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Geog-120 (30783/30784): Fall 2024

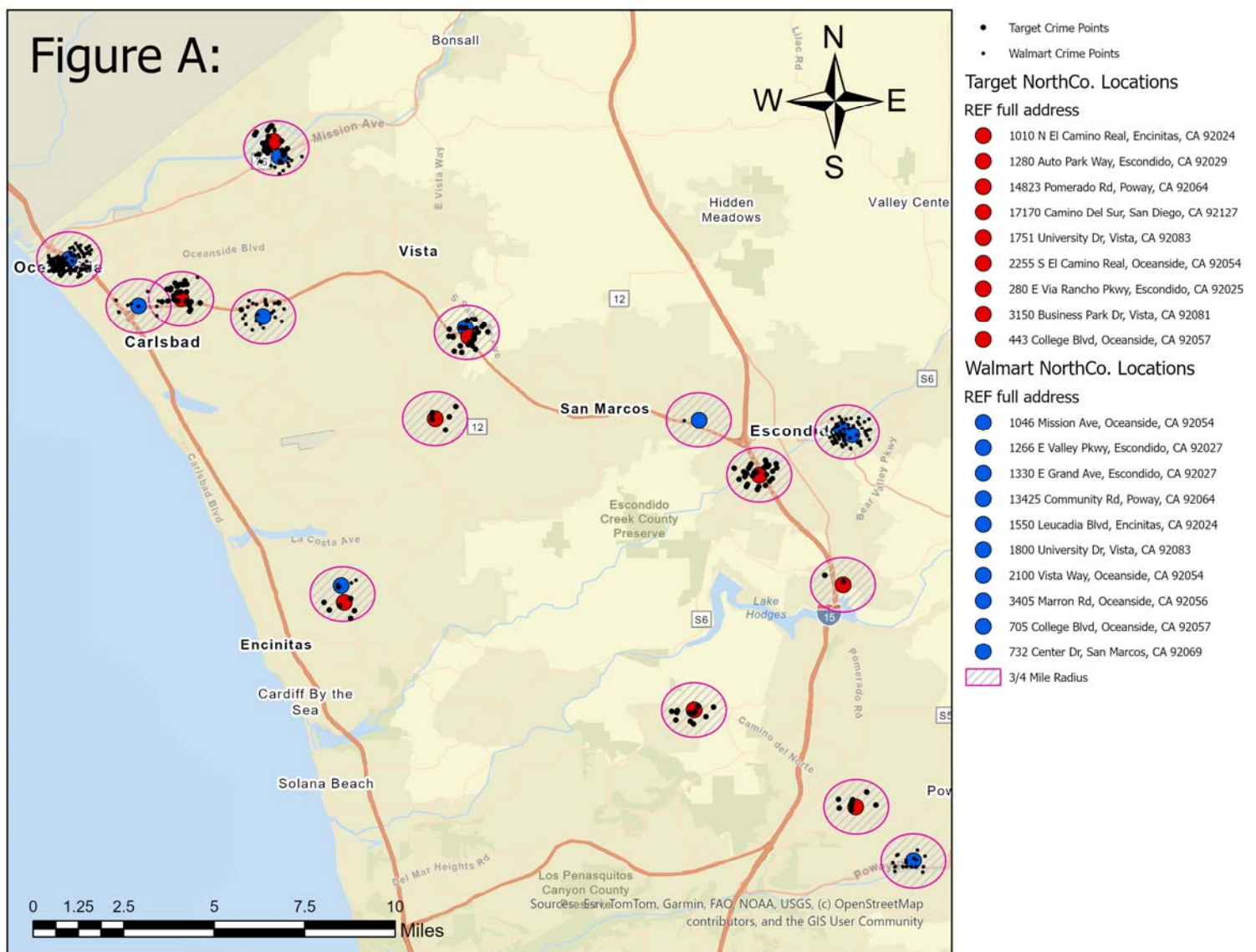
Final Project - May 16, 2025

Web Map: <https://arcg.is/0yqb5X0>

(Backup Link): <https://arcg.is/1OnSiK1>

Github Repository: <https://github.com/Figgs0bit/GEOG-120>

## Analyzing Crime Patterns around Walmart and Target



## ● Background and Related Studies ●

### Introduction

Just on personal experience, I avoid visiting any Walmart's especially any time after dark. I view these stores as having a less secure parking lot and store interior. When I need to shop at a large retail store its Target by default it just feels like a safer experience. It's not just my opinion, it's commonly felt by others that Target is safer than Walmart. Look, these feelings are pure speculative and not grounded in any crime data. The goal of this GIS study is to investigate whether Target or Walmart locations are associated with higher rates of crime. If so, how are they related? I'll be using crime data from the <https://www.crimemapping.com/> site. The objective of this project is to analyze crime rates within a set mile radius around each Walmart & Target location. We're looking to see if there is a measurable difference in crime levels between Walmart versus Target and explore and factors may be causing these disparities.

### Context: San Diego County Crime Severity

In 2023 San Diego County reported a violent crime rate of 362 incidents per 100,000 residents, which is a hair below the national average of 364 per 100,000. This means San Diego is one of the safest large metropolitan areas in the US, especially when compared to L.A., San Bernardino, Riverside Counties. Those neighboring counties see significantly higher crime rates (Spolin Law). San Deigo is also very wealthy, SD County outperforms both state and national benchmarks. Between 2019 and 2023, the median household income in the county was \$102,285, surpassing California's median of \$96,334 and the national median of \$80,610 (U.S. Census Bureau). Also, the county has a lower poverty rate than both California and the Country. As of 2023, just 10.1% of San Diego residents lived below the poverty line, compared to 12% statewide and 11.1% nationally (Axios; U.S. Census Bureau).

## ● Significance of the Study ●

Walmart and Target are often crime hotspots, often violent crime. The causes are complex and tied to reasons like fiscal corporate policies, store location, and surrounding low income areas. These retailers seem to naturally attract crime due to their size and high foot traffic. Both Walmart and Target usually open for extended hours and it used to be the case that they were open 24hrs. Until recently the majority of items weren't even locked away.

Walmart often builds its stores in lower-income communities, these areas tend to experience higher crime rates. As Jeff Spross points out in *The Week*, Walmart's strategy of entering economically distressed areas correlates with elevated crime levels nearby ("Why Criminals Flock to Walmart"). These neighborhoods often lack enough law enforcement to both monitor the neighborhood and the Walmart locations. Target usually places stores in wealthier areas or parts of town where crime rates are lower. Walmart has implemented aggressive cost-cutting measures which reduced the number of staff making theft harder to control. We've all been to a busy Walmart with a single cashier checkout open, its common occurrence. This makes theft prevention difficult and also harder to respond to disturbances or secure environment. A Bloomberg BusinessWeek investigation revealed that certain Walmart stores are responsible for thousands of police calls annually. These range from minor theft to violent crimes such as assaults and shootings (Pettypiece and Voreacos). NPR journalist Shannon Pettypiece further reports that some town's law enforcement can spend entire shifts to handling Walmart crime. This is straining an already limited public resources ("Wal-Mart's Crime Problem Overwhelms Police").

