DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY

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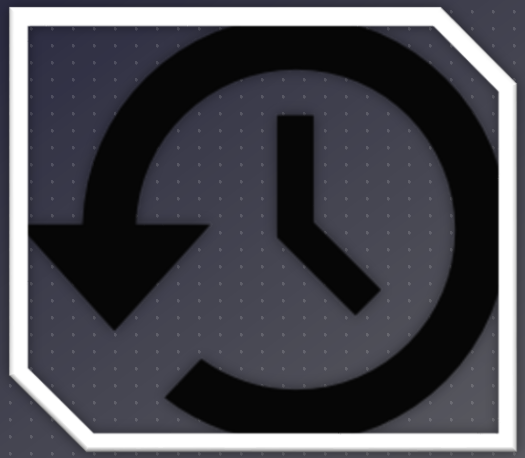
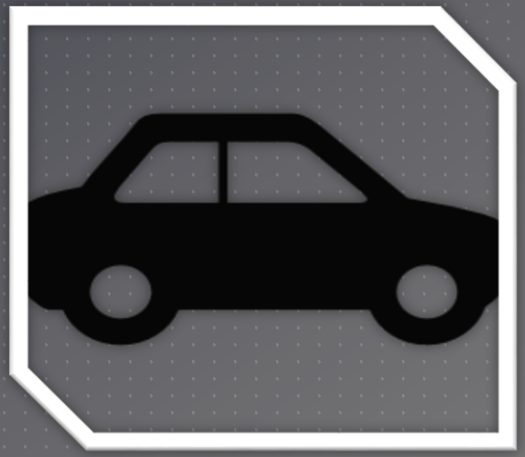
WHAT IS DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY?

DDACTS

TEMPORAL ANALYSIS



SPATIAL ANALYSIS



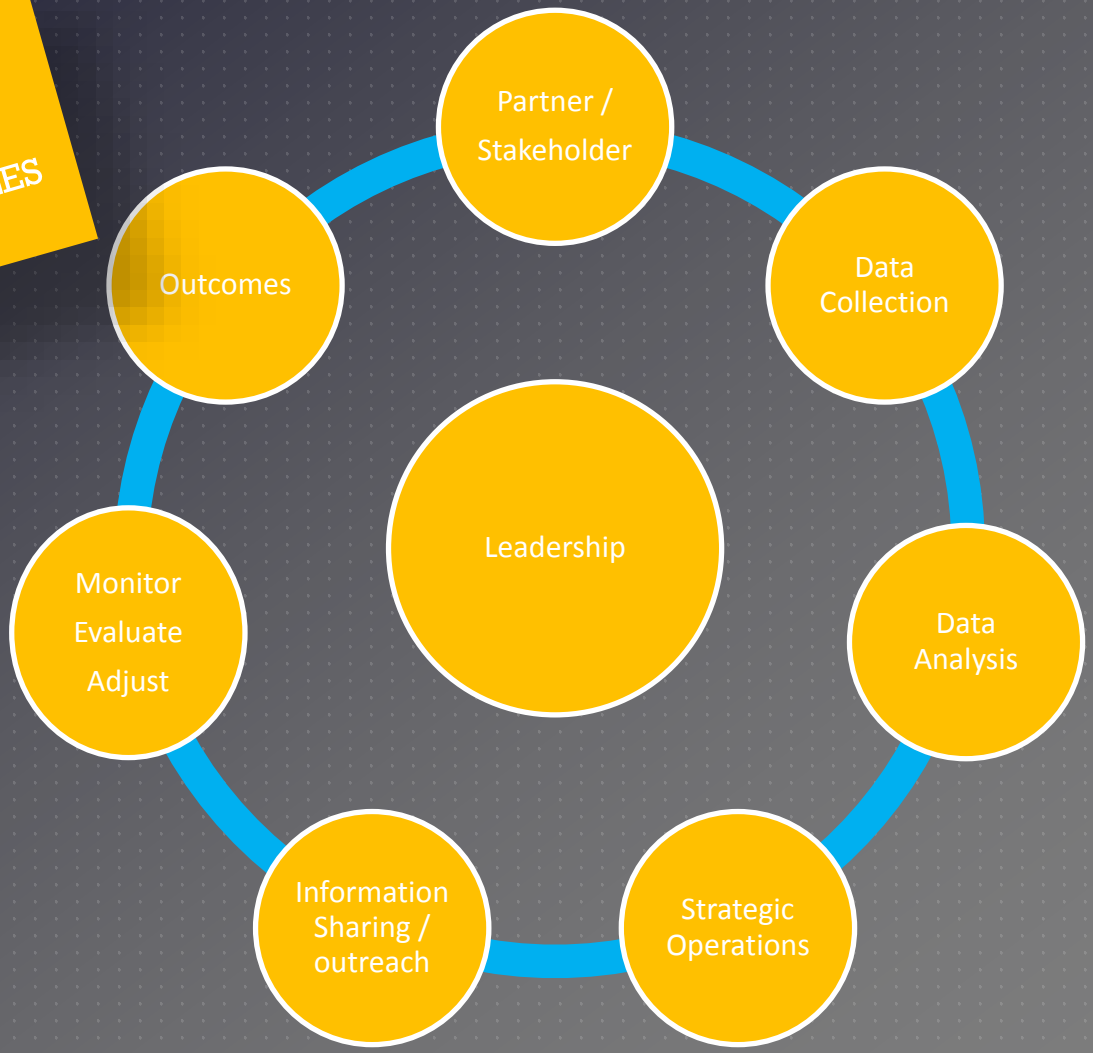
HIGHLY VISIBLE TRAFFIC ENFORCEMENT = CONTACTS *NOT* CITATIONS

MOST CRIMES INVOLVE THE USE OF A MOTOR VEHICLE

DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY

SEVEN GUIDING PRINCIPLES

AGENCIES FIND SUCCESS WHEN FOLLOWING THESE PRINCIPLES



Improve Quality of Life

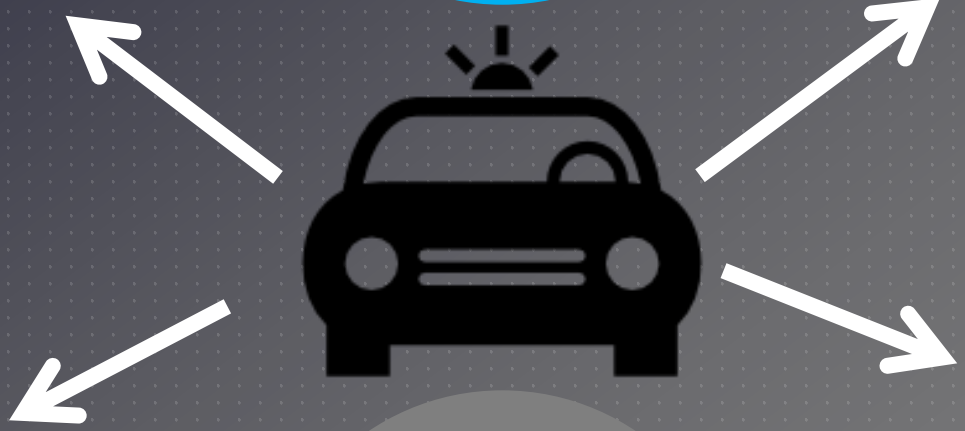
90% of Novi residents believe their quality of life is 'Excellent'

