

Education

Master of Civil Engineering, University of Houston, Houston, TX
Bachelor of Science in Civil Engineering, University of Houston, Houston, TX

Registrations

Licensed Professional Engineer State of Texas

Training

California Emergency Management Agency Safety Assessment Program Certification
10-hour OSHA safety training

Highlights

12 years of experience in the engineering structural diagnostics services industry
Chairman ASTM Wind PML Standard committee
Property Condition Assessments (PCAs)
Structural Condition Assessments
Seismic Assessments (PMLs)
Energy Audits
ADA Assessments

Experience Summary

Ms. Powell has 12 years of experience in the engineering structural diagnostics services industry. She has significant experience covering a wide range of assessment projects for commercial, industrial, governmental and residential projects including historically registered buildings. Specifically, Ms. Powell has performed a wide range of physical inspections and digital photo-documentation of existing buildings conditions in accordance with the needs and requirements of a varied number of reporting standards, including ASTM standards and customized client formats.

Ms. Powell is a Project Manager for Partner Engineering and Science, Inc. (Partner) providing project scheduling and budget reviews. She also reviews reports to ensure compliance with reporting standards, and performs Property Condition Assessments (PCAs), structural condition assessments, and seismic assessments as needed.

Ms. Powell has provided engineering design, technical assistance and consulting services to a number of clients preparing condition assessment reports, construction documents and specifications and construction administration and observation. Her role as engineer included project management of a team of engineers and technicians to provide assessment, remedial repair documents and testing of new and existing buildings during construction, restoration or repair to determine, for the client, building code compliance.

Ms. Powell has also provided seismic assessment services to a number of clients conducting condition assessments along the west coast of the United States and in the Caribbean, as well as preparing Probable Maximum Loss (PML) reports. Her role also includes reviewing PML reports prepared by others.

Ms. Powell has also provided emergency response and remedial structural repair construction documents, construction administration, and observation for hurricane damaged buildings after Hurricane Katrina, Hurricane Ike, and most recently, Hurricane Harvey.

In addition, Ms. Powell is knowledgeable in compiling emergency response assessments and remedial repair recommendations for distressed and/or damaged structures involving life safety. Ms. Powell also has experience providing litigation support for high profile structural failure litigation.

Project Experience

Parc at South Green Apartments, Houston, TX. Work is ongoing and includes construction administration and observation of structural repairs to balconies and exterior stair landings. A property condition assessment was performed prior to Hurricane Harvey with deficiencies identified. Hurricane Harvey exacerbated the deficiencies resulting in life safety concerns. Fascia boards and soffits were removed from balconies and exterior stair landings to determine the extent of the deterioration. Construction documents were provided to repair the damaged structural framing of the balconies and exterior stair landings.

Northborough Tower Parking Garage, Houston, TX. Work included the repair of the post-tension concrete slabs (broken tendons), repair of spalled and cracked concrete columns and slabs, repair of the spandrel panel connections, and repair of the cooling tower supports. A condition assessment was performed to identify items of distress requiring repair. Destructive testing was performed in select locations to determine the condition of the post-tension tendons and sheathing. Magnetic particle testing was performed on the spandrel panel connections to determine the condition of the welds. Construction progress monitoring was provided during the repairs.

Hamilton Financial Center Parking Garage, Brooklyn, NY. Work included a property condition assessment, mapping distress locations, remedial repair recommendations, and repair cost estimates. The garage was a steel-framed structure supporting metal decking with concrete slab. The metal decking was severely corroded with areas of complete section loss. Several areas of steel framing were also corroded with section loss. Shoring was recommended until repairs were completed.

Motel 6, Indianapolis, IN. Work included a structural assessment of the exterior stairs. The steel-framed stairs support metal decking with a concrete slab at the landings. The steel frames and metal decks were severely corroded with complete section loss. The project included condition assessment and schematic repair documents. Due to the extent of the deterioration, replacement of the stairs was recommended. Measurements of the existing stairs were made for replacement purposes. Shoring of the stairs and landings was recommended until replacements were complete.

Elevated Pool, TX. Work included destructive testing and materials testing of elevated pool concrete shell to determine waterproofing and existing construction. The project included construction documents review, analysis of material samples, and mediation support.

Christ Church Cathedral, Houston, TX. Work is ongoing and includes condition assessment and remedial repair design related to floor slab movement and structural deterioration. The project includes multiple buildings and multiple municipal governing bodies as a public right-of-way is included in the project scope.

The Cathedral building is a nationally registered historic building, therefore compliance with historic guidelines is mandatory.

Spring Branch ISD, Houston, TX. Work included structural assessment of bleachers and basketball goals in multiple indoor and outdoor facilities at 14 schools. The project included condition assessment, written and photographic documentation of distress items, repair/replacement recommendations, and meetings with client to discuss findings.

Klein ISD, Spring, TX. The work included structural assessment of light poles at athletic facilities at multiple schools. The project included magnetic particle testing of the welds at the base of the poles. During the process of assessment, major cracks were found on four poles in one location requiring immediate removal of the poles. A tornadic event also occurred which caused the failure of one light pole, and the bending and twisting of three other poles. Those poles were also removed.

Belvin-Buchanan and Elliot Halls at Sam Houston State University, Huntsville, TX. Work included a property condition assessment, remedial repair design, production of construction documents and specifications, construction administration and observations related to building enclosure restoration and structural deterioration.

Hunt County Detention Facility Structural Condition Assessment and Repair Documents, Greenville, TX. Work included performing a structural condition assessment of the distress related to foundation movement. Observations of the interior sub-grade structural elements (piers and grade beams) were made to determine remedial repair recommendations. Soil expansion prior to building occupancy was so great the grade beams had separated from the piers. Because this was a detention facility, the building was occupied during the assessment and repairs. Emergency, temporary repairs were made in order to prevent structural failure and allow occupancy. Work also included testing (non-destructive and destructive), remedial repair design, construction documents and specifications, construction administration and observations.

Affiliations

American Society of Civil Engineers (ASCE)
International Concrete Repair Institute (ICRI)

Publications

"Don't Let Property Red Flags Derail a Deal," Scotsman Guide, May 2018

Contact

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