



# Head in the Clouds: Autodesk Collaboration for Civil 3D and ArcGIS Online

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# Introduction

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# Purpose

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Autodesk Collaboration for Civil 3D allows project teams to share design data, securely, among multiple offices and companies in a common data location.

The Autodesk Connector for ArcGIS Online incorporates cloud or enterprise-based GIS datasets into your Civil 3D design as well as help incorporate as-built information back into the database.

In this session we will demonstrate how incorporation of cloud-based tools help eliminate project delays, optimize workflows, and reduce errors across the life of a project.



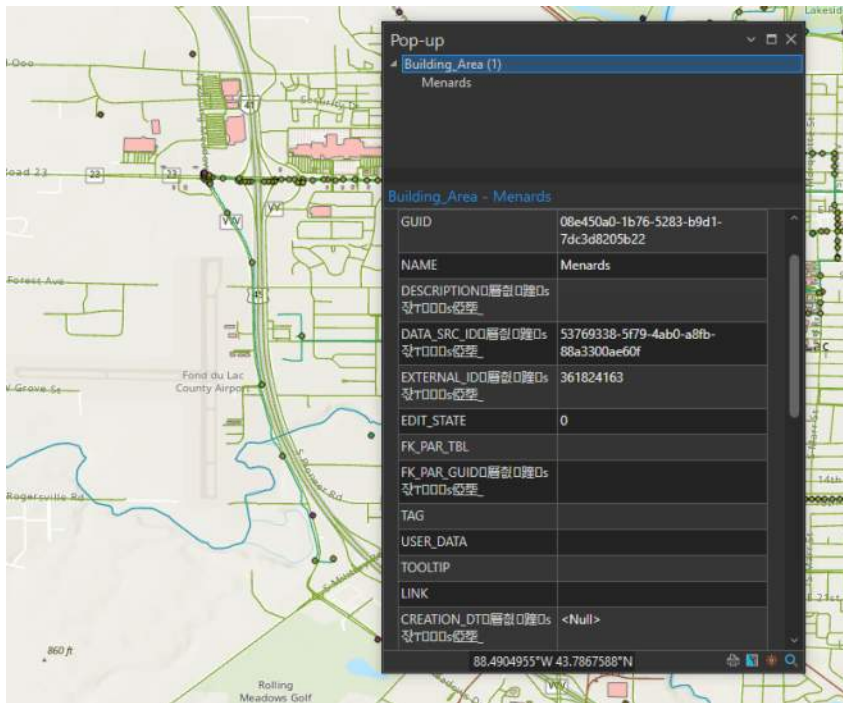


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# Definitions

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# GIS – Geographic Information Systems



- Store, manipulate, analyze, manage and present geographic data
- Data associated with spatial characteristics
- Attribute data (the what as well as where)
- Understand relationships, patterns and trends between places and things

# BIM – Building Information Modeling

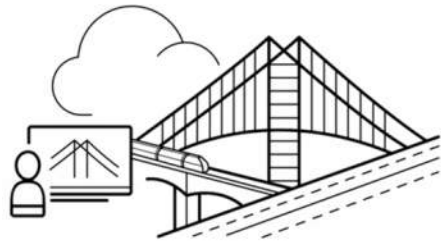
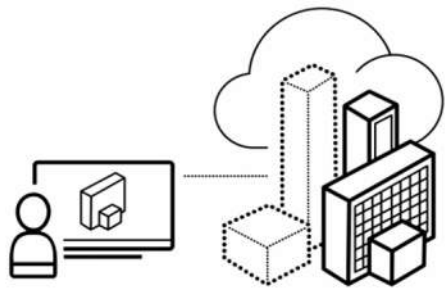


Image source  
Autodesk

- Foundation of digital transformation in architecture, engineering and construction
- The creation and management of information for a built asset in an intelligent model
- Integrates multi-disciplinary data across its lifecycle from planning, design, construction, operation and maintenance.
- Cloud based single source model for all disciplines





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# Autodesk Connector for ArcGIS Online

