Attendees:  
Rudy Frizzi  
Jack Kelly  
M. J. Paul (visitor)  
Billy Oliver  
Ed Ulrich  
Carlos E. Ospina  
V. K. Kumar  
Domenic D’Argenzio  
David Bird (TAC Representative)  

1.0 Call to order – the committee was called to order at 08:40 a.m.  
1.1 Solicit “rotating” committee secretary  
B. Oliver volunteered to take notes. The Committee gratefully accepts.  

1.2 Roster review  
Roy Armstrong passed away suddenly, and will be missed by the committee. DFI plans a tribute.  

1.3 Quorum review. More than 50% of voting committee members in attendance, so quorum exists.  

1.4 Review and approve minutes  
Minutes from Pittsburgh were posted in February.  
Motion to approve by E. Ulrich, second by D. D’Argenzio. Unanimous approval by no objections.  

1.4 Approve agenda  
New agenda item: Large pile driving experiences in Panama  
Motion to approve agenda: B. Oliver; second by E. Ulrich. Unanimous approval by no objections.  

2.0 Prior Business  
2.1 Review status of ACI 543-xx “Guide to Design, Manufacture, and Installation of Concrete Piles”  
2.1.1 TAC Comments  
TAC provided 252 comments. Many of the comments resulted from misinterpretation by the reviewers.  

2.1.2 Progress on updates to address TAC comments  
The committee will respond not only with a table and a track changes version of the document, but also a memorandum detailing the history of the document. Draft response memorandum and associated appendices were posted in March. The memo is somewhat long and detailed, prepared in the main by Roy Armstrong with input from B. Gamble, E. Ulrich, and R. Frizzi; some committee members question how this will be received by TAC. The chair’s decision was to add a succinct summary as the first page of the memo. The summary will be made more evident by inserting title sheets before each attachment.  

2.1.3 Memo to TAC transmitting committee response to TAC comments  
Reviewed specific comments from committee members; results were tracked by R. Frizzi in the on-screen copy of the memo. Corrections to comment responses were also offered and included:  
- Comment 188 – editorial corrections: added “used”, “importantly”
Comment 194 – editorial corrections: added “in”, changed “vessel” to “shell”
Comment 213 – editorial corrections: made “pile” plural, deleted “than”
Comment 225 – Added “Comment applies to 8.4.2.”

E. Ulrich noted that some of the TAC comments which the committee chose not to include in the document during this revision cycle are nevertheless worth consideration for the next revision.

The committee discussed the future possibility of reorganizing the document, as well as possible expansion of the document.

2.1.4 TAC Submission
Per David Bird (TAC Representative), process for TAC response submittal: email to staff contact and copy TAC representative and review chief (both are David, in this case). Include not only responses, but also the ballot summary on the responses. **R. Frizzi to post the memo for committee for final balloting via the ACI website.** If TAC requests additional response, the most likely avenue will be a web meeting.

3.0 New Business
3.1 New committee initiatives
3.1.1 Spring 2012 Convention session: “Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures, with emphasis on seismic design.” (C. Ospina)
- Announcement was published in the last two issues of Concrete International (see page 19 of March issue). Two half-day sessions (three hours each) are planned for Dallas, Spring 2012.
- Request being considered at this convention. If approved, June will be the deadline for abstract submission. That will leave a relatively short time to organize the SP in time for Dallas. Five individuals have expressed interest in presenting to date.
- ASCE’s COPRI has a committee that is working on a national standard on wharves and piers. C. Ospina is a corresponding member, and has invited participation, but thus far has received only moderate enthusiasm.
- Recent seismic events in Chile, New Zealand, and Japan should provide many opportunities for case histories, lessons learned, or simply observations regarding common issues.
- C. Ospina will contact TAC to confirm session approval, and to express a preference for Monday morning/Tuesday morning, or to keep Sunday afternoon/Monday morning.
- Committee 357 (through chair D. D’Argenzio) is pleased to plan to co-sponsor this session. Expected responsibilities include: get the word out regarding the event, help solicit and review papers and presentations.

3.1.2 Collaboration with Committee 357 – Offshore Structures on proposed future session on foundations for near-shore alternative energy structures. (D. D’Argenzio)
- Committee discussed the inclusion of the term “near-shore”; this was not included in the abstract, in an effort to broaden the potential applicants.
- Papers will be accepted on a broad range of topics, possibly even including floating structures; the topic can be narrowed or not based on the number of papers submitted.
3.2 Other business

3.2.1 Large concrete pile driving in Panama (VK Kumar and C. Ospina)

- There have been several projects lately in Panama utilizing precast concrete piles for near-shore facilities (container ports, etc.)
- Panama has a thriving precast industry, but recent changes have included development of 24-inch square and 28-inch octagonal piles.
- The new piles have been a success for high capacity piles, but posed challenges with respect to handling, transportation length, and installation. Some problems were solved by casting in a steel pipe pile section for the tip and at splice locations (to be field welded). The pipe section was anchored with embedded bar welded to a plate. The plate and pipe section were required to match the external diameter of the pile. The overall length of the pile was more than 125 feet. The steel pipe tip section was left open to facilitate stabbing the pile. This resulted in a weak water-soil matrix trapped in the open tip section. Vent holes were tried, but the holes were not large enough to solve the issue, so future piles were closed-ended. This was an important lesson-learned.
- Work is underway now for a large ~10 acre pile-supported wharf using the same composite pile design. Water depth is ~15m, with pile depths up to 40m.
- Other options are mechanical splices (expensive), or welded splices (time-consuming, must be welded prior to standing up)
- Seismic demand will be satisfied by transferring to a sheet pile bulkhead, but the connections must be design to accept 6-8 inches of lateral deflection.
- Another project is located on an island approximately one hour offshore of Panama. This site is directly on rock, and is exposed to wave action.
- Dolphins are needed for ship mooring to take large lateral and uplift loads. Concrete piles (28-inch octagonal) were selected, but with an 8-inch steel core for tension. The piles were driven into drilled holes, and the cores were drilled and grouted into the rock to develop the tension capacity.
- This process worked well, except for one plumb pile which exhibited a longitudinal crack from the mudline to the head. The current working theory is that the pre-drilled hole was very tight, and some silt was trapped in the hole. Driving may have generated hydrostatic pressure in the pile, causing the crack to propagate from the embedded portion upward.
- Another possible explanation would be that the spiral was inadvertently left out of this pile.

3.2.2 Ideas for future consideration in Committee Document

- Consider creating one or more reference specifications, as these will help generate interest from the contractor/constructor community.
- Consider revising the boundary between 543 and 336 for drilled piers (currently 30 inches)
- C. Ospina noted that a contractor on a current project has proposed CIP piles instead of driven piles for 24-inch diameter x 40m piles, using a sacrificial casing. High-strain dynamic testing was been undertaken, but it has indicated low capacities and a "soft toe".

4.0 Meeting adjourn - The meeting adjourned at 11:15 a.m.

Respectfully submitted,
William Oliver, acting Secretary