Pedestrian Safety

CountyStat Meeting #2
April 18, 2008

CountyStat

CountyStat Principles

- **Require Data Driven Performance**
- **Promote Strategic Governance**
- **Increase Government Transparency**
- **Foster a Culture of Accountability**

Agenda

- Introductions
- Follow-up items from 2/29/2008 meeting
- Data collection issues
- High Incidence Areas
- Major Lighting projects
- Wrap-up

Follow-up Items: DPWT

Develop a process to ensure coordination of pedestrian safety strategies and efforts and monitoring and reporting of progress.

Status: Partially Completed

- Pedestrian Safety Coordinator position relocated to DPWT
  - Incumbent resigned
  - New candidate applications now being reviewed
- Staff level Implementation Group formed Dec 2007; meets monthly to coordinate implementation of CE Pedestrian Safety Initiative
- Dept./Agency Head Steering Committee being formed to meet regularly to ensure resolution of significant issues between MCPS, MCPB, MCPD, PIO, DPS, and MSHA
- Pedestrian Safety Strategic Plan to be discussed at Steering Committee
  - Identify strategies being implemented and ensure focus
  - Reporting mechanism for Strategic Plan being developed to advise interested parties of progress and results
  - Matrices tracking each strategy to be published routinely.

Follow-up Items: Police

Examine how accidents are coded in police reports with particular focus on how driver and pedestrian culpability is categorized.

Status: Partially Completed

- Fault is already captured as a separate field within the traffic reports and is categorized as either driver, pedestrian, or both
- The MCPD will be conducting in-service training throughout the summer for all officers on coding of traffic reports
  - Improve the completeness and consistency of traffic reports
  - Familiarize all officers with updates to the MAARS reports

Follow-up Items: Police

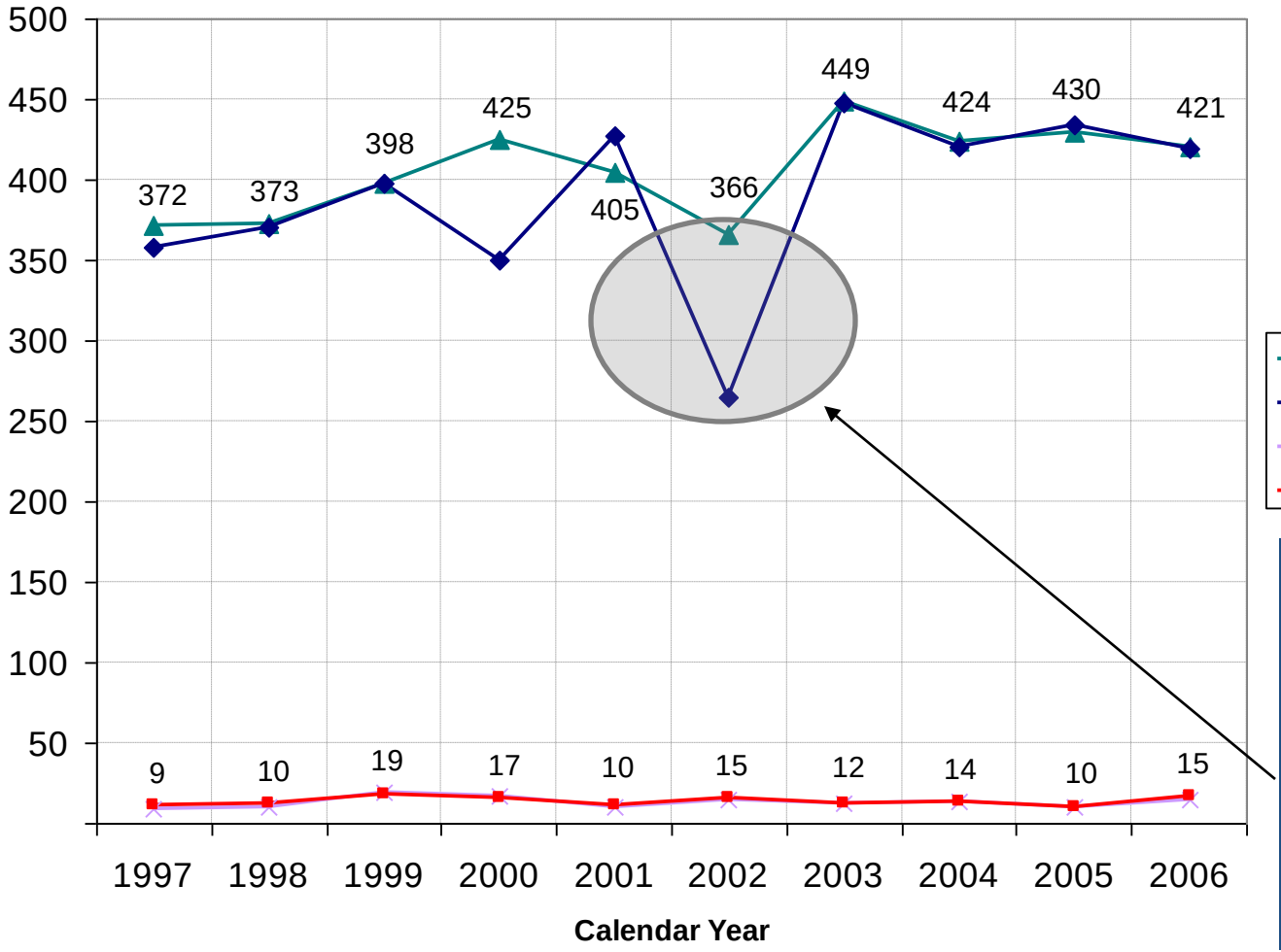
Determine reason for the drop in collisions seen in 2002.

Status: Completed

- According to Police analysts, pedestrian collision data prior to 2003 has data integrity issues that would call any analysis conclusions into question. The Analysis Section has worked since that time to improve the integrity of data.
- This integrity issue may also explain the discrepancies seen between the County's data and State data on numbers of pedestrian collisions

Source	Collisions
MCPD: original number	265
MCPD: current dataset	394
SHA reported number	366

