

in offices or otherwise obstructed from proceeding, or were simply calling to seek advice. In any case, the 911 operators and FDNY dispatchers who advised them did not appear to be basing their advice on these or other factual considerations.

97. Port Authority transcripts of recorded Port Authority calls and radio channels, Sept. 11, 2001.

98. For the evacuation route for civilians, see Civilian interview 6 (Mar. 22, 2004); Civilian interview 7 (Mar. 22, 2004); Civilian interview 14 (Apr. 7, 2004); Civilian interview 9 (Mar. 23, 2004); PANYNJ interview 7 (Jun. 2, 2004).

99. FDNY interview 40, Battalion 4 (Feb. 12, 2004); FDNY interview 16, Battalion 1 (Jan. 20, 2004); FDNY interview 24, Battalion 6 (Jan. 23, 2004); FDNY interview 29, Battalion 1 (Jan. 29, 2004); NYPD interview 6, ESU (Feb. 19, 2004); NYPD interview 10, ESU (Mar. 1, 2004); FDNY interview, transcript 10, Battalion 2, Dec. 6, 2001.

100. Civilian interview 7 (Mar. 22, 2004); Civilian interview 6 (Mar. 22, 2004); PAPD interview 4, Port Authority Bus Terminal Command (Nov. 20, 2003); NYPD interview 10, ESU (Mar. 1, 2004). For people killed by debris, see, e.g., WTC interview 9 (June 8, 2004).

101. FDNY records, computer-aided dispatch report, alarm box 8087, Sept. 11, 2001, 09:10:02; FDNY interview 45, HQ (Mar. 8, 2004).

102. For the 23 engines and 13 ladders dispatched, see FDNY records, computer-aided dispatch report, Sept. 11, 2001, 09:08:28–09:15:00. For units that self-dispatched, see FDNY interview 60, HQ (May 11, 2004); FDNY report, McKinsey & Company, “FDNY Report,” Aug. 19, 2002, p. 35. For units riding heavy, see *ibid.*, p. 131; FDNY interview 25, Battalion 1 (Jan. 23, 2004); FDNY interview 21, Battalion 1 (Jan. 22, 2004); FDNY interview 7, Battalion 4 (Jan. 9, 2004); FDNY interview 9, Battalion 8 (Jan. 9, 2004); FDNY interview 50, Battalion 11 (Mar. 17, 2004); FDNY interview 31, Battalion 1 (Jan. 30, 2004); FDNY interview 34, Battalion 1 (Feb. 9, 2004). For extra personnel being a particular issue for SOC companies, see FDNY report, 9/11 fatalities list. For firefighters responding when told not to, see FDNY interview 46, Battalion 10 (Mar. 9, 2004). For firefighters responding from firehouses separately from the on-duty unit, see FDNY interview 46, Battalion 10 (Mar. 9, 2004); FDNY interview, transcript 26, Battalion 2, Jan. 16, 2002; FDNY interview, transcript 14, Battalion 32, Dec. 12, 2001; FDNY interview, transcript 19, Battalion 2, Jan. 8, 2002. For firefighters responding from home, see FDNY interview 14, Battalion 1 (Jan. 13, 2004); FDNY interview 17, Battalion 6 (Jan. 22, 2004); FDNY interview 19, Battalion 4 (Jan. 22, 2004); FDNY interview, transcript 6, Battalion 6 (Oct. 12, 2001); FDNY interview 11, Battalion 1 (Jan. 13, 2004); FDNY interview, transcript 2, Battalion 2, Oct. 9, 2001. For numerous additional FDNY personnel reporting, see FDNY interview 3, Chief (Jan. 7, 2004); FDNY interview 8, Fire Marshall (Jan. 9, 2004).

103. FDNY interview 15, Chief (Jan. 14, 2004); Jules Naudet and Gedeon Naudet, video footage, Sept. 11, 2001.

104. For FDNY personnel requesting the repeater’s activation, see FDNY interview 4, Chief (Jan. 8, 2004). For one button on the repeater channel being activated, see PANYNJ interview 1 (Nov. 6, 2003); PANYNJ interview 4 (May 10, 2004); Port Authority records, measurements of repeater activation tones on Sept. 11, 2001, undated. For it being unclear who triggered activation, see WTC interview 6 (May 25, 2004). For the mechanics of activating the repeater, see PANYNJ interview 1 (Nov. 6, 2003); PANYNJ interview 4 (May 10, 2004).

105. For the testing of the repeater system, see Port Authority recording, WTC channel 30 (repeater channel), Sept. 11, 2001. For the master handset not being able to transmit, see PANYNJ interview 1 (Nov. 6, 2003); PANYNJ interview 4 (May 10, 2004); Port Authority records, measurements of repeater activation tones on Sept. 11, 2001, undated. For the chief on the handset not being able to hear, see Port Authority recording, WTC channel 30 (repeater channel), Sept. 11, 2001. On why he could not hear, see PANYNJ interview 1 (Nov. 6, 2003); PANYNJ interview 4 (May 10, 2004). For the repeater channel being in use in the South Tower, see Port Authority recording, WTC channel 30 (repeater channel), Sept. 11, 2001.

106. FDNY interview 15, Chief (Jan. 14, 2004); FDNY interview 4, Chief (Jan. 8, 2004); FDNY interview 5, Chief (Dec. 16, 2003). For the quotation, see Joseph Pfeifer testimony, May 18, 2004 (videotaped).

107. Peter Hayden testimony, May 18, 2004 (videotaped).

108. FDNY interview 15, Chief (Jan. 14, 2004); FDNY interview 4, Chief (Jan. 8, 2004); FDNY interview 5, Chief (Dec. 16, 2003).

109. On units ascending to the impact zone, see, e.g., FDNY interview 16, Battalion 1 (Jan. 20, 2004); FDNY interview 40, Battalion 4 (Feb. 12, 2004). On tasks below the impact zone, see FDNY interview 9, Battalion 8 (Jan. 9, 2004); FDNY interview, transcript 16, Battalion 31, Dec. 20, 2001. For rescuing civilians on the 22nd floor, see PANYNJ recognition 1, undated.

110. See FDNY interview 58, Division 3 (Apr. 22, 2004). For units using tactical 1, see FDNY interview 15, Chief (Jan. 14, 2004); FDNY interview 40, Battalion 4 (Feb. 12, 2004); FDNY interview 23, Chief (Jan. 23, 2004).

111. See FDNY interview 29, Battalion 1 (Jan. 29, 2004); FDNY interview 16, Battalion 1 (Jan. 20, 2004); Jules Naudet and Gedeon Naudet, video footage, Sept. 11, 2001. For equipment being carried, see *ibid.*

112. FDNY interview 38, Battalion 4 (Feb. 11, 2004). For the working elevator, see FDNY interview 23, Chief (Jan. 23, 2004).

113. FDNY interview 38, Battalion 4 (Feb. 11, 2004); FDNY interview 25, Battalion 1 (Jan. 23, 2004); FDNY