



# 911 Coordinators Conference - Fall 2012

*October 12, 2012*

NYS Division of Homeland Security &  
Emergency Services

Office of Cyber Security (OCS)

Jerome M. Hauer, Commissioner  
Thomas Smith, Director

# **SAM Project Objective**

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

# OITS Consolidation

*The IT Transformation program was created to enhance IT capabilities to improve government services and will enable the State to build an IT environment that maximizes existing resources*



- GIS and Cyber Security to consolidate into OITS
- SAM Impacts
  - Delay of maintenance solution
  - Need interim maintenance strategy



# Statewide Address Point Build: 2 Stages

## Stage 1:

State contracts for:

- “Principal” (main structure) point on building footprint
  - no routing points
  - no subaddresses (unless already in county data)
- Parcel centroids for vacant addressed parcels
- Addresses in draft NENA standard

State migrates existing county address points to draft NENA standard



# Statewide Address Point Build: 2 Stages

## Stage 2:

Counties use NENA standards to:

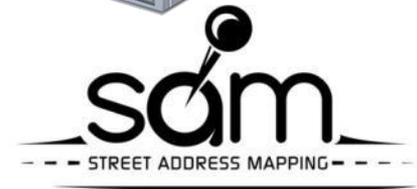
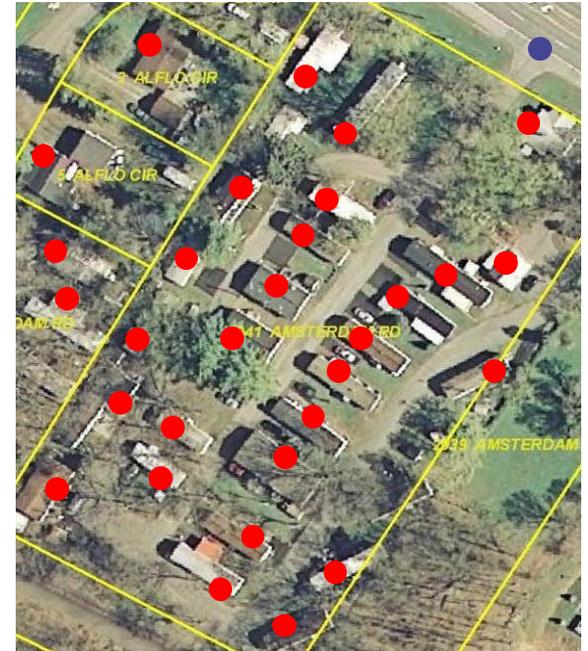
- **Add new points**
- **Refine** locations
- Map **subaddresses**
- Place **routing points**

Potential State grant funding

(via Interoperable & Emergency  
Communications Board)

State could provide:

- Data maintenance tools
- Data hosting/distribution services



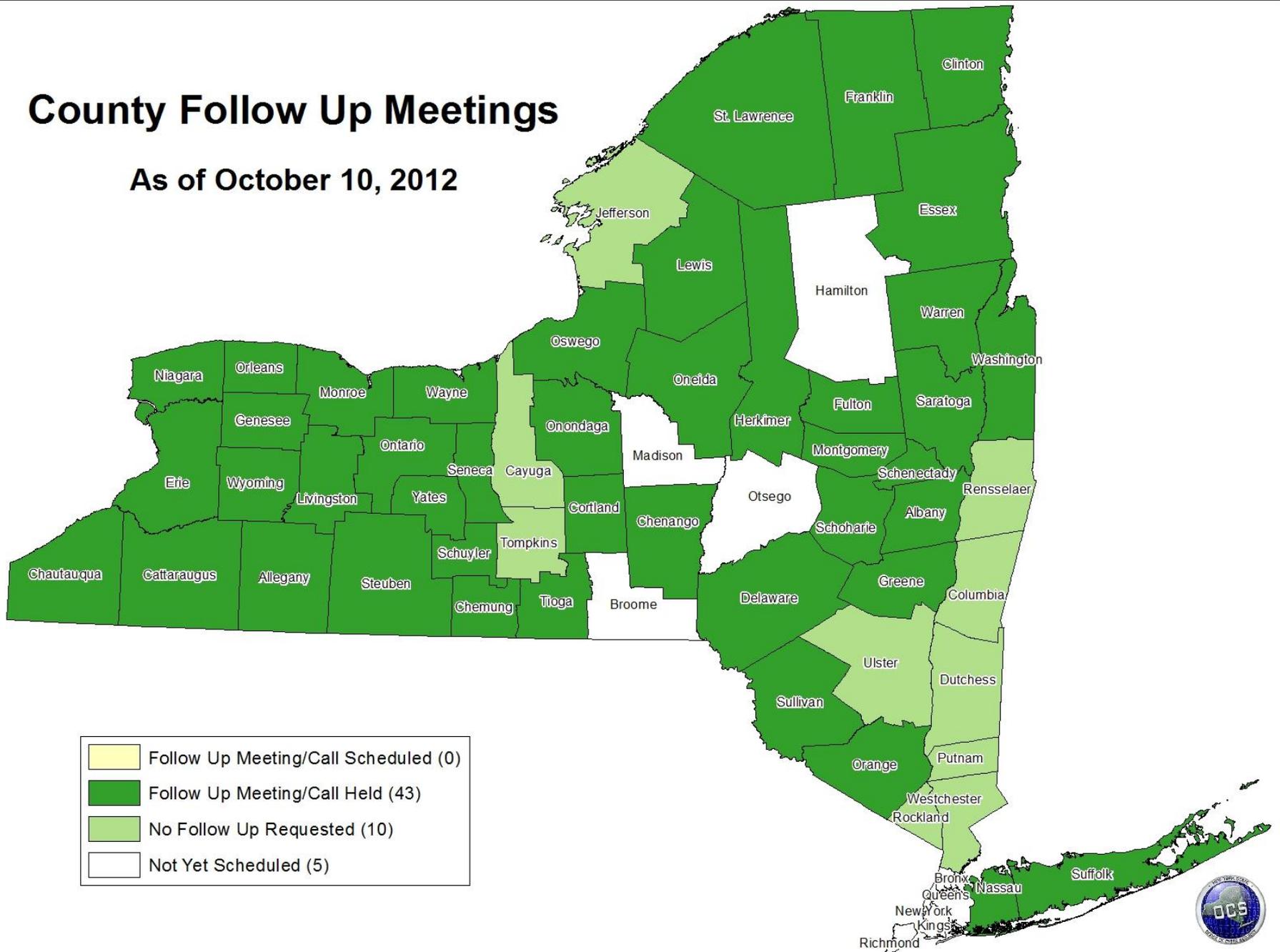
# Outreach Steps

- ✓ Contact Sheet
- ✓ Questionnaire
- ✓ Follow up meeting/discussion with each County
- ✓ Request data
  - County provides data
  - Source Usage Document
  - Data Usage Agreement



