

# EMBODIED CARBON ACTION PLAN

SE2050 NET ZERO COMMITMENT

RJC Engineers

2022/2023



Engineers





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## 1.0 RJC'S COMMITMENT

RJC Engineers (RJC) is an employee-owned engineering firm that celebrates creative thinking, prompt service, and technical excellence in the design and maintenance of structures. RJC provides structural engineering, structural restoration, building science, parking facility design, structural glass engineering, and building energy modeling services. Bringing the best of RJC to every project for over seven decades, the firm integrates ingenuity and practicality to create success for its clients and their projects.

RJC recognizes that the decisions we make today as structural engineers can impact society for generations. With this in mind, we acknowledge our role in shaping a more sustainable future and fully support the vision that all structural engineers shall understand and make efforts to reduce and ultimately eliminate embodied carbon in their projects by the year 2050.

For over seven decades, we have promised “Creative Thinking. Practical Results” to our clients and industry partners. While our promise remains the same a lot has changed within industry. Once thing that has not changed fast enough however, is the high carbon load of buildings. Worryingly atmospheric CO<sub>2</sub>

levels have risen from 311ppm (in 1950) to over 400 ppm during our first year as a SE2050 signatory. As creative thinkers passionate about solving problems, we see our commitment to SE2050 as an opportunity to develop and share bold, innovative, and practical solutions.

Beyond structural engineering and restoration, RJC specializes in building science and energy modelling, glass and façade engineering, and parking facility design. Our building performance team has Life Cycle Analysis expertise to measure and track environmental impacts across the full building life cycle, including embodied carbon. Our engineers and technologists have worked on numerous LEED, Passive House, Toronto Green Standard, and BC Step Code projects.

Is RJC ready to educate, explore, question, solve, report, and share? Yes, we are.

This Embodied Carbon Action Plan (ECAP) outlines how we at RJC will capitalize on our strengths and, creatively, practically drive down carbon emissions associated with our projects while simultaneously helping the industry.

