

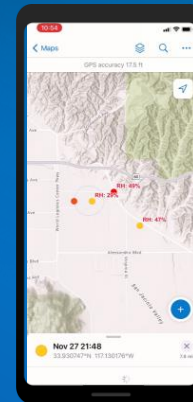
Optimising Utility Field Operations with ArcGIS Field Maps

Hermien Bijker

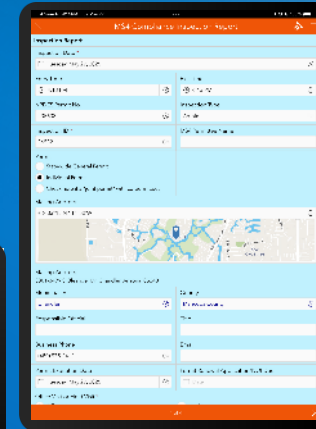
Esri Inc.

Utilities

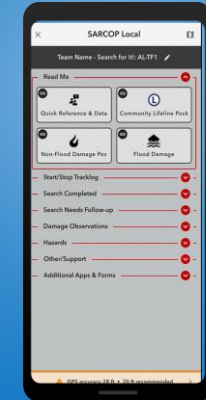
Majority of utility staff are in the field



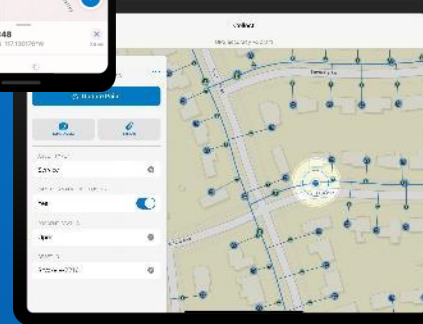
Capture



Survey123



QuickCapture



Field Maps

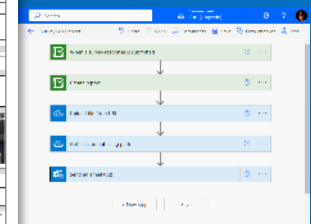
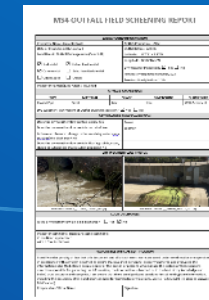


Navigator

Awareness



ArcGIS



Integration

Connected & Disconnected

... Integrating Mobile Workflows
Enhancing the Operational Picture ...

ArcGIS supports modern utility workflows

A Comprehensive Location-Based System

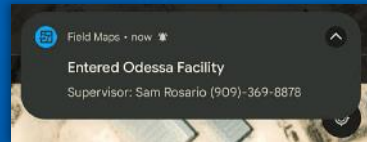


ArcGIS Field Maps

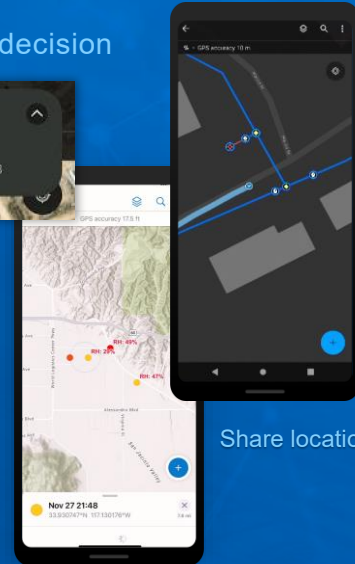
Comprehensive mobile solution for utility teams

Advance Awareness

Up-to-date information to inform decision making



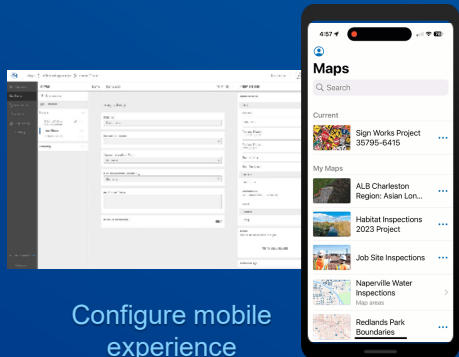
Search and view assets



Share location

Plan & Coordinate

Design field workflows & optimize work assignments



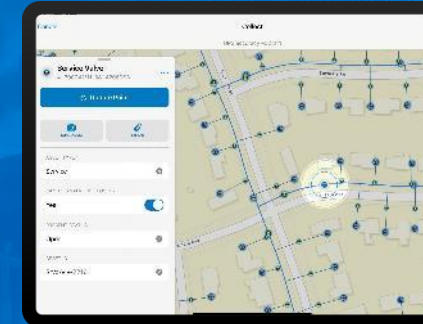
Configure mobile experience

Task coordination

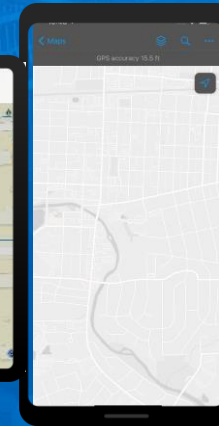
Work order management

Data Capture

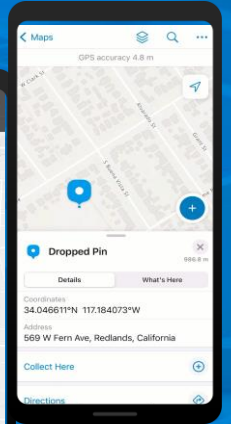
Intuitive and powerful mobile collection tools



Capture and edit locations



High accuracy



Dynamic smart forms



Integration

Connecting systems, reducing siloes

Automation



Location providers

Enterprise business systems

Field Maps

Key features in mobile app



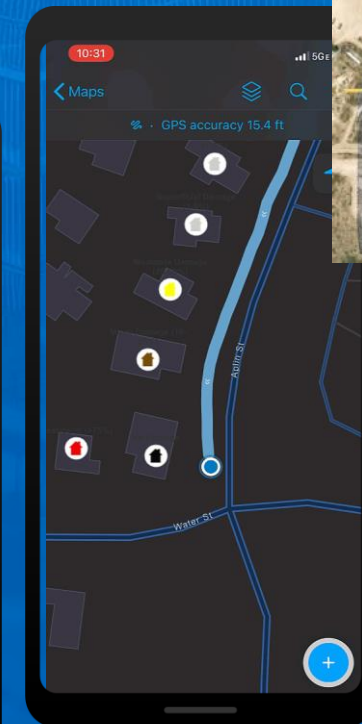
Stay informed and aware

With interactive maps, Field Maps gives teams the information and context they need to work confidently in the field.

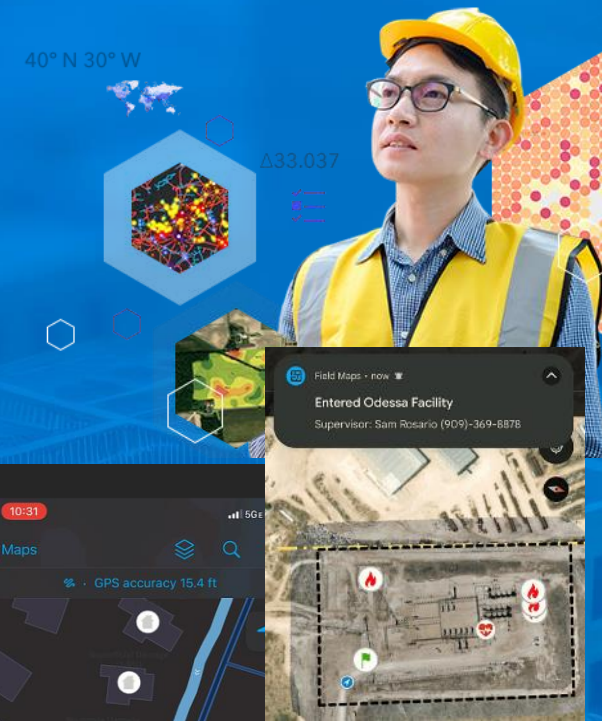
- Searchable maps (locations, coordinates, features)
- Asset information with field-optimized pop-ups
- Location sharing
- Location aware notifications with geofences
- Layer control & filtering
- Interchangeable basemaps
- Compass tool
- Directions to assets



Asset info in pop-up

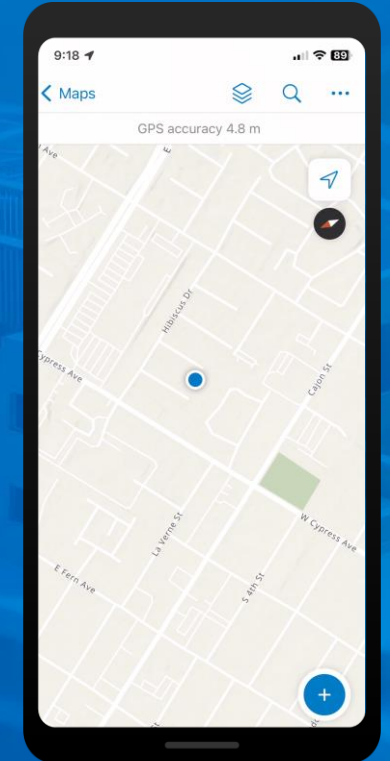
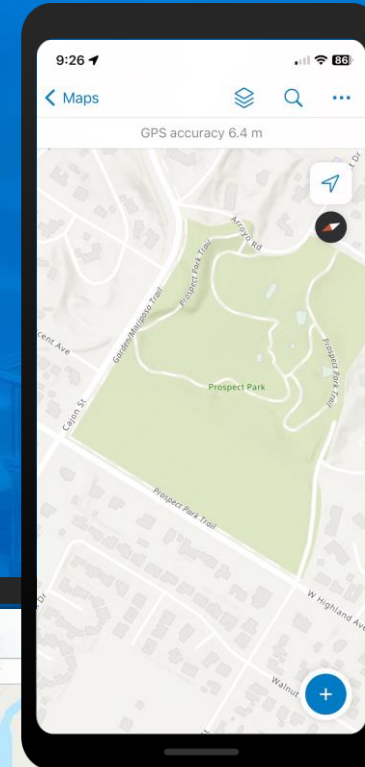


