



Office of Information
Technology Services

Street and Address Maintenance (SAM) Program

County Data Maintenance Discussion

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NYS GIS Program Office

Streets and Address Maintenance Program

Today's Agenda

- Update on SAM Project Status
- Data acceptance & post processing
- Files provided to counties
- Web-based data maintenance tool
- Strategize data maintenance
- Review delivered data files in ArcGIS

SAM Address Points

Stage 1: Build

State contracted 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



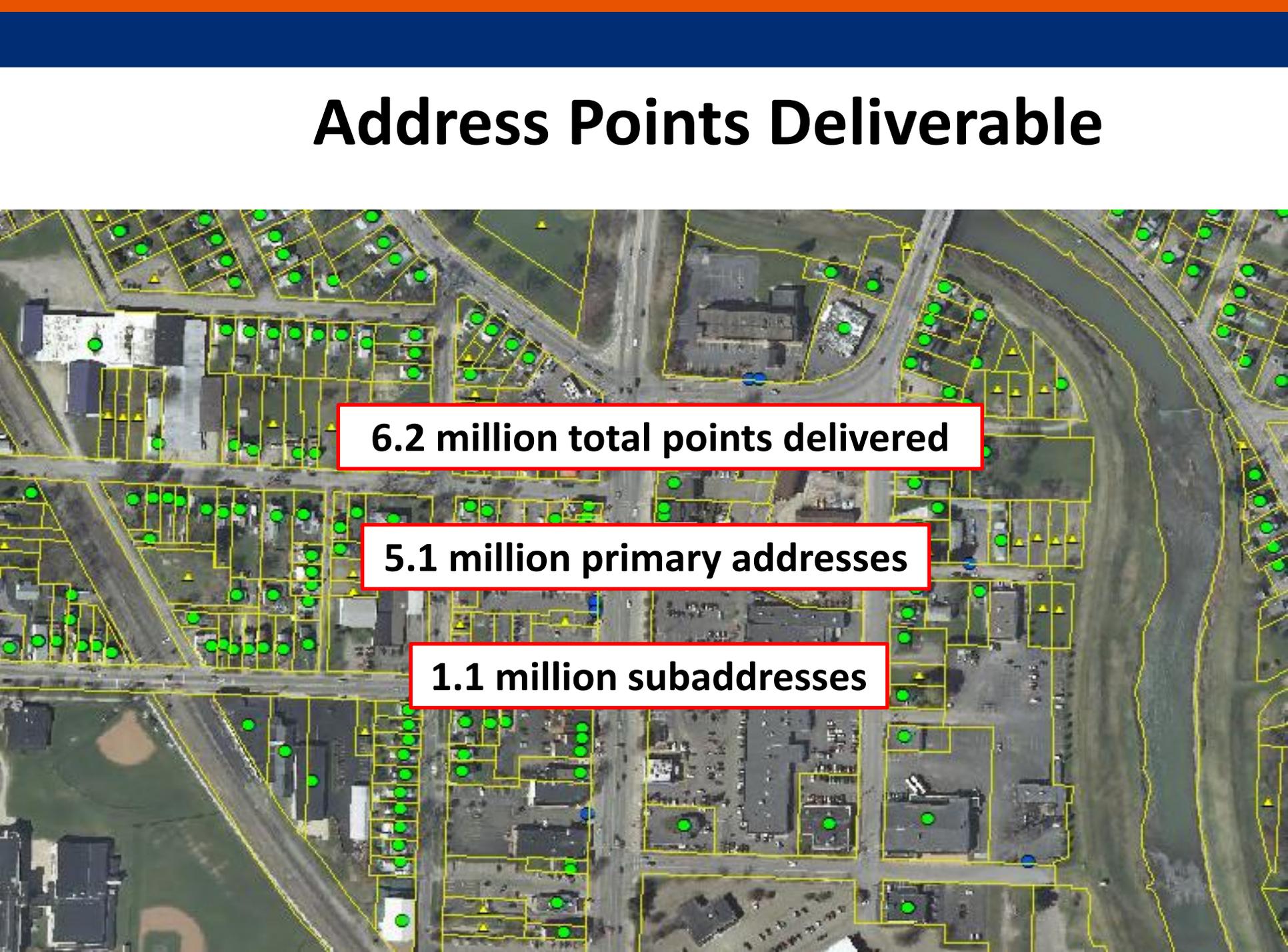
Delivery Acceptance

- 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***

Post Data Build

- ITS tasks:
 - ✓ Error corrections
 - ✓ Post processing
 - ✓ Build new geocoding locators
 - ✓ Review Exception file and error flags
 - ✓ Data distribution
 - County address data flow discussions
 - Train Counties to use data maintenance tool
- County Tasks:
 - Spatially Invalid file and Exception file review
 - Submit edits via data maintenance tool or other agreed upon edit submission process
 - Review proposed street and address edits from ITS

