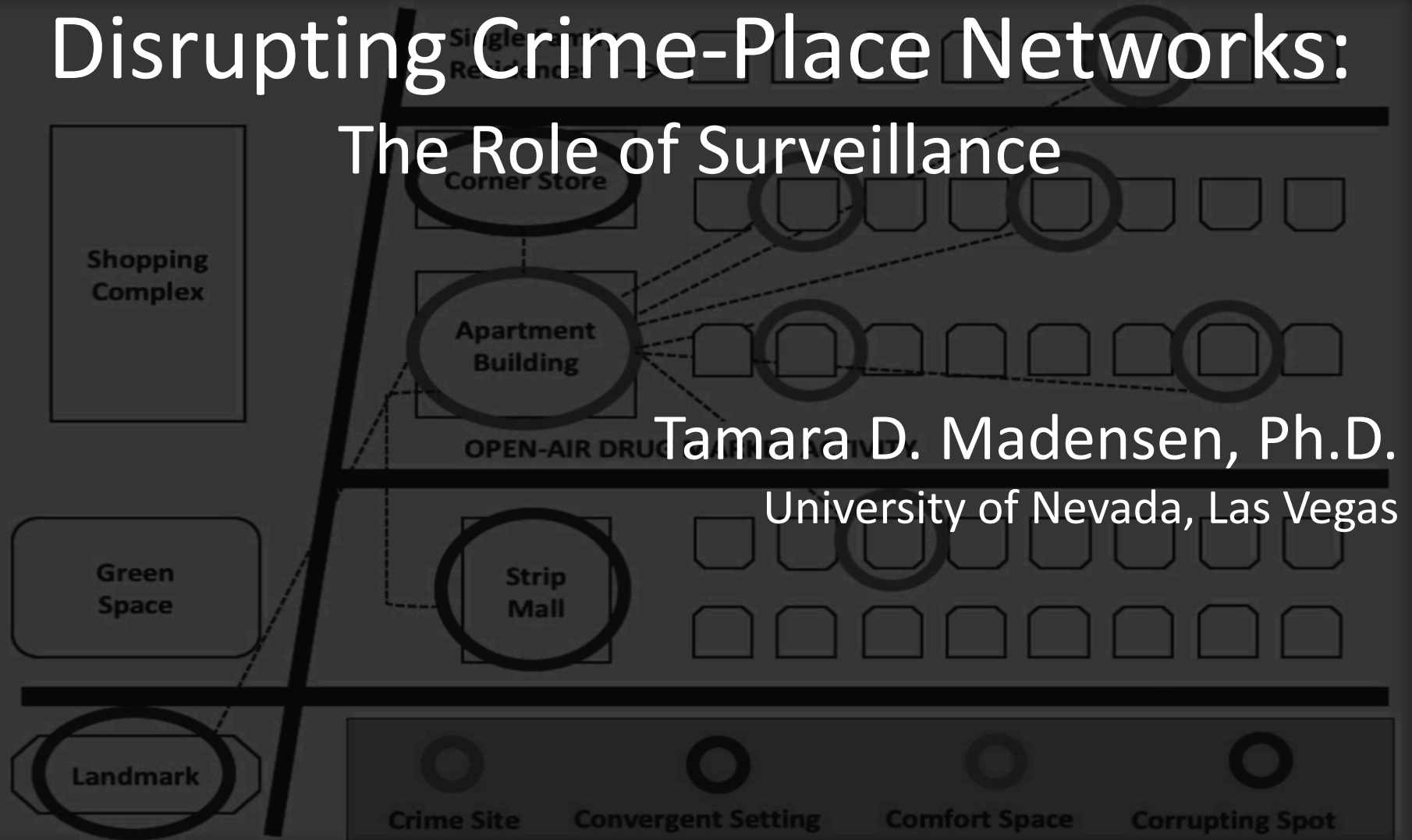


Disrupting Crime-Place Networks: The Role of Surveillance

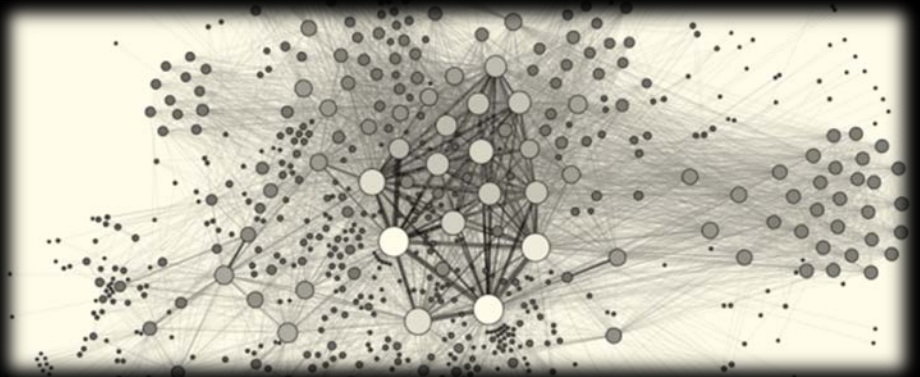


Tamara D. Madensen, Ph.D.
University of Nevada, Las Vegas

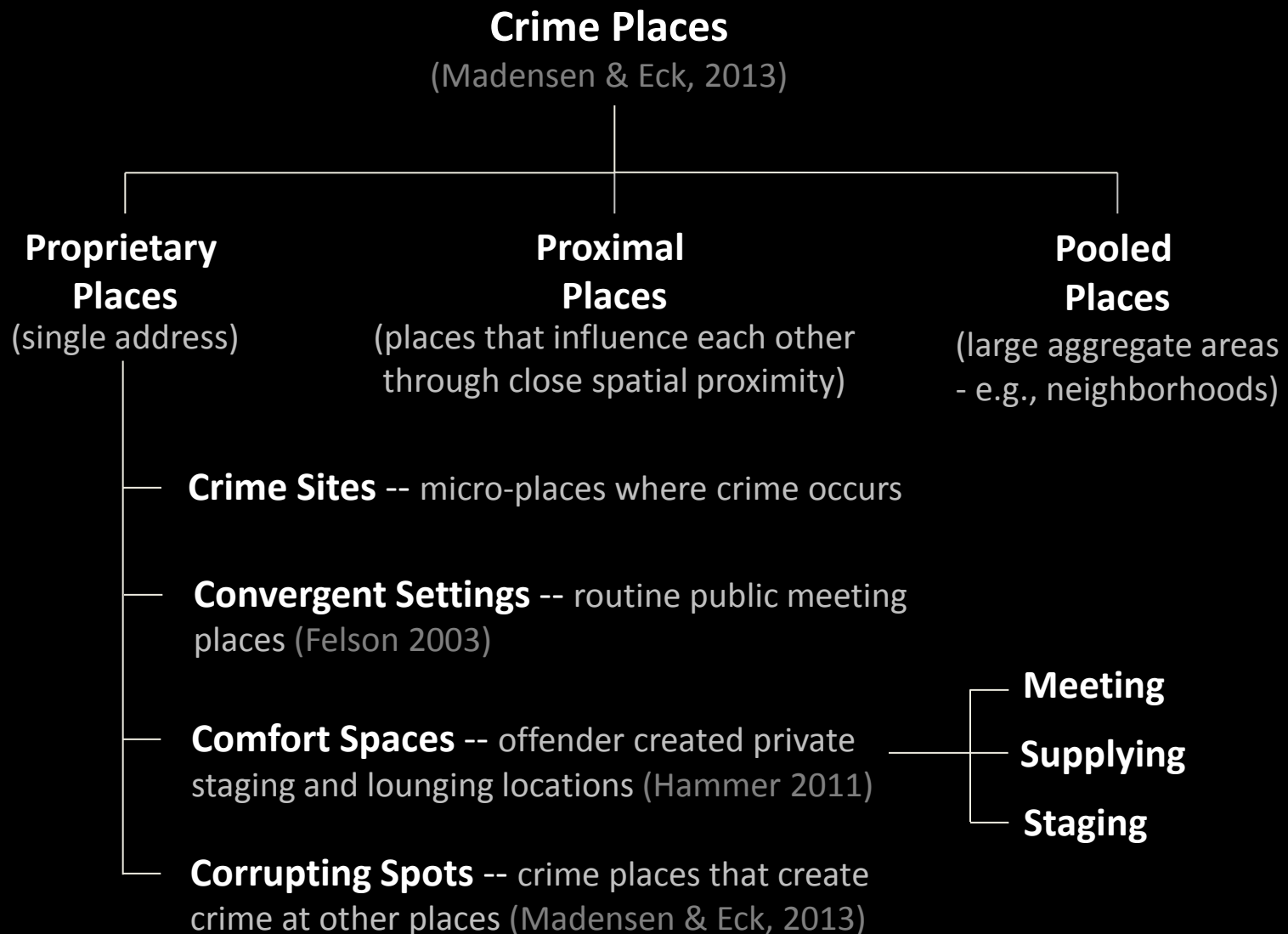
Kungliga Tekniska Högskolan
Stockholm, Sweden – September 8, 2017

Evidence Supporting Crime-Place Networks

- Crime is concentrated across places, offenders, victims
 - 80-20 Rule
- Offenders, victims, and crime places are networked.
- Persistent crime hotspots result from overlapping networks.
- Most violent crime, across any city, occurs in small, identifiable micro-locations.



Organization of Violent Place Networks



Crime Places and Copper Theft

Crime Sites →

Copper condensing
air-conditioning units



Light/telephone poles &
power stations



Vacant/foreclosed
properties

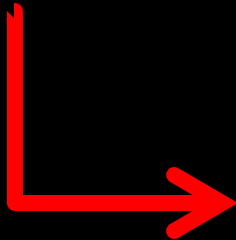
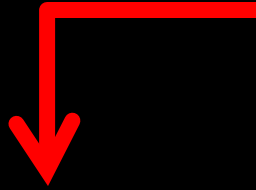


Churches

Crime Places and Copper Theft

What we see

Crime Sites



What we don't see

Comfort Space



Staging location
where offenders park & meet close to crime sites

Comfort Space



Supplying location
where metal is stored

Corrupting Spot



Recycling Plant



Convergent Setting

extra cash and removal of your recycle items - S1 (valley wide pick up)

Date: 2011-10-03, 10:13AM PDT
Reply to: see below [\[https://www.craigslist.org/about\]](#)

i will buy and haul off your unwanted junk such as any metal and recycle items, batterys, old car parts, cans please call 702-

