Materials and QA STG Meeting Minutes

Date: Wednesday – September 2, 2020
Time: 10:00 AM – 11:30 AM
Location: WEBEX MEETING

CT-Chair: Patrick Lo for Jacquelyn Wong
IN-Lead: Nathan Forrest
Attendees: Caltrans: Patrick Lo, Samir Ead, Reimond Garcia, David Lim, Industry: Dominika Pekala, Nathan Forrest, Katha Redmon
Guests: Working Group Chairs (Brett Soldano, Deepak Maskey, Lance Li)

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1. 10:00 AM - Introduction
2. 10:10 AM – Project Updates/Briefing by WG Chairs
    a) Use of 4x8 Cylinders for Compressive Strength Testing (Patrick)
    b) Concrete Mix Design Naming System (Brett)
    c) Recycled Crushed Concrete Aggregate for use in Cast In-Place Concrete Pavement (Deepak)
    d) CT 523 Flexural Beam Test Method (Patrick for Jackie)
    e) Impact of Portland Limestone Cement (PLC) on Concrete Performance (Lance)
3. 11:00 AM - Other Project Updates
    a) Heat of Hydration/Mass Concrete
    b) CarbonCure Investigation
    c) Revise Corrosive Environment Specifications
4. 11:30 AM - Open Discussion (Hot Topics)
    a) CTG Industry Succession Planning
    b) Round Table 11:45 AM - Action Item and Next Step (All)
5. 12:00 PM – Adjourn (All)

Work Product Groups:

Use of 4x8 Cylinders for Compressive Strength Testing
Caltrans Members: Patrick Lo (METS, Chair), Tom Collins (OSC), Larry McCrum (METS), Samir Ead (HQ Constr)
Industry Members: Tom Van Dam (NCE), Greg Halsted (PCA), Marc Robert (G3 Testing), Katha Redmon (Graniterock)

Unique Concrete Mix Design Naming System
Caltrans Members: Brett Soldano (METS, Chair), David Lim (Pavement), Tom Collins (OSC), Jeff Goronea (SP&I)
Industry Members: Nathan Forrest (CNCA), Ken Sears (Boral), Subhada Gadkar (National), Michael Taylor (Private)

Recycled Crushed Concrete Aggregate for use in Cast In-Place Concrete Pavement
Caltrans Members: Deepak Maskey (Pavement, Chair), Samir Ead (HQ Constr), Lance Li (METS), Reimond Garcia (Pavement)
Industry Members: Don Vivant (Sully-Miller), Matt Hansberger (Holliday Rock), Pete Conlin (Teichert), Katha Redmon (Graniterock)

Revise CT 523
Caltrans Members: Jacquelyn Wong (METS, Chair), David Lim (Pavement), Larry McCrum (METS), Samir EAD (HQ Constr)
Industry Members: Nathan Forrest (CNCA), Bruce Carter (SWCPA), Marc Robert (G3 Testing), Subhada Gadkar (National)

Impact of Portland Limestone Cement (PLC) on Concrete Performance
Caltrans Members: Lance Li (METS, Chair), David Lim (Pavement), Craig Knapp (SP&I), Eric Fornera (SSRD)
Industry Members: Kirk McDonald (CalPortland), Tom Van Dam (NCE), Morgan Johnson (Lehigh Hanson), 4. Hernan Jose Perez Rodriguez (Cemexl)

Meeting Notes:

1. Introduction
    a. Jackie is on a temporary assignment in district 4 until end of November and Patrick took over her responsibilities for PMPC subtask group (STG)
    b. Reimond Garcia joined Pavement Program and took Ron Jones's position in PMPC STG.
    c. Dominika is the acting branch chief for CMTB when Jackie is out.
2. Project Updates/Briefing by WG Chairs
    a. Use of 4x8 Cylinders for Compressive Strength Testing (Patrick)
        i. The final report was submitted to STG by January 30th.
        ii. DES put together a group to ensure the implementation of this work. The group has drafted the language changes in CT 540 and CT 521 to cope with the changes to allowing the use of 4X8 cylinders.
        iii. The CPD will be ready by December 2020 and it will allow to use the 4x8 cylinders in the existing projects. The RSS will be available in the next version of the revised standard specifications in April 2021.
    b. Concrete Mix Design Naming System (Brett)
        i. Caltrans and industry agreed on specifications draft and was forwarded to the routing process for review.
        ii. During the review process, comments came up by Industry.
        iii. Industry wants to keep the same mix name if the only change is a change in the aggrege source, while Caltrans believes the aggregate source change is a substantial change and should be reflected in the mix ID.
        iv. The working group has drafted a two-page statement that addresses the positions of each party for this impasse regarding whether or not the change of an aggregate source would necessitate a change in the mix design identification.
        v. Caltrans recommendation is aggregate source is a quality that cannot be changed without a change to the mix identifier. This issue will be elevated to TG and higher levels within PMPC in order to be resolved.
    c. Recycled Crushed Concrete Aggregate for use in Cast In-Place Concrete Pavement (Deepak)
        i. The next deliverable/milestone is to wrap up the literature review, proposed specifications draft and design guidance to summarized as a final report. The final report is due in October 2020.
        ii. The WG works within the scope of the scoping document (SD) to recommend the specification proposal, and pilot projects were recommended to obtain more data to refine the potential specifications.
    d. CT 523 Flexural Beam Test Method (Patrick for Jackie)
        i. Jackie has summarized this project in a folder before she left, and all the millstones have been achieved.
        ii. Will eliminate this project from the list.
    e. Impact of Portland Limestone Cement (PLC) on Concrete Performance (Lance)
        i. Lance/Kirk assembled the team and drafted the full scoping document. The SD was submitted to the CTG and approved in June.
        ii. The WPG had their first kick-off meeting in July to review the SD and the responsibilities and duties for WPG members.
        iii. The group had their August meeting last week to working on the first deliverable item which is due by the end of September.

iv. There is some delay on the OSU PLC research project and Lance is working with them and hopefully we will get the interim report within several weeks.

3. Other Project Updates
    a. Heat of Hydration/Mass Concrete
        i. DES concrete committee put together a group to work on selecting out a suitable software that Caltrans can use to predict the concrete temperature for concrete that may have mass concrete risk.
        ii. Craig Knapp suggested to use the monogram method to predict concrete temperature, and Jonathan Tsang is using D3 projects' temperature data to verify the accuracy of the monogram method.
        iii. Katha mentioned that she used 'Concrete Work' several years back, and it is an accurate and reliable software to predict the temperature for mass concrete.
    b. CarbonCure Concrete evaluation
        i. Lance introduced what is CarbonCure Concrete, what are the benefits and some additional background of this new material.
        ii. METS evaluated this product and found the strength was slightly improved with CarbonCure technology, and no consistent evidence indicates that the CarbonCure concrete can mineralize more CO2 in the concrete during the hydration process compared to the conventional concrete.
        iii. Lance will share our evaluations to the supplier's research lab and the original research group to see their thoughts regarding our findings.
    c. Revise Corrosive Environment Specifications
        i. This work is under DES concrete committee and Mike Mifkovic from corrosion lab will take the lead for this project.
4. Open Discussion (Hot Topics)
    a. CTG Industry Succession Planning
        i. Kirk McDonald with CalPortland, the co-chair of CTG level, will be retiring by the end of 2020, and industry decided to have George to replace Kirk in the PMPC.
        ii. Bob Foley will be retiring by end of 2020 and industry need to figure out the replacement of this position in this STG.
    b. Cement shortage in Northern California
        i. The excessive heat, the blackout and the pandemic are the main reasons that caused the shortage of cement, and it will be a short-term issue.
        ii. The cooler temperature ensures the cement plants to resume the full production to supply the cement and the cement supply issue has been resolved in southern CA.
        iii. For the Bay Area, suppliers are bringing in more sources of cement and importing more oversea cement to resolve the material shortage.
5. Adjourn