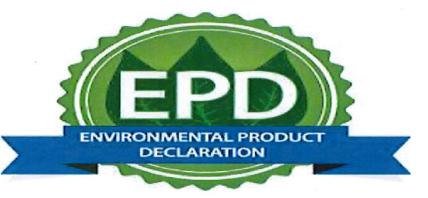
#### SUSTAINABILITY SUMMER SUMMIT:

### FEDERAL INITIATIVES UPDATE

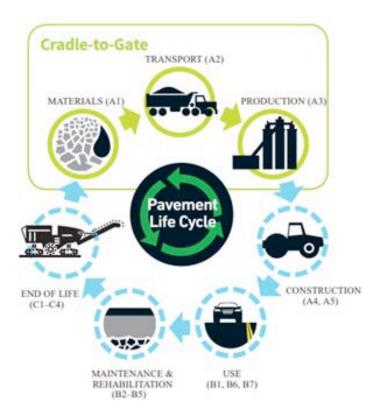
BY: STACY HILBRICH-ROWH, P.E. PRESIDENT HP2 ENGINEERING AND TESTING, LLC







# **EPD** Overview



AN EPD IS A VERIFIED REPORT OF THE ENVIRONMENTAL IMPACTS OF A PRODUCT MANUFACTURING THAT EXPRESS THE RESULTS OF A LIFE CYCLE ASSESSMENT FOR A SPECIFIC MATERIAL OR PRODUCT. EPDS CAN PROVIDE THE FOLLOWING BENEFITS:

- Sustainable Procurement
- Sustainable Design
- Sustainable Asset Management



#### SOME COMPONENTS OF AN EPD

#### **Product Description**

This EPD reports the potential environmental impacts and additional environmental information for an asphalt mixture, which falls under the United Nations Standard Products and Services Code 30111509. Asphalt mixtures are typically incorporated as part of the structure of a roadway, parking lot, driveway, airfield, bike lane, pedestrian path, railroad track bed, or recreational surface.

Mix Name: 216055 - 04294

Specification Entity: TxDOT

Specification: 340/341

Gradation Type: dense

Mix Design Method: superpave

Nominal Maximum Aggregate Size: 0.5 inches

Performance Grade of Asphalt Binder: PG 64-22

Customer [Project/Contract] Number: Not Reported

This mix producer categorizes this product as a Hot Mix Asphalt (HMA) asphalt mixture. This asphalt mixture was produced within a temperature range of 154 to 174°C (310.0 to 345.0°F). Energy and environmental impacts are based on a plant's average performance over a 12-month period and are not adjusted for mix-specific production temperatures.

#### An Environmental Product Declaration for Asphalt Mixtures

#### **Product Ingredients**

The product ingredients as identified in the mix design are provided in the table below.

#### TABLE 1. PRODUCT INGREDIENTS

COMPONENT	MATERIAL	WEIGHT %
Aggregate	Natural Stone	67
Aggregate	Natural Stone	9
RAP	Reclaimed Asphalt Pavement	20
Binder	Unmodified	4



# EXAMPLES OF AGENCY USE OF EPDS

- SOME AGENCIES (CALIFORNIA DOT & OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY) ARE TAKING STEPS TO REQUIRE EPDS FOR PAVEMENT & OTHER TRANSPORTATION MATERIALS, BUT IT ISN'T PART OF THE PROCUREMENT PROCESS, YET.
- MOST MAJOR TEXAS CITIES HAVE IMPLEMENTED SOME SORT OF CLIMATE ACTION PLAN, BUT THERE IS A DISCONNECT WITH PUBLIC WORKS ON THIS END.
- TXDOT HAS NOT STARTED THE DISCUSSION ON EPDS.



FHWA announced in March, 2024 that they will have \$2 billion dollars available to fund low carbon materials that create less pollution through the Low Carbon Transportation Materials (LCTM) Program. (\$1.2 billion to state DOTs & \$800 million to local agencies)

PROGRAM GOALS:

- Increase use of lower carbon materials
- ▶ Facilitate use of low carbon transportation materials
- Facilitate use of low carbon transportation materials while ensuring adequate engineering performance
- Promote technology transfer and enhance workforce development to increase the adoption of environmental quantification techniques used in decision-making





https://www.fhwa.dot.gov/lowcarbon/

#### FHWA Climate Challenge – Quantifying Emissions of Sustainable Pavements

(Provides funding & technical assistance to quantify Greenhouse Gas Emissions (GHG) from materials & practices for the design, construction, & maintenance of pavements).

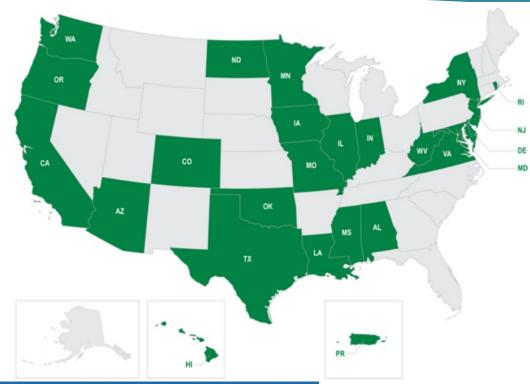
**PROGRAM GOALS:** 

- Aligns & supports activities related but not limited to the Executive Order 14057, Catalyzing Clean Energy Industries and Jobs through Federal Sustainability
- Directly addresses related concerns from agencies and industry, including data gaps and the need for more implementation assistance
- Encourages the use of LCAs and EPDs
- Highlights existing resources from FHWA Sustainable Pavements Program



https://www.fhwa.dot.gov/infrastructure/climatechallenge/ index.cfm





FHWA Climate Challenge – 35 Projects from 27 Agencies (Including 2 Local)

- TxDOT received \$312,000 to develop whole life LCA



https://www.fhwa.dot.gov/infrastructure/climatechallenge/ index.cfm



On July 16<sup>th</sup>, the EPA selected 38 grant recipients (\$160 million total) in an effort to report and reduce pollution from construction materials as part of Biden-Harris' Federal Buy Clean Initiative, which is funded by the Inflation Reduction Act.

#### EXAMPLES OF ORGANIZATIONS SELECTED FOR FUNDING:

- Heidelberg Materials US
- ► Holcim US
- National Readymix Concrete Association
- National Stone, Sand, & Gravel Association
- Old Castle Infrastructure, Inc.
- Portland Cement Association





https://www.epa.gov/newsreleases

In 2024, the GSA issued 3 contract opportunities in Texas for Land Port of Entry, Border Roadway Improvement & Construction Projects in El Paso, Laredo, & Pharr.

PROJECT GOALS:

- Seeks qualified small businesses to provide architectural & engineering design, construction, & other related services
- Requires the use of low-embodied carbon asphalt, concrete, & steel meeting the IRA's Low Embodied Carbon Material requirements
- Must have EPD at time of proposal





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## Summary

- EPDS CAN BE USED AS A TOOL TO HELP DESIGN SUSTAINABLE MIXES & TO IMPROVE PLANT EFFICIENCIES
- EPDS CAN BE USED AS A TOOL FOR LOCAL AGENCIES TO HELP PROMOTE SUSTAINABLE MATERIALS & TO SEEK GRANT OPPORTUNITIES
- TXDOT HAS NOT STARTED THE CONVERSATION ABOUT EPDS
- FEDERAL GRANT/FUNDING OPPORTUNITIES ARE AVAILABLE (Most only encourage the use of LEC products & the use of EPDs, but the Border crossings require them, which resulted in little response.)



### **QUESTIONS???**

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