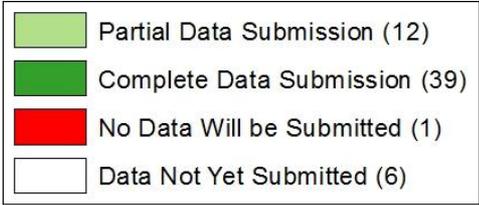
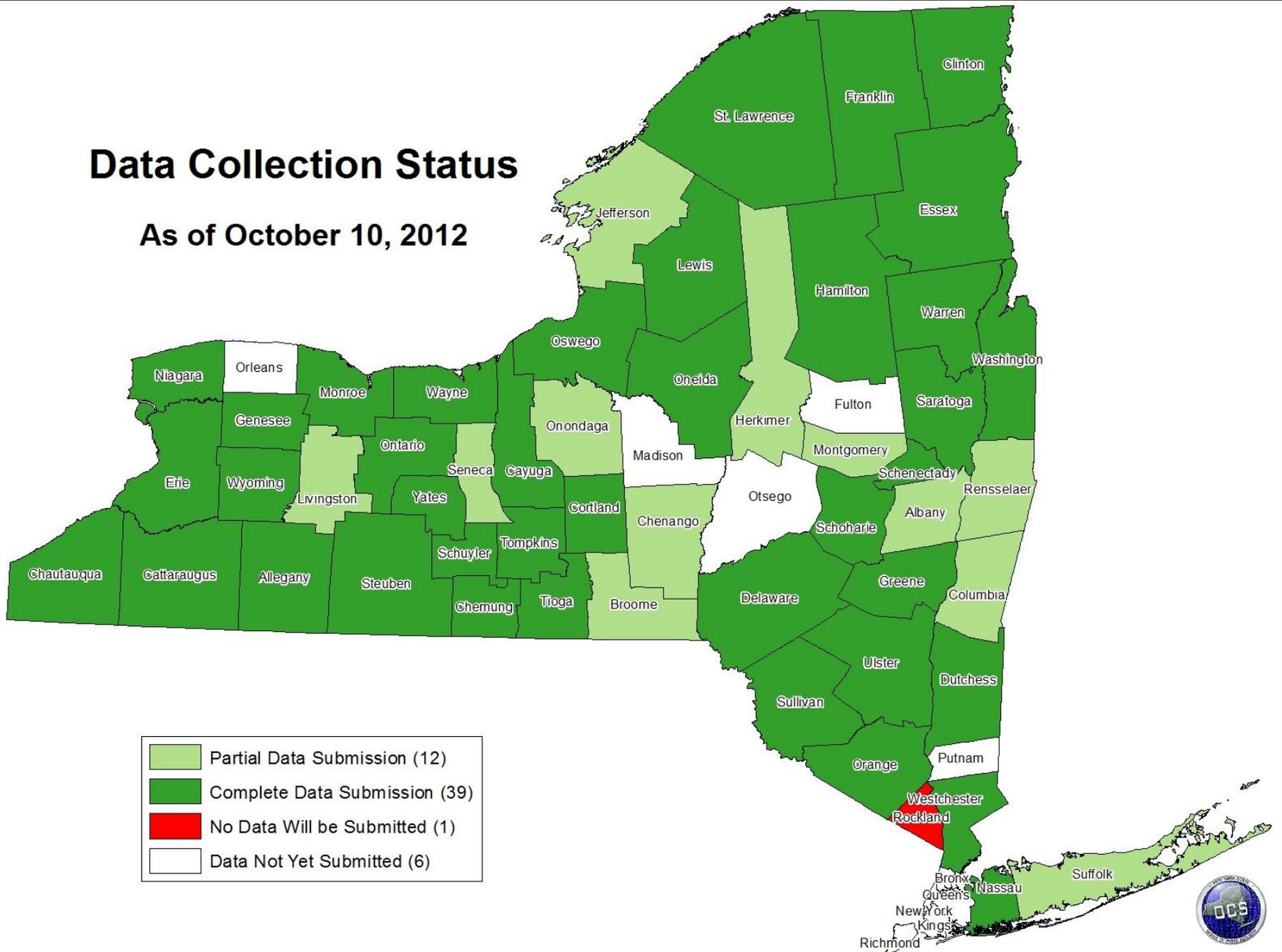
# County Follow Up Meetings

As of October 10, 2012



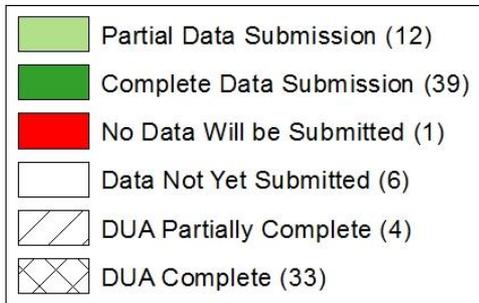
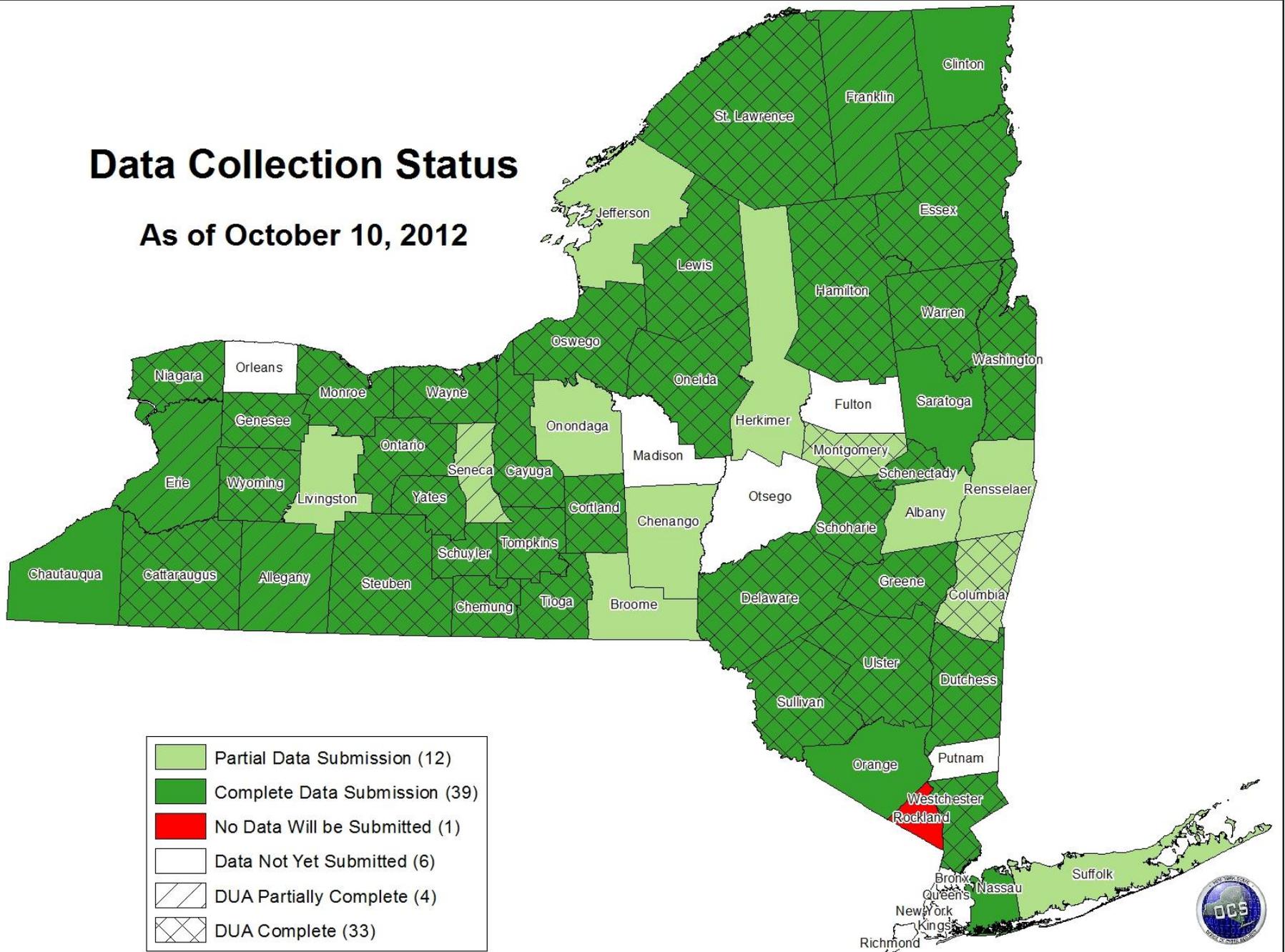
# Data Collection Status

