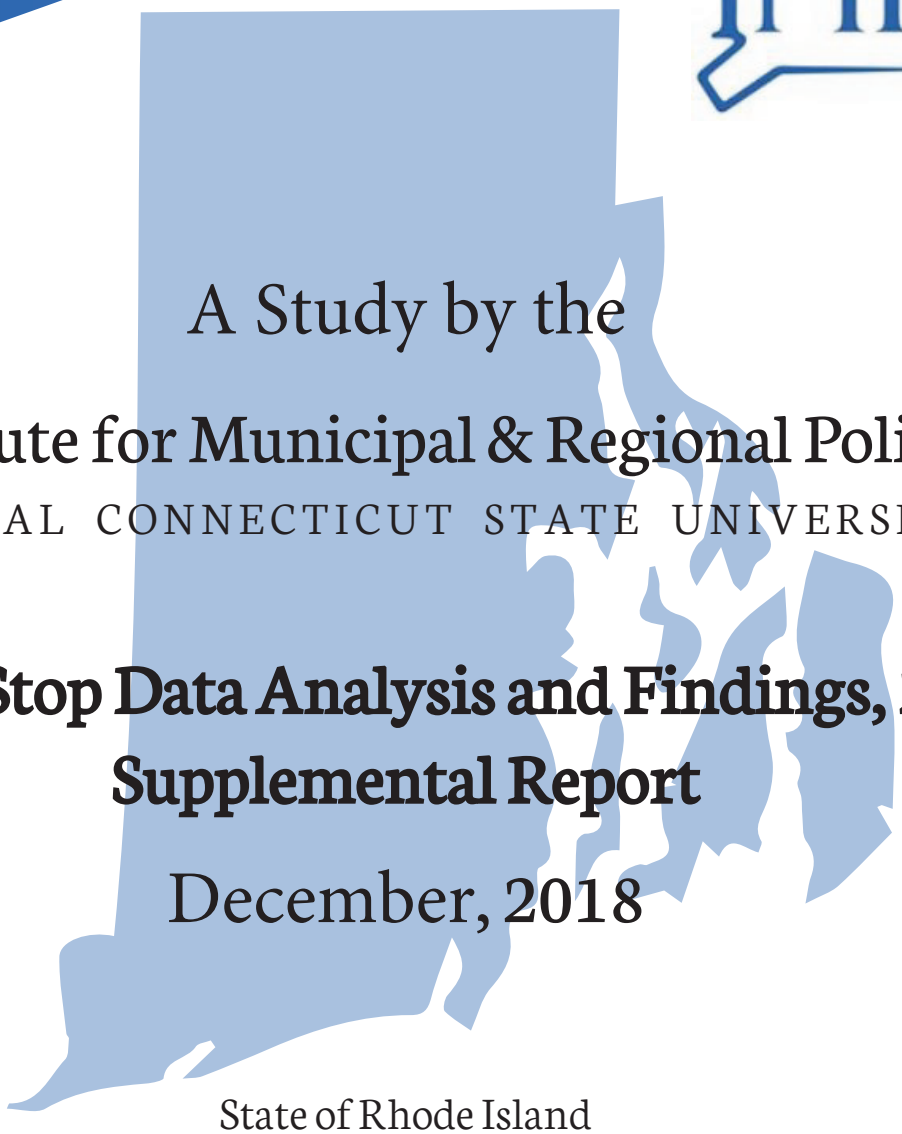

A Study by the

Institute for Municipal & Regional Policy

CENTRAL CONNECTICUT STATE UNIVERSITY

Traffic Stop Data Analysis and Findings, 2016
Supplemental Report

December, 2018

State of Rhode Island
Comprehensive Police-Community Relationship Act of 2015 (CCPRA)

Disclaimer

The Institute for Municipal and Regional Policy (IMRP) at Central Connecticut State University (CCSU) is the author of this report. The representations, opinions, findings, and/or conclusions contained in this report belong solely and exclusively to the IMRP. They do not in any way reflect the opinions or views of the Rhode Island Department of Transportation.

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INTRODUCTION

On July 10, 2015 Governor Gina Raimondo signed House Bill, 2015-H 5819 Sub A, and Senate Bill, 2015-S 669 as Amended into law (R.I. Gen. Laws § 31-21.2-1 et seq.) The law, also known as the Comprehensive Police-Community Relationship Act of 2015 (CCPRA) "honors the community's desire for just stop and search procedures, while permitting law enforcement to maintain public safety and implement best practices."[1] CCPRA requires Rhode Island police departments to collect and report information on all traffic stops. Traffic stop data collection is completed for each routine traffic stop. The officer, directly following the stop, typically collects the information electronically. There are a total of sixteen data elements collected which gather information on the driver (race, ethnicity, age, gender) and the traffic stop (time of day, result of stop, search, etc.). Data is then sent to the Rhode Island Department of Transportation (RIDOT) where, on a quarterly basis, a summary report of the monthly data provided by each department and the state police is published.

One component of CCPRA requires the Rhode Island department of transportation to "conduct a study of routine traffic stops by the Rhode Island state police and each municipal police department in order to determine whether racial disparities in traffic stops exist, and to determine whether searches of vehicles and motorists are being conducted in a disparate manner." In April 2018, the IMRP released the first statewide *Traffic Stop Data Analysis and Findings, 2016* report which analyzed stops between January 1, 2016 and December 31, 2016. This analysis is considered one of the most comprehensive analyses done in the country.

The report represented the application of a series of well-respected statistical techniques and the development of several useful descriptive statistics that helped to better contextualize those findings. The first technique applied a methodology known as the "Solar Visibility Test." The "Solar Visibility Test" is a statistical technique that was developed by Jeffery Grogger and Greg Ridgeway (2006) and published in the *Journal of the American Statistical Association*. The test examines a restricted sample of stops occurring during the "intertwilight window" to assess relative differences in the ratio of minority to non-minority stops that occur in daylight as compared to darkness. The underlying assumption is that if police officers wished to profile motorists, they would be more likely to do so during daylight hours when race and ethnicity are more easily discernible. The analysis utilizing this statistical measure is considered to be the most rigorous and broadly applicable of all the tests presented in our analysis.

A second statistical technique used was the synthetic control analysis that has the same intuitive appeal as traditional population-based benchmarks but remains grounded in rigorous statistical theory. A synthetic control is a unique benchmark constructed for each individual department using various stop-specific and town-level demographic characteristics as captured through inverse propensity score weighting. The synthetic control is then used to assess the effect of treatment on an outcome variable(s). In the present context, treatment is defined as a traffic stop made by a specific municipal police department and the outcome variable(s) indicates whether a motorist is a racial or ethnic minority.

In addition to the "Solar Visibility" test and Synthetic Control analysis researchers also used three measures that are descriptive in nature and compare department-level data to three benchmarks

[1] http://www.dot.ri.gov/community/CCPRA/index.php

(statewide average, estimated commuter driving populations, and resident population). These methods are referred to as population benchmarks and are commonly used to evaluate racial disparities in police data across the country. The statewide average comparison provides a simple and effective way to establish a baseline for all departments from which the relative differences between department stop numbers and the average for the state are compared. A comparison to the statewide average is presented alongside the context necessary to understand differences between local jurisdictions. Next, researchers adjust "static" residential census data to approximate the estimated driving demographics in a particular jurisdiction. Residential census data can be modified to create a reasonable estimate of the possible presence of many nonresidents likely to be driving in a given community because they work there and live elsewhere. This estimate is a composition of the driving population during typical commuting hours based on data provided by the U.S. Census Bureau. The final population benchmark comparison limits the analysis to stops involving only residents of the community and compares them to the community demographics based on the 2010 decennial census for residents age 16 and over. Although any one of these benchmarks cannot provide by itself a rigorous enough analysis to draw conclusions regarding racial disparities, if taken together with the more rigorous statistical methods they do serve as a useful tool.

Lastly, the report also assessed post-stop behavior, particularly the incidence of vehicular searches, by applying two estimation strategies. This measure illustrates the application of an analysis of hit rates using the classic approach developed by Knowles, Persico, and Todd (2001). Although some criticism has risen concerning the technique, it contributes to an understanding of post-stop police behavior in Connecticut.

The *Traffic Stop Data Analysis and Findings, 2016* report found that statewide a total of 11.4 percent of motorists stopped during the analysis period were observed to be black while 13.0 percent of stops were Hispanic motorists. The results from the Solar Visibility analysis indicate that stopped motorists were more likely to be minorities during daylight relative to darkness suggesting the existing of a racial or ethnic disparity in terms of the treatment of minority motorists relative to white motorists. The statewide results from the Solar Visibility analysis were found to be robust to the addition of a variety of controls. The level of statistical significance remained relatively consistent when the sample is reduced to only moving violations. It is important to note that it is impossible to clearly link these observed disparities to racial profiling as they may be driven by any combination of policing policy, heterogeneous enforcement patterns, or individual officer behavior. The results from the post-stop analysis confirm that the statewide disparity carries through to post-stop behavior across all racial and ethnic groups. In aggregate, Rhode Island police departments exhibit a tendency to be less successful in motorist searches across all minority groups.

In addition to the state level results, the 2016 statewide traffic stop data analysis was utilized as a screening tool by which researchers, law enforcement administrators, community members and other appropriate stakeholders focus resources on those departments displaying the greatest level of disparities in their respective stop data. A total of four municipal police departments were identified as having a statistically significant disparity in the conditional probability of a minority motorist being stopped in each respective jurisdiction. As noted in the report, these four municipal departments were identified across multiple statistical and descriptive tests. Although it is impossible to draw any direct inference about racial bias itself, the findings present compelling statistical evidence that warranted further investigation. The agencies identified were: **Cranston, Narragansett, North Smithfield, and Providence.**

The researchers wanted to better understand if the statistical disparities identified in the department level analysis could be driven by specific department-wide practices. Therefore, following the release of the 2016 analysis, the IMRP began to further analyze the identified department's data through a follow-up analysis. Our approach included further statistical and descriptive analysis along with an on-going dialogue with each department. The follow-up analysis included different approaches and methodologies from the initial report. By conducting additional in-depth analyses on the departments identified through the screening process, the public can have a better understanding as to why and how disparities exist. This transparency is intended to assist in achieving the goal of increasing trust between the public and law enforcement. The information presented in the subsequent sections is essentially a series of follow-up reports, one conducted for each department listed above. Each of these reports outlines additional descriptive measures that were applied to department-level data for the four municipal departments.

The Rhode Island State Police (RISP) Hope Valley barracks was also identified with a statistically significant in the rate that both black and Hispanic motorists were stopped during daylight relative to darkness in the Solar Visibility analysis. These results were statistically significant at a level greater than 95%. One of the criteria for identifying a department for further follow-up analysis was if the agency had a statistically significant disparity (above 95%) in the solar visibility analysis. However, upon further review of the 2016 data it was determined that the disparity was caused by stops that occurred outside the boundaries of the barracks. When an officer who is assigned to the Hope Valley Barracks conducts a stop in another patrol area it was reported as a stop conducted within the Hope Valley patrol area. There were 9,973 stops reported to the Hope Valley barracks. Of the 9,973 stops, only 6,706 stops occurred within the boundaries of the Hope Valley barracks. The other 3,267 stops were identified as occurring in the Chepachet barracks (251 stops), Lincoln barracks (1,839 stops), Portsmouth barracks (90 stops), or Wickford barracks (1,087 stops). The significant number of stops reported to the Hope Valley barracks dataset, but which occurred in Lincoln and Wickford, had a large impact on the results of the Solar Visibility analysis. When the Solar Visibility analysis was re-run with consideration made for the location of the stop, the results lost statistical significance. Therefore, Hope Valley no longer met the criteria for identification for a follow-up analysis.

I: MUNICIPAL POLICE DEPARTMENT ENHANCED DESCRIPTIVE ANALYSIS

The goal of an enhanced analysis in this report is to better understand the reasons for racial and ethnic disparities in traffic stop data. Disparities can be the result of a variety of factors that need to be further explored. In this section of the report we take a deeper look at the identified disparities in traffic enforcement. The nature of policing differs from one community to another based on a variety of unique factors. Police administrators must deal with a variety of crime and disorder problems. Traffic stop disparities can be influenced by factors such as the location of accidents, high call for service volume areas, high crime rate areas, and areas with major traffic generators such as shopping and entertainment districts, to name a few. Police administrators make decisions about how to effectively deploy police resources based on the needs of the community.

In order to understand the factors that might be contributing to traffic enforcement decisions, we first wanted to better understand where traffic enforcement occurs in a community. The best way to complete this task is to review reported traffic stop location information for each identified community. Police officers report the location of a traffic stop in a variety of ways. In some cases, the officer reported a descriptive location such as the number and street or street and nearest cross street. In other cases, the officer reported the patrol district where the stop occurred. The project staff worked with each of the four municipal police departments to identify the stop location data and the best format it was available in.

Cranston, North Smithfield and Providence officers recorded the location of a traffic stop by patrol area. Cranston is divided into 12 patrol areas, and North Smithfield and Providence are both divided into nine patrol areas. Although we were unable to determine the specific street location of each stop in these departments, the patrol areas provide us with enough information to assess how neighborhoods change within each jurisdiction. The fourth department, Narragansett, provided detailed location descriptions that allowed accurate mapping of 88% of their stops. This allowed us to conduct a census tract-based analysis as well as a descriptive analysis of major corridors and roadways.

Each community is broken up into census tracts to help understand the different makeup of a community. According to the United States Census Bureau, a census tract is “a small, relatively permanent statistical subdivision of a county or equivalent entity that are updated by local participants prior to each decennial census as part of the Census Bureau’s Participant Statistical Areas Program.” Census tract boundaries generally follow visible and identifiable features. Also, census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of about 4,000 people. Census tracts are each identified by a number of up to four digits.

Researchers have the ability to better understand the demographics of a subsection of a community by breaking down traffic stops into census tracts. A census tract analysis not only provides a better understanding of population demographics, but also allows researchers to focus on the unique attributes of a subsection of a community such as major traffic generators, accident rates, local crime problems, and calls for service. Neighborhoods can vary greatly within a community and a more detailed analysis will help to better understand the information presented in the initial analysis. In Narragansett we were able to conduct a census-based analysis due to the larger percentage of stops

that could be mapped. In Providence, the department provided us with the demographic makeup of each patrol district. The boundaries that make up each patrol district closely follow the boundaries used by the U.S. Census Bureau to divide Providence into census tracts. Finally in Cranston, and North Smithfield, we worked, to the best of our ability, to overlay census tracts with patrol areas.

Although analyzing traffic stops by census tract is the preferred method, analyzing traffic stops by patrol area or corridor was also an effective approach. Presented below are our findings from the department level descriptive analysis for each of the four identified departments.

I.A: CRANSTON FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the 2016 Traffic Stop Data Analysis and Findings report conducted by the Institute for Municipal and Regional Policy at Central Connecticut State University. This analysis continues the work of the Comprehensive Police-Community Relationship Act of 2015 study of traffic stops conducted in 2016. This follow-up report focuses on data reported for stops conducted from January 1, 2016 through December 31, 2016. Table 1.0 below is a summary of racial data for reported traffic stops in Cranston during the study year.

Table 1.0: Cranston Traffic Stops – 2016

Race/Ethnicity	Traffic Stops January 1, 2016 – December 31, 2016	
White	11,923	61.1%
Black	2,667	13.7%
Asian	777	3.9%
Native American	38	0.2%
Hispanic	4,124	21.1%
Total	**19,529**	

Overview of the Traffic Stop Analysis and Findings, 2016 Report

The 2016 Traffic Stop Analysis report indicated that for the January 1, 2016 – December 31, 2016 study period the Cranston Police Department made 19,529 traffic stops. Of these, 38.9% were minority stops (21.1% Hispanic and 13.7% black). The Solar Visibility analysis indicated a statistically significant disparity in the rate that both black and Hispanic motorists were stopped during daylight relative to darkness. Within the inter-twilight window, the odds that a stopped motorist was black increased by 1.24, while the odds that a stopped motorist was Hispanic increased by 1.31 during daylight. These results were statistically significant at the 95% level and robust to the inclusion of a variety of controls, officer fixed-effects, and a restricted sample of moving violations. Although certain assumptions have been made in the design of each methodology, it is reasonable to conclude that departments with consistent data disparities separating them from the majority of other departments should be subject to further review and analysis with respect to the factors that may have caused these differences.

Descriptive Analysis of the 2016 Traffic Stop Data

The racial and ethnic disparities in the Cranston Police Department data were studied using a more detailed review of traffic enforcement during the analysis period. Part of the analysis involved reviewing the detailed location descriptions provided by the department and any possible enhancements. Although we are unable to determine the specific street location of each stop, stops reported by patrol districts provide us with enough information to assess how neighborhoods change within the city. Cranston officers record the location of a traffic stop in two ways: (1) the patrol "beat" and (2) the patrol "zone." The city is divided into 12 patrol beats and within those beats, there are 61 patrol zones. Deployment decisions are made based on the needs of each patrol area[2]. According to the department, during some shifts officers are required to cover multiple patrol areas depending on

[2] Police deployment decisions are typically determined based on factors such as crime, volume of calls for service, accidents, and traffic volume.

the availability of police personnel. Additionally, patrol beats 1, 2, and 3 present certain challenges for the department with respect to patrol coverage due to the geography of the city.

According to the 2010 census, Cranston is a city with approximately 66,121 residents over the age of 16. Approximately 20% of the driving age population in Cranston is identified as a minority. Table 2.0 outlines the basic demographic information for Cranston residents over age 16.

Table 2.0: Cranston Population

Race/Ethnicity	16+ Population Total	% Population Total
White Non-Hispanic	52,718	79.7%
Black Non-Hispanic	3,074	4.7%
AsPac Non-Hispanic	3,171	4.8%
Hispanic	6,085	9.2%
Other	1,074	1.6%
Total	**66,121**	

Cranston is the second largest city in the state and is located in Providence County. It is approximately 28 square miles in area and is located just south of Providence. There is 3.5 miles of shoreline on the Providence River, which leads to Narragansett Bay. Five other municipalities border Cranston: the city of Warwick and the town of West Warwick to its south, the town of Scituate to its west, and the city of Providence and the town of Johnston to its north. Johnston, Scituate, West Warwick, and Warwick are all predominantly white demographically, with an average white driving age population of 93% (compared to Cranston's white driving age population of 79.7%). Providence has a significantly more diverse population with only a 43% white driving age population. Of the drivers stopped in Cranston, only 27% were residents of the town. Therefore, the town's traffic stop demographics are significantly affected by drivers coming from other communities.

A number of major roadways and highway corridors run through Cranston and impact traffic enforcement. Those roadways include Interstate 95 (I-95), Interstate 295 (I-295), R.I. 10 (Huntington Expressway), R.I. 2 (Reservoir Avenue and New London Avenue), R.I. 37 (Lincoln Avenue Freeway) and U.S. Route 1. Many of these corridors act as major arteries within Cranston connecting Providence and Warwick. I-95 runs along the border of Cranston and Warwick in the southeast corner of the city. It crosses into Cranston from Warwick just north of where it crosses the Pawtuxet River and continues to the Providence border north of exit 16. I-295 runs through the center of Cranston from the West Warwick and Warwick border north to the border of Johnston. Although there is a large land area to the west of I-295, which runs north-south through the middle of Cranston, most of Cranston's population (86%) lives to the east of I-295.

R.I. Route 2 is a 36-mile state road that runs from U.S. Route 1 in Charlestown to U.S. Route 1 in Providence. The roadway runs for approximately 4.5 miles through Cranston, passing just north of the I-295 interchange and continues through central downtown Cranston. It has major interchanges with Route 37 in the south and Route 10 in the northeast just before it crosses into Providence. Route 2 is a major commercial corridor in both Warwick and Cranston.

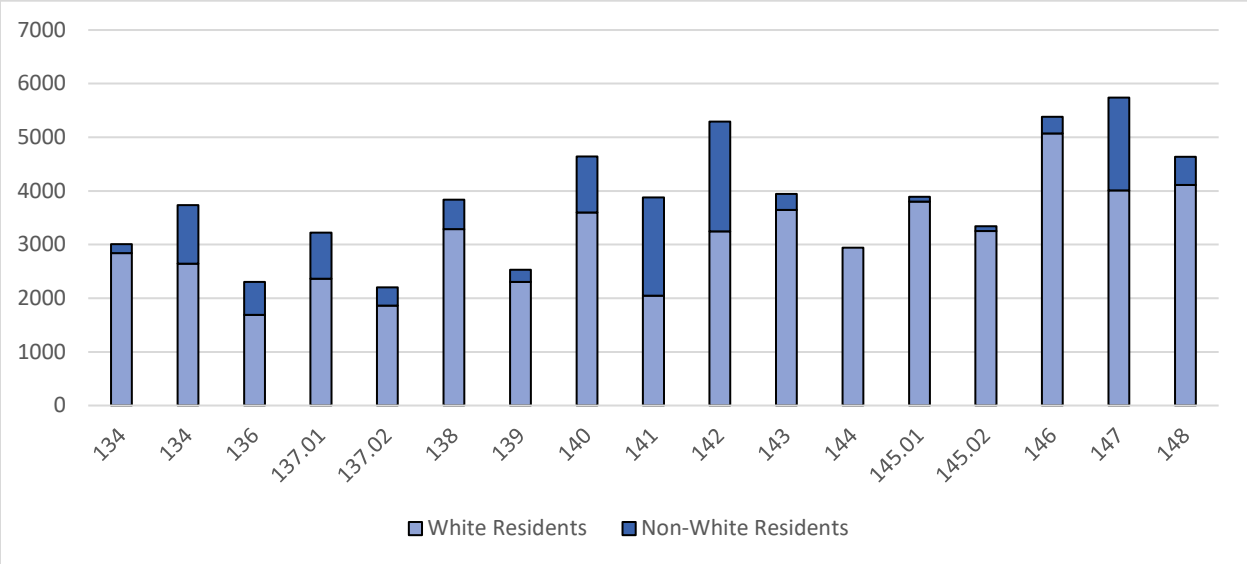
The Huntington Expressway (also known as Route 10) begins at the interchange with Park Avenue (Route 12) on the Cranston-Providence border. The Expressway then heads north through Providence, turning west before crossing U.S. Route 1. The Expressway then crosses I-95 at the exit

16 interchange and heads northwest where it intersects with Route 2 after crossing back into Providence. After the Route 2 interchange, the Expressway crosses back into Cranston and runs west along the city line before finally crossing back into Providence just after Cranston Street.

Finally, R.I. Route 37 (also known as the Lincoln Avenue Freeway) is a 3.5-mile state highway that serves the cities of Cranston and Warwick. The highway links the T.F. Green Airport in Warwick to I-295. Route 37 has three major interchanges starting with I-295 in Cranston, Route 2 in Cranston, and I-95 in Warwick. Route 37 serves as a major east-west freeway in the Providence metropolitan area as well as a route to the airport.

Although we do not specifically conduct a census tract-based analysis in this report, it is still helpful to understand the racial make-up of different sections of the city, as evidenced by the census tract data. The U.S. Census Bureau divides Cranston into 17 census tracts. The map in Appendix Figure A.1 outlines the boundaries of the Cranston census tracts, which will be referred to throughout this report. The resident driving age population in each census tract varies from about 2,500 to about 6,000 people, with the largest concentration (9% of the total population) in census tract 147. Tract 147 borders the western side of Providence and has one of the largest percentages of minority residents at 30%. Tracts 141 and 142 have the largest proportion of minority driving age residents at 47.3% and 38.7% respectively. The two tracts are located at opposite ends of the city with tract 141 to the north bordering Providence along route 10 and tract 142 bordering Warwick on the south side of Cranston. Figure 1.1 shows the distribution for each census tract in terms of white and non-white driving age population.

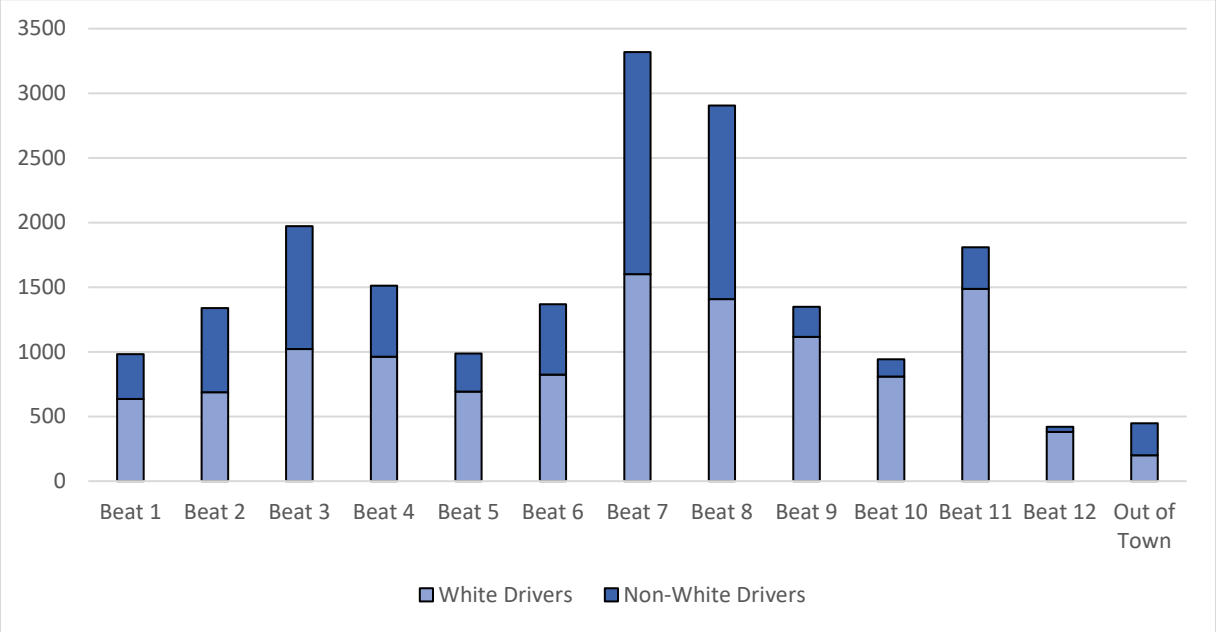
Figure 1.1: Age 16 and Older Resident Population by Census Tract



Officers reported the location of a traffic stop in one of 12 patrol beats. Figure 1.2 illustrates the volume of traffic enforcement that occurs in each of the 12 patrol beats. In particular, Beats 7 and 8 account for 32% of all traffic enforcement in the town. More specifically, they account for 43% of all minority driver stops but only 25% of white driver stops. Beat 7 coincides with most of census tract 141 and part of census tract 140. Beat 8 coincides with a small part of the western side of tract 141 and most of the residential portions of census tract 147.

There are four patrol beats that border Providence (Beats 2, 3, 7, and 8). These four patrol beats make up almost half of all stops in Cranston. Of all the minority drivers stopped in Cranston, 64% of them were stopped within these four patrol beats (63% of all black drivers, 65% of all Hispanic drivers, and 60% of all Asian drivers). In comparison, 40% of all the white drivers stopped in Cranston were stopped in these four beats.

Figure 1.2: Traffic Stops by Patrol Beat

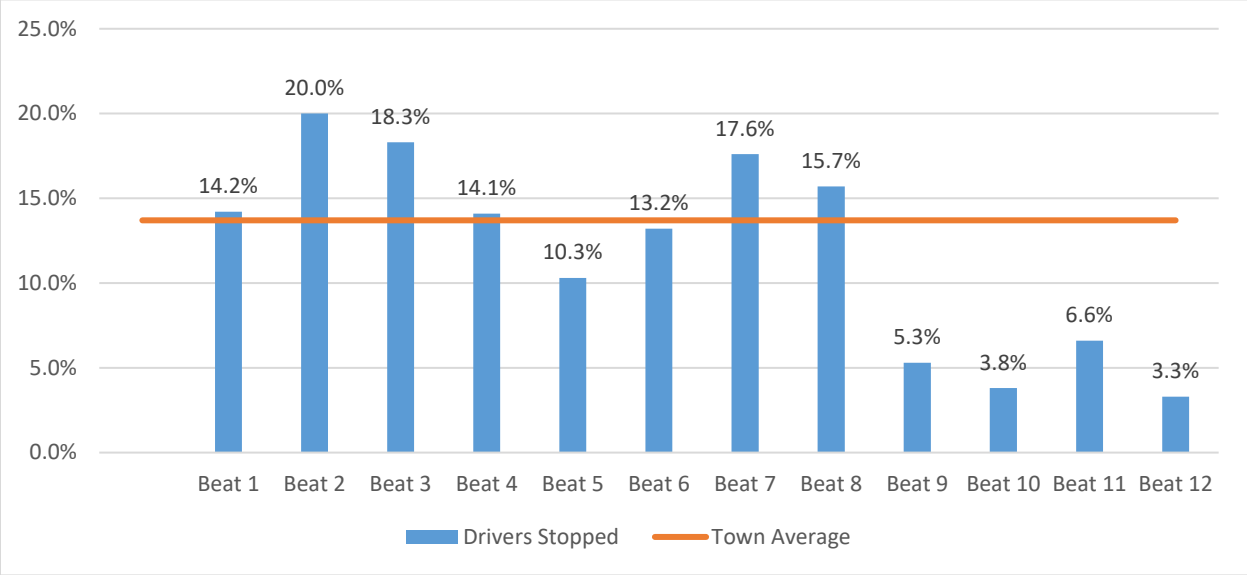


Traffic Stop Breakdown by Race/Ethnicity

In Cranston, 39% of all drivers stopped were minority drivers, classified as all non-white drivers, but predominantly black or Hispanic drivers with a small percentage of Asian drivers. Cranston's resident population age 16 and older is 20% minority but, on average, 72.8% of all the drivers stopped in Cranston were not residents. The actual percentage of non-residents stopped varies in different parts of the town from more than 80% in the most eastern section of the city (Beats 1 and 2) to under 60% non-residents in Beat 11, which is situated near the center of the city geographically. Thus the effect of non-resident drivers on the traffic stop demographics can vary from one area of the city to another.

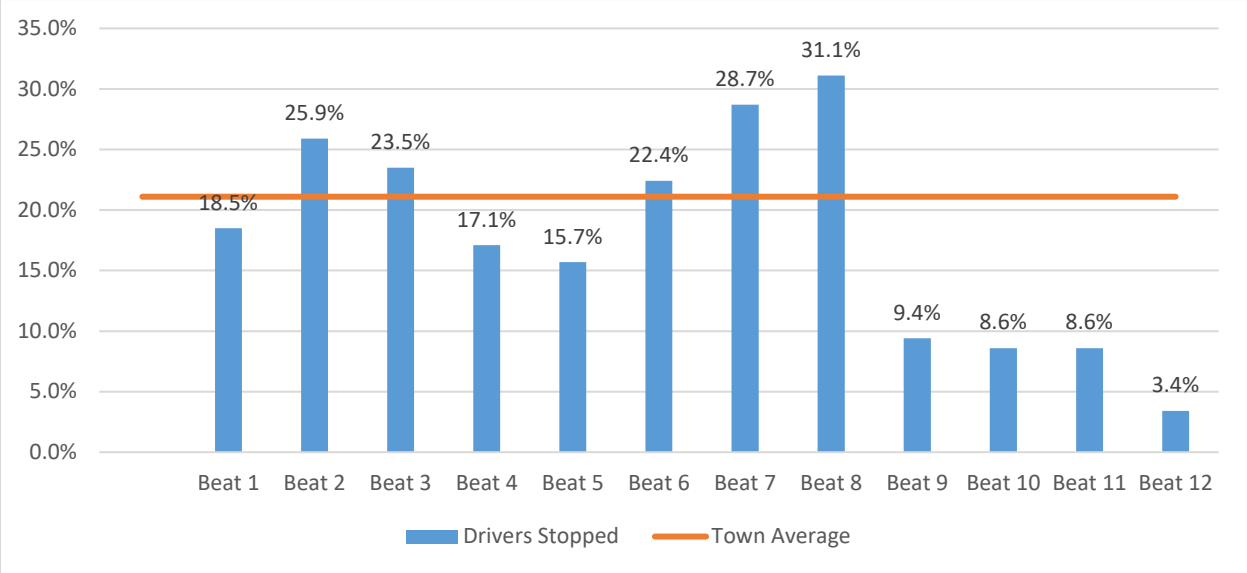
The overall percentage of Cranston traffic stops involving black drivers was 13.7%. The percentage of black drivers stopped exceeded the town wide average in half of the patrol beats (Beats 1, 2, 3, 4, 7, and 8), although the amount by which it exceeded the town average in Beats 1 and 4 was less than 0.5%. Patrol Beats 2, 3, 7, and 8 make up the border area between Cranston and Providence. Those same four patrol beats are where 63% of all black drivers were stopped. Of some note is the fact that 87% of all black drivers stopped in these four patrol beats were not residents of Cranston. Figure 2.1 shows the difference between the black drivers stopped by patrol beat and the town average.

Figure 2.1: Black Drivers Stopped Compared to Town Average



The overall percentage of traffic stops involving Hispanic drivers was 21%. The percentage of Hispanic drivers stopped exceeded the town average of 21% in five of the 12 patrol areas (Beats 2, 3, 6, 7, and 8.), although the percentage in patrol Beat 6 was only 1.3 percentage points above the average. The same four patrol beats that make up the border between Cranston and Providence also are where 65% of Hispanic drivers were stopped. As with black drivers, it is noteworthy that 84% of all Hispanic drivers stopped in these four patrol beats were not residents of Cranston. Figure 2.2 shows the difference between the Hispanic drivers stopped by patrol beat and the town average.

Figure 2.2: Hispanic Drivers Stopped Compared to Town Average



Cranston's traffic stop data appears to be strongly influenced by two factors: (1) a comparatively low white driving age resident population in the high enforcement patrol areas and an even lower white driving age population in the bordering neighborhoods of Providence and (2) a relatively large

proportion of non-Cranston residents who make up the majority of people stopped in these patrol areas.

The traffic stop data clearly indicates that the four patrol areas bordering Providence in the northeastern part of Cranston (Beats 2, 3, 7, and 8) have the largest impact on minority drivers being stopped. To better understand the localized population in these patrol areas, we determined that the same area is covered by approximately six census tracts (tracts 135, 136, 137.01, 140, 141, and 147). The average minority resident population in this localized geographic area is significantly higher than the average minority population in Cranston as a whole (30.4% compared to 18.3%). These same six census tracts is where 61% of all minority residents of Cranston live compared to where only 31% of its white residents live. Since this area is where almost half of all the traffic enforcement occurs, it is not surprising that stop rate for minority drivers is greater in these patrol areas than elsewhere in the town. In contrast, for example, Patrol Beat 11, which is located in the central portion of the city and accounts for 9.3% of all the traffic stops made, produced less than 18% minority drivers stopped. This patrol beat covers census tracts that have among the lowest proportions of non-white driving age residents and also has the smallest proportion of non-resident drivers stopped.

