

Catastrophic (CAT) Event Consulting



About Us

FOUNDED

1931

Walter P Moore is an international company of engineers, architects, innovators, and creative people who solve some of the world's most complex structural and infrastructure challenges. Providing structural, diagnostics, civil, traffic, parking, transportation, enclosure, and construction engineering services, we provide solutions that are cost- and resource-efficient, forward-thinking, and that help support and shape communities worldwide. Our professionals work across 20 U.S. offices and five international locations.

We've designed some of the world's largest and most sophisticated projects. Complex engineering is in our DNA.

STAFF COUNT

600+

With 20 U.S. offices and five international locations, We routinely evaluate and repair structures in areas impacted by CAT events.

ENGINEERS

260+

The licensed professional engineers at Walter P Moore have one thing in common: a passion for what we do. In the face of challenges, we deliver.

Before the Catastrophic Event

Walter P Moore has more than 87 years of engineering design, consulting, and testing. Our team identifies structures at risk during catastrophic (CAT) events. We find unique, practical, and timely ways to implement improvements.

Our team consists of more than 260 licensed professional engineers that are prepared to assist your property team. We work with brokers, underwriters, claims teams, and external partners to evaluate the risks in your property portfolio.

As part of our pre-loss services, we review property portfolios to identify areas of potential exposure to damage, failure, or collapse. Walter P Moore provides clients with the ability to protect their assets and guard against additional damage and lost revenue.

Services We Provide

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- Multi-risk assessments
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- Probable Maximum Loss (PML) studies
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- Flood and wind vulnerability evaluations
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- Flood and wind resiliency solutions
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Catastrophic Event Deployment

Walter P Moore deploys teams of experts to worldwide locations after a CAT event. Our experienced in-house consultant team works with your trusted advisors and preferred vendors to expedite the insurance claims process. We focus on the structural integrity of the facilities we evaluate, and provide technical direction with regards to structural safety. When requested, we work with industry partners to provide additional evaluations, deployment, and oversight.

Services We Provide

-
- Structural forensics
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- Structural/enclosure post-disaster evaluation
-
- Flood/wind loss evaluations
-
- Building code evaluation and consulting
-
- Property mapping and documentation
-



Event Responses

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**STRUCTURAL
FAILURES**

Failures in the built environment range from performance failure due to hidden structural or enclosure-related issues to collapse from a catastrophic event. Minimizing risk and preventing further damage are our priorities after a catastrophic (CAT) event. Walter P Moore provides forensic services to determine the failure cause through analysis, field assessments, and testing. Additionally, we provide expert witness testimony for legal proceedings and insurance claims.

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CAT EVENTS

Walter P Moore has coastal offices with direct experience with intense hurricanes and flooding. Our clients look to us to help them with mitigation solutions such as flood doors, valves and special access, roof performance enhancements, and site planning. Our team of flood protection specialists collaborates to address water height probabilities, identify points of exposure, and use best design practices to protect structures.

Deliverables

Walter P Moore can rapidly deliver digital reports—created concurrently with our site visits—that document existing conditions before and after man-made or natural disasters. Each report contains clear and concise language to explain distress observed, as well as repair options. Observations are communicated with photographs, location maps, and levels of distress. When needed, an order-of-magnitude opinion of probable repair costs can be developed along with a repair prioritization for the observed distress condition. Our deliverables help clients with budgets and insurance claims. We provide reports on the client requests listed below.

We Support

- Cause & Origin Investigation
- Building Code Evaluation
- Dispute Resolution Support
- Scope of Damage Determination
- Risk Assessment



Where to Find Us

Our technical staff, comprised of 260+ licensed professional engineers, are industry-recognized experts in structural design, infrastructure improvements, and flood evaluations. We develop and train our engineers to understand the conditions surrounding losses after a major CAT event. Our team determines the best course of action for clients to resume normal business operations. We maintain certifications and licenses to assess structures for pre-loss evaluations and post-loss surveys.

Walter P Moore is strategically located to respond to CAT events. We have 20 U.S. and five international locations. Due to the nature of forensic services, we are organized to respond to our clients' needs within 12 to 24 hours upon notice of emergency. Depending on the project, this time may be reduced even further to address life-safety or other critical issues.

We are always on call for our clients.

After the Catastrophic Event

With offices in North America, Central America, and India, we're used to responding to CAT Events such as hurricanes, wind, and flood events. Walter P Moore's engineering experts mobilize within hours of a CAT event, whether man-made or weather related, to conduct damage surveys and report findings in a timely manner. We work with your team and business partners to create tailored, efficient, and detailed reports for claim resolution.

Through our assessments, Walter P Moore's experts identify patterns of damage and diagnose failures in heavily damaged structures. We determine the types of buildings that performed well during a CAT event, and identify those that were most vulnerable. In times of unfortunate weather events, our clients look to us to help with creative mitigation solutions such as flood doors or roof performance enhancements.

Services Provided in Collaboration with Contractors

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- Opinions of cost

 - Bid phase services

 - Remediation design and repair

 - Third-party design review

 - Construction administration services

Projects

HOUSTON, TX

During the flood event in the Houston Metro Area following Hurricane Harvey's landfall in August 2017, Walter P Moore was among the first responders that worked within days of rain cessation to assess flood damage to the city's government buildings, downtown performance venues, and underground parking structures. The most immediate response was required at City Hall and the connecting Annex Building. Walter P Moore determined if flooding had impacted the structures and safety concerns of emergency response crews. We are currently part of a recovery team that is repairing downtown buildings that experienced significant loss.

