Robust Geodatabase Schema for Real World Users
Woolpert at a glance.

1911
Founded in Dayton, Ohio

25+
Offices across the nation

800
Global employees
About Cleveland Water

- Originated in 1856
- Provide Water to 70 Communities in Northeast Ohio
- 416,000 Metered Accounts
- 850 Employees
- 4 Treatment Plants
- 20+ Secondary Sites
- $1.7B net Plant Assets
The Backstory…

- 2004 – Citywide GIS Development Project resulting in the distribution system data model
- 2010 – Cityworks implementation for Water Pollution Control division
- 2015 – Cityworks preparation for Plants/Facilities begins
- 2017 – Cityworks implementation for Distribution System Maintenance
- 2019 – Approved Vertical Data Model for Plants/Facilities
- 2019 – Asset Inventory for Plants/Facilities assets
- 2019 – Cityworks Implementation for Plants/Facilities
A robust geodatabase schema to serve as the asset repository for CWD’s vertical assets.

Must Haves:
- User-friendly
- Follow Existing Data Conventions
- Adhere to Industry Data Standards
- Enable Dashboarding and Reporting Across Asset Classes, Systems, and Spatial Location
- Support AM Analysis
- Flexible
Challenges

• Expectation of Visual Model
• Providing “Sufficient” Level of Spatial Accuracy
• Difficult to Review and Provide Feedback On
• Informed by Business Process and Workflow
• Data Starting at Square One
The Strategy

• Bite Size Pieces
• Start Big and Work Small
• Understand the Influences
• Engage the User Base
• Utilize Pilot Efforts
The Result
The Position Point

- The Position Point provides the bond for aggregating maintenance data at the primary asset, sub-system or room level.
- The Asset provides location details.
Navigating the Hierarchy
Dashboarding
Lessons Learned

- Takes longer than you think!
- Maintain strict version control on schema updates
- Keep the vision in sight at all times
- Try populating data before it’s finalized
- Review in the context in which the GDB will be used
Questions?
Thank You!

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