

9/1/2016 BSSC PUC IT2 Meeting #1

Attendees (*italicized via webex*):

Voting:

Sandy Hohener
Kevin Moore
Daniel Dolan
Tom Xia
Bret Lizundia
Edwin Huston

Corresponding:

Bonnie Manley
Taka Tamiya
Dan Sloat
Greg Soules
Richard Bennett
Hussain Bhatia
Phil Line

Agenda items and discussion. Action items in bold

Approximate Periods (Hohener):

- Vote (5/0) to NOT move forward with the recommendations of the Adeli papers.
- The group feels that the caps on the period are appropriate and are based in other aspects of the code based design.

12:30 – 1:15pm: Height Limits (Xia).

- ASCE 7-16 corrected the transfer diaphragm issue that is included in the City of Seattle provisions.
- Designing the foundation for overstrength is a separate issue that, while important, is outside the scope of IT2.
- Committee voted (6/0) to move forward on developing a framework to adjust the height limits.
 - Committee felt that the line of demarcation when higher mode effects become important might be a more important trigger for non-linear analysis than a height limit. This will have to be weighed against the fact that the height limits are already in the code and are thus the easiest thing to modify.
 - Committee felt that qualitative measures, such as the number of occupants is also an important factor, to trigger advanced analysis.
 - Committee felt that triggers should focus on buildings that the code currently allows to be designed for prescriptive linear code based provisions.
 - Working Group established (Xia (chair), Moore, Dolan, Hohener)
 - Working group to research the papers/studies that form the technical basis of PEER Tall Building Guidelines et al. that will provide technical substantiation for triggering performance based design. Xia to coordinate this effort.** Note that *Hamburger et. al. response to Pfeiffer RE*

City of Seattle (e.g. on why dual systems > 240 feet should be designed using response history analysis) is a very good starting point for this effort.

1:15pm – 2pm: Bearing Wall Definition and Associated R-Factors (Hohener/Moore/Huston)

-Committee agreed that bearing wall code definition needs to be clarified.

-Huston to provide source for rationale of current code (lightweight construction) bearing wall definition.

-Committee agreed that providing supplemental frame detailing within a cast-in-place concrete wall does not provide any more ductility capacity and current thinking should be addressed in the provisions.

-Committee felt that the universe of “bearing wall” buildings that deserve to be designed with the lower off the R-factors is fairly small and a definition(s) of bearing walls that captures only these specific provisions needs to be developed.

-Working Group (Huston (chair), Hohener, Moore, Bhatia)

-Moore to begin compiling a list of archetypal buildings that should be designed as “bearing wall” buildings

2pm – 2:15 pm: Using $\rho = 1.3$ for high R buildings in SDC D (Moore)

-Moore expressed concern that the only penalty for buildings that have a primarily torsional response is ρ – these buildings are still designed for orthogonal response and don’t necessarily even trigger a modal analysis.

2:15pm – 2:30 pm: ATC 84 summary (Sloat)

2:30pm – 3pm: $C_d = R$ Proposal Framework (Tamiya).

-Committee felt that as a first step research that shows that $R = C_d$ needs to be compiled.

-Sloat/Tamiya to compile this research and look into technical justification for $C_d \ll R$ in current NEHRP provisions.

-Committee discussed whether or not it would be worth suggesting a code change proposal to “fix” ASCE 7 even though the committee agreed that changing $C_d = R$ without modifying the drift limits accordingly would be inappropriate. No consensus on this issue at this point.

3pm – 3:30pm: 100%/30% Directional Combination (Lizundia).

-Committee voted to bring a proposal forward to the PUC (6/0).

-Committee felt that Lizundia presentation/research is sufficient to substantiate a code change.

-Lizundia to develop a proposal and IT will vote on this proposal to bring forward to the PUC

3:30pm – 4pm: 100%/30% ATC-123 Update & Torsional Response (Hohener).

-Hohener to contact ATC 123 representatives to ensure that aspect ratio is a consideration in the universe of buildings being studied.

-Moore to provide example of building that could be designed without consideration of torsional response.