect. If you have high pressure move up through the zones, you'll feel this water pressure moving up and down your body. And then you can change the temperature as well. This is totally cutting-edge equipment for hydrotherapy because now we're able to precisely address particular issues. We've developed four sequences that allow us to do this: cellulite, muscle relaxation, anti-stress and tonic/invigorating."

The "Five Star, Five Diamond" Broadmoor Hotel, also known as the "Grande Dame of the Rockies," is located in beautiful Colorado Springs, CO at the foot of Pikes Peak.

Trapp had to figure out a precise piping plan for these 18-head, multi-zone showers. "It's a sophisticated deal," he said. "It all works off a computer with some heads coming on warm [and] others coming on colder, and they switch back and forth [as programmed]. It took a lot of work to pipe all that, and there is also radiant heating in the walls and floors. That radiant heating actually works off the domestic hot water system, and they use recirculated water to heat those floors through a control valve that keeps it the right temperature."

Custom-designed TAG Tubs were installed at the Broadmoor, with minimal effect on existing tile surfaces.

Determining how the pipes would come through the finishes of the showers was a real challenge, Galyean said. "These showers are very extravagantly finished because they're such a unique presence at the spa-they are the heart of the hydrotherapy. The pipe comes through the wall to hold the showerhead, and we extended that pipe out about six inches and had these hand-blown glass escutcheons that slid over that pipe and created a detail to hold it in place. [Olson] was right on board with us [in] dealing with those sorts of issues."

The Olson team and Galyean worked together to achieve a fully customized plumbing solution for the spa. "In the mechanical closet, we have six of these valves that are plumbed from the valve to the showerheads," Galyean said. "One of the things that is critical in this situation is that we want the travel of the water to be the same to each showerhead, so that when a zone comes on there isn't a big lag from the left side to the right side of your body."

The unique infinity-edge soaking tubs are the other crucial element of the spa's hydrotherapy treatments. "Originally we were going to use recirculating Jacuzzi-type tubs," Trapp said. "We set one of them up, and the interior designer didn't like the way it operated. So [Galyean] designed a bathtub

specifically for this project. I spent a lot of time with him making sure all the code issues were taken care of. They're called 'infinity-edge soaking tubs.' You fill the tub with a computerized fill, and once you get in it there are two jets above the water line in the back of the tub that flow water down across your shoulders. It flows across the bathtub to the infinity edge on [the] front of the tub, and the water drains constantly. So it's a constant loss tub-you don't recirculate any water. We oversized all the waste piping and P traps so it could drain a lot faster. They drain two times faster than the previous tubs."

The infinity-edge bathtubs were perhaps the most challenging aspect of the project, according to Trapp. "We had to pipe all those tubs, and we really didn't have plans on exactly how we were going to do it," he said. "We knew where it had to go. The tubs have filtration systems and all that, but none of it was piped like you would get from [a factory model]."

Trapp also had to preserve as much of the room's expensive tile as possible. "We had to try to avoid tearing up as much of the old building as we could," he said. "These tubs were made to fit the rooms so the tile wouldn't have to be destroyed to fit them in. We figured out how to do all that, and we left all the walls intact, so that made it pretty difficult. It was definitely a learning curve to get all that done."

Trapp's team worked closely with Galyean throughout the development of the infinity-edge tub prototype. "They were instrumental in getting all the plumbing to work correctly," Galyean said. "We needed to retrofit a tub into a six-foot space, and we wanted it to be a deep-soaking, computer-controlled tub. The reason we conceived this is that soaking tubs are instrumental to the spa experience they're developing at The Broadmoor. You have all these hygiene issues between every client because of all the plumbing that you don't have access to for cleaning. You're trying to put client after client through these tubs, so how do you possibly get it clean in time? By only using fresh water, we are cutting that out while still allowing a soothing experience of a constant flow of water through the tub."

Creating these tubs was a job in itself-one that required ingenuity and teamwork, according to Galyean. "We were dealing with off-the-shelf products but trying to make them do things that they weren't necessarily designed to do. For example, we used a drain fitting for the shoulder flows, with water coming out of it instead of going in. It was that type of ingenuity that the Olson team was really good at. We would try something, and if it didn't work, we'd brainstorm and come up with something that did."

The tubs' hot and cold water enters a thermostatic control valve, which feeds three large parallel water filters. Then the water goes to a diverter that sends it to a tub fill. Activating the diverter sends the water over the client's shoulders. "We need to fill the tub quickly, so we're trying to push water through these filters at 10 gallons per minute," Galyean said. "We managed to do it so we could fill the tub, keep the lines large enough, and have the filters pass enough water to fill the tub in seven minutes. Then we drain the tub in two minutes via a two-inch drain that goes into a three-inch trap. That was not an easy thing to do. That's when plumbing makes the business work because we can turn a tub over every 20 minutes instead of every half hour. That's really where good plumbing pays off."

Artist's rendition of the Custom-Designed TAG 'Infinity-Edge Tranquility Soaking Tub.'

The mechanical closet features six valves that deliver water equally to each showerhead zone.

Trapp also added treatment rooms and sinks with standard plumbing built over the existing building. "That posed a lot of challenges because of the finishes that were below all this," he said. "[We had to] keep from tearing all that stuff up and still get the new plumbing in there. It was a really interesting job with a very short time frame. We started in January, and it's all got to be done, up and running [by mid-April]."

Working on such an unusual project with a tight schedule was a stimulating experience, Trapp said. "Most jobs are pretty straightforward, but every now and then you get a challenge where you really get to shine and do something extra special. It's been a lot of fun to install." ■