As of October 10, 2012



# Data Collection Status

As of October 10, 2012





# What's Next for Local Governments

- DATA, DATA, DATA!!!
- Signed Data Usage Agreement
- Review Source Usage Document

no data + no DUA + no SUD = no processing

- Help to develop and pilot an interim data maintenance strategy

# Maintenance

- SAM is not a one-off
- Still evaluating our options
- We need your input
- Want a solution that enables continuous updates, bulk uploads and configurable downloads
- Web based, no client install
- Looking at a COTS not a custom build

# SAM RFP

- Restricted period – NYS procurement law
  - Intent to influence by potential bidders must be reported
  - Designated agency contact: Joe Martucci
  - [SAMRFP@dhses.ny.gov](mailto:SAMRFP@dhses.ny.gov)
  - In effect until there is a signed contract
- RFP schedule

# RFP Schedule

- Release of RFP - Monday, 9/24/2012
- Return Notice of Interest - Tuesday, 10/02/2012
- Questions Due from Bidders for Pre-Bid Conference - 5:00 p.m. EDT Tuesday, 10/02/2012
- Mandatory Pre-Bid Web Conference - 1:00 p.m. EDT Thursday, 10/4/2012
- **Rescheduled Mandatory Pre-Bid Conference - 1:00 p.m. EDT Thursday, 10/11/2012**
- Final Written Questions Due from Bidders - 2:00 p.m. EDT Monday, 10/15/2012
- Official Response to Bidders' Questions - Wednesday, 10/17/2012
- **Final version of Deliverable Schedule posted to RFP website - Wednesday, 10/17/2012**
- Closing Date for Receipt of Bids / Bid Opening Date - 2:00 p.m. EDT Thursday, 11/01/2012
- Notify selected bidder and non-selected bidders - Friday, 11/16/2012
- Contract Finalization with selected Bidder - 1:00 p.m. EDT Friday, 11/30/2012
- **Contract Award (Approval by the Office of the State Comptroller) – Late December – early January**

# *Tentative County Order*

1	Hamilton
2	Lewis
3	St. Lawrence
4	Essex
5	Franklin
6	Delaware
7	Allegany
8	Cattaraugus
9	Herkimer
10	Columbia
11	Cortland
12	Seneca
13	Washington
14	Montgomery
15	Tioga

16	Saratoga
17	Wyoming
18	Orleans
19	Livingston
20	Fulton
21	Clinton
22	Chenango
23	Ontario
24	Oneida
25	Schenectady
26	Cayuga
27	Wayne
28	Jefferson
29	Madison
30	Albany

31	Otsego
32	Chemung
33	Niagara
34	Oswego
35	Yates
36	Putnam
37	Westchester
38	Erie
39	Monroe
40	Schuyler
41	Suffolk
42	Chautauqua
43	Schoharie
44	Greene
45	Genesee

46	Sullivan
47	Steuben
48	Rockland
49	Ulster
50	Nassau
51	Onondaga
52	Broome
53	Rensselaer
54	Warren
55	Tompkins
56	Orange
57	Dutchess

# Data Processing Overview

- 3 County pilot projects completed
  - Tompkins County (Schema Transformation)
  - Lewis County (Creation of Address Points)
  - Warren County (Parcel Centroid to Rooftop Points)

