



# Asset Management

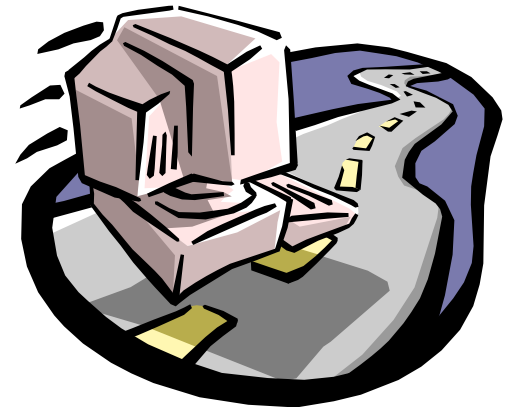
Maryland Department of Transportation

State Highway Administration

Joseph M. White



- Asset Management
- Asset Data Warehouse Project
- Asset Data Collection





# Asset Management Guiding Principals

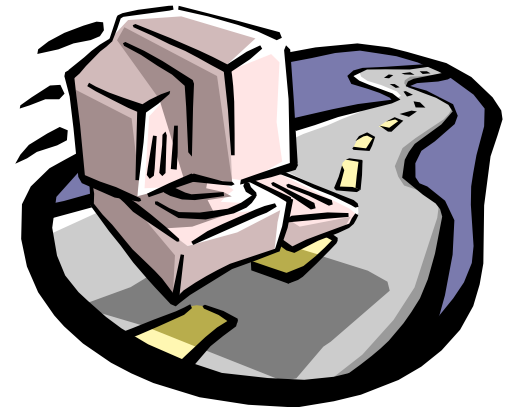
- The proposed asset management initiative should build upon existing and accepted asset management practices and systems to the greatest extent possible.
- The proposed asset management initiative shall be data driven.
- The proposed asset management initiative shall recognize the primacy of the goals and objectives in the SHA Business Plan.
- In recognition of scarce resources, the proposed asset management initiative will be developed in a prioritized, phased and modular approach.

# Asset Management Guiding Principals (cont.)

- The proposed asset management initiative should support the coordination of selecting individual projects across funds and with maintenance activities.
- The proposed asset management initiative shall strike a balance between centralized project selection and project selection input at the district/office level.
- Data from the proposed asset management support systems should be accessible to all decision-makers at SHA.
- The proposed asset management data collection initiatives should focus on only collecting information needed to make decisions and not require the collection of extraneous or overly detailed information that is not critical for decision-making.



# Asset Data Warehouse Project





# Asset Data Warehouse Goals

- Create a repository structure to maintain asset inventory, description and condition information that will be easily accessible to business units throughout SHA.
- Create basic standard and ad-hoc reports to include summaries of inventory and condition information.
- Create interfaces with established management systems.
- Develop and implement asset class specific performance models (planned future phases)
- Develop cross-program analysis tools utilizing information in the Asset Management Data Warehouse to support trade-off analysis and performance-based planning and budgeting for asset management activities (planned future phases)



# Asset Data Warehouse

## System Boundary Document Phase

- Interviewed Asset Owners
  - What is their current processes?
  - What they expect from the data warehouse?
  
- Best Practices of other states
  - Management Approach
  - Data Collection Process
  - Data Maintenance
  - Interfaces
  
- Demos of “Off the Shelf Products”



# Asset Data Warehouse

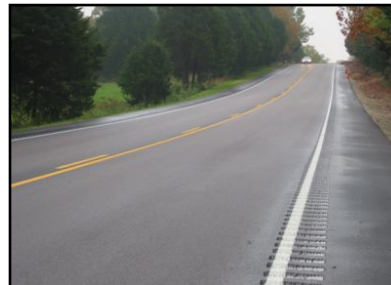
## Functional Requirements phase

- Initial Assets to be include in the Data Warehouse
  - Bridges
  - Pavement Data
  - Highway Lighting
  - ITS Devices
  - Mowable Areas
  - Drainage Assets
  
- Interviewed Asset Owners of Initial Assets
  - What is their current processes
  - What they expect from the data warehouse
  - Copy of their current data



