

Boral
Material
Technologies



Public Library Salt Lake City, UT



Boral Material Technologies' ultra-fine pozzolan Boral Micron³ was used in the construction of 8000 psi concrete columns for the Salt Lake City, Utah's new Main Public Library. Boral Micron³ can be used to achieve high durability and high strength concrete.

Boral Micron³ has a mean particle diameter of 3 micrometers with 90% of the particles less than 7 micrometers. The fine particles leads to a high packing density and increased pozzolanic reactivity at an early age which contribute to high strength and durability in the concrete.

The library project had column and beam design strength requirements of 8,000 psi, 6,000 psi, 5,000 psi, along with 4,000 psi lightweight slab concrete mixes. Architects Moshe Safdie & Associates incorporated a quality assurance objective that stated that all finished concrete surfaces shall be uniform in color and texture when viewed from a distance of 3 feet. Their specification called for color matching between the concrete mixes of different strengths.

The project's ready mix concrete supplier Jack B. Parson Co. proposed Boral Micron³ among candidate designs for 8,000 psi concrete columns. Parson's Technical Manager, Rich Warren, P.E. said, "Micron³ was effective in achieving 8,000 psi. It reduced the HRWR requirement and helped achieve excellent workability. Micron³'s light color also helped achieve a more uniformly colored concrete that was much lighter than silica fume concrete." Big-D Construction, the project general contractor, approved the use of Boral Micron³ for

the 8,000 psi columns. Big-D's project manager, Troy Thompson mentioned, "Micron³ was best suited to provide color continuity between the columns and horizontal structural members that were cast from different strength mixes. In fact, I recommended it for the precast concrete panels as well."

The exposed concrete surfaces in the Salt Lake City Main Public Library project challenged suppliers and contractors to look beyond past concrete experience and consider every variable affecting interior and exterior concrete quality. Boral Micron³ complies with stringent quality control that helps achieve high durability, and high strength concrete.