Pedestrian Collisions and Fatalities in Montgomery County

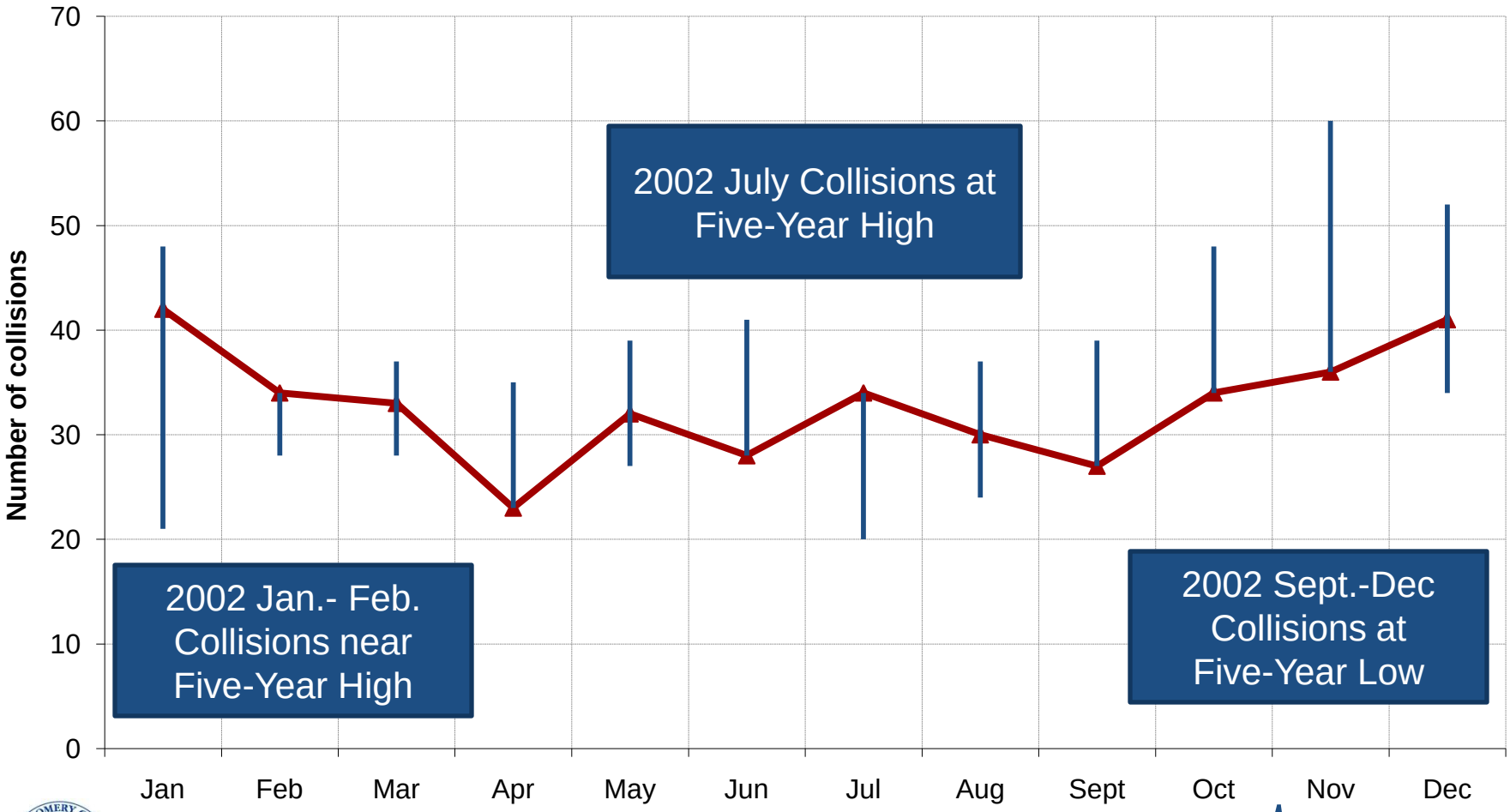


Uncertain about cause of drop.

Uncertain about cause of discrepancy with state data.

2002 Pedestrian Collisions

Number of 2002 Pedestrian Collisions by Month with High-Low Range 2002-2007 Shown



Follow-up Items: DPS

Barring the presentation of additional data, confirm that the Department of Permitting Services will not include two new inspector positions in DPS budget.

Status: Completed

– This decision results in a total savings of $174,000 per year.

Meeting Topics

- **Data Collection**
  - Discuss current data limitations and recommend creation of a unified data collection system

- **High Incident Areas**
  - Revisit and document the logic for High Incident Areas chosen for inclusion in the first year of the Pedestrian Safety Initiative. Examine others that may potentially be included.

- **Lighting Strategies**
  - Rethink and develop lighting strategy to correspond to pedestrian collision sites.

Data Collection Issues

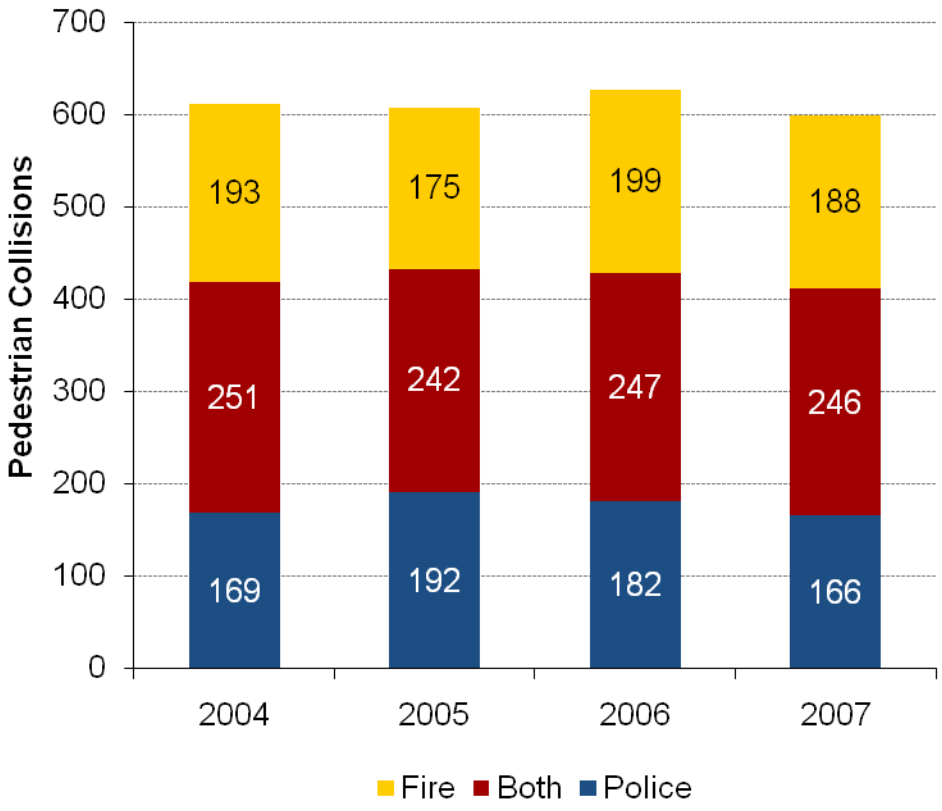
If the goal of pedestrian safety is to reduce the number of pedestrian-vehicle collisions, then strategies should be centered around areas and issues identified through analysis of crash data.

- It is important that the data being used is complete so that an accurate picture of pedestrian collisions across the county is developed.

- **Thesis:** There are pedestrian collisions that occur within Montgomery County that do not appear within the traffic collisions database kept by the Police Department.

- **Analysis**
  - Police data vs. MCFRS data
  - Spatial analysis of Police data

