

LERA

Consulting Structural Engineers

Forensic Engineering and Loss Consulting Group

LESLIE E. ROBERTSON ASSOCIATES

NEW YORK | MUMBAI | HONG KONG | SHANGHAI

LERA

Consulting Structural Engineers

NEW YORK

40 Wall Street, 23rd Floor
New York, NY 10005
Tel: 212 750 9000
Fax: 212 750 9002

MUMBAI

The Ruby, North Wing, 23rd Floor
29, Senapati Bapat Marg, Dadar (W)
Mumbai 400 028
Maharashtra INDIA
Tel: +91 6780 9000

HONG KONG

Suite 5160, 51/F Hopewell Centre
183 Queen's Road East
Wanchai, Hong Kong
Tel: +852 3602 3038

SHANGHAI

Suite 2102, Jingan China Tower
1701 West Beijing Road
Shanghai 200040 CHINA
Tel: +86 21 6136 3996
Fax: +86 21 6136 3995

LESLIE E. ROBERTSON ASSOCIATES

www.lera.com | info@lera.com

LERA Consulting Structural Engineers

Forensic Engineering and Loss Consulting Group

Recognized as a leader in the field of structural engineering, LERA is called upon by attorneys, insurance companies, and their clients to investigate problems that arise on construction projects. Drawing upon our 90-year history of successful and innovative designs for a wide range of complex projects, we seek out the root causes of structural defects, performance issues, and collapses, and provide sound and reliable advice to our clients. Our services include investigations, litigation support services, expert testimony, risk assessments, design of remedial measures for damaged or poorly performing structures, and development of graphic tools that help legal teams explain things to triers-of-fact.

What Sets LERA Apart

EXPERIENCE:

LERA is currently the lead structural engineer for more than \$12 billion and 50 million square feet of construction, world-wide. Our forensic engineers are experienced members of construction project teams, who understand the complexities of the design and construction processes and bring this experience to bear in the firm's forensic work.

CLARITY:

Problems that arise on construction projects can be complicated. LERA is committed to providing our clients with clear, reliable advice, so they understand the technical and operational issues underlying structural problems and can make sensible decisions in preparing for and navigating disputes. LERA frequently develops three-dimensional models and animations to help clients and triers-of-fact understand complex issues.

CREDIBILITY:

The breadth and depth of LERA's experience with complex, challenging projects worldwide, combined with our reputation for design excellence, gives our forensic engineers a unique level of credibility in their evaluations of construction projects.

Firm Profile

Leslie E. Robertson Associates (LERA) is a 120-person M/WBE firm providing structural engineering services to architects, owners, government agencies, contractors, developers, attorneys, and the insurance industry. Established in 1923, we have designed landmark projects, both in the United States and around the world. Our long tradition of innovative design has brought us to the forefront of the structural engineering profession. LERA's Forensic Engineering and Loss Consulting Group offers a variety of services critical to preparing for and navigating disputes. LERA's mission in providing these services is to bring clarity to key issues so that our clients are best positioned to make informed decisions and prepare for the future.

LERA Consulting Structural Engineers

Forensic Engineering and Loss Consulting Group

Structural Engineering Services

PROPERTY LOSS CONSULTING

- Scope of Damage Determination
- Root Cause Analysis
- Structural Failure / Inadequate Performance Evaluation
- Repair / Replacement Designs and Recommendations
- Building Code Evaluation

LITIGATION SUPPORT SERVICES

- Expert Testimony and Report Writing
- Construction / Design Defect Claim Evaluation
- Contractor Change Claim Evaluation
- Structural Analysis and Modeling
- Advanced Graphics and Building Information Modeling (BIM)
- Technical Document Review and Indexing
- Standard of Care Evaluation

RISK ASSESSMENT

- Man-made and Natural Hazard Vulnerability Assessment
- Loss of Function and Performance Based Design
- Mitigation Strategies

POST DISASTER RESPONSE

- Support for Agencies and Responders
- Condition Assessments

CURRICULA VITAE

BENJAMIN M. CORNELIUS, P.E., S.E.

Partner

Leslie E. Robertson Associates, R.L.L.P.
 Consulting Structural Engineers
 40 Wall Street, 23rd Floor
 New York, NY 10005-1339
 (646) 981-4341
benjamin.cornelius@lera.com

**Profile**

Benjamin Cornelius is a structural engineer with over 20 years' experience in the design and rehabilitation of structures, including tall buildings and other complex structures. His projects include the Broad Museum in Los Angeles, the renovation and expansion of the National Baseball Hall of Fame, and the supertall TransNational Place in Boston. Mr. Cornelius leads LERA's Investigations and Expert Witness Practice and is an experienced expert witness. He has conducted over twenty forensic investigations in North America, Europe, and Asia in disputes totaling more than \$600 million. He has provided consultations in disputes involving tall buildings, residential structures, embassy complexes, historic buildings, sports and entertainment structures, and transportation facilities. Mr. Cornelius is the current chair of ASCE's Committee on Forensic Investigations and an adjunct faculty member at the Rhode Island School of Design.

Professional Experience**Leslie E. Robertson Associates (LERA)****2001 – Present**

Partner

2016 – Present

*Director, LERA Investigations and Expert Witness Practice**Partner-in-charge, LERA Marketing Department**Project Experience, Investigations*

- *Pillowing and Cracking of Concrete Structure.* Investigated undesirable expansion and cracking of concrete floor slabs over large areas of a mid-rise building under construction.
- *Adaptive Reuse of Existing Structure.* Investigated deviations from contract drawings and specifications for the reinforcement of existing floors to accommodate new equipment.
- *Effects of Temporary Construction Loading.* Investigated claims of damage due to the installation and operation of construction equipment at an existing mid-rise condominium building.
- *High-Strength Steel Fasteners.* Investigated failures of large diameter, high-strength steel bolts at a high-rise building in Europe.
- *Historic Building Settlements.* Investigated settlement and cracking of a historic limestone and brick residence adjacent to an active construction project in North America.
- *Long-span Airport Structure.* Investigated structural design revisions made to a long-span airport structure under construction in Central Asia.
- *Single-Family Home Construction.* Investigated defects in wood structural components and concrete foundations at a custom single-family home in New York.
- *Masonry Facades and Parking Slabs.* Investigated cracking in the masonry facade, foundation walls, and garage slab of a condominium building in North America.
- *Party Wall Water Intrusion.* Investigated water infiltration from a building being renovated into the brick rowhome next door.
- *Concrete Balconies.* Investigated cracking and spalling of cantilevered concrete balconies and designed repairs at a high-rise residential building in North America.

Project Experience, Peer Review

- *45 Broad Street, New York, NY.* Peer reviewed the secant pile walls and caisson foundations of this 80-story residential tower.
- *Effects of Adjacent Construction.* Reviewed project plans for a proposed development and assessed potential effects on behalf of an adjoining property owner.
- *138 East 50th Street, New York, NY.* Peer reviewed this 64-story condominium tower.

Project Experience, Design

- *Convention Center and Public Transit Blast Enhancements.* Prepared schematic designs of blast enhancements for a convention center design project in North America.

Associate Partner

2012 – 2015

*Director, LERA Investigations and Expert Witness Practice**Project Experience, Investigations*

- *Airport Runway and Taxiway.* Investigated scaling, cracking, spalling, and other defects in a reinforced concrete runway structure in North America, measuring over 200 feet wide and 2 miles long.
- *Steel Pile Corrosion.* Investigated corrosion damage and predicted future performance of steel pile foundations at a government complex in Central Asia.
- *Structure and Building Services Coordination.* Investigated conflicts between building structure and services in a government facility in Europe.
- *Blast Design.* Investigated the adequacy of blast designs of a 90,000-sf reinforced concrete structure in Central Asia.
- *Pre-Cast Concrete Railway Structure.* Investigated cracking and spalling of pre-cast concrete deck panels supporting a 5-mile long segment of an operational commuter rail system and designed repairs.
- *Structural Drawings and Specifications Quality.* Investigated the quality of contract documents produced for a steel-framed, single-family home in North America.
- *Post-Tensioned Concrete Slabs.* Investigated the design and construction of post-tensioned slabs in a high-rise building in North America.
- *Concrete Reinforcing Steel Placement.* Investigated the root causes of defects in the placement of reinforcing steel for a high-rise hotel and condominium building.

Project Experience, Design

- *Bureau of Land Reclamation, Boulder City, NV.* Project manager for this 45,000-sf office building, featuring architecturally exposed steel and concrete structural components.
- *CUNY Kingsborough Community College Performing Arts Center Renovations, Brooklyn, NY.* Project manager for alterations and additions to this existing facility.
- *CUNY Medgar Evers College, Carroll Street Building Renovations Feasibility Study, Brooklyn, NY.* Project manager for a feasibility study of alterations and additions to three interconnected academic buildings.
- *Broad Museum, Los Angeles, CA.* Project manager for the structural design of this 80,000-sf museum in collaboration with the team's local engineer. This project featured a nearly three-quarter-acre, column-free gallery space and 30-foot cantilevered, post-tensioned slabs.
- *Center for Design Innovation, Massachusetts School of Art, Boston, MA.* Project manager for the adaptive reuse of an existing gymnasium building. The design featured a new structure housing a raised gallery and campus entry portal, a new exhibit hall, and the reconfiguration of existing spaces for classrooms and lecture halls.

Senior Associate

2003 – 2011

Engineering Staffing Manager, New York Office. Coordinated with firm partners to allocate personnel to projects, identify hiring needs, and interview engineering candidates office-wide.*Project Experience, Investigations*

- *Structural Drawings and Specifications Quality.* Investigated the reasons for revisions to member sizes, connection forces, and details for a 90,000-seat stadium in Europe.
- *Embassy Complex.* Investigated quality of structural bid documents for, and the effects of seismic loading on, a complex of reinforced concrete structures in North America.
- *University Library.* Investigated excessive deflections of reinforced concrete slabs and cracking and spalling of concrete members at a 125,000-sf library in North America.

Project Experience, Peer Review

- *One World Trade Center (Freedom Tower), New York, NY.* Peer reviewed this 94-story super-tall office tower.
- *Two World Trade Center, New York, NY.* Peer reviewed this 78-story super-tall office tower.

Project Experience, Design

- *TransNational Place, Boston, MA.* Project manager for this supertall office building proposed for a site at 115 Winthrop Square. The project proceeded into design development phase before stopping in 2008 amid a slowing real estate market.
- *250 East 49th Street, New York, NY.* Project manager for this 24-story residential tower.
- *SUNY Stony Brook Graduate Chemistry Building Renovation, Stony Brook, NY.* Project manager for alterations and additions to this 300,000-sf classroom building.
- *773 Prospect Avenue, Bronx, NY.* Project manager for this 7-story shelter for battered women and their children.
- *Shelter Island House, Shelter Island, NY.* Project manager for this custom, 3500-sf, timber-framed home featuring 12-foot cantilevers and exposed cypress framing.
- *47 East 91st Street Condominium Building, New York, NY.* Project manager for this 9-story condominium tower built over an existing and continuously operating, one-story bank branch.
- *1281 Madison Avenue, New York, NY.* Project manager for the gut renovation of a rowhome.
- *Albert Einstein College of Medicine Comprehensive Opioid Treatment Facility, Bronx, NY.* Project manager for this new 45,000-sf healthcare building.
- *MetroGreen Condominiums, Stamford, CT.* Project manager for this 53,000-sf affordable housing building, featuring a concrete podium and four stories of wood-framed construction.
- *Stamford Ninth Grade Center, Stamford, CT.* Project manager for this 60,000-sf addition, built over the existing locker room facilities at Stamford High School. The project included a new gymnasium, entryway, classrooms, and 20-ft tall concrete retaining wall to address site slope.
- *Danbury HeadStart School, Danbury, CT.* Project manager for the gut-renovation and expansion of an existing school building.
- *Hampshire Country Club Renovation, Mamaroneck, NY.* Project manager for the renovation and expansion of the clubhouse.
- *NYC DEP West of Hudson Headquarters, Kingston, NY.* Project manager for the renovation and expansion of this 98,000-sf facility housing laboratories and the regional headquarters of the Department of Environmental Protection.

Associate

2001 – 2002

Project Experience, Design

- *Las Vegas Springs Preserve Visitor Center, Las Vegas, NV.* Project manager for this 90,000-sf visitor center and exhibition space, featuring architecturally exposed structure and a 20,000-sf sunshade.
- *National Baseball Hall of Fame Renovation and Expansion, Cooperstown, NY.* Project manager for this renovation and expansion, which included repairs of existing masonry structures, expanded and reorganized galleries, and a new 3-story grand stair atrium with architecturally exposed steel framing.
- *Hunts Point Youth Center, Bronx, NY.* Project manager for this 10,000-sf gymnasium and community center featuring exposed, arc-shaped steel roof girders spanning the gymnasium and indoor track.

Lawrence Gordon Architects (LGA)**2000 – 2001**

Designer

Project Experience, Design

- *Custom Home, Larchmont, NY.* Architectural designer and detailer of this custom home.
- *Municipal Building, Larchmont, NY.* Architectural designer and detailer of this volunteer ambulance corps building.
- *Various Renovation and Expansion Projects, Northeast U.S.* Designer and architectural detailer of several additions to single-family homes.
- *Introduced the firm to computer-aided drafting.*

Leslie E. Robertson Associates (LERA)**1994 – 2000**

Associate

2000

*LERA Librarian**Project Experience, Design*

- *Federal Facility Security Enhancement, North America.* Project manager for this security upgrade project, which included reinforcements to an existing high-rise building to address blast loading, a blast-resistant site wall, and vehicle impact barriers.
- *Shanghai World Financial Center, Shanghai, China.* Project manager for a phase of the design of this supertall office building.

Engineering Designer

1994 – 1999

*LERA Librarian**Project Experience, Investigations*

- *Chek Lap Kok Airport, Hong Kong.* Assisted in the review of the tied-arch roof system for this airport.

