



# **SAM Partner Outreach Meeting**

GIS Program Office

NYS Office of Information Technology Services

# **SAM Project Objective**

***Create a statewide authoritative  
address point database to support  
Next Generation 9-1-1  
and other purposes***

# State of Affairs in 2011

## NYS GIS Program

- Active GIS Coordination Program
- Partnerships with county GIS & increasingly 9-1-1
- 10+ years building GIS Address Points
- *Awarded NTIA supplemental funds*

## NYS 9-1-1 Coordinators

- No statewide 9-1-1 data standards
- Understood NG 9-1-1 will **require** GIS data
- *Desired a Statewide Master Address file*
- Limited resources for building GIS data

# **Our Common Goal...**

## **Authoritative Statewide Address Points**

**A timely partnership opportunity!**



# Big Picture

- Next Generation 9-1-1 *requires* GIS data
- Huge range of needs for address data statewide
- Building to highest level requirements (i.e. 9-1-1) will support all lower requirements
- One master address point database
- Address point data will...
  - *Support 9-1-1 dispatch*
  - *Be publicly available for widespread uses*
  - *Support high-quality geocoding*
  - *Contain no personal or sensitive information*
  - *Contain unique IDs*



Phone Number

Automatic Number Identification (ANI)



Add Street Address

Automatic Location Identifier (ALI)



Add Emergency Service Zone

Master Street Address Guide (MSAG)



Look up Police, Fire, EMS

Emergency Service Provider  
Lookup Table

# Current Land Line Tabular look-up



Phone Number  
or email, text, video  
and **X, Y**  
(no Address)

# Next Generation ~~Mobile Phone~~ Device



Add Street Address  
**NYS Address Point File**

OCS

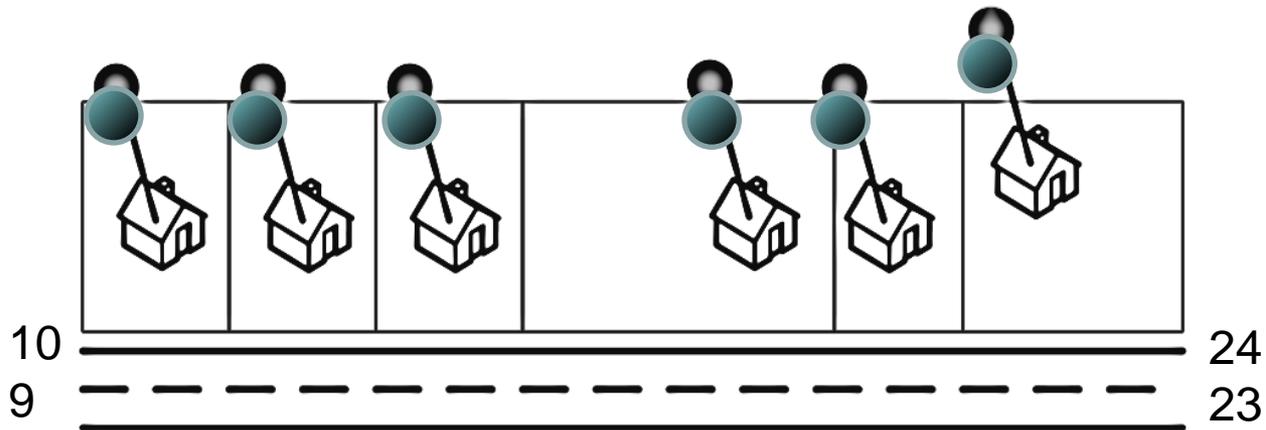
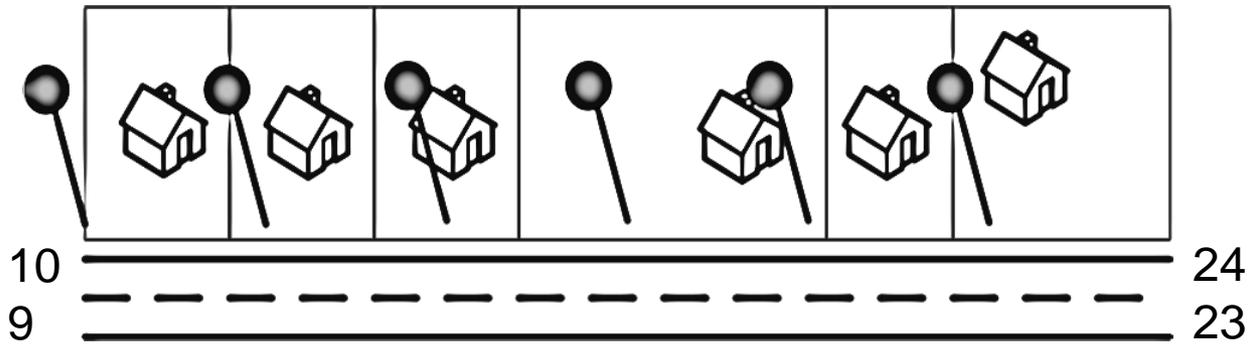


