



Synovus Bank Headquarters, Columbus, Georgia
Crawford, McWilliams, Hatcher Architects, Inc.

STRUCTURAL DESIGN GROUP

*Engineering
Better
Outcomes*

700 CENTURY PARK SOUTH, SUITE 114 • BIRMINGHAM, ALABAMA • 35226
PHONE: 205-824-5200 FAX: 205-824-5280

BACKGROUND

Structural Design Group (SDG) Engineers are leading professionals in many areas of concrete design including **post-tensioned concrete**, long span concrete structures, and advanced analysis of shell and arch concrete structures.

SDG has Engineers who serve on **several national code-setting bodies** for concrete design; making SDG a regional leader in state-of-the-art concrete design. In fact within the last 17 years, the majority of two-way post-tensioned slab projects in Alabama were designed by current SDG employees.

We have expertise in areas such as: **post-tensioned slabs on grade**, nationally recognized expertise in **tilt-up concrete**, and extensive experience with **industrial floor slabs**.

We have substantial experience with all types of **parking decks** totaling over **15,000 parking spaces** and including cast-in-place and precast construction. We also have experience designing cost-effective, quality steel parking structures.

SDG Engineers have experience designing **multi-level buildings** of fifteen or more floors.



Vestavia Hills City Center, Birmingham, Alabama
Williams Blackstock Architects



Pilot Medical Park Building 100, Birmingham, AL
Williams Blackstock Architects



City Federal Building Conversion to Condominiums, Birmingham, Alabama
Cohen Carnaggio Reynolds

We provide experience with projects involving **progressive collapse or anti-terrorist** requirements, including government projects using the latest DoD, UPC, or, GSA requirements.

*Structural Design
Group has completed
more than **2,300**
projects in the last ten
years.*

EXPERIENCED SENIOR STAFF

Stewart Lee, **P.E., 26** Years
Mike Jones, **P.E., 20** Years
Craig Winn, **P.E., 17** Years
Michael Davis, **P.E., 13** Years
Jason Partain, **P.E. 6** Years



Broadway Park, Birmingham
Cohen Carnaggio Reynolds

SELECTED REGISTRATIONS

ALABAMA
ARKANSAS
COLORADO
FLORIDA
GEORGIA
KENTUCKY
LOUISIANA
MARYLAND
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
NORTH CAROLINA
OHIO
OKLAHOMA
PENNSYLVANIA
SOUTH CAROLINA
TENNESSEE
TEXAS
VIRGINIA

SDG is a leading resource for **Seismic Design**. We have successfully implemented designs using the latest state-of-the-art **special steel moment frames and buckling restrained braced frames**.

Our involvement in state-of-the-art seismic design has led us to become one of the few regional firms with Engineers experienced in advanced **masonry design** using post-tensioning.

If you have a structure with **long-span roof** considerations, SDG can provide the level of expertise that such structures require.

Fast-track and **design-build** projects require having knowledgeable Engineers on staff who understand the inherent challenges expected with these types of projects. Many times multiple design packages are needed to satisfy construction schedule demands, and SDG Engineers are experienced with this process. **Confidence, consistency, accuracy, and leadership** are all traits that you will recognize in SDG Engineers.



