

## INCORPORATION OF ROUTINE SEISMIC DESIGN FOR SUSTAINABILITY AND SAFETY

In earthquake engineering, sustainability considerations are side-lined in an effort to save time and money. The industry needs to realise that incorporating sustainability into routine seismic design makes sense and creates safety for the economic, social and environmental factors.

Sustainability means meeting present demands without compromising the needs of future generations. In the context of engineering, this can mean a range of things, from using recyclable materials which cause less waste and pollution to constructing buildings with higher resilience to natural disasters.

The major principle of earthquake design is to introduce resilience in buildings – typically, we achieve this by designing the foundations in such a way that during seismic incidents, the superstructure is affected before the substructure, avoiding foundational damage.

Resilience is a sustainable concept, but that does not mean seismic design is automatically sustainable. As engineers, we play a crucial and influencing role in making seismic design sustainable through astute assessment of seismic risk and careful judgment of the best ways to mitigate it.

There will always be conflicts when trying to match differing demands of stakeholders, the environment and economics in delivering earthquake resilience. Our challenge is to balance these demands in the most sustainable way.

Moreover, disruption caused by earthquake damage to infrastructure can have a major 'cascade failure' effect on businesses and people. By improving the seismic performance of infrastructure, we avoid or reduce earthquake damage, and significantly reduce seismic incidents' impacts on the environment, economy and community.

Keeping this in view, the role of SEISMIC ACADEMY is quite important to make the environment clean and green as well as sustainable for future generations, globally.



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