# Many Uses for Address Data Beyond 9-1-1 Dispatch

- Sex offender placements
- Sales tax collection and distribution
- Environmental permitting
- Welfare to Work programs
- School bus routing
- Emergency response planning & recovery
- Tax fraud analysis
- Statewide Enterprise Geocoding

# Geocoding Basics

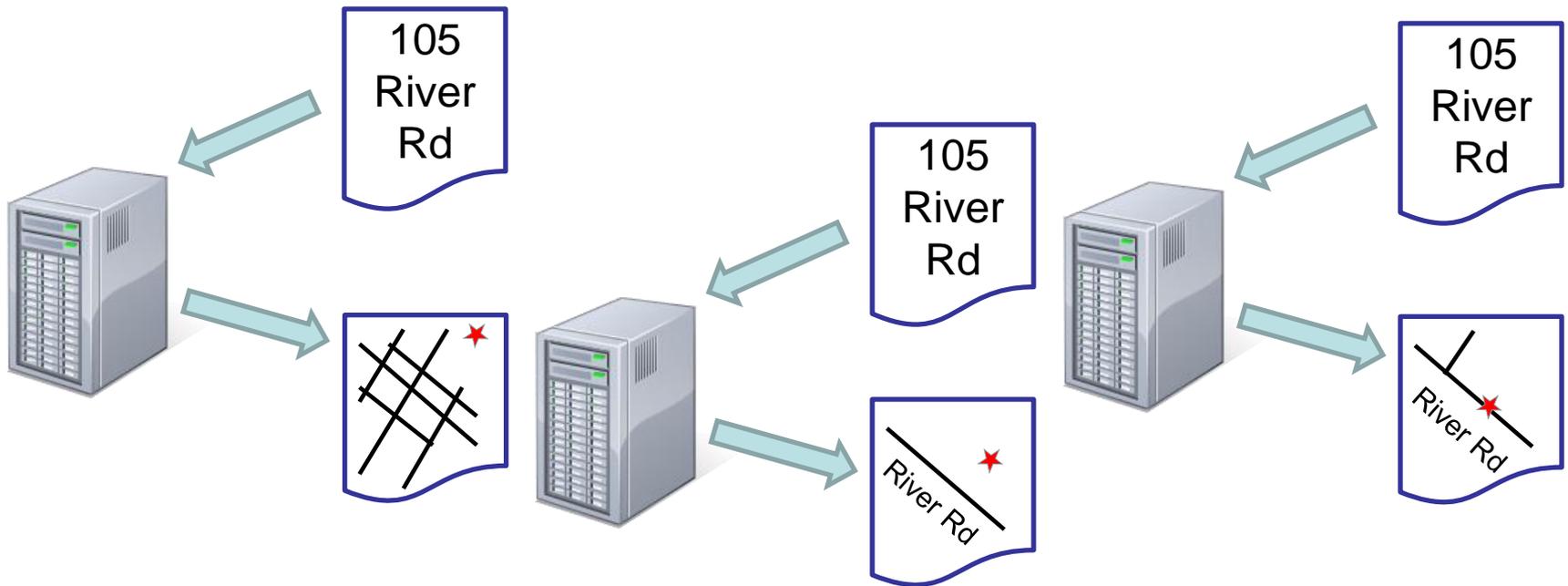
## Address matching vs. interpolation



# Current Geocoding Status Across the State

*Identical input addresses yield different results!*

State & local agencies currently use their own data for geocoding, yielding different results



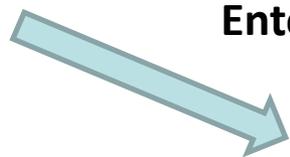
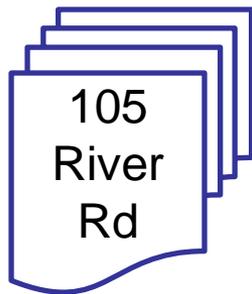
# Geocoding With a Centralized Service

*Identical input addresses yield identical results*

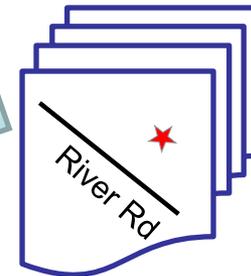
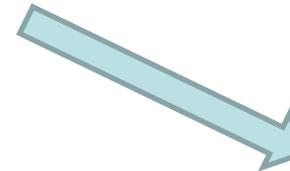
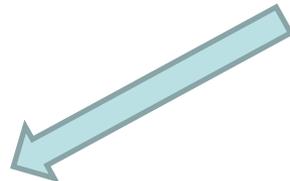
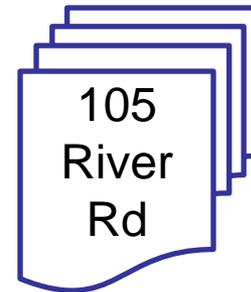
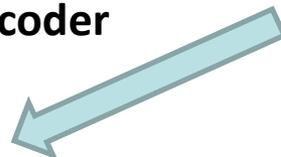
<http://gisservices.dhSES.ny.gov/arcgis/services>

