

SAMER GHANMA, P.E.

Vice President



Summary

Samer Ghanma is a licensed Professional Engineer in six states and specializes in structural engineering and forensic investigations. Currently, he leads Thornton Tomasetti's Forensic Engineering group in Dallas, TX. He has designed residential and commercial structures during his career and has experience providing litigation support services for cases involving construction/design defects, collapses, building envelope failures, and structural damage from natural disasters. He has also provided rehabilitation consulting for failed structures which included the issuance of repair documents as the Engineer-of-Record, construction administration, and quality-assurance observations of the repairs.

Areas of Technical Expertise

- Structural Engineering
- Forensic Engineering
- Building Envelope
- Property Condition Assessments
- Rehabilitation Consulting

Education

- B.Sc. Civil Engineering, 2012, The University of Texas at Arlington

Registrations

- Licensed Professional Engineer in TX, AR, KY, LA, OK, AZ
- NCEES Model Law Engineer
- American Concrete Institute – Repair Application Procedures
- OSHA 30-Hour General Industry Safety and Health Certification
- OSHA Code 29 CFR 1910 1926 Permit-Required and Non-Permit Confined Space Standard

CONTACT

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Select Project Experience

Structural Engineering

Designed and evaluated several structures built with steel, concrete, wood, and masonry, including the following:

Material-Handling Steel Structures, several locations, USA.*

Designed and evaluated steel structures for material handling systems used in distribution centers such as pallet racking, pick modules, conveyor systems, and mezzanines.

Commercial Concrete Structures, Dubai, UAE. * Designed mid-rise buildings, parking structures, water tanks, and mixed-use developments using conventionally reinforced, post-tensioned, and pre-stressed concrete.

Single and Multi-family Residential Structures, TX and AZ.*

Designed single-family homes and multi-family complexes using dimensional lumber, engineered-wood products, pre-manufactured wood trusses, and masonry.

Forensic Engineering Investigations and Rehabilitation

Structural Assessment and Rehabilitation of Midland Tower, Midland, TX. * Performed an assessment of the twelve-story reinforced-concrete downtown historic office tower designed by well-known Texas architect and engineer Wyatt C. Hedrick. The assessment included a survey of structural distress locations, providing repair documents, and conducting quality-assurance observations.

Building Collapse Investigation, Confidential Location. *

Forensic investigation of a large-scale building collapse which included on-site inspections, collection of physical evidence, coordination and specification of material testing, document review, and modeling the structure in a non-linear structural analysis software.

First United Methodist Church Investigation, Sulphur Springs, TX. *

Structural investigation of a historic church built in 1942 and providing structural rehabilitation documents to remedy structural distress of roof framing components.

*Denotes work performed with previous employer.

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New Construction Structural/Building Envelope Investigation and Rehabilitation, Port Aransas, TX. *

Investigation of a new construction residential structure constructed of Insulated Concrete Forms (ICF) and wood-frame roofing for construction/design defects. The rehabilitation consisted of providing repair documents, quality-assurance observations, and construction administration.

Concrete Podium Rehabilitation, Dallas, TX. * Investigation of a concrete podium slab related to damage of post-tensioned tendons. The rehabilitation consisted of providing repair documents to reestablish the structural integrity of the damaged concrete slab and quality-assurance observations.

Precast Concrete Foundation Investigation and Rehabilitation, North Richland Hills, TX. * Investigation of a precast concrete pier-and-beam foundation related to damage of precast Double-T members. The rehabilitation consisted of providing repair documents and quality-assurance observations.

Water Tank Investigations, multiple locations. Performed structural evaluation of concrete and steel tanks to determine cause of reported distress.

Parking Garage Assessments and Rehabilitation, multiple locations, TX. Performed assessments of concrete and steel parking garages and provided recommendations for remediation.

Retaining and Screen Wall Structural Distress Investigations, multiple locations, TX. Investigation of structural distress to retaining and screen walls and providing recommendations for remediation.

Multi-Family Residential Structures Assessment and Rehabilitation, multiple locations. Performed structural assessments and rehabilitation of multi-family residential structures. The rehabilitation work consisted of providing repair documents, construction administration, and quality-assurance observations during repairs.

Foundation Movement Investigations, multiple locations. Structural investigation of foundation movement and associated superstructure distress caused by expansive soils.

Fire Damage Evaluations, multiple locations. Performed damage assessments of multiple residential and commercial structures affected by fire. Work included design of temporary shoring, recommended replacement scope, and repair design.

Storm Damage Evaluations, multiple locations. Investigations of various types of residential and commercial buildings to determine damage caused by storms (wind, hail, and flooding). Roofing systems evaluated included asphalt shingle, metal tile, metal panel, clay tile, concrete tile, TPO, PVC, EPDM, Modified-Bitumen, Built-Up Roofing, and other various finish and cladding systems.

Earthquake Evaluation, OK. Performed damage assessment of a residential structure to determine extent of damage due to a reported earthquake.

Vehicular Impact Damage Evaluations, multiple locations. Evaluated extent of damage resulting from vehicle impacts to residential and commercial structures and provided repair scope.

Construction/Design Defect Investigations, multiple locations, TX. Performed and directed forensic investigations of system failures due to construction/design defects. Served as an expert witness in cases involving engineering disputes related to structural/building envelope failures.

Property Condition Assessments, multiple locations. Performed property condition assessments per ASTM E2018 to assist clients during the due diligence phase of property acquisitions. Work included preparation of Property Condition Reports (PCR) and Opinions of Costs for capital expenditure planning.

Sworn Testimony

Deposition, Moser Up at Henderson, Inc. v. Mittown Development, Inc.; Construction/Design Defect; Expert Witness for Plaintiff; Cause No. DC-21-15659; District Court of Dallas County, TX

Select Papers, Lectures and Publications

"Protect Your Structure – Cover Your Assets!"; Worth Ross Management Co. Training; Dallas, TX, September 23, 2021. (presenter).

"Forensic Engineering"; The University of Texas at Arlington; Arlington, TX, October 2, 2023. (presenter).

"Forensic Engineering"; The University of Texas at Arlington; Arlington, TX, October 16, 2024. (presenter).