

**Guidelines for Implementation of State Finance Law § 136-d
Contracts involving low embodied carbon concrete –
“NYS Buy Clean Concrete guidelines”**

I. Background

In December 2021, Governor Hochul signed into law Chapter 724 of the Laws of 2021, relating to provisions in state procurement contracts involving the use of low embodied carbon concrete. The law adds a new section 136-d (“SFL § 136-d”) to the State Finance Law which requires the Office of General Services (“OGS”) to establish guidelines requiring the procurement of low embodied carbon concrete on projects deemed appropriate by such office. The law is intended to accelerate the use and innovation of low carbon concrete in state projects.

Pursuant to SFL § 136-d, OGS convened a stakeholder advisory group consisting of the following professionals and representatives from several State agencies, industries, and academia: licensed professional engineers, licensed registered architects, the construction industry, an accredited school of civil engineering, New York State Energy Research and Development Authority (“NYSERDA”), Department of Transportation (“DOT”), Department of State (“DOS”), and the Department of Environmental Conservation (“DEC”). OGS also consulted with the federal government, and other states that are setting standards for low embodied carbon concrete procurement.

These guidelines establish the minimum requirements for State agencies when developing and executing contracts involving low embodied carbon concrete, and the applicability of the guidelines to State projects that involve the use of concrete. It includes guidance on certification and reporting. The guidance has several phases to allow for State agencies, contractors, and suppliers to become familiar with the new requirements, prior to them becoming mandatory. The objective is to signal to the market that the State intends to procure low embodied carbon materials going forward, in particular, concrete, and that environmental product declarations (“EPDs”) will be considered the primary mechanism by which compliance will be met.

II. Legal Authority

SFL § 136-d became effective on June 20, 2022 and applies to State procurement contracts involving the use of low embodied carbon concrete, on State agency “projects deemed appropriate by OGS”, as defined in these guidelines.

No later than January 1, 2024, State agency contracts shall include the minimum standards for low embodied carbon concrete in all relevant authorized contracts.

III. Scope

State Finance Law § 136-d applies to any State agency contract equal to or greater than \$1 million and includes use of at least 50 cubic yards of concrete for building projects. For transport projects, this applies to DOT contracts equal to or greater than \$3 million that include a concrete pay item with an estimated quantity of at least 200 cubic yards.

IV. Definitions:

The term “bidder” means an entity that responds to an invitation for bid, request for proposal, request for application, application for a grant, or other similar solicitation for a contract or grant with a State agency.

The term “contract” means any contract, lease, grant, or equivalent legal instrument.
The term “contractor” means an entity and/or the entity’s subcontractor that has been awarded a contract or grant by a State agency.

The term “State agency” has the same meaning as such term is defined in State Finance Law § 160.

The term “vendor” may mean either a bidder or a contractor awarded or being considered for award of a State contract.

The term “embodied carbon” refers to the emissions that result from the mining, harvesting, processing, manufacturing, transportation to site, installation, and use of the products and materials that are used in construction, as well as end-of-life emissions associated with the disposal of those materials. It is also referred to as the “carbon footprint” of a project.

The term “environmental product declaration” or “EPD” refers to a report that quantifies environmental information over the life cycle of a product to enable comparisons of environmental impact between products fulfilling the same function. EPDs are conducted in accordance with a Product Category Rule for the specific product being evaluated. (International Organization for Standardization 14025 as a Type III declaration). The key metric in an EPD is the Global Warming Potential (GWP) of a product or material, which is measured in kilograms of CO₂ equivalent (kgCO₂e).

EPDs under this guidance should be valid and be provided at the highest resolution available. Acceptable EPDs are Product-specific, Facility or Plant-specific, or Supply Chain-specific Type III (third-party reviewed) EPDs, in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*. The term “low embodied carbon concrete” refers to concrete which has emitted lower emissions from the processes of extraction, transport, and production (A1 – A3). For the purposes of these guidelines, the definition of low embodied carbon concrete does not include other life cycle stages mentioned above, such as transportation to the site, installation, or end-of-life emission associated with disposal.

The term “emergency construction” refers to Public Buildings Law Section 9, which defines it as damage to or a malfunction in buildings or property of the State of New York caused by an unanticipated, sudden, and unexpected occurrence which involves a pressing necessity for immediate repair, reconstruction, or maintenance in order to permit the safe continuation of a necessary public use or function, or to protect the property of the State of New York, or the life, health or safety of any person.

The term “high strength concrete” refers to concrete that has a high compressive strength. Under this guidance, concrete with a specified compressive strength of 8000 psi (55 MPa) or greater is considered high strength concrete, as per the ACI PCR-353.2-11)

The term “quick cure” concrete refers to concrete that hardens faster than an average mix, and is used on projects that require a fast setting time in order to allow critical activity to resume, or in order for a critical project to be completed quickly.

V. Guidelines

This section is intended to provide guidance for State agencies on project applicability for procurement of low embodied carbon concrete, and the minimum standards with which contractors and subcontractors must comply upon completion of a project, including reports to be filed with the contracting agency.

A. During Contract Development

If a project will require concrete, preference for lower embodied carbon concrete should be stated in the contract documents. Any relevant specifications should include the required performance outcomes associated with the concrete application, along with documentation evidencing compliance with the minimum standards outlined below.

Low Embodied Carbon Concrete Minimum Standards

1. Phase 1: Voluntary concrete GWP limits and EPDs

Between Jan 1, 2024, and Dec 31, 2024, contracts for relevant projects will require contractors to submit the EPDs of concrete mixes, where available, and use the EPDs to compare against New York State’s voluntary concrete GWP limits.

See below for New York State’s GWP limits for concrete mixes by compressive strength.

