



# Supporting Municipal Workflows Using ParcelMap BC

Organized by:

ParcelMap BC Adoption Working Group

October 12<sup>th</sup>, 2022

Part of the ICI Society's  
Virtual Café series

# Agenda

<b>Introductions</b> (5 min) <i>Brian Greening (LTSA)</i>	1:00 pm
<ul style="list-style-type: none"> <li>• <b>Using ParcelMap BC to Support the Capture of Infrastructure for Small Towns</b> (20 min) <i>Tjaart Van den Berg (LandInfo Technologies)</i> <ul style="list-style-type: none"> <li>• Use of Open-Source Software</li> <li>• Methodology on Data Capture of Municipal Infrastructure</li> </ul> </li> <li>• <b>Supporting Municipal Governments Transition to ParcelMap BC Adoption</b> (20 min) <i>Jason Hart (<a href="#">Harterra Spatial Solutions</a>)</i> <ul style="list-style-type: none"> <li>• Utility / Infrastructure Management</li> <li>• Workflows and Processes Relating to Geospatial Infrastructure</li> <li>• Applications to Local Governments</li> </ul> </li> </ul>	1:05 pm       1:25 pm
<b>Close Out, Questions &amp; Discussion</b> (15 min)	1:45 pm

# Welcome & Opening Remarks

## Workshop

A [ParcelMap BC Adoption Working Group](#) resource, presented as part of the ICI Society Virtual Café series

## Introductions

**Brian Greening**

Director, ParcelMap BC Products, LTSA

**Steve Mark**

Director, Operations, ICI Society

**Tjaart Van den Berg**

Principal, LandInfo Technologies

**Jason Hart**

Owner/ GIS Specialist, Harterra Spatial Solutions

# Using ParcelMap BC to Support the Capture of Infrastructure for Small Towns

Tjaart Van den Berg, LandInfo Technologies

# ParcelMap BC and Asset Management

Supporting the Capture of Infrastructure for Small Towns

Oct 12, 2022

Tjaart Van den Berg

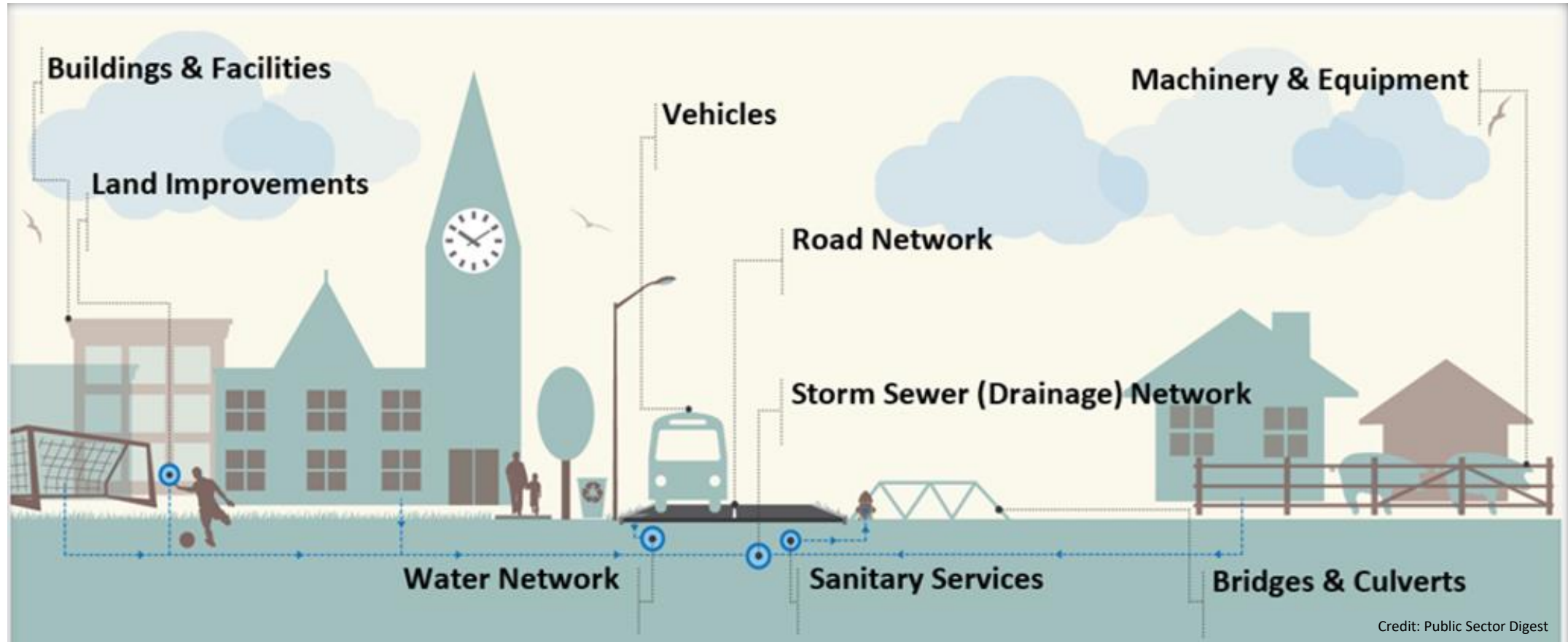


# 1. About LandInfo Technologies

- Asset Management consulting for small towns
- Support and develop open-source software
  - QGIS
  - PostgreSQL/PostGIS
  - Mergin Maps
  - Civitas Asset Management
- Capture of asset inventory a major focus

# Typical Asset Groups

- Water distribution
- Wastewater collection
- Stormwater collection
- Roads, Sidewalks and trial
- Buildings and structures



