



## TOWN OF SURFSIDE

MUNICIPAL BUILDING  
9293 HARDING AVENUE  
SURFSIDE, FLORIDA 33154-3009

Telephone: 305 861-4863

Re: Properties East of Collins Avenue  
Structural Assessment Recommendations;

Dear Building Owners, Managers, and Residents:

In the aftermath of the horrific tragedy that has so impacted our community, we are investigating the cause(s) of the Champlain Towers South collapse. To that end, the Town has retained a world-renowned structural engineering consultant, Mr. Allyn Kilsheimer of KCE Engineering, to lead the investigation. Among other very significant experience, Mr. Kilsheimer was involved in the Pentagon structural analysis following the 9/11 attacks and consulted on the FIU bridge collapse.

While we do not yet know the results of the investigation, after consulting with Mr. Kilsheimer and Town administration, we believe it is important to understand the extent to which the conditions that may have contributed to the apparent structural/foundational failures at Champlain Towers South are occurring elsewhere among the Town's beachfront properties. Accordingly, we want to promulgate basic recommendations to assist you in assessing the structural safety of your property.

The recommendations involve retaining a licensed and experienced (1) structural engineer and (2) geotechnical engineer, to be guided by a methodology developed by Mr. Kilsheimer in consultation with our Building Official, as described in the attached memorandum.

The recommendations described in the memorandum should be undertaken for all buildings east of Collins regardless of their age. The recommendations are made in an abundance of caution based on the current status of the investigation. They are intended to serve as an interim methodology to afford residents some peace of mind until the forensic investigation progresses further. Additional recommendations may be forthcoming.

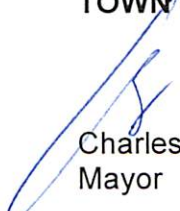
We are committed to do whatever is necessary to keep you as informed as possible as we further our investigation and develop additional recommendations.

Should you have any questions, please feel free to contact the Town hotline at 305-548-8351.

This is an incredibly difficult time, but we will get through this together.

Sincerely,

**TOWN OF SURFSIDE**

  
Charles W. Burkett  
Mayor

# KCE STRUCTURAL ENGINEERS, P.C.

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## Memo #1

**Date:** July 7, 2021

**To:** Town of Surfside Building Official

**RE:** Recommended Structural Engineering Evaluations  
For Multifamily or Commercial Multi-story Structures

KCE Job No. 2021-11-05

The following recommendations are good engineering practice for assessing the structural conditions of multi-story multifamily and commercial multi-story structures, including buildings east of Collins Avenue.

1. Retain a State of Florida registered practicing geotechnical engineer to provide the following investigation:
  - Foundation
    - Review original geotechnical report for the original building design and confirm that it is consistent with what was built.
    - Have a multichannel analysis of surface waves (MASW) or electrical resistivity testing geophysical study completed.
  
2. Retain a State of Florida registered practicing design structural engineer to provide the following investigation, in no particular order:
  - Review structural drawings used for construction.
  - Basement Floor (lowest level below-grade)
    - Perform GPR (ground penetrating radar) to determine slab thickness and to locate reinforcing steel, if reinforced (conventional slab on ground or reinforced slab on ground).
    - Take one set of three concrete cores (after GPR to avoid reinforcing steel) for compressive strength testing per ACI standards and one core for petrographic examination per ICRI standards. Repair cored holes in accordance with ICRI industry standards.
    - GPR column for vertical reinforcing steel and lateral ties (measuring spacing) for the full height of that lift. Verify vertical column reinforcing splices.
    - Take one 1½" diameter maximum 3"-depth core in column (after GPR to avoid reinforcing steel) for compressive strength testing per ACI standards and petrographic examination per ICRI standards. Immediately repair cored holes in accordance with ICRI industry standards.



Professional Registrations: AZ, DE, DC, FL, GA, IN, LA, MD, MA, NJ, NY, NC, PA, TN, TX, VT, VA, WV, NCEES



- First Floor
  - Remove finishes in one interior floor location and one exterior slab location.
  - GPR for slab thickness in the middle of the bay and at the column.
  - GPR for reinforcing steel in columns (vertical and ties) and slabs, as above.
  - Take one set of three concrete cores (after GPR to avoid reinforcing steel, not where other penetrations occur or within the column dimension from the column face) for compressive strength testing per ACI standards and one core for petrographic examination per ICRI standards. Repair cored holes in accordance with ICRI industry standards.
  - GPR for slab thickness in the middle of the bay and at the column (not where other penetrations occur).
- Typical Floor (Floor 3 and one floor below roof)
  - If post-tension slabs, then confirm waterproofing protection of pull/dead ends at exterior and anchors
  - Remove finishes in one interior floor location and one exterior slab location.
  - GPR for slab thickness in the middle of the bay and at the column.
  - GPR for reinforcing steel in columns (vertical and ties) and slabs, as above.
  - Take one set of three concrete cores (after GPR to avoid reinforcing steel, not where other penetrations occur or within the column dimension from the column face) for compressive strength testing per ACI standards and one core for petrographic examination per ICRI standards. Repair cored holes in accordance with ICRI industry standards.
  - GPR for slab thickness in the middle of the bay and at the column (not where other penetrations occur).
  - Take one 1½" diameter maximum 3"-depth core in column (after GPR to avoid reinforcing steel) for compressive strength testing per ACI standards and petrographic examination per ICRI standards. Immediately repair cored holes in accordance with ICRI industry standards.
- Roof
  - Peel back roofing in three areas to expose structural slab.
  - If post-tension slabs, then confirm waterproofing protection of pull/dead ends at exterior and anchors
  - GPR slab for reinforcing steel at each exposed area. Repair roofing.
  - Take one set of three concrete cores (after GPR to avoid reinforcing steel, not where other penetrations occur or within the column dimension from the column face) for compressive strength testing per ACI standards and one core for petrographic examination per ICRI standards. Repair cored holes in accordance with ICRI industry standards.
  - GPR for slab thickness in the middle of the bay and at the column.
  - Review rooftop mechanical equipment weights and support systems including antennas, dishes, mechanical units, and cooling towers.
- Elevators
  - Check elevator sheave beam (machine beam) supports.