



Northern Region 911 Coordinators Meeting

March 14th, 2012

NYS Division of Homeland Security &
Emergency Services

Big Picture (1 of 2)

- Next Generation 911 *requires* GIS data
- Huge range of needs for address data statewide
- State-led project will be most efficient and least costly to all
- Building to highest level requirements (i.e. 911) will support all lower requirements
- Centralized coordination for Census Bureau
- We have federal funds to get started
- Not a re-addressing project; we're just mapping what you've got

Big Picture (2 of 2)

- One master address point database
- Multiple versions for different requirements
- 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*

In Addition to 911 Dispatch, the Data will Improve:

- Sex offender placements by County
Social Services & Parole Officer casework
- Sales tax collection and distribution
- NYS DEC permitting (e.g. Chemical Bulk Storage Facilities, Pesticide application)
- Welfare to Work programs
- School bus routing

Geocoding – adds a longitude and latitude (x/y) to an address string using a geocoding service



1220 Washington Avenue
Albany, NY

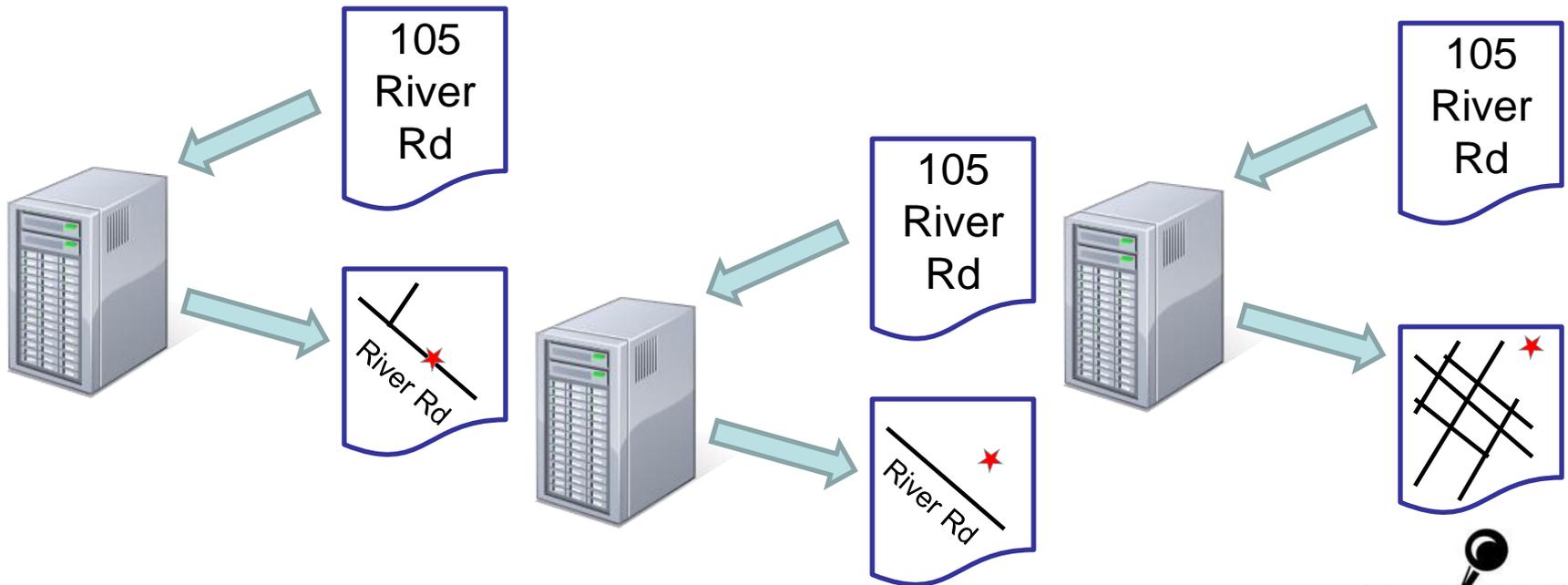
1220 Washington Avenue
Albany, NY 12242, 42.680349,-73.810409

Current Geocoding Status Across the State

Identical input addresses yield different results!