Based on Objective Data Analysis

Using data to drive decision making

Location Based Vs Person Based

Where *not* Who



Timely & Accurate Data

Weekly COMPSTAT meetings

Increased Perceived Risk of Apprehension

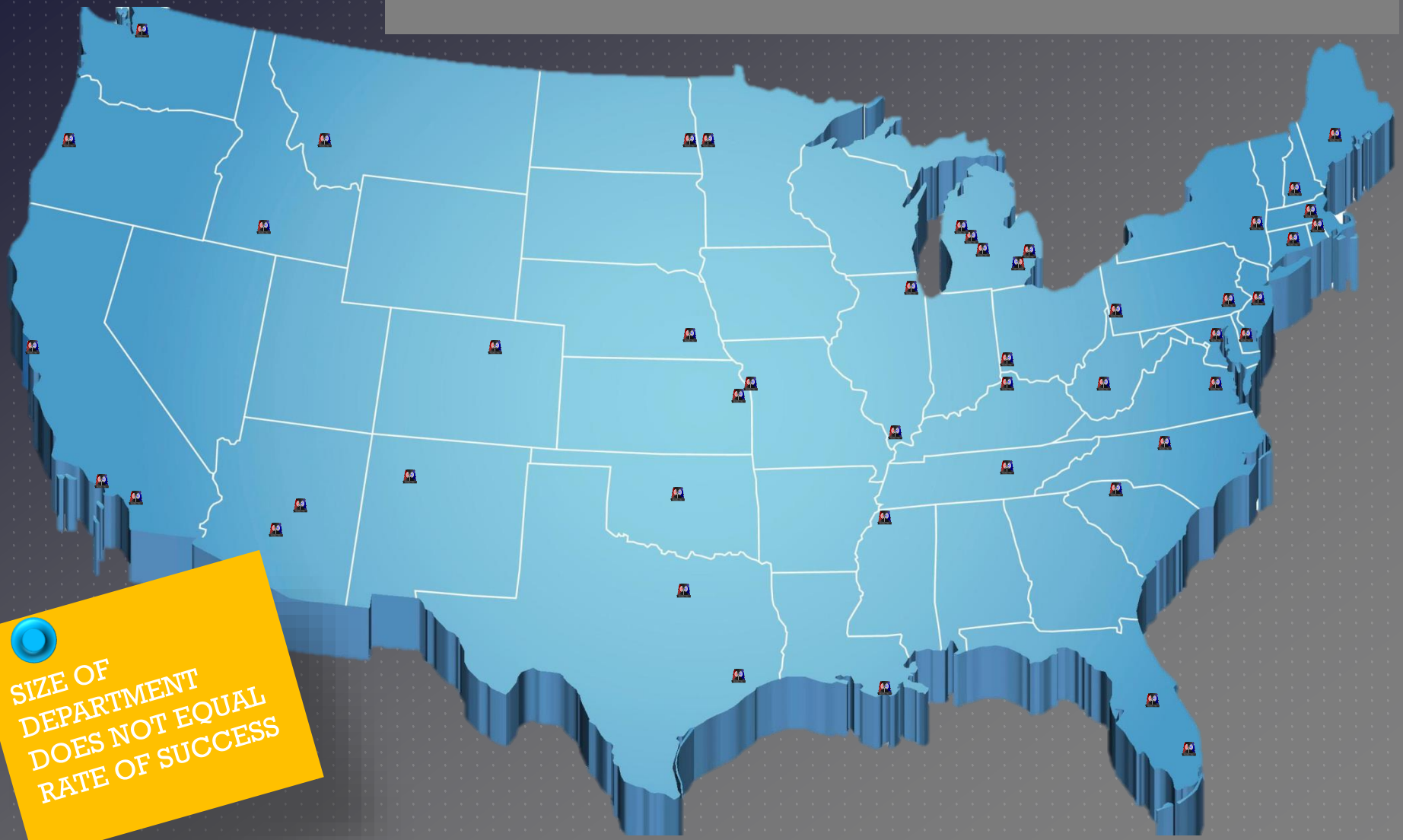
High visibility deters criminals

Efficient Deployment of Limited Resources

Random Patrol= Random Results

DDACTS SUCCESS STORIES

OVER 600 AGENCIES UTILIZING DDACTS



SIZE OF DEPARTMENT DOES NOT EQUAL RATE OF SUCCESS

DDACTS SUPPORTERS

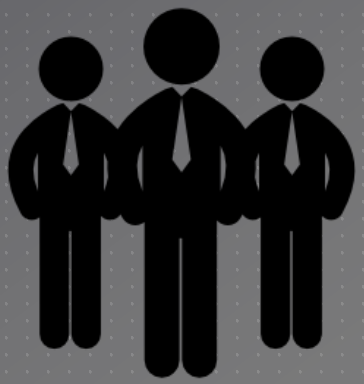
NATIONAL SUPPORT FOR DDACTS

National Institute of Justice

Federal Highway Administration

