January 2009 Text Changes to the NIST Reports of the
Federal Building and Fire Investigation of the World Trade Center Disaster,
NCSTAR 1A, NIST NCSTAR 1-9, and NIST NCSTAR 1-9A

Based on comments received, NIST has made the following changes to the reports on the collapse of World Trade Center Building 7:

1. In reports NIST NCSTAR 1A, NIST NCSTAR 1-9, and NIST NCSTAR 1-9A, appended the following two rows to the end of **Table P–2. Public meetings and briefings of the WTC Investigation**, with accompanying footnote:

August 21, 2008*	Gaithersburg, MD; Teleconference	Media and public briefing on release of all draft reports for WTC 7 and draft recommendations for public comment.
August 26, 2008*	Teleconference	Technical briefing on the probable collapse sequence for WTC 7, draft reports for WTC 7, and draft recommendations for public comment.

* Appended to table January 2009.

2. In report NIST NCSTAR 1-9, Volume 2, Chapter 11, **page 533**, corrected the text, with accompanying footnote, as follows:

Comparing Figure 11–51* to Figure 4-7, it can be seen that the temperature rise in the lower flange and web is similar. Figure 4-7 shows the temperature of a W24x55 floor beam with 0.5 in. of SFRM in a composite floor assembly for a constant 1100 °C gas temperature below the concrete slab. Figure 11–51* shows the temperature of a W24x55 beam (no concrete slab) with 0.53 in. of SFRM for a constant 1100 °C gas temperature. The beam without a slab analysis was conducted to evaluate the effect of SFRM thickness on steel temperature for a floor beam. The lower flange and web in Figure 4-7 and the beam in Figure 11–51* both reached 600 °C in 25 to 30 min.

Thus, an increase in the SFRM thickness on the floor beams would have delayed heating of the floor beams by 10 min to 20 min, but would not* have altered the outcome.

* Corrected text January 2009. Changes were made to this page only. Similar statements are correct in the original text for Chapter 11 Summary and in the findings and recommendations in NIST NCSTAR 1A.

3. In report NIST NCSTAR 1-9, Volume 2, Appendix D, **pages 699 and 709**, deleted text and added footnotes as follows:

Section D.3.3, Page 699, first sentence

A Shard Fly-out Model (SFOM) [Meyer 2002*~~, Marchand 2002~~] was used to predict window breakage, based on the pressure profiles from the SHAMRC analysis.

* Deleted reference January 2009. All pertinent material is contained in Meyers 2002.

Section D.6, Page 709

~~Marchand, Kirk A., 2002. "Analysis of Insulated Glass Units Subjected to Blast Loadings: Model and Data Comparisons," AMSAA Contract DAADM01-97-D-0013, ARA Project Number 0093, Applied Research Associates, San Antonio, Texas, July 19~~.

** Deleted reference January 2009. All pertinent material is contained in Meyers 2002.**

April 2012 Text Changes to the NIST Reports of the
Federal Building and Fire Investigation of the World Trade Center Disaster,
NIST NCSTAR 1-9

NIST has made the following changes to the report on the collapse of World Trade Center Building 7:

1. In Chapter 8, **page 342**, Footnote 2, text changed as follows:

[2]~~Taken from Erection Drawings, sheet E12/13, 12th & 13th Floor Framing Plan.~~
[2]Taken from Structural Drawing S-8, Typical floor framing plan 8th to 20th & 24th to 45th Floors.

2. In Chapter 8, **page 343**, Figure 8-16, note, text changed as follows:

~~Based on erection drawing of Floors 12/13 (Frankel Steel 1985)~~
Based on structural drawing of Floors 8 to 20 and 24 to 45(Cantor 1985)

June 2012 Text Changes to the NIST Reports of the
Federal Building and Fire Investigation of the World Trade Center Disaster,
NIST NCSTAR 1-9

NIST has made the following changes to the report on the collapse of World Trade Center Building 7:

1. In Chapter 11, **page 482**, Analytical Model for Seated Connection at Columns 79 and 81

The fourth sentence in the 3rd paragraph should be modified as follows:

The travel distance for walk off was ~~6.25~~ 5.5 in. along the axis of the beam and ~~5.5~~ 6.25 in. lateral to the beam.

The 5.5 in. dimension was the length of the girder bearing on the seat connection that had to slide off the seat axially to the girder. The 6.25 in. dimension accounted for the length from the flange tip to the far side of the web, so that the web was no longer supported on the bearing plate. This change corrects a typographical error which showed a lateral displacement of 5.5 in. instead of the correct value of 6.25 in., which was used in the analyses.

2. In Chapter 11, **page 527**, Thermal Effects on Connections for Floor Beams and Girders

The third and fourth sentences in the 3rd paragraph should be modified as follows:

The bearing seat at Column 79 was ~~11~~ 12 in. wide. Thus, when the girder end at Column 79 had been pushed laterally at least ~~5.5~~ 6.25 in., it was no longer supported by the bearing seat.

The 16-story model of WTC 7 used a 12 in. bearing plate on the north side of Column 79, consistent with Frankel drawing 1091. The 5.5 in. dimension was incorrectly cited, as the 6.25 in. dimension accounted for the lateral walk-off distance. These changes correct typographical errors. The dimensions and lateral displacements used in the analyses were correct.