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# DAVIDSON & ASSOCIATES

CONSTRUCTION ANALYSTS, INC.

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## 3883 Connecticut Avenue – Water Infiltration Repairs Forensic Analysis, Repair Design & Construction Phase Quality Assurance



This multifamily property located in NW Washington, DC consists of a multi-story, post-tension concrete frame structure over below grade parking. Water infiltration had been reported almost immediately after the building's completion in 2004 and unsuccessful repair attempts were made at limited locations. A prior water infiltration evaluation prepared in 2010 recommended complete removal of the exterior cladding in order to effect repairs to defective construction at an estimated cost of \$7,000,000, which was beyond the owners' financial capabilities.

**Challenge:** Analyze the existing building envelope construction to identify causes of ongoing water infiltration and develop appropriate, effective repairs to restore building envelope/water resistance integrity and mitigate future damage, while minimizing overall repair cost.

**Value Added:** Through use of document review, visual observations, non-destructive testing, and borescopic investigation D&A was able to verify / isolate the principal construction defects responsible for the water infiltration. D&A developed a comprehensive, phased repair scope and construction documents, reducing overall estimated repair costs to \$2,000,000, and provided Construction Quality Assurance services throughout the duration of the repair phase.

**Services Performed:** Forensic analysis, repair construction document and specification preparation, bidding and contract negotiations, and quality assurance during construction (in conjunction with Eichburg -CM and ECS -testing & inspection).

**Client:** 3883 Connecticut Avenue

**Contractor:** Culbertson of Virginia

**Duration:** 2011 - 2013 (through Phase I)

**Magnitude:** Phase 1 - \$500,000 / Total - \$2,000,000