Connecticut RACIAL PROFILING PROHIBITION PROJECT

## STATE OF CONNECTICUT

# TRAFFIC STOP DATA ANALYSIS AND FINDINGS, 2014-15

# SUPPLEMENTAL REPORT

## JULY 2017

www.ctrp3.org

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A special thanks to Tyler Lublin and Samantha Lam, students at Central Connecticut State University who helped to compile the data, complete many of the tables and map many departments' traffic stop data.

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# EXECUTIVE SUMMARY OF FINDINGS

The Alvin W. Penn Racial Profiling Prohibition Act (Public Act 99-198) was first enacted in 1999 and prohibits racial profiling in the State of Connecticut. The law prohibits any law enforcement agency in the state from stopping, detaining, or searching motorists when the stop is motivated solely by considerations of the race, color, ethnicity, age, gender, or sexual orientation of that individual (Connecticut General Statutes Sections 54-1l and 54-1m). In 2012 and 2013, the Connecticut General Assembly made several changes to this law to create a system to address concerns regarding racial profiling in Connecticut. In accordance with these changes, police agencies began collecting data pertaining to all traffic stops on October 1, 2013.

In 2012, the Racial Profiling Prohibition Project Advisory Board was established to advise the Office of Policy and Management (OPM) in adopting the law's standardized methods and guidelines. The Institute for Municipal and Regional Policy (IMRP) at Central Connecticut State University was tasked to help oversee the design, evaluation, and management of the racial profiling study mandated by Public Act No. 12-74 and Public Act No. 13-75, "An Act Concerning Traffic Stop Information."

The May 2016 *Traffic Stop Data Analysis and Findings, 2014-15* report analyzed Connecticut traffic stop data from October 1, 2014 – September 30, 2015. The report found that statewide a total of 14.1% of motorists stopped during the study period were observed to be black. A comparable 12.5% of stops were of motorists from a Hispanic descent. The results from the "Veil of Darkness" analysis indicated that minority stops were more likely to have occurred during daylight hours than at night. These results were robust to the addition of a variety of controls including time of day, day of the week, state traffic volume, department level fixed effects, and department volume controls. The results from the post-stop analysis confirmed that the disparity carried through to post-stop behavior across all racial and ethnic groups.

In addition to the state level results, a total of nine municipal police departments and one state police troop 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 nine municipal departments and state police troop 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: **Bloomfield, Meriden, Newington, New Milford, Norwalk, Trumbull, West Hartford, Wethersfield, Windsor, and Troop H.**

A main goal for the follow-up analysis was to better understand whether statistical disparities identified in the department level analysis could be driven by specific department-wide practices or by individual officers. Ultimately the approach included in this report is a mix of previously utilized and newly developed statistical and descriptive analyses, coupled with an on-going dialogue with each department.

The first section of the follow-up analysis outlines additional descriptive measures that were applied to department-level data for the nine municipal departments. Traffic stop policy can be influenced by factors as diverse as the location of accidents, high call for service volume areas, high crime areas, and areas with major traffic generators such as shopping and entertainment districts. In order to understand the factors that might be contributing to traffic enforcement decisions in the identified departments, researchers sought to understand where their respective traffic enforcement patterns

occurred and why. Mapping the traffic stops for each identified community was a primary means to begin this part of the analysis. (Due to the relatively low number of stops that could be adequately identify longitude and latitude coordinates for in the case of Wethersfield, we decided to analyze data by roadway.)

After completing the mapping exercise on the town or jurisdiction wide level, project staff proceeded with a descriptive analysis of traffic stops at the census tract level for all departments except Wethersfield. A census tract analysis not only provided a more nuanced understanding of population demographics, but also allowed 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. The findings from the descriptive analysis vary greatly from department to department and are presented in-depth in this report.

The second section of this report summarizes the findings for Troop H. As a result of the extensive follow-up analysis conducted and published for Troop H in the May 2016, *Traffic Stop Data Analysis and Findings 2014-15* report, we did not believe it was necessary to conduct the same level of analysis this year. However, CSP and researchers remained committed to a continual dialogue about the unique characteristics of crime, accidents, calls for service, and patrol patterns in Troop H. Although we have not been able to identify a specific source of the disparity in Troop H, we believe that the unique nature of the policing by CSP in and around the City of Hartford probably plays a significant role in that disparity.

The final section of this report moves beyond examining disparities at the department level and examines individual officer information. The officer analysis was developed and utilized as a tool to better understand if disparities in data were driven by individual officers or groups of officers. A total of 762 unique officer identifiers were listed in the traffic stop database for the 9 municipal departments and one state police troop that were part of the follow-up analysis. After limiting the sample to officers with 50 or more traffic stops, a total of 294 officers were examined. Of the officers examined, 25 were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. The balancing test revealed that only 17 of the 25 identified officers had a benchmark that convincingly captured the distribution of observable traffic stops. As part of this process, law enforcement administrators were requested to review the findings in conjunction with additional officer information not available to researchers.

To date, traffic stop studies in other states have primarily focused on statewide or department level trends. Aside from formal investigations, there is little precedence for a state to gain a more nuanced understanding of department level enforcement patterns with an eye towards racial and ethnic disparities contained therein. Yet researchers believes it imperative to the success of this project that the conversation not end at the identification of departments with significant racial and ethnic disparities. Indeed, the individual department follow-up proved enlightening for both researchers and departments. There is, however, always more to build upon in order to achieve the stated goals of the Alvin W. Penn Act. The follow up analysis should be viewed as a part of an ongoing process for the public, law enforcement and the law's implementing agency to gain an increasingly enhanced understanding of the factors contributing to racial and ethnic disparities in traffic stops.

# BACKGROUND

First enacted in 1999, Connecticut's anti-racial profiling law entitled, the Alvin W. Penn Racial Profiling Prohibition Act (Public Act 99-198), prohibits any law enforcement agency from stopping, detaining, or searching any motorist when the stop is motivated solely by considerations of the race, color, ethnicity, age, gender or sexual orientation of that individual (Connecticut General Statutes Sections 54-1l and 54-1m). In 2012 and 2013, the Connecticut General Assembly made several changes to this law to create a system to address racial profiling concerns in Connecticut.

Through September 30, 2013, police agencies collected traffic stop information based on requirements outlined in the original 1999 Alvin W. Penn law. Beginning October 1, 2013, police agencies had to submit traffic stop data for analysis under the new methods outlined by the Office of Policy and Management (OPM), as required by the amended racial profiling prohibition law. The law also authorized the OPM secretary to order appropriate penalties (i.e., the withholding of state funds) when municipal police departments, the Department of Emergency Services and Public Protection (DESPP), and other police departments fail to comply.

In 2012, the Racial Profiling Prohibition Project Advisory Board was established to advise OPM in adopting the law's standardized methods and guidelines. The Institute for Municipal and Regional Policy (IMRP) at Central Connecticut State University was tasked to help oversee the design, evaluation, and management of the racial profiling study mandated by PA 12-74 and PA 13-75, "An Act Concerning Traffic Stop Information." The IMRP worked with the advisory board and all appropriate parties to enhance the collection and analysis of traffic stop data in Connecticut.

The National Highway Traffic and Safety Administration (NHTSA) provided resources for this project through a grant administered by the Connecticut Department of Transportation. The Racial Profiling Prohibition Project Advisory Board and the project staff have been meeting since May 2012 in an effort to outline a plan to successfully implement the requirements of the 2012 and 2013 legislation. The focus of the project's early phase was to better understand traffic stop data collection in other states. After an extensive review of best practices, working groups were formed and met monthly to discuss the different aspects of the project. These working groups included Data and System, Public Awareness, and Training work groups. The full advisory board held more than 20 meetings and the working groups met approximately 50 times.

The advisory board and IMRP also worked with law enforcement officials to create a data collection system that is efficient, not burdensome to the police collecting it, and provides information that is easy to work with when it is submitted. Police agencies in Connecticut vary in their levels of sophistication and technological capacity with respect to how they collect and report data. The project staff worked with the state's Criminal Justice Information System (CJIS) to develop a system to collect consistent and universal traffic stop information and submit it to CJIS electronically on a monthly basis.

The IMRP developed and maintains a project website (www.ctrp3.org) that informs the public of the advisory board's activities, statewide informational forums, and related news items on racial profiling. The website includes meeting agendas and minutes, press releases, and links to register for events. The website is updated weekly. In addition to the project website, the IMRP partnered with the Connecticut Data Collaborative to publish all traffic stop data on a quarterly basis. The public can download the information in its original form or view summary tables for easy use. A full set of analytical tools will be available for more advanced users who are interested in data analysis.

Although much of the initial focus of this project was to develop a standardized method for data collection and analysis, there are other important components. The initiatives include a public awareness and education campaign, effective training for officers and departments, and a rigorous complaint process. Information about all of these initiatives is provided on the project website. These initiatives collectively represent different tools available for education and the prevention of racial profiling in policing. These tools were implemented in the hope of building and enhancing trust between communities and law enforcement in Connecticut.

In February 2014, the U.S. Department of Justice, Community Oriented Policing Services Division, sponsored a train-the-trainer program in Connecticut on "Fair and Impartial Policing (FIP)." The FIP program was established to train police officers and supervisors on fair and impartial policing by understanding both conscious and unconscious bias. This program was offered to police agencies throughout the state over the next year.

Lastly, a major component of addressing concerns about the possibility of racial profiling in Connecticut is bringing law enforcement officials and community members together to discuss relationships between police and the community. The project staff has conducted several public forums throughout the state to bring these groups together and will continue these dialogues in the foreseeable future. They serve as an important tool to inform the public of their rights and the role of law enforcement in serving their communities.

# I.A: INTRODUCTION

The reporting elements included in the 2012 and 2013 revisions to the Alvin W. Penn Racial Profiling Prohibition Act represent one of the largest and most comprehensive efforts to collect policing data in any state or individual jurisdiction to date. In May 2016, the IMRP released the second statewide *Traffic Stop Data Analysis and Findings, 2014-15* report which analyzed stops between October 1, 2014 and September 30, 2015. This analysis is considered one of the most comprehensive analyses done in the country.

The May 2016 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 "Veil of Darkness." The "Veil of Darkness" 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 "Veil of Darkness" 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 "Veil of Darkness" test and Synthetic Control analysis, researchers also used three descriptive measures that evaluate racial and ethnic disparities. They compare stop data to three different benchmarks: (1) statewide average, (2) employment commutation estimated driving population, and (3) resident-only stops. Although the design of each of the three measures is based on certain assumptions, it is reasonable to conclude that departments that consistently show data disparities separating them from the significant majority of other departments can be recommended for further review and analysis to determine the potential cause for these differences. An important factor is the relative size of the disparities. For this portion of the study, a department's data was considered sufficient for identification if a department had either (1) a disparity of 10 percentage points or more or (2) a disparity of more than five, but less than 10 percentage points as well as a disparity ratio of greater than 1.75 when compared to the descriptive benchmark. In each benchmark researchers looked at three measures: all minority driver stops, black driver stops, and Hispanic driver stops, making a total of nine measures. These techniques are extremely useful in helping to identify irregularities in the data.

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 May 2016 report found that a total of 14.1% of motorists stopped during the study period were observed to be black. A comparable 12.5% of stops were of motorists from a Hispanic descent. The results from the "Veil of Darkness" analysis indicated that minority stops were more likely to have occurred during daylight hours than at night. These results were robust to the addition of a variety of controls including time of day, day of the week, state traffic volume, department level fixed effects, and department volume controls. The results from the post-stop analysis confirmed that the disparity carried through to post-stop behavior across all racial and ethnic groups.

In addition to the state level results, a total of nine municipal police departments and one state police troop 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 nine municipal departments and state police troop 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: **Bloomfield, Meriden, Newington, New Milford, Norwalk, Trumbull, West Hartford, Wethersfield, Windsor, and Troop H.**

The researchers wanted to better understand if the statistical disparities identified in the department level analysis could be driven by specific department-wide practices or by individual officers. Therefore, following the release of the May 2016 report, the project staff began to further analyze the identified department's data. 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.

The first section of this follow-up analysis outlines additional descriptive measures that were applied to department-level data for the nine municipal departments. The second section summarizes the findings for Troop H. The final section outlines a methodology that moves us beyond examining disparities at the department level and examining individual officers. It is important to realize that the analysis only identifies officers that stopped more motorists relative to their internal benchmark and not whether officers are engaged in discriminatory policing. If any of the officers identified in this analysis were engaged in a particular activity that was not captured by the data, such as having been tasked with a specialized assignment, it could provide a reasonable explanation for the disparity. It is important that these results be viewed as the starting point of a dialogue and not as conclusive evidence of wrongdoing on the part of the officer. The officer analysis is meant to be an internal tool for law enforcement administrators to review in conjunction with additional officer information not available to researchers.

# I.B: 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. We relied on a series of descriptive and statistical tests to identify departments with consistent racial and ethnic disparities. 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 map traffic stops for each identified community. Police officers are required to report the location of a traffic stop in a manner that would allow the stop to be identified on a map. In some cases, technology allows the officer to capture the specific longitude and latitude coordinates for the stop. In other cases, the officer enters a descriptive location such as the number and street or street and nearest cross street.

The project staff worked with each of the nine municipal police departments to map traffic stops during our study period. Researchers were provided with longitude and latitude information for Bloomfield, Meriden, Norwalk, Trumbull and West Hartford**.**

In cases where specific longitude and latitude information wasn't available, a student from Central Connecticut State University manually identified the longitude and latitude coordinates from the location description entered by the officer. For these departments, we were unable to map some of the traffic stops because the officer didn't adequately detail the location of the stop. Below is a list of departments where the traffic stop location was manually identified beside the percentage of traffic stops that we were able to map.

Newington (88%)
New Milford (80%)
Wethersfield (44%)
Windsor (85%)

After completing the mapping exercise, we determined that we would proceed with a descriptive analysis of traffic stops at the census tract level for all departments except Wethersfield. Due to the relatively low number of stops that we could adequately identify longitude and latitude coordinates for in the case of Wethersfield, we decided to take a different approach.

The municipalities where we had a significant percentage of location coordinates, we mapped the stops by census tract. 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.

Due to the lack of detailed location information available in Wethersfield, researchers conducted a descriptive analysis of traffic stops by major corridors. The location information typically identified the road where the traffic stop was conducted, but not the specific point on the road. Although analyzing traffic stops by census tract is the preferred method, analyzing traffic stops by corridor was also an effective approach. Presented below are our findings from the department level descriptive analysis.

## I.B (1): BLOOMFIELD FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Bloomfield over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 2,008 | 36.4% | 1,992 | 38.0% |
| Black Non-Hispanic | 3,009 | 54.6% | 2,736 | 52.2% |
| AsPac Non-Hispanic* | 64 | 1.2% | 99 | 1.9% |
| AI/AN Non-Hispanic** | 23 | 0.4% | 35 | 0.7% |
| Hispanic | 411 | 7.5% | 379 | 7.2% |
| Total | 5,515 | | 5,241 | |

*Asian Pacific Non-Hispanic
** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period a total of 5,241 traffic stops were made by the Bloomfield Police Department. Of these, 62% were minority stops, of which 7.2% were Hispanic drivers and 52.2% were black drivers. Based on the *Veil of Darkness* analysis, minority motorists, across all racial and ethnic categories except for Hispanic motorists alone, were more likely to have been stopped during daylight relative to darkness. The results were robust to the inclusion of a variety of controls and sample restriction that excluded equipment violations. The synthetic control analysis also produced statistically significant results and the disparity was sufficiently large across all racial and ethnic categories. The post-stop analysis did not produce statistically significant estimates, possibly because of an insufficient sample of minority searches. The results of these analyses indicated that further investigation into the source of the observed statistical disparity in Bloomfield is warranted.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Bloomfield Police Department data were studied using a more detailed review of traffic enforcement during the original 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. Bloomfield provided the specific geographic location information necessary to map almost all traffic stops.

According to the 2010 census, Bloomfield is a town with approximately 16,781 residents over the age of 16. Approximately 61% of the driving age population in Bloomfield is identified as a minority. Figure 1.0 outlines the basic demographic information for Bloomfield residents over age 16.

**Figure 1.0: Bloomfield Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 6,536 | 39.0% |
| Black Non-Hispanic | 9,300 | 55.4% |
| AsPac Non-Hispanic | 133 | 0.8% |
| Hispanic | 812 | 4.8% |
| Other | 0 | 0.0% |
| Total | 16,781 | |

The U.S. Census Bureau divides Bloomfield into five census tracts. The resident driving age population varies from one census tract to another, from about 2,600 to 4,700 people. The racial breakdown in each census tract varies, from a high of over 90% minority driving age residents in census tract 4711 to a low of 32% in tract 4714. Figure 2.1 is a map that outlines the boundaries of Bloomfield census tracts, which will be referred to throughout this report. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: Bloomfield Census Tract Map**

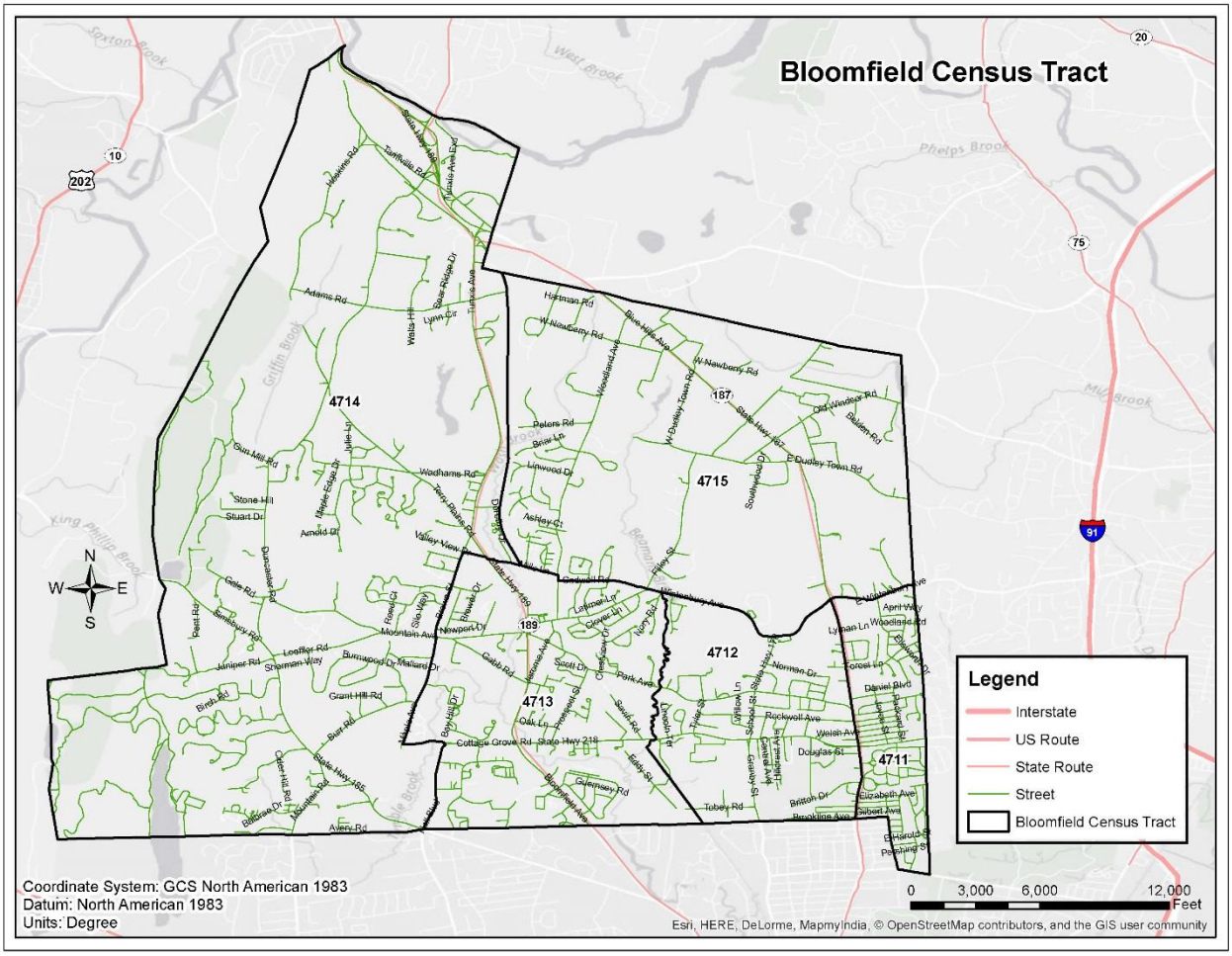
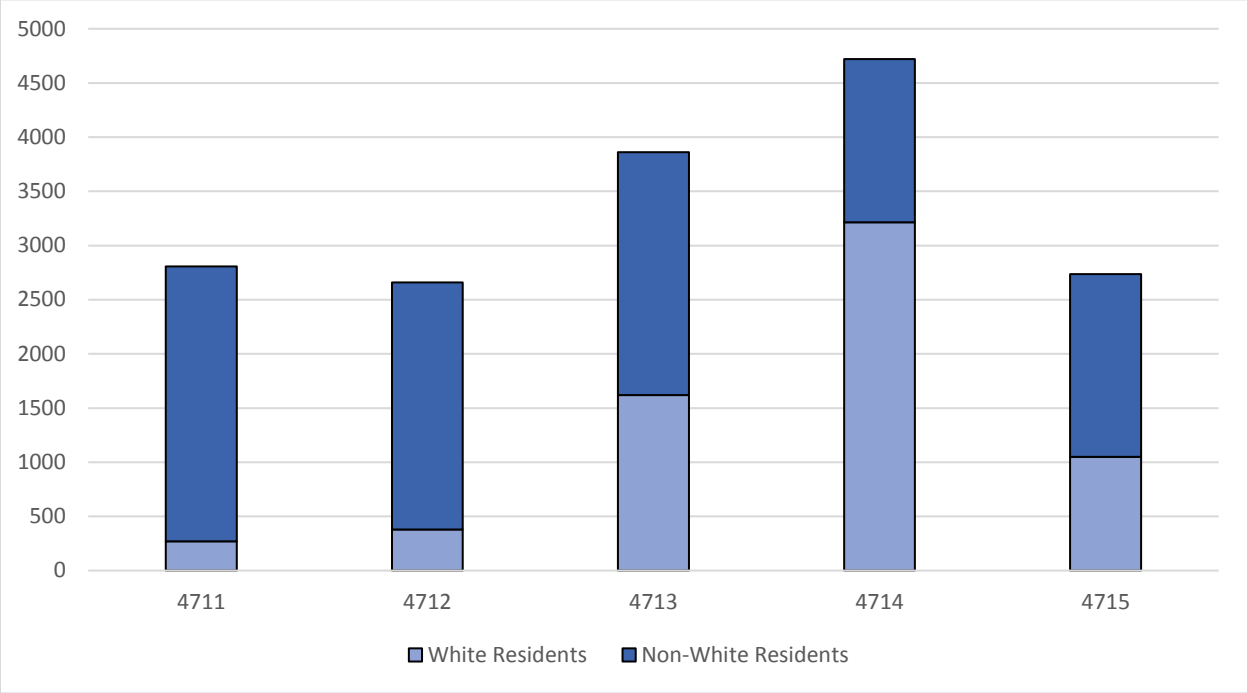


**Figure 2.2: Age 16 and Older Resident Population by Census Tract**




Six other municipalities share a common border with Bloomfield, including Windsor to the northeast, East Granby to the north, Simsbury and Avon to the west, and West Hartford and Hartford to the south. With the exception of Hartford, the five other border towns are predominantly white demographically, with an average driving age white population of 82% (compared to Bloomfield's white driving age population of 39%). Hartford borders the southern portion of Bloomfield and has a white driving age population of 19%. Of the drivers stopped in Bloomfield, 33% were Bloomfield residents and 67% lived elsewhere.

Bloomfield is 36 square miles in area and the Farmington River forms its northern border. The west side of the town is flanked by the Talcott Mountain. Route 218 is the major east-west throughway which runs from Simsbury to the West Hartford line. Bloomfield also has two major north-south roadways, Route 187 and Route 189, which both merge when approaching the Windsor town line.

The Bloomfield Police Department identified its patrol division as the unit responsible for the majority of the traffic enforcement in town. The patrol division is structured with district boundaries established for a three-district plan, four-district plan or a five-district plan. The patrol division operates three shifts per day (shifts A, B, and C). According to the department's General Order: No. 3-01, patrol districts are devised in differing sizes in accordance with crime patterns and anticipated workload based on density of commercial, industrial and residential topography.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each Bloomfield census tract. A large percentage of traffic enforcement activity (74%) occurred in a relatively concentrated geographical area covering three census tracts (4711, 4712, and 4713) in the southern portion of town. They also border four census tracts in Hartford and one census tract in West Hartford. The average population in these five bordering census tracts is 90% minority. Census tracts 4711 and 4712 also account for 47% of all minority residents. Moving away from the southern portion of the

town where a high percentage of traffic enforcement occurs, census tract 4715 contributes 16% of the overall traffic enforcement and covers a majority of Route 187.

**Figure 3.1: Traffic Stops by Census Tract**

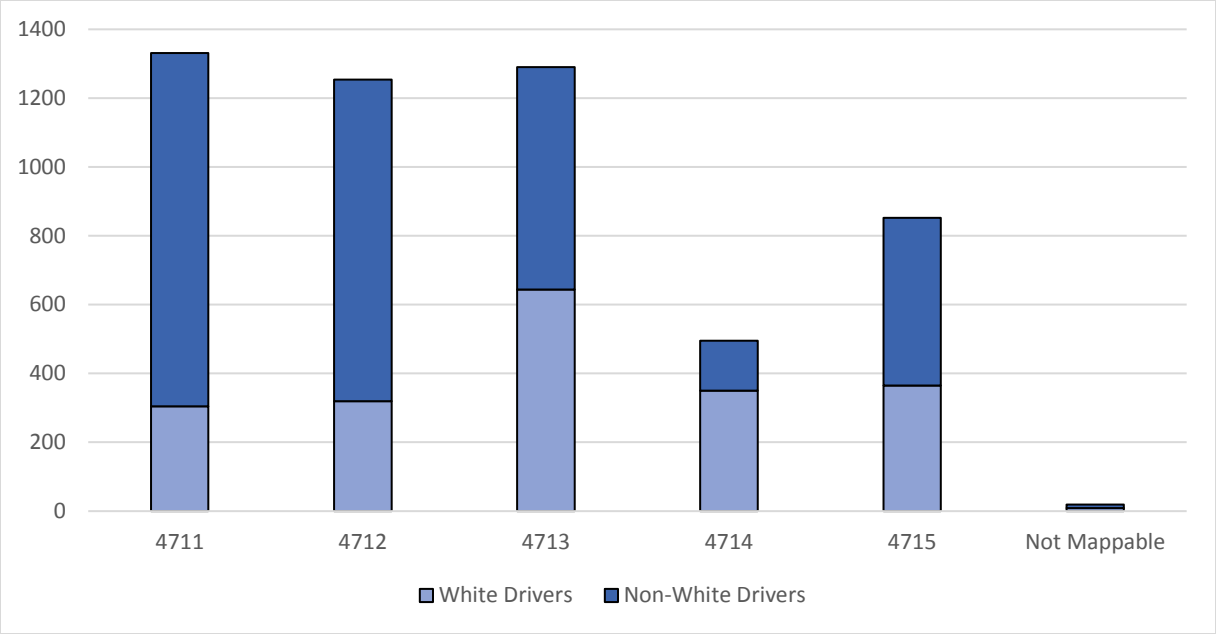



Figure 3.2 is a map of traffic stops made in Bloomfield. The three census tracts that account for 74% of the traffic enforcement activity include 55% of the Bloomfield's resident population. Census tract 4713 has the second largest residential population in town with 23%. Census tract 4712 has the smallest residential population with 16%. The two census tracts that fall outside the high enforcement area account for 25% of the traffic enforcement and make up 44% of the population.

Bloomfield's overall resident population is 61% minority and 81% of all Bloomfield residents who were stopped were minority. Resident minority drivers were stopped in all five census tracts at a rate that exceeded their representation in the resident driving age population. Only 33% of the drivers stopped in Bloomfield were residents of the town.

**Figure 3.2: Traffic Stop Map**

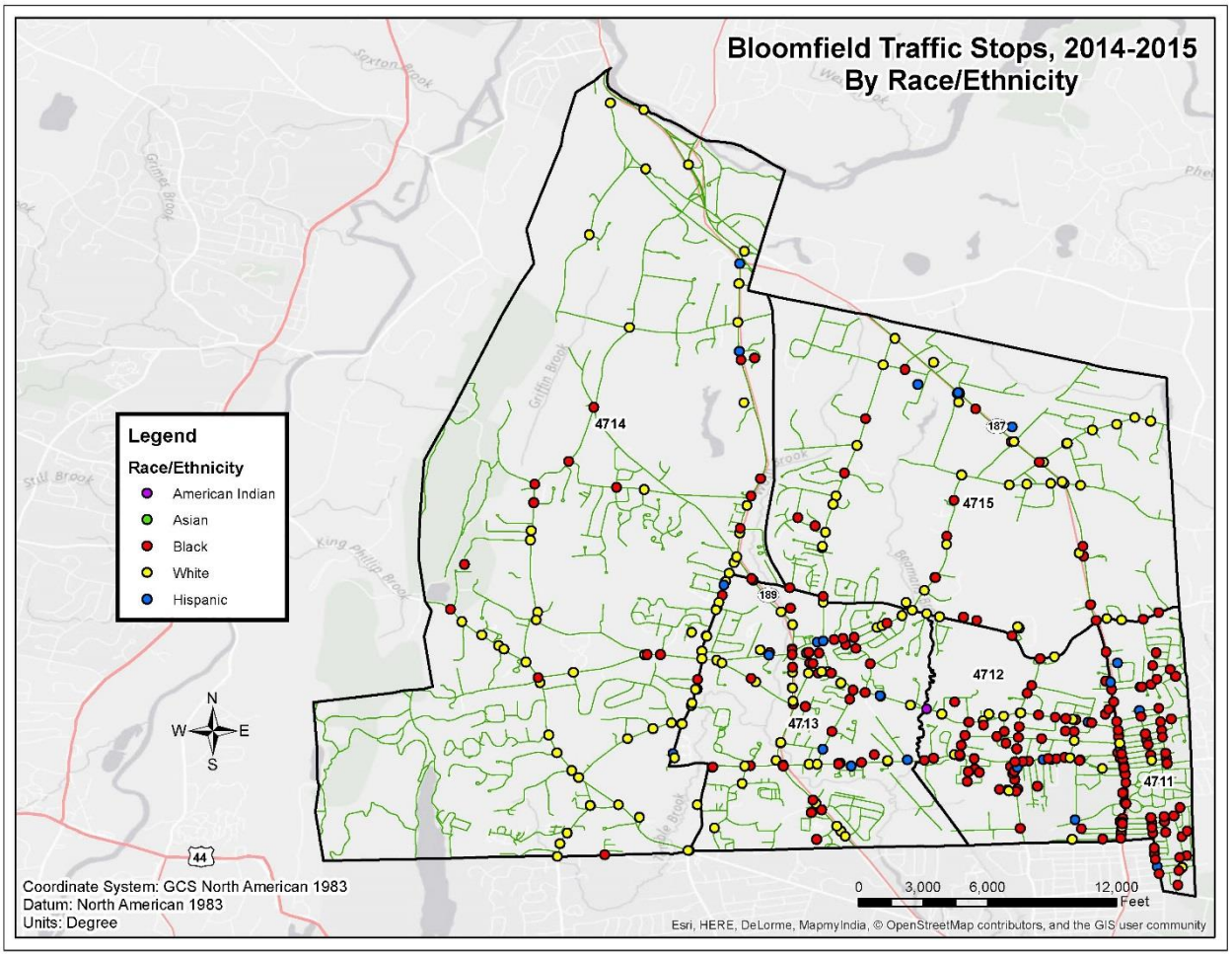
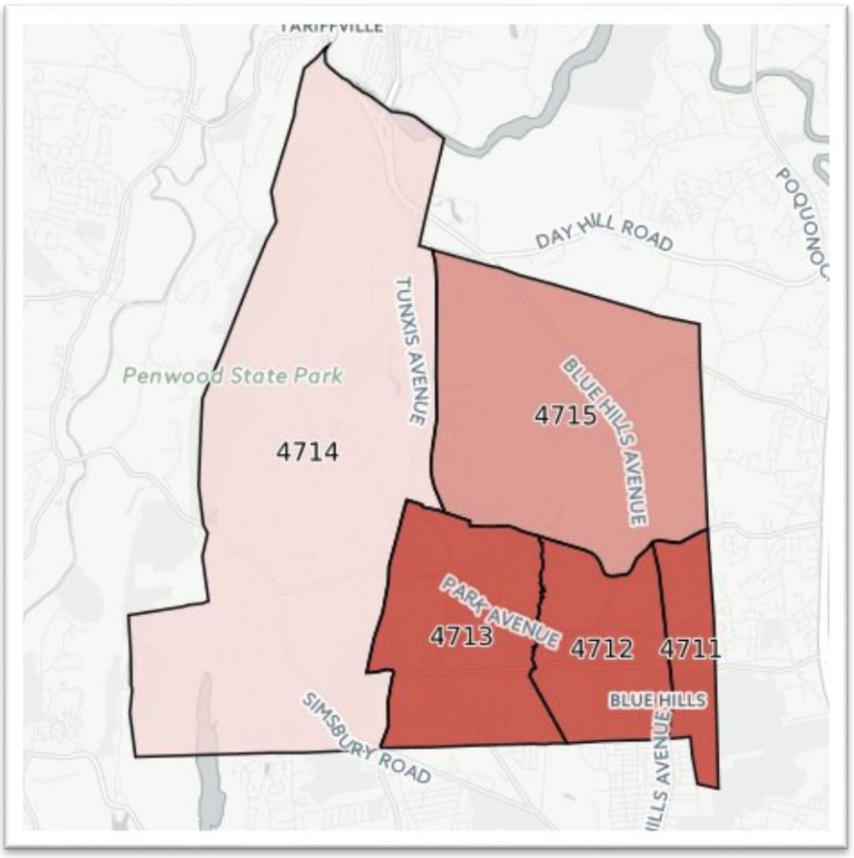



Figure 3.3 shows an additional way to view the high enforcement areas in Bloomfield. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area with between 1,250 and 1,350 traffic stops made in each census tract. Group one includes tracts 4711, 4712, and 4713where 74% of all traffic enforcement in Bloomfield occurs. Group two consists of census tract 4715 which included 852 of the total traffic stops and group three was census tract 4714 with 495 of the total traffic stops.

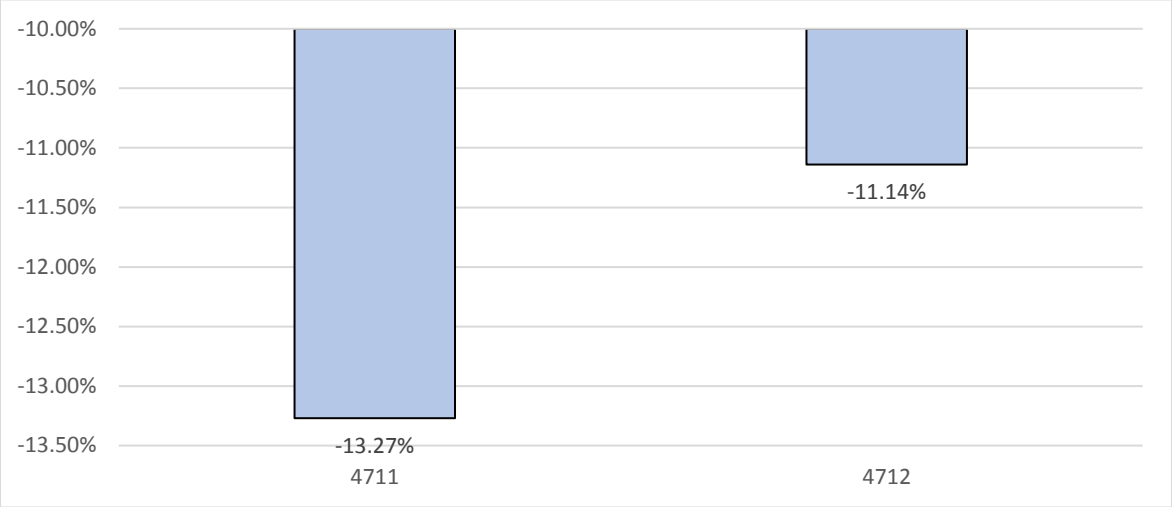
**Figure 3.3: Census Tracts Identified by Levels of Enforcement**




## Traffic Stop Breakdown by Race/Ethnicity

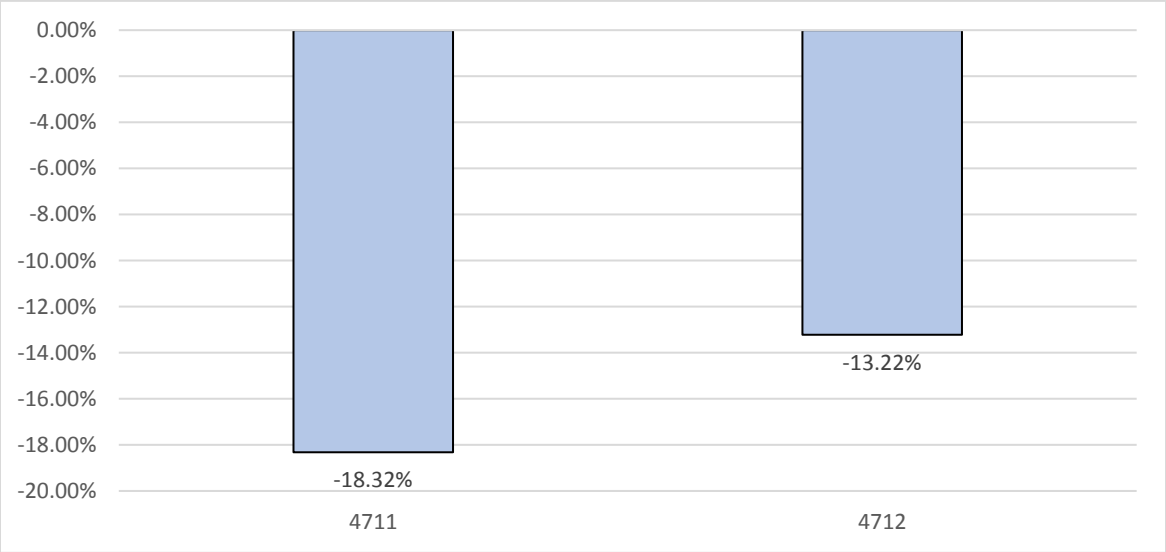
In Bloomfield, 62% of all drivers stopped were minority. Minority drivers are classified as all non-white drivers, but this is predominantly made up of black or Hispanic drivers. The resident population age 16 and older in the municipality of Bloomfield is 61% minority, but the two census tracts (4711 and 4712) with the highest level of traffic enforcement have minority resident populations between 85% and 90%. Taken individually, some of the census tracts with high proportions of minority drivers stopped and high to moderate enforcement activity tend to reflect the high proportions of the minority population. Figure 4.1 highlights the disparity between the minority population and percent of minorities stopped in the two census tracts where the minority stop percentage exceeded the town-wide average of 62%. Both of these census tracts have the highest minority resident population and the stop percentage was less than the population percentage. These tracts also account for 50% of all out-of-town drivers who were stopped.

**Figure 4.1: Disparity Between Minority Drivers Stopped and Census Tract Population**



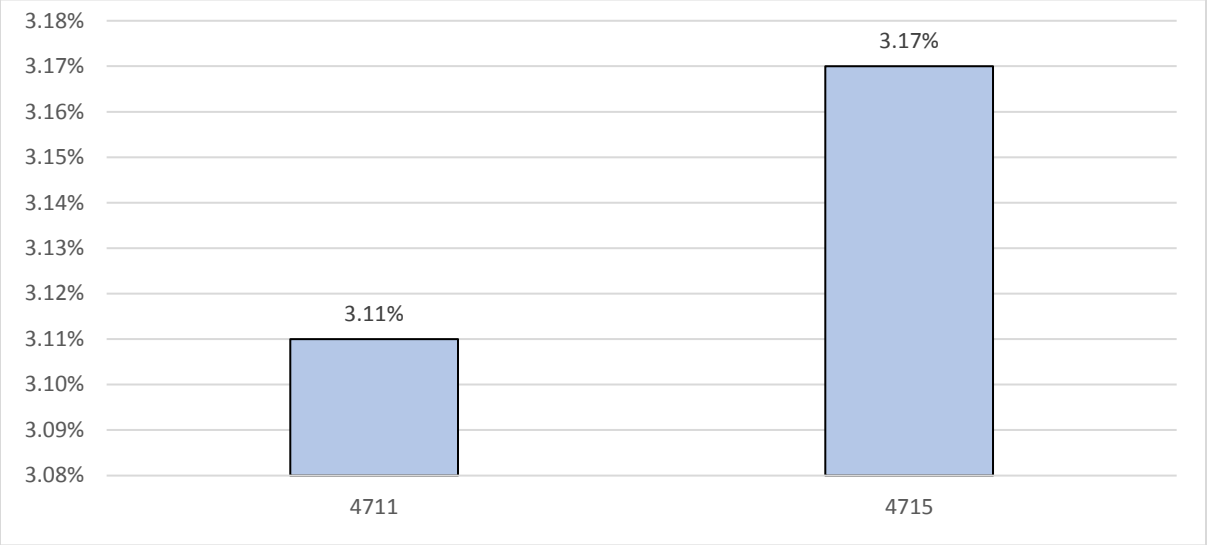

The overall percentage of Bloomfield traffic stops involving black drivers was 52%. The percentage of black drivers who were stopped exceeded the town average in two of the five census tracts. Figure 4.2 shows how the proportion of black stops made in these two census tracts compares to the proportion of black driving age residents living in these tracts. Both of these census tracts have the highest black resident population and the stop percentage was less than the population percentage.

**Figure 4.2: Disparity Between Black Drivers Stopped and Census Tract Population**




The overall percentage of Bloomfield traffic stops involving Hispanic drivers was 7.2%. The percentage of Hispanic drivers stopped exceeded the town average in two of the five census tracts. Figure 4.3 shows how the proportion of Hispanic stops in these two census tracts compares to the proportion of Hispanic driving age residents living within those census tracts. The data show a small disparity between Hispanic stops and the resident Hispanic driving age population. Bloomfield does not have a large Hispanic population (less than 5%). The disparity identified in Hispanic stops in census tract 4711 only minimally contributes to the overall disparity in Bloomfield.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Bloomfield. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

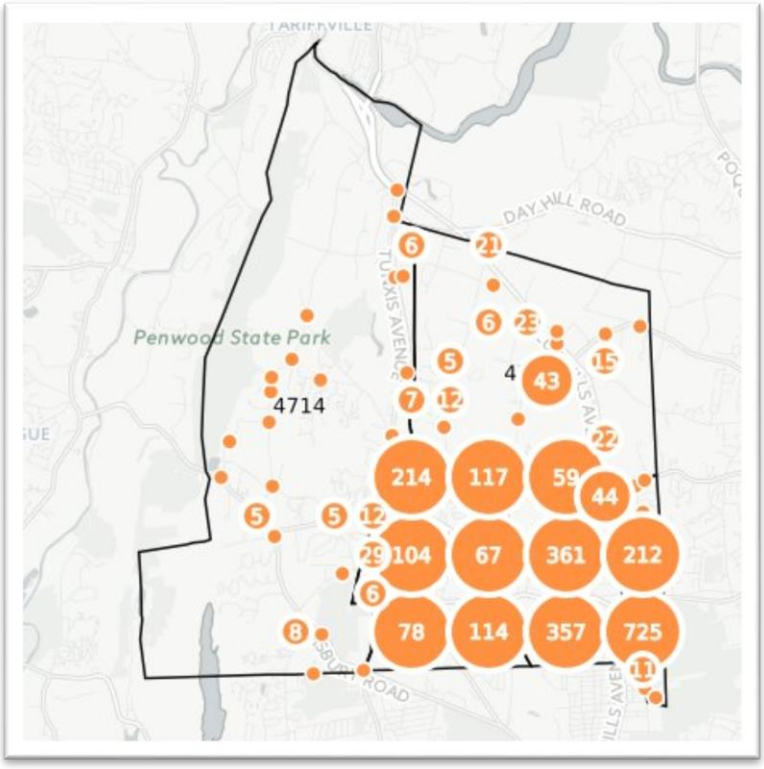
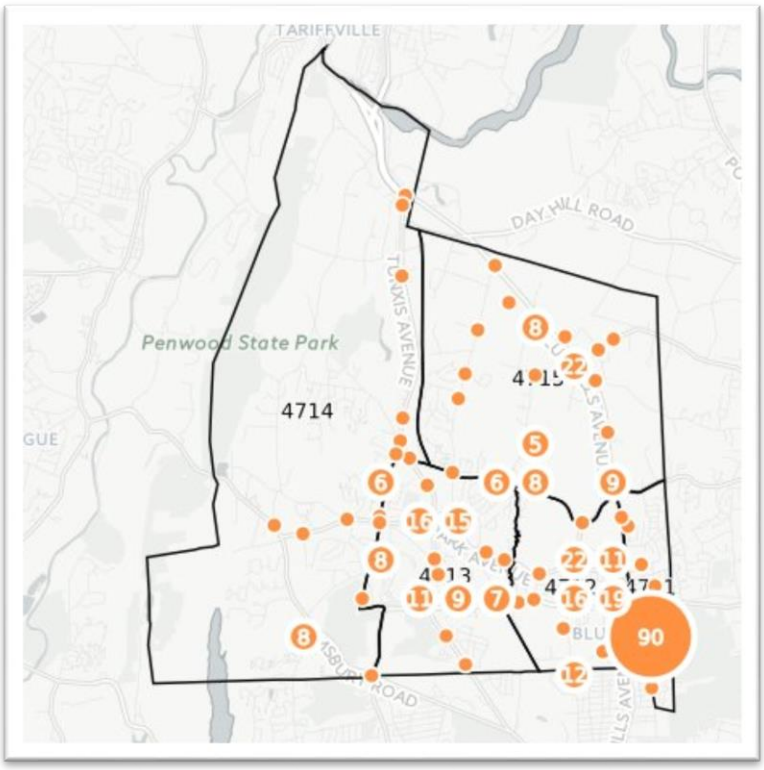


**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**




## Special Enforcement Campaigns

Bloomfield participated in special enforcement campaigns that were sponsored by the Connecticut Department of Transportation through funds made available by the National Highway Traffic Safety Administration (NHTSA). Bloomfield reported a total of 737 stops as part of the NHTSA-funded campaigns. The Special Enforcement campaigns in which Bloomfield participated focused on: (1) distracted driving, (2) drinking and driving, (3) seatbelt safety ("Click-It or Ticket"), and (4) High Risk Rural Road Speed Enforcement. The Bloomfield Police Department was able to identify only the dates, times, and basic stop information for special enforcement campaigns. They provided the locations for all check-points established during the campaign. The case numbers for each stop were not available to match to the traffic stop database.

Of the 737 stops made as part of the enforcement campaigns, 162 were reported as part of distracted driving campaigns, 514 were reported as part of drinking and driving campaigns, 27 were part of "Click-It or Ticket" campaigns, and 34 were part of a speed enforcement campaign. Stops made during special enforcement campaigns accounted for 14% of all stops made in Bloomfield during the study period. When a town has participated in these enforcement campaigns and made a significant portion of its total traffic stops as part of them, it can add an additional dimension to analysis of the town's stop data because they can affect the overall data for the town in several ways. For example, 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 or not to ticket the violator. Imposition of penalty-based outcomes is one of the tenets for participation in these federally-funded programs. Stop demographics can also differ, particularly with respect to distracted

driving campaigns which focus primarily, though not exclusively, on cell phone use. In general, cell phone stop demographics statistically tend to show higher proportions of female violators and lower proportions of minority drivers than is typical for other types of motor vehicle violations. Finally, the criteria for selection of locations to conduct selective enforcement could differ in some ways from the way stops are generally conducted. For example, effective distracted driving 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.

Distracted driving campaigns took place in April 2015 and August of 2015. In April 2015, special enforcement for distracted driving was conducted on 15 separate days. The focused patrols were at eight different locations; the most frequent at the intersections of Blue Hills Ave. and Cottage Grove Rd., and Bloomfield Ave. and Cottage Grove Rd. Police reported 125 stops for the April patrols, 114 of which were for cell phone violations. These stops accounted for 23% of all stops conducted in April. In August 2015, there were focused patrols on five separate days. The patrols took place at five different locations, primarily in the high enforcement southeast census tracts on Blue Hills Ave., Cottage Grove Rd., and Bloomfield Ave. Police reported 37 stops for the August patrols, 34 of which were for cell phone violations. These stops accounted for 9% of all stops conducted in August. During the campaigns, cell phone violation stops accounted for 34% of all cell phone related stops in town.

Drinking and driving campaigns took place throughout the entire year with a total of 514 stops made as part of the campaign. The data indicated that there was one DUI checkpoint in May 2015 conducted on Cottage Grove Rd. The remaining DUI enforcement that took place throughout the year were conducted as part of a roving DUI patrol. A roving patrol refers to an officer on patrol conducting motor vehicle enforcement to identify a violation highlighted in the enforcement campaign. Of the 514 stops reported during the DUI campaign, the information Bloomfield submitted to us for analysis showed that four drivers were arrested for DUI, 12 drivers were arrested on drug charges, and three drivers were arrested for a felony. The most frequent outcomes of stops were citations for speeding (311 drivers) and some other moving violation (115 drivers). The particular reporting format of the campaign data does not include the stop locations for roving DUI patrols.

The “Click-It or Ticket” campaign took place over four days in November 2014, when a total of 20 officer hours were used for this campaign. The four checkpoints were set up in two locations: (1) three at Blue Hills Ave. and Cottage Grove Rd. and (2) one at the corner of Blue Hills Ave. and Old Windsor Rd. which is the high enforcement area in the southeast corner of town. There were 27 stops reported during the checkpoints, 20 of which were for seatbelt violations.

Lastly, the High Risk Rural Road Speed Enforcement campaign, deploying 36 officer hours, took place over six days in July 2015 and three days in August 2015 with a total of 34 stops made. The data does not indicate that any of these stops were conducted as part of a check-point, which would imply that they were conducted as part of a roving patrol. Of the 34 stops reported during this campaign, 30 resulted in a speeding violation citation and four for some other violation.

## Traffic Stop Distribution for Bloomfield Officers

Bloomfield’s total of 5,241 traffic stops is similar to the number in other towns of its size. During the study period, traffic stop data was reported for 48 officers. The average number of stops made per officer was 109. Of the 48 officers reporting stops, 15 made fewer than 20 stops, five made between

20 and 50 stops, nine made between 50 and 100 stops, and 19 made over 100 stops. The 19 officers making over 100 stops account for 82% of all stop activity. The most active officer made 453 stops or 9% of all stops made town wide. Ten officers made over half of all traffic stops in Bloomfield. It is clear that the majority of officers are active in traffic enforcement, but about 20% of the officers reporting stops have the most impact on stop data.

## Post-Stop Outcome Review

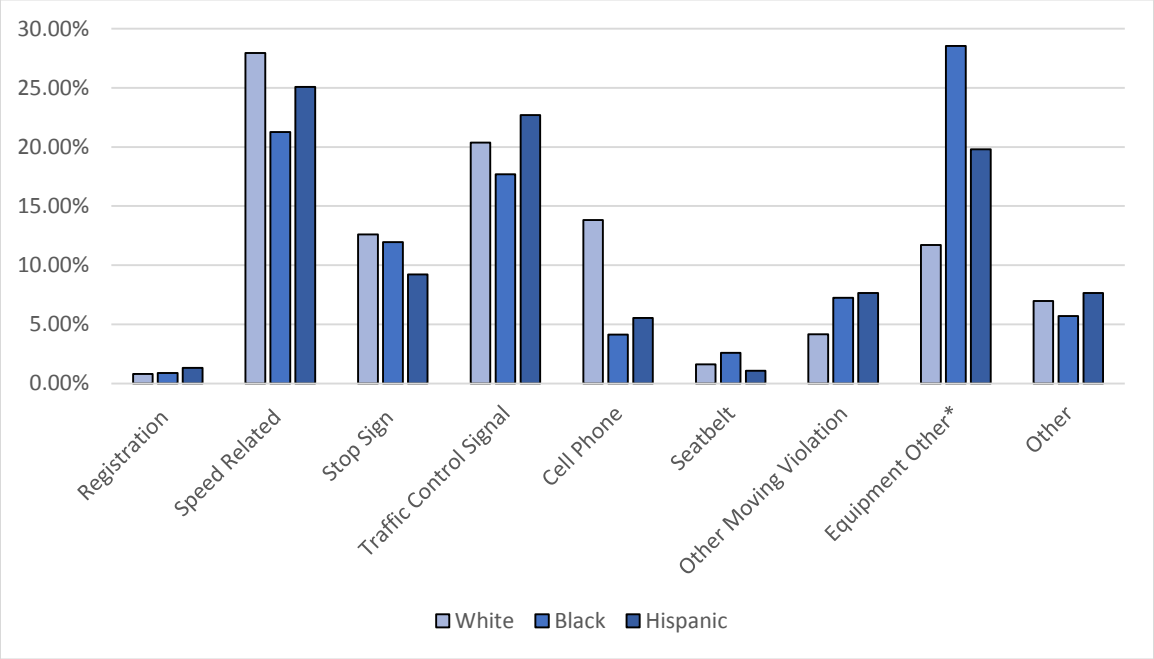
The reasons police stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that Bloomfield officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in Bloomfield account for 57% of the total stops. The three largest stop categories were for speed-related violations (24%); traffic control signal violations (19%); and defective or improper lighting (14%). 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-related and registration-related violations than white drivers as a percentage of their total stops.

The data shows that, with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) can be closely related to the frequency and location of where they are made. If they occur more frequently 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 higher concentrations of white drivers, the stop demographics shift toward white drivers, suggesting that the potential to find violators is more dependent on location than race.

The Bloomfield data tends to confirm these observations. Of all the black driving age residents living in Bloomfield, 70% live in census tracts 4711, 4712, and 4713. These three tracts are also the residential areas for 60% of all Hispanic driving age residents. The opposite is true for white residents, where only 35% live in those three tracts. Just over 88% of all fairly high discretion equipment-related stops for lighting, plate display, and window tinting were made in these three tracts. The racial breakdown for these stops were 7% Hispanic drivers, 73% black drivers, and 19% white drivers. The other 12% of these stops were made outside of these three census tracts, were only 30% of the black driving age residents and 40% of the Hispanic driving age residents live. For those stops, the demographics were 5% Hispanic drivers, 54% black drivers, and 38% white drivers.

These patterns seem to suggest that where these types of stops are made is a more significant factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. Figure 5.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 5.1: Reasons for Traffic Stops**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figure 5.2 and 5.3 are maps of traffic enforcement for safety-related motor vehicle stops and equipment-related motor vehicle stops. Stops that were made for speed, stop sign, traffic light, cell phone or moving violations were labeled "safety-related" stops. Stops for defective lights, window tints, or display of plate were labeled "equipment-related" violations.

**Figure 5.2: Safety-Related Motor Vehicle Stops**

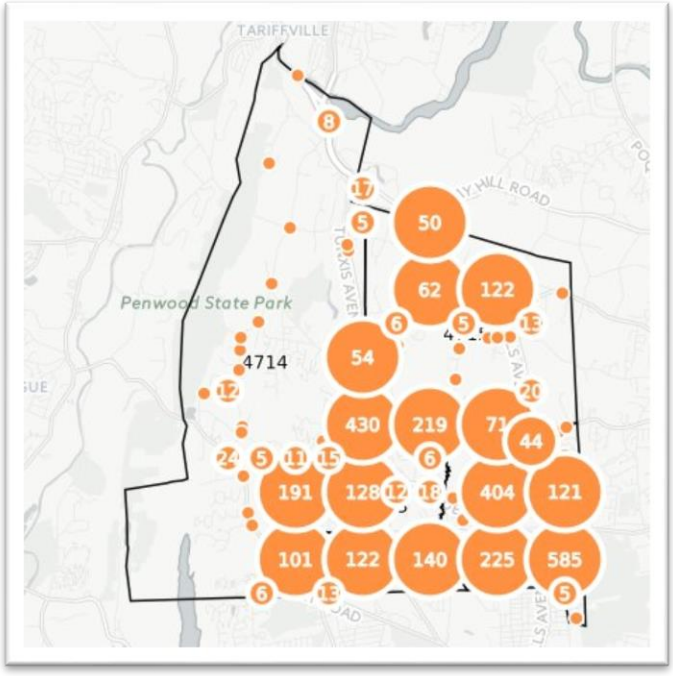
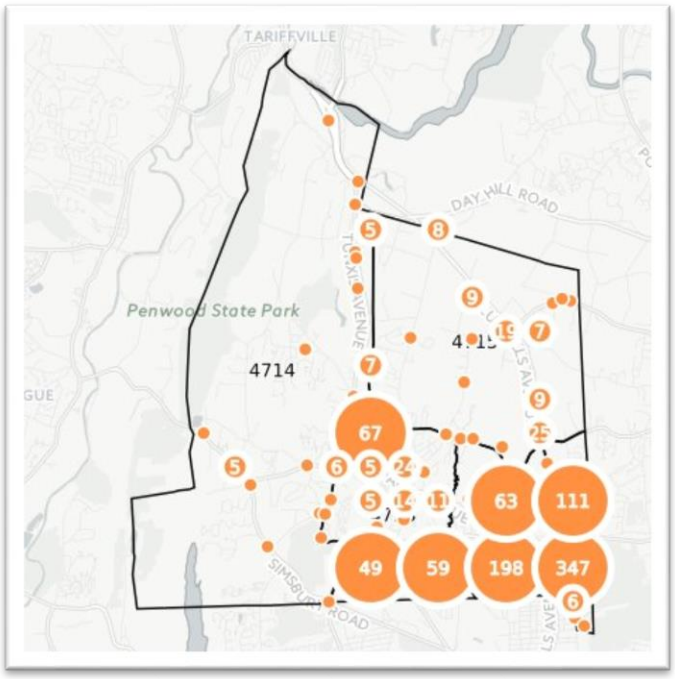


**Figure 5.3: Equipment-Related Motor Vehicle Stops**

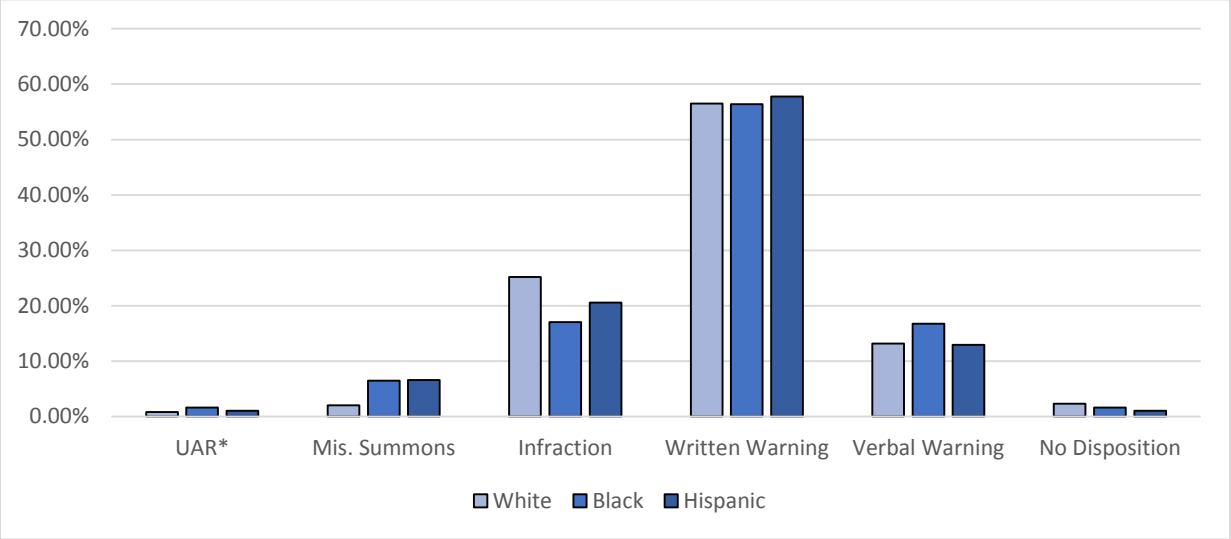



The highest percentage of motor vehicle stops in Bloomfield resulted in the driver receiving a written warning (57%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers. In addition, black and Hispanic drivers were slightly more likely to be arrested as a result of the stop. Figure 5.4 outlines the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives an analyst the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In Bloomfield, 245 of the stops made resulted in the issuance of a misdemeanor summons (4.7%). black and Hispanic drivers were more than three times as likely to be issued a misdemeanor summons as were white drivers (6.5% of black drivers and 6.6% of Hispanic drivers compared to 2.0% of white drivers). Bloomfield did a very thorough job reporting the secondary statutory citation information in cases involving a misdemeanor charge and should be commended for their attention to detail in this area.

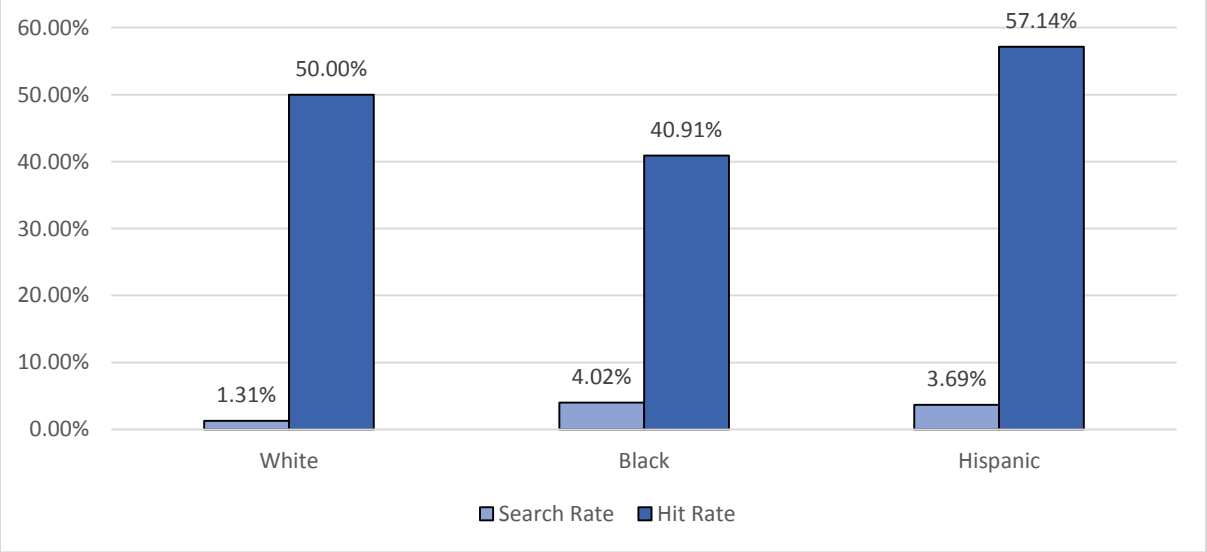
**Figure 5.4: Outcome of Traffic Stop**




*Uniform Arrest Report

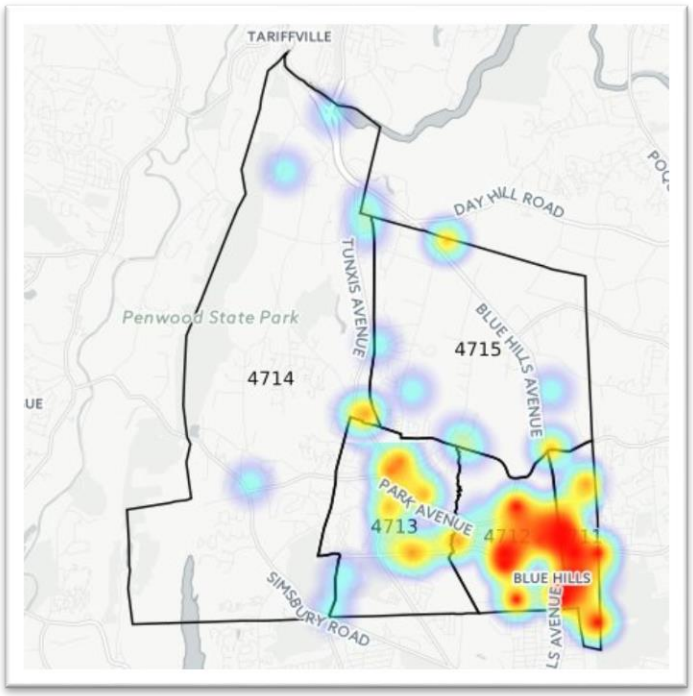
A review of department search information shows t 2.9% (150) of the drivers stopped in Bloomfield were subjected to a motor vehicle search. The rate of motor vehicle searches is exactly the same as the state average. Black and Hispanic drivers were searched at a rate more than double that for white drivers. Contraband was found at a higher rate in Hispanic and white drivers than in searches involving black drivers. Contraband was found at a significantly higher rate (53%) when the search was conducted as the result of probable cause, plain view, or some other reason compared to when the search was the result of consent (35%). Figure 5.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 5.5: Search and Hit Rate**



Motor vehicle searches in Bloomfield are concentrated in the high enforcement areas. Figure 5.6 is a heat map of motor vehicle searches in Bloomfield which indicates the majority of searches occurring in tracts 4711 and 4712.

**Figure 5.6: Search Heat Map**




## Department Enforcement Strategy

Law enforcement administrators distribute police resources within a community based on a variety of factors such as areas with high accident or crime rates and calls for service. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with Bloomfield provide a context to potentially explain the rationale for police deployments there and are important considerations.

The Bloomfield Police Department provided researchers with their 2012 Strategic Operating Plan. The Strategic Operating Plan was intended to provide employees of the department, as well as the community, an understanding of the department's core operating principles and strategic goals. In this plan the Chief outlined eight strategic goals for the department:

1. Maintain a Safe and Secure Community
2. Enhance Community Policing
3. Utilize a Crime-Fighting Strategy
4. Effectively utilize Technology and Equipment
5. Evaluate the Department Organization and Deployment
6. Progress toward National Accreditation

7. Enhance Employee Skills, Supervision, and Leadership
8. Develop a Comprehensive Traffic Safety Plan

Although all eight goals are important, there are two factors, high numbers of traffic accidents and citizen complaints of unsafe driving practices, which appear to be the most relevant to the town's traffic enforcement strategy. As part of strategic goal one, maintaining a safe and secure community, the Chief outlines his philosophy on proactive policing with emphasis on crime prevention:

> "Random, reactive patrol is ineffective in preventing crime. Instead, officers should be proactive, focused on directed patrol techniques and engaged in problem solving. To explain what I mean by focused and directed, let's examine the subject of motor vehicle enforcement. I have shared my philosophy on this subject many times over the past year. With the exception of a dedicated traffic enforcement program, I have argued that *when specific locations have been identified where motor vehicle accidents are occurring, or citizens have made complaints regarding speeding or unsafe operation, then those locations should be targeted for directed patrols and motor vehicle enforcement.* On the other hand, if an officer spends excessive time conducting motor vehicle enforcement at locations that have few accidents or an insignificant history of violation issues, then it would be a poor use of police resources. The quantity of motor vehicle infractions an officer issues is not an effective measure of productivity; rather the reduction in the number of accidents and motor vehicle violations, as well as community satisfaction in its safety is an effective measurement." (emphasis added)

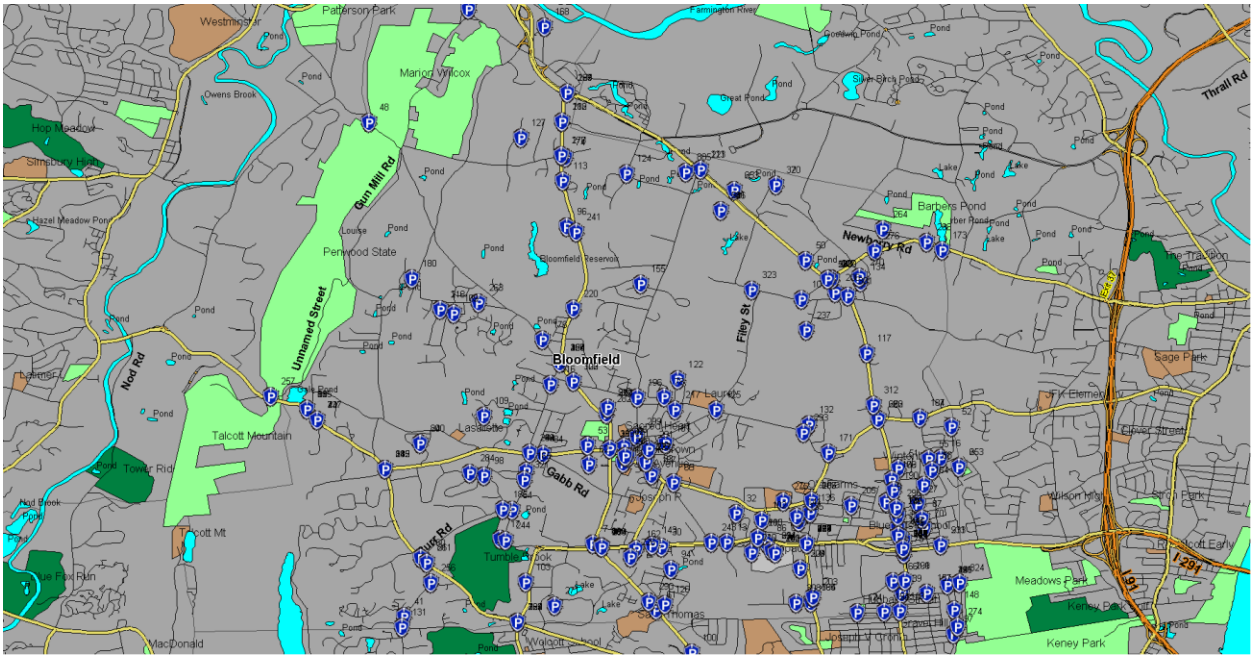
Additionally, strategic goal eight was to develop a comprehensive traffic safety plan. This strategy included increasing the use of Mobile License Plate Readers, initiating part-time traffic enforcement teams, focusing on high accident locations and school zones, and focusing on neighborhood-based traffic complaints. The strategic goals highlight the department's desire to be present in areas with high crime, high accident rates, and a large number of citizen complaints. We take a closer look at these three factors in the below sections.

## Calls for Service and Citizen Complaints

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. The department provided researchers with the calls for service log, which included calls for service and officer initiated actions that were called into police dispatch. The logs report approximately 31,689 entries from October 1, 2014 through September 30, 2015, exclusive of traffic stops. The top three reasons for calling dispatch were for a property check, medical call, or response to an alarm and these account for about 56% of all calls. Unfortunately, the information provided in the call logs was in summary form and did not identify the information by location or patrol district so it is difficult to assess how they are distributed throughout the town.

However, the department provided researchers with a map of citizen-initiated motor vehicle complaints generated through their records management system. Figure 6.0 illustrates the location of the 327 traffic stop complaints to the department during the study period. Occasionally, citizens will call the police to complain about illegal or disturbing motor vehicle activity. Although the image can be difficult to interpret, it tends to show larger numbers of citizen motor vehicle complaints in census tracts 4711, 4712, and 4713, the areas with generally higher traffic enforcement levels.

**Figure 6.0: Citizen Traffic Complaints**




## Crime in Bloomfield

In 2015, the crime rate in Bloomfield was reported to be of 277 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[1], there were 572 reported crimes in Bloomfield in 2015. The three most reported crimes were larceny (422), burglary (67), and aggravated assault (42).

The department provided information on the location of criminal activity in Bloomfield during the study period. This included the locations and number of assaults (56), burglaries (82), homicides (1), larcenies (372), motor vehicle thefts (18), robberies (6), sexual assaults (23), and weapons violations (14). Bloomfield police administrators stated that crime data and pattern activity are the cornerstone of their crime control and reduction strategy. Taking into consideration Bloomfield's overall strategic plan goals, looking at the locations of the above listed crimes in more detail could provide the context for a better understanding of what may be leading Bloomfield officers to be more active in some areas of the town more than others.

What follows are images showing the reported locations of the three most frequent crimes that occurred in Bloomfield that year. Figure 7.1, 7.2, and 7.3 show the locations for reported larcenies, burglaries and assaults in town. The image indicates that the majority of these crimes occurred in the three census tracts-- 4711, 4712, and 4713—which also happen to be the three tracts where traffic enforcement levels are the highest.

[1] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

**Figure 7.1: Reported Incidents of Larceny**

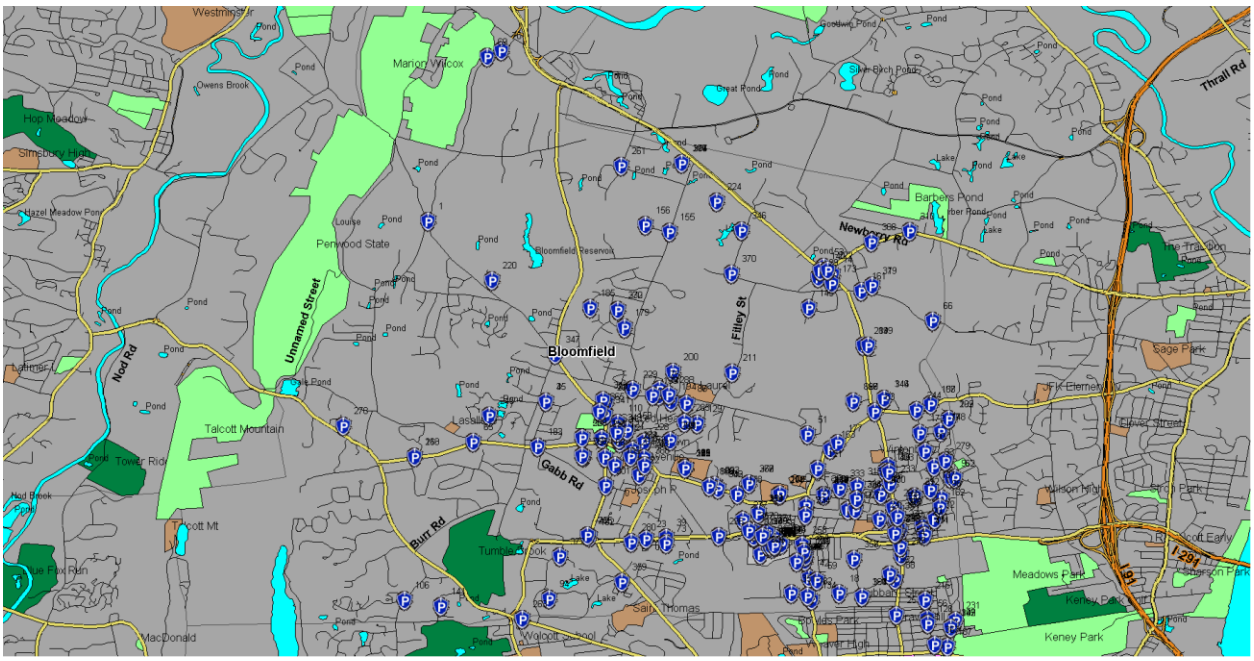



**Figure 7.2: Reported Incidents of Burglary**

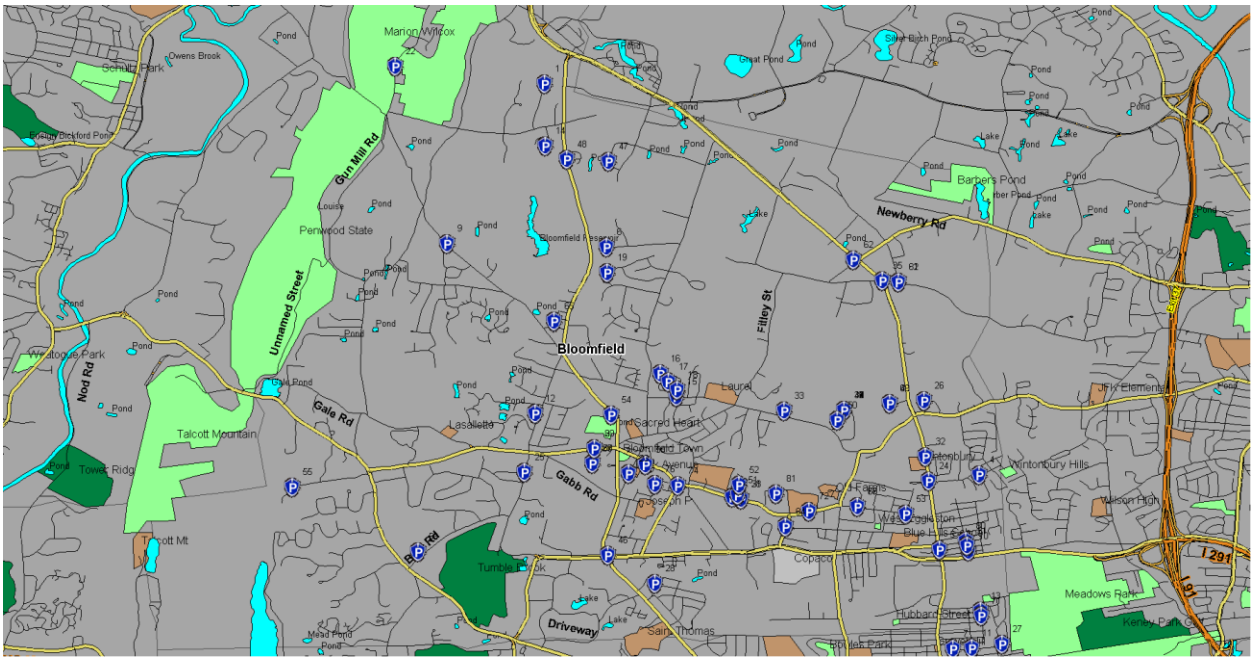
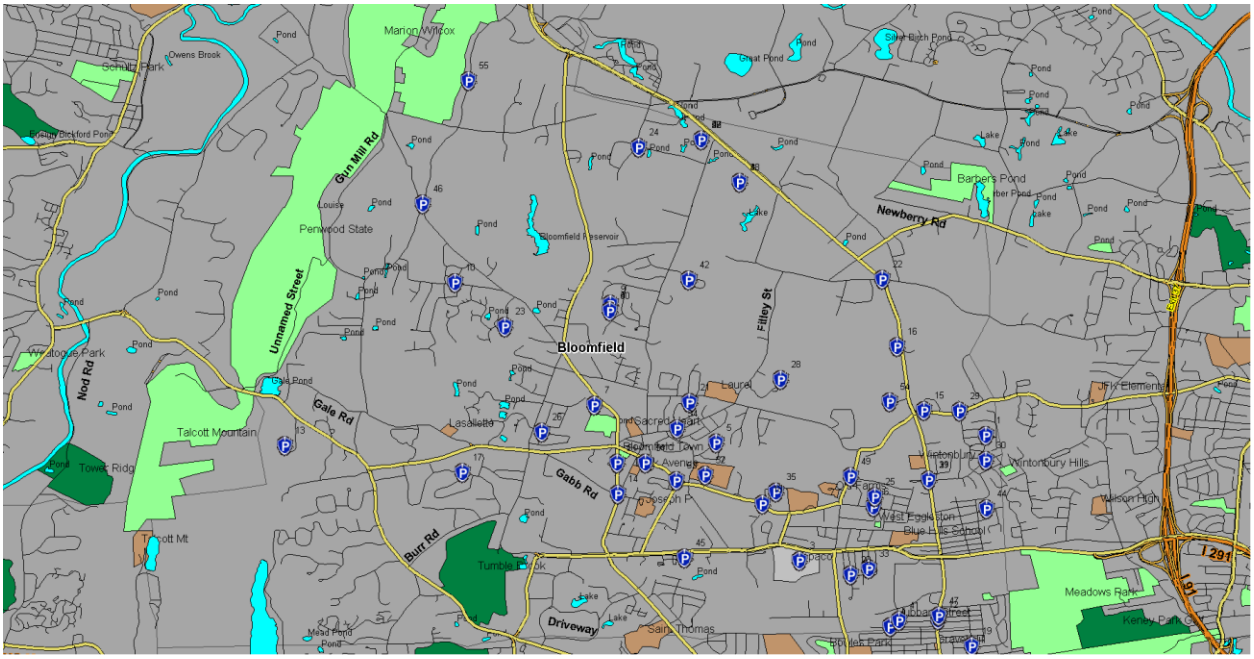


**Figure 7.3: Reported Incidents of Assault**




## Motor Vehicle Accidents

During the study period, there were 631 reported motor vehicle accidents on roads patrolled by the Bloomfield Police Department. Accidents were reported as occurring on a total of 80 roads. The roadways with the highest number of accidents were Blue Hills Ave. (149 accidents), Cottage Grove Rd. (74 accidents), and Route 185 (37 accidents). There were only 14 roads with 10 or more accidents and they accounted for 77% of all Bloomfield's accidents.

Figure 8.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Bloomfield. While the vehicle crash rate tends to build fairly steadily throughout the day in Bloomfield, it peaks during the afternoon period from 2:00 p.m. through 6:00 p.m. Traffic enforcement tends to track the daytime accident pattern somewhat closely, but diverges during the late night period (roughly 11:00 p.m. through 2:00 a.m.) when traffic enforcement reaches its second highest daily peak but accident levels are at their lowest.

**Figure 8.1: Accidents Compared to Traffic Stops by Time of Day**

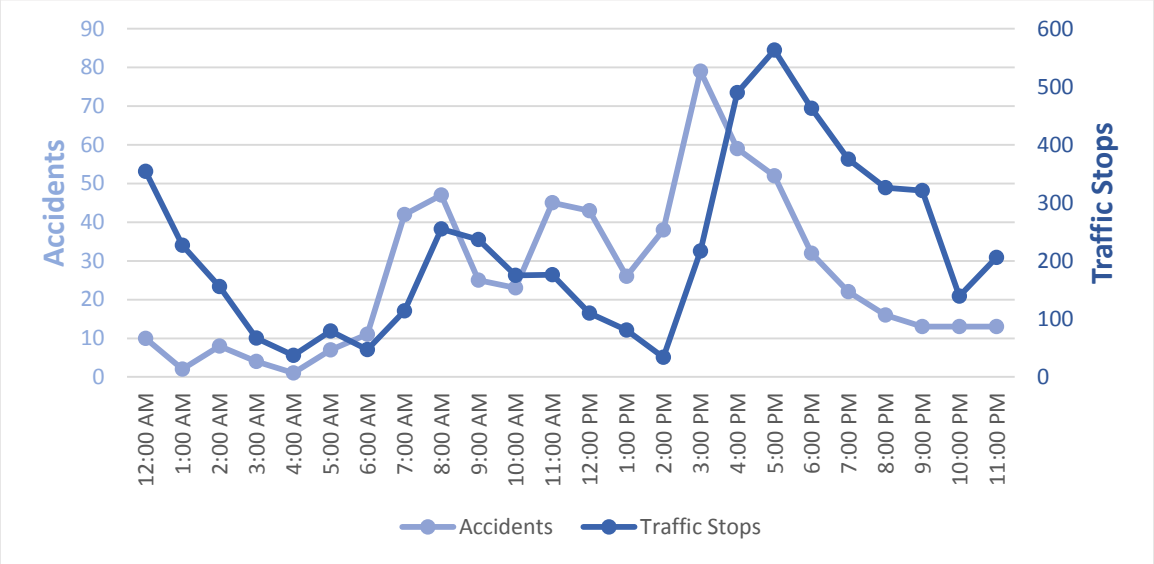
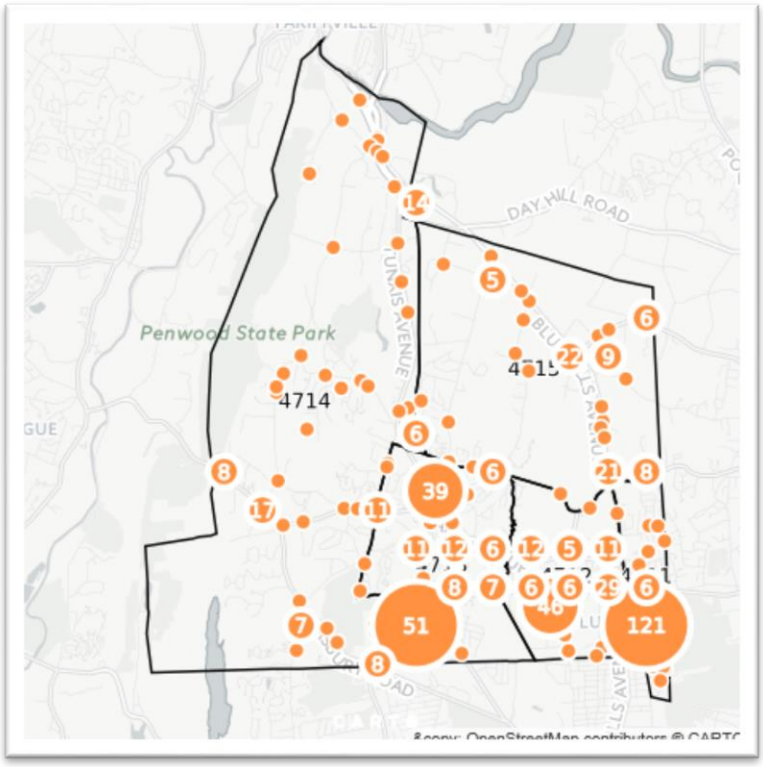



Figure 8.2 shows how motor vehicle accidents were generally distributed throughout the town. As can be seen from the diagram, while accidents are somewhat distributed throughout the city, the largest concentrations of them are (1) along Cottage Grove Road and Blue Hills Avenue, particularly where these two roads intersect; (2) the areas between Bloomfield Avenue and Hall Boulevard; and (3) along Park Avenue from Cottage Grove Road to the area where Park Avenue intersects with Bloomfield Avenue. The intersection of Blue Hills Avenue and Cottage Grove Road, which straddles the border between census tracts 4711 and 4712, is the most significant accident location in the entire town by far. Figure 8.2 shows how significantly traffic accidents affect Bloomfield census tracts 4711, 4712, and 4713, which are also Bloomfield's highest minority population and highest enforcement activity areas. The role traffic accident experience plays in resource deployment decisions in Bloomfield is a significant one.

Bloomfield's policy on traffic enforcement (General Order No. 3-13) establishes a strong connection between traffic accident experience within the town and officer deployment decisions and activities. It states, in part, that traffic enforcement activities will be conducted based on the principle that the most effective deterrent to traffic law violations is visible patrol in marked vehicles and expresses an interest in maintaining a posture of prevention as opposed to apprehension (Part IV Sec, B). It also states that the department will undertake "selective traffic enforcement" in order to reduce violations and, ultimately, accidents in the town (Part IV Sec. C).

