Prepping GIS Address Data for NG9-1-1

2018 ArcGIS Local Government Solutions Showcase

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Today's Topics:

- GIS in NG9-1-1 Overview
- Common problems in Address Data
- Available Address tools for GIS
- What's ahead
- Other

"We have to ask the question before we discover the problem to be solved"

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GIS in NG9-1-1 Overview

Implementing NG9-1-1 will allow the ability to dispatch from and transfer to a public safety entity almost anywhere in the world.

Provides routing instructions based on location rather than telephone number.

Identifies the Emergency Services Zone (ESZ)/Emergency Service Number (ESN) for the 9-1-1 call location

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NENA Standard for NG9-1-1 GIS Data Model NENA-STA-006.1-2018 (June 2018)

MUST continue to have only one occurrence. One way to accomplish this is to append the 9-1-1 Authority's domain to the end of the internally calculated feature ID.
Domain: None
Example: Feature ID 2002 in the Site/Structure Address Points layer would be represented as SITE2002@911Authority_domain.state.us

5.117 Source of Data

Description: Agency that last updated the record, usually the name of the 9-1-1 Authority. This MAY be represented by the domain name of the agency.
Domain: None
Example: Metropolitan Regional Addressing Authority; Vermont911.st.us.gov

5.118 Speed Limit

Description: Posted Speed Limit in MPH in US or Km/h in Canada
Domain: Whole numbers from 1 to 999
Example: 35; 55; 70

5.119 State

Description: The name of a state or state equivalent, represented by the two-letter abbreviation given in USPS Publication 28 [12], Appendix B.
Domain: ISO 3166-2 includes the same abbreviations as USPS Publication 28, Appendix B, with the exception of the additional one for the nine minor uninhabited islands owned by the US: These abbreviations are also freely available at https://www.census.gov/geo/reference/ansi_statetables.html
Example: TN; NM; OR

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GIS Layers for NG9-1-1

Minimum Requirements

- Road Centerlines
- PSAP Boundary
- Emergency Service Boundary (Police, Fire, EMS)

Strongly Recommended

- Street Name Table
- Site Address Points
- Landmark Names
- Administrative Boundaries
- Physical Features

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Common problems

- Mismatch of databases
- Mismatch of address ranges with points
- Gaps, overlaps, and slivers
- Too few address numbers
- Street Naming issues

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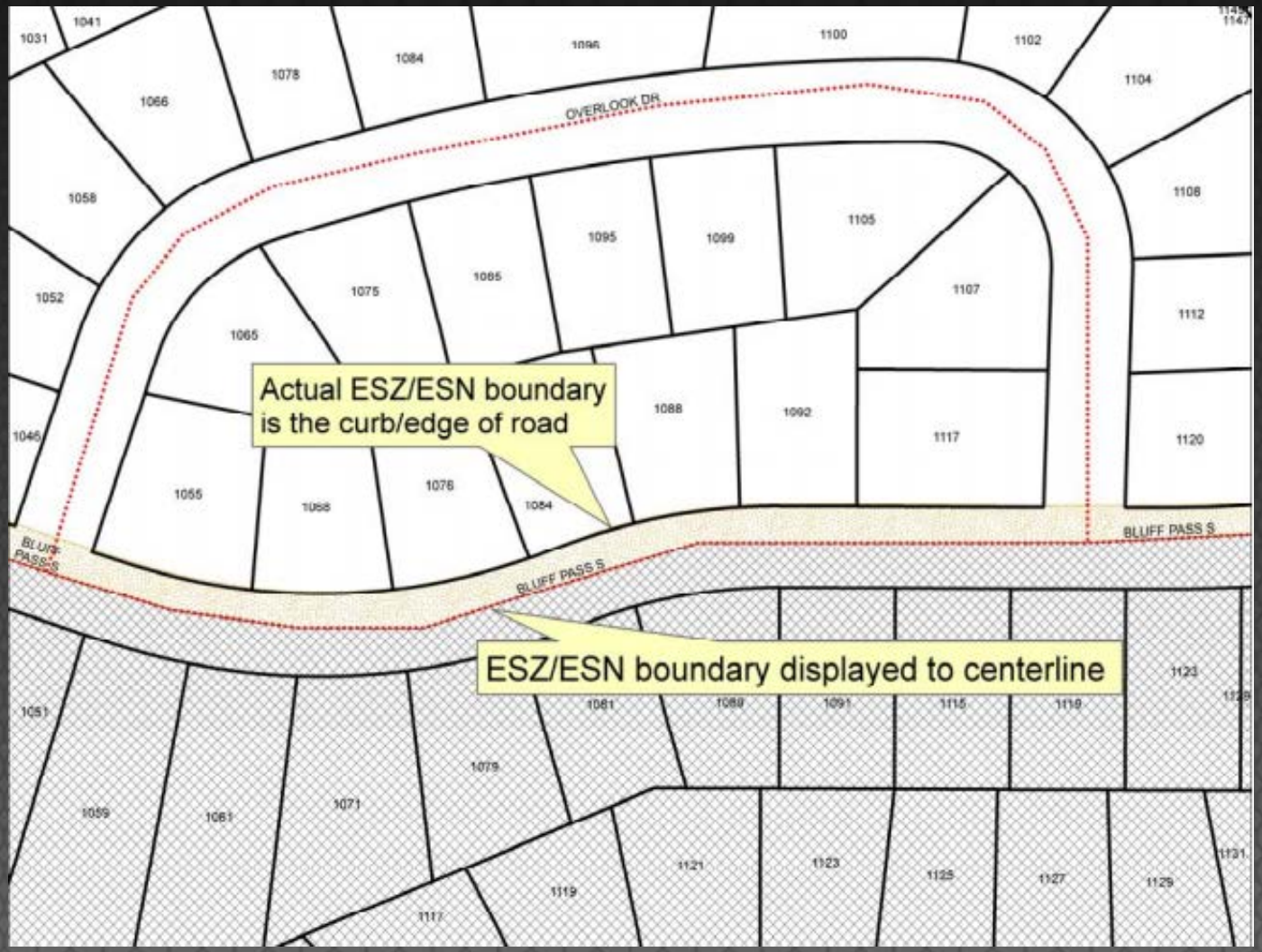
Common problems