U.S. Department of Justice

National Highway Traffic Safety Administration



DDACTS SUPPORTERS

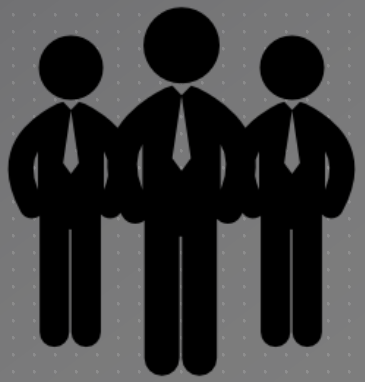
LOCAL SUPPORT FOR DDACTS

NOVI CITY COUNCIL

NOVI DPS

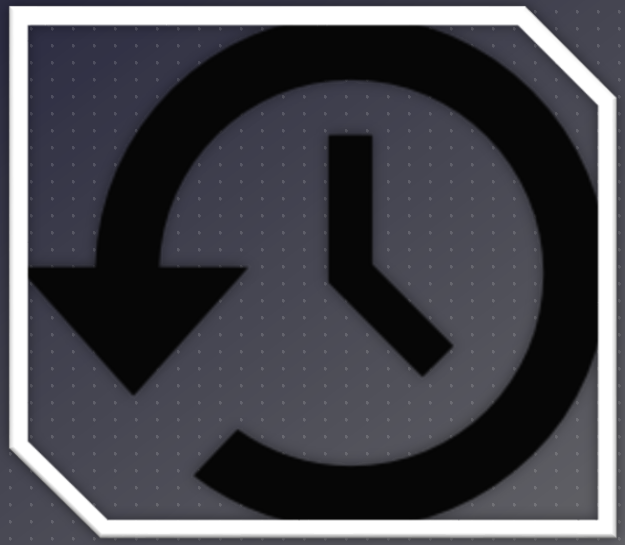
NOVI FIRE DEPARTMENT

LOCAL MEDIA



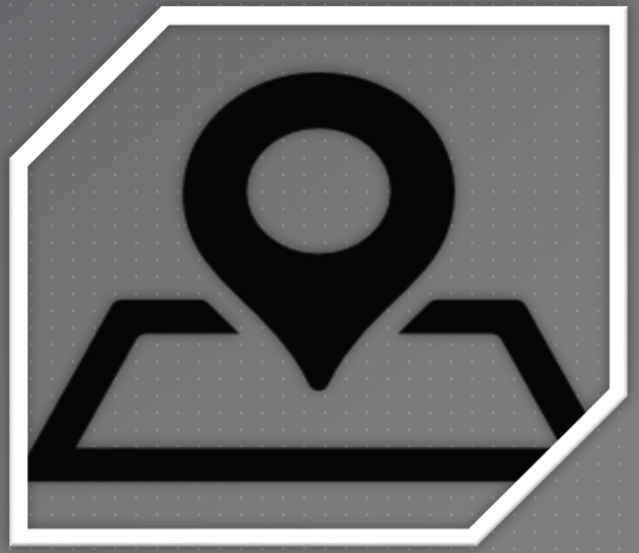
HOW DOES IT ALL WORK?

TEMPORAL ANALYSIS vs SPATIAL ANALYSIS



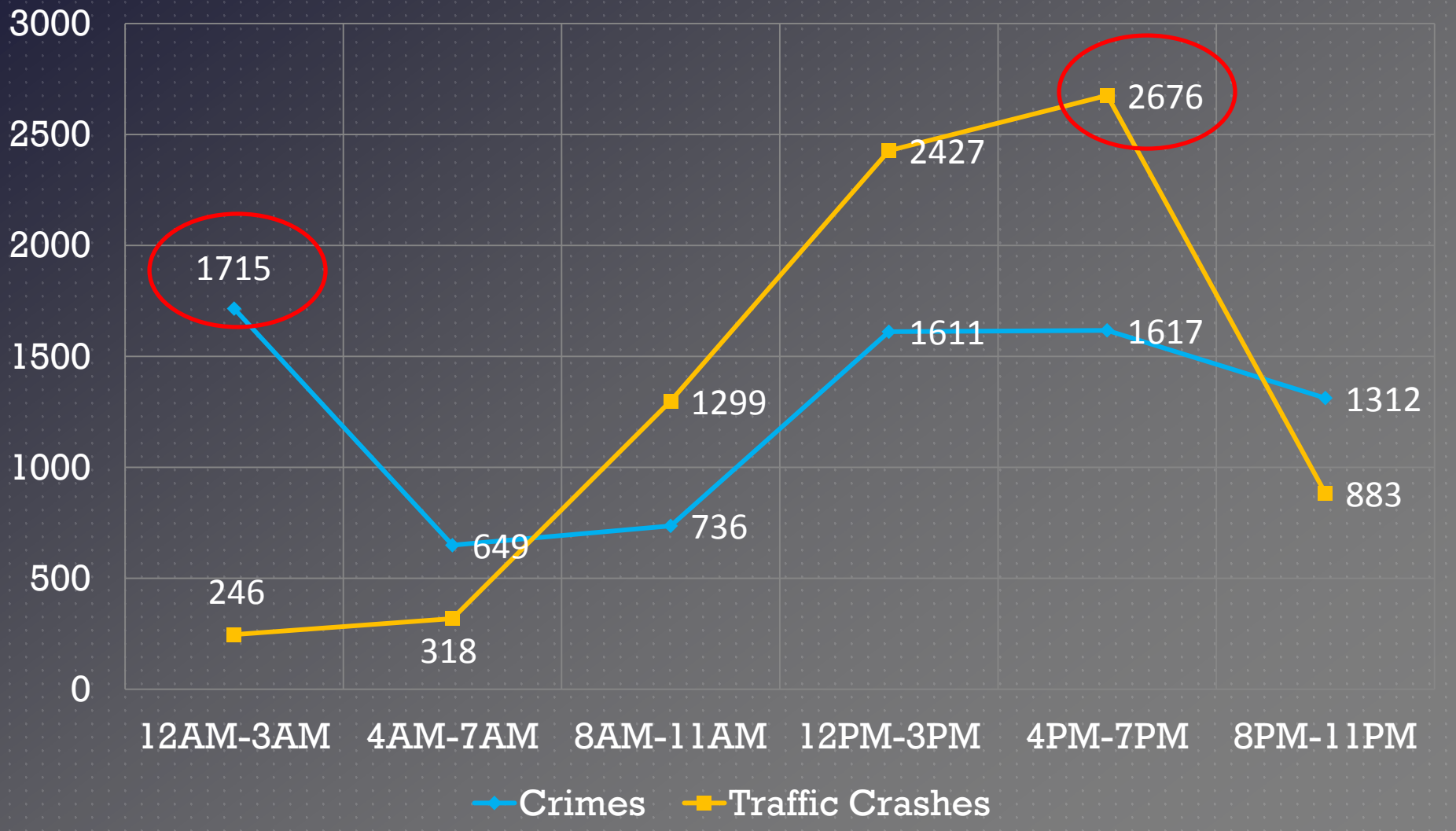
- IDENTIFY HOT SPOTS WITHIN THE CITY OF NOVI
- DEPLOY DEPARTMENT RESOURCES TO THESE AREAS

- USE DATA FROM CLEMIS TO ANALYZE WHERE OUR CRIMES AND TRAFFIC CRASHES ARE OCCURRING THE MOST
- DETERMINE A TIMEFRAME FOR WHEN THEY ARE HAPPENING