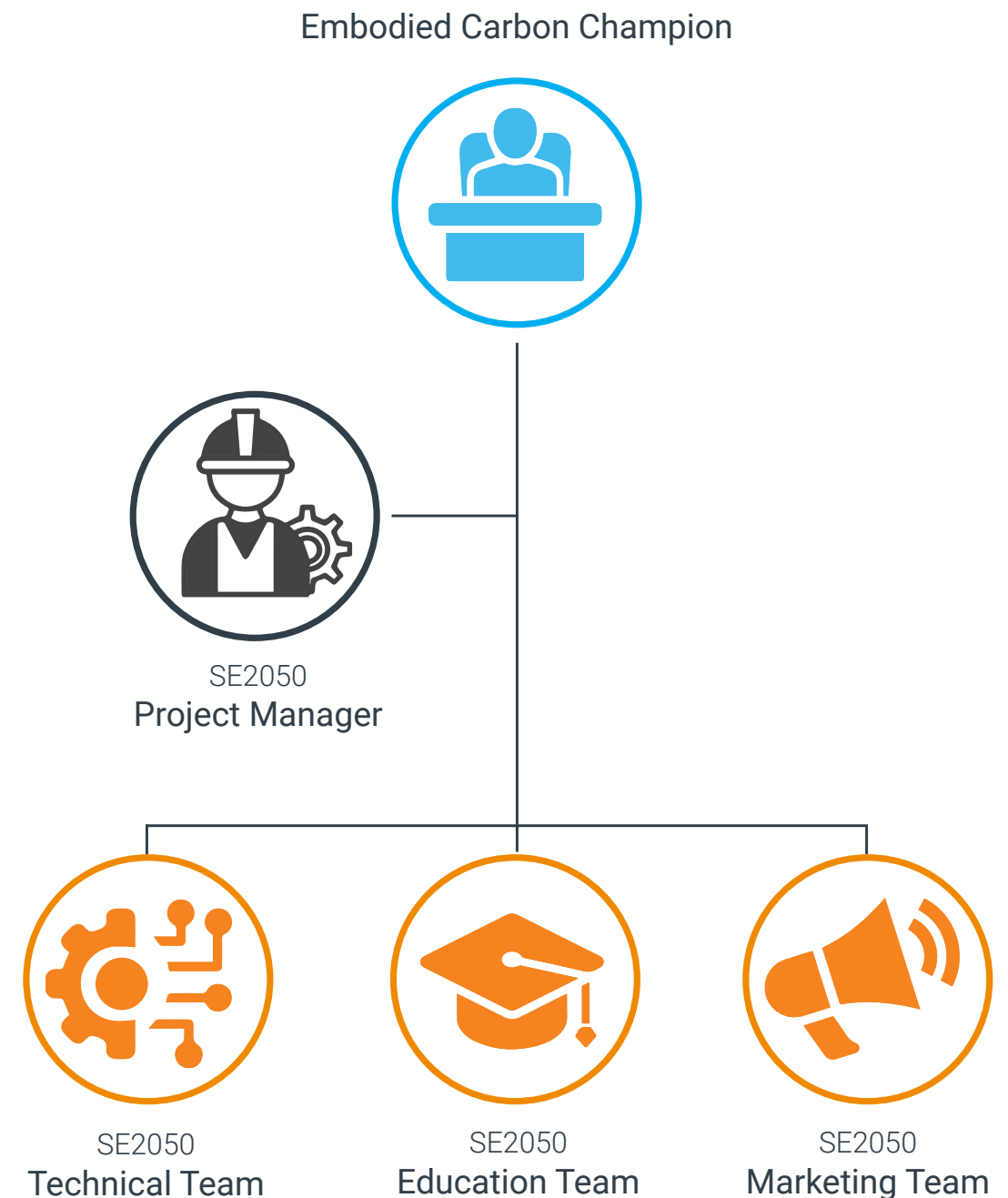
## 2.0 EMBODIED CARBON TEAM

While all RJCers will be a part of much of our SE2050 journey, we have identified people who will provide special focus and be tasked with leading the SE2050 initiatives.

Our Embodied Carbon Champion, Damien Stoneham, is part of RJC's senior structural leadership team. With Damien as our Embodied Carbon Champion, our clients and staff understand the importance we are placing on this initiative.

Damien is assisted by Wendy Macdonald, our SE2050 Project Manager, who will help with day-to-day management. As a long-time sustainability consultant, Wendy is experienced in the complexities of sustainability strategy related management and communications.

Damien and Wendy are further supported by talented technical and communications teams.



## 2.0 EMBODIED CARBON TEAM - continued



### Damien Stoneham

BSc, P.Eng., PMP, CSBA, LEED® AP | Principal

**Embodied Carbon Champion**

Damien will provide senior level leadership for our SE2050 implementation, directing how embodied carbon reductions are planned across the firm.

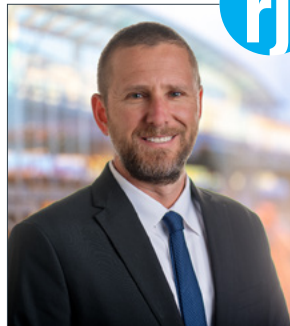


### Dominic Mattman

BASc, MASc, P.Eng., LEED® AP | Associate

**SE2050 Technical Lead**

Dominic is Chair of RJC's Structural Technical Liaison Group who are responsible primarily for SE2050 Reporting and Engaging initiatives (e.g. selecting projects to be submitted for the year, determining method of data collection, creating project specific reduction plan). Dominic and his group will identify who will perform required calculations, input data into the SE2050 Project Import Spreadsheet, and provide oversight and quality control of the data.

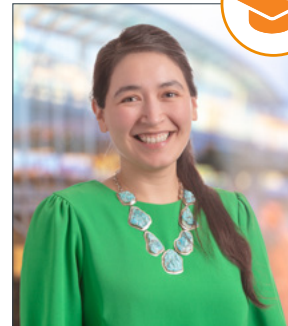


### Terry Bergen

CTech, LEED® AP, CPHC | Managing Principal

**SE2050 RJC Board of Directors' Liaison**

Terry will provide updates to RJC's Board of Directors, ensuring that our SE2050 commitments and deliverables align with our strategic objectives and overall plan for the firm.