Counties, Cities and Towns

State Agencies



Enterprise Geocoder



# Statewide Address Point Build: 2 Stages

## Stage 1:

### State contracts for:

- “Principal” (main structure) point on building footprint
- Parcel centroids for vacant addressed parcels
- Addresses in draft NENA standard

### State in-house tasks:

- Outreach to counties for data
- QA/QC of data deliverables



**Stage 1**  
*Building Rooftops*  
*Centroids of Vacant Parcels*

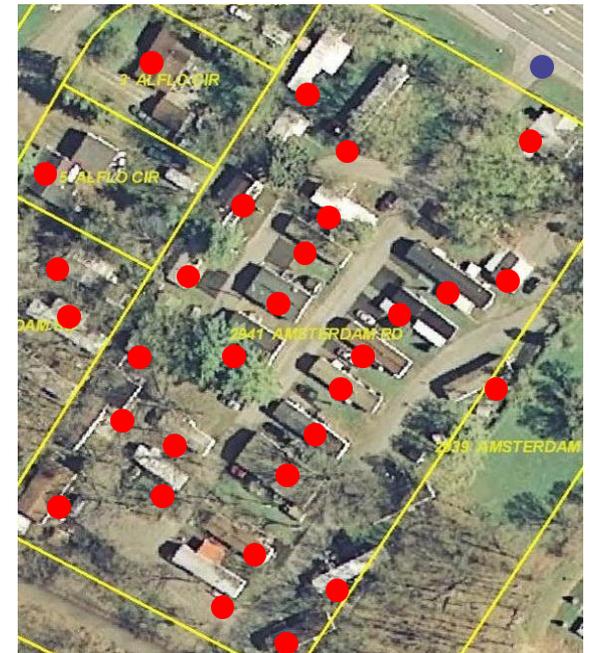


# Statewide Address Point Build: 2 Stages

## Stage 2:

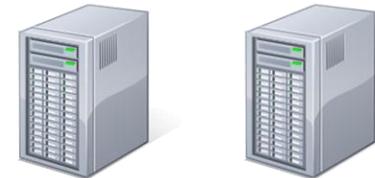
Counties use NENA standards to:

- **Locate** addresses identified in exception report
- **Add new points**
- **Refine** locations
- Map **subaddresses**

