

BULLETIN

News from *SubTerra, Inc.*[®]

Blasting Within 7-ft of a Plate Glass Door Friday Harbor, Washington

SubTerra, Inc. provided Blast Consulting and Blast Vibration Monitoring services to Wallace Technical Blasting for this project near the center of Friday Harbor, Washington. Close-in blasting was required to loosen hard bedrock encountered in the foundation zone for a new building. The blast site was surrounded by businesses and residences with the nearest located about 7-ft from the closest blasthole.

As the project(s) Blasting Consultant *SubTerra, Inc.* reviewed the Blast Plan and blasting procedures prepared by the BIC, conducted pre-blast surveys of the surrounding structures, discussed blasting procedures and anticipated vibration levels with local business and shop owners, and monitored each blast.

Public relations are an essential component of any near-field blasting project.



Ensuring that the public is well aware of the plans, schedule, and expected outcomes of a blasting project can eliminate a majority of their concerns.

Continuing interaction immediately prior to and following each blast can greatly reduce the potential for problems and claims.

Careful blast design is also essential as vibration levels at nearby structures may exceed the 2-in/sec criterion included in blasting regulations when blasting close-in. However, vibrations from close-in blasting occur at very high frequencies and can therefore be designed to induce relatively small dynamic strains and displacements.

SubTerra has developed a procedure for estimating induced dynamic stress, strain, and displacement as well as the more traditional peak particle velocity predictions. Predictions utilize blast pattern, blasthole loading, and structure proximity to quickly optimize the blast plan.



Blastholes were located within 7-ft of the plate glass door of the Dentist's office (above, right side of photograph).