### Veronica Ochoa

BArch, MSc, LEED® AP BD+C, WELL AP, MASHRAE | Building Performance Project Designer

**SE2050 Education Lead**

Veronica is responsible for developing and delivering education and advocacy initiatives. Together with our SE2050 Communications Lead, Veronica is tasked with finding the best mechanisms for raising embodied carbon awareness internally and externally.



### Wendy C. Macdonald

P.Eng., ENV SP, LEED® AP BD + C | Sustainability Consultant

**SE2050 Project Manager**

Wendy will coordinate the day-to-day implementation of the SE2050 ECAP process on behalf of our Embodied Carbon Champion, overseeing and directing the ECAP development and enactment.



### Tanya Kennedy Flood

BBA, CITP | Corporate Marketing and Communications Leader

**SE2050 Communications Lead**

Tanya is responsible for support the development and delivery of education and advocacy initiatives through effective communication strategies. Together with our SE2050 Education Lead, Tanya is tasked with developing strong and effective communication plans to raise embodied carbon awareness internally and externally.

## 3.0 EDUCATION PLAN

Professional development and internal training are an integral part of RJC. We have long-standing technical liaison groups, each with a focus relating to specializations within RJC. These groups provide a wealth of expertise as well as mechanisms for distribution of information across the firm's offices and disciplines.

RJC's SE2050 Initiative is guided and supported by RJC's Technical Excellence Committees. This provides the insight and support of RJC's subject matter experts from across services areas). We've recognized that our offices, spread coast to coast and with variations in size, specializations and clientele, will each benefit from slightly different mechanisms to most effectively engage RJCers on the evolving understanding of building low carbon buildings. Beyond widespread announcements, our education initiatives will start with providing educational material options to our select Technical Excellence Committees, who will then be tasked with advising on and connecting the best, customized education delivery options to each office.

For our inaugural year as signatories, the first priority for our Education Plan is to make sure everyone at RJC understands we are signatories to SE2050 and what that means. This began with presentations to the Executive Committee, and followed with an internal announcement, sharing the news with all RJCers. Our next step is a wide-spread rollout of this ECAP, letting all RJCers know how we plan to respond to SE2050.

Our education plan relies on repetition, availability, and diversity of learning modalities. This diversity will be reflected in learning options from Lunch & Learn sessions to Amazon-style memo meetings. We will make resources available to RJCers multiple times and in different ways and keep our low carbon goals top of mind. To make our plan and progress visible, we will add SE2050 as a "Topic of Interest" on our Knowledge Hub on RJC's intranet. The Knowledge Hub provides a readily accessible, single source location for important RJC resources, which will include SE2050 and embodied carbon information.



## 4.0 KNOWLEDGE SHARING NARRATIVE

We look forward to sharing our knowledge about reducing carbon emissions from buildings. RJC enjoys close and long-standing relationships with our clients who we want to bring on board as partners on our carbon reduction journey. We already share externally through conferences, seminars, lunch and learns, webinars and more. We look forward to having our own embodied carbon related education materials further developed so we can continue to share our knowledge broadly. As described in our Education Plan, our SE2050 initiative will have a consistent delivery of education materials. We will also include our clients and industry partners where beneficial.

As an industry leader, RJC readily shares knowledge through industry publications, seminars, conferences, webinars, lunch and learns and more. We will utilize many mediums to take full advantage of opportunities to share our knowledge, celebrate our successes, detail our case studies and provide lessons learned with the larger industry and public.

Our SE2050 Communications Lead will share language about SE2050 with RJC's entire marketing team, for their use in structural proposals. Our website will also celebrate and acknowledge our commitment to SE2050.



## 5.0 REDUCTION STRATEGY

For our first year, we will get our people processes and tools in place. Since our Building Performance team already has experience doing Whole Building Life Cycle Assessments (WBLCA), we're not starting from zero. That team has developed and shared resources such as a Structures Embodied Carbon Memo, Carbon Equivalent Factors for Structural Materials Memo, LCA Protocol, and structural material EPDs. We will continue to extend this knowledge across the firm, and will work to get a benchmark for our reduction strategies.

