

# World Trade Center 7 Report Puts 9/11 Conspiracy Theory to Rest

Conspiracy theorists have long claimed that explosives downed [World Trade Center 7](#), north of the Twin Towers. The long-awaited report from the National Institute of Standards and Technology (NIST) conclusively rebuts those claims. Fire alone brought down the building, the report concludes, pointing to thermal expansion of key structural members as the culprit. The report also raises concerns that other large buildings might be more vulnerable to fire-induced structural failure than previously thought.

By Arianne Cohen

Published on: August 21, 2008



World Trade Center 7 stands amid the rubble of the recently collapsed Twin Towers. (Photograph by New York Office of Emergency Management)

**The National Institute of Standards and Technology (NIST)** has released its long-awaited report on the collapse of World Trade 7 following the attacks of Sept. 11, 2001. "Our take-home message today is that the reason for the collapse of World Trade Center 7 is no longer a mystery," NIST lead investigator Shyam Sunder told journalists at this morning's press conference in Gaithersburg, Md. "WTC 7 collapsed because of fires fueled by office furnishings. It did not collapse from explosives or from diesel fuel fires."

Conspiracy theorists have long pointed to the collapse of the 47-story structure as key evidence that the U.S. government orchestrated or abetted the 9/11 attacks. No planes struck the building, and the commonly available views of the exterior didn't show significant damage. Yet, at 5:20 pm, 7 hours after the collapse of the Twin Towers (WTC 1 and 2), WTC 7 rapidly fell in on itself. Since WTC 7 housed Secret Service and CIA offices, conspiracy theorists claimed that the building was destroyed in a controlled demolition in order to obliterate evidence of the U.S. government's complicity in the terrorist attacks. "It is impossible for a building to fall the way it fell without explosives being involved," stated actress and [TV](#) personality Rosie O'Donnell of ABC's *The View* in March 2007. "For the first time in history, steel was melted by fire. It is physically impossible," she said.

Today's report confirms that a fire was, indeed, the cause. "This is the first time that we are aware of, that a building taller than about 15 stories has collapsed primarily due to fires," Sunder told reporters at the press conference. "What we found was that uncontrolled building fires—similar to fires experienced in other tall buildings—caused an extraordinary event, the collapse of WTC7." The unprecedented nature of the event means that understanding the precise mechanism of the collapse is important not just to answer conspiracy theorists' questions, but to improve safety standards in the engineering of large buildings.

The final report describes how debris from the collapse of WTC 1 ignited fires on at least 10 floors of WTC 7 at the western half of the south face. Fires on Floors 7 through 9 and 11 through 13 burned out of control, because the water supply to the automatic sprinkler system had failed. The primary and backup water supply to the sprinkler systems for the lower floors relied on the city's water supply. Those water lines were damaged by the collapse of WTC 1 and 2. These uncontrolled fires in WTC 7 eventually spread to the northeast part of the building, where the collapse began.

After 7 hours of uncontrolled fires, a steel girder on Floor 13 lost its connection to one of the 81 columns supporting the building. Floor 13 collapsed, beginning a cascade of floor failures to Floor 5. Column 79, no longer supported by a girder, buckled, triggering a rapid succession of structural failures that moved from east to west. All 23 central columns, followed by the exterior columns, failed in what's known as a "progressive collapse"—that is, local damage that spreads from one structural element to another, eventually resulting in the collapse of the entire structure.

The report clarifies a number of widely debated issues concerning the collapse, particularly the role of the building's many diesel fuel tanks and the importance of structural damage from falling WTC 1 debris. Both of those factors have been cited by investigators as possibly contributing to the collapse; the 2006 *Popular Mechanics* book [\*Debunking 9/11 Myths: Why Conspiracy Theories Can't Stand Up to the Facts\*](#) mentions both hypotheses. However, the final NIST report downplays both scenarios, concluding that the diesel fuel stored in tanks (and intended to power backup generators) did not burn long enough or hot enough to account for structural failures. And, while debris damage to WTC 7's southern exterior was considerable (and initiated the destructive fires), the

collapse originated in the northeast portion of the building. In fact, the report concludes: "Even without the structural damage, WTC 7 would have collapsed from fires."

The report determines that the actual culprit in the collapse was the combustion of ordinary building furnishings: "These uncontrolled fires had characteristics similar to those that have occurred previously in tall buildings." If the sprinkler system in WTC 7 had been working, it is likely that "the fires in WTC 7 would have been controlled and the collapse prevented." The report also suggests that current engineering standards for coping with fire-induced thermal expansion need to be re-examined, particularly for buildings like WTC 7 that have long, unsupported floor spans. A key factor in the collapse, NIST concluded, was the failure of structural "connections that were designed to resist gravity loads, but not thermally induced lateral loads." According to Sunder: "For the first time we have shown that fire can induce a progressive collapse."

Spurred by conspiracy theorists' questions, investigators did look specifically at the possibility that explosives were involved. "Hypothetical blast events did not play a role in the collapse of WTC 7," the report states, adding that investigators "found no evidence whose explanation required invocation of a blast event." Moreover, the smallest charge capable of initiating column failure "would have resulted in a sound level of 130 dB [decibels] to 140 dB at a distance of at least half a mile." Witnesses did not report hearing such a loud noise, nor is one audible on recordings of the collapse.

NIST will accept public comment on the final report until Sept. 15, 2008.

NIST's press release and other material on the report can be found [here](#). Click [here](#) to download the full report in pdf form.