

February 11, 2020

Colorado Public Utilities Commission
1560 Broadway #250
Denver, CO 80202

PUC Commissioners

This letter summarizes the reports received from Siemens and IFE Automatic Door Systems regarding the PUC request for additional information from the January 28, 2019 derailment Corrective Action Plan submitted in May 2019. The reports specifically answer the following questions:

1. Did the Siemens Vehicle and IFE door response/performance, during the derailment, meet design specifications or fail prematurely?
2. Are there any recommendations/changes to the door or vehicle construction that could prevent the ejection of a passenger in a future similar event?

Both reports demonstrate the vehicle and door interface performed as designed according to manufacturers and RTD specifications. The highly unusual forces on the vehicle, as a result of the impact, exceeded the design specifications damaging the door leaf lower guiding rail allowing the door rollers to lift from the guide. This damage along with the simultaneous force exerted on the door by the falling passenger, far exceeded the design specification, and caused the door to open at the bottom. The door was designed to withstand a force of 890 Newton's. The actual impact force was 2,520 Newton's.

As a result of this analysis, Siemens has suggested an enhancement that has the possibility to withstand forces above the original 890 Newton design limit. Detailed engineering work has not been performed to determine the level of improvement over the original design, but Siemens believes it would improve the door performance. The enhancement is the addition of a bracket that would prevent the rollers from lifting out of the lower guiding rail - thereby increasing the force the door mechanism could withstand. In addition, there would have to be an evaluation completed to ensure that this enhancement would not affect life safety egress characteristics of the door system.

Sincerely,



Michael Meader
Chief Safety and Security Officer