Address Points Deliverable



6.2 million total points delivered

5.1 million primary addresses

1.1 million subaddresses

Files Provided to Counties

Address Points Deliverable

(symbolized by Point Type)



Address Points Deliverable

(symbolized by Point Type)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Spatially Invalid Address Points

(addresses geocode only to street centerlines)



Exception Report

(addresses do not geocode to parcels or centerlines)

	A	B	C	D
1	ADDRESS	SOURCE	REASON	EXCEPTION_FLAG
29	7036 Third Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
30	81 Willard Dtc Romulus	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
31	8405 Bassett Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
32	8453 A 7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
33	8453 A-20 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
34	8453 A21 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
35	8453 D-7 Lower Lake Rd Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
36	8565 Mann Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
37	8588 # 1 Farris Ln Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
38	8897 Arden Rd Covert	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
39	9224 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
40	9248 Lamoreaux Ldg Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
41	9922 County Line Camp Lodi	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
42	Foreign Exchange Trumansburg Territory	911 Master AL	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
43	4400 Seybolt Rd Seneca Falls 13148	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
44	6150 State Route 96 Romulus 14541	Business Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
45	68 Elizabeth Blackwell St Geneva 14456	NAVTEQ	Address was successfully geocoded to NYS Centerlines, but could not be accurately located	Not Found
46	10435 Hatch Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
47	12135 Armitage Rd Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
48	146 Strang Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
49	1707 Beaujon Rd Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
50	20e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
51	21e Stanton Meadows Dr Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
52	2942 Knauss Rd Waterloo 13165	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
53	3395 Us Route 20 Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
54	3996 County Road 153 Ovid 14521	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
55	43 1/2 Center St Seneca Falls 13148	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
56	4902 Mcgrane Rd Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG
57	5693 Colonels Dr Romulus 14541	Residential Address	Address could not be geocoded to NYS Centerlines or working address points and was not found in MSAG	No MSAG



AP_Flag on Deliverables

- Confident in point placement but potential issue with source data
- AP_Flags:
 - HYP: Address number is part of a hyphenated range
 - DSUB: Potentially a duplicate subaddress
 - GEO: Geocoded to street centerline in a complex where only 1 parcel exists
 - CR: County review is needed to assure proper placement and attribution
 - PAR: Problem with odd/even addressing
 - INV: Source address information is invalid (missing elements)
 - NAME/TYPE: Street name/type does not match NYS Streets name
 - AOR: Address out of range when compared to NYS Streets
 - CBD: Address cannot be determined when compared to NYS Streets
 - NF: Not Found (address in the source data could not be located)
 - PND: Possible new development
 - OOD: Source data appears to be out of date

Landmark Name Issues

- NENA definition:
The name by which a prominent feature is publically known
- Populated from:
 - County LEC/TN/Address Lists
 - Contractor provided postal delivery addresses
- Discovered people's names in *Landmark Name* field
 - Home office with the business located elsewhere
 - Unnamed business
- SAM database will have no personal information
- Also discovered duplicate Landmark Names in early counties

Landmark Name Resolution

- Postponed data distribution
- Immediately removed all Landmark Names from:
 - Downloadable public file
 - Web map service
 - Geocoding service
- Removed people's names from *Landmark Name* field
 - Reviewed *AddressPoints* and *Spatially_Invalid* files
 - MD, DDS, DVM, ESQ, LLC
 - Developed automated methods for large counties
 - Small counties reviewed manually
- Resolved duplicate Landmark Names in early counties
- County review required before repopulating in public data