craigslist



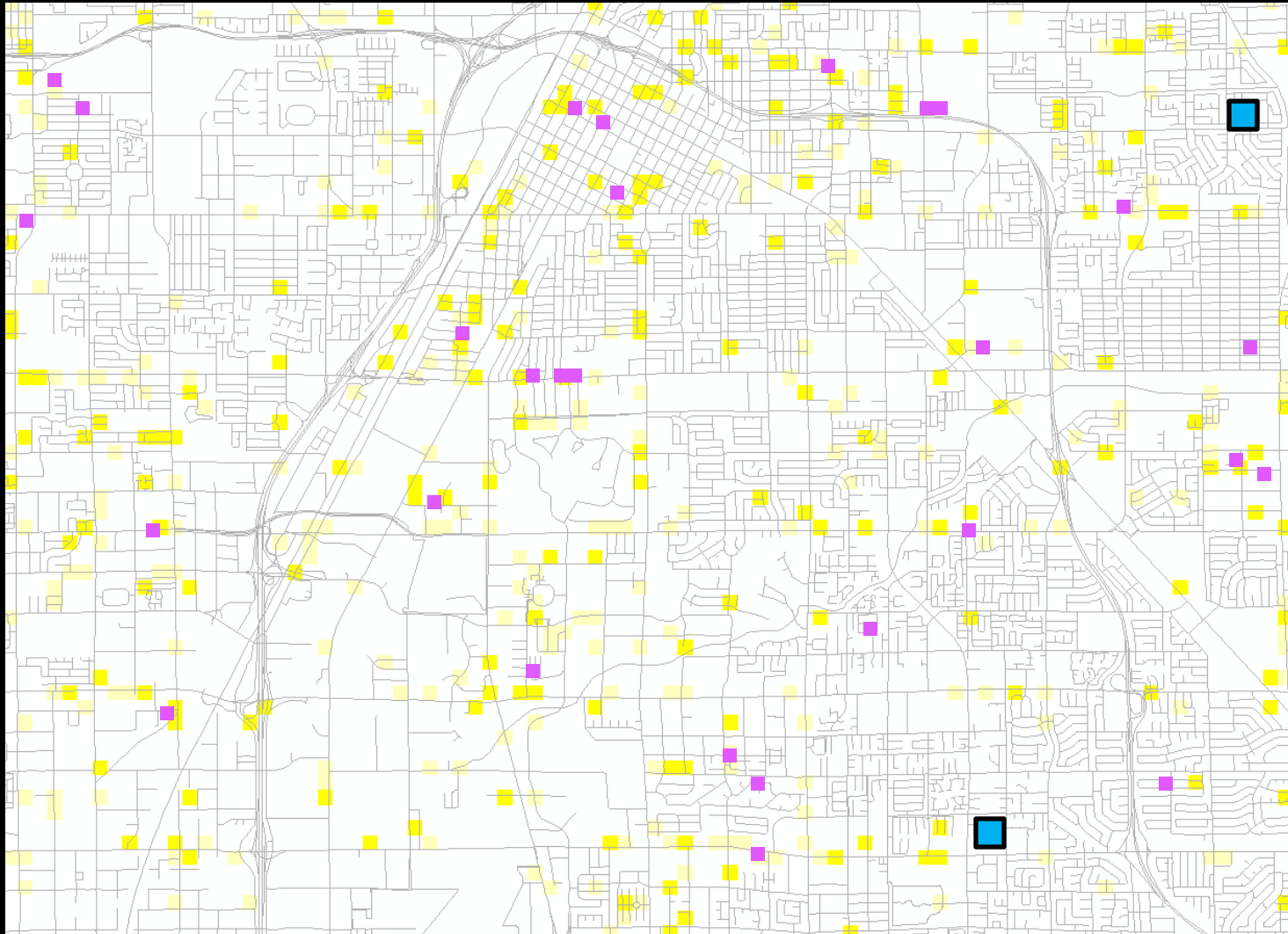
Crime Hotspot Map

■ Crime Sites

■ Comfort Spaces

■ Convergent Settings

■ Corrupting Spots



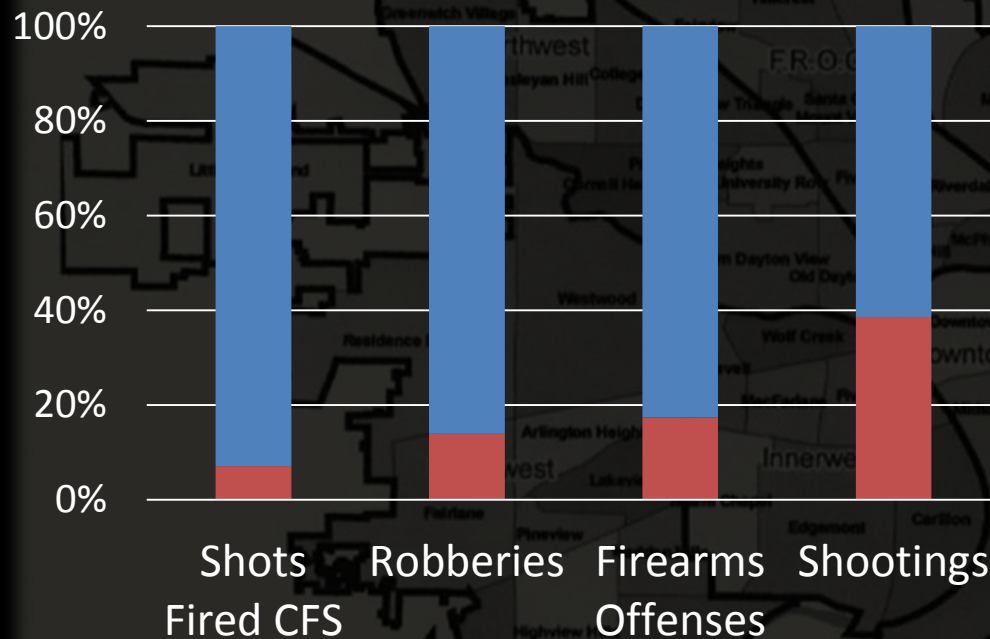
— Single virtual location

Violence Concentration

(Dayton, Ohio)

1.3% of City's total land mass (<0.7 sq mi)*:

Gun Violence



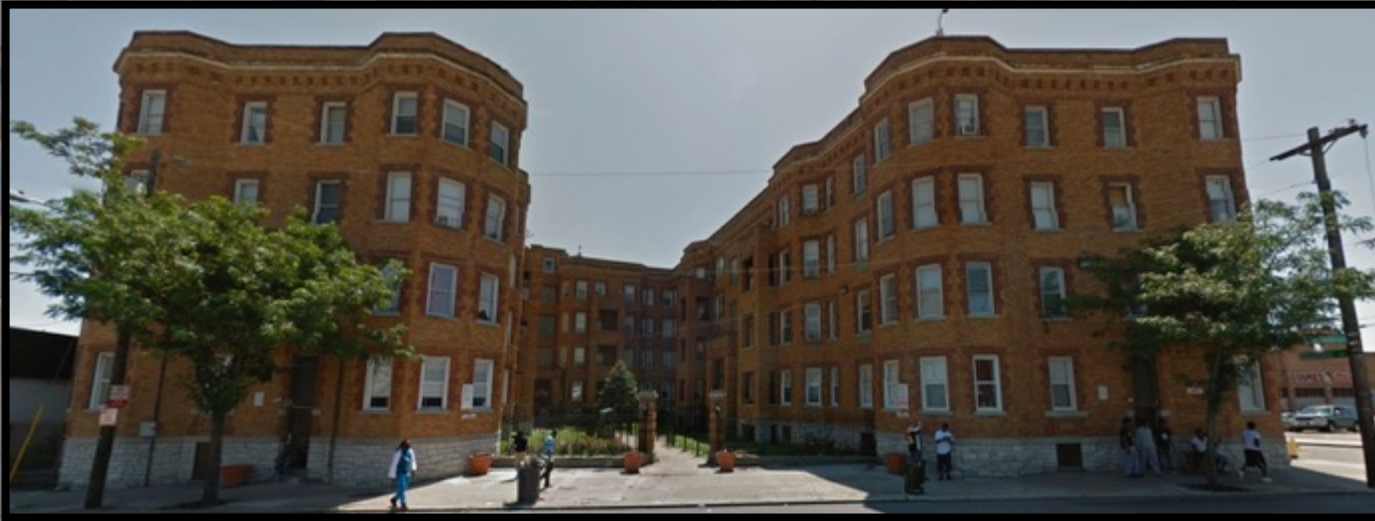
- 7.1% of shots fired calls-for-service
- 13.9% of robberies
- 17.2% of firearms offenses
- 38.6% of shootings

