



MTA Senior Engineer Andy Bennett, left, and John Galetzka, USGS Network Coordinator for the Southern California Integrated GPS Network, begin installation of antenna device, shown below, atop the Civic Center elevator structure.



Subway Station Antennas Linked to Nation's Earthquake Monitoring System

(Dec. 21) When the earth moves in Los Angeles, the U.S. Geological Survey wants to know how much. Now, the MTA is helping the scientists find out.

Recently installed atop the elevator structure at the Metro Red Line's Civic Center station is an ultra-sensitive radio antenna that picks up signals from the Global Positioning Satellite (GPS) system. A second GPS antenna will be installed in January above the elevator at the Westlake/MacArthur Park station.

The solar-powered GPS system can measure earth movements as small as three millimeters a day. By constantly monitoring the position of the antennas, USGS can determine surface movement along earthquake faults.

"The subway elevators are ideal," says Anderson Bennett of the MTA's Engineering Management Department, who is coordinating the project with USGS. "They are solid concrete and have foundations that extend over 80 feet into the earth."

The GPS antennas installed at the two subway stations will be part of an integrated network of installations throughout Southern California,

Bennett says. The USGS field office is based at the Jet Propulsion Laboratory on the CalTech campus in Pasadena.

By monitoring very small movements in the earth's crust, scientists may one day be able to predict where earthquakes are likely to occur.

For more on the GPS antennas and earth movement monitoring, visit the USGS website at www.usgs.gov and JPL site at CalTech at <http://pasadena.wr.usgs.gov/scign/>

[Back to MTA Report](#)