AIMS Coordinators Meeting - Olathe

September 10, 2020

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Agenda

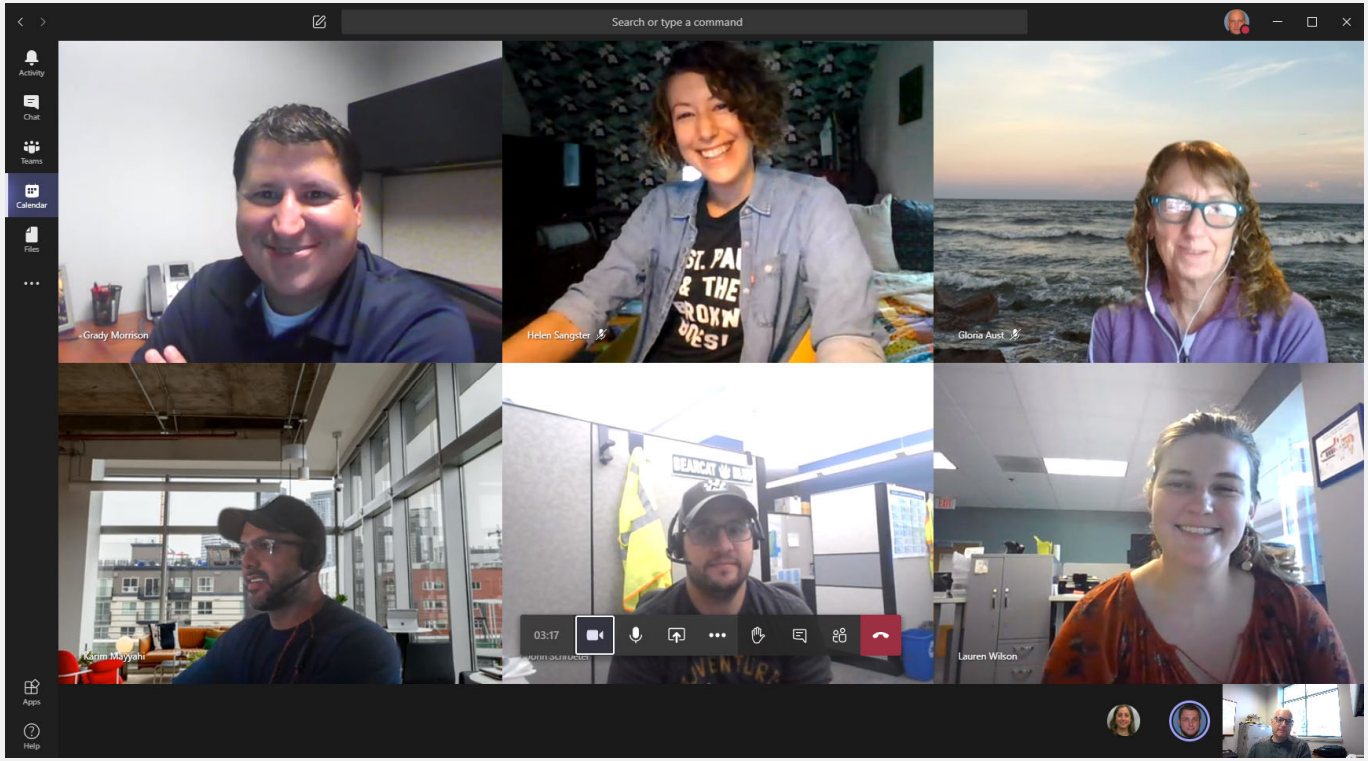
Order	Presenter	Topic
1	Matt	Intro
2	Matt	GIS Architecture
3	Grady	GIS Portal and Olathe Data Portal
4	John	Commercial Routing
5		Break???
6	Helen	Work from Home/ArcPro
7	Karim	Waze
8	John	Fiber Data Model
9	Matt	Enterprise Asset Management –Work Groups, Meters, Parks, ES, BRE

Olathe KM/GIS

- Resource Management Department
- City wide resource
- Support
  - Fire (EOC, Building Codes, Addressing)
  - Parks
  - Planning
  - Public Works
    - Environmental Services (Plants)
    - Field Operations (Water, Sewer, Streets)
    - Engineering (Stormwater, Engineering, Street Preservation)
    - Traffic (Signs, Markings, Signals, Street Lights, Fiber)
  - Resource Management (Benefit Districts, Budget, Performance)

Olathe KM/GIS Staff

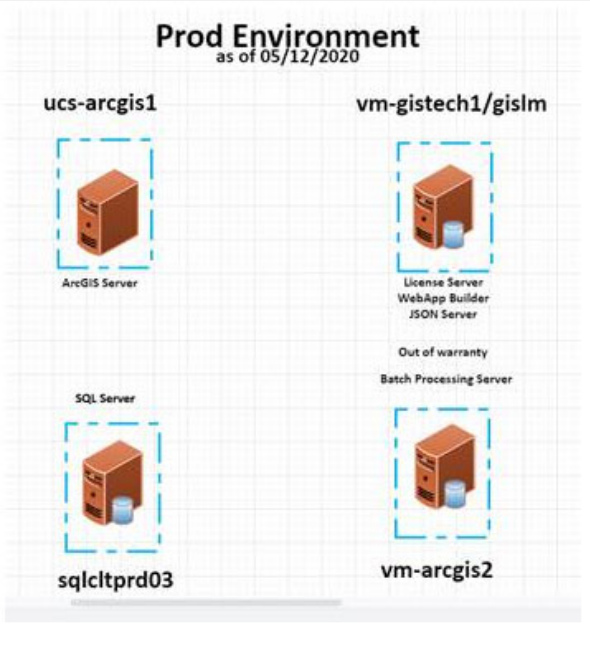
Grady Morrison
---Systems Analyst
Helen Sangster
---GIS Analyst
Gloria Aust
---Water Mgmt Analyst
Karim Mayyahi
---GIS/Dev Engineer
John Schroeter
---Systems Analyst
Lauren Wilson
---(former) PT GIS Tech
Betsy Pike
---GIS Tech
Jared Daniel
---GIS Analyst
Matt Steging
---KM/GIS Manager
Scott Rice
---IT Business Solutions Manager

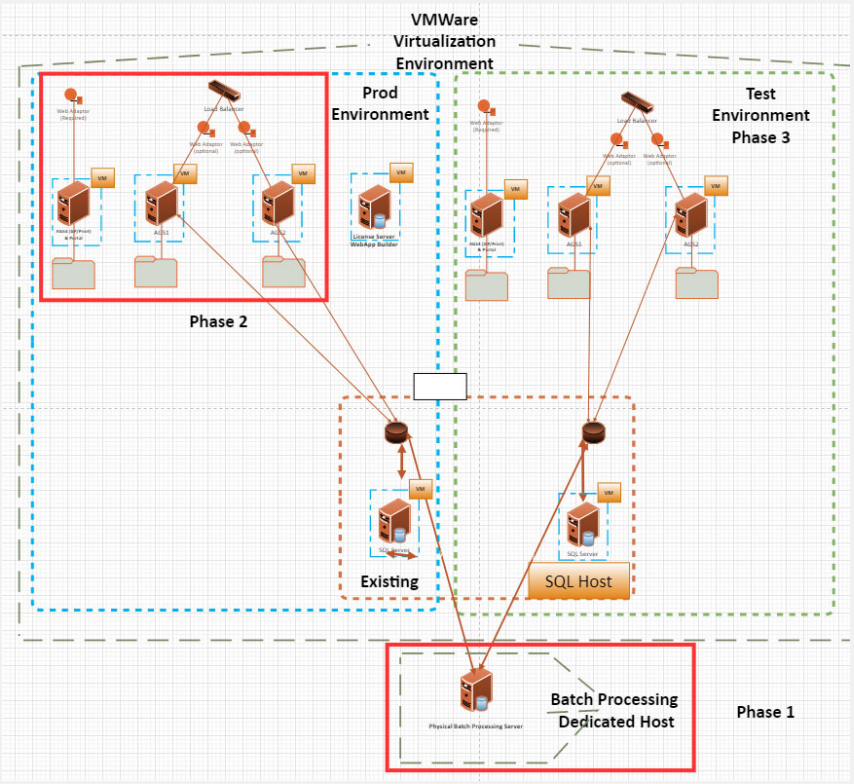


GIS Infrastructure

- Current Environment
  - SQL Server
  - AGS
  - Batch Processing Server
  - License Manager, Web App Builder
- Future Environment – redundancy, performance
  - SQL Server
  - 3 AGS
    - Active/Active
    - Web geoprocessing
  - Batch Processing Server
  - License Manager, Web App Builder

