



Ms. Aundria Blatch
Miami-Dade County
Internal Services Department
111 NW 1st Street, 24th Floor
Miami, Florida 33128

July 6, 2021 (*updated*)
Via Email: ablatch@miamidade.gov

**RE: Miami-Dade County Courthouse
June 2021 Condition Report**

Dear Ms. Blatch:

INTRODUCTION

Internal Services Department (ISD) requested a visual observation of the structure in response to the recent tragic events in Surfside. As requested, we visited the site on June 30, 2021, to observe the current condition of the existing structural systems for the Miami-Dade County Courthouse located at 73 West Flagler Street.

METHODOLOGY AND LIMITATIONS

This investigation was conducted by visual observations only. We did not destroy any existing finishes, etc. to gain access to structural members. Where not directly observed, a sampling of members was observed, or observations were directed at secondary signs of structural distress such as cracks, staining and deflections. Also, due to the constraint of time, investigations did not include an exhaustive member-by-member inspection. Therefore, it must be expected that during future renovation and at other times, deteriorated components that were not observed during this investigation, may be found. Calculations were not performed to verify the adequacy of the original design and construction. The findings presented in this report do not imply any warranty on the performance or code conformance of the structural systems.

This investigation is primarily directed at determining, within the limits of visual observation, the presence of any significant changes in the deficient structural elements reported previously.

Roofing, insect infestation, architectural items, mechanical systems, plumbing systems, electrical systems, environmental issues and hazardous materials are not within the scope of this investigation.

Design and specification of any recommended repairs, etc. are not within the scope of this investigation and report. Recommendations, if any, are intended to be general in scope and should not be used for actual repair, restoration, or construction.

DESCRIPTION OF SYSTEMS

Structural systems include those members and systems of members which are used to support and brace the building against the weights of building materials, superimposed dead loads, live loads, and wind loads. They do not include, but not limited to, ceiling finishes, doors, windows, non-bearing partition walls, roofing materials, decorative elements, cabinetry, finishes, mechanical equipment, plumbing or electrical systems. For this building, the existing structural systems include structural steel framing consisting of columns, beams, and wind bracing; all steel framing is encased in concrete; composite concrete joist and terracotta slab systems for the floors; reinforced concrete floor slabs; reinforced concrete retaining walls; terracotta infill walls; concrete slab on ground; and shallow pad foundations.

NOTED OBSERVATIONS

The following is a summary of our visit:

1. Access was granted to the building by maintenance staff (Mr. Gustavo Lopez) to select accessible areas only. Observation has been performed by visual means only. As you know, this is a completed structure and most of the structural framing members are concealed. Due to the constraints of time, our observation did not include an exhaustive inspection of all members and building areas. Therefore, it must be understood that this was a cursory review of the structural systems, at this point in time only.
2. Given the heavy rains during our visit, we were not able to visually observe the exterior elevations of the building.
3. The following was observed at the basement level:
 - a) Though signs of moisture were apparent in several areas, we did not observe any standing water at the time of our visit.
 - b) As previously reported and documented, the majority of the concrete column encasements have varying degrees of concrete spalling and cracks, ranging from minor to severe. The concrete encasement acts as fireproofing for the structural steel members below. The spalled concrete compromises the fire protection and allows moisture penetration which corrodes the steel members below.
 - c) As previously reported and documented, numerous embedded steel column members have varying signs of corrosion.
 - d) As previously reported and documented, concrete spalling and cracks are present in some of the overhead beams and slabs.
 - e) Due to the constraint of time, we did not observe the crawl spaces below the bathrooms and work rooms. It is assumed that spalling, previously reported in these areas, is still present.
4. Access was provided to floors 3, 15, 16, 17, 20, 21, 22, 24, 25, 26 and 27th floors. In general, the following was noted:
 - a) Terracotta-joist floor system was exposed at floors 16, 21, 24 and 25. At floors 15, 17, 20 and 21 we randomly removed some drop-ceiling panels to expose the floor framing above. Many of the visible members noted were repaired at some point in time using *gunite*. This method of repair is not precise and results in a joist member with an inconsistent profile. In addition, the terracotta, which provides lateral bracing for the joists was knocked-off and removed at numerous locations, and not replaced. We recommend that a search of City records be

