

ENGINEER: STRUCTURAL, CIVIL

CHARLES E. WHITLEY, P.E.
Engineering Design & Testing Corp.
Post Office Box 100758
Birmingham, Alabama 35210
Telephone: (205) 838-1040
cwhitley@edtengineers.com

EDUCATION:

1988 B.S.E. (Civil) University of Alabama at Birmingham, Birmingham, Alabama

EXPERIENCE – ENGINEERING PRACTICE:

April 1999
to Present Engineering Design & Testing Corp.
Birmingham, AL

Consulting Engineer, (April 1999-April 2000), Engineering Manager (April 2000-January 2011), Regional Engineering Manager (January 2011-Present)

Consulting in the areas of civil and structural engineering for industrial, commercial and residential structures, including cause and origin investigations of collapsed structures; evaluations of wind, fire, flood, and ground movement related damages; wind verses flood water evaluations; evaluations of retaining walls and slope stability failures; building code compliance; evaluation of construction materials and methods; structural evaluations of framing systems, exterior veneers, roof damage; evaluations of construction losses and construction defects; scope of damage evaluations; analysis of cost to repair; expert engineering testimony.

October 1998
to March 1999 Quality Technical Services
Mobile, AL

Structural Engineer. Performed structural design and administration for structural design department on petro-chemical projects. Projects were both land and sea based.

March 1998
to September 1998 Frucon Engineering
Birmingham, AL

Senior Structural Engineer and Department Manager. Performed conceptual and detailed structural designs in pulp and paper, food and beverage, and manufacturing fields. Responsible for all department functions for Civil, Structural and Architectural Departments.

March 1988
to March 1998

Rust International
Birmingham, AL

Structural Engineer. Provided conceptual and detailed design services for multi-million dollar projects in the pulp and paper, chemical and aerospace fields. Responsible for structural design, construction management and supervision of design and drafting personnel.

EXPERIENCE – DESIGN AND CONSTRUCTION MANAGEMENT (partial listing):

NASA Space Shuttle Fuel Generation Facility – Stennis, MS
Fuel production facility for space shuttle. Included casting pits, manufacturing facilities and support structures.

NASA Space Shuttle Rocket Testing Facility – Hancock County, MS
Testing facility for space shuttle rockets. Facility included horizontal test stand, testing bunkers and exhaust plume deflector

Dow Corning Chemical Plants – Various Locations
Chemical processing and manufacturing facilities throughout the United States

Union Camp Paper Recycling Facility – Franklin, VA
Paper recycling facility converting water paper to pulp for fine paper production

International Paper, Paper Mill – Courtland, AL
New paper machine in existing facility. Included power generation plant, log unloading and handling process equipment, and paper finishing and distribution warehouse

Mead Paper, Paper Mill – Eufaula, AL
New paper mill for fine paper production. Included all phases of production from incoming log handling equipment to paper distribution warehouse

EXPERIENCE – ENGINEERING INVESTIGATIONS (partial list):

Parking Deck Collapse – Atlanta, GA
Multi-level precast concrete parking structure. Determine cause of collapse, scope of structural damage, and feasibility and cost of repair

Scrap Metal Recycling Facility – Louisville, KY

220 Metric Ton Press and Shear facility. Engineering investigation to determine scope of explosion related damage to facility. Included repair design review and cost to repair/replace analysis

Cotton Storage Warehouse – Covington, TN

Precast and site cast concrete structure collapse. Determination of cause of collapse, scope of damage and review of repair/replacement options

Communication Tower Collapse – Huntsville, AL

1000 foot tall communication tower. Determine cause of collapse of tower

Parking Deck Collapse – Miami, FL

Determine scope of damage to precast concrete parking deck. Included design review, determination of extent of damage and cost estimate for replacement

Hurricane Damage to Barge Mounted Casinos – Mississippi Coast

Engineering investigations to determine cause and scope of damage to floating casino structures in multiple locations along the Mississippi coast. Separation of wind related damages from flood water and wave related damage

Marine Research Facility – Charleston, SC

Construction defect evaluation. Review of structural design for both seismic and hurricane wind force resistance, evaluation of horizontal force resistance capacity of the structure, and adequacy of structural systems and construction

Steel Production Facility – Birmingham, AL

Scope of damage evaluation for damage resulting from furnace explosion. Included investigation of furnace structure and support structures

Art and Science Center and Planetarium – Baton Rouge, LA

Review of design and construction for code compliance.

Medical Office Building Collapse – Meridian, MS

Determination of cause of collapse of site cast concrete structure. Included review of shoring design, construction sequencing, and structural design

High School Auditorium Collapse – Pinson, AL

Steel-framed structure. Investigation to determine cause of roof collapse of auditorium. Design review of structural and drainage design, investigation of construction techniques and facility maintenance

Yacht Club Facility – New Orleans, LA

Multi-story recreational facility. Determination of cause of damage to facility. Included review of structural design and building envelope design and construction

Warehouse/Distribution Facility – Atlanta, GA

Steel-framed warehouse building. Determination of cause of collapse of roof structure. Review of structural design, roof drainage design, and construction

Community College – Hanceville, AL

Investigation of storm related damage to 27 structures, including a 13-story tower undergoing renovation at the time of the storm. Evaluation of both cause and scope of damage, and review of repair proposals

Office Building Complex – Germantown, TN

Steel and wood-framed, multi building office complex. Post fire structural evaluation to determine scope of damage and potential for repair

Plastic Manufacturing Facility – Birmingham, AL

Site cast reinforced concrete structures. Review of design and construction to determine cause and scope of construction defects

Automobile Manufacturing Facility – Talladega, AL

Steel-framed manufacturing facility supported on driven concrete piles. Review of design and construction for determination of cause of foundation failure. Review of geotechnical evaluation for original construction, and review of contract documents for design and construction responsibilities

Multi-Story Hotel – Trussville, AL

Review of construction process and documentation to determine percentage of completion of construction. Included payment application review and construction evaluation documentation

Chemical Manufacturing Facility – Plaquemine, LA

Steel-framed manufacturing facility. Determination of scope of structural damage to manufacturing facility resulting from fire.

