

**ACI COMMITTEE 336  
FOOTING, MATS AND DRILLED PIERS**

**Convention:** Spring 2011  
**Location:** Tampa, FL (Marriot Suite 1001)  
**Date of Meeting:** Sunday, April 3, 2011  
**Time of Meeting:** 1:00 – 5:00 p.m.

**Participants:** *Committee members present:*

*Voting:*

Billy Oliver  
Bernie Hertlein  
Rudy Frizzi  
Jason Draper  
Ed Ulrich

*Associate:*

Larry Schulze  
Antonio Marinucci

Mike Kreger (TAC contact)

*Visitors present:*

*Regrets received from:*

Luke Schuler  
Adam Ramme  
David Hartman

Bill Brant  
Diane Campione

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**Meeting called to order at 1:10 p.m.**

**1. Introductions**

- 1.1. Sign-in sheet
- 1.2. Chair requests that guests sign in.
- 1.3. Introductions - name, affiliation, location

**2. Administrative Items**

- 2.1. Additions and changes to agenda
  - 2.1.1. Added communication with other committees under 5.3.2.
  - 2.1.2. Strive to adjourn early and move to the lobby for a website demo.
- 2.2. Meeting will adjourn at or before 5:00 p.m.

**3. Approval of Minutes**

- 3.1. Spring 2010, Chicago, IL
  - 3.1.1. Comments/discussion - none
  - 3.1.2. Ballot results: no vote held due to lack of a quorum
- 3.2. Fall 2010, Pittsburgh, PA

- 3.2.1. Comments/discussion - none
- 3.2.2. Ballot results: no vote held due to lack of a quorum

#### 4. Membership Roster Update

##### 4.1. Current roster

- 4.1.1. 15 voting members; 40% is a quorum = 6 members required to hold votes on documents; 50% = 8 required to vote on other actions (sessions, SPs, etc.).
- 4.1.2. Updates/corrections to contact information should be made online.
- 4.1.3. Changes to current membership categories
  - 4.1.3.1. Associate members must be ACI members.
  - 4.1.3.2. Satish Sachdev chose to retire from the committee.
  - 4.1.3.3. Larry Schulze agreed to become a voting member. [B. Oliver to request the change through ACI staff.](#)

#### 5. Status of Current Documents

##### 5.1. 336.1 – Specification for Drilled Piers

- 5.1.1. Published 2001
- 5.1.2. Revision task group report (Billy Oliver)
  - Subcommittee of three is working on technical changes first, then formatting
  - A. Ramme delivered proposed revisions; other subcommittee members (B. Oliver, L. Schuler) need to review
  - Discussion: ballot/review prior to formatting, or format first?E. Ulrich requests that the proposed technical changes be balloted using track changes format prior to reformatting the document. Document will be balloted at least one month prior to the next meeting (ballot in September 2011) with proposed technical changes. [B. Oliver to seek guidance from TSC on format, checklist, references \(specific editions versus evergreen style\).](#)
- 5.1.3. Consensus guidance needed
  - Does anyone use A996 rail steel?E. Ulrich to check with Walter P. Moore associates (Dennis Wittry, Larry Griffis) on use, otherwise, consensus of those present is that the material can be deleted from the specification. [\[Post meeting update: E. Ulrich reported that this material is not in common use as far as he could determine.\]](#)
  - Should withdrawal of temporary casing be up to the constructor?This is a means and methods decision that requires constructor input, but there are definite design issues that must be approved by the engineer. One way to handle this would be a submittal that must be approved by the engineer. Upon review of the specification, it would appear that the issue is already covered, as casing is defined as temporary or permanent, so all the provisions regarding casing apply to both permanent and temporary, including the required submission of details and installation/withdrawal plans. [B. Oliver to alter proposed revisions to emphasize this once at the beginning of the specification, then remove later references to temporary casing.](#)

- 5.2. 336.2R – Suggested Analysis and Design Procedures for Combined Footings and Mats  
Published 1988, reapproved 1993;

#### 5.2.1. Subcommittee Progress Report (Billy Oliver for Bill Brant)

- Discussion of progress on the 336.2R report for combined footings and mats.

J. Draper, Chapter 7: Draft to be sent out before the next meeting.

L. Schulze, Chapter 6: Draft underway, will be sent to subcommittee by the end of April.

B. Hertlein, Chapter 9: Need to get with L. Schuler; will deliver draft for the next meeting.

- Revised Chapter 1 posted; includes a general discussion about the different types of methods for foundation analysis, a mention of how this version of the report will vary from past versions, and also mentions other topics that are included in the document such as teamwork between the structural engineer and geotech engineer, deep foundations, and the construction contractor.