Crest Cadillac Hummer Dealership, Hoover, Alabama
TurnerBatson Architects

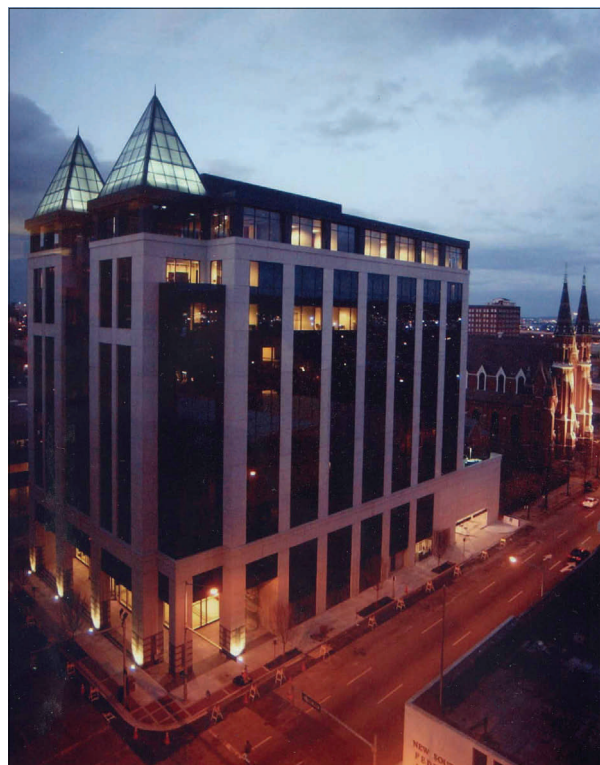
Ridgecrest South, Tuscaloosa, Alabama
Ward, Scott, Veron, Architects



SDG is a national leader in **Wood Engineering** with over **900 million dollars** in wood framed construction ranging from the complex and exotic to more standard stick framing.

When it comes to **apartments, condominiums, student housing, and university game day centers**, few can match the experience of SDG. With over **8,000 apartment units** and **13,300 student housing beds**, you can count on SDG to provide valuable insight and planning to make your project successful.

SDG has extensive experience in **Retail** projects, with over **9 million square feet** designed in the last few years.



Concord Center, Birmingham, Alabama
Williams Blackstock Architects

Trinity Baptist Church, Decatur, Alabama
Williams Blackstock Architects



Vestavia Hills High School, Birmingham, Alabama
Lathan Associates Architects, P.C.



We also have substantial experience with the design of **Schools** totaling more than **3 million square feet and 300 million dollars in construction cost**, including the use of hollow core, masonry, and advanced metal building systems.

Our **Church design** experience consists of a variety of project sizes and scopes including: **long-span roof framing, framed bowl seating, advanced acoustic design, and multi-story tilt up.**



Pilot Medical Park Building 100, Birmingham, AL.
Williams Blackstock Architects

PHILOSOPHY

At SDG, our most valuable resource is our people. When Stewart Lee founded the company in the mid 90's, he believed that projects benefited greatly from a single licensed **Professional Engineer** performing the work on all aspects of a project. Having multiple layers of project management does not best serve the client's interest.

At SDG our licensed Professional Engineers will **personally work on your project**. **Communications are rapid and crisp**, eliminating possible miscommunications, costly errors, and the slow response time of a more bureaucratic system. SDG is committed to employing well respected and seasoned Professional Engineers enhancing the **quality and speed** in which projects are done as compared to that of a multi-layered approach. Our philosophy is proven for projects with a construction cost up to about 40 million dollars. For larger projects, additional engineers would be added as needed.

By employing experienced licensed Engineers as the actual production personnel, SDG offers an **unparalleled level of expertise** on any given project. When you work with SDG your engineering is done by our team of Professional Engineers and not handed off to several Intern Engineers.

Archie Lamb Law Offices, Birmingham, Alabama
Cohen Carnaggio Reynolds



DESIGN - BUILD

The exclusive use of experienced Professional Engineers as our core production personnel has made us the consultant of choice for design-build projects.

Our **cutting edge and creative solutions** to design problems put our team a cut above – this is the kind of input you get when the hands-on work is being done by one of our seasoned Professional Engineers.



Broadway Park, Birmingham
Cohen Carnaggio Reynolds



The Mall at Turtle Creek, Jonesboro, Arkansas
Crawford, McWilliams, Hatcher Architects, Inc.

FAST TRACK

Mistakes made by poor communication or inexperienced design Engineers are costly. At SDG, our use of Licensed Professional Engineers as the key production personnel gives us an edge with fast track projects. Another advantage of the SDG system is the **increased speed** at which an experienced Professional Engineer can produce **quality design packages**.

