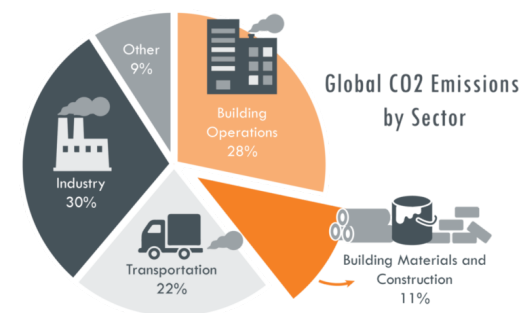




**COLORADO**  
Office of the State Architect  
Department of Personnel & Administration

# Buy Clean Colorado Act Compliance Training 2025

Presented by: Bailey Vigil, EIT II, LEED Green Associate  
Office of the State Architect



# Communications

Due to the statutory authority of HB21-1303 and the emergence and development of this requirement, OSA will be working with and educating the OSA delegate via communications on the implementation of the BCCO Act through the design and construction of projects.

It is the delegate's responsibility to work with OSA to ensure compliance with this requirement through all phases of a construction project. This is to ensure that the law is followed and that all waivers and modifications processed by the OSA or the delegate are handled within the same criteria.



# Buy Clean Goals



Through design optimization and responsible selection of materials, the reduction of embodied carbon emissions from building materials can be accomplished

**“Embodied Carbon”** is reported as global warming potential (GWP) and includes greenhouse gas emissions arising from the production, construction, use, and end-of-life of products or systems used in the construction of buildings, roads, and other infrastructure. Buy Clean programs focus on reducing the embodied carbon emissions generated during the production stage (Stages A1-A3).

**The ultimate goal is to create a market for low-carbon materials and support clean manufacturing**



# Introduction

## INTRODUCTION

The Buy Clean Colorado (BCCO) Act ([C.R.S. 24-92-117](#)) applies to State public projects for which the project cost **exceeds** five hundred thousand dollars (\$500,000) and for which an agency of government issues a **design solicitation** on or after **January 1, 2024**

**Requires OSA** to strive to achieve a continuous reduction of greenhouse gas emissions over time

**For invitation for bids for contracts for public projects:** Require the contractor who is awarded the contract to submit a current Environmental Product Declaration, Type III, for each eligible material procured for use in the public project



# Important Definitions

**“Eligible project”** means a public project defined as any construction, alteration, repair, demolition or improvement of any land, building, structure, facility, or other public improvement for which appropriation or expenditure of moneys is over \$500,000 and for which an agency of government issues a solicitation on or after January 1, 2024. Public project defined in C.R.S. 24-92-102.

**“Eligible materials”** means materials used in the construction of a public project, including:

- Asphalt and asphalt mixtures
- Cement and concrete mixtures
- Glass
- Post-tension steel
- Reinforcing steel
- Structural steel
- Wood structural elements



# 2025 Program Updates

The list of eligible materials subcategories has been updated

- **Added:** Cold-Formed Steel Framing & Accessories with GWP
- **Removed:** Wood Framing/Softwood Lumber with GWP



No changes to the GWP limits... yet

- Expect GWP reductions as early as next year

**UPDATES**



# Global Warming Potential (GWP) Limits

OSA's maximum acceptable GWP limits went into effect on January 1<sup>st</sup>, 2024

- Utilize the GWP limits available at the point of **design solicitation**
  - Download the latest GWP limits for your project
- See [EE-5.1](#) for OSA's GWP limits



**Program Update Protocol:** First review + update due January 2026

- True Frequency: OSA may choose to review the GWP limits on an annual basis
- In this case, the review process is to occur during the months of January - February, with all changes complete by February 28<sup>th</sup> of the applicable year



# Environmental Product Declarations (EPDs)

**Analogy:** EPDs are the nutrition labels for products

- Like nutrition labels, EPDs quantify and disclose the “ingredients” of a product
- Instead of calories and nutrients, EPDs report environmental impacts like carbon footprint (GWP) and resource depletion

