

## Chapter 13

# Thruway Bridge at Schoharie Creek

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*Following the collapse of the Schoharie Creek Bridge on April 5, 1987, an extensive investigation was undertaken to determine the cause of the failure. The foundations and the bridge components recovered and laid out in their original positions, were closely examined, and soil borings were taken at the site, but it soon became clear that Pier 3 was the critical element. In addition to the site work, the investigation included a review of documents pertaining to the design, construction, inspection and maintenance of the bridge, and geological and hydrological reviews were made of historical and existing conditions. Structural analyses were made of the superstructure and substructure. A brief review of many of these investigative efforts is described in this chapter. The Schoharie Creek Bridge collapsed because of the extensive undermining under Pier 3 due to scour resulting from a flow rate of about 63,000 cubic feet per second at the bridge site.*

### 13.1 Introduction

A major bridge failure occurred on Sunday morning, April 5, 1987, when two spans of the five-span Schoharie Creek Bridge on the New York State Thruway suddenly collapsed and fell into the flood-swollen creek. Five vehicles, in which ten persons were riding, all fell into the creek before traffic was stopped. All ten bodies were recovered. About 90 minutes later, a third span collapsed.

### 13.2 The Investigation Process

On Monday, April 6, 1987, the New York State Governor's office contacted Wiss, Janney, Elstner Associates, Inc. (WJE), prime, and Mueser Rutledge Consulting Engineers (MRCE), subcontractor, requesting the firms carry out a no-stone-unturned, independent investigation as to the cause of the collapse. The firms' engineers arrived on April 7, 1987, to begin their investigation. In addition, WJE and MRCE were responsible for planning and overseeing the removal and demolition of the structural components to