



Connecticut Highway Safety Improvement Program (HSIP)

Implementation Plan for FFY 2025



Disclaimer

Protection of Data from Discovery Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Table of Contents

List of Abbreviations	4
List of Definitions.....	5
List of Tables	6
List of Figures	6
Executive Summary.....	7
Available Funding	9
Funding Allocation Goals	9
Expenditure Analysis	9
HSIP Programs, Strategies, and Activities	14
Proposed Programs.....	26
Summary.....	30
Appendices.....	31
Appendix A: Project List.....	32
Appendix B: Crash Trees	34
Appendix C: District Data.....	62
Appendix D: COG Data.....	91

List of Abbreviations

ASA	 Additional Safety Areas
COG	 Council of Government
CTDOT	.. Connecticut Department of Transportation
DOT	 Department of Transportation
EA	 Emphasis Area
FFY	 Federal Fiscal Year
FHWA	 Federal Highway Administration
FY	 Fiscal Year
HSIP	 Highway Safety Improvement Program
HSP	 Highway Safety Plan
MAP-21	 Moving Ahead for Progress in the 21st Century Act
SHSP	 Strategic Highway Safety Plan
SI	 Serious Injury
State	 State of Connecticut
STIP	 State Transportation Improvement Plan
VMT	 Vehicle Miles Traveled
VRU	 Vulnerable Road Users

List of Definitions

Non-Emphasis Areas:

Planning projects that provide research and/or data collection used to develop future infrastructure and roadway improvement projects.

Non-Roadways:

Locations where crashes occur on private property, private roadways, or parking lots.

Unknown Crash Category:

Rural crash data information was often previously categorized as Unknown by those populating the crash data because of limited location information in the crash reports.

Crash Tree:

A diagram that helps identify trends and potential risk factors in crashes.

List of Tables

Table 1: Decision Support Framework Actions

List of Figures

Figure 1: Expenditures and Crash Distribution Based on Roadway Ownership
(2019-2023)

Figure 2: Expenditures Based on EA (2019-2023)

Figure 3: EA by Roadway Owner (2019-2023)

Figure 4: Expenditures by Project Type (2019-2023)

Figure 5: Fatal and Serious Injury Data in the State of Connecticut (2019-2023)

Figure 6: Crash Distribution of Injuries (2019-2023)

Figure 7: Distribution of Fatal and Serious Injury Crashes Based on Type
(2019-2023)

Figure 8: Fatal and Serious Injury Crashes by District (2019-2023)

Figure 9: Fatal and Serious Injury Crashes by COG (2019-2023)

Figure 10: Classification of Crash Severity by COG (2019-2023)

Figure 11: Fatal and Serious Injury Crashes Categorized by Rural and Urban
(2019-2023)

Figure 12: Speeding Related Crashes Out of All Fatal and Serious Injury
Crashes (2019-2023)

Figure 13: Rural Roadway Crashes by Lighting Condition (2019-2023)

Figure 14: Urban Roadway Crashes by Lighting Condition (2019-2023)

Figure 15: Crashes by Roadway Ownership (2019-2023)

Figure 16: Pedestrian Crashes by Roadway Surface Condition (2019-2023)

Figure 17: Pedestrian Crashes by Lighting Condition (2019-2023)

Figure 18: ...Pedestrian Crashes by Lighting Condition and Roadway Ownership
(2019-2023)

Figure 19: Pedestrian Crashes by Roadway Location and Roadway Ownership
(2019-2023)

Figure 20: Pedestrian Crashes in Dark-Lighted Conditions by Roadway
Location (2019-2023)

Connecticut HSIP Implementation Plan

Executive Summary

This Highway Safety Improvement Program (HSIP) Implementation Plan for Connecticut documents the HSIP obligations and actions the state will take for the 2025 Federal Fiscal Year (FFY). This plan is required because the Federal Highway Administration (FHWA) notified the State that Connecticut did not meet or make significant progress toward meeting the 2022 safety performance targets, based on the five-year rolling averages for 2018-2022. Connecticut did not meet any of the safety performance targets out of the five categories for 2018-2022 which are: number of fatalities, rate of fatalities per 100 million VMT, number of serious injuries, rate of serious injuries per 100 million VMT, and number of non-motorized fatalities and serious injuries. In addition to not meeting or making significant progress toward meeting the 2022 safety performance targets, FHWA determined that Connecticut has triggered special rules, which will result in additional requirements under this plan.

The requirement to prepare this HSIP Implementation Plan is viewed as an opportunity since the Connecticut Department of Transportation (CTDOT) has made a commitment to safety and has obligated all its annual HSIP apportionment over the past several years. CTDOT has taken this opportunity to again re-evaluate its HSIP investment decisions and identify gaps and deficiencies to ensure that the projects identified, prioritized, and programmed have the highest potential for reducing fatalities and serious injuries. Consideration is also being made to help Connecticut meet safety performance targets in subsequent years. In order to make these decisions for this HSIP Implementation Plan, CTDOT reviewed fatal and serious injury crash data on all public roads from 2019 to 2023 utilizing the [Connecticut Crash Data Repository \(CTCDR\)](#).

In addition to the safety performance targets, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), was signed into law on November 15, 2021 and includes three special rules: High-Risk Rural Roads (HRRR), Older Drivers and Pedestrians, and Vulnerable Road Users (VRU) Safety.

The HRRR Special Rule, found under 23 U.S.C. 148(g)(1), states “If the fatality rate on rural roads in a State increases over the most recent two year period for which data are available, that State shall be required to obligate in the next fiscal year for projects on high risk rural roads an amount equal to at least 200 percent of the amount of funds the State received for fiscal year 2009 for high risk rural roads under subsection (f) of this section, as in effect on the day before the date of enactment of the MAP-21.” The HRRR Special Rule is in effect for this HSIP Implementation Plan because the rate of high-risk rural road crashes have increased during the study period of 2022-2023.

Connecticut has made substantial improvements and no longer triggers the Older Drivers and Pedestrians Special Safety Rule, therefore no action is required for improvements.

The VRU Safety Special Rule, found under 23 U.S.C. 148(g)(3), states “If the total annual fatalities of vulnerable road users in a State represents not less than 15 percent of the total annual crash fatalities in the State, that State shall be required to obligate no less than 15 percent of the amounts apportioned to the State under section 104(b)(3) for the following fiscal year for highway safety improvement projects to address the safety of vulnerable road users.” This special rule is in effect for this HSIP Implementation Plan because 20% of the total annual crash fatalities included vulnerable road users.

Due to the HRRR and VRU safety special rules that have been triggered, the state must allocate the following funds in addition to the existing requirements:

- At least \$1,502,890 toward high-risk rural roads
- Not less than 15% of the amount apportioned under 23 U.S.C. 104(b)(3) for highway safety improvement projects to address the safety of vulnerable road users.

The framework for this implementation plan is based on the Decision Support Framework Actions from the FHWA Office of Safety’s HSIP Implementation Plan Guidance dated October 13, 2017 shown below:

Decision Support Framework Actions	
Review fatality and serious injury trends	Compare Statewide trends vs region, district, county Compare trends by SHSP EA, urban/rural designation, functional class, roadway ownership.
Review HSIP Expenditures	Compare the proportion of HSIP expenditure by SHSP EAs, urban/rural designation, functional classification, roadway ownership to determine if the proportion of fatalities/serious injuries align with where the problems are occurring?
Review Historical Project Performance	Which countermeasures were implemented? Where were countermeasures implemented? What crash types were these countermeasures addressing? Were these countermeasures and crash types identified as a priority in the SHSP? What was the outcome (i.e., countermeasures effectiveness)?
Identify Gaps or Deficiencies	Review data and information to determine any gaps and/deficiencies. Determine program modifications to ensure projects are identified, prioritized and programmed properly and have the best potential to reduce fatalities/serious injuries.
Identify Noteworthy Practices	Review literature on noteworthy practices that address State-specific crash characteristics. Identify noteworthy practices that have not yet been implemented and consider them in the HSIP.
Conduct Stakeholder Outreach	Engage safety stakeholders in a discussion about program needs and potential solutions.
Develop HSIP Implementation Plan	Use input from gap analysis, literature review, and safety stakeholders as a starting point for development of the HSIP Implementation Plan.

Available Funding

Under 23 U.S.C. 148(i)(1), Connecticut did not meet or make significant progress towards meeting safety performance targets and must obligate HSIP funds in the amount apportioned for the prior year and, as a result, Connecticut must allocate at least \$31,135,546 in FFY 2025, which is the apportionment amount for FFY 2025.

Funding Allocation Goals

The HSIP Implementation Plan must describe how HSIP funds will be allocated during the plan period (23U.S.C. 148(i)(2)(C)). In determining these allocation goals, Connecticut considered distributing needs by Strategic Highway Safety Plan (SHSP) Emphasis Areas (EAs) (infrastructure, VRU, etc.), as well as other categories such as roadway ownership (state vs. local roads, etc.) and improvement type (e.g., spot vs. systemic).

Expenditure Analysis

Five years of crash data, between 2019 and 2023, were analyzed for fatal and severe injury crashes and revealed that 55% of crashes occurred on state roads, 42% occurred on municipal roads, and 3% of crashes were uncoded to road type. A review of the HSIP project funding expenditures between 2019 and 2023 revealed \$124,976,896 was allocated to state roads, \$48,215,562 was allocated to municipal roads, and \$30,285,471 was allocated to non-roadway projects. This correlates to 61% of total funding for state roads, 24% to municipal roads, and 15% on non-roadway projects, as seen in Figure 1.

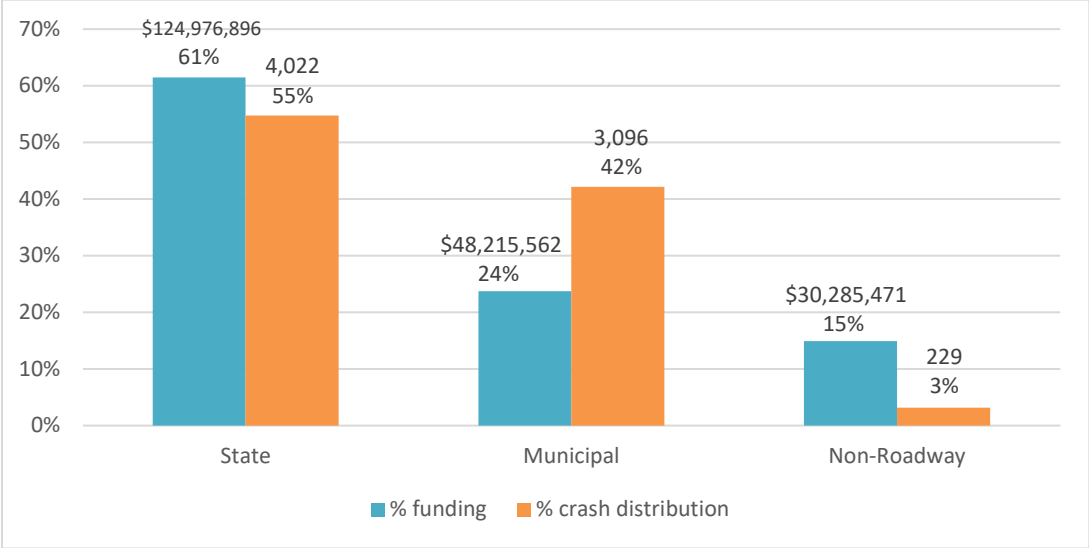


Figure 1: Expenditures and Crash Distribution Based on Roadway Ownership (2019-2023)

The municipal funding cited above shows a 3% decrease from the previous 27% of funds allocated to municipalities in the FFY2024 five-year rolling average. However, from FFY2024 to FFY2025, there was an overall increase of \$4,839,991 in municipal funding. The crash data trends suggest that expenditure allocation should be redistributed to increase allocations to municipal systems to reflect crash data trends as shown in the analysis portion of this report. Ongoing and new projects have been identified specifically for municipal roadways, as discussed in the Proposed Programs section and Project List found in Appendix A. By allocating more to municipal roadway projects, the gap between trends shown within the crash data and previous expenditures will be addressed. It is worth noting that some types of projects that were implemented on state roadway networks in FFY2024 will also be initiated on municipal roadways in coming years. Implementation of new concepts has proven to be better received by the public when implementation first occurs on state roads under CTDOT jurisdiction and then on municipal roads where further municipal input is needed prior to implementation. At the point of municipal outreach, the public has had an opportunity to experience each improvement on state roadways and relay feedback effectively.

Crash Type and Emphasis Areas

In addition to determining the percentage of fatal and severe injury crashes that occurred on both state and municipally owned roadways, the five years of analyzed crash data was also broken down by crash type. Based on the analysis, roadway departures, angle crashes, and pedestrian crashes were found to be the highest three types with 3,042 crashes, 1,812 crashes, and 1,037 crashes, as seen in Figure 7 later in this report.

Within the HSIP project funding expenditures, the highest expenditures were allocated to projects targeting the following SHSP EAs: infrastructure, with a total of \$109,094,994; non-emphasis areas, with a total of \$44,552,316; and pedestrians, with a total of \$40,173,860. These categories encompass the types of projects that target the highest occurring crash types listed above. Infrastructure and pedestrian projects include but are not limited to roadway pavement improvements, implementing high visibility warning signs and pavement markings, improved pedestrian facilities, and increasing sight distances. Non-emphasis areas include planning projects that provide research and/or data collection used to develop future infrastructure and roadway improvement projects. The EA with the smallest amount of funding is Behavioral, which includes crashes involving speeding or DUIs. Many crashes in this category involve drivers fleeing from the scene or crashes that are not reported, so the numbers in this category are not exact, but rather they are estimated based on police data (see further discussion on data collection in the HSIP Programs, Strategies, and Activities section of this report). Figure 2 summarizes spending based on EA.

Please note, Traffic Incident Management (TIM) is included in Figure 2 because in prior SHSP documents this was recognized as an EA. The recently updated SHSP contains revised EAs that have been realigned based on crash data patterns and no longer includes this category. The funding shown under the TIM section is associated with the five-year rolling average. In current and future years, the percentage of funding contributions to this section will be reallocated to alternative EAs. TIM is still captured in the SHSP; however, it is now included under the Additional Safety Areas (ASA) section.

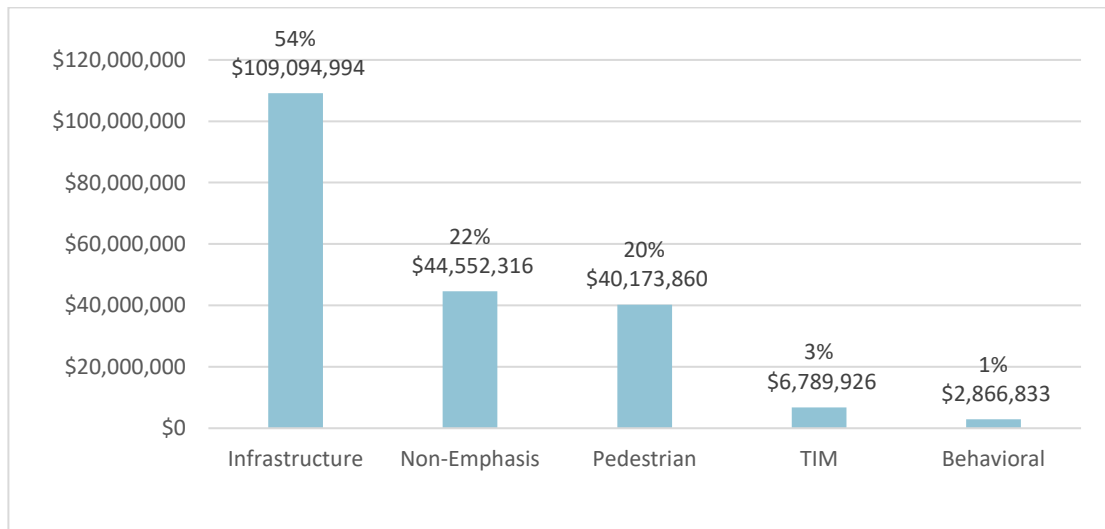


Figure 2: Expenditures Based on EA (2019-2023)

Roadway Ownership and EAs

For the SHSP EAs for infrastructure, non-emphasis areas, and pedestrians, the following is a summary to further break down the overall spending by showing the approximate funding between 2019-2023 by roadway ownership.

Infrastructure:

- \$90,588,273 (74%) to state roadways
- \$30,592,157 (25%) to municipal roadways
- \$1,600,000 (<1%) to non-roadway projects

Non-Emphasis Area Projects:

- \$14,163,186 (36%) to state roadways
- \$2,423,959 (6%) to municipal roadways
- \$23,029,017 (58%) to non-roadway projects

Pedestrian Funding:

- \$28,198,866 (73%) to state roadways
- \$10,695,966 (27%) to municipal roadways
- No allocation to non-roadway projects

Traffic Incident Management:

- \$9,074,000 (74%) to state roadways
- \$376,783 (3%) to municipal roadways
- \$2,000,000 (17%) to non-roadway projects

Behavioral Emphasis Area:

- \$816,866 (30%) to state roadways
- \$1,314,667 (48%) to municipal roadways
- \$603,000 (22%) to non-roadway projects

To aid in the analysis, the breakdown of EA by roadway owner listed above is also depicted in Figure 3. The data suggests that expenditure allocation within each EA should be redistributed to increase allocations to municipal systems based on the initial breakdown of crash data that shows that overall, 55% of crashes occurred on state roads and 42% occurred on municipal roadways. The values shown in Figure 3 represent the percentage of roadway ownership funds that have been allocated to each EA in from 2019-2023.

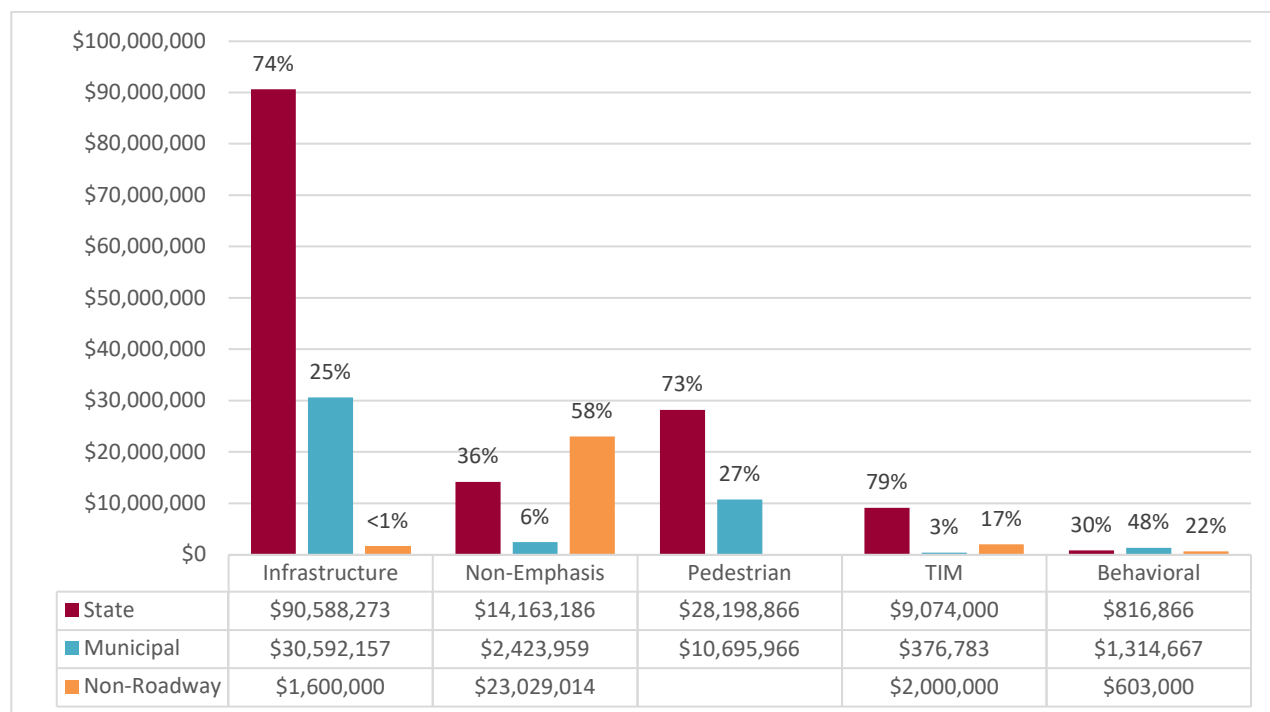


Figure 3: EA by Roadway Owner (2019-2023)

From 2019-2023, 508 crashes on state roadways were pedestrian crashes¹ and 529 crashes on municipal roadways were pedestrian crashes². This equates to a total of 49% of pedestrian crashes having occurred on state owned and maintained roadways and 51% occurred on municipal roadways. Examining the pedestrian EA in Figure 3, 73% of the total allocated funds went to state roadways, 27% went to municipal roadways, and there was no pedestrian contribution for non-roadway projects.

¹ See "Connecticut State Roads Fatal and Serious Injury Crash Tree" in Appendix B

² See "Connecticut Municipal Roads Fatal and Serious Injury Crash Tree" in Appendix B

Project Type

Between 2019 and 2023, the State of Connecticut allocated the most financial aid to systemic projects for roadways totaling \$95,239,888 (47%) of all project types. A total of \$48,039,600 (24%) was allocated to spot treatment projects, \$47,721,016 (23%) was allocated to other projects, and \$12,477,425 (6%) was allocated to systematic projects. The projects that are neither systemic, systematic, nor spot improvements are classified as “other” and largely encompass project funding for driver behavior, research, screening, analysis, and preparation of safety projects (such as the HSIP IP).

Figure 4 below summarizes the expenditures by project type.

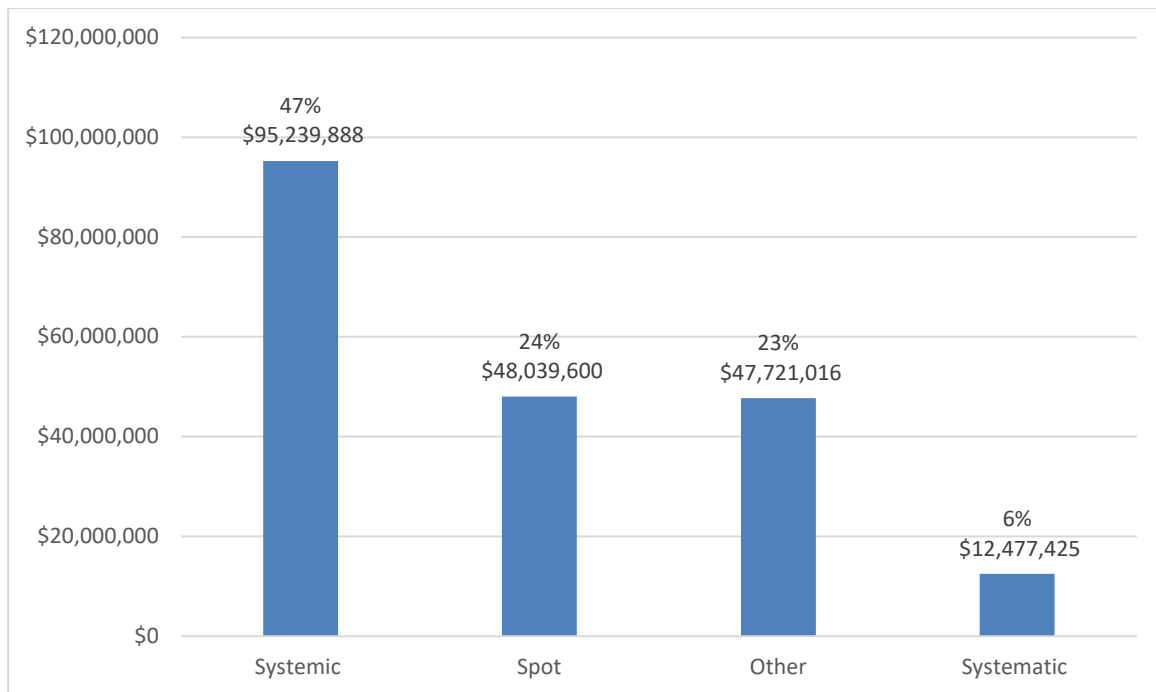


Figure 4: Expenditures by Project Type (2019-2023)

HSIP Programs, Strategies, and Activities

The State's HSIP Implementation Plan must identify a combination of programs, strategies, and activities to be funded under the HSIP that will (1) contribute to a reduction in fatalities and serious injuries [23 U.S.C. 148(b) & 150(b)(1)] and (2) help the State achieve or make significant progress towards achieving their safety performance targets in subsequent years [23 U.S.C. 148(i)(2)(D)]. The HSIP programs, strategies, and activities must address roadway features that constitute a hazard to roadway users, as well as highway safety improvement projects that were identified based on crash experience, crash potential, or other data- supported means. [23 U.S.C. 148(i)(2)(A)(B).]

In addition to the development of the HSIP Implementation Plan, CTDOT evaluates the need for additional projects included in the Strategic Highway Safety Plan (SHSP) and the State Transportation Improvement Plan (STIP). These documents are reviewed annually in conjunction with stakeholder outreach when developing the Implementation Plan. The process involved with stakeholder outreach is discussed further later in this section.

The following crash analysis for the years 2019-2023 was conducted to obtain a better understanding of Connecticut's highway safety trends. The crash data was disaggregated in various ways including, collision type, construction and maintenance district, planning region, roadway classification, roadway ownership, roadway surface condition, and lighting condition.

The Proposed Programs discussed later in this section have been selected to address the roadway safety concerns on both state and municipal roadways described in the previous sections of the Implementation Plan. These programs serve to create safer roadway conditions for all road users by targeting crash patterns discussed later in this section.

These programs focus on specific Emphasis Areas described in the previous sections of the Implementation Plan, including Pedestrians, Infrastructure, and Non-Emphasis Areas. Each proposed program summary outlines the purpose as related to what crash type and frequency each program is aiming to address, the estimated cost of the program, the methodology and implementation of each program, and the anticipated benefits as they relate to safety, including reference to any FHWA proven safety countermeasures.

In addition to the proposed programs, projects that are continued from previous years and identified in previous HSIP IPs are included in the project list provided in Appendix A. These projects are in various phases of development including Planning, Preliminary Engineering, and Construction and will continue to progress under this plan. These projects align with the SHSP and the STIP.

Crash Analysis

The crash data in the Implementation Plan has been collected from the UConn Crash Data Repository. Using the past five years of data, 2019-2023, the trends are observed and compared using different variables including crash type, crash severity, lighting conditions, roadway surface conditions, roadway ownership, and several others. This data is recorded using police crash reports and is the most accurate information available to analyze the crashes. However, some assumptions have to be made when considering crashes that have not been reported, crashes that are still going through litigation, or speed related crashes as speed data is not always available.

It should be noted that some crashes have been categorized as “Unknown.” This is due to the way that the Connecticut Crash Data Repository previously processed crash reports due to a lack of information provided in the reports. The database has recently been updated so the system recognizes the appropriate roadway category based on georeferenced location data synchronized with the system. This is a deficiency in the data that will be rectified moving forward. As the system is improved, the data will provide more accurate analyses resulting in improved program modifications.

Crash Trees were developed as part of the Implementation Plan in order to provide an additional opportunity to examine the crash data and how it aligns with the goals of the plan. The highest crash type under each disaggregation scenario can be recognized when determining the safety targets of the proposed and on-going programs. Crash Trees are provided by COG, District, and Municipal and State roadways in Appendix B.

A review of the Statewide Crash Data (see Crash Tree 1 in Appendix B) shows that the crash data continues to show the same patterns in terms of crash type that were exhibited during the creation of Connecticut’s current Strategic Highway Safety Plan (2022-2026 SHSP) and as shown in the previous three Connecticut HSIP Implementation Plans.

An overall look at the statewide fatal and serious injury crash data is shown in Figure 5. There is an upward trend in fatal and serious injury crashes from 2020 to 2022, followed by a decrease in the last year reviewed (2023). The highest number of fatal and serious injury crashes occurred in 2022, and the least amount occurred in 2023, based on preliminary crash data. The 2023 data is not complete due to a number of fatal and serious injury crashes still being processed through litigation at this time.

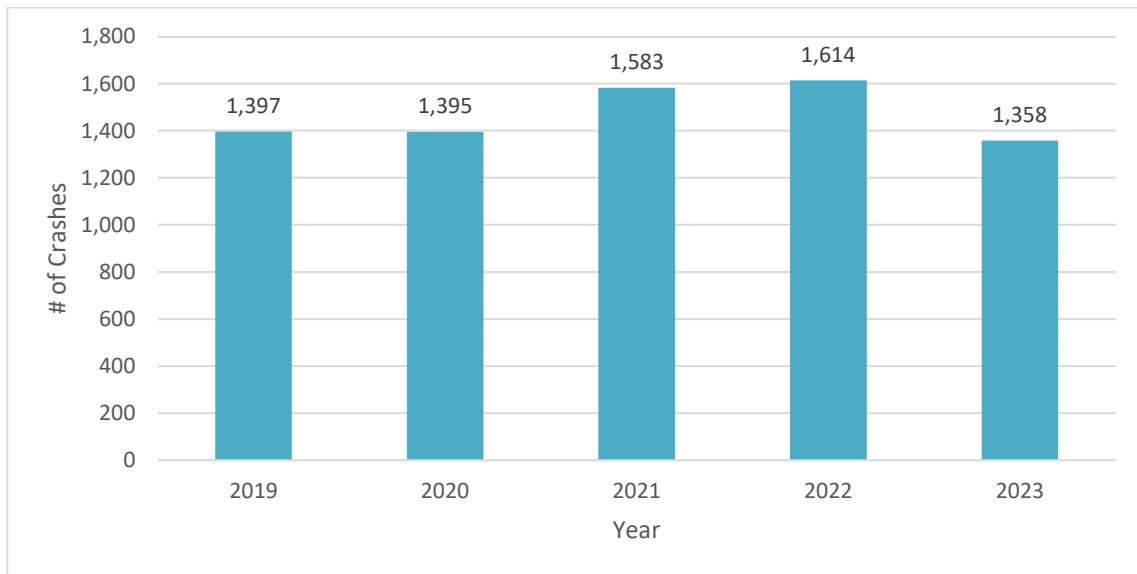


Figure 5: Fatal and Serious Injury Data in the State of Connecticut (2019-2023)

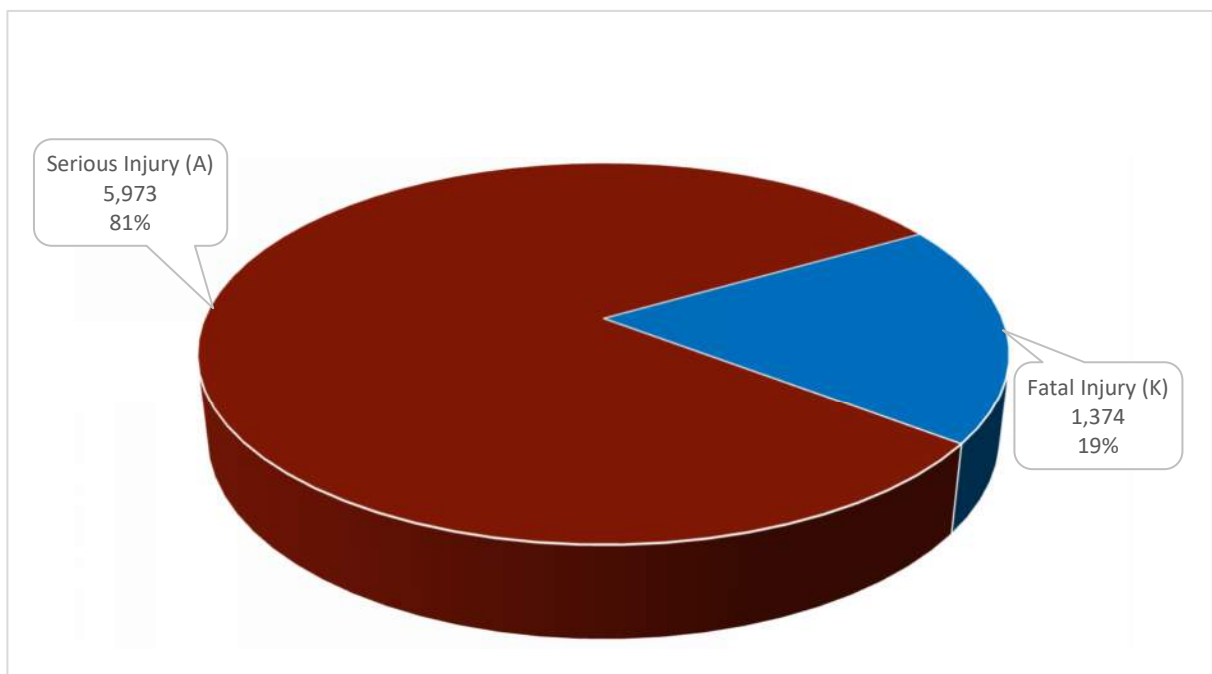


Figure 6: Crash Distribution of Injuries (2019-2023)

Overall, 81% of the 2019-2023 fatal and serious injury crashes were serious injuries and 19% were fatalities, as shown in Figure 6. Over these years, Connecticut has experienced a total of 7,347 fatal and serious injury crashes.

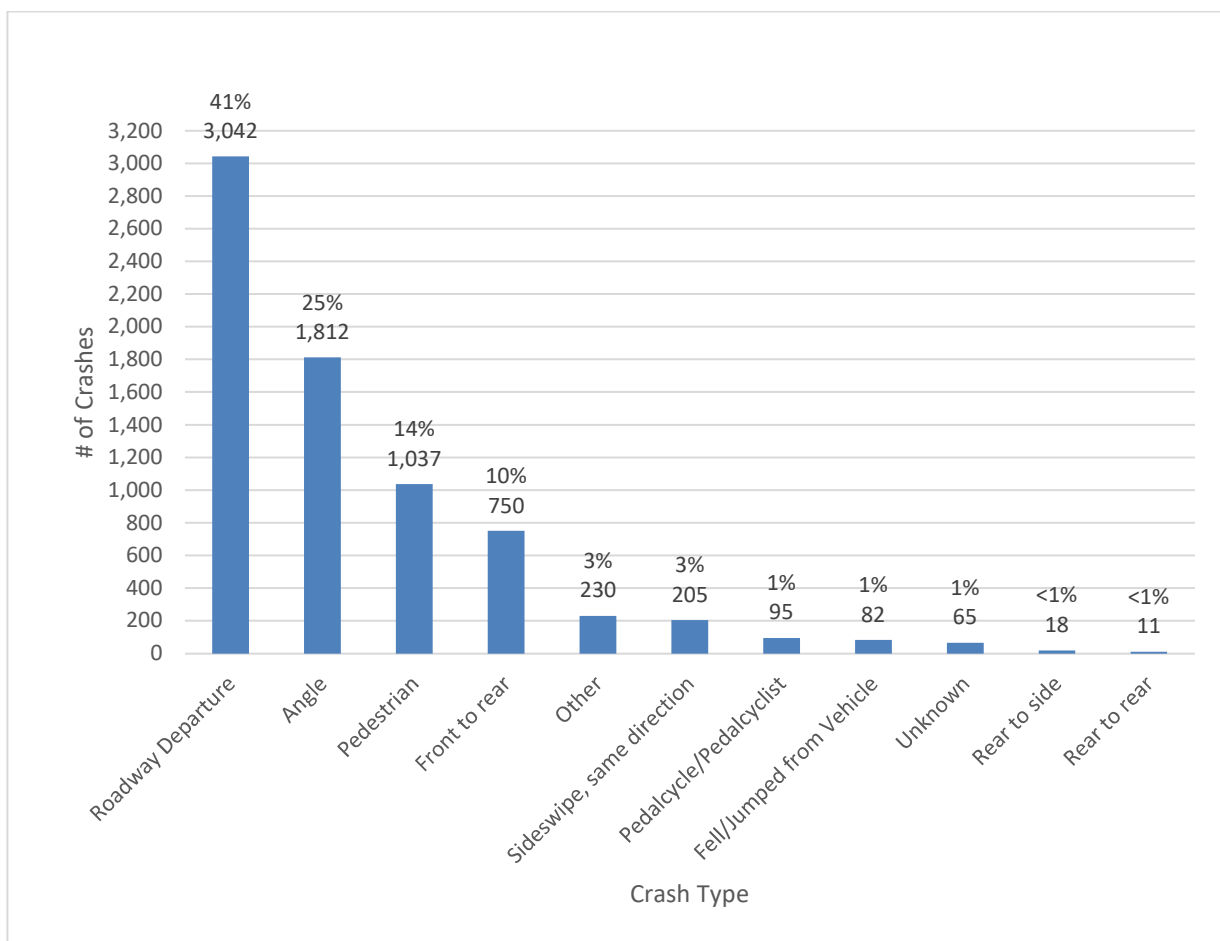


Figure 7: Distribution of Fatal and Serious Injury Crashes Based on Type (2019-2023)

As displayed in Figure 7, the top three crash types are Roadway Departure, Angle, and crashes involving pedestrians; there were a total of 3,042 Roadway Departure crashes, 1,812 Angle crashes, and 1,037 pedestrian crashes. For the purposes of this analysis, roadway departure crashes include all crash types involving the vehicle in motion exiting the designated roadway area - overturn, sideswipe opposite direction, fixed object crashes, front to front, or vehicle immersion. In prior years the Roadway Departure designation included fewer crash types, however given recent review it was established that overturn, sideswipe opposite direction, and head to head crashes should be included in the roadway departure designation. Crashes categorized as “Other” include crashes involving animals, vehicle failures, and other crashes that do not fall in the categories listed in Figure 7.

To further review the crash data, the data was disaggregated geographically. Connecticut is separated into four construction and maintenance Districts within the CTDOT and into nine regional Councils of Government (COGs).

Figure 8 shows that from 2019-2023, Districts 1 and 3 account for 31% and 38%, respectively, of the fatal and serious injury crashes throughout the state.

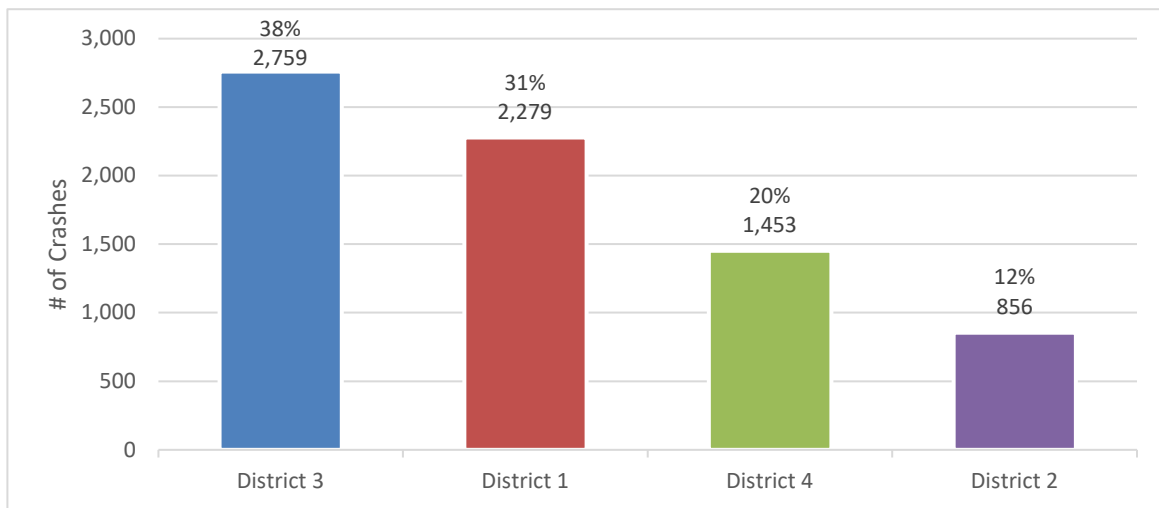


Figure 8: Fatal and Serious Injury Crashes by District (2019-2023)

Of the COGs within Districts 1 and 3, the Central Region COG (CRCOG) accounts for the most fatal injuries and suspected serious injuries throughout the state, followed by the South Central Region COG (SCRCOG) as shown in Figure 9.

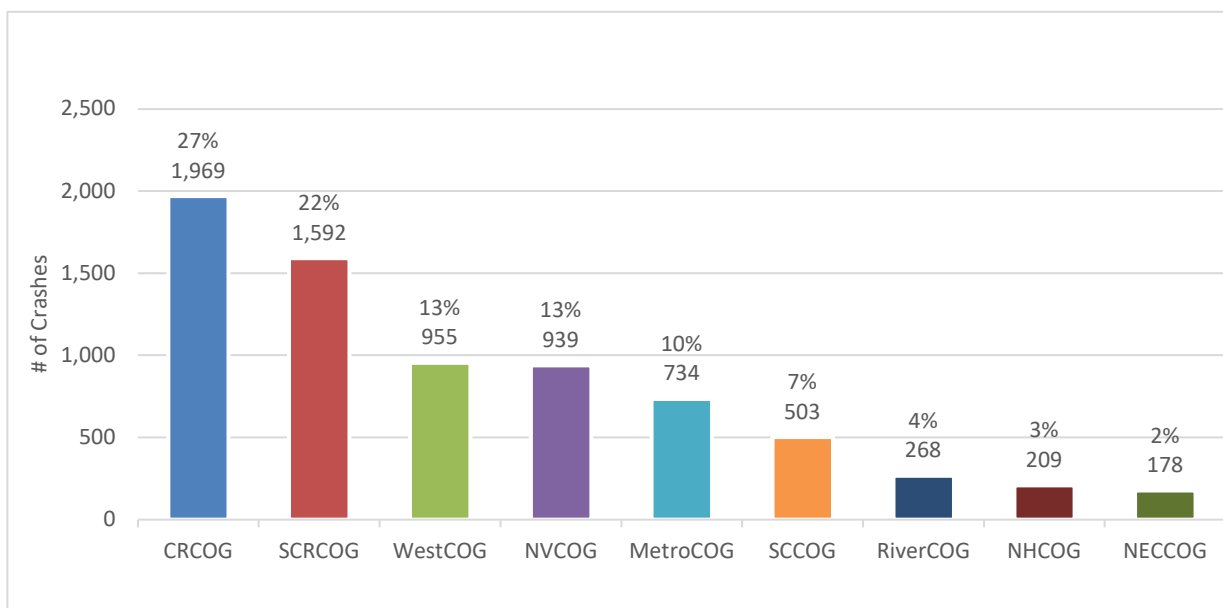


Figure 9: Fatal and Serious Injury Crashes by COG (2019-2023)

CRCOG is located almost entirely within District 1, with a few municipalities in District 2. SCRCOG is located almost exclusively in District 3, with one town in District 1. New Haven and Hartford are two of the largest Connecticut cities and are located in the CRCOG and SCRCOG regions as shown in the crash data analysis maps found in Appendix C. Additionally, many municipalities within SCRCOG and CRCOG offer more urban communities lending to higher numbers of vehicles, pedestrians, and bicyclists. A higher frequency of serious injury and fatal crashes likely occur in these areas as they often have a higher number of VRUs, such as bicyclists and pedestrians, as seen in Figure 10.

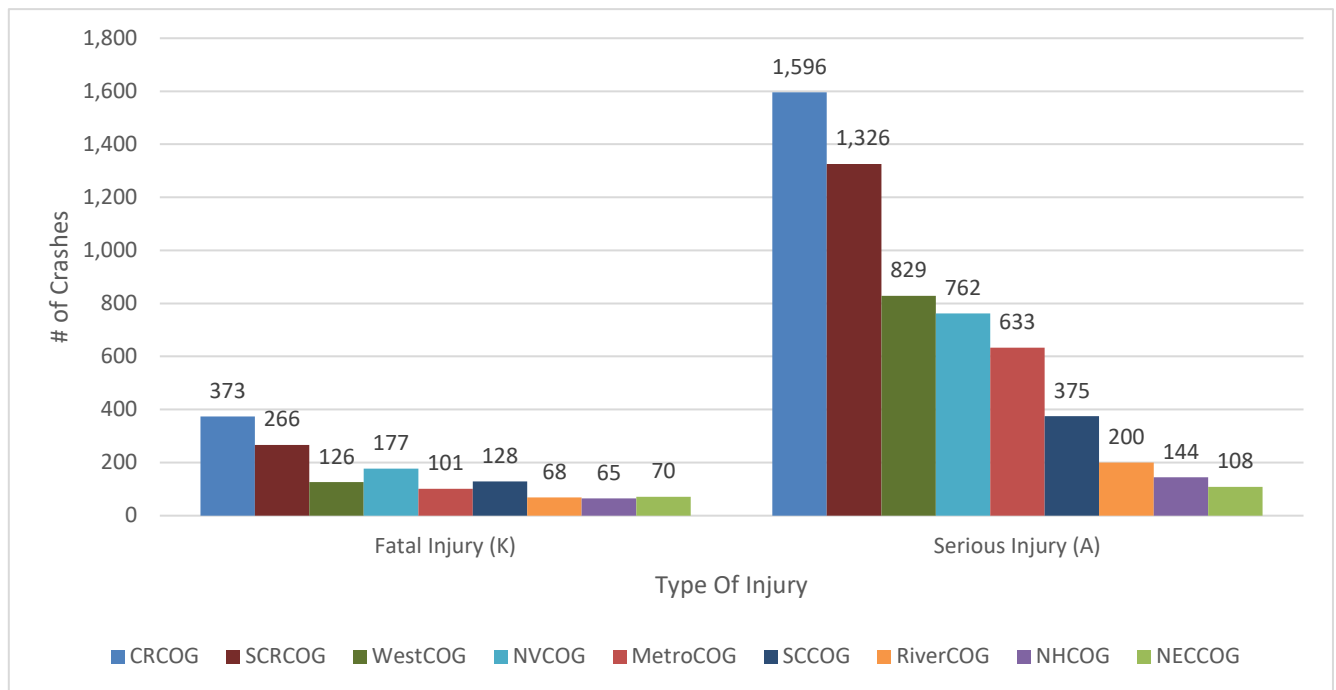


Figure 10: Classification of Crash Severity by COG (2019-2023)

Figure 11 shows that from 2019-2023, 60% of all total fatal and serious injury crashes occurred in urban areas, compared to 5% located in rural areas. This is most likely the result of the urban areas having a higher population than the rural regions. It is also worth noting that 34% of the serious and fatal injuries from 2019-2023 are unknown roadway classification.

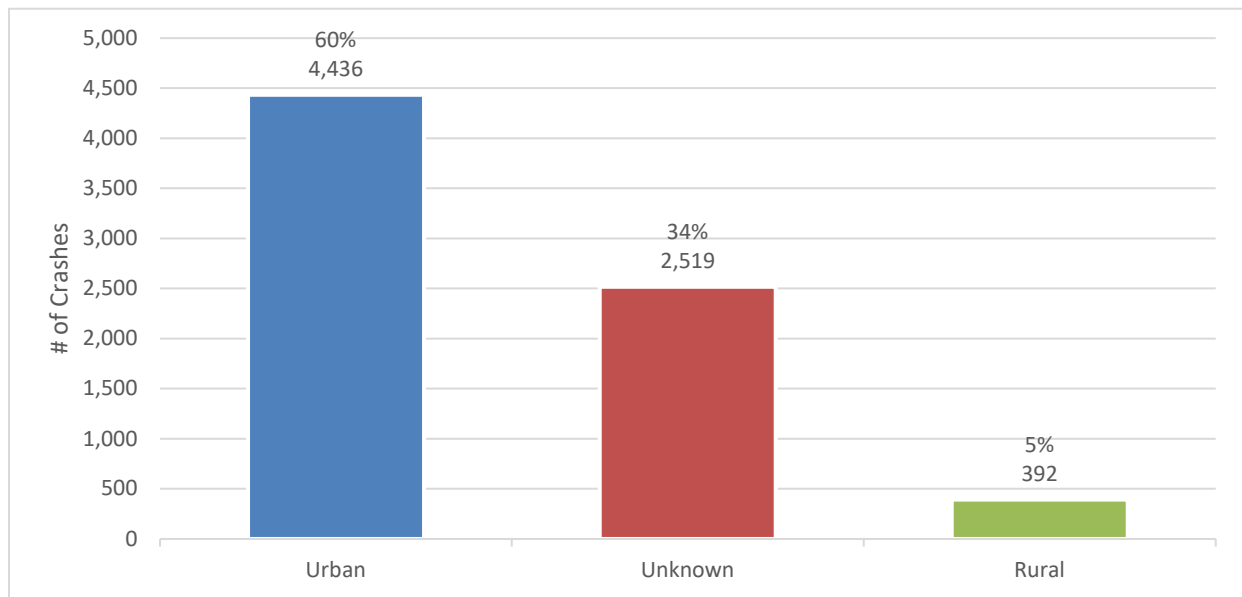


Figure 11: Fatal and Serious Injury Crashes Categorized by Rural and Urban (2019-2023)

Figure 12 depicts that speeding accounts for nearly 23% of all fatal and serious injury crashes throughout the state from 2019-2023. It is possible that the percentage of crashes involving speeding is higher due to the large percentage of crashes that were coded as “unknown” in the database. The total number of crashes depicted in Figure 12 includes only crashes where statements were taken from drivers. Speed-related statements are not included in the crash reports from passengers, pedestrians, and bicyclists as they would not be liable for speeding infractions. Therefore, the total number of crashes that contain speed designations is lower than the total number of crashes discussed throughout this document.

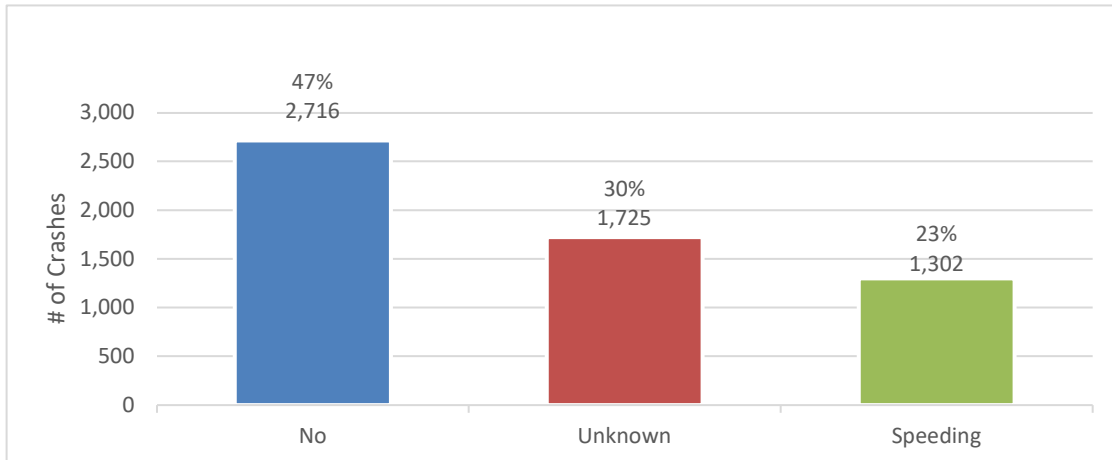


Figure 12: Speeding Related Crashes Out of All Fatal and Serious Injury Crashes (2019-2023)

Figure 13 shows the impact of lighting conditions on rural roadways from 2019 to 2023. Of the 392 total fatal and serious injury crashes on rural roadways, 115 occurred when it was dark with no lighting. Additionally, 162 of the total crashes occurred during non-daylight hours.

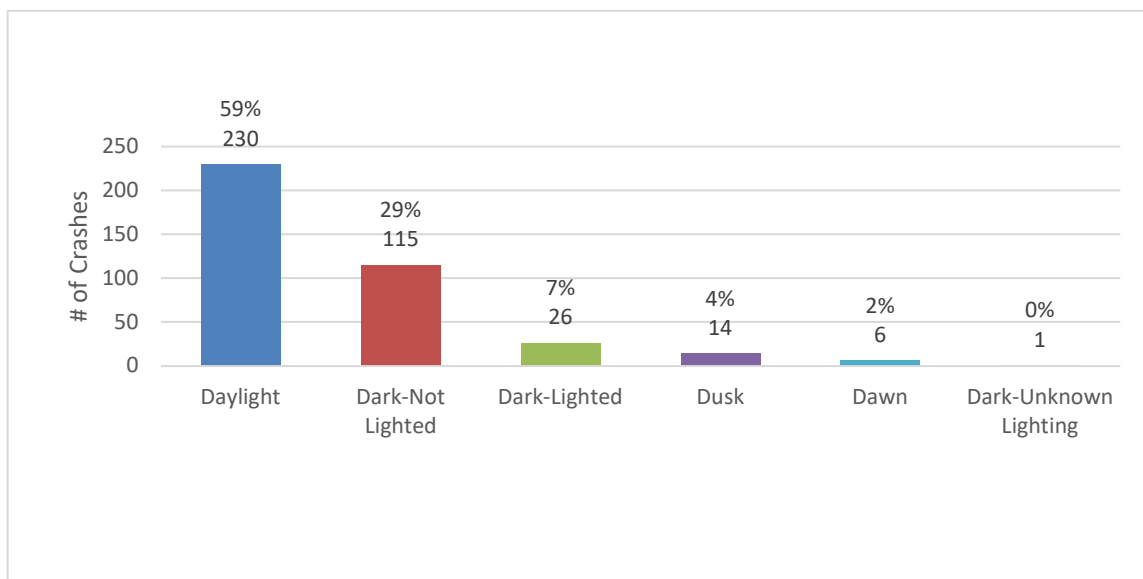


Figure 13: Rural Roadway Crashes by Lighting Condition (2019-2023)

Figure 14 displays the relationship between crashes on urban roadways and lighting conditions from 2019 to 2023. Of the 4,425 total fatal and serious injury crashes on urban roadways, 452 occurred when it was dark with no lighting. Additionally, 2,059 of the total crashes occurred during non-daylight hours.

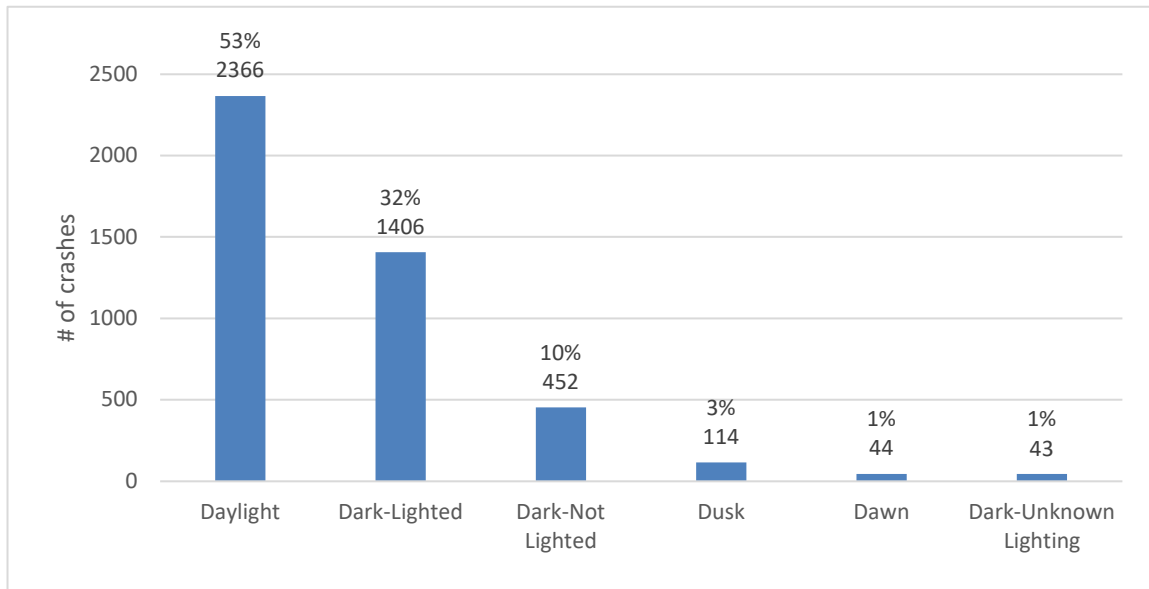


Figure 14: Urban Roadway Crashes by Lighting Condition (2019-2023)

Figure 15 shows the percentage of all fatal and serious injury crashes categorized by roadway ownership. As shown, 55% of all crashes throughout the state occurred on state roadways, while 42% of all crashes took place on municipal roadways and 3% were coded as unknown.

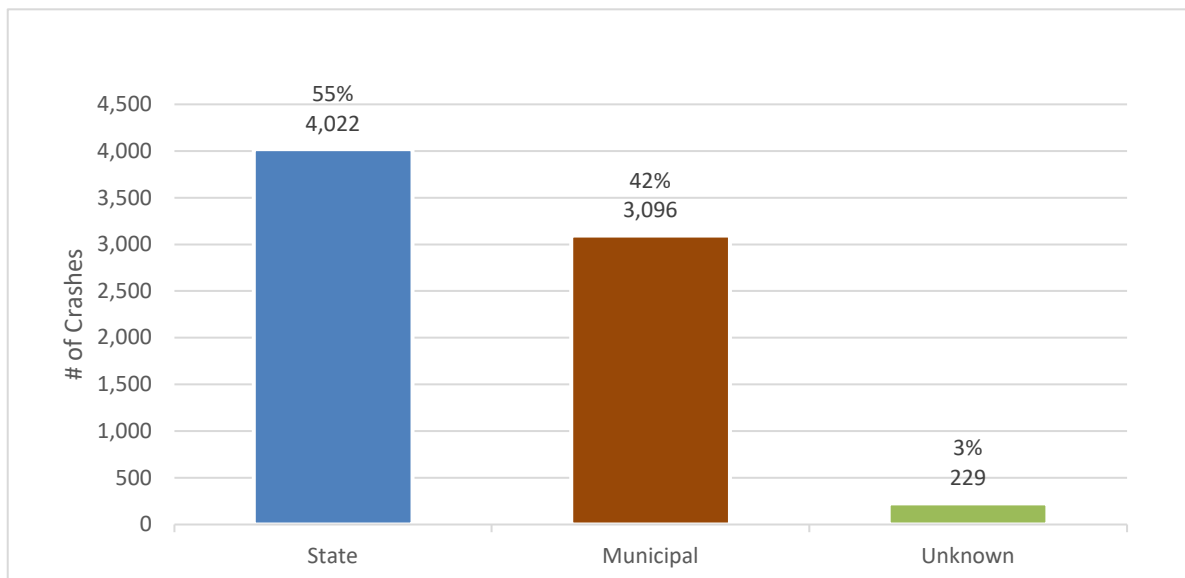


Figure 15: Crashes by Roadway Ownership (2019-2023)

Figure 16 demonstrates the breakdown of pedestrian crashes based on roadway surface conditions. Most pedestrian crashes occurred under dry roadway conditions, which may be due to speeding related activities or lack of driver attention in this condition. The second highest percentage of pedestrian crashes occurred when the roadway was wet, which may be attributed to motorists being unable to adequately slow down or come to a complete stop when approaching a pedestrian on a wet roadway.

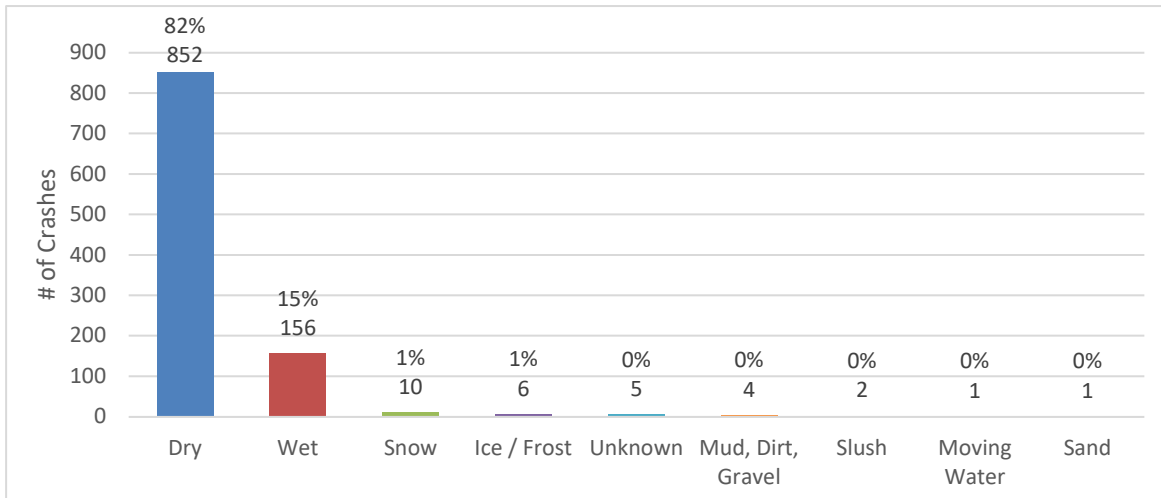


Figure 16: Pedestrian Crashes by Roadway Surface Condition (2019-2023)

Figure 17 shows the percentage of pedestrian fatal and serious injury crashes categorized by lighting conditions. As shown, 41% of all crashes throughout the state occurred during dark-lighted conditions, while 40% took place during daylight conditions. The combination of all non-daylight conditions accounts for 60% of all crashes.

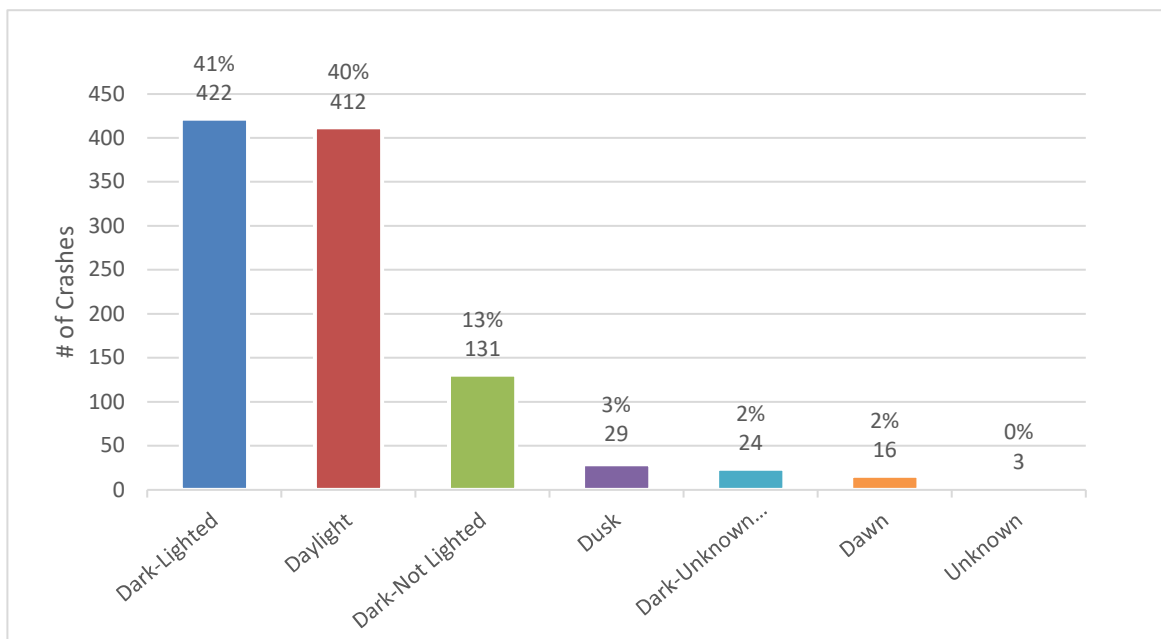


Figure 17: Pedestrian Crashes by Lighting Condition (2019-2023)

Figure 18 shows pedestrian fatal and serious injury crashes categorized by both roadway ownership and lighting conditions. In total, 518 pedestrian crashes occurred on municipal roadways and 419 pedestrian crashes occurred on state roadways. Of the pedestrian crashes on municipal roadways, 231 crashes occurred during daylight conditions and 287 occurred during all other lighting conditions. Of the pedestrian crashes on state roadways, 123 crashes occurred during daylight conditions and 296 occurred during all other lighting conditions. The unknown roadway ownership crashes are due to a data gap from the UConn Crash Data Repository. Training has commenced in an effort to improve the data gap in future years, and data is being reviewed to update the information for previous years.

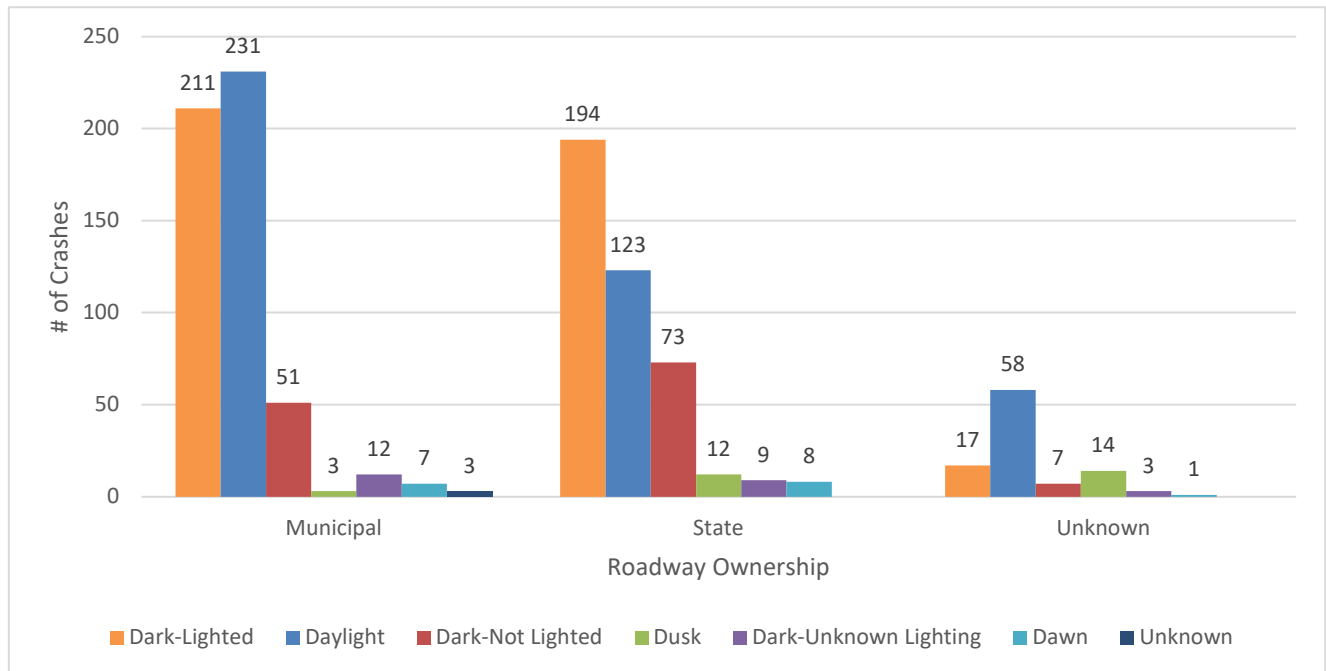


Figure 18: Pedestrian Crashes by Lighting Condition and Roadway Ownership (2019-2023)

Figure 19 shows pedestrian fatal and serious injury crashes categorized by where the pedestrian was located (either within or outside of the roadway) when the crash occurred and by roadway ownership. Of the total pedestrian crashes, 881 crashes occurred with the pedestrian on the roadway. Of the on-roadway crashes, 481 occurred on municipal roadways, 387 occurred on state roadways, and 13 were coded as unknown.

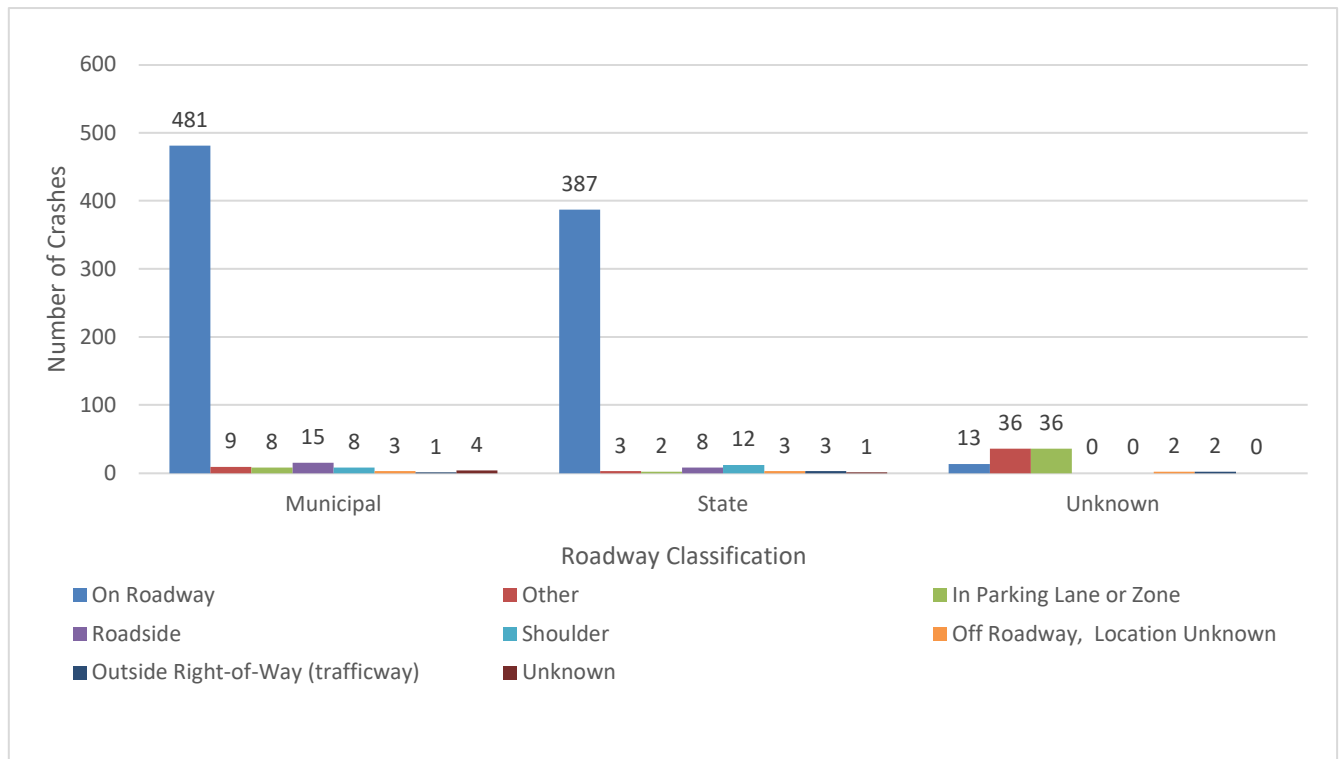


Figure 19: Pedestrian Crashes by Roadway Location and Roadway Ownership (2019-2023)

The information portrayed in Figure 20 exhibits the breakdown of pedestrian crashes in dark lighted conditions based on roadway locations. Of the fatal and serious injury pedestrian crashes that occur in dark lighted conditions, 399 or 91%, occur on the roadway.

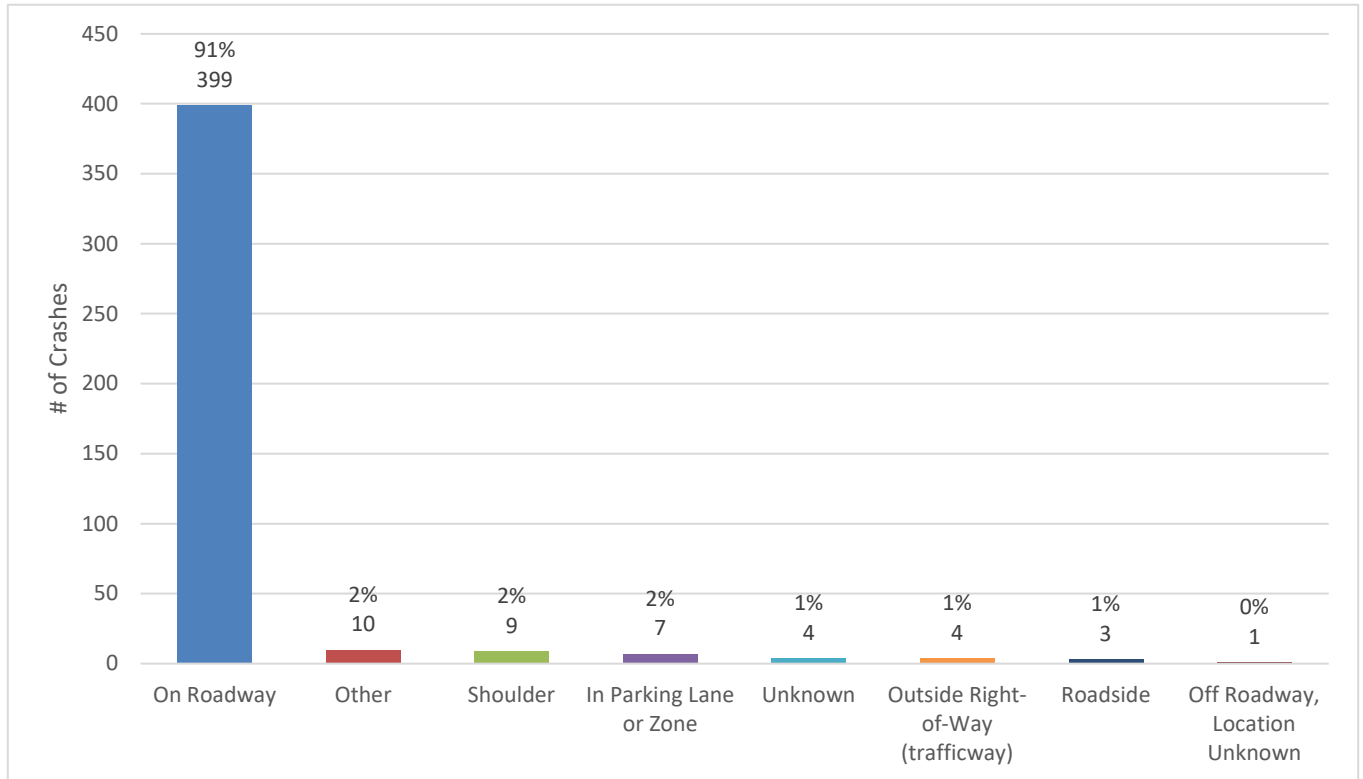


Figure 20: Pedestrian Crashes in Dark-Lighted Conditions by Roadway Location (2019-2023)

Stakeholder Outreach

During the process of developing the Implementation Plan, safety stakeholders were engaged in discussions about program needs and potential solutions. The outreach included separate meetings with all nine of Connecticut's COGs and CTDOT's Highway Safety Office, Division of Traffic Engineering (Safety Engineering Unit), Division of Highway Design (Project Development Unit), and the Office of Policy and Planning. At each stakeholder outreach meeting, the stakeholders were able to discuss projects that were applicable to their constituents. These potential projects were then cross-referenced with the crash data analysis to determine eligibility.

Crash data classification summaries are provided by District and COG in Appendix C and Appendix D, respectively. The crash data classification summaries were utilized during the stakeholder outreach discussions. The summaries were instrumental in analyzing and discussing where the targets should be based on the individual stakeholders and how they compare to others.

Proposed Programs

Retrofit Existing RRFBs for Illumination

Purpose:

From 2020-2022, pedestrian crashes accounted for 611 fatal or serious injury crashes statewide.³ To prevent such crashes, RRFBs can be updated and implemented with retrofit LED technology to enhance visibility of the RRFB to drivers. Illumination at crosswalks creates a safer crosswalk experience for the VRUs.

Cost:

\$75,000

Methodology and Implementation Plan:

Select RRFBs will be updated to have retrofit LED lighting which will enhance driver's visibility of the signs both day and night. Implementing lighting at select locations where lighting does not currently exist will greatly increase driver visibility of crossing VRUs.

Benefits:

- RRFBs provide safe crossings for pedestrians at unsignalized locations.
- Increases driver awareness of VRUs.
- RRFBs are a FHWA Proven Safety Countermeasure and can reduce crashes up to 47% and can increase motorist yielding rates up to 98%.⁴
- The retrofit LED lighting is more visible to drivers than the existing fluorescent or incandescent lighting at existing RRFB locations and is energy efficient.



³ See "Connecticut Fatal and Serious Injury Crash Tree" in Appendix B

⁴ See FHWA "Rectangular Rapid Flashing Beacons (RRFB)";
[Rectangular Rapid Flashing Beacons \(RRFB\) | FHWA \(dot.gov\)](https://www.fhwa.dot.gov/safety/rrfb/)

Larger and Double Signs on Municipal Roadways

Purpose:

From 2020-2022, roadway departure crashes accounted for 38% of all crashes on municipal roadways.⁵ To prevent such cases, larger and double traffic signs can be implemented to increase driver awareness and visibility on municipal roadways.

Cost:

Project underway.

Methodology and Implementation Plan:

CTDOT has evaluated roadways in municipalities that have experienced a high number of roadway departure crashes and have initiated projects to increase the number and size of roadway signs to warn drivers of roadway conditions and changes. This implementation is already taking place throughout the state with more locations planned in the next fiscal year.

Benefits:

- The addition of more and larger roadway warning signs will have a greater chance of warning drivers of roadway conditions and limiting roadway departure crashes.
- Double signage warns drivers of upcoming stops and roadway changes.
- Large and double signage are a FHWA Proven Safety Countermeasure and decrease fatal and injury crashes at rural intersections by 27%.⁶



⁵ See "Connecticut Fatal and Serious Injury Crash Tree" in Appendix B

⁶ See FHWA "Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections":
[Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections | FHWA \(dot.gov\)](https://www.fhwa.dot.gov/safety/crashprevention/systemicapplicationofmultiplelowcostcountermeasuresatstopcontrolledintersections/)

Replacement of Speed Limit Signs

Purpose:

From 2019-2023, 23% of all crashes were speeding related⁷ and 5% of crashes occurred in rural areas.⁸ On high risk rural roadways, many crashes occur because speed limit signs are missing in some areas, or drivers are not aware of the speed limit due to speed limit signs being located in areas that restrict visibility.

Cost:

\$700,000

Methodology and Implementation Plan:

CTDOT will review existing high risk rural roadways and determine specific locations where the speed limit signs need to be replaced and/or updated. Efforts will be made to make the signs visible to drivers to decrease the number of crashes seen on these roadways. CTDOT can also determine which speed limits need to be changed due to the number of crashes experienced on specific roadways.

Benefits:

- Updated speed limit signs will accurately represent the speed at which drivers can be driving on the rural roadways safely.
- Replacing missing speed limit signs gives the drivers an accurate indication of the desired safe operating speed of the roadway.
- Old signs may be hard to read due to wear and tear or be partially or completely hidden by overgrown roadside vegetation. These signs will be replaced and/or moved to more visible locations.



⁷ See Figure 12: Speeding Related Crashes Out of All Fatal and Serious Injury Crashes from 2019-2023” on page 22

⁸ See Figure 11: Total Fatal and Serious Injury Crashes from 2019-2023 Categorized by Rural and Urban” on page 21

Speed Limit Study

Purpose:

From 2019-2023, 1,302 of fatal and serious injury crashes were speeding related.⁹ Investigating speed limits at specific locations that experience a lot of speeding related crashes can help to pick locations where the speed limit needs to be changed or implemented to prevent such crashes.

Cost:

\$700,000

Methodology and Implementation Plan:

CTDOT will investigate the boundaries of the posted speed limit at select locations with the context classification of the various roadway segments and will review the existing speeds of the vehicles traveling on the roadway. A factor that will be considered in this investigation includes areas of high pedestrian and bicycle use. From this, it will be decided on which roadways the speed limits need to be changed or a speed limit sign needs to be implemented.

Benefits:

- Implementing speed limit signs at locations that currently do not have a speed limit posted will alert drivers of the speed limit and decrease speeding.
- Implementing or replacing speed limit signs in areas with high VRU use will decrease the amount of VRU related crashes.



⁹ See Figure 12 “Speeding Related Crashes Out of All Fatal and Serious Injury Crashes from 2019-2023” on page 22

Summary

The HSIP Implementation Plan must describe how HSIP funds will be allocated during the plan period (23 U.S.C. 148(i)(2)(C)). In determining these allocation goals, Connecticut considered allocation needs by Strategic Highway Safety Plan (SHSP) EAs (e.g., critical roadway locations, non-motorized roadway users), as well as other categories such as roadway ownership (e.g., state vs. local roadways) and improvement type (e.g., spot vs. systemic).

The Connecticut Department of Transportation (CTDOT) has made a commitment to safety and has obligated all its annual HSIP apportionment over the past several years. CTDOT has utilized the required HSIP Implementation Plan to again re-evaluate its HSIP investment decisions and identify gaps and deficiencies. This will ensure that the projects identified, prioritized, and programmed have the highest potential for reducing fatalities and serious injuries. As with previous HSIP Implementation Plans, consideration has also been made to help Connecticut meet safety performance targets in subsequent years.

CTDOT continuously evaluates the need for additional projects included in the Strategic Highway Safety Plan (SHSP) and the State Transportation Improvement Plan (STIP). These documents are reviewed when developing the Implementation Plan to ensure consistency between the documents.

Stakeholder Outreach is also conducted in order to inform and engage various agencies about program needs and potential solutions. This included separate meetings with all nine of Connecticut's COGs and CTDOT's Highway Safety Office, Division of Traffic Engineering (Safety Engineering Unit), Division of Highway Design (Project Development Unit), and the Office of Policy and Planning

Detailed crash analysis for the years 2019-2023 was conducted to obtain a better understanding of Connecticut's highway safety trends. The crash data was disaggregated in various ways including, collision type, construction and maintenance district, planning region, roadway classification, roadway ownership, roadway surface condition, and lighting condition.

It has been determined within this report that the HSIP funding should be reallocated to better align with the existing crash data trends. The top three crash types include roadway departure, intersection, and pedestrian crashes. The proposed funding allocations are separated into these categories to identify projects that will help reduce crash rates and improve overall safety.

The project list found in Appendix A exhibits the proposed projects that CTDOT will obligate for FFY2025. The projects will aid in reducing fatal and severe injury crashes and provide a safe roadway network statewide.