Nutrition Facts		
Serving Size 212 g		
Amount Per Serving		
Calories	257	Calories from Fat 84
% Daily Value*		
Total Fat	9.4g	14%
Saturated Fat	1.1g	6%
Cholesterol	0mg	0%
Sodium	41mg	2%
Potassium	400mg	11%
Total Carbohydrates	39.8g	13%
Dietary Fiber	10.0g	40%
Sugars	2.1g	
Protein	8.0g	
Vitamin A	10%	Vitamin C 16%
Calcium	3%	Iron 14%
Nutrition Grade A		
* Based on a 2000 calorie diet		



Product Impacts	
Declared Unit: 1 m <sup>3</sup> of 10,000 psi concrete at 28 days	
Amount Per Declared Unit	
Global Warming Potential	445 kgCO <sub>2</sub> eq
Emitted	460 kgCO <sub>2</sub> eq
Sequestered	-15 kgCO <sub>2</sub> eq
Ozone Depletion	0.000 kgCFC11eq
Acidification	2.96 kgSO <sub>2</sub> eq
Eutrophication	0.09 kgNeq
Smog Formation	0.61 kgO <sub>3</sub> eq
Primary Energy Demand	3017 MJ
Non-renewable	3000 MJ
Renewable	17 MJ





# What kind of EPDs will be accepted



**“Environmental Product Declaration” or “EPD” or “Type III EPD”** means a third-party verified document that summarizes stages A1-A3 of a life cycle assessment (LCA) for a single product and publicly discloses its environmental impacts. For an EPD to be deemed approved:

1. The EPD must be a current product-specific, Type III EPD.
2. The EPD must reference all ISO Standards - ISO 14025, ISO 14040, ISO 14044, and ISO 21930.
3. The EPD must align with the applicable product category rule requirements.

**Agencies, consultants, and contractors** shall demonstrate compliance with these requirements by verifying that the GWP value in the submitted EPD is less than or equal to the maximum acceptable GWP limit established by OSA for each eligible material following the submittal process in EE-5.2



# Reviewing EPDs

What to look for and verify when reviewing EPDs:

- ☒ Period of validity: EPD has not expired yet
- ☒ Product-specific
- ☒ Type III (third-party verified)
- ☒ Compliance with required ISO standards
- ☒ Aligns with the applicable PCR requirements



# How to find compliant materials with EPDs

- [American Institute of Steel Construction \(AISC\) EPD](#)
- [American Wood Council \(AWC\) EPDs and Transparency Briefs](#)
- [ASTM PCR and EPD Library](#)
- [Concrete Reinforcing Steel Institute \(CRSI\) EPD](#)
- [EC3 Tool](#) (Free Registration Required)
- [NAPA EPD Program Operator website and EPD Tool](#)
- [NRMCA EPD Program Operator website](#)
- [SPOT by UL](#)
- [Sustainable Minds Transparency Catalog](#)
- [WoodWorks Current EPDs for Wood Products](#)

**EPD  
Databases**



# EPD Submittal Process Summary

## Agency/IHE OSA Delegate/Project Owners

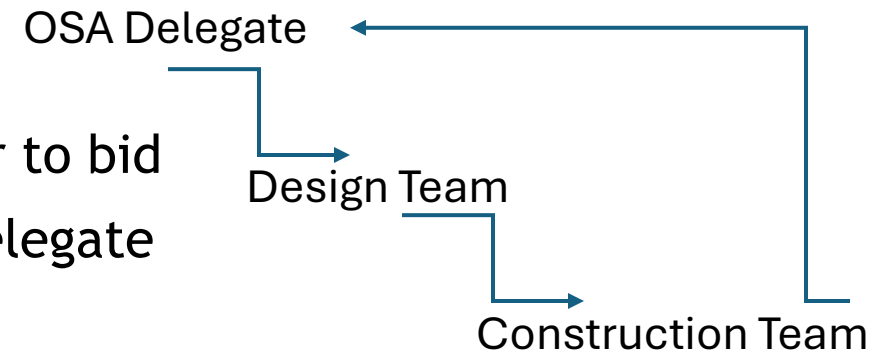
- Pass information and forms to proper channels (consultants, contractors, OSA)
- Review, verify, and sign off on entries in EE-5.2

## Design Consultant

- Specify eligible materials with compliant EPDs prior to bid
- Complete and submits EE-5.2 to Agency/IHE OSA Delegate

