MANTLE CLIMATE

ICLEI Local Governments for Sustainability CANADA

Reducing Embodied Carbon in New Construction

Building to Net-Zero Community of Practice Session



WE BUILD CLIMATE LEADERS

January 29, 2026



Ryan Zizzo

CEO & Founder
Mantle Climate

- Professional Engineer
- Master of Applied Science
- (Civil and Environmental Engineering)
- LEED Accredited Professional

- More than 15+ years experience in green buildings across Canada and Europe
- Principal researcher and author behind City of Toronto's **Toronto Green Standard** version 4 update, North America's first policy to cap embodied carbon on certain types of new construction
- Supported the development of the **Government of Canada**'s low-carbon concrete policy (Standard on Embodied Carbon in Construction)
- **Canada Green Building Council** (CAGBC): Embodied Carbon Technical Advisory Group Member, and previous member (4-year term) on Zero Carbon Steering Committee (Zero Carbon Building Standard)
- Technical Committee member for **2030 National Building Code** embodied carbon task group
- Advisory Board Member of the Carbon Leadership Forum (CLF) and founder of the CLF Toronto Hub

Who We Are

Mantle Climate is Canada's leading climate strategy and risk management consultancy for the built environment. We partner with our clients to align business success with climate leadership.

Our Mission:
Support the decarbonization of the built environment while integrating resilience into our clients' projects and their organizations.

Client-Centric & Outcomes-Driven: We don't just advise, we work alongside you, from strategy to implementation, turning ambition into measurable results.

Deep Technical Expertise: Gain recognition as a future-focused sustainability leader in your industry. Our team brings practical strategies and technical depth, shaped by experience on Canada's greenest buildings and global best practices.

Values-Led Partnerships: We prioritize trust, collaboration, and solutions that create lasting change for your business and the communities you serve.





Some of our Clients and Partners



Agenda

Introduction to embodied carbon

Embodied carbon management opportunities in construction

Toronto Green Standard

Federal Standard on Embodied Carbon in Construction

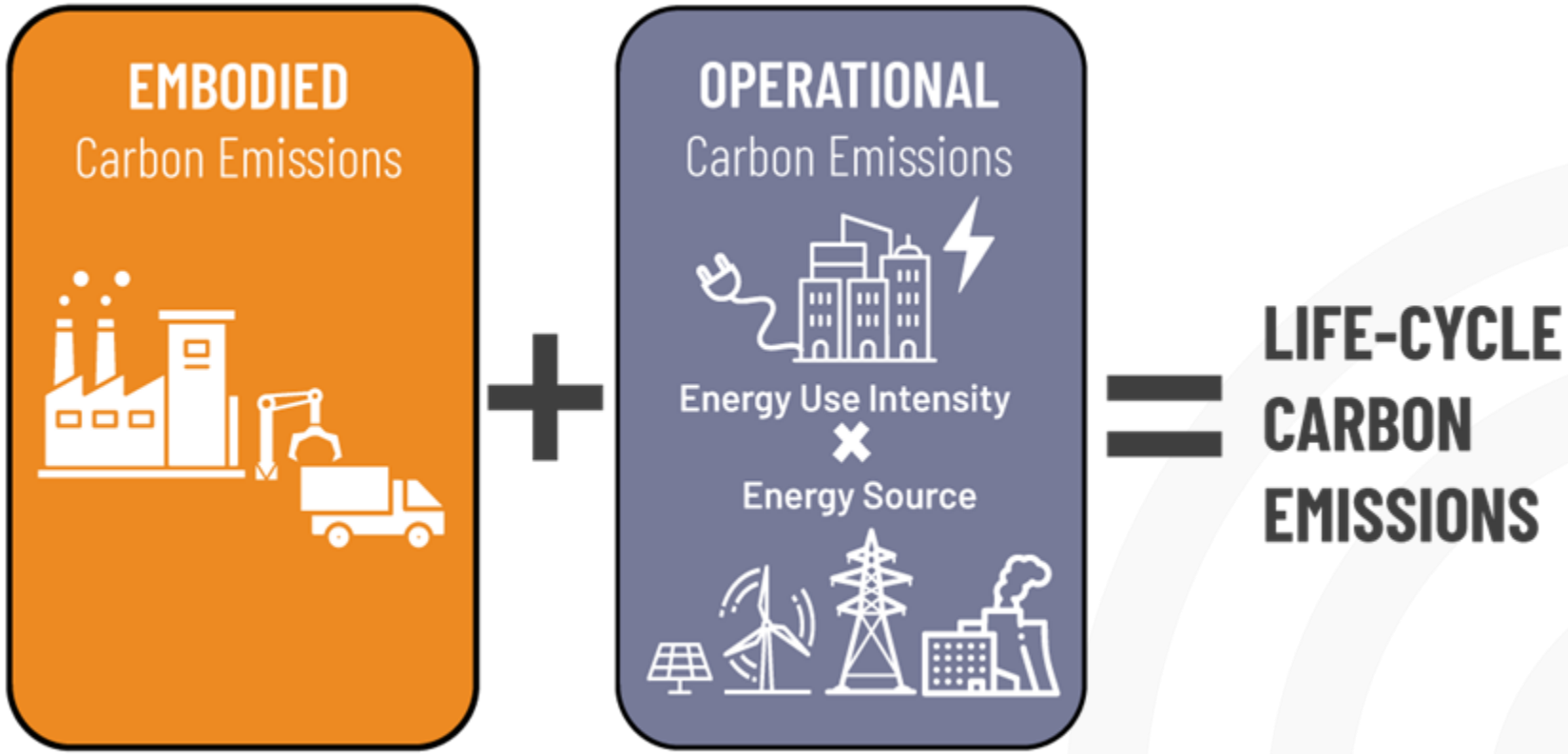
Discussion / Questions

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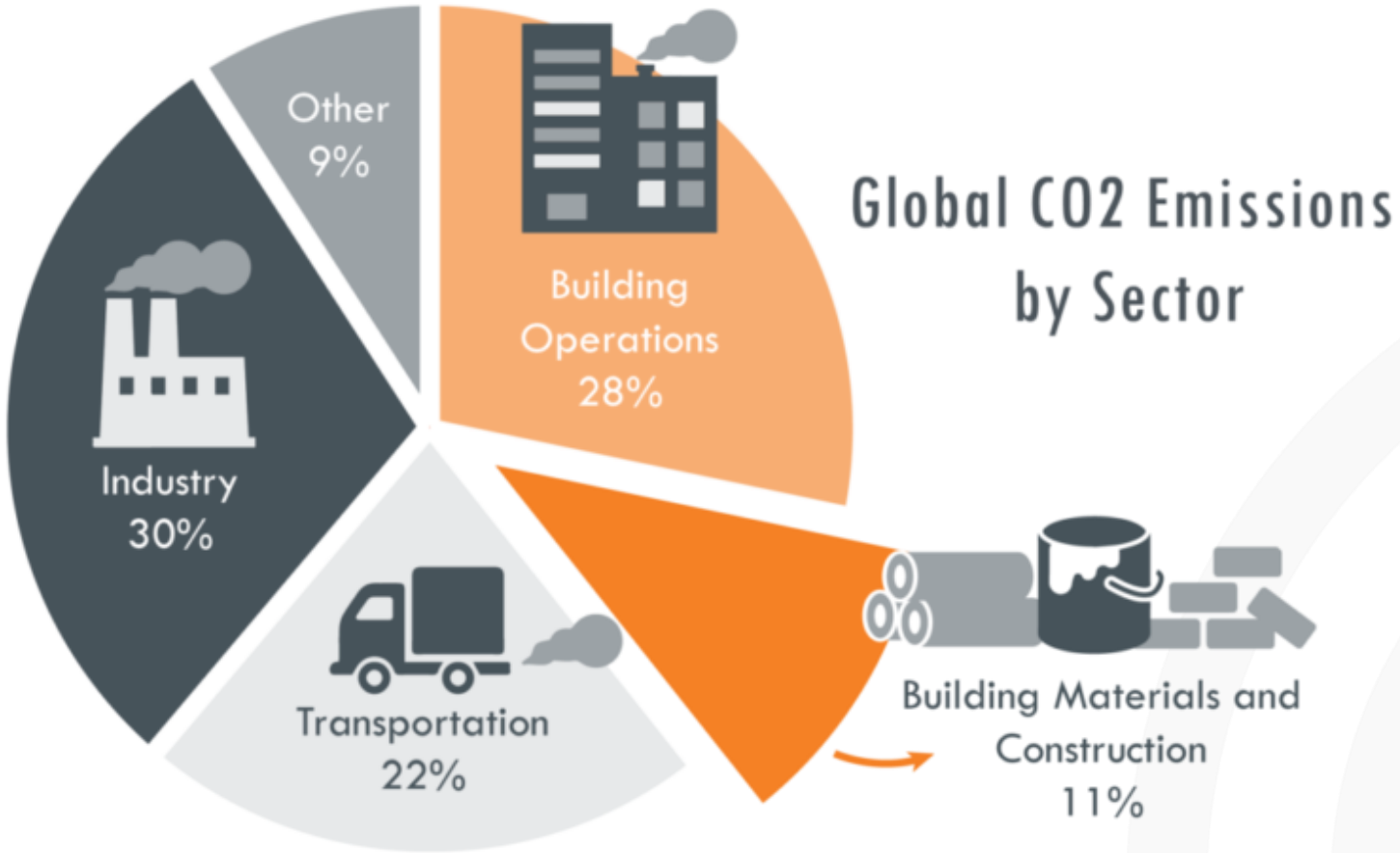
Introduction to Embodied Carbon