APPENDIX A:

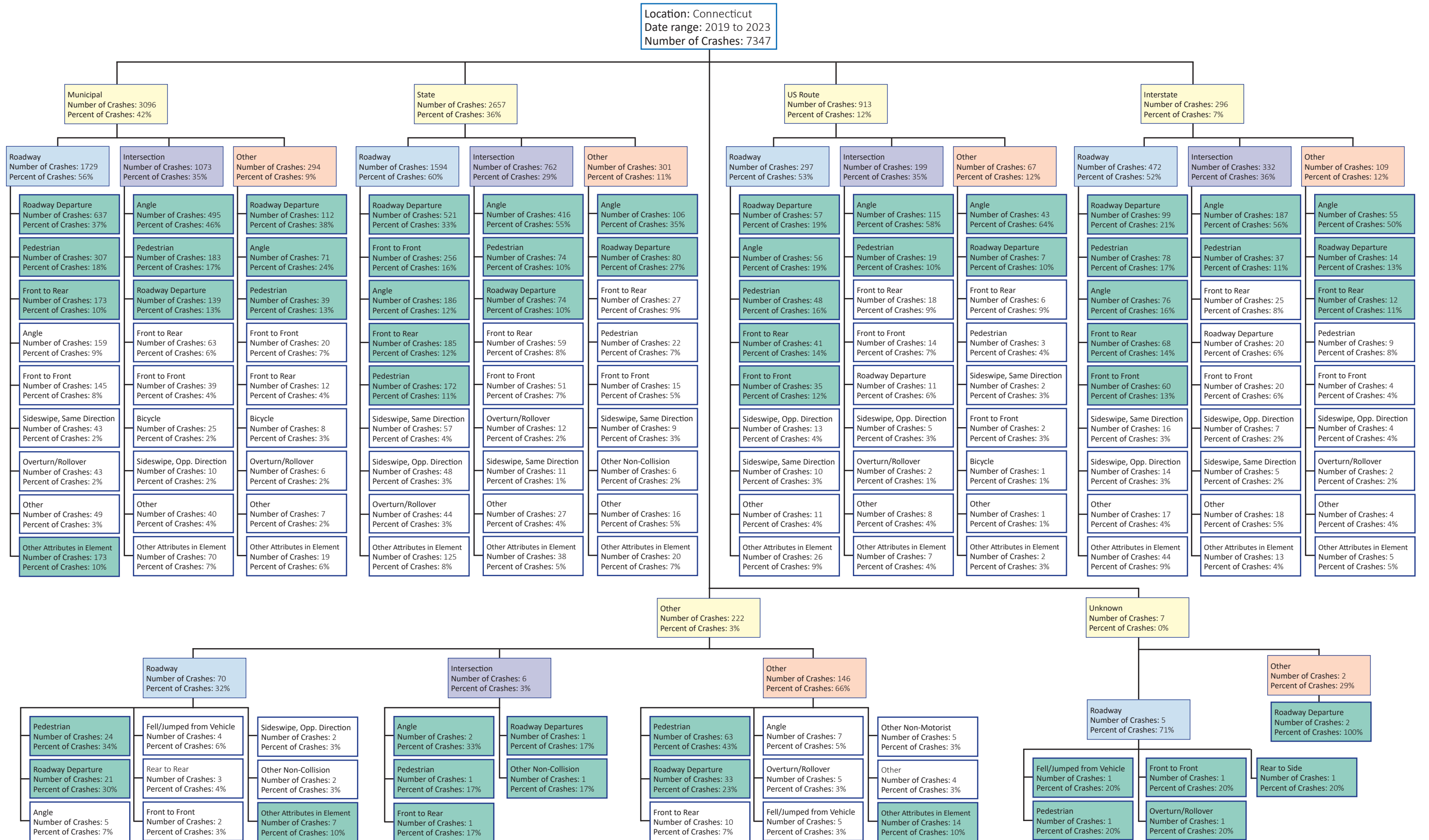
Project List

The project list below outlines proposed and ongoing projects that are progressing in planning, design, and implementation and have an estimated obligation date in FFY 2025. This list contains some projects previously included on a prior year(s) HSIP IP but were not obligated in that year(s) and are now anticipated to be obligated in FFY 2025.									
PROJECT	PHASE	TOWN	DESCRIPTION	TOTAL COST	FEDERAL SHARE	SHSP Emphasis Area	Roadway Ownership	systemic/spot	COMMENTS
Intersection Projects									
Project Phases to be Obligated in FFY 2025									
TBD	PL		Signal Design Manual Study	\$ 300,000	\$ 270,000	infrastructure	state	systemic	
0174-0461	CN	DISTRICT 4	Signing & Pvmt Mkg Imps at Municipally Owned Unsignalized Intersections	\$ 1,510,000	\$ 1,510,000	infrastructure	municipal	systemic	
0173-0528	CN	DISTRICT 3	Signing & Pvmt Mkg Imps at Municipally Owned Unsignalized Intersections	\$ 4,330,000	\$ 4,330,000	infrastructure	municipal	systemic	
0171-0488	CN	DISTRICT 1	Signing & Pvmt Mkg Imps at Municipally Owned Unsignalized Intersections	\$ 2,580,000	\$ 2,580,000	infrastructure	municipal	systemic	
0092-0681	PE	NEW HAVEN	Intersect. Imprvmt at SR745 & Kimberly Ave (FD)	\$ 675,000	\$ 607,500	infrastructure	state	spot	
0092-0681	RW	NEW HAVEN	Intersect. Imprvmt at SR745 & Kimberly Ave	\$ 250,000	\$ 225,000	infrastructure	state	spot	
0151-0338	CN	WATERBURY	Traffic Signal Revision @ Int. w/ Brass Mill Dr.	\$ 1,055,448	\$ 1,055,448	infrastructure	municipal	spot	
0171-0462	CN	DISTRICT 1	Traffic Signal Safety Improvements (Project #1)	\$ 2,709,800	\$ 2,709,800	infrastructure	state	systemic	
0171-0463	CN	DISTRICT 1	Traffic Signal Safety Improvements (Project #2)	\$ 3,883,000	\$ 3,883,000	infrastructure	state	systemic	
0173-0528	PE	DISTRICT 3	Signing & Pvmt Mkg Imps at Municipally Owned Unsignalized Intersections (FD)	\$ 150,000	\$ 150,000	infrastructure	municipal	systemic	
subtotal for intersection				\$ 17,443,248	\$ 17,320,748				
Vulnerable Road Users Projects									
Project Phases to be Obligated in FFY 2025									
0171-0468	CN	DISTRICT 1	Midblock Crosswalk Upgrades (RRFBs)	\$ 1,087,000	\$ 1,087,000	VRU	municipal	systemic	
0172-0505	CN	DISTRICT 2	Midblock Crosswalk Upgrades (RRFBs)	\$ 178,000	\$ 178,000	VRU	municipal	systemic	
0174-0477	CN	DISTRICT 4	Midblock Crosswalk Upgrades (RRFBs)	\$ 722,362	\$ 772,362	VRU	municipal	systemic	
0174-0447	CN	DISTRICT 4	Midblock Crosswalk Upgrades (RRFBs)	\$ 485,000	\$ 436,500	VRU	municipal	systemic	
0171-0514	PE	DISTRICT 1	APS Upgrades at Signalized Intersections	\$ 677,000	\$ 609,300	VRU	state	systemic	
0172-0541	PE	DISTRICT 2	APS Upgrades at Signalized Intersections			VRU	state	systemic	
0173-0549	PE	DISTRICT 4	APS Upgrades at Signalized Intersections			VRU	state	systemic	
0174-0476	PE	DISTRICT 4	APS Upgrades at Signalized Intersections			VRU	state	systemic	
0173-0522	CN	DISTRICTS 2 & 3	Clearance Interval Retiming for Local Traffic Signals	\$ 850,000	\$ 850,000	VRU	municipal	systemic	
0171-0474	CN	DISTRICT 1	Clearance Interval Retiming for Local Traffic Signals	\$ 450,000	\$ 450,000	VRU	municipal	systemic	
0050-0224	CN	FAIRFIELD	Road Diet from Rennell Dr. to 250' East of North/South Pine Creek Rd	\$ 1,830,000	\$ 1,647,000	VRU	state	spot	
TBD	PE	VARIOUS	Retrofit Existing RRFBs for Illumination	\$ 75,000	\$ 67,500	VRU	state	systemic	
0135-0342	CN	STAMFORD	Ped & Bike Safety Imprvs. From Atlantic St. to Greyrock Pl.	\$ 3,400,000	\$ 3,060,000	VRU	municipal	spot	
0171-0509	CN	DISTRICT 1	Replace Crosswalk Signs & Pavement Markings	\$ 2,669,784	\$ 2,449,884	VRU	state	systematic	
0172-0538	CN	DISTRICT 2	Replace Crosswalk Signs & Pavement Markings	\$ 3,550,000	\$ 3,550,000	VRU	state	systematic	
0172-0538	PE	DISTRICT 2	Replace Crosswalk Signs & Pavement Markings (FD)	\$ 45,000	\$ 45,000	VRU	state	systematic	
0173-0516	CN	DISTRICT 3	Midblock Crosswalk Upgrades (RRFBs)	\$ 597,000	\$ 537,300	VRU	state	systemic	
0173-0546	CN	DISTRICT 3	Replace Crosswalk Signs & Pavement Markings	\$ 100,000	\$ 36,000	VRU	state	systemic	
0173-0546	PE	DISTRICT 3	Replace Crosswalk Signs & Pavement Markings (FD)	\$ 36,000	\$ 100,000	VRU	state	systemic	
0174-0447	CN	DISTRICT 4	Midblock Crosswalk Upgrades (RRFBs)	\$ 485,000	\$ 436,500	VRU	state	systemic	
subtotal for vulnerable road users				\$ 17,237,146	\$ 16,312,346				
Roadway Departure Projects									
Project phases to be Obligated in FFY 2025									
TBD	PE	VARIOUS D1-D4	Wider Edge Lines along Curves	\$ 600,000	\$ 600,000	infrastructure	state	systemic	
TBD	PE	DISTRICT 2	Rural HFST	\$ 95,000	\$ 85,500	infrastructure	municipal	systemic	
TBD	CN	DISTRICT 2	Rural HFST	\$ 1,550,000	\$ 1,395,000	infrastructure	municipal	systemic	
TBD	PE	VARIOUS	Replacement of Speed Limit Signs on High Risk Rural Roads	\$ 700,000	\$ 630,000	Behavioral	municipal	systemic	
0171-0472	CN	DISTRICT 1	Install Curve Warning Signs at Various Locations	\$ 710,000	\$ 525,000	infrastructure	state	systemic	
subtotal for roadway departure				\$ 3,655,000	\$ 3,235,500				
Other HSIP projects									
Project phases to be Obligated in FFY 2025									
TBD	PL	VARIOUS	Speed Limit Study	\$ 700,000	\$ 700,000	non-EA	statewide	other	
TBD	PL	VARIOUS	Regional Transportation Safety Plan Updates	\$ 2,300,000	\$ 2,300,000	non-EA	statewide	other	
TBD	PL	VARIOUS	Speed Limit State Roads Study	\$ 500,000	\$ 500,000	non-EA	statewide	other	
TBD	PL	VARIOUS	Speed Feedback Signs Rural	\$ 1,500,000	\$ 1,500,000	non-EA	statewide	other	
TBD	PL	VARIOUS	Local Road Safety Program	\$ 500,000	\$ 500,000	non-EA	municipal	other	
0093-0241	PL	NEWINGTON	CT Safety Research Center (7/1/21-6/30/26)	\$ 2,133,856	\$ 2,133,856	non-EA	statewide	other	
0093-0242	PL	NEWINGTON	Highway Safety Office Tasks Consistent with SHSP (7/1/21-6/30/26)	\$ 1,055,021	\$ 1,055,021	non-EA	statewide	other	
0102-0362	CN	NORWALK	Over-Height Vehicle Detection System at North Main/South Main Street	\$ 482,700	\$ 434,430	non-EA	municipal	other	
0102-0365	CN	NORWALK	Traffic Calming Improvs. @ Various Locations	\$ 132,300	\$ 119,070	Behavioral	municipal	spot	
0170-3631	PL	STATEWIDE	Safety Circuit Rider Program (10/1/22-9/30/27)	\$ 504,000	\$ 504,000	non-EA	statewide	other	
CHMP-xxxx	HO	STATEWIDE	CHAMP Safety Service Patrol (starts 5/23/25)	\$ 5,083,580	\$ 4,575,222	non-EA	statewide	other	
SIPH-xxxx	CN	STATEWIDE	TBD Safety Projects	\$ -	\$ -	non-EA	statewide	other	
subtotal for other HSIP projects				\$ 14,891,457	\$ 14,321,599				
totals				\$ 53,226,851	\$ 51,190,193.00				

APPENDIX B:

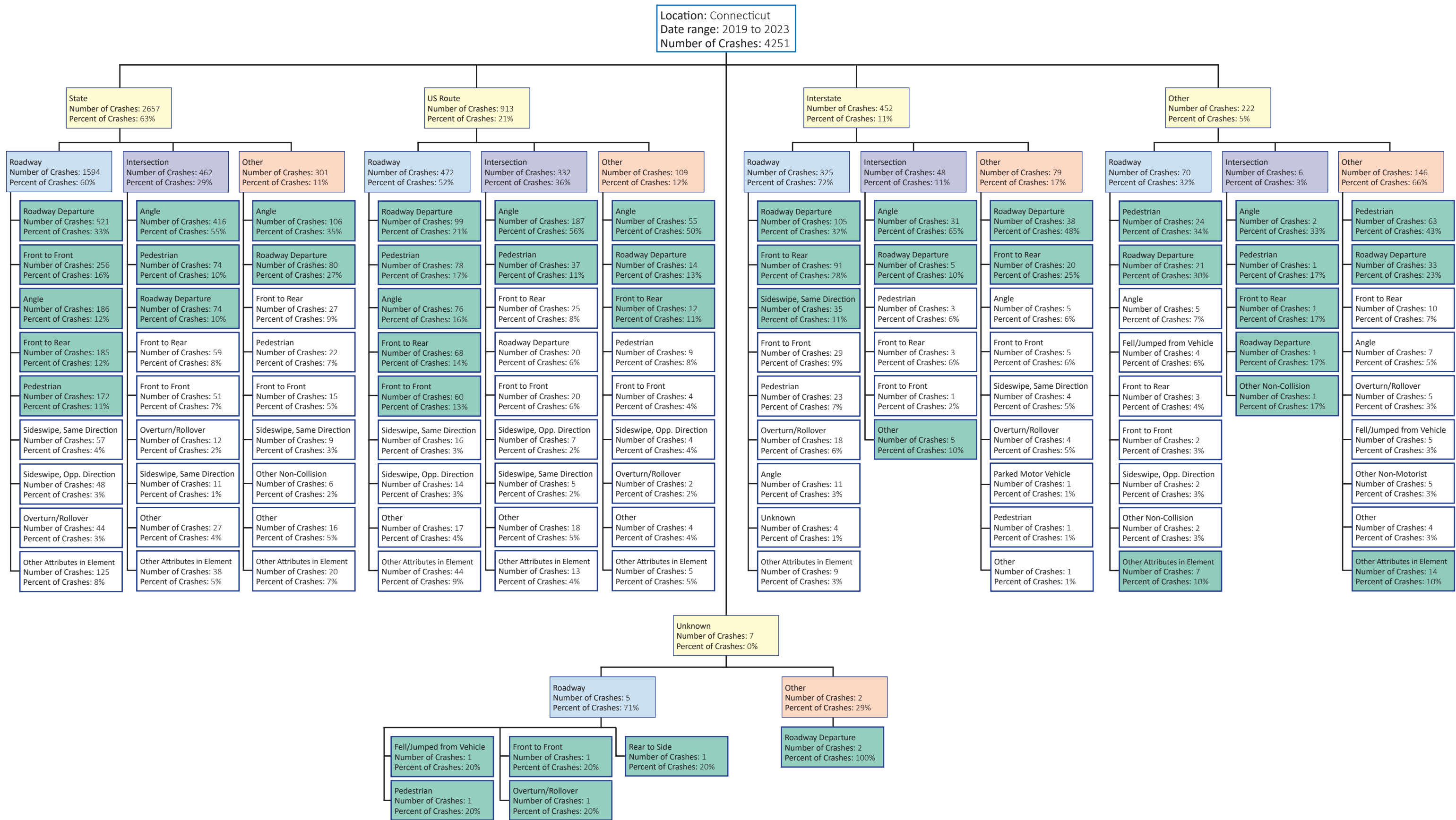
Crash Trees

Connecticut Fatal and Serious Injury Crash Tree



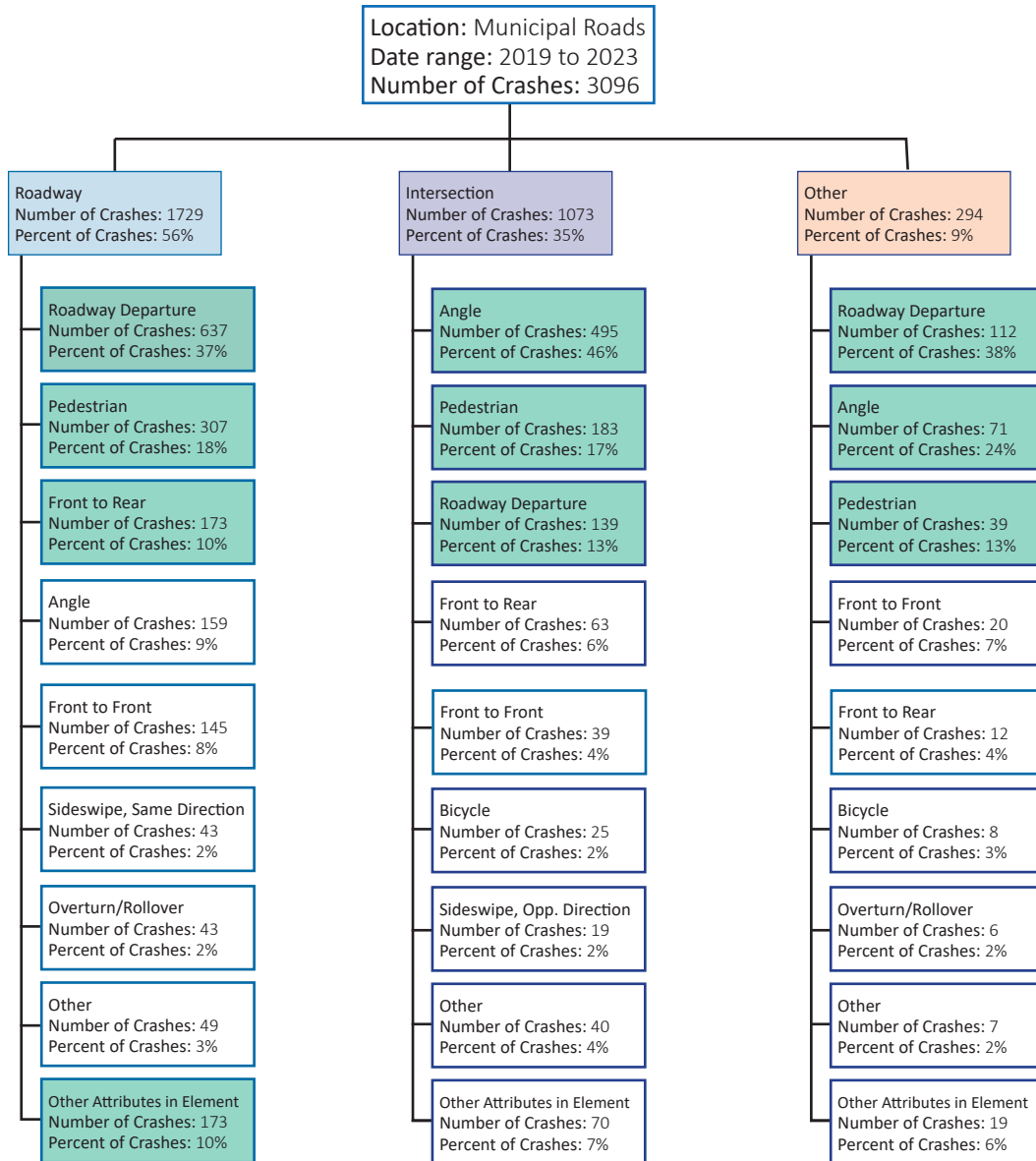
Connecticut State Roads

Fatal and Serious Injury Crash Tree

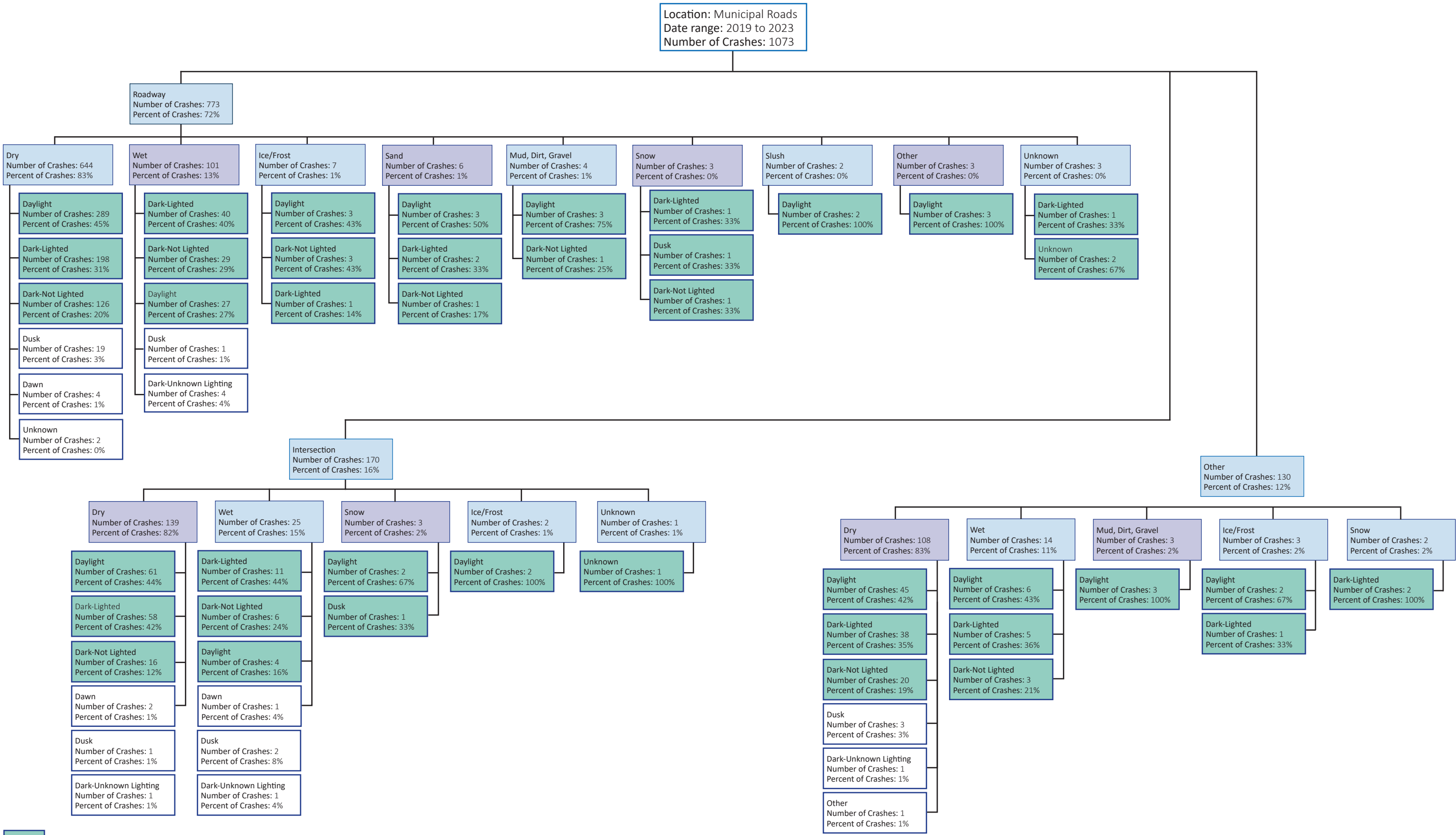


Municipal Roads

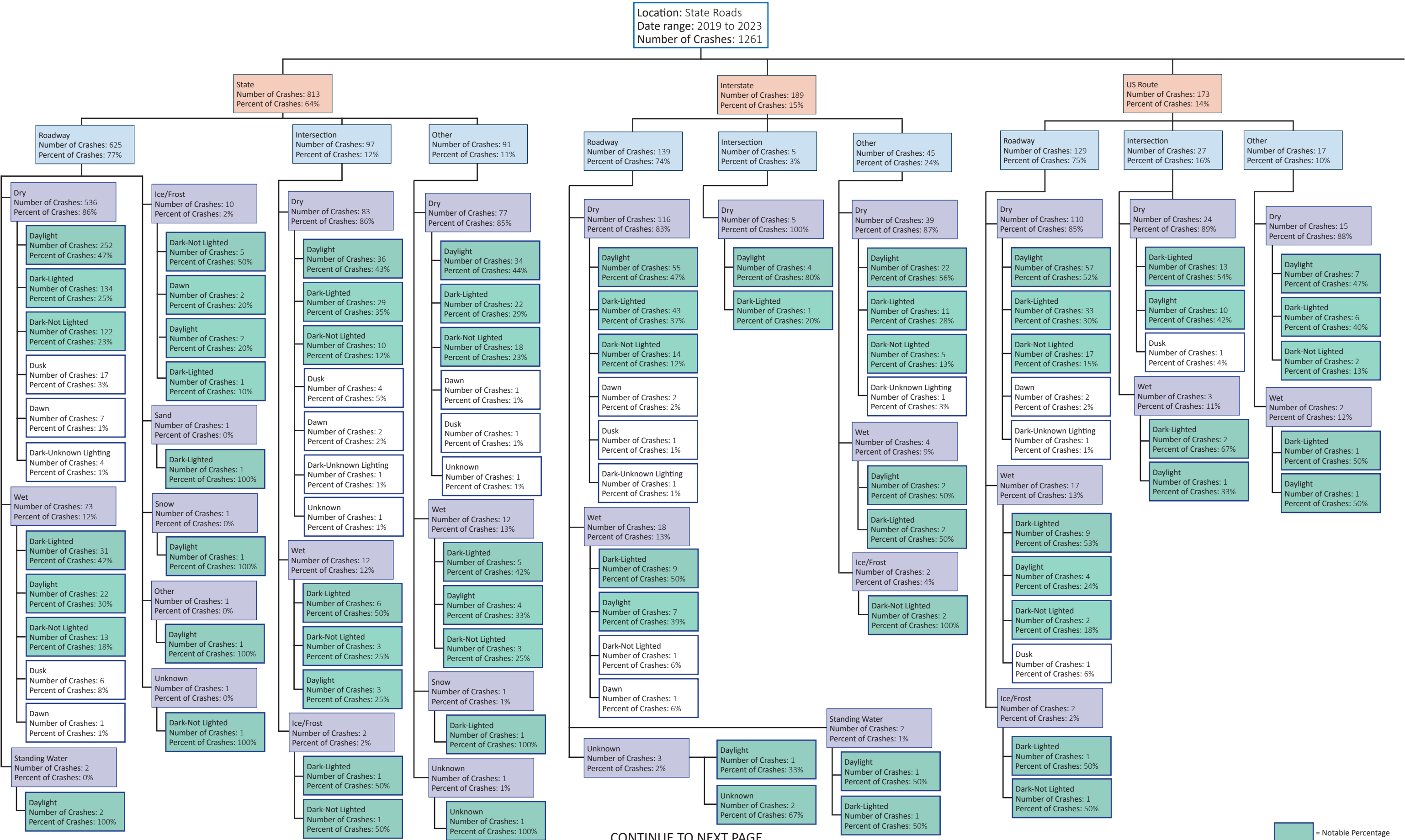
Fatal and Serious Injury Crash Tree



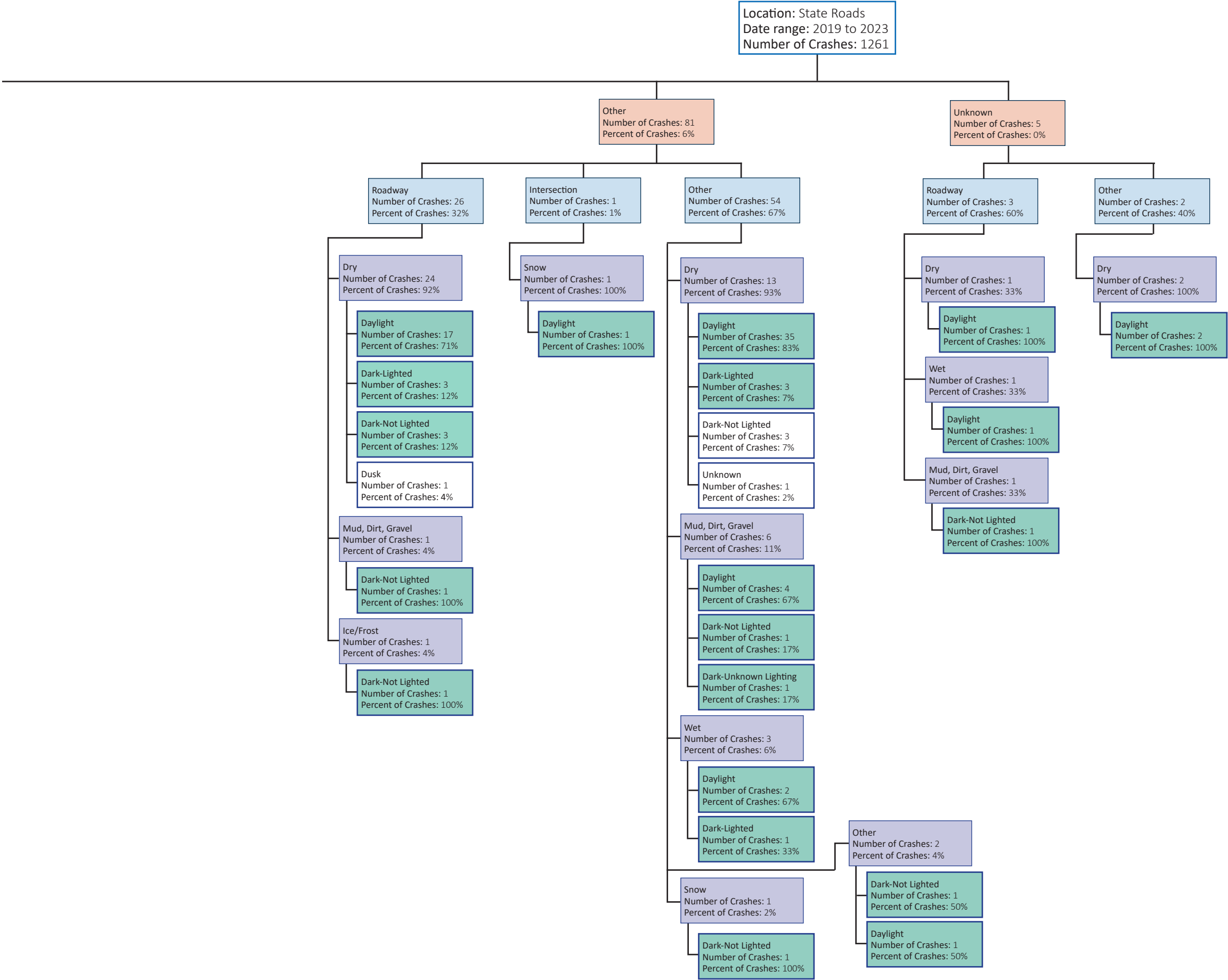
Municipal Fatal and Serious Injury Fixed Object Segment Crash Tree



Connecticut Fatal and Serious Injury Crash Tree
State Roads - Fixed Object Crashes



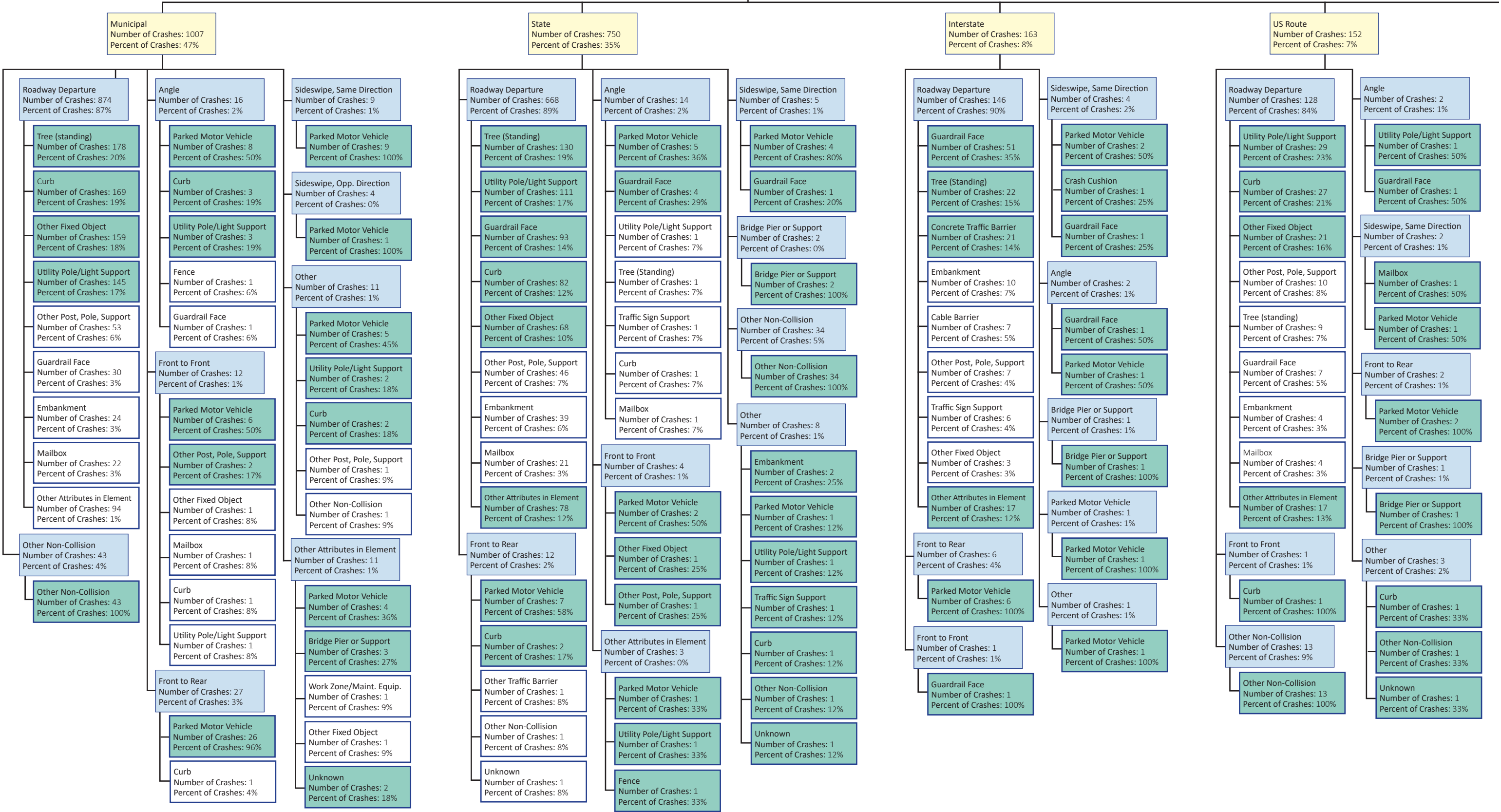
Connecticut Fatal and Serious Injury Crash Tree
State Roads - Fixed Object Crashes



 = Notable Percentage

Statewide Fixed Object Classification Fatal and Serious Injury Crash Tree

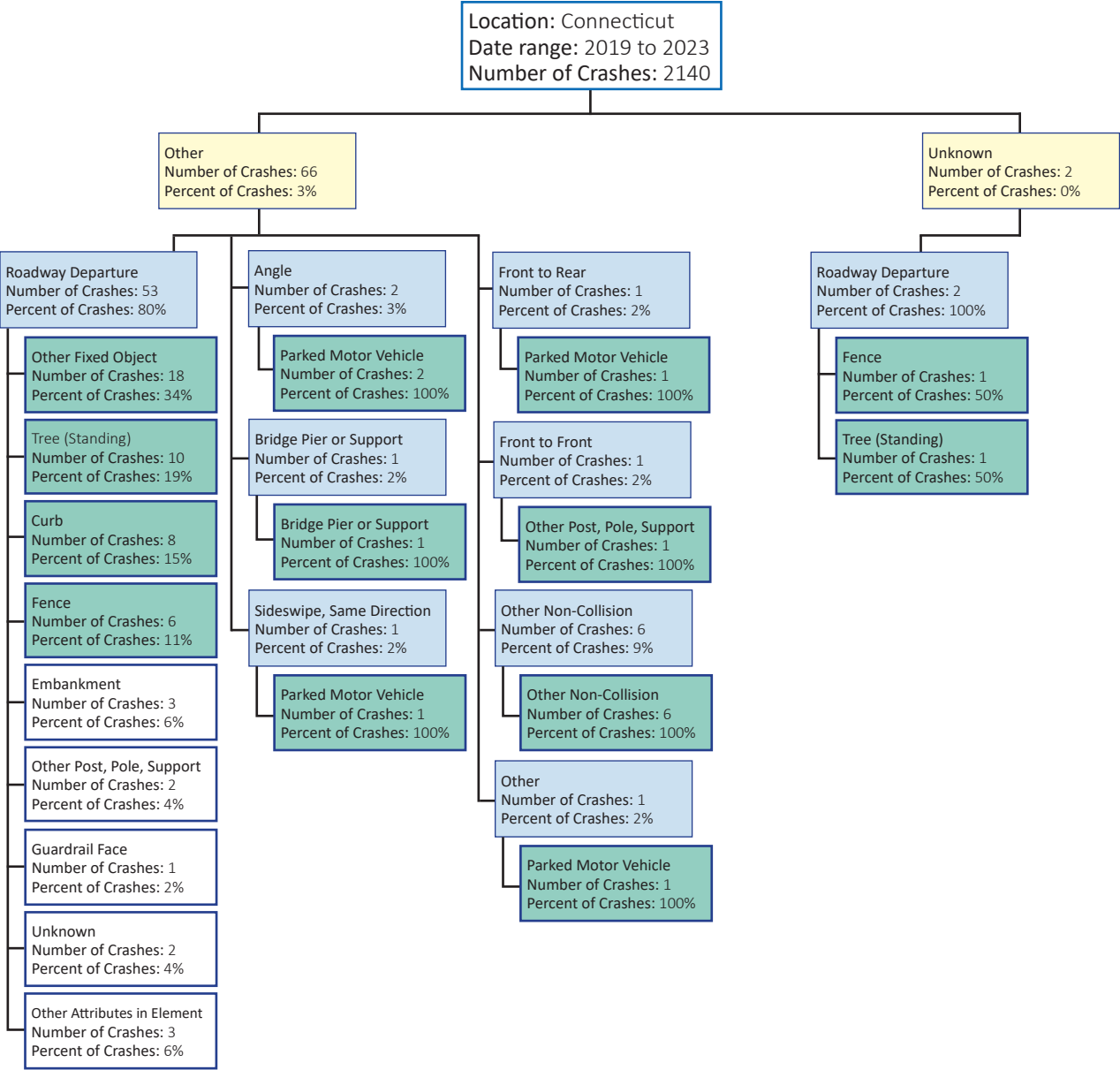
Location: Connecticut
Date range: 2019 to 2023
Number of Crashes: 2140



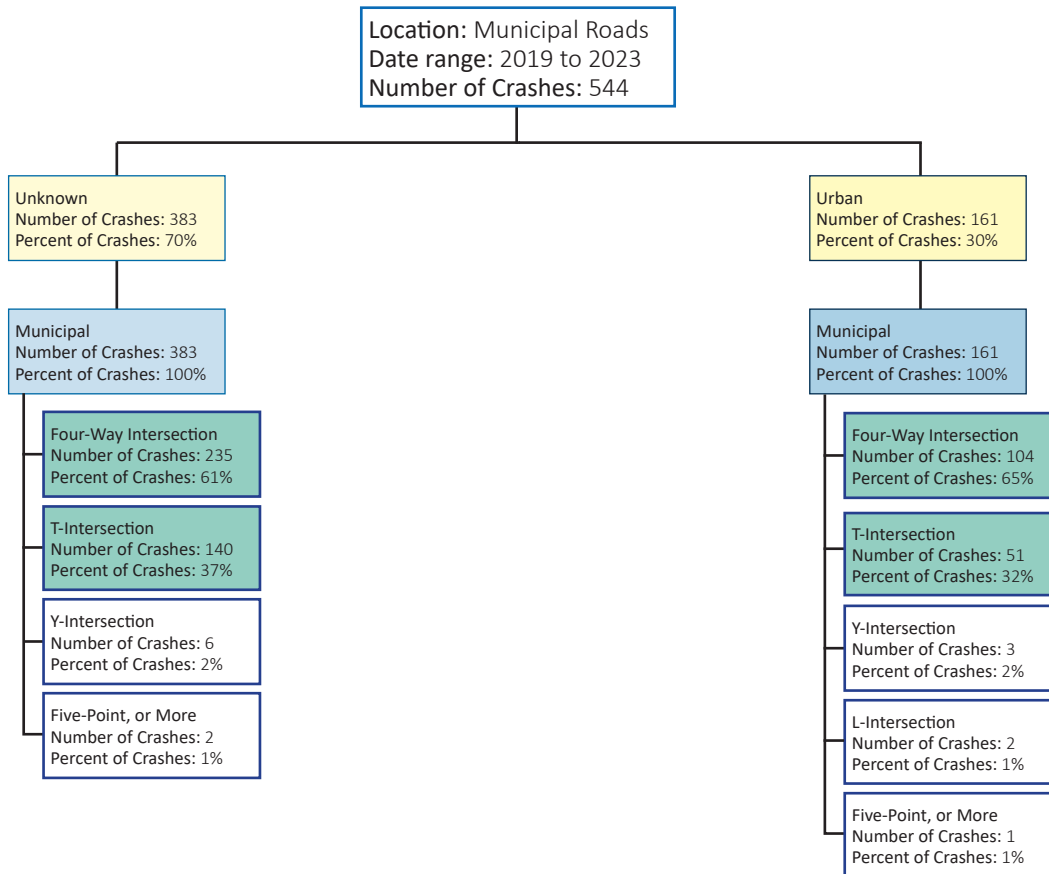
CONTINUE TO NEXT PAGE

= Notable Percentage

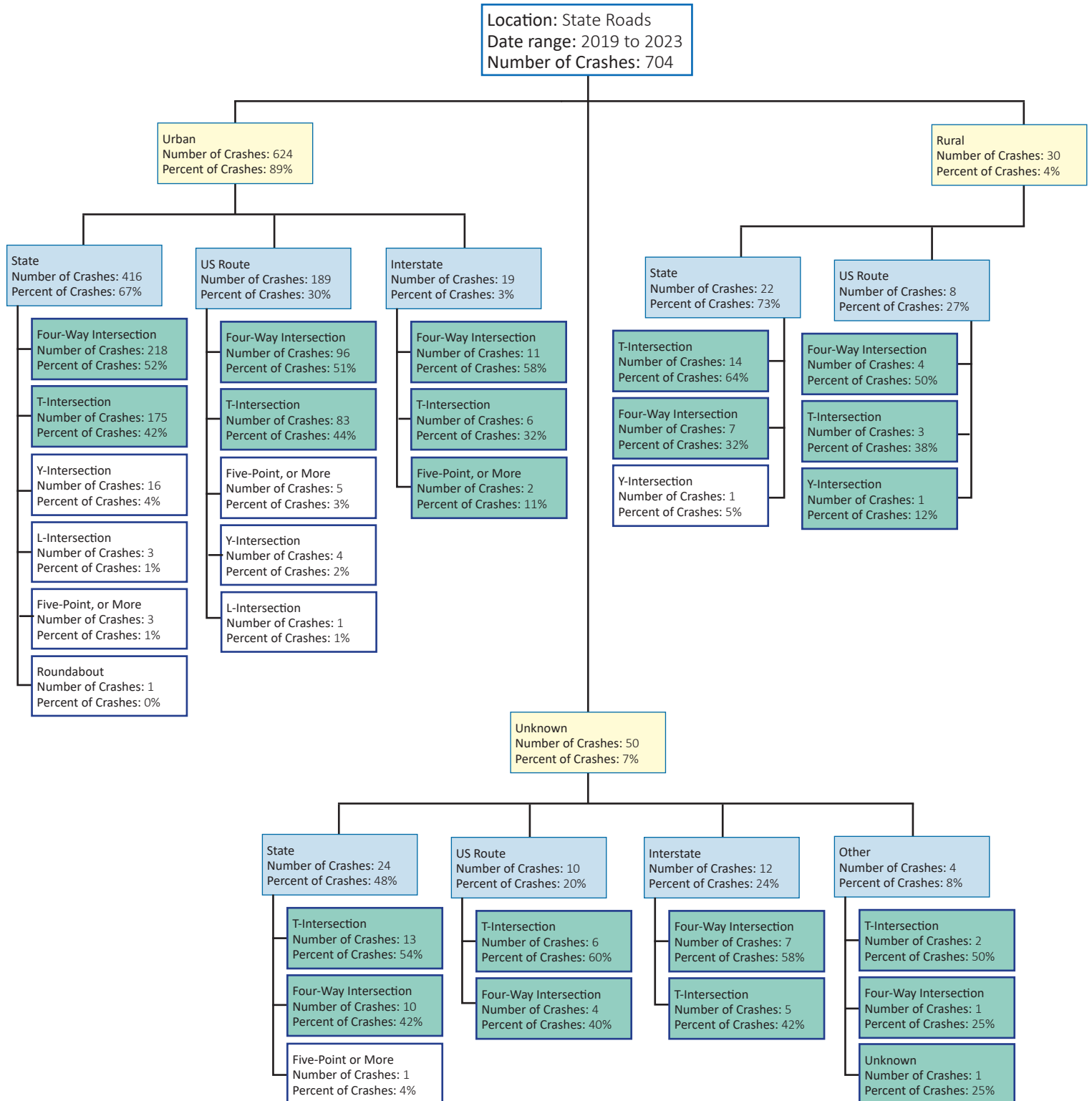
Statewide Fixed Object Classification Fatal and Serious Injury Crash Tree



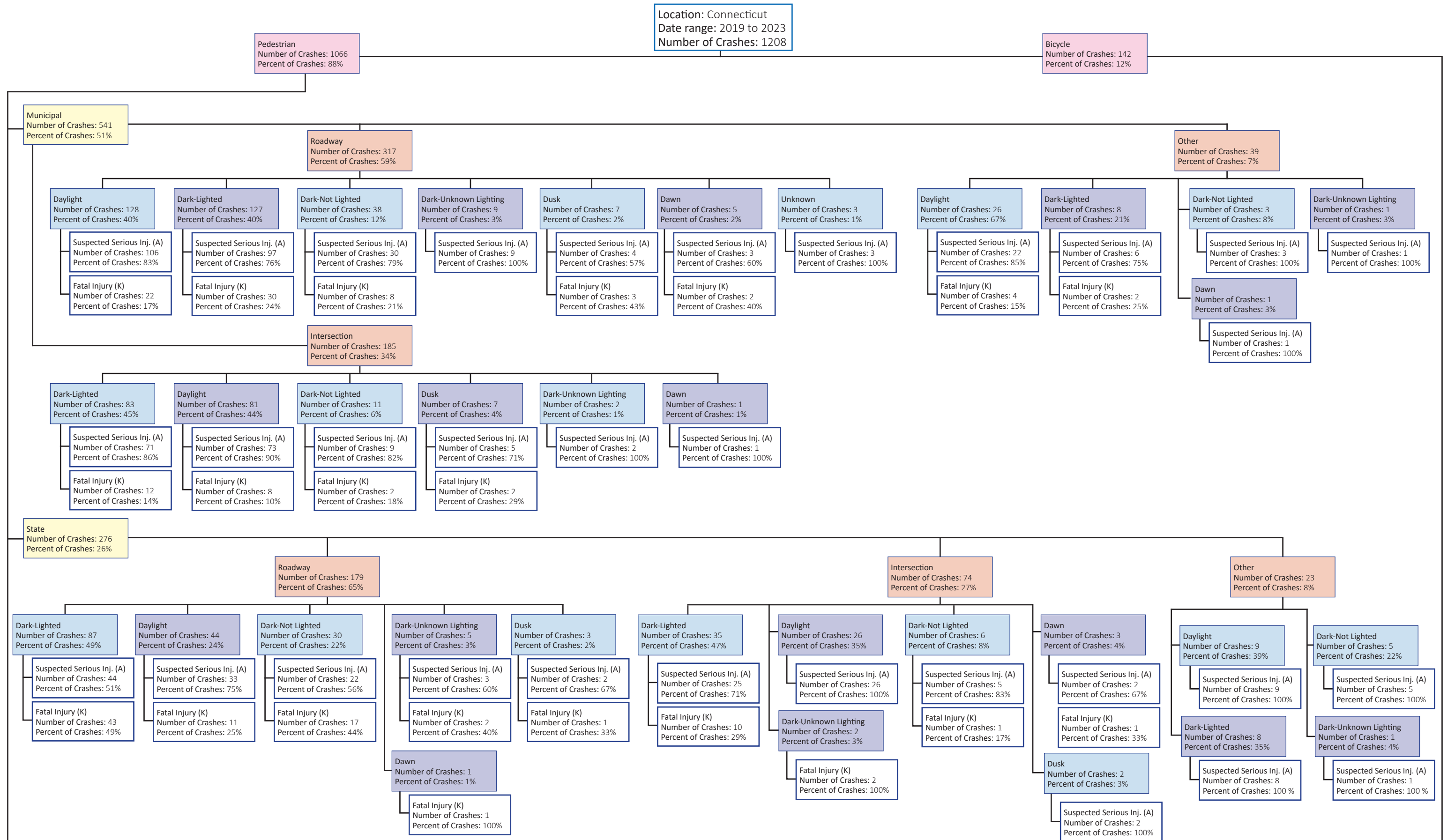
Municipal Signalized Angle Intersection Crashes (Top 10 Municipalities) Fatal and Serious Injury Crash Tree



State Signalized Angle Crashes Fatal and Serious Injury Crash Tree

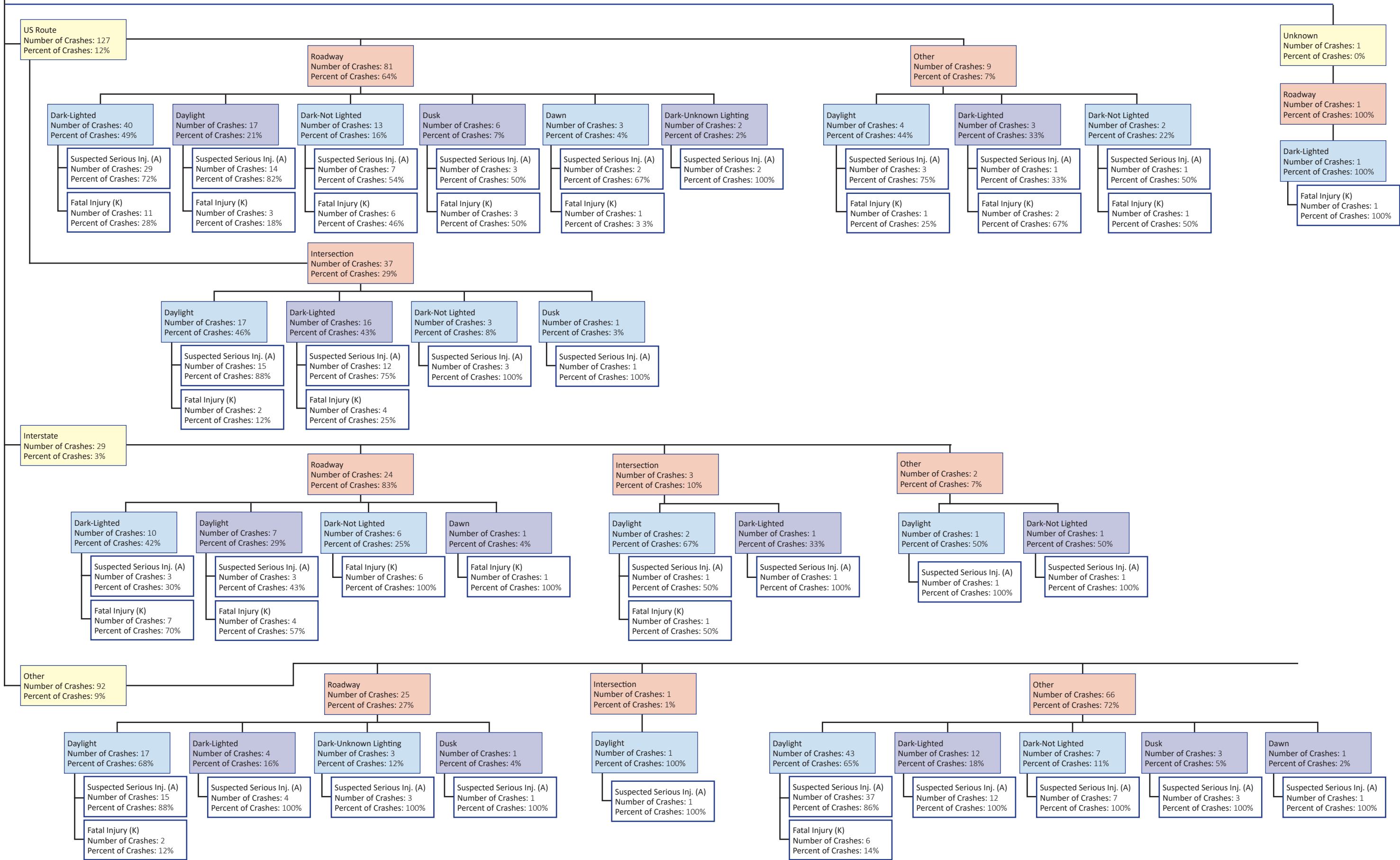


Fatal and Serious Injury Pedestrian and Bicycle Crash Tree



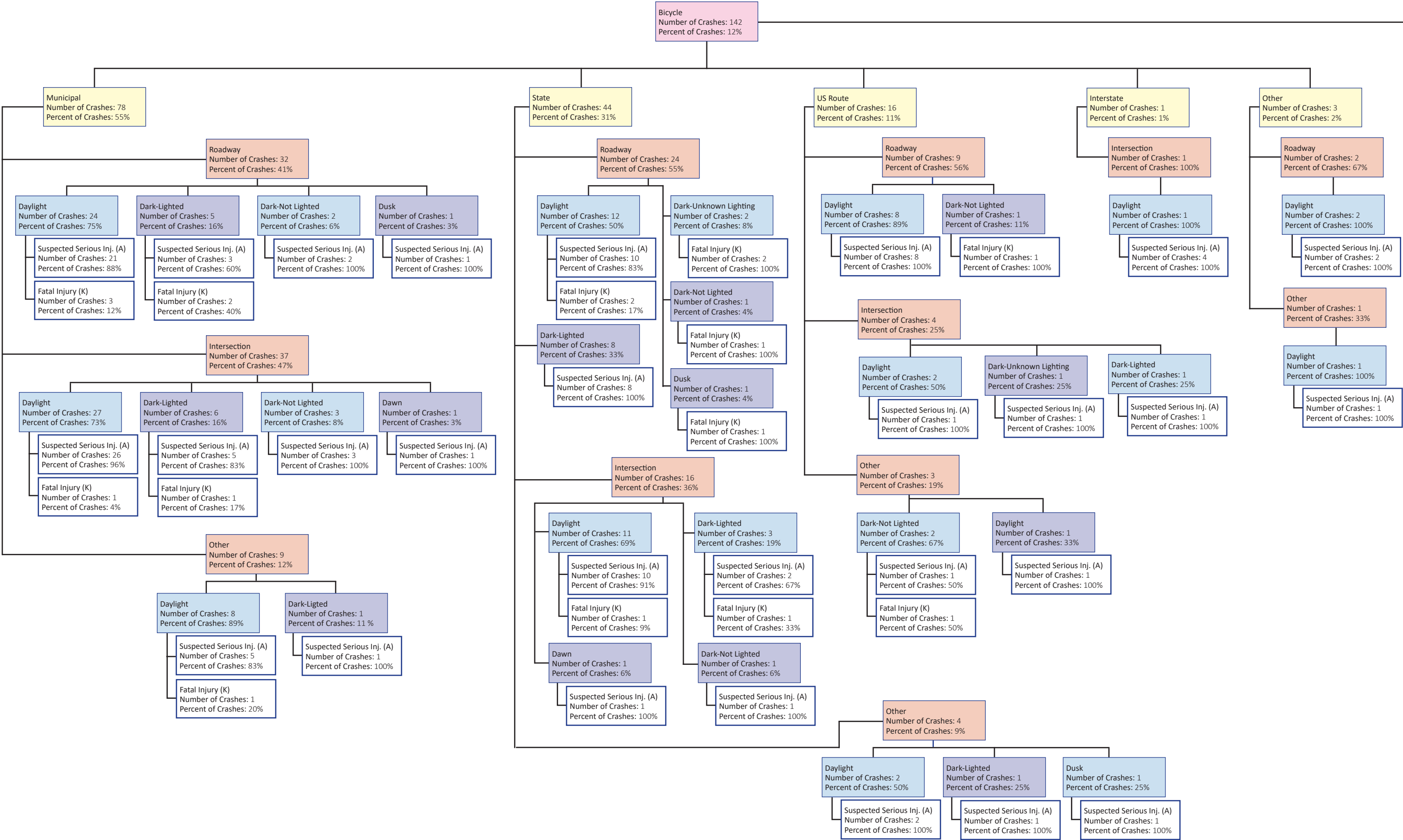
CONTINUE TO NEXT PAGE

Fatal and Serious Injury Pedestrian and Bicycle Crash Tree

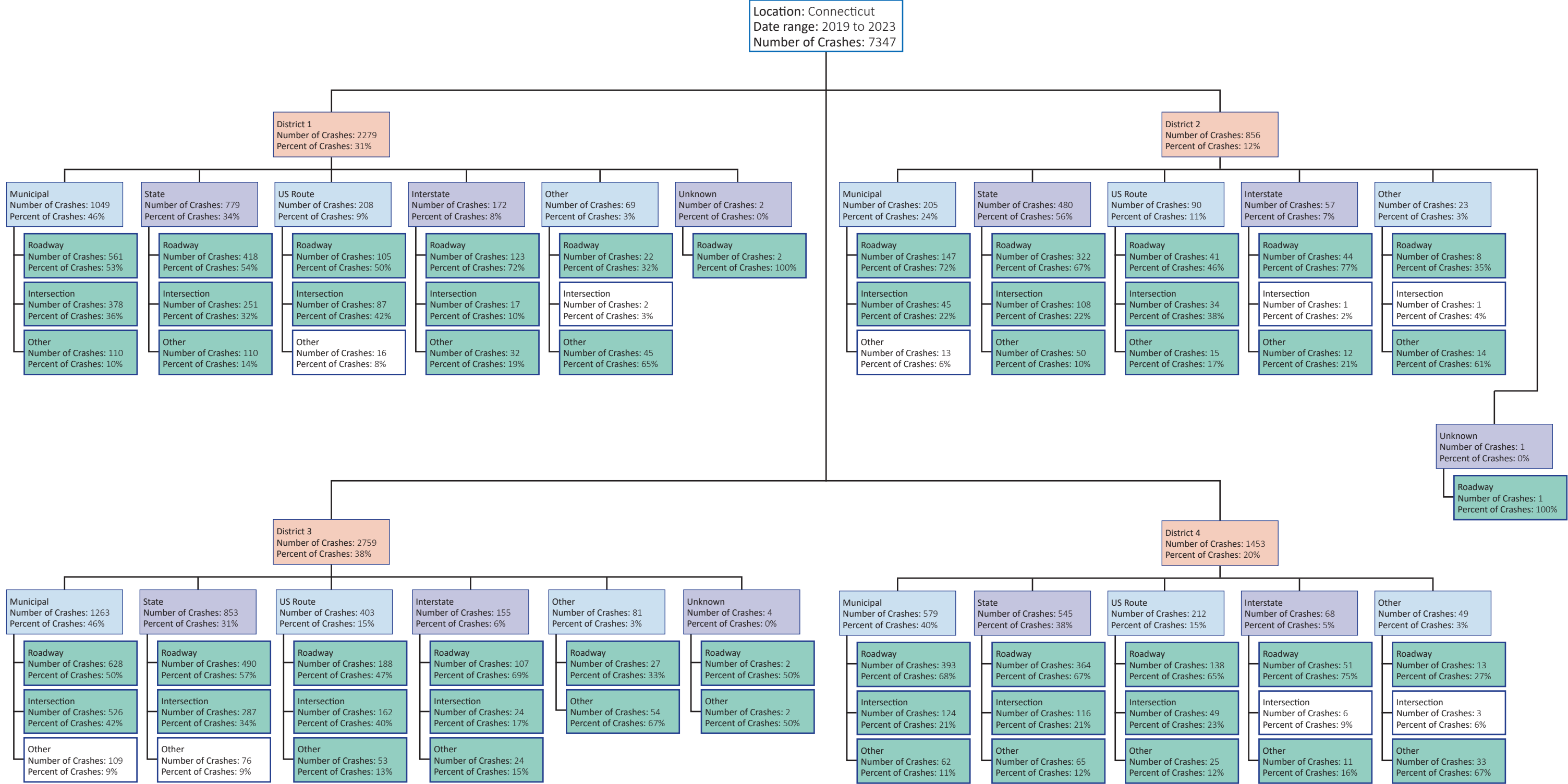


CONTINUE TO NEXT PAGE

Fatal and Serious Injury Pedestrian and Bicycle Crash Tree

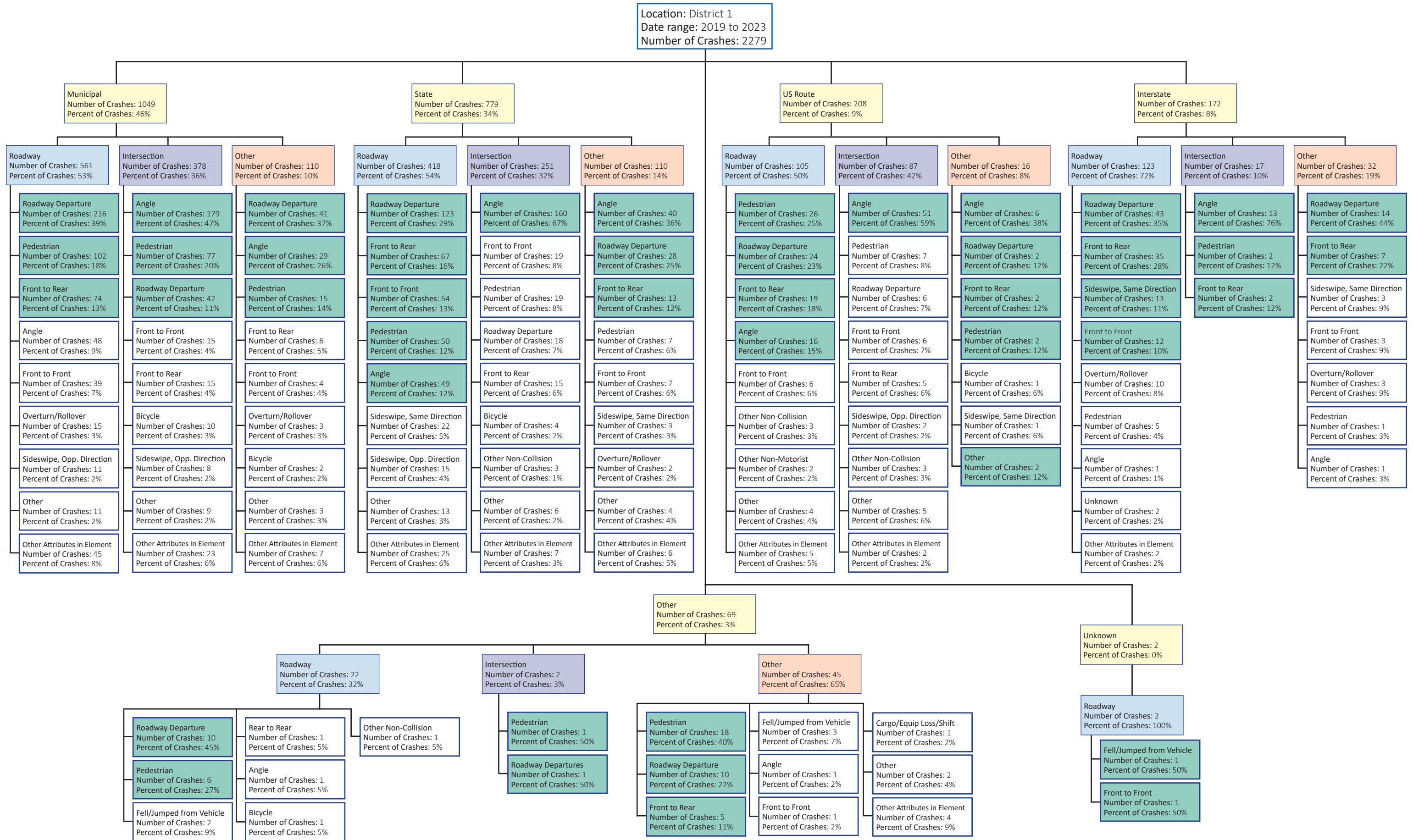


Summary District Fatal and Serious Injury Crash Tree



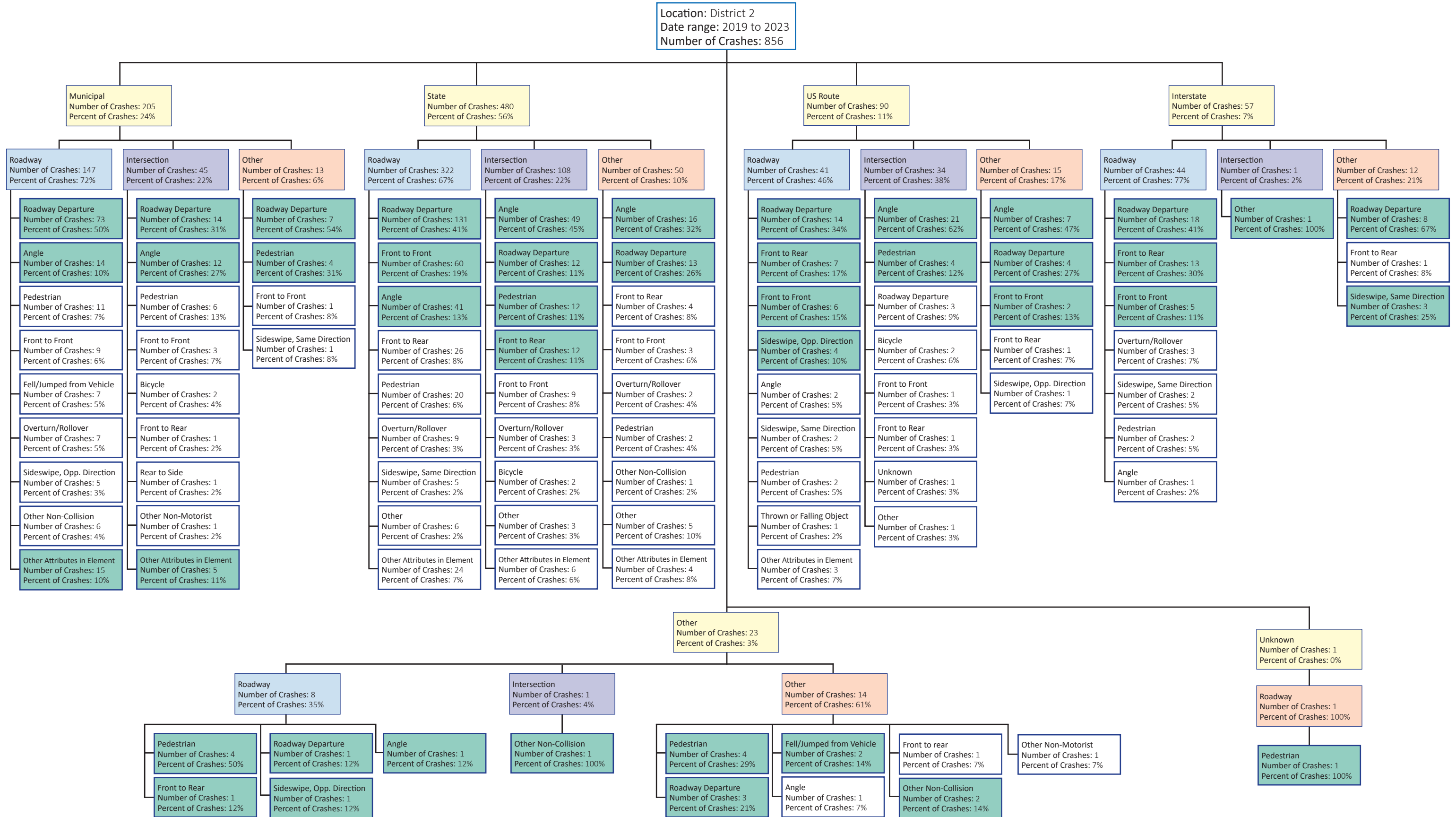
 = Notable Percentage

District 1 Fatal and Serious Injury Crash Tree



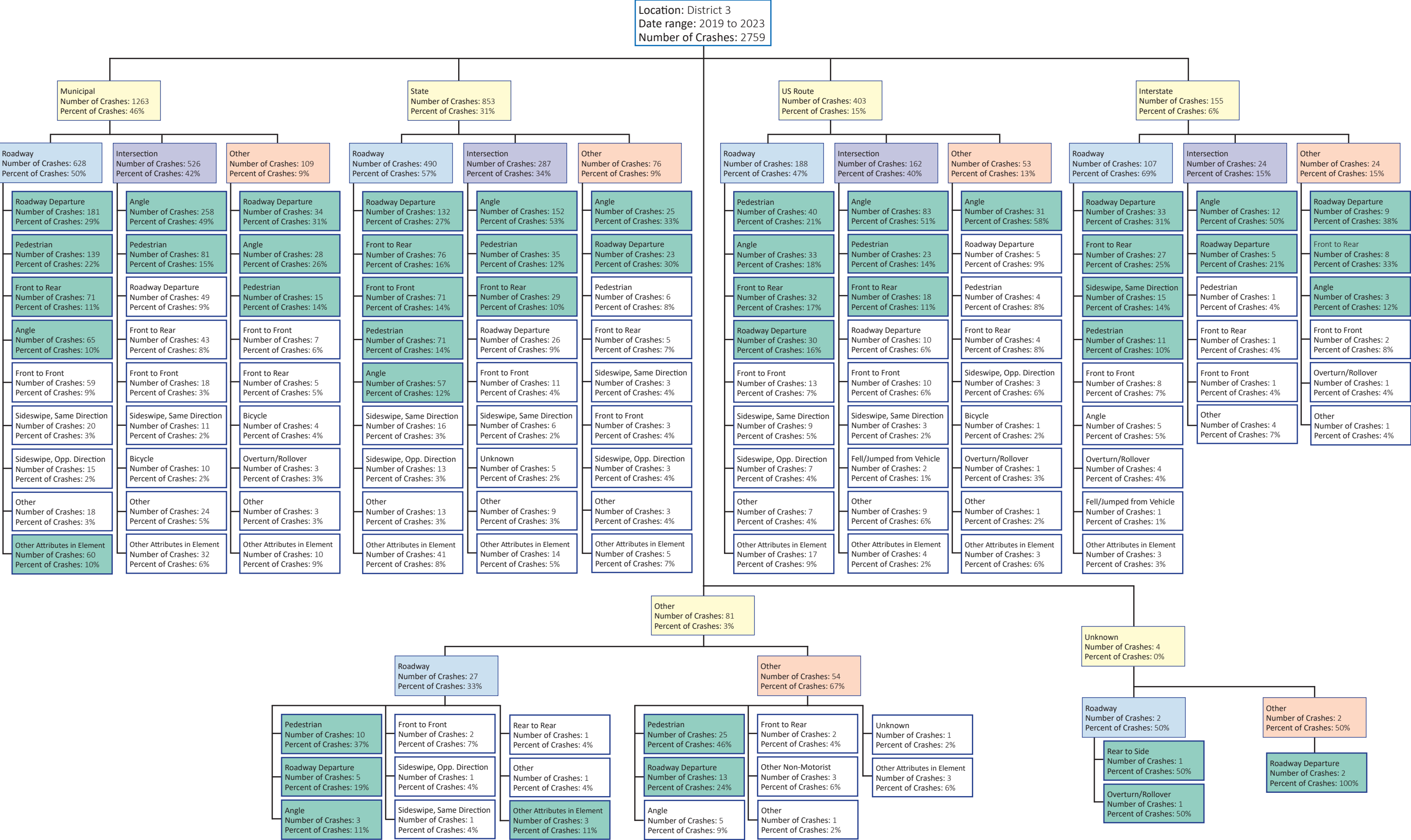
= Notable Percentage

District 2 Fatal and Serious Injury Crash Tree



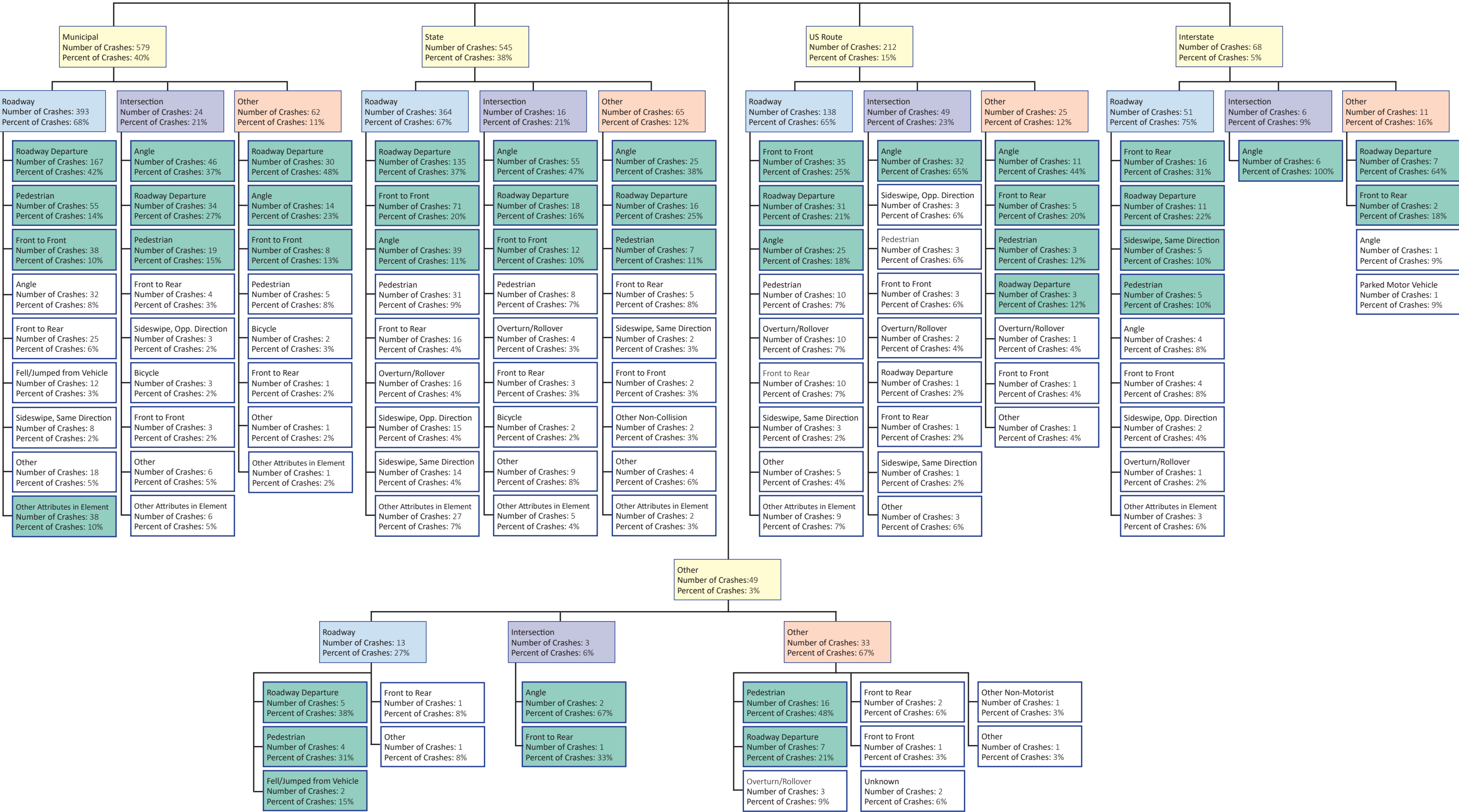
 = Notable Percentage

District 3 Fatal and Serious Injury Crash Tree



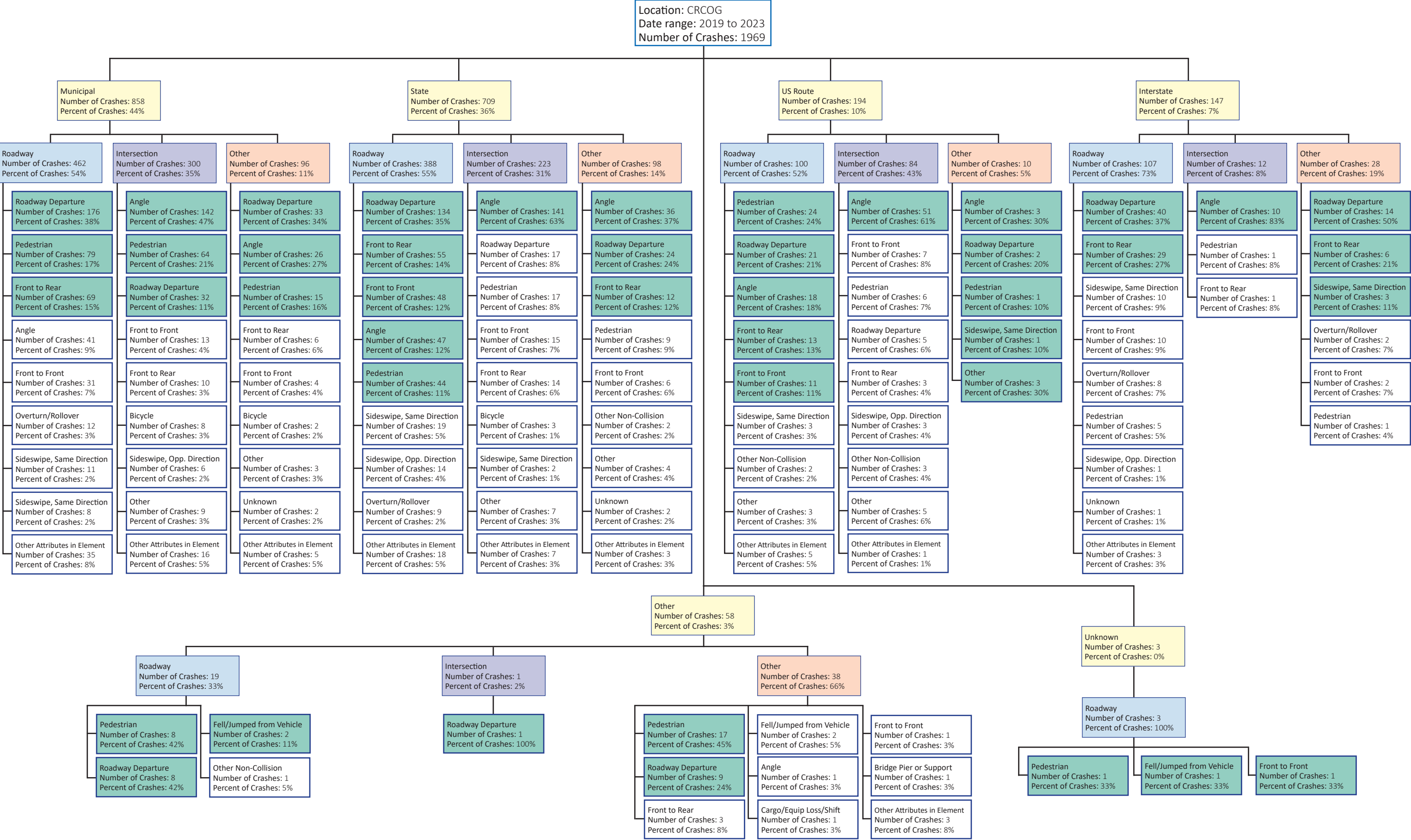
District 4 Fatal and Serious Injury Crash Tree

Location: District 4
Date range: 2019 to 2023
Number of Crashes: 1453



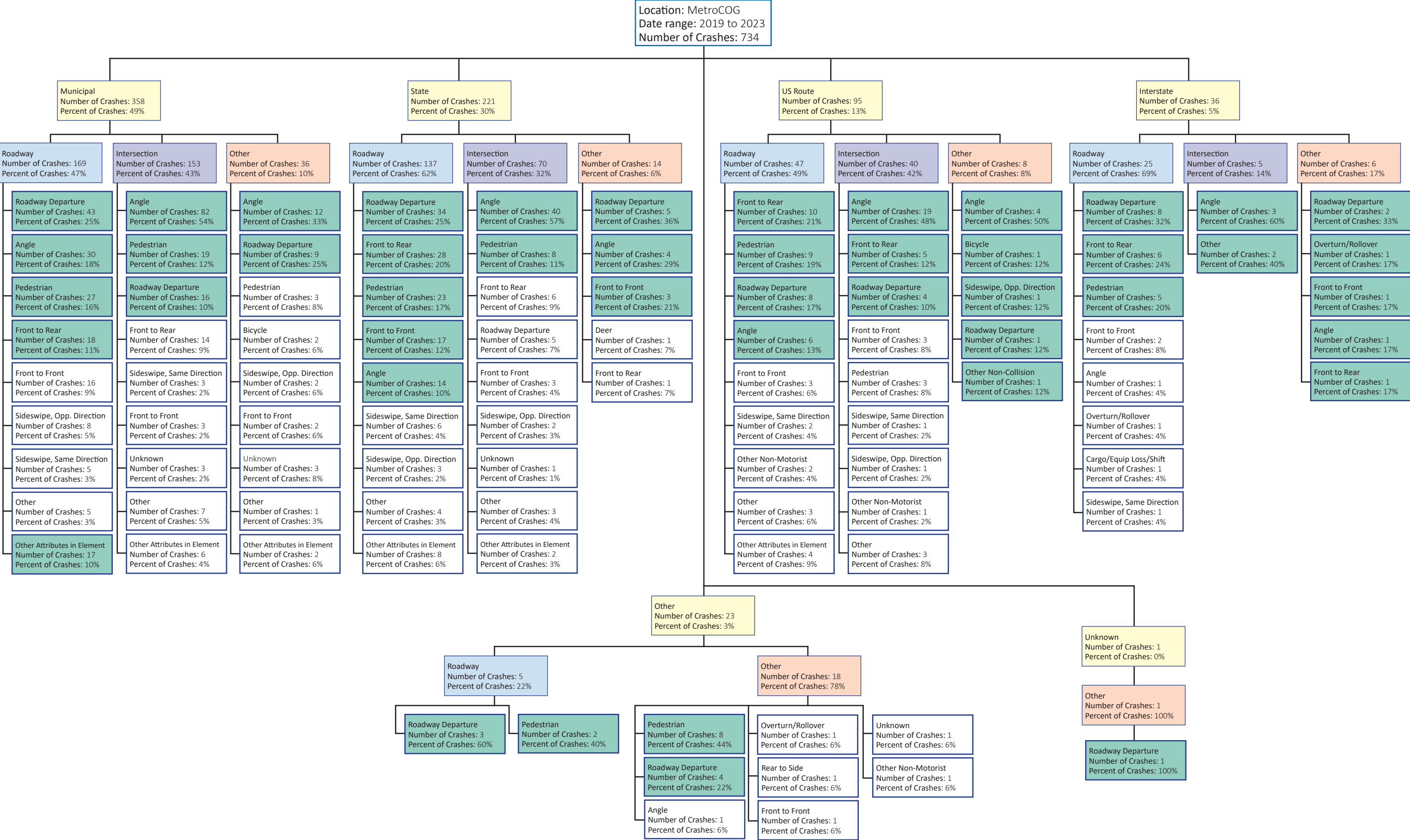
= Notable Percentage

CRCOG Fatal and Serious Injury Crash Tree

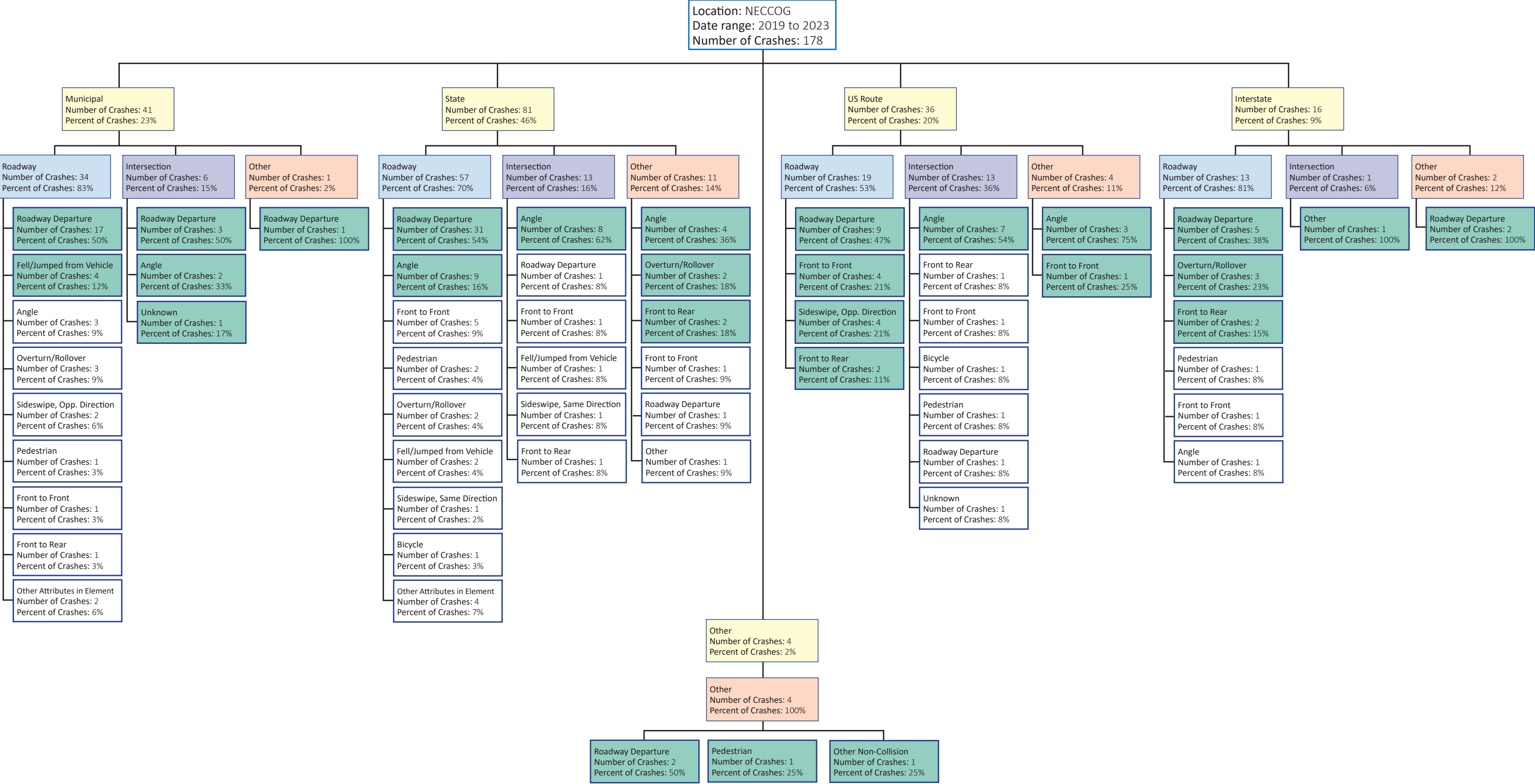


 = Notable Percentage

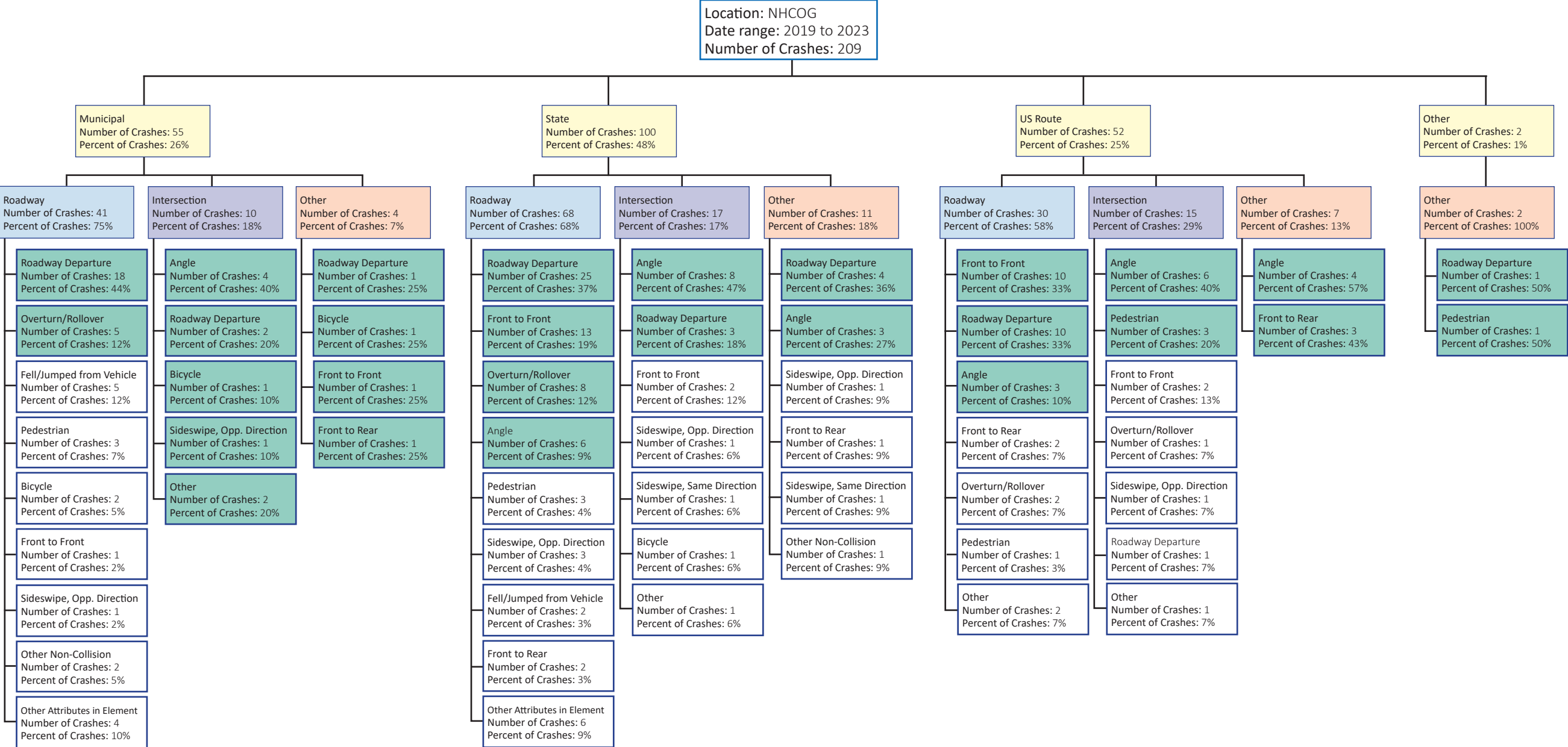
MetroCOG Fatal and Serious Injury Crash Tree



NECCOG Fatal and Serious Injury Crash Tree

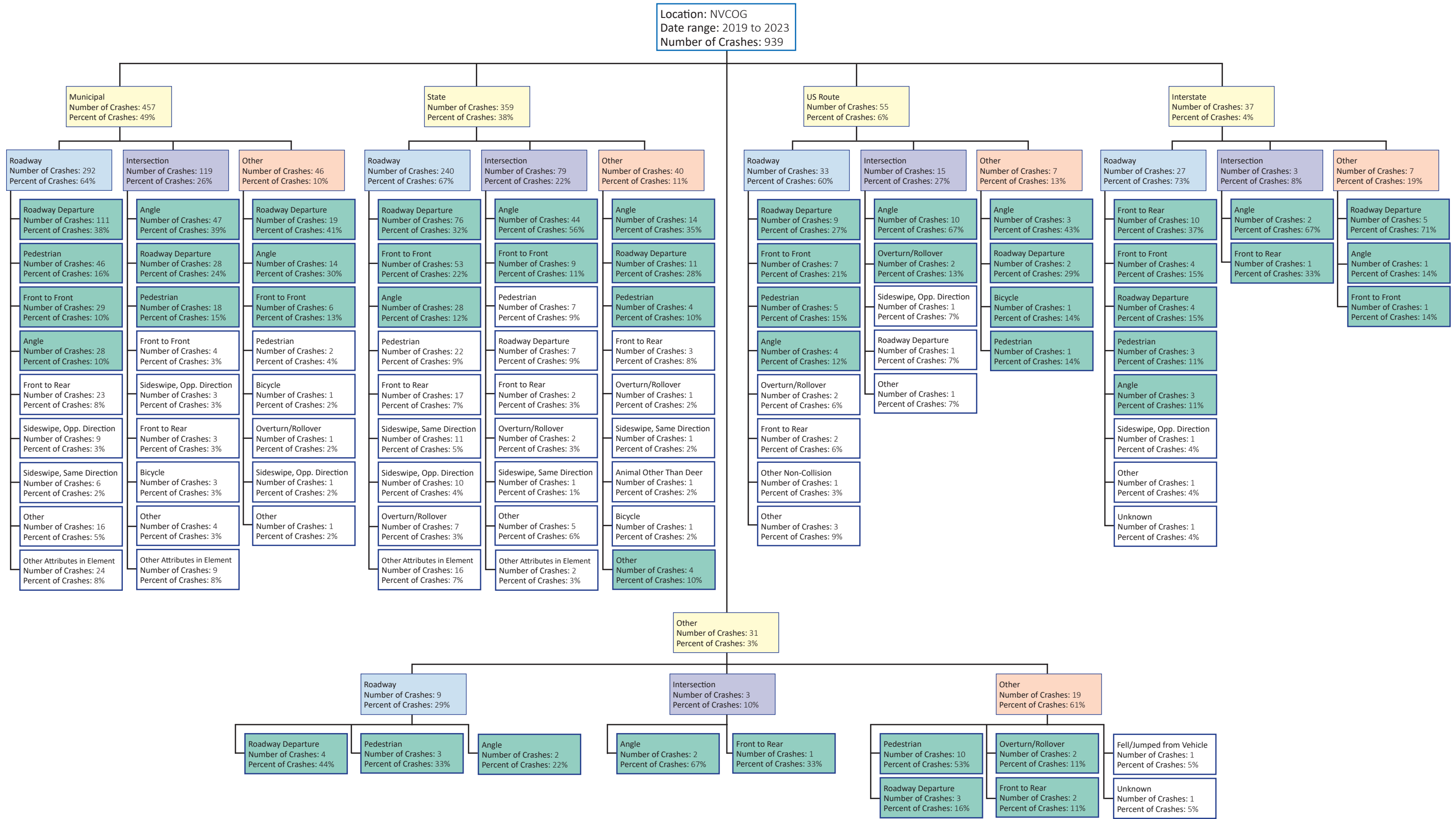


NHCOG Fatal and Serious Injury Crash Tree

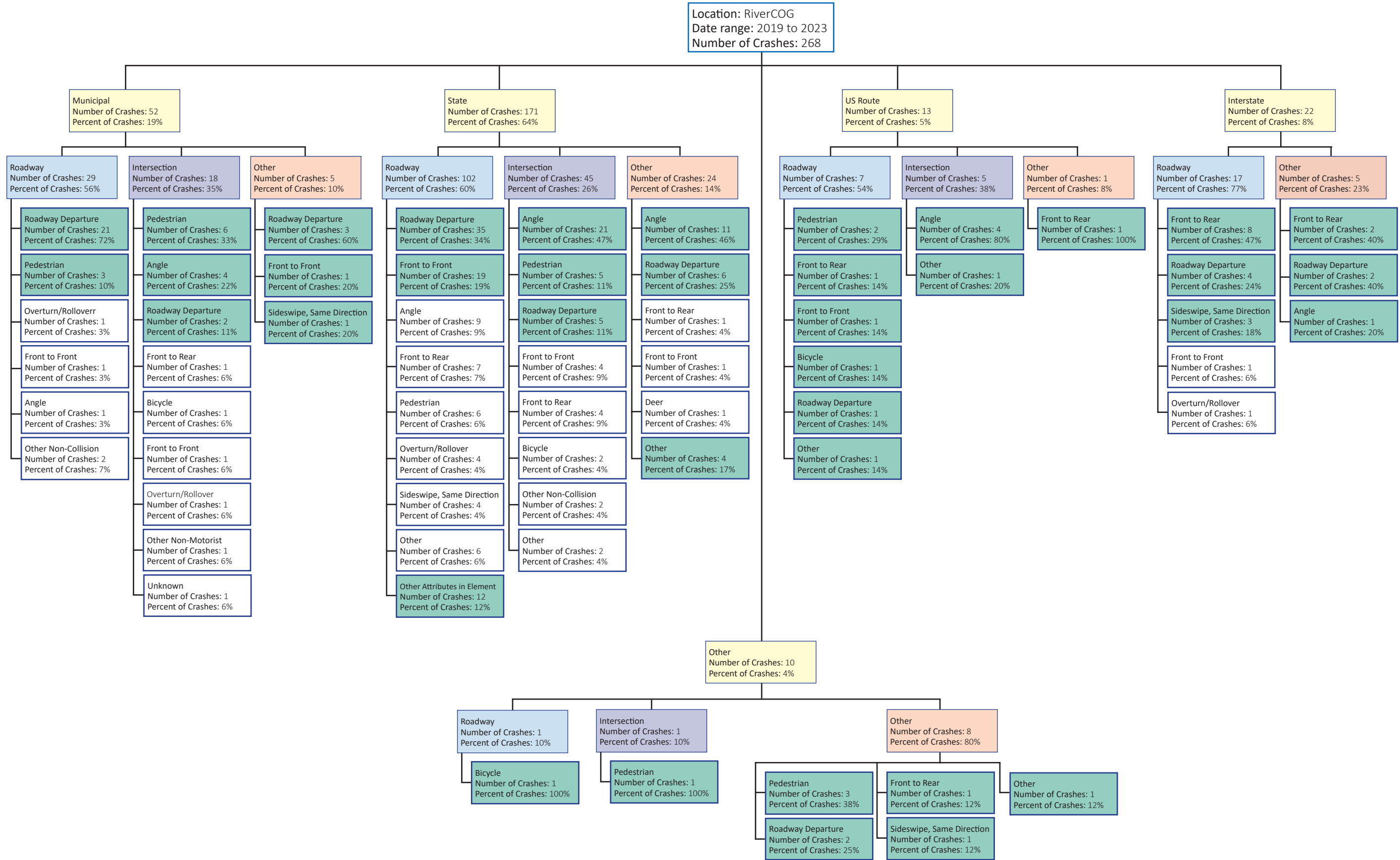


= Notable Percentage

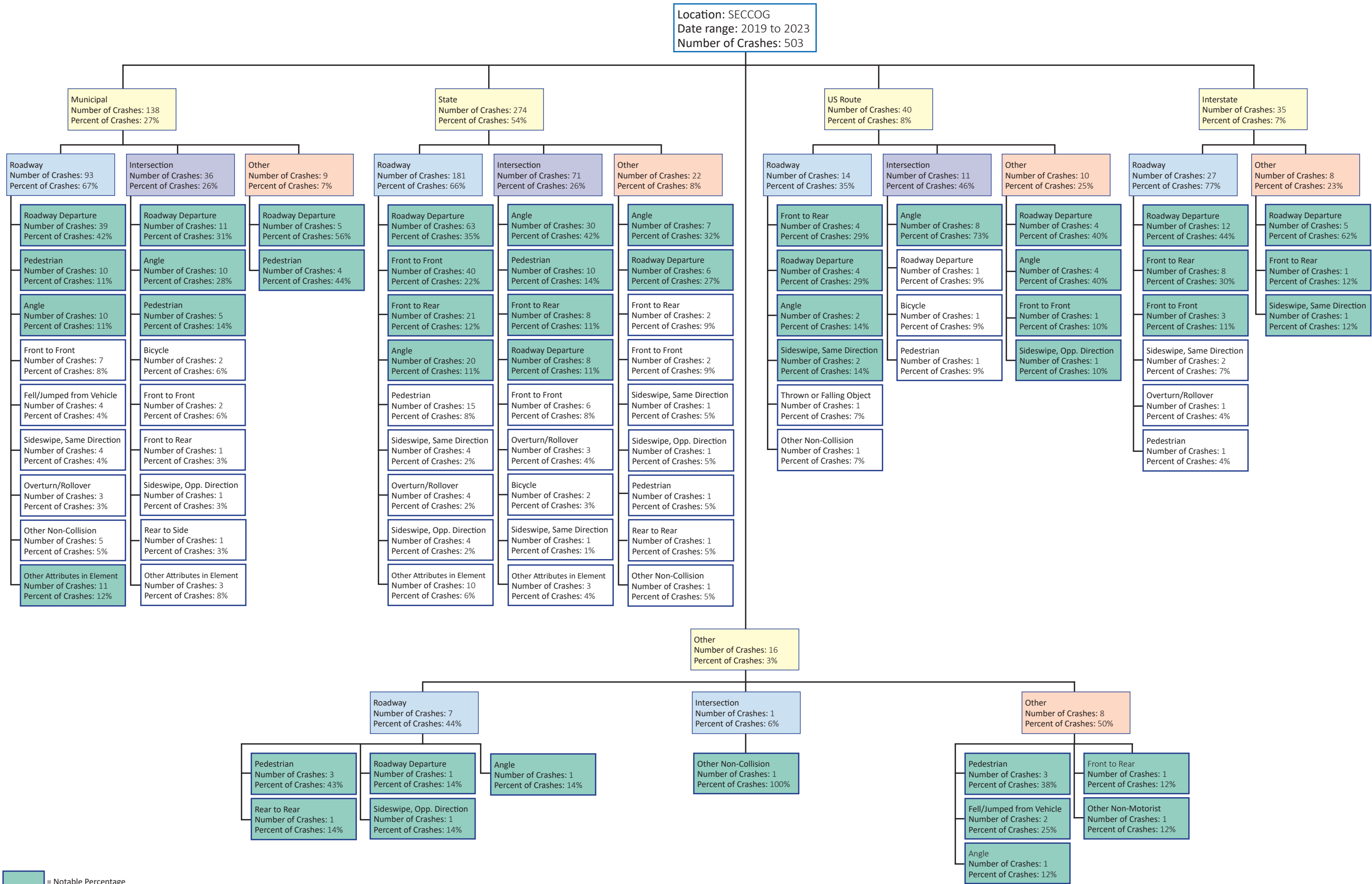
NVCOG Fatal and Serious Injury Crash Tree