Location sharing

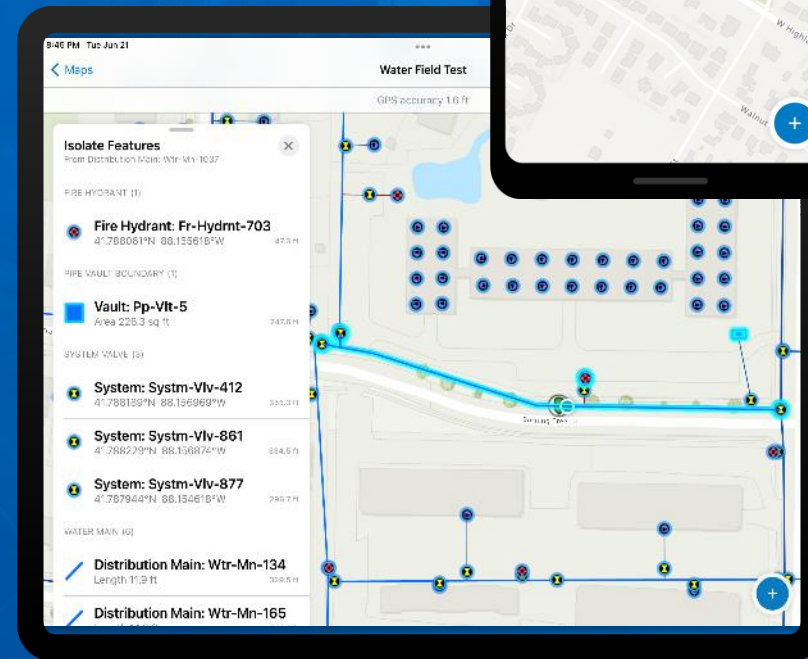


Notifications

Measure tool



Compass tool



Utility Network

Tools that help teams work smarter

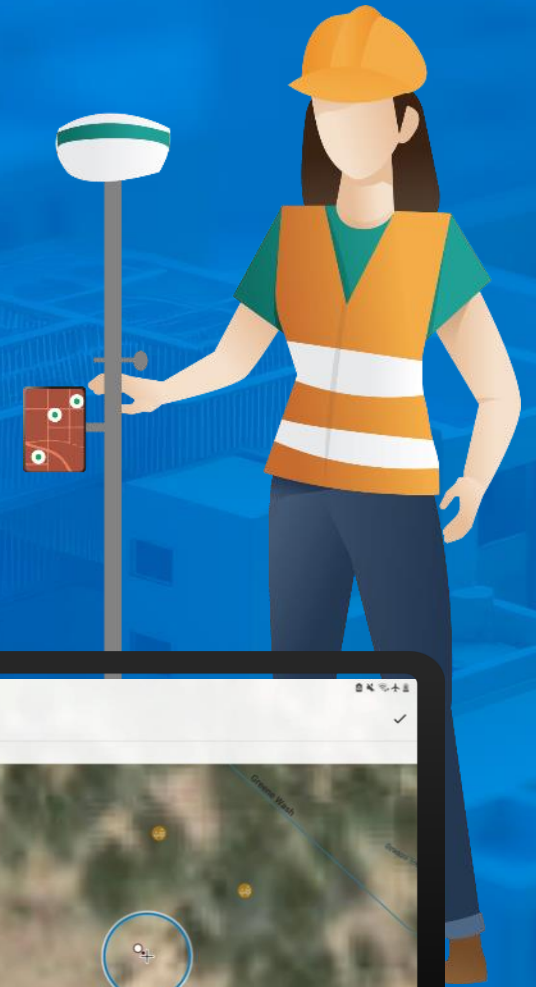
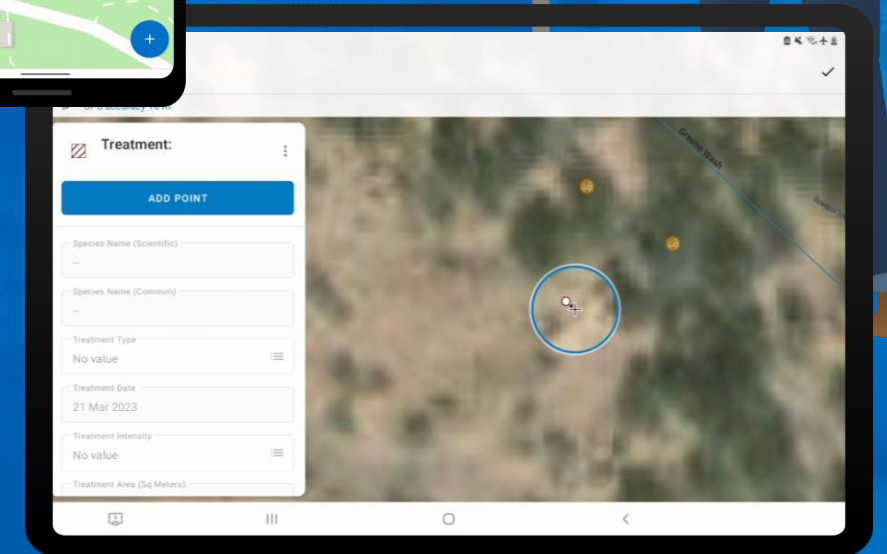
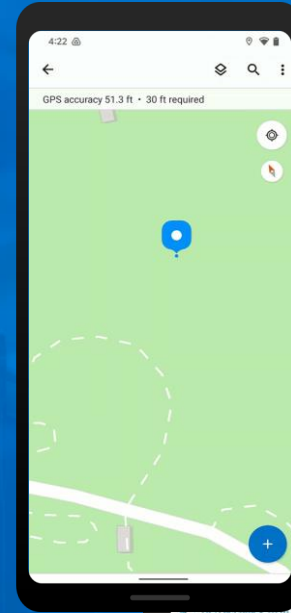
Field Maps provides tools that make everyday fieldwork activities easier and quicker to achieve.

- GPS accuracy feedback
- Measure tools (lines, areas)
- Linear referencing
- Personal Markup (draw on the map)
- Utility network viewing, editing, and tracing

Capture and edit data

Field Maps provides intuitive and powerful capture tools that ensures organizational GIS data is high-quality, accurate, and up-to-date.

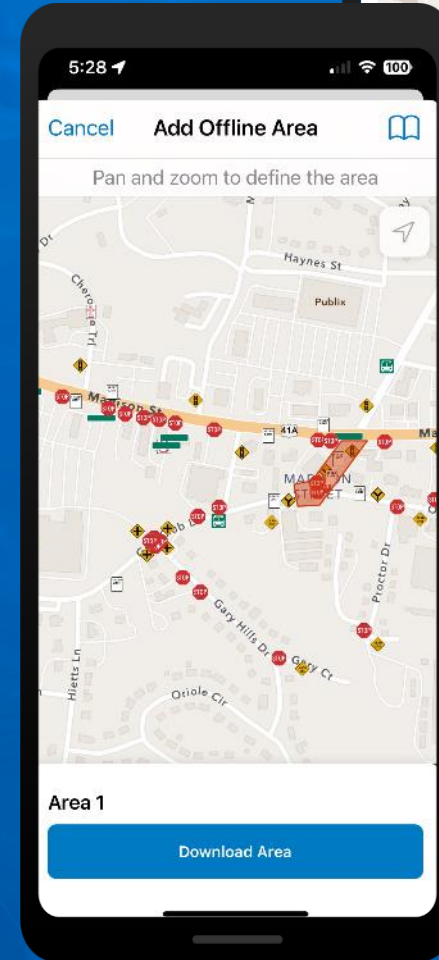
- Smart forms
 - Data collection
 - Editing
 - Inspections
- GNSS receiver pairing
- Sensor integration (e.g., laser rangefinders, barcode scanners)



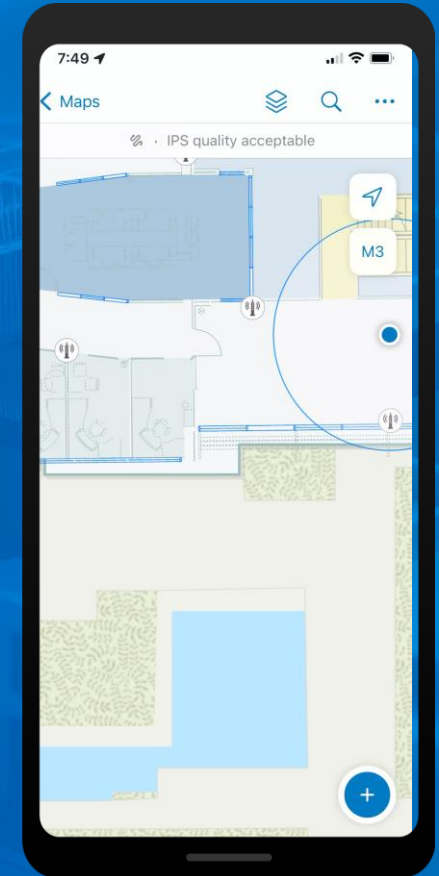
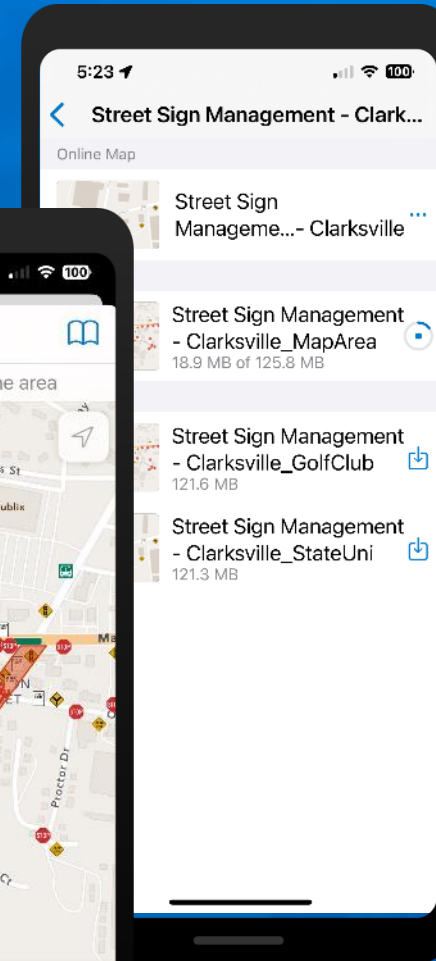
Work anywhere

Field Maps supports fieldwork wherever it's happening - in remote or urban areas, both indoors or outside.

