Montgomery County Policing Advisory Commission
Findings and Recommendations for Traffic Enforcement

Adopted, December 2021, revised and updated June 2023

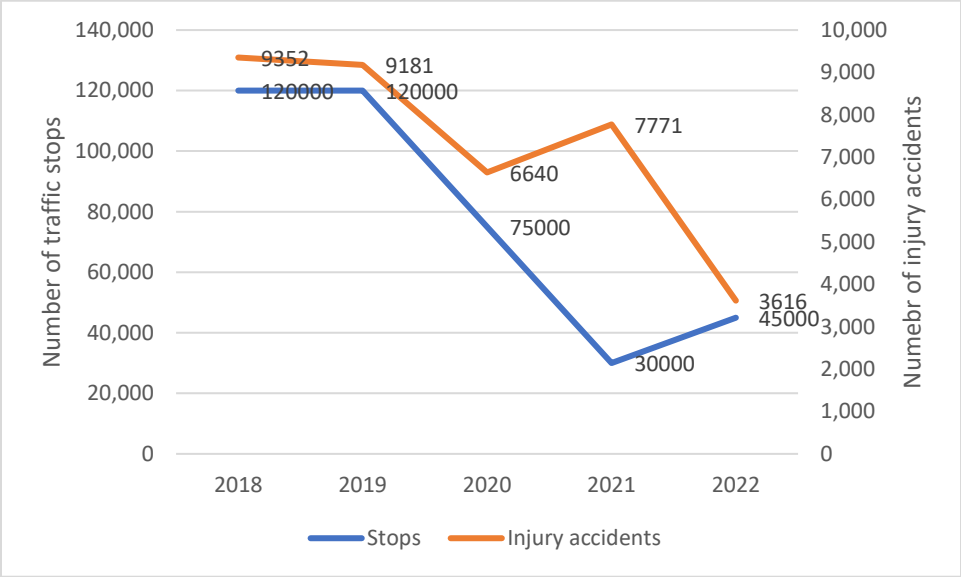
Preface

- **The Policing Advisory Commission's Committee on Discretionary Policing Practices, soon after it was established, began what has been a several years-long review of Montgomery County Police Department traffic enforcement practices. Their first round of questions submitted to the MCPD was answered on December 22, 2020. A second round of follow-up questions was also exchanged. An earlier draft of this report was casually transmitted to the County Council on January 28, 2022 (referred to in the last sentence of a 2 page letter on another subject). Receipt of the report was never acknowledged.**
- **On January 9, 2023, the PAC held a virtual public forum and received extensive written testimony regarding traffic enforcement. The hearing and witness statements can be viewed on the PAC webpage.**

Highlights

- **Need for a new MCPD traffic enforcement mission focused on *effective*, *efficient*, and *equal* enforcement.**
- **Mission effectiveness needs to be measured by traffic safety, not the number of traffic stops.**
- **Current traffic enforcement is not efficient, imposing enormous costs for little return.**
- **Enforcement falls disproportionately on Black and Hispanic drivers.**
- **The data collected by MCPD is insufficient; important components are not published.**
- **MCPD provides almost no description, analysis, or assessment of traffic enforcement.**
- **UPDATE 2023: A very sharp decline in traffic stops (down 63% between 2018 and 2022) is associated with an equally sharp 61% *decline* in injury accidents. This validates the basic core arguments in this report (see figure 1).**

Figure 1. Traffic stops and accidents, Montgomery County 2018-2022



Sources: Stops, Montgomery County OLO Report Dec 2022
Injury accidents, Maryland MDOT MVA's Highway Safety Office
https://zerodeathsmd.gov/resources/crashdata/

I. Introduction

Traffic stops are the most common form of interaction between MCPD and residents of Montgomery County. MCPD reported a total of more than 587,000 stops between 2015 and 2019 (pre-pandemic), more than 100,000 traffic stops annually. MCPD acknowledges that additional unreported stops have also occurred. Thus consideration of the time, place, manner, and rationale for these stops is central to understanding policing in the County.

The primary rationale provided by MCPD for making traffic stops is to enhance safety on the roadways. However, despite the enormous number of stops (pre-pandemic), accidents did not decline significantly in that time. Moreover, Black drivers are stopped, searched, and cited at higher rates than White drivers, and Latino drivers are stopped and given "warnings" more frequently than White drivers. Despite the persistence of these racial/ethnic disparities over the course of several years, MCPD has undertaken no studies to assess possible bias and offers little more than anecdotal "hunches" to explain these differences.

This report builds on two recent reports by the Montgomery County Office of Legislative Affairs (OLO), the report of the Montgomery County Reimagining Policing Task Force, the

preliminary results from the Effective Law Enforcement for All (ELE4A) audit of the Montgomery County police department, data from the Open Data Portal, and Policing Advisory Commission (PAC) public hearings. The PAC has also received more than 70 written testimonies from residents, and it has met with MCPD Chief Marcus Jones, and various groups within the County who are concerned about traffic enforcement.

We believe that traffic enforcement practices in the County do not meet basic tests of effectiveness, efficiency, and equal enforcement, and that a change in mission, focus, and strategy is necessary.

II. Findings

F1. MCPD Mission and objectives.

MCPD's current perspective is that more stops lead to safer roadways; therefore more stops are the primary objective. MCPD has stated in testimony to the PAC that traffic enforcement outcomes are measured by the effort put forth: "MCPD measures its traffic safety efforts by the amount of hours dedicated to in-person high visibility enforcement against the top dangerous behaviors on the roadways."[1]

Because the vast majority of stops have been conducted by patrol officers in the course of their duties, rather than as part of a strategic effort to address safety, these stops are a major component of discretionary policing: policing where officers individually decide who they stop and why. As both the data and testimony show, the burden of stops falls unequally across residents (see F2 below). Given these disparities, it is incumbent on MCPD to explain why these patterns exist, in order to justify current activities.

MCPD has however not successfully defended its current approach to traffic enforcement on the grounds of either effectiveness or efficiency. On effectiveness, it has provided some limited insights into the detailed operations of the Centralized Traffic Section. But it has provided no data or analysis on either District-led efforts or enforcement conducted individually by patrol officers. It has provided only minimal evidence linking traffic enforcement to reduced accidents and increased safety (see F3).

These is no evidence that the current approach is an efficient way to manage traffic enforcement. Takoma Park has found that reducing the number of traffic stops by about

[1] MCPD written response to PAC questions. For example, in the 2020 MCPD Annual Report, police describe at considerable length the laudable efforts of the Holiday Taskforce. However, MCPD provides no evidence of the *impact* of the Taskforce on accidents and deaths, or on the rate of drunk driving. *MCPD Annual Report 2020* pp 22-23

85% is associated with fewer, not more, collisions (see F3 below). This powerfully suggests that a large percentage of stops have no overall effect on safety.

The current approach also ignores the cost of stops. Direct costs involve the time of officers, of stopped citizens, and of the judicial system which must process violations. Indirect costs affect the trust relationship between citizens and the police: in communities whose members are stopped often, there is a strong belief that MCPD is targeting its members because of racial or ethnic bias. The PAC received a significant number of statements from citizens complaining about what they saw as over-zealous or inappropriately targeted traffic enforcement.

We conclude that MCPD must install a new mission for traffic enforcement. The existing mission encourages more traffic stops as an end in itself, rather than as a means to the end of creating a system which strategically uses stops to ensure public safety, at minimal cost, and where drivers are treated equally.

F2. Effectiveness of traffic stops as a cause of reduced accidents

MCPD has stated that the effectiveness of its traffic enforcement program should be measured in stops and citations. In response to PAC questions, MCPD said:

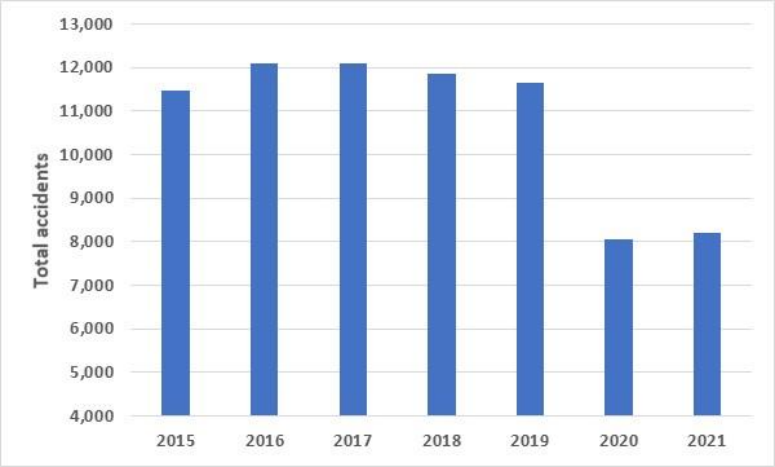
> "Our progress is measured by 'Efforts', or the amount of time and resources that are devoted to any area of the County. Our efforts are measured by results that are measured as 'Outcomes.' Outcomes come in the form of a written warning, citation, or emergency repair order."[2]

We disagree. The effectiveness of traffic enforcement must be measured against its impact on traffic accidents. That is the <u>only</u> appropriate metric for measuring effectiveness. And against that metric, there is no evidence that traffic enforcement in Montgomery County is effective: there was, in the years prior to COVID, no sign that the number of accidents was being significantly reduced. Data from the State Accident Reporting System show that from 2015-2019 (i.e. before the pandemic, the number of accidents reported did not decline (see figure 1).[3] The sharp decline in COVID years matches a sharp decline in the number of stops.

[2] Reply to previous information request

[3] It may be that the *rate* of accidents has declined, if the number of miles driven on County roads has increased. However, MCPD has not provided this data or any analysis based on this data.

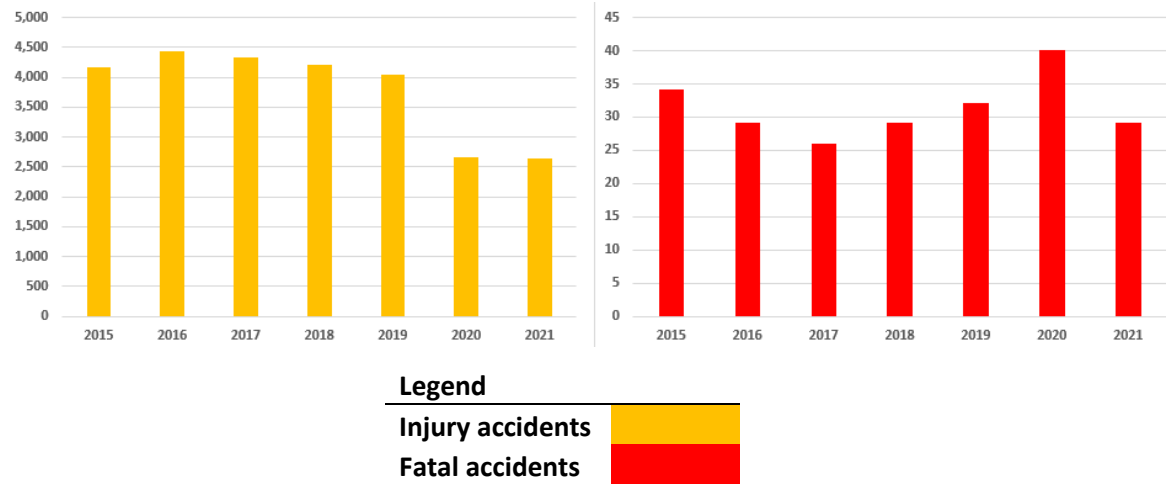
Figure 2. Accidents in Montgomery County Jan 1, 2015- Nov 25, 2021.



Source: ACS

Similarly, the data for injury accidents and fatal accidents also show no improvement aside from the pandemic (see figure 2). This strongly suggests that current enforcement efforts have not been effective in reducing accidents and especially serious accidents in Montgomery County.

