

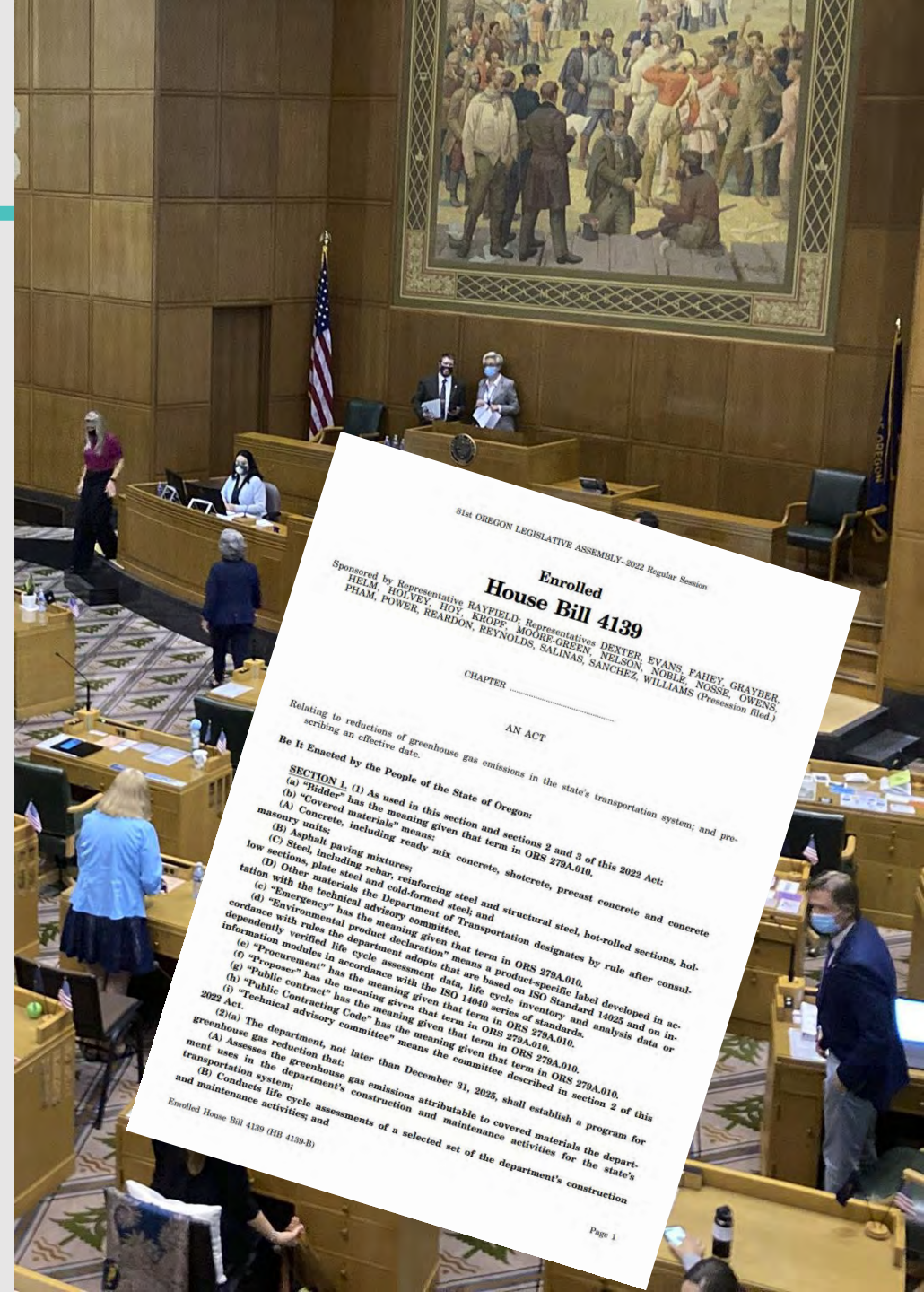
ODOT's Sustainability Program

February 9, 2024

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Oregon House Bill 4139 (2022)

- Requires ODOT to set up a “program for GHG reductions”.
- The agency to collect EPDs on asphalt, concrete and steel.
- “Product-Specific” Label
- Allows for regional variability and prioritization of quality / performance
- Set Program Rules with Advisory Committee.



