

CITY OF ALEXANDRIA

MEMORANDUM

DATE: JULY 19, 2019
TO: HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL
FROM: MARK B. JINKS, CITY MANAGER
SUBJECT: REVIEW OF PARKING ENFORCEMENT

During the review of FY 2019 revenues during the last month of budget work sessions, Council was informed, and expressed its concerns, related a 24% decline in parking ticket revenue during FY 2019. It was projected that revenues will drop from \$2.4 million received in FY2018 to a projected \$1.9 million in FY 2019. As a result, I requested that the Office of Performance and Accountability conduct a thorough program review of Parking Enforcement. Their report is attached.

In summary, the report identified the probable reasons for the revenue decline were due to:

1. Turnover and difficulty filling Parking Enforcement Officer (PEO) positions which led to higher vacancies in FY 2019 than FY2018.
2. Greater use of PEOs to temporarily fill school crossing guard positions due to absence and vacancy of a greater number of school crossing guard positions in FY2019.
3. 35% increase in CallClickConnect parking enforcement calls (such as complaints about double-parked delivery trucks) in FY2019. Often by the time the PEO drove to the site, the double parked vehicle had moved on.
4. Fewer parking tickets issued per PEO (due in part to #2 and #3 above)

In order to address the above probable reasons for a ticket writing decline, I have authorized the following:

1. PEO pay has been increased recently 10% for PEO I's and 5% for PEO II's. While current PEO salaries were at the median in regard to our comparators, ongoing turnover (and a very tight job market) was an indication that pay was a driving issue. The fact that the other uniformed personnel in APD received significant raises in early FY 2019 appears to have had a negative impact on morale in the PEO unit. The pay increase is for current PEOs as well as for new hires. A new starting salary of \$36,918 for PEO I's should make a significant difference in recruitment and retention.

2. A third pay tier has been added to the PEO career ladder to provide more long-term pay opportunity for PEOs so some PEO II's could eventually be promoted to PEO III's.
3. I have authorized two PEO overhires, so that APD can have a reserve of PEOs when vacancies occur. Added ticket revenues from overhire enforcement work should cover the cost of those overhires
4. APD has instituted a continuous hiring and processing system for PEO hires, so waiting for a vacancy to occur until recruitment starts no longer occurs.
5. I have authorized two school crossing guard overhires so that APD can have a reserve of school crossing guards when vacancies occur. This should reduce the draws on PEOs for school crossing guard duty.
6. APD and ACPS will be collaborating to see if part time ACPS workers at school sites would like to also become school crossing guards at their schools, so as to bookend their current part-time work with City crossing guard work at the beginning and at the end of the school day.
7. There have been some management improvements in the PEO unit.
8. APD is changing dispatch protocol so that if there is a patrol officer on duty near the site of a parking enforcement CallClickConnect complaint, and that officer is not already handling a call for service, then that officer will be dispatched to the site of the alleged parking violation and a PEO will not be the first person called to go to that site. That will allow PEOs to continue in their designated area enforcing parking, and avoid what sometimes is a cross-City trip to the site of the parking complaint.

Finally, APD will produce monthly statistics which mirror the data sets in the attached report, so we can see how the above changes that I have authorized impact total parking tickets issued and therefore parking ticket revenues collected. It should be noted that with the above changes, staff hours devoted to parking enforcement will increase, therefore leading over time to better parker compliance and space availability. If you have any questions, please let me know.

Attachment: *2019 Parking Enforcement Review*, Office of Performance and Accountability, July 18, 2019

C: Debra Collins, Deputy City Manager

Laura Triggs, Deputy City Manager

Michael Brown, Chief of Police

Greg Useem, Director, Office of Performance and Accountability



2019 Parking Enforcement Review

July 18, 2019

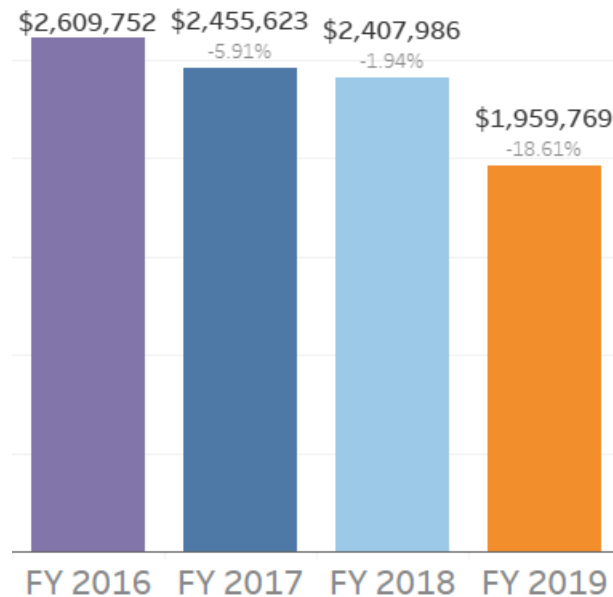
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Executive Summary

As part of the FY 2020 budget process, the Alexandria City Council asked the City Manager to identify the factors causing a decline in parking ticket revenue. Between July and March of FY 2019 parking ticket revenue declined by around 19%, as illustrated in Figure 1 below.

Figure 1: Ticket Revenue from July to March and Percent Change from Previous Year



Source: Munis. Values through March in each fiscal year.

At the City Manager's request, the Office of Performance and Accountability (OPA) in collaboration with the Alexandria Police Department (APD), the Department of Transportation and Environmental Services (TES), the Office of Management and Budget (OMB) and the Department of Finance analyzed these revenue changes in an attempt to identify the primary causes of this revenue decline.

Finding 1: The decline in revenue was not driven by changes in the value of tickets

Between July and March of FY 2018 and FY 2019, revenue declined by around 19%. During this period, the value of parking tickets did not significantly decline: there has been no change to the parking ticket fee schedule and there have not been significant shifts in other factors that affect the value tickets, such as late fees, voids, or dismissals.

Finding 2: The volume of tickets issued has declined, driving the revenue decline

Between July and March of FY 2018 and FY 2019, the total number of tickets issued by the Parking Enforcement Unit declined by 24%. This decline occurred consistently across nearly every type of parking ticket. Together with Finding 1, it seems likely that the primary driver of the decline in revenue is a decline in the number of issued tickets. The total decline in tickets

issued between July and March of FY 2019 compared against the same period in FY 2018 was 13,202 tickets.

Finding 3: The number of PEOs writing parking tickets has declined in FY 2019

The average number of Parking Enforcement Officers (PEOs) working per month in FY 2019 declined by an average of 3.7, compared against FY 2018. This staffing decline likely impacted the PEO's ability to enforce parking. However, the relationship between PEO staffing levels and number of tickets issued by the Parking Enforcement Unit has historically been variable.

Finding 4: The PEO parking ticket issuance rate has fallen, and has likely been influenced by an increase in other assignments

Between FY 2018 and FY 2019, there has been a decline in the rate of parking ticket issuance by PEOs; a 12% decline from 17 per PEO per day to 15. OPA was not able to identify all of the causes of this decline in ticket issuance. However, there were two areas in which non-ticketing work notably increased. The first is that PEOs conducted more crossing guard duties; between FY 2018 and FY 2019, PEOs have been required to cover 59% more crossing guard shifts. The second is an increase in Call.Click.Connect (C.C.C) service requests investigated by PEOs, which rose by 35% during this period.

Conclusion

The decline in parking ticket revenue is likely attributed to a decline in the number of tickets issued by the Parking Enforcement Unit. It is likely that the unit is issuing fewer tickets because it has fewer PEOs and because PEOs have less time to dedicate to writing tickets. It is important to note that due to data and time limitations not all potential causes were analyzed (see the addendum to this report for other factors).

Next Steps

After reviewing this report, the City Manager has indicated that two steps will be taken to reduce the time spent by PEOs on non-ticking activities. The first step will be to hire two additional crossing guards, reducing the number of crossing guard shifts PEOs are required to cover. The second step is to assign parking enforcement related C.C.C. requests to APD's patrol officers, instead of PEOs. The objective of both steps is to provide PEOs with more time to write parking tickets.

Background: The Parking Enforcement Process

APD's Parking Enforcement Unit is responsible for ensuring compliance with the City's parking ordinances. Housed in APD's headquarters, the Parking Enforcement Unit currently has 19 employees, including one supervisor and 18 PEOs.¹ In FY 2019 the Parking Enforcement Unit was authorized for two supervisors and 24 PEOs.²

The main responsibility of PEOs is to issue tickets to vehicles in violation of parking ordinances. PEOs enforce dozens of different ordinances relating to the proper use of parking meters, obeying parking signs, and various other offenses. PEOs are also responsible for other tasks, including investigating complaints about traffic violations, filling in for crossing guards, enforcing HOV lane ordinances, and other ad-hoc duties.³

There are three daily PEO shifts: morning (6:30am – 2:30pm), afternoon (1:30pm – 10:00pm), and night (8:30pm – 7:00am).⁴ At the time of analysis, there were nine PEOs working the morning shift, five PEOs working the afternoon shift, and three PEOs working the night shift.⁵ These three shifts are constant from Monday through Saturday. Sunday enforcement is lighter, as most parking is free on Sundays: currently the Parking Enforcement Unit only maintains one PEO on Sunday duty, who works from 10:30am until 7:00pm and primarily responds to community complaints.⁶

To issue tickets, PEOs are assigned a geographical area to monitor during their shift. These assignments rotate every month.⁷ The process of issuing tickets usually consists of a two hour "marking" cycle in which a PEO patrols an area, notes where the vehicles are parked, and issues tickets as appropriate.⁸ After two hours, the PEO re-visits the marked area, and issues tickets to vehicles which have stayed longer than the permitted time.⁹

The Parking Enforcement Unit requires PEOs to issue at least 300 tickets per PEO per month.¹⁰ This has been a Police Department standard operating procedure since January of 2011.¹¹ PEO progress against this standard operating procedure is regularly reviewed.¹² APD is currently re-reviewing this approach.¹³

Secondary responsibilities vary by shift. Between September and June, morning and afternoon shifts generally start their workday with crossing guard duty, directing traffic at specific

¹ MUNIS payroll data, accessed 06/07/2019.

² Lisa Henty, Assistant Director, Office of Management and Budget. Email, 06/07/2019. In FY 2018 the City budget authorized a total of 29 PEO positions, but this was reduced to 24 authorized PEO positions in the FY 2019 budget.

³ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 04/17/2019.

⁴ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 05/17/2019.

⁵ *Ibid.*

⁶ *Ibid.*

⁷ Katrina Morris, Supervisor, Parking Enforcement, Alexandria Police Department. OPA interview, 05/17/2019.

⁸ Parking Enforcement Officer, Alexandria Police Department. OPA interview, 05/14/2019.