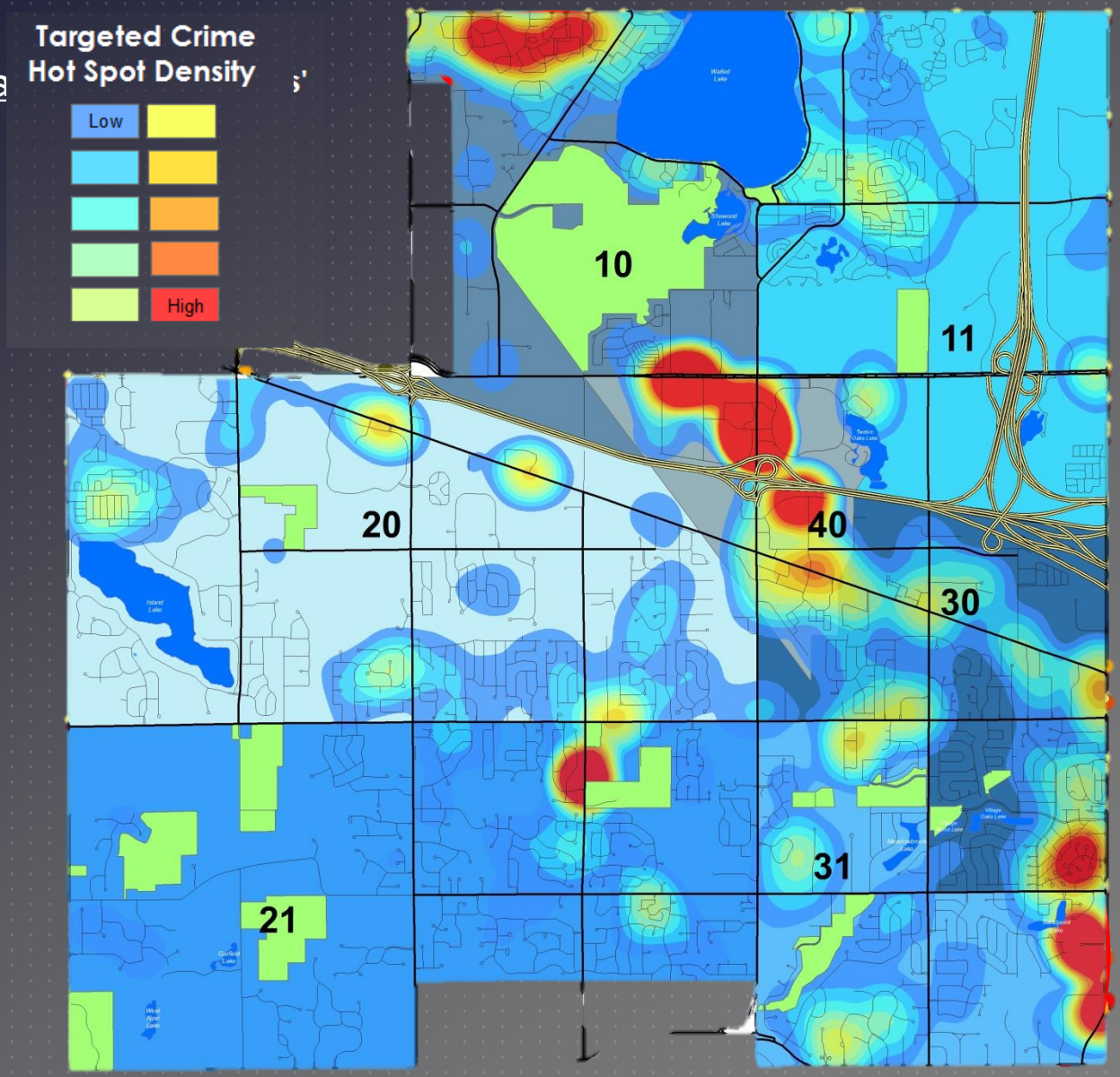


CITY OF NOVI

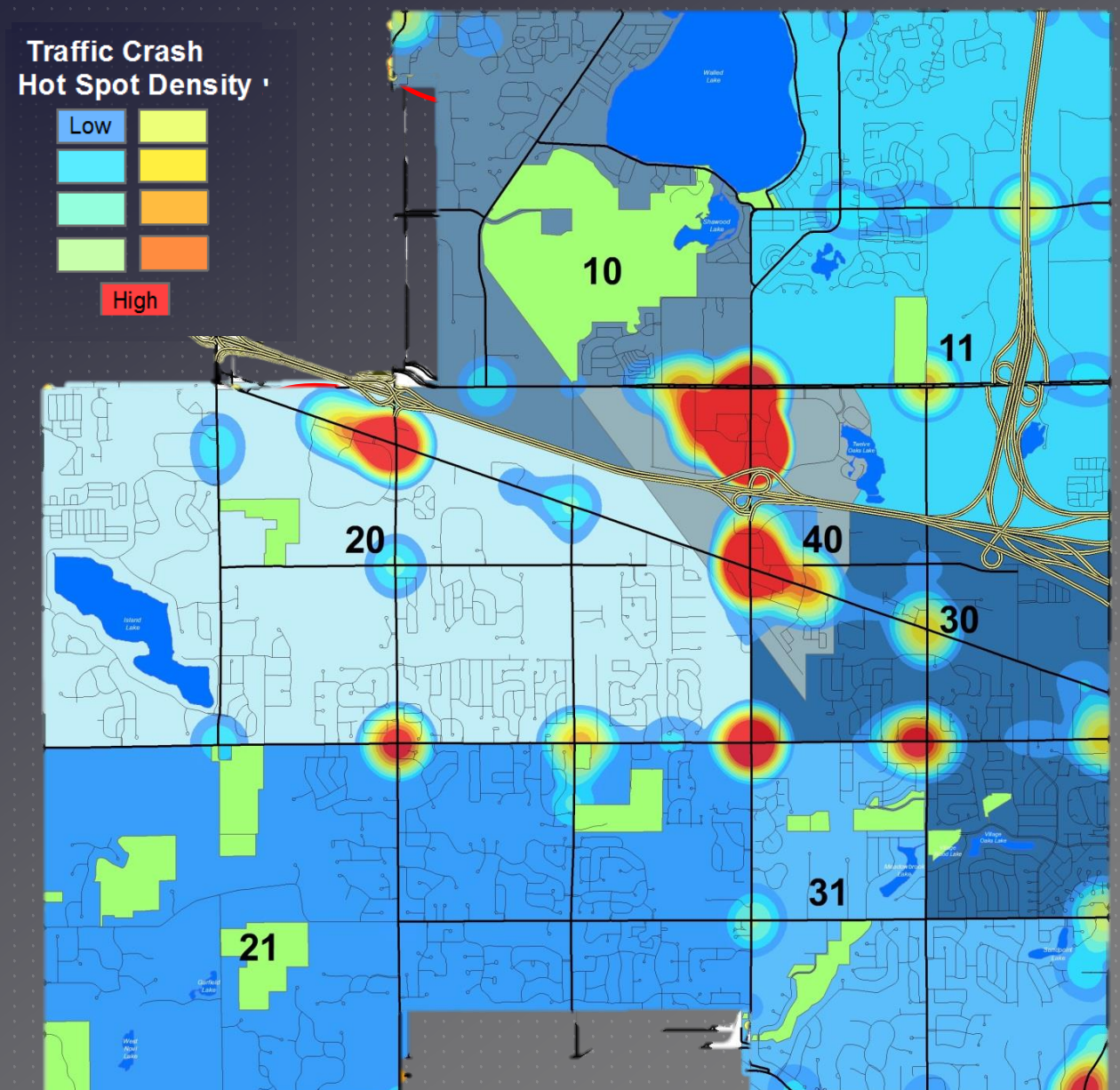
PART A CRIMES & TRAFFIC CRASHES JANUARY 1, 2010 – DECEMBER 31, 2012.



TARGETED CRIMES:
JANUARY 1, 2010 - DECEMBER 31, 2012



TRAFFIC CRASHES:
JANUARY 1, 2010 - DECEMBER 31, 2012



IDENTIFYING DDACTS ZONES

WHERE & WHEN

- Began with one zone to garner full support/buy-in from within the police department.

