

Since the partial collapse of the Champlain Towers South condo building in Surfside killed 98 people on June 24, 2021, efforts to implement reforms have in some cases stalled. *Miami Herald*



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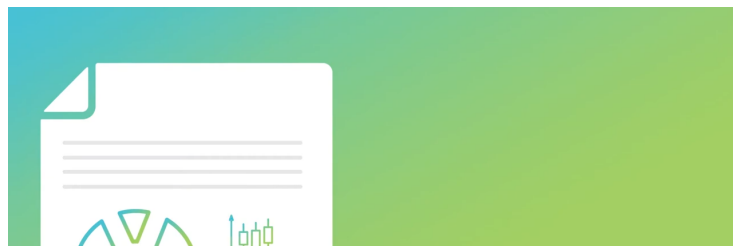
After a catastrophic partial building collapse in Surfside left 98 dead and a community traumatized, Florida’s lawmakers were tasked with finding a legislative solution to long simmering issues of lax inspections, poor upkeep and sloppy enforcement of 40-year structural recertifications, all seen as factors that may have contributed to the tragedy at Champlain Towers South.

But in the end, [state lawmakers agreed on nothing](#), leaving it up to South Florida’s patchwork of overlapping government agencies to forge a path ahead.

The most substantial package of reforms, which would reshape the way buildings are inspected and regulated in Miami-Dade County, gets its first [public hearing](#) on Wednesday. It requires high-rise structures to be “recertified” — undergoing what should be a rigorous structural checkup — after 30 years, as opposed to the current 40. Surfside leaders, who advocated for the change, are celebrating the measure. Champlain Towers South was in the throes of its 40-year review when it pancaked to the ground on an otherwise uneventful night.

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Some engineering experts, however, say the changes to the recertification standards aren't enough to prevent another Champlain South, pointing out that they don't demand that engineers look at a building's original design plans, scan for proper placement of reinforcement, or do other testing to ensure a building's original design was adequate to withstand decades of environmental pressures.

The county's move to 30-year recertifications, while more rigorous than anywhere else in Florida, is still a more conservative approach than the reforms suggested by a [Miami-Dade grand jury report](#) that recommended a threshold between 10 and 15 years. The reforms also fall short of a [state engineering association](#) report that called for 20-year recertifications for coastal buildings.

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Dawn Lehman, a professor of civil and environmental engineering at the University of Washington who was hired by the Miami Herald to help investigate the causes of the Champlain Towers South collapse, said many of the changes being made to Miami-Dade's recertification guidelines aren't reflective of what went wrong in Surfside.

She said, for instance, that mandates to investigate expansion joints (which create space to allow concrete to expand and contract), look at foundation settlement and scour buildings for signs of "overloading" (too much weight on a slab) wouldn't address some of Champlain South's known defects: water intrusion in the concrete pool deck slab, weak connections, steel corrosion and concrete deterioration. Those factors are hard to fully measure without testing that goes beyond visual inspection, Lehman said.

[READ MORE: Surfside became known for deadly collapse. Now it wants to be known for leading on reforms](#)

"This seems to be skipping around the actual big issues," Lehman said of the new recertification rules. "The good thing is they're trying to hit on the right subject matter, but I think what is underneath there is probably something missing."



Florida lawmakers failed to pass legislation to address the most serious issues that emerged from the Champlain Towers South collapse in Surfside. *Miami Herald*

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Though policy makers are wary of the cost of reforms, there are concerns that economic forces could upend the South Florida condo market anyway, similar to what happened in the wake of Hurricane Andrew in 1992. Andrew chased some insurance companies out of the state while prompting those that remained to jack up prices dramatically, a spiral that has continued since. In response, the state created its own windstorm insurance pool.

A similar spike in insurance premiums for oceanfront condos could mean additional costs for aging buildings up and down the coastline, many of which already require anywhere from \$3 million to \$20 million worth of repairs, said David Haber, a Miami condo attorney.

The sticking point in Tallahassee, Haber said, seems to be that many of those buildings have residents on fixed incomes. So, for instance, a proposal from lawmakers requiring condo associations to hold money in reserve for life-safety

items would create costs that would invariably be passed down to people who can't afford them.

"They haven't figured out how people are going to pay for any new regulatory enforcement they're going to make," Haber said of the Legislature.



The footage was released by the National Institute of Standards and Technology on the same day it announced the team that will conduct its five-pronged investigation of the disaster.

BY NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Jaime Gascon, director of the Board and Code Administration Division for Miami-Dade County, defended the countywide changes. For the purposes of recertification, Gascon said, the original design of a building is "not something you go back and check" because there's an expectation that, if a building has stood for decades, there is no reason to think it would fall.