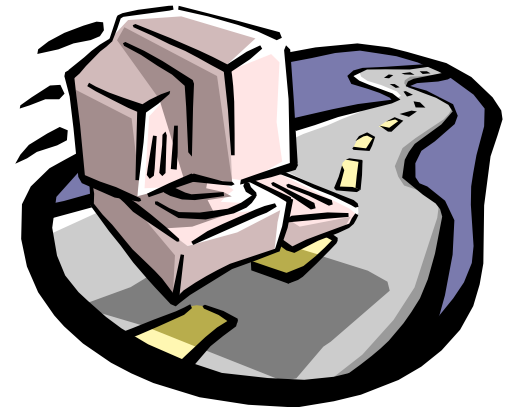
# Asset Data Warehouse

- Highway Characteristics
- Pavement
- Bridge/Structures
- Drainage
- ITS
- Sidewalk





# Asset Data Collection Current Projects



# Current Projects

## Highway Lighting

- One GPS Unit for each District (7)

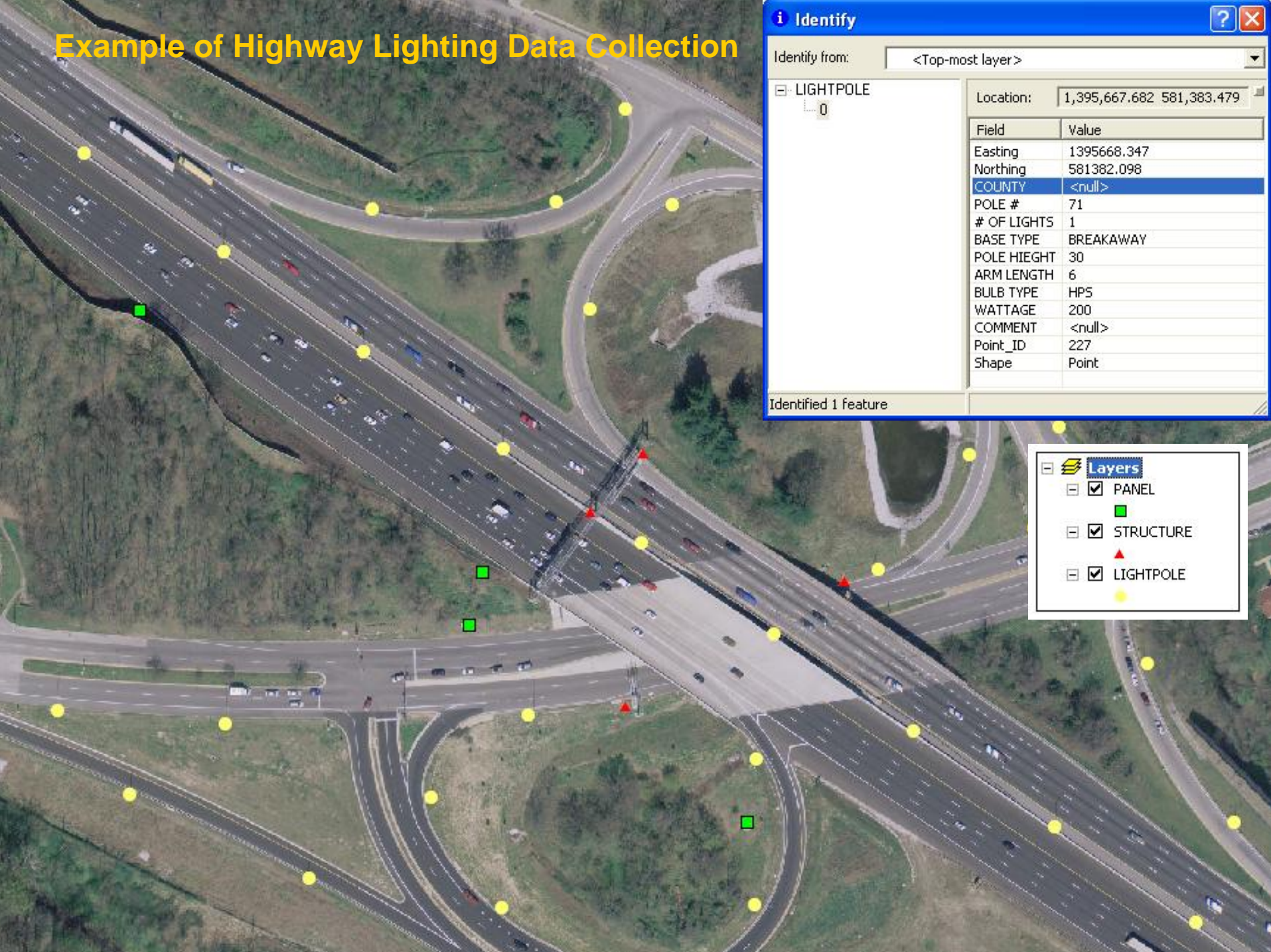


- Data Dictionary
  - Light Attributes

- Data Collected by District Personal

Highway Lighting Data Dictionary						
<b>Lighting Structures</b>						
Type	Overhead	Cantilever	Bridge Mount			
Id Number						
# of Lights						
Lumitrack	Yes	No				
Comments						
<b>Lightpoles</b>						
County						
Pole #						
# of lights						
Base Type	Breakaway	Non-breakaway				
Pole Height						
Arm Length						
Bulb Type	Incandesant	Mercury	HPS	LPS	METAL HALIDE	FLUORESCENT
Wattage						
Comment						
<b>Panel</b>						