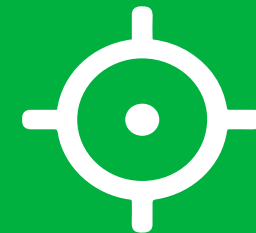
RJC will use our SE2050 inspired tools as means to understand embodied carbon on our projects and how they relate to various emissions targets. With our firm comprised of building envelope, building performance, and structural engineers, our goal is to

have a holistic approach to tracking and targeting emissions reduction across all RJC disciplines and building life cycle stages. To support this, RJC is developing processes and tools that streamline the tracking, storage, and visualization of SE2050 project and initiative data. These tools allow for processing of the data for trends and insight, which will further enable us to learn from our projects, take action, and ultimately allow for embodied carbon reduction. We want embodied carbon information to be easy to input, easily accessible, and easy to learn from. We will share this data with our project teams to make informed decisions and the resulting carbon costs. From that larger dataset, we'll pull the relevant information for our SE2050 submissions.



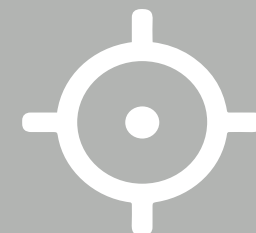
With 75 years of projects, our people are keen to have a better understanding of how our existing designs perform when it comes to embodied carbon. Some of our structural designers have been tasked with developing a list of our most common building archetypes. Figuring out how to reduce the embodied carbon on these designs will go a long way to reducing embodied carbon across all our designs.

In essence, our short term goal is to develop tools, gather data on archetypal designs that represent the bulk of our work, and to develop a clear benchmark to improve upon. Once we know more about where we currently stand, we'll be better able to assess the steps we need to take in the mid and long term in our quest to net zero designs by 2050.



## Short-term goal

Develop education and tracking tools to facilitate company-wide measurement, management, and reduction of embodied carbon in designs.



## Long-term goal

Capitalize on RJC's extensive experience to inform targets, timelines, and actionable strategies to drive the embodied carbon of RJC's design portfolio to net-zero by 2050.



## 6.0 REPORTING PLAN

Our talented structural and building envelope professions are excited about scaling up our efforts quickly to create an in-house resource of information about embodied carbon in our designs across sectors, regions, disciplines, and building types. We are going to make sure that we do this correctly. We will start with the intent to submit five projects as we use 2022/2023 to explore and refine our processes.

For projects requiring LCA or embodied carbon calculations for third-parties such as LEED, CAGBC's Zero Carbon Building Standard and/or the City of Vancouver, OneClick LCA will be our go-to tool. Our Building Performance team has expertise in OneClick LCA, so will keep that as our primary tool, at least for our first year. For projects analyzed with OneClick LCA, we'll analyze the A-D scopes, and rely on the EPD database within OneClick LCA unless there are specific product EPDs we need to source. We are training additional people with OneClick LCA and its embedded Carbon Designer 3D tool.

For projects without an existing embodied carbon or WBLCA goal, we will turn to SE2050's ECOM-Embodied Carbon Estimator, using its embedded industry-wide EPDs and Product Stage (A1-A3) results. The ECOM tool is a great tool to help us remove the fear factor from embodied carbon calculations. It's quick and easy, and that will make it easy for widespread adoption on projects.

We want to be sure that sustainability knowledge and initiatives are shared broadly, so we are evaluating LCA tools to determine the best firm-wide, integrated approach for our structural designers. Once we have a better understanding of the tools and identified best workflow practices, we'll key up our internal education program to disseminate the information to the design teams.



Regardless of who is running the numbers of the embodied carbon, our designers will be well versed in how to support the process. We have a handful of projects in mind that seem to be a good fit for our first year, and they represent a range of project stages. For earlier concept stage projects, our material quantities will come from Bluebeam take-offs, or derived from architectural elements. Projects in more detailed stages of design will be modelled in Revit and directly provide material quantities. Our Building Performance team has experience working with both forms of quantity information and is eager to share these experiences broadly to help our collective process moving forward.





