

March 18, 2013

Ms. Rebecca Anderson  
Lake Towne Apartments, LLC  
22 Langdon Street  
Madison, WI 53703

**SUBJECT: 622 & 632 Howard Avenue Apartments  
Structural Assessment  
MP-Squared Project No: 1310034WI**

## INTRODUCTION

MP-Squared Structural Engineers, LLC (MP2) was retained by Ms. Rebecca Anderson of Lake Towne Apartments, LLC to observe and comment on the structural integrity of the framing at 622 & 632 Howard Avenue apartments in Madison, Wisconsin. MP2 made two visits to the properties; the first visit occurred on Monday, February 11 at approximately 2:30 pm; the second visit occurred on Friday, March 8 at approximately 4:00 pm. The purpose of this report is to summarize our observations.

## OBSERVATIONS/ASSESSMENT

### 632 Howard Avenue:

632 Howard Avenue is a student housing apartment building. There are apartments on three levels above grade and one level below grade. Above grade framing is typically wood framed and the foundation, where exposed, appears to be cast-in-place concrete.

Nearly all the framing in the building is covered with wall/floor/ceiling sheathing; however, structural concerns are noticeable passively throughout the building. There are two "bump-outs" – one at the front of and one in the back of the building. Each bump-out appears to have once been an exterior, perhaps three season, porch that has been converted to livable space. There is a significant change in elevation between the main structure and the bump-out. Also, there appears to be differential movement between the bump-out and the main structure as seen by peeling paint at the intersection of the bump-out to the main building (see Photo 1); additionally, via conversations with the building

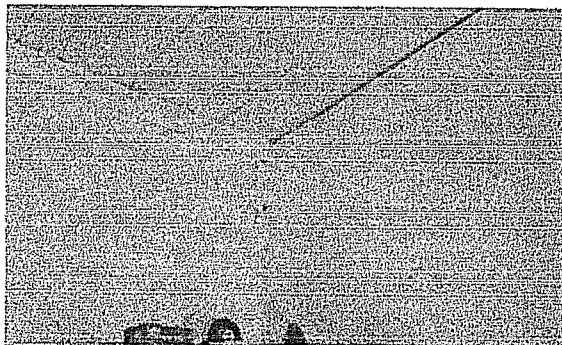


Photo 1: Peeling paint at joint between bump-out and main structure.

owner re caulking of exterior joint of the bump-out to the main structure, the caulking is replaced every one to two years because of visible separation (see Photo 2). The bump-out may not have a typical frost wall foundation which could be the cause of the relative movement.

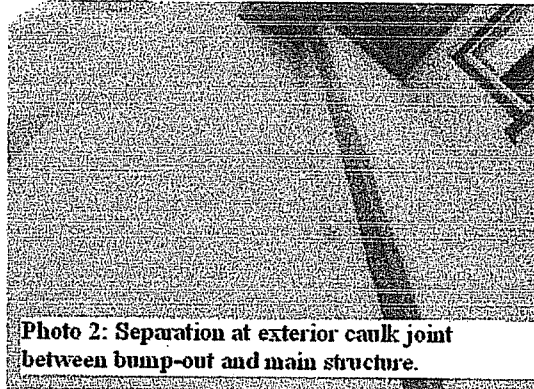


Photo 2: Separation at exterior caulk joint between bump-out and main structure.

There are "soft" spots felt throughout the building. These may be due to localized water damage, undersized framing, or a combination of the two; however, without removing the sheathing and exposing the wall studs and/or floor framing it is not possible to determine how pervasive the damage is. Water damage of some degree can be assumed in nearly all bathrooms and kitchens (see Photo 3).

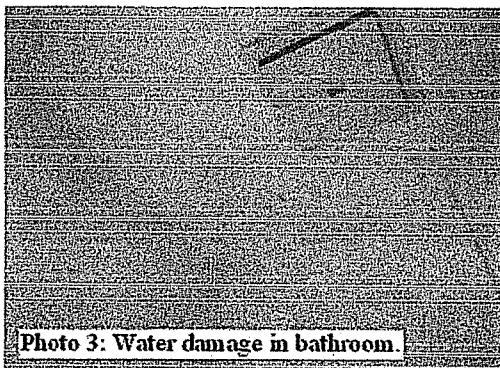


Photo 3: Water damage in bathroom.

In the lower level some framing was exposed and dry rot was noted (see Photo 4). Again, without removing the sheathing and exposing the floor joists it is not possible to determine the extent of the rot.

The foundation appears to have section loss in one of the lower level apartments. Additionally, efflorescence and water staining was noted.