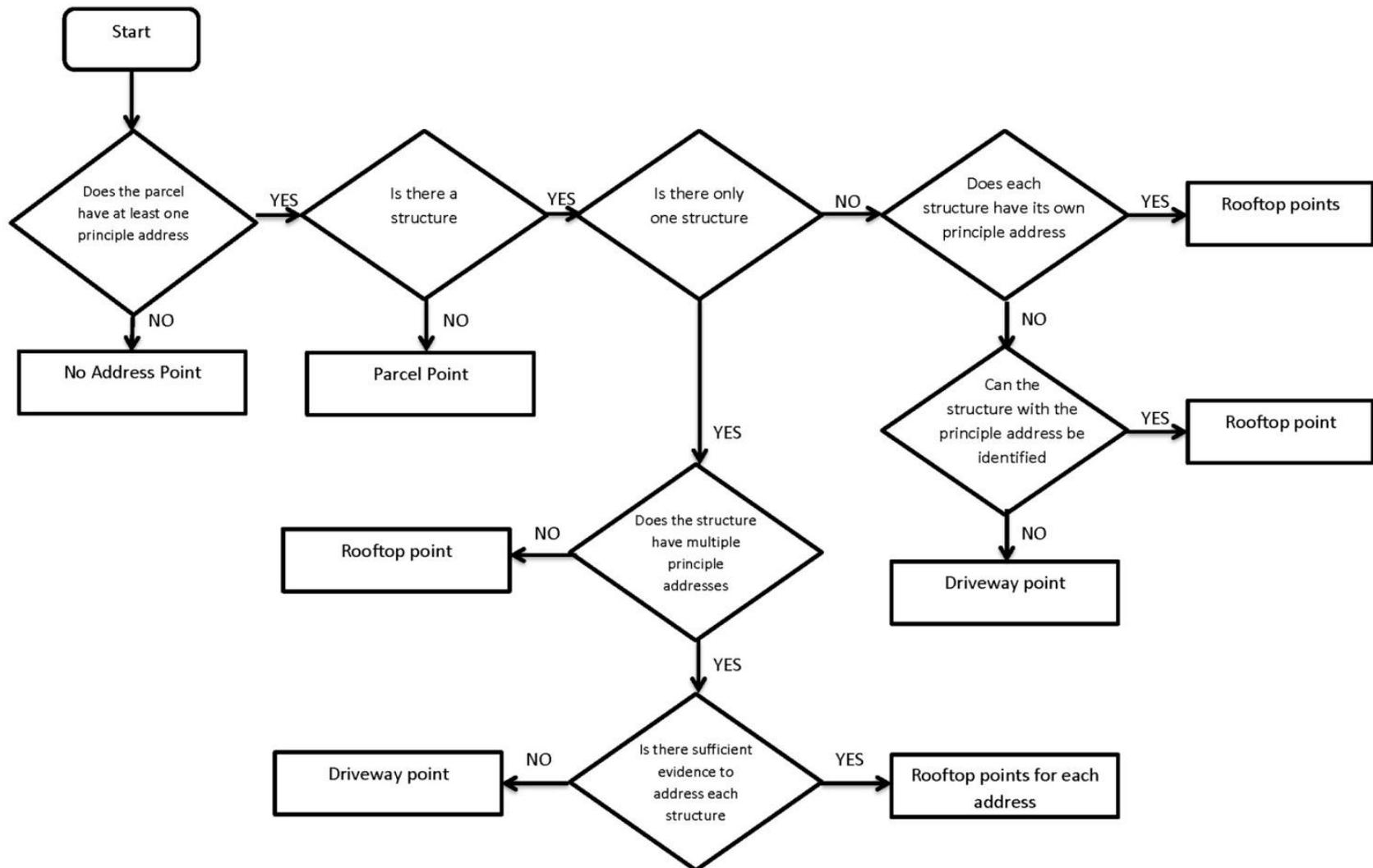
# Pilot Project Results

County	Total Points	Points Completed	Time	Points Processed per Hour
Warren	33,713	all (point location)	352 hrs	95.8
Lewis	25,986	3,399 (2 towns) (point location & NENA standard)	108 hrs	31.5
Tompkins	38,182	all (NENA standard)	75 hrs	509.1

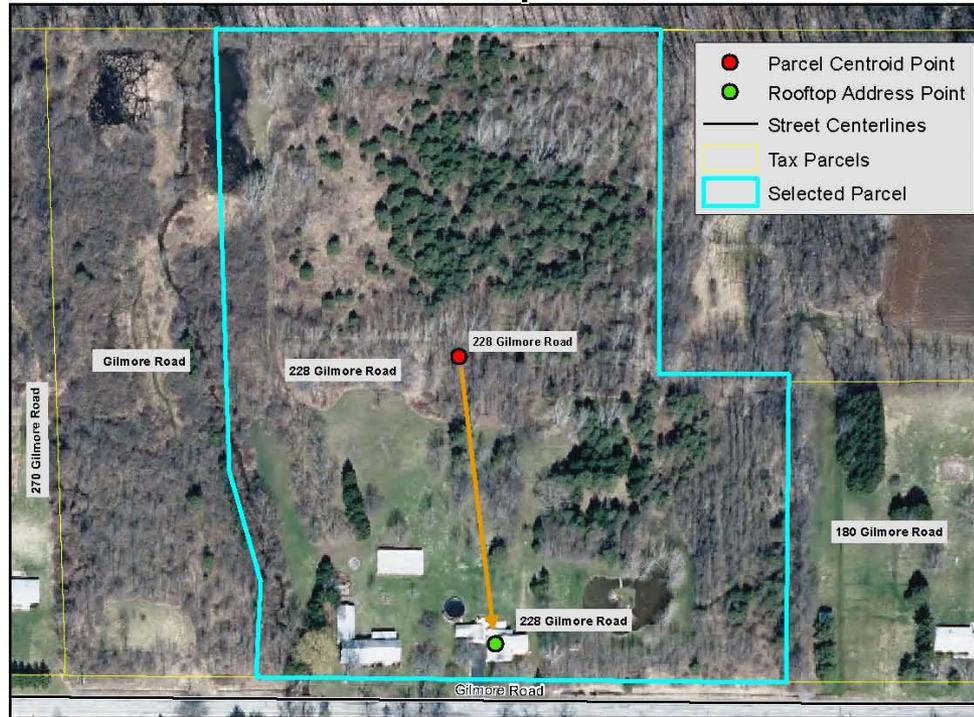
# Lessons Learned

- Automated address parsing required
  - With manual review afterwards
- Most efficient for the State to create a common place names related table
- Accurate streets data is crucial
- Local knowledge is critical to ensuring data accuracy

# Point Placement Examples



## Parcel Centroid Point to Rooftop Point



In this example, the parcel centroid address point has been moved to the visual center of the rooftop on the principle structure within the parcel boundary.

### Source Data

Monroe County Address Points				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26248905402000010111100000	228	Gilmore Road	240	Rural Res

Monroe County Tax Parcel Data				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26248905402000010111100000	228	Gilmore Road	240	Rural Res



## Driveway Entrance Points to Rooftop Points



In this example, the driveway entrance address points along Frisbee Hill Road have been moved to the rooftop of the principle structure within the parcel.

### Source Data

Monroe County Address Points					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26280003301000020330000000	346	Frisbee Hill Road	210	1 Family Res	
26280003301000020320000000	336	Frisbee Hill Road	210	1 Family Res	
26280003301000020310000000	330	Frisbee Hill Road	210	1 Family Res	
26280003301000020300000000	324	Frisbee Hill Road	210	1 Family Res	
26280003301000020290000000	318	Frisbee Hill Road	210	1 Family Res	

Monroe County Tax Parcel Data					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26280003301000020330000000	346	Frisbee Hill Road	210	1 Family Res	
26280003301000020320000000	336	Frisbee Hill Road	210	1 Family Res	
26280003301000020310000000	330	Frisbee Hill Road	210	1 Family Res	
26280003301000020300000000	324	Frisbee Hill Road	210	1 Family Res	
26280003301000020290000000	318	Frisbee Hill Road	210	1 Family Res	

Map created by NYS OCS, July 11, 2012



# Single Parcel with Multiple Points Moved to Rooftop



In this example, the Duplex in the selected parcel has 2 principle addresses in the same parcel and requires 2 points. Since the address numbers are increasing to the right, the lower numbered point was placed on the left of the roof and the higher numbered point was placed on the right of the roof. Since the three parcels to the right only have one building per parcel, the addresses were matched between the centroid points and parcels and points were moved to the rooftop.

## Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
3070	OLD STATE RD	SCHENECTADY	NY	12303
3072	OLD STATE RD	SCHENECTADY	NY	12303

Albany County Tax Parcel Data				
SBL	LOC_NUM	LOC_NAME	PROP_CLASS	
02701900020370000000	3070-3072	Old State Rd	220	



## Residential House with Multiple Buildings Moved to Rooftop



In this example, there are multiple buildings within a single parcel but only one parcel centroid address point. Since there is only a point for the main structure within the parcel and no additional point for the barn, the centroid point gets moved to the rooftop of the house.

