# St. Mary of the Mount Parish Church

Pittsburgh, Pennsylvania (1897)

**The Building:**   
A notable landmark in Pittsburgh, overlooking the city from the top of Mt. Washington.

**A New Alternative Treatment Method for Stabilizing Plain Face Plaster**An up-close inspection of the surface side of the ceiling revealed significant areas of plain face (vernacular) plaster in danger of falling. Particularly loose areas of the ceiling, which has an applied canvas cover typical of its period, were held in place with simple furring surface straps as a temporary measure.

HPCS (Canada) was asked to assess the plaster from the attic side to determine if the conditions observed from the surface side were more or less uniform and consistent.  They were. The assessment concluded that the plaster keys throughout the ceiling were likely exhibiting a loss rate average of between 30 and 40%. While some areas may have had a lower loss rate than this, it was particularly concerning to find other areas - specifically those identified in the initial surface inspection – with a loss rate approaching 85%. A good part of the ceiling plaster was apparently being held in place by the canvas cover, which is not particularly reliable. In short, the ceiling was doomed to collapse, either slowly over time or suddenly, with serious potential risks to public safety. The need for treatment was unquestionably urgent.

While this ceiling was an ideal candidate for consolidation treatment from the attic side, due to budget constraints, the client asked HPCS (USA) to develop a less costly alternative treatment method that would effectively stabilize the plaster.

HPCS (USA) proposed an alternative treatment method based on the success of a new HPCS product called [**RE Aramid Gel™**](http://www.historicplaster.com/content/re-aramid-gel)**.**Originally developed to stabilize fibrous plaster panels, [**RE Aramid Gel™**](http://www.historicplaster.com/content/re-aramid-gel)is reinforced with DuPont Kevlar® so that it provides both extraordinary strength and essential flexibility. The proposal involved drilling of thousands of small holes on the surface side of the ceiling, installing screws & washers in each hole and spray applying [**RE Aramid Gel™**](http://www.historicplaster.com/content/re-aramid-gel)to the entire ceiling surface to "unite" the connection points and provide long-lasting reinforcement.

As the picture below illustrates, the results were exceptionally good.  So good, in fact, that HPCS (USA) gave a 25-year guarantee on the service life of the ceiling.



Holes being drilled in the plaster ceiling of St. Mary of the Mount in preparation for treatment with HPCS RE Aramid Gel.



RE Aramid Gel being applied to the plain-face plaster ceiling.



Finished reinforced plaster ceiling at St. Mary of the Mount.

### HPCS Products Used

[CO Consolidant HPCS product category badge](http://ww2.historicplaster.com/products/consolidants/)

[CO S-50 Primer™](http://ww2.historicplaster.com/products/consolidants/)

[RE Reinforcement HPCS product category badge](http://ww2.historicplaster.com/products/reinforcement/)

[RE Aramid Gel™](http://ww2.historicplaster.com/products/reinforcement/)