The data also indicate that these four patrol areas are largely influenced by out-of-town traffic. On average, 78% of all drivers stopped in the four high enforcement patrol areas were not residents of Cranston. More specifically, non-resident minority drivers were stopped in these areas at a higher rate than non-resident white drivers (83% of minority drivers stopped were non-residents compared to 72% of white drivers.) Due to the proximity of these patrol areas to the Providence border, we also looked at the localized resident population in the census tracts within Providence that directly share a border with Cranston. Seven census tracts in Providence (tracts 1.01, 1.02, 2, 14, 15, 16, and 17) share a border with Cranston. The average minority resident population in these seven census tracts is 79%. The localized minority resident population in these seven census tracts is greater than the minority resident population for Providence as a whole (79% compared to 62%).

In addition, Cranston police stopped 449 drivers outside the Cranston town border. The drivers stopped outside the town's border accounted for 2% of all stops and 52% were identified as black or Hispanic. Over 82% of the drivers stopped out-of-town were not Cranston residents. The most likely reason is that the violation was observed by the officer in Cranston, but the vehicle was pulled over after it crossed the city line. The majority of drivers stopped in Cranston were stopped in Patrol Beats 2, 3, 7, and 8, which reflects to a great degree the more frequent presence of police in these four areas. The percentage of minority drivers stopped out-of-town was consistent with the percentage of minority drivers stopped in these same patrol areas. Therefore, it is likely that a large percentage of drivers stopped out-of-town were identified with a violation in the high enforcement area and stopped across the border in the neighboring city of Providence. Unfortunately, due to the location description provided for each stop it is not possible to determine the exact location of the stop.

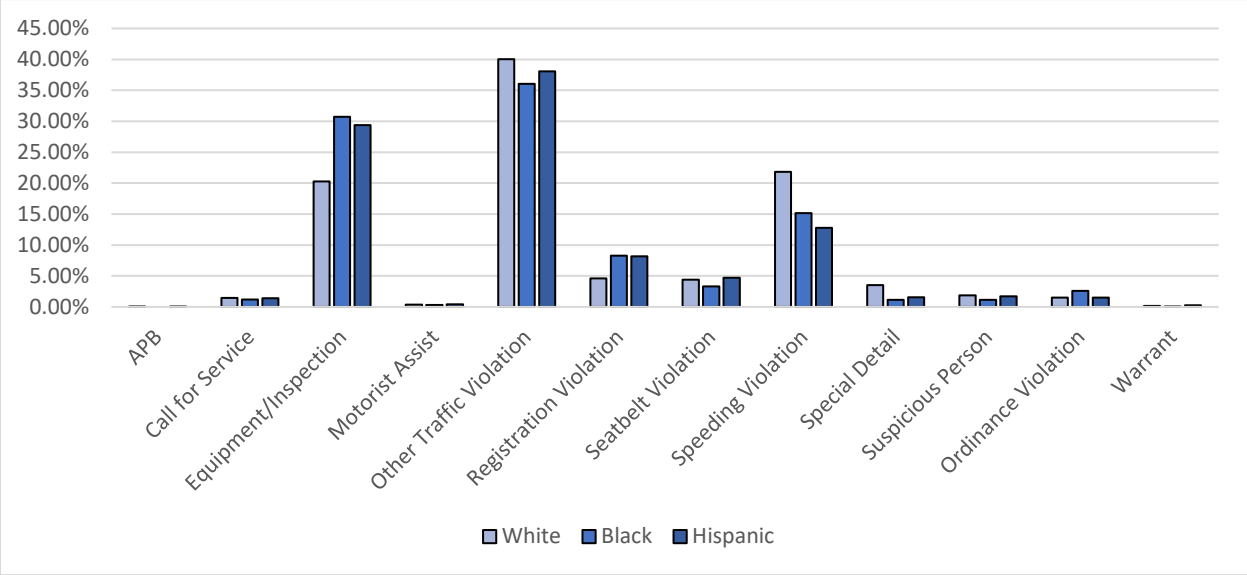
Post-Stop Outcome Review

Basis for Stops

The reasons police use to stop a motor vehicle can vary significantly from department to department. We reviewed the basis for the stop that Cranston officers reported as the reason for stopping motor vehicles. The three most common reasons for stopping a motorist in Cranston made up 82% of all the

stops. These reasons were stops made for "Other Traffic Violations"[3] (39%), equipment/inspection violations (24%), and speeding violations (19%). Figure 3.1 illustrates by race and ethnicity the reason officers cited to stop a motor vehicle.

Figure 3.1: Reasons for Traffic Stops



While white drivers were stopped more frequently than black or Hispanic drivers for driving violations such as speeding and other traffic violations as a percentage of their total stops, black and Hispanic drivers were stopped more frequently for equipment- and inspection-related violations than white drivers as a percentage of their total stops. Unfortunately, the way in which data is collected in Rhode Island does not allow a differentiation between equipment and inspection related stops, so these stops can't be separated from each other for analysis. There are a number of different violations that could be categorized as equipment violations, but the most common example is likely a stop made for defective lighting. On the other hand, an inspection violation would only occur if the vehicle was not in compliance with the Rhode Island safety inspection law. All vehicles registered in Rhode Island must have a valid Rhode Island inspection sticker. A vehicle safety and emissions test must be performed at least once every two years.

The data show that the frequency and location of where stops are made for equipment- or inspection-related reasons appear to have a lot to do with the overall racial and ethnic demographics of those stopped. When these types of stops are made more frequently in locations where there are higher concentrations of minority drivers, they tend to result in higher proportions of minority drivers being stopped than white drivers. However, in many places, the data also shows that when these same types of stops are made in areas with a higher concentration of white drivers, the stop demographics shift toward white drivers, suggesting that the likelihood of finding violators may be more dependent on location than on race.

[3] If a stop was made for a reason other than one of the 11 categories listed as the basis for the stop, it is recorded as "other traffic violation." Some examples of stops that might be recorded as "other traffic violation" include traffic light violations, stop sign violations, and turning or lane violations.

Of all the black driving age residents living in Cranston, 51% live in the six census tracts that make-up the high enforcement patrol area. These census tracts are also where 64% of all Hispanic driving age residents live. Just over 53% of equipment- or inspection-related stops (where officers exercise a higher degree of discretion than in stops for speeding or other hazardous driving behavior) were made in these patrol areas. The demographics for these stops were 31% Hispanic drivers, 21% black drivers, and 43% white drivers. Only 12% of the equipment- or inspection-related stops occurred in the patrol areas with the lowest percentage of minority residents (Patrol Beats 9, 10, and 11). For those stops, the demographics were 13% Hispanic drivers, 9.2% black drivers, and 74% white drivers.

The traffic stop information also indicates that speed-related motor vehicle enforcement tends to occur in areas with a higher concentration of white drivers. Officers often rely on enforcement techniques, like radar or a laser device, to make these stops. Although the data available in Rhode Island does not identify those speeding stops that were technology-based and those that were not, modern police practices generally tend to rely heavily on these technology-based techniques. The high enforcement patrol areas (Beats 2, 3, 7, and 8) where 53% of the equipment or inspection violation stops were made had only 37% of the overall speed-related traffic stops. The demographics for these stops were 23% Hispanic drivers, 16.2% black drivers, and 56% white drivers. In the patrol areas (Beats 9, 10, and 11) where only 12% of equipment- or inspection-related stops were made there were 28% of the speed-related traffic stops. The demographics were 6% Hispanic drivers, 5% black drivers, and 87% white drivers.

These patterns for both equipment- or inspection-related violation stops and speed-related violation stops seem to suggest that a stop location is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. In other words, if speed enforcement occurs more frequently in areas more likely to be traversed by white drivers, they are more likely to represent a higher rate in the stop demographics. Conversely, if equipment- or inspection-related enforcement occurs more frequently in areas more likely to be traversed by black or Hispanic drivers, they are more likely to be represented in the stop demographics at a higher rate. However, it would be inappropriate to conclude that white drivers are more likely to speed or minority drivers are more likely to have an equipment or inspection violation.

An interesting pattern emerges from a direct comparison of the stop demographics of the four patrol beats closest to Providence and other groups of patrol areas. Those four beats (2, 3, 7, and 8), produced 49% of all the stops made in Cranston. The driver demographics of those stops were 49.5% white, 17.5% black, 28% Hispanic, and 5.1% Asian and Indian American. Also, 53.3% of all the equipment- and inspection-related stops made in Cranston were made in those four beats, accounting for 26% of all the stops made. Non-resident drivers comprised 78% of all drivers stopped.

Beats 4, 5, and 6 comprise the patrol areas to the south and west of the four beats bordering Providence. These three beats produced 19.8% of all the Cranston stops, including 22.3% of all the equipment- or inspection-based stops. The driver demographics of those stopped in these three beats were 64% white drivers, 12.8% black drivers, 18.6% Hispanic drivers, and 4.5% Asian or Indian/Native American drivers. Non-resident drivers comprised 69% of all drivers stopped.

The remaining five patrol beats (1, 9, 10, 11, and 12) accounted for 28.2% of all the Cranston traffic stops. Except for Beat 1, these patrol areas are all located geographically the furthest away from the Providence border. Equipment- and inspection-related stops accounted for only 18.3% of the stops

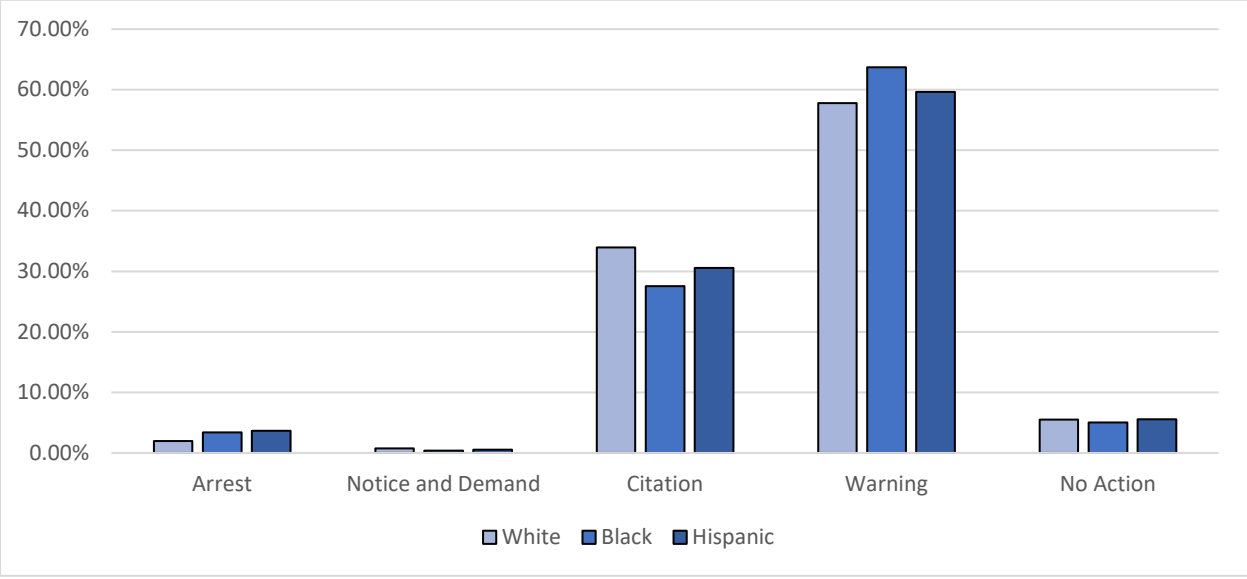
made in these five beats (21% of all the equipment-related stops made in Cranston) and only 65.5% of the stops involved drivers who were not residents of Cranston. The driver demographic characteristics of those stopped in these five patrol beats were 77.2% white drivers, 8.2% black drivers, 12.1% Hispanic drivers, and 2.6% Asian or Indian/Native American drivers.

What becomes clearer from these comparisons is that the demographic characteristics of those stopped changed significantly from those in the patrol beats closest to the Providence border compared to those further away. As you compare the changes in demographics between these three patrol district groups, white drivers comprised a significantly larger proportion of those stopped and all minority driver groups were a significantly smaller proportion of those stopped. Three factors appeared common to this pattern: (1) the distance away from the border with Providence, (2) the proportion of non-residents within the pool of drivers stopped (78% compared to 69% and 65.5%), and (3) the proportion of the overall number of equipment- and inspection-related stops made in each of the three groups of patrol areas (53.3% compared to 22.3% and 21.6%). As these three factors interact, they appear to shift driver demographics from heavily minority in the patrol areas closest to the Providence border to heavily non-minority further away from that border.

Outcome of Stops

The majority of motor vehicle stops in Cranston resulted in the driver receiving a warning (59%). Black and Hispanic drivers were slightly more likely to receive a warning as a percentage of their total stops. They were also slightly more likely to be arrested because of the stop, though the total number of arrests was small. Figure 3.2 shows the outcome of motor vehicle stops by race and ethnicity.

Figure 3.2: Outcome of Traffic Stop



Drivers were significantly more likely to receive a warning as a result of an equipment or inspection violation compared to all other violations. Of the drivers stopped for equipment- and inspection-related violations, 74% resulted in a warning whereas only 54% of stops for all other types of violations resulted in a warning. There were only 127 (0.7%) notice and demands that resulted from a traffic stop. These are typically given for non-moving violations, such as equipment violations, when

a vehicle has a defect that needs to be addressed. The notice provides the driver with five working days to fix the issue and have the vehicle inspected. Failure to correct the issue will result in a review by the traffic court. Of the 4,653 drivers stopped for an equipment or inspection violation, only 72 received a notice and demand. However, as we discussed earlier it is not possible to differentiate between equipment and inspection violations.

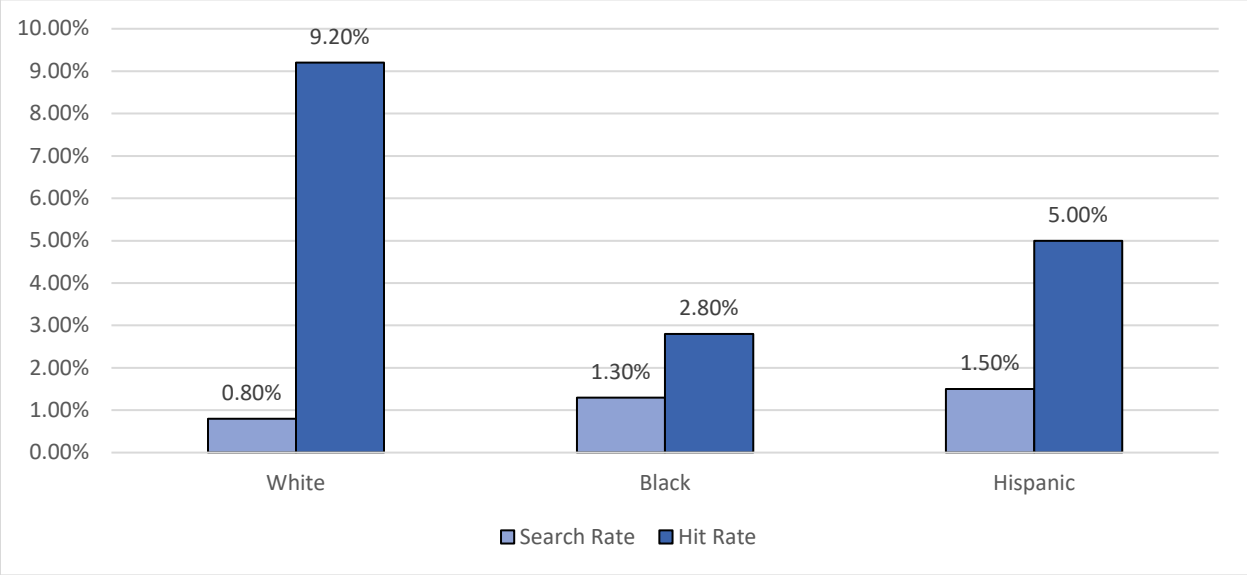
In Cranston, 491 of the stops made resulted in the arrest of either the driver or a passenger (2.5%). This was below the statewide average of 3% for stops resulting in an arrest. Of the 491 arrests, the driver of the vehicle was arrested in 457 cases and the passenger was arrested in 34 cases. The racial demographics of individuals arrested as a result of a traffic stop were 48% white, 18% black, and 30% Hispanic. When considered as a proportion of their total stops, black and Hispanic drivers were almost twice as likely to be arrested compared to white drivers (3.1% of all black drivers stopped and 3.3% of all Hispanic drivers stopped compared to 1.9% of all white drivers stopped). The high enforcement patrol areas (Beats 2, 3, 7, and 8) accounted for 59% of all arrests. In addition, the department reported 25 arrests that occurred outside the city boundaries.

Unfortunately, we are unable to determine the reason for the arrest, but can identify why the vehicle was initially stopped. Of the 491 reported arrests, the basis for stopping a vehicle was an "other traffic violation" (130 stops), equipment or inspection violation (109 stops), registration violation (96 stops), speeding violation (58 stops), call for service (43 stops), with the remaining arrests for some other reason (45 stops). Although the dataset doesn't allow researchers to determine the reason for the arrest, the assumption is that a more significant violation was identified.

Search Information

A review of department search information shows that 1% (206) of the drivers stopped in Cranston were subjected to a motor vehicle search. This rate of motor vehicle searches is lower than the state's 1.5% average. Black and Hispanic drivers were searched at a higher rate than white drivers were. Of reported searches, 64% were categorized as "frisk," 17% were incident to arrest, 10% were part of an inventory search, and nine were for some other reason. Contraband was reported found at a higher rate for white drivers. Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate may not reflect the actual number of instances an officer found contraband. Therefore, no conclusions should be drawn based on this summary information. Figure 3.3 illustrates the search rate and the rate at which contraband was found (the "hit rate").

Figure 3.3: Search and Hit Rate



Summary of Findings

The Cranston Police Department identified factors they believe contributed to the minority disparity identified in the initial analysis of traffic stops. In particular, the department identified areas with the highest call for service volume, the highest crime rates and the highest levels of traffic as some of the same areas with the highest levels of motor vehicle enforcement[4]. Our analysis of traffic stops by patrol area confirms that departmental resources are more heavily concentrated in four patrol districts in the northeastern part of Cranston bordering Providence. In these four patrol areas, Beats 2, 3, 7, and 8, almost half of all stops were made. Significantly more minority drivers stopped in Cranston (64%) were stopped in these four patrol districts compared to white drivers stopped in Cranston (40%). There is a comparatively low white residential population in the four high enforcement patrol areas and an even lower white residential population in the neighborhoods bordering Providence. Almost two-thirds of the minority residents of Cranston live in patrol areas 2, 3, 7, and 8, compared to only 31% of the town's white residents living there. Cranston's high stop rate for minority drivers is not surprising given the areas where the department engages in the majority of its traffic enforcement activity, i.e., areas with the highest populations of minority residents as well as areas that border high minority census tracts in neighboring Providence.

Cranston's traffic stop data also reflects a relatively large proportion of non-residents who make up the majority of people who were stopped. On average, 73% of the drivers stopped in Cranston were not residents, which influences the size of the disparities in many of the patrol areas to varying degrees. Non-resident drivers stopped were 44% minority compared to 27% of the residents stopped that were minority. The impact of non-residents was most pronounced in the four high enforcement patrol areas that border Providence. In these four patrol areas, over 78% of all drivers stopped were not residents. More specifically, non-resident minority drivers were stopped in these areas at a higher rate than non-resident white drivers (83% minority drivers stopped compared to 72% of white drivers.) The non-resident stop demographics in the high enforcement patrol areas is

[4] This observation was made based on a conversation with the department, but researchers were unable to specifically analyze calls for service, crime or accident data.

probably also affected by the resident populations in the border neighborhoods of Providence, where the population is significantly more diverse than the resident population in Cranston. It is evident that motor vehicle enforcement activity concentrated in the areas bordering Providence combined with the high rate of non-resident drivers stopped in those areas contributed significantly to the overall racial and ethnic disparity in Cranston's data.

Traffic Stop Outcomes

Stops for "other" traffic violations were the largest category of stops made in Cranston (39%). The next largest category of stops was for equipment- or inspection-related violations (24%), and the third stop category was for speeding violations (19%). As a percentage of their total stops, white drivers were more likely to be stopped for speeding and other traffic violations than were either black or Hispanic drivers. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration and equipment- or inspection-related violations than did white drivers. When these types of stops occur with greater frequency in areas with high minority populations than they do in areas where driving age populations are predominantly white, there is the potential for disparities to appear in the data even though violation rates for these offenses could be similar across racial categories.

In Cranston, when these equipment- or inspection-related stops were made in the four patrol districts (Beats 2, 3, 7, and 8) that were most impacted by non-resident minority motor vehicle stops and more heavily populated by black and Hispanic residents, they were more likely to be stopped for these violations. However, in other areas where these stops were made and the resident population was predominantly white, the stop demographics were a greater proportion of white drivers. This suggests that the frequency with which these enforcement choices occurred and, more importantly where they occurred, were more important to the overall stop demographics, particularly for black and Hispanic drivers, than racially inherent differences in the overall likelihood of violation.

It is also clear that the demographic characteristics of those stopped changed significantly from those in the patrol beats closest to the Providence border compared to those further away. Three factors appeared common to this pattern: (1) the distance away from the border with Providence, (2) the proportion of non-residents within the pool of drivers stopped, and (3) the proportion of the overall equipment- and inspection-related stops made in each of the three groups of patrol areas. As these three factors interact, they appear to be causing a shift in driver demographics from heavily minority in the patrol areas closest to the Providence border to heavily non-minority further away from that border.

Overall, 59% of all drivers stopped received a warning as a result of a traffic stop. Black and Hispanic drivers were marginally more likely to receive a warning as a result of a stop. Additionally, drivers were significantly more likely to receive a warning as a result of an equipment or inspection violation compared to all other violations. Of the drivers stopped for equipment or inspection violations, 74% resulted in a warning whereas 54% of all other stops resulted in a warning. Black and Hispanic drivers were also marginally more likely to be arrested as a percentage of their total stops. The racial demographics of the individuals arrested as a result of a traffic stop were 48% white, 18% black, and 30% Hispanic. The majority of arrests (60%) occurred in the four high enforcement patrol areas that border Providence. Unfortunately, it is not possible to determine the reason for the arrest, but the assumption is that the officer determined some additional reason beyond the reason for the stop that warranted making an arrest.

Cranston police searched the vehicles of 1% of drivers they stopped, which is considerably lower than the statewide average of 3.4%. Black and Hispanic drivers were searched at marginally higher rate than white drivers. Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate may not reflect the actual number of instances an officer found contraband. In addition, because the number of minority drivers searched was so small we caution against drawing any conclusions in this regard from the Cranston search data.

Conclusion

Taken as a whole, the Cranston traffic stop data reflects the influence of the four patrol districts in the northeastern area of Cranston. Reasons for the impact are that (1) relatively high levels of enforcement occur there, (2) the highest resident minority driving age populations live here, and (3) it is most likely relatively high proportions of non-resident minority drivers here because of the proximity to relatively high minority populations in the bordering city of Providence.

While white drivers are more likely to be stopped in Cranston than black or Hispanic drivers for speeding and other traffic violations, black and Hispanic drivers were more likely to be stopped for vehicle equipment or inspection violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made in high enforcement patrol areas, where minority drivers are more likely to be among the driving population.

Based on the overall follow-up analysis of the Cranston data, it is recommended that the department:

(1) review its traffic enforcement policies in Patrol Beats 2, 3, 7, and 8 in order to evaluate the extent to which they may have a disproportionate effect on black and Hispanic drivers and
(2) evaluate both the location and frequency of stops that involve equipment- or inspection-related motor vehicle violations, to better understand the impact they may be having on minority drivers.

Department Response

Below on page 19 is a response provided by Cranston Police Chief, Colonel Michael J. Winquist.

Allan Fung
Mayor

Colonel Michael J. Winquist
Chief of Police

"A Nationally Accredited Agency"

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Mr. Ken Barone
Project Manager
Institute for Municipal and Regional Policy
Central Connecticut State University
185 Main Street, Room 215
New Britain, Connecticut 06051

November 10, 2018

Dear Mr. Barone:

This letter is being provided in response to the follow-up report completed by Central Connecticut State University providing further analysis of the 2016 traffic stop data for the Cranston Police Department. I believe our recent discussion concerning the findings and recommendations contained in the follow-up report proved mutually beneficial. Thank you for providing me with the opportunity to offer commentary concerning the report and the recommendations that were made.

The Cranston Police Department and its members are dedicated to the stated goal of the Comprehensive Community-Police Relationship Act (CCPRA) of honoring "the community's desire for just stop and search procedures, permitting law enforcement to maintain public safety and implement best practices." We appreciate the cooperative process and open communication that has been facilitated by the Rhode Island Department of Transportation and Central Connecticut State University. We intend to review the recommendations made as part of the follow-up analysis of the 2016 Traffic Stop Data Analysis and Findings to ensure that we continue to practice fair and impartial policing while maintaining community safety.

The Cranston Police Department prides itself in providing exemplary police services to more than 80,000 residents, as well as the many citizens who work and visit our city. The Cranston Police Department

achieved and continues to maintain national and state accreditation to ensure our agency prescribes to "best practices" in law enforcement and are continually striving to enhance the services we provide. This endeavor requires providing ongoing training to all of the officers, which is facilitated through our Training Division on various topics including fair and impartial policing, as well as ethics. The Cranston Police Department has established policies that strictly prohibit the practice of bias-based policing. To ensure this policy is being followed, a comprehensive review of all traffic stops and searches related to race are reviewed by supervisory staff on a frequent basis. The results of this review, to include action taken, are reported to the Rhode Island Department of Transportation per the requirements of the CCPRA.

The Cranston Police Department values the relationships we have established with our community partners. This engagement is coordinated through the department's Office of Community Outreach. By being accessible and interactive with our citizens, we have been able to develop a trusting partnership which has resulted in a reduction in crime. We have also experienced a decrease in complaints made against our officers despite a continual increase in calls for service/community contacts. To best serve a community which continues to become more racially and ethnically diverse, we have intensified our efforts in recruiting more minority police applicants. As a result, the composition of our department continues to become more diverse and reflective of the community we serve.

Regarding the recommendations you provided in this follow-up report, we would like to share the following information:

(1) review its traffic enforcement policies in Patrol Beats 2, 3, 7, and 8 to evaluate the extent to which they may have a disproportionate effect on black and Hispanic drivers

Before the recommendations of this report, the administration of the Cranston Police Department identified the need to evaluate the current beat map. The origins of the current beat configuration date back to the 1960s and we fully recognize the fact that the population of our city has changed dramatically throughout the last 60 years. One of the significant barriers we have encountered when considering modifying the current patrol areas or beats is associated with the cost that would be incurred to reprogram our current record management and computer-aided dispatch systems. We intend to pilot a new beat model in the coming months and, with the potential deployment of a new RMS/CAD system, we will be able to implement a new beat model as part of the new software deployment.

Due to limited personnel, we are often unable to assign an officer to every beat. In these instances, the officer in charge must select which beats will be assigned as a primary patrol area. Our department patrol deployment and enforcement strategies are based on federally recommended practices associated with Data-Driven Approaches to Crime and Traffic Safety (DDACTS). The underlying philosophy of this strategy is to deploy traffic enforcement patrols in areas where there are elevated instances of motor vehicle crashes, crimes, and evidence of unsafe driving (as identified by neighborhood complaints, collected speed data, etc.). DDACTS is part of the deployment plan for all federal and state-funded traffic enforcement programs like Click it or Ticket, Drive Sober or Get Pulled Over, Distracted Driving, etc. We are fortunate to have a crime analyst who analyzes crimes occurring

citywide, as well as in specific beats. This information is disseminated in the form of a weekly intelligence report and is taken into consideration by patrol supervisors when deploying officers.

(2) Evaluate both the location and frequency of stops that involve equipment- or inspection-related motor vehicle violations, to understand better the impact they may be having on minority drivers.

The Cranston Police Department does not have a standing policy or directive that focuses on equipment or inspection violations, and no such policy or directive is focused on a specific geographic area. We are currently reviewing the data collected, along with the potential issues identified in this report. Based upon the three-pronged approach for traffic safety defined by the National Highway Traffic Safety Administration (enforcement, education, and engineering), we are working to identify methods for expanding current efforts related to traffic safety education programs, like the child passenger safety program where officers inspect, install, and, when resources are available, replace child passenger safety seats for those who need them, to include an education program on basic operator level vehicle safety inspections. These resources would educate motorists on the proper way to inspect vehicle lighting systems (headlights, brake lights, tail lights, turn signals, etc.), tires, windshields, and other easily identified vehicle safety equipment issues that are commonly associated with traffic stops. Ideally, we would hope that we could identify community partners, like auto parts stores and local mechanics who would be willing to share their expertise to motorists seeking information or assistance beyond our capabilities and resources within the police department.

In closing, the Cranston Police Department appreciates your efforts, as well as the efforts of your colleagues at Central Connecticut State University, in compiling and analyzing the data collected by the Rhode Island Department of Transportation. We also support reviewing the types of data collected and the methods by which it is collected to improve the ability to draw clear and accurate conclusions that can be used to develop action plans, where necessary. We will look forward to cooperating in this evolving process with transparency and proactive participation.

Respectfully,

Colonel Michael J. Winquist
Chief of police

I.B: NARRAGANSETT FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the 2016 Traffic Stop Data Analysis and Findings report conducted by the Institute for Municipal and Regional Policy at Central Connecticut State University. The report is published as part of the Comprehensive Police-Community Relationship Act of 2015. This follow-up report on Narragansett focuses on data reported between January 1, 2016 and December 31, 2016. Table 1.0 below is a summary of racial data for reported traffic stops in Narragansett during the study year.

Table 1.0: Narragansett Traffic Stops – 2016

Race/Ethnicity	Traffic Stops January 1, 2016 – December 31, 2016	
White	5,794	89.7%
Black	309	4.8%
Asian	75	1.2%
Native American	6	0.1%
Hispanic	277	4.3%
Total	**6,461**	

Overview of the Traffic Stop Analysis and Findings, 2016 Report

The 2016 Traffic Stop Analysis report indicated that for the January 1, 2016 – December 31, 2016 study period, the Narragansett Police Department made 6,461 traffic stops. Of these, 10.3% were minority stops (4.3% Hispanic[5] and 4.8% black). The Solar Visibility analysis indicated a statistically significant disparity in the rate of Hispanic[6] motorists stopped during daylight relative to darkness. Within the inter-twilight window, the odds that a stopped motorist was Hispanic increased by 2.6 during daylight. These results were statistically significant at a level greater than 95% and robust to the inclusion of a variety of controls, officer fixed-effects, and a restricted sample of moving violations. Although certain assumptions have been made in the design of each methodology, it is reasonable to conclude that departments with consistent data disparities separating them from the majority of other departments should be subject to further review and analysis with respect to the factors that may have caused these differences.

Descriptive Analysis of the 2016 Traffic Stop Data

The racial and ethnic disparities in the Narragansett Police Department data were studied using a more detailed review of traffic enforcement during the study period. Part of the analysis involved mapping all the stops; if possible, using the location data provided by the department and any enhancements we were able to make. Narragansett provided detailed location descriptions that allowed accurate mapping of 88% of their stops. This allowed us to conduct a census tract-based analysis as well as a descriptive analysis of major corridors and roadways. According to the 2010

[5] For purposes of our analysis we consider Hispanic drivers as a distinct racial category. The majority of Hispanic drivers are identified as white Hispanic. In Narragansett, almost 90% of Hispanic drivers were also identified as white.

[6] The operator's race and ethnicity is determined by the perception of the officer. The officer may make their perception of the operator's race and ethnicity prior to the stop or not until additional contact is made.

census, Narragansett is a town with approximately 13,911 residents over the age of 16. Approximately 4% of the driving age population in Narragansett is identified as a minority. Table 2.0 outlines the basic demographic information for Narragansett residents over age 16.

Table 2.0: Narragansett Population

Race/Ethnicity	16+ Population Total	% Population Total
White Non-Hispanic	13,310	95.7%
Black Non-Hispanic	101	0.7%
AsPac Non-Hispanic	115	0.8%
Hispanic	196	1.4%
Other	189	1.4%
Total	**13,911**	

Narraganset is approximately 38 square miles in area, of which 14 square miles is land and 24 square miles is water. The town runs along the eastern bank of the Pettaquamscutt River to the Narragansett Bay. Two other municipalities border Narragansett: North Kingstown to its north and South Kingstown to its west. North Kingstown and South Kingstown are predominantly white demographically, with an average white driving age population of 92% (compared to Narragansett's white driving age population of 96%). Of the drivers stopped in Narragansett overall, only 23% were Narragansett residents and 77% lived elsewhere.

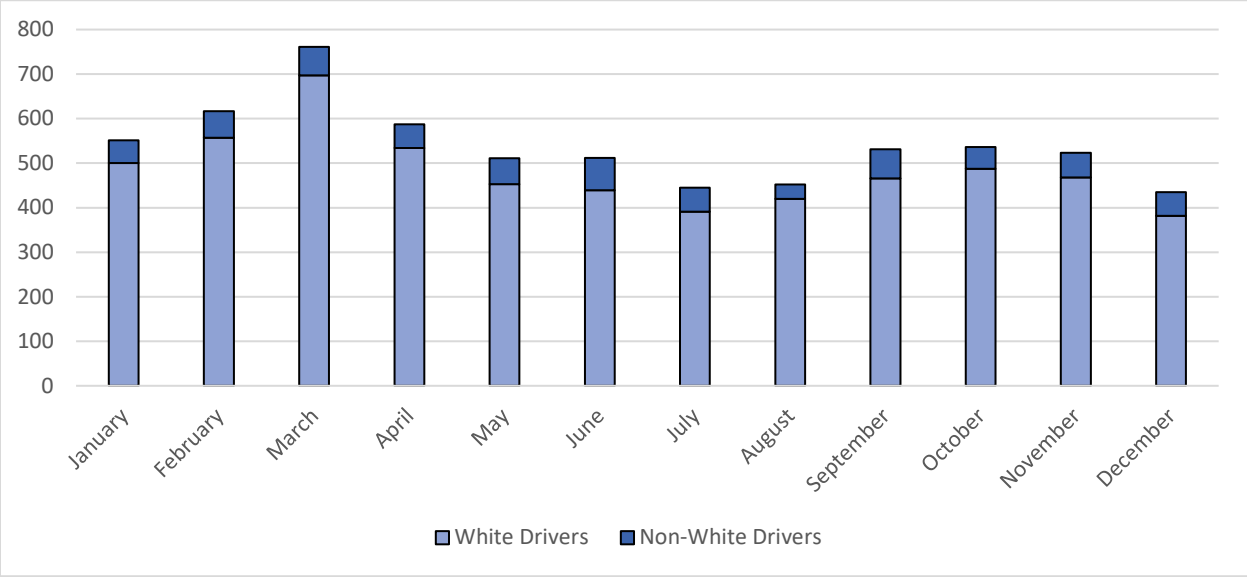
The University of Rhode Island's (URI) main campus is located just eight miles away in the neighboring town of South Kingstown. There is also a smaller campus (the Narragansett Bay Campus) located in Narragansett. The college significantly affects the population of the town during the academic year. According to the University of Rhode Island, over 55% of the student population lives off campus. In 2012, the Narragansett Planning Board published a report that estimated over 2,000 rental units in town are occupied by URI students during the academic year. The report also pointed out that because the 2010 census was taken during the academic year, it included most of the URI population living in town. Over 21% of the total population is between the age of 20 and 24, which is the largest population group in town. Just for comparison purposes, the 25 to 29 age group make-up only 4% of the town population. The college age population clearly has the largest impact on the census demographics in Narragansett and highlights the overall impact URI has in the community.