Figure 3. Injury accidents and fatal accidents, Jan 1, 2015 – Nov 25, 2021



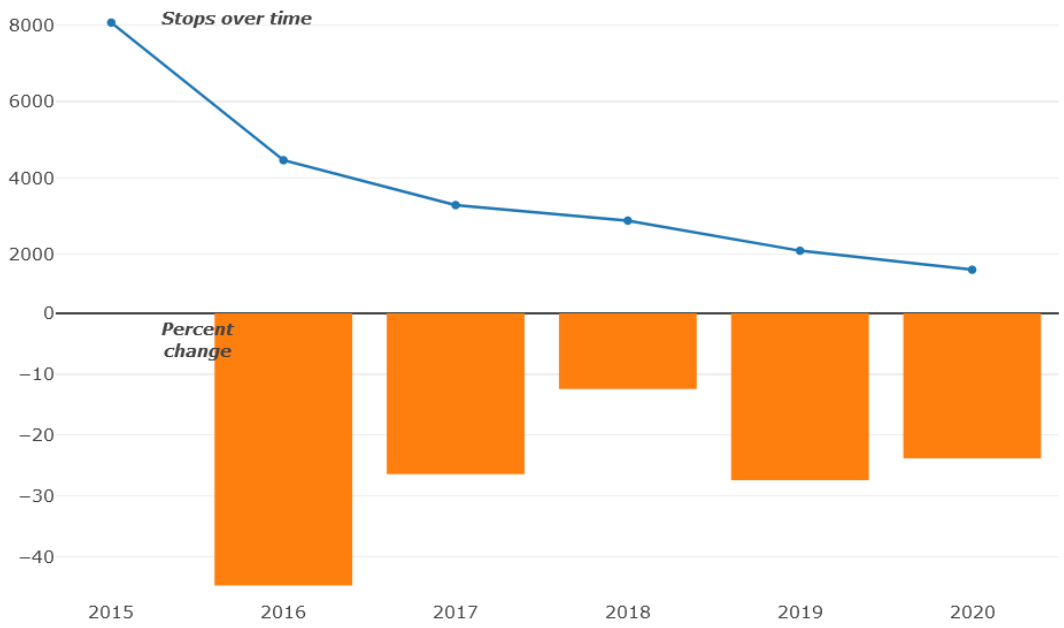
F3. Efficiency of traffic stops to improve safety.

Current practice also needs to be efficient. Given that stops impose costs on drivers, officers' time, and the courts, efficient enforcement means making the *minimum number* of enforcement actions necessary to support roadway safety.

MCPD has provided no evidence to show that its current approach is the most efficient way to ensure safety. But there is powerful evidence – from within Montgomery County – that current MCPD practice vastly over-uses traffic stops. The Takoma Park Police Department has in recent years made significant changes in its strategy and tactics, making a conscious effort to reduce the number of traffic stops, and declining to make stops for less serious violations. The results are shown in figure 4: between 2015 and 2020, the number of stops made declined from just over 8,000 annually to just under 1,600 – an overall decline of about 80 percent.[4] Moreover, figure 5 shows that the decline in citations has been even greater than the decline in stops, down from 4,010 in 2015 to 642 in 2020 – a decline of 84 percent.

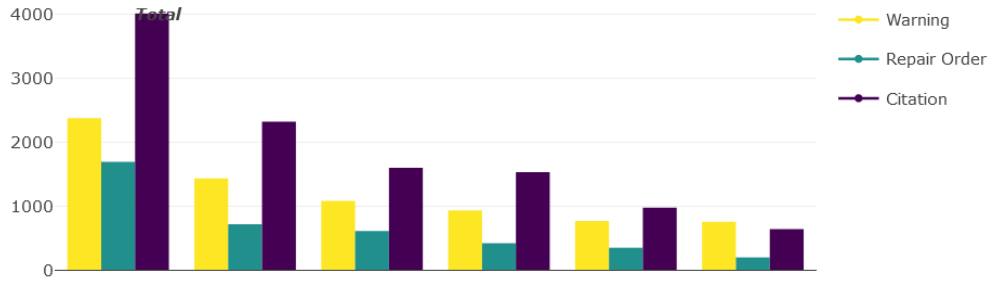
[4] https://r.takomaparkmd.gov/police-data-webpages/index.html

Figure 4. Traffic stops in Takoma Park, 2015-2020



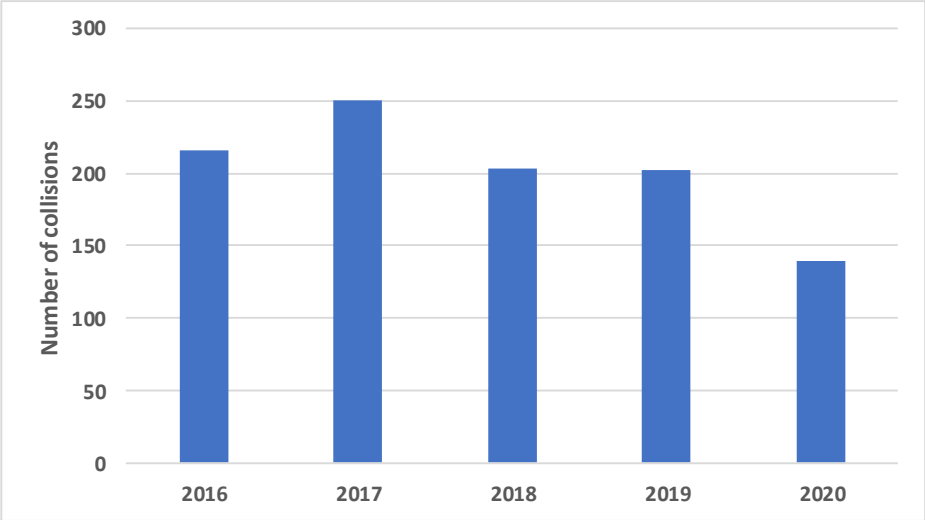
Source: Takoma Park PD

Figure 5. Outcomes from traffic stops in Takoma Park, 2015-202



Critically, the rapid decline in stops in Takoma Park was not associated with a reduction in traffic safety. On the contrary, data from Takoma Park PD annual reports shows that the number of collisions is down about 20% between 2017 when the traffic enforcement focus changed, and 2019 – the last year pre-pandemic At a minimum, we can conclude that there has been no negative impact on safety from a even a very sharp decline in stops.

Figure 6. Number of collisions in Takoma Park, 2016-2020



Source: Takoma Park PD Annual Reports

The implications are clear: current practice of the Montgomery County Police Department has led to a vast number of stops that have had minimal impact on safety, at considerable cost to drivers, to the County, to police resources, and to the courts.

F4. Equal enforcement.

Equal enforcement of traffic regulations must be a primary requirement for MCPD. All drivers should be treated equally and fairly. However, as national studies have shown, there is overwhelming evidence that bias in traffic stops is a problem.[5]

a. **Evidence of bias.** Studies of Montgomery County stops have also shown significant disparities.[6] MCPD has however undertaken no studies or analysis of possible bias in

[5] See among many other sources, Pierson, E., Simoiu, C., Overgoor, J. *et al.* A large-scale analysis of racial disparities in police stops across the United States. *Nat Hum Behav* **4,** 736–745 (2020). https://doi.org/10.1038/s41562-020-0858-1. This examined 100 million stops and found a range of biased behaviors for stops and searches.

[6] For some examples of possible bias in stops, citations, and searches in Montgomery County, see Appendix A section 1). See also OLO 2021-10

traffic enforcement. It has instead sought to disparage existing studies.[7] Figure 6 shows traffic stop outcomes by race and ethnicity in Montgomery County for all stops between 2013 and 2019 (i.e. pre-pandemic). The dotted red line in each chart shows the share of outcomes that would directly reflect the population of Montgomery County.[8]

Figure 7. Traffic stop statistics by racial and ethnic group, 2013-2020

Data source: Montgomery County Open Data Portal[9]

This data is similar to that reported by OLO,[10] and pose important questions for MCPD: *Why* are Black drivers apparently treated markedly differently than other drivers are? This data (and similar work by OLO) *demand* answers from MCPD. How are these disparate impacts justified? We regret that we have not received an answer to this question.

[7] Chief Jones also argued in the November 8 Commission meeting that because there are currently no available data on the impact of drivers from outside the jurisdiction, all existing analyses of traffic stops are invalid; we reject this argument (see discussion in section F2 below).

[8] According to Census data

[9] See Mikhael Gaster, "Analysis of Montgomery County Traffic Stops," prepared for the Montgomery County Police Advisory Commission, November 2021. The full paper is provided as Appendix A below.

[10] OLO 2020-9, p.10 and p.64-65

b. **MCPD responses**. MCPD has provided no answers to the questions posed by these data, aside from unfounded concerns about the data (see F10). According to Chief Jones, MCPD has conducted no studies of potentially biased policing traffic enforcement (and no studies of bias have emerged for other aspects of MCPD activity, either).[11] No such studies or analyses were reported to be under way.

c. **Different kinds of bias.** In the context of a world shaped by U.S. Department of Justice exposure of the oppression of Ferguson, Missouri and the murder of George Floyd in Minneapolis, MN, it is extraordinary and unacceptable that MCPD has taken no steps to ensure that its own work is bias-free. It appears to ignore the different kinds of racial bias that can be in play:

- *Conscious bias* (i.e. racist policing). Testimony submitted to the PAC by individuals and nonprofit organizations describes instances in which the drivers believed they were being confronted by racist policing.
- *Unconscious bias* (i.e. bias from individual officers which they are not aware of). All of us have unconscious bias; indeed MCPD police training makes a point of addressing unconscious bias. However, MCPD has made no effort to identify ways in which unconscious bias may affect traffic enforcement. That would require ongoing analysis and evaluation of individual officer activity. MCPD has provided no evidence that such analysis has been conducted or is planned.
- *Systemic bias* (i.e. biased outcomes that result from enforcement strategies which are not designed to produce disparate outcomes but may yet do so). Systemic bias may for example result from the introduction of traffic cameras (which have no conscious or unconscious bias) in a neighborhood with a high concentration of minority residents. The result will be more tickets for minority drivers. MCPD has not provided any assessment of disparate impacts from systemic bias. Note that MCPD has asserted that neighborhoods with high minority populations have sought traffic cameras. However, it has not provided any data to support this assertion or to support the contrary assertion that traffic cameras are not installed in neighborhoods with a high percentage of white residents. Regardless of resident requests, MCPD is required to employ objective criteria for camera deployment that are not driven solely by resident requests but that also supports an overall vision of traffic safety. Moreover, even if minority communities have requested traffic cameras, the onus remains on MCPD to monitor its activities for systemic bias. Disparate impact should not be regarded as simply a by-product of normal traffic enforcement. (Note – placement of traffic enforcement cameras is governed by Maryland state law.)

[11] Chief Jones, in response to PAC questions, Nov 8, 2021

F5. Serious and less serious traffic violations.

The July 27, 2021 OLO report on traffic (OLO 2021-10) differentiated Montgomery County traffic violations into collision-contributing violations and other traffic violations (e.g. minor violations, expired registrations, or equipment issues -- not due to driving in a dangerous or unsafe manner). Serious violations include:

- Aggressive driving (e.g., speeding).
- Not using seat belts.
- Failure to obey signals at intersections.
- Drunk or drug-impaired driving.
- Distracted driving (e.g., use of cell phones); and
- Drowsy driving.[12]

We broadly accept the OLO distinction, with two caveats: we do not accept that seat belt violations are serious violations; and we would distinguish between speeding below 10 miles per hour above the speed limit, which we view as a less serious violation, and speeding at higher speeds which is indeed a serious violation.

The distinction between serious and less serious violations is important when considering the best approach to traffic enforcement. We also note that a similar distinction has been implemented in Takoma Park, which now focuses only on serious offenses (see F4 and Figure 7, above).

F6. Structure.

