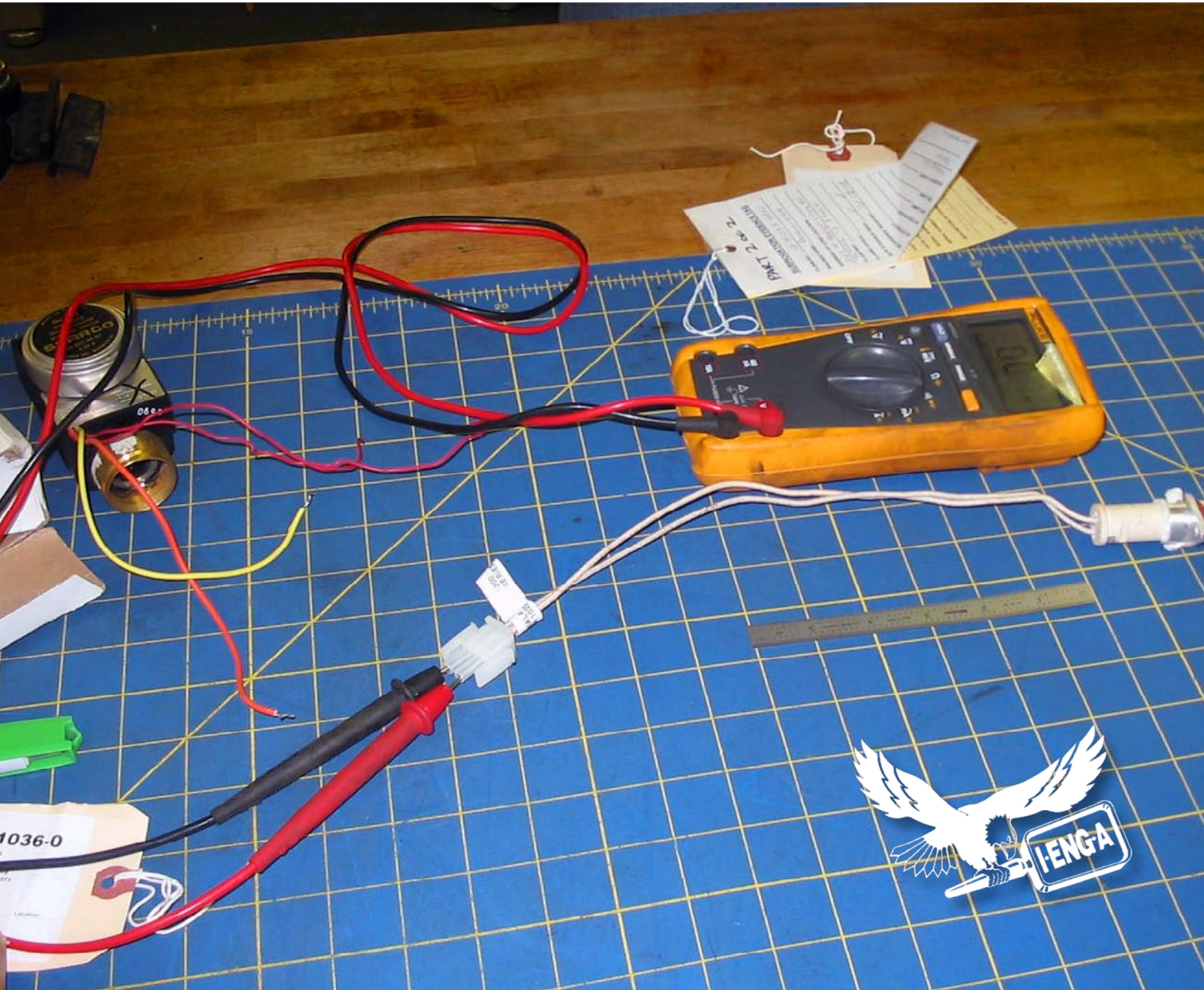


I-ENG-A® by
Gresham, Smith and Partners



INVESTIGATIVE ENGINEERING SERVICES



I-ENG-A® by Gresham, Smith and Partners

As an authorized member firm of the Investigative Engineers Association (I-ENG-A®), GS&P brings extensive investigative engineering services in all disciplines of engineering. Through I-ENG-A®, GS&P is part of an extensive nationwide network of independent forensic specialists that provides services to investigate, document, test and secure property and evidence and provides accurate reports for a wide variety of clients.

Serving national and international clients from 16 offices, GS&P's diverse staff of nearly 600 employees includes electrical, civil, structural, mechanical and environmental engineers as well as geologists, architects and Certified Fire and Explosion Investigators. We offer innovative, customized solutions to a wide variety of industries. In fact, as a full-service architecture, engineering, interior design and planning firm, our professionals bring a depth and breadth of forensic experience for a wide variety of structures, including residential, commercial and industrial buildings. This intimate building knowledge coupled with our specialized ability to determine the cause of failures and/or extent of damage translates into a comprehensive and accurate investigative solution.

Suite of Services

PROPERTY AND STRUCTURAL

- Biological Growth Analysis (Fungi)
- Building Envelope Analysis
- Concrete Evaluation
- Fireplace/Chimney Damage Assessment
- Foundation Failure Assessment
- Pavement/Floor Slabs
- Plumbing/Pumping/Water Distribution
- Structural Member Failure Assessment
- Structures: Residential, Commercial and Industrial
- Water Damage
- Water Proofing
- Wind Damage
- Wood Rot

MECHANICAL AND ELECTRICAL

- Boilers and Burners
- Electrical Controls and Failures
- Electrical Fire Cause and Origin
- Electrical Injuries
- Electrical Utility Power Systems
- Gas/High Pressure
- Hydraulics/Pneumatics
- Machining and Machine Design
- Material Failures
- Mechanical and Electrical Failure Analysis
- Product Liability/Safety



CONSTRUCTION DEFECTS

- Building Envelope Failures
- Code and Standard Compliance (OHS, ADA, Building Code Evaluations)/Interpretation Construction Practices and Safety
- Expansive Soil Conditions
- Foundation/Framing Failures
- Grading/Drainage Problems
- HVAC Design
- Structural Movement
- Mediation Plans
- Plans and Specifications Compliance

TRAFFIC ACCIDENT RECONSTRUCTION

- Accident Reconstruction
- Air Bag Failures
- Black Box Data Retrieval and Analysis
- Brake System Failures
- Fire Cause and Origin
- Headlamp/Tail-Lamp On-Off
- Highway and Work Zone Safety/Defects
- Low Velocity Impact Injury
- Seat Belt Evaluation
- Stolen/Burned Vehicles
- Tire Failure Analysis
- Traffic Signalization and Roadway Illumination
- Truck Accidents

GEOLOGICAL EVALUATION

- Blasting Damage Assessment
- Cause of Settlement
- Earthquake Damage Assessment
- Ground Water Evaluation
- Land Slide Assessment
- Sink Hole Identification and Remediation
- Soil Condition Evaluation
- Water Seepage

LIABILITY

- Code and Standard Compliance
- Heavy Equipment Accidents
- Process Analysis
- Trips, Slips and Falls

PRODUCT LIABILITY

- Cause of Failure
- Determination of how the product was being used at the time of failure
- Determination of industry standards
- Determination of similar failures of the same or similar products
- Mode of Failure

PRODUCT LIABILITY

Our highly skilled investigative staff provides comprehensive fire and explosion cause and origin investigations for a wide variety of fire losses. Every cause and origin investigation is assigned a lead CFEI/CFI as well as professional engineer to ensure the results of the investigation are accurate and admissible into a court of law. Services include:

- Assess code updates required for building re-use
- Investigation of the habitability and safety assessment of structures damaged by fire, electrical malfunctions and lightning damage, fuel system malfunctions and fuel-fired applications
- Laboratory analysis of samples for possibilities of accelerants, explosives and flammability
- Point of origin analysis and evaluation

ADDITIONAL FORENSIC INVESTIGATION SERVICES

- Original design specification, soil/ foundation and moisture level analysis, construction material analysis, building code defects, deterioration of structural parts, structural collapses, storm wind and tornado damage, wall and roof collapse, weather tightness efficiencies, upcoding, betterment and determination of the extent of external and/or natural forces.
- Analysis of roadways, hydraulics and hydrology, HVAC, plumbing, pipe failure, drainage and other civil structures for the effects of natural and man-produced failures or deficiencies. Construction completion as well as schedule and cost over-runs are analyzed and distributed to responsible parties.
- Analysis of blasting activity damage, earthquakes, settlement, sinkholes and foundation failures and land slippage.
- Analysis of architectural finishes and quality of workmanship, improper renovation and alteration, plan design review, roofing system failures, stairways, accesses, fire exits and construction defects.

*Should additional needs arise, an affiliate I-ENG-A® member firm may be utilized.



ABOUT US

Gresham, Smith and Partners provides design and consulting solutions for the built environment that contribute to the success of national and international clients. For more than 40 years, GS&P has focused on enhancing quality of life and sustainability within communities. GS&P consists of industry-leading professionals practicing architecture and engineering design as well as scientists and highly specialized planning and strategic consultants in Aviation, Corporate and Urban Design, Environmental Compliance, Healthcare, Industrial, Land Planning, Transportation and Water Services. GS&P consistently ranks among the top architecture and engineering firms in the United States. For more information regarding GS&P, visit www.gspnet.com.

OUR EXPERTISE

Aviation
Corporate + Urban Design
Environmental Compliance
Healthcare
Industrial
Land Planning
Transportation
Water Services

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OUR SERVICES

INVESTIGATIVE ENGINEERING SERVICES

Property and Structural
Mechanical and Electrical
Construction Defects
Traffic Accident Reconstruction
Geological Evaluation
Liability
Product Liability
Fire Cause and Origin
Forensic Investigation

ARCHITECTURE

Sustainable Design
Building Evaluations
Conceptual Design
Construction Documents
Specifications
Construction Administration
Post-Occupancy Evaluation
Visualization

ENGINEERING

Environmental
Civil
Structural
Mechanical, Electrical and Plumbing (MEP)
Traffic
Surveying
Commissioning

INTERIORS

Workplace Strategies and Consulting
Building Evaluations and Facility Assessments
Interior Design
Sustainable Design
Environmental Graphics and Wayfinding

PLANNING

Site Selection
Master Planning
Urban Design
Landscape Architecture



GRESHAM
SMITH AND
PARTNERS

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