Crest Cadillac Hummer Dealership, Hoover, Alabama
TurnerBatson Architects

TECHNICAL EXCELLENCE

One of our goals is to always be in the **forefront of design and engineering advancement**. We take on **unusual design challenges**, making the apparently **impossible a reality**, finding clever and creative answers to design issues. We are pleased with our contributions to the Engineering community and are proud of the **value** clients derive from our services.



J. STEWART LEE, P.E.

Principal/President

With over **25 years of experience** and project experience totaling over **two billion dollars** in construction cost, Stewart Lee represents one of the best Structural Engineering resources available in our region. Mr. Lee has extensive experience in all types of construction including: **concrete, post-tensioned concrete, structural steel, composite steel and concrete, wood, and masonry**.

One area of Mr. Lee's extensive experience is in the **hospital and healthcare** arena which only adds to his versatility and value to your project design team.

Mr. Lee is one of the **nation's top wood designers**. With over 250 projects comprised of **student housing (over 13,300 beds)** and **apartments (over 8,000 units)**, Mr. Lee's experience and knowledge is unsurpassed in this area. Mr. Lee is the "go-to" Engineer for wood projects ranging from complex and exotic **glue laminated trusses** to standard stick framing.

Mr. Lee's heritage and influence on Alabama's Engineering community is profound. Prior to founding SDG in the mid 90's, Mr. Lee was an Associate at a local structural engineering firm where he trained and supervised several individuals who have since become Principals at area firms.

Mr. Lee has been both a **pioneer** and a **leader** in the expanding growth of **design-build** projects. Over the years, he has developed a solid expertise in this area and is often selected as the **consultant of choice** for several internationally recognized General Contractors.



Auburn Public Library, Auburn, Alabama
Williams Blackstock Architects

SDG

STRUCTURAL DESIGN GROUP

PROFESSIONAL ACTIVITIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

AMERICAN CONCRETE INSTITUTE

SOUTHERN BUILDING CODE CONGRESS
INTERNATIONAL

AMERICAN INSTITUTE OF STEEL
CONSTRUCTION

EDUCATION

AUBURN UNIVERSITY, BACHELORS OF
CIVIL ENGINEERING, 1983 *CUM LAUDE*

AUBURN UNIVERSITY, MASTER OF
SCIENCE OF CIVIL ENGINEERING, 1988

EXPERIENCE

1996-DATE PRINCIPAL-STRUCTURAL
DESIGN GROUP

1985-1996 ENGINEER-CONSULTING
STRUCTURAL ENGINEERING FIRM

1984-1985 GRADUATE RESEARCH
ASSISTANT-AUBURN UNIVERSITY

1983-1984 GRADUATE TEACHING
ASSISTANT-AUBURN UNIVERSITY

PUBLICATIONS

LEE, J. S. AND J. W. TEDESCO, *MARINE
PIPELINE STABILITY*, COMPUTERS AND
STRUCTURES, VOL. 36, NO. 6, 1990

C. MIKE JONES, P.E.

Principal/Vice President

With over **20 years of experience** and hundreds of successfully completed projects, Mike Jones is one of the areas most experienced Engineers. Mr. Jones has extensive experience in all types of construction including **concrete, post-tensioned concrete, structural steel, composite steel and concrete, wood, and masonry**.

Mr. Jones has been involved in numerous **parking deck projects** and is adept at cast-in-place, precast, and structural steel designs.

With several hundred million dollars of **school construction** under his belt, he is recognized as a leader in **efficient and intelligent designs** of school construction including masonry, light gage, and pre-fabricated steel frames. Through his work on cost effective and efficient school framing systems Mr. Jones has become one of the **regional leaders** in the effective use of **hollow core** in construction of all types.

Mr. Jones's experience in **laboratory and research facilities** is a sought after resource. The framing systems of laboratories is a delicate and involved task that requires experience. The Engineer must be able to see ahead in the design process and plan for what the various other consultants will demand: **Vibration control**, floor penetrations to accept movable lab modules, extensive coordination with very large mechanical systems and plenums. If you are doing a lab or research facility, Mr. Jones is your Structural Engineer of choice.

