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Engineered Building Inspections, P.C. starts the waterproofing process at Sunnyside Garden Apartments

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When Engineered Building Inspections, P.C. (EBI) was called to Phipps Properties in Sunnyside, for Sunnyside Garden Apartments, they were faced with the familiar task of investigating water intrusion leaks. Like so many times before, the circumstances were similar: the building had a history of leaks in various apartments. And like this professional engineering company had seen countless times before, the building was marred by numerous unsuccessful attempts to rectify the water problems.

From brick pointing to brick replacement, many attempts at resolving the water intrusion issues at the buildings were unsuccessful. Taking this into consideration, the design team of EBI investigated existing conditions and developed a plan to efficiently correct the leaks. Their approach was a comprehensive plan to install a waterproof membrane and drainage system within the 3-brick wythe wall at various critical locations. Additionally, they designed 2-brick wythe deep flashing details at the window heads. When designing masonry façade waterproof systems, it must be assumed that water will penetrate the outside face of the brick. So in essence, we are designing drainage systems within the wall to discharge the water that penetrates the brick.

EBI is a specialist in the field of waterproofing and masonry. Recently, we completed masonry consultation and evaluation for the landmark Jones Beach Tower restoration in Wantagh, N.Y. Utilizing our expertise garnered by hands-on experience in the industry, they can often solve long term problems with economical and efficient methods. A lot of problems can be resolved by totally dismantling and rebuilding the wall system. The process of identifying and resolving specific building deficiencies is the real challenge. Of course, coming up with proper design details is what will ultimately make a project successful. That is exactly what the short-term results are of the Sunnyside project. Excellent execution of the construction design by the contractor Skyline Waterproofing of Long Island City, N.Y., has made the leak complaints "go away" at three building locations during this year's severe summer rainstorms. Buildings that were riddled with complaints of leaks after even minor rainstorms have made it through some of the most severe rains on record without a single complaint.

Working from the top down, work was performed to both stop water in its tracks and also to drain water out of the building at critical locations. Cast coping stones were reutilized after installing redundant waterproofing systems at the top of the masonry parapet. Though some parapet walls required removal, most of the parapets were salvaged with only the outside brick face being removed to allow for the installation of a membrane/drainage system. The brick was restored with Skyline matching the historical details quite impressively. As is somewhat common in restoration work, the project did uncover some severely damaged steel work within the building walls. After

properly shoring critical walls, much of this steel was replaced.

At many critical locations, EBI designed for redundant waterproofing systems including metal cladding, copper through wall flashing and even saline water repellents. This will not only provide relief to apartment occupants, it will help preserve the structural integrity of the building.

At the completion of the project, it hardly looked likework was done on the buildings. That is the mark of a nice job. Of course the real marks will be come after future rainstorms.

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