- Offline map areas
- Syncing when back online
- Indoor maps



Offline areas



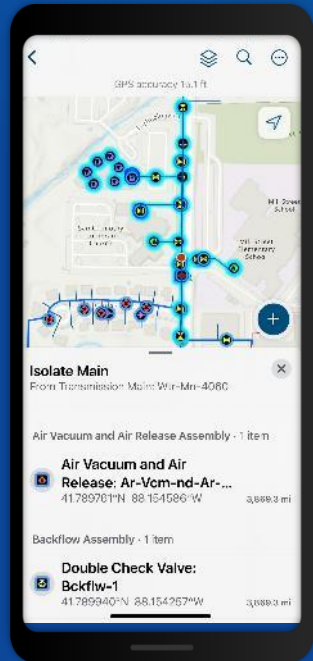
Indoor positioning and editing

Utility Network in the Field

Common Workflows

Understand Assets & Connectivity

- Locate Assets
- View Asset Information
- Understand how Assets are connected
- Enhance Situational awareness



Inspections & Maintenance

- Record Inspections
- Update current conditions of Assets
- Report work completed
- Understand where work was completed



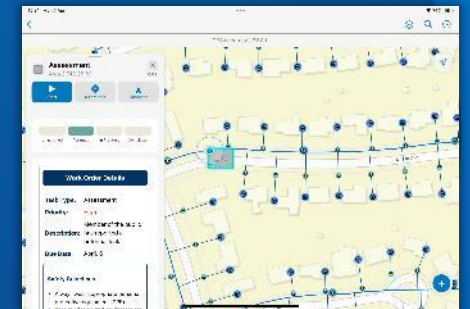
Verify, Rectify & Collect

- Digital As Built
- Update Asset Information
- Capture Missing Assets with High Accuracy locations



Event Response

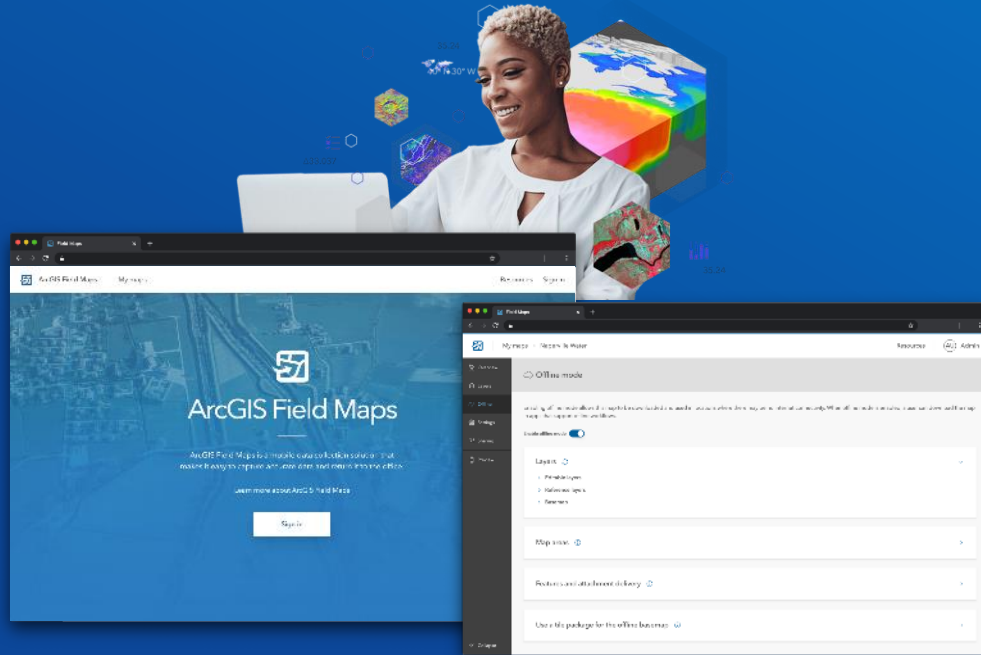
- Understand Connectivity and Outages
- Analytics
- Notifications & Awareness



Field Maps Components

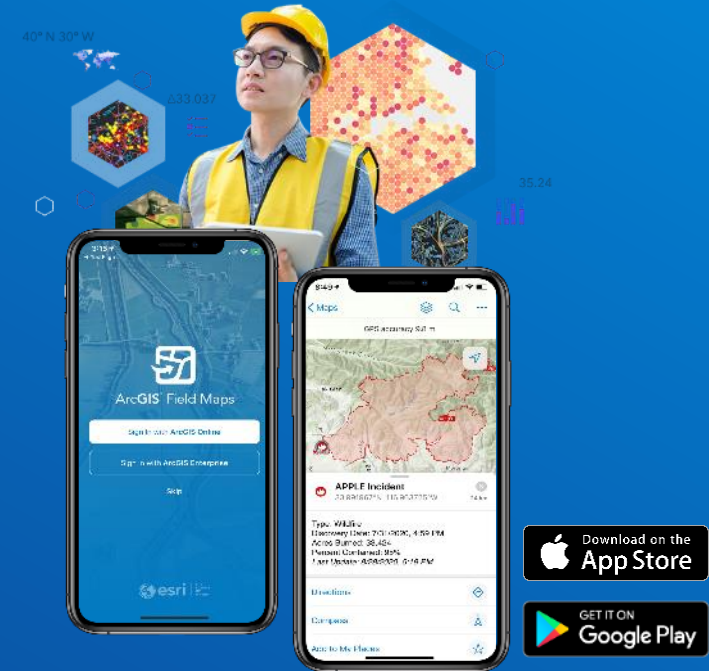
Prepare Maps for the Field

Field Maps Designer



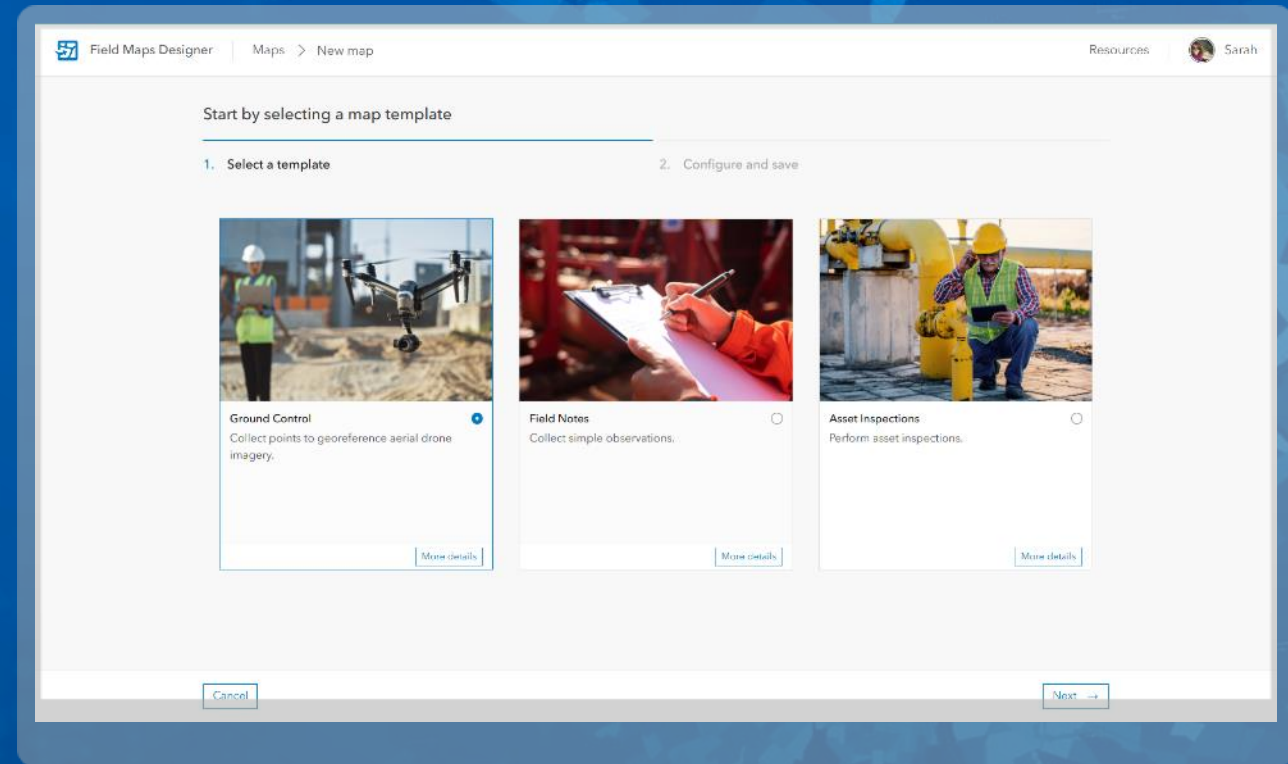
Do Work in the Field

Field Maps mobile app



Latest in Field Maps Designer

Offline, Templates





Overview

Forms

Geofences

Offline

App settings

Sharing

What's New

Collapse

Offline

Open in Map Viewer

Enabling offline mode allows this map to be downloaded and used in locations without a reliable internet connection. When offline mode is enabled, mobile workers can download the map in apps that support offline workflows.

