

SE 2050 ECAP Submission Form (No PDF)

Email *

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Firm Name *

Matt

Education

The first step to increased engagement within your firm is through education. We all should strive to understand the impacts of our design decisions and their effects on our environment.

Distribute firm-wide announcement of your firm's pledge to join the SE 2050 Commitment. *

☒ Completed

☐ Not Completed

Provide a brief narrative describing how your firm is promoting a firm-wide education program for embodied carbon reduction and the firm's commitment to SE 2050. *

We enact the education platform of our Embodied Carbon Action Plan through three pillars: General Knowledge, Calculations, and Performance and Reduction. Our group focuses on general knowledge required to understand what contributes to embodied carbon within a structural system. This includes providing clear definitions of parameters used to calculate embodied carbon, distributing resources for understanding (e.g., SE2050's Top 10 Carbon Reducing Actions for Structural Engineers), creating and presenting an annual webinar, and facilitating analysis of embodied carbon data for use in early stage design. We provide detailed guidance on calculating embodied carbon for projects which includes guidelines on regional carbon factors and best practices for estimating material quantities. We routinely evaluate commercially available LCA calculation tools to ensure adequacy of our data calculations. We regularly interface with SOM's internal Sustainable Engineering Studio (SES) for compliance with recommending LCA methods (i.e., CLF). We educate design teams on lessons learned from past projects with regards to embodied carbon performance. This encourages reductions through highlighting structural systems which were successful in EC reduction and also identifying shortcomings in designs.

Name of Embodied Carbon Champion (Point Person) *

Matt Streeter

Email of Embodied Carbon Champion *

matthew.streeter@som.com

Phone number of Embodied Carbon Champion *

9173858754

LinkedIn URL

Set a date within the first year to present the “Embodied Carbon 101” Webinar to your firm. *
Incorporate this information into your orientation/on-boarding programs.

- ☒ Committed / Completed
- ☐ Not Committed / Not Completed

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- ☒ Committed / Completed
- ☐ Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- ☒ Have one representative of your firm (any employee) attend quarterly external education programs (e.g. webinar, workshop) provided by SE 2050, Carbon Leadership Forum (CLF), or other embodied carbon resources.
- ☐ Share the SE 2050 library of resources with technical staff.
- ☒ Share embodied carbon reduction strategies with your firm as outlined in Top 10 Carbon Reducing Actions for Structural Engineers document produced by SE 2050.
- ☐ Nominate a minimum of (1) employee per office to participate in a CLF Community Hub.
- ☒ Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon
- ☐ Present the document, "How to measure and report embodied carbon" to all technical staff.
- ☒ Attend a presentation or demo of an LCA-based tool used to calculate embodied carbon.
- ☒ Initiate an embodied carbon interest group within your firm and provide a narrative of their goals.
- ☐ Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office. (intended for multi-office firms)
- ☐ Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Leading the sustainability efforts for our firmwide structural engineering teams is the Structural Life Cycle Group. The group aims to advance our sustainable design principles over the entire lifespan of a structure. The Group's mission is to advance the environmental performance of structural systems, advocate for more integrated design solutions, facilitate education for our engineering studio, and enable the implementation of innovative materials and construction practices.

Reporting

Quality data is essential to making informed decisions and setting important benchmarks and the development of appropriate embodied carbon reduction targets. The SE 2050 database is a central component to building a successful Commitment Program and reaching our collective embodied carbon reduction goals by 2050.

Submit an annual minimum of (2) projects per U.S structural office or (5) total projects for the firm to the SE 2050 Database. *

- ☐ Completed
- ☒ Committed and on track
- ☐ Need help reaching this target
- ☐ Not Completed

Number of Projects Reported Last Year (zero in first year)

5

Number of Offices Reporting Last Year (zero in first year)

4

Provide a narrative on how your firm plans to measure, track, and report embodied carbon data. *

To ensure SOM is making progress towards our embodied carbon targets we will engage in periodic embodied carbon tracking at the internal level. Our goal is to have design teams calculate embodied carbon at the end of each phase for all active projects within the structures group. By doing so, we can evaluate a given project's embodied carbon progression from the concept phase to the construction document deliverable to ensure reduction strategies are being implemented and overall reductions are being achieved. This internal tracking program also allows us to compare a given project's EC performance at a certain stage with past projects as well as measure it against objective EC targets. Further, we have been, and will continue to use these internal tracking mechanisms to identify which aspects of various structural systems are successful at reducing EC in our design, and to inform our reduction strategies moving forward.

SOM will continue to utilize internally developed tools to track embodied carbon over the duration of a project. These tools will feed into a larger database of all projects that will allow for rapid visualization EC performance across all offices/projects. This parent database was updated from previous years into an interactive database and, through an intensive effort, gained over 100 historic projects to track EC through past years and technologies to compare against new projects. The tool also serves as an educational tool to highlight embodied carbon success stories as well as give designers a clear reference of reasonable embodied carbon targets for a given project typology.