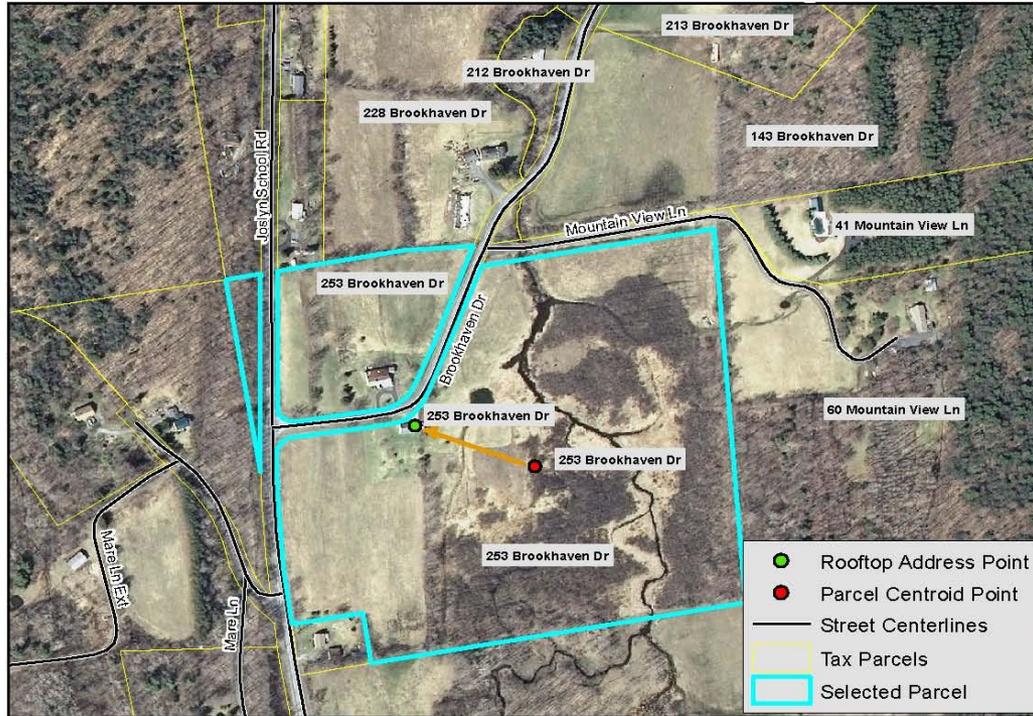
### Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
4533	HURST RD	ALTAMONT	NY	12009

Albany County Tax Parcel Data			
SBL	PROP_CLASS	LOC_NUM	LOC_NAME
3800000030200010000	210	4533	Hurst Rd



## Parcel Split by Road and Centroid Point Moved to Rooftop



In this example the parcel is split by Brookhaven Dr. The addresses on the right side of Brookhaven Dr are odd and the addresses on the left side are even so the address point would be placed on the rooftop of the building on the right side of the road. This situation is common in rural areas of the state where farm structures are on one side of the road and the residential structure is on the opposite side of the road.

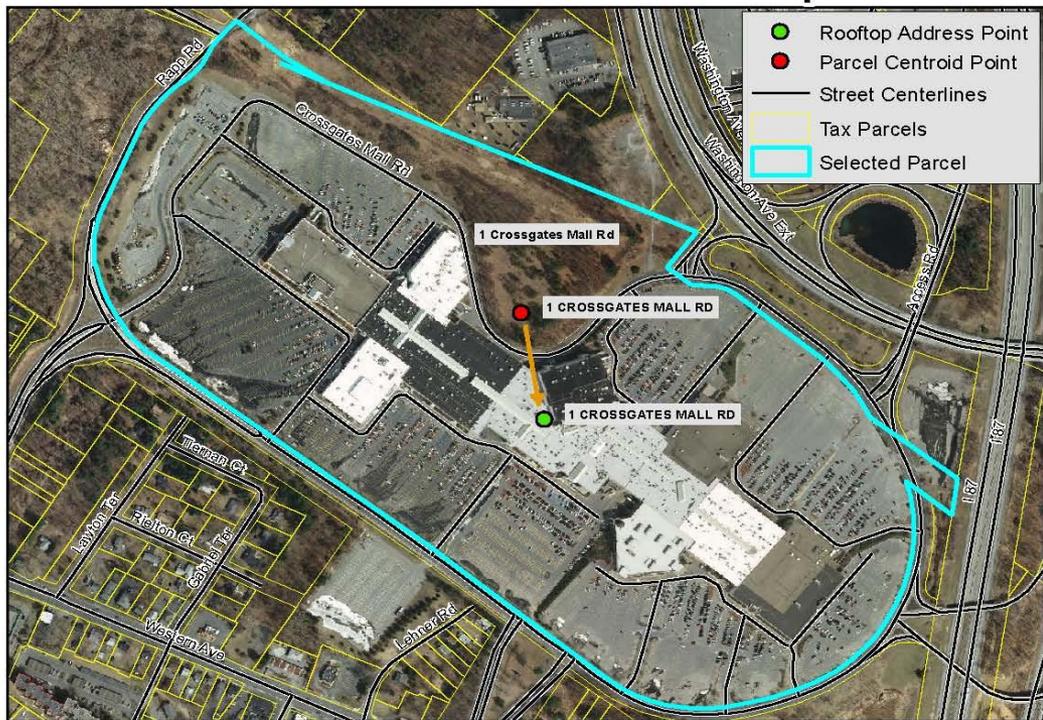
### Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
253	BROOKHAVEN DR	EAST BERNE	NY	12059

Albany County Tax Parcel Data		
SBL	LOC_NUM	LOC_NAME
10400000020030000000	253	Brookhaven Dr



## Single Building Mall with Parcel Centroid Point Moved to Rooftop



In this example, there is only one address in the data for the large, single building mall. The parcel centroid point was in a wooded area to the North of the parcel and was moved to the rooftop of the structure since there is only one structure within the parcel.

### Source Data

NYS Address Points				
ADD_NUMBER	STREETNAME	CITY	STATE	POSTAL
1	CROSSGATES MALL RD	ALBANY	NY	12203

Albany County Tax Parcel Data		
SBL	LOC_NUM	LOC_NAME
05200100010040020000	1	Crossgates Mall Rd



## Multiple Building Mall Plaza with Parcel Centroid Point Moved to Driveway



In this example, the plaza is made up of multiple buildings and there is only one address for the whole strip mall. The parcel centroid is moved to the driveway entrance since there is not one principle structure within the parcel or subaddress information for each of the stores within the strip mall.

