

To The Alameda Unified School District Board Members;

My name is Tai Tang and I am a licensed architect from Michigan. I have 17 years of working experience as an Architect and I have worked in the US, Europe, the Middle East and Asia.

My portfolio includes schools, commercial complexes, stadiums, industrial buildings and hospitals. I have worked closely with engineers on various types of projects from design to Construction Document phase including Construction Administration.

I thoroughly read the reports regarding the structural analysis at the LUM school site.

I find ZFA's letter and its content unsubstantiated and inconclusive to conduct the closure recommendation for the following reasons:

1. ZFA pointed out liquefaction due to severe earthquake might cause Lum buildings to settle by 5"-10" in a 2500 years event. If the event happened, some of the doors might not be able to open.---Lum school are mostly hexagon shaped buildings designed with multiple doors. If one side of the building did sink, other doors can be used for egress. It's unlikely the whole building would sink uniformly given the large floor plates. Still we can always use or place in emergency operable window exits on each unit for the unlikely event.
2. Though in ZFA's letter it stated that "The effects of liquefaction on lightly framed structures are not well studied... but buildings will sustain more damage." --- Lum school has one story buildings with light steel framed structures. Steel frames are one of the best materials for seismic movement because they are strong under both tension and compression stresses. Lum buildings are also large open hexagonal spaces span 68' clear. If indeed one corner of the building sunk the maximum estimated 10", the 10" vertical movement would only be 1% of the structure span. Steel structures should be able to accommodate 1% movement with ease. On construction sites, buildings were built with larger tolerance than that.
3. In ZFA's presentation, a 3 story house was shown failing in liquefaction. I find this example used incomparable to Lum buildings. The pressure per square foot exerted to the ground from a 3 story house with a small floor plate is much greater than single story light framed building with a large floor plate. These 'muffin' like light huts are much harder to sink in liquefaction.
4. The California Building Codes has one of the most stringent requirements on life safety issues. It has its own built in tolerance. Since both the California building codes and the State Architects are allowing the people to stay in Lum indefinitely, we need to question ourselves whether Lum school is indeed in any danger or whether it's our exaggerated self-induced fear.

Since the possibility of closing Lum school is on the table and the made public, we need to address it. Before any conclusion, I feel that we need to have the due diligence and the proof with verified hard data that show the school is indeed unsafe before we start to break up and relocate more than 500 students/teachers and a 70 year old community.

Sincerely,



Tai Tang  
05-04-2017