

Municipality of Anchorage Geotechnical Advisory Commission

Response to 30 Nov 2018 Earthquake

GAC'S RESPONSE TO THE 30 NOVEMBER EARTHQUAKE

- Attended EERI briefing meetings
- 5 December special meeting w/ MOA Building Safety
- Assisted MOA Building Safety with preliminary inspection of ground failures
- 9 December meeting with GEER Field Team

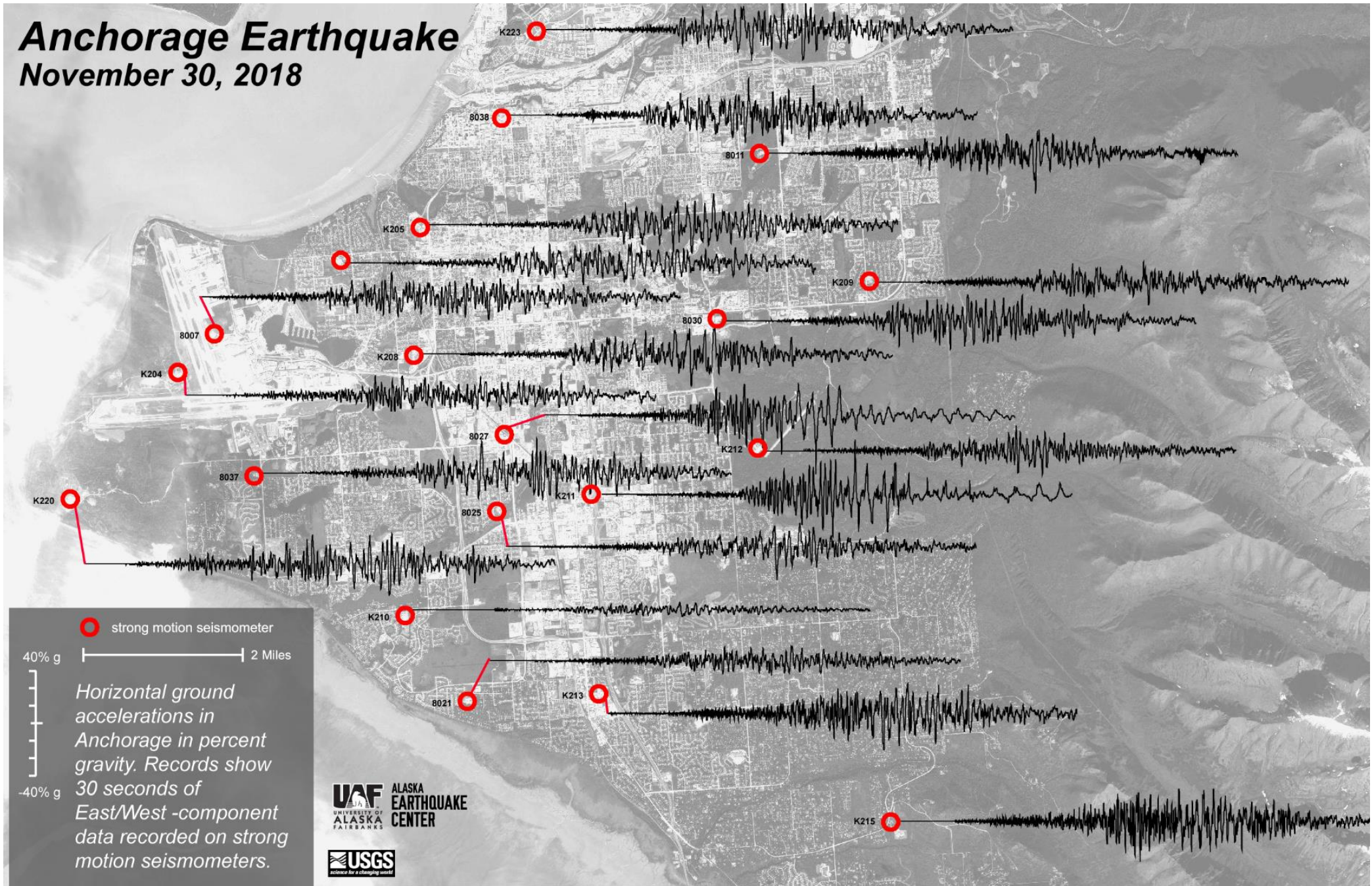
- February to-date: Working with USGS to improve timely release of time-histories
- GAC currently developing a Post-Earthquake Response Plan (following ASHSC's Plan)

ISSUES

- MOA's approach to initially inspect their buildings
 - *Not a significant earthquake – no buildings collapsed*
 - *Mis-understanding of initial illustrations of ground motions*

