LOSS OF CONFIDENCE IN ENGINEERING PROFFESSION DUE TO BAD DECISION-MAKING

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Failure of structures due to bad decision making of civil engineers causes the public to loose confidence in engineering profession. The public used to believe that the decisions made by engineers in designing, constructing and maintaining of structures are accurate and error free. However, bad decision making continue to happen and, as a consequence, public image towards the engineer declines. This presentation aims to point out some bad decisions that had been made by engineers and how they could be rectified.

Some of the failures are as follows:

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- 1. Failure of steel roof trusses during erection, in the UK. Failure was due to inadequate restraint in the temporary supports during the erection of the trusses. So the failure had taken place because supports were inadequate and not installed at the correct positions.
- Collapse of a wall while removing the windows. Removal of windows placed along the same vertical line caused collapse of the building.
- Collapse of 'Akash Deep' building in India.
 Collapse of the 'Akash Deep' multistory building due to the use of an improper concrete mix and incorrect construction practices.
- Failure of a building called 'Poonam Chamber' The design engineer had not informed owners about the load carrying capacity of the building when in use. The building collapsed due to overloading.
- 5. Collapsed building named 'Shiv Chandan' in India The maintenance engineer had not taken care to treat cracks as they appeared. Finally the development of the cracks lead to collapse of the building.
- 6. Collapse of Koror-Babldead Bridge at the Republic of Parau. Additional post-tensioning was applied for strengthening the bridge. But that caused to have overloaded the bridge and finally it collapsed.
- 7. Collapsed bridge at Paragastota in Sri Lanka. The failure of Paragastota Bridge was one of the recent incidents experienced in Sri Lanka. After modification of the bridge, the timber plates which were used for the deck, were replaced with concrete slabs without modification for the steel truss structure. This caused overloading of the bridge and finally it collapsed while a ten-wheel truck loaded with stones passed over the bridge.
- 8. Design failure of the hospital building at Nuwara Eliya. Building was failed due to bearing failure of the soil.
- 9. Partial collapse of a three-story class room building at Kendagolla, Badulla.