Traffic enforcement in Montgomery County is divided between the Centralized Traffic Section (identified as the Centralized Traffic Unit in the July 2021 Office of Legislative Oversight Report, and referred to in this report as the CTU) and Districts. The CTU, which now has about 20 patrol officers (there are about 600 patrol officers in total). Our findings address both CTU and the Districts.

a. **Centralized Traffic Unit (CTU).** CTU focuses primarily on high traffic roads in the County; historically, CTU accounts for about 20 percent of stops in Montgomery County. In July 2021, District officers whose primary responsibility has been traffic

[12] The OLO 2021-10 report references as sources of this distinction the following: https://www.nhtsa.gov/risky-driving ; see also, *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Officers, 9th Ed. 2017*, National Highway Traffic Safety Administration (2017) [hereinafter "*Countermeasures That Work*, NHTSA"]; *Traffic Safety Resource Guide*, International Association of Chiefs of Police (IACP), at p. 5-15 (2017); Conner, Marco, *Traffic Justice: Achieving Effective and Equitable Traffic Enforcement in the Age of Vision Zero*, 44 Fordham Urban Law Journal, at p. 982 (2017) [hereinafter "Connor, *Traffic Justice*"]; "2019 Traffic Safety Culture Index," AAA (June 2020).

enforcement were moved into the CTU, and preliminary data from MCPD indicate that now 44 percent of traffic stops are made by CTU, although such a large shift is surprising given that CTU has only 20 officers in total on patrol.[13] If accurate, this is a positive step, which should add clarity and strategy to traffic enforcement.

i. **CTU Work products.** MCPD claims that CTU is using data analytics to develop appropriate strategies that address high-accident areas. CTU has made public some examples of descriptive data,[14] but has not provided any examples of how the data have been used, or of impacts from that use. The 2020 MCPD Annual Report discusses holiday enforcement in detail, but provides no outcomes data related to traffic safety. It is therefore not clear whether CTU has developed appropriate metrics for measuring the success of its efforts, whether it applies these metrics across all its activities, and whether it has successfully impacted traffic safety.

ii. **Objectives.** Neither CTU nor MCPD has published detailed goals for traffic enforcement. MCPD is a partner in Vision Zero,[15] and thus is charged with reducing fatalities on county roadways. However, there are no known detailed objectives – e.g. "reduce accidents by 25% along the Route 29 corridor." Traffic enforcement could be viewed in a more positive light in some communities if such detailed targets were known.

b. **District-level traffic enforcement.** Traffic enforcement by the Districts and patrol officers historically accounted for about 80% of citations. Efforts within the District are split between specific District-driven efforts to address identified problems ("District plans"), and the normal enforcement activities of patrol officers.

i. **District plans.** In part, District traffic enforcement is planned: specific strategies and efforts are developed by District commanders to address either traffic-related problems identified by the Districts or by CTU, or in response to citizen complaints and requests (CTU says the latter drives most activity at the District level[16]). The relationship between CTU and Districts appears to be growing. For example, District 3 asked the Traffic Analyst for crash data for a specific timeframe (2000 to 0600 hours). This enabled the District Commander to deploy midnight patrols more effectively to specific

[13] MCPD response to PAC questions
[14] OLO 2021-10 Appendix C,
[15] Vision Zero is a principal strategy adopted by many jurisdictions "to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all." Launched in 2017, the County seeks to end all traffic fatalities and severe injuries by 2030. (From OLO 2021-10, p.1)
[16] MCPD response to PAC questions

areas with increased overnight collisions.[17] However, the PAC has no way to assess the extent to similar interactions drive District level traffic enforcement consistently and systematically, and District traffic enforcement and accident rates are not a part of the evaluation of senior District officers.

ii. **Patrol activities.** Most traffic enforcement is actually conducted by individual patrol officers in the normal course of their duties.

a) Patrol officers are authorized to enforce all traffic laws. However, the heavy flow of traffic in many parts of the County means that officers can make stops related to a wide range of fairly normal activities (e.g. exceeding the speed limit, changing lanes in a manner the officer sees as unsafe, failing to signal properly). Patrol officers thus have enormous discretion in their use of traffic stops.

b) Officers are currently also permitted to ask drivers if they may search a stopped vehicle (see F6 below), and to conduct Carroll searches even if permission is refused (see R6 for a more detailed description of Carroll searches). There is at least anecdotal evidence that MCPD patrol officers continue to use the "smell of marijuana" (which is both subjective and fleeting) as a reason to conduct Carroll searches.

c) Because Maryland does not have a vehicle inspection program after a vehicle has been registered (unless the registration is changed), patrol officers are authorized to enforce a wide variety of laws which can be associated with vehicle safety (e.g. nonworking headlights, broken taillights). Because vehicle safety infractions are sufficient to justify a stop, officers have considerable discretion in their traffic stops.

MCPD has provided no data or analysis on patrol officer activities, and this is the area of significant concern to individual citizens (reporting in testimony to the Commission) as well for local nonprofit organizations. MCPD data does not systematically record *why* an officer made a stop. It does not publicly report the number of stops per officer. It does not report how many of those stops resulted in search requests, by officer and location. Thus the rationale for a substantial share of traffic enforcement on local streets remains invisible.

[17] MCPD response to PAC questions

F7. Pretextual stops.

Pretextual stops can be defined as stops designed to address issues other than the traffic concern that is the ostensible basis for the stop.

a. Pretextual stops are by definition an expression of the officer's discretion. As noted above (see F2), preliminary evidence suggests that this discretion has in MCPD resulted in racially disproportionate stops. Accordingly, it is the responsibility of MCPD to demonstrate that these stops do indeed result in improved community safety, and that they are therefore worth the costs they impose (see F1 and F3).

b. **MCPD has defended the use of pretextual stops.** It argues that they enable officers to use their instincts to identify possible wrongdoers. And it claims that over 3 years, 144 illegal guns were seized.[18] These confiscations required approximately 340,000 stops,[19] or about 2,360 stops for each gun confiscation. Those guns accounted for 4.7% of guns seized by MCPD during the past 3 years.[20]

c. **MCPD has not provided any other evidence that pretextual stops protect the community.** MCPD does not collect data on drugs seized, on stolen cars recovered, on cash or other items confiscated, or on warrants served. It does track arrests from traffic enforcement, but not specifically from stops that were initiated as pretextual stops. Further, the publicly available traffic data does not differentiate between arrests for traffic offenses and arrests for other offenses uncovered during the stop. MCPD claims that tracking pretextual stops is impossible, because it cannot determine "what is going on in an officer's mind."[21]

d. **MCPD has not provided any substantive reason for permitting pretextual stops.** It has not shown that public safety is enhanced by pretextual stops, and there is evidence from members of the community, from community organizations, and of course nationally that pretextual stops are a primary mechanism through which biased policing occurs.

F8. Searches.

While MCPD maintains no data on whether a search was requested and refused, evidence from the community suggests that MCPD officers are often eager to conduct searches (see pretextual stops above). In some cases, officers delay drivers who refuse searches (e.g. claiming that they must wait for a K-9 officer or a supervisor). Further, because MCPD does

[18] MCPD response to PAC written questions.
[19] OLO 2021-10
[20] MCPD Annual report, p.20
[21] MCPD response to PAC written questions

not directly track outcomes from searches, there is no data on which to base an argument that searches in general are (or are not) effective.

F9. Incentives.

According to Chief Jones, traffic enforcement is a small component in the overall assessment of a patrol officer effectiveness.[22] While MCPD strongly asserts that there is no ticket quota for individual officers or other employment-related incentives to conduct traffic stops, traffic enforcement is currently part of the performance evaluation of officers. Therefore, it is unclear whether officers may still have personal incentives to make more stops. These concerns have not been put to rest by MCPD.

F10. Automated traffic enforcement (ATE).

According to the Centers for Disease Control and Prevention (CDC), the use of automated red-light and speed cameras should be a primary strategy for reducing the number and severity of motor vehicle crashes.[23] The Insurance Institute for Highway Safety found that police departments' automated speed enforcement programs were associated with a 10% reduction in average speeds and a 62% reduction in the likelihood that a vehicle was traveling more than 10 mph above the speed limit at camera sites.[24] A recent analysis focused specifically on red light cameras in Montgomery and PG Prince George's counties found that a properly deployed system can reduce side impact crashes, change the number of dangerous rear-end collisions (depending on the local driving populations), reduce aggressive driving behavior at the red light camera location and also at downstream intersections, induce more drivers to reduce speeds to stop when passing through a yellow phase, and reduce the number of vehicles running red lights.[25]

MCPD has noted that currently, state law limits the deployment of speed cameras and red light cameras across the county. For example, ATE cannot be used in areas where the speed limit is less than 35 mph, or in commercially zoned areas.[26]

a. **Expansion.** We welcome the expansion of ATE. Depending upon the placement of these devices, they can eliminate conscious and unconscious bias and will reduce the need for patrol officer stops. MCPD plans to increase ATE at a fairly modest

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[22] Chief Jones, responses to PAC questions, Nov 8, 2021
[23] CDC, "Motor Vehicle Crash Deaths: Costly But Preventable – Maryland." Noted in OLO 2021-10
[24] MCPD response to PAC questions
[25] Sung Yoon Park, Chien-Lun Lan, and Gang-Len Chang, ***"Evaluating the Impacts of Red Light Camera Deployment on Intersection Traffic Safety."*** June 2018 Maryland DOT Highway Safety Administration

[26] MD Transportation Articles 21-202.1 (Red Light Cameras) and 21-809 (Speed Cameras).

pace: approximately 5 additional cameras per year, or 4% of the current total. We do not believe that the plans for expanded ATE have been published or opened for public comment.

b. **Systemic bias.** Despite positive impacts on traffic safety and on conscious and unconscious bias in traffic enforcement, ATE will not necessarily eliminate structural bias: cameras placed in high-minority areas will flag more minority drivers, for example. As OLO concluded, MCPD must ensure that additional ATE is not mis-targeted. There is currently no evidence that MCPD has conducted any bias assessment of existing ATE, and such an assessment does not seem to be part of expansion plans.

Figure 8. ATE types and distribution in Montgomery County

Montgomery County Automated Traffic Enforcement Types

Type	Description	#	Fines
Speed Cameras	• For use only on residential roads with a maximum posted speed limit of 35 MPH • Uses photo radar/Lidar to photograph rear license plates • Vehicles must exceed the speed limit by 12 MPH or more	38 fixed-pole 34 portable 5 mobile van	$40
Red Light Cameras	• Activates when motion is detected just prior to the stop line/stop bar after the traffic signal has turned red • Camera captures video of an alleged violation, taken from the rear of the vehicle	51	$75
School Bus Cameras	• When a school bus extends its stop arm, the camera detects any vehicle passing the stopped school bus • Camera captures video showing the violating vehicle, the vehicle's license plate, and the extended stop arm	1,382	$250

Source: OLO 2021-10, p.3

c. **Scale.** The number of ATE violations does not appear to have changed significantly since 2009, when the speed camera program was fully implemented. Total revenues generated by speed cameras were approximately $15 million; contractor costs appear to be on the order of $8 million. ATE is therefore not a net drain on the budget, which would be a barrier to faster expansion.

d. **Is the State a significant barrier?** OLO concluded that State law and State agencies play a large part in determining whether it is appropriate for cameras to be introduced in specific locations where state-maintained roads are concerned, and State involvement presents a significant barrier to the introduction of additional ATE.[27] MCPD has noted that the primary reason for rejecting requests is concern about more rear-end collisions as drivers stop short as lights change. However, as

[27] OLO 2021-10

discussed in R8 below, we do not fully accept OLO's conclusions: about 2/3^{rds} of County requests are approved, so the barrier is clearly not insurmountable

e. **Role of the State agencies.** The State Highway Administration must approve requests. In principle, we have no issue with a useful technical check for proposed placements, and while it may delay or even deny County requests, on balance this may be appropriate. However, the data from the State's own study shows that on balance ATE reduces serious accidents; it appears that MCPD would seek more ATE if State barriers were lower.

F11. Tracking and data.

