Appendix A

High Impact Items:

The following items were identified for priority consideration during the workshop on the engineering needs for existing buildings, held during the NEHRP ACEHR meeting 19-20 November 2013. These are listed as developed, and have not been prioritized.

1. Non-ductile concrete frames, including the identification of the characteristics of killer buildings.

2. Provisions of RP-8 of lower seismicity.

3. Assessment tools for better modeling and evaluation of new and existing buildings, including improved estimates of benchmark fragilities.

4. Soil structure interaction effects on low-rise and high-rise buildings, including better integration of structural and geotechnical methodologies and consideration of permanent ground deformations.

5. Risk assessments and their use in identifying priorities.

6. Barriers to mitigation of earthquake risk, including ways to improve safety with more innovative systems and low cost incremental solution. Better understanding of local developers, builders, and construction workers and their perception of the vulnerabilities and benefits.

7. Calibration and expansion of FEMA P-58 methodology for evaluating overall performance.

8. Earthquake building rating system based on broad stakeholder participation.

9. Issue teams that are funded to develop improved ASCE 41 tools through translating research into practice.

10. Collect, curate, and archive building inventory data in all seismic regions to facilitate regional loss estimation and to focus research on the most common high-risk building and structural types.

11. Improve methods to identify and repair structural damage, including hidden damage caused by earthquakes.

12. Insitu testing of behavior of existing buildings.

13. Building stock resiliency related to community resilience, including lifeline services.

14. Characterization of risk, including the impact on communities.

15. Better assessment tools and guidelines that support mitigation; define what is a threat to the public.