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# Background

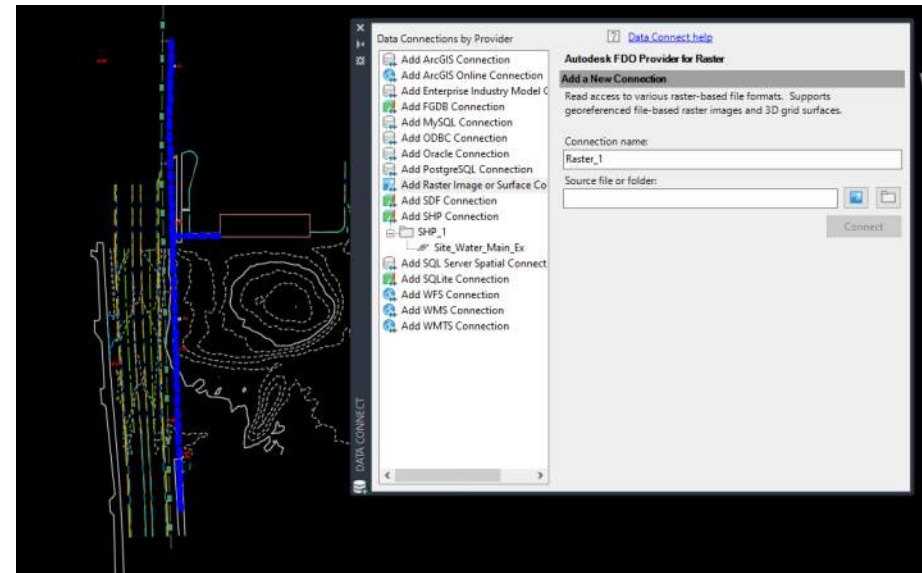
- Since 2017 Esri and Autodesk have partnered together, but functionality present before this time
- Live integration between ArcGIS and Autodesk AEC Tools
  - Autodesk Civil 3D
  - Autodesk Map 3D
  - Autodesk Infraworks
- Connected data published changes back and forth
- Up-to-date GIS data as a result



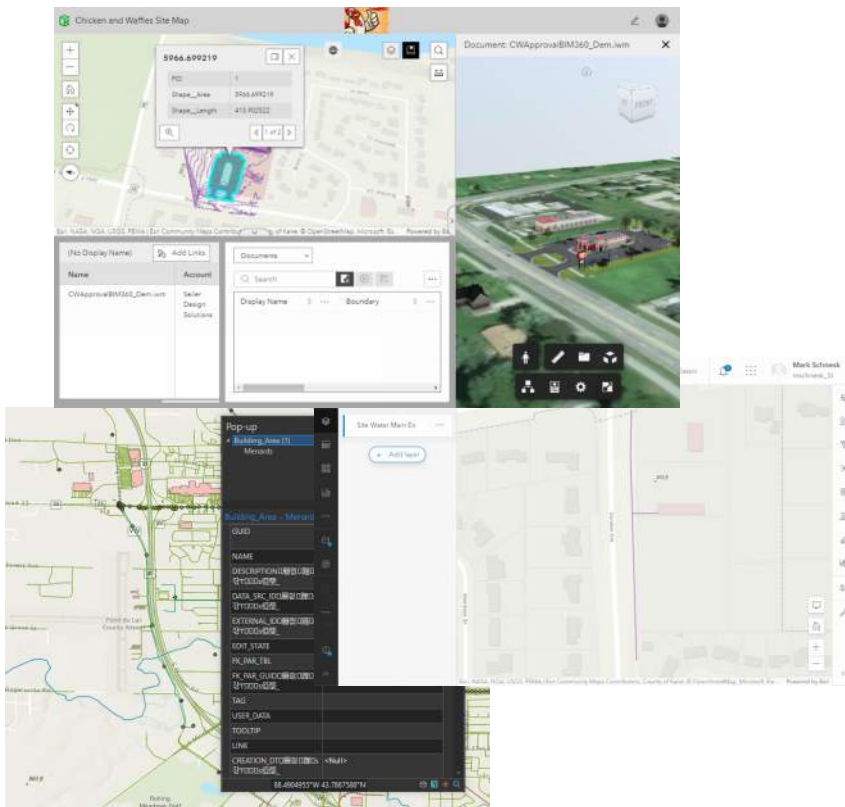


# AutoDesk Map3D

- AutoCAD Based Vertical GIS
- Directly access spatial data via FDO connection
- Directly edit geospatial data
- Manage infrastructure with Enterprise Industry Models
- Can connect with a variety of GIS formats and enterprise servers

