



Controlled Environment Agriculture & Greenhouse Engineering Services

Institutional • Commercial • Residential



Greenhouses Designed to Optimize the Plant Environment

Correct greenhouse design must first consider the needs of the plant or crop being grown or displayed in the greenhouse structure. Light levels, airflow, temperature, humidity, nutrients and watering requirements can all change depending on the crop and its growth stage.

Control of these parameters as well as their rate of change and uniformity in the space are critical to optimizing the plant environment. An uncontrolled greenhouse can easily go from 20°F to 130°F in a few hours. A plant can't thrive with wild swings in environment.

A greenhouse also has to provide a safe, pleasant, and low maintenance environment to the workers and other personnel in the structure. Institutional, research and other public use greenhouses have additional life-health & safety issues that require special design of the greenhouse structure and equipment.

Industry Knowledge Independent Advice

The engineers at GShort.com, LLC have extensive hands on experience working in the greenhouse industry including multiple greenhouse manufacturing and system supply companies. They know and are known by many of the major structure and equipment vendors and have experience with estimating and specifying the best equipment for your project. Unlike some design teams, we are independent of the manufacturers and work directly for our clients. This enables us to specify the broadest line of products, producing the most competitive bids. We partner on many jobs with Greenhouse Engineering Ltd, a design firm lead by Alex Turkewitsch, P.Eng





Gourley Greenhouse, OARDC Wooster, Ohio after tornado damage, and the repaired structure with new curved glass roof.

Client Centered Complete Greenhouse Design

We specialize in engineering services for commercial, institutional, and research greenhouse facilities. We offer services including site planning, feasibility studies, system specifications for both greenhouse and growth chamber facilities, building condition assessments, energy studies, and engineering design services.

Our professional greenhouse design services include the structure and glazing, mechanical, electrical and control systems, lighting, shading, ventilation, air conditioning, fogging, hydroponics, irrigation, fertigation, and mechanization of the greenhouse system.

We bring our years of specialized greenhouse expertise to the design process for both new and retrofitted facilities. We have a strong focus on working with the client and other design team members early in the design process to determine the correct programming of the space.

We provide drawings and specifications for tender with construction cost estimates based on multiple comparable past projects across North America with our partners.

Our client list includes architects, greenhouse operators, manufacturers, home owners, contractors, and institutions. We can design a wide variety of greenhouse facilities, ranging from plant production ranges, garden centers, compartmentalized research greenhouses, bio-containment greenhouses, conservatories and custom structures. We have extensive experience with hydroponic vegetable production systems including NFT and media based systems.

We also design controlled environment agricultural facilities such as mushroom systems and growth chamber facilities. These design services include facility layout, material processing/ handling equipment, service requirements, automated irrigation systems and containment consideration.



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