Counties, Cities, Towns and State Agencies

Each hosts a geocoder which returns different results

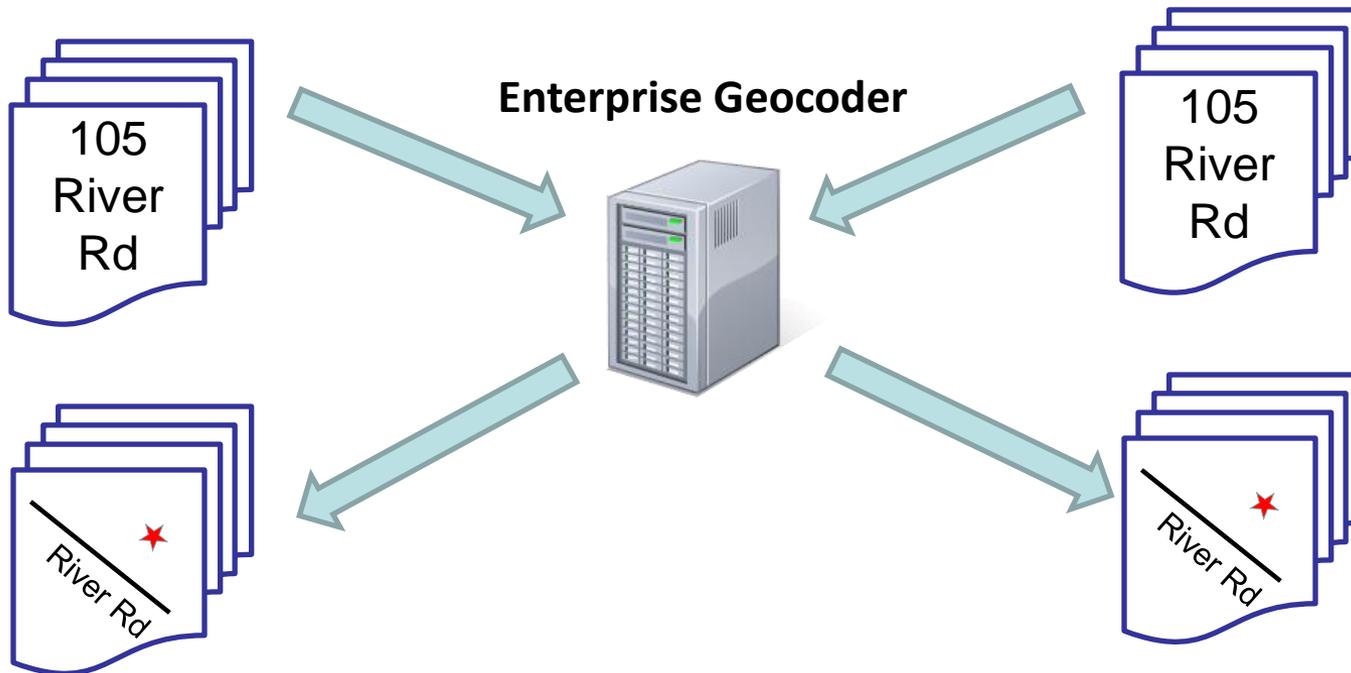


Geocoding With a Centralized Service

Identical input addresses yield identical results

Counties, Cities and Towns

State Agencies



SAM Partners

- DHSES (incl. State 911 Board)
- NY 911 Coordinators Association
- New York State Association of Counties
- NENA
- US Census Bureau
- US Postal Service
- NTIA



SAM-Speak

- National Emergency Number Association (NENA)
- Principal address
- Subaddress
- Supplemental points
- Local Exchange Carrier (LEC) subscriber database
- Phase
- Stage
- Source Usage Document (SUD)
- Data Usage Agreement (DUA)

NG911 Game Changers

- More than voice (audio)
 - Text
 - Email
 - Image
- Systems are IP based (Internet)
- IP Security
- Phones move and transmit their location
- GIS data is at the core



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



Point in Polygon Police, Fire, EMS
GIS Service Zones

NENA Address Standards

- FGDC *US Thoroughfare, Landmark and Postal Address Data Standard (2/9/11)*
 - Parses/breaks out addresses into smaller components
 - Jointly developed by URISA & NENA
 - Includes subaddresses
- NENA version similar
 - *Civic Location Data Exchange Format (CLDXF)*
 - Allows some abbreviations
 - NENA reviewing 200+ public comments on CLDXF
- Mapping standard for address points lacking
 - Where to place a point & how many points?
 - NENA standing up a work group
 - Will follow NENA standards development process
 - We need your participation!