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Street Naming Issues

- Mismatch of street name signs
- Different names & ranges along county boundaries
- Be aware of proper Prefix & Suffix

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Methodologies

Five address point placement methodologies:

1. Based on geocoding from centerlines
2. Based on a Parcel
3. Based on a Site
4. Based on a Structure(s)
5. Based on Property Access

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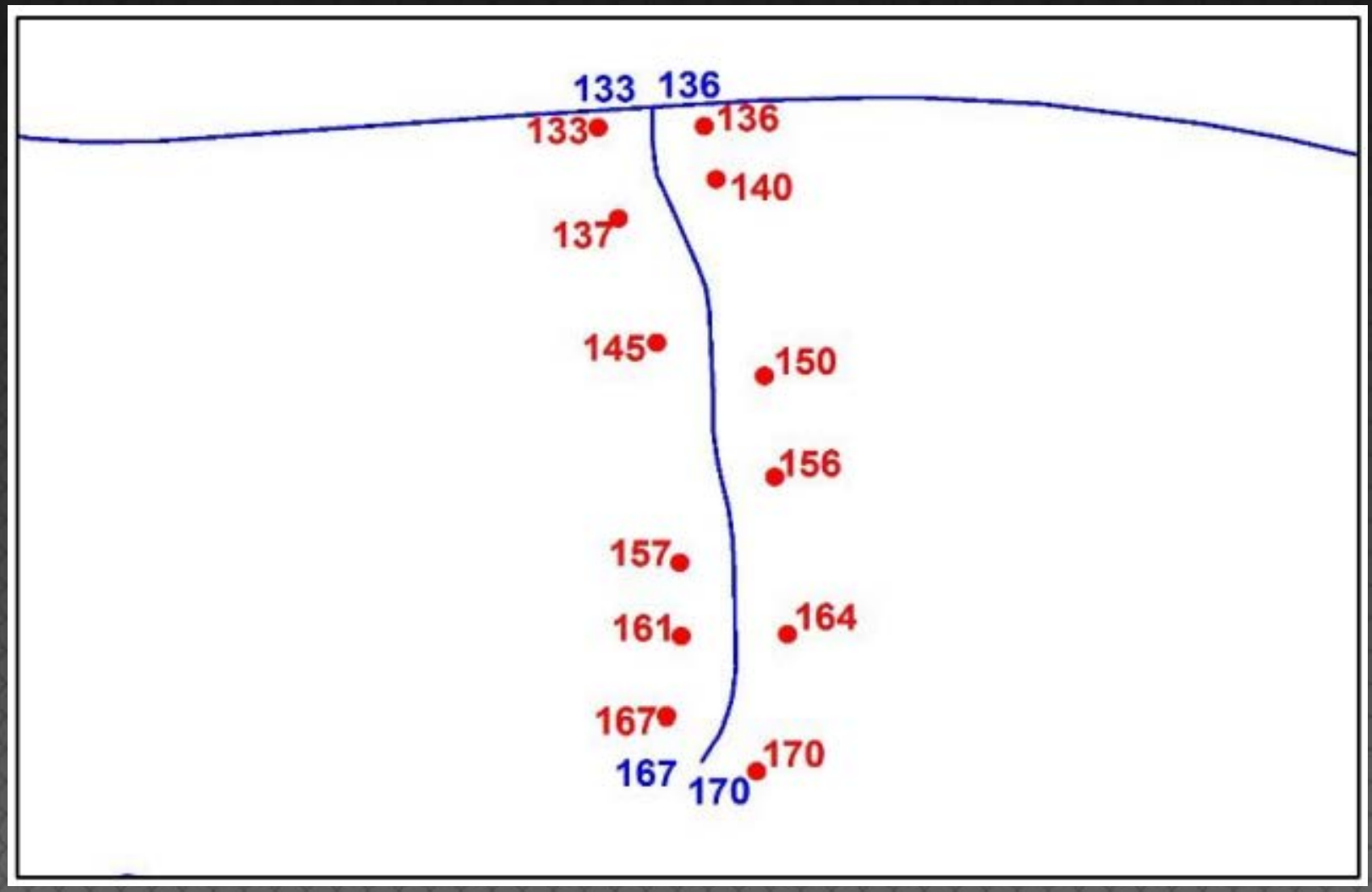
Based on geocoding from centerlines



