Mattson Macdonald Young
structural engineers

Bassett Creek Business Center
901 North 3rd Street, #100
Minneapolis, MN 55401

612-827-7825 voice
612-827-0805 fax

24 November 2015

Sarah Zorn
Planning and Economic Development
25 West Fourth Street, Ste. 1100
St. Paul, MN 55102

Project No.: 15688.00
Re: Structural Condition Review of the building at 208-210 Bates Ave.

Dear Sarah:

We visited the existing structure at 208-210 Bates Ave. on Thursday, November 19th, 2015. The purpose of our visit was to form an opinion of the building condition and to identify any areas of damage, deterioration, or deficiency and to assist the owner in planning the future of the house. The following is a summary of our observations and opinions:

Scope
This report concerns only the structural frame and elements that are an integral part of the load resisting system for the building. We did not observe and report on the building electrical systems, mechanical systems, fire protection, egress, and life safety compliance with the building code.

Our review concerned the basement level and the foundation walls that could be observed directly within that space, any visible roof systems, any visible wall structures, and any visible beams or joists. Observations that were performed are considered a cursory "walk-through" of the building. The performance of the structural system and framing elements was judged by visual observation only. This work should not be considered a detailed investigation of the building or of specific elements of the building framing system. During our walk through no finishes were removed to expose structural systems.

Calculations were not performed on the total building system nor were the apparent load capacities of the floor or roof determined as a part of this report.

Qualifications of the Personnel
Joe Cain P.E. is the author of this report, the lead investigator, and the Structural Engineer of Record (SER). Joe has 30 years of experience in the field of structural engineering and has performed condition reviews as the SER on numerous buildings that are similar to the subject building. Travis Stanley E.I.T. and Dave Hadler, engineering technician, have aided in the observation work, analysis, and research and have contributed to the preparation of the report.

Methods of Investigation
The method of investigation was by casual observation and was limited to those structural elements that were exposed to view. However, much of the structural system was covered by finish material, in which case the performance of the finish material was assumed to reflect the performance of the structural elements to which the finish material was attached. No attempt was made to perform an exhaustive investigation of all structural elements. No finish material was removed or damaged to expose the underlying structural elements. No existing as built documents were available for our use. Nor were we made aware of any previous reports related to the structural condition of the building or investigation of building elements.

Building Description
The structure is a two story building with a full basement. The original structure was constructed on or about 1880. The building is divided into three segments. Two of the segments are at the ground level and one is at the second floor. There was an addition to the building in the northeast section sometime after its construction. The roof is assumed to be constructed with hand framed lumber joists which are supported on wood stud bearing walls at the building perimeter.

The foundation walls that could be observed were constructed with rubble limestone masonry below grade in the original section of the house. The first floor is supported at the interior of the basement level with heavy timber beams, supported on timber columns that extend to the basement floor. The basement floor areas that were not covered were observed to be concrete slab on grade. It is assumed that the building walls and interior columns rest on spread footings.

Observed Conditions
In general, the structural elements of the building framing and foundation were judged to be in poor condition. There were conditions of deterioration or damage noted in the observations and will be described below in more detail.

Mold is abundant throughout the building. Picture 1 and Picture 2 show two instances of mold that is growing in the building, which is likely caused by water infiltration. The floor was damp in many places throughout the first level of the building. Dampness to a rug can be seen in Picture 3. Mold was observed on each of the levels including the basement.