Carbon: Operational & Embodied

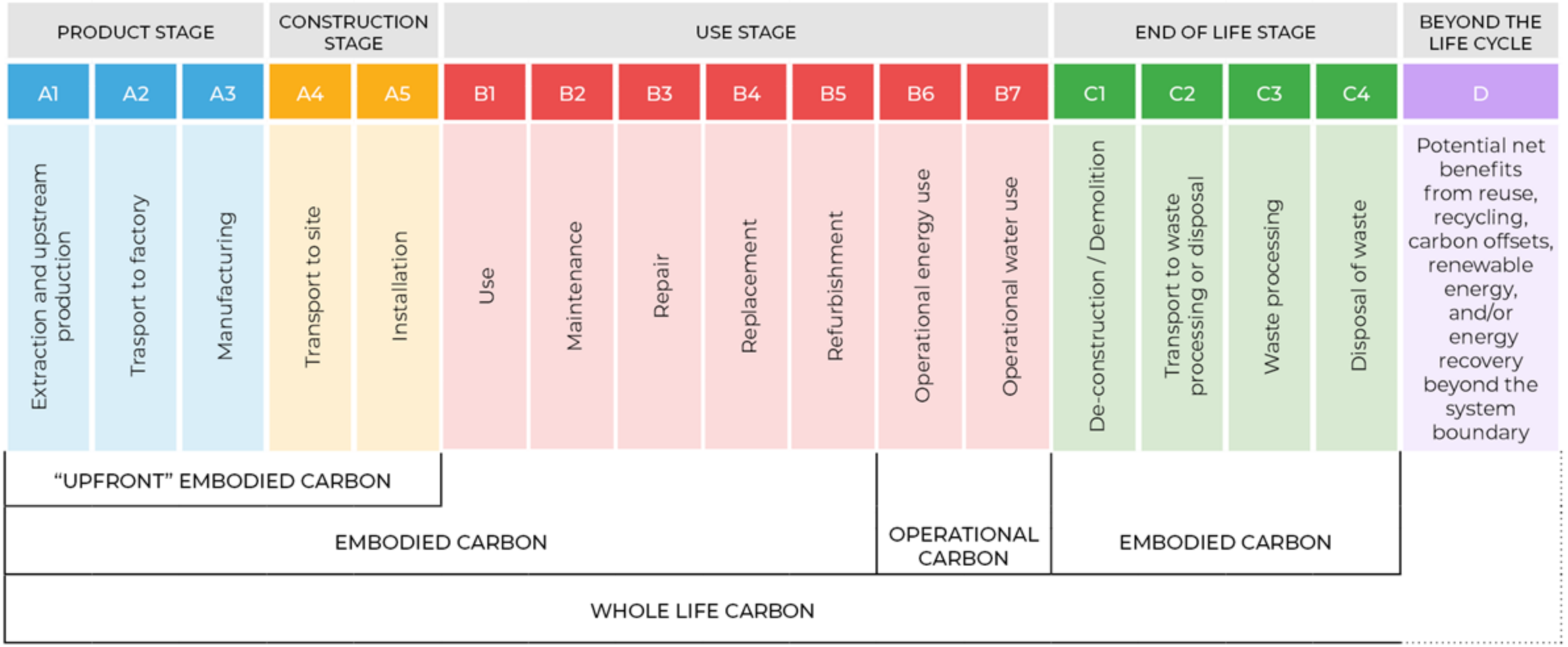


Buildings Impact on Global Emissions

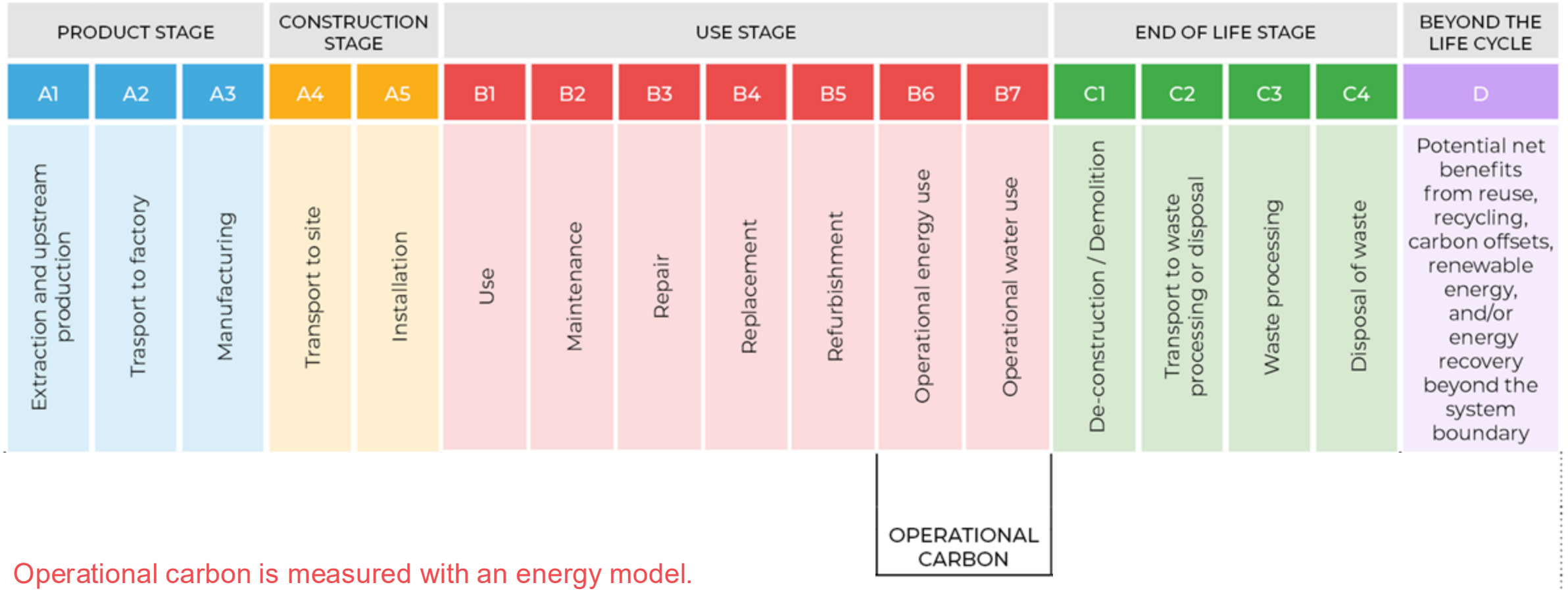


Source: Architecture 2030

“Whole Life Carbon” = Operational Carbon + Embodied Carbon

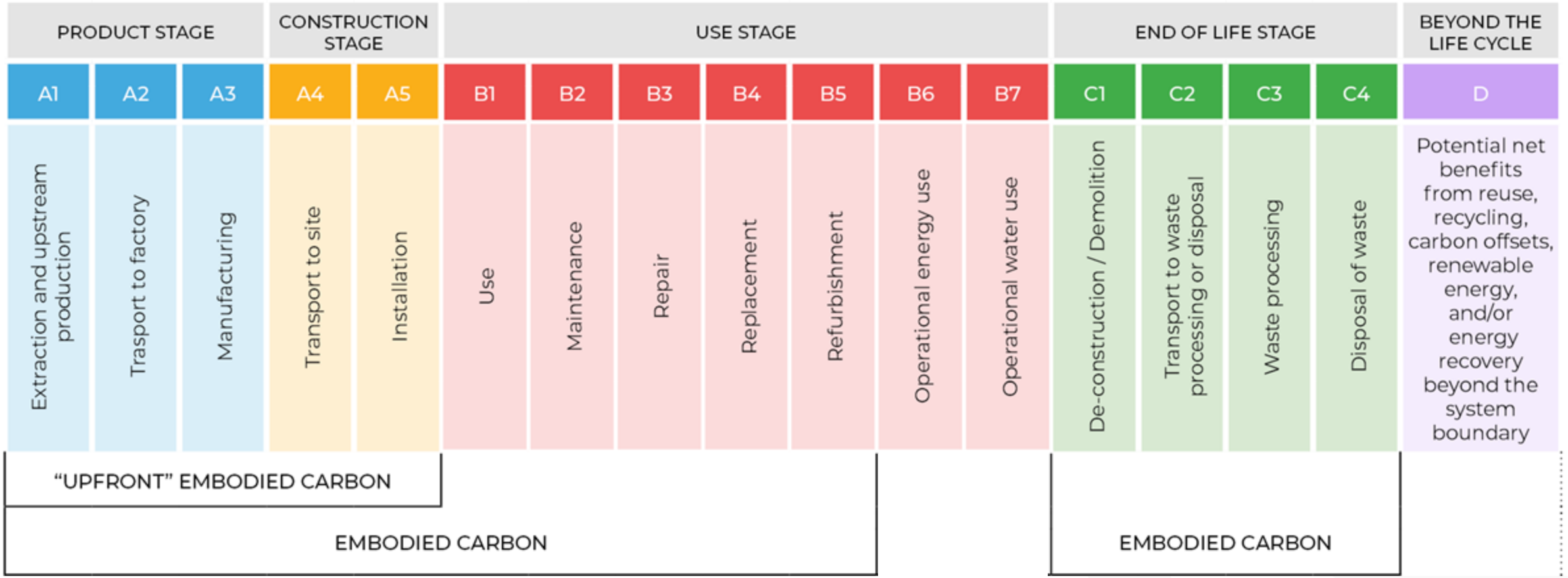


Operational Carbon



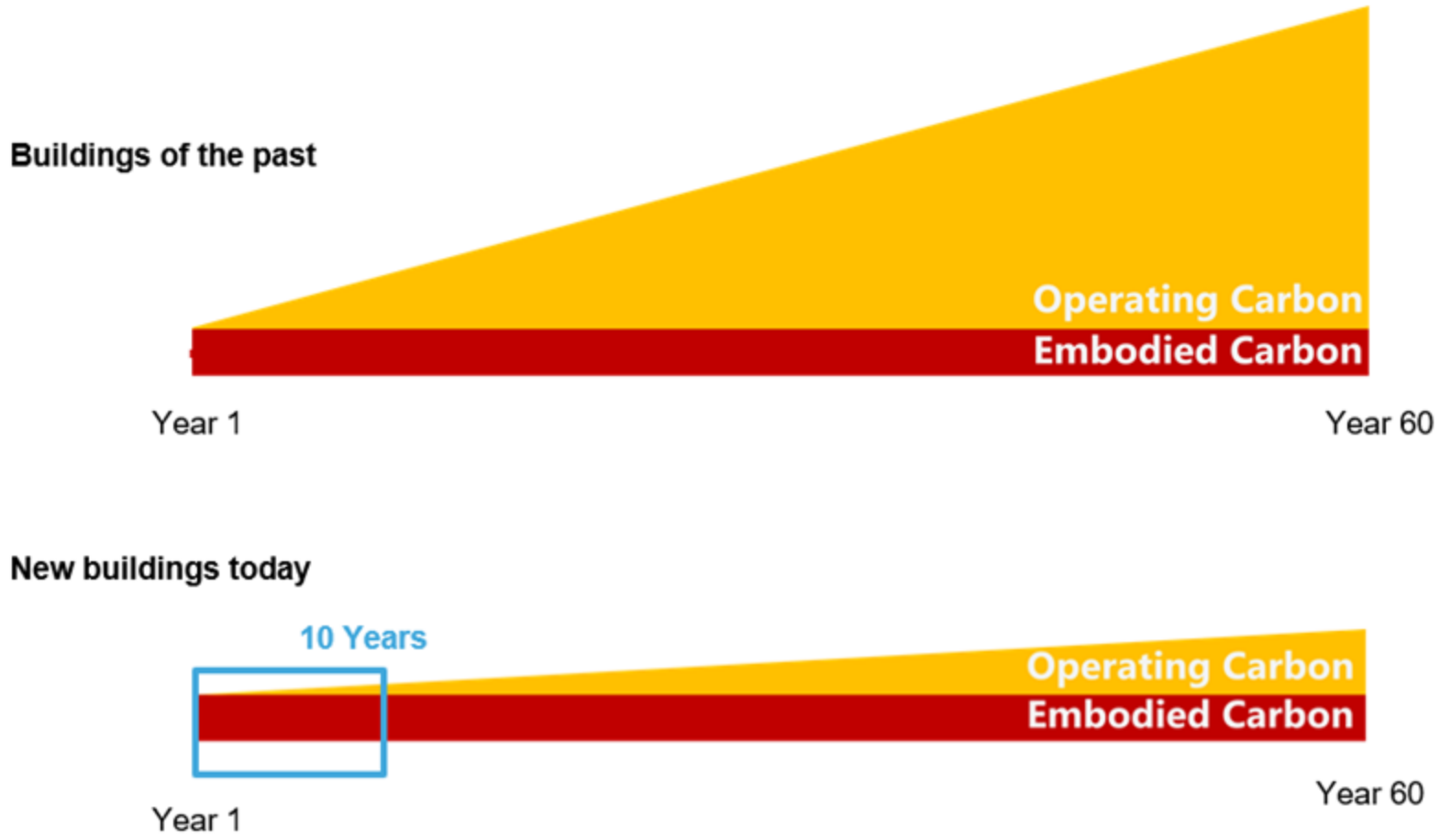
Operational carbon is measured with an energy model.
This has become a standard part of the design and permitting process.

Embodied Carbon