According to the same 2012 report produced by the Narragansett Planning Board, the town is heavily influenced by its seasonal populations. Most rental units are leased to URI students until the end of the academic year in May. These units are then re-populated during the summer months by weekly seasonal renters. In addition to seasonal rental units, Narragansett has 12 bed and breakfasts, three hotels, two motels and two campgrounds. Narragansett also has popular tourist attractions that attract "day trippers" during the summer months. There are three state beaches, three private beaches, restaurants, marinas, and other recreational activity attractions. Also located in Narragansett is the Block Island Ferry which brings hundreds of people to Block Island every day. The town estimates that from June through September the town's population, including "day trippers," increases by 100%. During the busiest weekends and special events the town's population can increase by well over 100%.

Although the localized population in Narragansett dramatically increases during the summer months, traffic enforcement does not. Figure 1.1 illustrates the number of traffic stops that occurred

each month. The highest volume of traffic stops occurred in March and the lowest volume occurred in July and August. It is likely that the demand on departmental resources during the busier summer months doesn't allow for the same level of traffic enforcement that might occur during other times of the year.

Figure 1.1: Traffic Stops by Month



The U.S. Census Bureau divides Narragansett into three census tracts. Figure 1.2 is a map that outlines the boundaries of Narragansett census tracts, which will be referred to throughout this report. The resident driving age population in each census tract varies from about 3,500 to about 6,000 people, with the largest concentration of people (44% of the total population) in tract 515.02. Generally, demographic information is only available for race/ethnicity groups of more than 50 people who are reported as living in a census tract. According to the 2010 census, there were more than 50 minority residents living in only census tract 515.02. Figure 1.3 shows the distribution for each census tract in terms of white and non-white driving age population.

Figure 1.2 Census Tract Map

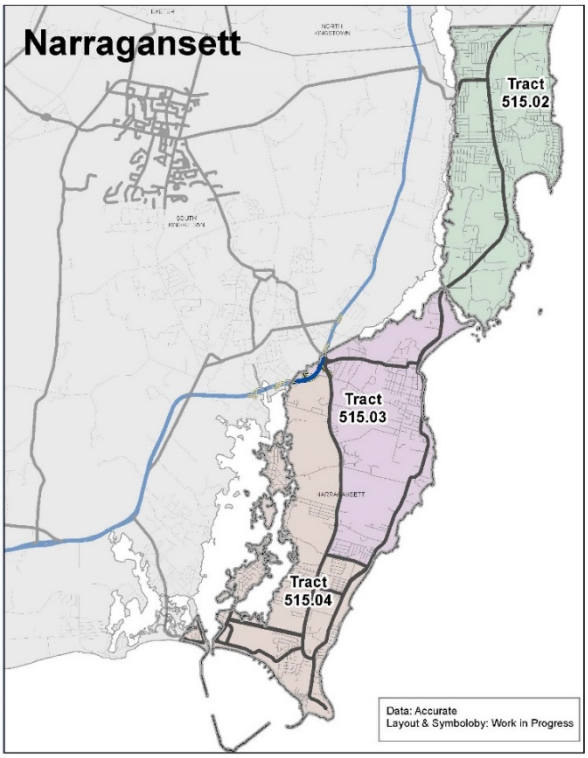


Figure 1.3: Age 16 and Older Resident Population by Census Tract

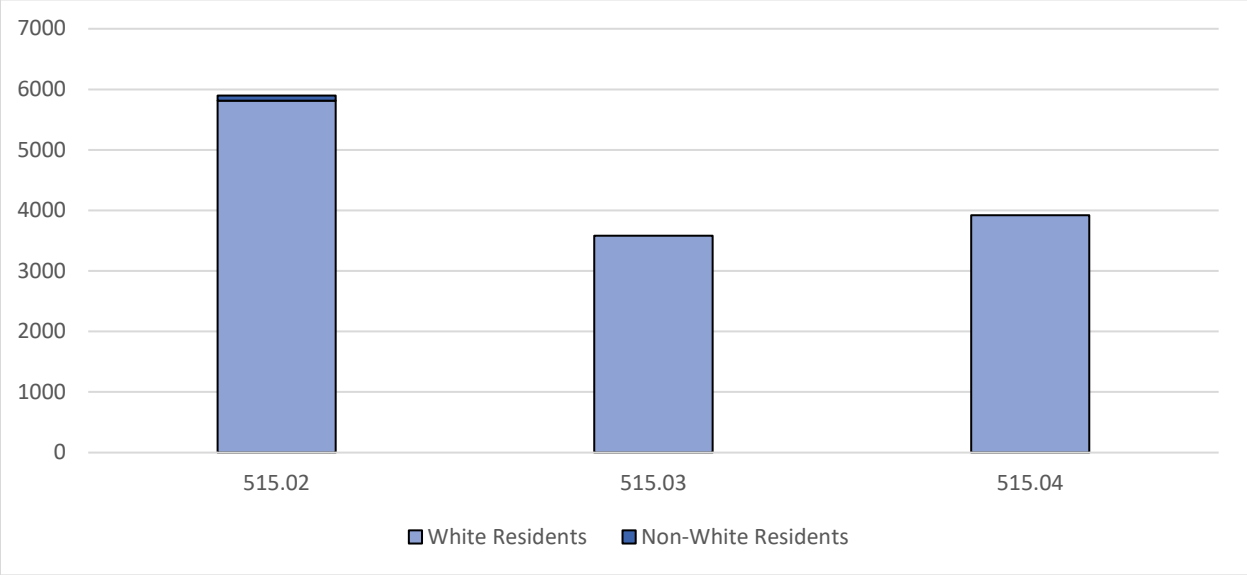
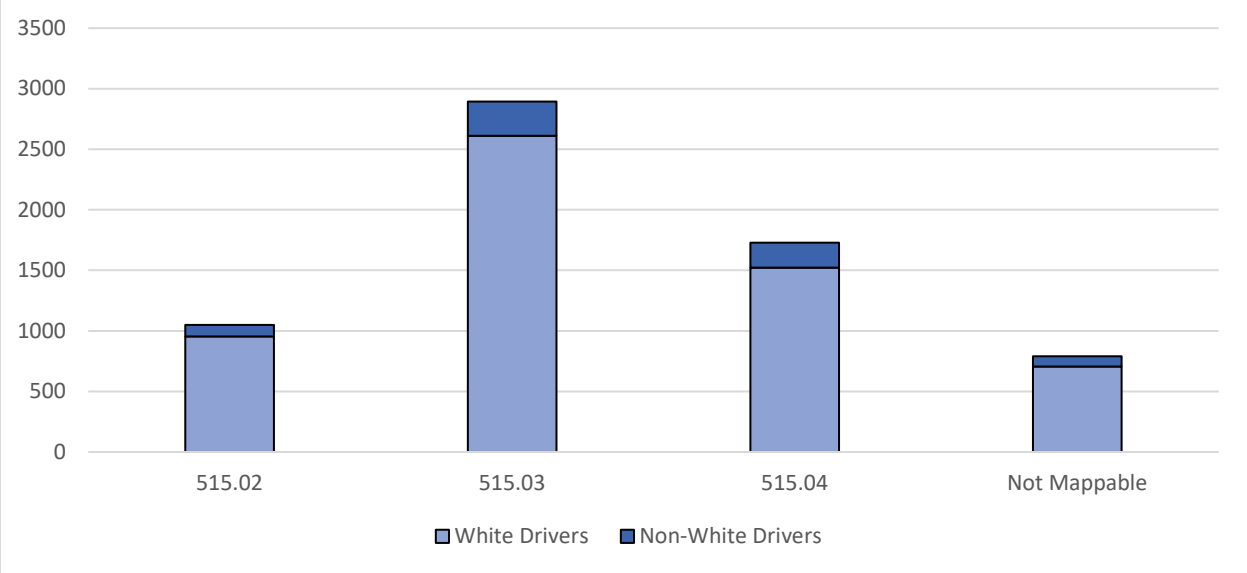


Figure 1.4 illustrates the volume of traffic enforcement that occurred in each census tract. The largest percentage of traffic enforcement activity (45%) occurred in census tract 515.03. This census tract covers the middle portion of the town including the town center and large sections of Boston Neck Road and Point Judith Road. We could not map approximately 12% of the stops and these were not considered in our analysis, for purposes of discussing traffic stops by census tract.

Figure 1.4: Traffic Stops by Census Tract



Traffic Stop Breakdown by Race/Ethnicity

In Narragansett, 10% of all drivers stopped were minority drivers, classified as all non-white drivers, but predominantly black or Hispanic drivers. Narragansett's resident population age 16 and older is 4% minority. On its face, this might suggest a wide disparity in the proportion of minority drivers stopped during the study period. In one sense, this is true, considering that about 4% of the

population is minority but close to 10% of the drivers stopped were minority. However, the racial and ethnic makeup of different areas of Narragansett varies by census tract, so the disparities were more pronounced in some areas compared to others.

Figure 2.1 shows the difference between the local black resident population and the black drivers stopped by census tract. The overall percentage of Narragansett traffic stops involving black drivers was 4.8%. The percentage of black drivers stopped exceeded the town average of 4.8% in one of three census tracts (515.04). The percentage of black drivers stopped in tract 515.02 was equivalent to the town average and in tract 515.03 slightly below the town average. There was a positive disparity above the resident black driving age population in all census tracts, with the largest disparity in tract 515.04. It is important to note that over 83% of all black drivers stopped were not residents of Narragansett.

Figure 2.1: Black Population Compared to Black Drivers Stopped by Census Tract[7]

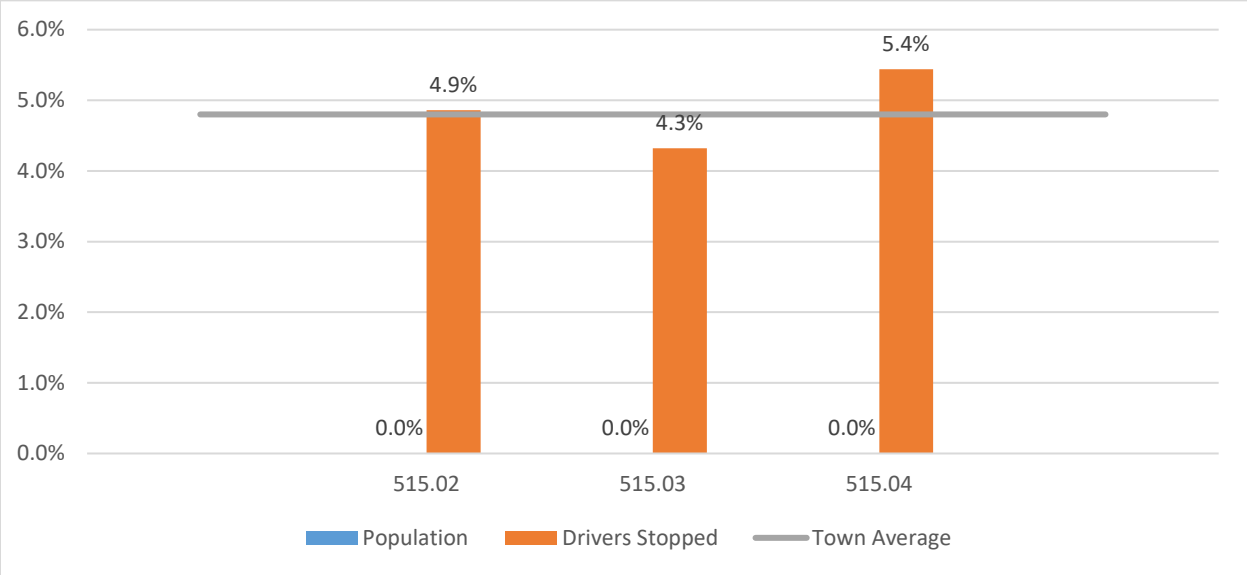
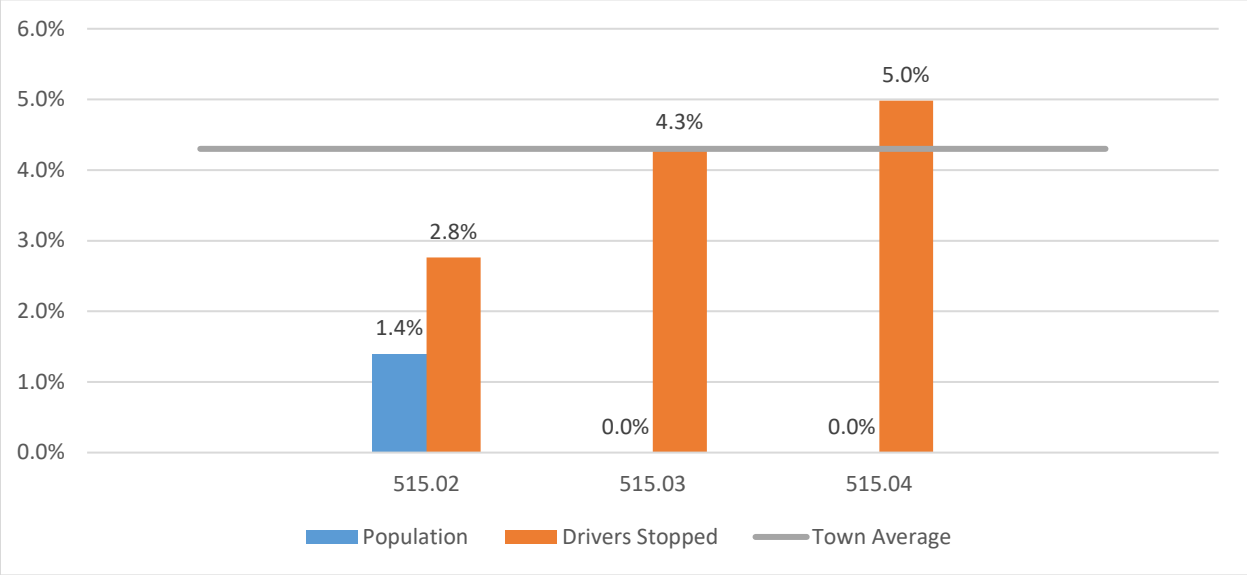


Figure 2.2 shows the difference between the local Hispanic resident population and the Hispanic drivers stopped by census tract. The overall percentage of traffic stops involving Hispanic drivers was 4.3%. The percentage of Hispanic drivers stopped exceeded the town average of 4.3% in one of three census tracts (515.04). The percentage of Hispanic drivers stopped in tract 515.03 was equivalent to the town average and below the town average in tract 515.02. There was a positive disparity above the resident Hispanic driving age population in all census tracts, with the largest disparity in tract 515.04. It is important to note that over 91% of all Hispanic drivers stopped were not residents of Narragansett.

[7] Demographic information is only available for race/ethnic groups over 50 people reported as living in a census tract. According to the 2010 U.S. Census, there were not more than 50 black residents living in any one census tract in Narragansett.

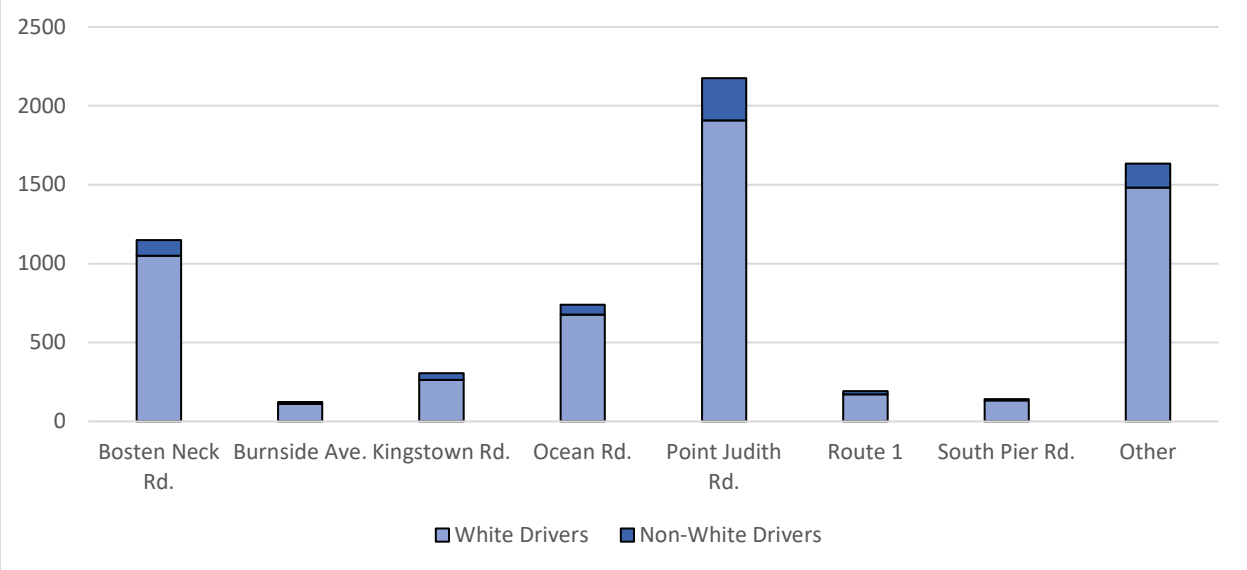
Figure 2.2: Hispanic Population compared to Hispanic Drivers Stopped by Census Tract



Highway Corridor Analysis

In addition to reviewing traffic enforcement by census tracts, we also conducted a separate review of the roadways with the greatest number of traffic stops. There were seven roadways where 100 or more traffic stops occurred during the study period. These seven roadways account for 75% of all traffic stops in town. Point Judith Road, Boston Neck Road and Ocean Road were the three most active corridors for enforcement. These three roadways accounted for 63% of all traffic enforcement. Figure 3.1 illustrates the volume of traffic enforcement that occurred on the each of the seven roadways with more than 100 traffic stops.

Figure 3.1: Traffic Stops by Major Roadway



Point Judith Road is approximately 4.5 miles of the 8.6 mile-long Route 108 state highway. The section of Route 108 that is Point Judith Road begins at the intersection of Ocean Road in the southern

part of Narragansett and runs north to the intersection of Kingstown Road. The roadway is residential in nature for about a half-mile before it enters the village of Galilee. The Point Judith Block Island Ferry is located in the village and connects to Block Island. Point Judith Road continues north as a four-lane roadway with sections that are mostly residential and other sections that are more commercial until the intersection of Burnside Avenue where the route becomes more residential again and wooded. There is a small commercial stretch starting at Sunnybrook Farm Road through Narragansett Pier until the roadway intersects with Route 1A and becomes Kingstown Road.

A total of 2,176 traffic stops were made along Point Judith Road during the study year, which was 34% of the total for the town. The stops made on Point Judith Road included more non-residents than in the town as a whole (83% compared to 77%), and involved a higher proportion of black and Hispanic drivers compared to the town-wide average. Black drivers accounted for 5.2% of the Point Judith Road stops compared to the town average of 4.8%. Hispanic drivers accounted for 5.8% of the Point Judith stops compared to the town average of 4.3%. Over 46% of Hispanic drivers and 37% of black drivers were stopped on Point Judith Road compared to 33% of white drivers stopped there. Point Judith Road runs through census tract 515.04 from Ocean Road north to the intersection of Burnside Avenue at which point it becomes the border between tracts 515.03 and 515.04. The stops along Point Judith Road were pretty evenly distributed between the two census tracts with 46% occurring in tract 515.03 and 54% occurring in tract 515.04.

Boston Neck Road is approximately 5.5 miles of the 40-mile long Route 1A state highway which runs through southern Rhode Island. Beach Street becomes Boston Neck Road just north of Narragansett Avenue (also just north of the village of Narragansett Pier). Boston Neck Road serves as a major commercial corridor through the northern half of Narragansett and provides access to the village of Bonnet Shores. The roadway continues north through Narragansett to the border of North Kingstown.

A total of 1,149 traffic stops were made on Boston Neck Road during the study year, which was 18% of the total stops made in town. Of the drivers stopped on Boston Neck Road, 70% were not residents of Narragansett, which was less than the town average of 77% non-residents. Driver demographics for those stopped on Boston Neck Road was equivalent to the town average for black drivers stopped and below the town-wide average for Hispanic drivers stopped. Black drivers accounted for 4.7% of the Boston Neck Road stops (compared to the town average of 4.8%). Hispanic drivers accounted for 2.8% of the Boston Neck Road stops (compared to the town average of 4.3%). Approximately 17% of black drivers and 12% of Hispanic drivers were stopped on Boston Neck Road compared to 18% of white drivers stopped there. Boston Neck Road runs through a small northern section of census tract 515.03 (where 37% of traffic enforcement occurred) and all of census tract 515.02 (where 63% of traffic enforcement occurred).

Finally, the third roadway with significant traffic enforcement is Ocean Road. It is approximately 5.5 miles in length and runs along the southeastern half of Narragansett along the shoreline. Boston Neck Road turns into Ocean Road just north of Kingstown Road in the center of town. Ocean Road then continues south along the coastline and through predominantly residential areas until it reaches Scarborough State Beach, one of three state beaches in town. As the roadway continues south past the beach it travels again through residential areas and ends at the Point Judith Lighthouse.

A total of 740 traffic stops were made on Ocean Road during the study year, which was 12% of the total stops made in town. Of the drivers stopped on Ocean Road, 76% were not residents of

Narragansett, which was equivalent to the town average of 77% non-residents. Fewer minority drivers were stopped on Ocean Road than the town average. Black drivers accounted for 3.8% of the Ocean Road stops (compared to the town average of 4.8%). Hispanic drivers accounted for 3.4% of the Ocean Road stops (compared to the town average of 4.3%). Approximately 9% of black drivers and 4% of Hispanic drivers were stopped on Ocean Road compared to 12% of white drivers stopped there. Ocean Road runs through a census tracts 515.03 and 515.04. However, the vast majority (79%) of stops on Ocean Road occurred in tract 515.03.

Non-Resident Component of Narragansett Traffic Stops

Narragansett's traffic stop data tended to reflect to a great degree two basic influences: (1) an extremely low non-white driving age resident population and (2) a relatively large proportion of non-Narragansett residents who make up the majority of people who were stopped in town. Narragansett's resident driving age population is estimated as 96% white, 1.4% Hispanic, 0.7% black, 0.8% Asian/Pacific Islander and 1.1% other. The demographics of the Narragansett residents who were stopped during the study year showed a disparity for black drivers. However, the disparity was most significant for out-of-town drivers stopped. Since 77% of all drivers stopped in Narragansett were not residents, out-of-town drivers clearly had an impact on the stop data. The racial breakdown of drivers stopped who were not Narragansett residents were as follows: 88% white, 5% Hispanic, 5% black, and 1.3% Asian/Pacific Islander. Approximately 83% of the black drivers stopped and 91% of Hispanic drivers stopped were not residents, compared to 76% of white drivers.

Of the three roadways with the highest levels of enforcement, a higher percentage of drivers stopped on Point Judith Road (83%) were non-residents compared to Boston Neck Road (70%) or Ocean Road (76%). The Point Judith Road corridor appears to have had the greatest influence on the out-of-town resident component of the stop demographics. Non-resident drivers were more likely to be stopped on Point Judith Road than they were on any other roadways in town (83% compared to 75%).

Special Enforcement Campaigns

Narragansett participated in special enforcement campaigns, some that were sponsored by the Rhode Island Department of Transportation through funds made available by the National Highway Traffic Safety Administration (NHTSA) and others that were department-wide initiatives. The special enforcement campaigns in which Narragansett participated focused on (1) drinking and driving, (2) speeding, and (3) seatbelt and child passenger safety. The Narragansett Police Department was able to identify the months the department participated in the special enforcement campaigns, but not the case numbers for stops made as part of these campaigns. Stop outcomes for stops made during selective enforcement campaigns can, and usually do, result in a high proportion of penalty outcomes rather than warnings compared to stops made during regular routine patrol activities where officers may have more discretion in deciding whether to ticket the violator. Imposition of penalty-based outcomes is one of the tenets for participation in these federally funded programs. The selection criteria for locations for special enforcement could differ in some ways from the way stops are generally conducted. For example, effective seatbelt enforcement requires officers to be able to observe drivers in their vehicles without being observed themselves and this can make some locations for this type of enforcement more suitable than others even though the less suitable locations might have as many drivers potentially violating the targeted laws than the more suitable enforcement locations.

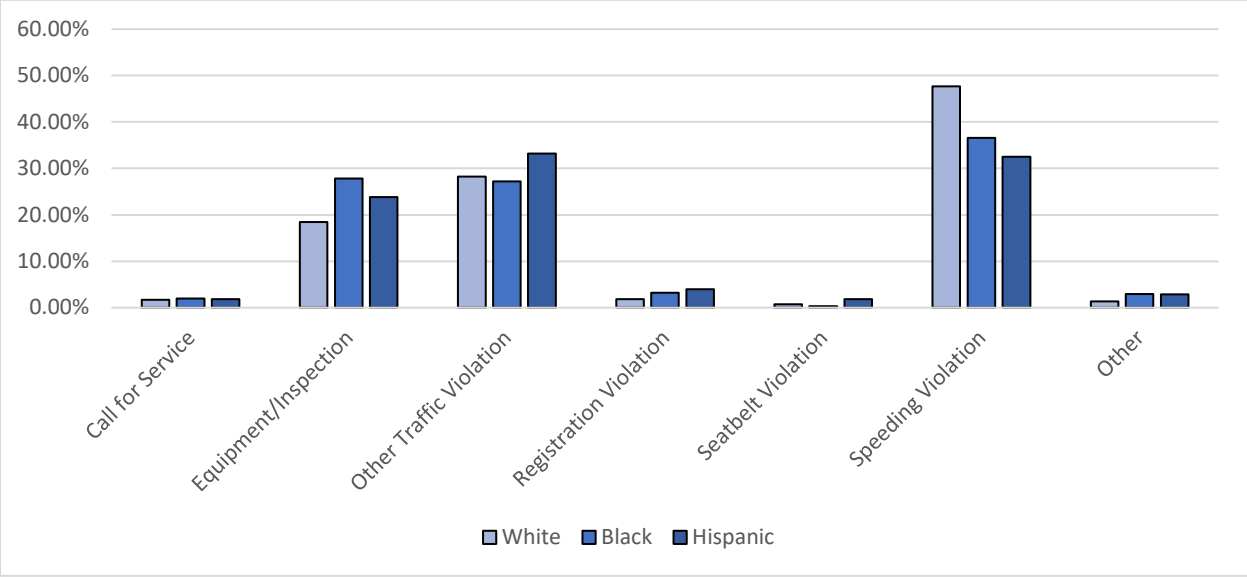
Narragansett reported 387 stops or 6% of all their enforcement during the study period resulted from participation in one of the special enforcement campaigns. Over 53% of the enforcement campaign stops were part of the speed enforcement grant. These stops were conducted throughout the year with the most activity occurring in March, April, and June. Approximately 26% of the enforcement campaign stops were part of the "click it or ticket" grant. These stops were conducted in March, May, June, and November of the study year, with the largest percentage of stops occurring in March and May. Lastly, 21% of the enforcement campaign stops were part of the Drinking and Driving grant program. These stops were conducted between January and April and then again between October and December. Of the 80 drivers stopped during this campaign, six were arrested for driving under the influence of alcohol or drugs.

Post-Stop Outcome Review

Basis for Stops

The reasons police use to stop a motor vehicle can vary significantly from department to department. We reviewed the basis for each stop that Narragansett officers reported as the reason for stopping motor vehicles. The three most common reasons for stopping a motorist in Narragansett made up 94% of the total stops. The three largest stop categories were for speeding violations (46%), Other Traffic Violations[8] (28%), and equipment or inspection violations (19%). While white drivers were stopped more frequently than black or Hispanic drivers for more hazardous driving violations as a percentage of their total stops, black and Hispanic drivers were stopped more frequently for equipment- and inspection-related violations than white drivers as a percentage of their total stops. Figure 4.1 illustrates by race and ethnicity the reason officers cited to stop a motor vehicle.

Figure 4.1: Basis for Traffic Stops



[8] If a stop was made for a reason other than one of the 11 categories listed as the basis for the stop, it is recorded as "other traffic violation." Some examples of stops that might be recorded as "other traffic violation" include a traffic light violation or stop sign violation.

Just over 19% (1,240 stops) of Narragansett's stops were made for equipment- or inspection-related violations. This was almost equivalent to the state average of 18.5% during the study year. Of all the Hispanic drivers stopped in Narragansett, 24% (66 stops) of them were stopped for equipment- or inspection-related violations. In addition, 28% (86 stops) of all the black drivers stopped in the town were pulled over for equipment- or inspection-related reasons. This compared to 18% (1,069 stops) of all white drivers. Conversely, 76% (4,400 stops) of all the white drivers stopped in town were stopped for hazardous driving behaviors (such as speeding and other traffic violations) compared to 64% (199 stops) of black drivers and 66% (182 stops) of Hispanic drivers.

Over 58% (721 stops) of all equipment-related stops were made on two of the high enforcement roadways. More specifically 19% (233 stops) were made on Boston Neck Road and 39% (488 stops) were made on Point Judith Road. Although the majority of these stops were made in the high enforcement area of town, there were also extensive equipment-related stops made throughout the town. These stops represented a significant percentage of the traffic stops made on each roadway (almost 20%), except Kingstown Road, Ocean Road, and Route 1. The frequency and location of these stops on the two high enforcement roadways appears to have had an impact on the size of the disparity affecting both black and Hispanic drivers in Narragansett. These roadways are the busiest corridors in town and appear to have a higher percentage of non-resident minority drivers traversing them than other roadways in town.

Speed enforcement was also a significant basis for a traffic stops in Narragansett. There were 3,000 stops made for speeding or 46% of all stops. This was a higher percentage of speed related stops when compared to the statewide average of 36% during the study year. Officers frequently rely on modern technology-based enforcement techniques, like using radar or a laser devices, to make speeding stops. Depending on the types of locations and vehicle travel speeds involved, using technology-based enforcement techniques is sometimes considered to be "blind", that is, the officer may have a reduced opportunity to specifically identify driver characteristics before making a decision to act than with other types of violations where a more direct and frequently prolonged observation of the vehicle is made. At least theoretically, if all speeding stops could be considered blind with respect to predetermination of the drivers' racial characteristics, they could possibly provide a useful if clearly imperfect window into the general racial make-up of drivers driving in an enforcement area.

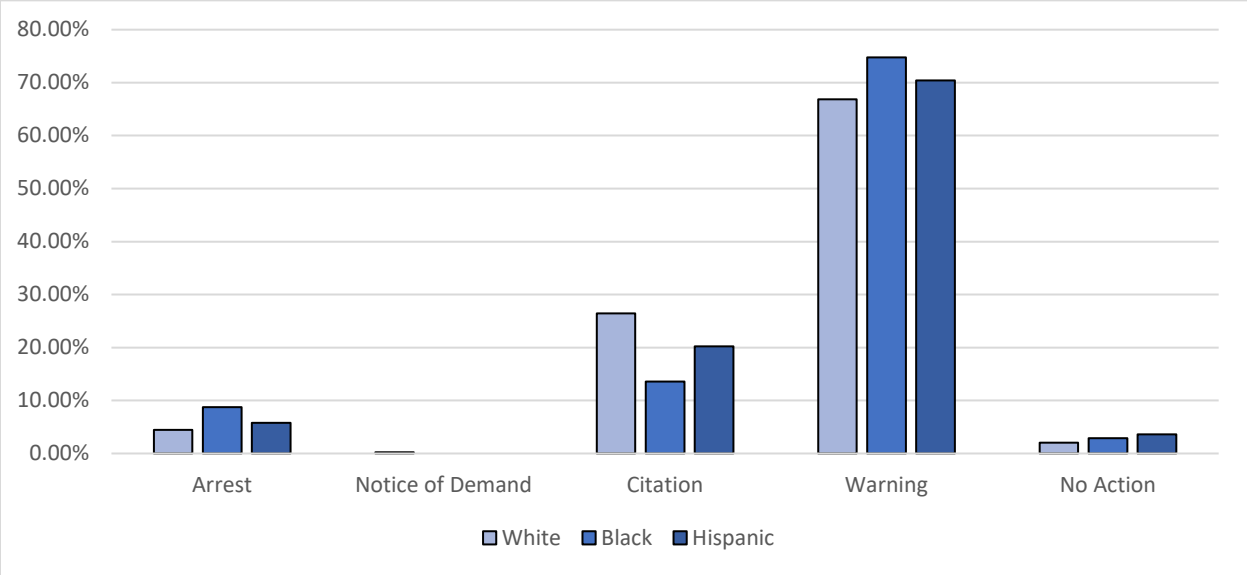
Unfortunately, the data available from Rhode Island does not capture information on technology-based speeding stops. That having been said, we believe it is reasonable to assume that a significant portion to Narragansett's speeding stops were probably technology based and provide the following analysis based on that assumption. The demographics for all speed-related stops in Narragansett were 3% Hispanic drivers (90 stops), 4% black drivers (113 stops), 1% Asian and other drivers (35 stops), and 92% white drivers (2,762 stops). There was a higher percentage of white drivers stopped for speed-related violations compared to their overall proportion of all other stops made (92% compared to 90%). However, black and Hispanic drivers were stopped at a lower rate for speed-related violations than their overall proportion of all other stops (Black drivers – 4% compared to 5% and Hispanic drivers – 3% compared to 4 %.) The highest percentage of speed-related stops (35%) were made on Point Judith Road. The demographics for these stops were 4% Hispanic drivers, 4.4% black drivers, 0.6% Asian drivers, and 91% white drivers. There was again a higher proportion of white drivers stopped for speed-related violations on Point Judith Road than their proportion of all other stops on that roadway (91% compared to 84%). A smaller proportion of black and Hispanic

drivers were stopped for speed-related violations on Point Judith Road than their proportion of all other stops on that roadway (Black drivers – 4.4% compared to 6.1% and Hispanic drivers – 3.8% compared to 7.8 %.) If, arguably, speeding stops might represent a better proxy of the actual driving population at any given time than all stops considered together, speeding stops may actually help to mitigate what could be a larger disparity in all stops not related to speed.