Montgomery County publishes a considerable amount of traffic and accident data through the Open Data Portal. However, much traffic-relevant data is not collected, or is not released publicly.

a. **Missing and incomplete data.** Missing data includes:
   i. Records of drugs seized, or warrants served during stops.
   ii. Requests for searches
   iii. Outcomes from searches
   iv. Complaints specifically related to traffic enforcement.
   v. Outcomes from arrests
   vi. Payment of fines or subsequent arrests for delinquency.
   vii. Outcomes from repair orders
   viii. Primary violation records – MCPD officers do not systematically report which violation caused the stop

b. **Access to data.** Not all of the data that MCPD collects is available to the public via the Open Data Portal. Missing data and information includes:
   i. **All officer-specific information**, which is a key element in identifying conscious and unconscious bias, as well as other officer specific characteristics e.g. the rate at which traffic citations, warnings, and SROs are issued. De-identified data is not provided.

F12. Analysis.

MCPD is clearly conducting some data-driven traffic enforcement. Appendix C of the OLO 2021-10 report provides sets of example data for specific locations, which show breakouts of high collision locations by day of week, time of day, kind of collision, weather conditions etc. These data can undoubtedly provide a basis for well-designed traffic enforcement

strategies. MCPD has also stated that the state's E-Tix/Delta+ program is in use, a program that permits comparisons between collision data and enforcement efforts.[28]

The data provided by MCPD show the incidence of collisions and important ancillary data, but they do not show how this data was used or how it influenced enforcement activities. An analysis of stops and accidents conducted by Mikhael Gaster shows that there are important outliers in traffic enforcement: some locations have large numbers of stops and few accidents; conversely, others show more accidents and fewer stops than the norm. If accident prevention is the primary catalyst for traffic enforcement, the ratio of stops to accidents should be similar throughout the county (see Appendix A, Section 3). MCPD has not explained these outliers.

a. Data driven enforcement.

i. **CTU.** We can provisionally accept that CTU activities are data driven, although the quality of the analysis and the subsequent strategies cannot be reviewed because MCPD has not provided any detailed methodologies or examples.

ii. **District enforcement** plans may not be subjected to systematic CTU analysis. District stations report monthly as part of MCSTAT, and provide current traffic enforcement efforts and comparisons to previous years. They also apparently request help from CTU. However, it is unclear how systematic such help is, and how much it actually influences District level enforcement.

iii. **Patrol officer enforcement** seems even less influenced by CTU, and these constitute the bulk of traffic stops.

In short, claims that traffic enforcement is data driven is probably true for CTU, but MCPD has provided insufficient information to support claims that data drives enforcement for Districts, while the activities of individual patrol officers are not apparently analyzed by CTU.[29]

b. **Outcomes analysis.**

MCPD has not published any outcomes analysis for its traffic enforcement activities. This is a startling and important conclusion: it is impossible for the community to judge the effectiveness of MCPD traffic enforcement if the department does not publish a detailed assessment of its own activities. The extremely limited analysis provided to date has focused entirely on CTU activities only.

[28] MCPD responses to PAC questions.
[29] MCPD response to PAC questions

c. **Analysis of potential bias.**

   As noted in F4, there has been no analysis of potential bias.

F13. Transparency.

A considerable amount of data is published by MCPD through the Montgomery County Open Data Portal. However, we also found that

a. **There are significant flaws in the data which make it hard to analyze** – a specific type of stop may be reported under multiple names, for example.

b. **No responsible officer**. Questions from the public about this data go unanswered, and no specific MCPD officer is named as being in charge of the data. MCPD claims this is normal practice for County departments. However, efforts to reach MCPD via the Portal have been fruitless.

c. **No annual report**. MCPD does not publish any annual assessment of traffic enforcement strategy or implementation, or its relationship to detailed analysis of accidents, injuries, and deaths. Without such an assessment, the public does not have a way to objectively determine the effectiveness of these efforts.

F14. Culture.

In 18 months of fairly constant communications with MCPD, it is striking that it has not offered a single recommendation for improving the traffic enforcement strategy or operations. Along with the refusal to address the disproportionate impact of traffic stops on drivers in certain racial/ethnic groups, the failure of MCPD to offer any recommendations to address these concerns seems to indicate that MCPD sees no need for change.

III. Recommendations

R1. New Mission.

We do not accept that more stops mean more effective and better policing traffic enforcement. On the contrary, we believe that an appropriate mission for MCPD traffic enforcement is that it be *effective, efficient,* and *equally enforced*:

a. **Effective.** Traffic enforcement throughout the county – at all levels – must be data driven. MCPD must use best practices to identify traffic safety problems and to address them. It must also expect to *show* the impact of its traffic enforcement on accident rates and perhaps other metrics, on a regular basis (at least annually). Where traffic stops are used as an enforcement mechanism, MCPD must show that this is the best available tactic for improving traffic safety.

b. **Efficient**. Traffic stops are a burden on the police, on drivers, and on the court system as well. Accordingly, an efficient traffic enforcement program is one that imposes the fewest stops consistent with the safety component of the mission. MCPD must show that it is finding ways to reduce the number of stops, and to ensure that all stops are driven by significant safety concerns.

c. **Equal.** To date, MCPD has not produced any evidence that its traffic enforcement efforts fall equally on all citizens. On the contrary: the high levels of stops and searches for Black drivers offer initial evidence that there is a problem here. The fact that Hispanic drivers receive fewer warnings than drivers of other races suggests that conscious or unconscious bias exists. MCPD must demonstrate that it is aware of the problem of bias and is taking immediate and active steps to eliminate it.

We strongly believe that a new triple-E mission (E^3) will be a central element in addressing weaknesses and improving outcomes for MCPD.

R2. Equal enforcement

MCPD must take immediate steps to fully understand all aspects of bias in traffic enforcement. Overall, MCPD must publicly demonstrate to the community that it is fully committed to equal and fair policing. That commitment must address the full range of biased enforcement, including:

a. **Overtly racist policing**. While we fully acknowledge that the vast majority of MCPD officers are not racist, public comments received by the Commission indicate that there are instances in which this is a problem. MCPD must develop internal procedures to ensure that racist officers are removed from the force as a soon as possible, and that recruitment processes screen them out in the future. These mechanisms should be provided to the public as evidence that MCPD is focused on excluding racists officers.

b. **Unconscious bias.** All of us carry unconscious bias. MCPD training does seek to address this problem in the context of racial and ethnic bias. However, MCPD has not demonstrated that it tracks officers' traffic enforcement activities at a sufficiently granular level to identify unconscious bias and to provide any required additional training. MCPD must address this issue and report on it to the public, annually.

c. **Systemic bias.** It may be that there is neither conscious or unconscious bias, and yet on the ground traffic enforcement is systemically biased. Setting up speed traps in minority areas would be one example. MCPD needs to develop internal procedures to cross-check its activities. It must ensure that where disparities in traffic enforcement exist, as noted in F2, these are fully explained.

R3. Focus on what matters

OLO described a distinction between violations that have significant potential to lead to accidents, and those that are minor and less threatening. Takoma Park has implemented a program that eliminated minor traffic stops (see F3). The City of Philadelphia also recently passed legislation that prevents police officers from stopping drivers for what are seen as less serious violations. We support this approach as meeting the efficiency component of the mission R1, F3).

a. **MCPD should implement a new focus on serious offenses, and should as a result dramatically reduce the number of traffic stops.** This new model should be based on the experience of Takoma Park and in the future on results from the City of Philadelphia and similar initiatives elsewhere.[30] Specifically, minor violations should not be used by MCPD officers as the basis for a traffic stops.

b. **Exceptions.** However, officers should *always* be permitted to make stops where driving or the vehicle are seen as dangerous. In these cases, officers should record their activities in ways that explain why the stop is justified on safety grounds: there

R4. Structure and enforcement

We welcome the shift of District traffic officers into the Centralized Traffic Section (CTU). This is a promising development that indicates a professional and consistent approach to traffic enforcement that should support the mission outlined in R1 above. However, we have a number of ongoing concerns:

a. **Resources.** Currently, CTU has 20 officers on patrol.[31] This may not be sufficient, given that there are 600 patrol officers in total. MCPD should consider shifting additional officers into CTU.

b. **Analytic capabilities.** Does CTU have the analytic capacity to develop plans for enforcement in light of the constant influx of accident and enforcement data? Can it expand into analysis of District activities, patrol officers, and ATE? Can it manage bias assessments? Does it have access to the best analytic tools for addressing traffic – for example, are there software packages used in other jurisdictions that can automatically highlight problem areas, and help to balance resources against needs? MCPD must ensure that these capabilities exist and

[30] The Driving Equality Bill, passed 14-2 by the Philadelphia city council on October 14, categorizes certain motor vehicle code violations as "primary violations," which allow officers to pull people over in the name of public safety, and "secondary violations" that don't meet the criteria for a lawful traffic stop,

[31] According to MCPD communications with the PAC

hence that CTU has sufficient resources. We have been given no evidence that helps answer these questions.

c. **District level enforcement.** It is unclear how much influence CTU has over District traffic enforcement plans. CTU should connect regularly with District management to develop plans for District level traffic enforcement, and to review the impact of previous plans. MCPD should ensure that CTU analysis is the foundation of *all* MCPD District traffic enforcement activities, including at District level.

   District plans should be publicized to the local community affected, and the community should be invited to formally provide appropriate feedback as needed. It may be, for example, the community members call for more enforcement or more specific enforcement in some cases.

d. **Patrol officer activities.**

   In line with the new mission outlined in R1, we recommend the following:

   i. **In line with R3, patrol officers should not stop drivers for minor violations (unless there are immediate safety concerns)**

   ii. **MCPD should limit the information requested from drivers.** Asking where a driver has been or is going is not appropriate unless an officer is seeking information about a specific crime.

   iii. Data and information. MCPD should:

      a) **Publish deidentified statistics by officer**, showing the number of stops, citations, repair orders, warnings, searches, and arrests by race and ethnicity of the driver. These data should be made public without personally identifiable information that would identify individual officers, but the data itself must be made publicly available through the Open Data Portal.

      b) **Publish statistics on complaints related to traffic enforcement separately by District.** This report should be published annually and may also include MCPD responses to those complaints.

R5. Pretextual Stops.

Pretextual stops are a key issue of contention in traffic enforcement. They occur when an officer on patrol stops a vehicle for a minor traffic offense, in order to seek out other more significant criminal activity.

Pretextual stops are at the center of arguments about racist policing; such stops make it easy for consciously or unconsciously biased police officers to inappropriately question minority drivers. MCPD claims that it is impossible to determine whether a stop is a

"pretextual stop," because "it is impossible to know what is going through an officer's mind at the time."[32] MCPD also claims that exploiting the opportunities presented by traffic stops is an important tool in addressing criminal activity. However, MCPD could provide no data on the amount of drugs seized in the course of traffic stops, cash or contraband confiscated, or any other public safety impacts from these stops, with one exception (see F7). MCPD does report that in the course of three years, 144 illegal guns were confiscated, which is undoubtedly a public benefit. However, that means one gun was seized for about every 2,360 traffic stops. We do not believe this meets the efficiency test described in R1 above. Accordingly, we recommend the following:

a. **MCPD should immediately cease using pretextual stops.** Pretextual stops can be an instrument of unconstitutional policing. They can be used to enforce bias and have no demonstrated utility for safety. Note that this does *not* mean that officers should cease making stops when safety is concerned – where for example they suspect drunk driving or other unsafe driving behavior.

R6. Searches.

Under the 1957 Supreme Court decision in Carroll vs US, officers may legally search a vehicle without a warrant if they have probable cause to believe a crime has been committed. In many cases, officers in MCPD and elsewhere have testified that they "smelled marijuana," and this justified the search.

a. **Probable cause only – no fishing expeditions.** MCPD should emphasize to officers that asking a driver for permission to search a vehicle must be limited only to cases in which there is probable cause, and the specific probable cause should be recorded and reported.

b. MCPD should publish its guidelines concerning what constitutes "probable cause," with examples.

c. **MCPD officers should not be permitted to use the smell of marijuana as** a probable **cause for a search.** As a matter of MCPD policy, the smell of marijuana should not be used as the reason for a probable cause search, given that possession is no longer regarded as a significant crime in Montgomery County.