- <u>First identified zone(s):</u>
  - Crime: Haggerty & Nine Mile
    - Targeting residential area at this location for specific crimes
    - Temporal Analysis: Tuesday – Thursday – 12A-3A
  - Traffic Crashes: Haggerty & Eight Mile
    - Targeting major thoroughfares/intersection at this location for traffic related violations
    - Temporal Analysis: Monday – Friday – 4P-6P

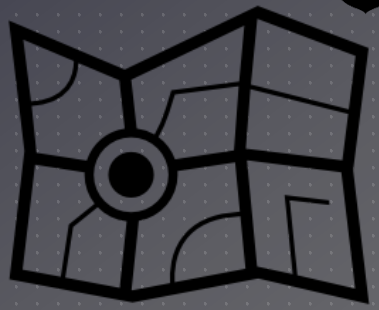
- <u>Second identified zone:</u>
  - Crime: Beck & Pontiac Trail
    - Targeting multiple residential areas at this location for specific crimes
    - Temporal Analysis: Friday - Monday – 12A-3A

  - Traffic Crashes: Beck & Pontiac Trail
    - Targeting major thoroughfares/intersection at this location for traffic related violations
    - Temporal Analysis: Monday – Friday – 2P – 5P

BY THE NUMBERS

2

TARGETED LOCATIONS PATROLLED



ZONES IDENTIFIED WITHIN CITY OF NOVI

3

4

TARGETED LOCATIONS

BY THE NUMBERS

ZONE 1: HAGGERTY & NINE MILE

72

WEEKS PATROLLED IN THIS ZONE

83

CITATIONS WRITTEN IN THIS ZONE

22

703

ARRESTS MADE IN THIS ZONE

68%

REDUCTION IN TARGETED CRIMES

15,651

MILES TRAVELED IN THE ZONE

3,483

561

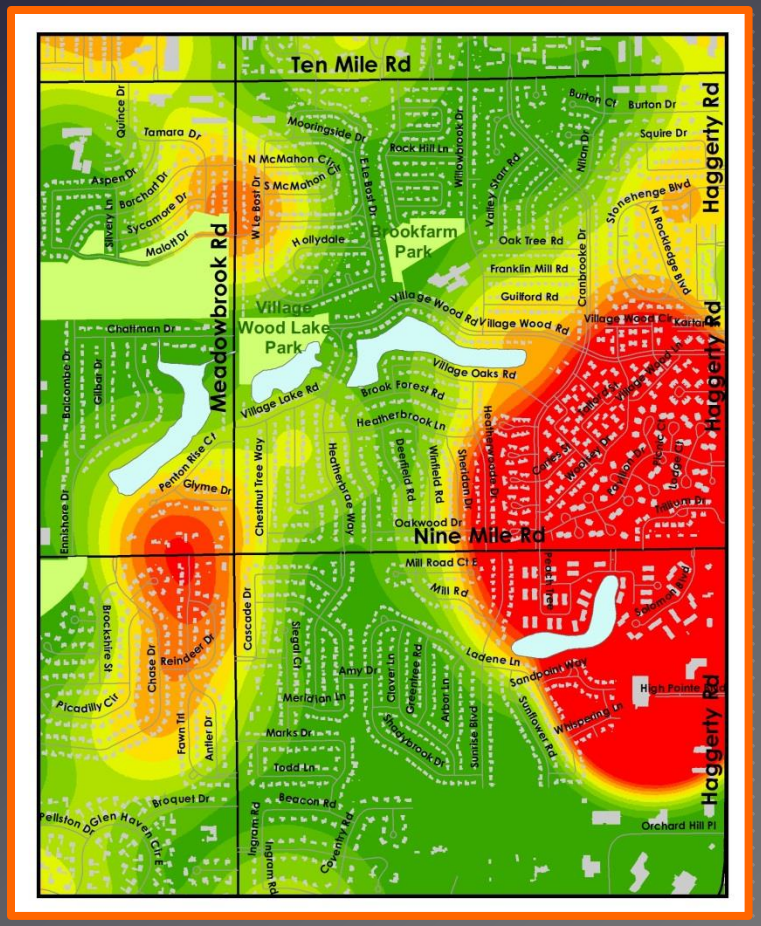
POLICE CONTACTS

123

ILLUSTRATING SUCCESS FROM DDACTS ENFORCEMENT

SEVEN MONTH COMPARISON

PRE DDACTS ENFORCEMENT



Map Legend

Targeted Crime Hot Spot Density

Low

High

DDACTS ENFORCEMENT

BY THE NUMBERS

ZONE 2: HAGGERTY & EIGHT MILE

65

WEEKS PATROLLED IN THIS ZONE

38 278

CITATIONS WRITTEN IN THIS ZONE

HOURS SPENT IN THIS ZONE

100 402

41%

REDUCTION IN TRAFFIC CRASHES

MILES TRAVELED IN THE ZONE

3,032 440

109 666

POLICE CONTACTS

BY THE NUMBERS

ZONE 3: BECK RD & PONTIAC TRL

46

WEEKS PATROLLED IN THIS ZONE

100

CITATIONS WRITTEN IN THIS ZONE

3

60

ARRESTS MADE IN THIS ZONE

51%

REDUCTION IN TARGETED CRIMES

MILES TRAVELED IN THE ZONE

5,616

687

111

490

POLICE CONTACTS

BY THE NUMBERS

ZONE 4: BECK RD & PONTIAC TRL

46

WEEKS PATROLLED IN THIS ZONE

18

458

CITATIONS WRITTEN IN THIS ZONE

146

733

HOURS SPENT IN THIS ZONE

7%

REDUCTION IN TRAFFIC CRASHES

905

6,697

MILES TRAVELED IN THE ZONE

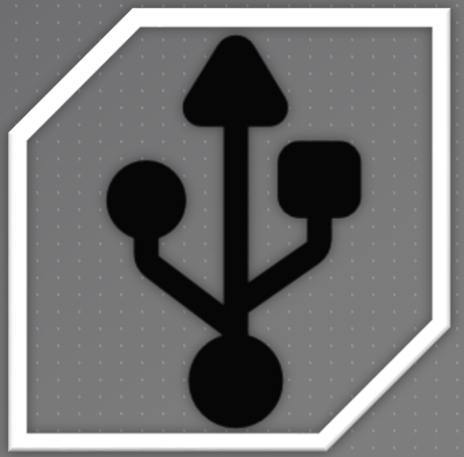
63

1,335

POLICE CONTACTS

Software Programs

THE CRIME ANALYSTS TOOL BOX



mobile
DASHBOARD

CLEMIS
CLEAR

CRIMEVIEW
Dashboard

PreCise
MOBILE RESOURCE MANAGEMENT

ArcGIS
ESRI

DATA DRIVEN DECISION MAKING

RANDOM PATROL = RANDOM RESULTS

THINK OUTSIDE THE BOX

LONG TERM PHILOSOPHY CHANGE

CRIME FIGHTING NEEDS TO BE INTENTIONAL

DEVELOP AN ACTION PLAN

"If you always do what you've always done, you'll always get what you've always got."