GIS Architecture





Web Mapping & Apps

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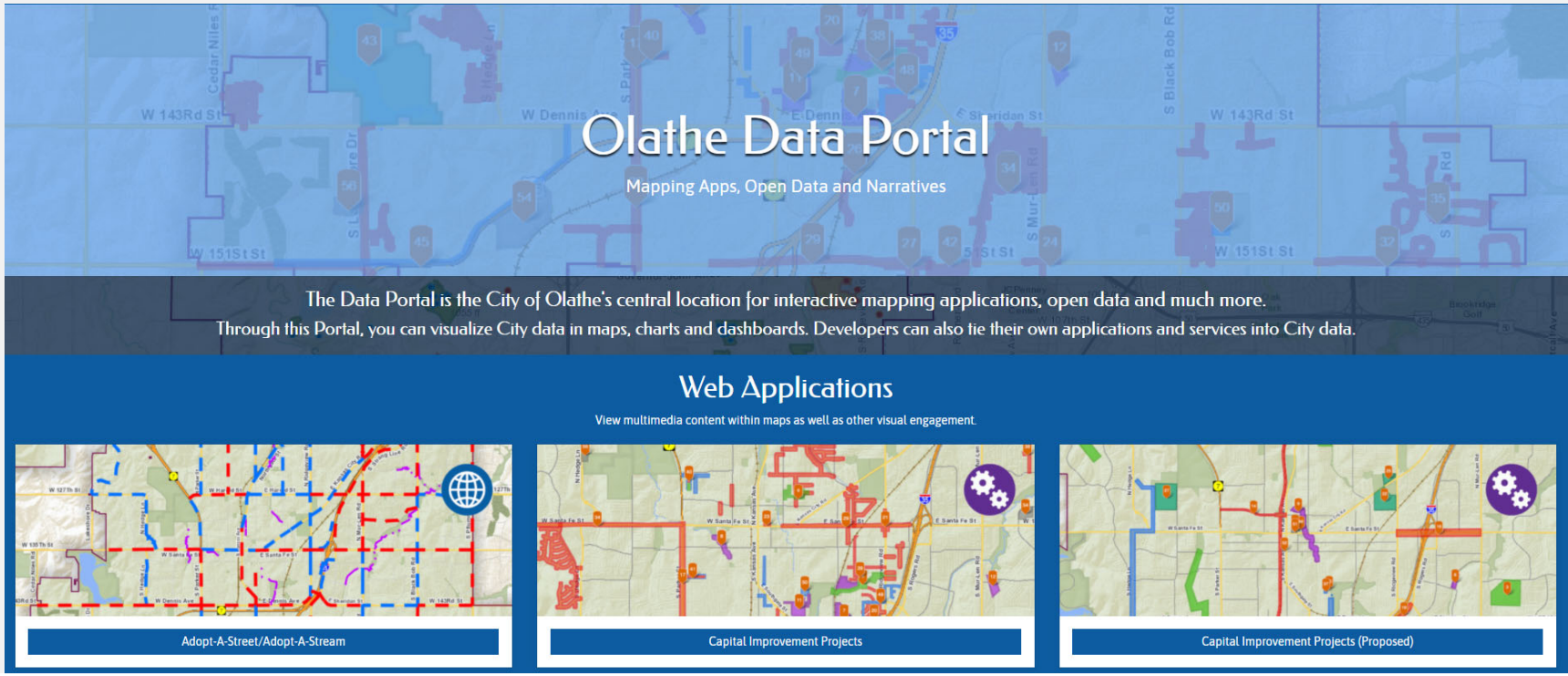
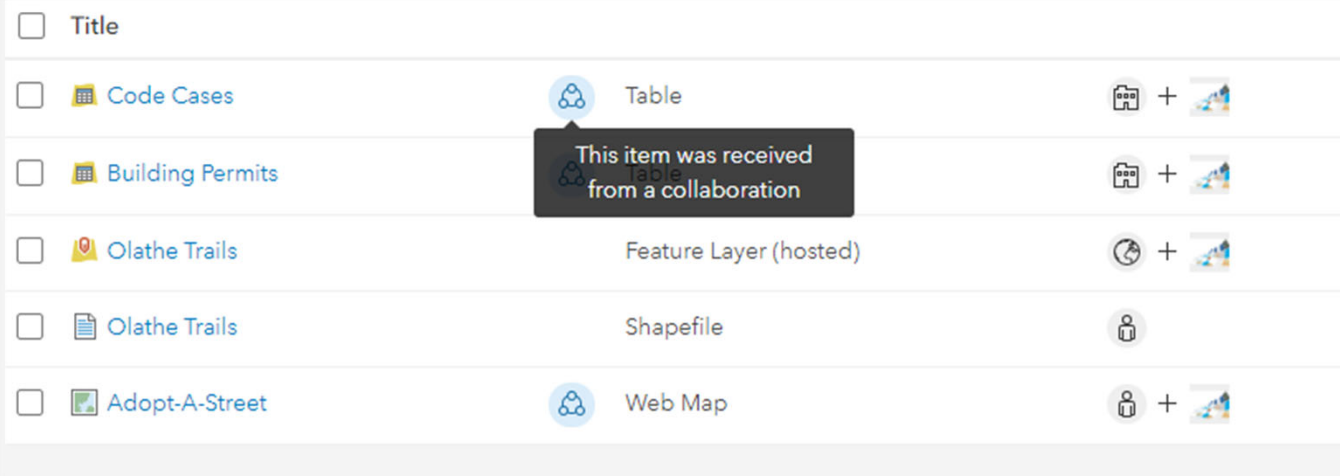
Olathe Data Portal

- Open Data on ArcGIS Online and ArcGIS Hub
  - https://data.olatheks.org/



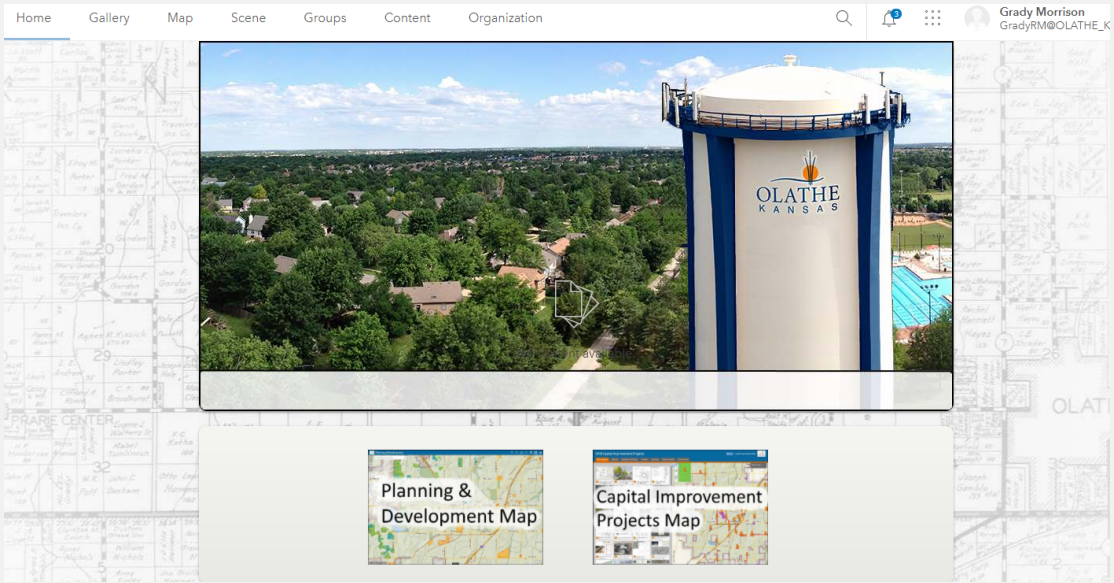
Connecting Portal to AGO

- AGO Settings > Collaborations
  - Sharing Content between AGO and Portal
  - Manage data and applications in one place and still leverage Open Data hub



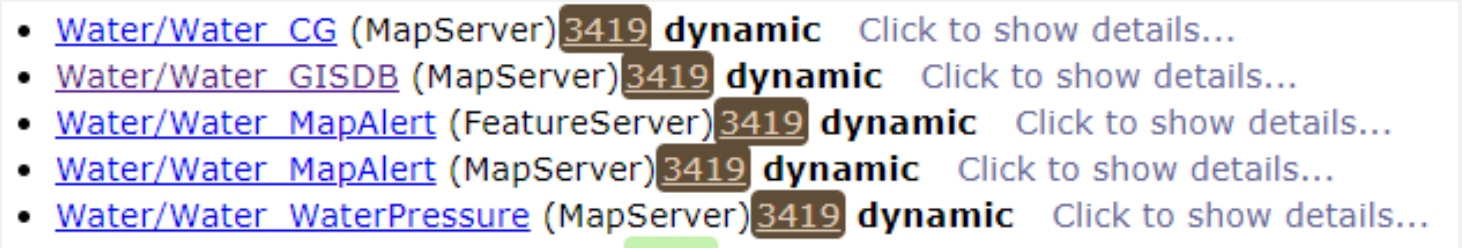
AGS Portal

- Currently 213 Users on Portal
- CGO Users are authenticated with Portal
- Content for Maps and Apps all maintained in Portal