Offline

Offline mode will be enabled when the content issues have been resolved.

Content

Several items in this map need to be updated to enable offline mode

> Layers **1**

> Tables **1**

> Basemap

Map areas ⓘ

Features and attachment delivery ⓘ

Basemap and tile package

Maps



+ New map

My maps (5)

Hidden maps (5)

Folder

Filter

Grid

Date modified

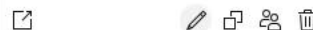
1-5 out of 5



Culvert Inspection



Modified Jun 19, 2025



Gas Leak Detection



Modified Jun 19, 2025



Bike Trail Inspections



Modified Jun 19, 2025



Public Grounds and
Facilities Reported
Issues



Modified Jul 13, 2023



Pipeline Inspection

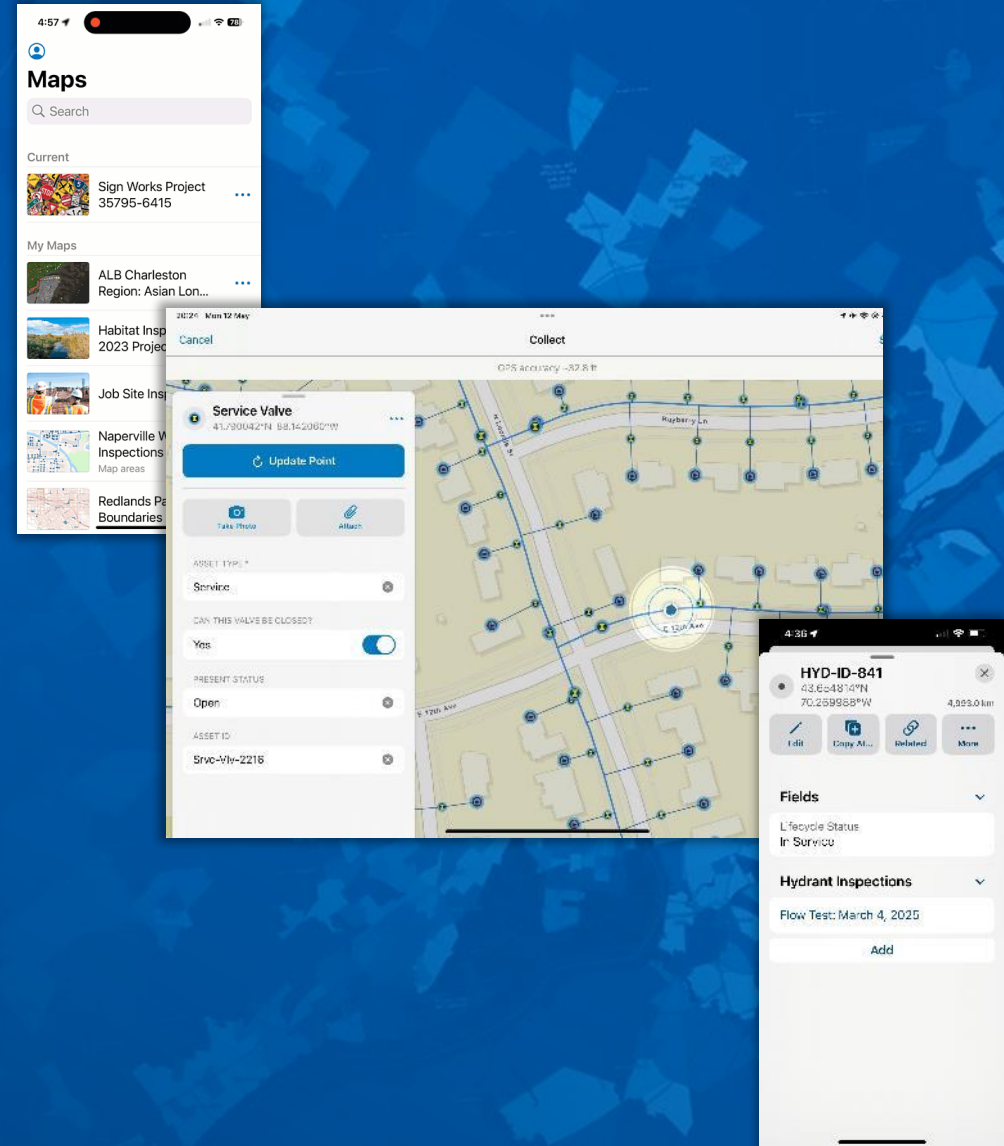


Modified Jul 13, 2023



Latest Mobile Release

Sept 2025



What's New

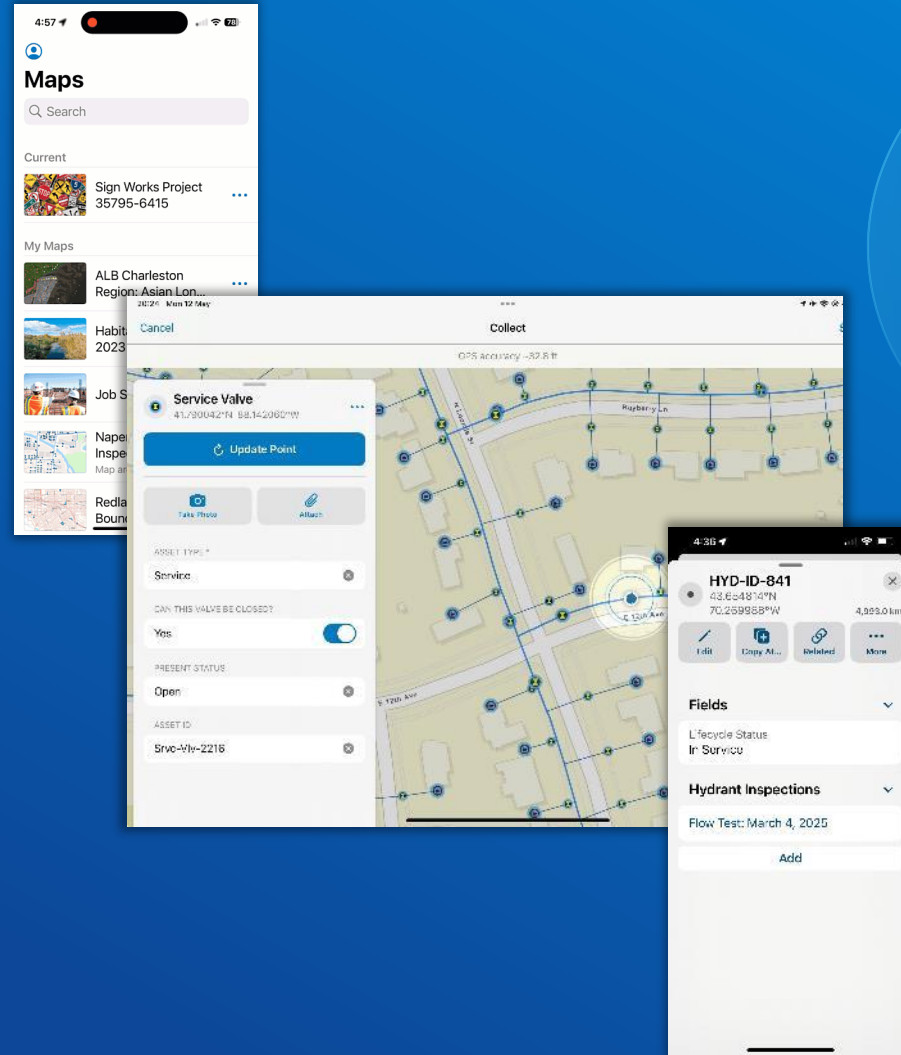
Q3 2025 (25.2)

Coordinate and Optimize Work

- Create, assign, and prioritize
- Real-time coordination
- Configure to workflows
- Integrate with existing business systems and apps

Maturing Support for Utility Network

- View, Edit and Trace Utility Network Offline
- Validate Network Topology
- Support for Utility Network Version 7
- Access a specified branch version (connected)



General Enhancements

Improved Situational Awareness

- Related record feature action & related record pop-up element
- Dynamic geofences
- Improved personal markup experience
- Location Sharing & Geofence support external GNSS receivers
- Improved indoor positional accuracy
- Dynamic Scale bar
- Measure snapping
- New collaboration experience for iOS

Efficient Capture

- Edit multiple with forms
- Offline attribute rules - Calculations and Constraints running client side.
- Arcade update
- Edit features within Subtype Group Layers
- Land Administration Data Model support

... and more

Tasks

Coordinate and optimize work

Redlands 311 Citizen Reporting Dashboard

Outstanding Reported Issues

Search...

- Abandoned car**
Assigned
Jeff Shaner
- Overflowing bins**
Assigned
Jeff Shaner
- Low branches**
Assigned
Liz Armstrong
- Low branches**
Assigned
Liz Armstrong
- Damaged street sign**
Assigned
Liz Armstrong
- Parking violation**
Assigned
Jeff Shaner
- Graffiti**
Assigned
Liz Armstrong
- Graffiti**
Assigned
Sarah Saint-Ruth
- Litter/Junk**
Unassigned
- Litter/Junk**
Unassigned
- Overflowing bins**
Unassigned

Mobile App Interface:

11:00 100%
Pothole
34.050487°N 117.175444°W 2,581.4 mi

Start Directions Compass

Unassigned Assigned In Progress Corrupted

Details

Task Type: Pothole
Priority: Medium
Description:
Due Date: July, 3

Safety Guidelines

- Always wear appropriate personal protective equipment (PPE).
- Ensure all tools and equipment are in good working condition.
- Report any unsafe conditions to your supervisor immediately, using the Talk to Team button.

