

Structural Engineering Services

Types of Structures

*Amusement rides
Bridges
Vehicle
Bike
Pedestrian
Railroad
Buildings
Low-rise buildings
Industrial buildings
Warehouses
Plant modifications
Dams
Equipment Support
Crane supports
Steel frames
Bents
Modifications
Foundations
Retaining structures
Sheet pile revetment walls
Retaining walls
Breakwaters
Stormwater structures
Wind power*

Accurate structural designs are crucial to the safety and long-term structural integrity of complicated and simple designs alike. We trust the work of a structural engineer every time we enter a building, cross a bridge, enjoy an amusement park ride, or run water through a powerhouse. We trust that the engineer had the experience and knowledge to provide practical, safe plans. Often, the public takes this safety for granted—and that's exactly how it should be.



Gentek provides structural integrity that clients can rely upon. Gentek's structural engineering team has with wide-ranging experience in designing structures, including foundations, retaining structures, bridges, buildings, and dams.

New, and good as new

Gentek's work experience includes designs for new structures, as well as repairs to and rehabilitation of existing structures. Gentek's staff of skillfull engineers is familiar with new and tried-and-true construction methods and materials. This gives rehabilitation efforts a broad focus that helps us to understand where original designs came from, not just where they are headed.

To complete detailed structural design and analysis, we use established theories of statics and mechanics, our knowledge of historical construction methods and materials, state-of-the-art design theory (including limit-state and plastic design), and software to determine member forces, deflections, and capacities.

Buildings

Gentek provides building design and engineering services for low-rise structures, building additions, plant modifications, and rehabilitations intended for commercial and industrial use. We design repairs and retrofits for existing steel, concrete, masonry, and wood structures. With a multidiscipline engineering staff, Gentek furnishes the additional engineering services needed to complete a new building including site development, plumbing and HVAC systems, and electrical power.



Gentek Consult Ltd.
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Bridges

Gentek offers a wide range of services, from inspections to assess a bridge's integrity, to recommendations and design repairs, corrective actions, or a new bridge if that is required. We inspect and design bridges used by vehicles, pedestrians, and bicycles, as well as bridges for operations and maintenance access.

Foundations

A building's foundation is more than a concrete slab on grade. We work with pile foundations, spread footings, bridge piers, lock and dam foundations, and abutments as part of past projects. These foundations have been designed to work with soils that range from sand and gravel to soft, cohesive soils and bedrock.