In 2010 Mr. Jones was honored as a **Distinguished Departmental Fellow** in the Department of Civil, Construction, and Environmental Engineering at the **University of Alabama**.



Child Development Research Center, Tuscaloosa, Alabama
TurnerBatson Architects

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STRUCTURAL DESIGN GROUP

PROFESSIONAL ACTIVITIES

STRUCTURAL ENGINEERS ASSOCIATION
OF ALABAMA

AMERICAN INSTITUTE OF STEEL
CONSTRUCTION

AMERICAN CONCRETE INSTITUTE

NATIONAL COUNCIL OF STRUCTURAL
ENGINEERS ASSOCIATION

AMERICAN SOCIETY OF CIVIL ENGINEERS

THE POST-TENSIONING INSTITUTE

EDUCATION

UNIVERSITY OF ALABAMA , BACHELOR
OF SCIENCE IN CIVIL ENGINEERING,
1989

UNIVERSITY OF ALABAMA , MASTER OF
SCIENCE IN CIVIL ENGINEERING, 1991

EXPERIENCE

2003-DATE PRINCIPAL-STRUCTURAL
DESIGN GROUP, INC.

2002-2003 ASSOCIATE-STRUCTURAL
DESIGN GROUP, INC.

1995-2002 ENGINEER-CONSULTING
STRUCTURAL ENGINEERING FIRM

1993-1995 ENGINEER-CONSULTING
STRUCTURAL ENGINEERING FIRM

1991-1993 ENGINEER-CAIN STEEL AND
SUPPLY, INC. STEEL FABRICATOR.

1990-1991 GRADUATE RESEARCH
ASSISTANT-UNIVERSITY OF ALABAMA

PUBLICATIONS

Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M.; "Measured Strains In Post-Tensioned Concrete Parking Deck Made With Shrinkage-Compensating Concrete," *ACI Structural Journal*, V. 107, No. 6, Nov.-Dec. 2010, pp.718-725.

Eskildsen, S.; Jones, M.; and Richardson, J.; "No More Pour Strips," *Concrete International*, V. 31, No. 10, Oct. 2009, pp. 42-47.

Jones, M.; "*Comparison of Analysis Methods For Metal Plate Connected Wood Trusses*," MSCE thesis, University of Alabama, 1991.

H. CRAIG WINN, P.E.

Principal/Vice President

With over **9,000,000 square feet of retail projects experience worth over half a billion dollars**, Craig Winn has extensive experience with **cost-effective** and efficient structural engineering for **retail centers** of all types: Strip centers, lifestyle centers, power centers, and indoor malls.

With over **17 years of experience**, Mr. Winn has been involved in the design of construction projects ranging from simple one story structures to **multi-level, multi-use facilities**. Mr. Winn's design experience includes: retail, schools, **medical facilities**, churches, **manufacturing** and warehouse buildings, and **government projects**.

Mr. Winn has a passion for versatile and flexible designs which are **contractor friendly** and **cost-effective**. Mr. Winn's philosophy and approach is extremely useful when he is **intimately involved** in the planning stage of large projects. His input on details and planning in the early stages of projects can make an immeasurable difference in the overall success of the project.



Chambers County Courthouse Renovation Lafayette, Alabama
TurnerBatson Architects

SDG

STRUCTURAL DESIGN GROUP

PROFESSIONAL ACTIVITIES

VICE PRESIDENT, STRUCTURAL ENGINEERS ASSOCIATION OF ALABAMA, 2003

BOARD OF DIRECTORS, STRUCTURAL ENGINEERS ASSOCIATION OF ALABAMA, 2003

AMERICAN SOCIETY OF CIVIL ENGINEERS

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

EDUCATION

AUBURN UNIVERSITY, BACHELORS OF CIVIL ENGINEERING, 1992

AUBURN UNIVERSITY, MASTER OF SCIENCE OF CIVIL ENGINEERING, 1994

EXPERIENCE

2003-DATE PRINCIPAL-STRUCTURAL DESIGN GROUP, INC.