Services – Data to Portal

- Organized by work group, and database



Commercial Solid Waste Routing

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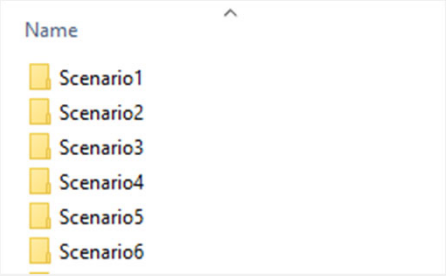
Commercial Solid Waste Routing

- **Tasks**
  - Improve Routes
    - Reduce Time
      - Reduce overtime
    - Reduce Mileage
    - Balanced Routes so they are equally divided
    - Meet time restrictions
- **First steps**
  - Met with staff and discussed the current process and billing data
  - Cleaned up base account information and matched it to addressing
  - Created a view into billing system
  - Created a view for the solid waste containers

Commercial Solid Waste Routing

Next Steps

- Setup Network for the trash trucks, create evaluator for exceptions or barriers, i.e. Spruce Bridge
- Setup MXD templates for each day of week, max times were different and account numbers per day varied.



Commercial Solid Waste Routing

Account Exceptions table

- Additional two-man accounts
  - Account – account number
  - Type – 2Man
- Multiple accounts associated to one dumpster
  - Account – account number
  - Type – Shared Carts
- Early Pickup is one other type of exception, but it's only used for Chick-fil-a

Commercial Solid Waste Routing

Pinned to Wrong Street

Field Name	Inputs for table
OBJECTID	OBJECTID
Name	Account – type of pickup(Trash, Recycle)
SourceOID	ObjectID from Centerline file
CurbApproach	• Either side of vehicle (0) • Right side of vehicle (1) • Left side of vehicle (2) • No U-Turn (3)
PositionAlong	After created join with PUBWORKS.PUBWORKS.vwSourceIDMeasurements
AssignmentRule	Leave Null unless trying to anchor first then use 4.
RouteName	Used to force to a Route
Sequence	Used to try to force a relative sequence in the routing
AIMSUniq	Copy AIMS unique ID for reference

Commercial Solid Waste Routing

Common Errors

- Time window violation
  - This error is usually not a problem, but if another one besides Chick-fil-a shows up, check results and the pickup times.
- Not Located is usually an address issue in billing system (NorthStar)
  - Can check the GIS.MUNI.CS_ADDR, GIS.PUBWORKS.BaseAccounts_Live, and PubWorks.PUBWORKS.vwSolidWasteContainers to verify address
  - Zip is also a good thing to check, we use this because accounts are outside the city
- Not Reached – usually not enough time per route, increase the MaxTotalTime

Commercial Solid Waste Routing

- Wepmap with routes and orders added daily
  - AVL of commercial trucks included
- MXD's of the daily routes also generated daily
- Custom API for M-Care (field app) to synchronize daily routes
- Route sheets generated in spreadsheet format

Commercial Solid Waste Routing

Results & Issues

- Adoption has been difficult, tested for several months
- Route consistency
- Locks and keys when routes changes daily was an issue
- Time restrictions caused skipping and avoidance of accounts that drivers thought were fine to pickup. Schools have restrictions at drop-off and pick-up times.
- Difficult to make long term comparisons
- A positive with automated routing with Covid, accounts decreased drastically, and we were able to show the changes immediately.

Commercial Solid Waste Routing

Modification in the routing

- Integrating Quadrants and routing within these zones

Future Uses

- Bulk pickups
- Meter techs
- Code enforcement

Waze Integration

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Waze Integration

- Partner Data Feed
  - WAB(s)
    - Internal
      - Communications specialist
    - External
  - Leverage ESRI's REST API to communicate with Waze
    - Data structure requirements (Schema)
- GeoRSS Events
  - Potholes
  - Integration
    - CGO

