FORWARD-LIGHTING CONFIGURATIONS FOR SNOWPLOWS

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ABSTRACT

Snow and ice control is a critical maintenance operation for New York State—for each storm up to 68,500 lane-kms (42,500 lane-miles) of highway must be cleared. Visibility during plowing operations is often poor and further diminished by backscatter glare from the snowplow's own headlights as well as glare from lights of oncoming traffic. This paper summarizes results of a pilot study to identify forward (front-end) lighting configurations that might improve visibility for plow operations. During the 1993-94 winter, eight lighting configurations were tested; two of which were identified as potential improvements over the existing pattern. Simple procedures and forms were developed for collection of reliable data. Methodological issues in performing such experiments are discussed. Statistical methodology is presented, suitable for comparison of lighting configurations, but also applicable in other, broader contexts where a number of items are compared by several evaluators.

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