

## MARCH 2012 MEETING

Wednesday, March 14, 2012 (1.0 PDH)

### TECHNICAL PROGRAM

#### Drainage Guidelines

**Speaker:** [Gerald Duhon, Gerald J. Duhon, P.E.](#), Houston, TX, Tel. No. 281-788-7393

Gerard Duhon, FPA Member, Subcommittee No. FPA-SC-17 Chair, and Owner of Gerard J. Duhon, P.E., where he provides forensic engineering and construction defect inspections for residential and other properties. Mr. Duhon is a licensed professional engineer in Texas and Louisiana with a BS in Mechanical Engineering from University of Southwestern Louisiana. He is an ICC certified residential combination inspector and was the main TRCC inspector for the State of Texas. Mr. Duhon, as owner of Engineered Foundation Solutions, performs structural repairs. As owner of Houston Design Solutions, Mr. Duhon assists clients in drawing, permitting, and code compliance for planned construction projects.

#### PRESENTATION SUMMARY

To an audience of about 75 at the HESS club, Mr. Duhon presented "Drainage Guidelines", FPA's paper No. FPA-SC-17-0. This project was sanctioned by the FPA's Structural Committee on March 25, 2009. Mr. Duhon chaired the subcommittee that was formed to write the paper. The paper completed its FPA Peer Review and was issued for publication on March 05, 2012.

The paper that Mr. Duhon presented provides an overview of drainage issues that relate to foundation movement. The document covers different drainage methods to use or employ in both residential and commercial construction to achieve effective and proper drainage. The FPA-SC-17-0 paper is intended for a broad audience including builders, contractors, surveyors, landscapers, architects, geotechnical engineers, foundation design engineers, and civil engineers. The paper is not limited to a specific geographical region and therefore should not contain geographical limitations.

In addition the paper contains equations such as the Manning flow equation which is useful when planning drainage collection and management. Simplified equations based on the Manning calculations are provided that are more useful and consistent for residential planning.

Mr. Duhon discussed a number of topics presented in the paper:

- drainage sources, collection and management, and disposal
- drainage effects on foundations including common drainage problems
- site soil types and their effect on drainage system designs
- drainage problems including references to FPA-SC-06-0, "Homebuyers Guide for Foundation Evaluation" which includes a checklist of items used to avoid drainage problems.

The paper includes 180 pages of reference material in the appendix which cites: HUD Handbook 4140.3, HUD Data Sheet 72, and HUD Data Sheet 79g.

To download a copy of the slide show presented by Mr. Duhon, [click here](#)

To download the committee's Document No. FPA-SC-17-0 [click here](#)