The creation of this central digital library transforms fragmented knowledge into structured, searchable, and interpretable datasets creating a fully integrated carbon accounting workflow. These data visualizations, which we hope to later pair with emerging AI capabilities, can be used to detect trends, test ideas rapidly and predict performance outcomes making embodied carbon intelligence a shared, firmwide resource.

These tools are currently in a beta testing phase. We have hosted training sessions with focus groups to provide feedback and assist with the development of this platform to ensure a positive user experiences and feasibility amongst users with varying levels of embodied carbon competence.

Describe the internal training for embodied carbon measurement you provided or will provide. *

The SOM Structural Life Cycle Group curates an annual webinar to review the status of internal carbon data, reduction efforts, and to update the global structural studio on new technologies and construction methodologies for embodied carbon reduction. This includes highlighting successes in structural design which reduced embodied carbon compared to carbon budgets, intensity limits, or past projects. All new structural designers are trained on carbon accounting through the collection of structural quantities and input into the internal tools.

The training begins by covering what embodied carbon is and the importance of careful consideration and targeted reduction. We then include a talk through of “best practices” on how to track and report embodied carbon at the conclusion of each project phase. Lastly, we cover an overview of the tools capabilities, case studies for where and how the tools are best utilized and leveraged for project success. We then open the opportunity for users to test the tools and provide feedback to the tool developers.

ELECTIVES (Not required, recommended to achieve (1) per year):

- ☐ Submit all projects to the SE 2050 Database
- ☐ Meet your target average embodied carbon reduction from the previous year.
- ☐ Report a greater percentage of projects than the preceding year.
- ☒ For a project submitted to the database, ask the Architect or Owner if the project has a carbon budget or if there are established project sustainability goals at the project kickoff meeting.
- ☐ Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Embodied Carbon Reduction Strategies

Embodied carbon reduction of structural materials is the ultimate goal of the SE 2050 program. As a starting point, you will have access to the SE 2050 project database and Program resources to identify and set strategies. This section also serves to share lessons learned and incite innovation. Demonstrate

leadership by not only applying, but developing best practices and actively collaborating with the design community. This is our profession's opportunity to take action and make an impact.

Set an EC reduction goal for the coming year and an implementation narrative (Qualitative goals focused on education are appropriate for the first year) *

Currently, a number of projects have tracked and reduced embodied carbon during the design phases relative to a baseline design. Also, at the concept or schematic design phase, teams will present structural material options including options using mass timber or other low-carbon materials and technologies as an alternative to conventional materials and systems.

Moving forward, we plan to use the project data we have for historic and current projects to refine our firm benchmarking. This benchmark will enable project teams to set an structural embodied carbon target relative to similar projects, and to establish a pathway to carbon reduction. We are looking for opportunities to expand the reach of reduction strategies beyond motivated clients and minimum code requirements, to projects where sustainability is not at the forefront of project discussions by talking about embodied carbon early in the design process alongside potential project goals. In addition, working with client on reducing new construction and promoting building reuse as part of the design is an avenue toward our overall carbon reduction goals.

For second year's ECAP and beyond, provide a narrative about what you have learned about embodied carbon reduction in the past year. Describe successes and misses to help the program improve.

We have added multiple projects that incorporate biogenic materials in the structural system. This was done in part by demonstrating the embodied carbon savings in the materials and fabrication processes in addition to the cost savings. We have continued efforts to implement new design technologies into projects that reduce overall structural material quantities and embodied carbon.

We continue to engage with clients and contractors in regards to carbon goals of a project early on. We have refined the project-specific strategy to pair with realistic regional material availability and carbon reduction capabilities. We have leveraged client contractor and subcontractor knowledge on previous projects to influence the carbon budgets and goals on future projects in the same region.

On several projects with driven clients and code reduction requirements, we are collaborating with our in-house SES team doing structure and enclosure LCA studies to meet project reduction targets during Design Development. The reduction targets are met using structural material performance-based specifications with prescriptive GWP limits and carbon budget approaches for procurement. Working as early as possible with the contractor team, this two-path specification approach has been used to deliver a number of projects across our firmwide domestic markets.