As part of this selective enforcement approach, the Traffic Supervisor is required to conduct an annual review of selective traffic enforcement activities as directed by the Patrol Commander. This review must include a compilation and review of both traffic crash data and traffic enforcement activities data, comparison of the collision and enforcement activity data, implementation of selective enforcement techniques and procedures, and deployment of traffic enforcement personnel and evaluation of selective enforcement procedures.

**Figure 8.2: Bloomfield Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

Bloomfield Police Department officials 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 and areas with the highest levels of traffic as some of the same areas with the highest levels of motor vehicle enforcement. They also indicated the impact that reported incidents of crime, traffic accidents, and citizen complaints in the southern section of town have had on the deployment of departmental resources. Our analysis of traffic stops by geographical area, confirms that departmental resources with respect to traffic enforcement tend to be concentrated in the three census tracts (4711, 4712, and 4713) along the southern section of town bordering Hartford and Windsor.

Bloomfield has a non-white driving age population with about 5% Hispanic driving age residents and 55% black driving age residents. Almost 68% of all black and Hispanic residents live in three census tracts (4711, 4712, and 4713). Two of the three census tracts have minority populations significantly above the town average, the largest being tract 4711, which has a minority resident population of 90%. Seventy-four percent of Bloomfield's stops occurred in these three tracts, with 58% of its stops involving black drivers and 7% of its stops involving Hispanic drivers. These areas border sections of Hartford with its large minority population and non-resident minority drivers were at least 39% of those who were stopped in these tracts.

Census tract 4711 has the largest volume of traffic enforcement with 25% of all stops. This tract is also the smallest geographically and runs from Route 187 to the Windsor border and from the

Hartford border to East Wintonbury Ave. (Route 178). Census tract 4711 has 17% of the residential population. This high enforcement area borders a high minority population area in Hartford as well. However, Bloomfield's traffic enforcement activity did not appear to be driven primarily by population concentrations; that is, the census tracts with the largest population concentrations do not all generate significant levels of traffic enforcement. The three census tracts with the highest levels of enforcement account for 56% of the resident population, but 74% of the traffic enforcement.

On average, 67% of the drivers stopped in Bloomfield were not town residents, which influences the size of the disparities in many of the census tracts to varying degrees. Stops of non-residents most heavily affected the three census tracts that makeup the high enforcement area bordering Hartford. Census tracts 4711, 4712, and 4713 accounted for 73% of all non-residents stopped in the town. White and Hispanic non-resident drivers were significantly more likely than black non-resident drivers to be stopped. Almost 84% of all white drivers and 79% of all Hispanic drivers stopped were not residents of Bloomfield compared to 53% of black drivers. Non-resident motor vehicle stops appears to have had a greater impact on white and Hispanic drivers, and to a lesser extent black drivers.

Though the non-resident component of minority drivers stopped may explain a portion of the disparities higher than the local minority population, there are exceptions. In some cases, the disparities above the resident population persisted even after the non-resident stops were accounted for. In all five of the census tracts, the proportion of minority stops involving only Bloomfield residents exceeded the resident minority driving age population. The disparity was significant (greater than 10 percentage points) in three of the census tracts. In all five census tracts, the resident-only stops for black drivers exceeded the resident black driving population, but in only three of the census tracts was the difference significant. Hispanic residents were only stopped in two census tracts at a greater rate than the resident driving age population, but not in any significant way.

Bloomfield's high stop rate for minority drivers is not surprising given the areas where it engages in the majority of its traffic enforcement activity, i.e., areas with the highest population of minority residents as well as areas that border high minority census tracts in neighboring Hartford. Additional information was provided by the Bloomfield Police Department to support its assertion that its resources are primarily deployed based on calls for service, crime locations, and high accident areas. The analysis showed that the census tracts experiencing the largest concentrations of traffic enforcement activity (4711, 4712, and 4713) coincided with the areas in Bloomfield with a higher number of citizen complaints about illegal or disturbing motor vehicle activity. Additionally, a large percentage of the reported crimes committed in Bloomfield occurred in the same census tracts where traffic enforcement levels were highest. Lastly, the role traffic accident experience plays in resource deployment decisions is a significant one. The areas with the highest number of motor vehicle accidents were along Blue Hills Avenue and Cottage Grove Road. The three high minority census tracts experienced both a high incidence of accidents and high levels of traffic enforcement. Generally speaking, Bloomfield's highest areas of traffic enforcement activity tended to coincide with its highest citizen complaints, crime areas, and areas with the most traffic crashes.

In addition, Bloomfield has 48 officers who made at least one traffic stop during the study period. The average stops made per officer was 109, but 10 officers accounted for 54% of all the traffic stops. The most active officer conducted 9% of all motor vehicle stops in town. There were 19 officers who conducted more than 100 stops and together accounted for 82% of all traffic enforcement. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific

duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics. This appears to be the case in Bloomfield.

*Traffic Stop Outcomes*

White non-Hispanic drivers were more likely to be stopped for driver-related safety issues like speeding, cell phone, stop sign, traffic light, and seat belt violations as a percentage of their total stops than were either black or Hispanic drivers. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 Bloomfield, when these equipment-related stops were made in the three census tracts (4711, 4712, and 4713) that were 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 a higher percentage of white residents, the stop demographics reflected a greater proportion of white drivers. This suggests that the frequency with which these enforcement choices occurred and, more importantly where they occurred, had a greater impact on the overall stop demographics, particularly for black and Hispanic drivers, than racially inherent differences in the overall likelihood of violation.

With regard to stop outcomes, minority drivers were more likely to receive a misdemeanor summons, whereas white drivers were more likely to be cited for an infraction. Warnings were given to drivers of all races at approximately the same rates.

Bloomfield searched 2.9% of drivers it stopped, which was equal to the state average of 2.9%. Black and Hispanic drivers were searched at a rate more than double white drivers. The rate of contraband found as a result of a vehicle search was greater for white and Hispanic drivers and above the state average for all drivers searched. Contraband was found at a significantly higher rate (53%) when the search was conducted as the result of probable cause, plain view, or some other reason compared to a search conducted pursuant to consent (35%). The data suggests that although vehicle searches do occur, they do not seem to occur at a frequency that would impact the overall disparity identified in Bloomfield's data.

*Conclusion*

Based on the overall follow up analysis of the Bloomfield data, we believe that the general disparities in its stop data with respect to Hispanic and black drivers reflect the overall nature of its enforcement policies, but that it would benefit by reviewing these practices to assure that the disparate impact these policies have on its minority residents are reasonable in terms of policy outcomes. When disparities result from policies and practices established to meet community and policing goals and objectives, even when profiling is not a direct result, minority communities can feel disadvantaged unless they can clearly perceive the overall benefits of this approach. It is important that the department assure that its minority community fully understands what benefits come from this enforcement presence. The relative disparities in Bloomfield appear to be due to two basic factors:

(1) the relatively high levels of enforcement normally in the southern areas of the town which have both the highest resident minority driving age populations and are most likely to have

relatively high proportions of non-resident minority drivers traversing them because of the proximity of relatively high minority populations in the bordering town of Hartford; and

(2) the high traffic volume area along Route 218, which serves as an entry point for drivers traveling into Bloomfield, specifically from Interstate 91

While white drivers are more likely to be stopped in Bloomfield 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 violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the three high enforcement census tracts, where both resident and non-resident minority drivers are likely to be present in the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violate these laws with greater frequency than white drivers.

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

(1) review its traffic enforcement policies in tracts 4711, 4712, and 4713 to evaluate the extent to which they may have a disproportionate effect, particularly with respect to black drivers;
(2) take steps to assure that its minority community is fully engaged in the process of understanding why the allocation of enforcement resources are made and what outcomes are being achieved;
(3) evaluate how the greater use of high discretion equipment-related stops in higher minority areas may be adding to disparities

## I.B (2): MERIDEN FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Meriden over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 1,665 | 51.9% | 1,336 | 49.5% |
| Black Non-Hispanic | 516 | 16.1% | 405 | 15.0% |
| AsPac Non-Hispanic* | 40 | 1.3% | 15 | 0.2% |
| AI/AN Non-Hispanic** | 1 | 0.0% | 6 | 0.6% |
| Hispanic | 987 | 30.8% | 938 | 32.7% |
| Total | 3,209 | | 2,700 | |

*Asian Pacific Non-Hispanic

** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Meriden Police Department made a total of 2,700 traffic stops. Of these, 50% were minority stops, of which 35% were Hispanic drivers and 15% were black drivers. The Meriden Police Department was identified using the three descriptive tests. Meriden was identified as having exceeded the threshold for identification in all three descriptive benchmarks used and six of the nine possible measures. Although certain assumptions have been made in the design of each of the three benchmarks, 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 to identify and understand the factors that may be contributing to the disparities. The synthetic control analysis also produced statistically significant results and the disparity exceeded the threshold of 10 percentage points for Hispanic driver stops. This narrative provides the follow-up analysis of Meriden's traffic stop data for the study period.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Meriden Police Department data were studied using a more detailed review of traffic enforcement during the period from October 1, 2014 through September 30, 2015. Part of this analysis involved mapping all stops, if possible, using the location data provided by the department and any enhancements to this data we were able to make. Meriden provided latitude and longitude coordinates that allowed mapping over 90% of its stops.

According to the 2010 census, Meriden is a city with approximately 47,100 residents over the age of 16. Approximately 34% of the driving age population in Meriden is identified as a minority. Figure 1.0 outlines basic demographic information for Meriden residents over 16.

**Figure 1.0: Meriden Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 31,000 | 65.8% |
| Black Non-Hispanic | 3,699 | 7.9% |
| AsPac Non-Hispanic | 606 | 1.3% |
| Hispanic | 11,795 | 25.0% |
| Other | 0 | 0.0% |
| Total | 47,100 | |

The U.S. Census Bureau divides Meriden into 17census tracts. Figure 2.0 is a map outlining the boundaries of Meriden census tracts, which will be referred to throughout this report. Figure 2.1 indicates the resident population 16 years of age or more in each census tract broken down by white and non-white residents. The resident driving age population varies from about 1,300 residents in census tract 1701 to 6,500 residents in census tract 1712. The racial breakdown of each census tract varies as well. For example, 78% of census tract 1701 is minority compared to just over 13% of census tract 1705.

**Figure 2.0: Meriden Census Tract Map**

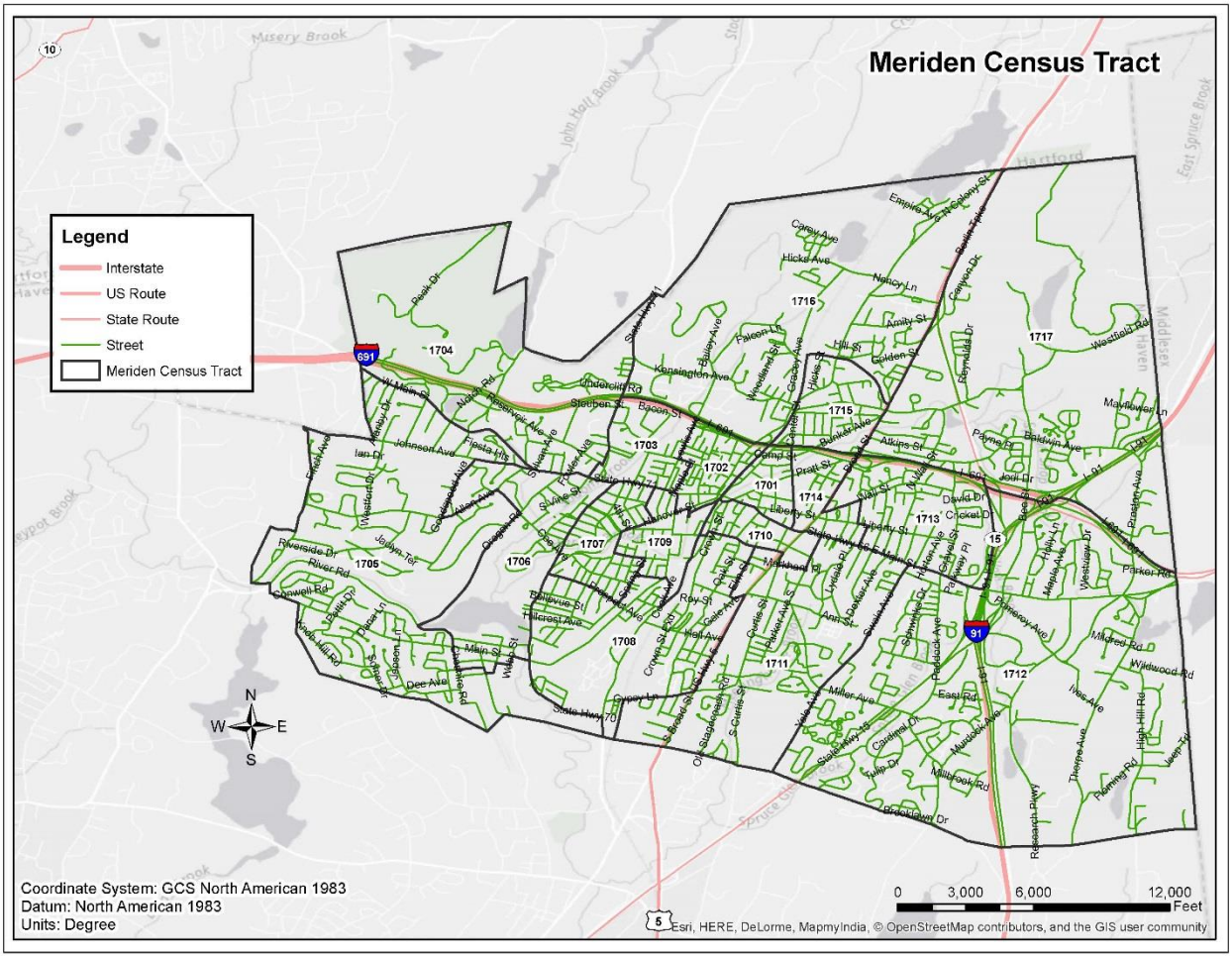
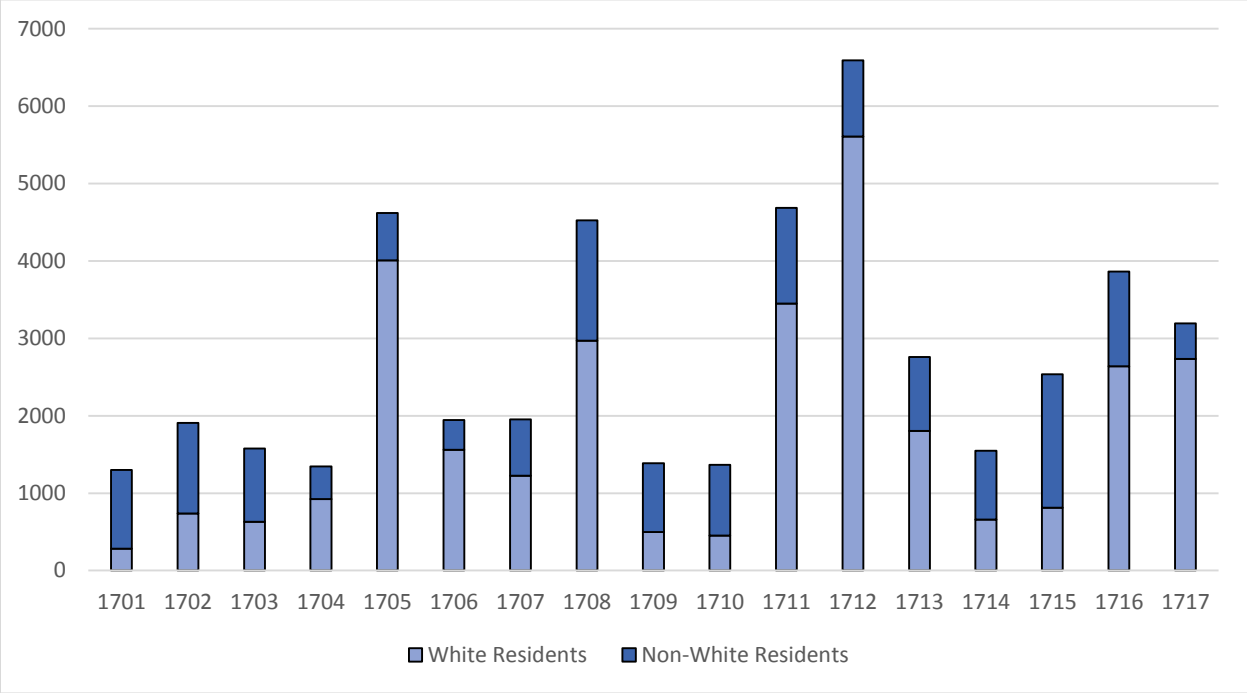


**Figure 2.1: Age 16 and Older Resident Populations by Census Tract**




Just over one half of the 11,795 driving age Hispanics living in Meriden reside in the seven census tracts that make up a large portion of the central downtown area (1701, 1702, 1703, 1709, 1710, 1714, and 1715). On average, almost 52% of the people living in these seven census tracts are Hispanic. The other half of the driving age Hispanics in Meriden are dispersed throughout the other 10 census tracts and make up an average of 16.3% of the population in these tracts.

Black residents comprise about 7.9% of Meriden's driving age population. About 41.7% of the black driving age residents live in the seven core census tracts noted above. On average, this represents 13.3% of the residential population in these seven tracts. The other 58% of the black driving age residents are dispersed throughout the other 10 census tracts and represent just over 6% of the population in these tracts.

Meriden has a relatively small Asian/Pacific Islander driving age population (1.3%). These residents are concentrated in only five census tracts: 1705, 1708, 1711, 1712, and 1716.

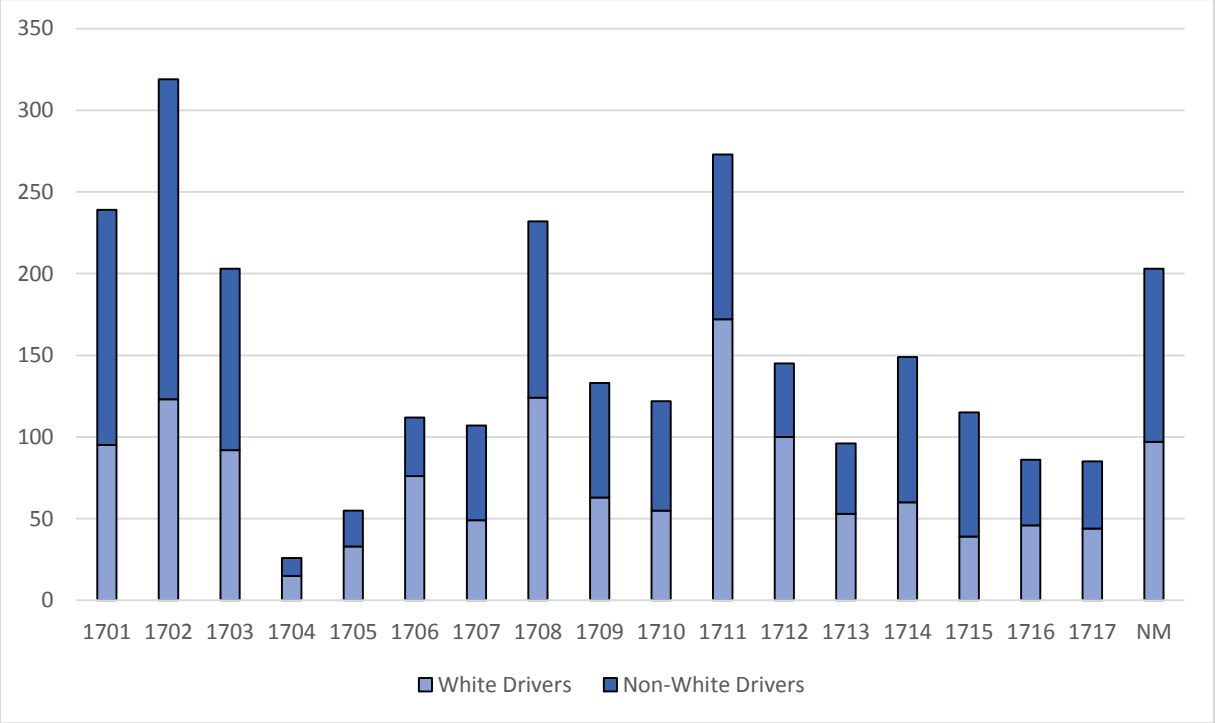
Six other municipalities share a common border with Meriden, including Southington and Cheshire to its west, Berlin to its north, Wallingford to its south, and Middlefield and Middletown to its east. These six municipalities are predominantly white demographically, with an average driving age white resident population of 90% (compared to Meriden's white driving age population of 66%). Meriden is approximately 24 square miles of land area and 0.4 square miles of water. Interstate 91 and Route 15 run from south to north along the eastern portion of town. Interstate 691 runs from east to west and provides access to Interstate 84 in Cheshire. It also provides expressway access to the Westfield Shopping Mall and MidState Medical Center at Exit 5/6. The Wilbur Cross Parkway ends in Meriden and turns into the Berlin Turnpike. Approximately 4.5 miles of the Berlin Turnpike is located in Meriden.

Meriden also contains Hubbard Park, a very large municipal park located in the far western portion of the city off West Main Street. It is a very popular recreational area and the site of several special town wide events, such as the annual Daffodil Festival.

Meriden has eight patrol districts, typically with at least one officer patrolling each district. Districts one, two, three, and four cover the largest geographic area of the town and are located in the outermost parts of Meriden. The Westfield Shopping Mall is located in patrol district two, and borders patrol district five. Patrol districts five, six, seven, and eight cover downtown Meriden and most of Route 5 (Broad Street). The four patrol districts that cover the downtown area and Route 5 are smaller in size but the higher enforcement patrol districts.

Figure 3.1 illustrates the volume of traffic enforcement that occurs in each census tract. Traffic enforcement activity in Meriden appears to be concentrated in two geographical areas: (1) census tracts 1701, 1702, and 1703, which account for 28% of the traffic enforcement activity and (2) census tracts 1708 and 1711, which account for 19% of the traffic enforcement activity. Census tract 1702 contributes the largest percentage of traffic enforcement with 12% of all of the city's traffic stops. Traffic enforcement activity is less common in the outer areas of the town, particularly towards the western and eastern edges of the city.

**Figure 3.1: Traffic Stops by Census Tract**




Meriden's overall resident population is 34% minority and 57% of all Meriden residents who were stopped were minority, while 37% of the stopped non-resident drivers were minority. Resident minority drivers were stopped in 13 of the 17 census tracts at a rate that exceeded their representation in the resident minority driving age population in the tract. On average, 66% of the drivers stopped in Meriden were residents of the town. This relationship of stops for residents and non-residents is reasonably consistent throughout the town with two exceptions, census tracts 1711 and 1716. In tract 1711, only 45% of the drivers stopped lived in Meriden and in tract 1716 only 36% of the drivers stopped were town residents. Tract 1711 includes a long section of South Broad Street

(Route 5) from just south of East Main Street all the way to the Wallingford town line, the southernmost part of which is a heavily traveled commercial area. Tract 1716 includes the northern approaches to Meriden along the Berlin Turnpike (Route 15) and North Broad Street (Route 5) as well as the Westfield Shopping Mall and MidState Medical Center adjacent to I-691. These factors may very well account for the higher proportion of non-residents among those stopped. Just over 10% of all Meriden traffic stops occurred in tract 1711 while only 3.2% of the stops were made in tract 1716.

While overall, 66% of all drivers stopped in Meriden were town residents, there is some racial and ethnic variation. Of all the white drivers stopped in Meriden, 57% were town residents. In comparison, just under 65% of all the black drivers stopped and just under 80% of all the Hispanic drivers stopped were town residents.

Figure 3.2 is a map of traffic stops made in Meriden. There are seven census tracts that cover most of the main downtown area. These seven census tracts account for 47% of the traffic enforcement activity and 23% of Meriden's resident population. Outside of this high enforcement activity area, the four most heavily populated census tracts (1705, 1708, 1711, and 1712) account for 26% of the motor vehicle enforcement and 43% of the population. Population concentration does not appear to be a primary driver of traffic enforcement patterns. Meriden's most populous census tract, 1712, accounts for only 5.4% of its traffic stops while its least densely populated census tract, 1701, accounts for more than 10% if its stops.

**Figure 3.2: Traffic Stop Map**

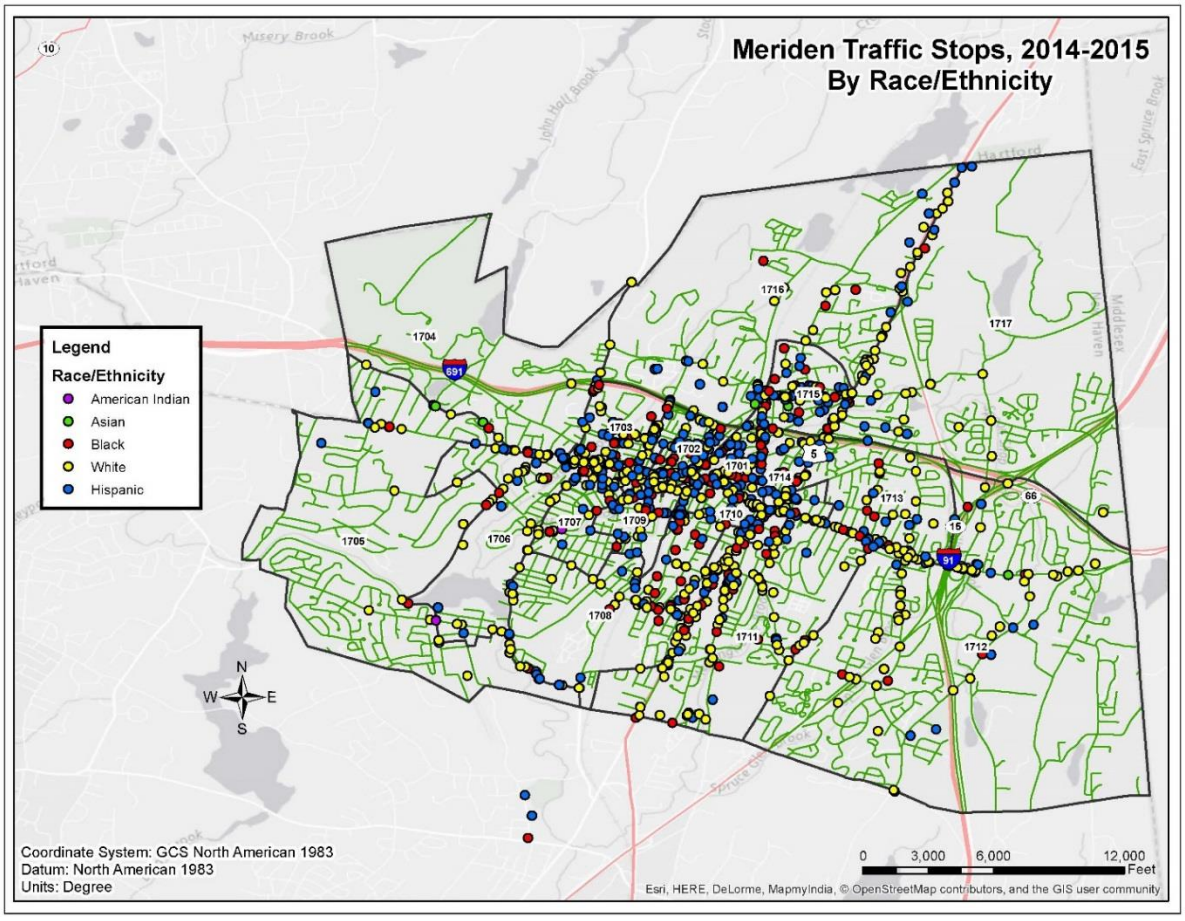
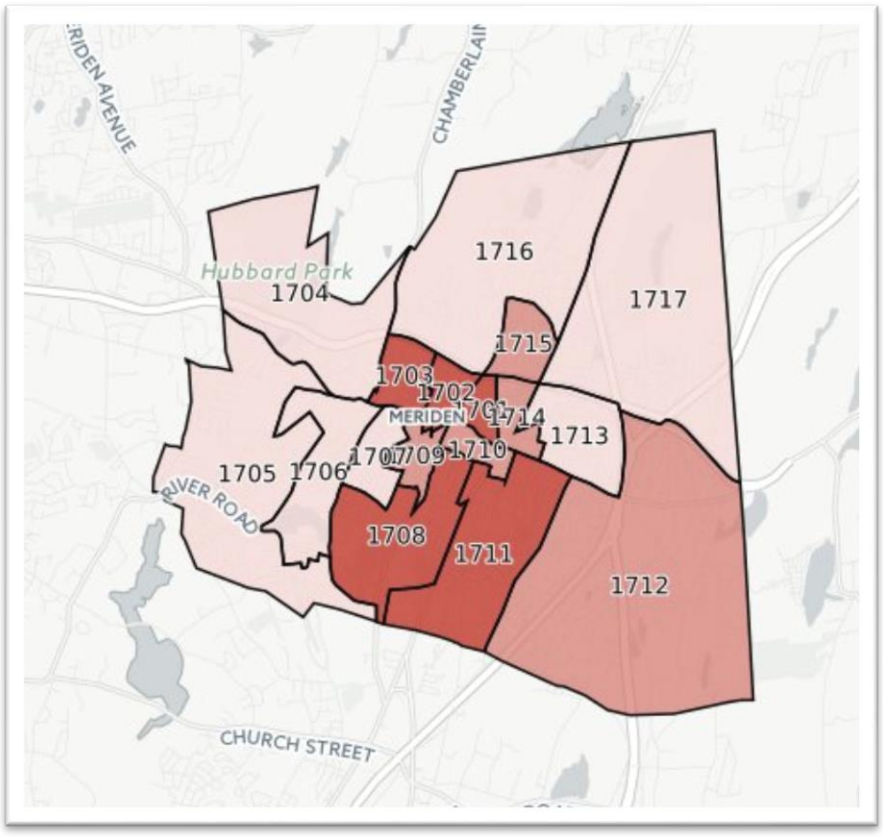


Figure 3.3 shows an additional way to view the high enforcement areas in Meriden. This image identifies the high enforcement areas in three groups. Group one (dark red) is the highest enforcement area with between 200 and 350 stops in each census tract. Group one includes census tracts 1701, 1702, 1703, 1708, and 1711. Group one accounted for 47% of all traffic enforcement in Meriden. Group two (medium red), including 1709, 1710, 1712, 1714, and 1715, consists of census tracts that had between 100 and 200 stops each. . There were between 25 and 100 stops in each of the remaining census tracts that makeup group three (light red).

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**



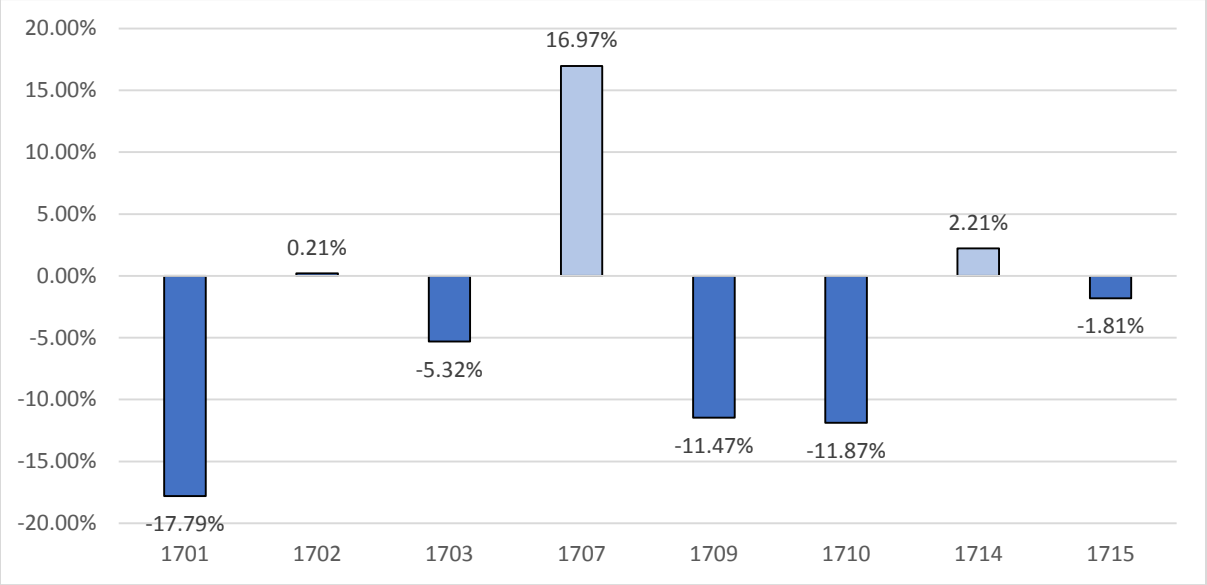

## Traffic Stop Breakdown by Race/Ethnicity

In Meriden, 51% of all drivers stopped were minority (35% Hispanic, 15% black, 1% Asian, Pacific Islander, Native American and Alaskan Native). Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. Meriden's resident population age 16 and older is 34% minority (25% Hispanic, 8% black, 1% Asian/Pacific Islander). The racial and ethnic makeup of different areas of Meriden varies significantly by census tract from as little as 13% minority in census tract 1705 to as much as 78% minority in census tract 1701.

Figure 4.1 shows the amount by which the minority stop disparity exceeded the resident minority driving age population in each of the eight census tracts. There were eight of 17 census tracts where a higher percentage of minorities were stopped than the town average of 51% minority stops. These eight census tracts account for 56% of the total traffic enforcement in town. Minority drivers were stopped at a higher rate than their proportion of the resident population in three of the eight census

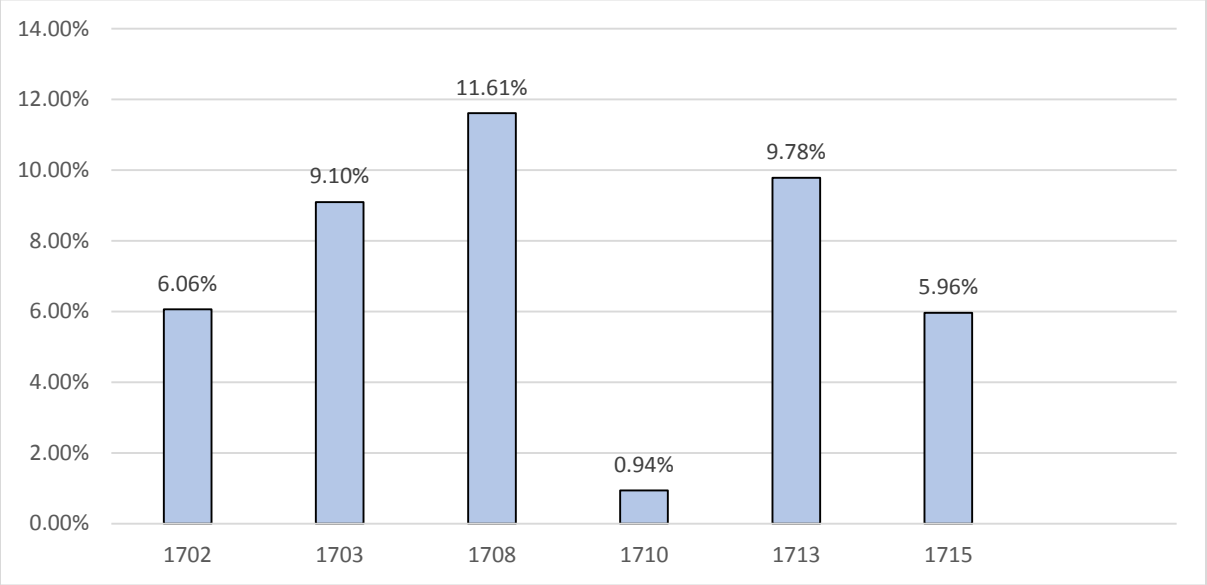
tracts, but at lower rate than their resident population in the other five census tracts. Although motor vehicle enforcement seems to be concentrated in the parts of town with a higher concentration of minorities, in five census tracts minority drivers are actually stopped at a rate below their localized population. The exception is in census tract 1707 where the resident minority driving age population is 37% but over 54% of the traffic stops involved minority drivers. Census tract 1707 includes a short portion of West Main Street between Bradley Avenue and North 1st Street and is bounded by Bradley Avenue, Prospect Avenue, Spring Street, Summer Street, Columbus Avenue, Hanover Street, and South 1st Street. While the short section of West Main Street on the north edge of the census tract is commercial in nature, the rest of the tract is almost entirely residential. Although the disparity with respect to minority drivers compared to the resident population is fairly significant in tract 1707, the total number of stops made in the tract was fairly small (107 stops), thus its overall effect on the town-wide stop demographics was also fairly small.

**Figure 4.1: Disparity between Minority Drivers Stopped and Census Tract Population**



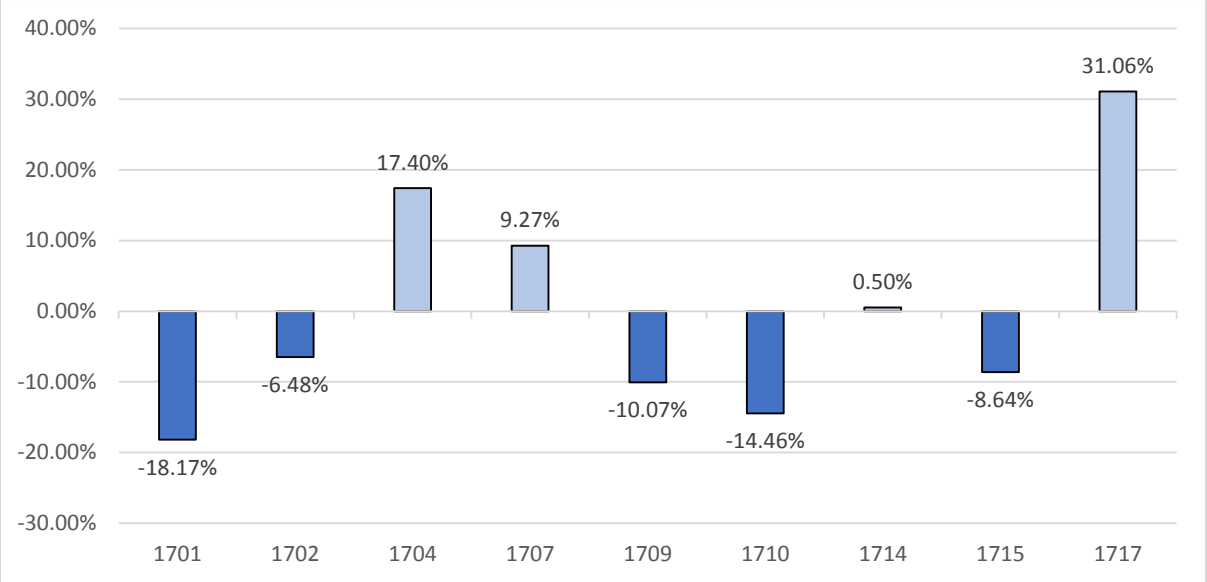

The overall percentage of Meriden traffic stops involving black drivers was 15%. The percentage of black drivers who were stopped exceeded the town average in six of the 17 census tracts, including five of the tracts in the high enforcement activity areas. Figure 4.2 shows the amount by which the black stop disparity exceeded the resident black driving age population in these six tracts. Black drivers were stopped at a rate that exceeded their resident population in all six of these census tracts, with the largest disparity occurring in census tract 1708 where the resident black driving age population was 8.2% and 19.8% of the traffic stops involved black drivers. Tract 1708 encompasses a fairly large portion of South Meriden between Hanover Street and South Broad Street.

**Figure 4.2: Disparity between Black Drivers Stopped and Census Tract Population**




The overall percentage of Meriden traffic stops involving Hispanic drivers was 35%. The percentage of Hispanic drivers who were stopped exceeded the town average in nine of the 17 census tracts. Figure 4.3 shows the amount by which the Hispanic stop disparity exceeded the resident Hispanic driving age populations in these nine tracts. Hispanic drivers were stopped at a rate that exceeded their local population in four of the nine census tracts.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Meriden. Both black and Hispanic stops tend to be concentrated in the high residential areas of Meriden where higher proportions of the local population are minorities. These maps better visualize these concentrations of black and Hispanic motor vehicle stops.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

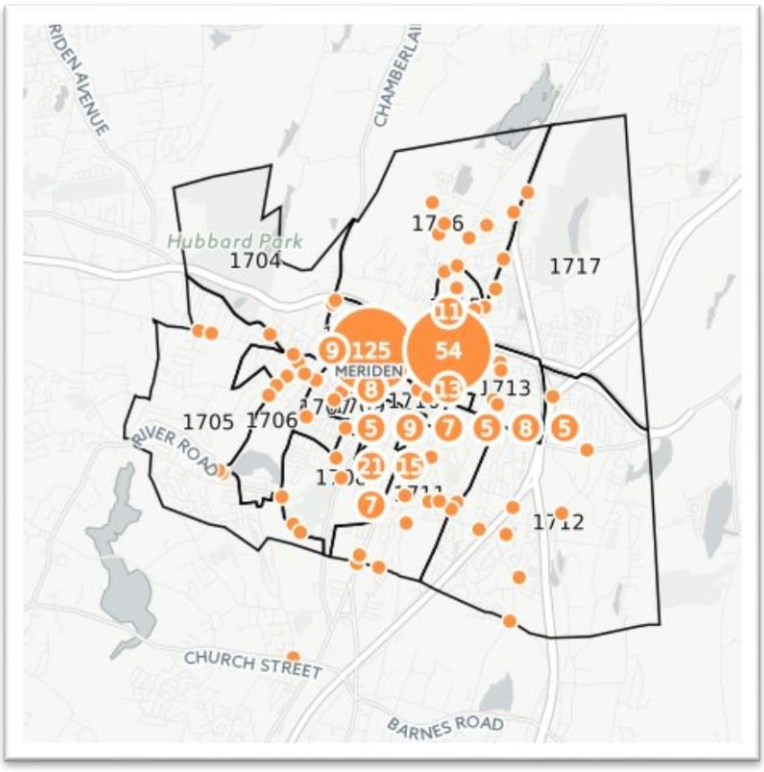
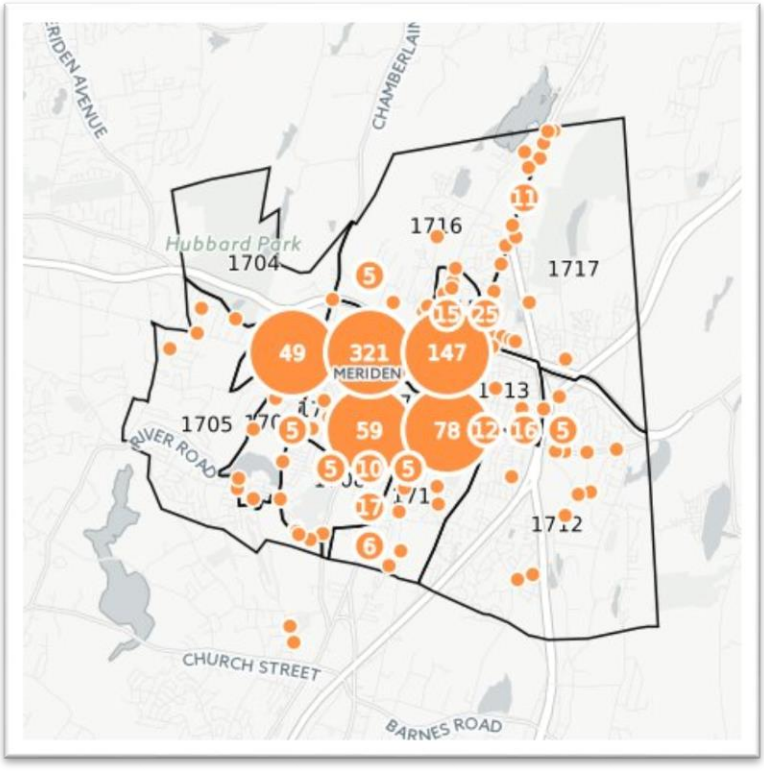



**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**



## Traffic Stop Distribution for Meriden Officers

Meriden's total of 2,700 traffic stops are comparable to those in other towns of its size. During the study period, traffic stop data was reported for 105 officers. The average number of stops made per officer was 26. Of the 105 officers reporting stops, 63 made fewer than 20 stops, 24 made between 20 and 50 stops, 14 made between 50 and 100 stops, and four made over 100 stops. The 18 officers making over 50 stops account for 55% of all stop activity. The most active officer made 174 stops or 6% of all stops made town-wide. From this distribution, it can be seen that a relatively small number of officers (17% of the total officer force) have a significant influence on the stop data.

## Post-Stop Outcome Review

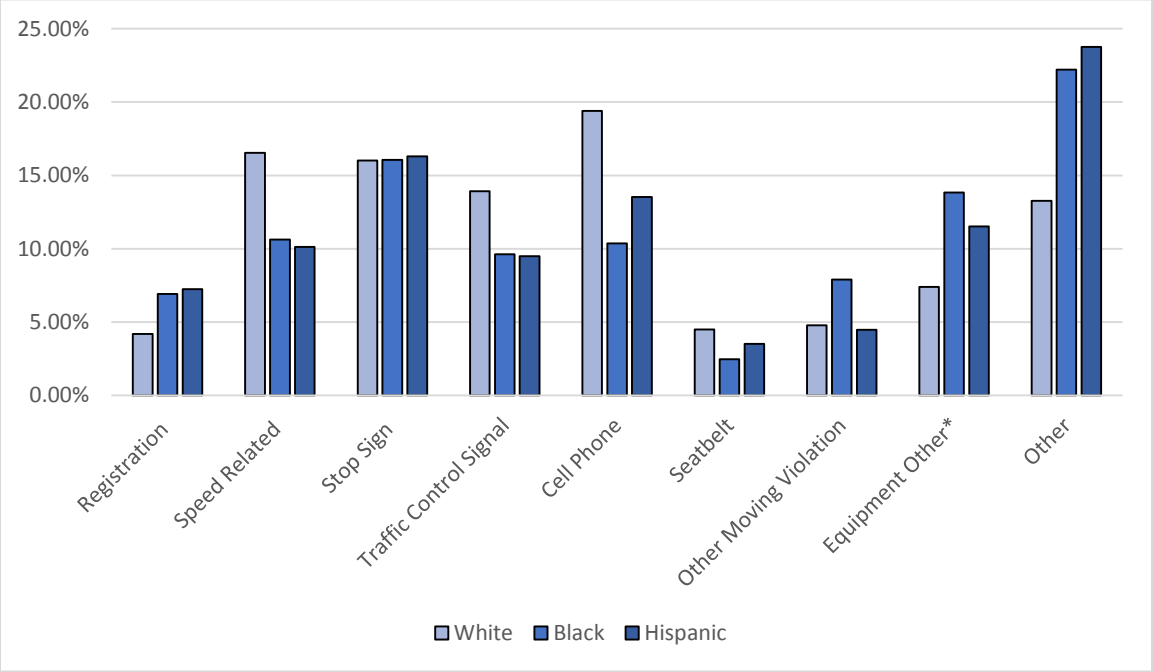
The reasons police stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that Meriden officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in Meriden account for 45% of the total stops. These three stop categories were stop sign violations (16%), cell phone violations (16%), and speed related violations (13%). 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-related and registration-related violations than white drivers as a percentage of their total stops. White, black, and Hispanic drivers were essentially equal with respect to stop sign violations.

Traffic stop data in many police departments tends to show that with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) are closely related to the frequency and location of where 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 police use these same criteria for making stops in areas with a higher concentration of white drivers, the stop demographics shift toward white drivers, suggesting that the likelihood of finding violators is more dependent on location of enforcement than race.

The Meriden data tends to confirm these general observations. The eight census tracts with higher minority populations in the center of Meriden are where 62% of all fairly high discretion equipment-related stops for lighting, plate display, and window tinting were made. The demographics for these stops were 45% Hispanic drivers, 18% black drivers, and 37% white drivers. The other 38% of these stops were made outside these eight census tracts where white drivers tend to be the largest segment of the residential population. For those stops, the demographics were 33% Hispanic drivers, 25% black drivers, and 40% white drivers.

These patterns seem to suggest that where these types of stops are made is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. Figure 6.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 6.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

It proved somewhat difficult to assess the true significance of the apparent disparity relating to black and Hispanic drivers stopped for violations in the "Other" category. Normally this category is used for many kinds of violations that are not committed frequently enough to justify their own distinct categories. However, in Meriden there were a number of stops identified in this category that appear to have been violations that should have been counted in an existing category. There were several reasons for the this including, (1) the statute cited was miscoded in the dataset, (2) some stops were identified as being made for things like "suspicious vehicle," "suspicious activity, or "creating a public disturbance" which probably should not have been treated as traffic stops, or (3) stops were for violations that might have been detectable after a vehicle was already stopped, but likely could not have formed the basis for an officer's initial decision to make the stop. For example, for 38 of the 191 Hispanic drivers stopped in the "Other" category, the reason coded into the data for making the stop was a violation of CGS Section 14-36 which requires a person to have a driver's license to operate a motor vehicle. While it might be possible for a police officer to determine through a registration inquiry that the registered owner might have a suspended, revoked, or expired license prior to making a stop, it is less likely that the officer would know if the person had no license at all until after the vehicle was stopped and the driver identified. In these cases, it was more likely that the driver was stopped for some other reason (which should have been recorded) and it was subsequently determined that they had no license (in which case the 14-36 notation should have been shown in the secondary violation data instead). In the future, it would be helpful for analytical purpose if some of these data entry consistencies could be avoided.

Figures 6.2 and 6.3 are maps of traffic enforcement for safety related motor vehicle stops and equipment related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone or moving violations were labeled "safety-related" stops. Stops for defective lights, window tints, or display of plate were labeled "equipment-related" violations.

**Figure 6.3: Safety-Related Motor Vehicle Stops**

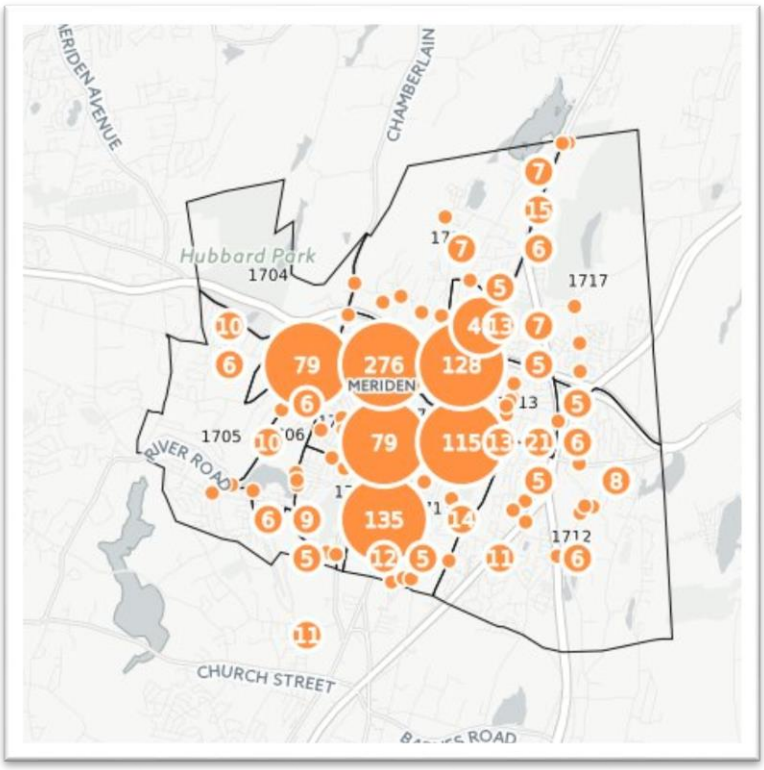
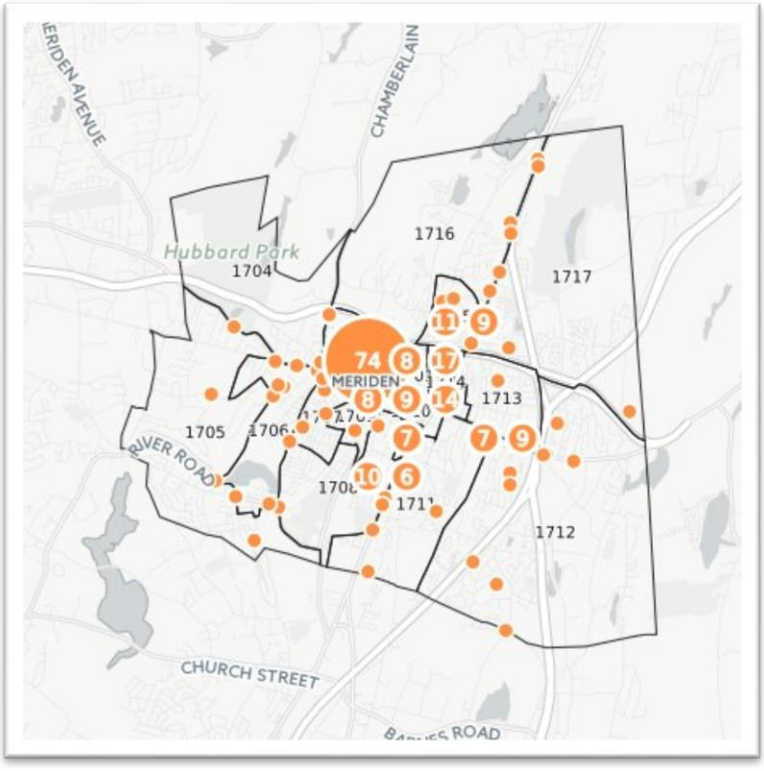



**Figure 6.4: Equipment-Related Motor Vehicle Stops**

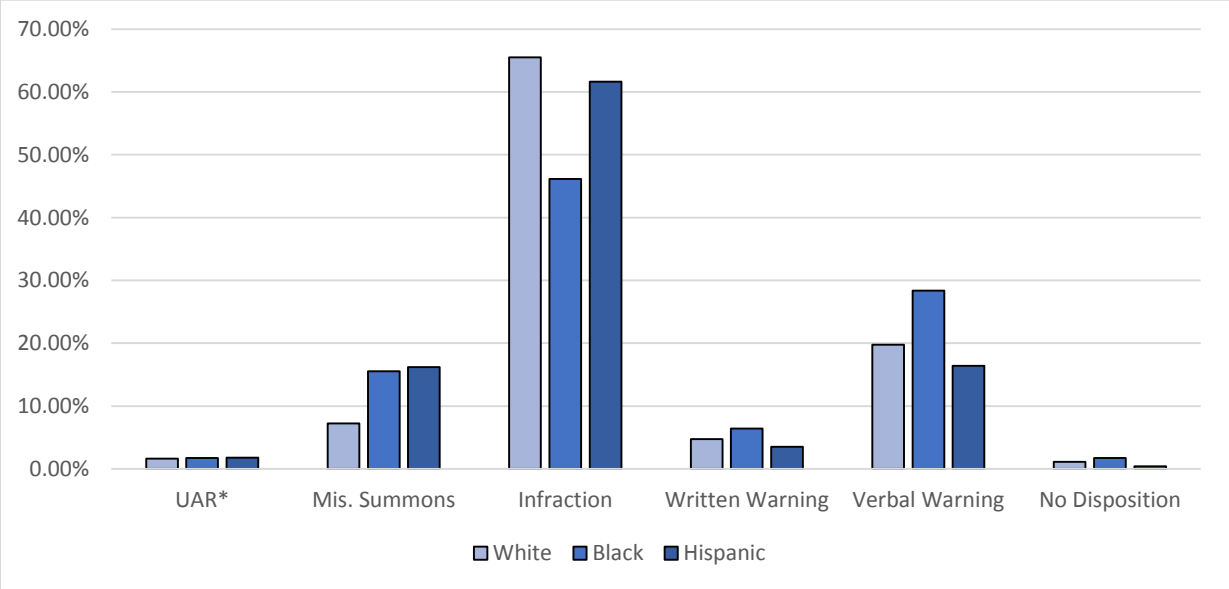


The highest percentage of motor vehicle stops in Meriden resulted in the driver receiving an infraction (61%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers as a result of the stop. Figure 6.2 shows the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives an analyst the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In Meriden, 314 of the stops made resulted in the issuance of a misdemeanor summons (12%). Black and Hispanic drivers were more than twice as likely to be issued a misdemeanor summons as white drivers (16% of black drivers, and 16% of Hispanic drivers compared to 7% of white drivers). Meriden police did a very thorough job reporting the secondary statutory citation information in cases involving a misdemeanor charge and should be commended for officers' attention to this detail.

**Figure 6.2: Outcome of Traffic Stop**

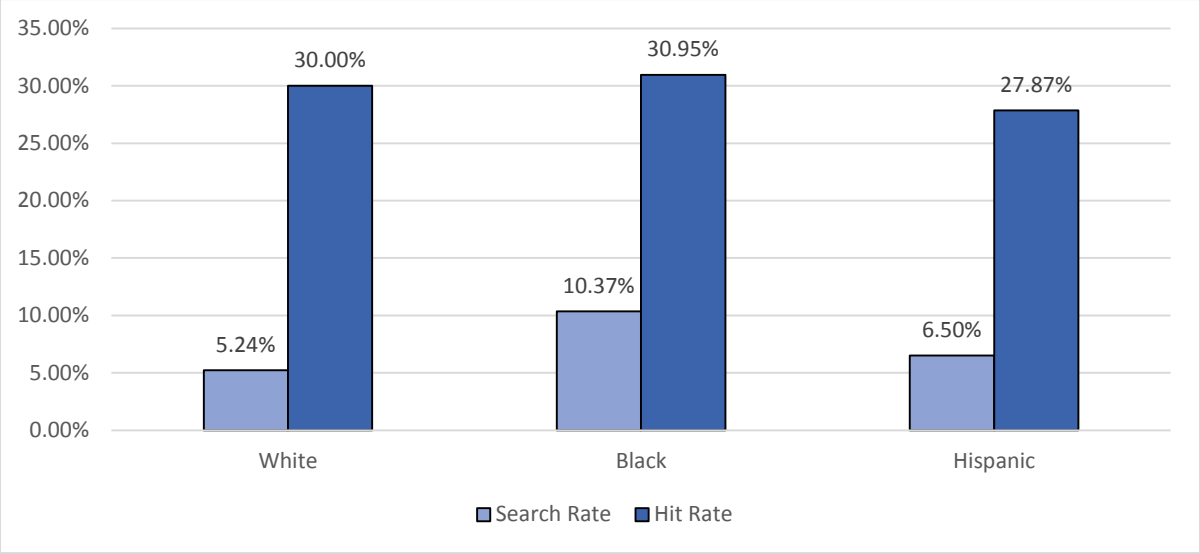



*Uniform Arrest Report

A review of the department's search information showed that 6.4% (174) of the drivers stopped in Meriden were subjected to a motor vehicle search. The rate of motor vehicle searches was more than the state average of 2.9%. Black drivers were searched at twice the rate of white drivers, while Hispanic drivers were searched at only a slightly higher rate than white drivers. Contraband was

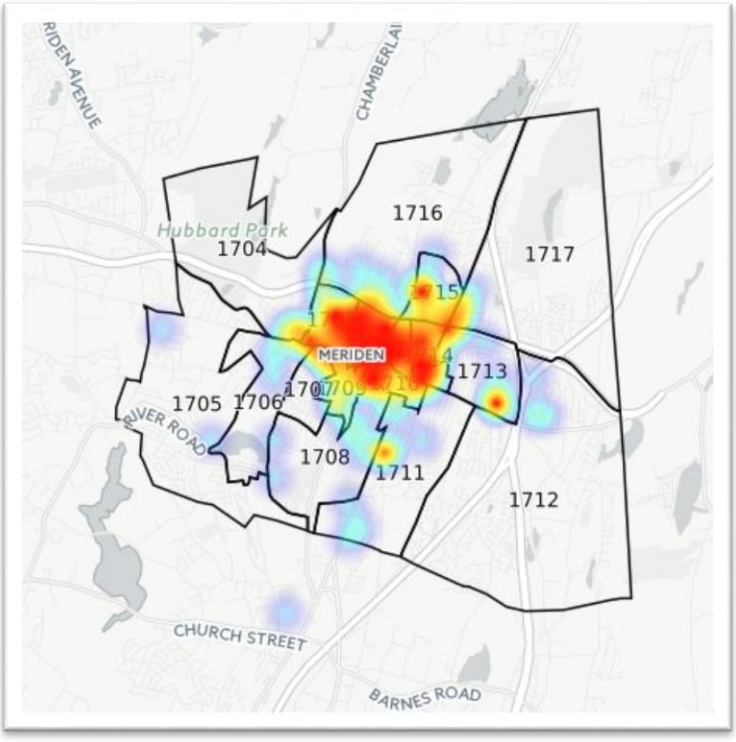
found at nearly the same rate for white and black drivers and at a slightly lower rate for Hispanic drivers. Figure 6.3 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 6.3: Search and Hit Rate**




Motor vehicle searches in Meriden were concentrated in the higher enforcement level census tracts. Figure 6.4 is a heat map of motor vehicle searches in Meriden, indicating that the majority of searches occurred in tracts 1701, 1702, 1703, 1709, 1710, and1714.

**Figure 6.4: Search Heat Map**

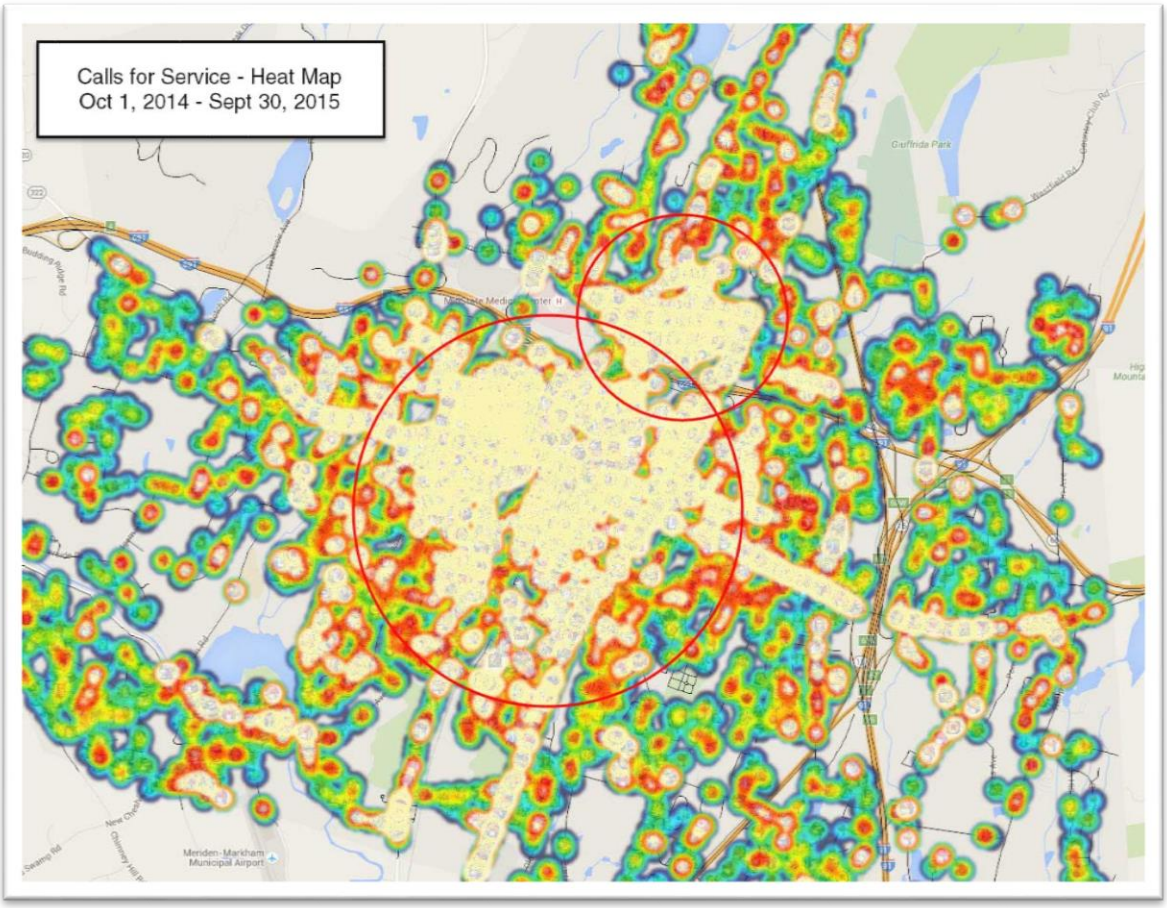


## Calls for Service and Part I Crimes

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. The department provided us with the dispatch log, including calls for service and officer initiated actions that were called into police dispatch. The dispatch logs report 17,011 entries from October 1, 2014 through September 30, 2015, excluding traffic stops. The top three reasons for calling dispatch were for an alarm, a suspicious person, or a motor vehicle accident and these account for 40% of all calls.

There are eight patrol districts in Meriden. Patrol district six accounts for the largest volume of calls for service with 18%, followed by district five with 16% of all calls. These two patrol districts make up the majority of the high traffic enforcement area in town, which includes downtown Meriden. District six borders the Westfield Shopping Mall which is located in district two. Figure 7.1 is a map from the Meriden Police Department that shows the location of calls for service during the study period. It is worth noting that this map includes motor vehicle stops. However, it appears that the census tracts in the high enforcement area tend to correlate with the areas with the highest call volume.

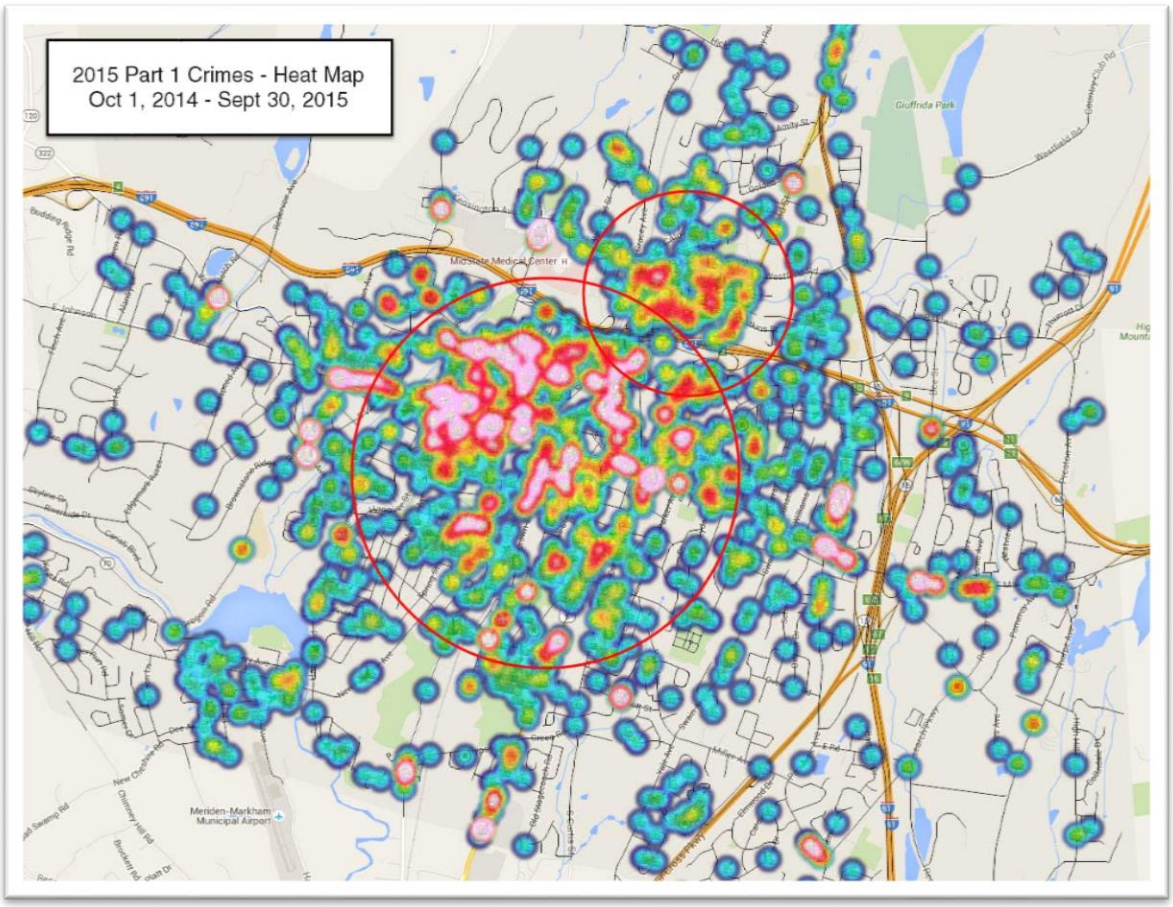
**Figure 7.1: Heat Map of Calls for Service**




The Uniform Crime Reporting (UCR) program established by the Federal Bureau of Investigations divided 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 Meriden police department provided information on the 275 Part I crimes that occurred during the study period. Figure 7.2 is a map from the Meriden Police Department showing the location of Part I crimes that occurred during the study period. It appears that the census tracts in the high enforcement area tend to correlate with the areas with the highest number of Part I crimes.

**Figure 7.2: Part I Crime Locations**




## Additional Contributing Factors

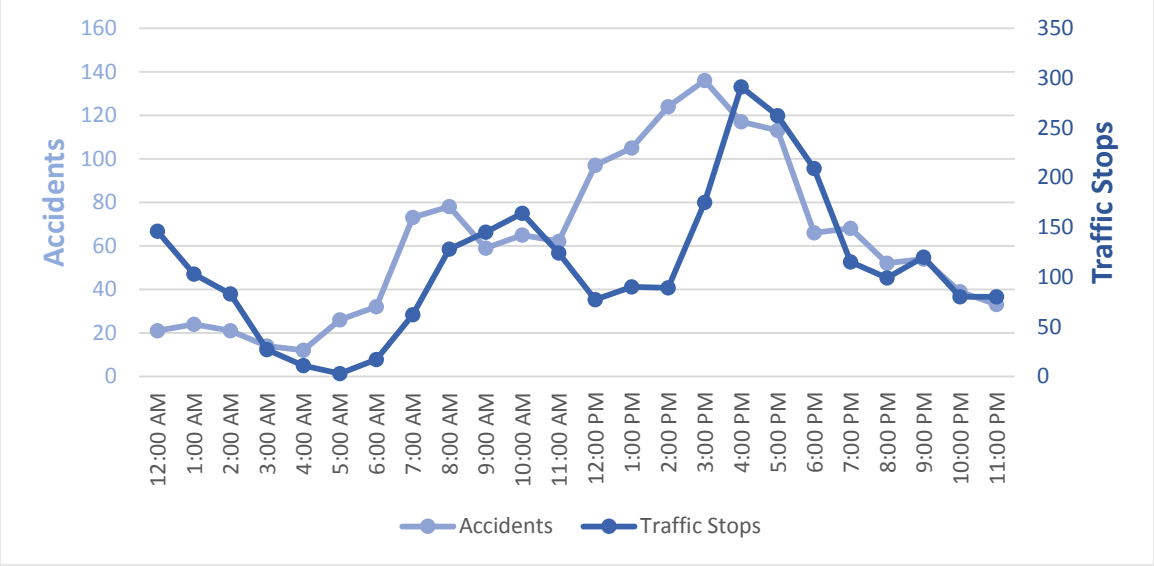
In addition to calls for service, law enforcement administrators also distribute police resources within a community based on the occurrence of motor vehicle accidents or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with Meriden provide a context to potentially explain the rationale for police deployment there are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 21,646 people work in Meriden and its major employers include MidState Medical Center, AT&T Corporation, Hunter's Ambulance, and Canberra Industries. The vast majority of commuters traveling into Meriden for employment are from Wallingford, Waterbury, Middletown, and Southington. The overall unemployment rate is 8.5%, which is above the unemployment rate for New Haven County and the state.

In 2015, the crime rate in Meriden was reported to be 266 per 10,000 residents, compared to the state crime rate of 205 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[2], there were 1,637 reported crimes in Meriden in 2015. The three most reported crimes were larceny (992), burglary (321), and motor vehicle theft (127).

During our study period, there were approximately 1,491 motor vehicle accidents on roads patrolled by the Meriden Police Department. Accidents were reported as occurring on a total of 235 roads, although the 27 roads on which at least 10 accidents occurred account for 66% of the reported accidents in Meriden. The roadways with the highest number of accidents were Route 5 (North Broad/Broad/South Broad Street) (259 accidents), East/West Main Street (257 accidents), and Route 71 (Chamberlain Highway/West Main Street/Cook Avenue/Old Colony Road) (65 accidents) and together accounted for 39% of Meriden traffic crashes-. Figure 8.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Meriden. Traffic accidents tended to peak between 6:00 a.m. and 8:00 a.m. and from noon to 3:00 p.m. Traffic enforcement tended to peak between 7:00 a.m. and 11:00 a.m. and again between 3:00 p.m. and 5:00 p.m.

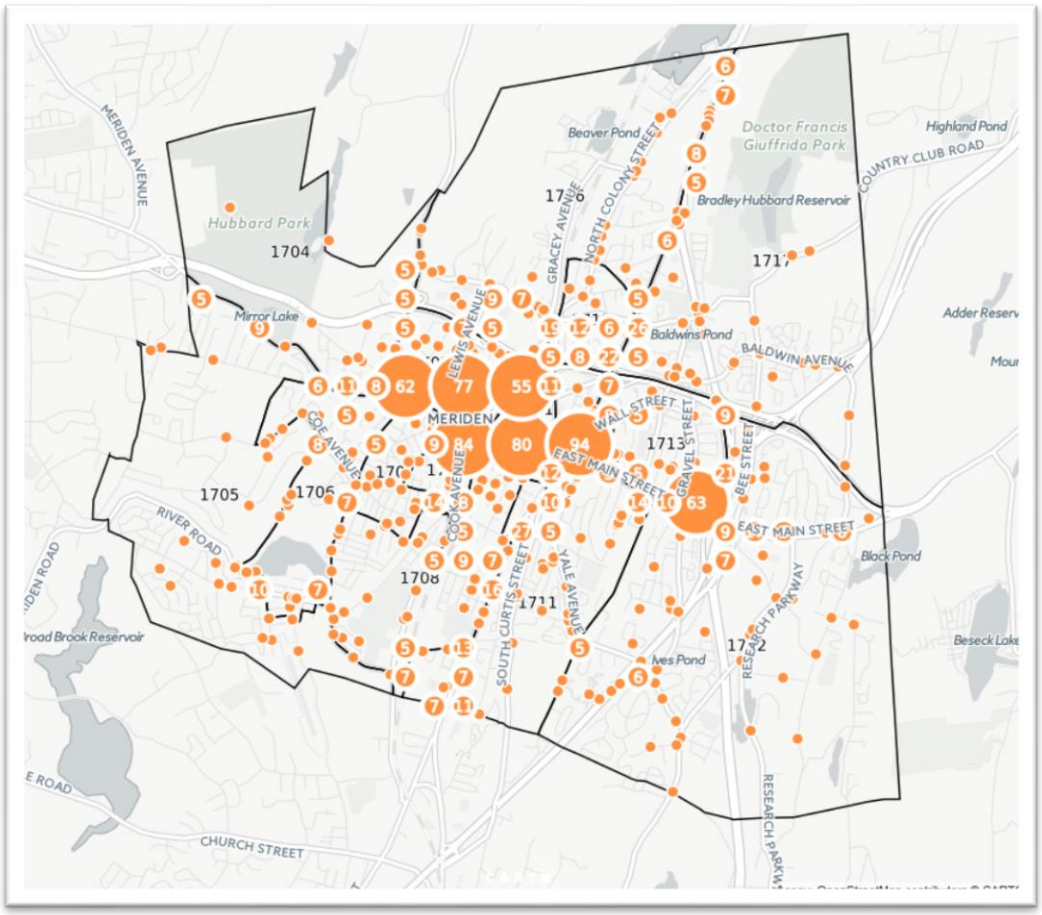
**Figure 8.1: Accidents Compared to Traffic Stops by Time of Day**




[2] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

Figure 8.2 shows how motor vehicle accidents were generally distributed throughout the city. As can be seen from the diagram, while accidents are somewhat distributed throughout the city, the largest concentrations of them are (1) along East and West Main streets from the area where East Main Street intersects Broad Street to the area where West Main Street intersects with the Chamberlain Highway (Route 71); (2) the residential areas between these sections of East and West Main Streets and I-691 near the Westfield Mall and MidState Medical Center, including Springdale Avenue; and (3) the area surrounding the East Main Street interchange for Route 15 and I-91 on the far east side of the city. Except for the East Main Street interchange area, the other areas where high concentrations of accidents occurred coincide with the high minority population/higher enforcement activity areas of census tracts 1701, 1702, 1703, 1714, and 1715. Enforcement levels around the East Main Street interchange are lower than at the other locations.

**Figure 8.2: Meriden Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

The Meriden Police Department identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified areas with the highest call for service volume and highest levels of traffic as some of the same areas with the highest level of motor vehicle enforcement. They also indicated the impact that reported incidents of crime and traffic accidents in downtown Meriden and along the southern section of Broad Street had on the

deployment of departmental resources. Based on the locational analysis of the number of traffic stops by geographical area, it appears that departmental resources with respect to traffic enforcement tend to be concentrated in two relatively small geographic areas: (1) the core downtown area of census tracts 1701, 1702, and 1703 (an area defined by East and West Main streets on the south, I-691 on the north, Route 71 (Chamberlain Highway) on the west, and Center Street on the east); and (2) the portion of South Broad Street that defines the boundary between census tracts 1708 and 1711.

Meriden traffic enforcement activity does not appear to be primarily driven by population concentrations; that is, the census tracts with the largest population concentrations do not all generate the most significant levels of traffic enforcement. There are seven census tracts that make up most of the downtown area. These seven census tracts account for 47% of the traffic enforcement activity but include only 23% of Meriden's resident population. Conversely, the four most heavily populated census tracts accounting for 43% of the population, generate only 26% of the enforcement activity.

Meriden's high stop rates of Hispanic drivers appears to be directly related to where it engages in a large portion of its traffic enforcement activity, i.e., areas with the highest population of minority residents. Comparing all the census tracts where the proportion of stops exceeded the town-wide average for a racial/ethnic group with the driving age population within those tracts can explain localized disparities. This is an effective way to assess some of these disparities, because such a high proportion of stops involved residents of Meriden. This is particularly true for Hispanic residents where 80% of the Hispanic drivers stopped were town residents compared to 57% of stopped white drivers who were residents and 65% of all stopped black drivers. Even though non-resident drivers influence the composition of traffic stops in certain portions of Meriden, such as on the northern and southern ends of Route 5, the overall influence of out-of-town drivers on the Meriden stop demographics appears to be less of a factor in Meriden than it might be in other communities.

A higher percentage of minority drivers were stopped than the town average in eight of the 17 census tracts, but only three had a stop disparity that exceeded the relevant resident population. Only in census tract 1707 did the minority proportion of stops exceed the resident population in any significant way (greater than five percentage points), but the total number of stops made in this tract was fairly small. In six of 17 census tracts black drivers stopped exceeded the town average. Black drivers were stopped at a rate that exceeded their resident population more than five percentage points in five of the census tracts (1702, 1703, 1708, 1713, and 1715). Hispanic drivers were stopped at a rate that exceeded the town average in nine of 17 census tracts. Hispanic drivers were stopped at a rate that exceeded their resident population by more than five percentage points in two census tracts (1704 and 1717). These disparities do not necessarily indicate profiling in these areas, since the disparity could be caused by other factors such as high levels of travel through the area by residents from other areas of the city, but it serves to identify those sections of the city where the disparities are occurring with the greatest regularity. Essentially, in these eight census tracts, the disparities could not be attributed solely to the proportion of minority residents living in the area.

Additional information was provided by the Meriden Police Department to support its assertion that its resources are primarily deployed based on calls for service, Part I crime locations, and high accident areas. The data tends to show that the census tracts experiencing the largest concentrations of traffic enforcement activity tend to coincide with the two patrol districts with the highest number of calls for service. Additionally, of the 275 Part I crimes in Meriden committed during the study period, a higher percentage appeared to occur in the same census tracts where traffic enforcement

levels are highest. Lastly, the areas with the highest number of motor vehicle accidents were Route 5, East/West Main Street, and Route 71. The three predominantly minority census tracts bounded by Route 71, East and West Main streets, Center Street and I-691experienced both a high incidence of accidents and high levels of traffic enforcement Generally speaking, Meriden's highest areas of traffic enforcement activity tended to coincide with its highest calls for service and Part 1 crime areas, and to a significant, but slightly lesser degree, its highest areas for traffic crashes.

Meriden had 105 officers who made at least one traffic stop during the study period. The average stops made per officer were 26. The most active officer conducted 6% of all motor vehicle stops in town. There were 18 officers who conducted more than 50 stops and accounted for 55% of all traffic enforcement. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics. This appears to be the case in Meriden.

*Traffic Stop Outcomes*

Stop sign violations (16.2%) were the largest category of stops made in Meriden. The next largest category of stops were for cell phone violations (15.9%) followed by speed-related violations (13.3%). White non-Hispanic drivers were more likely to be stopped for driver-related safety issues like speeding, cell phone use, and traffic light violations as a percentage of their total stops than were either black or Hispanic drivers. Hispanic and black drivers were stopped in equal proportion to white drivers for stop sign violations. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 Meriden, when these registration- and equipment-related stops were made in the eight high enforcement census tracts (1701, 1702, 1703, 1708, 1709, 1710, 1711, and 1714) that were 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 included 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. Although Meriden did not make extensive use of equipment-related stops on an overall basis (only 9.3% of its total stops) almost 51% of them were made in the seven census tracts where just over half of its Hispanic and 42% of its black residents live. The greater exposure minority residents may have had to these particular types of enforcement in those areas may very well have contributed to the size of the disparity for minority drivers but because of the relatively low number of these types of stops overall it was probably not the main reason why the disparity existed.

With regard to stop outcomes, minority drivers were more likely to receive a misdemeanor summons, whereas white drivers were more likely to receive an infraction citation. Stops involving black drivers were less likely to result in an infraction citation than either white or Hispanic drivers but slightly more likely to result in a verbal warning.

Meriden police searched 6.4% of drivers they stopped, which was more than twice the state average of 2.9%. Black drivers were searched at twice the rate of white drivers, while Hispanic drivers were searched at only a slightly higher rate than white drivers. Contraband was found after searching white and black drivers at almost the same rate and at a lower rate for Hispanic drivers. Overall, contraband was found at a significantly higher rate (49%) when the search was conducted as the result of probable cause, plain view, or some other reason compared to when a search was conducted pursuant to consent (17%).

*Conclusion*

The relative disparities in Meriden appear to reflect a concentration of enforcement activity in many areas of Meriden that also tend to have higher concentrations of minority residents. There are relatively high enforcement levels in seven census tracts in the central sections of Meriden where 52% of all Meriden's driving age Hispanics and 47% of its driving age Black residents live, as well as along sections of Broad Street which have considerable traffic levels and commercial activity. Higher levels of traffic enforcement in these areas tends to mirror the higher levels of calls for service, crime, and motor vehicle accidents. Minority residents of Meriden tended to be more significantly affected by traffic enforcement patterns than white residents. Just under 80% of all the Hispanic drivers stopped and 65% of all the black drivers stopped in Meriden were town residents while only 57% of the white drivers stopped were residents.

While white drivers are more likely to be stopped in Meriden 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 and registration violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the high enforcement census tracts, where resident minority drivers are likely to be present in the driving population in greater proportion, rather than to an inherently greater likelihood that minority drivers violate these laws with greater frequency than white drivers. Meriden did not make extensive use of equipment-related reasons for making traffic stops generally, but the greater likelihood that these reasons formed the basis for making stops in the higher minority census tracts, while not being the primary reasons for the larger impact its traffic enforcement had on Hispanic and black drivers

Based on the overall follow up analysis of the Meriden data, we believe that the general disparities in its stop data with respect Hispanic and black drivers tend to reflect the overall nature of its enforcement policies based on calls for service, crime, and motor vehicle accidents, but that it would benefit by reviewing these practices to assure that the disparate impact these policies have on its minority residents are reasonable in terms of policy outcomes. It is also important that the department assure that its minority community fully understands what benefits come from this enforcement presence. It is recommended that the department:

(1) review its traffic enforcement policies to fully understand and evaluate the disproportionate effect they could be having on minority drivers;
(2) take steps to assure that its minority community is fully engaged in the process of understanding why the allocation of enforcement resources are made and what outcomes are being achieved;
(3) evaluate how the greater use of high discretion equipment-related stops in higher minority areas may be adding to disparities; and

(4) review the role consent searches play in its overall traffic stop efforts to ensure that its officers are not overly relying upon this as a traffic stop technique.

We also recommend that department administrators make an effort to review the nature and circumstances of the 107 stops that were made in census tract 1707 during the study period to try and isolate why the disparity between the percentage of minority drivers stopped and the demographic nature of the local population living in that census tract seemed to stand out. While the resident driving age population in tract 1707 was 37% minority, the stops made in the tract were more than 54% minority drivers. The department may be able to compare this data with the data from other years to determine whether or not the results observed in the stop data for the study year are typical for this area of the town. While they may be an anomaly because of the relatively small number of stops made, they could also be due to fundamental differences in the type of enforcement that occurred in this geographic area.

Lastly, while some of the department's data collection practices were exemplary, it needs to improve the quality of some of its reason for stop data entry to improve miscoded data and incorrect interpretations that led to some inaccuracies in properly identifying the initial basis for making a small number of traffic stops.

## I.B (3): NEWINGTON FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Newington over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 3,997 | 62.4% | 3,317 | 60.5% |
| Black Non-Hispanic | 895 | 14.0% | 801 | 14.6% |
| AsPac Non-Hispanic* | 165 | 2.6% | 151 | 2.8% |
| AI/AN Non-Hispanic** | 17 | 0.3% | 25 | 0.5% |
| Hispanic | 1,336 | 20.8% | 1,186 | 21.6% |
| Total | 6,410 | | 5,483 | |

*Asian Pacific Non-Hispanic

** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Newington Police Department made a total of 5,483 traffic stops. Of these, 40% were minority stops, of which 22% were Hispanic drivers and 15% were black drivers. The Newington Police Department was identified using the three descriptive tests. Newington was identified as having exceeded the threshold for identification in all three descriptive benchmarks used and six of the nine possible measures. Although it is understood that certain assumptions have been made in the design of each of the three benchmarks, it is reasonable to believe that departments with consistent data disparities separating them from the majority of other departments in the study should be subject to further review and analysis with respect to the factors that may be causing these differences.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Newington Police Department data were studied using a more detailed review of traffic enforcement during the original 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. Newington provided latitude and longitude coordinates for some stops. In the cases where latitude and longitude information was not provided, research staff worked to manually identify location information based on the description provided by the officer. Though we could not map 11% of the stops because the location information was too vague, there was sufficient data that could be mapped for an analysis of stops by census tract.