*Excludes airport land use



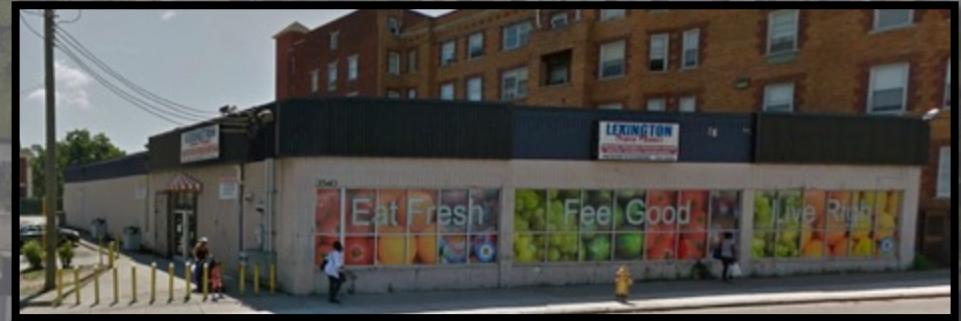
Poinciana Apartments
3522 Reading Road

Place Network Analysis



Crime Site – Most violent proprietary location in Avondale neighborhood

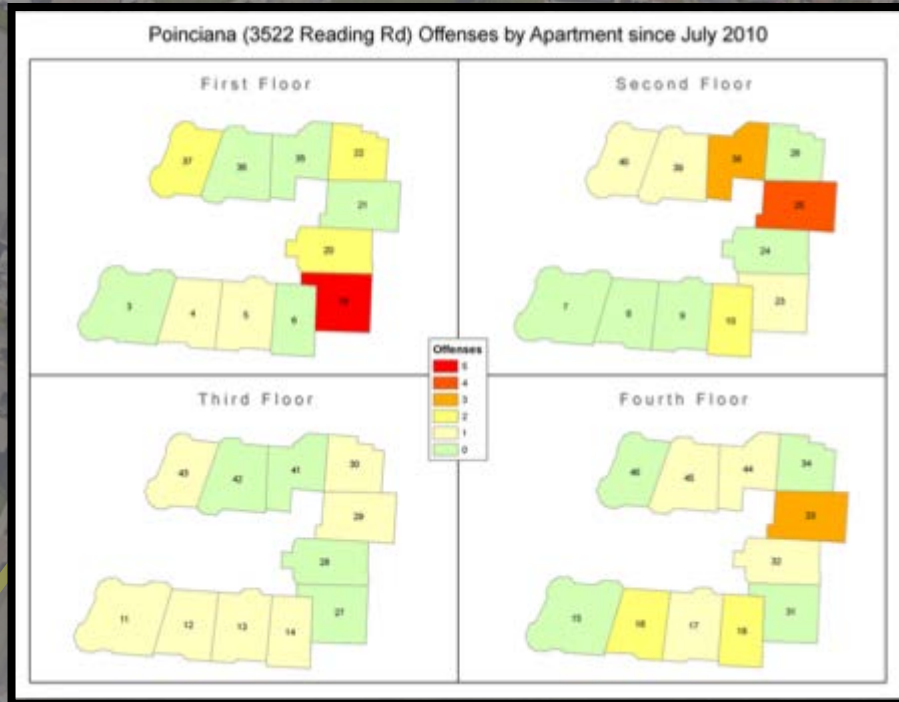
Place Network Analysis



○ Crime Site – Most violent proprietary location in Avondale neighborhood

○ Convergent Settings – Lincoln Statue, Lexington Supermarket





Place Network Analysis



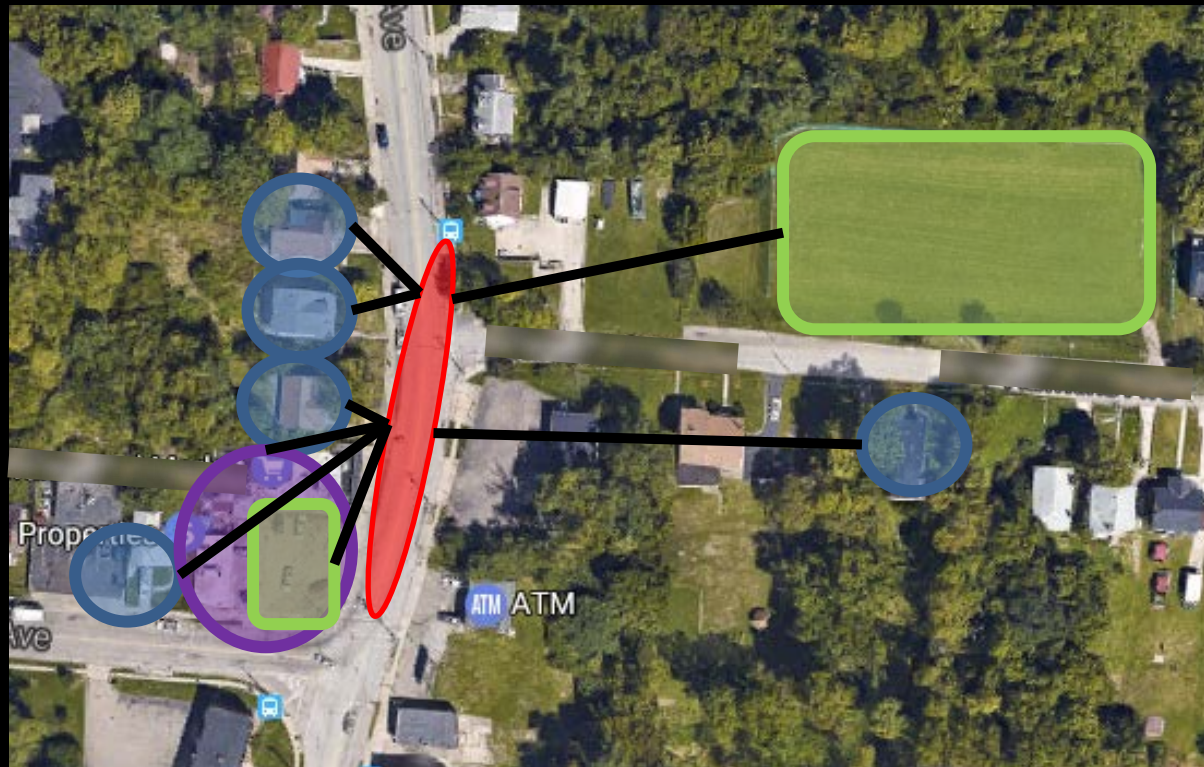
- Crime Site – Most violent proprietary location in Avondale neighborhood
- Convergent Settings – Lincoln Statue, Lexington Supermarket
- Comfort Spaces – Specific apt. units, Nearby residences

Place Network Analysis



-  Crime Site – Most violent proprietary location in Avondale neighborhood
-  Convergent Settings – Lincoln Statue, Lexington Supermarket
-  Comfort Spaces – Specific apt. units, Nearby residences
-  Corrupting Spots – Nearby businesses (some facilitators)