Outcome of Stops

The majority of motor vehicle stops in Narragansett resulted in the driver receiving a warning (67%). Black and Hispanic drivers were more likely to receive a warning as a percentage of their total stops and they were also more likely to be arrested. They were also less likely to receive a citation when compared to white drivers. Figure 4.2 shows the outcome of motor vehicle stops by race and ethnicity.

Figure 4.2: Outcome of Traffic Stop



Drivers were significantly more likely to receive a warning as a result of an equipment or inspection violation compared to all other violations. Of the drivers stopped for equipment- and inspection-related violations, 88% resulted in a warning whereas only 62% of stops for all other types of violations resulted in a warning. There were virtually no notice and demands that resulted from a traffic stop. These are typically given for non-moving violations when a vehicle has a defect that needs to be addressed. The notice provides the driver with five working days to fix the issue and have the vehicle inspected. Failure to correct the problem results in a review by the traffic court.

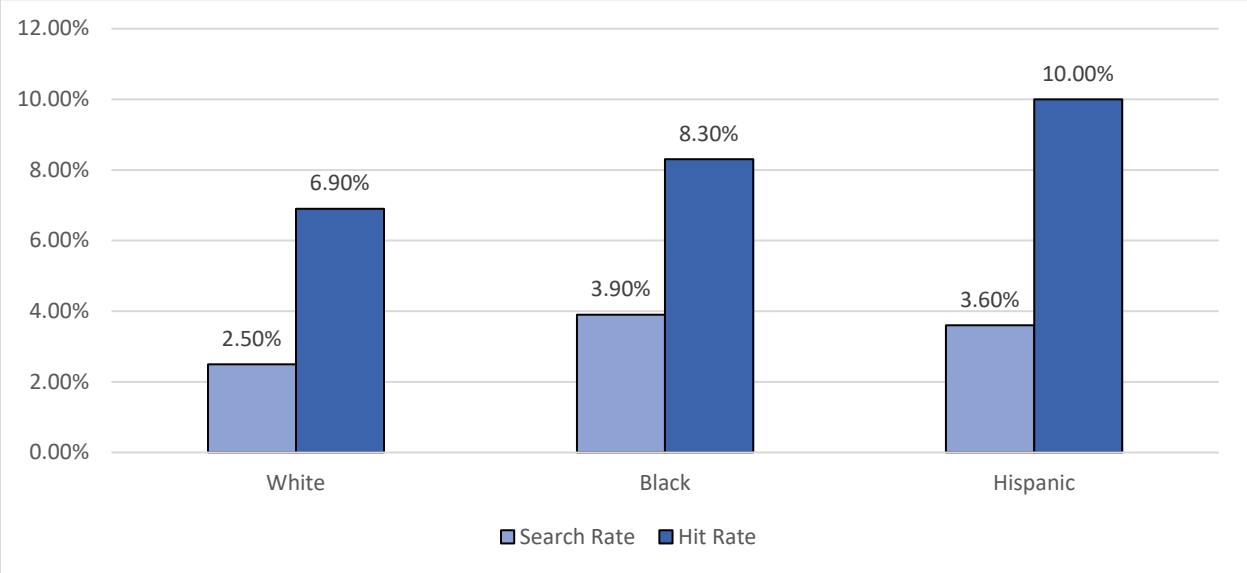
In Narragansett, 305 of the stops made resulted in the arrest of either the driver or a passenger (4.7%). This was above the statewide average of 3% for stops resulting in an arrest. Of the 305 arrests, the driver of the vehicle was arrested in 270 cases and the passenger was arrested in 35 cases. The racial demographics of individuals arrested as a result of a traffic stop were 84% white, 9% black, and 5% Hispanic. When considered as a proportion of their total stops, black drivers were almost twice as likely and Hispanic drivers were 25% more likely to be arrested compared to white drivers (8.7% of all black drivers stopped and 5.8% of all Hispanic drivers stopped compared to 4.4% of all white drivers stopped). The majority of arrests (53%) occurred on the three high enforcement roadways in town (Point Judith Road, Boston Neck Road, and Ocean Road.)

Unfortunately, we are unable to determine the reason for the arrest, but can identify why the vehicle was stopped. Of the 305 arrests, the basis for stopping a vehicle was an "other traffic violation" (113 stops), equipment or inspection violation (66 stops), speeding violation (59 stops), a registration violation (32 stops), with the remaining arrests for some other reason (35 stops). Stops that were made for what would seem to be more minor traffic-related violations such as equipment or inspection violations, registration violations, speeding and other traffic violations resulted in a higher proportion of minority drivers arrested. It is not possible to determine the reason for the arrest, but it is assumed that a more significant violation was identified that lead to an arrest.

Search Information

A review of department search information shows that 2.6% (169) of the drivers stopped in Narragansett were subjected to a motor vehicle search. This rate of motor vehicle searches is lower than the state's 3.4% average. Stops of black and Hispanic drivers resulted in a slightly higher search rate than white drivers. Figure 4.3 illustrates the searches and the rate at which contraband was found (the "hit rate"). Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate may not reflect the actual number of instances an officer found contraband[9]. The dataset only identified 12 instances where contraband was found as a result of a search. However, 92 drivers who were the subject of a search were arrested. It is likely that a number of these arrests were the result of the search. Because the number of minority driver searches was too small to draw any significant conclusions from, we caution against doing so based on this summary information.

Figure 4.3: Search and Hit Rate



Summary of Findings

The Narragansett Police Department identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified the impact that the University of Rhode Island and seasonal traffic had on the community. The University of

[9] Statewide training was conducted in early 2017 to address a number reporting errors, including reporting errors of search information.

Rhode Island's main campus is located just eight miles away in South Kingstown and it is estimated that over 2,000 housing rental units are occupied by students during the academic year. Most of the rental units are re-populated during the summer months by weekly seasonal renters. The department also indicated that they have a large presence of out-of-town residents traveling through town for coastline attractions like three state beaches, three private beaches, marinas, restaurants, and other recreational activities. The town estimates that during the summer months the population more than doubles due to "day trippers" and seasonal renters. Major roadways that are likely the areas with the highest levels of traffic appear to be some of the same areas with the highest levels of motor vehicle enforcement. It is evident from the number of traffic stops made along a relatively few major roadways that departmental resources are concentrated in a smaller geographic area.

There are three major roadways where significant traffic enforcement occurred (Point Judith Road, Boston Neck Road, and Ocean Road). Almost 63% of all traffic stops in Narragansett occurred on one of these three roadways. Point Judith Road is approximately 4.5 miles long and runs north to south from the center of town to the intersection of Ocean Road. It is the busiest roadway in town and accounts for the largest percentage of traffic stops (34%). This route had a higher percentage of out-of-town residents stopped than the town average. Additionally, black and Hispanic drivers were more likely to be stopped on Point Judith Road than the town average. The second busiest roadway is Boston Neck Road, where 18% of all stops were made. The roadway is approximately 5.5 miles long and runs from the border of North Kingstown to the center of town. Boston Neck Road serves as a major commercial corridor for the northern half of Narragansett. Fewer out-of-town residents were stopped on Boston Neck Road than the town average. Additionally, Hispanic drivers were less likely to be stopped on this roadway than the town average.

Finally, the third roadway with significant traffic enforcement is Ocean Road which accounts for 12% of all stops made in town. Ocean Road is essentially a continuation of Boston Neck Road through the southern half of Narragansett along the coastline. A similar proportion of drivers stopped on Ocean Road were not residents of Narragansett compared to the town average. Fewer minority drivers were stopped on Ocean Road than the town average. The data clearly indicates that traffic enforcement on Point Judith Road had the greatest influence on the stop disparity for black and Hispanic drivers.

Narragansett's traffic stop data also reflects (1) an extremely low non-white driving age resident population and (2) the relatively large proportion of non-town residents who make up the majority of people who were stopped in town. Since 77% of all drivers stopped in Narragansett were non-residents, the overall impact out-of-town drivers had on the stop data is fairly clear. Non-resident black and Hispanic drivers were more likely to be stopped than non-resident white drivers. Approximately 83% of black drivers stopped and 91% of Hispanic drivers stopped were not residents, compared to 76% of white drivers who were non-residents. The influence non-resident drivers had on stop demographics affected roadways to varying degrees. Non-resident drivers most heavily affected Point Judith Road, where over 83% of all drivers stopped there were not residents of the town. About 75% of drivers stopped on all roadways other than Point Judith Road were not town residents.

Traffic Stop Outcomes

In Narragansett, the three most common reasons used for stopping a motorist make up 94% of the total stops. The three largest stop categories were for speeding violations (46%), other traffic violations (28%), and equipment or inspection violations (19%). Black and Hispanic drivers were

more likely than white drivers to be stopped for an equipment- or inspection-related violation. In contrast, white drivers were more likely to be stopped for a speeding violation. Speed-related motor vehicle enforcement appears to have had the greatest impact on overall traffic enforcement in Narragansett. Officers often rely on enforcement techniques like radar and laser devices to make speed-related stops. Stops that rely on these technology-based enforcement techniques are often considered "blind." Of the speed-related stops, the racial demographics were 92% white, 4% black, and 3% Hispanic. Assuming that speed-related stops are a good indication of the driving population, then the Narragansett data indicates that a small racial disparity still exists for minority drivers.

Just over 19% of Narragansett's stops were made for an equipment or inspection violation. This was almost equivalent to the statewide average of 18.5%, but minority drivers were stopped at a higher rate than white drivers. Over 24% of Hispanic drivers and 28% of black drivers were stopped for equipment or inspection violations compared to 18% of white drivers. Conversely, 76% of all the white drivers stopped in town were stopped for hazardous driving behaviors compared to 64% of black drivers and 66% of Hispanic drivers. These stops occurred more frequently on Point Judith Road and Boston Neck Road, with over 58% of all equipment- or inspection-related stops occurring on these two major corridors. The frequency and location of these stops on two of the high enforcement roadways, with a large percentage of non-resident minority drivers traversing them, appears to have been an important factor in the Narragansett disparity involving black and Hispanic drivers.

Overall, almost 67% of all drivers stopped received a warning, although drivers stopped for equipment- or inspection-related violations were significantly more likely to receive a warning than any other type of violation. Of the drivers stopped for equipment- and inspection-related violations, 88% resulted in a warning whereas only 62% of stops for all other types of violations resulted in a warning. Virtually no driver received a notice and demand as a result of a traffic stop. A notice and demand is typically given for non-moving violations when a vehicle has a defect that needs to be addressed. The notice provides the driver with five working days to fix the issue and have the vehicle inspected. Over 4.7% of all drivers stopped were arrested, which was above the statewide average of 3%. Black and Hispanic drivers were more likely to be arrested as a percentage of their total stops and less likely to receive a citation. The racial demographics of the individuals arrested as a result of a traffic stop were 84% white, 9% black, and 5% Hispanic. The majority of arrests (53%) occurred on the three high enforcement roadways. Unfortunately, we cannot provide additional information regarding the reason a driver was arrested because the dataset doesn't provide it. However, we can assume that the officer made some additional determination beyond the reason for the stop that an offense occurred warranting an arrest.

Narragansett police searched the vehicles of 2.6% of drivers they stopped, which is below the statewide average of 3.4%. Black and Hispanic drivers were searched at a slightly higher rate than white drivers. Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate may not reflect the actual number of instances an officer found contraband. In addition, the number of minority drivers searched was too small to draw any significant conclusions from. Therefore, we caution against drawing any conclusions from the search data for Narragansett.

Conclusion

Taken as a whole, the Narragansett traffic stop data reflects the influence of the Point Judith Road, Boston Neck Road, and Ocean Road corridors that appears to be somewhat more diverse than the predominantly white local driving age population. These roads appear to have a relatively high level of enforcement and a relatively higher proportion of non-resident minority drivers traveling them. The nature of traffic enforcement in Narragansett is focused on more serious safety-related violations, particularly speed and other traffic violations. In most of the speed-related stops, officers made the determination to stop the driver using speed enforcement technology. After a full review, the disparities do not appear excessive in nature, but the department would benefit from a periodic review of traffic enforcement policies as they relate to enforcement activity particularly on Point Judith Road and Boston Neck Road in order to evaluate the extent to which they may have a disproportionate impact on minority drivers.

Department Response

Below on page 37 is a response provided by Narragansett Police Chief, Sean Corrigan.

TOWN OF NARRAGANSETT
POLICE DEPARTMENT
40 Caswell Street • Narragansett, RI 02882 • Chief Sean Corrigan
Tel. (401) 789-1091 • TDD (401) 782-0661 • Fax (401) 789-8819

November 9, 2018

To whom it may concern,

In response to the follow-up analysis of the 2016 traffic stop data analysis and findings report I will share some information regarding the constantly evolving system the Narragansett Police Department has in place to prevent bias in our policing operations.

The Narragansett Police Department has a strong policy entitled, "Bias Based Policing Prohibited". This policy strictly prohibits officers from using; actual or perceived race, ethnic background, national origin, color, age, gender, sexual orientation, religion, economic status, cultural group or any other identifiable group of any person as the basis for the detention, interdiction or other disparate treatment of any individual. This policy is posted on our website.

To facilitate the provisions of the policy the department has designated a Civil Rights Officer. It is among the duties of the Civil Rights Officer to monitor racial profiling statistics for racial disparities and to train the members of the department on the policy. Each month the Civil Rights Officer will meet with me and discuss the results of the previous month's traffic stop data. He provides in-depth analysis and makes recommendations for follow up actions.

The department backs up our strong policy and supervision with a thorough complaint and discipline system. Our complaint package, which includes a complaint form & instructions on how to file a complaint, is posted on our website in both English and Spanish. Additionally, complaint forms can be obtained at the Narragansett Police Department or the Town Manager's office. We practice transparency with our discipline system by posting on our website an annual complaints report. The report summarizes the internal affairs investigations completed that year for the department. The report includes; the race of the complainant, the nature of the complaint, the disposition of the investigation and the discipline imposed on the officer(s).

In conclusion I would like to address the final sentence of the follow up report that states, "After a full review, the disparities do not appear excessive in nature, but the department would benefit from a periodic review of traffic enforcement policies as they relate to enforcement activity particularly on Point Judith Road and Boston Neck Road in order to evaluate the extent to which they may have a disproportionate impact on minority drivers". Our monthly reviews of our statistics have shown no evidence of bias and we receive few complaints from citizens. However, I think we can obtain a greater understanding of our operations by including in the after action reports of our preplanned enforcement operations a profile data impact review. This will allow us to evaluate separately the traffic stop data of routine traffic enforcement from data of preplanned enforcement operations. This further attention to specific operations will serve as an early warning system for any operation that may disproportionately impact minority drivers.

Respectfully,

Chief Sean Corrigan
Narragansett Police

I.C: NORTH SMITHFIELD FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the 2016 Traffic Stop Data Analysis and Findings report conducted by the Institute for Municipal and Regional Policy at Central Connecticut State University. The report is published as part of the Comprehensive Police-Community Relationship Act of 2015. This follow-up report on North Smithfield focuses on data reported between January 1, 2016 and December 31, 2016. Table 1.0 below is a summary of racial data for reported traffic stops in North Smithfield during the study year.

Table 1.0: North Smithfield Traffic Stops – 2016

Race/Ethnicity	Traffic Stops January 1, 2016 – December 31, 2016	
White	1,784	68.6%
Black	316	12.2%
Asian	58	2.2%
Native American	6	0.2%
Hispanic	436	16.8%
Total	**2,600**	

Overview of the Traffic Stop Analysis and Findings, 2016 Report

The 2016 Traffic Stop Analysis report indicated that for the January 1, 2016 – December 31, 2016 study period the North Smithfield Police Department made 2,600 traffic stops. Of these, 31.4% were minority stops (16.8% Hispanic and 12.2% black). The synthetic control analysis for racial disparity produced statistically significant results and the disparity was sufficiently large across all racial and ethnic categories. The department was also identified as having a racial and ethnic disparity using the three descriptive tests. North Smithfield exceeded the threshold in two of the three descriptive benchmarks used and five of the nine possible measures. North Smithfield received a disparity score of 4.5 out of a possible nine points. Although certain assumptions have been made in the design of each methodology, it is reasonable to conclude that departments with consistent data disparities separating them from the majority of other departments should be subject to further review and analysis with respect to the factors that may have caused these differences.

Descriptive Analysis of the 2016 Traffic Stop Data

The racial and ethnic disparities in the North Smithfield Police Department data were studied using a more detailed review of traffic enforcement during the analysis period. Part of the analysis involved reviewing the detailed location descriptions provided by the department and any enhancement we were able to make. North Smithfield officers record the location of a traffic stop by patrol zones. The town is divided into nine patrol zones. Although we are unable to determine the specific street location of each stop, the patrol zones provide us with enough information to assess the differences in neighborhoods within the city.

According to the 2010 census, North Smithfield is a town with approximately 9,793 residents over the age of 16. Approximately 3.5% of the driving age population in North Smithfield is identified as a minority. Table 2.0 outlines the basic demographic information for North Smithfield residents over age 16.

Table 2.0: North Smithfield Population

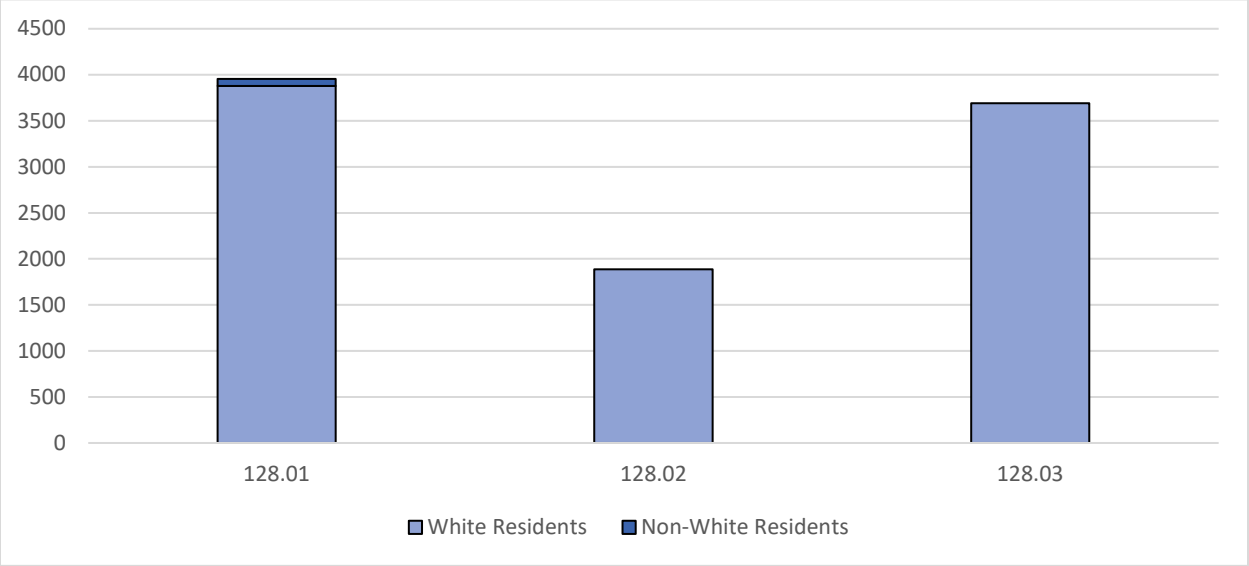
Race/Ethnicity	16+ Population Total	% Population Total
White Non-Hispanic	9,454	96.5%
Black Non-Hispanic	0	0.0%
AsPac Non-Hispanic	94	1.0%
Hispanic	179	1.8%
Other	66	0.7%
Total	**9,793**	

North Smithfield is approximately 24 square miles in area. The town is located in northern Providence County and is on the border with Massachusetts. Four other municipalities in Rhode Island and two municipalities in Massachusetts border North Smithfield. North Smithfield is bordered by Smithfield to its south, Burrillville to its west, and Woonsocket and Lincoln to its east. North Smithfield is also bordered by Millville and Uxbridge, Massachusetts to its north. With the exception of Woonsocket, all other border towns are predominately white demographically, with an average white driving age population of 96% (compared to North Smithfield's white driving age population of 96.5%). Woonsocket has a more diverse population with a 76.7% white population. Of the drivers stopped in town, only 8% were residents of North Smithfield. Therefore, the town is significantly impacted by traffic from other communities.

The major corridor that runs through North Smithfield is Route 146, also known locally at the North Smithfield Expressway. Route 146 is a major north-south freeway that connects Providence to Worcester, Massachusetts. The corridor is a limited-access highway for most of its 16-mile length, but there is one traffic light in the North Smithfield business district. Just over six miles of the corridor run through North Smithfield from the Lincoln town line to the Massachusetts state line. Route 5 is also a major corridor that runs through the center of North Smithfield. The state highway runs from Warwick to the Massachusetts state line in North Smithfield. Finally, the third significant corridor in North Smithfield is Route 7, also known locally as Douglas Pike. This route runs through the south-west portion of the town and connects Smithfield to Burrillville.

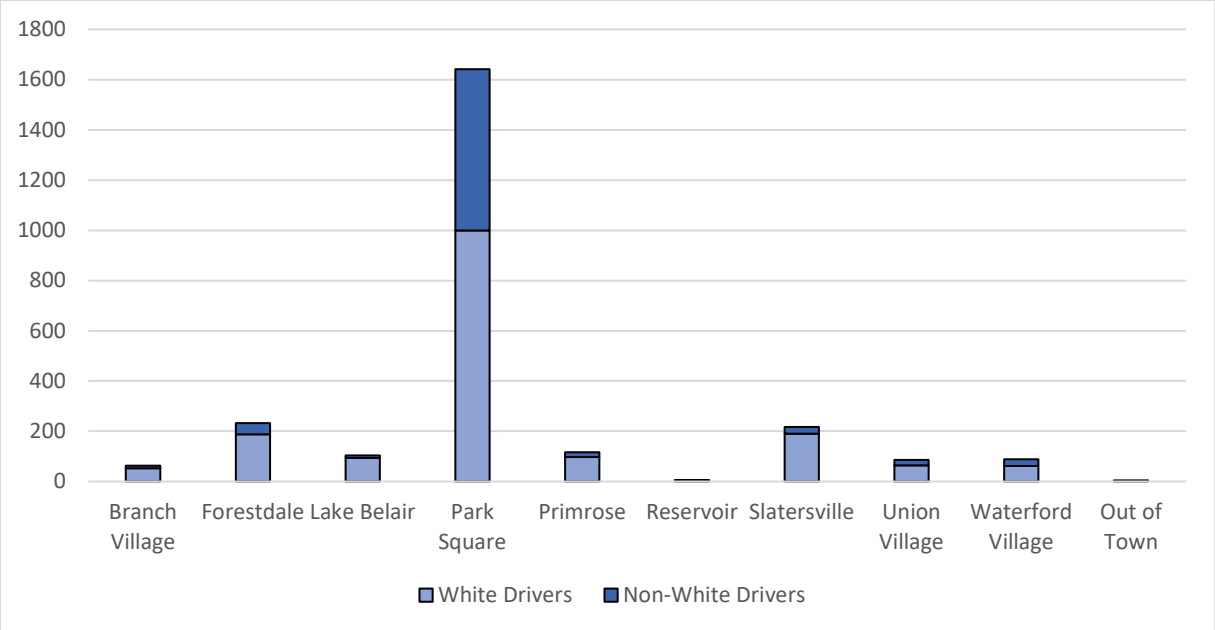
Although we do not conduct an analysis by census tract, it is still helpful to understand the racial make-up of different sections of the town, as evidenced in the census tract data. The U.S. Census Bureau divides North Smithfield into three census tracts. Figure 1.1 is a map that outlines the boundaries of North Smithfield census tracts, which will be referred to throughout this report. The resident driving age population in each census tract varies from about 1,800 to about 4,000 people, with the largest concentration (42% of the total population) in tract 128.01. Census tract 128.01 borders the Massachusetts state line and is where the census reports all minority residents as living. Figure 1.2 shows the distribution for each census tract in terms of white and non-white driving age populations.

Figure 1.2: Age 16 and Older Resident Population by Census Tract



Officers reported the location of a traffic stop in one of nine patrol areas. Figure 1.3 illustrates the volume of traffic enforcement that occurs in each of the nine patrol areas. Traffic enforcement appears to be primarily concentrated in the Park Square area. More specifically, this area accounted for 64% of all stops in the town. The stop demographics included 39% minority drivers and 61% white drivers. Minority drivers were stopped more frequently in this area with 80% of all minority drivers being stopped in the Park Square area compared to 56% of white drivers stopped in the same area.

Figure 1.3: Traffic Stops by Patrol Beat

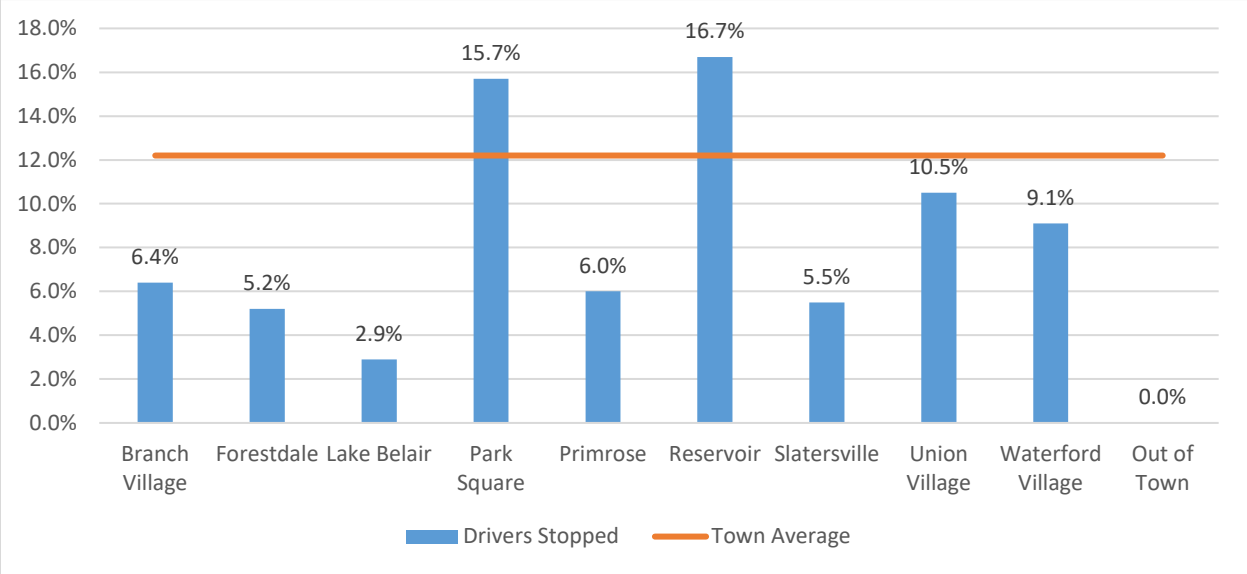


Traffic Stop Breakdown by Race/Ethnicity

In North Smithfield, 31% of all drivers stopped were minority drivers, classified as all non-white drivers, but predominantly black or Hispanic drivers. North Smithfield's resident population age 16 and older is 3.5% minority. On its face, this might suggest a large disparity in the proportion of minority drivers stopped during the study period. In one sense, this is true; however, the racial and ethnic makeup of different areas of North Smithfield and the influence of out-of-town drivers varies.

The overall percentage of North Smithfield traffic stops involving black drivers was 12.2%. The town average of 12.5% of black drivers stopped was exceeded in two patrol areas (Park Square area and Reservoir area). However, the percentage of black drivers stopped in the Reservoir area is insignificant because only six drivers were stopped in the area. The Park Square area is located on the border of Woonsocket and Lincoln. In this patrol area 82% of all black drivers were stopped. It is worth noting that 98% of all black drivers stopped in North Smithfield were not residents of North Smithfield. Figure 2.1 shows the difference between the black drivers stopped by patrol area and the town average.

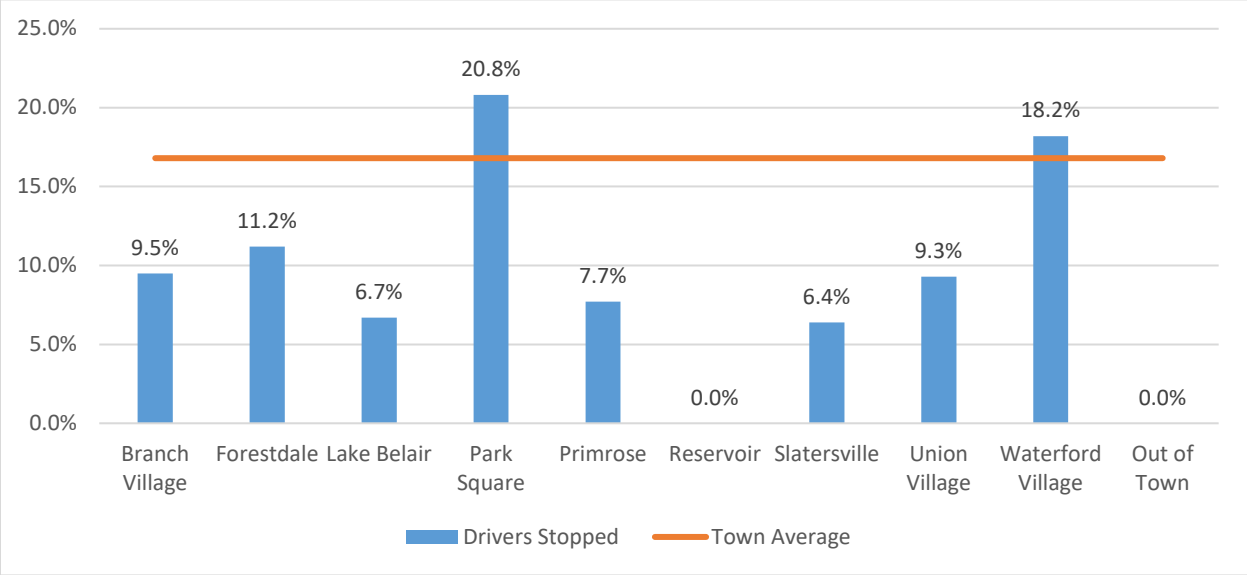
Figure 2.1: Black Drivers Stopped Compared to Town Average[10]



The overall percentage of traffic stops involving Hispanic drivers was 16.8%. The percentage of Hispanic drivers stopped exceeded the town average of 16.8% in two of the areas (Park Square area and Waterford Village). However, less than 100 drivers were stopped in the Waterford Village patrol area. The Park Square area is again, where the majority of drivers were stopped. In particular, it is the area where 80% of all Hispanic drivers were stopped. It is worth noting that 99% of all Hispanic drivers stopped in North Smithfield were not residents of the town. Figure 2.2 shows the difference between the Hispanic drivers stopped by patrol area and the town average.

[10] The percentage of black drivers stopped in the Reservoir area is insignificant because only six drivers were stopped in this area.

Figure 2.2: Hispanic Drivers Stopped Compared to Town Average



Non-Resident Component of North Smithfield Traffic Stops

North Smithfield's traffic stop data tended to reflect to a great degree two basic influences: (1) an extremely low non-white driving age resident population and (2) a relatively large proportion of non-residents who make up the majority of people who were stopped in town. North Smithfield's resident driving age population is estimated as 96.5% white, 1.8% Hispanic, and 1.0% Asian/Pacific Islander. (As noted in Table 1.0, there are no black, driving age residents of North Smithfield.) The demographics of the North Smithfield residents who were stopped during the study year showed only a small disparity for minority drivers.

The disparity was most significant for non-resident stops. The racial breakdown of drivers stopped who were not residents were as follows: 66% white, 18% Hispanic, 13% black, 2% Asian/Pacific Islander, and 0.3% Indian American. Approximately 98% of the black and Hispanic drivers stopped were not residents, compared to 89% of white drivers. Since 90% of all drivers stopped in North Smithfield were not residents, out-of-town drivers clearly had an impact on the stop data. The non-resident component of seven of the nine patrol areas (Branch Village, Forestdale, Lake Belair, Reservoir, Slatersville, Union Village, and Waterford Village) were all fairly close to the town wide average of 90%. However, the other two census tracts varied considerably from the town wide average in opposite directions. Drivers stopped in the Park Square area were 95% non-residents while those stopped in the Primrose area were 80% non-residents. The Park Square area appears to have had the greatest influence on the non-resident component of the stop demographics, with 95% of the drivers stopped in this area not living in North Smithfield. Non-resident drivers were more likely to be stopped in this patrol area than they were in any other area in town.