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QUESTIONS?

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OMEGA'S CRIMEVIEW DASHBOARD

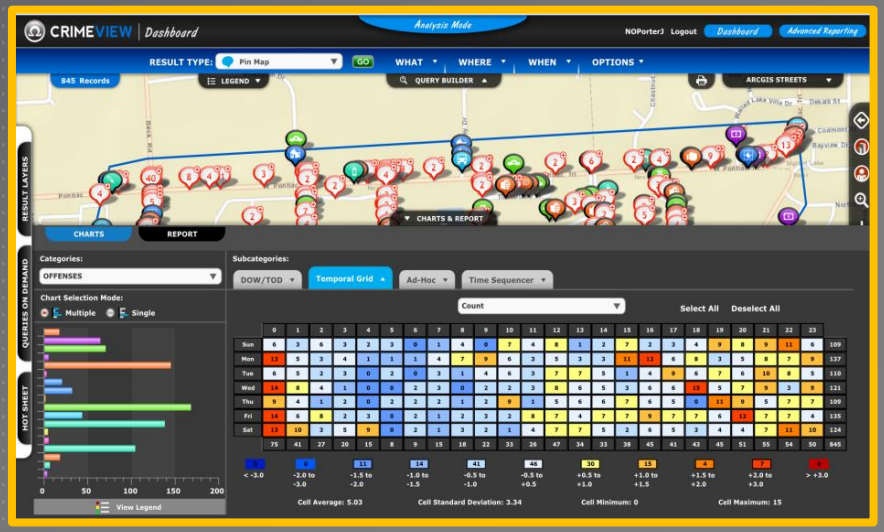
INTERACTIVE CRIME MAPPING SOFTWARE

CRIMEVIEW WIDGETS

- Organizes complex data from multiple databases into visualizations.
- Customize dashboard widgets based on geography, crime type, or policing unit.
- Analyze emerging crime trends through exclusive Briefing Books or Widgets.

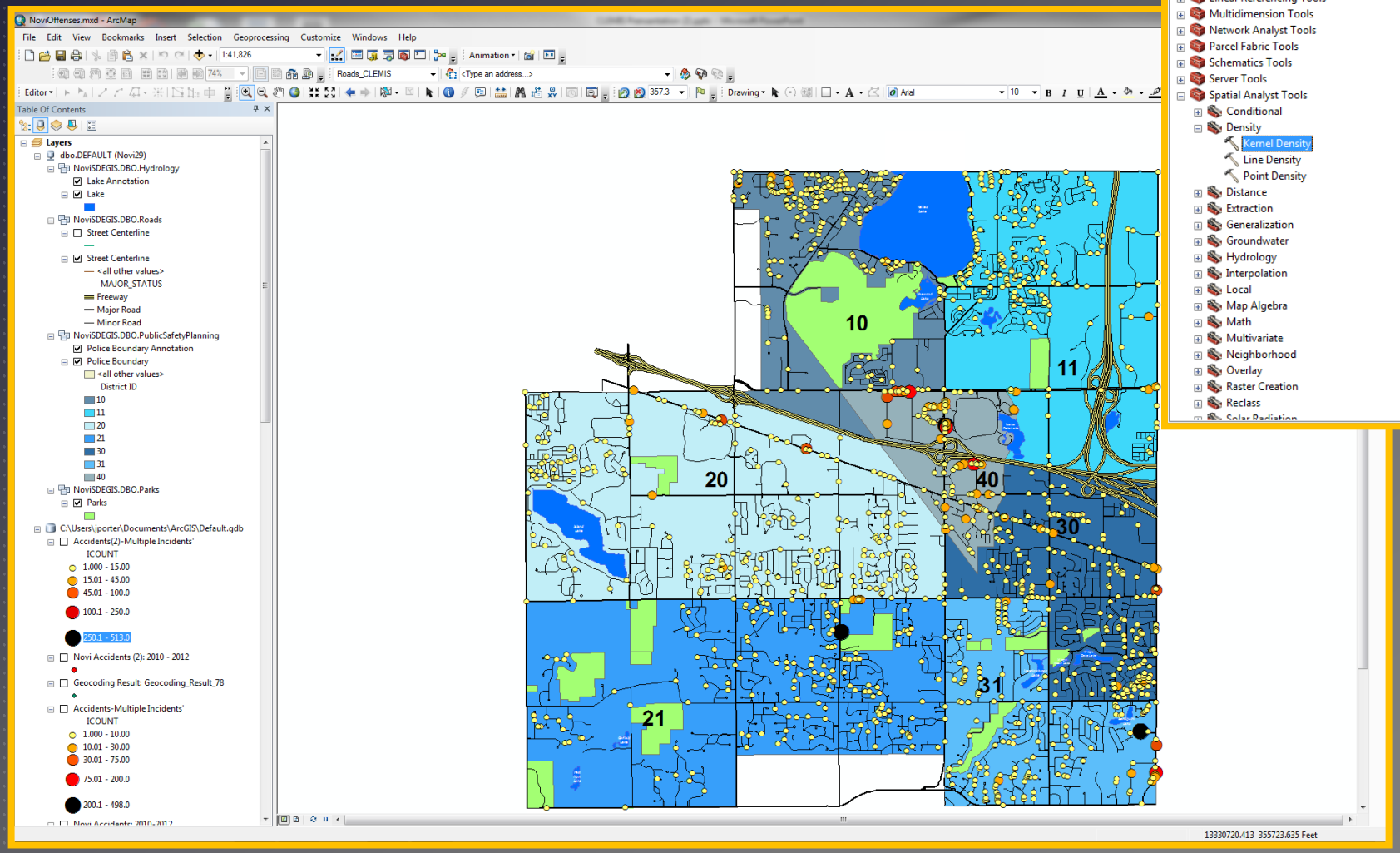
- DDACTS zones can be monitored on a daily basis through CrimeView.
- Used daily at Shift Briefings.
- Provides Command Staff with the tools they need to deploy their resources effectively.