Comparison of MCPD vs. MCFRS Collision Data



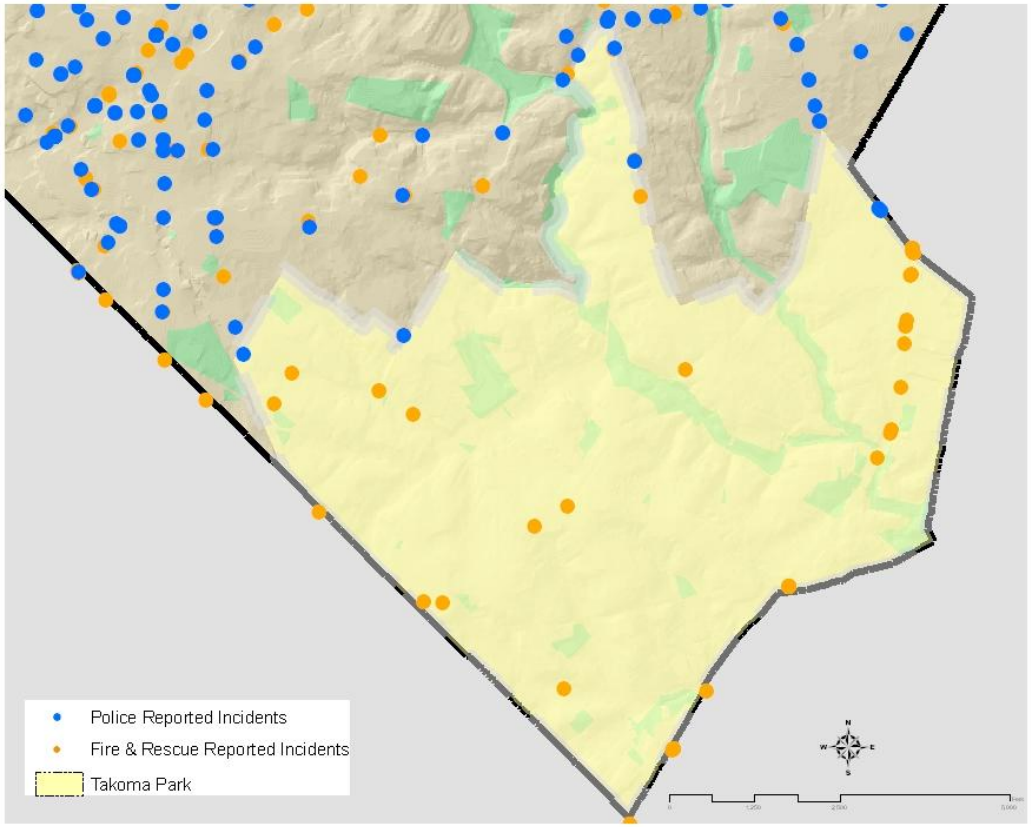
	Police	Fire	Total*
2004	420	444	613
2005	434	417	609
2006	429	446	628
2007	412	434	600
Total	1,695	1,741	2,450

Each year, MCPD and MCFRS list 175-200 pedestrian collisions that are not in the other department's database.

Comparison of MCPD vs. MCFRS Collision Data

- **Some of the discrepancy between MCPD and MCFRS data reflects jurisdictional boundaries like municipalities.**
- **Even in MCPD's jurisdiction, there are incidents that appear in the MCFRS database but not in the MCPD database.**

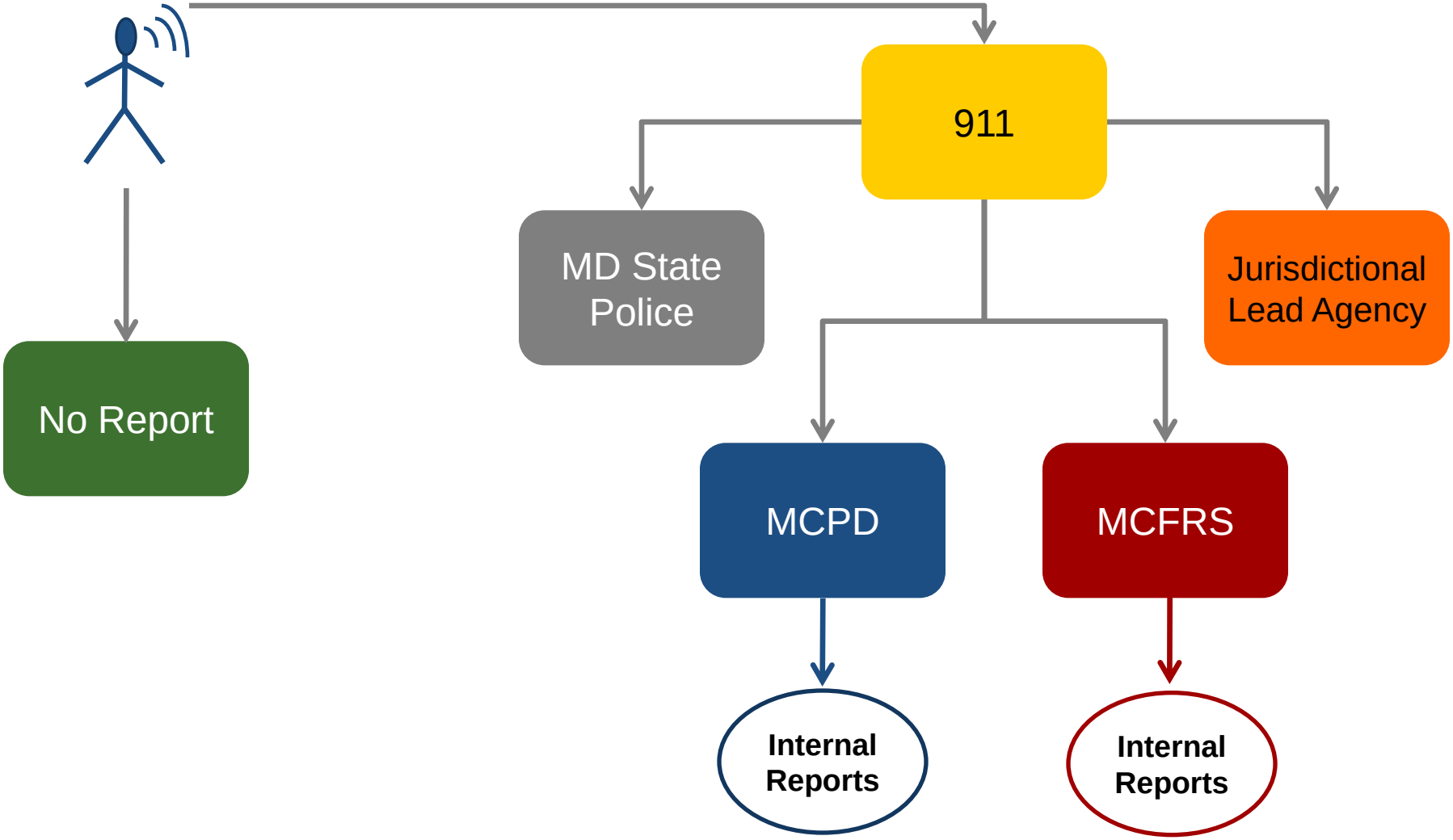
MCPD and MCFR Reported Pedestrian Collisions in Takoma Park (2004-2007)



Source: MCPD; MC Fire & Rescue

In Takoma Park, MCFRS shows collisions that MCPD does not.

