



DESIGN AND CONSTRUCTION COLUMN

Seismic upgrades: It's not as hard as you think

Phased construction and careful planning can reduce costs

Most building owners, managers and tenants in the Pacific Northwest recognize that earthquakes are an inherent risk to doing business here. The "big one" will come, and it's not a matter of "if," but "when." How well are you prepared? The states of Washington and Oregon recently published seismic vulnerability reports citing our collective infrastructure deficiencies. Without action, most building owners, managers and tenants will experience prolonged post-earthquake downtime when demand soars for limited construction and engineering services. Can you afford to be out of your building following a large earthquake for three to 12 months or longer?

Costs can be managed

Perceived seismic upgrade construction costs are typically the largest obstacle to implementing a building seismic upgrade. However, these costs can often be reduced by proactively incorporating phased, partial seismic upgrades into pre-planned building renovations, repairs and maintenance projects. Rather than initiate a construction project solely to install seismic

upgrades for the entire building, portions of the building's seismic deficiencies can be addressed as opportunities are presented via other projects. Over time your building will become more seismically resilient while only modestly increasing construction costs.

Opportunities abound

Common non-seismic upgrade projects that can create opportunities for incorporating partial phased seismic upgrades include:

- **Roof replacement or repairs:**

With roofing temporarily removed, access is provided to strengthen the structural connections between the roof structure and the exterior walls, a common seismic upgrade need, especially for brick buildings.

- **Interior remodels:**

Modifications to interior wall, ceiling and floor finishes provide an opportunity to access and strengthen hidden structural framing and connections.



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- **Additions:** A building enlargement may trigger some mandatory seismic upgrades, but can also create cost effective opportunities for other voluntary seismic upgrades.
- **Mechanical and electrical modifications:** Non-structural building systems, typically vulnerable to

earthquake shaking, can be upgraded during modification projects.

- **Maintenance and repairs:**

These projects represent great opportunities to systematically improve the seismic performance of your building.

- **Landscaping changes:**

Occasionally the foundations of a building are modified as part of a seismic upgrade; this work can be completed more cost effectively when the landscaping is already disturbed.

Incentives

Incentives to seismically upgrade your building in a phased approach include:

- **Cost effectiveness:** Patience and careful planning can lower construction costs when compared to traditional approaches.

- **Continued occupancy:**

Buildings can often remain occupied during a phased, partial seismic upgrade project.

- **Improved seismic performance:**

Some upgrades are better than none, and your building will be better prepared for an earthquake after your first phased project.

- **Marketability:**

A more seismically resilient building will appeal to a wider range of tenants and prospective buyers.

- **Insurance coverage:**

Earthquake insurance is difficult to obtain, and can be expensive. Upgrading your building can mean the difference between coverage availability and, if obtained, lower premiums.

- **Risk reduction:** There's no such thing as an "earthquake proof" building, but seismically upgrading your building can reduce building and content damage, improve your post-earthquake

recovery prospects and reduce downtime.

- **Life Safety:** Above all else, a seismically upgraded building will lower the risk to life safety for its occupants.

Where to start?

The path to a safer, more seismically resilient building begins with a seismic evaluation of your building conducted by an experienced structural engineer. The resulting report serves as a road map for your building upgrade projects. Consult with that report and your structural engineer before undertaking a project that may provide an opportunity for phased, partial seismic upgrades. Scrutinize your building maintenance, repair and renovation plans, giving each project the chance to include seismic upgrades. As phased upgrades are designed and installed, develop a record keeping system to track your progress.

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News BRIEFS

BergerABAM to lead library planning study

The Fort Vancouver Regional Library District (FVRL) has embarked on a six-month facilities planning study and has retained Vancouver planning consultants BergerABAM to lead the effort.

The project will include internal and community needs assessments; stakeholder input; goal refinement; review of best practices; and

development of facility and service options, financing strategies, and short- and long-term communication plans.

"We know there's strong community interest in larger library facilities in Washougal, Woodland and other communities, and, clearly, areas of our district are currently underserved. This study will help us be smart and responsive to all our communities in the coming years as we make project choices in times of reduced revenues and evolving library services," said FVRL

Executive Director Nancy Tessman.

The project timeline calls for a final report to be delivered to the library district in September.

Clars Auction Gallery to open Vancouver space

Oakland, California-based Clars Auction Gallery has expanded to the Pacific Northwest with the opening of a satellite office in Vancouver (500 W. 8th Street, Suite 235).

Heading the new office for the fine art and antiques auction house



is Jan Krane, a nationally recognized fine art expert and dealer with more than 20 years of experience.

"We have looked at expanding to the Pacific Northwest for a while," said Redge Martin, Clars president. "We recognize this region as a sophisticated fine art and antiques community that is worthy of top-

rate auction service. The current market has created an ideal time to be opening our satellite office. The decision was a result both of the improving economy once again making fine art and antiques a solid investment class and Clars' earlier commitment to developing a huge online bidding platform has driven our global buying and selling market to new heights resulting in a number of record years and individual sales for our firm."



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