



Community Support
Program

The Community Support Program

*Supporting Cities and Police Departments
to make Cities safer and more enjoyable*

Dr. Ross McNutt



Community Support Program Overview

- The Problem We Are Working To Address
- What is the Community Support Program
- WAMI Capability Overview
- Baltimore CSP Overview and Sample Cases
- Legal and Privacy Policy Considerations
- Potential Support and Steps Required to Proceed



The Problem

We Are Working To Address

Crime in our Major Cities

Lack of Trust Between Community and Police

Potential Police Misconduct



News / Maryland / I

Deadliest year in Baltimore history ends with 344 homicides

CBS NEWS - December 29, 2015, 1:53 PM

Bloody end of 2015 sees record murder rate in Baltimore



PHOTO GALLERY

From this article



Baltimore detectives the suspected killer of Cannaday

DEC. 30, 2015



Baltimore homicides

JUL. 1, 2014

Related



Chasing a killer: Inside Baltimore homicide investigation



Baltimore Mayor Stephanie Rawlings-Blake swears in Kevin Davis as interim commissioner in wake of Freddie Gray's death while in custody of the Baltimore Police Department. CBSNEWS.COM

91 Comments / f Share / Tweet / Stumble / Email

BALTIMORE -- Baltimore's murder rate is the highest per capita in the city's history -- and the past few days have been bloody, reports CBS Baltimore.



By Kevin Rector - Contact Reporter The Baltimore Sun



Will Baltimore Die?

The beleaguered city's mayor will need grit and brains to save it.

Myron Majumdar May 2, 2017 Cities, Public safety

With nearly a killing a day so far this year in her shrinking city of just over 600,000, it's no wonder that Baltimore mayor Catherine Pugh has cried out, "Murder is out of control" -- even before the summer homicide season has begun. She has begged the FBI to help her contain the mayhem, now running at

News / Maryland / Balt

Per capita, Baltimore reaches its highest ever homicide rate

By Kevin Rector and Justin Fenton - Contact Reporters The Baltimore Sun

Baltimore City
2015

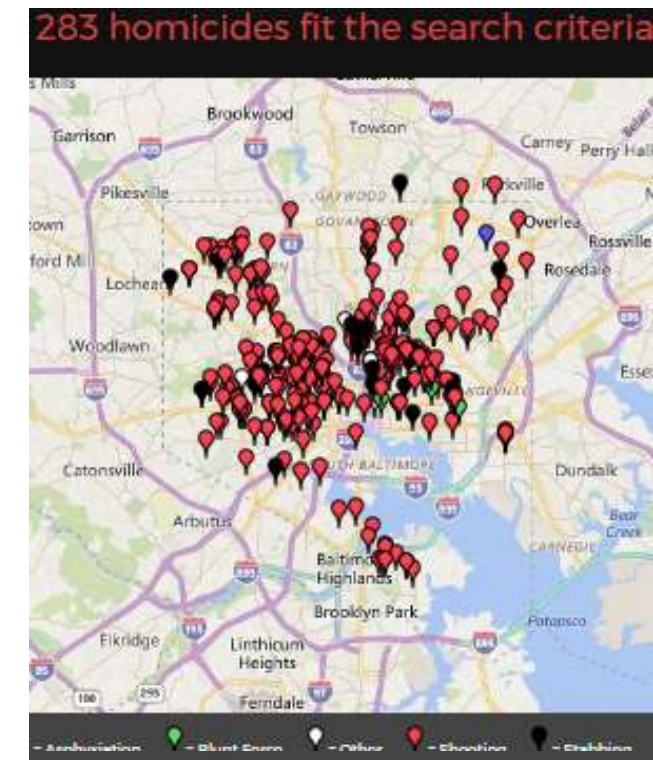
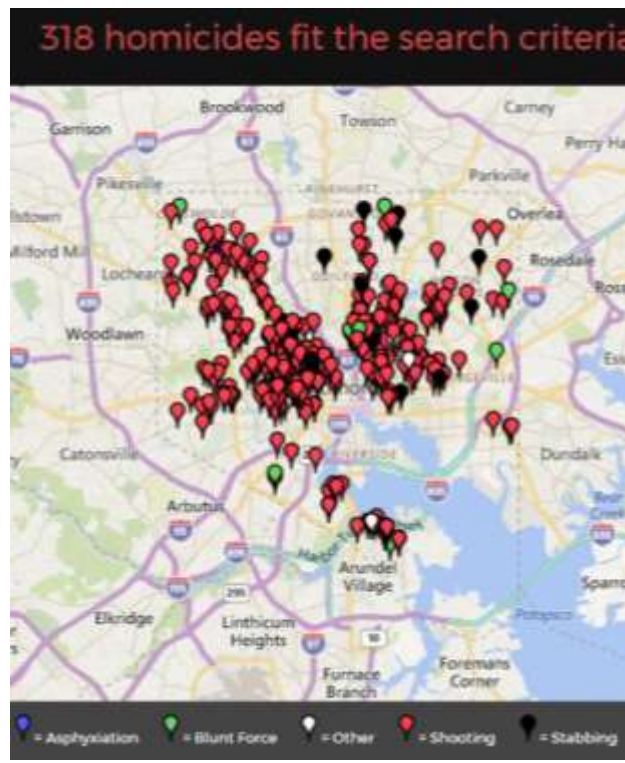
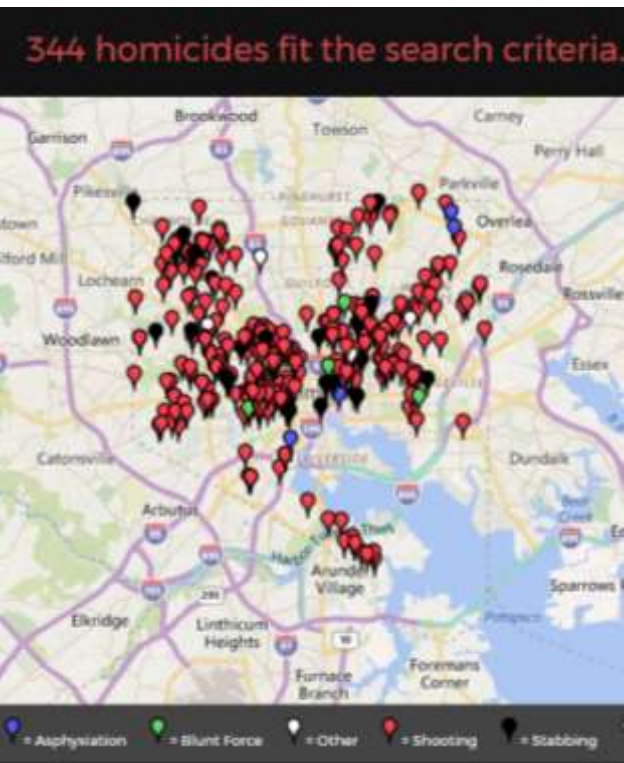
344 Homicides

Baltimore Ci
2016

318 Homicid

Baltimore City
2017 to Date

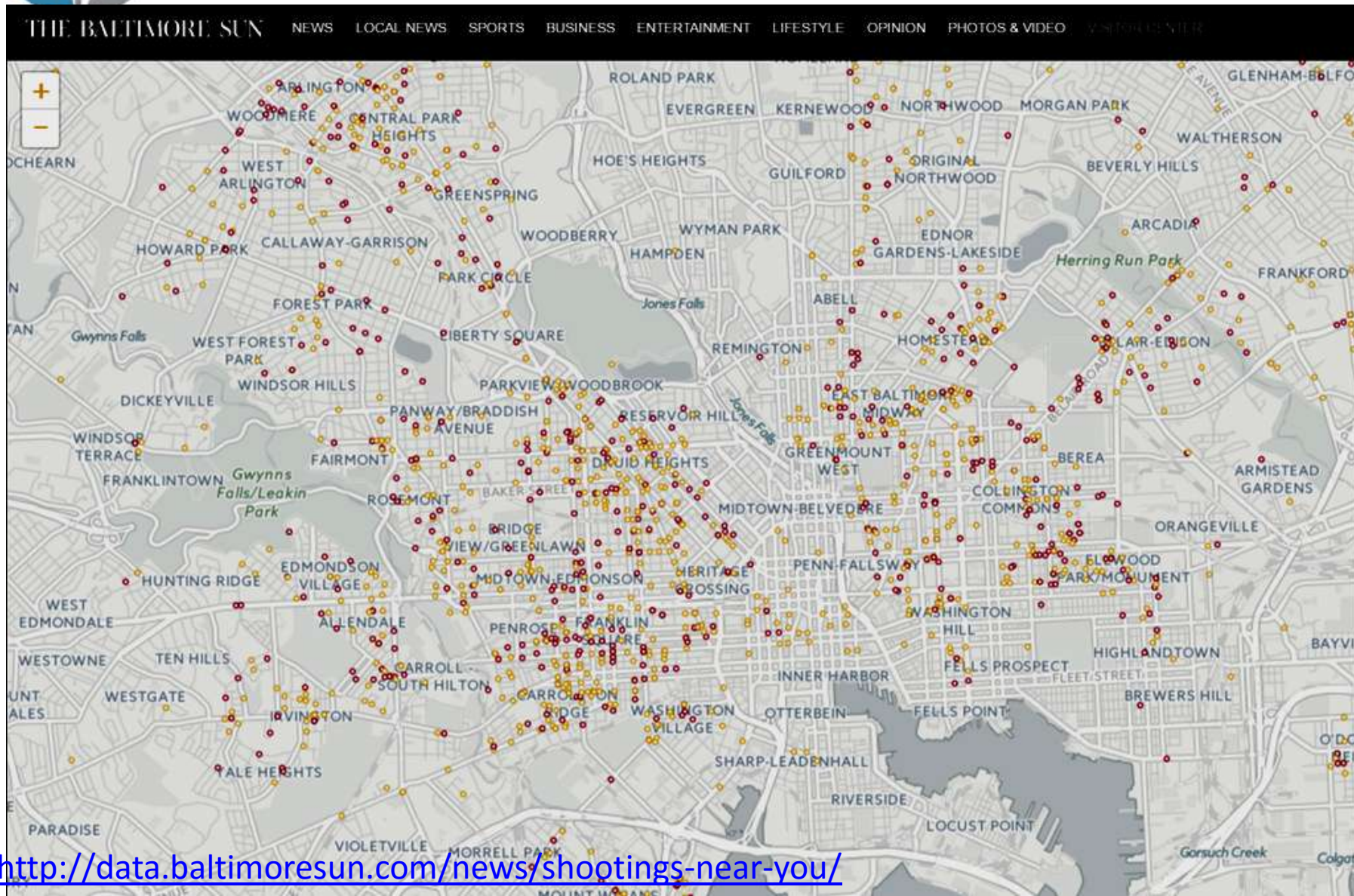
129-244-328 Homicides



<http://data.baltimoresun.com/news/police/homicides>



Baltimore Shootings





The Numbers Behind Baltimore's Record Year in Homicides 2015

55 -- The per-capita murder rate, a city record, for every 100,000 residents
2nd highest in nation, 3 times Chicago's murder rate

344 -- The number of Baltimore homicides in 2015, a 63 percent increase over 2014

318 – The number of Baltimore homicides in 2016, no let up.

77 – The number of Baltimore homicides in 2017 to data (March)

72 percent -- The increase in nonfatal shootings in 2015

93 percent -- The share of homicide victims in Baltimore who were black

30.5 percent -- The percentage of homicides solved by police 2015

87 percent -- The share of 2015 homicides committed with firearms

45 homicides in July 2015 -- Baltimore's deadliest months in decades



Baltimore Homicide Clearance Rate

- While homicides are up 60%, from 211 in 2014 to 344 in 2015, 318 in 2016
- At the end of 2015, non-fatal shootings were up by 72% and homicides were at the city's highest per capita in its history.
- Case Clearance rates have fallen from 70% to 30%





Cost of Crime - Baltimore

<http://www.rand.org/jie/centers/quality-policing/cost-of-crime.html>

The cost of crime is significant. The national Institute of Justice has sponsored many studies on the cost of crime to a community. Using the results of one of these studies conducted by the Rand Center on Quality Policing the cost of crime in Baltimore is calculated to be **\$3.8B per year**. This is calculated by multiplying the number of crimes in a given category by the cost of crime from the study.

Cost of Crime Baltimore				
Cost of Baltimore Violent Crime				
	Type	Number	Cost per crime	Total Cost
	Murder	344	\$8,649,215	\$2,975,329,960
	Rape	347	\$217,866	\$75,599,502
	Robbery	3709	\$67,277	\$249,530,393
	Aggravated Assault	4232	\$87,238	\$369,191,216
	Total Violent Crime			\$3,669,651,071
Cost of Baltimore Property Crime				
	Burglary	6973	\$13,096	\$91,318,408
	Larceny	18,431	\$2,139	\$39,423,909
	Auto Theft	4529	\$9,079	\$41,118,791
	Total Property Crime			\$171,861,108

Total Cost of Part 1 Crimes

\$3,841,512,179

Baltimore Population 622,793 Cost per Person

\$6,168 per year per person

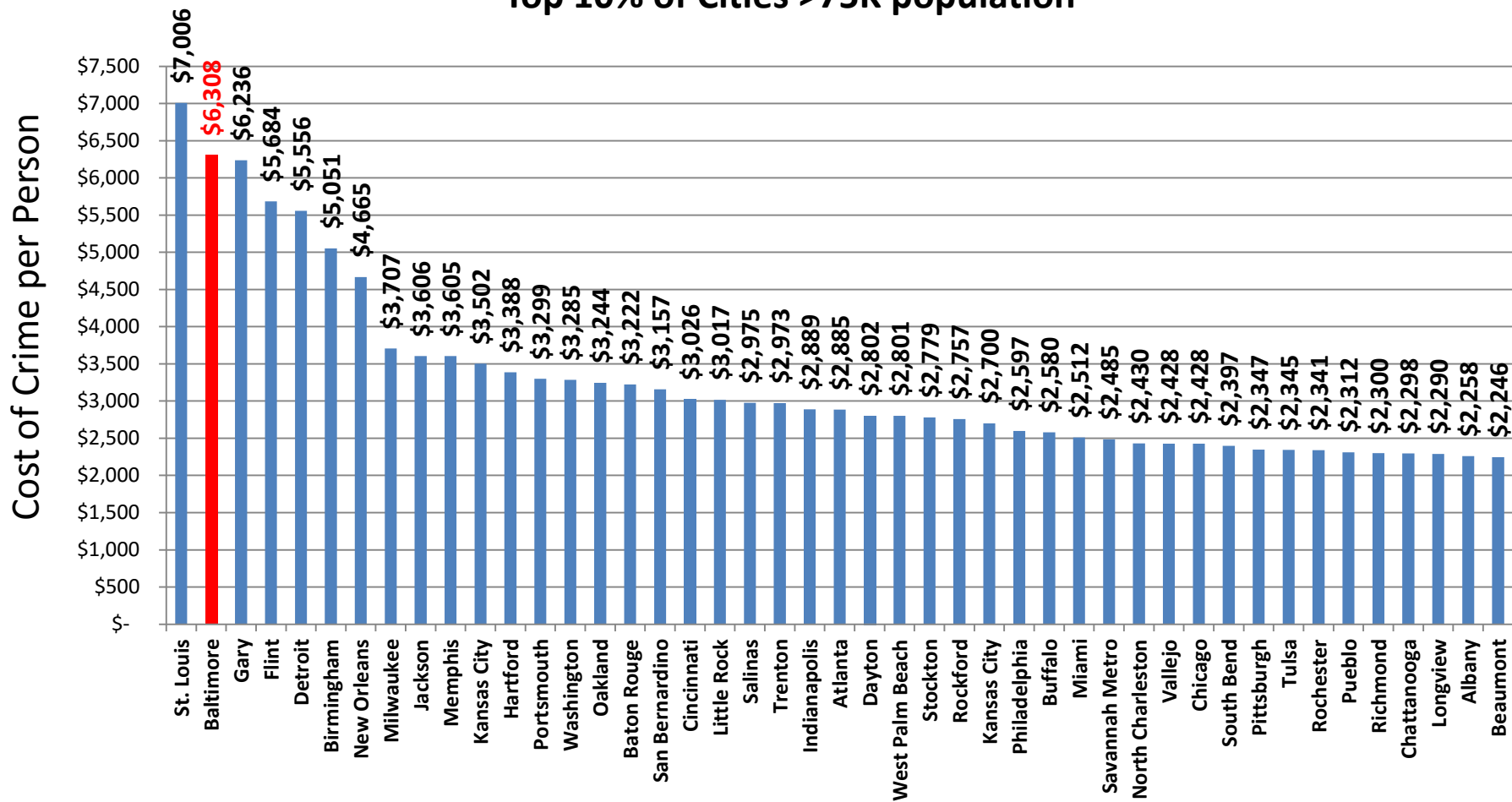
Even a 10% reduction in crime would result in \$384M economic impact on the city.