Some examples of what the NENA
standard will resolve...











600'

What's a Subaddress?

- 123 Main Street, **Apartment 101**
- U.S. Dept. of Agriculture Building, **Floor 7, Room 324**
- 800 West Mountain Road, **Building 6, Suite 450**
- Suburban Office Park, **Building 12, Mezzanine, Suite 200**
- Five-Star Hotel, **East Tower, Penthouse**
- General Hospital, **Cardiac Wing, Room 224**
- Metro Airport, **Terminal A, Gate C27**
- Batavia Downs, **Barn 12**

Some examples...





Duplex
10A Limerick Ave
& 10B Limerick Ave



61 Mc Carty Ave 57 Mc Carty Ave 51 Mc Carty Ave
49 Mc Carty Ave 47 Mc Carty Ave 45 Mc Carty Ave

39 Mc Carty Ave 37 Mc Carty Ave
35 Mc Carty Ave 33 Mc Carty Ave
29 Mc Carty Ave 27 Mc Carty Ave

**Apartment Building
Complex**
70 Mc Carty Ave
Building 1, Apt 1;
Building 2, Apt 4; etc.



70 Mc Carty Ave

Rear 74 Mccarty Ave

603 S Pearl St



Trailer Park
2941 Amsterdam Rd,
Lot 1, Lot2, Lot 3, etc.