Introducing the Tasks Capability

Dynamic, actionable to-do lists in the field

Tasks is designed to **coordinate and manage** individual assignments that need to be completed in the field.

Utilities need to:

- Create, assign, and prioritize work
- Real-time coordination
- Configure to workflows
- Track work progress
- Integrate with other apps and business systems

Build task workflows in Field Maps Designer

Complete tasks from to-do list in Field Maps mobile app

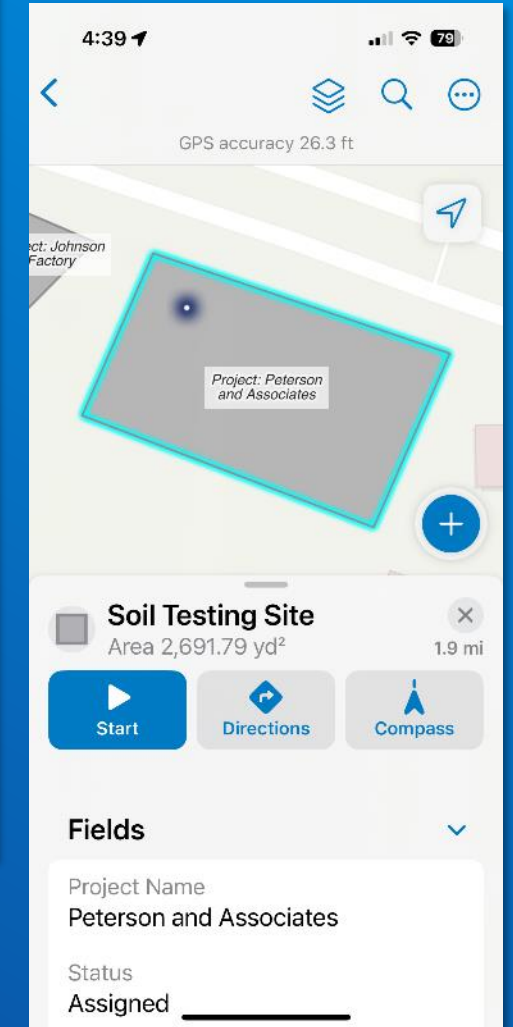
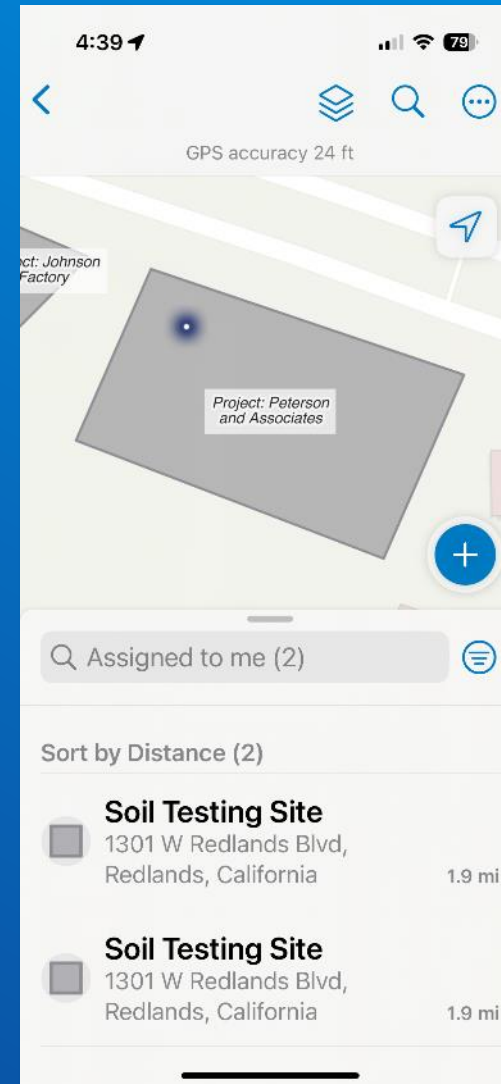
What are tasks?

Dynamic to-do lists for the field

Tasks are **features** that are presented in dynamic **to-do lists** for mobile workers, organizing and providing the information needed to complete the job.

With tasks, mobile workers can:

- **View & access** task details
- **Sort and filter** tasks
- **Navigate** to the job site
- Complete their work with configurable, context-driven **task actions**
- **Create and assign work** in the field
- Work with tasks both **online and offline**, **indoors and outdoors**



A task-enabled layer can be point, line, or polygon!



Search


Maps

Current

 Redlands 311
Citizen Reporting ...



On Device

 My Tracks
Location Sharing Off

My Maps

 ALB Charleston
Region: Asian L... ...

 Habitat
Inspections 20... ...

 Job Site
Inspections ...

 Naperville Water
Inspections >
Map areas

 Redlands 311
Citizen Reportin... ...

 Redlands Park
Boundaries ...

 Redlands
Potential Constr... ...

 Redlands Soils
Testing Sites - ...

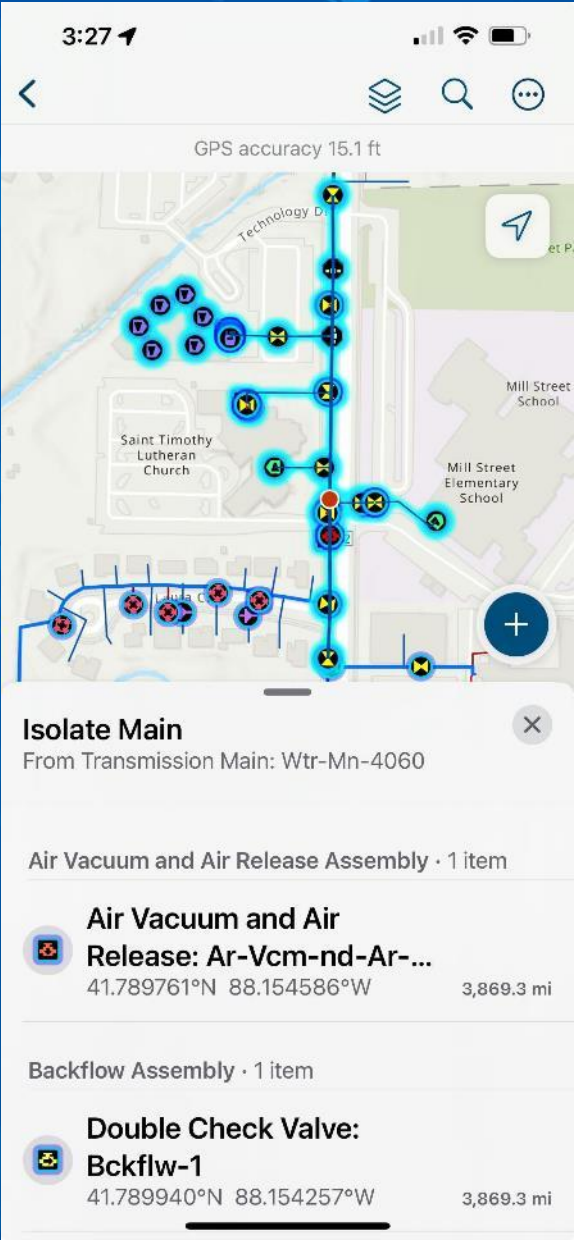
 Redlands Soils
Testing Sites A... ...

Tasks in Field Maps

Efficiently managed fieldwork improves productivity, speeds up response times, and ensures decisions are grounded in real-time insights from the field.



Utility Networks



Maturing Support for Utility Network

Access the Utility Network everywhere

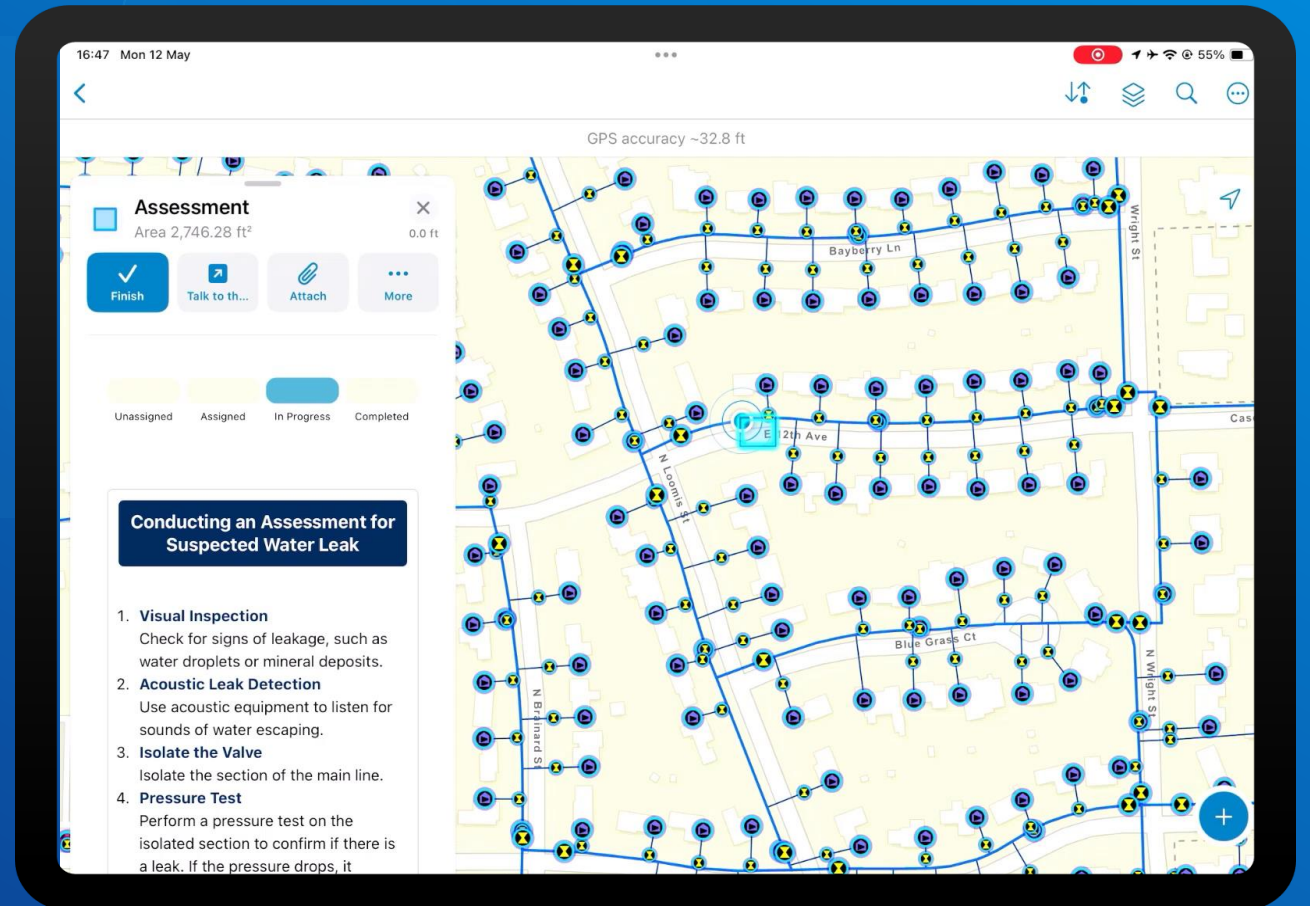
View and Trace Utility Network Connected & Offline

