ABSTRACT

The Port Special Session provides perspectives from port authorities, consultants, and a researcher on seismic analysis and design topics that impact the planning, protection, design, and retrofits projects of piers and wharves. The session provides an overview of: ASCE/COPRI piers and wharves design standards; ASCE/COPRI guidelines for seismic design of bulkheads; wharf upgrade project at the Port of Los Angeles and new wharf development at the Port of Long Beach; a seismic retrofit of Pier 6 at Puget Sound Naval Shipyard; and vulnerability and damage analysis maps that can be used by decision makers to assess and potentially mitigate impacts of hazards at ports and harbors. This session will have six presentations as follows:

1. **Update on ASCE/COPRI Piers and Wharves Design Code Standard.** This presentation provides an update on a newly forming committee for ASCE/COPRI standard that will provide a national consensus regarding the analysis and design of piers and wharves.

2. **ASCE 61 Updates and New ASCE Guidelines for Seismic Design of Bulkheads.** This presentation will summarize major updates to ASCE 61-19 along with new guidelines for seismic design of bulkheads.

3. **Upgrade of Berths 226-236 Everport Container Wharf Terminal at The Port of Los Angeles.** As a part of the Port of Los Angeles wharf upgrade program, this presentation describes the upgrades at Berths 226-236 container wharf terminal to accommodate the current and future ship sizes.

4. **Wharf Structure Design Consideration of Pier E Redevelopment Project at the Port of Long Beach.** This presentation addresses the wharf structural design considerations. A performance-based approach was used for the seismic design of the wharf structure utilizing the Port of Long Beach Wharf Design Criteria.

5. **Seismic Retrofit of Pier 6 at Puget Sound Naval Shipyard Using Lead-Rubber Bearings.** This presentation addresses the seismic retrofit of Pier 6 at Puget Sound Naval Shipyard Using Lead-Rubber Bearings.

6. **Harbor Vulnerability to Extreme Natural Hazards.** This presentation will describe the vulnerability maps for harbors throughout California showing “hot-spot” areas where there is relatively high potential for damage. The outputs of these damage analysis maps can be used by decision makers to assess and potentially mitigate the impacts of these hazards on harbors.

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1 PhD, PE, DPE, MASCE, Moffat & Nichol, Long Beach, CA, 90806 (ojaradat@moffattnichol.com)
2 PhD, GE, DGE, MEERI, FASCE, Earth Mechanics, Inc. CA 92708 (arulmoli@earthmech.com)