⁹ *Ibid.*

¹⁰ See Figure 18 in Appendix B.

¹¹ *Ibid.*

¹² William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 05/17/2019.

¹³ Michael Brown, Chief of Police. Email, 06/07/2019.

intersections as school children enter and leave school. After crossing guard duty, PEOs are responsible for answering dispatch calls in their area, which are usually parking complaints relayed directly to the Parking Enforcing Unit by the community. Subsequently, while marking their area, PEOs are responsible for investigating C.C.C. community requests in the previous 24 hours. PEOs also apply boots to vehicles as needed.

PEOs issue tickets using smartphones. Each PEO is issued a smartphone and a mobile printer which they carry on their person.¹⁴ Tickets are filled out on the smartphone, printed, and left on the offending vehicle.¹⁵ These smartphones are integrated with the database of Duncan Solutions, a third party vendor that manages the ticketing software, bill payment, and City remittances. Duncan Solutions manages this process as an end-to-end service provider, and removes its fee before remitting payments to the City. Once a ticket is printed by a PEO, ticket data is submitted to Duncan's system.¹⁶

After a ticket has been issued, the recipient has 30 days to pay the fee. After the 30 days, late fees and additional fees are added to the total amount owed.¹⁷ Payment can be made through several different avenues, including in person at City Hall, by mail, or online.

¹⁴ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 04/17/2019.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Code of the City of Alexandria Virginia, ARTICLE S - Payment, Contest and Enforcement of Parking Tickets. Sec. 3-2-354 (B) - Penalties for uncontested citations.

Data, Methodology, and Limitations

The analysis for this report used a variety of data including parking ticket data, revenue data, and other data sources. Details regarding these sources, limitations, and how they were used are described below.

Parking Ticket Data

The source of ticketing data is Duncan Solutions, a contractor that manages the City's ticketing infrastructure. Duncan collects, stores, and reports the number of tickets issued, and maintains the data infrastructure that records details at the individual ticket level. These detailed records include information such as the type of ticket, date of issuance, date of payment, and associated fees. The City does not maintain individual level ticketing records independent of Duncan's data.

Revenue collected by Duncan comes from several payment methods. Drivers can pay for parking tickets in-person at City Hall, by mail, by the City's web portal, by online voice response, through the Official Payments Corporations on Duncan's website, or at the City's impound lot (cash and credit card). Duncan transfers revenue from parking tickets to the City daily, where it is recorded in Munis, the City's financial system of record¹⁸

For this report Munis data was pulled through a query created by Finance Assistant Director Michael Stewart. OPA analyzed parking ticket revenue from Munis objects 47502 (web parking tickets) and 47525 (Treasury payment processing).

Throughout this report, unless otherwise noted, annual totals for both Munis data and Duncan data is reported July through March of each referenced fiscal year. This reflects data available at the time of writing.

¹⁸ Aaron Root, Deputy Treasurer. Department of Finance. Email, 5/1/2019.

Revenue Data Variance

It is important to note that Duncan Solutions and Munis report different parking ticket revenue numbers for the City as illustrated in Figure 2.

Figure 2: Duncan Ticket Data versus Munis Revenue Data (through March in each year)

	FY 2016	FY 2017	FY 2018	FY 2019
Munis (total revenue and percent change from previous year)	\$2,609,752	2,455,623 (-5.91%)	2,407,986 (-1.94%)	1,959,769 (-18.61%)
Duncan Data (total revenue and percent change from previous year)	\$2,515,694	2,414,705 (-4.01%)	2,379,735 (-1.45%)	2,008,668 (-15.59%)
Revenue difference between Munis and Duncan (in the same year)	\$94,058	\$40,918	\$28,251	(\$48,899)

Both systems agree on general revenue trends, with differences of magnitude recorded in each fiscal year.¹⁹ Due to the limited scope of this report, and its compressed timeline, OPA was not tasked with reviewing the specific reconciling items between the two systems.

Given this, when this report cites annual dollar amounts, Munis values are reported (as shown in Figure 1). When Duncan dollar values are referenced, they are in terms of percent, rather than absolute values, as OPA defers to Munis as the financial system of record. All ticket volume calculations are based on data provided by Duncan Solutions.

Other Data Sources

Additional data sources include APD's Computer Assisted Dispatch (CAD) data, which provides information on the time PEOs use to complete certain tasks. For example, if a PEO is covering a crossing guard shift, they use the CAD system to indicate that they are working a crossing guard shift and cannot be dispatched on another assignment. PEOs indicate when they are traveling to the site, completing the task, and driving back to their daily shift area. Once a PEO has returned to their shift area, they change their CAD status to "available" and continue their usual work.

The Department of Finance provided Munis payroll data which was used for our analysis of staffing levels. General Services provided data on parking garage usage. The Department of Transportation and Environmental Service (TES) provided information on the City's contract with Parkmobile and general information about parking policy in the city. The Department of Emergency Communications (DEC) provided C.C.C. data.

OPA also conducted in-person interviews with the Parking Enforcement Unit's management staff (including sworn and civilian management) and five PEOs. OPA interviewed PEOs from all shifts (three from day shift, one from the afternoon shift, and one from night shift).

¹⁹ A detailed month to month comparison of the revenue sources can be found in Appendix A.

Analysis and Findings

OPA's analysis produced four major findings. First, the City's revenue decline was not driven by a change in the value of tickets. Second, the decrease in City revenue is primarily driven by a decline in the volume of tickets issued. Third, there were fewer City PEOs working in FY 2019 than in FY 2018, which likely contributed to the decline in the number of tickets issued. Finally, PEOs issued fewer tickets in FY 2019 than in FY 2018, which was partially driven by an increase in other duties.

Finding 1: The decline in revenue was not driven by changes in the value of parking tickets

City parking ticket revenue declined by about 19% from FY 2018 to FY 2019 (see Figure 1). This could be driven by variance in two factors: the number of tickets issued or the value of the tickets issued. OPA's analysis indicates that the value of tickets has remained relatively stable in FY 2019. Value in this report is defined as the price of the original ticket plus any additional fees, minus any voided or dismissed amount.

Parking Ticket Fee Schedule

Under the current parking ticket fee schedule, nearly every parking violation has an associated fee of \$40.²⁰ The City Attorney's Office reports that the fee schedule was last updated in June of 2012.²¹ Therefore, fee schedule changes are not responsible for the revenue decline in FY 2019.

Additional Fees

Fees assessed in addition to the typical \$40 parking ticket add to the overall revenue generated by parking tickets. Less additional fee revenue could have contributed to the overall revenue decline.

There are three significant sources of additional ticket fees. First, a late fee, which is applied after 30 days if a ticket is not paid. The late fee is \$25 for all ticket types.²² Second, a collection fee, which is applied when an outstanding ticket is sent to a secondary collection agency or the City Attorney. This fee is to cover administrative costs. It cannot exceed 20% of the charges collected or \$30.²³ The final type of fee is the Virginia Department of Motor Vehicles (DMV) fee, which is collected on behalf of the DMV when a ticket relevant to their regulations, such as

²⁰ The only exceptions are for parking in a disability zone (\$500), or near a curb of fire hydrant (\$48). David Lanier, Assistant City Attorney, City Attorney's Office. Email, 04/25/2019. See Appendix C for the full fee schedule.

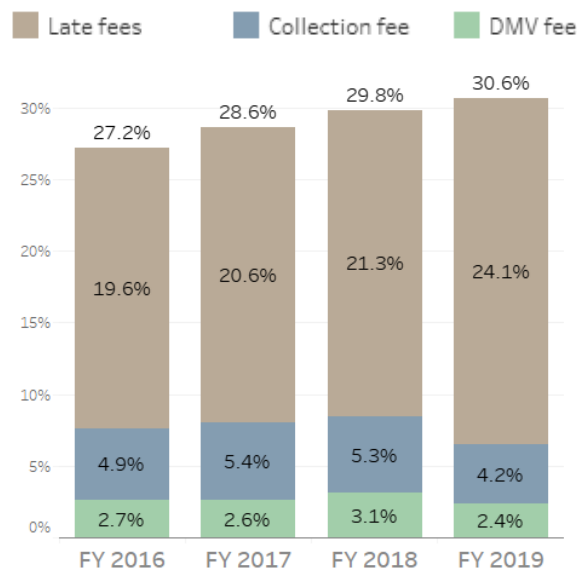
²¹ David Lanier, Assistant City Attorney, City Attorney's Office. Email, 05/01/2019.

²² Code of the City of Alexandria Virginia, ARTICLE S - Payment, Contest and Enforcement of Parking Tickets. Section Sec. 3-2-354 (B).

²³ Code of the City of Alexandria Virginia, ARTICLE S - Payment, Contest and Enforcement of Parking Tickets. Section Sec. 3-2-354 (C).

a registration violation is issued.²⁴ OPA investigated the total percentage of parking ticket revenue generated by these associated fees, as displayed in Figure 3 below.

Figure 3: Percent of Parking Ticket Revenue from Additional Fees



Source: Duncan Systems. Data through March in each fiscal year.

Overall during this period, these three fees have accounted for between 27% and 31% of all parking ticket revenue. In FY 2019, these fees have increased as a percentage of total revenue by less than one percent. This indicates that variance in the proportion of revenue generated by additional fees does not appear to be a primary cause of the decline in FY 2018 parking ticket revenue.

Voided, Dismissed, and Adjudicated Tickets

A final factor that could affect the value of parking tickets is voiding, dismissal, or adjudication. A voided ticket is one that is revoked by APD or the Finance Department. Common causes of voidance include a PEO canceling a mistakenly issued ticket or the Finance Department voiding a duplicate ticket.²⁵ A dismissed ticket is one canceled by the judicial system, usually after appeal in City Courts.²⁶ An adjudicated ticket is one dismissed by the City Attorney's Office.²⁷ An increase in any of these factors could reduce total City revenue.

²⁴ Code of Virginia §46.2-752 allows DMV to form contractual arrangements with localities to prevent registration renewal until the citation is paid. The DMV fee is collected by Duncan (on behalf of the City) then readmitted to the State later to pay for this enforcement action.

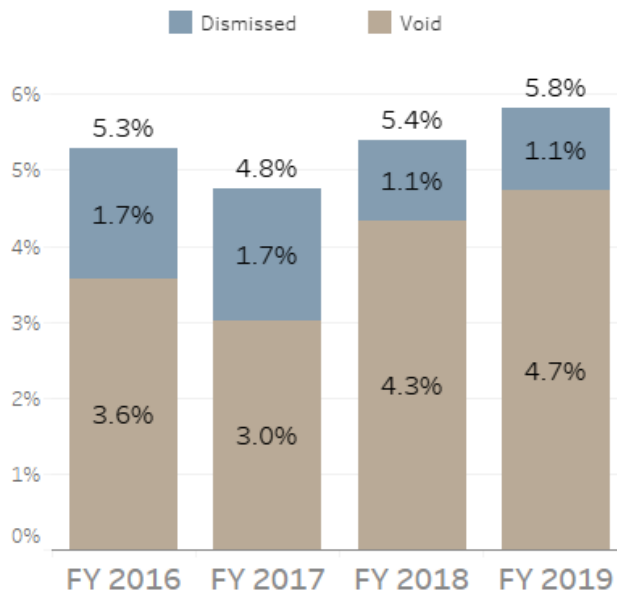
²⁵ Aaron Root, Deputy Treasurer. Department of Finance. Email, 4/25/2019.

