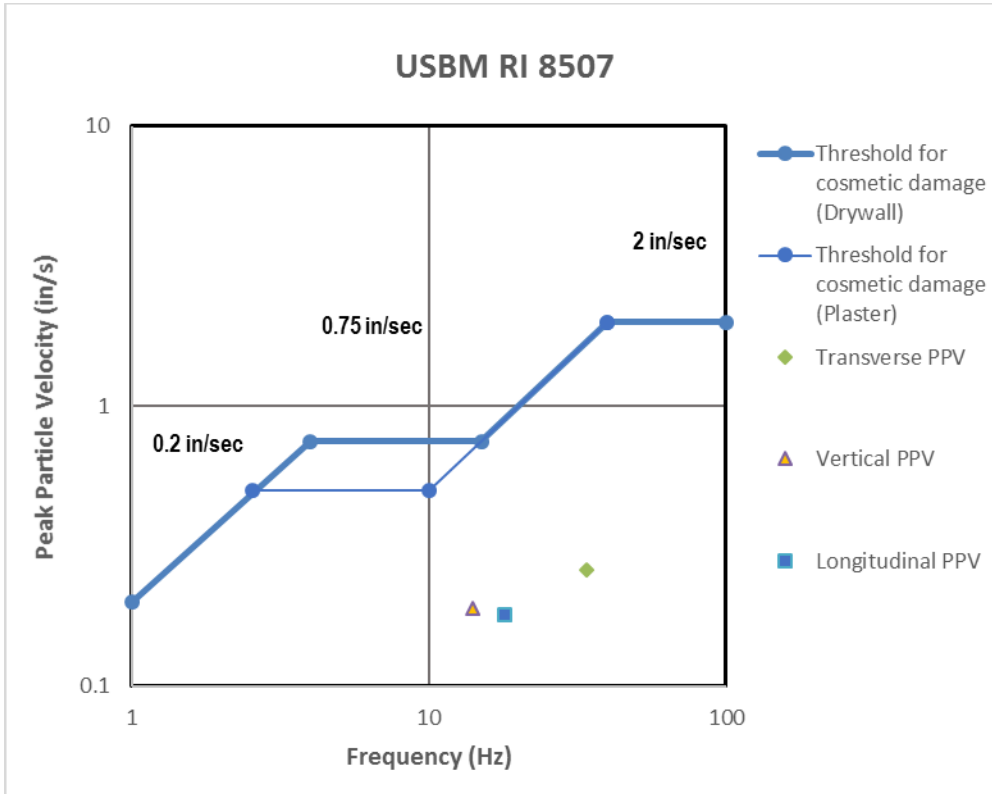


# 39<sup>th</sup> Avenue Greenway Vibration Monitoring

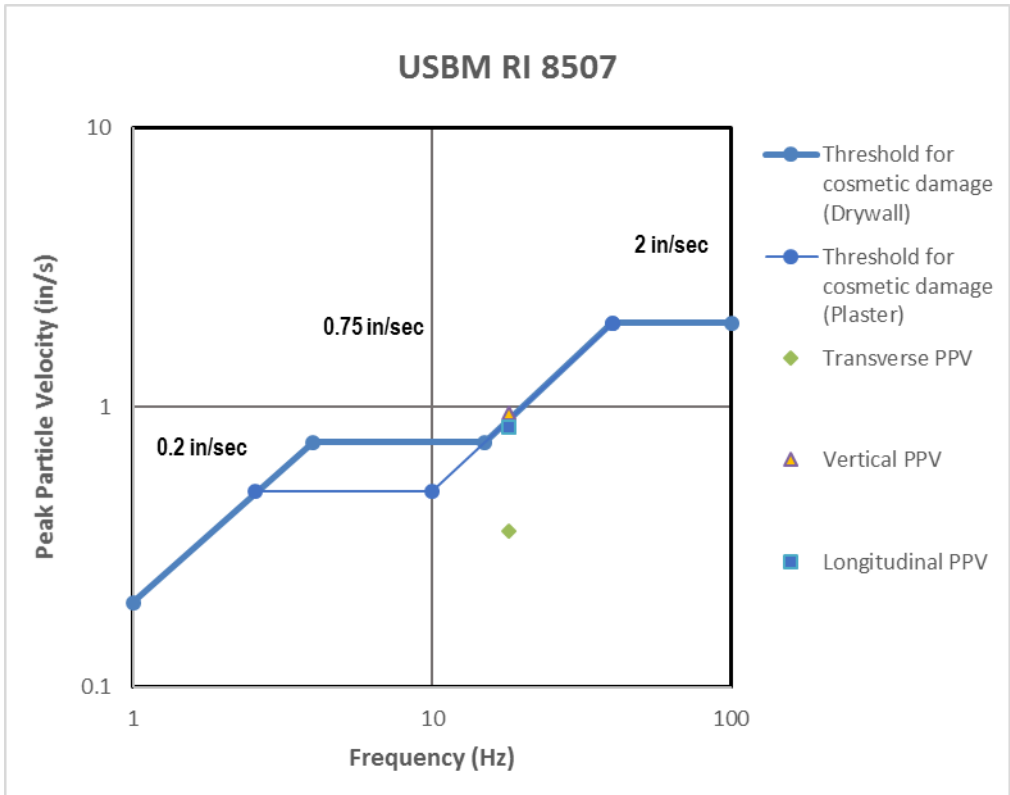
Week of April 7 to April 13, 2019

Vibration monitoring was performed near the shoring installation and excavation at the A-12 Structure.

**A-12 Structure, adjacent to the west side of the High Street Bar and Grill (Zone 7)**

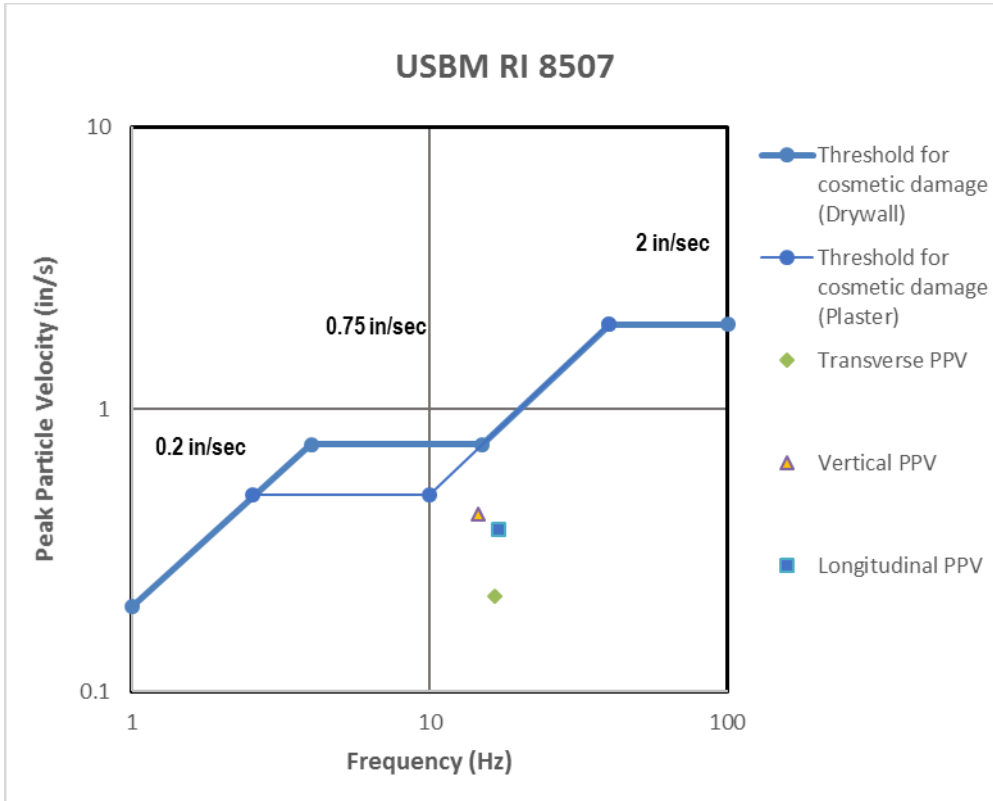


**Shoring Removal at A-4 Structure, North of A-4 Structure Shoring Removal (Zone 3)**



On March 11, 2019, at approximately 10:25 am, the threshold amplitude of ground vibrations generated from the construction activities exceeded the levels set forth in the U.S. Bureau of Mines (USBM) recommendation (RI 8507 1980) that are capable of producing damage to plaster and drywall in residential structures as shown on the graph above. The exceedance occurred while pulling the northernmost piles closest to the Mile-Hi Express building. Mr. Joe Urioste with SEMA tried various methods to try and minimize the vibrations in the area by pulling one sheet pile instead of two at a time, pulling without vibration, and saturating the ground. According to Mr. Urioste, in order to continue pulling, SEMA had a SEMA employee watching the New Tech Machinery building and the Mile Hi Express Building for any excessive vibrations or damage. While watching, SEMA employees would place a hand on the building walls to see if the vibrations were able to be felt, with no such apparent occurrence happening. Pictures were taken by SEMA prior to the operation commencing.

**Shoring Removal at A-4 Structure, South of A-4 Structure Shoring Removal (Zone 3)**



**Noise Monitoring:**

Date	Leq (dB(A))	Lmax (dB(A))
March 11, 2019	81.4	95.5