Anchorage Earthquake

November 30, 2018



ISSUES

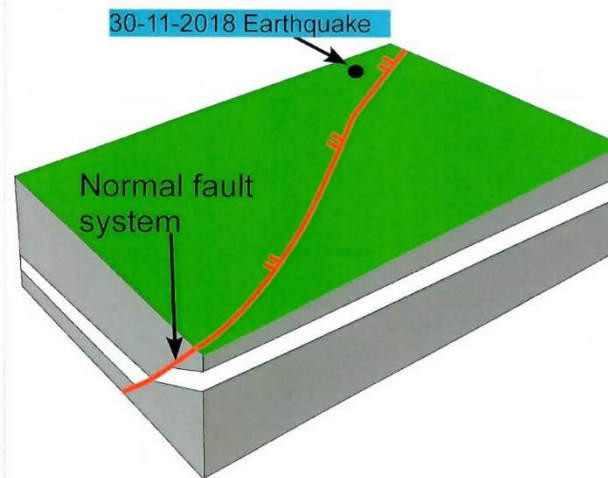
- Mis-information on web [*e.g. IRIS website posting speculating earthquake was on the Border Ranges Fault*]
- Failure of all seismometers on the Port Access Bridge
- USGS's erroneous reporting of PGAs
- USGS's complete failure to provide the recorded time-histories (even unprocessed) to local engineers in a timely manner [*only 12 of 36 time histories from initial EQ processed and available after 1 week*]

IRIS Earthquake Browser

Mw 7 Earthquake in Alaska, Depth: 31 km



Source: Image from IRIS Earthquake Browser
Earthquake source information from <https://www.emsc.csem.org/Earthquake/earthquake.php?id=728965#summary>

