IT 6 Non-building Structures

PUC Meeting, November 2016
IT 6 Non-building Structure

- Two Meetings
  - Face to face in Houston – all day
  - Conference call on large bore piping – 2 hours
- Meeting minutes available on website
IT 6 - Topics being considered (general)

• General (not specific to non-building structures)
  • Vertical seismic
  • Duration of strong ground motion
  • Risk vs Reliability (a systems approach)
IT 6 – Topics being considered (non-building)

• Non-building topics
  • Buildings with short specified design life (i.e. waste treatment)
  • Fiberglass cooling towers
  • Large concrete foundation
  • Lattice column structure
  • Expand pipe-rack section to distributed systems
    • Conveyor systems, large duct work, etc.
    • Need trigger points for additional analysis – i.e. added stiffness and mass
REQUEST FOR PROPOSALS
FOR THE
AUTOMATED PEOPLE MOVER (APM)
L. **Seismic Design:** Design the seismic performance of the guideway and columns supporting the guideway, including within the stations, M&SF and CONRAC, as follows:

1) **Operating Design Earthquake (ODE):** The probabilistic ODE has an average return period of one-hundred fifty (150) years. Design the structure to remain essentially elastic and for damage to be none to minimal and cosmetic in nature. The structure shall remain fully operational immediately after the ODE level earthquake. Primary structural members could have structural damage of a negligible nature. Refer to ASCE 41 for damage descriptions.

2) **Maximum Design Earthquake (MDE):** The probabilistic MDE has an average return period of 2,500 years. The guideway may not be fully operational immediately after the seismic event, but damage is controlled and limited to elements that are accessible and that can be readily repaired with limited disruption to service.

3) For portions of the guideway near S. Sepulveda Blvd, under the review of Caltrans, design seismic performance using the ODE, as stated above, and Caltrans Deterministic and Probabilistic Acceleration Response Spectra (ARS). This deterministic and probabilistic spectra has an average return period of 975 years. The guideway may not be fully operational immediately after the seismic event, but damage is controlled and limited to elements that are accessible and that can be readily repaired with limited disruption to service.
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