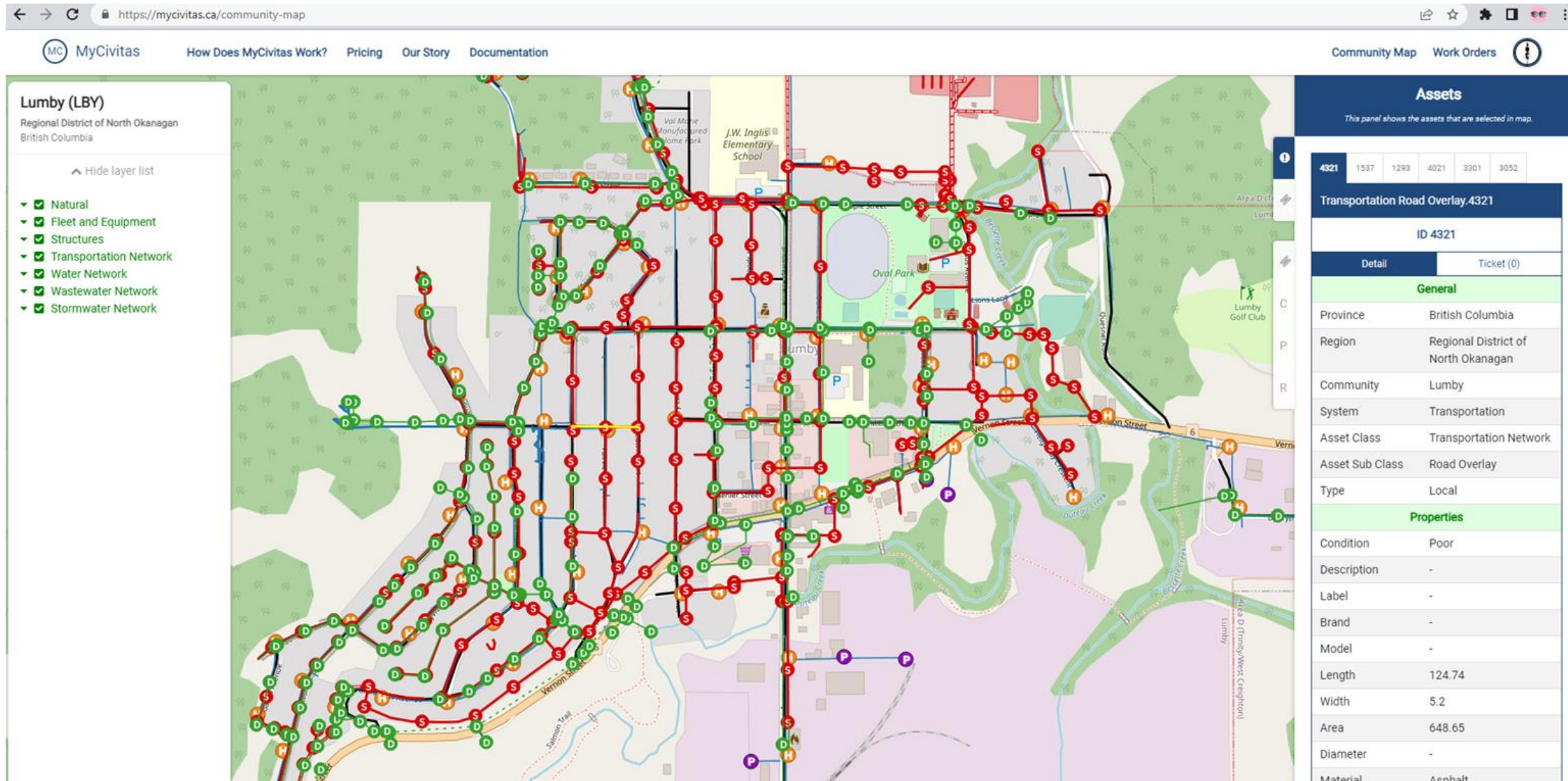


# Answering Asset Management Questions

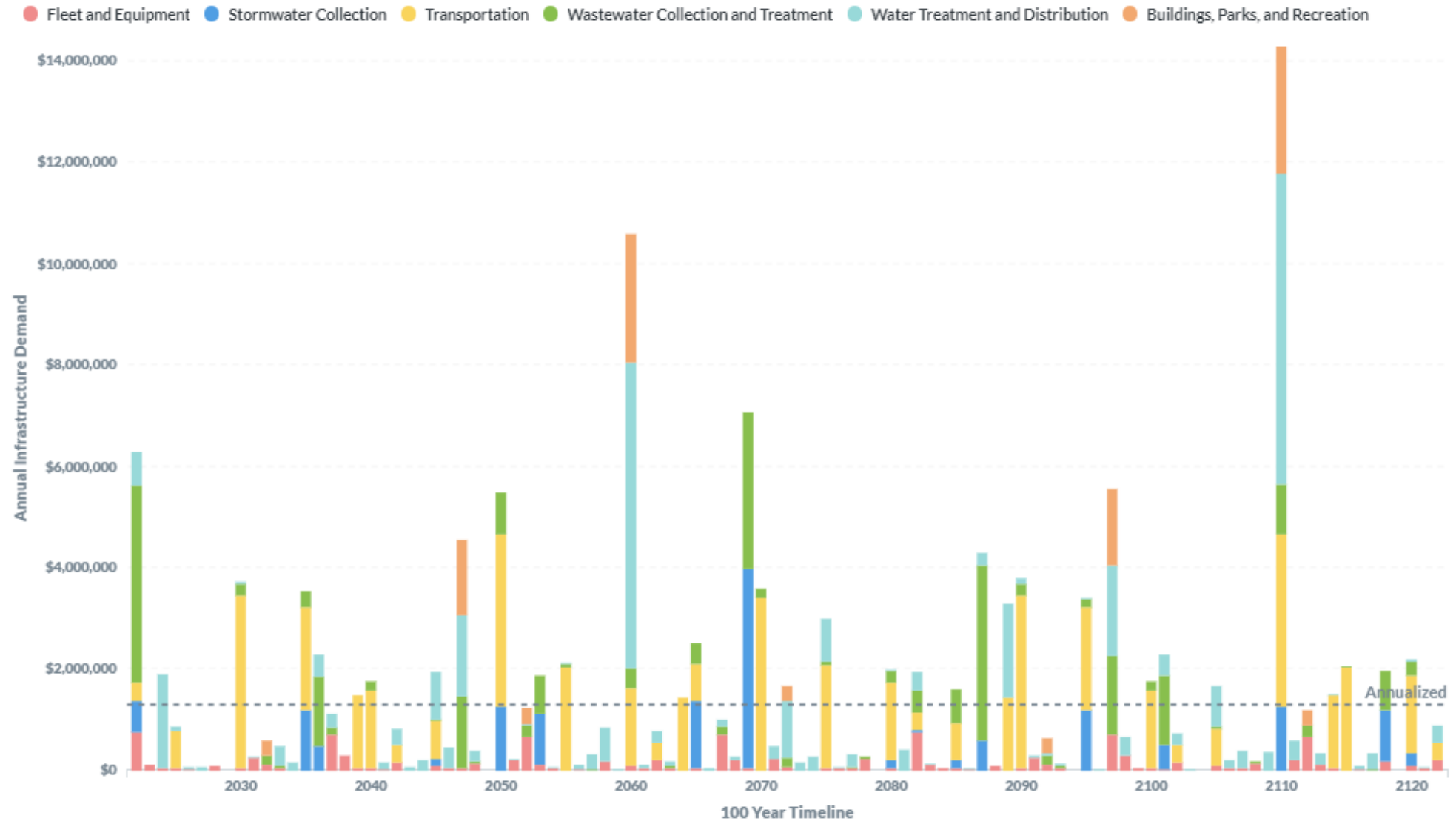




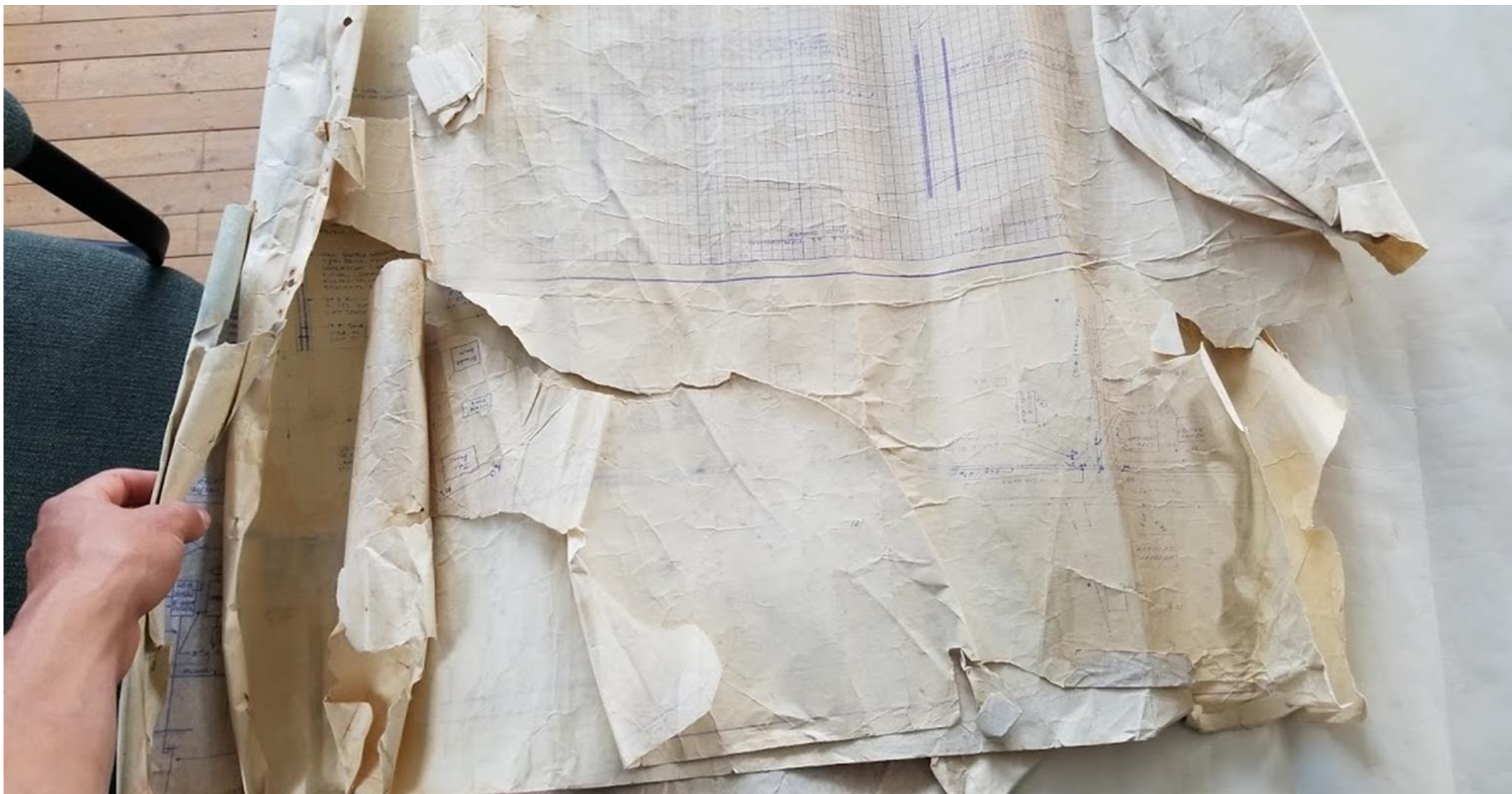