R7. Incentives.

MCPD has explained that traffic enforcement constitutes a small share of a holistic approach to officer evaluation (see F7). [33] Given concerns in the community (and on the

[32] MCPD written response to questions from the PAC
[33] Chief Jones, PAC meeting Nov 8, 2021

PAC) that there are incentives for patrol officers to write tickets, even a small share can be problematic.

a. **Change to officer evaluation.** MCPD should remove all traffic enforcement metrics from the evaluation of MCPD officers. While traffic stops may provide management with additional insight into officer activity – which may be useful when managing officers who are effectively "remote workers" – the use of traffic enforcement in evaluations has negative impacts both directly (though the possible incentive to write unnecessary tickets) and indirectly (through the erosion of community trust fin the face of unnecessary stops). These negatives outweigh the usefulness of what is, according to MCPD, a small part of a holistic evaluation.

R8. Automated traffic enforcement (ATE).

One way to enhance the effectiveness, efficiency, and equal impact of traffic enforcement is through the introduction of more automated enforcement – speed cameras and red-light cameras. MCPD plans to increase the numbers of both mechanisms in the coming years, but at a very modest pace (5 additional cameras per year, it appears). We believe that the replacement of officer-initiated stops with ATE is an important path forward for Montgomery County and encourage MCPD to accelerate the shift toward ATE.

a. **Room for much more ATE.** We recommend a much more accelerated shift from patrol officer enforcement to ATE. We do not accept that the State is as significant a barrier as OLO suggests. OLO briefed the PAC that about 2/3rds of County requests for ATE are approved. This is a reasonable average, which should not deter the County from seeking more ATE. As both the State and the County become more informed about State concerns, presumably the denial rate will fall in the future.

b. **More transparency.** The County should publish data about the frequency of tickets issued by location, via the Open Data Portal. It should also publish annual data about income from tickets issued, and the share of the revenue that is paid to the County and to the contractor. CTU or OLO should also report the net budgetary impact to the County of using each camera, on an annual basis.

c. **Bias checks.** It is especially important that CTU conduct regular checks of automated traffic enforcement for bias. As noted earlier, the placement of cameras can lead to systemically biased outcomes; it is key then that placement is clearly and publicly driven by the data. CTU should publish an annual analysis of automated traffic enforcement and potential bias.

Overall, we strongly encourage both the County (via budgets and procurement) and MCPD (via CTU analysis) to ramp up the use of ATE sharply in coming years. This is broadly in line with recommendations from the Reimagining Public Safety Task Force.[34]

R9. Tracking and data.[35]

Discussions with MCPD and information from other sources indicates that there are important gaps in traffic enforcement data, which will need to be addressed. These build on some issues identified in the recent OLO report.[36]

a. **Stops reporting.** MCPD recently revealed that despite an agreement with the State, MCPD officers have not been reporting all stops via the state-operated eTix system. This means that the data in eTix significantly underreported the number of stops between 2007 and 2021. [37] MCPD has agreed to remedy this discrepancy. MCPD should ensure that all stops are reported.

b. **Revised analysis.** Traffic data from previous years should be revised using a model to provide more accurate estimates of the actual number of traffic stops made by MCPD.

c. **Primary violation.** The PAC has received conflicting testimony from MCPD about recording of the primary reason for a stop. Overall, it seems that while the eTix reporting system contains a field designed for recording the cause of a stop, as a default the first violation entered is reported as the primary cause. MCPD must ensure that the primary reason for the stop is reported accurately for all stops.

d. **Registration or driver's license data.** MCPD has claimed that the apparent bias described in F2 and the OLO report could in part be a result of stops made on out-of-county drivers.[38] To address or test this claim, MCPD could cross-reference the drivers' licenses or registrations of those stopped. Either would provide evidence for MCPD's argument. However, it is unclear why MCPD believes the driver's place of residency would undermine claims of racial/ethnic bias in traffic stops.

e. **CTU, District interventions, and regular patrol stops.** Given that there are distinct kinds of traffic enforcement are under way, MCPD must add a field to the traffic

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[34] See Reimagining Public Safety Recommendations Report, pp.23-24

[35] MCPD has provided the PAC with a comprehensive list of data fields collected via various data sets. Most of these data are held privately within MCPD; only a small subset are made publicly available through the Open Data Portal. In subsequent reports, the PAC will address data collection more broadly. Here, we express our concerns about data only as it affects traffic enforcement.

[36] OLO 2020-9

[37] OLO 2020-10, p. iii.

[38] Chief Jones, response to PAC questions, Nov 8, 2021

stops data to show which kind of enforcement is being implemented in the course of a stop. This is the only way to connect specific enforcement activities with stops and then with safety outcomes.

f. **Searches and outcomes.** MCPD must collect data on all *requested* searches. This would include the reason for the request, whether a search was conducted, and any outcome from the search. This should specifically record any contraband confiscated by MCPD as a result of the search, as well as any arrests made. This would in turn measure the number of stops that generated no arrests or contraband.

R10. Analysis.

There are questions about the analysis that is being conducted currently, and there appear to be large gaps in MCPD's analytic capabilities that must be addressed immediately.

a. CTU effectiveness. To date, the PAC has not been provided with any detailed analyses, methodologies or examples for studies conducted by CTU. Thus the PAC cannot draw firm conclusions about the effectiveness of CTU's analysis. However, an analysis of traffic stops and accident data conducted by Mikael Gaster shows that there are significant outliers which call into question the claim that the distribution of accidents drives the distribution of stops (see Appendix A).

i. **CTU must publish detailed analyses of traffic enforcement and accident patterns** in Montgomery County. These analyses should include the data and analysis that fully explores potential bias.

ii. If it has not yet done so, CTU must assess its methodologies on a regular basis to determine which traffic management strategies are working well in which areas, and which are not. Constant monitoring of enforcement and accidents is required.

b. Equal enforcement. MCPD must undertake analysis *on a regular basis* to ensure that it is eliminating bias from traffic enforcement. Given the different kinds of bias noted earlier, MCPD must address all possible bias mechanisms.

i. **Tracking stops by individual officers.** MCPD must review, on an annual basis, all stops made by individual officers, and must develop tools for identifying bias. Because different patrol areas have different racial/ethnic demographics, these tools will need to be sufficiently sophisticated, carefully calibrated, and routinely regulated to assure that these demographic nuances are captured. Where bias is found, MCPD must implement additional unconscious bias training. This analysis would build on the data we recommend collecting in R4.d.

ii. **Escalating traffic complaints that reference bias.** IAD should share all complaints that reference bias with the commander of the CTU or the commander of the District (for regular patrol officers), along with the outcome of their investigation. Commanders should be directly responsible for ensuring that repeated complaints of bias against an officer are fully investigated and elevated to the appropriate departmental authorities.

iii. **Analyzing systemic bias.** The Council should hire an outside consultant to conduct an annual analysis of potential systemic bias in traffic enforcement. The consultant should work directly with MCPD. The consultant should provide a report to the Council annually, which should be shared with the public.

iv. **Analyzing automated enforcement.** The consultant report should include a section reviewing ATE, including a cost/benefit analysis of ATE as compared to non-automated enforcement systems.

v. **Recommendations.** The consultant's report should include specific recommendations for eliminating bias in traffic enforcement.

c. **Effectiveness.** MCPD must develop ways to demonstrate the effectiveness of traffic enforcement in the county, by showing that it increases the safety of the community. Vehicular accidents, especially accidents which result in injury and death, are the primary markers of unsafe roadways. Accordingly, MCPD should focus on demonstrating that its traffic enforcement programs are closely tied to reducing vehicular accidents and ensuring pedestrian safety.

i. **Accidents and enforcement.** MCPD must develop analysis that shows the linkage between enforcement and accidents. Enforcement that is not driven by the distribution of vehicular and pedestrian accidents needs to be fully explained.

d. **Efficiency.** MCPD must show that it is conducting only the minimum number of stops necessary to meet the safety needs of the county and no more. This may require programs that test efforts to reduce enforcement, or to provide alternatives to enforcement. For example, a specific District or intersection could be targeted for alternative actions designed to increase vehicular and pedestrian safety and public confidence while reducing police stops and the issuance of citations. Indeed, MCPD should seek to test a range of viable alternatives to stops in order to achieve its stated mission of increasing public safety.

i. **CTU analysis of traffic alternatives.** It should be part of CTU's mission and its annual plan to identify and test alternatives to officer stops. This should include an analysis of automated enforcement already in place and an examination of best practices in jurisdictions that have reduced racial/ethnic disparities in traffic stops.

R11. Transparency.

Traffic enforcement is the primary interface between MCPD and the communities it serves. Accordingly, it is a matter of urgency that MCPD commit to providing a detailed explanation of its activities, its objectives, and its record on an annual basis. Better access to MCPD data, and better communication between MCPD and the public are also required.

a. Annual report on traffic enforcement. MCPD must provide an annual report that explains how it is meeting the new mission of effective, efficient, and equal traffic enforcement. The current MCPD Annual Report is entirely inadequate: for example, it provides no data at all on collisions. The new traffic enforcement report should include details on:

- **i. Effectiveness.** A description and analysis of MCPD efforts to reduce the incidence of traffic accidents, and especially of injury and fatal accidents, and pedestrian and cyclist accidents. This section should explain MCPD strategy and should provide a comprehensive analysis of accident and enforcement data.
- **ii. Efficiency.** This section should explain how MCPD is seeking to make traffic enforcement as unobtrusive and low-burden as possible. This may include a discussion of various strategies, the use of enforcement without stops (e.g. automation, signage), etc.
- **iii. Equal enforcement.** MCPD must show that its efforts are fair. It must identify biased outcomes such as those described in F2 and explain why those outcomes should be understood in ways that reflect a fair approach to traffic enforcement, or alternatively how those disparate outcomes will be eliminated. This section will rest heavily on the consultant's report (R10.b), and should also address complaints about biased enforcement and MCPD resolution of those complaints.
- **iv. Forward strategy.** The proposed annual report is also an opportunity for MCPD to explain its traffic enforcement strategy going forward. This may include specific areas of targeted enforcement as well as broader approaches.

b. Data access. Data access to traffic enforcement is limited in some important ways, some of which can be resolved quite easily.

- **i. Primary violation.** MCPD must require that officers always identify the violation that caused the officer to make a stop.
- **ii. Search requests.** MCPD should provide detailed information about search requests and searches conducted along with the outcome of any searches (see R9.e)

iii. **Deidentified officer-level data.** As noted above, MCPD must publish deidentified traffic enforcement data at the level of individual officers. This is the only way the community can ensure that individual officers are not biased. MCPD should work to ensure that these data are properly contextualized e.g. linked to the demographics of the officer's area of operations.

c. **Example of transparent reporting.** The following figure shows the data and analysis available to the public for traffic enforcement and safety in Takoma Park, published by Takoma Park PD. While this model may not exactly match Montgomery County needs, it illustrates how a transparent approach can provide citizens with confidence that police are acting effectively, efficiently, and equally for all residents.

Figure 9. "Takoma Park Police Traffic Stop Analysis"

Source: Takoma Park PD. https://r.takomaparkmd.gov/police-data-webpages/index.html

R12 Culture.

