GLENN STEWART, M.E., P.E.
Engineering Design & Testing Corporation
Post Office Box 8027 | Columbia, South Carolina
phone: (803) 791-8800
email: gstewart@edtengineers.com

EDT
Forensic Engineering & Consulting

ENGINEER: CIVIL/STRUCTURAL

EDUCATION

1994 — **Master of Engineering in Civil Engineering**
Clemson University, Clemson, South Carolina

1985 — **Bachelor of Science in Civil Engineering**
North Carolina State University, Raleigh, North Carolina

EXPERIENCE

July 1993 to Present — **Engineering Design & Testing Corporation**
Columbia, South Carolina

Consulting Engineer
Columbia District Engineering Manager (1996 – 2003)
Columbia and Charleston Districts Engineering Manager (2016 – 2018)
SE Regional Engineering Manager-Associate Chief Engineer (2018 – 2022)
Investigation of cause of structural damage, including collapsed and sagging roofs, cracked walls, twisted members, cracked pavements and damaged foundations. Analysis to the affects of construction vibration, high winds, consolidating soils, moisture exposure, inadequate designs, heavy snows and construction deficiencies. Investigation of accidents involving cranes and rigging. Development of cost estimates for structural repairs; including buildings, retaining walls, bridges, and storage tanks. Development of repair estimates for structural repairs; including buildings, retaining walls, bridges and storage tanks. Evaluation of structures for building code conformance; including methods of construction, construction materials, compliance to safety requirements and structural design. Evaluation of building sites. Load testing and analysis of structural components. Evaluation of the integrity of damaged structures and development of scope of damage assessments. Evaluation and testing of fluid system components including pumps and tanks. Investigation of the origin and causes of structural fires.

August 1985 to July 1993 — **Charleston Naval Shipyard**
Charleston, South Carolina

Nuclear (Civil) Engineer
Design and issue plans and specifications for the fabrication, modification and maintenance of industrial facilities. Engineering of structural and fluid system projects. Structural projects requiring knowledge of analysis, design, metal construction techniques and construction codes. Fluid system projects include the design of supply and waste water systems and require knowledge of pump sizing, head loss determination, motor starter sizing, as well as stainless steel fabrication and machining techniques. Responsible for the engineering and design of hundreds of lifts made by various types of cranes utilizing various types of rigging arrangements. Supervise shipyard's effort on assigned projects to accomplish facility improvements and maintenance involving breathing air, supply and waste water systems, clean area requirements, radiological controls, HEPA filtered ventilation, hazardous material work controls, architectural, load lifting equipment and rigging, OSHA worker safety requirements and construction management. Development of schedules, costs estimates and preliminary design presentations. Development of

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Engineering services in New York provided through the associated firm, Engineering Consultants, D.P.C.
Engineering services in North Carolina provided through the associated firm, EDT Engineers, P.C.

long-range budgets for performance of complex engineering projects. Verification of satisfactory in-progress and completion status of projects. Analyze structural systems utilizing finite element-based software.

May 1982 to August 1985 **Charleston Naval Shipyard**
Charleston, South Carolina

Civil Engineering Cooperative Education
Drafting of mechanical and structural drawings, design basic industrial type equipment, and conferring with production shops during fabrication.

REGISTRATIONS and CERTIFICATIONS

National Council for Engineering and Surveying (#18-622-62)

Registered Professional Engineer in Alabama (#26203-E)

Registered Professional Engineer in Florida (#55633)

Registered Professional Engineer in Georgia (#PE23265)

Registered Professional Engineer in Mississippi (#17322)

Registered Professional Engineer in North Carolina (#021799)

Registered Professional Engineer in Ohio (#69430)

Registered Professional Engineer in South Carolina (#13962)

Registered Professional Engineer in Virginia (#0402037802)

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers

PUBLICATIONS

Cracking Open Construction Vibrations, Journal of Failure Analysis and Prevention, June 2007

Fracture Analysis of a Tumbler Mechanism, Proceeding from International Mechanical Engineering Conference & Exposition, November 1995 (co-authored R. Dean Harris, Joseph C. Jur)

Snow Load Building Code Requirements, Proceeding from a Design Project Presented to the College of Engineering of Clemson University, August 1994

Structural Steel and Fire Damage Assessment, ASM, Materials Science & Technology 2010 Proceedings; Failure Analysis and Prevention (co-authored R. Dean Harris), October 2010

CONTINUING EDUCATION (Partial List)