²⁶ Brian Dunn. Senior Vice President Operations. Duncan Solutions. Email, 04/25/2019.

²⁷ The City Attorney's Office assumed this responsibility in September of 2017.²⁷ Previously, voiding tickets was an internal APD function. Adjudication is captured in Duncan's dataset as dismissals. Data provided by the City Attorney's Office indicate that the rate of dismissals has not significantly changed in FY 2019.

OPA analyzed these factors, and as Figure 4 below demonstrates, the percent of revenue lost to voids and dismissal (which includes adjudications) has been consistently between roughly 5% and 6% of total revenue. The variance between FY 2018 and FY 2019 is 0.4%.²⁸

*Figure 4: Percent of Total Parking Ticket Revenue Voided and Dismissed*²⁹



Source: Duncan Systems. Data through March in each fiscal year.

Because the variance between FY 2018 and FY 2019 is less than one percent, voided and dismissed tickets do not appear to be a driving factor in the recent fall in revenue.

Conclusion

OPA identified three factors as possible sources of variance in the total value of parking tickets issued by the City: the base fee for a ticket, additional fees associated with tickets, and void, dismissal, and adjudication rates. After analyzing the available data, it does not appear that any of these factors have shifted significantly from FY 2018 to FY 2019. As such, it is unlikely that the value of City tickets has been a primary driver of the City's revenue decline in FY 2019.

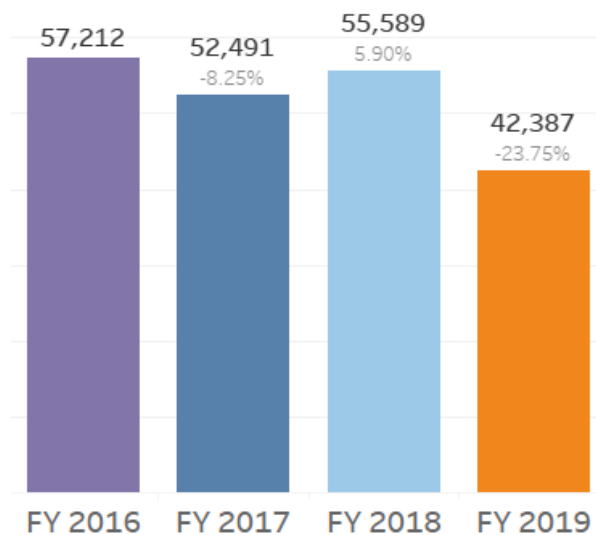
²⁸ Note, voiding and dismissing tickets takes time, so this calculation may not fully reflect what the impact that voids and dismissals will have in FY 2019.

²⁹ The percent calculation is relative to the total revenue collected July-March in that fiscal year.

Finding 2: The volume of tickets issued has declined, driving the revenue decline

There has been 24% decline in the number of tickets issued from July through March of FY 2019, compared against the same period in FY 2018. This decline has resulted in a total difference of 13,202 tickets. These trends are detailed in Figure 5 below.

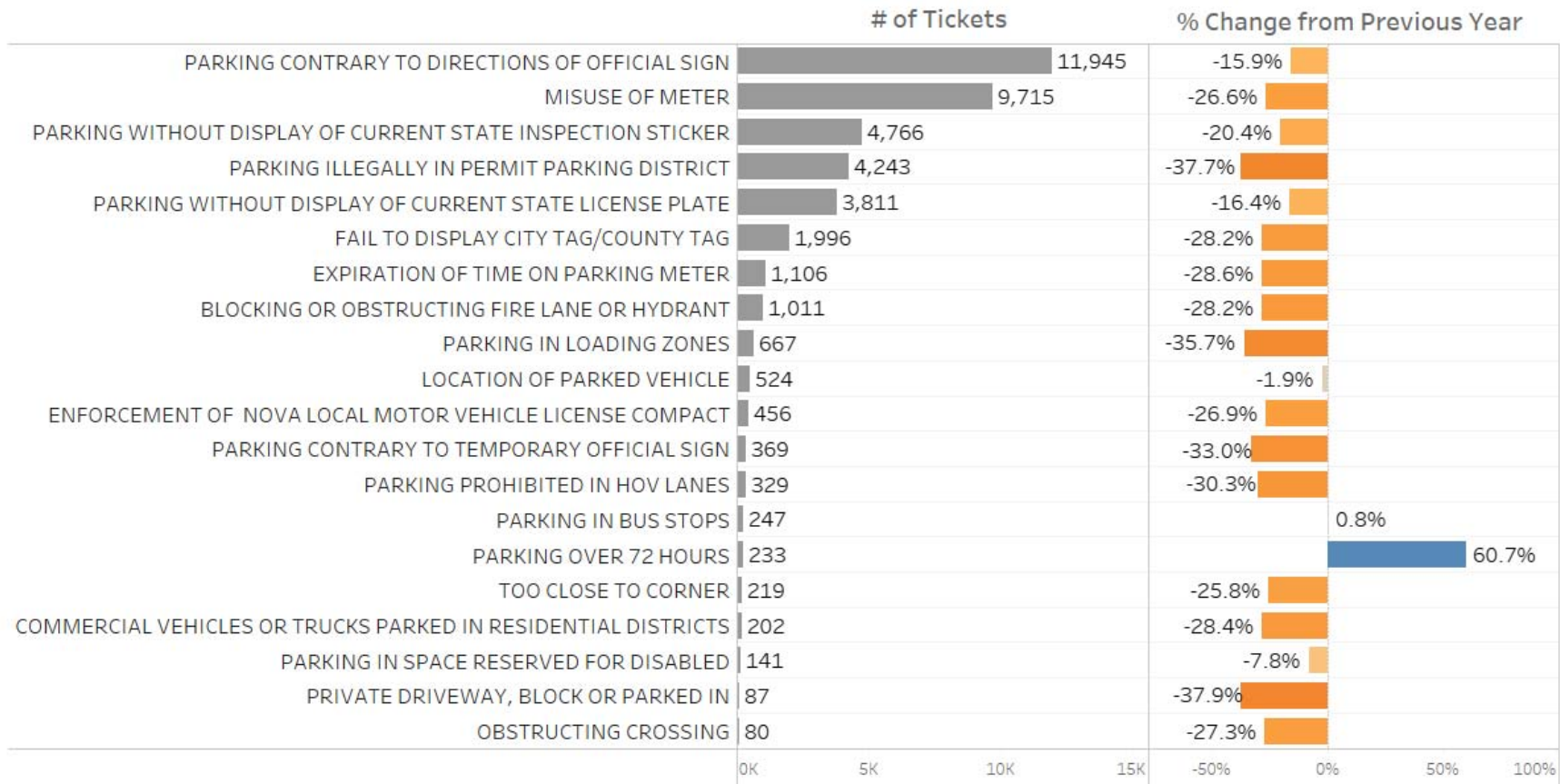
Figure 5: Tickets Issued and Percent Change from Previous Year



Source: Duncan Solutions. Values through March in each fiscal year.

OPA investigated if there had been a decline in certain types of tickets, which may be driving these trends. However, examining the 20 most issued ticket types reveals there is a steady decline in all categories (except for two cases that had small increases) in FY 2019, as illustrated in Figure 6 on the next page.

Figure 6: FY 2019 Top 20 Parking Ticket Types: Count and Percent Change from Previous Year



Source: Duncan Solutions. Values through March in each fiscal year.

The consistency of the decline across ticket types indicates that PEOs are issuing fewer tickets generally, not fewer of any specific kind of ticket.³⁰

Conclusion

The number of tickets issued in FY 2019 is down by about 24% during the same period in FY 2018. This translates to a decline of 13,202 tickets. This trend is constant across nearly every kind of ticket.

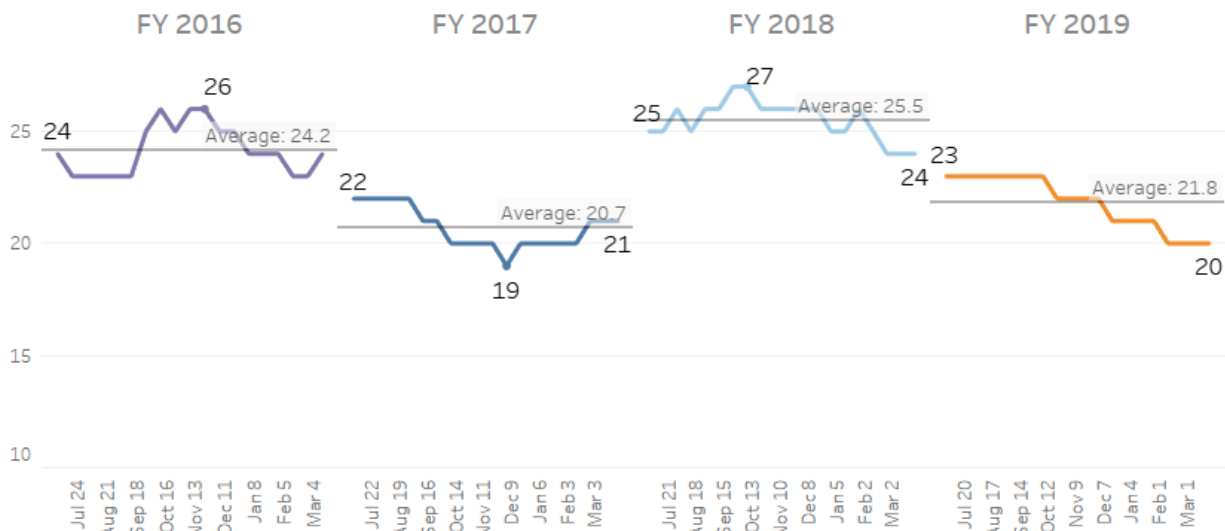
The total value of tickets issued has remained relatively constant (Finding 1). Therefore, the decline in the number of tickets issued is probably the primary driver of the FY 2019 revenue decline.

³⁰ It is important to note that the parking ticket category “parking is space reserved for disabled” is a \$500 ticket. As such, it has a significantly higher value than the typical \$40 ticket. If this ticket category had a large change from last year, it could have been a primary factor in the overall ticket decline. However, due to the relatively small total number issued last year (141) and the relatively small change from last year (-7.8%), it was not a primary factor in the overall decline.

