

Impacts of Emissions Mitigation Strategies for On-Road Traffic

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This paper seeks to quantify the effects of newer, more efficient, vehicle technologies, traffic volume changes, incidents and work zones on emissions production from on-road traffic. These effects are studied using microscopic traffic simulation and emissions estimation tools that can together capture emissions effects from the operating parameters of vehicles (e.g. second-by-second velocities and accelerations). A case study involving Montgomery County, Maryland's I-270-MD-355 corridor, including connecting arterials, was conducted. Non-linear multi-regression emissions estimation models were also developed to support GHG emissions analyses for other comparable roadways. Implications for policy-makers are discussed.

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