## Contractor

- Collect and organize compliant EPDs for all procured eligible materials
- Report Transportation Emissions for Products Sourced 100+ miles from project site
- Submit EE-5.2 and EPD zip folder to Agency/IHE OSA Delegate



Downloadable EPD submittal spreadsheet: [EE-5.2](#)

Online EPD submittal form: [EE-5.2](#)



# Project Team Expectations

For any new projects that are in solicitation beginning on or after January 1, 2024,

## Agency/IHE OSA Delegates shall:

1. Require consultants to specify EPDs for all eligible materials considered in the design
2. Require contractors to submit EPDs for all procured eligible materials prior to site installation
3. Submit EPDs and EE-5.2 to the OSA as part of the L-1 Code Compliance Documentation

## Consultants shall:

1. Prioritize products with EPDs for the design
2. Specify an EPD for each eligible material considered in the design
3. Verify that the GWP value included in each EPD is less than or equal to the maximum acceptable GWP limits established by OSA
4. Inform Agency/IHE OSA delegate if a design-phase waiver may be needed

## Contractors shall:

1. Obtain EPDs for all eligible materials procured for a public project
2. Submit compliant EPDs to the Agency/IHE OSA delegate prior to installation on site
3. Inform the Agency/IHE OSA delegate if a construction-phase waiver may be needed



# Design Team Requirements



1. Include eligible materials, GWP limits, and EPD requirements within the project specifications
  - Incorporate buy clean language into Division 01 and each specification section for the products selected
2. Specify eligible materials with EPDs and confirm that the product GWP value meets the OSA GWP limits
  - Include the name of the manufacturer/make/model/series in the specifications
  - Complete the Consultant portion of EE-5.2, which tracks the eligible material specification through construction documents, and submit to the Agency/IHE OSA Delegate
  - If necessary, work with the Agency/IHE OSA Delegate to complete a Design-Phase Waiver to submit to the OSA BCCO Act Manager for review and approval
3. Collect EPD information for eligible products specified in the construction documents



# Bid Expectations



1. The General Contractor (GC) may use the pre-bid walkthrough to ask questions
2. GCs estimate parts of the project and solicit bids from their specialty subcontractors
  - Specialty subs use the project specifications to secure price quotes from material suppliers or fabricators
  - There may be questions from suppliers about the GWP and EPD requirements
3. The owner reviews the bids, awards the GC, and signs the contract
  - The GC must recognize the GWP and EPD requirements
4. The GC signs subcontracts with specialty contractors
  - Specialty contractors must recognize the GWP and EPD requirements
  - Subcontractors contract with suppliers
5. GC evaluates sub's bids on their own or in consultation with the owner and/or the designers



# OPTIONAL Bid Accountability



OSA allows Agency/IHE OSA Delegates to update SBP 6.13 for bidders to acknowledge the BCCO Act requirements to ensure that this information is captured in the bidding process



STATE OF COLORADO  
OFFICE OF THE STATE ARCHITECT  
STATE BUILDINGS PROGRAMS

## BID

Institution/Agency: \_\_\_\_\_

Project No./Name: \_\_\_\_\_

Bidder Acknowledges Receipt of Addenda Numbers:

Bidder Anticipates Services outside the United States or Colorado:\*

Bidder will comply with 80% Colorado Labor on project above \$500,000:

Bidder is a Service-Disabled Veteran Owned Small Business:\*

Bidder acknowledges Buy Clean Colorado Act requirements apply to this project

No ☐ Yes ☐ If Yes see 3A below

Yes ☐ No ☐ If No see 3B below

No ☐ Yes ☐ If Yes see 3C below

Yes ☐ No ☐





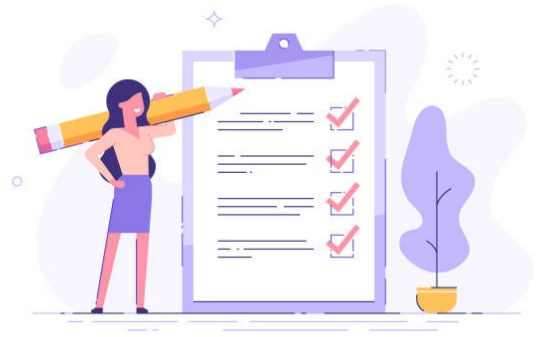
# Submittal Review



1. Design team reviews and verifies each eligible material submittal for compliance with the EPD and GWP requirements.
  - **Ensure compliance with the Buy Clean requirements!**
    - If compliance cannot be met, the Contractor shall complete a construction-phase waiver and submit to the design firm and Agency/IHE OSA Delegate for review
    - Contractor completes their portion of EE-5.2, which tracks the eligible materials, EPDs, and transportation information of the project through final installation
2. Upon approval of the submittal, the contractor may procure the materials