1 ALFLO CIR

3 ALFLO CIR

5 ALFLO CIR

2941 AMSTERDAM RD

2939 AMSTERDAM RD

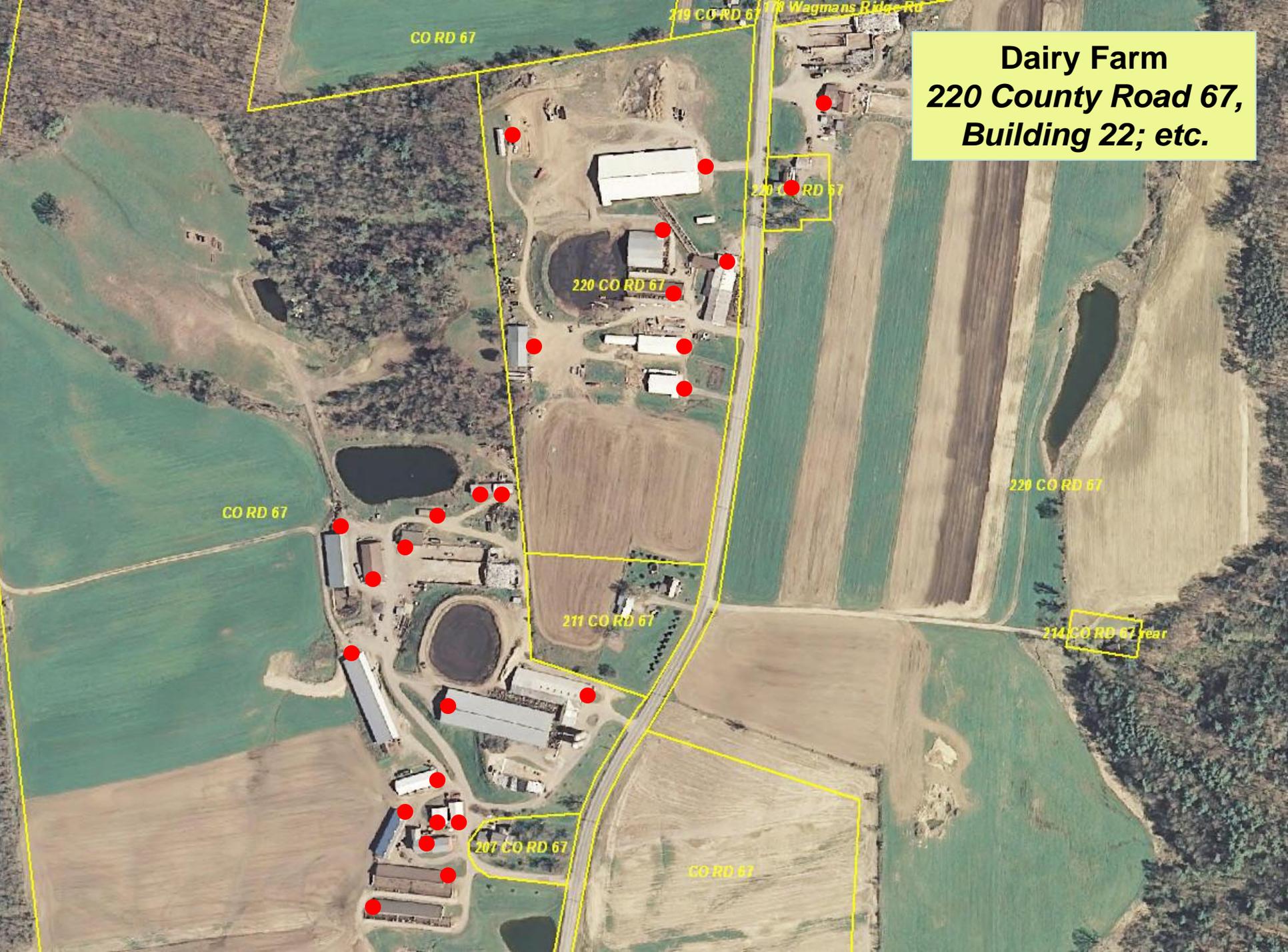
2901 AMSTERDAM RD

BOX_225 AMSTERDAM RD

AMSTERDAM RD

AMSTERDAM RD

VAN BUREN LN



Dairy Farm
220 County Road 67,
Building 22; etc.

CO RD 67

219 CO RD 67 Wagmans Ridge Rd

220 CO RD 67

220 CO RD 67

220 CO RD 67

CO RD 67

211 CO RD 67

214 CO RD 67 rear

207 CO RD 67

CO RD 67



**Office Building
90 State Street,
Floor 3, Suite 6;
Floor 1, Suite 1; etc.**

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90 STATE STREET
BOSTON, MASSACHUSETTS 02109

AMERICAN

Statewide Address Point Build: 2 Stages

Stage 1:

State contracts for assistance in mapping “main structure” address points

- Points on building footprint
 - not including supplemental points
 - not including subaddresses
 - (unless they already exist in county data)
- Address will be in NENA standard

State migrates existing county address points data to NENA standard

Statewide Address Point Build: 2 Stages

Stage 2:

Using the pending NENA standards

- Refine locations
- Map **subaddresses**
- Place **supplemental points** (driveways, entrances, etc)
- Potential State grant funding (via 911 Board) based on future NENA standards

Data Requirements

Where do we start?

- Identify local government data that could be useful for the data build
- Identify data owner(s)
- Document allowable data usage
- Evaluate how data could be used
- Understand CAD system map display capabilities

Data for the Address Point Build

- County Address Points
- Other data sources containing addresses
 - Local Carrier Exchange (LEC) subscriber database (911 Master Address list)
 - County Tax Parcels
 - NYS Address Points – NAVTEQ
- Data useful for placing or refining address points
 - Building Footprints
 - MSAG Address Ranges
 - County Streets
 - NYS Streets
- Common Place Names Table
 - For populating Landmark Name attribute/table

Questionnaire

- Will help us understand
 - CAD dispatch software in place and planned
 - Mapping capabilities of CAD software
 - Map data already in use in CAD systems
 - Existing Address Point Data
 - Number of principle addresses and subaddresses
 - Notification/maintenance of address changes
 - How PSAPs within a county share addresses
 - Preferences for follow up

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 will provide input and review the SUD
- Important for:
 - *Gauging level of work*
 - *Prioritizing order of counties*

Tompkins County Pilot Project

- Developed SUD document template and SUD evaluation process
- Tompkins County provided entire geodatabase
- OCS developed SUD and refined with Tompkins' input
 - *Tompkins already has address points*
 - *Subaddresses are included*
 - *Secondary sources include parcels and NYS address points*
 - *Tompkins County SUD*
- OCS parsed addresses per NENA standard
- OCS is geocoding NYS Address Points against Tompkins County address points

