

# MARGUERITE JEANSONNE PINTO, P.E.

Principal



## Summary

Ms Pinto is a leader of Thornton Tomasetti's Forensic Practice in New York and specializes in structural analysis and investigations. She has a broad experience with a variety of structural types, including long-span roofs and trusses, industrial facilities, temporary structures, and historic structures. Her work has included cause and origin investigations, emergency response, and the retrofit and repair of structures. Ms. Pinto is an expert in vibration analysis, both in design and as a tool, in structural health monitoring. She has also worked with contractors in the design of temporary structures and emergency site response.

## Areas of technical expertise

- Forensic and Structural Analysis
- Vibration Analysis
- Structural Health Monitoring

## Education

- Professional Degree in Civil Engineering, 2002, Columbia University
- M.S., Civil Engineering, 2001, Columbia University
- B.S., Civil Engineering, 2000, The Johns Hopkins University

## Registrations

- Licensed Professional Engineer in LA, MS, NJ, NY, PA, TN

## Professional activities

- Member, American Society of Civil Engineers (ASCE)
- Member, International Association for Bridge and Structural Engineers (IABSE)
- Structural Health Monitoring Committee Member, Engineering Mechanics Institute (EMI), 2019-2020

## Select project experience

### Forensic and structural analysis

**323 2nd Street**, Charlottesville, VA. Emergency response to partial crane collapse at new development.

**Helena Chemical**, Rosedale, MS. Investigation of collapsed conveyor truss at port facility. Designed new replacement span and reinforcement of remaining structure.

**Confidential Project**, New Orleans, LA. Investigation and repair of fabrication errors in welded connection of a 150 ft. tall steel canopy.

**Indiana State Fair Commission Collapse**, Indianapolis, IN. Structural engineering investigation related to an independent cause and origin opinion regarding the failure of a ground-supported temporary entertainment rigging structure on the evening of August 13, 2011.

**I-35 West Bridge Collapse**, Minneapolis, MN. Forensic investigation of vehicular bridge collapse, on behalf of a consortium of attorneys representing the victims.

**Cathedral Damage**, New York, NY. Forensic investigation to determine the cause of the cathedral damage in the wake of seismic and/or CAT-90 Sandy events on behalf of the insurer.

**230 Park Avenue Seismic Evaluation**, New York, NY. Seismic evaluation of a 1920s high-rise as required by the GSA. The project involved the investigation of construction techniques, materials and FEA modeling to understand building reactions under seismic events.

### Vibration analysis

**NASA Fluid Harmonic Disruptor**, Atlantic Yards B2 Building, Brooklyn, NY. Design of a Fluid Harmonic Disruptor for the building in conjunction with NASA to reduce accelerations under wind excitation.

**87 Bowne Street**, Brooklyn, NY. Monitoring ground borne vibrations due to industrial activity.

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**Confidential Sports Facility Vibration Study**, New York, NY. Structural peer review services for the renovation of a sports facility including investigation of vibrations during and outside events and recommendations for mitigating vibration in the future.

**Liberty Property Trust**, Philadelphia, PA. Investigation of floor vibrations of a high-rise office tower.

### Litigation

Confidential Project, Clarksville, TN. Litigation support to evaluate claims change orders stemming from the construction of a steel frame industrial plant.

GWB Bus Station, New York, NY. Litigation support which reviewed the completeness of design document for the renovation of an existing structure.

Confidential Project, Charleston, TN. Litigation support to evaluate Change Orders from major industrial facility construction.

Petersen Events Center, Pittsburgh, PA. Investigation of the existing condition of long-span roof trusses for conformance with industry standards. Expert report used in trial.

United States Embassy Compound, Astana, KAZ. Litigation support and review of the pile foundation design of a new embassy building.

### Sworn testimony

#### Trial and arbitration experience

Arbitration and Deposition, TIC – The Industrial Company vs. ThyssenKrupp Industrial Solutions USA, Inc. regarding the standard of care of issued design documents for a cement plant. Boulder, CO. December 15, 2020.

### Papers, lectures and publications

“Application of Modular Air-Tuned Damper Systems in High-Rise Buildings” Proceedings of the 2019 IABSE Congress, New York, NY, September 2019 (co-author)

“Integrated Approach for Unreinforced Masonry Stabilization in Historic Buildings of New York City” Proceedings of the 13th North American Masonry Conference, Salt Lake City, Utah, June 2019 (co-presenter)

“Rails in Retractable Roofs: Overview of the Design Methodology and a Case Study,” Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

“No-Touch Inspections: Challenges in Non-Destructive Evaluation of Subjects that Are Buried and Underwater” Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

“Remediation of Wind Induced Building Vibrations with Modular Tuned Liquid Damper System” Proceedings of the 8th Forensics Engineering Congress, Austin, TX, November 2018 (co-author)

“Innovative Tuned Liquid Damper System,” Proceedings of the 19th IABSE Congress, Stockholm, Sweden, September 2016 (co-author)

“Modeling Failure Progression in Structures Informed by Demolition,” CFRAC 2015, the Fourth International Conference on Computational Modeling of Fracture and Failure of Materials and Structures, Paris, France, June 3-5, 2015 (co-author)

“Forensic Investigation in the Age of the Internet of Things” Proceedings of the 37th IABSE Symposium, Madrid, Spain, September 2014 (co-presenter)

“The Debut of FIM,” Civil Engineering Magazine, January 2014 (co-author)

“Calculating Collapse: Analytical Approaches for Investigation the Cause of the I-35 West Bridge Failure” Proceedings of the 5th International Conference on Forensic Engineering 2013, London, UK April 2013 (presenter)

“The Indiana State Fair Collapse Incident: Anatomy of a Failure,” ASCE 6th Congress on Forensics Engineering, November 2012 (co-author)

“Challenges of FEA Modeling the Performance of Concrete Substructures under Blast Loading” American Concrete Institute, November 2010 (co-author)

## CONTACT

Marguerite Jeansonne Pinto  
40 Wall Street, New York, NY 10005  
212.367.3096  
MPinto@ThorntonTomasetti.com  
www.ThorntonTomasetti.com