Exhibit D

Existing Structural Condition Report by Keast & Hood Structural Engineers

This exhibit has been amended from the original October 29, 2015 application submission to limit the scope of the exhibit to 1918-1920 Sansom Street.

Structural and Masonry Evaluation Report
1920 Sansom Street
Philadelphia, PA 19103

Existing Conditions and
Recommendations for Repairs
October 12, 2015

Prepared For:
Southern Land Company

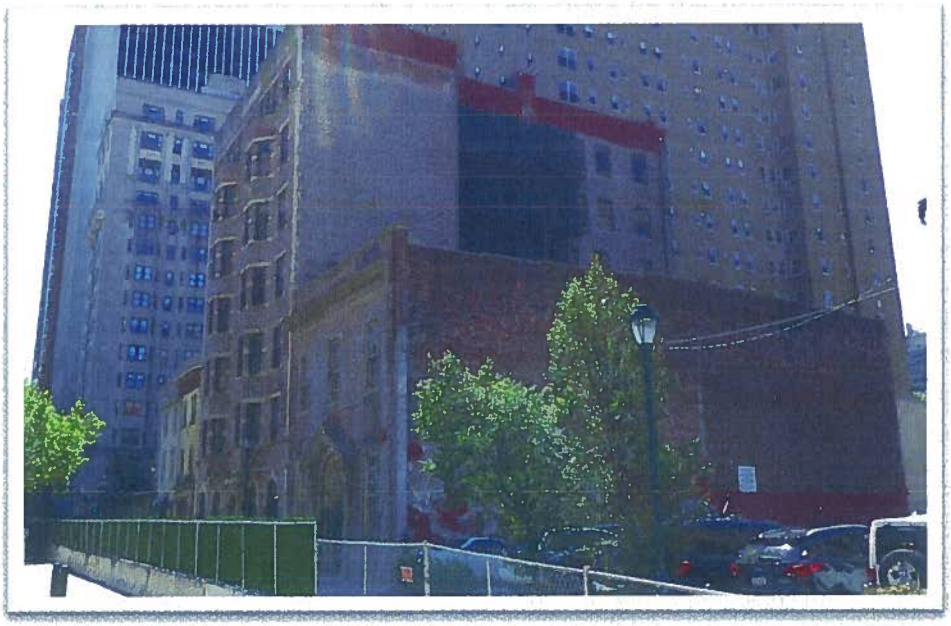

Image by Keast & Hood Co.

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1920 Sansom - Garage / Funeral Parlor

Introduction

Keast & Hood was requested to review the structural condition of 1920 Sansom Street in Philadelphia, PA. The first visit was made on July 22, 2015, in the company of other members of the project team to observe the general conditions of this building and others. A second visit was made on August 19 to probe the condition of the masonry. This report describes the observations and recommendations for the structure. The reader should understand that this report focuses primarily on structural issues and does not address the greater work that would be required for a full historic restoration.

In overview, the building was found to be in very poor condition. While it seems the roofing was replaced after several years of leaking, there continues to be extensive water infiltration from torn flashing, clogged and broken drain pipes, and cracks in the masonry. Water permeation and the resulting deterioration of the masonry require that most or all of the front wall be reconstructed, as well as portions of the side walls.

Observations

Reportedly this building was constructed in the very early twentieth century as a garage and thus has the main floor slab on dirt fill; there is a small mechanical room basement at the rear. There is a full second floor, but at a height inconsistent with a garage occupancy. This observation coupled with all of the structural details used (concrete mix components[1], steel beam sizes, and encasement forming details) point to the internal structure having been replaced in the 1940s or 1950s, and the front façade may have been replaced at the same time.

The existing structural system consists of steel beams at the second floor and roof levels that clear-span between the east and west brick bearing walls. These are topped with a cast concrete slab that turns down to fully encase the beams. There appears to have been a skylight near the front that was closed up with corrugated deck and roofed over. Where the original stair would have been, there is a relatively modern elevator that has a shallow pit and shaft made with concrete masonry walls, and the modern staircase to the second floor wraps the shaft. There is no "second exit" from the second floor so the building cannot be occupied in its current configuration.

