PROJECT PROFILE

1660 International Drive

Exterior Wall Water Leakage Investigation and Repair Design | McLean, VA

CLIENT

Bentall Kennedy/Cassidy Turley

BACKGROUND

Located in the Tysons Corner portion of McLean, Virginia, 1660 International Drive was originally constructed in 1999. The property consists of approximately 200,000 square feet of Class A commercial office space with four levels of parking. The facade is comprised of an internally-glazed, field-assembled, "stick-built" anodized aluminum curtain wall with alternating bands of vision and non-vision lites with a reflective or "mirrored" finish to provide a uniform exterior appearance. The building has been experiencing rainwater penetration through the exterior curtain wall assemblies at various locations on all elevations during heavy, wind-driven rain events.

WJE was retained to investigate and develop repair drawings and technical specifications to address uncontrolled rainwater penetration through the glazed aluminum curtain walls. The client had previously received another consultant's repair recommendations based on a limited visual investigation but retained WJE to complete a more detailed and comprehensive evaluation of the property through water penetration testing and close-range visual observations.

SOLUTION

WJE conducted a close-range, exterior visual condition assessment of representative samples of the glazed aluminum curtain wall and precast concrete wall panels below. The investigation included field testing for water penetration resistance at numerous locations throughout the property. As a result of this investigation, WJE determined that water leakage was attributed to the inability of the curtain wall assembly to properly manage water internally due to missing or defective interior end-dams and joint plugs. To solve this problem, WJE developed repair documents to competitively bid building-wide conversion of the drained curtain wall assembly to a barrier system. WJE's repair design and implementation addressed the uncontrolled rainwater penetration while remaining within the client's project budget.

WJE ENGINEERS ARCHITECTS MATERIALS SCIENTISTS