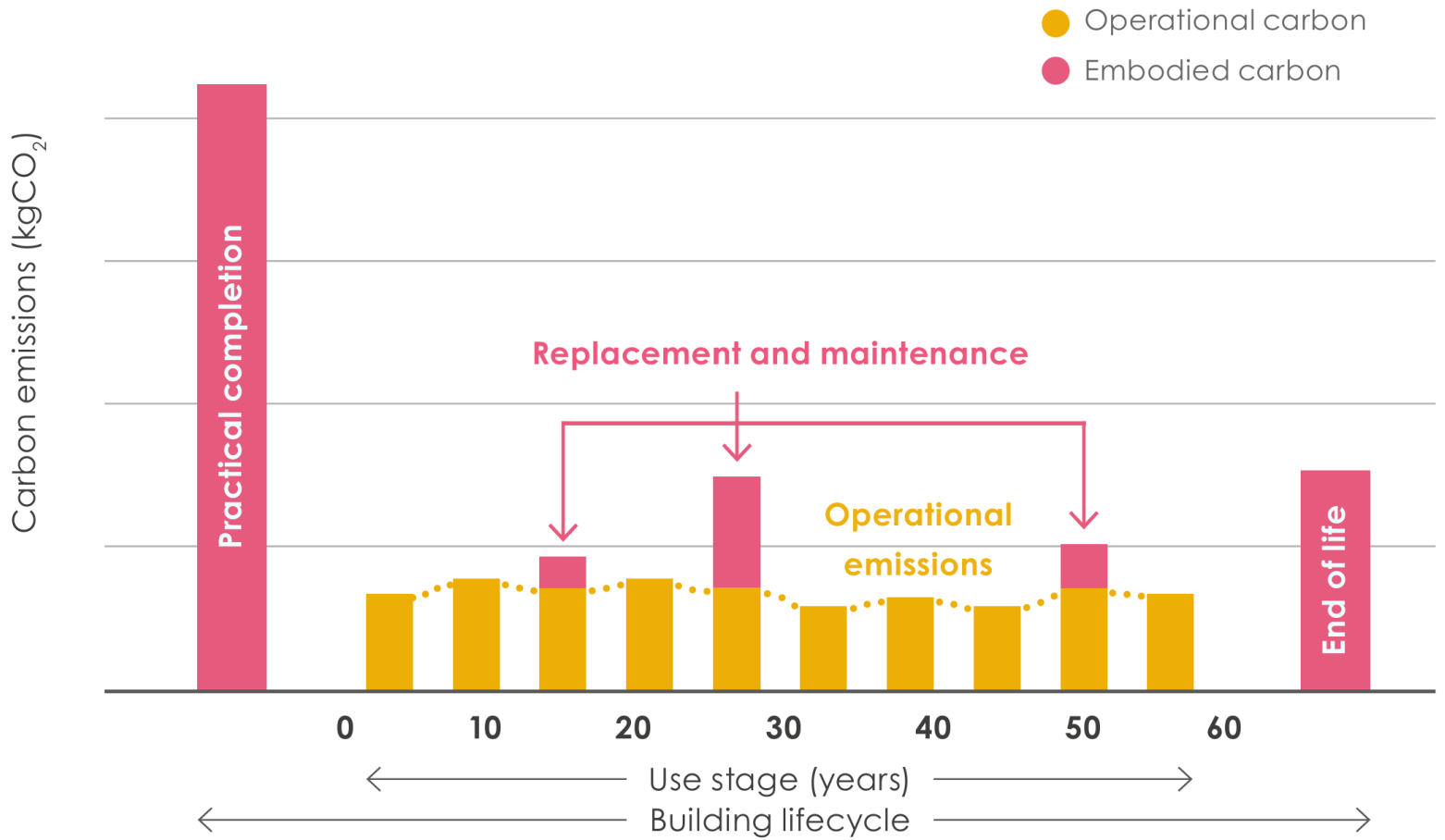
Embodied carbon is measured with a life cycle assessment (LCA).
LCAs are increasingly being done by leading projects targeting LEED and Zero Carbon.

Carbon: Operational & Embodied



New buildings are increasingly energy efficient, and energy is increasingly lower-carbon

Operational vs Embodied Carbon



Source: LETI Embodied Carbon Primer

Upfront Embodied Carbon Dominates

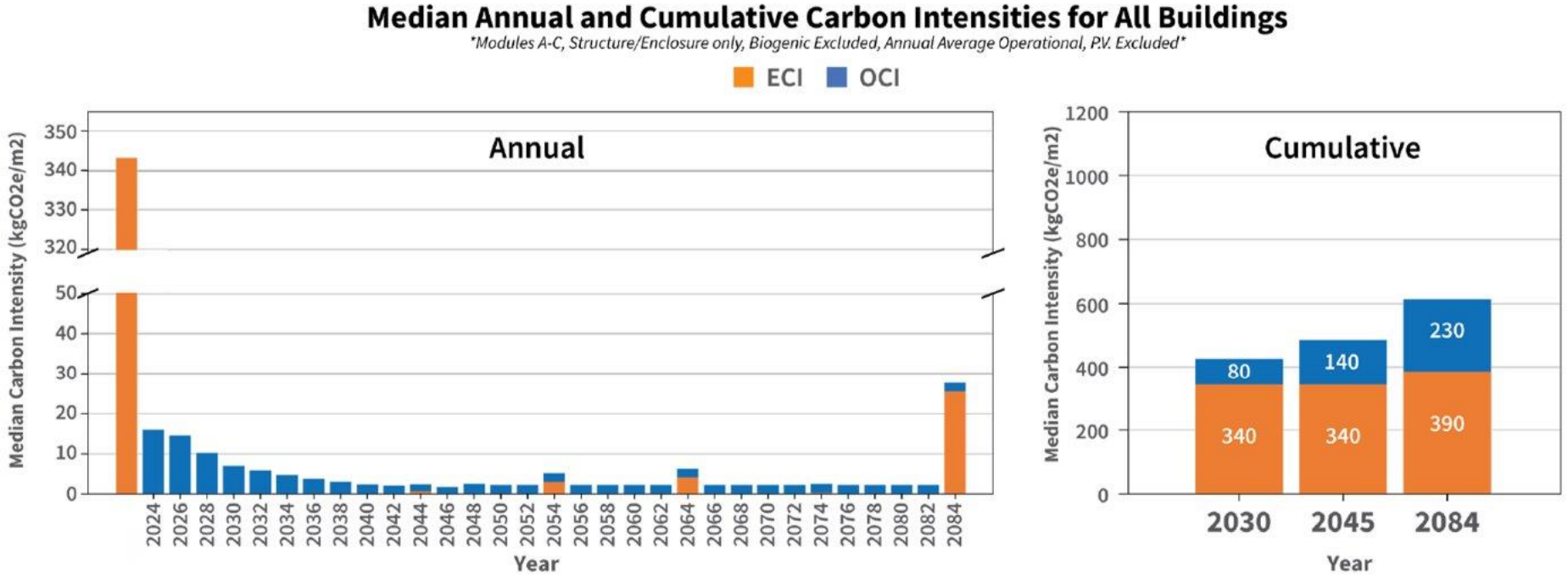
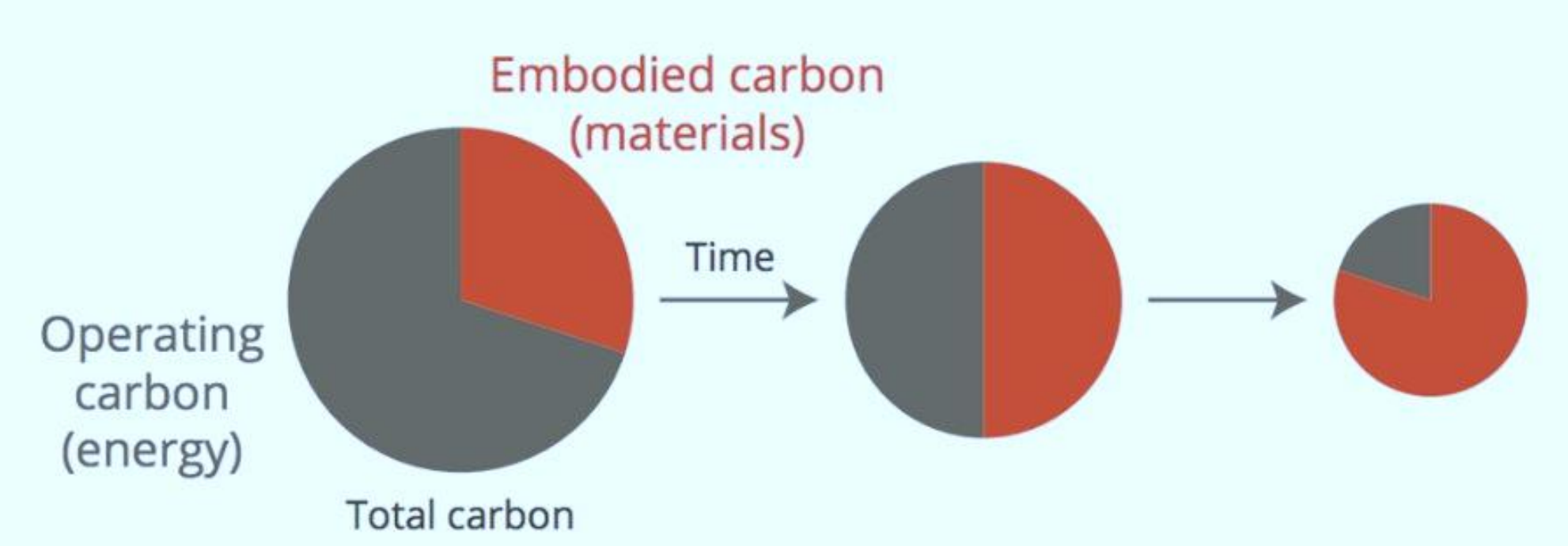