Finding 3: The number of PEOs writing parking tickets has declined in FY 2019

Payroll data indicates that parking enforcement staff levels have declined from FY 2018 to FY 2019, from an average of 25.5 staff to an average of 21.8, a difference of 3.7. Figure 7 below details this year on year trend, with previous fiscal years for additional context.

Figure 7: Parking Enforcement Officers and Supervisors by Pay Period, FY 2016 – FY 2019



Source: Munis Payroll Data. Values through March in each fiscal year.

Relationship between Staffing and Ticket Numbers

The relationship between the number of PEOs employed by the City and the number of tickets issued by the Parking Enforcement Unit is inconsistent.³¹ However, it stands to reason that because PEOs write the majority of the parking tickets (see Figure 13) changes in the number of PEOs probably has an impact on the number of tickets issued.

Estimated Impact of Fewer PEOs

The methodology used below should be considered a rough estimate of the relative importance of staffing as a factor in the ticketing decline, not an exact attribution.

Between July and March of FY 2018 and FY 2019, there was a monthly average decline in the number of working PEOs of 3.7. Duncan data indicates that in FY 2019, the least productive PEO produced an average of 184 parking tickets per month, and the most productive PEO produced an average of 347 tickets per month.³² As a result, considering only this factor, 3.7

³¹ FY 2017's staffing levels are equivalent to FY 2019, but ticket numbers in FY 2017 were higher than in FY 2019. Due to the scope and time limitations, this analysis did not conduct statistical tests to determine the relationship.

³² Calculated from Duncan Data.

fewer PEOs, operating between these two productivity thresholds, would be expected to write enough tickets to account for between 46% and 88% of the total ticket decline.³³

Conclusion

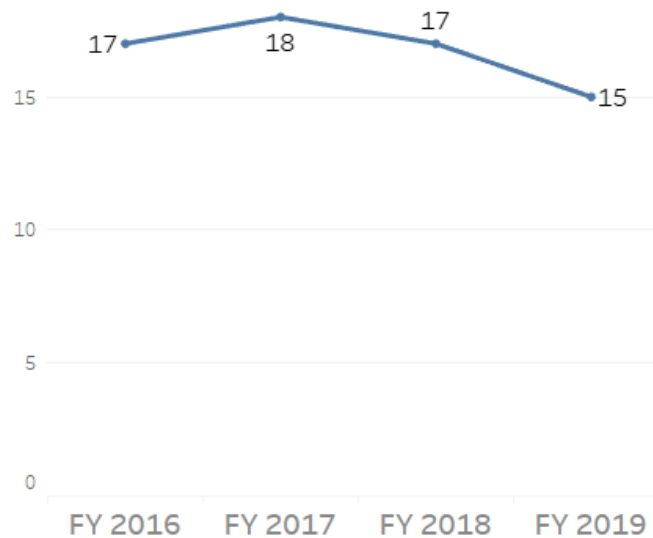
Between FY 2019 and FY 2018, the average number of PEOs writing parking tickets per month declined. Available data indicates that the relationship between total staffing levels and ticket numbers is inconsistent, and influenced by other factors. OPA estimates that the approximate size of that decline, considering only this factor, was between 46% and 88% of the total FY 2019 ticket decline.

³³ See Figure 20 in Appendix D.

Finding 4: The PEO parking ticket issuance rate has fallen, and has likely been influenced by an increase in other assignments

A second important factor that influences parking ticket output is the rate at which PEOs issue tickets. OPA analyzed data provide by Duncan Solutions, which indicate that the number of tickets written per productive day in FY 2019 is lower than in previous years. As Figure 8 below illustrates, the median PEO in FY 2019 wrote 15 tickets per productive day,³⁴ as compared to 17 in FY 2018.³⁵

Figure 8: Median Tickets Issued per Productive Day



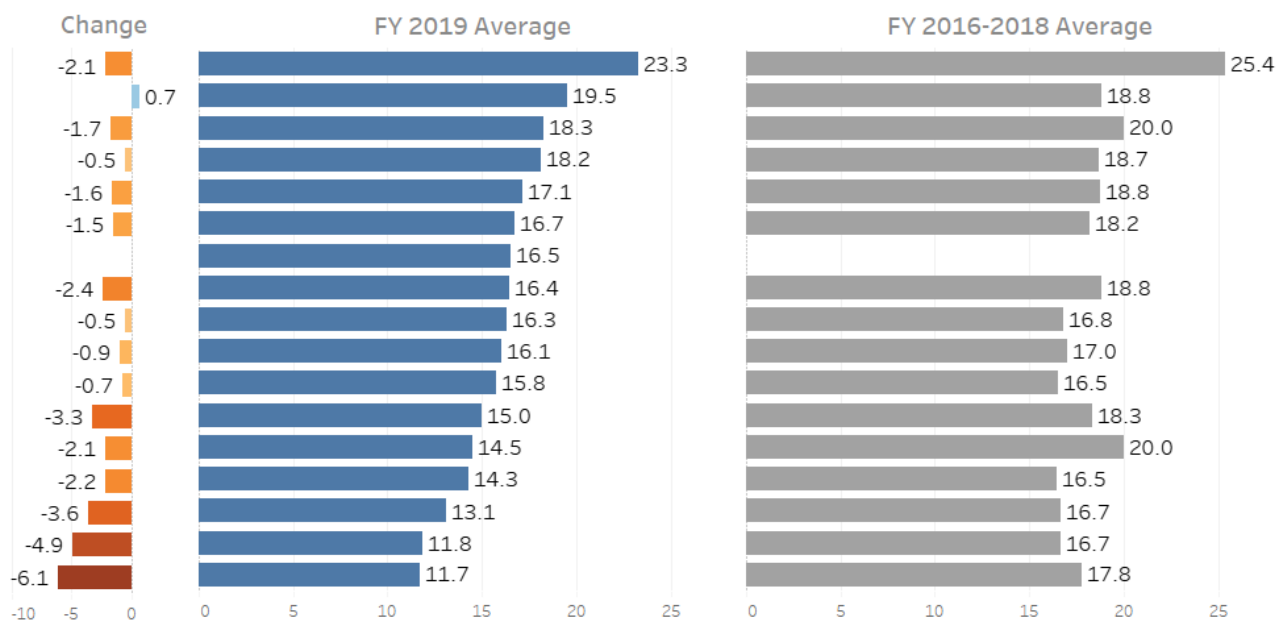
Source: Duncan Solutions. Values through March in each fiscal year.

³⁴ OPA used the median number of tickets issued by PEOs, as opposed to an average, because there were outliers skewing the average.

³⁵ For this calculation, a productive day as a day in which an officer wrote one or more tickets.

There is high variability in ticket productivity by individual PEOs, as displayed in Figure 9. The most productive PEOs issued around 20 tickets per day. The least productive issue around 15 tickets per day or fewer. Of note, with only one exception, all PEOs produced fewer tickets in FY 2019 than in previous years.

*Figure 9: Average Tickets per PEO per Productive Day
(For Active PEOs in March 2019)*



Source: Duncan Solutions. Values through March in each fiscal year.

In order to provide an estimate of the relative importance of the decline in the number of tickets issued per day, OPA multiplied the decline in the rate of ticket issuance of the median PEO against the total number of tickets issued in FY 2018. This is an imperfect measure that does not take into account the variance in the average number of tickets produced per PEO, or the variance in the severity of the productivity decline, as detailed in Figure 9. It also does not consider concurrent factors (such as declining staff levels). As such, this estimation should be used as a rough proxy for the relative importance of the issuance decline.

Assuming all other factors remained equal, if every PEO experienced the same productivity decline from FY 2018 to FY 2019 as the median PEO, the total decline in issued tickets would account for about half of the overall 13,202 decline.³⁶ To see the highest and lowest limits of this estimate, please consult Figure 22 in Appendix D.

OPA was not able to identify all of the causes for this overall decline in ticket issuance. Two potential factors were an increase in the number of crossing guard shifts covered by PEOs, and an increased number of C.C.C. requests investigated by PEOs.

³⁶ See Figure 21 in Appendix D.

Increase in Crossing Guard Duties

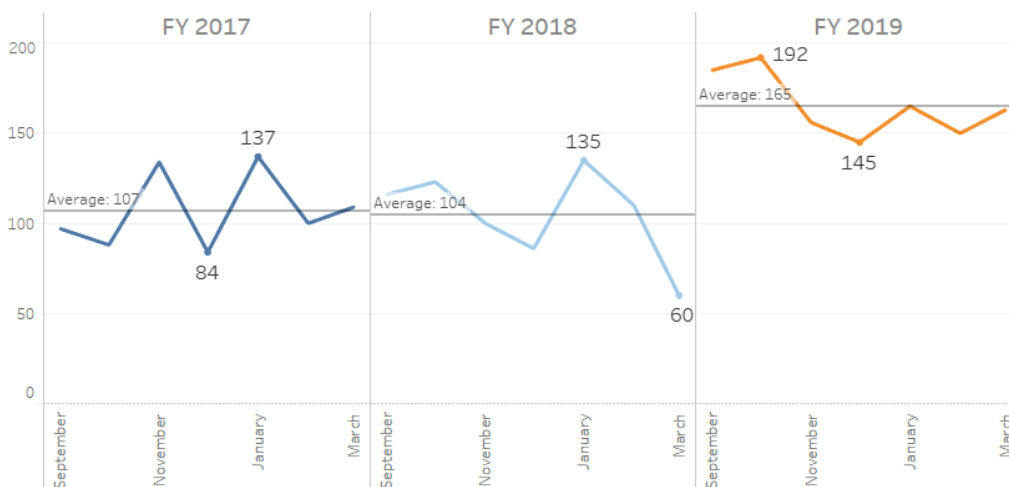
Alexandria has part-time crossing guards. These employees are responsible for directing traffic at identified intersections when children are traveling to and from school. PEOs are responsible for conducting crossing guard duties when the City does not have enough crossing guard staff to cover all intersections.³⁷

In interviews, PEOs report that they have assumed more crossing guard duties, which has led to a decline in the amount of time they have to write parking tickets. To test this, OPA examined two factors: first, the number of crossing guards the City employs, and second the number of PEO crossing guard shifts.

Payroll data indicates that on average, the number of crossing guards paid by the City per month has declined from 50 in FY 2018 to 42 in FY 2019.³⁸ This is supported by APD records,³⁹ which indicate that PEOs are conducting more school crossing guard duties.

As Figure 10 below demonstrates, the average number of monthly PEO crossing guard shifts, during the school year has increased, rising from an average of 104 crossing guard shifts in FY 2018 to 165 shifts in FY 2019.⁴⁰

Figure 10: Number of Crossing Guards shift PEOs cover per School Year



Source: APD CAD Data. Values are September through March of each fiscal year.