Cincinnati Place-Based Investigations

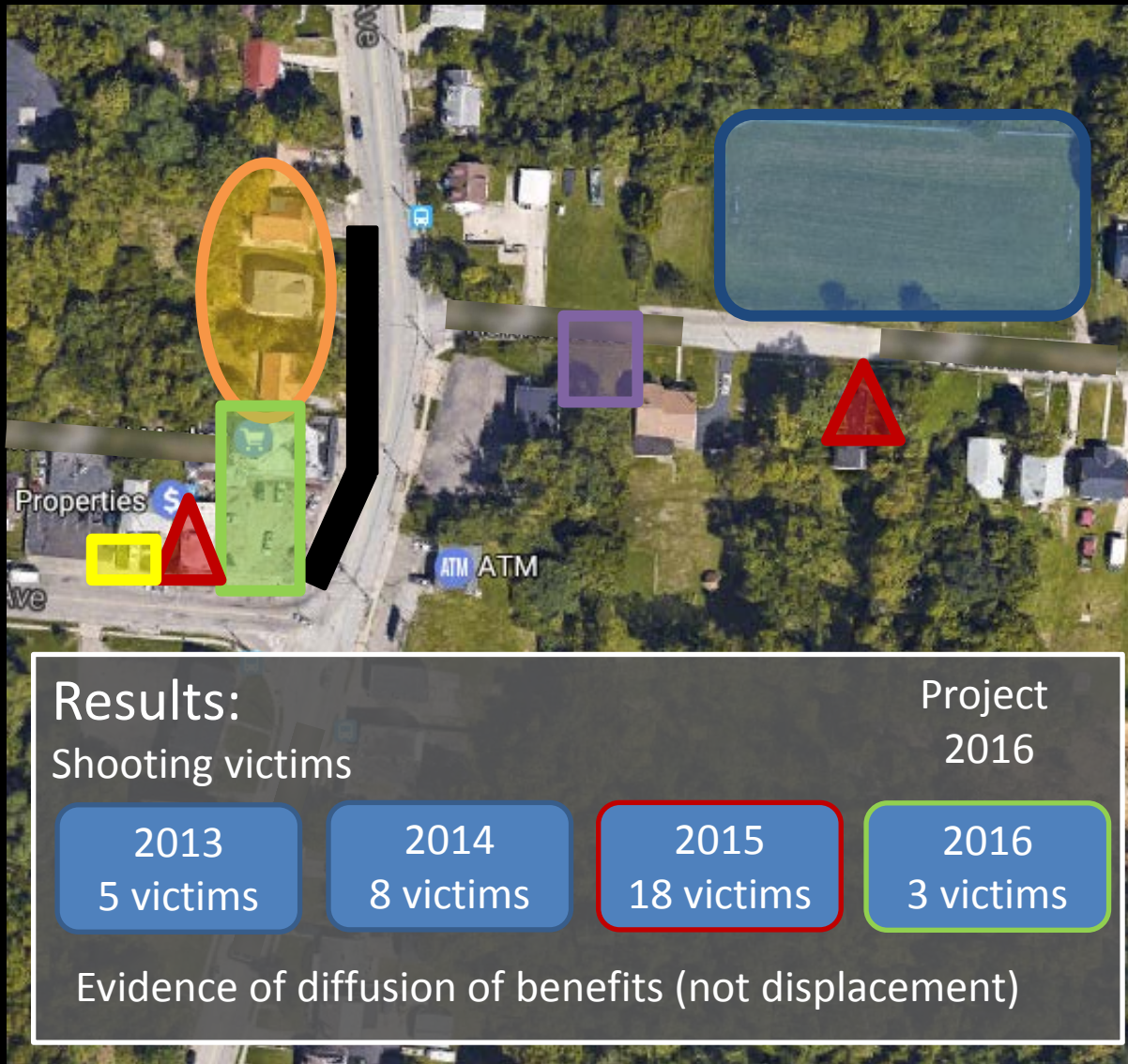


-  **Crime sites** – public street
-  **Convergent settings** – parking lot/park
-  **Comfort spaces** – rentals/vacant property
-  **Corrupting spots** – crumbling structures/store fronts



Violent Place Network

Cincinnati Place-Based Investigations

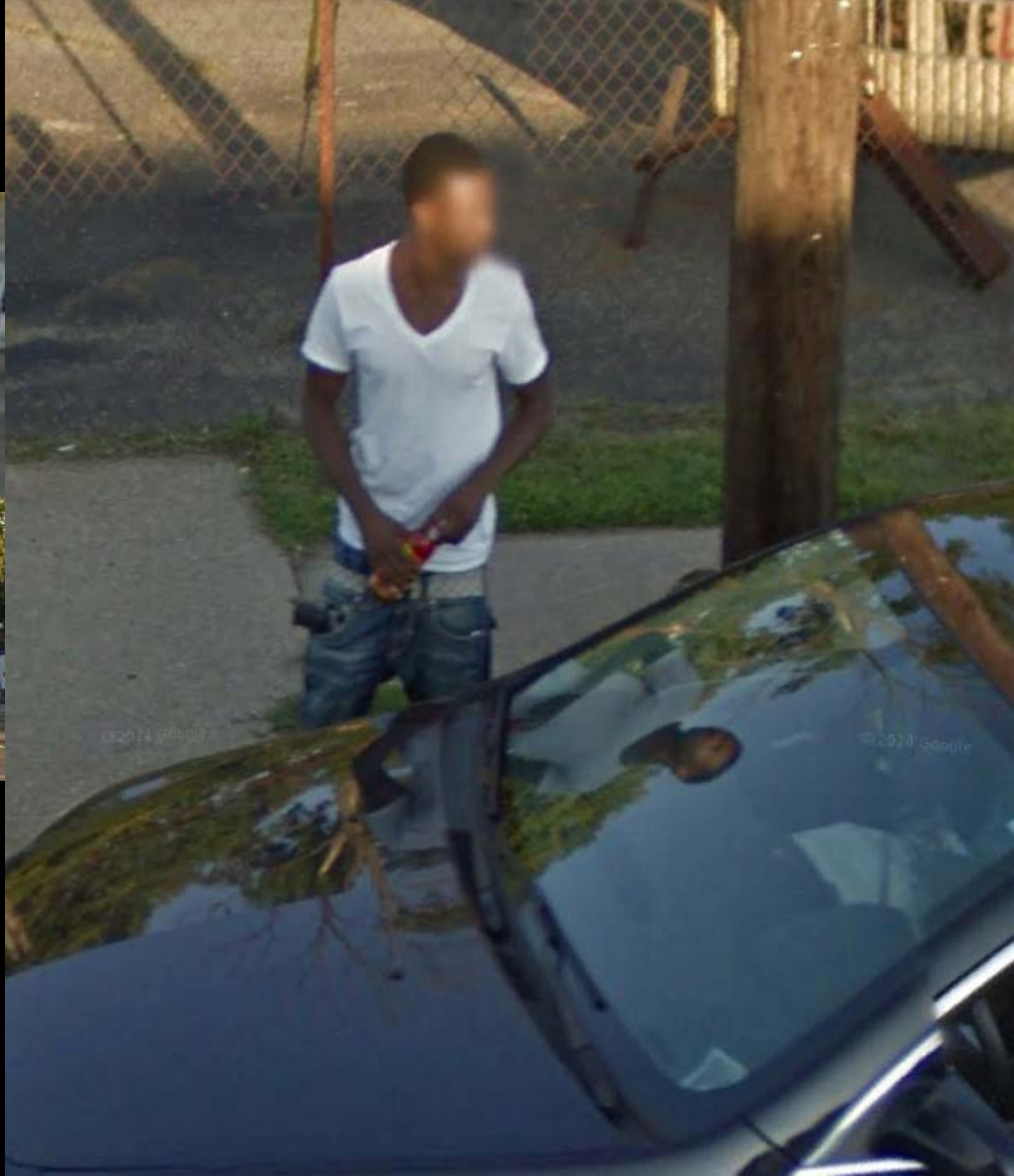


-  Permanent on-street parking restriction
-  Land maintenance/owner compliance
-  Code enforcement/dumpster-vendors
-  Blighted property demolition
-  Light tower intervention
-  Fencing - territory reinforcement
-  Space reactivation – public playground