## 7.0 ELECTIVE DOCUMENTATION

### 7.1 ADMINISTRATIVE

TABLE 2: SUMMARY OF ADMINISTRATIVE REQUIREMENTS		
Requirement/Elective	Status	Comments
<b>Submit Commitment Letter from firm leadership.</b>	Complete	Firm commitment letter submitted with sign-up, September 22, 2022.
<b>Distribute an Internal Announcement announcing firm's pledge to join SE2050.</b>	Complete	Internal email announcement sent by RJC Executive Committee, December 20, 2022.
<b>Select and nominate an internal embodied carbon champion.</b>	Complete	Selected. See Embodied Carbon Team section.
<b>Declare firm as a member of the SE2050 Commitment.</b>	Complete	Signed-up, September 22, 2022.
<b>Submit a high-resolution logo for inclusion on SE2050's website.</b>	Complete	Submitted.
<b>Share embodied carbon resources with firm.</b>	Complete	Link to <a href="#">embodied carbon resources</a> included with internal announcement.





## 7.0 ELECTIVE DOCUMENTATION

### 7.2 EDUCATION

**TABLE 2: SUMMARY OF EDUCATION REQUIREMENTS**

Requirement/Elective (2) required, (4) recommended (4) selected for 2022/23	Status	Comments
Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office.	In process	<p><b>2022 Q3:</b> Education re: SE2050 to RJC leadership. Selection of Embodied Carbon Champion.</p> <p><b>2022 Q4:</b> Formation of SE2050 teams, education provided to select liaison groups. Internal announcement.</p> <p><b>2023 Q1:</b> Finalization of Embodied Carbon Action Plan.</p> <p><b>2023 Q2:</b> Rollout of Embodied Carbon Action Plan to technical groups. Development and start of office level roll-outs of ECAP and Embodied Carbon 101.</p> <p><b>2023 Q3:</b> Continued and/or repeated rollout of Embodied Carbon 101 and specific education opportunities.</p>
<p>Present at least one (1) webinar focused on embodied carbon and make a recording available to employees. This could be created internally, pulled from an external source (with permission), or pulled from a publicly available source such as the Boston Society of Architecture.</p> <p>Include this resource in your orientation and on-boarding program.</p>	In process	<p><b>Q1-Q2 2023:</b> <i>Boston Society for Architecture – Embodied Carbon 101</i> <a href="#">Youtube video</a> distributed to all-staff as part of ECAP internal messaging.</p> <p><b>Q2 2023:</b> Feedback from team leaders and excellence groups regarding office specific delivery mechanisms (e.g. Lunch&amp;Learn making the <i>Boston Society for Architecture – Embodied Carbon 101</i> <a href="#">Youtube video</a> available for the first hour. Members of the Embodied Carbon Team will be in attendance, responding to questions in the webinar chat, and will facilitate discussion and Q&amp;A after the video is complete.)</p> <p><b>Q2-Q3 2023:</b> Inclusion of <i>Boston Society for Architecture – Embodied Carbon 101</i> <a href="#">Youtube video</a> in on-boarding material for new structural employees.</p>



## 7.0 ELECTIVE DOCUMENTATION



### 7.2 EDUCATION - CONTINUED

<b>Engage with a CLF Regional Hub. This could mean:</b> <ul style="list-style-type: none"><li>• <b>Attending presentations or working sessions and reporting back to the firm</b></li><li>• <b>Co-chairing a hub</b></li></ul>	In process	<b>Ongoing:</b> Veronica Ochoa, of our Building Performance team and SE2050 Education Team, volunteers with CLF Vancouver.
<b>Create an Embodied Carbon digital resource wiki and/or forum on your firm's internal website for staff to create, share, and discuss Embodied Carbon educational resources.</b>	In process	Accessed via RJC's Knowledge Hub, we are in the process of developing a central database for staff to access SE2050 related educational materials, discuss matters of embodied carbon, and submit/interact with RJC project data.





