

Tower Blueprints

Surviving Evidence of the World Trade Center Attack

The blueprints to the Twin Towers and Building 7 remained off-limits to the public for more than five years after the attack, despite the fact that the buildings were built with public money and that the engineering drawings of public buildings are supposed to be public information. ¹ Incredibly, the team of engineers from the ASCE that conducted the only investigation of the building "collapses" before Ground Zero had been cleaned up [lacked access](#) to the buildings' blueprints -- at least until they signed waivers that they would not use the evidence in a lawsuit against the Port Authority of New York and New Jersey. ²

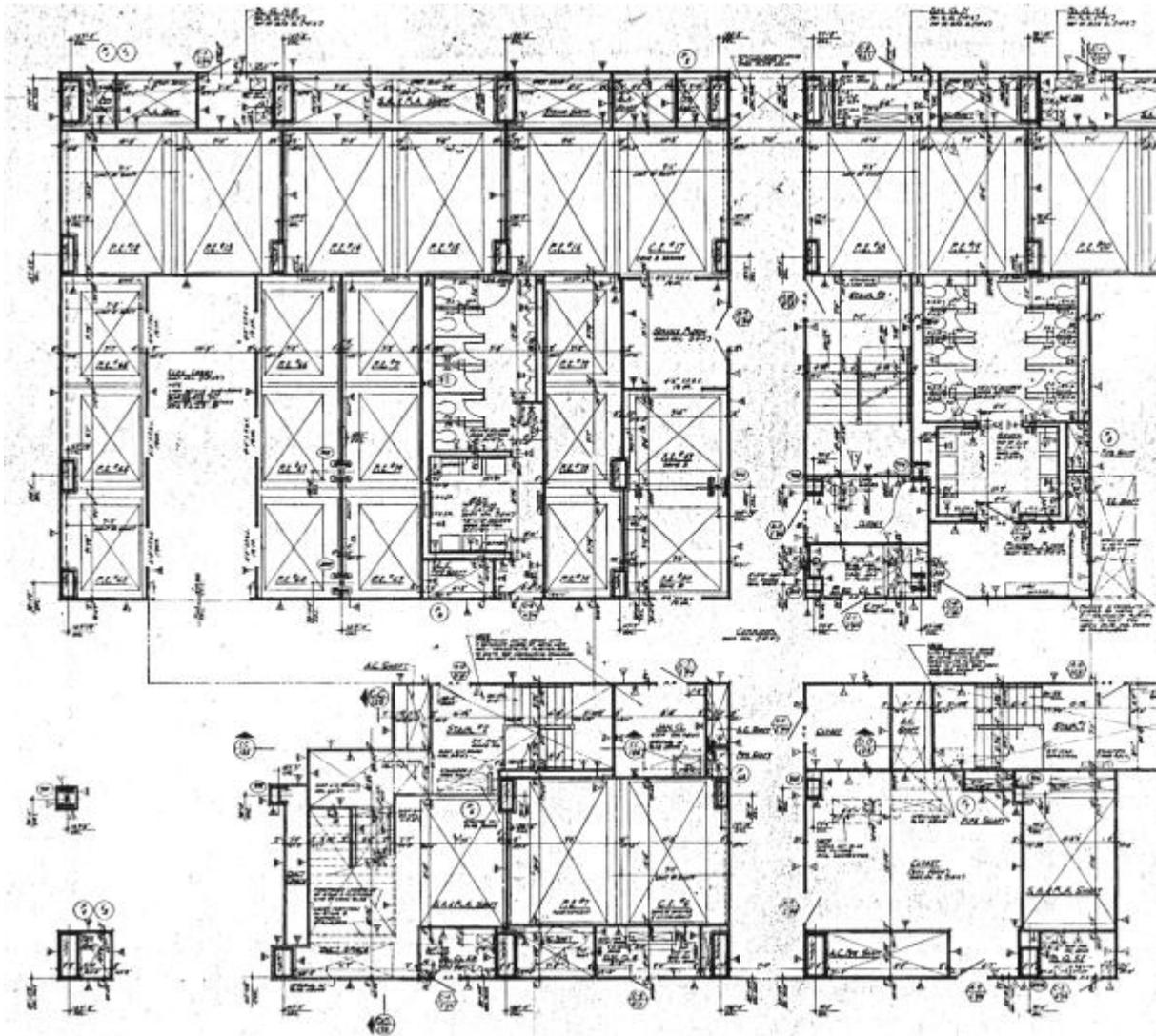
[LINK](#)

Whistleblower Releases Blueprints

In March of 2007, an extensive set of detailed architectural drawings of the World Trade Center became public through the actions of a whistleblower. The 261 drawings included detailed plans for the [North Tower](#) (WTC 1), the World Trade Center foundation and basement, and the TV mast atop the North Tower. The set of drawings does not include plans for the other six buildings in the World Trade Center complex. However, since the Twin Towers were of almost identical construction, it is safe to assume that the structural details that the drawings shown for the North Tower are largely applicable to the [South Tower](#).