According to the 2010 census, Newington is a town with approximately 24,845 residents over the age of 16. Approximately 14% of the driving age population in Newington is identified as a minority. Figure 1.0 outlines the basic demographic information for Newington residents over age 16.

**Figure 1.0: Newington Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 21,353 | 85.9% |
| Black Non-Hispanic | 615 | 2.5% |
| AsPac Non-Hispanic | 1,282 | 5.2% |
| Hispanic | 1,595 | 6.4% |
| Other | 0 | 0.0% |
| Total | 24,845 | |

The U.S. Census Bureau divides Newington into seven census tracts. The resident driving age population varies from one census tract to another, from about 2,200 to 5,000 people. The racial breakdown in each census tract varies, from a high of 19% minority driving age residents in census tract 4941 to a low of 8.7% in tract 4944. Figure 2.1 is a map that outlines the boundaries of Newington census tracts, which will be referred to throughout this report. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: Newington Census Tract Map**

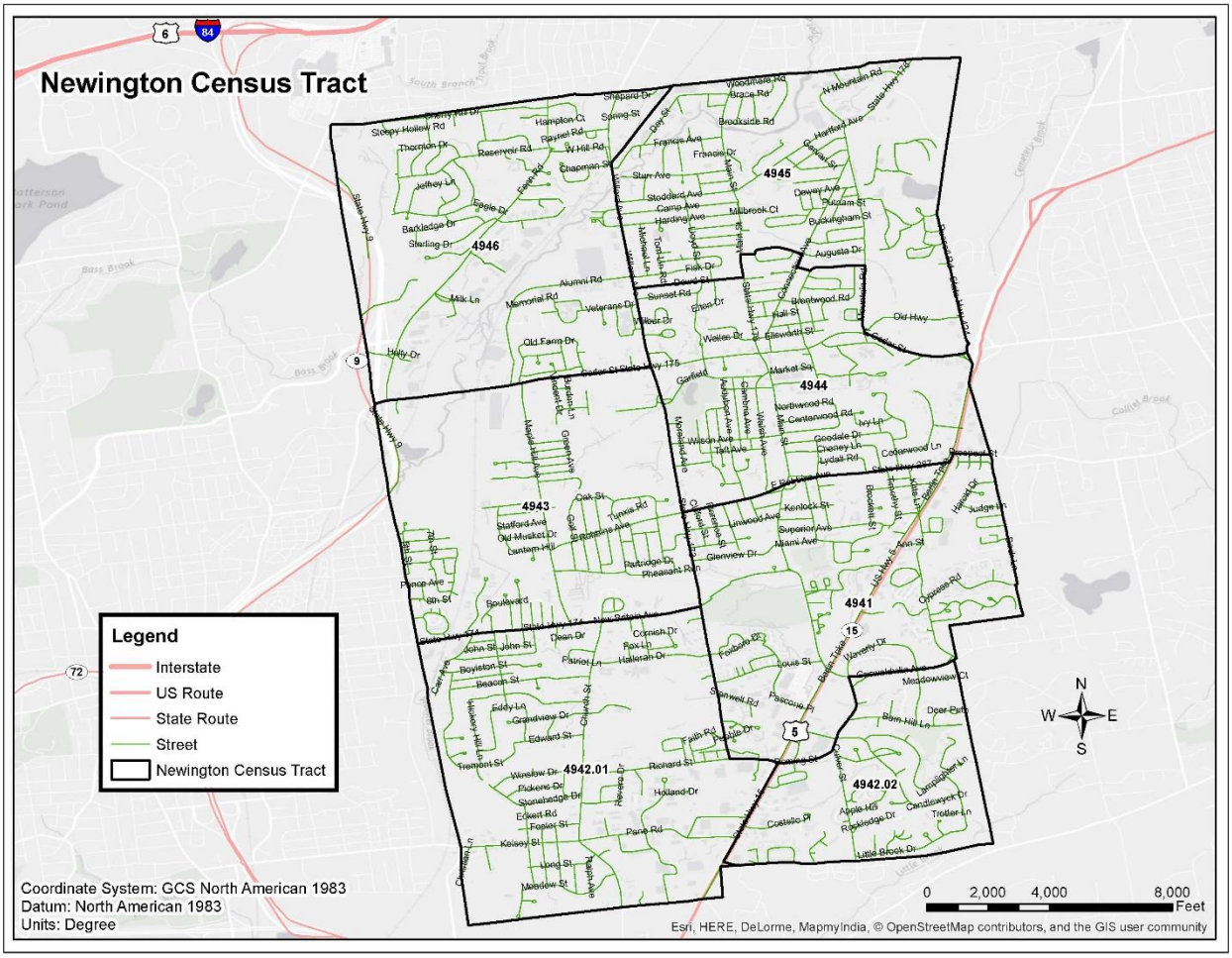
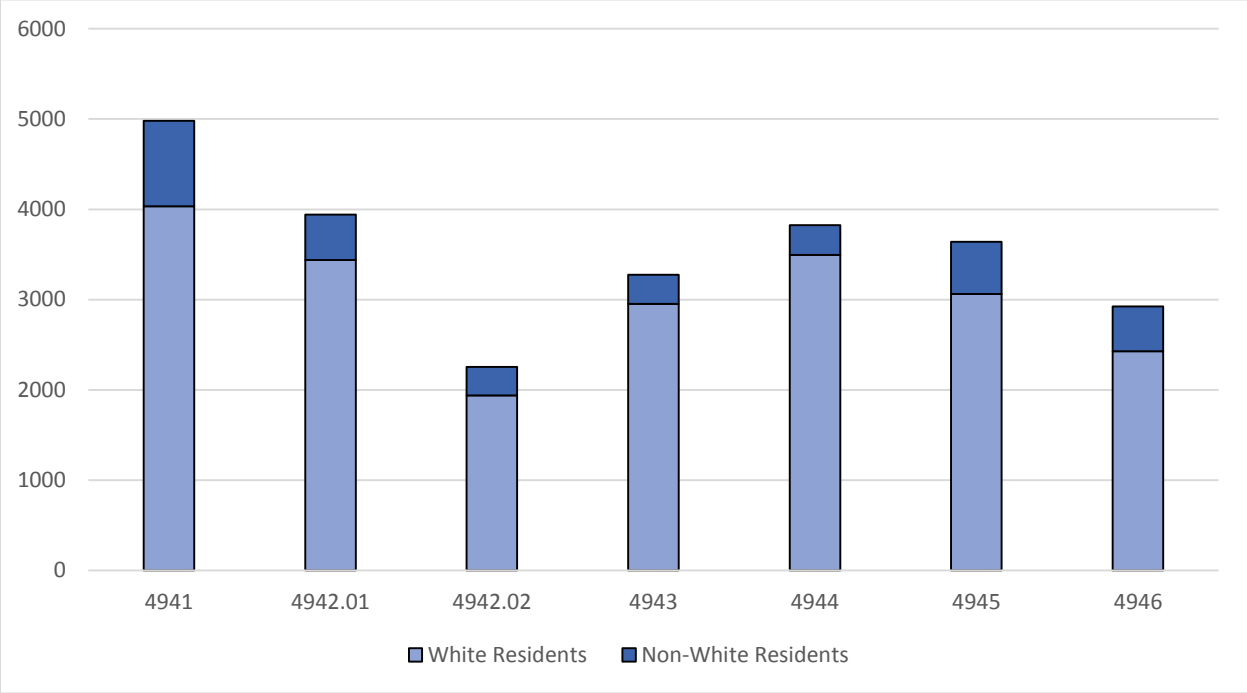


**Figure 2.2: Age 16 and Older Resident Population by Census Tract**




Newington is 13.1 square miles in area and consists mostly of residential areas and is home to a large stretch of the Berlin Turnpike. Seven other municipalities border Newington, including Hartford to the north, as well as the suburbs of Wethersfield, Rocky Hill, Berlin, New Britain, Farmington, and West Hartford. With the exception of Hartford and New Britain, the five other border towns are predominantly white demographically, with an average driving age white population of 86% (same as Newington's white driving age population of 86%). Hartford, located to the north of Newington, has a white driving age population of 19%. New Britain, located to the west of Newington, has a white driving age population of 55%. Of all the drivers stopped in Newington, 27% were Newington residents and 73% lived elsewhere.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each Newington census tract. A large percentage of traffic enforcement activity (59%) occurred in a relatively concentrated geographical area encompassing three census tracts (4941, 4942.01, and 4944). Census tract 4941 contributes the largest percentage of traffic enforcement with 27% of the town's traffic stops. Just over 600 stops could not be mapped. These are not considered in our analysis for the purposes of discussing traffic stops by census tract..

**Figure 3.1: Traffic Stops by Census Tract**

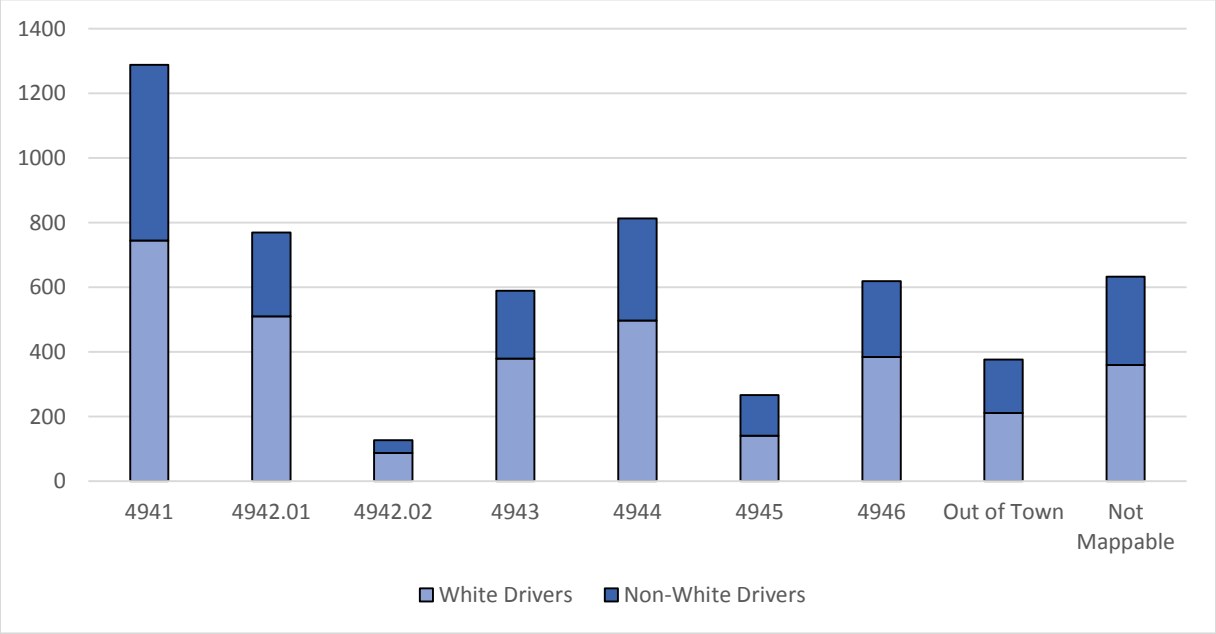



Figure 3.2 is a map of traffic stops made in Newington. The three census tracts that account for 59% of the traffic enforcement activity include 51% of Newington's resident population. Census tract 4941 has the largest resident population (21%) and the highest level of traffic enforcement (27%). The three census tracts with the highest enforcement account for 60% of all out-of-town resident stops in Newington. This is most likely due to the fact that the Berlin Turnpike is a major shopping, entertainment, and dining destination for surrounding communities.

Newington's overall resident population is 14% minority and 23% of all Newington residents who were stopped were minority. Resident minority drivers were stopped at a higher rate than the proportion of their town population, but it is also clear that non- residents contribute to the overall racial disparity in Newington stop data.

**Figure 3.2: Traffic Stop Map**

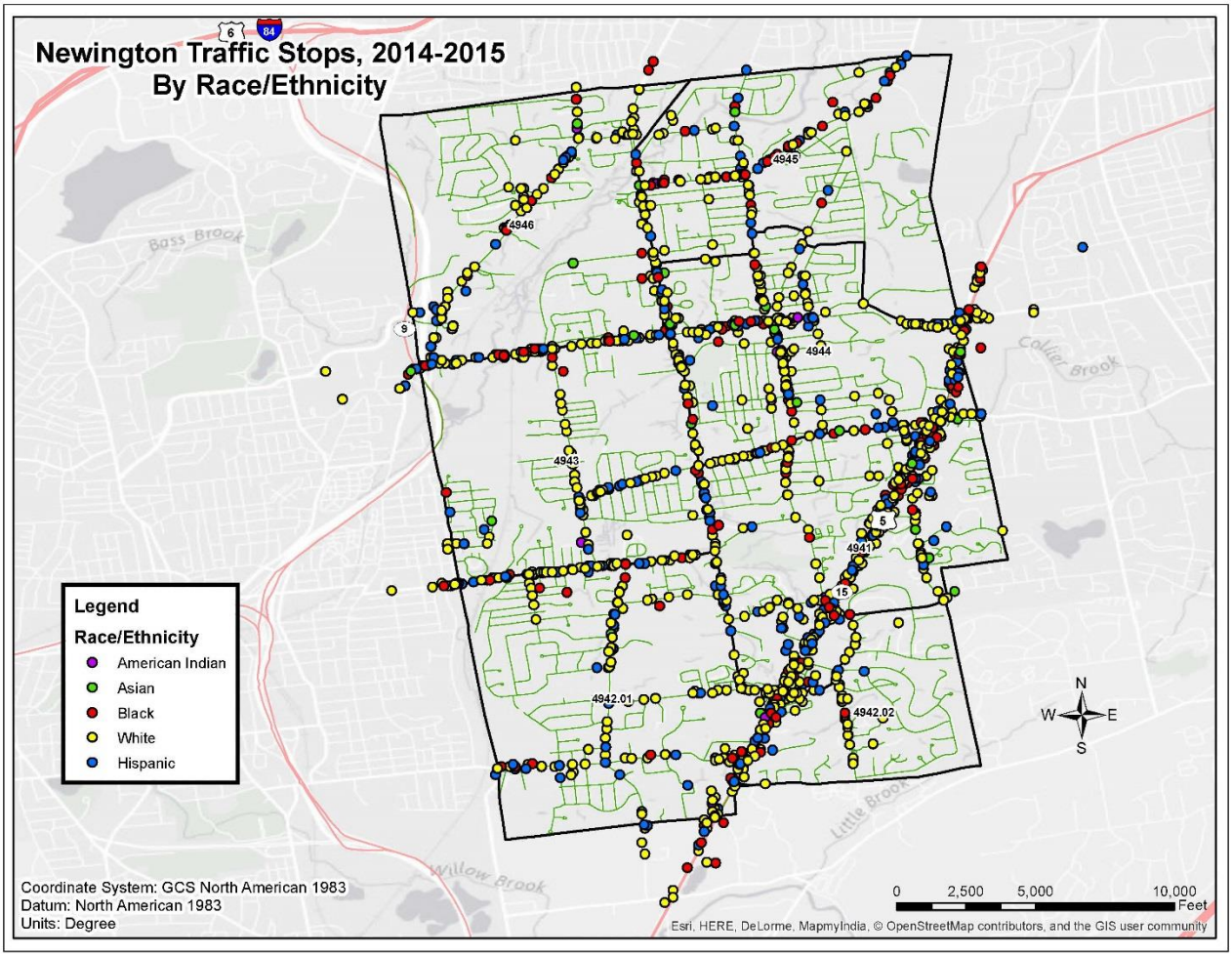
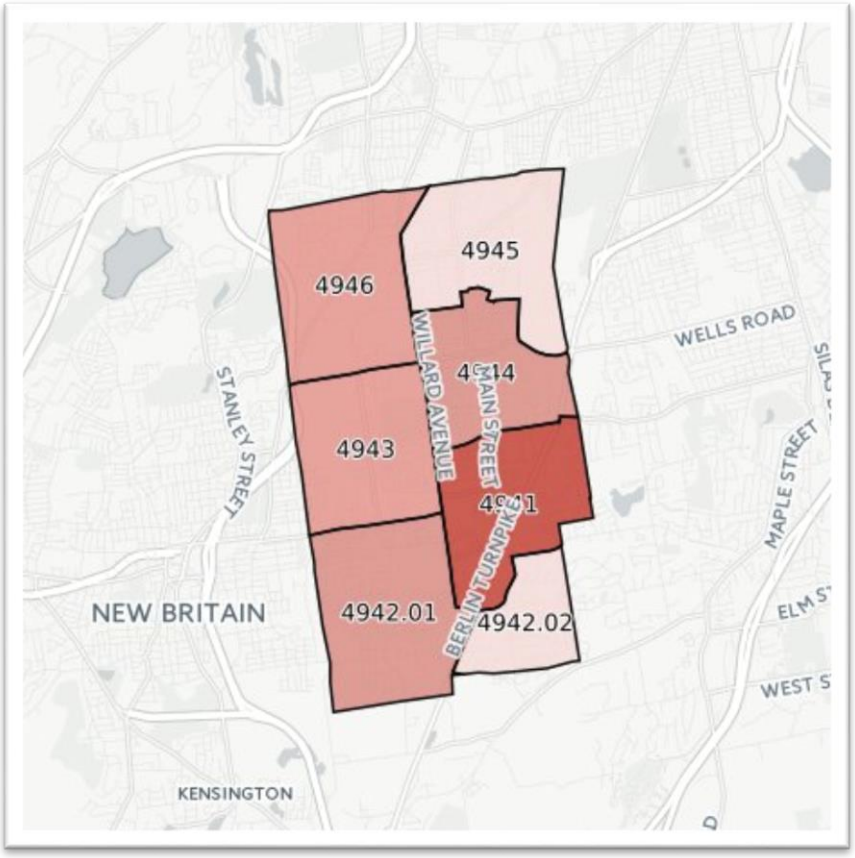



Figure 3.3 shows an additional way to view the high enforcement areas in Newington. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area with over 1,200 traffic stops made in census tract 4941 (dark red). Group one includes 27% of all traffic enforcement in Newington. Group two consists of census tracts that had between 550 and 800 stops (medium red). Group two includes tracts 4942.01, 4943, 4944, and 4946. There were between 100 and 300 stops in each of the remaining census tracts that make-up group three (light red).

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**



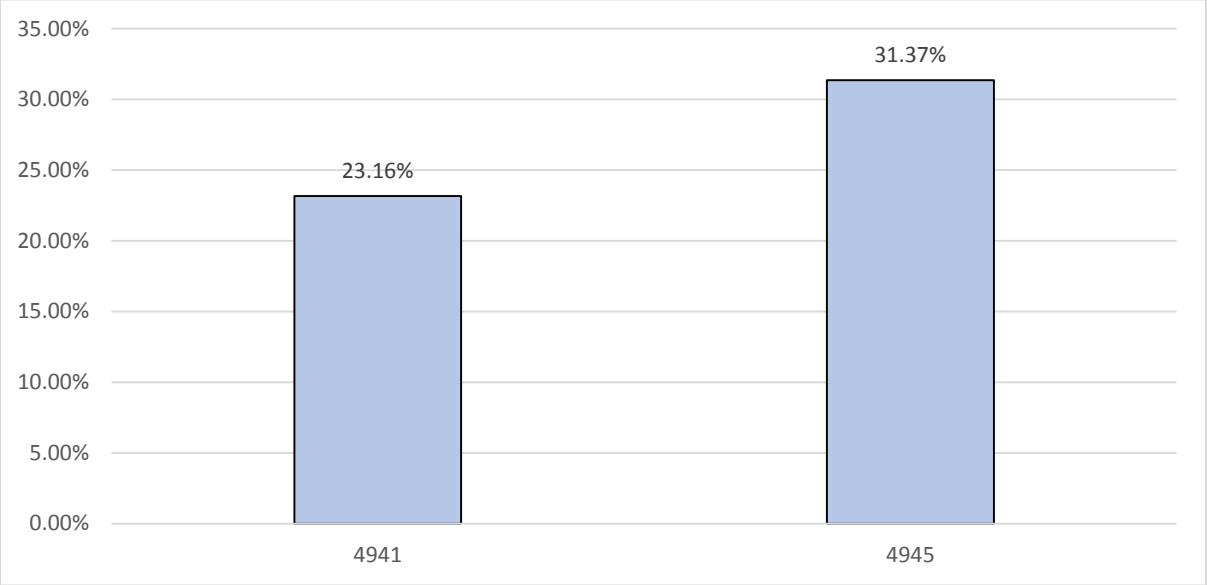

## Traffic Stop Breakdown by Race/Ethnicity

Minority drivers accounted for 40% of all drivers stopped in Newington. Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. The resident population age 16 and older in Newington is 14% 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; about 14% of the Newington population is minority but close to 40% of the drivers stopped were minority. However, the racial and ethnic makeup of different areas of Newington varies significantly by census tract, so the disparities were more pronounced in some areas compared to others.

Specifically, two of the seven census tracts (4941 and 4945) and the stops made outside the town boundary showed a higher percentage of minorities stopped than the town average of 40% minority stops. Part of the highest enforcement activity area in Newington is in census tract 4941. This census tract includes the majority of the Berlin Turnpike. Census tract 4945 is the northeast corner of the town which borders Hartford, West Hartford, and Wethersfield.

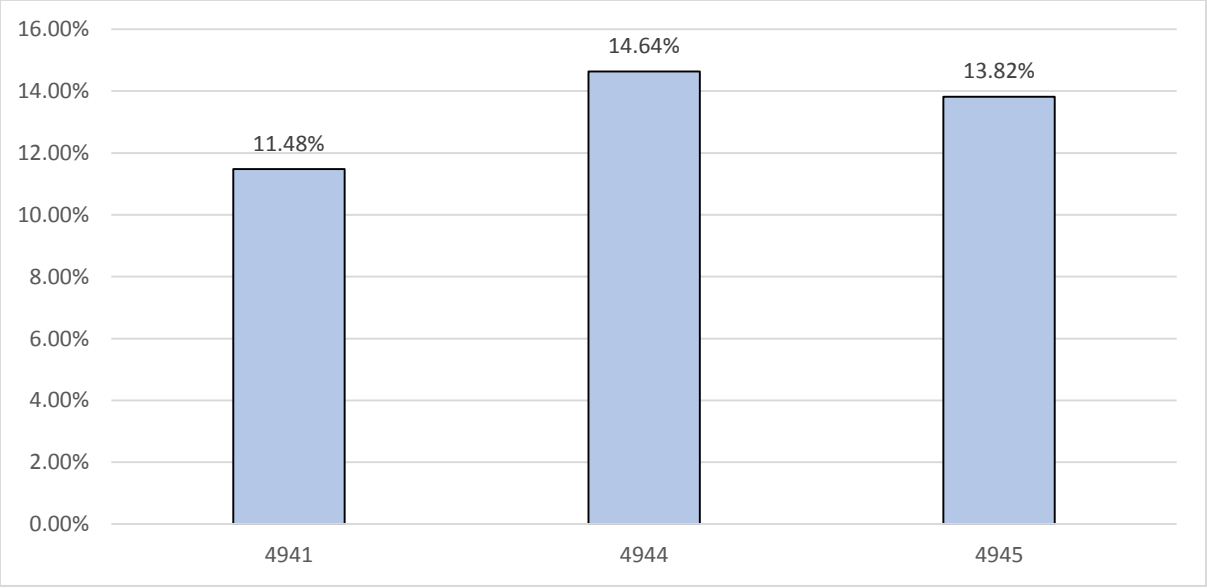
Figure 4.1 shows the amount by which the minority stop disparity exceeded the localized minority driving age populations in Census tracts 4941 and 4945. Almost 83% of the minority drivers stopped in these tracts were not Newington residents.

**Figure 4.1: Disparity between Minority Drivers Stopped and Census Tract Population**




The overall percentage of Newington traffic stops involving black drivers was 14%. The percentage of black drivers who were stopped exceeded the town average in three of the seven census tracts (4941, 4944, and 4945), including two of the three high enforcement activity areas. Figure 4.2 shows the proportion of black stops made in three of the seven census tracts where the percentage of black drivers stopped exceeded the town wide average. As was the case for all minority drivers stopped, there was a positive disparity above the localized black driving age population.

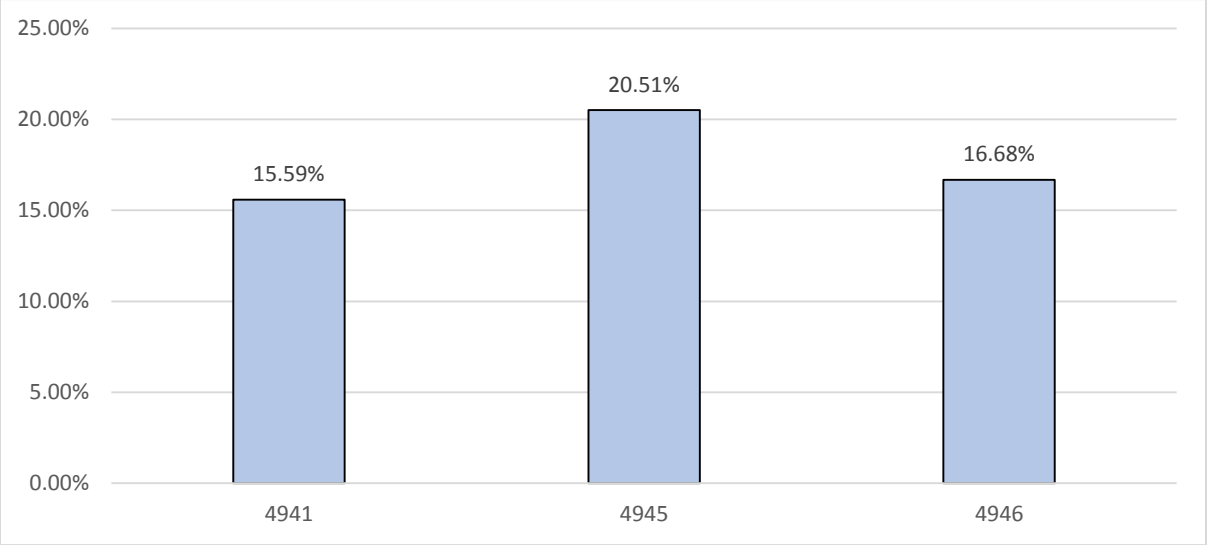
**Figure 4.2: Disparity between Black Drivers Stopped and Census Tract Population**




The overall percentage of Newington traffic stops involving Hispanic drivers was 22%. The percentage of Hispanic drivers stopped exceeded the town average in three of the seven census tracts (4941, 4945, and 4946). Figure 4.3 shows the proportion of Hispanic stops in these three census

tracts compared to the proportion of Hispanic driving age residents living within those census tracts. There was a positive disparity above the resident Hispanic driving age population in all three census tracts.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Newington. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

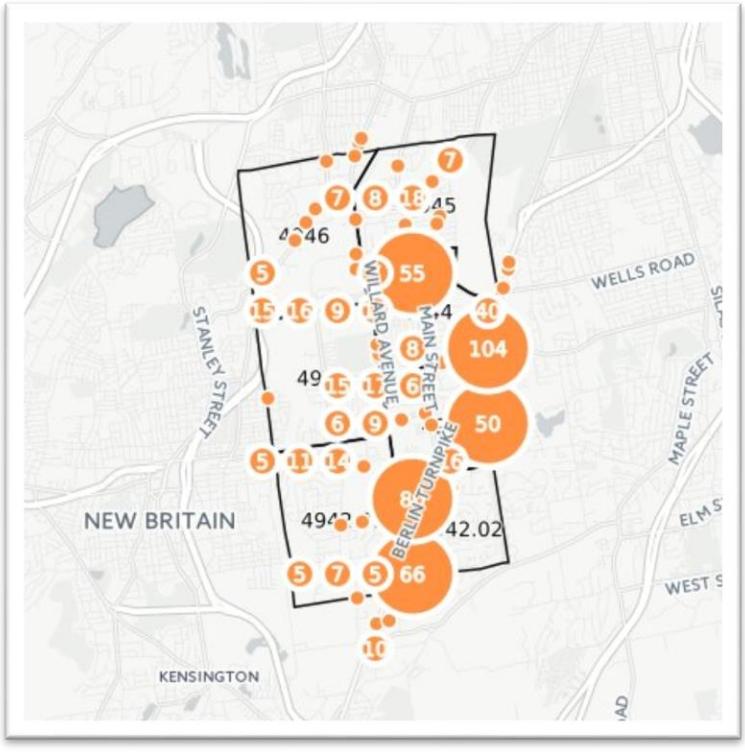
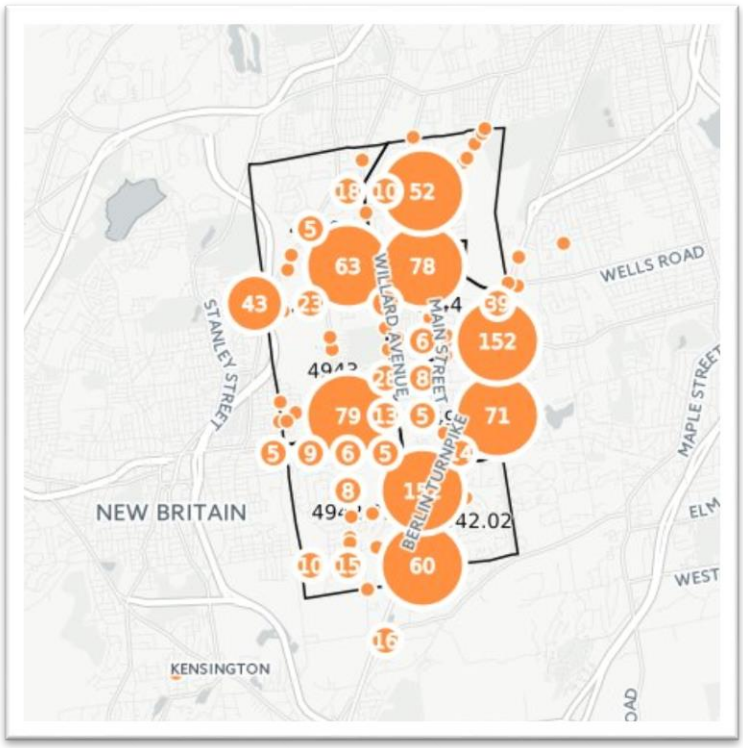


**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**




## Traffic Stop Breakdown on the Berlin Turnpike

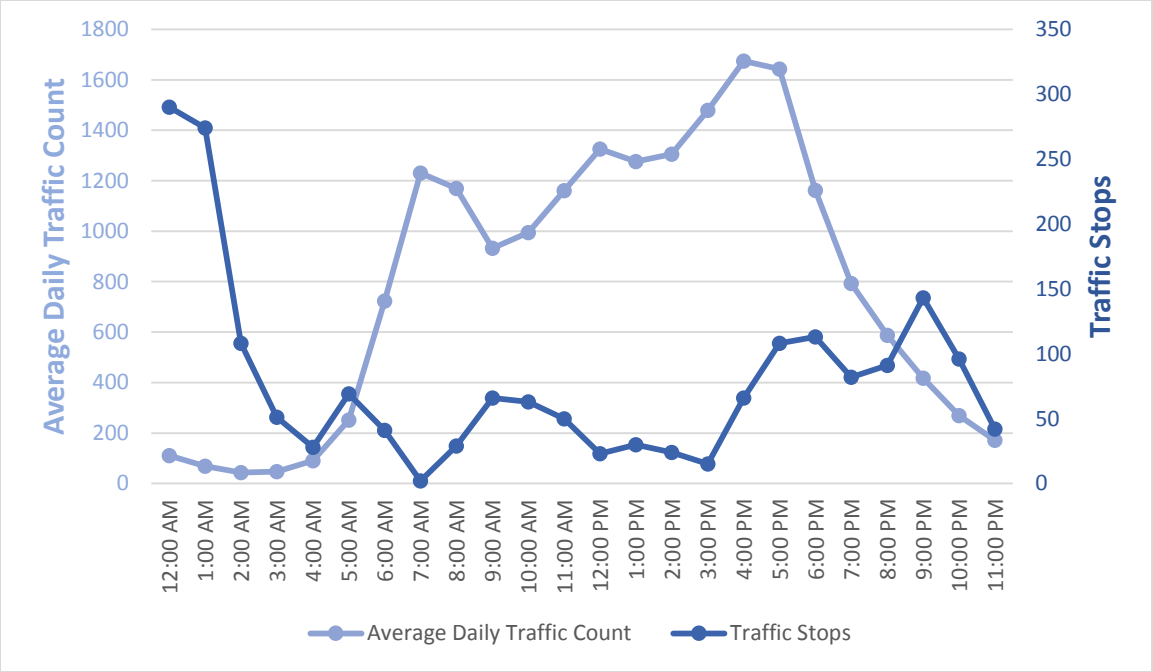
Of all traffic stops in Newington, 35% occurred on the Berlin Turnpike. The Berlin Turnpike is a four to six lane divided road that carries Route 5 and Route 15 from the Meriden-Berlin border through Newington and Wethersfield. The entire roadway is approximately 11 miles long, with about 3.5 miles running through Newington between the Berlin and Wethersfield borders. Some of the busiest sections of the Berlin Turnpike are located in Newington. They include major shopping centers such as Stew Leonard's, Best Buy, P.C. Richard and Son, Lowes Home Improvement, Walmart, Target, several restaurants and hotels, to name just a few. The Connecticut Department of Transportation (DOT) headquarters is also located on the Berlin Turnpike in Newington.

The turnpike crosses into Newington from Berlin at Rowley Street and from Wethersfield at Route 175. To help understand traffic flow on the turnpike, the analysis looked at the average daily traffic (ADT) records that are reported by the Connecticut DOT, which is responsible for collecting traffic volume information for state and local roads throughout the state. This task is accomplished by placing counting stations at different points along the roadway for a period of time to count the cars that drive through that point.

According to the ADT information for the portion of the Berlin Turnpike that runs through Newington, the traffic volume is similar in both north and south directions throughout the day. In other words, there are approximately the same number of vehicles traveling north at any given time as there are vehicles traveling south at any given time. Traffic flow on the turnpike is fairly steady between 7:00 a.m. and 5:00 p.m. Traffic enforcement peaks were offset somewhat from the commute peaks, with enforcement peaks occurring between9:00 a.m. and 11:00 a.m. and 4:00 p.m. and 7:00 PM. However, by far the most active enforcement period on the turnpike was from midnight to 2:00

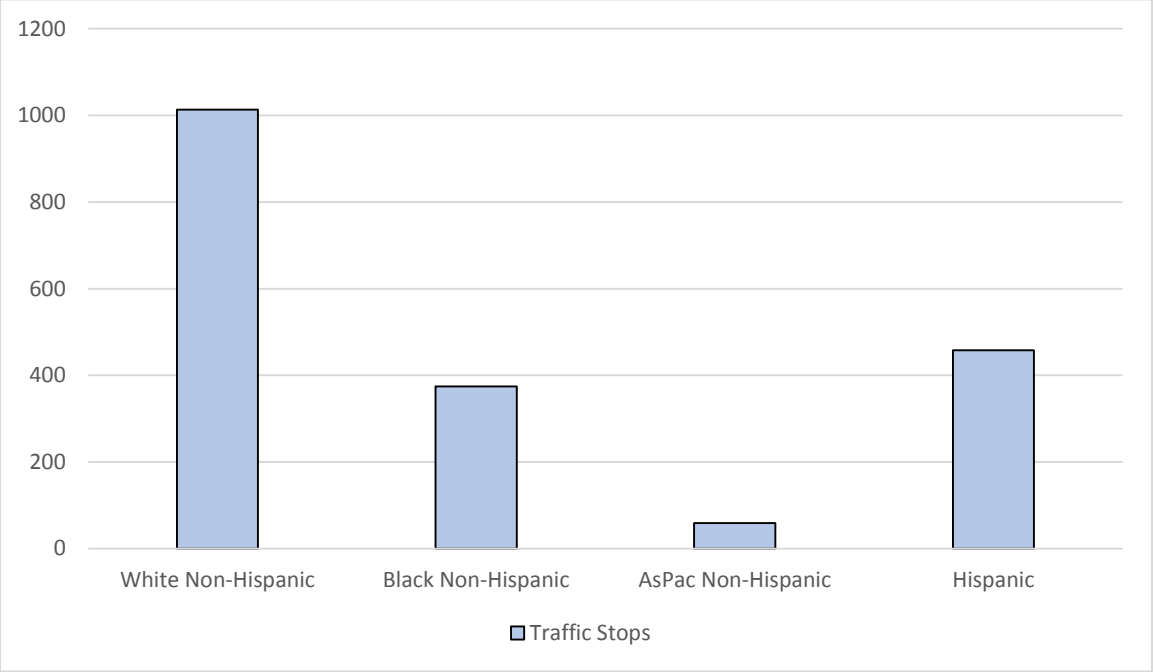
a.m. Figure 5.1 is a graph of traffic flow compared to traffic enforcement on the Berlin Turnpike in Newington.

**Figure 5.1: Berlin Turnpike Traffic Flow Compared to Traffic Enforcement**




The overall percentage of traffic stops involving minority drivers on the Berlin Turnpike was 47% compared to 39% minority drivers stopped town wide. Approximately 24% of drivers stopped were Hispanic and 20% were black. The Route 5 corridor appears to have the greatest influence on the non-Newington resident component of the stop demographics, with 84% of the drivers stopped on Route 5 not living in Newington. Non-resident black and Hispanic drivers were more likely than white non-resident drivers to be stopped on Route 5 than they were in any other place in Newington. This corridor was responsible for 41% of the non-resident Hispanic drivers stopped and 50% of the non-resident black drivers stopped, compared to 36% of the non-resident white drivers stopped. Figure 5.2 shows the proportion of traffic stops on the Berlin Turnpike by race and ethnicity.

**Figure 5.2: Berlin Turnpike Traffic Stops by Race/Ethnicity**



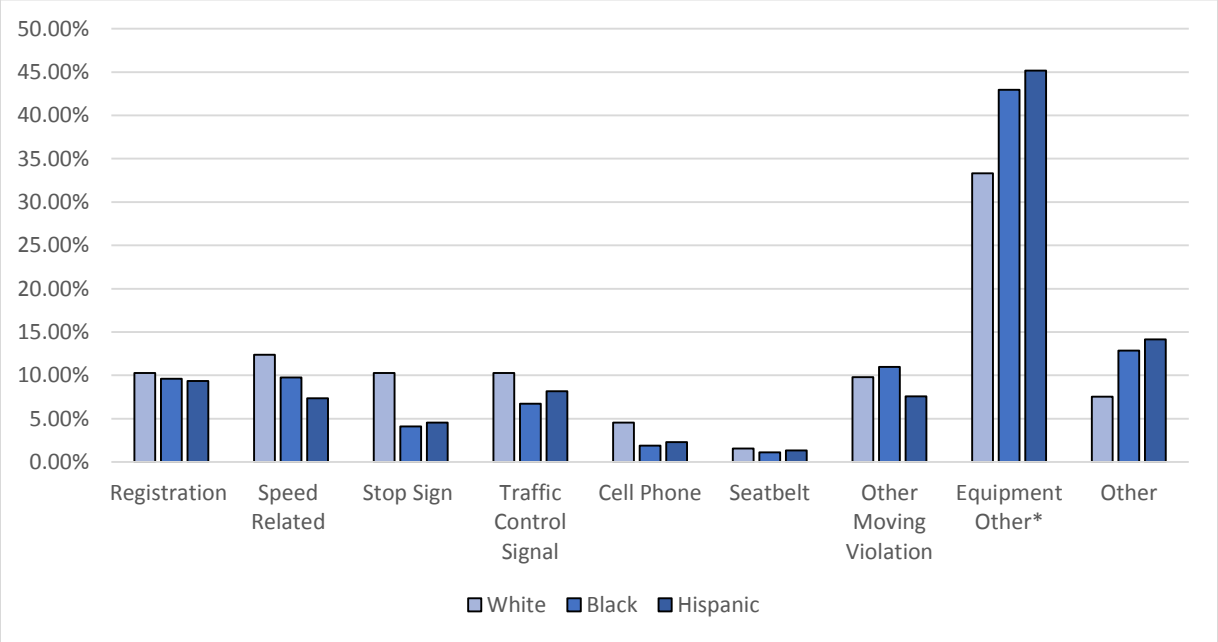

## Traffic Stop Distribution for Newington Officers

Newington's total of 5,483 traffic stops is comparable to other towns of its size. During the study period, traffic stop data was reported for 44 officers. The average number of stops made per officer was 125. Of the 44 officers reporting stops, 11 made fewer than 20 stops, seven made between 20 and 50 stops, six made between 50 and 100 stops, and 20 made over 100 stops. The 10 most active officers making over 100 stops each collectively accounted for 60% of the total. The most active officer made 526 stops or 10% of all stops made town wide. Thus, a relatively small portion of its officer force influences Newington's stop data.

## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that Newington officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in Newington account for over 50% of the total stops. The three largest stop categories were for defective or improper lighting (29 %), speed-related violations (11%), and registration violations (10%). 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-related violations than white drivers as a percentage of their total stops. Figure 6.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 6.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Just over 36% of Newington's stops were made for violations involving defective, missing, or inoperative vehicle lighting; improper display of license plates; and window tinting. This was the highest proportion for such stops of any municipal police department in the state during the study year. The statewide average for stopping drivers for these violations was 12%. Just over 88% of the equipment-related violations resulted in a written or verbal warning.

In many of the towns with extensive equipment-related traffic stops, the data tends to show that the racial and ethnic demographics of those stopped for defective, improper, or inoperative lighting; display of plates; or window tinting violations can be closely related to the frequency and location of where the stops are made. If they occur more frequently 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 higher concentrations of white drivers, the stop demographics shift toward white drivers, suggesting that the potential to find violators is more dependent on location than race.

Of all the Hispanic drivers stopped in Newington, 45% of them were stopped for equipment-related violations. Similarly, 43% of all the black drivers and 33% of all the white drivers stopped in Newington were stopped for equipment-related violations. Of all the black driving age residents living in Newington, 53% (approximately 330) live in census tracts 4941, 4942.01, and 4944. These three tracts are also where 52% (approximately 830) of all Hispanic driving age residents live. Just over 56% of all the equipment-related stops for lighting, plate display, and window tinting were made in three high enforcement area census tracts.

Newington differed from a number of the towns citing extensive use of equipment-related reasons for making traffic stops in that, even though it made the majority of these types of stops in areas of both high enforcement activity and high proportions of local minority driving-age residency, these stops represented a significant proportion of the stops made regardless of census tract. For example,

even in census tracts 4945 (northeast corner) and 4942.02 (southeast corner) where only 4% and 1.8% of all the equipment-related stops were made respectively, they still represented 32% and 28% of all the traffic stops made in these two census tracts. We found no census tract in Newington where less than 26% of all the traffic stops were for equipment-related reasons.

Thus, while the frequency and location sensitivity for the racial and ethnic demographics for these types of stops in Newington was similar to that observed in some other towns, the effect appeared to be less pronounced. In the three high-enforcement, high minority-residency census tracts where over 56% of the equipment-related stops were made, 52% of the drivers stopped for equipment-related reasons were white, 18% were black, and 27% were Hispanic. In all of the other census tracts where 44% of the equipment-related stops were made, 56% of the drivers stopped were white, 16% were black, and 25% were Hispanic. For analytical purposes, the stops that could not be precisely mapped and stops that were made outside the town boundaries were included in this latter group of census tracts.

The data shows that the extensive use of equipment-related reasons for making traffic stops affects black and Hispanic drivers to a greater extent that it does white drivers, even though white drivers are more than half of all the drivers stopped for these reasons. In comparative terms, 45% of all the Hispanic drivers stopped in Newington were stopped for equipment-related reasons while 30% were stopped for hazardous driving behaviors (speeding, stop sign or traffic signal violations, other moving violations, and cellphone use). Of all the black drivers stopped, 43% were for equipment-related reasons and 33% were for hazardous driving behaviors. While only 33% of all the white drivers were stopped for equipment–related reasons, 47% of them were stopped for hazardous driving behaviors.

In our discussions with the Newington Police Department, officials indicated that the high percentage of equipment-related motor vehicle enforcement was a technique used during roving DUI patrols. A roving patrol refers to an officer on patrol conducting motor vehicle enforcement with the purpose of identifying a specific violation, in this case, drinking and driving. The largest number of drivers stopped per-hour for equipment-related violations (851) occurred between midnight and 3:00 a.m., accounting for 41% of all equipment-related stops. To some extent, this corresponds with the department's explanation that officers are conducting roving DUI patrols that may focus on equipment-related violations during the overnight hours, particularly around the time bars close. Newington's data showed that one of these stops resulted in a DUI charge and four resulted in drug related charges.

Figures 6.2 and 6.3 are maps of traffic enforcement for safety related motor vehicle stops and equipment-related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone, or moving violations were categorized as "safety-related" stops. Stops for defective lights, window tints, or display of plate were categorized as "equipment-related" violations.

**Figure 6.2: Safety-Related Motor Vehicle Stops**

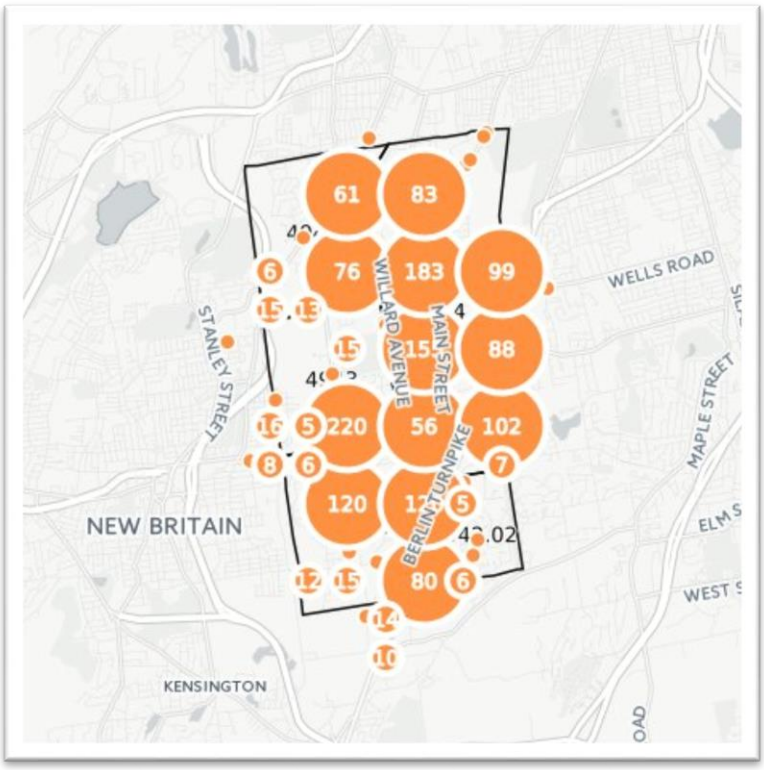
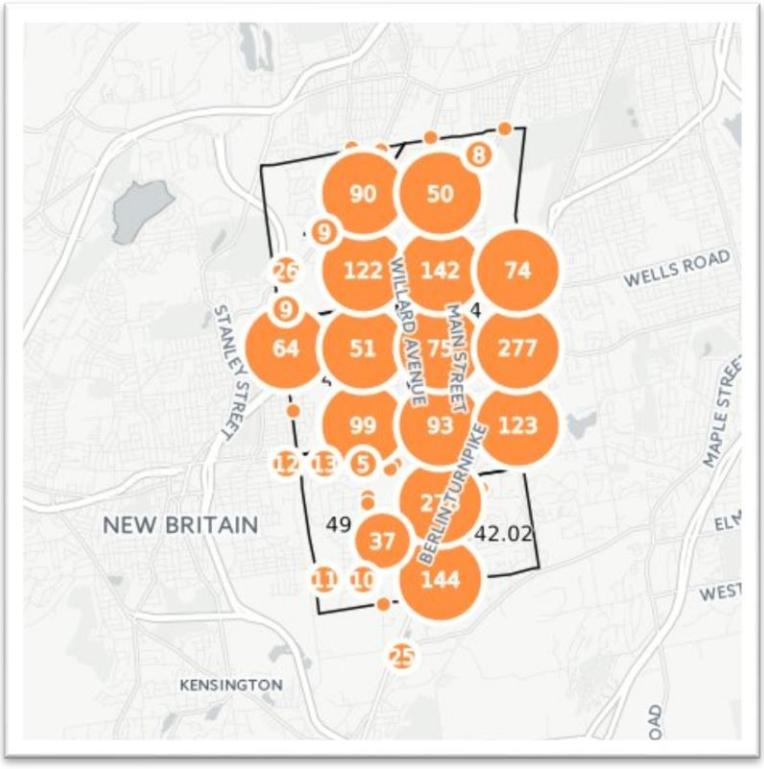



**Figure 6.3: Equipment-Related Motor Vehicle Stops**

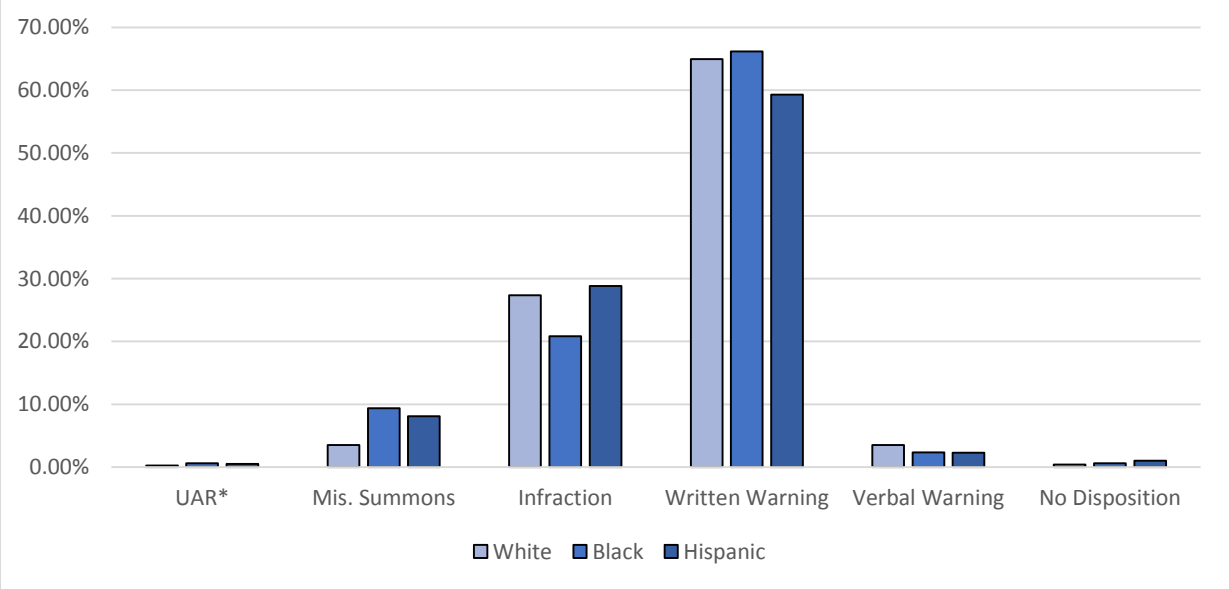


The majority of motor vehicle stops in Newington resulted in the driver receiving a written warning (64%). Figure 6.4 outlines the outcome of motor vehicle stops by race and ethnicity. Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black drivers were less likely to receive an infraction compared to white and Hispanic drivers.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives an analyst the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In Newington, 289 of the stops made resulted in the issuance of a misdemeanor summons (5.3%). Black and Hispanic drivers were almost three times as likely to be issued a misdemeanor summons as were white drivers (9.4% of black drivers and 8.1% of Hispanic drivers compared to 3.5% of white drivers) although this difference is not necessarily the result of disparate treatment. Newington did not report the secondary statutory citation in 173 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final misdemeanor charge.

**Figure 6.4: Outcome of Traffic Stop**

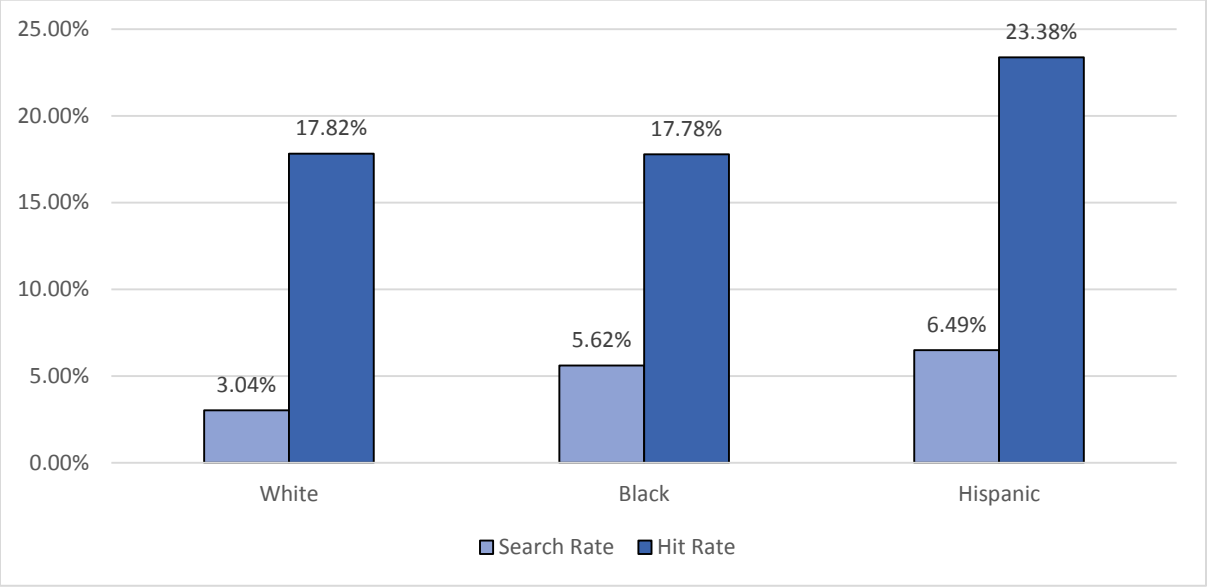



*Uniform Arrest Report

A review of department search information, shows 4.1% (225) of the drivers stopped in Newington were subjected to a motor vehicle search. The rate of motor vehicle searches is above the state

average of 2.9%. Black and Hispanic drivers were searched at twice the rate of white drivers. Of the 225 vehicles searched, 28% were subjected to an inventory search (compared to 21% statewide), 27% were subjected to a consent search (compared to 39% statewide) and 44% were subjected to a search for some other reason (compared to 40% statewide). The higher percentage of inventory searches is the result of a mandatory policy requiring an inventory search to be conducted for liability purposes when the vehicle is towed and unaccompanied by the owner. Contraband was found at almost the same rate for white and black drivers and at a slightly higher rate for Hispanic drivers. Figure 6.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 6.5: Search and Hit Rate**




Motor vehicle searches in Newington are concentrated in the high enforcement areas including the Berlin Turnpike. Figure 6.6 is a heat map of motor vehicle searches in Newington which indicates the majority of searches occurring in tracts 4941 and 4944.

**Figure 6.6: Search Heat Map**


## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates, or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with Newington provide a context to potentially explain the rationale for police deployments there and are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles approximately 17,604 people work in Newington and its major employers include the Connecticut Department of Transportation and Veterans' Medical Center, Data-Mail, and Connecticut Construction. The vast majority of commuters traveling to Newington for employment are from New Britain, Hartford, Bristol, and Wethersfield. The overall unemployment rate is 5.4%, which is below the unemployment rate for Hartford County and the state.

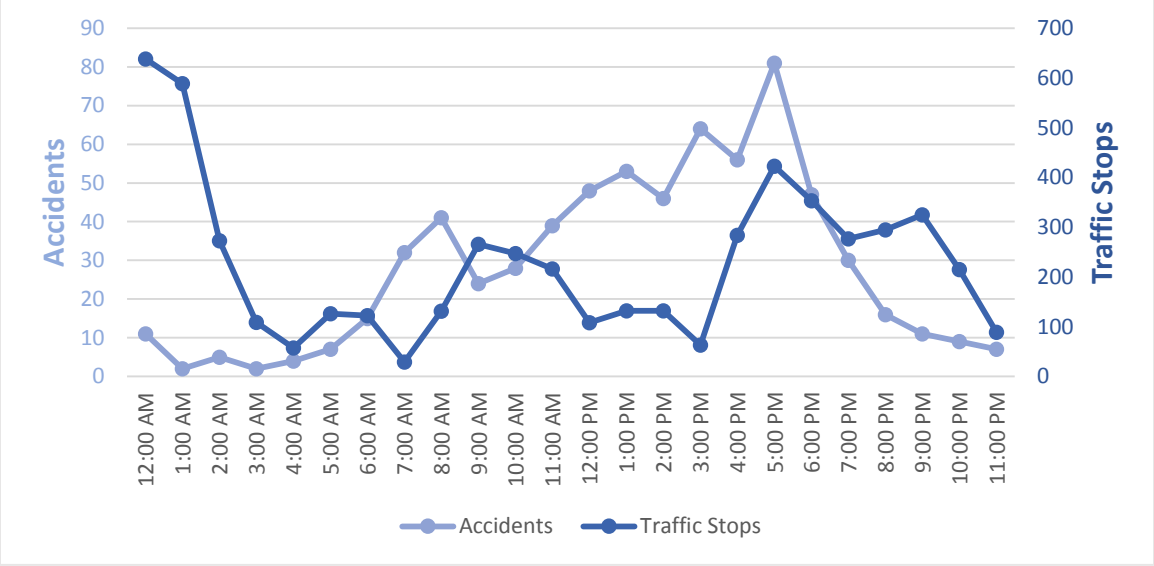
In 2015, the crime rate in Newington was reported to be 288 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2015 Connecticut Uniform Crime

Report[3], there were 890 reported crimes in Newington in 2015. The three most frequently reported crimes were larceny (669), burglary (125), and motor vehicle theft (59).

During our study period, there were approximately 679 motor vehicle accidents on roads patrolled by the Newington Police Department. Accidents were reported as occurring on a total of 67 roads. The roadways with the highest number of accidents were the Berlin Turnpike (178 accidents), Cedar Street (106 accidents), and Main Street (68 accidents). There were only 10 roads with 10 or more accidents and those roads account for 79% of all accidents in Newington.

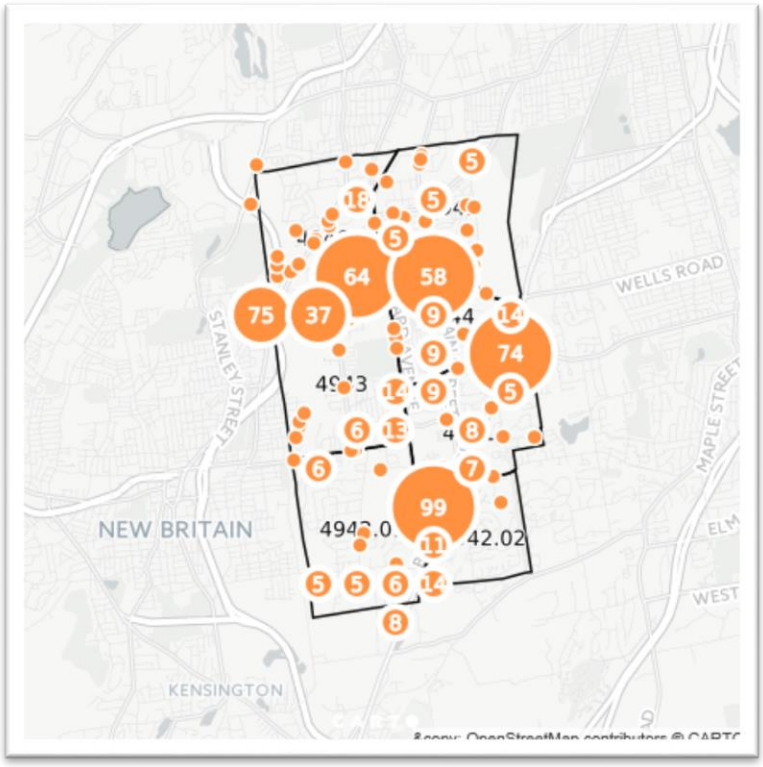
Figure 7.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Newington. While the vehicle crash rate tends to build fairly steadily throughout the day in Newington, it peaks during the afternoon period from 2:00 p.m. through 5:00 p.m. Figure 7.2 is a map siting the motor vehicle accidents that occurred during the study period.

**Figure 7.1: Accidents Compared to Traffic Stops by Time of Day**




[3] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

**Figure 7.2: Newington Motor Vehicle Accidents (October 1, 2014 through September 30, 2015)**




## Summary of Findings

Newington Police Department officials identified factors that they believe contribute 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 and areas with the highest levels of traffic as some of the same areas with the highest level of motor vehicle enforcement. The department stated that they believe their roadways are heavily impacted by residents from surrounding communities including New Britain and Hartford. Newington highlighted the impact that retail businesses on the Berlin Turnpike have on traffic volume. It was evident from the data that departmental resources were concentrated in certain parts of town, primarily along the Berlin Turnpike, Route 175 (Cedar St.), Route 174 (New Britain Ave.), and Route 173 (Willard Ave.). However, we did not receive any specific information from Newington regarding crime rates or calls for service that would have shown how closely deployment of resources for traffic enforcement matched these other factors.

Traffic enforcement in Newington is largely influenced by the activity in three census tracts (4941, 4942.01, and 4944.) These three census tracts account for almost 60% of the total traffic stop activity town wide and include the 3.5 mile stretch of the Berlin Turnpike. The Berlin Turnpike accounts for 35% of all traffic stops in Newington. This is one of the busiest roadways in the area with close to 40,000 cars traveling in each direction on a daily basis. The overall traffic stops involving minority drivers on the Berlin Turnpike was 47% compared to 39% town wide. In addition, 84% of the drivers stopped here were non-resident drivers. Non-resident minority drivers were more likely than non-resident white drivers to be stopped on the turnpike.

Census tract 4941 has the largest volume of traffic enforcement with 27% of all stops. This tract runs from Deming Street north to Robbins Avenue and from Willard Avenue east to the Wethersfield border. Census tract 4941 is also the most populous tract in town with almost 20% of the resident population. This high enforcement area contains the largest stretch of the Berlin Turnpike in Newington (approximately two miles). However, Newington's traffic enforcement activity did not appear to be driven primarily by population concentrations; that is, the census tracts with the largest population concentrations do not all generate significant levels of traffic enforcement. The three census tracts with the highest levels of enforcement (4941, 4942.01, and 4944) account for 51% of the resident population, but 60% of the traffic enforcement. The remaining four census tracts account for 49% of the resident population, but 33% of the traffic enforcement.

On average, 73% of the drivers stopped in Newington were not town residents, which influences the size of the disparities in many of the census tracts to varying degrees. Stops of non-residents most heavily affected the three high enforcement census tracts and tract 4946, located in the northwest corner of Newington. These four census tract had an average of 74% non-resident motor vehicle stops and accounted for 73% of all non-residents stopped in the town. Non-resident drivers stopped were 45% minority compared to 23% of the residents stopped who were minority. It is clear that motor vehicle enforcement concentrated in the census tracts that include the Berlin Turnpike combined with the high rate of non-resident drivers stopped in those areas contributed significantly to the overall racial and ethnic disparity in Newington's data.

Though the non-resident component of minority drivers stopped may explain a significant portion of the disparities above the resident minority population, there are exceptions. In some cases, the disparities above the resident population persisted even after the non-resident stops were accounted for. In all seven of the census tracts the proportion of minority stops involving only Newington residents exceeded the resident minority driving age population. The disparity was significant (greater than 10 percentage points) in four of the census tract. In all seven of the census tracts, the resident-only stops for black drivers exceeded the resident black driving population, but not significantly. Hispanic residents were stopped in six of the census tracts at a greater rate than the resident driving age population, but only tract 4945 had a significant disparity.

In addition, Newington police stopped 377 drivers outside the Newington town border. These drivers account for 8% of all stops and 41% were identified as black or Hispanic. They were stopped primarily in New Britain, Wethersfield, or Berlin and 82% of them were not Newington residents. The most likely reason is that the violation was observed by the officer in Newington, but the vehicle was pulled over after it crossed the town line. The majority of drivers stopped in Wethersfield or Berlin were stopped on or near the Berlin Turnpike. The drivers stopped in New Britain were stopped on or near Route 174 or Route 175, which reflects to a great degree the more frequent presence of police in these areas. The percentage of minority drivers stopped out-of-town was consistent with the percentage of all minority drivers stopped on these same roadways.

Newington's high stop rate for minority drivers is not surprising given the locations where it 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 or roadways that are traffic magnets for neighboring communities such as New Britain and Hartford.

In addition, Newington has 44 officers who made at least one traffic stop during the study period. The average stops made per officer was 125, but 10 officers (23% of the officer force) accounted for

60% of all the traffic stops. The most active officer conducted 10% of all motor vehicle stops in town. There were 20 officers who conducted more than 100 stops and together accounted for 87% of all traffic enforcement. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics.

*Traffic Stop Outcomes*

Defective lighting violations were the largest category of stops made in Newington (29%). The next largest category of stops was for speeding (11%), followed by stops for registration violations (10%). White non-Hispanic drivers were more likely to be stopped for driver-related safety issues like speeding, cell phone, stop sign, traffic light, and seat belt violations as a percentage of their total stops than were either black or Hispanic drivers. On the other hand, black and Hispanic drivers had higher percentages of stops due to equipment, and other violations than did white drivers.

Just over 36% of Newington's stops were made for violations involving defective, missing, or inoperative vehicle lighting; improper display of license plates; and window tinting. Equipment-related violations were three times more likely to be the reason for stopping a vehicle in Newington than the state average. This was the highest rate for such stops of any municipal police department in the state. Even though the majority of these stops were made on the high enforcement roadways in Newington, they were extensively used throughout the town and represented 26% or more of the traffic stops made in every census tract. This was true even when the actual number of equipment stops made in a census tract was relatively small. This appears to have had a significant effect on the size of the disparity affecting both black and Hispanic drivers. Hispanic drivers were stopped 45% of the time for equipment-related violations, and black drivers were stopped 43% of the time compared to 33% of the time for white drivers. Conversely, 47% of all the white drivers stopped in Newington were stopped for hazardous driving behaviors compared to 33% of black drivers and 30% of Hispanic drivers. Based on this analysis, we believe that this was an important factor in the Newington disparity involving black and Hispanic drivers.

The proportion of Newington's traffic stops that resulted in a misdemeanor summons was 5.3%. Black and Hispanic drivers were almost three times as likely as white drivers to receive a misdemeanor summons, although this difference is not necessarily the result of disparate treatment. When officers identify a misdemeanor violation they frequently have little or no discretion on the issuance of a summons. However, Newington did not properly report the secondary statutory citation information in 60% of the misdemeanor cases and we could not determine the final misdemeanor charge. White non-Hispanic drivers were more likely to receive an infraction ticket. Overall, almost 67% of all drivers stopped received a verbal or written warning. However, over 88% of equipment-related violations resulted in a warning. This was a significantly higher warning rate than for all other types of violations, which was only 55%.

Newington searched the vehicles of 4.1% of drivers it stopped, compared to the state average of 2.9%. Black and Hispanic drivers were searched at twice the rate of white drivers. The overall rate of contraband found (20%) was lower than the statewide average of 34%. The rate of contraband found was similar for white and black drivers searched and higher for Hispanic drivers. Contraband was found at a higher rate (31%) when the search was conducted as the result of probable cause, plain view, or some other reason compared to when the search was the result of consent (15%).

*Conclusion*

The relative disparities in Newington appear to be due to three basic factors:

(1) the relatively high levels of enforcement in three census tracts (4941, 4944, and 4942.01), with significant traffic volume and traffic complaints from local residents, and which coincide with both the largest local resident minority driving age populations and the highest likelihood that relatively high proportions of non-resident minority drivers are traversing them because of the proximity of New Britain and Hartford;
(2) the presence of significant traffic magnets along the Berlin Turnpike that generate a considerable number of calls for service, vehicle crashes, and traffic from surrounding communities; and
(3) the significant use of equipment-related motor vehicle stops that disproportionately affected minority drivers.

While white drivers are more likely to be stopped in Newington 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 violations. Our analysis indicates that this difference is probably due to (1) the greater frequency with which these stops were made within the three high enforcement census tracts, where both resident and non-resident minority drivers are likely to be present in the driving population in greater numbers and (2) their prevalence throughout the town as a proportion of all stops being made. Additionally, one of the stated reasons for the high number of defective lighting stops was as an enforcement strategy to identify drivers operating under the influence of alcohol or drugs. Defective lighting stops resulted in only one DUI arrest and four drug related charges.

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

(1) review its traffic enforcement policies in tracts 4941, 4942.01, and 4944, with particular attention to the stop activity on the Berlin Turnpike, 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 for high discretion equipment-related motor vehicle enforcement, with particular attention to stops for defective or improper lighting, to better understand the impact they may be having on minority drivers.

It is also recommended that department administrators remind Newington officers that the statutory reason why a misdemeanor summons was issued for stops that were made for infraction violations must always be entered as part of the data submission so that these outcomes may be tracked more accurately.

Lastly, in 2015 the entire Newington Police Department was trained in the U.S. Department of Justice, Community Oriented Policing Services Division- sponsored training program on "Fair and Impartial Policing (FIP)." The FIP program was established to train police officers and supervisors on fair and impartial policing by understanding both conscious and unconscious bias. We recommend that the department continue to identify these types of training opportunities for officer in the department.

## I.B (4): NEW MILFORD FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in New Milford over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 3,547 | 87.6% | 3,306 | 84.9% |
| Black Non-Hispanic | 147 | 3.6% | 166 | 4.3% |
| AsPac Non-Hispanic* | 76 | 1.9% | 43 | 1.1% |
| AI/AN Non-Hispanic** | 4 | 0.1% | 4 | 0.1% |
| Hispanic | 275 | 6.8% | 376 | 9.7% |
| Total | 4,049 | | 3,895 | |

*Asian Pacific Non-Hispanic
** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period a total of 3,895 traffic stops were made by the New Milford Police Department. Of these, 15.1% were minority stops, of which 9.7% were Hispanic drivers and 4.3% were black drivers. Based on the *Veil of Darkness* analysis, minority motorists, across all racial and ethnic categories except for black motorists alone, were more likely to have been stopped during daylight hours relative to darkness. The results were robust to the inclusion of a variety of controls and sample restrictions that excluded equipment violations. The synthetic control analysis and post-stop analysis did not reveal a statistically significant disparity. The results of these analyses indicated that further investigation into the source of the observed statistical disparity in New Milford was warranted to determine the factors that may be causing these disparities.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the New Milford Police Department data were studied using a more detailed review of traffic enforcement during the original 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. New Milford did not provide latitude or longitude data and Central Connecticut State University research staff manually identified location information based on the description provided by the officer. Unfortunately, we could not map 21% of the stops because the location information was too vague. However, there was sufficient data that could be mapped to allow for an analysis of stops by census tract.

According to the 2010 census, New Milford is a town with approximately 21,561 residents over the age of 16. Approximately 8% of the driving age population in New Milford is identified as a minority. Figure 1.0 outlines the basic demographic information for New Milford residents over age 16.

**Figure 1.0: New Milford Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 19,769 | 91.7% |
| Black Non-Hispanic | 184 | 0.9% |
| AsPac Non-Hispanic | 413 | 1.9% |
| Hispanic | 1,195 | 5.5% |
| Other | 0 | 0.0% |
| Total | 21,561 | |

The U.S. Census Bureau divides New Milford into six census tracts. Figure 2.0 is a map outlining the boundaries of New Milford census tracts, which will be referred to throughout this report. The resident driving age population varies from one census tract to another, from about 1,900 to 5,600 people. The demographic breakdown of each census tract varies, from a high of over 12% minority driving age residents in census tract 2533 to a low of 5% in tract 2535. Figure 2.1 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.0: New Milford Census Tract Map**

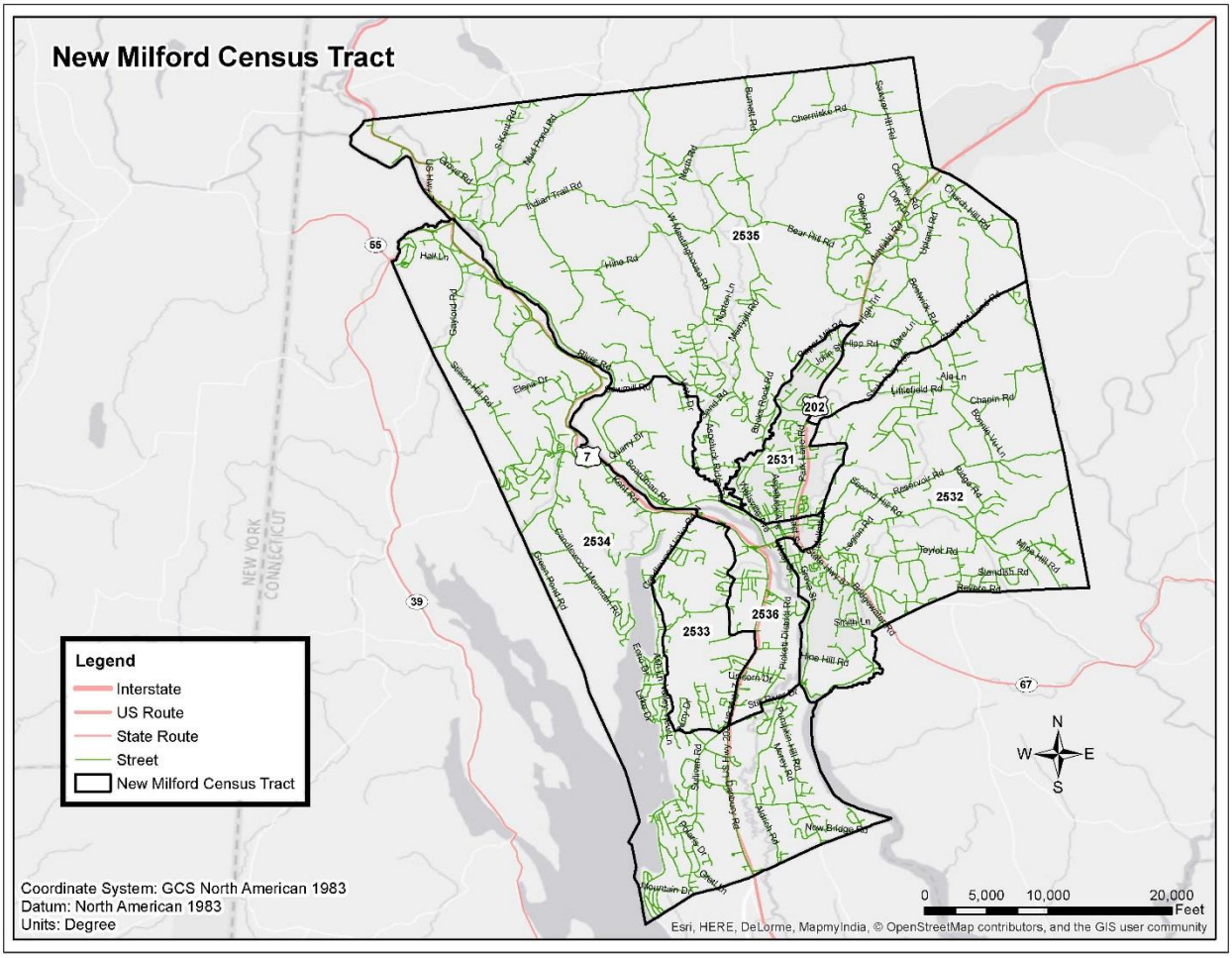
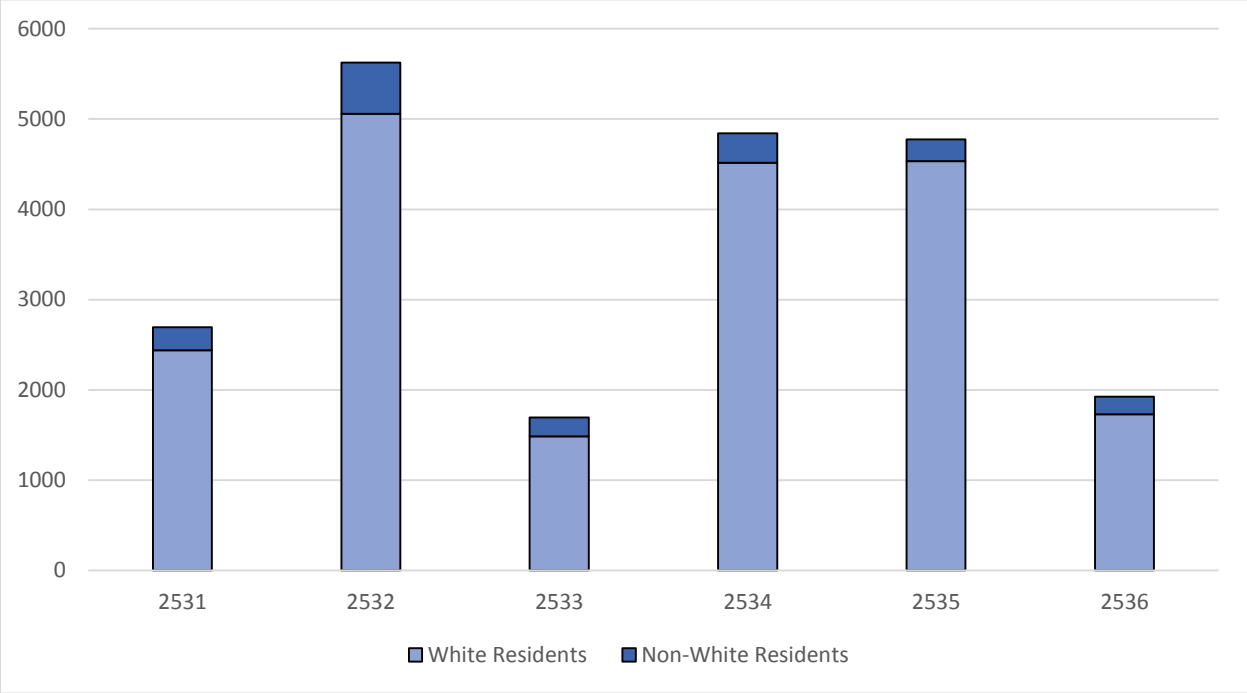


**Figure 2.1: 16+ Resident Population by Census Tract**

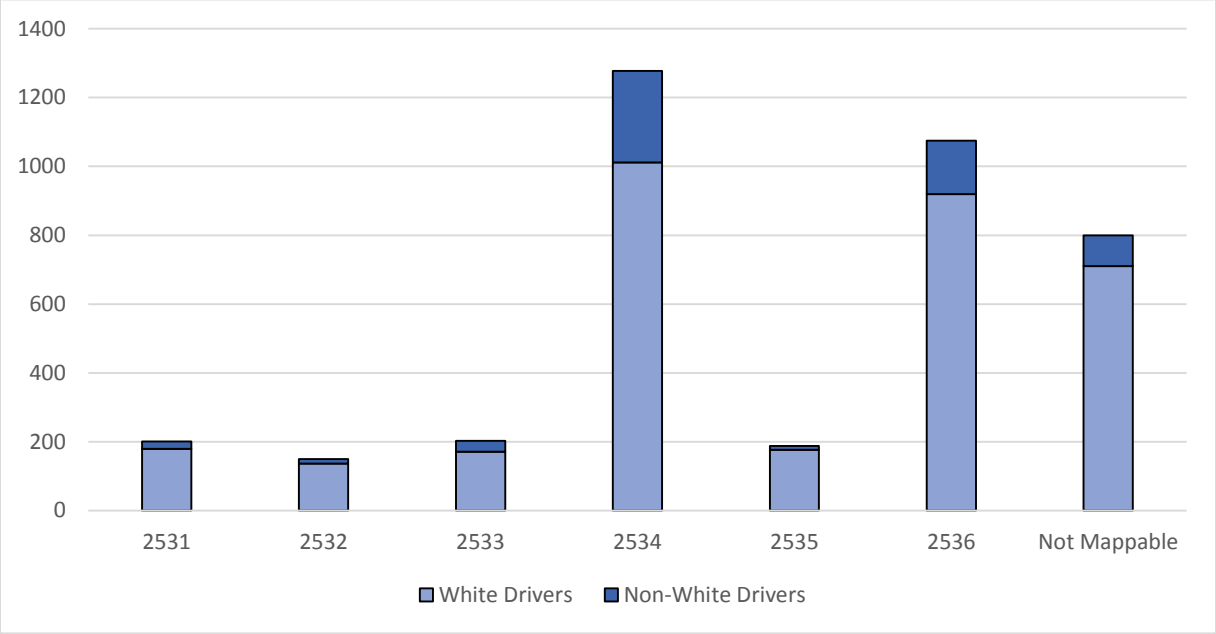



Seven municipalities border New Milford, including Kent to the north, Washington and Roxbury to the east, Bridgewater and Brookfield to the south, and New Fairfield and Sherman to the west. The seven border towns are predominantly white demographically, with an average white driving age population of 97% (compared to New Milford's white driving age population of 92%). Of the total number of drivers stopped in New Milford, 46% were New Milford residents and 54% lived elsewhere. New Milford is the largest town in the state with a land area of almost 62 square miles.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each New Milford census tract. A large percentage of traffic enforcement activity (75%) occurred in only two census tracts. Census tract 2534 accounts for the largest percentage of traffic enforcement activity with 41% of the town's traffic stops. There were 800 stops that could not be mapped. These are not considered in our analysis, for purposes of discussing traffic stops by census tract.

Route 7 is a major corridor that runs through New Milford and particularly impacts traffic enforcement in the high enforcement census tracts. Route 7 is a north-south highway which runs 78 miles from Norwalk to the Massachusetts border in North Canaan. Route 7 has been upgraded in large parts of New Milford to a four-lane divided highway. North of New Milford center, Route 7 becomes a two-lane roadway. Route 7 is just over seven miles from north to south through five of the six New Milford census tracts. The other major roadway in town is Route 202, which overlaps with Route 7 from the southern border of town until it splits off from Route 7 at the center of town.

**Figure 3.1: Traffic Stops by Census Tract**




New Milford's overall resident population is 8% minority and 12% of all New Milford residents who were stopped were minority. Resident minority drivers were stopped at a higher rate than the proportion of their town population, but it is also clear that non- residents contribute to the overall racial disparity in New Milford stop data.

Figure 3.2 is a map of traffic stops made in New Milford. The two census tracts that account for 75% of the traffic enforcement activity make up 31% of the resident population in New Milford. Census tract 2532 has the largest resident population (26%) but the lowest level of traffic enforcement (4.9%). The two census tracts with the highest enforcement account for 77% of all stops of non-residents in New Milford. This is most likely due to the fact that Route 7 is a major traffic route for surrounding communities.

**Figure 3.2: Traffic Stop Map**

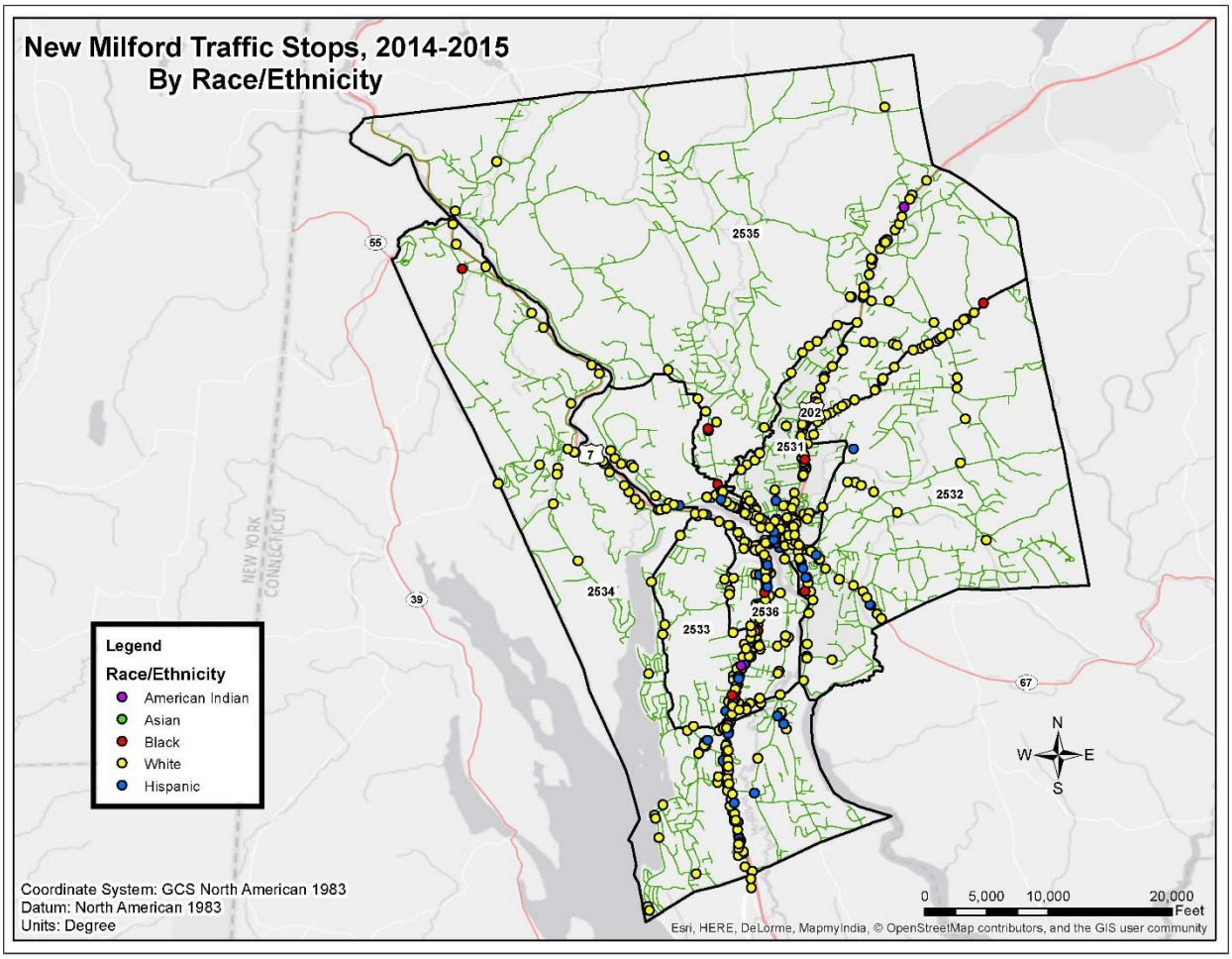
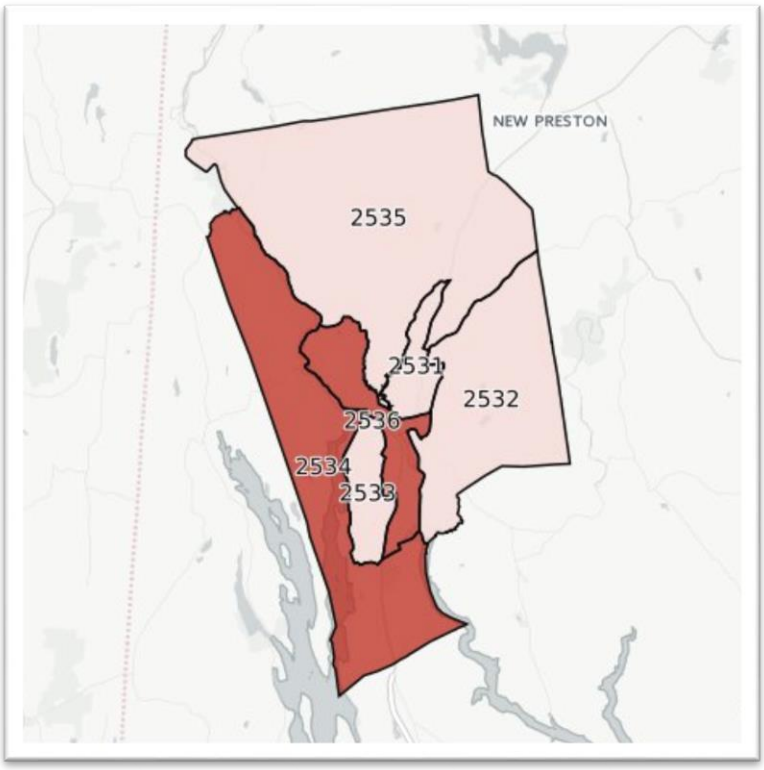



Figure 3.3 shows an additional way to view the high enforcement areas in New Milford. This image identifies the high enforcement areas in two groups. Group one (dark red), including census tracts 2534 and 2536, is the highest enforcement area with between 1,000 and 1,200 stops made in each census tract. Group one includes 75% of all traffic enforcement in New Milford. Group two (light red) consists of the remaining four census tracts that had between 150 and 200 stops. Group two includes tracts 2531, 2532, 2533, and 2535.