Limitations of Crime-Place Network Investigations

Role of Surveillance Technologies

Surveillance



Geofeedia



Place-Based
Social Media
Surveillance

1 days avg. per mention

last mention 5 minutes ago

31 unique authors

19 retweets

Top Users

Cincinnati_Kid	2
shannonrwatts	1
mdwblitz	1
kgat90	1
kwoodworth	1
BrennaDemands	1
hilarybama	1
CherylHaase	1
CincinnatiOHrr	1
/u/PhoecesBrow	1

Top Hashtags

charlottesville	4
maga	1
hannity	1

Sources

twitter	28
topix	8
reddit	3
photobucket	1

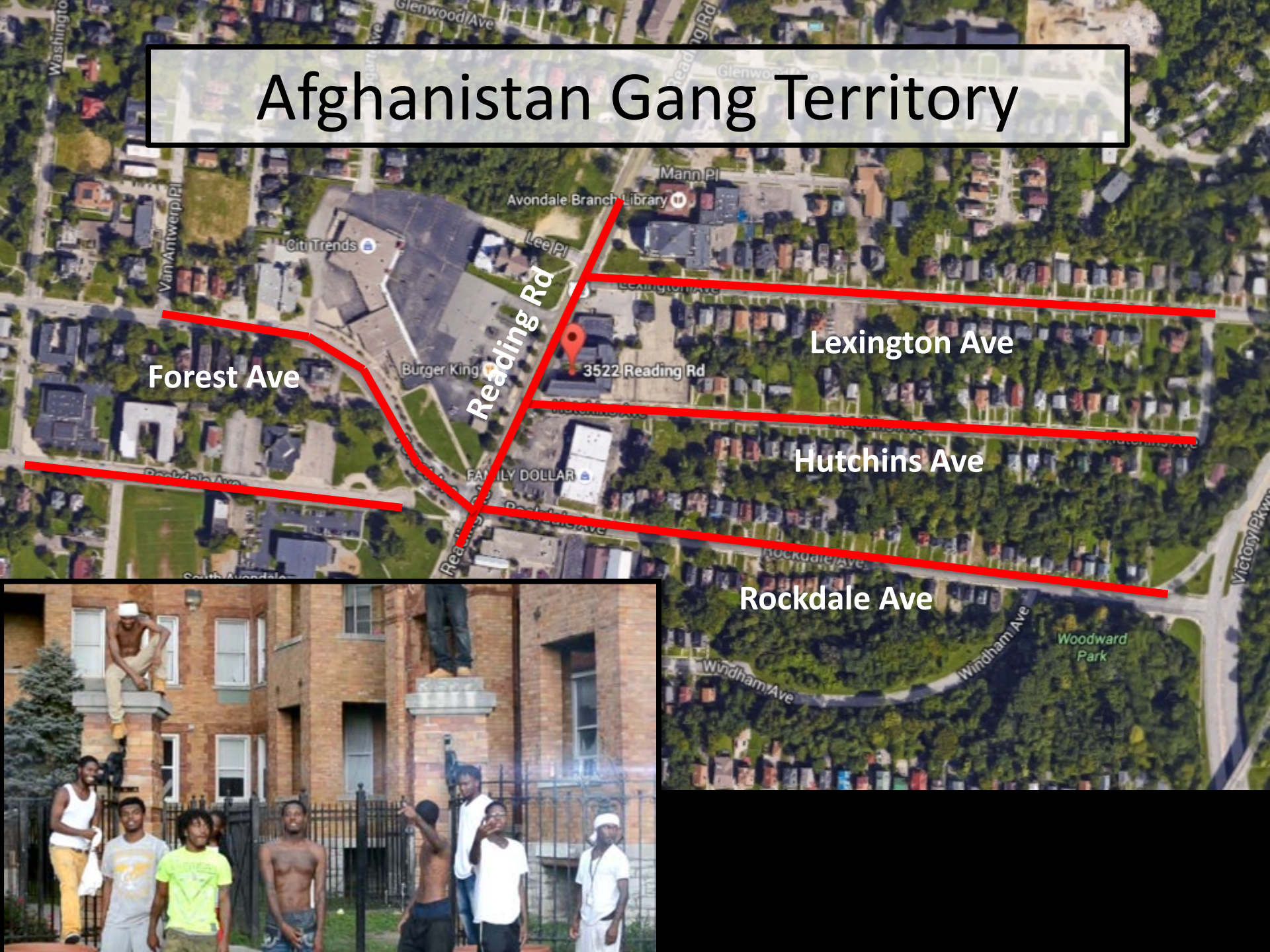
Sentiment

positive	6
neutral	31
negative	3

Top Keywords

didnt	50
time	41
good	38
violence	36
people	32
pick	30
cincinnati	29
players	28
year	25
work	24

