

# Automatic Streetlights Powered through Speed Breaker using Microcontroller

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**Abstract:** *This paper presents the design and implementation of an automatic streetlight system powered through a speed breaker using a microcontroller. The system aims to reduce energy consumption by utilizing mechanical energy generated by vehicles passing over speed breakers. This energy is converted into electrical power, stored, and used to control streetlights. A microcontroller is employed to automate the on-off operation of the streetlights, reducing human intervention and ensuring energy efficiency. The proposed system not only promotes sustainability but also ensures streetlights are powered in remote areas where grid power is inaccessible.*

**Keywords:** Automatic Streetlight, Speed Breaker, Microcontroller, Energy Harvesting, Sustainable Power