## 7.0 ELECTIVE DOCUMENTATION

### 7.3 REPORTING

TABLE 2: SUMMARY OF REPORTING REQUIREMENTS		
Requirement/Elective (1) Required, (2) recommended (2) Selected for 2022/23	Status	Comments
Submit a minimum of two (2) projects with structural engineering services to the SE2050 Database. It is not a requirement to submit more than five (5) total projects across the firm. Firms are expected to follow the spirit of the SE2050 Program in determining how many total projects firm must submit. Offices that only offer construction administration services or with fewer than five full-time employees need not be considered.	In process	2023 Q3: Refer to reporting section.
Compare the embodied carbon emissions from multiple projects across your firm. Analyze and document what data or pieces of information are most important and communicate findings to your firm.	In process	2023 Q3: Targeted completion of SE2050 database with tracking of project embodied carbon. Using a data analysis tool, visualization and comparison of embodied carbon from multiple projects will be completed using metadata with key categories (office, location, building type, category, etc). Further iteration of the tools will allow for insight into more points of key data to be collected and compared.





## 7.0 ELECTIVE DOCUMENTATION

### 7.4 REDUCTION

TABLE 2: SUMMARY OF REDUCTION REQUIREMENTS		
Requirement/Elective (1) Required, (4) recommended (4) Selected for 2022/23	Status	Comments
<b>Develop and implement a workflow that makes it easier to make early design decisions based on embodied carbon.</b>	In process	<b>2023 Q3:</b> Until we have more information about our own benchmarks, we will rely on SE2050 database benchmarks for reference, and will complete concept stage analysis using the ECOM tool, or OneClick LCA Carbon Designer. RJC is also in the process of expanding our in-house, concept stage, operational carbon calculator to allow for early calculations of embodied carbon. We currently plan to use tools, such as Microsoft forms, that will integrate with the developing SE2050 carbon database with the thought that designers will be prompted during Schematic Design to upload their information.
<b>Communicate the embodied carbon impacts of different design options to clients with creative data visualization. Inclusion of these visualizations in Elective Documentation is optional (i.e. not required if firm would prefer to keep marketing materials private).</b>	In process	<b>2023 Q3:</b> RJC is in the process of developing our own in-house, concept stage, embodied carbon calculator, and will include data visualizations in the calculator to easily show the carbon impacts of design options to technical staff and clients.



## 7.0 ELECTIVE DOCUMENTATION



### 7.4 REDUCTION - CONTINUED

<b>Incorporate sustainably harvested biogenic materials in at least one project.</b>	In process	<b>2022 Q4-2023 Q3:</b> Our North Island College Student Housing projects have specific requirements to use sustainably harvested wood products.
<b>Propose other embodied carbon reduction strategies and describe their value.</b>	In process	<b>2023 Q1 through to 2026 Q3:</b> SE2050 Technical Lead Dominic Mattman appointed to participate on an expert advisory panel to support the Canada Green Building Council and University of Toronto in a joint initiative to study carbon capture and utilization in cementitious building materials. Panel will meet quarterly for the duration of the project.

## 7.0 ELECTIVE DOCUMENTATION



### 7.5 ADVOCACY

TABLE 2: SUMMARY OF ADVOCACY REQUIREMENTS		
Requirement/Elective (2) Required, (4) recommended (5) Selected for 2022/23	Status	Comments
Describe the value of SE2050 to clients. How can your design teams collaborate to reduce embodied carbon? Please attach any associated marketing materials.	In process	<p><b>2022 Q3:</b> As part of a new project, RJC presented an out-of-scope introductory embodied carbon presentation to mentor a firm for whom this was the first time collaborating with us on this deliverable. The presentation was titled “Deciphering EPDs &amp; How to Conduct an LCA”.</p> <p><b>2023 Q1:</b> Presentation slide detailing RJC’s SE2050 commitment developed (and already presented) for inclusion in client presentations and for new partners/acquisitions of RJC.</p> <p><b>2023 Q3:</b> RJC will make use of our avenues to industry publications to promote SE2050 and discuss collaboration techniques for carbon reduction.</p>
Publicly declare your firm as a member of the SE2050 Commitment however you see fit (e.g. on your website, LinkedIn, or other social media)	In process	<p><b>2023 Q2:</b> Presentation to Marketing team regarding SE2050, including provision of boilerplate proposal language. LinkedIn post, and update to website to include our commitment to SE2050.</p>



