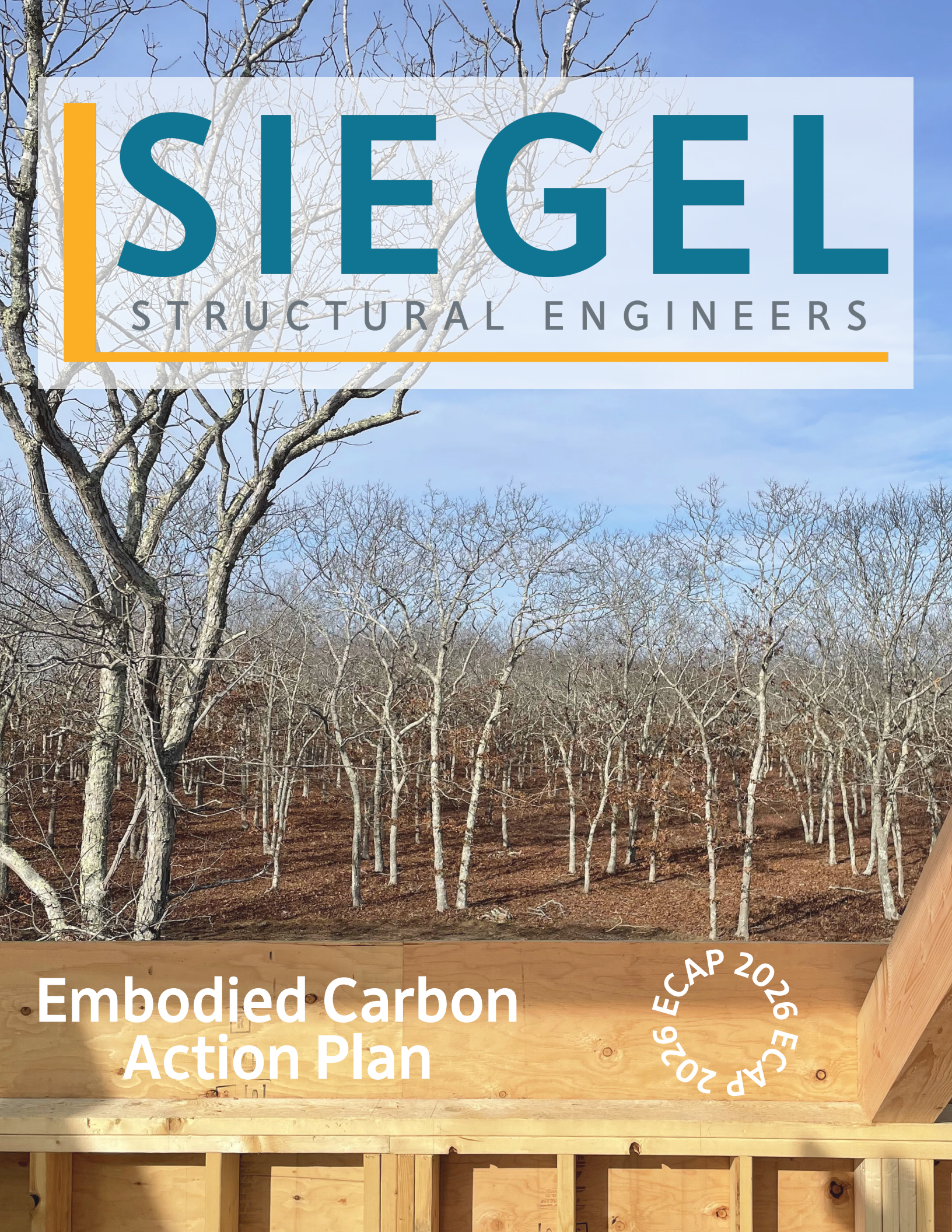




SIEGEL

STRUCTURAL ENGINEERS

Embodied Carbon
Action Plan

2026 ECAP 2026 ECAP

CONTENTS

3 Introduction

4 Team

5 Education

6 Reduction

7 Reporting

8 Advocacy

THE SE 2050 CHALLENGE

All structural engineers shall understand, reduce, and ultimately eliminate embodied carbon in their projects by 2050.