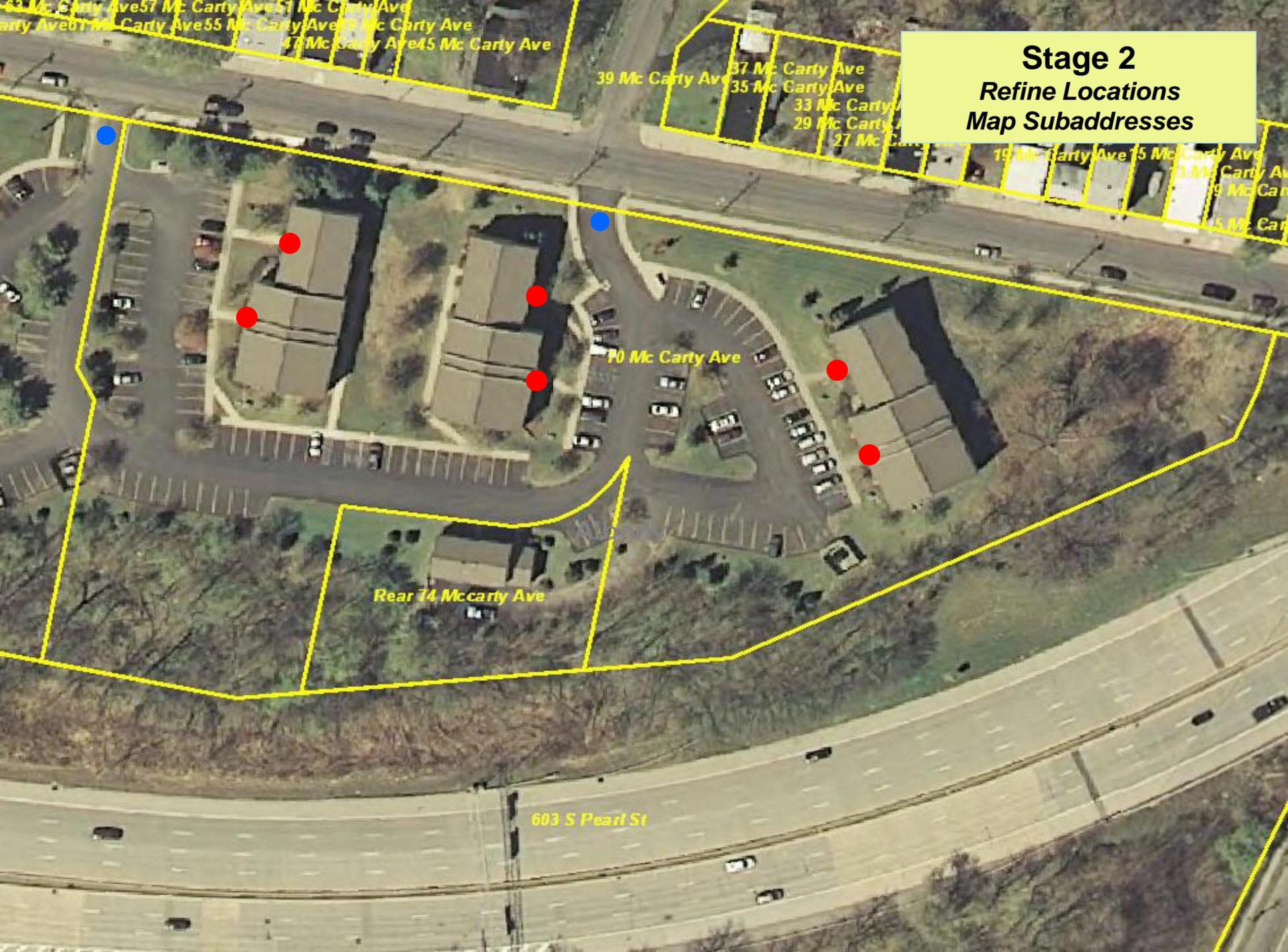


State provides:

- Data maintenance tools
- Data hosting/distribution services



**Stage 2**  
**Refine Locations**  
**Map Subaddresses**



603 S Pearl St

70 Mc Carty Ave

Rear 74 Mccarty Ave

# Developing the Partnership

- Leadership meetings
- Jointly identified:
  - Common goals
  - Individual strengths
  - Appropriate roles
  - Potential problems
  - Needed standards
  - Other stakeholders
- Developed an outreach plan



# Stakeholder Outreach Meetings

- Regional NYS 9-1-1 Coordinator Meetings
- County Real Property Tax Directors
- NYS Association of Counties
- NYS GIS community
- County/Local IT Directors
- NENA
- US Census Bureau
- CAD vendors / consultants
- GIS software vendors



# Follow Up with Individual Counties

- Initial information collection
  - Contact sheet
  - Questionnaire
- On site meetings with County-level stakeholders
- Post meeting
  - Sample data
  - Source Usage Document
  - Data Usage Agreement
- Pilots
  - Data Build
  - QA/QC



# Data for the Address Point Build

- Address Points
- Other data sources containing addresses
  - Tax Parcels
  - Local Carrier Exchange (LEC) subscriber database (9-1-1 Master Address list)
  - *NYS Address Points-NAVTEQ*
- Data useful for placing or refining address points
  - Building Footprints
  - County/Municipal Streets
  - MSAG Address Ranges
  - *NYS Streets*
- Common Place Names Table
  - For populating Landmark Name attribute/table

# Source Usage Document

- Identifies data available for the data build
- Evaluates how data should be used
  - *Primary source*
  - *Secondary source*
  - *Reference source*
- Each county reviewed on a case-by-case basis
- County provides input and reviews SUD
- Important for:
  - *Gauging level of work*
  - *Documenting data for the Contractor*