## 7.0 ELECTIVE DOCUMENTATION



### 7.5 ADVOCACY - CONTINUED

<p><b>Give an external presentation on embodied carbon that demonstrates a project success or lessons learned. Get connected at a CLF regional hub near you and be sure to post the recording.</b></p>	<p>Complete</p>	<p><b>2022 Q2 and Q3:</b> RJC presented as part of Simon Fraser University's Life Cycle Assessment and Sustainability (Special Topics) course and included case studies and lessons learned.</p> <p><b>2022 Q3:</b> RJC presented at last year's CCBST on a case study pursuing net-zero carbon</p> <p><a href="https://ccbst2022.obec.on.ca/program/program-day-2/low-carbon-ochoa">https://ccbst2022.obec.on.ca/program/program-day-2/low-carbon-ochoa</a></p>
<p><b>Engage with structural material suppliers in your region to communicate the importance of Environmental Product Declarations (EPDs) and low-carbon material options.</b></p>	<p>In process</p>	<p><b>2023 Q3:</b> As part of our office specific training and education, we will be requesting project designers engage with suppliers to request they provide EPDs for their products.</p>
<p><b>Propose alternative methods for advocacy and describe their value.</b></p>	<p>Ongoing</p>	<p><b>Ongoing:</b> RJC is at the forefront of wood design in Canada, from residential to institutional buildings. Engaged by provincial and federal governments, we consult on the latest updates to building codes for wood design. RJC has an integral role in the development of Canadian Codes and Standards for wood-frame and mid-rise wood-frame developments. We participate at a national level on code groups to develop changes for wood, including those that are leading the way to allowing for taller wood buildings.</p>



# APPENDIX A

RJC's Commitment Letter





September 22, 2022



Engineers

Laura Champion, Director  
Structural Engineering Institute  
1801 Alexander Bell Drive, Reston, VA, 20191

Dear Laura Champion, Director, Structural Engineering Institute

**RE: Letter of Commitment to the SE 2050 Program**

**RJC No. CSG.099013.0011**

RJC Engineers, a ~700 person firm with 14 offices located across Canada (Vancouver, Surrey, Victoria, Nanaimo, Kelowna, Calgary, Edmonton, Saskatoon, Toronto, Ottawa, Kitchener, Kingston, Montréal, and Prince Edward Island), is hereby signing on to the SE 2050 Commitment Program.

A Guiding Principle at RJC is “Make a Difference”. We recognize that the decisions we make today as structural engineers can impact society for generations to come. With this in mind we acknowledge our role in shaping a more sustainable future, and fully support the vision that all structural engineers shall understand, and make efforts to reduce and ultimately eliminate embodied carbon in their projects by the year 2050.

For over seven decades we have promised “Creative Thinking + Practical Results” to our clients and industry partners. While our promise remains the same today, so much else has changed. Slide rules and drafting tables have been replaced by calculators and computers, virtual meetings have been readily adopted, remote working is commonplace, and worryingly atmospheric CO2 levels have risen from 311ppm (in 1950) to 416ppm at the time of this writing. As creative thinkers with a passion for problem solving, we see our commitment to SE 2050 as an opportunity to develop and share bold, innovative, and practical solutions.

Beyond structural engineering and restoration, RJC specializes in building science and energy modelling, glass and façade engineering, and parking facility design. Our engineers and technologists have worked on numerous LEED, Passive House, Toronto Green Standard and BC Step Code projects. Our building performance team has Life Cycle Analysis expertise with the ability to measure and track environmental impacts, including embodied carbon, across the full building life cycle.

Is RJC ready to educate, explore, question, solve, report, and share? Yes, we are.



We therefore commit RJC Engineers to take the following steps which are part of the SE 2050 Commitment Program:

- Within six months and annually henceforth, we commit to reporting an Embodied Carbon Action Plan (ECAP) and permit the ECAP document or form be made public on the SE 2050 website.
- Within one year and annually henceforth, we commit to submit data to the SE 2050 project database in a collaborative effort to understand embodied carbon in structural engineering projects and to set attainable targets for future projects.

We look forward to joining this coalition and industry effort to achieve the goals of the SE 2050 Program.

Yours truly,

READ JONES CHRISTOFFERSEN LTD.

A handwritten signature in blue ink, appearing to be 'T. Bergen'.

