My name is Ed Loomis.

I am here today to provide comments in order to help you safely review this material as you attempt to adopt A17.1-2016.

A little back ground of myself. I have been in the elevator industry for the last 35 years. I have worked in all phases of the business, new construction, modernization, maintenance, repair, and testing. I am a certified NEIEP Instructor, and a past member of the Pennsylvania Elevator Board.

There are about 1600 changes involved in this effort.

I have a few points to consider and hope that you have, or plan to actually review the 1600 changes to ensure they maintain the safety of our communities. Copies of my comments have been provided.

If you require an electronic version let me know and I'll be happy to forward it to the board.

We have always done testing using straight forward methods and have always used qualified personnel.

Our goal is to follow these methods, codes mandate to eliminate hazards to passengers.

Those who sell alternative testing technology require a baseline during the final acceptance test using weights. There are no requirements in A17.1 to use weights to set the baseline, only a note.

Notes are not requirements and can't be enforced.

Alternative testing claims that the testing is predictive, not actual. Weight tests are actual.

Alternative testing documents state and I quote "...to *predict* the behavior...". Weight tests do *not predict*, they test.

If alternative testing is used to predict then the actual testing will be using passengers as test weights during normal operation.

Alternative testing claims their methods reduce the possibility of injury to personnel. We have yet to see any report of this claim.

If qualified personnel perform an actual test with weights, deficiencies will be revealed and addressed.

During my time as an elevator constructor of over 35 years a majority of mechanical failures were discovered during an accurate, actual weight test.

If alternative tests are used, injuries may increase because engineered equipment that has to hold certain loads by code is not held to those requirements.

Once again, passengers are now on a piece of machinery that was never tested to a safe code. We do not want passengers to be test dummies.

Alternative testing claims their methods reduce wear and tear on equipment....This is true, but only because alternative tests do not require the equipment to undergo real life conditions.

Alternative testing may save wear and tear but will create a problem where equipment can fail catastrophically while carrying passengers.

We, as part of the elevator industry do not want equipment to fail, or breakdown during a weighted test, but it may happen.

This is better than a failure happening while a passenger is on board.

Each year there are fatalities that occur. We actually need more weight testing until a reduction in injury and fatality is realized.

Alternative testing claims it predicts that an overloaded car in the down direction will slowdown and stop, but never actually measures it. It predicts it based on a no-load test.

Traction tests may pass easier without weights due to not applying needed forces that weight testing would. Weight testing is real world and safer.

Alternative testing inventors require testing that manufacturers using belts as suspension members will never comply with. This is because the testing requires moving the drive sheave against a nonmoving belt for at least 2 seconds may damage the rubber on the belt which might require them to be replaced. I know this same issue may be present during other testing. This brings the problems with belts into the conversation but that's a separate issue that can be discussed at a later date. My point today is manufacturers wanting alternative testing will object to what the alternative testing companies require.

Testing without weights to safely lower, stop and hold an overloaded elevator cannot be done with alternative tests that claim to tell the future rather than actually test the condition.

This is especially true with belts which in the past , and within the last 4 years have caught fire, burned, lost traction at contract speed and while stopped. These situations can be discussed at a later date.

Alternative test equipment is not subject to calibration requirements. We have always used great quality tools that can be checked by field personnel easily and accurately.

Alternative testing equipment uses wireless devices which in the past including the past few months have resulted in a dangerous situation where the wireless failed causing unintended movement. Wireless is not safe or accurate.

Alternative testing does not test a car safety sliding and therefore does not test real life conditions passengers are exposed to. Without adding requirements to control how a guide rails, safeties etc. are manufactured and maintained alternative testing cannot be allowed.

Maintenance providers have stopped providing effective maintenance and are now selling insurance policies which has increased injury and fatality to passengers.

Weight testing is real and can be evaluated providing a worst-case scenario without exposing passengers to danger.