81st OREGON LEGISLATIVE ASSEMBLY—2022 Regular Session

Sponsored by Representative RAYFIELD, Representatives DEXTER, EVANS, FAHEY, GRAYBER, HELM, HOLVEY, HOY, KROPP, MOORE-GREEN, NELSON, NOBLE, NOSSE, OWENS, PHAM, POWER, REARDON, REYNOLDS, SALLINAS, SANCHEZ, WILLIAMS (Procession filed.)

Enrolled House Bill 4139

CHAPTER _____

AN ACT

Relating to reductions of greenhouse gas emissions in the state's transportation system; and prescribing an effective date.

Be It Enacted by the People of the State of Oregon:

SECTION 1. (1) As used in this section and sections 2 and 3 of this 2022 Act:

(a) “Bidder” has the meaning given that term in ORS 279A.010.

(b) “Covered materials” means:

(A) Concrete, including ready mix concrete, shotcrete, precast concrete and concrete masonry units;

(B) Asphalt paving mixtures;

(C) Steel, including rebar, reinforcing steel and structural steel, hot-rolled sections, hollow sections, plate steel and cold-formed steel; and

(D) Other materials the Department of Transportation designates by rule after consultation with the technical advisory committee.

(c) “Emergency” has the meaning given that term in ORS 279A.010.

(d) “Environmental product declaration” means a product-specific label developed in accordance with rules the department adopts that are based on ISO Standard 14025 and on information modules in accordance with the ISO 14040 series of standards.

(e) “Procurement” has the meaning given that term in ORS 279A.010.

(f) “Proposer” has the meaning given that term in ORS 279A.010.

(g) “Public contract” has the meaning given that term in ORS 279A.010.

(h) “Public Contract Code” has the meaning given that term in ORS 279A.010.

(i) “Technical advisory committee” means the committee described in section 2 of this 2022 Act.

(2)(a) The department, not later than December 31, 2025, shall establish a program for greenhouse gas reduction that:

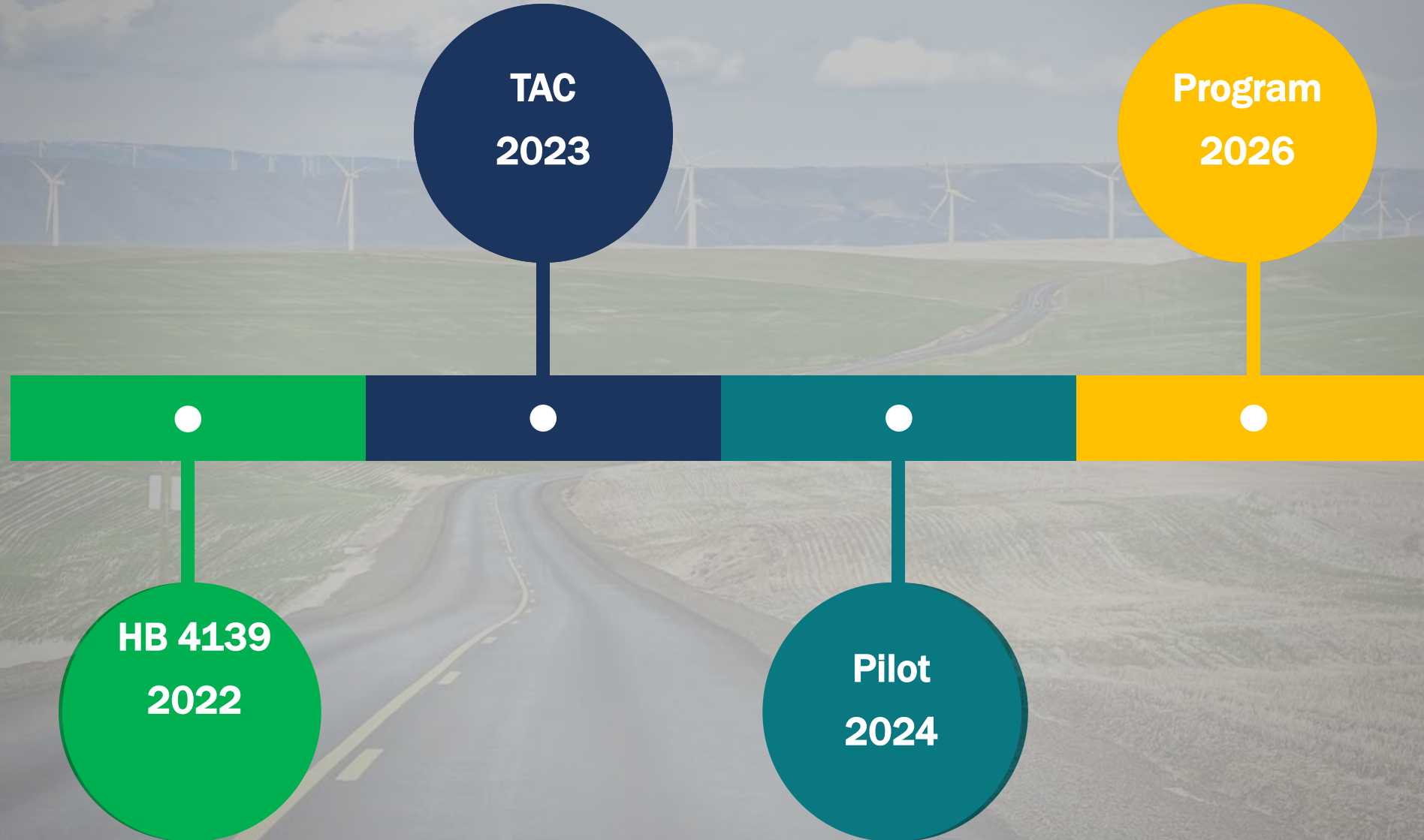
(A) Assesses the greenhouse gas emissions attributable to covered materials the department uses in the department's construction and maintenance activities for the state's transportation system;