"If they're not seeing the telltale signs of [the building] being under stress or starting to fail with their expert eyes, there's nothing to trigger," Gascon said.

That approach is reflected in the county's [recertification rules](#), which continue to note that, "unless there is obvious overloading, or significant deterioration of important structural elements, there is little need to verify the original design."

"It is obvious that this has been time tested if still offering satisfactory performance," the "guidelines" say.



An aerial photograph, taken Nov. 17, 2021, shows the former site of Champlain Towers South (right). Emily Mlchot emichot@miamiherald.com

But without mandating more in-depth inspections that take into consideration original design, there's nothing in the reforms tailored to prevent another Champlain South-type tragedy, said Abi Aghayere, a Drexel University engineering researcher who has closely studied the partial collapse. He noted that multiple engineers inspected Champlain South over the years and, despite documenting damage and recommending repairs, they never suggested it was at risk of collapse.

"If you are going to look at a building at all, I mean, what are you recertifying?" Aghayere said. "I don't understand the concept of saying we want to recertify the building, but we want to make the assumption that the building is okay."

Miami-Dade's updated recertification guidelines say "an attempt should be made" to review documents on file with a local government, but there's no requirement. That type of mandate, Aghayere said, might enable inspectors to catch the types of defects that jumped out at him when he first studied the bones of Champlain South: inadequate concrete cover, the overcrowding of rebar reinforcement, and a pool deck that wasn't designed to withstand expected loads.

Lehman, the University of Washington professor, agreed that every effort should be made to review a building's original plans.

“You absolutely need those drawings,” she said. “In order to do an evaluation of this building, the engineer should always start with these drawings.”