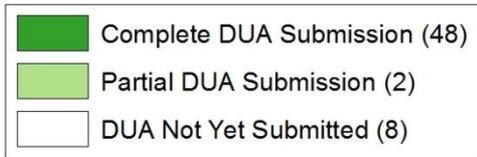
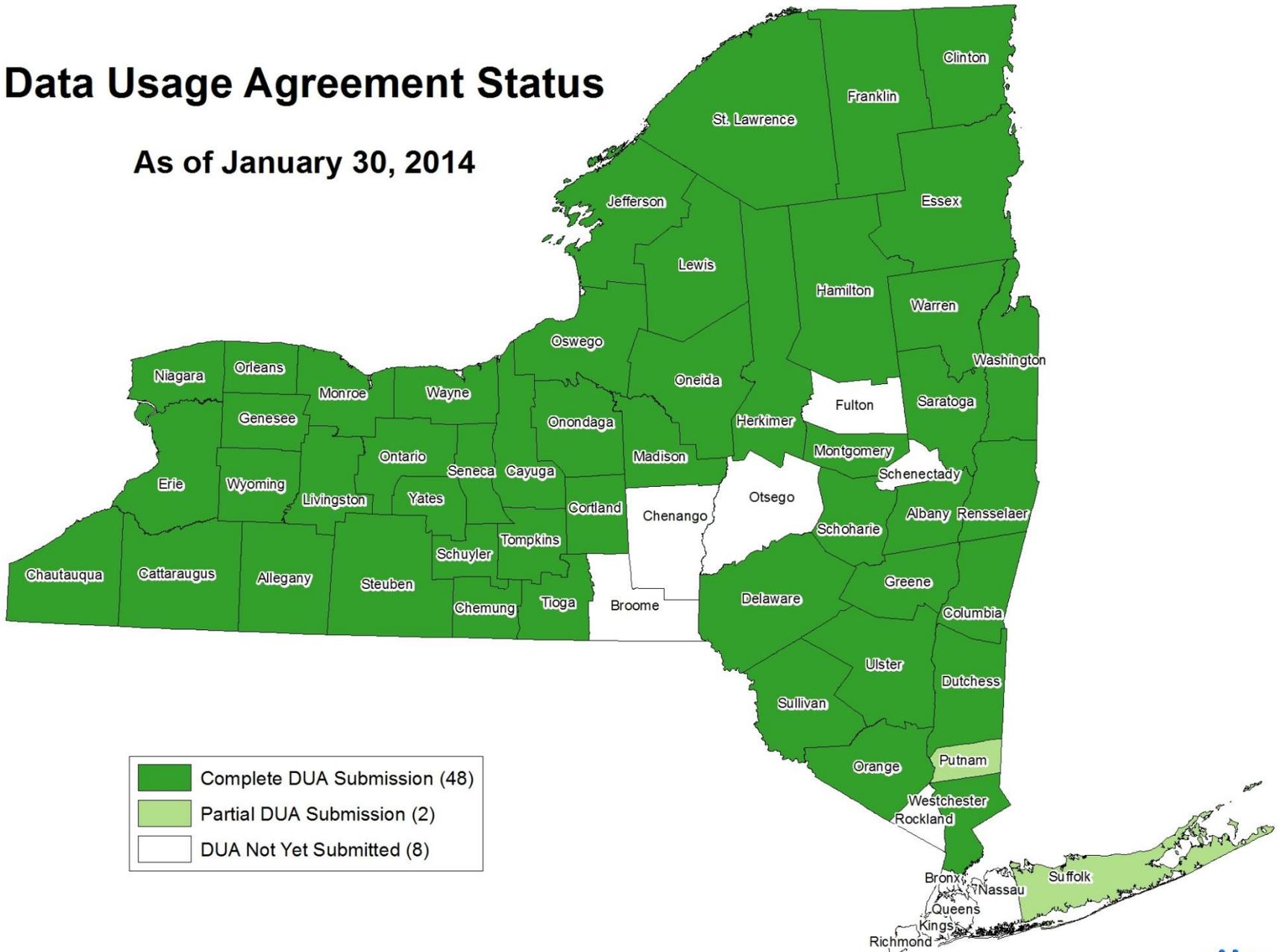
# Data Usage Agreement

- Clearly documents:
  - How each individual dataset provided can be used
  - Who can use this source data
  - No redistribution of source data unless Data Owner instructs otherwise
  - Public availability of resultant Statewide Address Point file
  - Authorize use (or opt out) of provided parcel data into a publically accessible statewide parcel data layer
- Original (notarized) signature required
- Can have one or multiple Data Usage Agreements
- Data Usage Agreement terms apply to subsequent data deliveries



# Data Usage Agreement Status

As of January 30, 2014



# SAM Contract

- Intrado/GDR team selected
- Kickoff meeting March 18, 2013
- Funds expire September 30, 2014
- Deliverable schedule by county
  - Projected total of 5 million principal address points
  - Schedule is flexible
- Intrado/GDR providing available subaddresses
- **\$2 million investment in core 9-1-1 GIS data**

 intrado®

 **GDR**  
GIS Data Resources, Inc.



# Delivery Acceptance

- County-wide review of:
  - Schema compliance
  - Domain values
- ANSI statistical sample
  - Random selection of points to be reviewed
  - Validate positional accuracy
  - Validate attribute accuracy
  - Tightened inspectional only allows 18 errors
- Acceptance/rejection required within 10 days of delivery
- ***Approximately one County delivered every 5-7 days***