Project Experience, Design

- *St. Regis Hotel, Shanghai, China.* Project manager for this 38-story hotel.
- *Neiman Marcus Flagship Store Expansion, San Francisco, CA.* Project manager for this 5-story expansion of an existing department store. The project featured new retail space, a new truck dock, and seismic enhancements serving the combined building.
- *Rock & Roll Hall of Fame Circular Exhibit, Cleveland, OH.* Project manager for the fit-out of the circular exhibit space within the museum.
- *World Trade Center Renovations and Structural Integrity Inspections.* Designer of renovations to the complex, including security enhancements for pedestrian and vehicle attacks and tenant fit-outs. Structural integrity inspector for the facades of the twin towers and low-rise buildings, and the antenna atop One World Trade Center.
- *Federal Energy Regulatory Commission, Washington, D.C.* Reviewer of shop drawings for this reinforced concrete government building.
- *PANYNJ Heliport, New York, NY.* Designer of a new vehicle security gate at the entrance to the facility.
- *5 World Trade Center Emergency Generators, New York, NY.* Designer of supplementary framing and temporary measures to accommodate the installation of new rooftop generators.

Teaching Experience

American Institute of Architects, Continuing Education System**2014 – Present**

Presenter, "Adaptive Reuse – Structural Concepts and Approaches," delivered at various architectural firms.

Rhode Island School of Design (RISD)**2011 – Present**

Adjunct Faculty, Department of Interior Architecture, Adaptive Reuse Thesis Program

Science Olympiad, Pleasantville Middle School**2015 – Present**

Coach, Mission Possible Team

Boston Society of Architects**2013 – 2014**Structural Mentor for "Duck-Work Wood Landscape Concept," Competition Finalist, *Urban Timber: From Seed to City*

Professional Licenses and Designations

Licensed Professional Engineer, New York	1999 – Present
Licensed Professional Engineer, New Jersey	2015 – Present
Licensed Professional Engineer, Rhode Island	2016 – Present
Licensed Professional Engineer, Pennsylvania	2017 – Present
Licensed Professional Engineer, Maryland	2017 – Present
Licensed Civil Engineer, California	2014 – Present
Licensed Civil Engineer, Washington State	2014 – Present
Licensed Professional Civil Engineer, Massachusetts	2017 – Present
Licensed Structural Engineer, Washington State	2014 – Present
Designated Model Law Structural Engineer <i>National Council of Examiners for Engineering and Surveying (NCEES)</i>	2014 – Present

Education

Bachelor of Architectural Engineering, The Pennsylvania State University	1994
Phi Alpha Epsilon Architectural Engineering Honor Society	1994 – Present
Tau Beta Pi Engineering Honor Society	1992 – Present
Professional Practice Activities Award <i>Professional Engineers in Private Practice of Pennsylvania</i>	1994
Gladys M. Baird Memorial Scholarship Award	1993

Publications

Author, "Five Key Steps Project Teams Can Take to Manage Risk in Property Line Construction Projects" <i>The Critical Path</i> , Newsletter of the Construction Law Committee of the Defense Research Institute, Volume 20, Issue 4	2016
Author, "LERA Assists Property Owners Adjacent to Construction Projects" LERA Summer 2016 Newsletter	2016
Author, "Designing Structures for the Effects of Extreme Events" Construction Law Seminar, <i>Defense Research Institute</i> , New Orleans, LA	2016
Author, "Getting Back to Nature...in Las Vegas" <i>Modern Steel Construction</i>	August 2008
Author, "Exposed Structural Systems Enhance Sustainability" <i>STRUCTURE Magazine</i>	April 2008

Presentations

Invited Presenter, "Four Strategies Forensic Engineers Use to Unravel Construction Disputes" Council of American Structural Engineers Risk Management Seminar, Chicago, IL	August 2017
Invited Presenter, "Good Neighbor Design Practices" Design Professional Roundtable, Donovan Hatem LLP, Boston, MA	May 2017
Co-Presenter with Kriton A. Pantelidis, "Risks of Property Line Construction for Design Professionals" Defense Research Institute Construction Law Committee Webinar	2017

Invited Speaker, "Four Key Strategies for Unraveling Construction Disputes" Structural Engineers Coalition of Connecticut, New Haven, CT	2016
Invited Panelist, "Engineering and Construction Issues in Catastrophic Loss" Defense Research Institute Construction Law Seminar, New Orleans, LA	2016
Invited Presenter, "Enhancing the Viability of Urban Housing Projects through Structural Buildover and Reuse" Residential Building Design and Construction Conference, University Park, PA	2016
Co-presenter with Doug Gonzalez, P.E., "Adaptive Reuse: Structural Concepts and Approaches" Various Architectural Firms	2014 – Present
Panel Discussion Moderator, "The Fog of Failures: Understanding and Explaining Complex Engineering Issues" Construction Law SuperConference, San Francisco, CA	2013
Invited Presenter, "The Art of Structural Design" Rotary Club, Pleasantville, NY Rotary Club, Briarcliff, NY	2010
Invited Presenter, "The World Trade Center" Architectural Engineering Department, The Pennsylvania State University, University Park, PA	May 2002
Presenter, "Comparison of Masonry Provisions: NYC Building Code versus IBC 2000" Structural Engineers Association of New York, New York, NY	2002

Project Honors and Awards

MassArt Design and Media Center, Boston, MA

American Architecture Award The Chicago Athenaeum Museum of Architecture and Design/The European Centre for Architecture Art Design and Urban Studies	2017
Design Award Society of American Registered Architects New York (SARA NY)	2017
Design Award – Education Facilities Design Boston Society of Architects (BSA)	2016

The Broad, Los Angeles, CA

Project of the Year, Southern California <i>Engineering News-Record (ENR)</i> Regional Best Projects	2016
Best Project, Southern California – Cultural/Worship <i>Engineering News-Record (ENR)</i> Regional Best Projects	2016
Grand Prize 46 th Annual Los Angeles Business Council (LABC) Architectural Awards	2016
Finalist – Architecture + Engineering Architizer A+ Awards	2016
Design Award of Honor American Institute of Architects New York (AIA NY)	2016
Architecture Award The Chicago Athenaeum Museum of Architecture and Design	2015
Design Award of Honor American Institute of Architects Los Angeles (AIA LA)	2014

Las Vegas Springs Preserve Visitor Center , Las Vegas, NV	
Platinum Award for Engineering Excellence	2008
American Council of Engineering Companies New York (ACEC NY)	
Award of Merit	2008
American Institute of Steel Construction, IDEAS Award	
AIA Nevada Citation Award	2007
City of Las Vegas Mayor's Urban Design Award	2007
AIA Nevada Honor Award, Unbuilt Project	2003

Professional Honors and Awards

Certificate of Recognition, Public Service in Response to September 11, 2001 Terrorist Attack	2002
<i>American Society of Civil Engineers, New Jersey Section</i>	
Certificate of Appreciation, World Trade Center Rescue and Recovery Effort	2001
<i>City of New York</i>	

Professional Affiliations

Member	2016 – Present
<i>Structural Engineers Association of New York (SEAoNY)</i>	
Member	2016 – Present
<i>ACEC Emerging Leaders Committee</i>	
Chair, Committee on Forensic Investigations	2016 – Present
<i>ASCE Forensic Engineering Division</i>	
Member	2014 – Present
<i>ASCE Metropolitan Section, Forensic Engineering Group</i>	
Affiliate Member, Forum on Construction Law, Design Division	2012 – Present
<i>American Bar Association</i>	
Member	1998 – Present
<i>American Society of Civil Engineers (ASCE)</i>	
Chair, Professional Practice, Forensic Investigations Track	November 2015
<i>ASCE Forensic Engineering 7th Congress, Miami, Florida</i>	
Member	2014 – 2015
<i>ASCE 2015 Forensic Congress Steering Committee</i>	
Volunteer	2013 – 2014
<i>Schoharie Area Long-Term (SALT) Relief Organization</i>	
Past Chair, Masonry Committee	2002
<i>Structural Engineers Association of New York (SEAoNY)</i>	

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DANIEL A. SESIL, P.E., S.E.**Partner**

Leslie E. Robertson Associates, R.L.L.P.
 Consulting Structural Engineers
 40 Wall Street, 23rd Floor
 New York, NY 10005-1339
 212-750-9000
daniel.sesil@lera.com

**Profile**

Daniel Sesil, Partner at Leslie E. Robertson Associates (LERA), has been with the firm since 1983. His extensive expertise lives in special design projects that answer to function and innovation. He specializes in long span, column-free spaces, high-rise buildings, creative solutions and research initiatives.

Mr. Sesil is currently Partner-in-Charge of a wide range of projects, including the design of the Lucas Museum of Narrative Arts, the Rubenstein Forum at the University of Chicago, the Jacob K. Javits Convention Center Expansion in New York, a new hospital building at Coney Island Hospital in New York, the New Embassy Compound (NEC) in Ankara, Turkey and the New Consular Compound (NCC) in Nogales, Mexico. Projects of his that are currently under construction include the Kimmel Pavilion at New York University Langone Medical Center in New York, a new building for SUNY's Downstate Medical Center and a private residence designed using a complex geometric system and FRP paneled roof.

Mr. Sesil has led the design of several of LERA's landmark projects, including the William J. Clinton Presidential Center in Little Rock, AR, the Newseum and Freedom Forum in Washington, DC, the Rock and Roll Hall of Fame in Cleveland, the Miho Bridge in Japan, the National Museum of American Jewish History in Philadelphia, the Columbia University Medical Center Education Building in New York and the Prada Soho boutique in New York. He also leads the structural design efforts for Global Building Modules, a steel framed modular system inspired by shipping containers, the scale and design of which allows for efficient transportation and offers a potential solution to high-cost housing.

A published author and frequent speaker at design and engineering events, Mr. Sesil serves on the U.S. Department of State's Bureau of Overseas Building Operations (OBO) Industry Advisory Group, and is also a member of the Marquette University College of Engineering Thought Leaders Council. For his actions following the 1993 World Trade Center bombing, he received the Medal of Valor from The Port Authority of New York and New Jersey.

Professional Experience**Leslie E. Robertson Associates (LERA)****1983 – Present**

Partner	1995 – Present
Associate	1988 – 1995
Design Engineer	1983 – 1988

Project Experience, Design

- *United Nations Consolidated Building, New York, NY.* Partner-in-Charge for the design of a new 37-story, 950,000-sf (88,000-sm) office building.
- *BDNI Center, Jakarta, Indonesia.* Partner-in-Charge for the design concept of two office towers. Tower A is 62-stories and Tower B is 45-stories, totaling approximately 2.1 million sf (195,000 sm) with 1.1-million sf (102,000 sm) of below-grade parking levels.
- *Shun Hing Square DiWang Commercial Complex, Shenzhen, China.* Assisted in the structural design of this 70-story (384-m), 3 million-sf (280,000-sm) office tower with 900 parking spaces below grade. LERA

provided peer reviews, wind engineering and alternative designs.

- *Parkhaven Tower, Rotterdam, The Netherlands.* Partner-in-Charge for the structural design of this high-rise office tower building concept that incorporates several sustainable features, including a double façade that reacts to changes in season and uses clear glass to optimize incoming daylight. The outer layer of the double façade diminishes wind pressure to such an extent that windows can remain open 80% of the year, maximizing natural ventilation and saving energy.
- *Medical Education Building, Columbia Medical Center, New York, NY.* Partner-in-Charge for the design of this new state of the art medical center.
- *International Hospital, Shanghai, China.* Partner-in-Charge for the design of this new hospital.
- *School of Public Health, SUNY Downstate, Brooklyn, NY.* Partner-in-Charge for the design of this new 115,000-sf (10,700-m) facility that serves as Brooklyn's only academic medical center.
- *Massachusetts School of Art (MassArt) Design and Media Center, Boston, MA.* Partner-in-Charge for the adaptive reuse of an existing gymnasium building. The design featured a new structure housing a raised gallery and campus entry portal, a new exhibit hall and the reconfiguration of existing spaces for classrooms and lecture halls.
- *Broad Art Museum, Los Angeles, CA.* Partner-in-Charge for the design of this 3-story, 80,000-sf (7,400-sm) art museum situated above a parking facility.
- *Private Residence, Long Island, NY.* Partner-in-Charge for the design of this private residential house.
- *NYU Medical Center, Kimmel Pavilion, New York, NY.* Partner-in-Charge for the design of this new academic and healthcare facility creating an 830,000-sf (77,110-sm) state-of-the-art, integrated environment for inpatient and procedure-based care for a New York area university hospital.
- *Kew Gardens Hills Library, Queens, NY.* Partner-in-Charge for the renovation of this library. The renovation will add 3,000 sf to the original library built in 1966, yielding a new total of 10,500 sf.
- *Staten Island Courthouse, New York, NY.* Partner-in-Charge for the design of a 184,000-sf (17,100-sm) new courthouse and memorial plaza. The project was designed to achieve a LEED Gold rating.
- *Novartis East Village Expansion, East Hanover, NJ.* Partner-in-Charge for the design of a new 5-story office building that totaling 185,000 sf (17,187 sm).
- *Agricultural Science Center, SUNY, Cobleskill, NY.* Partner-in-Charge for the design of the new Agricultural Science and Technology Center containing a gross area of approximately 86,000 sf (8,000 sm). The facility was designed to meet LEED Silver criteria.
- *NYU Medical Center Tisch Hospital Elevator Tower, New York, NY.* Partner-in-Charge for the addition of a new tower to the existing Tisch Hospital. The Hospital needed to remain fully operational during the construction of the 38,000-sf Elevator tower.
- *Utah Museum of Natural History, Salt Lake City, UT.* Partner-in-Charge for the design of this new 170,000-gsf (16,000-gsm) museum housing gallery space, classrooms, research laboratories and a separate parking structure designed to accommodate 200 cars.
- *NYU Medical Center, Energy Building, New York, NY.* Partner-in-Charge for the design a new building adjacent to the existing Tisch Hospital. This project was designed to accommodate updated flood mitigation measures, and was built on a fast-tracked schedule.
- *NYU Emergency Department Expansion, New York, NY.* Partner-in-Charge for 3,200-sf addition to the existing building and renovation of 19,000 sf of existing space.
- *P.S. 216 Edible Schoolyard, Brooklyn, NY.* Partner-in-Charge for the design of a new elementary school that consists of a free-standing, single-story building that contains a working greenhouse, an organic farm and a culinary classroom with a full kitchen.
- *Jacob K. Javits Convention Center Expansion, New York, NY.* Partner-in-Charge for the design of a proposed expansion of the existing convention center. The facility would be expanded in size from 1.9

million sf to 6 million sf.