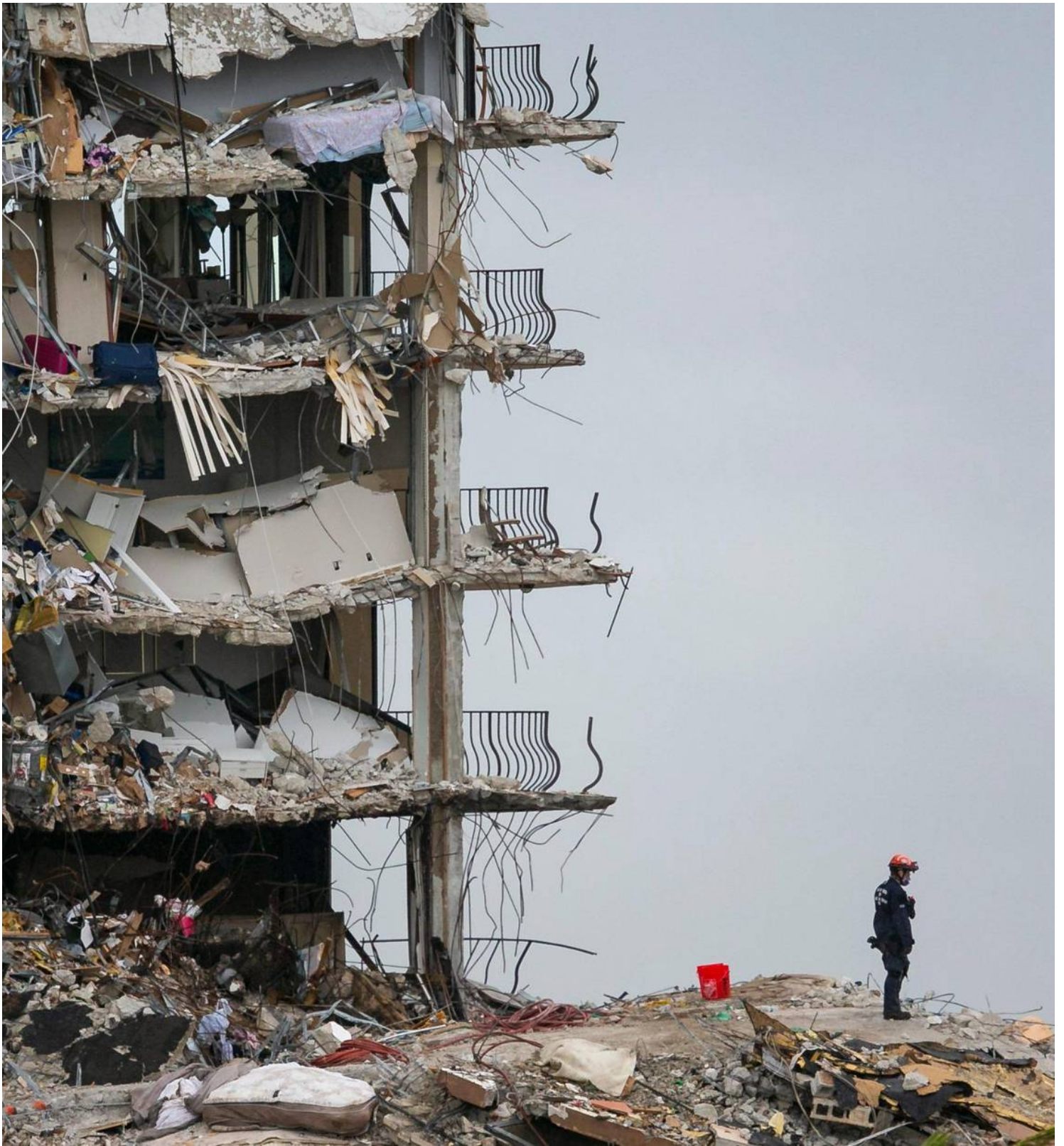


COST CONCERNS SHAPE POST-SURFSIDE CHANGES

Separate from proposed changes to the county building code, Miami-Dade has implemented some other changes to its recertification requirements. There is a new category requiring inspection of any “excessive settlement” in a building’s foundation. Inspectors must now report any “signs of overloading.”

The proposal to move to 30-year recertifications would also mandate that structural recertifications for large buildings be done only by structural engineers. And local governments would be required to remind property owners of their upcoming recertification deadlines two years ahead of time.

The county ordinance would prescribe \$1,000 fines for building inspectors who fail to report safety issues to the local building official. At the municipal level, Aventura became the first city in Florida to require condo associations to share all engineering reports with the city within 48 hours, a policy that has been replicated in other municipalities, such as Bal Harbour Village.



Search-and-rescue teams comb through rubble at the partially collapsed Champlain Towers South condo building in Surfside on June 28, 2021. Matias J. Ocner
mocner@miamiherald.com

Gascon, the Miami-Dade building code official, said it is important to wait for more conclusive answers on what went wrong at Champlain South before implementing other countywide reforms. The collapse is currently being investigated by the National Institute of Standards and Technology, Miami-Dade police and the town of Surfside.

“Going forward, we don’t want to seem, and building officials obviously would not want to seem as being alarmist without having facts,” Gascon said. “We’re all waiting for the results or the reasons why this building would have failed the way it did before anything is triggered that, ‘Oh, all of these types of buildings may have this problem.’”

In an interview, Miami-Dade County Mayor Daniella Levine Cava praised the changes the county has implemented and proposed so far. But she acknowledged that, without any funding set aside to help condo associations cover the costs of better inspections and maintenance, there’s still a problem.

“What worries me is older buildings with people that are not able to find the funds to do the necessary repairs and cutting corners or delaying,” Levine Cava said. “We don’t have a solution proposed, but we need to look at it.”

Costs have been part of the calculus as county officials have talked about changes to inspection protocols, said Lourdes Gomez, director of Miami-Dade’s Department of Regulatory and Economic Resources. Gomez said that’s one reason the county isn’t requiring steps experts say can help reveal a building’s overall condition, such as scanning for rebar placement or testing concrete strength.

“If you require that on every building, you are exponentially increasing the cost of the inspections for these facilities that may or may not need it,” Gomez said. “The more you layer on in terms of requirements, it does make the costs go up.”

The most sweeping changes to safety standards in the wake of natural disasters and building failures are often found in local building codes. Florida’s building code, separate from the county code, was overhauled after Hurricane Andrew.

But while an ongoing review of the code could lead to new design and construction standards in an updated 2023 edition, those changes are more likely to affect new buildings than old ones, according to the Florida Building Commission.

Asked how the agency was reacting to the Champlain Towers collapse, spokesperson Patrick Fargason noted that “maintenance and inspection requirements for existing buildings falls outside the technical scope of the Florida Building Code.”

Still, Lehman said there could be other ways to strengthen inspection and rehabilitation requirements for coastal buildings, such as creating separate building codes focused specifically on that segment. [Seismic codes](#), for example, dictate design, construction and maintenance in areas at high risk for earthquakes.

“What I would expect right now in this country,” Lehman said, “is Florida engineers would be trying to lead a new way of inspecting and rehabilitating structures.”



The sudden collapse of Champlain Towers South in Surfside on June 24 will go down as one of the great catastrophes for a generation. The wound is still fresh, but already Surfside is in our blood. BY [EMILY MICHOT](#) ✉

This story was originally published April 12, 2022 2:16 PM.

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