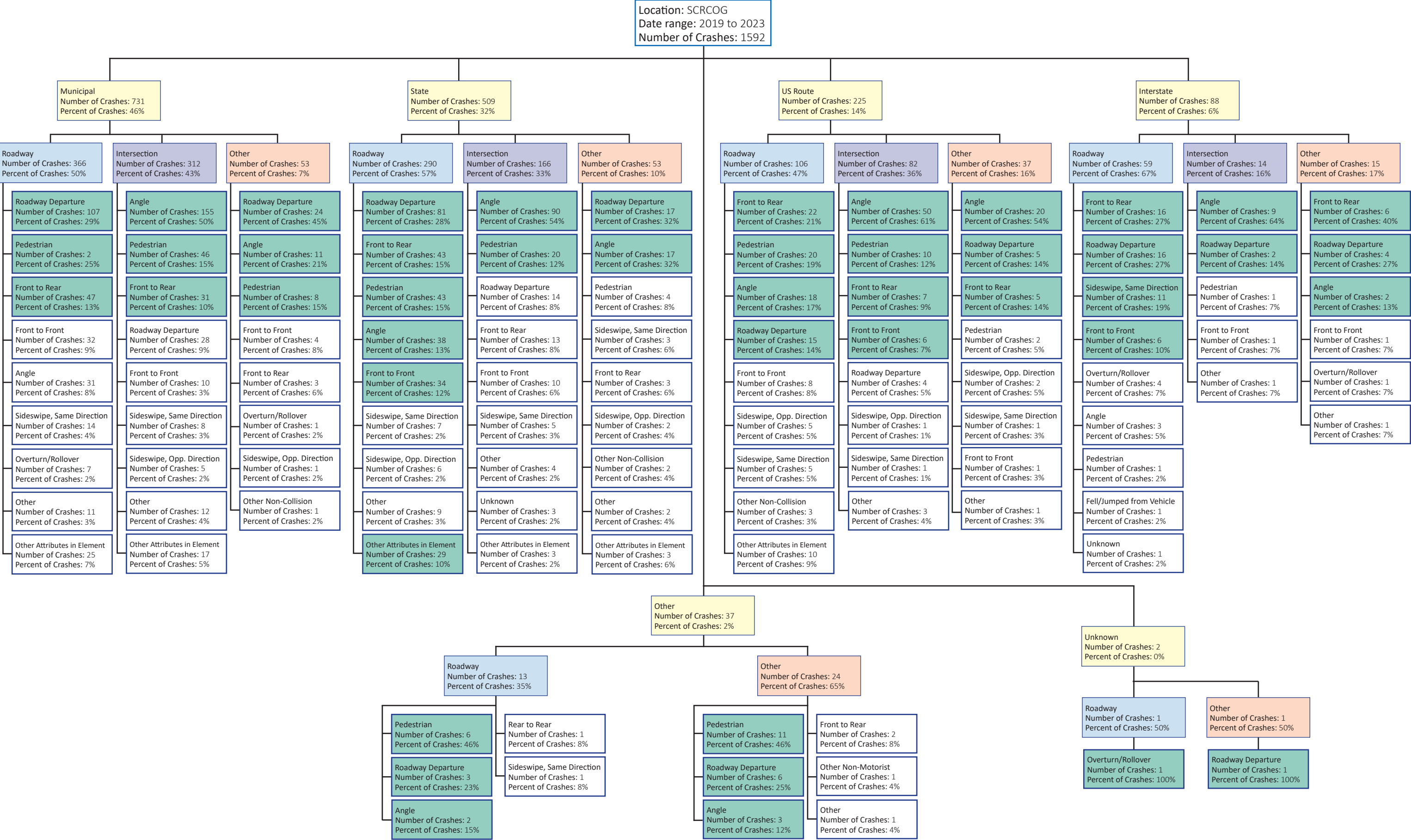
RiverCOG Fatal and Serious Injury Crash Tree



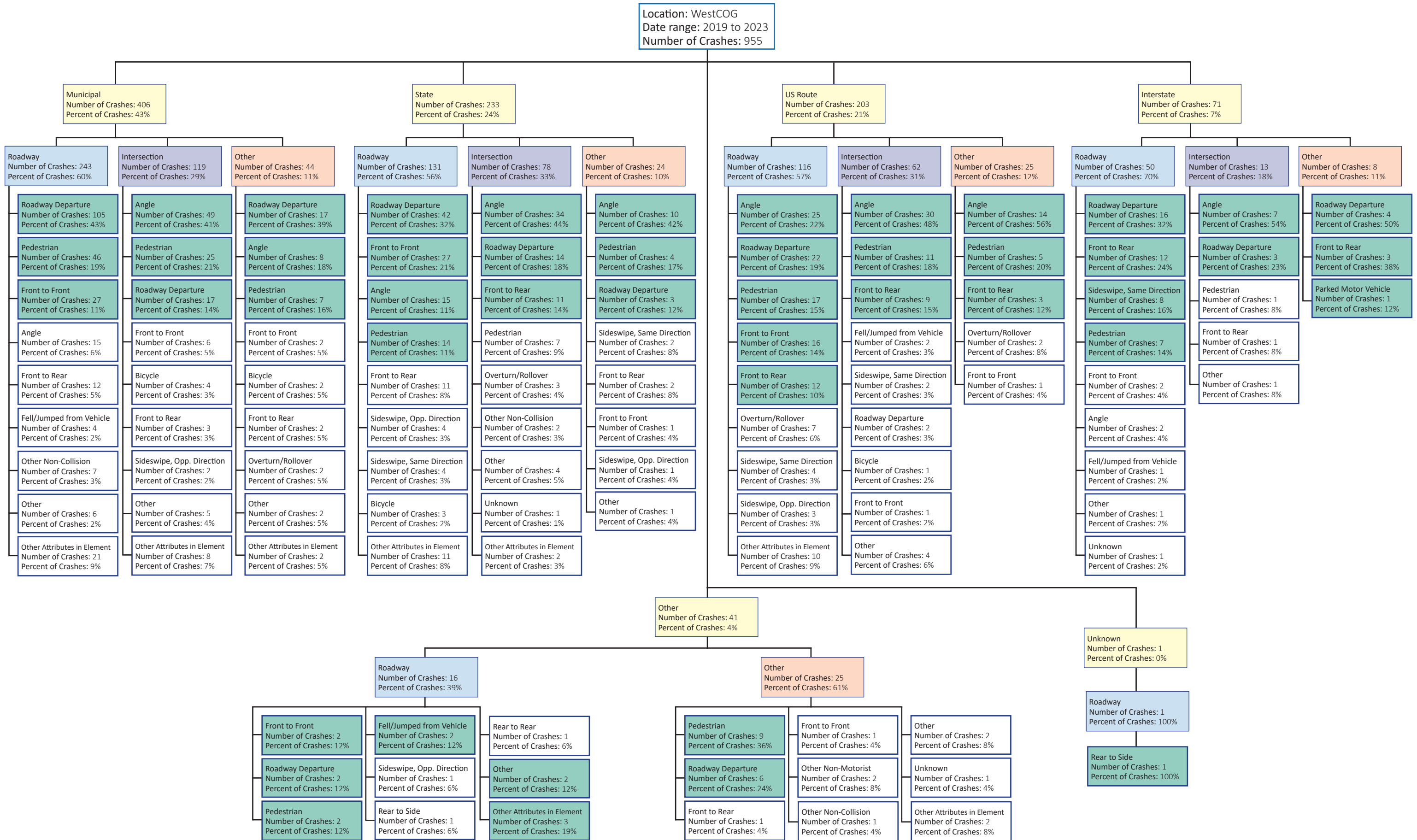
SECCOG Fatal and Serious Injury Crash Tree



SCRCOG Fatal and Serious Injury Crash Tree



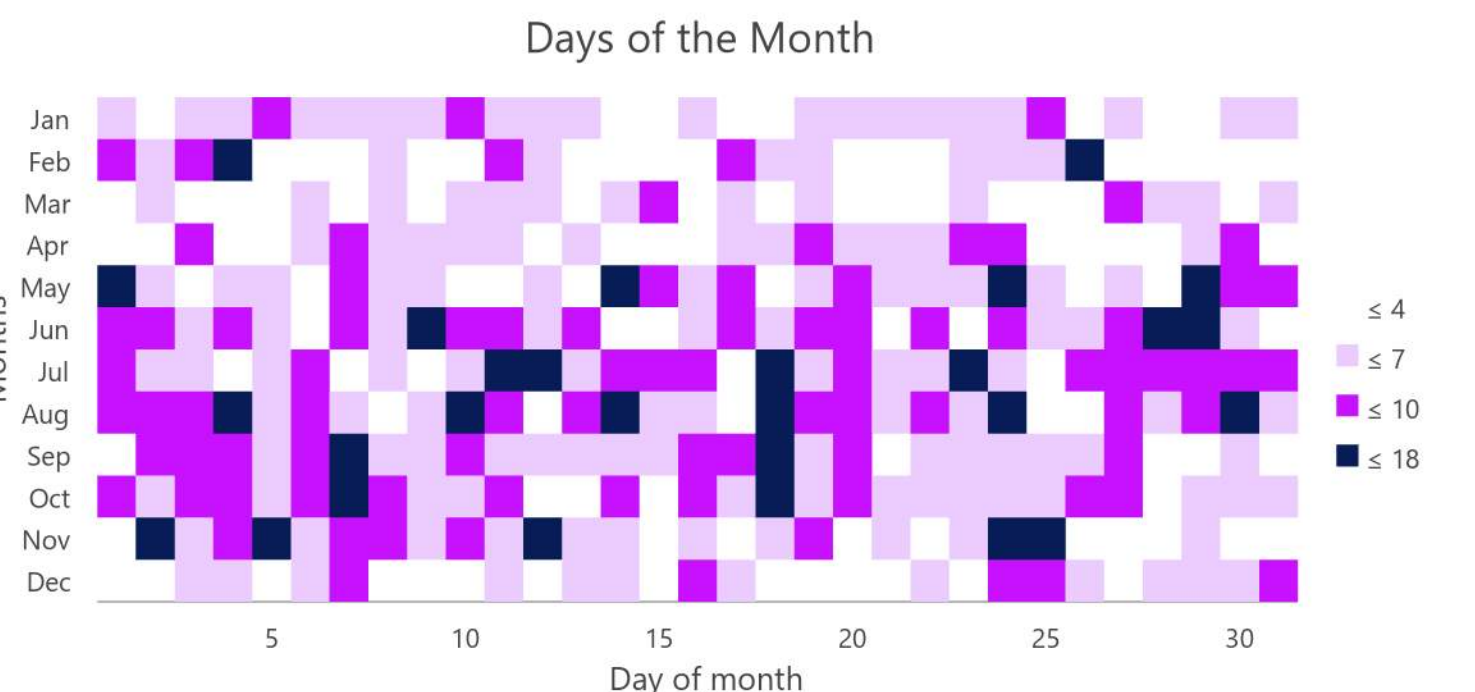
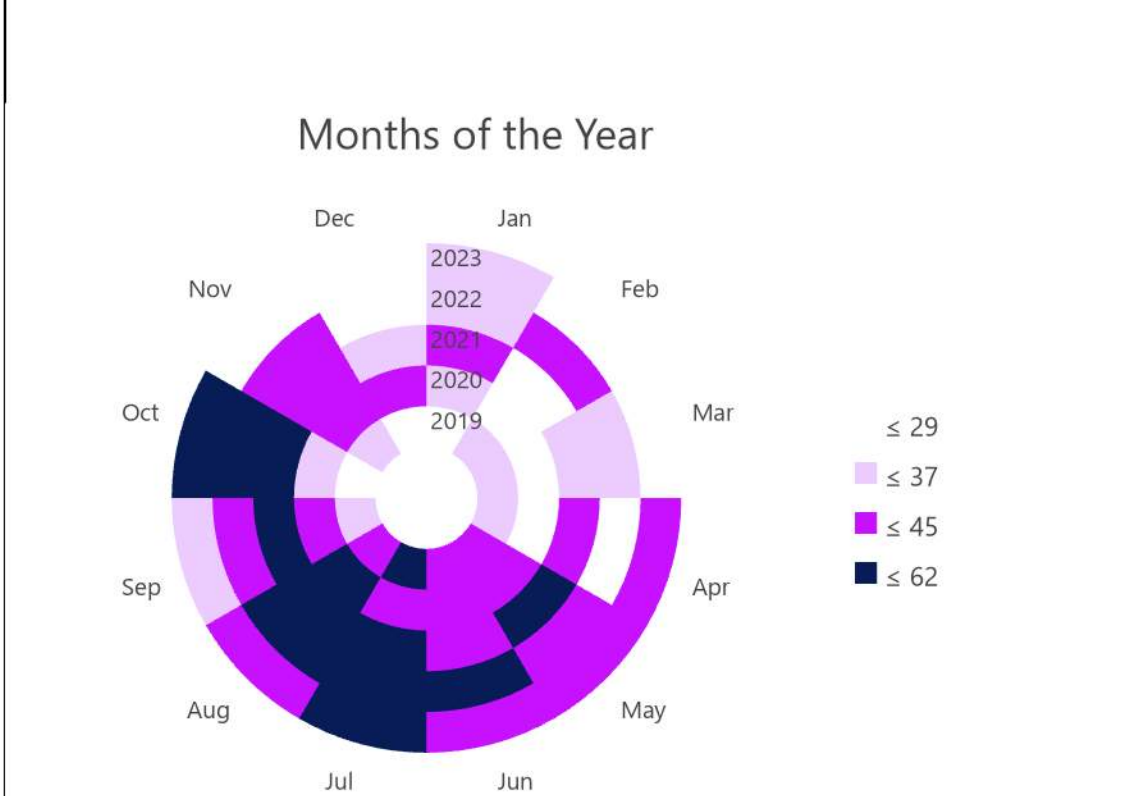
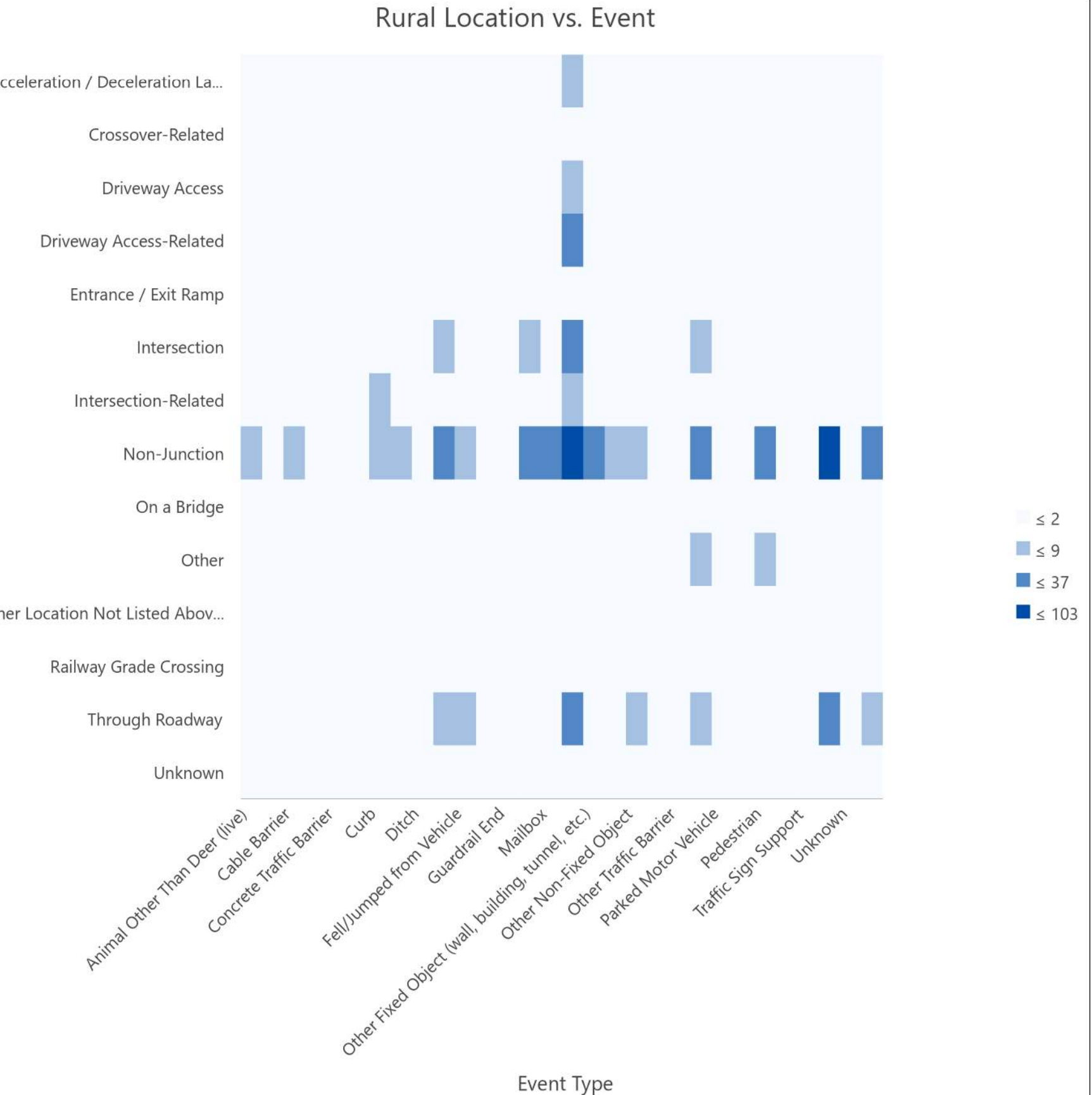
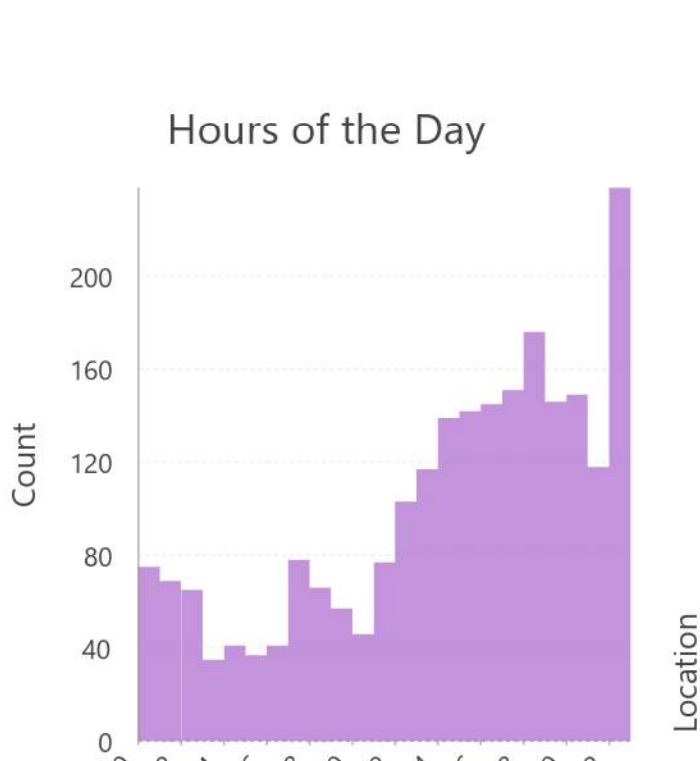
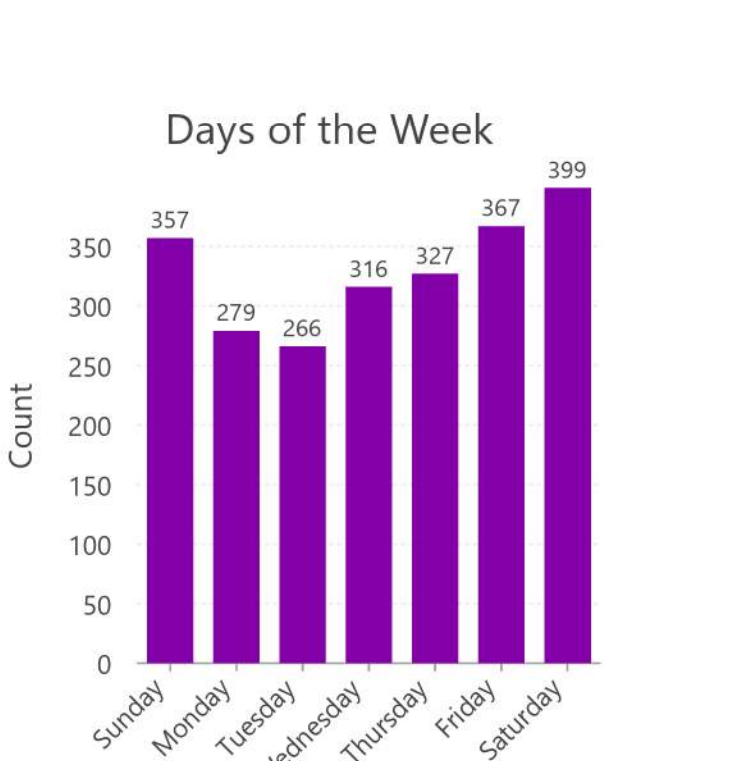
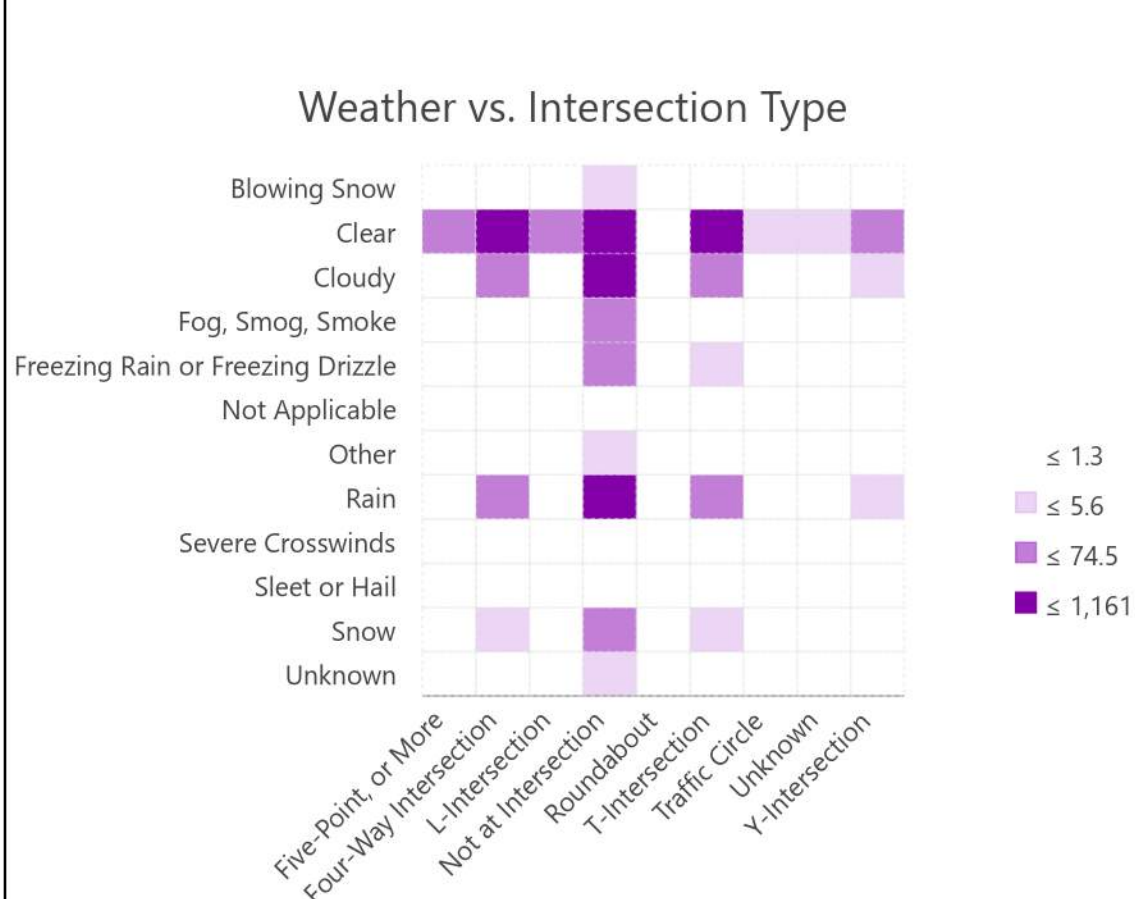
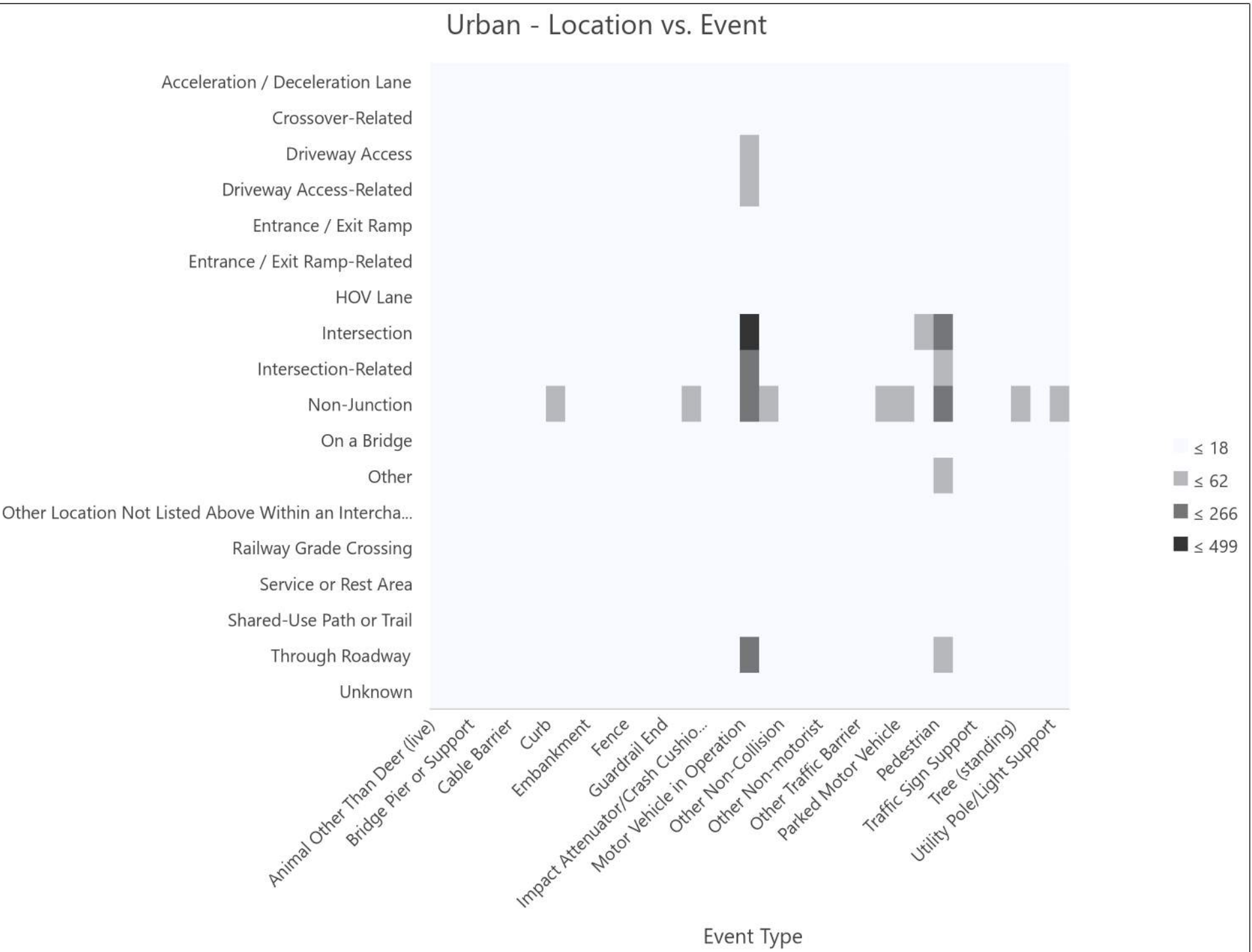
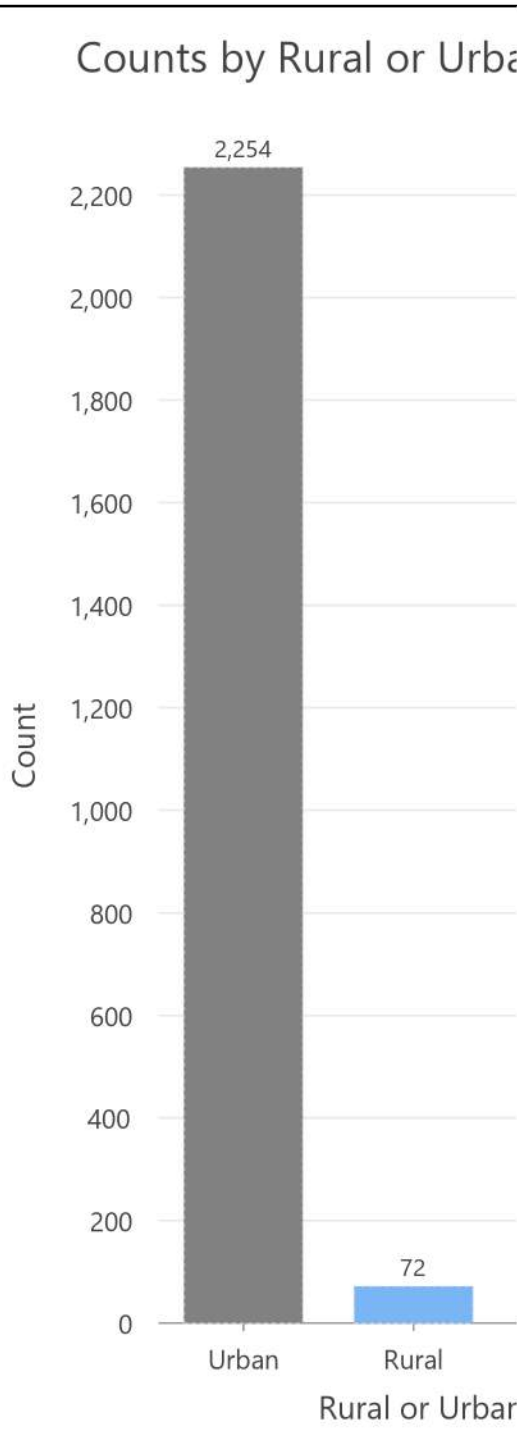
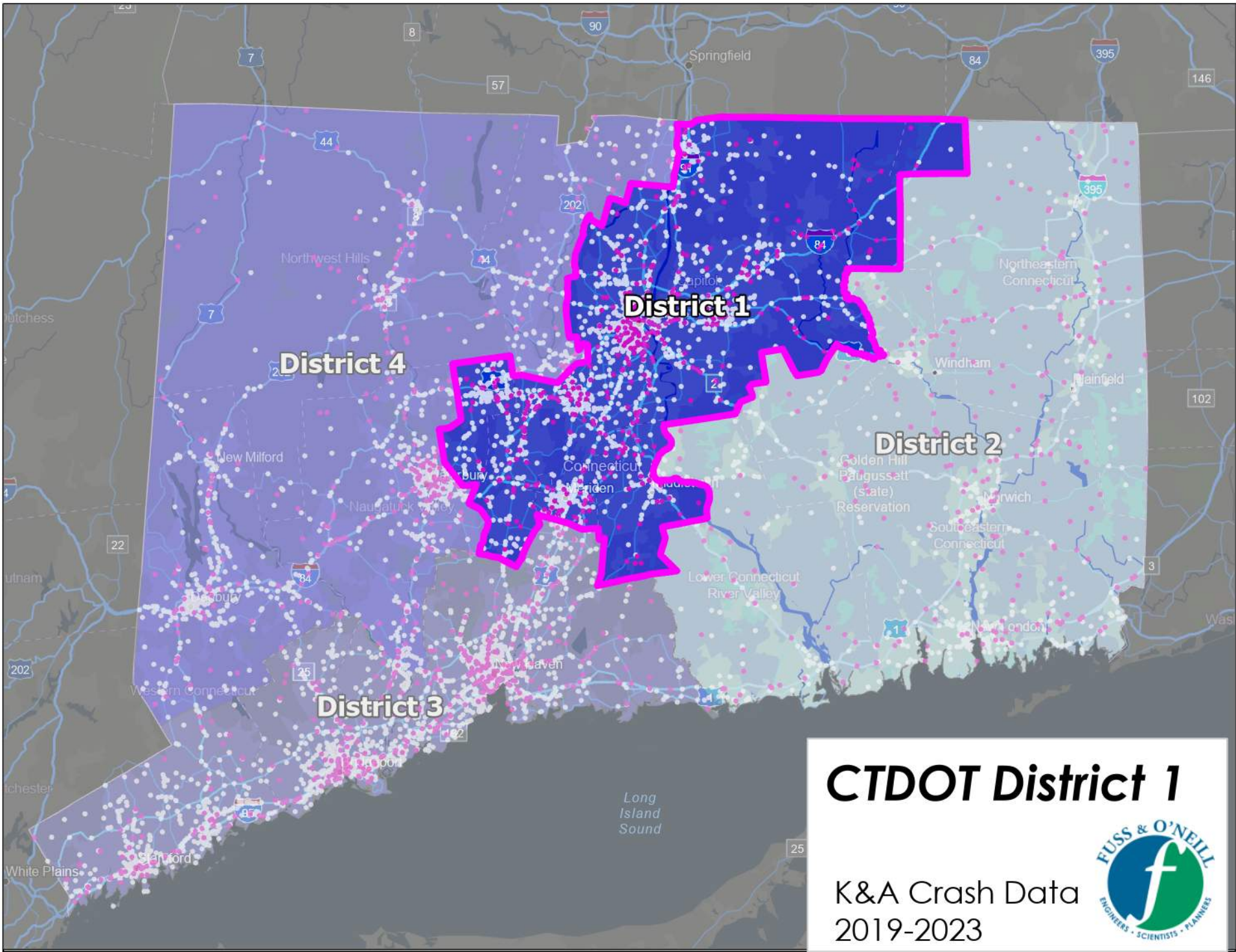
WestCOG Fatal and Serious Injury Crash Tree

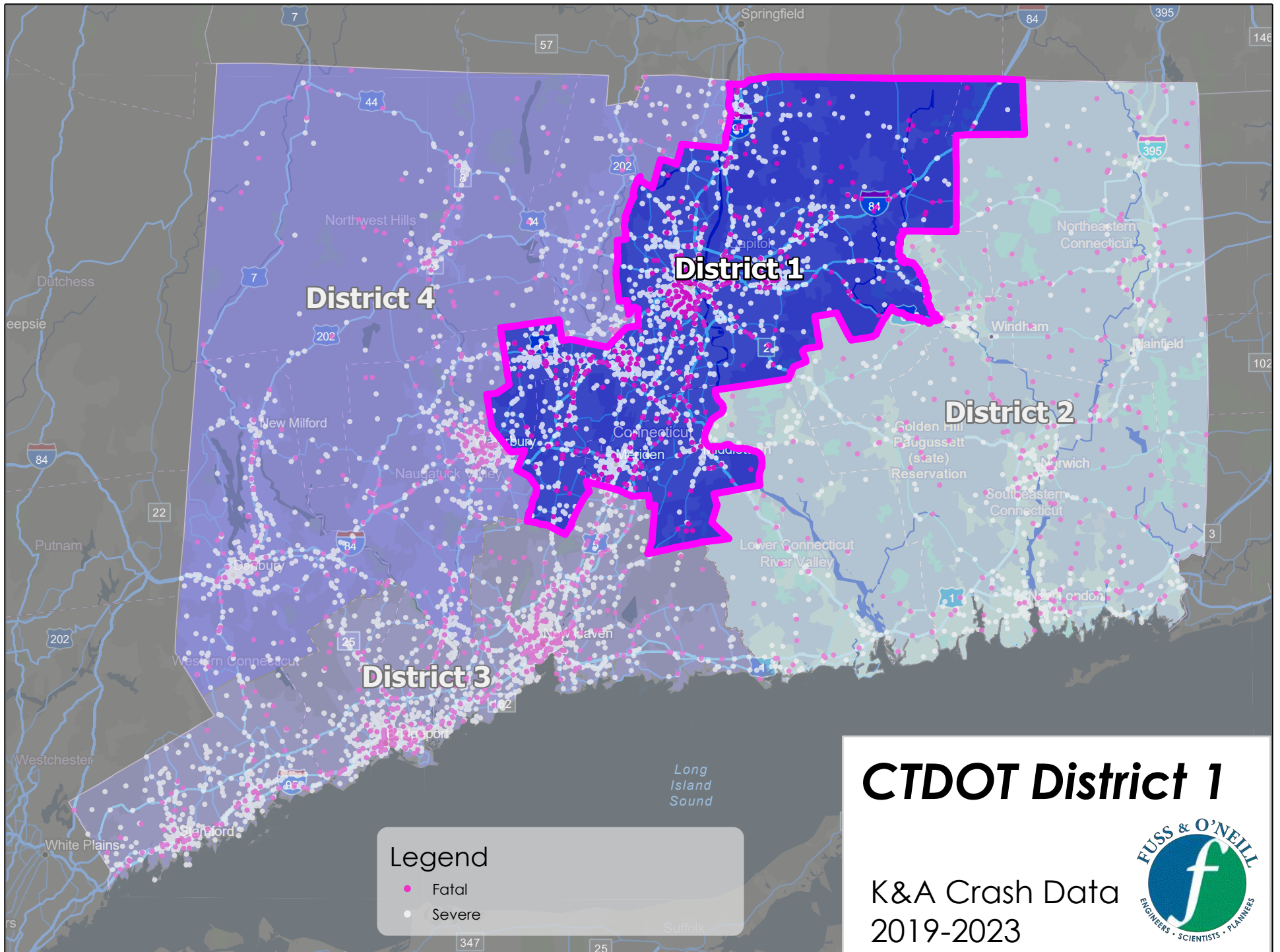


= Notable Percentage

APPENDIX C:

District Data



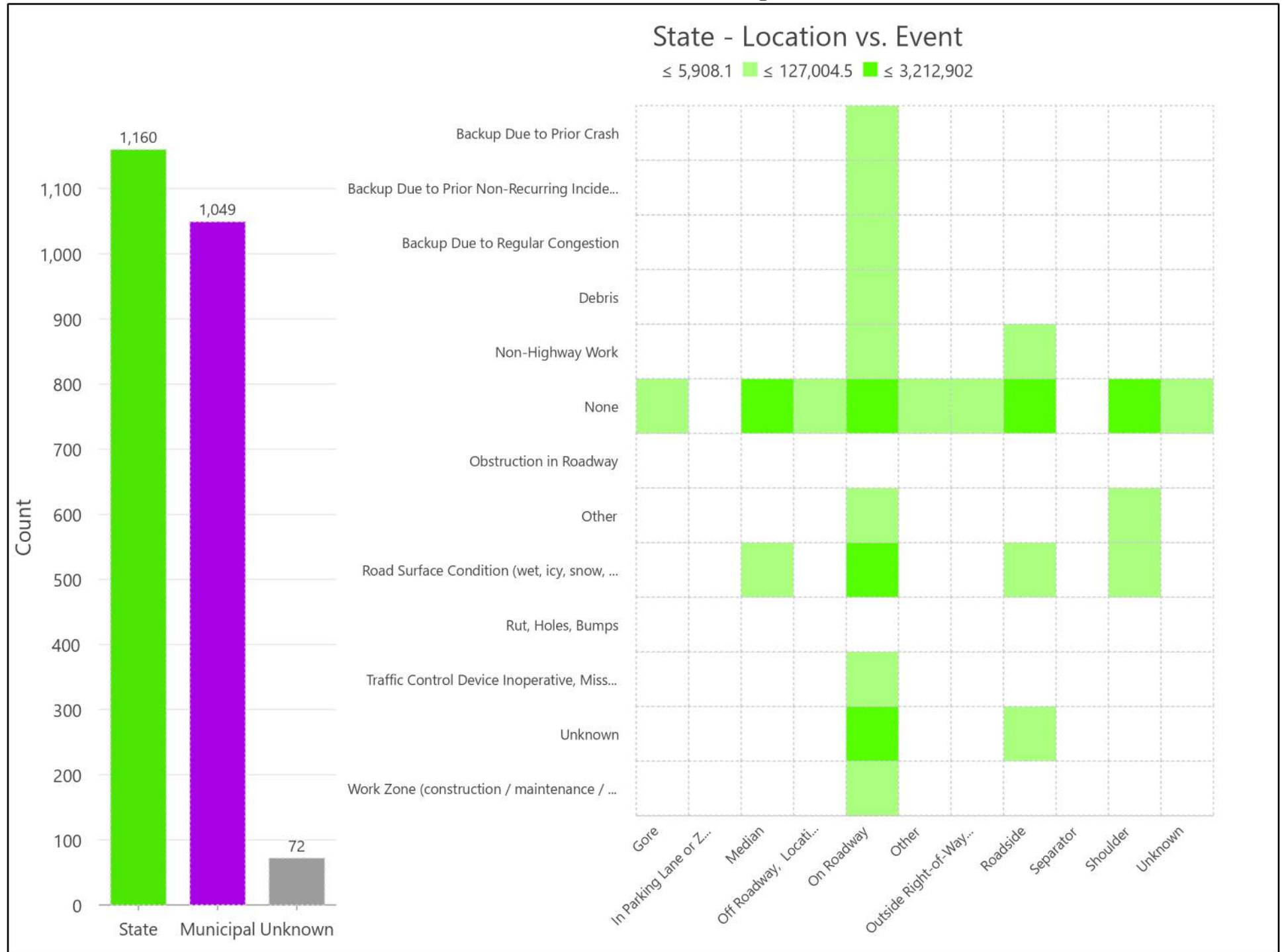


CTDOT District 1

K&A Crash Data
2019-2023



CTDOT District 1 State vs. Municipal Road



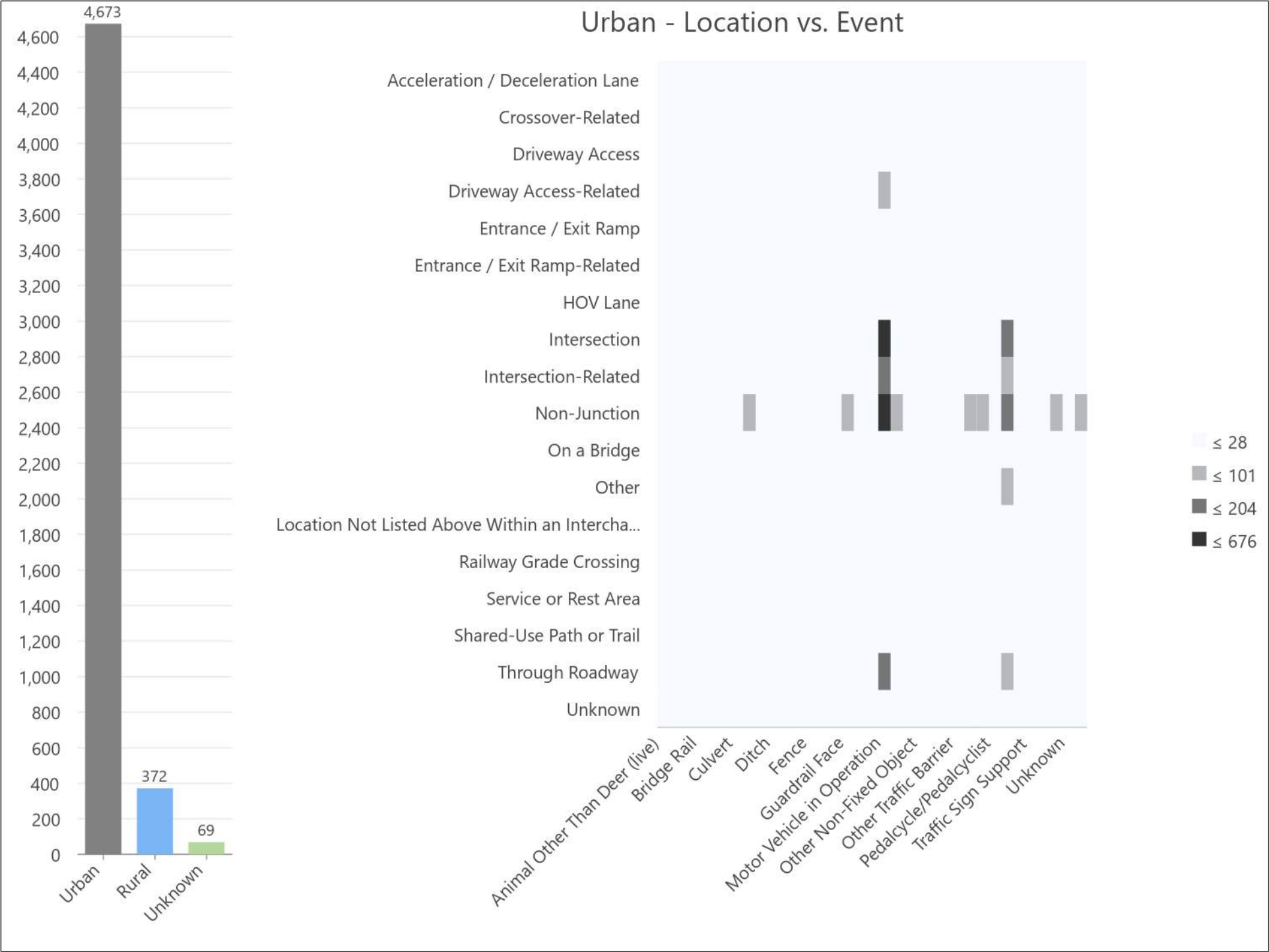
CTDOT District 1 State vs. Municipal Road

Municipal - Location vs. Event

≤ 6,311.6 ≤ 128,644.7 ≤ 2,508,808



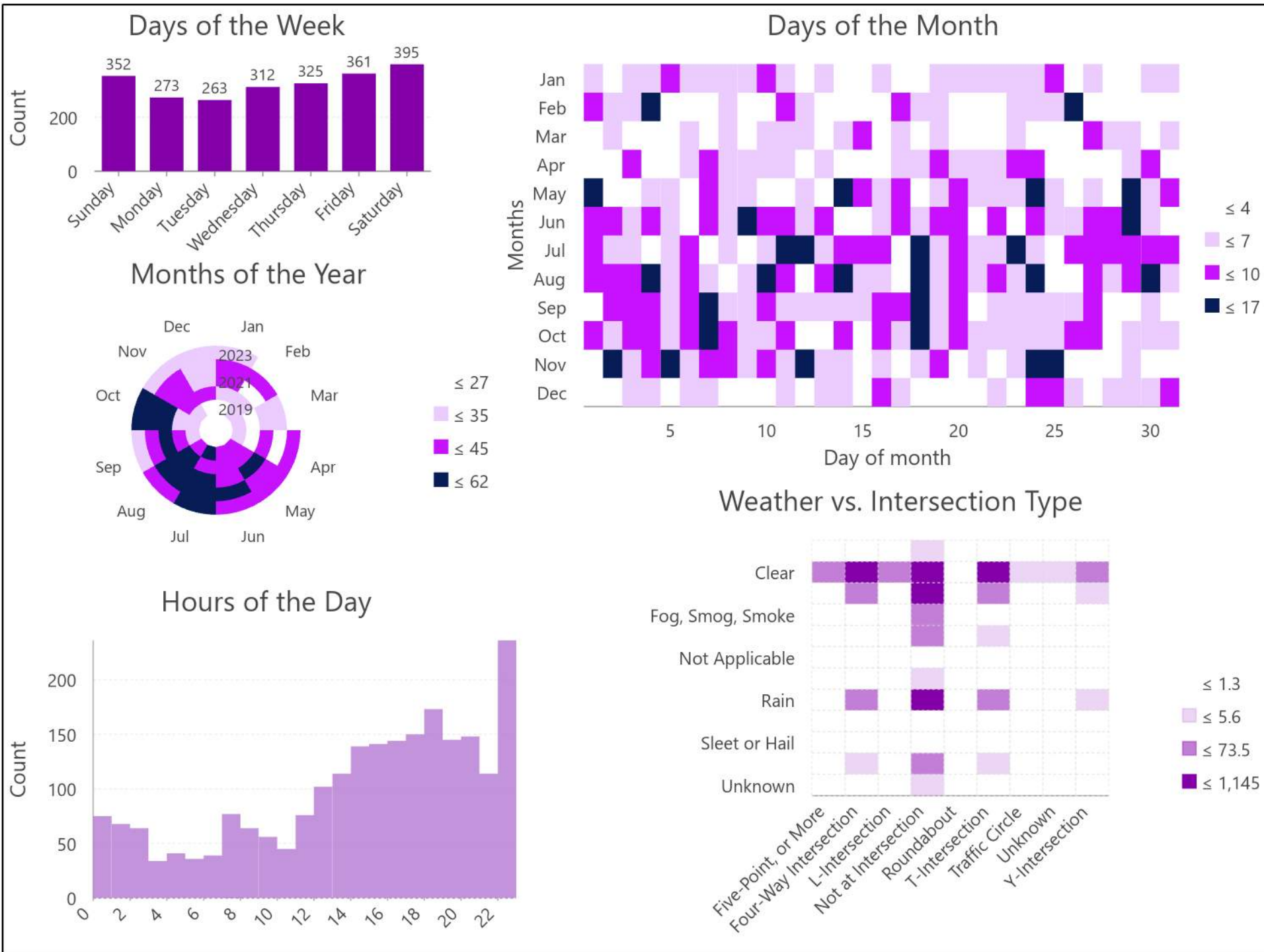
CTDOT District 1 Rural vs. Urban K&A Crash Data 2019-2023

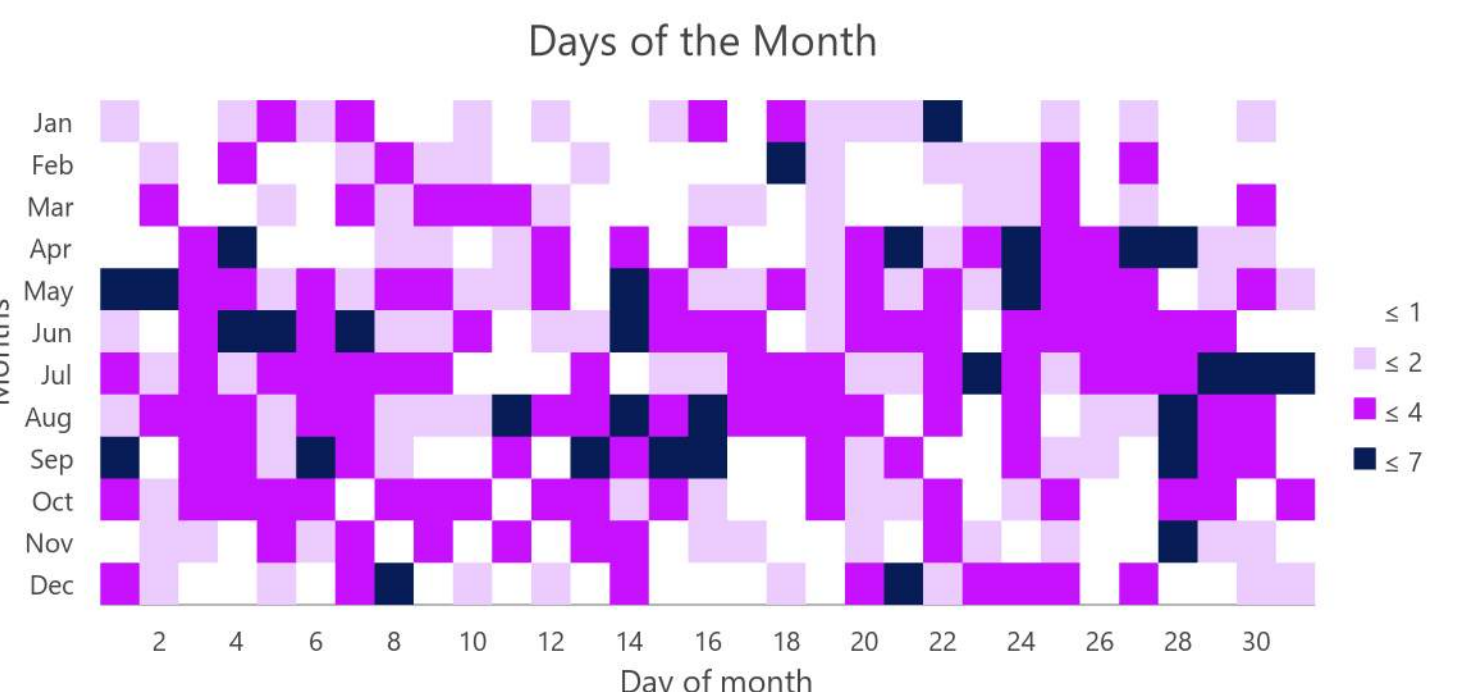
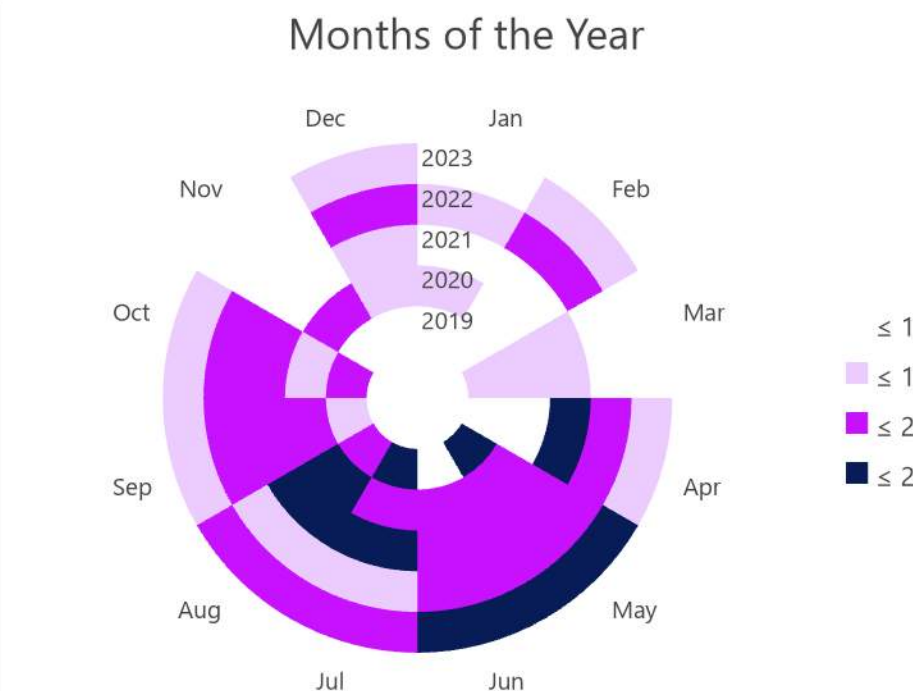
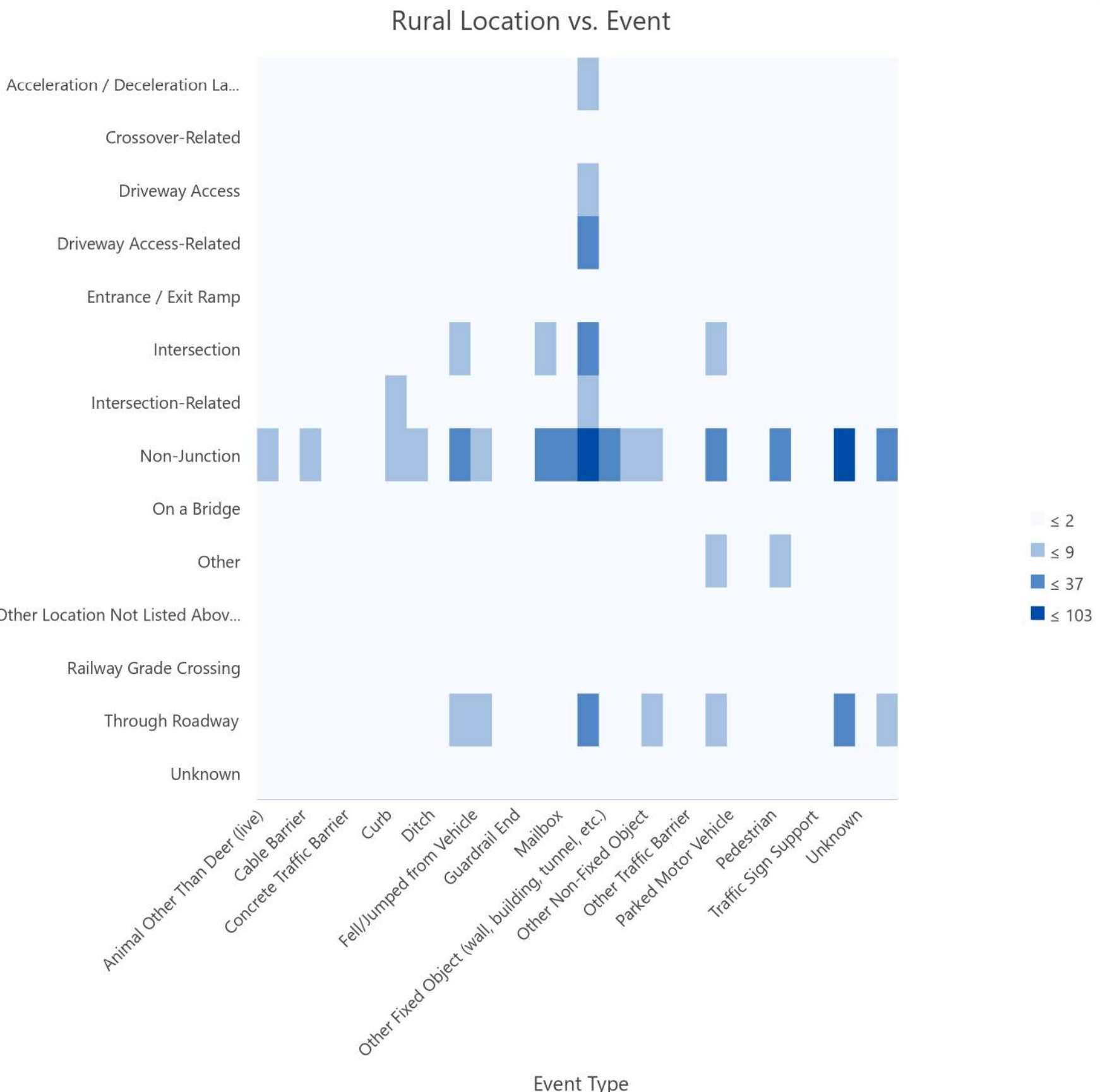
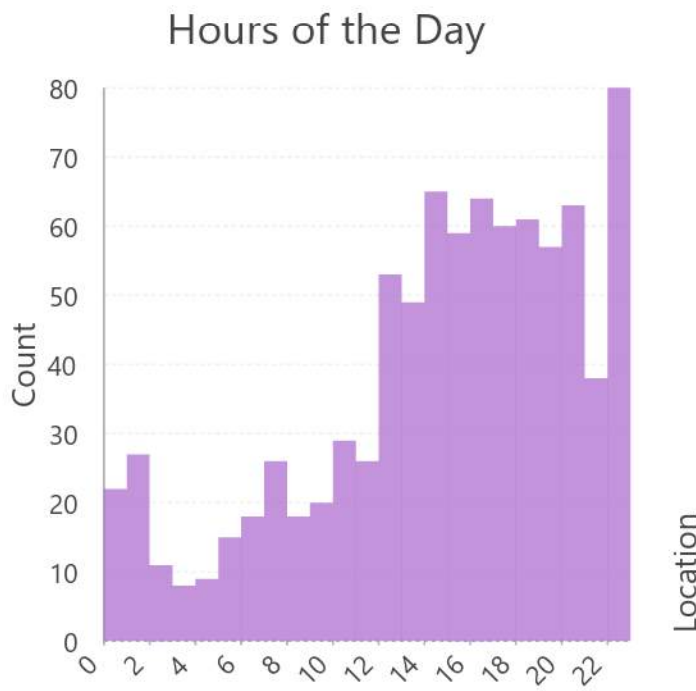
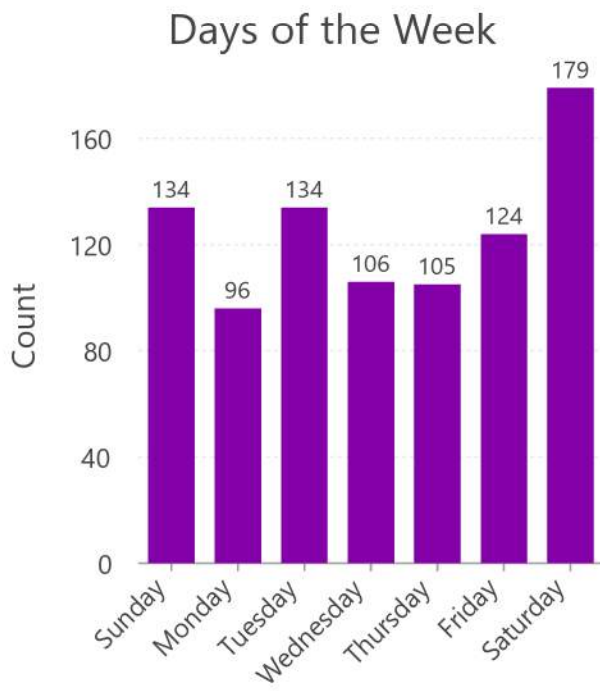
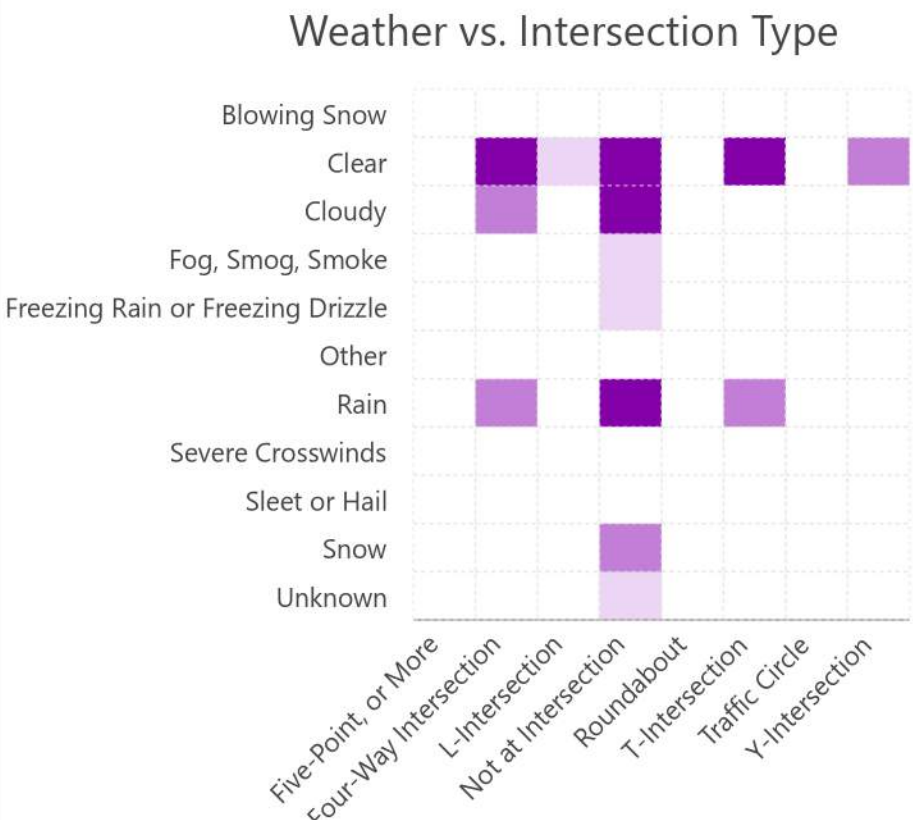
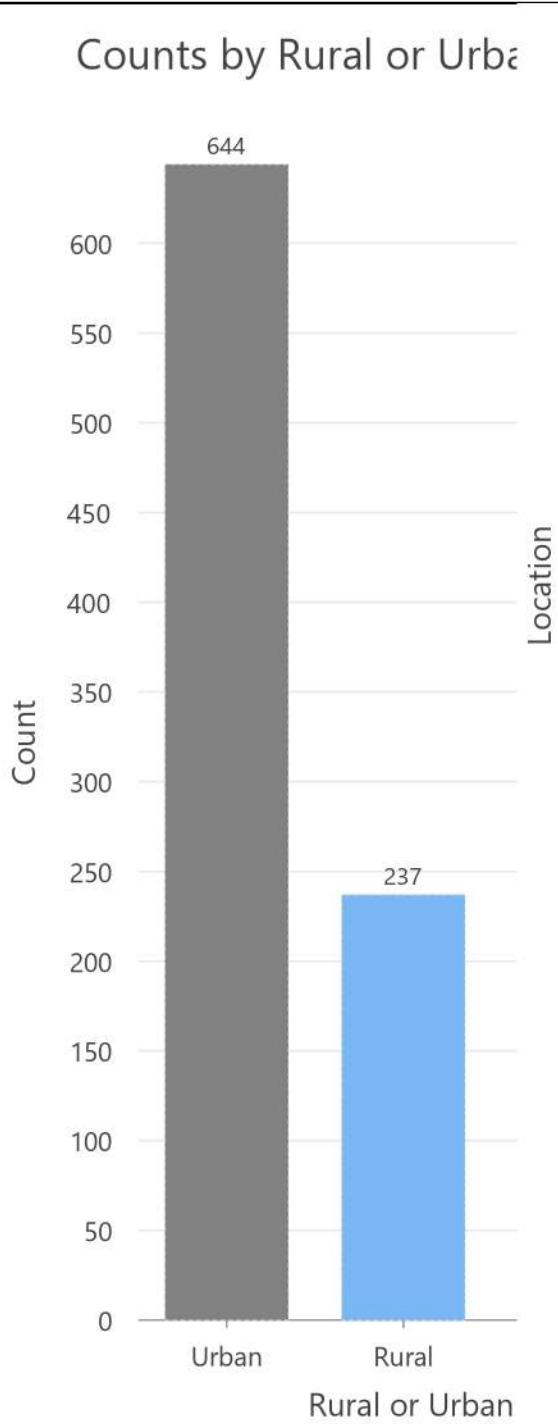
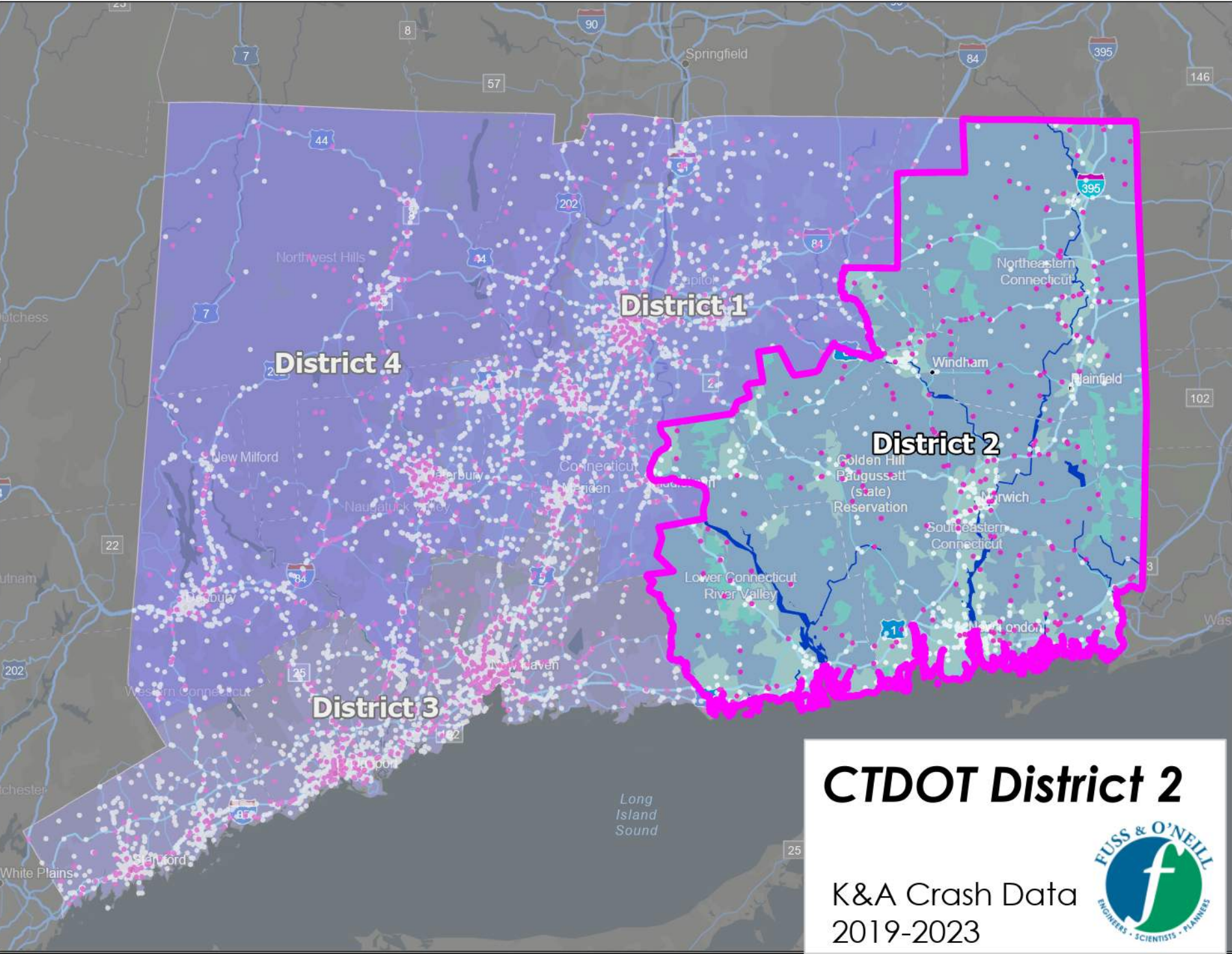


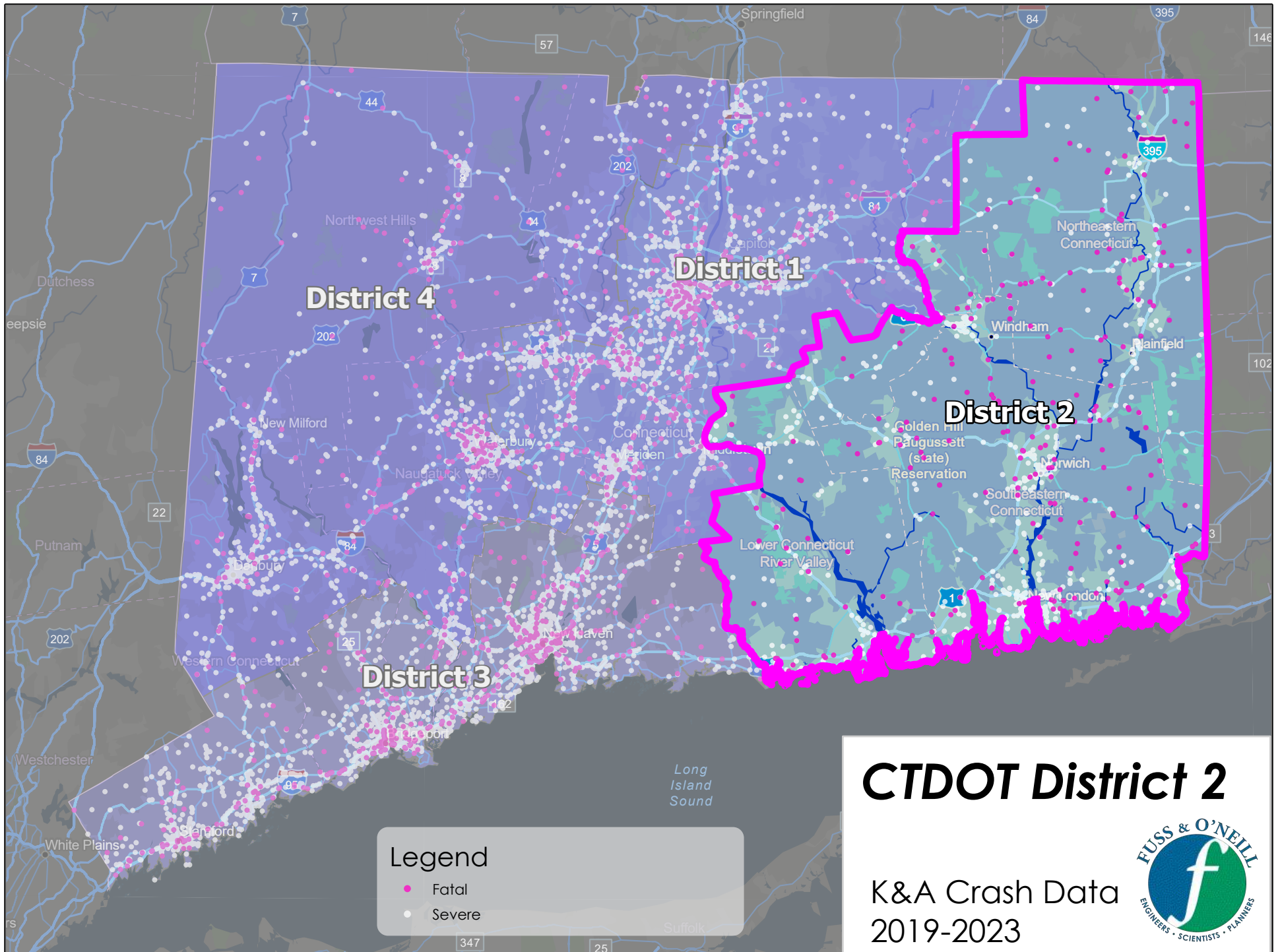
CTDOT District 1 Rural vs. Urban K&A Crash Data 2019-2023



CTDOT District 1 Time & Conditions K&A Crash Data 2019-2023







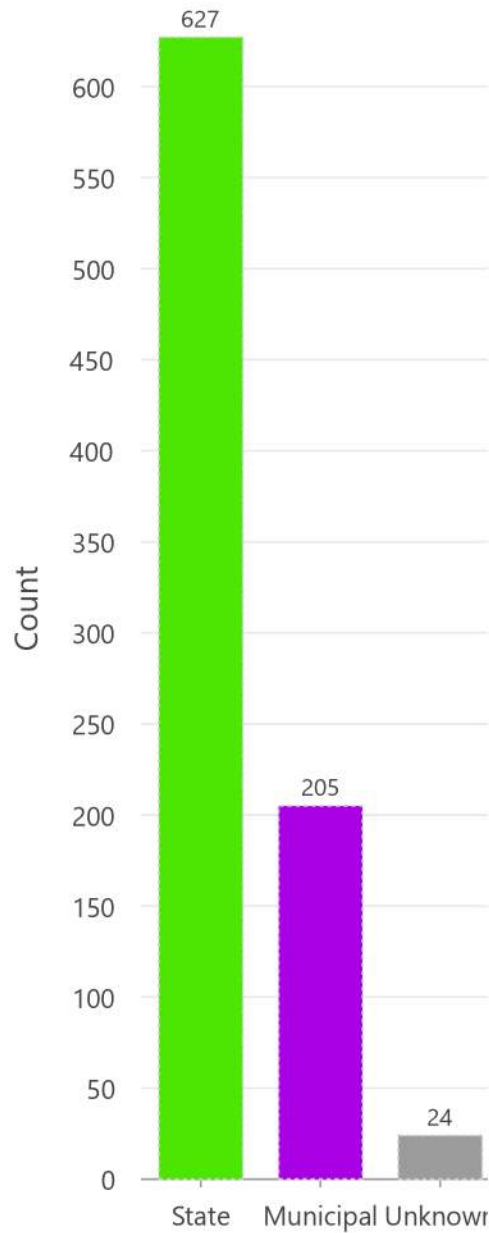
CTDOT District 2 State vs. Municipal Road



CTDOT District 2 State vs. Municipal Road

Municipal - Location vs. Event

≤ 4,777.9 ≤ 43,263.2 ≤ 407,897



Backup Due to Regular Congestion

Debris

Non-Highway Work

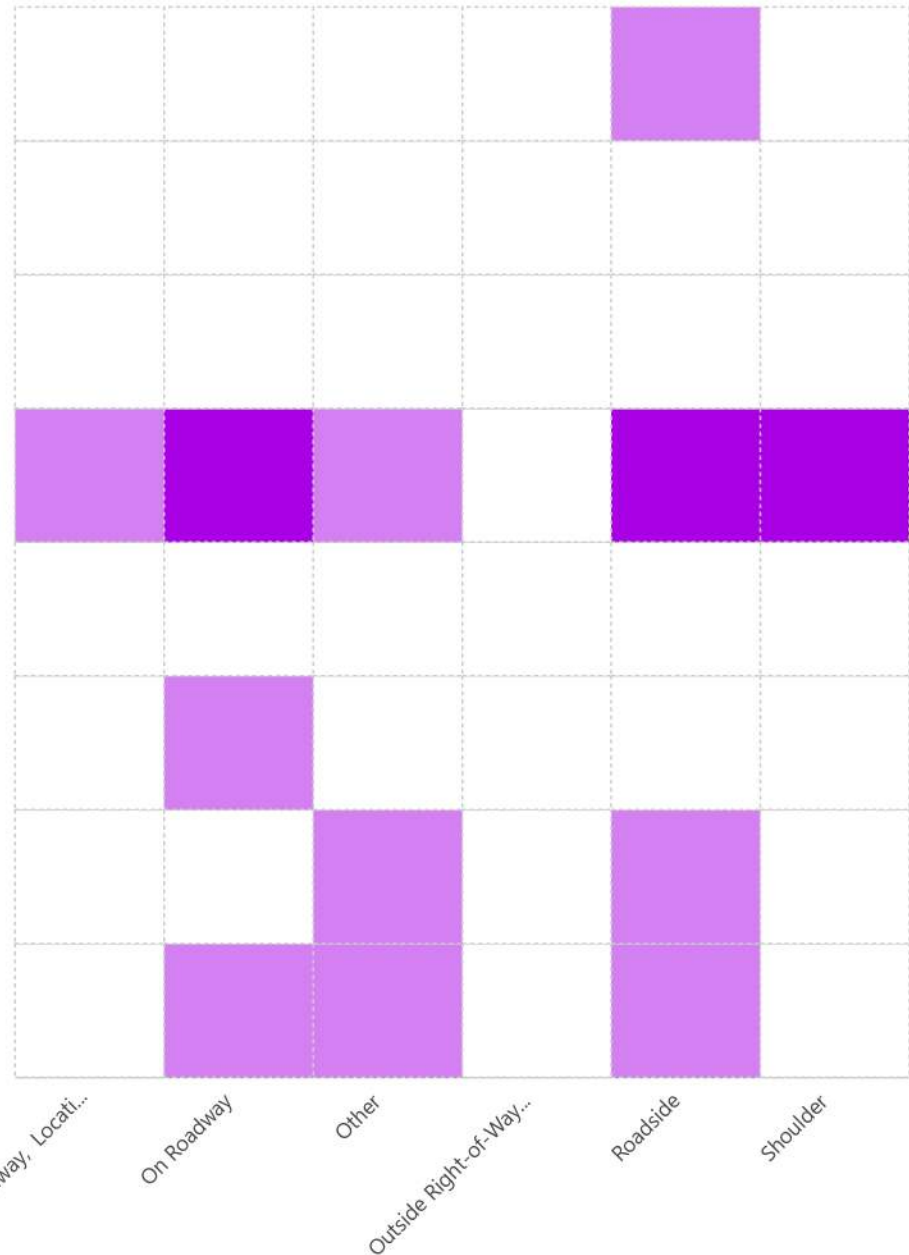
None

Obstruction in Roadway

Other

Road Surface Condition (wet, icy, snow, ...