Afghanistan Gang Territory



Forest Ave

Reading Rd

Lexington Ave

Hutchins Ave

Rockdale Ave

Woodward Park

Windham Ave

Windham Ave

Victory Pkwy

Avondale Branch Library

Mann Pl

Lee Pl

Citi Trends

Burger King

3522 Reading Rd

FAMILY DOLLAR

Rockdale Ave

South Avondale

Washington

Van Antwerp Pl

Washington

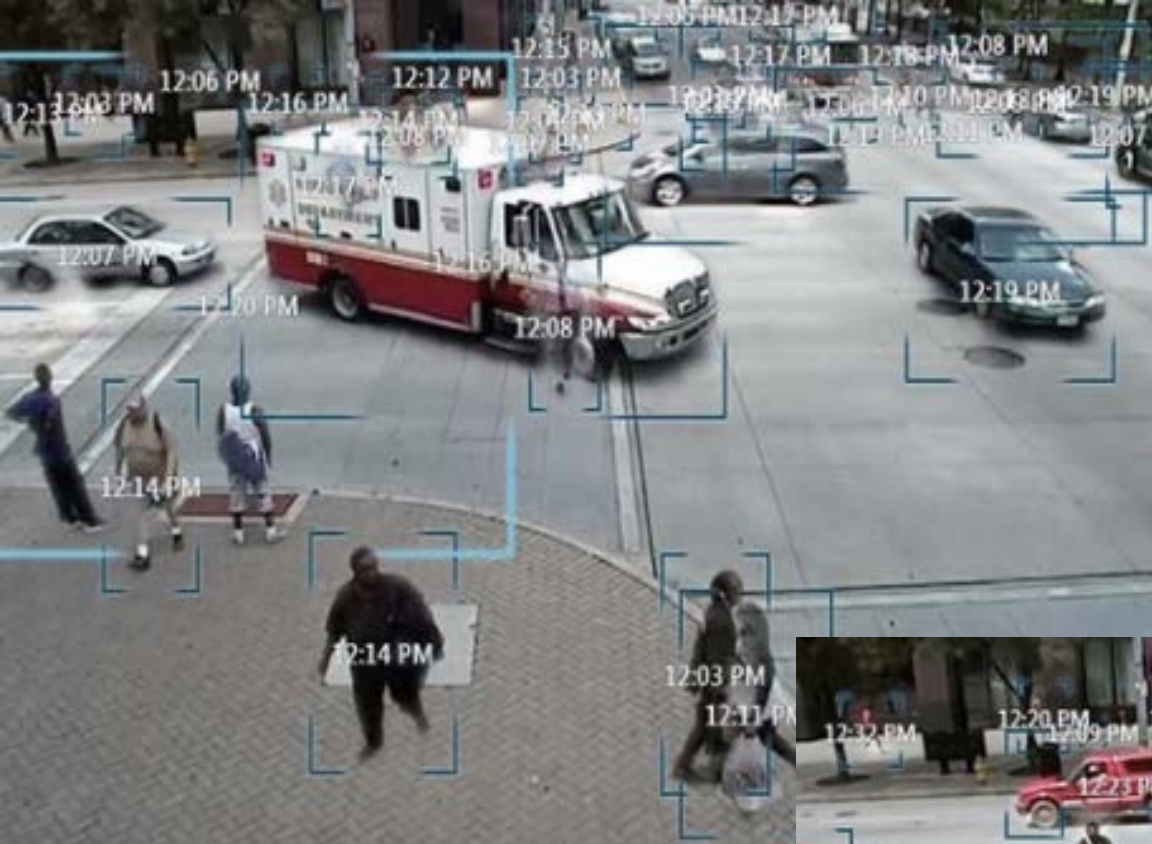
Glenwood Ave

19th Rd

Glenwood Ave

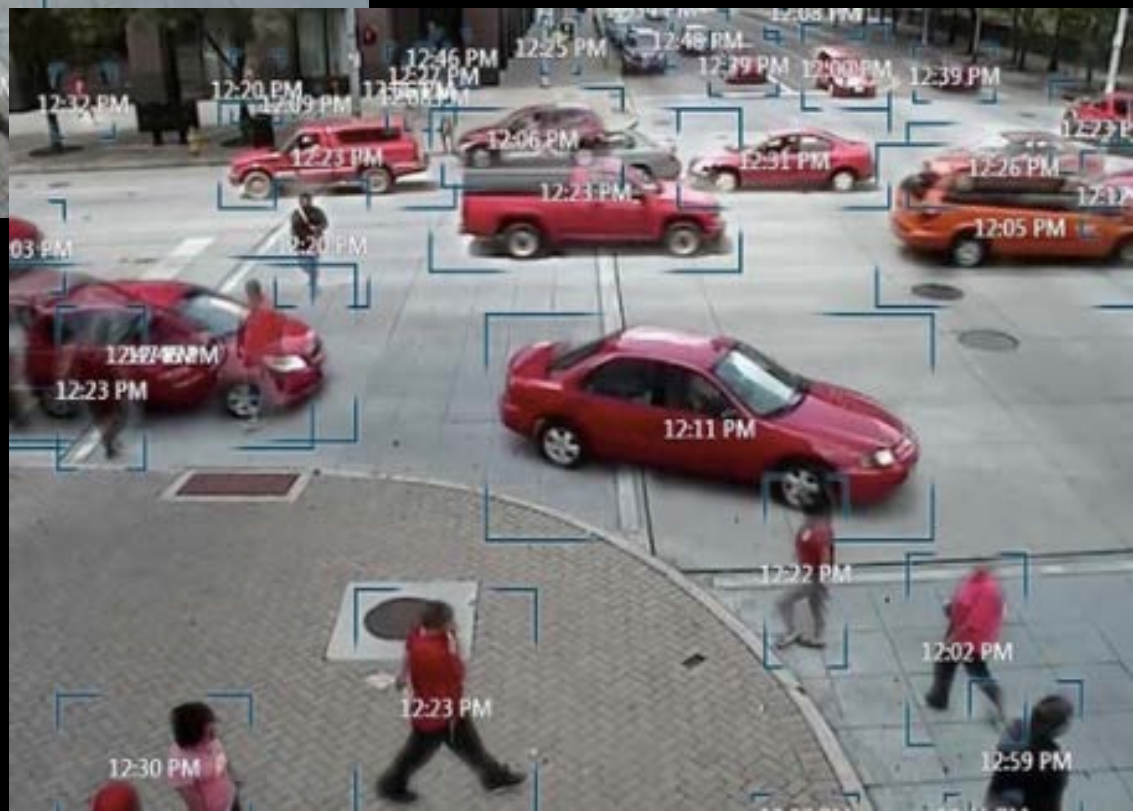


VIDEO FORENSICS



Condensed
Video Feeds

Filtered
Visuals





Emotion/Face API

Video Indexing

Text Analytics

Video/Image/Web Search

Questions

1. How are crime-places networked in Sweden?
2. How have new technologies changed “street” offenders’ activities? What investigation challenges/advantages do these technologies present?

Contact

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702-373-7828 (cell)
