



CONFERENCE

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San Francisco, CA



Thursday, June 4, 2015 at 8:30am

FEATURED SPEAKER

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**SUSTAINABILITY CONSIDERATIONS IN DEEP MIXING
APPLICATIONS, WITH EXAMPLES FROM LPV 111 IN NEW
ORLEANS, LA**

This paper addresses two primary factors affecting the sustainability of Deep Mixing Methods (DMMs): construction materials and handling of the spoil from wet mixing methods. We examine these factors within a life-cycle embodied energy (EE) and carbon dioxide (CO₂) emissions accounting framework, using the LPV 111 project in New Orleans, LA as a case history. The underlying assumption is that project planning and preliminary design have determined that a DMM is the best ground improvement alternative for achieving the broader aims of sustainable development. While EE and CO₂ emissions are direct measurements of environmental impact alone, we illustrate how their minimization can also influence the social and economic consequences of the project. It is recommended that DMMs use lower energy and carbon material alternatives to Portland cement and lime in the binder whenever possible, with preference given to locally sourced materials. Currently available alternative cementitious materials include fly ash and slag, which are waste products from other processes. In addition, recycling the spoil material from wet mix methods on site is recommended. If the material cannot be recycled on site, transporting it to a processing and recycling center for later use as fill is preferred over landfilling.

For more information, contact Craig Shillaber by email at cmshill@vt.edu.

Visit the Conference Website at www.deepmixing2015.org