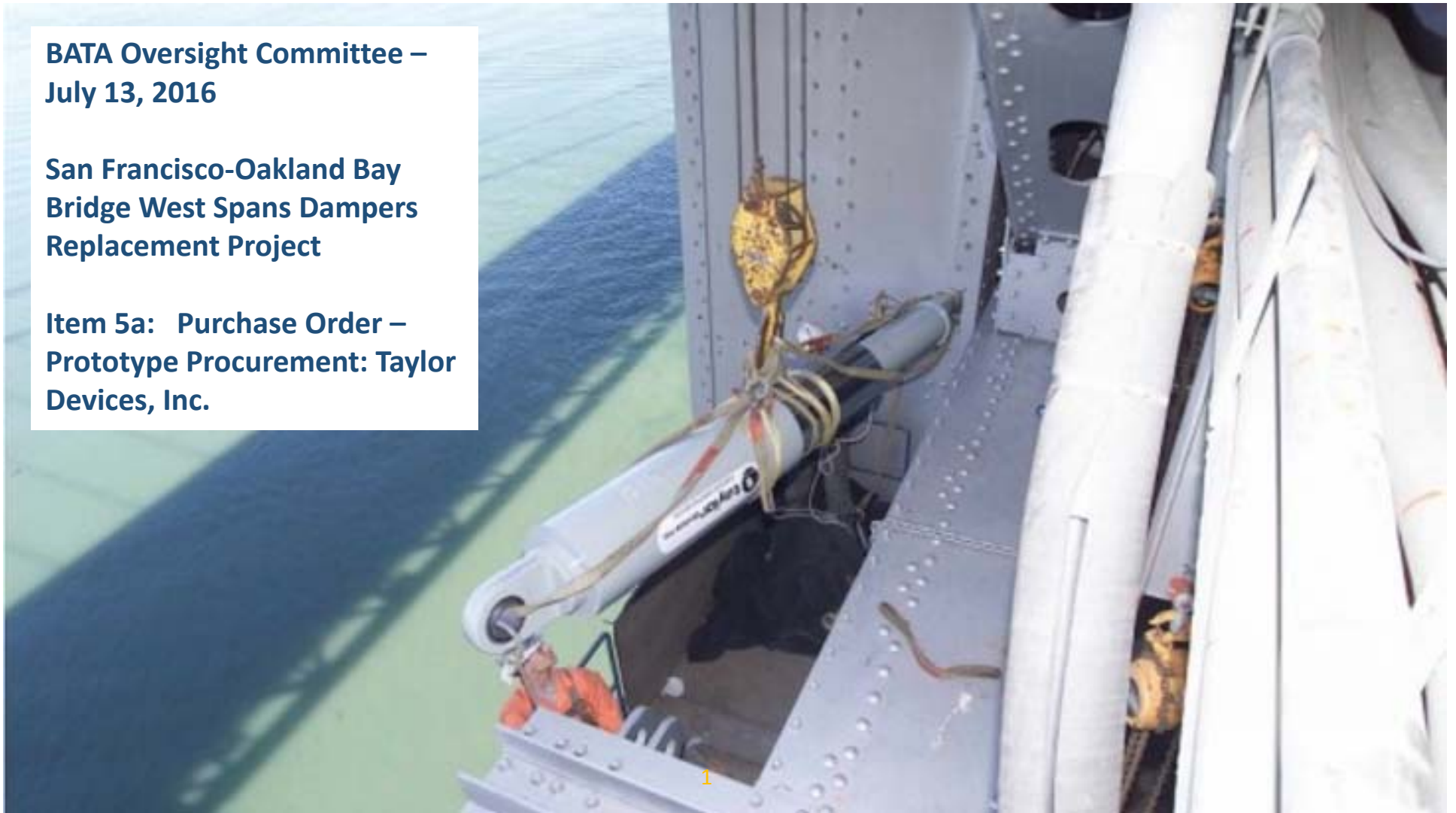


**BATA Oversight Committee –
July 13, 2016**

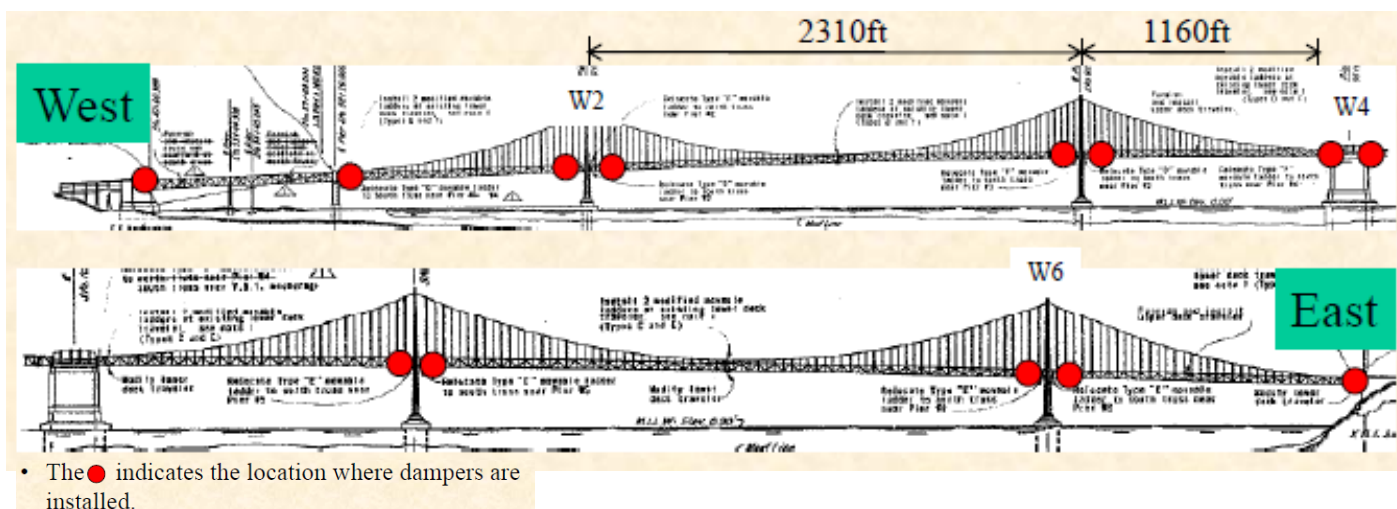
**San Francisco-Oakland Bay
Bridge West Spans Dampers
Replacement Project**

**Item 5a: Purchase Order –
Prototype Procurement: Taylor
Devices, Inc.**



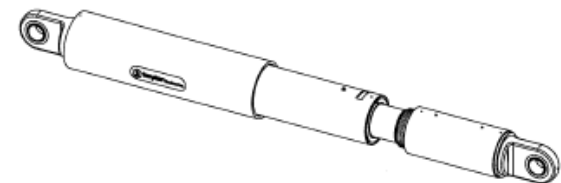
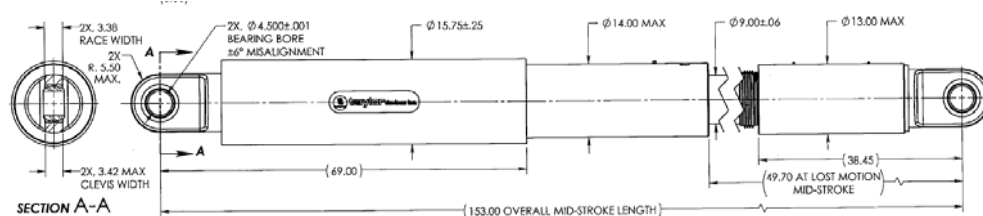
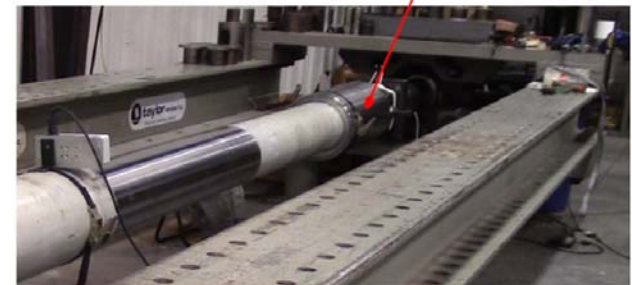
Existing Viscous Dampers

- 96 viscous dampers from Taylor Devices were installed in 2004
- These dampers allow spans to move freely under service loads but engage in a seismic event to absorb energy.
- Over time, the constant stroking of the dampers due to the ambient movement from thermal expansion and traffic vibrations has accelerated wear on the damper lubricant seals resulting in leakage.
- Refilling of the leaking lubricant is both constant and costly, while the seismic performance could be compromised



Upgraded Viscous Dampers

- Taylor Devices developed, tested, and evaluated a fully functional Lost Motion Device (LMD) to account for ambient bridge movement.
- Improved dampers with LMD have been laboratory verified by Taylor Devices to meet or exceed design criteria.
- Improved dampers easily fits into the existing configuration on the SFOBB
- Taylor Devices is providing a 25 year warrantee



BATA Staff Recommendation

- Procure six full-sized prototype dampers for independent testing by University of California, San Diego prior to full replacement by Caltrans under separate \$26.4 million Toll Rehabilitation Program project.
- Additional monitoring instrumentation of the dampers to improve evaluation of the performance.