Figure 3. Median annual and cumulative **embodied carbon intensities (ECIs)** and **operational carbon intensities (OCIs)**. Modeling based on the embodied and operational emissions from life cycle modules A-C for the structure and enclosure of buildings in California. Note that the y-axis for annual impacts (above) is shown with a break between 50 and 320 kg CO_2e/m^2).

Adapted from Benke, B., Roberts, M., Lewis, M., Shen, Y., Carlisle, S., Chafart, M., and Simonen, K. (2024). The California Carbon Report: Six Key Takeaways for Policymakers. Carbon Leadership Forum, University of Washington. Seattle, WA.

Upfront Embodied Carbon Dominates



As new buildings become more energy efficient and operations decarbonize, embodied carbon becomes the dominant piece of the whole building carbon pie

Carbon: Operational & Embodied

- New and future low-carbon buildings will have a vast majority of emissions due to materials (embodied)

These example buildings are highly energy-efficient and have electrically powered geo-exchange heating systems.

A value of 400 kg CO2 e/m2 has been used as an average benchmark for upfront embodied carbon, which results in a total upfront embodied carbon of 21,451 tonnes CO2 e for the archetype studied.

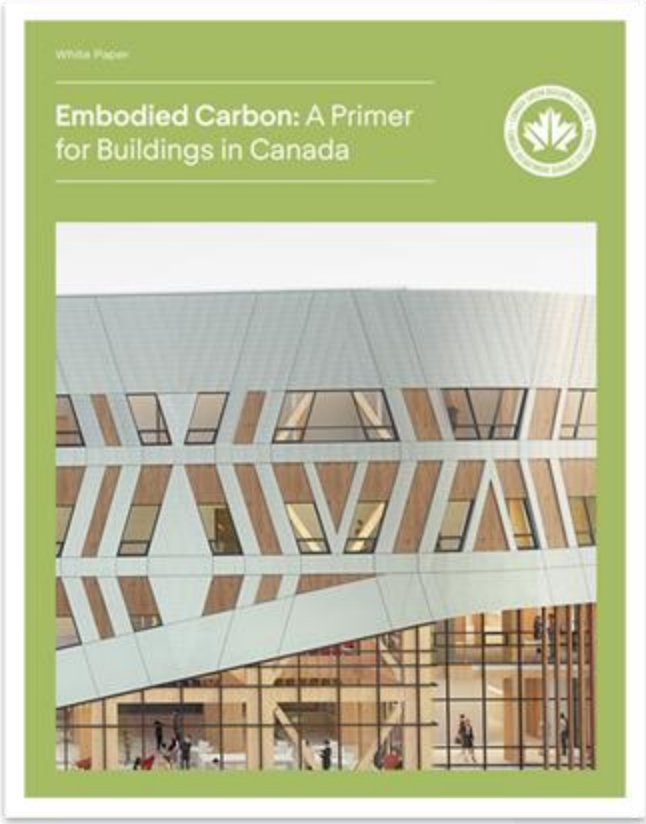


Figure 1: Vancouver High Performance Building
(Cumulative Tonnes CO_2e)

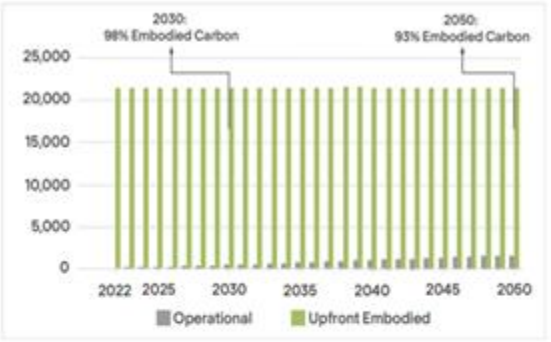


Figure 2: Toronto High Performance Building
(Cumulative Tonnes CO_2e)

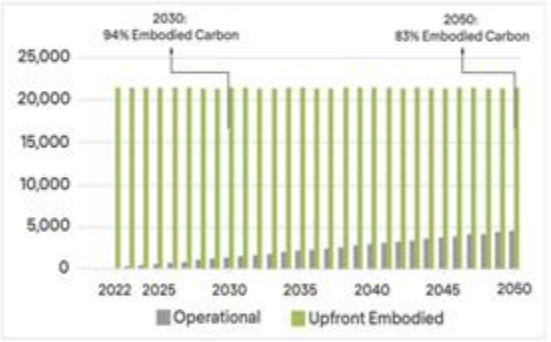
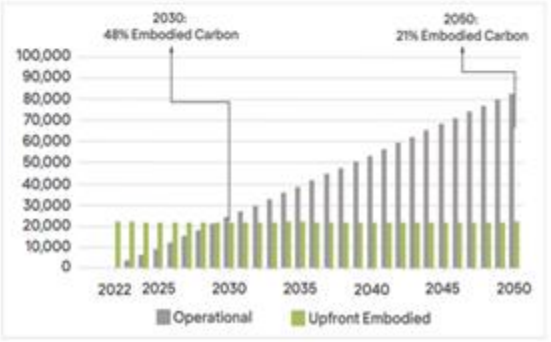


Figure 3: Calgary High Performance Building
(Cumulative Tonnes CO_2e)



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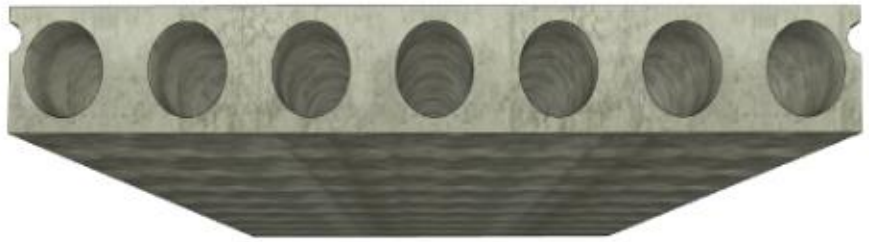
Embodied carbon management opportunities in construction



Embodied Carbon Reduction Strategies

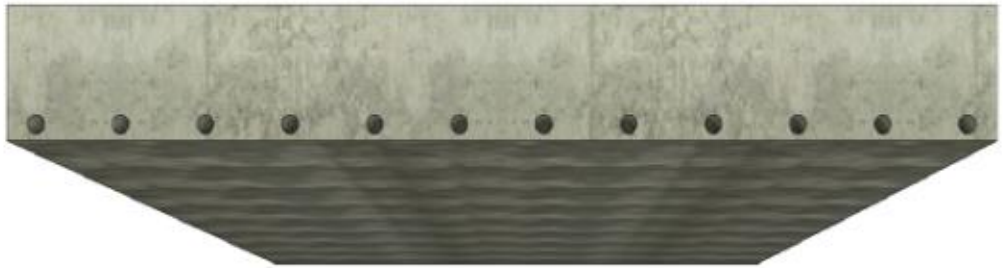
Material minimization

- Reduces both carbon and costs
- Less resources
- Less future waste
- Can be faster to construct (if off-site modular is optimized)



Hollow-Core Slab

Off-site manufacture (precast)



Flat Slab

On-site manufacture (cast-in-place)

Embodied Carbon Reduction Strategies

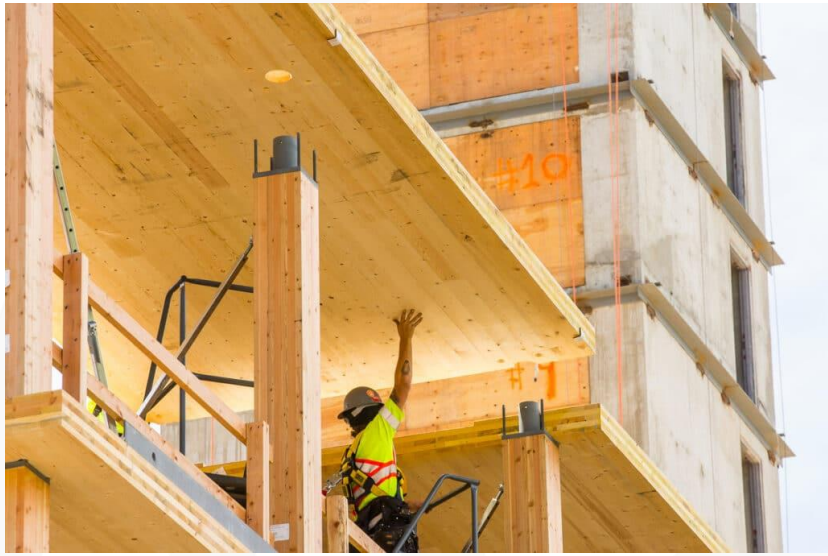
Low-carbon materials

- Low carbon cement and concrete
- Low carbon steel
- Mass timber (also enhances occupant wellbeing)

10-30% reductions can often be achieved for little to no cost premium. See recent study by Clean Energy Canada.