## ● Research Questions & Hypothesis ●

When comparing the crime data between these two stores we're going to focus on the type and severity crime within a confined window. How do crime rates differ between the two stores? My hypothesis is that Walmart locations experience higher crime rates than Target and not just in theft/shoplifting. Walmart is a hotspot for criminal activity, including theft, assault, and parking lot incidents. Crime like vehicle break-ins and purse snatching (Peterson, 2016; Dart, 2016). A 2016 analysis found that some Walmart stores generated thousands of police calls annually, ranging from petty theft to violent crimes (Pettypiece, 2016). Target stores aren't excluded from these crimes but generally report fewer incidents and appear less often in recorded police calls (Smith, 2017).

## ● Methodology & Data ●

We'll be using Geographic Information System (GIS) spatial analysis and Geocoding of crime data we'll be creating ourselves. The Walmart and Target locations are available on their respective websites. Those addresses will be manually entered into that Crime CSV file. The crime data can be downloaded from the <https://www.crimemapping.com/> site, we're interested in all incidences between Sept 01, 2024 and March 1, 2025. Once loaded into their respective CSV files, said files are then added into ArcGIS project and mapped using the Geocode tool. This creates another issue, too many crime points that are not close to either store. The downloaded crime data needs to be manually organized and cleaned of needed information. We're talking roughly 2500+ separate incidents in the CSV file that then needs to be Geocoded in ArcGIS. This amount is after the majority of data is removed for being outside the ¾ miles radius buffer for each location. A crime category tree outline was created and is shown below. This Outline sorts 158 separate incidents descriptions into (4) of the most serious categories. When shopping at Walmart, I'm less worried about wire fraud than say murder or assault which is common in some of these Walmart locations.

### **SORT: Crime Category Tree (4)**

#### **1) Drugs/Alcohol**

- a) *DUI*
- b) *POSSESS CONTROLLED SUBSTANCE / PARAPHERNALIA / NARCOTICS*
- c) *USE/UNDER THE INFLUENCE OF CONTROLLED SUBSTANCES*
- d) *MINOR POSS ALC*
- e) *TREATMENT-MANDATED FELONY HARD DRUGS W/2 PRIORS (F)*
- f) *DISORDERLY CONDUCT (if referring to intoxication)*

#### **2) Violent Crime**

- a) *SIMPLE BATTERY / BATTERY ON PERSON*
- b) *BATTERY*
- c) *COMMERCIAL ROBBERY*
- d) *STREET ROBBERY*
- e) *OTHER ROBBERY*
- f) *SPOUSAL/COHABITANT ABUSE*
- g) *ARSON*

- h) ASSAULT W/DEADLY WEAPON*
- i) THREATEN CRIME / EXECUTIVE OFFICER*
- j) EXHIBIT DEADLY WEAPON*
- k) CAUSE HARM/DEATH OF ELDER /DEPENDENT ADULT*
- l) WILFUL CRUELTY TO CHILD*
- m) STALKING*
- n) MURDER*
- o) RAPE*
- p) THROW SUBS AT VEH ON HWY*
- q) SHOOT AT INHABITED DWELLING/VEH (F)*
- r) BATTERY ON PERSON (if separate from above)*

**3) Theft/Fraud**

- a) PETTY THEFT*
- b) SHOPLIFTING*
- c) GRAND THEFT*
- d) COMMERCIAL/ RESIDENTIAL BURGLARY*
- e) VEHICLE BREAK-IN/THEFT*
- f) FRAUD*
- g) TAMPER WITH VEH*

**4) Misc. Crimes**

- a) VANDALISM*
- b) OTHER SEX CRIME*
- c) OBSTRUCT/RESIST EXECUTIVE OFFICER*
- d) PROHIBITED WEAPONS*
- e) PROHIBITED BY COURT ORDERS: PURCHASE/ETC FIREARM (F)*
- f) PROHIBITED PERSON OWN/POSSESS/ETC AMMUNITION/ETC (F)*
- g) STALKING (if non-violent)*
- h) PROSTITUTION*
- i) ANNOYING PHONE CALL*
- j) OBSTRUCT USE OF ANY WIRELESS COMMUNICATION DEVICE (M)*
- k) UNLAWFUL POSSESS/USE TEAR GAS OR TEAR GAS WEAPON: EX FEL/ETC (M)*

We then create a layer with circular boundary shape files of Radius –  $\frac{3}{4}$  miles. Having this shape will allow us to select crime points outside these circles and have them removed. We then add some layers from ArcGIS online to further paint an economic picture of where these Stores are located. The study uses four custom-created CSV data tables that include Walmart and Target store locations, as well as the crime incidents within a  $\frac{3}{4}$ -mile radius of each store. Additionally, a demographic data table from the U.S. Department of Housing and Urban Development (HUD) is used to examine income levels by census block group. This dataset, titled *SDCo\_Low\_to\_Moderate\_Income\_Population\_by\_Blockgroup*, was sourced from Esri Online.

### ***Data Tables***

- *WalmartNorthCo.csv – Walmart store locations in North County*
- *TargetNorthCo.csv – Target store locations in North County*
- *Walmart\_CrimeHotSpots.csv – Crime incidents near Walmart stores*
- *Target\_CrimeHotSpots.csv – Crime incidents near Target stores*
- *SDCo\_Low\_to\_Moderate\_Income\_Population\_by\_Blockgroup – Income demographics by block group*

### ***GIS Map Layers***

- *Walmart Crime Points*
- *Walmart North County Locations*
- *Target Crime Points*
- *Target North County Locations*
- *Low to Moderate Income Population by Block Group*
- *$\frac{3}{4}$ -Mile Radius Buffers*
- *2020 USA Median Household Income by Tract*
- *World Street Map (Basemap)*

## ● Results ●

**Table 1.A**

*Frequency of crimes committed at North county Walmart and Target locations.*

Store	Location	Crime Frequency				
		Violent	Theft/Fraud	Drugs/Alcohol	Other	Total
Target	14823 Pomerado Rd, Poway, CA 92064	1	13	17	2	33
Target	17170 Camino Del Sur, San Diego, CA 92127	2	26	33	9	70
Target	280 E Via Rancho Pkwy, Escondido, CA 92025	3	79	129	17	228
Target	1280 Auto Park Way, Escondido, CA 92029	13	97	106	56	272
Target	2255 S El Camino Real, Oceanside, CA 92054	18	45	166	80	309
Target	3150 Business Park Dr, Vista, CA 92081	2	4	8	0	14
Walmart	13425 Community Rd, Poway, CA 92064	9	18	47	14	88
Walmart	1046 Mission Ave, Oceanside, CA 92054	29	25	82	141	277
Walmart	2100 Vista Way, Oceanside, CA 92054	8	47	51	31	137
Walmart	3405 Marron Rd, Oceanside, CA 92056	5	31	50	68	154
Walmart	732 Center Dr, San Marcos, CA 92069	7	22	29	17	75

