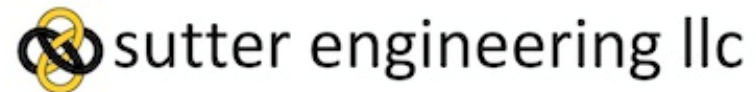


# Blended Cement Steering Committee and NCC Blended Cement Subcommittee

Maria Masten, MnDOT – Chair, National Concrete Consortium  
Larry Sutter, Sutter Engineering – Consultant  
Spring 2026 NC2 Meeting – April 7, 2026



- Support the adoption of Type IL cement by improving data transparency for all stakeholders. We also see this effort as a foundation for future implementation of other blended cements. Your support is greatly appreciated.

# Blended Cement Steering Committee

- Meet quarterly
- Provide direction towards implementation of blended cements through discussions at NCC

Name	Organization
Maria Masten	Minnesota DOT
Whitney Wise	Wyoming DOT
Jason Mellons	Tennessee DOT
Rich Mulcahy	Massachusetts DOT
Lieska Halsey	Nebraska DOT
Larry Sutter	Sutter Engineering
Tom Van Dam	WJE
Peter Taylor	CP Tech Center
Dan King	CP Tech Center
Leif Wathne	CP Tech Center
Robert Spragg	FHWA
Jerod Gross	Snyder and Associates

# Blended Cement Steering Committee

## Task #1 - NCC Cement Industry Request Letter for Data

Letter sent on 7/17/25 to most TTCC State Cement Plants with the following request:

On behalf of NC<sup>2</sup>, the SHAs are collectively requesting Type IL cement data from all plants shown in Attachment 1, retroactive to January 1, 2022 through June 30, 2025, providing at a minimum the following information (for data available):

- Bulk Shipping Sample Data (identify test methods used)
  - 3, 7, and 28-day compressive strength
  - Time of Set
  - Fineness
  - Loss on ignition
  - Sulfate Content (SO<sub>3</sub>)
  - Limestone content
- Monthly Composite Samples
- 30-day published mill certifications data

*GOAL: To make 1 collective data request instead of many SHAs all sending requests for the same data*

# Discussions with ACA

Follow up email to American Cement Association (ACA) on 8/27/25:

- I want to reiterate our request is to just collect the data and identify if there are trends to be concerned about. The NC2 Blended Cement Steering Committee understands we requested a very tight timeline for turning the data around and want to share we are open to receiving the data by the end of the calendar year 2025.
- Our goal is to review the data and present the information at the Spring 2026 NC2 meeting. As part of the data review, the NC2 Steering Committee is establishing a peer group to provide review and oversight of the data analysis. Larry Sutter will be the consultant performing the data analysis.
- This peer review group will include representatives from the following areas:
  - 5 State DOTs
  - 5 Cement Companies
  - 2-3 members of Industry/Academia

# Blended Cement Steering Committee

## Task #2 – Evaluate the Type IL Cement Data

- Larry Sutter will be the consultant reviewing and analyzing the data
- NC2 Steering Committee is establishing a Blended Cement Stakeholder Group to provide review and oversight of the data analysis.
- This group will include representatives from the following areas:
  - State DOTs
  - Cement Companies
  - Members of Industry/Academia
- *Goal: Present information at Spring 2026 NC2 meeting*

# Blended Cement Stakeholder Group

Name	Organization
Eric Giannini	ACA
Rob Shogren	Amrize
Cheng Qi	Ash Grove Cement
Gary Kirk	Cal Portland
Eduardo Caballero	Cemex
Peter Taylor	CP Tech Center
Dan King	CP Tech Center
Leif Wathne	CP Tech Center
James Greene	Florida DOT
Urs Fuchs	GCC
Jeff Hook	Heidelberg
Rich Mulcahy	Massachusetts DOT

Name	Organization
Maria Masten	Minnesota DOT
Alan Luker	National Cement
Lieska Halsey	Nebraska DOT
Jon Kunin	New York DOT
Nicholas Ewing	Quikcrete
Nick Popoff	St. Mary's Cement
Larry Sutter	Sutter Engineering
Jason Mellons	Tennessee DOT
Rachel Cano	Texas DOT
Doug Hooton	University of Toronto
Tom Van Dam	WJE
Whitney Wise	Wyoming DOT

# Blended Cement Blended Cement Stakeholder Group

## Task #2 – Evaluate the Type I/L Cement Data

- Meeting held on 3/25/26
- Purpose of meeting:
  - Discuss data collected and results of analysis so far - preview of Spring NCC presentation
  - Get feedback from stakeholders on initial data analysis
- Results of discussion:
  - Positive meeting – industry appreciated being included
  - Industry offered suggestions of data analysis
  - More data still needed
- Next Steps:
  - Additional stakeholder meetings as more data is analyzed
  - Future presentations at NCC meeting on data analysis

# Blended Cement Steering Committee

## Task #3 – Survey DOTs and Contractors

- Is Type IL cement the real issue?
  - Survey the DOTs to find out what actual problems they have seen since Type IL cements have been re-introduced to the market
  - Survey Contractors and Producers to see what real issues they have experienced since Type IL cements have been re-introduced to the market
- Goal: ~~Present information at Spring 2026 NC2 meeting~~
  - Developed focused questions on goals of information requested
  - Send out survey during summer of 2026
  - Present at future NC2 meeting

# TTCC Funded Research on PLCs

- Evaluation of Effects of Portland Limestone Cement (PLC) Variability on Mortar Fresh Properties
  - RFQ posted in July and bids were received in August
  - The PLC subcommittee selected the proposal from Braun Intertec
- Project timeline
  - Braun currently performing lab testing
  - CP Tech Center staff will review data and conduct analysis
  - Presentation planned for Fall 2026 NCC meeting

# Evaluation of Effects of Portland Limestone Cement (PLC) Variability on Mortar Fresh Properties

- Conducting testing with 10 PLCs (5 companies, 2 plants each)
  - Cement characterization through XRF, TGA, and PSD
- Preparing mortar mixtures with each cement for testing:
  - Water demand/mortar slump (ASTM C1810)
  - Bleed (ASTM C1741)
  - Set time and early hydration rate (ASTM C1753)
  - Rate of stiffening/mini-slump
- Analyzing sensitivity to following factors:
  - w/cm (0.40, 0.45, 0.50)
  - SCM type (Class F fly ash, Class C fly ash, slag cement)
  - Water reducing admixtures (Type A, Type F)
  - Mix temperature (50°F, 70°F, 90°F)

Questions?