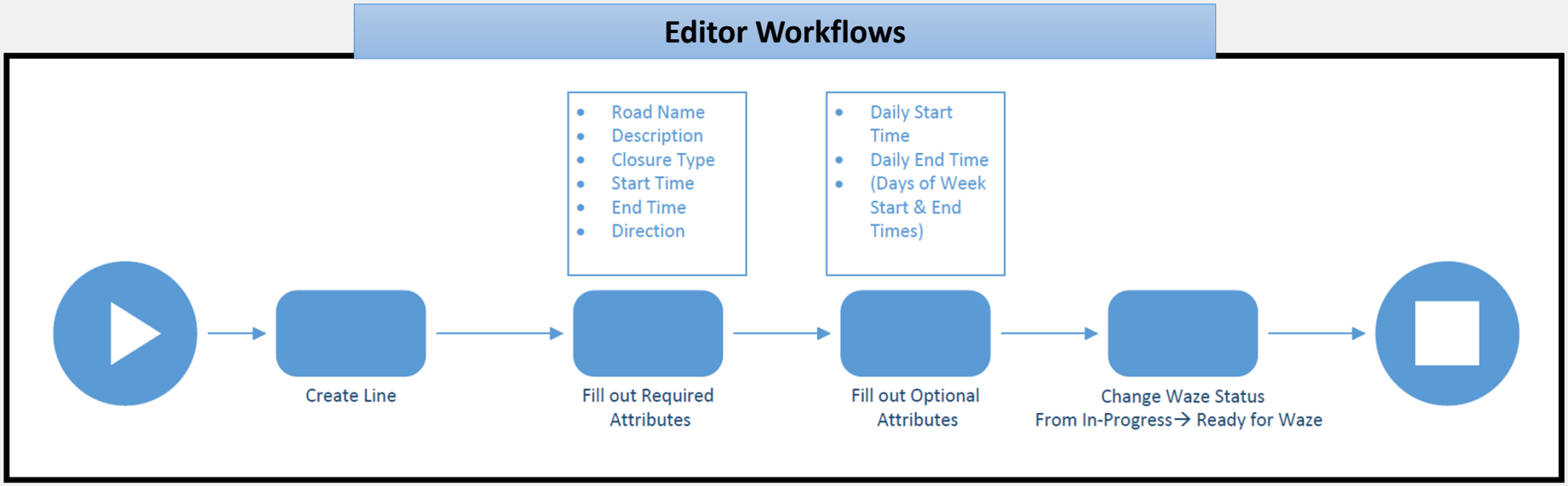
Waze Road Construction/Closure

Partner Data Feed

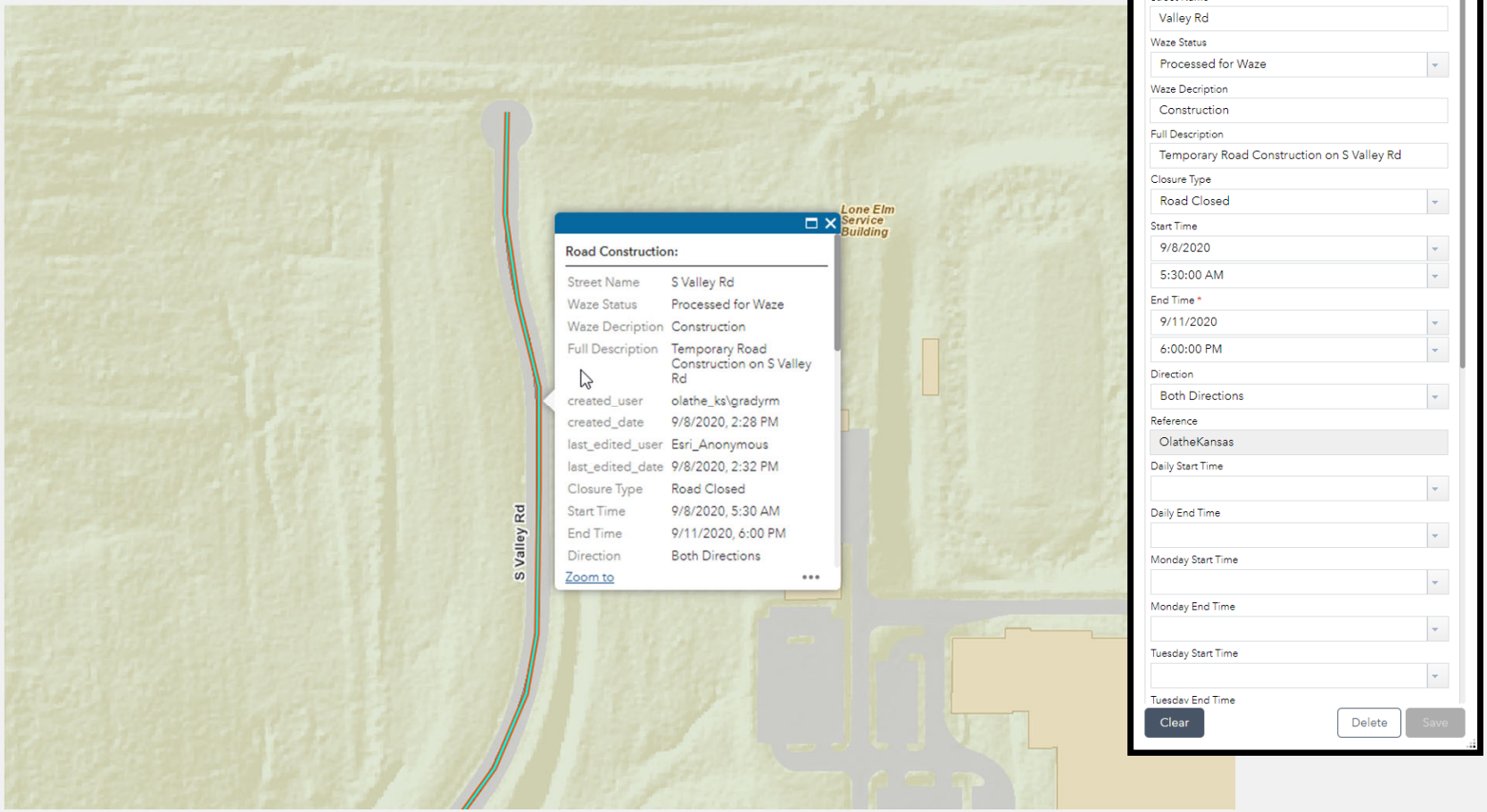
- **Road Construction/Closure**
  - WAB (Editor)
  - WAB (Public)
    - User creates data (workflow steps)
  - Custom Web Geoprocessing Requests
    - Results adheres to Waze's data model
    - Each request will check for new records and densifies geometry to comply with Waze's requirements.


```
{
    "updatetime": "2020-05-27T14:44:11-6:00",
    "location": {
        "direction": "BOTH_DIRECTIONS",
        "street": "S Lone Elm Rd",
        "polyline": "-94.834433974 38.867601352 -94.834433974 38.867159641 -94.834433974 38.866717931 -94.834433974 38.86627622 -94.834433974
        38.865834509 -94.834433974 38.865392799 -94.834433974 38.864951088 -94.834433974 38.864509377 -94.834433974 38.864067667 -94.834433974
        38.863625956 -94.834433974 38.863184245 -94.834433974 38.862742534 -94.834433974 38.862300824 -94.834433974 38.861859113 -94.834433974
        38.861417402 -94.834433974 38.860975692 -94.834433974 38.860533981"
    },
    "starttime": "2020-05-13T13:00:00-6:00",
    "creationtime": "2020-05-08T15:46:23-6:00",
    "endtime": "2020-09-30T05:00:00-6:00",
    "type": "ROAD_CLOSED",
    "id": "00B3D9C2-8DF6-424A-8DE4-E03D7FF4598B",
    "description": "Lone Elm Rd., between Old 56 Hwy. and W. Ironwood St. will be closed to traffic through late Summer 2020. A detour will be provided."
```

Waze Integration Road Closure/Construction



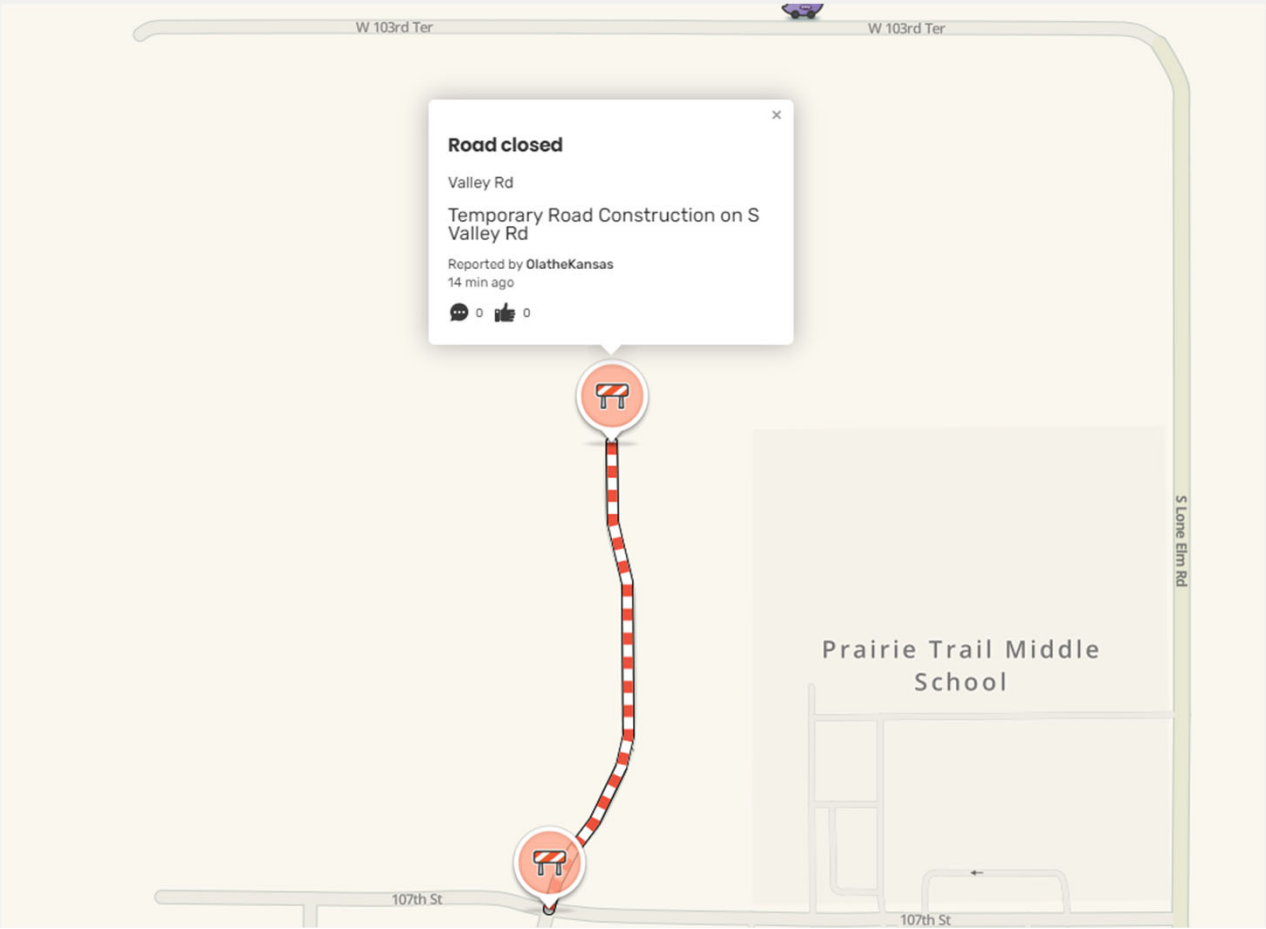
Waze Map (User Edits)



Waze Map (REST API JSON Reponse)


```
{
"updatetime":  "2020-09-08T19:32:12-6:00",
 "location":  {
 "direction":  "BOTH_DIRECTIONS",
  "street":  "S Valley Rd",
  "polyline":  "-94.839686668 38.937979712 -94.839697397 38.937579142 -94.839633023 38.937236988 -94.839525735 38.936894831 -94.83952
},
 "starttime":  "2020-09-08T10:30:00-6:00",
 "creationtime":  "2020-09-08T19:28:57-6:00",
 "endtime":  "2020-09-11T23:00:00-6:00",
 "type":  "ROAD_CLOSED",
 "id":  "AF61830B-81F3-4FE3-B8B4-6F7697495557",
 "description":  "Temporary Road Construction on S Valley Rd"
}
```

Waze Map (Waze Map)