Subtype Group Layer Editing

Validate Network Topology

Access a Specified Branch Version (Connected)

Support for Utility Network Version 7

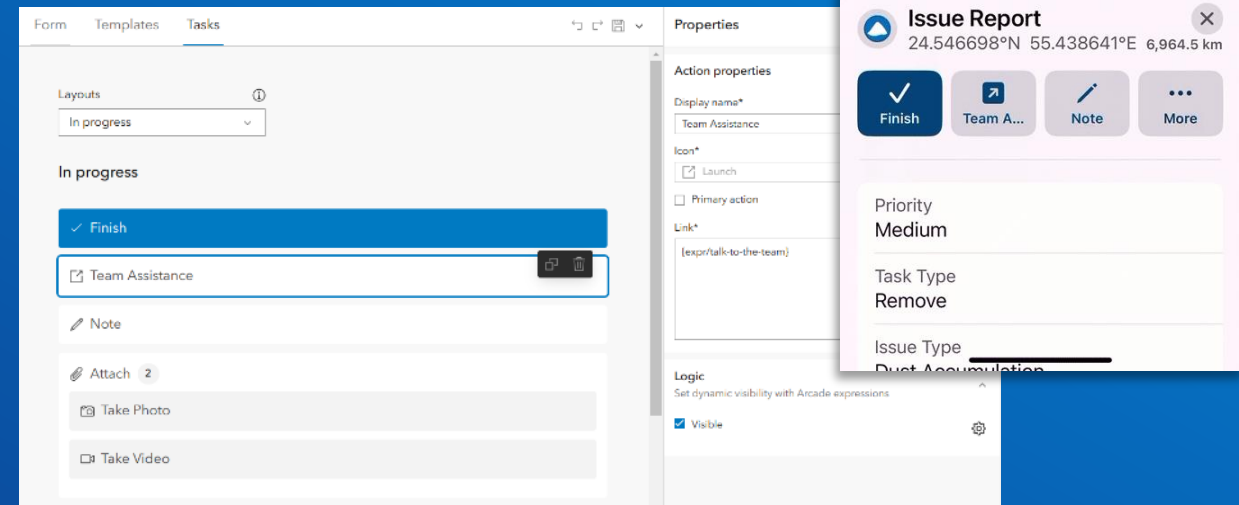


Integrating with Enterprise Business Systems

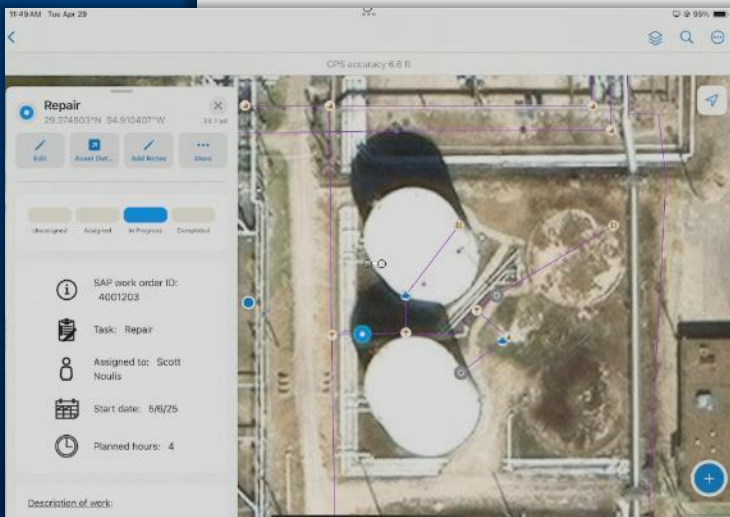
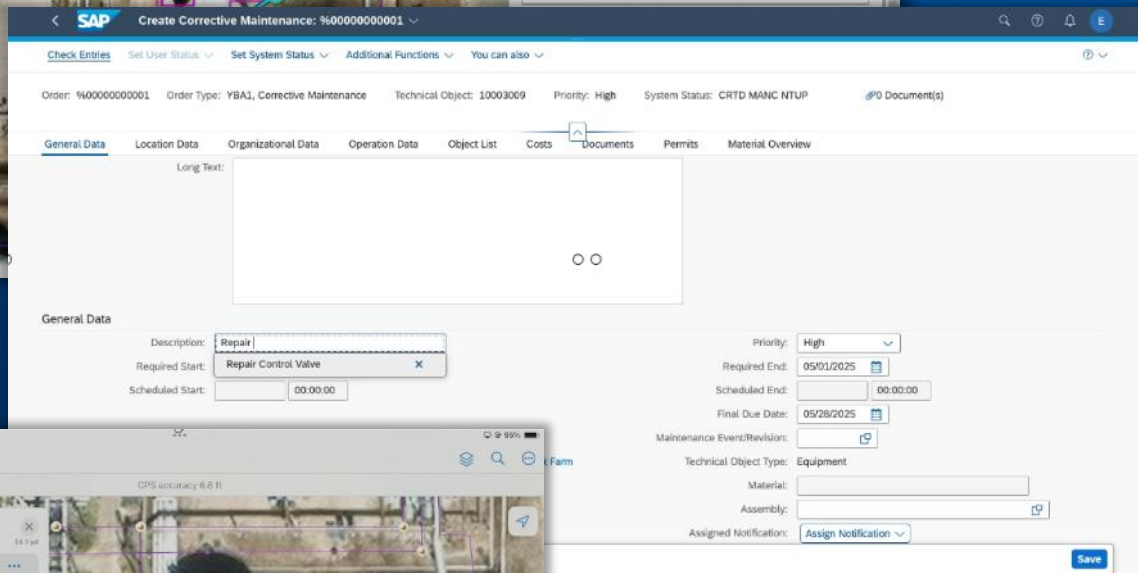
Configure custom actions to link business applications

- **Integration option part of tasks**
- **Direct Access:** View and interact with work orders in Field Maps alongside GIS data.
- **Automatic Updates:** Keep all systems up to date without manual intervention.
- **Seamless Workflow:**

Exchange information within mobile apps to maintain a connected experience.



URL links and custom actions create a seamless user experience



Demo:

Enterprise Integration

SAP & Esri

General Enhancements to Field Maps

The background of the slide is a blue-tinted aerial photograph of a rural landscape. It shows a dense grid of agricultural fields, with some larger, irregularly shaped plots. A winding road or path is visible on the right side, and there are some darker areas that could be trees or water bodies. The overall texture is that of a high-resolution satellite or aerial map.

