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 \( \rho \) – 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 \( C_d << R \) 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.