The drawings contain a wealth of detail about the buildings, including the dimensions of structural members such as the core columns.

Most of the drawings can be viewed in this [multiresolution browser](#).



This 66th floor core plan included in the detailed architectural drawings shows that most of the core columns retained their full outside dimensions well above the midpoints of the Towers. Of the sixteen columns bounding the long faces of the core, thirteen have outside dimensions of approximately 54 by 22 inches in this 66th floor section.

In late 2008 a second set of blueprints became public. This set, which can be viewed by this [multiresolution browser](#), details the electrical architecture of the Twin Towers.

[LINK](#)

Official Reports Misrepresented the Towers' Construction

The detailed architectural drawings make clear what official reports have apparently attempted to hide: that the Twin Towers had massive core columns, and those columns ran most of the height of each Tower before transitioning to columns with smaller cross-sections.

Based on [construction photographs](#) exhibited in the Skyscraper Museum and [illustrations from the *Engineering News Record*](#), 9-11 Research had established by mid-2005 that, low in the Towers, the sixteen core columns that bounded the long faces of the buildings' [cores](#) had dimensions of 54 by 22 inches. The detailed drawings show that these columns maintained these dimensions through about the 66th floor.



Portion of photograph in the collection of the Skyscraper Museum

Both of the government-sponsored engineering studies of the Twin Towers' "collapses" -- FEMA's and NIST's -- are highly misleading about the core structures. Neither [FEMA's Study](#) nor [NIST's Report](#) discloses dimensions for core columns -- dimensions that are clearly evident in the architectural drawings. Both Reports use a variety of techniques seemingly designed to minimize the strength of the cores or to conceal their structural role entirely.

So effective was FEMA at concealing the nature of the cores that the [9/11 Commission Report](#), citing the FEMA Report, [denied the very existence](#) of the core columns.

FEMA's *Building Performance Study*

In May of 2005, the Federal Emergency Management Agency (FEMA) released its *Building Performance Study*, of which Chapter 2, "[WTC 1 and WTC 2](#)", was devoted to explaining the "collapse" of the Twin Towers. It advances the "[truss theory](#)" or "pancake

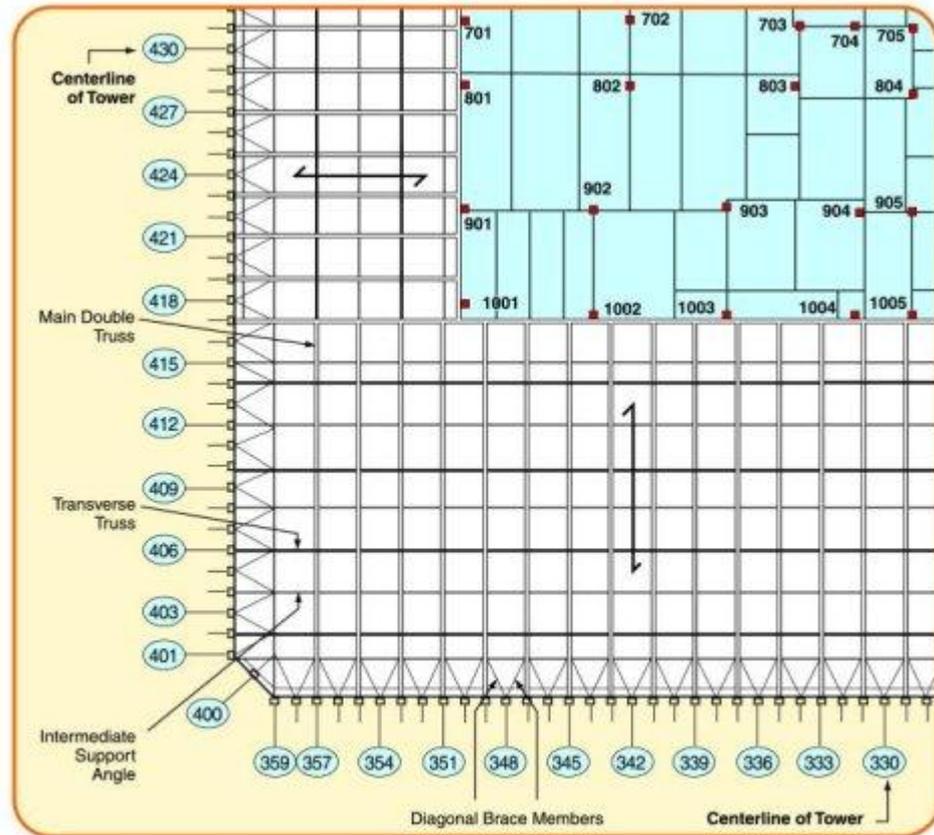


Figure 2-2 Representative structural framing plan, upper floors.

