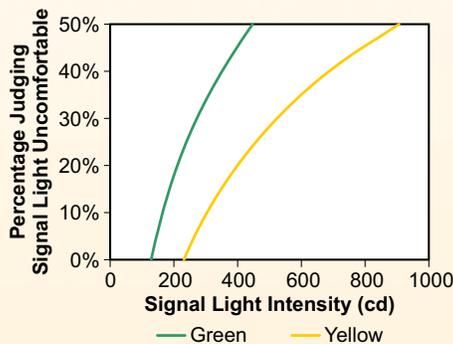


# Guidelines for Work Zone Lighting

Work zones are inherently complex and confusing visual environments, where the usual patterns of traffic flow are perturbed, and where lights used by workers for task visibility can create glare not only to workers but to nearby drivers. The use of delineation and signage, in addition to warning lights that may be flashing, can all contribute to "visual chaos." The New Jersey Department of Transportation (NJDOT) commissioned the present study with the LRC to address and begin to overcome these issues.

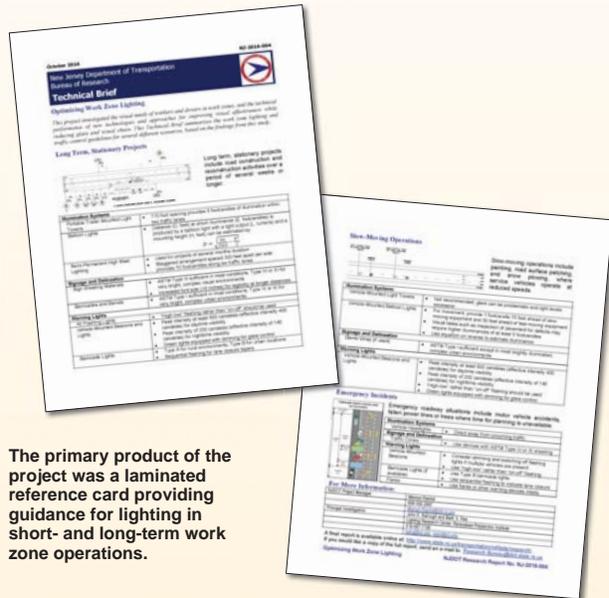


The objective of the present study was to identify the needs of workers and drivers in different work zone environments, and to review existing knowledge about ways in which lighting practices and technologies can be deployed to provide workers with sufficient illumination while minimizing glare and confusion to all individuals in and near the work zone.



A green signal light will be judged as uncomfortable by a majority of drivers when its intensity is 400 cd; a yellow light can have an intensity of 900 cd before most drivers will judge it uncomfortable to view.

Following a literature review of recently published information on lighting and traffic control in work zones, and a questionnaire of safety engineers, technical analyses of illumination systems (especially new "balloon" lights), signage and delineation materials, and warning lights were undertaken. The results of the technical analyses led to the development of guidelines for illumination system selection/layout, application of sign and delineation devices and materials, and the use and control of flashing green and yellow warning lights to provide workers and nearby drivers with visual information in work zones. Guidance took the form of a two-page (front and back) "Tech Brief" for easy reference, laminated for durability and use in the field.



The primary product of the project was a laminated reference card providing guidance for lighting in short- and long-term work zone operations.

## Full report

A copy of the final report, "Optimizing Work Zone Lighting," is available at <http://www.state.nj.us/transportation/refdata/research/reports/NJ-2016-004.pdf>



## Sponsors

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