Applied Science International, LLC
- Capabilities Statement -

General Information:

Registered Company Name: Applied Science International, LLC
Year Incorporated: 2004
State of Incorporation: North Carolina
Number of Employees: 85
Business Type: Small Business

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DUNS Number: 160209792
CAGE/NCAGE: 410A0

DHS SAFETY ACT: Designation Status for Extreme Loading® for Structures Software (ELS)

US Government Contracts (Accepts US Government Credit Cards)**:**

General Services Administration (GSA):

- GS-000P-09-CYD-0137: Nationwide Laser Scanning Services - Structural Analysis Specialty Subcontractor to Architectural Resource Consultants.
- GS-00P-09-CYD-0136: Nationwide BIM Services - Structural Analysis Specialty Subcontractor to DPR Construction.

Naval Facilities Engineering Command (NAVFAC):

- N62583-09-D-0164: Antiterrorism and Force Protection (ATFP) Engineering Services: Structural Analysis Specialty Sub-contractor to Integrity Consulting.

Locations:

Headquarters:
2012 T.W. Alexander Dr.
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About ASI:

In this constantly changing world structures are becoming increasingly complex, loading cases are more sophisticated, and natural and man-made threats including bombings and explosions, hurricanes, earthquakes are making it increasingly difficult to effectively and efficiently analyze and design both new structures as well as retrofit existing structures to ensure they perform adequately under these loads. Recognizing these challenges, Applied Science International, LLC (ASI) is focused on creating tools and training for engineers and architects that will better design, organize, and analyze structures. Structural security, blast analysis, progressive collapse analysis, seismic analysis, wind analysis demolition analysis, forensic engineering, and glass analysis are just some of the areas in which ASI adds new dimensions to the way we understand and design structures.

ASI develops and licenses several structural design and structural analysis software tools empowering engineers to provide faster more accurate numerical analysis that show's clients in 3-D what will happen due to a particular loading case from crack initiation, separation, collapse and final debris field. In addition to software licensing, ASI provides support services in the areas of training and structural engineering consultation services to better prepare and assist clients in meeting the exacting requirements of this changing world.

Structural Software & Services

Analysis Software:

- Extreme Loading® for Structures

Design Software:

- SteelSmart® System
- SteelSmart® Deck

Structural Analysis Capabilities:

- Structural Vulnerability Assessment
- Seismic, Progressive Collapse, Blast, Impact, High Wind, Hurricane, & Flood.
- Demolition Prediction & Pre-planning
- Complete Glazing Systems
- Historic Structures
- Corrosion & Retrofit
- Forensic Engineering & Expert Witness
- Performance Based Design
- R&D/Product Development

NAICS Codes:

- 541330 - Engineering Services
- 511210 - Software Publishers
- 541511 - Custom Computer Programming Services
- 541613 - New product development services
- 541710 - R&D in the physical & engineering sciences
- 611420 - Computer Training

SIC Codes:

- 8711 - Engineering Services
- 1795 - Wrecking & Demolition
- 7371 - Computer programming services
- 7372 - Prepackaged software
- 7389 - Business Services, NEC
- 8731 - R&D in the physical, engineering, & life sciences

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Recent Work:

Vulnerability Assessment: Blast, Impact Seismic, Wind & Progressive Collapse Analysis:

- Fort Bragg Barracks, USA, 2011 - Performed non-linear dynamic analysis of the composite deck floor system of a 4 story barracks building to resist progressive collapse.
- ARAMCO Vapor Cloud Blast Assessment, Saudi Arabia, 2011 - Non-linear dynamic analysis of three structures (masonry, steel, and reinforced concrete) under the effects of a vapor cloud explosion (VCE).
- Underground Vault, Qatar, 2011 - Performed non-linear dynamic analysis of an underground reinforced concrete structure against impact & blast.
- Ft. Hood WIT Barracks, USA, 2010 - Non-linear dynamic progressive collapse analysis (UFC 4-023-03) of a 5 story barracks building consisting of a cold formed steel stud bearing wall system.
- Ft. Sam Houston WIT Complex, USA, 2010 - Non-linear dynamic progressive collapse analysis (UFC 4-023-03) of a 5 story barracks building consisting of a cold formed steel stud bearing wall system.
- ARAMCO Deethanizer Column, Saudi Arabia, 2009 - Design seismic and wind loading analysis of as-built scenarios of several missing and damaged anchor bolts & column/tank structure.
- Fairwinds Tower, USA, 2007 - Identification of risk zones for all columns in the 48 story tower. 3-D non-linear dynamic analyses to estimate the potential of progressive collapse. Glass damage analysis for different impact scenarios and glazing materials.
- Titan Tire-Testing Facility, Illinois, USA, 2008. Risk evaluation of an industrial manufacturing plant under the effects of explosion of one its large off-road tires in its tire testing facility.
- Saint Francis Central Hospital, Pittsburgh, USA, 2008 - Evaluation of the potential of failure for the building after an incomplete demolition under the effect of high winds.
- Ramses II Statue, Cairo, Egypt, 2006 - Evaluation of the potential of damage or failure of the 83 ton, 3,200 year old statue during its relocation from downtown Cairo to its new location next to the Giza Pyramids.

Forensic Engineering Analysis & Expert Witness:

- Minnesota I-35W Bridge Failure, Minnesota, USA, 2009 - Non-linear dynamic analysis of the entire bridge structure to determine the cause for the collapse.
- Car Shed, Saudi Arabia, 2009 - Forensic analysis and redesign of a car port structure that failed due to high wind loads.

Demolition Simulation & Analysis:

- HBI Facility - Australia, 2011-12 - Weakening, pulling and implosion analysis for three complex industrial structures constructed from structural steel and reinforced concrete. Noted as the largest demolition project in the southern hemisphere (Ongoing).
- Castelão Soccer Stadium, Rio de Janeiro, Brazil, June 2011 - Weakening and implosion of a portion of the cantilevered reinforced concrete and post-tensioned stadium seating while leaving the remaining stadium and nearby structures intact. Project included analysis of seismic ground vibration to protect surrounding structures. (Winner: Explosive Demolition of the year, 2011)
- University Hospital, Rio de Janeiro, Brazil, December 2010 - Implosion of half a 16 story reinforced concrete hospital while leaving the remaining half intact. Project included analysis of seismic ground vibration to protect surrounding infrastructure and property.
- Helio Gomes, Rio de Janeiro, Brazil, July 2010 - Implosion of a reinforced concrete structure.
- Women's Residence Hall, University of South Carolina, March 2010 - Vulnerability assessment of a 7 story reinforced concrete structure as all non-structural walls were demolished with machines moving in the structure.
- Presídio Frei Caneca, Rio de Janeiro, Brazil, March 2010 - Implosion of an 8 building prison.
- Kwinana Boiler, Kwinana Power Plant, Australia, February 2010 - Demolition of an industrial structure due to pulling force. Project included analysis of seismic ground vibration to protect surrounding gas lines.
- Santa Cruz, Santa Cruz, Brazil, November 2009 - Implosion of two, 10 story reinforced concrete structures.
- Chimney, Stack Kwinana Power Plant, Australia, 2009 - Demolition of a chimney stack due to pulling force.
- Old Humana Building - Louisville, July 2008 - Implosion of an 8 story reinforced concrete structure.
- Newcastle Brown Brewery, New Castle, UK, June 2008 - Implosion of an 5 story reinforced concrete structure.
- Tule Lake Lift Bridge, Corpus Christi, Texas, April 2008 - Demolition of a lift bridge due to procedural weakening & implosion.
- Saint Francis Central Hospital, Pittsburgh, USA, 2008 - Implosion of an 11 story steel structure.
- Stubbs Tower, Georgia, USA, 2007 - Implosion of a 15 story reinforced concrete structure.
- Charlotte Coliseum, North Carolina, USA, 2007 - Implosion of a football arena/stadium.
- Sheraton Hotel Tower, North Carolina, USA, 2007 - Implosion of an 9 story reinforced concrete structure.
- Eastman Kodak Building, Rochester, USA, 2007 - Analysis of the demolition due to implosion.
- Ramallo Building, Puerto Rico, 2006 - Analysis of the proposed implosion of an 8 story reinforced concrete structure.
- Boodarie HBI Plant, Port Hedland, Western Australia, 2007 - Initial planning and analysis of proposed demolition plans due to controlled collapse.