This represents an increase of 61 extra shifts per month, or a 59% increase from FY 2018 to FY 2019. APD data shows that the average time spent on a crossing guard shift in FY 2019 was about

³⁷ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 04/17/2019.

³⁸ MUNIS payroll data, September-March in each fiscal year.

³⁹ CAD system data. PEOs indicate in the CAD when they are driving to, or conducting, crossing guard duties. As a result, OPA was able to count the total number of shifts PEOs worked throughout FY 2019, and the duration of those shifts.

⁴⁰ These number are based on available months of data when school is in session

80 minutes (inclusive of travel).⁴¹ Thus, crossing guard duty accounts for about 16% of an 8-hour shift.

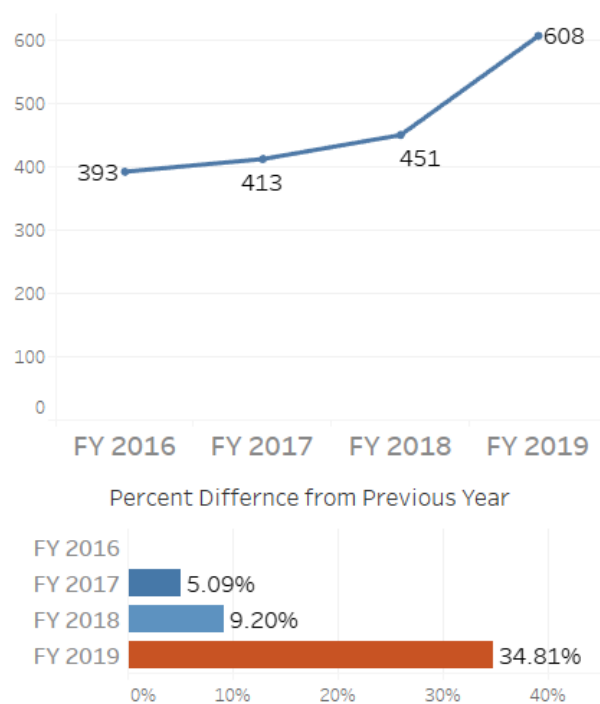
Estimated Impact of Additional Crossing Guard Shifts

From this information, OPA was able to estimate the impact of extra crossing guard shifts. An extra 61 shifts per month, at 80 minutes each, would require approximately 81 hours a month. The least productive PEO could have used this time to write 854 extra tickets between September and March, and the most productive could have written around 1,637.⁴² This would account for between 6% - 12% of the total decline in ticket issuance between FY 2018 and FY 2019 (exclusive of considering other factors).⁴³

Increase in Call.Click.Connect Service Requests

One potential cause of additional non-ticketing duties is an increase in C.C.C. service requests. Figure 11 below details an increase in requests submitted in FY 2018 and FY 2019 from 451 to 608, or a 35% increase. It is important to note that individual service requests may be duplicated issues reported multiple times by the community.

Figure 11: Call.Click.Connect Service Requests for Parking Enforcement (July-March)⁴⁴



Source: CityWorks. Values through March in each fiscal year.

⁴¹ CAD data.

⁴² This calculation is detailed in Figure 23 of Appendix D.

⁴³ *Ibid.*

⁴⁴ Service Request data from CityWorks. C.C.C. complaints counted in this chart were from the APD_PARK code. APD_PARKING_CITATION codes are directed towards the City Attorney, and are not addressed by the Parking Enforcement Unit.

An increase in C.C.C. service requests affects PEO workload because all C.C.C. service requests are read by Parking Enforcement management, disseminated to the appropriate PEOs, investigated, and replied to in writing.⁴⁵

PEOs do not reliably track when they are investigating C.C.C complaints, or how long an investigation takes.⁴⁶ However, PEOs are responsible for answering dispatch calls. Dispatch calls are generally issued when a community member calls APD to complain directly about a parking issue. As such, dispatch calls frequently concern issues similar to C.C.C.⁴⁷ Dispatch call response time is tracked through the CAD, so OPA was able to use average dispatch call response time as a proxy for C.C.C. workload utilization time.

In FY 2019, the average amount of time spent responding to a dispatch call was 37 minutes. This could have accounted for enough time to write between 1% - 2% of the total ticket decrease of 13,202 in FY 2019 (considering only this factor).⁴⁸

⁴⁵ Katrina Morris, Supervisor, Parking Enforcement, Alexandria Police Department. OPA interview, 05/17/2019.

⁴⁶ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 05/17/2019.

⁴⁷ The year on year change in the total number of dispatch calls issued to PEOs was an increase of less than 3%. Because that variance was small, and because dispatch calls cover many different categories, OPA did not believe it was possible to accurately parse out and measure the impact of the increase in dispatch calls.

⁴⁸ See Figure 24 in Appendix D.

Addendum: Other Theories

Throughout the process of writing this report, PEOs and the Parking Enforcement Unit management were helpful in providing suggestions as to why ticketing revenue and output could have declined in FY 2019.

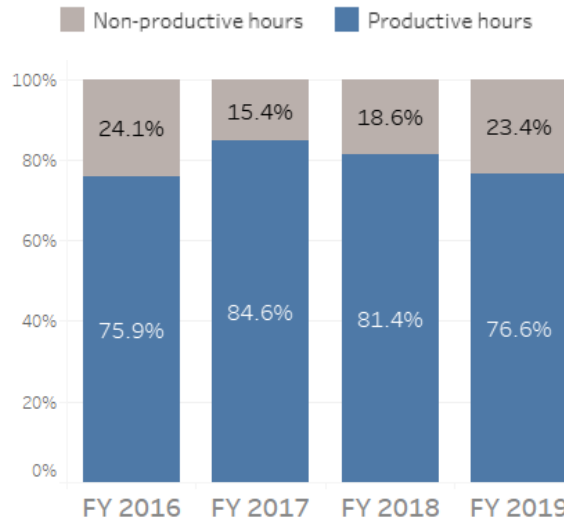
OPA investigated as many of these proposed causes as possible. This addendum details three types of theories which OPA explored: theories that City data indicate that were not primary factors in the revenue decline, theories that were not a factor in revenue decline, and theories that could not be substantiated.

Non-primary Drivers of Revenue Decline

Decline in Productive Hours Worked

One possibility for the decline in ticketing numbers could have been a decline in the number of productive hours PEOs were using to write ticket due to short-term illness, long-term injury, training, or some other use of paid hours. To investigate this, OPA analyzed the PEOs hours worked, as tracked in the payroll system. For the purposes of this analysis, productive time includes: regular time, shift differential, and overtime. All other types of time are non-productive hours and include admin leave, annual leave, FLMA, sick leave and other leave codes. Results are displayed in Figure 12 below:

Figure 12: Percentage of Productive vs Non-Productive Time



Source: Munis Payroll Data. Values through March in each fiscal year.

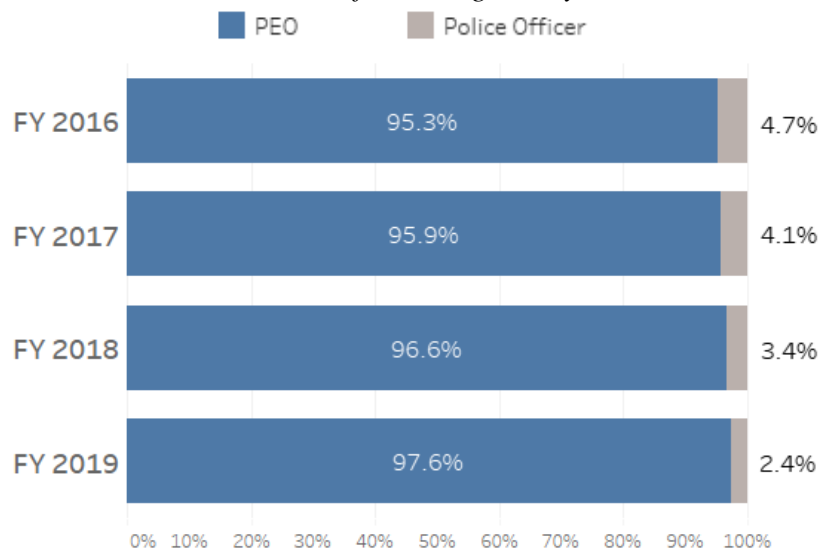
Figure 12 illustrates that the time PEOs have spent on regular work has fallen by 4.8% in FY 2019 compared to FY 2018. However, while the percent of non-productive time is larger in FY 2019 than the two previous years, it is smaller than in FY 2016. OPA does not expect that this decline would be acting as a primary driver of the overall drop in tickets in FY 2019.

Police Officer Parking Ticket Production

Parking tickets are not usually issued by police officers, unless they are sent to a non-emergency call related to parking. Generally, parking enforcement is the Parking Enforcement Unit's responsibility.⁴⁹ However, before FY 2019, a component of police officers' annual performance review included the number of parking tickets issued. Thus, police officers had an incentive to write some parking tickets. In FY 2019, the performance review criteria changed, and no longer specifically includes a count of tickets issued.⁵⁰ This change could have resulted in police officers writing fewer parking tickets, contributing to the overall decline in ticketing.

OPA's analysis found that in the past four fiscal years, the volume of police officer tickets did decline from a high of 4.7% of all parking tickets in FY 2016 to a low in FY 2019 of 2.4%. As Figure 13 below details, the change from FY 2018 to FY 2019 was a decline from 3.4% of all tickets to 2.4% of all parking tickets, or a decline of 836 tickets.⁵¹ This change is 6% of the decline of 13,202 from FY 2018 to FY 2019. Because of this relatively modest total decline, the change in police officer ticketing is not considered to be a primary driver for the FY 2019 decrease in ticket revenue.

Figure 13: Number and Percent of Tickets given by PEO and Police Officers



Source: Duncan Solutions. Values through March in each fiscal year.

⁴⁹ Jamie Bridgeman, Captain, Alexandria Police Department. OPA interview, 04/17/2019.

⁵⁰ *Ibid.*

⁵¹ The 836 ticket figure is the difference between the number of tickets written by police officers in FY 2018 vs FY 2019, as counted in the Duncan data (FY 2018: 1,865 vs. FY 2019: 1,029)

Theories that were not a factor in revenue decline

The following section explores theories OPA was able to test against City data, and which were found to not to have had an impact on the FY 2019 revenue decline.

Parking Application Change from Pango to ParkMobile

In September of 2018, the City adopted the ParkMobile parking application.⁵² This replaced the previous application, Pango.

Some parking enforcement staff suggested that Parkmobile now allows drivers to extend their time beyond the posted limit in a zone. For example, if a zone has a two-hour limit, and a driver parks for an hour and a half, Parkmobile would allow them to top up their session for another hour and a half. TES staff indicated that this was not accurate.⁵³ OPA tests of the application to replicate the error were not allowed by the application.

