**DATE:**
FEBRUARY 25, 2026

# DIVISION 04 INSERT SPECIFICATION LANGUAGE

## CARBONBUILT CONCRETE MASONRY UNITS and SEGMENTAL RETAINING WALL MADE WITH REVERSA ® BINDER

PART 1 – GENERAL

**Summary**

A) Work includes loadbearing and non-loadbearing concrete masonry units (CMU), segmental retaining wall (SRW), accessories, and installation.
B) Section includes low-carbon CMU and SRW manufactured using CarbonBuilt Reversa® binder technology.
C) Work under this Section may support the project's sustainability goals, including LEED v5 certification, by reducing embodied carbon, improving material transparency.

1.1 **References**

A) ASTM C90 – Standard Specification for Loadbearing Concrete Masonry Units.
B) ASTM C129 – Standard Specification for Non-Loadbearing Concrete Masonry Units.
C) ASTM C1372 – Standard Specification for Segmental Retaining Wall Units.
D) ISO 14040 and ISO 14044 – Life-Cycle Assessment (LCA) Principles and Framework.
E) LEED v5

**1.2 Administrative Requirements**

A) Coordination: Coordinate unit sizes, strengths, and finishes with structural and architectural requirements.
B) Coordinate LEED documentation with the sustainability consultant or Owner's Representative to ensure proper inclusion in the project's sustainability assessment and LEED submittal package.

**1.3. Submittals**

A) Informational Submittals:
- Certificates of compliance confirming CMU and SRW meet applicable ASTM standards.
- Test reports validating compliance.
- Product Data Sheets for CMU and SRW.
- Environmental Product Declarations (EPDs) in accordance with ISO 14025 (Type III).

B) Sustainability Submittals:
- Embodied Carbon Data: Provide cradle-to-gate Global Warming Potential (GWP) values in kg $CO_2e$ per declared unit as defined in the applicable EPD, verified by a third-party EPD.

- LEED Documentation: Provide manufacturer documentation required to support LEED v5 MRc2 and MRc4 submittals, including EPDs and product transparency documentation.
- Verification Statements: Provide documentation confirming that embodied carbon reductions are verified under an ISO or ETV protocol (when available).

C) Sustainable Attributes (informational): Cradle-to-gate Global Warming Potential (GWP), A1–A3, as documented in the applicable third-party verified Type III EPD (Declared Unit: 1 m³ of finished CMU). As of January 2026 (ASTM Program Operator; WAP Sustainability LCA), values include:
- Normal Weight CMU (1 m³): 127 kg $CO_2$e
- Lightweight CMU (1 m³):  kg $CO_2$e
- Segmental Retaining Wall (1 m³): 120 kg $CO_2$e

**1.4. Quality Assurance**

A) Manufacturer Qualifications: Produce CMU meeting ASTM C90, ASTM C129, or ASTM C1372, as applicable.

B) Performance: Provide CMU and SRW units that meet specified structural and durability requirements and are suitable for the intended application.

C) Sustainability Performance: Provide products incorporating Portland cement replacement via CarbonBuilt's Reversa® technology. Provide third-party verified cradle-to-gate GWP values as documented in the applicable Type III EPD. Any comparison to baseline products shall be determined by the project team using the project-defined reference case.

**1.5. Delivery, Storage, and Handling**

A) Deliver units on pallets; protect from contamination and moisture per manufacturer recommendations.

B) Provide documentation required for LEED v5 material cost and embodied carbon reporting.

**1.6. Field Conditions**

Do not install masonry in rain, snow, or freezing conditions unless protected per TMS 402/602 and project requirements.

## PART 2 – PRODUCTS

**2.1 Manufacturers**

A) Basis-of-Design Manufacturer(s): Provide CarbonBuilt CMU and SRW manufactured using CarbonBuilt Reversa® technology.

B) Approved Manufacturing Locations:
- CarbonBuilt, Inc., Danielson, Connecticut
- Substitutions: Submit requests in accordance with Division 01. Substitutions must demonstrate equivalent structural performance and documented embodied carbon performance via third-party EPD.

**2.2 Concrete Unit Masonry (CMU)**

A) Units shall conform to the following:
- Loadbearing CMU: ASTM C90.
- Non-loadbearing CMU: ASTM C129.

B) Technology: Incorporates CarbonBuilt's Reversa® binder technology, which replaces a portion of Portland cement with supplementary and recovered materials.

C) Physical Requirements: Match standard nominal sizes, shapes, textures, and strengths indicated on drawings. Units shall meet specified structural and durability requirements and be suitable for the intended application.

D) Environmental Requirements: Provide a current, third-party verified Type III EPD conforming to ISO 14025.

**2.3. Segmental Retaining Wall (SRW)**

A) Units shall conform to Loadbearing SRW: ASTM C1372.

B) Technology: Incorporates CarbonBuilt's Reversa® binder technology, which replaces a portion of Portland cement with supplementary and recovered materials.

C) Physical Requirements: Match standard nominal sizes, shapes, textures, and strengths indicated on drawings. Units shall meet specified structural and durability requirements and be suitable for the intended application.

D) Environmental Requirements: Provide a current, third-party verified Type III EPD conforming to ISO 14025.

**2.4. Accessories**

Mortar, grout, reinforcement, ties/anchors, and accessories: As specified elsewhere in Section 04 05 13 and related sections. (Coordinate with project standards.)

**2.5. Source Information**

Manufacturer:
CarbonBuilt, Inc.
42 Junior Ave,
Danielson, CT 06239
info@carbonbuilt.com

## PART 3 – EXECUTION

**3.1. Examination**

Verify substrates, foundations, and supports are plumb, true, and ready to receive CMU or SRW.

**3.2. Installation**

A) Install CMU in accordance with TMS 402/602 and project documents.

B) Install SRW systems in accordance with ASTM C1372, the project geotechnical and structural design, and manufacturer's published installation instructions.
C) Do not cut or alter units in ways that compromise compliance with ASTM C90/C129/C1372.

**3.3 Field Quality Control**

A) Perform testing and inspections per project specifications and code requirements.
B) Provide data necessary for LEED v5 documentation of installed quantities and embodied carbon.

**3.4. Cleaning And Protection**

Clean masonry and retaining wall with methods and solutions acceptable to manufacturer; protect completed work from damage and moisture.

**Spec Writer Notes (Do Not Include in Project Manual)**

Carbon attributes associated with product manufacturing have been sold to third parties Purchasers of CarbonBuilt concrete products may not claim Scope 3 reductions for these units.

Project teams should consult GBCI directly regarding eligibility of these products for embodied carbon credit calculations such as LEED.

## DISCLAIMER AND LIMITED WARRANTY

CarbonBuilt maintains all disclaimer and warranty information publicly, on its website, here.

## CONTACT INFORMATION

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