SAM Address Points

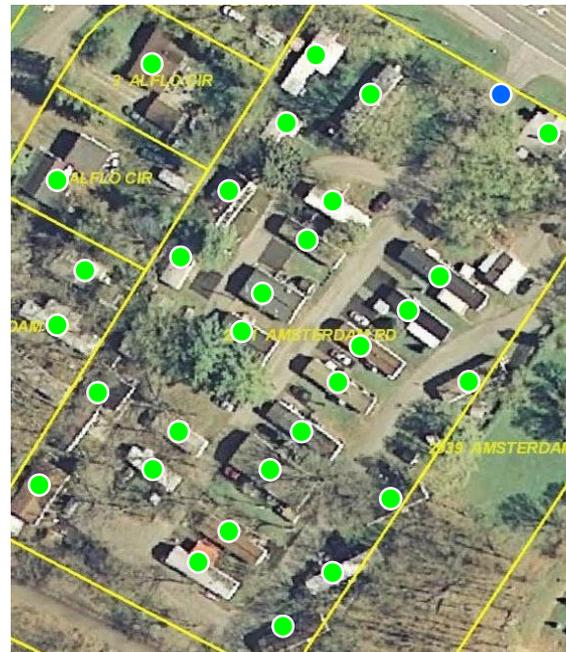
Stage 2: Maintenance

Counties use NENA standards to:

- **Locate** addresses in Spatially Invalid file and Exception Report
- **Add new** points
- **Refine** locations
- Map **subaddresses**

New York State:

- Facilitates data maintenance discussions
- Provides data maintenance tools
- Provides data hosting/distribution services



GeoComm Data Maintenance Tool

- Web-based data maintenance tool – GeoLynx
- No cost for counties and state agencies to use
- Edit data directly
 - Editing limited by geographic footprint
 - Add, delete, or reposition address points
 - Edit attributes on address points and streets
 - Add, delete or realign streets*
- Notification only option
 - Provide information/attachments for needed changes
 - Edits outside of your geographic footprint