Another concern raised by APD staff was that the new ParkMobile app allows you to park for the limit in a zone, then immediately renew the parking session. For example, if a driver parks in a two-hour zone for two hours, and then immediately adds another two hours after a session expires. TES staff indicated that this is not accurate; after parking in a zone, a driver must wait two hours before parking in the same zone again.⁵⁴ OPA testing of the application verified that after a session expires, drivers are unable to immediately re-park in the same zone.

Additionally, the total number of tickets written for violations related to expired meters and overstaying time limits do not appear to have changed in a way that is divergent from the overall ticket decline. If the change to ParkMobile had caused significant disruption, we would expect to see those categories of tickets decline at a faster rate than categories of tickets unrelated to ParkMobile, such as parking in violation of signs. See Figure 6 for details.

Zone Changes

One possible source of change for parking behavior is adjustments made to the City's parking zones. Since 2016, there have only been minor alternations to the City's parking zone structure: one district was expanded by two blocks and there were additional hourly restrictions installed in previously unrestricted zones.⁵⁵ However, both of these alterations would potentially allow PEOs to generate more tickets and would not account for a decline in ticketing.

Productivity by Tenure

City staff suggested productivity of issuing tickets was impacted by PEO tenure. OPA analysis indicates that the relationship between monthly tickets production and the amount of time a PEO has been in their position is complicated. Figure 14 below show the current PEOs, broken down by the number of years since they have been hired. PEOs from every seniority category are

⁵² Matt Melkerson, Division Chief of Traffic Operations, TES. Email, 04/26/2019.

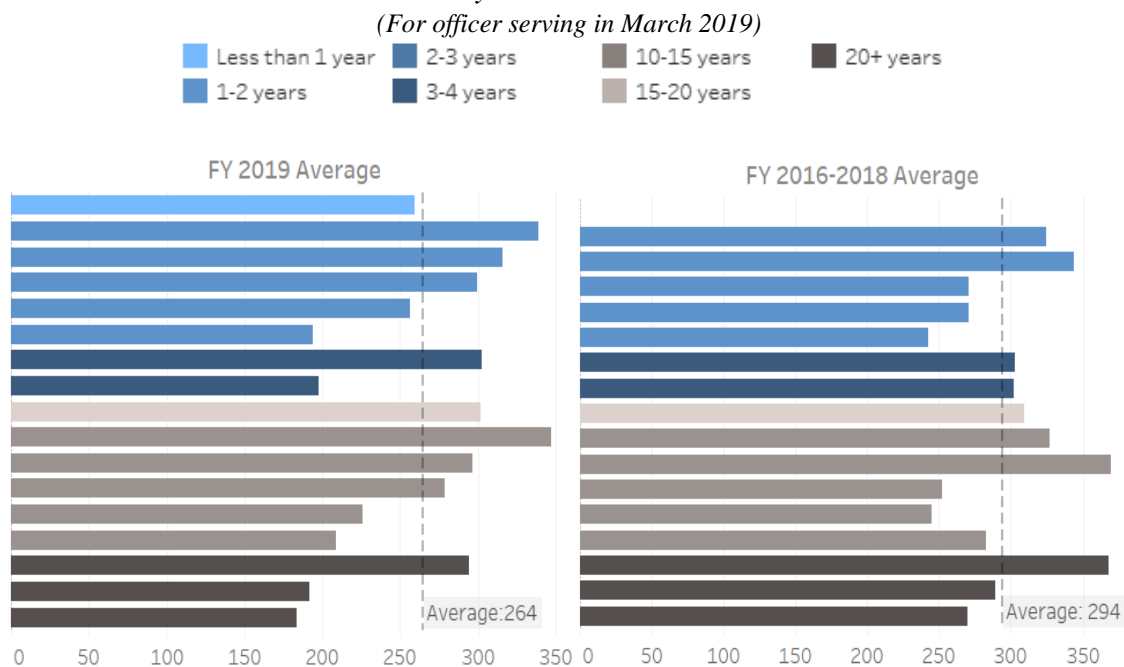
⁵³ Katie North, Division Chief, TES. Email. 05/13/2019.

⁵⁴ *Ibid.*

⁵⁵ Matt Melkerson, Division Chief of Traffic Operations, TES. Email, 05/06/2019.

above average as well as below average. Thus, we think seniority was not a significant factor in the decline in ticket production.

Figure 14: Monthly Average Number of Tickets Issued by Officer (each bar represents a PEO) by Years as PEO

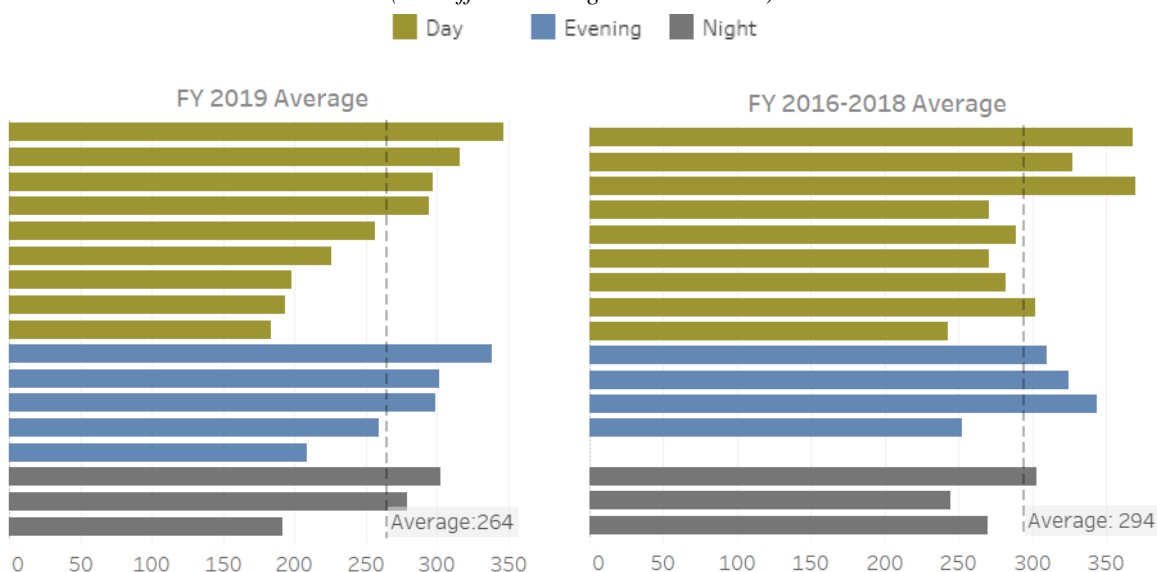


Source: Duncan Solutions. Values through March in each fiscal year.

Productivity by Shift

This analysis also explored if PEOs were more or less productive by shift. Figure 15 below shows that highly productive PEOs are distributed across the day, evening, and night shifts. In previous years and in FY 2019, shift does not determine monthly productivity.

*Figure 15: Monthly Average Number of Tickets Given per PEO (each bar represents a PEO) by Shift
(For officer serving in March 2019)*



Source: Duncan Solutions. Values through March in each fiscal year.

Recent Departures

Parking enforcement management indicated to OPA that the most recent PEOs to depart were more productive than the average. OPA compared the average number of tickets issued by these recent departures against the average number of tickets issued by all PEOs and found that several recent departures were above average in daily ticket issuance, several were also below average.⁵⁶ The net impact is likely a not a driver of the overall revenue decline.

⁵⁶ This analysis was conducted using officer ID numbers from the Duncan ticketing information.

Theories that could not be substantiated

This section explores a number of theories raised by APD and TES staff, which OPA was unable to analyze because, in most cases, the data was unavailable.

Equipment Issues

Parking enforcement staff raised concerns about the impact of new equipment on ticketing productivity. On August 23, 2017, parking enforcement officials switched from handheld ticket units used to issue tickets to smartphones.⁵⁷ The PEOs did not believe their new equipment was working efficiently and upgraded to more secure and better functioning smartphones on August 1, 2018.⁵⁸

Parking enforcement management was concerned that the first iteration smartphones may have been slowing down ticketing. However, ticketing productivity rose during the period of the first smartphone iteration and fell during after the upgrade in August of 2018.

It is possible that the impact of the equipment issues is concealed by other, more important trends such as staffing levels. However, OPA is not able to separate evidence from these larger trends that supports the idea that a slowdown was due to equipment issues.

New Employee Training Time

Parking enforcement employees noted that employee turnover may be contributing to the ticketing productivity decline, because the time taken to train new staff decreases active ticketing time. APD does not currently track time spent training, so OPA was not able to fully evaluate this theory.

General Parking Demand

One possible explanation for a decline in tickets issued is that that the demand for parking has lessened in Alexandria. Conducting a full parking demand analysis is outside the scope of this report, but OPA did examine the total number of resident parking permits issued by the City, in an attempt to determine if residents are maintaining fewer vehicles. This indicator does not account for a potential increase in the number of visitors parking in Alexandria.

⁵⁷ William Mayfield, Sargent, Parking Enforcement, Alexandria Police Department. OPA interview, 04/17/2019.

⁵⁸ *Ibid.*

General Parking Demand: Residential Parking Permits

The City maintains a record of how many residential parking permits it issues by calendar year. As detailed in Figure 16 below, since 2015, this number has remained relatively steady, increasing by between 0 and 2% per year, from 9,101 residential permits in 2015 to 9,399 permits in 2018. Because this number has not declined, it does not support the hypothesis that residential parking demand is in decline.