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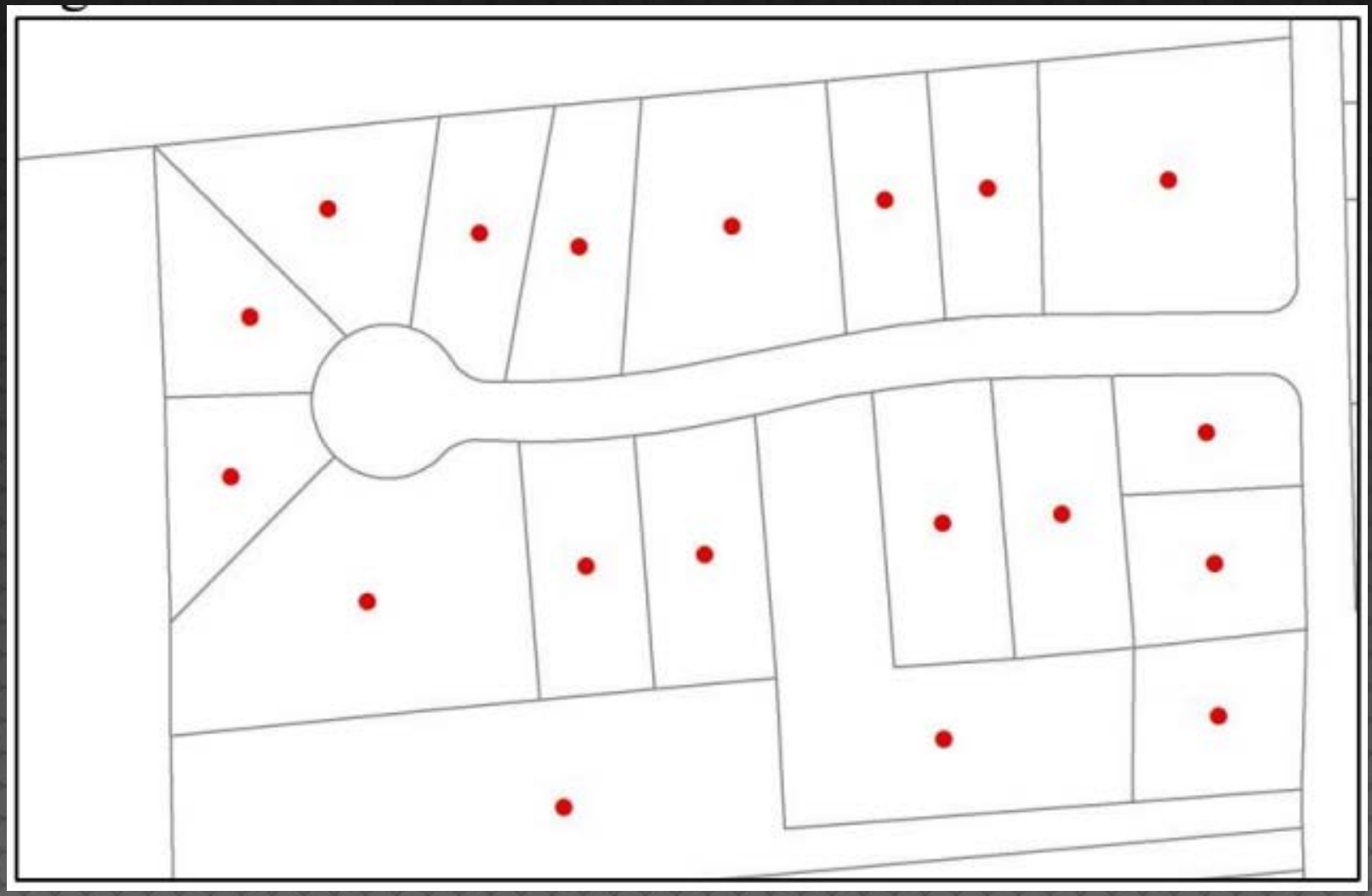
Based on a Parcel



