

### 3.0 - PROBLEM STATEMENT

---

Upon a site visit to The Towers, it was discovered that large, round concrete columns were placed in the corner windows of the apartments, obstructing any views of Saint Nicholas Park or downtown Manhattan. There are also many large, concrete columns placed throughout the building on an irregular grid,



Figure 5: Photograph illustrating the concrete column obstructing the window (Photo courtesy of Robert Chin)

which may have impacted the ease of construction of The Towers. Some of these columns are obstructions in corridors and open spaces, which detract from the architecture of the building.

### 4.0 - PROPOSAL

---

A steel structure on a regular grid is proposed to eliminate the corner columns in the windows and make construction of the building more efficient. A composite steel deck will replace the flat plate concrete slab and steel braced frames and moment frames will replace the concrete shear walls. Using a steel frame will also cut down on the foundation loads which can decrease the required sizes for the spread footings. Although using steel will increase floor to floor height of the building, the zoning requirements per the Building Code of the City of New York allows for an increase of 3' per floor.

The corner columns will be eliminated by cantilevering the beams supporting the portion of the building where the corner windows are located. By keeping a ceiling plenum depth of 2', the floor to floor height will only be increased by 1'-4" which only increases the total building height by approximately 13'.