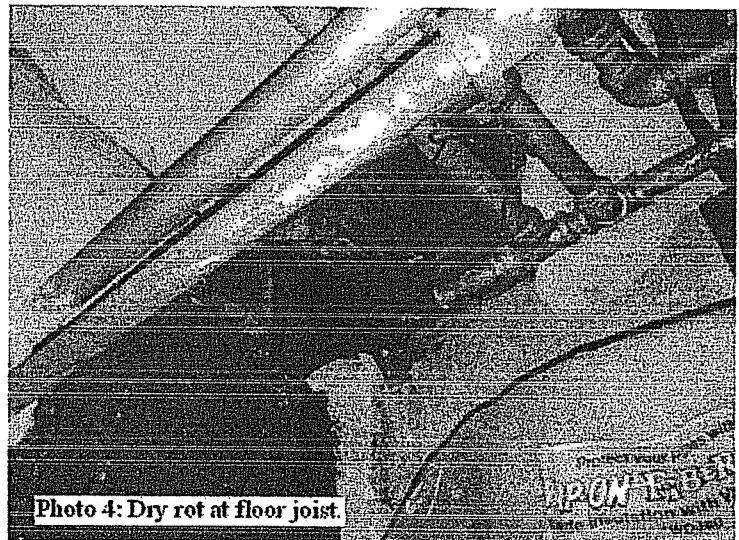
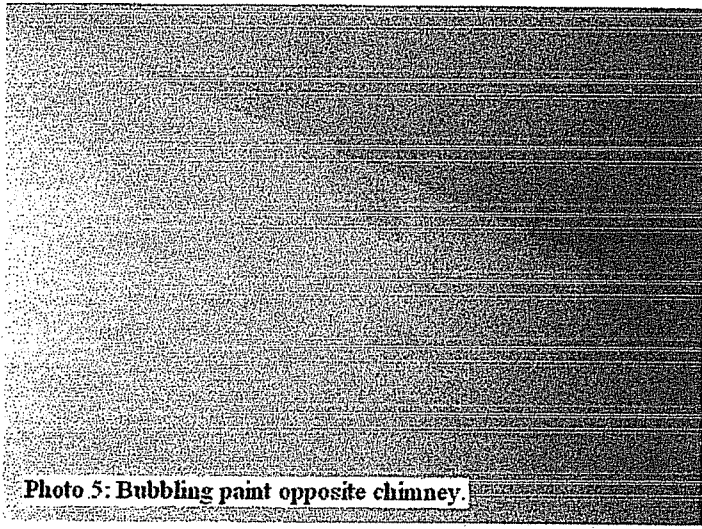


Photo 4: Dry rot at floor joist.



Paint in the stairwell opposite the chimney has bubbled (see Photo 5). Per the Owner the bubbling paint has been repaired numerous times and a new liner has been installed in the chimney. It is our understanding the bubbling continued after the liner was installed. This may not indicate a structural issue; however, it is concerning and may be indicative of high heat.

Photo 5: Bubbling paint opposite chimney.

632's garage does not appear to have been originally designed

per typical structural engineering standards. The trusses have not been properly fastened to the top of the wall. Steel tie rods have been installed to prevent the walls from kicking out; however, the structure appears generally unstable and possibly in danger of imminent collapse. See Photo 6.

**622 Howard Avenue:**

622 Howard Avenue is a student housing apartment building. There are apartments on two levels above grade and one level below grade. Above grade framing is typically wood framed and the foundation, where exposed, appears to be constructed using a multi-wythe brick wall.

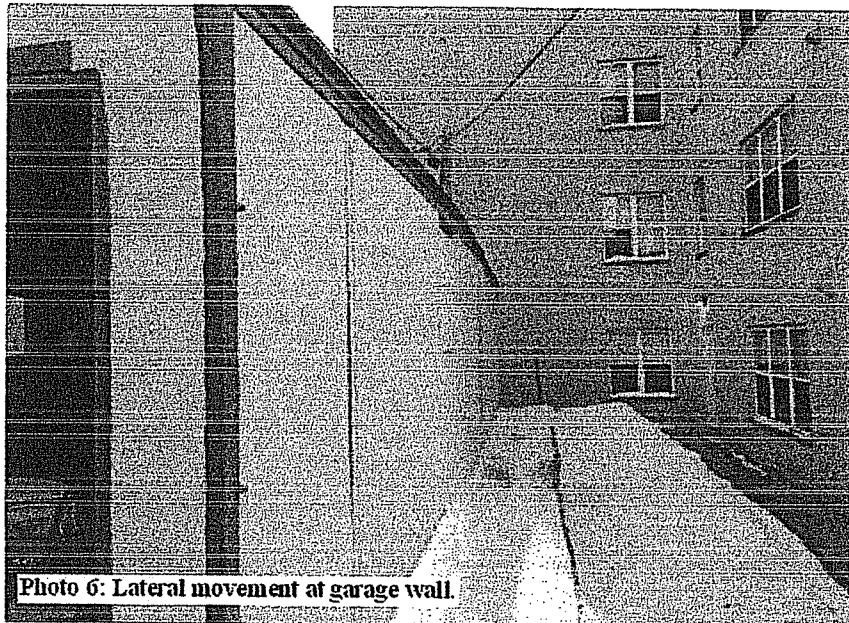


Photo 6: Lateral movement at garage wall.