(B) Conducts life cycle assessments of a selected set of the department's construction and maintenance activities; and

Enrolled House Bill 4139 (HB 4139-B)

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Important Dates



HB 4139 – Implementation

1. HB 4139 into law

2. Set up advisory committee

3. Establish program rules / update specs

4. Collect EPDs / conduct LCAs → GHG reduction strategies

5. Report to legislature and OTC

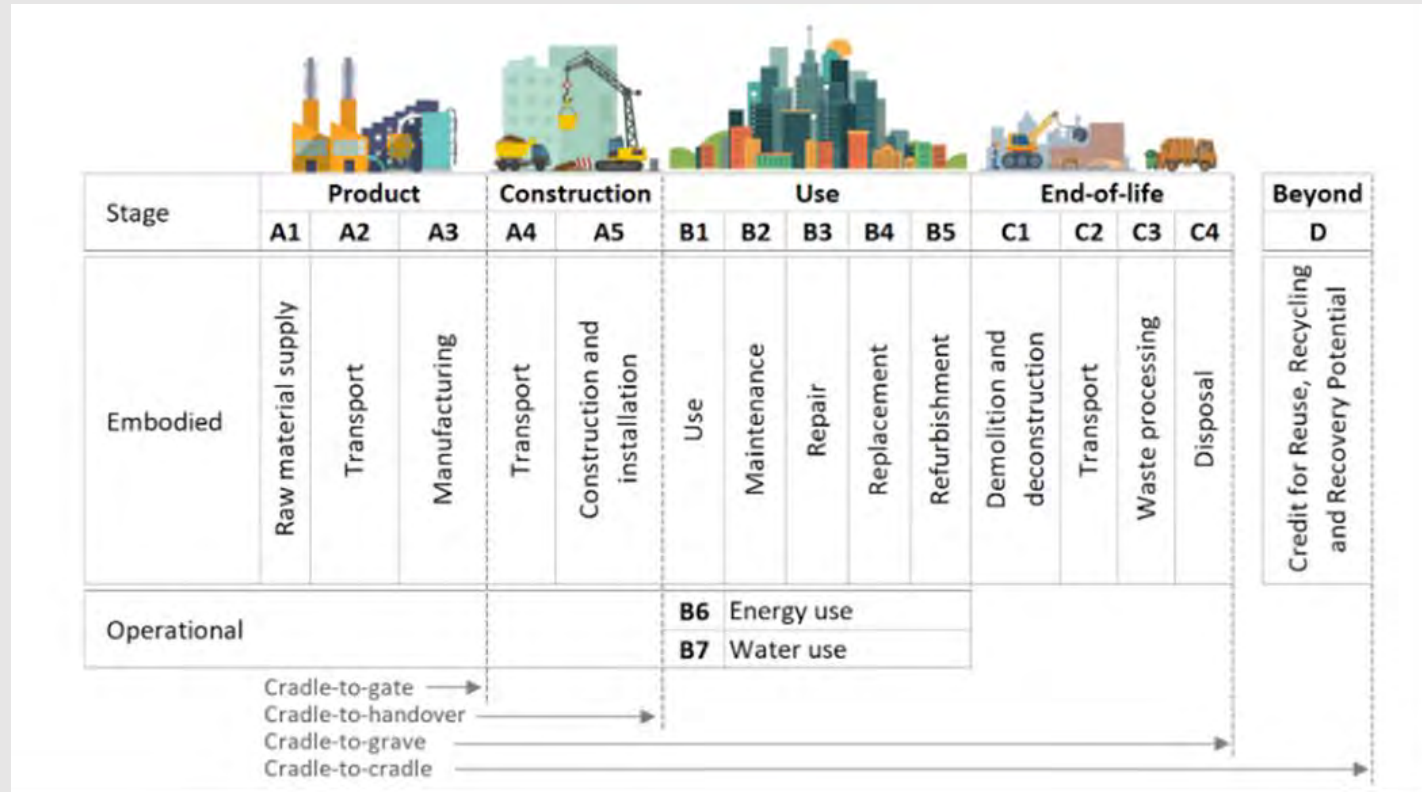
6. Consider factoring EPDs into bid selection

