TECHNOLOGY GROUP

THE ADDRESS OF SUCCESS

Using Web-Based Tools to Maintain Addresses for Next Gen 911

A Render

Project Purpose

- Create/update site structure address point layer for Berks & Montgomery Counties
- Develop address maintenance protocol and web-based tools to support it

Project Details

- 134 municipalities (city, township, town, and borough)
- Each municipality responsible for addressing
- ~1.25 million residents
- Over 510K address points
- Funded by PEMA state grants







How We Got Here



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Stakeholder Engagement

Creation of Address and Sub-Address Points Identified opportunities for stakeholder interaction Meet face-to-face (if possible) to bring stakeholders together

Utilize multiple data sources to update address points. Develop standards for editing common address scenarios in GIS



Address Maintenance Protocol

Develop formal guidance from the scenarios to establish workflows



Tools to Support Maintenance



Who is Responsible? County/PSAP or Municipality?

- State statutes delegate addressing and street naming to municipalities
- 911 Communication to the County/PSAP
- Requires coordination between municipality and PSAP
- Creation of county-wide guidance





What is a Sub-Address?

 NENA refers to as a "unit" within a building or structure

> NENA Standard for NG9-1-1 GIS Data Model NENA-STA-006.1.1-2020, February 18, 2020

4.138 Unit

Description: A group or suite of rooms within a building that are under common ownership or tenancy, typically having a common primary entrance. **Domain**: None **Example**: Apartment C2; Penthouse; Suite 710

- Not just a field in the NENA model
- Each unit requires a unique point in the Site Structure Address Point Layer
- Ideally point placed at unit entrance
- Not always reflected in ALI
- Can account for up to 25% of address points





Cast a Wide Net

- No one data source will provide all sub-address detail
- Identify all local stakeholders to acquire data
- Coordinate with and between stakeholders
 - Many local departments still operate in silos
 - Hold workshops
 - Online Surveys



Stakeholder Coordination



Finding Patterns





Example: Using parcel and other municipal sources

Results in City of Reading, PA



- Initially 26K address points
- 28K unique ALI records
- 98% match rate to street centerlines



- Created 10K sub-addresses
- Updated 5K addresses with unit details



- Authoritative source for zip code
- Lists all carrier routes within the zip code
- Contains addresses & subaddresses USPS delivers to
- Coordinate with Address Management Office not Postmaster
 - Not easy to acquire

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U.S. POSTAL SERVICE - ADDRESS MANAGEMENT SYSTEM ROUTE LISTING REPORT

PAGE

MAXIMIZE USPS SHEETS

- Conversion to Excel results in "compressed records"
- Multiple lines from sheet compressed into 1 record, unable to geocode
- Custom SQL script to resolve issue
- Resulting table geocoded and symbolized for sub- address

USPS 05-6889 U.S. POSTAL SERVICE - ADDRESS MANAGEMENT SYSTEM DATE: SAM MATEO IBSSC ROUTE LISTING REPORT REPORT LFA22092 PAGE:													3/16/2021						
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	19 3984		API	2	OTH	R											1144	2	
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	PRIMARY ADDRESS	COMPLETE STREET_NAME	SECY ABBR	SECY UNIT	DELV_TYPE	ID1
1	206 601 517	SPRUCE ST FRANKLIN ST	NULL	NULL	OTH OTH OTH	214
2	550 548 548 550	FRANKLIN ST	FL APT APT FL	1122	OTH CENT CENT OTH	253
3	533 1/2	FRANKLIN ST	NULL	NULL	OTH	300
4	841 841 501	HANCOCK BLVD	STE	50	OTH OTH OTH	768
5	1001 1017	SCOTT ST	NULL	NULL	OTHOTH	926
6	420 46 423	GRACE ST LANCASTER AVE	NULL	NULL	OTH OTH OTH	1341
7	112 102 110	BARTLETT ST MORGANTOWN RD	OFC	NULL	CURB OTH OTH	1418
8	110 110 110 110	BARTLETT ST MORGANTOWN RD	APT APT APT APT	1234	OTH OTH OTH OTH	1419
9	124 132 125 125	BARTLETT ST MORGANTOWN RD	STE STE	12	OTH OTH OTH OTH	1420
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Value in Converting

- Identify missing addresses/subaddresses
- Update existing address
- Add unit details
- QC other datasets
 - Road Centerlines
 - Parcel
 - Voting Districts



Countywide Addressing Protocol



- Define both the municipality and county's role in addressing
- Provide guidelines to local addressing authorities to assign and manage street names and addresses within the PSAP
- Guidance complies with federal, state and county standards necessary to ensure that NG911 operates as intended
- Simplify the process through easy-to-use online tools available in a single platform



ADDRESS/ STREET REQUEST





REVIEW COUNTY UTILIZE COUNTY GUIDELINES TOOLKIT



PROPOSED ADDRESS/STREET REVIEW



ADDRESS/STREET CONFIRMED



911 SYSTEM UPDATED

Stakeholder Needs

- Simplified addressing guidance to streamline process
- Access to authoritative data to assist with address/street name management
- Reduction in overall addressing effort
- Most are not reviewing NENA or state guidance and are not GIS power users





This document will serve as a reference for the municipalities, specifically

greater importance and supports a greater county role in addressing, as described herein.

responsibility for the public health and safety for Berks County.

The weblinks below (respectively) outline these codes as defined on the official Pennsylvania State Legislation website:

Addressing Web Toolkit Solution

- Policy map, story map with embedded maps and dashboard
- No-code COTS solution
- Self-service tool for guidance and QC tools
- All stakeholders working with authoritative data
- Review current address and street names and propose new ones to PSAP for recommendations



Purpose

Provide guidelines to local addressing authorities to assign and manage street names and addresses within Berks County.

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county standar

Multi-Unit Residence Example: Single family residence converted into apartments

with individual entrances, often where a side or rear door ...

Multi-Unit House: Mixed Use Example: First floor is business (Unit 1); upper floor(s) or rear/side of building is apartment(s) (Unit 2).

Mulit-Unit Residence: Shared Common Entry Example: Condominium, Apartment Building



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Example: Town Tracking

A dashboard is available to track the progress of the proposed addresses and street names. The tool will also perform basic QC checks on those address points and street names for incorrect or null values.







QC – Avoiding Duplicates



- Web-app builder page with query and edit tools
- Review current address/street names to avoid duplicates
- Propose new address/street names to PSAP for recommendations
 - Edit tool writes to proposed feature layer





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