

## PUC Meeting Minutes

December 4-5, 2019  
THE WESTIN SAN FRANCISCO AIRPORT

### Participants

#### **Provisions Update Committee**

David Bonneville, Degenkolb Engineers (Chair)  
Pete Carrato, Bechtel Corporation  
Kelly Cobeen, Wiss Janney Elstner  
C.B. Crouse, AECOM (absent)  
Dan Dolan, Washington State University  
Anindya Dutta, Simpson Gumpertz & Heger  
S.K. Ghosh, S.K. Ghosh Associates  
John Gillengerten, Consulting Engineer  
Ron Hamburger, Simpson Gumpertz & Heger  
Jim Harris, James Harris & Associates  
William Holmes, Rutherford & Chekene (absent)  
John Hooper, Magnusson Klemencic Associates  
Gyimah Kasali, Rutherford & Chekene  
Charles Kircher, Charles Kircher & Associates  
Philip Line, American Wood Council  
Bret Lizundia, Rutherford & Chekene  
Jim Malley, Degenkolb Engineers  
Bonnie Manley, American Iron and Steel Institute  
Robert Pekelnicky, Degenkolb Engineers  
Rafael Sabelli, Walter P. Moore  
John Silva, Hilti (absent)  
Greg Soules, CB&I  
Jonathan Stewart, University of California Los Angeles

#### **BSSC Members and Associates**

Jennifer Goupil, ASCE/SEI, BSSC Board  
Bahram Zarin-Afsar, BSSC Board  
Emily Guglielmo, Martin/Martin, ASCE 7 SSC  
Laura Champion, ASCE/SEI  
Philip Caldwell, SE (call in)  
Mike Ganna, AISC

#### **USGS**

Nicolas Luco  
Sanaz Rezaeian

#### **NIST**

Matthew Speicher

## **FEMA /NIBS**

Mai Tong, FEMA

Bob Hanson, FEMA

Lakisha Woods, NIBS/BSSC

Jiqui Yuan, NIBS/BSSC

### 1. Introductions, Agenda Review, Antitrust Statement, Bonneville

David Bonneville opened the meeting at 9:00 a.m. with member introductions, a reading of the anti-trust statement, and a review of the agenda.

### 2. Approval of Last PUC Meeting Minutes, 2020 Cycle Schedule Review, Bonneville

The minutes were approved unanimously (19 PUC voting members in the room) and the meeting minutes will be posted on the BSSC website. [https://www.nibs.org/?page=bssc\\_PUC](https://www.nibs.org/?page=bssc_PUC)

Clarification with PUC ballot procedures: If significant changes were made to resolve MO comments, the proposal would be reballoted by MO. The reballot may not include the whole suite of the proposal but just the changed sections.

The next PUC ballot will be our last ballot and will only include reballot items but not new proposals so 2020 NEHRP Provisions could be completed and published in time.

### 3. ASCE 7 SSC update, Hooper

John Hooper, Jennifer Goupil, and JQ are coordinating to deliver all the PUC approved proposals to ASCE 7 SSC. It is clarified that ASCE 7 SSC will have all the PUC approved proposals from BSSC directly, and proponent may make editorial tweaks to the PUC approved proposals. They should notify ASCE SSC as to what is PUC approved and what are the changes.

### 4. FEMA Update, Tong

FEMA/BSSC contract for Fiscal Year 2020 is in place and we are on schedule to develop the 2020 NEHRP Provisions. Suggested that PUC and its Issue Teams begin thinking about the unsolved problems, future issues, and research needs.

### 5. BSSC Update, Yuan

- This cycle we have vetted about 50 proposals, 15 proposals have been finalized (resolved both PUC and MO comments), and we will complete 14 more at this meeting (resolve the MO comments).
- BSSC is preparing for the 2020 NEHRP publication and JQ will collect and confirm all the final versions of proposals.