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Based on site

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Based on structure

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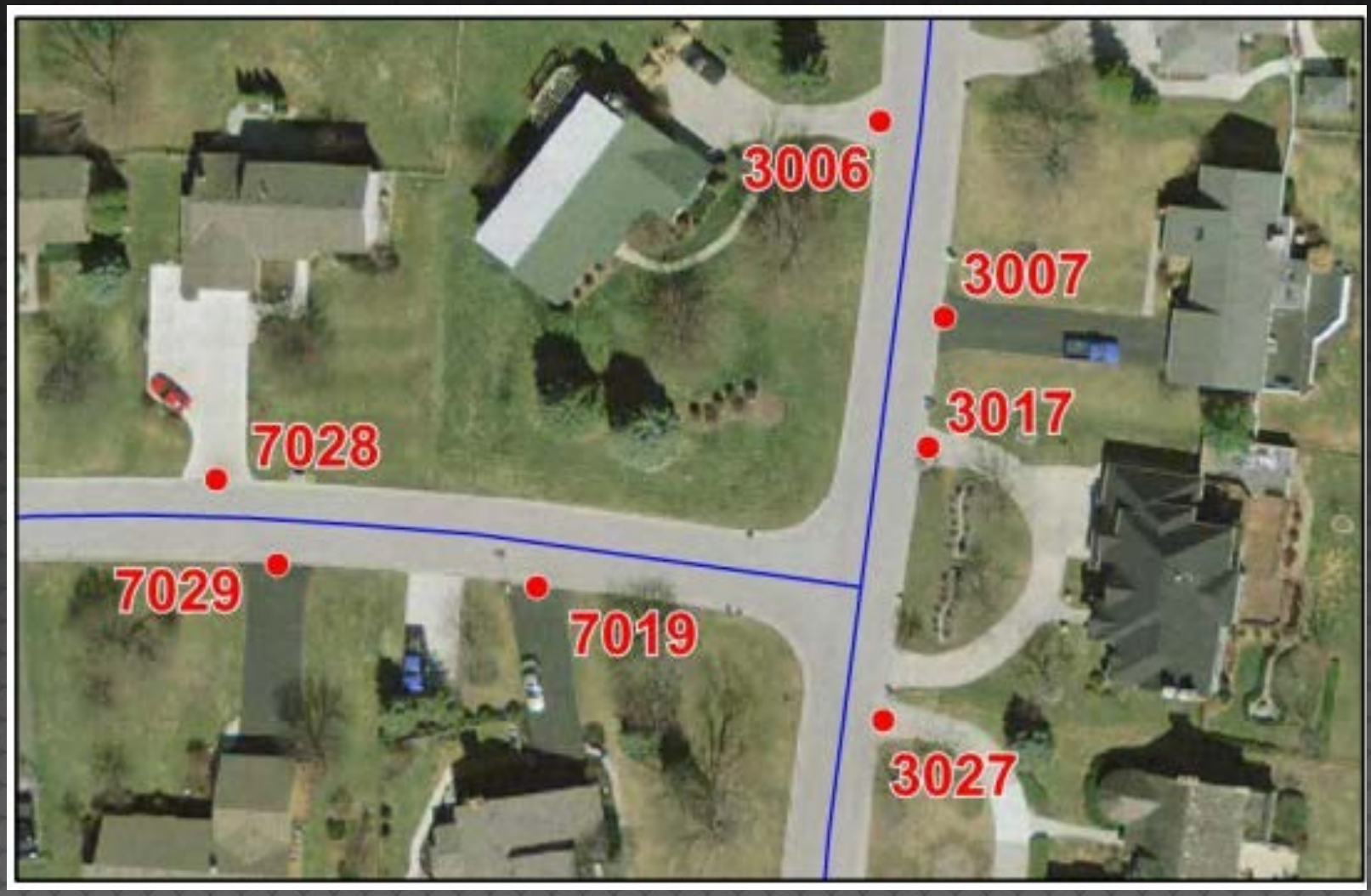
Based on Property Access