Cost of Crime Per Person

Baltimore \$6,308 per person

Cost of Crime Per Person
Top 10% of Cities >75K population





Mayor Catherine Pugh speaks out on spike in crime

- Baltimore mayor Catherine Pugh has cried out, “Murder is out of control”—even before the summer homicide season has begun. CJ 5/8/17
- Strategy we have in place now is not working. Looking for original solutions.
- “Anytime feel comfortable in the daylight to walk up and shoot somebody in their head that’s like slaying people. That says to me you don’t value life in our city. I value every single life of every individual in Baltimore,”
- Now Pugh is calling for action, saying violent acts like this will not stand.
- I ran on a platform of bringing the city together and moving the city forward.





Provides Unbiased Witness of Potential Police Misconduct

9 Baltimore Police Officers indicted robbing people

DOJ Report shows mistreatment of Citizens

Baltimore Police Caught Planting Evidence on Body Cameras

Freddie Grey – What actually happened? Rough Ride?

- CSP provides unbiased information as to what happened
 - Provided information in 2 officer involved shootings
- Can be used to verify officers statements
 - Has been used by Public Defender in Baltimore to challenge officers statement
- Provide all information to defense attorneys
- CSP provides additional **privileged analysis and information to defense attorneys**



Community Support Program

- Full subscription-based turn-key service for community support and major crime investigations using **wide area motion imagery**
- *Provides information to law enforcement and communities to help solve what may have often been **unsolvable crimes**.*
- CSP Provides all equipment and manpower required
- Output is
 - Major crimes investigation briefings
 - Support of ongoing investigations
 - Consistent with agreed to Privacy Policy
 - Prosecution testimony
 - Support for public disclosure events
 - Support for major events
- Available to communities through GSA Schedule 84



The Community Support Program

Goals and Objectives

Solving and Deterring Crime to make communities safer and more enjoyable, and more prosperous



CSP Objectives:

Impact Investigations and Crime

- Provides Airborne Persistent Witness of Major Crimes
 - Identify potential suspects, witnesses, and accomplices at crime scenes
 - Provided an overview of events at crime scene
 - Provided addresses of suspects and others
 - Track suspects past ground based cameras for identification
- Use Provided Information to Solve Otherwise Unsolvable Crimes
 - 20-30% of murders cases currently solved, 10% of shootings
 - Provide justice to victims and families of major crimes
 - Reduce desire for revenge killings by providing justice for victims
- Remove of the Repeat Offenders Earlier in Criminal Career
 - Reduces future crime – Provides early course correction to potential offenders
- Dramatically Increase Crime Deterrence in Supported Cities
 - **A crime deterred is always better than a crime solved**



Deterrence Effect

- **Most Important Aspects of Deterrence**

- 1st – Perceived likelihood of getting caught
 - Current case clearance rate has dropped to 30% for Homicides and lower for shootings
- 2nd – Perceived likelihood of getting convicted
 - Conviction rate much lower than case clearance rate
- 3rd – Amount of Punishment
 - Federal Crimes/County are seen as more significant punishment

- **Best Ways to Increase Deterrence**

- Increase Case Clearance Rate – Provide critical leads to investigators
- Increase Conviction Rate – Support public trials and convictions of those caught
- Insure people know the systems exists its capabilities and that is operating in the area

- **Ways to Amplify Deterrent Effect**

- Increase the **perceived** impact on case clearance and conviction rates
- Increased public knowledge of capability
 - Brief at risk youth and people of the systems and its capability
- Publicize high profile cases results
- Support in-depth news media stories

A crime deterred is always better than a crime solved



Increased Law Enforcement Accountability

The Community Support Program

- Acts as an **impartial observer** and recorder of activity associated with law enforcement personnel
- Provides **neutral video based evidence of the facts** at a crime scene and actions of law enforcement before and after an event
- Because its use is known, CSP provides a **deterrent effect to improper behavior** by law enforcement personnel
- Defense team support analysis can and has been used by defense legal teams to **analyze the accuracy of law enforcement statements and testimony**
- Support of defense efforts not limited to reported major crimes but require a release agreement and must abide by CSP privacy policies
- Support to defense efforts use a separate team of analysts are **defense privileged information** and are not shared with law enforcement or the prosecution.

**CSP supports community and defense team efforts and can
Provide Video-based evidence and privileged confidential analysis**



Community Support Program Goals

- Help supported cities reduce the crime rate by **20% to 30% in the first full year of operation.**
 - By solving typically unsolvable crimes
 - By catching the small percentage of people who are driving most crime
 - By increased deterrence through higher case closure and conviction rates
 - By increased deterrence through public awareness of program
 - By pushing crime out of the supported city
- Demonstrate the impact and effectiveness of our systems in support of a large cities.
- Help our customers be seen as a **city successfully turning around and reducing recent troubling crime trends**
- Provide **employment opportunities to local youth** for job training and experience to allow them to enter a very profitable careers in the area.



Benefits of 20%-30% Crime Reduction

- **70 - 105 People Saved (Not Murdered)**
- **920 to 1480 fewer shooting and aggravated assaults**
- **\$760 Million - \$1.14 Billion** saved economic impact
- Positive city publicity from significant drop in crime
- Increased attractiveness of city and community to business
 - More Jobs - more opportunities
- Increased home prices (Decreased crime discount to property values)
 - Increased city tax revenue due to increased house values
- Local jobs program with strong career path
 - Allows Baltimoreans a path to 20,000 high paying local NSA/DoD intel analyst jobs

**A safer, more enjoyable, and prosperous
community to live, work, play and raise families**



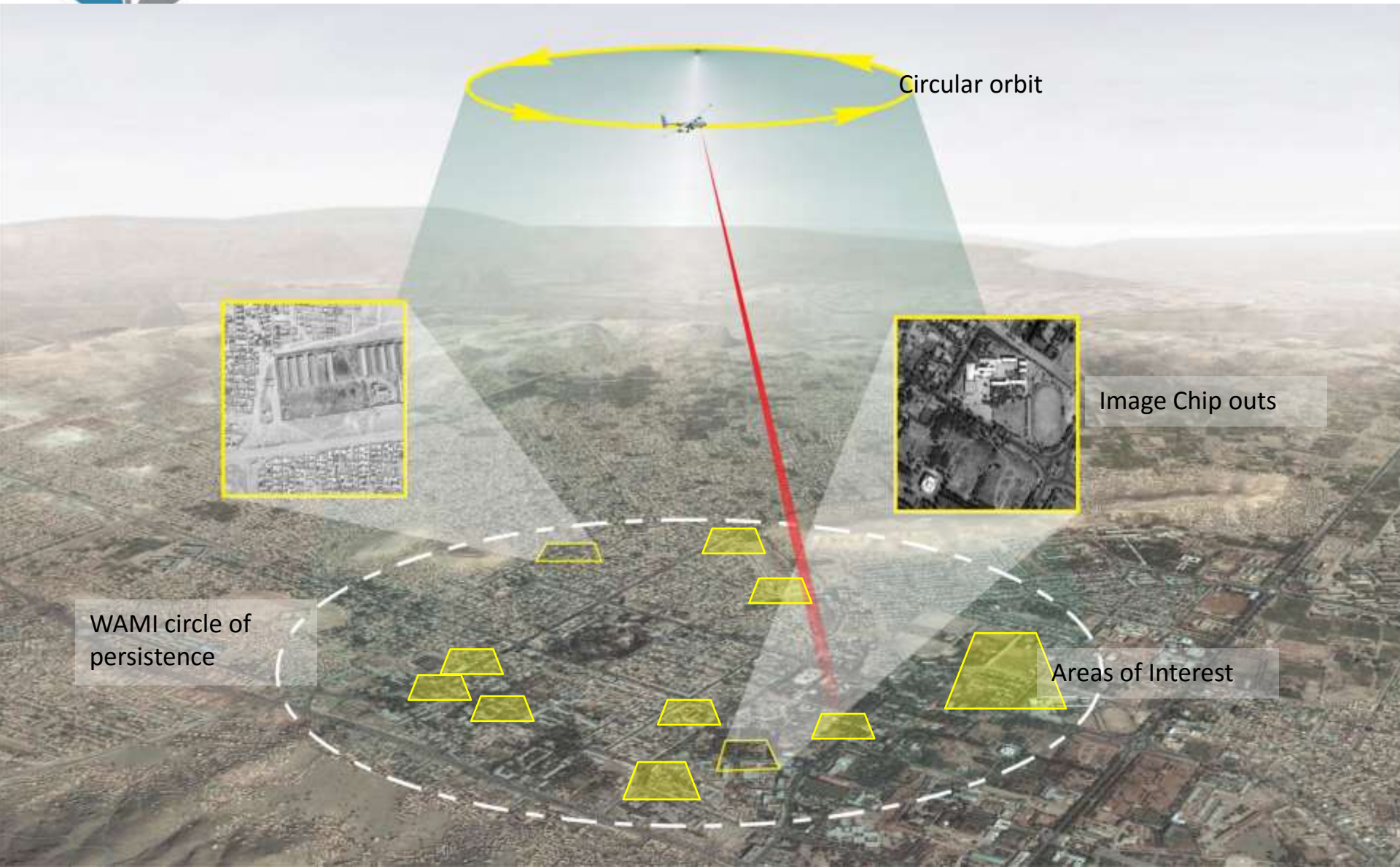
The Technology Behind the Community Support Program

Wide Area Motion Imagery



What is Wide Area Motion Imagery?

Continuous Imagery of city-size areas



Circular orbit

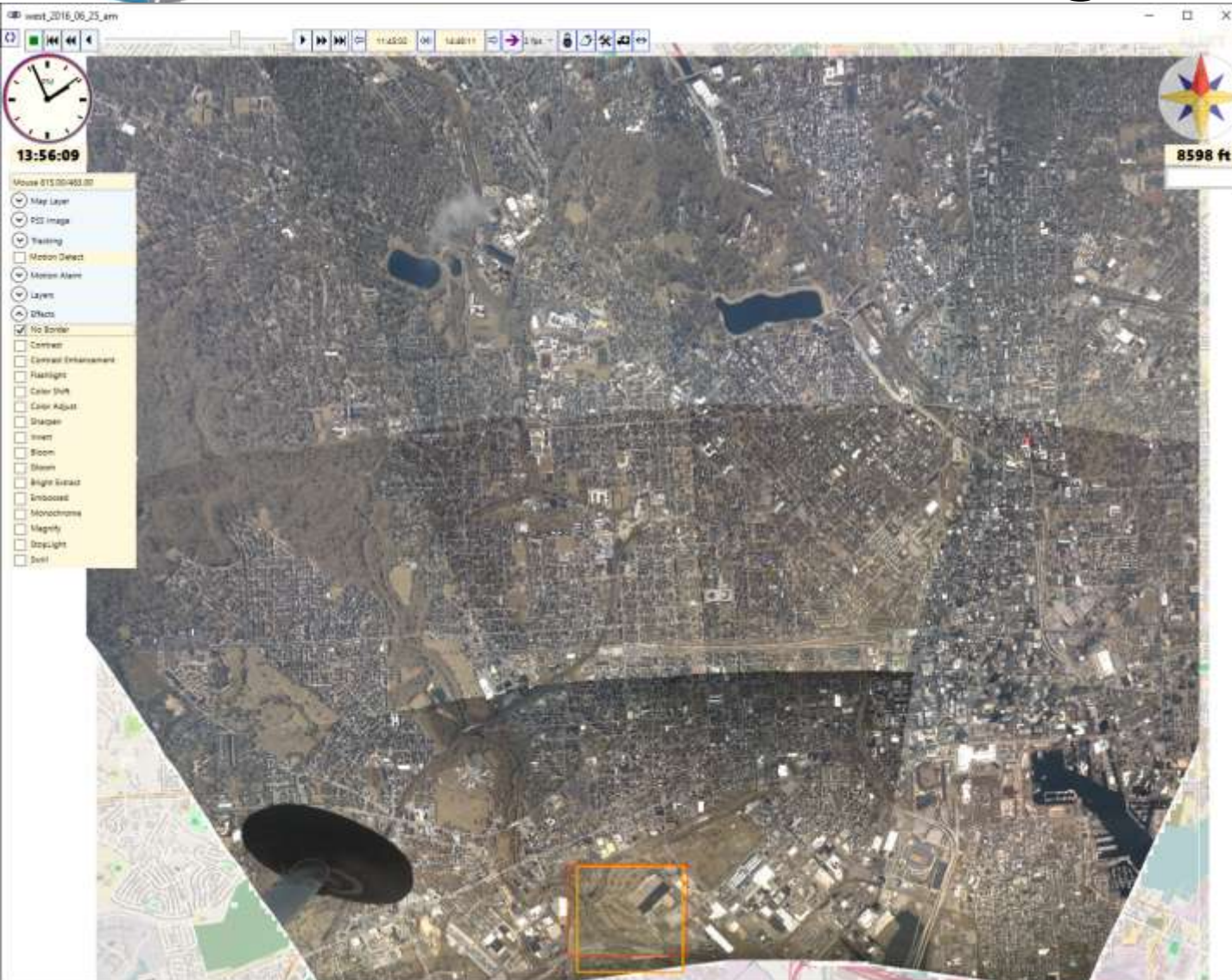
Image Chip outs

WAMI circle of persistence

Areas of Interest

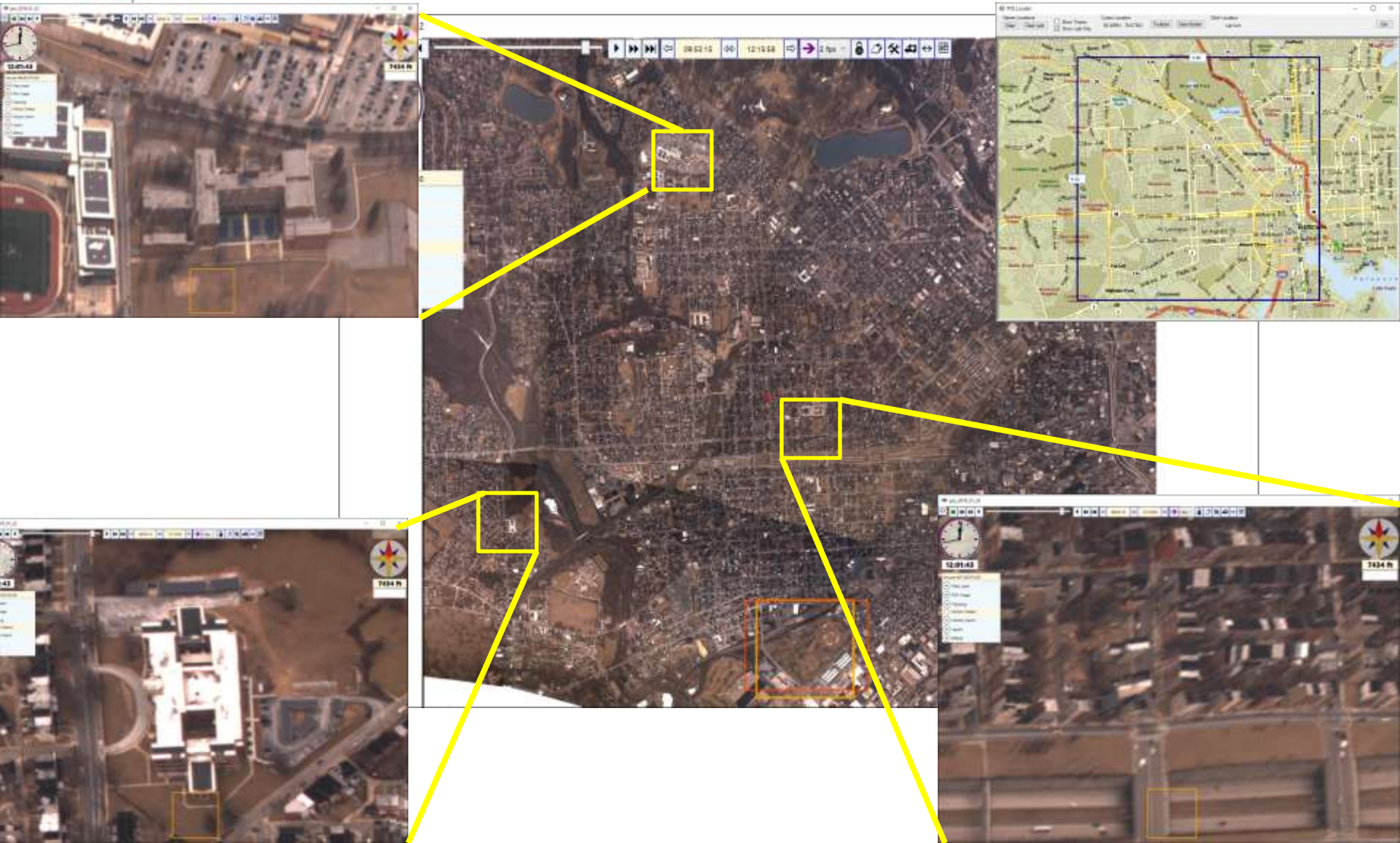


West Baltimore Area of Coverage





Wide Area Motion Imagery





Samples of Pixels

Comparison between PSS Wide area motion imagery
and Typical Security cameras

Typical Security Camera

Standard TV	640 x 480	0.31 MP
HD TV 720P	1280 x 720	0.92 MP
HD 1080	1920 x 1080	2.07 MP
Digital Cinema 2K	2048 x 1080	2.21 MP
Imax Digital Cinema 4k	4096 x 2160	8.84 MP

