

WHAT MAKES A MASS TIMBER PROJECT PENCIL? A Whole-Project Framework for Evaluating Cost, Constructability, Schedule + Value

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INTRODUCTION

The economics of mass timber cannot be understood by comparing the timber package to steel or concrete alone. The more useful question is: What changes across the entire project when mass timber is introduced?

Structural efficiency, foundations, finishes, field labor, logistics, schedule, trade sequencing and installation can all influence the business case. Some create value. Others introduce costs or constraints.

The goal is not to prove that mass timber belongs everywhere. It is to understand where it makes the project better and adds value.

THE BUSINESS CHALLENGE

Comparing products can miss the economics of the system.
A conventional cost comparison may focus on:

MASS TIMBER PACKAGE vs. STEEL / CONCRETE PACKAGE

But the structural package is only part of the equation. A whole-project evaluation should consider:

*Foundation impacts are project-specific and should be evaluated rather than assumed.

STRUCTURE	BUILDING	DELIVERY
Material	Finishes	Field labor
Connections	Foundation opportunities*	Schedule
Fabrication	Structural weight	Crane + logistics
Shipping	Architectural expression	Trade sequencing
Installation	MEP interfaces	General conditions

QB STRATEGIC INSIGHT

The business case is bigger than the timber package. Comparing mass timber to steel or concrete on material or structural-package cost alone can miss where value is actually created.

The more useful analysis looks at the whole building and construction process:

- What changes in the structure?
- What can be eliminated or reduced elsewhere?
- What happens to labor, logistics and schedule?
- And can the rest of the project capitalize on those changes?

The right question isn't simply, "What does the timber cost?" It's "What does choosing timber change across the project?"

"You can't understand the economics of mass timber by looking at the timber package alone. You have to look at what it changes across the entire project."

— Scott Charney, Quality Buildings

THE QB FRAMEWORK: 6 QUESTIONS THAT HELP MASS TIMBER PENCIL

01 | DON'T MAXIMIZE TIMBER. MAXIMIZE VALUE.

Use timber where its structural, architectural or delivery advantages matter. Challenge its use where another system may perform more efficiently.

Hybrid isn't a compromise. It can be the optimization strategy.

02 | COUNT THE “DEDUCTS.”

Evaluate both sides of the equation. The true cost of a structural system includes not only what it requires, **but what it allows the project to reduce, eliminate or accelerate.** For mass timber, that means evaluating potential impacts beyond the structural package, including:

Finishes • Field labor • Foundation requirements • Site logistics • Waste • Schedule • Downstream trades

The business case becomes clearer when these project-level effects are evaluated alongside material and installation costs.

03 | DESIGN FOR REPEATABILITY + CONSTRUCTABILITY

The economics of prefabrication are shaped long before fabrication begins.

Grid and span decisions influence member sizes and quantities. Connection strategies affect detailing, hardware and installation time. Panelization influences manufacturing, shipping and crane picks. Repetition creates opportunities to standardize components, details and installation sequences.

The objective is not to standardize the architecture. It is to find repeatability within the design—preserving the architectural vision while reducing unnecessary variation in the systems, components and details used to deliver it.

When design intent, structural efficiency, fabrication requirements and installation strategy are considered together, teams can preserve what makes the building distinctive while creating a more efficient and predictable path to construction.

Repeatability should support design intent—not constrain it. The goal is not a more standardized building. It is a more standardized path to delivering the design.

04 | PLAN FOR THE “BIG BUT.”

Installation speed does not automatically translate into project acceleration.

Mass timber can move quickly through erection, but the value of that speed depends on what happens before and after the structure is installed. This is the “Big But”: a fast installation sequence only improves the overall project schedule when site logistics, material deliveries, preceding work and downstream trades are coordinated to keep pace.

If access constrains deliveries, the crane is waiting on material, preceding work is incomplete, or following trades are not ready to mobilize, installation efficiency can be absorbed without meaningfully shortening the critical path.

The opportunity is to plan the entire construction sequence around the speed the structural system **can create**—so faster erection leads to earlier enclosure, earlier trade access and ultimately earlier project completion.

The real measure of speed is not how quickly the structure goes up. It is how much time the project gains because of it.



05 | MOVE VALUE CREATION UPSTREAM.

The ability to influence project economics declines as design decisions become fixed.

Early in design, teams still have the flexibility to evaluate structural grids, spans, system selection, member sizing, connections, sourcing and installation strategy together. As the project advances into detailing, fabrication and procurement, those same decisions become increasingly interconnected—and increasingly costly to revisit.

DESIGN → ENGINEERING → BIM → CONSTRUCTABILITY → FABRICATION → LOGISTICS → INSTALLATION

Moving constructability, procurement and installation thinking upstream allows teams to evaluate alternatives while they can still meaningfully affect cost, schedule and execution—rather than relying on late-stage value engineering to recover value after key decisions have already been made.

06 | EVALUATE THE WHOLE-PROJECT ECONOMICS

The lowest-cost structural package does not necessarily produce the best project economics.

Making mass timber pencil requires understanding the cumulative effect of the structural decision across the building and the construction process. A system may add cost in one area while reducing labor, eliminating finishes, improving logistics, accelerating the schedule or enabling value elsewhere.

That means evaluating the interaction between:

STRUCTURAL COST + CONSTRUCTABILITY + PROCUREMENT + LABOR + LOGISTICS + SCHEDULE + DOWNSTREAM IMPACT

The objective is not to make mass timber win every individual cost comparison. It is to determine whether—and where—its combined effects create a better overall project outcome.

Where does mass timber create enough value across the project to make it the right system?

EXECUTIVE TAKEAWAY

The timber package is only part of the equation. Mass timber creates the strongest business case when teams evaluate **what it changes across the entire building and construction process**—and make those decisions early enough to act on them.

The goal isn't to prove that mass timber belongs everywhere. It's to understand where it makes the project better.

THE QB CONSTRUCTABILITY ADVANTAGE

QB brings installation expertise into the design phase. By combining structural knowledge, prefabrication experience, and field installation insight, QB helps project teams evaluate constructability before structural systems are finalized.

This integrated perspective helps teams:

- confirm structural feasibility early
- reduce downstream coordination risk
- align design decisions with real installation conditions
- support efficient structural installation

“We don’t just frame projects. We help teams solve structural problems before they reach the jobsite.”— Elmer Zook, CEO, QB

NEXT STEPS FOR PROJECT TEAMS

1. Constructability Review

Proactive risk and logistics analysis that uncovers hidden site inefficiencies early, frequently delivering 10%+ in cost savings with zero downstream disruption.

2. Preconstruction Alignment Session

Bring engineering, constructability, and budgeting perspectives together early to align structural decisions with project schedule and cost targets.

3. Integrated Structural Delivery Strategy

Explore how QB’s Design | Supply | Install approach integrates engineering, prefabrication, and installation expertise to support efficient structural execution.

DESIGN

Early Coordination
Before Systems Are
Locked

SUPPLY

Coordinated
Procurement and
Prefabrication
Strategy

INSTALL

Install-Informed
Execution That
Reduces Field Risk

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