



The 474 North Lake Shore Drive Condominium Building is a 62-story, concrete framed structure, built in 1990. The first 15 stories of the high-rise tower are a parking structure, which extends to the west of the high-rise tower into an adjacent structure. The building exterior primarily consists of precast concrete facade panels with an exposed aggregate finish along with aluminum-framed windows. Precast concrete louvers take the place of windows at the parking garage levels. Joints between precast panels and at perimeters of windows were originally constructed with a silicone sealant.

Significant deterioration of the east elevation concrete louvers was noted during a critical examination performed in 2008. Much of the observed deterioration was attributed to direct exposure to salt spray from heavily traveled Lake Shore Drive adjacent to the east elevation of the building. BTC was retained to design repairs for the deteriorated concrete. Conventional concrete repairs performed in 2009 were effective initially. However, deterioration continued. BTC developed 4 "levels" of long-term repair options for the HOA's consideration. These options included conventional concrete repairs, acrylic coating, elastomeric coating, and replacing the louver rungs with a prefabricated aluminum louver. A combination of repairs was selected to optimize cost effectiveness of the repairs.

Most of the silicone sealant between precast facade panels and window perimeters had been in good condition. However, with an anticipated useful life of approximately 20 years, BTC had recommended that the Association plan for a comprehensive sealant replacement project.

BTC designed the repairs for a facade repair project implemented in 2019, which combined louver repairs with proactive comprehensive sealant replacement at the Tower. BTC also provided bidding assistance and administered the construction contract.

Project Name:

*Sealant and Concrete Louver Repairs
474 North Lake Shore Drive
Condominiums*

Project Location:

*474 North Lake Shore Drive
Chicago, Illinois*

Client:

*474 North Lake Shore Drive
Condominium Association /
FirstService Residential*

Approximate Construction Cost:

\$2,800,000

Year Completed:

2019

Nature of Services:

*Design of Concrete Louver Repairs and
Comprehensive Sealant Replacement,
Bidding Assistance, and Construction
Contract Administration*