Data Capture

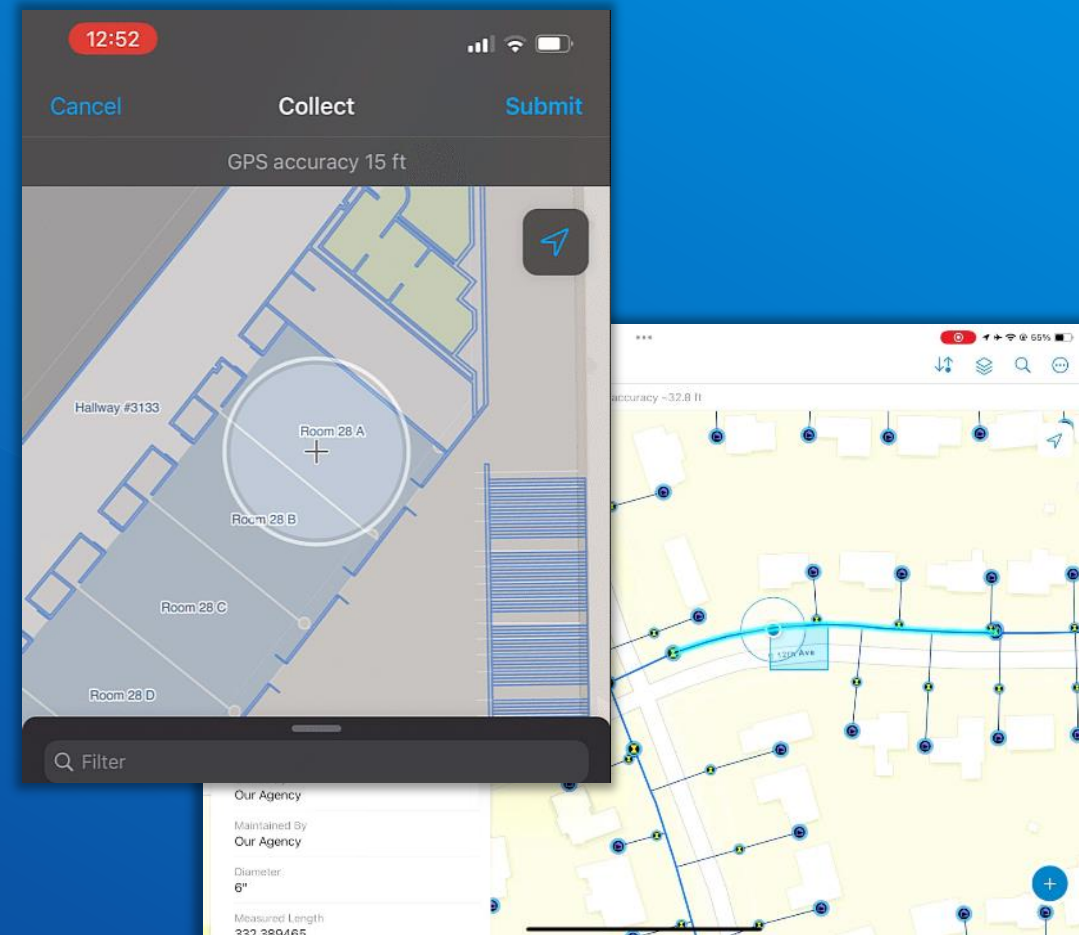
Simpler, Quicker and Accurate

Offline attribute rules - Calculations and Constraints

Edit features within Subtype Group Layers

Land Administration (LADM) support on Android

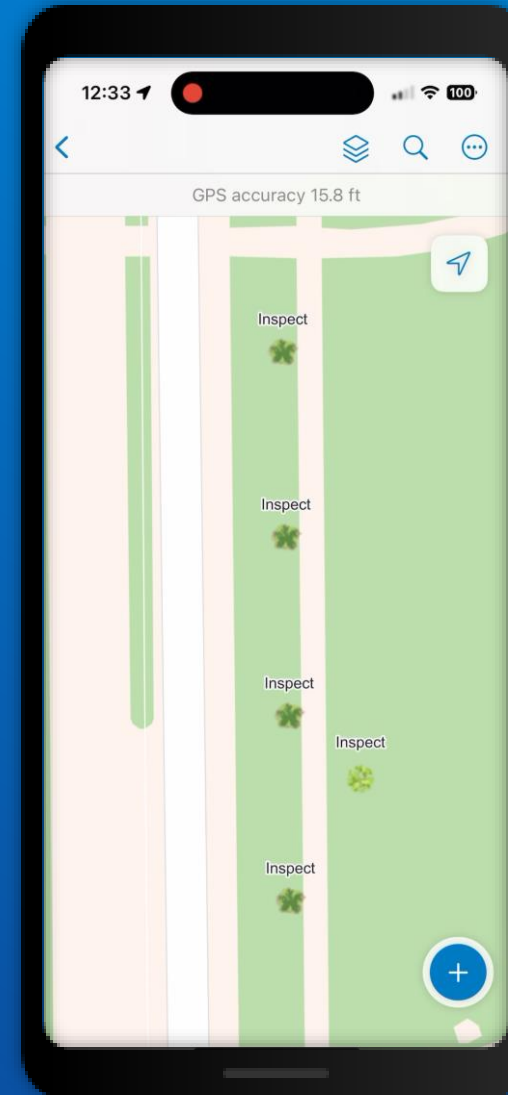
Improved indoor experience (editing, IPS)



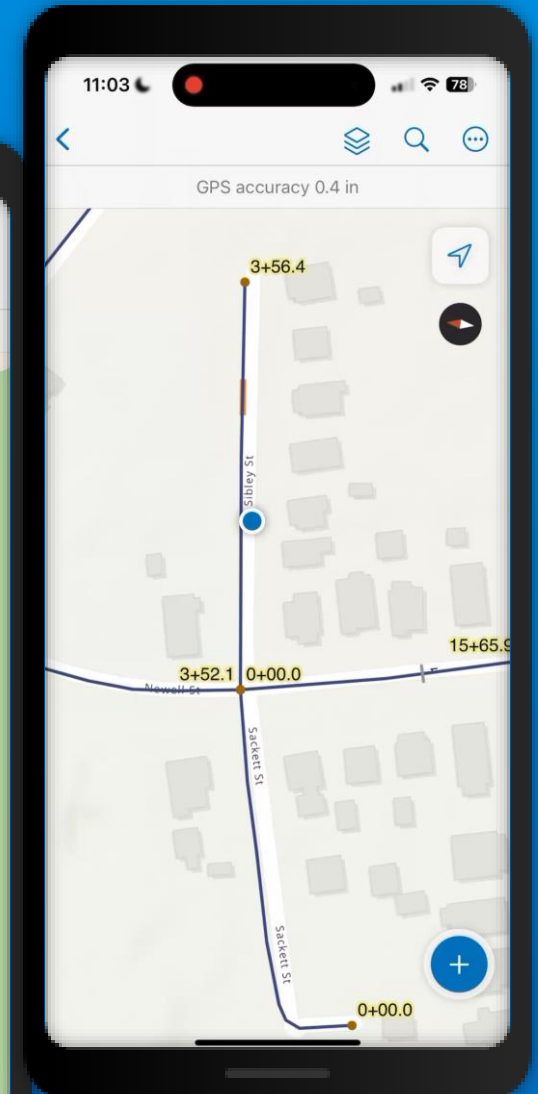
Forms

Ensure data consistency and optimize capture

Form support for Edit Multiple tool
Arcade enhancements



*Edit multiple features
using forms*



*Arcade example:
Station and offset capture*

Improved Situational Awareness

Evolving Map Tools

Related Record Feature Action & Pop-up Element

Dynamic Geofences

Improved Personal Markup Experience

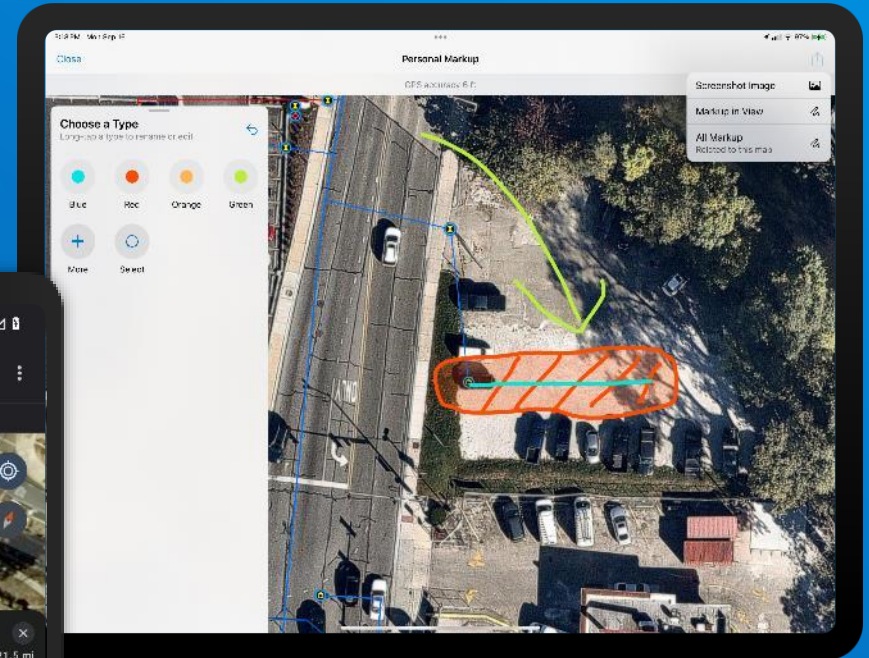
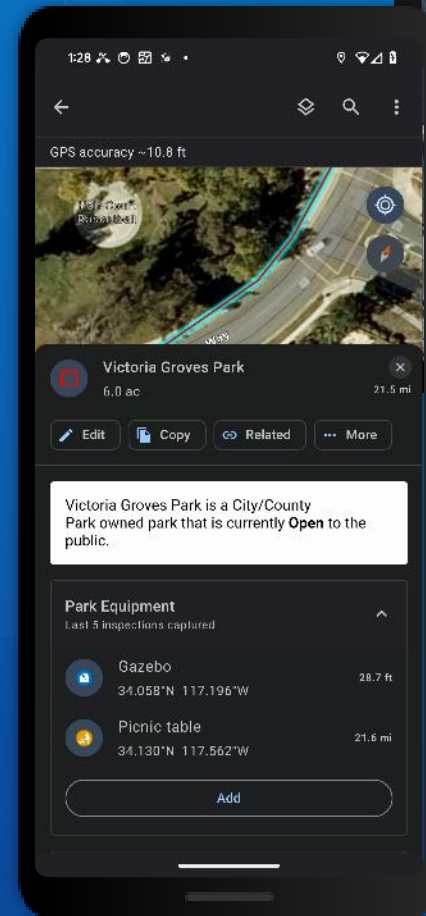
Location Sharing & Geofence Support