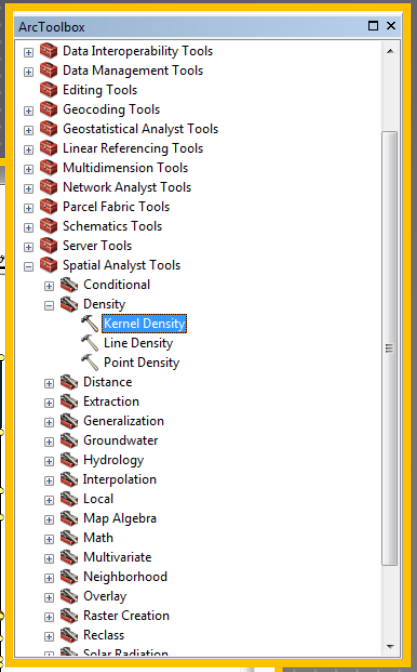
Temporal Analysis



ESRI ARCGIS ARCMAP

CUSTOMIZED CRIME MAPPING

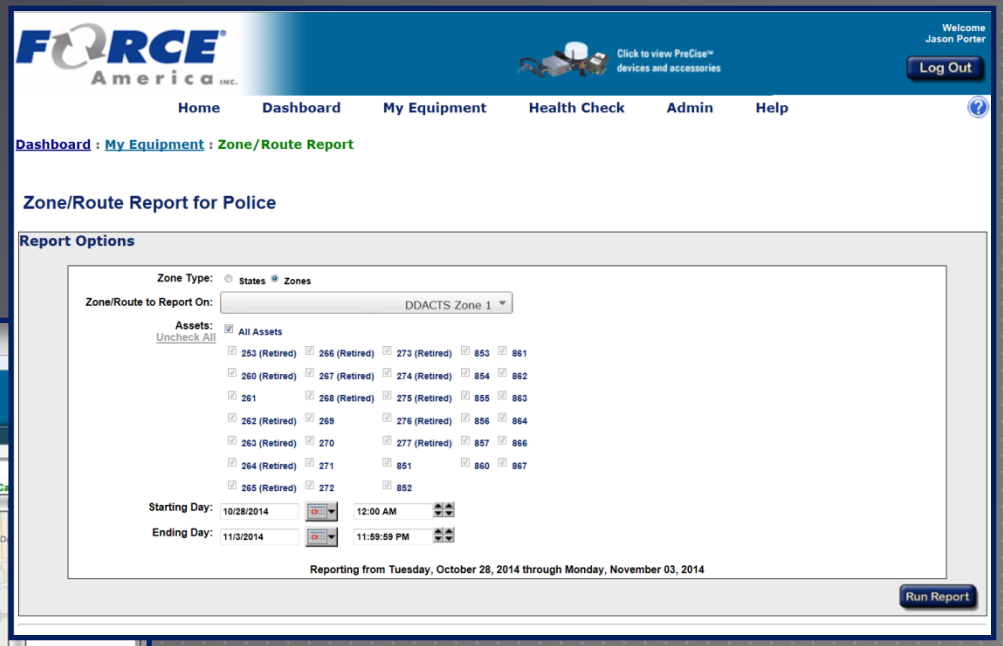


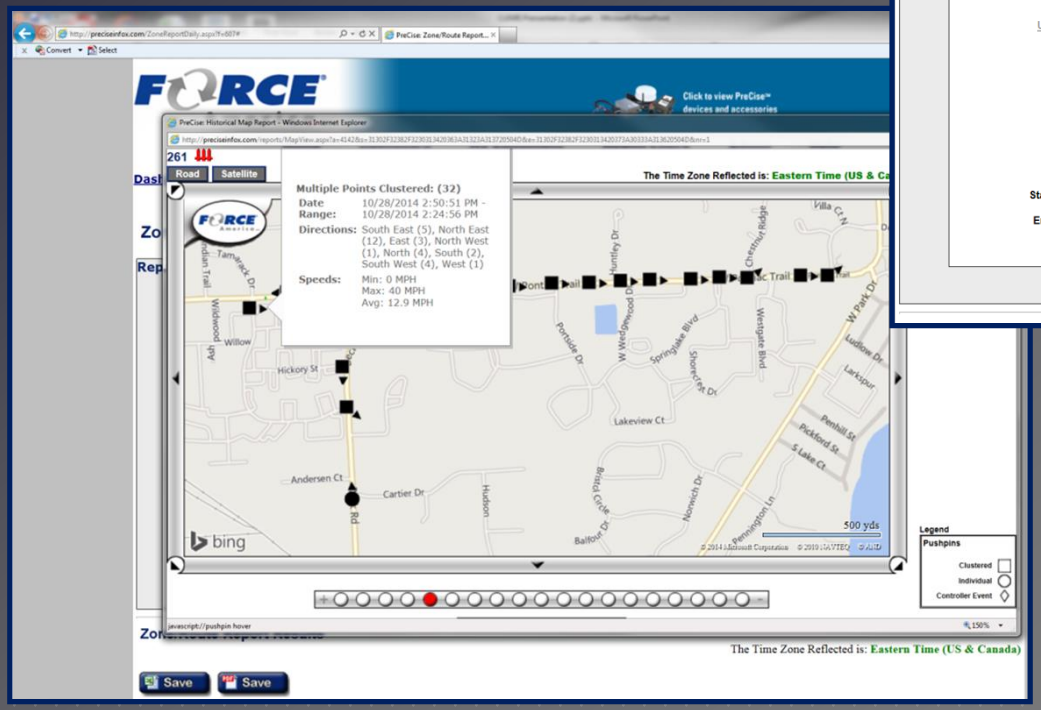


PRECISE AVL TRACKING

WHAT ARE THEY DOING?

- How long were they in the zone?
- Where were they while they were in the zone?
- Did they simply sit in their vehicle?
- Where they proactive with their time?

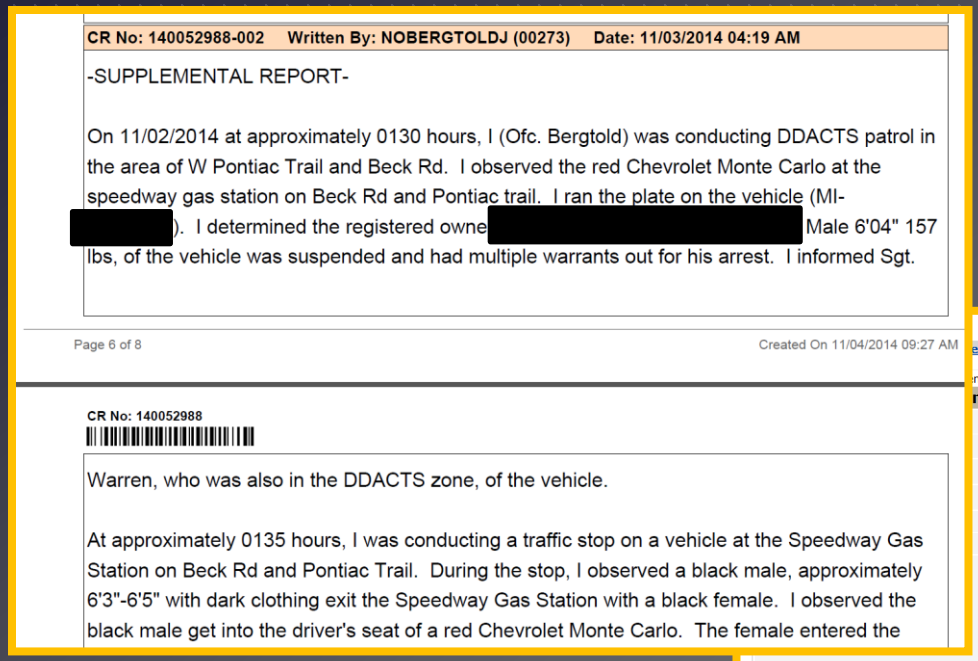




Analyze officer activity within DDACTS zones

CLEMIS CLEAR & MOBILE DASHBOARD

RECORDS MANAGEMENT SOFTWARE



CR No: 140052988-002 Written By: NOBERGTOLDJ (00273) Date: 11/03/2014 04:19 AM

-SUPPLEMENTAL REPORT-

On 11/02/2014 at approximately 0130 hours, I (Ofc. Bergtold) was conducting DDACTS patrol in the area of W Pontiac Trail and Beck Rd. I observed the red Chevrolet Monte Carlo at the speedway gas station on Beck Rd and Pontiac trail. I ran the plate on the vehicle (MI-[redacted]). I determined the registered owne[redacted] Male 6'04" 157 lbs, of the vehicle was suspended and had multiple warrants out for his arrest. I informed Sgt.