The condition of the framing at 622 is generally unremarkable. Buckling of the exterior front porch decking was noted, and appears to be from moisture and a rigid boundary condition. Moisture infiltration was noted in the attic – there is discoloration of the roof joists and roof decking, along with efflorescence on the chimney.

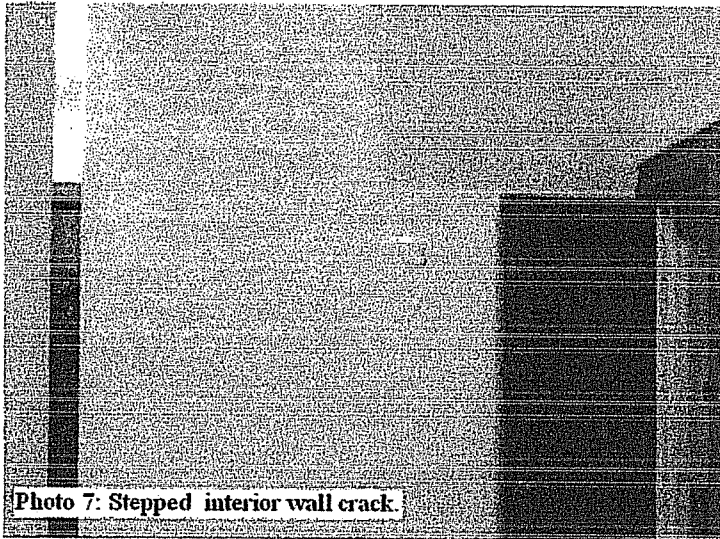


Photo 7: Stepped interior wall crack.

The most concerning structural behavior occurs approximately in-line with the ridge. The floor framing on the first and second floor significantly dips approximately 18'-0" from the front, exterior wall. On the second floor, there is a large, apparently active, stepped crack (see Photos 7 - 9). This is indicative of settlement. The exterior foundation and exterior wall framing show no signs of distress. A possible origin may be due to the removal of an interior load bearing member, or perhaps continued settlement of an interior load bearing column/wall.

### CONCLUSION

The structural issues in 632 Howard Avenue are pervasive. Load path and the extent of rot and water damage cannot be determined unless the sheathing is removed and the studs are

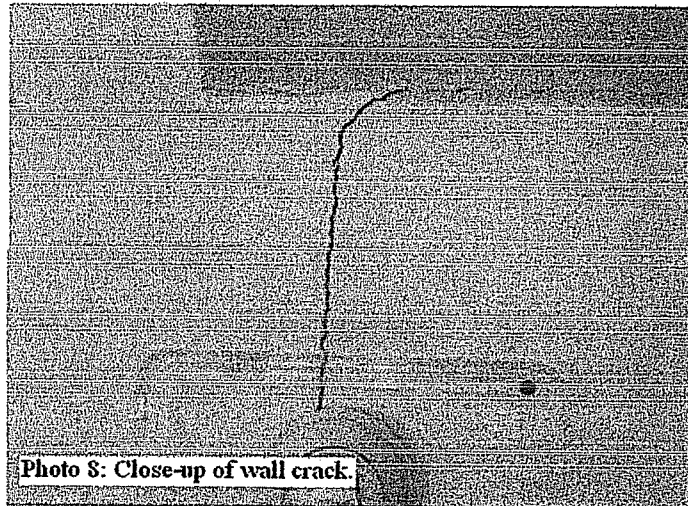


Photo 8: Close-up of wall crack.

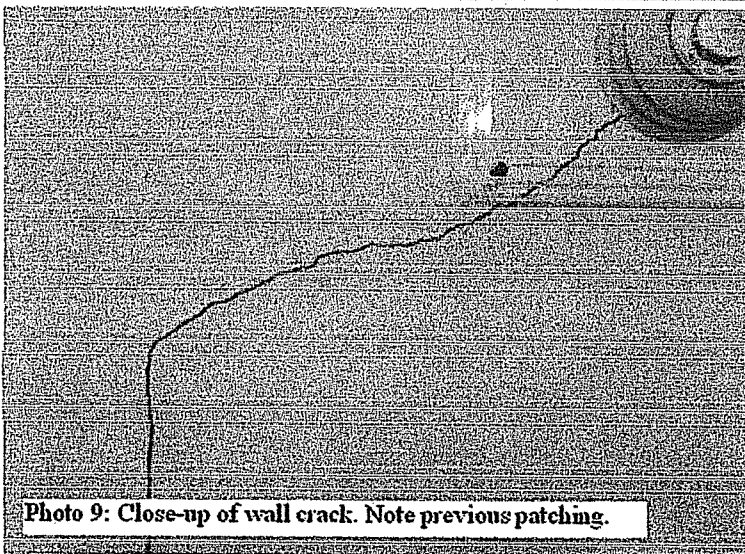


Photo 9: Close-up of wall crack. Note previous patching.