Before

**11686 State Route 812**



**11686 State Route 812**



Parcel Centroid Point



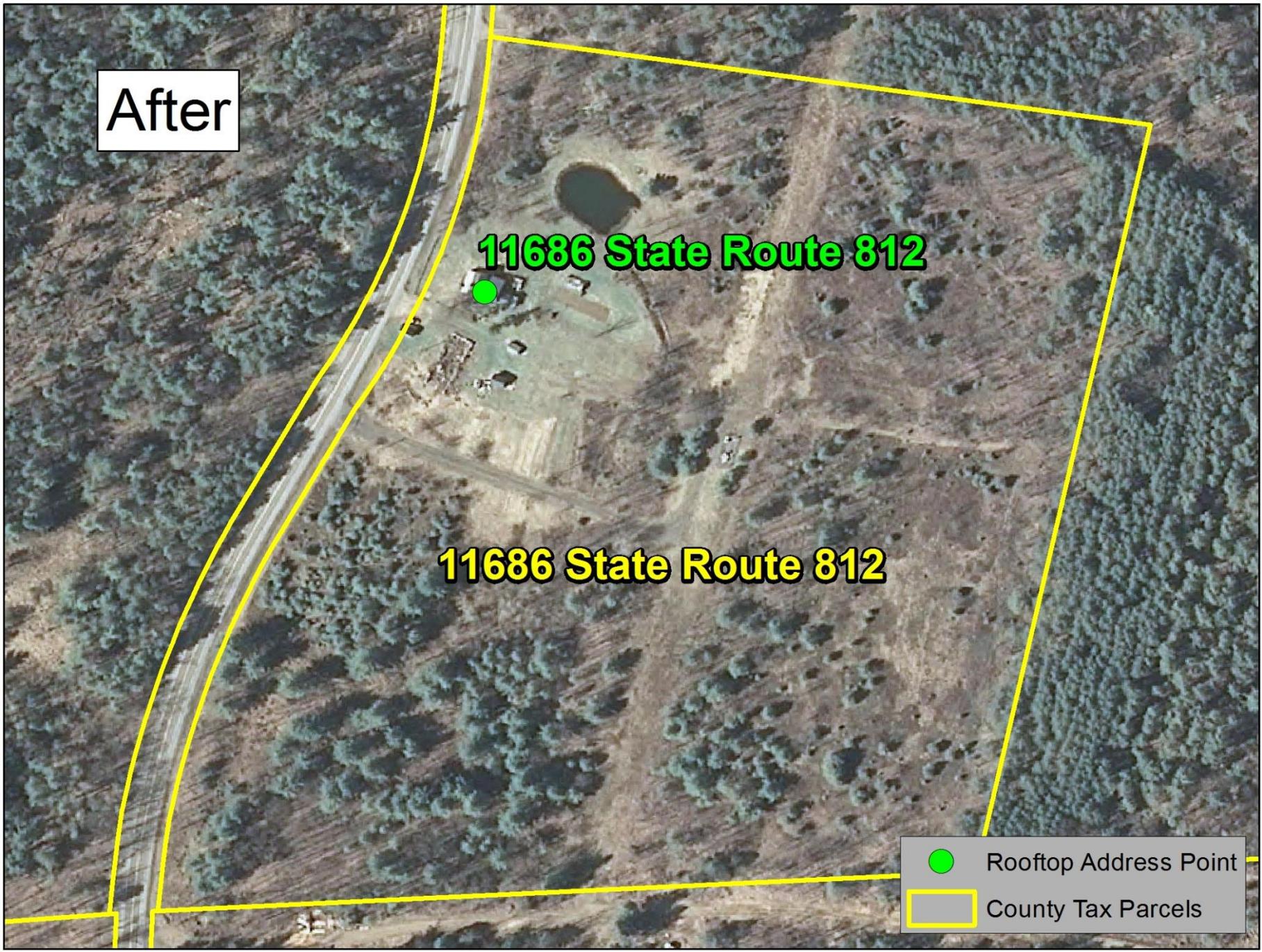
County Tax Parcels

After

**11686 State Route 812**

**11686 State Route 812**

● Rooftop Address Point  
□ County Tax Parcels



Before



- Parcel Centroid Point
- ▭ County Tax Parcels

After

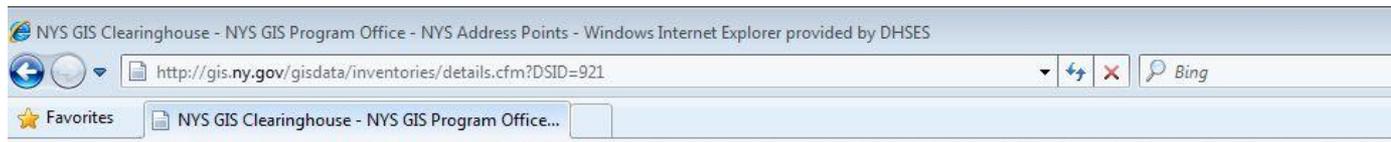


● Rooftop Address Point

▭ County Tax Parcels



# Accessing SAM Data



## GIS Data Set Details

Data Set Name	Description	Theme	Metadata
NYS Address Points	Point files of addressed properties in New York State. Data is not complete statewide. Data is copyright protected.	Cadastral (tax parcels) Miscellaneous	n/a

## Supporting Documentation

[Data Dictionary-Streets and Address Points \(Revised 01/14\)](#)

[Geocoding - ESRI Instructions](#)

A web service of the SAM Address Point file is available here:  
<http://gisservices.dhSES.ny.gov/arcgis/rest/services>. The web service named SAM\_Address\_Points\_Symbolized has different symbology for each of the 5 PointType values (see image). The web service named SAM\_Address\_Points has all points symbolized the same way. The SAM Address Point files are projected in Web Mercator (Auxiliary Sphere).