- *William J. Clinton Presidential Center, Little Rock, AR.* Partner-in-Charge for the design of 165,000 sf (15,000 sm) that houses archive and exhibit spaces, as well as the Clinton Foundation Headquarters. The site includes the University of Arkansas Clinton School of Public Service and a 28-acre recreational park.
- *New York Historical Society, New York, NY.* Partner-in-Charge for the renovation of this historically significant building in New York City's Upper West Side.
- *Boulder City Operations Office, Boulder City, NV.* Partner-in-Charge for the 45,000-sf office building, which is home to approximately 170 employees of the Bureau of Reclamation's Lower Colorado Region. The project was built on a fast-tracked schedule.
- *Museum of American Jewish History, Philadelphia, PA.* Partner-in-Charge for the design of this 100,000-sf (9,300-sm) museum.
- *Gateway Center, Westchester Community College, Valhalla, NY.* Partner-in-Charge for the design of three new academic buildings totaling 70,000-sf (6,500-sm). The Gateway's unique structural design consists of architecturally exposed stackable steel "boxes," which were prefabricated and bolted together on site. A steel bridge crosses the Gateway and links the three campus buildings.
- *47 East 91st Street, New York, NY.* Partner-in-Charge for the design of a 9-story condominium tower built over an existing and continuously operating one-story bank branch.
- *Public Farm One, Queens, NY.* Partner-in-Charge for the design of this interactive, working farmsited at the P.S.1 Contemporary Art Center.
- *Newseum and Freedom Forum, Washington, DC.* Partner-in-Charge for this 650,000-sf (60,000-sm) building that contains galleries, a 500 seat auditorium, technologically advanced black box broadcasting facilities and office and retail space in a 7-story building envelope.
- *Prada Soho, New York, NY.* Partner-in-Charge for the renovation of the former Guggenheim Soho Museum into an upscale retail establishment.
- *School of Architecture, Princeton University, Princeton, NJ.* Partner-in-Charge for the renovation and addition to this academic facility.
- *Shelter Island Residence, NY.* Partner-in-Charge for the design of this 4,500-sf (420-sm) beachfront home, which is composed of a timber and glass box balanced on a concrete base with cantilevers of up to 13 feet on four sides and details inspired by classical Japanese architecture.
- *Community College of Southern Nevada (CCSN), Science Center, Las Vegas, NV.* Partner-in-Charge for the design of a 75,000-sf facility containing 16 state-of-the-art teaching laboratories, 17 lecture classrooms and a high-tech distance education studio.
- *Schein Residence, Woodstock, NY.* Partner-in-Charge for the design a 4,500-sf (420-sm) private residence in the scenic overlay district in the town of Woodstock.
- *Learning Spring Elementary School, New York, NY.* Partner-in-Charge for the design of an 8-story learning center for autistic children in grades K-8. In addition to classrooms and administrative offices, the 30,000-sf (2,800-sm) facility contains a gymnasium, a library, a cafeteria, an acoustically isolated music room and a therapy room.
- *Satellite D Expansion, McCarran Airport, Las Vegas, NV.* Partner-in-Charge for the addition of a 144,000-sf (13,400-sm), 2-story wing to McCarran Airport's existing Satellite D Terminal.
- *New York Hall of Science Addition, Queens, NY.* Partner-in-Charge for the design of a 70,000-sf (6,500-sm) addition expanding existing space for permanent and temporary exhibits, exhibition preparation and shop facilities.
- *Gagosian Gallery Renovation, New York, NY.* Partner-in-Charge for the conversion of an existing warehouse into an art gallery.
- *Richard Serra sculpture at Gagosian Gallery, New York, NY.* Partner-in-Charge for the structural design

of this sculpture.

- *Miho Museum Bridge, Kyoto, Japan.* Partner-in-Charge for the design of the museum bridge and the museum building. The building, 80 percent of which is underground, is nestled within a 247-acre mountainous nature preserve.
- *Princeton Friend Center for Engineering, Princeton, NJ.* Partner-in-Charge for the structural design of this 3-story, 65,000-sf building that includes classrooms, the engineering library, faculty offices, computer clusters and a lecture hall.
- *Colin Powell Hall, City College, New York, NY.* Partner-in-Charge for the structural design of this academic facility.
- *Tisch Institute of Performing Arts, NYU, New York, NY.* Partner-in-Charge for the structural design of this academic facility.
- *Alfred Lerner Hall, Columbia University, Ramps and Glass Wall (Contractor's Engineer), New York, NY.* Partner-in-Charge for the structural design of this new academic building.
- *Reno/Tahoe International Airport Canopy, Reno, NV.* Partner-in-Charge for the structural design of the addition of a new canopy that surrounds the existing airport.
- *Richard Serra sculpture at Matthew Marks Studio, New York, NY.* Partner-in-Charge for the structural design of this sculpture.
- *Richard Serra sculpture at Princeton University, Princeton, NJ.* Partner-in-Charge for the structural design of this sculpture.
- *Richard Serra sculpture, Bilbao, Spain.* Partner-in-Charge for the structural design of this sculpture.
- *Beverly Pepper's "Sentinels," New York, NY.* Partner-in-Charge for the structural design of this sculpture.
- *Federal Reserve Bank, Richmond, VA.* Partner-in-Charge for the structural design of this 26-story office building that consists of 551,000 sf (52,000 sm) and includes underground parking for 500 cars.
- *West Street Condominiums, New York, NY.* Partner-in-Charge for the structural design of this residential building.
- *El Equis, Panama.* Partner-in-Charge for the structural design of this residential building.
- *Federal Facility Security Enhancement, Bldgs. 1 & 2.* Partner-in-Charge for the structural design of these office buildings.
- *Industrial and Commercial Bank of China, Shanghai, China.* Led the structural design of this 27-story, 376,000-sf (35,000-sm) office building for the Shanghai Industrial and Commercial Bank of China.
- *St. Regis Hotel, Shanghai, China.* Led the structural design of a 37-story, 376,000-sf (50,000-sm) hotel located in the Pudong region of Shanghai for the Hongta Corporation.
- *Rock 'N' Roll Hall of Fame and Museum, Cleveland, OH.* Led the structural design of this 143,000-sf (13,000-sm) facility that combines geometric forms and cantilevered spaces.
- *Conrad Centennial Hotel & Retail, Singapore.* Led the structural design of the 41-story hotel that includes 509 rooms, the Millenia Walk and a 3-story upscale retail mall containing 323,000 sf (30,000 sm) of rentable space with parking below.
- *Meyerson Symphony Center, Dallas, TX.* Project Manager for the structural design of this building, the home for the Dallas Symphony Orchestra. It contains a 2,200-seat performance hall, an administration wing, entertainment rooms, ticket booths, a restaurant and a 100-car parking level.
- *U.S. Embassy Office Building, Caracas, Venezuela.* Project Manager for the structural design of this 100,000-sf, (9,000-sm) 5-story building recessed into the bedrock of the Andean foothills.
- *Borofsky's "Hammering Man," Seattle, WA.* Project Manager for the structural design of this sculpture.
- *Crystal Cathedral, Garden Grove, CA.* Project Manager for the structural design of this religious chapel.

- *Puerta de Europa, Madrid, Spain.* Assisted in the structural design of these two leaning towers measuring at 372.5 ft (114 m) tall and 27 stories high. The tower floors total 13,000 sf (1,200 sm).
- *Hawá Center, Saudi Arabia.* Assisted in the structural design of this retail development.
- *International Trade Center, Barcelona, Spain.* Assisted in the structural design of this office building.

Project Experience, Investigations

- *Blast Design.* Investigated the adequacy of blast designs of a 90,000-sf reinforced concrete structure in Central Asia.
- *Embassy Complex.* Investigated quality of structural bid documents for, and the effects of seismic loading on, a complex of reinforced concrete structures in North America.
- *Pre-Cast Concrete Railway Structure.* Investigated cracking and spalling of pre-cast concrete deck panels supporting a 5-mile long segment of an operational commuter rail system and designed repairs.

Project Experience, Peer Review

- *World Trade Center PATH and Transportation Hub, New York, NY.* Member of the Hub Working Group that reviewed and suggested time- and cost-saving alternatives for the new World Trade Center PATH and Transportation Hub.
- *MTA 1 Line, World Trade Center, New York, NY.* Member of the 1 Line Working Group that reviewed and suggested time- and cost-saving alternatives for the support and construction of the MTA 1 Line passing through the World Trade Center.
- *Pittsburgh Convention Center, Pittsburgh, PA.* Assisted in the peer review of the expansion of the convention center.
- *Federal Reserve Bank (Study), Richmond, VA.* Assisted in the study and peer review of this 551,000-sf office building.
- *625 King's Road, Hong Kong.* Assisted in the peer review of a 26-story office building.
- *Dubai Towers, Dubai, UAE.* Assisted in the peer review of four high-rise towers, the tallest being 400 meters.

Teaching Experience

Cornell University

Spring 2016

Guest Lecturer, College of Architecture, Art and Planning

Columbia University

2001 – 2010

Adjunct Assistant Professor, School of Architecture

Professional Licenses and Designations

Licensed as a P.E. and/or S.E. in New York, 30 other states and the District of Columbia

1986 – Present

Education

Master of Civil Engineering, Purdue University

1983

Bachelor of Civil Engineering, Marquette University

1981

Chi Epsilon National Civil Engineering Honor Society

1981

Publications

Co-Author, "Columbia Medical Center's Vertical Campus" <i>STRUCTURE Magazine</i>	April 2016
Co-Author, "Securing the Vibrant Future of our Cities: Decision Making Principles for Aspirational Projects" <i>Council on Tall Buildings and Urban Habitats, Global Interchanges Resurgence of the Skyscraper City</i>	October 2015
Co-Author, "A New Monument on America's Main Street" <i>Modern Steel Construction</i>	February 2010
Co-Author, "Newsmaker" <i>Civil Engineering Magazine</i>	April 2009
Co-Author, "Commanding Presence" <i>Civil Engineering Magazine</i>	March 2005
Co-Author, "Considerations for Retrofit of Existing Steel Buildings for Resisting Blast and Progressive Collapse" Blast Design Symposium, AISC/SINY, New York, NY	2003
Co-Author, "Rising High" <i>Urban Land Magazine</i>	November/December 2000
Co-Author, "The Miho Museum Bridge: A Post-Tensioned Steel Space-Frame" World Steel Bridge Symposium	September 1998
Co-Author, "The Miho Museum Bridge Shiga-raki, Japan: A Bridge Between Function and Beauty" <i>STRUCTURE Magazine</i>	May 1998
Co-Author, "Material Selection in the Design of Innovative Structures" Structural Engineering World Congress	Winter 1998
Co-Author, "The Museum Bridge for Shinji Shumeikai: a Post-Tensioned Steel Space-Frame" <i>Advances in Steel Structures (ICASS '96)</i> , Volume I, pp. 565 – 570	December 1996

Presentations

Presenter, "Securing the Vibrant Future of our Cities: Decision Making Principles for Aspirational Projects" Council on Tall Buildings and Urban Habitats, International Conference, New York, NY	October 2015
Workshop Presenter, "Broad-side" Facades+ Symposium, New York, NY	April 2014
Co-Presenter, "William J. Clinton Presidential Center and Park: 'Bridge to the 21st Century'" ASCE Metropolitan Section Structures Group Spring Seminar	April 2006
Presenter, "Innovations in the Design of the Miho Museum Bridge" ASCE Metropolitan Section Structures Group Spring Seminar	May 2000
Presenter, "Rock and Roll Hall of Fame Museum, Cleveland Ohio" ASCE Metropolitan Section Structures Group Spring Seminar	April 1996

Project Honors and Awards

MassArt Design and Media Center , Boston, MA Design Award, Boston Society of Architects	2016
The Broad , Los Angeles, CA	

Design Award of Honor American Institute of Architects New York (AIA NY)	2016
Design Award of Honor American Institute of Architects Los Angeles (AIA LA)	2014
Novartis , East Hanover, NJ Project of the Year <i>Engineering News-Record</i>	2015
Columbia University Medical Center Medical & Graduate Education Building , New York, NY Finalist, Architecture+Engineering Category Architizer A+ Awards	2016
Excellence in Structural Engineering Awards Structural Engineers Association of New York (SEAoNY)	2015
Excellence in Structural Engineering Awards National Council of Structural Engineers Association (NCSEA)	2015
Annual Award – 53rd Annual Roger H. Corbetta Awards Concrete Industry Board (CIB)	2014
Award for Innovative Design American Concrete Institute, Strategic Development Council	2014
Edible Schoolyard , Brooklyn, NY Best Green Design Initiative, MASTerworks Award Municipal Arts Society	2014
Natural History Museum of Utah , Salt Lake City, UT Excellence in Architecture for a New Building Society for College and University Planning/American Institute Architects' Committee on Architecture for Education	2014
Calder Foundation , New York, NY A+ Cultural Award Architizer A+ Awards	2015
Westchester Community College, Gateway Building , Valhalla, NY Excellence in Structural Engineering Structural Engineers Association of New York (SEAoNY)	2011
American Architecture Award The European Centre for Architecture Art Design and Urban Studies and The Chicago Athenaeum	2011
Architecture Design Award of Merit American Institute of Architects New York (AIA NY)	2011
National Award Innovative Design in Engineering and Architecture with Structural Steel (IDEAS ²) Award American Institute of Steel Construction (AISC)	2011
National Design Award Society of American Registered Architects	2011
High Honor Award American Institute of Architects Westchester/Hudson Valley	2011
Merit Award American Institute of Architects New York (AIA NY)	2011
Metalmag Architectural Award, Wall Panel & Metal Building Categories	2011

