

ROBERT EARL BOOKWALTER: Civil/Structural/Architectural Engineer

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SUMMARY

Civil/structural/architectural engineering design for commercial, residential, and government projects, including budgets of up to \$100 million, and coordination of teams of up to four dozen people.

Specializing in creative solutions to unique engineering challenges with efficient design that is innovative but not over-built, and effective project management for on-time, within-budget delivery.

SKILLS

- Proposal development and budgeting
- **Project management**, quality assurance, quality control
- Operational analysis
- Drafting
- **3D Modeling** for spatial and structural analysis
- **Structural Engineering** for structures up to five stories high, foundations, pre and post-tensioned concrete, timber frame, steel frame, and cold-formed steel frame structures
- **Civil Engineering:** grading and drainage for residential and commercial properties
- **Bridge Design** for NMDOT based on AASHTO design standards
- **Roadway Design** for rural and private access per AASHTO design standards
- **Water Harvesting** design
- **Architectural Engineering**
- Building Inspection
- **Construction oversight and Management**
- Consulting for construction-related litigation
- **Forensic Investigations**

EXPERIENCE

Principal and Lead Engineer

REBel Engineering & Design

February 2017 to the present

Santa Fe, New Mexico

An engineering firm focusing on small commercial and custom home construction in northern New Mexico.

- **Angel Fire Ski Resort:** Structural design for a contemporary, 5,000 square foot multi-million dollar home in the Angel Fire ski resort area of northern New Mexico – budget approx \$1.3 million
- **Santa Fe Railyard Stationmaster's House:** Remodel of this historic building in Santa Fe to expand the adobe and mansard-roofed building, while maintaining its historic character – budget approx \$ 550,000
- **Log Cabin Renovation:** Structural and civil design for the renovation and upgrading of a unique log cabin estate next to the Brazos River and cliffs in northern New Mexico – budget approx. \$750,000

Lead Engineer, Principal Partner

Armstrong Group, Inc.

June 2012 to January 2017

Albuquerque, New Mexico

A specialty firm addressing building envelope performance for residential, commercial, and industrial clients.

- **Albuquerque Public Schools:** Structural engineering for remodeling the APS warehouse into a conference center/administrative office, including a new 50,000 square foot warehouse – budget approx \$2 million
- **Lim Residence:** Structural/civil design for the 8,000 square foot, Albuquerque, NM Lim residence, including raising the site above the flood plain and gaining county approval for the new flood plain designation
- **Los Poblanos Bed & Breakfast:** Structural design for two new guest quarters buildings and remodeling the old milking barn into a state-of-the-art restaurant/bar for this ABQ, NM property – budget approx \$3 million
- **Bobcat Bite Restaurant:** Structural and civil design for the new Bobcat Bite restaurant and bar on the site of the old Bobcat Bite restaurant south of Santa Fe, NM – project budget \$1 million
- **El Vado Hotel:** Structural and civil design for the renovation of the historic El Vado Hotel on Route 66 in Albuquerque – budget approx \$2.1 million
- **Internal Management:** of a 6-person engineering department including calculations and drawing preparation

Project Manager and Lead Engineer

December 2002 to May 2012

URS Corporation

Los Alamos, New Mexico

A full-service, global engineering, design, and construction firm which served Los Alamos National Laboratory.

- **Los Alamos Laboratory:** Lead Engineer for the Los Alamos office responsible for the ten-year design and construction of the \$100 million Nuclear Materials Safety Storage Upgrade Project required by Congress
- **Santa Fe Railyard Park and Plaza:** Lead Engineer for the approximately \$5 million, civil and structural design for this Santa Fe civic centerpiece including the internationally recognized Railyard Tan
- **NM DOT Bridges:** Structural design for half a dozen roadway bridges for the NM DOT

Chief Engineer and Vice-President

September 1997 to present

Chama Valley Manufacturing, Inc.

Chama, New Mexico

A manufacturing company producing rockfall control structures, gabion mesh, wire, rope/cable, rigging hardware, and other slope stabilization systems for North American roadways and other infrastructure uses.

- **Building Design:** Design of the building and equipment layout for the production facility
- **Production Layout:** Design/construction management oversight for all product and production processes
- **Strategic Direction:** Collaboratively manage strategic direction and organizational finances with partners

Project Manager and Civil/Structural Engineer

August 1998 to November 2002

Louis Berger Group

Santa Fe, New Mexico

A \$1 billion/year global engineering firm ranked in the top 20 worldwide by Engineering News Record.

- **Corn Maiden Bridge:** Structural design of numerous post-tension concrete, steel, and AASHTO girder bridges in NM and NV including the Corn Maiden Bridge north of Santa Fe, NM
- **Post-tension Slab and Steel Construction:** Structural design for a variety of commercial and residential architectural projects in Santa Fe, NM and Las Vegas, NV including post-tension slabs and steel frames

Surveyor, Draftsman

April 1996 to August 1998

Surveying Services, Inc.

Santa Fe, NM

Surveying and engineering services for road layout design and diverse civil construction projects.

- **Drawings for Roadway and GPS Projects:** Interpolated and created drawings from surveying field data using AutoCad R14 and Softdesk R 8 for roadway and GPS projects

Chief Engineer

April 1992 to April 1996

Brugg Cable Products, Inc.

Santa Fe, New Mexico

Manufacturer of steel-mesh rock-slope protection and avalanche control systems for North America.

- **Rockfall Slope Systems:** Site evaluation, design, fabrication, and construction of rockfall slope stabilization and avalanche control systems throughout North and Central America
- **ISO 9001 Procedures:** Wrote/implemented ISO 9001 procedures with the Swiss Assn of Quality & Mgt

President and General Manager

December 1993 to December 1994

Catchment Erectors Company

Santa Fe, New Mexico

Construction company specializing in the erection of rockfall control structures.

- **Company management:** Setup the corporation and managed day-to-day operations
- **Project Proposals:** Preparation of all bids and estimation of viability for all projects
- **Project Management:** Project coordination with the Project Foreman and General Contractors

Civil/Structural Engineer

July 1991 to March 1992

Merrick and Company

Los Alamos, New Mexico

An international design/engineering firm serving government/industry in the energy and life sciences sectors.

- **Bradbury Science Museum:** Structural design and drawings for this Los Alamos Museum
- **Los Alamos Weapons Subsystems Laboratory:** Structural proposals and seismic analysis
- **Diverse Projects:** Site planning and construction management

Project Engineer

January 1985 to August 1990

Lyons Engineering Associates

Santa Fe, New Mexico

Responsible for the design of structures at the Taos Ski Valley including:

- **Ski lift 7A:** Design involved relocation of the old ski lift on Al's Run to the new site on Bob's Run
- **Wind-control Fencing:** A system of fences to divert the wind up and over existing lifts
- **Pump House:** For snowmaking operations

Project Engineer

January 1985 to July 1989

Pneumatic Turbine Partnership

Santa Fe, New Mexico

Startup company for the design and manufacturing of pneumatic turbine drilling machines.

- **Prototype Turbine:** Mechanical design, fabrication, and testing of a pneumatic turbine drilling machine
- **Testing Tower:** Design of a testing tower used to simulate loads encountered during drilling in the field
- **Performance Testing:** Theoretical predictions/stress analysis of the pneumatic turbine using microcomputers

EDUCATION and PROFESSIONAL TRAINING

Project Management

2005 – 2012 Los Alamos, New Mexico

URS Corporation Management Training

Project Quality Control

2002 – 2012 Los Alamos, New Mexico

Los Alamos National Laboratory

Graduate Studies in Engineering Mechanics

1990 – 1991 Newcastle-Upon-Tyne, England

University of Newcastle-Upon-Tyne

Bachelor of Science, Architectural Engineering

1984 Boulder, Colorado

University of Colorado

Architectural Design Studies

January 1979 to June 1980

University of New Mexico

Albuquerque, New Mexico

AFFILIATIONS

American Society of Civil Engineers (**ASCE**)

National Society of Architectural Engineers (**NSAE**)

AWARDS

Rotary International, Graduate Scholar Recipient, 1990

Department of Energy, Award for Engineering Excellence, Pneumatic Turbine Partnership, 1988

PUBLICATIONS

“Field Testing of a Downhole Pneumatic Turbine Drilling Motor,” at the Geothermal Energy Symposium, Jan 10-13, 1988. Published by the American Society of Mechanical Engineers/Geothermal Resources Council.

“The Testing of Various Rockfall Control Systems,” This paper was presented with Los Alamos National Laboratory and Colorado Department of Transportation, August 1998.

SOFTWARE EXPERTISE

- **AutoCAD** Releases 2002 – 2018
- **AutoCAD Civil 3D** 2008 – 2018
- Structural Modeling with the **REVIT ROBOT** Finite Element Program 2008 – 2018

- **Primavera** Scheduling Software
- **Conspan** Bridge Design Modules
- **Microsoft** Office with extensive use of **Excel** spreadsheets

- **STAAD III** Structural Analysis
- **Corel Draw**
- **Aldus** PageMaker

LICENSING

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References Available Upon Request