

# DOUGLAS E. RITZMANN, P.E., S.E.

## PRINCIPAL

**Experience** Mr. Ritzmann has 12 years of experience in the structural design and analysis of industrial facilities. Mr. Ritzmann has experience in the design of steel structures (braced and moment frames), reinforced concrete foundations (spread footings, mats, piles and caissons), reinforced masonry, and precast concrete tilt-up panels. He is experienced in the design of all types of structures associated with industrial and manufacturing facilities. He has performed extensive designs conforming to the seismic provisions of various building codes.

**Special Expertise** Mr. Ritzmann has extensive experience in the application of computer aided structural design for commercial and industrial facilities. Mr. Ritzmann is proficient in analyzing and designing structures using RISA 3D. Mr. Ritzmann is also adept at using RISA 3D to perform seismic dynamic analyses (according to UBC 1997, IBC or ASCE 7 code requirements) or dynamic vibration analyses.

**Education** Bachelor of Science, Civil Engineering - Purdue University – 1995

**Registrations** Professional Engineer - Illinois  
Structural Engineer – Illinois

### REPRESENTATIVE COMMERCIAL EXPERIENCE

**Walgreens** **Carolina, Fajardo, Coamo, Trujillo Alto, Catano, Plaza Tropical, Cidra and Arecibo, PR.** Lead structural engineer responsible for the design of the structural steel and reinforced concrete for each new 17,000 sq ft store. Performed design per applicable building code incorporating 125 mph wind load and seismic zone 3 loading criteria. Coordinated structural design with the architectural requirements of each individual location.

**Morovis, PR.** Designed buried reinforced concrete tank for storm water retention. This tank was sized to retain 60,000 gallons at a depth of 20'-0" below grade.

**Urban Retail Properties** **Pottery Barn Kids, Oak Brook, Illinois.** Provided structural review of an existing roof structure for the support of new HVAC units. Performed necessary calculations to review existing design and analyze proposed layout.

**Restoration Hardware** **Restoration Hardware, Oak Brook, Illinois.** Provided an investigation of the existing structural system to determine its ability to carry two relocated HVAC units. Designed and detailed auxiliary steel supports as required.

### REPRESENTATIVE INDUSTRIAL EXPERIENCE

**US Filter/HPD Products** **Greif, Riverville, Virginia.** Lead structural engineer responsible for the design and development of structural steel and reinforced concrete drawings for this Black Liquor facility. Three-dimensional model utilized to optimize this steel structure within a very aggressive schedule.

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**Calpine, Hudson, Colorado.** As structural engineer, developed design drawings for both structural steel and reinforced concrete design for this 35,000 sq ft Zero Liquid Discharge facility. Designed and detailed foundation supports for grade level equipment, structural steel platforms and pre-engineered buildings. Responsible for the management and coordination of all design drawings.

**Virginia Gas, Saltville, Virginia.** Lead structural engineer responsible for all aspects of concrete and steel design related to the project. Developed a three-dimensional computer model for the structural steel design of both a crystallizer and heater tower contained within a pre-engineered building. Designed and detailed all foundations for the support of the structural steel towers as well as the pre-engineered building. This design included the development of a large concrete mat for the support of the heavier process loads. Also coordinated all support pads and auxiliary steel required for the process equipment throughout this 13,000 sq ft facility.

**Airborne, Ghent, Kentucky.** Developed three-dimensional models for the design of three individual product skids. Each skid had three levels and supported multiple vessels. Analyzed each skid individually for various lifting positions since they were to be shipped horizontally with all equipment in place and rotated to their vertical positions at the site.

**Indeck, Corinth, New York.** Structural engineer working with the client to develop a pipe rack design. This task included the analysis of the pipes as well as the design of individual pipe supports and a pipe bridge over a railroad easement. Also assisted in the development of foundations for the support of a pre-engineered building.