Umicore Building Projects	
Best of 2010 Awards (Higher Education/Research)	2011
New York Construction	
Public Farm One, Queens, NY	
Platinum Award for Engineering Excellence	2009
American Council of Engineering Companies New York (ACEC NY)	
Best of 2008 Awards (Park/Landscape)	2008
New York Construction	
Merit Award	2008
Structural Engineers Association of New York (SEAoNY)	
Newseum, Washington, DC	
Platinum Award for Engineering Excellence	2009
American Council of Engineering Companies New York (ACEC NY)	
Design Award of Merit	2009
American Institute of Architects New York (AIA NY)	
National Design Award	2009
Society of American Registered Architects	
Award of Merit	2009
Society of American Registered Architects/New York Council	
Craftsmanship Award Winner	2008
Washington Building Congress	
Best of 2008 Award, Cultural Project of the Year	2008
Mid-Atlantic Construction News	
Merit Award	2008
Structural Engineers Association of New York (SEAoNY)	
Las Vegas Springs Preserve Visitor Center, Las Vegas, NV	
Platinum Award for Engineering Excellence	2008
American Council of Engineering Companies New York (ACEC NY)	
Award of Merit	2008
American Institute of Steel Construction (AISC) IDEAS ² Awards	
Citation Award	2007
American Institute of Architects (AIA) Nevada	
Urban Design Award	2007
Mayor of the City of Las Vegas	
Design Award of Honor	2003
American Institute of Architects (AIA) Nevada	
McCarran International Airport Satellite D Expansion & Control Tower, Las Vegas, NV	
Gold Award for Engineering Excellence	2007
American Council of Engineering Companies New York (ACEC NY)	
Excellence in Design Award	2005
American Council of Engineering Companies New York (ACEC NY)	
William J. Clinton Presidential Center, Little Rock, AR	
Architecture Design Award of Honor	2006
American Institute of Architects National	

Engineering Awards of Excellence American Institute of Steel Construction (AISC)	2006
Award for Engineering Excellence American Council of Engineering Companies New York (ACEC NY)	2006
Honorable Mention American Institute of Architects/COTE Top Ten Green Projects	2007
Library Building Award American Institute of Architects/ALA	2007
Honor Award American Institute of Architects New York (AIA NY)	2005
Prada Soho , New York, NY Award of Merit <i>New York Construction News</i>	2002
Miho Museum Bridge , Shiga-raki, Japan Outstanding Structure Award International Association for Bridge and Structural Engineering	2002
Most Innovative Structure Award Structural Engineers Association of Illinois (SEAOI)	1999
Diamond Award for Excellence in Bridge Engineering New York Association of Consulting Engineers, Inc.	1999
Engineering Excellence Honor Award American Consulting Engineers Council	1999
HIROBA Architectural Award Kinki Federation of Architect & Building Engineers	1998
Award of Excellence 15 th International Association of Lighting Designers (IALD) Design Competition	1998
Rock and Roll Hall of Fame Museum , Cleveland, OH National Engineering Award of Excellence American Institute of Steel Construction (AISC)	1997
Innovative Design and Excellence in Architecture with Steel American Institute of Steel Construction (AISC)	1997
Merit Award The Concrete Industry Board, Inc.	1997
Puerta de Europa , Madrid, Spain First Prize Award for Engineering Excellence New York Association of Consulting Engineers (NYACE)	1996
Meyerson Symphony Center , Dallas, TX Award of Merit for Out-of-Area Project New York Concrete Industry Board	1997
Honor Award American Institute of Architects	1991
Dallas Urban Design Award City of Dallas	1990

Commendation for Excellence in Construction
Associated Builders & Contractors, North Texas Chapter

1990

Professional Honors and Awards

Member, College of Engineering Thought Leaders Council
Marquette University

2015 – Present

Member, Industry Advisory Group
U.S. Department of State, Bureau of Overseas Building Operations (OBO)

2014 – Present

The World Trade Center Medal for Individual Acts of Valor
The Port Authority of New York and New Jersey

1993

Professional Affiliations

Active Member
Structural Engineers Association of Illinois (SEAOIL)

Active Member
Structural Engineers Association of New York (SEAoNY)

Active Member
ASM International

Active Member
American Welding Society (AWS)

Active Member
American Concrete Institute (ACI)

Active Member
American Society of Civil Engineers (ASCE)

Active Member
New York Academy of Sciences (NYAS)

Active Member
American Society for Testing and Materials (ASTM)

Active Member
Structural Engineering Certification Board (SECB)

Updated 13 October 2016

WILLIAM J. FASCHAN, P.E., S.E., F.ASCE, M. Eng.

Partner

Mr. Faschan works on projects in the role of Project Director and Partner-in-Charge. He guides the efforts of our Project Manager in the development of the structural design and in the coordination of the structural engineering services with Owner, Architect, Services Engineer and Contractor. Mr. Faschan works closely with the other Partners and with the staff of other firms.

Professional Education Cornell University, Master of Engineering (Civil), 1978
Cornell University, B.S. with distinction, 1977

Professional Experience 1978 to Date - Leslie E. Robertson Associates



Investigations/Expert Witness Testimony

Hotel and Condominium Tower, North America
Football Stadium, United Kingdom
Office Building Complex, New York
High Rise Apartment Building, Florida, USA
High Rise Hotel, New York
Office Tower, New York
Convention Center Expansion, Illinois
International Airport Terminal, Southeast Asia
Convention Center, Pennsylvania
High Rise Office Building, Pennsylvania
World Trade Center, Repairs after the 1993 Bombing,
New York, NY
NIST Investigation of the World Trade Center Collapse,
New York, NY
Log Framed House, Upstate New York, NY

Office Buildings/Retail

Al Assima, Kuwait City, Kuwait
Tradewinds Square, Kuala Lumpur, Malaysia
Jinan Cheda International Financial Center, Jinan, China
Kuala Lumpur Development, Malaysia
Ben Thanh Towers, Ho Chi Minh City, Vietnam
World Trade Center, Tower 4, New York, NY
Bitexco Financial Tower, Ho Chi Minh City, Vietnam
Hyderabad Office Tower, Hyderabad, India
Shanghai World Financial Center, China
Fenway Center, Boston, MA
Repsol - YPF, Buenos Aires, Argentina
Publix on the Bay Supermarket, Miami, FL
BASF Headquarters, Mount Olive, NJ
Korean Mission, New York, NY
Torre Picasso, Madrid, Spain
FERC Building, Washington, DC

Peer Reviews/Structural Audits

1 World Trade Center, Freedom Tower, New York, NY
7 World Trade Center, New York, NY
Kuala Lumpur City Centre, Malaysia
AOL Time Warner Centre, New York, NY
Marriott Marquis Hotel, New York, NY

The Tequesta and Courvoisier Courts, Miami, FL
Conrad Hilton Hotel, Pacific Place, Hong Kong
Island Shangri-La Hotel, Pacific Place, Hong Kong
Emirates Headquarters, Peer Review, Dubai, UAE

Hotel/Residential

World One Tower, Mumbai, India
M3M Golf View Estate, Mumbai, India
Marriott International Hotel, Hanoi, Vietnam
Oberoi Skyz, Mumbai, India
Canal Point, Dubai, UAE
Flatiron Condominium, New York, NY
Cooper Square Hotel, New York, NY
Monument Center, Reno, NV
Espirito Santo Plaza, Miami, FL
Trump International Hotel & Condominiums NY, NY
Tregunter Path, Hong Kong, China
Olympic Heights, The Philippines
Vista Hotel Renovation, New York, NY

Educational Facilities

New Academic Facility, John Jay College, New York, NY
Butler College, Princeton University, Princeton, NJ
Integrated Sciences Building, SUNY-Geneseo, NY

Museums

Museum of Islamic Art, Doha Qatar
German Historical Museum Addition, Berlin, Germany
Portland Museum of Art, Portland, ME

Sports/Entertainment Facilities

Chicago Bears Stadium, Chicago, IL
Meyerson Symphony Center, Dallas, TX
IZOD Center, East Rutherford, NJ
New Playhouse Theater, Cleveland, OH
Chicago Bears Fieldhouse, Lake Forest, IL
Baseball Hall of Fame Renovation, Cooperstown, NY

Honors and Activities

- AISC Blast and Impact Resistant Design Committee
- Fellow, American Society of Civil Engineers
- Advisory Council of the Cornell University School of Civil and Environmental Engineering
- Advisor, Cornell University Master of Civil Engineering Design Project, 1983-84
- Past-Chairman, Committee CL-5, Gravity Loads and Temperature Effects, Council on Tall Buildings and Urban Habitat
- The World Trade Center Medal for Exceptional Service, 1993
- Cited by ENR as one of "Those Who Made Marks in the Construction Industry," 1989
- New York City Building Codes Structural Loads Committee

Professional Licenses

- Professional Engineer - New York.
Licensed or eligible in all 50 states. N.C.E.E.
- Structural Engineer - California & Illinois
- Civil Engineer-CA. Licensed or eligible in all 50 states.

Papers and Talks

- "Bitexco Financial Tower," *Structure Magazine*, June 2009
- "Structural Design for Tall and Iconic Buildings in the Aftermath of 9/11," Princeton University, 2004
- Co-Author, "Considerations For Retrofit Of Existing Steel Buildings For Resisting Blast And Progressive Collapse", AISC/SINY Blast Design Symposium 2003, New York, NY
- Co-author, "Rising High", *Urban Land Magazine*, Nov/Dec 2000
- "Successful Exposed to View Structures," Structural Engineering Association of Texas, 1999
- "The Art of Structural Engineering," Texas Society of Architects Annual Convention, Dallas, TX, 1995
- "The World Trade Center Bombing & Reconstruction," Boston Society of Civil Engineers Annual Meeting, Boston, Massachusetts, 1994

RICHARD ZOTTOLA, P.E., C.E. M.ASCE, M. Eng.

Partner

Mr. Zottola works on projects in the role of Project Director and Partner-in-Charge. He guides the efforts of our Project Manager in the development of the structural design and in the coordination of the structural engineering services with Owner, Architect, Services Engineer and Contractor. Mr. Zottola works closely with the other Partners and with the staff of other firms.

Professional Education	Cornell University, Master of Engineering (Structural), 1982
Education	Cornell University, Bachelor of Science (Civil), 1981
Professional Experience	1982 to Date - Leslie E. Robertson Associates



Investigations/Expert Witness Testimony

Football Stadium, United Kingdom
Apartment Building, New Jersey
High-Rise Hotel, Nevada
Concrete Overpass Investigation, New York
Hospital Building Settlement Investigation, New York
Investigation of the World Trade Center Collapse, New York, NY
World Trade Center Investigation after the 1993 Bombing, New York, NY

Educational Facilities

Hostos Community College, Allied Health and Natural Science Building, Bronx, NY
Lehman College Nursing School, Bronx, NY
CUNY Advanced Science Research Center, New York, NY
Science Facility, CUNY-Lehman College, Bronx, NY
Mott Haven Campus, NYC SCA, Bronx, NY
Academic Building I, CUNY Medgar Evers College, Brooklyn, NY
Renovation of Sara Delano Roosevelt House, CUNY, NY, NY
Rehabilitation of Husted Hall, SUNY-Albany, NY
Wagner School, New York University, New York, NY
Columbia University East Campus Masterplan, New York, NY
Founders' Hall, Rockefeller University, New York, NY
Welch Library Modernization, Rockefeller University, NY, NY
Stamford Ninth Grade Center, Stamford, CT
Stanwich School Condition Assessment, Greenwich CT

Renovations/Repairs

United Nations Capital Master Plan, New York, NY
World Trade Center Renovations, New York, NY
Windows on the World Renovation, New York, NY
Children's Place Headquarters, Hackensack, NJ
Marriott, World Trade Center, New York, NY
Stuyvesant Town Renovations, New York, NY
Chase Manhattan Bank, Stony Brook, NY

Laboratories/Technical Buildings

Dominican Academy Chemistry Lab, New York, NY
Building Five Expansion, NY Psychiatric Institute, NY, NY
NYC DEP Laboratory Consolidation, Kingston, NY
Assisted Living Facility, Helen Hayes Hospital, West Haverstraw, NY
Buffalo Life Sciences Complex, Buffalo, NY
Medical Research Complex, Roswell Park Cancer Institute, Buffalo, NY
Buck Institute for Age Research, Novato, CA
Biotechnology Incubator Facility, SUNY Farmingdale, NY

Office Buildings

La Caixa Bank Headquarters, Sant Cugat, Spain
Puerta de Europa, Madrid, Spain
Bank of China Tower, Hong Kong, China

Hotel/Residential

Metro Green, Stamford, CT
Hamilton Court, White Plains, NY
Buckingham Place, Manila, Philippines

Sports and Entertainment Facilities

Football Stadium, United Kingdom
iPark – LA Fitness Center, Lake Success, NY
Hunts Point Youth Center, Bronx, NY
San Jose Convention Center, San Jose, CA

Museums/Galleries

Seattle Art Museum, Seattle, Washington
The Flynt Center of Early New England Life, Deerfield, MA
Rock 'N' Roll Hall of Fame and Museum, Cleveland, OH
Athens Museum, Athens, Greece

Broadcasting Facilities

WMHT Broadcasting Facility, Albany, NY
Morgan Stanley Dean Witter Corporate Video, NY, NY
World Trade Center HDTV Antenna, New York, NY

Restoration/Historic Preservation

Apollo Theater, New York, NY
Historic Preservation Services, DCAS, New York, NY
Columbia University Department of Real Estate, NYC
St Ann's Holy Trinity Church, New York, NY

Professional License

- Professional Engineer - New York. Licensed or eligible in all 50 states.
- Civil Engineer - California

Honors and Activities

- American Society of Civil Engineers
- Chi Epsilon, National Civil Engineering Honor Society
- Co-author, "Structural Systems for the New Bank of China Building," Fourth International Conference on Tall Buildings, Hong Kong & Shanghai
- Co-author, "Leaning High Rise Buildings - Puerta de Europa"
- Co-author, "Material Selection in the Design of Innovative Structures – Sentra BDNI Development"
- The World Trade Center Medal for Individual Acts of Valor, 1993
- "Puerta De Europa" and "Composite Structures in Asia," American Concrete Institute Fall Convention, Montreal, Canada, 1995

ELIAS S. MATAR, P.E.

Partner

Mr. Matar works on projects in the role of Project Director and Partner-in-Charge. He guides the efforts of our Project Manager in the development of the structural design and in the coordination of the structural engineering services with Owner, Architect, Services Engineer and Contractor. Mr. Matar works closely with all members of the design team to meet Client goals for budget and schedule.