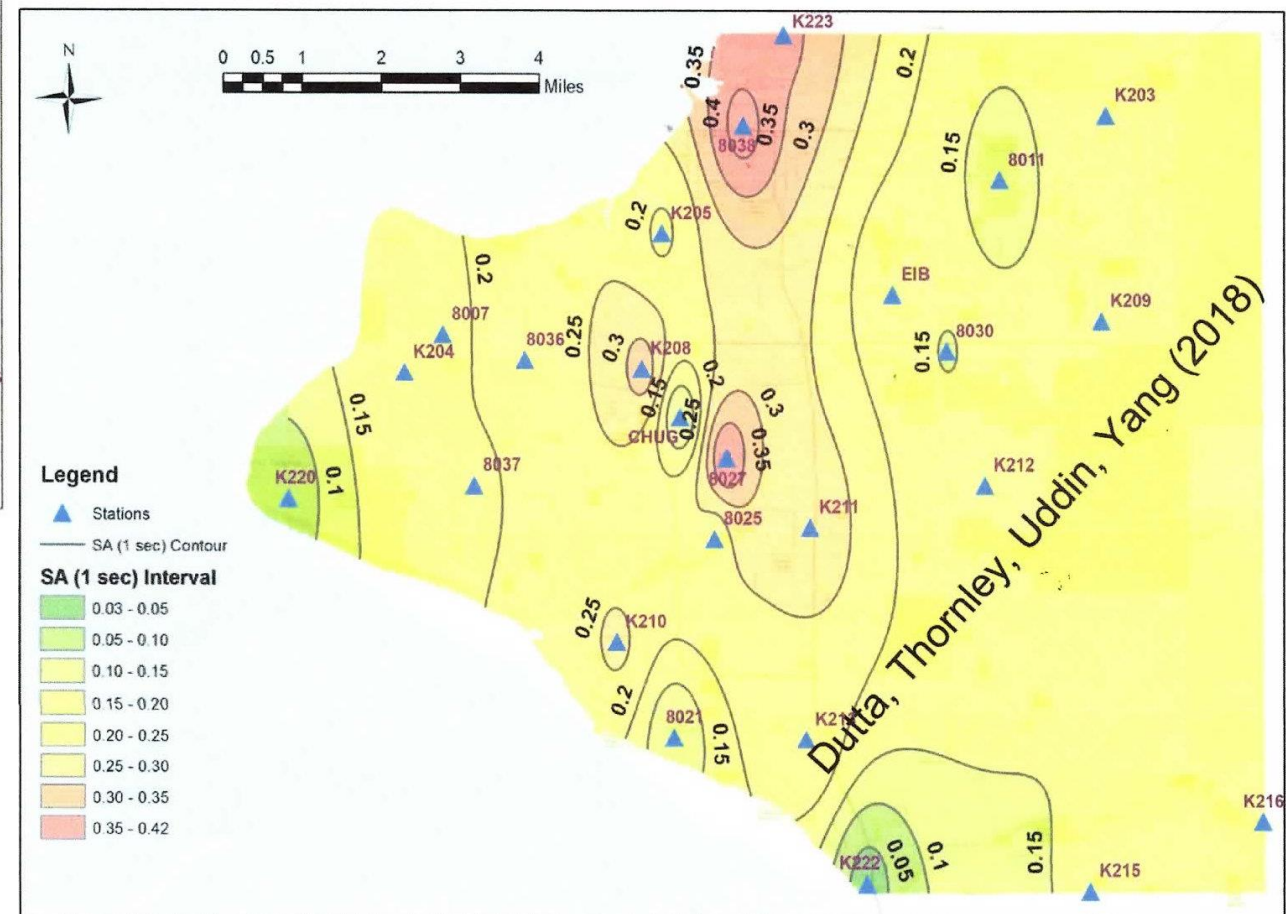
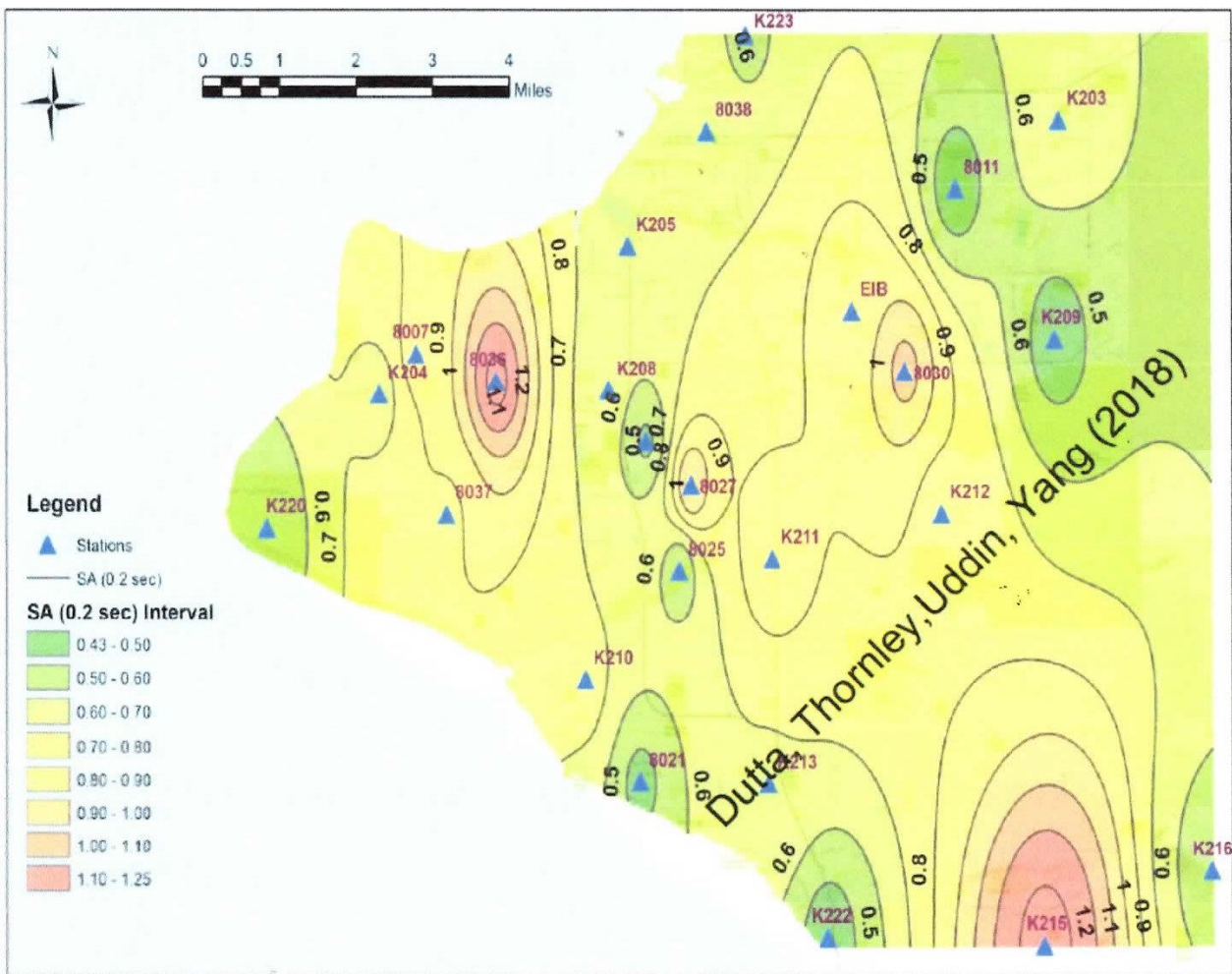


The Mw 7.0 Earthquake of 30th Nov. 2018 seems to have ruptured a normal fault system at a depth of ~31 km. The cartoon on left is my initial interpretation of the existence of such a fault system in Alaska. It is based on the topographic expression of fault scarps that are visible on the satellite imagery. The ~NW dipping fault plane is consistent with the fault plane solutions (FPS) shown above.

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Field Observations

- Slope Failures
- Non-code Compliant Foundations
- Masonary Chimney
- Rock Falls (Turnagain Arm Trail)