All of the exterior walls consist of multi-wythe brick masonry. The front face has carved limestone ornamentation, stained green from algae and lichens. Most of the front wall is coated with salt deposits from efflorescence, and several bed joints were turning to friable powder. Sections of the plaster stucco covering part of the west wall (a party wall that may consist of soft "salmon" brick) is peeling off as a result of long-term water intrusion and should be removed; the condition of the underlying brick should then be examined and addressed as necessary.

[1] Cores were taken through the roof concrete. When tested, it was found that the compressive strength was well over 5,000 psi and the density was 162 pcf; normal would be 3,000 to 3,500 psi and 144 to 150 pcf.

Checked from the interior, the front wall and portions of the side walls were saturated from roof to first floor, with mold growing on all finishes. Two sample bricks were removed from the wall, one from the exterior and the other from the interior face; both were found to be saturated and have completely wetted the sealed bags in which they are stored. We observed advanced deterioration of the bricks and mortar behind the wall finishes, especially above the second floor. The extent of damage will require reconstruction of most of the front wall and portions of the side walls.

The front spandrel beams for the second floor and roof are partially embedded in the front wall and were found to be suffering corrosion within the concrete encasement[2]. Other beams have less severe corrosion – although the extensive failure of the concrete fireproofing around the beams suggests rust jacking of the steel surface caused by the moisture. Likewise there is significant corrosion where the beams pocket into the walls.

It was found that the roof drains were clogged, causing failure of the roofing and water migration into the walls. Additionally, the drainage pipes have split, sending water into the building. These two conditions have led to many of the issues described above. The floor and roof slabs are saturated in the front section of the building. The masonry and concrete are so saturated, it is our opinion that an active, rigorous drying program would take up to two years to sufficiently remove moisture from the structure to allow the interior to be inhabited, even if the plan was to retain only the front wall. A passive drying system (natural ventilation only) may take much longer. An expert contractor should be consulted on this topic.

RECOMMENDATIONS

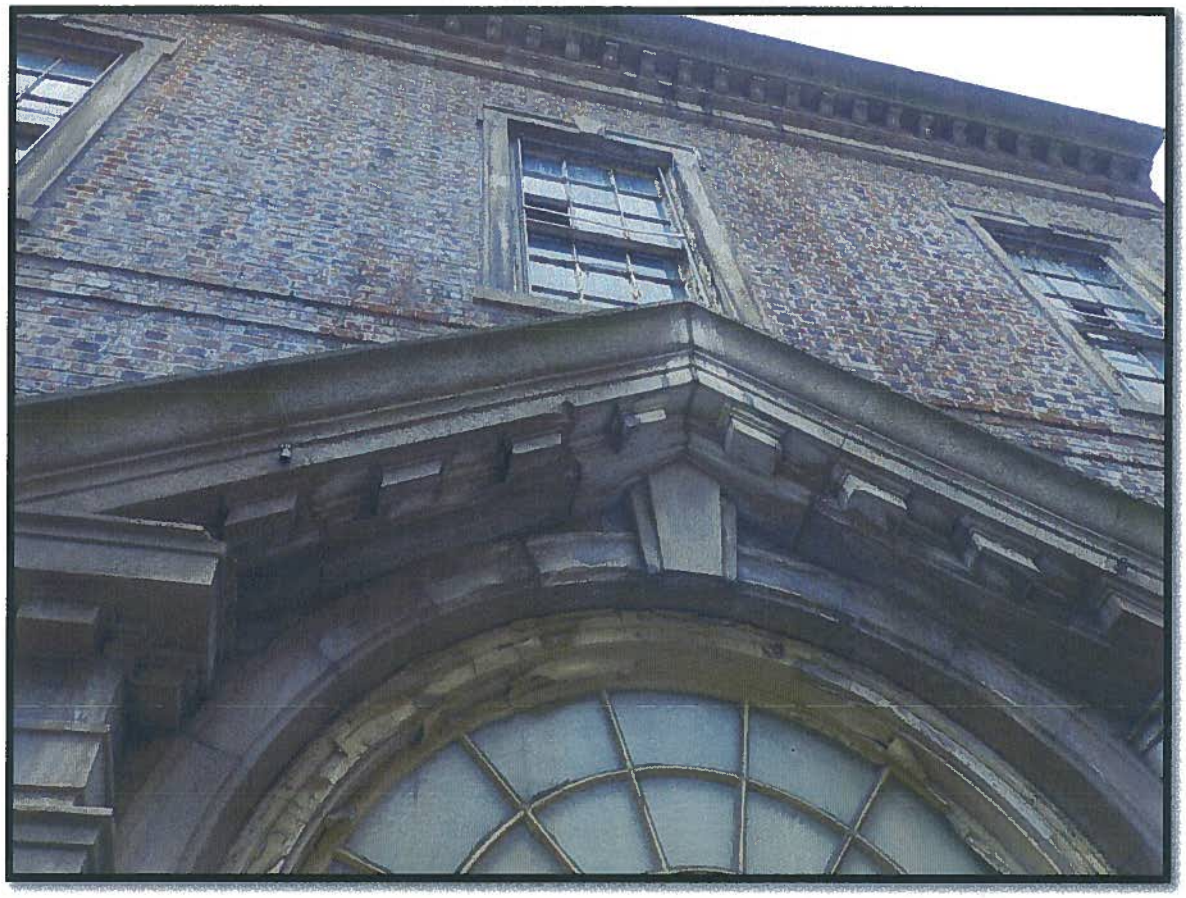
To rehabilitate the building, the structural work will include:

- Remove (and eventually replace; see below) the stucco on the outside face of the west wall
- In some areas of the side and rear walls the inside wythes of brick should be cut out and replaced due to excessive freeze-thaw degradation
- Multiple passes on the front façade will be necessary to clean the stone and draw out some of the crystalized salt deposits embedded in the brick. However, because most of the back-up (interior) brick has been so weakened by freeze-thaw cycles, it is recommended that the entire front wall be reconstructed
- After the masonry is sufficiently dried out so as to not trap moisture in the core of the walls, all exterior and interior faces of the masonry would have to be re-pointed; and in the case of the west wall, the application of the stucco would follow if it is needed
- The concrete encasement removed from the internal steel beams, and the beams reinforced where corrosion is found, cleaned, painted and fire-protected
- The spandrel beams embedded in the front wall replaced, and possibly the same at the rear. This operation requires shoring the adjacent span of floor / roof slab.

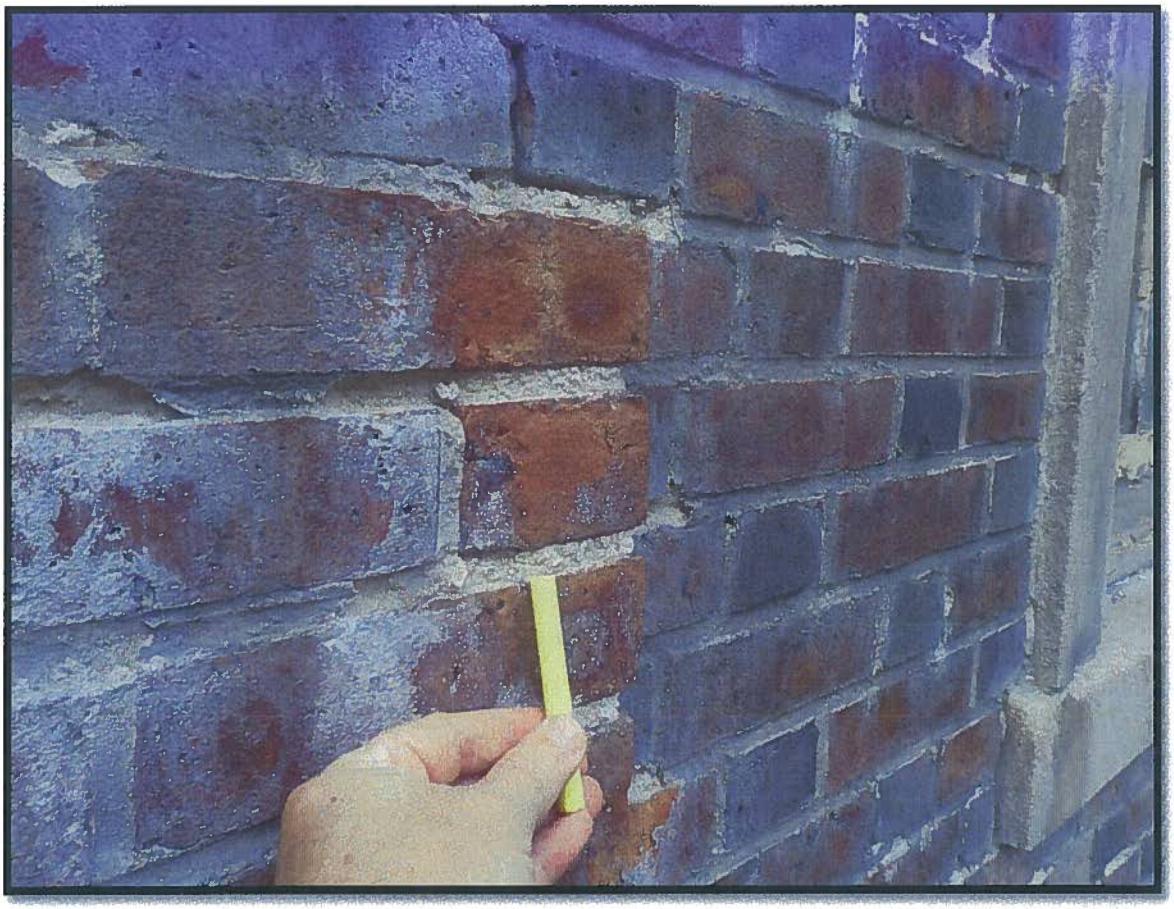
[2] Only the inside face of the web could be exposed for review; the outside face is expected to be worse due to trapped moisture.

- If significant openings in the floor and roof slabs are expected, a study should be undertaken to determine the size(s) and spacing of the reinforcing bars so the structural engineer can perform its design work.