We hope that by implementing the changes outlined above, MCPD will return to its historical roots in community policing, as recommended by the Effective Law Enforcement for All (ELE4A) audit and the Taskforce.[39] Traffic stops are both a symptom of and a mechanism for what is often called " dominance policing:" a model in which the police seek first and foremost to ensure that they dominate the space around them. We are encouraged that the FOP has also called for a return to an earlier community-oriented model. Such a model demands clarity of purpose and mission, one aligned with the values of the community, and requires that the police commit to a new level of openness, demonstrating that MCPD is fully data driven, and that the mission of effective, efficient, and equal traffic enforcement is achievable. This requires:

a. **A fully data driven culture.** The hallmark of a data-driven culture is not just the use of data – it is the relentless use of data to cross-check comfortable assumptions about the world, and to use data as a tool for constant iteration toward improvement. In this sense, there is little evidence at MCPD of a data-driven culture, but there are now opportunities to make it so.

b. **Transforming from a department where more enforcement is better to one where better enforcement is better.** Using citations and tickets as evidence of effectiveness is simply wrong: quantity does not evince quality. MCPD must focus on traffic safety rather than the quantity of citations and warnings issued: a deeper focus on serious traffic violations that risk public safety would not lead to large numbers of citations, but would increase the safety of our roadways. Numerous tickets for minor violations not only fail to make the public safer, they reduce public confidence in law enforcement. A department that issues fewer tickets in a county with a decreased number of accidents would support a culture of public safety, and would also give police officers the time and ability to develop potentially transformative relationships with the community. Data from elsewhere suggests this is possible.[40]

c. **Training.** MCPD trains officers to ensure that all stops are conducted with courtesy, and drivers are treated well. A number of citizen testimonies mentioned that the stop was conducted professionally, with due courtesy, but others reported a different experience. We encourage MCPD to ensure that the training works for all stops and all officers. Additionally, we encourage MCPD to require "refresher" courses that emphasize these goals.

[39] See ele4A recommendations 84 and 85.
[40] See OLO 2021-10 for a discussion of approaches in other jurisdictions

d. **The power of sunlight.** We hope that MCPD will conclude that it is very much in the department's best interest to publicize its activities as widely as possible. We have focused here on areas for improvement, but it is also true that many citizens provided highly positive testimony about MCPD traffic enforcement. MCPD is also making efforts to increase its use of data and to operate in a best practices environment, yet these positive features are largely hidden from the public. Trust with the community can only be built on a foundation of shared information, and as MCPD controls most of the information, those foundations are largely in the department's hands. MCPD should see that providing a detailed annual report about its traffic strategies, stops/citations/warnings/SROs, and their specific impacts on accidents is a way to help reshape in a very positive way the connection between PCPD and the public it serves.

# # #

Appendix A. Analysis of Montgomery County Traffic Stops

Prepared for the Montgomery County Policing Advisory Commission

Mikhael Gaster

November 2021

I. Traffic policing by race and ethnicity

Context

This analysis is designed to provide a clear visualization of over and under-policing by race and ethnicity ("group"). To determine whether a group is receiving an appropriate amount of attention from the MCPD, we first need to estimate how many drivers there are in each group. Then, for each group, we can compare the share of drivers to the share of enforcement actions (e.g., searches or citations).

Figure 1 shows traffic stop summary statistics by group and ethnicity ("group"). In each group's sub-chart, each column represents that group's share of that column's total across all groups. For example, the "Stops" column in the "ASIAN" sub-chart, which has a value (height) of approximately 5%, shows that stops of Asian drivers accounted for 5% of all traffic stops.

Each sub-chart has two blacked-out columns ("MC Pop." and "Accidents") which serve as estimates for the number of drivers of each group:

- The "MC Pop." column describes each group's share of Montgomery County's population. The main caveat of using this to estimate driver-population is that some groups may be more/less likely to own cars or drive; the greater these differences, the less accurate this estimate is. Nonetheless, it is still the best estimate of driver populations available. The horizontal red line in each sub-chart is set to the same height as "MC Pop.," to make it easier to compare population to traffic stop outcomes.
- The "Accidents" column shows each group's share of all accident-related stops. "Accidents" is useful for two reasons: first, accident-related tickets are arguably the least discretionary that police can write,[41] so this is close to a random sample (i.e., it

[41] Fatality and alcohol-related tickets are also non-discretionary, but they each have caveats that make them less useful as population estimates than accident-related tickets. Fatality-related tickets are too rare to be

is not strongly influenced by any potential bias in the MCPD); second, some groups may drive less safely than others (i.e., have more accidents) – this would lead to drivers of this group being stopped and cited more frequently, even if there is no racial bias in policing. Thus, if "Accidents" is higher than "MC Pop." for a group, it may indicate that this group drives less safely than average.[42]

Figure A - 1

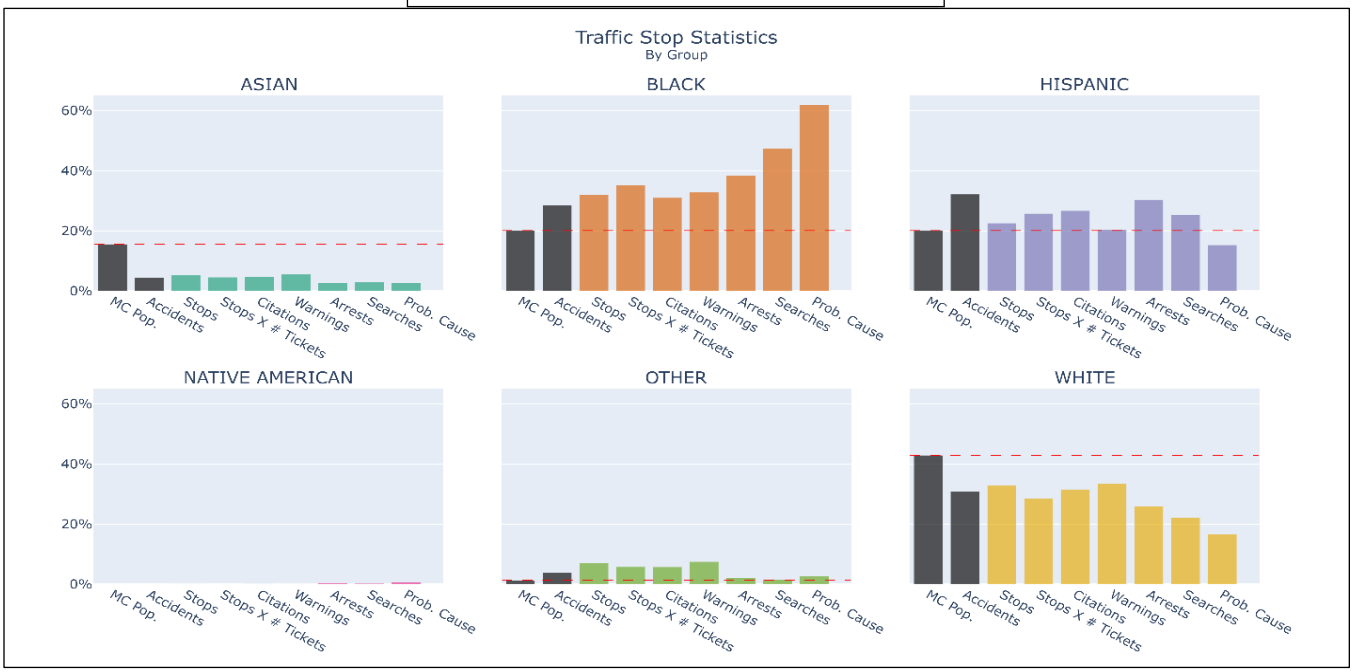

Figure A – 1. Column Descriptions

MC Pop. – This group's share of Montgomery County's population (taken from census data).

Accidents – This group's share of all traffic writeups due to accidents.

Stops – This group's share of all traffic stops.

reliable and precise; alcohol-related are too specific and too sensitive to confounding variables to fairly estimate an entire group (e.g., if one group has a higher proportion of young drivers, they will also have a higher proportion of alcohol-related tickets, so their population estimate would be too high).

[42] While the purpose of this report is not to label any groups as "better" or "worse" drivers on average, it is also unfair to the MCPD to assume that all groups drive identically, so this should be taken into consideration.

Stops X # Tickets – This group's share of all traffic writeups. This is different from "Stops" because one stop can have multiple writeups (citations, warnings, and/or repair orders).

Citations – This group's share of all citations from traffic stops.

Warnings – This group's share of all warnings from traffic stops.

Arrests – This group's share of all arrests from traffic stops.

Searches – This group's share of all searches conducted during traffic stops.

Prob. Cause – This group's share of all probable cause searches conducted during traffic stops.[43]

Interpretation and Results of Figure A – 1 data.

Asian Drivers

Asian drivers appear to be under-policed[44] when their share of Montgomery County's population is compared to their traffic stop outcomes. However, when comparing Asian traffic stop outcomes to the Asian share of accidents, Asian drivers appear to receive a proportionate amount of attention from police. As of 2006, Asian drivers in the U.S. had 1/3rd as many fatal accidents per capita as Hispanic, White, and Black drivers,[45] so it would be reasonable to conclude that they are fairly policed (or, at least, that the data do not provide strong evidence for over or under-policing).

Black Drivers

Black drivers appear to be severely over-policed. Despite making up only 20% of Montgomery County's population, Black drivers receive 38% of all traffic-related arrests, 47% of searches, and 62% of probable cause searches.

Hispanic Drivers

Hispanic drivers appear to be policed proportional to their share of the population (20%), but they are the only group with a lower share of warnings than citations. In

[43] Probable cause searches are defined as searches conducted "when evidence of the crime is present in the place to be searched" (Cornell Legal Encyclopedia). Probable Cause searches are especially important in investigations of racial bias in policing because they are discretionary, and depend on the officer's assessment of the driver.

[44] Asian drivers appear under-policed because their share of traffic stop outcomes (e.g., stops, arrests, etc.) is much smaller than their share of MC's population.

[45] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810995 (page 2). This statistic comes with the caveat that "Asian" is a wide umbrella, and national statistics may not be pertinent to Montgomery County.

addition, arrests are high (30% of total) and probable cause searches are low (15% of total).

Native American

Native American drivers make up so few stops that it is difficult to draw a conclusion from the data.

White Drivers

White drivers appear extremely under-policed. In particular, compared to their share of Montgomery County's population (43%), they receive far fewer traffic-related arrests (26%), searches (22%), and probable cause searches (17%).

Other

"Other" drivers appear over-policed at first glance, but this is largely due to differences in group labels coming from the Census Bureau compared to those from MC data. In addition, it is unclear who officers label as "Other" drivers, and whether this labeling is consistent enough across officers to draw any conclusions across the MCPD as a whole.

II. Citations for speeding: Group & Leniency

When drivers are stopped for speeding, the ticket they receive carries a fine and one or more points on their license – both of these punishments are dependent on the speed that they are cited at. For example, when caught speeding on the highway, drivers recorded as driving 1-9 mph over the speed limit receive a fine of $80 and 1 point on their license, whereas drivers recorded as driving 10-19 mph over the speed limit receive a fine of $90 and 2 points on their license. [46]

Police officers often record drivers' speeds as lower than they actually were, so as to lower a driver's fine and license points.[47] From the unnatural spike in Figure 2's distribution, we can infer that most MC stops in the 10-14 mph range were revised down to 9 mph. While this is generally a nice thing for officers to do, it is unfair if this nice act is inconsistently applied to different groups of drivers.

Figure A - 2 is designed to visualize the differences in police leniency applied to each group, although the interpretation of these numbers is unclear.