# Typical GIS data



# Typical report



# Where to start?

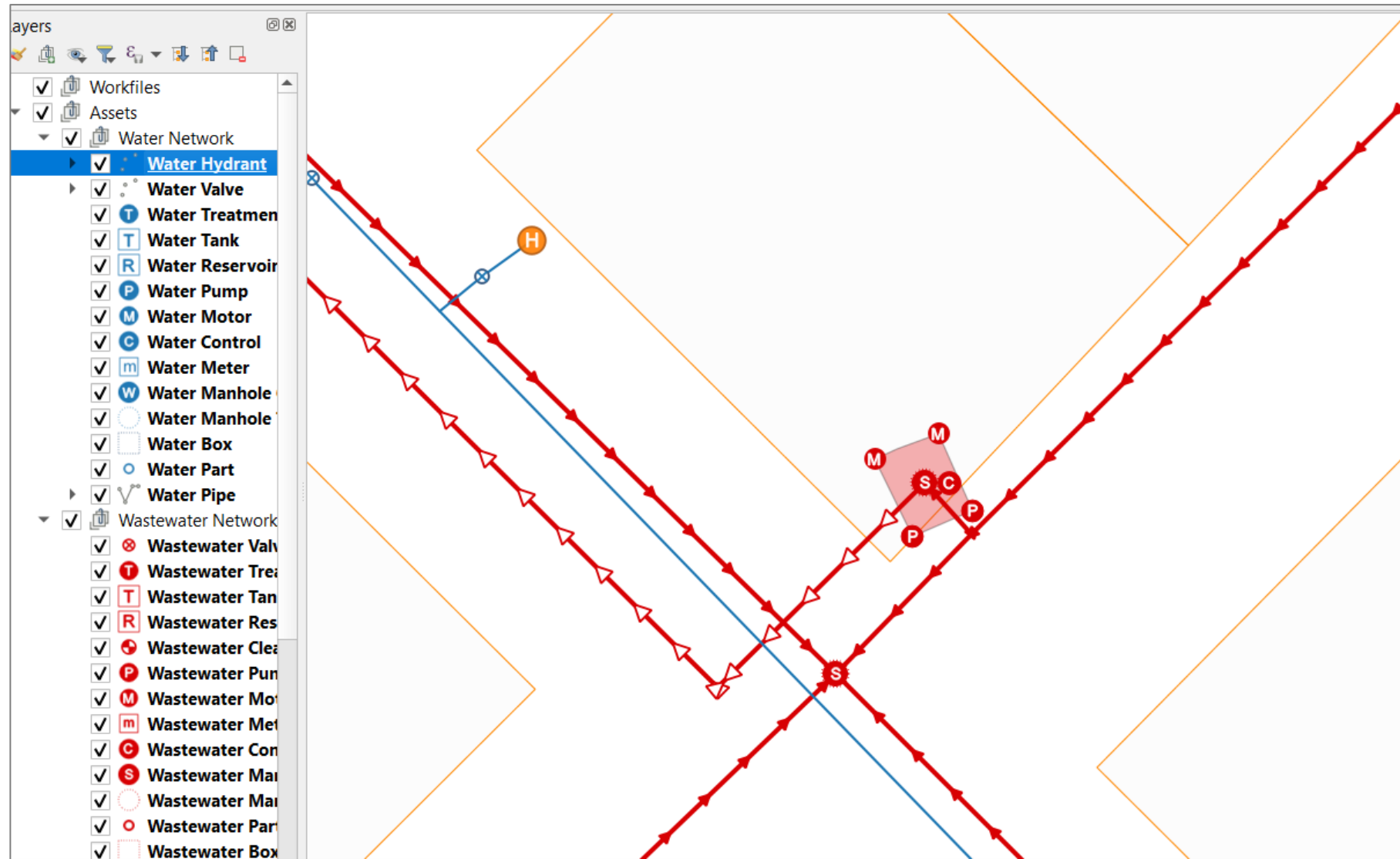




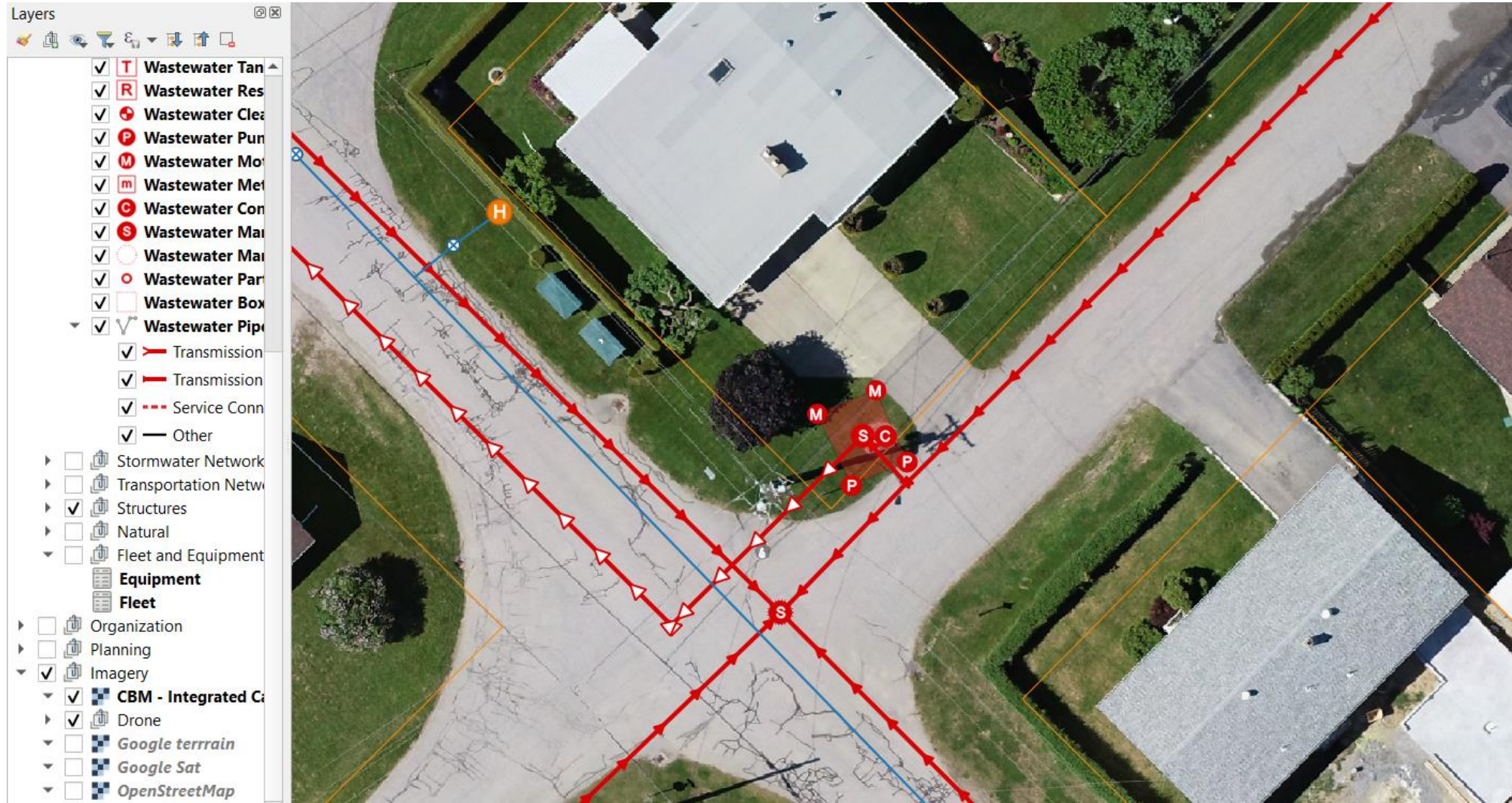
## 2. Our Methodology to Capture Infrastructure

- Step 1: Using parcel boundaries as reference
- Step 2: Orthophotos (Drone photography)
- Step 3: Onsite data capture using GPS