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**



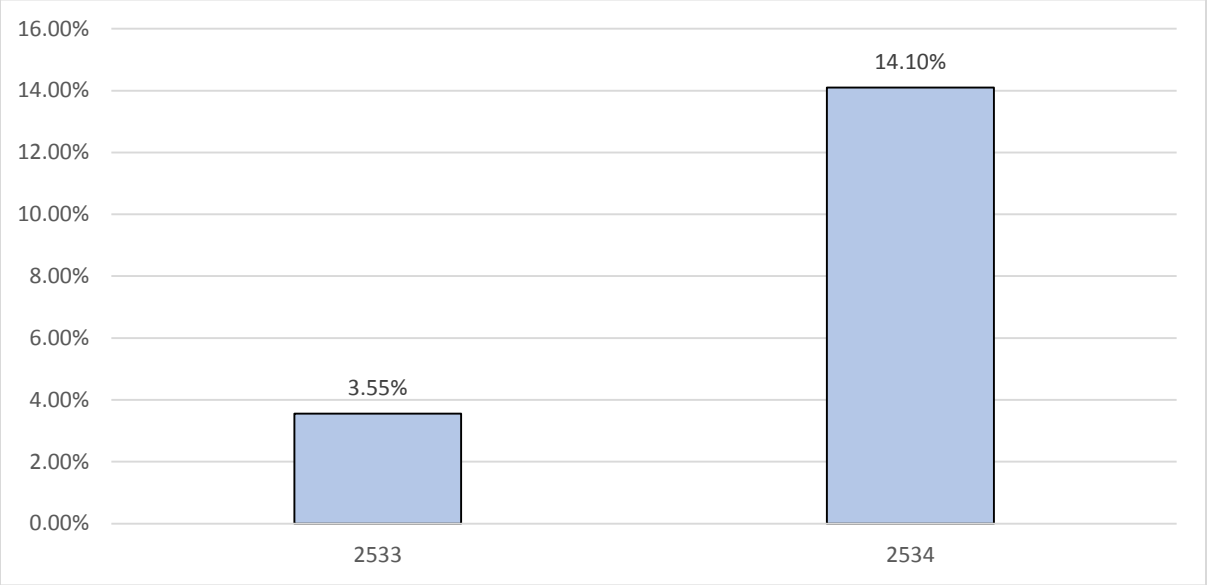

## Traffic Stop Breakdown by Race/Ethnicity

In New Milford, 15% of all drivers stopped were minority drivers, classified as all non-white drivers, but predominantly black or Hispanic drivers. New Milford's resident population age 16 and older is 8% 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 8%of the population is minority but close to 15% of the drivers stopped were minority. However, the racial and ethnic makeup of different areas of New Milford varies significantly by census tract, so the disparities were more pronounced in some areas compared to others.

Specifically, two of the six census tracts (2533 and 2534) showed a higher percentage of minorities stopped than the town average of 15% minority stops. Both of these census tracts are part of the high enforcement area and account for 39% of the traffic stops. These census tracts includes a large portion of Route 7 in New Milford.

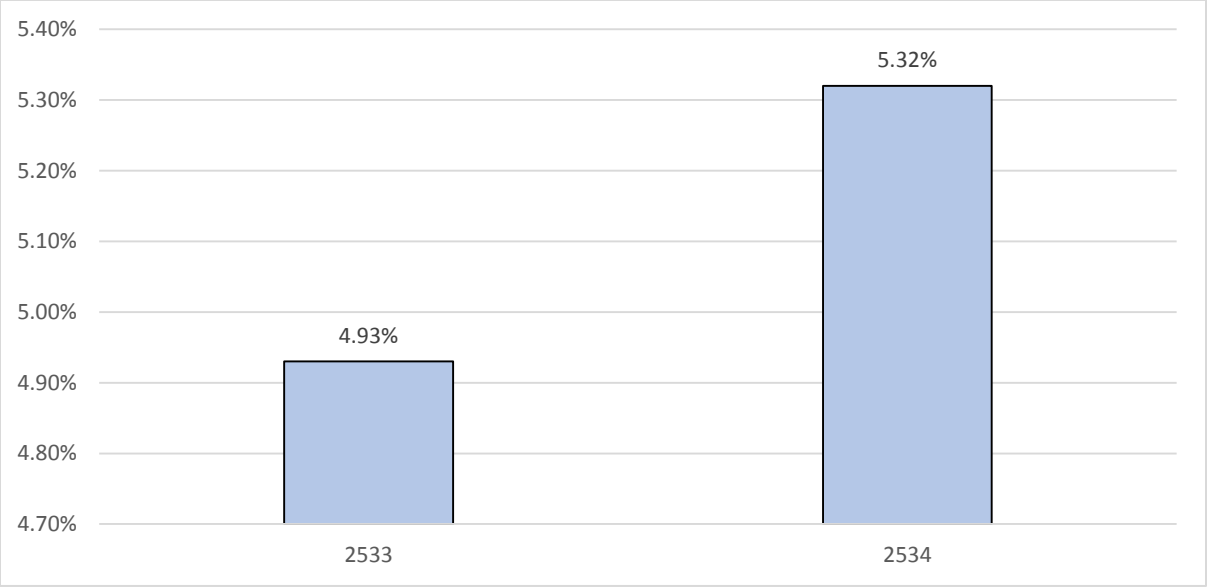
Figure 4.1 shows the amount by which the minority stop disparity exceeded the resident minority driving age population in each of census tracts 2533 and 2534. Almost 70% of the minority drivers stopped in these tracts were not New Milford residents.

**Figure 4.1: Disparity Between Minority Drivers Stopped and Census Tract Population**




The overall percentage of New Milford traffic stops involving black drivers was 4.3%. The percentage of black drivers stopped exceeded the town average in the same two census tracts as minority drivers (2533 and 2534). Figure 4.2 shows the proportion of black stops made in these two census tracts where the percentage of black drivers stopped exceeded the town-wide average. As was the case for all minority drivers stopped, there was a positive disparity above the resident black driving age population.

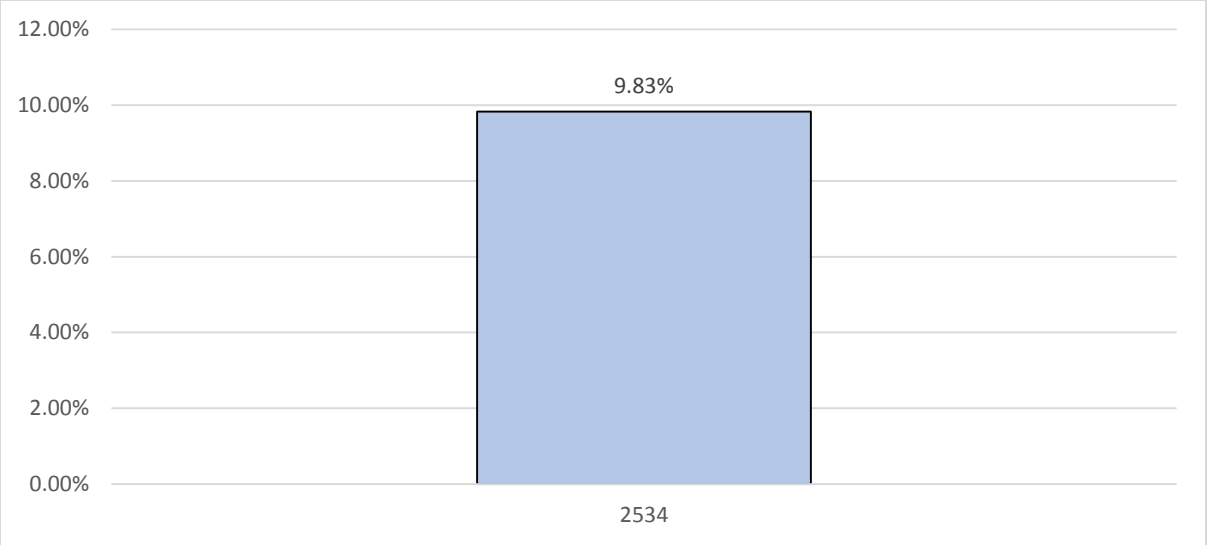
**Figure 4.2: Disparity Between Black Drivers Stopped and Census Tract Population**




The overall percentage of New Milford traffic stops involving Hispanic drivers was 9.7%. The percentage of Hispanic drivers who were stopped exceeded the town average in only one of the six census tracts (2534). Figure 4.3 shows the proportion of Hispanic stops made in this census tract

compared to the proportion of Hispanic driving age residents living within that census tract. There was a positive disparity above the resident Hispanic driving age population.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in New Milford. Both black and Hispanic stops tend to be concentrated on the southern half of Route 7 and the center of New Milford. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

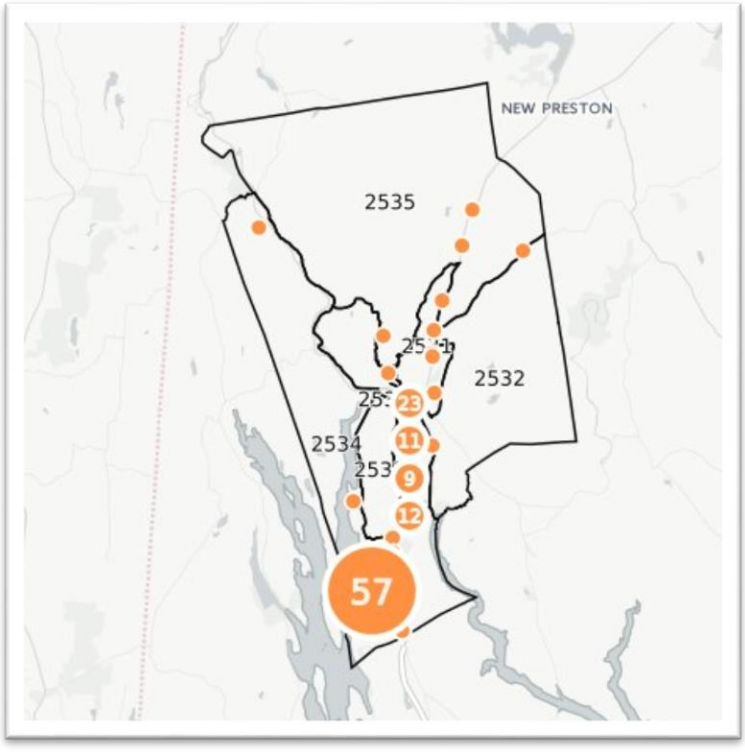
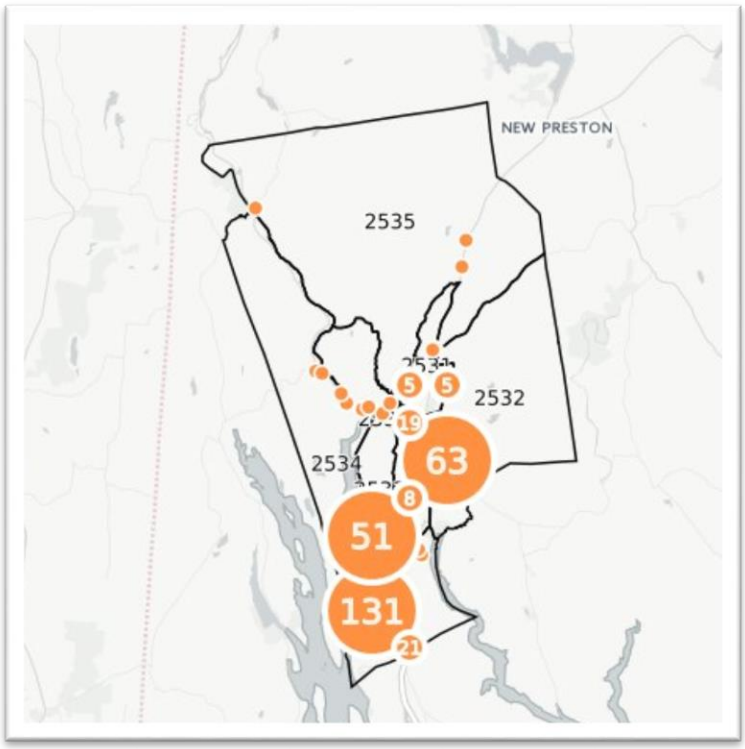


**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**




## Highway Corridor Analysis

In addition to the census tract-based analysis, we also conducted separate analyses of the highway corridors with the greatest number of traffic stops. These two corridors were Route 7 and Route 202. Route 7 and 202 overlap from the Brookfield line until central New Milford (locally named Danbury Road), where Route 202 turns east with Route 67 (several local names including Bridge Street, East Street, Poplar Street, Park Lane Road, and Litchfield Road) while Route 7 continues north (Kent Road). Route 7/202 from the Brookfield border to New Milford Center is a four-lane divided highway, but Route 7 becomes a two-lane road north of central New Milford. The corridor analysis focuses on three sections of Route 7/202: (1) the Route 7/202 overlap from Brookfield to central New Milford (Danbury Road); (2) Route 7 north of central New Milford (Kent Road); and (3) Route 202 east of central New Milford (Bridge Street, East Street, Poplar Street, Park Lane Road, and Litchfield Road). This provides information on how the stops that could not be precisely located in these corridors might be affecting the overall traffic stop patterns.

A total of 800 stops (21% of all reported stops for New Milford) could not be mapped precisely. . Based on the descriptions provided, these 800 stops occurred on 104 different roads, but only 20 of which had more than 10 traffic stops. These 20 roads accounted for 76% of all the unmapped stops. The stops reported with non-specific location descriptions most often occurred on Danbury Road (162 stops), Bridge Street (78 stops), Boardman Road (47 stops), and Young's Field Road (44 stops). The racial demographics of the unmapped stops reflected fewer minority drivers than the overall stop demographics for the town. The drivers who were stopped were 11% minority while the average for the town was 15% minority.

Danbury Road, where Routes 7 and 202 overlap for approximately five miles, runs north from the Brookfield border to the center of New Milford,, through three census tracts (2533, 2534, and 2536). A total of 2,020 traffic stops were made along the Danbury Road corridor during the study year, which was 52% of the total for the town. The stops made on Danbury Road included slightly more non- residents than in the town as a whole (58% compared to 54%) and also involved a slightly higher proportion of black and Hispanic drivers than the town-wide average. Black drivers accounted for 5% of the Danbury Road stops (compared to the town average of 4%). Hispanic drivers accounted for 13% of the Danbury Road stops (compared to the town average of 10%). Over 68% of Hispanic drivers and 61% of black drivers were stopped on Danbury Road compared to 49% of white drivers stopped there. Census tract 2534 which accounts for the southern portion of Danbury Road also account for almost 57% of all traffic stops on this road. There were 162 stops reported on Danbury Road that could not be mapped because of vague location descriptions.

Route 7 (Kent Road) runs from the center of New Milford north to the border of Kent through the northern half of census tract 2534. A total of 135 traffic stops were made along Kent Road during the study year, which was 4% of the total stops made in town. Of the drivers stopped in the Kent Road corridor, 64% were not residents of New Milford, which was above the town average of 54%. Driver demographics for those stopped in the Kent Road corridor was below the town-wide average for black drivers and the same as the town-wide average for Hispanic drivers. Black drivers accounted for 2% of the Kent Road stops (compared to the town average of 4%). Hispanic drivers accounted for 10% of the Kent Road stops (compared to the town average of 10%). However, the total number of black and Hispanic drivers was insignificant with only three black drivers and 14 Hispanic drivers stopped on Kent Road. Most of the stops occurred near the center of New Milford where Route 7 and Route 202 split.

Lastly, Route 202 (Bridge Street, East Street, Poplar Street, Park Lane Road, and Litchfield Road) runs from the center of New Milford east to the border of Washington and through census tracts 2531, 2535, and 2536. A total of 593 traffic stops were made along the Route 202 corridor during the study year, which was 15% of total stops made. Of the drivers stopped in the Route 202 corridor, 58% were not residents of New Milford, which was above the town average of 54% non-resident stops. Driver demographics for those stopped in the Route 202 corridor were below the town-wide average for black and Hispanic drivers. Black drivers accounted for 3% of the Route 202 stops (compared to the town average of 4%). Hispanic drivers accounted for 6% of the Route 202 stops (compared to the town average of 10%). Census tract 2536 had the greatest percentage of stops with 39%, followed by 2531 with 18%, and 2535 with 15% of all stops on Route 202.

## Traffic Stop Distribution for New Milford Officers

New Milford's total of 3,895 traffic stops is comparable to those in other towns of its size. During the study period, traffic stop data was reported for 44 officers. The average number of stops made per officer was 89. Of the 44 officers reporting stops, 14 made fewer than 20 stops, six made between 20 and 50 stops, 12 made between 50 and 100 stops, and 12 made over 100 stops. The 12 officers making over 100 stops each collectively accounted for 70% of the New Milford stops. There were four officers who made over 300 stops each and accounted for 43% of all stops. Thus, a relatively small portion of its officer force influences New Milford's stop data.

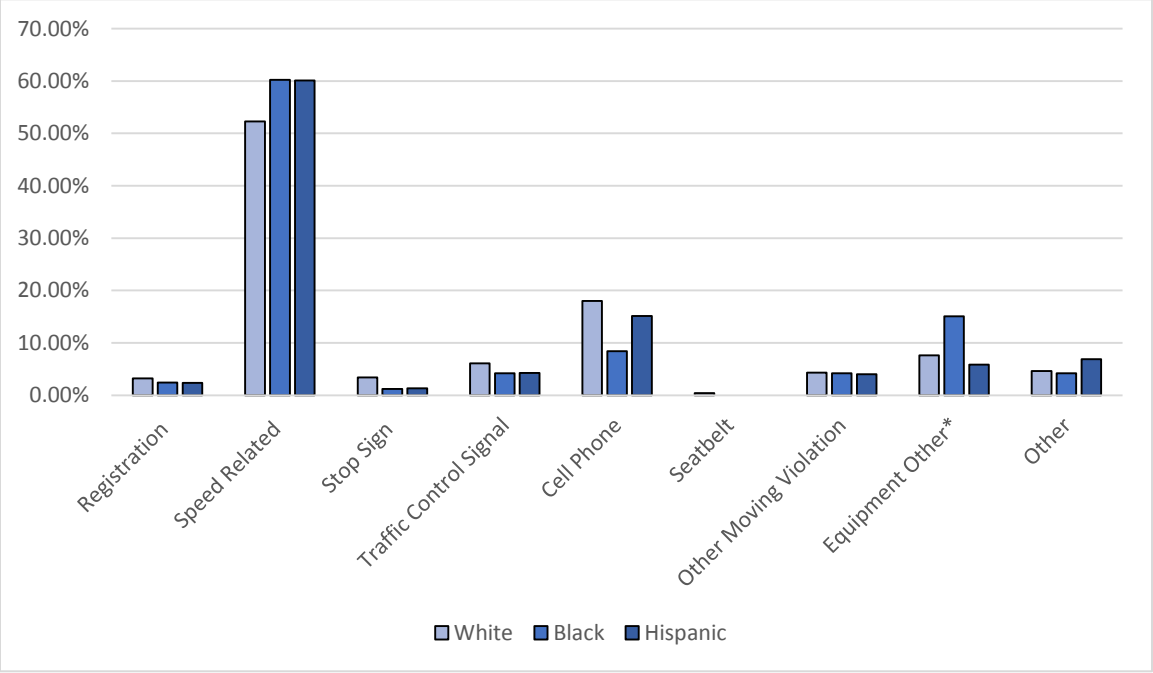
## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that New Milford officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in New Milford cover 77% of the total stops. The three largest stop categories were for speeding violations (54%), cell phone violations (17%), and defective lighting violations (6%). While white drivers were stopped more frequently than black or Hispanic drivers for cell phone violations, black and Hispanic drivers were stopped at a higher rate for speeding violations. Although there appears to be a higher percentage of black drivers stopped for equipment violations, the total number of equipment-related stops is too small to draw any conclusions.

Speed-related motor vehicle enforcement on Danbury Road appears to have had a significant impact on overall traffic stop trends in New Milford with speed-related stops occurring there at a significantly higher rate than on other roadways in town. Of the 2,086 speed-related traffic stops in town, 64% occurred on Danbury Road. Over 60% of the white drivers stopped for speeding were stopped on Danbury Road compared to 74% of black drivers and 81% of Hispanic drivers.

Officers reported 51% of speed-related stops as "blind." This means an officer reports using a blind enforcement technique like radar, a laser, license plate recognition device, or other similar technology or method. The speed-related stops recorded as "blind" were likely the result of an officer using radar or laser technology. For these "blind stops," the racial breakdown was 81% white, 5% black, and 13% Hispanic. For all other speed-related stops the racial demographics were85% white, 4% black and 9% Hispanic. Figure 6.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 6.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figures 6.2 and 6.3 are maps of traffic enforcement for safety-related motor vehicle stops and equipment-related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone or moving violations were labeled “safety-related” stops. Stops for defective lights, window tints, or display of plate were labeled “equipment-related” violations. Figure 6.3 indicates that safety-related motor vehicle enforcement occurs all along Danbury Road, in the center of New Milford, and along Route 202. Figure 6.4 indicates that equipment-related motor vehicle enforcement is concentrated in a smaller geographic area in the center of New Milford

**Figure 6.3: Safety-Related Motor Vehicle Stops**

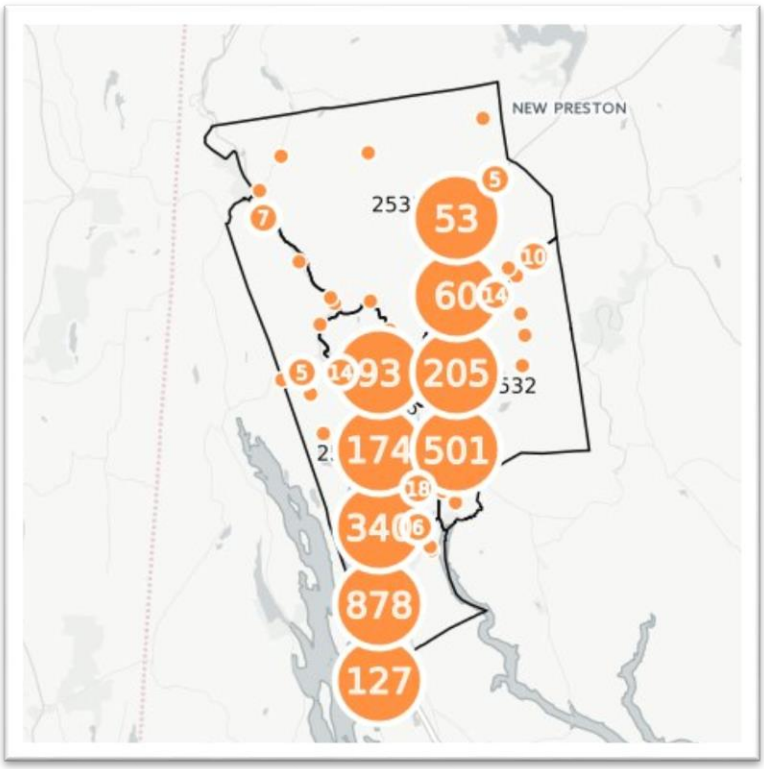
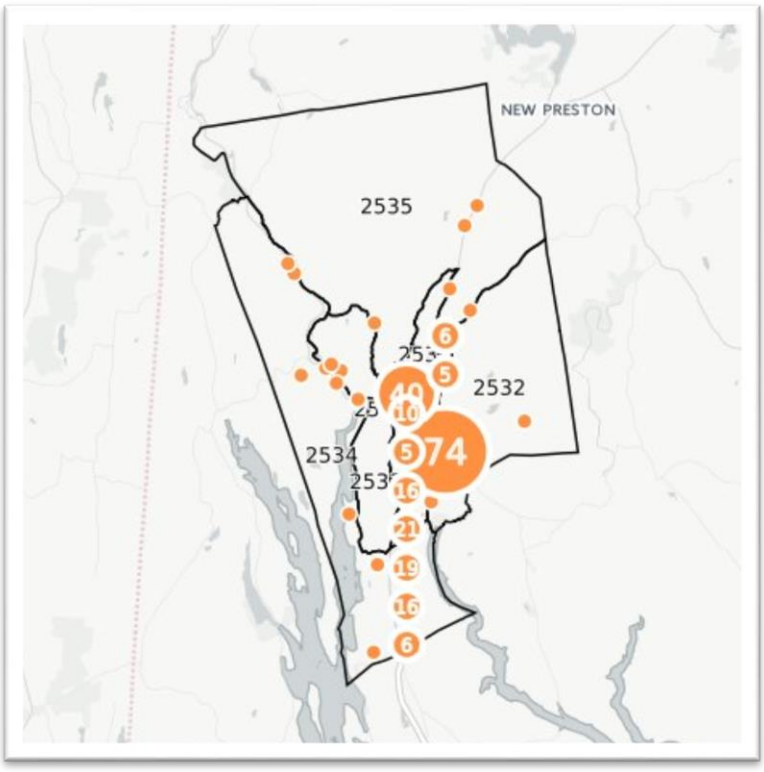


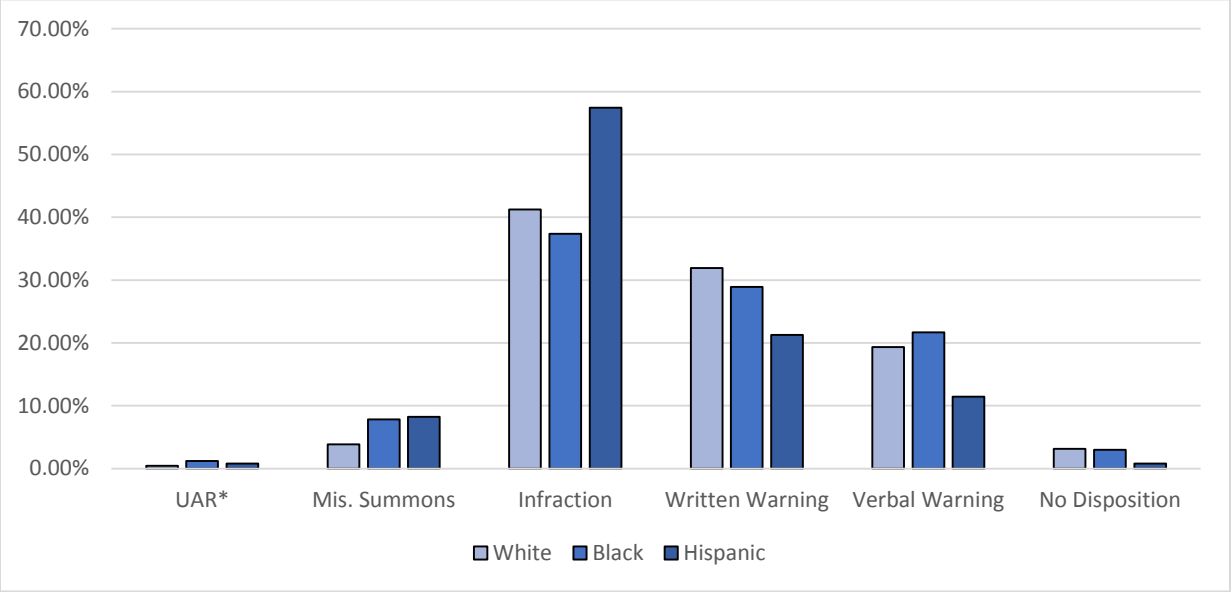
**Figure 6.4: Equipment-Related Motor Vehicle Stops**




The majority of motor vehicle stops in New Milford resulted in the driver receiving an infraction (43%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. Hispanic drivers were also more likely to receive an infraction compared to white drivers as a result of the stop. A total of 172 of the traffic stops made resulted in issuance of a misdemeanor summons to the driver (4%). Black and Hispanic drivers were more than twice as likely to be issued a misdemeanor summons as white drivers (8% of black and Hispanic drivers compared to 4% of white drivers). Figure 6.2 shows the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, or operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives analysts the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge. New Milford did not report the secondary statutory citation in 89 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final charge.

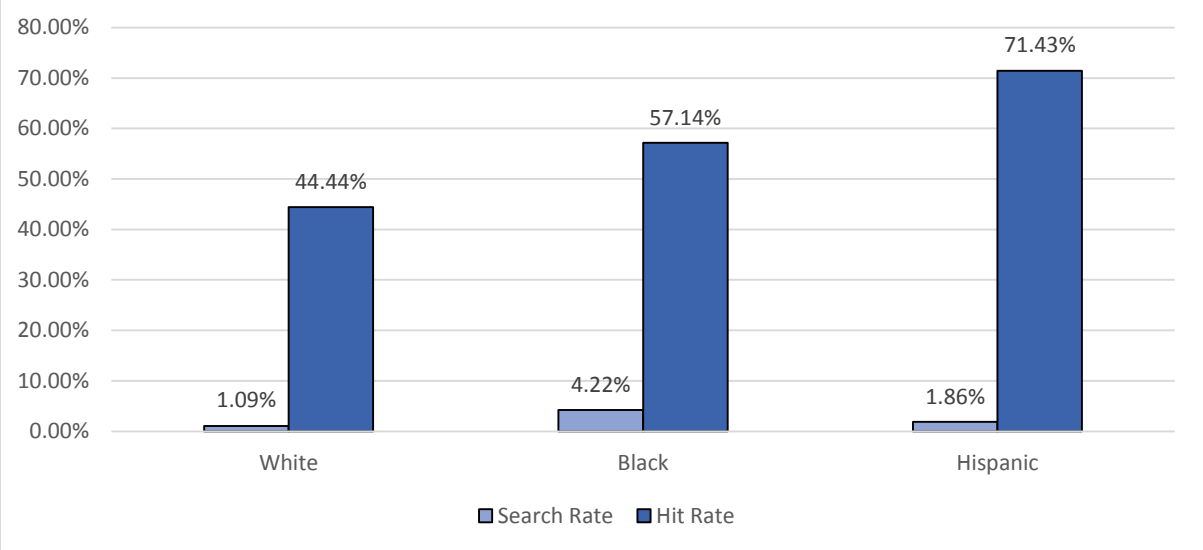
**Figure 6.2: Outcome of Traffic Stop**




*Uniform Arrest Report

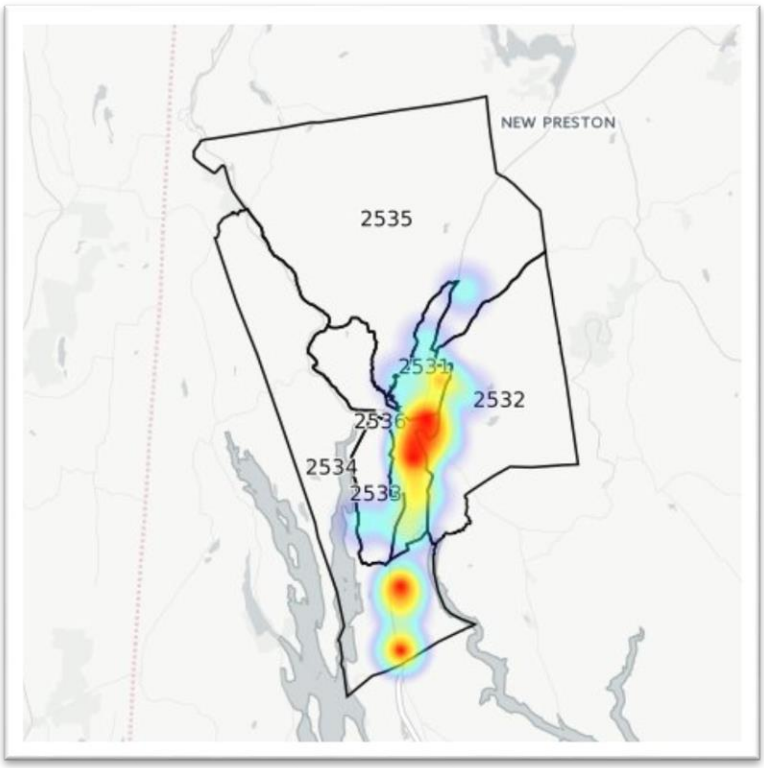
A review of department search information shows 1.3% (50) of the drivers stopped in New Milford were subjected to a motor vehicle search. The rate of motor vehicle searches is less than the state average of 2.9%. Black drivers were searched at three times the rate of white drivers, while Hispanic drivers were searched at only a slightly higher rate than white drivers. Contraband was found at a higher rate with black and Hispanic drivers, but given the relatively small number of searches conducted, these differences are insignificant. Figure 6.3 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 6.3: Search and Hit Rate**



Motor vehicle searches in New Milford are concentrated in the high enforcement census tracts. Figure 6.4 is a heat map of motor vehicle searches in New Milford which indicates the majority of searches occurring in tracts 2534 and 2536, the center of New Milford.

**Figure 6.4: Search Heat Map**




## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with New Milford provide a context to potentially explain the rationale for police deployment that are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 8,334people work in New Milford and its major employers include Kimberly-Clark, New Milford Hospital, and Nestle USA, Inc. The vast majority of commuters traveling into New Milford for employment are from Danbury, Brookfield, and Torrington. The overall unemployment rate is 5.5%, which is below the unemployment rate for Litchfield County and the state.

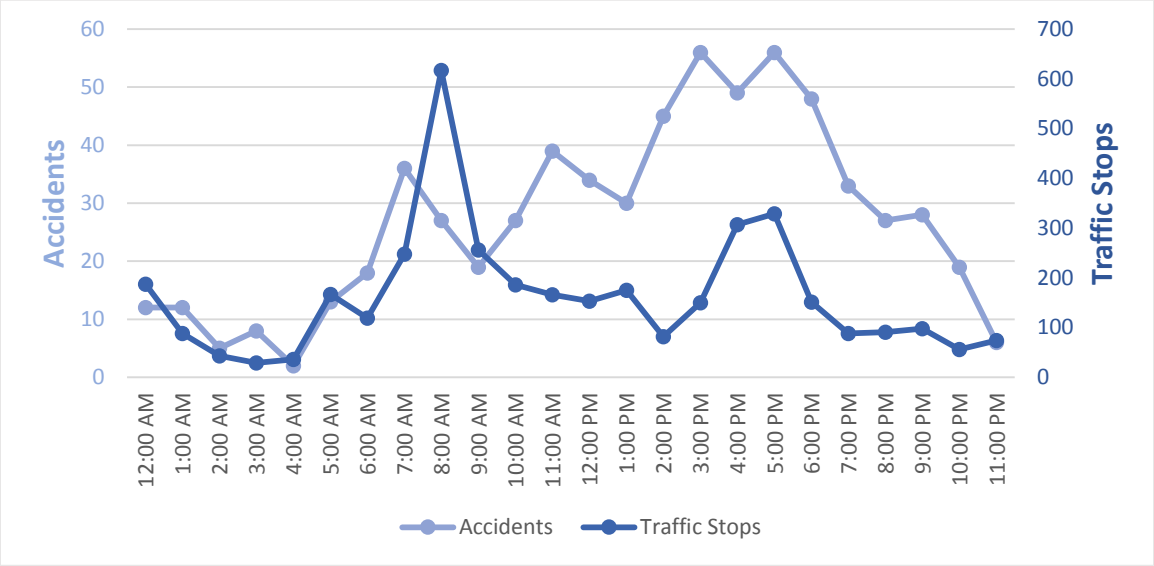
In 2015, the crime rate in New Milford was reported to be 141 per 10,000 residents, compared to the state crime rate of 205 per 10,000 residents. According to the 2015 Connecticut Uniform Crime

Report[4], there were 403 reported crimes in New Milford in 2015. The three most reported crimes were larceny (370), aggravated assault (12), and motor vehicle theft (10).

During our study period, there were approximately 649 motor vehicle accidents on roads patrolled by the New Milford Police Department. Accidents were reported as occurring on a total of 98 roads. The roadways with the highest number of accidents were Route 7/202 (Danbury and Kent Roads) (276 accidents), Bridge Street (36 accidents), and Park Lane Road (20 accidents). There were only 12 roads with 10 or more accidents and those roads account for 70% of all accidents in New Milford.

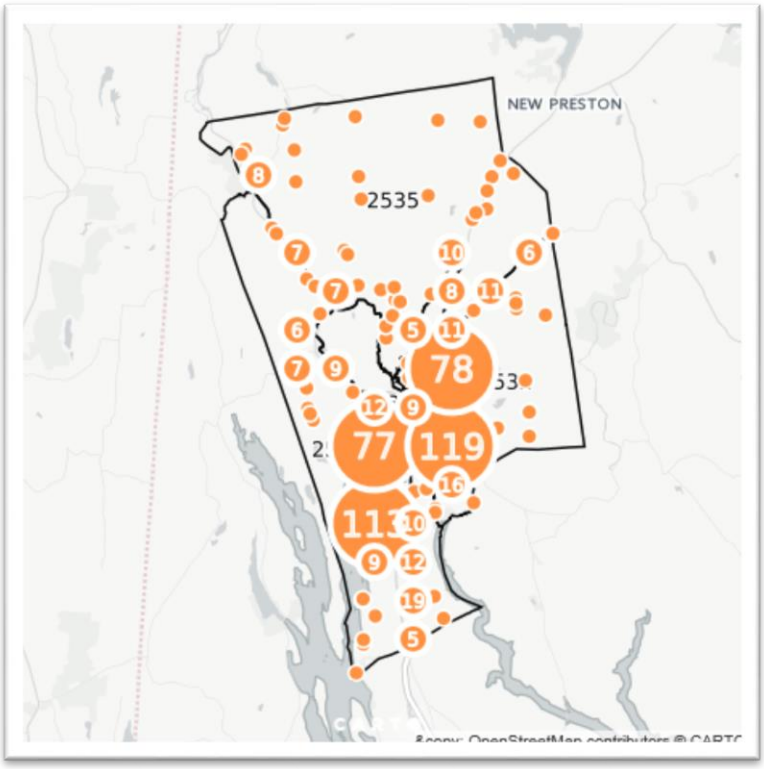
Figure 7.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in New Milford. While the vehicle crash rate tends to build fairly steadily throughout the day in New Milford, it peaks during the afternoon period from 3:00 p.m. through 6:00 p.m. Figure 7.2 is a map of the motor vehicle accidents that occurred during the study.

**Figure 7.1: Accidents Compared to Traffic Stops by Time of Day**




[4] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

**Figure 7.2: New Milford Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

The New Milford Police Department identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified Danbury Road as a major traffic generator for the town. The department also indicated that they have seen an increase in out-of-town residents travelling on Danbury Road for shopping, dining or entertainment purposes. Areas with the highest levels of traffic appear to be some of the same areas with the highest levels of motor vehicle enforcement. The department also indicated the impact that reported incidents of crime and accidents in the southern section of town have had on the deployment of departmental resources. It is evident by the number of traffic stops made in a relatively small geographic area that departmental resources are concentrated along Danbury Road and the center of town. Because we did not receive any specific information from New Milford regarding crime rates or calls for service, an analysis of how closely deployment of resources for traffic enforcement matched these factors is not possible.

New Milford has a non-white driving age population that includes about 6% Hispanic residents and 1% black residents. There are two high enforcement census tracts (2534 and 2536) that account for 60% of all traffic enforcement. These same census tracts account for 67% of all black drivers stopped and 74% of all Hispanic drivers stopped. The traffic enforcement within census tracts 2534 and 2536 is primarily driven by activity on Danbury Road.

There are two major roadways where significant amounts of traffic enforcement occurred (Routes 7 and 202). Both of these roadways were divided into three sections in our analysis: (1) Danbury Road

(Route 7/202 from Brookfield to central New Milford), (2) Kent Road (Route 7 north of central New Milford), and (3) Route 202 east of central New Milford. Almost 71% of all traffic stops in New Milford occurred on one of these two roadways, with 4% of the stops involving black drivers and 11% of the stops involving Hispanic drivers. Routes 7 and 202 are the major travel routes for traffic to and from surrounding communities. Non-resident minority drivers formed at least 58% of those stopped on these roads.

On average, 54% of the drivers stopped in New Milford were not residents. The influence non-resident drivers had on stop demographics affected census tracts and roadways to varying degrees. Non-residents most heavily affected the southern portion of New Milford on Danbury Road; over 58% of all drivers stopped on Danbury Road were not residents of the town. However, non-resident black and Hispanic drivers were more likely to be stopped on Danbury Road than non-resident white drivers. Approximately 55% of the white drivers stopped on Danbury Road were not town residents compared to 68% of black drivers and 72% of Hispanic drivers. About 50% of drivers stopped on all roadways other than Danbury Road were not town residents. The percentage of non-resident minority drivers stopped on other roadways was similar to the percentage of non-resident white drivers. Therefore, the data suggests that non-resident minority drivers travel on Danbury Road at a higher rate.

New Milford police stopped 52 drivers outside the town's border, primarily in Brookfield on Route 7/202. These drivers accounted for only 1% of all stops and only five of the drivers were identified as black or Hispanic. There could be a number of reasons for these stops, including a violation that was witnessed in New Milford, but the vehicle was pulled over in an adjacent town.

New Milford has 44 officers who made at least one traffic stop during the study period. The average stops made per officer was 89, but 12 officers (27% of the officer force) accounted for 70% of all the traffic stops. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics.

*Traffic Stop Outcomes*

In New Milford, the three most common reasons used for stopping a motorist make up 77% of the total stops. The three largest stop categories were for speeding violations (54%), cell phone violations (17%), and defective lighting violations (6%). While white drivers were stopped more frequently than black or Hispanic drivers for cell phone violations, black and Hispanic drivers were stopped at a higher rate for speeding violations. Although there appears to be a higher percentage of black drivers stopped for equipment violations, the total number of equipment-related stops is too small to draw any conclusions.

Speed-related motor vehicle enforcement on Danbury Road appears to have had a significant impact on overall traffic stop trends in New Milford. Speed-related stops occurred on Danbury Road at a significantly higher rate than on other roadways in town. Of the 2,086 speed-related traffic stops in town, 64% occurred on Danbury Road. Officers reported 51% of speed-related stops as "blind." An officer reported a blind stop when using a blind enforcement technique such as a radar, laser, license plate recognition device, or other similar technology or method. Of the speed-related stops recorded as "blind," the racial demographics were 81% white, 5% black, and 13% Hispanic. For all other speed-related stops the racial demographics were, 85% white, 4% black and 9% Hispanic. Regarding stop outcomes, minority drivers were more likely to receive a misdemeanor summons and Hispanic

drivers were more likely to receive an infraction compared to white drivers. Stops involving black drivers were less likely to result in an infraction citation than either white or Hispanic drivers but slightly more likely to result in a verbal warning. The majority of motor vehicle stops in New Milford resulted in the driver cited for an infraction (43%).

New Milford police searched 1.3% of drivers they stopped, which was below the state average of 2.9%. Black drivers were searched at three times the rate of white drivers, while Hispanic drivers were searched at only a slightly higher rate than white drivers. Contraband was found after a search at a higher rate for black and Hispanic drivers. But given the relatively small number of searches conducted, these differences are not significant.

*Conclusion*

Taken as a whole, the New Milford traffic stop data reflects the influence of the Danbury Road corridor that appears to be somewhat more diverse than the predominantly white local driving age population. Danbury Road appears to have a relatively high level of enforcement and a relatively higher proportion of non-resident minority drivers travelling this roadway. The nature of traffic enforcement in New Milford is focused on more serious safety-related violations, particularly speed and cell phone violations. In many 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 on Danbury Road in order to evaluate the extent to which they may have a disproportionate impact on minority drivers.

Since New Milford's records management system does not appear to capture latitude and longitude for traffic stops, it is extremely important that the descriptive explanation of the stop locations be as specific as possible. Though it may be difficult to adequately capture a street address or cross street in some rural sections of New Milford, it is recommended that New Milford take steps to review and improve its ability to report more precise locations for its traffic stops to minimize the number of stops that could not be mapped for this analysis.

## I.B (5): NORWALK FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Norwalk over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 4,330 | 54.8% | 3,057 | 57.4% |
| Black Non-Hispanic | 1,814 | 23.0% | 1,074 | 20.2% |
| AsPac Non-Hispanic* | 67 | 0.8% | 55 | 1.0% |
| AI/AN Non-Hispanic** | 9 | 0.1% | 27 | 0.5% |
| Hispanic | 1,680 | 21.3% | 1,109 | 20.9% |
| Total | 7,900 | | 5,322 | |

*Asian Pacific Non-Hispanic

** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Norwalk Police Department made a total of 5,322 traffic stops. Of these, 43% were minority stops, of which 21% were Hispanic drivers and 20% were black drivers. The results from the *Veil of Darkness* indicated that minority motorists, for aggregate non-Caucasians and black motorists alone, were more likely to have been stopped during daylight hours relative to nighttime. The results were robust to the inclusion of a variety of controls and sample restriction that excluded equipment violations. The synthetic control analysis also produced statistically significant results but the disparity did not meet the threshold of 10 percentage points and was not highlighted in that requisite section. The post-stop analysis did not produce statistically significant estimates, possibly because of an insufficient sample of minority searches. The results of these analyses indicated that further investigation into the source of the observed statistical disparity in Norwalk was warranted to determine the factors that may be causing these disparities.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Norwalk Police Department data were studied using a more detailed review of traffic enforcement during the original study period, October 1, 2014 through September 30, 2015. Part of this analysis involved mapping all stops, if possible, using the location data provided by the department and any enhancements to this data we were able to make. Norwalk provided latitude and longitude coordinates that allowed mapping of almost all of its stops.

According to the 2010 census, Norwalk is a city with approximately 68,034 residents over the age of 16. Approximately 41% of the driving age population in Norwalk is identified as a minority. Figure 1.0 outlines basic demographic information for Norwalk residents over age 16.

**Figure 1.0: Norwalk Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 40,278 | 59.2% |
| Black Non-Hispanic | 8,931 | 13.1% |
| AsPac Non-Hispanic | 3,235 | 4.8% |
| Hispanic | 15,424 | 22.7% |
| Other | 166 | 0.2% |
| Total | 68,034 | |

The U.S. Census Bureau divides Norwalk into 22 census tracts. The resident driving age population in each tract varies from about 1,200 to 6,000 people with the largest concentration of people (9% of the total population) in tract 438. The racial breakdown in each census tract varies from a high of 91% minority driving age residents in census tract 445 to a low of 0% in tract 446. Figure 2.1 is a map that outlines the boundaries of Norwalk census tracts, which will be referred to throughout this report. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: Norwalk Census Tract Map**

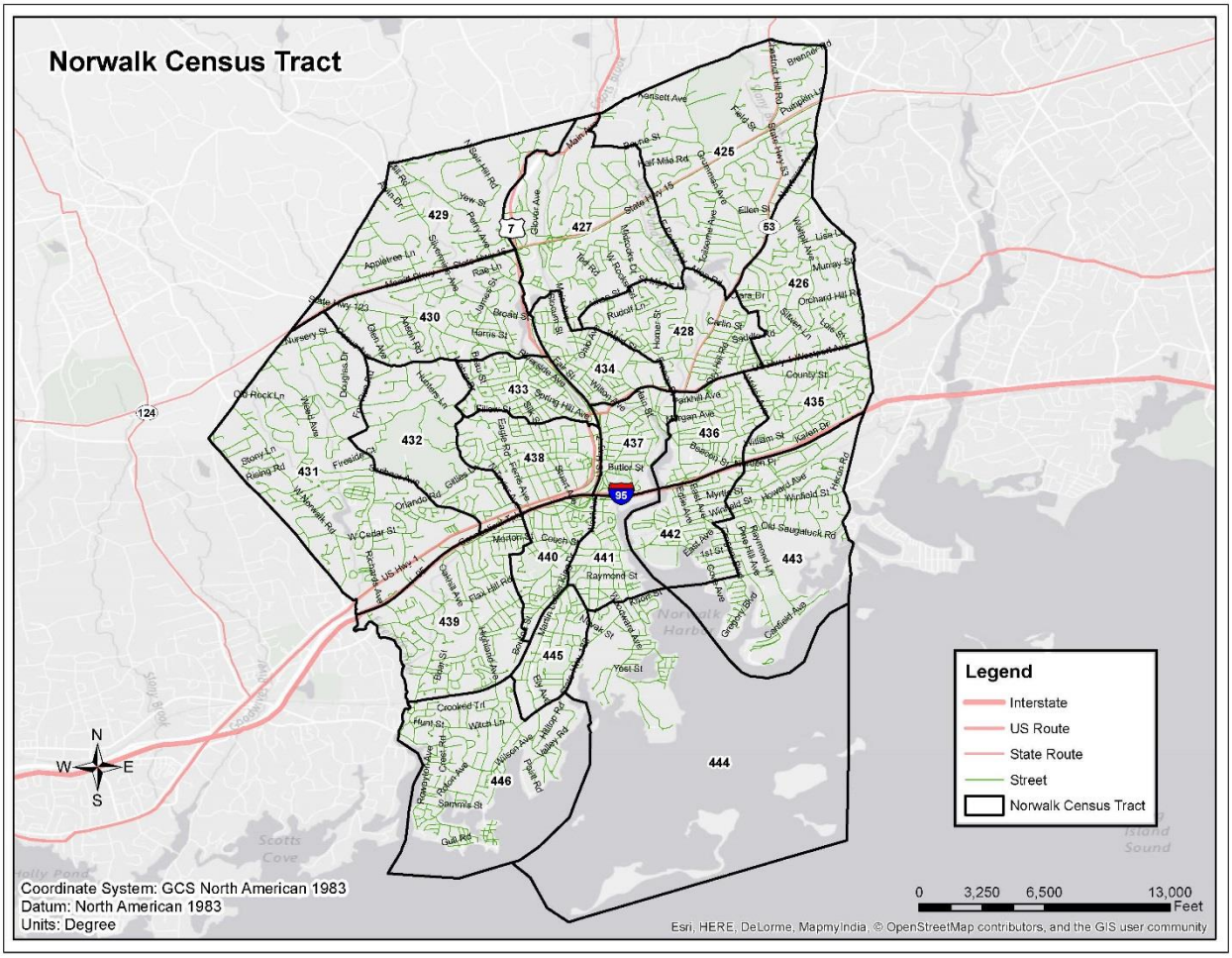
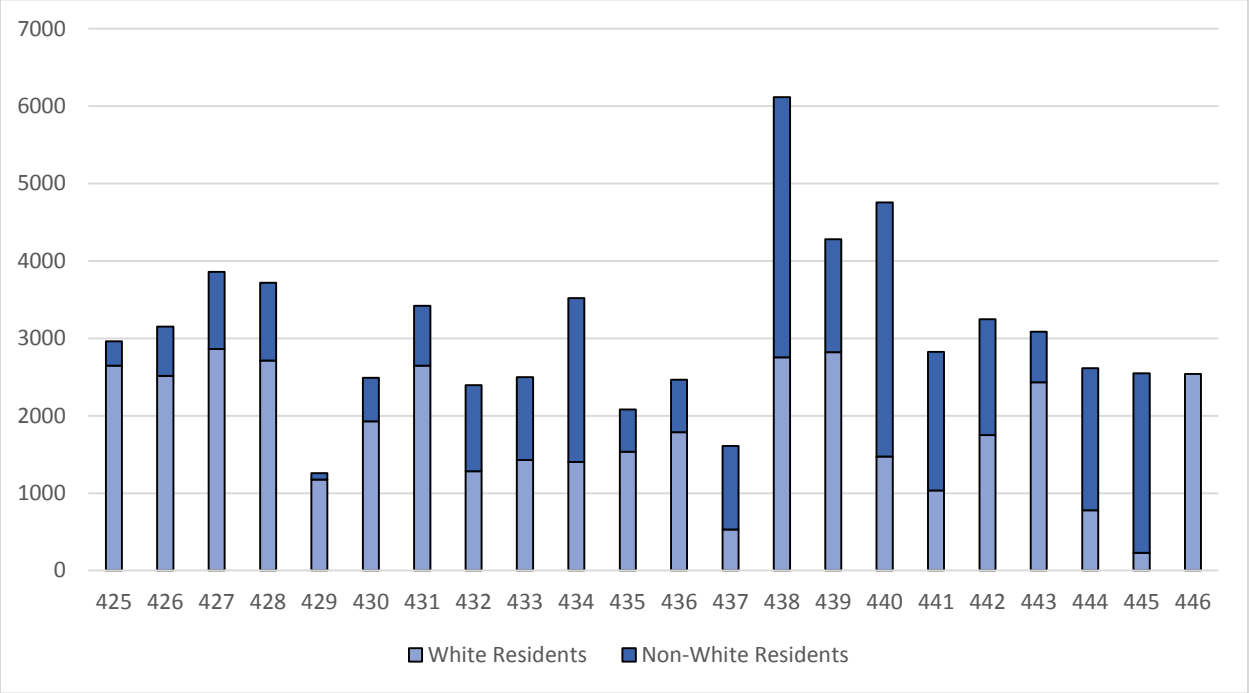


**Figure 2.2: Age 16 and Older Resident Populations by Census Tract**




Four other municipalities share a common border with Norwalk, including New Canaan and Wilton to its north, Westport to its east, and Darien to its west. Norwalk is a shoreline community with the Long Island Sound to the south. These four municipalities are predominantly white demographically, with an average driving age white resident population of 92% (compared to Norwalk's white driving age population of 59%).

Norwalk is approximately 23 square miles of land and 14 square miles of water. Interstate 95 runs from east to west along the southern portion of the city. Route 15 also runs from east to west, but along the northern section of the city and Route 7 runs from Interstate 95 north to the Wilton border. There are three additional state highways in Norwalk including Route 53, Route 123, and Route 136. In recent years, large areas of the community have seen a significant transformation, including the area known as South Norwalk, which significantly altered Norwalk and made it a regional dining, shopping, and entertainment destination.

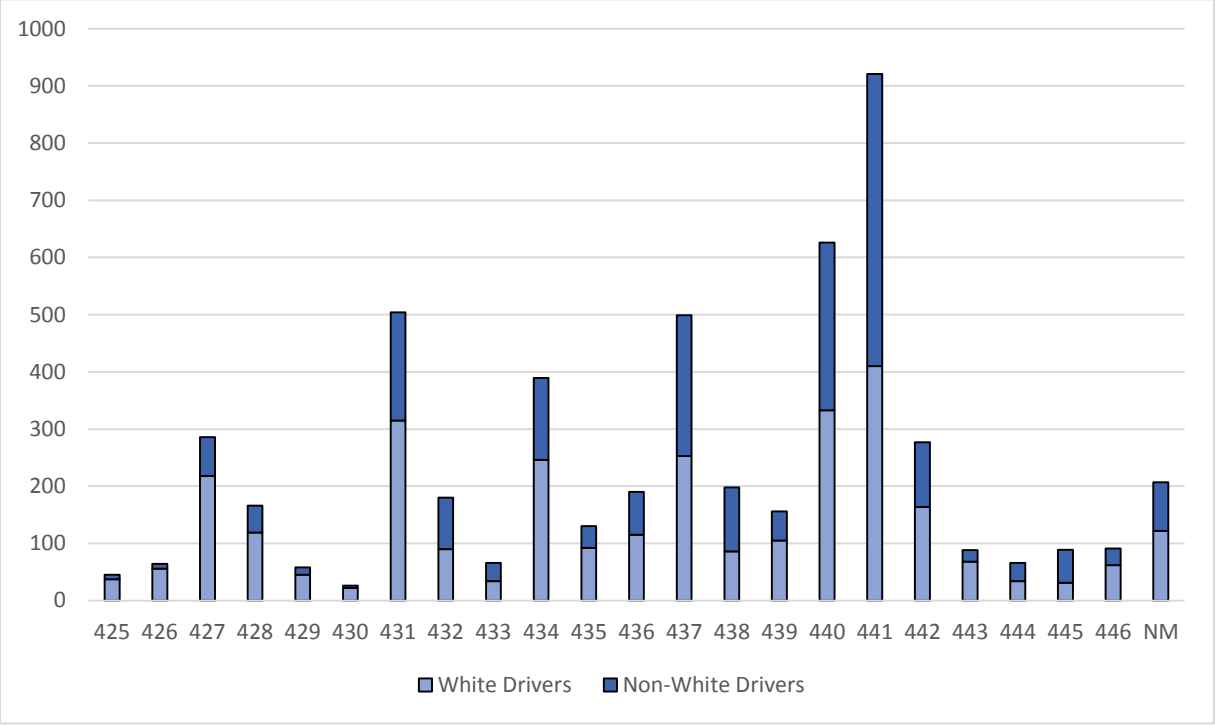
Norwalk patrol officers operate in seven patrol sectors. There is a minimum of one officer assigned to each patrol sector, but additional officers may be assigned to specific sectors based on community need and available resources. For example, South Norwalk is located primarily in patrol sector two, which usually has four or five additional patrol cars assigned. The Norwalk Police Department facility is also located in patrol sector two. In addition to the patrol division, specialized units conduct targeted enforcement in areas with the highest need. For example, Norwalk has a Strategic Narcotics Enforcement Team (SNET) that operates in patrol areas with higher levels of calls for service and areas identified with more street level narcotics problems.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each Norwalk census tract. The majority of traffic enforcement activity in Norwalk (48%) occurred in a relatively concentrated geographical area encompassing four census tracts near the center of the city. Census tract 441 has

the largest percentage of traffic enforcement with 17% of all of the city's traffic stops. Tracts 437, 440, and 441 cover the main downtown area of Norwalk and are three of the highest traffic stop enforcement areas. Tracts 440 and 441 include the busy South Norwalk area and the Police Department is located in this area as well. The other high enforcement area includes census tract 431, outside of the downtown area that includes a busy stretch of Route 1 and borders Darien.

Traffic enforcement changes dramatically moving to the outer parts of the city. With the exception of the three tracts that directly border the downtown South Norwalk area, none of the other census tracts generate more than 3.5% of the traffic stop activity, with most considerably below that level.

**Figure 3.1: Traffic Stops by Census Tract**




While Norwalk's overall resident population is 40% minority, they were 53% of all residents who were stopped. Thirty-six percent of the non-resident drivers who were stopped were minority. Resident minority drivers were stopped in 17 of the 22 census tracts at a rate that exceeded their representation in the tract's resident minority driving age population.

Figure 3.2 is a map of traffic stops made in Norwalk. The majority of drivers stopped in Norwalk (63%) were not residents of the city. The four census tracts that account for 48% of the traffic enforcement activity include 19% of the resident population in Norwalk. The population of the largest of these four tracts is tract 440 with 7% of the city's population. Outside of the high enforcement area, the three most heavily populated census tracts (427, 438, and 439) account for 21% of the population and 12% of the motor vehicle enforcement activity. Population concentration does not appear to be a primary driver of traffic enforcement patterns.

**Figure 3.2: Traffic Stop Map**

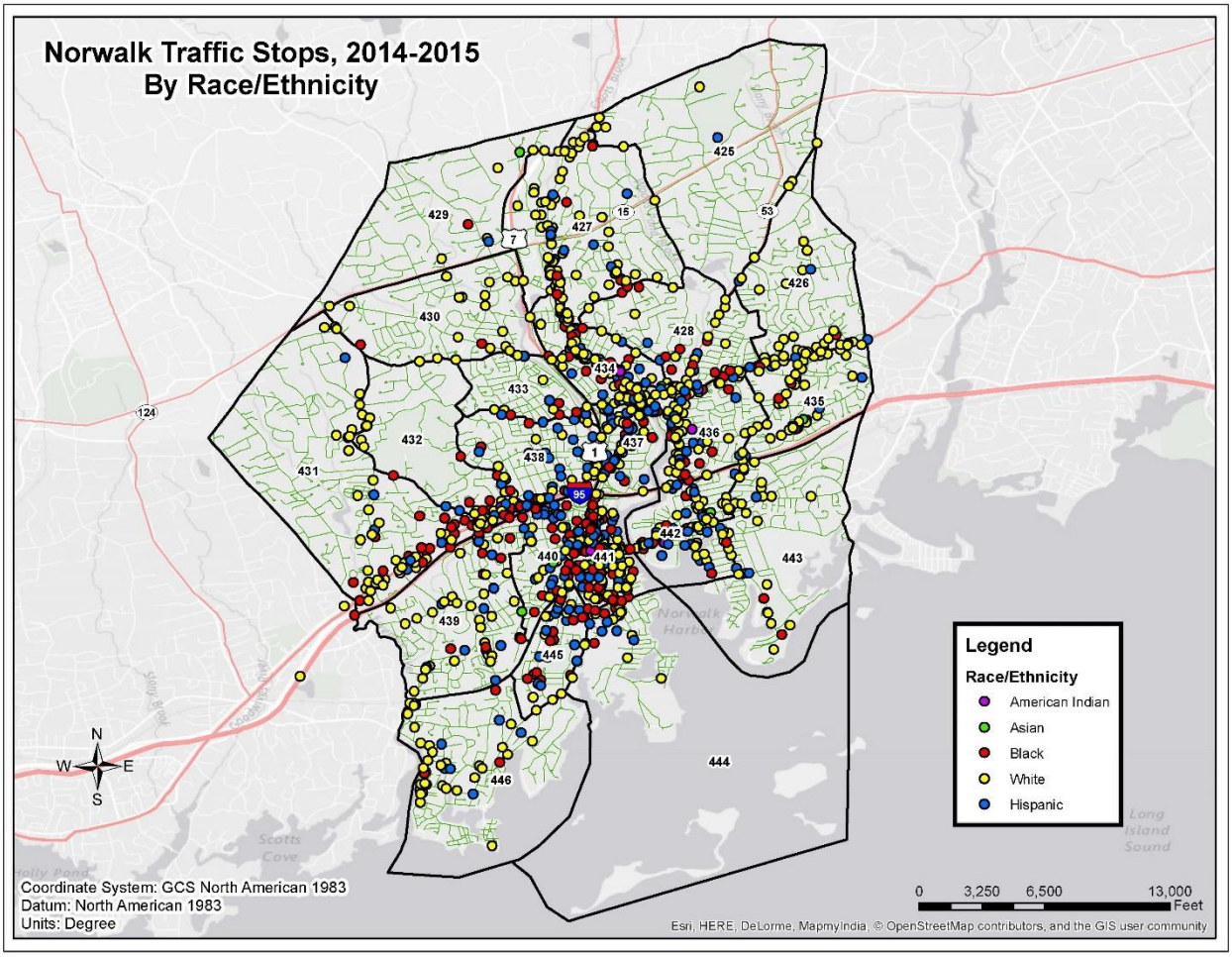
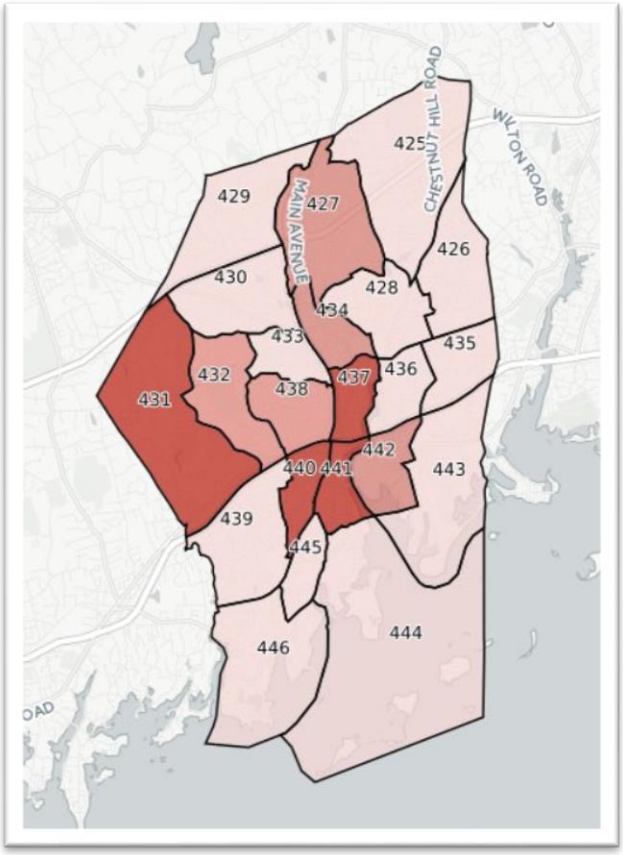



Figure 3.3 shows an additional way to view the high enforcement areas in Norwalk. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area with between 500 and 900 stops made in each census tract. Group one includes census tracts 431, 437, 440 and 441. There are between 180 and 400 stops made in group two census tracts. Group two includes tracts 427, 432, 434, 438, and 442. There were between 25 and 150 stops in each of the remaining census tracts which create group 3.

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**




## Traffic Stop Breakdown by Race/Ethnicity

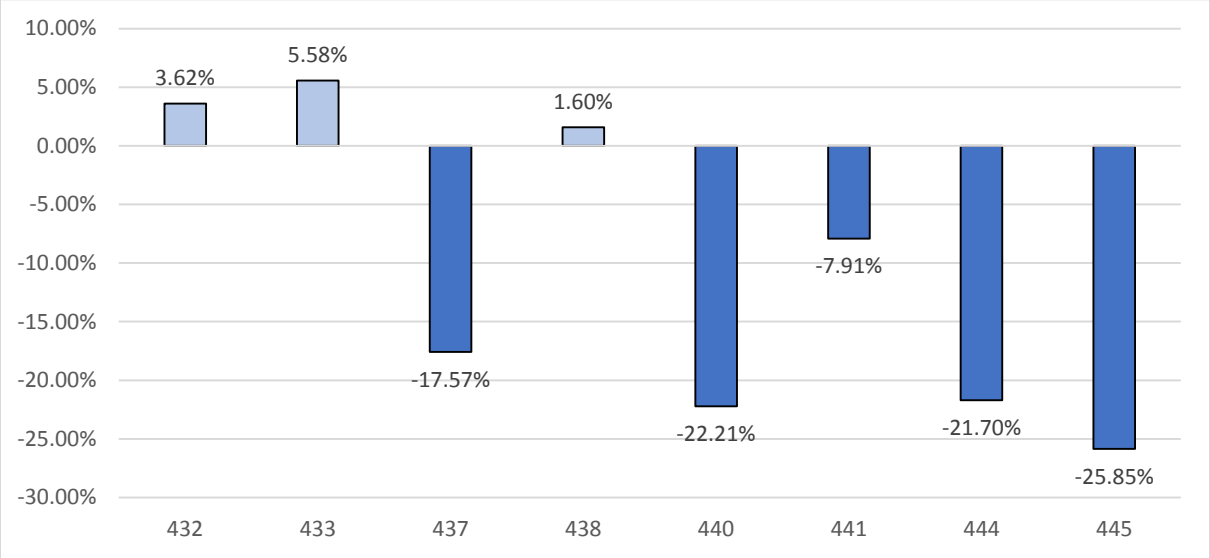
Minority drivers accounted for 43% of all the drivers stopped in Norwalk. Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. Norwalk's resident population age 16 and older is 40% minority. The racial and ethnic makeup of different areas of Norwalk varies significantly by census tract, so the disparities were more pronounced in some areas compared to others.

Motor vehicle enforcement impacts higher minority residential census tracts. Sixty-four percent of all minority drivers are stopped where 60% of all minority residents live. The high enforcement areas are also the high minority residential areas. Minority residents are stopped at a greater rate than non-residents in the high enforcement areas. However, non-resident white drivers are significantly more likely to be stopped in these same areas. This is likely due to the fact that the high enforcement areas are also entertainment, employment, and shopping magnets.

Specifically, eight of the 22 census tracts showed a higher percentage of minorities stopped than the town average of 43% minority stops. These eight census tracts account for 50% of the total traffic enforcement in town. Three of the high enforcement census tracts (437, 440, and 441) in the downtown area are included in the areas with a higher rate of minority stops. Minority drivers were stopped at a higher rate than their population in three of the eight census tracts, but a lower rate than their population in five of the census tracts. Although motor vehicle enforcement seems to be concentrated in the parts of town with a higher minority population, minority drivers are stopped at

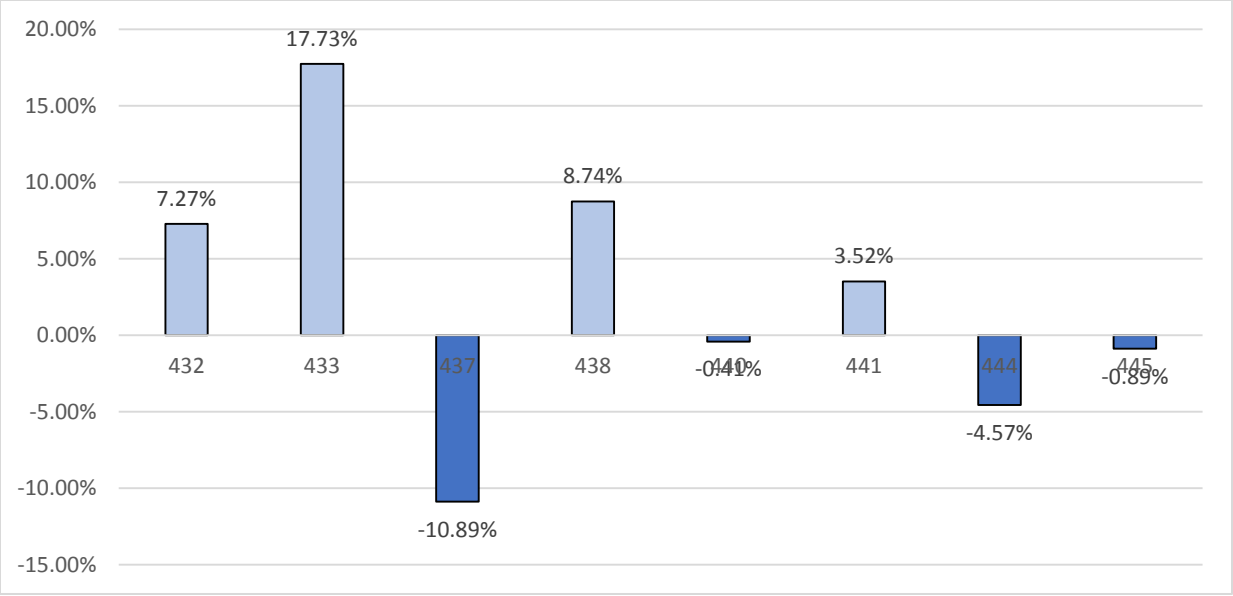
a lower rate. But almost 60% of the drivers stopped in these eight tracts were not Norwalk residents. The non-residents were 55% white, 23% black, and 20% Hispanic. In contrast, the residents stopped in these tracts were 38% white, 30% black, and 32% Hispanic. Figure 4.1 shows the amount by which the minority stop disparity exceeded the localized minority driving age populations in these eight census tracts.

**Figure 4.1: Disparity between Minority Drivers Stopped and Census Tract Population**



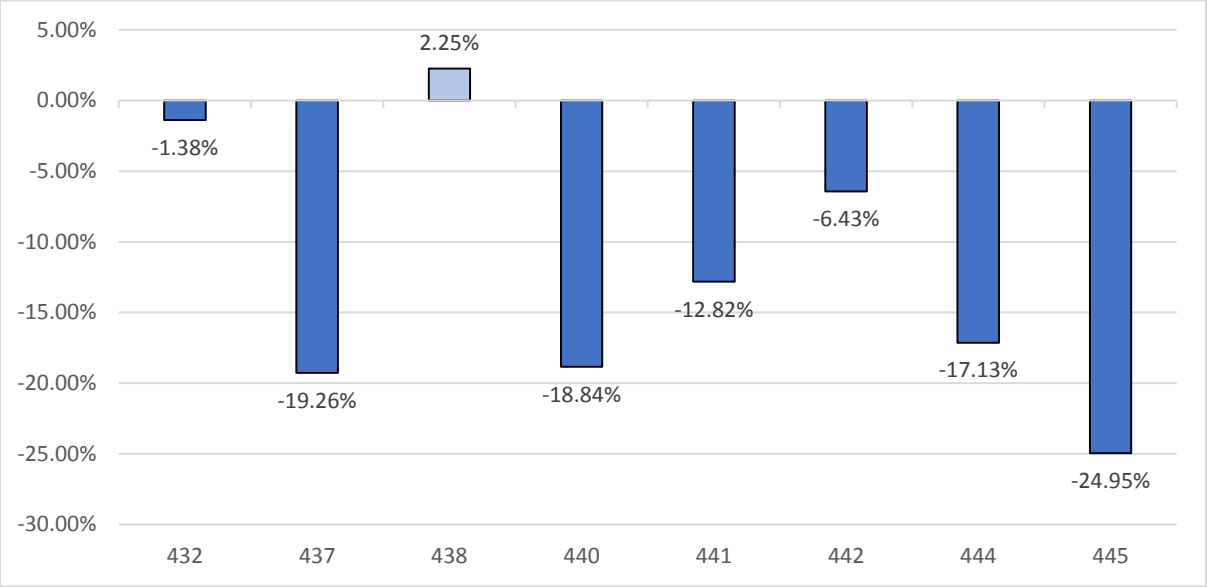

The overall percentage of Norwalk traffic stops involving black drivers was 20%. The percentage of black drivers who were stopped exceeded the town average in eight of the 22 census tracts, including three of the four high enforcement activity areas. Figure 4.2 shows the amount by which the black stop disparity exceeded the resident black driving age populations in these eight tracts. Black drivers were stopped at a rate that exceeded their local population in four of the eight census tracts.

**Figure 4.2: Disparity between Black Drivers Stopped and Census Tract Population**



The overall percentage of Norwalk traffic stops involving Hispanic drivers was 21%. The percentage of Hispanic drivers stopped exceeded the town average in eight of the 22 census tracts, including three of the four high enforcement activity areas. Figure 4.3 shows the amount by which the Hispanic stop disparity exceeded the resident Hispanic driving age populations in these eight tracts. Hispanic drivers were stopped at a rate that exceeded the proportion of their resident population in only one census tract.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Norwalk. Both black and Hispanic stops tend to be concentrated in the high minority residential areas of Norwalk, which is also the high enforcement area. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

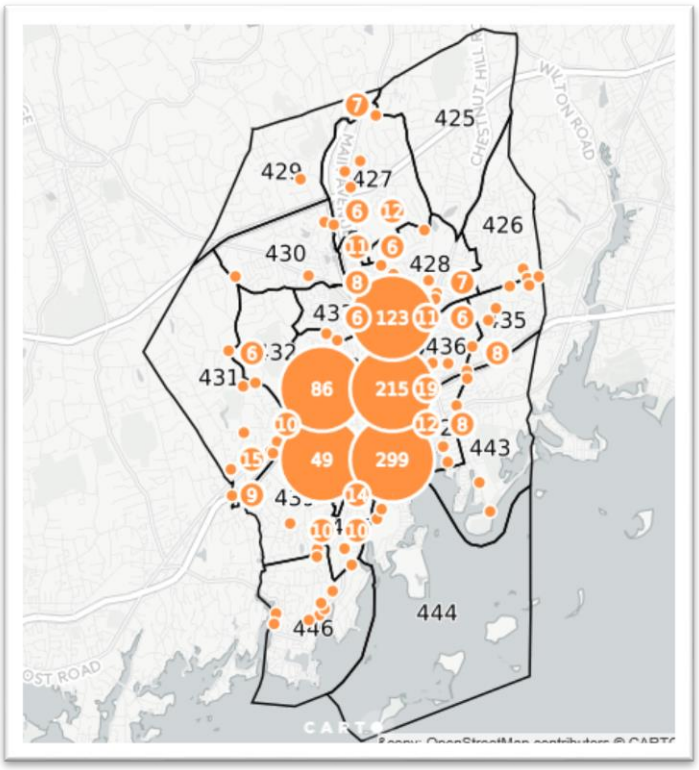
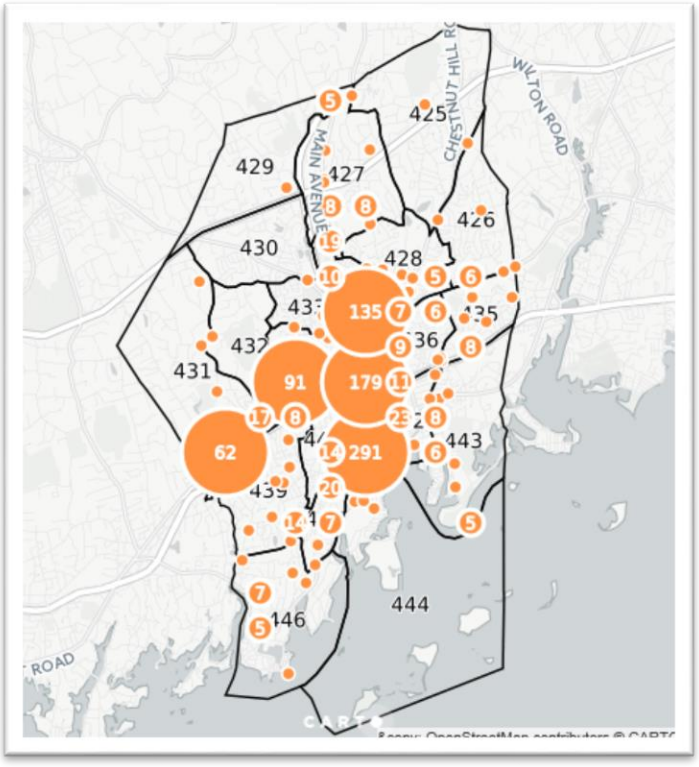



**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**



## Special Enforcement Campaigns

Norwalk participated in special enforcement campaigns that were sponsored by the Connecticut Department of Transportation through funds made available by the National Highway Traffic Safety Administration (NHTSA). The Special Enforcement campaigns in which Norwalk participated focused on: (1) distracted driving, (2) drinking and driving, and (3) seatbelt safety ("Click-It or Ticket"). The Norwalk Police Department was able to identify only the dates and times of the special enforcement campaigns, but not the case numbers for stops made as part of these campaigns.

Norwalk participated in a "Click It or Ticket" seatbelt enforcement campaign for four hours on May 18, 2015. During that time period, three officers made 12 motor vehicle stops. Most of these 12 stops occurred on Westport Avenue (Route 1) and were made for cell phone violations. Of the 12 stops, 11 drivers were white and one driver was black.

Norwalk also participated in two distracted driving (cell phone) campaigns on April 2, 2015 (7:00 a.m. to noon) and August 4, 2015 (7:00 a.m. to 1:00 p.m.). A total of 84 motor vehicle stops were made during these periods. The vast majority of these stops occurred on West Avenue, located in the high enforcement downtown area. Of the 84 stops, 76 were for cell phone violations. Over 60% of the drivers stopped during these time periods were white, 21% were black, and 18% were Hispanic.

Lastly, Norwalk also participated in drunk driving checkpoints and roving patrols in January, May, August, and October. During Norwalk's reported participation in the grant program, 56 drivers were stopped. The vast majority of these stops occurred on West Avenue and Route 1, both located in the high enforcement downtown area. Over 52% of the drivers stopped during these time periods were white, 32% were black, and 13% were Hispanic. Of the 56 stops, Norwalk reported one DUI case.

## Traffic Stop Distribution for Norwalk Officers

Norwalk's total of 5,322 traffic stops are comparable to those in other towns of its size. During the study period, traffic stop data was reported for 142 officers. The average number of stops made per officer was 37. Of the 142 officers reporting stops, 88 made fewer than 20 stops, 28 made between 20 and 50 stops, 12 made between 50 and 100 stops, and 14 made over 100 stops. The 14 officers making over 100 stops account for 55% of all stop activity. The most active officer made 507 stops or 10% of all stops made in Norwalk. This is an indication of the extent to which a relatively small portion of the officer force influenced Norwalk's stop data.

## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that Norwalk officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in Norwalk account for 50% of the total stops. The three largest stop categories were for cell phone violations (24 %), registration violations (17 %), and traffic control signal violations (9%). 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-related and registration-related violations than white drivers as a percentage of their total stops.

The data shows that, with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related stops (defective, improper, or inoperative lighting; display of plates; or window tinting) are closely related to the frequency and location of where the

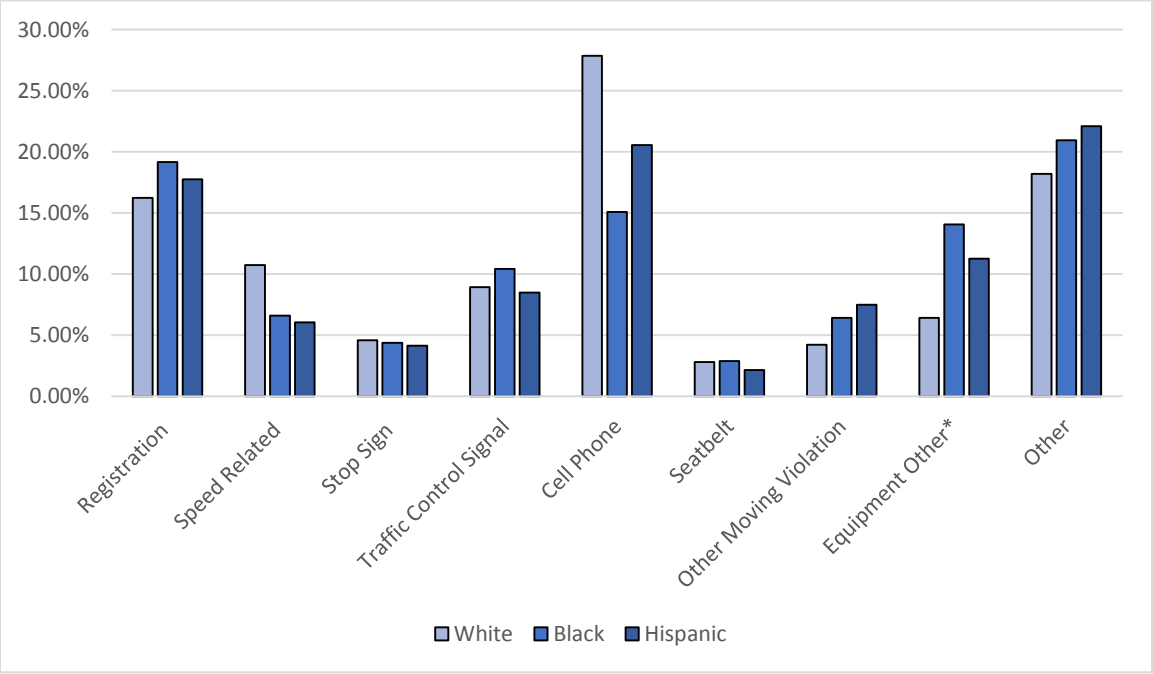
stops are made. When these types of stops are made more frequently in locations where there are higher concentrations of minority drivers, they tend to result in higher proportions of minority drivers being stopped than white drivers. However, in many places, the data also shows that when these same 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.

The Norwalk data tends to confirm these observations. Of all the black driving age residents living in Norwalk, 44% live in census tracts 434, 437, 438, 440, and 441. These five tracts are also where 44% of all Hispanic driving age residents live. Only 18% of white driving age residents live in these tracts. Just over 58% of equipment-related stops for lighting, plate display, and window tinting, which are fairly highly discretionary, were made in these five tracts. The demographics for these stops were 26% Hispanic drivers, 37% black drivers, and 37% white drivers. The other 42% of these stops were made outside of these five census tracts. For those stops, the demographics were 27% Hispanic drivers, 25% black drivers, and 47% white drivers.

The registration-related stops made in Norwalk showed a similar pattern. About 58% of the registration-related stops were made in the five census tracts with a high minority proportion of the population. The demographics for these stops were 24% Hispanic drivers, 25% black drivers, and 50% white drivers. The other 42% of the registration-related stops in the remaining census tracts were 19% Hispanic drivers, 19% black drivers, and 60% white drivers.

These patterns seem to suggest that where these types of stops are made is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. Figure 5.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 5.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figures 5.2 and 5.3 are maps of traffic enforcement for safety related motor vehicle stops and equipment related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone or moving violations were labeled “safety-related” stops. Stops for defective lights, window tints, or display of plate were labeled “equipment-related” violations. Overall, equipment-related enforcement is concentrated in a smaller geographic area that has a higher minority population, but safety-related motor vehicle enforcement is conducted throughout a larger geographical area.

