

# WTC 1 Collapse – What if the Columns Miss?

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In the official explanation for the collapse of the twin towers it is asserted that one storey, near the plane impact region, completely and suddenly collapses. This allows the upper section to fall freely down and strike the lower section. It is asserted that the kinetic energy in the falling section is sufficient to destroy the integrity of the lower portion of the tower and cause complete collapse at near free fall speed. NIST does not produce its own calculations regarding the size of the impact, relying instead on the calculations of Bazant and Zhou, who say that collapse requires “one powerful jolt”.<sup>1</sup> Gordon Ross however has calculated that the strength of the steel columns is sufficient to bring the collapse to a halt.<sup>2</sup> His calculation relies on the columns of the upper section making a good connection with the columns of the lower section.

Some have argued that many of the falling columns might have missed the lower columns and that there would not have been enough strength in the floors, and other structures which the columns would have encountered, to bring the motion to a halt. Let us examine what would happen in this case.

Of course it is wildly improbable that an entire storey could totally lose strength in an instant and permit this free fall, as steel loses strength gradually when heated. Steel also strengthens as it distorts, requiring more heat to be added if collapse is to progress, which takes time.<sup>3</sup> It is even wildly improbable that an entire storey could have lost strength slowly, allowing it to sag, as the data in the body of the NIST report, in contradiction of its own conclusion, plainly shows that the steel was not hot enough at the time collapse occurred.<sup>4</sup>

But let us say that one entire storey did miraculously disappear and that none of the columns hit one another. Let us say that the floors, cross beams and diagonal stays above and below the missing storey were not strong enough to engage the weight of the top block. Then we would see the columns piercing the floors and the top continuing to move down. The columns of the top and bottom sections would slide between one another. The columns would punch their way through floor after floor. The floor-to-floor distance is too short to permit buckling of the columns at the first impact<sup>5</sup> and in punching through these floors the columns would acquire additional support against lateral deflection. Little lateral support is required to keep a straight column straight, thus the possibility of buckling could never arise.

The floors of the top section would collide with the floors of the lower section and the connections of the floors to the columns would be broken. As the collapse continued, the roof would soon reach the plane impact area where the columns were supposed to have been severed. We would then see the lower core columns punch through the roof. As the floors are no stronger lower down we would see the top section continue to move down and the core columns of the lower section would project further and further above the roof.

The perimeter columns would also have the floor connections stripped off, which raises an interesting point to consider. The top section must be slightly offset to have the columns miss one another so in some places the top perimeter columns would be outside the bottom columns and in other places they would be inside. If outside, they would hang in long sheets outside the bottom section. If inside, long sheets would split off the bottom section, stand up briefly outside the top, then fall over. Finally we would expect to see the floors

stacked up about 50 feet high, with about 96 storeys of the lower section columns projecting through them. These columns, with stays damaged by the passage of the upper section columns, would probably topple over.

The videos show that none of these things happened. The very first thing we see move down is the antenna.<sup>6,7</sup> This proves that not only the core but also the hat truss, connecting the core to the perimeter, was severed at the outset. We see violent projections of dust above the impact area. We see that the top block disintegrates and shrinks as the roof drops. Why would it disintegrate as it falls given that there are no forces on a freely falling body? The top shrinks substantially before any damage appears in the lower section.



Then we see rows of dust projecting below the impact area. The rows of dust are not at every floor, as would be expected if pushed out by compressed air. They appear at about every fourth or fifth storey.<sup>7</sup>

We do not see long strings or sheets of perimeter columns. Among the shower of aluminium cladding we see short sections of perimeter columns, some of which fly out violently, most about three storeys long. What would cut them short? What would eject them? Instead of a stack of floors we see that the concrete of the floors is largely pulverized and projected outward with considerable force to form a huge and heavy dust cloud. The density of this cloud is so high that the bulk of it settles in seconds, leaving a portion of the core visible briefly in clear air. The rapidly falling dust cloud strikes the ground and its momentum forces it to spread outward in all directions, blanketing the area. It has such density that it flows between the buildings rather like a liquid. Most of it settles very quickly with only the lightest fractions continuing to drift with the wind. The core sways but does not topple over. Moments later the core drops vertically showing that it has been completely severed at some point well above the ground, as shown in the photos below.



In the hypothetical situation under discussion there are four alternatives to consider in the way the columns might interact. If most columns hit one another the collapse would be

arrested as Gordon Ross explains.<sup>2</sup> If few hit one another we would see a collapse with columns penetrating floors, as set out in this paper.

But what if a significant number collide? The most likely outcome would be asymmetrical resistance, in which case we would see the top tilt and fall over. If the resistance happened to be symmetrical we would see the collapse slowed. There was however no slowing of the collapse: the downward acceleration of the roof was constant right through the period when the impact would have occurred, approximately one second into the collapse.<sup>8</sup> There was no “jolt”.<sup>1</sup>

None of these four outcomes was observed. Clearly all the evidence points to the use of explosives to sever the columns in a precise sequence designed to produce vertical collapse at near free fall speed. As felling of such a tall building had previously not been attempted, it is likely that a considerable excess of explosive was used to make absolutely certain that the collapse would be vertical and complete. As a probably undesired consequence of this excess, most of the concrete was pulverized, as we observe.

We can therefore safely conclude that, regardless of how the columns of the upper section interact with the columns of the lower section, the official explanation for the collapse is false.

## References

1. That is the position adopted in the NIST Report:  
[http://wtc.nist.gov/reports\\_october05.htm](http://wtc.nist.gov/reports_october05.htm)  
It is based on the paper by Bazant and Zhou:  
<http://www.springerlink.com/content/vk8dkmbt4nvbp149/>  
and look for a paper by Szamboti and MacQueen, “...one powerful jolt...” currently under review for the Journal of 9/11 Studies.
2. G Ross: [http://journalof911studies.com/articles/Journal\\_5\\_PTransferRoss.pdf](http://journalof911studies.com/articles/Journal_5_PTransferRoss.pdf)  
<http://journalof911studies.com/volume/200704/NISTandDrBazant-SimultaneousFailure-WTCCollapseAnalysis2.pdf>
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4. F Legge, NIST shows steel was not hot enough for collapse initiation:  
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5. G Ross, minimum buckle length, p 43:  
<http://journalof911studies.com/volume/200704/NISTandDrBazant-SimultaneousFailure-WTCCollapseAnalysis2.pdf>
6. Collapse videos: [http://www.youtube.com/watch?v=7\\_E4N5YIycl](http://www.youtube.com/watch?v=7_E4N5YIycl)  
<http://9-11.meetup.com/332/files/>
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