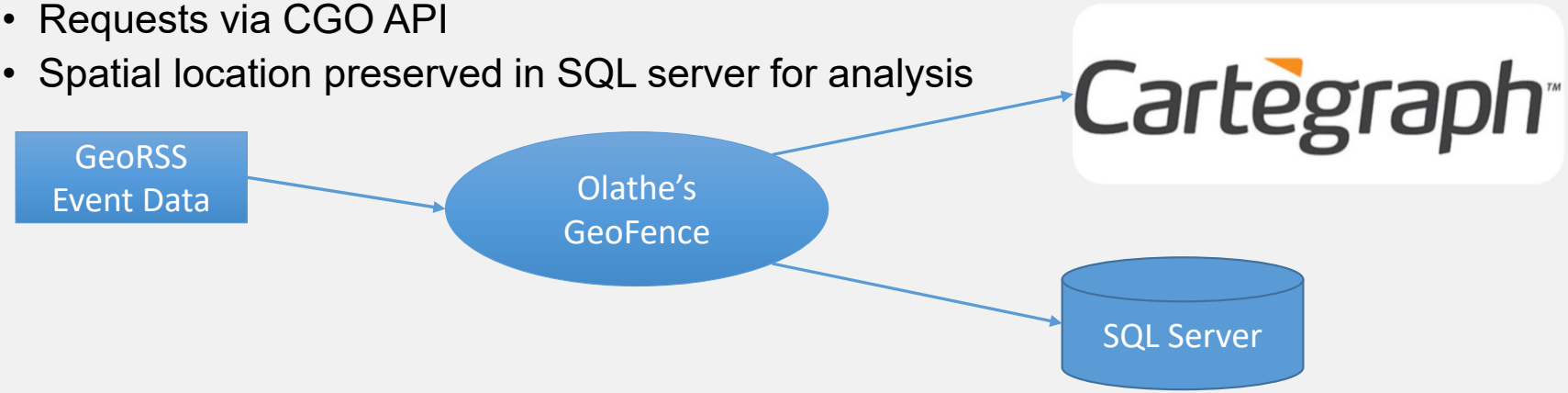


Waze Road Closure/Construction Requirements

- **Feed closures can only be created on the following road types:**
  - Freeways
  - Highways
  - City Streets
  - Ramps
- **Unsupported road types include:**
  - Private roads
  - Parking lot roads
  - 4x4 and pedestrian roads
- Closures can only affect one street name.
- Closure's start and end points must have the same street name.
- Multiple street name segments aren't supported, even if a polyline is provided.
- **Street Names (S Valley Rd vs Valley Rd)**

Waze GeoRSS feed

- Potholes
  - GRSS Feed
  - Polygon to exclude event data (GeoFence)
    - Private streets
    - Highways
    - Allowed for bridges
    - Areas of serial reporting (Great Mall segments)
  - Requests via CGO API
  - Spatial location preserved in SQL server for analysis



Waze What's next

- Railroad closures
- Waze for city data
  - Traffic data for analysis

WORKING FROM HOME

Things that worked and things that did not

ARC PRO

Why Did We Put This Off For So Long?

What's the best way to access information?

For Records and As-Built Data

Web Apps

- Online Web Maps embed As-Built information for most projects
- Most relevant information is available
- Primary resource to many field workers

VPN Data

- Access to Georeferenced plans
- Shared drives that may not be included in the PLANLINK

What's the best way to access information?

For Asset Data

Cartegraph

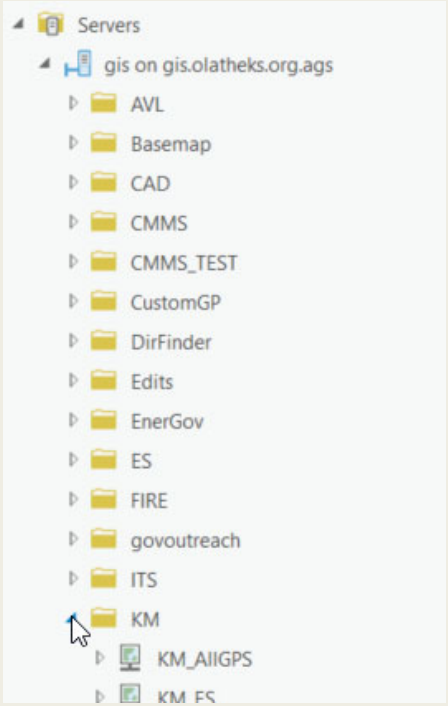
- Browser based CMMS system
- Utilized by field crew to track Tasks and Work Orders
- Most relevant information is available to appropriate users

ArcPro Services

- Primary source for input data
- Personalized data
  - *Symbology*
  - *Attribute Table*
  - *Complex Queries*

Utilizing Services

- Karim Mayyahi, GIS/Development Engineer
- Why Feature Services?
- Pro vs Desktop
- How long did it take to create?
- Editable *and* Read Only data
- Quick turnaround for data requests
- Checking out licenses
- Security



BLOOMFIRE

Still Useful After All These Years

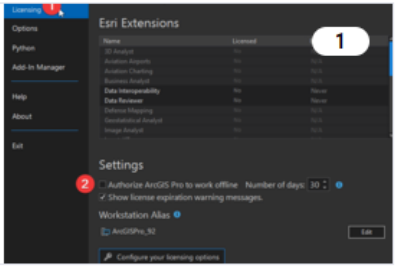
Working From Home Series

(Offline) ArcGIS Pro License

Karim Mayyahi

Published on March 16th, 2020

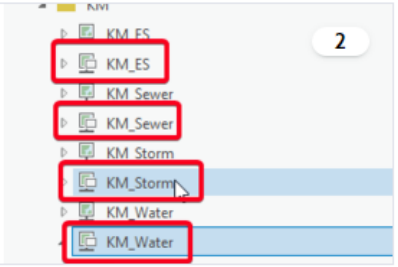
Guide on how to check out an ArcGIS Pro license.