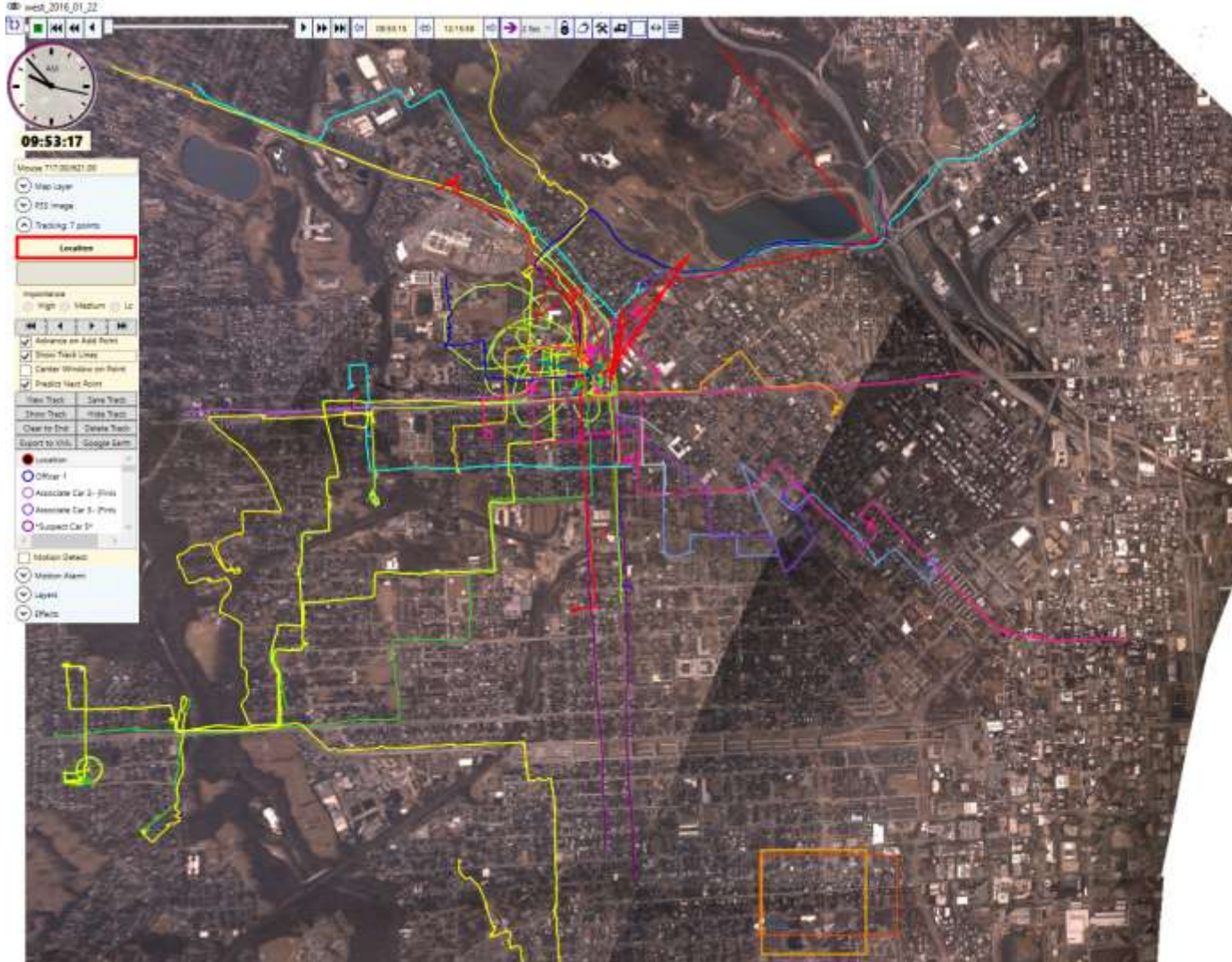
Wide Area Surveillance Systems

PSS Hawkeye B&W	99 MP
<u><i>PSS Hawkeye II Color</i></u>	<u><i>192 MP</i></u>

Real-time processing and downlink makes imagery available to analysts on the ground in 3-5 seconds



Observed Event Example: Multiple Vehicles Tracked from a Single Shooting



Multiple vehicles tracked from and around crime scene

Victim, suspects and potential witnesses tracked

Multiple beginning and end destination identified

Multiple vehicles tracked past CitiWatch cameras



Baltimore System Integration

Wide Area Motion Imagery amplifies the effectiveness of the following systems

- Police Dispatch and 911 - CAD
- CitiWatch Ground Based Cameras

Working to integrate

- MTA Bus Cameras
- Automatic Gun Shot Detection
- Automatic License Plate Readers

Incident ID	Location	Time	Status	Priority	Category	Officer	Vehicle	Notes
1001	123 Main St	5/2/2006 10:02:19 AM	Open	High	Accident	Officer A	Red Car	...
1002	456 Elm St	5/2/2006 10:02:07 AM	Open	High	Accident	Officer B	Blue Car	...
1003	789 Oak St	5/2/2006 10:02:15 AM	Open	High	Accident	Officer C	Black Car	...
1004	101 Pine St	5/2/2006 10:02:22 AM	Open	High	Accident	Officer D	White Car	...
1005	202 Maple St	5/2/2006 10:02:28 AM	Open	High	Accident	Officer E	Yellow Car	...





CitiWatch Camera Integration

pos_2016_01_22

10:14:37

Mouse 748.00x520.00

Map Layer
RSS Image
Tracking: 628 points

Suspect Car 1

Importance
High Medium Low

Advance on Add Point
Show Track Lines
Center Window on Point
Predict Next Point

New Track Save Track
Zoom Track Hide Track
Clear to End Delete Track
Export to KML Google Earth

Suspect Car 1
Suspect Car 2
Suspect Car 3
Suspect Car 4
Suspect Car 5

Motion Detect
Motion Alarm
Layers

Cameras
Shapes
Load SHP Files

Geocpy
Off/On

Track Report

File: pos_ev01_1020.kml
Event: Shooting (McKean/Walbrook)
Track: *Suspect Car 1*
Notes: White vehicle that is always travelling with Suspect 2.

Time	Level	Trackpoint Comment
0933:15	Low	[First] First image.
0933:47	Low	Location 1: Suspect Cars 1 and 2 Arrive at 1745 Mulberry St.
1001:26	Low	Suspect Cars 1 and 2 Depart 1745 Mulberry St.
1002:02	Low	609 Edmonson Ave and Alendale St.
1003:36	Low	Suspect Cars 1 and 2 Arrive at Woodridge Rd and Mt Holy St Location.
1005:09	Low	Location 2: 621 Mt Holy Street
1008:10	Low	Suspect Cars 1 and 2 Depart Woodridge and Mt Holy St.
1016:23	Low	Location 3: Suspect Cars 1 and 2 Arrive at Walbrook Street and park.
1016:40	Low	3 People get out of Suspect Cars 1 and 2 and walk into 1816 Walbrook Ave.
1016:55	Low	Suspects appear to enter second house from corner at 10:16:55. In View of Ground Camera 722.
1026:11	Low	Red car pulls up fts of people around.
1027:19	Low	Red car pulls back up next to white cars.
1038:49	Low	Red car pulls up next to white cars.
1042:27	Low	Black Car leaves parking spot on McKean.
1045:19	Low	Large group of people walk from McKean onto Walbrook, Camera 722.
1050:04	Low	Suspect Cars 1 and 2 Depart Walbrook parking spot.
1050:14	Low	T22: N Monroe St and Walbrook Ave
1050:28	Low	T12: N Payton St and Ridgehill Ave
1051:15	Low	Location 4: Suspect Cars 1 and 2 Arrive at McKean Parking and park together.
1055:24	Low	Other Silver and White Car have meeting that block south on McKean.
1108:30	Low	Other Silver car drops off person at north end of block.
1108:39	Low	Suspect Cars 1 and 2 stay parked on McKean until shooting when they depart.
1157:40	Low	Person Gets into Car
1200:52	Low	Car at Shooting scene at 1200:52.
1200:53	Low	Suspect Car 1 Departs scene after shooting at 1200:53.
1201:46	Low	Suspect Car 1 pulls over for a few seconds before going around back to reconnect with Suspect Car 2.
1202:12	Low	721: W North Ave and N Monroe St
1202:36	Low	T17: N Payton St and Walbrook Ave
1203:44	Low	Suspect Car 1 pulls beside Suspect Car 2.
1204:13	Low	Suspect Car 1 Departs shooting location with Suspect Car 2.
1204:33	Low	Suspect stops on side of road for a minute; Officer 2 passes him while parked.
1205:32	Low	Suspect departs at same time as suspect 2 from another location indicating they are in close communication.
1205:52	Low	T21: W North Ave and N Monroe St
1206:03	Low	T15: W North Ave and N Payton St
1206:11	Low	T12: W North Ave and N Payton St
1206:20	Low	T09: W North Ave and N Siskinwood St
1206:26	Low	T37: W North Ave and Bentlows St
1206:41	Low	T06: W North Ave and Moreland Ave
1207:38	Low	W3: W North Ave and N Dukenand St
1208:03	Low	910: Baker St and N Dukenand St
1208:40	Low	916: Booningsdale Rd and Ellicott Driveway
1210:59	Low	918: Poplar Grove and Riggs Ave



CitiWatch Ground Camera Integration

White Infiniti In Camera Views

Camera 715: W North Ave – N Payson St
Suspect 1: White Infiniti 10:14:51



Camera 715 W North Ave – N Payson St
Suspect 1: White Infiniti 12:02:23



CSP Vehicle tracks with CitiWatch In Camera Views

CitiWatch Cameras

Time	Level	Comment
10:02:32	Low	929: Edmonson Ave and Allendale St.
10:05:09	Low	821 Mt Holly Street
10:14:52	Low	715: W North Ave and N Payson St
10:50:14	Low	722: N Monroe St and Wallbrook Ave
10:50:28	Low	718: N Payson St and Ridgehill Ave
12:02:12	Low	721: W North Ave and N Monroe St
12:02:23	Low	715: W North Ave and N Payson St
12:05:52	Low	721: W North Ave and N Monroe St
12:06:11	Low	712: W North Ave and N Pulaski St
12:06:20	Low	709: W North Ave and N Smallwood St
12:06:26	Low	737: W North Ave and Bentalou St
12:06:41	Low	706: W North Ave and Moreland Ave
12:07:38	Low	905: W North Ave and N Dukeland St
12:08:28	Low	910: Baker St and N Dukeland St
12:09:40	Low	916: Bloomingdale Rd and Ellicott Drwy
12:10:39	Low	918: Poplar Grove and Riggs Ave
12:11:07	Low	920: Poplar Grove St and W Lafayette Ave
12:11:34	Low	921: N Franklinton Rd and N Longwood St.



Example Investigation Briefing

Type of Product We Provide
Baltimore Case Example

Example Investigation

Murder #2 on
26 Aug 09 at 13:42

Report Number 1126146

Case Number 43132N



PSS Incident Locator

Ingests available police reports and dispatch information

Shows times and locations of flights

Shows summary of reported crimes within the coverage area

Searchable by location, time, crime, flight, and coverage area

Significantly speeds process to identify crimes in coverage area

Incident Locator

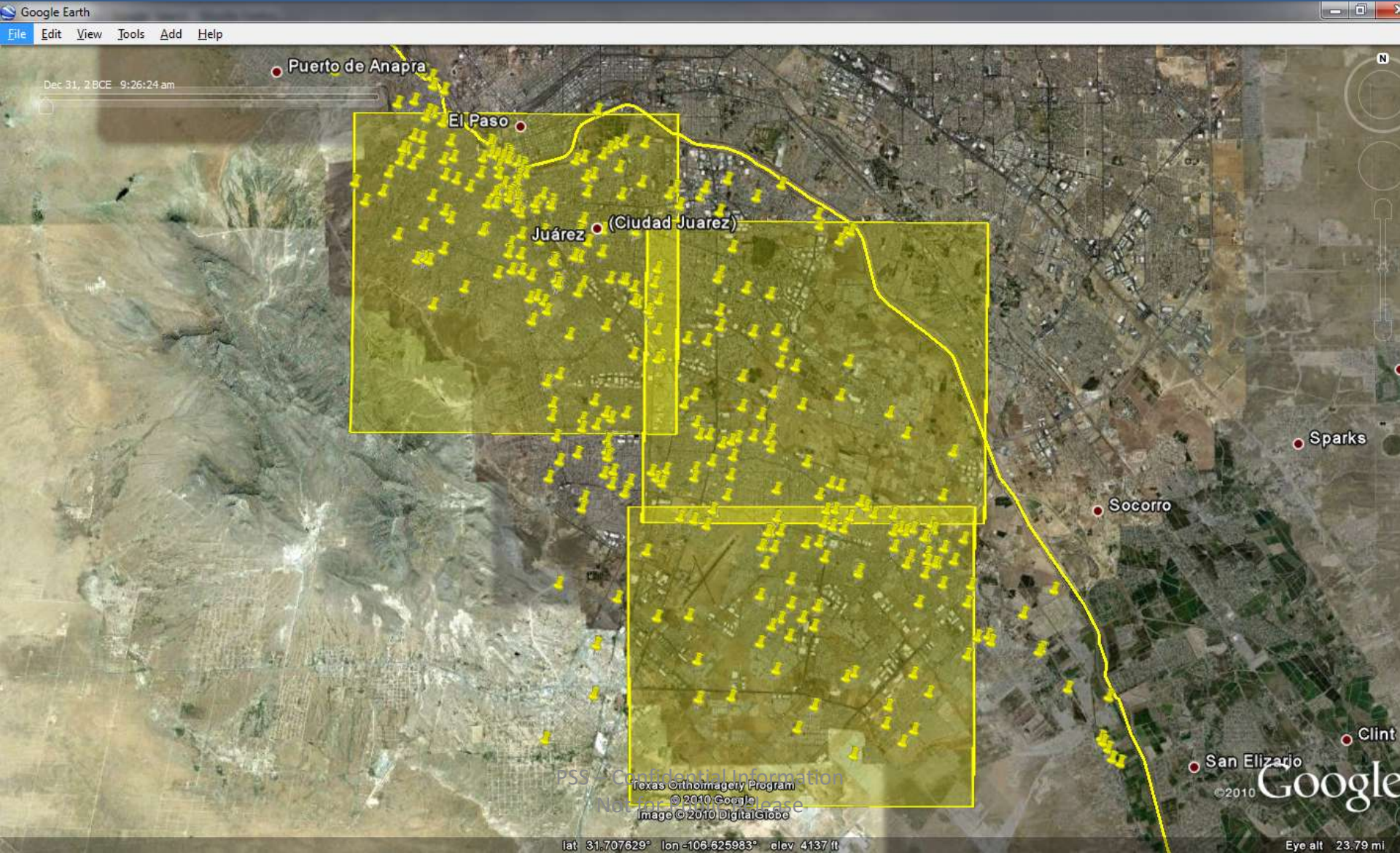
App	Area	Type	Date	Time	Location	Officer	Officer	Officer	Officer
ALPHA_11	ALPHA_11	ALPHA_11	2010-11-11	10:10:10	ALPHA_11	ALPHA_11	ALPHA_11	ALPHA_11	ALPHA_11
ALPHA_12	ALPHA_12	ALPHA_12	2010-11-11	10:10:10	ALPHA_12	ALPHA_12	ALPHA_12	ALPHA_12	ALPHA_12
ALPHA_13	ALPHA_13	ALPHA_13	2010-11-11	10:10:10	ALPHA_13	ALPHA_13	ALPHA_13	ALPHA_13	ALPHA_13
ALPHA_14	ALPHA_14	ALPHA_14	2010-11-11	10:10:10	ALPHA_14	ALPHA_14	ALPHA_14	ALPHA_14	ALPHA_14
ALPHA_15	ALPHA_15	ALPHA_15	2010-11-11	10:10:10	ALPHA_15	ALPHA_15	ALPHA_15	ALPHA_15	ALPHA_15
ALPHA_16	ALPHA_16	ALPHA_16	2010-11-11	10:10:10	ALPHA_16	ALPHA_16	ALPHA_16	ALPHA_16	ALPHA_16
ALPHA_17	ALPHA_17	ALPHA_17	2010-11-11	10:10:10	ALPHA_17	ALPHA_17	ALPHA_17	ALPHA_17	ALPHA_17
ALPHA_18	ALPHA_18	ALPHA_18	2010-11-11	10:10:10	ALPHA_18	ALPHA_18	ALPHA_18	ALPHA_18	ALPHA_18
ALPHA_19	ALPHA_19	ALPHA_19	2010-11-11	10:10:10	ALPHA_19	ALPHA_19	ALPHA_19	ALPHA_19	ALPHA_19
ALPHA_20	ALPHA_20	ALPHA_20	2010-11-11	10:10:10	ALPHA_20	ALPHA_20	ALPHA_20	ALPHA_20	ALPHA_20