Sub Addresses



TITUS TOWERS #308	800 S PLAIN ST 308
TITUS TOWERS #309	800 S PLAIN ST 309
TITUS TOWERS #310	800 S PLAIN ST 310
TITUS TOWERS #311	800 S PLAIN ST 311
TITUS TOWERS #312	800 S PLAIN ST 312
TITUS TOWERS #401	800 S PLAIN ST 401
TITUS TOWERS #402	800 S PLAIN ST 402
TITUS TOWERS #403	800 S PLAIN ST 403
TITUS TOWERS #404	800 S PLAIN ST 404
TITUS TOWERS #405	800 S PLAIN ST 405
TITUS TOWERS #406	800 S PLAIN ST 406
TITUS TOWERS #407	800 S PLAIN ST 407
TITUS TOWERS #408	800 S PLAIN ST 408
TITUS TOWERS #409	800 S PLAIN ST 409
TITUS TOWERS #410	800 S PLAIN ST 410
TITUS TOWERS #411	800 S PLAIN ST 411
TITUS TOWERS #412	800 S PLAIN ST 412
TITUS TOWERS #501	800 S PLAIN ST 501
TITUS TOWERS #502	800 S PLAIN ST 502
TITUS TOWERS #503	800 S PLAIN ST 503
TITUS TOWERS #504	800 S PLAIN ST 504
TITUS TOWERS #505	800 S PLAIN ST 505
TITUS TOWERS #506	800 S PLAIN ST 506
TITUS TOWERS #507	800 S PLAIN ST 507
TITUS TOWERS #508	800 S PLAIN ST 508
TITUS TOWERS #509	800 S PLAIN ST 509
TITUS TOWERS #510	800 S PLAIN ST 510

Conversion to NENA Standard

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

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

Conversion to NENA 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	BLDG G28	FL 4	2-7

Data Usage Agreement

- Clearly documents how each individual dataset can be used
- Currently in development
- Not a contract, but an understanding of who can use the data and how
- Not just for SAM, but for all data OCS receives
- Puts everything in writing so data usage is clear to all parties

When Authorizing Data Usage, Consider...

- **What will be used as data sources**
 - Each dataset provided must be listed on the DUA
 - Could have its own terms
- **What will be built**
 - Principal addresses (stage 1)
 - Subaddresses and supplementary points (stage 2)
 - Migrate addresses to NENA standard
- **What will be publically accessible**
 - Principal addresses and subaddresses
 - Supplementary points?
 - NO personally identifiable information
- **How it will be publically accessible**
 - Statewide geocoding service and Web Mapping Service
 - Address point file posted on the GIS Clearinghouse

Contact Sheet



County:

1. Primary Street Address Mapping Project Contact (one per county)	
Name/Title	Email
<input type="text"/>	<input type="text"/>
Organization	Phone Number
<input type="text"/>	<input type="text"/>
Primary Data Sets Contact (Enter n/a if NOT APPLICABLE)	
2. Address Points	
Name/Title	Email/Phone Number
<input type="text"/>	<input type="text"/>
3. Building Footprints	
Name/Title	Email/Phone Number
<input type="text"/>	<input type="text"/>
4. MSAG (Ranges & Master Address List)	
Name/Title	Email/Phone Number
<input type="text"/>	<input type="text"/>

Local Government Involvement

- Regional meetings
- Put in touch with data custodians
- SUD evaluation
- Participate in work groups
 - NENA Standards
 - Data QA roles and processes
 - Long term data maintenance agreement
- Data QA and long term maintenance

[Home](#) |
 [Geocode](#) |
 [Admin](#)

Request#: 0 Requestor: rcoryell (DHSES)
 Status: New Change Request Supervisor:
 Current Grp: Reviewer:
 Closed: Editor:

County: [Map It!](#)
 Municipality: [Map It!](#)
 Type:

request with current markup and/or selection shapes [Map It!](#)

[Drawings](#) [Features](#)
 1 0

Scale: 1513

Orthoimagery
 Street Address
 Address Po
 Address Ra
 Alternate Street Ne
 Rural Street Label: E
 Landmarks
 Street Edit Check
 Transportation
 Hydrography
 Land Use
 Boundary

Markup Tools

[Attributes](#) |
 [Comments](#) |
 [Attachments](#) |
 [Links](#) |
 [On-Behalfs](#) |
 [Duplicates](#) |
 [Status Log](#)

Attributes:

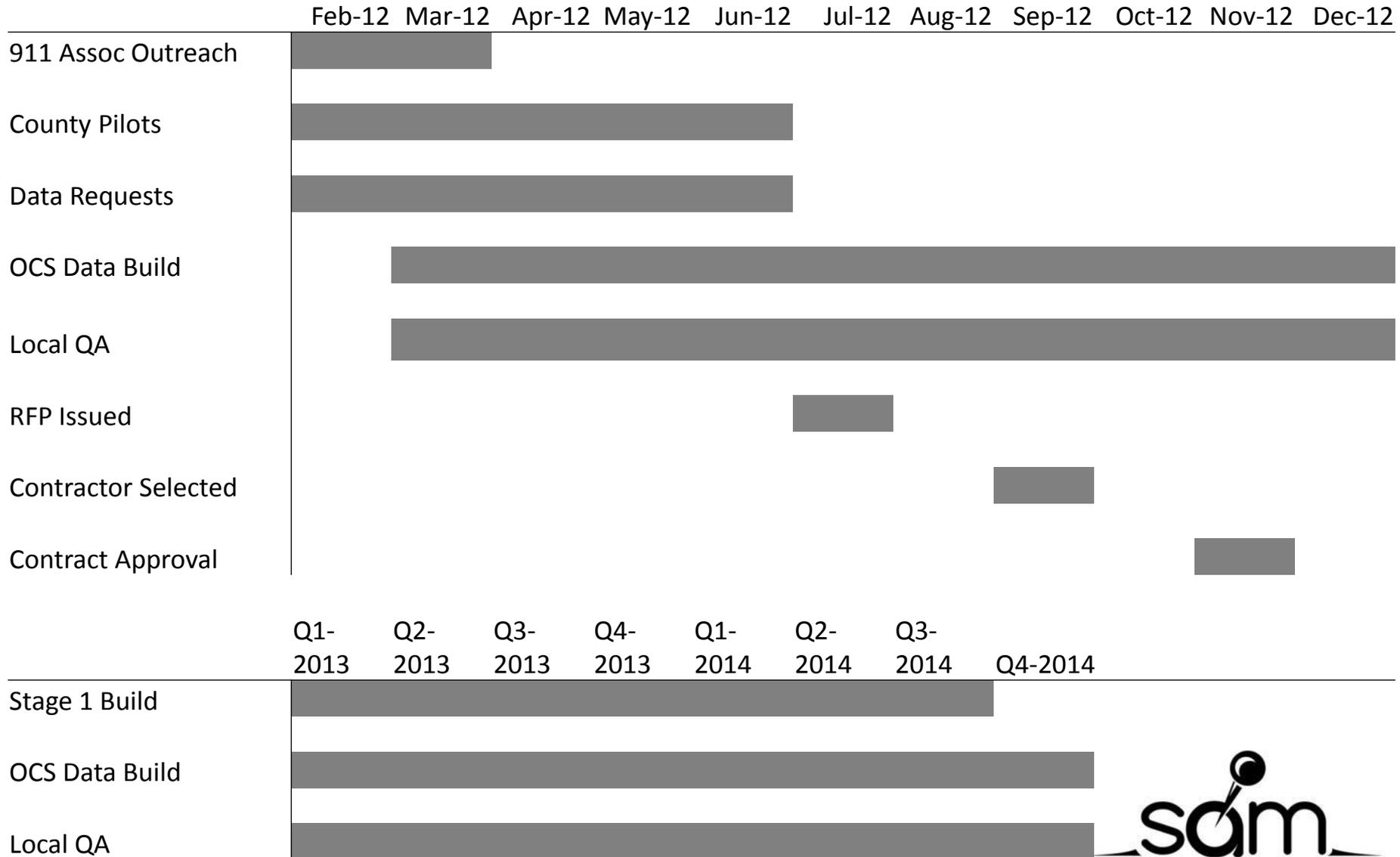
Estimated days to review: 1
 Estimated days to accept: 2
 Estimated days to complete: 90

ATTRIBUTE	EXISTING VALUE	REQUESTED VALUE
Address Number	N/A	<input type="text" value="24"/>
Street Name	N/A	<input type="text" value="Woodland Ave"/>
City	N/A	<input type="text" value="Catskill"/>
Zip Code	N/A	<input type="text" value="12414"/>
Address Source	N/A	<input type="text" value="Greene Co E911"/>

Next Steps

- Follow up email
 - Contact sheet
 - Online questionnaire
 - Website link
 - Follow up phone discussions
- Requests for Data
 - Onsite visits and phone discussions
 - Request data from each contact on sheet
 - Data received by DHSES and evaluated
 - Completed SUD returned to contact

Stage 1 Timeline



Thank you!

Open Discussion