- performed to confirm if the preceding repairs were documented with a permit. If not, we recommend an analysis of the remaining joist profile to confirm its structural adequacy.
- b) Until such time as the preceding analysis can be performed, we recommend that floors 16 and above not be occupied and all live loads removed.
 - c) Floor 16 – we observed 5 pallets of stored books. This load must be removed immediately (see photo #7).
 - d) Floor 21 – we observed excessive storage, which also presents a fire hazard. All excessive loads and storage must be removed as soon as possible.
 - e) Floor 24 – we observed a pallet of sandbags that must be removed, or the bags spread out to distribute the load (see photo #18).
 - f) Floor 25 – this floor is not currently occupied. We observed spalling at columns, beams, lintels, slab and joist system, and corrosion at steel column members. Given the degree of deterioration observed this floor shall not be occupied until repairs can be performed.
 - g) Floor 25 – there is an existing column at the south end that has lost its concrete encasement and the steel member below is excessively corroded. **We recommend that this column be shored within 30 days of this letter** until such time as permanent repairs can be performed (see photo #25).
 - h) Floor 26 (machine room) – the same spalling previously reported remains (i.e., beams and columns)
 - i) Floor 27 (water tower roof) – the same spalling previously reported remains (i.e., slab, overhead slab, and beam spalls)
 - j) Floor 3 – Mr. Lopez showed us an existing water leak that is seeping through an existing beam. The source of this leak could not be determined during the time of our visit.
 - k) At no time shall any floor level be utilized for storage.
 - l) Refer to photos below for additional items not noted above.

Please note that structural deficiencies exist on the property that were present prior to our visit, and that have been reported on for several years now. At the time of this visit, none of the structural deficiencies identified in the 40/50-year re-certification report by Rizo Carreno & Partners (circa 2015), and basement level repairs provided by this office (U.S. Structures, Inc., 2015) have been addressed.

CONCLUSION

In general, we observed numerous members with visible signs of structural deterioration that have been documented and reported by this and other firms for quite some time now. Many of these members are in an advanced state of deterioration. Given the lapse of time and extent of deterioration observed, we recommend that a full and updated structural evaluation of the building be performed as soon as possible to document current conditions. The scope of evaluation should include select destructive testing at lower floor levels to allow observation of concealed structural members below, along with an evaluation addressing the need of additional shoring. Repair drawings and specifications shall be prepared and submitted for permit addressing all structural deficiencies.

Of immediate attention, we recommend that the existing column noted in item (g) above at Floor 25 be shored within 30 days of this letter. We further recommend that all live loads (personnel, equipment,

furniture, storage materials, etc.) be removed from all floors 16 and above. Access to these floors should be restricted to authorized maintenance staff only.

As a routine matter, in order to avoid possible misunderstanding, nothing in this report should be construed directly or indirectly as a guarantee for any portion of the structure. To the best of my knowledge and ability, this report represents a reasonable appraisal of the present condition of the visible structural systems for this building based upon evaluation of observed conditions, to the extent reasonably possible.

Please do not hesitate to contact us if you have any further questions regarding this matter.

Respectfully Submitted,
U.S. STRUCTURES, INC.

A handwritten signature in black ink, appearing to read 'J. Toledo'.

