The functional purpose of the new elevated water tank rising 175 feet into the air from the mesa on the south side of Albuquerque, N.M., is to bring water to a new residential development under construction there.

But for the developers and future residents, the unique design of the tank, inspired by the native white oak tree albus quercus, means less "looming public utility" and more "unexpected art experience" according to Amy Coburn, director of residential development at Mesa Del Sol.

For design-build contractor Landmark Structures of Fort Worth, Texas, an attractive tank is just one of the benefits they’re delivering to their customers, who are spread across the United States. Landmark has been erecting composite water tanks of similar design since 1986, and uses a specialized design and construction method to do so. The steel tank itself is constructed and painted at ground level, then it’s hoisted by jack, hydraulic pump and cable to the top of the concrete column, where it is secured.

The artistic elements of the tanks Landmark erects are a more recent phenomenon, but one that Landmark’s Coatings Manager Jim Climo and crew are most willing to accommodate. And a new coating from Sherwin-Williams, FluoroKem Fluoropolymer Urethane Finish, is helping to ensure that such artwork remains appealing for years to come.

“Gone are the days when the tank says, “The City Of...” in black block letters and nothing else,” Climo says. “Now we’re doing logos and colors on almost all of them.”

Safer, easier construction

According to Climo, the beauty of the Landmark structural design and methodology goes well beyond surface level, however. Construction of the tank at ground level is simply easier and less time-consuming than doing so in the air, thus translating to a lower cost for the owner. Coating at ground level minimizes the necessity of containment, which can be of particular concern when tanks are being erected in residential areas, as they often are. Ground level work is also safer. And future maintenance, due to the abundant use of maintenance-free concrete in the design, is also greatly reduced.

Landmark has also taken further steps to reduce maintenance of the steel tank and is applying Sherwin-Williams coatings systems almost exclusively, beginning...
beginning with Zinc Clad PCP Ultra as a sacrificial pre-construction primer applied at the steel fabricator. Climo says they’re constantly scrutinizing the coatings process in pursuit of an ambitious goal for customers, that being zero maintenance.

Preserving artwork, design

Such scrutiny has most recently resulted in Landmark applying FluoroKem, a premium ultra-durable finish that water tank owners are finding an effective tool in preserving the artwork that is becoming a popular feature on water tanks.

The white oak leaf pattern at Mesa Del Sol — one of three originally submitted by artist Lisa DeJohn — required Landmark to subcontract the talents of a local sign painter, who free-hand-painted the more detailed features of the design. According to Climo, the design is unusual in that it covers the entire circumference of the tank, whereas most tanks Landmark works on will feature a single logo visible from just one or two directions.

FluoroKem wasn’t part of the original specification, but Climo knew he had to make a case for applying a 2.0-4.0-mil topcoat over the artwork once he saw the time, effort and money being invested in the design. Paul Brasher of Albuquerque engineering firm Brasher & Lorenz was soon on board and adjusted the specification accordingly.

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While the coating preserving the artwork is a relatively new product, the Sherwin-Williams systems were reliable and familiar tools in the hands of Landmark applicators. After a shop prime coat of Zinc Clad PCP Ultra, the tank interior was field primed with Corothane I Galvapac Zinc Primer at 2.5-4.0 mils, and finished with two coats of Macropoxy 646 PW at 5.0-7.0 mils.

The exterior was also shop-primed with Zinc Clad PCP Ultra and field primed with a coat of Corothane I Galvapac Zinc Primer. The intermediate coat consisted of 2.0-4.0 mils of Acrolon 218HS, while the topcoat was 2.0-4.0 mils of FluoroKem. An additional coat of FluoroKem Clear was used over the design.