NEW ORLEANS, LA

In August 2005, Hurricane Katrina caused catastrophic damage along the Gulf coast from Florida to Texas. Walter P Moore mobilized to assess damages to the Mercedes-Benz Superdome, Smoothie King Center (formerly New Orleans Arena), and several downtown parking garages where the water was still in the process of receding. As the National Guard was still conducting emergency operations, Walter P Moore received a state-level government authorization to work around curfew zones.

NAPLES, FL

Days after Hurricane Irma made landfall in Florida in September 2017, Walter P Moore engineers arrived at the Care Center at Bentley Village in Naples, a retirement community with critical care patients. The center sustained widespread water infiltration, resulting in sizable interior damage that necessitated extensive repairs before residents could return. Within three days, we performed an assessment and diagnostic water testing. We provided the repair contractor with waterproofing repair recommendations to mitigate the window system water infiltration. The residents were able to move back in only 20 days following the hurricane.

MIAMI, FL

In September 2017, Walter P Moore mobilized within days after Hurricane Irma to provide assessments for a 33-story office tower located at 701 Brickell in downtown Miami, adjacent to the Biscayne Bay. We investigated interior water intrusion and found deteriorated waterproofing systems in need of repair. We designed sealant replacement at the façade on the top 10 levels and replaced the waterproofing membrane and topping slab at two exterior terraces.

Key Experts



Gabriel Jimenez, PhD, PE, PEng, SE, FSEI

As Executive Director of Walter P Moore's Diagnostics Group, Gabriel ensures the quality of our forensic engineering services for pre- and post-loss CAT events. He has been heavily involved in determining the strategy for our response to Hurricanes Katrina and Harvey. Gabriel was named a Fellow of the Structural Engineering Institute and received his doctorate in Civil Engineering (Structures) from the University of Minnesota. He is a licensed engineer in 12 U.S. states and three Canadian provinces.



Mark Williams, PhD, PE, PEng, SE

Mark is our Restoration and Renovation Practice Leader with 14 years of structural and forensic engineering experience. He is the Principal-in-Charge on repairs of several high-profile downtown Houston buildings affected by Hurricane Harvey. Mark is a licensed engineer in Texas, Florida, and North Carolina, as well as nine additional U.S. states and Saskatchewan. Before earning his doctorate at the University of Florida, he received a Masters and Bachelor of Science from the University of Central Florida.



Ray Drexler, PE

Ray's 20 years of forensic engineering expertise includes evaluating and designing repairs for structures distressed by CAT events. He routinely works on flood mitigation projects for all types of property portfolios, including remediation and design solutions to help reduce future loss. Ray earned a Masters and Bachelor of Science in Civil Engineering from the University of Illinois at Urbana-Champaign. He is a licensed engineer in Texas, Louisiana, and two additional U.S. states.



Randal Beard, PE, FICRI

Randy leads the Diagnostics group in Orlando with more than 35 years of experience. He manages a team of engineers that routinely respond to CAT events. Randy's projects include sports stadiums, parking structures, and plazas over occupied space. He was named an International Concrete Repair Institute Fellow. He earned a Bachelor of Science degree in Construction Engineering from Lawrence Technological University. Randy is a licensed professional engineer in Colorado..



Andy Yung, PE, CFM

With 27 years of experience as an engineer, planner, and hydrologist, Andy's projects include hydrology, hydraulics, master drainage studies, channel modifications, watershed impact analyses, detention facility designs, and dam safety analyses. He has provided technical and peer review for federal flood damage reduction projects. Andy holds a Bachelor of Civil Engineering from Georgia Tech. He is a Certified Floodplain Manager, as well as a licensed engineer in Texas, Louisiana, and Georgia.



Matt Heringer, PE

Matt focuses on solving issues with existing structures. He is currently the Project Manager for extensive flood protection projects at the AIG complex in Houston. Matt provides design and construction administration for repair and restoration projects, including flood mitigation and enclosure improvements for structures with wind vulnerabilities. He is a Certified Weld Inspector with a Masters and Bachelor of Science in Structural/Civil Engineering from the South Dakota School of Mines & Technology.



Webb Wright, PE, RRO

Webb has 20 years of experience related to structural engineering and forensic analysis, building enclosure moisture management, roofing systems, and below-grade waterproofing. He was part of our Hurricane Irma emergency response team in 2017. In addition to being a licensed engineer in Florida, Mississippi, Alabama, and three additional U.S. states, Webb is a Registered Roof Observer. He earned a Bachelor of Science in Civil Engineering from the University of Central Florida.



Javier Balma, PhD, PE

Javier is a NACE-certified Cathodic Protection Technician and designs corrosive material protection systems for structures exposed to harsh environmental conditions, including those affected by CAT events. Javier received his Doctor of Philosophy and Master of Science in Civil Engineering (Structures) from the University of Kansas, as well as a Licentiate in Civil Engineering from the University of Costa Rica. He is a licensed engineer in Florida, Puerto Rico, and three additional U.S. states.

Contact us to deploy
CAT event consultants to
worldwide locations.



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