Alternative testing is not the same as weight testing. I want to make all of you, the AHJ aware that an accident in one major case was fully blamed on the AHJ and did not consider the entire process of maintenance and testing.

Alternative predictive does not use a practice of randomly placing actual test weights in a car enclosure.

Alternative testing not using this does not evaluate how a car sits, rides during the test, decelerates, stops and holds the elevator.

Unless additional requirements are developed alternative testing cannot replace actual weight testing.

Alternative testing does not test the actual operation of mating parts as a weight test does.

Not using weights on a car buffer fails to expose a buffer to the actual conditions it would experience

Maintenance providers are actually maintaining the equipment less. Boiler plate numbers for a traction elevator subject to the testing being discussed here would require a Maintenance Control Program where a minimum between 1 and 2.6 hours a month is spent on each elevator per month or it will not be maintained to code compliance. This is the maintenance versus insurance policy issue.

Any consideration to use electronic devices to measure how level something is not reliable.

No standard ensures these devices are calibrated and as I stated earlier, we have always used tools that can be checked by field personnel easily and accurately. This also allows for oversight by an AHJ.

Alternative testing is being utilized to reduce safety and increase profit.

This will also decrease the oversight provided by an AHJ.

ThyssenKrupp Elevator installs alternative testing stock on their TKE, EVO Blue MRL.

Once connected to a network alternative testing devices will become connected to a network without any code to guide their safe use.

I want to be clear in that the example of a manufacturer is solely due to it being a good example that directly bears on this topic.

Claims have been made by alternative testing sales people that it reduces cost.

They fail to openly advertise that in at least one jurisdiction persons using the equipment would be required to be trained and certified to use this equipment.

This would increase cost to achieve the group that is trained, in some cases it has been shown to violate local laws on the use of the equipment.

It would also expose persons to loss of income.

As we discuss the choice of accurate real-world safe weight testing versus alternative testing one important issue has come to bear is overbalance.

There is a problem globally with elevator systems not being overbalanced properly from design to installation and then throughout their life.

For this reason at some point I respectfully ask that you undertake an action item to require weighing of elevator systems using an analog means.

This will not only increase safety but decrease costs to building owners and elevator companies.

Our industry can be expensive. As long as safety prevails the financial burden should be eased when possible to our building owners.

I have sat in on many Elevator Safety Board meetings.

When this topic was brought up in the past there were statements made, that the Elevator Inspection Division wasn't going to recognize Alternative Testing.

Third party inspections already have some degree of a lack of oversight because safety has been privatized by allowing it.

Please realize if it is not removed from the code any Third Party QEI Inspector could except Alternative Testing as a part of their Category 5 testing.

A word for thought at that time, that Third Party QEI Inspector is now AHJ.

They would be acting as the AHJ, accept that test because it's in the Code and our legislation!!

Please delete the following in ASME A17.1-2016/CSA B44-16:

1. **8.6.4.20.1(b)**
2. **References to 8.6.11.10 in 8.6.4.20.3(-a)**
3. **References to 8.6.11.10 in 8.6.4.20.3(-b)**
4. **References to 8.6.11.10 in 8.6.4.20.3(f)**
5. **8.6.4.20.4(b)**
6. **8.6.4.20.10(b)**
7. **8.6.11.10 and its subordinate requirements**
8. **The note referencing 8.6.11.10 in the parent paragraph in Section 8.10**

The changes in A17.1-2000 along with the addenda we are enforcing moving toward this 2016 edition represents some 1600 changes.

Today I have only scratched the surface on some basic safety concerns.

You have a substantial amount of work ahead of you to ensure Pennsylvania's safety.

The massive amount of changes is compounded by this jurisdictions local administrative code language.

Anything short of an item by item review by your board and all of its disciplines may be construed as reckless and in addition to exposing our citizens to danger may expose this jurisdiction to liability it is not prepared to accept.

Be safe, work hard, thank you for the respect and time today for me to provide you my thoughts.