José A. Toledo, P.E.
FL License No. 54891
FL Threshold Inspector No. 1180



1. BASEMENT – COLUMN ENCASEMENT SPALL



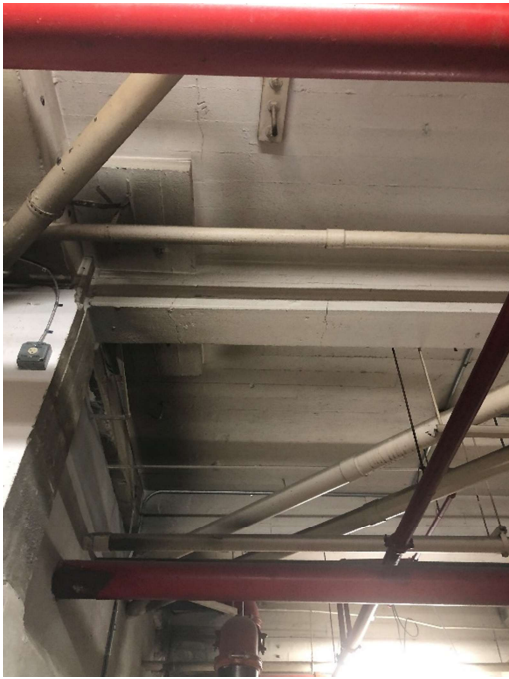
2. BASEMENT – COLUMN ENCASEMENT SPALL



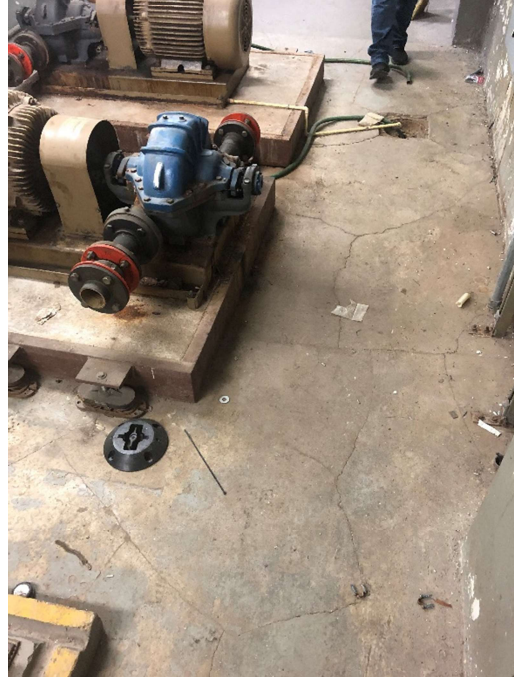
3. BASEMENT – COLUMN ENCASEMENT SPALL



4. BASEMENT – COLUMN ENCASEMENT SPALL



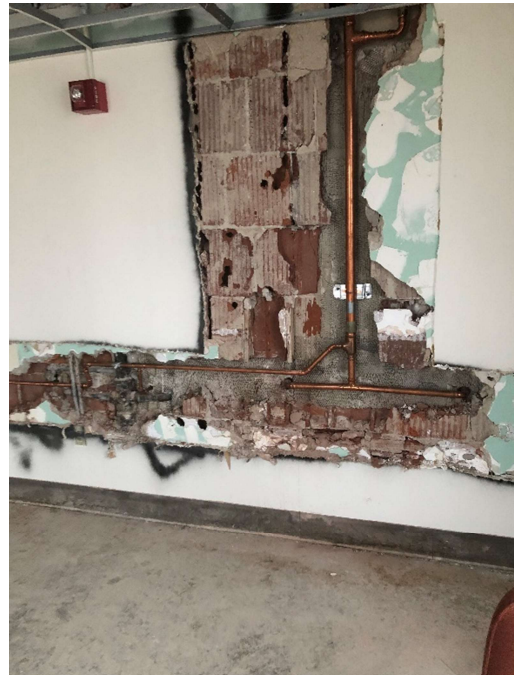
5. BASEMENT – BEAM CRACKS



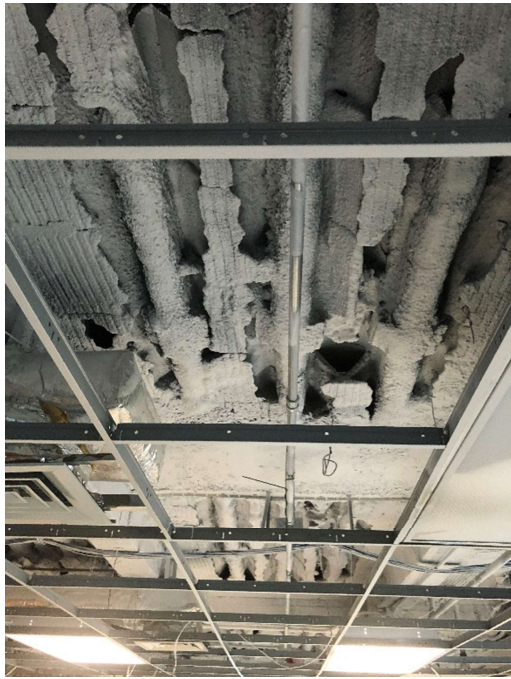
6. BASEMENT – SLAB CRACKS OVER CRAWL SPACE