Amperage						
Comments						
<b>Other</b>						
Type	Handbox	Manhole	Photocell			

# Example of Highway Lighting Data Collection



**Identify** [?] [X]

Identify from: <Top-most layer>

[-] LIGHTPOLE  
    0

Location: 1,395,667.682 581,383.479

Field	Value
Easting	1395668.347
Northing	581382.098
COUNTY	<null>
POLE #	71
# OF LIGHTS	1
BASE TYPE	BREAKAWAY
POLE HIEGHT	30
ARM LENGTH	6
BULB TYPE	HPS
WATTAGE	200
COMMENT	<null>
Point_ID	227
Shape	Point

Identified 1 feature

**Layers**

- PANEL
- STRUCTURE
- LIGHTPOLE

# Current Projects

## Ground Mounted Signs and Traffic Barriers

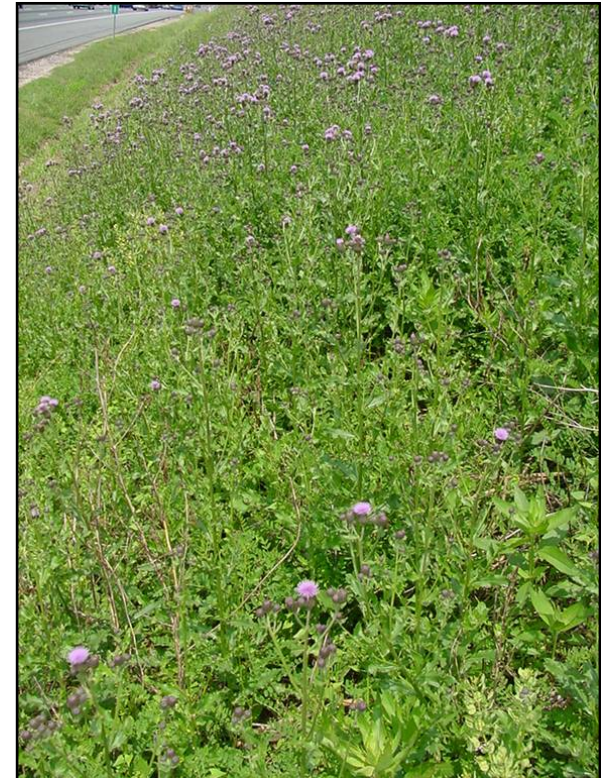
- Data Dictionary
  - Collected Attributes
  - Input from Asset Owners
  
- Data Collection
  - Collect Data on IS 795
  - Get feedback from Asset Owners
  - HISD to standardize collection process

