City of Newton Embodied Carbon Reporting Template

Please submit this completed template with the building permit application.

Template last updated on July 31, 2025.

City of Newton Chapter 30: Zoning Ordinance, Section 5.13, addresses sustainable development. Section 5.13.4.D requires project teams to "provide an analysis that estimates the embodied carbon of a project."

The type of analysis is determined based on gross square footage of the green building project:

1. For projects under 50,000 sf, only structural materials must be evaluated using Life Cycle Analysis tools or Environmental Product Declarations.
2. For projects over 50,000 sf, the design team must use a Whole Building Life-Cycle Assessment tool to estimate the embodied carbon of both structural and enclosure materials, compare the CO2e per square foot of the project to an average CO2e intensity (kg CO2e/unit floor area) for projects of comparable use, and explain why the building materials and systems were chosen. The Life-Cycle Assessment requirement may be met by using one of the following methods:
    a. LEED Credit for Whole Building Life-Cycle Assessment.
    b. Green Building Initiative's (GBI) Green Globes for New Construction (NC) Credit for Whole Building Life-Cycle Assessment.
    c. International Living Future Institute's (ILFI) Zero Carbon Standard.
    d. Another method approved by the Planning Director.
3. Projects where at least 50% of the floor area comprises re-use of a pre-existing structure are not subject to these provisions.

Project Name and Address:

Submitted By:

Date of Submission:

Project Information

Embodied carbon analysis procedure (method and tool(s)) used:

Current Project Design Phase (% Complete SD/DD/CD/CA)	
Total Project Square Feet	
% of total floor area of new construction	
% of total floor area of pre-existing structure (or, optionally, provide a diagram identifying the new and old portions of the project)	

Embodied Carbon Estimation Results

EMBODIED CARBON FOR TOTAL BUILDING	**in kg CO2e.**
Global Warming Potential (GWP) (kg CO2e) of **Structural Components Only (for all projects):**	
Global Warming Potential (GWP) (kg CO2e) of **Enclosure Components Only (for projects over 50,000 sf):**	

EMBODIED CARBON (EMISSIONS) PER UNIT OF FLOOR AREA	**Emissions Intensity**
	in kg CO2e/SF
Global Warming Potential (GWP) (kg CO2e) per Square Foot of Total Project: *GWP per square foot is used by LEED	
	in kg CO2e/unit area
Global Warming Potential (GWP) (kg CO2e) per Square Meter of Total Project: *GWP per square meter, rather than square foot, is used by AIA 2030 and ILFI	
For projects over 50,000 sf only: Global Warming Potential (average CO2e intensity (kg CO2e/unit floor area)) for projects of comparable use (specify floor area units and data source):	

Carbon Sequestration/Biogenic Carbon data		**Answer = X**
	Included in LCA	
	Not included in LCA	

For projects over 50,000 square feet:

Provide an explanation of why the building materials and systems were chosen, including a description of any reused or reclaimed materials used. *The checklists that follow are optional.*

Primary Floor Framing System (Select All that Apply):

☐ Wood Joists and Sheathing

☐ Wood: Mass Timber

☐ Wood: Other

☐ Steel: Frame and Concrete on Steel Deck

☐ Steel: Frame and Bare Steel Deck

☐ Steel: Other

☐ Concrete: Post-Tensioned Framing

☐ Concrete: Conventionally Reinforced Framing

☐ Concrete: Precast

☐ Concrete: Other

☐ Other: _____

Primary Vertical Framing System (Select All that Apply):

☐ Wood: Light-Frame

☐ Wood: Mass Timber

☐ Wood: Other

☐ Steel: Columns

☐ Steel: Cold-Formed

☐ Steel: Other

☐ Masonry

☐ Concrete: Cast-in-Place

☐ Concrete: Precast

☐ Concrete: Other

☐ Other: _____

Primary Lateral System (Select All that Apply):

☐ Wood: Shear Panels

☐ Wood: Other

☐ Steel: Braced Frames

☐ Steel: Moment Frames

☐ Steel: Cold-Formed Shear Panels

☐ Steel: Other

☐ Masonry: Shear Walls

☐ Concrete: Shear Walls

☐ Concrete: Moment Frames

☐ Concrete: Other

☐ Other: _____

Primary Foundation Type (Select All that Apply):

☐ Shallow Foundations (e.g. spread footings)

☐ Deep Foundations (e.g. piles) < 50 feet

☐ Deep Foundations (e.g. piles) > 50 feet

<u>For 50,000 square feet and above projects only:</u>

Primary Type(s) of Exterior Wall Insulation (Select All that Apply):

☐ Fiberglass Batt

☐ EPS

☐ XPS

☐ Mineral Wood

☐ Cellulose

☐ Spray Foam

☐ Other: _____

Primary Type of Roof Insulation (Select All that Apply):

☐ Cellulose

☐ Fiberglass Batt

☐ Polyisocyanurate

☐ EPS

☐ XPS

☐ Other: _____

Primary Type(s) of Wall Cladding (Select All that Apply)

☐ Wood Siding

☐ Cementitious Siding

☐ Metal Panel

☐ Stone Veneer

☐ Brick Veneer

☐ Precast Concrete

☐ EIFS

☐ Terracotta

☐ Curtainwall

☐ Other: _____