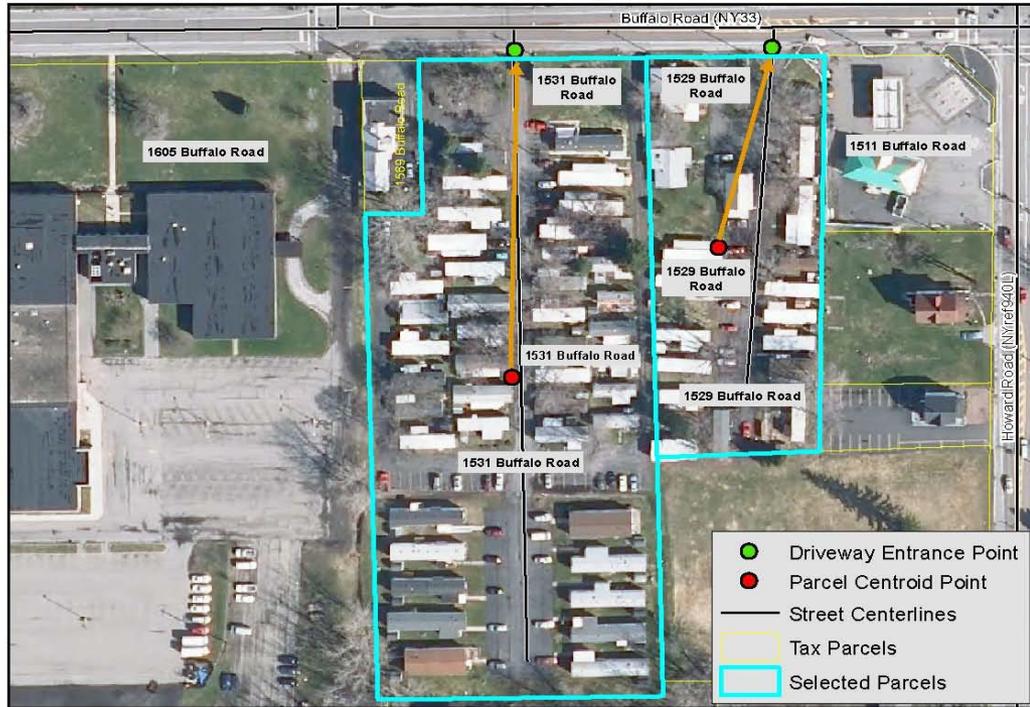
### Source Data

NYS Address Points				
ADD_NUM	STREETNAME	CITY	STATE	POSTAL
1475	WESTERN AVE	ALBANY	NY	12203

Albany County Tax Parcel Data		
SBL	LOC_NUM	LOC_NAME
05200400020080000000	1475	Western Ave



## Mobile Home Park with Single Point Moved to Driveway Entrance



In this example, there were only parcel centroid address points for these two mobile home communities. There were no addresses or points for the individual mobile homes in the data. Since there is no principle building within these two mobile home communities, the centroid points were moved to the driveway entrance.

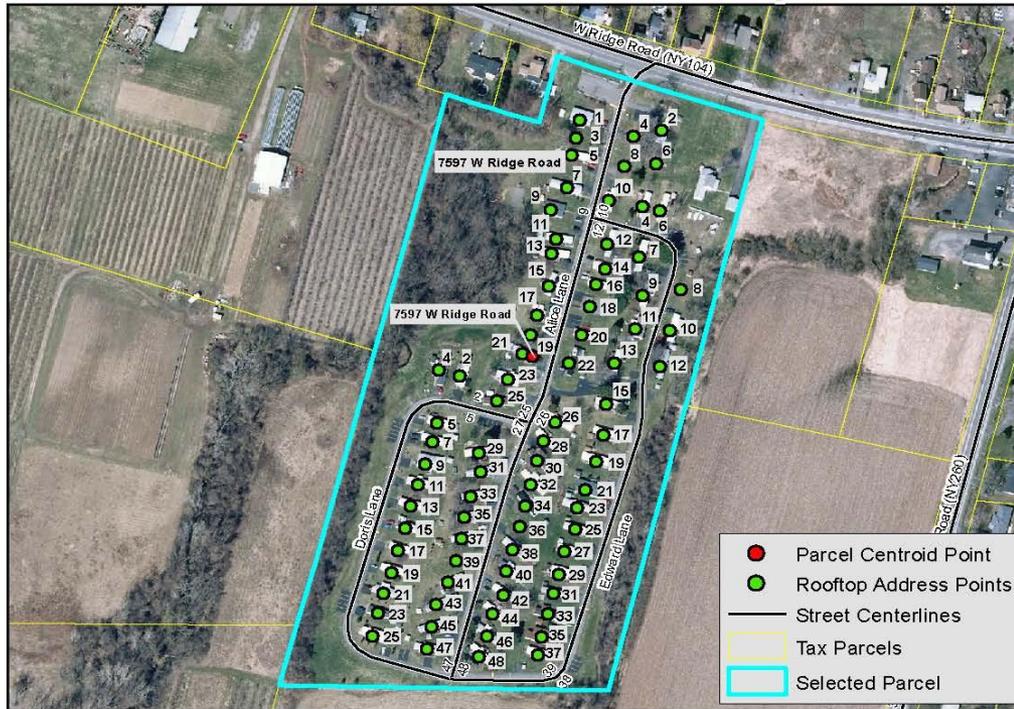
### Source Data

Monroe County Address Points				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26260011910000030530000000	1531	Buffalo Rd	416	Mfg Housing Pk
26260011910000030540000000	1529	Buffalo Rd	416	Mfg Housing Pk

Monroe County Tax Parcel Data				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26260011910000030530000000	1531	Buffalo Rd	416	Mfg Housing Pk
26260011910000030540000000	1529	Buffalo Rd	416	Mfg Housing Pk



## Parcel Centroid Point Moved to Individual Mobile Home Rooftops



In this example, the streets within the mobile home community are named and there are addresses for each of the mobile homes as well. Based on the street ranges it is possible to place the address points on the rooftop of the correct mobile homes.

### Source Data

Monroe County Master Address File						
SBL	ST_NBR	ST_NAME	ST_TYPE	LOC_NAME	LOC_CITY_ST	LOC_ZIP
26248905404000010240000000	1	Alice	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	10	Alice	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	11	Alice	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	12	Alice	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	11	Doris	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	10	Edward	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420
26248905404000010240000000	11	Edward	Lane	Maple Ridge Mobile Home Park	Brockport NY	14420

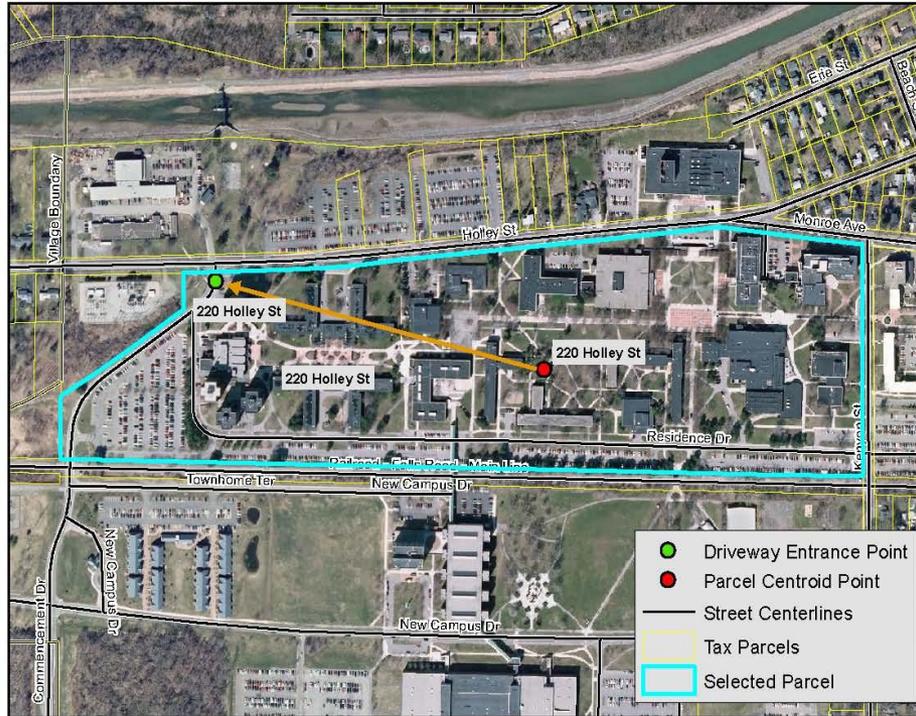
Monroe County Address Points					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26248905404000010240000000	7597	WRidge Road	416	Mfg Housing Pk	