**Figure 5.2: Safety-Related Motor Vehicle Stops**

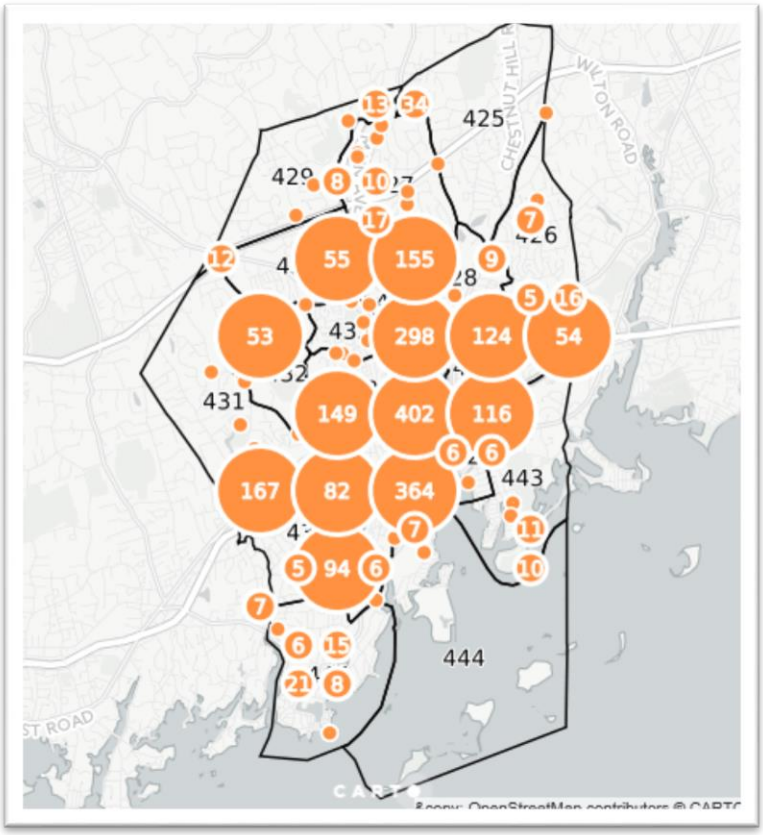
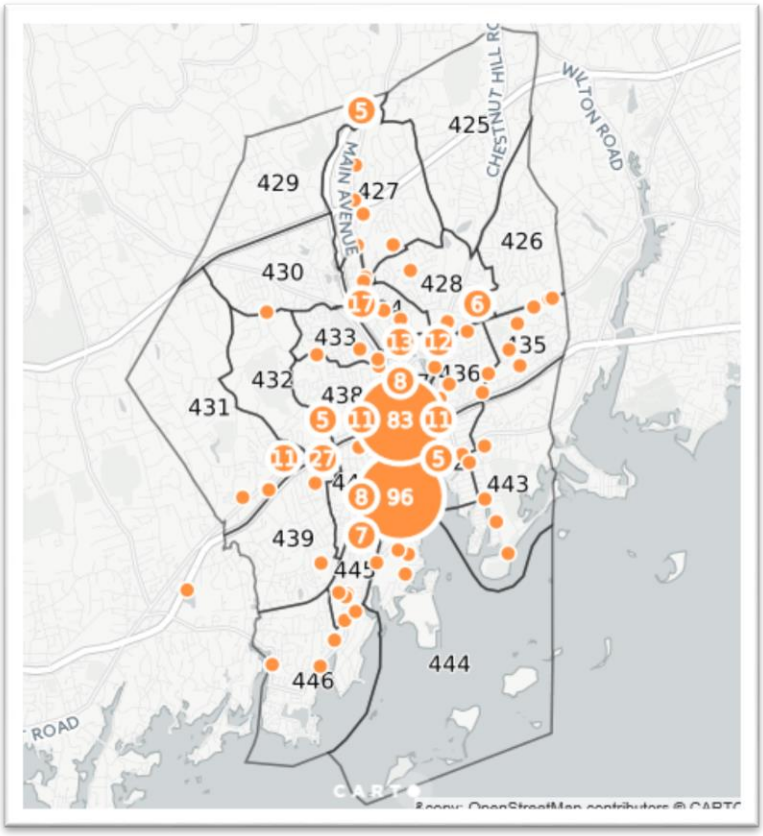


**Figure 5.3: Equipment-Related Motor Vehicle Stops**



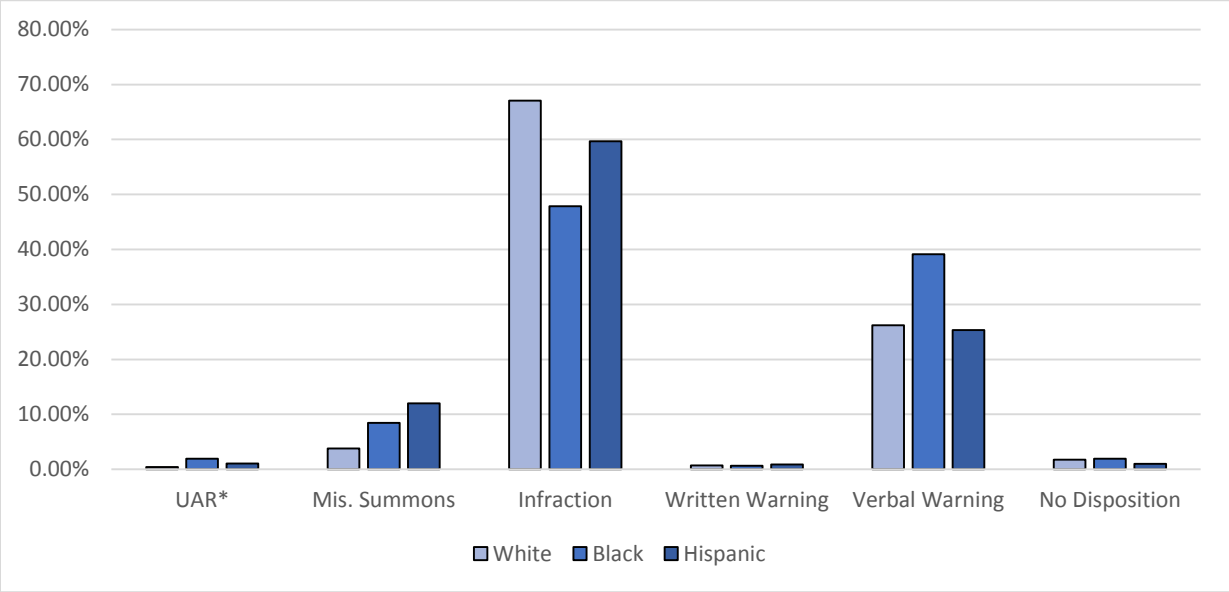

The highest percentage of motor vehicle stops in Norwalk resulted in the driver receiving an infraction (62%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers as a result of the stop. Figure 5.4 shows the outcomes of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives an analyst the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In Norwalk, 341 of the stops made resulted in the issuance of a misdemeanor summons (6.4%). Black drivers were more than twice as likely to be issued a misdemeanor summons as were white drivers (8.5% of black drivers compared to 3.8% of white drivers). Hispanic drivers were more than three

times as likely to be issued a misdemeanor summons as were white drivers (12% of Hispanic drivers compared to 3.8% of white drivers). Norwalk did not report the secondary statutory citation in 121 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final misdemeanor charge.

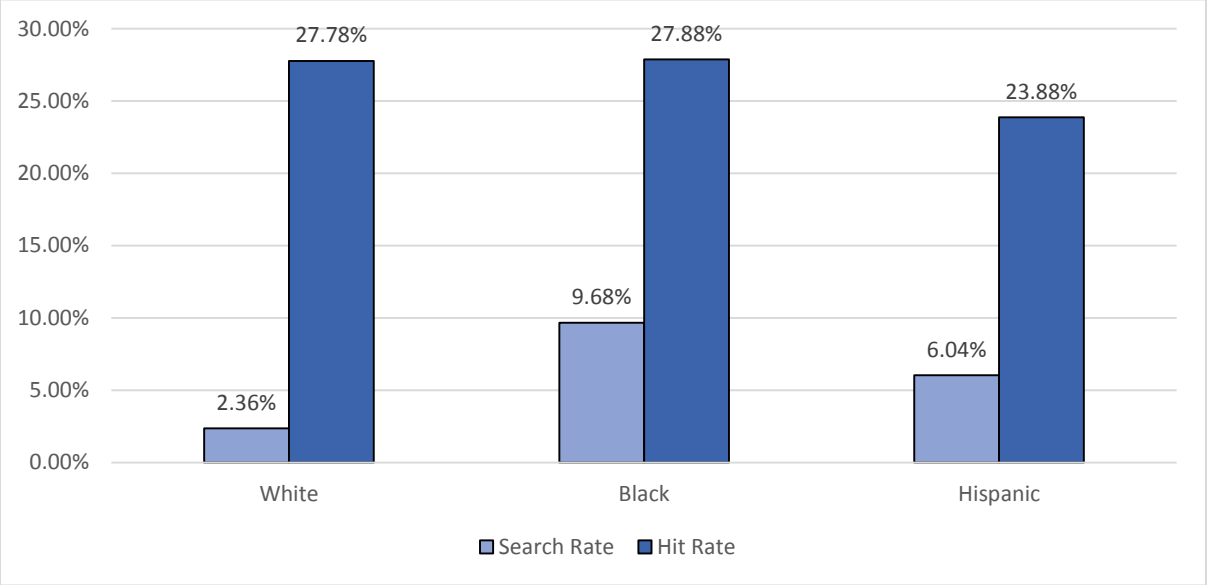
**Figure 5.4: Outcome of Traffic Stop**




*Uniform Arrest Report

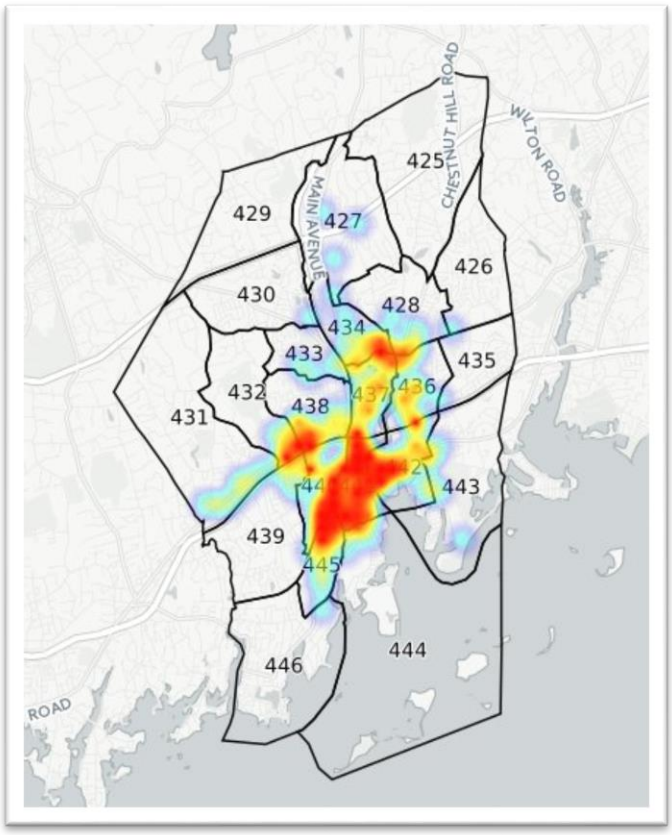
A review of department search information shows 4.6% (243) of the drivers stopped in Norwalk were subjected to a motor vehicle search. The rate of motor vehicle searches is more than the state average of 2.9%. Hispanic drivers were searched at almost three times the rate of White drivers, while black drivers were searched at more than four times the rate of white drivers. Contraband was found at almost the same rate between white and black drivers and a lower rate for Hispanic drivers. Figure 5.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 5.5: Search and Hit Rate**




Motor vehicle searches in Norwalk are concentrated in the high enforcement census tracts. Figure 5.6 is a heat map of motor vehicle searches in Norwalk which indicates the majority of searches occurring in tracts 440 and 441.

**Figure 5.6: Search Heat Map**



## Calls for Service

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. The department provided us with the calls for service log, including calls for service and officer initiated actions that were called into police dispatch. The logs report approximately 52,000 entries from October 1, 2014 through September 30, 2015, excluding traffic stops. The top three reasons for calling dispatch were for an alarm, a motor vehicle accident, or a general disturbance and these account for about 20% of all calls. Norwalk reported 3,678 cases that were classified as group "A" offenses. Some of the most common group "A" offenses include vandalism, theft from a motor vehicle, assault, and shoplifting.

The department also shared summary information on the number of calls per patrol sector. Patrol sector two accounts for the largest volume of calls for service with 27% of all calls, followed by district one with 16% of all calls. These two patrol districts make up the majority of the high traffic enforcement area in the city. Patrol sector two patrols the area that includes South Norwalk and patrol sector one patrols the center of Norwalk that includes parts of Route 1 and Route 7. The higher level of calls for service in patrol sector two supports the rationale for the additional resources deployed to patrol that busier section of the city.

## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with Norwalk provide a context to potentially explain the rationale for police deployments there are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, Norwalk approximately 45,063 people work in Norwalk and its major employers include Norwalk Hospital, GE Capital, Cablevision, Diageo, and Stew Leonard's. The vast majority of commuters traveling into Norwalk for employment are from Stamford, Bridgeport, Fairfield, and Stratford. The overall unemployment rate is 5.6%, which is below the unemployment rate for Fairfield County and the state.

In 2015, the crime rate in Norwalk was reported to be 214 per 10,000 residents, compared to the state crime rate of 205 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[5], there were 1,872 reported crimes in Norwalk in 2015. The three most reported crimes were larceny (1,312), burglary (202), and aggravated assault (178).

During our study period, there were approximately 2,143 motor vehicle accidents on roads patrolled by the Norwalk Police Department. Accidents were reported as occurring on a total of 330 roads. The roadways with the highest number of accidents were Route 1 (152 accidents), Connecticut Ave. (139

[5] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

accidents), and East Ave. (120 accidents). There were only 42 roads with 10 or more accidents and those roads account for 71% of all accidents in Norwalk.

Figure 6.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Norwalk. While the vehicle crash rate tends to build fairly steadily throughout the day in Norwalk, it peaks during the afternoon period from 1:00 p.m. to 6:00p.m. Figure 6.2 is a map siting the motor vehicle accidents that occurred during the study.

**Figure 6.1: Accidents Compared to Traffic Stops by Time of Day**

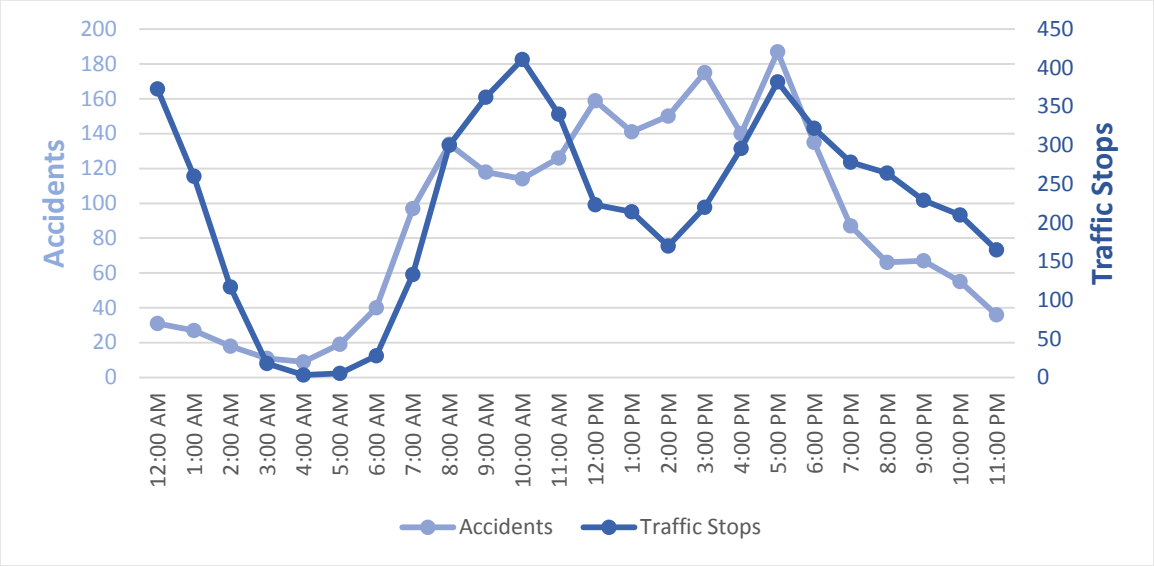
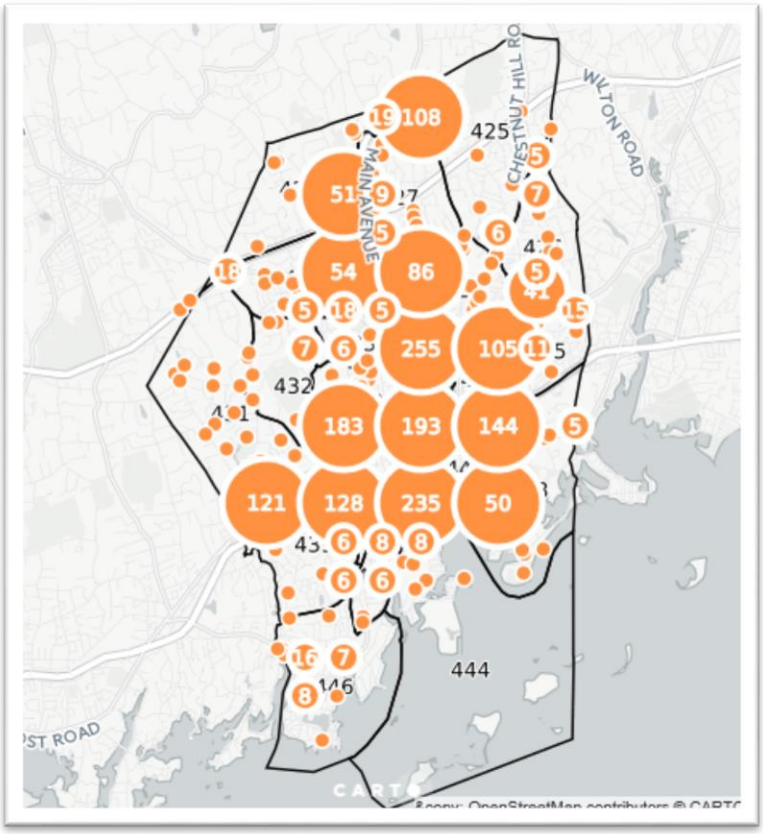


**Figure 6.2: Norwalk Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

Norwalk Police Department officials identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified areas with the highest call for service volume and areas with the highest levels of traffic as some of the same areas with the highest level of motor vehicle enforcement. The South Norwalk area, which has the most traffic stops, is also where the most patrol cars operate. An additional four or five patrol cars typically operate in this area as well as officers assigned to specialized units that frequent this area. In addition, the South Norwalk area has the largest volume of calls for service. It is evident that departmental resources are concentrated in the South Norwalk area to a greater extent than other areas in the city.

Norwalk has a non-white driving age population with about 23% Hispanic driving age residents and 13% black driving age residents. Almost 49% of all black and Hispanic residents live in five census tracts (438, 440, 441, 444, and 445.) These five census tracts all have minority populations above the city average with tract 445, the largest with more than twice the minority resident population at 91%. These five tracts account for 36% of Norwalk's traffic stops, with 27% of its stops involving black drivers and 25% of its stops involving Hispanic drivers. These areas include the high enforcement area of South Norwalk and non-resident minority drivers comprise at least 26% of those who are stopped in these tracts.

Census tract 441 has the largest volume of traffic enforcement with 17% of all stops. This tract runs from Martin Luther King Dr. to the Norwalk Harbor and from Interstate 95 to Knott St. This high

enforcement census tract also has a high minority population. Norwalk's traffic enforcement activity did not appear to be driven primarily by population concentrations; that is, the census tracts with the largest population concentrations do not all generate significant levels of traffic enforcement. The five census tracts with the highest levels of enforcement (431, 434, 437, 440, and 441) account for 24% of the resident population, but 55% of the traffic enforcement.

On average, 63% of the drivers stopped in Norwalk were not town residents, which influences the size of the disparities in many of the census tracts to varying degrees. In particular, non-resident stops impacted white drivers to a great degree. Overall, 70% of white drivers stopped were not residents of Norwalk compared to 53% of minority drivers stopped. The greatest occurrence of traffic stops involving non-resident drivers was in the center of Norwalk that includes South Norwalk. The high enforcement census tracts 431, 434, 437, 440, and 441 accounted for 57% of all non-residents stopped in the city. Non-resident white drivers were more likely to be stopped in the high enforcement census tracts as opposed to non-resident minority drivers. For example, 49% of the minority drivers stopped in the highest enforcement census tract of 441 were not residents compared to 68% of the white drivers stopped. Norwalk's high stop rate for minority drivers is not surprising given where it engages in the majority of its traffic enforcement activity, i.e., areas with the highest populations of minority residents.

In addition, Norwalk has 142 officers who made at least one traffic stop during the study period. The average stops made per officer were 37. The most active officer conducted 10% of all motor vehicle stops in town. There were 14 officers who conducted more than 100 stops and together accounted for 55% of all traffic enforcement. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics. This appears to be the case in Norwalk.

*Traffic Stop Outcomes*

White non-Hispanic drivers were more likely than either black or Hispanic drivers to be stopped for driver-related safety issues like speeding, cell phone, stop sign, traffic light, and seat belt violations as a percentage of their total stops. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 racial disparities to appear in the data even though violation rates for these offenses could be similar across racial categories.

In Norwalk, when these registration- and equipment-related stops were made in the five high enforcement census tracts (431, 434, 437, 440, and 441) that were 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 showed 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.

The proportion of Norwalk's traffic stops that result in a misdemeanor summons (6.4%) exceeded the state average of 5.4%. Black drivers were more than twice as likely to be issued a misdemeanor summons as were white drivers, and Hispanic drivers were more than three times as likely to be

issued a misdemeanor summons as were white drivers. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers as a result of the stop. Overall, almost 62% of all drivers stopped received an infraction.

While a portion of the Norwalk's stops that resulted in the misdemeanor charges were apparently misdemeanor violations at the outset based on the data entered in the system, Norwalk did not report the secondary statutory citation in 121 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final misdemeanor charge. Thus it is not possible from the available data to analyze the progression of how these stops moved from infractions to misdemeanors. It is important that the police department address this shortcoming by assuring that its officers submit all the necessary data into the system.

Norwalk searched the vehicles of 4.6% of drivers stopped, which is more than the state average of 2.9%. Black drivers were searched at more than four times the rate of white drivers, and Hispanic drivers were searched at more than three times the rate of white drivers. The location for vehicle searches mirrors the five census tracts with the highest levels of traffic enforcement. The rate for finding contraband is higher when white drivers are searched compared to Hispanic drivers but almost equivalent to the contraband rate for black drivers. Of the 243 vehicle searches, more than half were the result of the driver's consent and the other half were due to inventory searches or some other authority (i.e., probable cause, plain view, etc.) The rate at which contraband was found is only 21% for consent searches, but 54% for "other" searches. However, the department reports that some officers may use consent even when they have probable cause or some other reason to search the vehicle which could have an impact on the search analysis.

*Conclusion*

The relative disparities in Norwalk appear to reflect a concentration of enforcement in central and southern areas of the city which tend to have higher concentrations of minority residents. There are relatively high enforcement levels in South Norwalk that has both the highest resident minority driving age population and is most likely to have the relatively high proportions of non-resident drivers traversing the area. The regional dining, shopping, and entertainment destinations in South Norwalk have significantly altered Norwalk and the department has devoted a greater number of police personnel to patrolling this section of the city.

Higher levels of traffic enforcement in South Norwalk tends to mirror the higher number of calls for service and crime. However, enforcement tends to correspond to accidents less directly, except in and around the area of Route 1 and portions of South Norwalk. In a few areas of the town with a significant number of vehicle crashes, such as the northern portion of Route 7, there are somewhat lower levels of traffic enforcement activity.

While white drivers are more likely to be stopped in Norwalk 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 and registration violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the five high enforcement census tracts, where resident minority drivers are likely to be among the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violate these laws with any greater frequency than white drivers.

Norwalk searched drivers at a higher rate than the state average. Black drivers were searched at more than four times the rate of white drivers, and Hispanic drivers were searched at more than three times the rate of white drivers. The rate of contraband found is higher when white drivers are searched compared to Hispanic drivers but almost equivalent to the contraband rate for black drivers. Contraband was found at a significantly lower rate for consent searches than other searches, but consent searches were used most frequently. However, the department reports that some officers may use consent even when they have probable cause or some other reason to search the vehicle. Norwalk has indicated that it has begun retraining officers on the proper way to report the authority for a vehicle search to improve the quality of data in the future.

Based on the overall follow up analysis of the Norwalk data, we believe that the general disparities in its stop data with respect Hispanic and black drivers tend to reflect the overall nature of its enforcement policies, but that it would benefit by reviewing these practices to assure that the disparate impact these policies have on its minority residents are reasonable in terms of policy outcomes. When disparities result from policies and practices established to meet community and policing goals and objectives, even when profiling is not a direct result, minority communities can feel disadvantaged unless they can clearly perceive the overall benefits of this approach. It is important that the department assure that its minority community fully understands what benefits come from this enforcement presence. It is recommended that the department:

(1) review its traffic enforcement policies in tracts 431, 434, 437, 440, and 441 to evaluate the extent to which they may have a disproportionate effect, particularly with respect to black and Hispanic drivers;
(2) take steps to assure that its minority community is fully engaged in the process of understanding why the allocation of enforcement resources are made and what outcomes are being achieved;
(3) evaluate how the greater use of high discretion equipment-related stops in higher minority areas may be adding to disparities; and
(4) review the role consent searches play in its overall traffic stop efforts to ensure that its officers are not overly relying upon this as a traffic stop technique.

It is also recommended that department administrators remind Norwalk officers that the statutory reason why a misdemeanor summons was issued for stops that were made for infraction violations must always be entered as part of the data submission so that these outcomes may be tracked more accurately.

## I.B (6): TRUMBULL FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Trumbull over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 1,937 | 65.1% | 1,773 | 61.7% |
| Black Non-Hispanic | 500 | 16.8% | 587 | 20.4% |
| AsPac Non-Hispanic* | 39 | 1.3% | 53 | 1.8% |
| AI/AN Non-Hispanic** | 17 | 0.6% | 28 | 1.0% |
| Hispanic | 481 | 16.2% | 435 | 15.1% |
| Total | 2,974 | | 2,876 | |

*Asian Pacific Non-Hispanic
** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Trumbull Police Department made a total of 2,876 traffic stops. Of these, 38% were minority stops (15.1% Hispanic and 20.4% black). The Trumbull Police Department was identified as having a racial and ethnic disparity using the three descriptive tests. Trumbull exceeded the threshold in two of the three descriptive benchmarks used and five of the nine possible measures. Although certain assumptions have been made in the design of each of the three benchmarks, 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 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Trumbull 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. Trumbull provided latitude and longitude coordinates that allowed accurate mapping of almost all of its stops. According to the 2010 census, Trumbull is a town with approximately 27,474 residents over the age of 16. Approximately 11% of the driving age population in Trumbull is identified as a minority. Figure 1.0 outlines the basic demographic information for Trumbull residents over age 16.

**Figure 1.0: Trumbull Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 24,381 | 88.7% |
| Black Non-Hispanic | 664 | 2.4% |
| AsPac Non-Hispanic | 1,029 | 3.8% |
| Hispanic | 1,400 | 5.1% |
| Other | 0 | 0.0% |
| Total | 27,474 | |

The U.S. Census Bureau divides Trumbull into seven census tracts. Figure 2.1 is a map that outlines the boundaries of Trumbull 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 of people (22% of the total population) in tract 902. The racial breakdown in each census tract varies, from a high of over 21% minority driving age residents in census tract 904 to a low of only 3.4% in tract 906. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: Trumbull Census Tract Map**

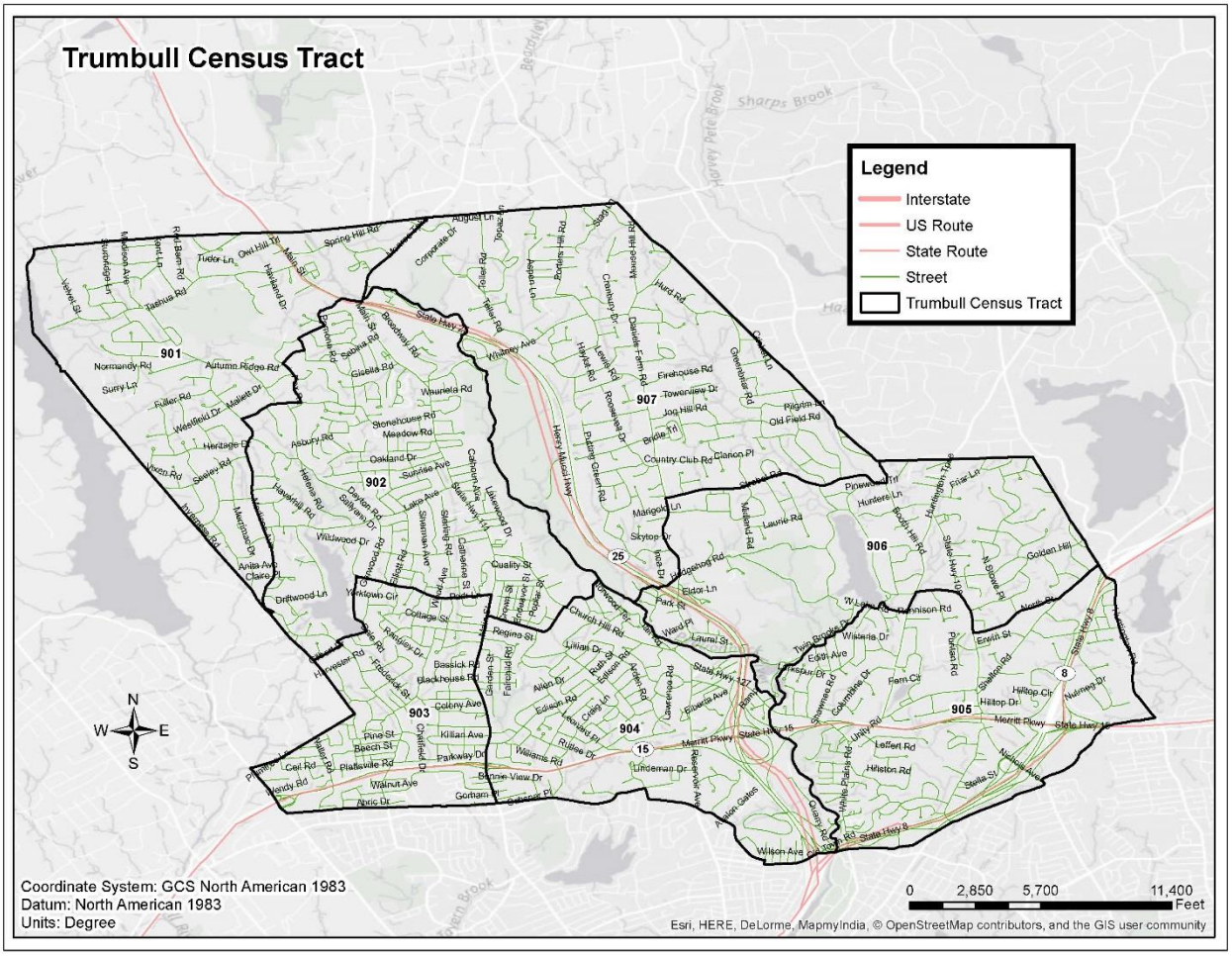
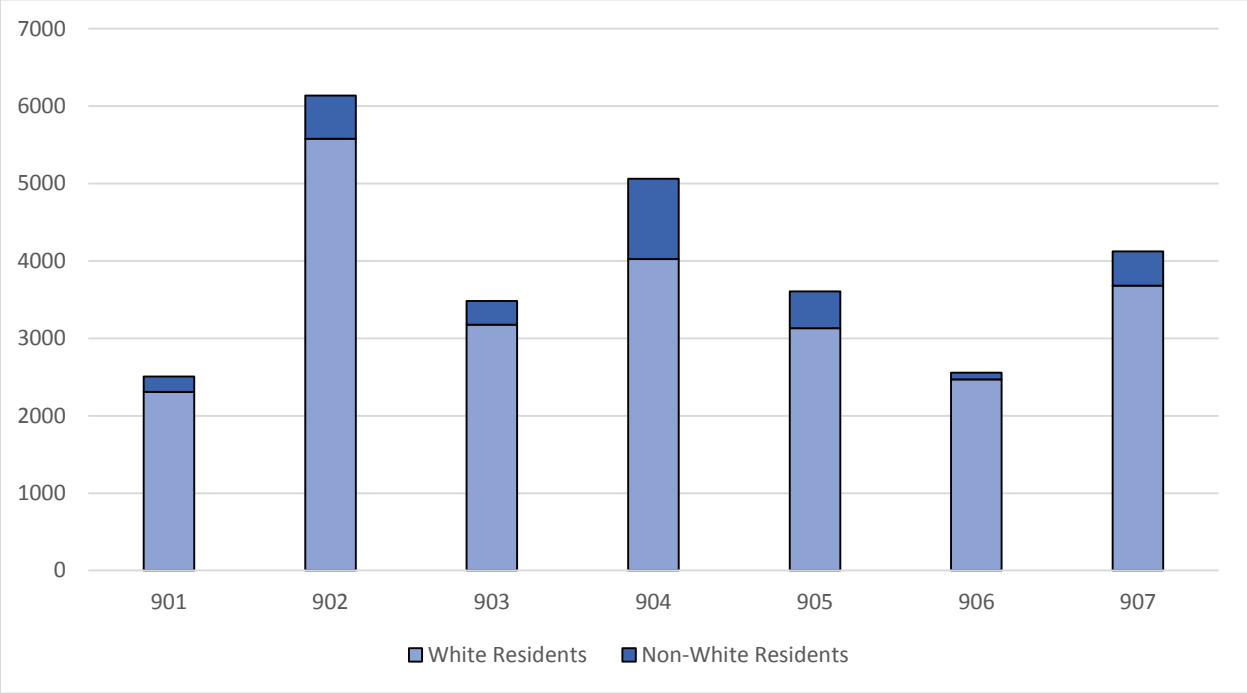


**Figure 2.2: Age 16 and Older Resident Population by Census Tract**




Six other municipalities border Trumbull, including Monroe to its north, Shelton to its east, Bridgeport and Stratford to its south and Fairfield and Easton to its west. With the exception of Bridgeport, the five other border towns are predominantly white demographically, with an average driving age white population of 87.8% (compared to Trumbull's white driving age population of 88.7%). Bridgeport borders part of the southern portion of Trumbull and has a white driving age population of 27%. Of the drivers stopped in Trumbull overall, 20% were Trumbull residents and 80% lived elsewhere.

Trumbull is 23 square miles in area. Route 15 (the Merritt Parkway) runs through the southern portion of Trumbull from Fairfield to Stratford. Route 8 runs through the southeast corner of Trumbull from Bridgeport to Shelton, and Route 25 runs southeast to northwest through Trumbull from Bridgeport to Monroe. Trumbull has a large corporate park where Unilever, the town's largest employer, is situated among other companies. The town also has the Westfield Shopping Mall which is estimated to have eight million visitors each year and is located in the southwest corner of the town directly bordering Bridgeport.

Trumbull has five patrol districts and typically has at least five officers patrolling the town at any given time. District one patrols from the Monroe border south to the border of the Long Hill section of town. Patrol two covers the western side of Route 25 to the Easton border. This patrol includes one of the two middle schools and the town center. The southwest portion of the town which includes the Westfield Shopping Mall is the smallest geographic district, covered by patrol three. Patrols four and five both cover from the Bridgeport and Stratford border to the border of patrol one. Patrol five includes the Hawley Lane Shopping Center.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each Trumbull census tract. A large percentage of traffic enforcement activity (59%) occurred in a relatively small geographical

area encompassing two census tracts (904 and 905) in the south and southeast portions of town. Census tract 904 has the largest percentage of traffic enforcement with 41% of the town's traffic stops. This tract borders three census tracts in Bridgeport with a resident driving age population that is almost 78% minority. Routes 15, 8, and 25 all intersect in the eastern part of census tract 904. Census tract 905, which is the second most active traffic enforcement area, borders two census tracts in Bridgeport and two census tracts in Stratford with an average minority population of 42%. It includes the Hawley Lane Shopping Plaza on the Trumbull-Stratford border. The third most active enforcement area is census tract 903, which borders part of Bridgeport with a minority population of 33%.

Moving away from the southern portion of the town where the majority of traffic enforcement occurs, census tract 902 contributes 11% of the overall traffic enforcement. Although the remaining three census tracts account for 33.4% of the town's driving age residents, they account for a combined total of only 9.4% of the town's traffic stop activity.

**Figure 3.1: Traffic Stops by Census Tract**

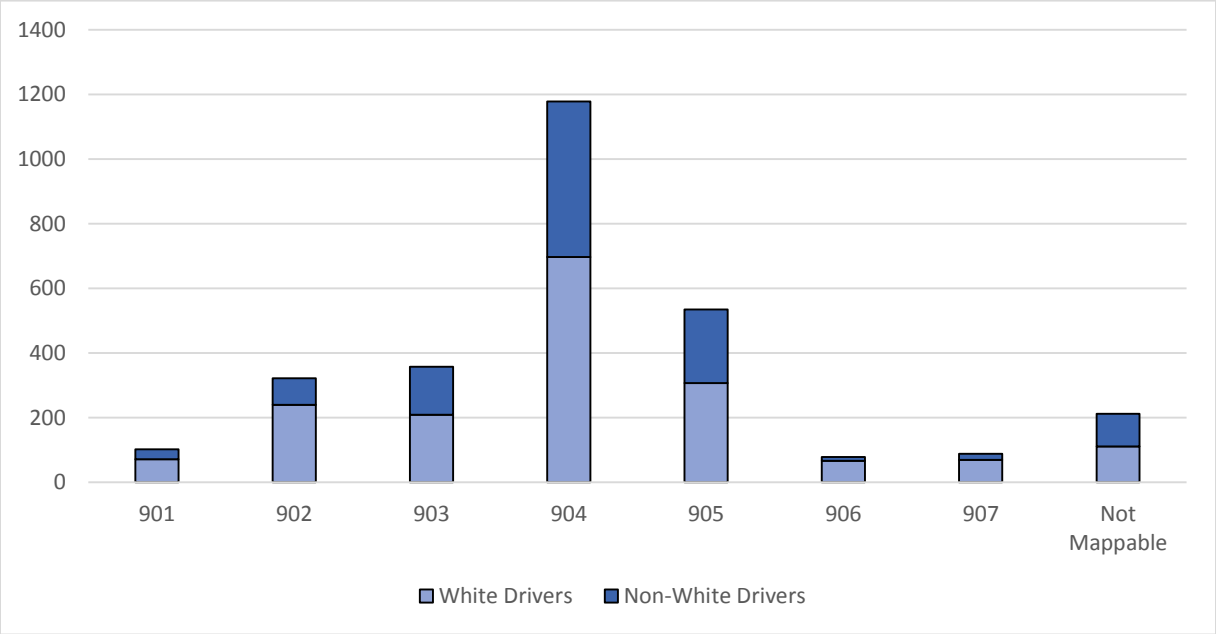



Figure 3.2 is a map of traffic stops made in Trumbull. The two census tracts that account for 59% of the traffic enforcement activity comprise 32% of the resident driving age population in Trumbull. Tract 904 is the larger of these two tracts with 18% of the town population. Two of the other most heavily populated census tracts in Trumbull (902 and 907) are located outside of this high enforcement activity core.

Trumbull's overall resident driving age population is 11% minority and 16% of all Trumbull residents who were stopped were minority. Resident minority drivers were stopped in five of the seven census tracts at a rate that exceeded their representation in the tract's resident minority driving age population.

**Figure 3.2: Traffic Stop Map**

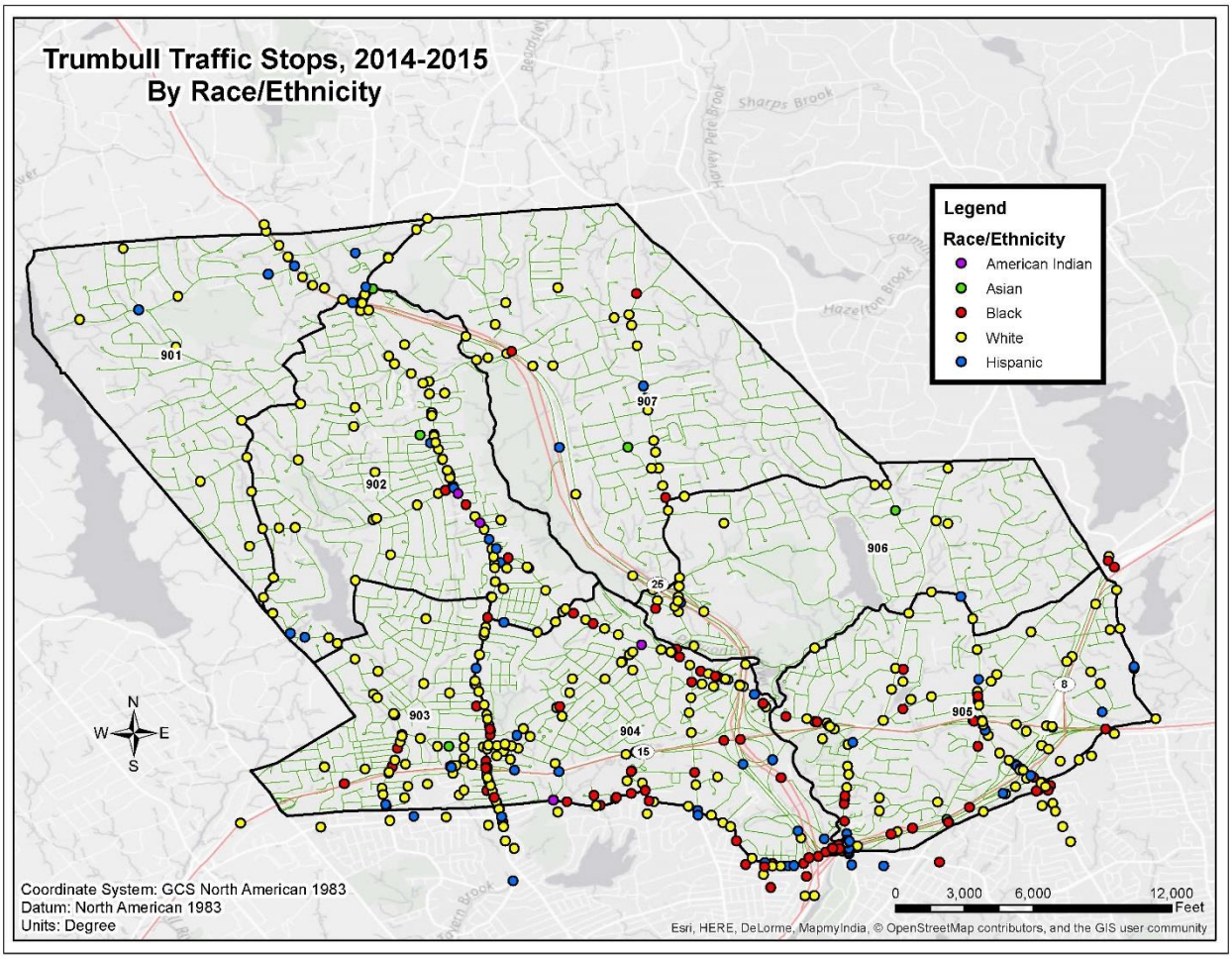
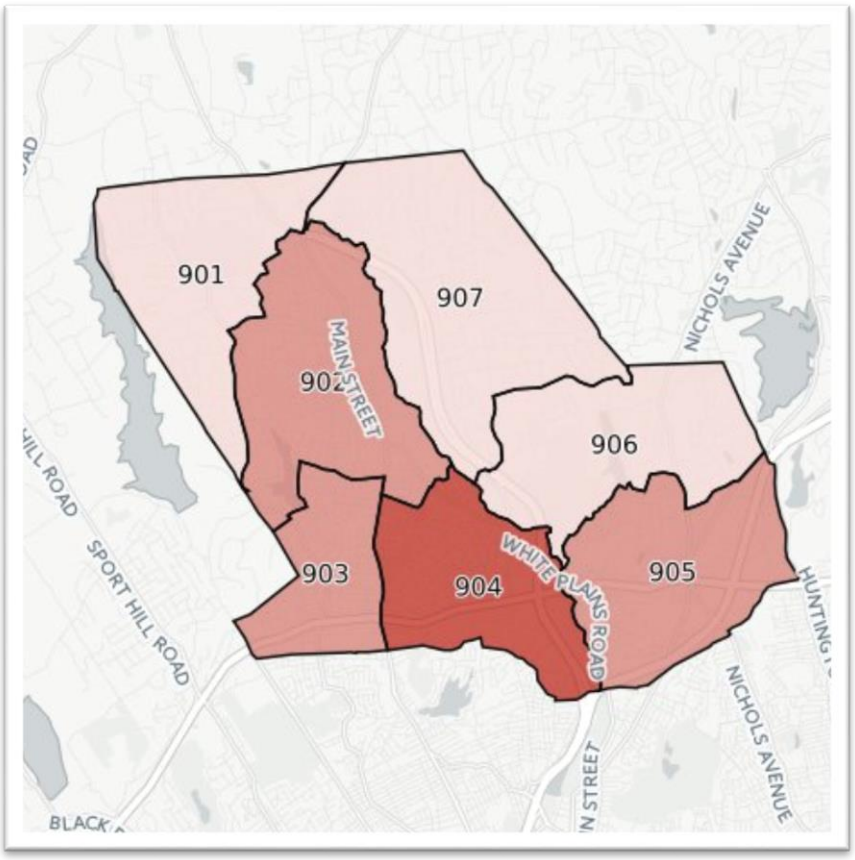



Figure 3.3 shows an additional way to view the high enforcement areas in Trumbull. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area (census tract 904) with more than 1,000 traffic stops. Group one includes 41% of all traffic enforcement in Trumbull. Group two (tracts 902, 903, and 905) consists of census tracts that had between 300 and 550 stops. . There were between 75 and 100 stops in each of the remaining census tracts that make up group three.

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**




## Traffic Stop Breakdown by Race/Ethnicity

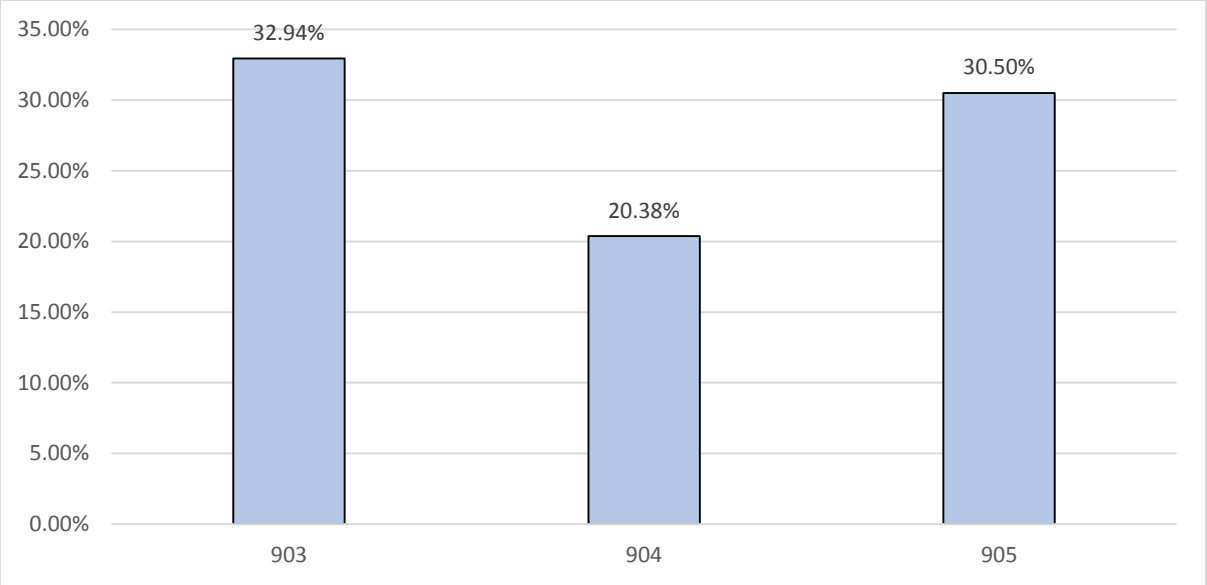
Minority drivers accounted for 38.4% of all the drivers stopped in Trumbull. Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. Trumbull's resident population age 16 and older is 11.3% minority. On its face, this might suggest a wide disparity in the proportion of minority drivers stopped during the study period. In one sense, this is true, comparing the 10% of the minority population in Trumbull with the close to 40% of stopped drivers who were minority. However, the racial and ethnic makeup of different areas of Trumbull varies significantly by census tract, so the disparities were more pronounced in some areas than others.

Specifically, three of the seven census tracts (903, 904, and 905) showed a higher percentage of minorities stopped than the town average of 38% minority stops. In these three census tracts the highest enforcement activity occurred in Trumbull, accounting for just over 72% of the stops made. These census tracts make up the southern portion of town and border six Bridgeport census tracts, three tracts in Stratford, and a small portion of a tract from Fairfield and Easton. The average minority population is 54% for the tracts in Bridgeport and Stratford that border this section of Trumbull.

Figure 4.1 shows the amount by which the minority stop disparity exceeded the resident minority driving age populations in census tracts 903, 904, and 905. In these three tracts with high enforcement activity, almost 83% of the minority drivers stopped were not Trumbull residents. The

non-residents were 45% white, 21% black, and 15% Hispanic. In contrast, the residents stopped in these tracts were 82% white, 9% black, and 6% Hispanic.

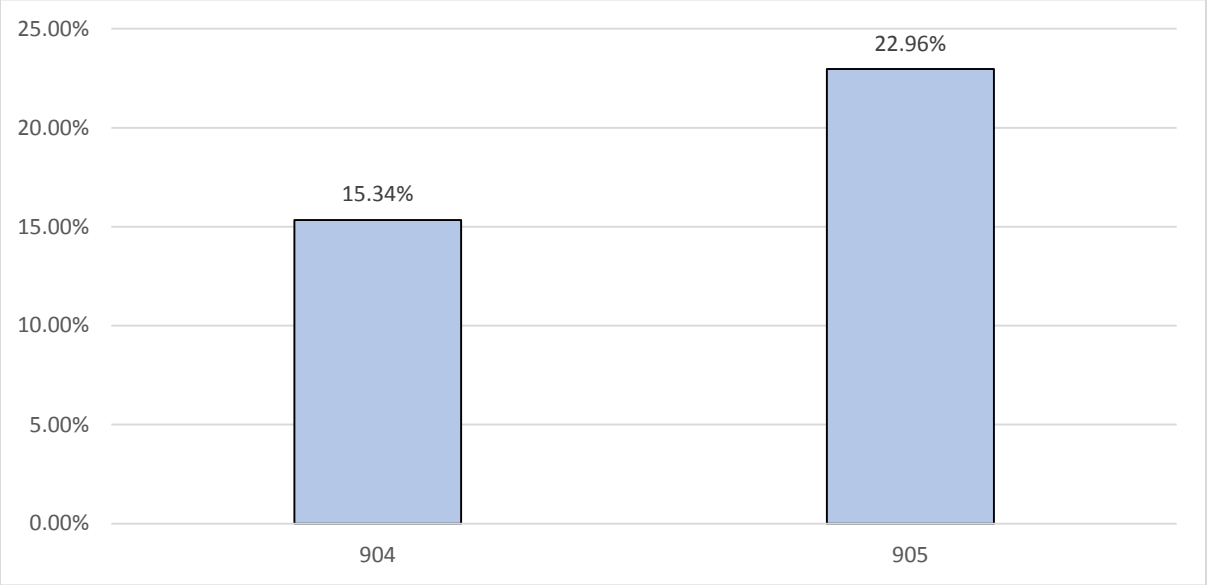
**Figure 4.1: Disparity Between Minority Drivers Stopped and Census Tract Population**




The overall percentage of Trumbull traffic stops involving black drivers was 20.4%. The percentage of black drivers who were stopped exceeded the town average in two of the seven census tracts (904 and 905), including two of the three high enforcement activity areas. The third high enforcement area, tract 903, was the exception among the three high enforcement areas with only 18% black driver stops, which was almost two percentage points below the town-wide average.

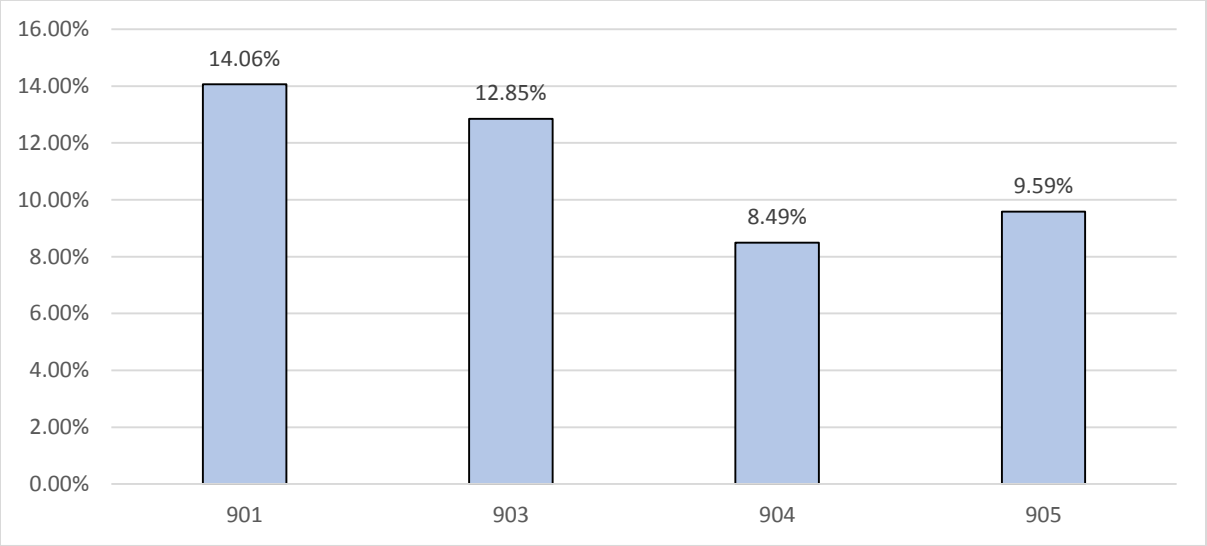
Figure 4.2 shows the proportion of black stops made in two of the seven census tracts where the percentage of black drivers stopped exceeded the town-wide average. As was the case for all minority drivers stopped in these two census tracts, there was a positive disparity above the resident black driving age population. The black driver disparity in tracts 904 and 905 was smaller than it was for all minority drivers in that tract.

**Figure 4.2: Disparity Between Black Drivers Stopped and Census Tract Population**




The overall percentage of Trumbull traffic stops involving Hispanic drivers was 15.1%. The percentage of Hispanic drivers stopped exceeded the town average in the same three census tracts (903, 904, and 905) highlighted in the previous figures as well as tract 901. Figure 4.3 shows the proportion of Hispanic stops made in these four census tracts compared to the proportion of Hispanic driving age residents living within those census tracts. There was a positive disparity above the resident Hispanic driving age population in all four census tracts.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Trumbull. These maps better illustrate where the concentration of black and Hispanic motor vehicle enforcement occurs. Black and Hispanic drivers are primarily stopped in the southern portion of town that borders Bridgeport and Stratford.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

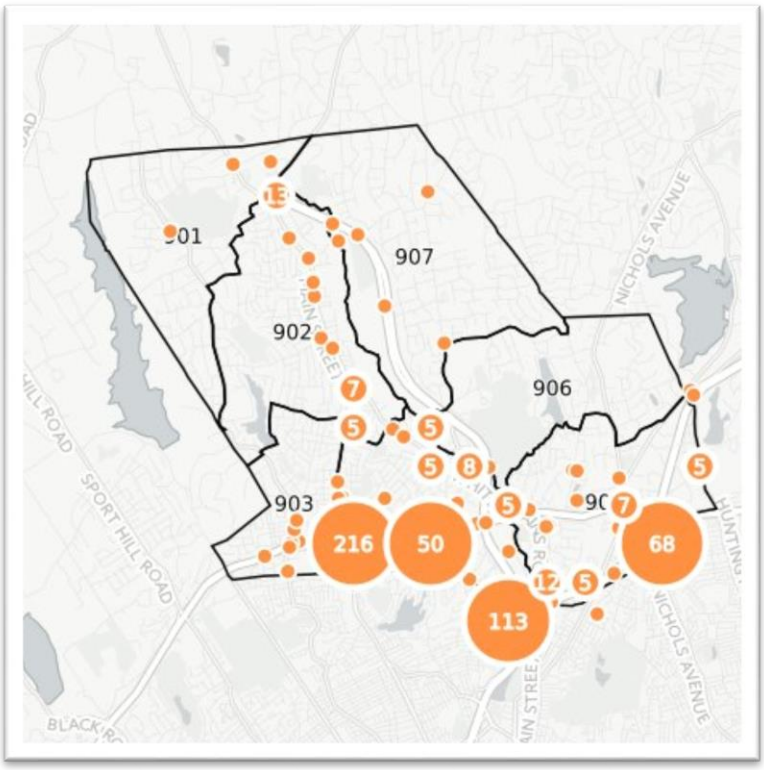
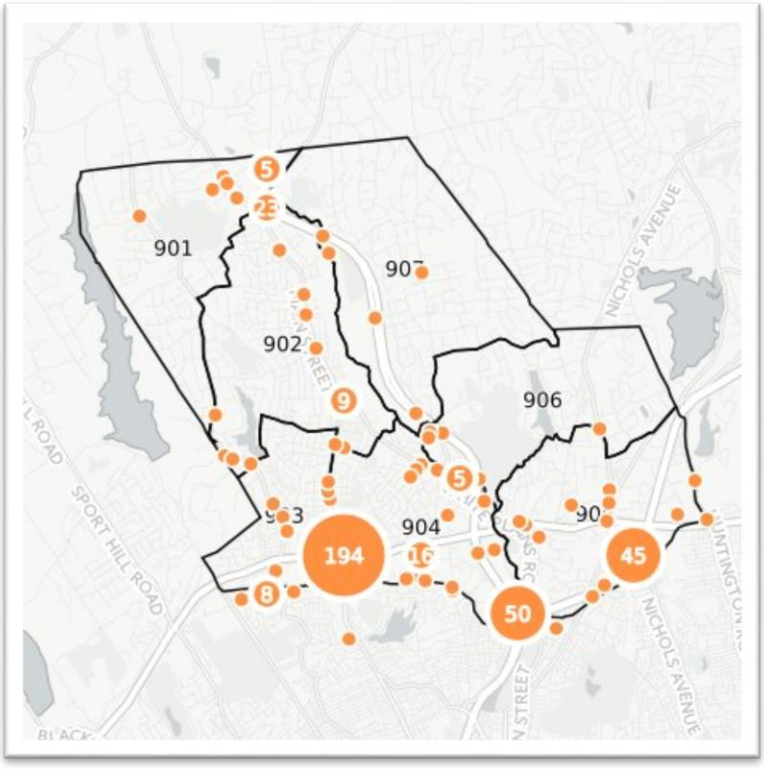



**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**



## Special Enforcement Campaigns

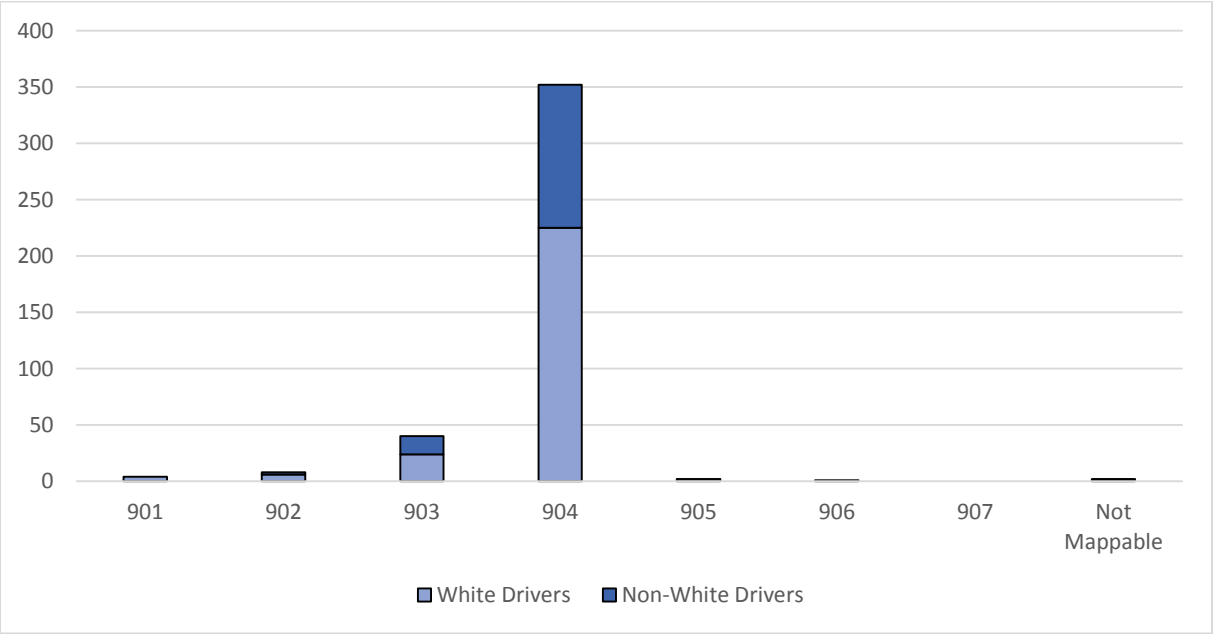
Trumbull participated in special enforcement campaigns that were sponsored by the Connecticut Department of Transportation (DOT) through funds made available from the National Highway Traffic Safety Administration (NHTSA). Trumbull reported a total of 1,053 motor vehicle stops as part of the NHTSA-funded campaigns. The Special Enforcement campaigns in which Trumbull participated focused on: (1) distracted driving and (2) drinking and driving violations. Of the 1,053 stops made as part of the enforcement campaigns, 409 were reported as part of the distracted driving campaigns and 644 were reported as part of the drinking and driving campaigns. Stops made during special enforcement campaigns accounted for 36.6% of all the stops made in Trumbull during the year.

When a town has participated in these enforcement campaigns and made a significant portion of its total traffic stops as part of them, it can add an additional dimension to analysis of the town's stop data because they can affect the overall data for the town in several ways. For example, 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 or not to ticket the violator. Imposition of penalty-based outcomes is one of the tenets for participation in these federally-funded programs. Stop demographics can also differ, particularly with respect to distracted driving campaigns which focus primarily, though not exclusively, on cell phone use. In general, cell phone stop demographics statistically tend to show higher proportions of female violators and lower proportions of minority drivers than is typical for other types of motor vehicle violations. Finally, the criteria for selection of locations to conduct selective enforcement could differ in some ways from the way stops are generally conducted. For example, effective distracted driving 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.

Distracted driving campaigns took place during the months of April and August of 2015. Of the 409 stops for this campaign, 249 occurred in April and 160 occurred in August. The majority (86%) of these stops occurred in census tract 904 with most of the rest occurring in census tract 903. In reality, virtually all of the distracted driving stops occurred in the same place, the extremely short segment of Main Street (Route 111) from the Route 15 interchange (Exit 48) south to the Bridgeport town line. This area is directly adjacent to the Westfield Shopping Mall and is a main access route to the mall. This section of road serves as the geographic border separating tracts 903 and 904.

Minority drivers accounted for 36% of the stops made as part of the distracted driving campaign. Records showed that 186 (45%) of these stops were part of an established spot check. Officers also recorded 73 stops as "blind," though this is likely the result of improperly interpreting the definition of a "blind" stop. Only 12 of the 409 stops made during the distracted driving campaigns were made for something other than a violation of the law prohibiting use of a hand held cell phone or other mobile electronic device while driving. Figure 5.1 illustrates the volume of traffic enforcement reported as part of a distracted driving campaign that occurred in each Trumbull census tract.

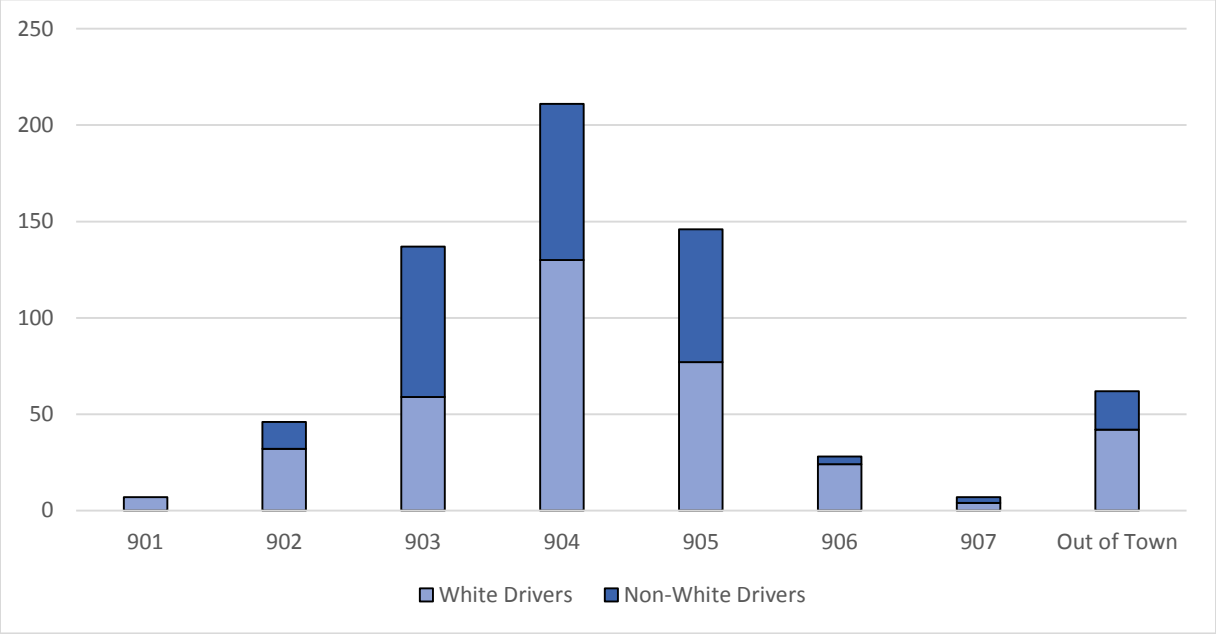
**Figure 5.1: Distracted Driving Campaign Stops by Census Tract**




Drinking and driving campaigns were usually around holidays and other major events such as the Super Bowl. Of the 645 stops for this campaign, 145 occurred in December around the Christmas holiday and 134 occurred around the Fourth of July holiday. The majority (76%) of these stops occurred in census tracts 903, 904, and 905. In tracts 903 and 905, minority drivers were stopped as a greater rate during DUI enforcement campaigns than all other times. In tract 903, 60% of drivers stopped during DUI enforcement were minority compared to only 30% during other times. In tract 905, 47% of the drivers stopped during DUI enforcement were minority compared to 41% during other times.

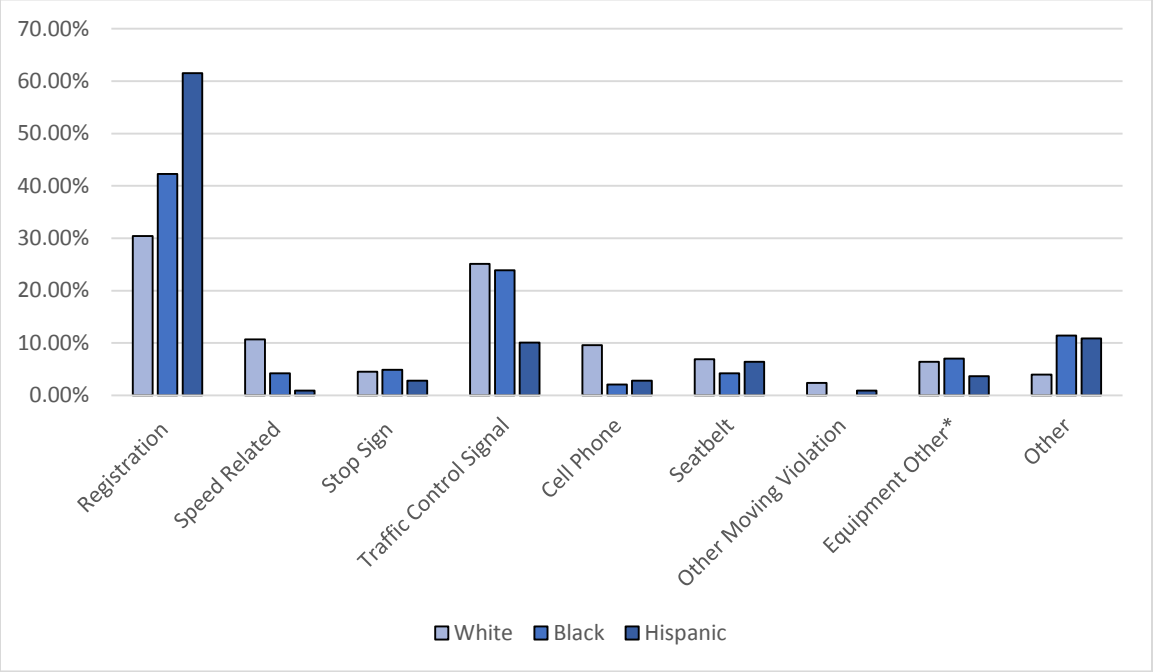
The data does not indicate that any of these stops were conducted as part of a DUI check-point, which would imply that they were conducted as part of a roving DUI patrol. Figure 5.2 illustrates the volume of traffic enforcement reported as part of a drinking and driving campaign that occurred in each Trumbull census tract.

**Figure 5.2: Drinking and Driving Campaign Stops by Census Tract**




Unlike the stops made during the distracted driving campaigns, almost all of which were made for use of a hand held cell phone or mobile electronic device, the stops made during the DUI enforcement campaigns were made for a variety of reasons. The highest percentage of the 644 drivers stopped during the DUI special enforcement campaigns was for registration violations (38%), followed by traffic light violations (22%), speeding violations (7.5%) cell phone violations (6.8%), and seatbelt violations (6.2%). Minority drivers were more likely than white drivers to be stopped for a registration violation. Of the 644 stops, two drivers were arrested for driving under the influence of alcohol. In addition, three drivers were found to have less than one-half ounce of a cannabis type substance and one driver was found to have drug paraphernalia to be used for less than one-half ounce of cannabis. Figure 5.3 outlines the initial reason for the motor vehicle stop that occurred during the DUI enforcement campaign.

**Figure 5.3: DUI Patrol Reason for Traffic Stop**




## Traffic Stop Distribution for Trumbull Officers

Trumbull's total of 2,876 traffic stops is comparable to those in other towns of its size. During the study period, traffic stop data was reported for 57 officers. The average number of stops made per officer was 51. Of the 57 officers reporting stops, 25 made fewer than 20 stops, 10 made between 20 and 50 stops, 14 made between 50 and 100 stops, and seven made over 100 stops. The seven most active officers making over 100 stops collectively accounted for 48% of all the Trumbull stops. Four of the seven Trumbull officers who made more than 100 stops were heavily involved in the Special Enforcement campaigns, accounting for two-thirds of all the stops made during these campaigns. The special enforcement stops accounted for between 70% and 91% of all the stops made by these four officers. This indicates the extent to which a relatively small portion of the officer force influenced Trumbull's stop data and further how significantly the stops made during special enforcement campaigns influenced the overall stop data .

## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department depending, among other things, on a department's overall philosophy on the purpose of traffic enforcement. We reviewed the statutory authority that Trumbull officers reported as the reason for stopping motor vehicles. The three most common reasons used for stopping a motorist in Trumbull account for over 55% of the total stops. The three largest stop categories were for registration violations (28%), cellphone violations (18%), and traffic signal violations (9%). 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-related and registration-related violations than white drivers as a percentage of their total stops.

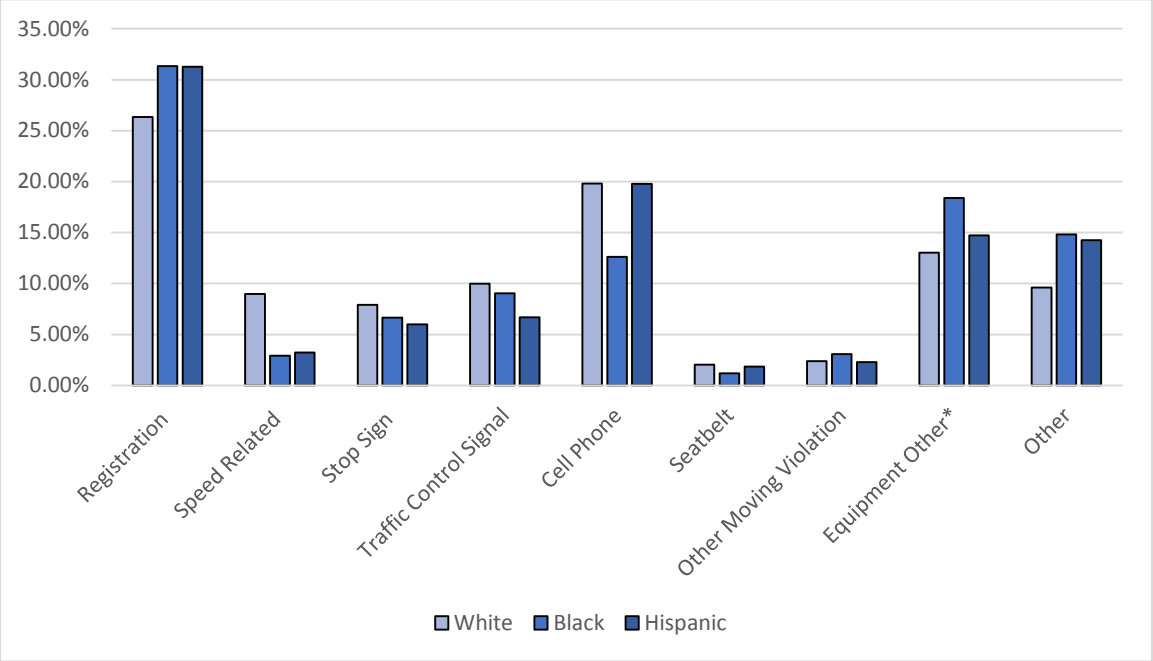
The data shows that, with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) are closely related to the frequency and location of where the stops are made. When 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.

The Trumbull data tends to confirm these observations. Of all the black driving age residents living in Trumbull, 89% live in census tracts 902, 904, and 905. These three tracts are also where 62% of all Hispanic driving age residents live. Just over 76% of equipment-related stops for lighting, plate display, and window tinting, which are fairly highly discretionary, were made in these three tracts. The demographics for these stops were 15% Hispanic drivers, 28% black drivers, and 54% white drivers. The other 24% of these stops were made outside of these three census tracts, where only 11% of the black driving age residents and 38% of the Hispanic driving age residents live. For those stops, the demographics were 11% Hispanic drivers, 15% black drivers, 75% white drivers.

The registration-related stops made in Trumbull showed a slightly different pattern. About 70% of the registration-related stops were made in the three census tracts with a high minority proportion of the population. The demographics for these stops were 15% Hispanic drivers, 23% black drivers, and 60% white drivers. Of the 30% of the registration-related stops that were made outside of these three high-minority population areas, 53% involved white drivers, 22% black drivers, and 21% Hispanic drivers. More than half of these registration-related stops were made in census tract 903. About 63% of the black and Hispanic drivers were stopped outside census tracts 902, 904, and 905.

These patterns seem to suggest that where these types of stops are made is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. Figure 6.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 6.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figures 6.2 and 6.3 are maps of traffic enforcement for safety-related motor vehicle stops and equipment-related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone or moving violations were labeled "safety-related" stops. Stops for defective lights, window tints, or display of plate were labeled "equipment-related" violations.

**Figure 6.2: Safety-Related Motor Vehicle Stops**

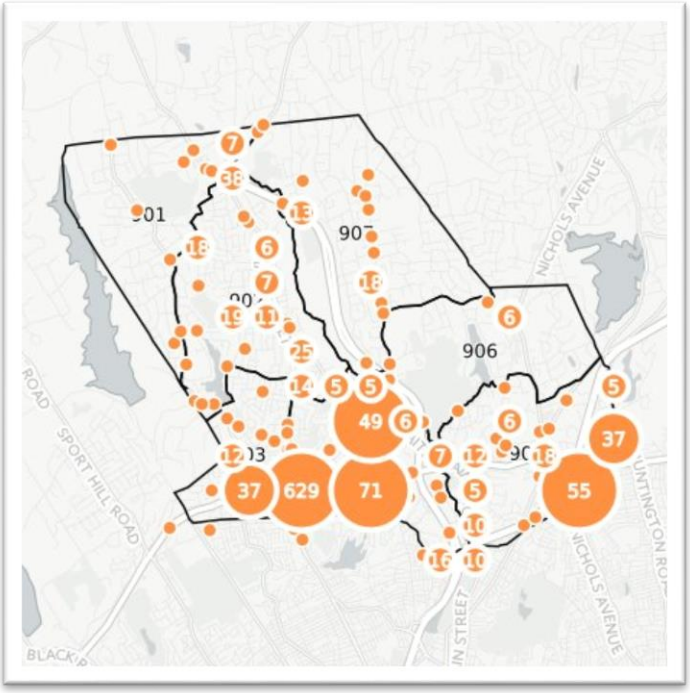
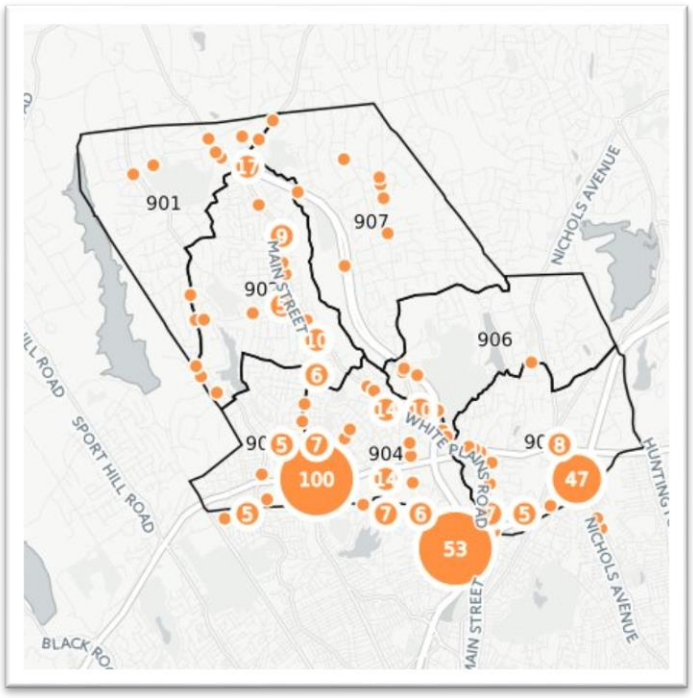


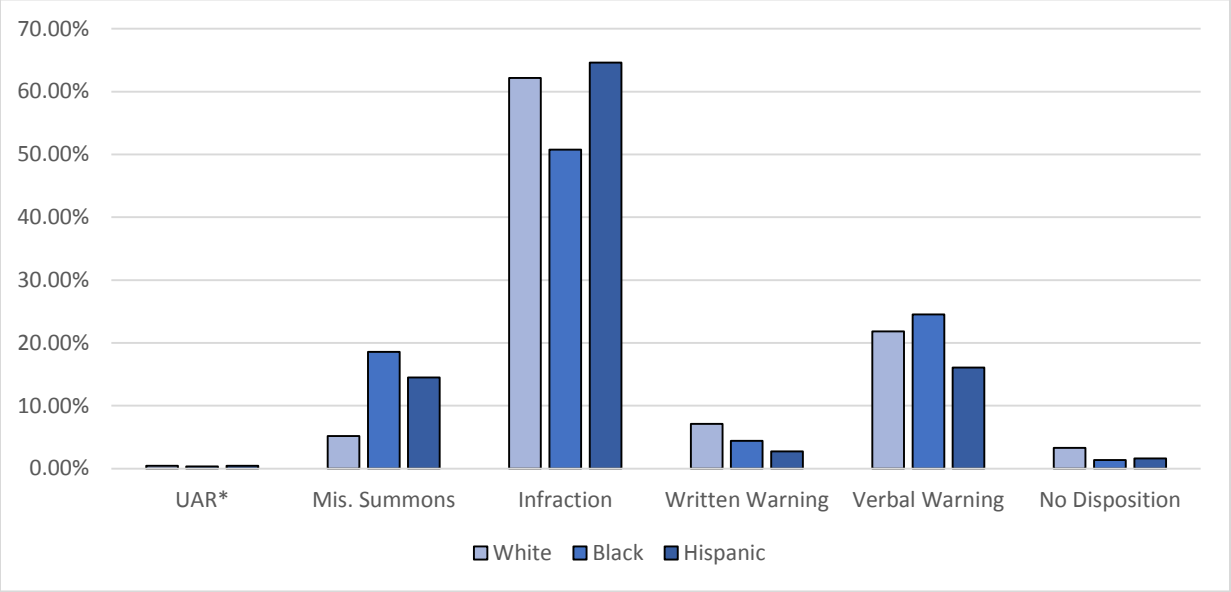
**Figure 6.3: Equipment-Related Motor Vehicle Stops**




The majority of motor vehicle stops in Trumbull resulted in the driver receiving an infraction (60%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. Black drivers were less likely to receive an infraction compared to white and Hispanic drivers, but slightly more likely to receive a verbal warning. A total of 266 of the traffic stops that were made resulted in issuing the driver a misdemeanor summons (9.2%). Black drivers were 3.5 times more likely to be issued a misdemeanor summons following a stop than were white drivers (18.5% of all black drivers stopped compared to 5.2% of all white drivers). Approximately, 14.5% of all the Hispanic drivers who were stopped in Trumbull were issued a misdemeanor summons. Figure 6.4 shows the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initial charge. This gives an analyst the data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge. Trumbull did not report the secondary statutory citation in 98 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine final misdemeanor charge.

**Figure 6.4: Outcome of Traffic Stop**




*Uniform Arrest Report

A review of department search information shows that 2.5% (72) of the drivers stopped in Trumbull were subjected to a motor vehicle search. The rate of motor vehicle searches is below the state's 2.9% average, and black drivers were searched at a rate slightly higher than white drivers, while Hispanic drivers were searched at a lower rate than white drivers. Given the relatively small number of searches conducted, these differences are not significant. Contraband was found at almost the same rate across all racial groups. Figure 6.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate"). Figure 6.6 is a heat map of the location of motor vehicle searches in Trumbull.

**Figure 6.5: Search and Hit Rate**

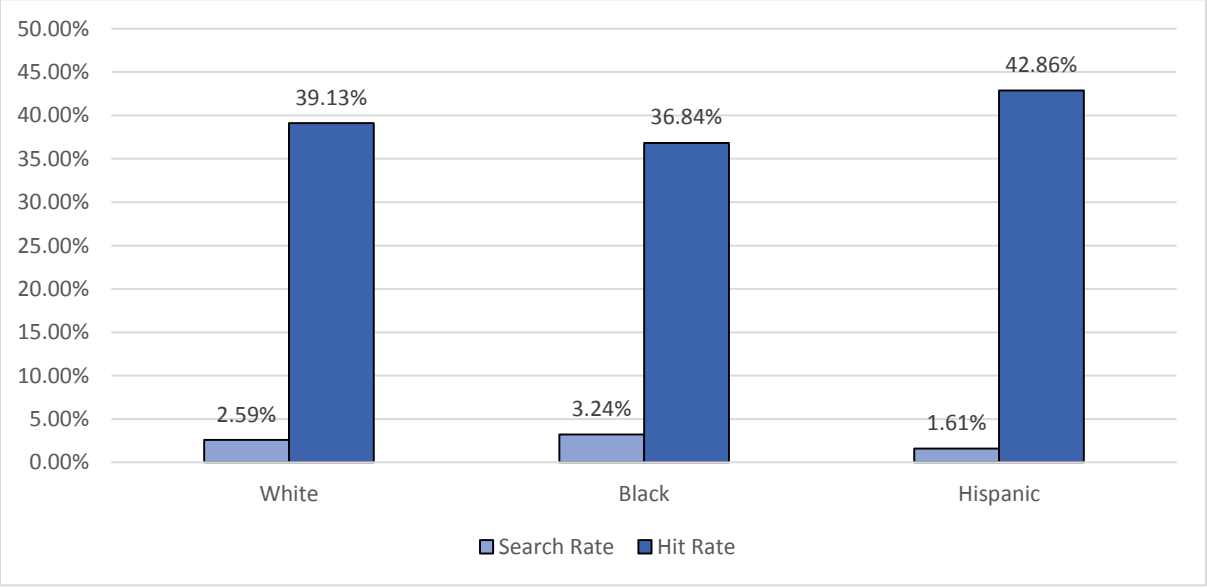
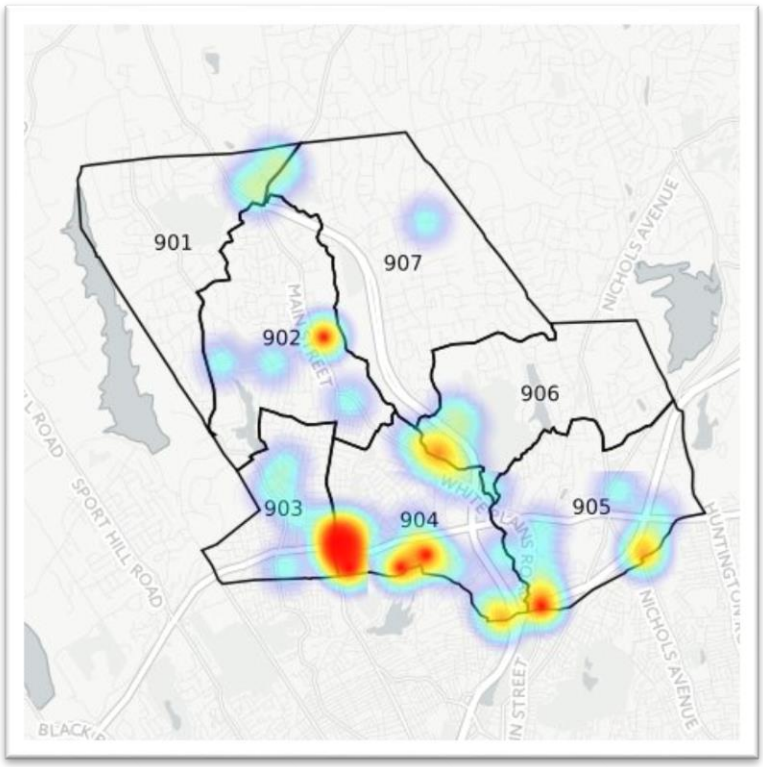


**Figure 6.6: Search Heat Map**




## Calls for Service

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. The department provided us with the dispatch log including calls for service and officer initiated actions that were called into police dispatch. The dispatch logs report 15,670 entries from October 1, 2014 through September 30, 2015, excluding traffic stops. Officers initiated 2,746 calls and 12, 799 incidents were called into the department. The top three reasons for calling dispatch were for an alarm, a medical call, or to check on a building and these account for 35% of all calls.