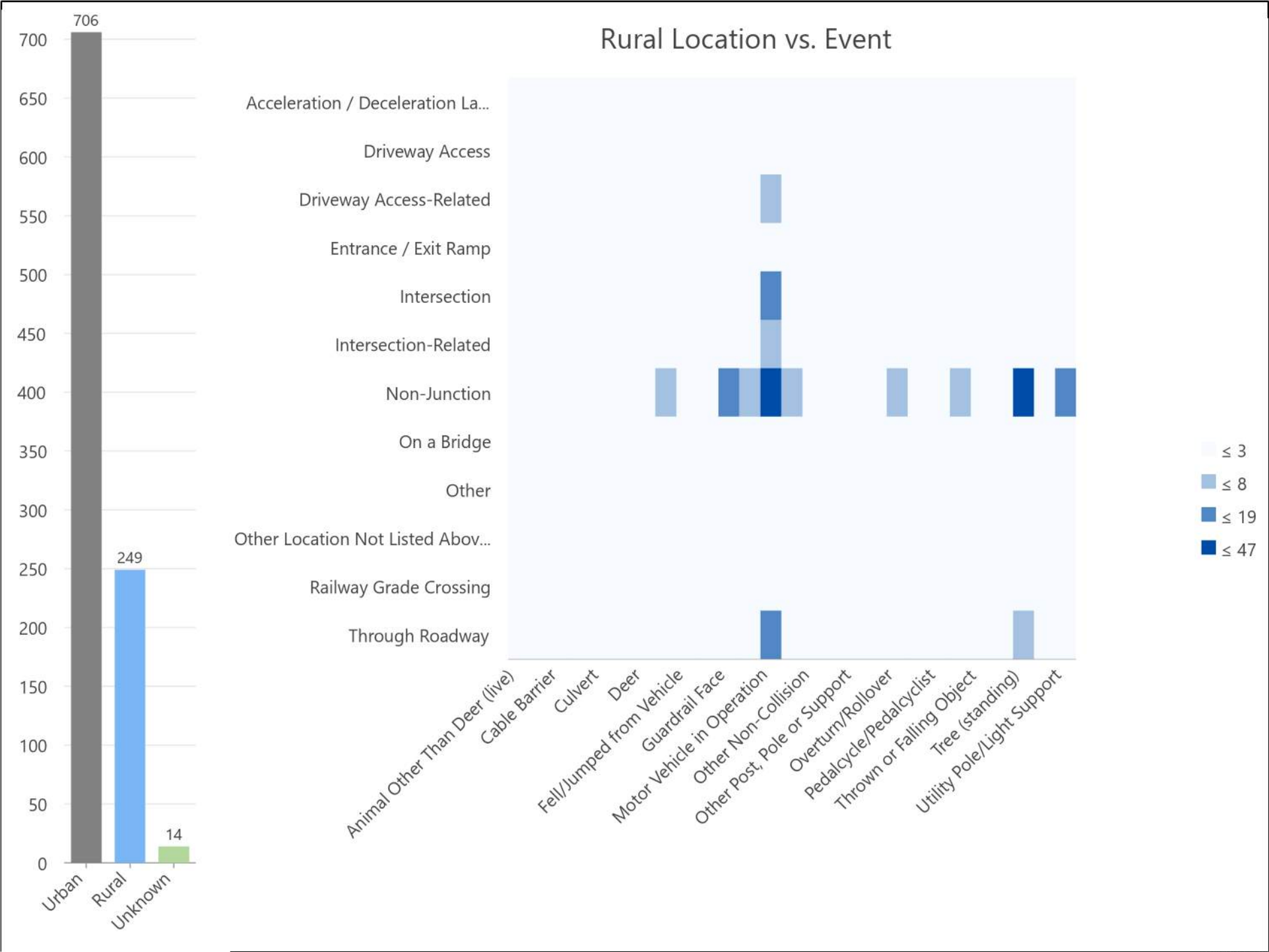
Unknown



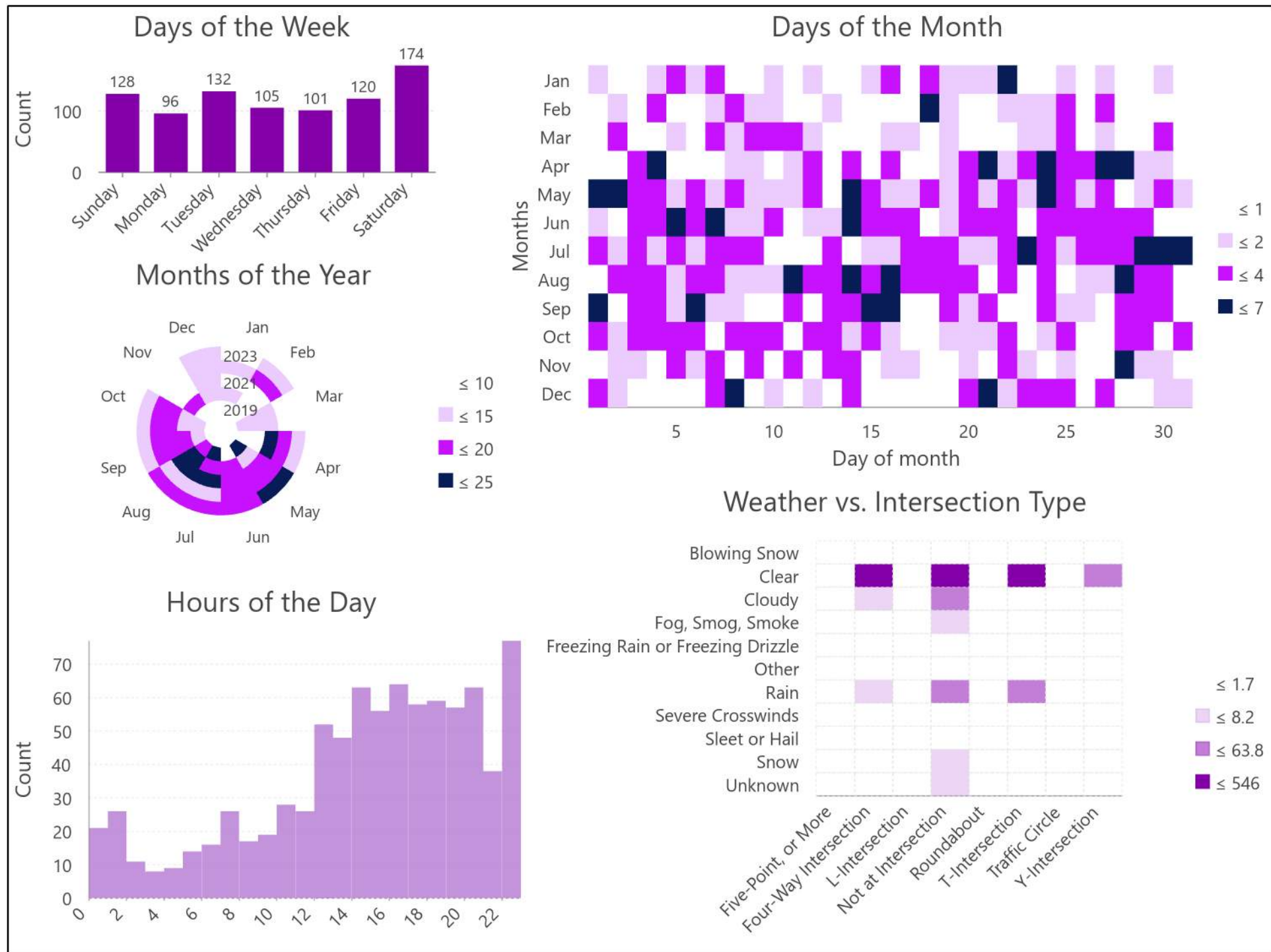
CTDOT District 2 Rural vs. Urban K&A Crash Data 2019-2023

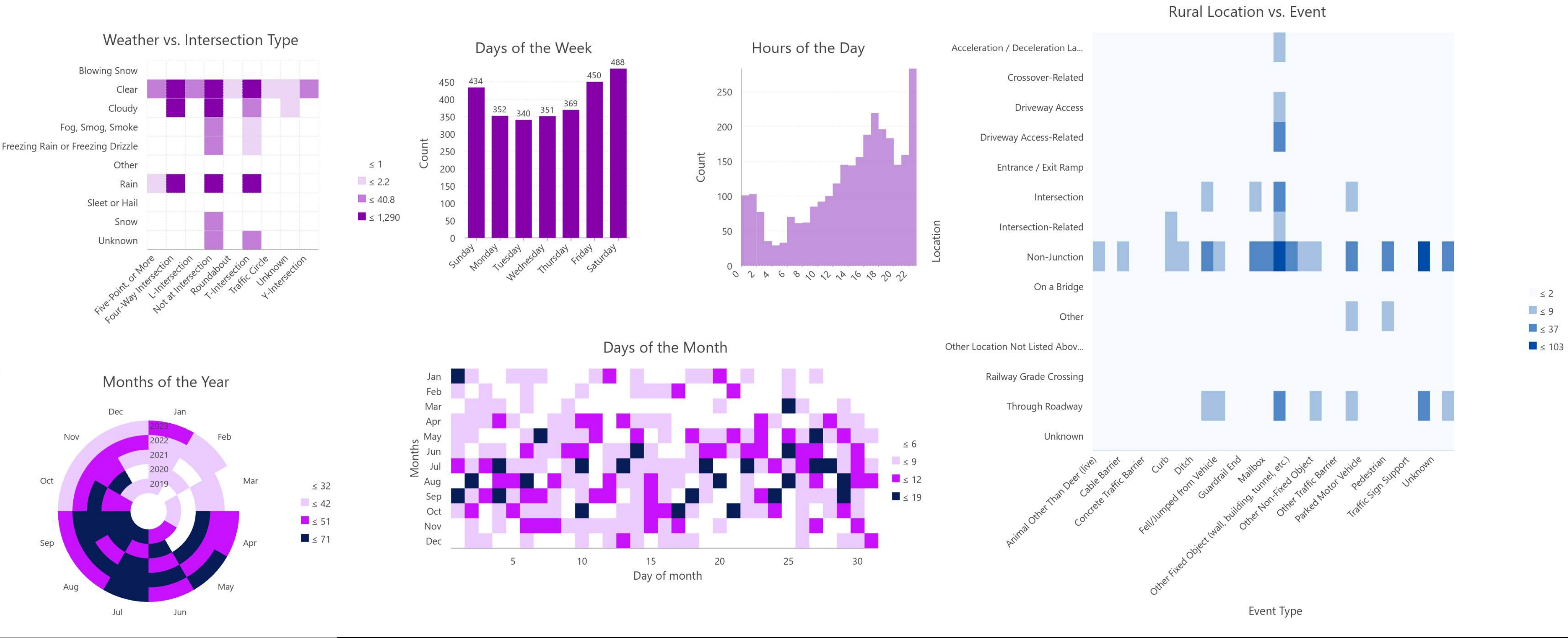
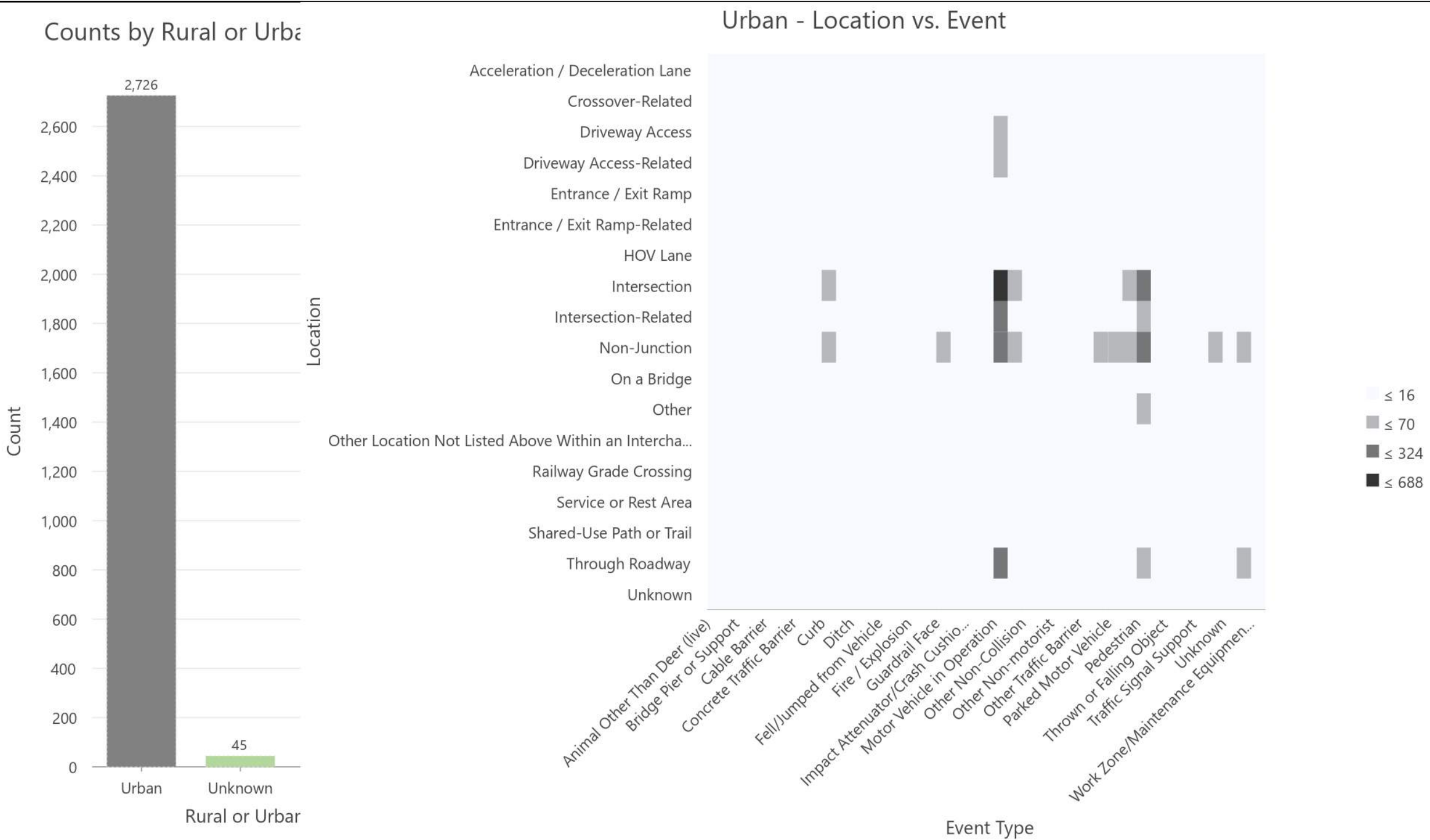
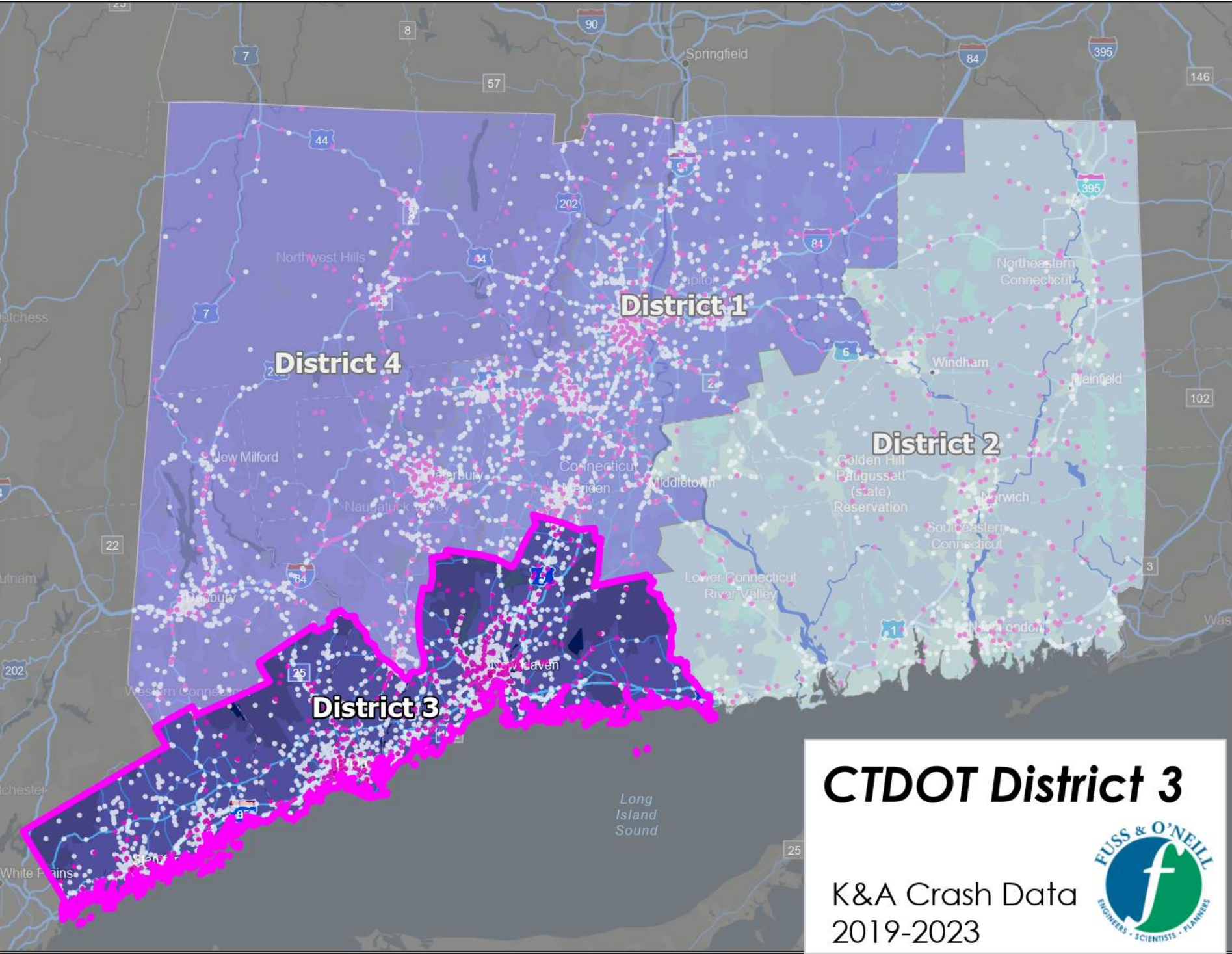


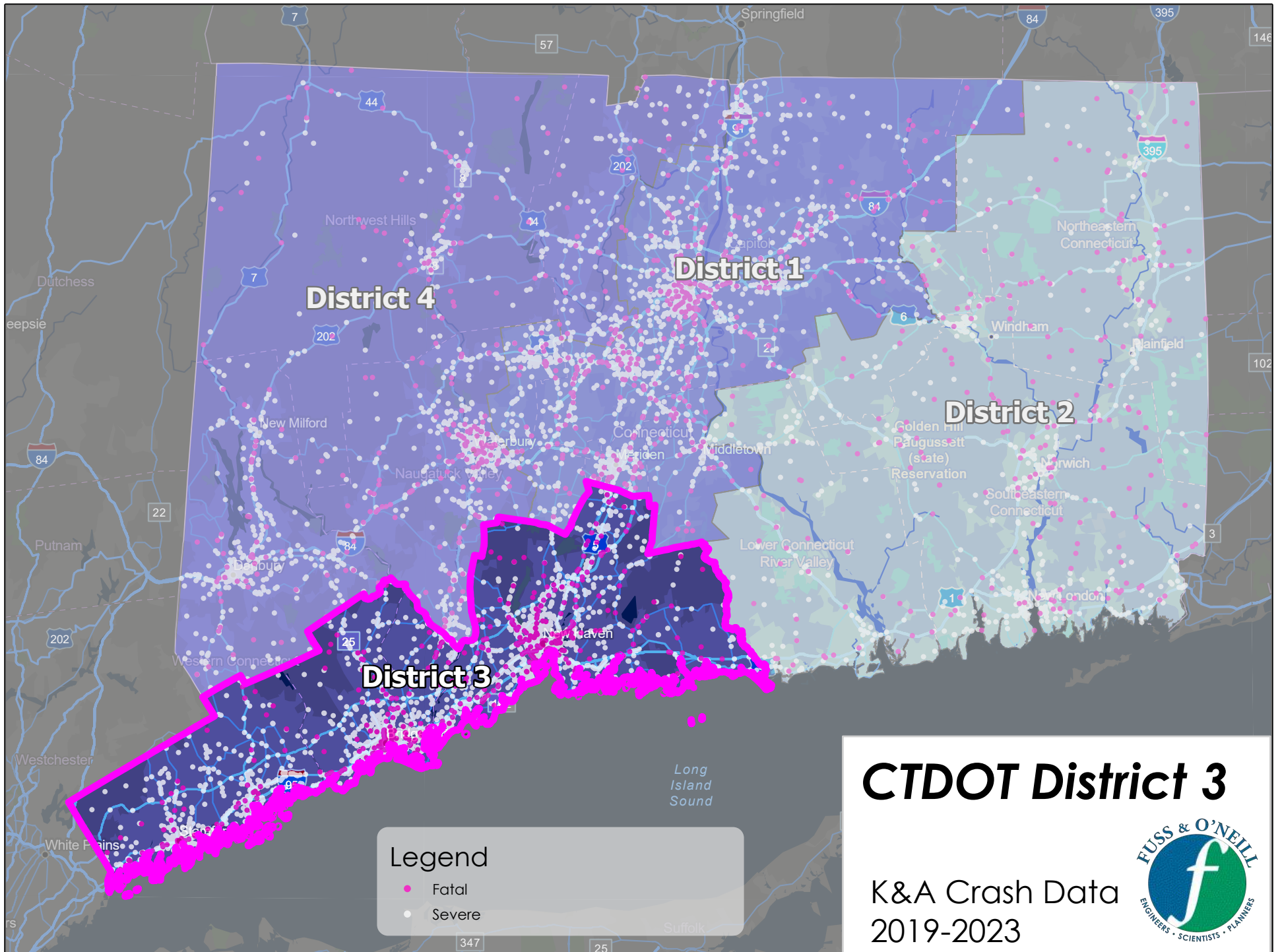
CTDOT District 2 Rural vs. Urban K&A Crash Data 2019-2023



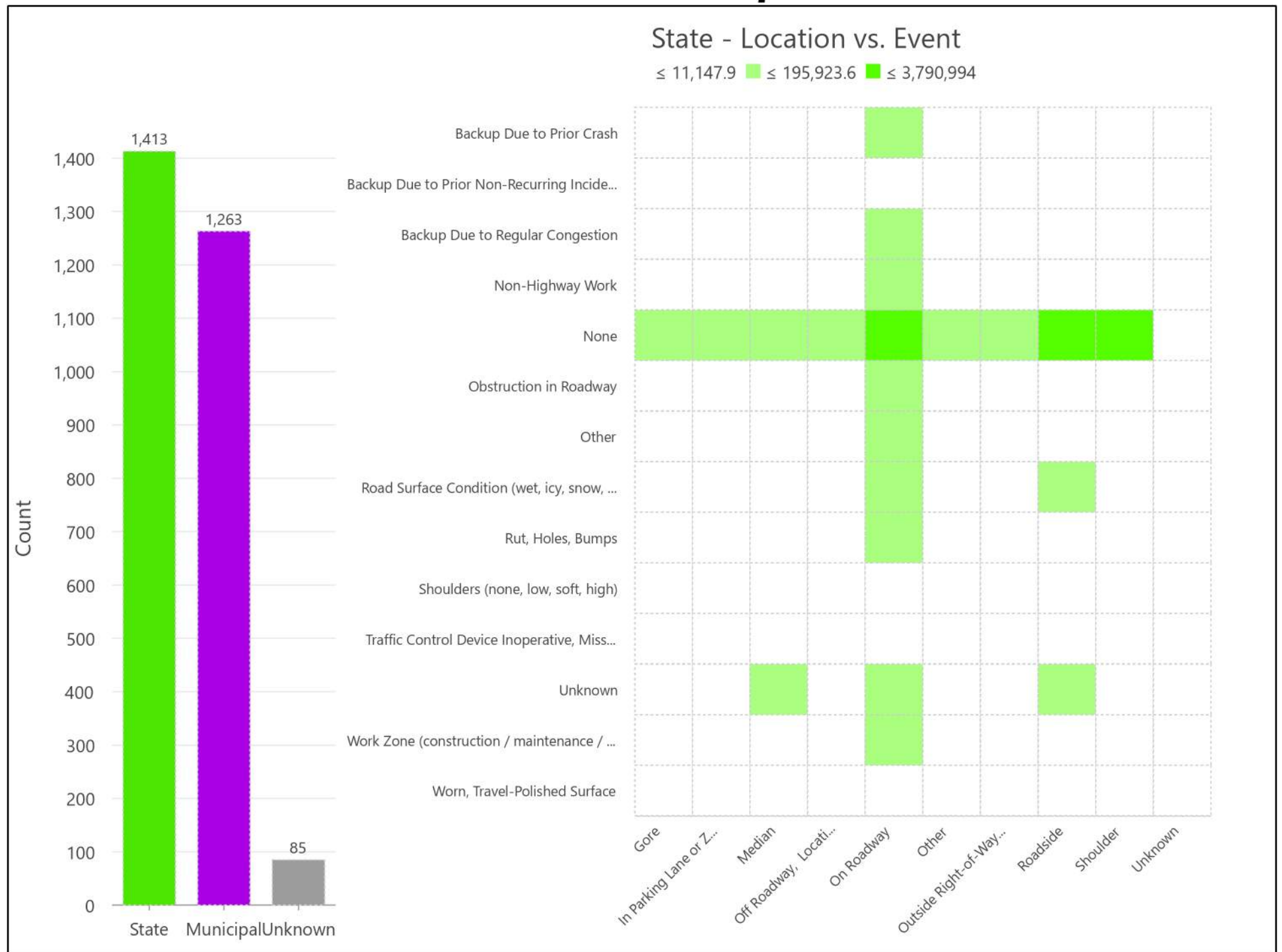
CTDOT District 2 Time & Conditions K&A Crash Data 2019-2023







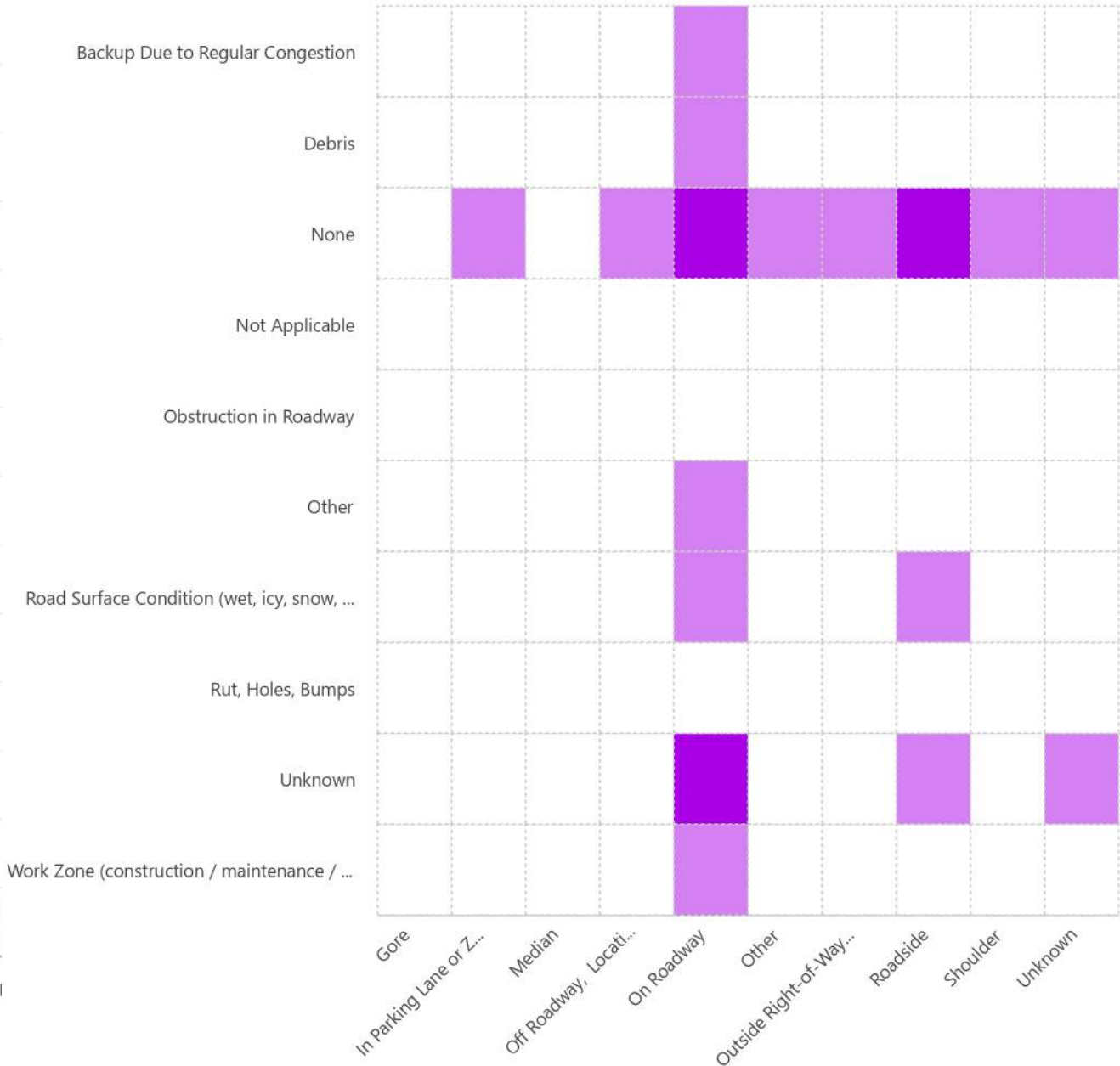
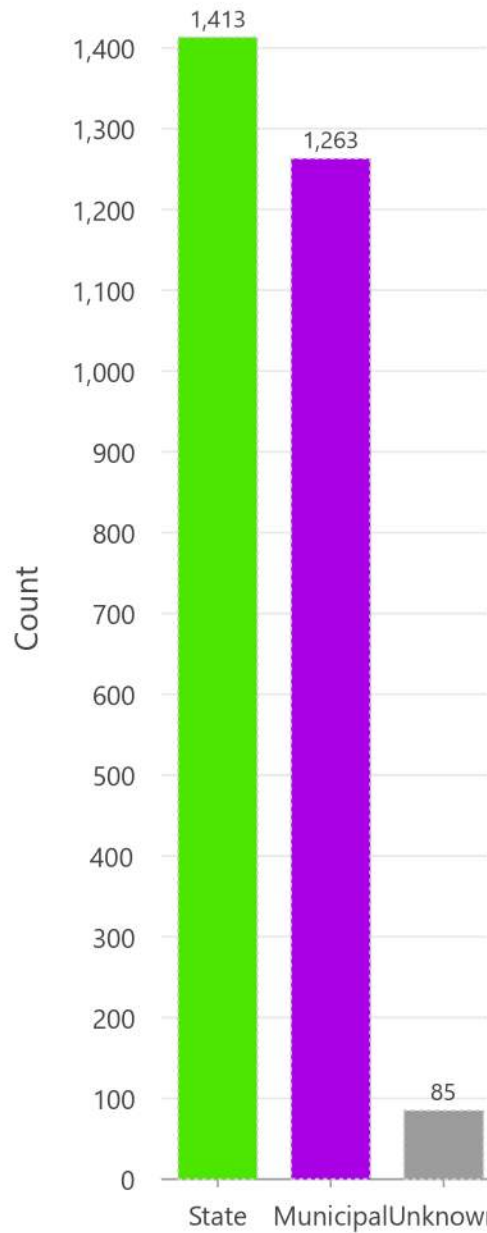
CTDOT District 3 State vs. Municipal Road



CTDOT District 3 State vs. Municipal Road

Municipal - Location vs. Event

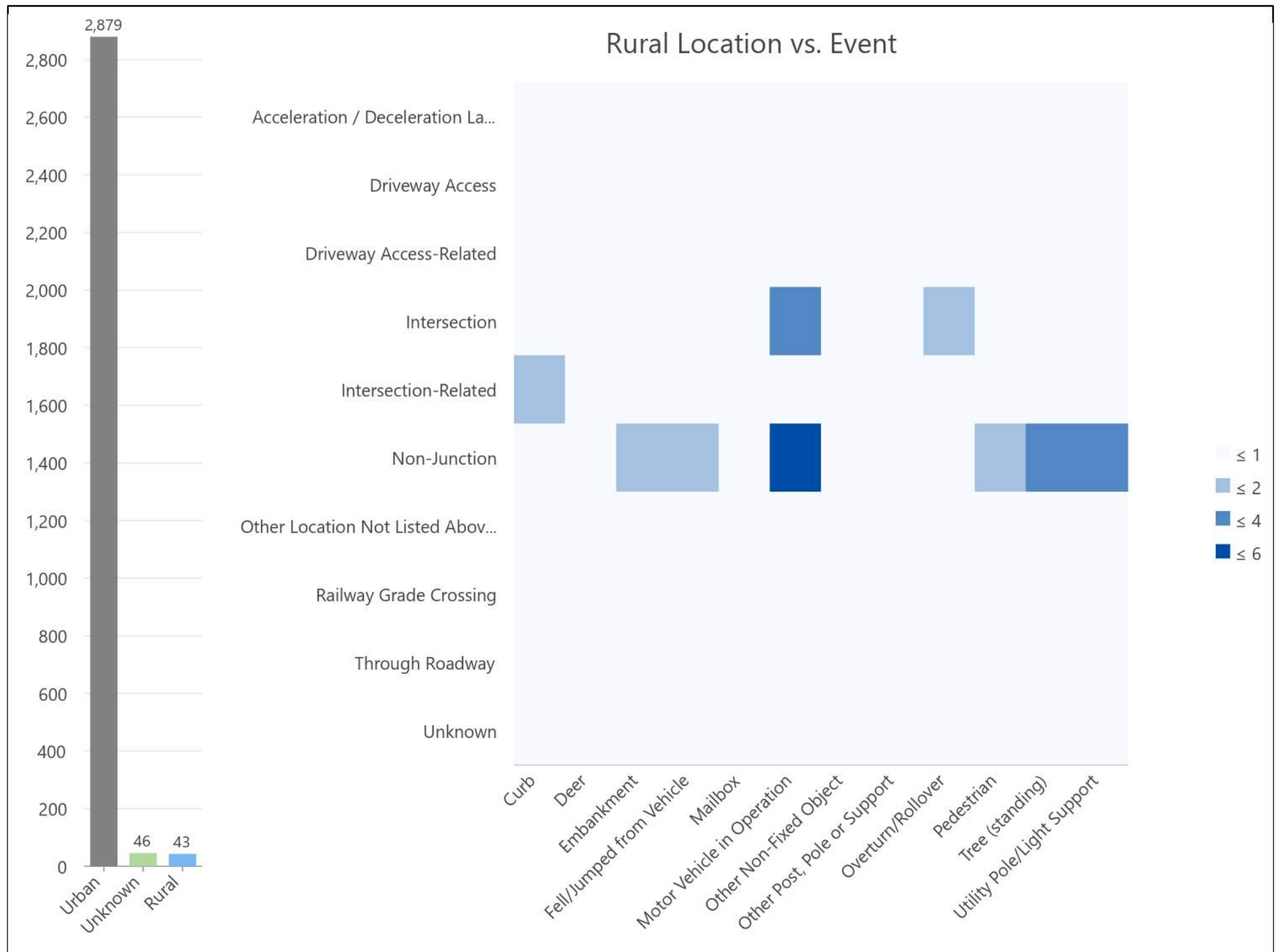
≤ 9,983.4 ≤ 186,875.1 ≤ 3,332,505



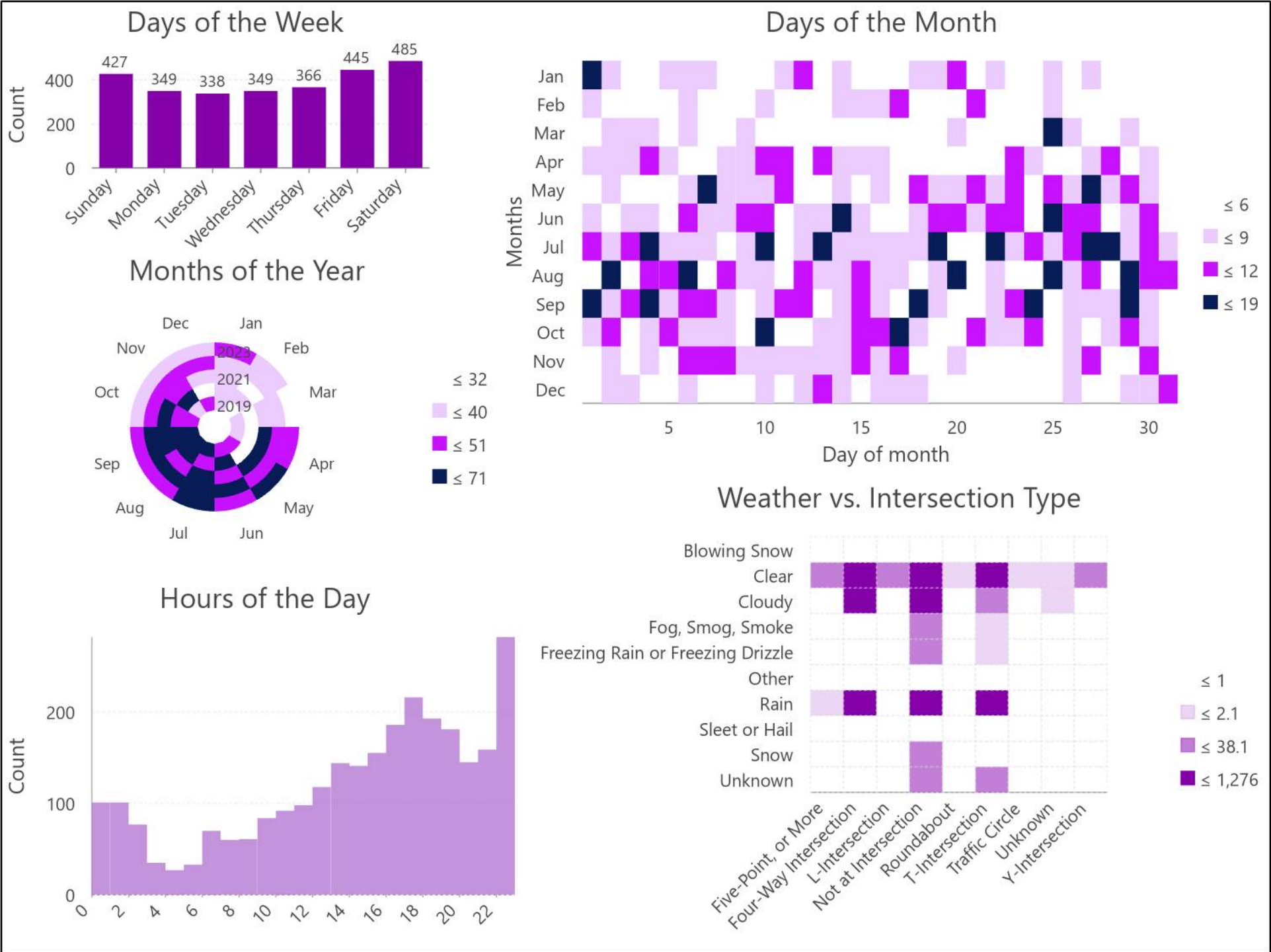
CTDOT District 3 Rural vs. Urban K&A Crash Data 2019-2023

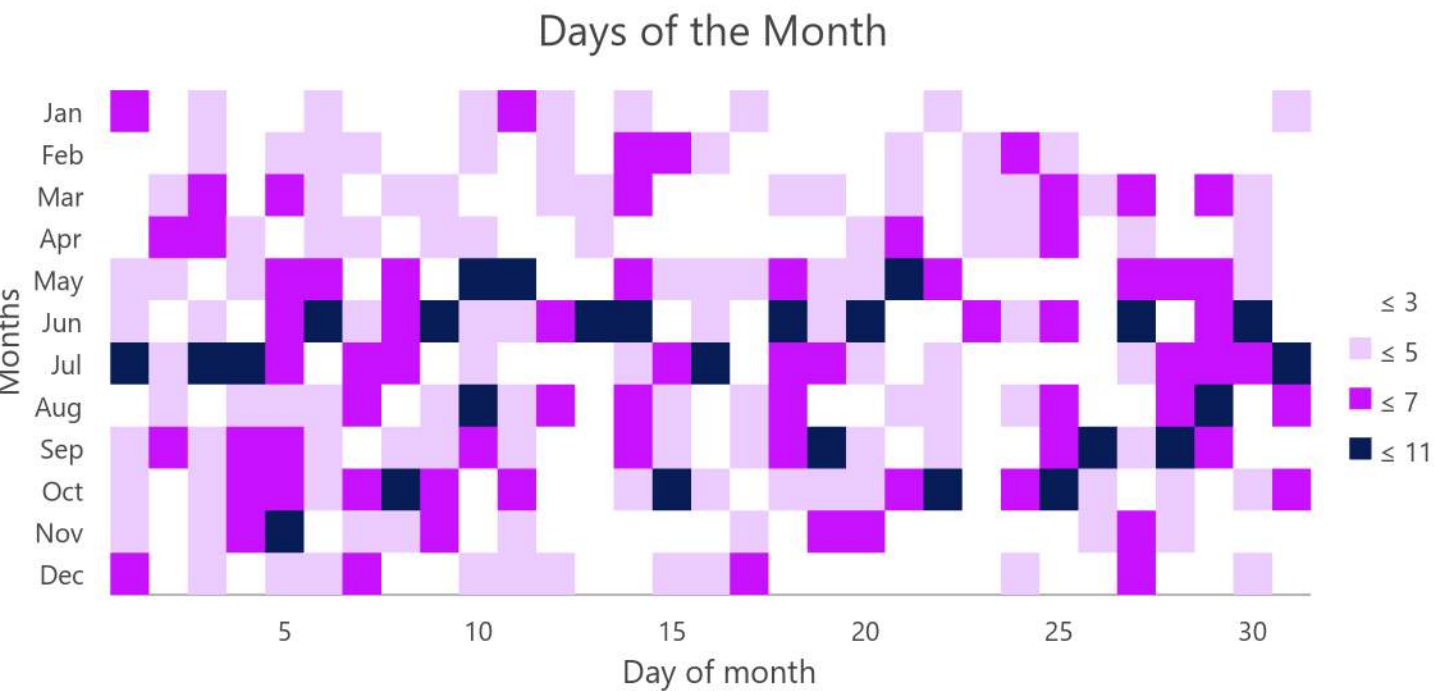
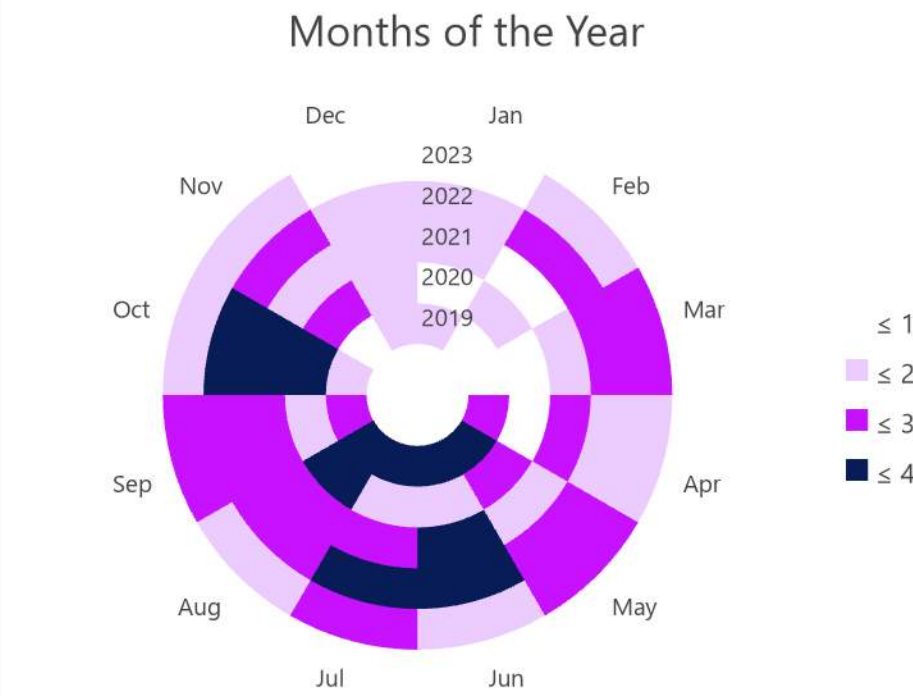
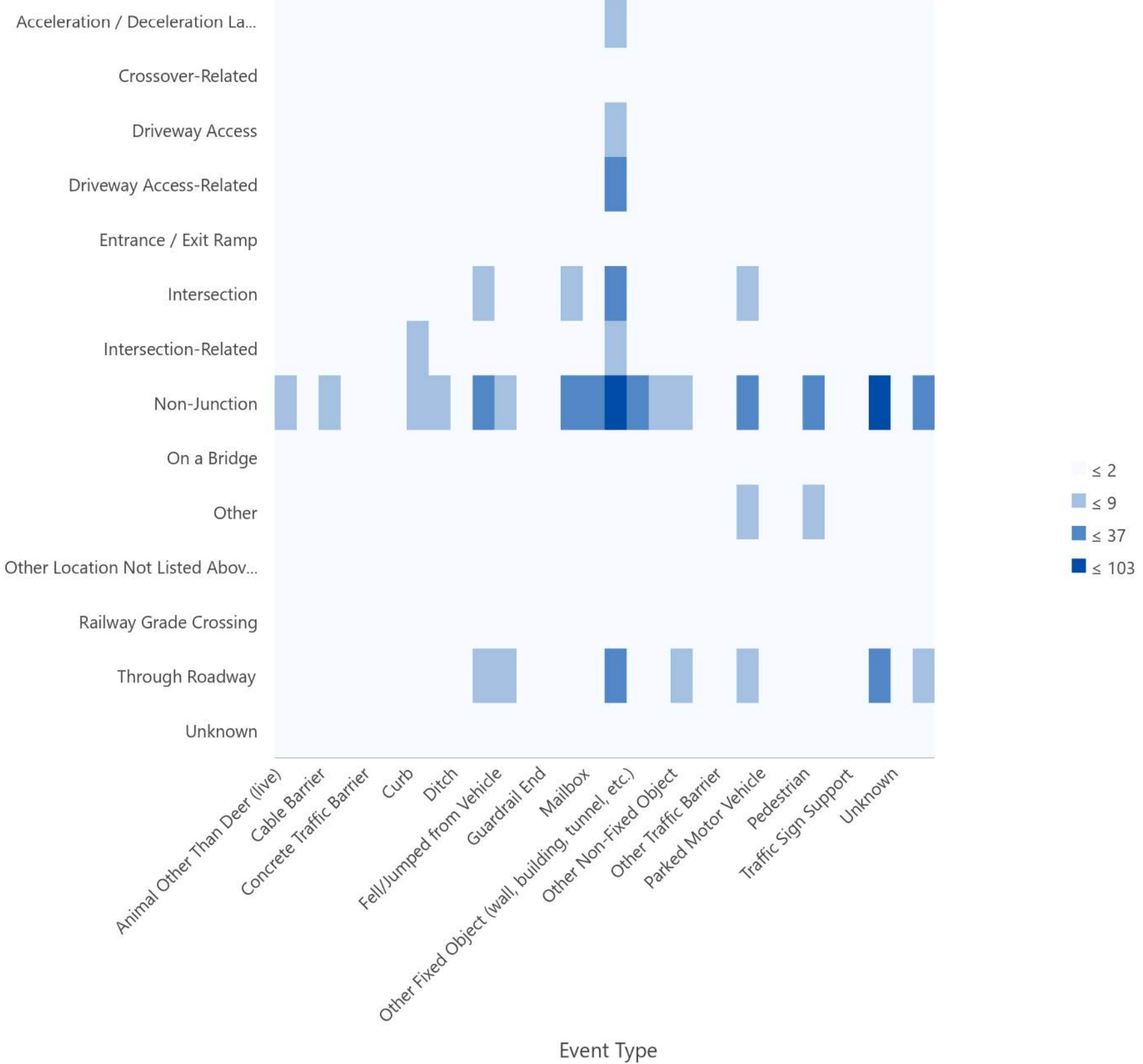
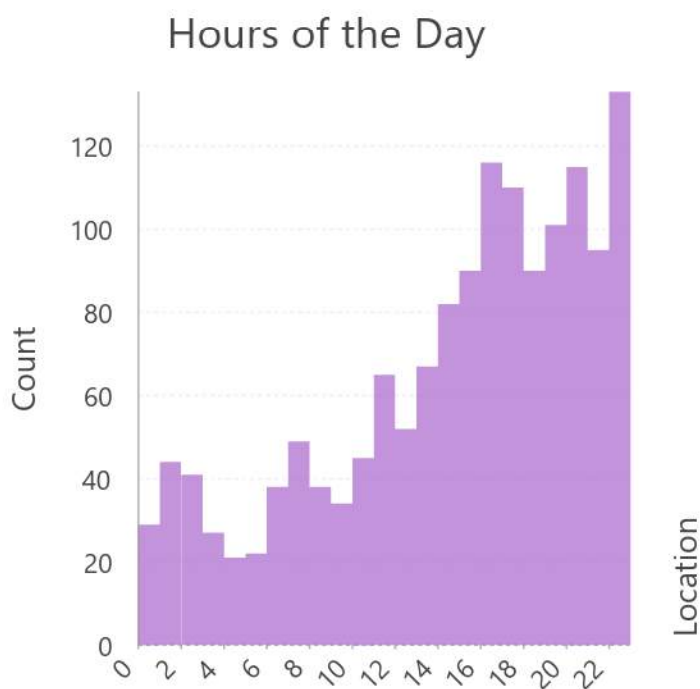
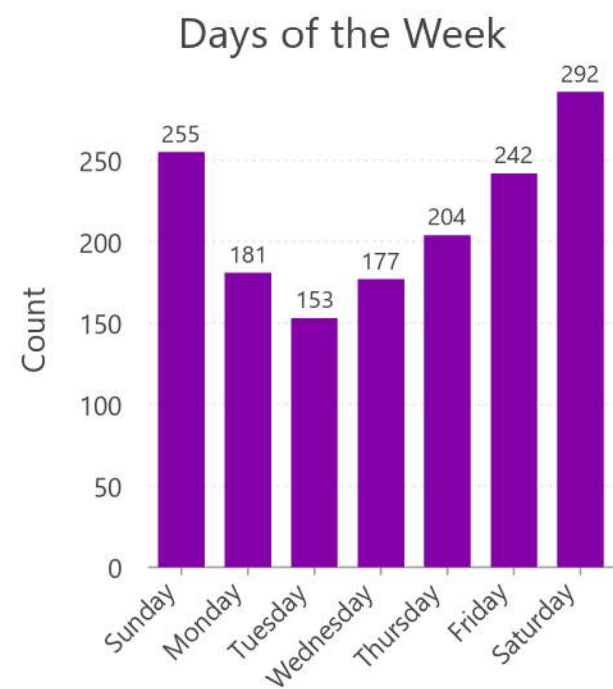
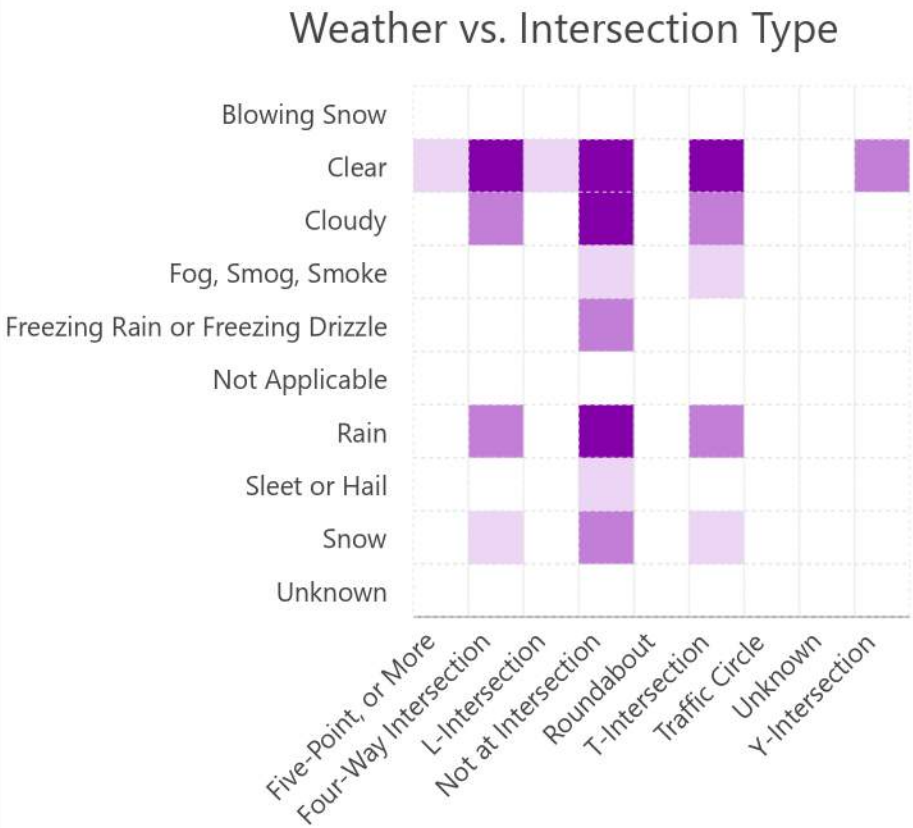
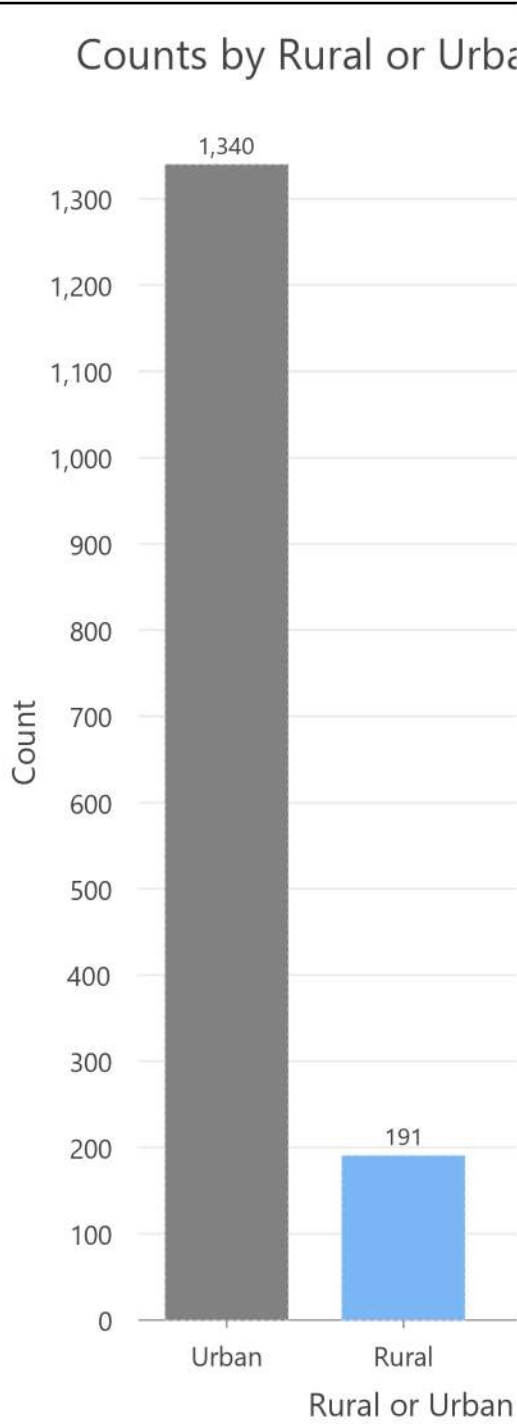
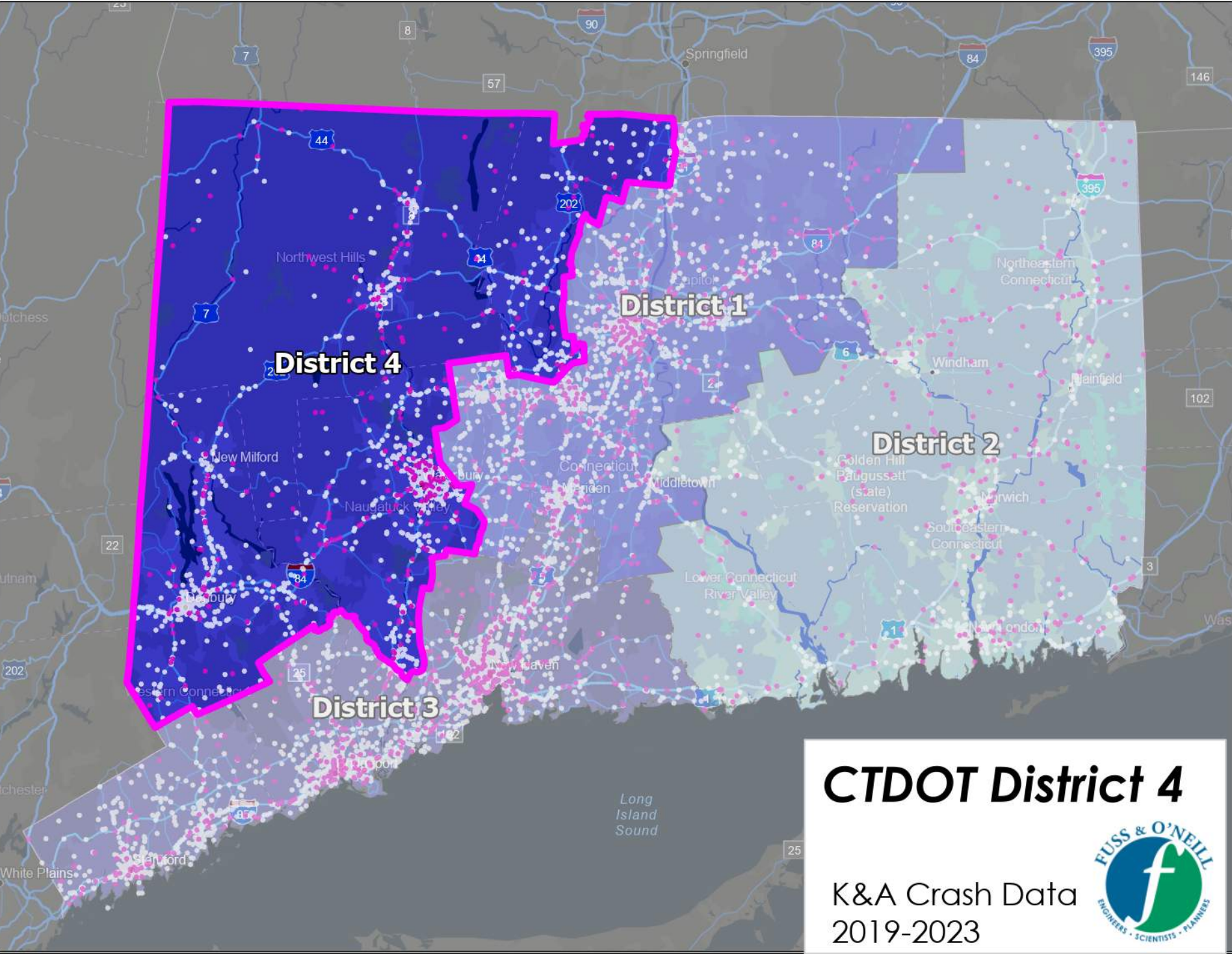


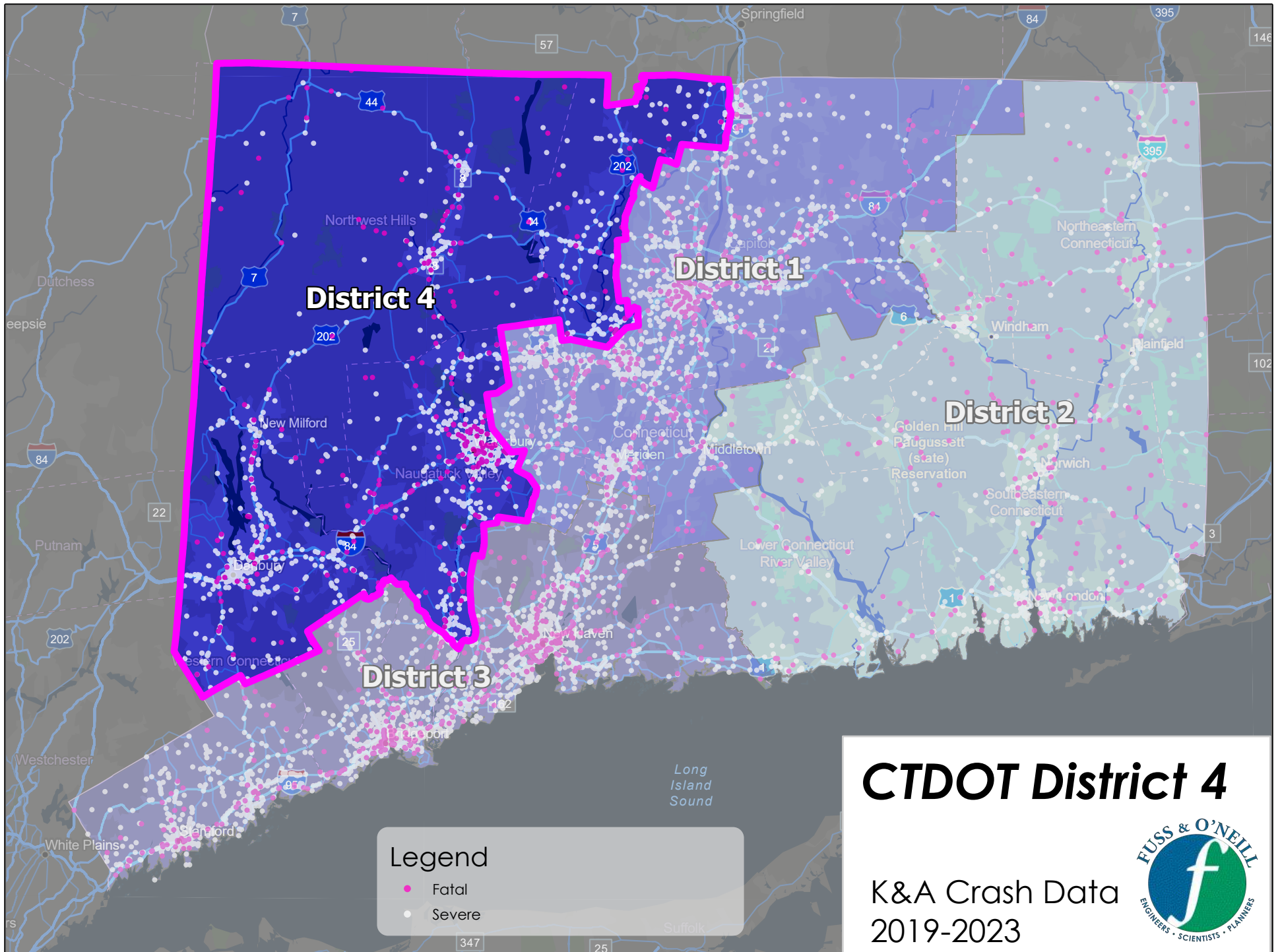
CTDOT District 3 Rural vs. Urban K&A Crash Data 2019-2023



CTDOT District 3 Time & Conditions K&A Crash Data 2019-2023







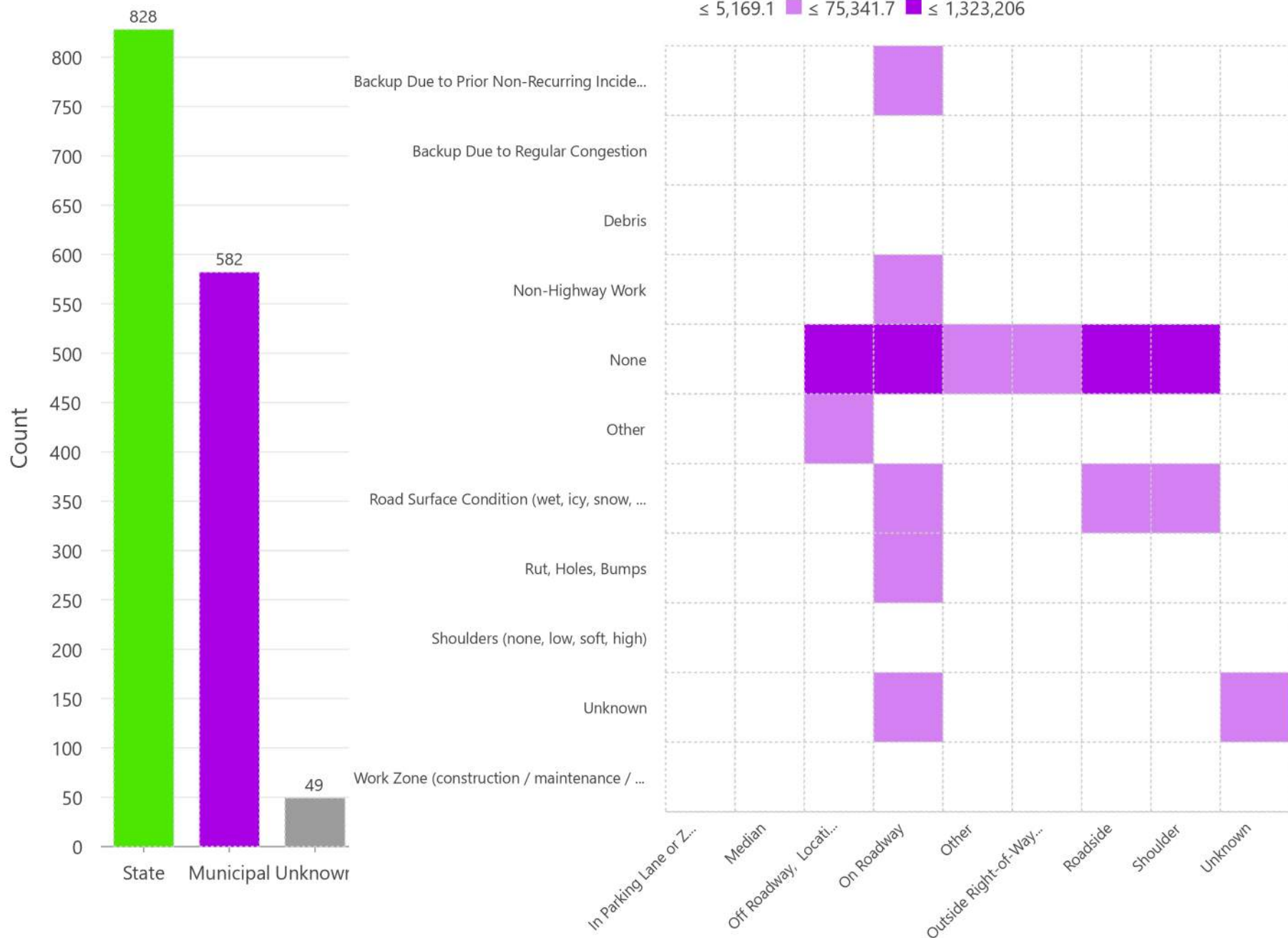
CTDOT District 4 State vs. Municipal Road



CTDOT District 4 State vs. Municipal Road

Municipal - Location vs. Event

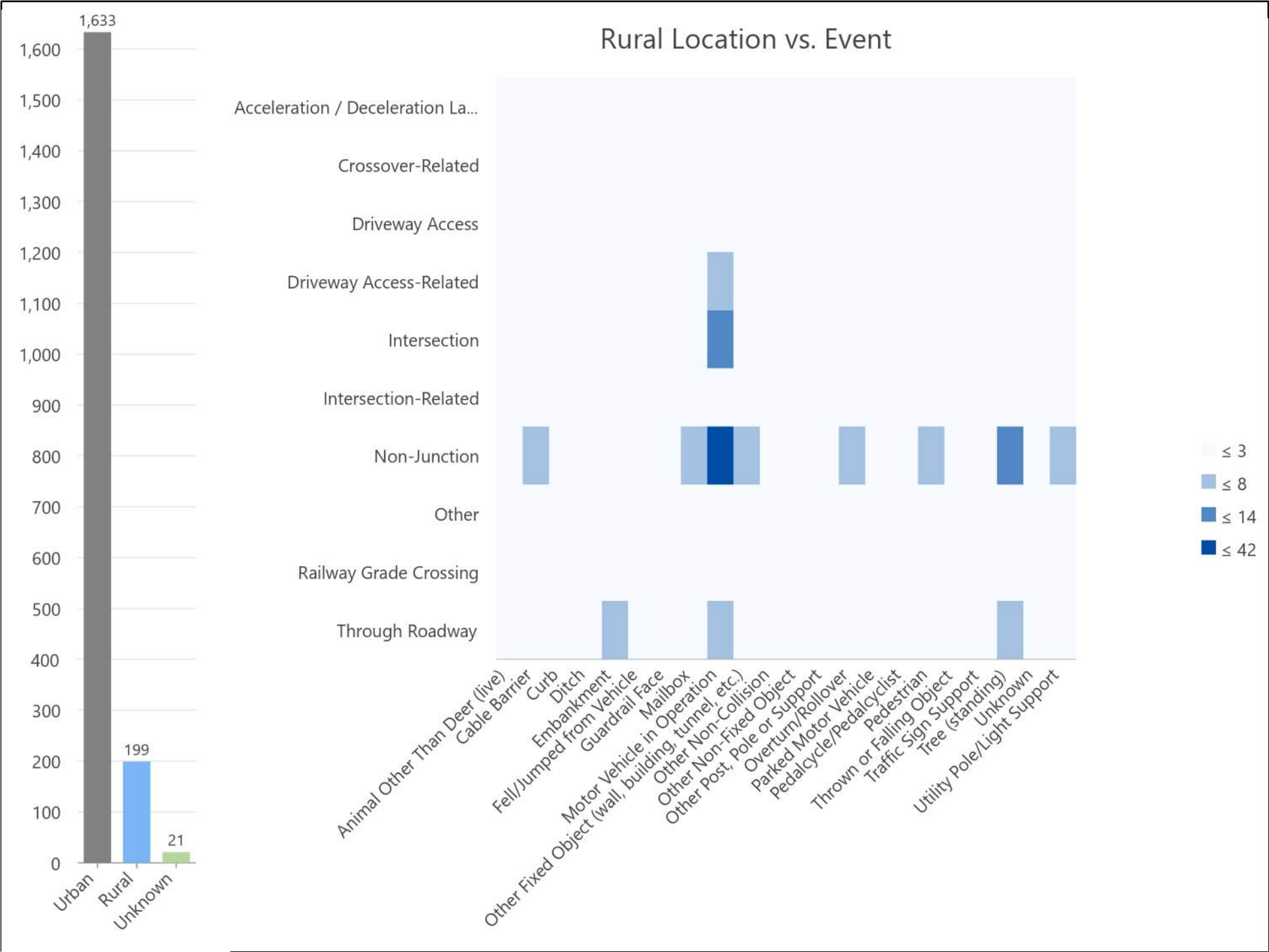
≤ 5,169.1 ≤ 75,341.7 ≤ 1,323,206



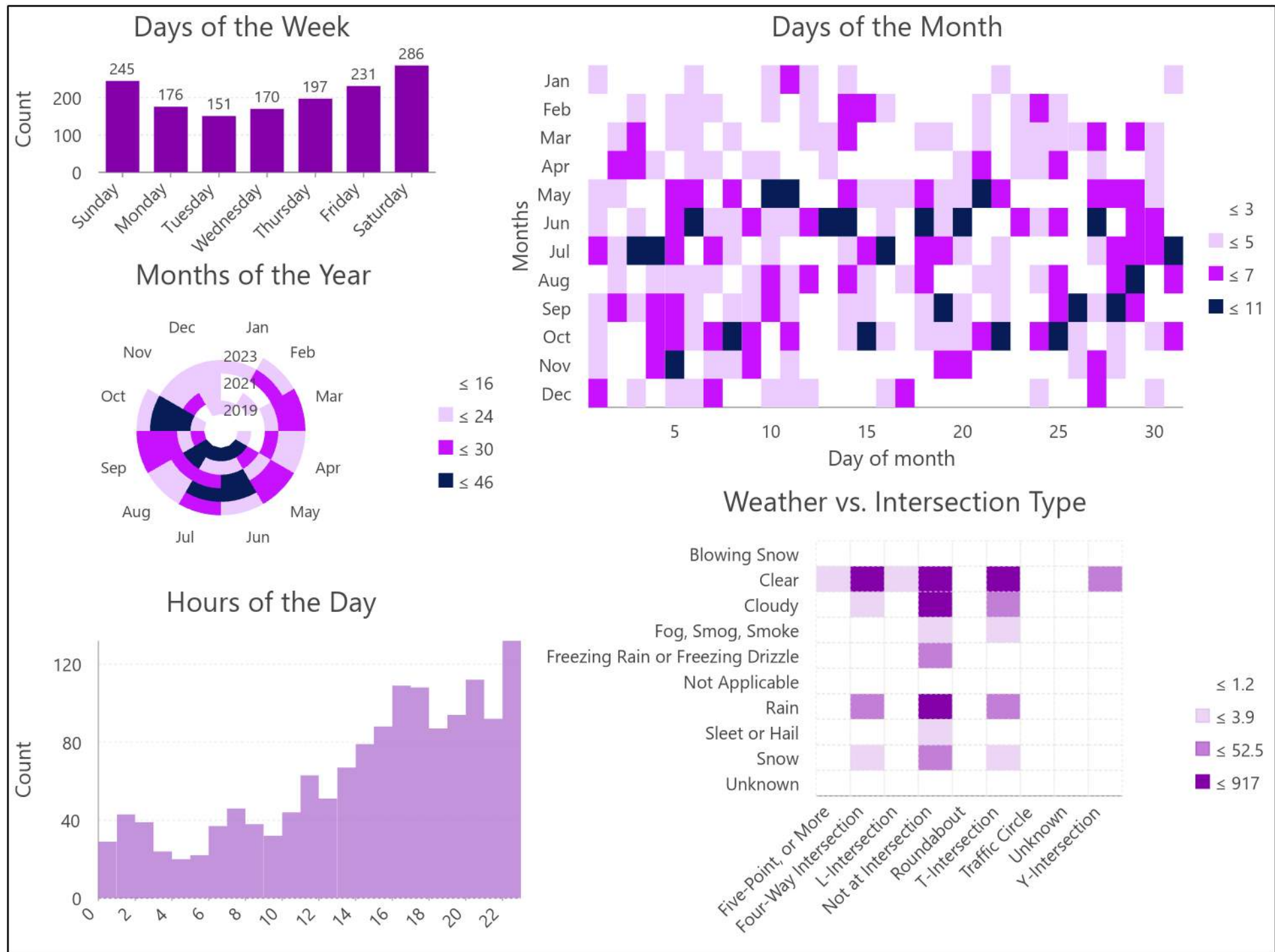
CTDOT District 4 Rural vs. Urban K&A Crash Data 2019-2023



CTDOT District 4 Rural vs. Urban K&A Crash Data 2019-2023

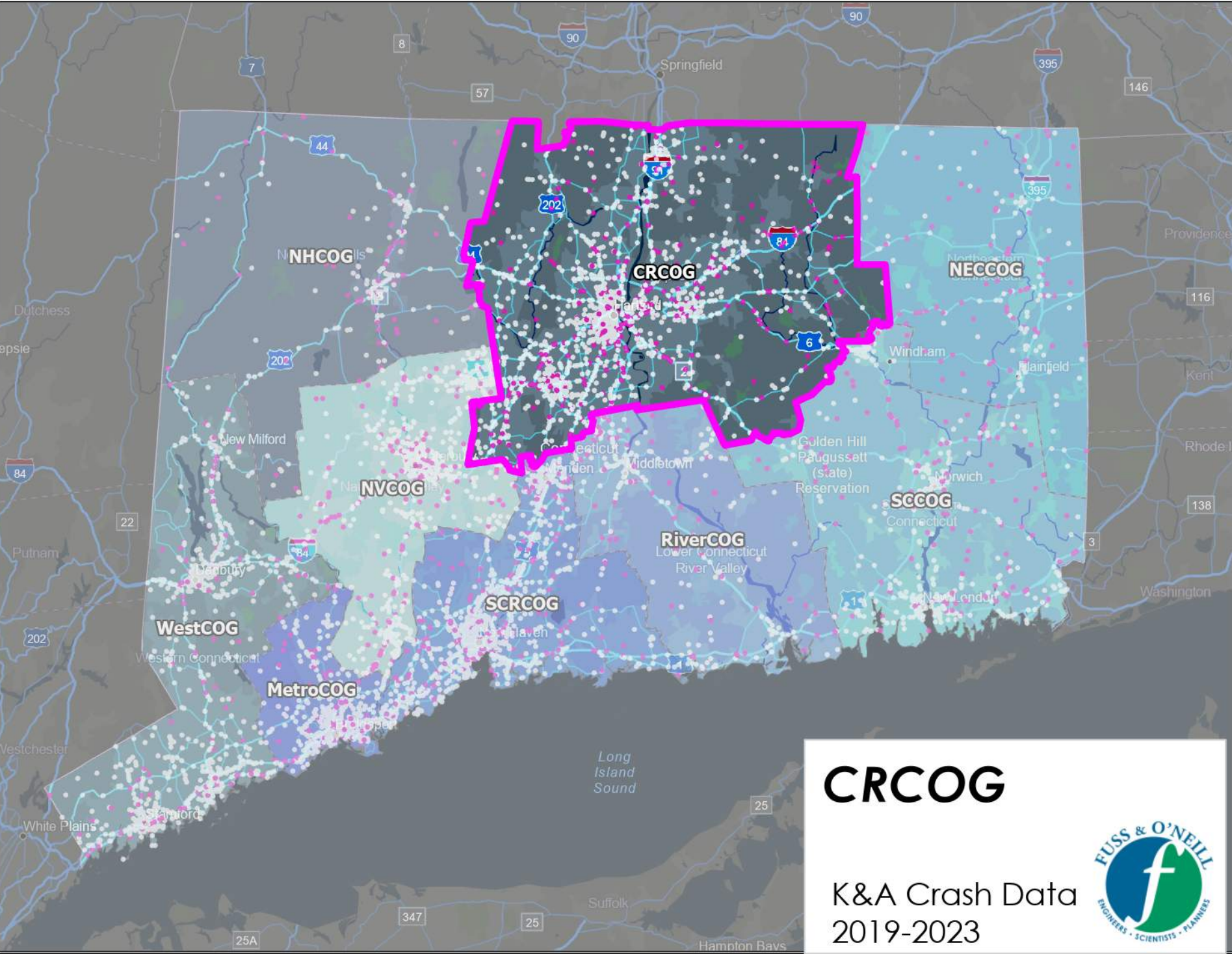


CTDOT District 4 Time & Conditions K&A Crash Data 2019-2023

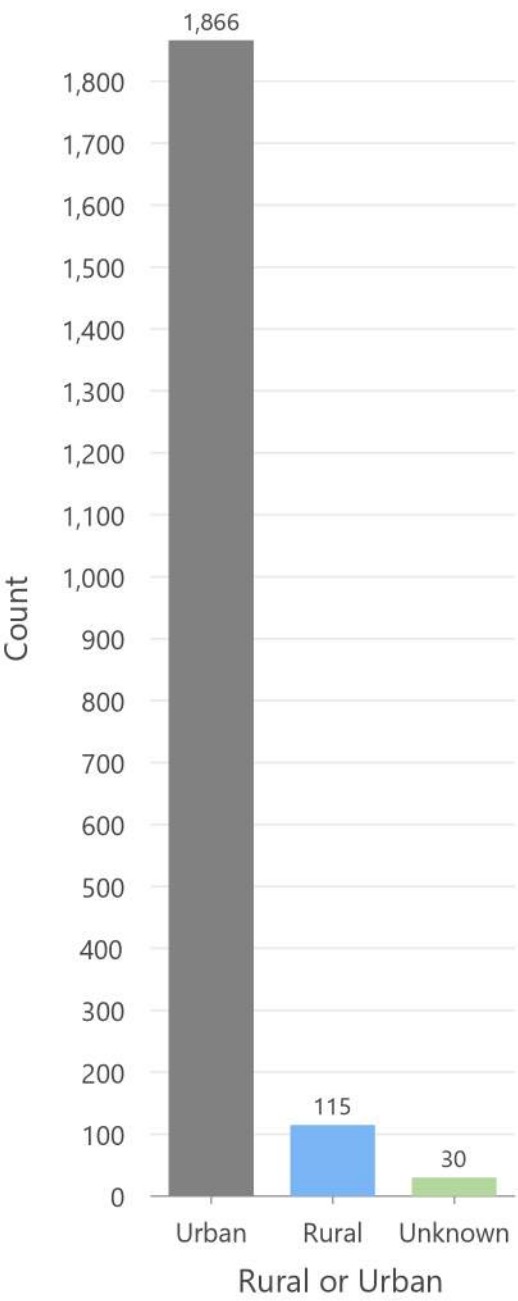


APPENDIX D:

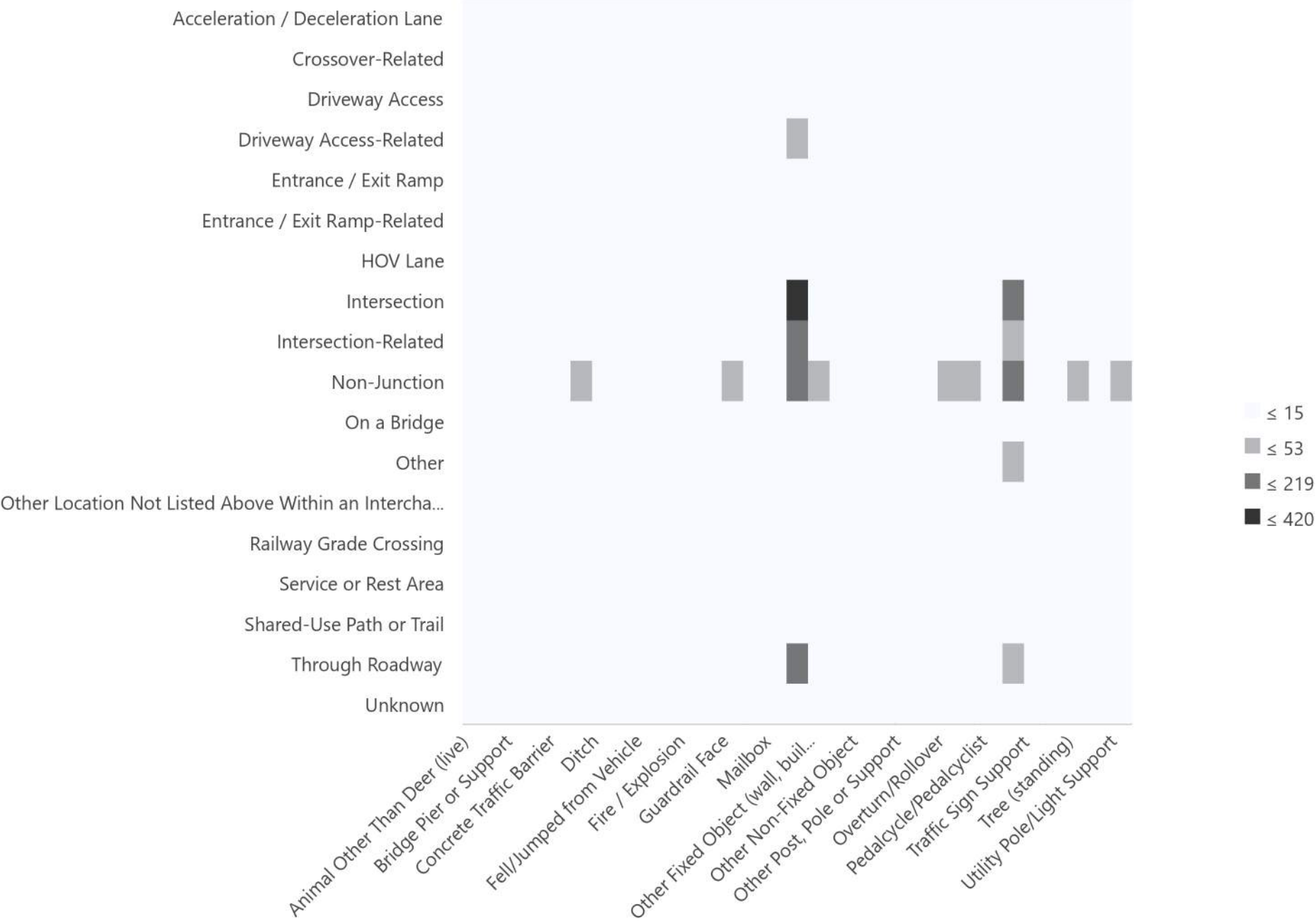
COG Data



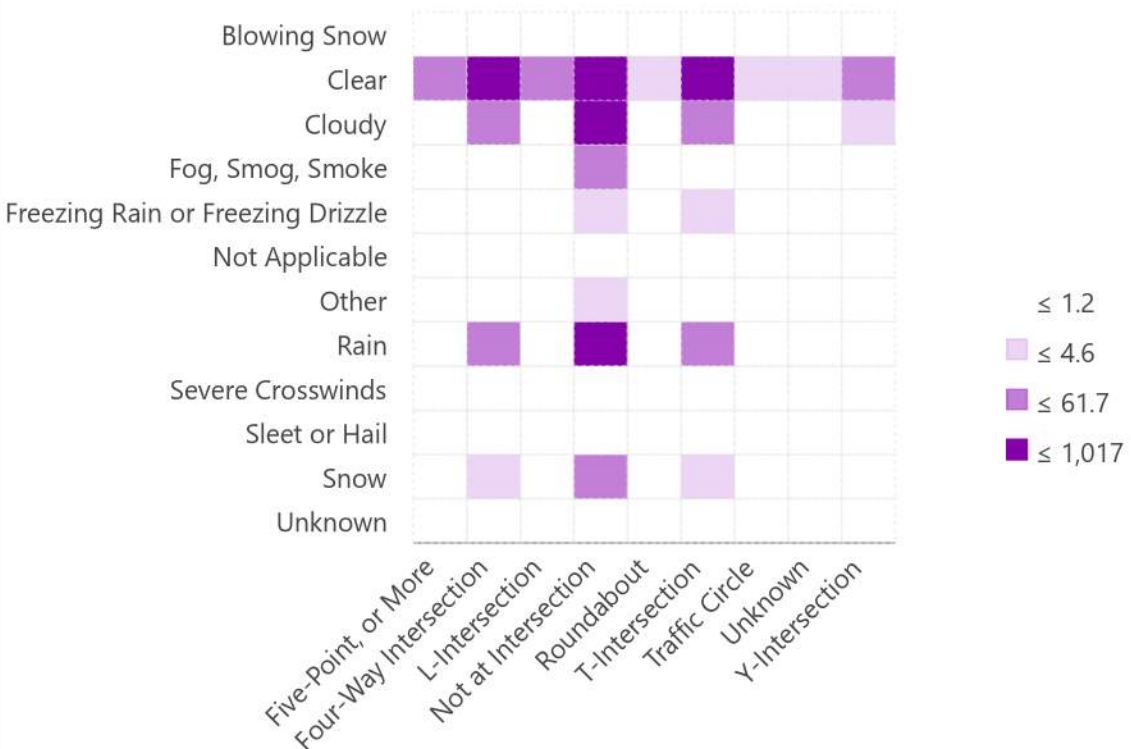
Counts by Rural or Urban Te



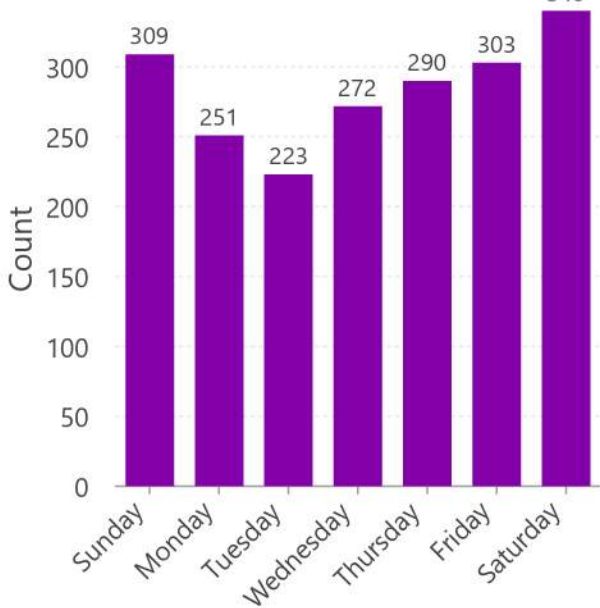
Urban - Location vs. Event



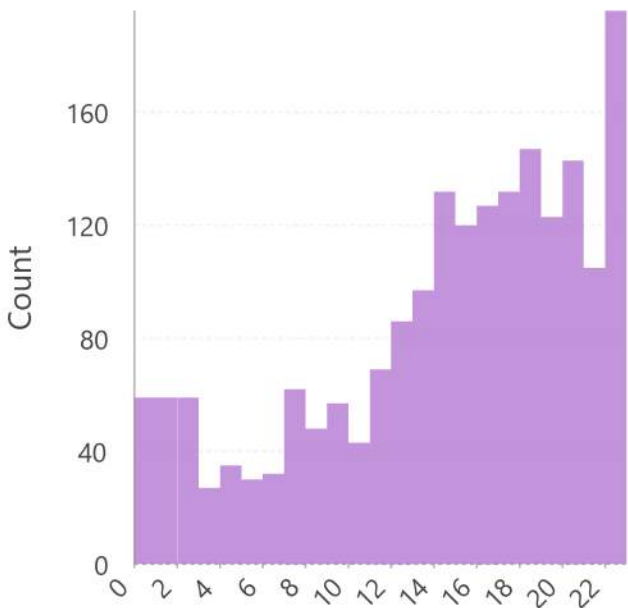
Weather vs. Intersection Type



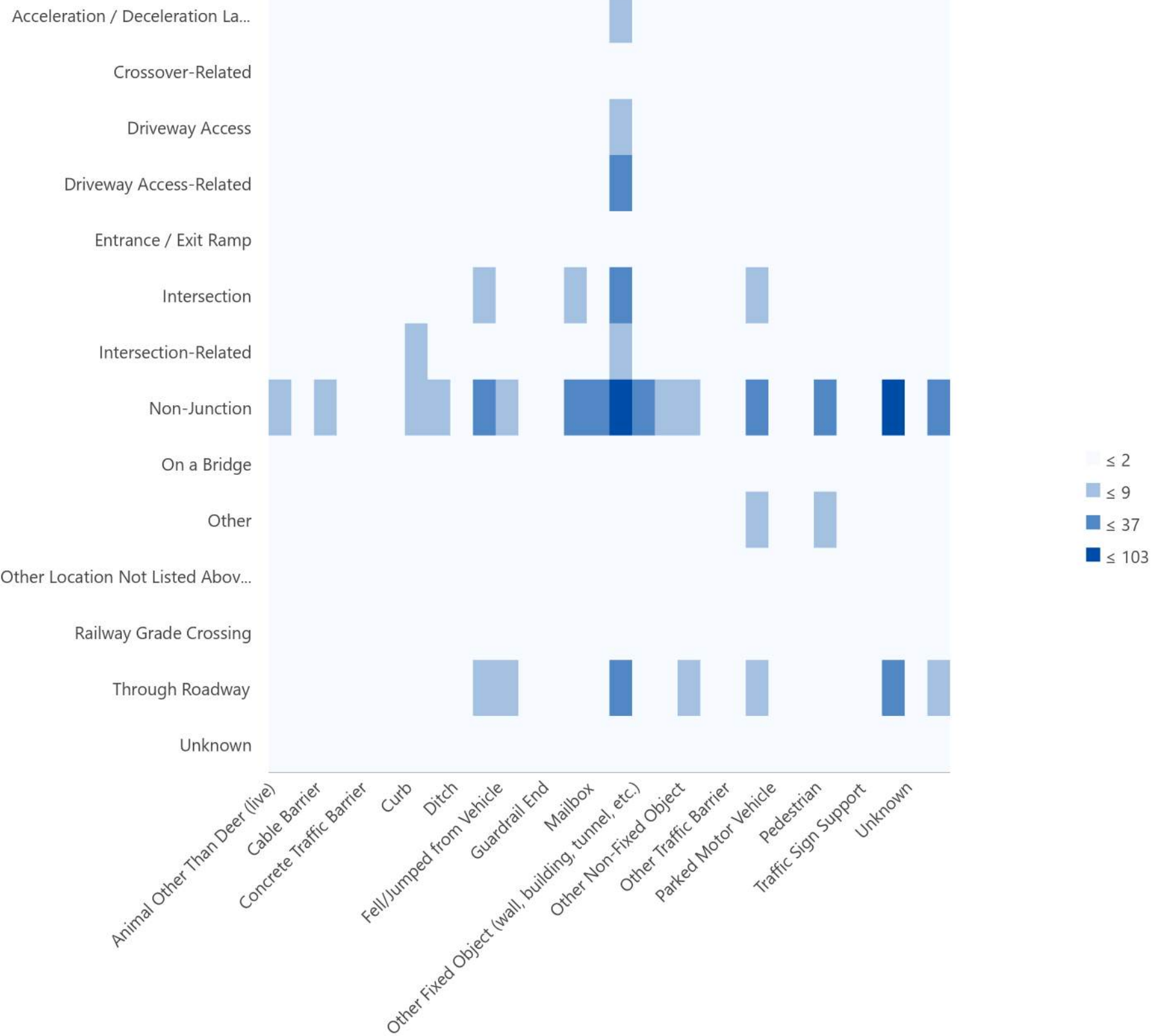
Days of the Week



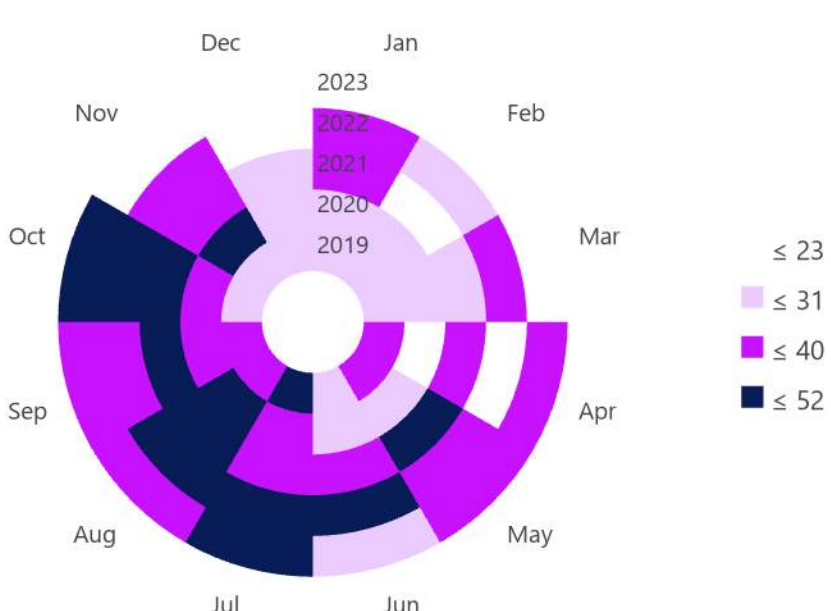
Hours of the Day



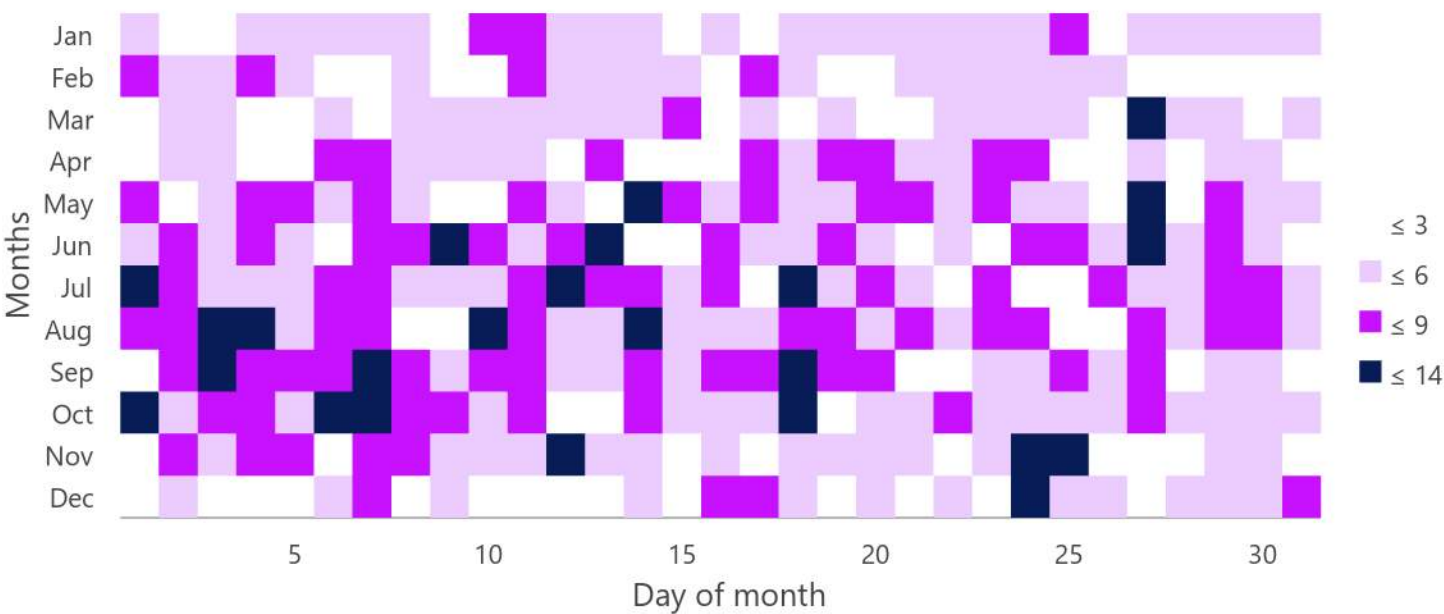
Rural Location vs. Event

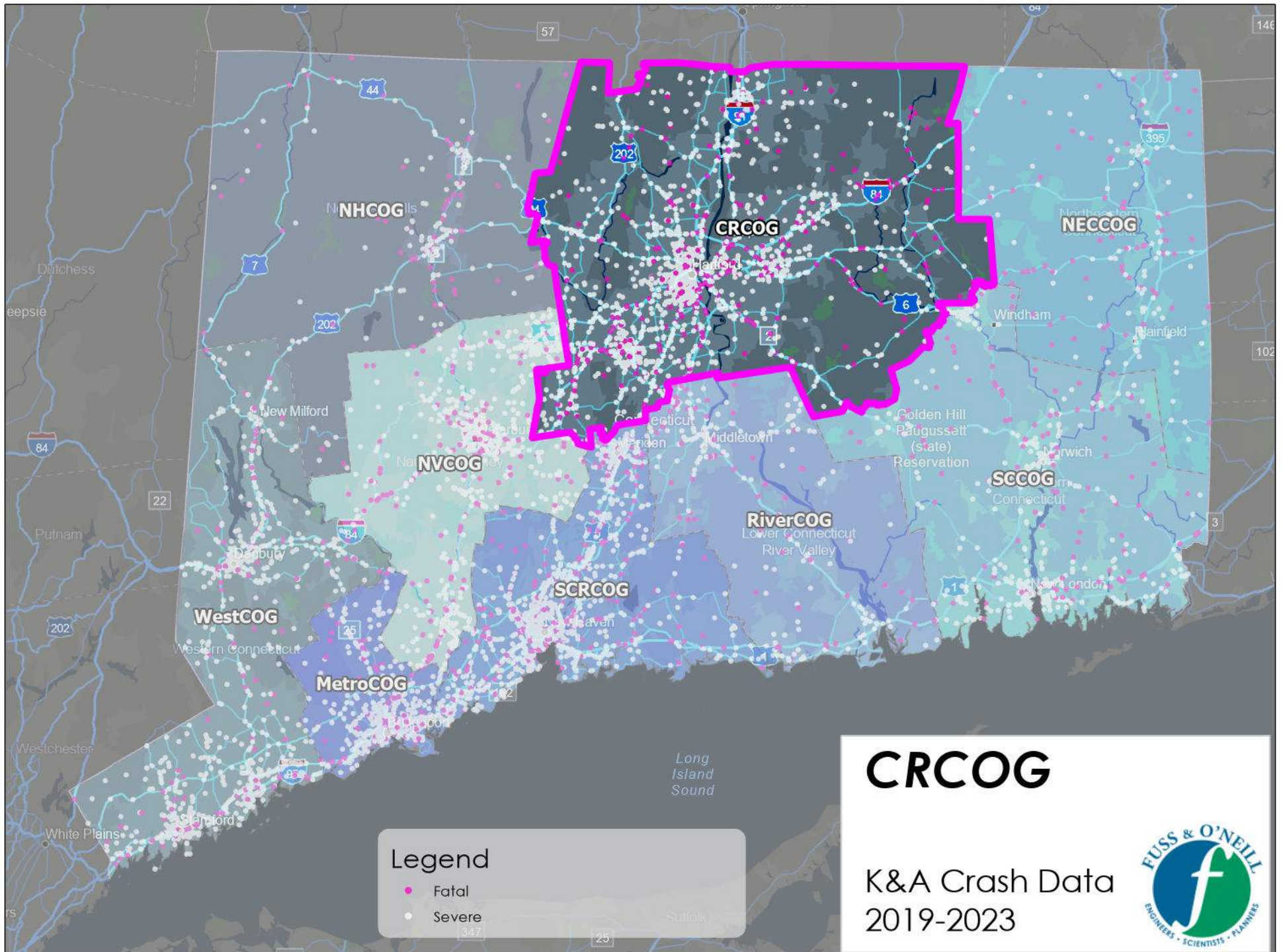


Months of the Year

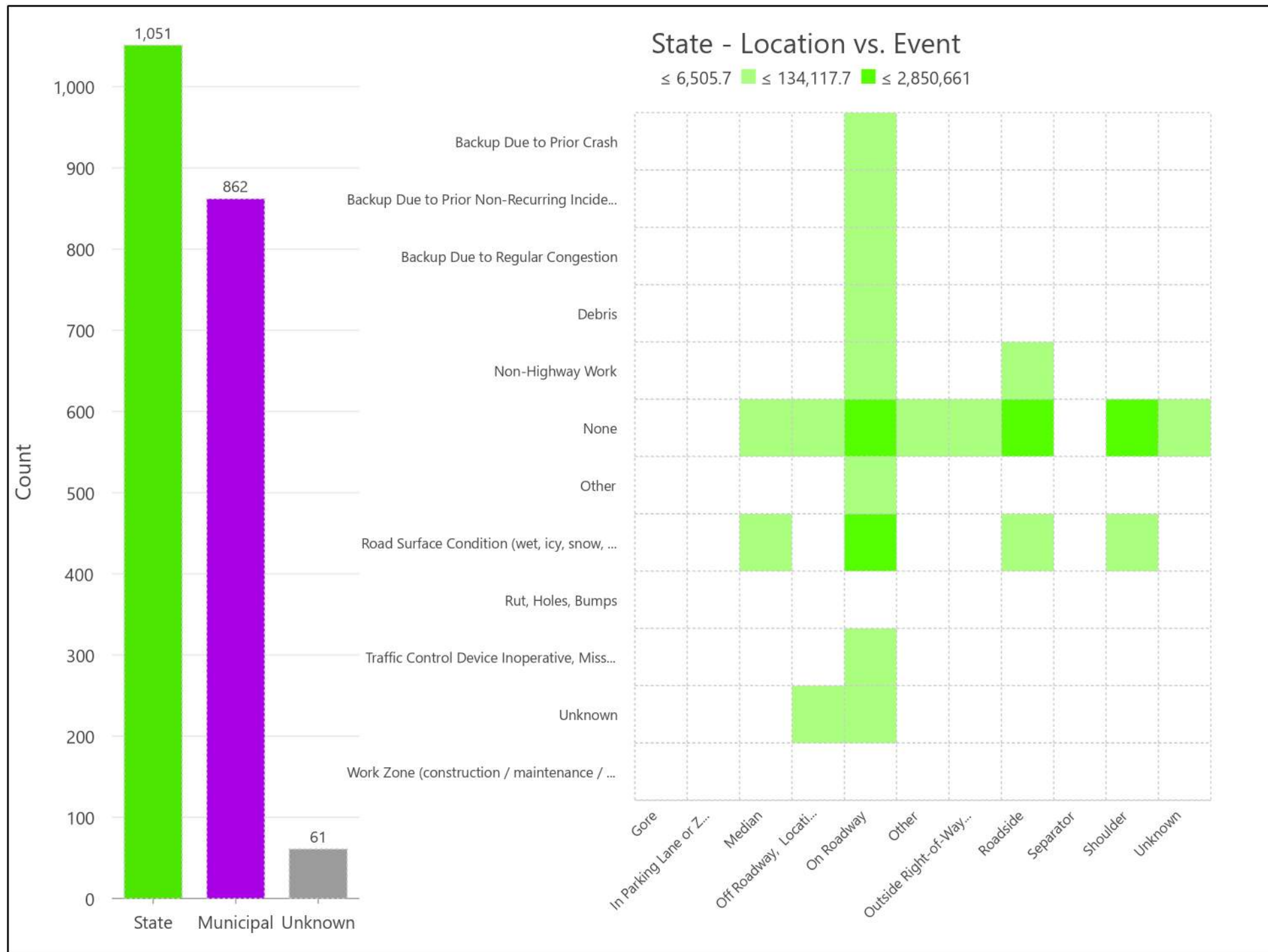


Days of the Month

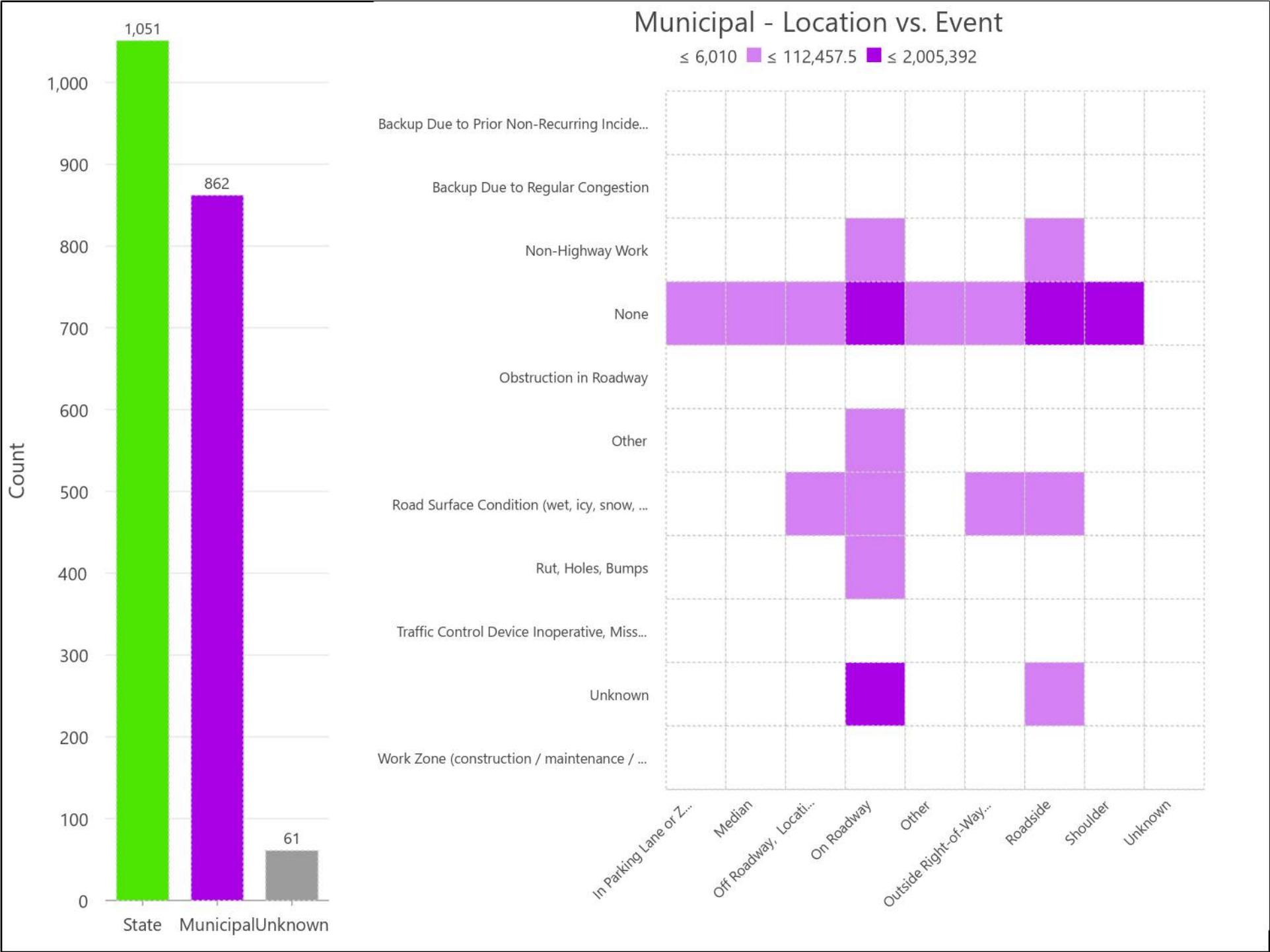




CRCOG State vs. Municipal Road K&A Crash Data 2019-2023



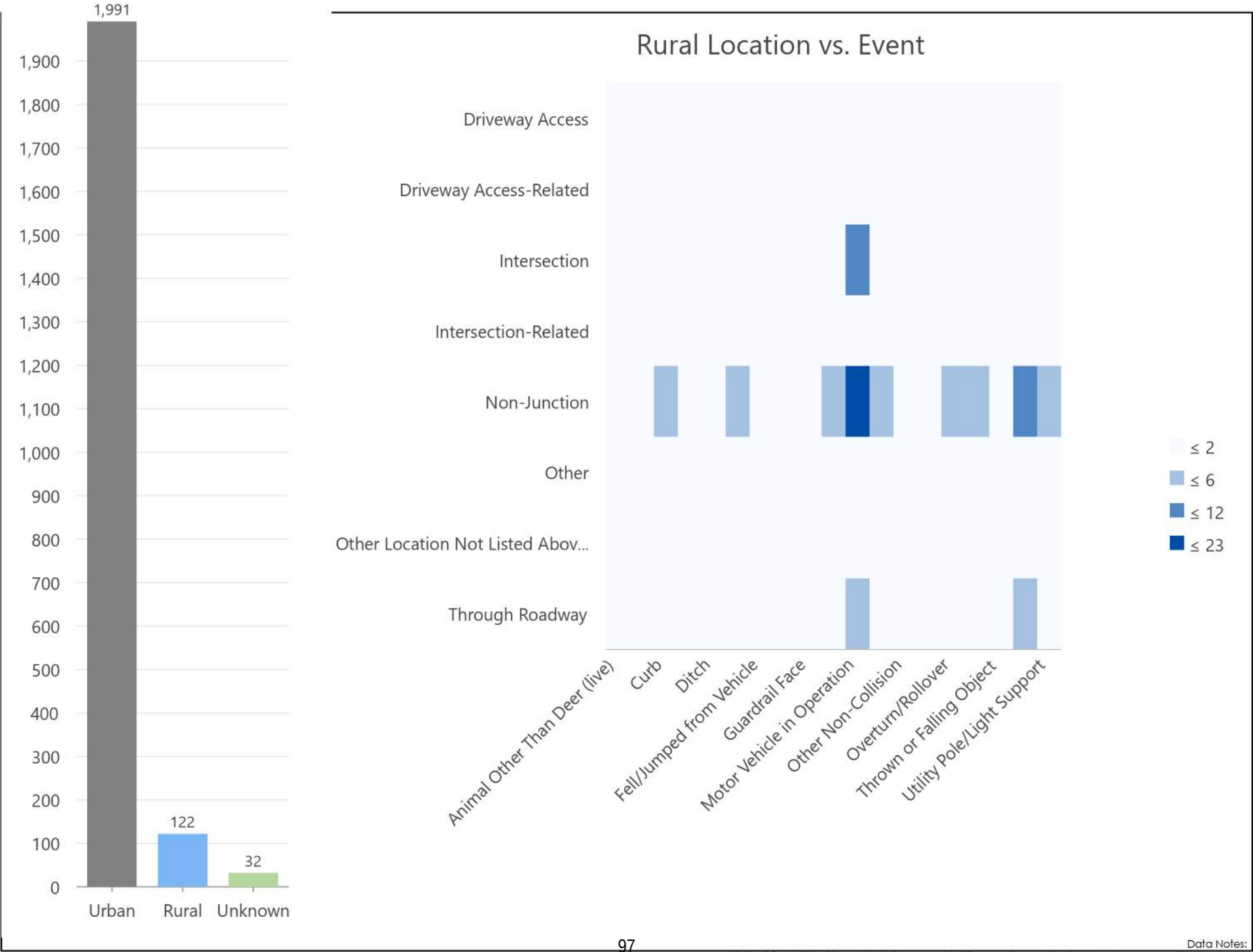
CRCOG State vs. Municipal Road K&A Crash Data 2019-2023



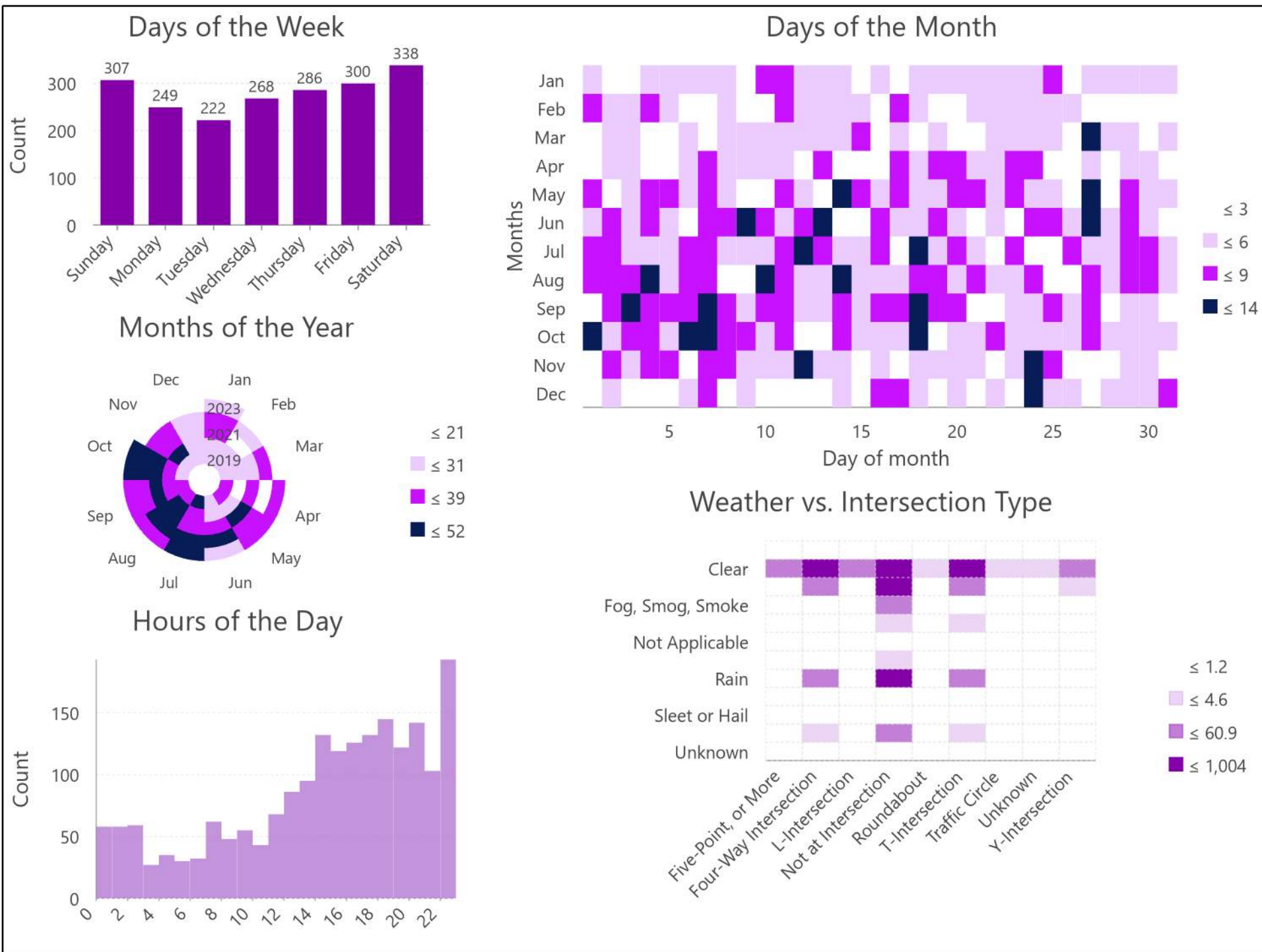
CRCOG Rural vs. Urban K&A Crash Data 2019-2023

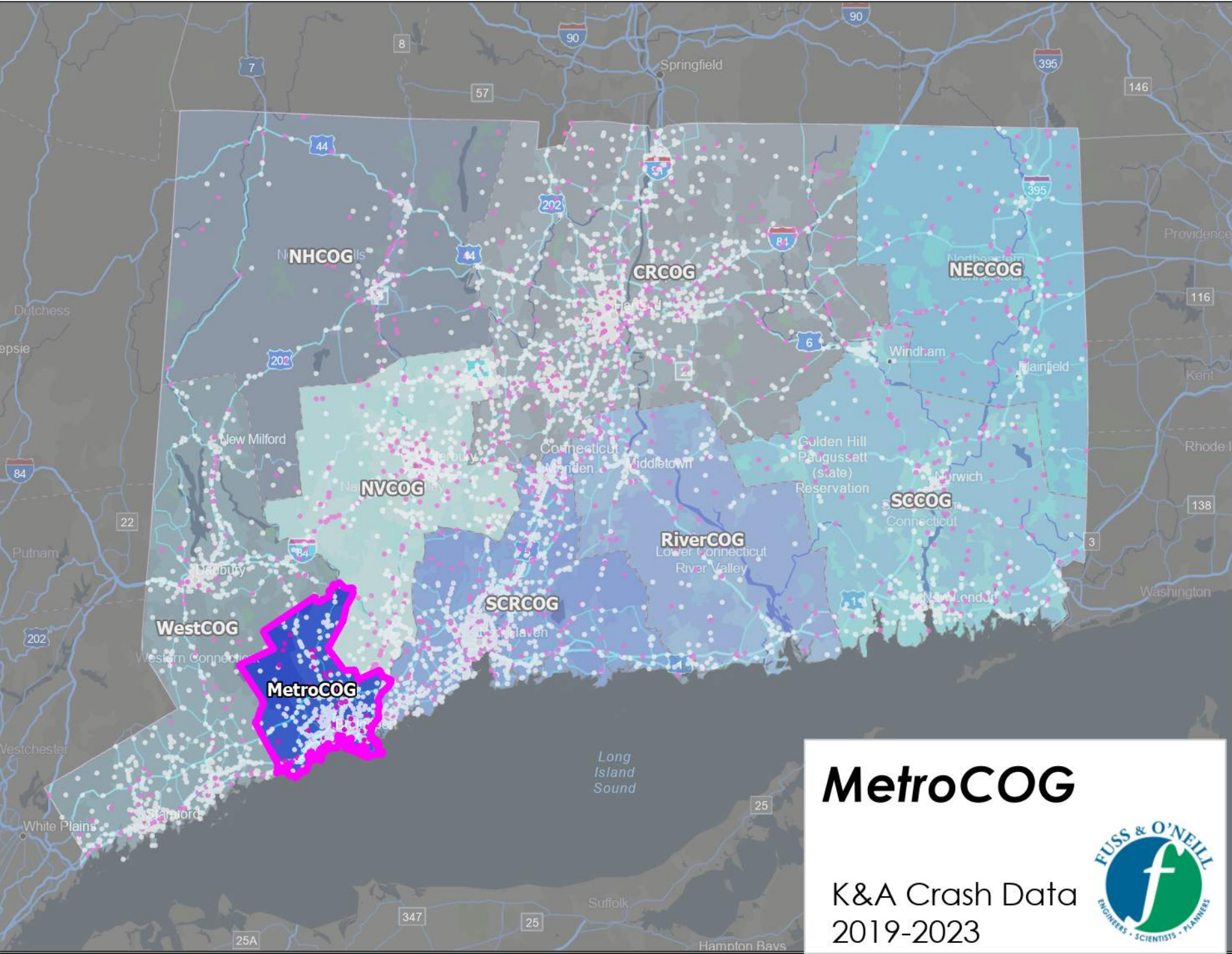


CRCOG Rural vs. Urban K&A Crash Data 2019-2023

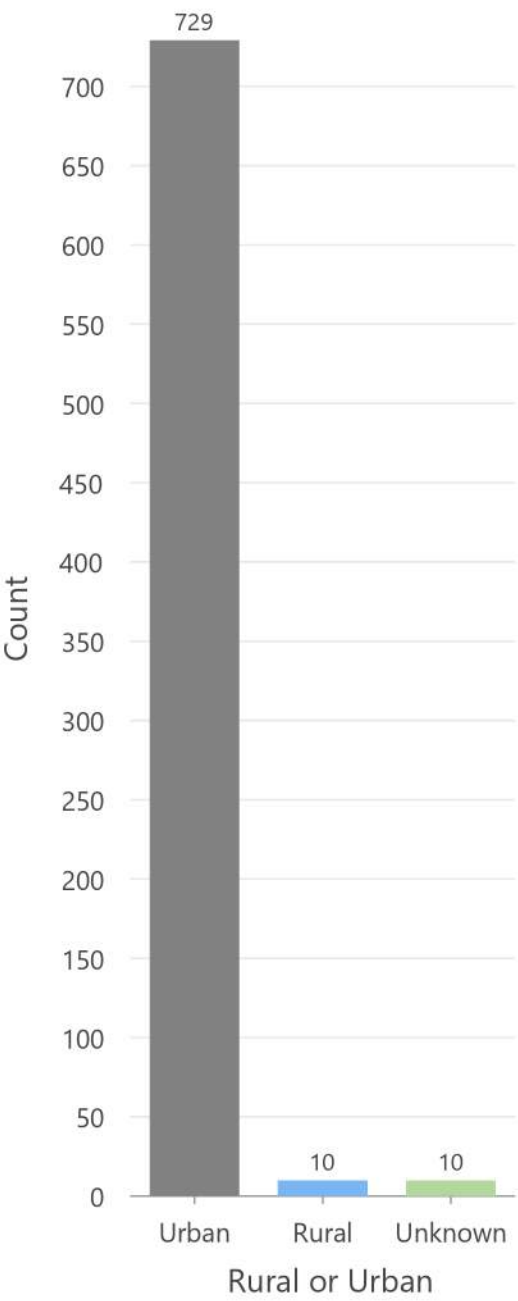


CRCOG Time & Conditions K&A Crash Data 2019-2023

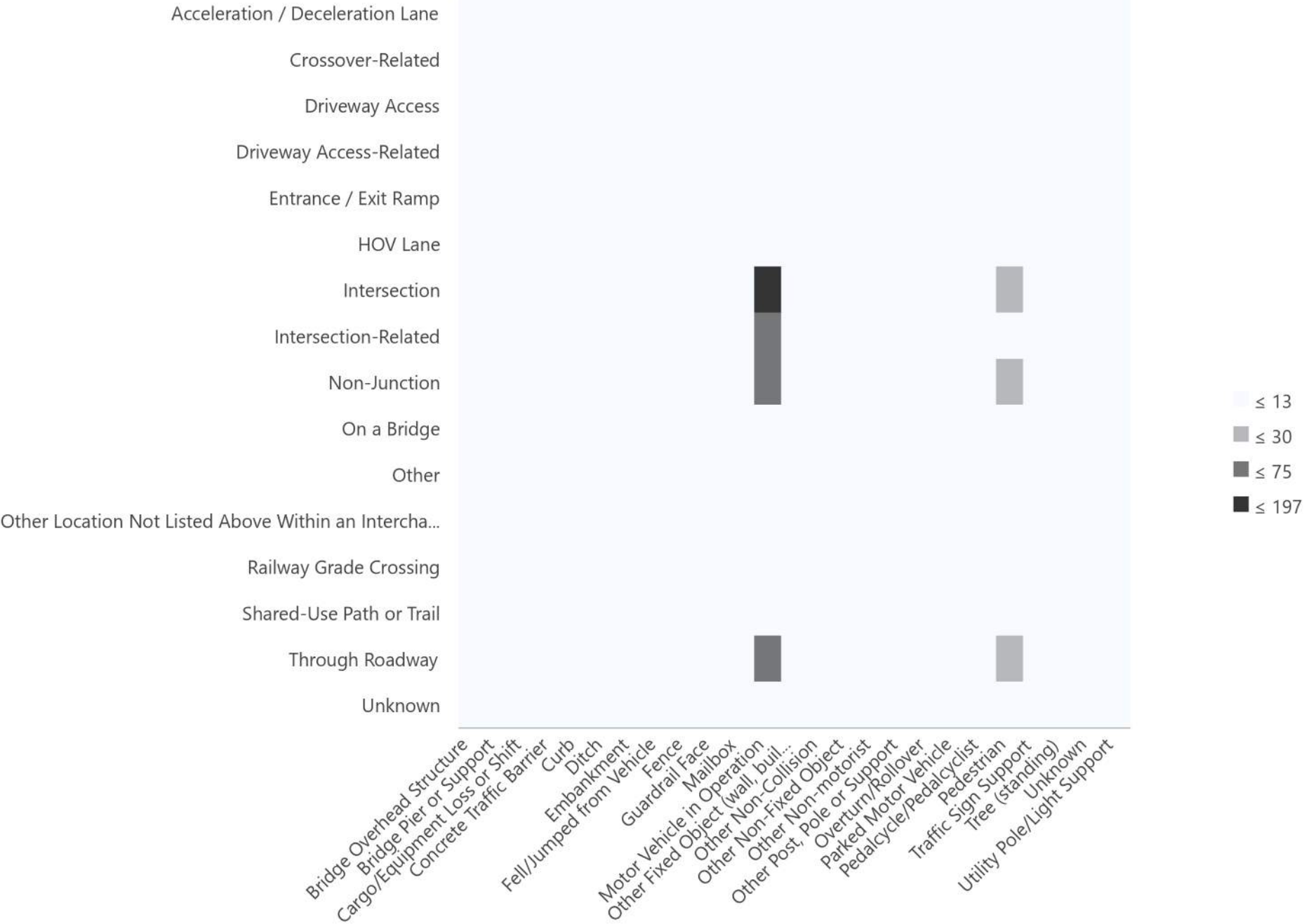




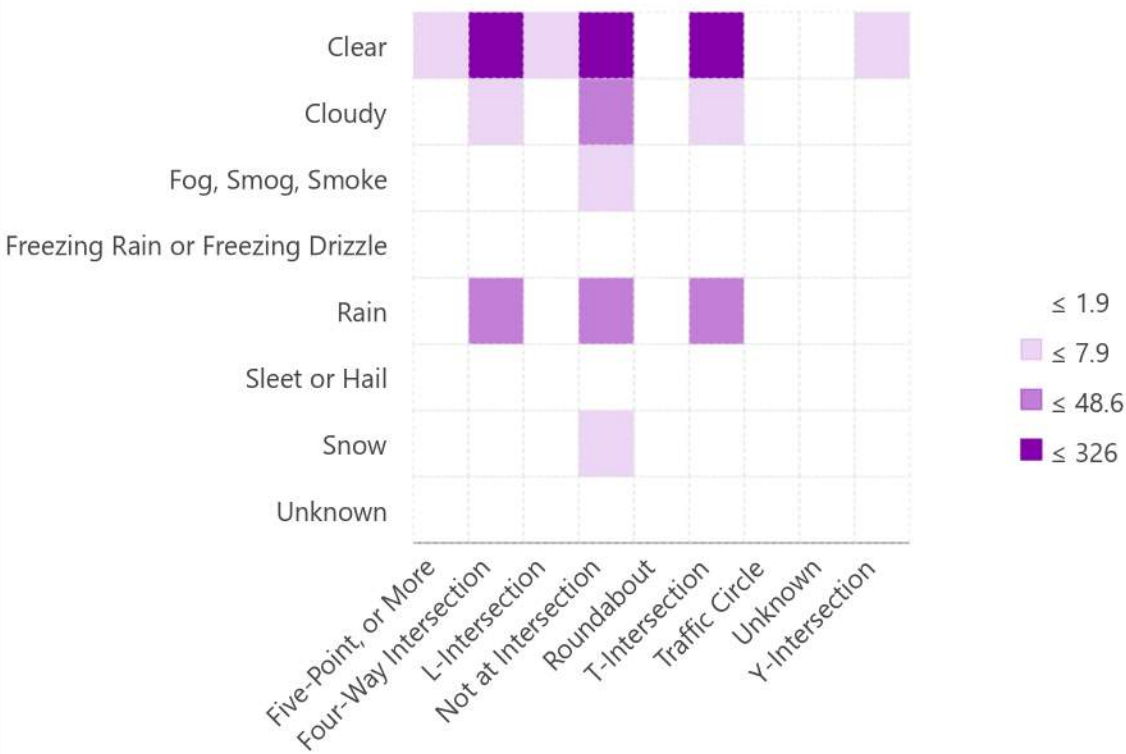
Counts by Rural or Urban Te



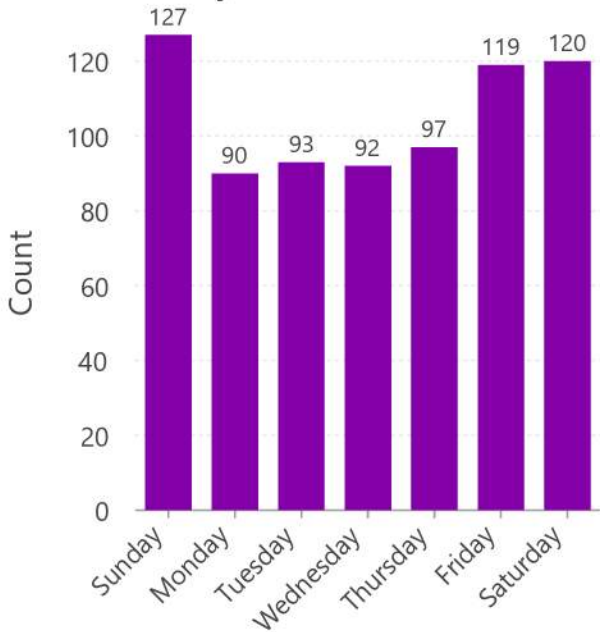
Urban - Location vs. Event



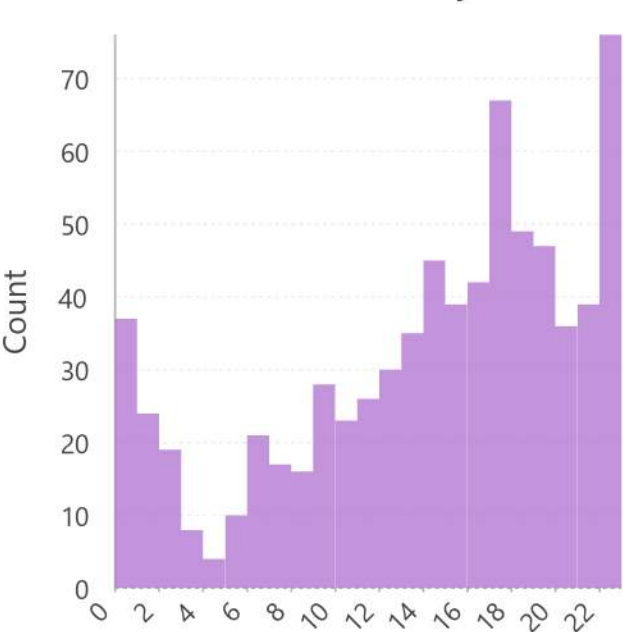
Weather vs. Intersection Type



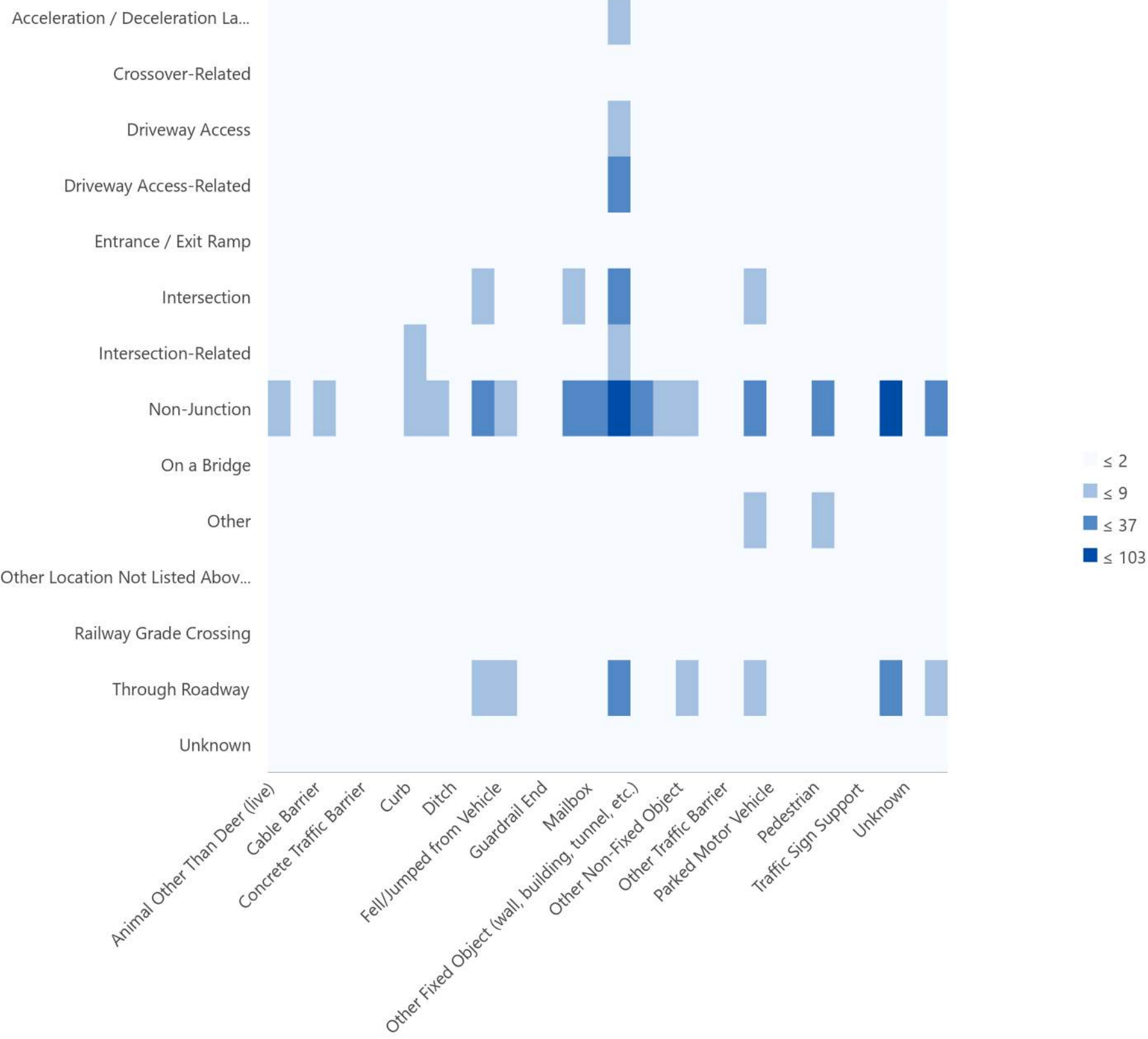
Days of the Week



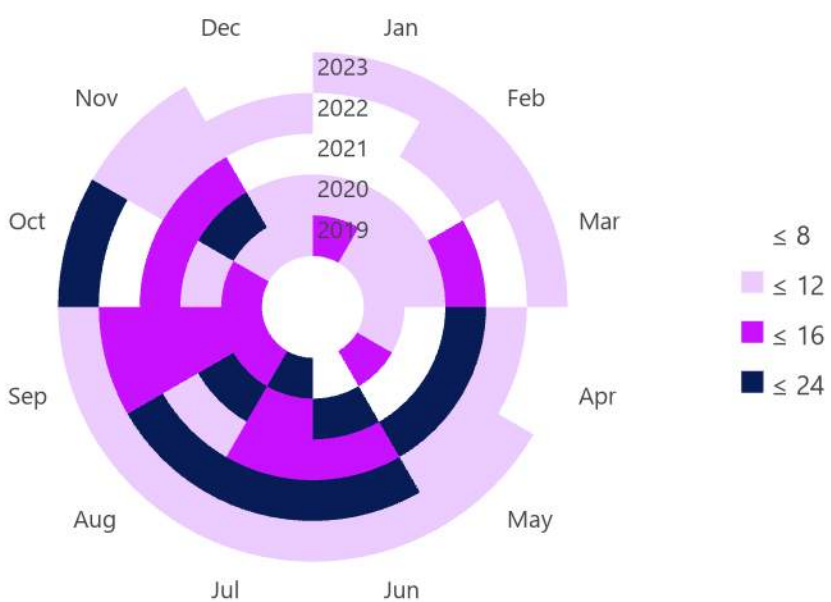
Hours of the Day



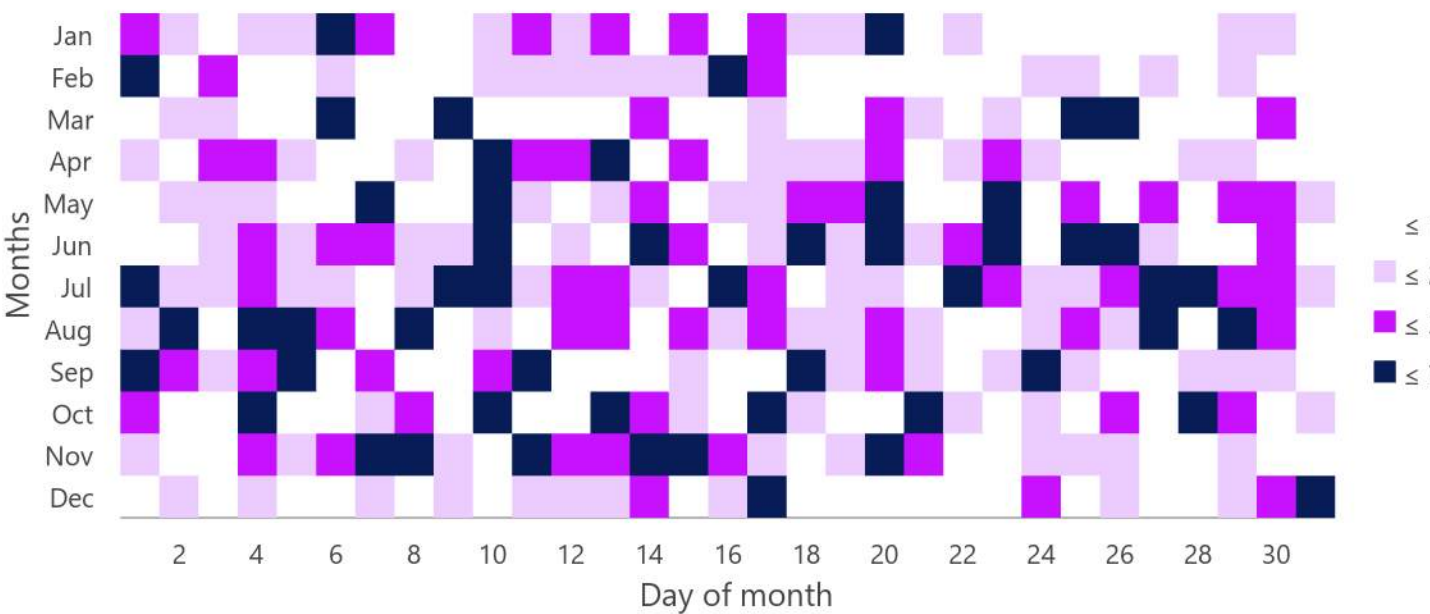
Rural Location vs. Event

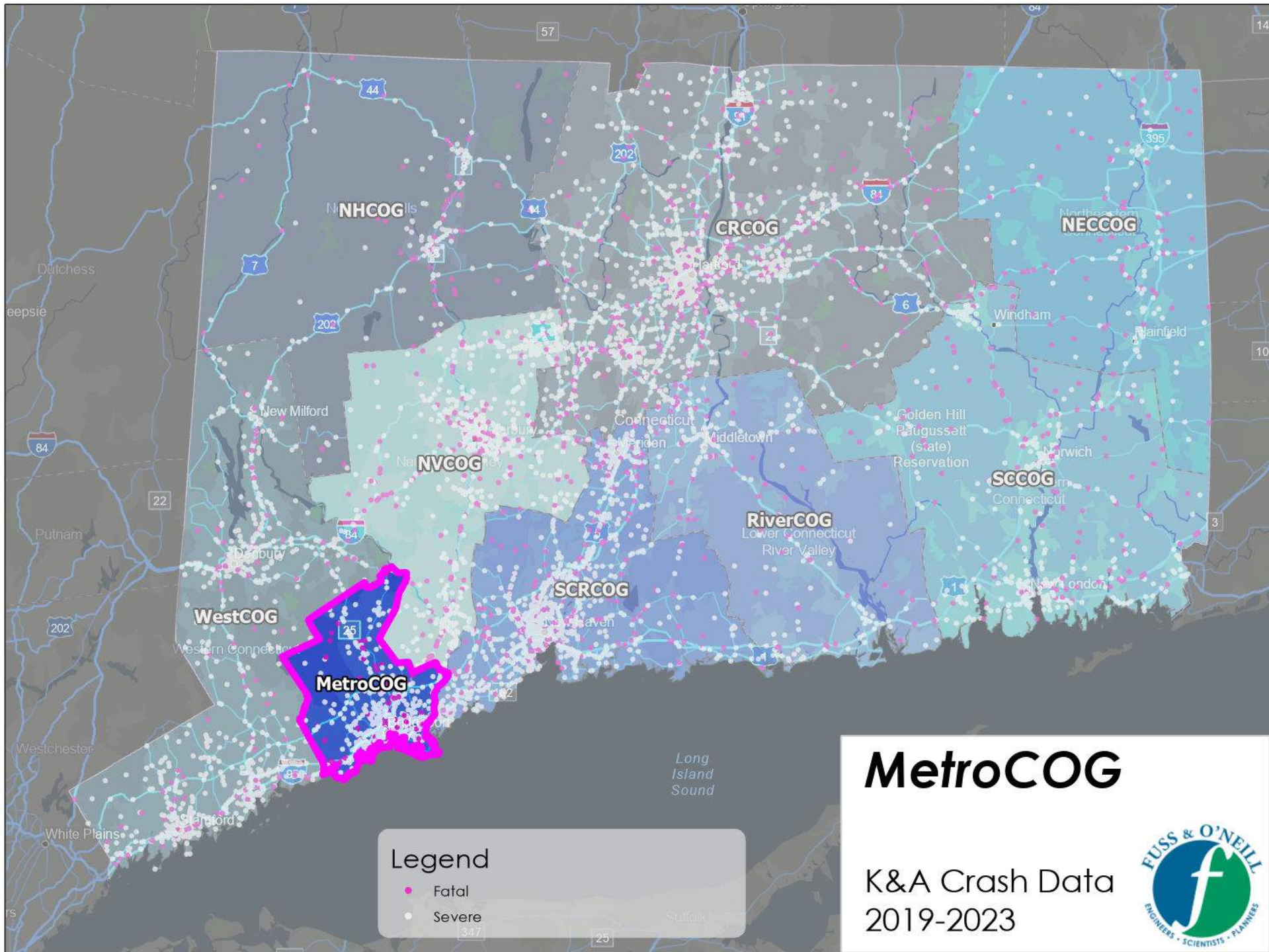


Months of the Year



Days of the Month

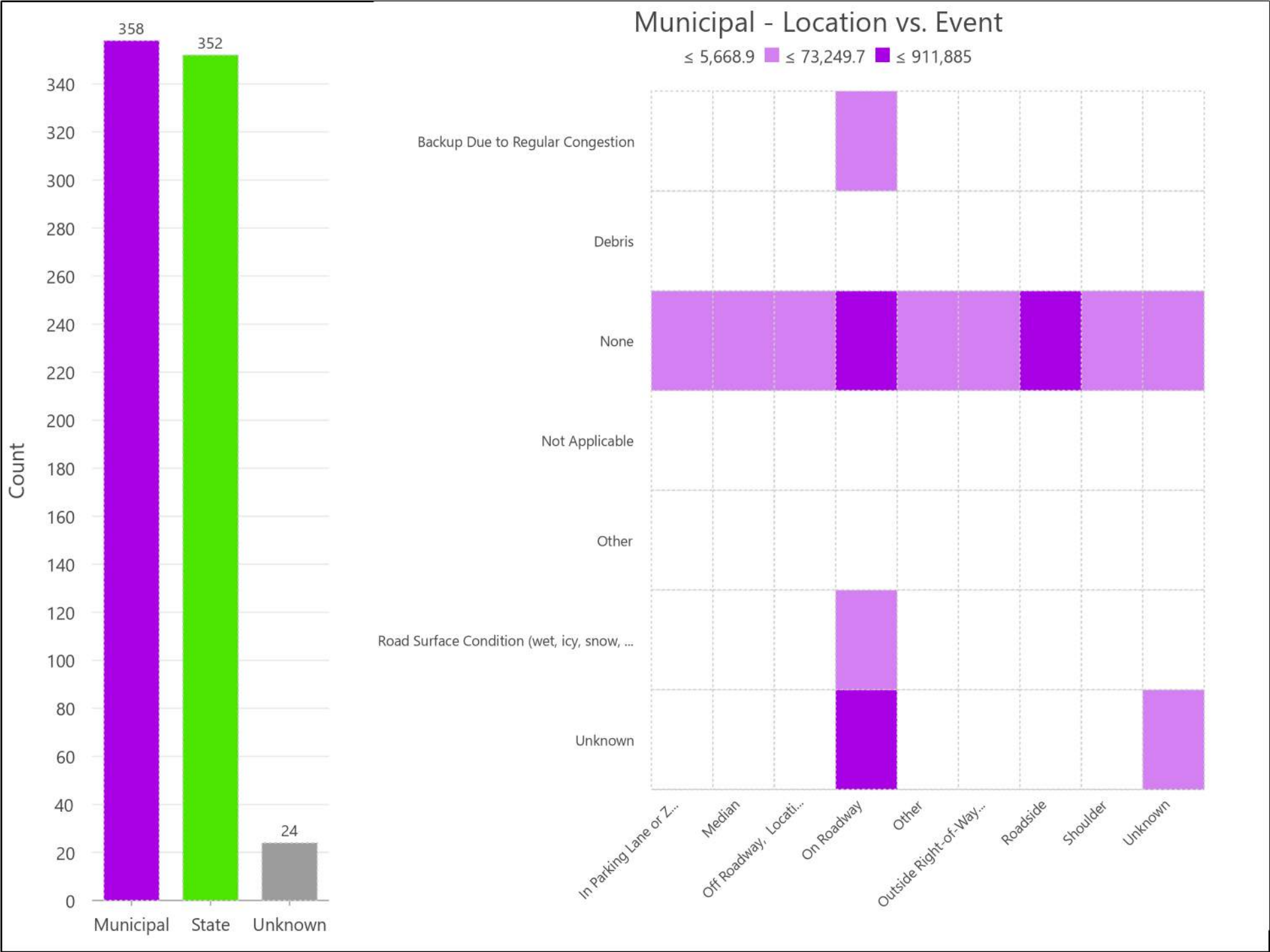




MetroCOG State vs. Municipal Road K&A Crash Data 2019-2023



MetroCOG State vs. Municipal Road K&A Crash Data 2019-2023



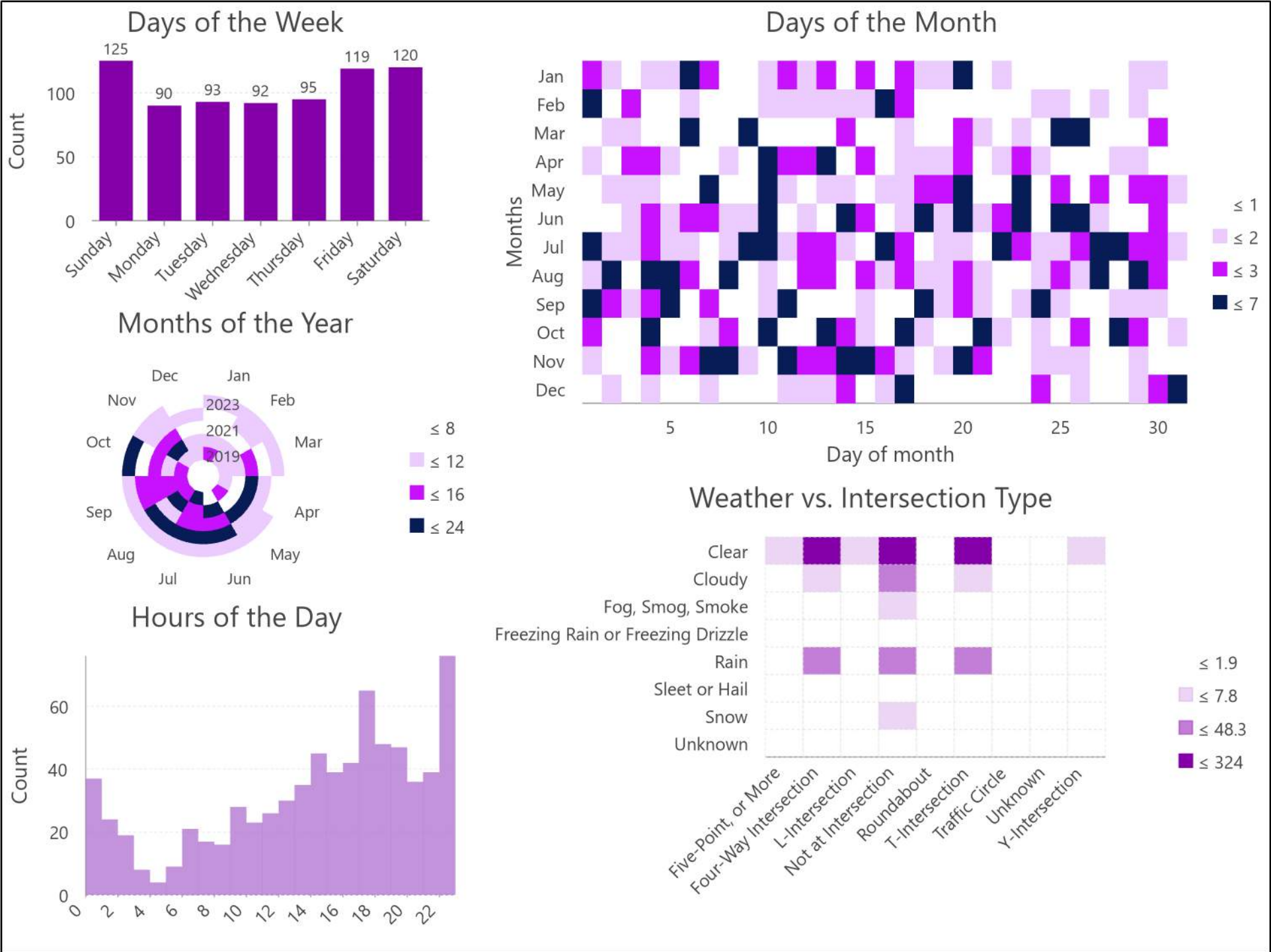
MetroCOG Rural vs. Urban K&A Crash Data 2019-2023

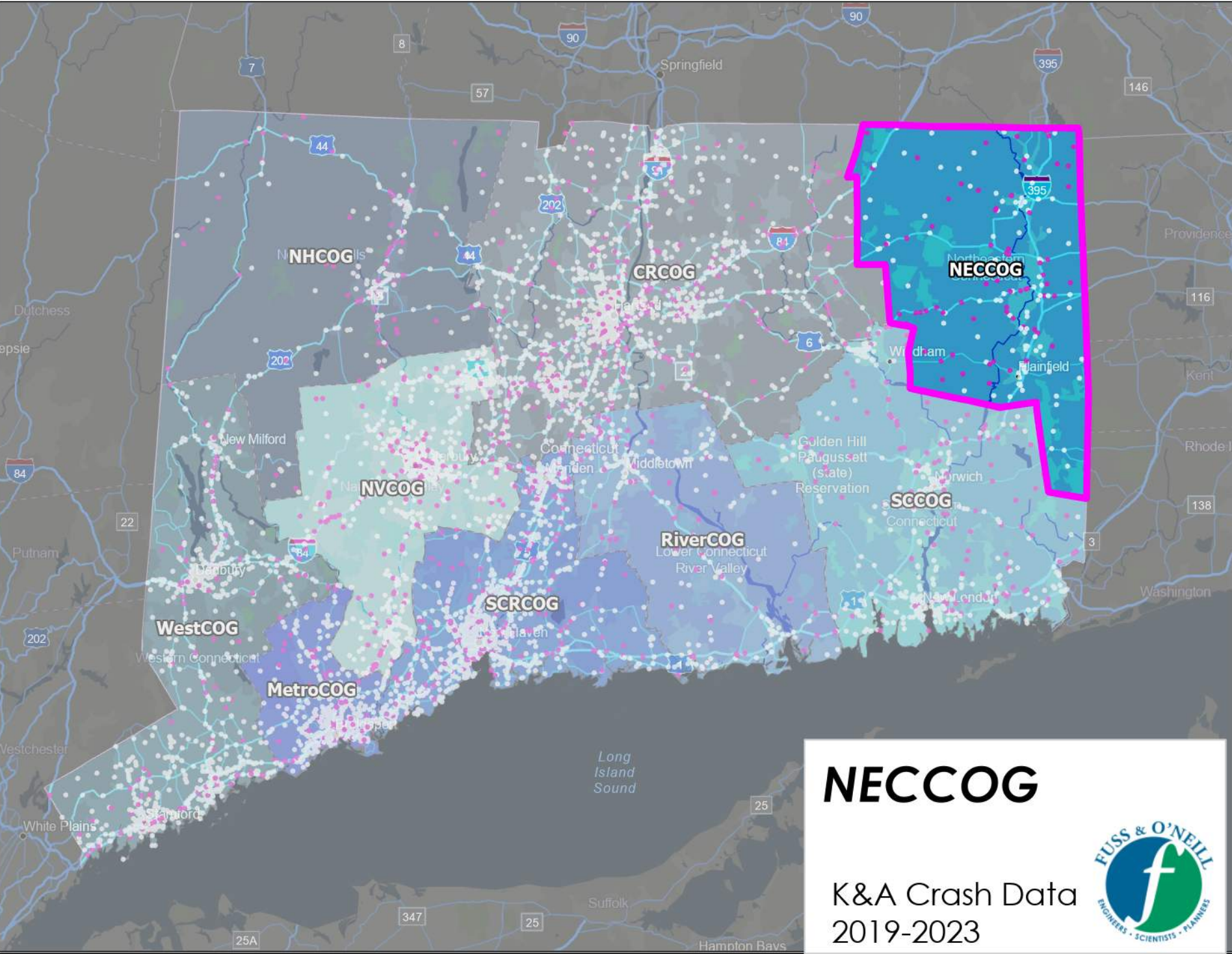


MetroCOG Rural vs. Urban K&A Crash Data 2019-2023

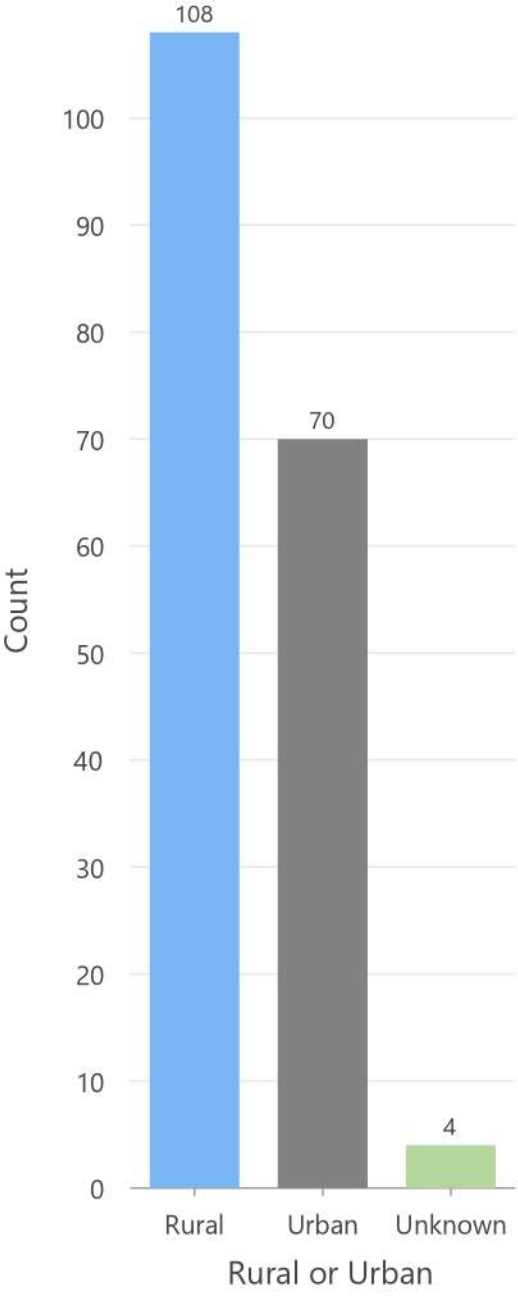


MetroCOG Time & Conditions K&A Crash Data 2019-2023

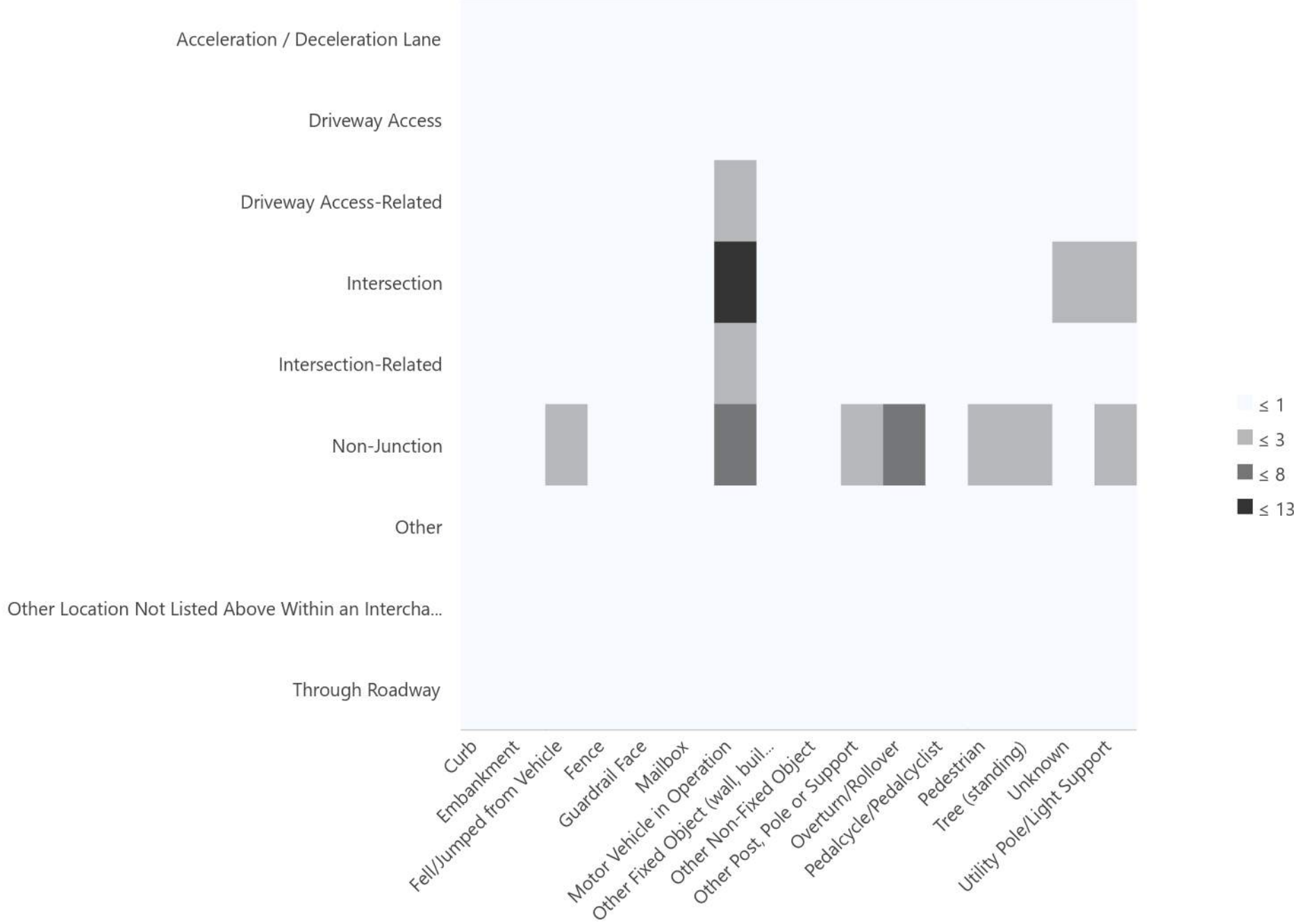




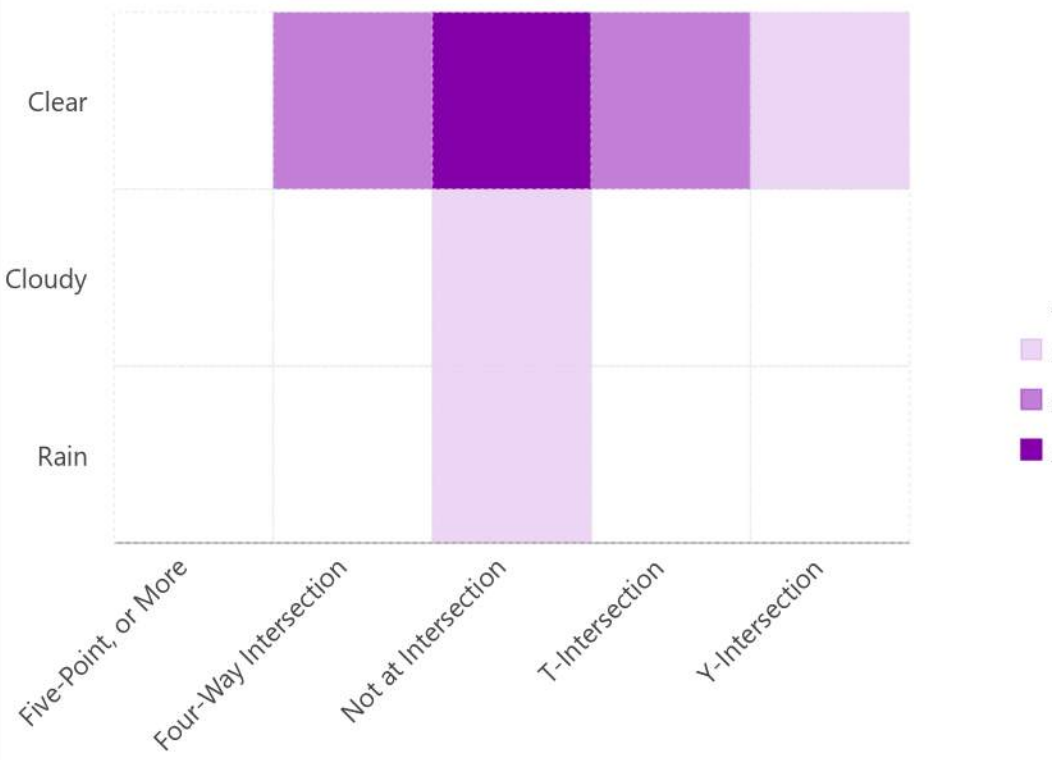
Counts by Rural or Urban Te



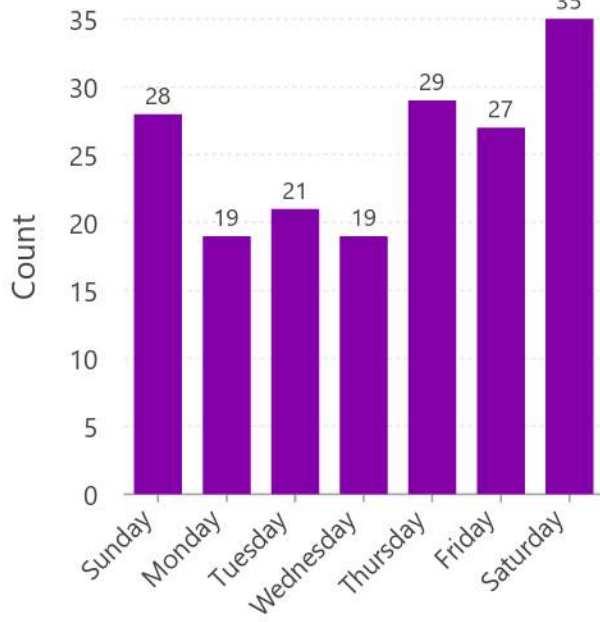
Urban - Location vs. Event



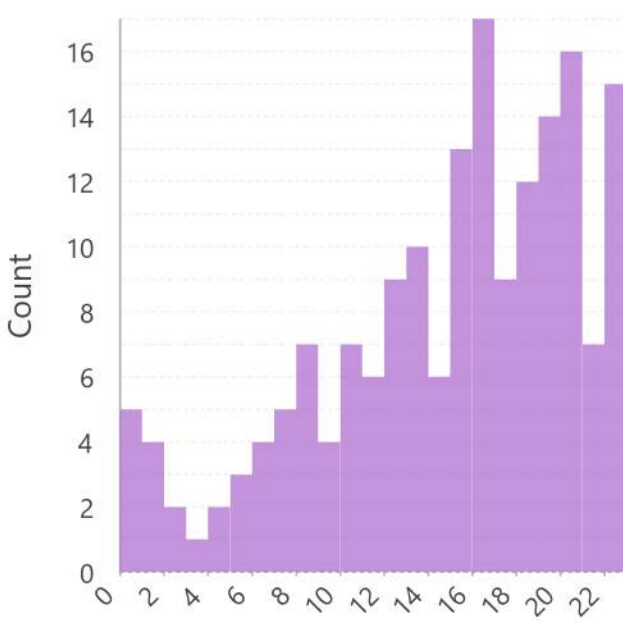
Weather vs. Intersection Type



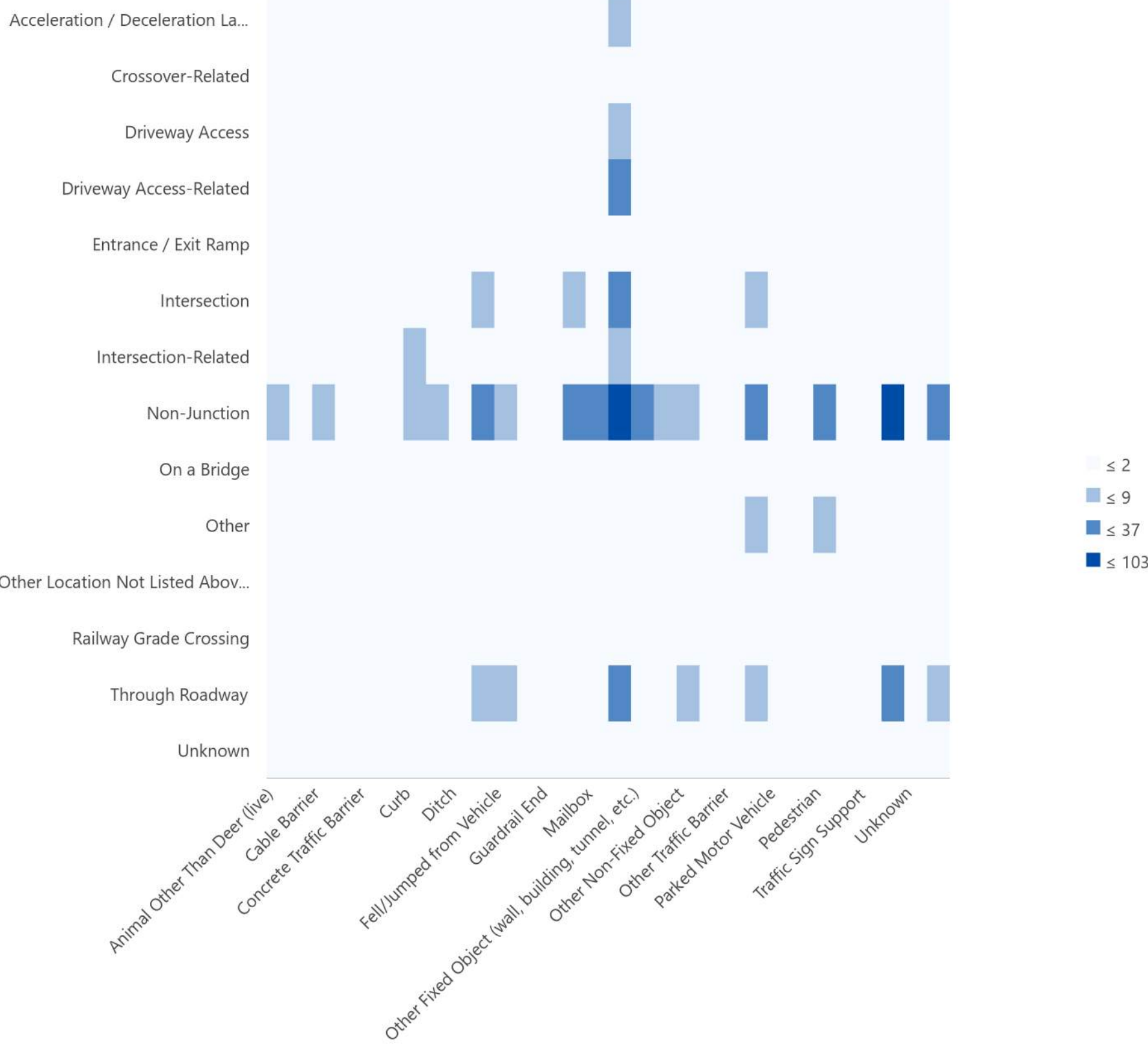
Days of the Week



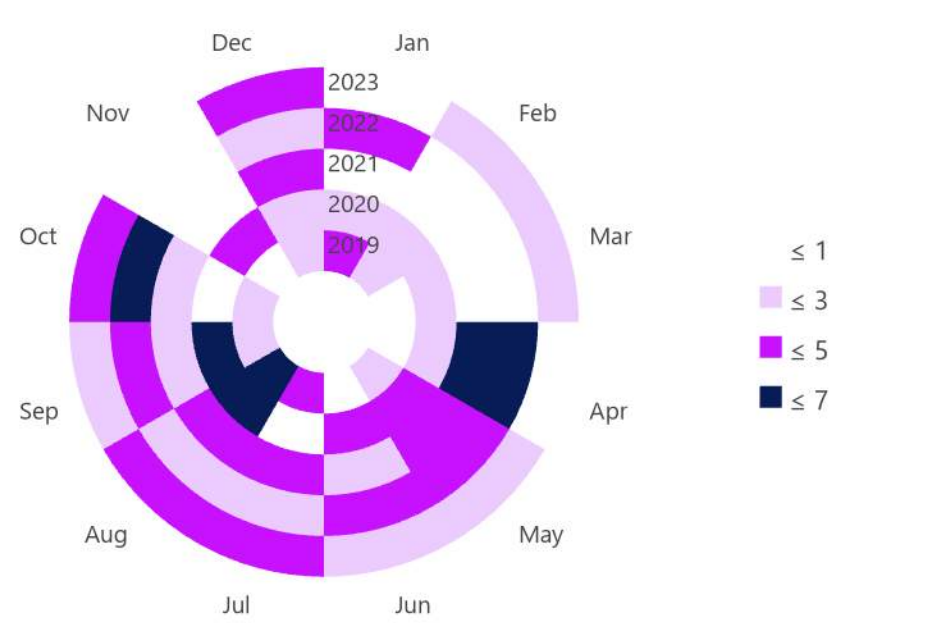
Hours of the Day



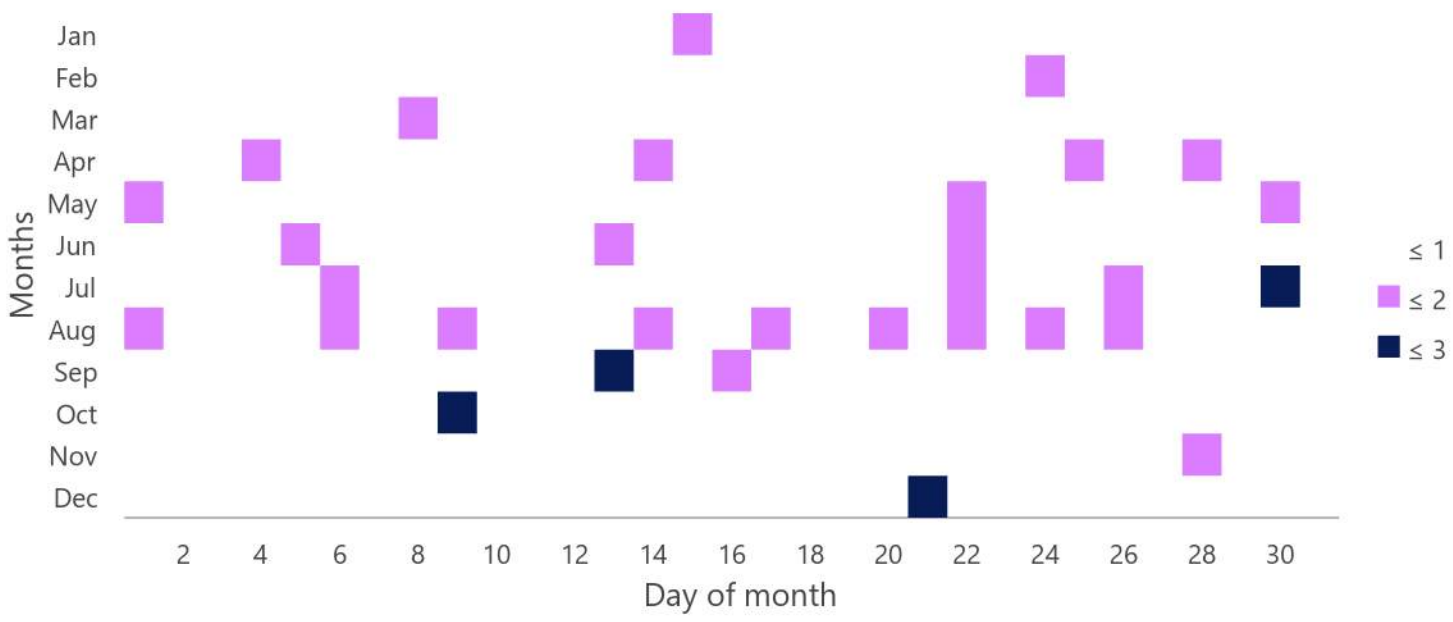
Rural Location vs. Event

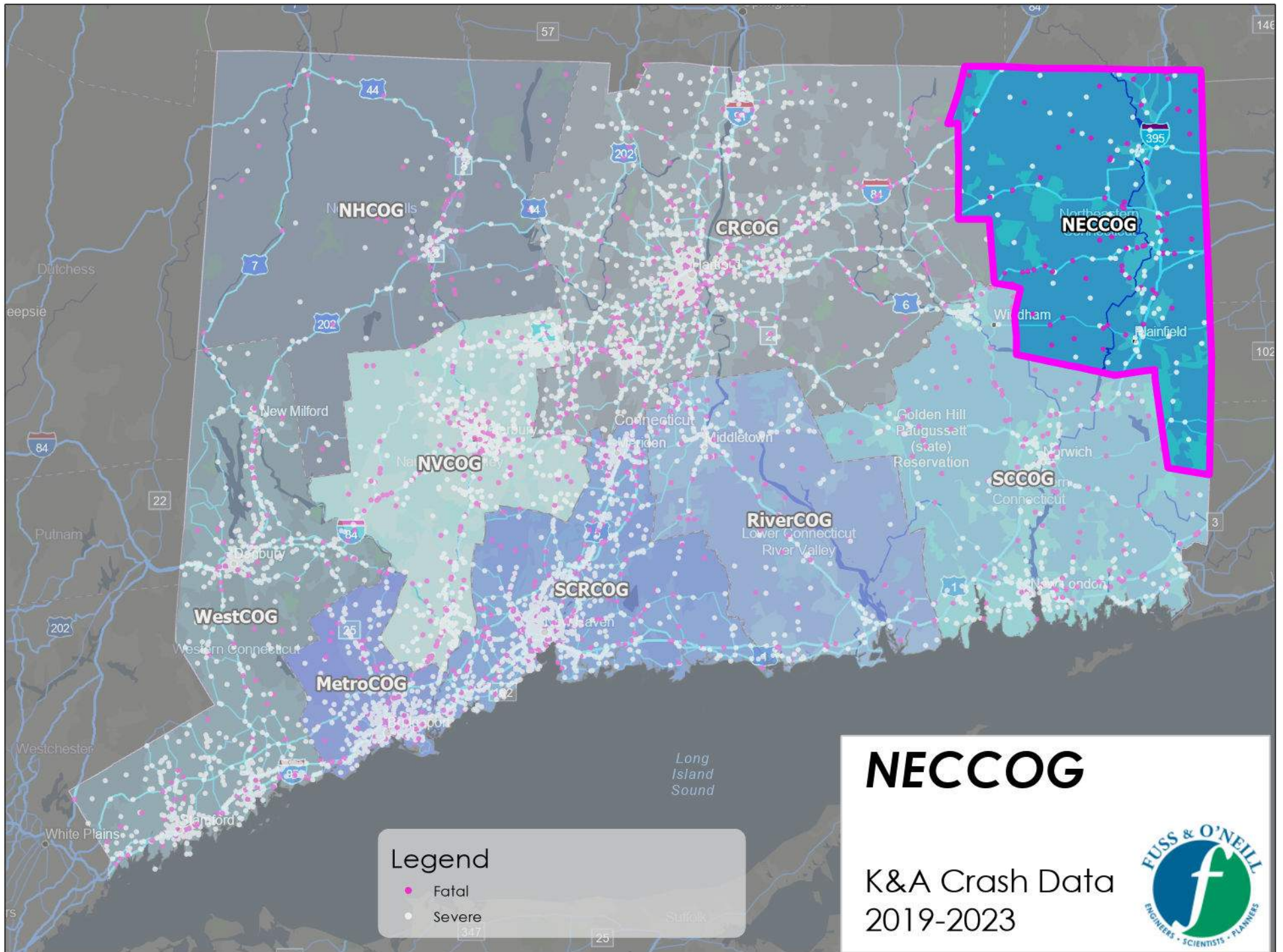


Months of the Year



Days of the Month



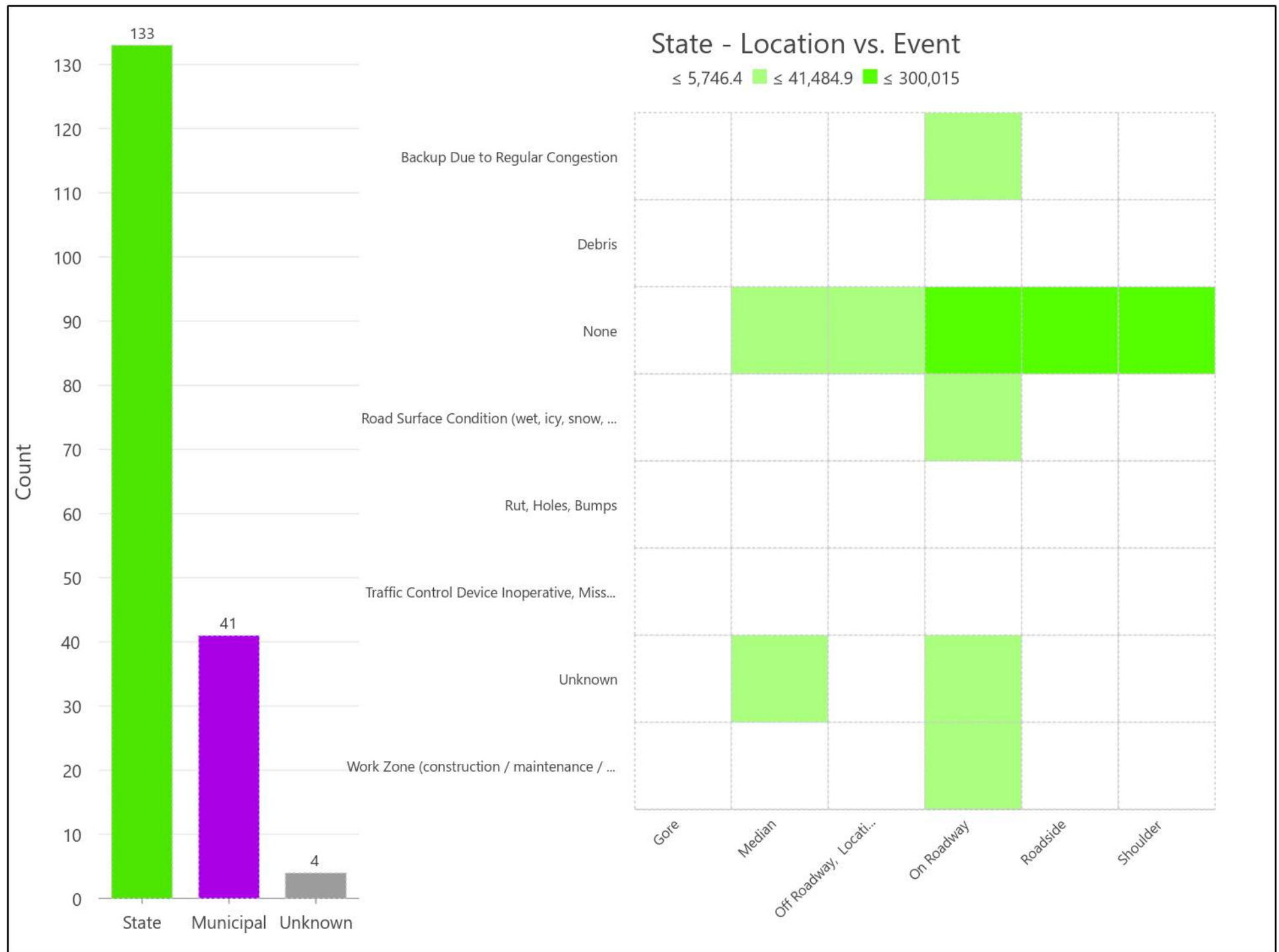


NECCOG

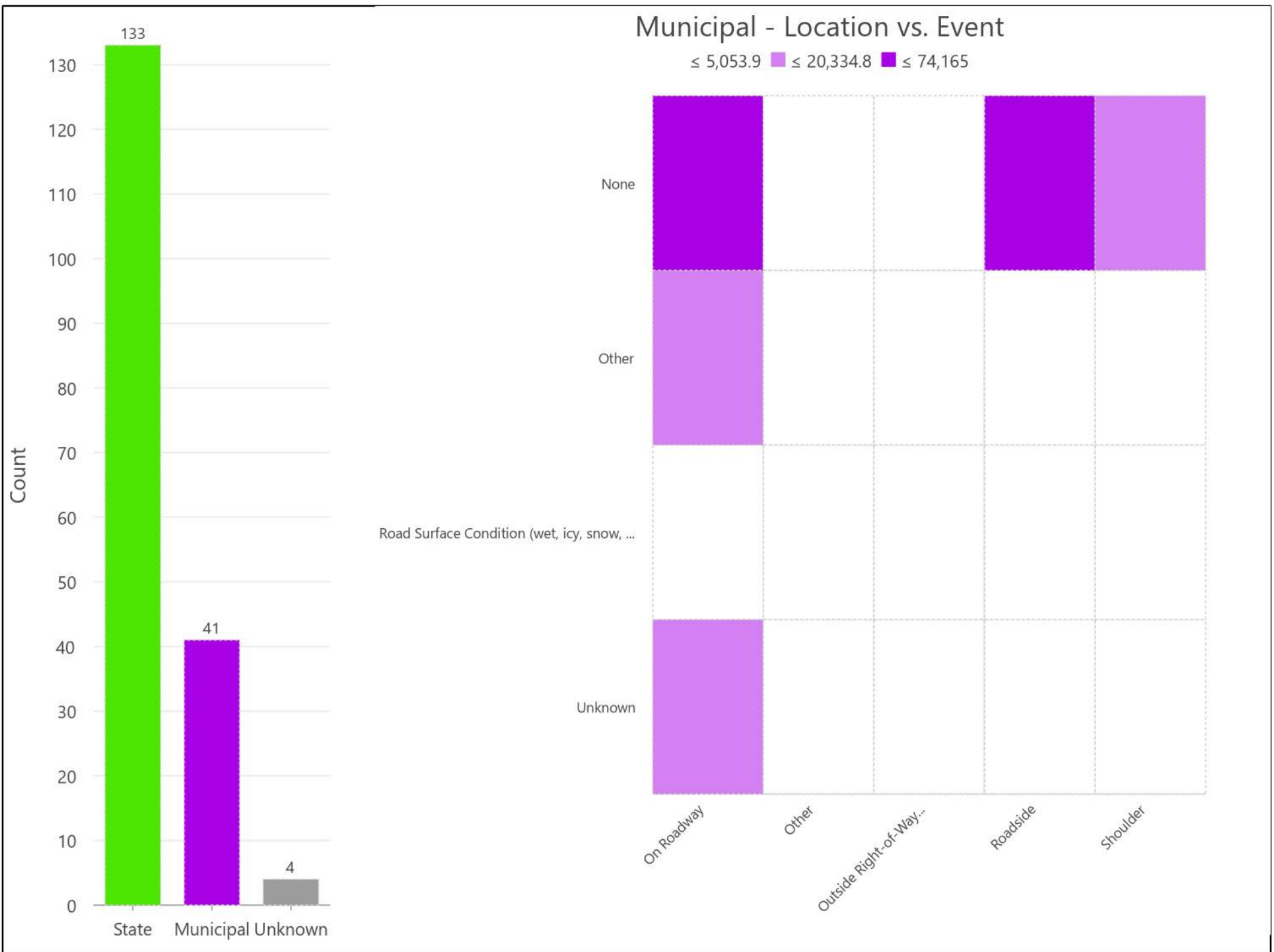
K&A Crash Data
2019-2023



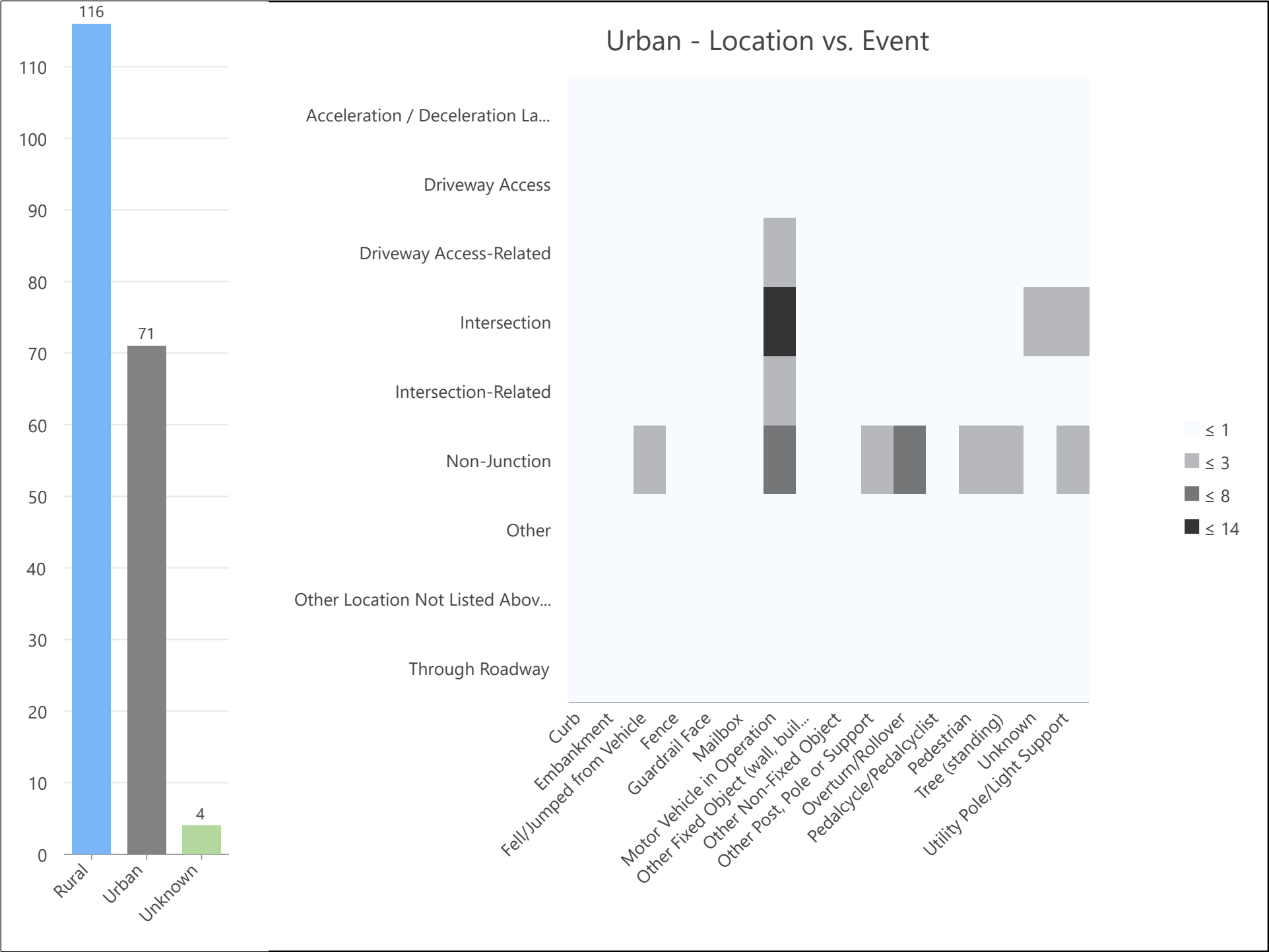
NECCOG State vs. Municipal Road K&A Crash Data 2019-2023