**Table 1.B**

*Frequency of crimes committed at North county Walmart and Target locations.*

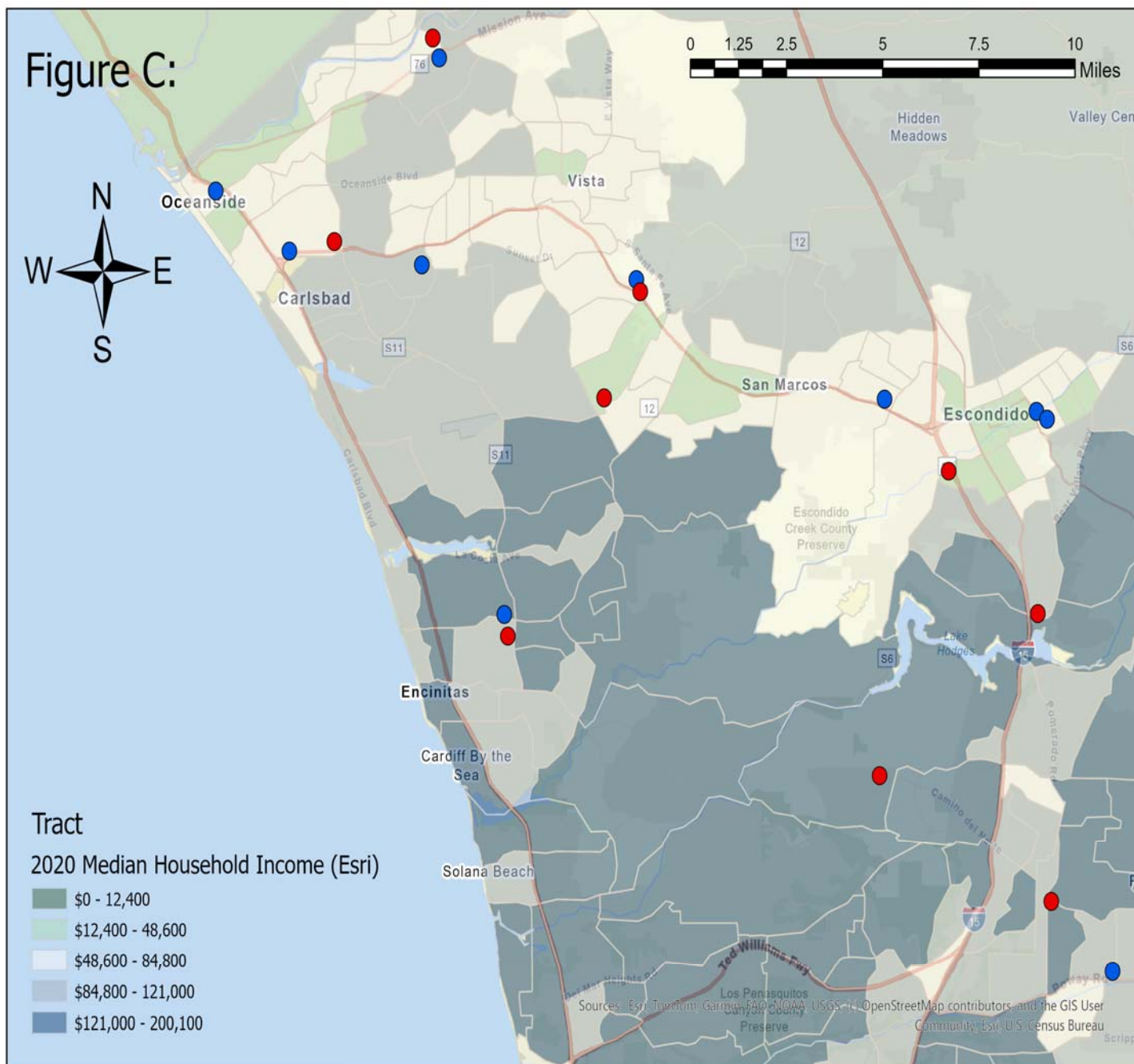
*(Locations below are located near each other and share a common crime data radius)*

*\*The (2) Walmart locations are located next to each other*

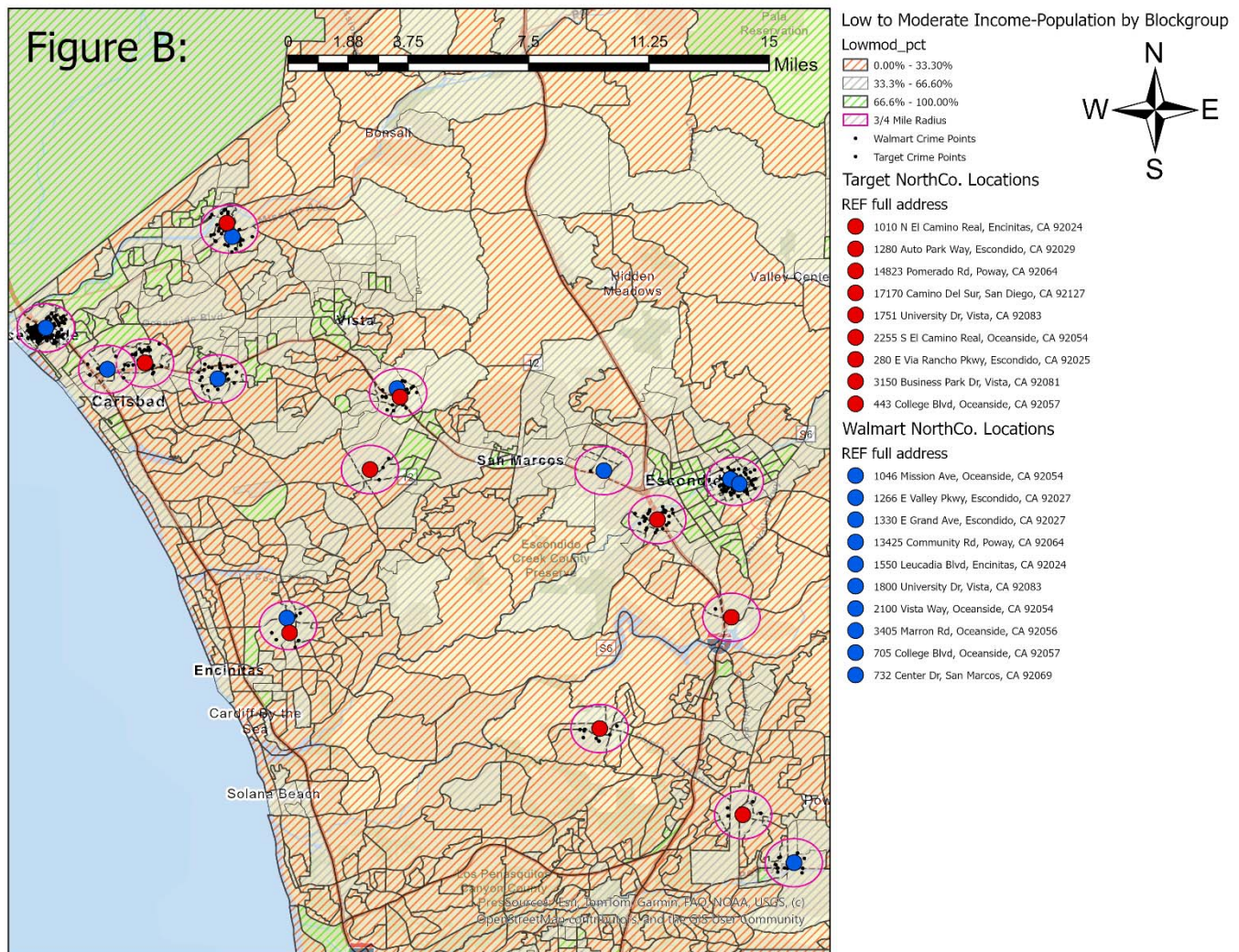
Store	Location	Crime Frequency					Store Total
		Violent	Theft/Fraud	Drugs/Alcohol	Other	Total	
Target	443 College Blvd, Oceanside, CA 92057	9	48	6	32	95	170
Walmart	705 College Blvd, Oceanside, CA 92057	7	36	8	24	75	
Target	1751 University Dr, Vista, CA 92083	3	68	13	11	95	186
Walmart	1800 University Dr, Vista, CA 92083	0	57	24	10	91	
Target	1010 N El Camino Real, Encinitas, CA 92024	2	55	4	9	70	151
Walmart	1550 Leucadia Blvd, Encinitas, CA 92024	6	42	4	29	81	
*Walmart	1266 E Valley Pkwy, Escondido, CA 92027	8	105	47	113	273	559
*Walmart	1330 E Grand Ave, Escondido, CA 92027	11	108	53	114	286	