The largest volume of calls for service occurs in patrol district four with 22% of all calls, followed by district three with 19% of all calls. These two patrol districts make up the majority of the high traffic enforcement area in town. District three patrols the area that includes the mall. Shoplifting and larceny are two incidents that expected to be more prevalent in such an area. District three accounts for 86% of all shoplifting incidents and 46% of all reported larcenies.

## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates, or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with

Trumbull provide a context to potentially explain the rational for police deployments that are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 15,212 people work in Trumbull and its major employers include Unilever, Genesis Healthcare, Target Corporation, Cooper Surgical Inc., and Affinion Group. The vast majority of commuters traveling into Trumbull for employment are from Bridgeport, Stratford, Shelton, and Milford. The overall unemployment rate is 5.4%, which is below the unemployment rate for Fairfield County and the state.

The Westfield Shopping Mall is located in the southwest portion of Trumbull on the border of Bridgeport. It is located in census tract 903 near both Exit 48 of the Merritt Parkway (Route 15) to the north and the Bridgeport town line to the south. Census tract 903 is the third highest enforcement activity area in the town, due to a great extent to the mall's influence on calls for service and traffic accidents that on the mall property and the main approaches to it. Department of Transportation average daily traffic estimates for the Main street approaches to the mall are 25,200 vehicles at the Exit 48 ramp north of the mall and 20,900 vehicles at the Bridgeport border south of the mall. Average daily traffic estimates on Main Street north of Exit 48 range from 12,300 to 16,600 vehicles per day which indicates that a significant amount of the mall-induced traffic consists of vehicles exiting the Merritt Parkway at Exit 48 and traveling the short distance south to the mall and vehicles coming north on Route 111 from Bridgeport. About 17% of the reported accidents in Trumbull during the study period appeared to occur on the mall property itself and the Main Street and Madison Avenue approaches to the east and west of the mall. The majority of these accidents occurred on the mall property. The Trumbull Police Department indicated that the mall area is their largest single source of accidents.

According to data provided by the Westfield Shopping Mall, there are approximately 8.5 million visitors to the mall each year, and the main trading area has a population of 382,877. Over 93% of the visitors are over the age of 18 and it is estimated that 65% are white, 19% are black, and 22% are Hispanic.

In 2015, the crime rate in Trumbull was reported to be 245 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2014 Connecticut Uniform Crime Report[6], there were 884 reported crimes in Trumbull in 2015, 84% of which were larcenies. The three most reported crimes were larceny (746), burglary (82), and motor vehicle theft (24).

During our study period, there were approximately 867 motor vehicle accidents on roads patrolled by the Trumbull Police Department. Accidents were reported as occurring on a total of 132 roads. The roadways with the highest number of accidents were Main Street (Route 111) (186 accidents), White Plains Road (57 accidents), and Daniels Farm Road (50 accidents). There were only 20 roads with 10 or more accidents and those roads account for 77% of all accidents in Trumbull.

Figure 7.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Trumbull. While the vehicle crash rate tends to build fairly steadily

[6] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

throughout the day in Trumbull, it peaks during the afternoon period from 2:00 p.m. to 6:00 p.m. Figure 7.2 is a map siting the motor vehicle accidents that occurred during the study.

**Figure 7.1: Accidents Compared to Traffic Stops by Time of Day**

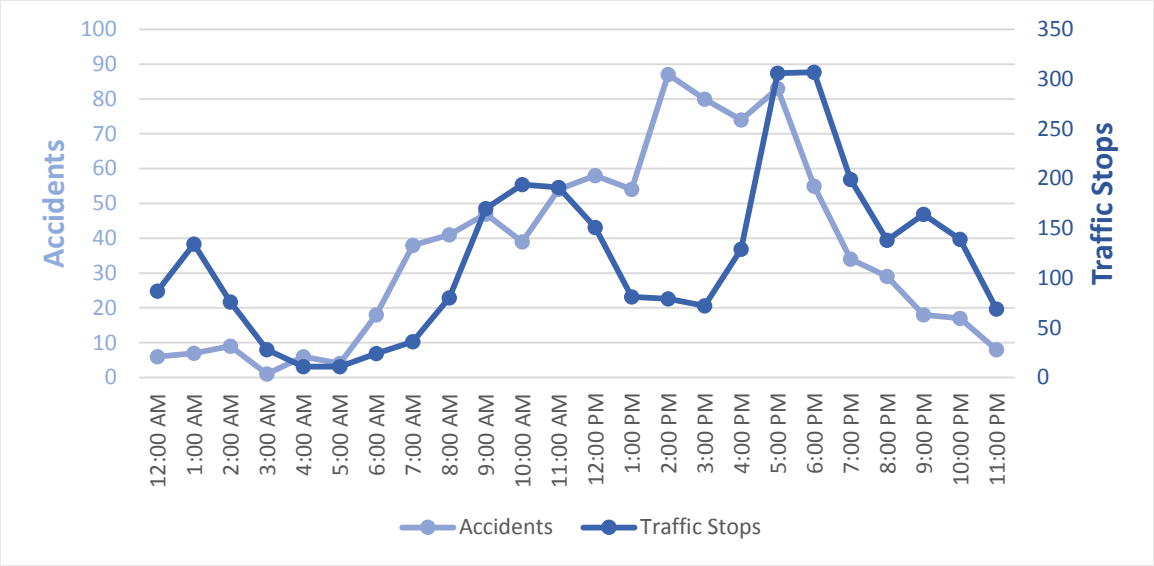
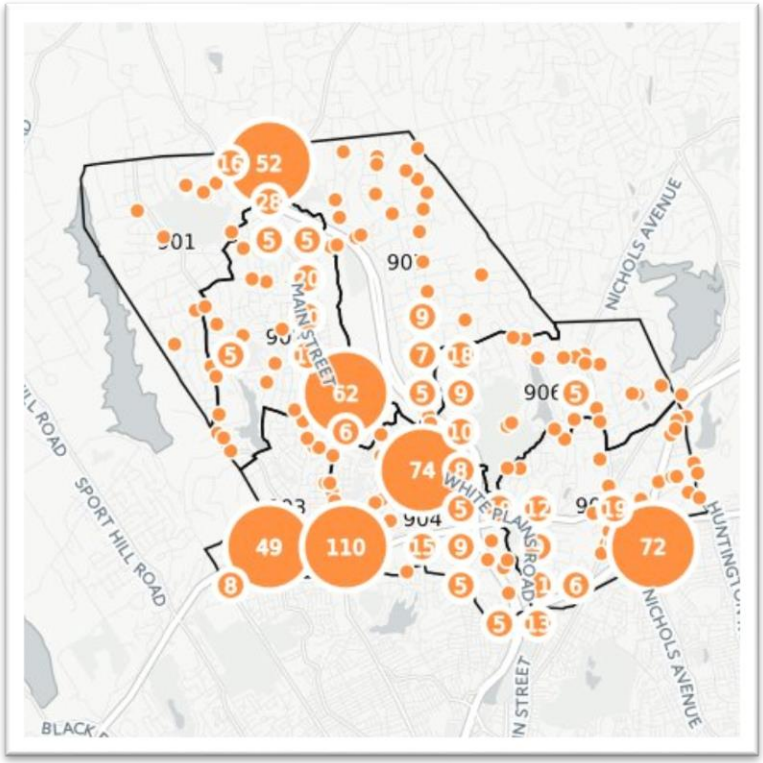



**Figure 7.2: Trumbull Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**



## Summary of Findings

Trumbull Police Department officials identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified areas with the highest call for service volume and areas with the highest levels of traffic as some of the same areas with the highest level of motor vehicle enforcement. They also indicated that the Westfield Shopping Mall has a large influence on the deployment of departmental resources both in terms of its general calls for service and as a significant source of traffic accidents. It appears that about 17% of Trumbull's traffic accidents during the study period occurred on the mall property itself and the nearby approaches to it. It is evident from the volume of traffic stops that occur in a relatively small geographic area that the department concentrates its resources in certain parts of town. Although calls for service data indicate that each of the five patrol districts receive a substantial number of calls, the districts that cover the high enforcement area also have the highest call volume.

Trumbull has a small non-white driving age population with about 5% Hispanic driving age residents and 2% black driving age residents. Almost 53% of all black and Hispanic residents live in two census tracts (904 and 905.) These two tracts also have a minority population above the town average of 11.2%. The larger tract (904) has close to double the minority resident population at 20.5%. Sixty percent of Trumbull's stops occur in these two tracts, with 24% of its stops involving black drivers and 16% of its stops involving Hispanic drivers. These areas border sections of Bridgeport and Stratford with large minority populations; and non-resident minority drivers comprise 38% of those who are stopped in these tracts.

Trumbull's traffic enforcement activity did not appear to be driven primarily by population concentrations; that is, the census tracts with the largest population concentrations do not all generate the highest levels of traffic enforcement. Census tract 902 has the largest resident population at 22%, but accounts for only 11% of traffic enforcement. The three census tracts with the highest level of enforcement (903, 904, and 905) account for 44% of the resident population, but 72% of the traffic enforcement. Non-residents accounted for 83% of the drivers stopped in the three high enforcement census tracts. Non-residents were less likely to be among those stopped in the two census tracts immediately to the north of the three high enforcement areas (in census tract 902, 11% of stops, 60% non-residents; and in census tract 906, 2.8% of stops, 66% non-residents).

On average, 80% of the drivers stopped in Trumbull were not town residents. This affects the size of the disparities in many of the census tracts to varying degrees. Stops involving non-residents occurred most often in the southern portion of Trumbull that borders Bridgeport and Stratford. Census tracts 903, 904, and 905 had an average of 81% non-resident motor vehicle stops and accounted for 75% of all non-residents stopped in the town. Of the non-resident drivers who were stopped, 44% were minority compared to only 16% of the residents stopped who were minority. Clearly, motor vehicle enforcement efforts concentrated in the census tracts that border Bridgeport and Stratford combined with the high rate of non-resident drivers stopped in those areas contributed significantly to the overall racial and ethnic disparity in Trumbull's traffic stop data.

While in many cases the non-resident component of stopped minority drivers may explain a significant portion of the disparities above the resident minority population, especially in tracts 903, 904, and 905 where the non-resident component of the stop totals were 80% or more, there are exceptions. In some cases, the disparities above the resident population persisted even after the non-resident stops were accounted for. In five of the seven census tracts, including the high enforcement

areas of tracts 903 and 905, the proportion of minority stops involving only Trumbull residents exceeded the resident minority driving age population. However, the disparity was only significant (greater than 10 percentage points) in census tract 903. In five of the seven census tracts, the resident-only stops for black drivers exceeded the resident minority driving population, but only tract 903 had a significant disparity. Hispanic residents were stopped in four of seven census tracts at a greater rate than the resident driving age population, but not in any significant way.

There were 206 drivers stopped outside the Trumbull town border. The drivers stopped outside the town's border account for 7% of all stops and 46% were identified as black or Hispanic. These drivers were stopped primarily in Bridgeport and 90% of them were not Trumbull residents. Though there could be a number of reasons for these stops, the most likely is that the violation was observed by the officer in Trumbull but the vehicle was pulled over after it crossed the Trumbull town line. The majority of drivers stopped in Bridgeport were stopped near census tracts 904 and 905 which reflects to a great degree the more frequent presence of police in these two census tracts. The percentage of minority drivers stopped out-of-town was consistent with the percentage of minority drivers stopped in census tracts 904 and 905.

Trumbull's high stop rate for minority drivers is not surprising given where it 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 towns.

In addition, Trumbull has 57 officers who made at least one traffic stop during the study period. The average stops made per officer was 51, but seven officers (12% of the officer force) accounted for 48% of all the traffic stops. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics. This appears to be the case in Trumbull and the effect may have been even more pronounced because four officers made over two-thirds of the stops conducted during the distracted driving and DUI Special Enforcement campaigns, circumstances that can be a common occurrence during special enforcement campaigns. Many of these stops were made in the areas where both resident and non-resident minority drivers were more likely to be present in the driving population because of the location of the Westfield mall and the two major expressway interchanges in the southern section of town.

*Traffic Stop Outcomes*

White non-Hispanic drivers were more likely than were either black or Hispanic drivers to be stopped for driver-related safety issues like speeding, cell phone, stop sign, traffic light, and seat belt violations as a percentage of their total stops. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 Trumbull, when these registration- and equipment-related stops were made in the three census tracts (903, 904, and 905) 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 showed 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.

With regard to stop outcomes, minority drivers were more likely to receive a misdemeanor summons, whereas white drivers were more likely to receive an infraction citation. Stops involving black drivers were less likely to result in an infraction citation than either white or Hispanic drivers but slightly more likely to result in a verbal warning.

Trumbull searched 2.5% of drivers it stopped, which was just below the state average of 2.9%. Black drivers were searched at a slightly higher rate than white drivers, while Hispanic drivers were searched at a lower rate. The rate of contraband found as a result of a vehicle search was only slightly greater for white and Hispanic drivers and above the state average for all drivers searched. The data suggests that although vehicle searches do occur, they do not seem to occur at a frequency that would impact the overall disparity identified in Trumbull's data.

*Conclusion*

The relative disparities in Trumbull appear to be due to three basic factors:

(1) the relatively high levels of enforcement normally in the southern areas of the town which have both the highest resident minority driving age populations and are most likely to have the relatively high proportions of non-resident minority drivers traversing them because of the proximity of relatively high minority populations in the bordering towns of Bridgeport and Stratford;
(2) the presence of two significant traffic magnets in the Westfield mall, which is directly adjacent to the Bridgeport border and generates both a considerable number of calls for service and vehicle crashes, and the interchanges of Routes 8 and 25, and Routes 15 and 25, both of which are very near to the Bridgeport and Stratford borders and draw significant traffic from those communities; and
(3) the layering of a significant number of additional stops conducted as part of the federally-funded Special Enforcement campaigns in addition to the high number of stops already performed in these same areas.

High levels of traffic enforcement in the southern portions of Trumbull tend to mirror the higher number of calls for service in that part of town but tend to correspond to accidents less directly, except in and around the area of the Westfield mall. In a few areas of the town with a significant number of vehicle crashes, such as the location where the Route 25 expressway ends and merges with Main Street (Route 111) there are somewhat lower levels of traffic enforcement activity.

While white drivers are more likely to be stopped in Trumbull 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 and registration violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the three high enforcement census tracts, where both resident and non-resident minority drivers are likely to be among the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violate these laws with any greater frequency than white drivers.

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

(1) review its traffic enforcement policies in tracts 903, 904, and 905 to evaluate the extent to which they may have a disproportionate effect, particularly with respect to black drivers; and
(2) evaluate both the location and frequency of use of stops that involve equipment-related motor vehicle violations to better understand the impact they may be having on minority drivers.

It is also recommended that department administrators remind Trumbull officers that the statutory reason why a misdemeanor summons was issued for stops that were made for infraction violations must always be entered as part of the data submission so that these outcomes may be tracked more accurately.

## I.B (7): WEST HARTFORD FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary data for reported traffic stops in West Hartford over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 5,396 | 65.6% | 5,396 | 62.5% |
| Black Non-Hispanic | 1,204 | 14.7% | 1,277 | 14.8% |
| AsPac Non-Hispanic* | 200 | 2.4% | 262 | 3.0% |
| AI/AN Non-Hispanic** | 24 | 0.3% | 177 | 2.1% |
| Hispanic | 1,397 | 17.0% | 1,527 | 17.7% |
| Total | 8,221 | | 8,639 | |

*Asian Pacific Non-Hispanic
** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the West Hartford Police Department made a total of 8,639 traffic stops. Of these, 38% were minority stops, of which 18% were Hispanic drivers and 15% were black drivers. Based on the *Veil of Darkness* analysis, t minority motorists across all racial and ethnic groups were more likely to have been stopped during daylight relative to darkness. The results were robust to the inclusion of a variety of controls and sample restriction that excluded equipment violations. The synthetic control analysis also produced statistically significant results but the disparity did not meet the threshold of ten percentage points and was not highlighted in that requisite section. The post-stop analysis did, however, reveal that minorities were also searched significantly more frequently than Caucasian motorists. The results of these analyses indicated that further investigation into the source of the observed statistical disparity in West Hartford was warranted to determine the factors that may have caused these disparities.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the West Hartford 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. West Hartford was able to supply latitude and longitude coordinates that allowed accurate mapping of almost all of its stops.

According to the 2010 census, West Hartford is a town with approximately 48,814 residents over the age of 16. Approximately 20% of the driving age population in West Hartford is identified as a minority. Figure 1.0 outlines the basic demographic information for West Hartford residents over age 16.

**Figure 1.0: West Hartford Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 38,833 | 79.6% |
| Black Non-Hispanic | 2,416 | 5.0% |
| AsPac Non-Hispanic | 3,299 | 6.8% |
| Hispanic | 4,266 | 8.7% |
| Other | 0 | 0.0% |
| Total | 48,814 | |

The U.S. Census Bureau divides West Hartford into seventeen census tracts. The resident driving age population in each tract varies from about 1,600 to 5,000 people with the largest concentration of people (10% of the total population) in tract 4969. The racial breakdown in each census tract varies, from a high of over 64% minority driving age residents in Census tract 4961 to a low of 0% in tracts 4965 and 4976. Figure 2.1 is a map that outlines the boundaries of West Hartford census tracts, which will be referred to throughout this report. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: West Hartford Census Tract Map**

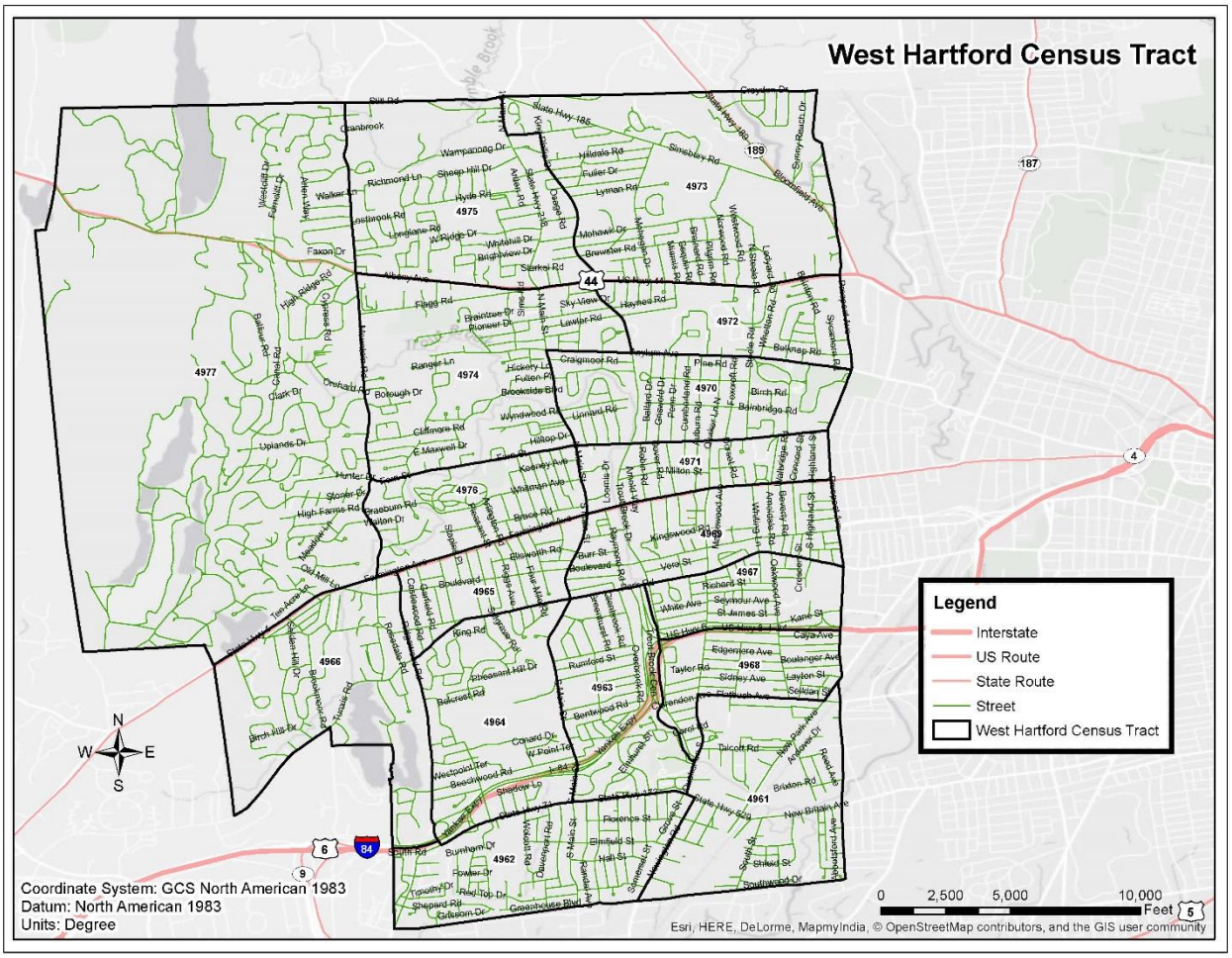
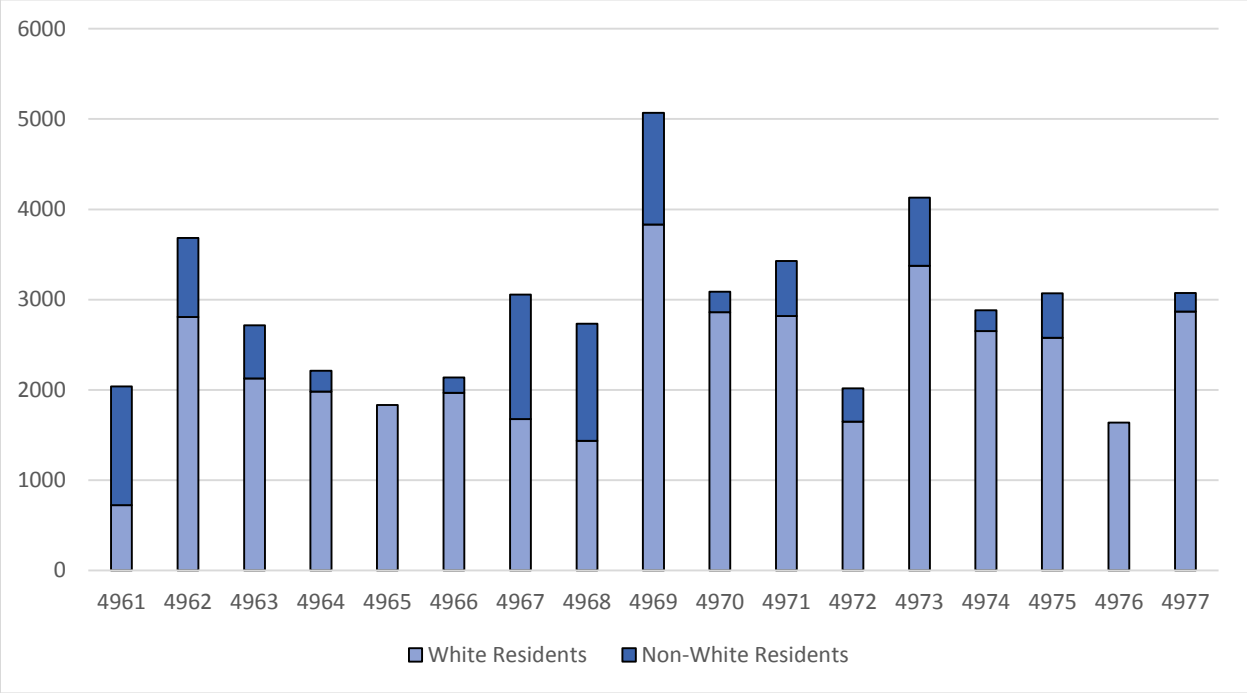


**Figure 2.2: Age 16 and Older Resident Population by Census Tract**




Six other municipalities border West Hartford, including Hartford which is adjacent to the east, Bloomfield to its north, Avon and Farmington to its west, and Newington and New Britain to its south. Avon, Farmington and Newington are all predominately white demographically with an average driving age white population of 87.7% (compared to West Hartford's white driving age population of 79.5%). However, Hartford, New Britain and Bloomfield have an average white driving age population of 37.6%. Of the drivers stopped in West Hartford, 18% were West Hartford residents and 82% lived elsewhere.

West Hartford is 22 square miles in area. There are nine major roadways that run through West Hartford including US 44, I-84, Route 9, Route 4, Route 71, Route 173, Route 185, Route 189, and Route 218. Interstate 84 runs from west to east through the southern portion of West Hartford, while Route 44 runs through the northern portion of West Hartford. In addition, the Westfarms shopping mall is on the border of West Hartford and Farmington. In recent years large areas of the community have seen a significant transformation, including the opening of Blue Back Square in 2007. Blue Back Square has significantly altered West Hartford Center and made it a regional dining and shopping destination.

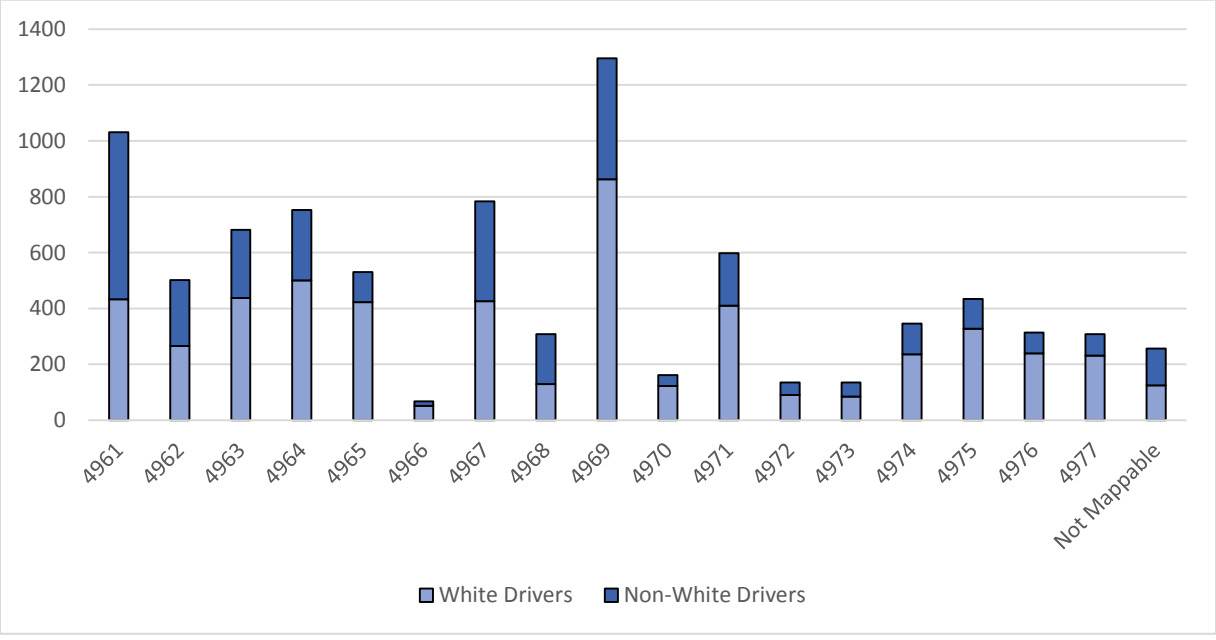
West Hartford identified three units that conduct the majority of the traffic enforcement in town: the patrol division, traffic division, and community interaction team (CIT). The patrol division has district boundaries established for a 10-district plan or an 8-district plan. The patrol division operates three shifts per day (squads A, B, and C). Squads A and B operate from the 10-district plan, while Squad C operates from the 8-district plan. Since July 2014, the department added a car on the midnight shift on Thursday, Friday, and Saturday evenings. This extra car was assigned to primarily focus on West Hartford Center. The traffic division is made up of eight officers who are deployed Monday through Saturday on two shifts which operate from 6:30 AM until 10:30 PM. On Sunday, the traffic division works a limited schedule from 10:00 AM to 6:00 PM. There are no set districts for the traffic division

to operate. The CIT is a five-member unit designed to address specific neighborhood issues such as car break-ins, burglaries, vandalism, etc. This unit makes a lot of the self-initiated drug arrests in town. They are deployed in three vehicles and work the day shift on Tuesday and Wednesday and the evening shift on Thursday, Friday, and Saturday. The CIT unit is typically assigned to work in the same districts that correspond to the high enforcement census tracts bordering Hartford (Districts 8, 9, and 10).

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each West Hartford census tract. A large percentage of traffic enforcement activity occurred in the southern portion of West Hartford in the census tracts that border Hartford. Census tracts 4969 and 4961 are the two highest enforcement areas and account for 27% of all enforcement. There are several main roadways that appear to contribute to a large percentage of traffic enforcement including New Britain Ave., Route 44, Prospect Ave., and Main Street. The three high enforcement activity areas are the center of town, New Britain Ave., and the census tracts bordering Hartford.

The southeast section of West Hartford is made up of four census tracts (4961, 4967, 4968, and 4969) and accounts for 40% of all traffic enforcement. These four census tracts have an average minority driving age population of 45%. These census tracts border four census tracts in Hartford which have an average minority driving age population of 76%. The average percent of minority drivers stopped in these four census tracts was 49%. As you move away from the southeastern census tracts that border Hartford, the demographics and volume of traffic stops change. For example, census tracts 4966, 4970, 4972, and 4973 account for less than 6% of the total stop activity and 23% of the town population. The average percent of minority drivers stopped in these four census tracts was 29%.

**Figure 3.1: Traffic Stops by Census Tract**




West Hartford's overall resident population is 20% minority. Of the drivers who were stopped, 30% who were West Hartford residents were minority while 39% of the non-resident drivers were minority. Resident minority drivers were stopped in 16 of the 17 census tracts at a rate that exceeded their representation in the localized minority driving age population in the tract.

Figure 3.2 is a map of traffic stops made in West Hartford. The majority of drivers stopped in West Hartford (82%) were not residents of the town. The five census tracts that account for 53% of the traffic enforcement activity make up 31% of the resident population in West Hartford. Census tract 4969 has the largest resident population (10%) and the highest level of traffic enforcement (15%). The five census tracts with the highest enforcement levels account for 54% of all out of town resident stops in West Hartford.

**Figure 3.2: Traffic Stop Map**

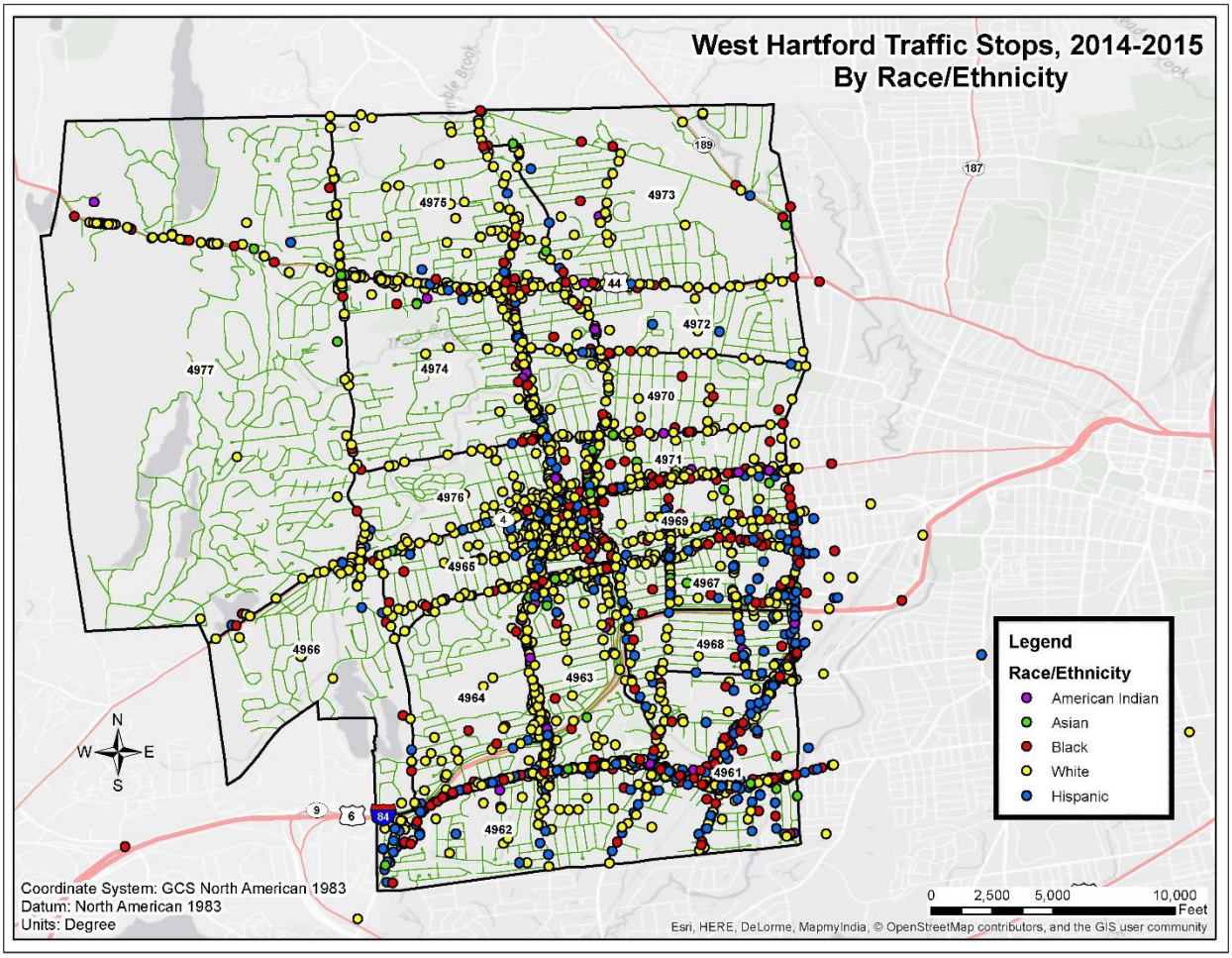
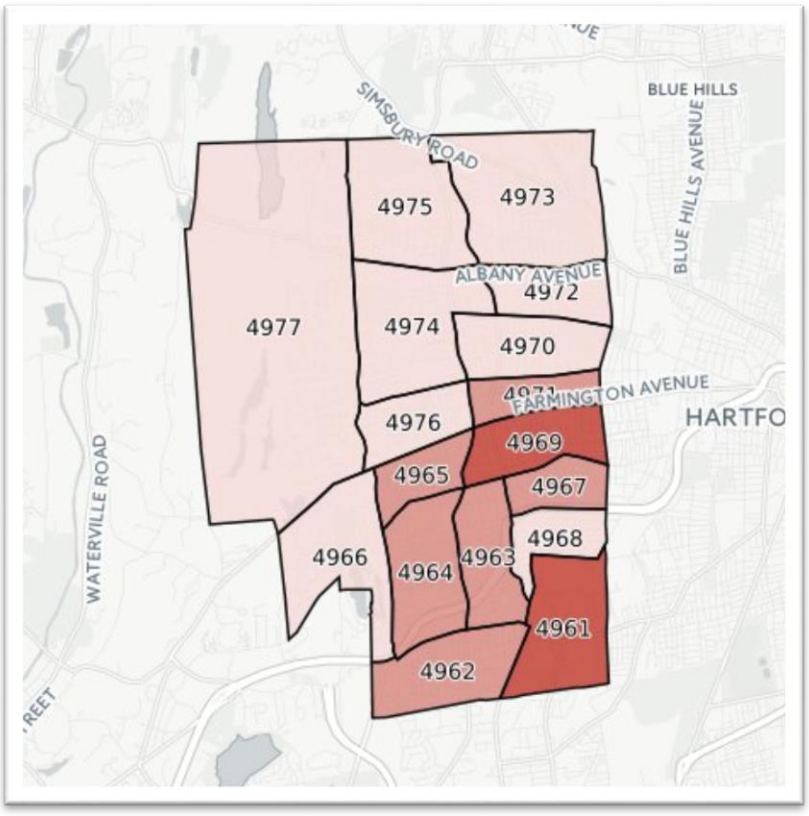



Figure 3.3 shows an additional way to view the high enforcement areas in West Hartford. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area with two census tracts (4961 and 4969) that have over 1,000 traffic stops each. Group one includes 26% of all traffic enforcement in West Hartford. Group two consists of census tracts that had between 500 and 800 stops. Group two includes tracts 4962, 4963, 4964, 4965, 4967, and 4971. There were between 65 and 400 stops in each of the remaining census tracts that make-up group three.

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**



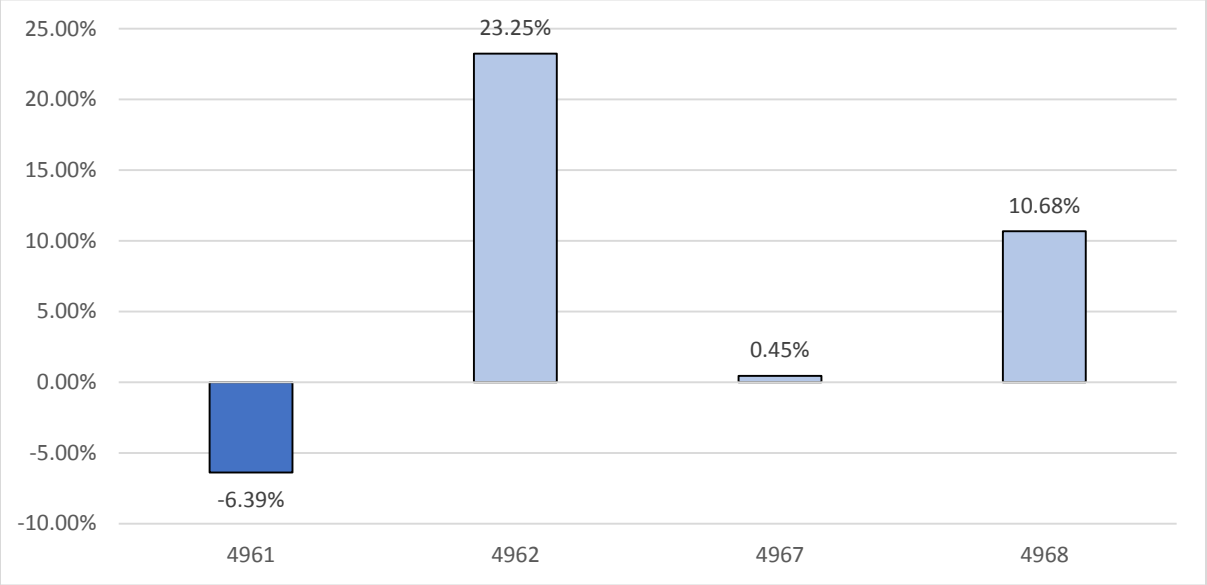

## Traffic Stop Breakdown by Race/Ethnicity

Minority drivers accounted for 38% of all the drivers stopped in West Hartford. Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. The resident population age 16 and older in West Hartford is 20% 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; however, the racial and ethnic makeup of different areas of West Hartford vary significantly by census tract, so the disparities were more pronounced in some areas than others.

Specifically, four of the 17 census tracts (4961, 4962, 4967, and 4968) showed a higher percentage of minorities stopped than the town average of 38%. These four census tracts account for 30% of the total traffic enforcement in town. They make up the southern and southeastern section of town that borders two census tracts in Newington and three census tracts in Hartford. The average minority population is 16% for the tracts in Newington and 81% for the tracts in Hartford that border this section of West Hartford.

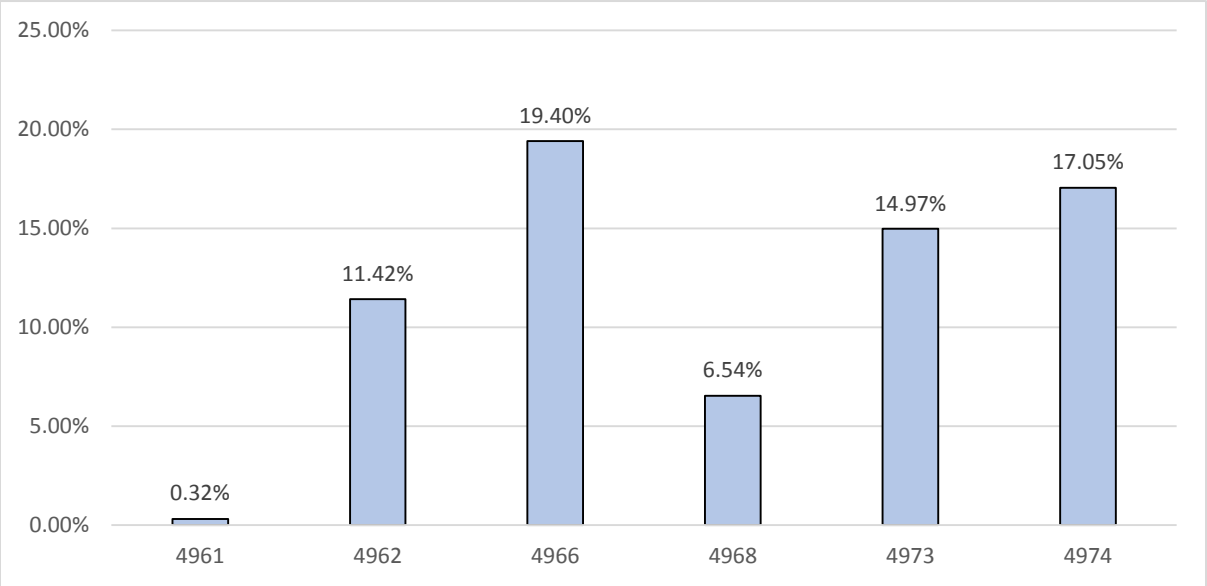
Figure 4.1 shows the amount by which the minority stop disparity exceeded the localized minority driving age populations in census tracts 4961, 4962, 4967, and 4968. Minority drivers were stopped at a higher rate than their population in three of the four census tracts. That being said, almost 85% of the drivers stopped in these four tracts were not West Hartford residents. The non-residents were 48% white, 18% black, and 31% Hispanic. In contrast, the residents stopped in these tracts were 49% white, 15% black, and 27% Hispanic.

**Figure 4.1: Disparity Between Minority Drivers Stopped and Census Tract Population**




The overall percentage of West Hartford traffic stops involving black drivers was 15%. The percentage of black drivers stopped exceeded the town average in six of the 17 census tracts (4961, 4962, 4966, 4968, 4973, and 4974), including three of the four high enforcement activity areas. Figure 4.2 shows the amount by which the black stop disparity exceeded the localized black driving age populations in these six tracts. There was a positive disparity above the localized black driving age population in all six tracts, but most pronounced in 4962, 4966, 4973, and 4974. It is worth noting that 83% of the drivers stopped in these six census tracts were not residents of West Hartford.

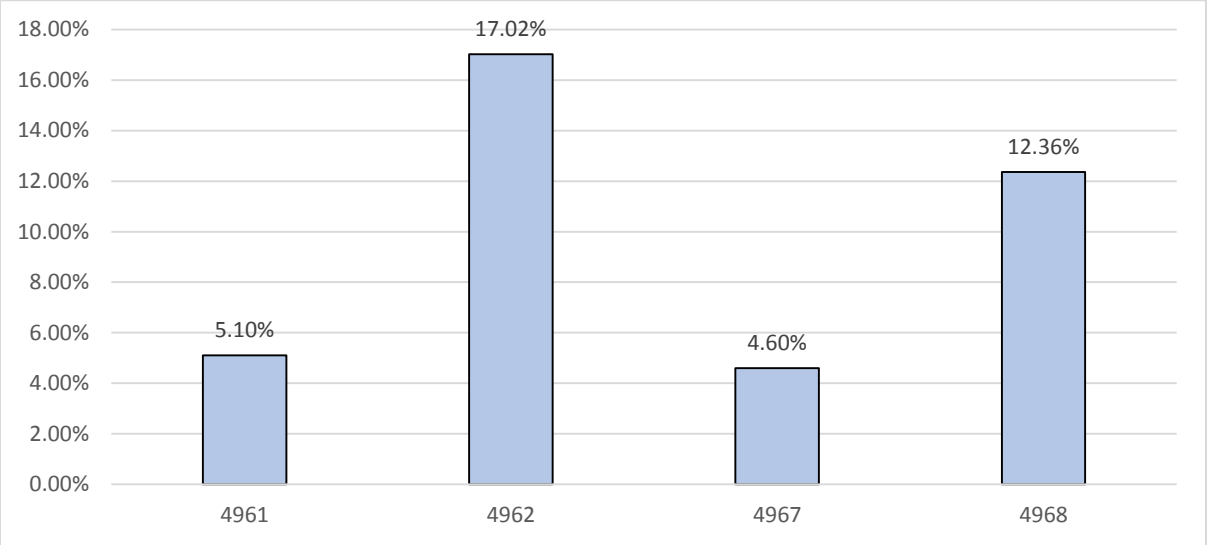
**Figure 4.2: Disparity Between Black Drivers Stopped and Census Tract Population**




The overall percentage of West Hartford traffic stops involving Hispanic drivers was 18%. The percentage of Hispanic drivers stopped exceeded the town average in the same four census tracts

(4961, 4962, 4967, and 4968) highlighted in the previous figures for all minority drivers. Figure 4.3 shows the proportion of Hispanic stops made in these four census tracts compared to the proportion of Hispanic driving age residents living within those census tracts. There was a positive disparity above the localized Hispanic driving age population in all four census tracts.

**Figure 4.3: Disparity between Hispanic Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in West Hartford. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs. Black and Hispanic drivers are primarily stopped in the southeast section of town that borders Hartford. Stops also occur on New Britain Avenue and through the center of town.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

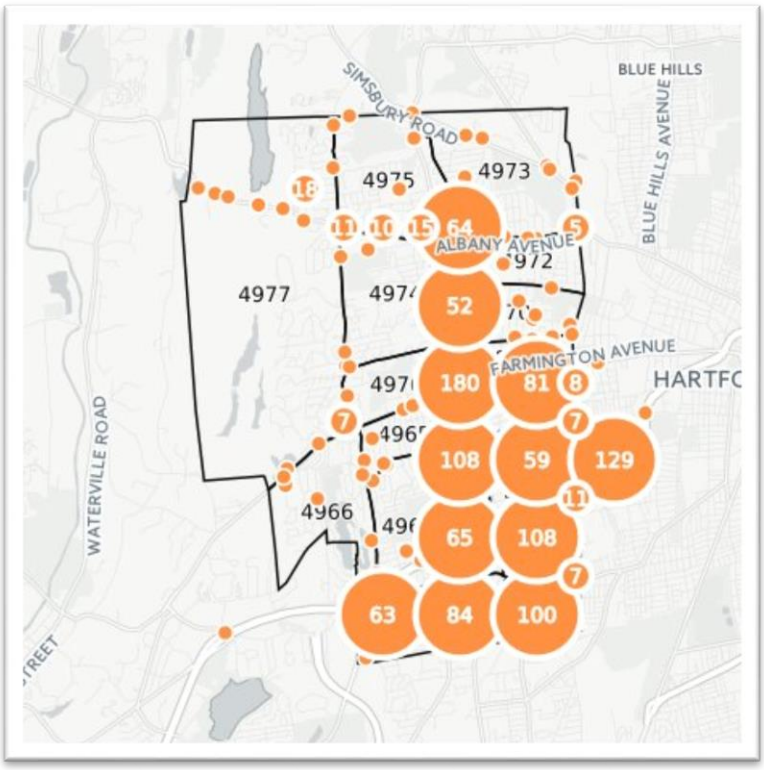
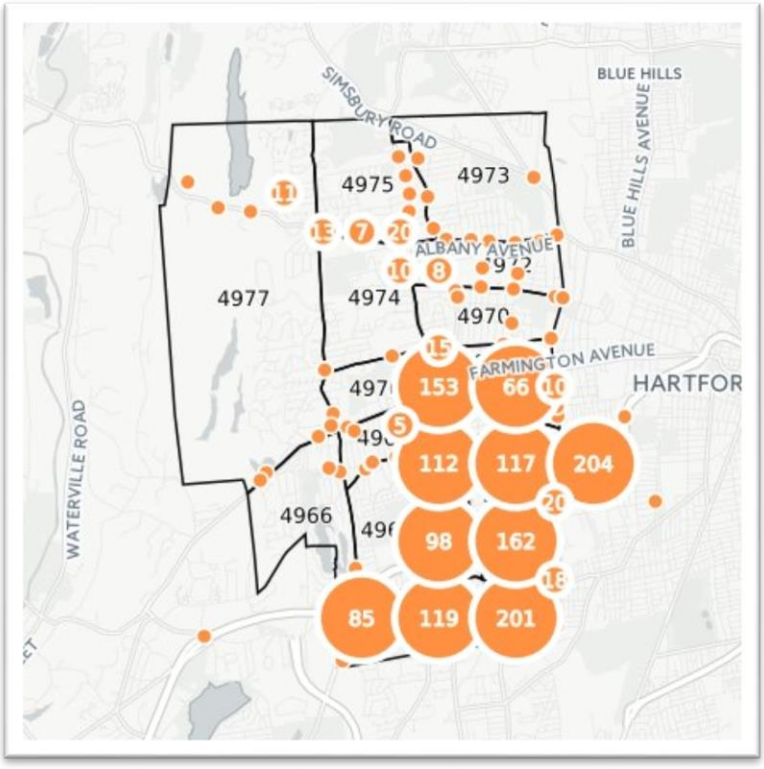



**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**



## Special Enforcement Campaigns

West Hartford participated in special enforcement campaigns that were sponsored by the Connecticut Department of Transportation through funds made available by the National Highway Traffic Safety Administration (NHTSA). West Hartford reported a total of 2,105 stops as part of the NHTSA-funded campaigns. The Special Enforcement campaigns in which West Hartford participated focused on (1) distracted driving, (2) drinking and driving, and (3) seatbelt safety ("Click-It or Ticket"). The West Hartford Police Department was able to identify only the dates, times and basic stop information for special enforcement campaigns. They provided the locations for all check-points established during the campaign. The case numbers for each stop were not available to match to the traffic stop database.

Of the 2,105 stops made as part of the enforcement campaigns, 1,029 were reported as part of distracted driving campaigns, 969 were reported as part of drinking and driving campaigns and 107 were part of "Click-It or Ticket" campaigns. Stops made during special enforcement campaigns accounted for 24% of all stops made in West Hartford during the study period. When a town has participated in these enforcement campaigns and made a significant portion of its total traffic stops as part of them, it can add an additional dimension to analysis of the town's stop data because they can affect the overall data for the town in several ways. For example, 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 or not to ticket the violator. Imposition of penalty-based outcomes is one of the tenets for participation in these federally-funded programs. Stop demographics can also differ, particularly with respect to distracted driving campaigns which focus primarily, though not exclusively, on cell phone use. In general, cell phone stop demographics statistically tend to show higher proportions of female violators and lower proportions of minority drivers than is typical for other types of motor vehicle violations. Finally, the criteria for selection of locations to conduct selective enforcement could differ in some ways from the way stops are generally conducted. For example, effective distracted driving 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

The "Click-It or Ticket" campaigns took place in November 2014 and May 2015. In November 2014, there were checkpoints set up on three separate days (11/25, 11/26, and 11/29) on Park Rd. and New Britain Ave. in the high enforcement southeastern census tracts. Police reported 47 stops during the November checkpoints, 34 of which were for seatbelt violations. In May 2015, there were checkpoints on seven separate days (5/18 – 5/21 and 5/26 – 5/28). The checkpoints were set up on Park Rd. Farmington Ave., and New Britain Ave. in the same high enforcement southeastern census tracts. There were 60 stops reported during the May checkpoints, 30 of which were for seatbelt violations.

Distracted driving campaigns took place in April 2015 and August of 2015. In April 2015, special enforcement for distracted driving was conducted on 21 separate days. The focused patrols were in the high enforcement southeast census tracts on New Britain Ave., Farmington Ave., North Main St., and Park Rd. Police reported 693 stops for the April checkpoints, 643 of which were for cell phone violations. These stops accounted for 51% of all stops conducted in April. In August 2015, these

focused patrols were conducted on 10 separate days. They also primarily took place in the high enforcement southeast census tracts on New Britain Ave., Farmington Ave., North Main St., and Park Rd. There were three additional focused patrols that took place near the intersection of North Main St. and Albany Ave. There were 336 stops reported for the August checkpoints, 314 of which were for cell phone violations. These stops accounted for 35% of all stops conducted in August. During the two campaigns, cell phone violation stops accounted for 46% of all cell phone related stops in town.

Drinking and driving campaigns took place throughout the entire year with a total of 969 stops made as part of the campaign. An average of 81 stops were made each month. The data does not indicate that any of these stops were conducted as part of a DUI check-point, which would imply that they were conducted as part of a roving DUI patrol. A roving patrol refers to an officer on patrol conducting motor vehicle enforcement to identify a violation highlighted in the enforcement campaign. Of the 969 stops reported during the DUI campaign, the information West Hartford submitted to us for analysis showed that 94 drivers were arrested for DUI. The particular reporting format of the campaign data does not include the stop locations. However, the data West Hartford reported to the traffic stop database indicated only 51 DUI arrests for the year. It is unclear why there is a discrepancy between the separate data compiled for the special enforcement campaigns and the DUI arrests reported to the state traffic stop database.

## Traffic Stop Distribution for West Hartford Officers

West Hartford's total of 8,639 traffic stops is significantly more than towns of a similar size. This is likely a result of the resources available to maintain a traffic unit and CIT unit. During the study period, traffic stop data was reported for 102 officers. The average number of stops made per officer was 85. Of the 102 officers reporting stops, 35 made fewer than 20 stops, 18 made between 20 and 50 stops, 23 made between 50 and 100 stops, and 26 made over 100 stops. The 26 officers making over 100 stops accounted for 73% of all stop activity, indicating the extent to which a relatively small portion of the officer force influenced West Hartford's data. The most active officer made 1,375 stops or 16% of all stops made town-wide.

## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department depending, among other things, on a department's overall philosophy on the purpose of traffic enforcement. We reviewed the statutory authority that West Hartford officers reported as the reason for stopping motor vehicles. The three most common reasons cited for stopping a motorist in West Hartford are the basis for 55% of the total stops. The three largest stop categories were for cell phone violations (24%); registration violations (16%); and other moving violations (15%). 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-related and registration-related violations than white drivers as a percentage of their total stops.

The data shows that, with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) can be closely related to the frequency and location of where the stops are made. If these types of stops occur 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

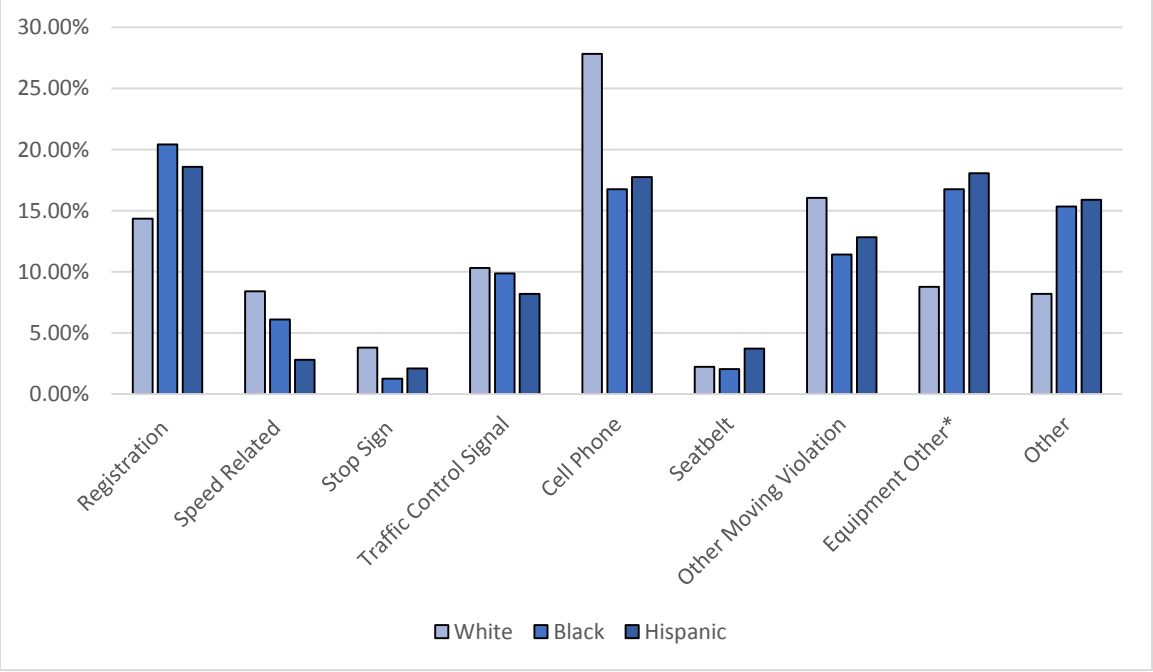
types of stops are made in areas with higher concentrations of white drivers, the stop demographics shift toward white drivers, suggesting that the potential to find violators may be more dependent on location than race.

The West Hartford data tends to confirm these observations. Of all the black driving age residents living in West Hartford, 60% live in census tracts 4961, 4967, 4968, and 4969. These four tracts are also the residential areas for 58% of all Hispanic driving age residents. Just over 52% of all fairly high discretion equipment-related stops for lighting, plate display, and window tinting were made in these four tracts. The racial breakdown for these stops were 35% Hispanic drivers, 22% black drivers, and 40% white drivers. The other 48% of these stops were made outside of these four census tracts, where only 40% of the black driving age residents and 42% of the Hispanic driving age residents live. For those stops, the demographics were 20% black drivers, 19% Hispanic drivers, and 55% white drivers.

The registration-related stops made in West Hartford showed a similar pattern. About 43% of the registration-related stops were made in the four high minority proportion census tracts. The demographics for these stops were 27% Hispanic drivers, 20% black drivers, and 48% white drivers. The other 57% of the registration-related stops in the remaining 13 census tracts were 15% Hispanic drivers, 17% black drivers, and 62% white drivers.

These patterns seem to suggest that where these types of stops are made is a more important factor in the stop demographics than inherent differences in the frequency with which various races may violate these laws. Figure 5.1 illustrates the reasons officers used to stop a motor vehicle by race and ethnicity.

**Figure 5.1: Reasons for Traffic Stops**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figure 5.2 and Figure 5.3 are maps of traffic enforcement for safety-related motor vehicle stops and equipment-related motor vehicle stops. Stops that were made for speed, stop sign, traffic light, cell

phone or moving violations were labeled “safety-related” stops. Stops for defective lights, window tints, or display of plate were labeled “equipment-related” violations. Overall, enforcement is concentrated in the same southeast section of town, but safety-related motor vehicle enforcement is conducted throughout a larger geographical area and has a larger presence on Route 44 (Avon Mountain Rd.)

**Figure 5.2: Safety-Related Motor Vehicle Stops**

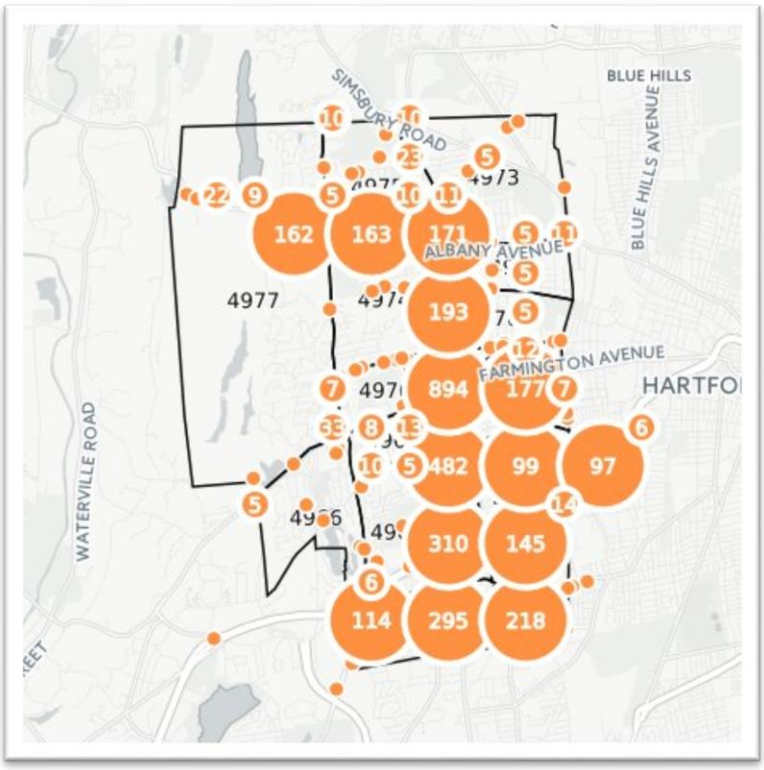
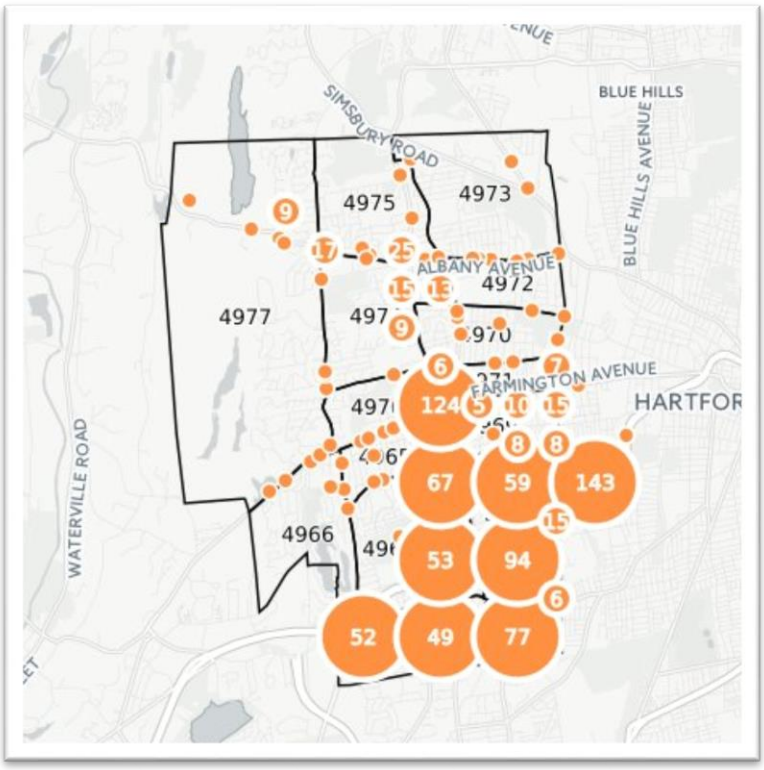


**Figure 5.3: Equipment-Related Motor Vehicle Stops**



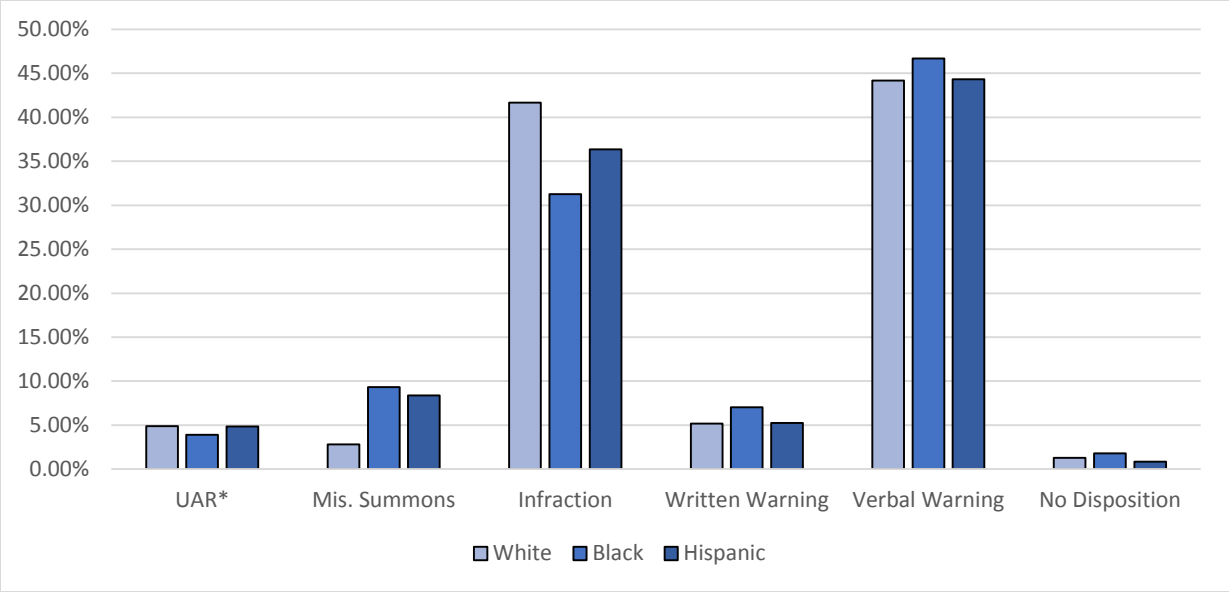

The highest percentage of motor vehicle stops in West Hartford resulted in the driver receiving a verbal warning (45%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers. In addition, white drivers were slightly more likely to be arrested as a result of the stop. Figure 5.4 outlines the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initiating. This gives an analyst data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for minor reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In West Hartford, 414 of the stops resulted in the issuance of a misdemeanor summons (4.8%). Black and Hispanic drivers were more than three times as likely to be issued a misdemeanor summons as were white drivers (9.3% of black drivers and 8.4% of Hispanic drivers compared to 2.8% of white drivers). West Hartford did not report the secondary statutory citation in 180 of the cases that

resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final misdemeanor charge.

**Figure 5.4: Outcome of Traffic Stops**




*Uniform Arrest Report

A review of department search information shows 7.8% (676) of the drivers stopped in West Hartford were subjected to a motor vehicle search. The rate of motor vehicle searches is more than double the state average of 2.9%. Hispanic drivers were searched at a higher rate than white drivers, while black drivers were searched at a rate slightly less than white drivers. Contraband was found at a higher rate with white drivers than in searches involving black or Hispanic drivers. Figure 5.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate"). Figure 5.6 is a heat map of the location of motor vehicle searches in West Hartford.

**Figure 5.5: Search and Hit Rate**

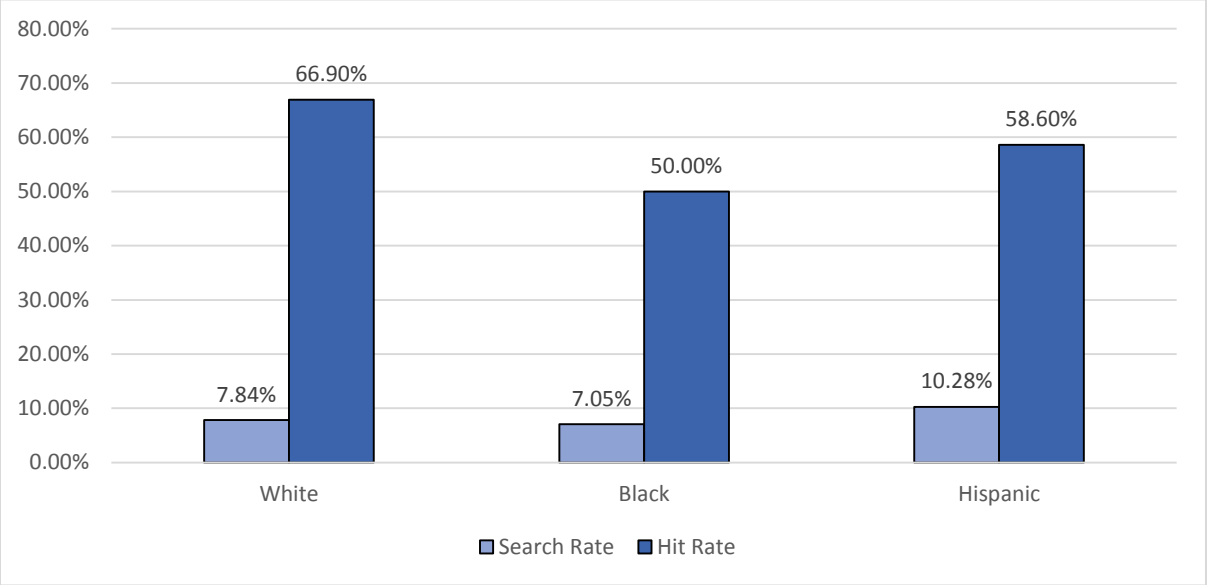
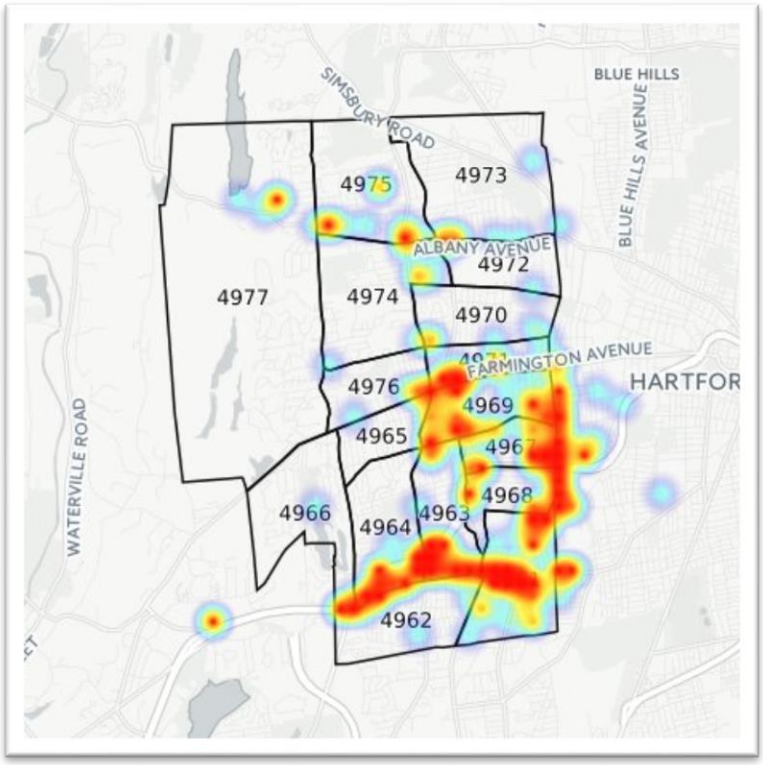



**Figure 5.6: Search Heat Map**




## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors

that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with West Hartford provide a context to potentially explain the rationale for police deployments there and are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 28,631 people work in West Hartford and its major employers include the University of Hartford, Wiremold Products Inc., Triumph Engine Control Systems, and the Hospital at Hebrew Health Care. The vast majority of commuters traveling into West Hartford for employment are from Hartford, New Britain, Newington, and East Hartford. The overall unemployment rate is 4.7%, which is below the unemployment rate for Hartford County and the state.

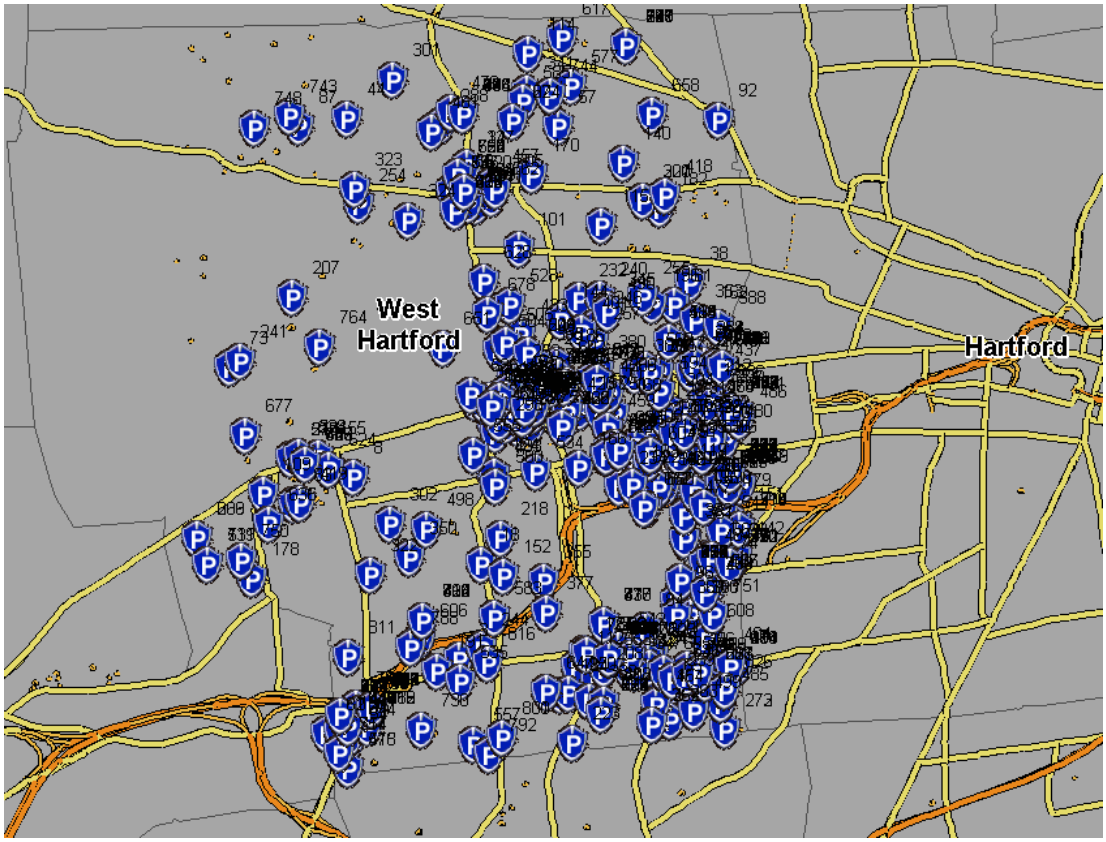
In 2015, the crime rate in West Hartford was reported to be 228 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[7], there were 1,529 reported crimes in West Hartford in 2015. The three most reported crimes were larceny (1,208), burglary (156), and motor vehicle theft (109).

The department identified complaints of theft as one of the largest criminal problems in town. They provided us with information on reported thefts for calendar year 2015 (which covered most of this study period). Between January 1, 2015 and December 31, 2015, there were 1,044 incidents of theft. Of these incidents, 67% involved white individuals, 22% involved black individuals and 11% involved other races. There was no information provided on the ethnicity of those involved in theft incidents.

What follows is an image showing the reported locations of theft complaints that occurred in West Hartford that year. Figure 6.1 shows the location for reported thefts in town. The image indicates that the majority of these crimes occurred along the Hartford border and in the center of town—which also happen to be the area where traffic enforcement levels are the highest.

[7] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

**Figure 6.1: Incidents of Theft Complaints (January 1, 2015 – December 31, 2015)**




During our study period, there were approximately 1,365 motor vehicle accidents on roads patrolled by the West Hartford Police Department. Accidents were reported as occurring on a total of 167 roads. The roadways with the highest number of accidents were New Britain Ave. (120 accidents), Farmington Ave. (108 accidents), and North Main Street (105 accidents). There were only 24 roads with 10 or more accidents and those roads accounted for 78% of all accidents in West Hartford. Accidents appear to most frequently occur in the center of town, on or near Route 44, and along New Britain Ave. and Prospect St.

Figure 6.2 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in West Hartford. While the vehicle crash rate tends to build fairly steadily throughout the day in West Hartford, it peaks during the afternoon from 2:00 p.m. to 6:00 p.m.

**Figure 6.2: Accidents Compared to Traffic Stops by Time of Day**

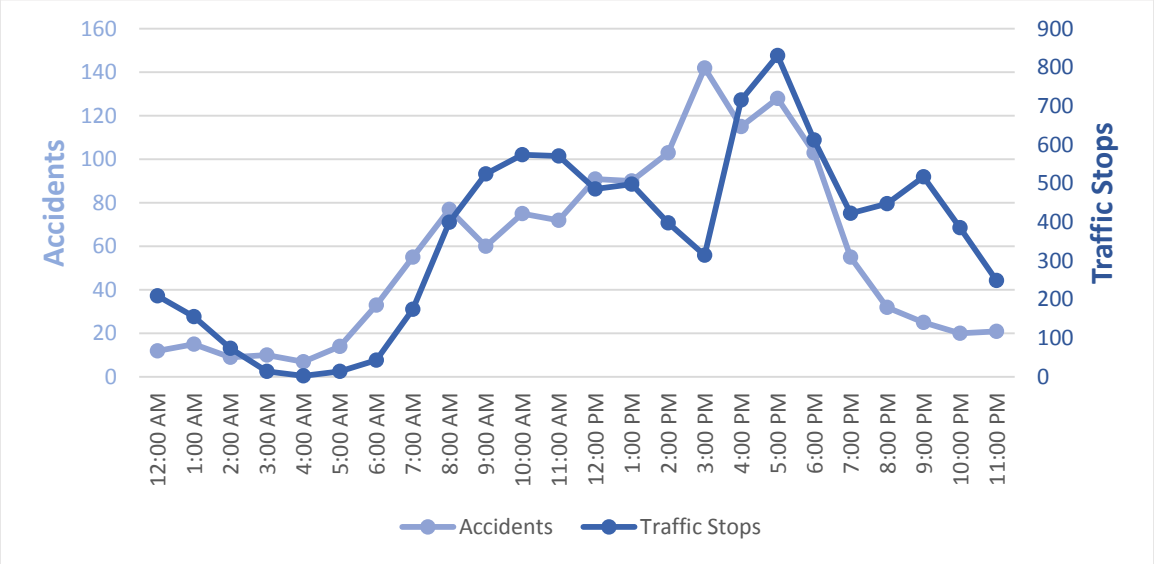
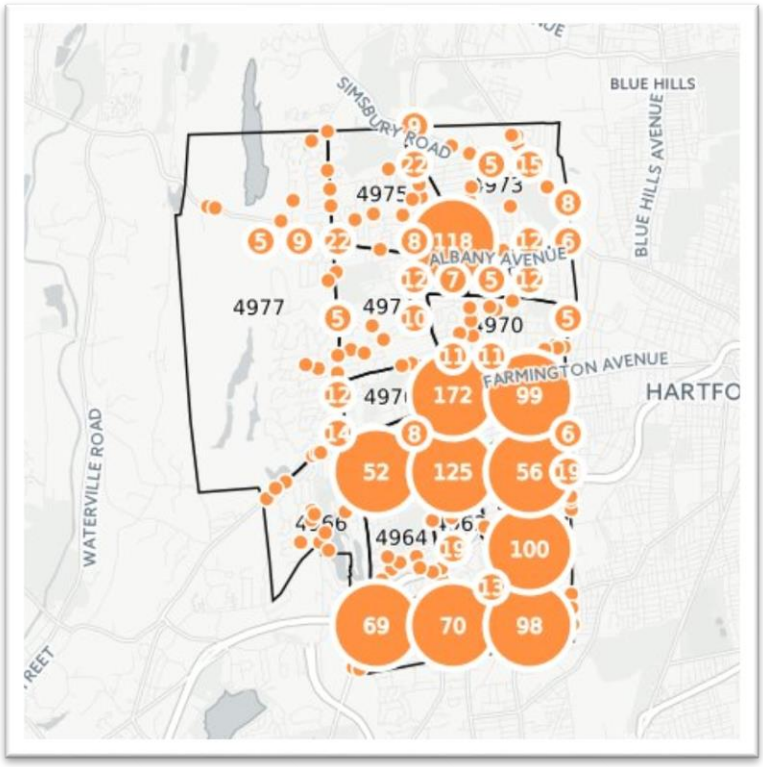



Figure 6.3 shows how motor vehicle accidents were generally distributed throughout the town. As can be seen from the image, while accidents are somewhat distributed throughout the town, the largest concentrations of them are (1) along South Main Street between Park Road and Farmington Avenue; (2) at the intersection of Park Road and Trout Brook Drive the areas; (3) along New Britain Avenue, particularly where the road intersects with South Quaker Lane; (4) at the intersection of Flatbush Avenue and New Park Avenues; and (5) at the intersection of Albany Avenue and North Main Street. The area along South Main Street between Park Road and Farmington Avenue is the most significant accident location in the entire town. Figure 6.3 shows how significantly traffic accidents affect West Hartford's southeast border and town center, which are also West Hartford's highest enforcement activity areas. The role traffic accidents play in resource deployment decisions in West Hartford appears to be significant.

**Figure 6.3: West Hartford Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

West Hartford Police Department officials 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 and areas with the highest levels of traffic as some of the same areas with the highest level of motor vehicle enforcement. They also indicated the impact that reported incidents of theft in the southeast section of town have had on the deployment of departmental resources. In addition to the patrol division, the department also deploys additional units to focus on traffic safety (Traffic Unit) and to address community concerns (Community Interaction Team). Patrol officers are assigned to a specific geographical area in town, which differ in size; but the specialized units may vary the locations where they operate. The high volume of traffic stops made in a relatively small geographic area makes it clear that department resources (including specialized units) are concentrated in the southeast section of town bordering Hartford and the center of town including Blue Back Square.

West Hartford has a non-white driving age population with about 9% Hispanic driving age residents and 5% black driving age residents. Almost 59% of all black and Hispanic residents live in four census tracts (4961, 4967, 4968, and 4969.) These four census tracts all have minority populations above the town average, the largest being tract 4961, which, with 64%, has more than three times the minority resident population. These four tracts account for 40% of West Hartford's stops, with 17% of its stops involving black drivers and 25% of its stops involving Hispanic drivers. These areas

border sections of Hartford with large minority populations and non-resident minority drivers form at least 39% of those stopped in these tracts.

Census tract 4969 has the largest volume of traffic enforcement with 15% of all stops. This tract runs from Trout Brook Dr. to Prospect Ave. and from Farmington Ave. to Boulevard. Census tract 4969 is also the most populous tract in town with almost 11% of the residential population. This high enforcement area borders a high minority population area in Hartford as well. However, West Hartford's traffic enforcement activity did not appear to be driven primarily by population concentrations; that is, the census tracts with the largest population concentrations do not all generate significant levels of traffic enforcement. The five census tracts with the highest levels of enforcement (4961, 4963, 4964, 4967, and 4969) account for 31% of the resident population, but 53% of the traffic enforcement.

On average, 82% of the drivers stopped in West Hartford were not town residents, which influences the size of the disparities in many of the census tracts to varying degrees. The impact of non-residents was most pronounced in the southeast section of West Hartford that borders Hartford and the two census tracts that include the majority of New Britain Ave. Census tracts 4961, 4963, 4964, 4967, and 4969 had an average of 84% non-resident motor vehicle stops and accounted for 54% of all non-residents stopped in the town. Non-resident drivers stopped were 39% minority compared to 30% of the residents stopped that were minority. It is evident that motor vehicle enforcement concentrated in the census tracts that border Hartford combined with the high rate of non-resident drivers stopped in those areas contributed significantly to the overall racial and ethnic disparity in West Hartford's data.

Though the non-resident component of minority drivers stopped may explain a significant portion of the disparities above the local minority population, there are exceptions. In some cases, the disparities above the localized population persisted even after the non-resident stops were accounted for. In 16 of the 17 census tracts, including the high enforcement areas, the proportion of minority stops involving only West Hartford residents exceeded the resident minority driving age population. The disparity was significant (greater than 10 percentage points) in seven of the census tracts. In 14 of the 17 census tracts the resident-only stops for black drivers exceeded the localized black driving population, but not significantly. Hispanic residents were stopped in 13 of 17 census tracts at a greater rate than the West Hartford resident driving age population, but only tract 4968 had a significant disparity.

In addition, West Hartford police stopped 195 drivers outside the West Hartford town border. The drivers stopped outside the town's border accounted for 2% of all stops and 49% were identified as black or Hispanic. These drivers were primarily stopped in Hartford and 90% of them were not West Hartford residents. The most likely reason is that the violation was observed by the officer in West Hartford, but the vehicle was pulled over after it crossed the West Hartford town line. The majority of drivers stopped in Hartford were stopped near census tracts 4961, 4967, 4968, and 4969 which reflects to a great degree the more frequent presence of police in these four census tracts. The percentage of minority drivers stopped out-of-town was consistent with the percentage of minority drivers stopped in these same census tracts.

West Hartford's high stop rate for minority drivers is not surprising given the areas where it 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 Hartford. Additional

information provided by the department indicates that resources are deployed based on calls for service, crime locations, and high accident areas. The data tends to show that the census tracts experiencing the largest concentrations of traffic enforcement activity tend to coincide with the areas with a higher number of theft complaints as well. The role traffic accidents play in resource deployment decisions is a significant one. The areas with the highest number of motor vehicle accidents were along New Britain Avenue, South Main Street, Albany Avenue, and Flatbush Avenue. The high enforcement census tracts experienced both a high incidence of accidents and high levels of traffic enforcement. Generally speaking, West Hartford's highest areas of traffic enforcement activity coincide with its highest criminal complaints, and crime areas, and to a significant, but slightly lesser degree, its highest areas for traffic crashes.

In addition, West Hartford has 102 officers that made at least one traffic stop during the study period. The average stops made per officer was 85, but 10 officers (10% of the officer force) accounted for 47% of all the traffic stops. The most active officer conducted 16% of all motor vehicle stops in town. There were 26 officers that conducted more than 100 stops and accounted for 73% of all traffic enforcement. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a great deal to do with the overall stop demographics. This appears to be the case in West Hartford.

*Traffic Stop Outcomes*

White non-Hispanic drivers were more likely to be stopped for driver-related safety issues like speeding, cell phone, stop sign, traffic light, and seat belt violations as a percentage of their total stops than were either black or Hispanic drivers. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 West Hartford, when these registration- and equipment-related stops were made in the four census tracts (4961, 4967, 4968 and 4969) 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.

Regarding stop outcomes, minority drivers are more likely to receive a misdemeanor summons, whereas white drivers are more likely to receive an infraction. Warnings were given to drivers of all races at approximately the same rates.

West Hartford was identified as one of the top 10 departments with the highest search rate in the state. West Hartford searched 7.8% of all vehicles stopped, compared to only 2.9% of vehicles searches statewide. Moreover, searches occurred at a high rate for all three racial and ethnic groups. Hispanic drivers were searched at a rate higher than white drivers and black drivers were searched at a rate similar to white drivers. Contraband was found at more than twice the state average.

However, it was found at higher rate in white drivers than black or Hispanic drivers. Contraband was found at a significantly higher rate (80%) when the search was conducted as the result of probable cause, plain view or some other reason compared to when the search was the result of consent (41%). The disparity in search outcomes is contributing to the post-stop disparity identified using the KPT Hit Rate analysis. This is an area where the disparity needs to be further explained and evaluated by the police department.