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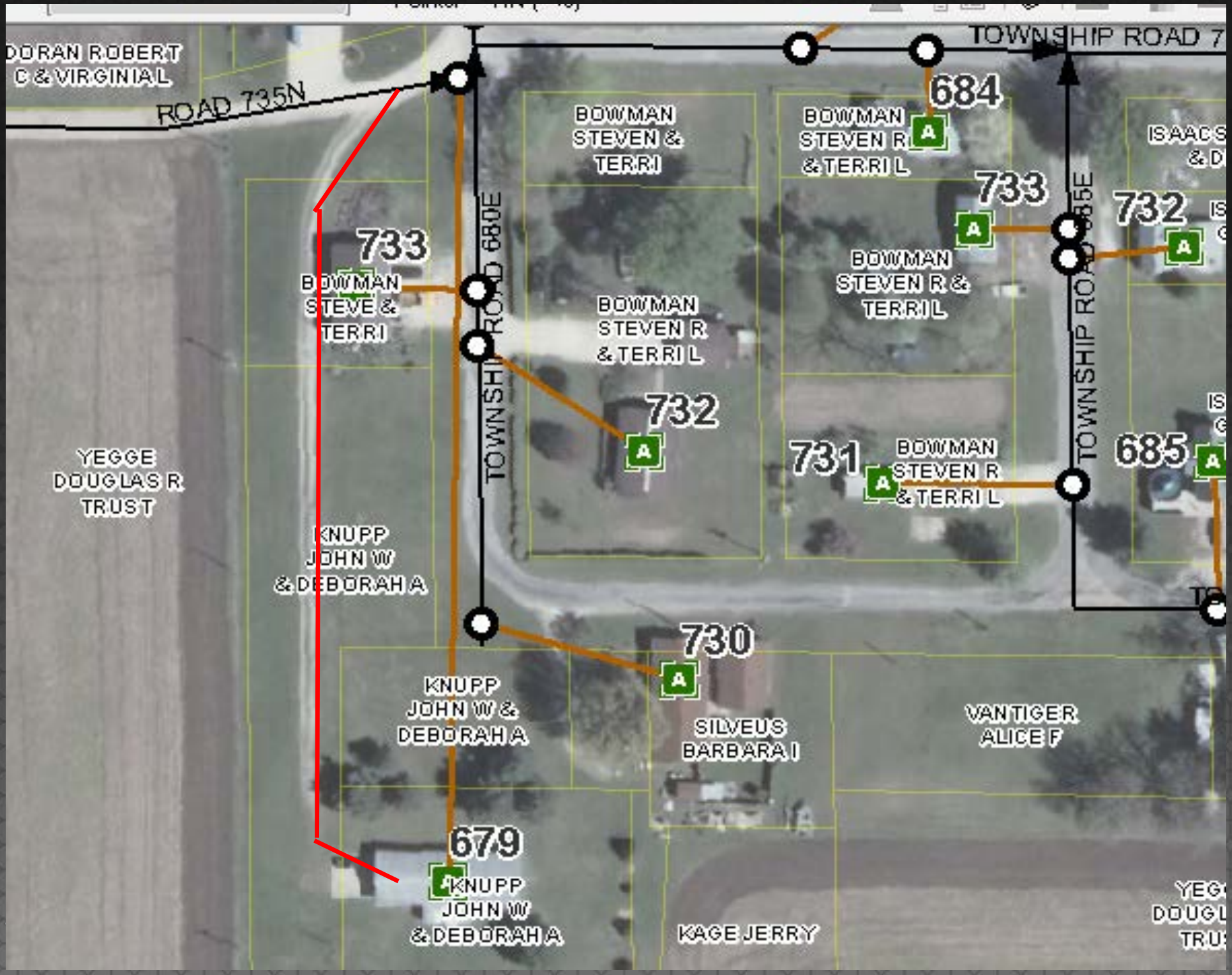
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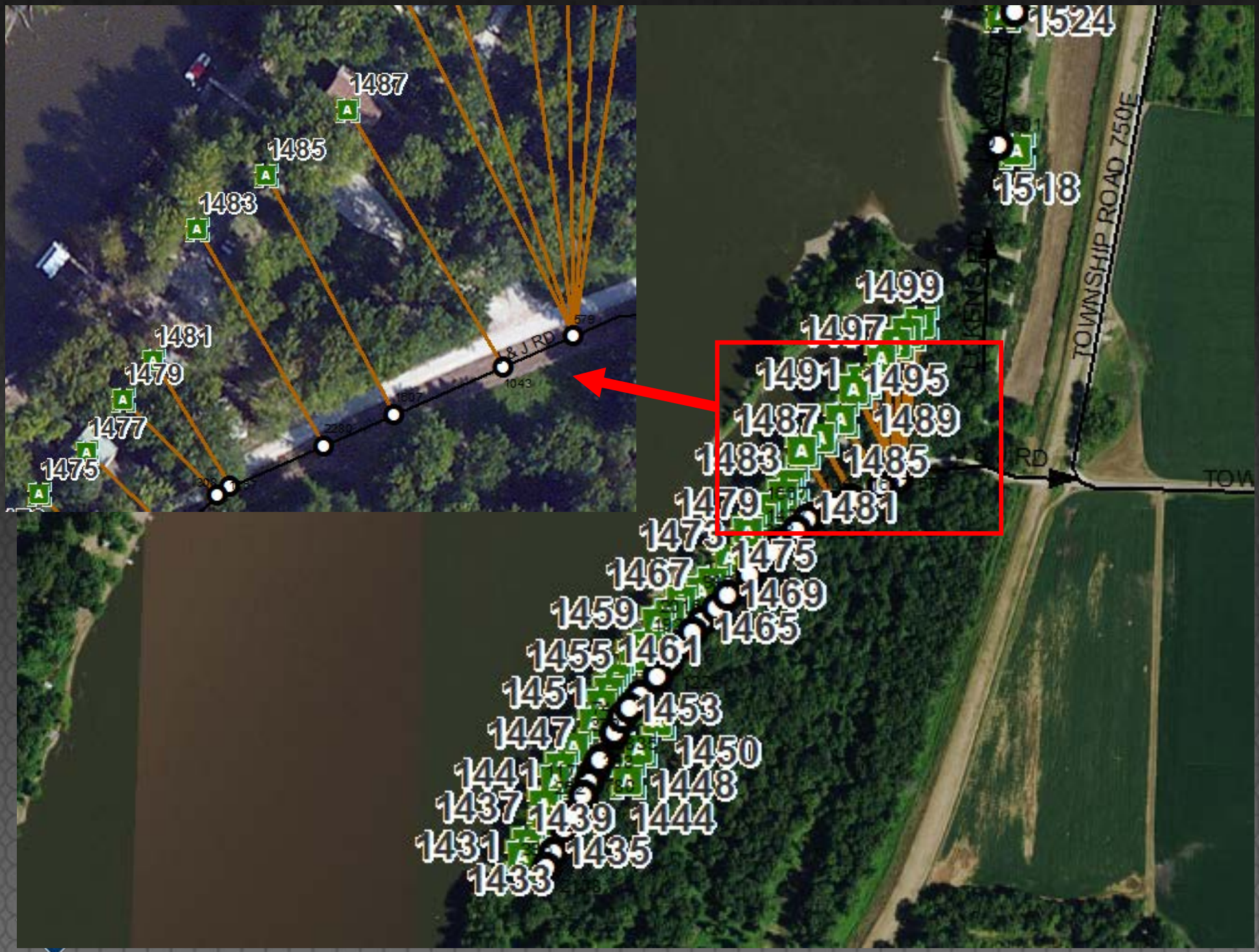
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Desktop GIS Tools for Addressing

