

Civil Engineering & Construction Detailing Services

**Precision-driven support for fabrication,
coordination and execution**

From steel detailing and connection design to precast, estimation and PEB support, Moldtek helps project teams reduce rework, improve coordination and move from design intent to site execution with confidence.



About Moldtek

Moldtek Technologies Limited is a global engineering and technology solutions partner supporting construction, manufacturing, utilities and industrial clients across geographies. With more than two decades of experience, Moldtek combines engineering expertise, disciplined quality systems, scalable delivery and technology-enabled workflows to support complex project requirements.



Established in
2001



500+
Employees



**USA, UK
& India**
Presence



Global
Project
Experience



\$400M
Group
Heritage

The Civil Engineering Challenge

Small detailing gaps can create major downstream risks across fabrication, erection and site execution. Moldtek helps teams resolve complexity early and move with confidence.



Coordination
gaps between
design, fabrication
and erection



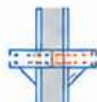
Shop drawing
errors leading to
rework



Material waste
from inaccurate
take-offs



RFIs and
delayed
approvals



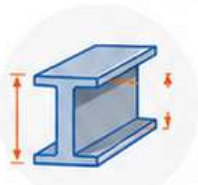
Site installation
and fit-up
issues



Compliance
and
constructability
risk

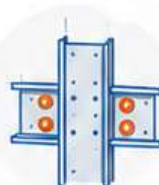
Civil Services Overview

Moldtek supports civil and construction stakeholders across the detailing and delivery workflow, from estimation and modeling to shop drawings, connection design, precast detailing, erection planning and project coordination.



Structural Steel Detailing

Fabrication-ready shop drawings, erection plans, 3D models, BOMs and coordinated steel deliverables.



Connection Design & Delegated Design

Code-compliant connection solutions and coordinated integration with structural and fabrication teams.



Precast Detailing

Accurate precast shop drawings, panel detailing, reinforcement coordination and assembly-ready outputs.



Miscellaneous Steel Detailing

Stairs, handrails, guardrails, ladders, platforms, grates, gates and architectural metalwork detailing.



Structural Steel Estimation

Quantity take-offs, material projections and estimation outputs for better planning and budgeting.



Pre-Engineered Building Design

PEB modeling, design coordination, material optimization and fast-track project support.

Structural Steel Detailing

Detailing that turns design intent into fabrication-ready execution

Moldtek provides structural steel detailing services that support fabrication, erection planning and project coordination. The team develops accurate 3D models, shop drawings, erection drawings, material take-offs, BOMs, anchor bolt plans and field bolt lists to help fabricators and construction teams reduce ambiguity and move faster with confidence.

Pain Points Addressed



Unclear drawings



Fabrication errors



Coordination gaps



Delayed approvals



Material wastage



Site erection issues

Capabilities



3D Modeling & BIM Coordination

Accurate 3D models with coordinated structural information for seamless execution.



Shop Drawings & Fabrication Drawings

Detailed, fabrication-ready drawings that minimize field queries and rework.



Erection Plans

Clear erection sequencing and general arrangement for smoother site execution.



Connection Details

Precise connection details for steel joints that ensure strength and buildability.



BOMs & Material Take-Offs

Accurate quantities and bills of materials to streamline procurement.



Anchor Bolt Plans

Detailed anchor bolt layouts and schedules for error-free installation.



Field Bolt Lists

Organized field bolt lists to support erection and on-site installation teams.



Clash Detection & Constructability Support

Proactive clash detection and constructability reviews to reduce conflicts and risk.

Digital Backbone

Tekla Structures | AutoCAD | Advance Steel | Revit | Navisworks | SDS/2

Connection Design & Delegated Design

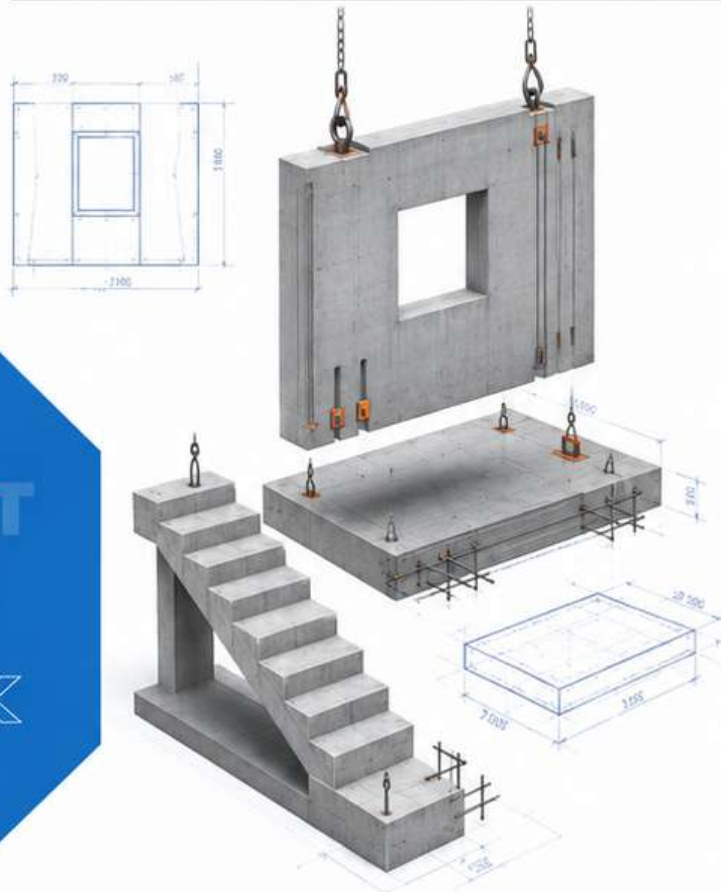
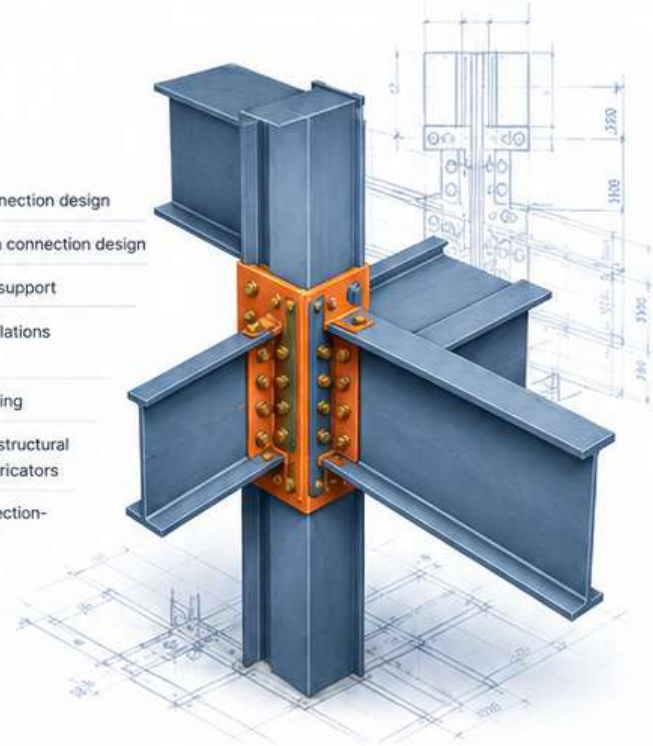
Modern steel projects depend on connection details that are not only structurally sound, but also practical for fabrication and erection. Moldtek supports beam-column, column-to-column and complex connection requirements with design solutions that improve coordination, reduce RFIs, minimize material waste and support project timelines.

Common Pain Points We Solve



Capabilities

- Beam-column connection design
- Column-to-column connection design
- Delegated design support
- PE-stamped calculations where applicable
- Connection modeling
- Coordination with structural engineers and fabricators
- Fabrication and erection-friendly detailing



Precast Detailing

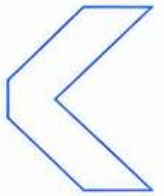
Precast construction depends on precision long before manufacturing begins. Every panel, slab, stair, embed, connection and lifting point must be coordinated clearly to avoid production errors and on-site assembly issues.

Capabilities

- Precast panel detailing
- Shop drawings
- Reinforcement detailing
- Embed coordination
- Lifting and handling considerations
- BIM coordination
- Assembly-ready documentation
- Fabrication support

Common Pain Points We Solve





Miscellaneous Steel Detailing

Miscellaneous steel elements may not always carry the largest tonnage, but they are critical to safety, access, usability and project completion. Stairs, handrails, ladders, platforms, gates, grates and guardrails must fit accurately within the larger structural and architectural environment.



Capabilities

- Stairs
- Handrails
- Guardrails
- Ladders
- Platforms
- Grates
- Gates
- Ornamental steel
- Architectural metalwork
- As-built drafting support

Pain Points Addressed



fit-up
issues



incorrect
dimensions



fabrication
rework



architectural
coordination
gaps



safety and
compliance
concerns

Structural Steel Estimation

Accurate estimates and quantity take-offs form the foundation of cost control. Moldtek supports contractors, fabricators and project teams with structural steel estimating services that improve bid confidence, reduce quantity errors and support informed decision-making.



Capabilities

- Quantity take-offs
- Structural steel estimating
- Material projections
- Cost-support documentation
- Revision-based estimate updates
- Data preparation for project planning

Pain Points Addressed



inaccurate
quantities



budget
overruns



design
revisions



manual
errors



bid
uncertainty



Pre-Engineered Building Design

Pre-engineered metal buildings demand a balance of speed, material efficiency, structural performance and assembly simplicity. Moldtek supports PEB projects with accurate modeling, detailing, design coordination and material optimization.

Our Capabilities

- ✓ PEB modeling
- ✓ Primary and secondary framing support
- ✓ Roof and wall system coordination
- ✓ Connection and assembly detailing
- ✓ BIM workflows
- ✓ Material optimization
- ✓ Industrial, commercial, agricultural and recreational building support



Fast-track delivery pressure



Material wastage



Complex geometries



Environmental load considerations



Coordination issues



Assembly challenges

Delivery Confidence



Accuracy-led detailing



Global standards compliance



BIM-enabled coordination



Fabrication-ready deliverables



Scalable engineering teams



Practical constructability focus



Gillette Stadium North End Zone Renovation

2,800
tons detailed in 24 weeks



Intel CUB.2 Project

4,632
tons detailed in 15 weeks

Why Project Teams Choose Moldtek



Engineering Depth

Civil, structural, detailing, BIM, estimation and construction-focused engineering expertise under one roof.



Global Delivery Strength

A scalable team with experience supporting international projects, standards and execution environments.



Coordination-First Approach

Workflows designed to reduce gaps between engineering, fabrication, erection and site teams.



Technology-Enabled Accuracy

Industry-standard tools including Tekla, Revit, AutoCAD, Navisworks, SDS/2, Advance Steel and Bluebeam.



Quality & Compliance Focus

Disciplined delivery processes aligned with global standards to reduce errors, rework and risk.



Practical Execution Mindset

Outputs are created not just to look correct, but to support real fabrication, installation and construction workflows.

Bring clarity to your next
civil engineering or
construction detailing project.



Moldtek Technologies Limited



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