Figure 16: Annual Trends, Residential Parking Permits

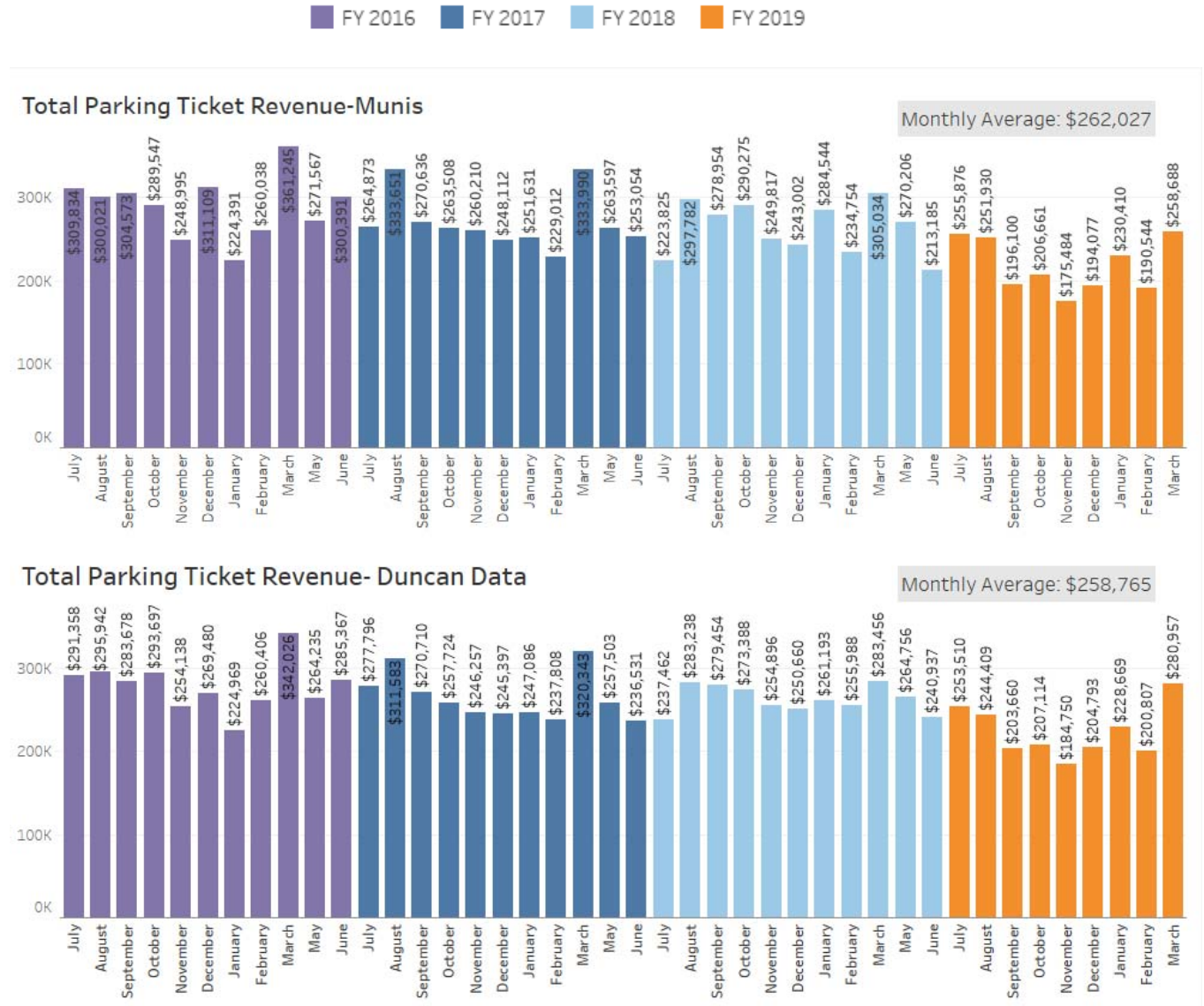
District	2015	2016	2017	2018
1	2,580	2,566	2,616	2,636
2	1,129	1,152	1,137	1,195
3	808	795	804	807
4	1,207	1,218	1,252	1,301
5	994	1,024	1,042	1,036
6	519	521	506	506
7	921	903	920	948
8	76	76	88	80
8A	184	170	189	187
9	553	558	559	549
10	80	81	79	82
11	50	59	61	72
<i>Totals</i>				
Total	9,101	9,123	9,253	9,399
Year-to-year percent change	-	0%	1%	2%

Appendices

Appendix A: Munis and Duncan Dataset Comparison

Figure 17 below compares the total parking ticket revenues recorded by month from FY 2016 to FY 2019, as recorded in both the City's Munis system, and the data provided by Duncan Solutions.

Figure 17: Month Over Month Revenue Comparison, Munis and Duncan Datasets



Source: Duncan Solutions.

Appendix B: Parking Ticket Required Standards

The information below is taken from the Parking Enforcement Unit's Standard Operation Procedure 8.1. – Productivity Standards. This procedure was instituted in January of 2011.

Figure 18. Parking Ticket Standard- Page 1

SOP- 8.1.3 PRODUCTIVITY – Citation and Booted Vehicles

A parking enforcement officer is scheduled to work a specific number of hours per day and is expected to produce a certain volume of citations and booted vehicles. To that end the volume of citations issued per day are cumulative as are the booted vehicles to the end of the month. Therefore these standards of productivity will be assessed as follows:

Citations:	Daily	Monthly
a. Outstanding	25	500 or more
b. Exceeds Requirements	20-24	400 - 499
c. Meets Requirements	15-19	300-399
d. Below Requirements	10-14	200-299
e. Unsatisfactory	0-13	1-199

Booted Vehicles:	
a. Outstanding	8 or more
b. Exceeds Requirements	7
c. Meets Requirements	4-6
d. Below Requirements	2-3
e. Unsatisfactory	0-1

On each occurrence when a parking enforcement officers' monthly work productivity fails to attain at least a "meets requirements" level, the employee will receive supervisory counseling aimed at improving the performance. The employee and their supervisor will work jointly to increase productivity.

Appendix C: Parking Ticket Fee Schedule

Figure 19 below details the current schedule of fees for parking citations. The schedule has not been changed since 2012.

Figure 19: Current Schedule of Fees for Alexandria Parking Citations

Ordinance	Value of Ticket
3-2-336 (CITY TAG/COUNTY TAG, FAIL TO DISPLAY MUST PURCHASE TAG AT ONCE)	\$40
10-3-1242 (DISABLED, PARKING IN SPACE RESERVED FOR)	\$500
10-4-1 (STOPPING CONTRARY TO DIRECTIONS OF POLICE OFFICER)	\$40
10-4-2 (OFFICIAL SIGN, PARKING CONTRARY TO DIRECTIONS OF)	\$40
10-4-4 (OBSTRUCTING CROSSING)	\$40
10-4-5 (DOUBLE PARKING)	\$40
10-4-6 (COMMERCIAL VEHICLES OR TRUCKS PARKED IN RESIDENTIAL DISTRICTS)	\$40
10-4-8 (OVER 72 HOURS, PARKING)	\$40
10-4-9 (TRAILERS & RECREATIONAL VEHICLES, PARK IN RESIDENTIAL DISTRICTS)	\$40
10-4-10 (SIDEWALK, PARKING ON OR OBSTRUCTING)	\$40
10-4-11 (ALLEYS OR COURTS, PARKING IN)	\$40
10-4-14 (BUS STOPS, PARKING IN)	\$40
10-4-17 (ANGLE PARKING)	\$40
10-4-18 (LOADING ZONES, PARKING IN)	\$40
10-4-22 (MISUSE OF METER)	\$40
10-4-23 (EXCEEDING TIME LIMIT ON PARKING METER)	\$40
10-4-25 (EXPIRATION OF TIME ON PARKING METER)	\$40
10-4-34 (PERMIT PARKING DISTRICT, PARKING ILLEGALLY IN)	\$40
10-4-35 (PARKING IN TWO-HOUR PARKING ZONES IN THE CENTRAL BUSINESS DISTRICT)	\$40
10-4-37 (CITY TAG/COUNTY TAG, FAIL TO DISPLAY MUST PURCHASE TAG AT ONCE)	\$40
10-4-37.1 (ENFORCEMENT OF THE NORTHER VIRGINIA LOCAL MOTOR VEHICLE LICENSE COMPACT)	\$40
10-4-38 (PARKING WITHOUT DISPLAY OF CURRENT STATE INSPECTION STICKER)	\$40
10-4-38 (PARKING WITHOUT DISPLAY OF CURRENT STATE LICENSE PLATE)	\$40
10-4-39 (TEMPORARY OFFICIAL SIGN, PARKING CONTRARY TO)	\$40
10-4-40 (LOCATION OF PARKED VEHICLE)	\$40
10-4-41 (TOO CLOSE TO CORNER)	\$48
10-4-42 (FIRE LANE, HYDRANT BLOCKING OR OBSTRUCTING)	\$48
10-4-44 (PARKING PROHIBITED IN HOV LANES)	\$40
Unclassified	\$40

Appendix D: Volume Impact Assessments

The figures in this Appendix provide estimates as to the relative importance of various factors on the decline in number of parking tickets issued by the Parking Enforcement Unit from FY 2018 – FY 2019. These estimates are not designed to provide a comprehensive accounting for each factor that contributed to the decline in issued tickets. Rather, estimates of the relative impact of each factor, made with best on the best available data. Each of these estimates is a stand-alone assessment. They are not intended to be used in conjunction

Figure 20 below details the total number of tickets 3.7 additional PEOs would be expected to write in FY 2019, depending on the productivity of the PEO. It then details what percentage of the gross FY 2019 ticketing decline this would constitute.

Figure 20: Estimated Impact on Ticketing Decline, Loss of 3.7 PEOs

	Item	Least Productive PEO, FY 2019	Most Productive PEO, FY 2019
<i>Estimated Ticket Output, 3.7 PEOs</i>			
1	Average decrease in the number of PEOs working per month	3.7	
2	Average number of tickets issued per month	184	347
3	Expected number of tickets issued by 3.7 PEOs per month (line 1 x Line 2)	681	1,284
<i>Impact Assessment – Loss of 3.7 PEOs</i>			
4	Estimated decline for 9 months (Line 3 x 9 months)	6,129	11,556
5	Actual realized ticket decline, FY 2019	13,202	
6	Estimated total percentage of ticket decline attributable to 3.7 fewer PEOs (line 4 / line 5)	46%	88%

Figure 21 below details an estimate of the percentage of the overall FY 2019 ticketing decline that can be attributed to a decline in the rate of ticket issuance, if each PEO experienced the same decline in ticket issuance as the median PEO.

Figure 21: Impact Estimate, Decline in Rate of Ticket Issuance – Median PEO

	Item	Amount
<i>Estimated Ticket Output Decline, Median PEO</i>		
1	Daily rate of ticket issuance FY 2018, median PEO	17
2	Daily rate of ticket issuance FY 2019 - median PEO	15
3	Decline in rate of ticket issuance (Line 1 - Line 2) / Line 1	11.8%
<i>Impact Assessment</i>		
4	Total number of tickets issued, July- March, FY 2018	55,589
5	Estimated impact of ticket decline, FY 2019 (Line 3 x Line 4)	6,559
<i>Scale Estimate</i>		
6	Actual realized ticket decline, FY 2019	13,202
7	Estimated percent of actual decline potentially caused by the impact of variance in issuance rate (Line 5 / Line 6)	50%

Figure 22: Impact Estimate, Decline in Rate of Ticket Issuance – Least and Most Productive PEOs

	Item	Amount: Least Productive PEO	Amount: Most Productive PEO
<i>Estimated Ticket Output Decline, Most and Least Productive PEOs</i>			
1	Average ticket output per PEO per productive day (FY 2016 – FY 2018 Average) ⁵⁹	18	25
2	Average ticket output per PEO per productive day (FY 2019) ⁶⁰	12	23
3	Decline in rate of ticket issuance (Line 1 - Line 2) / Line 1	33%	8%
<i>Impact Assessment</i>			
4	Total number of tickets issued, July- March, FY 2018	55,589	
5	Estimated impact of ticket decline, FY 2019 (Line 3 x Line 4)	18,530	4,447
<i>Scale Estimate</i>			
6	Actual realized ticket decline, FY 2019	13,202	
7	Estimated percent of actual decline potentially caused by the impact of variance in issuance rate (Line 5 / Line 6)	140%*	34%

*This 140% figure exists as a consequence of the methodology of providing a range for our impact estimates. This number projects the estimated FY 2019 decline in ticketing levels for the Parking Enforcement Unit, if every PEO ticketing output fell as much as the least productive PEOs ticketing output between FY 2018 and FY 2019. If that had happened, the Unit's ticketing output would have fallen by 18,530, instead of the actual 13,202. The actual decline was less than this estimate, because most PEOs experienced a decline of less than the least productive PEO.