Add/Extend a Street

Views Layers Change Requests Web DMS GIS Portal Log Off

GeolynxServer Street Address or Longitude, Latitude

Web DMS

Web DMS Editing

Addressing

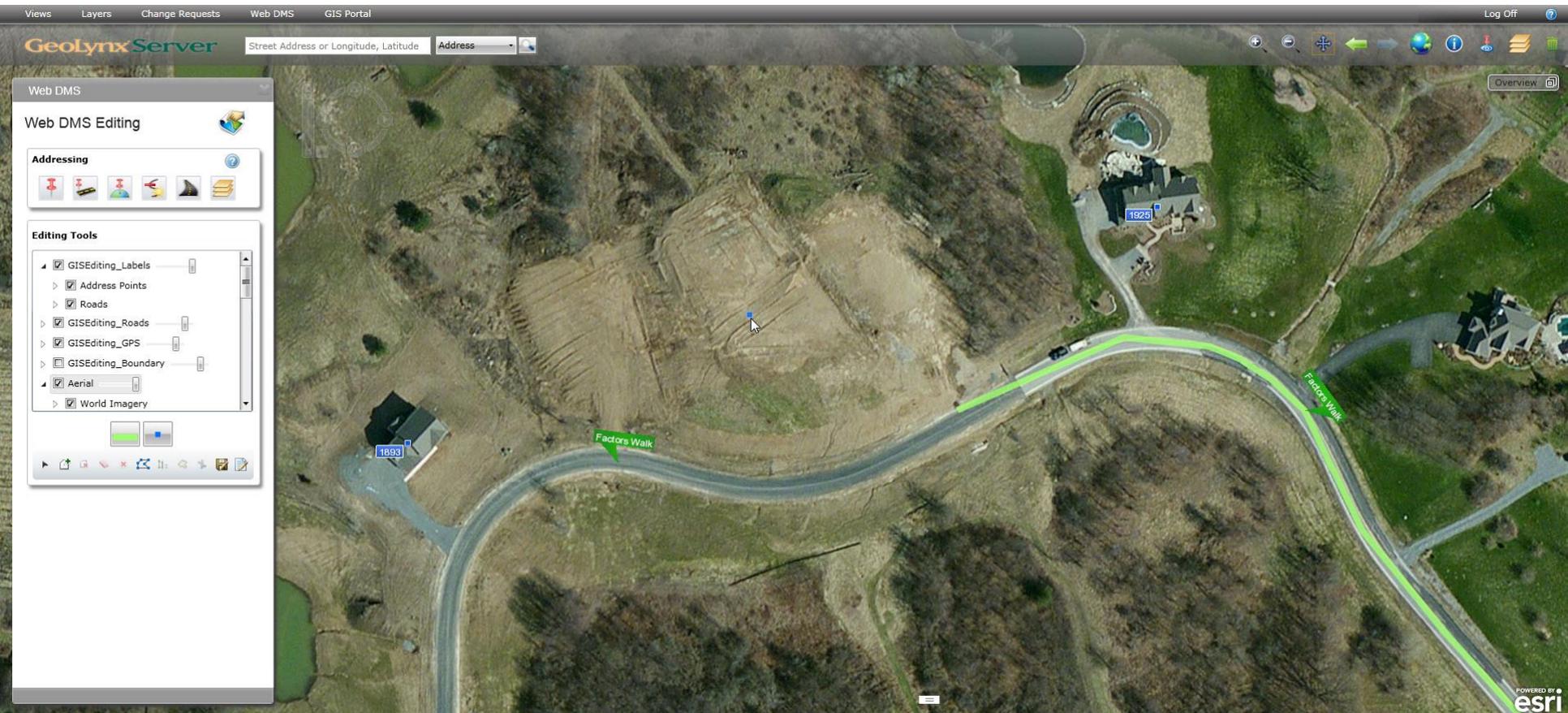
Editing Tools

- GISEditing_Labels
 - Address Points
 - Roads
 - GISEditing_Roads
 - GISEditing_GPS
 - GISEditing_Boundary
- Aerial
- World Imagery

Add/Edit Street Attributes

The screenshot displays the Geolynx Server GIS interface. At the top, a navigation bar includes 'Views', 'Layers', 'Change Requests', 'Web DMS', 'GIS Portal', and 'Log Off'. A search bar contains the text 'Street Address or Longitude, Latitude'. The main map area shows an aerial view of a residential area with a cyan street highlighted. A 'Web DMS Editing' sidebar on the left contains 'Addressing' tools and 'Editing Tools' such as 'GISEditing_Labels', 'Address Points', 'Roads', 'GISEditing_Roads', 'GISEditing_GPS', 'GISEditing_Boundary', 'Aerial', and 'World Imagery'. An 'Attributes' dialog box is open, showing the following fields: 'LeftFromAddress' (with a cursor), 'LeftToAddress', 'RightFromAddress', 'RightToAddress', 'CompleteStreetName' (set to 'Factors Walk'), 'PreModifier', 'PreDirectional', 'PreType', 'SeparatorElement', 'StreetName', 'PostType', and 'PostDirectional'. 'Update' and 'Delete' buttons are at the bottom of the dialog. The map includes labels for 'State Route 64', 'Unnamed Street', and 'Factors Walk'. Numerous address points are visible, such as 1826, 1831, 1837, 1838, 1881, 1870, 1868, 1852, 1849, 1879, 784, 1882, 1945, 1947, 1941, 1880, 8482, 8436, 8674, and 8654. The 'esri' logo is in the bottom right corner.

Add an Address Point



Add Address Point Attributes

The screenshot displays the Geolynx Server GIS interface. The main map area shows an aerial view of a residential area with a road labeled "Factors Walk" highlighted in green. Several address points are visible, including 1893, 1899, and 1926. An "Attributes" dialog box is open, showing the following fields:

- PrefixAddressNumber: [Empty]
- AddressNumber: 1899
- SuffixAddressNumber: [Empty]
- PreModifier: [Empty]
- PreDirectional: [Empty]
- PreType: [Empty]
- SeparatorElement: [Empty]
- StreetName: Factors Walk
- PostType: [Empty]
- PostDirectional: [Empty]
- PostModifier: [Empty]
- SubAddress: [Empty]

Buttons for "Update" and "Delete" are located at the bottom of the dialog. On the left side, the "Web DMS Editing" panel is visible, containing "Addressing" and "Editing Tools" sections. The "Addressing" section includes icons for various address-related functions. The "Editing Tools" section includes checkboxes for GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, and World Imagery.

Reposition an Address Point

The screenshot displays the GeolynxServer GIS web application interface. At the top, navigation links include Views, Layers, Change Requests, Web DMS, GIS Portal, and Log Off. A search bar contains the text "Street Address or Longitude, Latitude" and "Address".