Multi-Story Condominium Building – Orange Beach, AL

Steel and wood-framed residential/rental facility. Review of construction for adequacy of repairs due to hurricane related damage.

Floating Boat Docks – Guntersville, AL

Steel-framed floating dock structures for yacht club. Investigation of structures to determine scope of storm related damage. Included review of design documents and cost analysis for repairs

Concrete Parking Deck – Huntsville, AL

Site cast concrete parking structure. Review of design and construction for construction defect/structural failure evaluation. Determination of cause of failure and adequacy of structural design and code compliance. Site monitoring during demolition for review of construction techniques and materials usage

Concrete Storage Silo – Pine Mountain, GA

Elevated concrete storage silo. Post fire structural evaluation to determine scope of fire related damage. Review of repair proposals for structural adequacy and cost

Bottling Facility – Memphis, TN

Steel-framed structure. Evaluation of 1,000,000 square foot structure for scope of storm related damages.

Office Building – Fort Walton Beach, FL

Steel-framed multi-story commercial building. Determination of cause and scope of roof damage. Included review of repair/replacement proposals and cost analysis

US Route 78 Bridge – Tupelo, MS

Determination of scope of damage. Review of repair proposals and cost of repair analysis

Office Building and Warehouse Facility – Pelham, AL

Investigation to determine cause of collapse. Analysis to determine appropriate method of temporary shoring, scope of damage, and review of repair proposals

Auditorium Under Construction – Memphis, TN

Wood-framed auditorium with truss failure during construction. Determination of cause of collapse. Review of structural design and construction methods/sequencing

Shopping Mall – Pensacola, FL

Steel and concrete retail structure. Analysis to determine effects of blasting on structure. Review of blasting logs, structural design, and construction

LEGAL CONSULTATIONS (partial listing):

Retaining Wall – Birmingham, AL

Expert testimony on cause of collapse, warnings and barricades

Single Family Dwelling – Jasper, AL

Expert testimony on construction defects, appropriate repairs and cost of repair

Restaurant – Birmingham, AL

Expert testimony on construction, lighting and code compliance

Office/Warehouse Facility – Atlanta, GA

Expert testimony on cause of collapse, structural and drainage design, and cost of repair

Condominium Facility – Birmingham, AL

Expert testimony on construction defects, structural and drainage design, construction methods and materials

Manufacturing Facility – Greenville, AL

Expert testimony on cause and scope of collapse, structural design, and construction methods and materials

Single Family Dwelling – Huntsville, AL

Expert testimony on cause and scope of damage to residence. Analysis of structural design and construction, analysis of structural response to wind forces, and review of repair proposals

Retail Shopping Mall – Tuscaloosa, AL

Expert testimony on cause and scope of damage to roofing and roof structure. Included review of design and construction and cost of repair

Single Family Dwelling – Birmingham, AL

Expert testimony on code compliance of residence

Manufacturing Facility – Birmingham, AL

Expert testimony of cause and scope of damage to steel and concrete structure. Included feasibility of repair and cost analysis

Retaining Wall – Pell City, AL

Expert testimony of design and construction of retaining wall, cause of failure, and construction methods

Retail Shopping Mall – Mobile, AL

Expert testimony on construction defects, structural design, code compliance, construction methods and materials

Single Family Dwelling – Olive Branch, MS

Expert testimony on construction defects and code compliance

30-Story Condominium Building – Panama City, FL

Expert testimony on storm related damage, construction defects, structural design, building envelope design, and code compliance

Multiple Single Family Dwellings – Anniston, AL

Expert testimony on blasting damage to residences. Evaluation of structures, blasting records, and soil response to blasting wave generation

Commercial/Warehouse Facility – Dothan, AL

Expert testimony on cause of construction accident. Review of construction sequencing and methods, code compliance, and workplace safety requirements

Retail/Warehouse Facility – Pelham, AL

Expert testimony on cause of structural collapse. Included review of structural design, drainage design, and construction methods

Office Building – Birmingham, AL

Expert Testimony on flooding of office building. Review of drainage calculations, maintenance requirement, and weather records

PRESENTATIONS:

Hurricane Damage Evaluation Procedures
May 20, 2006; Charlotte, North Carolina

REGISTRATIONS & CERTIFICATIONS:

Registered Professional Engineer in Alabama (# 19393)
Registered Professional Engineer in Tennessee (# 00105023)
Registered Professional Engineer in Mississippi (# 14349)
Registered Professional Engineer in Georgia (# PE026011)
Registered Professional Engineer in Florida (# 55003)
Registered Professional Engineer in Louisiana (# 32381)
Registered Professional Engineer in Arkansas (# 14596)

Registered Professional Engineer in South Carolina (# 30231)

National Council of Examiners for Engineering and Surveying (# 18027)

OSHA Site Supervisor

Confined Space Entry

Certified Building Inspector

Certified Masonry Inspector

PROFESSIONAL ORGANIZATIONS:

American Society of Civil Engineers

Tau Beta Pi

International Code Council

International Society of Explosives Engineers, Alabama Chapter

American Institute of Steel Construction