EPD 101

- Type III EPD – environmental declaration providing quantified environmental data using predetermined parameters, and where relevant, additional environmental information (ISO 14025)
 - Predetermined parameters based on ISO 14040 series

ENVIRONMENTAL IMPACTS	
Declared Product: Mix 3O1405260A • The Dalles Plant Description: ODOT CLASS 4000 Compressive strength: 4000 PSI at 28 days	
Declared Unit: 1 m ³ of concrete (1 cyd)	
Global Warming Potential (kg CO ₂ -eq)	406 (310)
Ozone Depletion Potential (kg CFC-11-eq)	8.31E-6 (6.35E-6)
Acidification Potential (kg SO ₂ -eq)	1.86 (1.42)
Eutrophication Potential (kg N-eq)	0.46 (0.35)
Photochemical Ozone Creation Potential (kg O ₃ -eq)	47.0 (35.9)
Abiotic Depletion, non-fossil (kg Sb-eq)	7.21E-5 (5.51E-5)
Abiotic Depletion, fossil (MJ)	1,132 (865)
Total Waste Disposed (kg)	111 (85.1)
Consumption of Freshwater (m ³)	3.45 (2.64)
Product Components: natural aggregate (ASTM C33), Portland cement (ASTM C150), batch water (ASTM C1602), admixture (ASTM C494), admixture (ASTM C260)	

Cradle to Gate (A1-A3)



Life Cycle Impacts

DECLARATION OF ENVIRONMENTAL INDICATORS DERIVED FROM LCA

Impact Assessment	Unit	A1	A2	A3	Total
Global warming potential	kg CO ₂ -eq	337	60.0	8.89	406
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC-11-eq	8.16E-6	2.31E-9	1.47E-7	8.31E-6
Eutrophication potential	kg N-eq	0.38	0.06	0.02	0.46
Acidification potential of soil and water sources (AP)	kg SO ₂ -eq	0.67	1.14	0.06	1.86
Formation potential of tropospheric ozone (FOOP)	kg O ₃ -eq	12.6	32.7	1.70	47.0



Product Category Rule for Environmental Product Declarations

PCR for Concrete v2.2 (including deviation)



Program Operator

NSF International

National Center for Sustainability Standards

Valid through February 22, 2024

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Product Category Rules

- PCRS- set of specific rules, requirements and guidelines for developing Type III EPDs for one or more product categories (ISO 14025)
- ISO 21930
 - Subcategory PCRs
 - Asphalt
 - Ready-Mix
 - Precast Concrete
 - CMU
 - Steel

What does it take to develop an EPD?

- One to three months of staff time for initial data collection and entry.
- 12-months of plant-specific data (location, energy use).
- Mix-specific data (quantities of ingredients, transportation distance and transportation type).

Contractor vs Supplier

- Contractor

- Responsible for purchasing materials
- Submittal Requirements

- Suppliers

- Need to supply EPD conforming to rules and policy adopted by ODOT.

Where is ODOT at?

- Currently in discussions with Industry and Subject Matter Experts
- Informative discussions with Technical Advisory Committee
 - OAR- requiring collection of EPDs
 - Specifications- contract language for EPD collection
 - Policy- specific details of EPD requirements
- Performing detailed analysis of spending and materials

Thank you!

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