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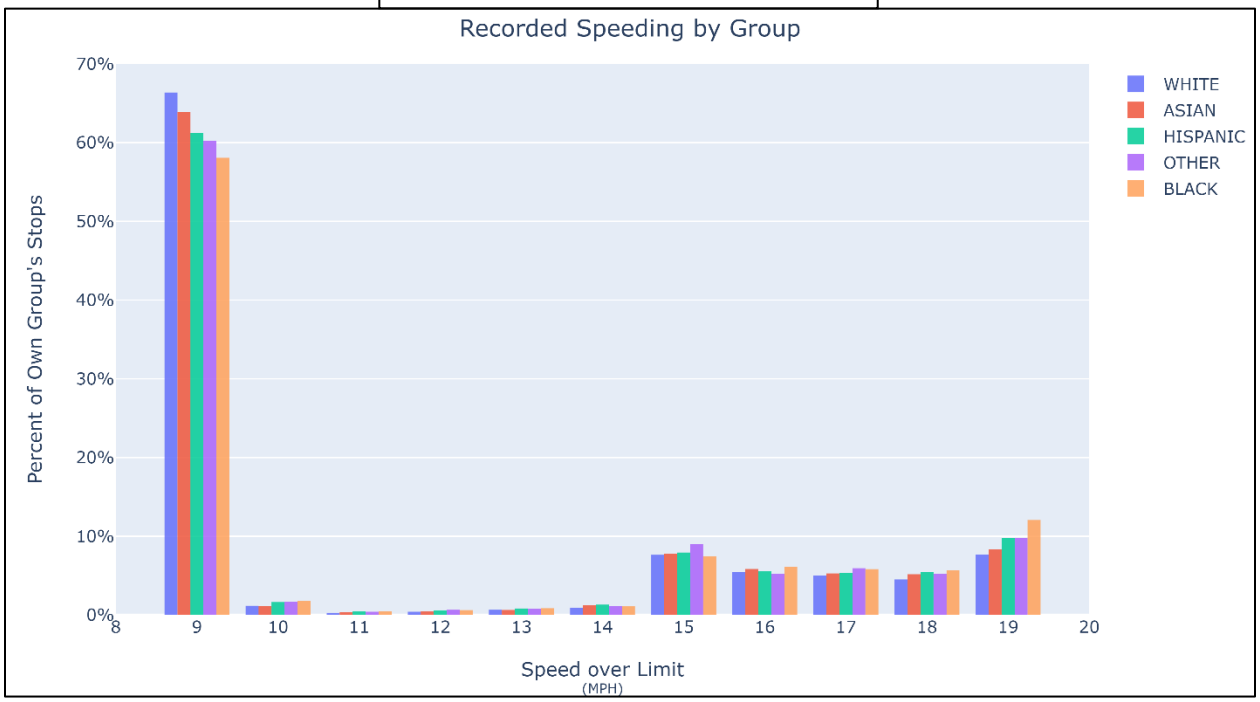
https://www.courts.state.md.us/sites/default/files/court-forms/district/forms/criminal/dccr090public.pdf/dccr090public.pdf (page 49)

[47] Montgomery County is not unique in this – see: Goncalves and Mello (2021).

Figure A - 2



For each group in Figure A - 2,[48] the height of each bar represents the share of speeding stops (that were recorded between 9-19 mph over the limit) for that group were recorded at a given speed. For example, 66% of White drivers' stops (that were recorded between 9-19 mph over the limit) were recorded at 9 mph over the limit. For Asian drivers, 64%; for Hispanic, 61%; for Other, 60%; and for Black, 58%.

This could be tentatively interpreted as a ranking of how much preferential treatment the MCPD gives each group, although there are strong caveats that also need to be discussed:

- It seems likely that the closer a ticket is to a speeding ticket "cutoff" (e.g., 10 mph), the more likely officers are to be lenient. In other words, we can expect officers to be more likely to revise a 10 mph ticket down to 9 mph than to revise a 19 mph ticket down to 9 mph. If this is true,[49] then this ranking may simply reflect the differences in speeding across groups, rather than any police bias.

[48] There were only 90 speeding stops for Native American drivers, so they are omitted from this figure.
[49] And the data do provide some evidence in support of this hypothesis. All speeds in the 10-14 mph range have artificially lowered speeding rates when compared to speeds in the 15-19 mph range, which implies that officers are more likely to revise tickets in the 10-14 range than they are to revise tickets in the 15-19 range.

There is some evidence that groups which receive lower rates of revision to 9 mph were simply driving at higher speeds – there is a similar revision at 19 mph (from the 20-29 mph range), and the rates of revision at 19 mph are reversed compared to those at 9 mph, i.e., groups which received relatively higher rates of revision at 9 mph received relatively lower rates of revision at 19 mph.

- Officer leniency may be conditional on interpersonal interactions with drivers. If different groups have different attitudes toward the MCPD, they may be more/less friendly to officers, which could lead to systemic differences in leniency.
- It is also important to note that even if the above two caveats do not hold, and racial bias is the driving force between differences in speed revision rates for each group, it is still unclear whether a few extremely biased MCPD officers are responsible for these discrepancies, or whether they arise from subtle biases that are widespread throughout the MCPD.

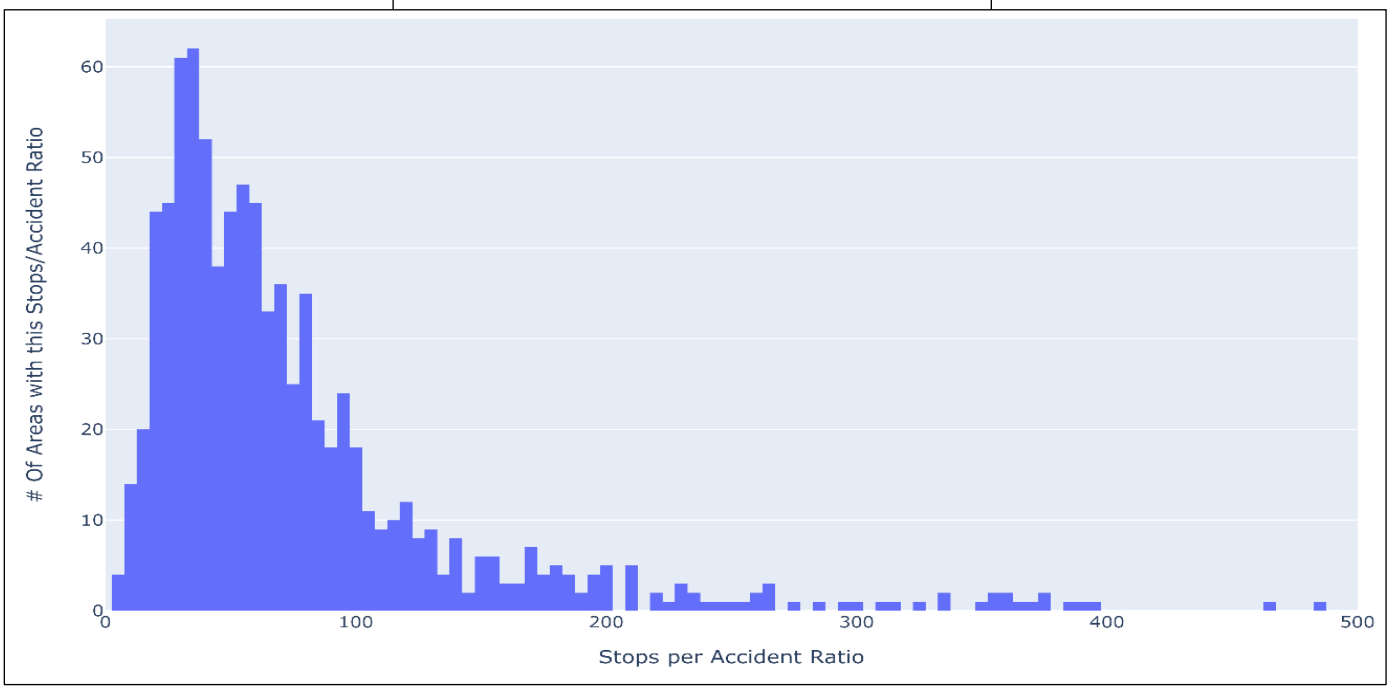
Since it is unclear whether these caveats hold, I do not believe that a clear conclusion (on whether there is bias) can be reached with the data currently published on Data Montgomery.[50] Instead, my conclusion from these findings is that the burden of proof is now on the MCPD to show that they are applying their discretion evenly and fairly.

III. Distribution of Traffic Enforcement Stops & Auto Accidents

The MCPD have stated that traffic enforcement is aimed at reducing the incidence of accidents, and hence that the incidence of traffic enforcement is driven by the frequency and location of traffic accidents. To understand the accuracy of this claim, Montgomery County was divided into smaller areas[51] and the number of Stops per Accident in each area was calculated to create a ratio of stops per accident for each area. To create Figure A – 3, each area was plotted along the x-axis based on the ratio of the number of Stops per Accident ratio in that area. The number of areas with a given ratio is revealed along the y-axis in Figure A- 3.

[50] Officer-level data will be required to answer this question . These data do not need to be made public, but at the very least they should be reviewed internally if the MCPD wishes to hold biased officers accountable.
[51] Specifically, Figure 3 plots data from splitting MC into hexagons with areas of approximately 0.1 Km^2, i.e., widths of approximately 0.4 km.

Figure A- 3



If traffic stop locations are *solely* determined by accidents, then the MCPD would allocate more officers to the areas with more accidents, resulting in more stops, and the ratio between traffic stops and accidents would be uniform. Such uniformity would be revealed in a graph like Figure A - 3 in which all the areas would align with the same ratio. A hypothetical Figure A – 3 with a county-wide uniform ratio would have a single vertical line, i.e., all areas of MC would have identical ratios of traffic stops to accidents. On the other hand, to the degree to which accidents are not the sole determinants of where the MCPD patrols and polices, there would be more variance of Stops per Accident ratios across different areas (i.e., we would see a wider and flatter distribution of ratios in chart like Figure A - 3).[52]

There will always be data quirks, idiosyncrasies unique to areas, and other factors which prevent ratios from being exactly (or even nearly) equal in all areas of MC, so Figure A - 3

[52] One might think that if accidents do not determine stops at all, we would observe a flat, uniform distribution of Stops per Accident ratios across areas of Montgomery County, however, this would not be the case, because officers naturally drive on the same roads that civilians do, and will therefore be inherently more likely to drive in places that see more accidents.

does not tell us conclusively whether accidents are determinants of stops. However, other techniques can tell us how strongly accidents and stops are related.[53]

Figures A - 3.1, A - 3.2, and A - 3.3, below plot accidents against stops for all areas of Montgomery County (but using different-sized areas in each figure). Each contains a statistic which shows how correlated stops and accidents are across different areas of Montgomery County (roughly speaking).

Figure A - 3.1 and A - 3.2 (and their accompanying statistics) show that when Montgomery County is carved into large and medium-sized areas, there is a strong correlation between accidents and stops. Figure A - 3.3, however, shows that as Montgomery County is carved into smaller areas, the correlation between accidents and stops weakens.

So while there is a natural correlation between stops and accidents on highly-traveled roads, the association between them in part breaks down when the analytic lens becomes more detailed. Where the cell size is on the order of 800 yards, which seems like a distance within which to look for linkages from accidents to traffic stops, the data demonstrates some important findings:

- Many cells fall within one standard distribution of the median for all cells. So for this majority of cells, traffic enforcement is approximately correlated with the rate of accidents
- There are some cells where enforcement is unexpectedly high. Here the number of accidents is relatively, low, and enforcement patterns are what we might expect if those patterns were much higher.
- Conversely, there are also cells where enforcement efforts are much weaker than might be expected given the level of accidents.

This analysis is only preliminary. It only presents significant variations in the pattern of traffic enforcement; it does not seek to explain them. However, as with other elements in this white paper, it suggests that MCPD should take on the task of assessing and explaining outliers, particularly if they are associated with racial disparities.

[53] Specifically, the estimates of how strongly variation in accidents explain variation in stops (displayed in Figures 3.1, 3.2, and 3.3) are found by taking the R^2 from a weighted least squares regression of Stops on Accidents (weighted by Stops).
Note: These regressions only include areas with over 50 stops and over 10 accidents.