#### 5.2.2. Subcommittee Progress Report (Rudy Frizzi)

- Official 336-0A subcommittee, Mats on Deep Foundations, formed following Chicago Spring 2010 meeting to allow collaboration with consulting members Rolf Katzenbach and Harry Poulos. Additional subcommittee members are Ed Ulrich, Clyde Baker, and Billy Oliver.
- A revised chapter draft with new content for piled mat foundations has been written and posted; comments from subcommittee members are requested. Revised draft strives to present analysis techniques that are in use, rather than address design. This chapter will likely not address detailed structural design, but rather highlight the potential benefits, important design issues, and analysis techniques currently in use.
- [R. Frizzi and the subcommittee plan to:](#)
  - [Draft chapter \(in progress\)](#)
  - [Organize a special publication of case histories](#)
  - [Plan a session](#)

#### 5.2.3. Additional discussion under agenda item 8.

### 5.3. 336.3R – Design and Construction of Drilled Piers

#### 5.3.1. TAC submission schedule and strategy

- Draft has been cleaned up for submission to HQ; next step is updating to match the TCM (units, references, style, etc.)
- R. Frizzi and E. Ulrich advised – based on the recent experience of 543 – that it is very important that the committee communicate clearly to TAC that the document is a report (not a guide).
- [B. Oliver to submit document as it is, then make editorial changes to units in parallel.](#)

#### 5.3.2. Recommendations to other committees (IBC, ACI 117)

- The committee discussed R. Frizzi's IBC comparison, particularly including location tolerances, casing requirements, and requirements for rock sockets. 336 should make recommendations for changes to IBC as needed; recommendations from consensus committees get a better reception than changes from individuals.
- Larry Schulze provided a summary of the recommendations for cracked stiffness in IBC.
- [B. Oliver to prepare a letter and ballot it to ensure committee consensus, then send \(through ACI, with copies to Larry Johnsen, DFI and Antonio Marinucci, ADSC\).](#)
- [B. Oliver to contact Dan Falconer about ACI – IBC communications.](#)

- B. Oliver & B. Hertlein to visit 117 meeting on Tuesday morning at 08:30 to bring up the tolerance issue with them.

5.4. 336.4R – Alternative Method for the Analysis and Design of Footings using Load and Resistance Factors

5.4.1. Proposed document – never published; on hold pending revision of 336.2R.

## 6. TAC Updates

Activity	TAC Summer Meeting Farmington Hills, MI July 13-15, 2011	ACI Fall Convention Cincinnati, OH October 16-20, 2011
Final 30-day letter ballot issued	9-Mar-11	10-Jun-11
Committee approved document submitted to staff for editorial review	13-Apr-11	15-Jul-11
Document submitted to TAC and external reviewers	8-Jun-11	9-Sep-11
TAC Review Group conference calls	July 6-8, 2011	October 5-7, 2011
TAC meeting	July 13-15, 2011	October 14-16, 2011

### 6.1. TAC review of 336.3R

6.1.1. Three volunteers: Billy Oliver, Bernie Hertlein, Clyde Baker

6.1.2. B. Oliver will advise Bernie and Clyde when the TAC review has been scheduled.

### 6.2. Technical Committee Manual (TCM) changes

6.2.1. The new TCM 2011 has incorporated the style guide and specification manual.

## 7. Review of Action Item list

7.1. See revised list, attached and posted on website.

## 8. Working Session: 336.2R

### 8.1. 336.2R – Suggested Analysis and Design Procedures for Combined Footings and Mats

8.1.1. Target first ballot by May 2011 (previously agreed to ballot by chapter, with outline).

- First ballot to include at least one chapter and the outline.
- Discussion: Is it useful to ballot just Chapter 1, given that it is very general, or should the first ballot wait until additional chapters are ready? Consensus is that ready or not, it is useful to ballot the outline, target audience, and document “footprint”, along with Chapter 1.
- [Members are requested to comment on the draft of Chapter 1, as well as the outline/chapter list.](#) Both are posted on the website.
- [B. Oliver to ballot the outline and Chapter 1 in May 2011.](#)

8.1.2. Outline revision

The committee members present added a description of the target audience to the outline/chapter list, then went through the rest of the outline and added detail as possible.

The revised outline will be posted for comments later this week, then balloted in May as previously noted. Members are encouraged to submit comments for incorporation prior to the ballot.

The goal of this outline/chapter list document is to serve as a 'road map' for the ongoing revision and balloting by chapter of the remainder of this rewrite of 336.2R.

### **9. Open Discussion of Current Issues in Construction (Footings, Mats, or Drilled Piers)**

B. Hertlein provided a demonstration of navigation on the committee website. Note that the sub-folders do not appear until the small plus sign to the left of the directory tree is clicked. Also note that double-clicking the plus sign may show, then hide, the sub-folders and files very quickly; members are encouraged to click once, then wait.

### **10. Future Agenda Items**

Committee members are encouraged to send suggestions to B. Oliver for inclusion on future agendas.

### **11. Adjourn**

The meeting was adjourned at 4:20 p.m.