Professional Education Cornell University, Master of Business Administration, 1990
Cornell University, Master of Engineering (Civil), 1989
Cornell University, BSCE with Distinction, 1988

Professional Experience 1990 to Date - Leslie E. Robertson Associates



Investigations/Inspections/Peer Review

Hotel and Condominium Tower, North America
Kingston Pointe, North Bergen, NJ
Soccer Stadium, United Kingdom
Post-Hurricane Damage Assessment, Espirito Santo, Miami, FL
Two Liberty Place Peer Review, Philadelphia, PA
Two Tequesta Point Residential Project, Miami,

Educational/Laboratories/Technical Buildings

Columbia University Medical Education Building, NY, NY
Wexler Library Renovation, Hunter College, New York, NY
Gateway Center, Westchester Community College, Valhalla, NY
Javits Lecture Hall Renovation, SUNY-Stony Brook, NY
Roosevelt Hall at Brooklyn College, CUNY, Brooklyn, NY
Buck Institute for Age Research, Novato, CA

Hotel/Residential

Kumar Builders Worli Project, Mumbai, India
505 West 47th Street, New York, NY
495 West Street, New York, NY
250 East 49th Street, New York, NY
315 East 46th Street, New York, NY
Tregunter Path, Hong Kong
Landes Residence, Miami, FL

Parks and Recreation

Union Square North Pavilion and Playground, New York, NY
Hudson Park and Boulevard, New York, NY
Brooklyn Bridge Park, DEP Conversion Site, Brooklyn, NY
Idlewild Park Nature Center, Queens, NY

Museums/Galleries

Newseum and Freedom Forum, Washington, D.C.

Convention Centers/Arenas/Theaters

Albany Convention Center and Hotel, Albany, NY
Baltimore Convention Center Expansion, Baltimore, MD

Office Buildings/Mixed-Use

Mixed-Use Project, Peru
Office Tower, Peru
Hermitage Plaza, Paris, France
Shanghai World Financial Center, Shanghai, China
Espirito Santo Plaza, Miami, FL
Regional Justice Center, Las Vegas, NV
Sentra BDNI, Jakarta, Indonesia
La Caixa Bank Headquarters, Sant Cugat, Spain
BASF Headquarters, Mount Olive, NJ

Puerta de Europa, Madrid, Spain

Bridges

Henry Hudson Bridge Inspection Platforms, New York, NY
Pedestrian Bridge, Espirito Santo Plaza, Miami, FL
Pedestrian Bridges, World Trade Center, New York, NY

Restaurants

Morimoto, New York, NY
Centro Lounge & Restaurant, Miami, FL

Aviation/Transportation Projects

McCarran International Airport Expansion, Las Vegas, NV
Air Traffic Control Tower, Bourne, MA

Renovations/Repairs

CMG Manhattan Office Renovation, New York, NY
Brown University, Friedman Study Commons, Providence, RI
Surrey Hotel, New York, NY
School of American Ballet, New York, NY
The Children's Place Headquarters, Secaucus, NJ
Ethical Culture School Renovation, New York, NY
World Trade Center Repairs Due to Bombing, NY, NY
World Trade Center Tenant Modifications, New York, NY

Sculptures

Richard Serra sculptures at:
-Princeton University, -National Gallery, -Riggio Residence
Beverly Pepper's "Sentinels" - New York, NY

Professional License

Professional Engineer - New York

Honors and Activities

Adjunct Associate Professor of Architecture,
Columbia University
Member, ASCE
Structural Engineers Association of New York
World Trade Center Medal for Individual Acts of Valor, 1993

Papers and Talks

- Co-Author, "Espirito Santo Plaza, Miami, Florida," *Structural Engineering International*, 2/2003
- "Espirito Santo Plaza – Miami's Newest Tower," October 2002, New York, NY

Languages

English, Spanish, French, Arabic

RICHARD B. GARLOCK, P.E.

Associate Partner

As Project Manager, Mr. Garlock provides detailed guidance to the analysis and the development of the structural design and coordinates the structural engineering services with Owner, Architect, Services Engineer and Contractor. He works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.



Education Lehigh University, M.S. (Civil Engineering), 1993
Syracuse University, B.S.C.E. (Civil Engineering), 1990

Professional Experience 1993 to Date - Leslie E. Robertson Associates

Investigation

Baseline Performance of the World Trade Center Towers NIST
WTC Investigation, Washington, DC

Emergency Response

KL Sentral, Kuala Lumpur, Malaysia
World Trade Center Bombing - Repairs and Reconstruction, New York, NY (Field Engineer)
World Trade Center Recovery, New York, NY (Field Engineer)
AOL Time Warner Scaffolding Stabilization, NY, NY (Contractor's Engineer)

Security Projects

Regional Justice Center, Las Vegas, NV
Federal Facility Security Enhancement, Building 1
Federal Energy Regulatory Commission, Washington, DC

Educational Facilities

Butler College, Princeton University, Princeton, NJ
Princeton Friend Center for Engineering, Princeton, NJ
Princeton School of Architecture, Princeton, NJ
E-Quad Renovations, Princeton University, Princeton, NJ
Alfred Lerner Hall, Columbia University Ramps and Glass Wall (Contractor's Engineer), New York, NY
Roosevelt Elementary School, Passaic, NJ
Central Avenue Elementary School, Passaic, NJ
Henry Howe Elementary School, Passaic, NJ
Main Street Elementary School, Passaic, NJ
Thomas Jefferson Elementary School, Passaic, NJ
PS 166 Modernization, New York, NY

Renovations/Repairs

Prada SoHo, 575 Broadway, New York, NY
World Trade Center Master Plan - Plaza Windscreen, NYC
World Trade Center Tenant Modifications, NY, NY
7WTC Adjacent Slurry Wall Stabilization, NY, NY
PS 166 Modernization, New York, NY
Thomas Jefferson Elementary School, Passaic, NJ

Hotel/Residential

Clover Hill Residence, Underground Tunnel, Colts Neck, NJ
West Street Residential Project, New York, NY
Grange Court, Singapore
Debrosses Street Loft, New York, NY

Office Buildings

Tower 4, World Trade Center, New York, NY
United Nations Consolidation Building, New York, NY
Sentra BDNI, Jakarta, Indonesia

Museums/Galleries

Gagosian Gallery Renovation, New York, NY
New York Hall of Science Addition, Queens, NY
William J. Clinton Presidential Center, Little Rock, AR

Aviation/Transportation

McCarran International Airport Expansion, Las Vegas, NV
Interim WTC PATH Station, New York, NY

Peer Reviews

1 World Trade Center, Freedom Tower, New York, NY
World Trade Center Tower 2, New York, NY
World Trade Center Tower 3, New York, NY
Torre Espacio, Madrid, Spain

Sculptures

Richard Serra sculpture, Gagosian Gallery - 1999/2000
Chris Burden sculpture, Gagosian Gallery - 2000

Convention Centers/Arenas/Theaters

Baltimore Convention Center Expansion, Baltimore, MD

Specialized Training

Confined Space Entry
Self Contained Breathing Apparatus Qualified
ATC 20-1 Post-Earthquake Safety Evaluation of Buildings
Urban Search & Rescue Structure Specialist I & II

Teaching

Visiting Lecturer for Princeton University's Department of Civil and Environmental Engineering since 2005

Professional License

Professional Engineer - New York

Presentations, Honors and Activities

- Author, "Sustainable Design: A Structural Perspective," International Roundtable on Engineering, Construct Canada, 2005
- Structures Specialist, State of New Jersey Office of Emergency Management, Urban Search & Rescue (NJ-TF1)
Tropicana Parking Garage, Atlantic City, NJ
PETCO Gas Explosion, Eatontown, NJ
Apartment Building, Hackensack, NJ
- Structural Engineers Association of New York
- American Society of Civil Engineers
- Co-Author, "Considerations For Retrofit of Existing Steel Buildings For Resisting Blast And Progressive Collapse", AISC/SINY Blast Design Symposium 2003, New York, NY

W. JOHN PUGH, P.E., M.ASCE

Associate Partner

As Project Manager, Mr. Pugh provides detailed guidance to the analysis and the development of the structural design and coordinates the structural engineering services with Owner, Architect, Services Engineer and Contractor. He works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.



Professional Education Pennsylvania State University,
Bachelor of Architectural Engineering, 1978

Professional Experience 1978 to Date - Leslie E. Robertson Associates

Investigations

Hotel and Condominium Tower, North America
Commuter Rail Structure, North America
Football Stadium, United Kingdom
Liberty Place II, Philadelphia, PA
Chek Lap Kok International Airport Roof Evaluation,
Hong Kong
McCormick Place Convention Center, Chicago, IL

Peer Review/Structural Audits

Busan Lotte Town Tower, Busan, Korea
International Commerce Centre, Kowloon,
Hong Kong, China
One Central, the Mandarin Oriental, Macau, China
Icon Hotel, Dubai Promenade, Dubai, UAE
Landmark Tower, Hong Kong, China
First Bank Place, Minneapolis, MN
101 Hudson Street, Jersey City, NJ
International Finance Center, IFC 1 and IFC 2,
Hong Kong Station, China

Office Buildings

Lotte Jamsil Tower, Seoul, Korea
Shanghai World Financial Center, China
Mabarak Center, Lahore, Pakistan
AT&T Corporate Headquarters (now SONY), New York, NY
International Finance Center, Shenyang, China
Government Center, Toledo, OH
PPG Corporate Headquarters, Pittsburgh, PA
U. S. Embassy, Caracas, Venezuela
The Bank of China, Hong Kong
Puerta de Europa, Madrid, Spain
International Trade Center, Barcelona, Spain
Sentra BDNI, Jakarta, Republik Indonesia
Capital Place, Fort Bonifacio, The Philippines

Convention Centers/Arenas/Theaters

Baltimore Convention Center, Baltimore, MD
Palm Beach Opera Center, West Palm Beach, FL

Museums/Galleries

The Israel Museum, Jerusalem
National Constitution Center, Philadelphia, PA
German Historical Museum Addition, Berlin, Germany
William J. Clinton Presidential Center, Little Rock, AR

Aviation/Transportation Facilities

King Fahd International Airport, Dhahran, Saudi Arabia

Renovations/Repairs

Port Authority Bus Terminal, New York, NY
Federal Reserve Bank, Richmond, VA
World Trade Center Repairs Due to Bombing, NYC
World Trade Center Tenant Modifications, New York, NY
Vista Hotel Renovation, New York, NY

Construction Surveillance

The Bank of China, Hong Kong – Senior Resident Structural Engineer – 2 years
The World Trade Center Repairs due to Bombing – Senior Resident Structural Engineer – 2 years
Government Center, Toledo – Senior Resident Structural Engineer

Educational Facilities

Academic Buildings and Greenhouse, SUNY,
Binghamton, NY
RPI Center for Industrial Innovation, Troy, NY
M.I.T – Experimental Media Facility, Cambridge, MA

Laboratories/Technical Buildings

Buck Institute for Age Research, Novato, CA

Professional License

Professional Engineer - New York

Honors and Activities

- Structural Engineer's Association of New York
- American Society of Civil Engineers
- Tau Beta Pi National Engineering Honor Society

JASON B. STONE, P.E.

Senior Associate

As Project Manager, Mr. Stone provides detailed guidance on the analysis and the development of structural design and coordinates structural engineering services with the Owner, Architect, Services Engineer and Contractor. He works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.

Professional Education Stanford University, M.S. Structural Engineering, 2002
University of Illinois at Urbana-Champaign, B.S. Civil Engineering, Mathematics minor, 2001

Professional Experience Leslie E. Robertson Associates, 2002 to Present



Office Buildings

Shanghai World Financial Center, Shanghai, China
World Trade Center, Tower 4, New York, NY

Hotel/Residential

Ardmore 6 Residential Tower, Singapore
Cooper Square Hotel, New York, NY
Oberoi Exquisite, Mumbai, India
M3M Golf Estate, Garagon, India

Educational Facilities

Academic Building I, CUNY John Jay College, New York, NY
Gateway Center, Westchester Community College, Valhalla, NY
Science Building, CUNY Lehman College, Bronx, NY
Buffalo Life Sciences Complex, SUNY, Buffalo, NY
Sara Delano Roosevelt House, CUNY Hunter College, New York, NY
Stamford Ninth Grade Center, Stamford, CT

Renovations/Repairs

Apollo Theater, New York, NY
Port Authority Bus Terminal Seismic Upgrade, New York, NY
Sara Delano Roosevelt House, CUNY Hunter College, New York, NY

Laboratory/Technical Facilities

NYC DEP Laboratory Consolidation, Kingston, NY

Peer Review

Federal Facility, Washington, DC
Football Stadium, United Kingdom
India Bulls Sky Suites, Sky Tower Complex, Mumbai, India

Museums/Libraries

William Jefferson Clinton Presidential Center, Little Rock, AR
New York Hall of Science Great Hall Facade, New York, NY

Aviation/Transportation Facilities

Port Authority Bus Terminal Seismic Upgrade, New York, NY

Sports Facilities

Chicago Olympic Aquatics Center Concept Design,
Chicago, IL

Professional License

Professional Engineer – California

Honors and Activities

- Associate Adjunct Professor of Architecture, Columbia University

Papers and Talks

- Juror, AISC IDEAS² Awards, 2016
- Tour Leader, Open House New York, Engineering Weekend, John Jay College of Criminal Justice Tour, October 2015
- Author, "Justice is Served," *Modern Steel*, September 2014
- Author, "John Jay College Expansion – Transforming a 21st Century Urban College Campus New York, NY," *STRUCTURE Magazine*, June 2013
- Contributor, *Metals in Construction*, Winter 2013

STEPHEN PFUND, P.E.

Associate

As Project Engineer, Mr. Pfund provides detailed guidance to the analysis and the development of structural design and coordinates structural engineering services with the Owner, Architect, Services Engineer and Contractor. He works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.

