Effective Address Design and Management in Municipal GIS

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The City of Tempe contains ~89k active addresses

1 previous employee tasked with overseeing addresses on full-time basis used a manual process of editing physical documents

Has never had centralized, authoritative address dataset

Lack of quality address data is beginning to hinder operations across multiple departments
Challenges

- Community Development staff enter new permit information into 3rd party system and integration with other systems has proven difficult.
- Multi-story, multi-family housing makes up an increasing amount of new developments (i.e., stacked point features).
- Departments have their own operational requirements when using address data (e.g., Fire Medical Rescue, Police Dispatch).
Real-world implications

- Lack of centralized, high-quality addresses has real-world implications on departments’ operational workflows.
- Tempe’s Fire and Medical Rescue division is dispatched via the Phoenix Fire Department but relies on internal address data in order to reach an emergency in an optimal amount of time.
Obstacles to Stakeholder Buy-In

- Limited staff lack familiarity with ArcGIS platform
- Reticence by management/staff to take on additional workflows
- Misbelief as to what addressing is ("Addressing should be maintained by GIS department")
Achieving Stakeholder Buy-In

- Frame the place of authoritative address data in the context of open data and transparency ("open by default")
- Underscore negative impact on cross-department integrations and workflows
- Leverage power of existing webGIS resources (e.g., ArcGIS Online) to streamline data creation and/or curation processes so as to mitigate technical obstacles and reticence by personnel
Addresses are created in ArcMap due to need to create address records which are stacked
Review and edit existing addresses in ArcGIS Online
Provide field staff and public means to report incorrect or missing addresses.
Using GIS as Technology Solution

Provide staff with map interface to review submitted reports and to update layer when address has been corrected.
The City of Tempe’s efforts to implement an authoritative address dataset reflects a broader culture change amongst the city’s workforce.

Tempe is employing a “hybrid” approach to creating and maintaining addresses, i.e., workflows that incorporate both ArcGIS Desktop and webGIS components.

Placing the need for up-to-date addresses in the broader narrative of open data and municipal transparency has accelerated buy-in from stakeholders.
Questions?