

BULLETIN

News from SubTerra, Inc.®

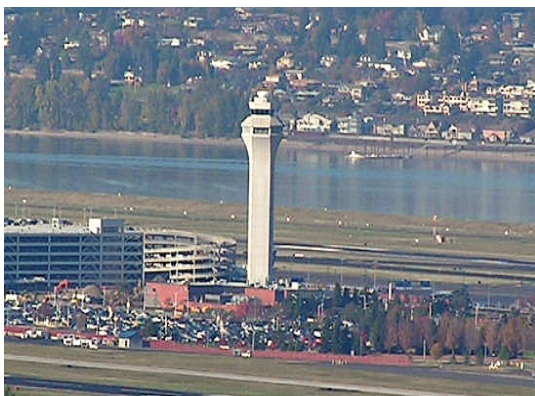
Port of Portland, Portland Airport Control Tower Portland, Oregon

SubTerra, Inc was contracted by the Port of Portland to evaluate potential impacts to Portland Airport's Control Tower from nearby construction and remotely monitor vibration levels in and on the Tower during construction. Continued operation of vibration sensitive radar equipment used to track aircraft when in proximity to and while on the ground was essential to safe operations at this Airport which accommodates over 14 million passengers annually.

SubTerra's scope of work included:

1. Evaluate potential vibration levels from proposed pile driving operations installing retaining walls for a new parking garage adjacent to the Control Tower
2. Continuous monitoring during construction with data reports provided daily via the Internet.

Security and access limitations required that vibration monitoring systems be accessed remotely using cell phone technology and that data transmission did not interfere with Tower operations.



Monitors were installed at ground level



and near the top of the Tower immediately below a critical radar installation.

Ironically, monitoring revealed that vibrations associated with the start-up of the radar system exceeded vibrations from pile driving and other site work immediately adjacent to the Tower.



Above: Taken from the upper vibration monitoring location.