

FEBRUARY 2013 MEETING

Wednesday, February 13, 2013 (1.5 PDH)

TECHNICAL PROGRAM

Best Practices in Pavement Recycling and Soil-Cement Solutions

Speaker: Matthew W. Singel, PE, Program Manager Soil Cement & RCC Pavement Cement Council of Texas Tel. 817-709-4313 [mobile/direct], 817-540-4437 ext 13 [office]

Matt's diverse background provides a unique perspective on alternative construction methods. His broad knowledge base draws from experience obtained in engineering design consulting, asphalt and concrete construction as well as the cement industry. In Matt's career, he has been actively involved with many progressive technologies spanning pavement design, construction, rehabilitation and preservation for street, highways and site development applications that reduce construction time and cost while maximizing long-term performance. Since his graduation from the University of Pittsburgh's School of Engineering Technology, Matt has been employed by Benatec Associates, Inc. (Camp Hill, PA), E.J. Breneman, LP (Reading, PA and Atlanta, GA) and the Southeast Cement Association (Atlanta, GA) with geographic responsibilities across multiple states in the northeast, mid-Atlantic and southeast United States.

Among his accomplishments, Matt was a featured speaker at the AASHTO Construction Committee Meetings in 2004 and selected to present at the International Public Works Congress in both 2006 and 2011. Matt is a member of the ACI 327 Committee on Roller-Compacted Concrete Pavements. In addition to articles published and serving on multiple industry technical advisory committees, Matt was a contributing technical author for Portland Cement Association's Guide to Roller-Compacted Concrete Pavements, (published - August 2010) and a technical advisor for the Guide to Cement-Based Integrated Pavement Solutions (published - August 2011).

Matt currently serves as the Cement Council of Texas Program Manager for Soil Cement and Roller-Compacted Concrete Pavement providing educational awareness and technical support for owners, specifiers, designers, contractors and state and local government officials across Texas.

PRESENTATION SUMMARY

To an audience of about 60, Matt Singel, PE, presented information on the newest technologies using cement treated materials. Soil-cement technologies have provided the base and subgrade support systems for countless roadways, parking lots, airports and other pavements for decades. Matt presented information that illustrated a variety of cement treated materials including:

1. Cement modified soils (CMS)
2. Cement treated base (CTB)
3. Full depth reclamation (FDR)



Matt explained the differences between conventional concrete and cement treated materials. He described the best uses of the soil cement products based on the job demands and compared those uses with other cement based pavement materials such as roller-compacted concrete, pervious concrete, and traditional concrete. He described the key attributes of soil cement products including speed of installation, increased production rates, permanence, material cost savings, reduction in recycling, etc. He compared the soil cement technologies including full depth reclamation to other methods such as lime stabilization and conventional concrete pavements, and described the best uses of each. An interesting observation suggested that lime stabilization is best used to decrease shrink swell activity in soils where soil cement products are best used where an increase in strength is required. Information was presented that shows cement stabilized materials are comparatively inexpensive and can extend the life of the asphalt and concrete pavements they support. Several design examples were provided based on completed projects. A short video illustrating the use, installation and final products was shown at the meeting conclusion. The video is available for viewing at the following link:

http://www.youtube.com/watch?v=bJLqfmKQwkY&feature=em-share_video_user

To read summaries of previous presentations by Matthew Singel, please click:

[February 8, 2012](#) - Roller Compacted Concrete Pavement: Design and Construction

[October 10, 2007](#) - Mini Seminar on Cost-Saving Site and Pavement Techniques: Fast, Durable