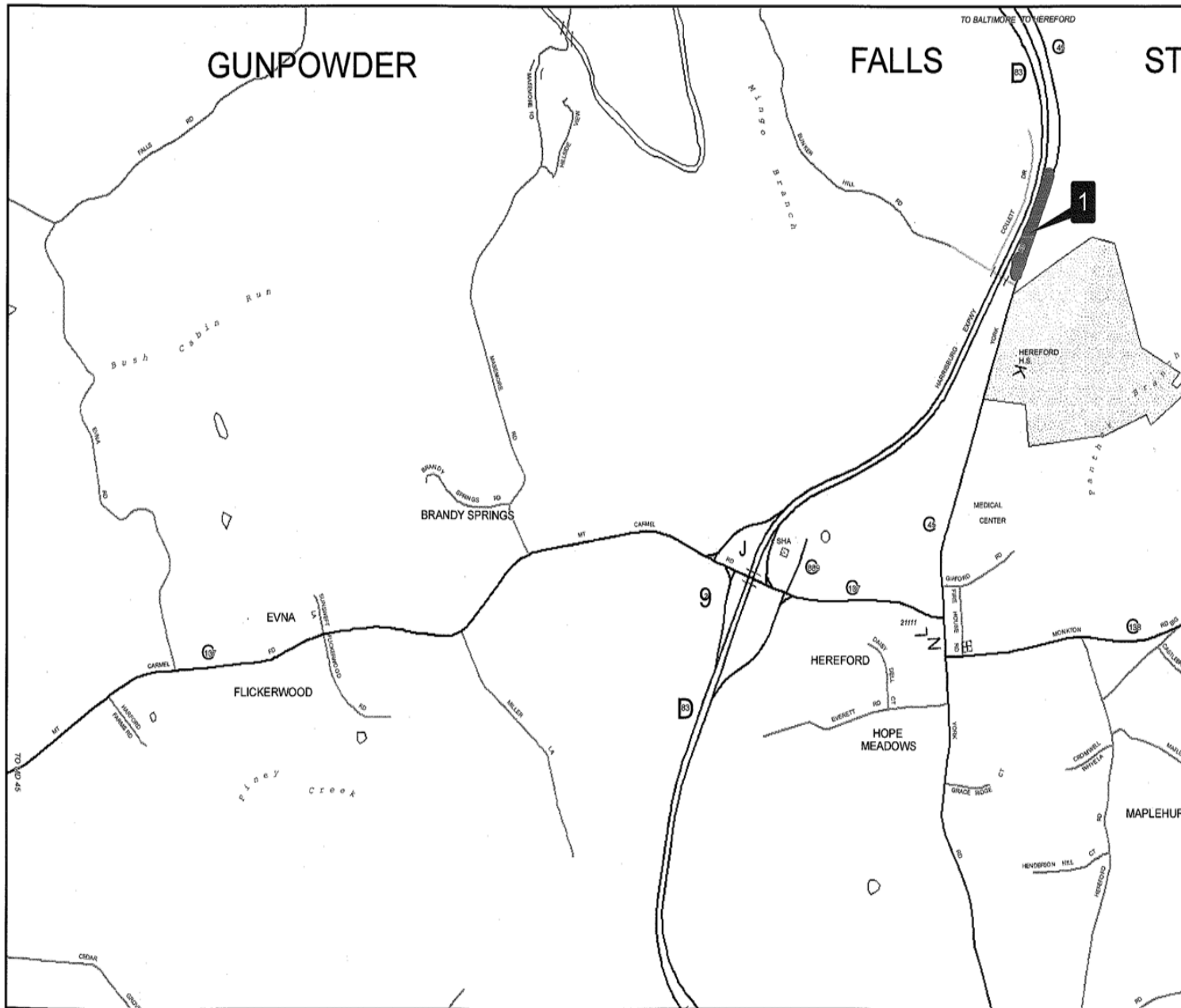


# Current Projects

## Invasive Species Management

- Data Dictionary
  - Species - Canada Thistle
  
- Data Collection
  - Map perimeter
  
- Map Book

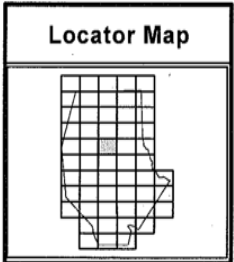




**CANADA THISTLE LOCATIONS**  
 Spring 2008  
 Mapbook is based on 1/16 grid, a product of the statewide 1/4 grid published by SHA in 2007.

