

Wind Loading Mechanisms on Masonry Construction

Kishor C. Mehta¹ and Joseph E. Minor²

Abstract:

Windstorms cause significant economic loss every year in the United States. Wind-induced damage to buildings and their contents results in economic losses in excess of three billion dollars annually. All types of buildings and structures are affected by wind storms although the vast majority of damage is experienced by low-rise buildings including those built with steel, concrete, timber and masonry. The paper describes wind loading mechanisms on such buildings and their effects on masonry walls and buildings in particular. It is concluded that appropriately designed vertical reinforcement in masonry walls can provide tensile strength, increase ductility and resist types of loading mechanisms described in the paper.

To purchase full article: Please use this direct link to purchase the TMS Journal Volume of this article, Volume 5, Issue 1: <https://masonrysociety.org/product/tms-ejournal-vol-5-no-1/>

Otherwise, consider becoming a TMS member for full access to all TMS Journal articles: <https://masonrysociety.org/membership/#join>

DOI: 10.70803/001c.140532

¹ Professor of Civil Engineering, Texas Tech University, Lubbock, TX

² Institute for Disaster Research, Texas Tech University, Lubbock, TX