Monroe County Tax Parcel Data					
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC	
26248905404000010240000000	7597	WRidge Road	416	Mfg Housing Pk	

Map created by NYS OCS, July 12, 2012



## Single Address Point on Campus Moved to Driveway



In this example, the college campus pictured has an address point in the center of the parcel. There were no additional address points for the individual buildings on campus so the centroid address point has been moved to the driveway street entrance off of Holley St.

### Source Data

Monroe County Address Points				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26520106815000010101100000	220	Holley St	613	College/Univ

Monroe County Tax Parcel Data				
SBL	ST_NBR	RPS_ST_NAM	PROP_CLASS	PROP_DESC
26520106815000010101100000	220	Holley St	613	College/Univ



# Conversion to NENA Draft Standard

Before

ADDRESSID	ADDRNUM	PREFIX	STREETNAME	STREETTYPE	SUFFIX	SUBADDRESS
2888	101	East	SOUTH	ST		V GROTON
2928	104	West	SOUTH	ST		V GROTON

After

AddressNumberPrefix	AddressNumber	PreModifier	PreDirectional	PreType	SeparatorElement	StreetName	PostType
<Null>	101	<Null>	E	<Null>	<Null>	SOUTH	ST

Before

OBJECTID *	Shape *	ADDRESSID	ADDRNUM	PREFIX	STREETNAME	STREETTYPE	SUFFIX	SUBADDRESS
3749	Point	3749	<Null>	<Null>	STATE ROUTE 13	<Null>		C ITHACA
3750	Point	3750	<Null>	<Null>	STATE ROUTE 13	<Null>		C ITHACA
3751	Point	3751	<Null>	<Null>	STATE ROUTE 13	<Null>		C ITHACA
3752	Point	3752	<Null>	<Null>	STATE ROUTE 13	<Null>		C ITHACA

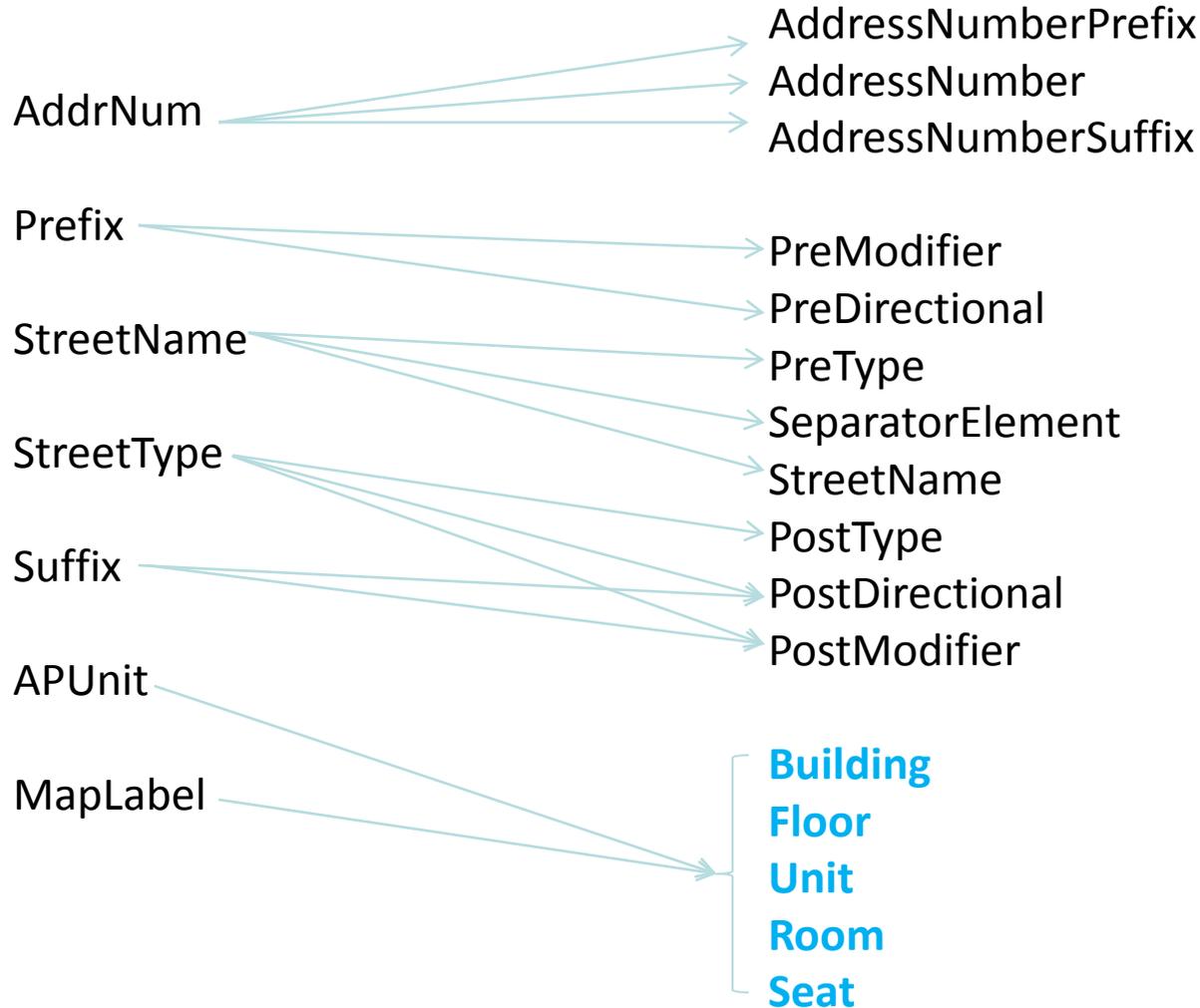
After

AddressNumberPrefix	AddressNumber	PreModifier	PreDirectional	PreType	SeparatorElement	StreetName	PostType
<Null>	<Null>	<Null>	<Null>	STATE ROUTE	<Null>	13	<Null>
<Null>	<Null>	<Null>	<Null>	STATE ROUTE	<Null>	13	<Null>
<Null>	<Null>	<Null>	<Null>	STATE ROUTE	<Null>	13	<Null>
<Null>	<Null>	<Null>	<Null>	STATE ROUTE	<Null>	13	<Null>

