In 2019, Concrete Fiber Solutions partnered with Goebel Forming and Prairie Material to complete a massive flooring installation at the 110 N. Wacker building in Chicago, Illinois. The building’s composite metal deck floors were reinforced with 25 pounds per cubic yard of CFS 150-5 steel fibers in the lightweight concrete.

Steel fiber was specified over wire mesh for its ability to better control cracking and therefore improve performance and finish. Unlike welded mesh or rebar, which are located in a single plane and therefore allow cracks to grow until they meet this plane, steel fibers are distributed uniformly throughout the concrete matrix to meet micro cracks where they originate. An additional advantage of steel fiber is that the material is pumped with the concrete, whereas installing wire mesh requires the additional time and expense of hauling the material multiple stories by crane.

The use of steel fibers was made possible by International Building Code 2015 (IBC-2015), adopting SDIC-2011, allowing for the use of steel fibers in place of welded wire fabric to control temperature and shrinkage cracking in composite metal deck applications.

“We’re proud to have helped supply Prairie Material and Goebel Forming with a concrete flooring solution that offered a more efficient installation and superior performance long-term.”

--Matt Norman, Concrete Fiber Solutions