- FEMA/BSSC will continue to support needed IT in-person meetings. One important input FEMA and BSSC would like to get is the recommended issues for next cycle from each issue teams and members.
- Planned outreach activities:
  - BSSC 1-day symposium with PUC recognition ceremony is being planned
  - Presentation sessions at National Earthquake conference and NIBS Annual Conference
  - If you are presenting NEHRP related topics at other conferences, please let JQ know and BSSC would be happy to help promote it.

6. IT 5-2 (No.38) F<sub>p</sub> Lateral Force Proposal (MO ballot), Gillengerten

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- NAHB's No vote: Motion by Greg Soules that it is non persuasive, 2<sup>nd</sup> by John Hopper, in favor 15, no 0, not voting 0. Motion carried.
- ASCE' YR vote: Motion by Jim Harris that it is persuasive and it is conceptually simple (not required for rebalot), 2<sup>nd</sup> by Greg Soules, in favor 15, no 0, not voting 0. Motion carried. In next MO ballot #4, it is suggested to share the changes with MO but not ask for revote.
- AISI's YR vote: change response to editorial persuasive. Change to "relevant material standards" and delete "list in Chapter 23."
- SEAONC's No vote:
  - Motion by Greg Soules that Comment 1 is non-persuasive, 2<sup>nd</sup> by John Hopper, in favor 15, no 0, not voting 1. Motion carried.
  - Motion by Greg Soules that Comment 2 is non-persuasive, 2<sup>nd</sup> by John Hopper, in favor 15, no 0, not voting 1. Motion carried.
  - Motion by Greg Soules that Comment 3 is non-persuasive, 2<sup>nd</sup> by John Hopper, in favor 15, no 0, not voting 1. Motion carried.
- SEA OCC YR vote:
  - Comment on page 13 line 35: non persuasive
  - All other comments are editorial persuasive

Motion by Greg Soules to accept all the comments resolution and move it to 2020 NEHRP Provisions, 2<sup>nd</sup> by Dan Dolan, in favor 16, no 0, not voting 0. Motion carried.

7. Pete Carrato shared some pictures about a massive fuel storage tank designed per Chapter 13 and a "bad" brace design.

8. IT4-3 (No. 48) Shear Wall Resource Paper, Ghosh

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- Bret's YR comment: all persuasive, editorial

- Jim Malley's comments: agree.
- John Silva: change No vote to YR.

Motion by SK to move it to MO Ballot #4 with all the editorial improvements, 2<sup>nd</sup> by Greg Soules, in favor 17, no 0, not voting 1. Motion carried.

#### 9. RS-1 (No.11) Drift and Deformation proposal (MO ballot), Sabelli

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- All changes are editorial.

Motion by Rafael Sabelli to move the proposal as modified to 2020 NEHRP Provisions, 2<sup>nd</sup> by Greg Soules, in favor 17, no 0, not voting 1. Motion carried.

#### 10. RS-2 (No.45) Drift Limit Table Revision, Silva and Sabelli

The proposal failed at the PUC online ballot. The proposal was withdrawn by the proponents and it is likely to be considered at next cycle.

#### 11. NIBS President Introduction, Lakisha Woods

NIBS' President and CEO, Lakisha Woods, attended the meeting on the afternoon of the 4<sup>th</sup> and morning of the 5<sup>th</sup>.

#### 12. IT 1-8 (No.49) SDC Consolidation, Gillengerten

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- Motion by John Gillengerten to move the proposal with corrections (particularly taking out the options, restoring the words for MMI 8 in commentary) to MO Ballot #4 (and in parallel submit it to ASCE 7 SSC), 2<sup>nd</sup> by Jim Harris, in favor 16, no 0, not voting. Motion carried.

#### 13. PL-1 (No. 43) CLT Shear Wall Proposal, Line/van de Lindt

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- Bonneville's comments: Motion by Philp Line to accept proposed responses, 2<sup>nd</sup> by Dan Dolan, in favor 14, no 0, not voting 2. Motion carried.
- Carrato's No vote: Motion by Philp Line to accept proposed responses, 2<sup>nd</sup> by Dan Dolan, in favor 12, no 1, not voting 2. Motion carried.
- Cobeen's comments: Motion by Philp Line to accept proposed responses, 2<sup>nd</sup> by Kelly Cobeen, in favor 14, no 0, not voting 1. Motion carried
- Hamburger's comments: Motion by Philp line to accept proposed responses, 2<sup>nd</sup> by John Gillengerten, in favor 11, no 0, not voting 1. Motion carried.