Using EPDs

Baseline:



Table 6. LCA Results 25 MPa concrete without air

	UNIT	Baseline 25 MPa concrete without air GU 10 SL	25 MPa concrete without air GU	25 MPa concrete without air GU 15 SL	25 MPa concrete without air GU 25 SL	25 MPa concrete without air GU 35 SL	25 MPa concrete without air GU 50 SL	25 MPa concrete without air GUL	25 MPa concrete without air GUL 15 SL	25 MPa concrete without air GUL 25 SL	25 MPa concrete without air GUL 35 SL	25 MPa concrete without air GUL 50 SL
Environmental impacts												
GWP	kg CO_2 eq.	254.05	273.67	244.24	224.62	205.01	175.58	255.89	229.13	211.29	193.45	166.69
ODP	kg CFC-11 eq.	6.35E-06	6.25E-06	6.40E-06	6.49E-06	6.58E-06	6.72E-06	5.98E-06	6.16E-06	6.28E-06	6.41E-06	6.59E-06
EP	kg N eq.	0.20	0.21	0.19	0.19	0.18	0.16	0.19	0.18	0.18	0.17	0.16
AP	kg SO_2 eq.	1.22	1.25	1.21	1.18	1.15	1.10	1.19	1.16	1.13	1.11	1.07
POCP	kg O_3 eq.	20.96	21.11	20.88	20.73	20.58	20.35	20.30	20.19	20.12	20.05	19.94
Use of primary resources												
RPR_E	MJ, NCV	72.27	76.83	69.99	65.43	60.88	54.04	76.62	69.82	65.28	60.74	53.94
RPR_M	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
$NRPR_E$	MJ, NCV	1600.80	1637.11	1582.64	1546.33	1510.02	1455.55	1555.40	1513.19	1485.05	1456.91	1414.69
$NRPR_M$	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Use of secondary resources												
SM	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	MJ, NCV	115.37	128.18	108.96	96.14	83.32	64.09	119.14	101.27	89.36	77.44	59.57
RE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abiotic depletion potential												
ADPf	MJ, LHV	587.66	585.65	588.67	590.69	592.71	595.73	581.27	584.95	587.41	589.86	593.54
ADPe	kg Sb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumption of freshwater resources												
FW	m^3	2.47	2.52	2.45	2.40	2.35	2.28	2.50	2.43	2.38	2.33	2.27
Waste and output flows												
HWD	kg	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
NHWD	kg	209.33	232.58	197.70	174.45	151.19	116.31	219.89	186.91	164.93	142.94	109.97
HLRW	m^3	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07	3.41E-07
ILLRW	m^3	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07	2.95E-07
CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EE	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Additional inventory parameters for transparency												
CCE	kg CO_2 eq.	118.50	131.67	111.92	98.75	85.59	65.83	121.55	103.32	91.16	79.01	60.78

CONCRETE ONTARIO
Ready Mixed Concrete Association of Ontario

ASTM INTERNATIONAL
Helping our world work better

130 vs 254 = 48% below “baseline”.

> 10% below baseline requirement.

Proposed:


ENVIRONMENTAL
PRODUCT
DECLARATION

READY MIX CONCRETE PRODUCED BY LAFARGE

FACILITY: BURLINGTON Q01

ECO.Pact

MIX NAME: RMP25N511X

STRENGTH: 25 Mpa at 28 days Non-Air

Impact Indicator		per m3
Climate Change	kg CO2e	130.17
Ozone Depletion	kg CFC11e	4.18E-06
Acidification	kg SO2e	1.00
Eutrophication	kg NE	0.18
SFP (Smog)	kg O3e	28.18
Non-renew. energy	MJ, NCV	1535.24

1. GENERAL INFORMATION

Declared Product	Ready-mixed concrete produced by Lafarge
Date of Issue	1/18/2022
Period of Validity	5 Years
EPD Holder	Lafarge - Eastern Canada 6509 Airport Road Mississauga, ON, L4V 1S7
Program Operator	ASTM International 100 Barr Harbor Drive,West Conshohocken, PA 19428-2959, USA
LCA and EPD Developer	Athena Sustainable Materials Institute 280 Albert Street, Suite 404, Ottawa, ON K1P 5G8, Canada
Core PCR	ISO 21930:2017 Sustainability in Building Construction — Environmental Declaration of Building Products
Sub-category PCR	NSF International Product Category Rule (PCR) for Concrete (version 1 (February 22, 2019), verified by Thomas P. Gloria, Ph.D., Industrial Ecology Consultants
Independent LCA Reviewer and EPD Verifier	Independent verification of the declaration and data, according to ISO 21930:2017 and ISO 14025:2006 by: Thomas P. Gloria, PhD. (t.gloria@industrial-ecology.com) - Industrial Ecology Consultants ☐ internal ☒ external

The declared product meets the following product specifications:

- ACI 211: Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
- ACI 318: Building Code Requirements for Structural Concrete
- ASTM C94: Standard Specification for Ready-Mixed Concrete
- CSI MasterFormat Division 03-30-00: Cast-in-Place Concrete
- UNSPSC Code 30111500: Ready Mix

Disclaimer:

EPDs are comparable only if they comply with this document, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works.

Embodied Carbon Reduction Strategies

Circular Construction

- Reuse of existing building elements and structures on site
- Targeted use of salvaged materials

Helps minimize carbon and diverts materials away from landfill, while adding heritage elements and character.







Embodied Carbon Reduction Strategies

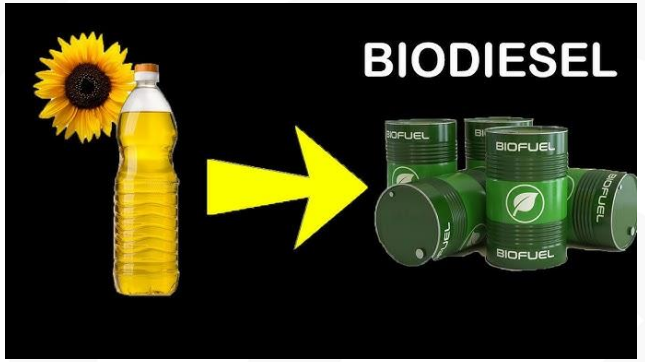
Low-carbon construction

- Bio-fuels
- Electric construction equipment

Construction companies are starting to offer lower-carbon fuels and equipment.

Diesel	Carbon Intensity (g CO2e/MJ)
Biodiesel Blend (B5)	89 - 92
Biodiesel Blend (B20)	72 - 83
Renewable Diesel	10 - 30





Toronto Green Standard



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Toronto Green Standard

New buildings must meet Tier 1 of the Toronto Green Standard (TGS) to obtain site plan approval.

- Applies to new rezoning and site plan applications
- TGS v4 (May 2022) is the first version to have embodied emissions / LCA requirements

On May 10, 2023, the embodied carbon credit was updated (background research and draft policy by Mantle Developments),

making **Toronto the first North American jurisdiction to require lower-carbon construction materials and implement embodied carbon caps (on city-owned buildings).**





Toronto Green Standard V4 –Material reuse

Only applies to new construction, not renovations.

Tier 2 items are voluntary.

Waste and the Circular Economy

Performance measures to divert waste going to landfill and use sustainable building materials

Building Material Reuse –

TIER 2 *(required for City projects) – but often not targeted*

SW 2.1 Building and Material Reuse

Option 1

Path 1) Maintain Existing Structural Elements: Walls, Floors, Roofs, and Envelope

Maintain the existing building structure (including floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural roofing materials) for at least 30 per cent of the project completed floor area.[5]

AND/OR

Path 2) Maintain Interior Non-structural Elements

Use existing interior non-structural elements (e.g. interior walls, doors, floor coverings and ceiling systems) for at least 30 per cent of the project completed floor area, including additions.[5]



Phase 1 Embodied Carbon Studies

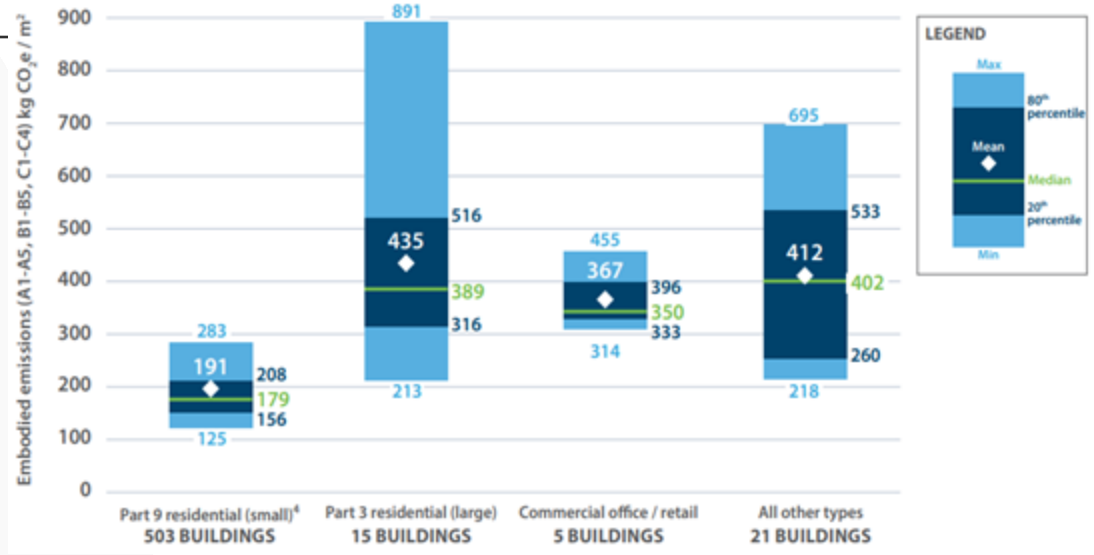
1st dataset for ON municipalities collecting and comparing whole-life building emissions

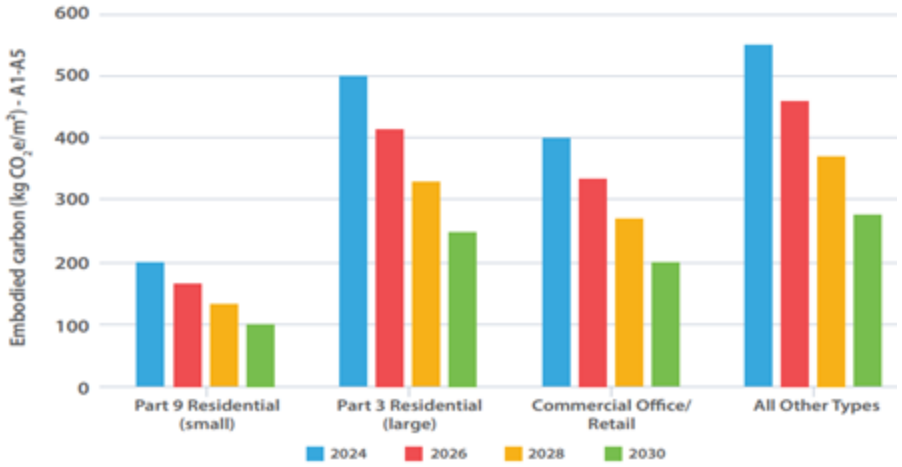
- Data from 41 projects (designers, owners, builders)
- Almost no project tried to reduce EC, but data showed that industry can and is calculating EC
- Feedback: Managing embodied emissions is important and EC policy isn't too burdensome