Working Offline in ArcPro

Helen Sangster

Published on March 18th, 2020



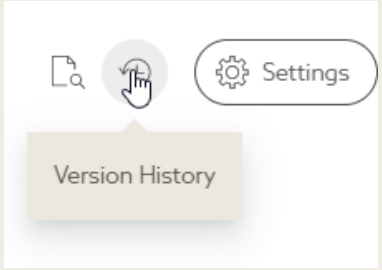
Telecommuting Tips & Tricks

Helen Sangster

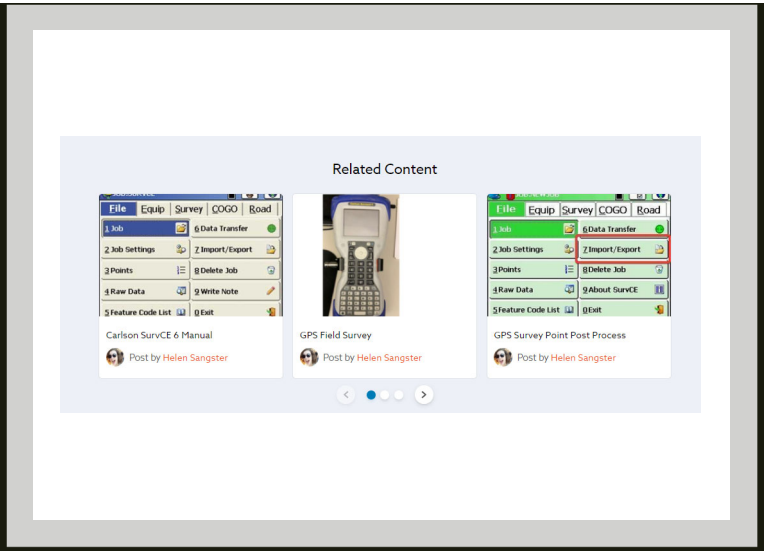
Published on March 16th, 2020

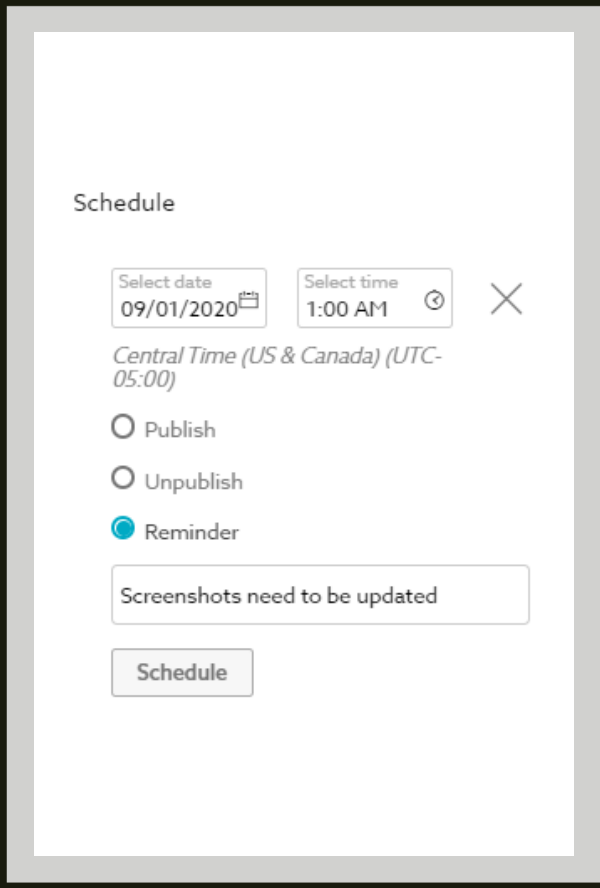
SOPs and Documentation

- Series allow us to link similar documents together



- Simple to edit and update, as well as restore previous versions





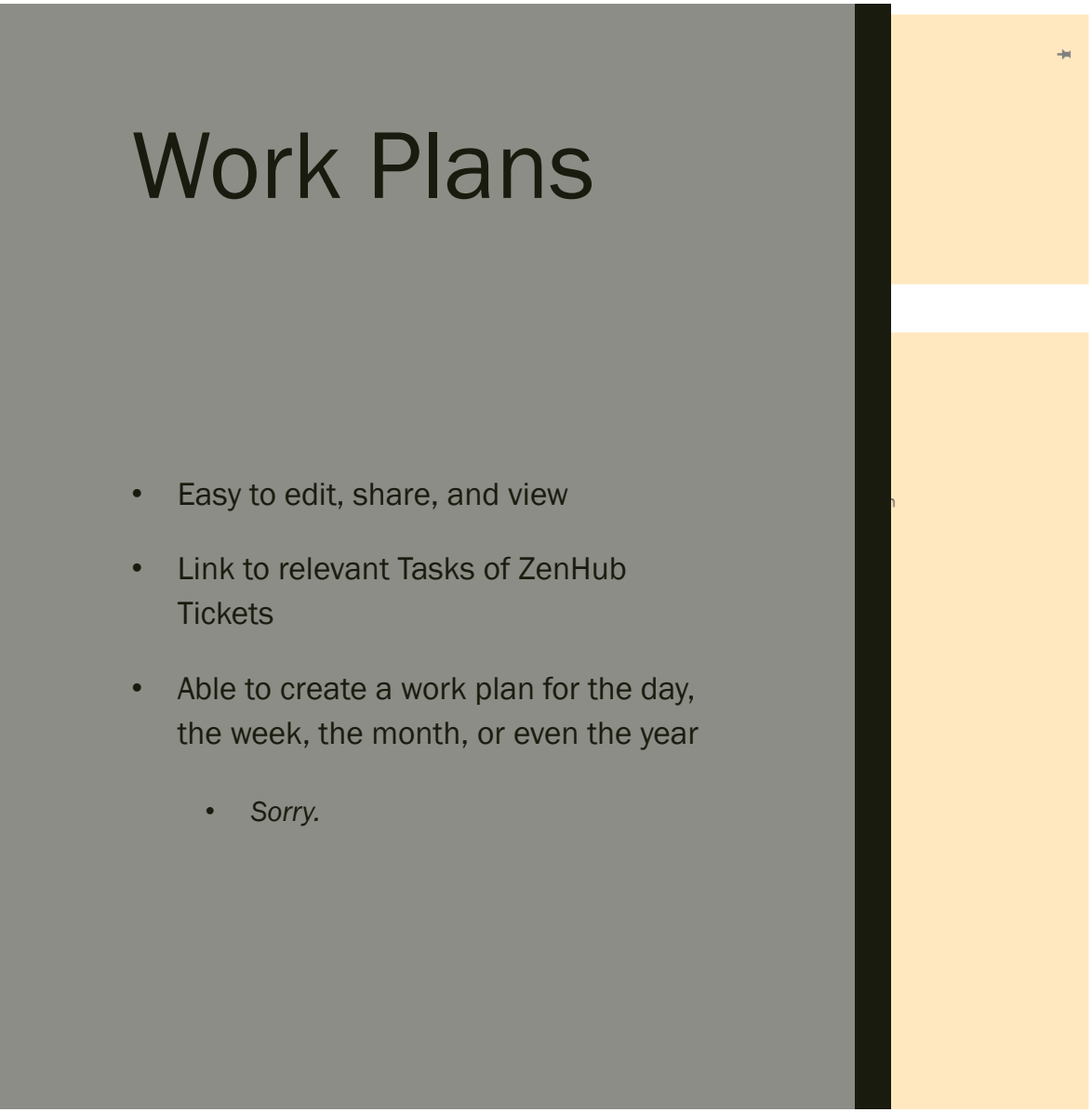
- Tags and Categories
- Related Content
- Scheduling Updates

TEAMS

It’s Not What You Know, It’s *Who* You Know

Work Plans

- Easy to edit, share, and view
- Link to relevant Tasks of ZenHub Tickets
- Able to create a work plan for the day, the week, the month, or even the year
    - *Sorry.*



- Mark progress, checklist on:
    - Lime Residuals Storage Facility & Sludge Pump Station Modifications
    - Curtis Street Pump Station Improvements
    - Black Bob Pump Station Generator Replacement
- GPS WP2 with Clint Kissinger
    - Prepare with
        - GPS Tasks
        - Paper maps with surrounding infrastructure from as-builts and GIS

Tuesday 09/01/2020

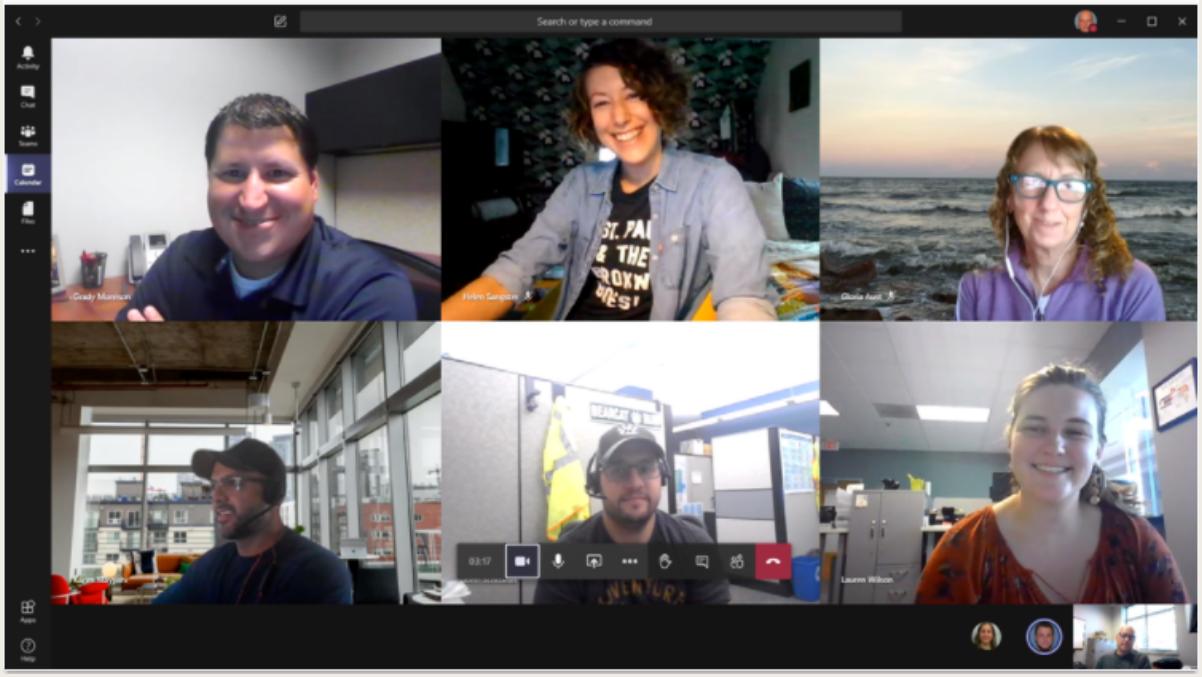
- Black Bob Pump Station
    - Will have ZenHub ticket with specifics
- Meet with Jordan for Map Change 401
- Water Main QAQC with Betsy and Jared
    - Will post plan on Bloomfire
- AIMS Presentation

Monday 08/31/2020

- College Blvd – K-7 to Woodland
    - Data Review
- Question From Brent
    - Inlets on the East side of W 143rd St at Quivira
        - I think they're within the Overland Park jurisdiction, will follow up after lunch
        - Jared is helping
- Lime Residuals/WP2
    - Finalize GPS plans, get any relevant information to Clint Kissinger for Wednesday
- Start on Black Bob Pump Station Generator Replacement
- Work on tentative outline for AIMS presentation
    - ArcPro
    - Use of Bloomfire
    - Services (maybe enlist Karim for some specifics)

