



Pile Setup – A Competitive Edge

By Wayne E Waters, PDCA President

Those of you who missed this year's Winter Roundtable missed the best one yet. It was attended by a record number of contractors and, for the first time, commenced with two very popular short courses. You should make it a point to try to participate next year.

One of the programs, that I presented, involved the use of pile set to achieve ultimate bearing capacity. This case study involved a project recently completed at the Orlando International Airport utilizing 18-inch diameter pipe piles.

For some of you, depending on geographical area, the use of pile set to achieve bearing is an accepted common practice. For others, it is a very

new concept to engineers that you may be dealing with, one which can be very valuable in terms of time and dollar savings.

At the Orlando International Airport, the end of driving blow counts and PDA results indicated achievement of capacities on the order of 40 to 60 percent of the required ultimate (400 to 500 kips) at a depth of approximately 50 feet above the elevation, where refusal would be expected. However, three days later, due to pile set, capacities on 20 PDA tested piles were all well above capacities required.

After two static load tests verified PDA results, over 300 production piles were installed with an APE 30- to

32-pile hammer with a blow count that never exceeded 20 blows per foot! This resulted in a savings of over 15,000 feet of piling.

Keep this principal in mind when bidding jobs where soil conditions are proper for consideration of set, PDCA can be helpful to you by providing case study and other resources that may help make you more competitive. In many cases, hammer blow count at the end of driving does not indicate what the capacity of the pile really is. If you are willing to test, and soil conditions are conducive to pile set, you, along with a willing owner and engineer, can save a considerable amount of time and money. ▼