Professional Education Pennsylvania State University, University Park, PA
M.S. Architectural Engineering, 2012
Pennsylvania State University, University Park, PA
B.S. Architectural Engineering, 2011

Professional Experience Leslie E. Robertson Associates, 2012 to Present

Renovation Projects

Kingsborough Community College Performing Arts Center, City University of New York, Brooklyn, NY
Medgar Evers College Carroll Street Building, City University of New York, Brooklyn, NY
Center for Design Innovation, Massachusetts College of Art and Design, Boston, MA

Education Facilities

Medical and Graduate Education Building, Columbia University Medical Center, New York, NY
New Academic Building, School of Public Health, Health Science Center, State University of New York, Brooklyn, NY
York College Academic Village & Conference Center, The City University of New York, Jamaica, NY
Center for Design Innovation, Massachusetts College of Art and Design, Boston, MA
Kingsborough Community College Performing Arts Center, City University of New York, Brooklyn, NY
Medgar Evers College Carroll Street Building, City University of New York, Brooklyn, NY
Entrance Canopy, Creative Arts Center, Brown University, Providence, RI
Hunter College Wexler Library, City University of New York, New York, NY

Laboratories/Healthcare

Kimmel Pavilion, NYU Langone Medical Center, New York, NY
Energy Building, NYU Langone Medical Center, New York, NY

Government/Convention Centers/Public Facilities

US Embassy, Ankara, Turkey
Jacob K. Javits Convention Center, New York, NY



Investigation Projects

Embassy Building, Central Asia
Embassy Building, Europe
Hotel and Condominium Tower, North America
Residential Structure, North America
Airport, North America

Competitions

Duck-Work, Winner, Timber New England Design and Fabrication, Boston Society of Architecture, Boston, MA
CANstruction, New York, NY
2015 Team Member, Winner Best Use of Can Labels
2014, Captain, Winner Jurors' Favorite (New York and International)
2013 Captain, Winner Jurors' Favorite (New York), International Founder Memorial Award
2012 Team Member, Winner Jurors' Favorite

Professional License

Professional Engineer – New York

Honors and Activities

Phi Alpha Epsilon AE Honor Society
Robert McNamara AE Scholarship
Louis and Judy Geschwinder Endowed Scholarship
Class of 1975 AE Scholarship
BIM Thesis Winning Thesis Award

MEGAN LENZ, P.E.

Associate

As an Associate, Megan Lenz provides detailed guidance on the analysis and development of structural design and coordinates structural engineering services with the Owner, Architect, Services Engineer and Contractor. Ms. Lenz is also LERA's special inspection supervisor responsible for the direct supervision of the special inspection program's employees, including recruitment and training. She works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.



Professional Education

University of California, Berkeley, CA
M.S. Structural Engineering, May 2011
Queen's University, Kingston, Canada
B.S. Civil Engineering, May 2010

Professional Experience

Leslie E. Robertson Associates, 2011 to Present
Structural E.I.T, DIALOG, Calgary, Canada, 2010

Office Buildings/Mixed-Use

4 World Trade Center, New York, NY
United Nations Consolidated Building, New York, NY
Capitol Crossing, Washington, DC
Al-Assima, Kuwait City, Kuwait

Government Facilities

Embassy Building, Middle East

Residential

Private Residence, East Hampton, NY

Retail

Al-Assima, Kuwait City, Kuwait
4 World Trade Center Dining Terrace, New York, NY
Victoria's Secret Flagship Store, New York, NY
Banana Republic Flagship Store, New York, NY
H&M Flagship Store, New York, NY
Tom Ford Flagship Store, New York, NY
Jones the Grocer, New York, NY

Healthcare

Kimmel Pavilion, NYU Medical Center, New York, NY

Education

SUNY Albany ETEC, Albany, NY

Art Installations

Sky Memory, 4 World Trade Center, New York, NY

Special Inspections

4 World Trade Center, New York, NY
Columbia University College of Physicians and Surgeons,
New York, NY
Kimmel Pavilion, NYU Medical Center, New York, NY

Professional Certifications

- ACI Concrete Construction Special Inspector
- ACI Concrete Field Testing Technician – Grade I
- ICC Prestressed Concrete Special Inspector

Presentations

- Current and Past Experience with SCC, Concrete Industry Board Morning Educational Seminar, 2016
- A Day in the Life of an SCC Project, World of Concrete, Las Vegas, NV 2016
- "Engineering Insights" Interview, 2016

Honors & Awards

- WBC's Outstanding Women, Women Builders Council, 2014
- Internal Award, Canadian Institute of Steel Construction
- Mike Hamze Memorial Award (Community Involvement)

Professional License

Professional Engineer – California

KSENIA TRETIKOVA

Design Engineer

As Project Engineer, Ms. Tretiakova provides detailed guidance to the analysis and the development of structural design and coordinates structural engineering services with the Owner, Architect, Services Engineer and Contractor. She works closely with LERA's Project Director and Partner-in-Charge and with the staff of other firms.



Professional Education Pennsylvania State University
M.S. Structural Engineering, 2013
Pennsylvania State University
B.S. Structural Engineering, 2011

Professional Experience Leslie E. Robertson Associates, 2013 to Present

Renovations

Soldiers and Sailors Memorial, New York, NY
Coney Island Hospital, Brooklyn, NY
Massachusetts College of Art (MassArt) Design and Media Center, Boston, MA
Fordham University Law Library, New York, NY

Healthcare Facilities

Coney Island Hospital, Brooklyn, NY
Kimmel Pavilion, NYU Medical Center, New York, NY
SUNY Downstate School of Public Health, Brooklyn, NY
Columbia University Medical Center Graduate and Education Building, New York, NY

Special Inspections

Columbia University Medical Center Graduate and Education Building, New York, NY
Kimmel Pavilion, NYU Medical Center, New York, NY
The Women's Building, New York, NY

Mixed-Use Developments

Al-Assima, Kuwait City, Kuwait

Academic Facilities

Massachusetts College of Art (MassArt) Design and Media Center, Boston, MA
Fordham University Law Library, New York, NY
Kimmel Pavilion, NYU Medical Center, New York, NY
SUNY Downstate School of Public Health, Brooklyn, NY
Columbia University Medical Center Graduate and Education Building, New York, NY

Competitions/Honors

CANstruction, New York, NY
Captain, International Juror's Favorite, 2014
Captain, New York Juror's Favorite, 2014
Team Member, New York Jurors' Favorite, 2013
Team Member, Founder Memorial Award, 2013

Professional Certifications

- ACI Concrete Construction Special Inspector
- ACI Concrete Field Testing Technician – Grade I

FORENSIC ENGINEERING & LOSS CONSULTING



FORENSIC ENGINEERING

PROPERTY LOSS CONSULTING SERVICES

With a reputation for design excellence, LERA is frequently called upon to investigate building problems. We have considerable experience in the investigation of building problems and the design of repairs and rehabilitation of buildings in distress. Our services range from structural integrity inspections and condition studies to the design and preparation of construction documents for major repairs. In certain instances where the building problems we investigate result in litigation, our scope of work has included expert witness testimony.

Projects for which we have provided these services include office buildings, hotels, condominiums, arenas, theaters, convention centers, airports and government buildings. Representative projects include the following:

[Chek Lap Kok Airport Terminal Roof Structure Evaluation, Hong Kong](#)

This project consisted of the evaluation, on behalf of the contractor, of constructability issues relating to the structural steel of the new terminal's 14 million-sf (1.3 million-sm) roof structure. The terminal roof consists of large, prefabricated structural steel panels. Constructability issues involved tolerances associated with roof panel fabrication, assembly, and erection.

[C&D Building Settlement Investigation, Bellevue Hospital Center, New York, NY](#)

This existing 8-story building, constructed in the 1910's, experienced significant settlement caused by the construction of an adjacent building. We assessed damage to the structural frame and provided peer review services for the design of repairs.

[Northshore Health Systems Facilities, Long Island, NY](#)

This project consisted of the investigation of a window washing support mechanism failure and included design of measures to correct a design deficiency.

[Federal Reserve Bank, Minneapolis, MN](#)

This project included the evaluation of issues associated with the curtain wall, air leakage between floors, and fireproofing.

[NIST Investigation of the World Trade Center Collapse, Washington, DC](#)

This project consisted of a 3-year building and fire safety investigation conducted by the National Institute of Standards and Technology (NIST) to study the factors contributing to the probable cause (or causes) of post-impact collapse of the WTC Towers (WTC 1 and 2) and WTC 7. LERA's role included the development and analysis of reference structural analysis models for each tower. LERA also developed structural databases of the primary components of the WTC 1 and WTC 2 towers including the subgrade level.



Chek Lap Kok Airport



[39 Vestry Street](#), New York, NY

This project consisted of examining the existing structure of a 7-story masonry, wood, and steel building which underwent a previous renovation for a condominium conversion. Investigations focused on retrofitting existing timber columns as well as the load-carrying capacity of the various setback roof terraces for the purpose of adding new gardens and pergolas.

[John Hancock Tower](#), Boston, MA

This project consisted of an investigation of building sway and lateral stability, and included a friend-of-the-court opinion paper.

[Two Tequesta Point Redesign](#), Miami, FL

LERA was retained by Swire Properties to review the design of a 40-story residential project under construction in Miami, FL. The project involved re-design of portions of the project. In order to prevent delays in the original project schedule, LERA's review and re-design were completed on a fast-track schedule minimizing the delay to the project's original schedule.

[World Trade Center Post Bombing Repairs](#), New York

This project consisted of the investigation of the structure following the 1993 bombing, and the demolition, shoring, and repairs to the areas damaged. This project also included expert witness testimony.

[World Trade Center 9/11 Rescue and Recovery Effort](#), New York

This work consisted of volunteer services to assist government agencies and recovery contractors in searching the buildings and subgrade structures, removing debris, and securing damaged structures and foundation elements.

[World Trade Center 9/11 Insurance Litigation](#), New York

LERA provided investigative and structural modeling services related to the question of whether the attacks constituted one or two occurrences.

[Two Liberty Place](#), Philadelphia, PA

This project consisted of expert witness testimony and the investigation of the metal deck edge form, truss connections, column shortening, curtainwall to structure connections, and steel connections of this high-rise office building.

[Wembley Arena](#), United Kingdom

LERA provided expert witness and construction engineering services on behalf of the contractor for a sports and entertainment stadium with a retractable roof. Our services included a review of the adequacy of construction documents for the structure and construction sequence, and investigation of the reasons for changes to construction documents.

[Convention Center Expansion](#), Chicago, IL

LERA was retained to review a contractor's claim for extra costs and provide an opinion and expert witness testimony regarding the validity of the claim, which included material costs, fabrication costs, erection costs, detailing costs, overtime, loss of efficiency, disruption, and miscellaneous other costs for a variety of drawing revisions, clarifications, RFI's, etc.



Two Tequesta Point Redesign, Miami, FL



Two Liberty Place, Philadelphia, PA



Convention Center Expansion, Chicago, IL

Embassy, North America

LERA reviewed the structural design of this government facility and evaluated structural issues related to delays that were encountered during construction. Our services included expert witness testimony on behalf of the owner at a deposition.

Continental Airlines Arena, East Rutherford, NJ

LERA has provided services to the New Jersey Sports and Exposition Authority for numerous projects at the Continental Arena, including investigations of truss damage, roof loading imposed by rigging loads, and terrazzo cracks. LERA also performed a vibration study of the arena seating areas.

Citicorp Center, New York, NY

LERA was retained by Citibank to lead the design of structural repairs required to correct the design deficiencies of this high-rise building.

Highway Study, North America

LERA reviewed the structural design of components involved in the collapse of a portion of a highway structure. Our services included engineering investigations and assistance to attorneys preparing arguments.

140 Broadway, New York, NY

Investigation of the feasibility of repairing curtainwall supports at an existing 40-story building.

Port Regalle Condominiums, Staten Island, NY

LERA was retained by an adjuster to investigate the extent of damage to this waterfront condominium complex resulting from flooding during Hurricane Sandy.

Harristown Key Block, Strawberry Square, Harristown, NY

This project consisted of an investigation into the cladding and design for re-cladding over existing ceramic tile-faced precast wall panels with metal panels.

Hotel Penta, New York, NY

This project consisted of a pre-purchase condition survey of load-bearing masonry façade on behalf of a prospective buyer.

Chrysler Building, New York, NY

The project consisted of repairs to the cladding of this landmark building.

High-Rise Condominium, Miami, FL

LERA reviewed the structural design of an occupied 30-story condominium and associated parking structure and designed repairs to strengthen deficiencies in the existing structure.

Marriott Marquis Hotel, New York, NY

This project consisted of the investigation of truss erection and erection bracing and included expert witness testimony.



Chrysler Building, New York, NY



Citicorp Center, New York, NY



Port Regalle Condominiums, Staten Island, NY

[High-Rise Apartment Building](#), Miami, FL

LERA reviewed the structural design of an occupied 25-story apartment building and associated parking structure. A wind tunnel study was accomplished to demonstrate the adequacy of the existing structure.

[Espirito Santo Plaza](#), Miami, FL

LERA assessed damage to the structure and curtainwall following Hurricane Wilma.

[IBM Office Building](#), Sterling Forest, NY

This project consisted of the investigation of concrete slab cracks in this suburban office building.

[Pirelli Armstrong Tire Co.](#), New Haven, CT

This project consisted of the investigation of concrete slab cracks.

[Rockefeller University](#), New York, NY

This project consisted of a peer review, investigation, and repairs to truss cracks in a dormitory building.

[Meridian Plaza](#), Philadelphia, PA

This project consisted of the preliminary investigation of fire damage and the review of repairs.

[GPU Tank](#), Parsippany, NJ

This project consisted of an investigation of water tank cracks.

[Whitehead Residence](#), New York, NY

This project consisted of the monitoring of roadway construction along a major highway. Our firm was retained as an advisor to the owner of a private residence adjacent to the thoroughfare.

[Log Framed House](#), Upstate New York, NY

Investigation of cracking wood logs in a private residence.

[Condo Building](#), New York, NY

Investigation of a building over the Riverside Drive.

[KL Sentral 348](#), Kuala Lumpur, Malaysia

LERA provided guidance on the damage assessment, structural evaluation, and repair program for a 33-story office building that was fire damaged while still under construction. LERA provide expedited emergency services to the developer with the emphasis on structural integrity, maintaining compliance with local and international building codes, and resuming construction. Construction resumed shortly thereafter and the buildings continued to their intended height and function.