# Field Matching

## Current Tompkins Schema

## NENA Standard



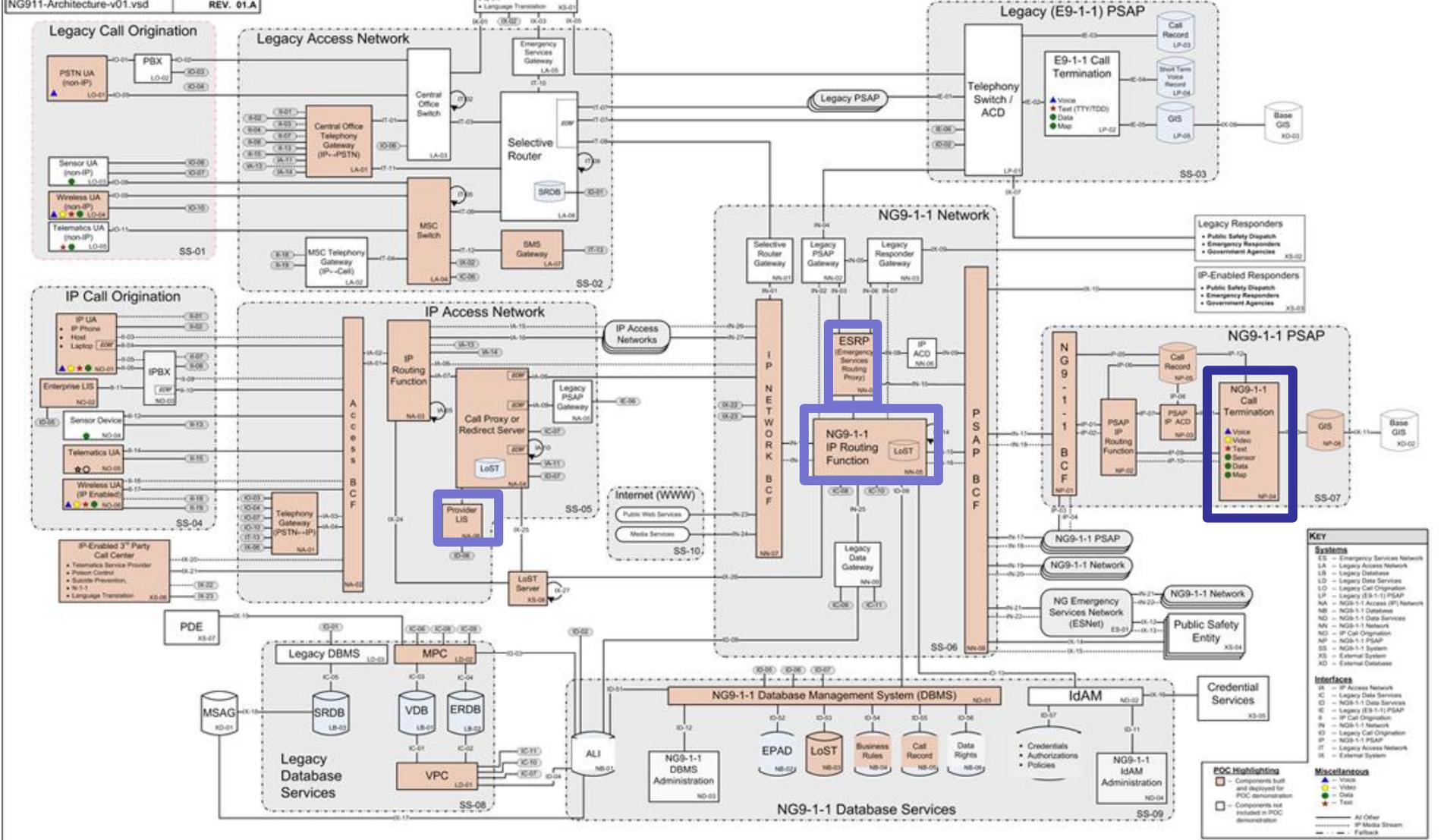
# ESRI Template

- Working closely with ESRI, our GIS Software vendor, on an automated address standardizer
- Address standardization template for the FGDC format
- Not going to build a NENA version until the standard is complete

# NG9-1-1 NENA i3

U.S. Department of Transportation – ITS JPO  
**Next Generation 9-1-1 Architecture**  
 ISSUE: November 2007 LEVEL 2 OF 2  
 NG911-Architecture-v01.vsd REV. 01.A

Revisions		
Rev.	Description	Date
01.A	Initial Release	2007-Nov-01



**KEY**

**Systems**

- ES - Emergency Services Network
- LA - Legacy Access Network
- LD - Legacy Database
- LD - Legacy Data Services
- LD - Legacy Call Origination
- LA - Legacy (E9-1-1) PSAP
- NA - NG9-1-1 Access (IP) Network
- ND - NG9-1-1 Database
- ND - NG9-1-1 Data Services
- NN - NG9-1-1 Network
- NO - IP Call Origination
- NP - NG9-1-1 PSAP
- NS - NG9-1-1 System
- XS - External System
- XD - External Database

**Interfaces**

- IA - IP Access Network
- IC - Legacy Data Services
- ID - NG9-1-1 Data Services
- IE - Legacy (E9-1-1) PSAP
- IF - IP Call Origination
- IN - NG9-1-1 Network
- IS - Legacy Call Origination
- IT - Legacy Access Network
- IX - External System

**POC Highlighting**

- Components built and deployed for POC demonstration
- Components not included in POC demonstration
- IP Media Stream
- Backbone

**Miscellaneous**

- Voice
- Video
- Data
- Text

# NENA Standards Activities

- NG9-1-1 Civic Location Data Exchange Format (CLDXF) Standard
  - defines address data elements
- NG9-1-1 GIS Data Model Standard
  - defines the minimum set of GIS data for NG9-1-1
- Site/Structure Address Point GIS Data for 9-1-1
  - defines the spatial placement of site/structure address points for use in 9-1-1 systems
- NYS 9-1-1 GIS Workgroup
  - Monthly webinar on 3<sup>rd</sup> Thursday at 1pm
  - Over 40 NYS 9-1-1 and NYS GIS professionals
  - Review/discuss NENA GIS-related standards

# NENA Standards

## *NG9-1-1 CLDXF Standard*

- ✓ Standard completed & submitted to NENA leadership
- ✓ Internal NENA “all committee review”
- ✓ NENA Work Group reviews comments & updates document
- ✓ Revised standard submitted to NENA leadership
- ✓ Public review
- ✓ NENA Work Group reviews comments & updates document
- ✓ Second public review (ended 10/5/2012)
- ✓ NENA Workgroup reviews comments & updates document
- Revised standard submitted for publication

# NENA Standards

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

- ✓ Standard completed & submitted to NENA leadership
- ✓ Internal NENA “all committee review” (ended 6/22/2012)
- ✓ NENA Workgroup reviews comments & updates document
- Revised standard submitted to NENA leadership
- 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 standard
  - Standard completed & submitted to NENA leadership
  - Internal NENA “all committee review”
  - NENA Workgroup reviews comments & updates document
  - Revised standard submitted to NENA leadership
  - Public review
  - NENA Workgroup reviews comments & updates document
  - Revised standard submitted for publication

# Thank you!

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

## Open Discussion

