

**DIR Elevator Consulting Services
(916) 835-5663**

December 12, 2023

Los Rios Community College District
3753 Bradview Drive
Sacramento, CA 95827

Attn: Chrystelle Bak, CASp
Facilities Planning Specialist

Re: STEM Elevator

As a follow-up to our on-site meeting on December 7, 2023, I would like to address the facilities concerns and our findings in regards to the entrapment that occurred on November 18, 2022.

The cause of the elevator shutdown on November 18, 2022 appears to have been caused by the failure of the ADON board in the KONE drive. It cannot be determined as to exactly why this board failed as this is a printed circuit board with hundreds of failure points. The governor switch was likely tripped due to the emergency stop of the elevator caused by the failed ADON board. The governor will not operate once it senses there is a safety issue with the elevator resulting in a shutdown of the system.

There have been no further incidents with the governor and/or drive system since this occurrence on November 18, 2022.

The elevator service company is currently providing monthly elevator maintenance which is above and beyond what is required The State of California. To improve the overall ride quality and reliability, the elevator service provider has replaced the slide guide inserts and aligned the rails. The State of California also inspects this elevator once yearly. If deficiencies were noted during the year of 2022-2023, there would have been write ups and corrections addressed. No major deficiencies were noted by The State of California for this elevator.

In regards to the "unique" KONE door design, this really does not apply. All elevator company's have their own door design which may or may not be more difficult to access. Elevator doors are not designed to be "picked". The State of California does not allow for lunar keys or easy access. This is a State of California Code Requirement. The only time doors are accessed in the manner of "picking" is during emergencies, if possible and/or while elevator maintenance and/or service is being performed. Hoistway access keys are issued to mechanics that can raise and lower the elevator and open doors but only if the elevator is under power. In this case, the elevator was not under power as the ADON board had failed.

In the case of this entrapment, the elevator was shutdown without power due to a safety issue. The number one priority was to retrieve the passenger in the utmost safe manner.

Therefore, the elevator company worked with the fire department and came up with an extremely better solution than ripping the doors off the front of the elevator. A small hole was made in the elevator machine room wall so that the mechanic could reach through the shaft with a pole and open the doors through the backside of the elevator. The passenger was then retrieved through the front of the elevator in a safe manner. The passenger was retrieved safely and there was no damage to the elevator, saving the College costly door repairs.

If I can be of further assistance to you, please let me know.

Denise Raspberry
DIR Elevator Consulting Services