

METRO DAVIDSON COUNTY DETENTION FACILITY

To help achieve Leadership in Energy and Environmental Design (LEED) silver certification for a new detention center, the state of Tennessee chose compliant mat-layup systems and low-VOC coatings from Tnemec Company. "We worked with the architect to write a quality specification," said coating consultant Tiffany Goulet. "All systems we chose followed LEED standards."

Series 222 Deco-Tread, a decorative broadcast quartz system, was applied to the concrete floors of the detention center's showers to achieve a 1/8" thickness. Then the system's finish coat of Series 284 Deco-Clear, a modified polyamine epoxy, was laid down to protect against impact and abrasion. The quartz floors provide slip resistance and a seamless, grout-free finish in the showers.

The CMU block and poured-in-place concrete shower walls received a heavy-duty Stranlok system, also to provide a seamless finish. The CMU portion of the walls received a parge coat of Series 215 Surfacing Epoxy, a 100 percent solids epoxy filler for concrete, followed by Series 273 Stranlok ML, a fiberglass-mat reinforced epoxy coating system that provides a smooth, seamless surface with excellent impact and abrasion resistance. Series 280 Tneme-Glaze was used as a saturant coat over the fiberglass mat, followed by a second coat to seal the Stranlok system. Series 297 Enviro-Glaze, a fast-drying waterborne polyurethane that provides enhanced abrasion and stain resistance, completed the wall system. The poured-in-place shower walls received the same heavy-duty system without a parge coat of Series 215.

In the inmate cells and day rooms, Series 27WB Typoxy, an advanced generation, high solids water-based epoxy, was first applied to the concrete. A topcoat of Series 297 was used in these rooms not only to protect against inmate abuse, but to provide good color and gloss without yellowing over time.

Shop-coated interior steel doors and windows received Series 135 Chembuild, a high-build epoxy coating with excellent abrasion and corrosion resistance. Series 135 was followed by a finish coat of Series 297 Enviro-Glaze to achieve the same protective properties as the rest of the facility. Exterior metals were also coated with Series 135, followed by Series 1074 Endura-Shield II, an aliphatic acrylic polyurethane that resists degradation caused by ultra-violet (UV) light.

"We made sure the best systems available were used for each area while still complying with LEED regulations," said Goulet. The 40,000 square foot medium security detention facility was built to house female inmates for one to six years. The center is Tennessee's first LEED-certified facility of its type.

FEATURED PRODUCTS

- Series 27WB Typoxy
- Series 135 Chembuild
- Series 215 Surfacing Epoxy
- Series 222 Deco-Tread
- Series 273 Stranlok ML
- Series 280 Tneme-Glaze
- Series 284 Deco-Clear
- Series 297 Tneme-Glaze
- Series 1074 Endura-Shield II



PROJECT INFORMATION



Project Location
Nashville, TN

Project Completion Date
May 2011

Owner
Tennessee Department of F&A - Nashville, Tennessee

Architect
Centric Architecture - Nashville, Tennessee

Field Applicator
Boulton Enterprises - Nashville, Tennessee

The Metro Detention Facility in Nashville, Tennessee, used a variety of Tnemec systems on doors, showers, and cells to help achieve LEED silver certification.

