



**Project Name:**  
*Curtain Wall and Waterproofing  
Repairs, Citigroup Center*

**Project Location:**  
*Chicago, Illinois*

**Client:**  
*MB Real Estate  
500 West Madison, Suite 300  
Chicago, Illinois 60661*

**Approximate Construction Cost:**  
*\$470,000*

**Year Completed:**  
*2013*

**Nature of Services:**  
*Evaluation of existing curtain wall and  
waterproofing, design of curtain wall  
and waterproofing repairs, bidding  
assistance, and assistance with  
contract administration.*

Citigroup Center is a 40-story steel and concrete frame building with a continuous glass and aluminum curtain wall. There are several roof levels on the building. Typical roofing system consists of a split slab assembly with an EPDM waterproofing system. The 40<sup>th</sup> floor includes a large mechanical roof surrounded by a 3-story tall curtain wall system that is exposed on both sides.

For several years prior to our involvement, the building had suffered from persistent water leaks around the perimeter of the mechanical roof. BTC was retained to evaluate the sources of leaks and assess the overall condition of the roofs. Our scope of work included visual review of the roofs and the curtain wall, exploratory openings, and water testing.

To address the leaks along the perimeter of the mechanical roof, BTC took a 2-pronged approach to the repair design. First, waterproofing repairs were designed at the curtain wall-to-concrete slab interface. Then curtain wall repairs from the exterior were designed to address deficiencies above the penthouse floor. To save construction costs, the repairs were designed as 2 separate projects that could be delivered through multiple-prime contracts.

The waterproofing repairs included removal of the concrete topping slab around the mechanical roof perimeter, installation of flashing between the curtain wall and waterproofing, and revisions to protective metal interior walls around the curtain wall. Curtain wall repairs included wet sealing over existing glazing gaskets, use of custom-molded preformed silicone boots on aluminum frame joints, and repairs to feature light boxes.

BTC provided bidding assistance and contract administration services during the construction phase of the project.