Figure 2-2 of FEMA's *Building Performance Study*, labeled "Representative structural framing plan, upper floors", is one of five illustrations in the report that depict core columns. Each of these illustrations depicts the core columns at their minimum dimensions, and none depict them at their typical dimensions.

theory", in which the supposed failure of floor-truss-to-column connections is the initiating event in a series of chain reactions ending in total collapse. Added commentary in our archived copy exposes many deceptive techniques employed in the article.³

Key elements of FEMA's theory depend on misrepresentations of the Towers' construction made possible by their vague descriptions. For example, to explain other collapse of the core their Study states:

As the floors collapsed, this left tall freestanding portions of the exterior wall and possibly central core columns. As the unsupported height of these freestanding exterior wall elements increased, they buckled at the bolted column splice connections, and also collapsed.

Contrary to the FEMA's hedged assertion that the core columns were freestanding, construction photographs clearly show that large horizontal beams cross-connected the core columns in a three-dimensional matrix of steel.

FEMA's report seems crafted to hide the structural significance of the core columns, if not

their very existence. Examples of features of the Report that minimize or conceal the core structures include:

- The absence of any illustrations showing core columns of typical dimensions
- The repeated [use of the term "service core"](#) to describe the cores, and avoidance of terminology describing their structural role
- The use of illustrations that imply the cores didn't exist, such as [Figure 2-20](#)
- The only photograph of a core column in the Report (Figure D-13) being of an atypical column of very small dimensions
- The inclusion of only floor plans that show core columns of very small dimensions with no clarification that the core columns that ran most of the Towers' heights were of much larger dimensions



Figure D-13 from FEMA's Study, bearing the caption "WTC 1 or WTC 2 core column (C-74)", is the only photograph in the Study that shows an identified core column

NIST's Final Report on the Twin Towers

In 2005 NIST published its 'Final Report of the National Construction Safety Team on the Collapses of the World Trade Center Towers' -- a 280-page report that was extremely vague in a number of respects, including any description of the structural systems of the Towers. It contains very little information about the core columns, the following being one of the only passages describing them:

The 47 columns in this rectangular space were fabricated using primarily 36 ksi and 42 ksi steels and also decreased in size in the higher stories. The four massive corner columns bore nearly one-fifth of the total gravity load on the core columns.