If the purpose of downloading the address points is for geocoding, NYS ITS has a publicly available geocoding service which includes the address points along with other layers. The geocoding service is named NYS\_Points\_Streets and can be found here:  
<http://gisservices.dhSES.ny.gov/arcgis/rest/services>.

The NYS Address Point File is changing! Please see the [SAM project](#) about future updates to the statewide address point file.

## Address Point Type

- Rooftop
- Primary Structure Entrance
- Driveway Entrance
- ▲ Parcel Centroid
- Miscellaneous

## Files available to the Public

Files	Download	Metadata
Address Points - SAM	<a href="#">GEODATABASE</a> <a href="#">SHAPE</a>	<a href="#">Metadata</a> <a href="#">Metadata</a>

<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>

# NENA Standards and Data Conversion

# Conversion to NENA Draft Standard

**Before**

ADDRUNITS	APUNIT
132 GRANT EGBERT BLVD E BLDG G28	2-7 FL 4

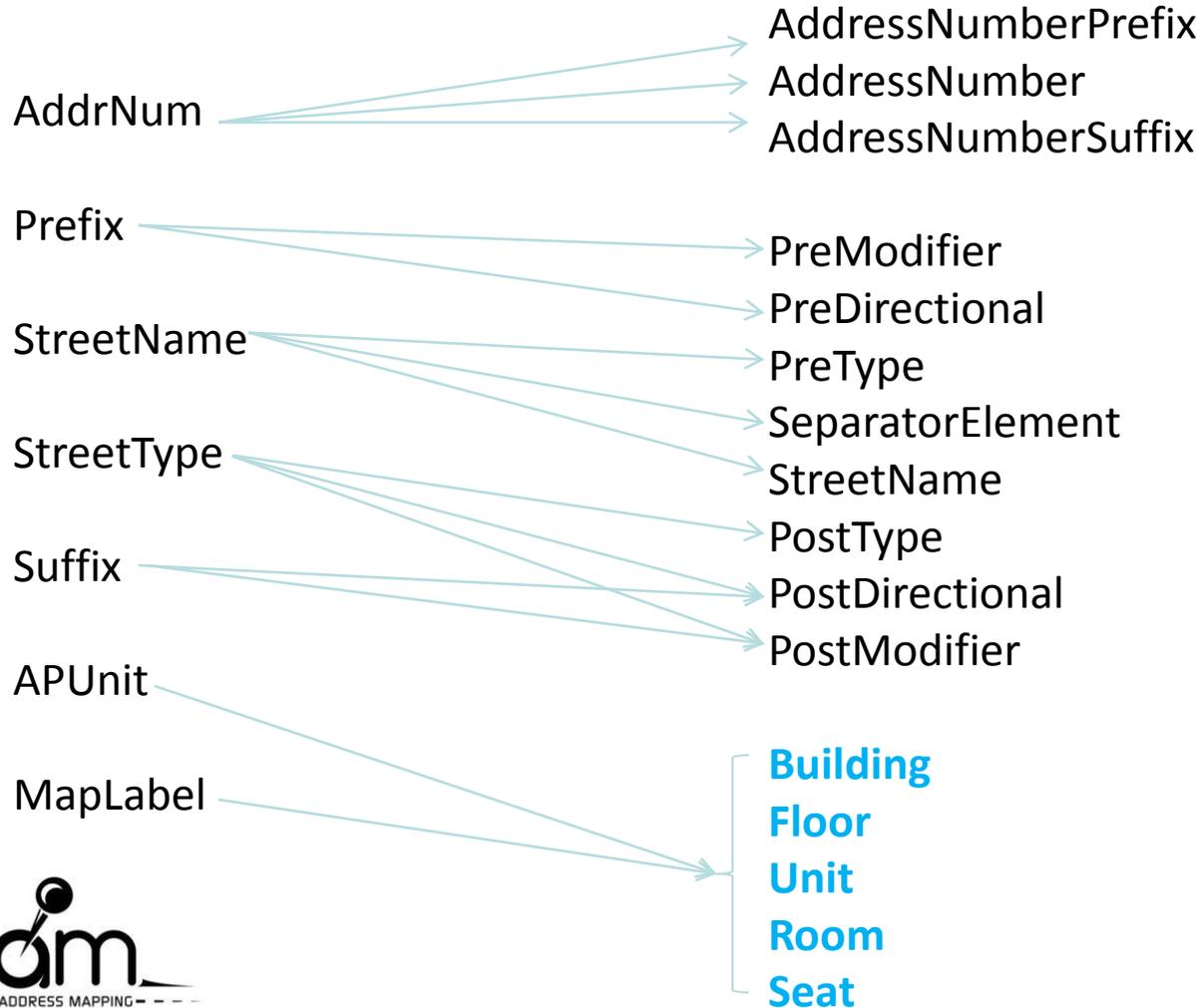
**After**

AddressNumber	StreetName	PostType	PostDirectional	Building	Floor	Unit
132	GRANT EGBERT	BLVD	E	BUILDING G28	FLOOR 4	2-7