# Capture: Using Parcel Boundaries

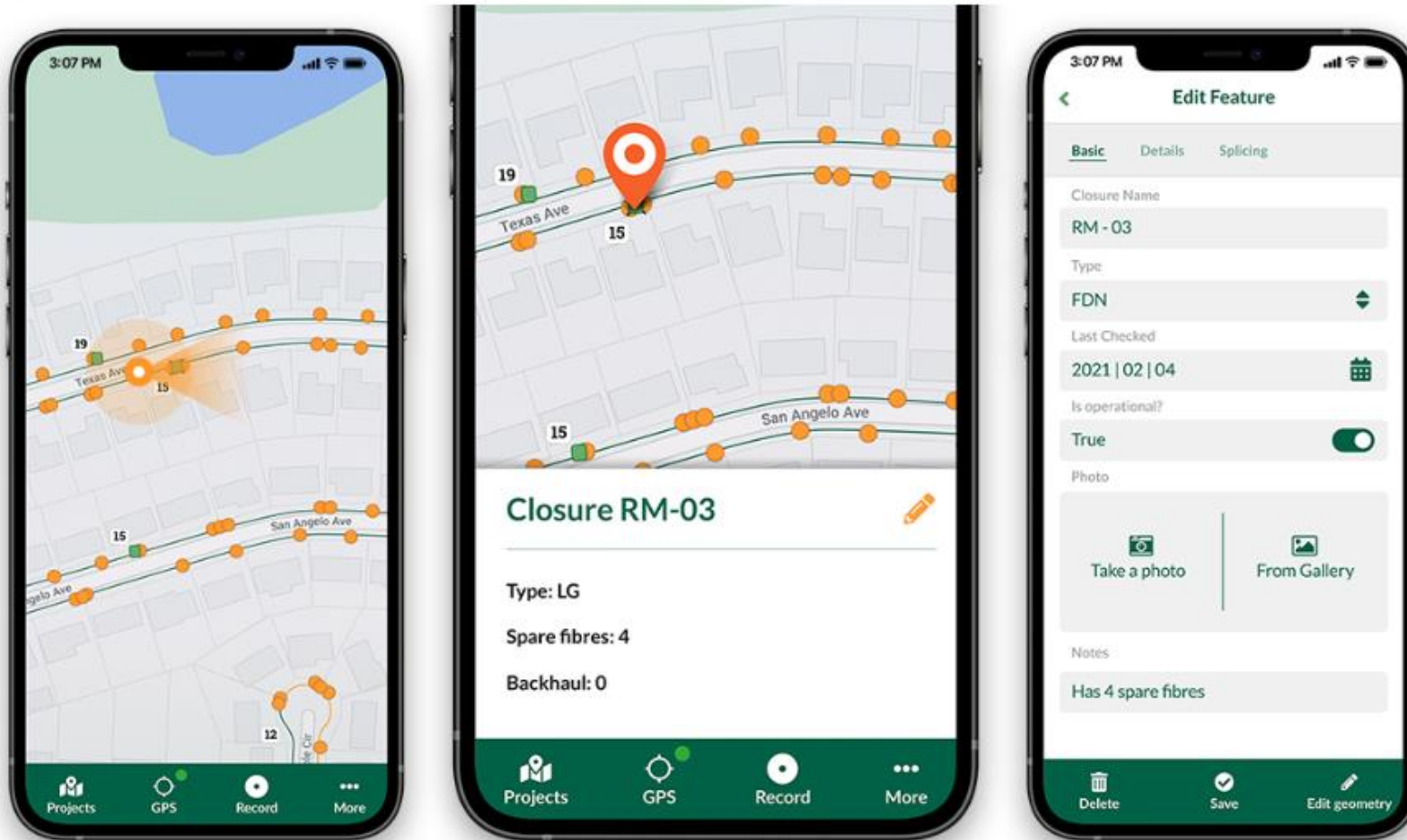


# Capture: Using Orthophotos





# Capture: Using GPS



### 3. Why we support ParcelMap BC

- It's free!
- It's easy to access remotely (Web Mapping Service)
- Constantly improving accuracy
- Complete coverage
- Trusted source
- Link to external data sources (e.g. BC Assessment)

# Moving forward

- Integration with open-source applications (Civitas portal)
- Add additional information to parcels – e.g. owner, assessment, etc.

# Questions and Discussion

# Supporting Municipal Governments: Transition to ParcelMap BC Adoption

Jason Hart, Harterra Spatial Solutions

# Supporting Municipal Governments: Transition to ParcelMap BC

Supporting Managing and Operating Municipal  
Infrastructure and Utilities

October 12, 2022



Jason Hart  
Owner /GIS Specialist  
[jason.hart@harterra.com](mailto:jason.hart@harterra.com)



# Drawing on a common canvas

- Many organizations start with parcel boundaries for designing, planning and creation of their information and data.
- Historically, the source parcel boundaries have come from different sources with varying accuracies, precision and completeness.
- Results in data generated with varying accuracies, precision and completeness.



# Benefits of a common canvas

- Use of a common parcel representation for design and planning has the effect of aligning datasets between and within organizations.
- Overall goals are to:
  - Reduce or eliminate errors
  - Increase confidence
  - Reduce duplication of information
  - Reduce costs
  - Provide new opportunities...



# Impacts on using a common canvas

- Design and engineering
  - Using ParcelMap BC as the starting point for designing infrastructure
  - Attempting to bring in other external data together for planning and design
- Administrative and or legal boundary alignment
  - Allows spatial overlay to determine attributes of associated polygon(s)
  - Support using parcel definitions rather than traditional metes and bounds description
- Planning and land-use
  - OCP, zoning, others
- Emergency Operations / Common Operating Picture

# Impacts on using a common canvas

- Infrastructure operations
  - Confidence in the data when accuracies are known
  - Less visits to the field
- Management of rights-of-way and easement
  - Other interest surveys integrated into the ParcelMap BC fabric
- Automation of alignment to ParcelMap BC fabric
  - ParcelMap BC Data Alignment Tools
- Rapid changes in technology
  - Making it easier to access data and leverage data
  - Easier to integrate ParcelMap BC data with other data and systems
  - Tools like GNSS and drones for capturing geospatial data are much pervasive

# Impacts on using a common canvas

- Business intelligence and decision support
  - Property information and management
  - Property reports
  - Ties to assessment information
- Open access and sharing of data
  - Data is becoming more accessible
  - ParcelMap BC data is publicly available
- Driving data quality improvements
  - Parcel data, but also the data that is associated and integrated with the parcel

# Recommendations and Approaches

What does it take to implement ParcelMap BC?



# Key Recommendations & Resources

- Understand your current workflows and data structures
- Understand what systems are integrated at your organization and how
  - BC Assessment Integration
  - Address integration
  - Development and permitting solutions
  - Others...
- Please see [Transition Planning Resources](#) for guidance and resources for assessing your current situation.

# Key Recommendations & Resources

- Evaluate existing parcel fabric and other layers (planning and infrastructure) alignment and gaps in data both spatial and non-spatial (attributes)
- Automate the download and linking of ParcelMap BC into and to your systems
- Please see [Spatial Alignment Resources](#) for guidance and resources for assessing your data alignment.

# Integration - Detect Changes and Update

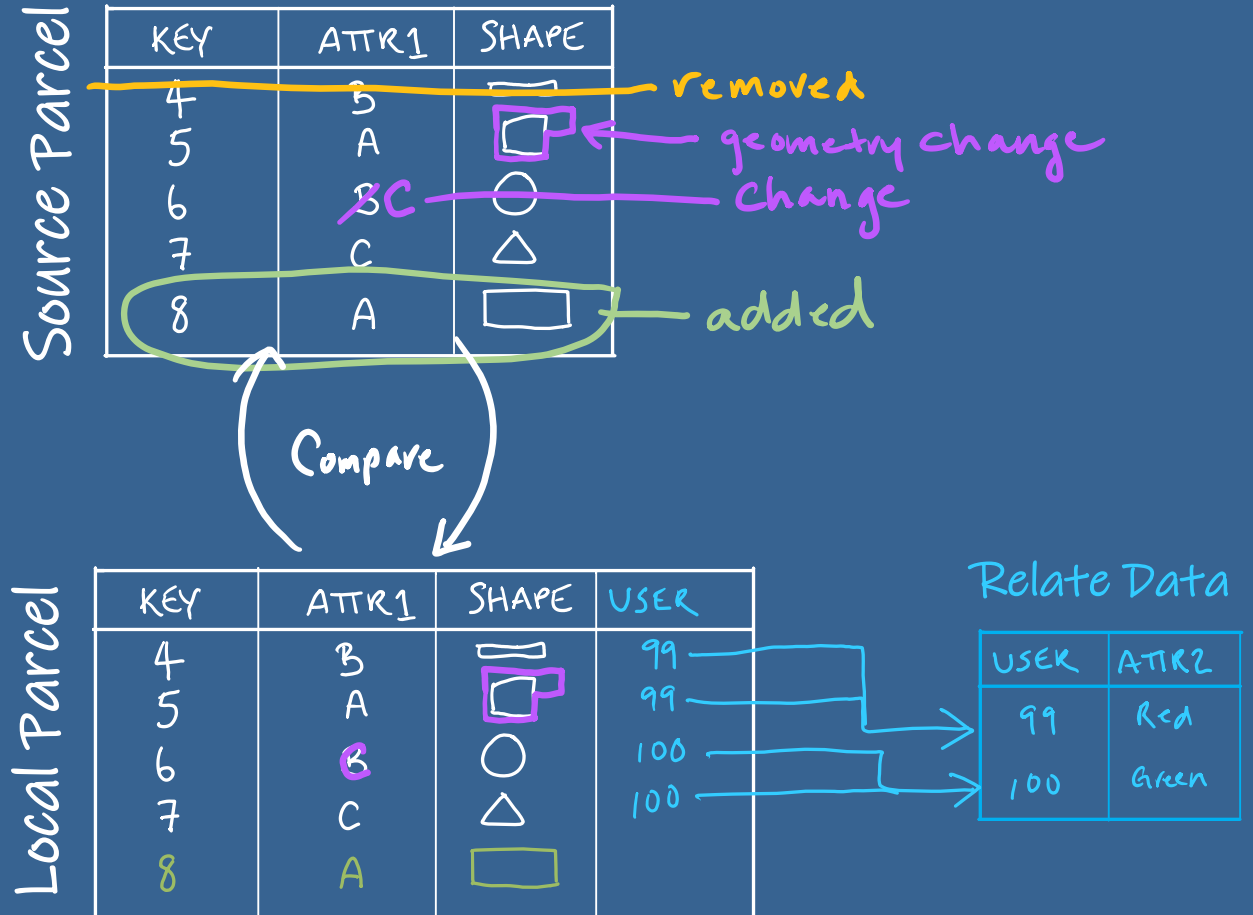
- Compare your local feature classes and tables to ParcelMap BC package from ICI Society and update attributes/shapes, delete or insert new parcels.