Persistent Surveillance Systems

Area Coverage (With 3 month murder overlay)

Coverage Area 4 x 4 miles - 600,000 people within covered area





Murders Observed and Investigated in a 2 month Period

26 Aug 13:10 - Execution of Police Woman

26 Aug 13:45 - Cartel on Cartel Murder

31 Aug 1515 - Armed Robbery

1 Sept 15:20 - Body Dumping by Liberty Bridge

9 Sept 14:09 - Attempted Execution

9 Sept 14:55 - Execution of City Official

20 Sept 13:05 - Murder

24 Sept 16:15 - Execution on Street

25 Sept 14:22 - Execution on Street

29 Sept 14:47 - Murder

1 Oct 13:47 - Execution on Street

2 Oct 17:15 – Murder

10 Oct 1407 - Murder

15 Oct 14:22 - Murder

16 Oct 14:48 - Murder

21 Oct 11:56 - Double Murder

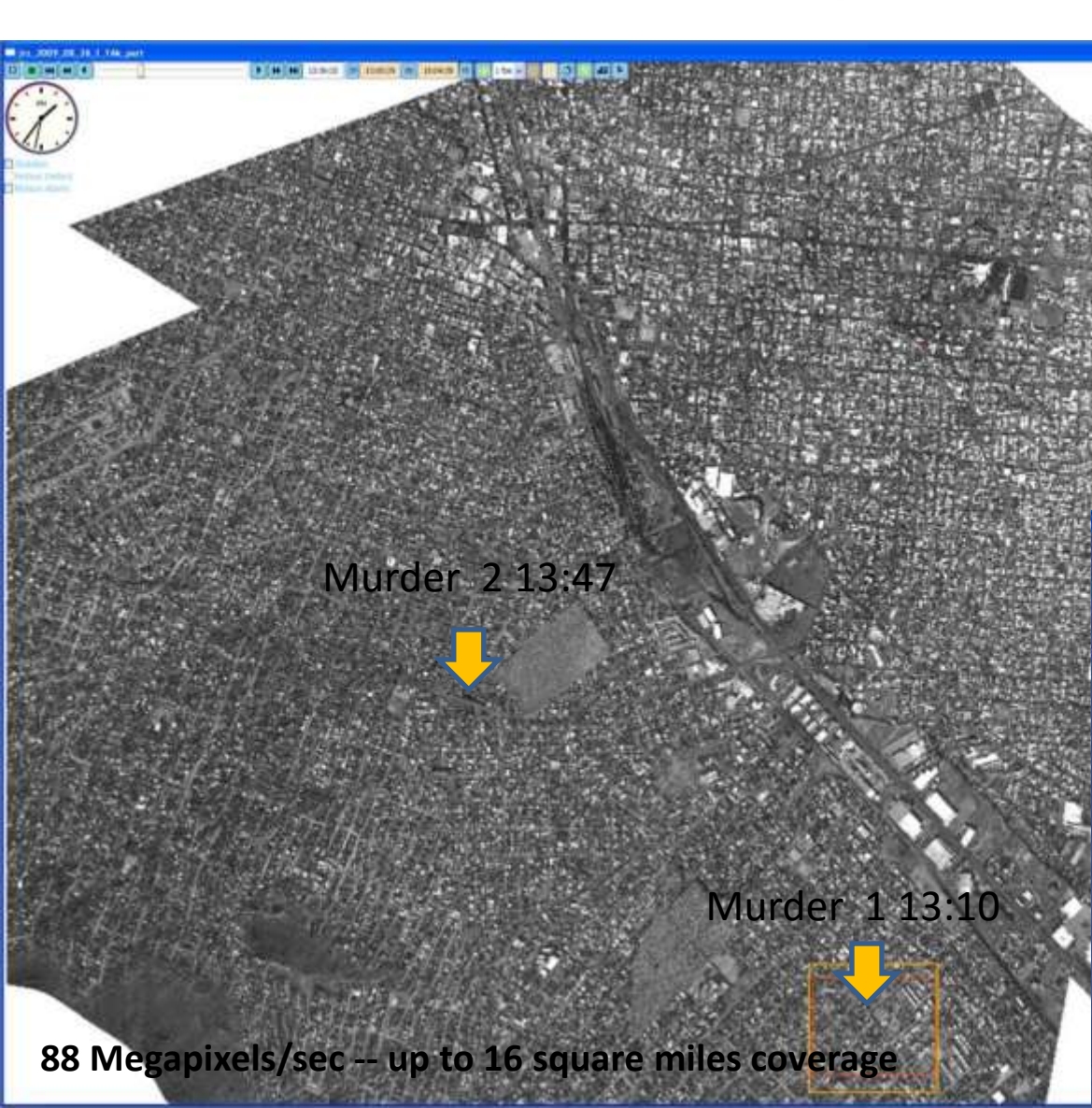
22 Oct 15:22 - Murder in Mall Parking Lot

PSS – Confidential Information
Not for Public Release

Many more events in data collected but we have not analyzed

We witnessed many more crimes than could be analyzed with available staff

Wide Area Surveillance Murder Examples



Images of the Murder



Images of the Murder



Images of the Murder





3 Cars Directly Involved in Murder

Murder Car 3

Murder Car 2

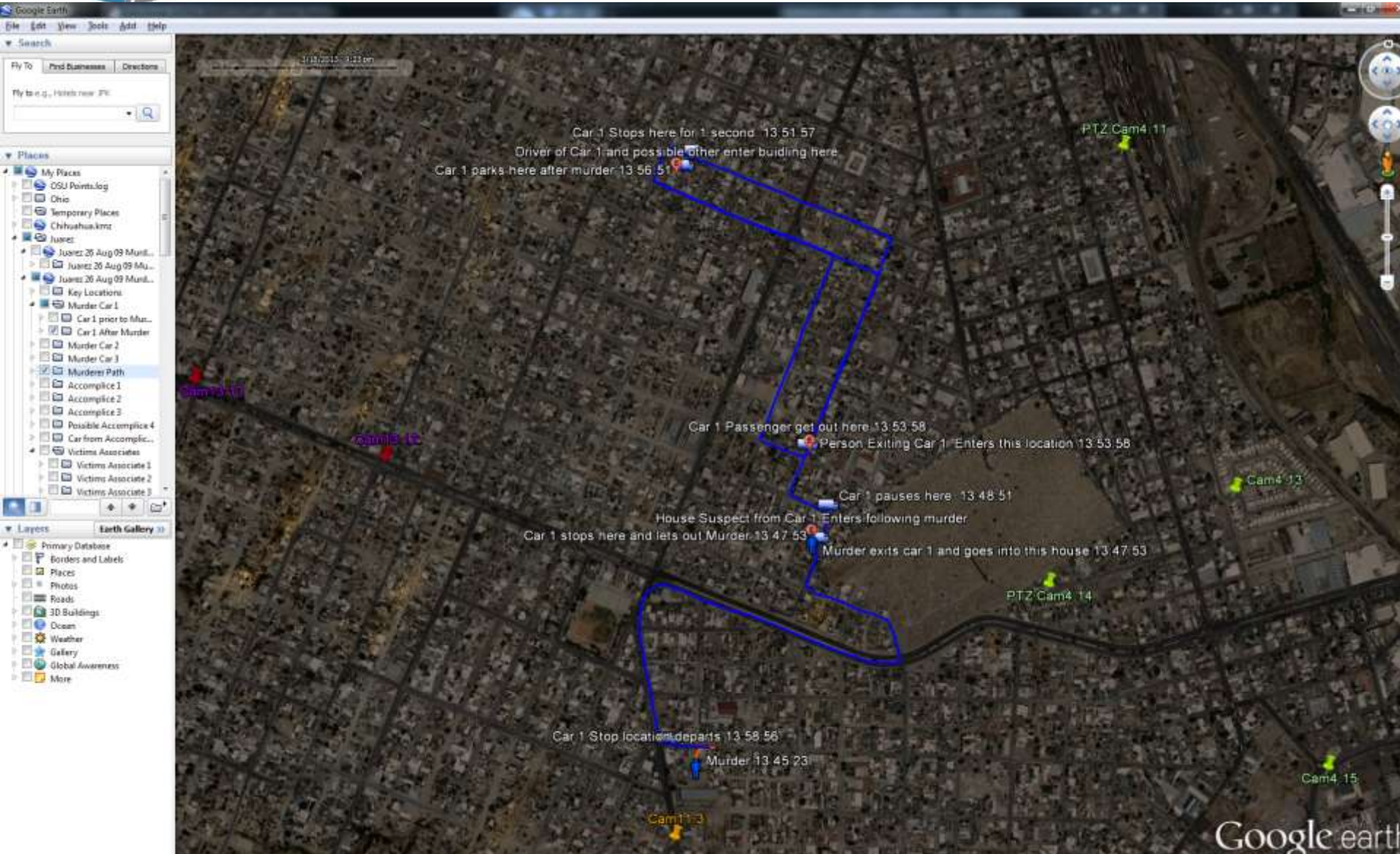
Murder Car 1
Murder Get into
this car after murder

Murder Location
and Murderer



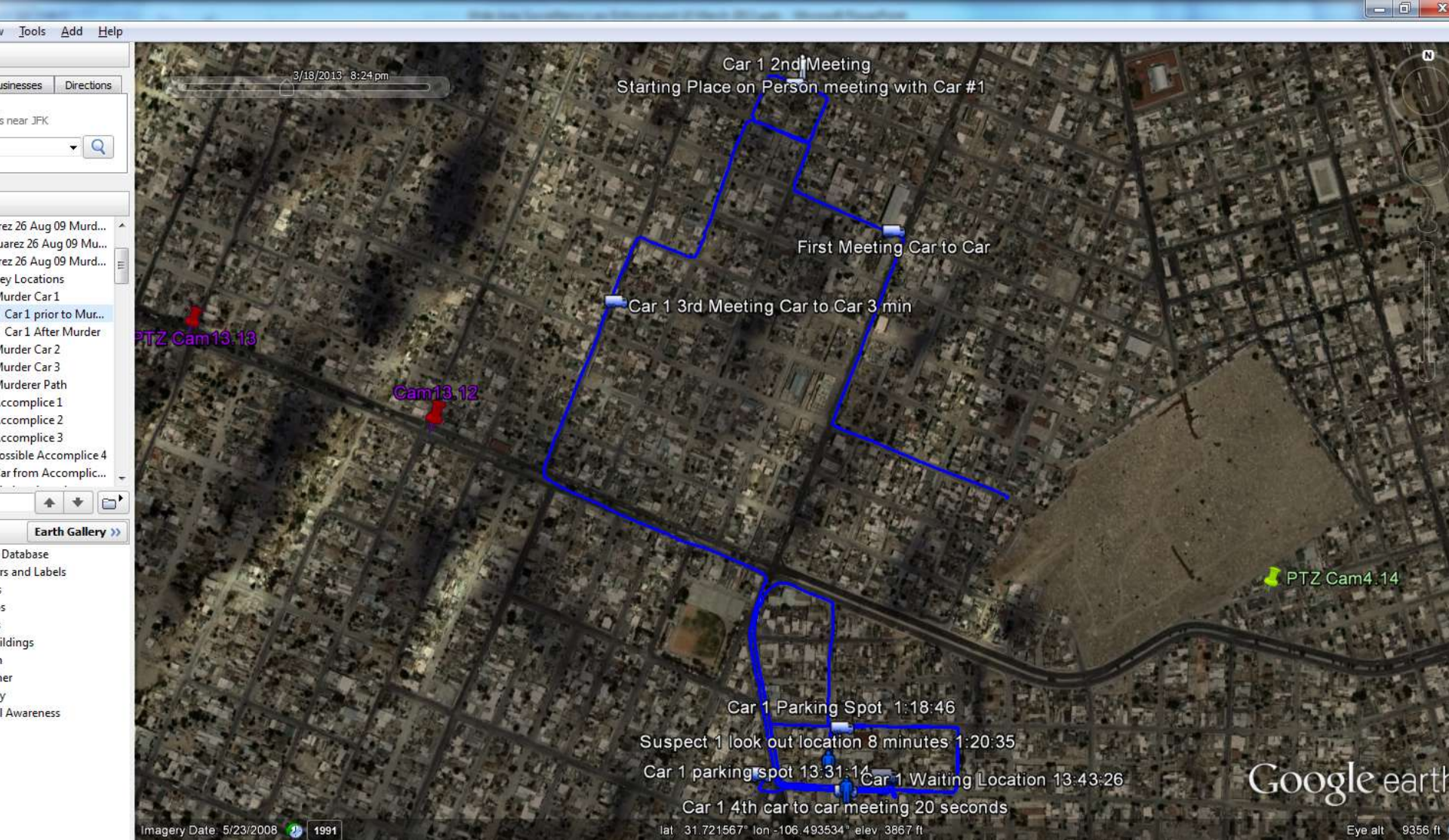


Suspect Car 1 Path after Murder





Suspect Car 1 Path Prior to Murder





Suspect Murder Car #1 Timeline

- 13:01:14 Murder Car #1 Start
- 13:02:51 Car to Car Meeting With Car 3
- 13:04:20 Car to Multi People Meeting
- 13:07:32 Car to Car Meeting with Car 3
- 13:12:40 Car to Car Meeting by Where murder will happen
- 13:18:48 Person exits Car to observe area where the murder will take place
- 13:42:11 Car to Car meeting just down the block where the murder will happen
- 13:44:25 Murder Occurs
- 13:45:46 Suspect enters Car on passenger side and Suspect Car drives away
- 13:47:58 1st Person exits Car enters house
- 13:48:33 Car to Person Meeting
- 13:53:41 2nd Person exits Car and enters house
- 13:56:05 Suspect Car Parks - Driver exits Car
- 14:35:20 Suspect Car stops (37 25.818'N 122 05.36'W) 35 minutes long
- 14:39:46 Suspect Car parks and Driver exits

.....