2026 *OSHA 10 Hour Construction Training* – 360 Training

2025 *Design Aspects of Repairs* – EDT Seminar

Evaluation of Commercial Flat Roofs – EDT Seminar

Condition Evaluation of Existing Structures- Masonry and Wood – ASCE

ASCE's Code of Ethics – ASCE

Joints in Buildings – ASCE

Structural Renovation of Parking Garages – ASCE

2024 *Large Concrete Sewer Condition Assessment* – EDT Seminar

Geo-Structural Investigation of Existing Structures – ASCE

Design of Foundations for Coastal Flooding – ASCE

Design of Adhesive Anchors – ASCE

2023 *Exposure Category Determination and Impact on Residential Structures* – EDT Seminar

Introduction to 2015 International Existing Building Code – ASCE

Case Study: A Fresh Look at the Citicorp Engineering Ethics Dilemma – ASCE

A Data Base and Recommendation on 400 Failed MSE Walls and Geosynthetic Reinforcement – ASCE

Avoiding Problems in Specifying Metal Roofing – ASCE

Guidelines for Inspecting Earth Dams and Associated Outlet Works and Spillways – ASCE

2022 *Technical Issues Regarding Premise Liability Matters* – EDT Seminar (Presenter)

Basics of Drainage Design for Parking Lots – ASCE

Rain Loads 101 – ASCE

Ethics in Sustainable Development of Civil and Structural Engineers – ASCE

Reinforced Masonry Design and Construction – ASCE

Pavement Marking Maintenance Methods – ASCE

2021 *Hurricane Damage: Storm Surge vs. Wind vs. Wind-Driven Rain* – EDT Seminar

Blast-Related Damage Evaluation of Residential Structures – EDT Seminar

Hydraulics 101 – Part I and II – ASCE

Renovation of Slabs on Grade – ASCE

Lessons from Failures of Building Envelopes – ASCE

Avoiding Ethical Pitfalls in Failure Investigation – ASCE

2020 *Standard of Care Examined Through a Warehouse Roof Collapse* – EDT Seminar

Concrete Roof Tiles: Installation Guidelines and Storm Damage Assessment – EDT Seminar

Rules of Professional Conduct – What the States Say – EDT Seminar (Presenter)

Rules of Professional Conduct – Now What Do I Do – EDT Seminar

Diagnosis, Repair, and Restoration of Building Facades – ASCE

Design of Steel Lintels in Masonry Walls – ASCE

Evaluating Damage and Repairing Metal Plate Connected Wood Trusses – ASCE

2019 *Interdisciplinary Investigations* – EDT Seminar (Presenter)

Residential Roof Adjustment Challenges – PLRB Regional Conference (Presenter)

Engineering Judgement – Structural Renovation of a 100-Year-Old Historic Barn – ASCE

Deciphering Building Code Provisions for Structural Renovations – ASCE

2018 *Introduction to Wood Connection Analysis*– EDT Seminar
Fire Retardant Treated Wood – Pressure Treated Wood – EDT Seminar (Presenter)
Basic Fatigue Analysis – EDT Seminar
An Introduction to Fire Protection Engineering for Buildings – PDHLibrary
ASCE 7-10 Snow Load Provisions – ASCE
Mentoring: Guidance for Mentors, Proteges and Organizations – ASCE
Glass and Glazing: Design and Detailing – ASCE
The Ethics of Leadership – ASCE
Construction Stormwater BMPs – ASCE

2017 *MSE Retaining Walls – Design and Analysis* – EDT Seminar
Instructions and Warnings: What is the Difference and Does it Matter? – EDT Seminar
Understanding Firewall Basics – ASCE
Crawlspace Construction in Special Flood Hazard Areas – PDHLibrary
Slope Stability – PDHLibrary
Fire Retardant Treated Wood – EDT Seminar

2016 *A Primer Regarding Blast Loads on Structures* – EDT Seminar
Maintenance and Repair of Roofs – Part 1 and 2 – PDHLibrary
Ethics for Structural Engineers – PDHLibrary
Foundation Design of Buildings and Other Structures PT 1 - PDHLibrary

2015 *Drilled Displacement Pile Performance* – SC Engineering Conference
Ethics for Professional Engineers – SC Engineering Conference
NCMA SRW Design & Construction Best Practices Guide – SC Engineering Conference
PCI–Special Inspection of Precast Concrete Structures – SC Engineering Conference
Soil Stabilization Through Structural Resin Injection – SC Engineering Conference

2014 *Asphalt Pavement Design Guide* – SC Asphalt Pavement Association
Asbestos Awareness – R&R Environmental
A Guide to the Investigation of Imminent Collapse – EDT Seminar

2013 *Masonry Anchoring Solutions* – CINTEC Reinforcing Systems
Changes in the Wind Provisions of ASCE 7 Standard – EDT Seminar
Metal Roofing: Composition and Damage Assessment – EDT Seminar