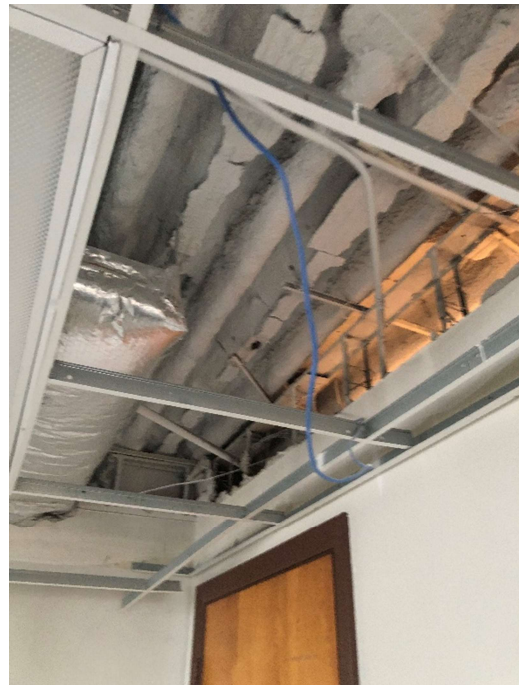
7. FLOOR 16 (REMOVE LOAD FROM BOOKS)



8. FLOOR 16 (PARTITION WALL DAMAGED BY PLUMBING WORK)



9. FLOOR 16 (17TH FLOOR JOIST AND TERRACOTTA FRAMING ABOVE / GUNIT REPAIR)



10. FLOOR 16 (17TH FLOOR JOIST AND TERRACOTTA FRAMING ABOVE / GUNIT REPAIR)



11. FLOOR 15 (COURTROOM 15-1 REMOVE UNSUPPORTED GYPSUM MEMBER WITHIN CEILING SPACE)



12. FLOOR 21 (REMOVE LOADS / STORAGE)



13. FLOOR 21 (REMOVE LOADS / STORAGE)



14. FLOOR 21 (22ND FLOOR JOIST AND TERRACOTTA FRAMING ABOVE / GUNITE REPAIR)



15. FLOOR 21 (22ND FLOOR JOIST AND TERRACOTTA FRAMING ABOVE / GUNITE REPAIR)



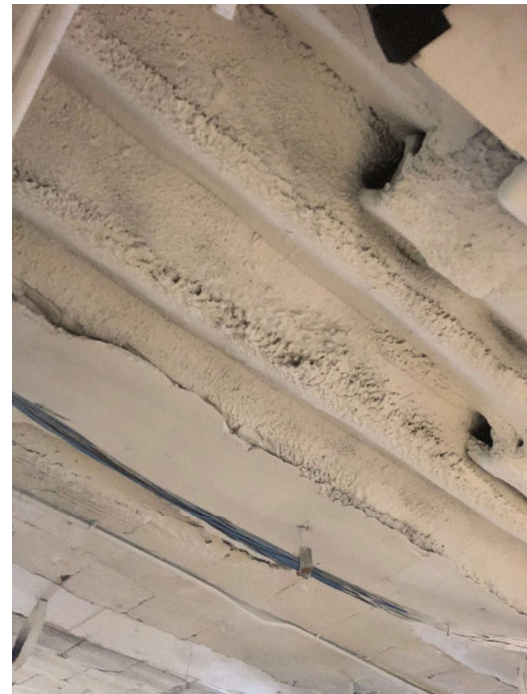
16. FLOOR 21 (DETERIORATION AT JAMBS)



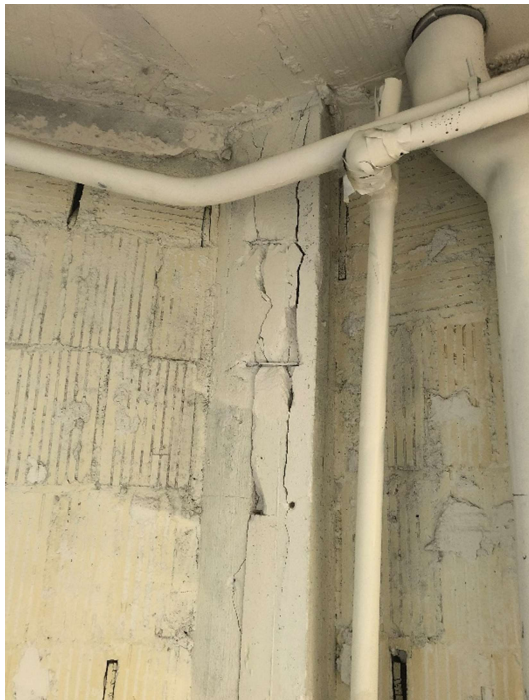
17. FLOOR 21 (DETERIORATION AT LINTEL)