**Thistle Verification**

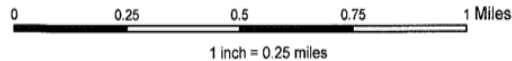
1. \_\_\_\_\_



**Legend**

- Canada Thistle
- Local Roads
- State Roads

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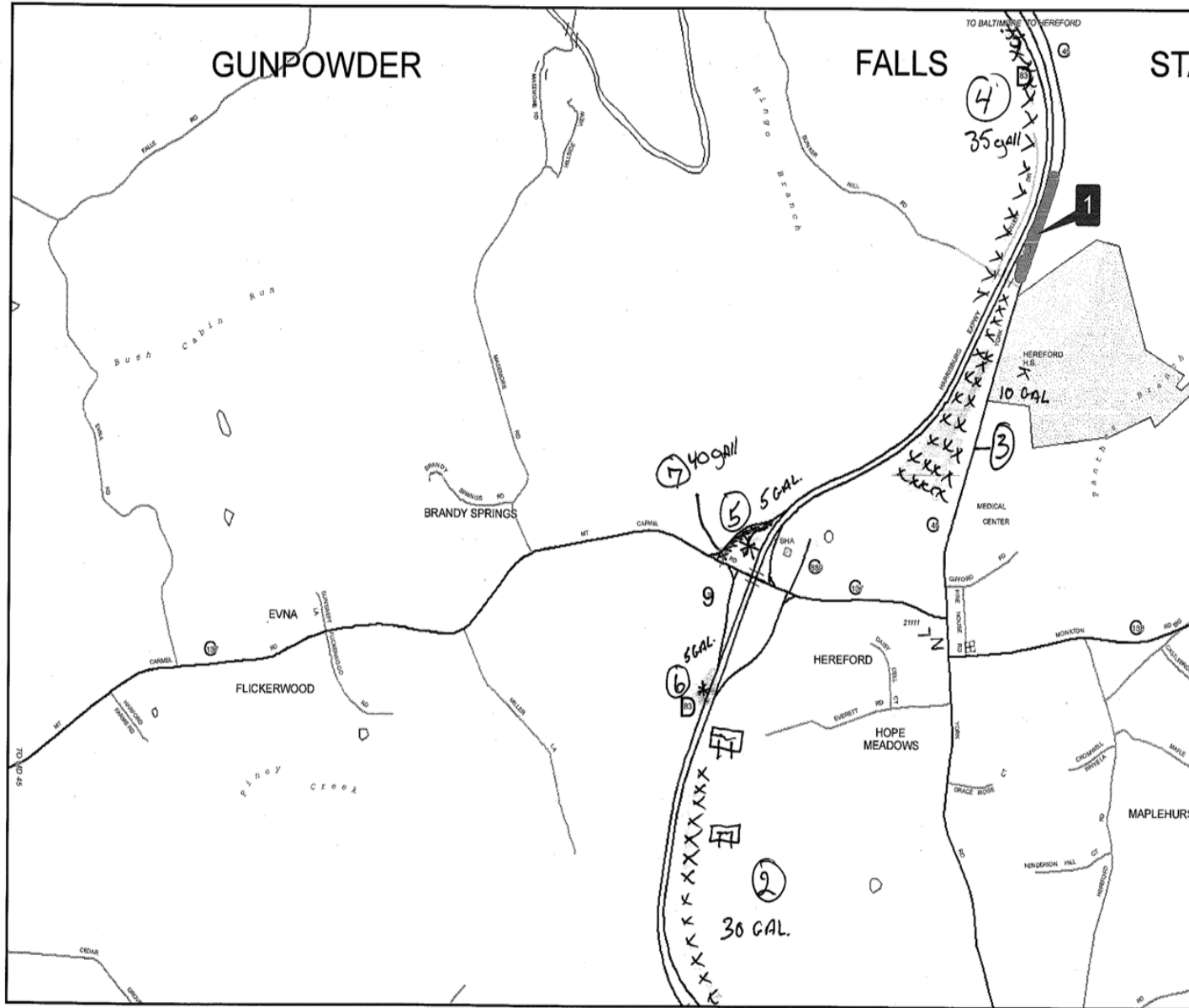
# Current Projects

## Invasive Species Management

- Spray Mapped Areas
  - Canada Thistle
- Map Book
  - Notes

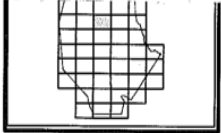






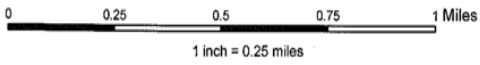
**CANADA THISTLE LOCATIONS**  
 Spring 2008  
 Mapbook is based on 1/16 grid, a product of the statewide 1/4 grid published by SFA in 2007.

- Thistle Verification**
1. York Rd Along 83
  2. 83 Across From
  3. 83 W/ Speed Limit
  4. Gunpowder Brantle Mill
  5. MO. 157 BETWEEN RAMP & BRIDGE
  6. PAST MO. 157 ON RAMP
  - 7) W/ CARM RAMP 1/4 Behind P/R



**Legend**

- Canada Thistle
- Local Roads
- State Roads



# Invasive or Evasive

- Invasive: tending to spread or to infringe
- Evasive: tending or intended to evade
  - To slip away or take refuge in escape or avoidance

Canada Thistle cannot run away when it is spotted, it is not evasive.



# Future Asset Data to be Collected

- Mowable Area
- Brush and Tree
- Line Striping
- Retro-Reflective Pavement Markers
- Rumble Strips





Questions?



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