MiTek[®]

SidePlate[®] Connection Designs



SIDEPLATE[®] CONNECTION DESIGNS PUT STEEL WHERE A BUILDING NEEDS IT

Our design process is engineered to reduce overall tonnage, minimize required connections, and accelerate erection times. Our team gets involved early and stays involved through the engineering, detailing, fabrication, and erection phases to ensure a simple and successful project.



RED = APPLICATION OF SIDEPLATE® CONNECTIONS

WHY SIDEPLATE® CONNECTION DESIGNS?

- → Increased savings from lighter steel packages and reduced foundation footings
- → No expensive welding or preheating, which means a faster and safer erection schedule
- → Increased design flexibility due to greater spans between columns
- → Field-bolted connections minimize crane time and increase schedule efficiency



OPTIMIZED



MINIMIZED



SIMPLIFIED

The design optimization process begins with a phone call or email with our team, who will review your project and design a completely optimized lateral system with MiTek technology. Think of us as an extension of your team, providing support to implement SidePlate® Connection Designs to resist wind, seismic, or progressive collapse.

There are virtually no limits to designs using SidePlate® Connections.

SidePlate® Connection Design technology utilizes stiffer moment frames in the design, typically reducing the number of moment connections by 20-30% compared to conventional moment frame buildings. The increased stiffness allows the design team to minimize beam and column weight by 15-25% of the lateral steel tonnage.

This design technology is field-bolted eliminating expensive and time-consuming welding and reducing erection times significantly.

To simplify the design and construction phases of the building process, our team provides the connection drawings and calculations and incorporates these into the construction documents, eliminating the need for deferred submittals. To further simplify the process, our team provides software tools and data for estimating, detailing, and coordinating through Excel material takeoff files, Tekla/SDS2 components, and Revit families.

Fabrication can be completed at any fabrication shop with no special or proprietary tooling needed.

BENEFITS AND SUCCESS STORIES



FABRICATORS

- → Fully designed joints allow for more accurate bidding
- → Simple plates and angles
- → No proprietary parts or tooling needed
- → Increased detailing accuracy with Tekla/SDS2 components
- → Faster and more accurate estimating with provided estimate files

PFIZER OFFICE/LAB - Employing more than 450 scientists, this 295,000 sq. ft. facility was built with LEED sustainability certification and SidePlate® Field-Bolted Connections.

"SidePlate[®] Connection Designs were so easy to build, and the shop enjoyed fabricating the components. We really saw how easy it would go together in the field." – Steven Tillery, Steel Service (Project Fabricator)



ENGINEERS

- → Ability to meet client desire for open layouts without increased conventional frame costs
- → Increase schedule efficiency through field-bolted connections
- Develop efficient steel buildings while reducing steel tonnage and number of connections
- → Decrease plan review time by using a proven design technology
- → Expand your design team by partnering with MiTek

SAN JOSE AIRPORT - A fast-turn, four-gate, \$58 million addition was built quickly using SidePlate[®] PLUS Connection Designs. By utilizing a bolted system, no welding at the airport was required which minimized safety hazards.

"The SidePlate® PLUS Connection Design and collaborative partnership was essential to the design-build team's ability to complete structural steel erection on this facility just 150 days after the contract was awarded." – Bill Andrews, Walter P. Moore (Project Engineer)



GENERAL CONTRACTORS & OWNERS

- → Decrease risk by incorporating SidePlate® Connections in the design and construction coordination
- → Reduce connection RFIs due to complete and coordinated connection drawings
- → No decrease in bidding pool
- → Decrease schedule by eliminating field welding and minimizing connections
- → Reduce steel package costs with efficient steel designs and documentation
- → Increase design flexibility by eliminating structural braces
- → Increase usable square footage by eliminating structural walls

NC STATE UNIVERSITY FITTS-WOOLARD HALL - Built to stand four-stories tall and encompass 240,000 sq. ft., this state-of-the-art facility was built to put engineering on display, including the SidePlate® Connection Design. This facility is home to civil and environmental engineering programs and rounds out the Centennial Campus Engineering Quad.

"Working with MiTek on the Fitts-Woolard Hall Engineering Building provided a real benefit to the project. The efficiency gained from the ease of installation helped the structure top out ahead of schedule. The SidePlate® Connections fit together extremely well." – Greg Cooper, Skanska (Project General Contractor)



ERECTORS

- → Quick field-bolted construction minimizes crane time
- → No welding means no weather delays
- → No preheating required
- → Fewer connections speed-up the erection process
- → No UT inspections on site

FRANCISCAN ST. ANTHONY HEALTH CAMPUS - This world-class medical center features up to 120 private patient rooms, outpatient services, and a medical office building. The five-story, 427,000 sq. ft. facility features SidePlate® Field-Bolted Connections.

"MiTek was excellent to work with. Our bolting numbers were spectacular and because of that we kept a flow going through the whole project." – Dave Wiggins, Danny's Construction Company (Project Erector)

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