- Pros:

- Services or app connections do not need to be disconnected (no exclusive schema lock)
- Value add attributes or related information do not have to be repopulated or re-linked
- Detecting changes allows for automated notification. (i.e. a new parcel has arrived)
- Allows you to more realistically keep a history (archive) of all the changes
- You can have your own cycle to your updates (can skip a package)

- Cons:

- Can get really slow if ParcelMap BC changes a lot of things (spatial improvements)
- Schema doesn't change automatically with ParcelMap BC



# Archiving of ParcelMap BC

- Using archiving (history) on the geodatabase and change detection approach to updates provides insights and supports...
  - Workflows for alignment of local datasets with ParcelMap BC
  - Systems integration
  - Issue resolution to parcel changes
  - And so much more



# Case Study: City of Penticton

Uses of ParcelMap BC improving operation workflows


# ParcelMap BC at the City of Penticton

- City of Penticton was an earlier adopter of ParcelMap BC
  - Replaced their existing self-maintained cadastral base
  - Integrated with other business systems
- Linked to Tempest and other systems (records management)
  - Property Report
  - Owners listing
- Leveraging ParcelMap BC to support operations including:
  - Service cards for water and wastewater
  - Tree trimming notification
  - Buried infrastructure locate requests automation
  - Integration between properties, assessment information and other city data
  - Many others...





Parcel Viewer


citygis03devst.cityhall.penticton.bc.ca/test/parcel-viewer/





Parcel Viewer












Property Viewer


☐ Buffer


Meters


☐ Keep on screen


Buffer Method: ☒ Selection ☐ Drawing
















0 records selected


Owner Report


Property Report

Service Utility Report













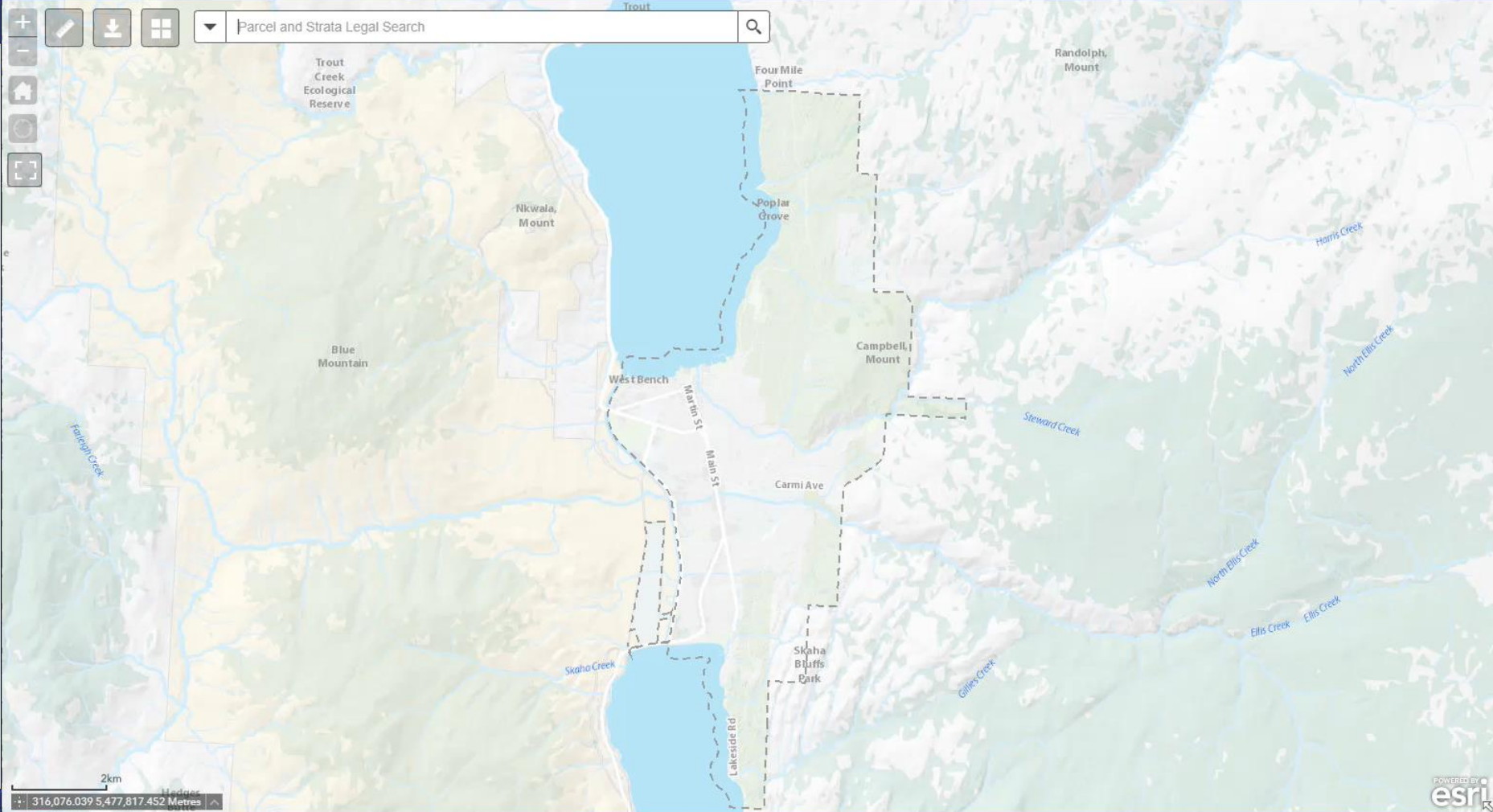
Parcel and Strata Legal Search











2km

316,076.039 5,477,817.452 Metres

POWERED BY

esri

City of Penticton 2018 (v2.0.52 - Internal Test)

