

ALTERNATIVE BLASTING LEVEL CRITERIA

(Appendix B, Replicated from US Department of the Interior Blasting Guidance Manual 8507)

Safe blasting vibration criteria were developed for residential structures, having two frequency ranges and a sharp discontinuity at 40 Hz (table 13). There are blasts that represent an intermediate frequency case, being higher than the structure resonances (4-12 Hz) and lower than 40 Hz. The criteria of table 13 apply equally to a 35-Hz and a 10-Hz ground vibration, although the responses and damage potentials are very much different.

Using both the measured structure amplifications (fig. 39) and damage summaries (figs. 52 and 54), a smoother set of criteria was developed. These criteria have more severe measuring requirements, involving both displacement and velocity (fig. B-1).

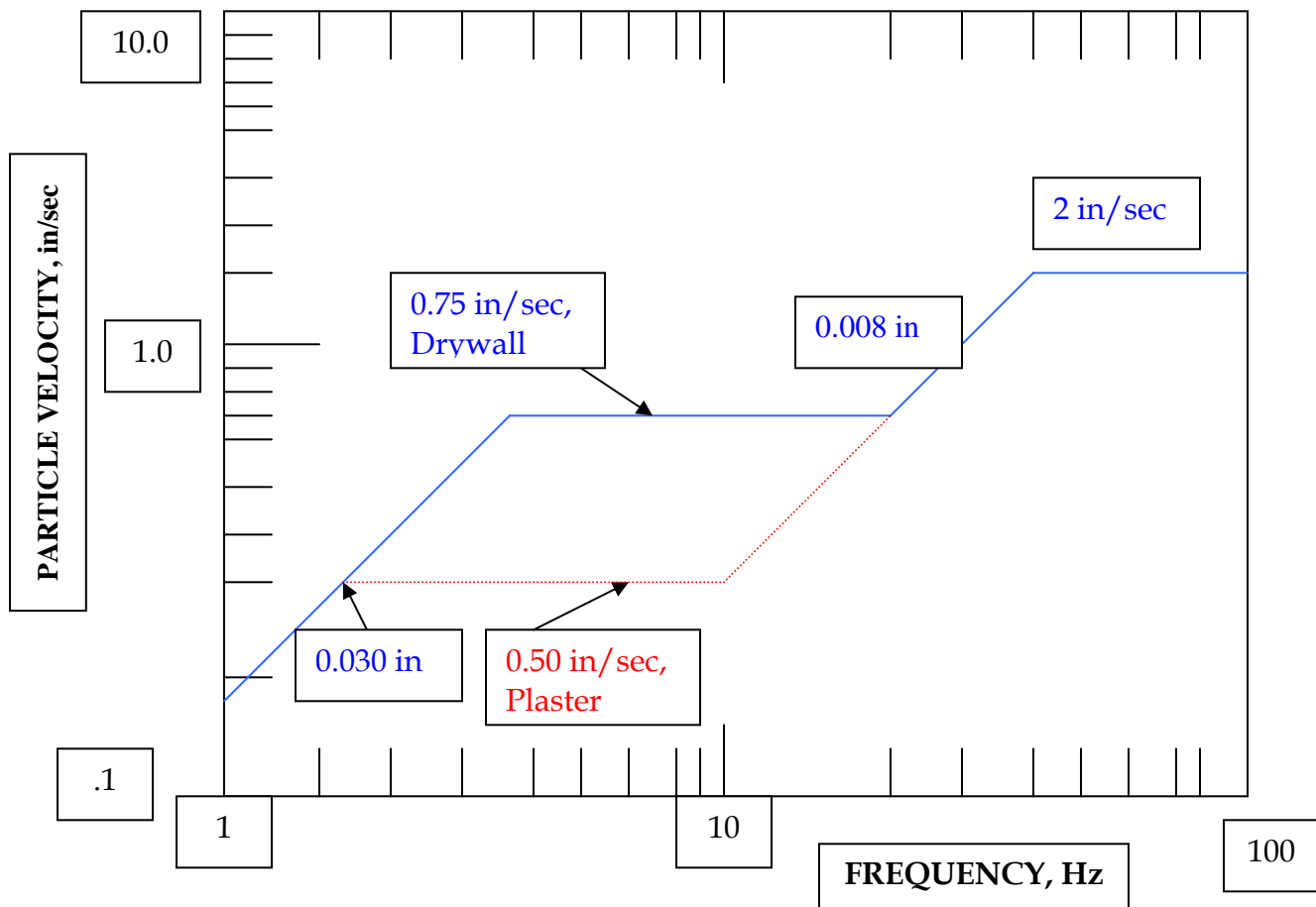


Figure B-1. -Safe levels of blasting vibration for houses using a combination of velocity and displacement.