18. FLOOR 24 (REMOVE SAND BAG LOADING)



19. FLOOR 24 (25TH FLOOR JOIST AND TERRACOTTA FRAMING ABOVE / GUNITRE REPAIR)



20. FLOOR 24 - COLUMN ENCASEMENT SPALL



21. FLOOR 24 (EXPOSED STEEL COLUMN / CONC. ENCASEMENT HAS BEEN REMOVED)



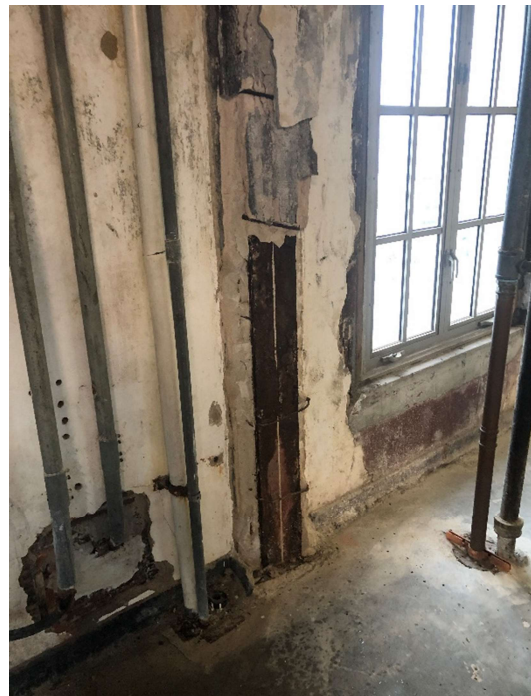
22. FLOOR 25 (SLAB SPALL AND EXPOSED REBAR)



23. FLOOR 25 (SLAB SPALL AND EXPOSED REBAR)



24. FLOOR 25 (LEAK FROM A/C UNIT ABOVE AT FLOOR 26)



25. FLOOR 25 (EXPOSED STEEL COLUMN / CONC. ENCASEMENT HAS BEEN REMOVED AND STEEL IN POOR CONDITION)
SHORING IS RECOMMENDED



26. FLOOR 25 (CONCRETE ENCASEMENT HAS DISLODGED / EXPOSED STL BEAM)



27. FLOOR 25 (SPALLING AT CONCRETE BEAM ENCASEMENT)



28. FLOOR 26 (CONCRETE BEAM SPALL AND EXPOSED STL COLUMN)



29. FLOOR 26 (EXPOSED STEEL BEAM MEMBER)



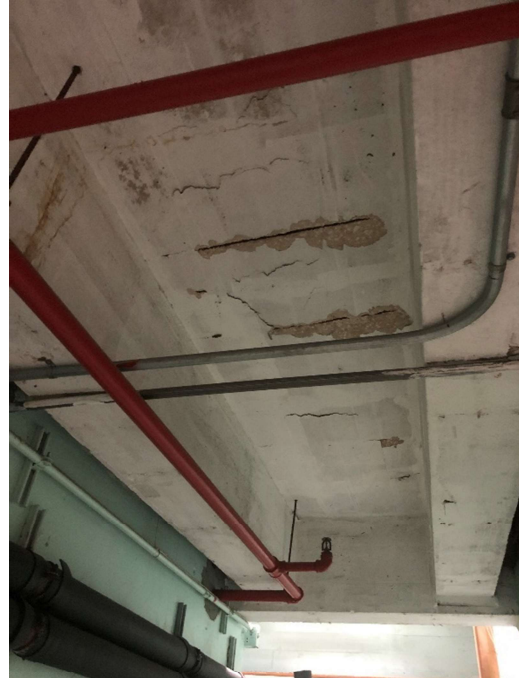
30. FLOOR 26 (OVERHEAD SPALL)



31. FLOOR 26 (LEAKING A/C UNIT)



32. FLOOR 27 (OVERHEAD SPALLS)



33. FLOOR 27 (OVERHEAD SPALLS)