# Basic Property Viewer

- Includes details on BC Assessment / Tempest and PMBC
  - Highlighting of PMBC Data
  - Assessment over time
  - Owners information
- On-the-fly spatial overlay for other layers
  - Zoning, OCP, Development Permits, Garbage Pickup, ALR
  - Easily add other layers
- Allows for basic reports to be generated
  - Property Report - Details about the property
  - Owners Report – Contact information for owners
  - Service Utilities – Details about the services on

Property Viewer

☐ Buffer   ☐ Keep on screen

Buffer Method: ☒ Selection ☐ Drawing

1 records selected

Owner Report

Property Report

Service Utility Report

810 THREE MILE RD

Folio: 07203-200

Pid: 003-084-418

Plan: KAP33796

Parcel Class: Subdivision

Folio Lot Size: 0.685 ACRES

Penticton, The Corporation of the City of

LOT A DISTRICT LOT 199 SIMILKAMEEN DIVISION

YALE DISTRICT PLAN 33796

[Run Property Report](#) [Show Related Files](#)

Zoning: A Agriculture

Has Site Specific Zoning: No

OCP:

Development Permit:

Garbage Pickup: Friday

In ALR: No

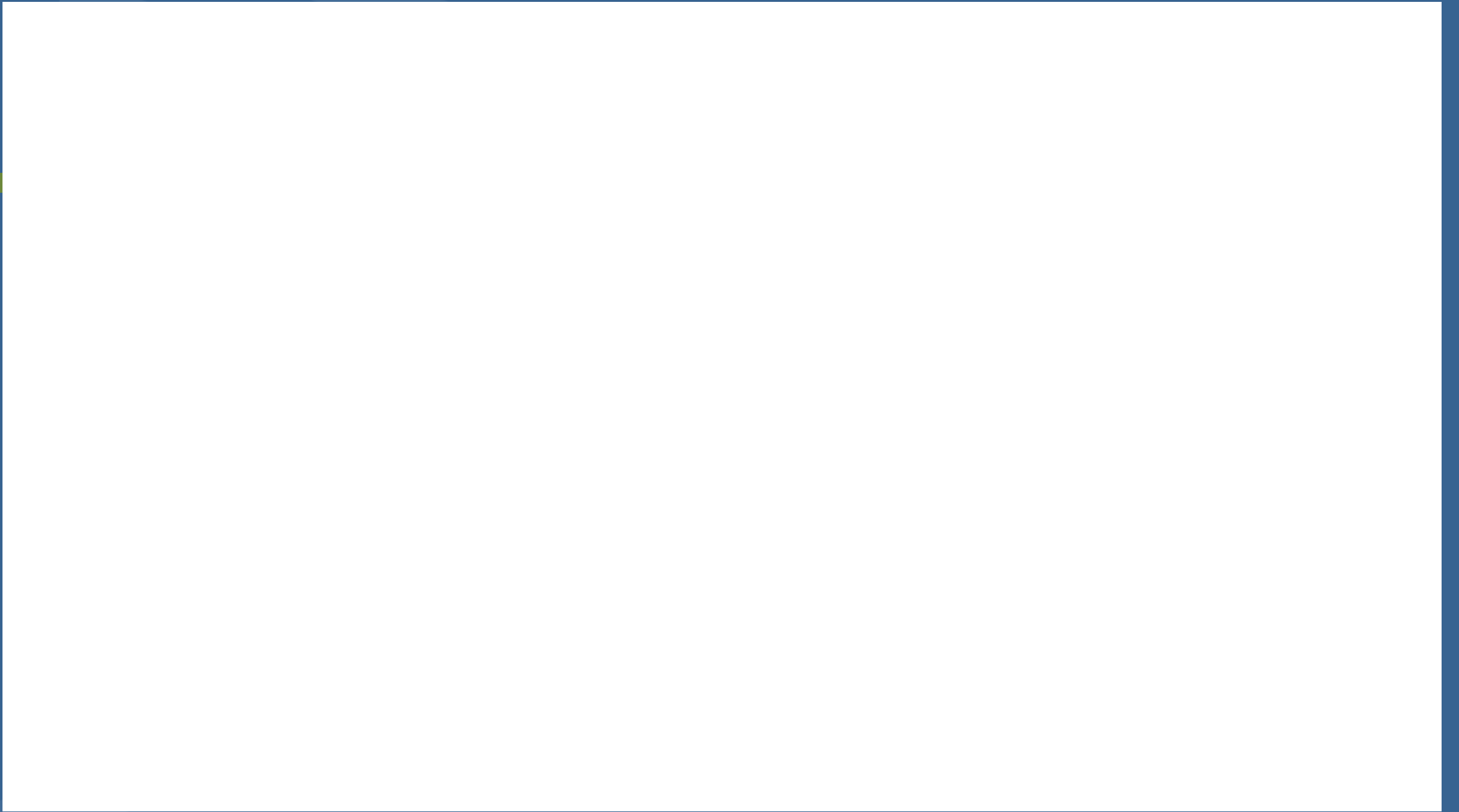
Assessments

Year	Land	Building	Total
2018	\$491,000	\$152,000	\$643,000
2017	\$534,000	\$128,000	\$662,000
2016	\$451,000	\$123,000	\$574,000
2015	\$451,000	\$133,000	\$584,000