On the left, the "Web DMS Editing" panel is active, showing "Addressing" tools and "Editing Tools" such as GISEditing_Labels, Address Points, Roads, GISEditing_Roads, GISEditing_GPS, GISEditing_Boundary, Aerial, and World Imagery.

The main map area shows an aerial view of a residential area with a road labeled "Frieden Walk". Two address points are visible: one labeled "1929" and another labeled "1931". A red box highlights the "1931" address point.

On the right, the "Attributes" window is open, displaying the following data for the selected address point:

ZipName	Ionia
State	New York
ZipCode	14475
PointType	Parcel Centroid
AddressSource	County Building Footprint
SourceOfData	
DateUpdated	9/10/2013 7:00:00 PM
PrimaryPoint	Yes
CityTownName	West Bloomfield
PlaceName	
PlaceType	

Buttons for "Update" and "Delete" are located at the bottom of the Attributes window.

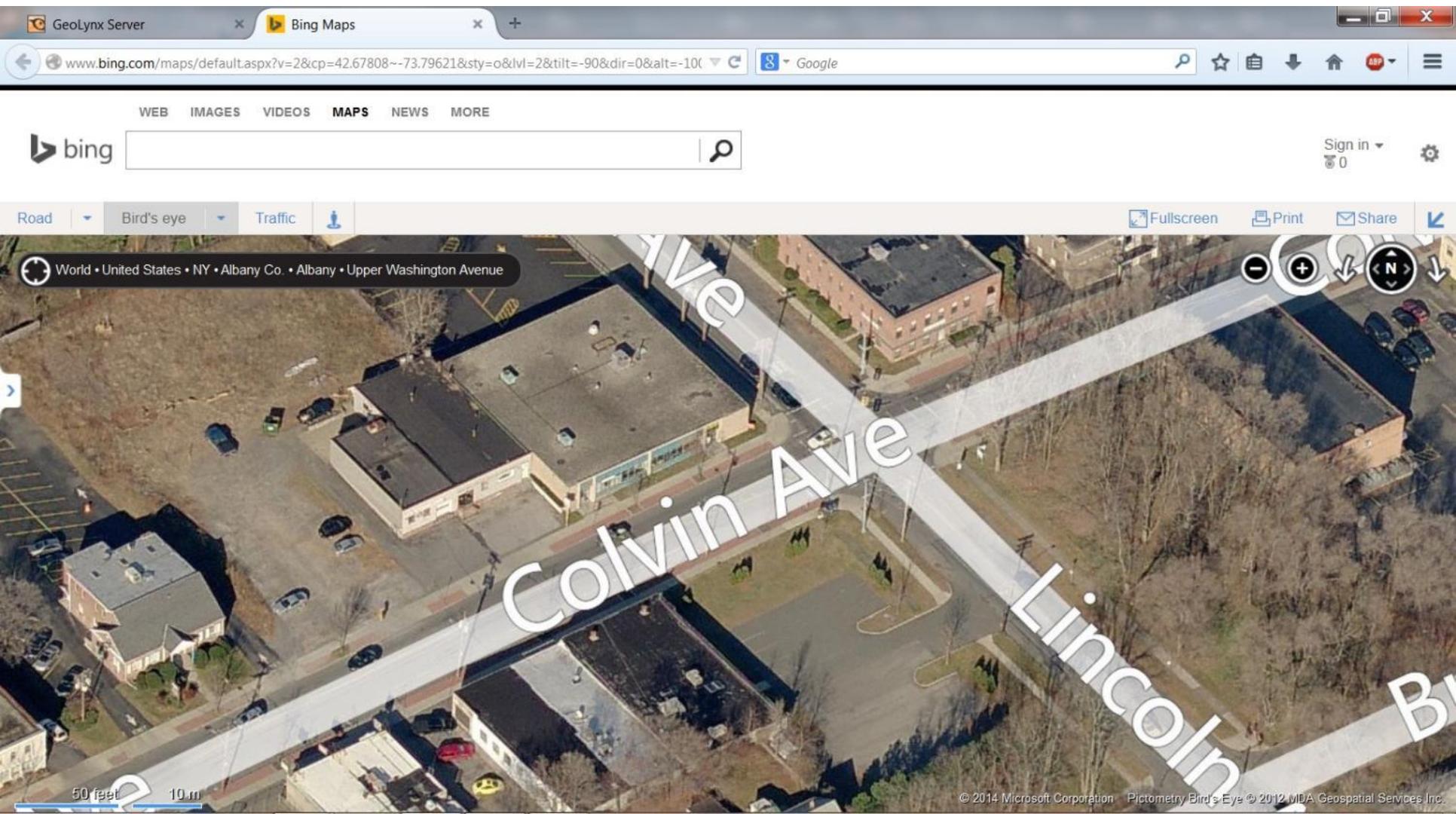
Change PointType Attribute

The screenshot displays the GeolynxServer web GIS interface. The main map area shows an aerial view of a residential area with several address points labeled with numbers like 1929, 1931, and 1937. A road labeled 'Frieden Walk' is highlighted in green. On the left, the 'Web DMS Editing' panel is visible, containing 'Addressing' and 'Editing Tools' sections. The 'Attributes' dialog box is open on the right, showing the following data for a selected point:

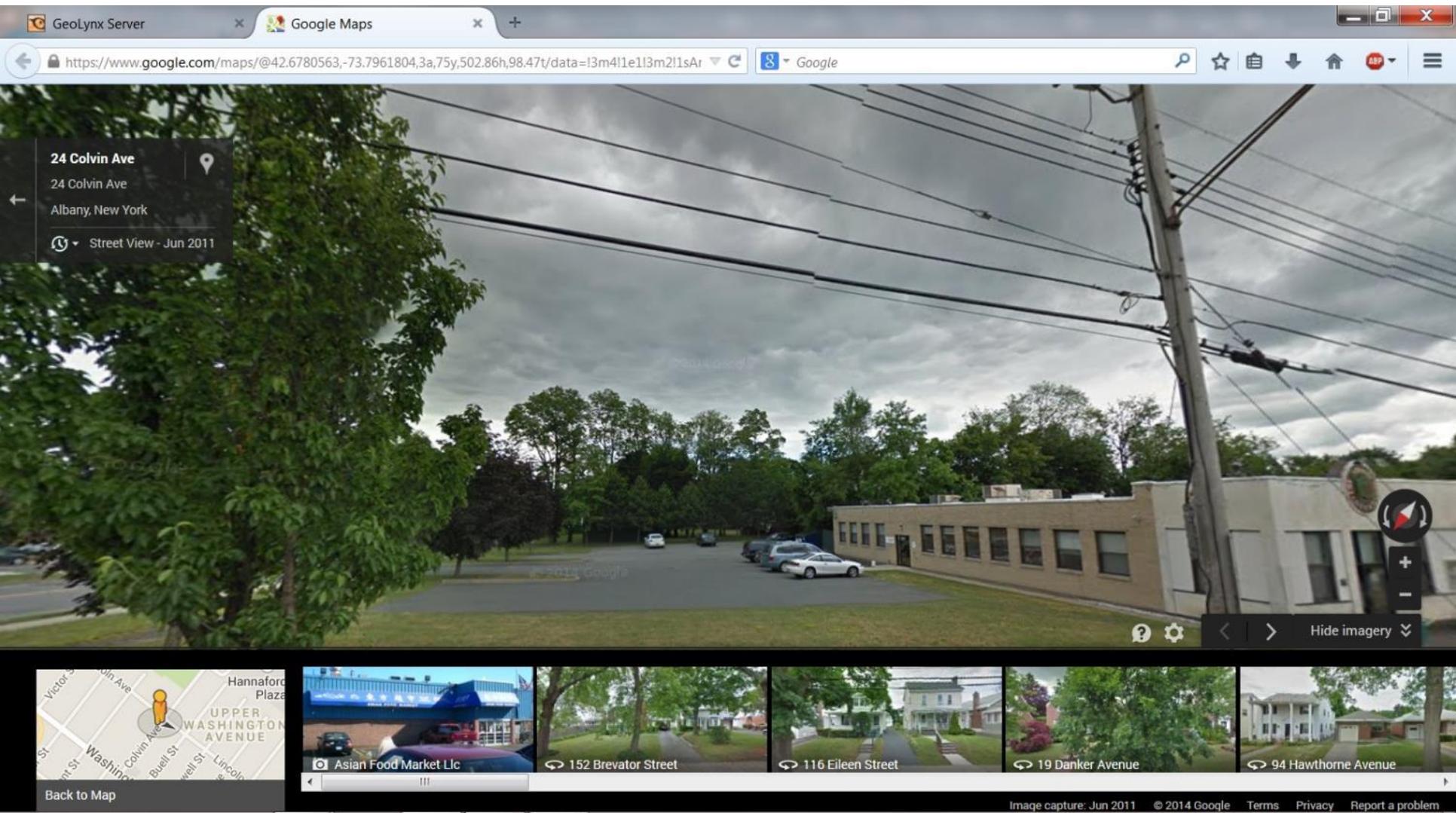
Field	Value
ZipName	Ionia
State	New York
ZipCode	14475
PointType	Rooftop
AddressSource	County Building Footprint
SourceOfData	
DateUpdated	9/10/2013 7:00:00 PM
PrimaryPoint	Yes
CityTownName	West Bloomfield
PlaceName	
PlaceType	