Figure A - 3.1

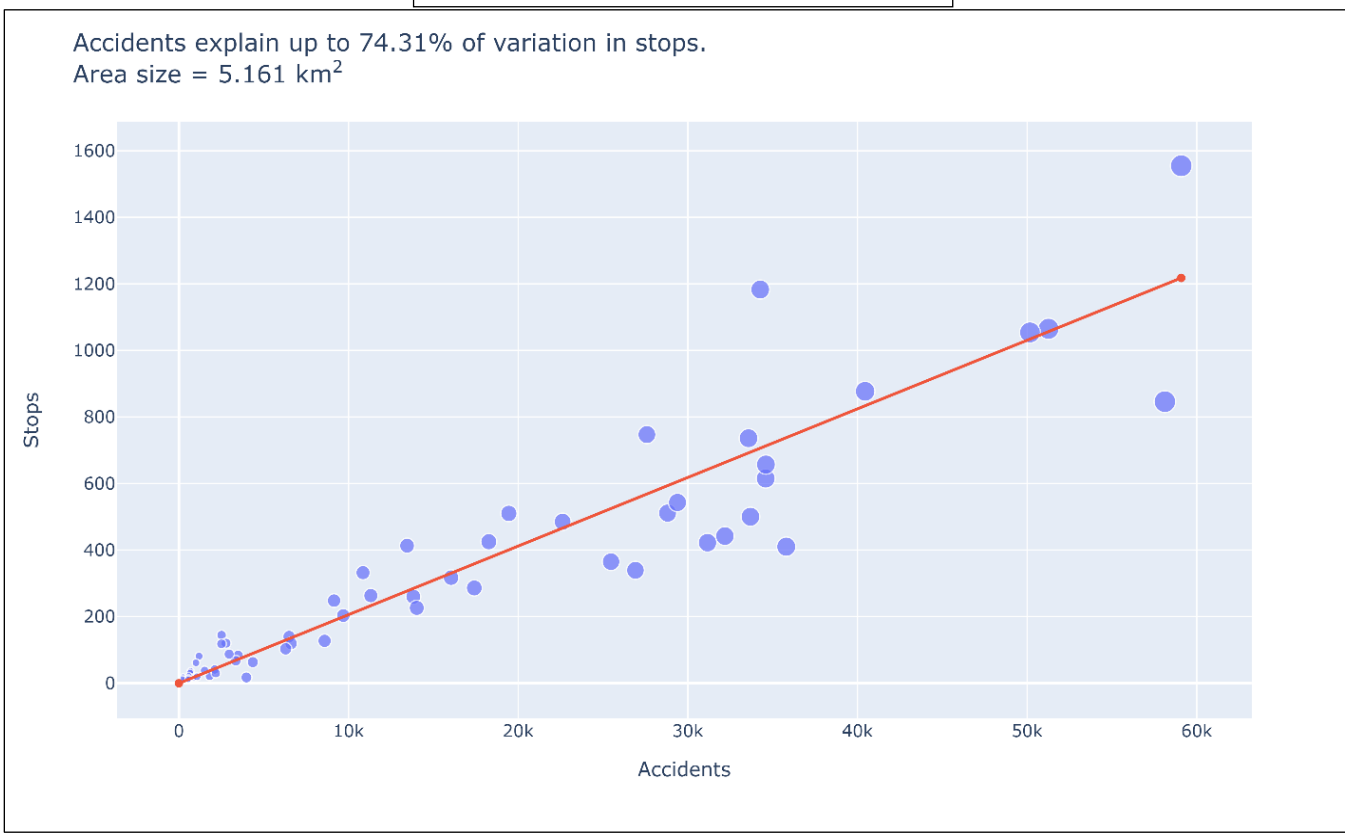

Accidents explain up to 74.31% of variation in stops.
Area size = 5.161 km²
Stops
1600
1400
1200
1000
800
600
400
200
0
0
10k
20k
30k
40k
50k
60k
Accidents

Figure A - 3.2

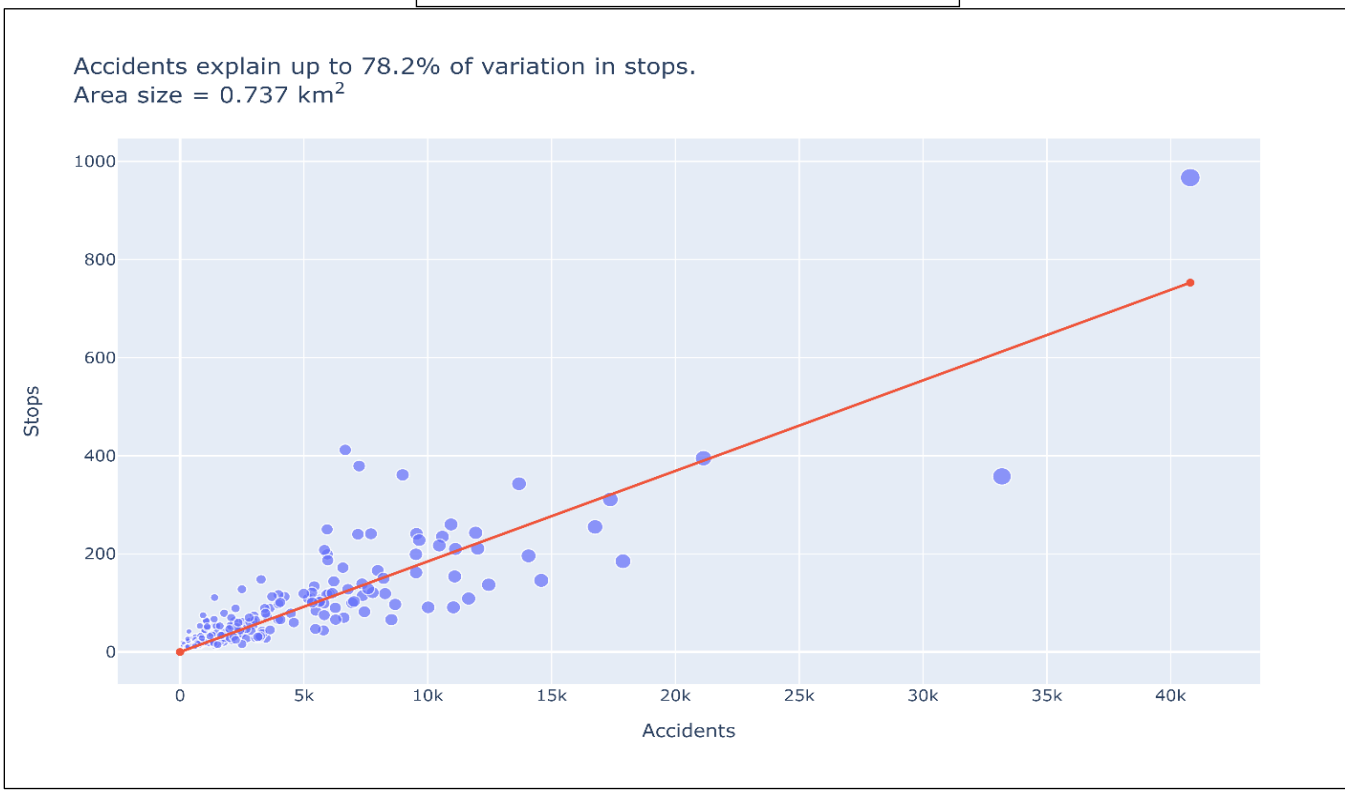
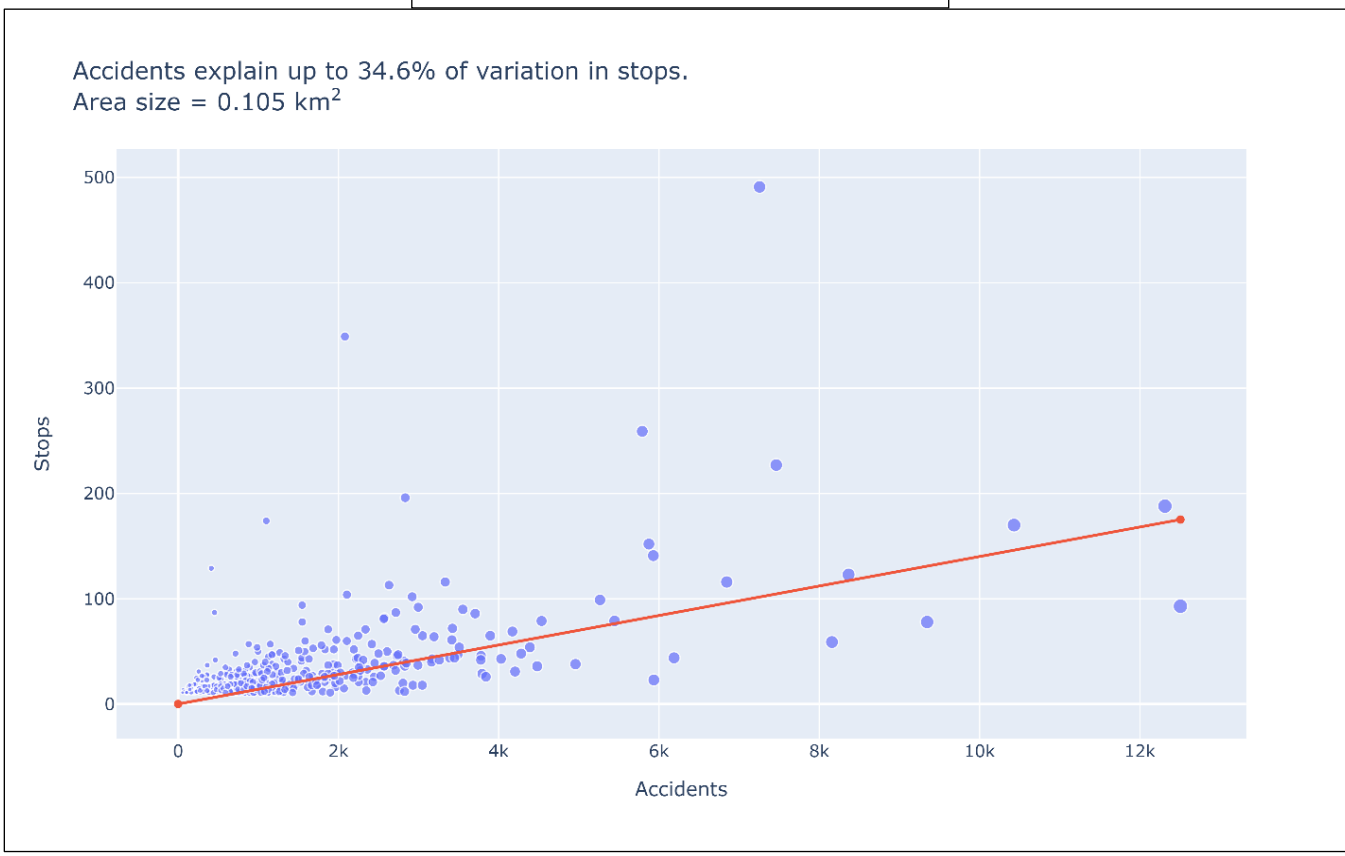

Accidents explain up to 78.2% of variation in stops.
Area size = 0.737 km²
Stops
1000
800
600
400
200
0
0
5k
10k
15k
20k
25k
30k
35k
40k
Accidents

Figure A - 3.3



Figures A - 3.1 through A - 3.3 come with two caveats:

These estimates are *upper bounds* of how closely traffic enforcement is linked to accident rates (i.e., the link between traffic stops and accidents is likely far lower than the estimates provided). This is because even if officers were assigned randomly over Montgomery County, they would travel around using the same roads that civilians use, so they would spend more time on busier roads (where most accidents occur). In other words, there is a natural correlation between accidents and stops, whether officers are told where to patrol or not.

Dividing Montgomery County into larger areas naturally leads to a stronger correlation between stops and accidents, and dividing Montgomery County into smaller areas will naturally lead to a weaker correlation between stops and accidents.

The interpretation of these figures and statistics is therefore dependent on how precise the MCPD claim their traffic assignment is. For example, if they claim to be assigning officers to patrol broad areas that cover many square kilometers, the data do not disagree. On the

other hand, the data clearly disagree if they claim to be assigning officers to patrol areas as small as specific intersections.

IV. Notes

Traffic stop data was extracted from dataMontgomery, and covers 987,417 traffic stops from 2012-01-01 to 2021-10-05.

Code used for the analysis can be found in this public repository.

Appendix B. County revenues from automated traffic enforcement

Automated traffic enforcement brings in approximately $18 million in revenues annually. The Montgomery County budget includes $8.9 million for ATE, according to County staff. Overall, there is on net a positive contribution to the County's bottom line from ATE.

Figure B – 1. Revenues from speeding cameras

Figure B – 2. Revenues from red light cameras

Source: MCPD