

Base isolation and vibration control breakout report

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Current E-Defense Plans

Base isolated building tests, LRB isolation

- 2012
 - passive isolation tests
 - building being designed currently
 - mid-rise (3-4 story) RC building
- 2015
 - semi-active control
 - control algorithm
 - new idea system

Ground Motions

- Long period
- Long duration
- Impulsive ground motions
- Vertical motion to be included

Potential Collaboration

- Logistics:
 - Must show benefit to Japan
 - Budget needed to reflect actual demands - NEESR
 - Approval from E-Defense needed
 - Clear two-way outline of collaboration, responsibilities, benefits, cost
- Semi-active tests
- Negative Stiffness device
- Nonstructural effects, impact of isolated building, effects of vertical ground motion, etc. could be tested at scale in the US

Potential Collaboration (continued)

- Possible US building in parallel with Japanese building
- Isolator testing (UCSD?)
 - No long duration ground motions tested at UCSD; large deformations from near-fault
 - Scale effects may need to be investigated
 - UCSD is not a NEES facility, but other funding avenues possible