Park Square Area Influence on Traffic Enforcement

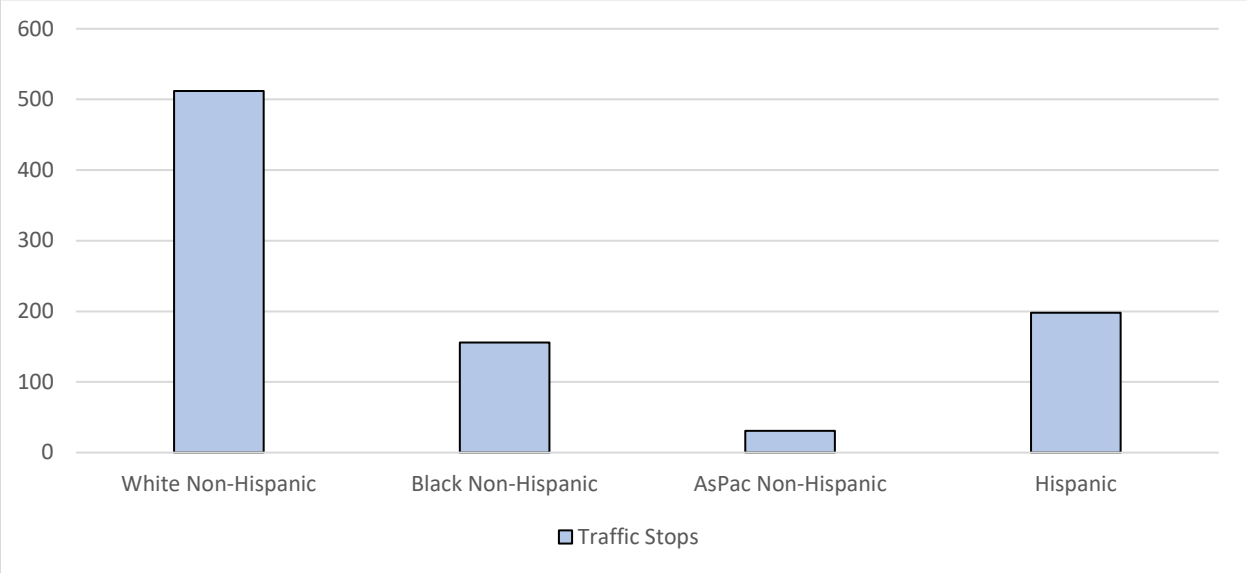
North Smithfield's traffic stop data clearly reflects the influence of the Park Square patrol area, which is where 64% of all traffic stops were made. The Park Square area is a small geographic area that covers about 1.5 square miles of the 24 square miles of North Smithfield. The triangular area is located on the eastern side of North Smithfield, with the Eddie Dowling Highway acting as the

western border, and Woonsocket and Lincoln as the eastern border. Lincoln and Woonsocket have more diverse resident populations than North Smithfield. Over 23% of the Woonsocket population and 8% of the Lincoln population are minority residents compared to 3.5% of North Smithfield's population. Most of the land area within Park Square is open space, but the main route within the area, the Eddie Dowling Highway, has a large commercial presence. The overall percentage of traffic stops involving minority drivers in this area was 39%, which is significantly above all other areas in town. Park Square is where 82% of all black drivers and 80% of all Hispanic drivers were stopped compared to 57% of all white drivers.

Of all the stops made in the Park Square area, 66% occurred on the Eddie Dowling Highway. Over 35% of all stops in North Smithfield occurred on this roadway. The Eddie Dowling Highway begins at the Woonsocket border where Park Avenue crosses over Smithfield Road and heads south into North Smithfield. This section of the highway is also known as Route 146A, which is a four lane-divided roadway with a significant commercial presence. There are a number of shopping and entertainment facilities including stores such as Stop and Shop, Lowes Home Improvement, Walmart Supercenter, fast food chains, medical facilities, and restaurants. This densely commercial section of the roadway is less than one mile in length before it merges with Route 146. South of Route 146A, the local road name is the Eddie Dowling Highway and the road continues to the border of Smithfield, R.I. According to the department there are two motels, Hilltop Inn and Travelers Motor Lodge, along the Eddie Dowling Highway, that also contribute to a larger police presence along the roadway. Calls for service and crime is greater in the area near the motels and as a result impacts police activity.

The overall percentage of traffic stops involving minority drivers on the Eddie Dowling Highway was 43%, which is significantly above the town average of 31% minority drivers stopped. Approximately 22% of drivers stopped were Hispanic and 17% were black. Of the more than 897 traffic stops on this roadway, 95% of the drivers stopped were not North Smithfield residents. Almost none of the minority drivers stopped were North Smithfield residents compared to 8% of white drivers stopped. Out-of-town drivers clearly had a significant impact on the stop demographics in this area. Figure 3.1 shows the proportion of traffic stops on the Eddie Dowling Highway by race and ethnicity.

Figure 3.1: Eddie Dowling Highway Traffic Stops by Race/Ethnicity

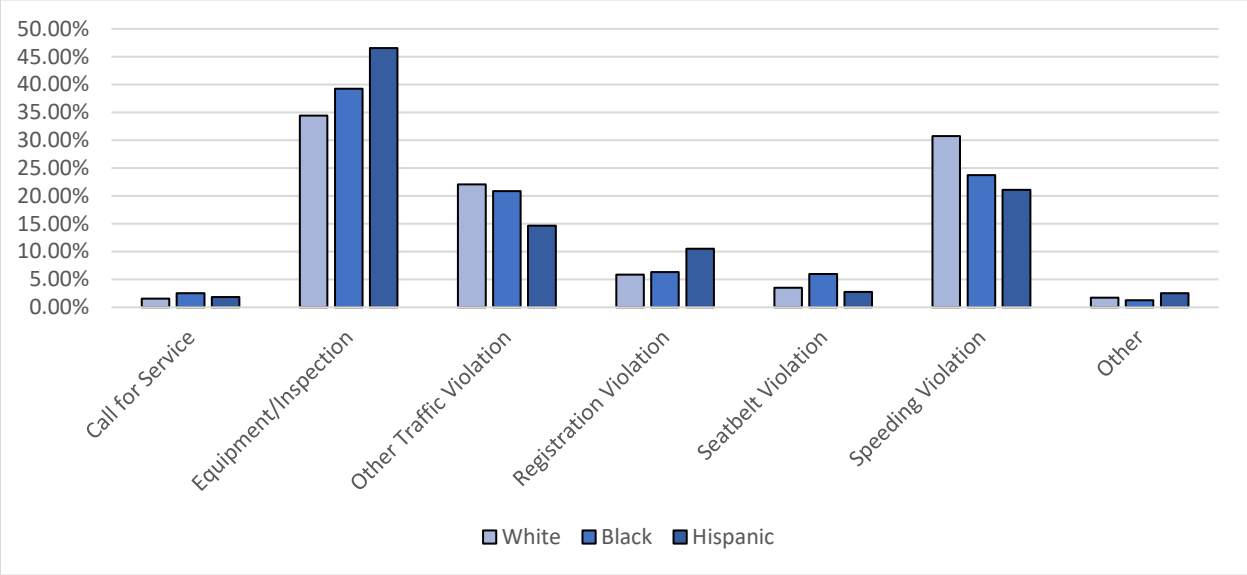


Post-Stop Outcome Review

Basis for Stops

The reasons police use to stop a motor vehicle can vary significantly from department to department. We reviewed the basis for the stop that North Smithfield officers reported as the reason for stopping motor vehicles. The three most common reasons for stopping a motorist in North Smithfield made up 86% of the total stops. The three largest stop categories were for equipment or inspection violations (37%), speeding violations (28.5%) and other traffic violations[11] (20.5%). While white drivers were stopped more frequently than black or Hispanic drivers for more hazardous driving violations as a percentage of their total stops, black and Hispanic drivers were stopped more frequently for equipment- and inspection-related violations than white drivers as a percentage of their total stops. Figure 4.1 illustrates by race and ethnicity the reason officers cited to stop a motor vehicle.

Figure 4.1: Basis for Traffic Stops



The data shows that, with respect to the racial and ethnic demographics of those stopped, equipment- or inspection-related stops are closely related to the frequency and location of where the stops are made. When these types of stops are made more frequently in locations where there are higher concentrations of minority drivers, they tend to result in higher proportions of minority drivers being stopped than white drivers. However, in many places, the data also shows that when these same types of stops are made in areas with a higher concentration of white drivers, the stop demographics shift toward white drivers, suggesting that the likelihood of finding violators may be more dependent on location than race.

Just over 37% of North Smithfield's stops were made for equipment- or inspection-related violations. This was significantly higher than the state average of 18.5% during the study year. Over 66% of all

[11] If a stop was made for a reason other than one of the 11 categories listed as the basis for the stop, it is recorded as "other traffic violation." Some examples of stops that might be recorded as "other traffic violation" include a traffic light violation or stop sign violation.

equipment-related stops were made in the Park Square area and more specifically 45% were made on the Eddie Dowling Highway. Although the majority of these stops were made in the high enforcement area of town, they were also extensively used throughout the town. These stops represented a significant percentage of the traffic stops made in each patrol area, except the Lake Belair and Primrose patrol areas.

These stops appear to have had an effect on the overall disparity affecting both black and Hispanic drivers. Of all the Hispanic drivers stopped in North Smithfield, 47% of them were stopped for equipment- or inspection-related violations. In addition, 39% of all the black drivers stopped in the town were pulled over for equipment- or inspection-related reasons. This compared to 34% of all white drivers. Conversely, 53% of all the white drivers stopped in town were stopped for hazardous driving behaviors (such as speeding and other traffic violations) compared to 45% of black drivers and 36% of Hispanic drivers. Hispanic drivers were 21% of those stopped for equipment- or inspection-related reasons but only 14% of those stopped for all other reasons. Black drivers were 13% of those stopped for equipment- or inspection-related reasons and 12% of those stopped for all other reasons. Conversely, white drivers were 64% of those stopped for equipment- or inspection-related reasons and 71% of those stopped for all other reasons. Based on this, we believe that these stops were an important factor in the North Smithfield disparity involving black and Hispanic drivers.

Speed enforcement was also a significant basis for a traffic stops in North Smithfield. There were 742 stops made for speeding or 28.5% of all stops. However, this was a lower percentage of speed related stops when compared to the statewide average of 36% during the study year. Officers frequently rely on modern technology-based enforcement techniques, like using radar or a laser devices, to make speeding stops. Depending on the types of locations and vehicle travel speeds involved, using technology-based enforcement techniques is sometimes considered to be "blind", that is, the officer may have a reduced opportunity to specifically identify driver characteristics before making a decision to act than with other types of violations where a more direct and frequently prolonged observation of the vehicle is made. At least theoretically, if all speeding stops could be considered blind with respect to predetermination of the drivers' racial characteristics, they could possibly provide a useful if clearly imperfect window into the general racial make-up of drivers driving in an enforcement area.

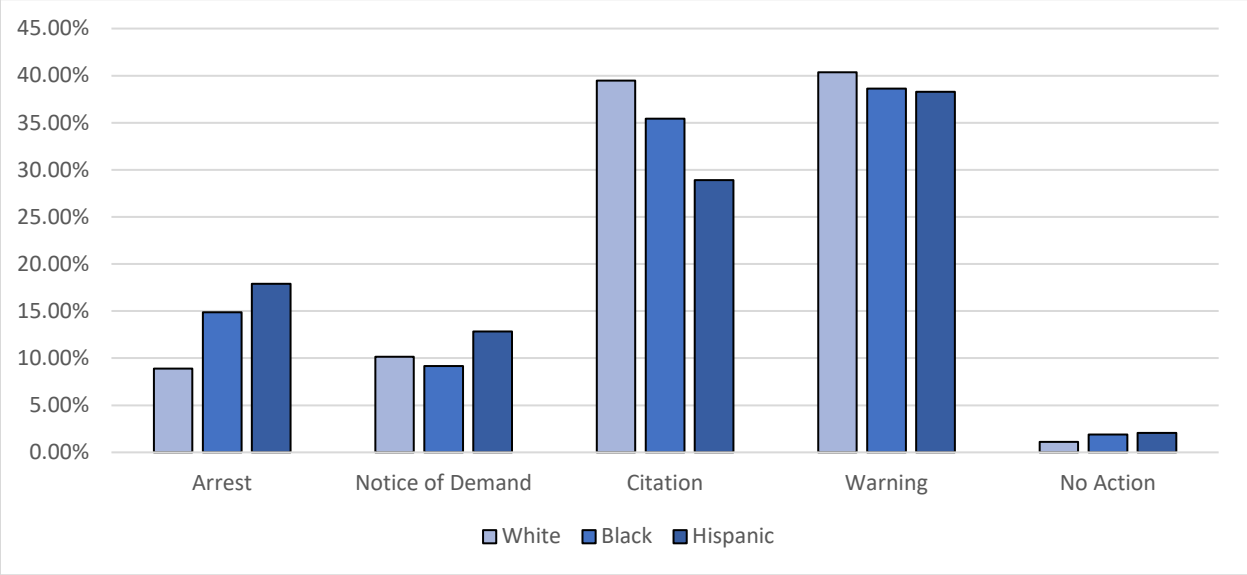
Unfortunately, the data available from Rhode Island does not capture information on technology-based speeding stops. That having been said, we believe it is reasonable to assume that a significant portion to North Smithfield's speeding stops were probably technology based and provide the following analysis based on that assumption. The demographics for all speed-related stops in North Smithfield were 12.4% Hispanic drivers, 10% black drivers, 3.6% Asian and other drivers, and 74% white drivers. There was a higher percentage of white drivers stopped for speed-related violations compared to their overall proportion of all other stops made (74% compared to 66.5%). However, black and Hispanic drivers were stopped at a lower rate for speed-related violations than their overall proportion of all stops (Black drivers – 10% compared to 12.2% and Hispanic drivers – 12.4% compared to 16.8 %.) The majority of speed-related stops (56%) were made in the Park Square patrol area. The demographics for these stops were 17% Hispanic drivers, 15% black drivers, 3% Asian drivers, and 65% white drivers. There was again a higher proportion of white drivers stopped for speed-related violations in the Park Square patrol area than their proportion of all other stops in the area (65% compared to 59.5%). An almost equivalent proportion of black drivers and a smaller proportion of Hispanic drivers were stopped for speed-related violations in the Park Square area

than their proportion of all other stops in the area (Black drivers – 15% compared to 16% and Hispanic drivers – 17% compared to 22 %.). If, arguably, speeding stops might represent a better proxy of the actual driving population at any given time than all stops considered together, speeding stops may actually help to mitigate what could be a larger disparity in all stops not related to speed.

Outcome of Stops

The majority of motor vehicle stops in North Smithfield resulted in the driver receiving either a warning (40%) or citation (37%). Black and Hispanic drivers were more likely to be arrested as a percentage of their total stops. They were also less likely to receive a citation or warning when compared to white drivers. Figure 4.2 shows the outcome of motor vehicle stops by race and ethnicity.

Figure 4.2: Outcome of Traffic Stop



In North Smithfield, 289 of the stops made resulted in the arrest of either the driver or a passenger (11%). This was significantly above the statewide average of 3% for stops resulting in an arrest. Of the 289 arrests, the driver of the vehicle was arrested in 274 cases and the passenger was arrested in 15 cases. The racial demographics of individuals arrested as a result of a traffic stop were 55% white, 16% black and 27% Hispanic. When considered as a proportion of their total stops, black drivers were more than 1.5 times and Hispanic drivers were more than twice as likely to be arrested as a result of the stop as were white drivers (15% of all black drivers stopped and 18% of all Hispanic drivers stopped compared to 9% of all white drivers stopped). The majority of arrests (76%) occurred in the high enforcement Park Square patrol area.

Unfortunately, we are unable to determine the reason for an arrest, but can identify why the vehicle was stopped. Of the 284 arrests, the basis for stopping a vehicle was an equipment or inspection violation (95 stops), a registration violation (56 stops), other traffic violation (49 stops), speeding (40 stops), or a warrant for an arrest (12), with the remaining arrests for some other reason (37 stops). The data also indicated 98 of these stops resulted in the vehicle being searched. Stops that were made for what would seem to be more minor traffic-related violations such as equipment or inspection violations, registration violations, speeding and other traffic violations resulted in a

significantly higher proportion of minority drivers who were arrested than white drivers arrested. However, it is not possible to determine the reason for the arrest and it is assumed that the officer made some additional determination during the stop that a more significant violation had occurred. Unlike many infraction violations, officers have little or no discretion in the arrest of a person when certain, more serious violations[12] are identified.

Search Information

A review of department search information shows that 6.8% (178) of the drivers stopped in North Smithfield were subjected to a motor vehicle search. This rate of motor vehicle searches is greater than the state's 3.4% average. Stops of black drivers resulted in a search at more than twice the rate of white drivers (11.5% black drivers searched compared to 5.8% white drivers). Stops of Hispanic drivers resulted in a search at almost 1.5 times the rate of white drivers (8.2% of Hispanic drivers searched compared to 5.8% of white drivers).

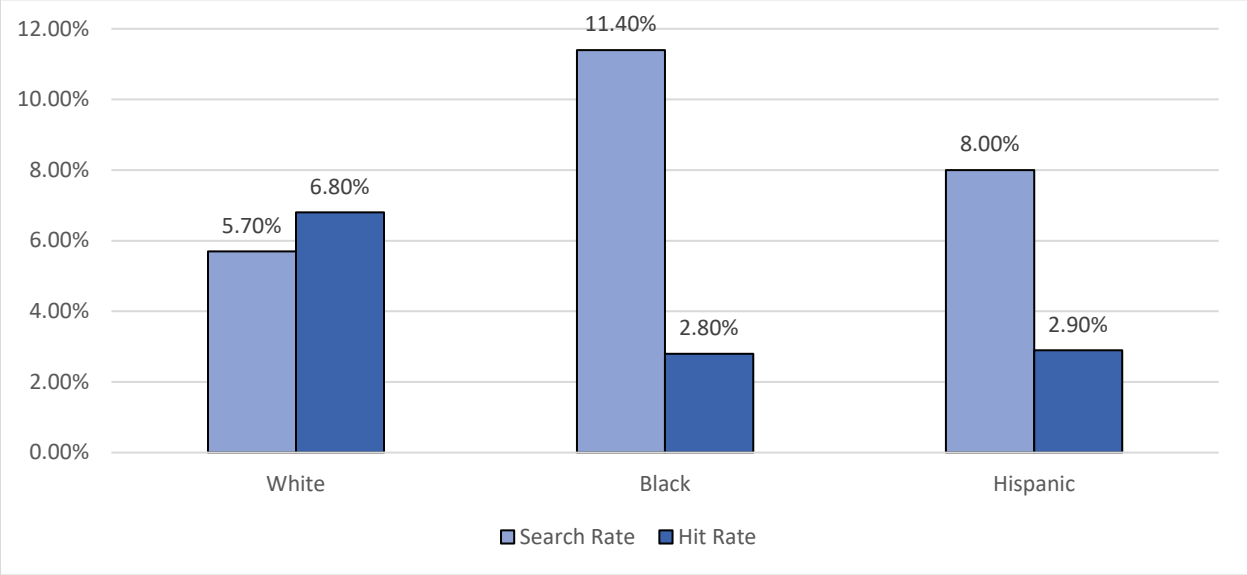
Police officers have the legal authority to search a motor vehicle under several circumstances. One of those circumstances is for the purpose of taking inventory of the items in a motor vehicle prior to taking custody of the vehicle. Certain violations require the officer to tow or impound the vehicle. The North Smithfield Police Department motor vehicle inventory policy states, *"Pursuant to Department's authority to protect public safety, and to seize and remove motor vehicles from the streets and highways of this town, it shall be the Department's policy that any towed, impounded, or unlocked abandoned/disabled motor vehicle be inventoried and properly recorded."* Due to the department's policy, inventory searches are considered non-discretionary, which could impact the search disparity. Unfortunately, data is not available on the number of vehicles subject to an inventory search to explore this further.

Disparities identified in the search information should be viewed with caution. A number of reporting errors occurred in 2016 that impacted the quality of the search data for the entire state of Rhode Island. In particular, the contraband rate may not reflect the actual number of instances an officer found contraband. In North Smithfield, the dataset only identified nine instances where contraband was found as a result of a search. However, 98 drivers subjected to a search were arrested. It is likely that a number of these arrests were the result of the search. Therefore, drawing any conclusions based on the search information would be inappropriate at this time[13]. Figure 4.3 illustrates the percentage of searches and the rate at which contraband was found (the "hit rate").

[12] Most violations of the motor vehicle laws are designated as infractions but some are not. The more serious violations can be reckless driving, operating under a license suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle.

[13] Statewide training was conducted in early 2017 to address a number reporting errors, including reporting errors of search information.

Figure 4.3: Search and Hit Rate



Summary of Findings

The North Smithfield Police Department identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified Route 146 and the Park Square area as major traffic generators for the town. Route 146 is a major north-south freeway that connects Providence to Worcester, Massachusetts. The corridor is a limited access highway for most of its 16-mile length, with just over six miles running through North Smithfield. The Park Square area is a small geographic area on the eastern side of town bordering Lincoln and Woonsocket. Most of the Park Square area is open space, but the main route in the area, the Eddie Dowling Highway, is a densely commercial area with shopping, entertainment, and restaurants. It is evident by the number of traffic stops made in the Park Square area and more specifically on the Eddie Dowling Highway that more departmental resources are concentrated there. Over 64% of all traffic stops occurred in the Park Square patrol area, with 16% of the stops involving black drivers and 21% of the stops involving Hispanic drivers. Approximately 66% of the stops in the Park Square area occurred on the Eddie Dowling Highway, which also accounted for 35% of all stops in North Smithfield. The overall percentage of traffic stops involving minority drivers was significantly greater than the town average on this roadway (43% of drivers stopped were non-white).

North Smithfield's traffic stop data also reflects an extremely low non-white driving age resident population and the relatively large proportion of non-town residents who make up the majority of people who were stopped in North Smithfield. Since 95% of all drivers stopped in North Smithfield were non-residents, the overall impact out-of-town drivers had on the stop data is fairly clear. Approximately 99% of black and Hispanic drivers stopped were not residents, compared to 89% of white drivers who were non-residents. The non-resident component of the stop demographics appeared to have its greatest impact in the Park Square area, with 95% of the drivers stopped not living in North Smithfield. The Park Square area was responsible for 80% of the non-resident Hispanic drivers stopped and 83% of the non-resident black drivers stopped compared to only 59% of the non-resident white drivers stopped. Non-resident drivers were more likely to be stopped in the Park Square area than they were in all other patrol areas in town. The driving populations in the

border towns of Lincoln and Woonsocket, which the Park Square area borders, are significantly more diverse than the driving population in North Smithfield.

Traffic Stop Outcomes

Equipment or inspection violations were the largest category of stops made in North Smithfield (37%). The next largest category of stops was for speeding violations (29%), and the third stop category was for other traffic violations (21%). Black and Hispanic drivers were more likely than white drivers to be stopped for an equipment- or inspection-related violation. In contrast, white drivers were more likely to be stopped for a speeding violation. Just over 37% of North Smithfield's stops were made for an equipment or inspection violation. This was significantly higher than the statewide average of 18.5%. Hispanic drivers were stopped 47% of the time for equipment- or inspection-related violations, and black drivers were stopped 39% of the time compared to 34% of the time for white drivers. Conversely, 53% of all the white drivers stopped in town were stopped for hazardous driving behaviors compared to 45% of black drivers and 36% of Hispanic drivers. These stops occurred more frequently in the Park Square area, with over 66% of all equipment- or inspection-related stops occurring in this area. The frequency and location of these stops in this patrol area and along the Eddie Dowling Highway appears to have been an important factor in the North Smithfield disparity involving black and Hispanic drivers.

Drivers stopped for equipment or inspection violations received a notice and demand 27% of the time. A notice and demand is typically given for non-moving violations when a vehicle has a defect that needs to be addresses. The notice provides the driver with five working days to fix the issue and have the vehicle inspected. Failure to correct the issue will result in a review by the traffic court. Drivers were also more likely to receive a warning as a result of an equipment or inspection violation compared to all other violations. Of the drivers stopped for equipment- and inspection-related violations, 50% resulted in a warning whereas only 40% of stops for all other types of violations resulted in a warning.

Overall, almost 40% of all drivers stopped received a warning, although as noted above, stops for equipment- or inspection-related violations were significantly more likely to result in a warning than any other type of violation. Over 11% of all drivers stopped were arrested, which was significantly above the statewide average of 3%. Black and Hispanic drivers were more likely to be arrested as a percentage of their total stops and less likely to receive a citation. The racial demographics of the individuals arrested as a result of a traffic stop were 55% white, 16% black, and 27% Hispanic. The majority of arrests (76%) occurred in the Park Square patrol area. Unfortunately, it is not possible to determine the reason for an arrest, but presumably the officer made some additional determination beyond the reason for the stop that an offense occurred warranting an arrest.

North Smithfield police searched the vehicles of 6.8% of drivers they stopped, which is twice the statewide average of 3.4%. Black drivers were searched at twice the rate of white drivers and Hispanic drivers were searched 1.5 times as often as white drivers were. Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate may not reflect the actual number of instances an officer found contraband. Therefore, we would caution against drawing any conclusions in this regard.

Conclusion

Taken as a whole, the North Smithfield traffic stop data reflects the influence of the Park Square area where drivers are somewhat more diverse than the predominantly white resident driving age population. The Park Square area appears to have a relatively high level of enforcement and a relatively higher proportion of non-resident minority drivers travelling it. The Park Square area is a significant traffic magnet for business, shopping, and entertainment, particularly along the Eddie Dowling Highway. The Eddie Dowling Highway is a major thoroughfare from Woonsocket and Lincoln to Providence.

White drivers are more likely to be stopped in North Smithfield than black or Hispanic drivers for most types of hazardous driving behaviors. Black and Hispanic drivers are more likely to be stopped for vehicle equipment or inspection violations. Our analysis indicates that this difference is likely due more to the greater frequency with which these stops were made on high enforcement roadways, where minority drivers are more likely to be among the driving population, rather than to an inherently greater likelihood that minority drivers violate these laws more frequently than white drivers.

Based on the overall follow-up analysis of the North Smithfield data, it is recommended that the North Smithfield Police Department:

(1) review its traffic enforcement policies in the Park Square area, and more specifically along the Eddie Dowling Highway and
(2) evaluate both the location and frequency of stops that involve equipment- or inspection-related motor vehicle violations.

I.D: PROVIDENCE FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Traffic Stop Data Analysis and Findings, 2016 report conducted by the Institute for Municipal and Regional Policy at Central Connecticut State University. The report is published as part of the Comprehensive Police-Community Relationship Act of 2015. This follow-up report on Providence focuses on data reported between January 1, 2016 and December 31, 2016. Table 1.0 below is a summary of racial data for reported traffic stops in Providence during the study year.

Table 1.0: Providence Traffic Stops – 2016

Race/Ethnicity	Traffic Stops January 1, 2016 – December 31, 2016	
White	3,275	33.5%
Black	2,641	27.0%
Asian	336	3.4%
Native American	14	0.1%
Hispanic	3,521	36.0%
Total	**9,787**	

Overview of the Traffic Stop Analysis and Findings, 2016 report

The 2016 Traffic Stop Analysis report indicated that for the January 1, 2016 – December 31, 2016 study period the Providence Police Department made 9,787 traffic stops. Of these, 66.5% were minority stops (36% Hispanic and 27% black). The Solar Visibility analysis indicated a statistically significant disparity in the rate that both black and Hispanic motorists were stopped during daylight hours relative to darkness. Within the inter-twilight window, the odds that a stopped motorist was black increased by 1.3, while the odds that a stopped motorist was Hispanic increased by 1.2 during daylight. These results were statistically significant at a level greater than 95% level and robust to the inclusion of a variety of controls, officer-fixed effects, and a restricted sample of moving violations. Although certain assumptions have been made in the design of each methodology, it is reasonable to conclude that departments with consistent data disparities separating them from the majority of other departments should be subject to further review and analysis with respect to the factors that may have caused these differences.

It is also important to note that the Providence Police Department uses a different system for collecting and reporting traffic stop records than all other departments in Rhode Island. Unfortunately, the design of this system caused an indeterminate number of traffic stop records to be reported with the incorrect date and/or time. During the study year, the system was designed to capture the date and time of the stop based on the date and time when the officer completed the stop survey. In many cases, the officer completed the stop survey immediately following the stop. However, there were circumstances where officers may not have completed the stop survey until much later. The system was modified in May 2017 when the department became aware of the problem. Although a data issue was present during the study year, we do not believe it affects our ability to conduct a thorough follow-up analysis of the Providence Police Department data.

Descriptive Analysis of the 2016 Traffic Stop Data

The racial and ethnic disparities in the Providence Police Department data were studied using a more detailed review of traffic enforcement during the analysis period. Part of the analysis involved reviewing the detailed location descriptions provided by the department and any enhancement we were able to make. Providence officers record the location of a traffic stop by patrol districts. The city is divided into nine patrol districts. Although we are unable to determine the specific street location of each stop, the patrol districts provide us with enough information to assess how neighborhoods change within the city.

According to the 2010 census, Providence is a city with approximately 141,375 residents over the age of 16. Approximately 57% of the driving age population in Providence is identified as a minority. Table 2.0 outlines the basic demographic information for Providence residents over age 16.

Table 2.0: Providence Population

Race/Ethnicity	16+ Population Total	% Population Total
White Non-Hispanic	60,987	43.1%
Black Non-Hispanic	17,569	12.4%
AsPac Non-Hispanic	9,359	6.6%
Hispanic	47,411	33.5%
Other	6,049	4.4%
Total	**141,375**	

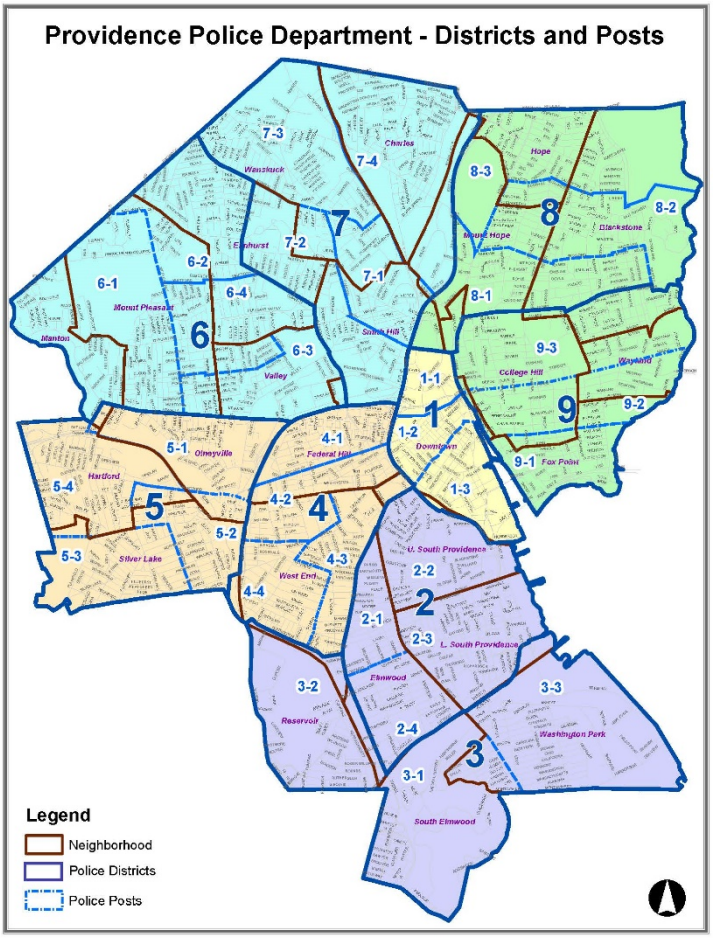
Providence is the most populous city in Rhode Island and is the state capital. It is approximately 20.5 square miles in area and is located at the head of Narragansett Bay. Five other municipalities border Providence: Cranston to its south, Johnston to its west, North Providence and Pawtucket to its north, and East Providence to its east. The Providence and Seekonk rivers separate Providence from East Providence. Cranston, Johnston, North Providence, and East Providence are all predominantly white demographically, with an average white driving age population of 85% (compared to Providence's white driving age population of 43%). Pawtucket has a significantly more diverse population than other bordering town with only a 61% white population. Of the drivers stopped in Providence, 62% were residents of the city while 38% were not. The town does appear to be impacted by traffic from surrounding communities, but a large percentage of traffic stops involved its own city residents.

Providence is a very compact city with over 1,000 streets running through it. A number of the major roadways and highway corridors converge in the downtown area. Interstate 95 (I-95) runs from north to south through Providence. Interstate 195 (I-195) connects the city to eastern Rhode Island and southeastern Massachusetts from the I-95 interchange at exit 19. Route 146 is a major north-south freeway that connects Providence to Worcester, Massachusetts. The route begins at the interchange with I-95 and continues north to the North Providence town line. U.S. Route 6 also runs through Providence from the I-95 and I-195 interchange west to the Johnston border. Finally, U.S. Route 1 runs parallel to I-95 from the Pawtucket border to downtown Providence.

The Providence Police Department divides the city into nine patrol districts and 31 police posts within those districts. Figure 1.1 is a map that outlines the patrol districts in Providence, referred to throughout this report. Each patrol district is responsible for a number of the 25 neighborhoods within the city. District 1 covers downtown Providence, which is the smallest geographic area.

District 2 is located just south of downtown and includes three neighborhoods: Upper South Providence, Lower South Providence, and Elmwood. District 3 borders Cranston and includes the South Elmwood, Reservoir, and Washington Park neighborhoods. District 4 is located west of downtown and includes the Federal Hill, and West End neighborhoods. District 5 borders Johnston and includes the Olneyville, Silver Lake, and Hartford neighborhoods. District 6 is located in the northwest part of the city and includes the Manton, Mount Pleasant, Elmhurst and Valley neighborhoods. District 7 is located in the north central part of the city and includes the Wanskuck, Charles, and Smith Hill neighborhoods and part of the Elmhurst neighborhood. District 8 is located in the northeast corner of the city bordering Pawtucket and includes the Blackstone, Mount Hope and Hope neighborhoods. Finally, District 9 is located east of downtown to the waterfront and includes the Fox Point, Wayland, and College Hill neighborhoods. Brown University is located in district 9 and there are also a number of entertainment establishments in the area.

Figure 1.1: Providence Patrol District Map



The Providence Police Department provided the research team with the demographic makeup of each patrol district. The boundaries that make up each patrol district closely follow the boundaries used by the U.S. Census Bureau to divide Providence into census tracts. Therefore, we are able to better understand the demographic makeup of each patrol district within the city. The resident population in each district varies from a low of 4,700 residents to a high of 29,000 residents, with the largest concentration (16% of the total population) in District 7. Figure 1.2 shows the distribution for each district in terms of white and non-white driving age population.

