

Grand Canal, Dublin

Contractor—Fressinet/ Norfolk Marine

Owner—Waterways Ireland

2007

The stonework gravity walls to the historic dock basin were suffering from face failure underwater due to loss of its original weak lime mortar. An underwater concrete face repair was selected as the repair method, nominally 100 mm thick. A 10 m long mesh control frame system was adopted which carried a fabric formwork face shutter connected to base and leading side grout bag seals.

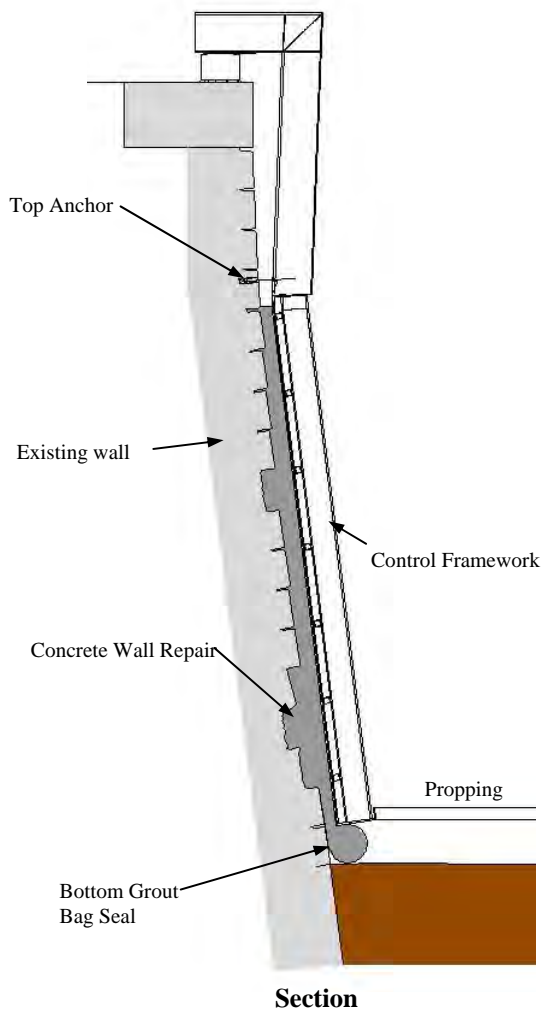
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Fabriform



Control Frame Being Craned into Position



Top of Concrete Wall Repair

The frame was temporarily supported by driven piles with rams to the bottom and drilled anchor ties to the top. The shutter system was filled with a sand: cement micro concrete. The bleed combination of the micro concrete mix and fabric face formwork quickly reduces concrete filling pressures and allows a lower weight frame system to be used. It also produced a good quality concrete face repair which also infilled failed stonework areas.