2001-2003 ASSOCIATE-STRUCTURAL DESIGN GROUP, INC.

1998-2001 PROJECT ENGINEER-STRUCTURAL DESIGN GROUP, INC.

1994-1998 ENGINEER-CONSULTING STRUCTURAL ENGINEERING FIRM

1992-1994 GRADUATE RESEARCH ASSISTANT-AUBURN UNIVERSITY

PUBLICATIONS

WINN, FIBER REINFORCED PLASTIC REINFORCING FOR CONCRETE. UNPUBLISHED THESIS.

MICHAEL D. DAVIS , P.E.

Associate

Michael Davis is a specialist in projects involving the **historic preservation** of structures and renovations, or remodeling where maintaining historical and architectural integrity is of paramount concern.

Mr. Davis has been involved in over 200 million dollars in **tilt-up projects** and is one of the regions most experienced tilt-up Engineers. Tilt- up projects have included: **manufacturing, industrial, storage, retail, churches, and office buildings**. If you are looking to do your first tilt-up project, or are a veteran designer, you can turn to Mr. Davis with confidence.

Mr. Davis is also specialized in the design of **steel and concrete structures** including cast in place **parking decks**. With several hundred million dollars in concrete construction, he is a veteran of many concrete systems, both conventionally reinforced and post-tensioned.

Several of Mr. Davis's concrete and steel projects have been selected as **feature projects** for their state-of-the-art use of structural engineering software by Ram International.



Lakeshore Crossing Building K, Birmingham, Alabama
Williams Blackstock Architects

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STRUCTURAL DESIGN GROUP

PROFESSIONAL ACTIVITIES

STRUCTURAL ENGINEERS ASSOCIATION OF ALABAMA

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

BOARD OF DIRECTORS AND FOUNDING MEMBER, INTERNATIONAL CONCRETE REPAIR INSTITUTE, GULF SOUTH CHAPTER, 2010

EDUCATION

UNIVERSITY OF ALABAMA, BACHELOR OF SCIENCE IN CIVIL ENGINEERING, 1996

UNIVERSITY OF ALABAMA, MASTER OF SCIENCE IN CIVIL ENGINEERING, 1998

EXPERIENCE

2005-DATE ASSOCIATE-STRUCTURAL DESIGN GROUP, INC.

2002-2005 PROJECT MANAGER-STRUCTURAL DESIGN GROUP, INC.

1998-2002 ENGINEER-CONSULTING STRUCTURAL ENGINEERING FIRM

1996-1998 RESEARCH ASSISTANT-UNIVERSITY OF ALABAMA, CIVIL ENGINEERING DEPT.

PUBLICATIONS

DAVIS, *ALABAMA HISTORIC BRIDGE INVENTORY*, ALABAMA DEPARTMENT OF TRANSPORTATION, 1998

LECTURES

"THE STRUCTURAL INVESTIGATION OF MAIN STREET ~ THE CITY FEDERAL BUILDING, A CHICAGO-STYLE SKYSCRAPER"

THE ALABAMA HISTORICAL COMMISSION, THE BUILDING CODE & HISTORIC PRESERVATION ON MAIN STREET SYMPOSIUM, DECATUR, ALABAMA. STRUCTURAL ENGINEERING FOR EXISTING-HISTORIC BUILDINGS, OCTOBER 27, 2005.

"ALABAMA'S HISTORIC BRIDGE INVENTORY"

SOCIETY OF INDUSTRIAL ARCHEOLOGY, 28TH ANNUAL MEETING, INDUSTRY IN THE LOW COUNTRY, OUR SOUTHERN INDUSTRIAL HERITAGE IN HISTORIC, SAVANNAH, GEORGIA. BRIDGE SYMPOSIUM, JUNE 5, 1999.