Expirito Santo Plaza, Miami, FL



Wembley Arena, United Kingdom



Marriott Marquis Hotel, New York, NY

DESIGN PROJECTS



SHANGHAI WORLD FINANCIAL CENTER

Shanghai, China



The Shanghai World Financial Center is described as both a city within a city and a global magnet, symbolizing China's prominence in global trade. The tower's central location in the Pudong District is ideally sited for international client groups. Podium level uses, including retail, serve to enliven the streetscape and engage passersby. The tower includes office, trading, hotel, museum, and retail uses.

LERA first performed an alternative structural design for a contractor of this 1,509-ft (460-m) tall building in 1997. When the developer, Mori Building Company, elected to construct on the existing foundations a taller building at 1,614-ft (492 meters) with 16% more floor area, others were unable to provide a design. We developed a new structural system that decreased the amount of steel and concrete, and provided enhanced reliability and robustness, all while speeding the construction, and reducing costs in both structural and non-structural systems.

The building, opened in 2008, won the *Best Tall Building in the World, 2008* award from The Council on Tall Buildings and Urban Habitat (CTBUH). The jury stated "the structure is nothing short of genius."

Construction Cost \$1.3 billion

Completion Date 2008

Owner

Mori Building Company

Architect

Kohn Pedersen Fox Associates

Awards

Best Mixed-Use Project, MIPIM Asia Awards, 2009

Diamond Award for Engineering Excellence,
ACEC New York, 2008

LOTTE WORLD TOWER

Seoul, South Korea



At 555 m (1,820 ft) tall, the 123-story Lotte World Tower became the fifth tallest building in the world upon completion. The \$2.5 billion tower and adjacent development, totaling 505,300-gsm (5.4 million-gsf), features a variety of usages, including office, retail, hotel, officetel, museum and observation space.

The tower's elegant tapered shape is a nod to traditional Korean art forms. Though it led to challenging structural complexities, it was effective at minimizing wind loads. LERA worked closely with the architects to strike a balance between the structural efficiency gained by adding columns and the need to preserve open floor plans. The result is a system of eight concrete mega-columns with long-span spandrels between them—up to 24.5 m (80 ft)—along with concrete core walls, outriggers and belt trusses.

Construction Cost \$2.5 billion

Completion Date 2016

Owner

Lotte Group

Architect

Kohn Pedersen Fox Associates

Awards

NCSEA Excellence in Structural Engineering, 2016

SEAoNY Excellence in Structural Engineering, 2016



Leslie E. Robertson Associates

LERA

Consulting Structural Engineers

WORLD TRADE CENTER, TOWER 4

New York, NY



Facing onto the World Trade Center Memorial Park, Tower 4 stands alongside Tower 1 as an important part of the redevelopment of Downtown Manhattan.

In addition to Class A office space, retail and fine dining will be provided within a five story podium. Curtainwall at portions of the building is intended to provide transparency. The project consists of a 947-ft (290-m) office tower with a gross construction area of 2.3 million-sf (214,000-sm). This area includes the below grade construction within the street-level boundaries of the project site. Below-grade structure is designed for flood protection of critical systems. It has been designed to meet LEED-Gold criteria.

Completion Date

Exterior & Lobby 2013
Retail & Dining Ongoing

Owner

Silverstein Properties

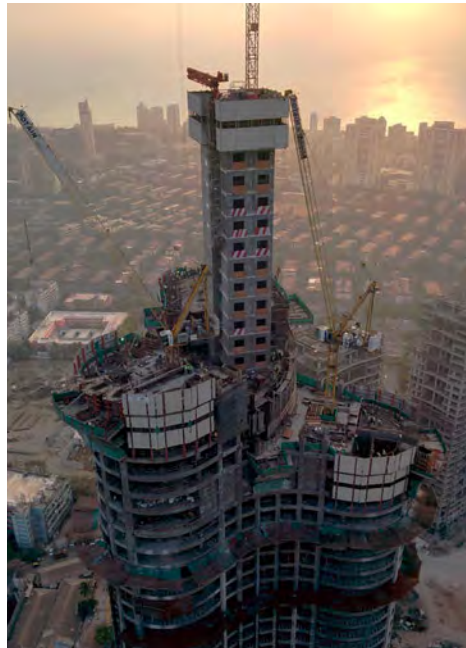
Architect

Maki & Associates - Design Architect
Adamson Associates - Executive Architect



LODHA PROJECT ALPHA AND WORLD ONE TOWER

Mumbai, India



This project consists of a multi building, mixed use development. The first phase of work will contain 5,500,400-sf (515,000sm) of buildable area, including a 1,220,600sf (113,400sm) residential tower. The second phase will be comprised of residential, commercial, retail and parking uses totaling approximately 4,000,400sf (374,000sm) of space. LERA will be providing complete structural engineering services for the project from the design through construction phase.

Construction Cost
Completion Date

Not Available
Under Construction

Owner
Lodha Realty

Architect
Pei Cobb Freed



BITEXCO FINANCIAL TOWER

Ho Chi Minh City, Vietnam



The shape of the tower is modeled after a lotus flower bud, the national flower and an emblem of the Vietnam's emergence into the global community of trade, business, and commerce. The project consists of a 68 story, 870-ft (265m) office tower and podium with a gross construction area of approximately 1,230,000 sf (114,000 sm). The tower contains four levels of parking below grade. Site constraints required the building be slender. A concrete structural system was devised in order to achieve an effective building solution. As the project is sited on the alluvial plain terminating the Mekong River delta, soil conditions presented an additional challenge to the design of this tall tower.

Construction Cost \$80 million
Completion Date 2010

Owner
Bitexco Group of Companies

Architect
Carlos Zapata Studio



BANK OF CHINA TOWER

Hong Kong, China



The Bank of China is a dramatic display of geometric form, an example of architecture and structural engineering seamlessly conjoined. It was envisioned by architect I.M. Pei as a "cube rising out of the ground, and diagonally divided into quadrants."

Internationally recognized for its iconic design, the building has received awards from New York Association of Consulting Engineers, the Structural Engineers Association of Illinois, and Conseils du Canada.

The 1.4-million-sf (131,000-sm) office tower consists of 70-stories and includes 2 levels of underground parking. Constructed on a tightly constrained, urban site framed by highways, the design solution called for a slender tower design. When first completed for the Sun Chung Management Co. Ltd., the Bank of China was the world's tallest building outside of New York and Chicago, and the fifth tallest in the world.

Construction Cost \$420 million

Completion Date 1988

Owner

Sun Chung Building Management

Architect

Pei Cobb Freed & Partners

HERMITAGE PLAZA

Courbevoie, France



Located in Paris, France on the Seine river bank. A 3.4 million-sf (310,000 sm) mixed use development combining residential, hotel, office, retail and parking. The central feature of the project is a pair of high rise towers each reaching a height of 1060-ft (323 m). A third building rising 174-ft (53 m) above grade is a dedicated office building. The three buildings sit on a common retail and parking podium extending several levels below grade.

Construction Cost

Not Available

Completion Date

Concept Design

Owner

Hermitage Immobilier

Architect

Foster and Partners



THE STANDARD HOTEL, EAST VILLAGE

New York, NY

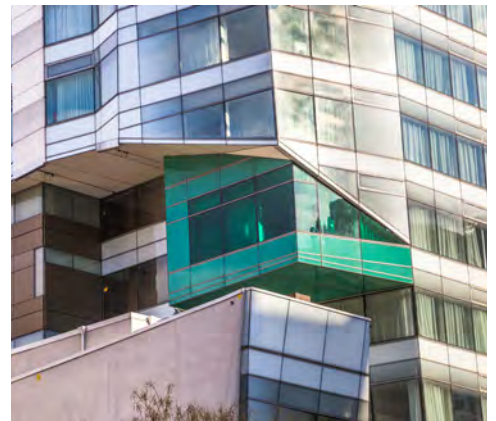


The Standard Hotel, East Village is a 20-story hotel with a gross area of approximately 100,000 sf (9,300 sm) plus two full basements.

Construction Cost \$45 million
Completion Date 2009

Owner
Lounge Sleep

Architect
Carlos Zapata Studio



ESPIRITO SANTO PLAZA

Miami, FL



Located on Brickell Avenue, in the heart of Miami's international financial district, Espirito Santo Plaza's front façade, with its sloping face and graceful parabolic arch is a well-known feature of the Miami skyline. The geometry of the high arch is created by the intersection of the vertical concave surface inside the arch with the inclined plane around it. Espirito Santo Plaza is a 37-story glass tower with an attached 13-story parking garage. The project includes an 80 ft x 120 ft steel framed glass canopy located between the tower and the parking garage. The canopy is supported along its centerline and cantilevers 50 feet in each direction. Its connections to the two buildings are detailed to allow the tower and garage to move independently of each other.

The parking garage is a 500,000-sf (46,400-sm) garage with a roof level health club that includes tennis courts and a swimming pool. At the first floor level, the garage is linked to the tower with a pedestrian bridge. The tower has a 10 story high atrium. The atrium is enclosed with a steel framed skylight and a 60 ft wide by 110 ft high steel framed glass wall.

Construction Cost \$105 million
Completion Date 2003

Owner
Estoril, Inc.

Architect
Kohn Pedersen Fox Associates

NEWSEUM AND FREEDOM FORUM

Washington, District of Columbia



Dedicated to journalism and free speech, this museum features a two story media wall and a glass facade, reflecting openness and transparency. The 650,000 sf (60,000 sm) building contains galleries, a 500 seat auditorium, technologically advanced black box broadcasting facilities, office and retail space in a seven story building envelope. A unique truss system allows for the formation of a 4,500 sf (420 sm) window wall and monumental stair.

Design considerations included four below-grade levels which are built with reinforced concrete. A sixteen-inch thick foundation retains soil at the building's perimeter.

Construction Cost \$230 million
Completion Date 2008

Owner
Freedom Forum

Architect
Ennead Architects



WILLIAM JEFFERSON CLINTON PRESIDENTIAL LIBRARY & MUSEUM

Little Rock, Arkansas



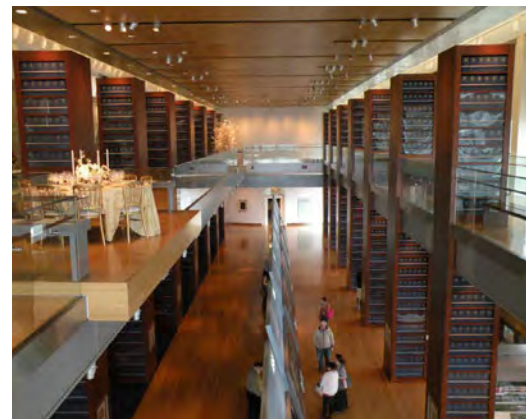
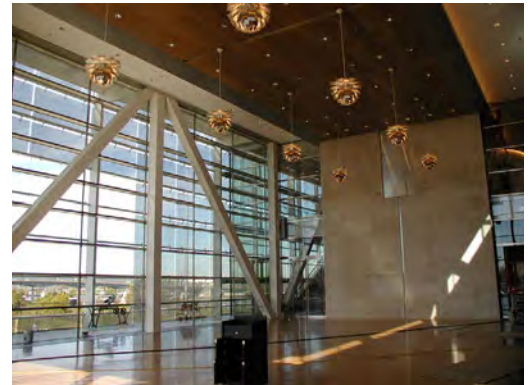
In response to Mr. Clinton's desire to "put things in the light," the William Jefferson Clinton Presidential Library & Museum was designed to be a vibrant place, accessible, highly visible and mutable. The main building takes the form of a glass bridge symbolizing President Clinton's theme of "Building a Bridge to the 21st Century."

The project is 165,000-sf (15,000-sm). It houses archive and exhibit spaces, and the Clinton Foundation Headquarters. The site includes the University of Arkansas Clinton School of Public Service and a 28-acre recreational park. At the center of the project is the Bridge (Museum) Building, which serves as a library that houses exhibits that are dedicated to Mr. Clinton's presidency, his life and times. The 420-ft (130-m) long glass-enclosed Museum Building hovers above the ground while cantilevering out 90-ft (27-m) at both ends. The building's transparency and daylighted spaces are designed to serve as very public invitations. This presidential center includes a new public park, as well. The building has received a LEED Silver rating.

Construction Cost \$90 million
Completion Date 2004

Owner
Clinton Presidential Foundation

Architect
Ennead Architects



MUSEUM OF ISLAMIC ART

Doha, Qatar



The museum, dramatically sited in Doha Bay, houses an important collection of Islamic Art. The building is an important cultural addition to the region.

The museum is comprised of two distinct structures: a Ramp and Garage Building on dry land and the Museum Building offshore. The entire building is made of architectural concrete structure.

Construction Cost \$150 million

Completion Date 2008

Owner

Qatar Museums Authority

Architect

I.M. Pei in Association with Pei Partnership



ROY AND DIANA VAGELOS EDUCATION CENTER COLUMBIA UNIVERSITY MEDICAL CENTER

New York, NY



LERA led the structural design and performed special inspections for this new 15-story, 107,000-sf (9,945-sm) medical education building that features a “Study Cascade,” a vertical campus of stacked neighborhoods composed of post-tensioned, cantilevered concrete slabs. The structural system leverages natural interconnections that come from the unique arrangement of the program spaces: single-story walls and ramps connect and stiffen the cantilevered slabs, reducing post-tensioning, rebar and concrete quantities. The building stands as a nearly identical realization of the architects’ vision—rarely does a completed building so accurately reflect its original renderings.