- Harris' comments: Motion by Philp Line to accept proposed responses, 2<sup>nd</sup> by Jim Harris, in favor 12, no 0, not voting 1. Motion carried.
- Pekelnicky' comments:
  - Comment 2: clarify floor diaphragm CLT floor panels are designed to function as the floor diaphragm. Motion by Phil Line find it persuasive, 2<sup>nd</sup> by Bob Pekelnicky, in favor 14, no 0, not voting 2. Motion carried.
  - All other Comments: solved.
- Silva: change his No vote to YR.

Motion by Philip Line to move the revised proposal to MO ballot #4, 2<sup>nd</sup> by Dan Dolan, in favor 13, no 0, not voting 2. Motion carried.

#### 14. Presentation of the ongoing soil structure interaction research (ATC 144), Lizundia

- A practical guide to soil-structure interaction
- Finite element “direct analysis”
- Review of ASCE 7 Chapter 19
- The timeline to produce 2020 NEHRP Provisions won't allow another PUC Ballot for this proposal, and Lizundia may have an ASCE 7 proposal, if so, by July 2020 for ASCE 7.

#### 15. IT 1-7 (No.39) proposal Resilience Resource Paper (MO ballot), Bonowitz

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Bob Pekelnicky to move the revised revision to 2020 NEHRP Provisions, 2<sup>nd</sup> by Jim Manley, in favor 17, no 0, not voting 0. Motion carried.

#### 16. NIST/FEMA Functional Recovery update, McCabe/Mahoney

Steve McCabe from NIST and Mike Mahoney from FEMA updated their joint effort to address one of the charges within the 2018 NEHRP Reauthorization related to functional recovery. The functional recovery recommendation report will be completed and submitted to Congress by August 2020.

#### 17. Beginning of planning for next cycle: unresolved issues, future topics, and needed research, Bonneville

- Similar to what has been done in the past, PUC will develop a report summarizing the unresolved issues in this cycle, future topic and research needs. David suggested each IT to meet to discuss future issues. SK and Kelly Cobeen volunteered to lead the effort.
- Potential needed funded research discussed at the meeting:

➤ Performance objective  
and acceptable risks, qualitative language with

- quantitatively performance targets
  - Choice of max direction
  - Ongoing ATC 138 on performance-based seismic design
  - Review of a P-695 study for diaphragm,  $R_s$  factor, amplification factor
  - Funded transparent non-structural testing (like topics on component ductility and damping)
  - SSI, research to show if current code is adequate and when SSI is needed
- Future topics discussed at the meeting:
    - Diaphragm deflection
    - $C_d=R$  – continuing studies
    - Outreach/community building, engage in more stakeholders, demonstrate the need for change
    - Understanding the impact of changes
    - Liquefaction
    - Site specific response (chapter 21); risk target; deterministic caps
    - More broad, holistic strategic thinking
    - Design examples and training materials

## 18. MRPS Proposals, Kircher/Luco/Rezaeian

- IT10-1 (No. 20) MRPS-Chapter 11 (MO Ballot)
  - Please see all the comments and responses at the BSSC Ballot Portal.  
<https://portal.nibs.org/bssc/>
  - Motion by Charlie Kircher to find NAHB non persuasive (agree the change will affect IRC), 2<sup>nd</sup> by Jon Stewart, in favor, 19, no 0, not voting 0. Motion carried.
  - Comment about potential conflict in changes to Section 11.4.2 (and Chapter 20), Motion by Charlie find the response acceptable, 2<sup>nd</sup> by David Bonneville, in favor 18, no 0, not voting 0. Motion carried.
  - About referring to USGS data as site specific, agree with the solution
  - Clarification on requirements for multi-period and 2-period design spectra, motion by Charlie to accept the revised language, 2<sup>nd</sup> by David Bonneville, in favor 19, no 0, not voting 0. Motion carried.

