

Market

Buildings

Application

Concrete Repair & Protection

Focus

Corrosion

Project:	Waterside Tower Condominium
Owner:	Waterside Tower Condominium Association
Engineer:	B.P. Taurinski Structural Engineers
Contractor:	Phoenix Concrete Restoration
Year:	2008 - 2009

The Problem



The Waterside Tower Condominium is a 10 story building located in the coastal area of Miami, Florida. The 118 unit high-rise building was constructed in 1972 with post-tensioned concrete. After 30 years of the highly corrosive environment of South Florida the building started to show signs of deterioration. The most evident sign of failure was at the balcony slab edge.

The initial visual and sounding investigation revealed spalled and delaminated concrete conditions at the slab edge of the balconies.

When the demolition of the concrete started it was found that the spalled condition was a result of insufficient concrete cover at the slab edge. The lack of concrete cover accelerated corrosion of the post-tension anchors and the steel reinforcement.

The Sika Solution

A decision was made to extend the balcony slab six inches, full depth, to provide sufficient cover for the post-tension anchors and steel reinforcement. The existing hand rails and coatings were removed from the balconies. The delaminated concrete on the slab edge was chipped away carefully not to disturb the post-tension anchors.

After the slab edge was prepared, and new steel reinforcement doweled in place, forms were built and Sikacrete 211 SCC Plus was poured into the forms. The Sikacrete 211 SCC Plus was wet cured and the forms were removed after 5 days.

Sikacrete 211 SCC Plus was selected as the product of choice for it's excellent placement characteristics.



The Sikagard FlexCoat cement-based waterproofing system was applied to the surface of the balconies after the surface was prepared by water blasting. Two coats of the FlexCoat waterproofing was applied followed by two coats of the Adobe Brown FlexCoat ATC. The new handrails were installed on the balcony.

During phase one of the project the following repairs were accomplished:

Total Sikacrete 211SCC Plus full depth edge repair 700 L/F
Total Sikagard FlexCoat waterproof system applied 5000 S/F



Due to the success of the system, phase two of this project has started with the same Sika solution. The Flexcoat system was selected to offer protection from moisture intrusion in the slab. The acrylic topcoat provides aesthetic appeal to the balcony and general appearance of the building.

Sika Products Used

Sikagard® FlexCoat is a polymerized cementitious protective coating. It consists of a unique rubber-like polymer liquid (Part A) mixed at the time of application with a cement aggregate blend (Part B).

Sikagard® FlexCoat ATC is a single component acrylic finish coating for two-coat application to SikagardFlexCoat in new or recoat work. Important characteristics of Top Coat are its durability and excellent weathering qualities.

Sikacrete® 211 SCC Plus is a one-component, self-consolidating concrete containing factory blended coarse aggregate. This self-consolidating concrete material is silica fume and polymer modified and also contains a penetrating corrosion inhibitor.

Contact Sika at:
Phone: 1-800-933-SIKA (Nationwide)
Website: www.sikaconstruction.com



Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 201-933-8800
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537