Post Murder Locations



Suspects from Car 1
Enter this House after
Murder

Suspects from Car 2
Enter this House after
Murder

Suspect Car #2
Returns here after
Murder

Suspect Car #1
Returns here
after Murder
– Drops off
person



Back Tracked to Pre-Murder Meeting at 13:38:11



Murder Car 3

Previously picked up weapons from Accomplice #1 20 minutes prior

Murder Car 2

Murder Cars 2 and 3 leave this location at 13:38:23 to go to murder site

Accomplice #2

Accomplice #2 Meets with murderers takes different route then observes from a distance

Accomplice #2 is tracked for 40 minutes prior and 2 hours after the murder



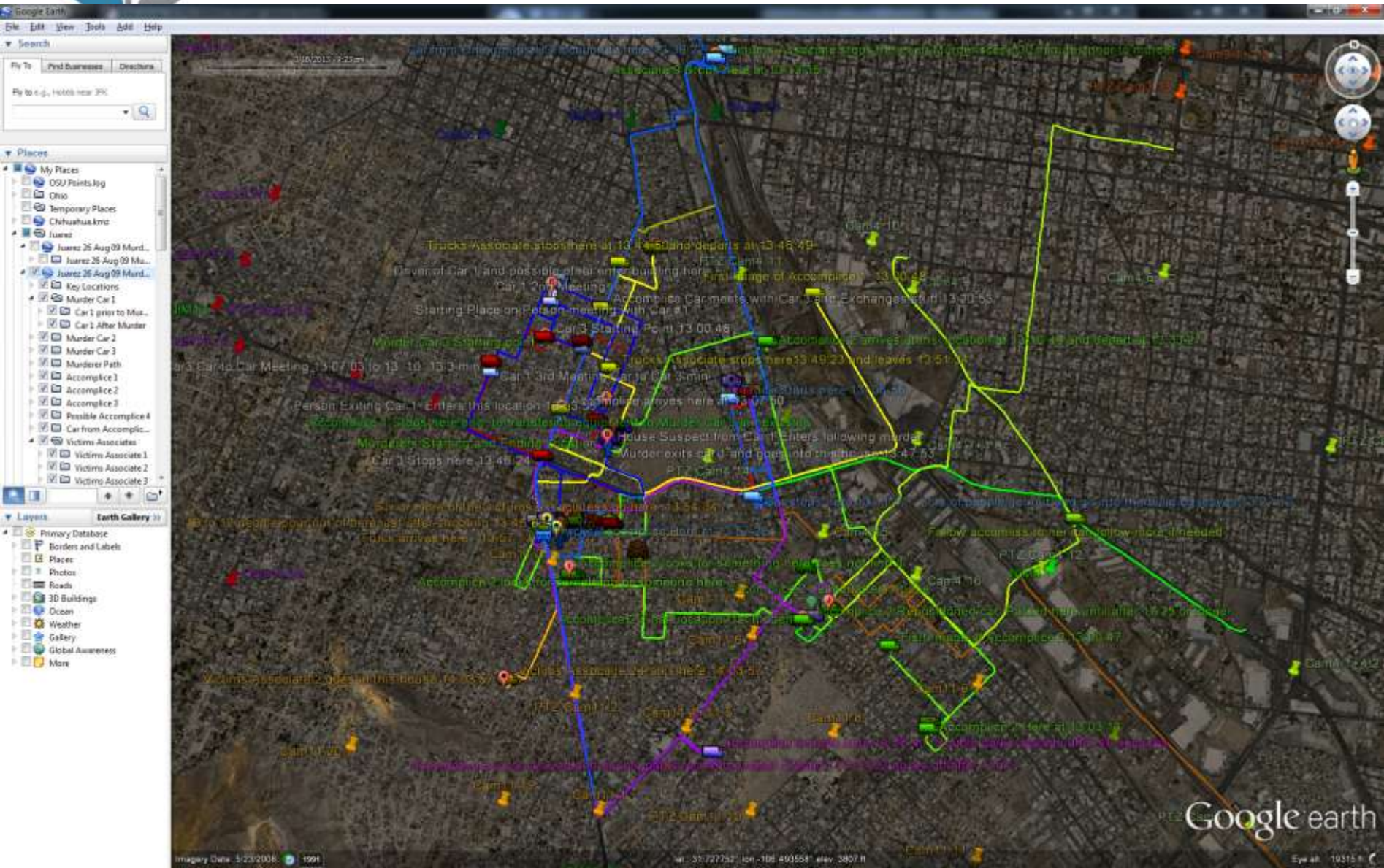
Street View

SUSPECT #1 STARTING AND ENDING LOCATION "B"



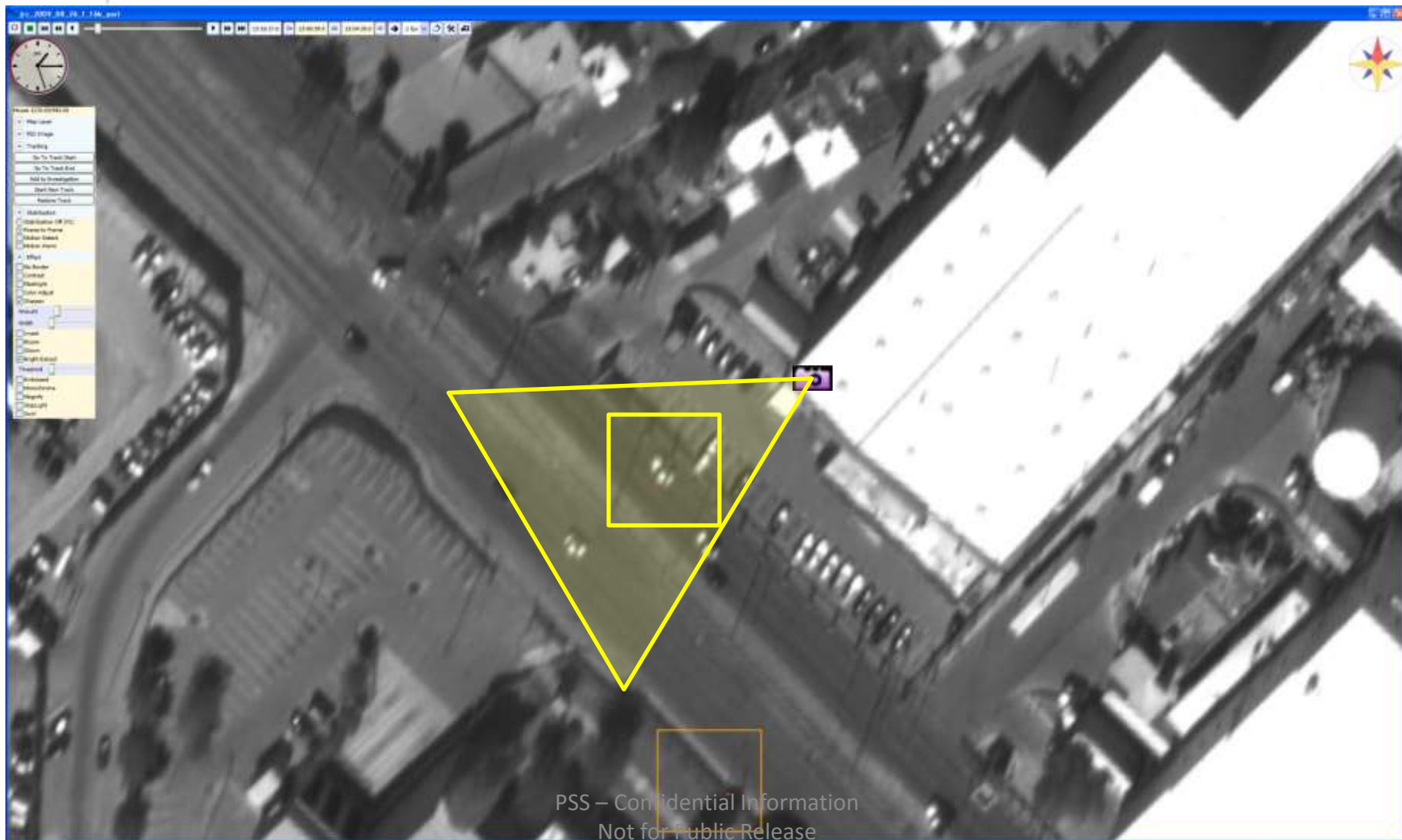


Murderer, Accomplices, and Associates Tracked Activities 45 minutes prior and 3 hours after murder





Suspect Car 1 in Camera 4.12 at 13:15:27



PSS – Confidential Information
Not for Public Release

Annotated Reports Integrate Ground and Arial Imagery

Car 1 and Car 2 Post-Murder Activities



13:48:31: Driver from Murder Car 2 Meets Murder car 1 then enters this building.

13:47:53: Murder Car 2 returns here after murder and parks. Driver appears to exit vehicle.



Corner D.M. Ruiz & Heroes del Carrizal



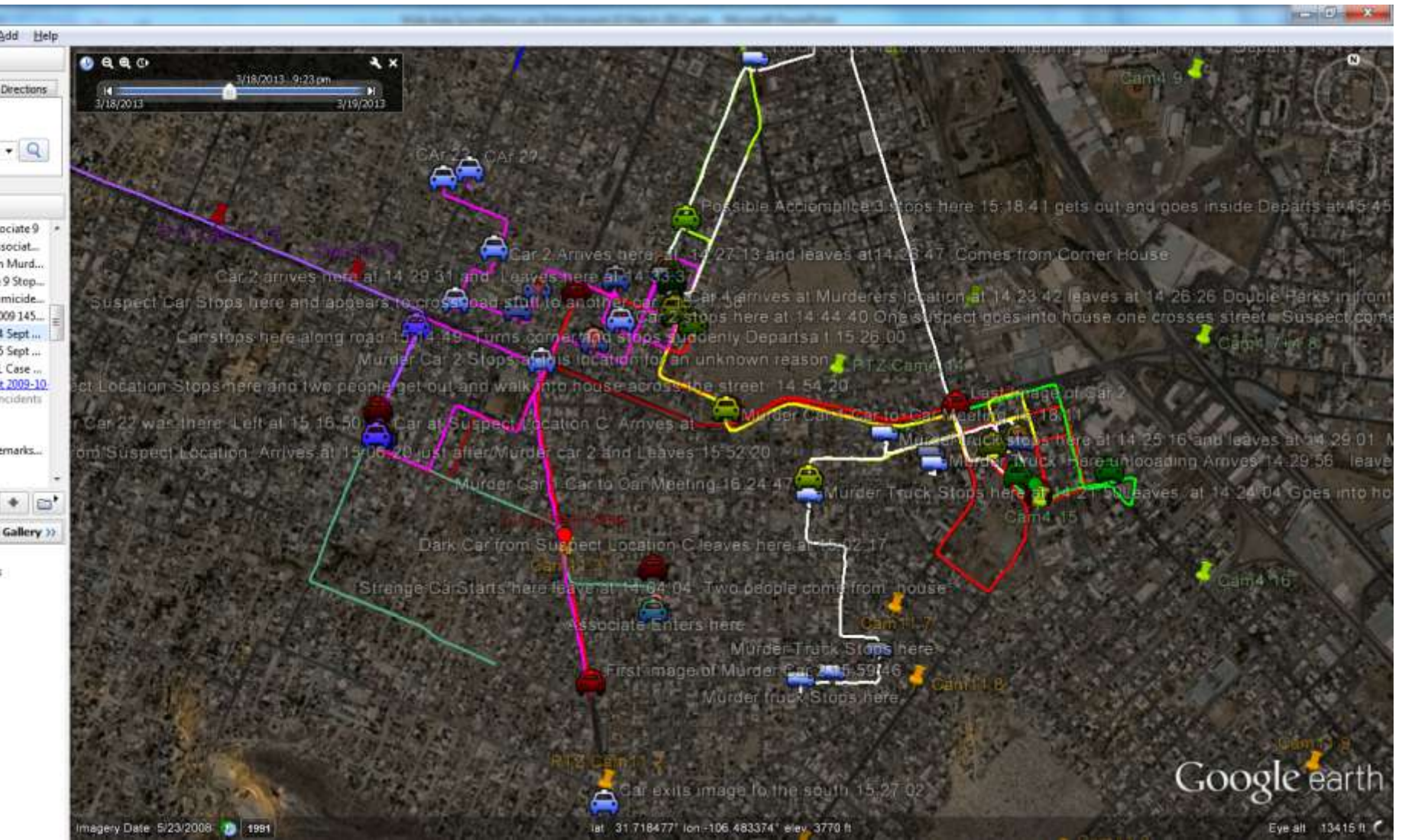
13:47:51: Murder Car 1 returns to location of pre-event meeting , parks briefly. Person exits passenger side (it is possible that this is the murderer) and enters this Blue building (also pictured earlier).



Corner of Pascual Jaramillo & Heroes del Carrizal



24 Sept Murder Same Group





Baltimore Community Support Program

Evaluation Phases

- Phase I - Technical Evaluation
 - Jan Feb 2016– Worked well, Worked Integration Issues
- Phase II – Initial Operational Evaluation
 - June- Aug 2016 – Worked well, 108 sample investigation briefs completed – Showed value – Integrated with BPD systems
 - Leadership approval to proceed
- Phase III – Operational Employment
 - Briefing to Investigators, States Attorneys, Other Agencies
 - Public Announcement and Community Involvement
 - Use of Data in Investigations and Cases



Baltimore Phase I/II Results

- ~314 hours of recorded imagery data
 - 3,576 Priority 1 Calls within imagery
 - 13,302 Priority 2 Calls within imagery
 - 3,001 Priority 3 Calls within imagery
 - 21,174 Total Call For Service within imagery
- 108 Completed Investigation Briefs
- Including:
 - Murders, Shootings, Officer Involved Shootings, Stabbings, Rape, Robbery, Burglary, Car Jackings, Hit and Runs, Accidents, and Illegal Dumping



Calls For Service within Coverage Areas and Times

Phase	Priority	Number within coverage area
Phase I	100 hours Jan – Feb	6,378
	1	1,085
	2	3,409
	3	1,504
	4	380
Phase II	200 hours Jun - Aug	14,796
	1	2,491
	2	9,893
	3	1,497
	4	915
Total		21,174



BCSP Investigation Briefings Completed

Homicides	5
Shootings	15
Stabbings	3
Rape	1
Aggravated Assaults	2
Robbery/Burglary	3
Surveillance	7
Dirt Bike Complaints	4
Car Jacking	3
Hit and Run	16
Accidents	42
Auto Theft	1
Illegal Dumping	2
Scenarios (Live Tests of System)	3
GPS Tracking Integration	1
Requested Analysis for Public Defender	<u>1</u>
	109



Completed Homicide Investigations

- 30 Jan 1400 Morris St
- 20 Feb 2300 Lafayette
- 3 Jul 2226 Poplar Grove
- 11 Jul 500 Dolphin St
- 19 Jul 2200 Rosedale St



Completed Shooting Investigations

- 22 Jan Walbrook and McKean
- 27 Jan 3407 Piedmont Ave - Officer Involved Shooting Investigation
- 4 Feb 2401 Hollins
- 16 Feb Madison Ave & MLK Blvd
- 23 Feb 3400 Clifton Ave
- 27 Feb 3400 Canton Ave
- 25 Jun 1400 N Mount St
- 29 Jun 3300 Edmondson Ave
- 11 Jul 1800 North Ave
- 14 Jul Winchester St - Officer Involved Shooting Pre-incident Surveillance
- 17 Jul 1817 Clifton Ave
- 19 Jul 3130 North Ave
- 24 Jul Pulaski Ave
- 13 Aug 3100 North Ave
- 17 Aug 2305 N Longwood



