

OCTOBER 2005 MEETING

Wednesday, October 12, 2005

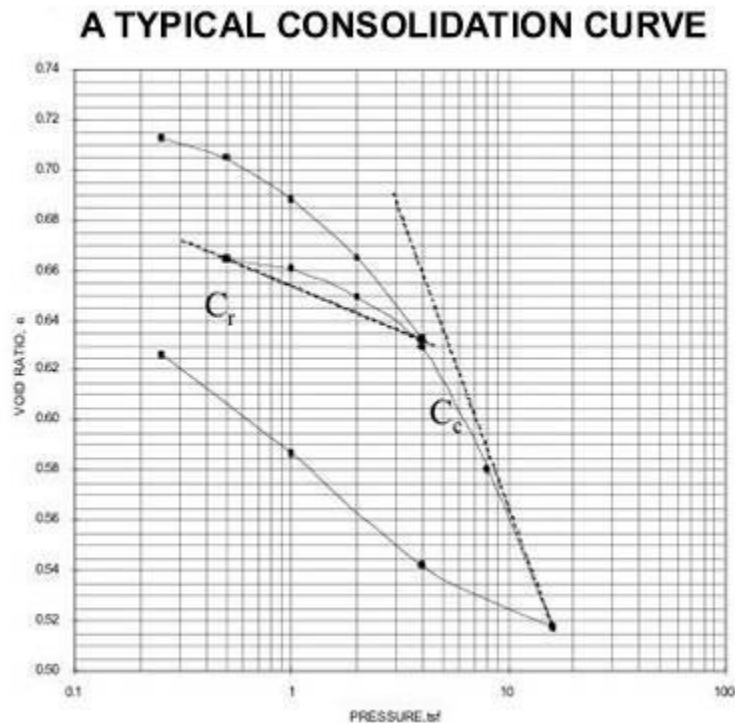
TECHNICAL PROGRAM

Compression and Recompression Indices of Texas Overconsolidated Clays

Speaker: Dr. Sayeed Javed with Terracon Consultants, Inc., Tel No. 713-690-8989. Sayeed Javed, Terracon

Dr. Javed, a practicing geotechnical engineer since 1994 in the Greater Houston area, has been with Terracon Consultants, Inc. for the past four years. He has authored two journal papers and four conference papers. He has a Ph.D. from Purdue University, Indiana, and a Master of Science from Imperial College, London.

PRESENTATION SUMMARY



To an audience of about 40, Dr. Javed presented his statistical analysis results as a proposed means of providing consolidation data without performing the actual tests, which he said take a week to run, costing \$250 - \$300 per test. He said several statistical relationships have been used in the past for estimation of the Compression Index on normally consolidated clays. He reviewed about a dozen previously published equations for Compression and Recompression Indices, but said many were limited in that they were based on a single variable.

Using Terracon's database of consolidation tests, Dr. Javed found the best curve fits for the Compression and Recompression Indices of Texas' overconsolidated clays required the following variables

- (1) the void ratio (Eo)
- (2) the liquid limit (LL)

Dr. Javed noted that these variables are fairly simple to accurately calculate and allow practicing engineers to calculate settlement when time and budget constraints do not allow for an adequate number of consolidation tests to be performed for a particular project.

The final parametric equations Dr. Javed proposed for determining the Compression Index (C_c) and the Recompression Index (C_r) are:

$$C_c = 0.0026 \times LL \times E_o + 0.092$$

$$C_r = 0.0007 \times LL \times E_o + 0.010$$

To download Dr. Javed's slide presentation, which includes a comparison of his equations with others' equations and with actual consolidation test results, [click here](#).

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