



OFFICE OF THE INSPECTOR GENERAL

PRELIMINARY INQUIRY MEMORANDUM

May 17, 2017

TO: Timothy L. Firestine
Chief Administrative Officer

FROM: Edward L. Blansitt III
Inspector General

SUBJECT: Yellow Signal Timing
OIG PIM #17-003

A Preliminary Inquiry Memorandum (PIM) describes specific issues or complaints received and the outcomes of limited procedures undertaken during a Preliminary Inquiry conducted by the Office of the Inspector General (OIG). Copies of this PIM along with your response, if any, will be provided to the members of the County Council and the County Executive within 10 business days of the date of this PIM.

Complaints:

In early 2017, the OIG received two complaints related to Montgomery County's Department of Transportation (MCDOT) timing of yellow signals along State highways.

The initial complainant stated that the County had set some yellow signals to a duration less than the 3.5 seconds required by the State Highway Administration (SHA). The complaint alleges that MCDOT and the Montgomery County Police Department have stated that the 3.5 second SHA policy is a recent one, but SHA told the complainant that the policy originated in 2003.

The OIG received a separate complaint stating that the County had unfairly placed red light cameras at intersections where the yellow signal duration was less than 3.5 seconds. The complainant provided a link to a December 8, 2016, ABC7 news segment covering the topic.¹

¹ <http://wjla.com/features/7-on-your-side/montgomery-county-turns-off-red-light-camera-responsible-for-350k-in-fines>, last accessed on May 3, 2017.

Inquiry and Outcome:

In 1968, the SHA and MCDOT entered into an agreement where the State reimburses the County for the maintenance of traffic signals along State-maintained highways in the County.² Currently, MCDOT maintains 836 traffic signals within Montgomery County.³

The MCDOT Division of Traffic Engineering and Operations (TEO) Division Chief told OIG staff that because the County does not have a written policy for the operation of traffic signals, MCDOT follows SHA's lead and complies with State regulations for all signals maintained by the County.

In March 2003, SHA issued a policy stating that the "*minimum yellow interval should be 3.5 seconds.*" However, neither MCDOT nor SHA could provide any record verifying that the policy was officially shared with MCDOT. The SHA Office of Traffic and Safety (OOTS) Director believed that some members of MCDOT had been informally notified, as they had participated in meetings with SHA during which the policy was discussed, but acknowledged that the information could have "*slipped through the cracks*" through employee attrition, retirement, etc. He also stated that while the shorter (3 second) interval utilized at some County intersections was not unsafe and met the national standard, SHA believed that the extra half of a second was of benefit.

The MCDOT TEO Division Chief communicated that his team first officially learned of the SHA guideline outlining a 3.5 second minimum yellow signal duration from a May 15, 2015 memo. OIG staff reviewed the memo and its attachments which discuss guidelines for yellow, all-red, and pedestrian clearance timing for traffic signals. The memo states,

"These policies should be met at all SHA-owned signals and all SHA-owned signals that other jurisdictions operate. Jurisdictions may use different policies on signals they own and operate as long as they still comply with the 2009 MUTCD⁴ [Maryland Manual On Uniform Traffic Control Devices]."

The MCDOT TEO Division Chief stated that MCDOT is systematically retiming intersections to change walking speed. During the course of those efforts, yellow signals are being retimed to be at least 3.5 seconds in duration.

According to MCDOT, during the fall of 2015, MCDOT prioritized the retiming of yellow signals at intersections with red-light camera monitoring, and all of those intersections were retimed by the end of 2016. At the time of our review, MCDOT

² Signals within the corporate limits of Rockville, Takoma Park, and Gaithersburg are excepted from the agreement.

³ 547 of the 836 traffic signals maintained by MCDOT are owned by SHA. The SHA Office of Traffic and Safety (OOTS) Director told OIG staff that while the State's contract with the County does not specifically require that the County comply with State regulation, signals referenced in the contract are owned by the State and the traffic signal plans are signed by the State. Thus, it is his expectation that MCDOT follow the State regulations for the operation of State-owned traffic signals.

⁴ Both the Current (2011) and 2009 Edition of *Maryland Manual On Uniform Traffic Control Devices* state "*A yellow change interval should have a minimum duration of 3 seconds and a maximum duration of 6 seconds.*" Thus, we conclude that the County would be permitted to set a policy allowing yellow signals to have a duration between 3 and 3.5 seconds at intersections that are not SHA-owned. However, at the time of our review a MCDOT representative stated that because MCDOT does not have a written policy, it complies with SHA regulation for all signals.

reported that 105 of the 836 traffic signals maintained by MCDOT still need to be retimed to meet the 3.5 second standard for yellow signal timing. MCDOT was unable to provide an accurate estimate of timing for the completion of the retiming project. The OIG did not test the accuracy of the information provided by MCDOT.

OIG staff discussed MCDOT's retiming efforts with the SHA OOTS Director, who stated that as long as MCDOT continues its current efforts, SHA is generally satisfied with MCDOT's efforts to bring County traffic signals into compliance. The SHA OOTS Director suggested that MCDOT provide SHA with written progress reports detailing its efforts.

Currently, SHA and MCDOT meet on a quarterly basis to informally discuss traffic items of interest and retiming is a topic of discussion. SHA expressed an interest in receiving more formal (written) communication regarding the matter. SHA has informally offered to provide assistance with MCDOT's retiming efforts. However, at the time of our review MCDOT had not received confirmation of SHA support.

Summary and Conclusion:

In lieu of creating separate, written County policies, MCDOT has adopted SHA policies for the operation of all traffic signals within the County. Current SHA guidelines state that yellow signals should last at least 3.5 seconds.

Although the 3.5 second minimum was set by SHA in 2003, MCDOT maintains that it was not formally notified of the guideline until May 2015. Since May 2015, as it retimes signals during the course of its regular operations, MCDOT has been retiming yellow signals to comply with the SHA policy. According to MCDOT, at the time of our review, 13% of the County-operated signals have a yellow signal duration of less than 3.5 seconds and need to be retimed.⁵ Also, per MCDOT, the remaining traffic signals, including all signals equipped with red-light cameras, are in compliance with SHA policy regarding yellow signal timing. We did not test or verify the accuracy of the information provided by MCDOT.

MCDOT was unable to provide a timeline for completion of the retiming project. SHA has also indicated that it would like more formal reports of the County's progress regarding yellow signal retiming efforts and would be willing to assist the County in its retiming efforts if necessary. The County should seek SHA assistance in signal retiming if needed.

MCDOT should develop a formal schedule with a defined completion date for yellow signal retiming. The schedule should include a mechanism for routinely reporting progress to SHA.

cc: Al Roshdieh, Director, Department of Transportation
Venu Nemani, Chief, Division of Traffic Engineering and Operations

⁵ A representative of MCDOT stated that yellow signals meet the federal minimum of 3 seconds in duration.

A Preliminary Inquiry Memorandum (PIM) is appropriate in situations where we have, in reaction to a complaint, gathered and assessed sufficient information for us to draw limited conclusions related to the specific complaint. Since PIMs do not result from full inspections, investigations, or audits, it would not be appropriate for us to provide full findings and recommendations in PIMs. Instead, we may identify specific conditions, transactions, and events that management may want to continue to research from an investigative or policy standpoint.

Response to this Preliminary Inquiry Memorandum:

From Montgomery County Chief Administrative Officer:

On June 1, 2017, the office of the *Chief Administrative Officer* responded via email:

“As suggested by the report, MCDOT will develop a formal schedule with a defined completion date for yellow signal retiming. We have no additional comments.”