



TECHNICAL PRESENTATION

December 13, 2023



Lime and Expansive Subgrade Soils

Presented by [Larry Peirce](#) with [Lhoist North America](#) and [Dale Rand](#), P.E., with [Lime Association of Texas](#)

BIO: Larry Peirce is a senior manager in Civil Market Development for Lhoist North America. He has been in the civil infrastructure industry for over 35 years, mainly in highway/roadway construction and large civil works projects. He has worked in the pavement research area with the FHWA's Strategic Highway Research Program (SHRP) Long Term Pavement Performance Program and SuperPave implementation efforts, as well as the

geotechnical and construction materials industry in Texas with PavTex Engineering and Fugro Consultants. He has worked with the Texas Asphalt Pavement Association and served as the Executive Director of the Lime Association of Texas for over 6 years. He currently leads technical support and project development initiatives at Lhoist, the largest lime producer in Texas, for the roads and civil market sector in Texas and other U.S. areas.

BIO: Dale A. Rand, P.E., has over 30 years of experience related to construction materials engineering, inspection & testing. He worked for TxDOT for over 26 years serving as a materials expert within the Materials and Test Division (MTD) where his roles included serving as Flexible Pavements Section Director for 13+ years and Soils and Aggregates Section Director prior to that. He is recognized for his expertise in HMA mixtures, pavement design, construction, materials testing, pavement reclamation, maintenance and inspection. He wrote many of TxDOT's current test procedures and pavement construction specifications, and was recognized with TxDOT's High Flyer Award and AASHTO's Journey Towards Excellence Award. He authored TxDOT's Wet Weather Accident Reduction Program and championed the use of Permeable Friction Courses (PFC) in Texas. After his retirement from TxDOT in 2013, he worked for Atlas Technical Consultants as the General Manager for the Dripping Springs office. While at Atlas, Dale has served as project manager on numerous TxDOT materials contracts and as Materials Manager on more than 25 City of Austin Site and Subdivision projects. In August of 2023, Dale became the Executive Director for the Lime Association of Texas where his primary duties include education and training on the proper use of lime. Dale received his bachelors degree in engineering from Texas Tech and his masters degree in engineering from the University of Texas. He has been a licensed engineer in Texas since 1993.

PRESENTATION SUMMARY: This presentation defined how to use lime to mitigate problems associated with expansive subgrade soils. The speakers explained several types of lime and delivery methods and defined the differences between lime modification and lime stabilization. Best construction management practices were addressed including QCQA methods. Detailed descriptions of Lime "Do's and Don'ts" were also provided.

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