- Local Government Model
- Topology
- Attribute Assistant (Transfer Attributes in Pro)
- Network Analyst

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ArcGIS Solutions for Addressing

- Address Data Management
- Community Addresses
- Data Reviewer for Addresses
- Address Field Verification

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Other Resources

- NENA-STA-004.1.1-2014
  NG9-1-1 Civic Location Data Exchange Format (CLDXF)
- NENA 02-014 (July 2007)
  NENA GIS Data Collection and Maintenance Standards (updated in progress)
- NENA 02-005.1.1 (August 2017)
  NENA Standards for the Provisioning and Maintenance of GIS data to ECRFs and LVFs

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Recommendations

- Educate
- Automate
- Coordinate
- Collaborate

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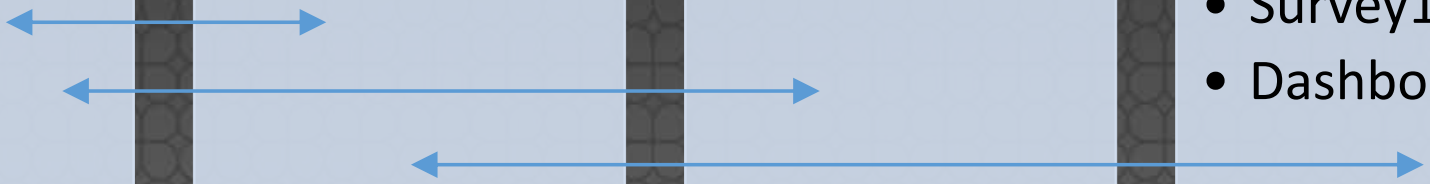
Leverage the platform

esri Partner Network Silver

ArcGIS Pro / Desktop	ArcGIS Online	ArcGIS Server / Portal	Apps
• Basic • Standard • Advanced	• Templates • Marketplace • Portal	• Standard • Workgroup	• Collector • Navigator • Workforce • Survey123 • Dashboards