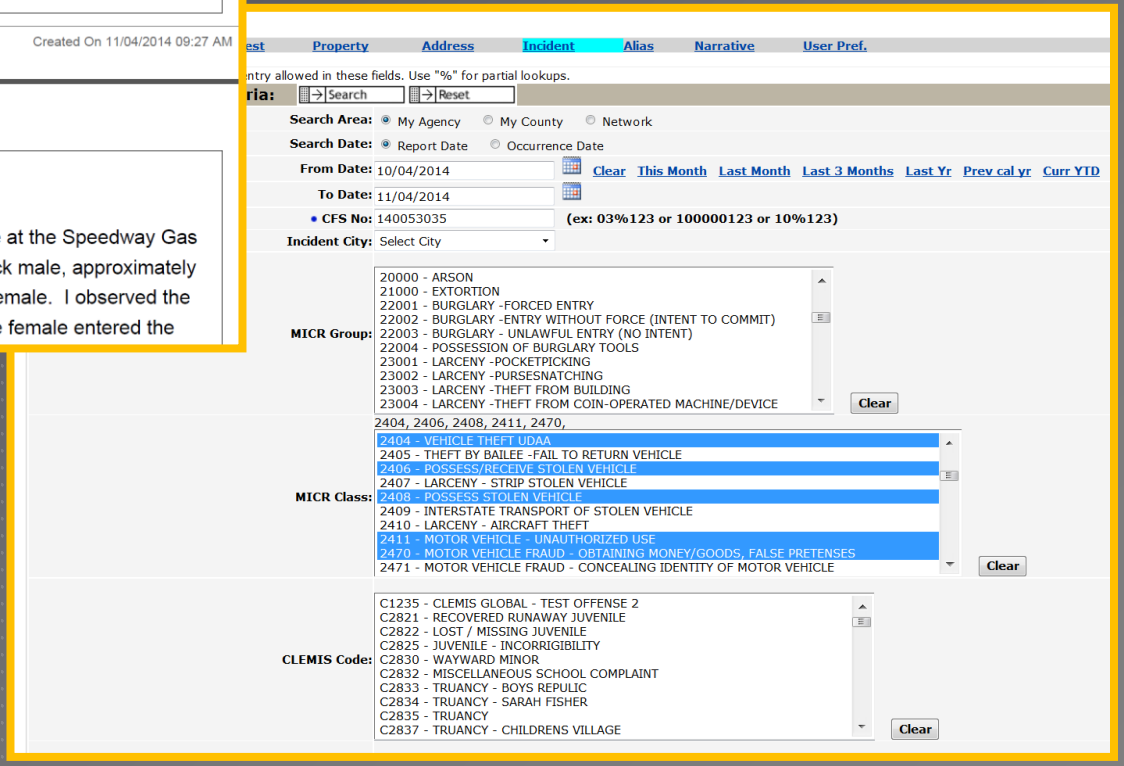
Page 6 of 8 Created On 11/04/2014 09:27 AM

CR No: 140052988

Warren, who was also in the DDACTS zone, of the vehicle.

At approximately 0135 hours, I was conducting a traffic stop on a vehicle at the Speedway Gas Station on Beck Rd and Pontiac Trail. During the stop, I observed a black male, approximately 6'3"-6'5" with dark clothing exit the Speedway Gas Station with a black female. I observed the black male get into the driver's seat of a red Chevrolet Monte Carlo. The female entered the

- Ability to look deeper into DDACTS activity using case reports



est Property Address Incident Alias Narrative User Pref.

ntry allowed in these fields. Use "%" for partial lookups.

ria: Search Reset

Search Area: My Agency My County Network

Search Date: Report Date Occurrence Date

From Date: 10/04/2014 Clear This Month Last Month Last 3 Months Last Yr Prev cal yr Curr YTD

To Date: 11/04/2014

CFS No: 140053035 (ex: 03%123 or 100000123 or 10%123)

Incident City: Select City

MICR Group:
20000 - ARSON
21000 - EXTORTION
22001 - BURGLARY -FORCED ENTRY
22002 - BURGLARY -ENTRY WITHOUT FORCE (INTENT TO COMMIT)
22003 - BURGLARY - UNLAWFUL ENTRY (NO INTENT)
22004 - POSSESSION OF BURGLARY TOOLS
23001 - LARCENY -POCKETPICKING
23002 - LARCENY -PURSESNATCHING
23003 - LARCENY -THEFT FROM BUILDING
23004 - LARCENY -THEFT FROM COIN-OPERATED MACHINE/DEVICE
Clear

2404, 2406, 2408, 2411, 2470,

MICR Class:
2404 - VEHICLE THEFT UDAA
2405 - THEFT BY BAILEE -FAIL TO RETURN VEHICLE
2406 - POSSESS/RECEIVE STOLEN VEHICLE
2407 - LARCENY - STRIP STOLEN VEHICLE
2408 - POSSESS STOLEN VEHICLE
2409 - INTERSTATE TRANSPORT OF STOLEN VEHICLE
2410 - LARCENY - AIRCRAFT THEFT
2411 - MOTOR VEHICLE - UNAUTHORIZED USE
2470 - MOTOR VEHICLE FRAUD - OBTAINING MONEY/GOODS, FALSE PRETENSES
2471 - MOTOR VEHICLE FRAUD - CONCEALING IDENTITY OF MOTOR VEHICLE
Clear

CLEMIS Code:
C1235 - CLEMIS GLOBAL - TEST OFFENSE 2
C2821 - RECOVERED RUNAWAY JUVENILE
C2822 - LOST / MISSING JUVENILE
C2825 - JUVENILE - INCORRIGIBILITY
C2830 - WAYWARD MINOR
C2832 - MISCELLANEOUS SCHOOL COMPLAINT
C2833 - TRUANCY - BOYS REPULIC
C2834 - TRUANCY - SARAH FISHER
C2835 - TRUANCY
C2837 - TRUANCY - CHILDRENS VILLAGE
Clear

- Drill down the data for a more detailed look at incidents
- Identify key facts that can link suspects, crime patterns, and officer activity