Introduction

Siegel Structural Engineers joined the SE 2050 Commitment program in October 2022. We embrace our role of providing low and net zero options to our clients and collaborators. We are driving towards the collective goal of net zero embodied carbon emissions by 2050.

What is the fastest way we will get to net zero? Encouraging our collaborators to incorporate net zero solutions in projects. We see it as our responsibility and goal to find and present net zero building material options, persuasively share these options with our collaborators, and incorporate them in our designs whenever possible.

Net zero by 2050 is an ambitious goal. While structure typically represents about half of the embodied carbon in a building project, historically the profession of structural engineering has not had a large role in sustainable design. We are excited to help change this and actively find ways to make an impact. We are committed to educating our team, reporting, and sharing our data with the SE 2050 movement, and are eager to help develop industry targets that drive structural engineers to actively design with reduction in mind.

Team



Nak Khun, Structural Designer, and Helene Woodvine, Associate Principal, are our embodied carbon co-champions, spearheading the company's commitment to SE 2050 and empowering the entire team to articulate our goals. Every team member contributes to carbon reduction through their unique specialty area: concrete, steel, timber, reuse, advocacy, and marketing. We meet regularly to strategize how we may best engage our collaborators and strategize ways to make the greatest impact.



Education

Through regular learning opportunities and organized dissemination of information, all team members will be equipped with relevant carbon reduction knowledge to strategize on how to achieve net zero embodied carbon in structures.

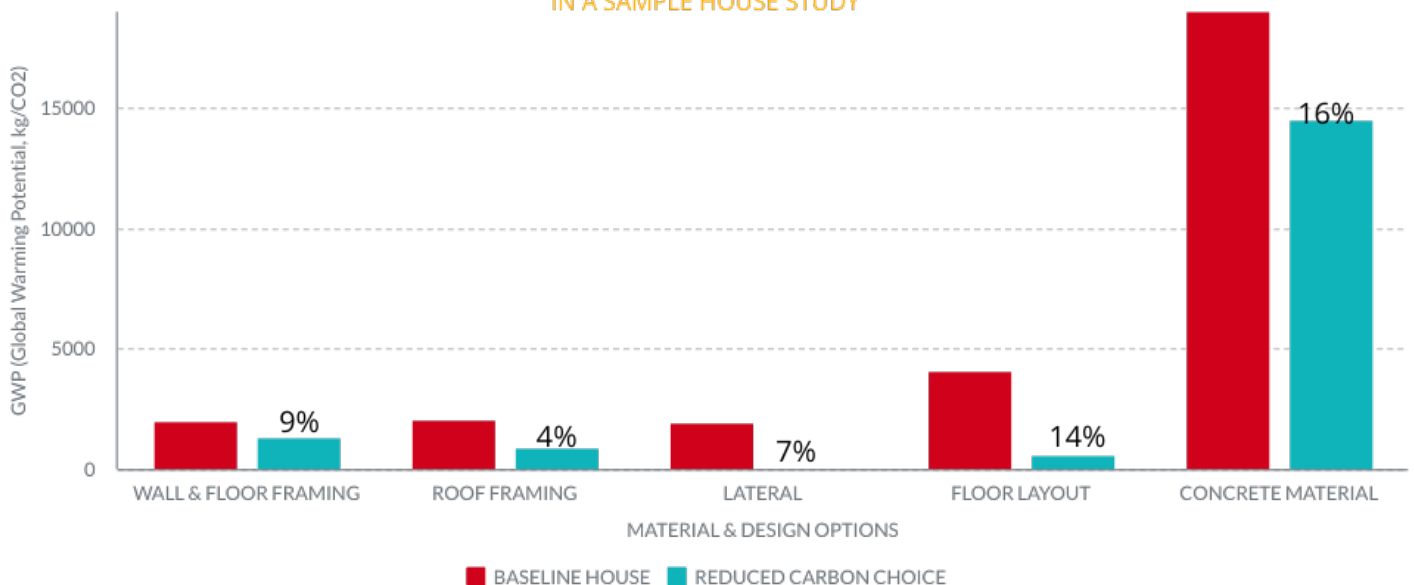
- We hold twice-annual hour-long presentations to inform the company of our SE 2050 initiatives.
- We attend external seminars to educate ourselves on the future of carbon reduction in structures.
- We have initiated and will maintain contact with suppliers to understand what reduced-carbon materials are locally available and at what cost premiums.
- We continuously develop and update internal documents and construction details to reflect new carbon-reduction standards.
- We are leaning into and promoting the use of Mass Timber in our projects.
- We are using multiple types of panelized construction as a means of reducing embodied carbon.
- We are continuing to research and understand the impact of passive house projects and how they may align with SE 2050 goals.
- As part of the onboarding process, we introduce new employees to SE 2050 and our ECAP, internal documents, and a sample project that highlights good carbon reduction strategies, and invite them to choose a specialty area team.