Terry Bergen, C.Tech., CCCA, LEED® AP, CPHC  
Managing Principal

A handwritten signature in blue ink, appearing to be 'D. Stoneham'.

Damien Stoneham, BSc, P.Eng., PMP, CSBA, LEED® AP  
Principal

WM/TB/DS/rt



# APPENDIX B

RJC's Internal Communication







STRUCTURAL  
ENGINEERING  
INSTITUTE



Hello/Bonjour RJCers,

We are excited to announce that RJC is a signatory to SE2050 (the Structural Engineers 2050 Commitment Program). Structural engineers around the world are stepping up and committing to reducing and ultimately eliminating embodied carbon in our projects.

Blueprint 2027's Innovation and Growth pillar has a strategic objective to deliver innovative services. Committing to SE2050 formalizes our commitment to sustainability in our designs and provides a framework and resources for continued betterment. We will:

- Further our culture and practice of sustainable design.
- Provide access to tools that will allow us to benchmark embodied carbon metrics, set targets, track progress, and validate your design approach for embodied carbon savings against industry trends.
- Be part of a growing cadre of firms who are working to combat climate change through education, embodied carbon modeling using LCA methods, and advocacy.

### What is SE2050?

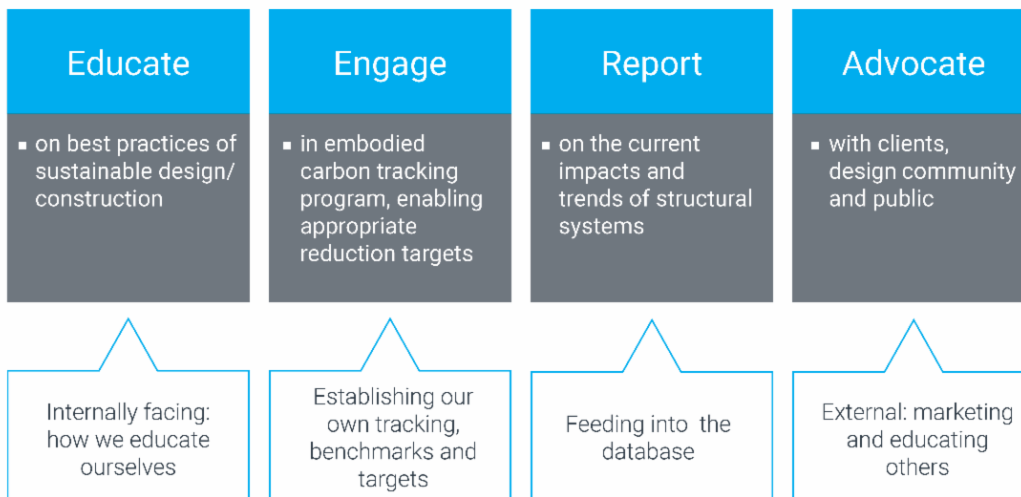
The Sustainability Committee of the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE) developed SE2050 in response to the Carbon Leadership Forum (CLF)'s challenge:

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

The program provides an accessible sustainability program for individual structural engineers and structural engineering firms, with an accountable commitment strategy of active engagement on projects and sharing of information all in the name of achieving net zero carbon structures by 2050.

The program goals are:





## Resources

SE 2050 provides a framework for our efforts in creating low carbon building designs, and provides the opportunity to work with industry peers to contribute to a growing library of information about embodied carbon in structural designs. Here is some information to get started:

- [SE2050 website](#)
- [SE 2050 library of resources](#)
- [Top 10 Carbon Reducing Actions for Structural Engineers](#)
- [IStructE's "How to calculate embodied carbon"](#)

## Next Steps

More information and educational opportunities to come in 2023. If you have questions, please reach out to **Damien Stoneham** (RJC's designated Embodied Carbon Champion for 2022-2023) and **Wendy Macdonald** (RJC's SE2050 Program Manager).

Progress by design!



**Roger Steers**

Executive Principal | MEng, P.Eng., LEED® AP



**Mike Moffatt**

Executive Principal | BSc, P.Eng., LEED® AP



**Joette Decore**

Executive Principal | BSc, MBA



STAY CONNECTED



rjc.ca