Figure C:







## ● Conclusion & Discussion ●

Walmart stores do tend to experience more crime than Target but largely due to their locations in lower-income areas. Areas which are statistically more prone to crime. A study of police reports found that Walmart stores averaged 770 incidents per store in 2004, compared to 170 at nearby Target stores, suggesting that surrounding socioeconomic conditions play a major role (Loss Prevention Magazine).

The other issue is how wealthier communities often fight Walmart's intention to build locations in their wealthy communities further concentrating Walmart's in crime prone areas. Granted these concerns are valid: traffic, crime, and property values. Ultimately, the higher crime rates at Walmart reflect the environments they operate in, not solely the stores themselves. I would argue Walmart's don't bring crime to a neighborhood but are often victims of the neighborhoods crime themselves.

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## Additional Layouts

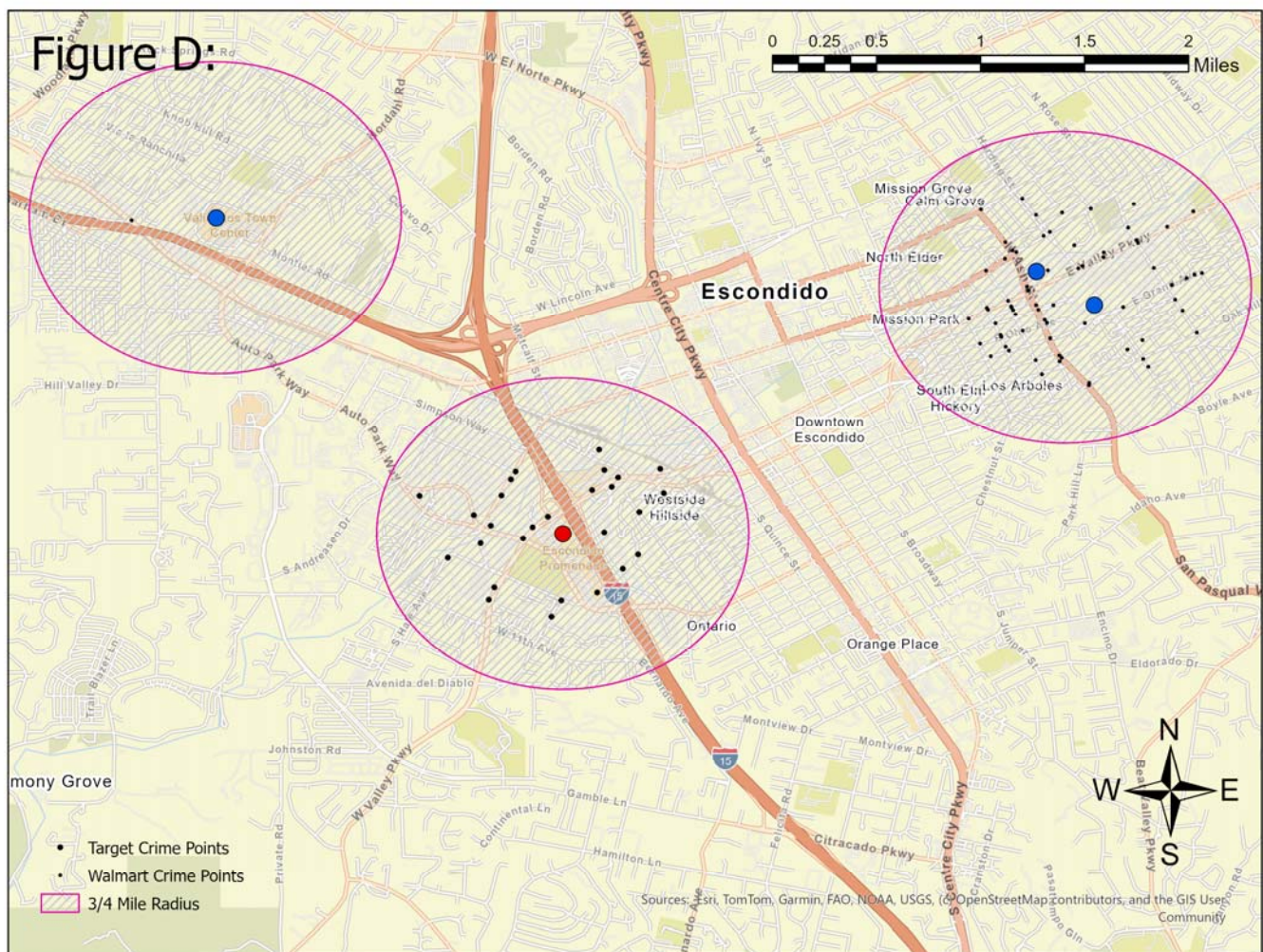




Figure E:

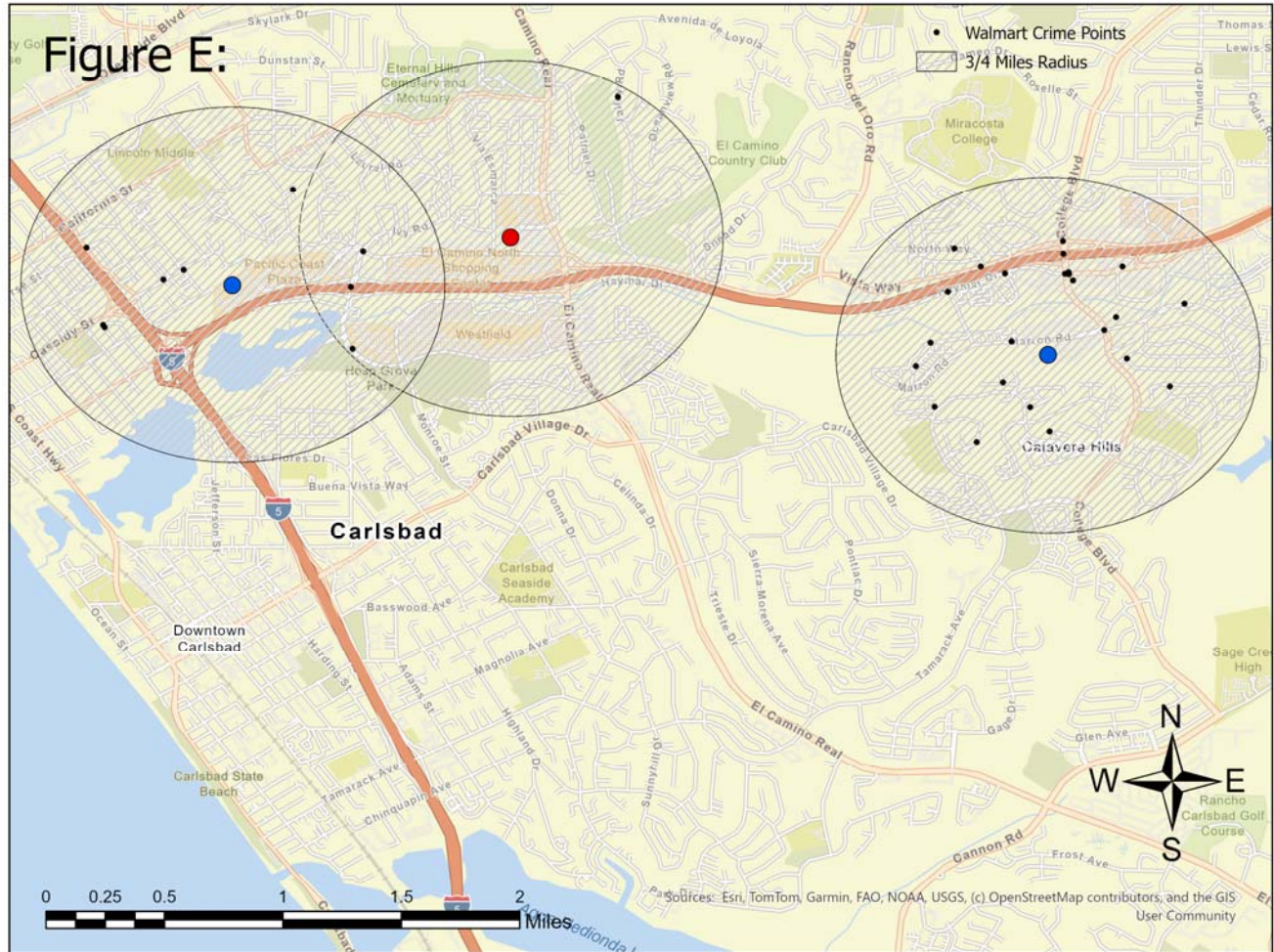


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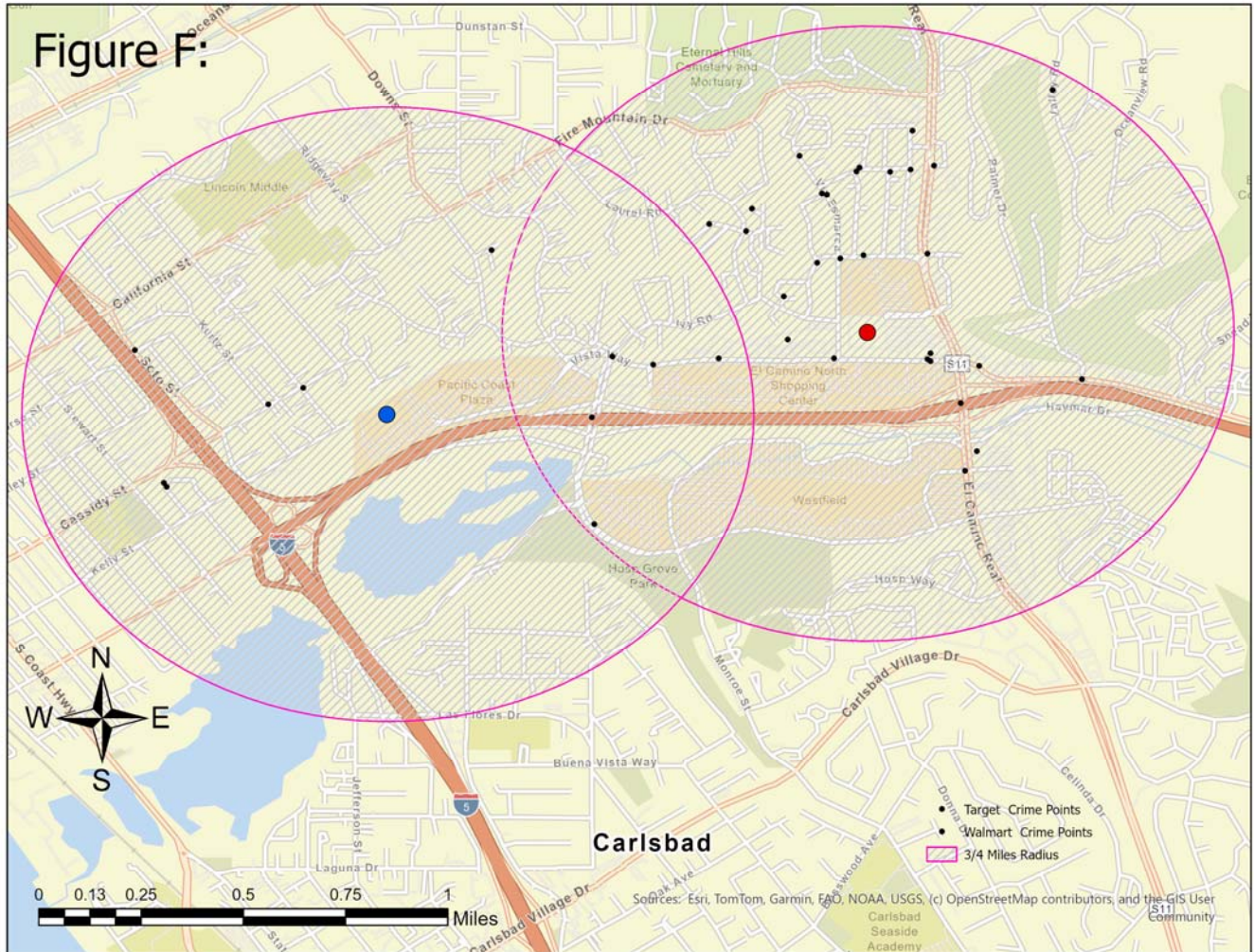