# Field Matching

## Tompkins County Schema

## NENA Standard



# NENA GIS-Related Standards

- *Civic Location Data Exchange Format (CLDXF) Standard*
  - Breaks out addresses into smallest data elements
  - XML used to share data components in a NG9-1-1 system
- *NG9-1-1 GIS Data Model Standard*
  - Identifies the GIS data layers & defines attributes
- *Site/Structure Address Point GIS Data for 9-1-1*
  - Where to place a point & how many points
  - An Information Document, not a Standard
- *Provisioning and Maintenance of GIS data to ECRF/LVF Standard*
  - Loading local GIS data into regional, statewide, and national databases
- *NG9-1-1 Data Management Standard*
  - Discrepancy Reports for errors discovered during data provisioning
- NENA web site: [www.nena.org](http://www.nena.org)

# NENA Standards

## *NG9-1-1 CLDXF Standard*

- ✓ Standard completed & submitted to NENA leadership for review:
  - ✓ Internal NENA Authoring Committee Review
  - ✓ Internal NENA All Committee Review
  - ✓ Public review
  - ✓ Second public review (ended 10/5/2012)
- ✓ NENA Workgroup reviews comments & updates document
- ✓ Revised standard submitted for publication (12/19/2013)
- Standard published (expected March 2014)

# NENA Standards

## *NG9-1-1 Data Model Standard*

- ✓ Standard completed & submitted to NENA leadership
- ✓ Internal NENA Authoring Committee Review (ended 6/22/2012)
- ✓ **NENA Workgroup reviews comments & updates document**
- Revised standard submitted to NENA leadership for review:
  - ✓ Internal NENA All Committee Review – expected spring 2014 (10 business days)
  - ✓ Public review (15 business days)
- NENA Workgroup reviews comments & updates document
- Revised standard submitted for publication

# NENA Standards

## *Site/Structure Address Point GIS Data for 9-1-1*

- ✓ Workgroup initiated (8/15/2012)
- ✓ **Draft Information Document**
- Document completed & submitted to NENA leadership for review:
  - ✓ Internal NENA Authoring Committee Review – expected summer 2014 (10 business days)
  - ✓ Internal NENA All Committee Review (10 business days)
  - ✓ No public review
- NENA Workgroup reviews comments & updates document
- Revised document submitted for publication

# NENA Standards

## *Provisioning and Maintenance of GIS data to ECRF/LVF Standard*

- ✓ Standard completed & submitted to NENA leadership for review:
  - ✓ Internal NENA Authoring Committee Review
  - ✓ Internal NENA All Committee Review
  - ✓ Public review (ended 1/16/2014)
- ✓ NENA Work Group reviews comments & updates document
- Revised standard submitted for publication

# NENA Standards

## *NG9-1-1 Data Management Standard*

- ✓ Standard completed & submitted to NENA leadership
- ✓ Internal NENA Authoring Committee Review (ended 11/2/2012)
- ✓ NENA Workgroup reviews comments & updates document
- Revised standard submitted to NENA leadership for review:
  - ✓ Internal NENA All Committee Review – expected February/March 2014 (10 business days)
  - ✓ Public review (15 business days)
- NENA Workgroup reviews comments & updates document
- Revised standard submitted for publication

# Want to Stay Informed?

- SAM Project Webpage:
  - <http://www.dhSES.ny.gov/ocs/streets>
  - Address Points Schema
  - County data build list
  - Status maps
  - Presentations
- NYS 9-1-1 GIS Workgroup
  - Monthly webinar on 3<sup>rd</sup> Thursday at 1pm
  - Over 60 NYS 9-1-1 and NYS GIS professionals
  - Review/discuss NENA GIS-related standards
- SAM Newsletter (bimonthly email)
- Preparing for NG9-1-1: ***NENA GIS & NG9-1-1 Training***

# Skating to where the puck is *going* to be



- Working on standards
- Building foundational data first
- Working with GIS vendors
- Working with CAD and other 9-1-1 vendors
- Will build towards detailed/more refined data over time

# Thank you!

SAM Project Web Page:

<http://www.dhSES.ny.gov/ocs/streets>

SAM Address Point Data:

<http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=921>