Priority 1 Crimes Information Provided

Date	CFS#	Event Description	The number of events observed and investigated	The number of crime scene characterized (Time, number of people, number of vehicles, activity on the ground observed)	The number of tracks created for the event	Number of Primary Vehicles or People	The total number of Cameras we tracked Vehicles or People past	The number of cameras that captured images of either Vehicles or People	The number specific stop locations of Primary Vehicles or People	number of potential suspects and witnesses at the crime scene identified.	The number of Final Locations associated with Primary Vehicles or People
20-Jan	160201311	Kirk Ave and Friendship Auto Theft	1	1	14	3	0	0	2	0	2
20-Jan	160201657	N Rose St Burglary	1	1	7	1	10	2	2	3	2
22-Jan	160221384	Walbrook and McKean Shooting	1	1	60	4	78	15	12	6	5
22-Jan	160221220	3212 Westmount Cutting	1	1	3	1	14	3	3	-	1
30-Jan	160301330	1400 Morris St Homicide	1	1	42	7	9	7	6	1	2
4-Feb	160351349	2401 Hollins Shooting	1	1	52	2	8	0	1	3	0
14-Feb	160451244	2019 Walbrook Cutting	1	1	6	1	6	4	1	1	2
16-Feb	160472064	Madison Ave & MLK Blvd Shooting	1	1	3	1	1	0	1	1	1
20-Feb	160511411	2300 Lafayette Homicide	1	1	20	2	9	5	25	-	2
22-Feb	160531304	3400 Clifton Ave Shooting	1	1	41	2	0	0	3	-	2
27-Feb	160581506	3400 Canton Ave Shooting	1	1	13	1	1	0	1	2	0
28-Feb	Event #1429	1655 Smallwood Cutting	1	1	2	1	11	0	1	1	1
25-Jun	161771470	1400 N Mount St Shooting	1	1	24	3	40	14	8	4	2
29-Jun	161811490	3300 Edmondson Ave Shooting	1	1	38	2	27	2	4	8	2
3-Jul	161751760	2226 Poplar Grove Homicide	1	1	21	14	40	15	13	0	5
11-Jul	161932069	500 Dolphin St Homicide	1	1	28	4	11	10	4	10	1
17-Jul	161991558	1817 Clifton Ave Shooting	1	1	24	9	8	5	1	4	1
18-Jul	162001565	2742 Edmondson Ave Rape	1	1	22	3	21	15	4	1	3
19-Jul	162012332	2200 Rosedale St Homicide	1	1	27	3	7	4	4	8	3
19-Jul	162012654	3130 North Ave Shooting	1	1	17	2	11	3	3	3	2
24-Jul	162061610	Pulaski Ave Shooting	1	1	19	2	16	13	13	9	2
13-Aug	162262755	3100 North Ave Shooting	1	1	38	1	9	6	1	3	1
17-Aug	162301746	2305 N Longwood Shooting	1	1	16	4	14	7	3	4	2
		TOTALS	23	23	537	73	351	130	116	72	44

Priority 1 Crimes: 73 Primary Vehicles Identified, 116 locations where suspects stopped, 44 suspect final locations, 351 CitiWatch camera shots of primary vehicles

Analysts at Work





Levels of Analysis

- **Real -Time Operational Support**
 - Event response and information forwarding
 - Multiple simultaneous location surveillance
 - Cued or tasked support - Dispatch or 911, locations of interest, BOLO
- **Level 1 Analysis - Overnight**
 - Who is directly involved
 - Where did they come from
 - Where did they go
- **Level 2 Analysis – 1-3 days**
 - Who did they meet with
 - Where did they come from
 - Where did they go
- **Level 3 Network Analysis - 1 week**
 - Over the last week or two who did all of the above meet with
 - Where did they come from and where did they go





CSP Workforce

Expected Source and Demographics

Position	Number	Local Hires	8A Subcontract	Local HS Interns	Deployed	Potential Minority Hires
Analysts	15-20	11	4-8	2	3	9-15
Pilots	7	7				1-2
Managers	2	1			1	0-1
IT	2	1			1	0-1
Police Liaison	1	1				0-1
Total	32	21	4		7	10-20

More will shift to local hires as we move to longer term operations.

Roughly 2/3rds of our local hired analysts are minorities from the community

After 2 years analysts have experience typically required for DoD Analyst positions



Use of CSP Information

- Legally reviewed many times by many states and defense attorneys
- Found fully constitutional and allowable as evidence
 - 4 Supreme Court decisions directly support
 - Baltimore States Attorneys and Public Defenders have been briefed and agree
 - Even the ACLU acknowledges it is legal
- Usable in support of major crime investigations by both defense/prosecution
- Usable as evidence by both defense and prosecution
- Usable by community to investigate incidents with police
- Provides an unbiased record of what happened at a scene of an incident for use by all sides
- **All analysis done for investigation is provided in full to defense attorneys**
- Additional **confidential/privileged** analysis can be conducted for defense attorneys and is not shared with police or prosecutors



CSP Privacy Program

- Privacy Program is Central to all Community Support Program operations
- Resolution limited to 1 pixel per person
 - no identifiable information from images – Just dots for people
 - See as many major crimes as possible
- Only look at reported **Major Crime Scenes** and people coming and going from them.
 - Someone has called and asked for assistance
 - Support analysis of community approved crimes
- Information is maintained where all analysts have ever looked, what investigation it was for and that is reviewed by management, department leadership, and outside parties.
- All tracks (vehicle/people) are required to be directly associated to a specific investigation
- Fully welcome outside oversight and review and will fully support their efforts
- Data securely maintained and accessed.
 - Consistent with all BPD video camera surveillance policies



Public Acceptance

<http://www.bizjournals.com/baltimore/pulse/poll/are-you-comfortable-with-city-polices-surveillance-program/20446022>

www.bizjournals.com/baltimore/pulse/poll/are-you-comfortable-with-city-polices-surveillance-program/20446022

MENU BALTIMORE BUSINESS JOURNAL

BUSINESS PULSE POLL

Are you comfortable with city police's surveillance program?

RELATED Baltimore Police Says Aerial Surveillance Plane Was Not A Secret

f in t

Comments

Baltimore Business Journal Poll

82 % Approve

9 % "Would have approved had it been discussed"

91 % Approve of CSP approach

5 % Program makes them feel "uneasy"

4 % Wanted more information



Total number of responses: 128

This poll is not a scientific sampling. It offers a quick view of what readers are thinking.

Public Acceptance

www.baltimoresun.com/news/opinion/bal-bpds-secret-surveillance-poll-20160825-htmlstory.html

SECTIONS SEARCH

THE BALTIMORE SUN

THURSDAY SEP. 1, 2016

BREAKING SPORTS MARYLAND BUSINESS OPINION OBITS ENEWSPAPER ADVERTISING

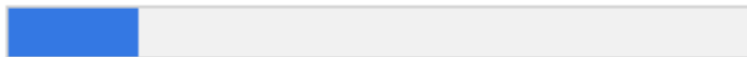
Should the Baltimore Police Department have disclosed plans to conduct aerial surveillance over the city before doing it, even if it put the program at risk?

THE BALTIMORE SUN
News / Opinion

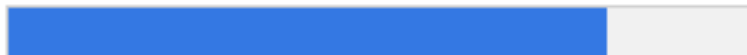
AUGUST 25, 2016, 3:10 PM

Thank you for voting!

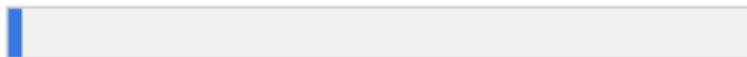
Yes 17.52% (55 votes)



No 80.57% (253 votes)



Not sure 1.91% (6 votes)



Total Votes: 314

80.5% Approved of the program

17.5% Said it should have been announced "even if it put the program at risk"

2% Said "not sure"

<http://www.baltimoresun.com/news/opinion/bal-bpds-secret-surveillance-poll-20160825-htmlstory.html>



Efforts in Baltimore

- **Phase I** Jan Feb 2016 – Initial demonstration and test
 - Does it technically work – **Answer Yes**
- **Phase II** June July August 2016
 - Does it provide useful information supporting crime investigations - **Answer Yes**
 - Police Foundation report said it showed great promise in helping solve crime
 - Supported many cases and contributed significant information
- **Phase III** 1 Year Proposed Effort **Not yet started – Need community support**
 - Does CSP help reduce crime in the community?
 - Goal is 20-30% reduction in major crime in first full year of operation
 - How effective is CSP in reducing crime in the community
 - How effective is the deterrence with full public awareness program
 - How effective is it in solving otherwise unsolvable crimes
 - What is the impact of increased trust between police and the community on the community



Required Funding

- Our services cost \$1.6M per year or 135,000 per month as a complete service
 - Less than the cost of operating a single police helicopter
- There are groups willing to fund the entire effort
 - No money required from the city
 - External evaluation program to determine effectiveness in meeting goals
- Just need local support and approval by political leadership
- Able to start as early as January



CSP Public Awareness

- Asked to come and brief community and community leaders
- Public Awareness and Engagement
 - Community Meetings
 - Community Leaders
 - City Leadership
- Outreach and Awareness Program for Youth and Prior Offenders
 - Awareness Briefings in Schools, Community Centers, Churches, others
 - Increased deterrence through wide spread knowledge of the program
 - Deterrence does not work if no one knows about the program
 - Awareness of Job opportunities
- CSP will support all requested efforts

If you want this program we require your support expressed to your city council member and the Mayors office



Summary

- We support the community
- We help solve unsolvable crimes
- We help build trust and accountability between the community and law enforcement
- Our goal is to reduce major crimes within the community by 20-30% within the first year
 - Mostly through deterrence of crime
- We want to help make communities a better place to live, work and raise families
- We are open to talk with anyone or group at any time



Legal and Privacy Considerations

Is this legal, can it be used in court and
how do you protect people privacy



Legal and Privacy Issues

- **Not a new or novel legal issue**
 - Reviewed by multiple city attorneys
 - 4 Supreme Court Ruling Supporting Use
 - Usable in Court - Legal Bench Brief Available (Attached)
- **Same rules as other Airborne Law Enforcement**
 - 210 Law enforcement agencies use airborne law enforcement
 - Baltimore has used helicopters FoxTrot since 1970
- **Strict Privacy Policy**
 - Developed in conjunction with many departments
 - On contract with BPD (Attached)
- **No Expectation of Privacy**
 - Following people to and from crime scenes over sidewalks and roads in public spaces
 - No expectation of privacy in public spaces
 - Always start with a reported crime or ongoing investigation

Legal aspects they are the same –
CSP imagery is just using new larger cameras.



Review of Relevant Laws, Ordinances, and Policies

- Federal Laws
 - 4 Supreme Court Level Rulings
 - Directly supports effort
- State Laws and Regulations
 - Subtitle 9 - SURVEILLANCE AND OTHER CRIMES AGAINST PRIVACY
 - Do not apply to this situation
- County Ordinances
 - No relevant ordinances
- City Ordinances
 - No relevant ordinances
- Baltimore PD General Order Policy 1014 1 Aug 2016
 - Consistent with BPD video surveillance general order



Legal Analysis

US Supreme Court Decisions

- ***United States v Karo*, 468 U.S. 705, 730 (1984).**
 - 4th Amendment and The Expectation of Privacy
- ***California v Ciraolo*, 476 U.S. at 209(1986)**
 - Aerial observation to be found permissible by law enforcement
- ***Dow Chemical Co. v. United States*, 476 U.S. 227 (1986).**
 - Aerial photography - Found to be permissible
- ***Florida v. Riley*, 488 U.S. 445 (1989).**
 - Aerial Viewing and Search Warrants
 - Found to be permissible



Legal Precedence

4th Amendment/Expectation of Privacy

US Supreme Court - *United States v Karo*

- The United States Supreme Court has developed a “relatively straightforward” test for determining what expectations of privacy are protected by the Fourth Amendment. *United States v Karo*, 468 U.S. 705, 730 (1984).
- **“What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection.”** *United States v Karo*, 468 U.S. 705, 730 (1984) (quoting *Katz v. United States*, 389 U.S. 347, 351 (1967)).
- **Under the familiar *Katz* test, the defendant’s ability to challenge a search turns on two inquires:**
 - (1) whether he had an actual, subjective expectation of privacy in the premises searched; and
 - (2) whether this subjective expectation is one that society is prepared to recognize as reasonable. *Katz*, 389 U.S. at 361 (Harlan, J., concurring).
- **“The touchstone of search and seizure analysis is whether a person has a constitutionally recognized expectation of privacy.”**



Legal Precedence

US Supreme Court – California v Ciraolo

- In *California v Ciraolo*, the Supreme Court considered whether a naked eye aerial observation of the defendant's backyard was a Fourth Amendment violation. The police had received an anonymous tip that defendant was growing marijuana in his backyard, but the police were unable to confirm this tip from driving by his residence. *Ciraolo*, 476 U.S. at 209. The officers secured a private plane and flew over the area at 1,000 feet within navigable airspace. From that height the officers, who were trained in marijuana identification, could readily identify marijuana growing in the yard. *Id.* They subsequently secured a warrant and seized marijuana plants. *Id.*
- There was no dispute that the defendant had manifested a subjective intent to maintain the privacy of his backyard from any street-level views because the defendant erected a 6-foot outer fence and a 10 foot inner fence completely enclosing his yard. *Id.* at 209, 211. Thus, the case turned on whether or not society was prepared to recognize this expectation as reasonable. The Court concluded that the intrusion was not unconstitutional:
- The observations by [the officers] in this case took place within **public navigable airspace . . . in a physically nonintrusive manner**; from this point they were able to observe plants readily discernible to the naked eye as marijuana. That the observations from aircraft were directed at identifying the plants and the officers were trained to recognize marijuana is irrelevant. Such observation is precisely what a judicial officer needs to provide a basis for a warrant. **Any member of the public flying in this airspace who glanced down could have seen everything that these officers observed.** On this record, we readily conclude that **respondent's expectation that his garden was protected from such observation is unreasonable and is not an expectation that society is prepared to honor.** *Id.* at 213-14 (emphasis added).
- Further, “[i]n an age where private and commercial flight in the public airways is routine, **it is unreasonable for respondent to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet.**” *Id.* at 215. **“The Fourth Amendment simply does not require the police traveling in the public airways at this altitude to obtain a warrant to order to observe what is visible to the naked eye.”**



Legal Precedence

US Supreme Court – Dow Chemical Co. v. United States

- The same conclusion was reached in *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986).
- In that case, the EPA contracted with a commercial aerial photographer to provide images of the Dow Chemical manufacturing facility from altitudes of 1200, 3000, and 12,000 feet. *Id.* at 229.
- Dow Chemical filed suit, alleging the surveillance amounted to a search in violation of the Fourth Amendment. The district court found in favor of Dow Chemical, but the Sixth Circuit disagreed, concluding the aerial images did not constitute a Fourth Amendment search. *Id.* at 230.
- The United States Supreme Court accepted certiorari, and affirmed the Sixth Circuit's decision. *Id.* at 239. **The Court held that “the taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment.”** *Id.* In so holding, the Court reasoned, “any person with an airplane and an aerial camera could readily duplicate” the photographs at issue. *Id.* at 231.



Legal Precedence

US Supreme Court – Florida v. Riley

- In 1989 the Court decided *Florida v. Riley*, 488 U.S. 445 (1989).
- In *Riley*, the sheriff's office received an anonymous tip that marijuana was being grown on the respondent's property. The respondent lived in a mobile home on five acres of rural property. *Id.* at 448. A greenhouse was located ten to twenty feet behind the home and two sides of it were enclosed. The other two sides were not enclosed but were obscured from view by surrounding trees and shrubs. The roof of the greenhouse was covered with corrugated panels, some of which were translucent and some which were opaque. Two of these panels, comprising approximately ten percent of the roof were missing.
- The respondent had a wire fence enclosing his property with a "DO NOT ENTER" sign posted. *Id.* The investigating officer realized he could not confirm the anonymous tip from the road and twice circled the property in a helicopter at the height of 400 feet. *Id.* With his naked eye, he was able to see through the openings in the greenhouse and observe what he thought was marijuana growing inside. He sought and procured a search warrant based on these observations and marijuana plants were seized. *Id.* at 449.
- The Court found that respondent's actions evinced his intent that his property would not be open to public inspection from the road. However, because the greenhouse roof was partially exposed, its contents were subject to aerial viewing. *Id.* at 450. Thus, under *Ciraolo*, the respondents **"could not reasonably have expected the contents of his greenhouse to be immune from examination by an officer seated in a fixed-wing aircraft flying in navigable airspace at an altitude of 1,000 feet or, as the Florida Supreme Court seemed to recognize, at an altitude of 500 feet, the lower limit of the navigable airspace for such an aircraft."** *Id.* The fact that the helicopter was flying at 400 feet did not change the analysis because "helicopters are not bound by the lower limits of the navigable airspace allowed to other craft" and any member of the public could have legally flown over the property at that altitude and observed the marijuana. *Id.* at 451. **Moreover, there was no indication that "intimate details" of respondent's property or curtilage were observed or that there was "undue" noise, dust, or threat of injury.** *Id.* at 452.