Owners

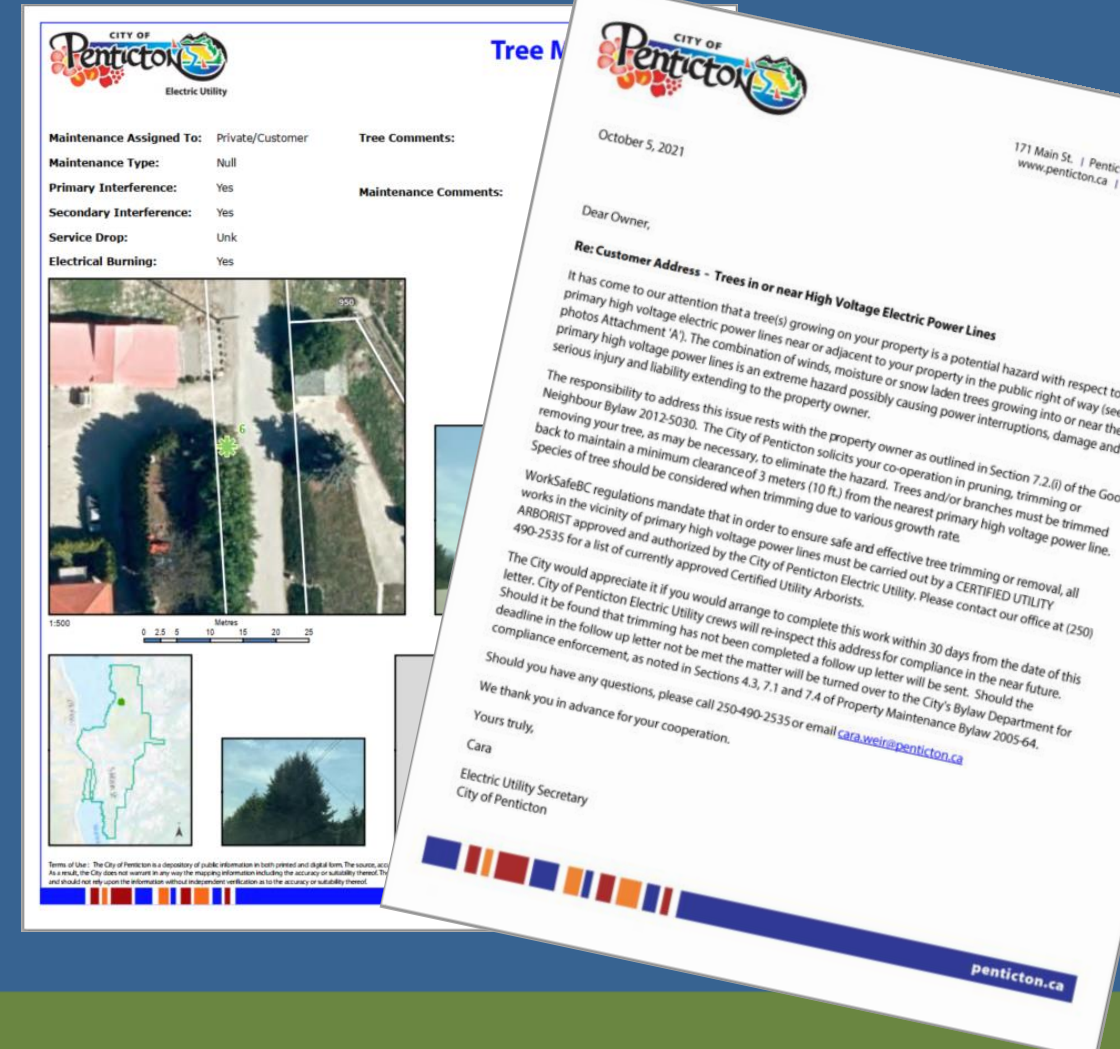
Contact(s) PENTICTON (CITY)

Address 171 MAIN ST PENTICTON BC V2A 5A9



# Tree trimming and notification

- Wanted efficient way to generate notifications regarding electrical interfering customer owned trees.
- Use field data collection to gather tree and trimming information.
- Spatial association of data collected in field with ParcelMap BC fabric.





# Service utilities report

- Historically used a non-spatial database for attributes about service and CAD for graphic representation.
- Migrated data into GIS along with ParcelMap BC parcel fabric.
- Developed automated report that provides dimensions to ParcelMap BC property.



# Underground locates

- City responds to BC1Call requests.
- Historically, a very manual process to create maps for response and involved multiple departments.
- Leveraged ParcelMap BC data to automate mapping for locate response.

The screenshot displays the 'BC1Call Locate Report Tool' web application. The interface includes a header with the City of Penticton logo and the title 'BC1Call Locate Reports'. Below the header, a welcome message states: 'Welcome to the Automatic BC1Call Locate Report Tool'. An 'Overview' section explains that the tool produces a PDF document of the City of Penticton owned locatable electrical underground features based on the information provided. An 'Instructions' section guides the user to find the attached XML and GML files from the BC1Call report and upload them. The interface features two file upload buttons: 'XML file: Choose File' and 'GML file: Choose File', both currently showing 'No file chosen'. A 'Template' section allows selection between 'Electric' (selected) and 'Parks' or 'Public Works'. Below the form, a map of 325 Dawson Avenue is shown, with red and purple lines indicating underground utility locates. The map includes a scale bar and a north arrow. The bottom of the page features a footer with the City of Penticton logo and the website address 'penticton.ca'.

BC1Call Locate Report Tool

citygis03devtst.cityhall.penticton.bc.ca/dev/bc1call/

CITY OF Penticton

BC1Call Locate Reports

Welcome to the Automatic BC1Call Locate Report Tool

**Overview:**  
The following tool will produce a PDF document of the City of Penticton owned locatable electrical underground features based on the information provided.

**Instructions:**  
Please find the attached XML and GML file from the BC1Call report below. Once, both files are uploaded click run report and download the information of the XML and GML files.

BC1Call

Click to select or drag

XML file: Choose File No file chosen

GML file: Choose File No file chosen

Template: Electric ☒ Parks ☐ Public Works

325 Dawson Avenue

Locate Request: Electric Utility

Effective Date: 2021-08-04

Customer Information  
Name: Sameen Mian TEST  
Company: Pelican Corp.  
Phone: 604 765 1289  
Email: sameen.mian@pelicancorp.com

Ticket Information  
Ticket Number: 20211000042  
Request Date: 2021-09-21 1:38:56 PM  
Work to Begin Date: 2021-09-25

Excavation Information  
Method: Mechanical Excavation  
Depth: 1m to 3m  
Size: 3618 sq.m

Additional Information  
Remarks: \*\*\* THIS IS A TEST TICKET PLEASE DO NOT PROCESS \*\*\* FORMAT  
Emergency: No

Notes of Use: The City of Penticton is a provider of public information in both printed and digital forms. The accuracy, reliability, and completeness of the information is not guaranteed. The City of Penticton does not warrant or accept any responsibility for the accuracy or reliability of the information. The user of this information does so at their own risk and should not rely upon the information without independent verification as to the accuracy or reliability thereof.

penticton.ca

# Questions?

**Jason Hart**

Owner / GIS Specialist

250.608.1335

[jason.hart@harterra.com](mailto:jason.hart@harterra.com)



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1410 Columbia Avenue, Castlegar BC

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# Feedback, Questions & Closing Remarks

## ParcelMap BC Resources:

- [Adoption Resources & Tools](#)
- [Data Products & Descriptions](#)
- [Webinars & Workshops](#) (slides & videos)



# Thank You For Participating!

*Video recording & slide deck will posted soon!*

<https://help.ltsa.ca/parcelmap-bc-workshops-and-tutorials>

Learn more at:

[ltsa.ca/parcelmapbc](https://ltsa.ca/parcelmapbc)

[help.ltsa.ca/parcelmap-bc](https://help.ltsa.ca/parcelmap-bc)

➡ Have questions? Contact us [parcelmapbc@ltsa.ca](mailto:parcelmapbc@ltsa.ca)

➡ *ParcelMap BC Newsletter: [Sign up here!](#)*