

NOVEL CHILLER SUPPORT STRUCTURE DESIGN SOLUTION

ABOUT THE CLIENT

Our client is a global Fortune 500 biopharmaceutical manufacturer known for their innovative pharmaceuticals, vaccines, and animal health products. Their research-driven approach to healthcare and commitment to patient well-being have positioned them at the forefront of the industry.



SERVICES

Structural Engineering
Mechanical Engineering
Electrical Engineering

HIGHLIGHTS

- Designed unique steel beam structure able to withstand difficult terrain and support new chiller systems
- Ensured production and occupant comfort requirements were met
- Improved temperature control precision and product consistency

PROBLEM TO SOLVE

Our client needed to add new chiller systems to a facility situated on challenging terrain with 15-foot slopes. Due to this steep slope, positioning a chiller system near the facility was nearly impossible. In order to overcome this obstacle, they approached EAD to explore the feasibility of supporting the chiller system on the concrete lid of an existing fire water tank located nearby the facility.

APPROACH & SOLUTION

Since there were no available drawings of the fire water tank and draining it was not an option, EAD conducted an in-depth field investigation of the fire water tank and the site. Through our engineering analysis, we determined that placing the chiller system directly on the tank lid was not feasible. We then went a step further and developed an innovative solution to enable our client to add the desired chiller systems to their facility.

RESULT & BENEFIT

EAD designed a custom steel beam structure to support the chillers at the necessary support points on the concrete lid. The new support structure has the strength and stability to handle the difficult terrain and reliably support the new chiller system. Because of the additional chiller systems, the facility operates with the necessary cooling capabilities to meet production demands and maintain occupant comfort year-round. The facility is also able to improve the precision of temperature control to ensure product consistency for their manufacturing processes. With additional chillers, and the means to support them, our client is building a strong foundation for future facility upgrades.