# Installation and Closeout



## Installation

- Contractors are responsible for ensuring that the correct materials are received at the site and EPDs are available for all eligible materials before installation

## Close Out

- Contractor collects and organizes EPDs for all procured eligible materials
- Contractor completes the Transportation (A4) section of form EE-5.2 for all eligible materials transported 100+ miles to project site
- Contractor signs EE-5.2 and submits it with the EPDs to the Agency/IHE OSA Delegate
- The Agency/IHE OSA Delegate submits all required forms and EPDs for the certificate of occupancy/use to the OSA and the OSA BCCO Act Manager



# Waiver Process



## During Design

- Consultants may request delegates complete and submit a design-phase waiver
- Design-phase waivers must receive OSA approval

## During Construction

- Contractors shall notify the design consultant and Agency/IHE OSA Delegate if a construction-phase waiver is needed
- Installing an alternative eligible material with an EPD does not require a waiver

## During Closeout

- Submit all approved waivers (EE-5.30) and the waiver management form (EE-5.32) to OSA with EPD submission (EE-5.2) and EPD zip folder



# Exemption Justifications

Design and construction waiver request exemption justifications,

- Technically Infeasible/Code Compliance
- Significant Time Delay
- Significant Increase in Project Cost (**Construction-phase requests only**)
- One Source for Material
- Reused/Recycled Materials
- Emergency
- Min. Usage Threshold (**Design-phase requests only**)
- No Eligible Materials Utilized (**Design-phase requests only**)
- Other (with OSA approval)



# Min. Usage Threshold Example

Reinforcing Bars								
Base Bid	AREA		Dimensions		#4 Rebar		#5 Rebar	
			L	W	#4 Bar (20 LF)	Unit Cost	#5 Bar (20 LF)	Unit Cost
8" Concrete, #5 bars, 18" OC EW	208	SY	156	12			132	\$ 20.00
2' Curb & Gutter	324	LF			26	\$ 13.00		\$ 338.00
Alt #1								
8" Concrete, #5 bars, 18" OC EW	67	SY	41	20			53	\$ 20.00
Alt #2								
8" Concrete, #5 bars, 18" OC EW	82	SY	25	41			67	\$ 20.00
Alt #3								
Loading Dock Ramp							60	\$ 20.00
Alt #4								
8" Concrete, #5 bars, 18" OC EW	684	SY	205	30			443.3	\$ 20.00
							TOTAL MATERIAL COST	\$ 15,444.00



# Notes for Waiver Requests



Verify that alternative materials with EPDs are not available before requesting a waiver

If a waiver request is necessary,

- All BCCO Act waivers must go to the OSA BCCO Act Manager for review
- Review the exemption justifications to determine the correct justification
- Use the State Controller's assigned project # for these requests
  - Internal project #'s are okay if the project is internally funded
- If a design-phase waiver is approved for a project not utilizing any eligible materials, do NOT remove the BCCO Act language from the contracts
  - Strike through of the language is preferred after receiving approval



# BCCO Act Forms

All BCCO Act Forms are available on the OSA [BCCO Act webpage](#):

- BCCO Act Policy: [EE-5.0](#)
- OSA Max. GWP Thresholds: [EE-5.1](#)
- EPD Submittal & Sign-Off (EE-5.2): [Spreadsheet](#) & [Online Form](#)
- [Design-Phase Waiver](#) & [Construction-Phase Waiver](#): EE-5.30
- EPD Exemption Justifications: [EE-5.31](#)
- Waiver Management Form: [EE-5.32](#)

**IMPORTANT  
FORMS**





# Question Time!

Reach out to Bailey Vigil with questions, concerns, and feedback

Email: [bailey.vigil@state.co.us](mailto:bailey.vigil@state.co.us)

Phone: 720-813-7937

