

CHARLES B. LUTTRELL, PE

PRINCIPAL
PROFESSIONAL ENGINEER -
STRUCTURES

cluttrell@alphaaec.com

SUMMARY

Mr. Luttrell has worked with Alpha Associates, Inc. since 1996. He is the chief structural engineer for Alpha on all projects at Alpha. Before coming to Alpha, Mr. Luttrell's graduate work resulted in several contributions to the cold-formed steel deck industry. His new method of analysis for non-uniform loads on composite concrete and cold-formed steel decks has been made a permanent part of the *Steel Deck Institute's* design manual. Mr. Luttrell also worked on projects that involved pre-stressed timber bridge research with the West Virginia University Constructed Facilities Center. Since coming to Alpha, Mr. Luttrell has had a significant involvement in the effort to begin utilizing modern composite materials in practical bridge applications. Two recent Alpha bridge projects have been designed using these innovative materials.

PROFILE

Broad-based responsibilities in the following areas:

- Bridge Structural Design and Analysis
- Innovative Bridge Materials Applications
- Building Structural Design and Analysis

PROFESSIONAL HIGHLIGHTS

STRUCTURAL ENGINEER:

- Hazel Ruby McQuain Amphitheater Roof, Morgantown, WV
- West Buckeye Bridge, Core, WV
- South Jefferson High School, Charles Town, WV
- WVU Coliseum Asbestos Abatement Project (Scaffolding Design and Dome Structural Inspection); Morgantown, WV
- Morgantown Airport Air Rescue and Firefighting Building; Morgantown, WV

PROJECT MANAGER:

Bridge Design:

- Blackshere Bridge; Mannington, WV
- South High Street Bridge; Morgantown, WV
- Market Street Bridge; Wheeling, WV
- West Buckeye Bridge; Core, WV
- Simpson Creek Covered Bridge; Marion County, WV
- Fletcher Covered Bridge; Marion County, WV
- Elkins Bypass, Spur A Bridge; Elkins, WV



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EMPLOYMENT HISTORY

PRIVATE INDUSTRY:	1996 – Current	Alpha Associates, Incorporated
	1995 – 1996	Larry D. Luttrell, PE, Ph D
	1991 – 1994	West Virginia University
	1990 – 1991	WVU Constructed Facilities Center

EDUCATION

GRADUATE: West Virginia University
MS – Structural Engineering; 1995

UNDERGRADUATE: West Virginia University
BS – Civil Engineering; 1993

QUALIFICATIONS

LICENSE: Professional Engineer:
West Virginia, Maryland

AFFILIATIONS

PROFESSIONAL: West Virginia Society of Professional Engineers
National Society of Professional Engineers
Chi Epsilon; Member
American Concrete Institute; Member
Structural Engineering Certification Board

RESEARCH EXPERIENCE

STRUCTURAL: Cold Formed Steel Deck Research

- Fastener failures
- Edge conditions/failures
- Buttoned overlap shear failures

Composite Cold Formed Steel and Concrete Deck Research

- Line load behavior/failures
- Concentrated load behavior/failures
- Web crippling
- Punch failures