NECCOG State vs. Municipal Road K&A Crash Data 2019-2023



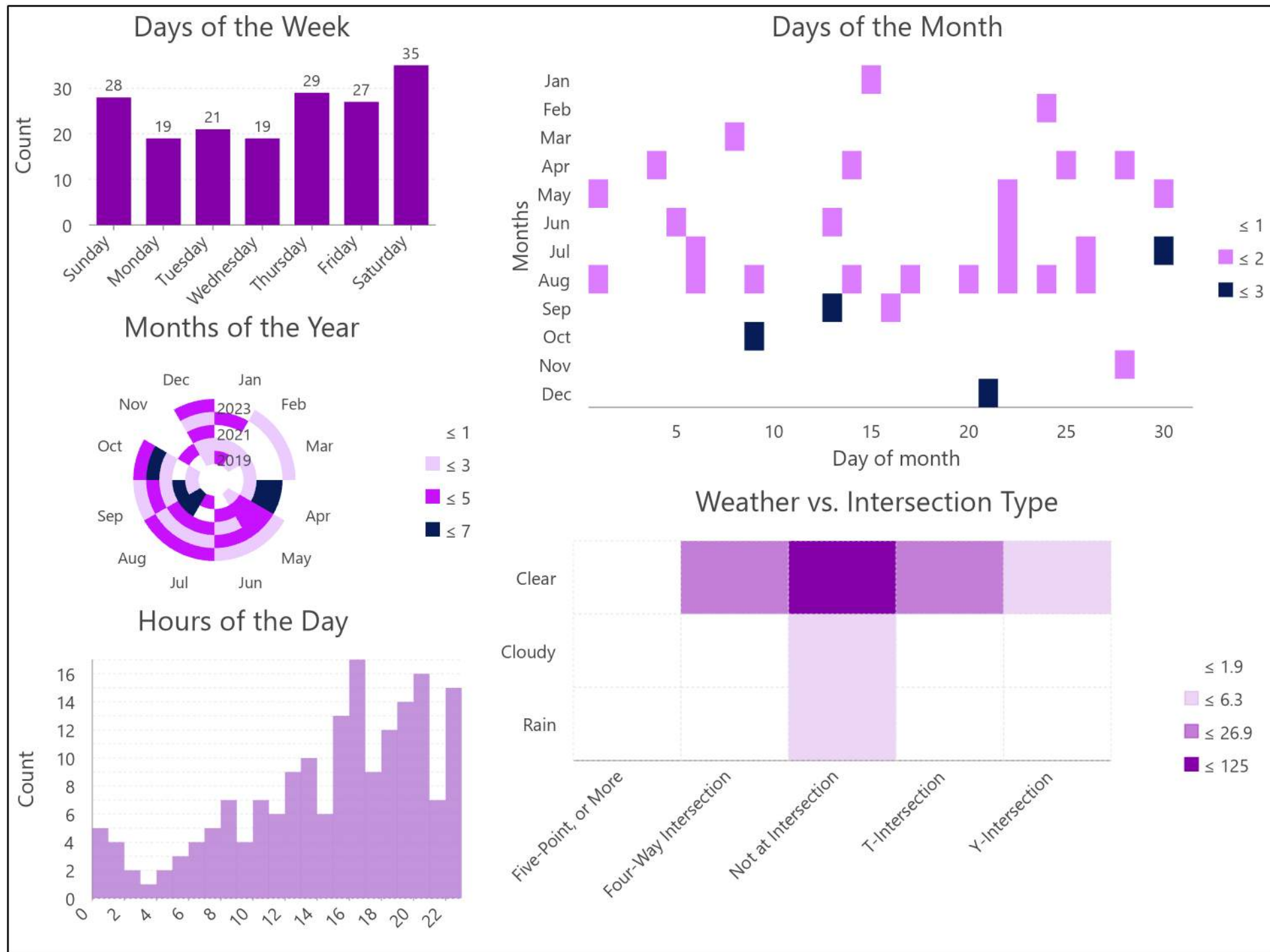
NECCOG Rural vs. Urban K&A Crash Data 2019-2023

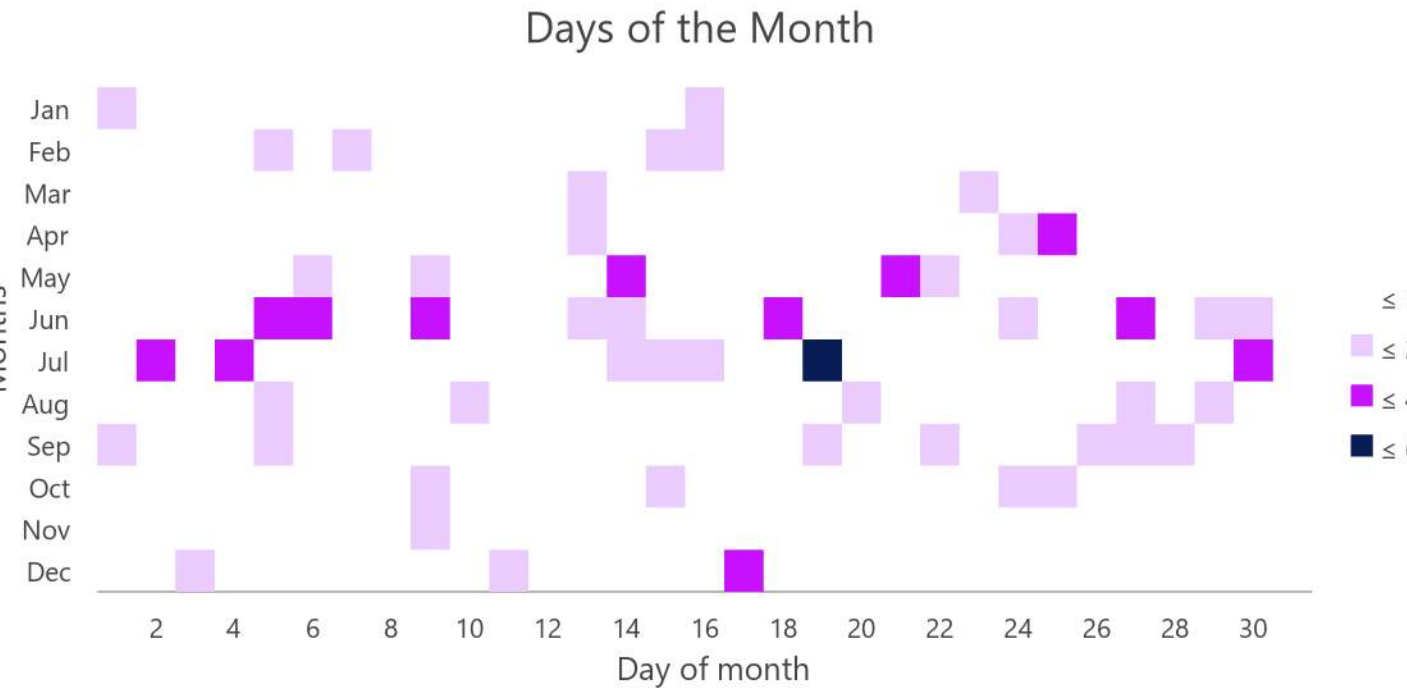
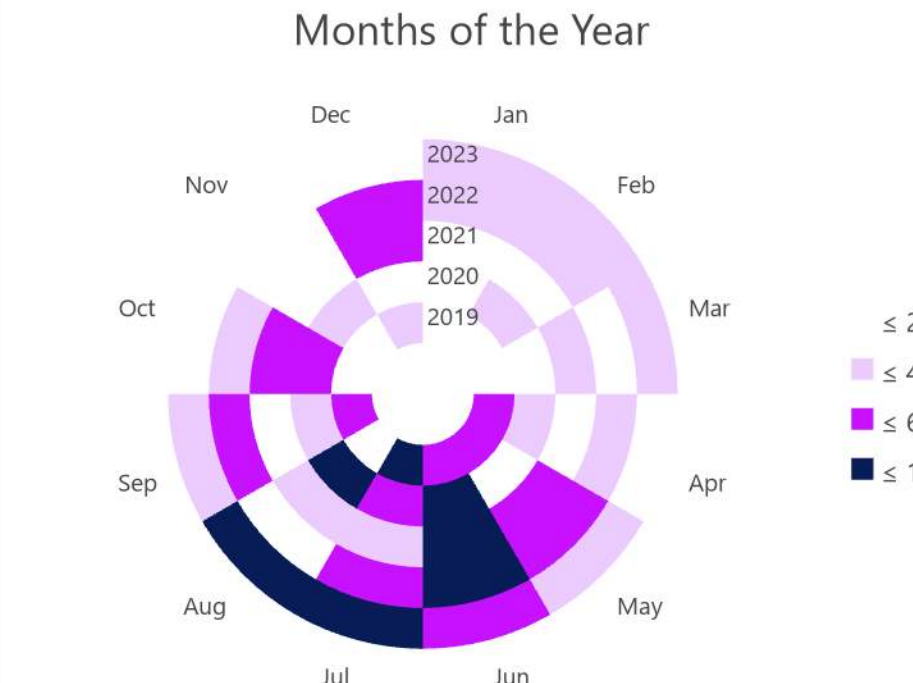
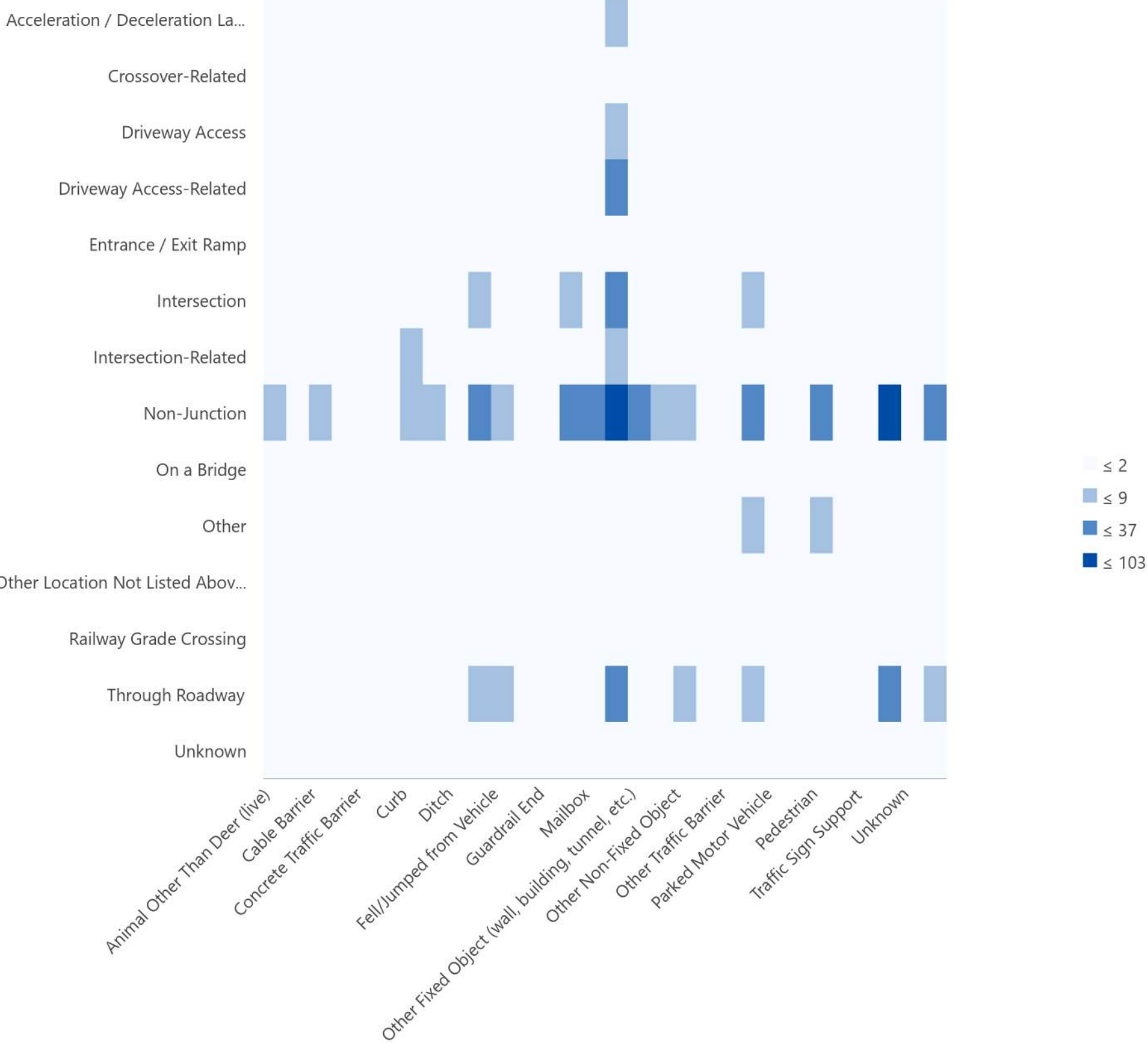
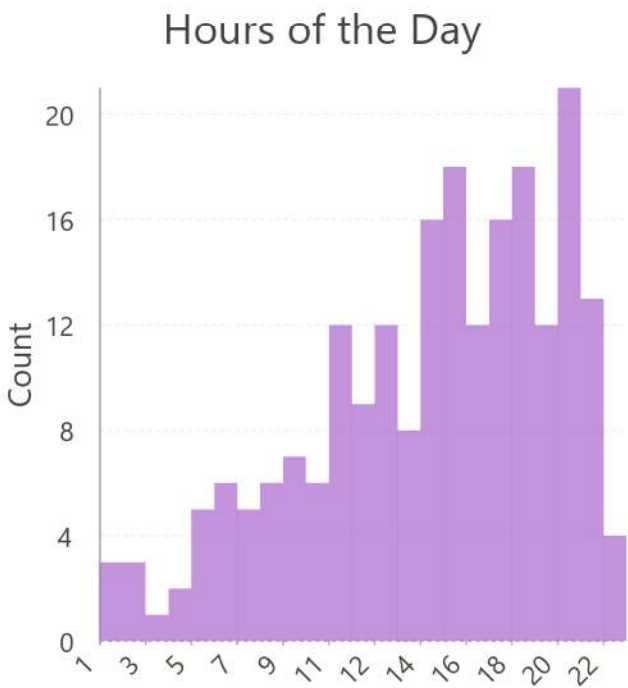
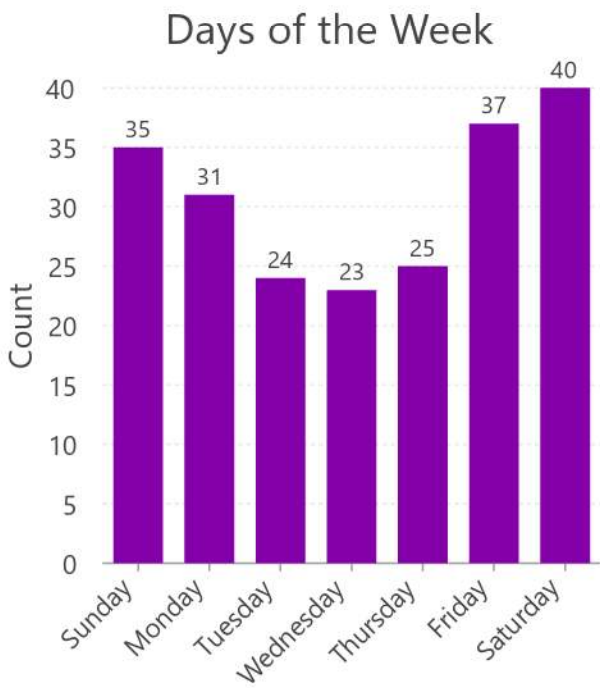
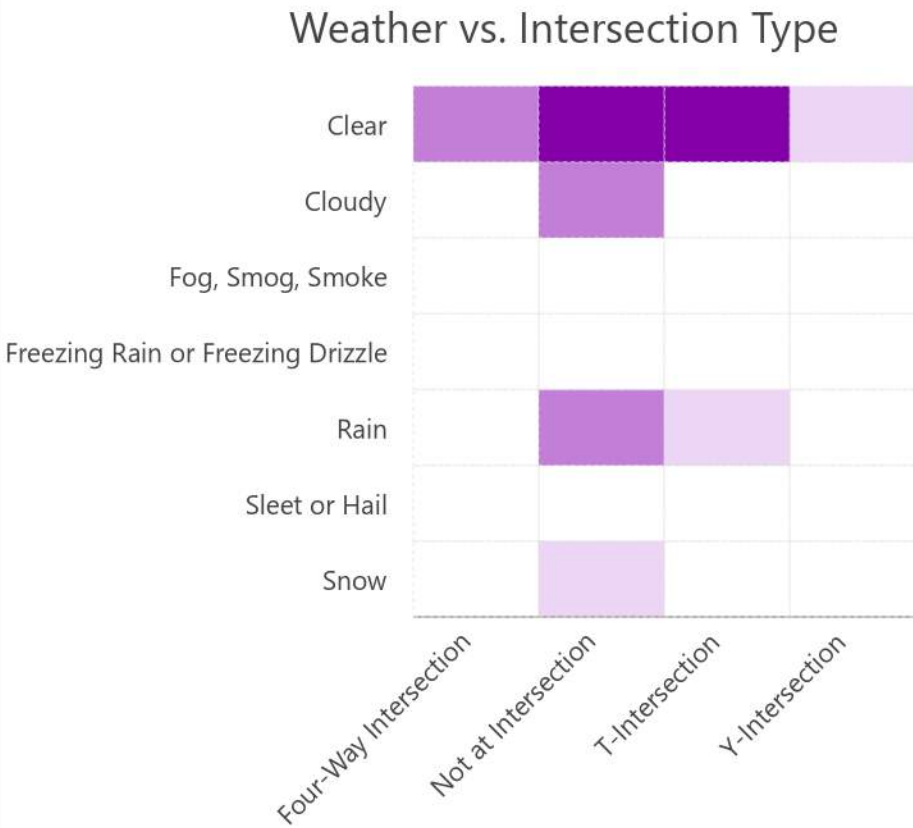
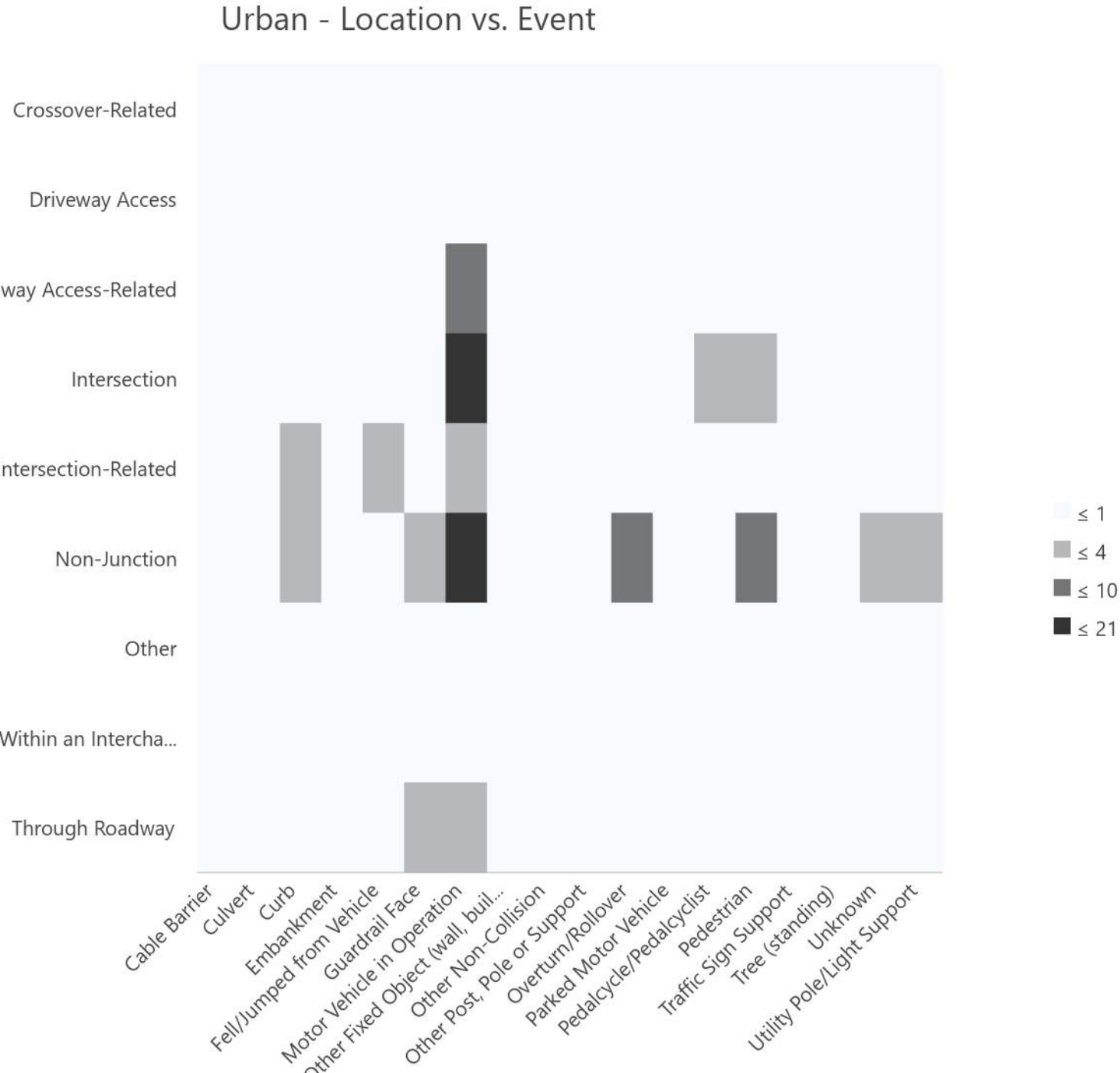
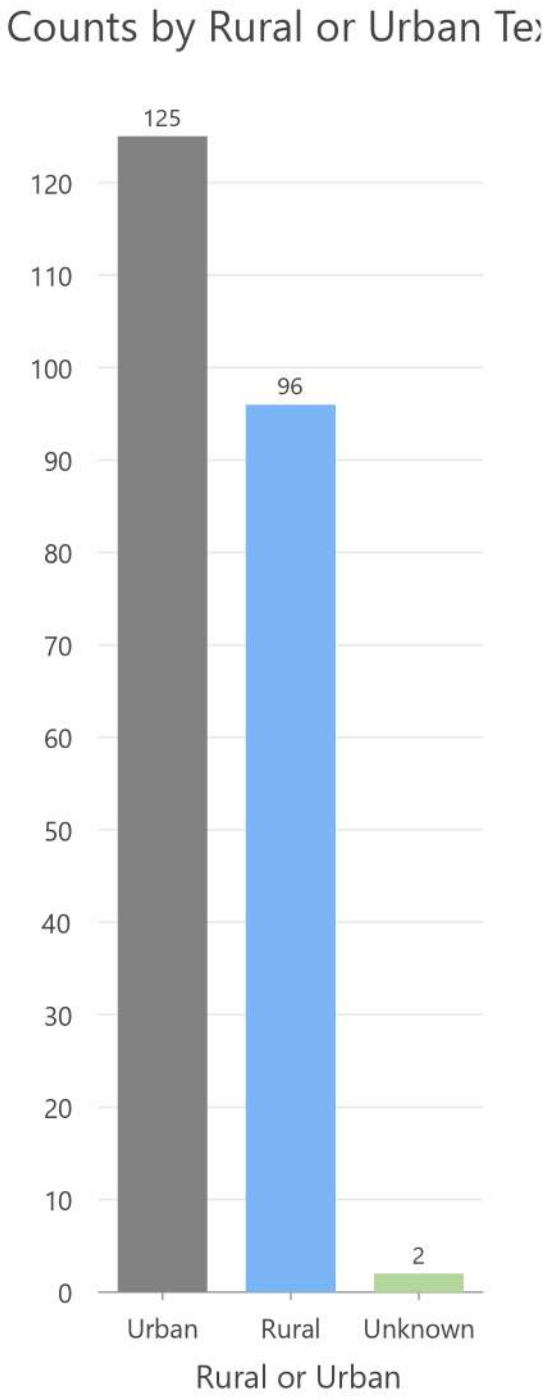
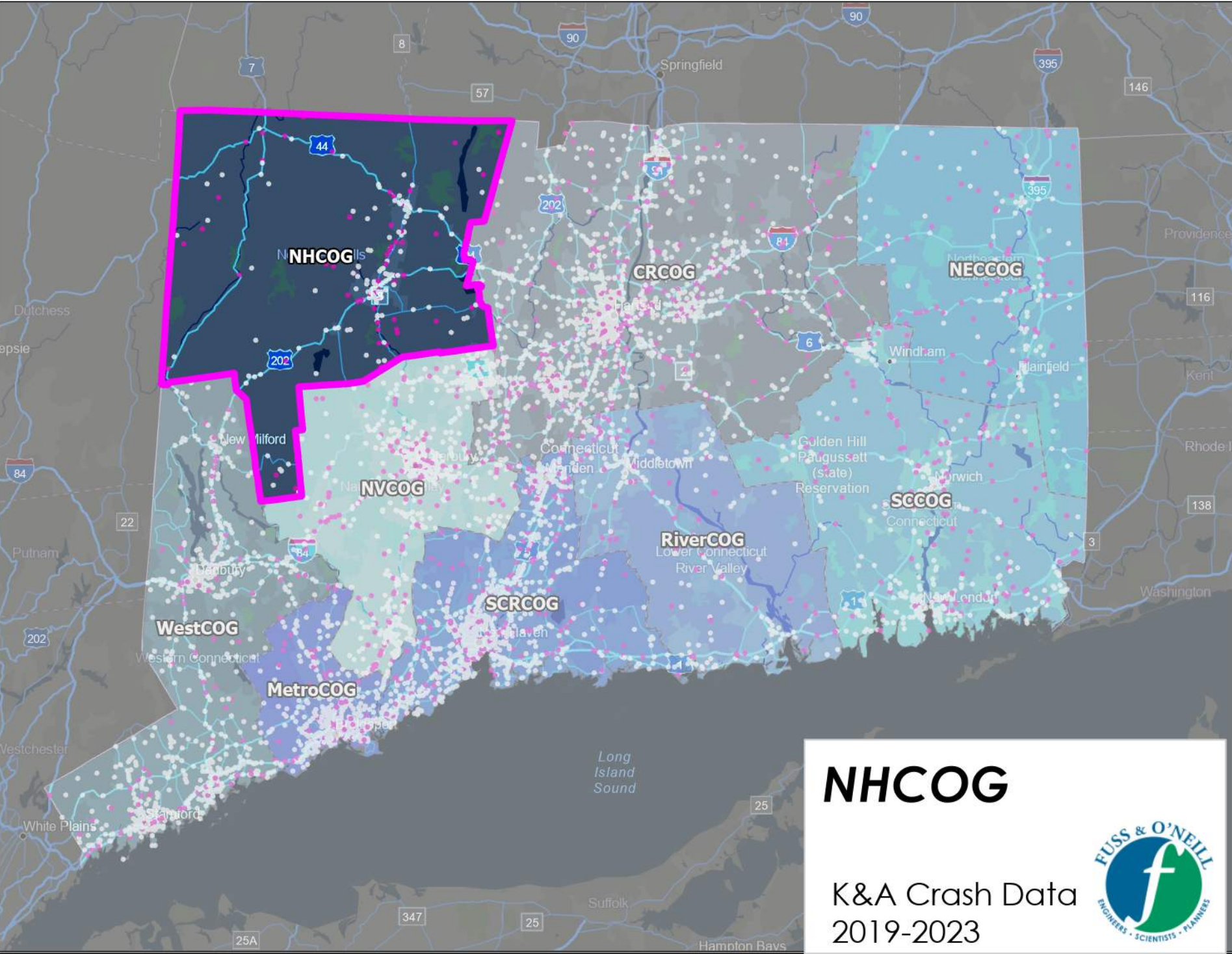


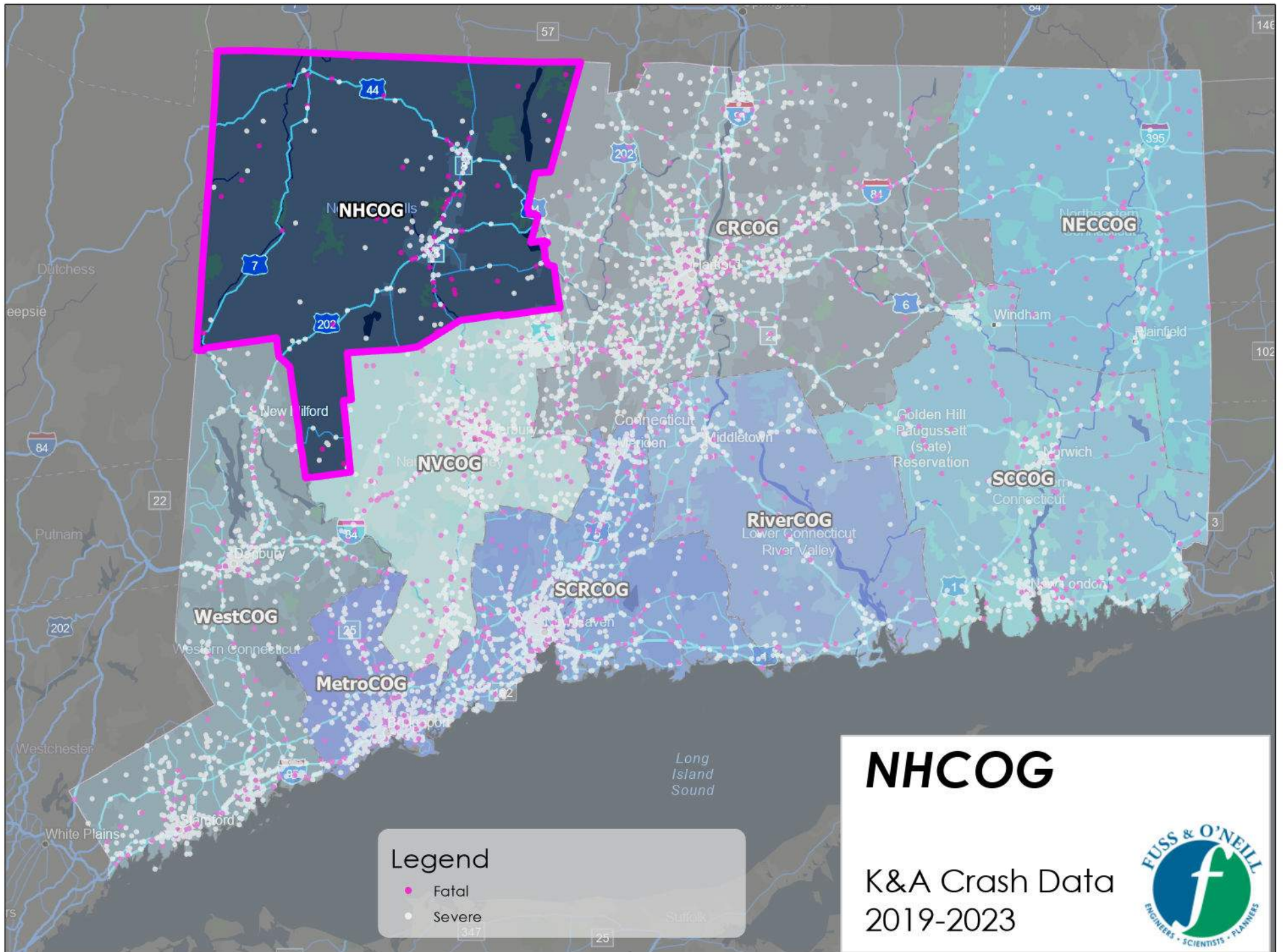
NECCOG Rural vs. Urban K&A Crash Data 2019-2023



NECCOG Time & Conditions K&A Crash Data 2019-2023



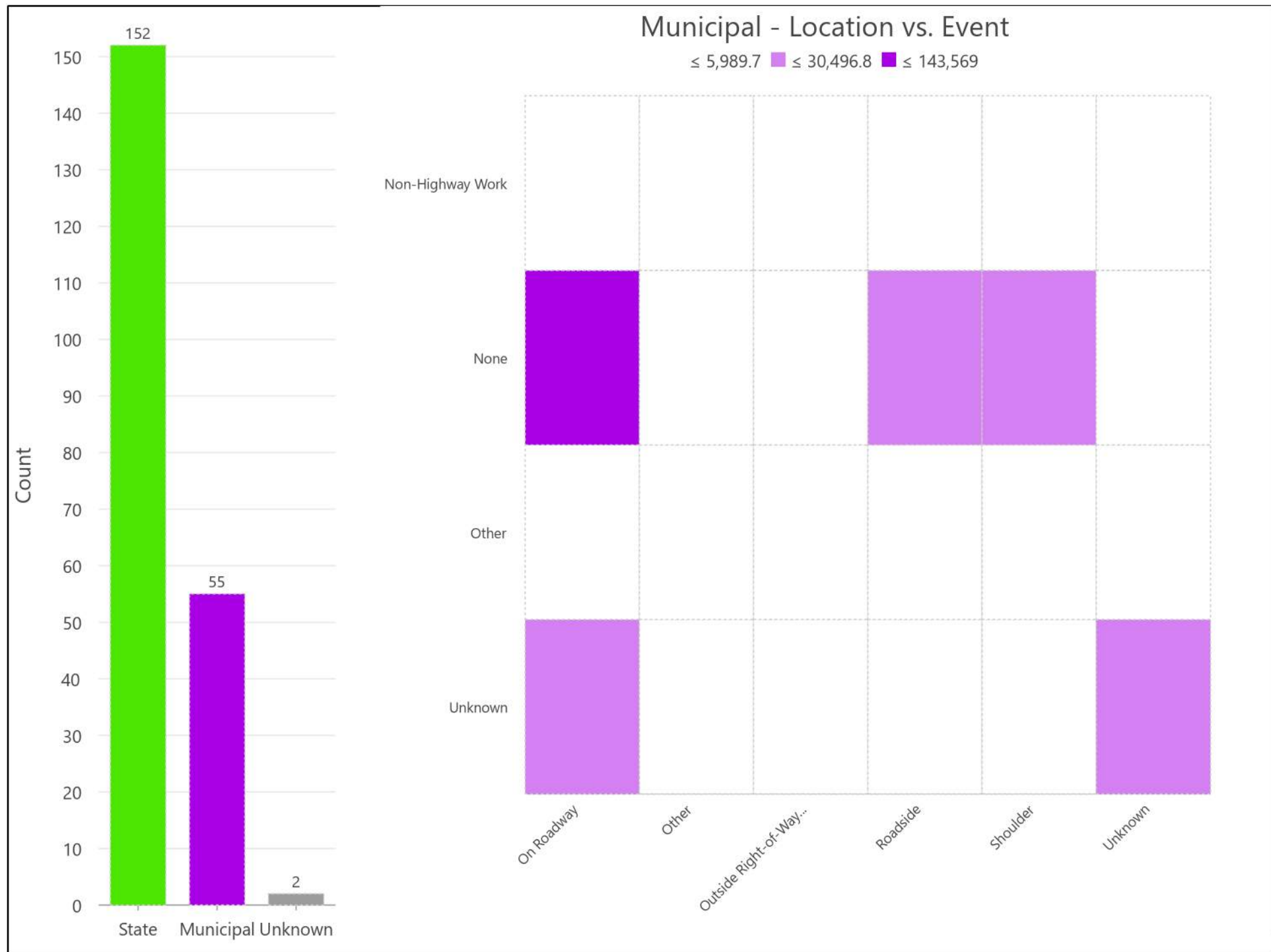




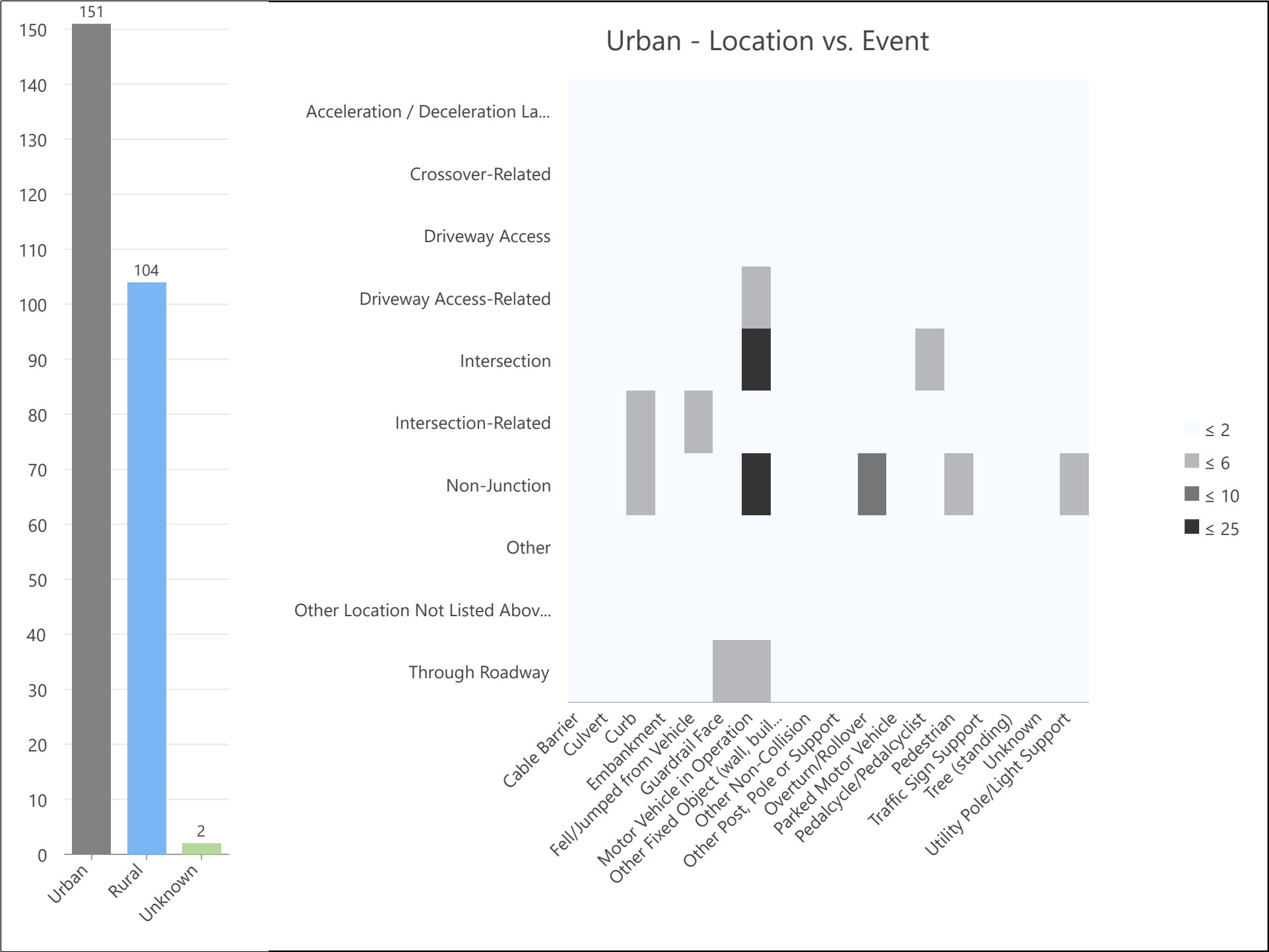
NHCOG State vs. Municipal Road K&A Crash Data 2019-2023



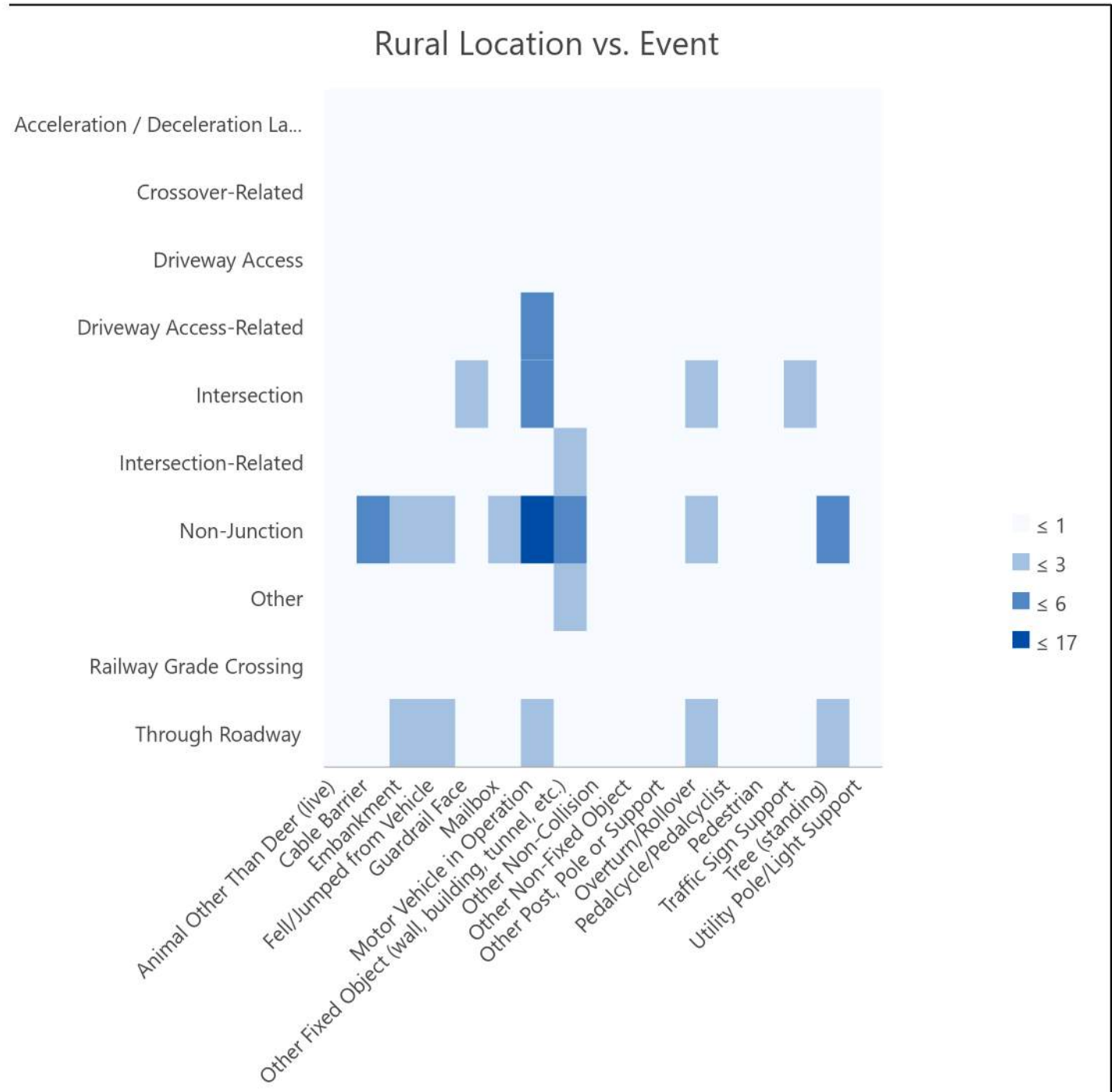
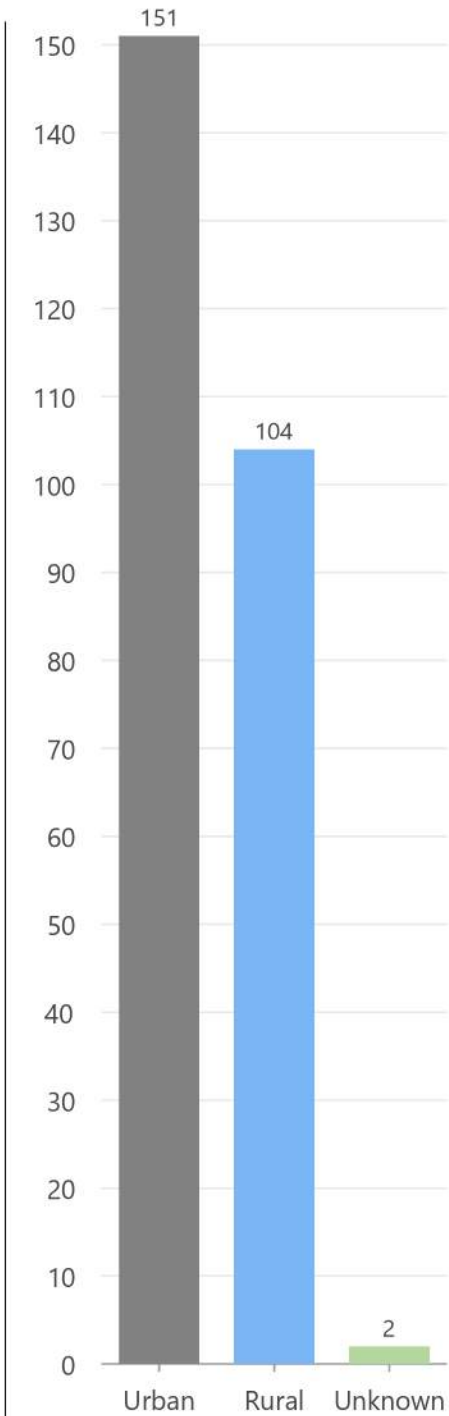
NHCOG State vs. Municipal Road K&A Crash Data 2019-2023



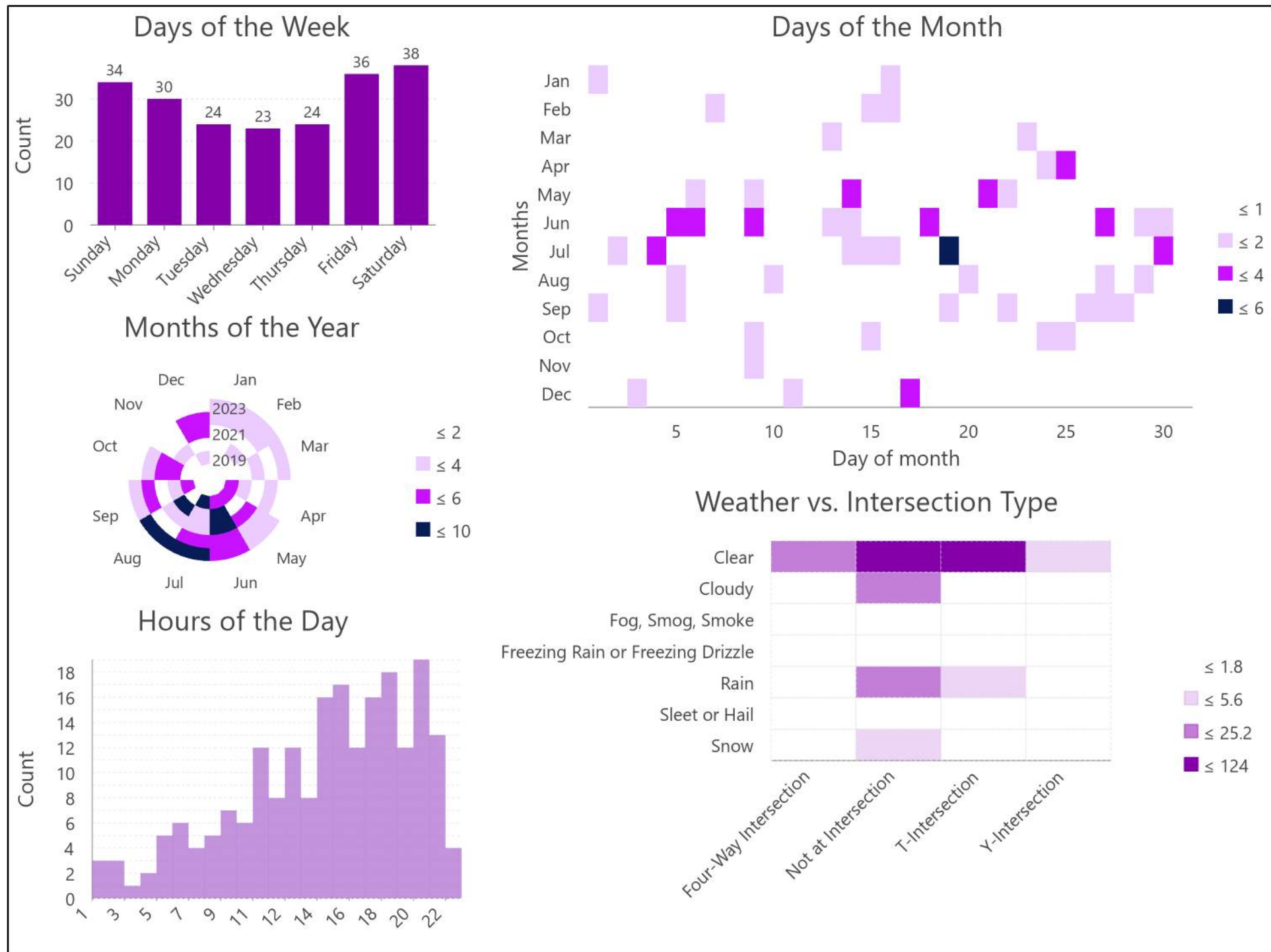
NHCOG Rural vs. Urban K&A Crash Data 2019-2023

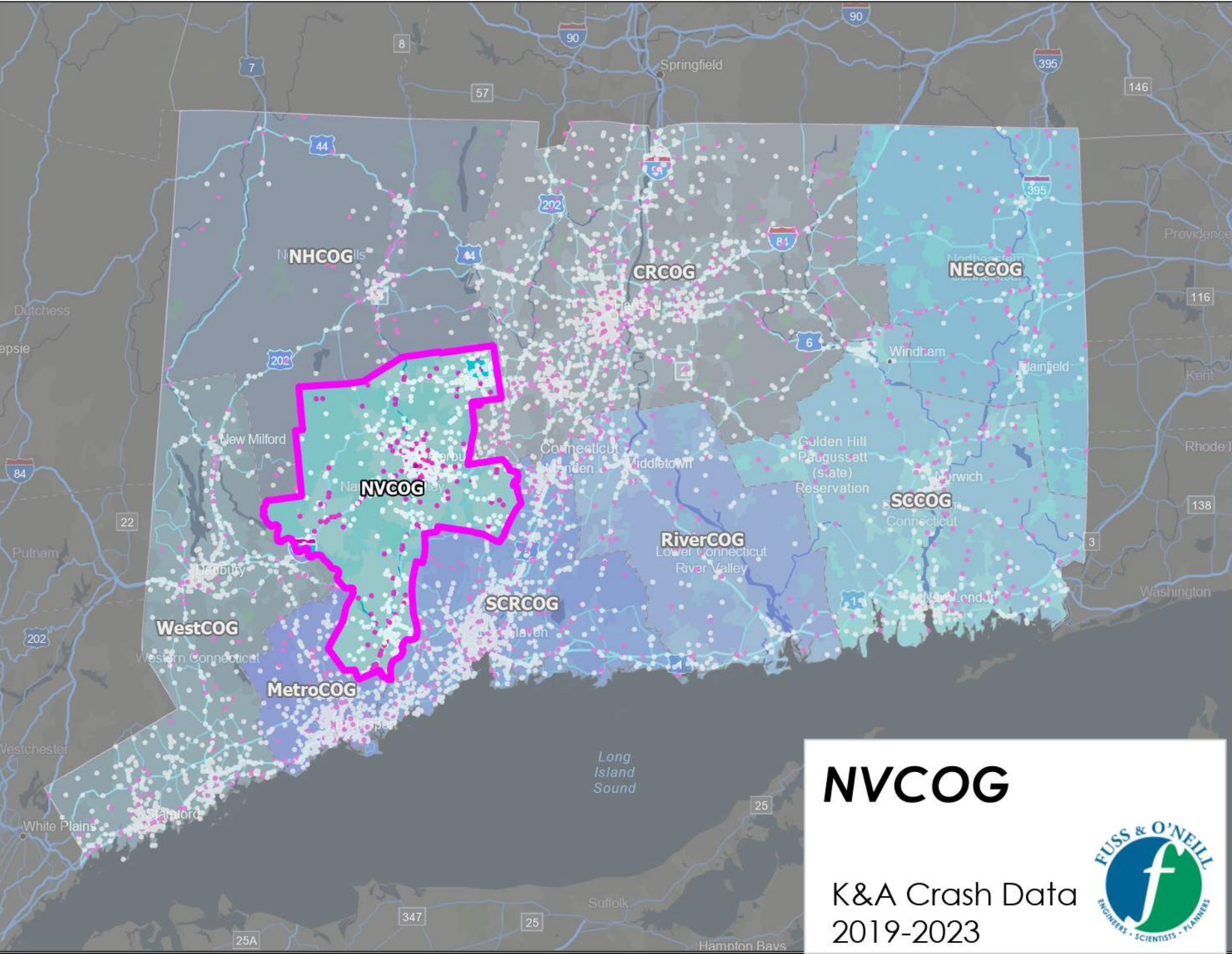


NHCOG Rural vs. Urban K&A Crash Data 2019-2023



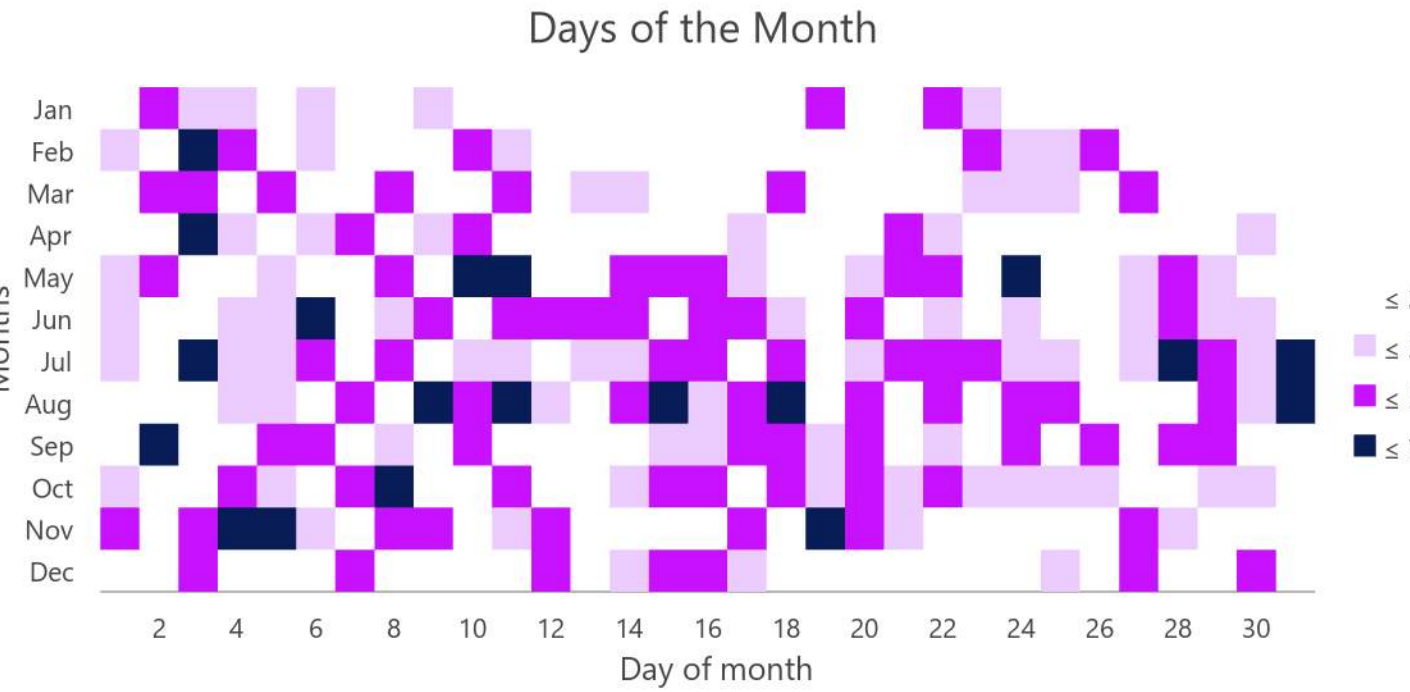
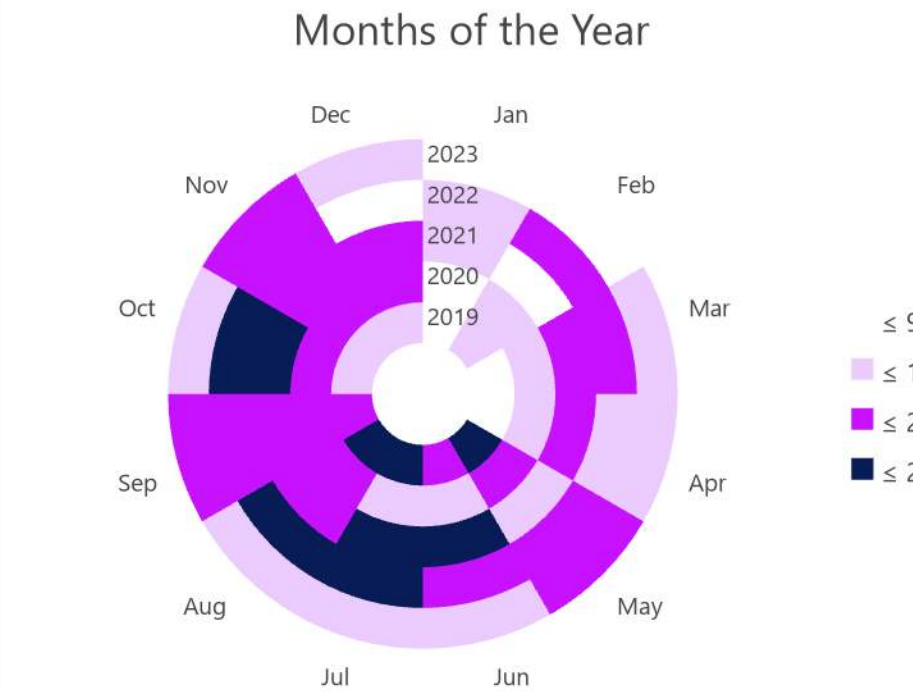
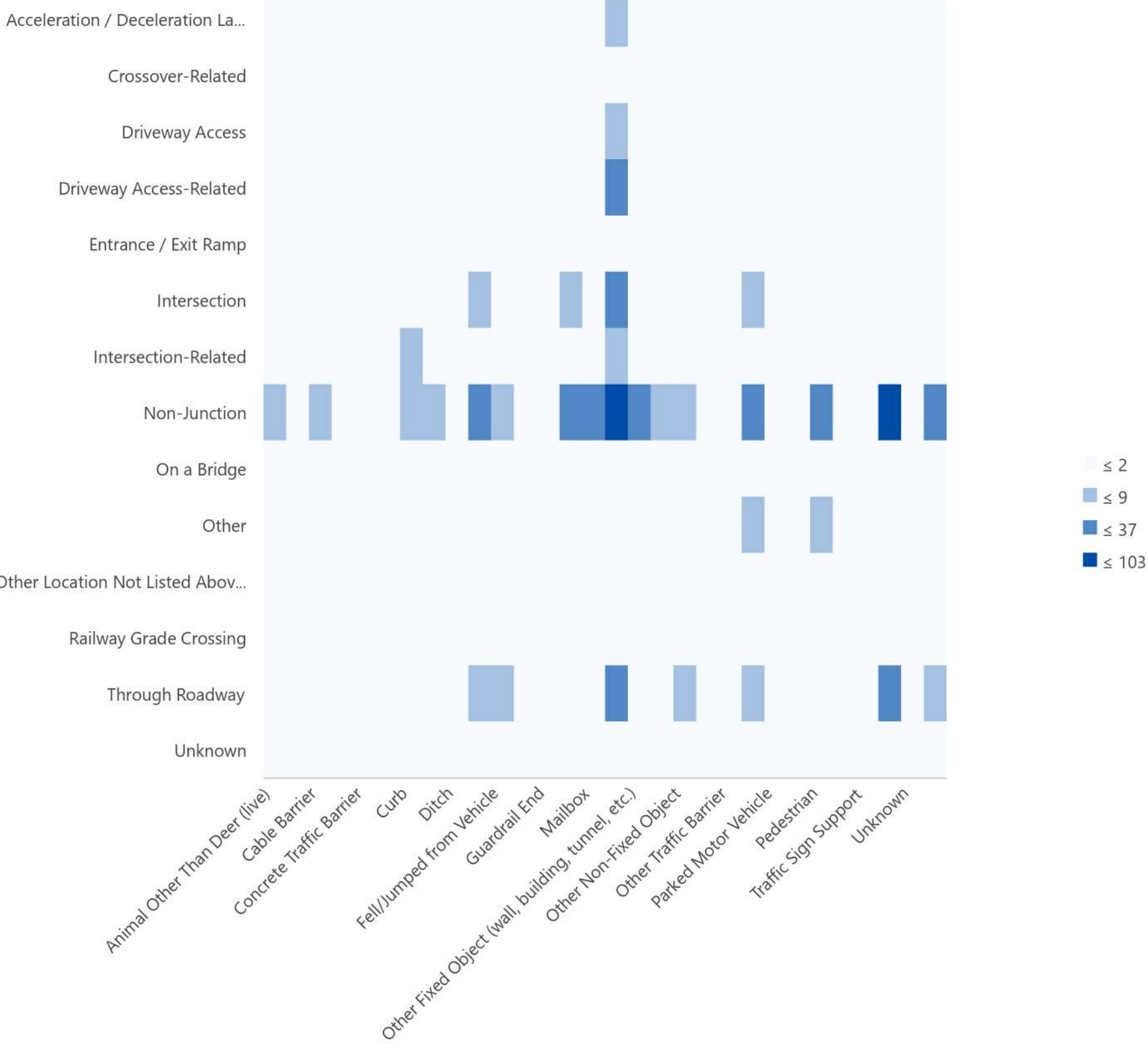
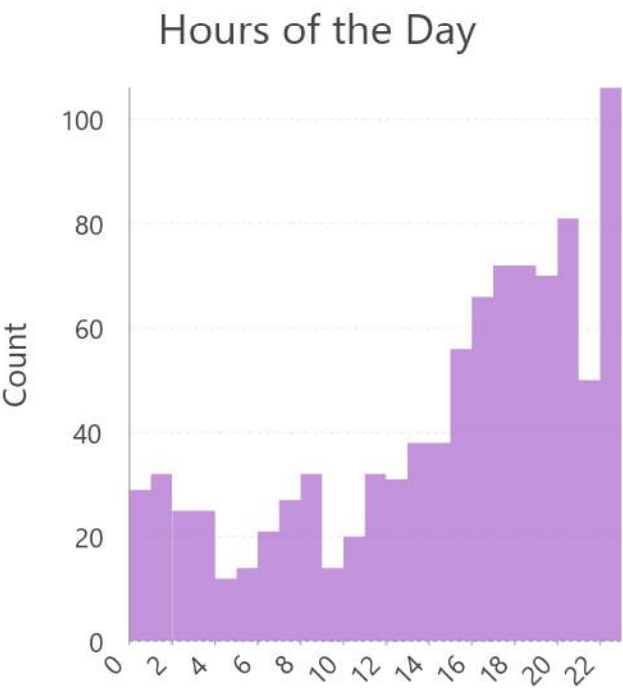
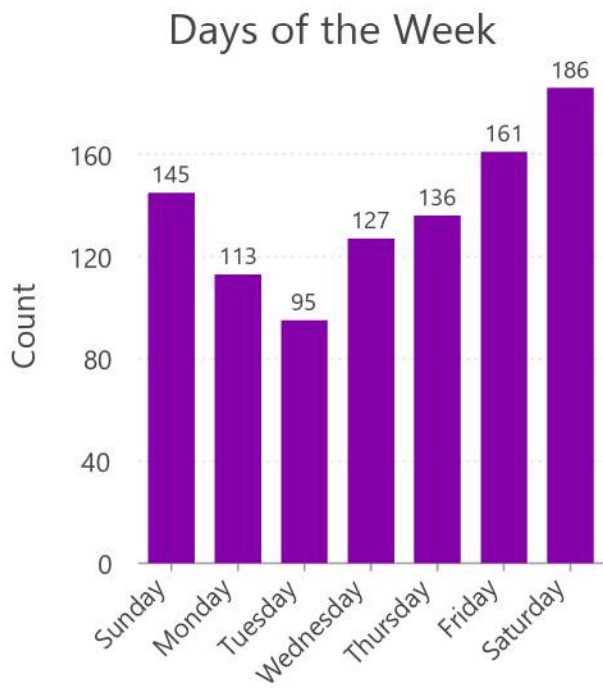
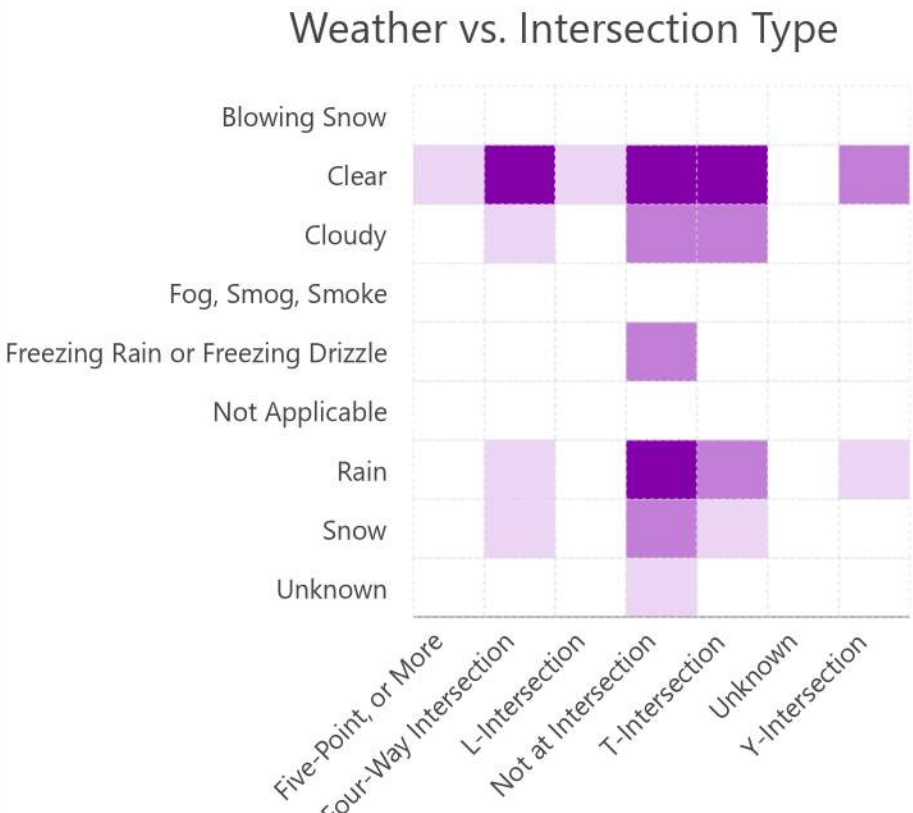
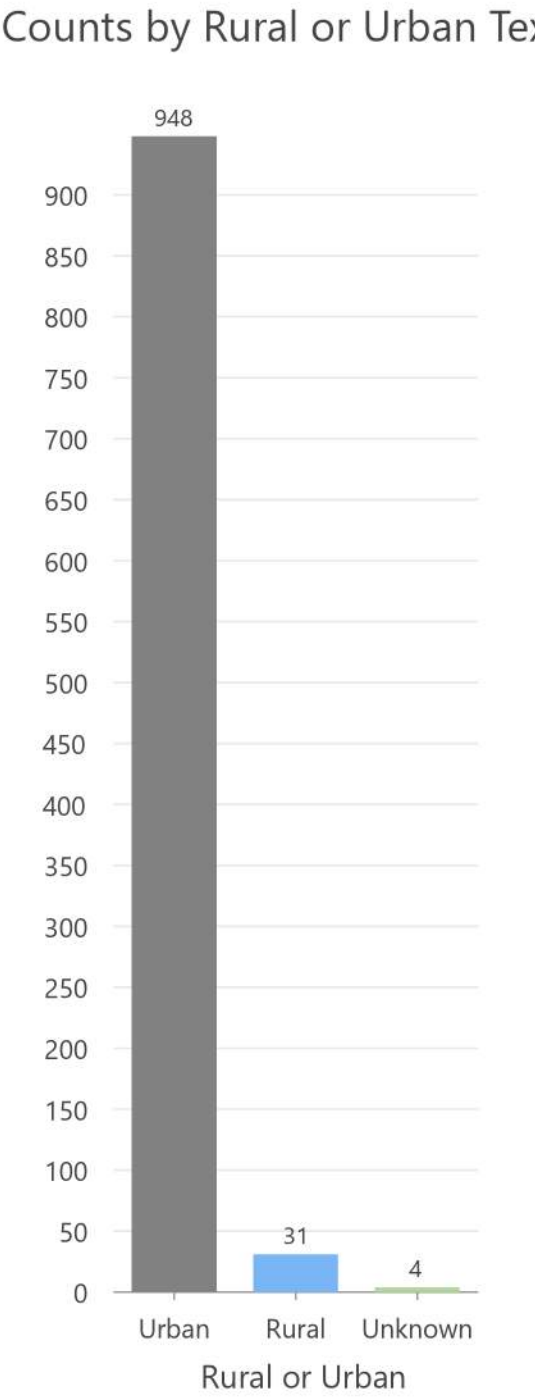
NHCOG Time & Conditions K&A Crash Data 2019-2023

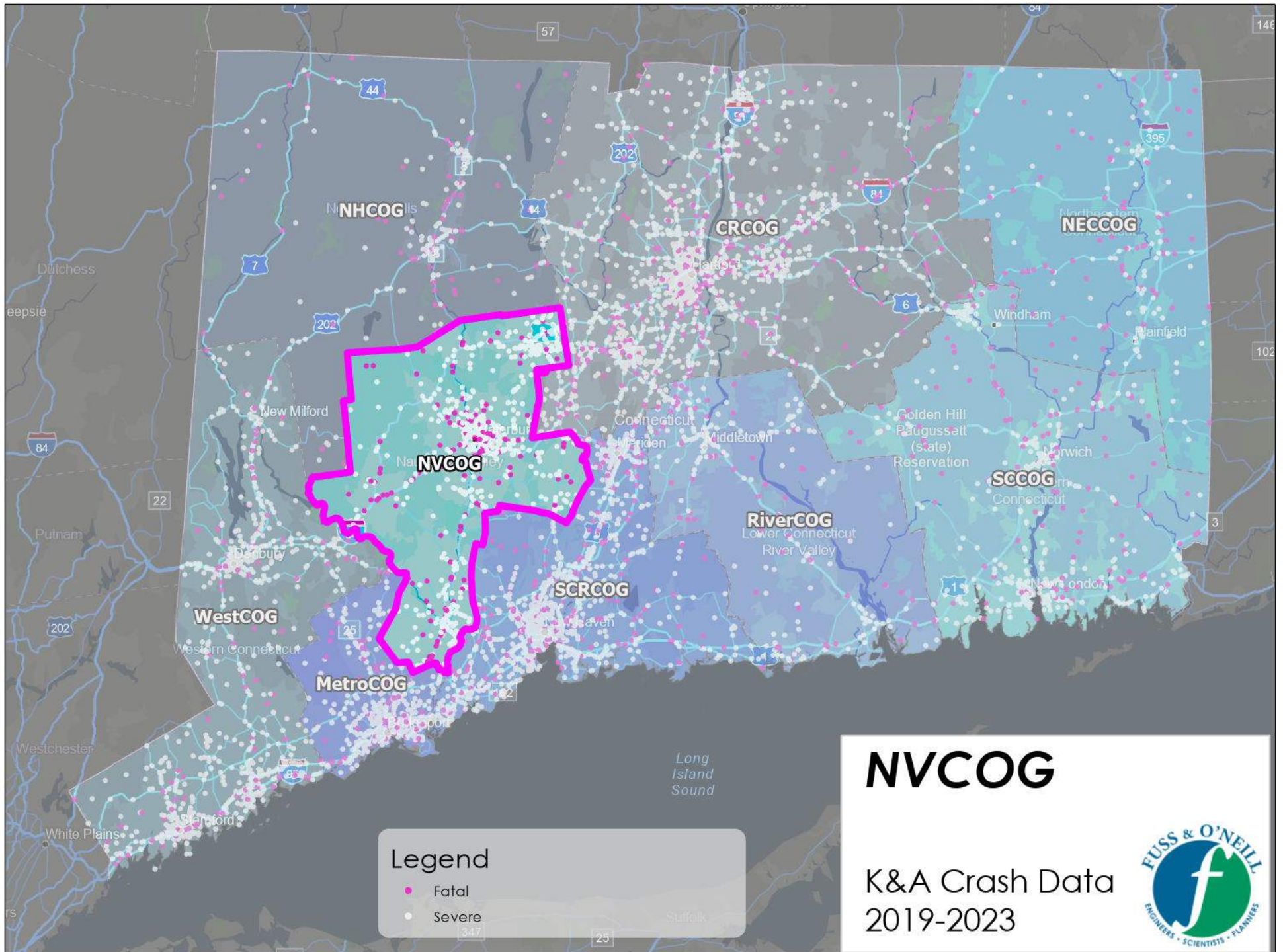




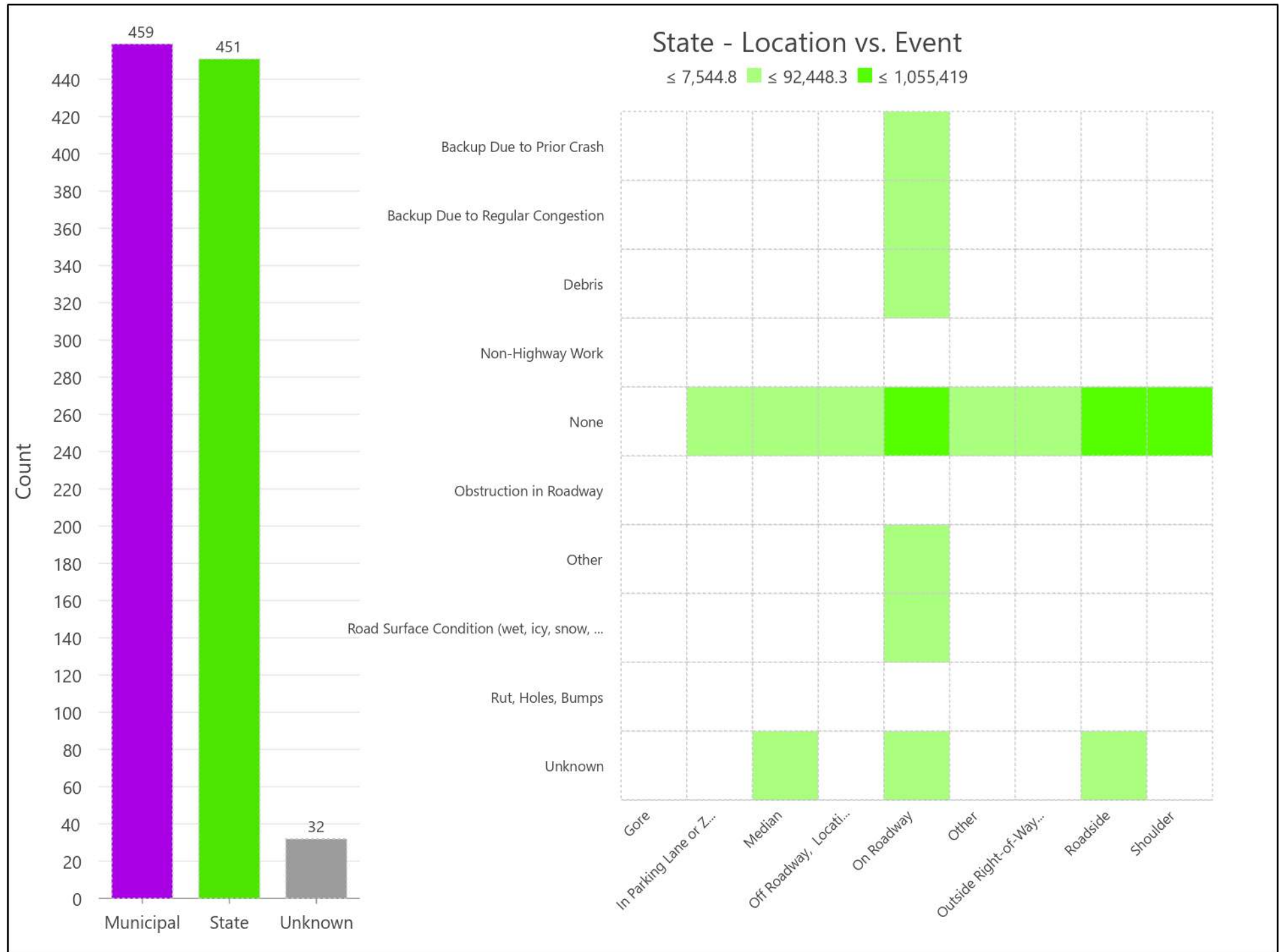
NVCOG

K&A Crash Data
2019-2023

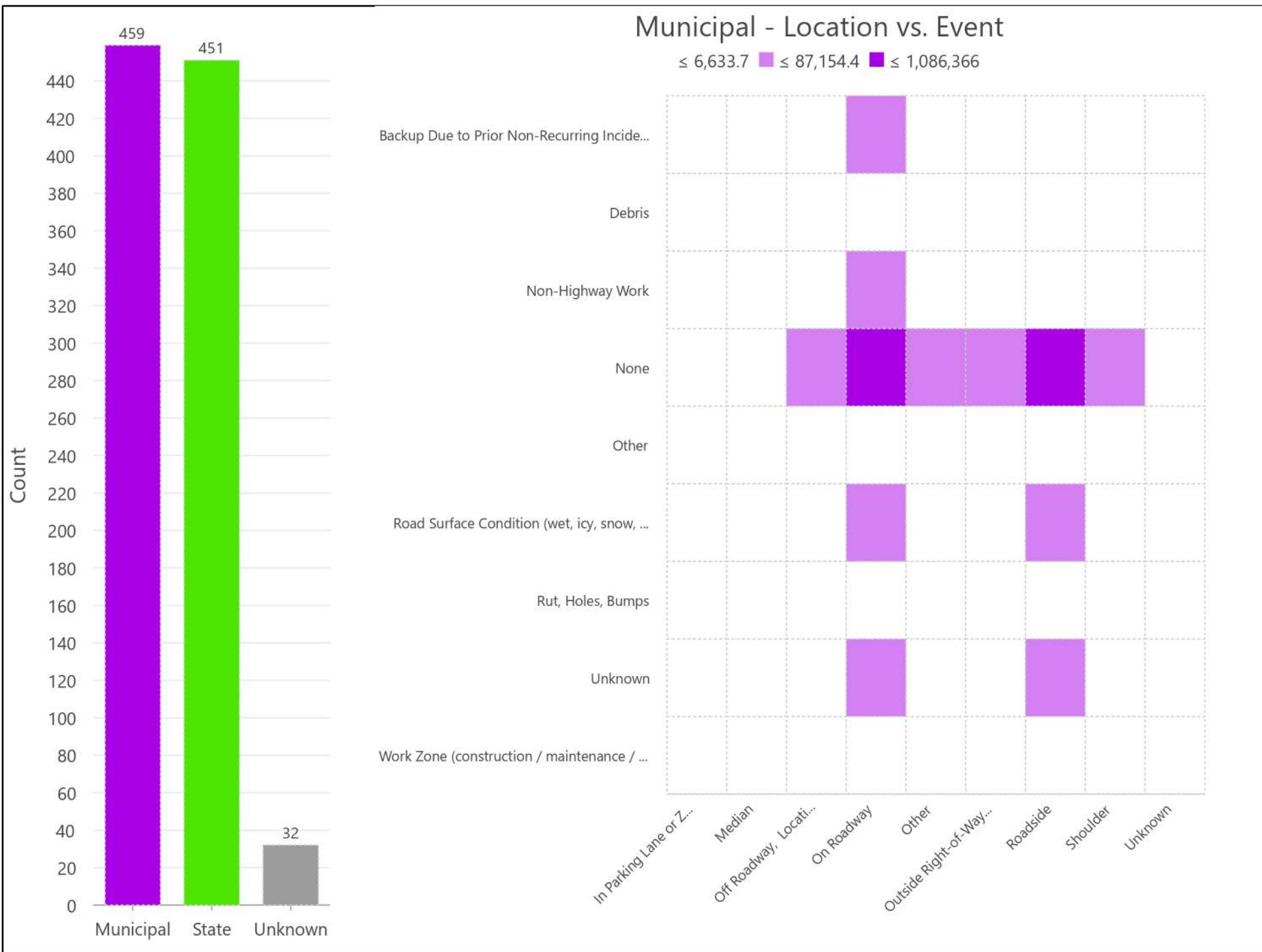




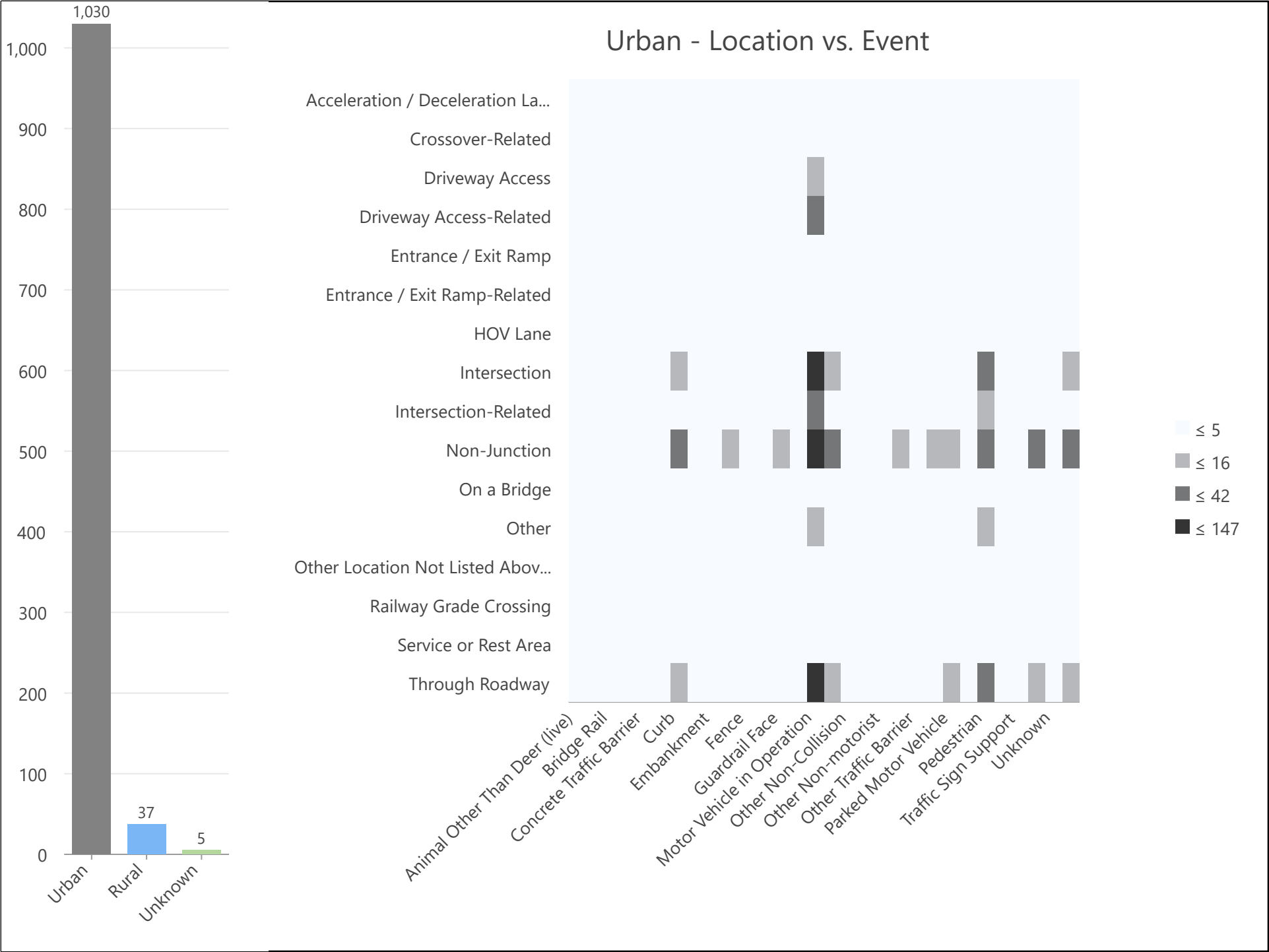
NVCOG State vs. Municipal Road K&A Crash Data 2019-2023



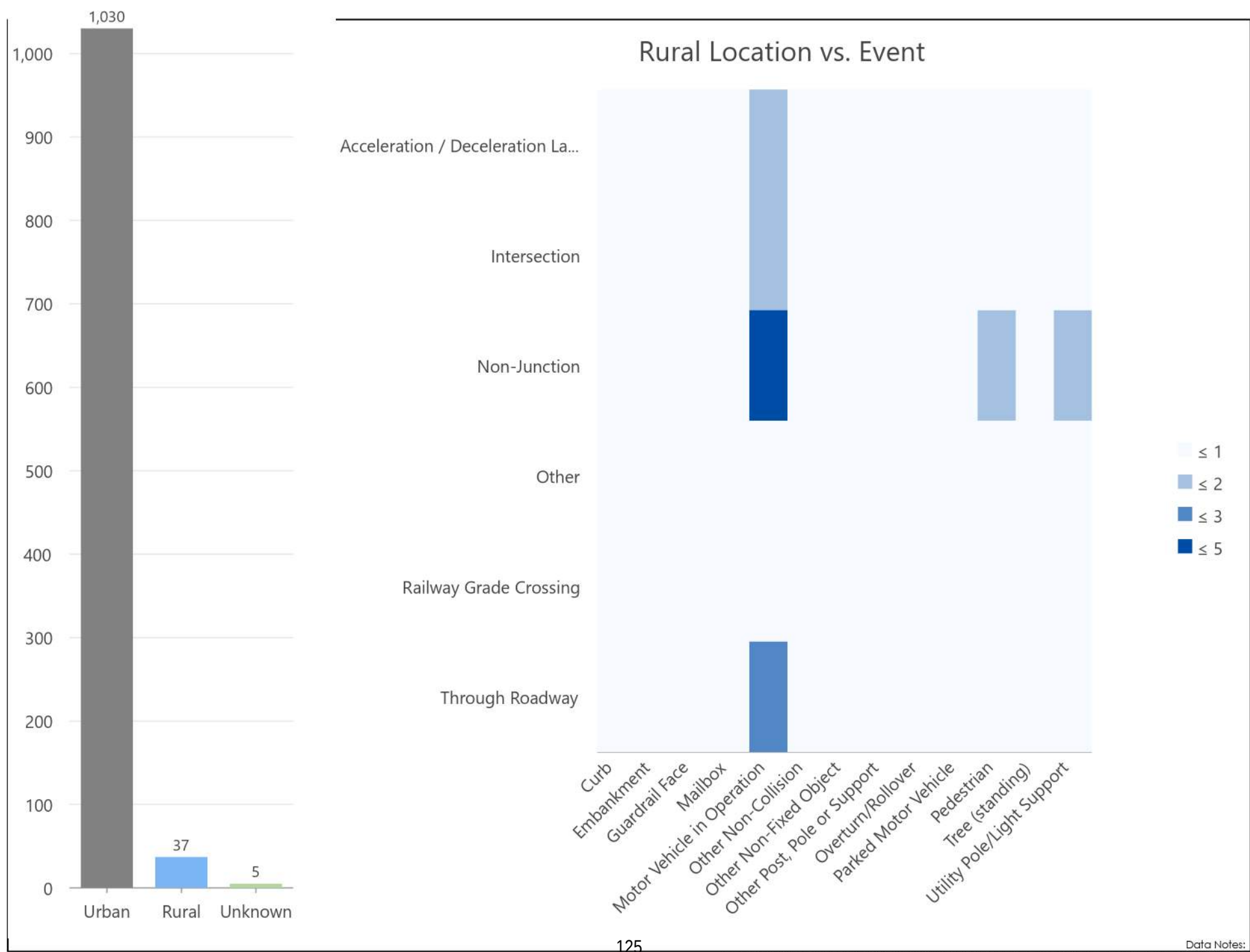
NVCOG State vs. Municipal Road K&A Crash Data 2019-2023