Figure 1.2: Age 16 and Older Resident Population by Census Tract

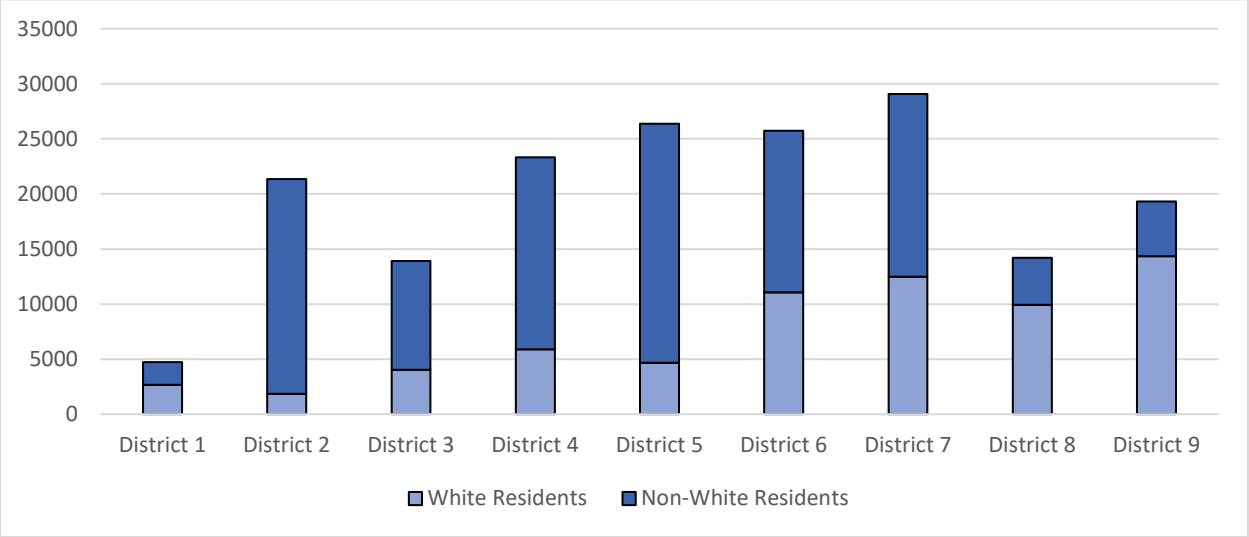
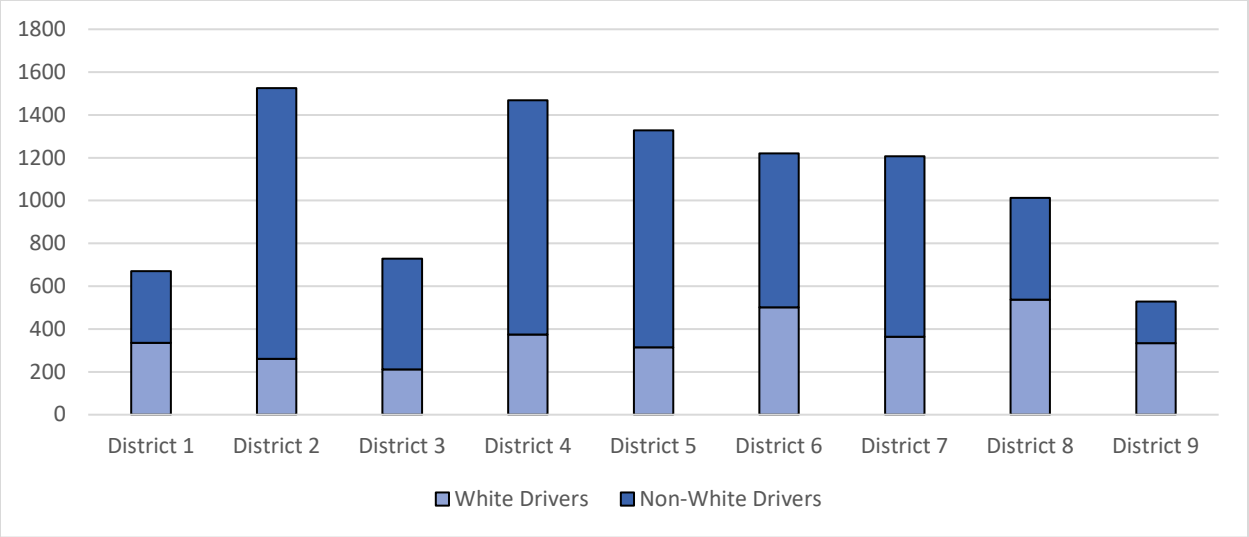


Figure 1.3 illustrates the volume of traffic enforcement that occurred in each patrol district. Traffic enforcement is not necessarily distributed based on the size of the population in each district. For example, the largest proportion of traffic enforcement activity (31%) occurred in patrol districts 2 and 4, which is directly west of downtown, but only 25% of the cities resident population live in these two districts. On the other hand, District 7 is the most heavily populated district in Providence with 16% of the city population, but only 12% of the traffic stops.

Figure 1.3: Traffic Stops by Patrol District



Traffic Stop Breakdown by Race/Ethnicity

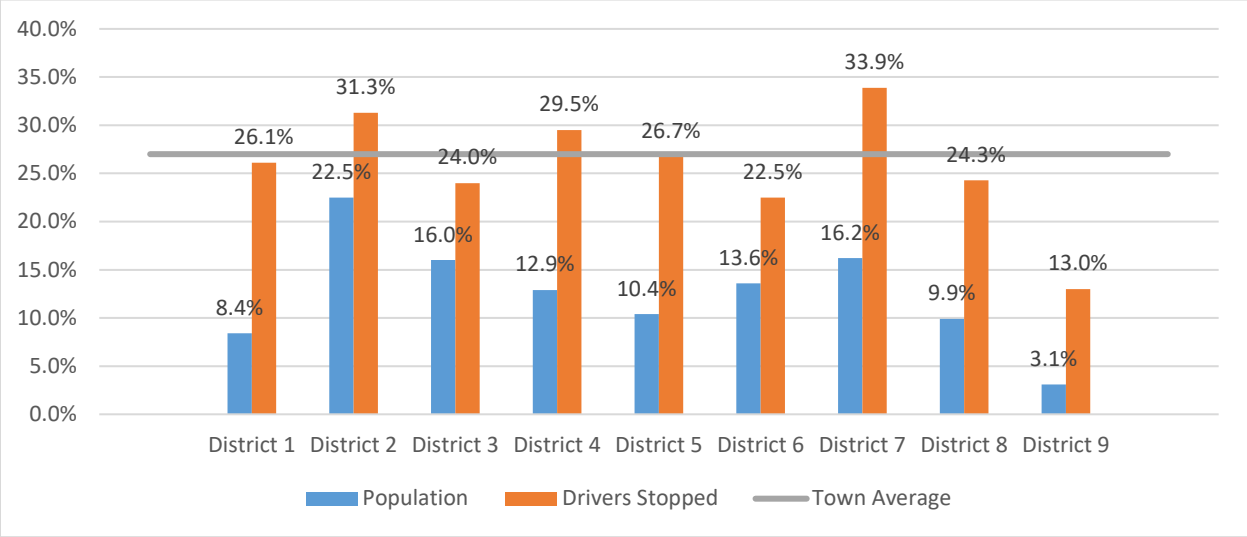
In Providence, 66.5% of all drivers stopped were minority drivers, classified as all non-white drivers, but predominantly black or Hispanic drivers. Black non-Hispanic drivers comprised 27% of all drivers stopped in Providence, Hispanic drivers 36%, White non-Hispanic drivers 33.5%, and 3.5% were drivers of other races. Providence's resident driving age population is 57% minority (12.4% black non-Hispanic, 33.5% Hispanic, 6.6% Asian/Pacific Islander, and 4.4% other races). If compared

directly, these sets of figures could suggest the presence of a disparity with respect to minority drivers, but other factors must be considered before drawing such a conclusion and the disparate effect varies based on the racial and ethnic makeup of the different patrol areas of Providence. Generally speaking, the analysis tends to show that any disparities seem to be affecting black drivers to a greater degree than Hispanic drivers.

Figure 2.1 shows the difference between the local black resident population and the black drivers stopped by patrol district. One general observation that can be made from this figure is that, regardless of patrol district, black drivers were stopped in greater proportion to the localized residential population of blacks within the patrol district. The differences between the proportion of black drivers stopped within a district and the proportion of black residents within the district ranged from a low of eight percentage points in District 3 to a high of 17.7 percentage points in districts 1 and 7. District 1 is the downtown district of Providence and one of its busiest commercial and entertainment areas.

The overall percentage of Providence traffic stops involving black drivers was 27%. The percentage of black drivers stopped exceeded this town wide average in three patrol districts (2, 4, and 7). These three patrol districts accounted for 50% of all the black drivers stopped in Providence. Black drivers stopped were significantly more likely to be residents of Providence (76%) than were the white drivers stopped (36%). The relative effects non-resident drivers had on the Providence stop demographics will be discussed in more specific detail in a later section of this analysis.

Figure 2.1: Black Population Compared to Black Drivers Stopped by Patrol District



The racial disparity for black drivers in Providence may be even greater than it might appear in the analysis considering the fact that a fairly large percentage of Hispanic drivers in Providence were also identified as black racially, but were counted as only Hispanic. For purposes of our analysis we consider Hispanic drivers as a distinct racial category. For example, if a driver is recorded as both white and Hispanic they are considered as only Hispanic in the analysis. This is done to allow researchers to make more appropriate comparisons among the three groups without double counting Hispanic drivers. This usually has little or no impact on our black driver comparisons since the majority (over 80%) of Hispanic drivers stopped are also identified as white. However, in Providence a sizable percentage of Hispanic drivers were also identified as black (25%). There were

897 drivers stopped that were reported as black and Hispanic (over 9% of all drivers stopped.) If these drivers were to be considered as part of the total number of black drivers stopped, the disparity becomes even greater, from a high of 47% in District 2 to a low of 20% in District 9. While black non-Hispanic drivers accounted for 27% of all stops made in Providence, inclusion of black Hispanic drivers in the black driver analytical sample would increase this number to 36%. Figure 2.2 helps to illustrate how the disparities for black drivers would change in each patrol district if black-Hispanic drivers were added to the black driver stop totals, instead of being considered only Hispanic drivers.

Figure 2.2: Relative Difference between Black Non-Hispanic and Black Hispanic Drivers Stopped by Patrol District

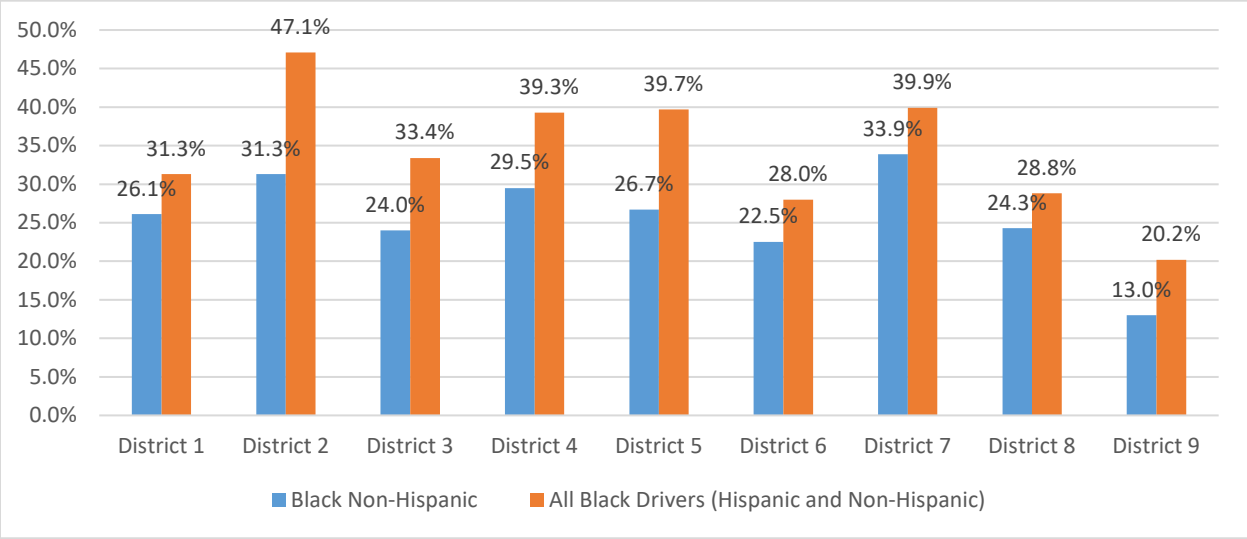
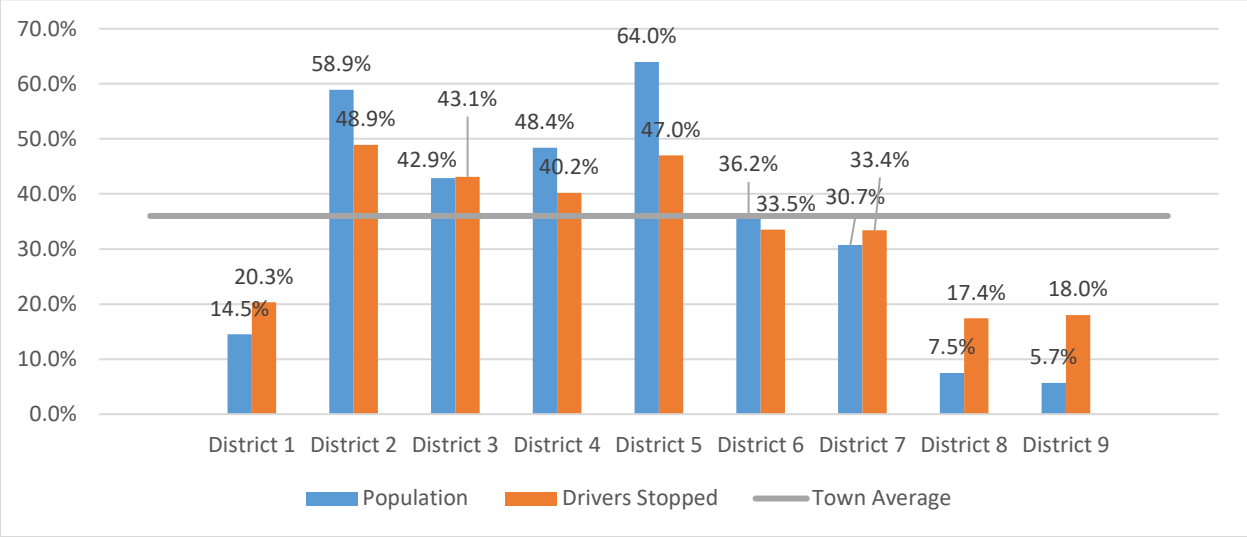


Figure 2.3 shows the difference between the local Hispanic resident population and the Hispanic drivers stopped by patrol district. The overall percentage of traffic stops involving Hispanic drivers was 36%. The percentage of Hispanic drivers stopped exceeded the city average of 36% in four patrol districts (2, 3, 4, and 5). In four patrol districts (1, 7, 8, and 9), there was a larger percentage of Hispanic drivers stopped than their representation in the local population. The largest disparities were in patrol districts 8 and 9. Over 76% of all Hispanic drivers stopped were residents of Providence compared to only 36% of white drivers.

Figure 2.3: Hispanic Population Compared to Hispanic Drivers Stopped by Patrol District



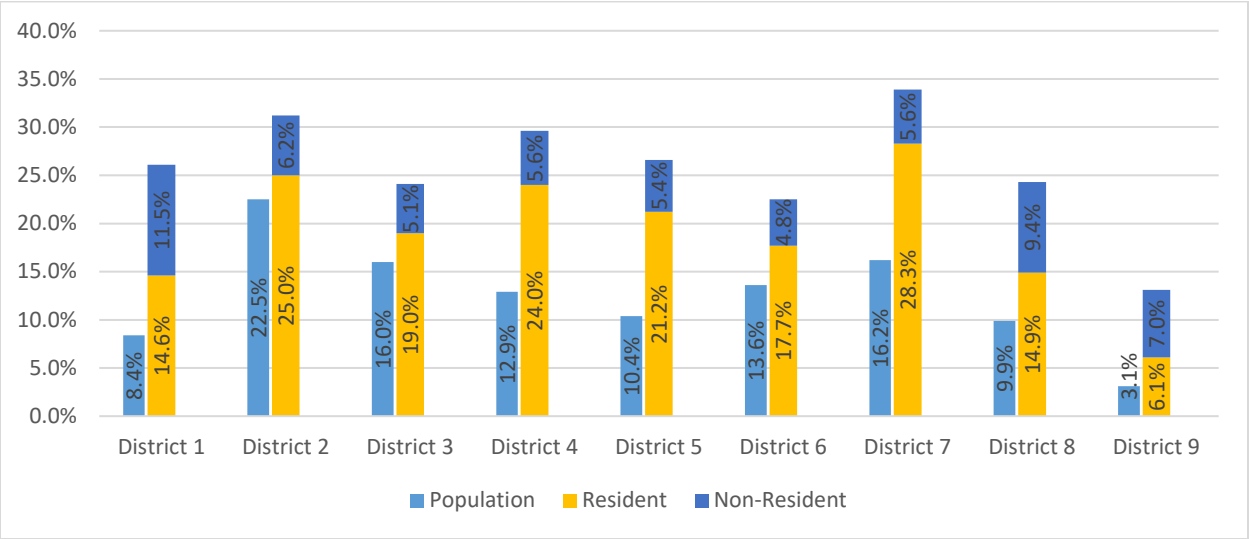
Resident/Non-Resident Component of Providence Traffic Stops

Providence's traffic stop data tended to reflect to a great degree the impact that resident minority drivers had on the overall racial disparity in the stop data. Providence's resident driving age population is estimated as 43% white, 12% black, 34% Hispanic, 7% Asian/Pacific Islander and 4% other. The demographics of the Providence residents stopped during the study year showed a disparity for both black and Hispanic drivers. The racial demographics of the resident drivers stopped were 19% white, 33% black, 44% Hispanic, and 4% other. Comparatively speaking, a larger proportion of black and Hispanic drivers were stopped than their proportion of the resident driving age population, while a significantly smaller proportion of white drivers were stopped than their proportion of the resident driving age population.

On a town wide basis, non-residents accounted for 38% of the drivers stopped. This percentage was fairly consistent for six of the nine patrol districts (2, 3, 4, 5, 6, and 7) where the non-resident component of the drivers stopped ranged from 26% to 37%. However, in the other three patrol districts (1, 8, and 9) non-resident drivers comprised from 53% to 63% of the drivers stopped. This appears to be related to the percentage of minority drivers stopped in the district. For example, in District 2 where the highest percentage of minority drivers were stopped (83%) there was also the highest percentage of resident drivers stopped (74%). In contrast, District 9 stopped the lowest percentage of minority drivers (37%) and the lowest percentage of resident drivers (37%).

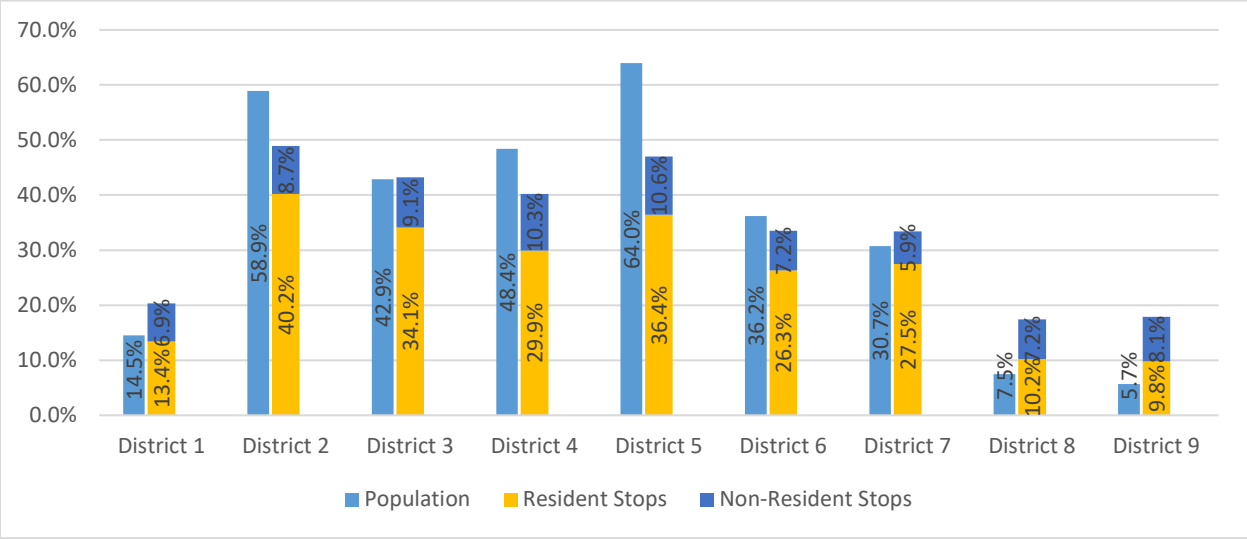
Black drivers stopped were much more likely to be residents of the city than were white drivers. Black drivers accounted for 33% of the resident drivers stopped in Providence, but were only 12% of the resident population. Over 76% of all black drivers stopped were residents of Providence, which was significantly greater than for white drivers stopped, of whom only 36% were residents. With the exception of District 9, more black resident drivers were stopped in each patrol district than out-of-town black drivers. If all of the out-of-town black drivers are factored out of the dataset, sizable disparities still remain for most of the patrol districts when compared to the local population. Figure 3.1 shows the difference between the local black resident population and black drivers stopped by patrol district. It highlights the relative addition non-resident black drivers made to each district's disparity. As can be seen, the non-resident contribution was relatively small in most of the districts.

Figure 3.1: Black Population Compared to Black Drivers Stopped by Patrol District



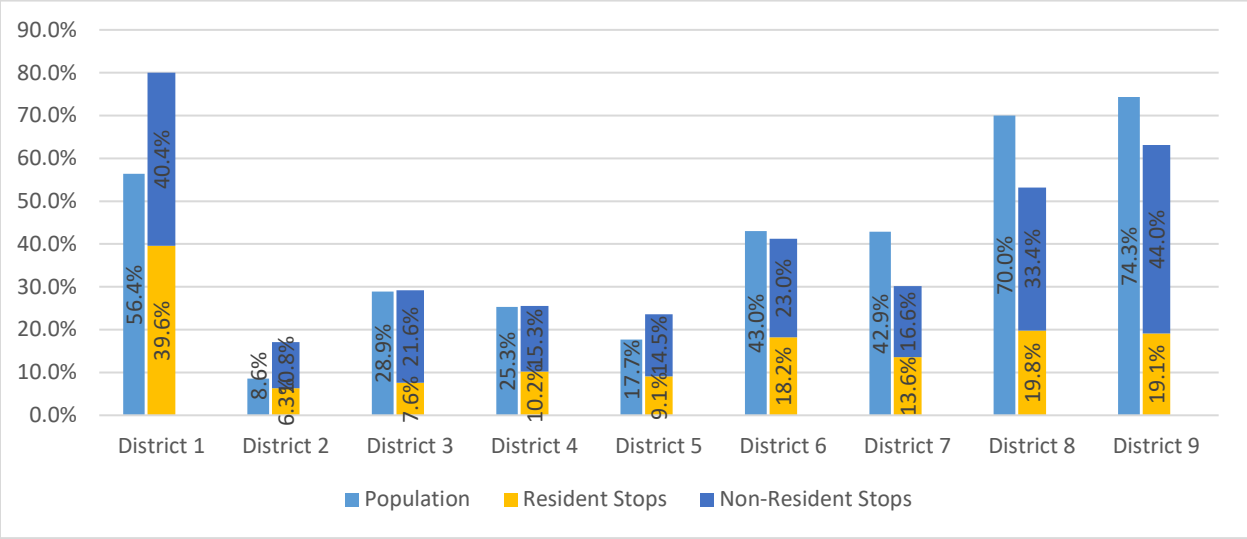
Hispanic drivers were also significantly more likely to be residents of the city compared to white drivers. Hispanic drivers accounted for 44% of the resident drivers stopped in Providence, but were 34% of the resident population. Over 77% of all Hispanic drivers stopped were residents of Providence, which was significantly greater than white drivers, of whom only 36% were residents. A greater percentage of Hispanic residents were stopped in each patrol district than out-of-town Hispanic drivers. However, only in districts 8 and 9 were more Hispanic residents stopped than their representation in the local population. Figure 3.2 shows the difference between the local Hispanic resident population and the Hispanic drivers stopped by patrol district. Taken as a whole, except for districts 1, 8, and 9, Hispanic drivers did not appear to be stopped with greater frequency than would be expected based on their localized population within each patrol district. In those three districts the non-resident component of the Hispanic driver demographics had a significant effect on the overall size of the disparity. The chart highlights the percentage of out-of-town versus town residents stopped in each district.

Figure 3.2: Hispanic Population Compared to Hispanic Drivers Stopped by Patrol District and Residency



Unlike black and Hispanic drivers, white drivers were much more likely to be from out-of-town. The majority of white drivers stopped (64%) were not residents of Providence and they also accounted for the largest percentage of out-of-town drivers stopped in Providence (57%). This might be expected given that Providence is a major employment center and entertainment destination for communities throughout Rhode Island and surrounding states. According to the "Local Employer Household Dynamics" database developed by the U.S. Census Bureau, there are over 90,000 people that work in Providence, but live elsewhere and more than 85% of them were estimated to be white. A higher percentage of out-of-town white drivers were stopped than white residents in all nine patrol districts. There was a larger percentage of white drivers stopped in districts 1, 2, and 5 than their representation in the local population, but non-residents were a significant proportion of the overall disparities in each of these districts, as they were in all districts. Figure 3.3 shows the difference between the local white resident population and the white drivers stopped by patrol district. The chart also highlights the percentage of non-residents versus residents stopped in each district.

Figure 3.3: White Population Compared to White Drivers Stopped by Patrol District and Residency



Post-Stop Outcome Review

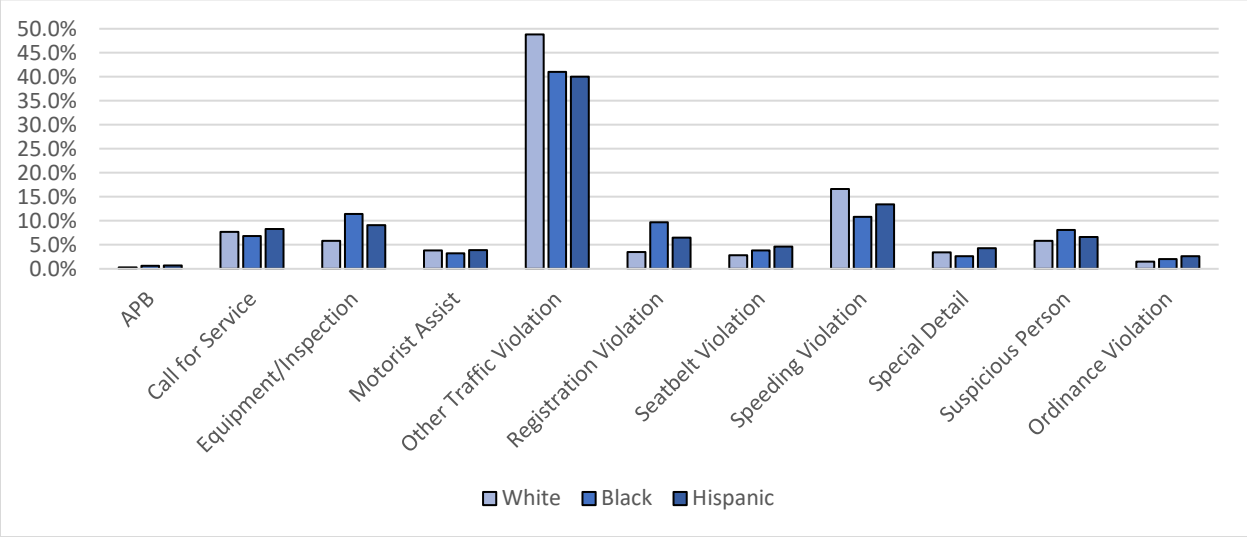
Basis for Stops

The reasons police use to stop a motor vehicle can vary significantly from department to department. We reviewed the basis for the stop that Providence officers reported as the reason for stopping motor vehicles. The three most common reasons for stopping a motorist in Providence made up 66% of the total stops. The three largest stop categories were for Other Traffic Violations[14] (44%), speeding violations (14%), and equipment/inspection violations (8.5%). Figure 4.1 illustrates by race and ethnicity the reason officers cited to stop a motor vehicle.

Providence reports significantly more drivers being stopped for "Other" traffic violations (44%) compared to the statewide average (27%). The classification system that police in Rhode Island use to report traffic stops includes 12 categories. If a stop is made for a reason other than one of the 11 specific categories (i.e., speeding, registration violation, seatbelt violation, motorist assist, etc.), then the stop is recorded as "Other." Unfortunately, it is impossible to determine the seriousness of the violation because this category is fairly broad. White drivers are more likely to be stopped for "Other" traffic violation than black or Hispanic drivers (49% white drivers compared to 41% black drivers and 40% Hispanic drivers.). These stops are also reported at a higher rate than the city average in districts 1, 5, 8, and 9. With the exception of District 5, white drivers are more likely to be stopped in the districts with higher rates of "Other" traffic violation stops, which would help to explain some of the disparity.

[14] If a stop was made for a reason other than one of the 11 categories listed as the basis for the stop, it is recorded as "other traffic violation." Some examples of stops that might be recorded as "other traffic violation" include a traffic light violation or stop sign violation.

Figure 4.1: Reasons for Traffic Stops



While white drivers were stopped more frequently than black or Hispanic drivers for more hazardous driving violations as a percentage of their total stops, black and Hispanic drivers were stopped more frequently for equipment- or inspection-related violations than white drivers as a percentage of their total stops. The data show that the frequency and location of stops made for equipment- or inspection-related reasons appear to have a lot to do with the overall racial and ethnic demographics of those stopped. When these types of stops are made more frequently in locations where there are higher concentrations of minority drivers, they tend to result in higher proportions of minority drivers being stopped than white drivers. However, in many places, the data also shows that when these same types of stops are made in areas with a higher concentration of white drivers, the stop demographics shift toward white drivers, suggesting that the likelihood of finding violators may be more dependent on location and frequency of use than on race.

As an example, there were 174 equipment- or inspection-related stops in patrol District 2. The resident population in this patrol district is 91% non-white. Of the 174 equipment or inspection stops, the demographics for these stops were 47% Hispanic drivers, 37% black drivers, and 13% white drivers. On the other hand, there were 112 equipment- or inspection-related traffic stops in patrol District 8. The resident population in this patrol district is 30% non-white. Of the 112 equipment or inspection stops, the demographics for these stops were 19% Hispanic drivers, 31% black drivers, and 46% white drivers. It is important to note that 52% of all equipment- or inspection-related stops occurred in the three patrol districts (2, 4, and 5) with the highest percentage of non-white residents.

The traffic stop information also indicates that speed-related motor vehicle enforcement tends to occur in areas with a higher concentration of white drivers. There were 248 speed-related stops in patrol District 8. The resident population in this patrol district is 30% minority. Of the 248 speed-related stops, the demographics for these stops were 15% Hispanic drivers, 18% black drivers, and 63% white drivers. On the other hand, there were 114 speed-related traffic stops in patrol District 2. The resident population in this patrol district is 91% non-white. Of the 114 speed-related stops, the demographics for these stops were 40% Hispanic drivers, 33% black drivers, and 23% white drivers.

It is important to note that 57% of all speed-related stops occurred in the three patrol districts (4, 6, and 8) with an average non-white resident population that mirrored the city as a whole.

These patterns for both equipment- or inspection-related violation stops and speed-related violation stops seem to suggest that the stop location is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. In other words, if speed enforcement occurs more frequently in areas more likely to be traversed by white drivers, they are more likely to represent a higher rate in the stop demographics. Conversely, if equipment- or inspection-related enforcement occurs more frequently in areas more likely to be traversed by black or Hispanic drivers, they are more likely to be represented in the stop demographics at a higher rate. However, it would be inappropriate to conclude that white drivers are more likely to speed or minority drivers are more likely to have an equipment or inspection violation.

Officers frequently rely on modern technology-based enforcement techniques, like using radar or a laser device, to make speeding stops. Depending on the types of locations and vehicle travel speeds involved, using technology-based enforcement techniques is sometimes considered to be "blind," that is, the officer may have a reduced opportunity to specifically identify driver characteristics before making a decision to act than with other types of violations after a more direct and frequently prolonged observation of the vehicle is possible. At least theoretically, if all speeding stops could be considered blind with respect to predetermination of drivers' racial characteristics, they could possibly provide a useful if clearly imperfect window into the general racial makeup of drivers driving in an enforcement area.

Unfortunately, because the data available from Rhode Island does not capture information on technology-based speeding stops, it seems reasonable to assume that a significant portion to Providence's speeding stops were probably technology-based and the following analysis is based on that assumption. The demographics for all speed-related stops in Providence were 35% Hispanic drivers, 21% black drivers, 34% Asian and other drivers, and 40% white drivers. There was a higher percentage of white drivers stopped for speed-related violations compared to their overall proportion of all other stops made (40% compared to 32%). However, black drivers were stopped at a lower rate for speed-related violations and Hispanic drivers were stopped at almost an equivalent rate to their overall proportion of all stops (Black drivers – 21% compared to 28% and Hispanic drivers – 35% compared to 36 %.) If, arguably, speeding stops might represent a better proxy of the actual driving population at any given time than all stops considered together, speeding stops may actually help to mitigate what could be a larger disparity in all stops not related to speed.

Outcome of Stops

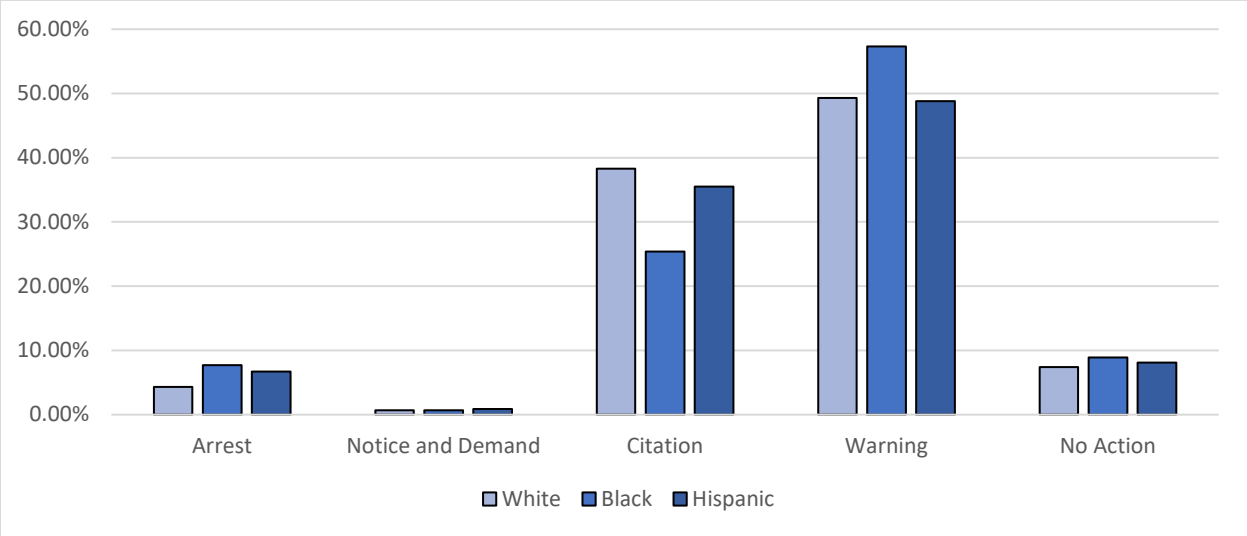
In the majority of stops in Providence the driver received a warning (52%). Black drivers were more likely to receive a warning as a percentage of their total stops than white or Hispanic drivers were. Conversely, white and Hispanic drivers were more likely to receive a citation compared to black drivers. Black and Hispanic drivers were arrested at a higher rate than white drivers were. Figure 4.2 shows the outcome of motor vehicle stops by race and ethnicity.

