



# REAL-TIME DATA FOR REAL-LIFE DECISIONS

## SHMWORKS

*Monitoring building behavior upon earthquake impact.*

Seismic monitoring systems track critical data on the behavior of buildings during earthquakes, leading to improved understanding and better design codes.

***Call us for a free quotation!***

***Tel. U.S. : +1-518-602-0001 | Europe: +43-720-775203***

***<https://www.shm.works/contact>***

*The web interface to the SHM.Works system provides you with:*

**Secure access**

**A mobile-phone friendly view** of your properties' structural health

**Assurance** that your property is being assessed 24x7 by the monitoring systems

**A complete synoptic view,** after the earthquake, of the shaking experienced by your properties and whether any design thresholds were exceeded



# STRUCTURAL HEALTH MONITORING WORKS.

Seismic monitoring systems provide critical data on building behavior during earthquakes, improve understanding of structural stability, and lead to better building codes. Additional benefits include reduced inspection time after large earthquakes, since onsite visits by engineers may not be necessary when enough data are available. Our systems help satisfy common government requirements for seismic instrumentation when monitoring earthquakes in critical or large buildings.

As an example, the 2008 Los Angeles Building Code (1613.8.2) requires a minimum of three accelerographs to be deployed at the base, middle, and top of a structure. Required for buildings over ten stories, or over six stories with aggregate floor area of 60,000 square feet or more, the three instruments are typically placed in identical positions vertically in the building. Interconnected for common triggering and timing, the top-most unit provides a GPS timing signal from the roof of the structure.

*GEObit Equipment + ISTI Software:  
a Complete Solution*

## *SHM.Works Software Capabilities*

- **Real-time monitoring** of building/structural accelerations and threshold crossing detection. Monitoring can range from simple threshold crossing throughout the building (e.g., an accelerometer experienced shaking greater than 0.1 g for n seconds) to base load threshold crossing (e.g., design forces were exceeded).
- **Interstory drift monitoring** if the building is equipped on each floor with an accelerometer.
- **Retention of continuous data for review.** Continuous data are retained on the accelerometer platform for 6 months and on a Structural Monitoring Computer (SMC) for up to 1 year.
- **E-mail and SMS notifications** from the SMC when there are issues with the system (e.g. power loss) or shaking is observed at the structure (e.g., "Structure X experienced an acceleration of 0.2 g"):
  - + **An easy-to-use Web interface** for configuring the SMC.
  - + **Online accelerograms** obtained by engineers online.
  - + **Cloud-based review of data** through a web portal.

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## *GEOtinyAC! Hardware Capabilities*

- Low-cost and low-maintenance via solid-state design.
  - Building code compliant per Los Angeles, CA, USA.
- High-resolution and high sample rate data acquisition system.
  - Low power consumption < 1W (wifi off), 12Vdc powered.
    - GPS or NTP timing.
      - GPS timing distribution to all connected devices at the local network in the absence of internet (no NTP connection available).
        - +/-2g accelerometer, meeting CSMIP (California state requirements).
  - GPS clock provides +/-1 microsecond accuracy, NTP provides 0.5 millisecond accuracy.
  - An easy-to-use web interface for configuring each digitizer.
- Local data collection and automatic transmission to the Structural Monitoring Computer over CAT5 cable (ethernet) or WiFi.

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