Maximum Global Warming Potential (GWP) Limits for Low Embodied Carbon Concrete (relevant for Phase 1 and Phase 2)

Specified compressive strength (f'c in PSI)	Maximum Global Warming Potential Limits for Low Embodied Carbon Concrete (kilograms of carbon dioxide equivalent per cubic yard - CO _{2e} kg/y ³)
0 - 2500	275
2501 - 3000	302
3001 - 4000	360
4001 - 5000	434
5001 - 6000	458
6001 - 8000	541
These limits reflect 150% of the Eastern Region average GWP figures from the National Ready Mix Concrete Associations' "A Cradle-to-Gate Life Cycle Assessment of Ready-Mixed Concrete Manufactured by NRMCA Members – Version 3.2 "(Jul 2022), page 62-66	

2. Phase 2: Mandatory concrete GWP limits and EPDs

Starting Jan 1, 2025, New York State’s voluntary concrete GWP limits above, will become mandatory limits.

Between Jan 1, 2025, and Dec 31, 2026, contracts for relevant projects will require concrete mixes procured to certify a GWP lower than the New York State’s GWP limit in the relevant compressive strength category, in the form of an EPD, and additional certifications as required by each agency as outlined below.

3. Phase 3: Revised mandatory concrete GWP limits and EPDs

Starting Jan 1, 2027, or within 6 months of this date, pending availability of sufficient data for analysis, New York State will revise (lower) the mandatory concrete GWP limits in the table shown above.

4. Certification requirements

Starting January 1, 2025, contractors and subcontractors doing work involving low embodied carbon concrete shall certify, upon completion of the milestone or project, that all procured low embodied carbon concrete utilized on the project meets the minimum standards in these guidelines, by providing: 1) an acceptable EPD (see Section IV. Definitions), and 2) a document stating the GWP of the concrete mix used (indicating comparison to New York State’s concrete GWP limit), to demonstrate that the GWP of the concrete mix is lower than New York State’s GWP limit for concrete.

State agencies should review and approve certification documentation submitted by the contractor to confirm that the minimum certification requirements have been met. Certification requirements should be maintained for the duration of the contract.

The certification required by these guidelines is in addition to the reporting requirements set forth in [Executive Order #22](#), per the Executive Order 22: [Embodied Carbon Guidance](#).

The contract should also include language giving the State agency (i) the right to suspend work under the contract if information is discovered that calls into question contractor certifications or competence and (ii) the right to terminate the contract if the State agency makes a determination that the contractor is not certified or has not maintained certifications as required.

VI. Exemption Process

Starting in Phase 2, the mandatory phase of collecting EPDs and procuring low GWP concrete mixes, prime contractors may request an exemption from these guidelines for certain concrete applications, and agencies may choose to grant the exemption.

Exemptions in these guidelines are intended to allow critical, time- and strength-sensitive projects to be completed. They are not intended as a means to avoid taking steps to reduce concrete-related carbon emissions on a project.

In instances where the agency chooses to grant an exemption, contractors and suppliers should be directed to continue to reduce the GWP of the concrete mixes as much as possible, documenting the steps taken.

Agencies may choose to provide exemptions from these guidelines for (i) high-strength concrete, (ii) quick cure concrete; and (iii) emergency construction, as defined in Section IV. Definitions above.

Any exemptions should be documented clearly outlining:

- (i) the concrete mix(es) being given the exemption, including compressive strength;
- (ii) the reason for the exemption:
 - a. high-strength concrete
 - b. quick cure concrete
 - c. emergency construction
- (iii) the steps, if any, that will be taken to reduce concrete GWP.

Prior to close of contract, the contractor should file a document with the agency that sets forth actions taken to reduce GHG emissions from concrete on the project.

All documentation must be retained and kept on file by the issuing agency.

VII. Waiver Process

If, during the progress of an eligible state contract for low embodied carbon concrete, a concrete mix cannot be found that meets the requirements of the contract and these guidelines, the prime contractor may request a waiver from the agency. The head of the State agency may determine that a waiver is appropriate and issue a waiver from these guidelines.

In instances where the agency chooses to grant a waiver, contractors and suppliers should be directed to continue to reduce the GWP of the concrete mixes as much as possible.

When requesting a waiver, the contractor must document the following for the State agency's consideration:

- (i) the concrete mix(es) being given the exemption, including compressive strength;
- (ii) provide documentation of mix composition if no EPD is available;
- (iii) the reason for the exemption, for example, the only available suppliers in the local area currently not being able to produce EPDs yet, or unavailability of materials to produce low embodied carbon mixes;
- (iv) the methods that will be used to reduce concrete GWP on the project. If no methods were taken, contractor should set forth the reason(s);
- (v) any other factors affecting the decision to grant a waiver.

Prior to close of contract, the contractor should file a document with the agency that records actions taken to reduce GHG emissions from concrete on the project.

If a State agency head believes a waiver is warranted, the documented waiver must be signed by the head of the State agency, or a person designated to act in the place of the head of the State agency. The documented waiver must be included in the record for the relevant contract or project.

VIII. Sample Contract Language

The following sample contract language is being provided for agencies to include in contracting and solicitation documents. Agencies may also develop their own language.

Use of low embodied carbon concrete

Contractors and subcontractors must comply with all applicable New York State laws and policies regarding use and documentation/certification of low embodied carbon concrete. This includes, but is not limited to: New York State Executive Order 22 (2022), and the Buy Clean Concrete guidelines issued in 2023 pursuant to [State Finance Law § 136-d](#).

Environmental Product Declarations

Starting Jan. 1, 2025, Environmental Product Declarations must be submitted to the contract manager for all proposed concrete mixes.