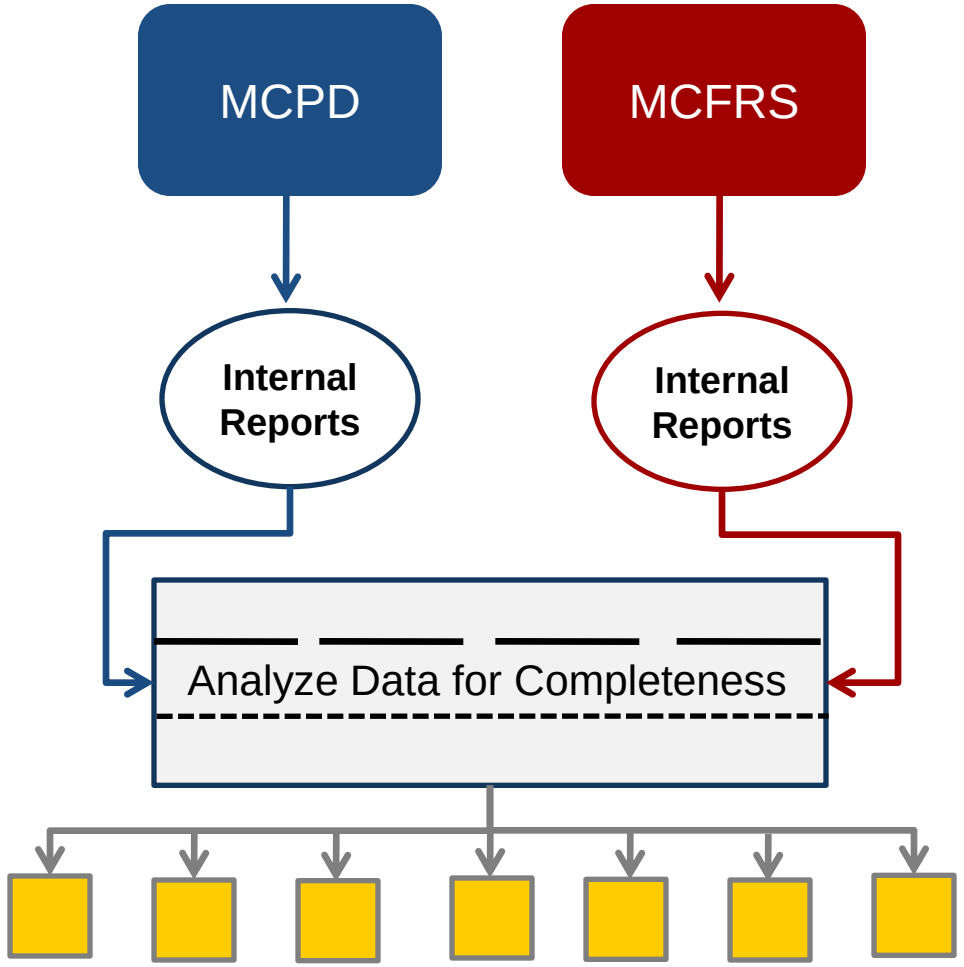
Data Collection: Current Incident Reporting



Data Collection: Rectifying Internal Reporting

- **Data from all pedestrian collisions needs to be centrally collected.**

- **Steps**
  - Identify data that is to be collected
  - Articulate an approach to analyzing the data
  - Determine stakeholder responsible for maintaining dataset
  - Collect unified data
  - Report on results of analysis



Generate Issue Reports with Complete Data Sets

High Incidence Areas

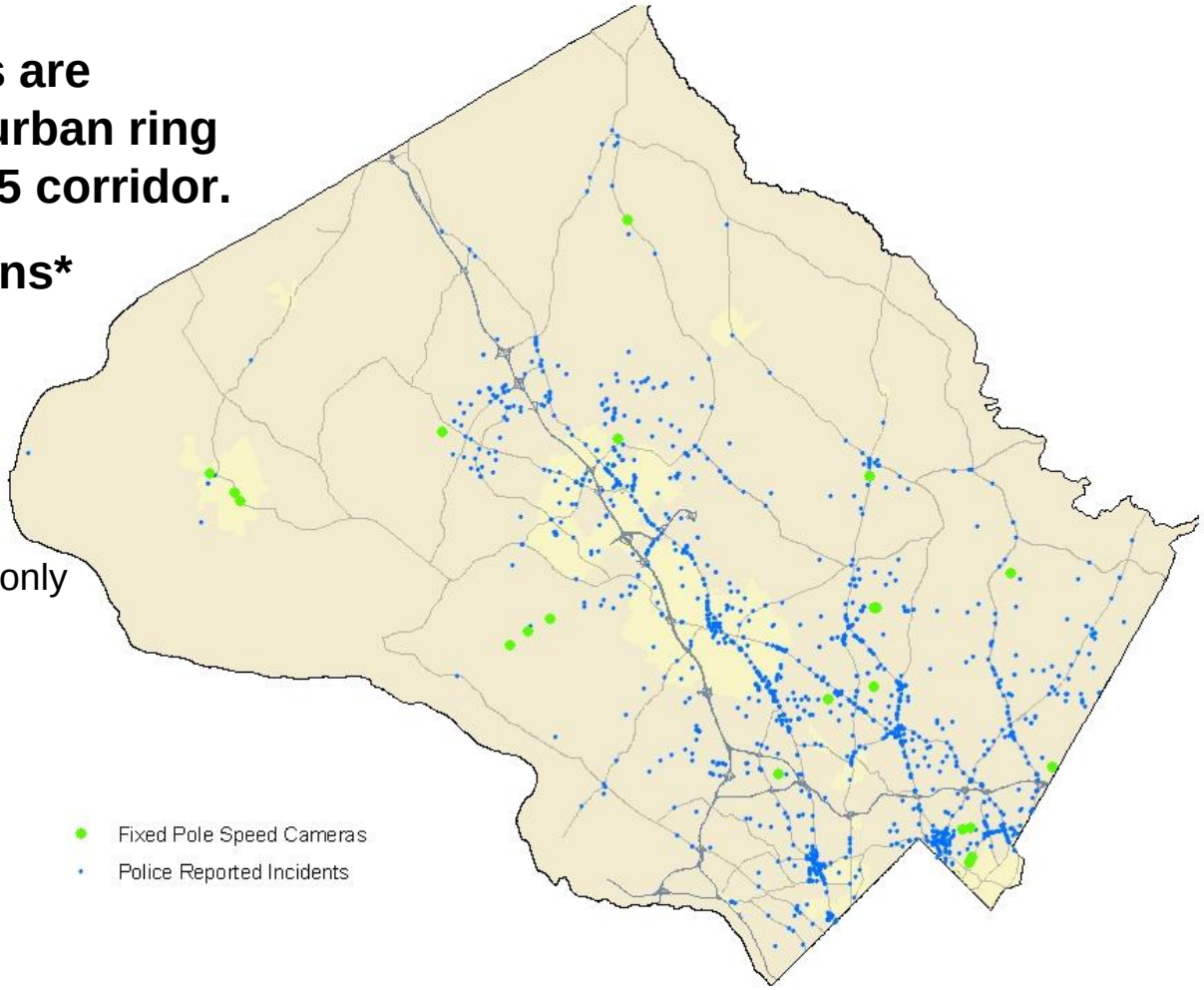
Revisit and document the logic for High Incident Areas chosen for inclusion in the first year of the Pedestrian Safety Initiative. Examine others that may potentially be included.

- **Initial selection method for High Incidence Areas**
  - Limited data set – initial prioritization for program development
  - Used 2004-2006 pedestrian collision data from MCPD
  - Incidents were plotted on a GIS map
  - Discrete segments of roadway were manually selected considering
    - Grouping intersections with highest number of collisions
    - Manageable lengths to conduct Pedestrian Roadway Safety Audits (PRSA)
    - Separation of groupings along naturally occurring break points

Pedestrian Collisions, 2004-2007

- **Pedestrian collisions are concentrated in the urban ring and along the MD-355 corridor.**
- **Total of 1695 collisions***
  - 2004: 420
  - 2005: 434
  - 2006: 429
  - 2007: 412