*Conclusion*

The relative disparities in West Hartford appear to be due to two general factors:

(1) the relatively high levels of enforcement normally in the south and southeastern areas of the town which have both the highest resident minority driving age populations and are most likely to have the relatively high proportions of non-resident minority drivers traversing them because of the proximity of relatively high minority populations in the bordering city of Hartford; and
(2) the presence of two significant traffic magnets in the Westfarms Mall/ Corbins Corner Shopping Center, which are directly adjacent to the Farmington and New Britain borders, and West Hartford Center which generates a considerable number of calls for service and vehicle crashes, and both of which draw significant traffic from surrounding communities

High levels of traffic enforcement in the southeast section of West Hartford tends to mirror higher levels of crime, particularly reported thefts, in that portion of town. In addition, enforcement mirrors accidents in and around the areas along New Britain Avenue and the town center. But in a few areas of town that have a significant number of vehicle crashes, such as the intersection of Albany Ave. and North Main Street, data shows somewhat less traffic enforcement activity.

While white drivers are more likely to be stopped in West Hartford 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 and registration violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the three high enforcement census tracts, where both resident and non-resident minority drivers are likely to be present in the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violate these laws with greater frequency than white drivers.

West Hartford searches almost three times more motor vehicles than the state average. Contraband was found at a higher rate in white drivers than in searches involving black or Hispanic drivers. West Hartford has exhibited statically significant racial and ethnic disparities in search outcomes for two years. This disparity is most pronounced with black drivers. Although they are searched at a similar rate as white drivers, officers are significantly less likely to find contraband. This is an area where the police department needs to further examine and explain the disparity.

Based on the overall follow up analysis of the West Hartford data, we believe that the general disparities in its stop data with respect to Hispanic and black drivers tend to reflect the overall nature of its enforcement policies based on calls for service, crime, and motor vehicle accidents, but that it would benefit by reviewing these practices to assure that the disparate impact these policies have on its minority residents are reasonable in terms of policy outcomes. In particular, it is recommended that the department:

(1) review its traffic enforcement policies in tracts 4961, 4967, 4968, and 4969 to evaluate the extent to which they may have a disproportionate effect, particularly with respect to black and Hispanic drivers;
(2) evaluate both the location and frequency of use of stops for equipment-related motor vehicle violations to better understand the impact they may be having on minority drivers; and
(3) evaluate both the location, frequency and outcome of motor vehicle searches involving black drivers.

Department administrators should also remind West Hartford officers that the statutory reason for issuing a misdemeanor summons for stops that were made for infraction violations must always be entered as part of the data submission in order to track outcomes more accurately.

Lastly, in 2015 the West Hartford Police Department was trained in the U.S. Department of Justice, Community Oriented Policing Services Division- sponsored training program on "Fair and Impartial Policing (FIP)." The FIP program was established to train police officers and supervisors on fair and impartial policing by understanding both conscious and unconscious bias. We recommend that the department continue to identify these types of training opportunities for officer in the department.

## I.B (8): WETHERSFIELD FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Wethersfield over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 2,726 | 49.14% | 2,361 | 52.57% |
| Black Non-Hispanic | 1,030 | 18.57% | 831 | 18.52% |
| AsPac Non-Hispanic* | 73 | 1.32% | 64 | 1.42% |
| AI/AN Non-Hispanic** | 13 | 0.23% | 12 | 0.27% |
| Hispanic | 1,705 | 30.74% | 1,222 | 27.22% |
| Total | 5,547 | | 4,490 | |

*Asian Pacific Non-Hispanic

** American Indian/Alaska Native Non-Hispanic

### Overview of the April 2015 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Wethersfield Police Department made a total of 4,490 traffic stops. Of these, 47.4% were minority stops, of which 27% were Hispanic drivers and 18.5% were black drivers. Based on the *Veil of Darkness* analysis minority motorists, across all racial and ethnic groups, were more likely to have been stopped during daylight relative to darkness. The results were robust to the inclusion of a variety of controls and sample restriction that excluded equipment violations. The synthetic control analysis also produced statistically significant results and the disparity was sufficiently large across all racial and ethnic categories. The department was also identified using the three descriptive tests. Wethersfield was identified as having exceeded the threshold for identification in all three descriptive benchmarks used and seven of the nine possible measures. The post-stop analysis did not produce statistically significant estimates possibly because of an insufficient sample of minority searches. Wethersfield was the only department to be identified with significant racial and ethnic disparities in all measures, except the post-stop analysis. The results of these analyses combined indicate that further investigation into the source of the observed statistical disparity in Wethersfield was warranted.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Wethersfield Police Department data were studied using a more detailed review of traffic enforcement during the original study period. Part of this analysis involved mapping all stops, if possible, using the location data provided by the department and any enhancements we were able to make. Unfortunately, the descriptive information on stop locations was only specific to allow accurate mapping of 43% of the traffic stops reported. In most cases, geographical coordinates were not provided to us and traffic stops were manually mapped by using the officer's description of the location of the stop. In 57% of the reported traffic stops, the description was too vague and therefore researchers could not identify the specific geographic coordinates. The stop location description improved significantly in the second half of the data collection period (April 2015 – September 2015). It is clear that training efforts within the department to improve the quality of data have been successful.

Due to the lack of detailed location information available in Wethersfield for the majority of stops in Year 2, the census tract-based analysis was replaced by a descriptive analysis of highway corridors. The location information typically identified the road where the traffic stop took place, but not the specific point on the road. Although analyzing traffic stops by census tract is the preferred method, analyzing traffic stops by corridor proved just as effective an approach because two out of three traffic stops in Wethersfield are made on only two specific highway corridors. We also supplemented the corridor analysis with visuals from the stops that we could map. Although this accounts for fewer than half of the stops conducted during our study period, it still helps to illustrate overall traffic enforcement trends.

According to the 2010 census, Wethersfield is a town with approximately 21,607 residents over the age of 16. Approximately 12.5% of the driving age population in Wethersfield is identified as a minority. Figure 1.0 outlines the basic demographic information for Wethersfield residents over age 16. A large portion of the minority population in Wethersfield resides within the northernmost section of the town adjacent to the city of Hartford. Within this tract (4923) live 54.4% of all the driving age black residents and 42.3% of all the driving age Hispanic residents of Wethersfield.

**Figure 1.0: Wethersfield Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 18,913 | 87.5% |
| Black Non-Hispanic | 594 | 2.8% |
| AsPac Non-Hispanic | 565 | 2.6% |
| Hispanic | 1,535 | 7.1% |
| Other | 0 | 0.0% |
| Total | 21,607 | |

Five other municipalities share a common border with Wethersfield, including Hartford to its north, East Hartford and Glastonbury to its east, Rocky Hill to its south, and Newington to its west. Glastonbury, Newington, and Rocky Hill are predominantly white demographically with an average driving age white population of 86%, which is consistent with the white driving age population in Wethersfield. However, Hartford borders the northern portion of Wethersfield and has a white driving age population of only 19%. The three Hartford census tracts that directly border Wethersfield range from 48% to 55% Hispanic population and 14% to 17% black population. In addition, East Hartford borders a small portion of the northeast corner of Wethersfield and has a white driving age population of 48%. East Hartford has no direct highway connection to Wethersfield other than I-91 or Route 5/15. Approximately 82% of the drivers stopped in Wethersfield during the study year were not residents of the town.

Interstate 91 runs from north to south along the eastern part of town, Route 15 (Berlin Turnpike) runs from Newington to Hartford in the northwest part of town, and Route 99 (Silas Deane Highway) runs from Rocky Hill to Hartford in the eastern part of town. Three main east-west roads cross through Wethersfield. Nott Street traverses the northern third of Wethersfield; Wells Road (Route 175) traverses the central section; and Prospect Street (Route 287) traverses the southern third. All three roads intersect with the Silas Deane Highway.

Wethersfield has two patrol plans outlining patrol districts based on the number of officers working. Plan A is designed for five patrol districts and Plan B is designed for four patrol districts. The districts

are numbered two through six in Plan A and two through five in Plan B. In the Plan A map, districts 2 and 3 border Hartford, while districts 4 and 5 border Rocky Hill. District 3 covers a majority of the Berlin Turnpike and District 2 covers the northern portion of the Silas Deane Highway. District 6 is located in the center of town and covers from the Newington border east to Wolcott Hill Rd. In the Plan B map, the town in divided into four equally sized geographic districts. District 2 and 3 patrol the northern half of town, while district 4 and 5 patrol the southern half of the town.

Mapping only 43% of the traffic stops identified, there were nine roadways in Wethersfield that account for 85% of traffic stop locations. More than 50 stops were conducted on each of these nine roadways; all other roads in Wethersfield contributed fewer than 50 traffic stops. In particular, the Berlin Turnpike and Silas Deane Highway account for 64% of all traffic enforcement in town. Therefore, this analysis of traffic enforcement in Wethersfield focuses more on these roadways than on census tracts, although some references to the census tract data are included.

Figure 2.1 illustrates the volume of traffic enforcement that occurs on each of the nine identified roads. The Berlin Turnpike accounted for 26% of Wethersfield traffic stops. The Silas Deane Highway (Route 99) accounted for 38% of the traffic stops. The next largest group of stops occurred on Maple Street, Jordan Lane, and Wolcott Hill Road. These stops are also important to the overall analysis because they occurred almost entirely within the northern tier census tract 4923, which is also the tract within Wethersfield with the highest proportion of its black and Hispanic population. Taken together, these four roads accounted for almost 76% of Wethersfield's stops.

The following analysis focuses primarily on the Berlin Turnpike and the Silas Deane Highway separately, and the combination of the Berlin Turnpike and Jordan Lane as part of a northern tier analysis.

**Figure 2.1: Traffic Stops by Major Roadway**

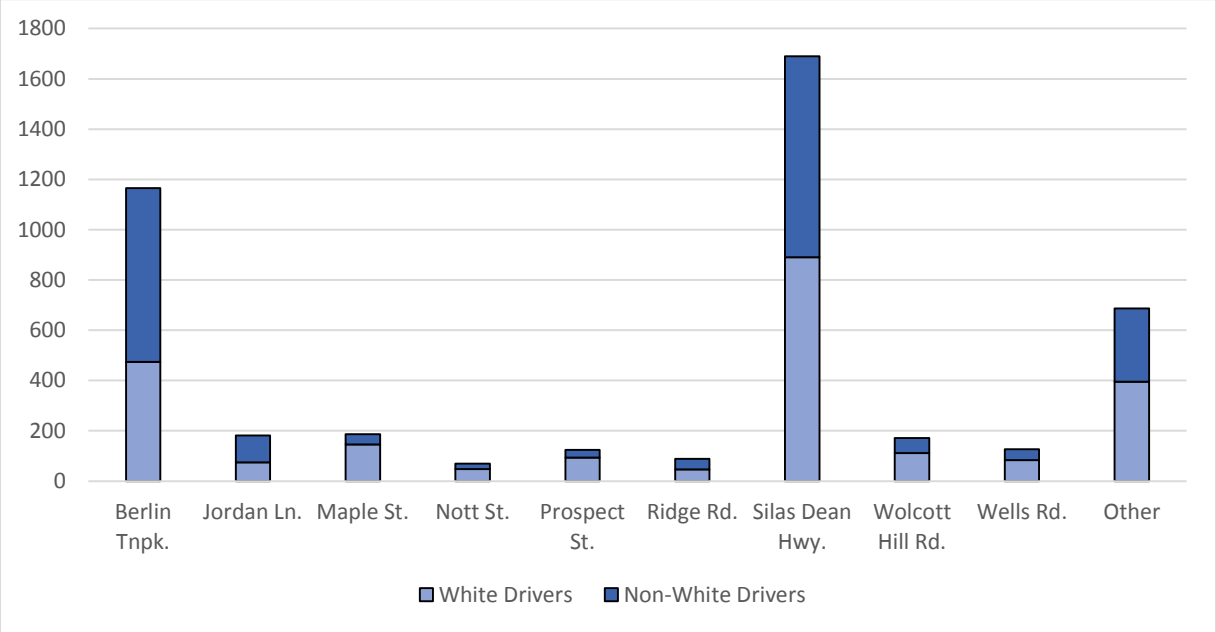



Figure 2.2 is a map of the 43% of traffic stops made in Wethersfield that could be mapped. Although we were unable to map the majority of stops, the stops that we could map follow a similar trend

shown in the data for unmapped stops. It is clear from this image that the majority of traffic enforcement occurs on the Berlin Turnpike and Silas Deane Highway. In addition, a significant number of traffic stops occur in Hartford and in the northern section of Wethersfield near the border of Hartford.

**Figure 2.2: Traffic Stop Map**

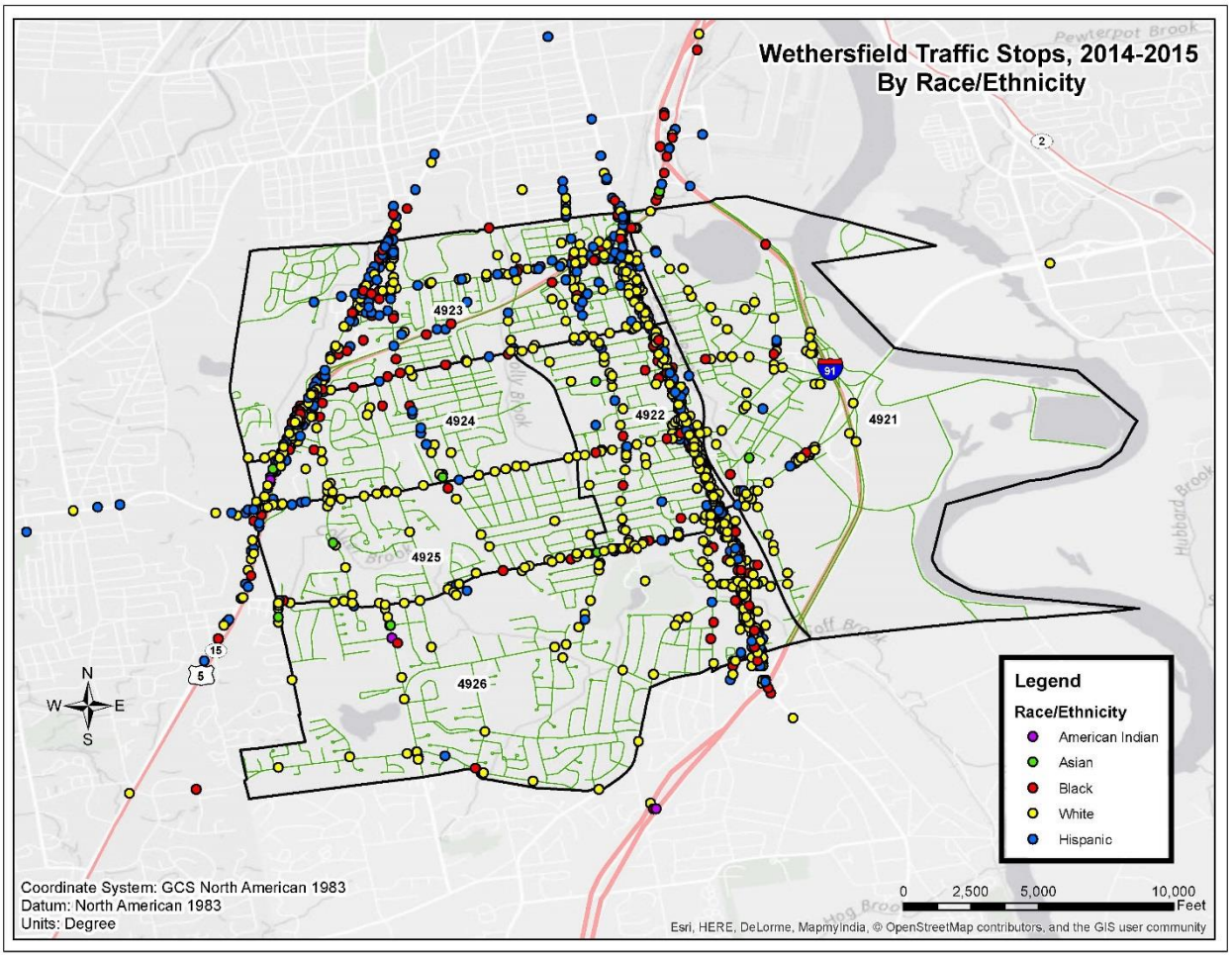
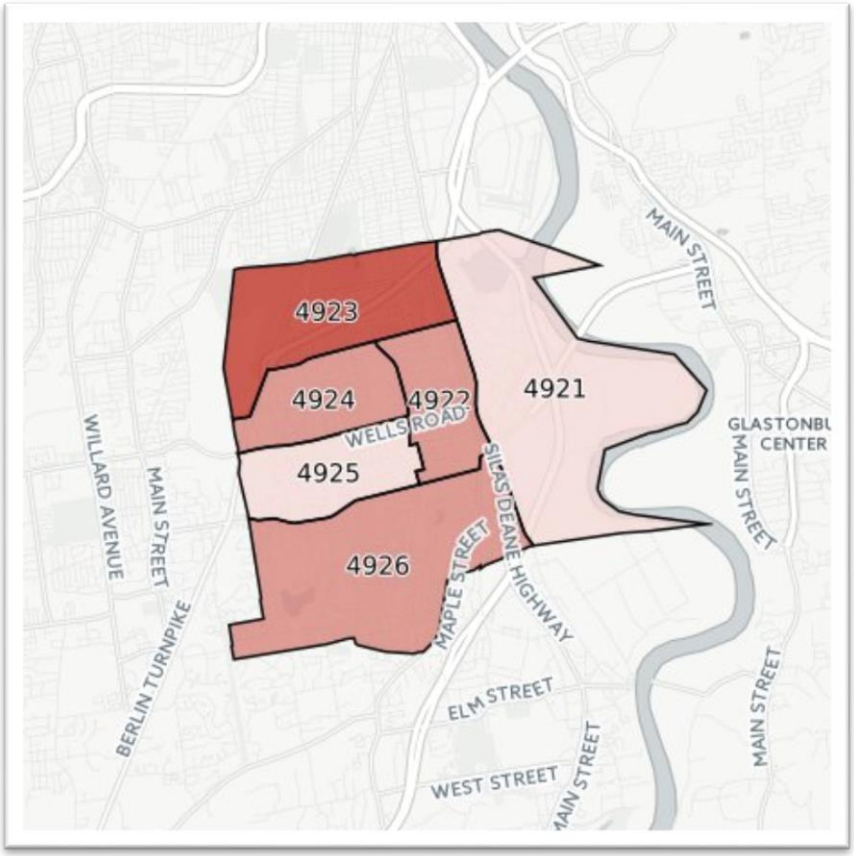



Figure 2.3 shows an additional way to view the high enforcement areas in Wethersfield. Although we could only map about half of the stops for this study period, we believe it is an accurate reflection of enforcement patterns in the town. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement area with stops made in census tract 4923. Group one includes 34% of all mapped traffic enforcement in Wethersfield. Group two consists of census tracts 4922, 4924, and 4926. There was a moderate amount of traffic enforcement in each of these tracts, most of which is from the Berlin Turnpike or Silas Deane Highway. The third group includes tracts 4921 and 4925 where little traffic enforcement occurs.

**Figure 2.3: Census Tracts Identified by Levels of Enforcement**




## Traffic Stop Breakdown on the Berlin Turnpike

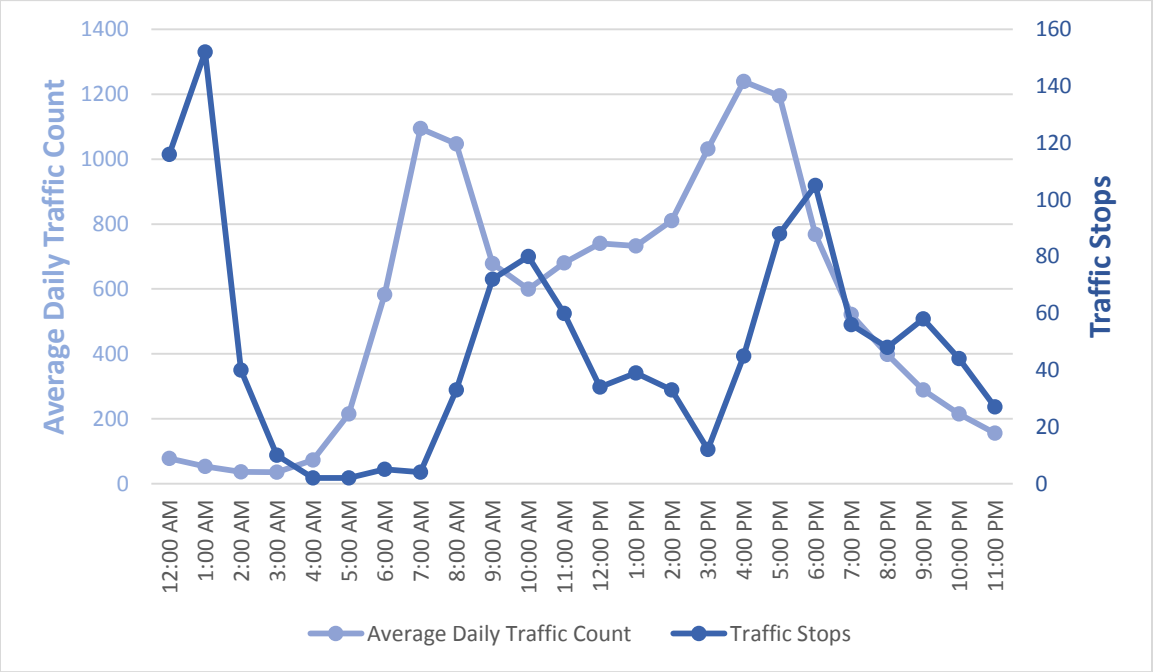
Twenty-six percent of all traffic stops in Wethersfield occur on the Berlin Turnpike. The Berlin Turnpike is a four to six lane divided road that carries Route 5 and Route 15 from the Meriden-Berlin border through Newington and Wethersfield. The entire roadway is approximately 11 miles long, with about 1.9 miles running through Wethersfield to the Hartford line. In Wethersfield the turnpike is a divided highway for less than one mile, at which point Route 5 branches off to connect with Interstate 91 and the turnpike continues as a two lane local road to the Hartford border (State Road 543), where it turns into Maple Avenue once it crosses the town line. There is a large shopping center, including a Stop and Shop grocery store, located just south of the Hartford town line where State Road 543 and Jordan Lane intersect.

The turnpike crosses into Newington at the Wells Road (Route 175) interchange. To help understand traffic flow on the turnpike, the analysis looked at the average daily traffic (ADT) records that are reported by the Connecticut Department of Transportation (DOT). DOT is responsible for collecting traffic volume information for state and local roads throughout the state by placing counting stations at different points along the roadway for a period of time to count the cars that drive through that point. According to the ADT information for the Berlin Turnpike, during the morning commute, the majority of traffic flows from the Newington border to the Route 5 connector and during the evening commute, the majority of traffic picks up the turnpike off the Route 5 connector traveling south towards Newington. Traffic flow on the portion of the turnpike in Wethersfield seems to be

predominantly driven by employment commute. There is significantly less traffic on the small stretch of the turnpike that is past the Route 5 connector and heading towards the Hartford border. In addition, the vast majority of traffic that enters Wethersfield on the turnpike enters through the Route 5 connector.

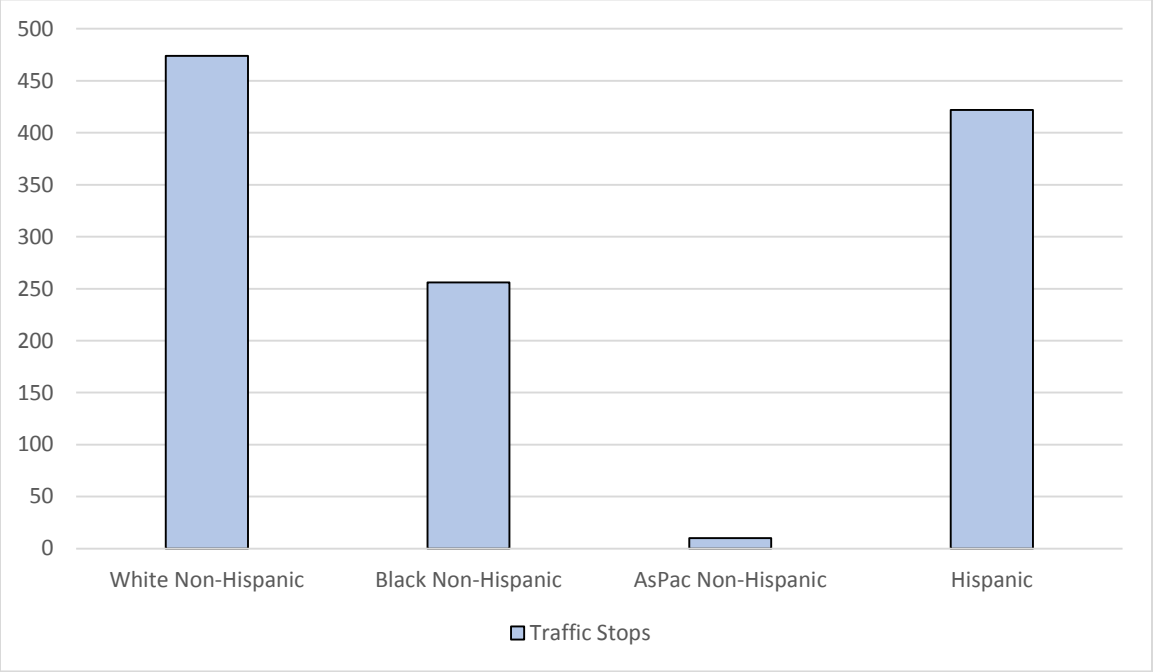
Figure 3.1 is a graph of traffic flow compared to traffic enforcement on the Berlin Turnpike. Traffic flow on the turnpike peaks during morning (6:00 a.m. to 9:00 a.m.) and evening (3:00 p.m. to 6:00 p.m.) commuting hours. Traffic enforcement peaks were offset somewhat from the commute peaks, with enforcement peaks at 9:00 a.m. to 11:00 a.m. and 4:00 p.m. to 7:00 p.m. However, by far the most active enforcement period on the turnpike was from midnight to 2:00 a.m.

**Figure 3.1: Berlin Turnpike Traffic Flow Compared to Traffic Enforcement**




The overall percentage of traffic stops involving minority drivers on the Berlin Turnpike was 60%. Approximately 36% of drivers stopped were Hispanic and 22% were black. Of the more than 1,165 traffic stops on the turnpike, 94% of the drivers stopped were not residents of Wethersfield. Hispanic drivers were 21% of all Wethersfield residents stopped on the turnpike and 37% of all non-residents. Black drivers were 10% of all Wethersfield residents stopped on the turnpike and just over 22% of all non-residents. Figure 3.2 shows the proportion of traffic stops on the Berlin Turnpike by race and ethnicity.

**Figure 3.2: Berlin Turnpike Traffic Stops by Race/Ethnicity**




## Traffic Stops in the Northern Tier (Census Tract 4923)

The Berlin Turnpike accounted for the bulk of the traffic stops in the northern section of Wethersfield defined by census tract 4923, but Jordan Lane also accounted for a significant number of stops within that tract. Together, the Berlin Turnpike and Jordan Lane accounted for 30% of all Wethersfield stops. These two main roads within tract 4923 accounted for 35% of all black drivers stopped in Wethersfield and 40% of all Hispanic drivers. Stops made on the northern end of the Silas Deane Highway also add to the stop total within this tract. Although half of the stops on the Silas Deane Highway could not be accurately mapped because of the limited location descriptions, we were able to locate 213 stops within the portion of the Silas Deane Highway that passes through tract 4923. The racial breakdown for these 213 stops were 27% Hispanic, 21% black, and 51% white.

Taken together, more than 35% of all the stops made in Wethersfield were made on these three roads in census tract 4923. The combined demographics of these stops was 22% black, 35% Hispanic, and 42% white. These disparities were only 3.5 percentage points above the town-wide average for black driver stops but 8 percentage points above the town-wide average for Hispanic drivers.

In all, 41% of all black drivers and 45% of all Hispanic drivers stopped in Wethersfield were stopped in census tract 4923. The high enforcement levels in this section of Wethersfield, that has both the highest concentration of black and Hispanic driving age residents and borders on a section of Hartford with a 55% Hispanic and 17% black population base, appears to have had a considerable impact on both of these driving populations.

## Traffic Stop Breakdown on the Silas Deane Highway

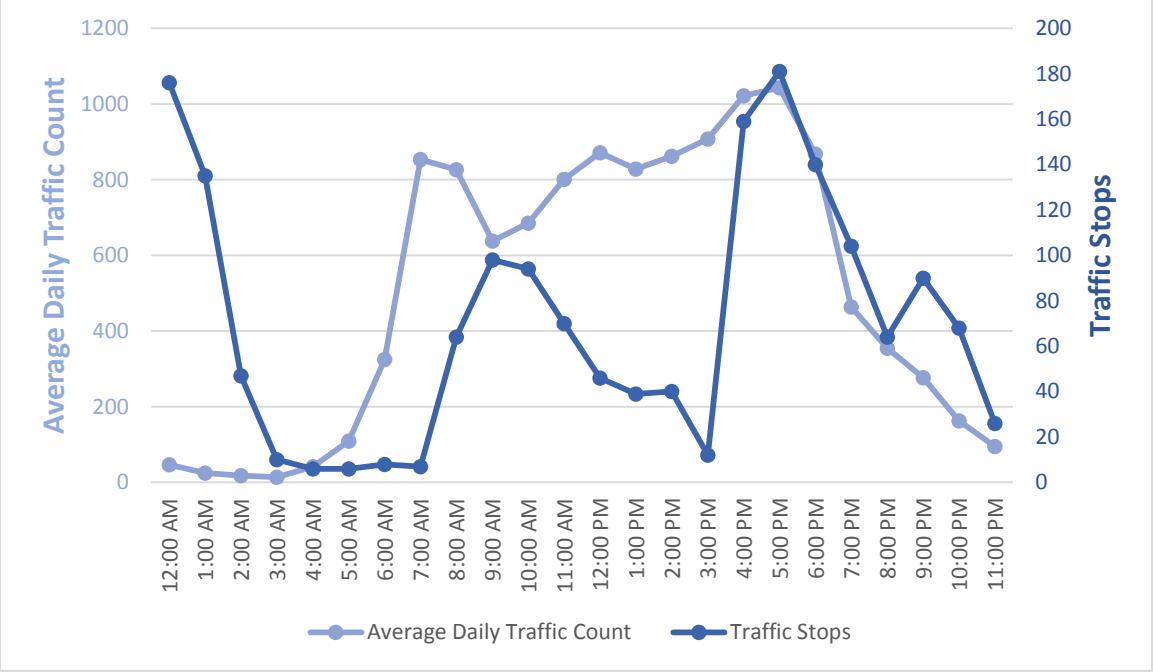
The Silas Deane Highway (Route 99) accounted for 38% of all traffic stops in Wethersfield. The Silas Deane Highway is a four lane road that runs from the Rocky Hill border on the south side of Wethersfield all the way to the Hartford border on the north. The Silas Deane Highway is about 3.3

miles long and meets the Rocky Hill town line at Exit 24 on I-91. It connects with Route 3 (Maple Street) a little more than two miles from where it begins at Wethersfield Avenue in Hartford.

According to the DOT's ADT estimates for the Silas Deane Highway, the majority of traffic flows from the Rocky Hill border north towards Hartford during the morning commute, and south from Hartford towards Rocky Hill during the evening commute. Traffic flow on the portion of the Silas Deane Highway in Wethersfield seems to be impacted by commuters, but traffic volume remains high during the afternoon hours, presumably due to shopping and other activity centers along the highway.

Figure 4.1 shows the traffic flow compared to traffic enforcement on the Silas Deane Highway. Traffic flow on the highway peaks during morning commuting hours and remains fairly constant through the afternoon, dropping after evening commuting hours. Traffic enforcement peaks are slightly offset from the morning commute peak but track fairly closely to traffic volumes during the afternoon commute peak period. As with the Berlin Turnpike, the largest enforcement spike on the Silas Deane Highway occurs during the late night period from midnight until 1:00 a.m.

**Figure 4.1: Silas Deane Highway Traffic Flow Compared to Traffic Enforcement**




The overall percentage of traffic stops involving minority drivers on the Silas Deane Highway was 47%. Approximately 25% of drivers stopped were Hispanic and 20% were black. Of the more than 1,600 traffic stops on the Silas Deane, 83% of the drivers stopped were not residents of Wethersfield. Figure 4.2 shows the proportion of traffic stops on the Silas Deane Highway by race and ethnicity.

The lack of enough accurate location data hampers an effective analysis of the Silas Deane Highway stop data more than it does the Berlin Turnpike analysis. Half of the stops on the highway could not be assigned a specific location. However, we were able to accurately locate 47% of the stops by census tracts. The Silas Deane Highway runs through three census tracts, 4922, 4923, and 4926. Tract 4923 is the northern-most portion of the roadway and borders Hartford. The largest stretch of roadway runs through tract 4922, which is located in the center of Wethersfield. Lastly, the roadway also runs through tract 4926, which is the southern portion of the road bordering Rocky Hill. Of the stops we

could map, 213 stops were in tract 4923, 310 stops in tract 4922, and 240 stops in tract 4926. This sample provides an interesting perspective on the corridor as a whole.

In census tract 4923, the stop demographics were 21% black drivers, 27% Hispanic drivers, and 51% white drivers, with the remaining 1% drivers of other races. These demographics tracked fairly closely to the overall demographics of the northern tier stop sample, which were 22% black, 35% Hispanic, and 42% white.

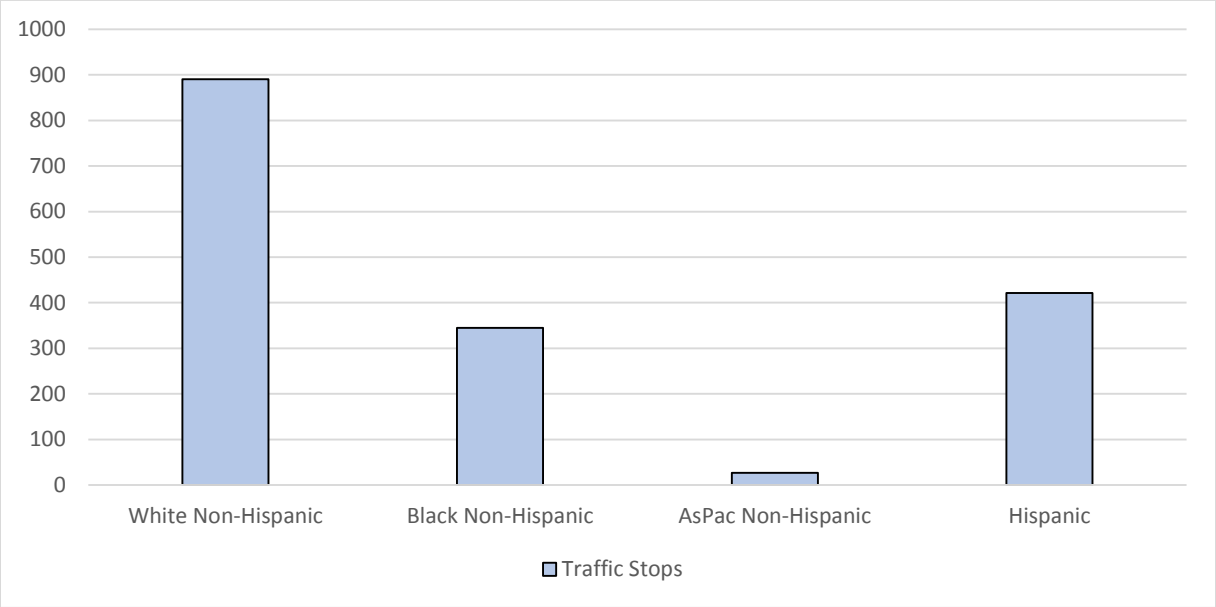
The stop demographics in the central section of the Silas Deane Highway covered by census tract 4922 differed somewhat. The 310 stops that we could map in this tract were 16% black, 22% Hispanic, and 62% white. In the southernmost third of the Silas Deane covered by census tract 4926, the stop demographics varied again. For the 240 stops that could be accurately located, the demographics were 22% black, 17% Hispanic, and 60% white.

These sectional samples provide a profile of the Silas Deane that suggests a decreasing occurrence of Hispanic driver stops as one moves south on the Silas Deane and black driver stops that are similar on the northern and southern parts of the corridor but dip somewhat in the central section. The white driver demographic is fairly consistent, at about 60% for the two sections south of census tract 4923.

The analysis of all the stops that could not be accurately located along the corridor shows the demographic component for black and Hispanic drivers matched the northern census tract 4923 demographic almost exactly. Specifically, the demographics for the unmapped stops were 21% black, 28% Hispanic, 48% white, and less than 3% drivers of other races.

It is difficult to draw firm conclusions from this analysis; but, if the sectional analysis reflects the general distribution of the unmapped stops, it tends to suggest that the unmapped stops were more likely to be occurring in the northern half of the Silas Deane corridor than in the southern half.

**Figure 4.2: Silas Deane Highway Traffic Stops by Race/Ethnicity**



## Non-Resident Component of Wethersfield Traffic Stops

Wethersfield'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) the relatively large proportion of non-Wethersfield residents who make up the majority of people who were stopped in Wethersfield. Wethersfield's resident driving age population is estimated as 87.5% white, 7.1% Hispanic, 2.8% black, and 2.6% Asian/Pacific Islander.. The demographics of the Wethersfield residents who were stopped during the study year showed a disparity for black and Hispanic drivers. The disparity was even more significant for non-Wethersfield resident stops. Since 82% of all drivers stopped in Wethersfield were not residents, out-of-town drivers clearly had an impact on the stop data. The racial breakdown of drivers stopped who were not Wethersfield residents were as follows: 47% white, 30% Hispanic, 21% black, 1% Asian/Pacific Islander, and 0.3% Indian American. Approximately 92% of the black and Hispanic drivers stopped were not residents, compared to 72% of white drivers.

The Route 5 and Route 99 corridor locations appear to have the greatest influence on the non-Wethersfield resident component of the stop demographics, with 94% of the drivers stopped on Route 5 and 83% of the drivers stopped on Route 99 not living in Wethersfield. Jordan Lane has a lesser influence because the number of stops is smaller, but 81% of those drivers were not residents of Wethersfield. Non-resident black and Hispanic drivers were significantly more likely than white non-resident drivers to be stopped on Route 5 and Route 99 than they were in any other place in Wethersfield. These two corridors were responsible for 72% of the non-resident Hispanic drivers stopped in Wethersfield and 73% of the non-resident black drivers stopped, compared to only 63% of the non-resident white drivers stopped.

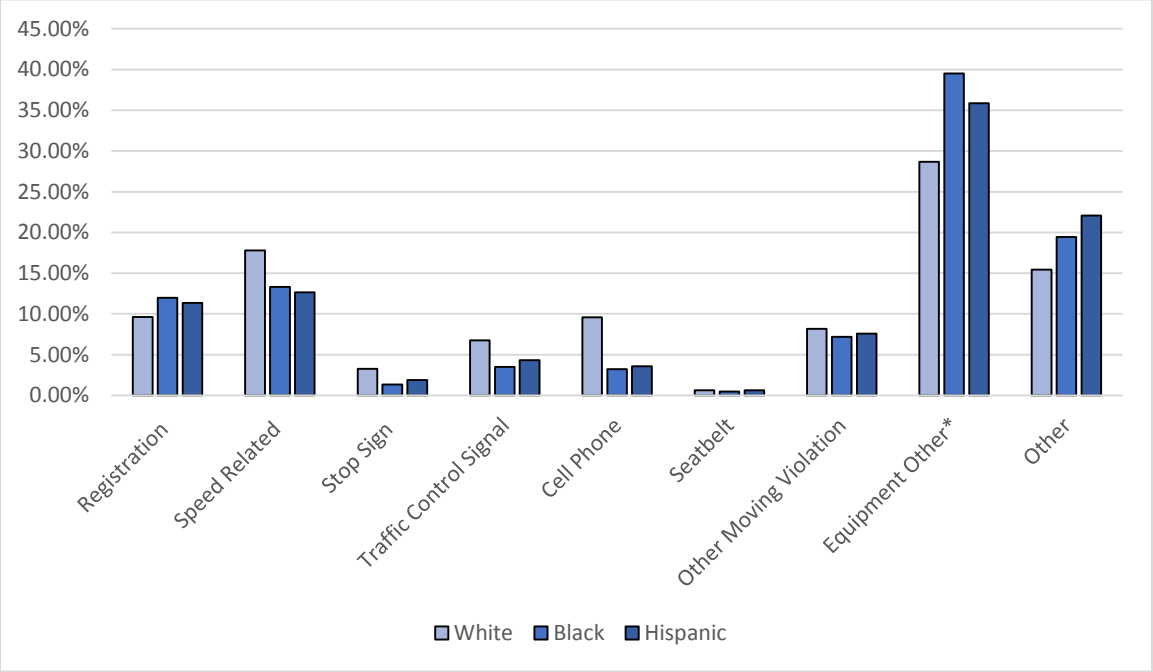
## Traffic Stop Distribution for Wethersfield Officers

Wethersfield's total of 4,490 traffic stops is comparable to other towns of its size. During the study period, traffic stop data was reported for 45 officers. The average number of stops made per officer was 100. Of the 45 officers reporting stops, 20 made fewer than 20 stops, four made between 20 and 50 stops, eight made between 50 and 150 stops, nine made between 150 and 300 stops and four made over 300 stops. The four most active officers making more than 300 stops each collectively accounted for 34% of Wethersfield stops. While these four officers clearly had the greatest impact on Wethersfield's total stop numbers, the average number of stops per officer is relatively higher than the averages found in a number of other departments.

## Post-Stop Outcome Review

The reasons police use to stop a motor vehicle can vary significantly from department to department. We reviewed the statutory authority that Wethersfield officers reported as the reason for stopping motor vehicles. The three most common reasons for stopping a motorist in Wethersfield made up 45% of the total stops. The three largest stop categories were for speeding violations (16%); defective, improper, or inoperative lighting (15%); and display of plate violations (14%). 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-related violations than white drivers as a percentage of their total stops. Figure 5.1 illustrates by race and ethnicity the reason officers cited to stop a motor vehicle.

**Figure 5.1: Reasons for Traffic Stops**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Just over 32% of Wethersfield's stops were made for violations involving defective, missing, or inoperative vehicle lighting; improper display of license plates; and window tinting. This was the second highest proportion for such stops of any municipal police department in the state during the study year. The statewide average for stopping drivers for these violations was 12%. Just over 85% of these equipment-related violations resulted in verbal warnings. This was a significantly higher warning rate than for all other types of violations, which was only 66%.

The data shows that, with respect to the racial and ethnic demographics of those stopped, registration- and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) can be closely related to the frequency and location where they are made. If 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 occur in areas with higher concentrations of white drivers, the stop demographics shift toward white drivers, suggesting that the potential to find violators is more dependent on location than race.

The Wethersfield data tends to confirm these observations. Of the stops that we could map, there were 224 equipment-related stops made in census tract 4923, which is the northern census tract closest to Hartford. The racial breakdown for these stops shows 30% Hispanic drivers, 23% black drivers, and 46% white drivers. There were 122 equipment-related stops made in census tract 4926, which is the southern census tract bordering Rocky Hill. The demographics for these stops were 16% Hispanic drivers, 17% black drivers, and 66% white drivers. This proportion appears to have been due more to the frequency and location of where such stops were made than an inherently higher violation rate by Hispanic or black drivers.

These stops occurred more frequently on the roadways that have direct access to Wethersfield from Hartford (Berlin Turnpike, Jordan Lane, Silas Deane Highway, Hartford Ave., and Folly Brook Blvd.). The frequency and location of these stops on these roadways in the northern area of Wethersfield appears to have had a large impact on the size of the disparity affecting both black and Hispanic drivers in Wethersfield. Of all the Hispanic drivers stopped in Wethersfield, 36% were stopped for equipment-related reasons. Similarly, 40% of all the black drivers stopped were stopped for equipment-related reasons and 29% of all the white drivers stopped were stopped for equipment-related reasons.

Figure 5.2 and Figure 5.3 are maps of the traffic stops that we could map that illustrate traffic enforcement for equipment-related motor vehicle stops and safety-related motor vehicle stops. Stops that were made for speed, stop sign, traffic light, cell phone or moving violations were labeled "safety-related" stops. Stops for defective lights, window tints, or display of plate were labeled "equipment-related" violations.

**Figure 5.2: Equipment-Related Motor Vehicle Stops**

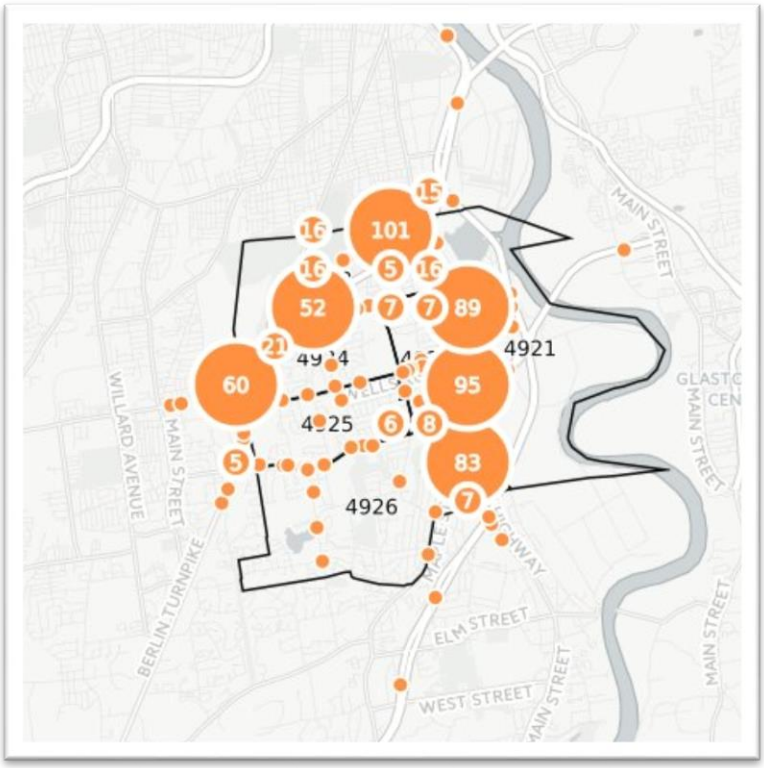
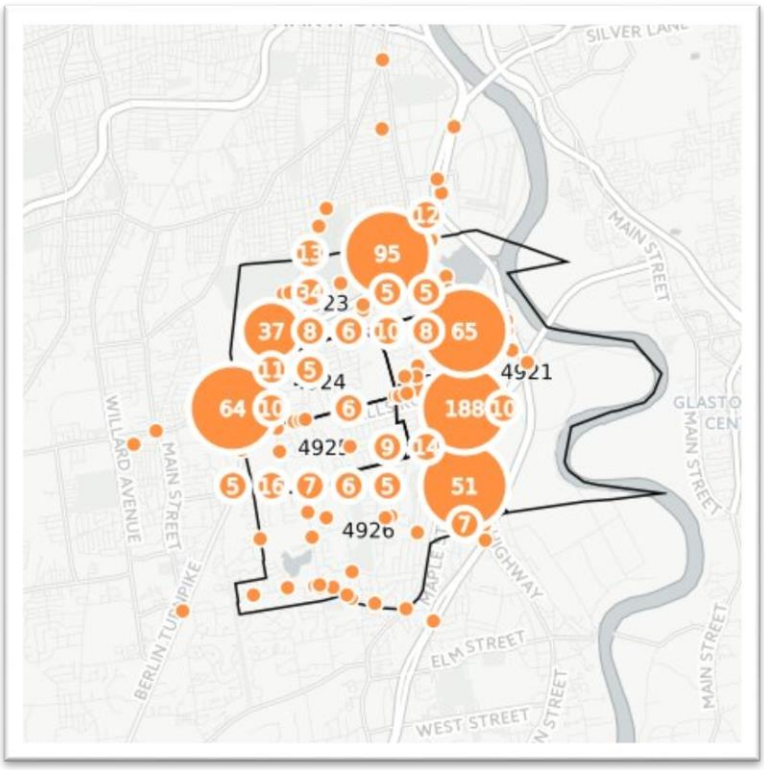


**Figure 5.3: Safety-Related Motor Vehicle Stops**



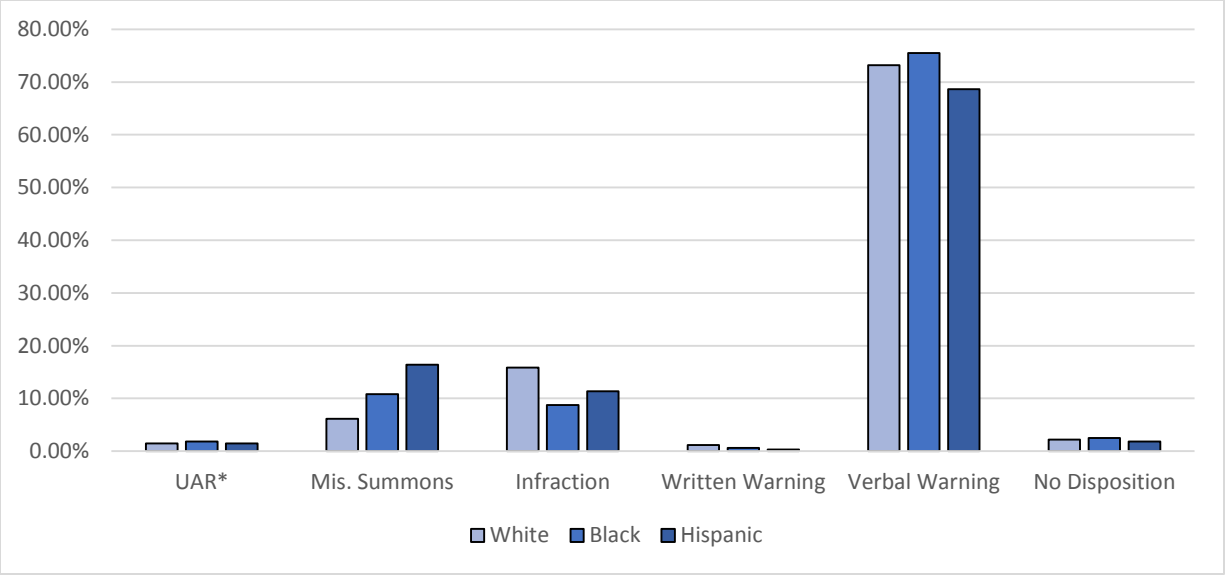

The highest percentage of motor vehicle stops in Wethersfield resulted in the driver receiving a verbal warning (73%). Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black drivers were less likely to receive an infraction compared to white and Hispanic drivers. Hispanic drivers were slightly less likely to receive a verbal warning than white or black drivers. Figure 5.4 outlines the outcome of motor vehicle stops by race and ethnicity.

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 suspension, operating under the influence of alcohol or drugs, and operating an uninsured or underinsured vehicle. The system for collecting and reporting traffic stop data requires officers to record the statutory citation for the violation that was the basis for the stop as well as any subsequent charges that differed from and were more significant that the initiating charge. This gives an analyst data on the initial cause for making a stop as well as any subsequent, more serious charge. For example, if someone was initially stopped for a lesser reason such as not wearing a seat belt or rolling through a stop sign, the officer might subsequently determine that the driver was operating with a suspended license or registration. If this information is properly recorded, it is possible to distinguish those stops from the ones that begin and end with the same charge.

In Wethersfield, 437 of the stops resulted in the issuance of a misdemeanor summons (9.7%). Black drivers were almost twice as likely and Hispanic drivers were almost three times as likely to receive a misdemeanor summons compared to white drivers (11% of black drivers and 16% of Hispanic drivers compared to 6% of white drivers). Wethersfield did not report the secondary statutory

citation in 156 of the cases that resulted in a misdemeanor. Additionally, in some cases the secondary citation was not a misdemeanor and we could not determine the final misdemeanor charge.

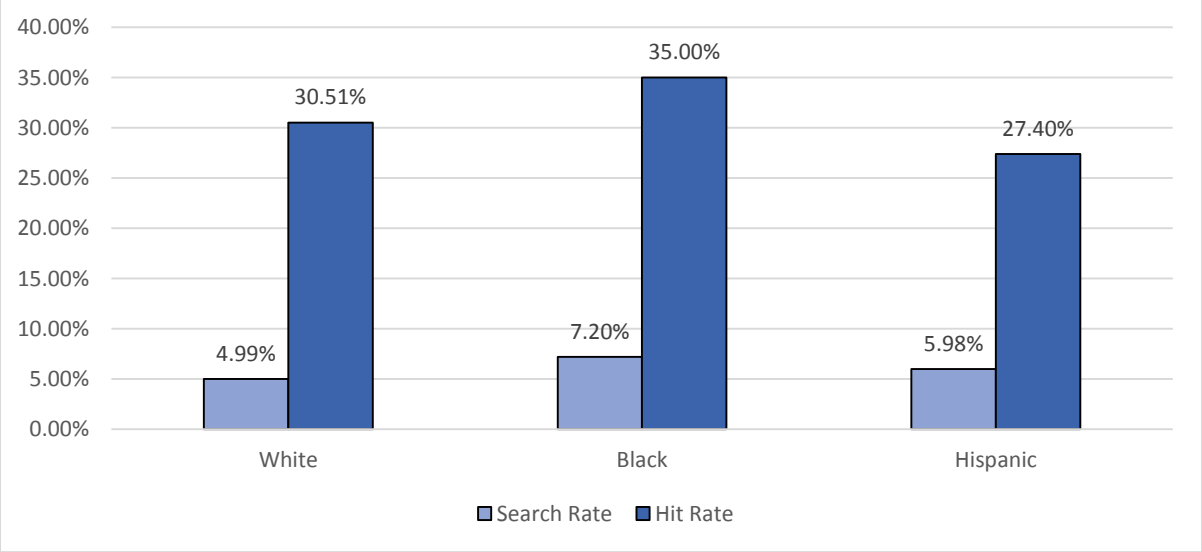
**Figure 5.4: Outcome of Traffic Stop**




*Uniform Arrest Report

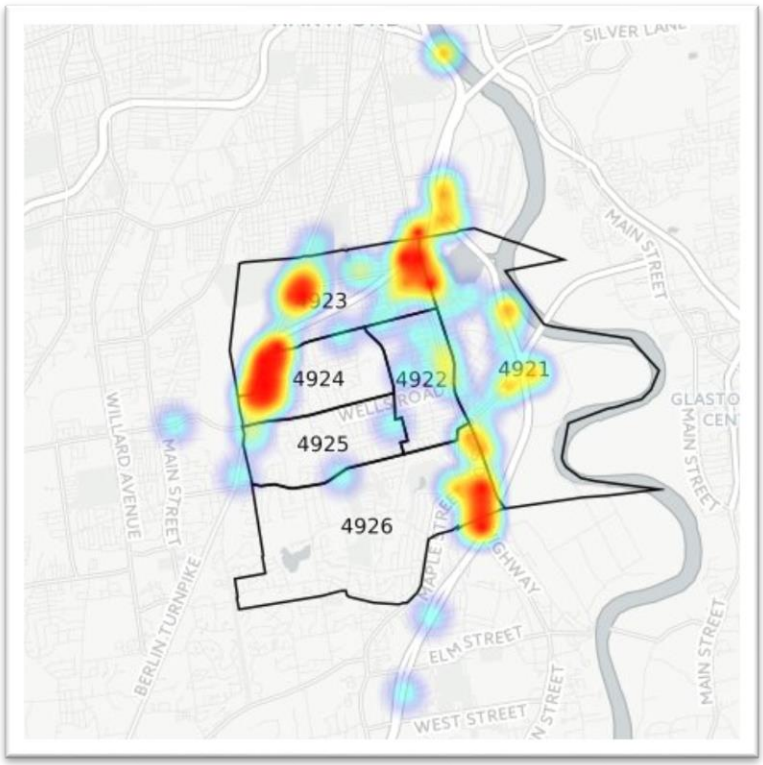
A review of department search information shows that 5.7% (254) of the drivers stopped in Wethersfield were subjected to a motor vehicle search. The rate of motor vehicle searches was above the state average of 2.9%, and minority drivers were searched at a higher rate than white drivers. Contraband was found at a slightly higher rate with white drivers compared to Hispanic drivers. Black drivers had a slightly higher rate for contraband compared to white drivers searched. Figure 5.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate").

**Figure 5.5: Search and Hit Rate**



Motor vehicle searches in Wethersfield are concentrated in the high enforcement areas including the Berlin Turnpike and Silas Deane Highway. Figure 5.6 is a heat map of motor vehicle searches in Wethersfield which indicates where the majority of searches occur.

**Figure 5.6: Search Heat Map**

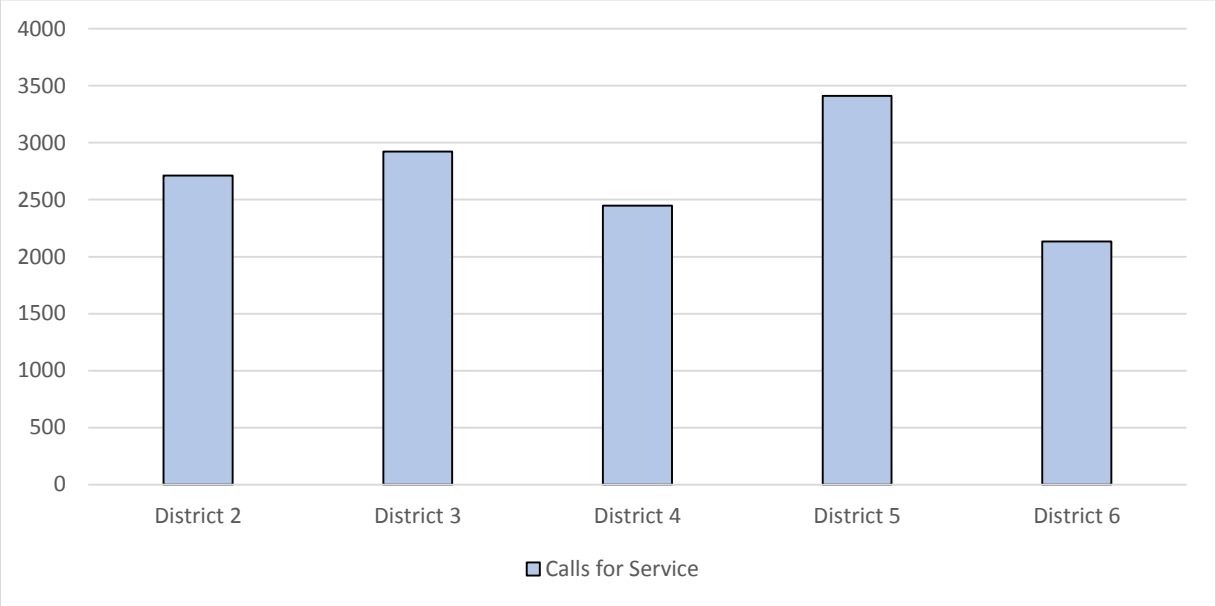



## Calls for Service

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. The department provided researchers with the calls for service log, which included calls for service and officer initiated actions that were called into police dispatch. The logs report approximately 15,897 entries from October 1, 2014 through September 30, 2015. The top three reasons for calling dispatch were for a medical issue, a suspicious person or incident, or a general call to a residence. These three types of calls account for about 33% of all calls.

The calls for service information identifies the patrol district where the call originated. This identifies the level of demand for police resources in particular areas of town. Figure 6.0 is a graph that illustrates the total number of service calls for each district. As indicated earlier, Wethersfield has two patrol plans based on the number of officers working. Plan A has five patrol districts and Plan B has four patrol districts. Therefore, it is reasonable that district 6 has the fewest number of calls because it is not in use all the time.

**Figure 6.0: Calls for Service by Patrol District**




Patrol district 5 accounts for the largest volume of calls for service with 21% of all calls, followed by district 4 with 19% of all calls and district 3 with 19% of all calls. These three patrol districts make up the majority of the high traffic enforcement areas in town which include the Berlin Turnpike and Silas Deane Highway. The call logs indicate that the majority of motor vehicle thefts occur in the northern tier of the town. A higher percentage of medical related calls are from the southern tier of town. One of the top three reasons for a call in the dispatch log was for a suspicious person. Almost 45% of the suspicious person calls come from districts 2 and 3 in the northern part of town, while 40% come from districts 4 and 5. Lastly, there were 133 calls for shoplifting. The majority of shoplifting incidents were reported in districts 3 and 5. District 3 covers most of the Berlin Turnpike and district 5 covers a large part of the center of the Silas Deane Highway.

## Additional Contributing Factors

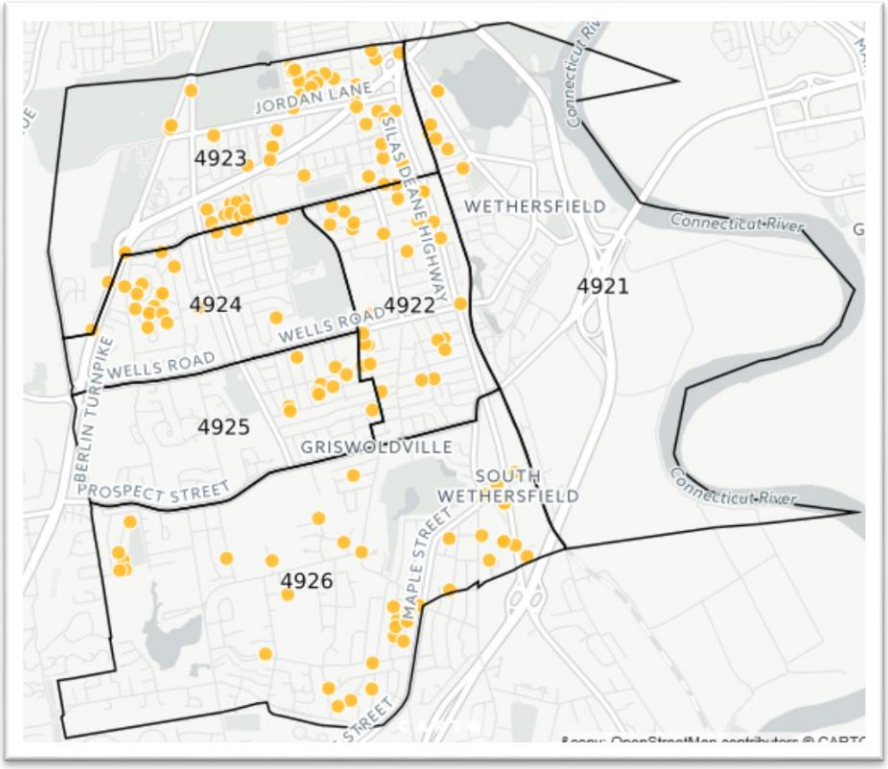
In addition to calls for service, law enforcement administrators also distribute police resources within a community based on accident rates, or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment and entertainment. Traffic enforcement actions are likely to be more prevalent in locations that attract greater police presence due to some of these factors. Basic information on crime, accidents, and other economic factors associated with Wethersfield provide a context to potentially explain the rationale for police deployments there and are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 13,000 people work in Wethersfield and its major employers include Wethersfield Health Care Center, VNA Healthcare Inc., Connecticut's departments of Correction and Labor, and Cox Communications. The vast majority of commuters traveling into Wethersfield for employment are from Hartford, East Hartford, Newington, Manchester, and New Britain. The overall unemployment rate is 5.7%, which is below the unemployment rate for Hartford County and the state.

In 2015, the crime rate in Wethersfield was reported to be 133 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[8], there were 369 reported crimes in Wethersfield in 2014. The three most reported crimes were larceny (205), burglary (95), and motor vehicle theft (36).

The department reported that car break-ins have been on the rise over the last three years which have had an impact on the deployment of patrol resources. Information provided by the department shows that car break-ins have increased close to 100% over the last three years. Car break-ins have increased from 122 in 2013 to 173 in 2014 and 243 in 2015. These incidents appear to occur throughout the town with a higher number of incidents occurring in the northern tier. Figure 7.1 is a map of car break-ins during the study period.

**Figure 7.1: Reported Car Break-Ins (October 1, 2014 – September 30, 2015)**




During our study period, there were approximately 715 motor vehicle accidents on roads patrolled by the Wethersfield Police Department. Accidents were reported on a total of 74 roads. The roadways with the highest number of accidents were the Silas Deane Highway (168 accidents), Berlin Turnpike (120 accidents), and Maple Street and Wells Road (47 accidents each). There were 17 roads with 10 or more accidents and those roads accounted for 84% of all the accidents.

Figure 7.2 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is

[8] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

correlated with traffic accidents in Wethersfield. While the vehicle crash rate tends to build fairly steadily throughout the day in Wethersfield, it peaks during the afternoon from 2:00 p.m. through 5:00 p.m. Figure 7.3 is a map siting the motor vehicle accidents that occurred during the.

**Figure 7.2: Accidents Compared to Traffic Stops by Time of Day**

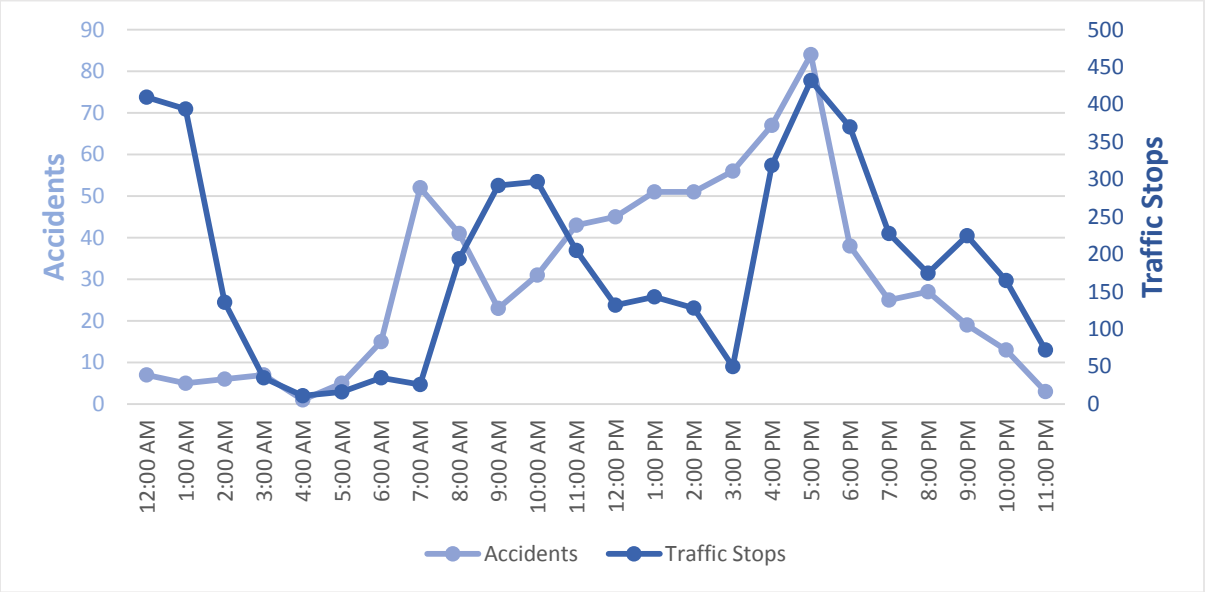
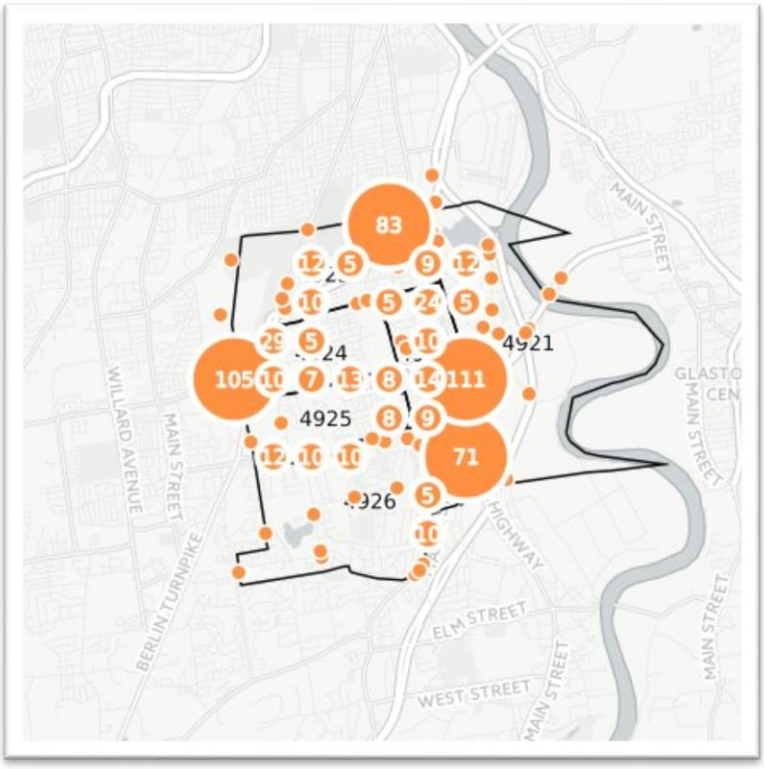



**Figure 7.3: Wethersfield Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**



## Summary of Findings

Wethersfield Police Department officials identified factors that they believe contribute to the minority disparity identified in the initial analysis of traffic stops. The department stated that they believe their roadways are heavily impacted by residents of Hartford and in particular by minority residents from Hartford's south end. Wethersfield highlighted the effect of the location of retail businesses on the Berlin Turnpike and Silas Deane Highway has on traffic. The department provided summary information on calls for service that were reviewed. The southern patrol districts that border Rocky Hill had the highest call volume, but this was mostly the result of medical related calls. The northern patrol districts that border Hartford reported a higher number of motor vehicle thefts, while shoplifting related calls were identified in the northern patrol districts and the middle of the Silas Deane Highway. The highest volume of shoplifting calls appear to come from the area on the Silas Deane Highway near the Marshalls plaza. However, there were fewer than 100 calls for shoplifting or motor vehicle theft in each of these areas. In addition, motor vehicle accidents can also impact enforcement patterns. The accidents that we were able to map appear to mirror some overall stop patterns. The highest number of accidents occurred on the southern half of the Silas Deane Highway, near the Newington border of the Berlin Turnpike and on the Route 5 connector at the Hartford border. It was evident from the data that departmental resources were concentrated in certain parts of town, primarily along the Berlin Turnpike, Silas Deane Highway, and in the northern tier of the community defined largely by census tract 4923.

Traffic enforcement was concentrated in a relatively limited geographic area along the northern portion of the town near the Hartford border and on Route 99 (Silas Deane Highway). Route 99 had the greatest impact on traffic enforcement in Wethersfield, accounting for 38% of the traffic stops. Route 5 (Berlin Turnpike) has the second greatest impact on traffic enforcement with 26% of traffic stops. Combined, these two roadways account for 64% of all traffic stops and 70% of all minority traffic stops in Wethersfield.

In the northern tier of Wethersfield, basically defined within census tract 4923, there was significant law enforcement activity. When the stops made on the Berlin Turnpike and Jordan Lane were combined with the portion of the stops on the Silas Deane Highway within the boundaries of census tract 4923, the total is 35% of all Wethersfield stops. Just over 22% of these stops involved black drivers, 35% involved Hispanic drivers, and 42% involved white drivers. The rate of Hispanic driver stops in this area was almost eight percentage points higher than the town-wide average for Hispanic stops. Overall, 41% of all black drivers and 45% of all Hispanic drivers stopped in Wethersfield were stopped in this northern enforcement tier.

Wethersfield's traffic stop data reflects (1) an extremely low non-white driving age resident population and (2) the relatively large proportion of non-Wethersfield residents who make up the majority of people who were stopped in Wethersfield. Since 82% of all drivers stopped in Wethersfield were non-residents, the overall impact out-of-town drivers had on the stop data is fairly clear. Approximately 92% of black and Hispanic drivers stopped were not residents of Wethersfield, compared to 72% of white drivers who were non-residents.

The non-resident component of the stop demographics appeared to have its greatest impact in the Route 5 and Route 99 corridors, with 94% of the drivers stopped on Route 5 and 83% of the drivers stopped on Route 99 not living in Wethersfield. These two corridors were responsible for 72% of the

non-resident Hispanic drivers stopped in Wethersfield and 73% of the non-resident black drivers stopped compared to only 63% of the non-resident white drivers stopped.

*Traffic Stop Outcomes*

Speeding violations were the largest category of stops made in Wethersfield (16%). The next largest category of stops was for defective, improper, or inoperative lighting (15%), followed by stops for display of plate violations (14%). Black and Hispanic drivers were more likely than white non-Hispanic drivers to be stopped for an equipment violation. In contrast, white non-Hispanic drivers were more likely to be stopped for a moving or speeding violation.

Just over 32% of Wethersfield's stops were made for violations involving defective, missing, or inoperative vehicle lighting; improper display of license plates; and window tinting. This was the second highest proportion for such stops of any municipal police department in the state during the study year. Hispanic drivers were stopped 36% of the time for equipment-related violations, and black drivers were stopped 40% of the time compared to 29% of the time for white drivers. Conversely, 37% of all the white drivers stopped in Wethersfield were stopped for hazardous driving behaviors compared to 21% of black drivers and 22% of Hispanic drivers. Just over 85% of these equipment-related violations resulted in verbal warnings. This was a significantly higher warning rate than for all other types of violations, which was only 66%. These stops occurred more frequently on the roadways that have direct access to Wethersfield from Hartford (Berlin Turnpike, Jordan Lane, Silas Deane Highway, Hartford Ave., and Folly Brook Blvd.) The frequency and location of these stops on these roadways in the northern area of Wethersfield appear to have had a large impact on the size of the disparity affecting both black and Hispanic drivers.

The proportion of Wethersfield's traffic stops that resulted in a misdemeanor summons (9.7%) exceeds the state average of 5.4%. Black and Hispanic drivers were more than twice as likely as white drivers to receive a misdemeanor summons as the result of a stop. White drivers were more likely to receive an infraction ticket. Overall, almost 73% of all drivers stopped received a verbal warning, although as noted above, stops for equipment violations were significantly more likely to result in verbal warning than any other type of violation.

Wethersfield police searched the vehicles of 5.7% of drivers they stopped, which is almost twice the state average of 2.9%. Black and Hispanic drivers were searched at about a 35% higher rate than white drivers. The overall rate of contraband found mirrored the statewide average, with contraband found 30% of the time. Compared to white drivers, the rate of contraband found was slightly lower for Hispanic drivers and slightly higher for black drivers. Of the 254 vehicle searches, the majority were conducted after seeking and receiving the driver's consent, although contraband was only found 16% of the time. The other searches were primarily the conducted under some other authority (i.e., probable cause, plain view, etc.) and the rate at which contraband was found in these instances exceeded the town and state-wide averages at 49%. This data suggests that the police department may want to review its use of consent-based searches and evaluate their overall value to the department.

*Conclusion*

The relative disparities in Wethersfield appear to be due to three basic factors:

(1) the relatively high levels of enforcement in the northern tier of town which has both the highest resident minority driving age population and is most likely to have relatively high

proportions of non-resident minority drivers traversing it because of its proximity to relatively high minority populations in the south end of Hartford;
(2) the presence of significant traffic magnets along the Berlin Turnpike and Silas Deane Highway which generate a considerable number of calls for service, vehicle crashes, and traffic from surrounding communities; and
(3) the significant use of equipment-related motor vehicle stops that disproportionately affected minority drivers.

While white drivers are more likely to be stopped in Wethersfield 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 and registration violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the high enforcement northern tier of town, where both resident and non-resident minority drivers are likely to be present in the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violate these laws with greater frequency than white drivers.

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

(1) review its traffic enforcement policies in the northern section of the town, with particular attention to the stop activity on the Berlin Turnpike and Silas Deane Highway, in order to evaluate the extent to which they may have a disproportionate effect on black and Hispanic drivers;
(2) evaluate both the location and frequency of stops that involve equipment-related motor vehicle violations, to better understand the impact they may be having on minority drivers; and
(3) review the role consent searches play in traffic stop searches to ensure that officers are not overly relying upon this as a search technique.

Department administrators should also remind Wethersfield officers that the statutory reason for issuing a misdemeanor summons for stops that were made for infraction violations must always be entered as part of the data submission in order to track outcomes more accurately.

## I.B (9): WINDSOR FOLLOW-UP ANALYSIS SUMMARY

This analysis continues the work of the Racial Profiling Prohibition Project's study of traffic stops conducted since October 1, 2013. This follow-up report focuses on data reported for stops conducted from October 1, 2014 through September 30, 2015. The table below compares summary racial data for reported traffic stops in Windsor over a two-year period.

| | 2013-2014 Traffic Stop Records | | 2014-2015 Traffic Stop Records | |
|---|---|---|---|---|
| White Non-Hispanic | 2,534 | 45.5% | 2,554 | 44.7% |
| Black Non-Hispanic | 2,380 | 42.8% | 2,504 | 43.8% |
| AsPac Non-Hispanic* | 85 | 1.5% | 108 | 1.9% |
| AI/AN Non-Hispanic** | 19 | 0.3% | 21 | 0.4% |
| Hispanic | 547 | 9.8% | 529 | 9.3% |
| Total | 5,565 | | 5,716 | |

*Asian Pacific Non-Hispanic

** American Indian/Alaska Native Non-Hispanic

### Overview of the May 2016 Traffic Stop Analysis

The May 2016 Traffic Stop Analysis report indicated that for the October 1, 2014 – September 30, 2015 study period the Windsor Police Department made a total of 5,716 traffic stops. Of these stops, 55% were of minority drivers (9.3% were Hispanic drivers and 43.8% were black drivers). The Windsor Police Department was identified using the three descriptive tests as well as the synthetic control model. Windsor was identified as having exceeded the threshold for identification in two of the three descriptive benchmarks used and four of the nine possible measures. In addition, Windsor was identified using the synthetic control method with a statistically significant racial disparity for black drivers. The synthetic control model compares the demographics of Windsor stops with a sample of stops with similar characteristics made in other places. Although certain assumptions have been made in the design of each of these methods, it is reasonable to conclude that departments with consistent data disparities which separate them from the majority of other departments should be subject to further review and analysis with respect to the factors that may be causing these differences.

### Descriptive Analysis of the 2014-2015 Traffic Stop Data

The racial and ethnic disparities in the Windsor Police Department data were studied using a more detailed review of traffic enforcement during the study period, October 1, 2014 through September 30, 2015. 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. The descriptive information on stop locations was specific enough to allow accurate mapping of 85% of the traffic stops reported, though in most cases, geographical coordinates were not provided to us and traffic stops were manually mapped using the officer's description of the location of the stop. In 15% of the reported traffic stops, the description was too general or non-specific and therefore researchers could not identify the specific geographic coordinates. While these stops could not be pinpointed to a specific location on a roadway, the roadway itself was identified and could be included to some extent in the overall analysis. We believe that the significant percentage of stops we could map and the ability to account for the other stops within larger geographic areas of the town covered by more than a single census tract was sufficient to proceed with a census tract-based analysis.

According to the 2010 census, Windsor is a town with approximately 23,186 residents over the age of 16. Approximately 44% of the driving age population in Windsor is identified as a minority (other than white, non-Hispanic). Figure 1.0 outlines the basic demographic information for Windsor residents over age 16.

**Figure 1.0: Windsor Population**

| Race/Ethnicity | 16+ Population Total | % Population Total |
|---|---|---|
| White Non-Hispanic | 13,022 | 56.2% |
| Black Non-Hispanic | 7,477 | 32.3% |
| AsPac Non-Hispanic | 984 | 4.2% |
| Hispanic | 1,703 | 7.3% |
| Other | 0 | 0.0% |
| Total | 23,186 | |

The U.S. Census Bureau divides Windsor into eight census tracts. The resident driving age population varies from one census tract to another, from about 1,400 to 5,000 people. The racial breakdown of each census tract varies, from a high of over 84% minority driving age residents in census tract 4738 to a low of 22% in tract 4734. Figure 2.1 is a map that outlines the boundaries of Windsor census tracts, which will be referred to throughout this report. Figure 2.2 shows the distribution for each census tract in terms of white and non-white driving age population.

**Figure 2.1: Windsor Census Tract Map**

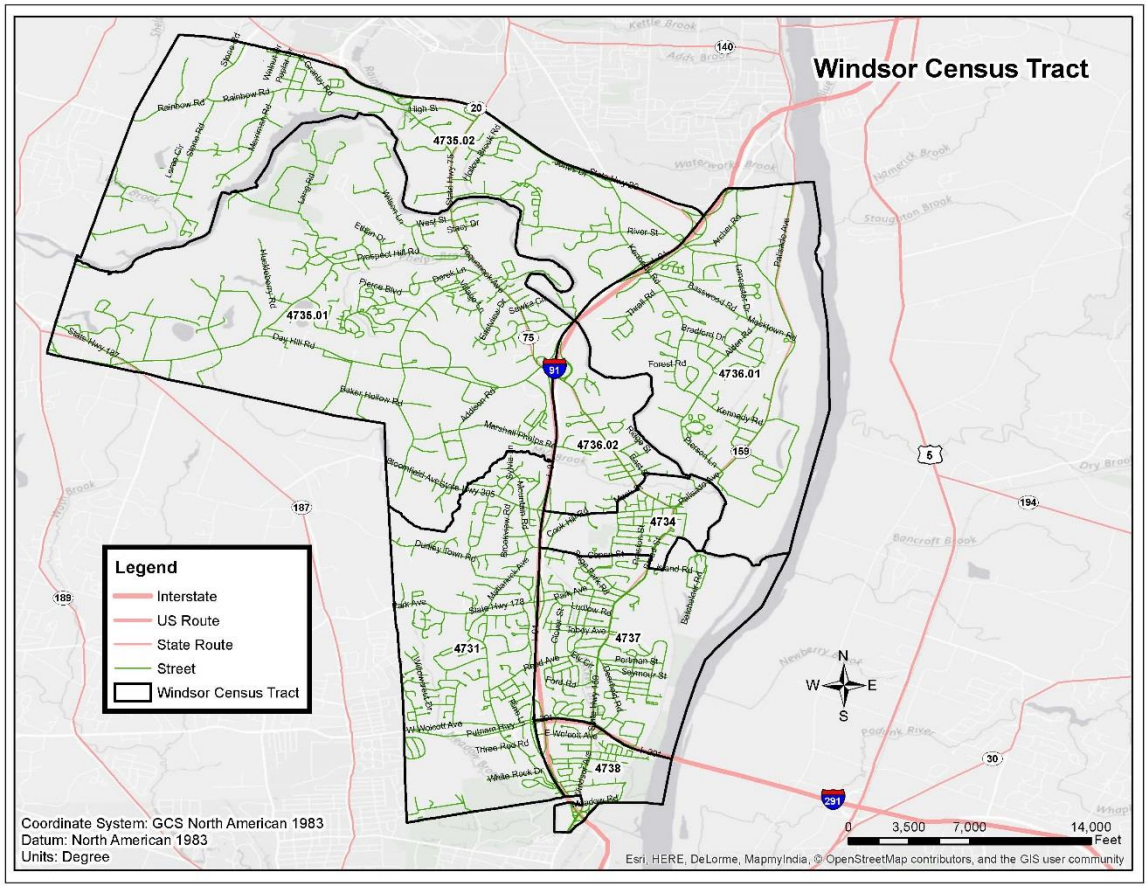
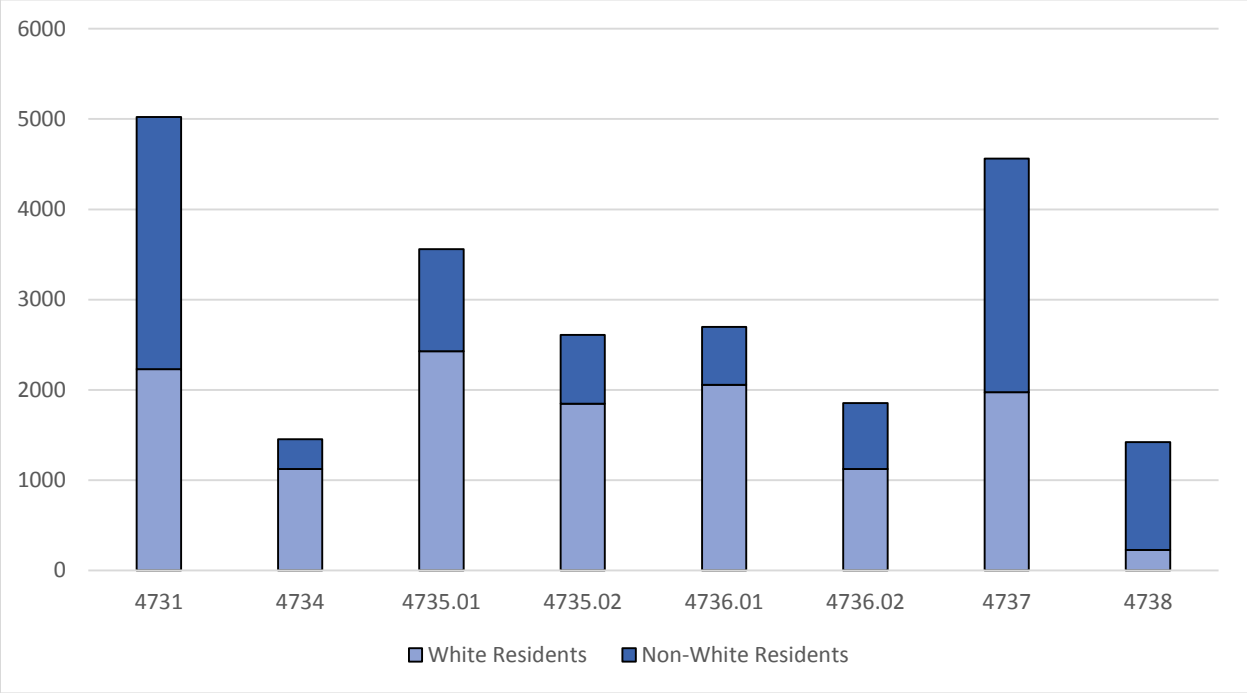


**Figure 2.2: Age 16 and Older Resident Population by Census Tract**




Census tracts 4731 and 4738 directly border the north end of Hartford and have the two highest proportions of black residents in Windsor (44.8% and 60.6% respectively). Census tract 4737, which is directly to the north of 4738 has the next highest proportion of black residents (44.3%). In all, 70% of all of the black driving age residents of Windsor live in these three southernmost census tracts. These three census tracts also contain 59% of all Windsor's Hispanic driving age residents.