Improved Indoor Positional Accuracy

Dynamic Scale Bar

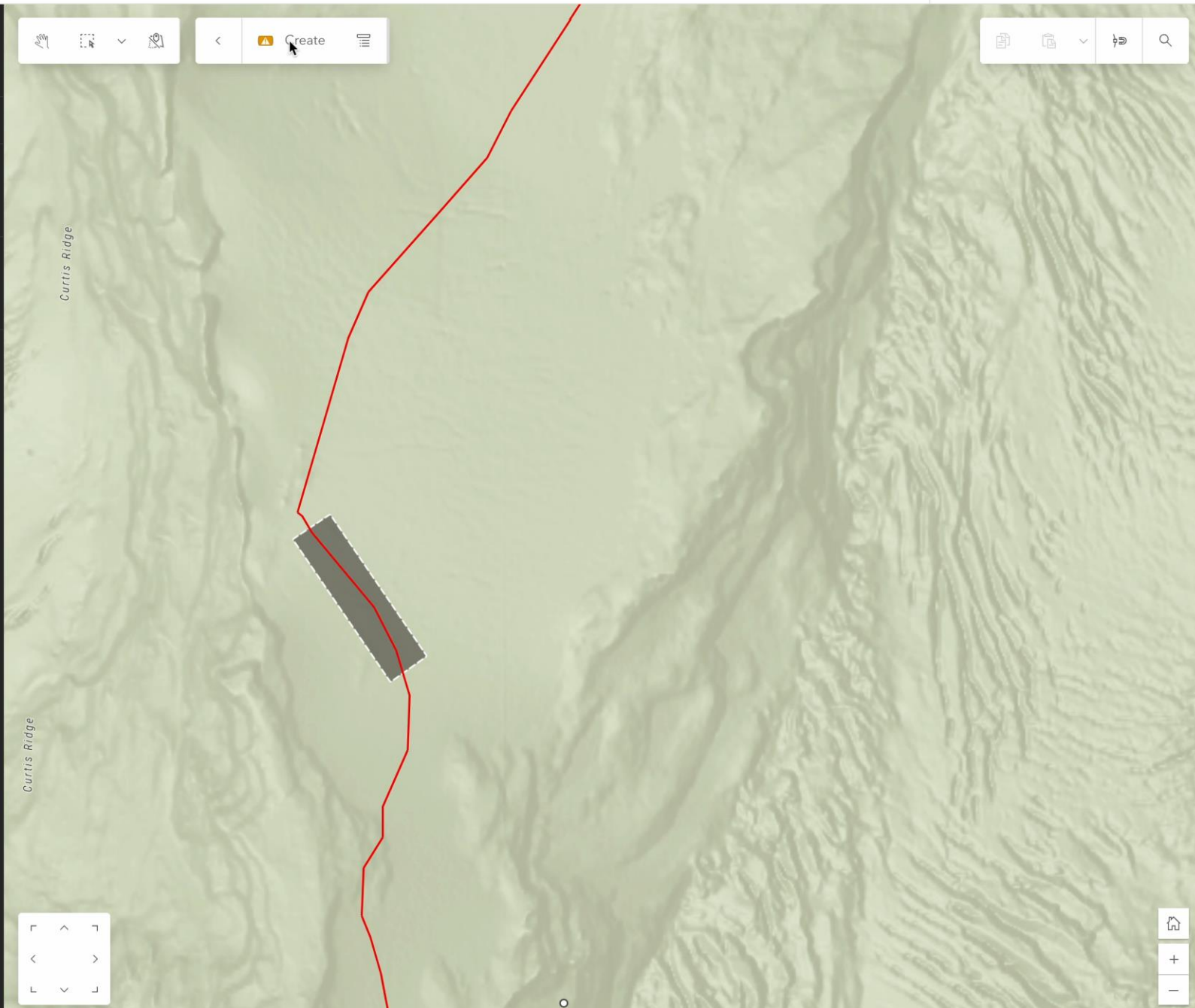
Snap when using Measure

New Collaboration Experience for iOS



Improved markup experience

Related pop-up elements



Personal Markup enhancements

Improved interface makes drawing easier

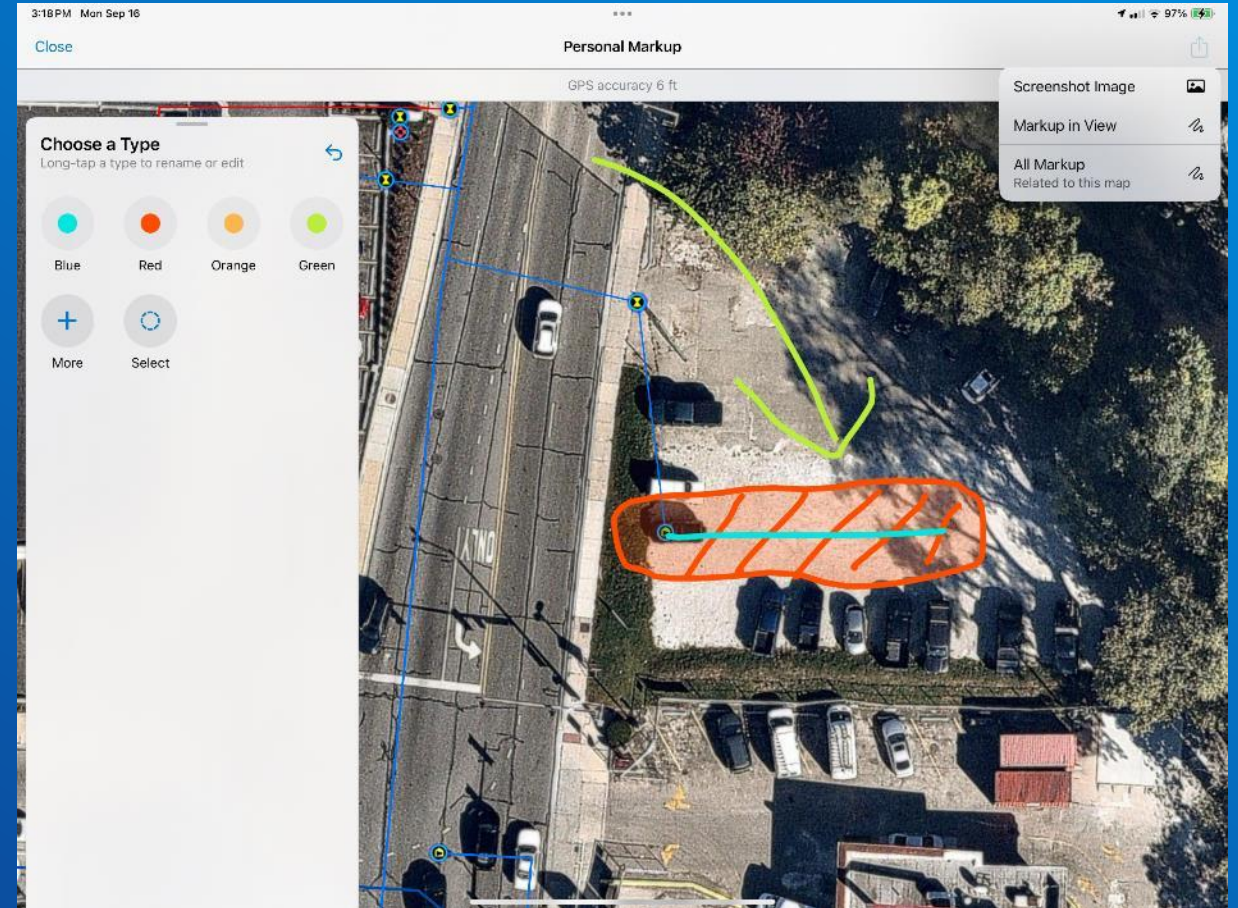
Simplified experience

Supports Undo / redo

Attach notes to markup

Edit multiple items of markup simultaneously

Share markup to other devices using Field Maps



ArcGIS Field Maps Roadmap

Near-term

Forms

- **Attachment Element**
- New date time field support
- Performance improvements
- Override calculated expressions

Map tools and Situational Awareness

- **GeoPDF support**
- Stakeout Tool
- Improved Search results

Data Collection

- **Orthometric heights/Tilt compensation**
- **Initial Line Locator vendor support**

Offline

- Search on-demand offline area

Utility Network

- Choose from select versions
- Support for associations pop-up element
- View and form editing of subtype group tables
- Isolation Trace improvements

Authentication

- Support for Entra Identity Aware Proxy

Beta Now

Teams

- Location sharing administration changes

Midterm

Forms

- Multi-choice Element
- Dynamic choice list

AI Assisted

- Analyze Image (Computer vision)
- Audio Transcription & Text Analysis

Data Collection

- Added Support for Utility Locate vendors
- Freehand drawing mode
- Rapid collection
- Editing tools (Split, merge)
- Vertical transformations
- Oriented Imagery capture

Teams

- View worker details, status

Long-term

Forms

- Support for signatures
- Relationship Element

Data Collection

- Group and preset feature templates
- Nested collection
- More editing tools
- Measurement and offset data capture
- Improved Barcode Scanning
- Photo markup

Sharing and Collaboration

- Collaboration using markup
- Dropped pins

Augmented Reality

- Locate assets
- View places

BIM/3D Support

- Visualization
- Inspections
- Data capture

Details and timeline subject to change



Resources for Field Maps

[Esri Communities](#)

Ask questions, find out about our latest release on the blog and share your ideas on what should be coming next in ArcGIS Field Maps.

[ArcGIS Blog](#)

Find out the latest news and capabilities from product experts

[Documentation](#)

Find out how to configure Field Maps for your organizations needs

[Tutorials](#)

New to Field Maps or want to learn new skills check out the tutorials

[Live Training Seminar](#)

October 23, 2025: 9:00 AM and 11:00 AM (PDT)
ArcGIS Field Maps: Streamline Data Collection with Tasks

[Early Adopter Community](#)

Try out the newest capabilities and provide feedback before we release

[Videos](#)

See our capabilities in action