



# Civil & Structural Forensic Engineering

- Building Envelope
- Building Systems
- Civil Engineering
- Concrete Damage Assessment
- Drone/UAS Investigations
- Infrastructure Failure
- Steel Inspections
- Storm Damage
- Structural Failure Analysis
- Wood/Timber Inspections





## Civil and Structural Forensic Engineering

Envista's civil and structural engineering experts specialize in the investigation of structures, from small buildings to complex infrastructure, and determining the root cause of many types of incidents like building envelope deficiencies, wind and hail damage, moisture infiltration, commercial and residential roofing, construction defects, and structural failures.

Around the globe, our building stock is aging, which increases the risk of major catastrophic events happening across the built environment. Civil engineering failures are always high exposure incidents for all involved parties, which is why our multi-disciplinary team consists of experienced analysts who can provide certainty after any disaster.

**When a loss or failure occurs, we take a holistic, team-oriented approach to determine the underlying cause and extents of damage promptly, accurately, and cost-effectively.**

**Our expert findings are delivered in a clear and concise manner so that certainty is restored following any disaster.**

### OUR TEAM

Envista's multidisciplinary team of engineers and experts are experienced with analyzing all types of civil and structural failures of complex nature. Our engineers and forensic experts come from various disciplines, including civil, structural, materials engineering, architecture, design, building envelope, and foundation.

### OUR EXPERT TEAM CAN PROVIDE:

- Evaluation of Design Errors/Construction Defects
- Litigation Support
- Root Cause Analysis (RCA)
- Scope of Damage Determination.
- Scope of Repairs
- Structural Analysis

### DATA COLLECTION AND ANALYSIS

Due to the complex nature of these incidents, Envista's investigation team uses the following tactics and technology to fully survey and document the scene:

- 3D Scans
- Aerial Photography
- App-Based Photogrammetry
- Confined Space Robots
- Digital Fluid-Column Surveys
- Drone Footage
- Infrared (IR) Imaging
- Scene Evaluations
- Thorough Site Inspections



## Structural Failure

Envista's experienced structural engineers can sift through the facts to pinpoint the root cause of a structural failure and the extent of the related damage. Our engineers investigate anything from design error to the type of materials used, construction vibrations, or weather-related contributions.

## Civil Failure

When buildings and structures are damaged because of natural disasters or structural failures, complex technical issues must be considered and the immediate concern for life and safety is paramount. At the same time, any evidence that helps identify the cause of the incident must be carefully documented and preserved. Envista's team of engineers can assess the entire structure and determine the underlying cause.

## Building Envelope Failure

With the increasing frequency and intensity of storms being felt throughout the globe, building envelope elements, such as roofing, EIFS, stucco, siding, windows, and doors, are under nearly constant attack. While innovation in materials and methods for new construction have been keeping pace, failures of the existing and aging building stock will inevitably occur. Timely inspection of those elements and careful consideration of the meteorological factors are crucial to determine the nature of the failure and the best path forward for repairs. Envista's experts can provide a detailed inspection and comprehensive evaluation of the damaged building envelope elements and relevant factors to facilitate the prompt reinstatement of these critical weather barrier systems.

### CONTACT US

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## **Where You Need Us, When You Need Us**

For over 40 years, Envista Forensics has been at the forefront of servicing the insurance industry, legal professionals and corporations, successfully helping clients understand the cause of loss and determining responsibility following all types of equipment failures.

With extensive operations across North America, EMEA, Singapore, and Australia, Envista Forensics is uniquely positioned to deliver technical expertise and courtroom presentation experience to their clients, no matter where in the world these services are required.



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