Construction Cost \$77 million
Completion Date 2016

Architect

Diller Scofidio + Renfro – Lead Designer
Gensler – Executive Architect

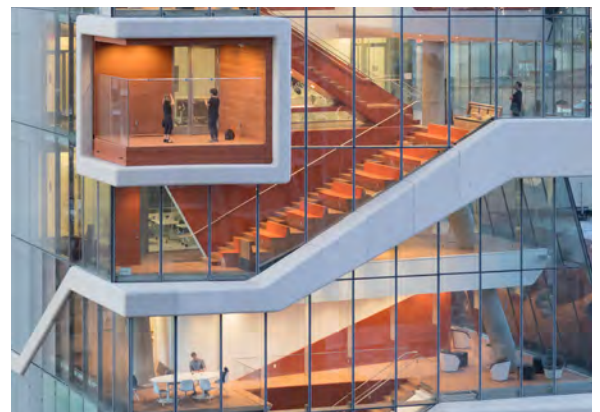
Awards

Best in Competition & Architecture Honor Award, 2017
American Institute of Architecture NY Design Awards

Award of Merit, 2017
Post-Tensioning Institute Awards

Best of Design Award – Facade, 2016
Architect’s Newspaper Best of Design Awards

Excellence in Structural Engineering Award, 2015
National Council of Structural Engineers Associations &
Structural Engineers Association of New York



WESTCHESTER COMMUNITY COLLEGE STATE UNIVERSITY OF NEW YORK

Valhalla, NY



The Gateway Center functions as a unique resource on the campus, housing the college's Business Programs, Professional Development Center, and multi lingual programs. The facility creates new, dynamic opportunities for student growth and collaboration. This 70,000-sf (6,500-sm) project consists of three new buildings. The Gateway, a large and open volume serving as a lobby, is flanked by two buildings which house classrooms, offices, an auditorium, student lounge and a cafeteria. The Gateway's unique structural design consists of architecturally exposed, stackable steel "boxes," which were prefabricated and bolted together on site. A steel bridge crosses the Gateway and links the three campus buildings. The site is further distinguished by a 65-foot (20-m) tall steel tower, which is lit at night to serve as a beacon for the campus. This facility received a LEED Gold rating.

Construction Cost \$33 million
Completion Date 2010

Owner
State University of New York; Westchester Community College

Architect
Ennead Architects

Awards
National Winner, AISC Ideas2 Award (2011)
Excellence in Structural Engineering, SEAoNY (2011)



SCHEIN RESIDENCE

Woodstock, NY



Description

This project consists of a 4,500-sf (420-sm) private residence in the scenic overlay district in the town of Woodstock. The residence also includes a 1,500-sf garage, studio building, and a pool.

Construction Cost Completion Date

Not Available
2012

Owner

Not Available

Architect

Barry Price Architecture



SHELTER ISLAND RESIDENCE

Shelter Island, New York



Description

This 4,500-sf (420-sm) beachfront home is composed of a timber and glass box balanced on a concrete base with cantilevers of up to 13 feet on four sides, and features 6" x 14" (2-m x 4-m) solid cypress timbers and details inspired by classical Japanese architecture.

Construction Cost

Not Available

Completion Date

2008

Owner

Not Available

Architect

Tamarkin Co.



PRADA SOHO

New York, NY



This project consists of the renovation of two floors of the former Guggenheim - SoHo museum into an upscale retail establishment. A feature of this ground-breaking project includes flexible space for special programs and cultural events in the space. An innovative bracing system using composite cast-iron steel and concrete columns, cantilevering off of the existing 1890's brick foundation pier helped create an open space. Structural features include bracing systems to support floating display cases.

Construction Cost \$15 million

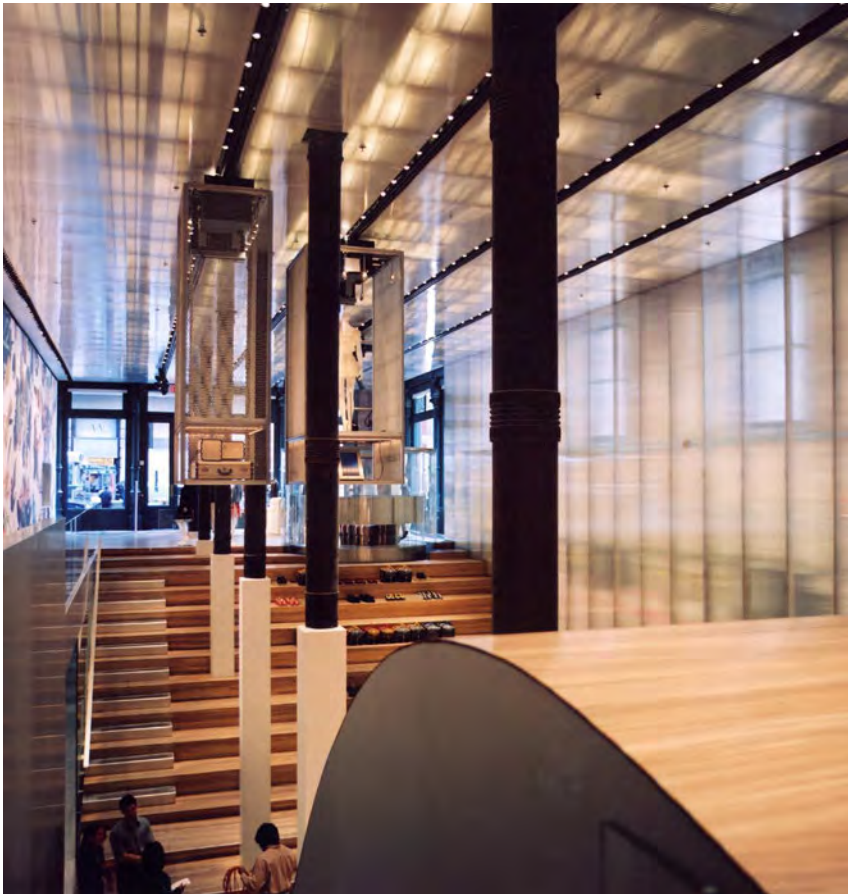
Completion Date 2002

Owner

Prada USA Corp.

Architect

Office of Metropolitan Architecture
in Association with Architecture Research Office



MORIMOTO RESTAURANT

New York, NY



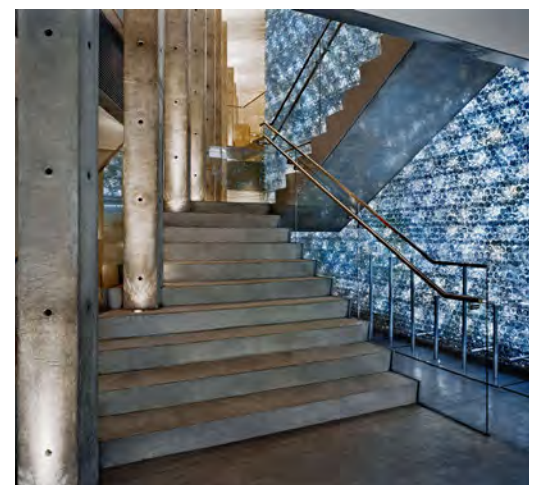
Architecturally exposed concrete, a signature element of Tadao Ando's work, is dramatically visible in a series of concrete columns and floating stair. The space is further defined by a static "waterwall," a steel curtain holding nearly 20,000 illuminated bottles of water.

Developed by noted restaurateur Stephen Starr, this project consists of a high-quality tenant renovation of a 13,000 sf (1,200-sm) restaurant on two levels in the Chelsea Market in New York City. The facility is punctuated by remnants of the High Line elevated railway, referencing the site's prior use as a food manufacturing center.

Construction Cost \$12 million
Completion Date 2006

Owner
Starr Restaurant Organization

Architect
Tadao Ando - design architect,
in collaboration with Goto Design Group



PUBLIC FARM ONE

Long Island City, New York



This project consists of an interactive, working farm sited at the P.S.1 Contemporary Art Center. The design, which explores the use of sustainable and recyclable materials in a temporal space, was selected as the winning entry in the museum's Young Architects Program. Cardboard tubes were used as the primary building material, resulting in an expression of thoroughly integrated architecture and structure.

Construction Cost Not Available
Completion Date 2008

Owner
MoMA/ PS1 Contemporary Art Center

Architect
WORK Architecture Company

Awards

Platinum Award for Engineering Excellence, 2009 ACEC New York

Best of 2008 Awards (Park/Landscape) New York Construction Merit Award, 2008 Structural Engineers Association of New York



PEER REVIEWS



1 WORLD TRADE CENTER, FREEDOM TOWER

Peer Review

New York, NY



LERA provided peer review services for the 80-story, 1,776-ft (540-m) tall Freedom Tower, whose program includes 2.6 million-sf (240,000-sm) of office space, as well as an observation deck, world-class restaurants, parking, and broadcast and antennae facilities, all supported by both above and below-grade mechanical infrastructure for the building and its adjacent public spaces. Below-grade tenant parking and storage, shopping and access to the PATH and subway trains and the World Financial Center are also provided.

Construction Cost

Not Available

Completion Date

Under Construction

Owner

Silverstein Properties

Architect

Skidmore, Owings & Merrill and
Studio Daniel Libeskind



AOL TIME WARNER CENTER

Peer Review

New York, NY



LERA provided value engineering and peer review services for the developer of this mixed-use project. The 2,700,000-sf (250,900-sm) complex consists of two 52-story hotel and residential towers; an 8-story podium containing restaurants, retail space and a 1,200-seat jazz performance, rehearsal and education facility for Jazz @ Lincoln Center; 380,000-sf (35,000-sm) of television production studios; and parking for 225 cars below grade.

Construction Cost \$1.7 billion
Completion Date 2004

Owner
Columbus Centre, LLC

Architect
Skidmore, Owings & Merrill

ONE CENTRAL, MANDARIN ORIENTAL

Peer Review

Macau, China



This project consists of a peer review for a multi-tower development containing hotel, casino, and commercial uses. Buildings contain between 42 through 49 stories. Additionally, LERA performed schematic design for the podium level retail.

Construction Cost \$435 million
Completion Date 2010

Owner
Hongkong Land

Architect
Kohn Pedersen Fox



39 CONDUIT ROAD

Peer Review

Hong Kong, China

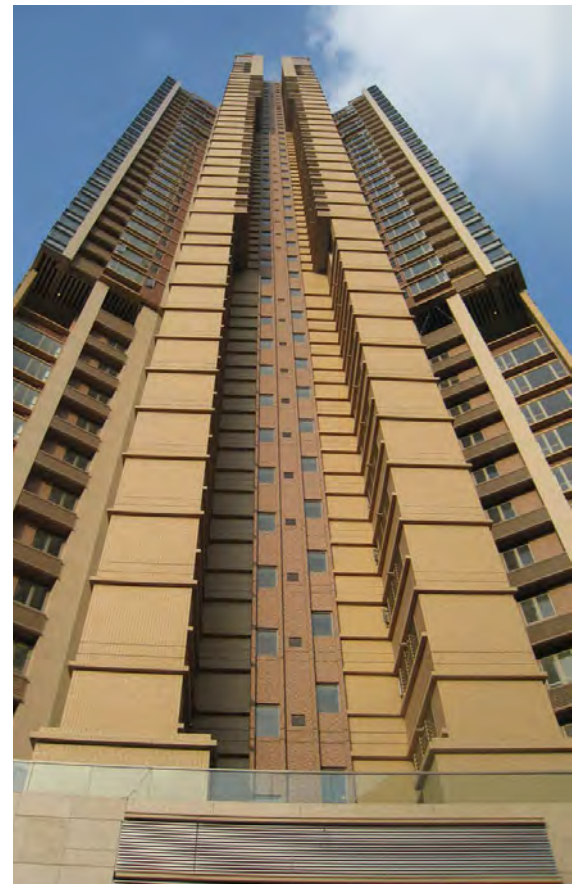


This development is a high class residential development with a total gross floor area of 2 million sf (187,260 sm) with Henderson Land. We provided peer review services and assisted with wind engineering and damper designs.

Construction Cost Not Available
Completion Date 2009

Owner
Henderson Land Development

Architect
Dennis Lau & Ng Chun Man
Architects and Engineers



INTERNATIONAL COMMERCE CENTER

Peer Review

Hong Kong, China



The International Commerce Center contains an array of uses including corporate office, hotel, and retail. Centrally located in Kowloon, the development will serve as a destination for locals and visitors to Hong Kong. For the 118-story, 490meter International Commerce Centre, Kowloon, we provided the concept design for this competition-winning project... which project is now nearing completion. We provided advice, value engineering, and peer reviews for the Developer, Sun Hung Kai Properties.

Construction Cost \$2.5 billion
Completion Date 2010

Owner
Sun Hung Kai Properties Ltd.

Architect
Kohn Pedersen Fox Associates



INTERNATIONAL FINANCE CENTER 1 AND 2

Peer Review

Hong Kong, China



The design for Two International Finance Center is simple and iconic, facing directly onto Victoria Harbour. The office and hotel towers have provided considerable amenity to business groups. Combined with an array of uses contained within the podium level, the IFC Complex has become a well known attraction in Hong Kong, and beyond. This project consists of the value engineering, structural audit, and alternative designs of a 900,000-sf (83,000-sm), 38 story office tower; 88-story, 1,378-ft (420-m) tower; and two hotels totaling 1,211,000 sf (110,000-sm).

Construction Cost \$520 million

Completion Date 1998

Owner

Central Waterfront Property Management

Architect

Cesar Pelli & Associates

Associate Architect

Rocco Design Associates

BUSAN LOTTE TOWER

Peer Review

Busan, Korea



This project consists of the peer review of a 513-meter (1,683-ft) tower containing approximately 2,647,000-sf (246,000-sm).

Construction Cost	Not Available
Completion Date	Concept Design

Owner
Lotte Group

Architect
Skidmore, Owings & Merrill



EMIRATES HEADQUARTERS

Peer Review

Dubai, United Arab Emirates



This project consisted of a peer review of two towers of approximately 60 floors, one a hotel and one an office building.

Construction Cost \$500 million
Completion Date 1996

Owner
Acer Wargon
The Ruler's Office

Architect
NORR Group Consultants International



TRUMP INTERNATIONAL HOTEL & CONDOMINIUMS

Peer Review

New York, NY



This project consisted of the peer review of a design to limit the potential for wind-induced swaying motion in this 45-story hotel and condominium tower located at 15 Columbus Circle.

Construction Cost \$50 million
Completion Date 1996

Owner
Trump Organization

Architect
Philip Johnson



SAN JOSE ARENA

Peer Review

San Jose, CA



This project consisted of the design review of a 425 ft x 425 ft (130 m x 130 m) multi-purpose arena.

Construction Cost \$130 million

Completion Date 1993

Owner

Redevelopment Agency of the City of San Jose

Architect

Sink Combs Dethlefs