  * Police-reported collisions only



Source: MCPD

High Incidence Areas: Potential Locations

High Incidence Clusters

- **21 collisions**
  - Centered around Wisconsin Ave and Hampden Ln

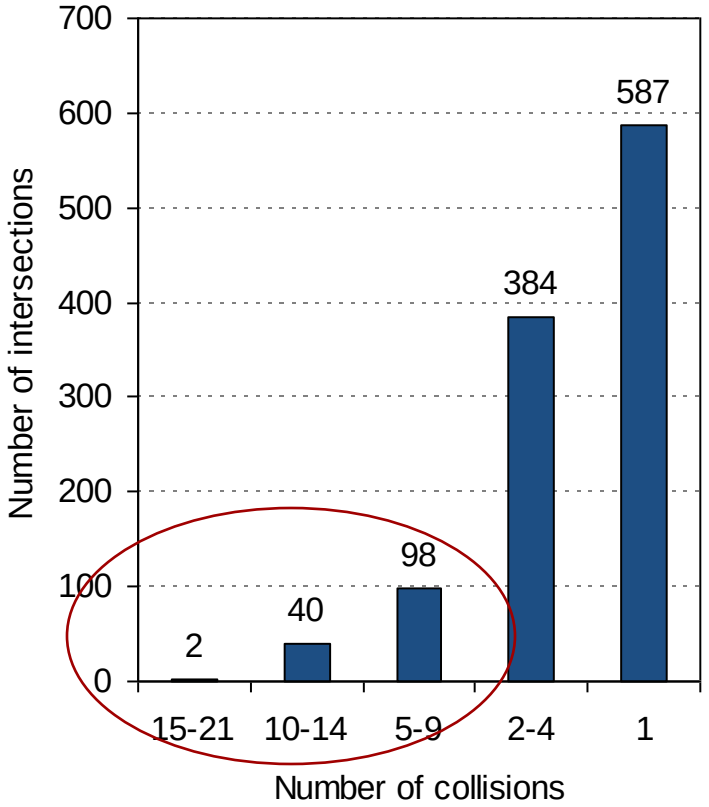
High Incidence Intersections

- **20 collisions**
  - Piney Branch Rd and University Blvd
- **10-14 collisions**
  - Colesville Rd and East-West Hwy
  - Colesville Rd and Fenton St
  - Colesville Rd and Georgia Ave
  - Colesville Rd and University Blvd

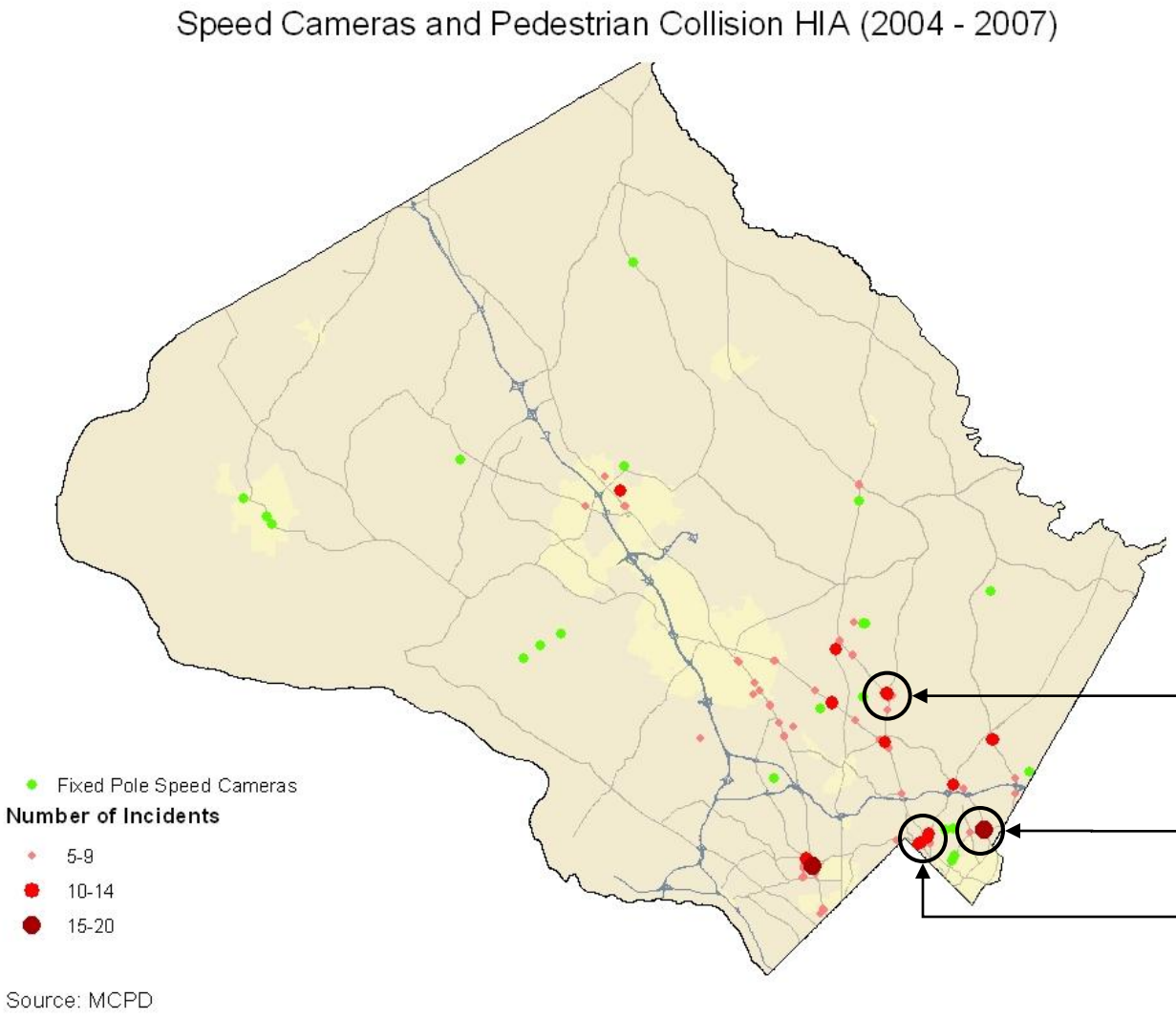
High Incidence Areas are intersections or clusters with 5 or more collisions

- Includes 458 collisions
- Represents 27% of all collisions

Number of intersections or clusters of intersections with the given number of collisions, 2004-2007



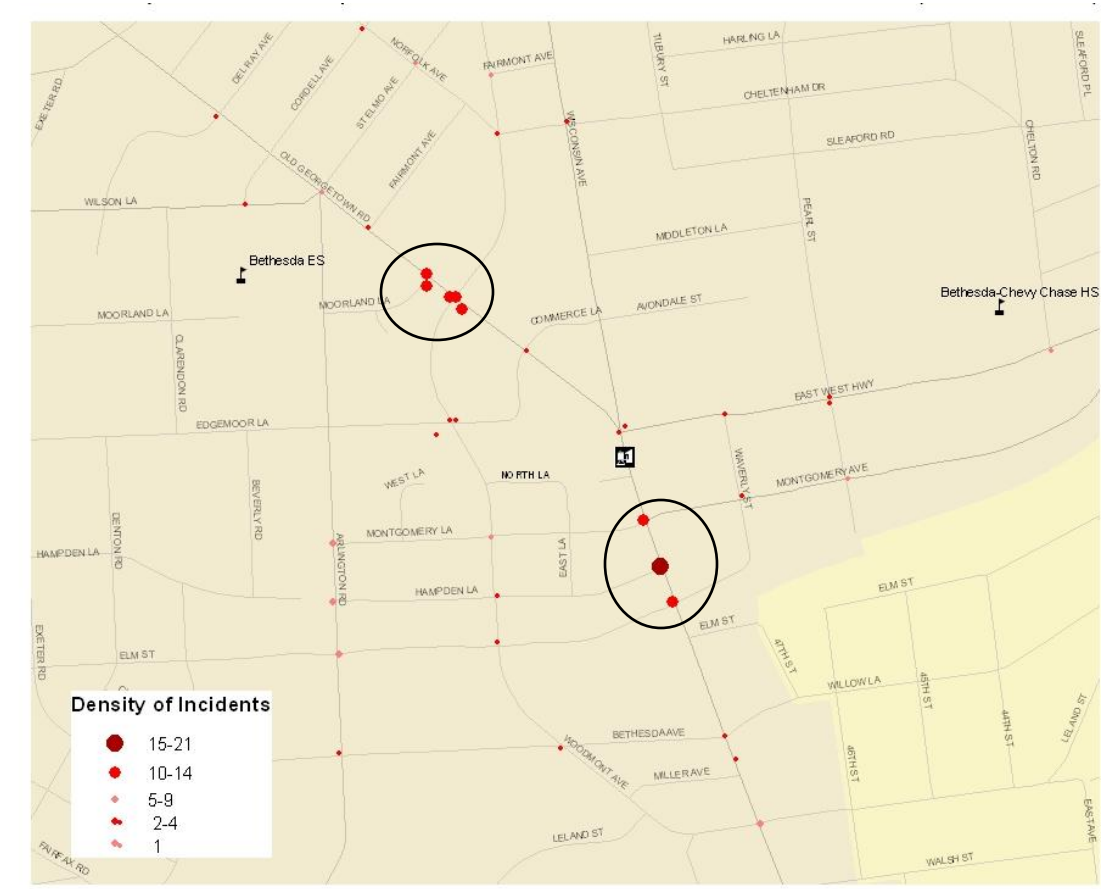
High Incidence Areas: Potential Locations