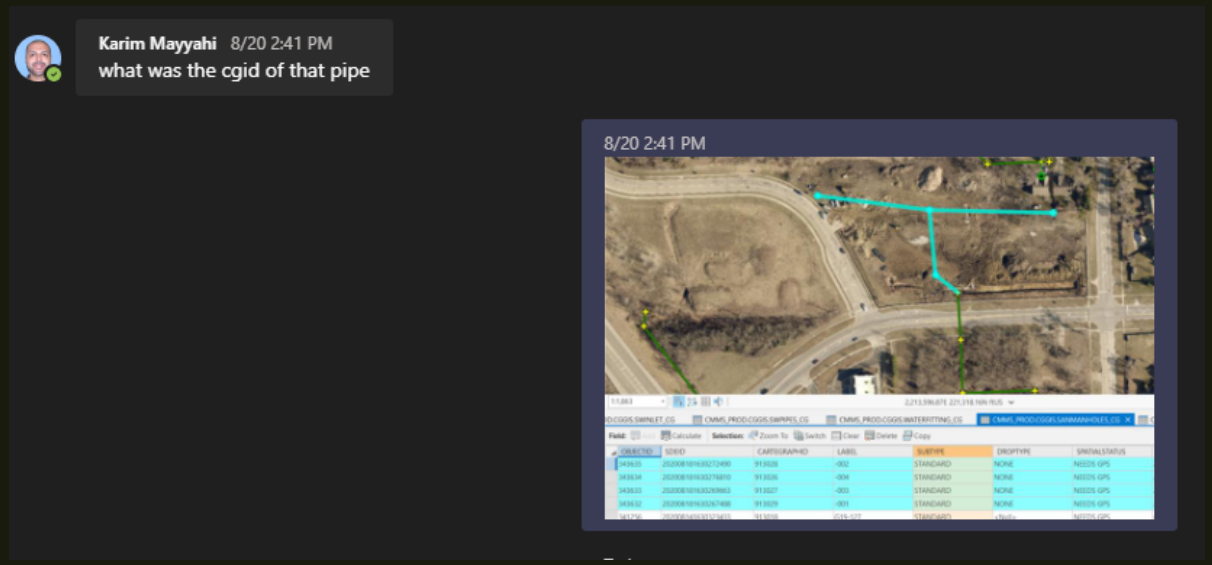
Friday 08/28/2020

- Morning was mostly trying to get a kiddo to eat anything other than fruit
    - Spoiler alert, he ate all my eggs.
- Project Mapping
    - Finish Woods of Forest View – Storm
        - Thanks to Betsy for the quick turn around on the QC



Efficient and Fun!

- Daily Team Meetings help us keep on track of our coworkers
- Able to utilize different ways of working while still being able to work together
- Ask relevant questions
- Take screenshots since we can’t come into the office to take a group picture!

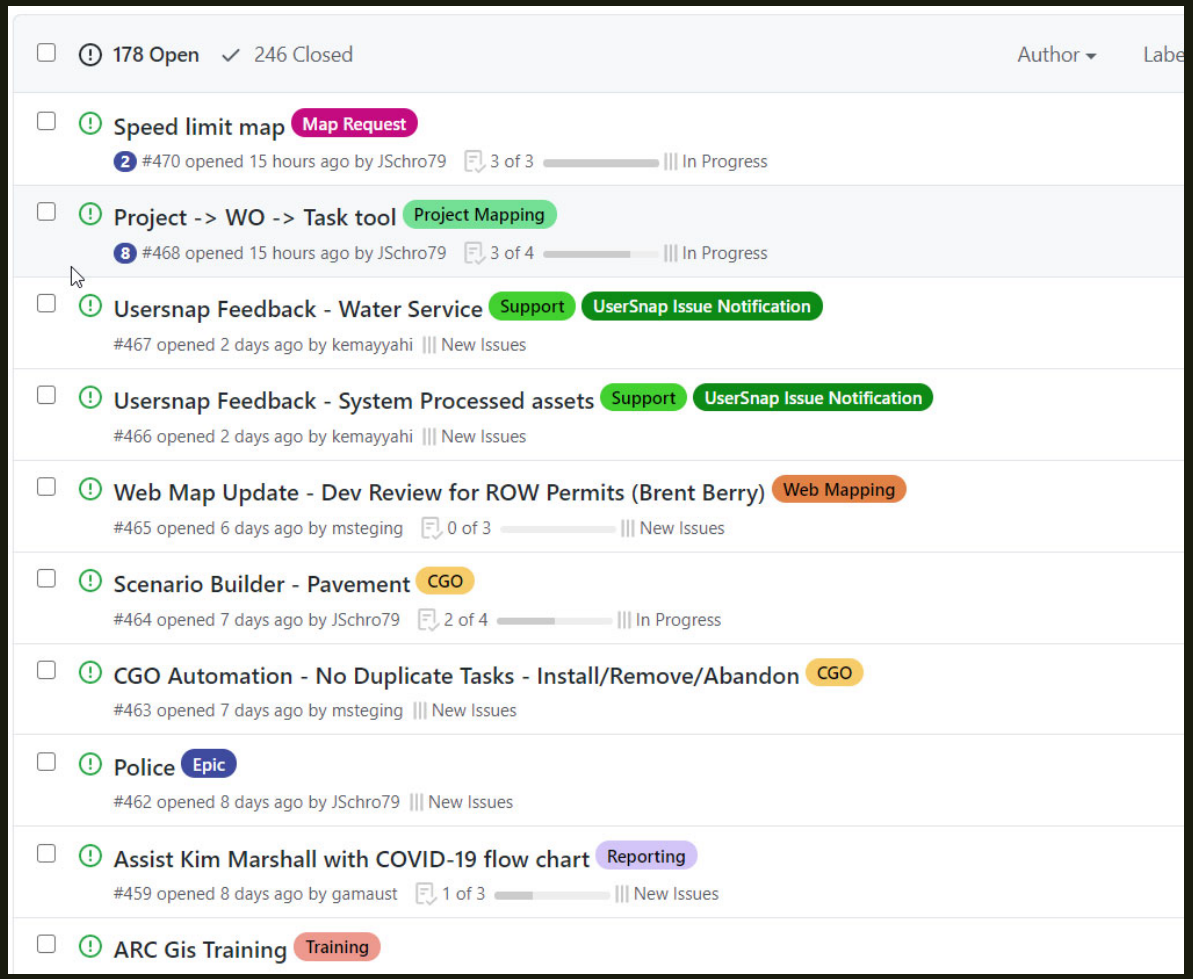


Quickly Share Information

- Sharing Screens has helped troubleshooting remotely
- Screenshotting information instead of reading off IDs is easier for everyone
- Quick notes and ideas can be shared and saved
- Status ensures that we won't disrupt our coworkers
- No one else smells your lunch when they need to ask you a question!

ZENHUB AND GITHUB

Did You Open a Ticket For That?



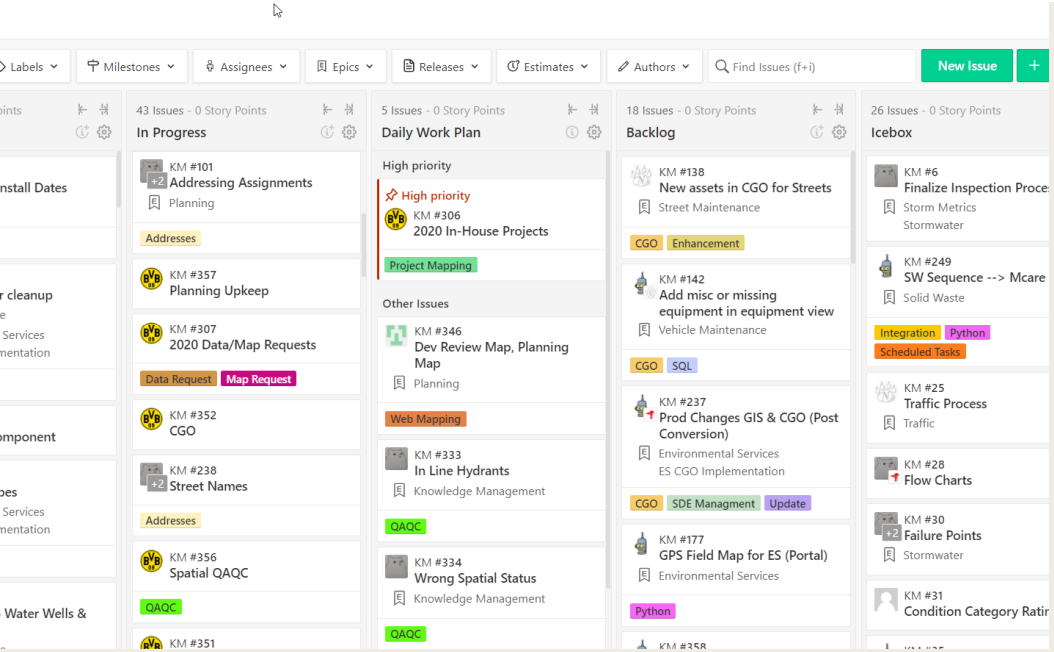
GitHub

Code Repository (offsite)