**Australian Paper, Southern Australia.** As structural engineer, provided design assistance in all aspects of the project. Incorporated current Australian design standards in multiple three dimensional models of steel structures for the support of various equipment.

**Weyerhaeuser, Dryden, Ontario.** Structural engineer provided engineering, design and construction support for the design of a Black Liquor support structure. Responsibilities included the development of a three-dimensional computer model for a portion of the facility and the development of the design drawings.

**AmerAlia, Meeker, Colorado.** Lead structural engineer responsible for design and development of design drawings for this multi-story mining facility. Also provided design for three mile pipe rack. Developed three-dimensional computer model of the steel structure and designed all building and tank foundations for the facility.

**Georgia-Pacific, Port Hudson, Louisiana** Lead structural engineer responsible for all aspects of the project. Developed computer model to design structure for the support of two crystallizers. Provided management and coordination for the development of all design drawings.

**American Soda, Rifle, Colorado.** Structural engineer provided engineering, design and construction support for the design of a crystallizer support tower. Using structural engineering software developed a three-dimensional computer model of the steel structure

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to support the four million pound vessel. Responsibilities included the development and accuracy of all design drawings.

**Texas Brine, Baytown, Texas.** Structural engineer provided engineering, design, and construction support for this 25,000 SF project. Using structural engineering software developed a three-dimensional computer model of the steel structure. Performed or reviewed all structural steel calculations for load determination and member and connection design.

**Murrin-Murrin, Western Australia.** Responsible for structural design calculations for all aspects of this four-story, 1 300-square-meter project that related to structural steel design. Developed a three-dimensional computer model of the steel structure using RISA-3D computer software. Responsibilities included development and accuracy of the design drawings for the project.

**US Gypsum  
Company**

**Plant Upgrades/Modifications, Various USG Plants.** Lead structural engineer responsible for the design and execution of multiple projects at USG production plants. Worked closely with USG Corporate Engineering and plant personnel to ensure successful completion of all projects.

**#3 Auratone Line.** Structural engineer for design and layout of the main building foundations for the pre-engineered framing system of a ceiling tile plant.

**Baxter  
International**

**Blood Fractionation Facility, Los Angeles, California.** Lead structural engineer accountable for the design and development of all structural drawings and documents. Provided coordination among all other disciplines for this 90,000 SF facility. Entire structure designed to meet seismic provisions per 1997 Uniform Building Code.

**Mylan, Inc.**

**Building Addition, Caguas, Puerto Rico.** Responsible for the structural design calculations and drawings for this two-story , 30,000 SF building addition. In this role, provided management and coordination for all structural aspects of the project.

**Industrial  
Facilities  
Engineering**

Barceloneta, Puerto Rico Structural engineer working on the structural steel and foundation design for a multileveled 460 ft long existing pipe rack replacement project for Abbott Laboratories. The new pipe rack has an increased loading area of 50% over the existing and the new pipe rack design had to incorporate conditions resulting from the fact that all existing pipe would remain in place during erection of the new pipe rack. The pipe rack and associated pile foundations were designed for UBC Zone 3 seismic loads and 125 mph hurricane force wind loads. Experience also includes 15 plus small structural projects ranging from small pipe racks, equipment supports, assessments and misc structural engineering activities.

**REPRESENTATIVE PUBLIC SECTOR PROJECTS**

**IDOT**

**Bridge Inspections Chicago, Illinois.** Structural engineer for inspection of five bridges. Developed drawings detailing the findings of bridge inspections. Also responsible for preparing the final bridge condition report submitted to the client

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**City of Chicago**

**Chicago 911 Project.** Member of the computer-aided dispatch closeout team on the Chicago 911 project. Involvement included the daily management of subcontractor software and documentation activities. Also served as liaison between the software subcontractor and the City of Chicago. In this role, provided management and coordination of software releases, hardware upgrades, and training activities. Also served as project training coordinator for all subcontractor training delivered to City of Chicago personnel and assisted in all City of Chicago field training activities.

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