The racial and ethnic disparities identified in the warning versus citation rates is unsurprising given the correlation with the disparity also identified in the basis for the stop. The violations that affected minority drivers at a disproportionate rate were more likely to result in a warning (i.e., equipment or inspection violations and registration violations) and the violations that disproportionately affected white drivers were more likely to result in a citation. For example, minority drivers were

more likely to be stopped for an equipment- or inspection-related violation and 75% of these stops resulted in a warning. Conversely, white drivers were more likely to be stopped for speed-related violations and 45% of these stops resulted in a warning.

In Providence, 587 of the stops resulted in the arrest of either the driver or a passenger (6%). This was twice the statewide average of 3% for stops resulting in an arrest. Of the 587 arrests, the driver of the vehicle was arrested in 544 cases and the passenger was arrested in 43 cases. The racial demographics of individuals arrested as a result of a traffic stop were 24% white, 34% black, and 41% Hispanic. When considered as a proportion of their total stops, black and Hispanic drivers were almost twice as likely to be arrested compared to white drivers (7% of all black drivers stopped and 6.5% of all Hispanic drivers stopped compared to 3.9% of all white drivers stopped). Unfortunately, we are unable to determine the reason for the arrest, but can identify why the vehicle was initially stopped. Of the 587 reported arrests, the basis for stopping a vehicle was an "other traffic violation" (165 stops), call for service (121 stops), suspicious person (84 stops), registration violation (52 stops), with the remaining arrests for some other reason (165 stops). Although the dataset doesn't allow researchers to determine the reason for the arrest, the assumption is that a more significant violation was identified.

Figure 4.2: Outcome of Traffic Stop



Search Information

A review of department search information shows that 5.1% (503) of the stops in Providence were reported as resulting in a search of either a motor vehicle or an occupant[15]. This rate of searches is greater than the state's 3.4% average. Black drivers were searched at a rate that was 2.2 times greater than white drivers were. Hispanic drivers were searched at a rate that was 1.6 times greater than white drivers were. Of the 503 reported searches conducted 23% were a driver or passenger frisk, 12% were a consent search, and 65% were unreported.

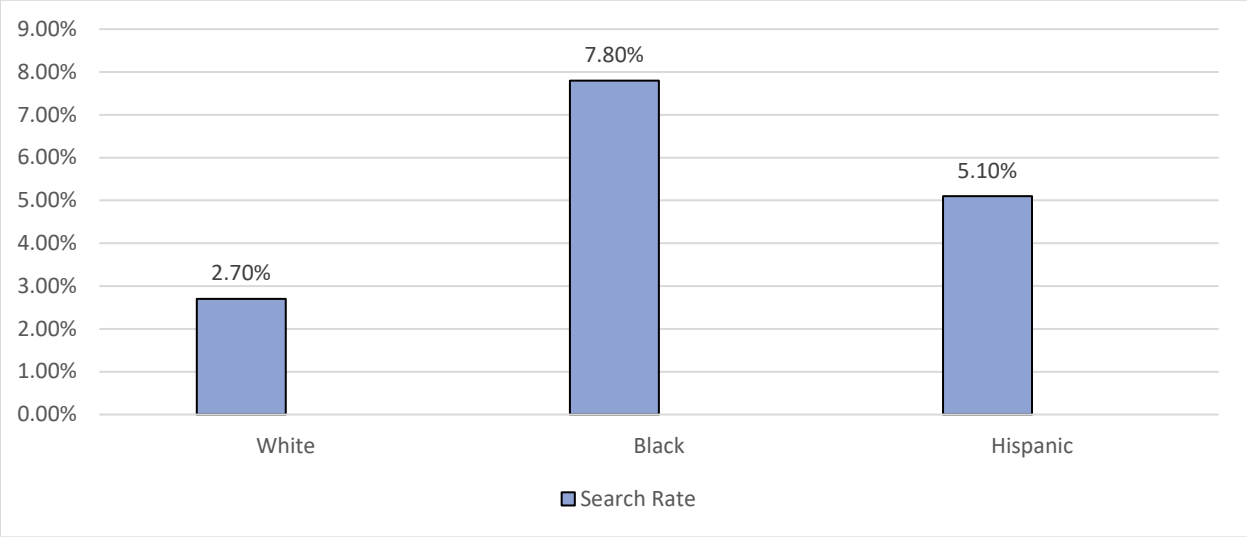
The racial disparity in searches can be related to the racial disparity identified in arrests. According to Providence's search and seizure policy, a search of a motor vehicle can be conducted incident to

[15] According to supplemental data provided by the department there were 717 searches (7.2%) in Providence in 2016.

arrest if (1) the arrestee is within reaching distance of the passenger compartment of the vehicle at the time when the search is conducted, or (2) if reasonable suspicion exists that evidence pertaining to the offense of arrest is present within the vehicle. Officers should also be conducting a search of all individuals they take into custody as a result of an arrest. Of the 587 traffic stops that resulted in an arrest, 47% resulted in a search. Officers reported searching a higher proportion of black drivers arrested than white or Hispanic drivers who were arrested (54% compared to 45%). However, based on the Providence search policy requiring an officer to search all people arrested it would be expected that all people arrested would be searched. Given this departmental policy, there appears to be a discrepancy between the search data and the arrest data. Due to this discrepancy it is difficult to draw any substantial conclusions about the relationship between racial disparities in arrests and searches. That being said, when we excluded searches that resulted in an arrest, black and Hispanic drivers were still searched at twice the rate of white drivers.

Unfortunately, we were also unable to determine the hit rate (rate at which contraband was found) for searches based on the data submitted to the state. This was the result of a data reporting error that occurred throughout the state in 2016. However, Providence was able to provide supplemental information from internal records which indicated that contraband was found 31% of the time. More specifically, drugs or drug paraphernalia was found 23% of the time, a weapon was found 3% of the time, alcohol was found 2.6% of the time and other contraband was found 2% of the time. Based on the format of the supplemental search information we were unable to determine additional characteristics, such as the race or ethnicity of the driver. Therefore, we can't determine if the greater search rate for black and Hispanic drivers also yields a greater rate of contraband. Given all the data reporting issues identified for search information in 2016, it would be inappropriate to draw any conclusions from this summary information. Figure 4.3 illustrates the search rate for drivers stopped in Providence.

Figure 4.3: Search Rate



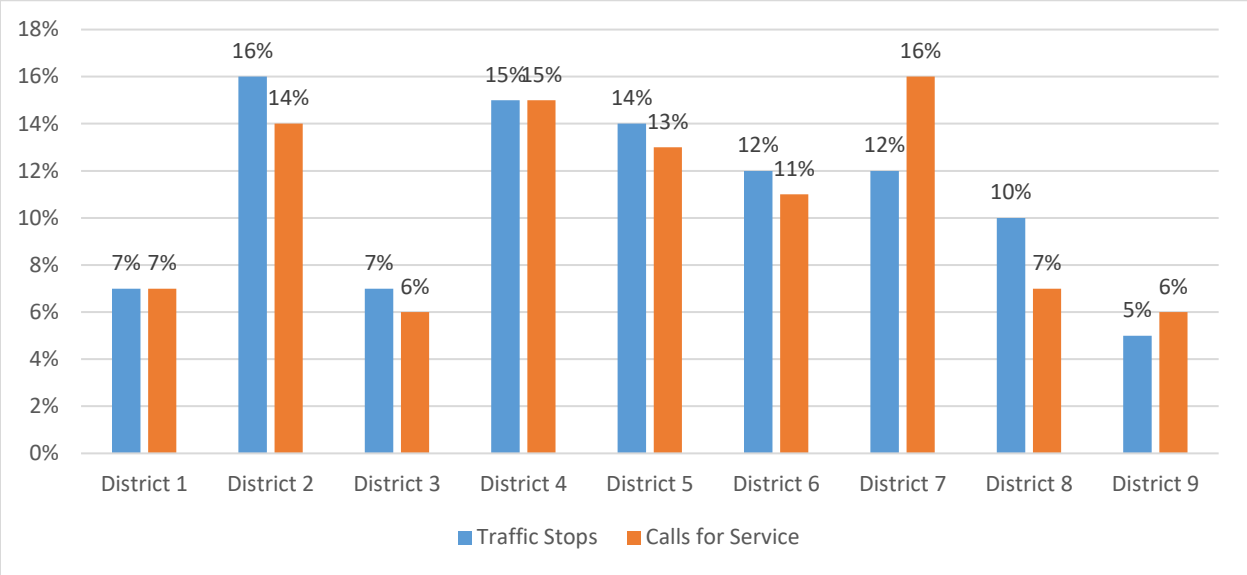
Calls for Service and Crime in Providence

Law enforcement administrators choose to deploy police resources within a community based on a number of different factors, including where calls for service are more prevalent and areas with higher rates of crime. Traffic enforcement actions are likely to be more prevalent in locations that

attract greater police presence due to these factors. Providence police administrators stated that calls for service and crime activity significantly impact police deployments throughout the city. Examining the distribution of Providence calls for service and crimes in more detail could provide additional insight into interpreting its traffic enforcement activities.

The department provided researchers with a summary of calls for service by patrol district, which included calls for service and officer initiated actions that were called into police dispatch. The logs report approximately 116,583 entries in 2016, exclusive of traffic stops. The top three reasons for calling dispatch were for a traffic accident, alarm at a business, or a suspicious person and these account for about 21% of all calls. The highest level of reported calls for service was in district 7 (16% of all calls), whereas the lowest level of reported calls for service was in districts 3 and 9 (6% of all calls for each district). There appears to be a correlation between calls for service and levels of traffic enforcement in most of the patrol districts, but the relationship is less clear in districts 7 and 8. Specifically, districts 2, 4, and 5 account for 42% of all the calls for service in Providence and are also the three most active districts with respect to traffic enforcement activity, accounting for 44% of all the traffic stops. However, districts 7 and 8 provide the sharpest contrast between the calls for service and traffic enforcement. District 7 has 16% of all the calls for service but only 12% of all traffic enforcement. District 8 experienced only 7% of the reported calls for service but had 10% of all the traffic enforcement. Figure 5.1 compares the overall percentage of calls for service occurring within each patrol district and the overall proportion of traffic stops made within the district.

Figure 5.1: Calls for Service by Patrol District

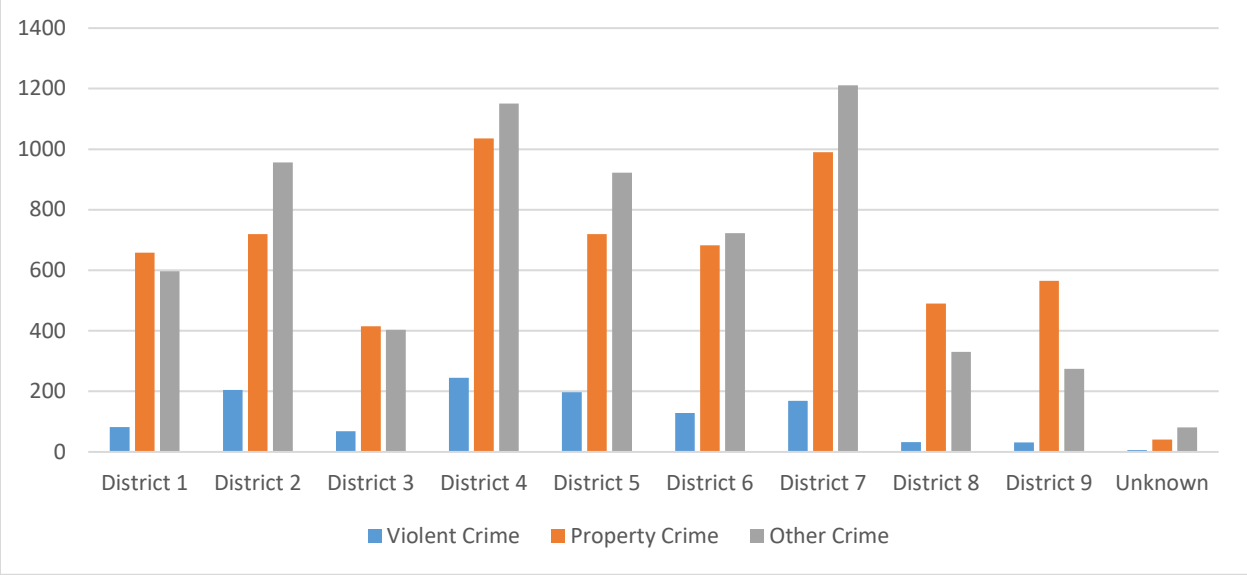


The Uniform Crime Reporting (UCR) program established by the Federal Bureau of Investigation divides offenses into two groups, Part I and Part II crimes. Typically, departments will track and submit Part I offenses known to the law enforcement agency to the FBI. The Part I offenses are (1) criminal homicide, (2) forcible rape, (3) robbery, (4) aggravated assault, (5) burglary, (6) larceny-theft, (7) motor vehicle theft, and (8) arson. The Providence police department provided information on the 14,129 Part I crimes that occurred during the 2016 calendar year. The information they provided broke Part I crimes down by patrol district and categorized the crimes into three broad

areas: (1) violent crime (8% of the total), (2) property crime (45% of the total), and (3) other crime[16] (47% of the total). There were seven types of crimes that were considered violent and the most common of them were aggravated assault (53%), robbery (30%), and forcible rape (9%). Eight categories of crimes were considered property crimes and the most common offense was theft from a motor vehicle (32%), other larceny (23%) and burglary (20%). Finally, there were 22 types of crimes that were considered in the other category and the most common offenses were vandalism (33%), simple assault (31%), and drug violations (13%).

The number and type of Part I crimes varies by patrol district. The highest level of reported crime was in districts 4 and 7 (17% of all crime for each district), whereas the lowest level of reported crime was in districts 3, 8, and 9 (6% of all crime for each district). Although districts 4 and 7 had similar levels of crime, district 4 had more violent and property crime, whereas district 7 had more crime for other reasons. Districts 2 and 5 also experienced higher levels of violent crime, but lower levels of property and other crime than district 7. Ten of the 11 homicides occurred in districts 4, 5, and 6, with the most occurring in district 5 (five of 11 homicides). Figure 5.2 shows Part 1 crimes by type reported in Providence by patrol district.

Figure 5.2 Part I Crime by type and Patrol District

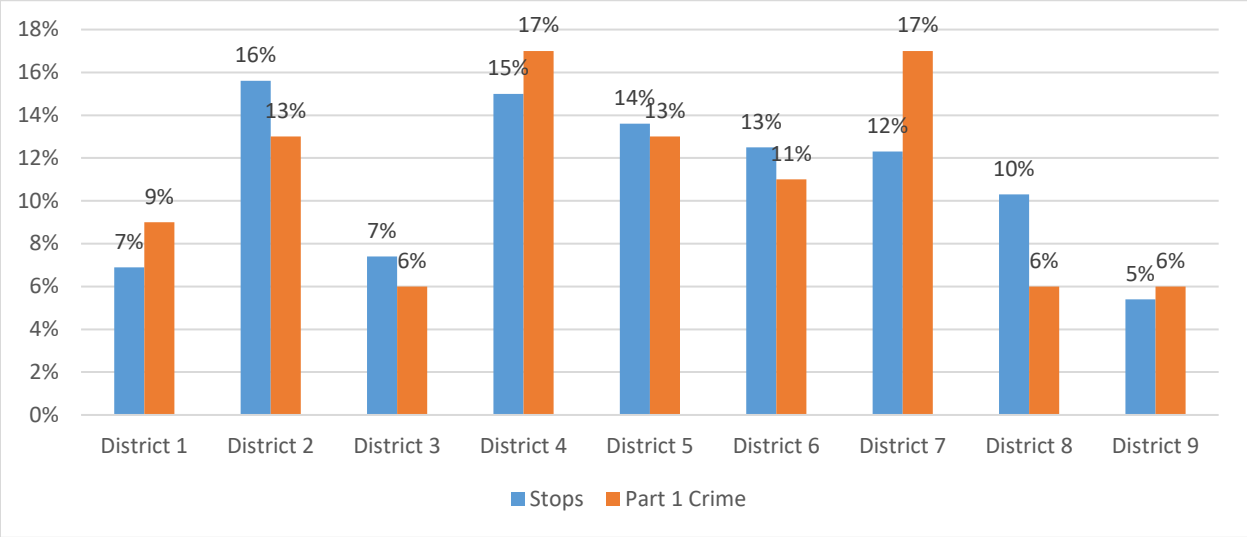


While there appears to be some correlation between violent crime patterns and higher levels of traffic enforcement, the overall relationship between all crime and traffic enforcement levels seems more tenuous. Specifically, districts 2, 4, and 5 account for 56% of all the violent crime in Providence and are also the three most active districts with respect to traffic enforcement activity, accounting for 44.2% of all the traffic stops. However, district 7, which is tied with district 4 for the highest percentage of crime in the city (17%), is only the fifth most active patrol district for traffic stops at 12.3%. When these four districts (2, 4, 5, and 7) are considered together they represent 60% of all reported crime, 71% of all the violent crime, 54% of all the property crime, 63% of all the other crime, but only 56.5% of all the traffic stops. Districts 7 and 8 provide the sharpest contrast between the incidence of crime and traffic enforcement. District 7 has 17% of all the crime but only 12.3% of all

[16] Other crime is classified as crimes such as, simple assault, vandalism, drug violations, swindling, weapon law violations, and stolen property to name a few.

traffic enforcement. District 8 experienced only 6% of the reported crime but had 10.3% of all the traffic enforcement. Figure 5.3 compares the overall percentage of crime occurring within each patrol district and the overall proportion of traffic stops made within the district. A map of violent crime density by patrol district can be found in appendix figure D.2.

Figure 5.3: Traffic Stop Volume compared to Part I Crime by Patrol District



Summary of Findings

A number of factors contributed to the minority disparity identified in the initial analysis of traffic stops made by the Providence Police Department. The analysis highlights that the disparities in Providence seem to be affecting black drivers to a greater degree than Hispanic drivers. Regardless of the patrol area, the proportion of black drivers stopped was greater than their proportion of the local residential population. This was not the case for Hispanic drivers where the proportion of Hispanic drivers stopped was less than the proportion of Hispanic residential population in five of the nine patrol districts. In the four remaining patrol districts Hispanic drivers only marginally exceeded the local Hispanic population. The racial disparity for black drivers is even greater considering the large percentage of Hispanic drivers also identified as black, but who were only accounted for as Hispanic in stop demographics. The percent of black drivers stopped when Hispanic ethnicity is included increases from 27% to 36% and makes black drivers the largest demographic stopped in Providence.

Providence's traffic stop data also tended to reflect the impact that resident minority drivers had on the overall racial disparity in the stop data. A greater proportion of black and Hispanic resident drivers were stopped than their proportion of the driving age population. Conversely, a smaller proportion of white resident drivers were stopped than their proportion of the driving age population. On average, 62% of the drivers stopped in Providence were residents of Providence. Over 76% of all black drivers stopped and 77% of all Hispanic drivers stopped were residents of Providence compared to only 36% of the white drivers stopped. Resident drivers stopped were 81% minority compared to only 43% of the non-resident drivers stopped that were minority. White drivers were more likely to be from out-of-town, which is unsurprising given that over 85% of the individuals that work in Providence, but live elsewhere were identified as white by the U.S. Census Bureau. Providence is not only a major employment center, but is also a major entertain destination

for communities throughout Rhode Island. Drivers from out-of-town tend to have a larger impact in patrol District 1, which covers the downtown area and is one of the busiest commercial and entertainment areas. It is evident that motor vehicle enforcement activity concentrated in the areas with high minority residential populations combined with the high rate of resident drivers stopped in those areas contributed significantly to the overall racial and ethnic disparity in Providence's data.

The department also indicated the impact that reported calls for service and incidents of crime in high traffic enforcement districts have had on the deployment of departmental resources. Examining both the distribution of calls for service and crimes in more detail provided some additional insight into interpreting its traffic enforcement activities. There appeared to be a correlation between calls for service and levels of traffic enforcement in most of the patrol districts, but the relationship was less clear in districts 7 and 8. Additionally, there was some correlation between violent crime patterns and higher levels of traffic enforcement, particularly in districts 2, 4, and 5. However, the overall relationship between all crime and traffic enforcement levels seemed more tenuous.

Traffic Stop Outcomes

Stops for "other" traffic violations were the largest category of stops made in Providence (44%). The next largest category of stops was for speed-related violations (14%), and the third stop category was for equipment or inspection violations (8.5%). As a percentage of their total stops, white drivers were more likely to be stopped for driver-related safety issues (such as speeding) and other traffic violations than were either black or Hispanic drivers. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration and equipment- or inspection-related violations than did white drivers. When these types of stops, which can sometimes be more discretionary in nature, occur with greater frequency in areas with high minority populations than they do in areas where driving age populations are predominantly white, there is the potential for disparities to appear in the data even though violation rates for these offenses could be similar across racial categories.

In Providence, black and Hispanic drivers were more likely to be stopped for equipment or inspection-violations in the patrol districts more heavily populated by black and Hispanic residents. However, in other areas where these stops were made and the resident population had a higher proportion white individuals, the stop demographics were a greater proportion of white drivers. The same was true for speed-related motor vehicle enforcement, which tended to be conducted in areas with higher concentrations of white drivers. This suggests that the frequency with which these enforcement choices occurred and, more importantly where they occurred, were more important to the overall stop demographics, particularly for black and Hispanic drivers, than racially inherent differences in the overall likelihood of violation.

Overall, 52% of all drivers stopped received a warning as a result of a traffic stop. Black drivers were more likely to receive a warning as a result of a stop. Additionally, drivers were significantly more likely to receive a warning as a result of an equipment or inspection violation compared to all other violations. Of the drivers stopped for equipment or inspection violations, 75% resulted in a warning whereas 49% of all other stops resulted in a warning. Black and Hispanic drivers were also more likely to be arrested as a percentage of their total stops. The racial demographics of the individuals arrested as a result of a traffic stop were 24% white, 34% black, and 41% Hispanic. The majority of arrests (59%) occurred in three high enforcement patrol areas with larger proportions of minority residents (districts 2, 4, and 5.) Unfortunately, it is not possible to determine the reason for the arrest,

but the assumption is that the officer determined some additional reason beyond the reason for the stop that warranted making an arrest.

Providence police reported searching the vehicles of 5% of drivers they stopped, which is greater than the statewide average of 3.4%. Black and Hispanic drivers were searched at a higher rate than white drivers. Although there are disparities in the search rate, the dataset appeared to have reporting errors and the contraband rate was not reported. Therefore, it is not possible to determine the outcome of any of these searches. Given the lack of information on the rate of contraband found, no conclusions should be drawn.

Conclusion

The overall follow-up analysis of the Providence data raises additional questions about the racial disparity impacting black drivers in the stop data. Even after accounting for calls for service, Part 1 crime rates by district, and both the local black resident populations in each patrol area and the relative contribution of non-resident black drivers to the overall totals, sizable disparities existed throughout the city for which the analysis could not identify specific reasons. This was not the case for Hispanic drivers where a concentration of motor vehicle enforcement in areas with higher proportions of local Hispanic resident populations helped explain the disparity. Additionally, in many of the patrol districts, the Hispanic stop rate was less than the Hispanic residential population in that area, especially after the non-resident component of the disparity was identified and accounted for.

The disparity was also evident in a review of post-stop outcomes. That is, minority drivers were more likely to be stopped for reasons that were different from white drivers. While white drivers are more likely to be stopped in Providence than black or Hispanic drivers for more types of hazardous driving behaviors, black and Hispanic drivers were more likely to be stopped for vehicle equipment or inspection violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made in patrol areas where minority drivers are more likely to be among the driving population, rather than to an inherently greater likelihood that minority drivers violate these laws with greater frequency than white drivers. Disparities were also present in the outcome of traffic stops and the rate of motor vehicle searches. Unfortunately, due to both problems in the initial data and limitations in the way the data was collected, it was not possible to draw specific conclusions on the factors contributing to the post-stop disparities.

It is difficult to draw meaningful conclusions about the disparity impacting black drivers at this time given the fact that we have only had the benefit of reviewing one year of traffic stop data. Additional conversations with the department have revealed other factors that need to be both quantified and considered in order to fully assess the size and relative consistency of the disparities. Therefore, we recommend analysis of additional stop data for Providence, including 2017 stop records. We will continue to work with the department and community stakeholders to examine additional contributing factors to help determine the nature of the disparity impacting black drivers in Providence.

TECHNICAL APPENDICES

Appendix A: Cranston Police Department

Appendix B: Narragansett Police Department

Appendix C: North Smithfield Police Department

Appendix D: Providence Police Department

APPENDIX A: CRANSTON POLICE DEPARTMENT

Figure A.1: Cranston Census Tract Map

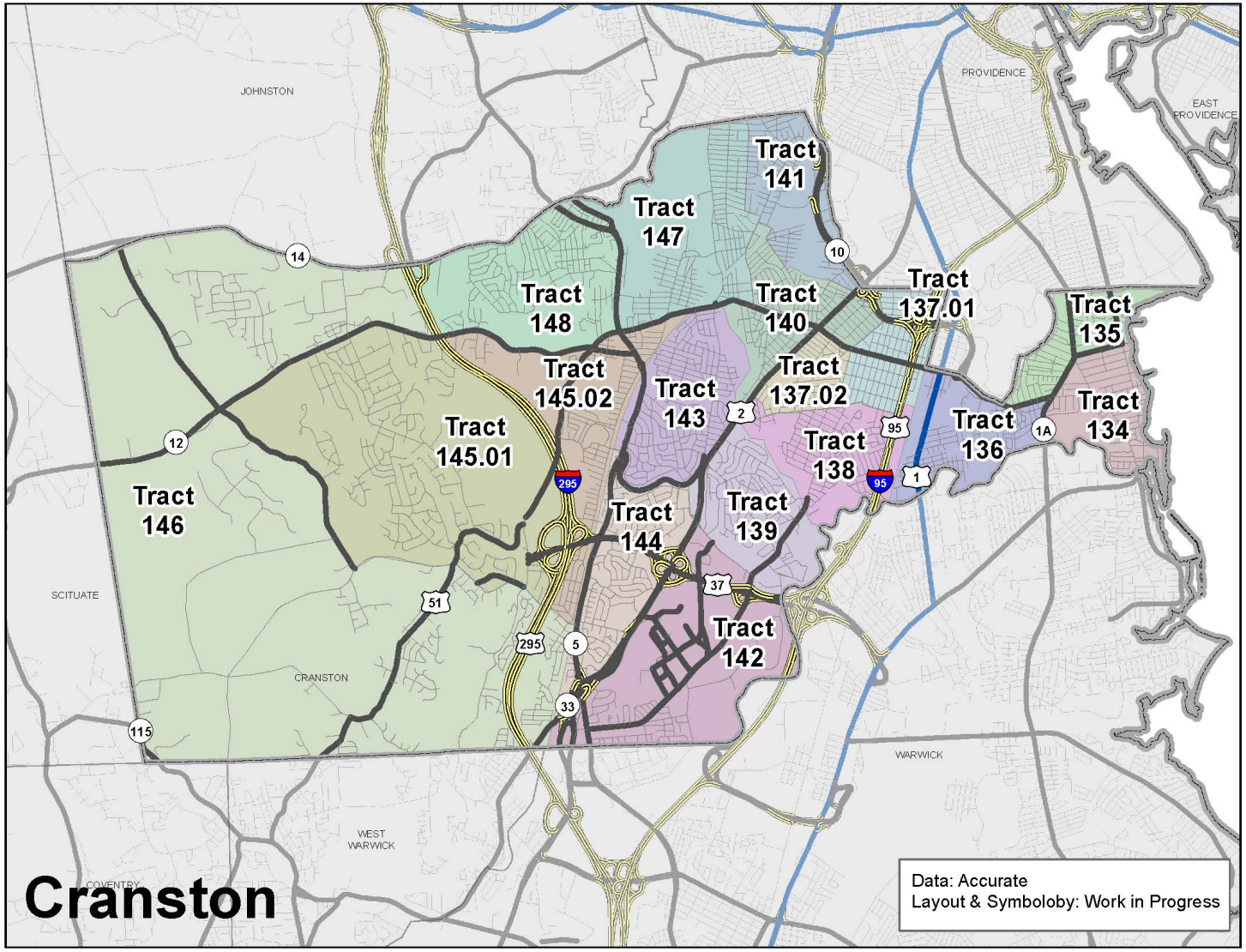


Figure A.2: Cranston Patrol Beat Map

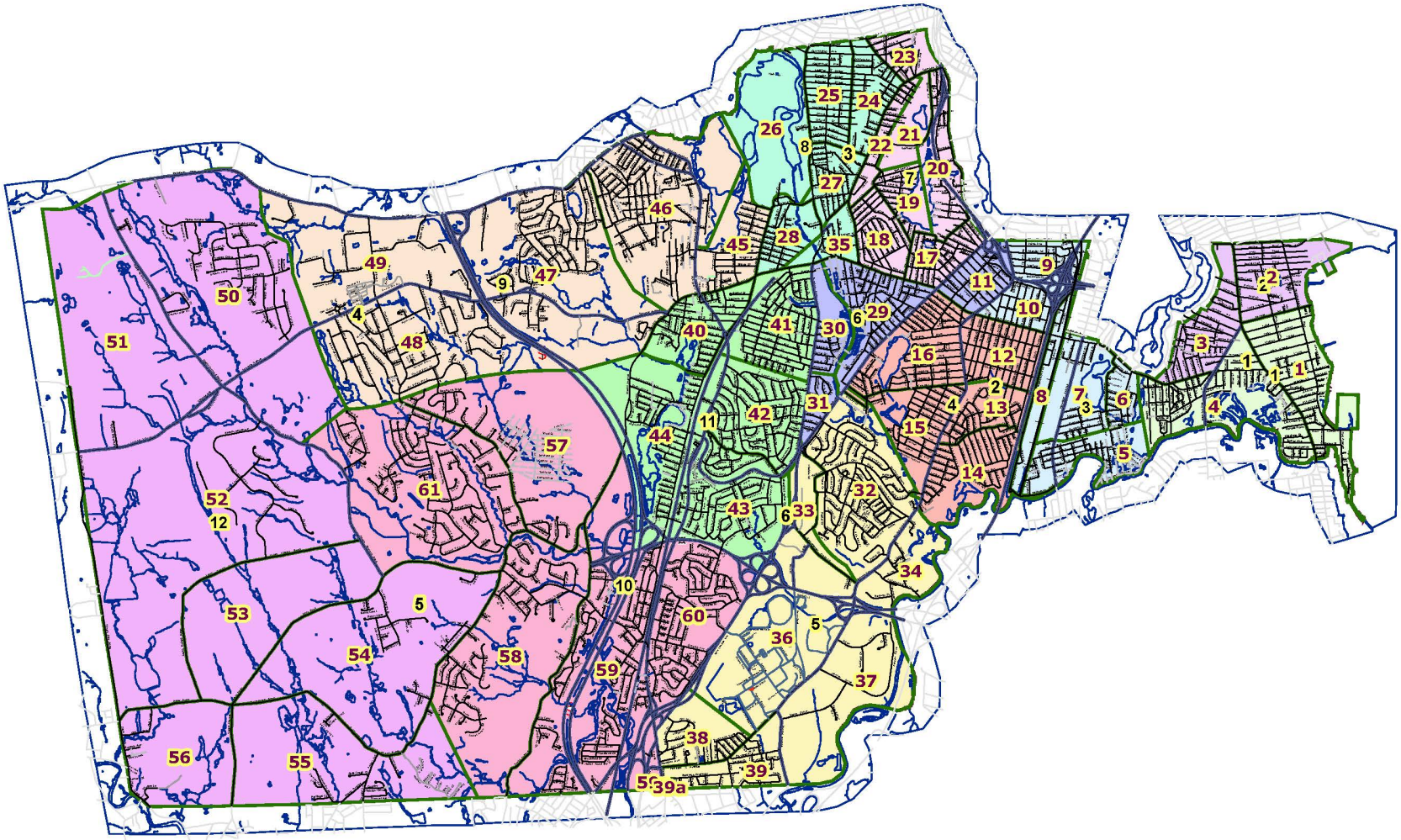


Table A.1: Cranston Population by Census Tract

Census Tract	White	Black	AsPac	AI/AN	Hispanic	Other	% of Population
134	94.4%	0.0%	0.0%	0.0%	5.6%	0.0%	4.7%
135	70.8%	8.9%	3.9%	0.0%	14.2%	2.2%	5.8%
136	73.3%	6.9%	7.4%	0.0%	12.4%	0.0%	3.6%
137.01	73.3%	5.0%	7.5%	0.0%	14.1%	0.0%	5.0%
137.02	84.6%	0.0%	7.3%	0.0%	8.1%	0.0%	3.4%
138	85.7%	3.3%	4.5%	0.0%	6.4%	0.0%	5.9%
139	91.1%	0.0%	3.7%	0.0%	5.2%	0.0%	3.9%
140	77.5%	4.1%	7.5%	0.0%	9.8%	1.1%	7.2%
141	52.7%	5.9%	12.1%	0.0%	27.4%	1.9%	6.0%
142	61.3%	20.7%	2.3%	0.0%	15.6%	0.0%	8.2%
143	92.3%	0.0%	4.7%	0.0%	3.0%	0.0%	6.1%
144	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%
145.01	97.7%	0.0%	2.3%	0.0%	0.0%	0.0%	6.0%
145.02	97.3%	0.0%	0.0%	0.0%	2.7%	0.0%	5.2%
146	94.2%	0.0%	3.7%	0.0%	2.2%	0.0%	8.3%
147	69.8%	5.2%	5.5%	0.0%	18.1%	1.4%	8.9%
148	88.7%	1.7%	4.2%	0.0%	5.4%	0.0%	7.2%