- Intersections with high numbers of collisions are concentrated in the southeastern part of the county.
- All sites currently selected continue to be identified using this methodology.

Potential Locations: Bethesda

- **Clusters of intersections form two distinct high incidence areas**



Source: MCPD

An example of potential high incidence areas using clusters of intersections.

Potential Locations: Silver Spring

- **Clusters of intersections form a distinct high incidence area**
- **Individual high incidence intersections are also identified**
- **DPWT identified the highlighted area as one of the four high incidence areas listed in the Pedestrian Safety Initiative**

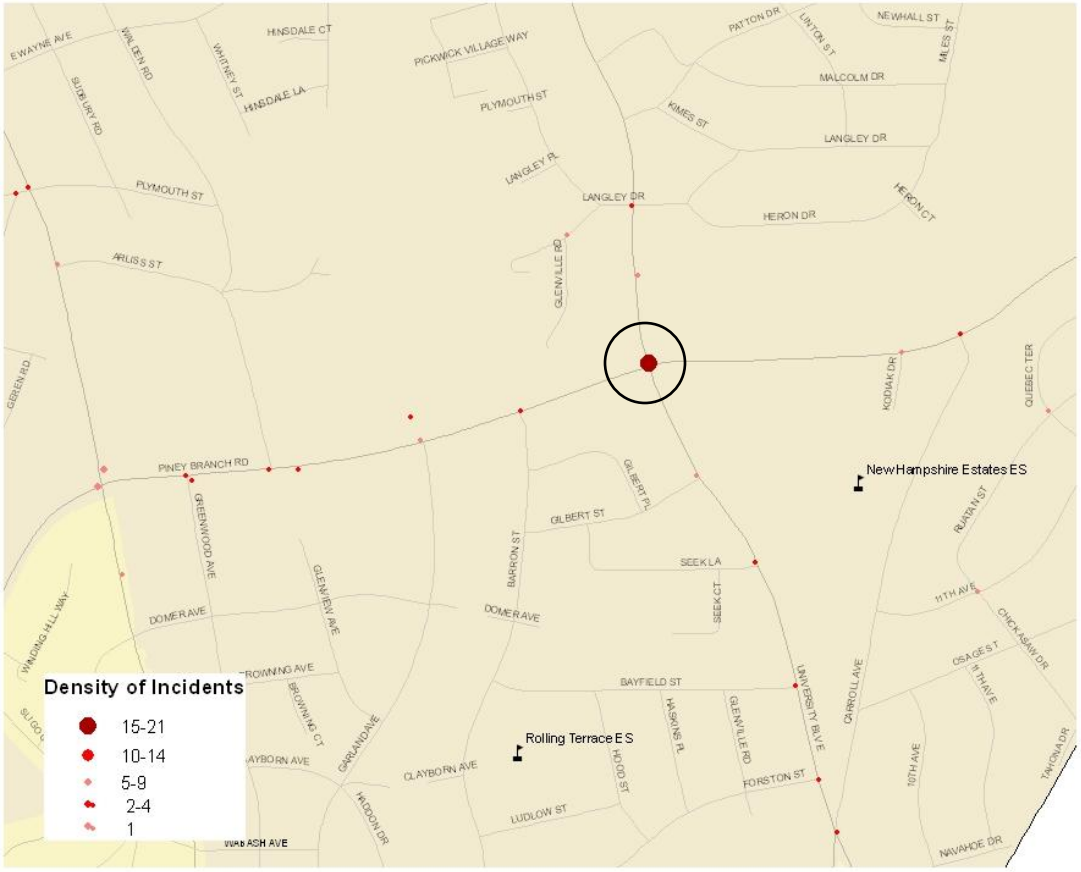
Speed Cameras and Pedestrian Collision HIA in Silver Spring (2004 - 2007)

Source: MCPD

An example of potential high incidence areas using individual intersections.

Potential Locations: Piney Branch Road

- **A single high incidence intersection is identified**



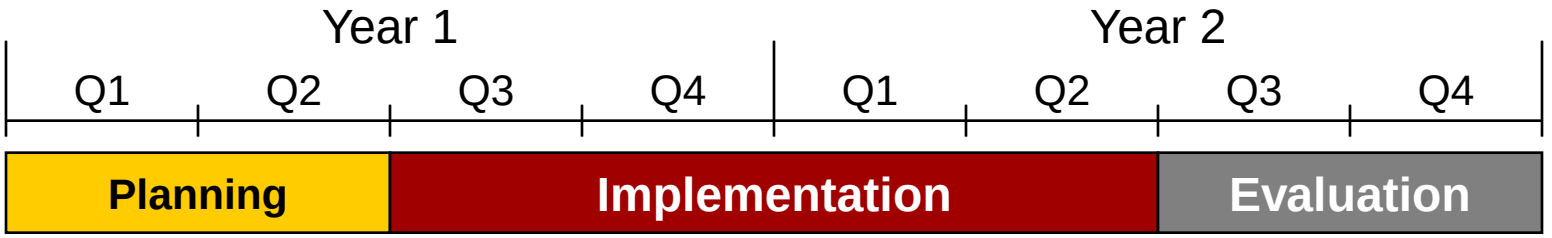
Source: MCPD

An example of potential high incidence areas using individual intersections.

High Incidence Area Implementation: Pedestrian Road Safety Audits

- **Auditing procedure**
  - Process based on Federal Highway Administration guidelines
  - Will be overseen by DPWT Traffic Engineering and Operations
  - To be facilitated by consultant (currently under contract)
    - Same consultant that is developing guidelines for Federal Highway Admin.
- **Improvements to be implemented by contractors, in-house forces, and/or the State Highway Administration**
- **Entire process for targeting high incidence areas**
  - Will be a multi-year process from beginning to end
  - Will target 4 HIA's annually

