

adequate to evacuate roughly one-third of that number in the building that morning (NIST NCSTAR 1-9, Chapter 7).

At about 9:45 a.m., a manager from the OEM ordered the evacuation of WTC 7. It was not clear whether this order was broadcast over the public address system, because the building was already nearly empty.

Initially, as the occupants had tried to leave WTC 7, building officials kept them in the lobby for fear that they might be hurt by debris falling from WTC 1. The lobby quickly filled with evacuating WTC 7 occupants, occupants of WTC 5 and WTC 6 who had crossed Vesey Street using the Promenade and covered walkway, and injured people from WTC 1 in a medical triage post, established by the OEM. After the second aircraft was flown into WTC 2, the people in WTC 7 were directed down the turned-off escalators to the 1st floor lobby, out the loading dock doors on the west end of the south side of the building, and across Washington Street. There, they moved north under protection of scaffolding on the Verizon building. By the time WTC 2 collapsed at 9:59 a.m., all the building occupants who intended to leave WTC 7 had done so (NIST NCSTAR 1-9, Chapter 7).

The Fire Department of the City of New York (FDNY) had arrived on the scene by 8:50 a.m. and took control of the site, since this had been identified as a fire incident. Eventually, roughly 1,000 fire fighters would arrive. The New York City Police Department (NYPD) helicopters and the first of about 50 ground staff reached the site by 8:52 a.m. and began establishing a security perimeter around the WTC site. Port Authority Police Department (PAPD) and staff from the OEM were already present. There was extensive emergency response activity during this roughly 70 min interval. Aside from the medical triage unit set up in the WTC 7 lobby, most of their efforts were directed at the WTC towers (NIST NCSTAR 1-9, Chapter 6).

2.2.2 9:59 a.m. to 10:28 a.m. EDT

WTC 2 collapsed at 9:58:59 a.m. from the damage inflicted by the aircraft and the intense, multi-floor fires that followed. A few windows on lower floors of the south face of WTC 7 were broken, and dust and small debris were deposited in the 3rd floor lobby. None of the large pieces of debris from WTC 2 hit WTC 7 because of the large distance between the two buildings, and there was no evidence of structural damage to WTC 7.

When WTC 1 collapsed at 10:28:22 a.m., most of the debris landed in an area not much larger than the original WTC 1 building footprint. However, some fragments were forcibly ejected and traveled distances up to hundreds of meters. Pieces of WTC 1 hit WTC 7, severing six columns on Floors 7 through 17 on the south face and one column on the west face near the southwest corner. The debris also caused structural damage between Floor 44 and the roof. The damage to the building face is depicted in Figure 2–1. Based on photographic evidence, witness accounts, and engineering judgment, it is likely that the structural damage (steel and floor slabs) did not penetrate beyond the perimeter of the building core. At the southwest corner, the structural damage extended only about one-third of the distance from the exterior wall to the building core. The debris also broke a large number of windows on the south face. Compared to the airplane impact damage to the WTC towers, there was relatively little damage to the interior of WTC 7. For instance, damage to the sprayed fire resistive material (SFRM) was limited to the immediate vicinity of the WTC 1 debris impact. There was no superficial or structural damage to the north and east faces (NIST NCSTAR 1-9, Chapter 5, Section 5.5.2).