2012 *Elevated Work Platform Program* – EDT Seminar
Introduction to Arc Flash – EDT Seminar

2011 *Construction of Residential Buildings in Coastal Areas* – Decatur Professional Development
Earthquakes–Key Components to Aid in Damage Evaluation – EDT Seminar
Engineering Ethics Seminar – EDT Seminar

Maintenance of Concrete – Decatur Professional Development

Rotating Equipment and Predictive Maintenance – EDT Seminar

Warnings vs. Instructions – EDT Seminar

2010 *ADA Guidelines: Accessible Routes* – RedVector, Inc.

ADA Guidelines: General Site and Building Elements – RedVector, Inc.

Assessment and Repair of 155 Year–Old Heavy Timber Trusses In Historic Building – SEA of South Carolina–Columbia, Chapter

Basement Foundation Walls – EDT Seminar

HVAC Design and Components – EDT Seminar

Structural Steel and Fire Damage Assessment– SEA of South Carolina–Columbia Chapter (Presenter)

The Engineer's Role in Loss Valuation – EDT Seminar

2009 *Alternate Means and Methods as Provided by the ICC* – EDT Seminar

Asphalt Pavement – Design Basics – RedVector, Inc.

Concrete 3: Methods, Materials, and Maintenance – Red Vector, Inc.

Interior Codes 4: Means of Egress – Red Vector, Inc.

Ethical Decision Making for Engineers #1 – Red Vector, Inc.

The Intention of LEED – EDT Seminar

You Can Judge a Roof by Its Cover – EDT Seminar

2008 *Confined Space Training* – South Carolina National Safety Council

Hot–Dip Galvanizing: Corrosion Protection – Red Vector, Inc.

Pyrolyzed by Spontaneous Combustion – EDT Seminar

Characterizing Damages to Residential Roofing Systems – SCIFI (Presenter)

Bucking Restrained Braced Frame Systems – SAE of SC

2007 *Design and Application of Sheet Pile Walls* – ASCE

Simplified Design of Two–Way Slabs – ASCE

Slab–on–Grade Reinforcing Design – PDH Center

Soil Reinforcement Solutions – ASCE

Subgrade Improvement & Base Reinforcement Utilizing Geogrid – ASCE

The Analysis of Open Web Steel Joists in Existing Buildings – PDH Center

The New Orleans Levees: The Worst Engineering Catastrophe in US History–What Went Wrong and Why – ASCE

Understanding Firewall Basics – PDH Center

2006 *Contractors' Pricing Methods* – PLRB/LIRB Claims Conference

Earthquake Damage Assessment & Repair – PLRB/LIRB Claims Conference

Hail Testing of Residential Roofing Materials – EDT Seminar

Hurricane Damage Evaluation Procedures – EDT Seminar

Legal Aspects of Product Liability Claims – EDT Seminar

Making Weather Work for You – EDT Seminar

South Carolina Business & Law – American Contractors Exam Services

South Carolina General Contractor Unlimited – American Contractors Exam Services

2005 *Windows: Performance and Testing* – EDT Seminar

2004 *Concrete Distress and Deterioration – Symptoms and Causes* – Decatur Professional Development LLC

Confined Space Compliance – Safety and Health Council of North Carolina

Metal Roofing Systems–Damage Assessment – EDT Seminar

Reinforced Modular Block Walls – EDT Seminar

2003 *Exterior Insulation and Finish System Panel Discussion* – EDT Seminar

2002 *Examination and Evaluation of Wood Roofs* – EDT Seminar

Structural Condition Assessment – ASCE

2001 *Excavation Safety* – Videotape Course

1999 *Analysis of Fatigue Fractures* – EDT Seminar

Structural Fires – Evaluating Damage as a Result of Fire – EDT Seminar

Safety on the Job, on the On-site – EDT Seminar (Presenter)

1998 *How to Predict and Control Floods* – ASCE

Residential Construction Materials – EDT Seminar (Presenter)

1997 *Exterior Insulation Finish System (EIFS)* – EDT Seminar (Presenter)

Hurricane Resistant Residential Construction Course – ASCE

1996 *The New American Concrete Institute 318 Building Code* – ACI Seminar

1995 *Basic Cause and Origin* – International Training Association

Residential Electrical Inspection Course –SBCCI

1993 *Radiological Controls for Engineers, Non–destructive Testing for Engineers, Quality Control, Nuclear*

1982 *Reactor Principals, and Total Quality Management* – Provided by Charleston Naval Shipyard, Charleston, South Carolina