



# Improving Infrastructure in College Park, MD



Lourdes Jack

College Park Scholars – Science & Global Change Program  
Civil and Environmental Engineering  
ljack1@umd.edu

College Park Scholars Academic Showcase, April 30, 2021

## Site Information:

Intersection at Knox Road and Baltimore Avenue  
7400 Baltimore Ave, College Park, MD 20740

Dr. Nicole Mogul

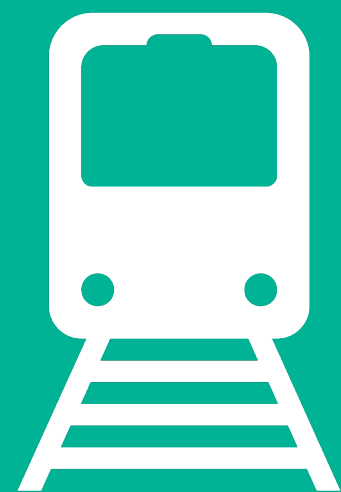
Mission: To create a more efficient, safe, and sustainable area in which individuals will feel safer and more represented in the infrastructure in College Park.

## Issues Confronting Site:

The intersection of Knox Road and Baltimore Avenue is located at the edge of the University of Maryland College Park campus. The area is a high traffic location with eating and recreational establishments. It has a walkability score (out of 100) of 69, a transit score of 43, and a biking score of 91. This makes the area a diverse high traffic area for all students, residents, and staff and needs to be updated.



69%



43%



91%

## Introduction

For my practicum project I completed CPSP 349T, Infrastructure and Society. This course involved learning about how infrastructure should be designed based on the diversity of humans in an area, not on what works best for the majority. My teammate and I created a more efficient and diverse intersection design at Knox Road and Baltimore Avenue.

## Activities:

My teammate and I would meet two times a week, sometimes in our own time and others during the class time of 11am to 12:15pm. During this time, we completed some following tasks.

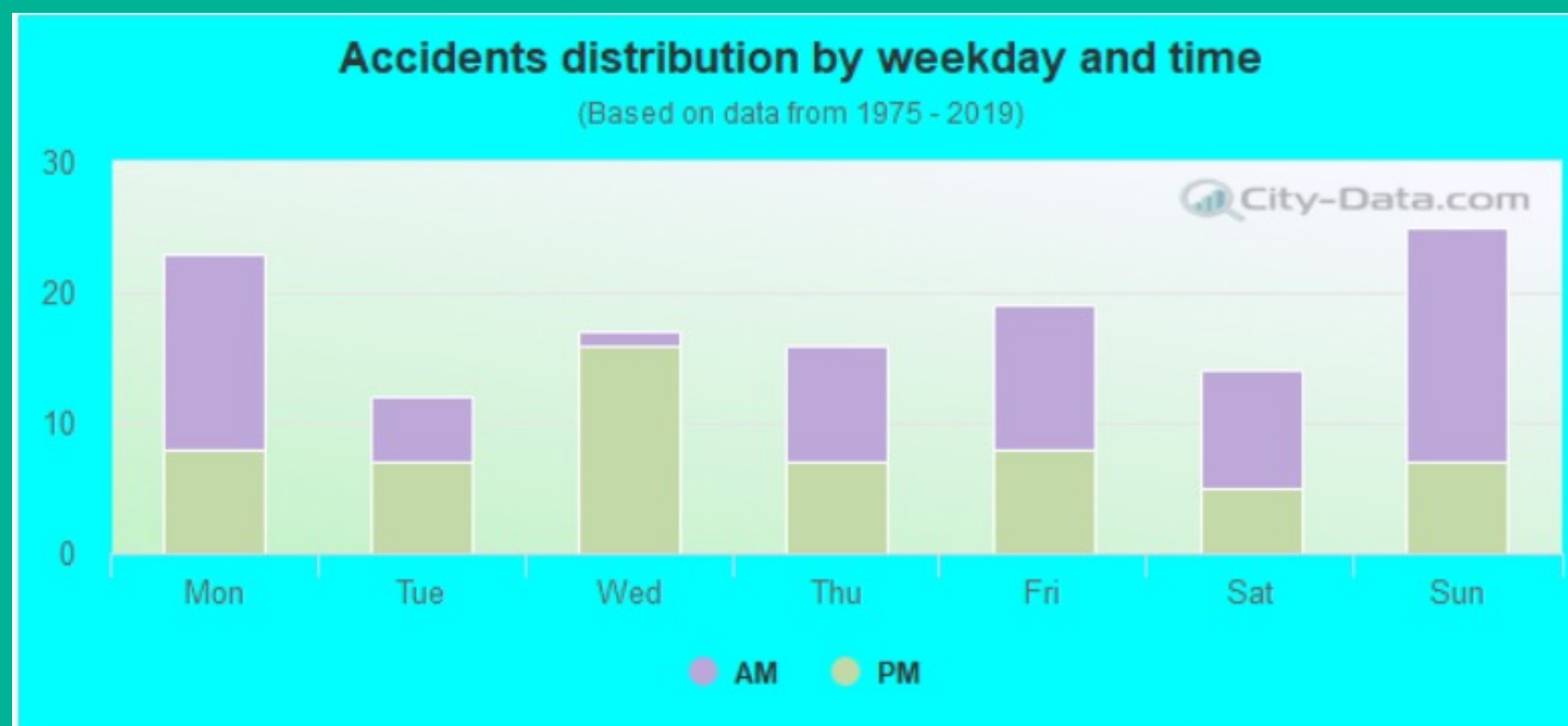
- Created a stakeholder analysis
- Interviewed stakeholders
- Created a list of all the necessary amenities for the diverse group of individuals living in the area.
- Promoted need of change using social media
- Developed a new and improved intersection plan



Picture above of Knox Road and Baltimore Avenue Intersection taken by Lourdes Jack

## Impact on Society:

- Walkability and biking score of area improves
- Lowers accident rates for cars, pedestrians, and bikes
- More diverse infrastructure for all areas of live
- Increases the safety and mobility of students on nearby campus during evening hours



Above is the data from City Data that pulls data from police reports written in the College Park area. Graphic is from the Report Site for accidents in cities around the state of Maryland. The walkability scores are from the National Walkability website as well. 100 is the best score and 0 is the worst. (<http://www.city-data.com/accidents/acc-College-Park-Maryland.html>) (<https://www.walkscore.com/score/college-park-maryland>)

## Future Work:

After taking this class, there is so much more to infrastructure than just the buildings and the roads. Designing infrastructure, you must include the diversity of an area and appreciate the land in its natural state. When continuing in my civil engineering degree, I will use these ideas to ensure my buildings are surrounded by a diversity of amenities for all walks of life and use biomimicry for sustainability.



## Acknowledgments:

Firstly, I would like to thank Dr. Holtz and Dr. Merck for my two insightful years in the Science and Global Change Program. Secondly, I would like to thank Dr. Nicole Mogul for her unique and interacting lessons on infrastructure and how it impacts society. Also, a big thank you to all the individuals we interviewed in helping us to create the list of needed changes to improve the intersection.