Following are a few photographs.



A tremendous volume of water permeation over many years left extensive salt deposits and damaged embedded wood elements such as window frames.



The water migration has washed out the calcium and caused the mortar to turn to powder due to freeze-thaw cycles.

Condition of the wire mesh that supported the plaster on the second floor. Behind this, the salmon brick is saturated. Many bricks are crumbling from freeze-thaw cycles and must be replaced, or the wall rebuilt.

Concrete encasement is spalled at the underside of the beam due to corrosion (rust jacking).

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1920 Sansom - Table of Conditions

Building vacant since 1997 -- no heat has contributed to the deterioration
Table indicates extent of repairs or replacement required

Exterior	**pointing**	**brick failure**	**stone failure**	**windows**	**cornice**	**cleaning**
Sansom Façade (1,3)	100%	100%	25%	100%	1005%	100%
West façade	100%	10%	coping 20%	N.A.	N.A.	50%
South façade (3)	100%	50%	coping 20%	50%	25%	25%
Parapets	100%					

Interior	**plaster**	**flooring**	**beam reinf**	**slab**
first floor	100%	100%	N.A.	N.A.
second floor	100%	100%	10%	5%
roof	N.A.	0%	30%	10%

Notes:

1 Front wall is saturated; other walls holding moisture as well
2 Slab on ground; saturated within sixteen feet of front wall
3 Front & rear walls repointed with hard mortar that is too strong for the brick