Motion by Charlie Kircher to accept the changes and move the revised proposal to 2020 NEHRP Provisions, 2<sup>nd</sup> by Dan Dolan, in favor 19, no 0, not voting 0. Motion carried.

- IT 10-2 (No.21) MRPS-Chapter 20 (MO Ballot)
  - Please see all the comments and responses at the BSSC Ballot Portal.  
<https://portal.nibs.org/bssc/>
  - Motion by Charlie Kircher to accept all the comments response, 2<sup>nd</sup> by Rafael Sabelli, in favor 19, no 0, not voting 0. Motion carried.

Motion by Ron Hamburger to accept the responses and move the revised proposal to 2020 NEHRP Provisions, 2<sup>nd</sup> by David Bonneville, in favor 19, no 0, not voting 0. Motion carried.

- IT 10-3 (No.22) MRPS-Chapter 21 (MO Ballot)
  - Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
  - SEAONC's no vote: about eliminating deterministic lower limit, Motion by Charlie Kircher find it non persuasive (modify the response that "site specific analysis is no longer relevant"), 2<sup>nd</sup> by Ron Hamburger, in favor 17, no 0, not voting 1. Motion carried.
  - SEAONC comment on smoothing, Motion by Charlie Kircher find it non persuasive, 2<sup>nd</sup> by Jim Manley, in favor 17, no 0, not voting 0. Motion carried.
  - SEAONC comment on "site specific", Motion by Charlie Kircher that it is editorial persuasive and proposal will remove "site specific", 2<sup>nd</sup> by Jim Manley, in favor 17, no 0, not voting 1. Motion carried.
  - ASCE, SEAOC comments on shear wave velocity thresholds, it is persuasive. PUC agrees that it is not a significant technical change and rebalot is not needed, in favor 18, no 0, not voting 0.
  - Comment about the tool, agree on the solution
  - Comment on allowing the USGS mapping value to be taken as the site specific response spectrum, agree with the solution
  - Comment on clarifying the use of  $S_{D1}$  for the two period design response, agree on the solution

Motion by Charlie Kircher to accept the changes and move the revised proposal to 2020 NEHRP Provisions, 2<sup>nd</sup> by Ron Hamburger, in favor 17, no 0, not voting 2. Motion carried.

- IT 10-4 (No.23) MRPS-Chapter 22 (MO Ballot)
  - Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
  - NAHB's No vote: Nico Luco presented SDC change comparisons and it is suggested to present the comparison at the BSSC workshop. There are fewer changes than expected. Suggestion to roll out this information during BSSC workshop/and workshop proceedings. Won't include the comparisons in the commentary. Motion by Charlie Kircher that NAHB is non persuasive, 2<sup>nd</sup> by Dan Dolan, in favor 16, no 0, not voting 0. Motion carried.
  - ASCE YR comments: agree with comments resolution

Motion by Charlie Kircher to accept the changes and move the revised proposal to 2020 NEHRP Provisions, 2<sup>nd</sup> by Dan Dolan, in favor 15, no 0, not voting 2. Motion carried.

#### 19. IT 7-1 (No.33) Chapter 20, site classification (MO Ballot), Kasali

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- NAHB's comment: same response as provided in Proposal No. 21 by Charlie Kircher. Motion by Gyimah Kasali that it is non persuasive, 2<sup>nd</sup> by Jon Stewart, in favor 14, no 0, not voting 0. Motion carried.
- ASCE's comments: editorial persuasive.
- SEAC: non responsive

- SEAONC: motion by Gyimah to accept the response, 2<sup>nd</sup> by Jon Stewart, in favor 15, no 0, not voting 1. Motion carried.
- ACI's No vote: coordinated with proposal IT10-2. Motion by Gyimah Kasali to find it editorial persuasive, 2<sup>nd</sup> by Charlie Kircher, in favor 16, no 0, not voting 0. Motion carried.