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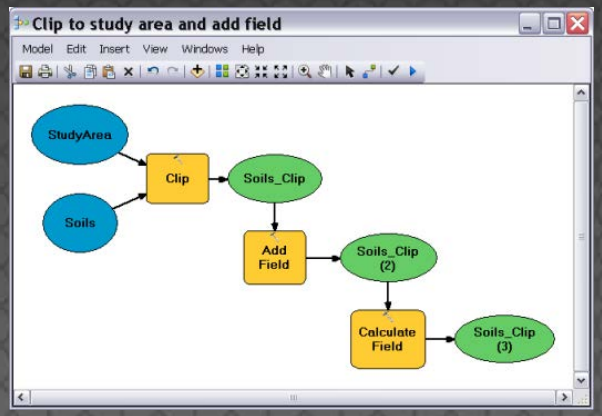
Other tools for the toolbox



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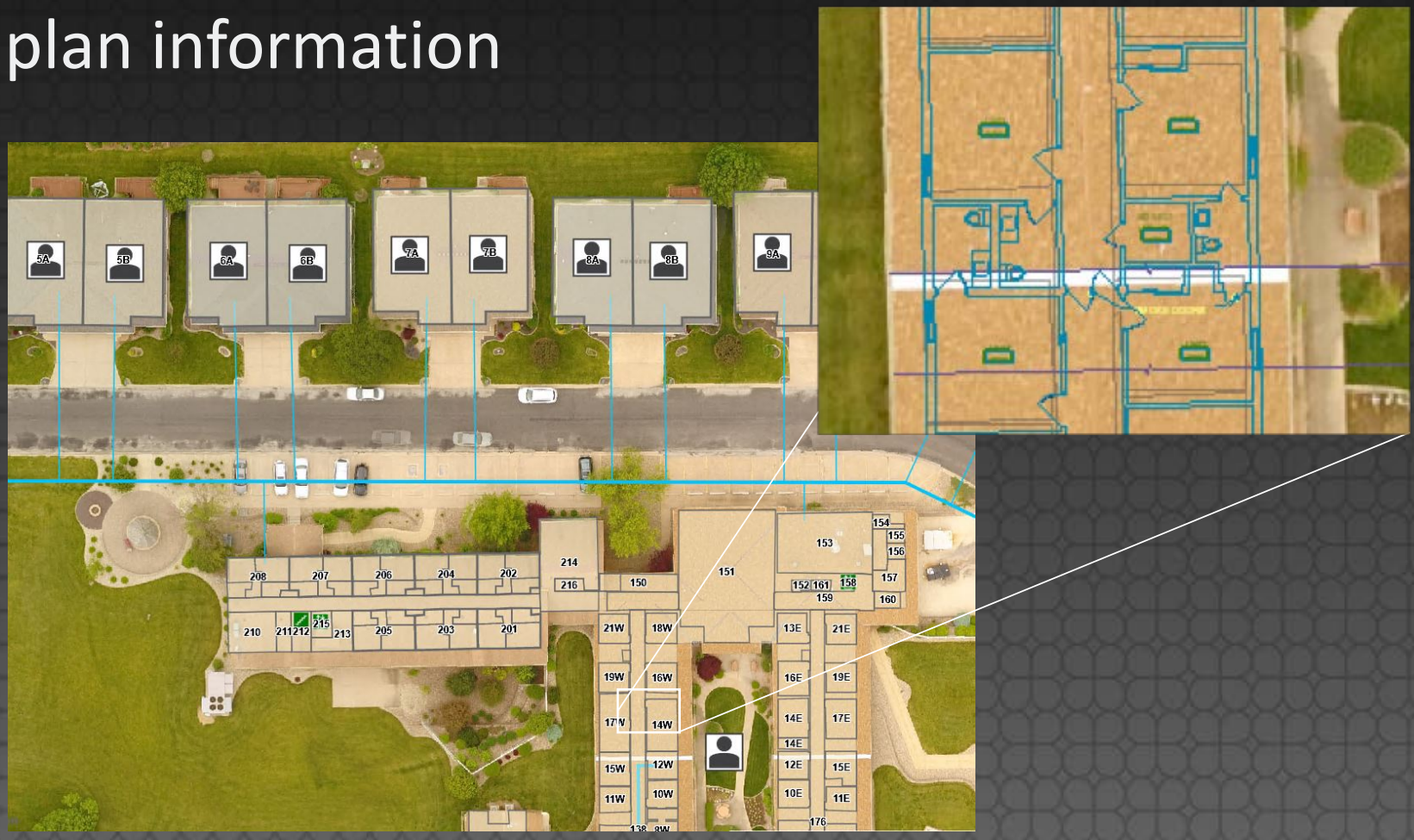
What's ahead: Indoor addressing?