Picture 1 – Mold in Building

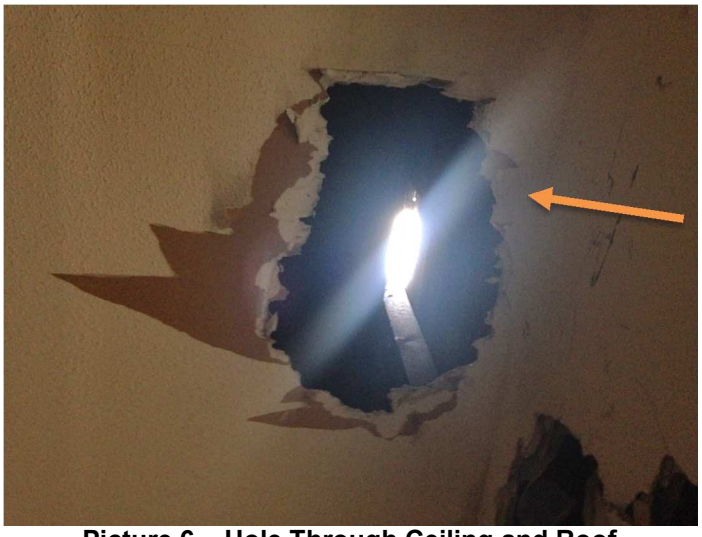
Picture 2 – Mold in Building

Picture 3 – Dampness to a Rug

Water damage was also observed in the ceiling at the second floor. Picture 4 and Picture 5 show some of the places where the damage is. The water infiltration is most likely due to an extensively damaged roof. A hole through the ceiling and roof was found. Picture 6 shows the opening. The water damage was observed in most rooms throughout the second floor, so it is likely that the roof is damaged in more than one place. It was also noted that there was no insulation above the ceiling in the location that was open.

Picture 4 – Water Damage at 2nd Floor Ceiling

Picture 5 – Water Damage at 2nd Floor Ceiling



Picture 6 – Hole Through Ceiling and Roof

The floors sloped slightly toward the center of the building. The stairs also had a slight sideways slope to them. This is likely due to the settlement of the building along the load resisting system at the center of the building. Most of the joists in the basement appeared to be in good condition. There were a couple of exceptions. One of the joists has a crack in it and another is damaged at the foundation wall. Picture 7 shows the crack and Picture 8 shows the damaged member.

Picture 7 – Crack in Floor Joist

Picture 8 – Damaged Floor Joist

Some of the rooms on the first floor are raised above the rest of the floor by a step. There are many places where the raised flooring is failing. There is significant sagging that can be felt as a person walks through a room that is supported by one of these. It is likely that the OSB and the wood members that support it have extensive water damage. Picture 9 shows one such step up. On the left side of the picture is the standard floor and the right side is the elevated room. The arrow in the picture is pointing at the wood framing that is exposed.

Picture 9 – Raised Flooring

Some of the clay masonry bricks at the northeast face of the building's exterior are missing and some are leaning away from the main structure. Picture 10 shows the northeast face of the building. The missing bricks are apparent in the picture. Picture 11 shows the bricks above the window that are leaning away from the main structure. It is likely that the bricks were improperly tied to the structure or the ties that were used have deteriorated and are no longer functioning properly. The clay masonry bricks at the southwest face of the building have been reinforced to prevent the bricks from falling off the building. Picture 12 shows the bricks at the southeast face along with the reinforcement.

Picture 10 – Northeast Exterior Wall

Picture 11 – Leaning Bricks at Northeast Face

Picture 12 – Reinforced Bricks at Southwest Face

It appears as if a renovation began some time ago in the building, but was never finished. Cabinets, counters, water heaters, and carpeting (in the second floor) all seem nearly brand new. Most of the new material seems salvageable. Picture 13 shows one set of new cabinets that were installed and Picture 14 shows a water heater that appears in good condition.

Picture 13 – Cabinets

Picture 14 –Water Heater

Summary
The building at 208-210 Bates Ave. is in generally poor condition. As stated above, we made no attempt to remove finish material. Our opinions are based on what was in plain sight. The problems that were seen are likely more extensive than what we observed but were covered with finish materials. In addition to what was previously listed, there could be more issues that we could not observe. Repairs are possible, but it would likely be relatively costly. A more thorough structural review would be required in order to give details for the repair of any specific structural system.

Limiting Conditions:
The opinions and recommendations contained in this report are based on a cursory observation of the building. No attempt was made to perform an exhaustive investigation of all conditions and building elements. It is possible that conditions exist that cannot be discovered or judged as a result of this limited nature of investigation. The work provided in the preparation of the report concerns the structural system only and is not intended to address mechanical, electrical or plumbing systems, fire protection, or handicap accessibility. The owner is encouraged to discuss these items with a building official and other design professionals for guidance and recommendations.

If you have any questions concerning the above, please do not hesitate to contact us.

Sincerely
Mattson Macdonald Young, Inc.

Travis Stanley, E.I.T.

Dave Hadler, Engineering Technician

Joe Cain, P.E.

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Joe Cain, P.E.

11/24/2015 MN Reg. No. 40119