

The Cathedral Church of St. Paul

Boston, MA



Project Profile (2014)



Project Summary

The Cathedral Church of St. Paul in Boston Massachusetts was built in 1819. Listed on the US National Register of Historic Places, this church has experienced numerous renovations throughout its almost 200-year existence. In 2014, the church undertook interior renovations to make repairs and to create a warm and welcoming atmosphere for its constituents.

Being in the heart of Boston and a protected landmark set the stage for some exciting challenges. An additional challenge was in the concrete floor - radiant heating tubing was to be installed with a concrete topping slab to improve the heating and comfort for the church's users during the cold northeast winters. The radiant tubing was embedded in the concrete along with 2 layers of wire mesh. The concrete mix design was for lightweight concrete, which intrinsically has a high-paste content.

Since high-paste mixes are already a concern for shrinkage cracking and curling, the concern was even higher when it was realized that placing joints in the concrete would be cumbersome due to the heat tubing. Shrinkage cracking and curling would have resulted in damage to the elegant tiles being installed over the concrete topping, leading to future repair and maintenance. PREVent-C Shrinkage Reducing/Compensating admixture was used to produce a concrete mix that was able to be poured and finished in one placement with no joints. The results was a crack-free 7000 square foot slab and a beautiful floor.

Owner: Episcopal Diocese of Massachusetts

Engineer: Structures North Consulting Engineers, Inc.

Concrete Contractor: M.J. Scully & Co.

General Contractor: Delphi Construction Inc.

Ready-Mix Producer: Aggregate Industries Northeast Region

Products: PREVent-C®500 Shrinkage-Reducing/Compensating Admixture



300 Barr Harbor Dr. Suite 250, West Conshohocken, PA 19428
www.premiercpg.com | T. 800-227-4287

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