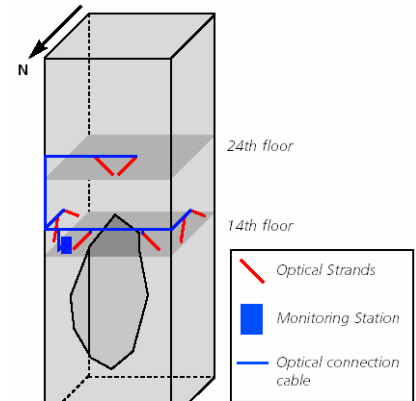


Bankers Trust, New York City, USA

osmos

Integrated safety for structures



Sensor location sketch



Cleaning of the floors sides hit by the planes

Emergency Monitoring of damages after September 11

Client

City of New York, DCC
Deutsche Bank / The Cantor Seynuk Group, Inc.

Instrumentation Installed

- 20 Optical Strands
- 1 anemometer
- 1 temperature sensor
- 1 monitoring station

Structure

Bankers Trust Building
Ground Zero New York City, USA

The Optical Strands were installed on the undersides of the 15th, 25th, and 40th floors.

Context

On September 11, 2001, New York City witnessed the greatest disaster in its history: the terrorist attack resulting in the destruction of both towers of the World Trade Center.

The 40-story Bankers Trust Building, located directly across from the South Tower, sustained heavy structural damage from the impact of falling debris.

During the days and months immediately following the attack, there was a need to evaluate the post-disaster behavior of the structure in terms of immediate safety concerns. Was there a danger of Bankers Trust's collapsing?

Initial Results

The first results show that the deformations are linked to the thermal variations: The optical strands expanded and contracted with daily temperature changes. The main causes of deformation are temperature and wind strength. The integrity of the structure seems to be secure.

Client's Needs

From a long-term perspective, Deutsche Bank was in need of reliable and precise data in order to make a complex and difficult decision: would it be possible to repair the structure, or should it be demolished?

Client Benefits

"I want to thank OSMOS very much for the significant volunteer effort made to help the City of New York and its Department of Design and Construction to respond to the consequences of the terrorist attack of September 11, 2001. The sensors that OSMOS installed at and around the World Trade Center site were an important tool for assessing the structures of 3 World Financial Center (AMEX) and 130 Liberty Street (Bankers Trust)."

Kenneth Holden, Commissioner
Dan Eschenasy, DDC City of New York



View of one end of an Optical Strand.



Optical Strand on the underside of the 15th floor