Floor plan information



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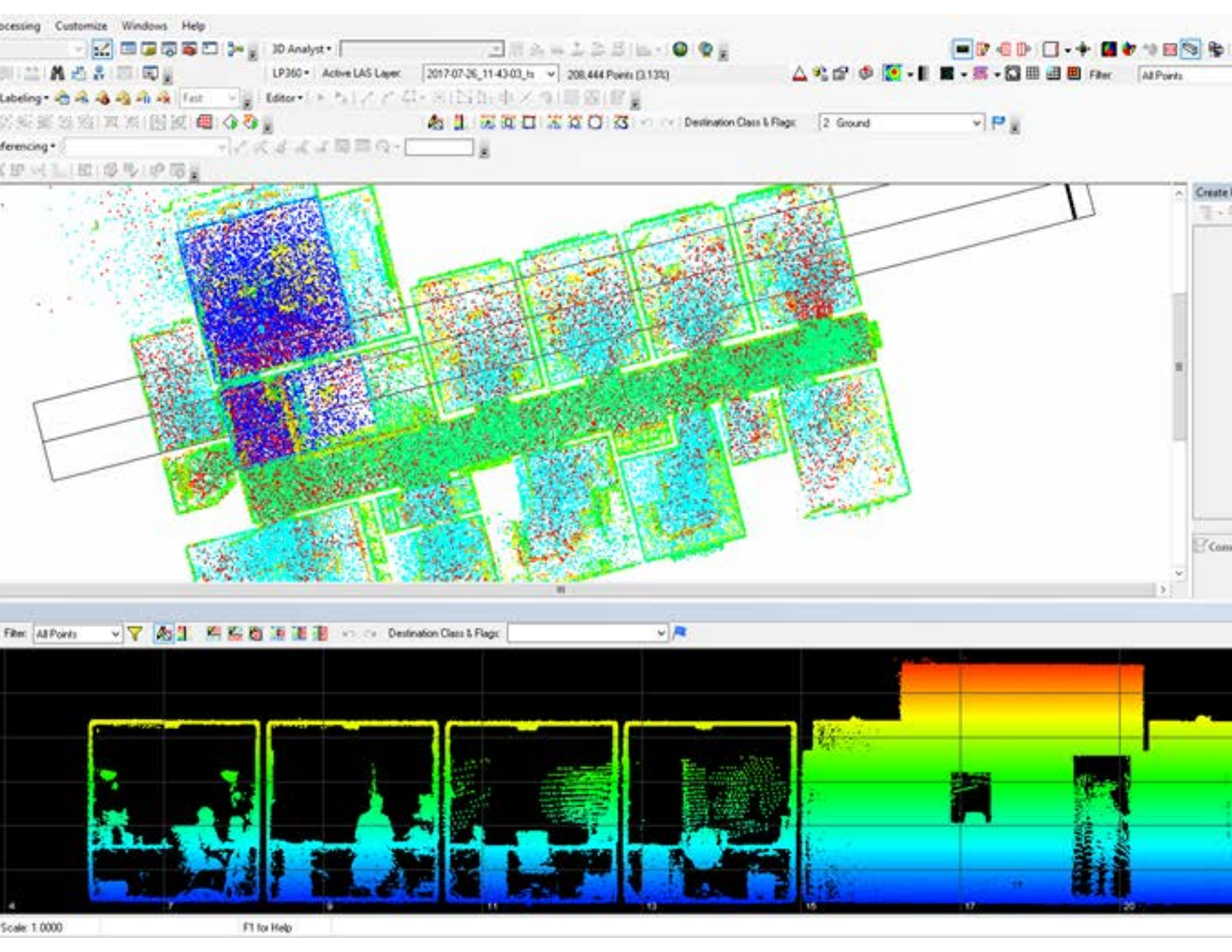
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F1 for Help

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- Configurers
- Data
  - Collection
  - Clean
  - Configure
  - Connect
- Asset Inventories
- Problem Solvers

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Thank You

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