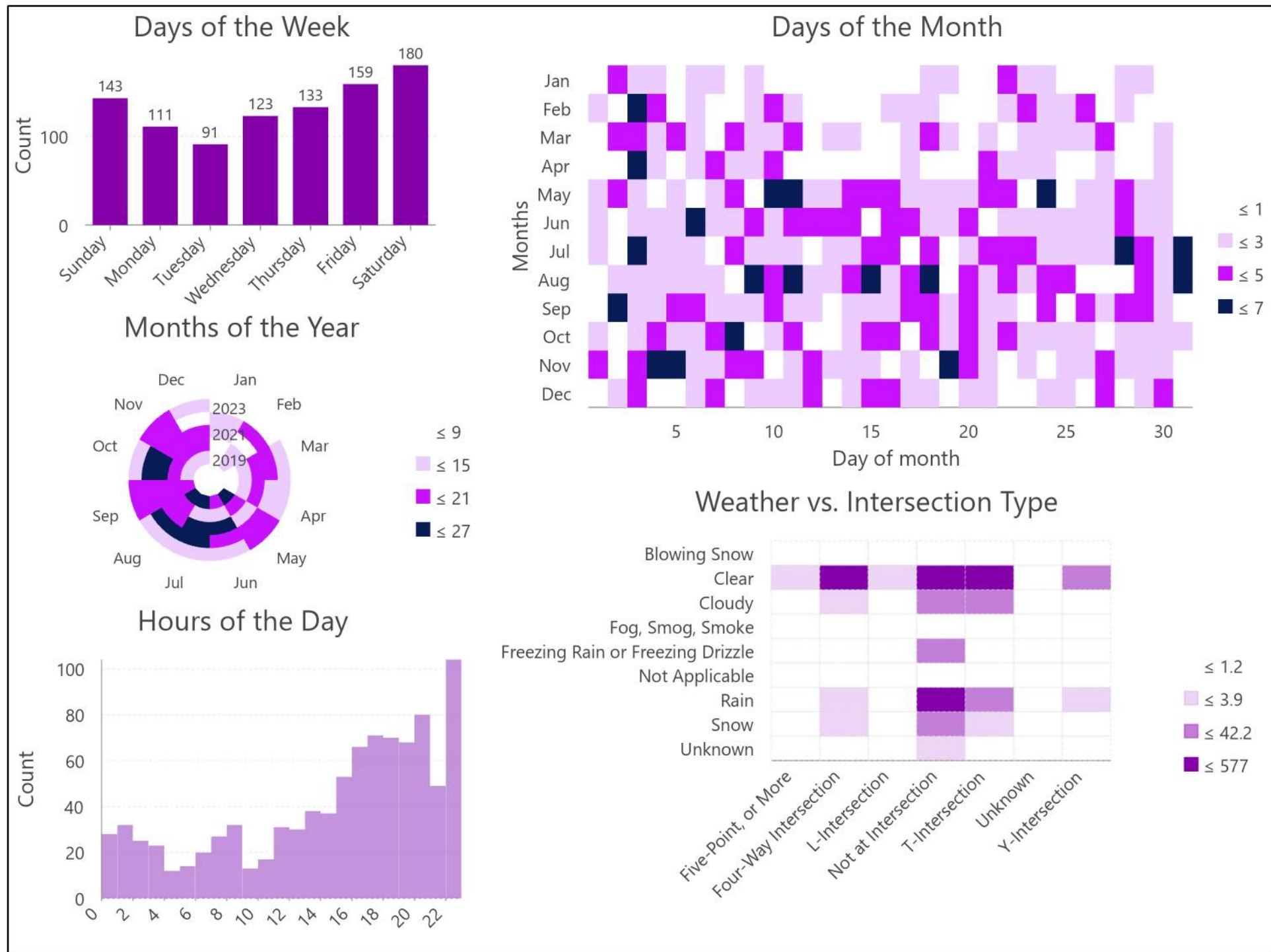
NVCOG Rural vs. Urban K&A Crash Data 2019-2023

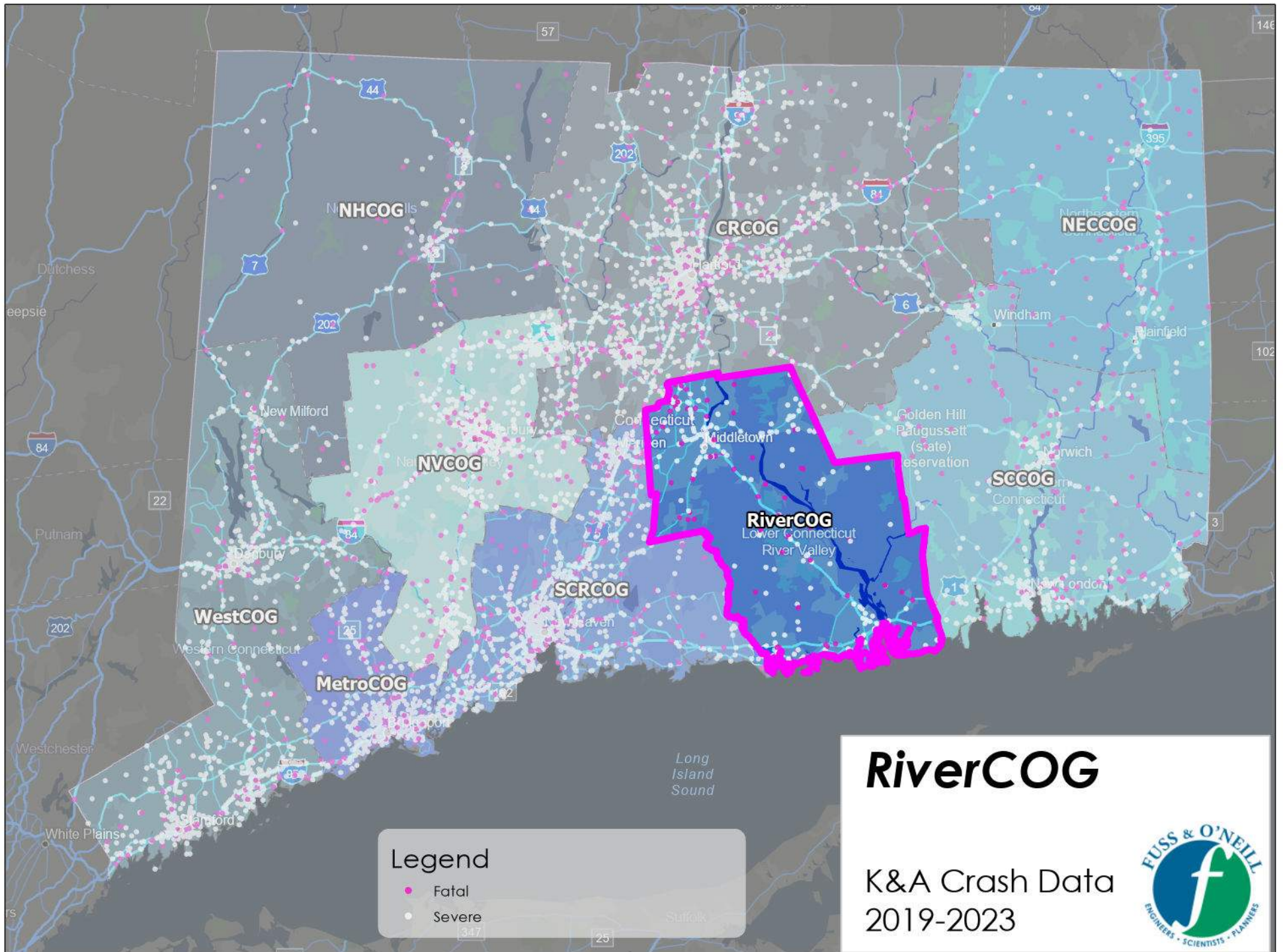


NVCOG Rural vs. Urban K&A Crash Data 2019-2023

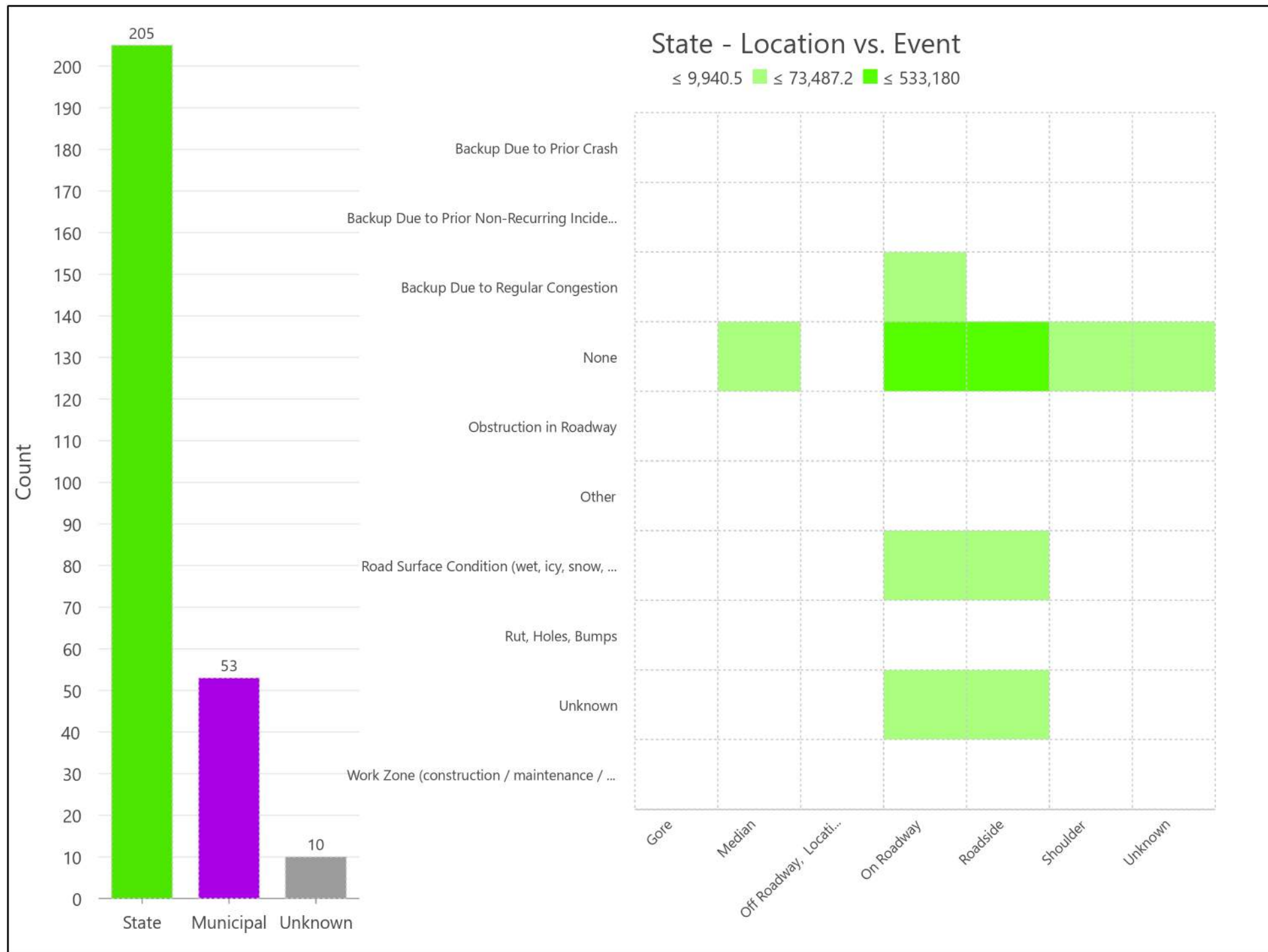


NVCOG Time & Conditions K&A Crash Data 2019-2023

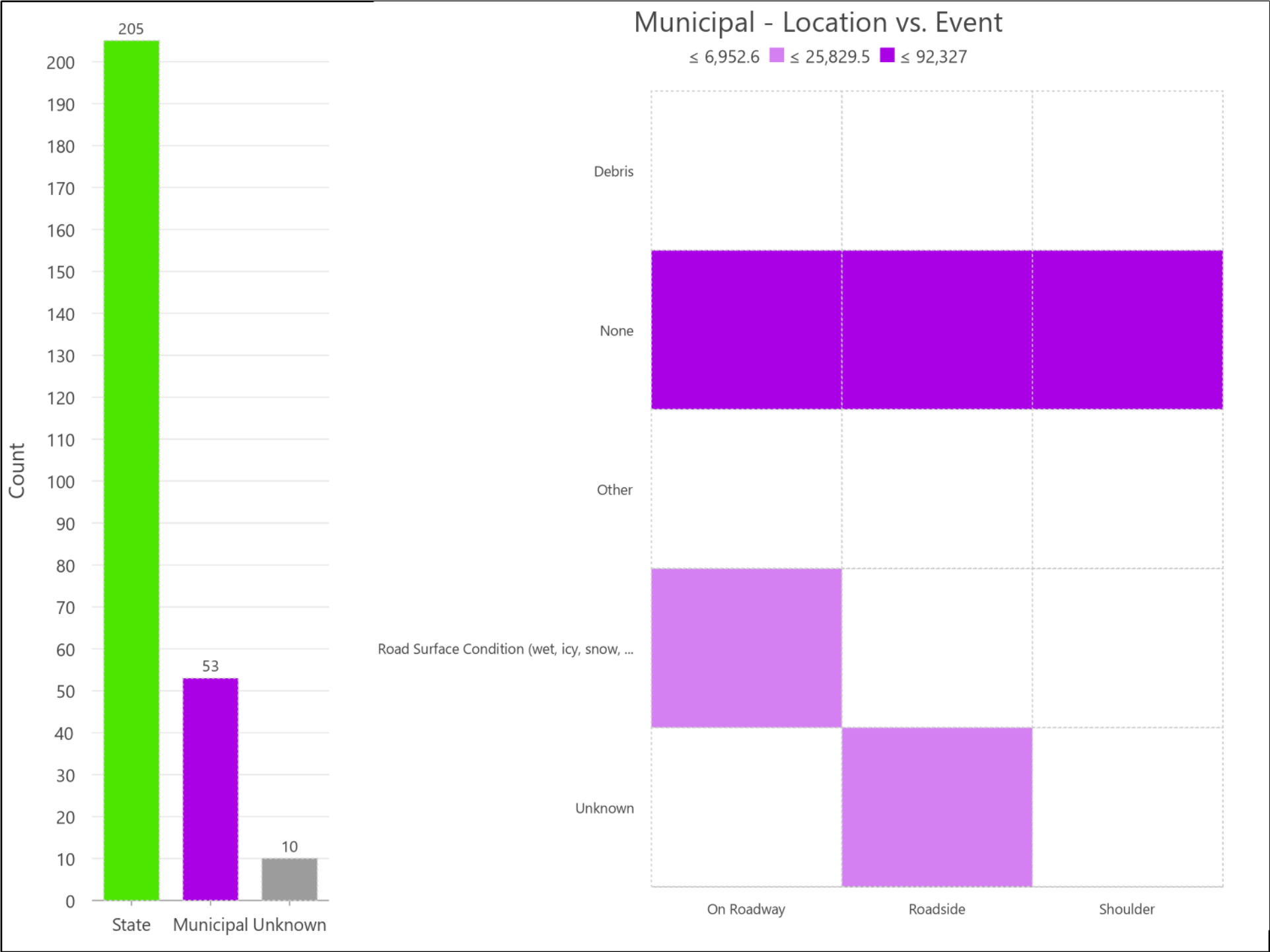




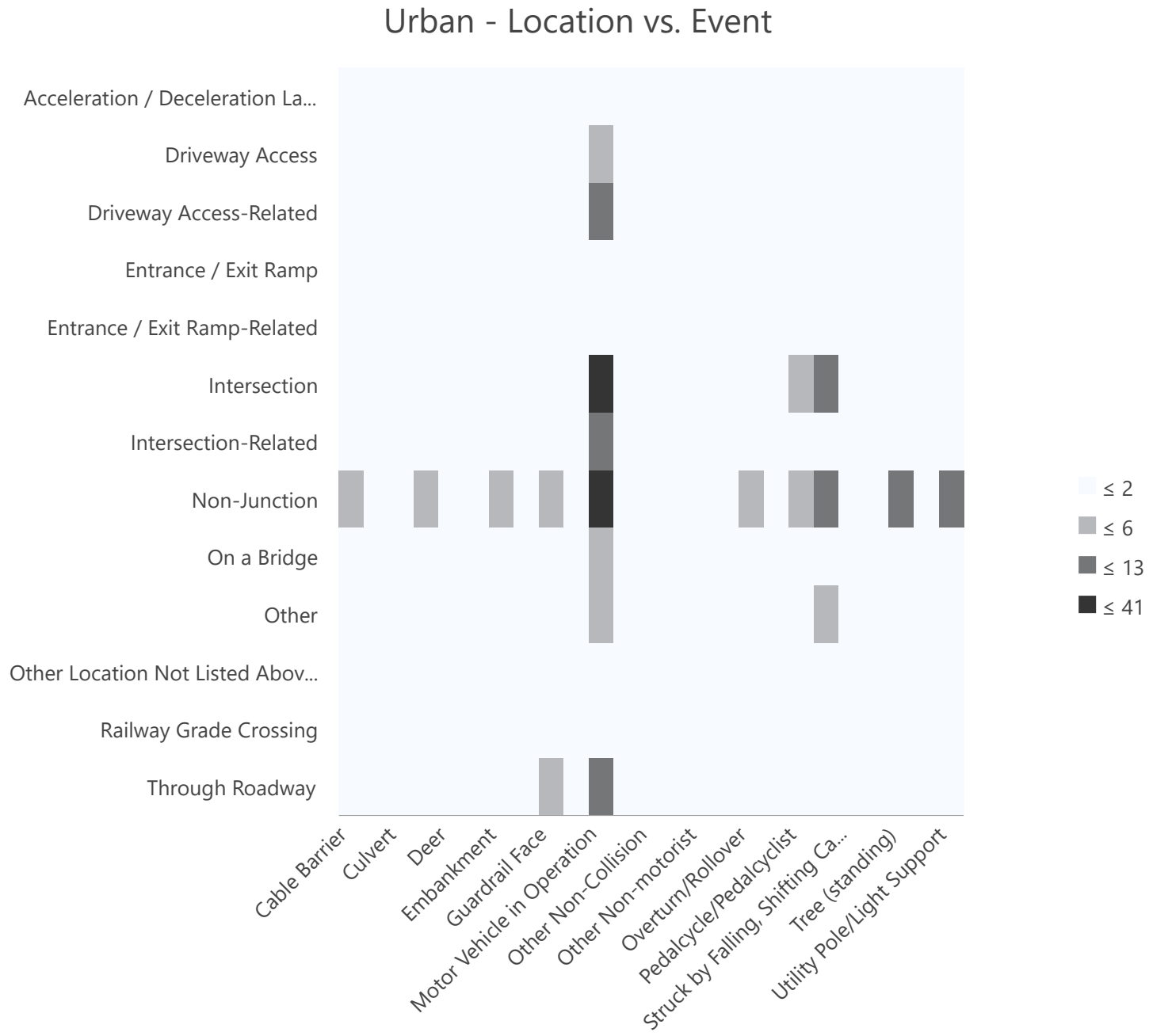
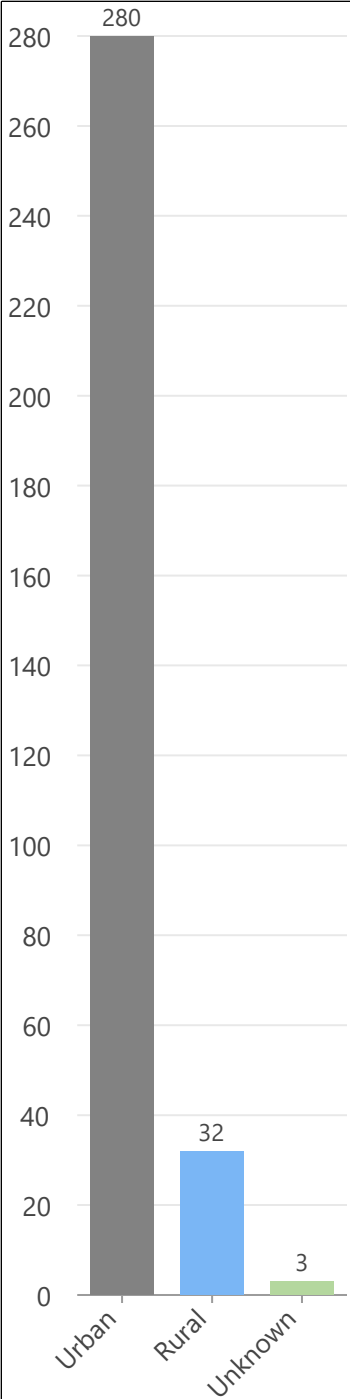
RiverCOG State vs. Municipal Road K&A Crash Data 2019-2023



RiverCOG State vs. Municipal Road K&A Crash Data 2019-2023



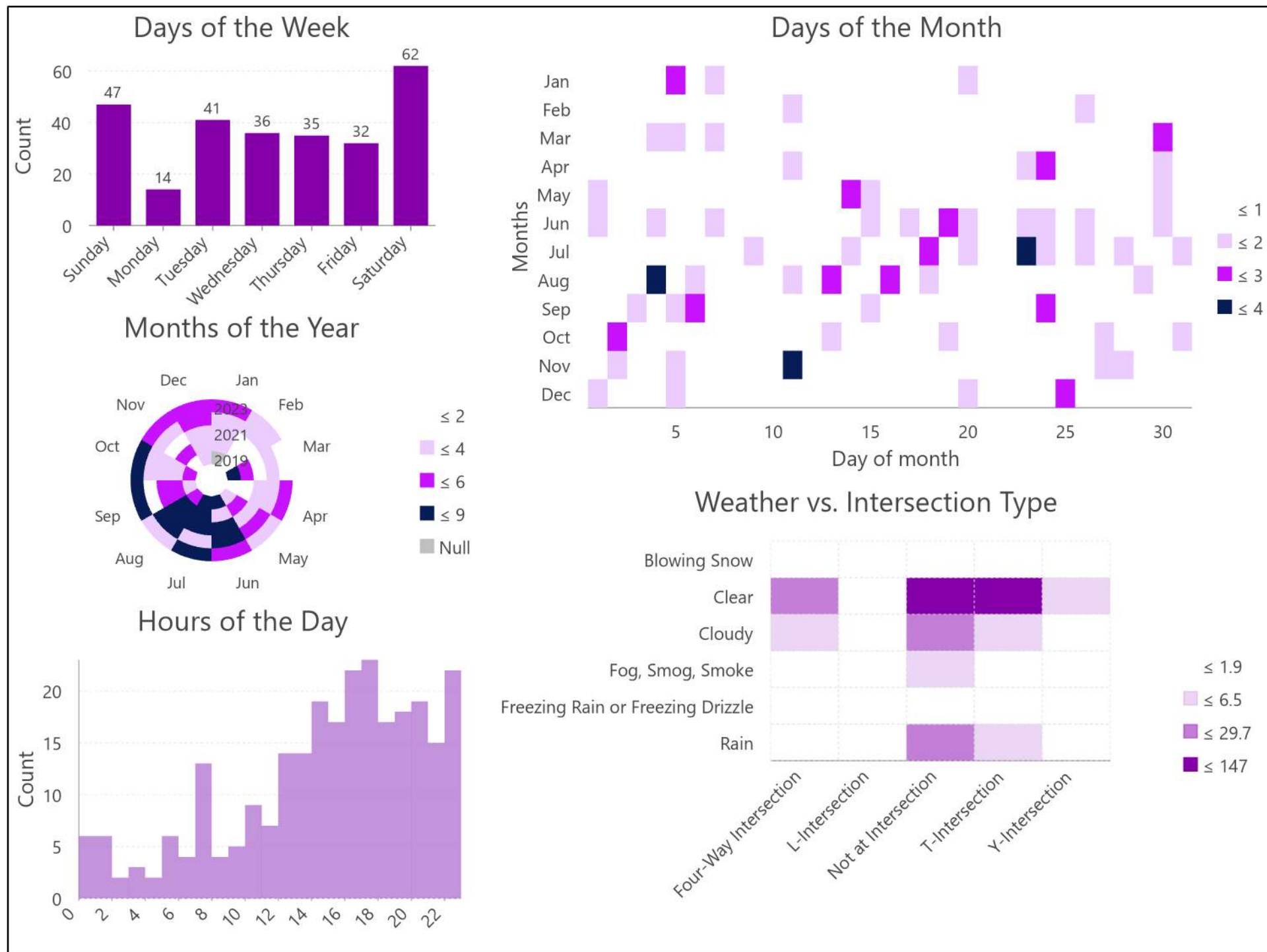
RiverCOG Rural vs. Urban K&A Crash Data 2019-2023

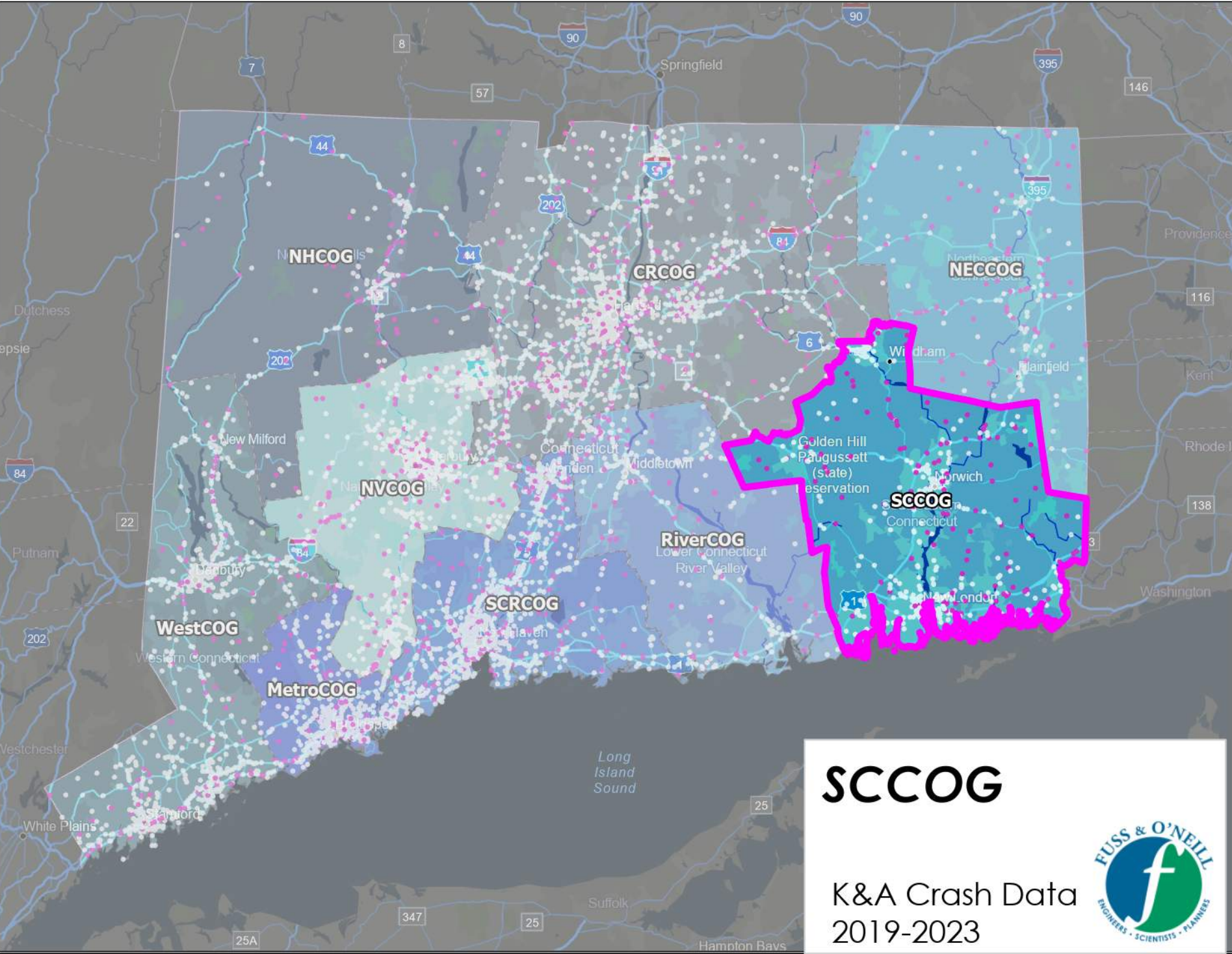


RiverCOG Rural vs. Urban K&A Crash Data 2019-2023

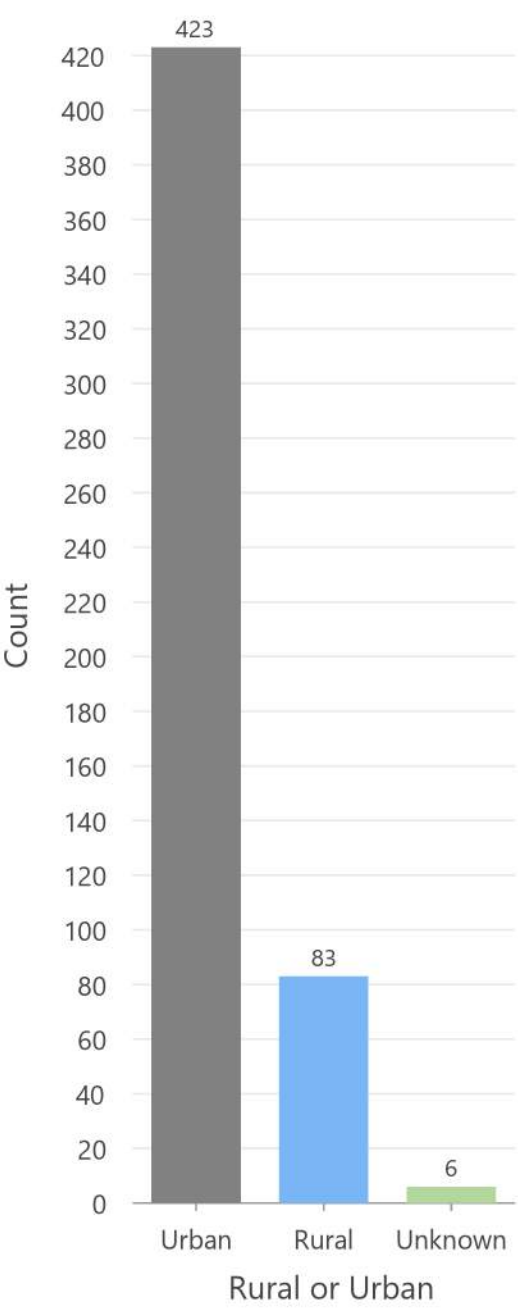


RiverCOG Time & Conditions K&A Crash Data 2019-2023

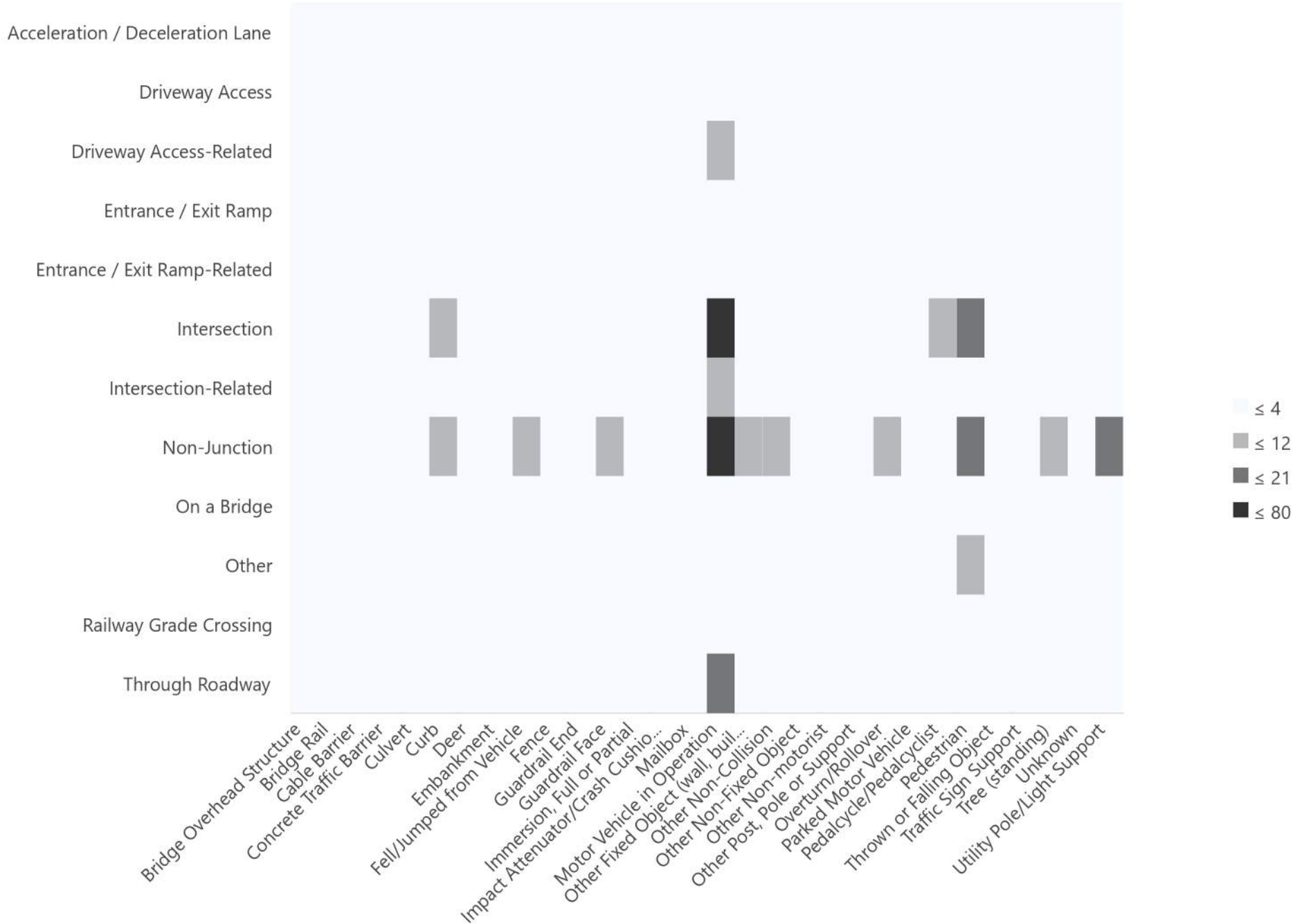




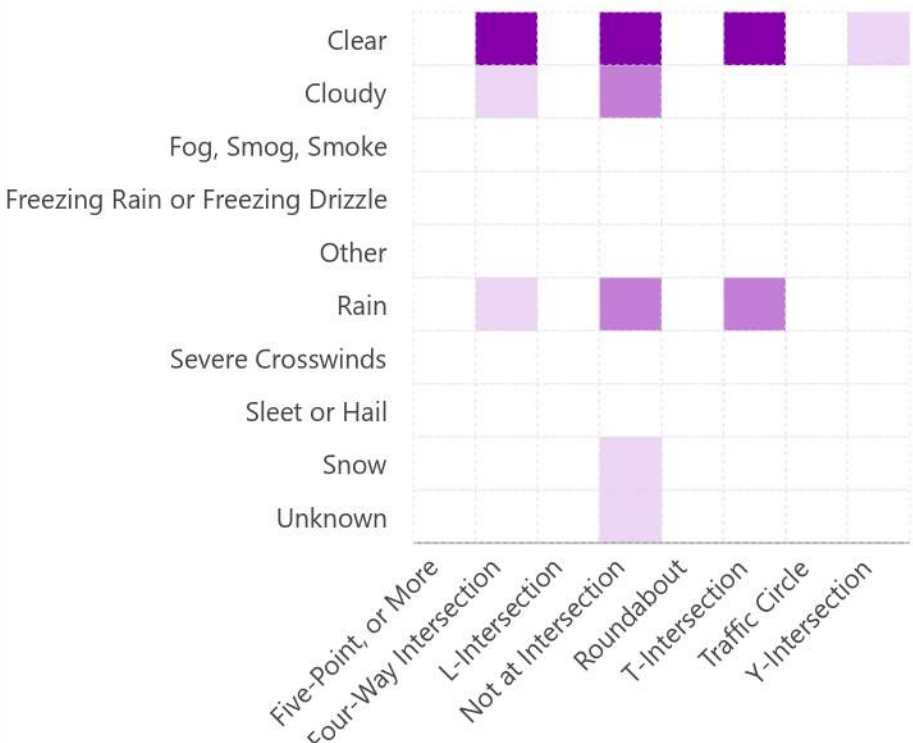
Counts by Rural or Urban Te



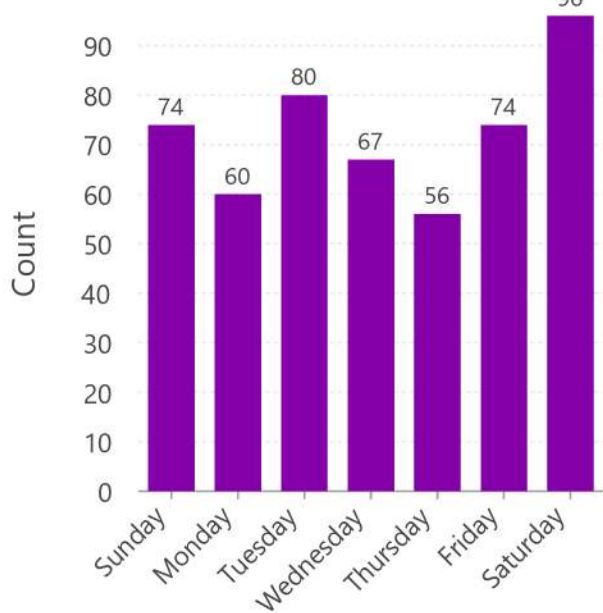
Urban - Location vs. Event



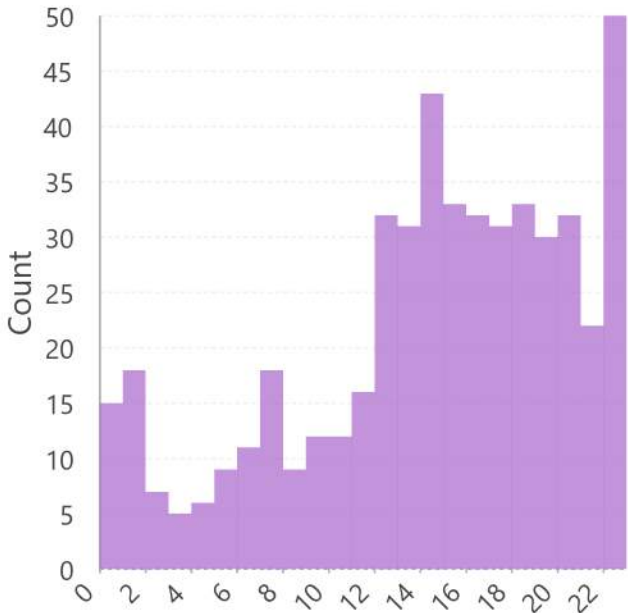
Weather vs. Intersection Type



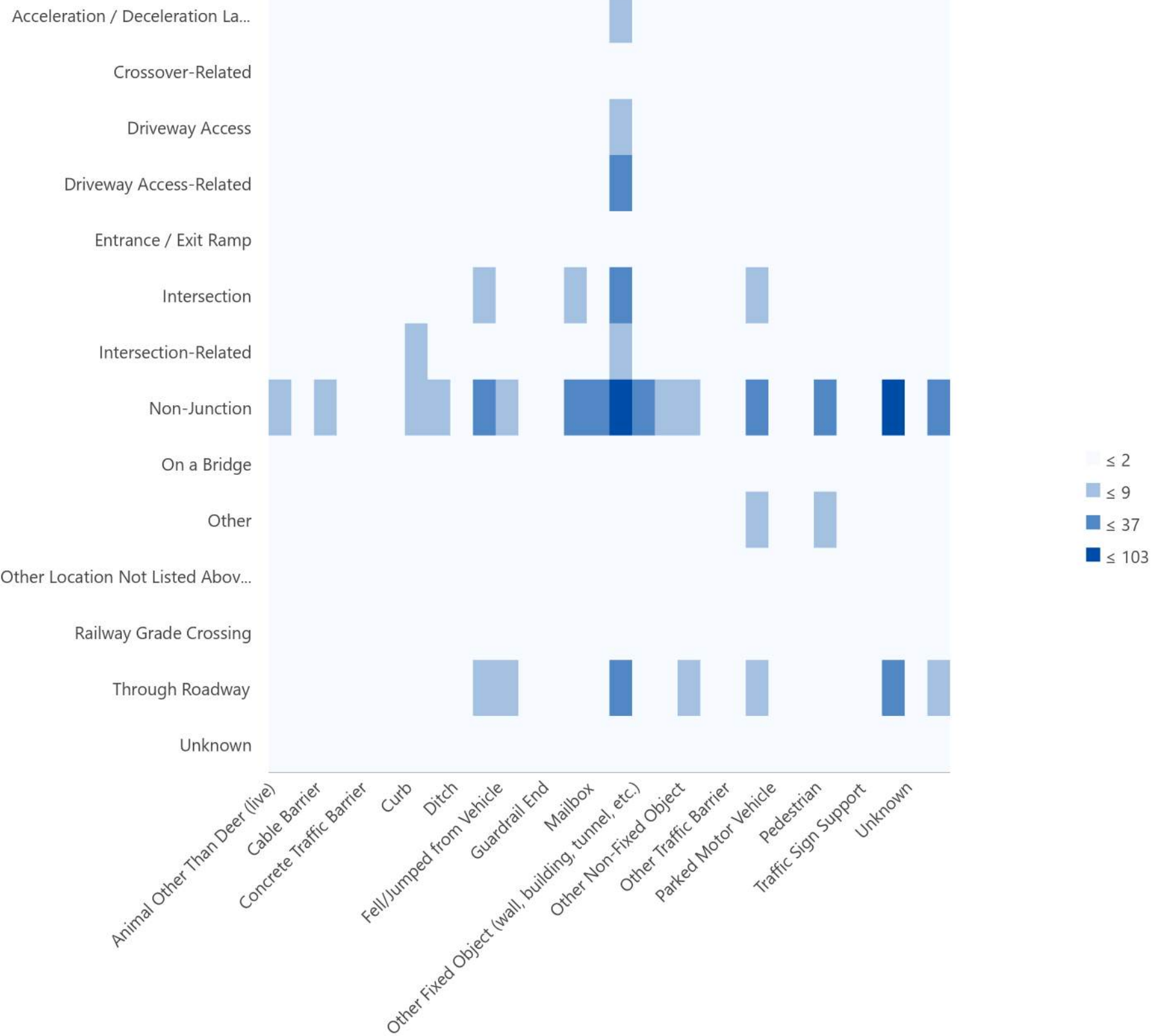
Days of the Week



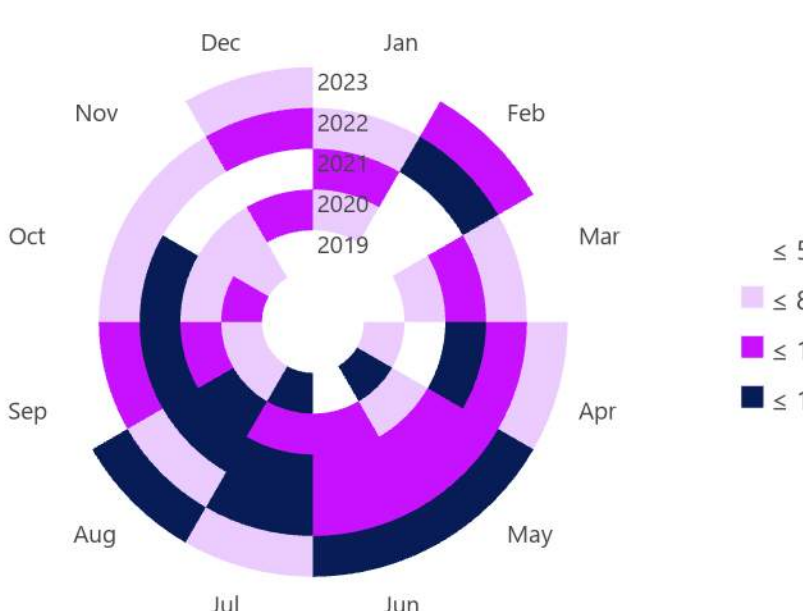
Hours of the Day



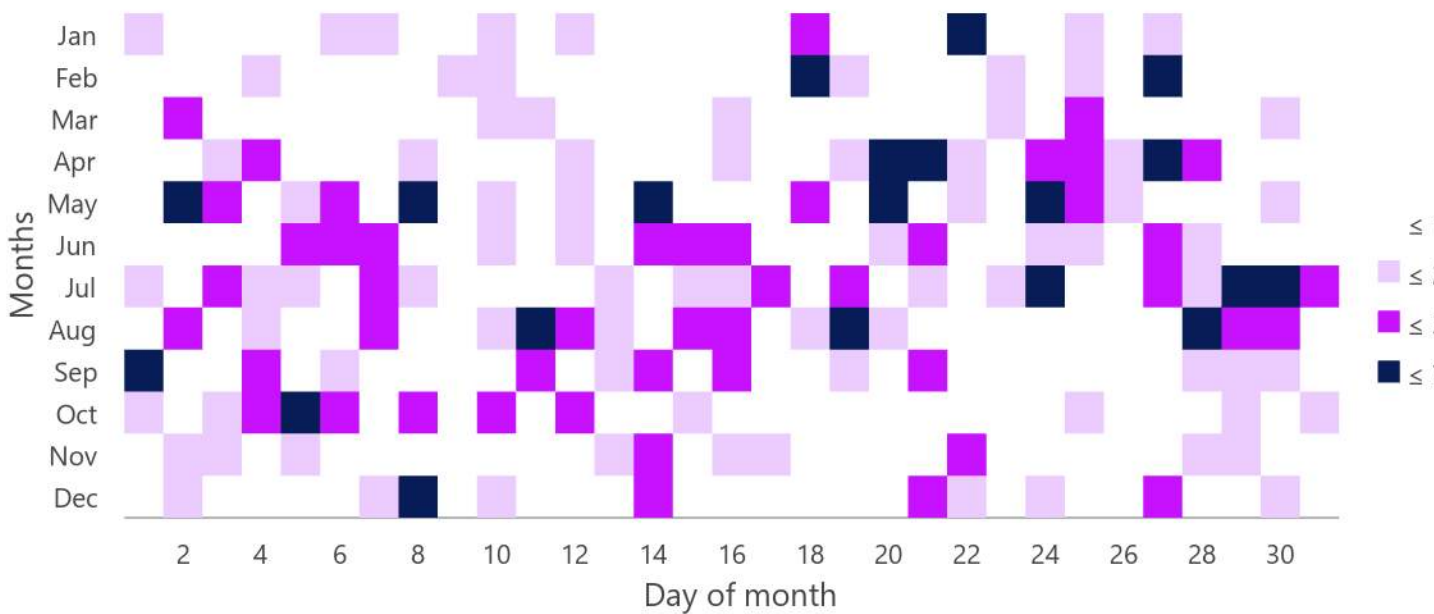
Rural Location vs. Event

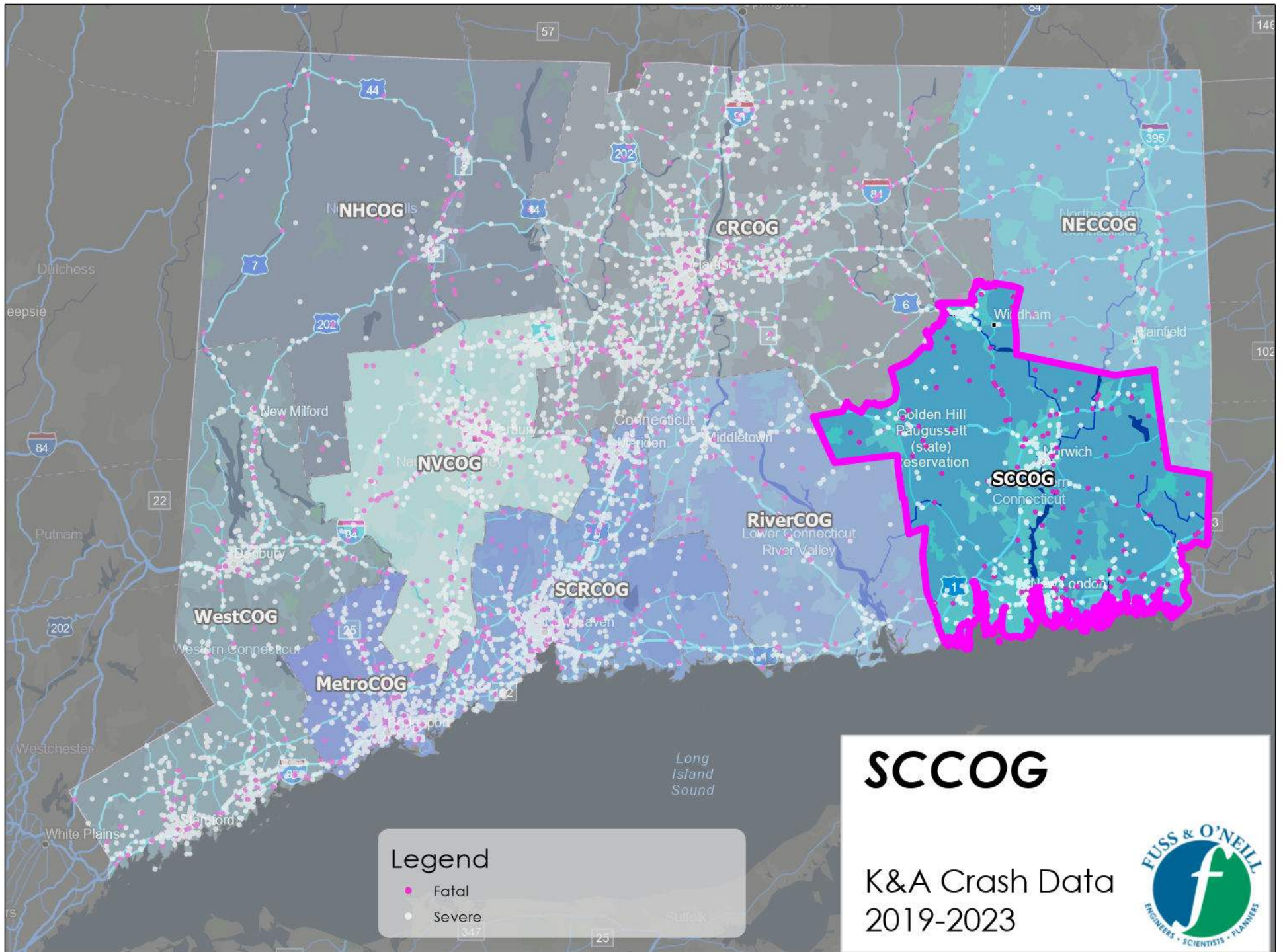


Months of the Year



Days of the Month

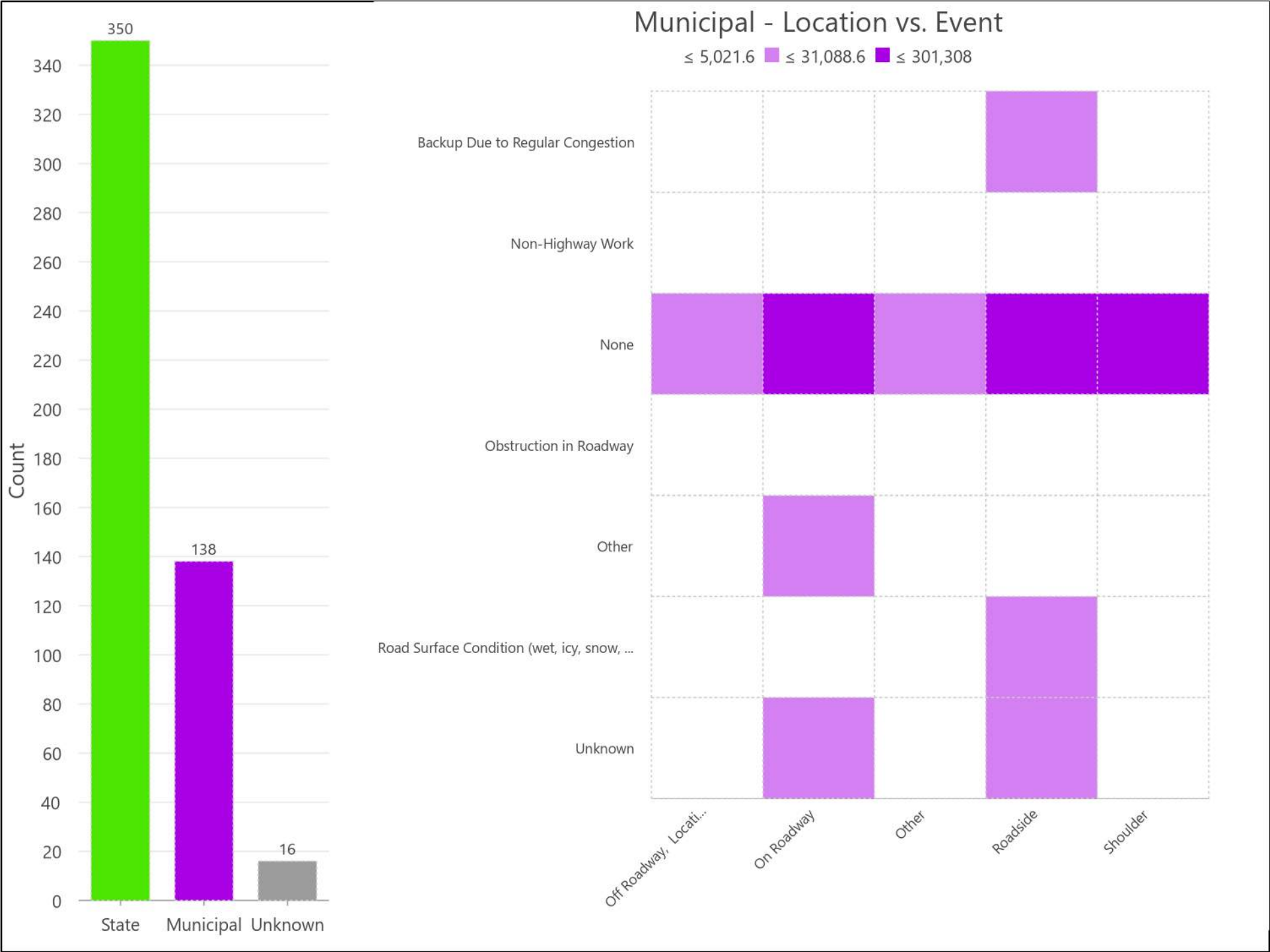




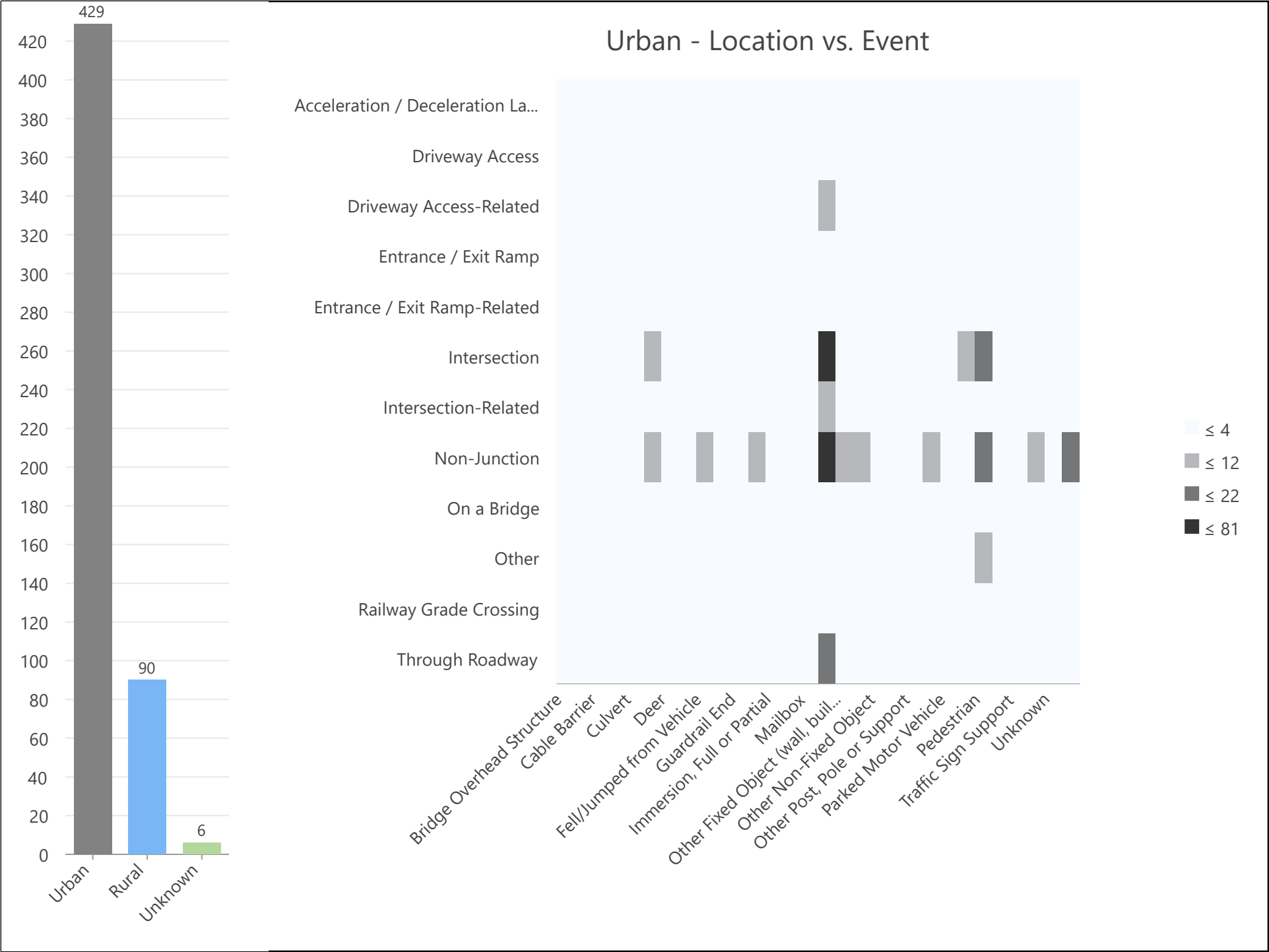
SCCOG State vs. Municipal Road K&A Crash Data 2019-2023



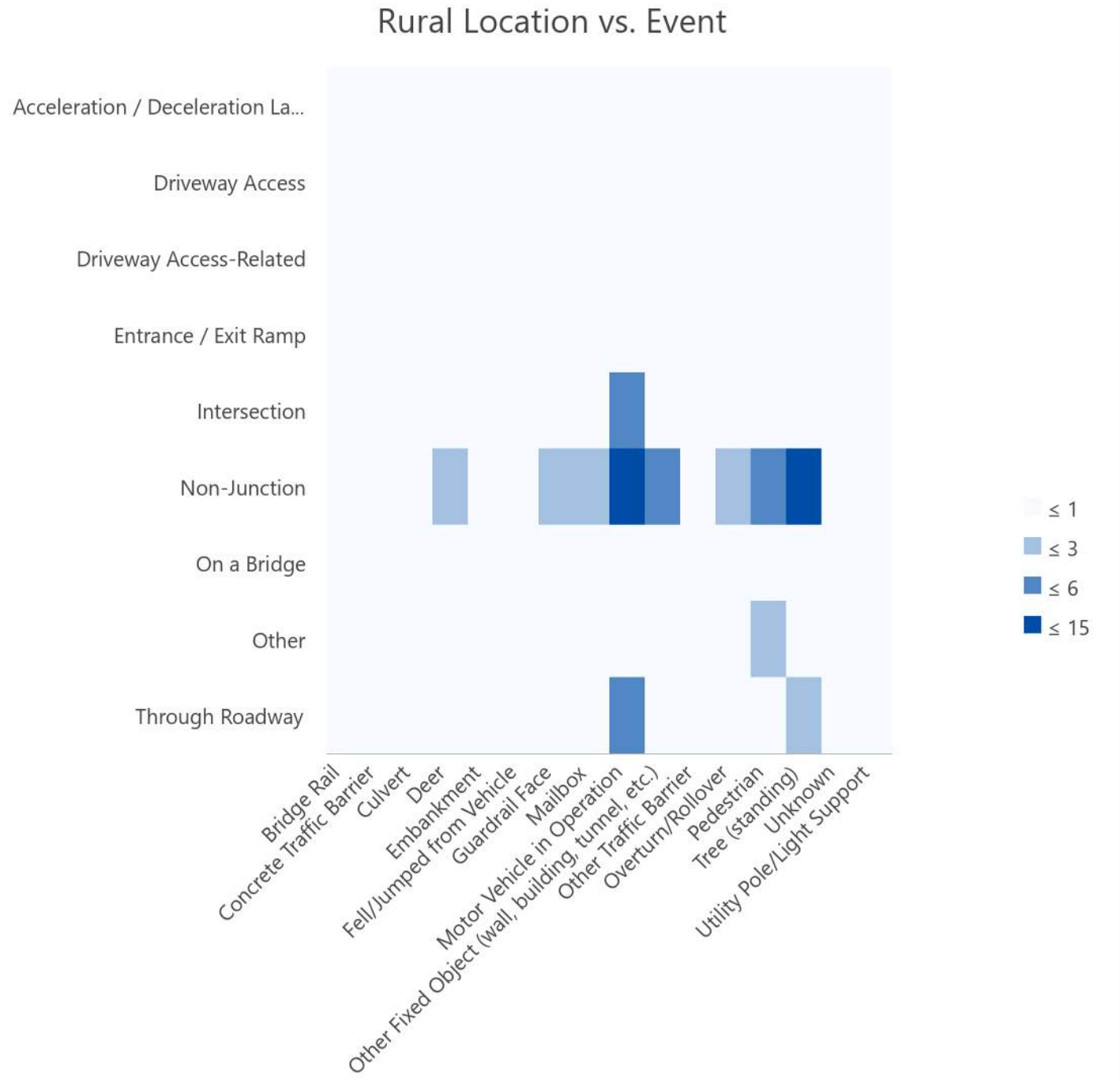
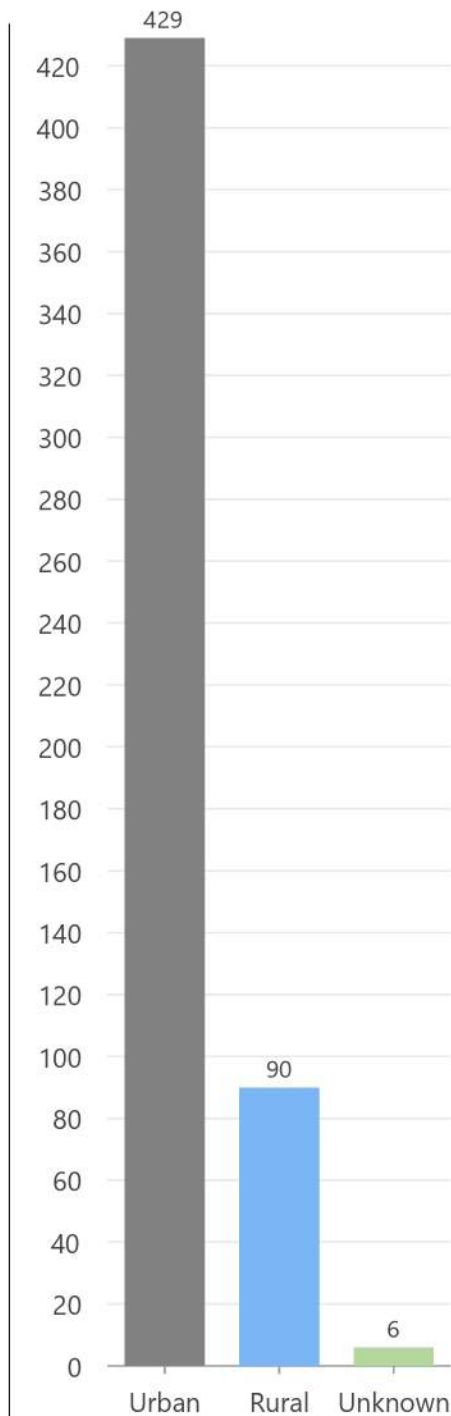
SCCOG State vs. Municipal Road K&A Crash Data 2019-2023



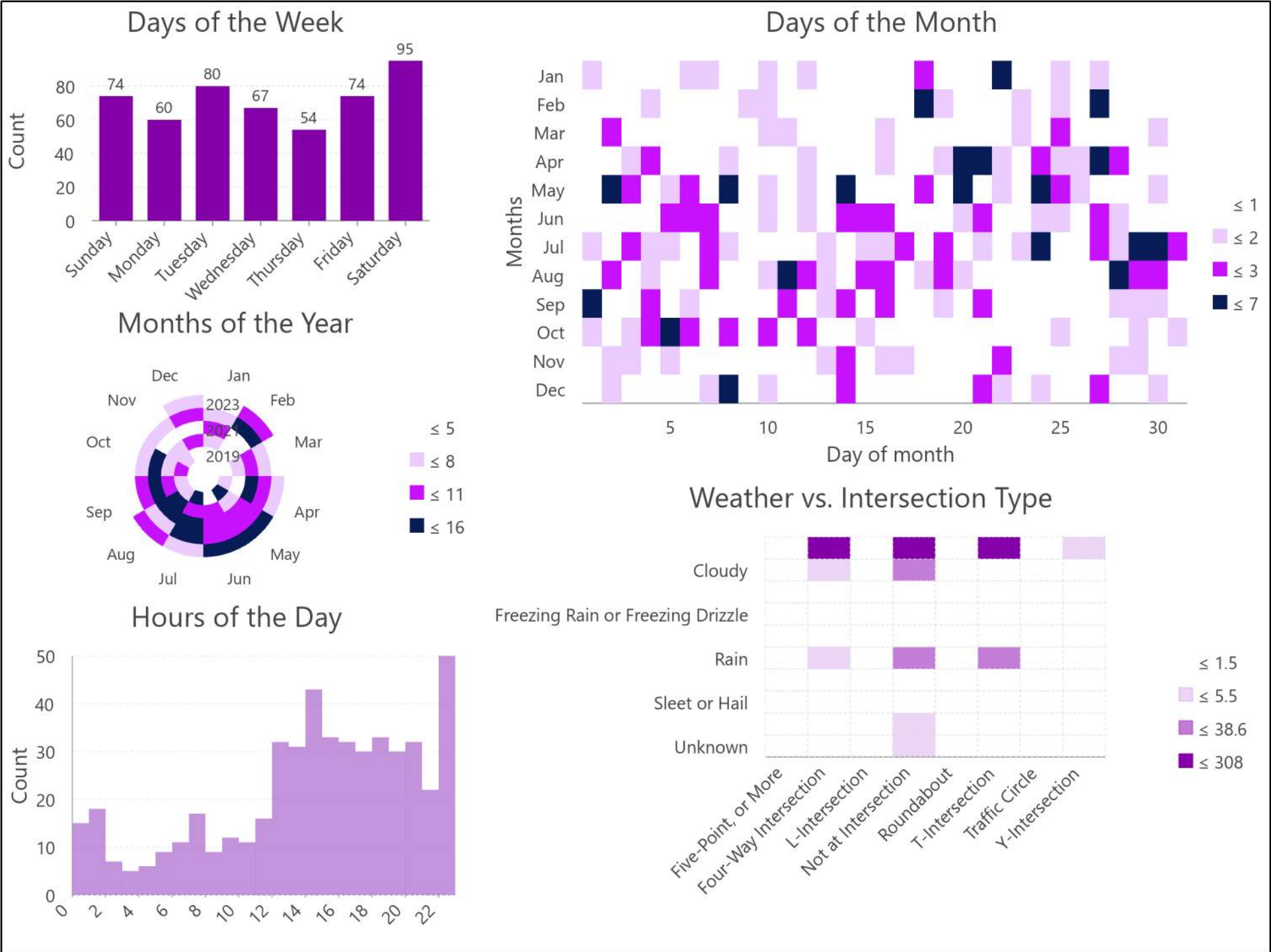
SCCOG Rural vs. Urban K&A Crash Data 2019-2023

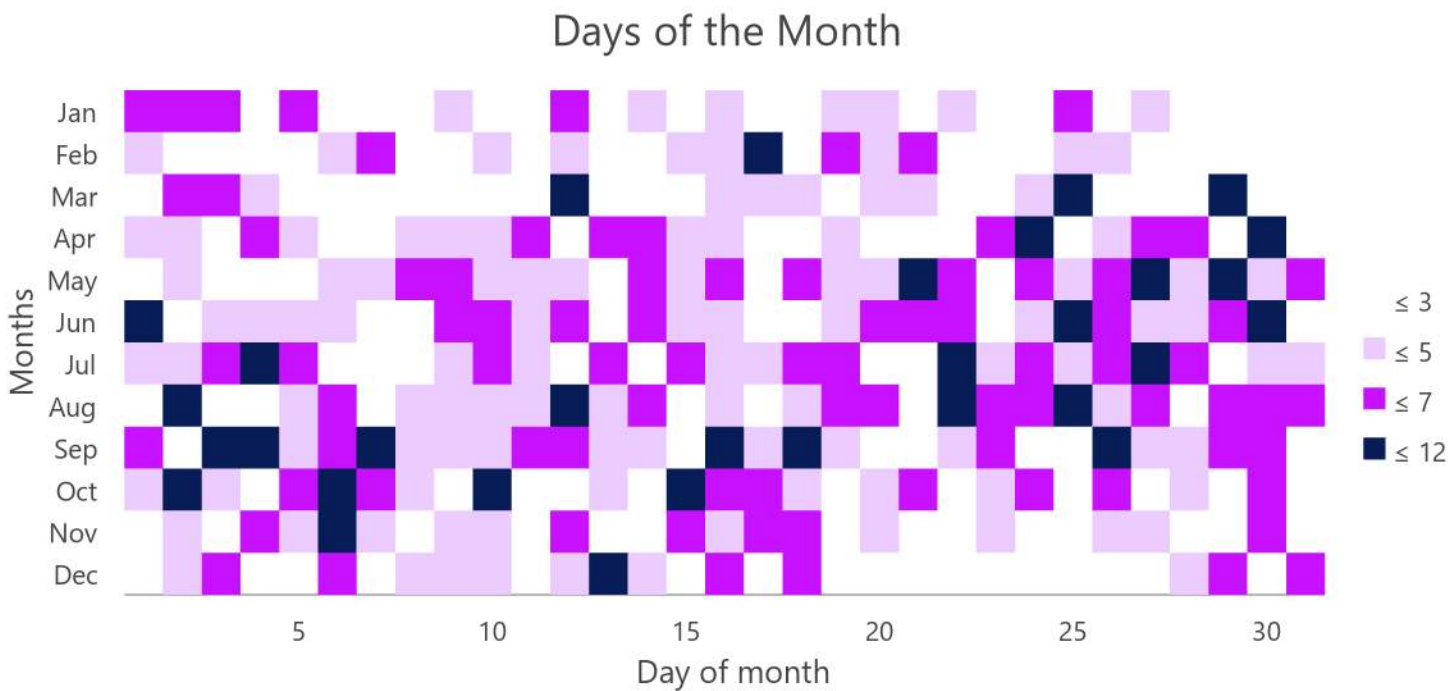
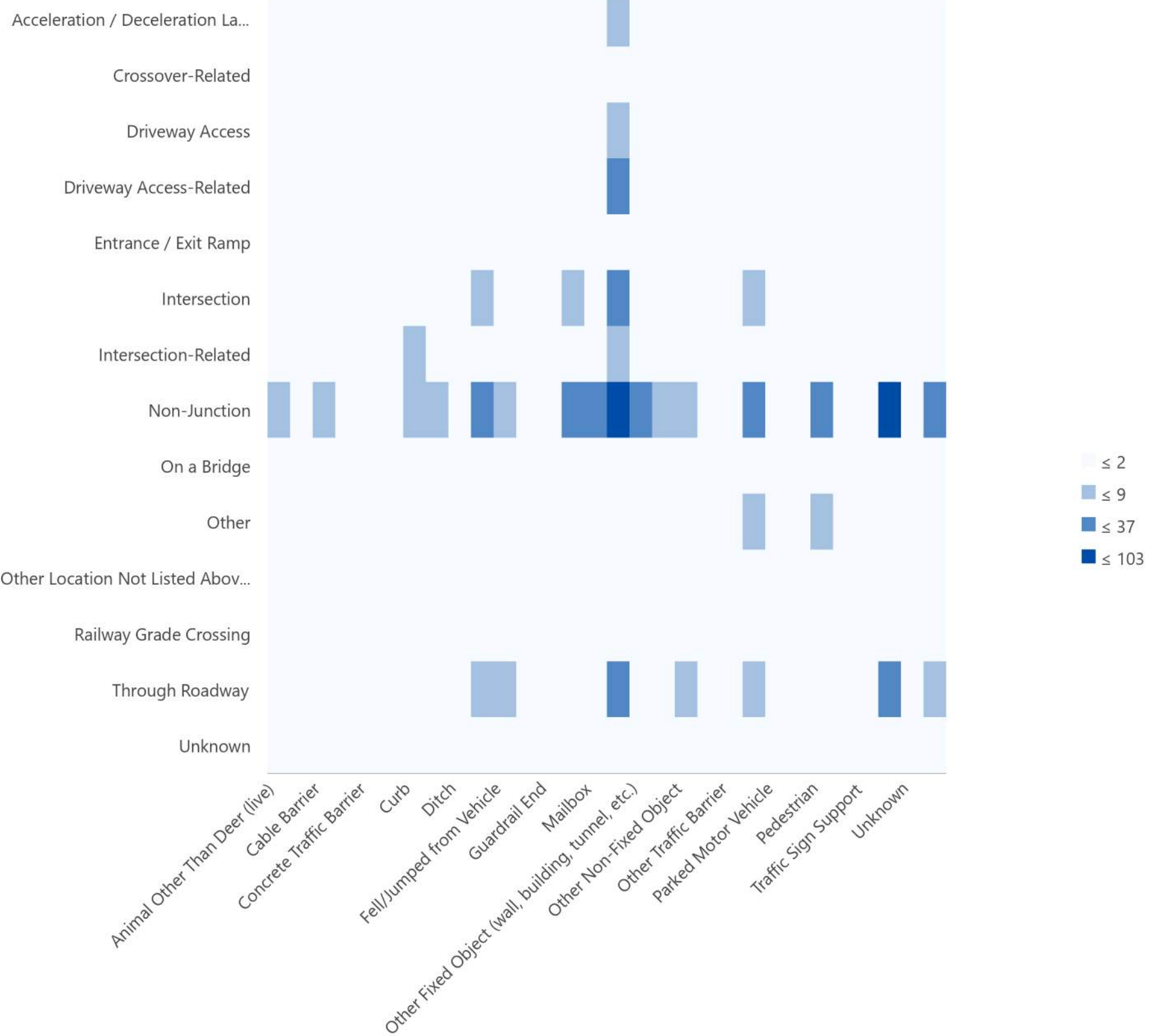
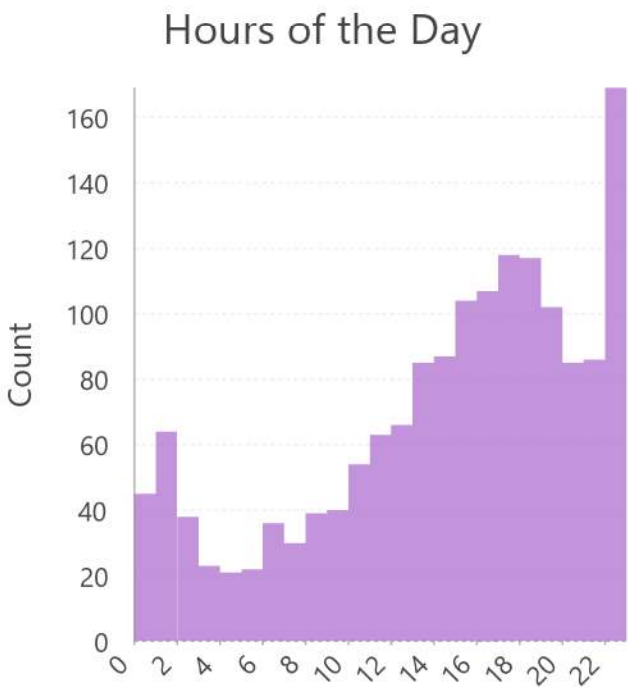
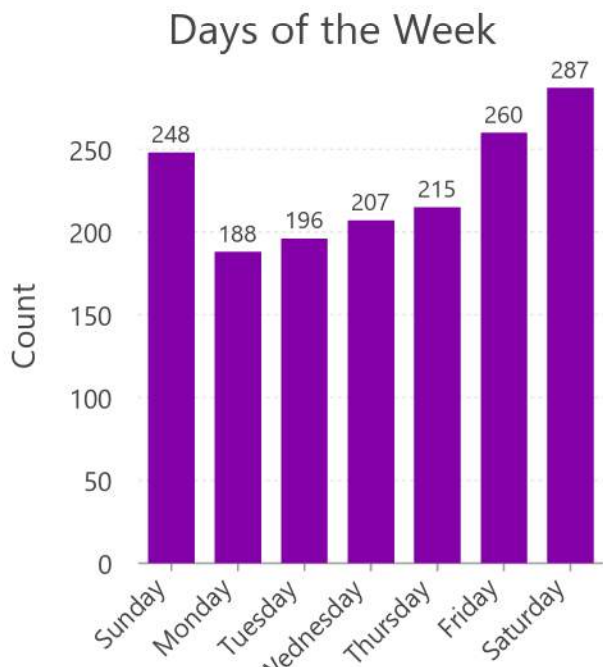
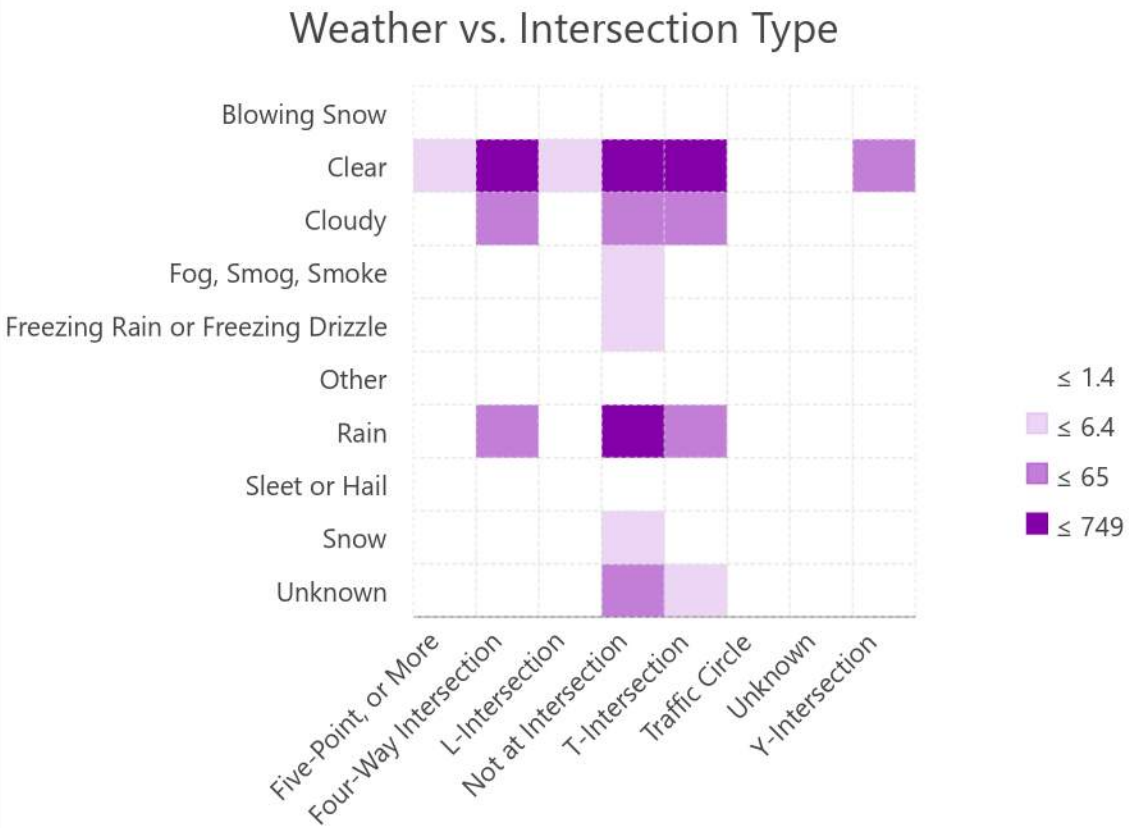
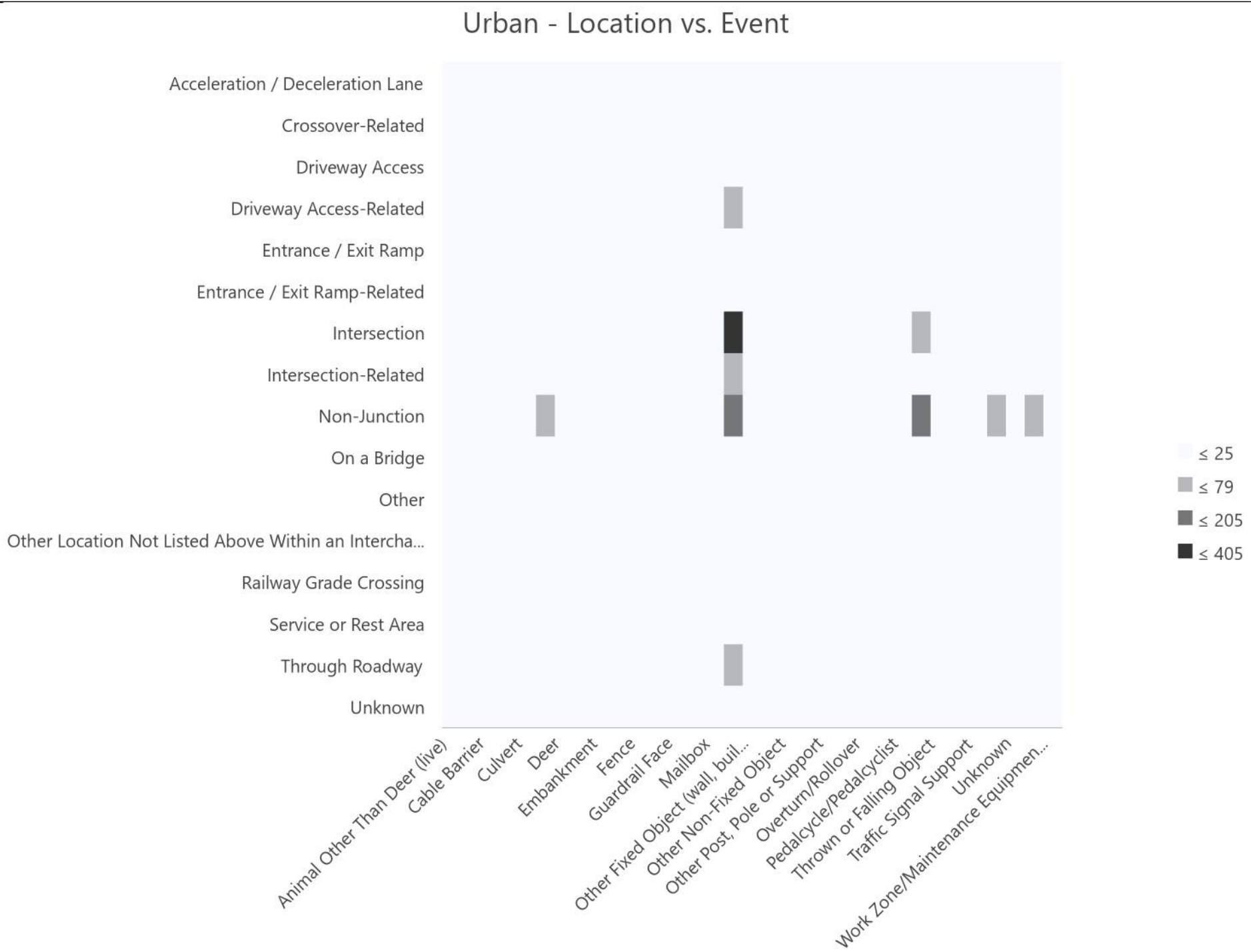
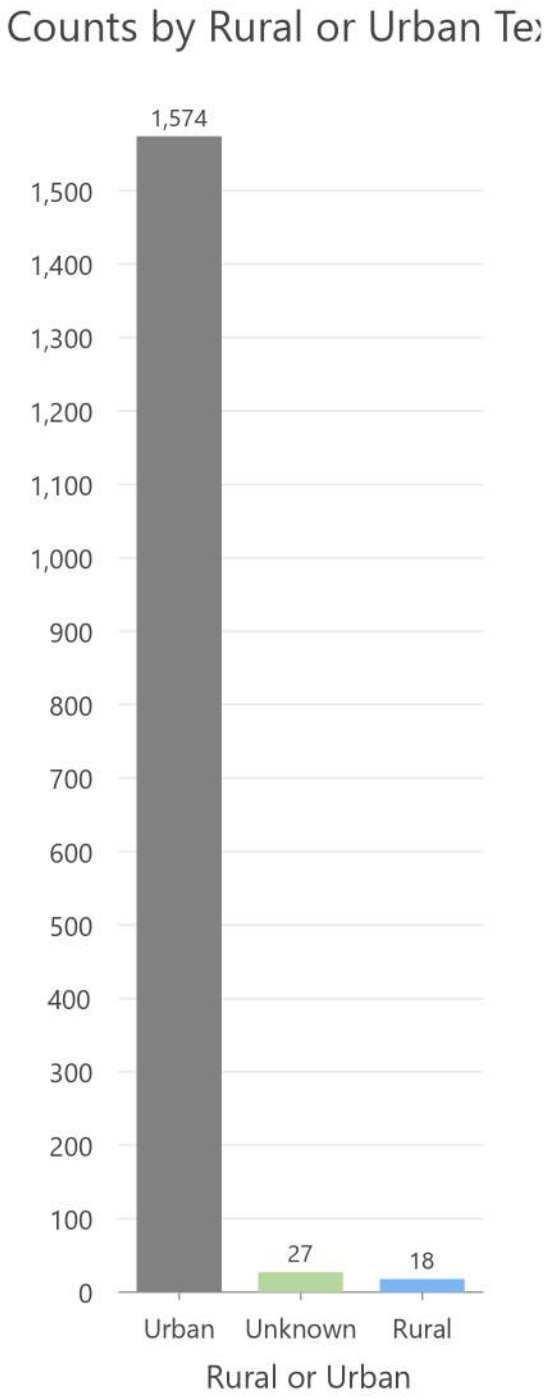
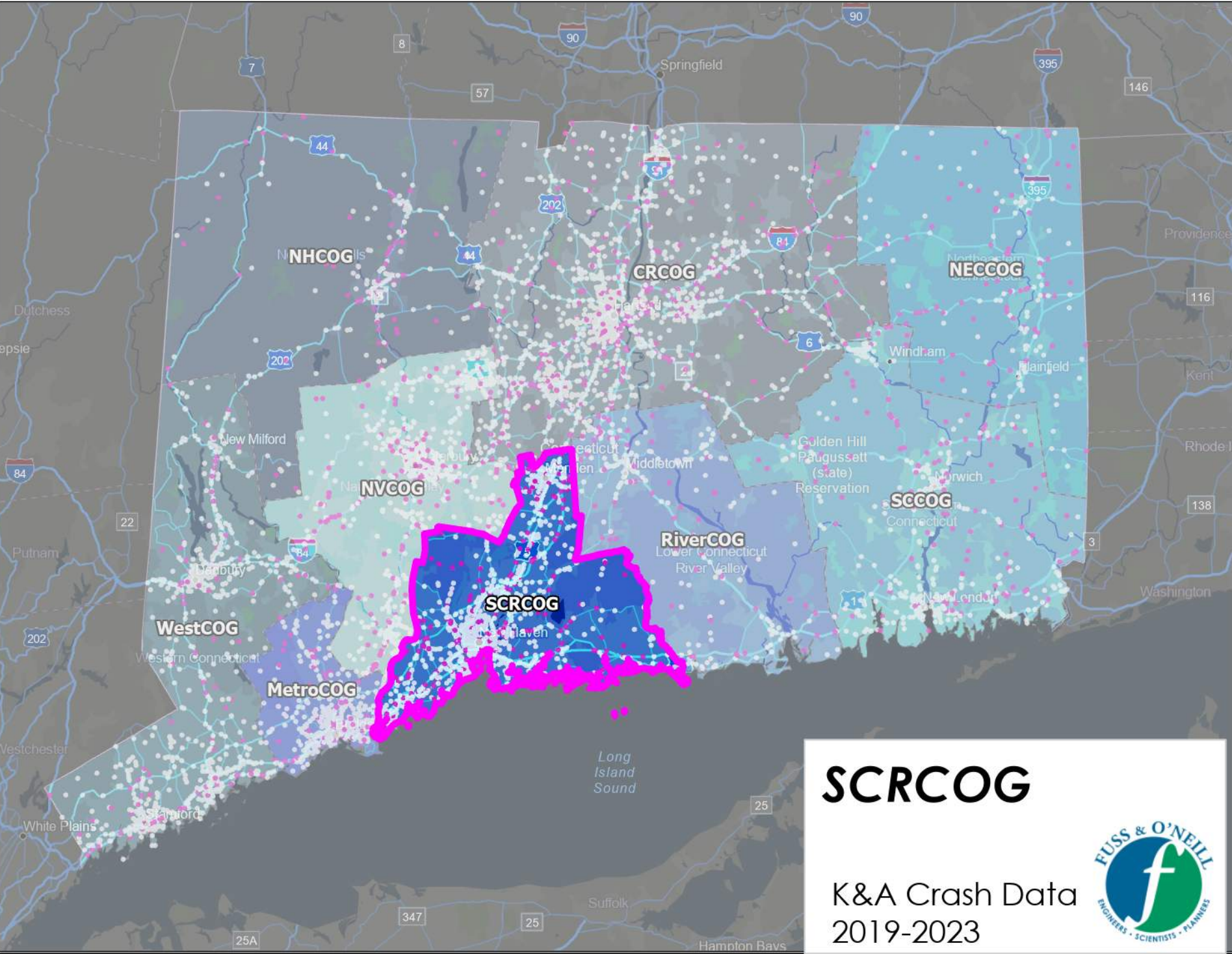