Motion by Gyimah Kasali to move it to 2020 NEHRP Provisions with all the editorial changes, 2<sup>nd</sup> by Charlie Kircher, in favor 16, no 0, not voting 0. Motion carried.

20. IT 7-2 (No.34) Chapter 11, MRPS (MO Ballot), same as IT10 -2, withdrawn by Kasali.

21. IT 7-3 (No.35) Chapter 19, SSI for Seismic Design (MO Ballot), Kasali

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- ASCE No vote: Motion by Gyimah Kasali to find it editorial persuasive, 2<sup>nd</sup> by Jim Manley, in favor 15, no 0, not voting 0. Motion carried.
- SEAONC: EP

Motion by Gyimah Kasali to move it to 2020 NEHRP Provisions with editorial changes (and check with Jennifer using right ASCE 7-16 version), 2<sup>nd</sup> by Jon Stewart, in favor 17, no 0, not voting 0. Motion carried.

22. IT2-7 (No.40)  $C_d=R$  resource paper, Cobeen

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Kelly Cobeen to move it to 2020 NEHRP Provisions with editorial changes, 2<sup>nd</sup> by SK Ghosh, in favor 13, no 0, not voting 1. Motion carried.

23. IT 9-10 (No.47) Diaphragm Deflection Resource Paper update, Cobeen

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Kelly Cobeen that technical changes incorporated are conceptually simple and move it to MO ballot with suggested edits, 2<sup>nd</sup> by SK, in favor 14, no 0, not voting 2. Motion carried.

24. IT9-6 (No.41) Diaphragm Design Methods Commentary (MO Ballot), Cobeen

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Kelly Cobeen to move it to 2020 NEHRP Provisions, 2<sup>nd</sup> by Philip Line, in favor 14, no 0, not voting 1. Motion carried.



25. IT9-9 (No.46) Derivation of  $R_s$  Factors Resource Paper, Cobeen

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Kelly Cobeen to move it to MO Ballot #4 with suggested edits, 2<sup>nd</sup> by SK, in favor 16, no 0, not voting 1. Motion carried.

26. IT9-8 (No.42) Composite Concrete Filled Metal Deck (MO Ballot), Cobeen

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Kelly Cobeen to move it to 2020 NEHRP Provisions, 2<sup>nd</sup> by SK Ghosh, in favor 15, no 0, not voting 0. Motion carried.

27. JPS-1 (No. 32) Deterministic Caps (MO Ballot), Stewart

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Jon Stewart to move it to 2020 NEHRP Provisions, 2<sup>nd</sup> by John Gillengerten, in favor 14, no 0, not voting 0. Motion carried.

28. JPS-2 (No.37) Proposal on v/h ratio, Stewart

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>

Motion by Jon Stewart find all the comments about correcting reference to SDC persuasive, the rest are editorial, and move the revised proposal to MO Ballot #4, 2<sup>nd</sup> by Kelly Cobeen, in favor 15, no 0, not voting 0. Motion carried.

31. IT 3-1 (No.44) RSA

- Please see all the comments and responses at the BSSC Ballot Portal. <https://portal.nibs.org/bssc/>
- Cobeen's comment 1: withdrawn. Agree on the resolution for the rest
- Ron comment: revise per Ron's comment 5.
- Soften the wording related to  $C_d=R$

With all the comments resolution, the proposal will be revised and resubmitted to next PUC ballot. A companion Part 1 proposal will also be developed. The proposals will be discussed at PUC 3/17/2020 meeting, then go to MO Ballot #5 if passed, and resolve MO comments in a PUC web meeting.

### 32. Future Meetings

- The next PUC in-person meeting will be held on March 17, 2020 at SFO
- JQ will send a Doodle Poll to find a date for the BSSC Symposium
- Future PUC web meetings may be held to resolve the last few MO comments

### 32. Meeting Adjourn