

DECEMBER 11, 2002 - [FPA Committee Paper # FPA-SC-05-0](#) Presentation by the Structural Committee, entitled, *"Comments to the Use and Application of the PTI Method and Suggestions for Further Research"*

Speaker: [Lowell Brumley](#), P.E. (Tel: 713-996-8101, Email: sandy@catchnet.net), FPA Subcommittee Chair

PRESENTATION SUMMARY

Mr. Brumley presented his subcommittee paper no. [FPA-SC-05-0](#) that was recently sanctioned by the FPA and is published on the FPA website. Mr. Brumley is president of TSG Consultants, a Houston engineering firm responsible for designing thousands of post-tensioned foundations every year in Texas. Mr. Brumley is a licensed professional engineer with MSCE and BSCE degrees from UT Arlington. He is a member of the FPA and the Structural Committee, where for the last three years he chaired the subcommittee that produced the document being presented.

According to Mr. Brumley, the purpose of the paper was to provide comments to those developing the PTI method or using it for designing post-tension slab on grade foundations. Several questions in the method were raised with the goal to spur further research by the PTI Committee. Examples were given exhibiting how even small changes in PTI parameters from geotechnical engineers using the method can greatly affect the design by the foundation engineers. Some examples included increasing e_m by only 12 inches, resulting in a 35-40 percent increase in moment. When y_m was increased only 0.70 inch, the moment increased by 40-45 percent and the deflection by 50 percent.

Mr. Brumley pointed out that it is common to get these small variations in the PTI parameters (which greatly affect the foundation design) from different geotechnical engineers working on the same site. To help reduce these variations, he encouraged geotechnical engineers to follow FPA-SC-04-0 ["Recommended Practice for Geotechnical Explorations and Reports."](#) He also encouraged the Post-Tension Institute to simplify the PTI procedure to help reduce the variations and to modify the method to alleviate some anomalies outlined in the paper.

[PAST PRESENTATIONS \(click here\)](#)