Use of CSP Imagery for Law Enforcement is Constitutional

- Like in *Ciraolo, Dow Chemical, and Riley*, the photographs taken from a manned aircraft flying within publicly navigable airspace do not constitute a search, and do not run afoul of the Constitution.
- Particularly, the photographs are obtained by wide area airborne surveillance by manned aircraft operating in publicly navigable airspace at 3,000 to 12,000 feet altitude.
- The cameras are available to, and routinely used by members of the public. The cameras capture images visible to the naked eye. No infrared, telephoto, or zoom lenses are utilized. The photographs do not reveal intimate details of private life.
- Thus, in utilizing the photographs, law enforcement does not violate any reasonable expectations of privacy. They are simply observing what can be seen from public space.
- **Like in *Ciraolo, Dow Chemical, and Riley*, the photographic surveillance is constitutionally permissible.**



BPD Policy 1014 - 1 Aug 2016

Video Surveillance Procedures

Policy – It is the policy of the Baltimore Police Department to utilize surveillance cameras for the purposes of deterring crime, aiding in apprehending suspects, and protecting homeland security

Definition - Video Surveillance – Non-consensual interception of a CCTV broadcast which requires a court order.

- 1. Does not require a court order unless there is no-consensual interception of oral communication.**
- 2. Use of video cameras to monitor an area open to the public view does not require a warrant or court order.**

Required Action - Members

1. Responds to reports of crimes/incidents, reported by members of CitiWatch at the discretion of the Shift Commander
2. Information provided by active sworn members, who have viewed crimes/incidents at CitiWatch, might constitute probable cause for arrest.
3. Information provided by personnel other than active sworn members who have viewed crimes/ Incidents might constitute reasonable articulable suspicion to justify an investigatory stop of an individual.
 - 3.1 Such investigatory stops may lead to an arrest only if:
 - 3.1.1 Observation/information obtained by the officers at the scene of the investigatory stop furnish probable cause; or
 - 3.1.2 An active sworn member views the video footage seen by the CitiWatch personnel and that footage is sufficient to establish probable cause.

Use of BCSP imagery is consistent w/ BPD Policy 1014 Video Surveillance



Investigation Briefings

- CSP will provide written and verbal briefings, analysis support, and data and tracks to any of the following upon request and under the guidance and oversight of BPD:
 - Investigators
 - Prosecutors
 - Defense Attorneys
 - Courts
- Need to be told who controls access, timing, and content of information and briefings.
- Who is authorized to see and have information



CSP Support to Public Defenders / Defense Attorneys

- Present and explain data collected and presented to Police.
- CSP can provide confidential analysis of imagery for defense
 - Use separate analysts for confidentiality
 - Prepare reports and analysis for defense team use
 - Defense team support analysis is not shared with law enforcement or prosecution
- All analysis must follow community agreed to and contracted privacy policies
 - Related to a reported crime or legal defense effort
- Largely just need to know what to look for
- Require a release from defendant to look at related locations not directly related to the crime.
- **Briefed 10 Public Defenders on program and support we provide.**
- **Provided detailed analysis to defense team in a federal firearms case which was not previously reported through a crime report**



Privacy Policy



CSP Privacy Policies

- Privacy and privacy policies are critically important to CSP, our analysts, our customers, and our business
- Breaches in our privacy policies can and will be dealt with as a management priority
- CSP has privacy policy training and procedures for its analysts and teaches them to others
- **CSP resolution is limited by both technology and design**
 - Objective is 1 pixel per person and to cover as large an area as possible
 - You cannot tell who a person is, what they are wearing, or most the time what they are doing
 - Future camera enhancements allow larger coverage area to observe more crime not higher resolution
- **Investigations are tied directly to a reported crime investigation**
 - CSP analysts find a reported crime in the imagery then track cars and people who are involved or are likely witnesses to the crime and can assist in the investigation.
 - Cars and people are only tracked over public roads and sidewalks in areas that have no expectation of privacy
 - Occasionally during investigations – Additional suspicious acting cars catch the eye of the analyst – Cars going at excessive speeds, making multiple u-turns, not stopping at red lights or stop signs. These cars are followed to determine if they are involved in a larger crime effort. If they are not they are to be deleted.



CSP Privacy Policies (Cont)

- Most CSP analysts have had DHS suitability checks and/or DoD Security clearances to provide some assurance of personal integrity.
- CSP can provide an audit trail of every location and time when an analyst looked at imagery.
 - PSS through its server process can record this information and managers can review this data to ensure that the analyst is looking at appropriate locations and times for the crime they are investigating. This data can show every place and time the analyst looked. Management can pull this data when needed.
- CSP provides secure storage and management of the collected data. Sensitive data analyzed data can be secured in classified storage safes.
- All computers are password protected and firewalled keeping non-authorized users from the data.
- CSP has invited outside observers to oversee activities and ensure compliance
- Privacy Policies are tailored to the supported community through City leadership, supported organization input and public input.
- Finalized privacy policy is placed on contract to ensure compliance by both CSP and our supported organizations



Previously Expressed Privacy Concerns

- Police Privacy Policies need further clarification and refinement –
City Council Statement April 2013
- Future cameras will be better and be able to identify people – Jay
Stanley National ACLU
- Looking people in their back yards / private areas – Joel Pruce
 - Auditable analyst viewing locations
- Focusing support only on minority areas – Ellis Jacobs AL Jazzera Interview
- Watching people from (Occupy Dayton) Protests –
- Jobs not from Dayton community – Mr Forward NAACP



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Privacy Policy Development Program

- Dayton City Leadership
- Dayton Police Department
- National ACLU
- State Ohio ACLU
- Privacy Conference presentation and feedback
- Multiple Local Community Groups
- Community Feedback
- International Association of Chiefs of Police
- Airborne Law Enforcement Association
- AUVSI UAV Privacy Lawyers

**All Privacy Policies are adapted to a specific community
through community input within a city**



Sample Draft Police Department **WIDE AREA AERIAL SURVEILLANCE POLICY STATEMENT**

The XXX Police Department utilizes Wide-Area Aerial Surveillance for the purpose of creating a safer environment for all those who live, work and visit the city of XXX. This policy explains the purpose of the use of this technology and provides guidelines for the operation and for the storage of captured images.

DEFINITIONS

Wide-Area Aerial Surveillance- Wide-Area Aerial Surveillance Sensors is an optical camera assembly that can provide continuous, second-by-second video monitoring of a city-sized area via a manned small fixed wing aircraft platform.

Part 1 Crimes - The Federal Bureau of Investigation (FBI) designates certain crimes as Part I or index offenses because it considers them to be the major crimes plaguing society in the United States: Murder, Rape, Robbery, Aggravated assault, Burglary, Larceny-theft, Motor vehicle theft, and Arson.

Major Events – For the purposes of this operating policy, major events will be interpreted as any event where a large gathering of individuals may congregate and there is illegal and/or dangerous activity.

Weather Emergencies – Large scale damage or power outages due to weather related events.

Natural Disaster Response – Coordination of emergency services to aid the populace in the event of a natural disaster.

Large Scale Disturbances – Rioting, civil unrest, violent strikes, etc.

Tactical Operations – Tactical operations include SWAT call outs, active shooter situations, Hostage Team call outs, maintenance of order, etc.

Illegal Dumping – Large scale disposal of waste in public right-of-way.



Sample Draft Police Department **WIDE AREA AERIAL SURVEILLANCE POLICY STATEMENT**

I. Purpose

Wide-Area Aerial Surveillance (WAAS) can be used for general deterrence of targeted crimes; disrupting identified crime patterns; safeguarding against potential threats to the public; management of emergency response situations during natural and man-made disasters; and for support of tactical operations.

II. Wide-Area Aerial Surveillance

- The use of wide-area aerial surveillance (WAAS) will only be utilized to view areas of public right-of-way or public view.
- The current system has the ability to operate uninterrupted for five hours without having to make a stop for fuel.
- The sensor technology has the capability of viewing up to a 25 square mile area depending upon altitude
- The images captured by the sensor have the ability to be viewed nearly in real-time utilizing a down-link system.
- While images cannot identify specific persons, they can provide significant leads to investigators (See appendix A).
- Due to the cost to operate WAAS, this technology will only be deployed for the following reasons:
 - To disrupt identified Part I crime patterns.
 - To monitor major events,
 - To assist during weather emergencies or natural disaster response.
 - To monitor large scale disturbances.
 - To support tactical operations.
 - To monitor for illegal dumping
- During active WAAS operations dispatch information, to include citizen generated calls for service, will be monitored and evaluated to see if the use of this technology would assist in the apprehension or case solvability of an active incident.



Sample Draft Police Department

WIDE AREA AERIAL SURVEILLANCE POLICY STATEMENT

III. Training

- Personnel involved directly with the use of WAAS technology shall be appropriately trained and supervised.
- Training shall include the review of this policy.

IV. Prohibited Activity

- The use of WAAS will be conducted in a professional, ethical and legal manner.
- WAAS will not be used to invade the privacy of individuals, to look into private areas or areas where the reasonable expectation of privacy exists.
- All reasonable efforts will be taken to protect these rights.
- WAAS technology shall not be used to track individuals arbitrarily or based on race, gender, ethnicity, sexual orientation, disability or other classifications protected by law.
- Under no circumstances will aerial surveillance be used for the purpose of tracking persons lawfully exercising their rights to protest or assemble.



Previously Expressed Privacy Concerns

- Police Privacy policies need further clarification and refinement –
City Council Statement April 2013
- Future cameras will be better and be able to identify people – Jay
Stanley National ACLU
- Looking people in their back yards / private areas – Joel Pruce
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Our Resolution Objectives Are Not To

- Identify vehicles specific type of vehicle
 - 6 inch resolution
- Read License Plates
 - <3 cm resolution - wrong look angle
- Identify people
 - <1 cm resolution – Wrong look angle – top of head
- Determine if someone is armed
 - 2 cm resolution
- If I had more pixels would want to cover more area and see more crimes, track more criminal to final location

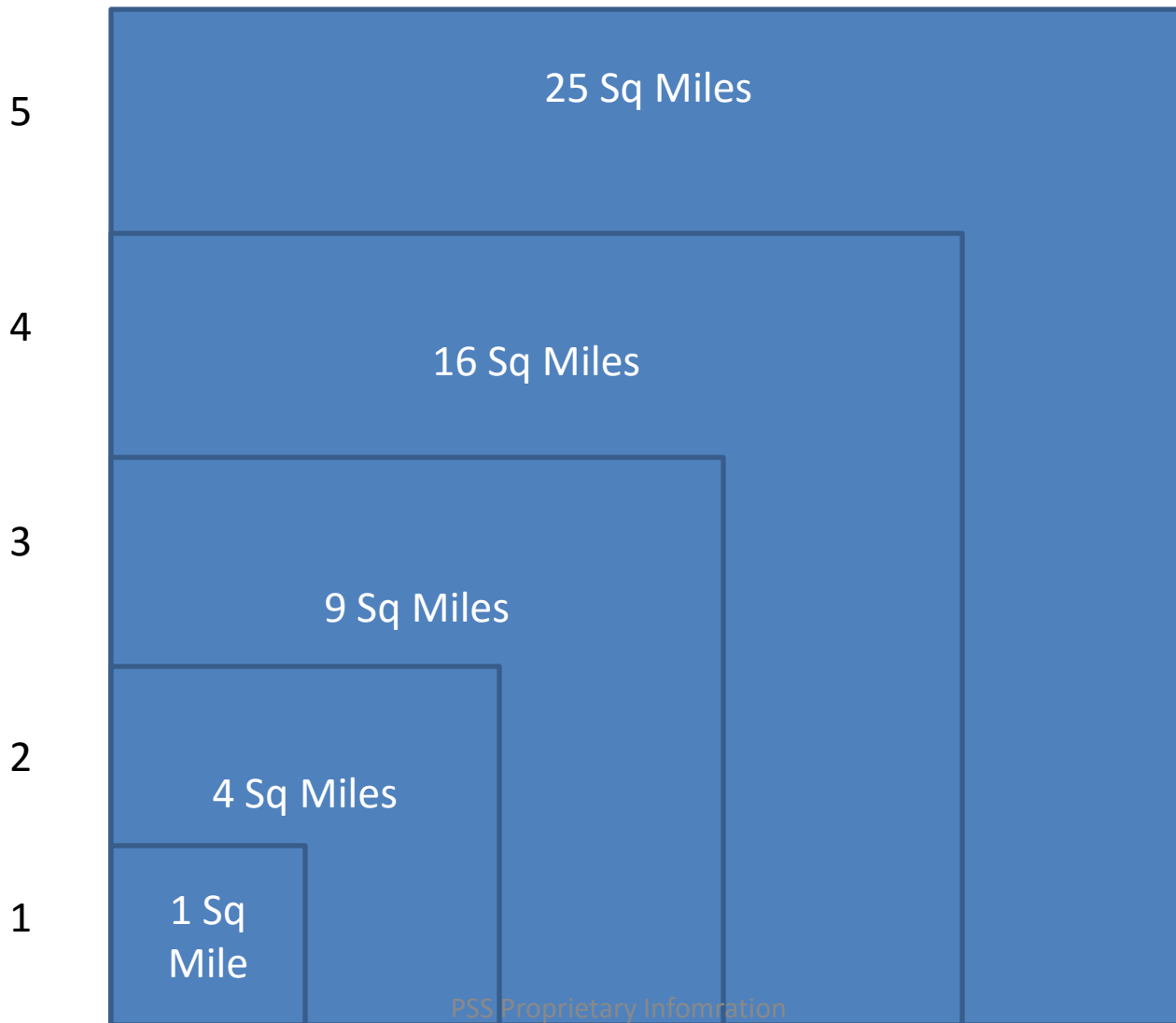


Our Resolution Objectives

- Be able to track humans from crime scenes to vehicles
- Be able to track vehicles from crime scenes to place of origin and place of destination
- Maximize coverage area
 - Maximizes observed crime



