

INDUSTRIAL



Borton  Lawson
ENGINEERING | ARCHITECTURE

INDUSTRIAL

The Borton-Lawson Industrial team delivers innovative solutions for the design, construction, and maintenance of manufacturing facilities, which increase productivity and utilize available space effectively.



LIFE SCIENCES

Borton-Lawson's facilities engineering professionals have provided engineering project solutions to pharmaceutical and vaccine manufacturers since 1995. We are thoroughly familiar with FDA requirements, validated systems, and the critical nature of the design requirements and documentation for validated systems.

- ▶ Space planning and layout
- ▶ Clean Rooms
- ▶ HVAC
- ▶ Campus Planning
- ▶ Utility Infrastructure
- ▶ Power Distribution
- ▶ Emergency Power/UPS
- ▶ Automation
- ▶ Site Design
- ▶ Validated Systems
- ▶ Commissioning
- ▶ Laboratory/Production Monitoring Systems
- ▶ Permitting

GLASS & CEMENT

Borton-Lawson has provided manufacturing engineering solutions to world-wide manufacturers since 1994, and similar services in the cement industry. Numerous furnace, kiln and balance-of-plant projects have benefitted from our fully-engineered approach, which includes 3D laser scanning, modeling and design.

- ▶ Refractory layout, design, procurement & inspection
- ▶ Furnace support & binding steel
- ▶ Forehearth support steel Roller pack assemblies
- ▶ Access catwalks, stairs & platforms
- ▶ Cranes & utility bridges
- ▶ Special foundations
- ▶ Combustion systems & burner skids
- ▶ Process piping & pumps Ductwork & fans
- ▶ Batch handling & dust collection
- ▶ Substations, transformers, switchgear and MCCs
- ▶ Industrial lighting and power distribution
- ▶ Process controls and instrumentation
- ▶ Motor controls and drive systems
- ▶ Site environmental and permitting
- ▶ Survey and 3D laser scanning
- ▶ Site utilities and stormwater management



FOOD & BEVERAGE

Borton-Lawson has extensive experience providing professionally-engineered solutions for food and beverage manufacturers, and we are familiar with the special requirements imposed by auditing agencies and production schedules.

- ▶ Designs meeting cGMP and GFSI requirements
- ▶ Process Flow Diagrams (PFDs) & Process and Instrumentation Drawings (P&IDs)
- ▶ Production space layout
- ▶ Integration of new process equipment
- ▶ CIP systems
- ▶ Plant utilities
- ▶ Industrial refrigeration
- ▶ Wash down areas
- ▶ Seamless flooring systems
- ▶ Site permitting and design
- ▶ Industrial pre-treatment design
- ▶ Structural engineering/ cranes/access platforms and mezzanines
- ▶ Containment areas
- ▶ Process piping
- ▶ HVAC/dust collection
- ▶ Steam systems
- ▶ Power distribution
- ▶ Automation and control systems
- ▶ Commissioning

PAPER & PLASTICS

Borton-Lawson has been supporting modernization and improvement projects in large paper and plastics manufacturing facilities for major clients for several years. Our structural, mechanical and electrical engineers support your in-house production and maintenance experts to execute critical projects.

- ▶ Integration of new process equipment
- ▶ Automation and control systems
- ▶ Land survey/3D laser scan survey
- ▶ Site permitting and design
- ▶ Industrial pre-treatment design
- ▶ Roof load analysis/conveying systems
- ▶ Structural engineering cranes/access platforms and mezzanines
- ▶ Process piping
- ▶ HVAC/dust collection
- ▶ Steam systems/heat recovery
- ▶ Power distribution
- ▶ Commissioning

ENERGY & UTILITIES

Borton-Lawson has leveraged the experience of our industrial team in the successful design of numerous industrial utility projects, including wastewater pre-treatment, central utility plants and Combined Heat and Power systems.

- ▶ Wastewater pre-treatment analysis and pilot projects
- ▶ Permitting and compliance
- ▶ Municipal wastewater treatment plants
- ▶ Central utility & chiller plants
- ▶ Municipal water and wastewater distribution systems
- ▶ Steam and water distribution
- ▶ Compressed air systems
- ▶ Energy studies/utility rate studies
- ▶ Power distribution
- ▶ Substations/motor control centers
- ▶ Automation and control systems
- ▶ Flood control pumping stations



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