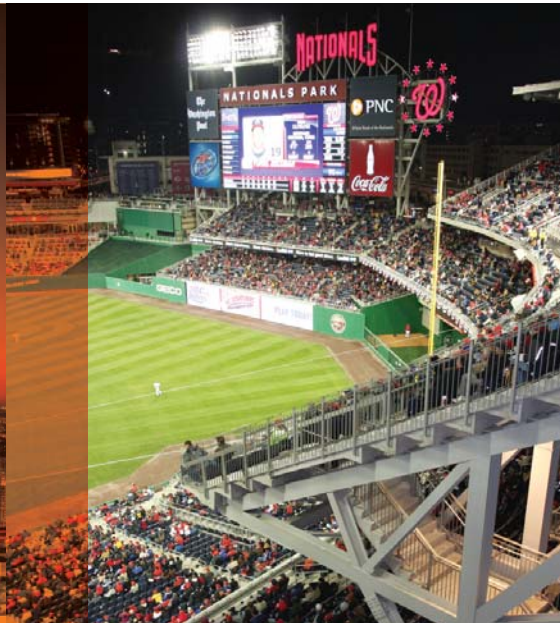
Thornton Tomasetti

Building Solutions

Building Structure Practice



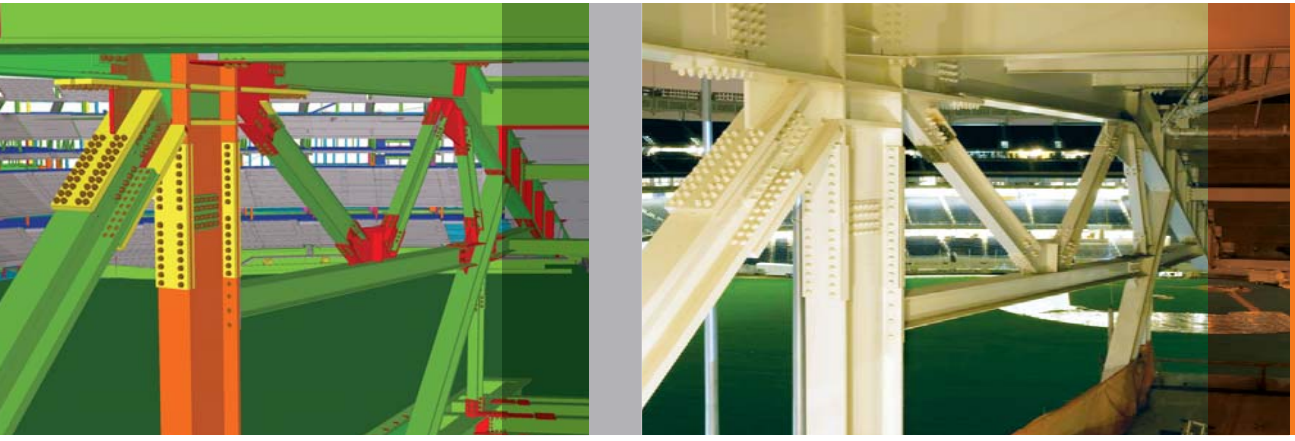
Building Structure Practice

Our Building Structure practice provides a complete range of structural design services for clients worldwide on projects of all sizes and complexity – from designing some of the world's tallest buildings and longest spans, to engineering the most ambitious yet small-scale structures. In all our work – from new design to alteration of existing buildings, to feasibility and peer reviews of emerging designs – we continually challenge convention while striving to address the demands of constructability, sustainability, budget, function and aesthetic vision.

Any successful building project requires an understanding of the interaction between structural systems, building skin, and architectural and mechanical systems. Our integrated services in building structure, skin and performance uniquely position us to serve our clients with this holistic perspective.

All of our structural designs are developed with Building Information Models, using custom interoperability tools that enable us to work with virtually any design software. This interoperability and use of BIM enhances efficiency, accelerates delivery time, reduces change orders and preserves the design integrity as it moves across software platforms.

Our project delivery strategy is customized to meet individual client needs. For design-bid-build, design-build, integrated project delivery or a hybrid, we understand the benefits and limitations of each approach and advise our clients on the most suitable choice. We routinely incorporate advanced detailing, saving time and ensuring accuracy of deliverables for the contractor and fabricator, and erection engineering and site logistics support to optimize the construction process.



Yankee Stadium cantilever truss system as modeled (left) and built.

Buildings

New Design
Modifications & Alterations
Feasibility Studies
Peer Review
Value Engineering

Supertall Buildings

New Design
Feasibility Studies
Peer Review
Value Engineering

Long-Span Structures

New Design
Feasibility Studies
Peer Review
Value Engineering

Special Structures

Temporary Structures
Sculptures & Artwork
Moveable Structures

Specialty Analysis

Performance-Based Design
Vulnerability Analysis
Vibration Analysis
Nonlinear Dynamic Analysis

Project Delivery

Design Delivery Strategy
BIM
Automation
Advanced Detailing
Erection Engineering and Site Logistics
Animations & Renderings

Images from top:
• Indianapolis Midfield Terminal, Indianapolis
• Federation Tower, Moscow
• Revit model for Masdar Headquarters, Abu Dhabi
• The New York Times Building, New York

Firm Overview

Practice Areas

Building Structure

Building Skin

Building Performance

Thornton Tomasetti provides engineering services to clients worldwide on projects of all sizes and complexity. From the tallest buildings and the longest spans, to innovative building systems and materials, we are committed to creating the best solutions through our technical ingenuity, pursuit of excellence, and responsiveness to client needs.

Founded in 1956, today Thornton Tomasetti is a 600-person organization of engineers and architects collaborating from offices across the United States and in Asia, Europe and the Middle East.

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Cover:
Taipei 101, at 508 meters, was the world's tallest building when completed in 2004.

Nationals Park, Washington, D.C., is one of the first stadiums designed with Building Information Modeling.

Credits:
Photo of Yankees truss: Chris Linder
Indianapolis airport: © MediaWright Photography