⁵⁹ See Figure 9.

⁶⁰ *Ibid.*

Figure 23 below estimates the total amount of time PEOs had to take in FY 2019 to respond to an increase in crossing guard shifts over FY 2018 which was roughly equal the time required to write between 6% and 12% of the total year-on-year ticket decline.

Figure 23: Estimated Impact on Ticketing, Additional Crossing Guard Shifts (Rounded)

	Item	Least Productive PEO	Most Productive PEO
<i>Time Estimate</i>			
1	Average number of increased crossing guard shifts per month ⁶¹	61	
2	Average length of a crossing guard shift (minutes) ⁶²	80	
3	Total hours required for increased number of shifts per month ((Line 1 x line 2) / 60)	81.33	
4	Total average number of PEO working days per month required to cover additional crossing guard shifts (Line 3 / 8 hours)	10.17	
<i>Impact Assessment of Time Required to Conduct Extra Crossing Guard Shifts</i>			
5	Average number of tickets issued by a PEO per productive day, FY 2019 ⁶³	12	23
6	Estimated impact of additional crossing guard shifts, September - March FY 2019 (Line 4 x Line 5 x 7 months)	854	1,637
7	Actual realized ticket decline, FY 2019	13,202	
8	Estimated total percentage of ticket decline attributable to increased crossing guard shifts (line 6 / line 7)	6%	12%

⁶¹ From APD CAD data.

⁶² *Ibid.*

⁶³ See Figure 9.

Figure 24 below estimates the total amount of time PEOs had to take in FY 2019 to respond to an increase number of C.C.C. work requests which would roughly equal the time required to write between 1% and 2% of the total year-on-year ticket decline.

Figure 24: Estimated Impact on Ticketing, C.C.C. Requests

	Item	Least Productive PEO, FY 2019	Most Productive PEO, FY 2019
<i>Time Estimate</i>			
1	Average number of increased C.C.C. investigations per month ⁶⁴	17	
2	Estimated average C.C.C investigation time (minutes) ⁶⁵	37	
3	Total hours required for increased number of C.C.C. investigations per month ((Line 1 x line 2) / 60)	10.5	
4	Total average number of PEO working days per month required to cover C.C.C. investigations (Line 3 / 8 hours)	1.3	
<i>Impact Assessment of Time Required to Conduct Extra Call Click Connect Complaints</i>			
5	Average number of tickets issued by a PEO per productive day, FY 2019 ⁶⁶	12	23
6	Estimated impact of additional crossing guard shifts, July - March FY 2019 (Line 4 x Line 5 x 9 months)	140.40	269.10
7	Actual realized ticket decline, FY 2019	13,202	
8	Estimated total percentage of ticket decline attributable to increased crossing guard shifts (line 6 / line 7)	1%	2%

⁶⁴ Service Request data from CityWorks. This figure calculated as the total increased number of FY 2018 requests from July to March of FY 2019 (608), minus the total number of request in the same months in FY 2018 (451), divided by 9.

⁶⁵ Average actual time taken to respond to dispatch calls, APD CAD data. (See Finding 4 for more details).

⁶⁶ See Figure 9.

Appendix E: Ticketing Data

Figure 25 show the trend in the number and type of parking tickets issued by the Parking Enforcement Unit from FY 2017 – FY 2019.

Figure 25: Ticket Type and Percent Change from Previous Year July -March (FY 2017 – 2019)

	FY 2017	FY 2018		FY 2019	
Parking contrary to directions of official sign	15,532	14,201	-8.57%	11,945	-15.89%
Misuse of meter	10,126	13,241	30.76%	9,715	-26.63%
Parking without display of current state inspection sticker	6,070	5,991	-1.30%	4,766	-20.45%
Parking illegally in permit parking district	4,239	6,809	60.63%	4,243	-37.69%
Parking without display of current state license plate	6,158	4,560	-25.95%	3,811	-16.43%
Fail to display city tag/county tag	3,438	2,779	-19.17%	1,996	-28.18%
Expiration of time on parking meter	819	1,548	89.01%	1,106	-28.55%
Blocking or obstructing fire lane or hydrant	1,532	1,408	-8.09%	1,011	-28.20%
Parking in loading zones	899	1,037	15.35%	667	-35.68%
Location of parked vehicle	363	534	47.11%	524	-1.87%
Enforcement of NOVA local motor vehicle license compact	231	624	170.13%	456	-26.92%
Parking contrary to temporary official sign	658	551	-16.26%	369	-33.03%
Parking prohibited in HOV lanes	602	472	-21.59%	329	-30.30%
Parking in bus stops	179	245	36.87%	247	0.82%
Parking over 72 hours	156	145	-7.05%	233	60.69%
Too close to corner	303	295	-2.64%	219	-25.76%
Commercial vehicles or trucks parked in residential districts	370	282	-23.78%	202	-28.37%
Parking in space reserved for disabled	179	153	-14.53%	141	-7.84%
Block or parked in private driveway	175	140	-20.00%	87	-37.86%
Obstructing crossing	106	110	3.77%	80	-27.27%
Stopping to obstruct traffic	43	51	18.60%	47	-7.84%
Exceeding time limit on parking meter	44	57	29.55%	28	-50.88%
Double parking	30	79	163.33%	20	-74.68%
Trailers & recreational vehicles park in residential area	41	28	-31.71%	27	-3.57%
Parking in Alleys or courts	11	38	245.45%	9	-76.32%
Park across in parking space Lines	6	8	33.33%	4	-50.00%

	FY 2017	FY 2018		FY 2019	
Stopping contrary to directions of police officer		33		2	-93.94%
Location other than space for sight-seeing bus	3	2	-33.33%	3	50.00%
Angle parking	8	26	225.00%	1	-96.15%
Depositing coin in meter to extend time	7	1	-85.71%	1	0.00%
Private property, park on				1	
Sight-seeing bus park in non-designated space	3	3	0.00%	1	-66.67%
Sightseeing bus overtime use of designated space	3	1	-66.67%	1	0.00%
Interfering with enforcement of chapter				1	
Use of parking spaces designated for use by sight-seeing buses by other vehicles		1		1	0.00%
Right to parking space	1				
Failure to display front license plates		1			
Removal of chalk marks	3	2	-33.33%		

Appendix F: Scope of Work

City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 26, 2019

FROM: ~~TO:~~ MARK B. JINKS, CITY MANAGER

TO: ~~THROUGH:~~ GREG USEEM, CHIEF PERFORMANCE OFFICER

FROM: BETH HALAYKO, PERFORMANCE ANALYST
JOHN PIERCE, PERFORMANCE ANALYST

SUBJECT: SCOPE OF WORK FOR TICKET REVENUE ANALYSIS

A part of the FY2020 budget process, Alexandria City Council has asked the City Manager and Chief of Police to explore a recent drop in revenue produced by parking enforcement in the City and elaborate on the potential reasons for this decline.

Per your request, the Office of Performance and Accountability (OPA) in collaboration with the Alexandria Police Department (APD), the Department of Transportation and Environmental Services (TES), and the Office of Management and Budget (OMB) will analyze the issue: **why has parking ticket revenue declined?**

This analysis is to be conducted on an expedited timeline and is a descriptive analysis designed to identify potential contributing factors to the decline in revenue. In order to address this question, OPA will investigate the following areas:

1. **Parking Ticket Revenue** including potential changes in fees, collection rates, ticketing rates.
2. **Interviews** with APD parking enforcement management, including the parking enforcement team, parking enforcement supervisors, and sworn APD management. Interview other important stakeholders such as T&ES Operations staff, and Finance Department staff who collect revenue.
3. Analyzing the **availability of staff** to conduct parking enforcement activities. This includes changes in *staffing levels* (authorized, turnover, filled positions, vacancies, etc.), changes in how parking enforcement *staff are utilized* (time spent on and type of assignments including assignment to other duties like school crossing guard) and changes in how often police and parking enforcement officers engage in parking enforcement activity.

4. Review changes to parking enforcement's **workload**. This includes: the number of tickets written over time, the number and types of tickets written, the intersection between staff levels and workload (i.e. tickets per officer), calls for service (911 and Call.Click.Connect-including parking complaints to investigate), and reviewing the impact of the change from Pango to ParkMobile. This will help OPA to understand how workload changes may have affected revenue trends.
5. Conduct a limited **parking demand** analysis, using factors including parking meter revenue, City garage occupancy rates and **parking zone changes**.

Given the limited scope and time of this project, it will not include the following:

- Pay and benefit analysis for parking enforcement officers
- Workload distribution for parking enforcement officers
- Program evaluation
- Process analysis
- Evaluation of the overall City parking philosophy and strategy
- Optimization of officer locations and patrol zones
- Recommendations for next steps

Risks

Known risks to this project are:

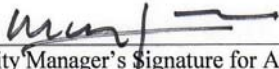
- Data availability
- Data quality
- APD, TES, OMB, and other key department staff time availability for participating and assistance

Timeline

It is estimated that this project will require six weeks to complete. This may need to be adjusted as additional information is acquired (such as data availability).

Stage	Description	OPA	Dept.	CMO	Timing
1. Data collection	Collect data from Duncan, Cale, Parkmobile, Gtechna, Munis, Call.Click.Connect, PEO daily assignment sheet, CAD/RMS, and other systems as required	R/A	R/I		2 weeks
2. Analysis, draft report	OPA staff analyzes collected data, visualizes and describes trends, and drafts a report for departmental review	R/A			2 weeks
3. Draft report reviewed by stakeholders	APD, T&ES, OMB, and other relevant departments review	A	R		1 week
4. Present to City Manager, determine next steps		R/A	C	R/A	1 week

R=responsible, A=accountable, C=consulted, I=informed


City Manager's Signature for Approval

4-30-19
Date

CC:

Emily Baker, Deputy City Manager
Debra Collins, Deputy City Manager
Laura Triggs, Deputy City Manager
Michael L. Brown, Police Chief
Yon Lambert, Director, T&ES
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