Reduction

As structural engineers we provide design and building material options to our collaborators, and the choices our clients make will directly impact meeting the SE 2050 challenge. Our ability to persuade our collaborators- clients, builders and developers- is paramount, and we are working to create and provide a compelling client guide that shows tangible impacts when choosing building materials. We will regularly update our guide and information to reflect recent projects where we will have real time data.

Providing compelling evidence- concrete options with measurable impacts- is a must. We will provide the storyline and evidence that will show in visual ways how people can make choices to get to net zero carbon emissions. A clear understanding of how each material reduces embodied carbon creates more opportunities to make a difference. We are creating visual marketing materials to share widely online, at industry meetings, and with other SE 2050 signatories, to get as many in our industry involved, and our clients engaged.

CHOICES THAT REDUCE NET EMBODIED CARBON
IN A SAMPLE HOUSE STUDY



Reporting

To effect large scale change, data collection is needed on an equally large scale. SSE recognizes the importance of learning how best to gather quality data and submit it to the SE 2050 database.

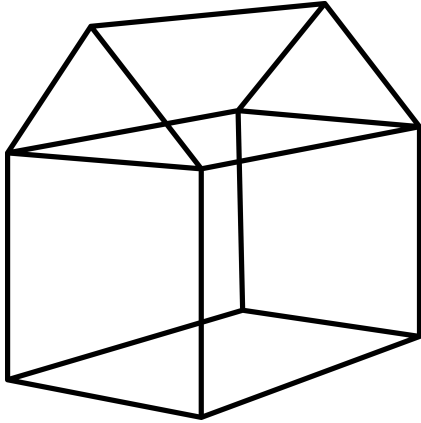
- SSE is committed to submitting a minimum of two projects per year to the SE 2050 database.
- For a project submitted to the database, our reporting will include information from the architect or owner regarding any target carbon budget or established project sustainability goals.
- Increase the number of projects we report on each year.

Advocacy

To drive large-scale change, all members of the building team, including architects, contractors, and owners, must understand the need to reduce embodied carbon and work together to achieve our shared goals.

- Our standard proposal template shares that we are a signatory of SE 2050 and includes our commitment to creating structural designs with net zero embodied carbon by 2050.
- SSE is promoting the value of SE 2050 to our clients, particularly in the early stages of project development. The goal is to encourage our clients to think about embodied carbon reduction and to highlight the services that we provide.
- Our social media team continues to promote SE 2050 on Instagram, LinkedIn, and our website and we continue to promote awareness, across all of our marketing channels.
- SSE is encouraging industry and policy change by asking material suppliers for EPDs and communicating the importance of having EPDs for reducing embodied carbon.
- We created a presentation on the importance of SE 2050 and ways we can implement it together, and delivered it to a group of architects, builders and developers at Building Evolution Corporation NEXUS meeting in April 2024. We look forward to finding more opportunities to share this presentation, and offer it as a lunch and learn for our clients.

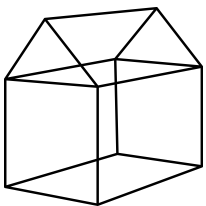
The Power of Persuasion



The reduction of embodied carbon by choosing to use Low Carbon Concrete in 1 house foundation



NOT driving your car 11,500 miles*



100 houses



1.15 million miles

*based on SSE sample 4000 sq ft house

JOIN SE 2050

SIEGEL
STRUCTURAL ENGINEERS