To manage and reduce carbon intensity in buildings you need to measure it

- Quantify benchmarks, propose carbon intensity caps based on benchmarks/median, reduce over time (w/ dates to signal to industry)
- Benchmark study results can and were used to inform policies to reduce EC (e.g., TGS V4)

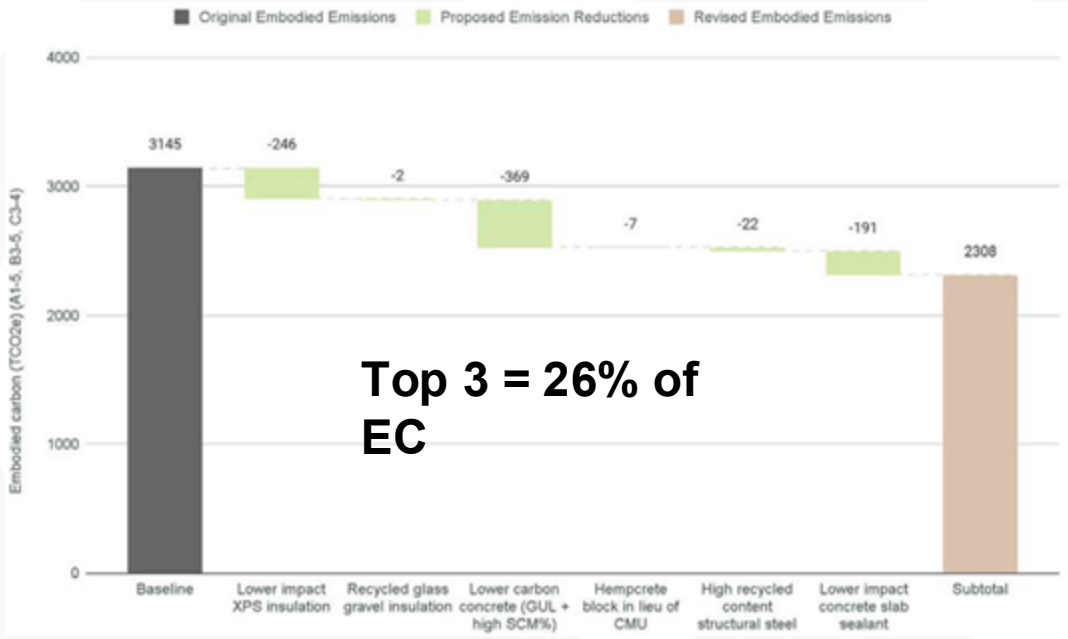
Access Policy Primer here.

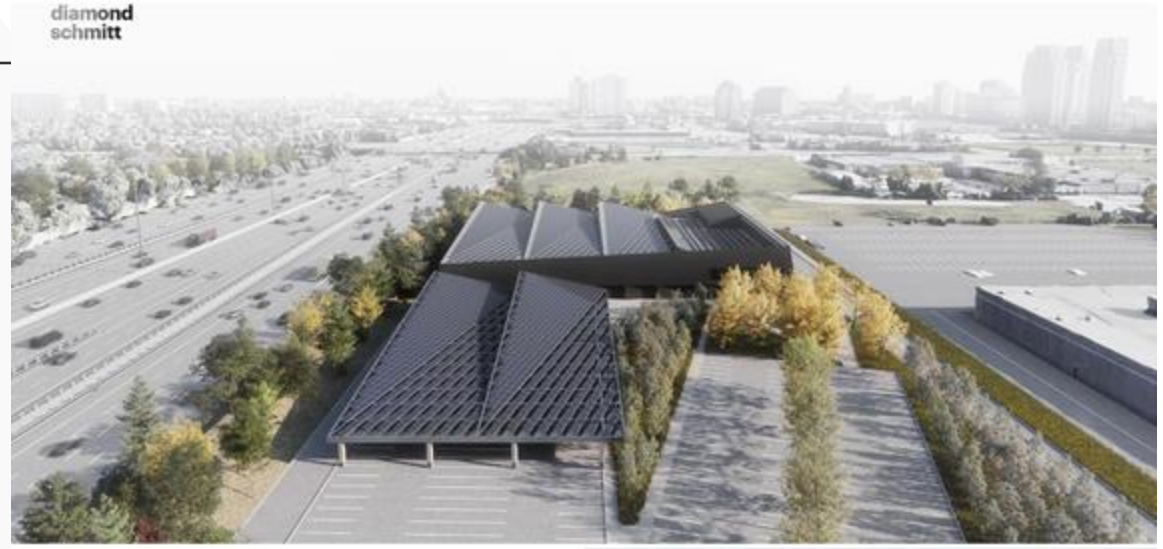




City Project Analysis - Demonstrating Action

Two City projects aiming for net zero energy and emissions were analyzed to identify opportunities for further reduction (both projects in later stages of design)





Majority of EC from certain materials (concrete, steel, insulation)

When building materials with low EC are prioritized a **30% reduction in embodied emissions is possible**

Material solutions can have a negligible impact on budget and schedule

Design & Material Strategies to Reduce EC

DESIGN STRATEGY	DETAILS
1 **Promote reuse and rehabilitation of existing buildings instead of demolition and new builds**	Most buildings that get demolished have perfectly safe and strong structure and foundations, which represent substantial embodied carbon investments, and carbon that has already been released into the atmosphere. Seek ways to extend the life of these structures by promoting rehabilitation and reuse of existing structure, pared with new high efficiency envelopes and energy systems.
2 **Promote disassembly, salvage, and reuse of materials**	When a building must be taken down, do it thoughtfully through disassembly. Materials should be salvaged for reuse where possible, and when salvage isn't possible, recycled.
3 **Minimize or remove high embodied carbon underground construction**	Underground construction typically has a larger embodied emissions footprint than above ground construction due to the use of high carbon retaining walls, concrete, XPS insulation, and shoring works typically required. Look for ways to minimize the impact of this, including by limiting underground construction to only where needed, and including it in gross area calculations.
4 **Eliminate or reduce minimum parking requirements**	Instead of dictating a minimum amount of parking, let the developers and owners decide how much parking makes sense for a given project. Consider setting a maximum on the amount of allowable parking to limit the embodied emissions associated with this additional construction.
5 **Ask for facility-specific EPDs from suppliers**	Although this doesn't directly reduce emissions, it will indirectly over time. Once manufacturers start reporting publicly on their product's embodied emissions they will likely start taking actions to reduce it as market pressure for low carbon materials grows.
6 **Eliminate or reduce transfer structures**	When structural bay sizes change between building storeys as is often the case when a building transitions from residential storeys to parking storeys, a transfer structure is often required to shift the loads from one set of columns and walls to a separate set below in a different layout. These structures are often extremely thick and can be a major source of embodied emissions. Transfer structures should be minimized through efficient and thoughtful design.
7 **Use performance-based design requirements, and ask for low carbon solutions**	Instead of prescribing specific approaches to be taken – which can often stifle innovation – set the desired performance while noting that low carbon solutions are preferred. Let designers and suppliers innovate and find low carbon and cost efficient ways to deliver the required level of performance.
8 **Review how coverage regulations might incentivize sub-surface floor area**	An unintended driver of underground construction is how coverage is calculated and regulated through means like floor area ratio (FAR) or floor space index (FSI). When these coverage calculations fail to include sub-grade floors area, they incentivize below grade construction, which is embodied emissions intensive (see point 3 above).

MATERIAL	STRATEGY
CONCRETE	1. Use Portland-limestone cement (PLC) – also called general use limestone (GUL) – instead of regular Portland cement. PLC is 10% lower embodied emissions, widely available, and cost and performance neutral. It has been approved for use by Canadian regulators and safety associations as a one-for-one substitute with Portland cement without needing to revise the design. 2. Allow structural elements that do not require early strength more time to achieve their rated performance, beyond the standard 28-day period. Candidate structural elements for 60-, 90-, or 120-day strength include most footings, sheer walls, columns, and slabs-on-grade. Longer curing times mean less cement and therefore lower embodied emissions. Speak about this with your structural engineer and concrete supplier. 3. Use a higher percentage of supplemental cementitious materials (SCMs). Most concrete mixes use nominal SCMs (5-10%), however mixes can use far more, up to 70% SCMs in some applications. Each 10% increase in SCMs leads to an approximate 7% reduction in concrete's embodied emissions.
STEEL	Order steel that is made from low-carbon mills utilizing high levels of recycled scrap. The carbon impact of steel manufacturing can vary widely depending on how the steel is made, in either typically higher emitting blast oxygen furnaces, or potentially lower emitting electric arc furnaces. The details within those categories matter too, since blast oxygen furnaces can be fueled by coal (resulting in very high embodied emissions steel) or hydrogen produced from renewable energy (resulting in very low embodied emissions steel). Similarly, whether an electric arc furnace is powered by fossil vs renewable electricity makes a huge difference to the ultimate embodied emissions of the steel. Facility-specific EPDs from your steel manufacturer candidates is the best source of information to request and compare to find the lowest carbon option. Also consider the A4-transportation impacts of shipping your steel to the construction site. This can be significant if shipping steel from far away jurisdictions, however may still be a net carbon saving strategy if the steel from a distant jurisdiction is ultra-low carbon.
WOOD	As with all other materials, how wood is grown and harvested matters to its final embodied emissions footprint. Wood has a few added complexities since it is a renewable resource and part of a larger forest carbon cycle. The best approach to ensure your wood is low embodied emissions is to ask for wood that is certified to one of the recognized standards for sustainable managed forests and harvested wood such as the Forest Stewardship Council (FSC) or Program for the Endorsement of Forest Certification (PEFC). This will ensure your wood was not from old growth forests and that responsible forest practices including replanting was used.
INSULATION	Many types of insulation exist, and their embodied emissions can vary widely. Extruded Polystyrene (XPS) insulation is typically the highest carbon option and should be avoided where possible. There are some bio-based insulations that are much lower carbon, including straw bale and wood fiber board. Bio-based insulation can even be net-negative if biogenic carbon is considered. See Figure 11 of the EMBARC report for a list of insulations and their relative embodied emissions.