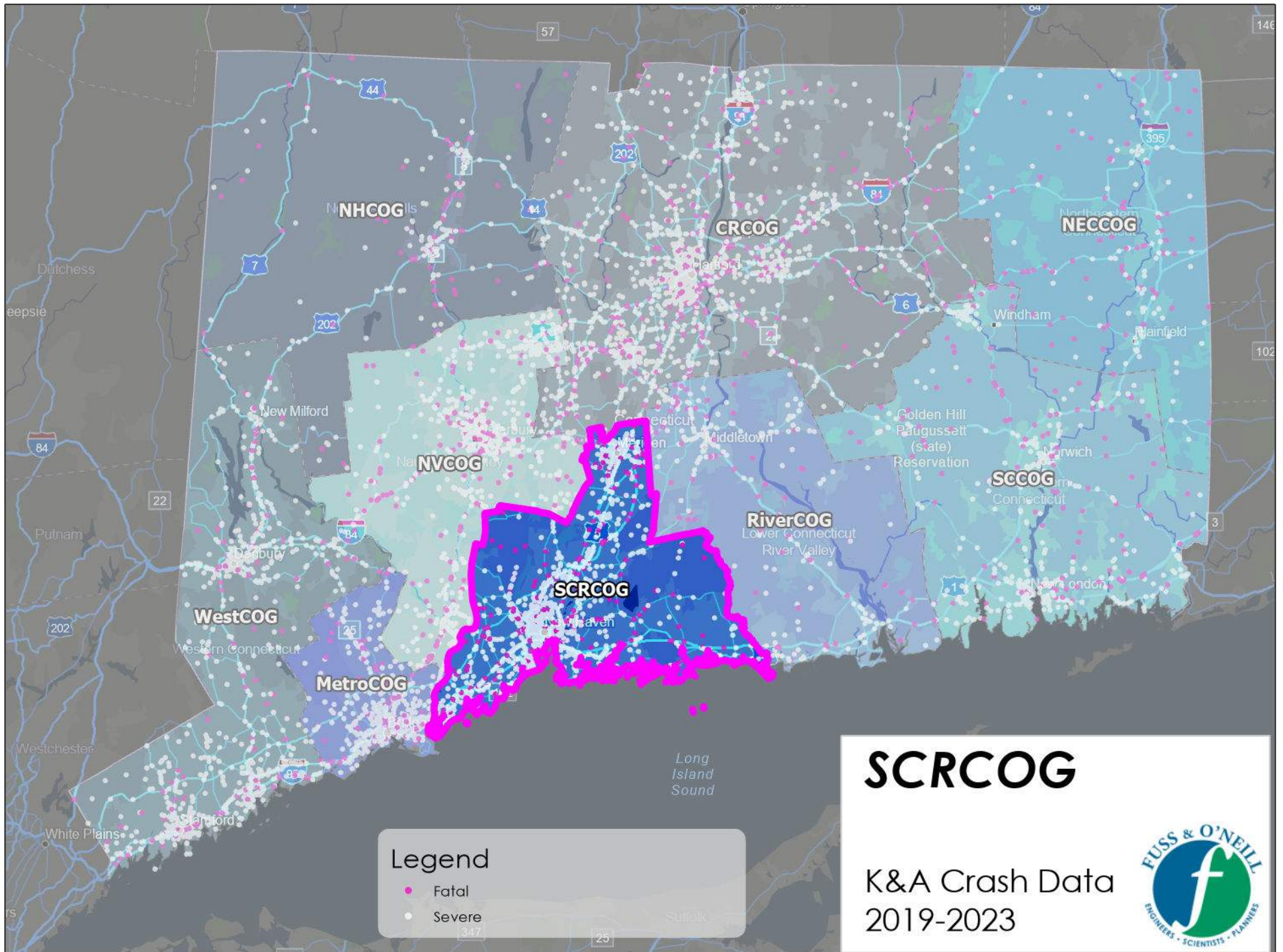
SCCOG Rural vs. Urban K&A Crash Data 2019-2023



SCCOG Time & Conditions K&A Crash Data 2019-2023



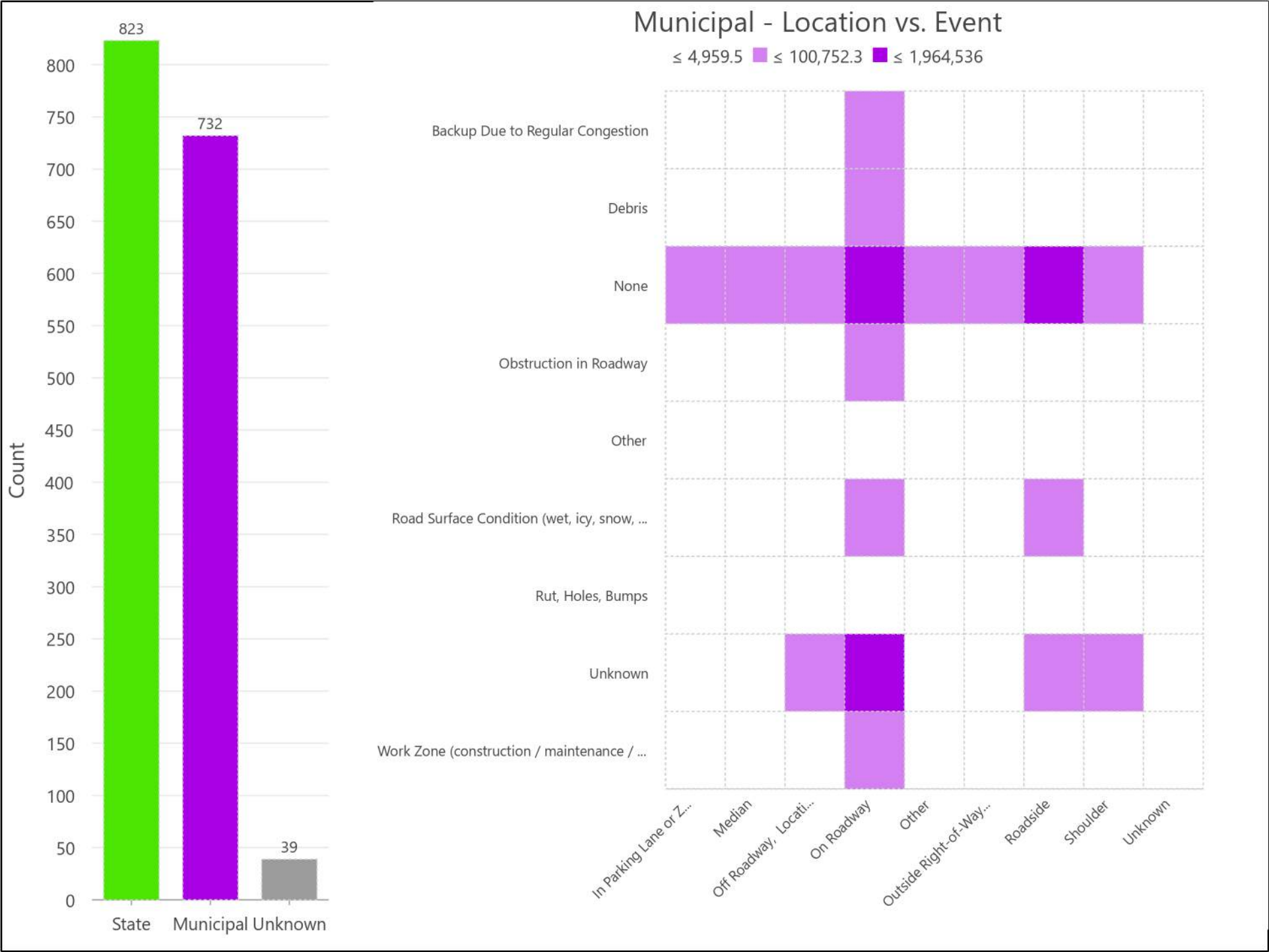




SCRCOG State vs. Municipal Road K&A Crash Data 2019-2023



SCRCOG State vs. Municipal Road K&A Crash Data 2019-2023



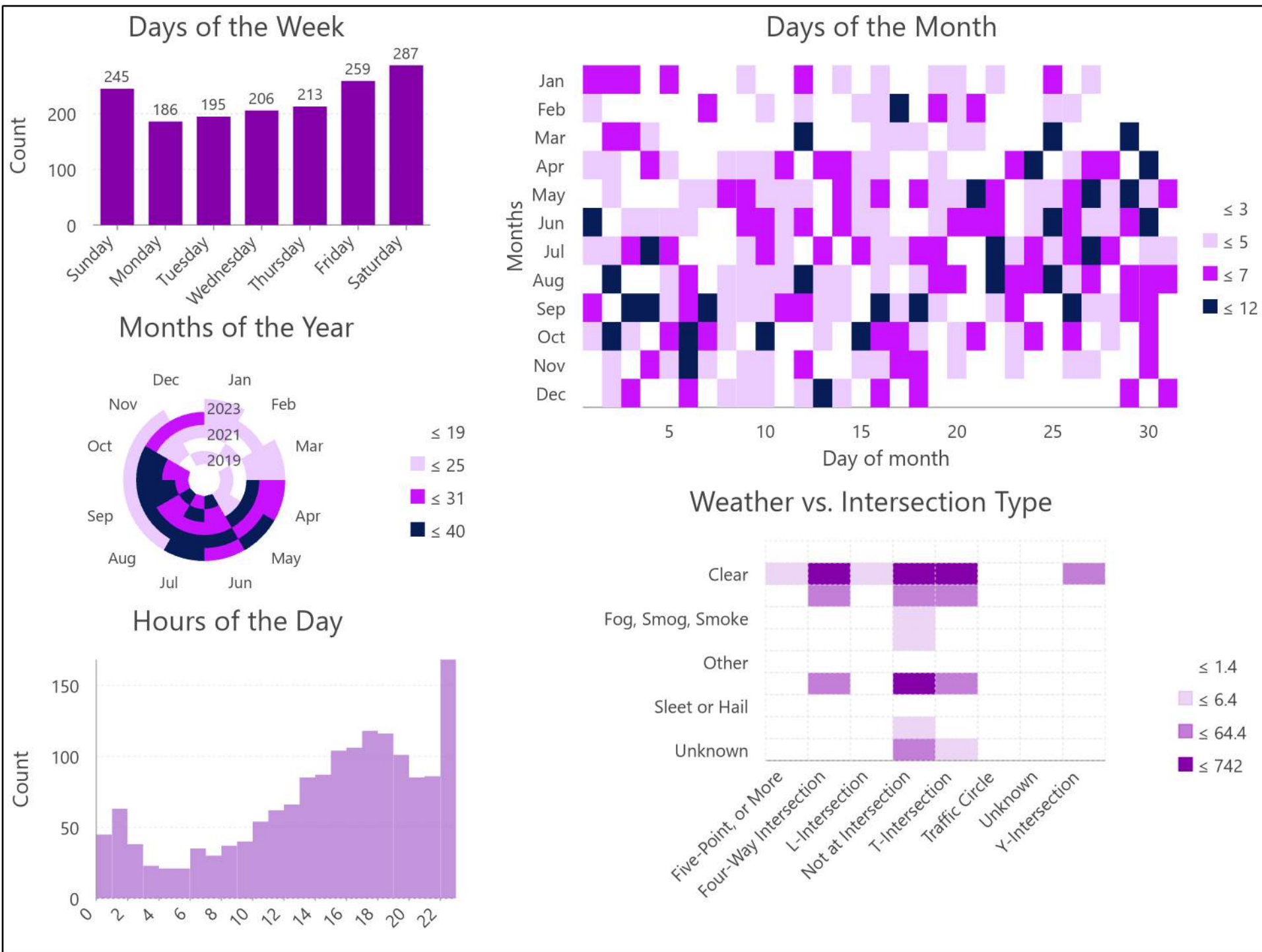
SCRCOG Rural vs. Urban K&A Crash Data 2019-2023

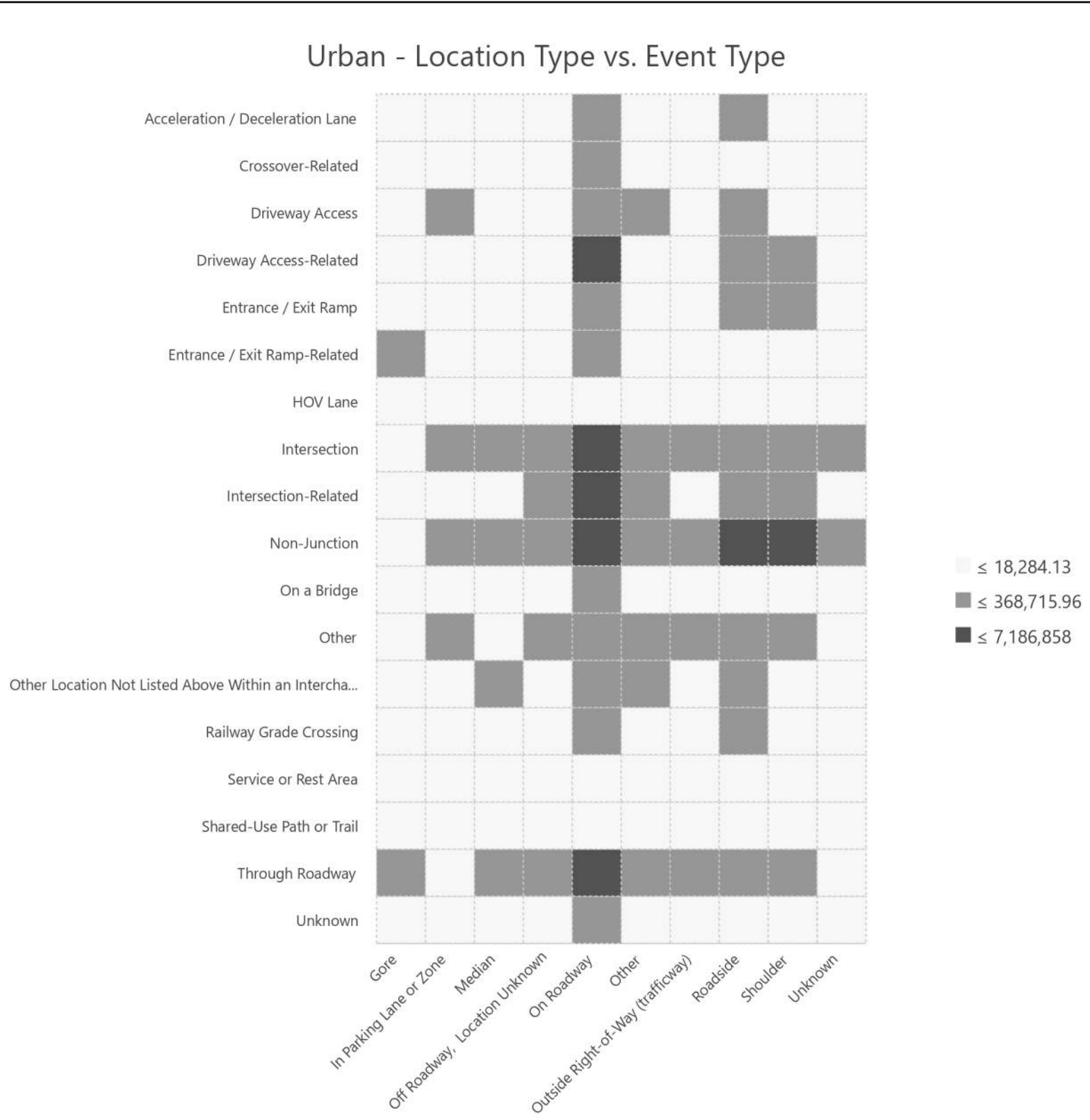
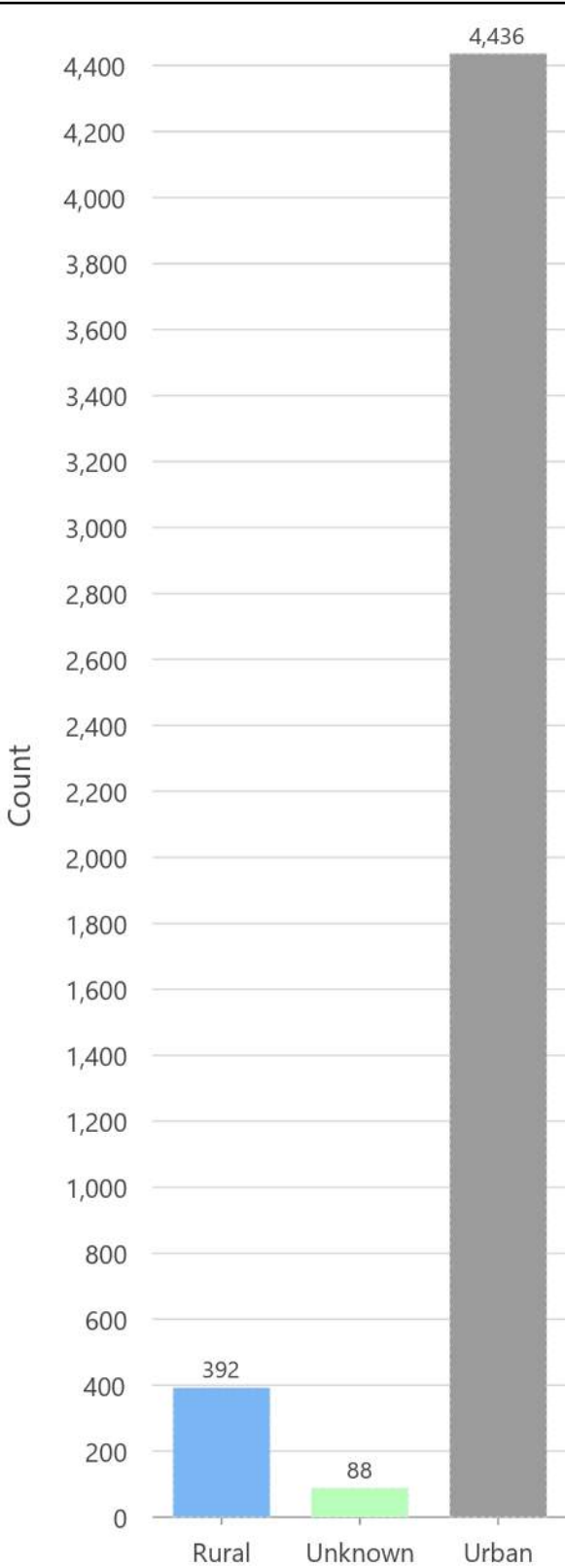
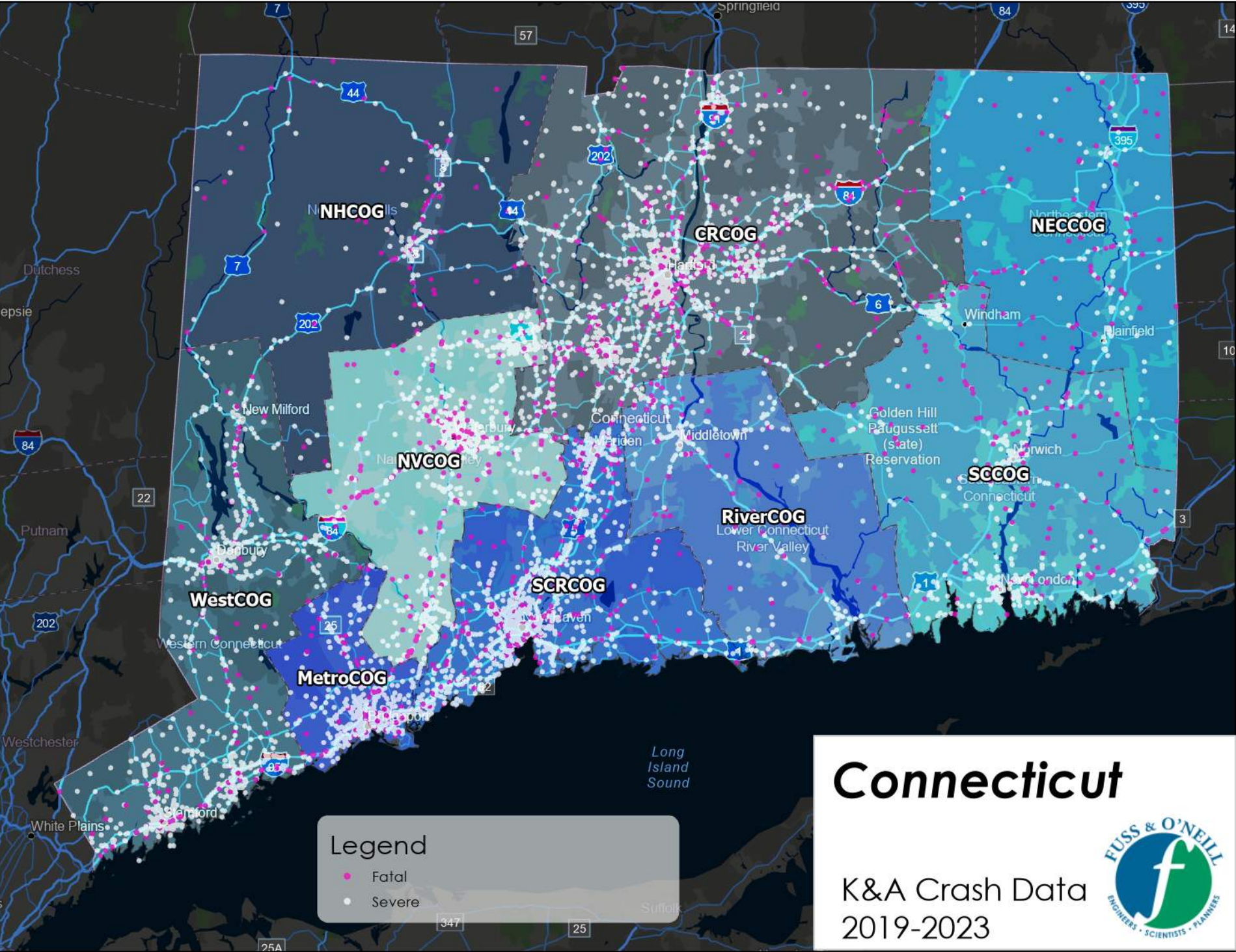


SCRCOG Rural vs. Urban K&A Crash Data 2019-2023

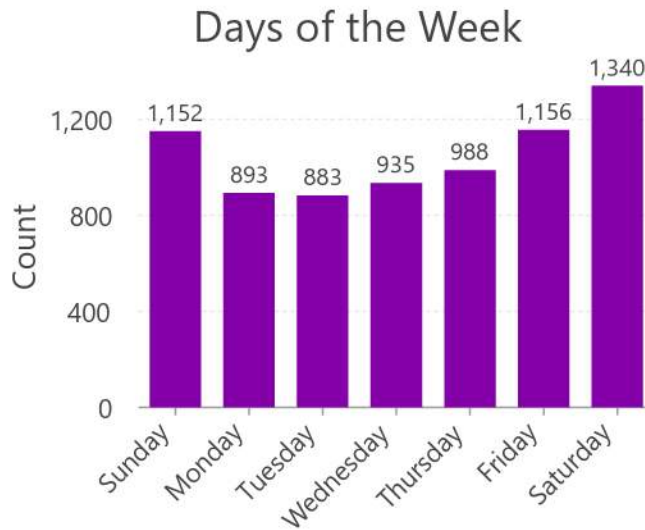
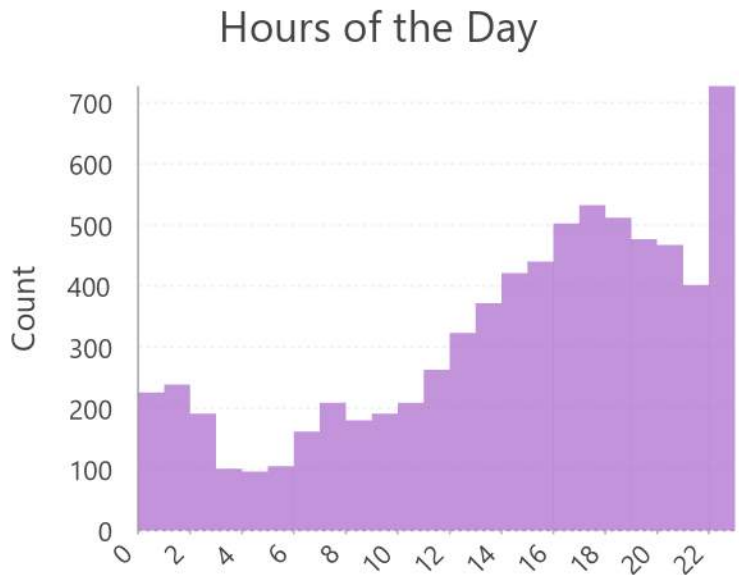
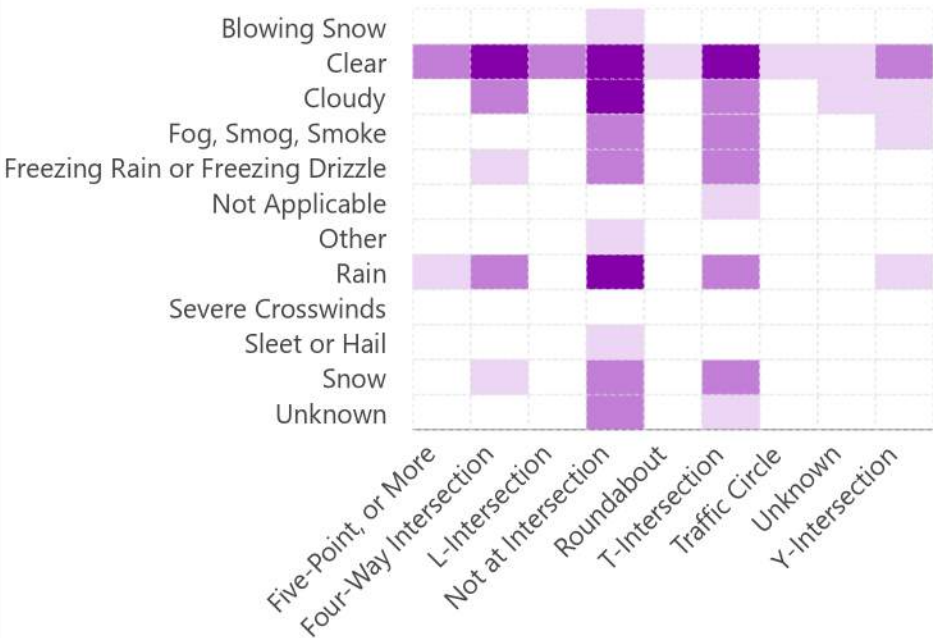


SCRCOG Time & Conditions K&A Crash Data 2019-2023

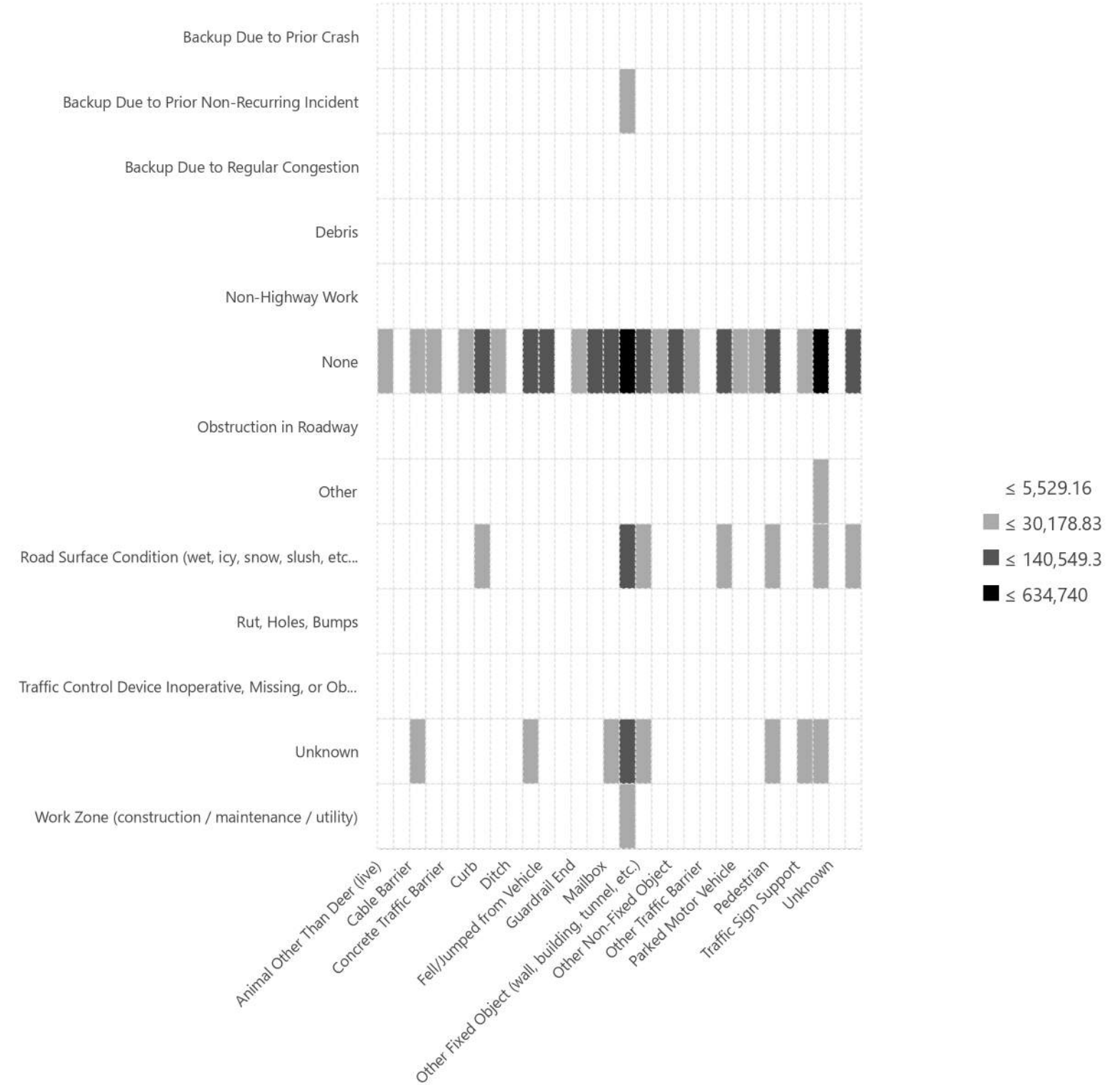




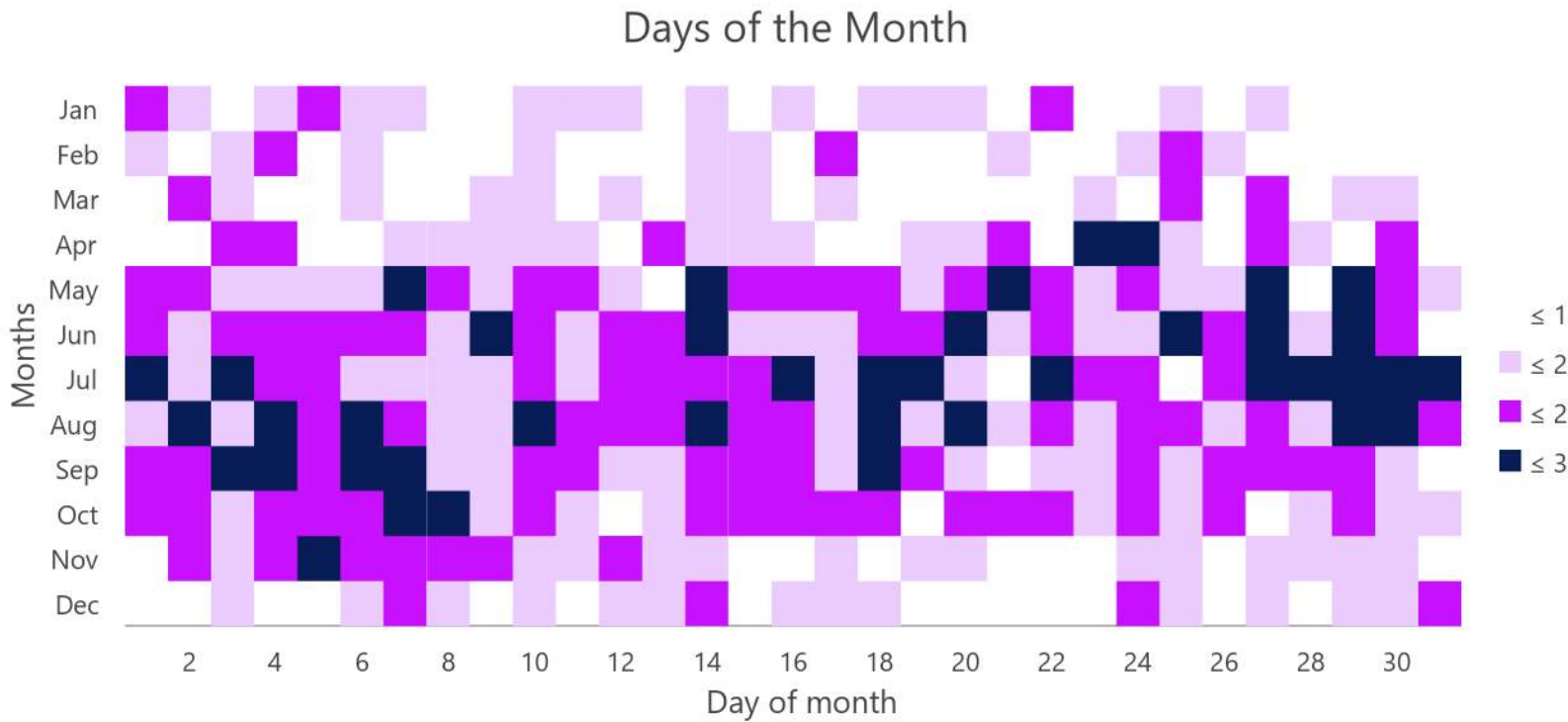
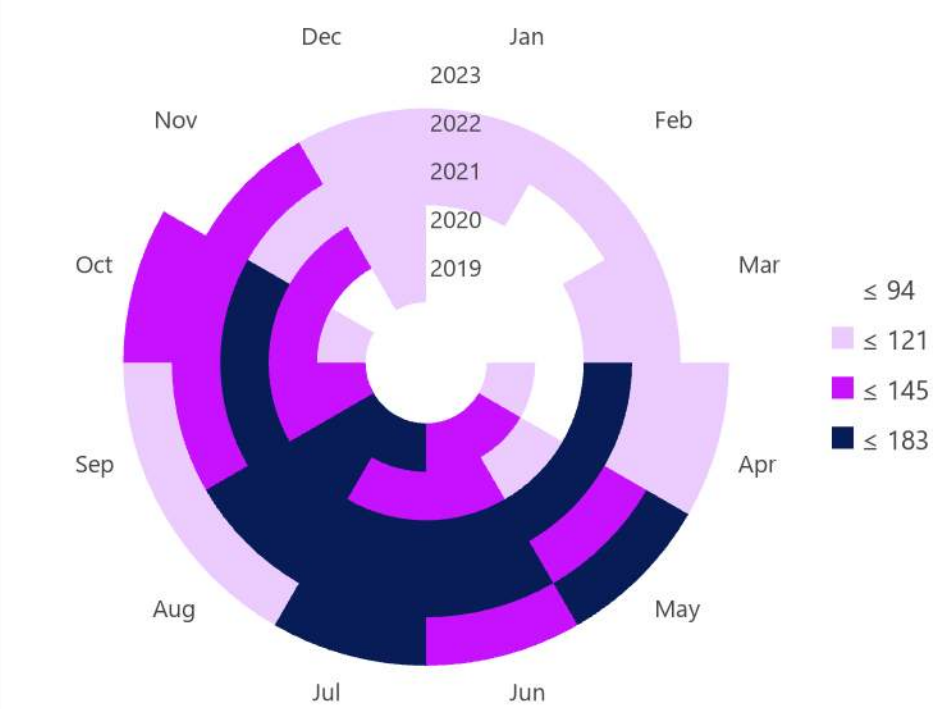
Weather vs. Intersection Type

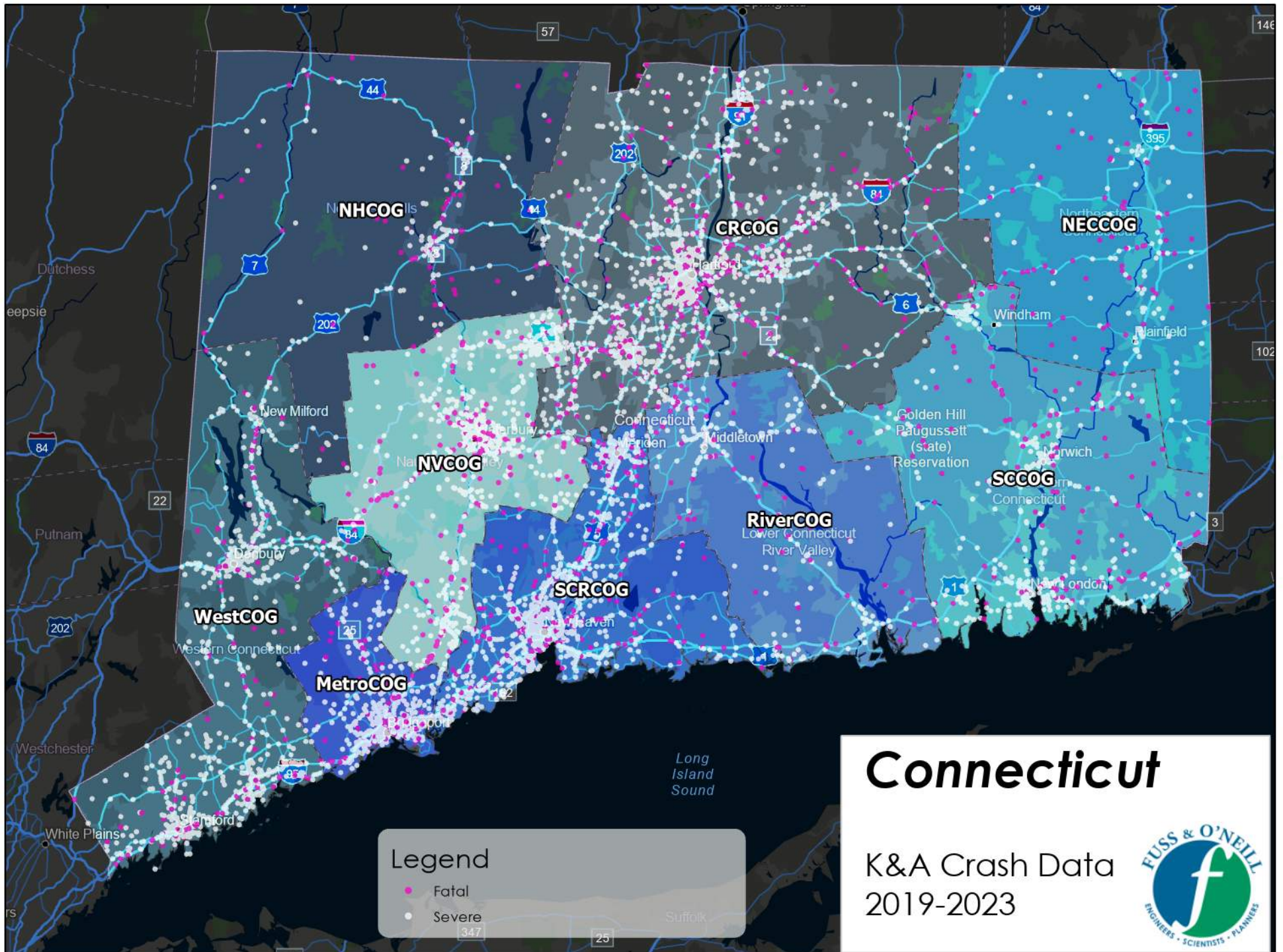


Rural - Location Type vs. Event Type

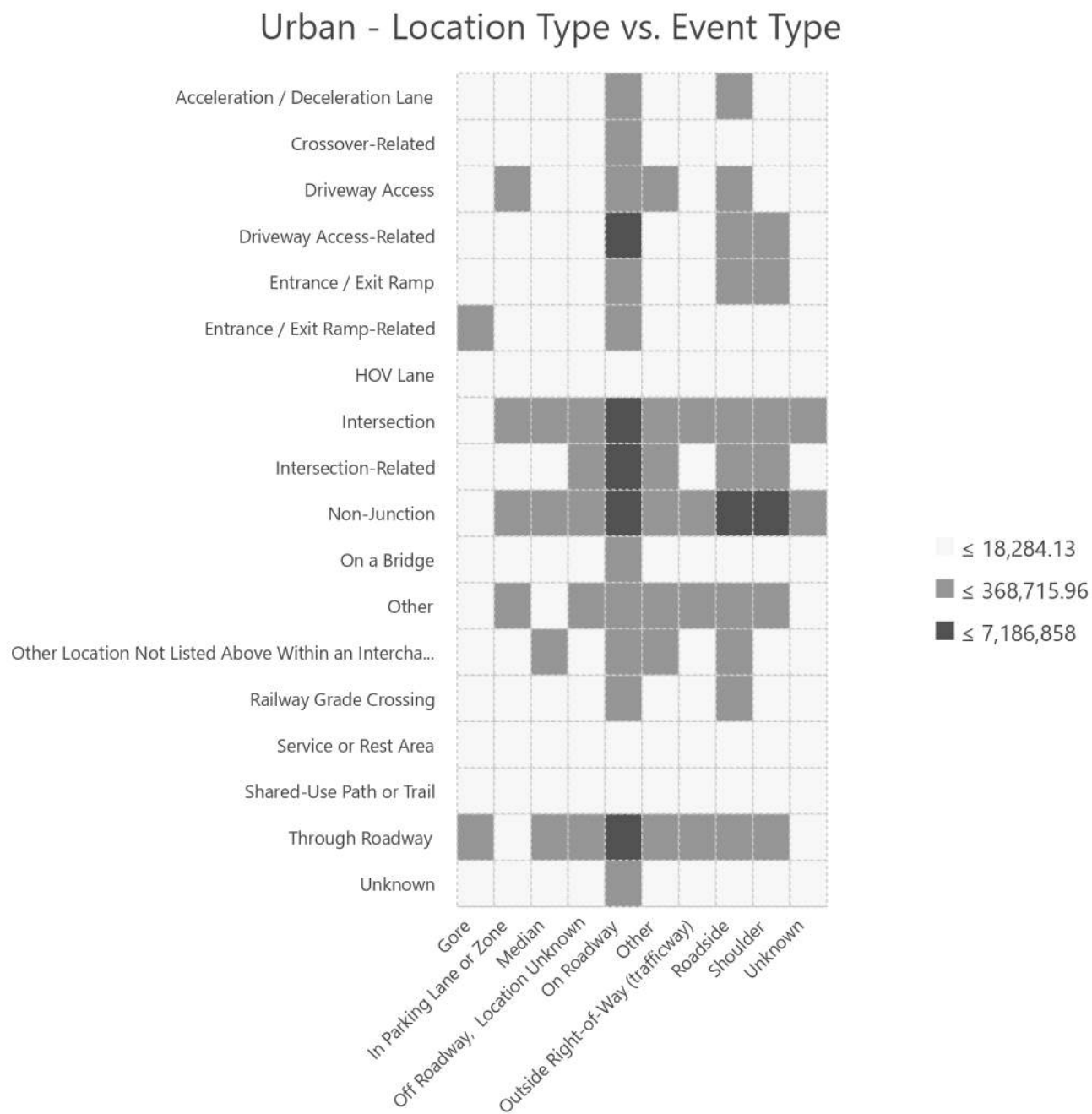
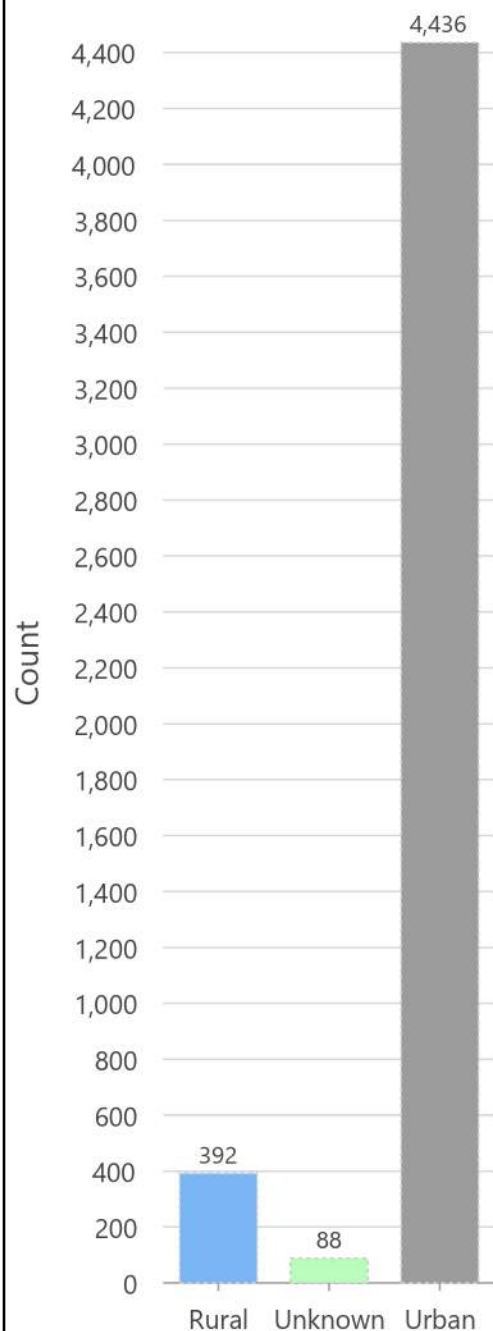


Months of the Year





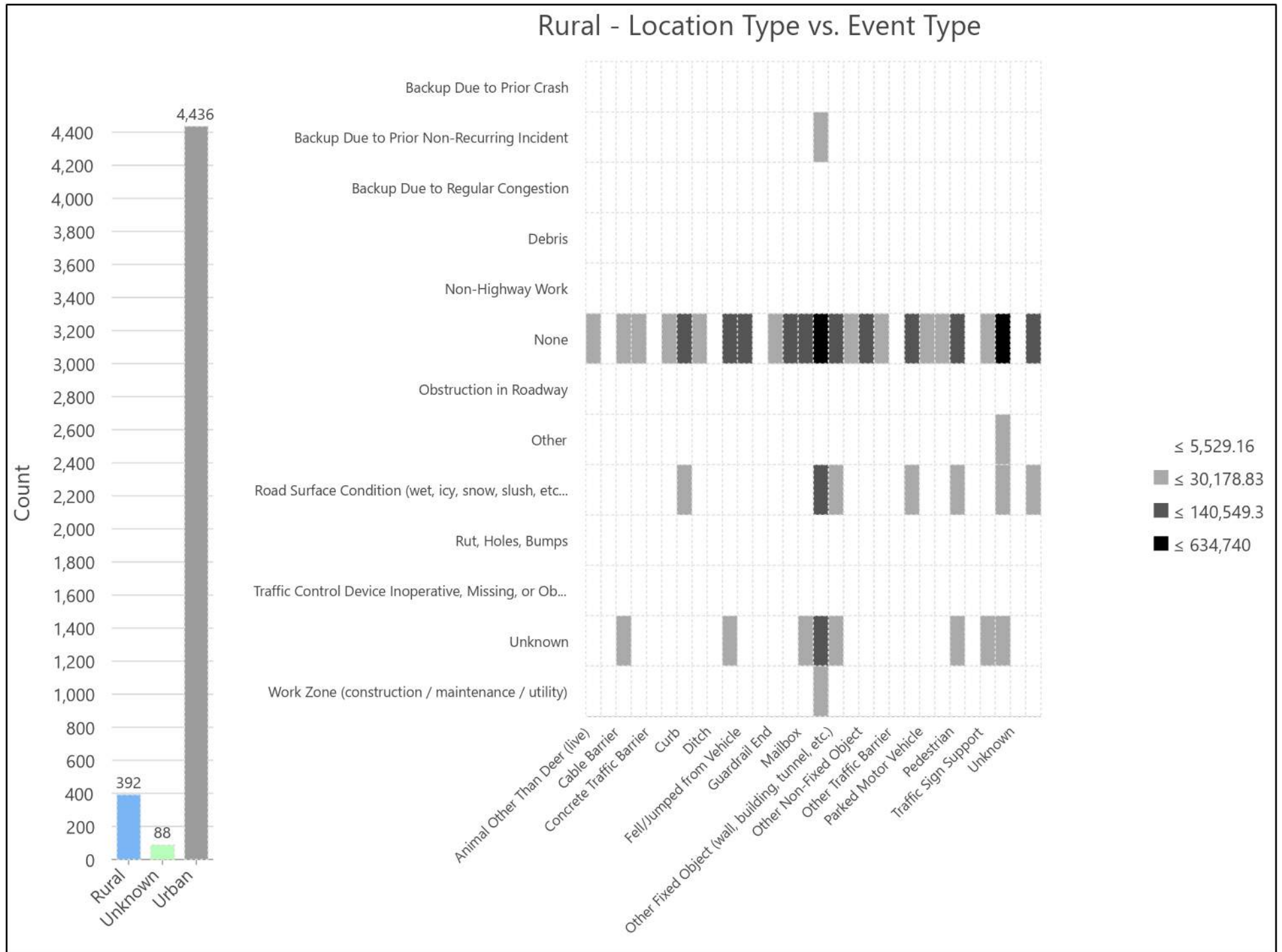
Rural vs. Urban K&A Crash Data 2019-2023



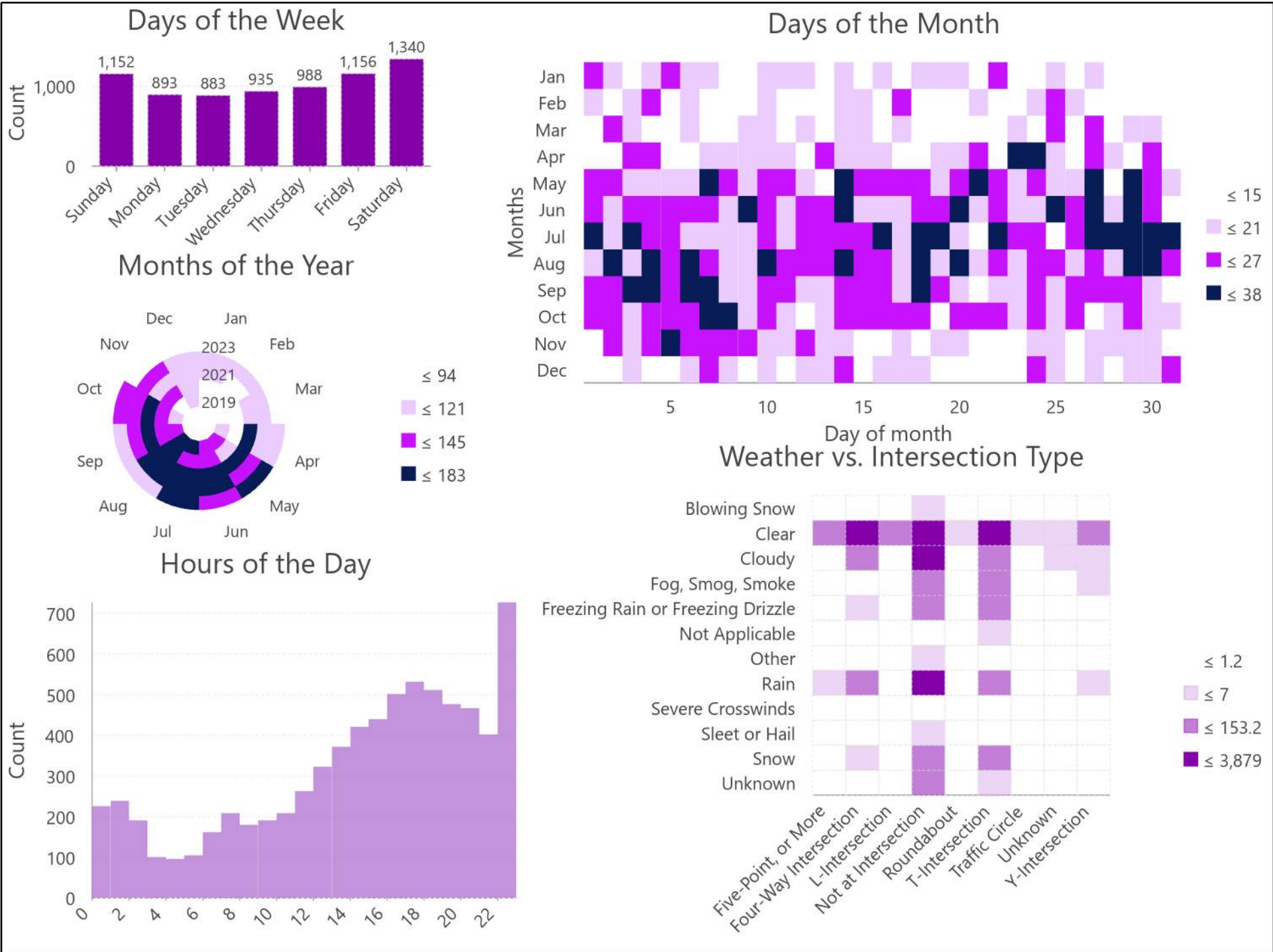
State vs. Municipal Road K&A Crash Data 2019-2023

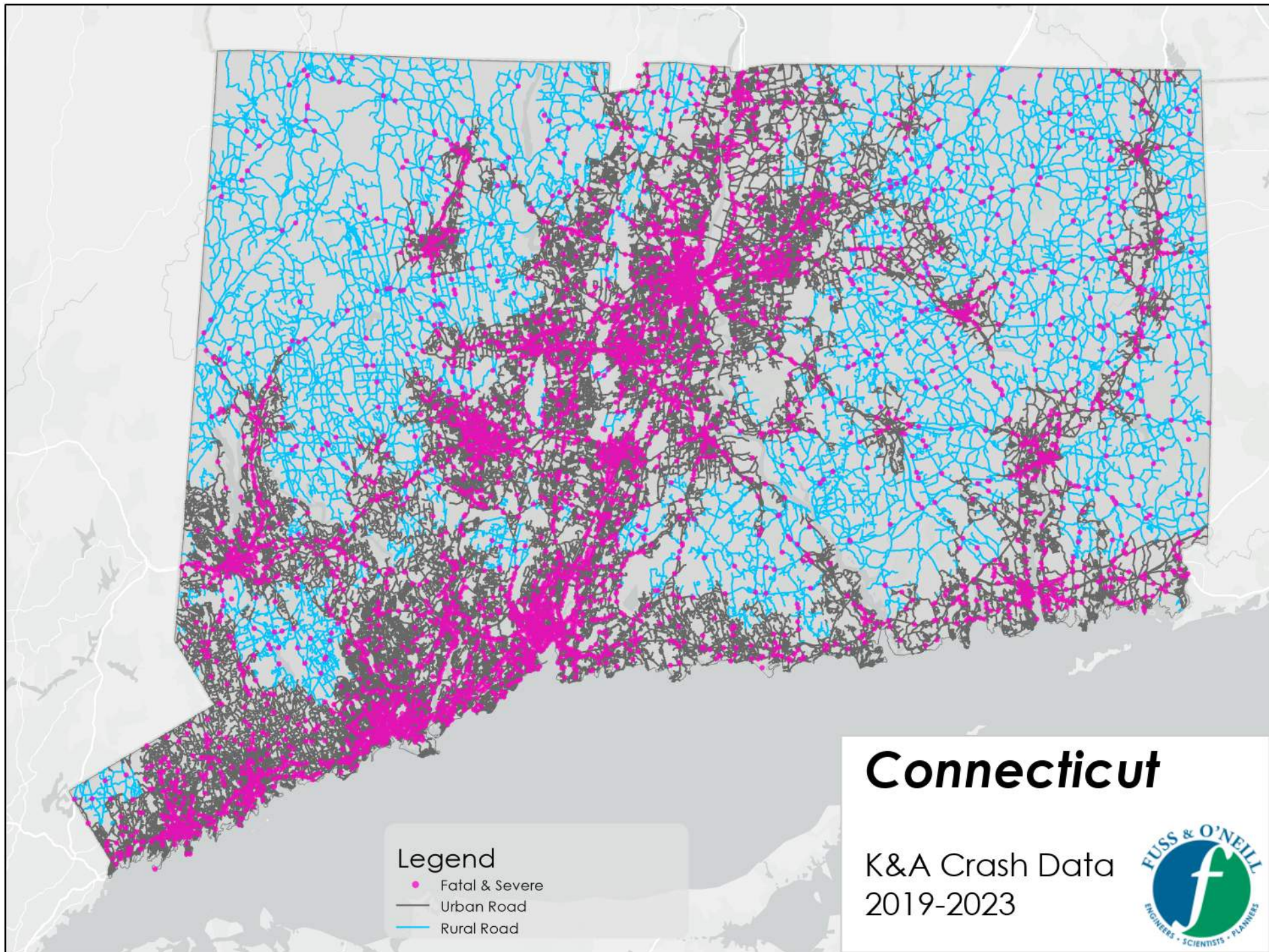


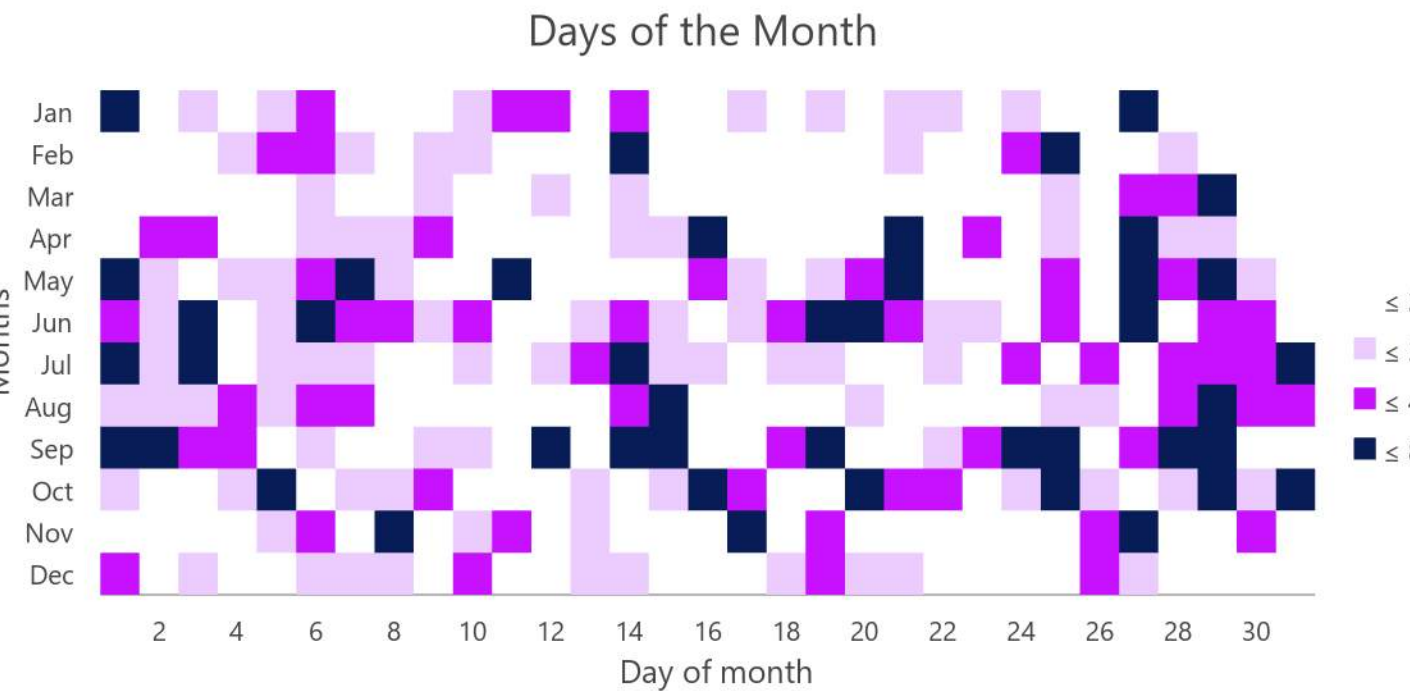
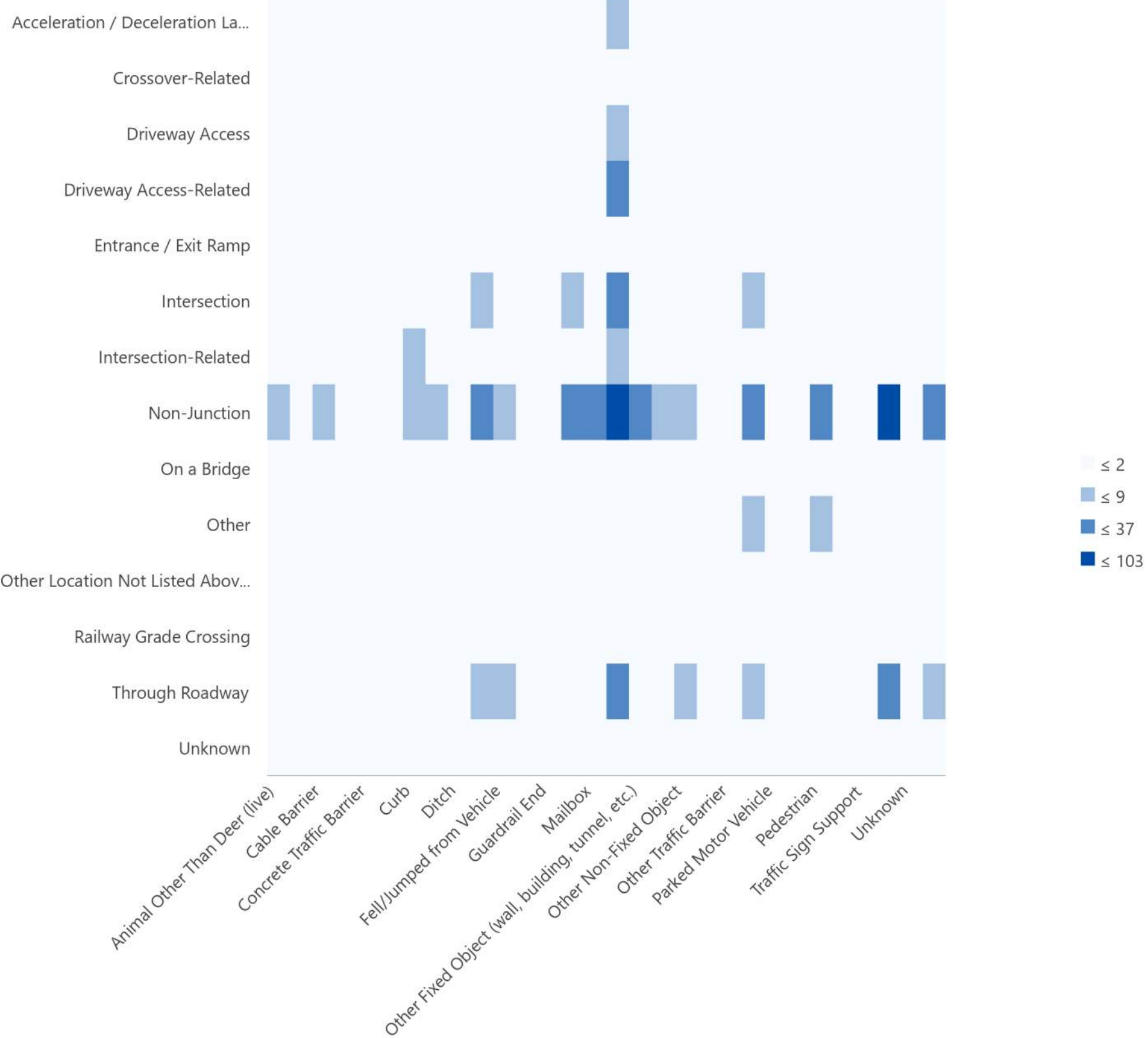
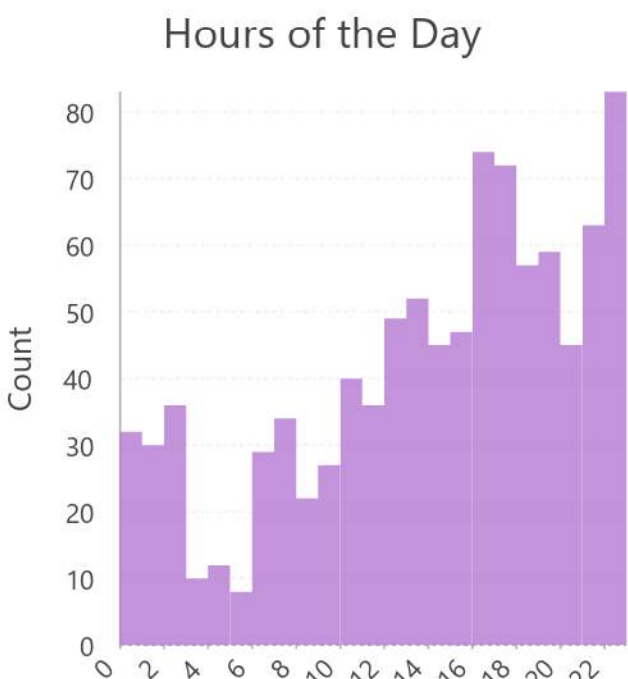
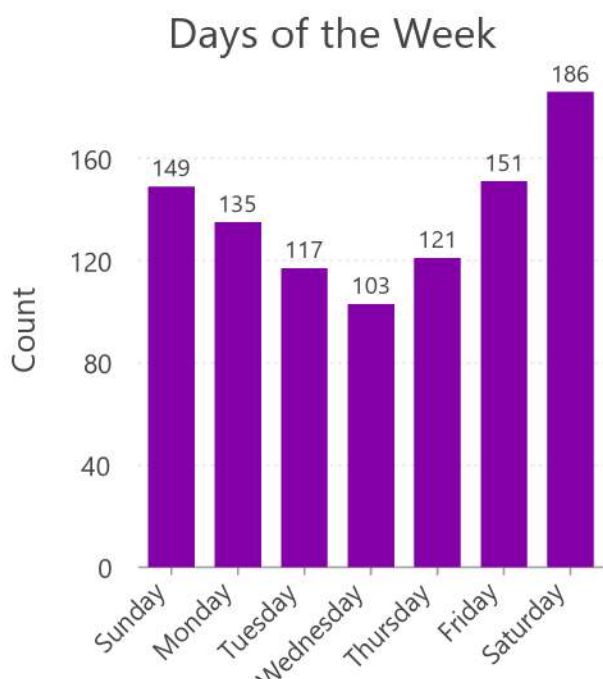
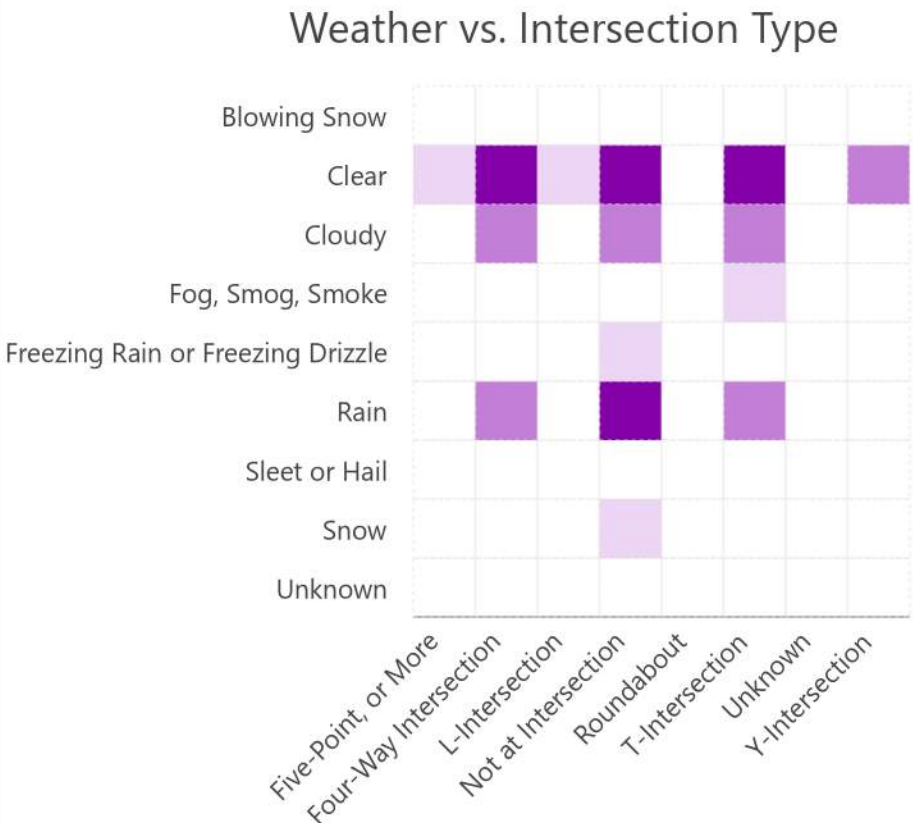
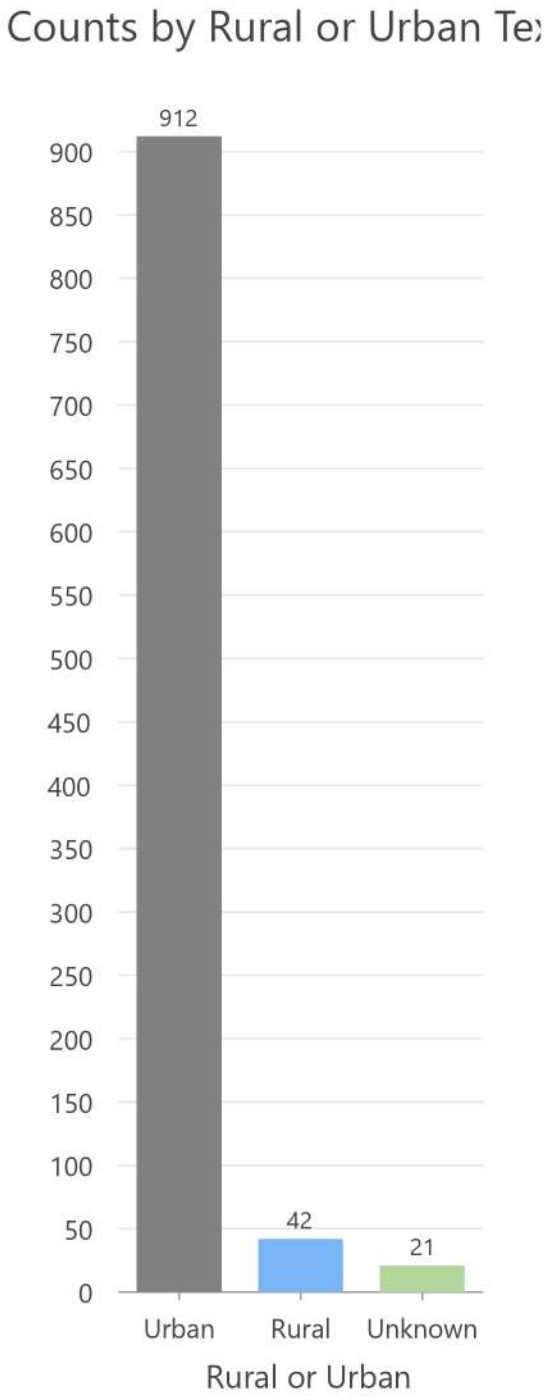
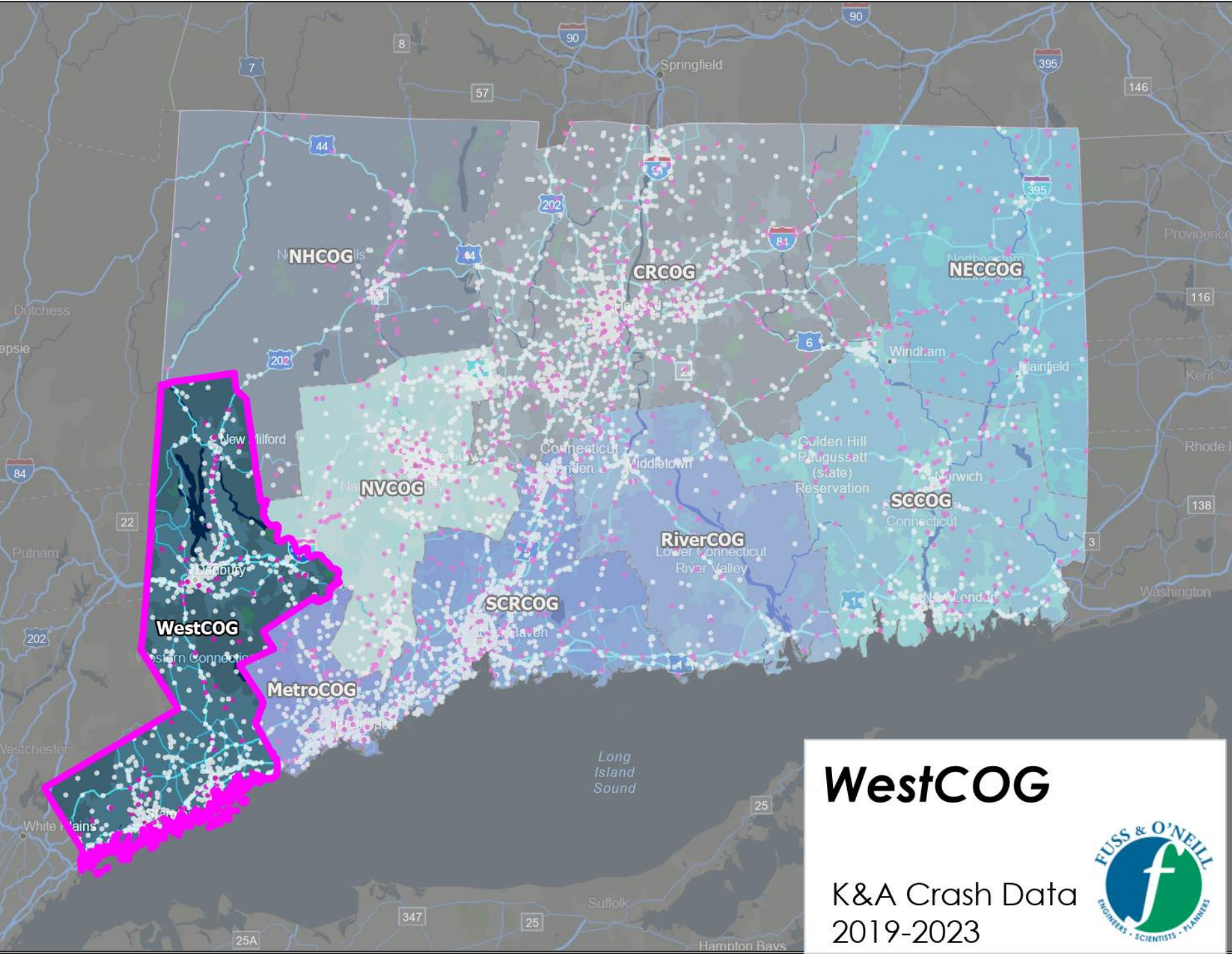
Rural vs. Urban K&A Crash Data 2019-2023

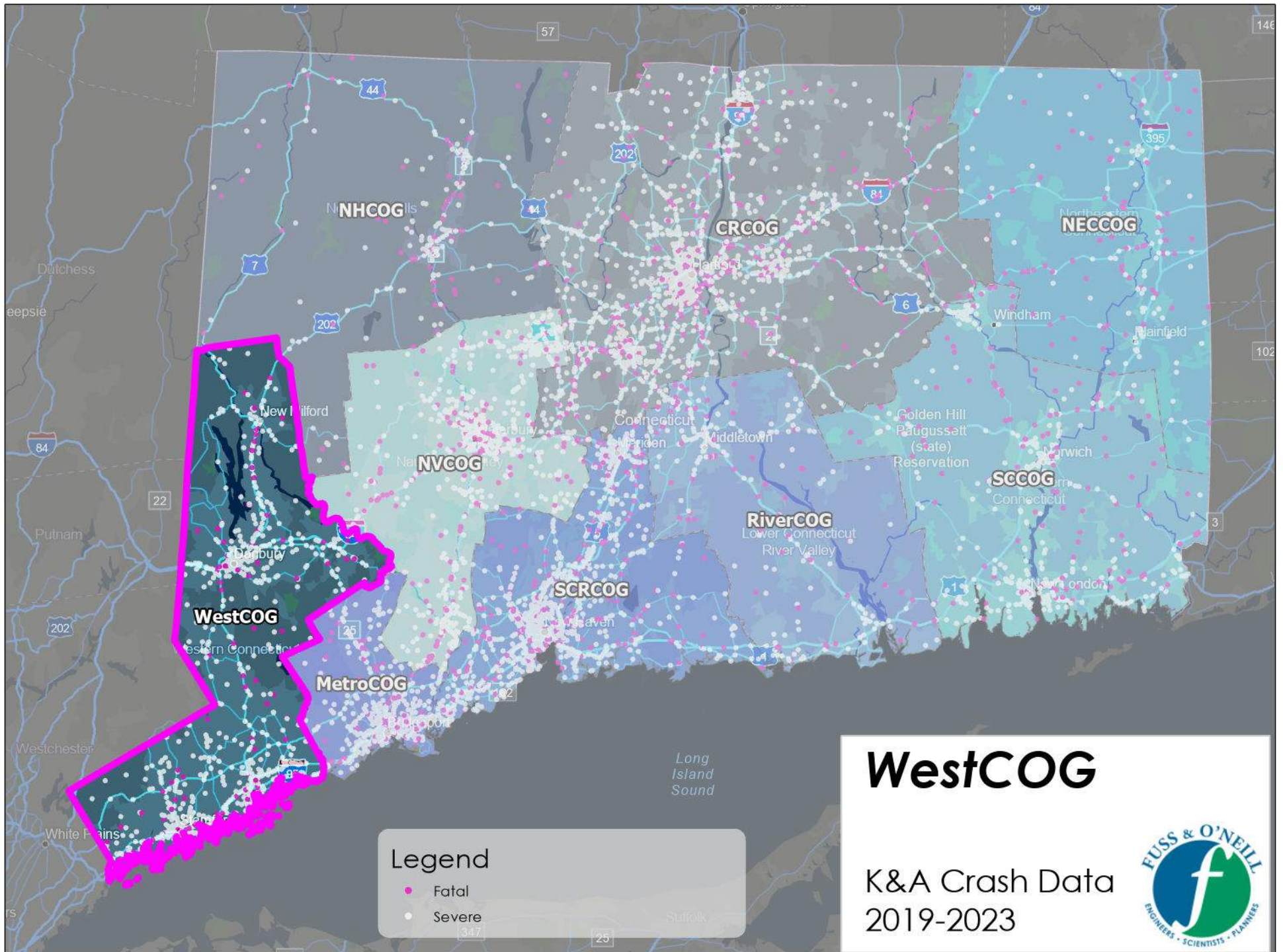


Time & Conditions K&A Crash Data 2019-2023

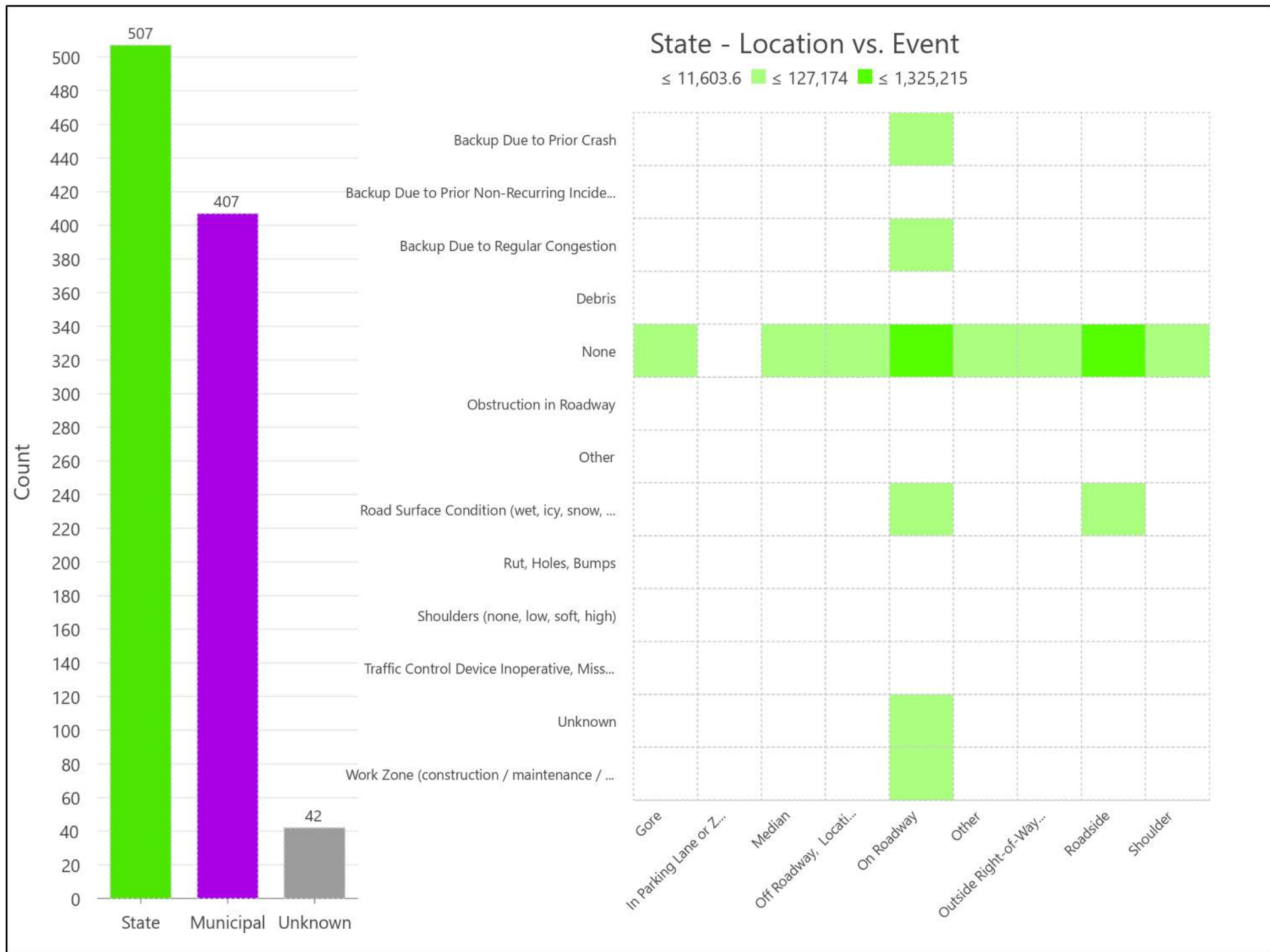




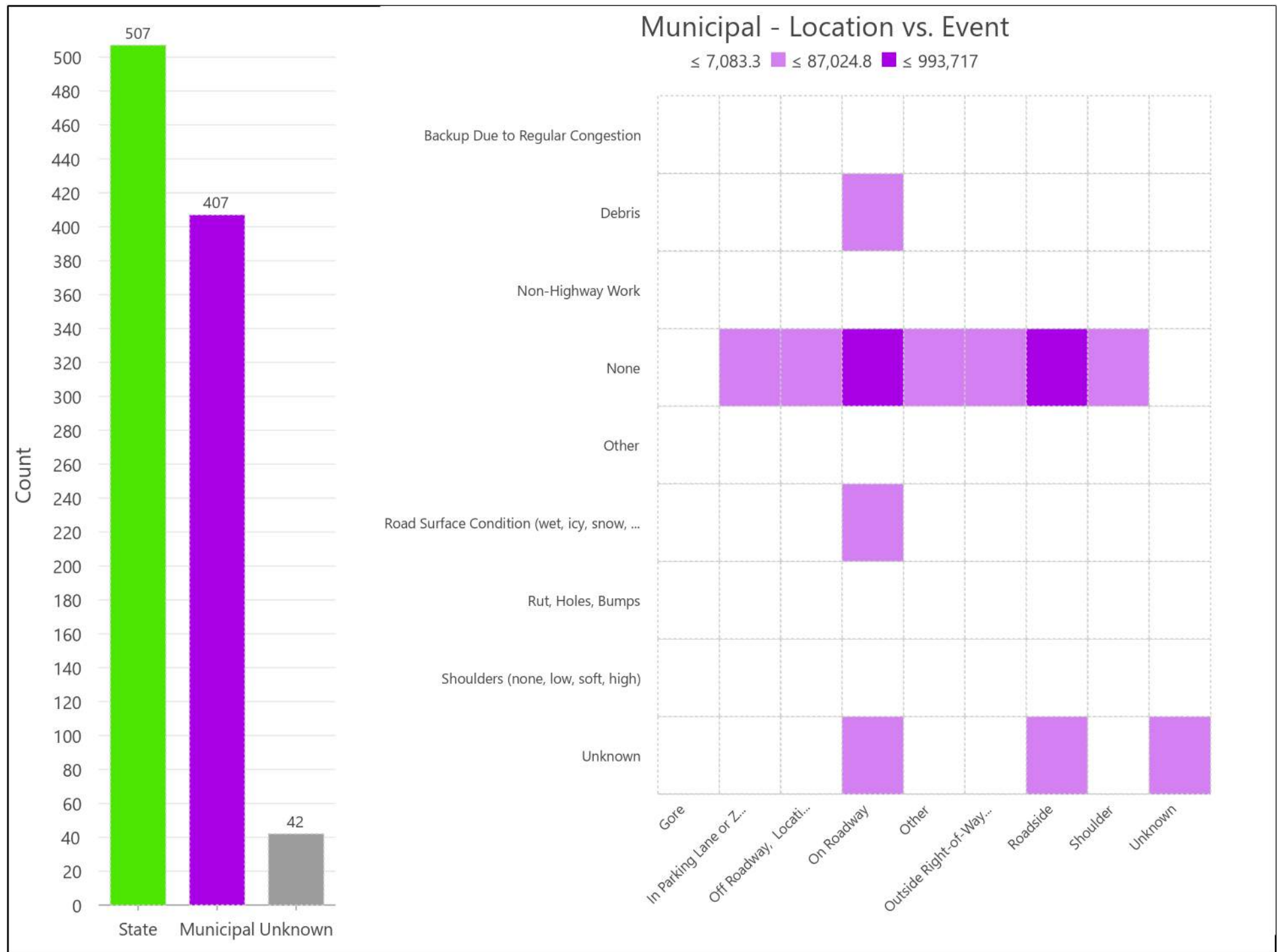




WestCOG State vs. Municipal Road K&A Crash Data 2019-2023



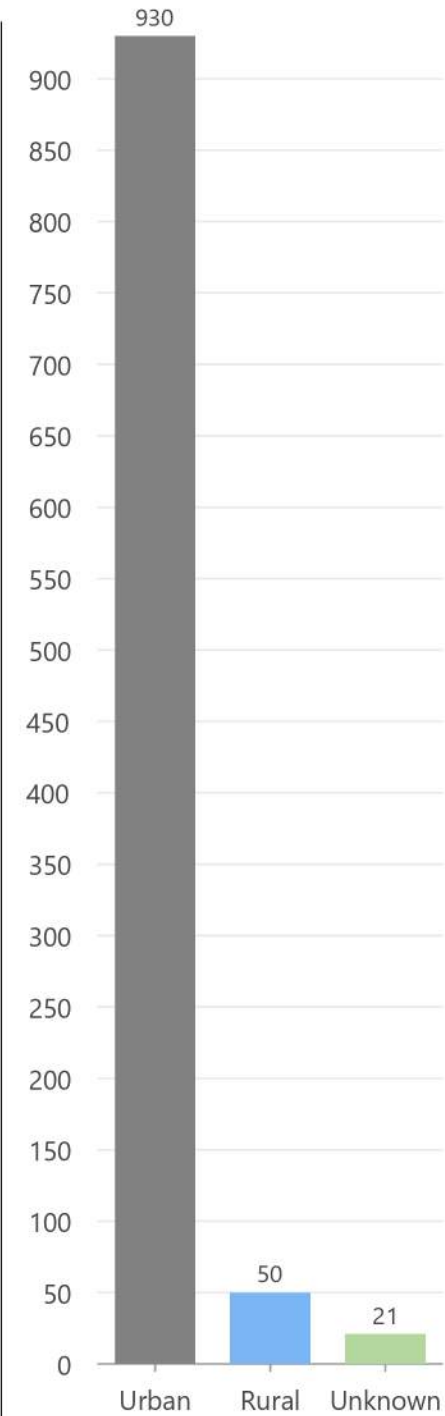
WestCOG State vs. Municipal Road K&A Crash Data 2019-2023



WestCOG Rural vs. Urban K&A Crash Data 2019-2023



WestCOG Rural vs. Urban K&A Crash Data 2019-2023



WestCOG Time & Conditions K&A Crash Data 2019-2023