Six other municipalities share a common border with Windsor, including East Granby and Windsor Locks to its north, East Windsor and South Windsor to its east, Hartford to its south and Bloomfield to its west. With the exception of Hartford and Bloomfield, the four other border towns to the north and east are predominantly white, with an average driving age white population of 88% (compared to Windsor's white driving age population of 56%). Hartford borders the southern portion of Windsor and has a white driving age population of 19%. Bloomfield, to Windsor's west, has an overall white driving age population of 39%.

Of the all the drivers stopped in Windsor, 36% were Windsor residents and 64% lived elsewhere. However, there is considerable variation within sections of the town. The three census tracts that are directly north of tract 4738 and border the Connecticut River (4737, 4734, and 4736.01) have a significantly lower proportion of non-residents stopped (ranging from 47% to 58%) than do the other census tracts.

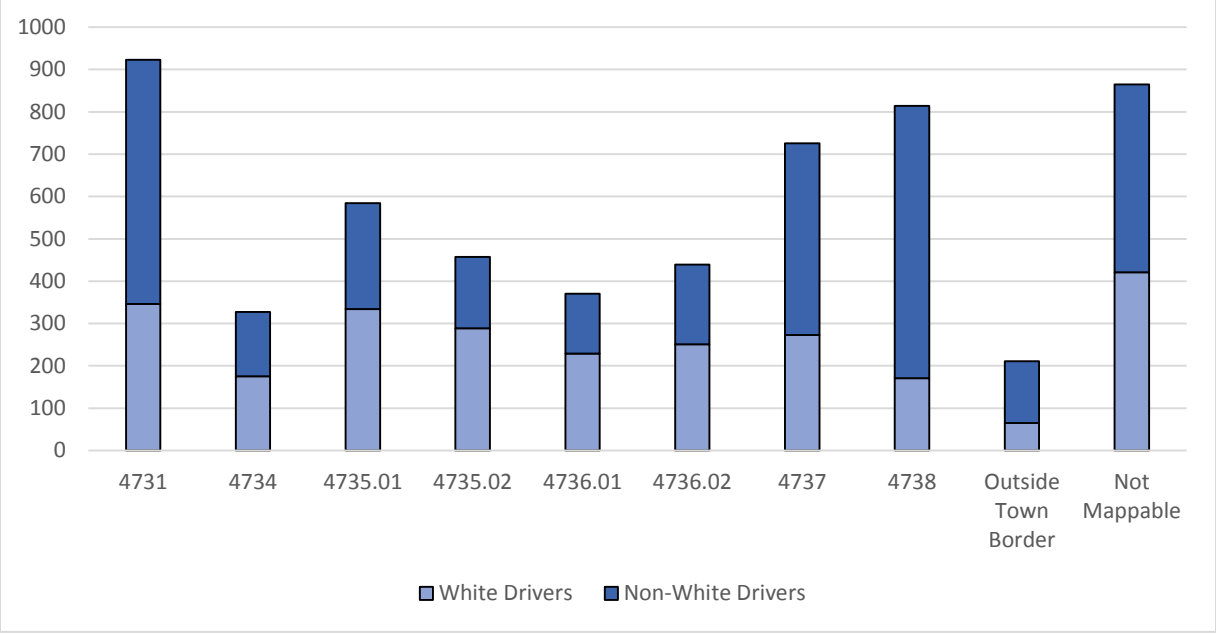
Windsor covers 31 square miles and the Connecticut River defines its eastern border. Interstate 91 bisects the town in a north-south direction from Hartford to Windsor Locks. Interstate 291 which connects Interstate 91 and Interstate 84 runs through the south east corner of the town. I-291 provides the town's only direct access across the Connecticut River to the east.

Windsor patrol officers operate in five patrol districts with typically at least five officers patrolling the town at any given time. District one and two patrol the high enforcement areas in the southern

section of town that borders Hartford. These are also the smallest geographic patrol districts and primarily cover census tracts 4731, 4737, and 4738. District three patrols the northwestern section of the town including most of census tracts 4735.01 and 4735.02. District four patrols the northeastern section of town which includes census tract 4736.01 and a small part of tract 4735.02. Lastly, district five patrols the center of town which includes the northern part of census tract 4731 and census tracts 4736.02 and 4734.

Figure 3.1 illustrates the volume of traffic enforcement that occurred in each Windsor census tract. Excluding the stops that could not be mapped, a large percentage of traffic enforcement activity (51%) occurred in a relatively concentrated geographical area encompassing three census tracts (4731, 4737, and 4738) along the southern portion of town. They also border two census tracts in Hartford and one census tract in Bloomfield. The average minority population in these three bordering census tracts is 88%. Interstates 91 and 291 intersect at the border of all three census tracts. Moving away from the southern portion of the town where a high percentage of traffic enforcement occurs, census tract 4735.01 covers a majority of the downtown area and contributes 12% of the overall traffic enforcement. A combined total of 33% of all traffic enforcement activity occurs in the remaining four census tracts and about 4% of stops occurred outside of Windsor.

**Figure 3.1: Traffic Stops by Census Tract**




While Windsor's overall resident driving age population is 44% minority, 60% of all Windsor residents who were stopped were minority. Resident minority drivers were stopped in seven of the eight census tracts at a rate that exceeded their representation in the tract's resident minority driving age population. Only 36% of the drivers stopped in Windsor were residents of the town.

Figure 3.2 is a map of traffic stops made in Windsor. The three census tracts that account for 51% of the traffic enforcement activity include 47% of the resident population in Windsor. Two of these census tracts also have the largest residential population with tract 4731 having 22% and tract 4737 having 20% of the town population. The third census tract in the high enforcement area, 4738, is the

smallest tract with only 6% of the population. The remaining five census tracts with 52% of the population account for 45% of the traffic enforcement.

**Figure 3.2: Traffic Stop Map**

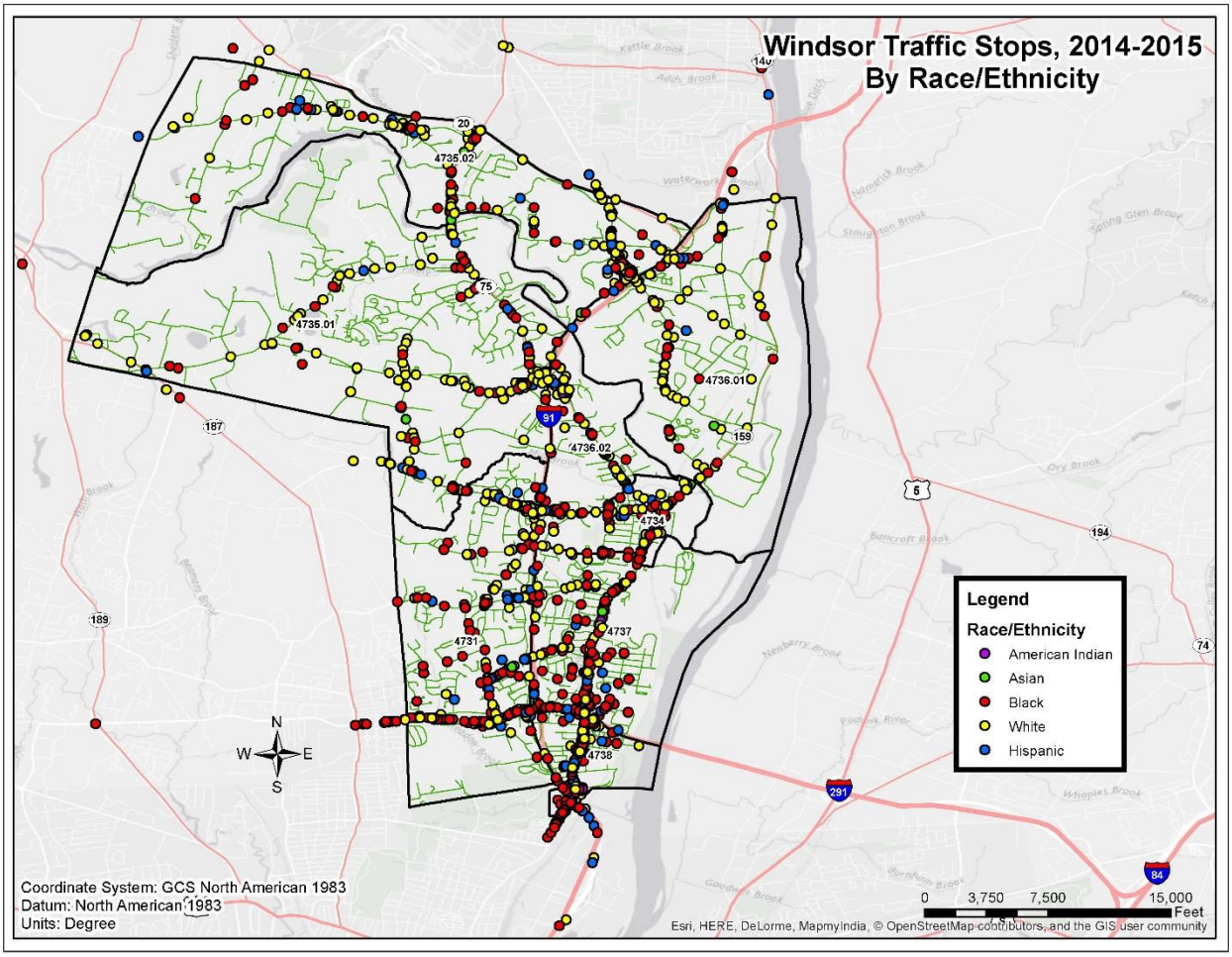
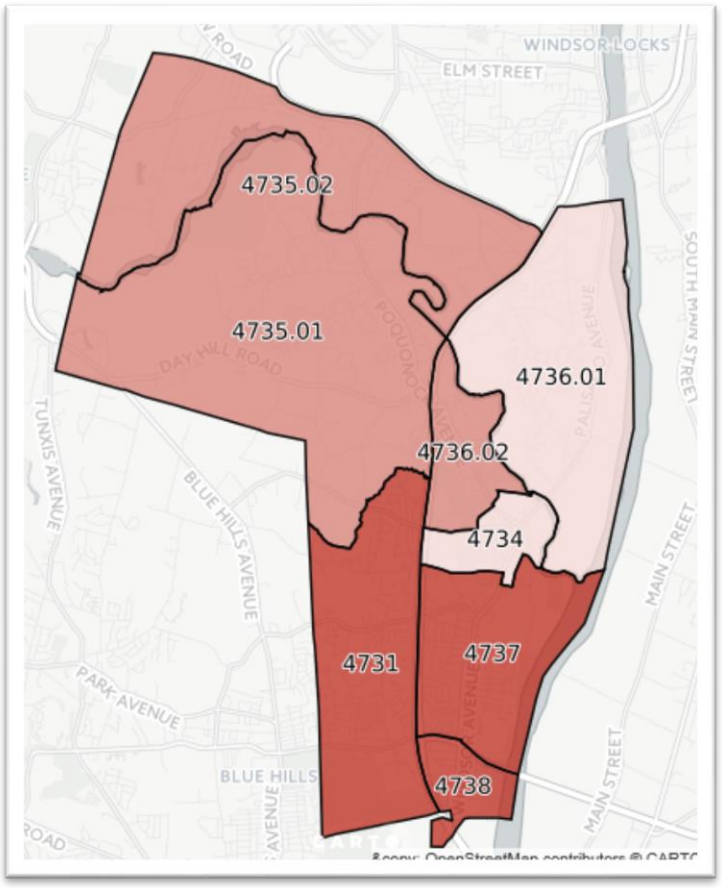



Figure 3.3 shows an additional way to view the high enforcement areas in Windsor. This image identifies the high enforcement areas in three groups. Group one is the highest enforcement areas with between 725 and 925 traffic stops made in each census tract (dark red). Group one includes 43% of all traffic enforcement in Windsor and includes tracts 4731, 4737, and 4738. Group two consists of census tracts that had between 430 and 590 stops (medium red). Group two includes tracts 4735.01, 4735.02, and 4736.02. There were between 300 and 400 stops in each of the remaining census tracts that make-up group three (light red).

**Figure 3.3: Census Tracts Identified by Levels of Enforcement**




## Traffic Stop Breakdown by Race/Ethnicity

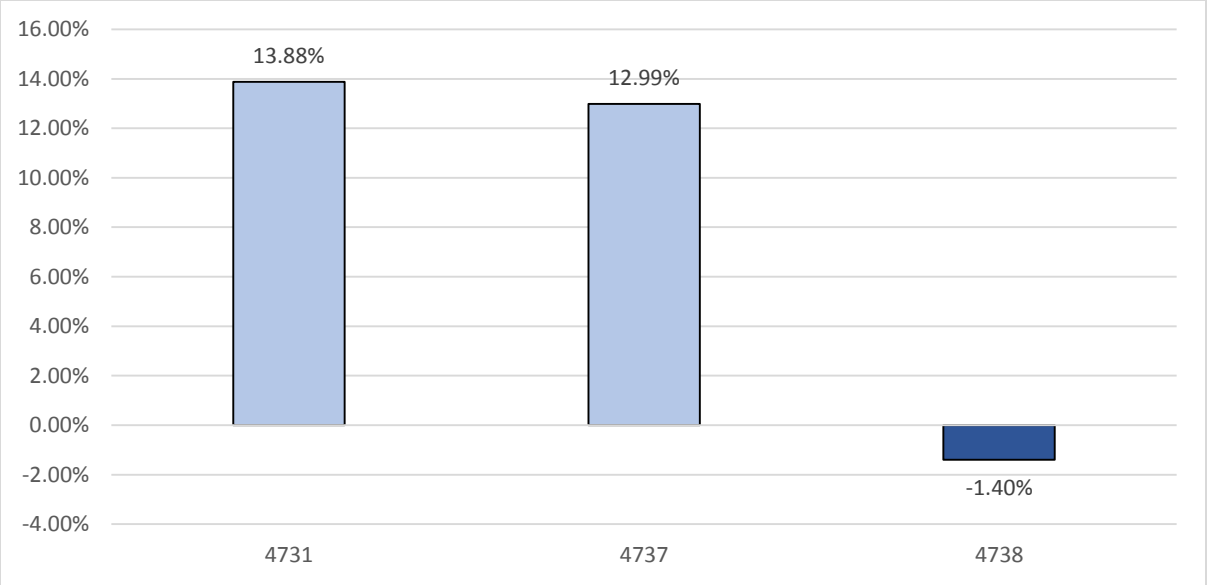
Minority drivers accounted for 55.3% of all drivers stopped in Windsor. Minority drivers are classified as all non-white drivers, but are predominantly made up of black or Hispanic drivers. Windsor's resident population age 16 and older is 43.8% minority. On its face, this might suggest a wide disparity in the proportion of minority drivers stopped during the study period. In one sense, this is true, when considering that about 43% of the Windsor population is minority but close to 55% of the stopped drivers were minority. However, the racial and ethnic makeup of different areas of Windsor varies significantly by census tract, so the disparities were more pronounced in some areas compared to others.

Specifically, three of the eight census tracts (4731, 4737, and 4738) showed a higher percentage of minorities stopped than the town average of 55%. The highest enforcement activity occurred in these three census tracts, accounting for just over 51% of the stops. These census tracts are in the southern portion of town and border two census tracts in Hartford and one tract in Bloomfield. The average minority population is 88% for the tracts in Hartford and Bloomfield that border this section of Windsor.

Figure 4.1 shows the amount by which the minority stop disparity exceeded the resident minority driving age populations in census tracts 4731, 4737, and 4738. Almost 63% of the minority drivers stopped in these tracts were not Windsor residents. The non-residents were 35% white, 51% black,

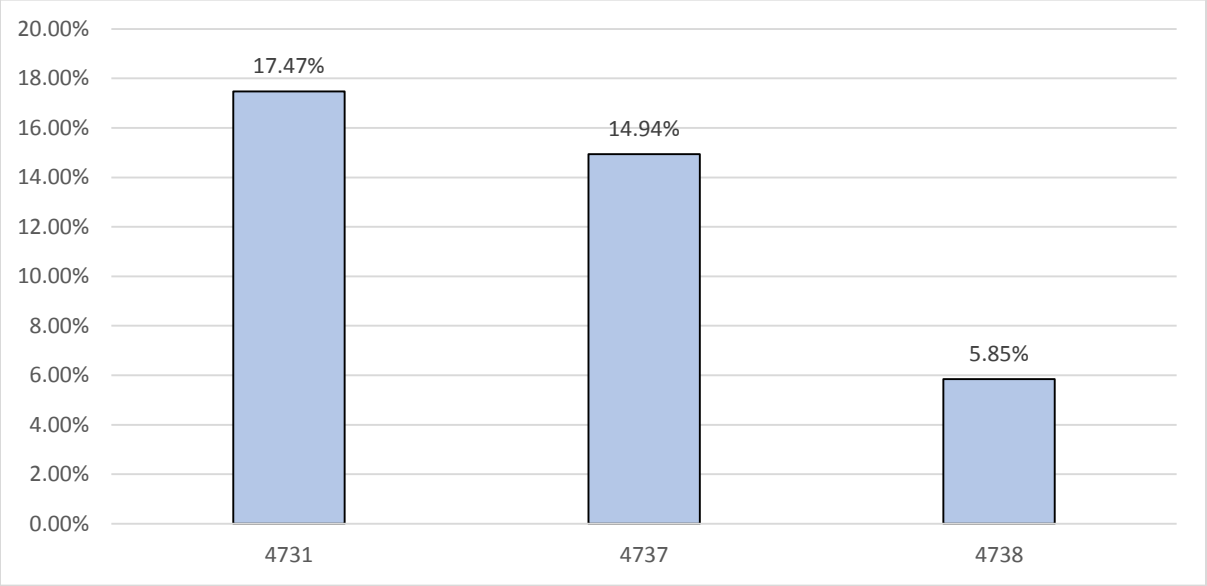
and 11% Hispanic. In contrast, the residents stopped in these tracts were 26% white, 64% black, and 8% Hispanic.

**Figure 4.1: Disparity between Minority Resident Drivers Stopped and Census Tract Population**



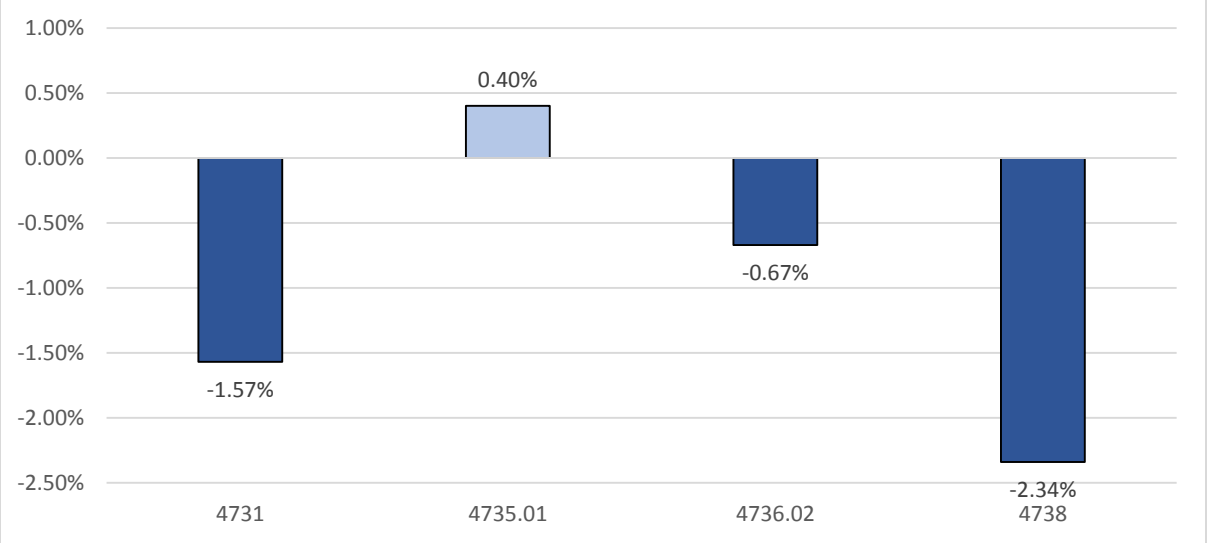

The overall percentage of Windsor traffic stops involving black drivers was 43.8%. The percentage of black drivers who were stopped exceeded the town average in three of the eight census tracts (4731, 4737, and 4738), all of which are part of the high enforcement activity area. Almost 57% of the black drivers stopped in these tracts were not Windsor residents. Figure 4.2 shows the proportion of black stops made in three of the eight census tracts where the percentage of black drivers who were stopped exceeded the town-wide average. There was a positive disparity above the resident black driving age population in all three census tracts.

**Figure 4.2: Disparity between Black Resident Drivers Stopped and Census Tract Population**



The overall percentage of Windsor traffic stops involving Hispanic drivers was 9.3%. The percentage of Hispanic drivers stopped exceeded the town average in four of the eight census tracts (4731, 4735.01, 4736.02, and 4738). Almost 78% of the Hispanic drivers stopped in these tracts were not Windsor residents. Figure 4.3 shows the proportion of Hispanic stops made in these four census tracts compared to the proportion of Hispanic driving age residents living within those census tracts. There was a negative disparity above the resident Hispanic driving age population in three of the four census tracts.

**Figure 4.3: Disparity between Hispanic Resident Drivers Stopped and Census Tract Population**




Figures 4.4 and 4.5 are maps that indicate motor vehicle enforcement for black and Hispanic drivers in Windsor. These maps better illustrate where the concentrations of black and Hispanic motor vehicle enforcement occurs.

**Figure 4.4: Map of Black Driver Stops by Census Tract**

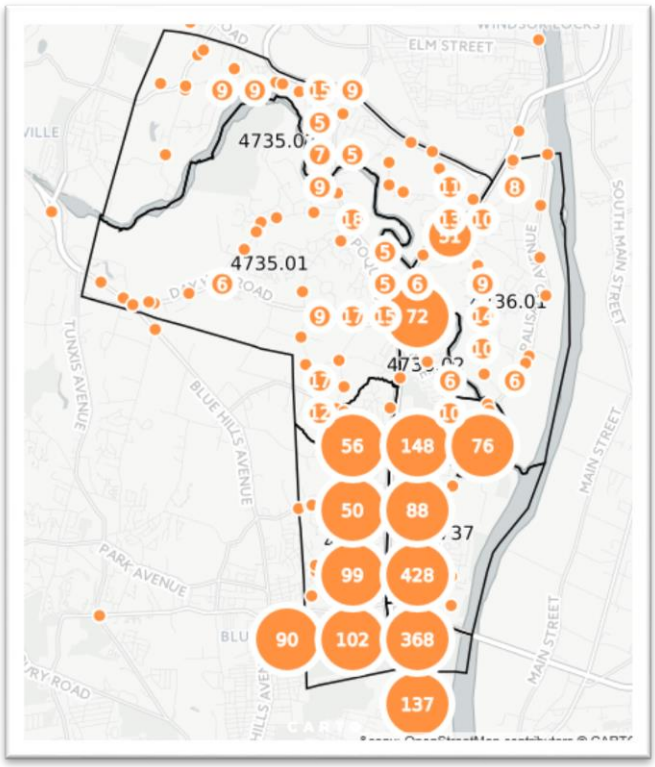
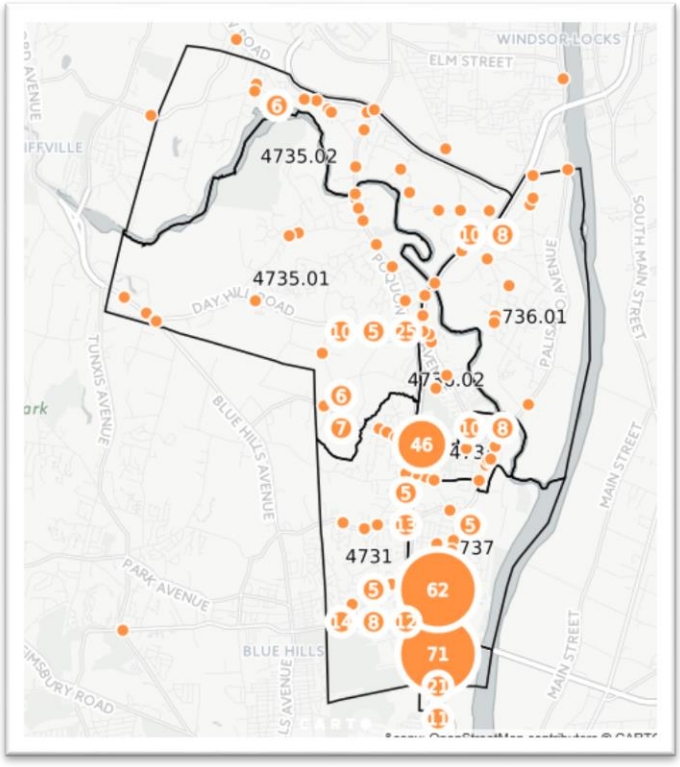



**Figure 4.5: Map of Hispanic Driver Stops by Census Tract**



## Highway Corridor Analysis

In addition to the census tract-based analysis, we also conducted separate analyses of the four highway corridors with the greatest number of traffic stops. These four corridors were Route 159 (Windsor Avenue, Broad Street, and Palisado Avenue), Route 218 (Putnam Highway), Route 305 (Bloomfield Avenue), and Route 75 (Poquonock Avenue). This provides information on how the stops that could not be precisely located in these corridors might be affecting the overall traffic stop patterns.

A total of 865 stops (15% of all Windsor reported stops) could not be mapped precisely. . Based on the descriptions provided, these 865 stops occurred on 73 different roads, only 16 of which had more than 10 traffic stops. These 16 roads accounted for 85% of all the unmapped stops. The stops reported with non-specific location descriptions most often occurred on Routes 159 (219 stops), 218 (107 stops), 305 (63 stops), and 75 (63 stops). The racial demographics of the unmapped stops tend to correspond to the overall stop demographics for the town. The drivers stopped were 51% minority while the average for the town was 55% minority.

Route 159 runs north to south through Windsor from Windsor Locks to Hartford and has several different local road names, including Windsor Avenue, Broad Street, and Palisado Avenue. It runs through four census tracts including 4736.01, 4734, 4737, and 4738. A total of 1,589 traffic stops were made along the Route 159 corridor during the study year, which was 28% of the total for the town. The stops made in the Route 159 corridor included slightly more non-town residents than the non-residents stopped in the town as a whole (64% compared to 59% compared) and also involved a higher proportion of black and Hispanic drivers than the town-wide average. Black drivers accounted for 58% of the Route 159 stops (compared to the town average of 44%). Hispanic drivers accounted for 10% of the Route 159 stops (compared to the town average of 9%). Almost 70% of all traffic stops on this road occurred in census tracts 4737 and 4738 on the southern portion of Route 159. There were 251 other stops reported on Route 159, but could not be mapped due to a vague location description.

Route 218 (Putnam Highway) runs east to west through Windsor from Bloomfield to Deerfield Road, near the South Windsor town line. Route 218 becomes Cottage Grove Road once it crosses into Bloomfield. The roadway runs through the southern end of census tract 4731 and forms the border between census tracts 4737 and 4738. Census tract 4731 runs from the Hartford border on the south to the vicinity of Route 305 where Mill Brook forms its northern boundary. Route 218 serves as a major access to and from Bloomfield and Interstate 91.

A total of 747 traffic stops were made along the Route 218 corridor during the study year, which was 13% of the town total. In addition, another 123 stops were submitted as occurring on Route 159 but were described as the location where Routes 159 and 218 intersect, so the number of stops associated with Route 218 could actually be closer to 870. Of the drivers stopped in the Route 218 corridor, 79% were not residents of Windsor, well above the town average of 64%. The race and ethnicity of drivers stopped in the Route 218 corridor differed slightly from the overall town-wide stop demographics for Hispanic drivers, but more significantly for black drivers. Hispanic drivers accounted for 8% of the Route 218 stops (compared to the town average of 9%). Black drivers accounted for 61% of the Route 218 stops (compared to the town average of 44%). Almost 60% of the Route 218 stops occurred in census tract 4731 (covering the section between I-91 and the

Bloomfield town line). There were 105 other stops (14%) reported on Route 218, but could not be mapped because of non-specific location descriptions.

Route 305 (Bloomfield Avenue) runs through the southeast corner of census tract 4735.01 and the northeast corner of census tract 4731 and forms the border of tracts 4734 and 4736.02. It intersects with I-91 in Windsor at Exit 37 and, along with Route 218, provides a second major access corridor from I-91 west to Bloomfield. A total of 622 traffic stops (11% of the total stops) were made along the Route 305 corridor during the study year. Of the drivers stopped in the Route 305 corridor, 70% were not Windsor residents, which was above the town average of 64% non-residents. The race and ethnicity of drivers stopped in the Route 305 corridor was below the town-wide average for black and slightly higher for Hispanic drivers. Black drivers accounted for 32% of the Route 305 stops (compared to the town average of 44%). Hispanic drivers accounted for 12% of the Route 305 stops (compared to the town average of 9%). The greatest percentage of stops occurred in census tract 4736.02 with 28%, followed by 4731 with 27% and 4734 with 20% of all stops on Route 305. There were 71 other stops (11%) reported on Route 305, but could not be precisely mapped due to non-specific location descriptions.

Lastly, Route 75 (Poquonock Avenue) runs from the Windsor Locks town line southeasterly to where it intersects with Routes 305 and 159 in the center of Windsor. Route 75 runs through four census tracts, with its longest portion located in tract 4735.01. A total of 596 traffic stops (10% of total stops) were made along the Route 75 corridor during the study year. Of the drivers stopped in the Route 75 corridor, 54% were not residents of Windsor, which was below the town average of 64% non-resident stops and significantly below the 72.6% non-resident component of stops made in census tract 4735.01 generally. The race and ethnicity of drivers stopped in the Route 75 corridor were below the town-wide average for Black and Hispanic drivers. Black drivers accounted for 28% of the Route 75 stops (compared to the town average of 44%). Hispanic drivers accounted for 7% of the Route 75 stops (compared to the town average of 9%). The greatest percentage of stops occurred in census tract 4736.02 with 39%, followed by 4735.01 with 26% and 4735.02 with 20% of all stops on Route 75. These factors suggest that Route 75 may have contributed less to the overall stop demographics of census tract 4735.01 than did Routes 218 and 305. There were 66 other stops (11%) reported on Route 75, but could not be mapped because of non-specific location descriptions.

## Special Enforcement Campaigns

Windsor participated in special enforcement campaigns that were sponsored by the Connecticut Department of Transportation through funds made available by the National Highway Traffic Safety Administration (NHTSA). Windsor reported a total of 156 motor vehicle stops as part of the NHTSA-funded campaigns. Windsor participated in several drinking and driving campaigns which included sobriety check points and roving DUI patrols. Stops that were reported as part of a special enforcement campaign accounted for only 3% of all stops in Windsor.

Drinking and driving campaigns usually took place around holidays and other major events such as the Super Bowl. Of the 156 stops for this campaign, 66 occurred in August and 23 occurred around the Fourth of July holiday. During DUI enforcement campaigns, the highest percentage of drivers were stopped for moving violations (31%), followed by speeding violations (24%) and seatbelt violations (19%). Of the 156 stops reported, two drivers were arrested for driving under the influence of alcohol. In addition, 12 drivers were arrested for drugs or drug paraphernalia.

One sobriety check-point was conducted in September on Route 218. The sobriety check-point accounted for 17 of the 156 special enforcement campaign stops. Unfortunately, due to the limited records the Windsor police department was able to provide, we could not assess any information on the drivers stopped during any of these campaigns. It was also difficult to identify the location of the roving DUI patrol stops. However, the overall number of stops that occurred as part of a special enforcement grant was relatively small and not likely to have significantly affected the overall racial and ethnic disparity identified in Windsor.

## Traffic Stop Distribution for Windsor Officers

Windsor's total of 5,716 traffic stops is comparable to those in other towns of its size. During the study period, traffic stop data was reported for 46 officers. The average number of stops made per officer was 124. Of the 46 officers reporting stops, five made fewer than 20 stops, 11 made between 20 and 50 stops, 10 made between 50 and 100 stops, and 20 made over 100 stops. The 10 most active officers, each of whom made more than 200 stops, collectively accounted for 55% of the Windsor stops. One officer made 664 stops and accounted for 12% of the overall enforcement in Windsor.

## Post-Stop Outcome Review

The reasons police stop a motor vehicle can vary significantly from department to department. Officers must report the alleged statutory violation that was the basis for a stop as part of the traffic stop record. Analysis of the statutory authority that Windsor officers reported as the reason for stopping motor vehicles showed that the three most common reasons used for stopping a motorist in Windsor were for defective lighting equipment (27%), speeding violations (25%), and traffic signal violations (12%). Together these three categories account for over 65% of all Windsor traffic stops. White drivers were stopped more frequently than black or Hispanic drivers for hazardous driving violations (speeding, stop sign and traffic light violations, and cell phone use) as a percentage of their total stops. This was particularly true for speeding and cell phone violations. (Hispanic drivers were stopped for traffic light violations in about the same proportion as white drivers but white drivers were stopped in greater proportions than black drivers in all categories). Black and Hispanic drivers were stopped more frequently for equipment-related violations than white drivers as a percentage of their total stops.

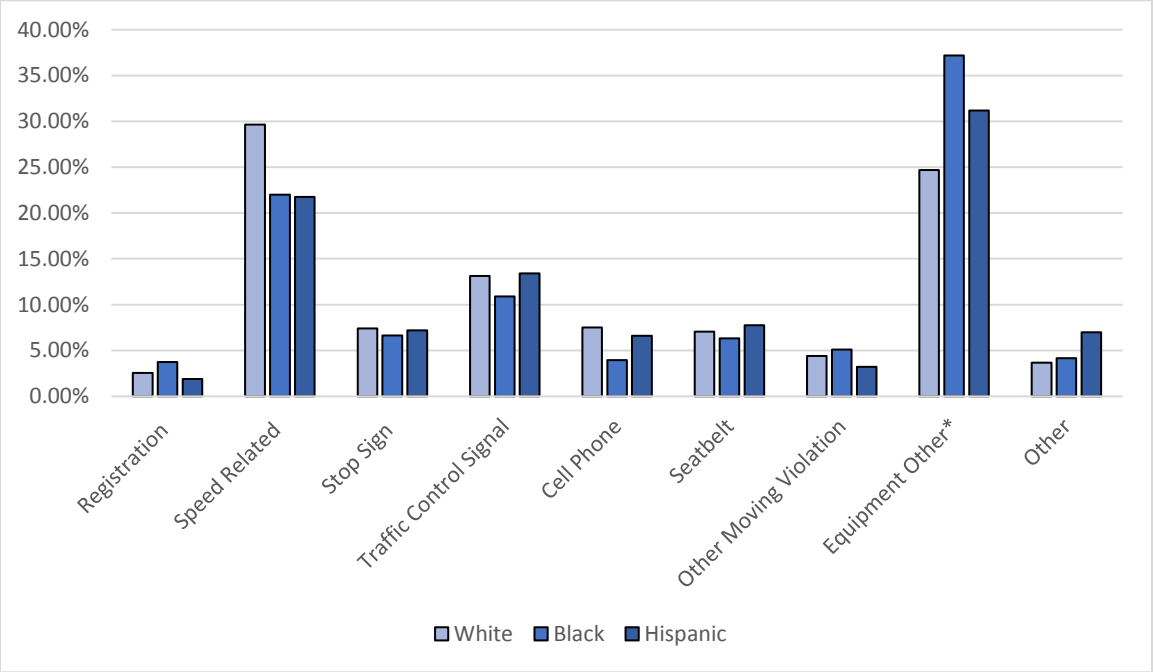
In many towns, the analysis of traffic stop data tends to show that, with respect to the racial and ethnic demographics of those stopped, registration-related and equipment-related (defective, improper, or inoperative lighting; display of plates; or window tinting) violations can be quite sensitive to the frequency and location where such stops are made. If 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 have also shown that when these same types of stops are made in areas with higher concentrations of white drivers, the stop demographics shift more markedly toward white drivers, suggesting that the potential to find violators could be more closely related to frequency and location than race.

The Windsor data tend to confirm these general observations, particularly with respect to the equipment-related stops. Of all the black driving age residents living in Windsor, 70% live in census tracts 4731, 4737, and 4738. These three tracts are also where 60% of all Hispanic driving age residents live. Just over 47% of all equipment-related stops for lighting, plate display, and window tinting, which are highly discretionary, were made in these three tracts. The demographics for these stops were 11% Hispanic drivers, 66% black drivers, and 22% white drivers. In addition, 35% of

these stops were made in the other five census tracts that account for 30% of the black driving age population and 40% of the Hispanic driving age population. Of the equipment-related stops made in these five other census tracts, 36% were black drivers, 8% were Hispanic drivers and 53% were white drivers. Another 18% of the equipment-related stops were made at locations that could not be precisely mapped due to non-specific location descriptions, although 435 of them were made on Routes 159 and 218. For these stops, 8% were Hispanic drivers, 53% were black drivers, and 39% were white drivers.

These patterns seem to suggest that where these types of stops are made is a more important factor in the stop demographics than widespread inherent differences in the frequency various races may violate these laws. Figure 6.1 illustrates the reason officers used to stop a motor vehicle by race and ethnicity.

**Figure 6.1: Reason for Traffic Stop**




*Equipment Other includes violations for defective lights, excessive window tint, or display of plate violations.

Figures 6.2 and 6.3 are maps of traffic enforcement for safety-related motor vehicle stops and equipment-related motor vehicle stops. Stops made for speed, stop sign, traffic light, cell phone or moving violations were categorized as "safety-related" stops. Stops for defective lights, window tints, or display of plate were categorized as "equipment-related" violations.

**Figure 6.2: Safety-Related Motor Vehicle Stops**

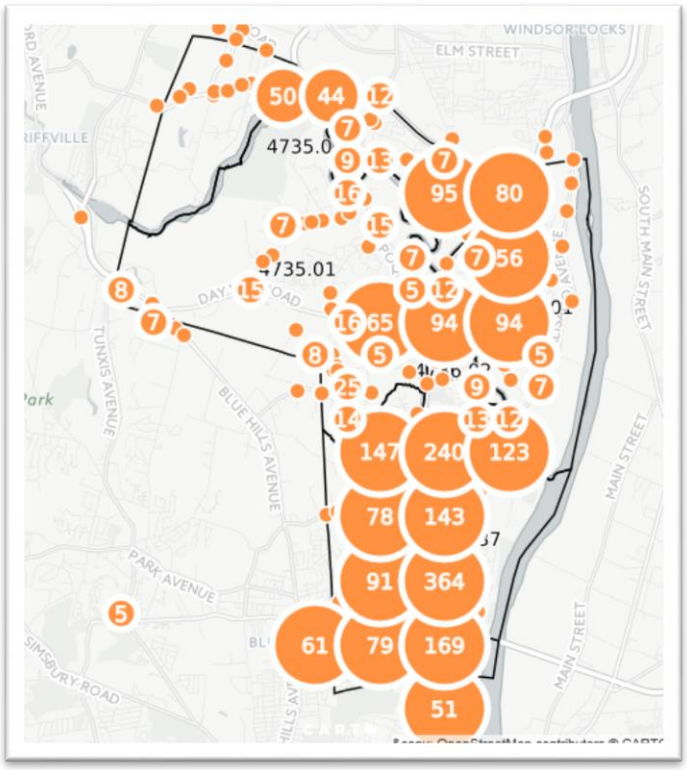
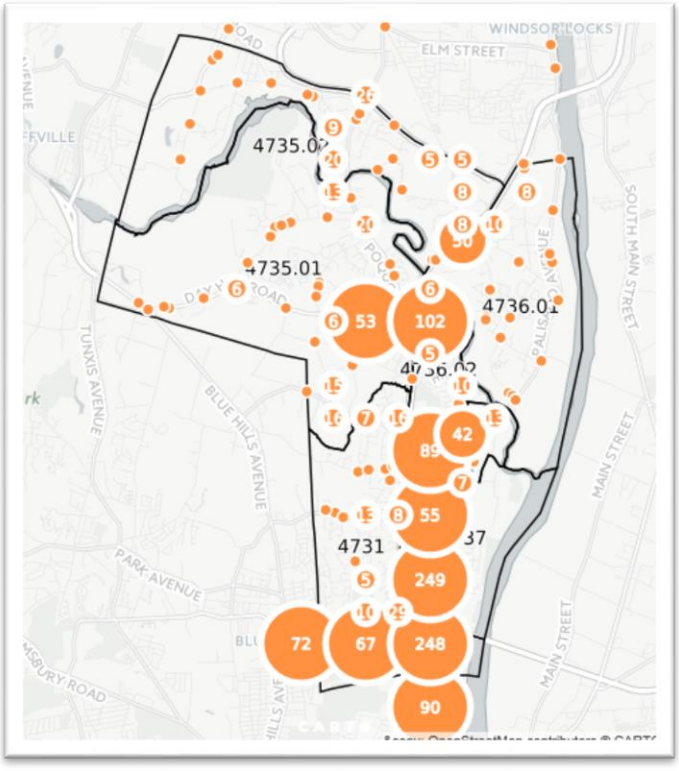
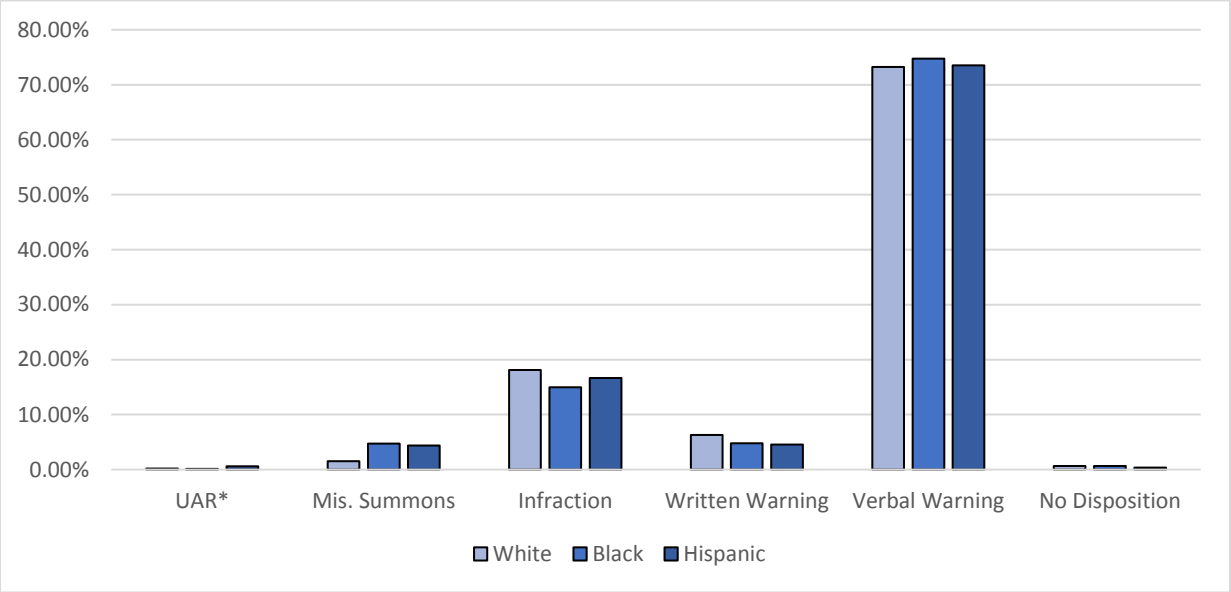



**Figure 6.3: Equipment-Related Motor Vehicle Stops**



A significant majority of motor vehicle stops in Windsor resulted in the driver receiving a verbal warning (74%). Written warnings accounted for another 5.5% of stop outcomes. Black and Hispanic drivers were more likely to receive a misdemeanor summons as a percentage of their total stops. However, black and Hispanic drivers were less likely to receive an infraction compared to white drivers. Only 3.2% of the stops made in Windsor resulted in a misdemeanor summons. Figure 6.4 shows the outcome of motor vehicle stops by race and ethnicity.

**Figure 6.4: Outcome of Traffic Stop**




*Uniform Arrest Report

A review of department search information shows that 1.5% (85) of the drivers stopped in Windsor were subjected to a motor vehicle search. The rate of motor vehicle searches is below the state average of 2.9%, and black drivers were searched at a rate slightly higher than white drivers, while Hispanic drivers were searched at about twice the rate of white drivers. Contraband was found above the town average for black drivers, but below the town average for Hispanic drivers. Figure 6.5 illustrates the motor vehicle search rate and the rate at which contraband was found (the "hit rate"). Figure 6.6 is a heat map of motor vehicle searches in Windsor which indicates the majority of searches occurred in tracts 4737 and 4738.

**Figure 6.5: Search and Hit Rate**

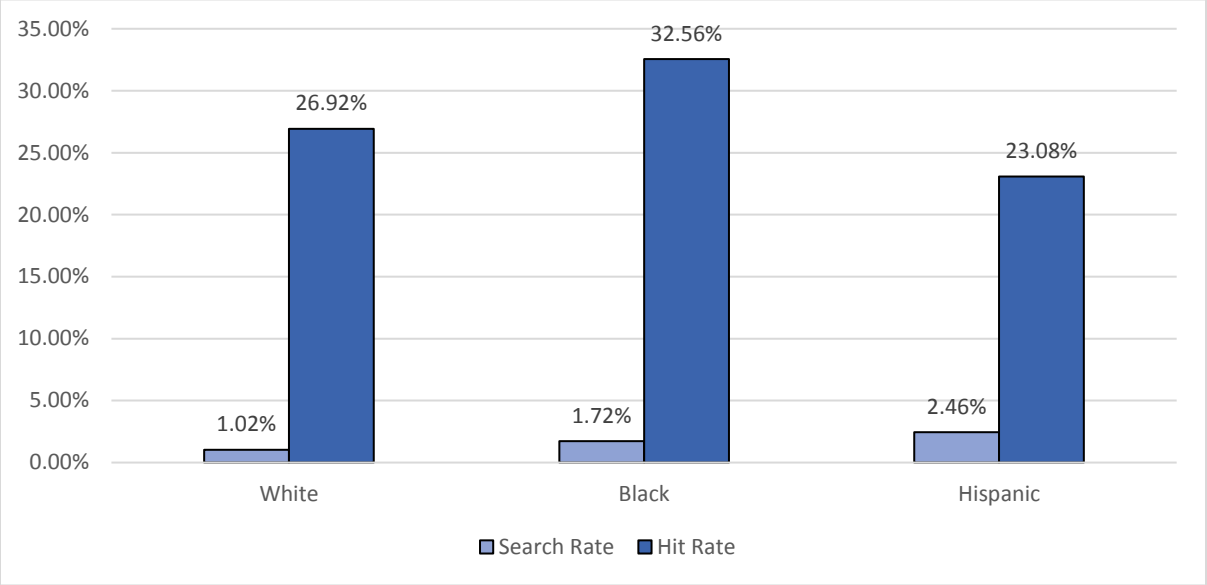
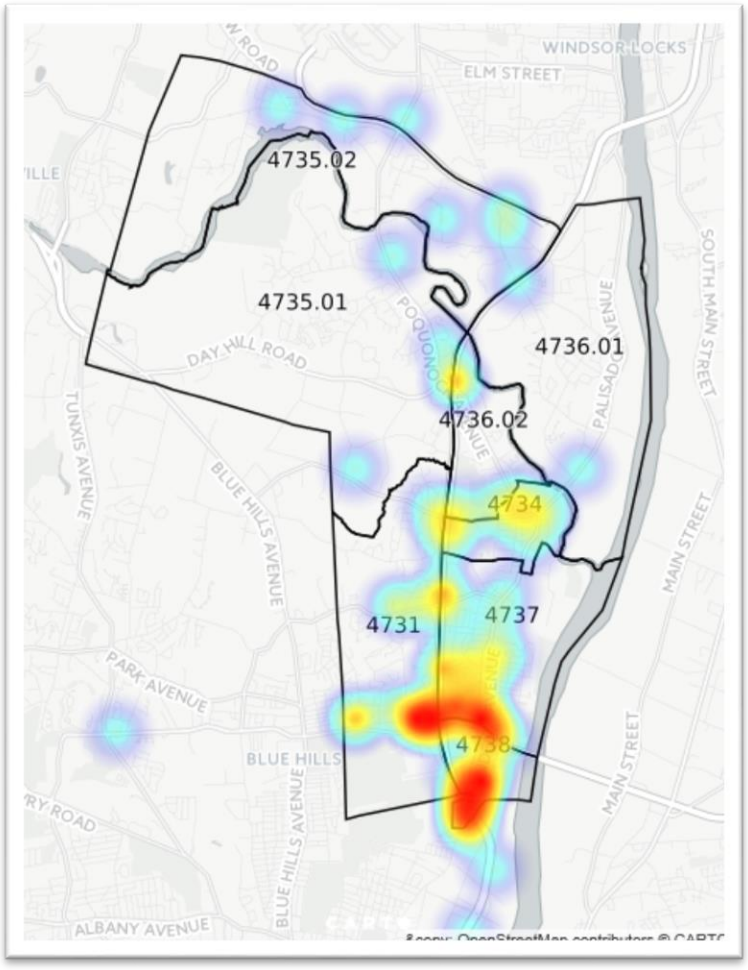



**Figure 6.6: Search Heat Map**



## Calls for Service

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. The department provided us with its dispatch log including calls for service and officer initiated actions that were called into police dispatch. The dispatch logs report 40,318 entries from October 1, 2014 through September 30, 2015, after excluding traffic stops. There were a total of 67 different categories used to describe each call ranging from a property check to a parking violation, or criminal offense, to name a few. The top three types of logged service calls were for property check, specific detail, and directed patrol. The top three reasons account for 46% of all calls. There were 5,837 or 15% of all departmental calls that might be classified as criminal offenses.

Unfortunately, the information the department provided did not indicate the patrol district most impacted by the calls for service. While location descriptions were included where available, the information was often incomplete or difficult to interpret. However, it appears that officers were called most often to Bloomfield Avenue (Route 305), Windsor Avenue (the southern portion of Route 159, and Poquonock Avenue (Route 75).

## Additional Contributing Factors

In addition to calls for service, law enforcement administrators also distribute police resources within a community based on vehicle crash frequency, or where crime rates are higher. In addition to these factors, police presence may be greater where traffic volume is higher as the result of common factors that draw people into a community such as employment, retail economic activity, entertainment, or the location of government service facilities. Traffic enforcement actions are likely to be more prevalent in locations where police presence is greater due to any of these factors. Basic information on crime, accidents, and other economic factors associated with Windsor provide a context to potentially explain the rational for police deployments that are important considerations.

According to the Connecticut Economic Resource Center (CERC) town profiles, approximately 23,990 people work in Windsor. Its major employers include Alstom Power Inc., Envirotest Systems Holdings, Stanadyne Corporation, Konica Minolta, and Super Stop and Shop. The vast majority of commuters traveling into Windsor for employment are from Enfield, Hartford, Manchester, and East Hartford. The overall unemployment rate is 6.4%, which was below the unemployment rate for Hartford County and the state in 2015.

In 2015, the crime rate in Windsor was reported to be 162 per 10,000 residents, compared to the state crime rate of 205.4 per 10,000 residents. According to the 2015 Connecticut Uniform Crime Report[9], there were 4,814 reported crimes in Windsor in 2015. The three most reported crimes were larceny (375), burglary (48), and motor vehicle theft (38).

During our study period, there were approximately 310 motor vehicle accidents on roads patrolled by the Windsor Police Department. Vehicle crashes were reported on a total of 67 roads. The roadways with the highest number of accidents were Windsor Avenue (62 accidents), Route 218 (34 accidents), and Route 305 (34 accidents). Windsor Avenue is the southern portion of Route 159 from the Hartford border to the vicinity of Island Road (a distance of approximately 2.9 miles). There were

[9] The Uniform Crime Report is an index for gauging fluctuations in the overall volume and rate of crime. The crime index includes seven offenses: the violent crimes of murder, rape, robbery, and aggravated assault and the property crimes of burglary, larceny-theft, and motor vehicle theft.

only six roads (Routes 159, 218, 305, 75, 20 and Day Hill Road) with 10 or more accidents and those roads account for 64% of all accidents in Windsor.

Figure 7.1 illustrates the time of day when traffic accidents were reported and the number of traffic stops that occurred during that same time period. This illustrates how closely traffic enforcement is correlated with traffic accidents in Windsor. While the vehicle crash rate tends to build fairly steadily throughout the day in Windsor, it peaks during the morning and afternoon commuting periods from 6:00 a.m. through 9:00 a.m. and 2:00 p.m. and 6:00 p.m. Figure 7.2 is a map siting the motor vehicle accidents that occurred during the study period.

**Figure 7.1: Accidents Compared to Traffic Stops by Time of Day**

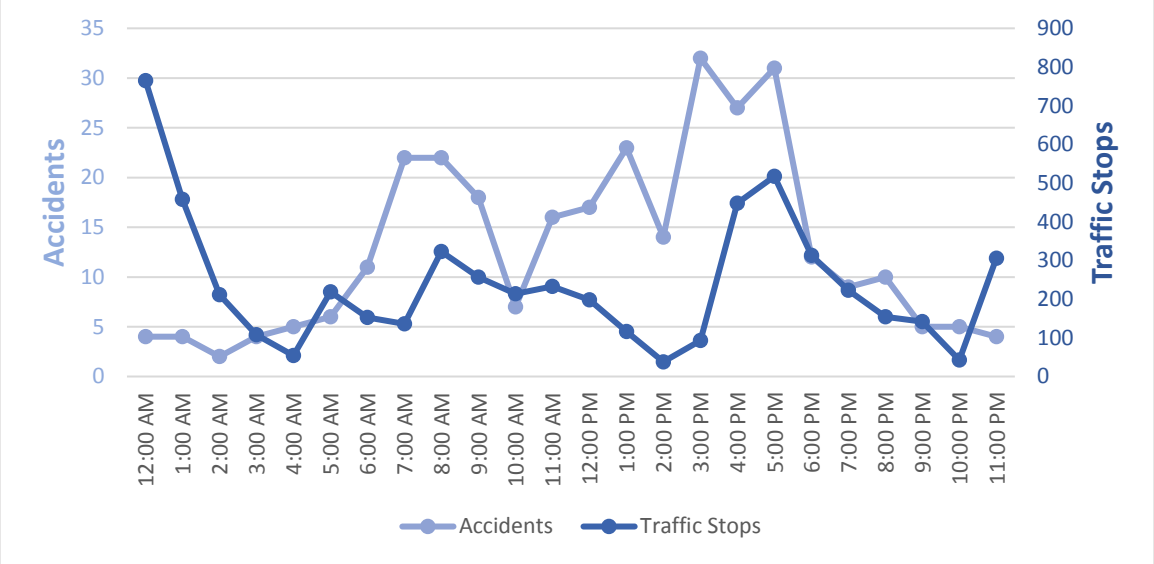
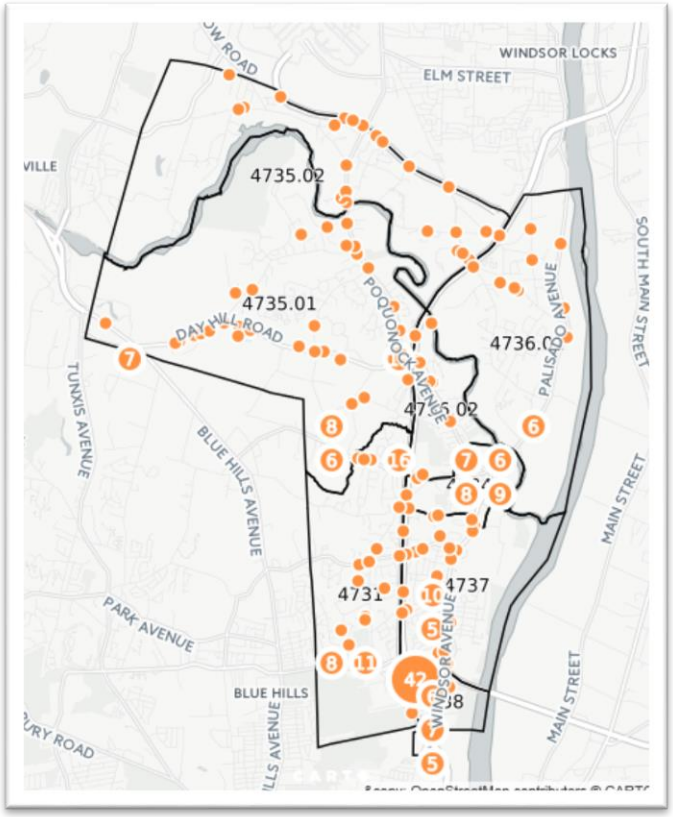


**Figure 7.2: Windsor Motor Vehicle Accidents (October 1, 2014 – September 30, 2015)**




## Summary of Findings

The Windsor Police Department identified factors they believe contributed to the disparity identified in the initial analysis of traffic stops. In particular, the department identified areas with the highest call for service volume and areas with the highest levels of traffic as some of the same areas with the highest levels of motor vehicle enforcement. They also indicated the impact that reported incidents of crime and accidents in the southern section of town have had on the deployment of departmental resources. It is evident from the volume of traffic stops made in a relatively small geographic area that the department concentrates its resources in the three census tracts that make up the high enforcement area in the southern section of town (4731, 4737, and 4738).

Windsor has a non-white driving age population that includes about 7% Hispanic residents and 32% black residents. Almost 68% of all black and Hispanic residents live in three census tracts (4731, 4737, and 4738). All three of the census tracts have proportions of minority driving age residents that are significantly above the town average of 44%, the largest being tract 4738 with a minority resident driving age population of 84%. These three tracts account for 51% of Windsor's stops, 56% of which involved black drivers and 10% of which Hispanic drivers. These areas border sections of Hartford and Bloomfield with large minority populations and non-resident minority drivers comprise at least 41% of those who are stopped in these tracts.

In addition to analyzing stops by census tracts, we identified four major roadways where significant traffic enforcement activities occurred. Three of the four roadways (Routes 159, 218, and 305) are

within the three high enforcement census tracts located in the southern part of town. Route 159 (Windsor Avenue) serves as a major travel route to and from the north end of Hartford and Routes 218 (Putnam Highway) and 305 (Bloomfield Avenue) serve as major travel routes between I-91 and Bloomfield. The fourth road, Route 75, runs primarily from the center of Windsor northwesterly to Route 20 in Windsor Locks. Almost 63% of all traffic stops in Windsor occurred on one of these four roadways, with 52% of the stops involving black drivers and 10% of the stops involving Hispanic drivers. Non-resident minority drivers were at least 40% of those stopped on these roads.

On average, 64% of the drivers stopped in Windsor were not residents. The impact of non-resident drivers on stop demographics varied among census tracts. Non-residents most heavily affected the western portion of Windsor adjacent to Bloomfield. Census tracts 4731, 4735.01, and 4735.02 had an average of 72% non-resident motor vehicle stops and accounted for 39% of all non-residents stopped in town. Non-resident drivers stopped were 53% minority compared to 59% of the residents stopped who were minority. Although non-resident drivers had an impact, particularly in census tract 4731 where large proportions of non-residents traveling on the sections of Routes 305 and 218 between I-91 and Bloomfield were reflected in the stop demographics, the high resident minority population in this census tract also significantly contributed to the overall racial and ethnic disparity. While the non-resident component of stopped minority drivers partially explains a significant portion of the disparities above the resident minority population, especially in tract 4731, minority Windsor residents still appear to be stopped in fairly significant proportions throughout most of the town. In seven of the eight census tracts, including the high enforcement areas of tracts 4731 and 4737, the proportion of minority stops involving only Windsor residents exceeded the resident minority driving age population in the census tract. The disparity was significant (greater than 10 percentage points) in six of the seven census tracts. The only census tract where the minority stop percentage did not exceed the minority resident population was 4738 where the resident minority population is almost 84% and the proportion of minority residents stopped was 82%.

There were 211 drivers stopped outside the Windsor town border. The drivers stopped outside the towns border account for 4% of all stops and 68 % were identified as black or Hispanic. These drivers were primarily stopped in Bloomfield or Hartford and 79% of them were not Windsor residents. A number of reasons could explain these stops, including that the violation was witnessed in Windsor, but the vehicle was pulled over in an adjacent town.

Windsor's high stop rate for minority drivers is not surprising considering in the locations of most 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 Hartford and Bloomfield as well as on local roads that directly access the corridors to these communities from I-91.

Windsor has 46 officers who made at least one traffic stop during the study period. The average stops made per officer was 124, but 10 officers (22% of the officer force) accounted for 55% of all the traffic stops. When a relatively small portion of the officer force makes a significant portion of all the stops, the specific duties, patrol areas, and shifts of these officers might have a significant impact on overall stop demographics.

*Traffic Stop Outcomes*

White non-Hispanic drivers were more likely than were either black or Hispanic drivers to be stopped for driver-related safety issues like speeding, cell phone, stop sign, and traffic light violations as a percentage of their total stops. Hispanic drivers were stopped in proportion equal to their

proportion of the total population to white drivers for traffic light violations but black drivers were stopped in lesser proportions than white drivers in all categories. On the other hand, black and Hispanic drivers had higher percentages of stops due to registration, equipment, and other 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 Windsor, when these registration- and equipment-related stops were made in the three census tracts (4731, 4737, and 4738) that were most impacted by non-resident minority motor vehicle stops and more heavily populated by black and Hispanic residents, minorities were more likely to be stopped for these violations. However, in other areas where these stops were made and the resident population was a majority white, the stop demographics reflected 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 might be any racially inherent differences in the overall likelihood of violation.

With regard to stop outcomes, minority drivers were more likely to receive a misdemeanor summons, whereas white drivers were more likely to receive an infraction citation. Stops involving black drivers were less likely to result in an infraction citation than either white or Hispanic drivers but were slightly more likely to result in a verbal warning.

Windsor searched 1.5% of drivers it stopped, which was below the state average of 2.9%. Black drivers were searched at a slightly higher rate than white drivers, while Hispanic drivers were searched at almost twice the rate of white drivers. The rate of contraband found as a result of a vehicle search was slightly greater for black drivers, but lower for Hispanic drivers and equivalent to the state average for all drivers searched. While these data suggest the presence of a disparity with respect to Hispanic drivers, this disparity does not appear to be a significant cause for concern due to the very small overall number of searches conducted.

*Conclusion*

The relative disparities in Windsor appear to be due to three basic factors:

(1) the relatively high levels of enforcement normally in the southern areas of the town which have both the highest resident minority driving age populations and are most likely to have relatively high proportions of non-resident minority drivers traversing them because of the proximity of relatively high minority populations in the bordering towns of Bloomfield and Hartford;
(2) the combination of high enforcement presence, high resident minority driving age population, and the probability that non-resident minority drivers from the neighboring towns of Hartford and Bloomfield are more likely to be using certain specific roads, namely, the Windsor Avenue section of Route 159, Route 218 between I-91 and Bloomfield, and Route 301 between I-91 and Bloomfield; and
(3) the significant use of equipment-related motor vehicle stops in the areas of town that appear likely to have the largest proportion of minority resident and non-resident drivers present in the driving population.

While white drivers were more likely to be stopped in Windsor than black or Hispanic drivers for certain hazardous driving behaviors, black and Hispanic drivers were more likely to be stopped for vehicle equipment violations. Our analysis indicates that this difference could be due more to the greater frequency with which these stops were made within the three high enforcement census tracts, where both resident and non-resident minority drivers are likely to be present in the driving population in greater numbers, rather than to an inherently greater likelihood that minority drivers violated these laws with greater frequency than white drivers.

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

(1) review its traffic enforcement policies as they relate to enforcement activity in census tracts 4731, 4737, and 4738 to evaluate the extent to which they may have a disproportionate effect on minority drivers, particularly Black drivers; and
(2) evaluate both the location and frequency of use of stops for equipment-related motor vehicle violations to better understand the impact they may be having on minority drivers

# I.C: TROOP H SUMMARY

In the May 2016, *Traffic Stop Data Analysis and Findings 2014-15* report, Connecticut State Police Troop H was observed to have made 42.4% minority stops of which 15.4% were Hispanic and 22.1% were black motorists. The results for Troop H from the *Veil of Darkness* analysis indicated that minority motorists were more likely to have been stopped during daylight relative to darkness especially after restricting the sample to moving violations. As mentioned, the synthetic control analysis was not run for any of the Connecticut State Police (CSP) troops. The post-stop analysis for Troop H also revealed that Hispanic motorists were searched significantly more frequently than Caucasian motorists were. The results of these analyses indicated that further discussions with CSP into the source of the observed statistical disparity in Troop H were warranted.

Troop H was also identified in the April 2015, *Traffic Stop Data Analysis and Findings 2013-14* with results from the *Veil of Darkness* analysis indicating that minority motorists were more likely to have been stopped during daylight relative to darkness. At the time we worked with CSP to conduct a follow-up analysis to supplement our initial findings by conducting several additional robustness checks. The results of this more detailed analysis indicated that the racial and ethnic disparities found in Troop H are robust to the inclusion of additional controls. The results persisted even after the sample of stops was restricted by infraction type, enforcement pattern, and driver's residency. Controls for geography and officer heterogeneity were also shown to have little impact on the overall results. Additionally, an extremely restrictive specification that focused on stops having occurred within a month before and after the daylight savings time (DST) adjustment in clock-time showed the same consistent disparity in Troop H.

As a result of the extensive follow-up analysis conducted and published in the May 2016, *Traffic Stop Data Analysis and Findings 2014-15* report, we did not believe it was necessary to conduct the same level of analysis this year. However, CSP and researchers remained committed to a continual dialogue about the unique characteristics of crime, accidents, calls for service, and patrol patterns in Troop H. This dialogue included several meetings with CSP command staff and a ride-along to better understand typical Troop H operations first-hand. Although we have not been able to identify a specific source of the disparity in Troop H, we believe that the unique nature of the policing by CSP in and around the City of Hartford probably plays a significant role in that disparity.

CSP characterizes Troop H (Hartford) and Troop G (Bridgeport) generally as "Highway Troops" and consequently focuses its enforcement efforts and allocates agency assets primarily along the limited access highways in each troop area. While both of these troops include a major Connecticut city and a significant expressway network, CSP sees some fundamental differences between them that heavily influences their deployment patterns in each troop.

The highway layout and primary travel pattern in the Troop H area is concentrated in and around the City of Hartford with an estimated 50,000 motorists driving daily to and from places of employment in the city, on weekdays and especially during rush hours. The primary limited access highways in the area used by commuters are Interstates 91, 84, 384 and 291 and Route 2. According to CSP, this traffic pattern in combination with the current design and state of the roadways in the immediate Hartford area generates a significant number of "reactive" calls for service (deployment for disabled vehicles, motor vehicle crashes, and similar events). These calls for service are specifically within and immediately surrounding the City of Hartford. As a result of the call pattern,

Troop H keeps the majority of its patrol troopers centrally located in the Hartford area to respond in a timely manner.

In addition to concentrating troopers in and around the Hartford portion of the troop area where the most calls for service come during rush hours, CSP mirrors this deployment pattern during non-peak driving times to carry out its proactive motor vehicle enforcement activity (primarily, pre-announced special enforcement activity and technology-based "blind" stops) and has found this approach beneficial. CSP makes decisions to distribute troopers based on each troop's traffic patterns and opportunities for enforcement are data-driven. Their stated goal is faster responses to accidents and injuries during peak driving hours and continued enforcement of policing "hot spots," locations characterized by higher levels of driving incidents and infractions, at other times. In essence, Troop H traffic activities represent a type of "hub and spoke" travel flow that tends to be more concentrated to business days and hours than in Troop G with Hartford essentially serving as the hub destination due to its concentration of employers.

In contrast, the fundamental characteristics of the Troop G area result in a somewhat different deployment pattern by CSP. The Troop G geography is more linear in nature covering not only the geographic area from Greenwich to Stratford but also responsibilities along I-95 through the New Haven area as far east as Branford. The majority of traffic in this corridor is enroute to destinations outside of the troop area, specifically, to and from New York City, northerly through New Haven to points north via I-91, or eastward to destinations in southeastern Connecticut and Rhode Island. In-state commuter destinations tend to be more dispersed along the corridor than in Troop H, there tends to be a higher commercial component to the traffic mix, and high traffic levels tend to be maintained for longer periods outside typical weekday peak commutation hours. Largely reflective of these traffic flows and characteristics, CSP's reactive calls for service tend to be dispersed through the entire corridor rather than concentrated as in Troop H. CSP resource deployment tends to mirror these realities which makes it considerably different from the Troop H. Thus, while superficially the two "Highway Troops" might seem similar in nature, what actually goes on within them differs substantially. Because of the extensive interaction with CSP during the last two years over the Troop H disparities, it is has become apparent that broad comparisons between Troop H and Troop G are probably not appropriate because each represents a unique highway environment that CSP approaches differently.

Taken as a whole, the Troop H traffic stop data over the past two years seems to reflect the unique "hub and spoke" nature of travel within the Troop H geography and the significant influence of the City of Hartford as the destination location. While we have been unable to identify any single, specific cause of the disparities identified in the Troop H data through the *Veil of Darkness* analysis, we believe that the deployment patterns concentrated in and around the Hartford portion of the Troop area based on CSP's reaction to the high level of calls for service in the immediate area around Hartford could be a reasonable, and a possible explanation for why the Troop H data differs from the other CSP troops.

If this concentration of resources in the Hartford area of the troop geography, where minority drivers could be more prevalent, is influencing the disparity data in a significant way, it is unlikely that it will disappear in future years unless the underlying regional characteristics influencing resource deployment change significantly. CSP has invested considerable time and effort in reviewing its operations in the Troop H area and responding to concerns over the data and should be commended for this effort. We believe this awareness should continue and CSP could benefit from continuing its

evaluation of the unique Troop H environment in future years to minimize any disproportionate effects on minority drivers that its response to the needs of policing the Hartford area might have.

# I.D: OFFICER LEVEL ANALYSIS

Racial bias in policing has been brought to the forefront of American consciousness by recent national headlines of disparate treatment across racial and ethnic divides. These news stories have sparked a contentious and impassioned debate about fair and impartial policing. Although unbeknownst to most Americans, there is a longstanding debate among economists and statisticians about this very topic. Researchers in these fields have developed new and increasingly sophisticated analytical techniques for assessing the extent of racial and ethnic disparities in policing data. Much of the initial research in this field focused on assessing racial and ethnic disparities at the department-level.[10] Although important in their own right, analyses that focus on institutional bias are unable to identify disparities at the officer-level. Recent work by Ridgeway et al. (2006; 2007; 2009) utilizes propensity score methods to evaluate officer-level data. These techniques are quite attractive to policymakers as they have the potential to provide the basis for creating accurate early intervention systems.

## I.D (1): OVERVIEW OF THE METHODOLOGY

In observational studies, as opposed to randomized control trials, it is difficult to estimate the causal effect of treatment. The difficulty emerges because assignment to treatment occurs on a non-random basis and is often confounded with other variables. Regression analysis can accurately estimate the effect of treatment if all possible factors driving treatment are available to the analyst and the model is specified correctly. In reality, however, there are both observed as well as unobserved variables that confound the effect of treatment. These confounding variables create bias that muddles the true impact of treatment on the outcome variable. As a result, it becomes impossible to disentangle the effect of treatment from compositional differences in the observed and unobserved variables. The problem arises because these variables affect both selection into treatment and outcome.

In the context of this analysis of racial and ethnic disparities, treatment is defined as a traffic stop made by an individual officer from each of eight departments and one state police troop. These policing agencies were selected for inclusion in this analysis based on the findings from the *Connecticut Traffic Stop Data Analysis and Findings, 2014-15*. The outcome variable represents the probability that a motorist is a member of a racial or ethnic minority conditional on his or her being stopped by the treatment officer.[11] In an effort to produce a significantly more robust analysis of racial and ethnic disparities for individual officers, the analysis proceeds with an analytical framework that estimates treatment using inverse propensity score weights. The propensity score, an estimate of the probability of treatment conditional on observed variables, is used as a weight in the construction of the control group for each individual officer. Weighting the observations by the inverse of the propensity score ensures that the distribution of pre-stop observable characteristics for the control group is consistent with the treatment officer. As long as the observed variables are

[10] Prominent work that focuses on assessment at the department-level includes: Knowles, Persico, and Todd (2001); Antonovics and Knight (2004); Anwar and Fang (2004); Dharmapalam and Ross (2004); Grogger and Ridgeway (2006); and Ritter (2013)

[11] In the proceeding methodological discussion the details of the estimation procedure are presented as if a single treatment effect were estimated using a single outcome variable. However, the estimates were constructed for 658 distinct officers across eight departments and one police troop using three different outcome variables.

predictive of unobserved confounders, inverse propensity score weighting will allow for an unbiased estimate of the treatment effect.

Using inverse propensity score weighting, an internal benchmark is created for each individual officer that is composed of other stops from that officer's department that are similar in terms of pre-stop observables. The internal benchmark is used to evaluate whether each individual officer stopped a disproportionate number of minority motorists relative to their individual benchmark. This methodology follows a rich and extensive literature spanning the fields of statistics, economics, and public policy. The application of this methodology to policing data has recently entered the criminal justice literature through notable applications by McCaffrey et al. (2004), Ridgeway (2006) and Ridgeway and MacDonald (2009).

Rosenbaum and Rubin (1983) characterize the propensity score as the probability of assignment to treatment conditional on pretreatment variables. The key insight is that conditional on this scalar function, assignment to treatment will be independent of the outcome variable. Simply put, given some *observed* pretreatment variables, it is possible to identify the conditional probability of treatment. Correctly adjusting for this conditional probability allows for the bias associated with *observed* covariates to be statistically controlled. If these observed covariates are correlated with unobserved variables, these confounding factors will also be controlled for statistically. This methodology allows for a causal interpretation of the difference between outcomes associated with treatment and control.

Hirano and Imbens (2001) note that a useful adjustment is to weight observations according to their propensity scores. This adjustment effectively creates a balanced sample among treatment and control observations. Conveniently, when the estimate of interest is the treatment effect on the treated, only potential control observations need to be weighted. In this context, the weight that balances the sample and removes bias associated with pretreatment confounding factors is exactly the inverse of the propensity score. Ridgeway and MacDonald (2009) apply this technique in the context of policing data by matching the joint distribution of a particular officer's stop features to those by other officers.

Ridgeway and MacDonald (2009) estimate the propensity scores using a boosted logistic regression technique. Boosted regression [see McCaffrey et al. 2004] has two benefits over standard logistic regression when it comes to the computation of propensity scores. The first is that it is not limited to a set parametric or semi-parametric specification of covariates. The method searches over a wide range of interactions and higher-order polynomials. The second benefit, closely related to the first, is that boosted regression incorporates a penalty function on the size of the coefficients. The two characteristics together allow for much greater predictive power through a dynamic functional form, while contemporaneously constraining and removing unimportant coefficients.

Following Ridgeway and McDonald (2009), the propensity score is estimated using a boosted logistic regression such that the log-likelihood function:

$$\ell(\alpha) = \sum_{i=1}^{n} t_i \alpha' h(x_i) - log\left(1 + exp\left(\alpha' h(x_i)\right)\right) - \lambda \sum_{j=1}^{J} |\alpha_j|$$

The sample of stops for each internal benchmark is restricted to those made by other officers within the same department as the officer of interest. The variable $t_i$ is a dichotomous binary indicator of treatment that, in this case, represents stops made by the officer of interest. The function $h(x)$ is the collection of piecewise constant functions of $x_j$ variables and their two-way interactions. The variables used in the estimate of the propensity to treat include all pre-stop observable characteristics in the traffic stop data. The of variables $x_j$ includes six categorical variables representing the reason for the stop, four for the season of the year, seven for the day of the week, time of the day, an indicator of a Connecticut license plate, an indicator that the stop was made of a local resident time of day, and the location of the stop (in terms of latitude and longitude).

The shrinkage parameter $\lambda$ reduces the effect of each successive regression tree so that the impact of an incorrectly specified branch is minimized. In estimating the propensity score, the shrinkage parameter is set such that $\lambda = .05$ which is consistent with existing applications. As noted by Friedman (2001), selecting a random sample of the residuals at each iteration of the regression tree is thought to reduce variation in the outcome variable without affecting bias. Following the related literature, the training sample was set to 50 percent of the residual at each iteration.

The propensity score $p_i$ is estimated using the boosted logistic regression outlined in Equation 1. A weighting variable $w_i$ is constructed such that the stops made by the officer of interest are set to unity and those made by all other officers in the department are set to $w_i = p_i/(1 - p_i)$. Applying a propensity score weight to stops made by other officers in the same department creates an internal benchmark with a comparable distribution of pre-stop observable characteristics. The propensity score and resulting weight for those stops with characteristics that are drastically different than stops made by the officer of interest will approach zero. As a result, the internal benchmark will consist of the stops that are similar, in terms of pre-stop observable characteristics, to the stops made by the officer of interest. The construction of an internal benchmark using propensity scores allows the comparison to reflect the average treatment effect on the treated and abstract from potential bias in so far as the observable covariates control for selection into treatment.

Hirano and Imbens (2001) extend the weighting framework to what Robins and Ritov (1997) refer to as doubly robust estimation. That is, including additional covariates to a semi-parametric least-squares regression model to capture a more precise estimate of the treatment effect. It is shown in both of these discussions that such an estimator is consistent if either of the models is specified correctly. Ridgeway and MacDonald (2009) further extend the doubly robust propensity score framework to policing data. Specifically, the authors look at whether the officer of interest deviates from the internal benchmark along the outcome dimension.

Treatment effects are estimated following Ridgeway and McDonald (2009) who structure the doubly robust estimation using a logistic regression approach such that the log-likelihood function:

$$\ell(\beta) = \sum_{i=1}^{n} w_i \left( y_i(\beta_0 + \beta_1 t_i + \gamma' x_i) - log\big(1 + exp(\beta_0 + \beta_1 t_i + \gamma' x_i)\big)\right)$$

If a particular officer is designated as a treatment to a group of stops, it follows that the outcome of interest would be driver race. Simply, does the intervention by a particular officer result in a relatively higher stop rate of minority drivers, controlling for all observable factors? Mixing propensity score weighting with regression analysis allows for a more precise answer to this question. In the circumstance where the benchmark and individual officer do not perfectly match

along all dimensions of stop features, there is potential for bias in any comparison, especially if those features by which they differentiate relate to a driver's race. Doubly robust estimation help to remove this potential bias by controlling for these features, resulting in a much more accurate officer effect.

## I.D (2): ANALYTICAL RESULTS BY DEPARTMENT

The officer level analysis was conducted using the methodology outlined in the previous section. As mentioned, the propensity score for each stop was generated iteratively for each officer using a boosted logistic regression.[12] The propensity scores were generated using binary indicator variables for clock time, reason for stop controls, state and town resident controls, day of the week controls, and season controls.[13] Additionally, latitude and longitude enter as continuous variables to control for location. The probability of a racial or ethnic minority conditional on their being stopped by the officer of interest (i.e. the treatment effect) was estimated using a doubly-robust logistic regression with inverse propensity score weights having been applied to the control group.

The doubly-robust regression included each of the covariates from the propensity score regression. The results for each department are presented sequentially along with a narrative describing the details of the analysis. It is important to realize that the analysis only identifies officers that stopped more motorists relative to their internal benchmark and not whether officers are engaged in discriminatory policing. If any of the officers identified in this analysis were engaged in a particular activity that was not captured by the data, such as having been tasked with a specialized assignment, it could provide a reasonable explanation for the disparity. It is important that these results be viewed as the starting point of a dialogue and not as conclusive evidence of wrongdoing on the part of the officer. A detailed presentation of each officer's traffic stops and requisite internal benchmark is contained in the supplemental appendix.[14]

A total of 762 unique officer identifiers were listed in the traffic stop database for the 9 municipal departments and state police troop that were identified in the 2014-15 Traffic Stop Analysis and Findings. After limiting the sample to officers with 50 or more traffic stops, a total of 294 officers were examined. Of the officers examined, 25 were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. The balancing test revealed that only 17 of the 25 identified officers had a benchmark that convincingly captured the distribution of observable traffic stops. The results of the analysis for each individual department is presented alongside the descriptive statistics for these officers below.

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[12] The code used was from a user written R package titled "GBM" by Greg Ridgeway with contributions by Daniel Edwards, Brian Kriegler, Stefan Schroedl and Harry Southworth.

[13] Stop controls were aggregated into six distinct categories consisting of "safety" defined as cell phone and seatbelt violations; "equipment" defined as defective lights, display of plate, equipment, or window tint violations; "moving" defined as moving, stop sign, or traffic signal violations; "speeding" defined as speeding violations; "paperwork" defined as suspended license or registration violations; and "other" defined as stops coded as other or without a violation listed.

[14] As mentioned, estimation of treatment effects was conducted using doubly-robust logistic regression. The comparison tables contained in the appendix were constructed to conduct a balancing test and are presented only for descriptive purposes.

**Department: Bloomfield**

The Bloomfield Police Department contained a total of 48 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 28 officers were examined. A total of five officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. Two of these officers were found to have benchmarks that convincingly captured the distribution of observable traffic stops.

**Department: Meriden**

The Meriden Police Department had a total of 104 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 18 officers were examined. None of these officers were identified as having been statistically more likely to stop a minority motorist than their benchmark.

**Department: New Milford**

The New Milford Police Department had a total of 42 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 18 officers were examined. None of these officers were identified as having been statistically more likely to stop a minority motorist than their benchmark.

**Department: Newington**

The Newington Police Department contained a total of 43 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 24 officers were examined. Two officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. The balancing test revealed that these two officers had benchmarks that convincingly captured the distribution of observable traffic stops.

**Department: Norwalk**

The Norwalk Police Department contained a total of 136 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 23 officers were examined. A total of three officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. The three officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of the benchmark. All of these officers were found to have benchmarks that convincingly captured the distribution of observable traffic stops. It is interesting to note that the effect for both officers is driven by stops of Hispanic motorists.

**Department: Trumbull**

The Trumbull Police Department contained a total of 56 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 21 officers were examined. A total of four officers were identified as

being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. One office was found to have benchmarks that convincingly captured the distribution of observable traffic stops.

**Department: Wethersfield**

The Wethersfield Police Department had a total of 36 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 13 officers were examined. None of these officers were identified as having been statistically more likely to stop a minority motorist than their benchmark.

**Department: Windsor**

The Windsor Police Department contained a total of 45 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 28 officers were examined. A total of four officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. Three of these officers were found to have benchmarks that convincingly captured the distribution of observable traffic stops.

**Department: West Hartford**

The West Hartford Police Department contained a total of 102 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 49 officers were examined. A total of five officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. All five of these officers were found to have benchmarks that convincingly captured the distribution of observable traffic stops.

**Department: State Police Troop H**

State Police Troop H contained a total of 138 unique officer identifiers in the traffic stop database from October 2014 through September 2015. After limiting the sample to officers with 50 or more traffic stops, a total of 72 officers were examined. A total of three officers were identified as being statistically more likely to stop a minority motorist relative to their benchmark. These officers were then examined using a balancing test that directly compared the distribution of observable traffic stop characteristics with those of each officer's benchmark. Two of the officers were found to have a benchmark that convincingly captured the distribution of observable traffic stops.

# REFERENCES AND WORKS CITED


Anwar, Shamena and Hanming Fang. 2006. "An Alternative Test for Racial Bias in Law Enforcement: Vehicle Searches: Theory and Evidence". American Economic Review.

Antonovics, K. L. and Brian G. Knight. 2004. "New Look at Racial Profiling: Evidence from the Boston Police Department". NBER Working Paper No. w10634.

Dharmapala, Dhammika and Stephen L. Ross. 2003. "Racial Bias in Motor Vehicle Searches: Additional Theory and Evidence". The B.E. Journal of Economic Analysis and Policy.

Friedman, J. 2001. "Greedy Function Approximation: A Gradient Boosting Machine". The Annals of Statistics, Vol. 29(5), 1189–1232.

Grogger, Jeffrey and Greg Ridgeway. 2006. "Testing for Racial Profiling in Traffic Stops from Behind a *Veil of Darkness*". Journal of American Statistical Association.

Hirano, K., and Imbens, G. 2001."Estimation of Causal Effects Using Propensity Score Weighting: An Application to Data on Right Heart Catheterization". Health Services and Outcomes Research Methodology, Vol. 2, 259–278.

Knowles, John and Nicola Persico and Petra Todd. 2001. "Racial Bias in motor Vehicle Searches: Theory and Evidence". Journal of Political Economy.

McCaffrey, Daniel F. and Greg Ridgeway and Andrew R. Morral. 2004. Propensity Score Estimation with Boosted Regression for Evaluating Casual Effects in Observational Studies. *Psychological Methods.* American Psychological Association, Vol. 9 (4): 403-425

Ridgeway, Greg. 2006. Assessing the Effect of Race Bias in Post-Traffic Stop Outcomes using Propensity Scores. *Journal of Quantitative Criminology,* Vol. 22 (1): 1-29

Ridgeway, Greg and Terry Schell and K. Jack Riley and Susan Turner and Travis L. Dixon. 2006. "Police-community Relations in Cincinnati: Year Two Evaluation Report". Rand Corporation: Safety and Justice Program.

Ridgeway, Greg and John M. MacDonald. 2009. Doubly Robust Internal Benchmarking and False Discovery Rates for Detecting Racial Bias in Police Stops. *Journal of the American Statistical Association.* American Statistical Association, Vol. 104 (486): 661-668

Ridgeway, Greg. 2009. Cincinnati Police Department Traffic Stops: Applying RAND's Framework to Analyze Racial Disparities. Rand Corporation: Center on Quality Policing.

Ridgeway, Greg and John M. MacDonald. 2014. A Method for Internal Benchmarking of Criminal Justice System Performance. *Crime & Delinquency*, Vol. 60 (1): 145-162

Ritter, Joseph A. "Racial Bias in Traffic Stops: Tests of a Unified Model of Stops and Searches". 2013. University of Minnesota: Minnesota Population Center Working Paper 2013-05.

Robins, J. and Y. Ritov. 1997. “Towards a curse of dimensionality appropriate (CODA) asymptotic theory for semiparametric models”. Statistics in Medicine, 16, pp. 285–319

Rosenbaum, P., and Rubin, D. 1983. “The Central Role of the Propensity Score in Observational Studies for Causal Effects” Biometrika, Vol. 70, 41–55.

Schell, Terry and Greg Ridgeway and Travis L. Dixon and Susan Turner and K. Jack Riley. 2007.“Police-community Relations in Cincinnati: Year Three Evaluation Report”. Rand Corporation: Safety and Justice Program.

Schonlau, Matthias. 2005. Boosted Regression (Boosting): An Introductory Tutorial and a State Plugin. *The Stata Journal*, Vol. 5 (3): 330-354

Worden, Robert E. and Sarah J. McLean and Andrew P. Wheeler. 2012. “Testing for Racial Profiling with the Veil-of-Darkness Method”. Police Quarterly.

Worden, Robert E. and Sarah J. McLean and Andrew P. Wheeler. 2010. “Stops by Syracuse Police, 2006-2009”. The John F. Finn Institute for Public Safety, Inc. Report.