Table A.2: Stop by Patrol Beat

Patrol Beat	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Beat 1	64.6%	14.2%	2.5%	0.1%	18.5%	5.0%
Beat 2	51.3%	20.0%	2.5%	0.3%	25.9%	6.9%
Beat 3	51.9%	18.3%	6.2%	0.2%	23.5%	10.1%
Beat 4	63.6%	14.1%	5.1%	0.1%	17.1%	7.7%
Beat 5	70.2%	10.3%	3.4%	0.3%	15.7%	5.1%
Beat 6	60.1%	13.1%	4.1%	0.2%	22.4%	7.0%
Beat 7	48.2%	17.6%	5.3%	0.3%	28.7%	17.0%
Beat 8	48.4%	15.7%	4.6%	0.1%	31.1%	14.9%
Beat 9	82.7%	5.3%	2.4%	0.3%	9.3%	6.9%
Beat 10	86.0%	3.8%	1.3%	0.3%	8.6%	4.8%
Beat 11	82.2%	6.6%	2.5%	0.1%	8.6%	9.3%
Beat 12	91.0%	3.3%	2.1%	0.0%	3.6%	2.2%
Out of Town	44.5%	22.0%	3.3%	0.2%	29.8%	2.3%
Other	56.1%	13.5%	3.5%	0.6%	26.3%	0.9%
Total	**61.1%**	**13.7%**	**4.0%**	**0.2%**	**21.1%**	

Table A.3: Town Resident Stops by Patrol Beat

Patrol Beat	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Beat 1	71.5%	9.3%	3.1%	0.5%	15.5%	3.6%
Beat 2	61.6%	14.7%	3.7%	0.4%	19.6%	4.6%
Beat 3	61.8%	10.1%	7.0%	0.3%	20.9%	7.5%
Beat 4	73.2%	11.2%	4.3%	0.2%	11.0%	10.0%
Beat 5	78.2%	6.9%	4.2%	0.0%	10.7%	5.4%
Beat 6	71.8%	8.9%	4.8%	0.5%	14.0%	7.0%
Beat 7	63.1%	11.1%	5.6%	0.5%	19.6%	14.0%
Beat 8	61.0%	9.1%	5.4%	0.3%	24.2%	13.5%
Beat 9	88.7%	3.1%	2.7%	0.2%	5.4%	9.1%
Beat 10	90.6%	1.7%	1.4%	0.0%	6.3%	6.6%
Beat 11	86.2%	4.2%	2.5%	0.0%	7.1%	13.7%
Beat 12	90.7%	2.9%	3.6%	0.0%	2.9%	2.6%
Out of Town	44.3%	24.1%	3.8%	0.0%	27.8%	1.5%
Other	85.4%	0.0%	0.0%	0.0%	14.6%	0.8%
Total	**73.3%**	**8.1%**	**4.2%**	**0.2%**	**14.2%**	

Table A.4: Out-Of-Town Resident Stops by Patrol Beat

Patrol Beat	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Beat 1	62.9%	15.4%	2.4%	0.0%	19.2%	5.6%
Beat 2	49.0%	21.2%	2.2%	0.3%	27.3%	7.7%
Beat 3	49.4%	20.4%	6.0%	0.1%	24.1%	11.1%
Beat 4	58.4%	15.6%	5.5%	0.1%	20.3%	6.9%
Beat 5	67.0%	11.7%	3.1%	0.4%	17.7%	4.9%
Beat 6	55.8%	14.7%	3.8%	0.1%	25.6%	7.0%
Beat 7	43.9%	19.4%	5.2%	0.2%	31.3%	18.1%
Beat 8	44.3%	17.9%	4.4%	0.0%	33.4%	15.4%
Beat 9	79.4%	6.5%	2.2%	0.3%	11.6%	6.1%
Beat 10	83.2%	5.1%	1.2%	0.5%	10.0%	4.2%
Beat 11	79.5%	8.2%	2.6%	0.1%	9.5%	7.6%
Beat 12	91.1%	3.6%	1.4%	0.0%	3.9%	2.0%
Out of Town	44.6%	21.6%	3.2%	0.3%	30.3%	2.6%
Other	46.9%	17.7%	4.6%	0.8%	30.0%	0.9%
Total	56.5%	15.7%	3.9%	0.2%	23.7%	

Table A.5: Basis for Stops by Race/Ethnicity

Basis for Stop	White	Black	AsPac	Native American	Hispanic
APB	0.1%	0.0%	0.3%	2.6%	0.0%
Call for Service	1.4%	1.2%	1.0%	2.6%	1.4%
Equipment/Inspection Violation	20.3%	30.7%	25.2%	23.7%	29.4%
Motorist Assist/Courtesy	0.4%	0.3%	0.5%	0.0%	0.4%
Other Traffic Violation	40.0%	36.1%	41.2%	44.7%	38.1%
Registration Violation	4.6%	8.3%	4.4%	0.0%	8.2%
Seatbelt	4.4%	3.3%	5.7%	5.3%	4.7%
Special Detail/Directed Patrol	3.5%	1.1%	2.6%	2.6%	1.6%
Speeding	21.8%	15.1%	16.2%	15.8%	12.8%
Suspicious Person	1.8%	1.2%	1.5%	2.6%	1.7%
Violation of City/Town Ordinance	1.5%	2.6%	1.4%	0.0%	1.5%

Table A.6 Searches by Patrol Beat

Patrol Beat	Total Searches	White	Black	AsPac	Native American	Hispanic
Beat 1	13	84.6%	15.4%	0.0%	0.0%	0.0%
Beat 2	33	18.2%	24.2%	3.0%	0.0%	54.5%
Beat 3	48	50.0%	25.0%	6.3%	0.0%	18.8%
Beat 4	30	56.7%	20.0%	3.3%	0.0%	20.0%
Beat 5	21	61.9%	19.0%	0.0%	0.0%	19.0%
Beat 6	25	48.0%	16.0%	0.0%	0.0%	36.0%
Beat 7	59	28.8%	30.5%	1.7%	0.0%	39.0%
Beat 8	80	35.0%	16.3%	1.3%	0.0%	47.5%
Beat 9	10	50.0%	0.0%	0.0%	0.0%	50.0%
Beat 10	9	77.8%	11.1%	0.0%	0.0%	11.1%
Beat 11	20	55.0%	25.0%	0.0%	0.0%	20.0%
Beat 12	4	50.0%	25.0%	0.0%	0.0%	25.0%
Out of Town	24	25.0%	33.3%	4.2%	0.0%	37.5%
Other	6	33.3%	33.3%	0.0%	0.0%	33.3%
Total	**382**	**42.1%**	**22.0%**	**2.1%**	**0.0%**	**33.8%**

APPENDIX B: NARRAGANSETT POLICE DEPARTMENT

Figure B.1: Narragansett Census Tract Map

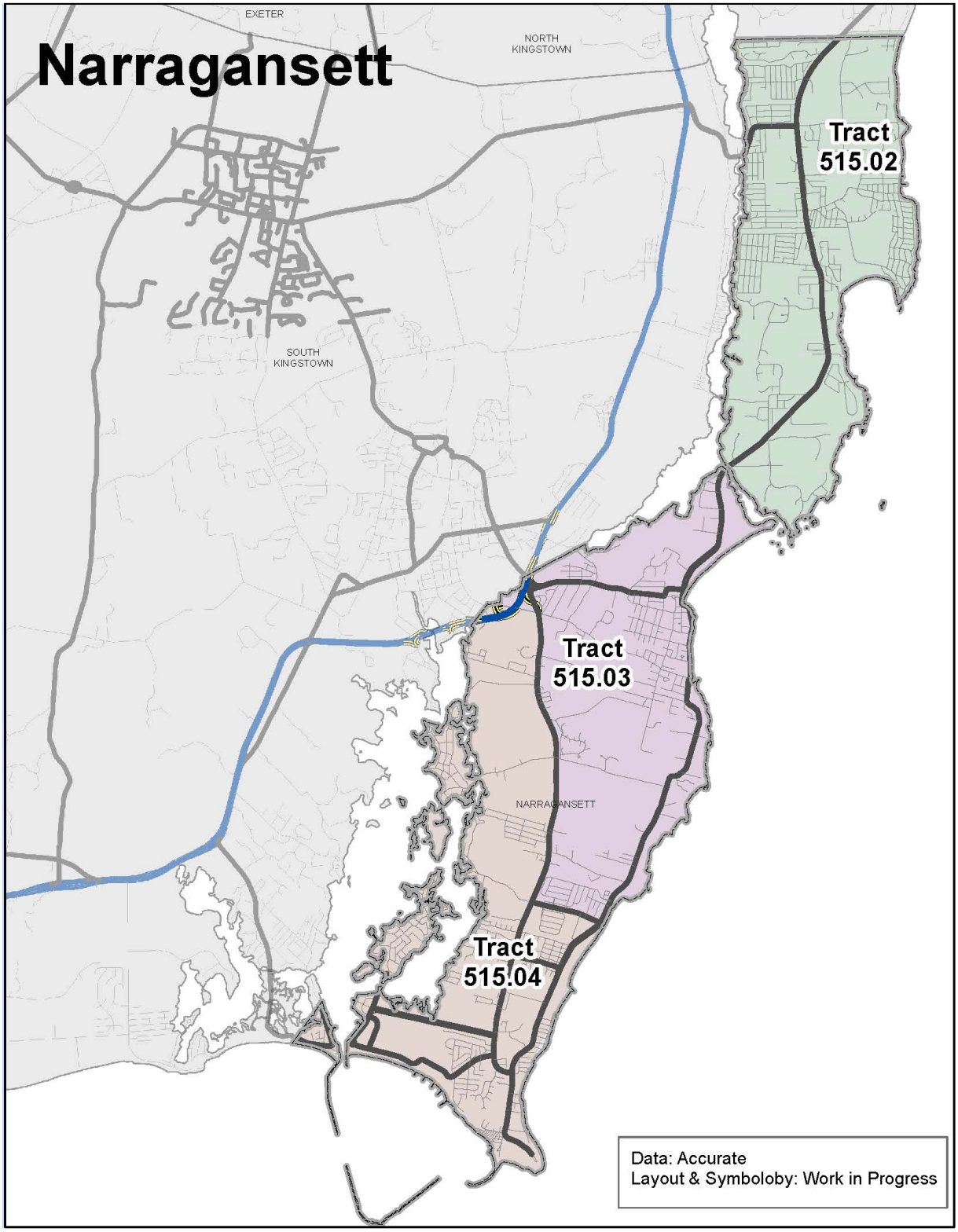


Table B.1: Narragansett Population by Census Tract

Census Tract	White	Black	AsPac	Native American	Hispanic	Other	% of Population
515.02	98.6%	0.0%	0.0%	0.0%	1.4%	0.0%	44.0%
515.03	100%	0.0%	0.0%	0.0%	0.0%	0.0%	26.7%
515.04	100%	0.0%	0.0%	0.0%	0.0%	0.0%	29.3%

Table B.2: Stop by Roadway

Roadway	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Boston Neck Road	91.4%	4.7%	1.0%	0.2%	2.8%	17.8%
Burnside Ave.	90.2%	3.3%	1.6%	0.0%	4.9%	1.9%
Kingstown Rd.	86.3%	6.9%	2.9%	0.0%	3.9%	4.7%
Ocean Road	91.4%	3.8%	1.4%	0.1%	3.4%	11.5%
Point Judith Road	87.6%	5.2%	1.2%	0.0%	5.8%	33.7%
Route 1	89.1%	4.7%	1.0%	0.0%	5.2%	3.0%
South Pier Rd.	93.7%	2.8%	0.0%	0.0%	3.5%	2.2%
Other	90.8%	4.6%	0.9%	0.1%	3.7%	25.3%
Total	89.7%	4.8%	1.2%	0.1%	4.3%	

Table B.3: Town Resident Stops by Roadway

Roadway	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Boston Neck Road	93.6%	4.4%	0.6%	0.0%	1.5%	23.6%
Burnside Ave.	88.2%	11.8%	0.0%	0.0%	0.0%	1.2%
Kingstown Rd.	89.3%	5.4%	3.6%	0.0%	1.8%	3.8%
Ocean Road	94.3%	3.4%	1.1%	0.0%	1.1%	12.1%
Point Judith Road	93.9%	2.9%	0.3%	0.0%	2.9%	25.8%
Route 1	100.0%	0.0%	0.0%	0.0%	0.0%	1.4%
South Pier Rd.	100.0%	0.0%	0.0%	0.0%	0.0%	3.0%
Other	94.6%	3.5%	0.5%	0.0%	1.4%	29.2%
Total	94.1%	3.6%	0.6%	0.0%	1.7%	

Table B.4: Out-Of-Town Resident Stops by Roadway

Roadway	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Boston Neck Road	90.4%	4.8%	1.1%	0.2%	3.4%	16.1%
Burnside Ave.	90.6%	1.9%	1.9%	0.0%	5.7%	2.1%
Kingstown Rd.	85.6%	7.2%	2.8%	0.0%	4.4%	5.0%
Ocean Road	90.4%	3.9%	1.4%	0.2%	4.1%	11.3%
Point Judith Road	86.3%	5.7%	1.4%	0.1%	6.4%	36.0%
Route 1	87.7%	5.3%	1.2%	0.0%	5.8%	3.4%
South Pier Rd.	90.8%	4.1%	0.0%	0.0%	5.1%	2.0%
Other	89.4%	5.0%	1.0%	0.2%	4.5%	24.1%
Total	88.4%	5.1%	1.3%	0.1%	5.0%	

Table B.5: Basis for Stop by Race/Ethnicity

Basis for Stop	White	Black	AsPac	Native American	Hispanic
APB	0.1%	0.3%	0.0%	0.0%	0.0%
Call for Service	1.7%	1.9%	1.3%	0.0%	1.8%
Equipment/Inspection Violation	18.5%	27.8%	24.0%	16.7%	23.8%
Motorist Assist/Courtesy	0.5%	0.6%	0.0%	0.0%	0.7%
Other Traffic Violation	28.3%	27.2%	28.0%	50.0%	33.2%
Registration Violation	1.8%	3.2%	2.7%	0.0%	4.0%
Seatbelt	0.7%	0.3%	0.0%	0.0%	1.8%
Special Detail/Directed Patrol	0.0%	0.0%	0.0%	0.0%	0.0%
Speeding	47.7%	36.6%	44.0%	33.3%	32.5%
Suspicious Person	0.5%	1.3%	0.0%	0.0%	1.4%
Violation of City/Town Ordinance	0.1%	0.0%	0.0%	0.0%	0.7%

Table B.6 Searches by Roadway

Patrol Beat	Total Searches	White	Black	AsPac	Native American	Hispanic
Boston Neck Road	20	90.0%	5.0%	0.0%	0.0%	5.0%
Burnside Ave.	5	60.0%	0.0%	20.0%	0.0%	20.0%
Kingstown Rd.	8	87.5%	0.0%	0.0%	0.0%	12.5%
Ocean Road	18	94.4%	0.0%	0.0%	0.0%	5.6%
Point Judith Road	46	80.4%	13.1%	0.0%	0.0%	6.5%
Route 1	5	100%	0.0%	0.0%	0.0%	0.0%
South Pier Rd.	4	75.0%	0.0%	0.0%	0.0%	25.0%
Other	63	87.3%	7.9%	0.0%	1.6%	3.2%
Total	**169**	**85.8%**	**7.1%**	**0.6%**	**0.6%**	**5.9%**

APPENDIX C: NORTH SMITHFIELD POLICE DEPARTMENT

Figure C.1: North Smithfield Census Tract Map

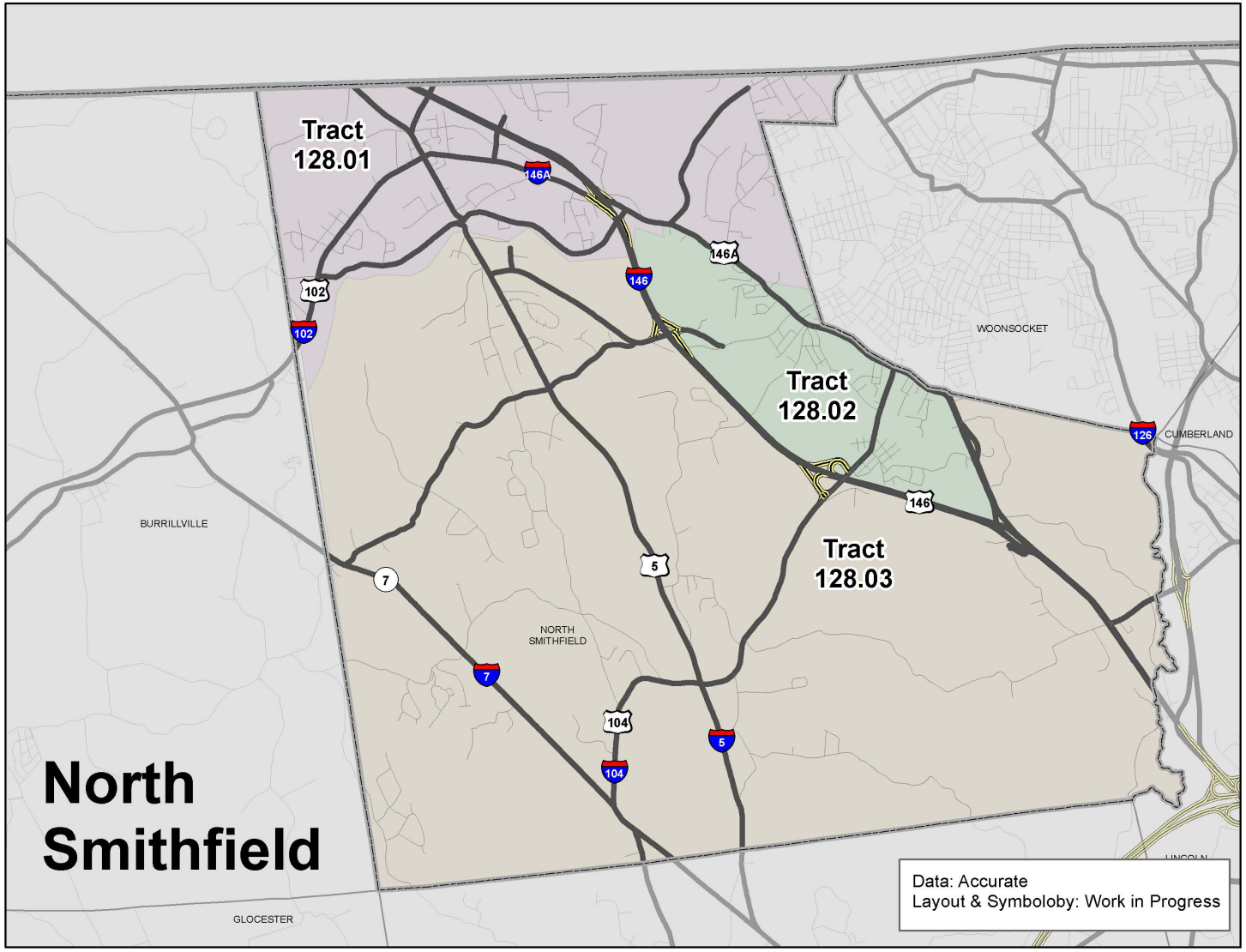


Table C.1: North Smithfield Population by Census Tract

Census Tract	White	Black	AsPac	Native American	Hispanic	Other	% of Population
128.01	98.1%	0.0%	0.0%	0.0%	1.9%	0.0%	41.5%
128.02	100%	0.0%	0.0%	0.0%	0.0%	0.0%	19.8%
128.03	100%	0.0%	0.0%	0.0%	0.0%	0.0%	38.7%

Table C.2: Stop by Patrol Area

Patrol Area	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Branch Village	84.1%	6.3%	0.0%	0.0%	9.5%	2.5%
Forestdale	81.0%	5.2%	2.6%	0.0%	11.2%	9.1%
Lake Belair	89.4%	2.9%	1.0%	0.0%	6.7%	4.1%
Park Square	60.8%	15.7%	2.5%	0.2%	20.8%	64.2%
Primrose	82.9%	6.0%	3.4%	0.0%	7.7%	4.6%
Reservoir	83.3%	16.7%	0.0%	0.0%	0.0%	0.2%
Slatersville	87.6%	5.5%	0.0%	0.5%	6.5%	8.5%
Union Village	74.4%	10.5%	4.7%	1.2%	9.3%	3.4%
Waterford Village	70.5%	9.1%	1.1%	1.1%	18.2%	3.4%
Out of Town	100.0%	0.0%	0.0%	0.0%	0.0%	0.2%
Total	**68.6%**	**12.2%**	**2.2%**	**0.2%**	**16.7%**	

Table C.3: Town Resident Stops by Patrol Area

Patrol Area	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Branch Village	77.8%	11.1%	0.0%	0.0%	11.1%	4.2%
Forestdale	91.9%	5.4%	2.7%	0.0%	0.0%	17.4%
Lake Belair	93.3%	0.0%	0.0%	0.0%	6.7%	7.0%
Park Square	91.7%	3.6%	1.2%	0.0%	3.6%	39.4%
Primrose	95.8%	0.0%	4.2%	0.0%	0.0%	11.3%
Reservoir	100.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Slatersville	95.8%	4.2%	0.0%	0.0%	0.0%	11.3%
Union Village	100.0%	0.0%	0.0%	0.0%	0.0%	3.3%
Waterford Village	100.0%	0.0%	0.0%	0.0%	0.0%	5.2%
Out of Town	100.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Total	**93.0%**	**3.3%**	**1.4%**	**0.0%**	**2.3%**	

Table C.4: Out-Of-Town Resident Stops by Patrol Area

Patrol Area	White	Black	AsPac	Native American	Hispanic	% of Total Stops
Branch Village	85.2%	5.6%	0.0%	0.0%	9.3%	2.3%
Forestdale	79.0%	5.1%	2.6%	0.0%	13.3%	8.3%
Lake Belair	88.8%	3.4%	1.1%	0.0%	6.7%	3.8%
Park Square	59.2%	16.3%	2.6%	0.2%	21.8%	66.4%
Primrose	79.6%	7.5%	3.2%	0.0%	9.7%	4.0%
Reservoir	80.0%	20.0%	0.0%	0.0%	0.0%	0.2%
Slatersville	86.5%	5.7%	0.0%	0.5%	7.3%	8.2%
Union Village	72.2%	11.4%	5.1%	1.3%	10.1%	3.4%
Waterford Village	66.2%	10.4%	1.3%	1.3%	20.8%	3.3%
Out of Town	100.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Total	66.4%	13.0%	2.3%	0.3%	18.0%	

Table C.5: Basis for Stop by Race/Ethnicity

Basis for Stop	White	Black	AsPac	Native American	Hispanic
APB	0.1%	0.0%	0.0%	0.0%	0.0%
Call for Service	1.6%	2.5%	0.0%	0.0%	1.8%
Equipment/Inspection Violation	34.4%	39.2%	34.5%	0.0%	46.6%
Motorist Assist/Courtesy	0.0%	0.0%	0.0%	0.0%	0.0%
Other Traffic Violation	22.1%	20.9%	17.2%	0.0%	14.7%
Registration Violation	5.9%	6.3%	6.9%	33.3%	10.6%
Seatbelt	3.5%	6.0%	3.4%	0.0%	2.8%
Special Detail/Directed Patrol	0.1%	0.0%	0.0%	0.0%	0.0%
Speeding	30.8%	23.7%	37.9%	66.7%	21.1%
Suspicious Person	0.6%	0.6%	0.0%	0.0%	0.2%
Violation of City/Town Ordinance	0.6%	0.6%	0.0%	0.0%	0.2%

Table C.6: Searches by Patrol Area

Patrol Beat	Total Searches	White	Black	AsPac	Native American	Hispanic
Branch Village	3	66.7%	33.3%	0.0%	0.0%	0.0%
Forestdale	12	75.0%	0.0%	0.0%	0.0%	25.0%
Lake Belair	4	100.0%	0.0%	0.0%	0.0%	0.0%
Park Square	134	50.0%	24.6%	3.7%	0.0%	21.6%
Primrose	1	100.0%	0.0%	0.0%	0.0%	0.0%
Reservoir	2	50.0%	50.0%	0.0%	0.0%	0.0%
Slatersville	14	78.6%	7.1%	0.0%	0.0%	14.3%
Union Village	3	100.0%	0.0%	0.0%	0.0%	0.0%
Waterford Village	4	75.0%	0.0%	0.0%	0.0%	25.0%
Out of Town	1	100.0%	0.0%	0.0%	0.0%	0.0%
Total	178	57.3%	20.2%	2.8%	0.0%	19.7%

APPENDIX D: PROVIDENCE POLICE DEPARTMENT

Figure D.1: Providence Patrol District Map

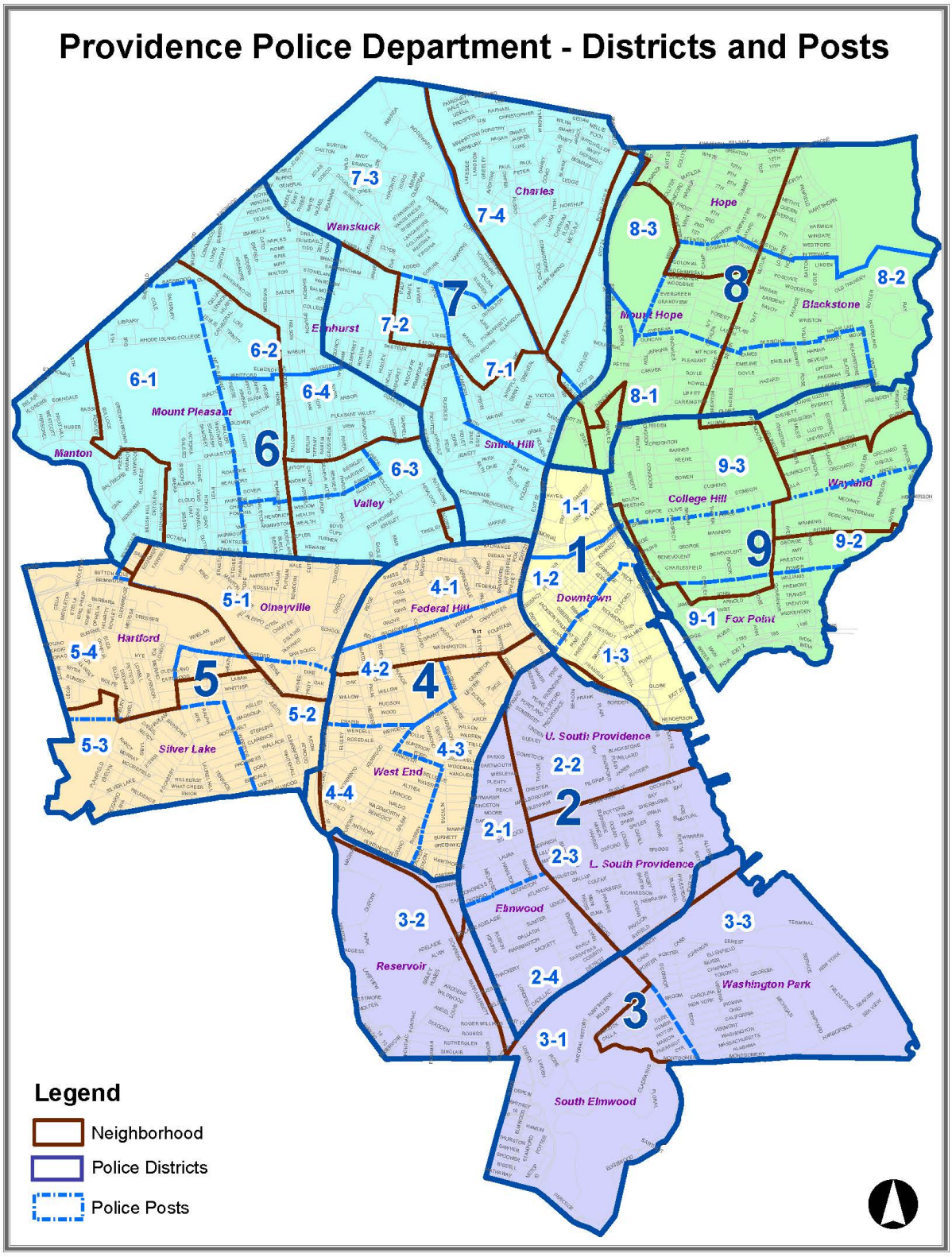


Table D.1: Providence Population by Patrol District

Patrol District	White	Black	AsPac	AI/AN	Hispanic	Other	% of Population
District 1	56.4%	8.4%	17.2%	0.4%	14.4%	3.2%	2.7%
District 2	8.6%	22.5%	4.7%	1.0%	58.9%	4.3%	12.0%
District 3	28.9%	16.0%	7.3%	0.8%	42.9%	4.2%	7.8%
District 4	25.3%	12.9%	9.4%	0.6%	48.4%	3.4%	13.1%
District 5	17.7%	10.4%	4.0%	0.8%	64.0%	3.0%	14.8%
District 6	43.0%	13.6%	2.7%	0.6%	36.2%	3.9%	14.5%
District 7	42.9%	16.2%	4.4%	0.8%	30.7%	5.0%	16.3%
District 8	70.0%	9.9%	5.1%	0.5%	7.5%	7.1%	8.0%
District 9	74.3%	3.1%	12.3%	0.2%	5.7%	4.3%	10.8%

Table D.2: Stop by Patrol District

Patrol District	White	Black	AsPac	AI/AN	Hispanic	% of Total Stops
District 1	50.0%	26.1%	3.4%	0.1%	20.3%	6.8%
District 2	17.1%	31.3%	2.6%	0.1%	48.9%	15.6%
District 3	29.1%	24.0%	3.6%	0.1%	43.1%	7.4%
District 4	25.5%	29.5%	4.4%	0.3%	40.2%	15.0%
District 5	23.6%	26.7%	2.7%	0.0%	47.0%	13.6%
District 6	41.1%	22.5%	2.8%	0.1%	33.5%	12.5%
District 7	30.2%	33.9%	2.3%	0.2%	33.4%	12.3%
District 8	53.2%	24.3%	4.9%	0.2%	17.4%	10.3%
District 9	63.1%	13.0%	5.7%	0.2%	18.0%	5.4%
Other	40.4%	28.3%	4.0%	0.0%	27.3%	1.0%
Total	**33.5%**	**27.0%**	**3.4%**	**0.1%**	**36.0%**	

Table D.3: Town Resident Stops by Patrol District

Patrol District	White	Black	AsPac	AI/AN	Hispanic	% of Total Stops
District 1	24.2%	37.0%	4.5%	0.4%	34.0%	4.3%
District 2	8.5%	34.0%	2.8%	0.1%	54.5%	18.4%
District 3	12.0%	30.1%	3.9%	0.0%	54.0%	7.5%
District 4	15.2%	35.7%	4.2%	0.3%	44.6%	16.1%
District 5	13.3%	31.0%	2.6%	0.0%	53.1%	14.9%
District 6	28.5%	27.7%	2.7%	0.0%	41.2%	12.8%
District 7	19.1%	39.8%	2.1%	0.2%	38.7%	14.0%
District 8	41.8%	31.6%	4.8%	0.2%	21.5%	7.8%
District 9	51.8%	16.4%	4.6%	0.5%	26.7%	3.2%
Other	18.4%	38.8%	2.0%	0.0%	40.8%	0.8%
Total	19.4%	33.0%	3.3%	0.1%	44.3%	4.3%

Table D.4: Out-Of-Town Resident Stops by Patrol District

Patrol District	White	Black	AsPac	AI/AN	Hispanic	% of Total Stops
District 1	66.9%	19.0%	2.7%	0.0%	11.4%	11.0%
District 2	41.1%	23.7%	2.0%	0.0%	33.2%	10.9%
District 3	58.4%	13.8%	3.0%	0.4%	24.5%	7.3%
District 4	46.5%	16.9%	5.0%	0.2%	31.4%	13.1%
District 5	46.2%	17.2%	2.9%	0.0%	33.7%	11.3%
District 6	63.6%	13.2%	3.0%	0.2%	20.0%	11.9%
District 7	57.1%	19.4%	2.9%	0.3%	20.3%	9.5%
District 8	63.3%	17.8%	5.1%	0.2%	13.7%	14.5%
District 9	69.8%	11.1%	6.3%	0.0%	12.9%	9.1%
Other	62.0%	18.0%	6.0%	0.0%	14.0%	1.4%
Total	56.8%	17.1%	3.7%	0.1%	22.3%	

Table D.5: Basis for Stops by Race/Ethnicity

Basis for Stop	White	Black	AsPac	Native American	Hispanic
APB	0.3%	0.6%	0.0%	0.0%	0.7%
Call for Service	7.7%	6.8%	5.4%	14.3%	8.3%
Equipment/Inspection Violation	5.8%	11.4%	6.5%	7.1%	9.1%
Motorist Assist/Courtesy	3.8%	3.2%	1.8%	7.1%	3.9%
Other Traffic Violation	48.8%	41.0%	50.0%	42.9%	40.0%
Registration Violation	3.5%	9.7%	4.8%	7.1%	6.5%
Seatbelt	2.8%	3.7%	3.0%	0.0%	4.6%
Special Detail/Directed Patrol	3.4%	2.6%	6.0%	0.0%	4.3%
Speeding	16.6%	10.8%	14.0%	21.4%	13.4%
Suspicious Person	5.8%	8.1%	6.8%	0.0%	6.6%
Violation of City/Town Ordinance	1.6%	2.0%	1.8%	0.0%	2.6%

Table D.6: Searches by Patrol District

Patrol District	Total Searches	White	Black	AsPac	Native American	Hispanic
District 1	27	37.0%	37.0%	0.0%	0.0%	25.9%
District 2	75	13.3%	48.0%	2.7%	0.0%	36.0%
District 3	25	32.0%	28.0%	0.0%	0.0%	40.0%
District 4	86	19.8%	37.2%	2.3%	0.0%	40.7%
District 5	152	21.1%	35.5%	1.3%	0.0%	42.1%
District 6	20	20.0%	40.0%	0.0%	0.0%	40.0%
District 7	93	16.1%	41.9%	1.1%	0.0%	40.9%
District 8	13	46.2%	30.8%	0.0%	0.0%	23.1%
District 9	10	50.0%	30.0%	0.0%	0.0%	20.0%
Other	2	0.0%	50.0%	0.0%	0.0%	50.0%
Total	503	21.3%	38.6%	1.4%	0.0%	38.8%

Figure D.2: 2016 Violent Crime Density by Patrol District