Design & Material Strategies to Reduce EC

TGS updated to include North America's 1st whole building EC policy

- City-owned construction must calculate & report on embodied emissions w/ carbon caps (voluntary for Tier 2 & 3 projects, no carbon caps)
- A good start, but more is needed to accelerate efforts toward mandatory LCAs and carbon caps for all new development

	Original Text	Revised Text (May 10, 2023)
Mandatory **(City-owned)** ***Voluntary*** **Tier 2 Private Mid-to-High Rise & Non- Res)**	**Perform upfront LCA** (stage A1-A5) for structure and envelope. **Identify low-carbon sustainable material alternatives.**	Original text + **report must demonstrate an emissions intensity = to or less than** **350 kg CO_2e/m^2 (Residential/Commercial)** **400 kg CO_2e/m^2 (Other building types)**
Voluntary Tier 3 "Enhanced pathway"	Perform full life cycle assessment on structure and envelope for stages A1-A5, B1-B5, C1-C4, and achieve a **20% reduction against a baseline building.**	• Perform upfront carbon LCA (stage A1-A5) for structure and envelope. • Identify and specify low-carbon sustainable material alternatives to the proposed structure and/or envelope for use in the building. **Report must demonstrate emissions intensity = to or less than** **250 kgCO_2e/m^2 (Residential)** **275 kg CO_2e/m^2 (Other building types)**

Phase 2 - EC Mgmt. Report, Toolkit & Training

Key Goal = develop an “EC Management Toolkit” to help ON municipalities identify major drivers of EC and optimize for low carbon buildings through actionable changes, including possible updates to standards and guidelines

Three main topics of analysis:

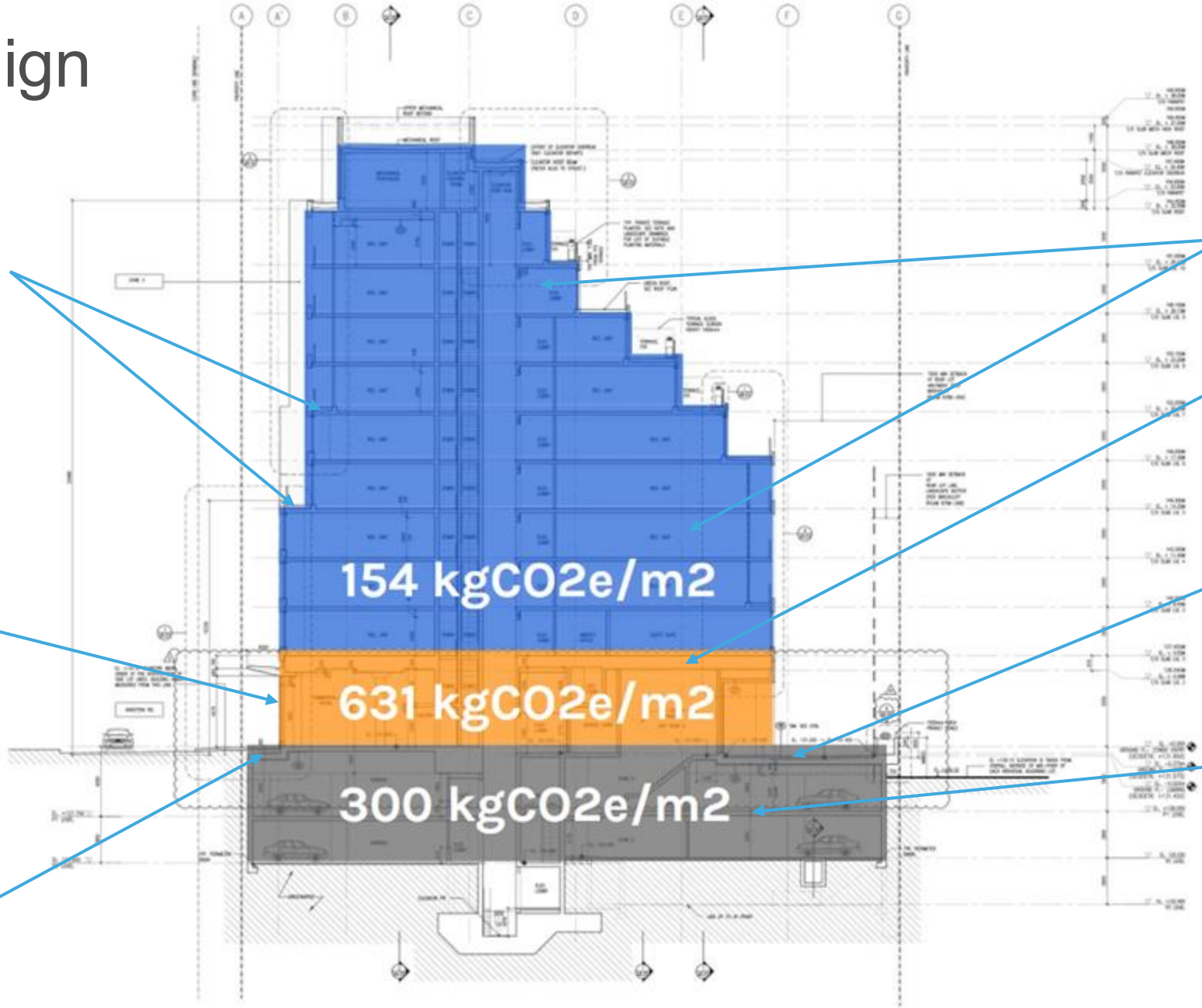
1. **Urban Design Guidelines**
2. **Procurement of low carbon materials**
3. **Circularity**

- Workshops w/ City staff and industry experts to inform research questions and peer review findings

Access Toolkit here



Urban Design



Front step-backs resulting in transfer beams

Floor-to-ceiling curtain wall glazing across entire front facade.

Transfer structure at parking due to accommodate front set-back

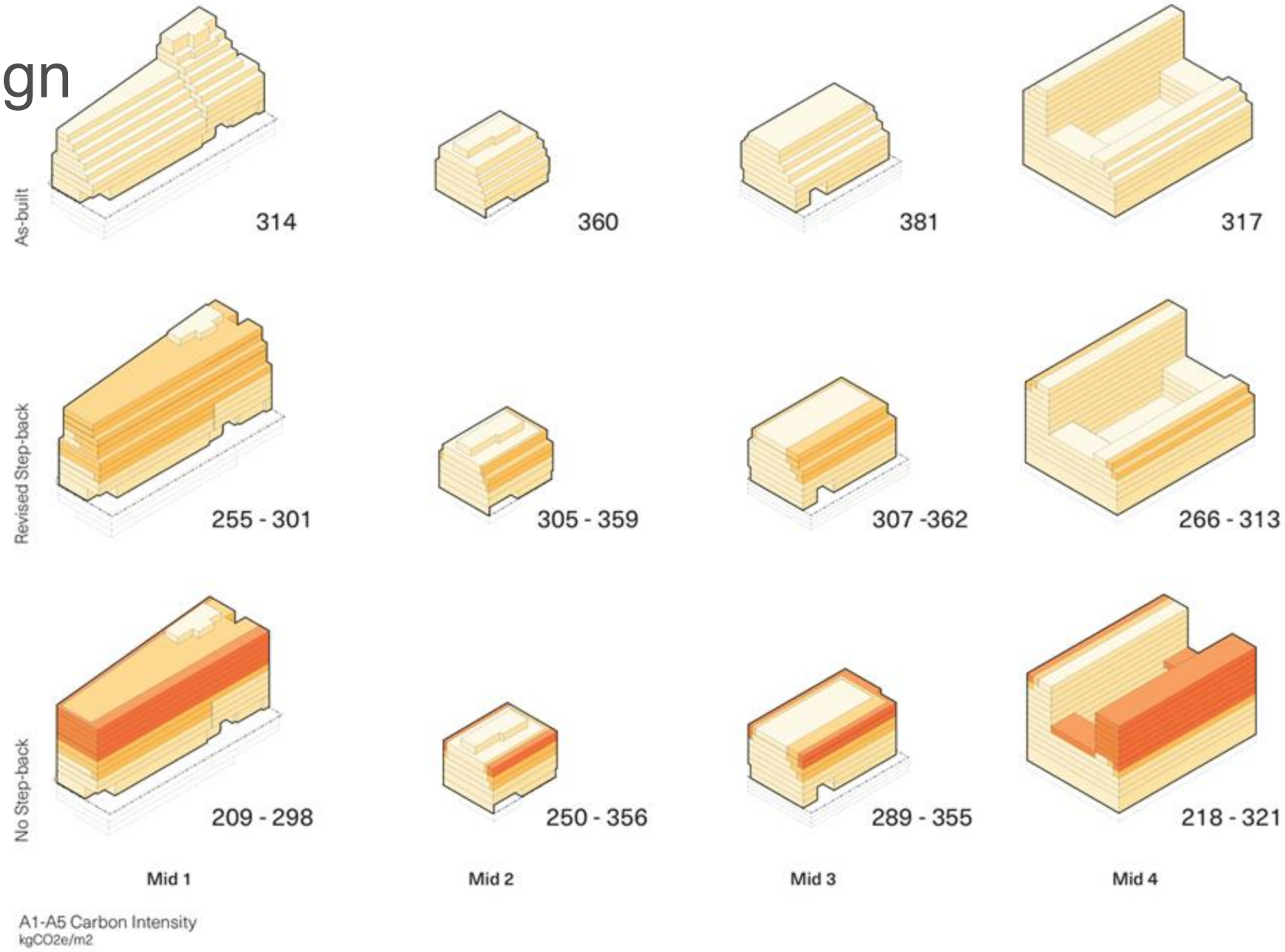
Rear transition plane resulting in units either too deep or too shallow

Transfer slab mediating structure of residential and parking levels.

Type G Loading results in sizeable concrete slab and transfer structures.