Zenhub Integration (GitHub Requirement)

Version Control

- *Compare changes*
- *Reverting backwards*



commented on Aug 26, 2020

- [ ] Plant Overview

-Georeferenced
-Line work and valves adjusted between Filter Building and Below Grade Clearwell, have added GPS tasks to Valves
-All assets that I've double checked from the plans I've marked myself in spatialeditor and spatialeditdate
-Keeping track of lines and points I've adjusted on the overview sheet and will confer with Mark/Steve on when a good time would be to come up and GPS affected assets to be totally sure of their location
-Lines and valves between Basin's 1-4 and connections to the Flow Blend Structure
-Connection into the North High Service
-Connection into the Above Grade Clearwell into the Membrane Building

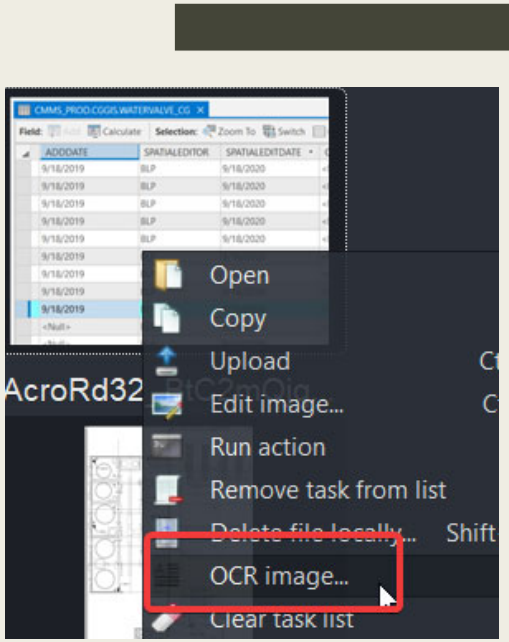
Highlighted are edits to date

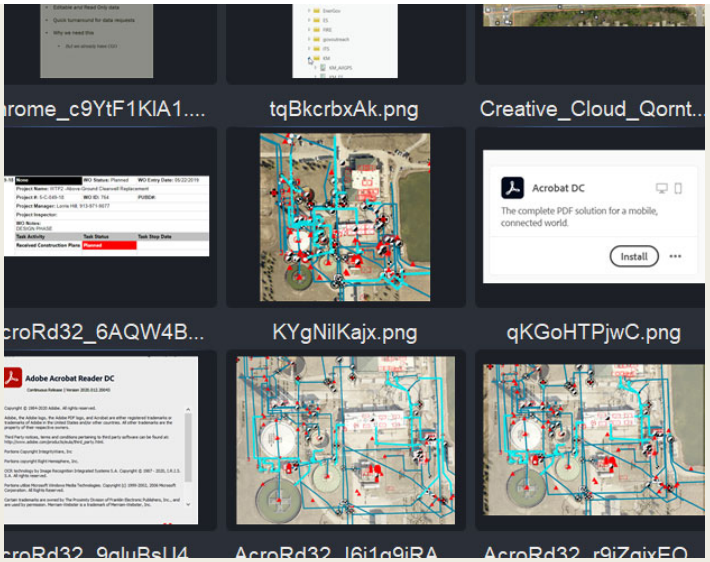
Keeping Track of Projects

- ZenHub allows us to create tickets for projects and update them with
- *Progress Checks*
- *Comments*
- *Links to relevant information*
- *Assignees*
- *Releases*

FUN TRICKS AND TIPS

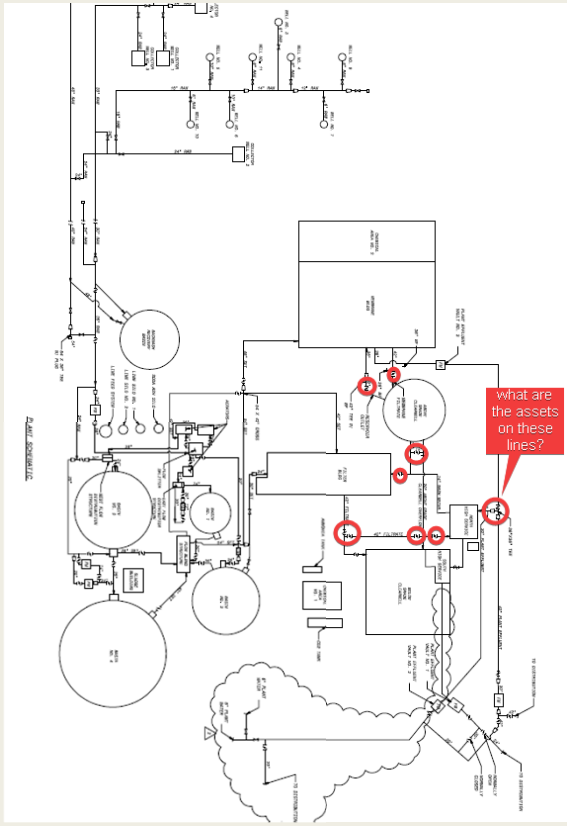
Well, Fun is a Relative Term

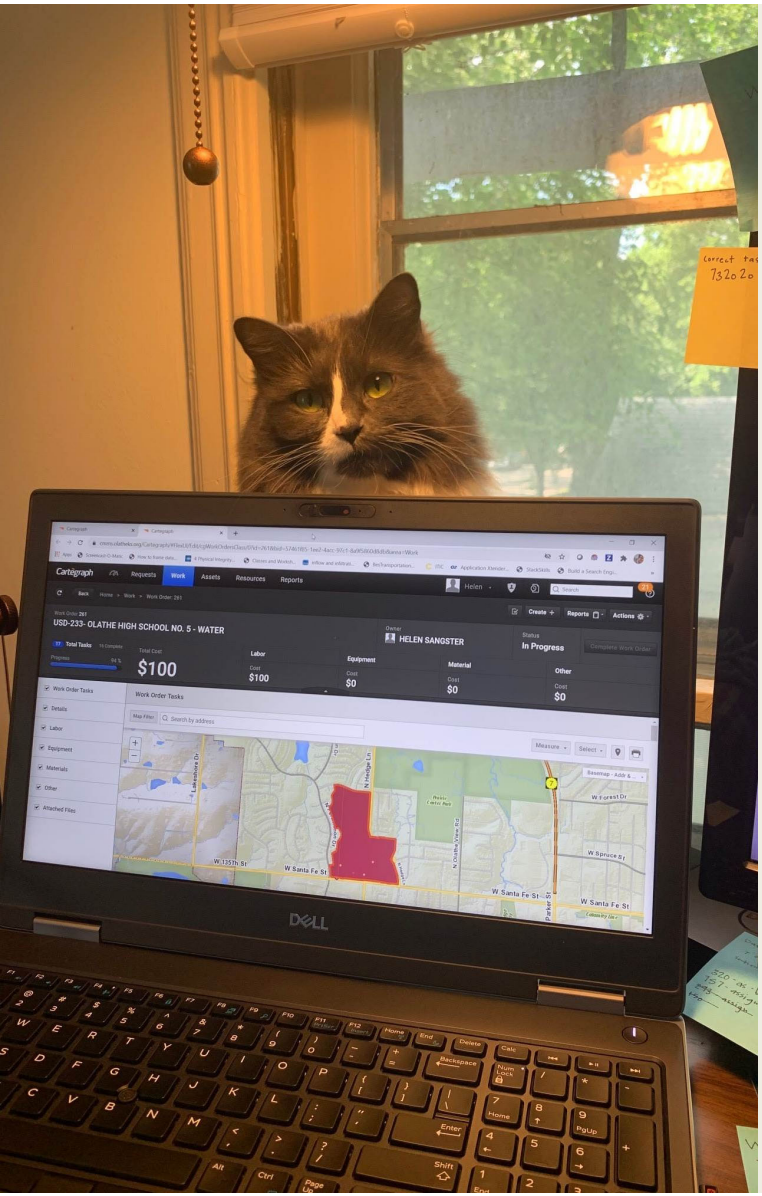




Share-X

- Ability to take a screenshot and capture the text
  - *Customizable hot keys*
- Simple, fast way to generate screenshots
  - *Also creates unique imgr link*
- Edit screenshots to show important details or add notes





Are there any other tools people have been using?

- Helpful pets!
- ArcPro Shortcuts
- Unique tools
- Innovative processes
- Snacks