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- ☒ Committed / Completed
- ☐ Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- ☐ Incorporate data visualization into your ECAP. How are you looking at data to make informed design decisions and communicate design options to your clients?
- ☐ Provide a project case study in your ECAP that captures a reduction of embodied carbon or some lessons learned.
- ☒ Create a project-specific embodied carbon reduction plan.
- ☒ Complete a system embodied carbon design comparison study during the project concept phase.
- ☐ Participate in a project LEED design charrette and speak to potential design considerations impacting embodied carbon.
- ☐ Calculate your firm average benchmark for embodied carbon.
- ☒ Update your specifications and incorporate embodied carbon performance. Include embodied carbon in your submittal review requirements.
- ☒ Collaborate with your concrete supplier to reduce embodied carbon in a mix design.
- ☒ Work with a contractor during material procurement to meet an embodied carbon performance criteria on at least (1) project.
- ☒ Have an Environmental Product Declaration (EPD) created as a result of a project.
- ☒ Incorporate biogenic materials on at least one project annually.
- ☐ Provide a narrative of how circular economy has been used on your projects. Incorporate re-use or design for deconstruction into at least one project.
- ☐ Quantify construction waste reduction on a project and the impact to embodied carbon.
- ☐ Integrate embodied carbon mitigation strategies in your General Notes.
- ☐ Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

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Advocacy

True change can only come with industry-wide adoption. This section recognizes that our impact reaches beyond any one firm. Plan opportunities to share your experience and knowledge within your firm, with your design community, and beyond. Host a webinar or lunch 'n learn, attend a conference, connect with the SEI Sustainability Committee, or reach out to manufacturers and policy-makers.

Provide a narrative about how you plan to share knowledge and data to accelerate adoption of embodied carbon reduction. *

We aim to continue sharing strategies toward carbon reduction during early-phase client presentations and in the materials specification of each project to encourage more clients and contractors to use low-carbon materials and systems. Additionally, we continuously aim to provide embodied carbon impact summaries in our deliverables to provide detailed insight for all projects. This information is reviewed by the entire project team and raises awareness around the embodied carbon cost of the building structure. We will use comparative studies in the early phases of each project to demonstrate the carbon cost of functionally equivalent structural systems to encourage selection of the lower impact material.

Our firm also released our first ever “impact report” which highlights many of the efforts we are taking as a firm to advance a zero-carbon built environment highlighting our commitment to decarbonization. This externally shared report reaffirms our commitment to our reduction efforts and sets a standard in the larger industry that the future of AEC is environmentally conscious and responsible. We are also interested in integrating with our firm's “climate week” programming. These panel discussions and presentations engage our office internally, professionals in the AEC industry and in academia.

SOM has a long standing reputation for driving industry-wide adoption of sustainable practice. The firm was recently named “Sustainable Architecture Firm of the Year” at the 2025 Sustainability Innovation Awards recognizing its use of sustainable materials, urban solutions and technological innovation. Our carbon neutral operations and deep commitment to sustainable design are philosophies we share with the industry in an effort to set sustainable standards.

In September of 2025, our New York office hosted a “Timber Connections” event in collaboration with RothoBlaas to promote best practices for timber construction to AEC industry professionals. Our innovations often require collaborations with smaller companies doing specialized research. In our recent Governors Island project, New York Climate Exchange, we partnered with Prometheus Materials and specified their bio concrete material for the side walks.

Our firm, together with Skanska, Nucor and Northeastern University, has written the inaugural AISC sustainability design guide which is envisioned to be distributed to a wide audience. The guide includes chapters on Steel quantities and connections for Early Phase LCA and Design Influences on Embodied Carbon - Material Reduction Strategies which educate designers on how to calculate embodied carbon and ways to reduce material usage and hence embodied carbon.

Describe the value of SE 2050 to clients. How can we collaborate to drive adoption? At your option, attach any associated marketing materials. *

SE 2050 provides a collection of expert experiences, guidelines and benchmarks, methodologies, and recommendations to effectively implement carbon reduction in the building environment. By leveraging the wealth of knowledge that SE 2050 provides, structural designers and project engineers can make impactful contributions to both aspirational goals and achievable targets.

Additionally, the effort by SE 2050 to collect building quantity and embodied carbon data will allow future engineers, architects, and contractors to track goals and provide actionable steps for future reductions. In the past, engineers have been open with sharing ideas but hesitant to share quantity and carbon data. By opening up access to the Project Database, design professionals can realize what is achievable, if previously unknown.

Optional: Upload any documents you would like to exhibit.

 Add file

Declare your firm as a member of the SE 2050 commitment on boilerplate proposal language. *

- ☒ Committed / Completed
- ☐ Not Committed / Not Completed

ELECTIVES (Not required, recommended to achieve (2) per year):

- ☒ Share your commitment to SE 2050 on your company website
- ☐ Give an external presentation on embodied carbon that demonstrates a project success or lessons learned (Tip: Get connected at a CLF local hub near you!)
- ☒ Discuss with the Owner / Client the option of requiring that some of the structural materials come with facility-specific or product-specific EPDs
- ☐ Share education opportunities with clients
- ☐ Provide a narrative of how you have encouraged industry and policy change incentivizing availability of low-carbon and carbon sequestration materials
- ☒ Start an embodied carbon community of practice or mentorship program in your office
- ☐ Mentor a firm new to the embodied carbon space
- ☐ Other action you feel appropriate and a narrative for why.

Elective Narrative (Optional):

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Program Feedback

Please add any comments that you wish to share publicly. The Program Leadership Group is committed to transparently improving SE 2050.

Comments:

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