Coverage Area



Murder Locations 27 Feb 10

- ▼ PSS Image
- ▼ Tracking
- ▼ Stabilization
- ▼ Effect



Objective is to see as much crime as possible

Murder of Israel Munoz Oronday

Murder Shot at 13:40:42 - 27 Feb 2010

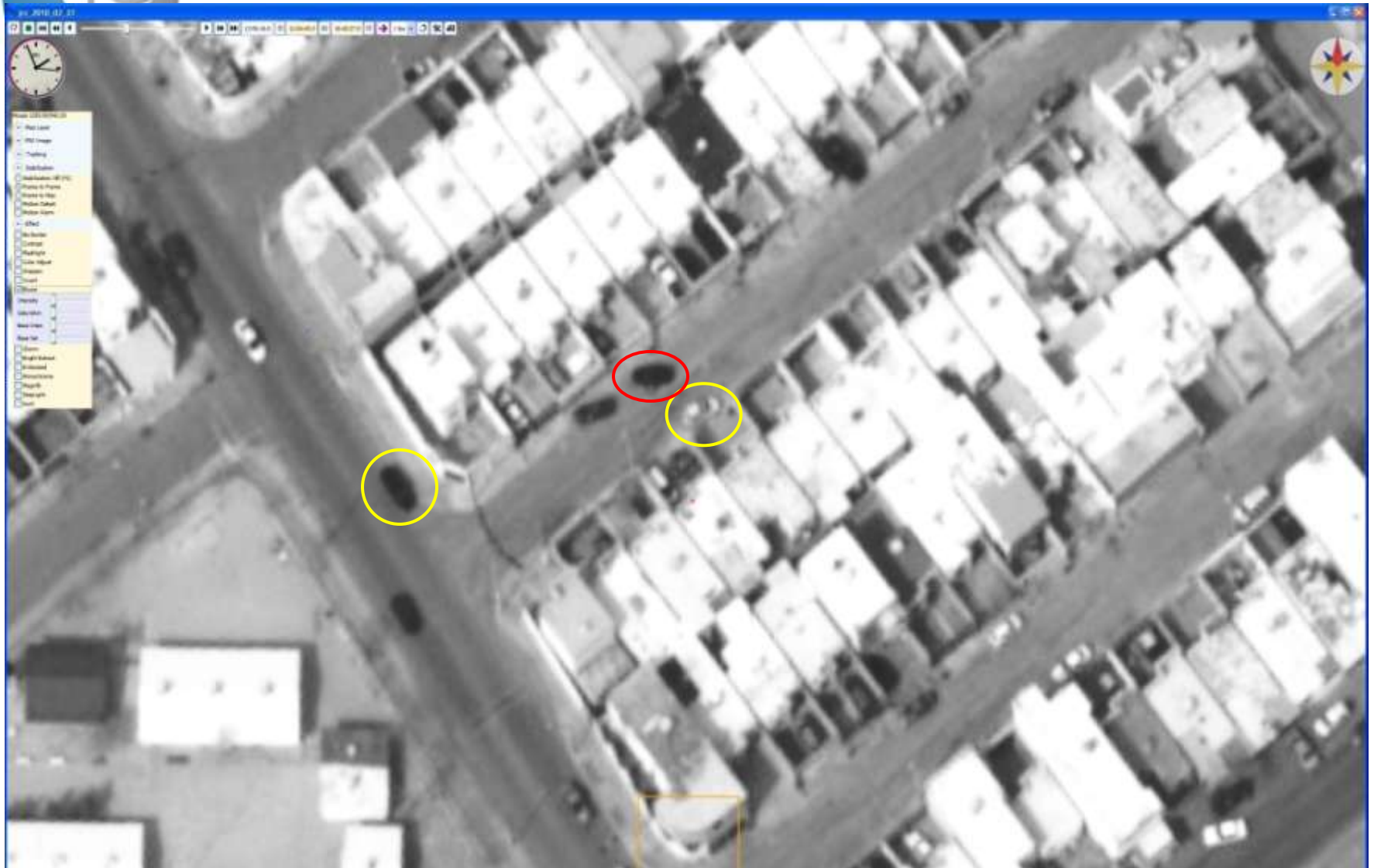


FOUO - For Official Use Only

PSS Proprietary Information

The Murder of Luz Adriana Cobayachi Peñaloza & Aldo Alan Contreras Cobayachi

Murder Shot at 13:56:16 – 27 Feb 10



Shot of actual shooter, victim and getaway car
Accomplice car 2 (left) also shown waiting around the corner



13:48:57



10825 ft

- Mouse 528.00/399.00
- Map Layer
- PSS Image
- Tracking
- Motion Detect
- Motion Alarm
- Layers
- Effects



PSS Proprietary Information

Objective is to watch as large an area as possible while still being able to solve crime



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PSS Analyst Training

- 80 hours of hands on analysis training
- Training Formalized as Community College Courses
- System Introduction
- Privacy Policies and Procedures
- System Uses and Limitations
- Tracking
- Investigation Process
- Intel process
- Criminal TTPs (What they typically do)
- Integration of sources
- Reporting results
- Leading teams



Reviewable Viewed Areas and Tracks

- Analysts support investigation of reported crimes
 - Analysts track people and vehicles in the proximity of reported crimes. (Potential suspects and witnesses)
 - Analysts are not allowed to view areas or track vehicles that are not in support of investigations
 - Tracks are identified by in investigation supported and person tracking
- Recorded viewed location by analysts
 - Images are served from central servers by requested location and time
 - Lat, Lon, time, and time of requested images from server by analyst
- Viewed areas are reviewable by management and others
 - Allows verification of areas looked at, time, and by whom
 - Reviewable by others to verify supported areas



Sample Server Log

User	Time Of User Request	NorthLatit ude	WestLongit ude	SouthLatit ude	EastLongit ude	FrameNum ber	Time of Data
RossMcNutt	05/13/14 13:33:25	39.7754	-84.2072	39.745882	-84.166663	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:25	39.77964	-84.2146	39.740798	-84.161232	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:25	39.78418	-84.2228	39.735035	-84.155281	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:27	39.7851	-84.2157	39.735948	-84.148211	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:27	39.77968	-84.2077	39.742328	-84.156426	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:28	39.77548	-84.2017	39.747103	-84.162698	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:28	39.77283	-84.1979	39.750093	-84.166637	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:28	39.77028	-84.1942	39.752974	-84.170426	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:30	39.76855	-84.1917	39.754868	-84.172956	464830	03/31/14 16:54:43
RossMcNutt	05/13/14 13:33:32	39.77045	-84.1945	39.756773	-84.175678	464831	03/31/14 16:54:44
RossMcNutt	05/13/14 13:33:32	39.77261	-84.1978	39.758931	-84.17901	464841	03/31/14 16:55:01
RossMcNutt	05/13/14 13:33:33	39.77507	-84.1934	39.76139	-84.174567	465011	03/31/14 16:55:02
RossMcNutt	05/13/14 13:33:33	39.77512	-84.1932	39.761442	-84.174432	465021	03/31/14 16:55:03
RossMcNutt	05/13/14 13:33:34	39.77143	-84.1854	39.757756	-84.166585	465031	03/31/14 16:55:05
RossMcNutt	05/13/14 13:33:34	39.77143	-84.1854	39.757756	-84.166568	465051	03/31/14 16:55:06
RossMcNutt	05/13/14 13:33:35	39.76812	-84.1817	39.75444	-84.162888	465061	03/31/14 16:55:07
RossMcNutt	05/13/14 13:33:36	39.76812	-84.1817	39.75444	-84.162871	465071	03/31/14 16:55:08
RossMcNutt	05/13/14 13:33:37	39.76518	-84.1831	39.751504	-84.164316	465081	03/31/14 16:55:09
RossMcNutt	05/13/14 13:33:37	39.76518	-84.1831	39.751504	-84.164299	465091	03/31/14 16:55:10
RossMcNutt	05/13/14 13:33:38	39.76285	-84.1898	39.749172	-84.171044	465101	03/31/14 16:55:11
RossMcNutt	05/13/14 13:33:38	39.76285	-84.1898	39.749172	-84.17101	465111	03/31/14 16:55:12
RossMcNutt	05/13/14 13:33:39	39.76217	-84.1934	39.74849	-84.174599	465121	03/31/14 16:55:13
RossMcNutt	05/13/14 13:33:39	39.76213	-84.1934	39.74845	-84.174599	465131	03/31/14 16:55:14
RossMcNutt	05/13/14 13:33:40	39.76052	-84.1922	39.749122	-84.176585	465141	03/31/14 16:55:15
RossMcNutt	05/13/14 13:33:40	39.75884	-84.191	39.74983	-84.178609	465151	03/31/14 16:55:16
RossMcNutt	05/13/14 13:33:40	39.75771	-84.1901	39.750305	-84.179949	465161	03/31/14 16:55:17



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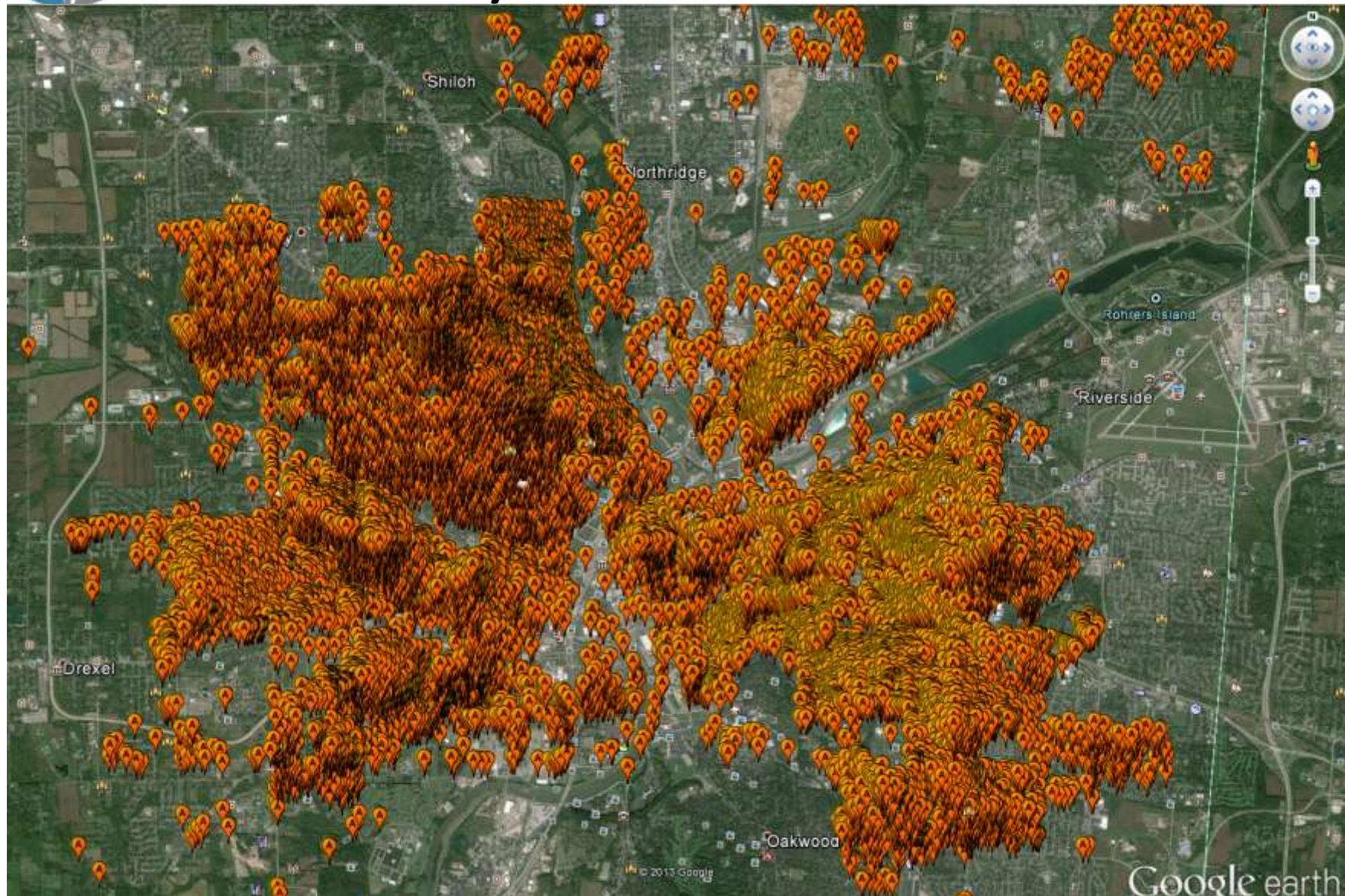
Covered Areas

- Up to 32 square miles
 - Covers multiple neighborhoods and communities at once
 - Systems does not focus on any single areas
- Where/when to support determined by Law Enforcement
 - Based on reported crimes, statistics, and crime heat maps from Dayton Police information system
 - Locations, times, and severity of crime patterns
- Working from Reported Crimes
 - Victims/Citizens have requested support by calling 911
 - If they do not call we do not know about it and can not support



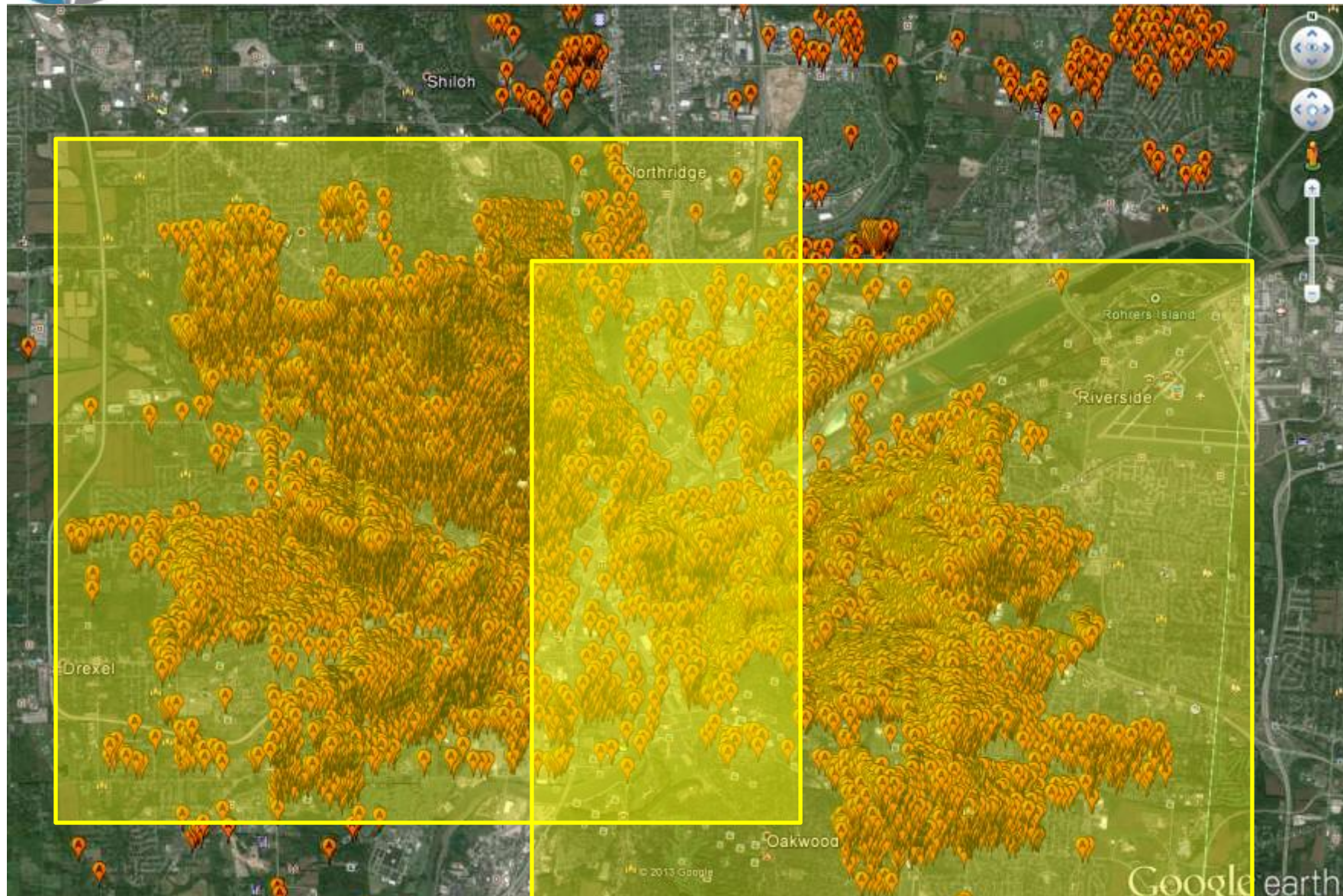
Example

Dayton Crime 2012-13





Dayton Crime 2012-13





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CSP Workforce

Expected Source and Demographics

Position	Number	Local Hires	8A Subcontract	Local HS Interns	Deployed	Potential Minority Hires
Analysts	15-20	11	4-8	2	3	9-15
Pilots	7	7				1-2
Managers	2	1			1	0-1
IT	2	1			1	0-1
Police Liaison	1	1				0-1
Total	32	21	4		7	10-20

More will shift to local hires as we move to longer term operations.

Roughly 2/3rds of our local hired analysts are minorities from the community

After 2 years analysts have experience typically required for DoD Analyst positions



CSP Public Awareness and Engagement Plan

- Public Awareness and Engagement program outlined in plan
 - City Leadership
 - Community Leaders
 - Public Awareness and Engagement Program
 - Community Meetings, Tours, Media...
- CSP will support all requested efforts