

WORLD TRADE CENTER BELOW GRADE REPAIRS

New York, USA (2013)

BACKGROUND

The New World Trade Center Transportation Hub is just one of five new buildings which will make up the improved vision of downtown New York. Sustainable commercial space, convenient transportation, and a destination cultural center are all attributes which have been balanced gracefully within the new rebuild of the World Trade Center to symbolize the resilience and renaissance of not only New York – but of the entire country.

This vision also unites an unprecedented merging of architects, artists, and urban developers, including Santiago Calatrava, David Childs, Norman Foster, Frank Gehry, Daniel Libeskind, Fumihiko Maki, and Richard Rogers. The singular goal is a grand new urban center for 21st century New York, and promises to become the most recognizable site in New York.

Even esteemed projects such as these buildings are not without their hurdles. Located in lower Manhattan, two blocks from the Hudson River, the buildings are in a flood zone. The 9A Underpass and North Extension commuter passages, were experiencing what many below-grade concrete structures face – water infiltration. Leaking concrete cracks, damp areas and water penetration through joints were becoming increasingly hazardous to this area used by hundreds of thousands of commuters every day, due to its location adjacent to the new Freedom Tower.

Many products were applied to attempt to mitigate the water damage. The problems were found to have been caused by failed external sheet membranes, and due to blind side application, they were impossible to access in or to replace or repair. Injection systems were attempted to address the leaking cracks and persistent damp areas, with results proving only temporary, while costing thousands of dollars in additional labour.

SOLUTION

Greg Maugeri and Billy Della Sorte of Dry Concrete personally assessed the problems the passages were facing. Through countless early morning site visits, the Dry Concrete team performed trials and provided support and technical expertise.

As long time Kryton distributors, Dry Concrete has a strong familiarity with the Krystol Cracks Repair System, and through their experience, could confidently recommend it as a permanent solution to the leakage problems. After demonstrating the performance of the products on a wall of one of the passageways, the project's decision makers agreed with Dry Concrete's recommendation.

OWNER:

Port Authority of New York and New Jersey (PATH NY NJ)

DEVELOPER:

World Trade Center Properties

ENGINEER:

Downtown Design Partnership (DDP)/AECOM

CONTRACTOR:

Urban Foundation Engineering and Dry Concrete LLC for Judlau Contracting Inc : North Extension
Skanska USA : 9A Underpass

CONSTRUCTION MANAGER:

Tishman Construction

DISTRIBUTOR:

Dry Concrete, LLC

PRODUCTS:

Learn more at kryton.com
Krystol® Crack Repair System
Krystol T1®/T2®



Kryton's Krystol Crack Repair System for concrete leaks was able to repair the existing leaks, and protect the frequently used underpass against future leaks, even at high water pressure.

The repair site before the Krystol Crack Repair System was applied.



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The Krystol Crack Repair System was the only concrete repair solution that was able to stop the leaks and return the problem areas to a dry state. Approved by both the Downtown Design Partnership (DDP), and the Port Authority of New York and New Jersey (PATHNYNJ), the Krystol Crack Repair System went to work, effectively sealing the leaking cracks, while providing permanent protection against high ground water pressure.

The proprietary chemicals used in the Krystol products will only get more effective at preventing water penetration over time. These chemicals lie dormant throughout the life of the concrete structure, reacting with any present moisture to create hair like, permanent crystals which stop any water from entering the structure.

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Damp, weeping concrete and persistent leaking cracks were successfully fixed with the Krystol Crack Repair System, after other repair methods repeatedly failed.



Krystol Crack Repair System - A permanent solution for waterproofing and repairing tie holes, pipe penetrations, cracks and defective concrete.

Kryton International Inc.

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