The 'PointType' dropdown menu is highlighted with a red box, indicating the attribute being modified. The 'Update' and 'Delete' buttons are visible at the bottom of the dialog.

Bing Birds Eye View



Google Street View



Strategize Data Maintenance

Today's Discussion

- Who in the County / local gov'ts assigns street names?
- Who in the County / local gov'ts assigns addresses?
- What County / local gov't digital data contain street names and addresses?
- Where are street and address changes being shared:
 - between county agencies
 - between the county and local governments
 - with other outside organizations or agencies
- How are addresses shared:
 - Does the County have an existing data maintenance process?
 - Does the County have an existing data maintenance tool?
 - Would the County consider using our free GeoComm Tool?
- Are the NYS Streets being used in your County / local gov'ts?

Review Address Data Flow Diagram

- Identify potential data maintenance participants
- Identify ROLE(s) for each participant:
 - Data Editor
 - Change Requestor
 - Field Research/Validation
- Is there interest in using the GeoComm tool?
 - County establishes NYSDS Accounts
 - ITS “entitles” NYSDS accounts to access tool
 - On-site training

Editing Data Directly

- Alternate/interim data maintenance environments
 - ArcGIS editing
 - ArcReader, ArcGIS.com or ArcGIS Explorer free viewers
- Critical attributes to update/validate (see *Address Point Maintenance*)
 - **CountyID (if used)**
 - **DateUpdated**
 - **PointType**
 - AddressSource
 - PrimaryPoint (y/n)
- Add an *Status* attribute to the deliverable or maintain separate file of deleted points
- ITS will populate NYSAAddressPointID
- Important: Provide sample edited file to ITS early for QA/QC review

ArcReader Map Packages

- Useful for those who don't have GIS software
- Data deliverables and original source data
- View and Identify capabilities
- Allows on-screen markups
- Requires free Esri viewer
 - <http://www.esri.com/software/arcgis/arcreader>
- User instructions provided (see handout)

Public Access to SAM Data

GIS Data Set Details

Data Set Name	Description	Theme	Metadata
NYS Address Points <i>Revised: October 2016</i>	Point files of addressed properties in New York State. Data is not complete statewide. Please refer to the Metadata for more information.	Address	Metadata

Supporting Documentation

[Data Dictionary - Address Points](#) 

[Geocoding – ESRI Instructions](#)

Web
Service

A web service of the SAM Address Point file is available here: http://giservices.dhSES.ny.gov/arcgis/rest/services/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).

Address Point Type

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

Geocoding
Service

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. Documentation on the geocoding service can be found at: <http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1278>

Direct
Download

Counties that do not have data available for download have not yet been returned to the County.

Files available to the Public

Files	Download	Metadata
Address Points - SAM - Statewide	 GEODATABASE	Metadata
Albany County	 GEODATABASE  SHAPE	Metadata Metadata

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



Office of Information
Technology Services

Review Delivered Files

- SAM Address Points
 - Rooftop
 - Driveway
 - Parcel centroid
 - Miscellaneous (tower, bridge, storage tank, well, utility, etc.)
- AP_Flag Attribute (HYP, GEO, DSUB, CR, INV)
- Spatially Invalid File
 - Geocoded only to streets (not to parcel or Address Points)
 - Exact structure or driveway could not be determined
- CountyID_Deleted
- Exception Report
 - 9-1-1 Telco lists
 - USPS residential delivery addresses
 - USPS business delivery addresses