exposed. It appears that water has infiltrated the structure via different means. Continued exposure to moisture will cause decay and rot in any structure, especially wood framed buildings. Unfortunately, significant changes in strength and stiffness can take place before any rotting is detected. Visual clues appear mostly during the advanced stages of fungal attack, limiting the life of the structure.

The structural issues in 622 Howard Avenue appear less pervasive, but could be a larger life safety issue than what we are observing in 632. Tracking down the cause of the settlement will require a rigorous evaluation and exposure of the framing system. It may be necessary to retain to geotechnical engineer if the structural load path is found to be sufficient to transfer the loads to the foundation.

The garage at 632 Howard should be considered in danger of imminent collapse and should be repaired, shored, or demolished.

### LIMITATIONS

Our observations were limited to a hands-reach assessment. The assessment conducted by MP2 was limited to observable conditions.

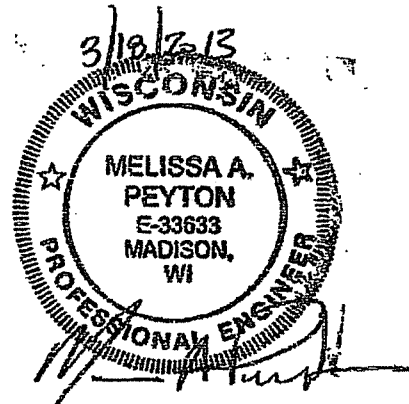
A rigorous structural analysis of the structure/s is beyond the scope of our contract and has not been performed. Typical connections and the structural adequacy of framing members have not been verified by rigorous structural analysis. The observations were limited to the items stated in the report.

Sincerely,

MP-SQUARED STRUCTURAL ENGINEERS, LLC

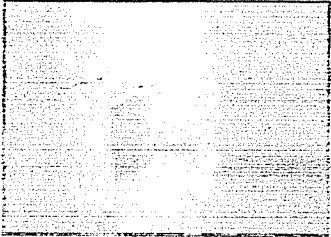


Melissa A. Peyton, P.E.  
Structural Engineer / Principal





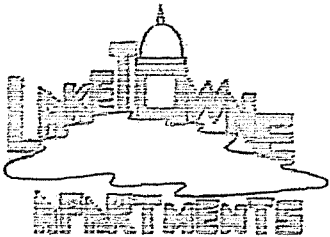
# 632 Howard Place



Taxes [REDACTED]

2012  
Utilities [REDACTED]

Insurance [REDACTED]



632 Howard Place | Madison | WI | 53703

Owner

Becky Anderson

22 Langdon St., #101  
Madison, WI 53703

Phone: 608-255-6550  
Mobile: 608-219-7749  
Fax: 608-255-3395

- 2012
- One 2 bedroom/2 bathroom [REDACTED]

- One 2 bedroom [REDACTED]

- Studios & Efficiencies [REDACTED]

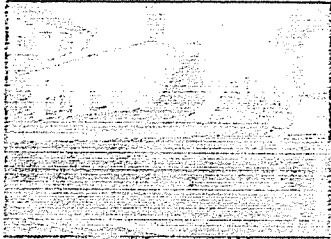
- 2 garage parking spots [REDACTED]

- 3 uncovered parking spots [REDACTED]

- Coin operated laundry [REDACTED]



# 622 Howard Place



Taxes [REDACTED]

Utilities [REDACTED]

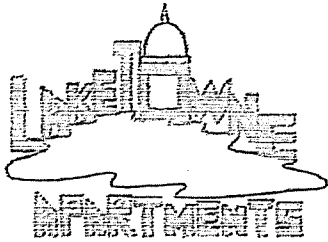
Insurance [REDACTED]

2012



assessed value

2007



622 Howard Place | Madison | WI | 53703

Owner

**Becky Anderson**

22 Langdon St., #101  
Madison, WI 53703

Phone: 608-255-6550  
Mobile: 608-219-7749  
Fax: 608-255-3395

2012

- Two 1 bedrooms [REDACTED]
- Four studios [REDACTED]
- Four parking spots [REDACTED]
- Tenants pay electric
- Coin operated laundry

6 UNITS