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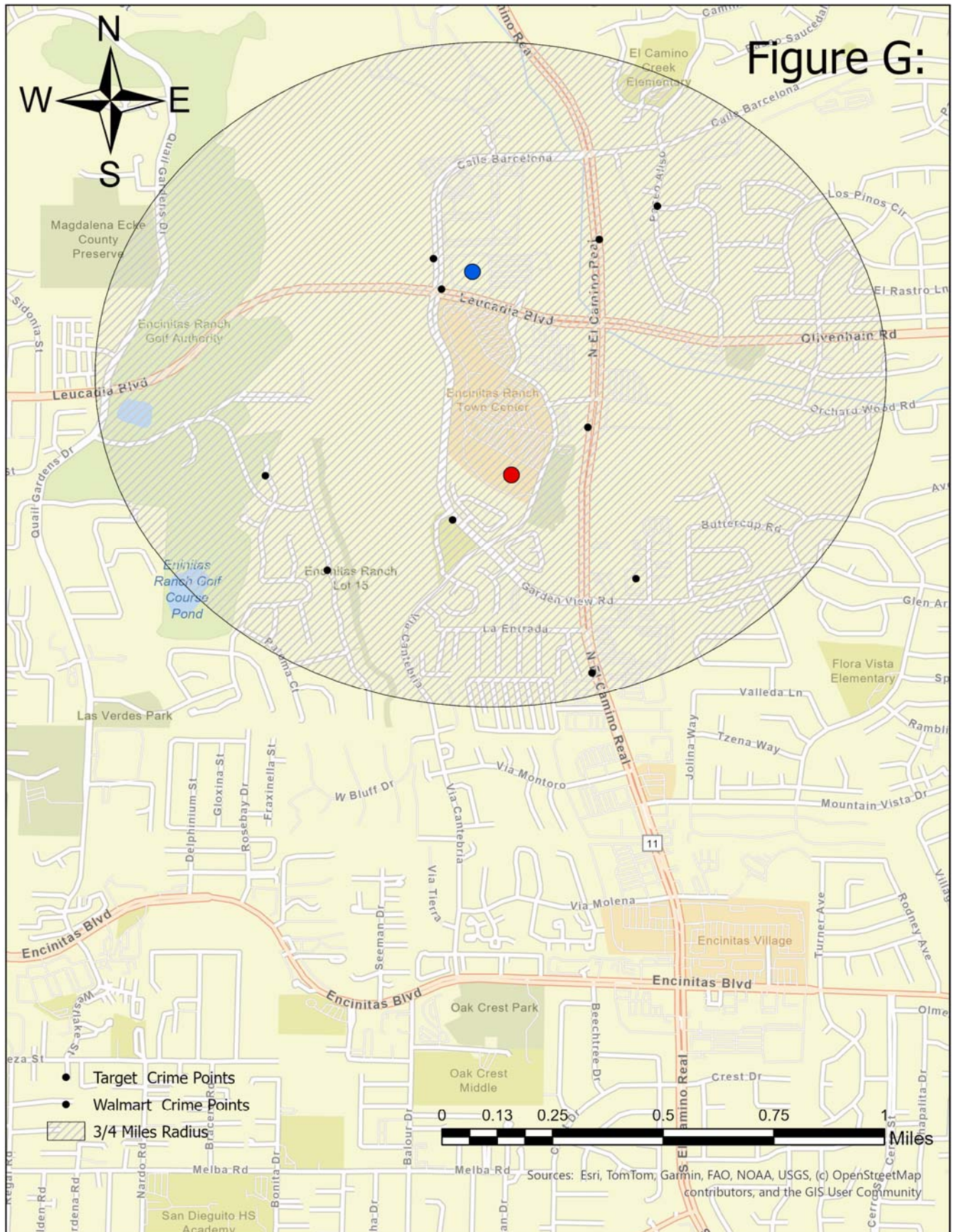




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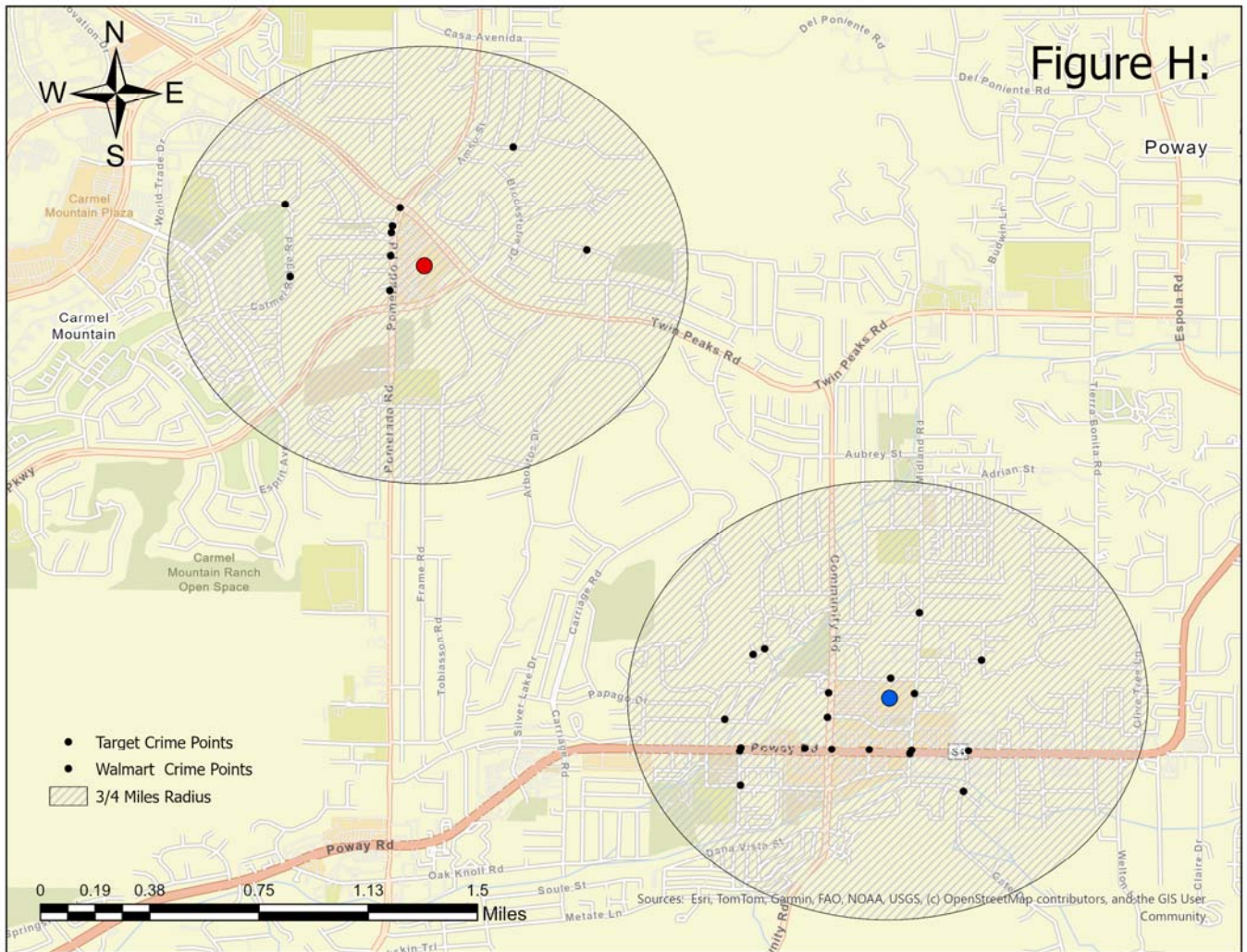




Figure I:

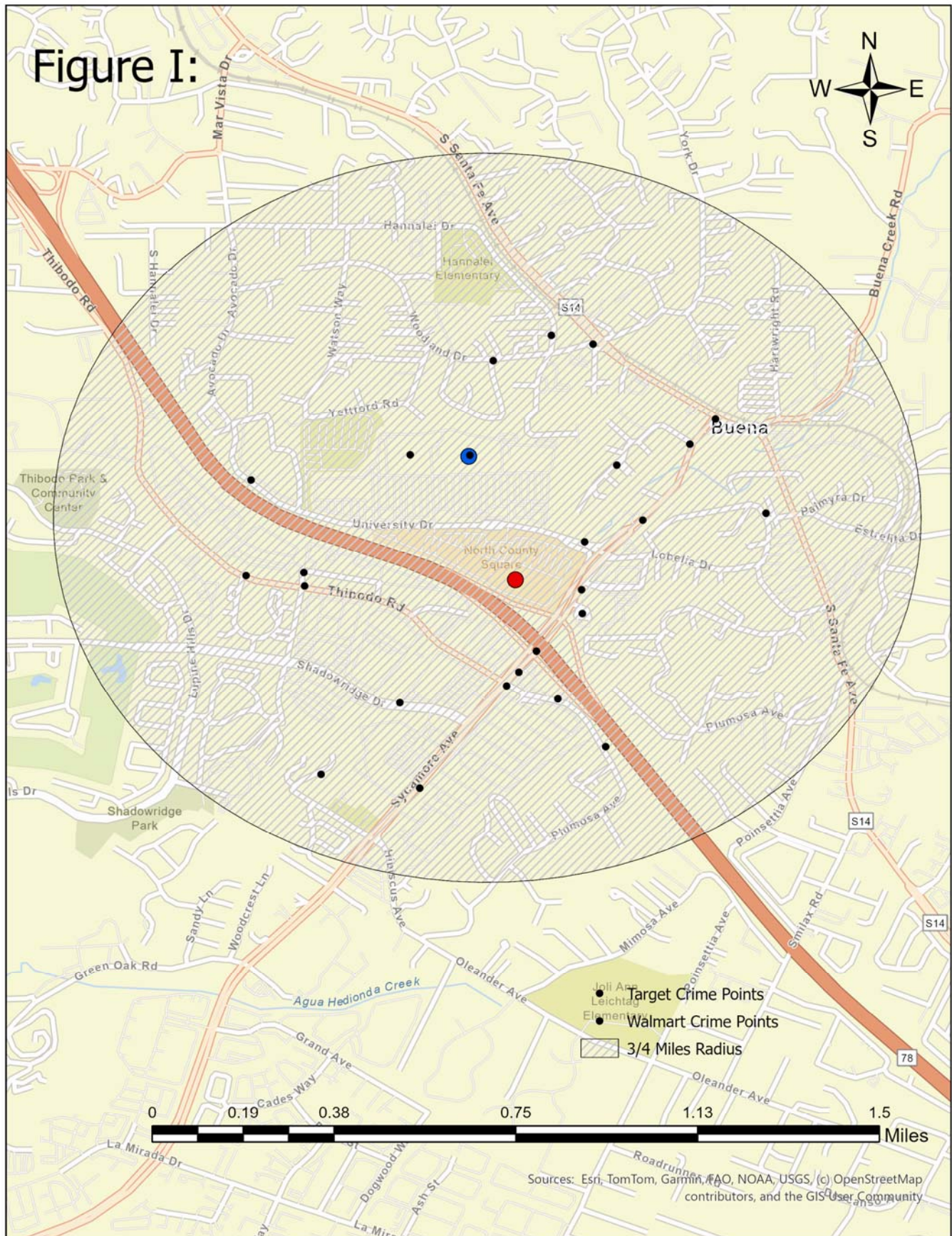
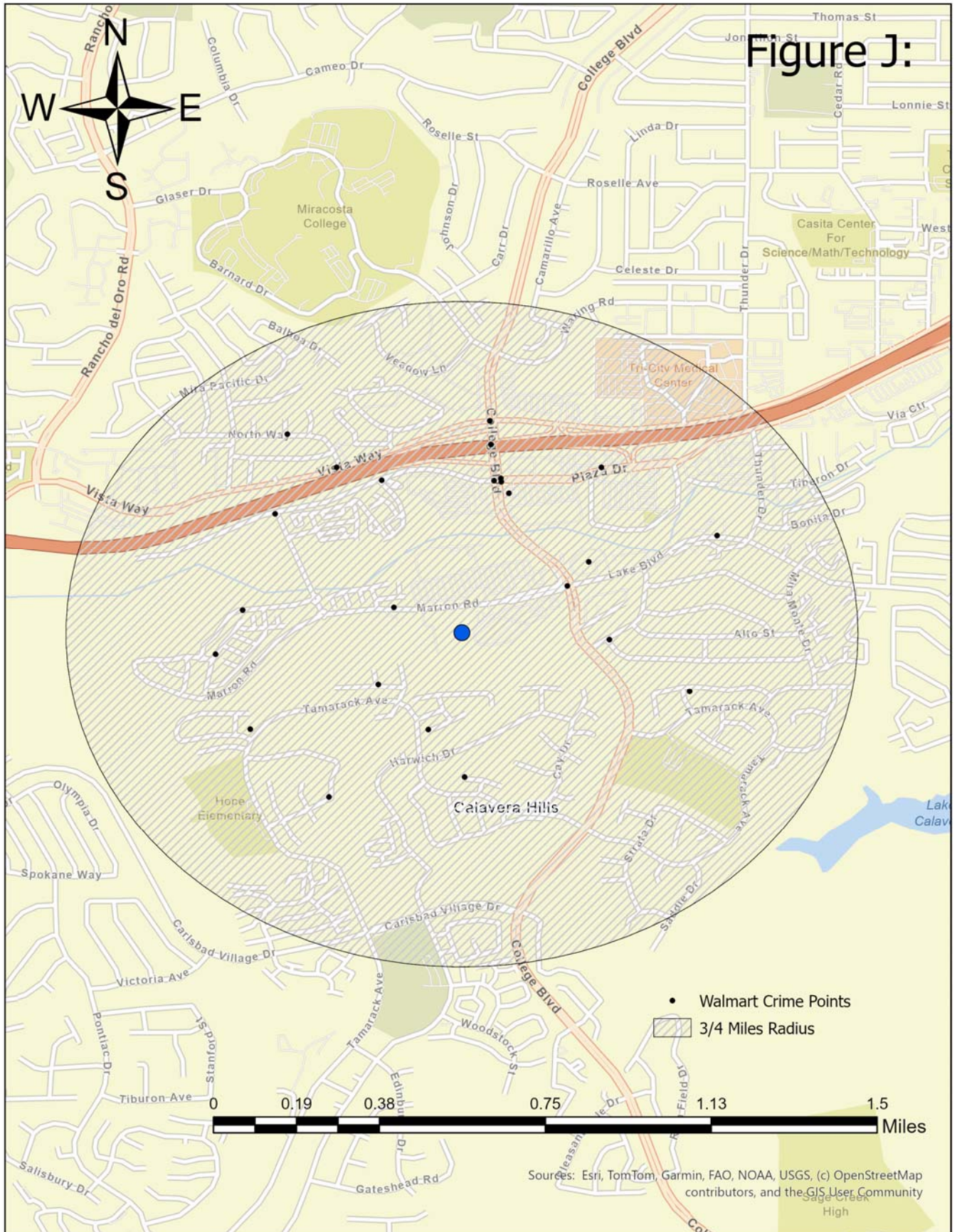




Figure J:





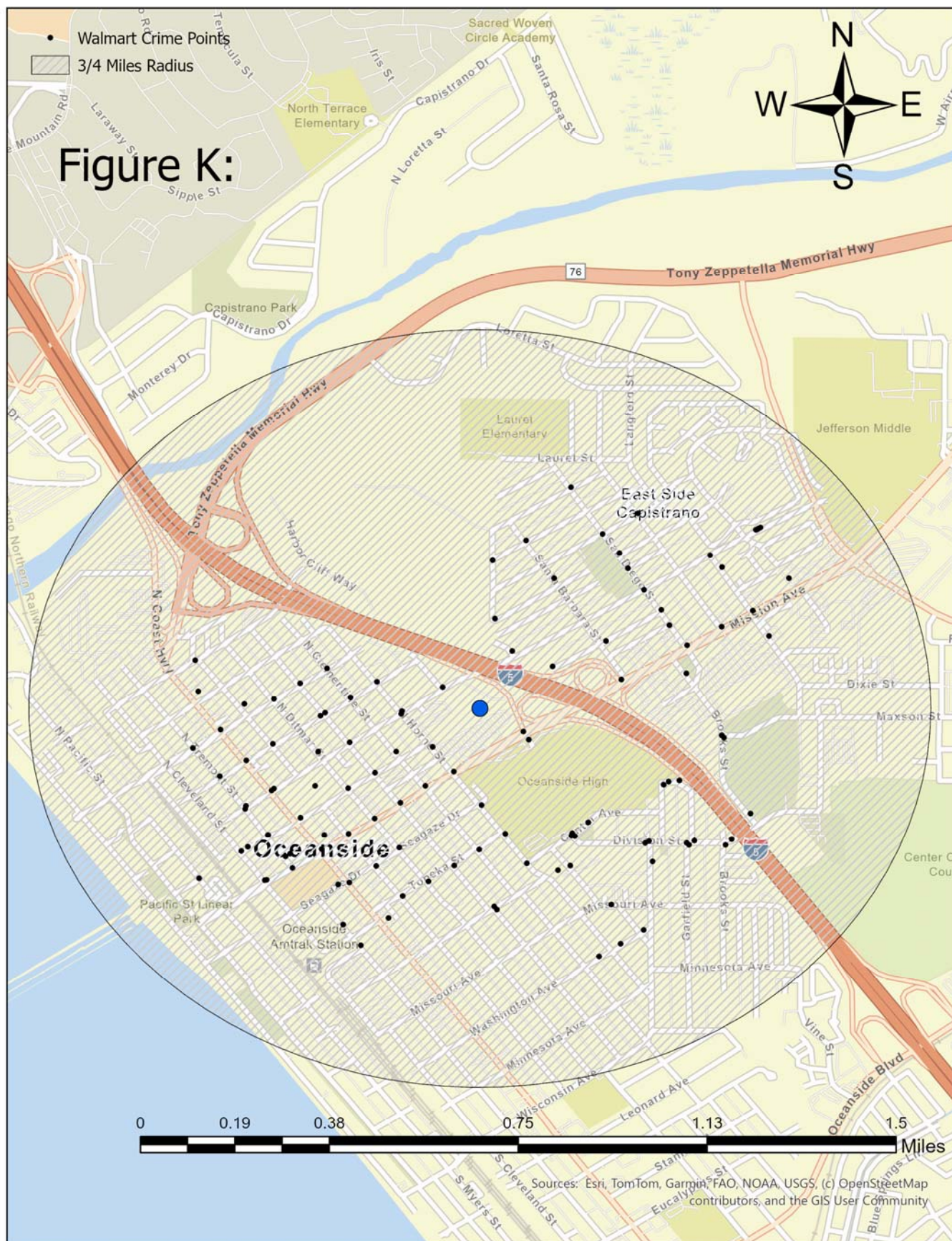




Figure L

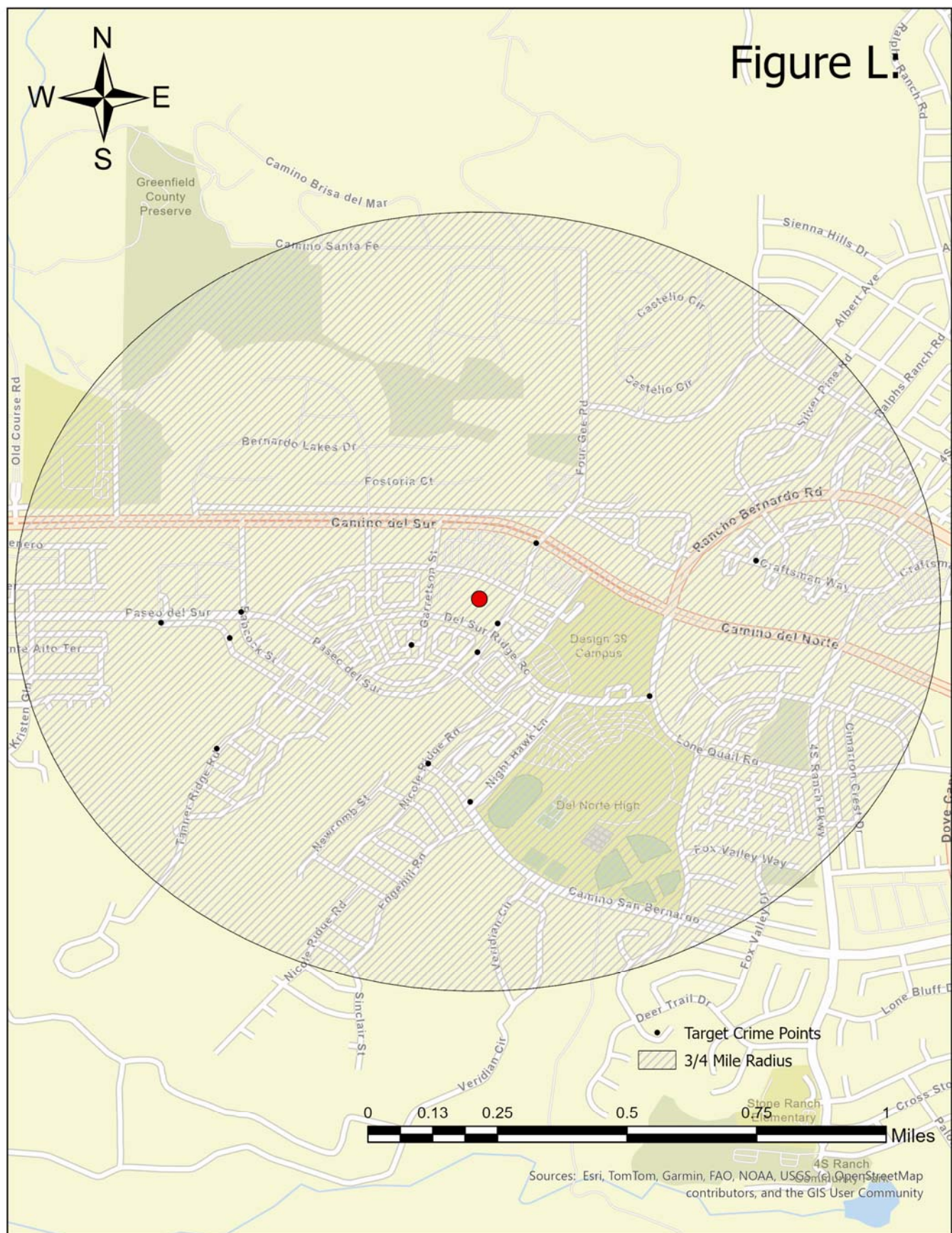




Figure M:

