



# LIFE CYCLE ASSESSMENT SERVICE

## EARLY, COST-EFFECTIVE BUILDING MATERIAL ANALYSIS



**IMEG's Life Cycle Assessment Service provides a Whole Building Life Cycle Analysis (WBLCA) of the environmental impacts of the different materials used in a building's construction.**

This analysis provides data on the building's embodied carbon, which refers to the greenhouse gas emissions arising from the manufacturing, transportation, installation, maintenance, and eventual disposal or reuse of structural and architectural materials.

The information gathered during a WBLCA enables clients to understand and compare the potential embodied carbon of various structural design options.

As a complement to a WBLCA or as a standalone calculation, IMEG can conduct a structural-focused Embodied Carbon Study early in a project. This provides crucial data and insight on the materials and applications being considered before the project reaches initial milestones.



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## IMEG'S STRUCTURAL EMBODIED CARBON PROCESS

### Conceptual Phase

Opportunity for structural material comparison using an Embodied Carbon Study



### Schematic Phase

Opportunity for structural framing comparison using an Embodied Carbon Study

### Design Development

Establish the baseline WBLCA at 100% DD and develop targets for any project-specific reductions



### Construction Documents

Implement carbon reduction strategies and compare to project goals at 100% CD (design completion)

### In Construction

Update WBLCA with project-specific material data and generate final report for client



**WBLCAs and Embodied Carbon Studies are part of IMEG's structural embodied carbon process and empower owners to make informed, scientifically justified decisions that lessen their new or renovated building's overall carbon footprint while still meeting other project goals.**

Such an analysis, when appropriate, provides the highest impact and most cost-effective results when initiated at the earliest stages of a project and continued through construction. It also is a component of IMEG's commitment to [SE 2050](#), which calls on all structural engineers to understand, reduce, and ultimately eliminate embodied carbon in their projects by 2050.

With the built environment responsible for 40 percent of global greenhouse gasses, building decarbonization is an issue that is being prioritized by owners, architects, and engineers around the world. A Whole Building Life Cycle Analysis is an important step in aligning your next project with this movement. Contact IMEG to learn more.

**For more information on IMEG's Life Cycle Assessment Service, contact a Client Executive at the [IMEG location nearest you.](#)**