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Hurricane Elena, following an erratic and difficult-to-forecast course along an unusually large section of the Gulf Coast, posed special problems from New Orleans, Louisiana, to Sarasota, Florida, well before it came ashore on September 2, 1985. Considerable wind damage occurred in this area to structures that were ostensibly designed to resist such extreme wind conditions. Because similar design conditions and building control procedures exist along other U.S. hurricane-prone coasts, the conclusions drawn in this detailed book catalog the structural damage caused by the hurricane and emergency response actions, establish the wind conditions of the storm, review in-depth the building control process used in the area, and conduct necessary structural and wind tunnel tests relevant to a large number of communities along the coastal areas.