Minimum parking requirements result in large underground structure

Urban Design



Circularity

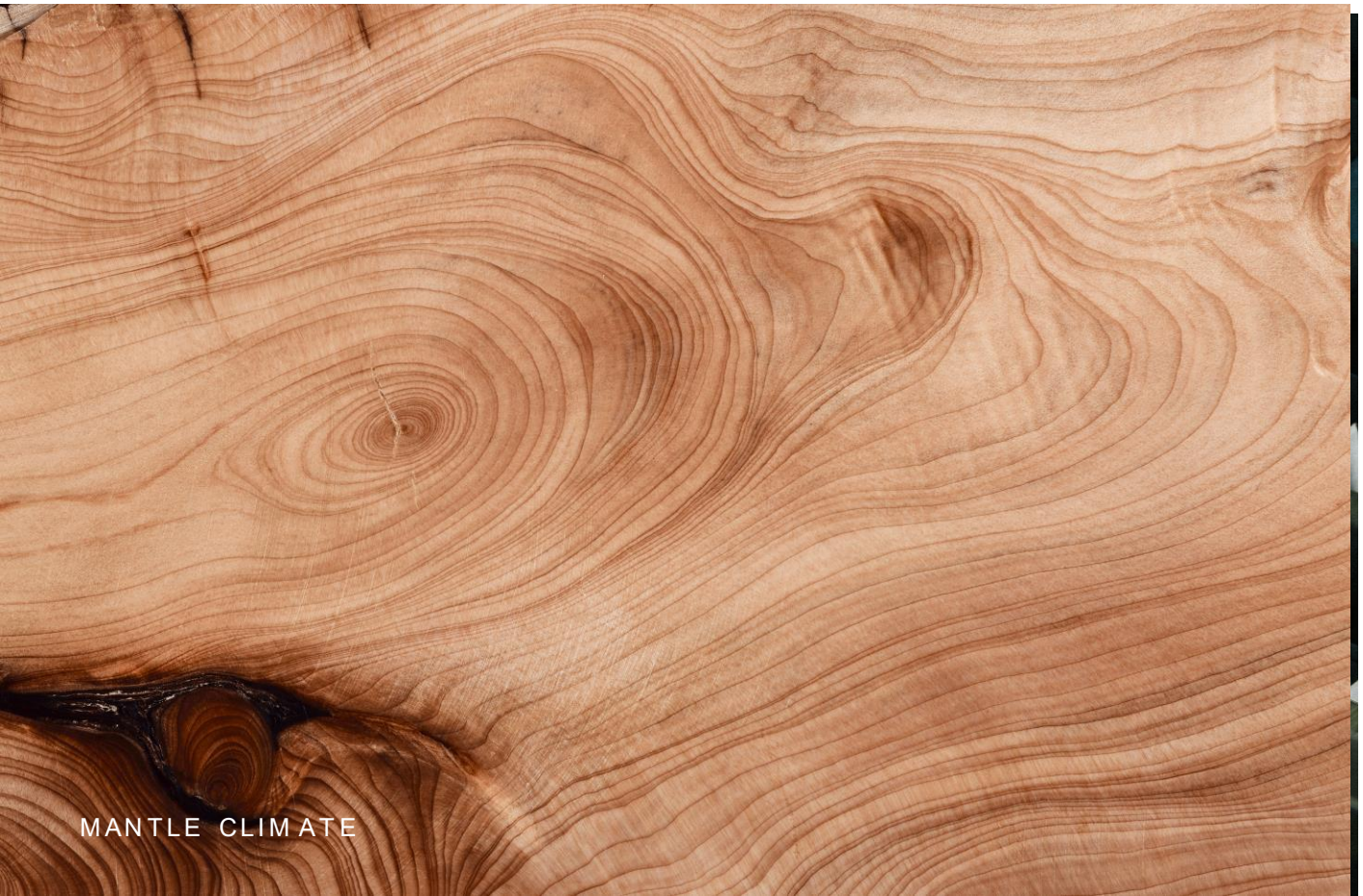


MANTLE CLIMATE

- Adaptive reuse and material retention is often superior to recycling or low-carbon substitutions.
- Waste audits are a data input for the embodied carbon strategy, not just compliance exercises
- Encouraging deconstruction over demolition by planning for salvage and reuse reduces both waste and demand for new materials.
- Normalizing reuse planning at schematic design creates demand for salvage markets and circular supply chains.

Procurement of low-carbon materials

Procurement is where carbon targets become enforceable.



- Embed embodied carbon limits and disclosure requirements in procurement policies to ensure reductions are realized in delivery, not just design.
- Align with the federal Standard on Embodied Carbon in Construction and consider adding additional materials and more stringent requirements.

Procurement of low-carbon materials

Procurement is where carbon targets become enforceable.



- Prioritize high-impact materials, particularly ready-mix concrete, steel, asphalt.
- Mandate material quantity and Scope 3 emissions reporting to establish a consistent baseline for accountability and performance tracking.

MANTLE
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Federal Standard on Embodied Carbon in Construction



Greening Government Strategy

Government of Canada's plan to transition to net-zero emissions and climate-resilient operations by 2050.

> *"Sets minimum requirements for the procurement of design and construction services to disclose and reduce the embodied carbon of major construction projects.*
>
> *Major construction projects typically include the renovation or new construction of buildings or engineering assets."*

Policy on Green Procurement

- Appendix A: Standard on Embodied Carbon in Construction
  "The objective of this standard is to establish requirements to disclose and reduce the embodied carbon footprint of construction."
- Appendix B: GHG Disclosure Standard
  "The objective of this standard is to induce major suppliers to disclose their greenhouse gas emissions and set reduction targets."

Greening Government Strategy

Launched in 2017 and updated in 2025.

Provides a roadmap for the Government of Canada to achieve net-zero emissions by 2050.

Applies to all Government of Canada operations, owned and leased property, fleets, procurement, and services.

Applies to all crown corporations(Canada Post, VIA Rail, CBC, Bank of Canada, LCBO, etc.)



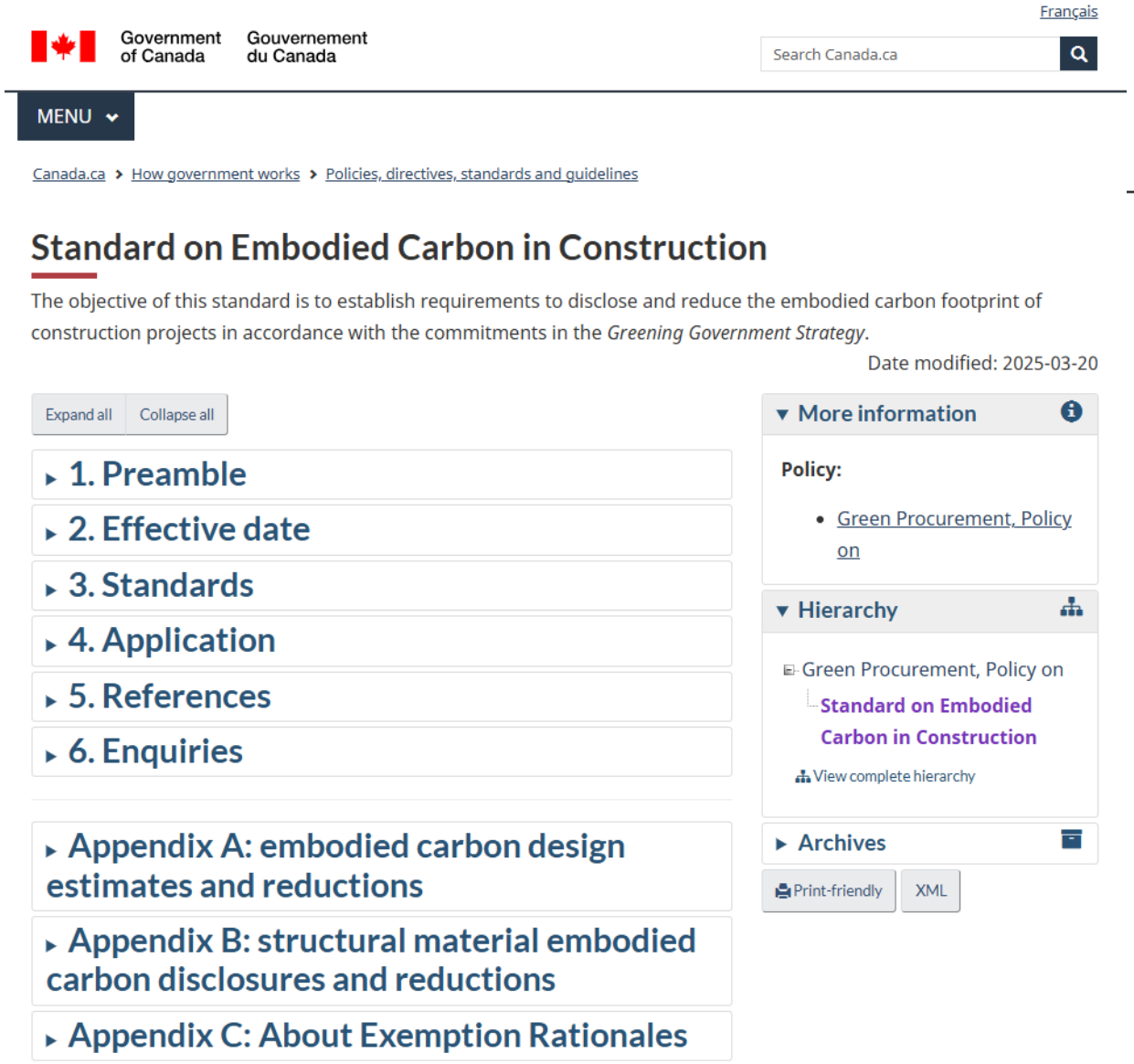
Real Property
Buy clean: low-carbon construction

▼ Buy clean: low-carbon construction

The government will implement Buy Clean in its procurement by reducing the environmental impact of construction materials and design by:

- disclosing the amount of embodied carbon [16] in the construction materials of major construction projects, based on material carbon intensity or a life cycle assessment
- conducting whole-building (or asset) life cycle assessments by 2025 at the latest for major buildings and infrastructure projects
- reducing the embodied carbon of major construction projects by 30%, starting in 2025, using recycled and lower-carbon materials, material efficiency and performance-based design

Projects will also minimize the use of harmful materials in construction and renovation, including using low volatile organic compound (VOC) materials in building interiors.



- Effective December 31, 2022

Subsections of 7.1-7.3 of the Policy on Green Procurement

Requirements

- Disclose the carbon footprint of ready-mix concrete and structural steel on all major buildings and engineering assets.
  - Must submit a project disclosure template and Environmental Product Declarations (EPD) or third-party Life Cycle Assessment (LCA) report.
- Reduce the embodied carbon footprint of these materials by at least 10%

Thank You!
Questions / Discussion



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