Introduction

- An inherent danger comes with the duties of emergency response.
- First responders are exposed to factors which make them uniquely vulnerable to traffic related injuries and death.
- From 2009 to 2018, on average, at least one officer per week has been killed on our nation’s roads [1].
- 19 first responders & EMTs struck and killed in 2017 & 2018 [2].
- The goal of this research is to identify factors that lead to responder vehicle crashes and struck-by crashes.

Methods

Gathering Data

- Signal Four Database (S4)
  - Florida statewide interactive, web-based geospatial crash analytical tool created and hosted by University of Florida, Geoplan Center
- Florida Crash Data from 2016 to 2018
- Custom queries from 2016 to 2018
- Police Vehicle Involved
- Fire Vehicle Involved
- Ambulance Vehicle Involved
- Struck-by Crashes

Data Partition

- Excel Analysis
  - Pivot Tables
  - Charts
  - Proportions

- Categories of Interest:
  - Crash Severity
  - Crash Type
  - Influence Related
  - Weather Conditions
  - Lighting Conditions

Results

- 3 years of Crash Data (2016 – 2018)
- 2,173,853 crashes in the State of Florida
- For Tables 1 – 4, rows highlighted in red are statistically significant. These are areas where common protective measures are probably doing a good job of preventing these types of crashes.