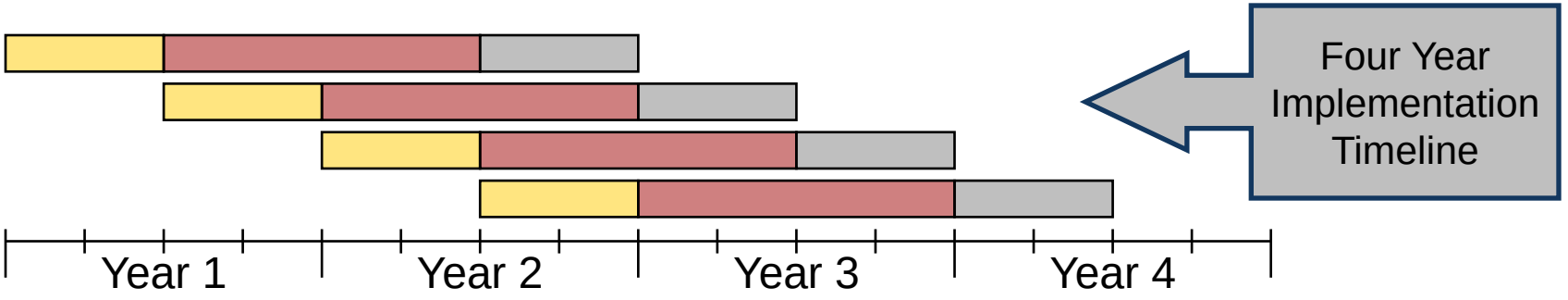
Pedestrian Road Safety Audit Timeline



Audit
Collision Analysis
Baseline Data
- Pedestrian survey
- Traffic speeds

Engineering Improvements
Targeted Enforcement
Targeted Education

Data Collection
- Collision data
- Pedestrian survey
- Traffic speeds



High Incidence Areas: Data Analysis

- **For high incidence areas other than those identified for full PRSA audits, analysis of pedestrian collision data can still be performed**
- **Identify standard characteristics of each high incidence area**
  - Demographic distribution: pedestrians vs. drivers, gender, age, fault
  - Distribution of incidents in time
  - Contributing factors
  - Pedestrian location and movement
- **Characteristics may point toward near-term solutions and allow wider impact**

High Incidence Areas: Data Analysis

Example form for collecting data about a high incidence area.

	2004	2005	2006	2007	Total
Number of collisions					
Pedestrians, Drivers, Gender, and Fault					
Number of pedestrians					
# of males involved					
# of males at fault					
# of females involved					
# of females at fault					
Total # at fault					
Number of drivers					
# of males involved					
# of males at fault					
# of females involved					
# of females at fault					
Total # at fault					
Distribution of collisions in time					
Light condition codes					
Daylight (01)					
Dawn or dusk (02)					
Dark: street lights on (03)					
Dark: no street lights (04)					
Number in daylight (between sunrise and sunset)					
Daylight					
Not in daylight					
Distribution by days of the week					
Sunday					
Monday					
Tuesday					

High Incidence Areas: Recommendations

- **Recommend facilities be given priority rankings based on the average crash density**
- **Utilize a robust data set**
  - Use latest 4 years of pedestrian collision data
  - Utilize GIS capabilities for more rigorous analysis
- **Discrete HIA's will be identified using GIS-produced collision densities**
  - Roadway segments within these areas with highest number of collisions will be selected for PRSA
  - Manageable lengths
  - Along naturally occurring break points

Major Lighting Projects

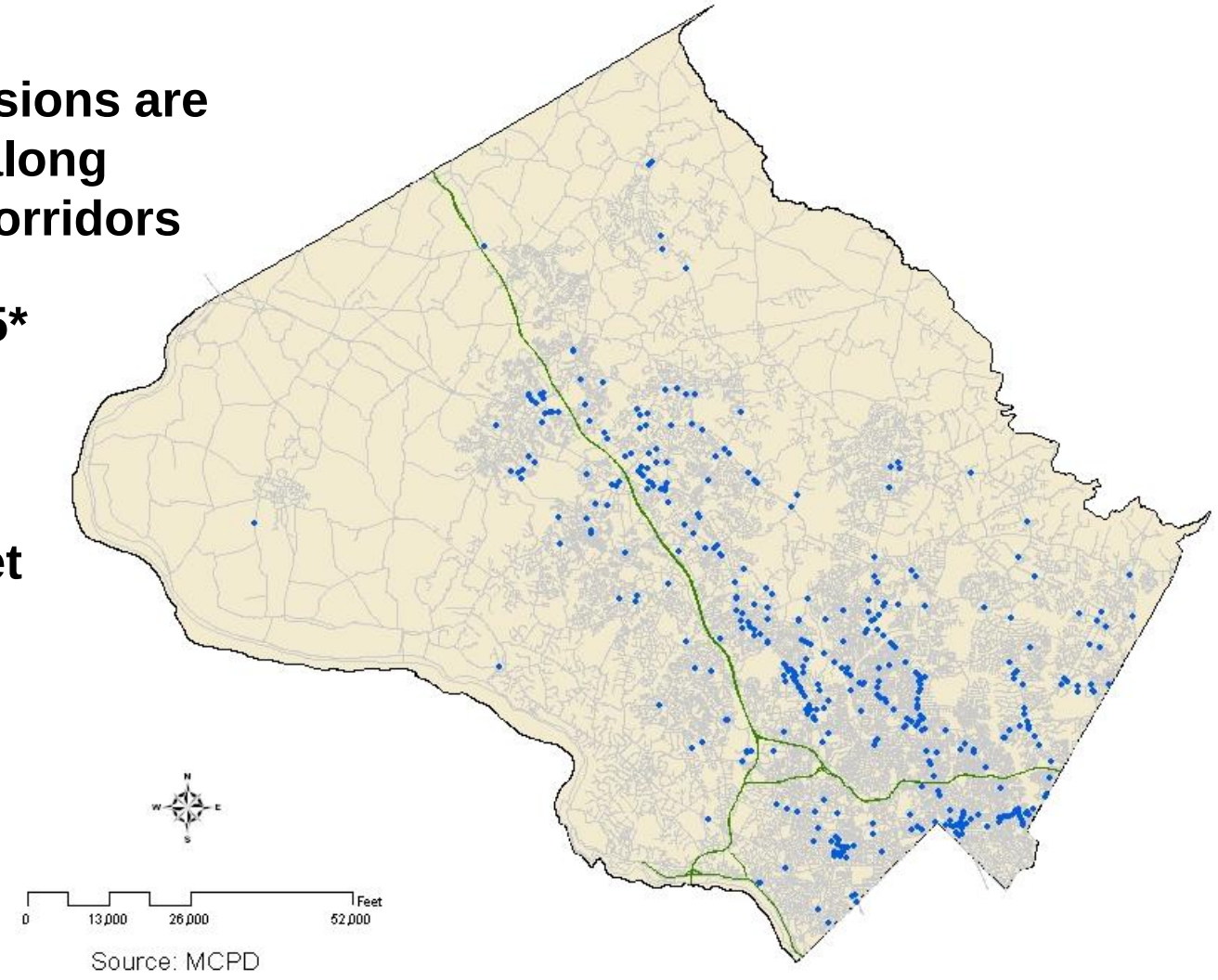
Rethink and develop lighting strategy to correspond to pedestrian collision sites.