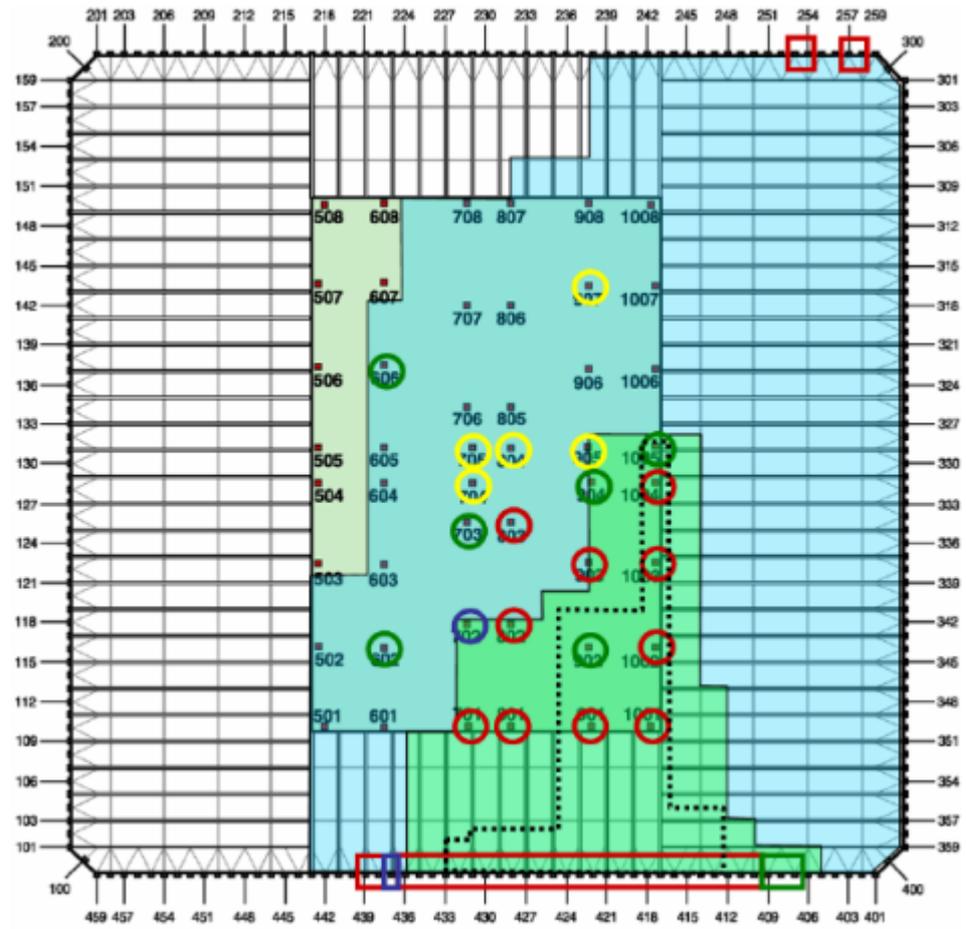


Figure 3-3 From NIST's Final Report drastically misrepresents the dimensions of the core columns on the 78th through the 83rd floors.

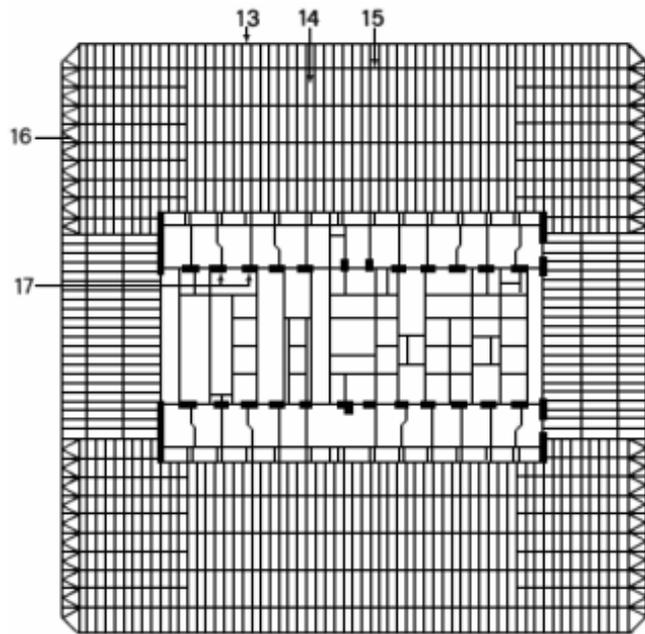
The passage implies that only the corner columns were

"massive" when, in fact, the sixteen columns on the long faces of the cores shared the same dimensions for most of each Tower's height.

Illustrations in the Report depict the core columns at the North and South Tower crash zones as being the same size, when in fact the core columns were much broader around the 80th floor than around the 95th. NIST's failure to highlight this difference is especially interesting in light of its estimates of core column damage in the Towers. Those estimates show 10 of the South Tower's core columns severed, compared to only 6 of the North Tower's. How could the South Tower's core have had more damage when its impact-level columns were twice as large as the North Tower's and it sustained only a glancing rather than a head-on impact? Was NIST struggling to explain how the South Tower succumbed to "global collapse" almost twice as quickly as the North Tower despite having much smaller fires?

World Trade Center Master Plan

Prior to the release of the detailed architectural drawings, 9-11 Research published the [MASTER PLAN](#), dated December 16, 1963. The MASTER PLAN does not show structural details such as column dimensions, and shows an arrangement of core columns that was later changed. The obsolete core column arrangement indicated in the MASTER PLAN has been reproduced in other publications such as the book 'Multi-Storey Buildings in Steel'.⁴



This illustration from 'Multi-Storey Buildings in Steel' shows a structural system that matches the drawings in the MASTER PLAN. [Multi-Storey Buildings in Steel](#)

References

1. [WTC surveillance tapes feared missing, AP, 12/10/02 \[cached\]](#)
2. [WTC Probe Ills Bared, Daily News, 3/7/02 \[cached\]](#)
3. [WTC 1 and WTC 2, FEMA.gov](#)
4. [Multi-Storey Buildings in Steel, Second Edition, 1978](#)