

MEMORANDUM

To: Dr. Jeff LaMondia, Department of Civil Engineering, Auburn University

From: Lan Liu, Bo Zhang

Date: March 31, 2017

RE: The impact of the 'school run' on pedestrian-vehicle crashes in Fulton County, GA

I Purpose

The purpose for this project is analyzing the pedestrian-vehicle crashes during "School Run" hours compared with normal hours. Therefore, Georgia census tracts, Fulton County school areas as well as traffic crash locations and time of accident were researched.

II. Process of Manipulating the Map

The main challenge for creating the map was collecting data, and the following steps created this brief layout:

- First, the shapefile of Georgia census tracts was obtained from US Census Bureau, and the census in Fulton County was extracted from the attribute table of the total census in Georgia. The school district shapefile was downloaded which shows the school zones in Georgia. Fulton County of school district was selected and extracted present the school zones located in Fulton County.
- Second, the crash data that was the crucial part for this project were researched from the City-Data website, where accidents taking place in Fulton were obtained. The latitude and longitude of each crash location were recorded and input into the ArcMap by using "Go to XY". The "Add Point" button was clicked so that the location dots were made permanently.
- Third, a new data frame was created to show the census tract in Georgia, by using the extracted census in Fulton County to show the major area which the project focus on. And then required map elements such as legends, title and author names were inserted. After this step, the large map with three layers and inset map with two layer were all set up.

III Conclusion on Current Accomplishment

Major data sources including Fulton County limits, school zones in Fulton County as well as crash locations in Fulton were already found, although the crash locations still include vehicle crashes and vehicle-pedestrian crashes. Specific vehicle-pedestrian crash type will be figured out during the remaining research. Also, geocoding, clipping, Buffer and data compiling will be used for this project to analyze the particular school zone and the distance of traffic crash taking place from the school locations. Traffic volume data will be combined with crash data in the end to create some tables to show the relationship between traffic volume and pedestrian crashes.

IV Appendices

Block groups, Road tracts, school district---Tiger Census

<https://www.census.gov/geo/maps-data/data/tiger.html>

Crash 2014---City Data.com

<http://www.city-data.com/accidents/acc-Atlanta-Georgia.html>

Road network---Atlanta Regional Commission

<http://www.atlantaregional.com/>

Traffic Volume---Traffic Counts in Georgia

<http://geocounts.com/gdot/>