- **Initial Selection Method**
  - Did not relate locations to pedestrian collision rates
  - Locations identified by residents' requests and DPWT staff reviews
  - Narrowed list to include only locations with pedestrian facilities and pedestrian traffic

Pedestrian Collisions at Night, 2004-2007

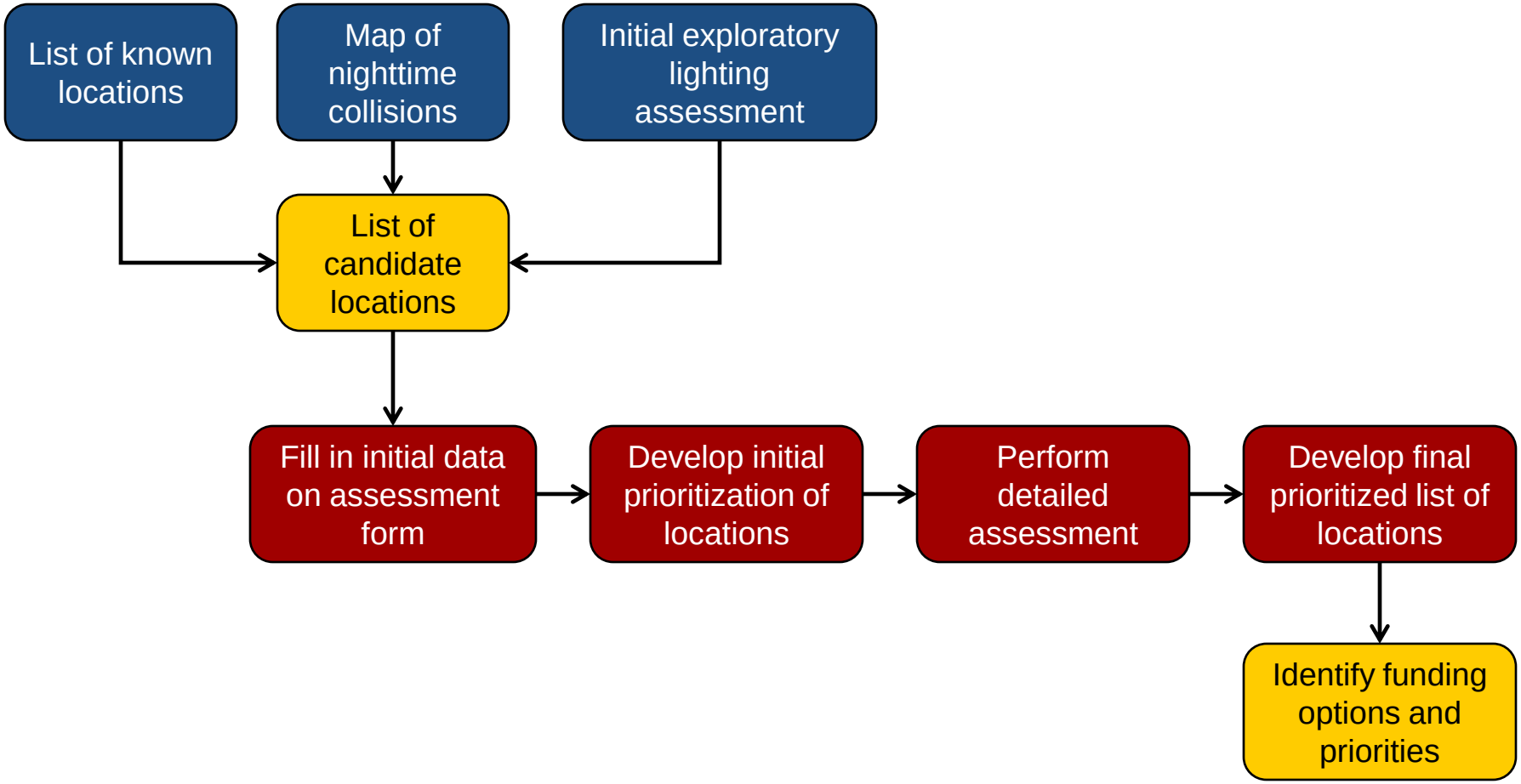
- **Nighttime collisions are concentrated along major transit corridors**
- **580 out of 1695* collisions occurred between the hours of sunset and sunrise**

* Police-reported collisions only



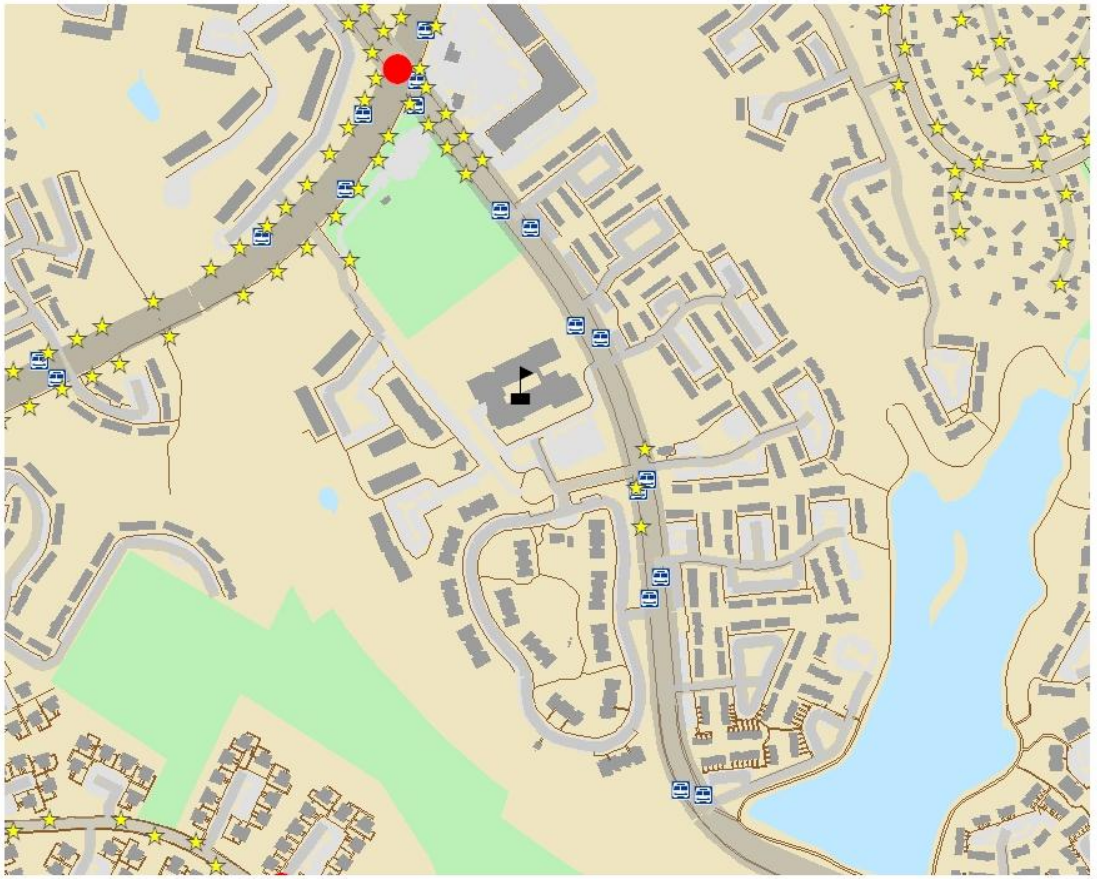
Source: MCPD

Potential Process to Select Lighting Project Locations



Lighting Example: Wisteria Drive

- **The Pedestrian Safety Initiative proposed lighting along Wisteria Drive from Great Seneca to Sky Blue Drive.**
- **Numerous pedestrian facilities**
  - School
  - Bus stops
  - Parks
- **Analysis does not support installing lighting based upon pedestrian collisions alone.**



Source: MCPD

The only nighttime collision appears in an area that already has lighting.

Lighting Projects: Recommendations

- **Develop list of candidate locations through multiple avenues**
  - Known locations identified by residents
  - Locations identified by an inventory of lighting needs (windshield survey) of Major, Arterial, and Primary roadways
    - Evaluate light types, spacing, and wattage
    - Identify locations that do not have lighting or do not meet County lighting standards based on IESNA recommendations
  - Locations with higher densities of nighttime pedestrian collisions
- **Use uniform criteria to evaluate identified locations to prioritize projects**
- **Develop prioritization before starting any projects**

Wrap-Up

- Confirmation of follow-up items
- Time frame for next meeting