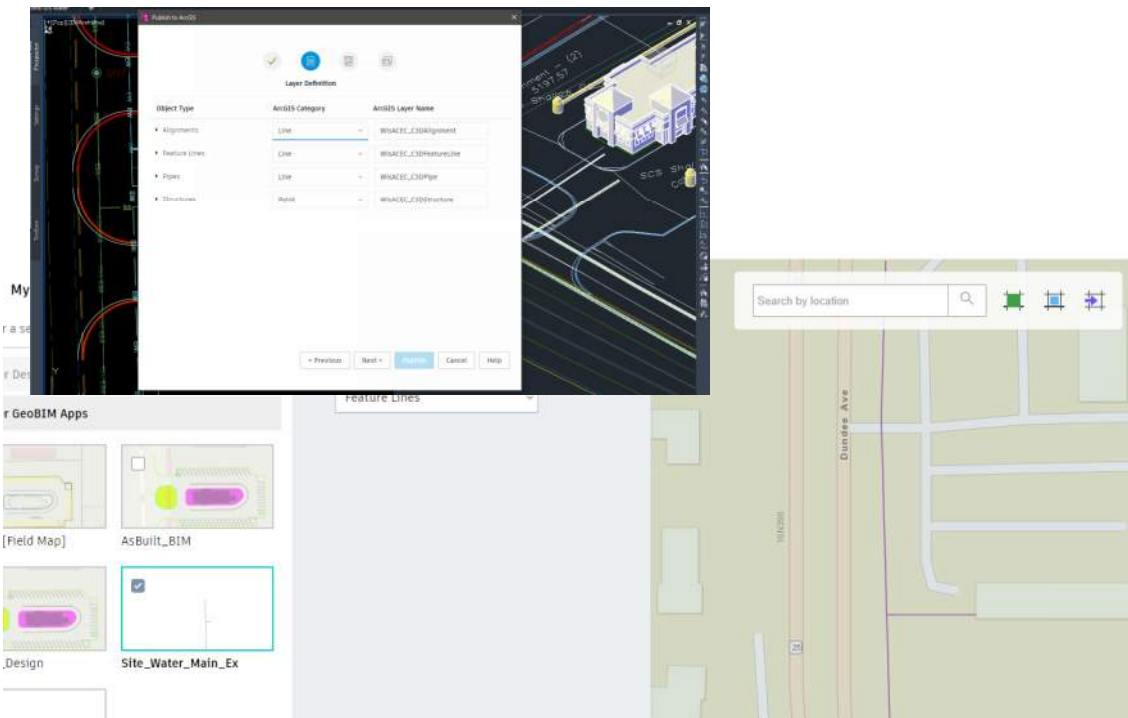


# Civil 3D GIS Workflow Options



- Autodesk Map3D Feature Layer Connections
- Autodesk Civil 3D Import and Export data via Autodesk Connector to ArcGIS Online
- Design Collaboration for Civil 3D integrations with ArcGIS Pro
- As-Built collection, coordination and processing
- GeoBIM

# Civil 3D integration with ArcGIS Online



- Connect to data via Autodesk Connector for ArcGIS Online
- Add Civil 3D Object data directly to your design as Points, Features, Alignments and Networks
- Attribute data
- Export and upload design Civil 3D Object data directly to ArcGIS Online



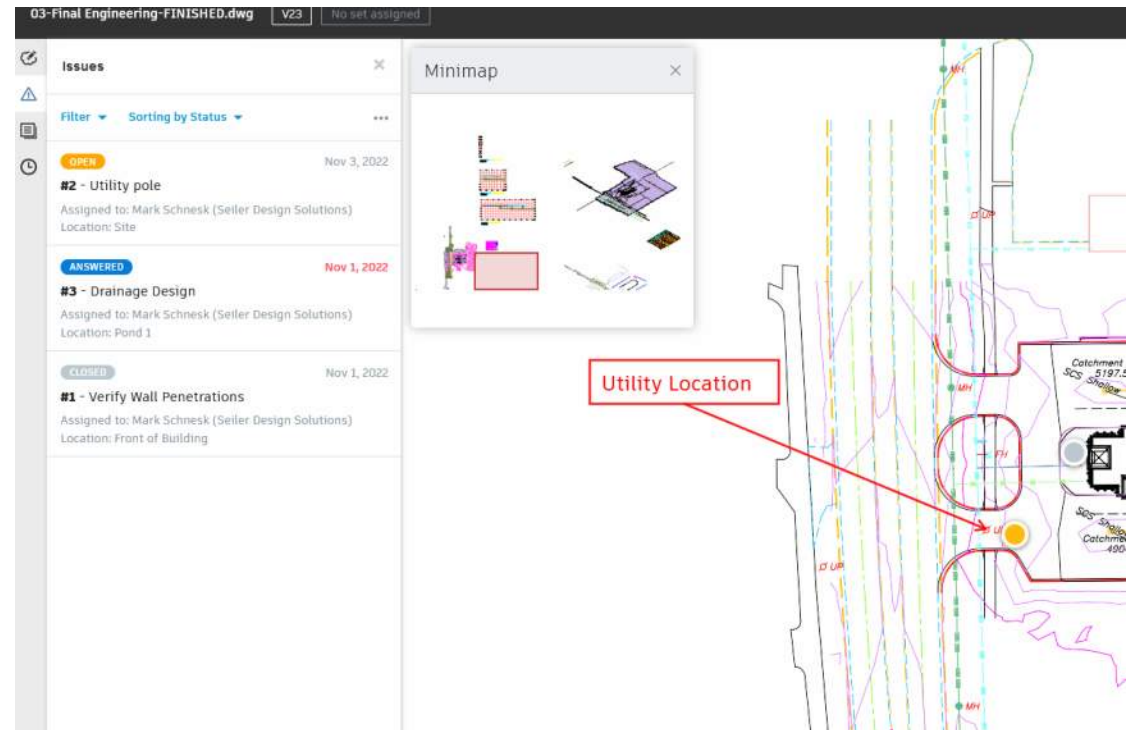
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# Autodesk Construction Cloud and ArcGIS Pro

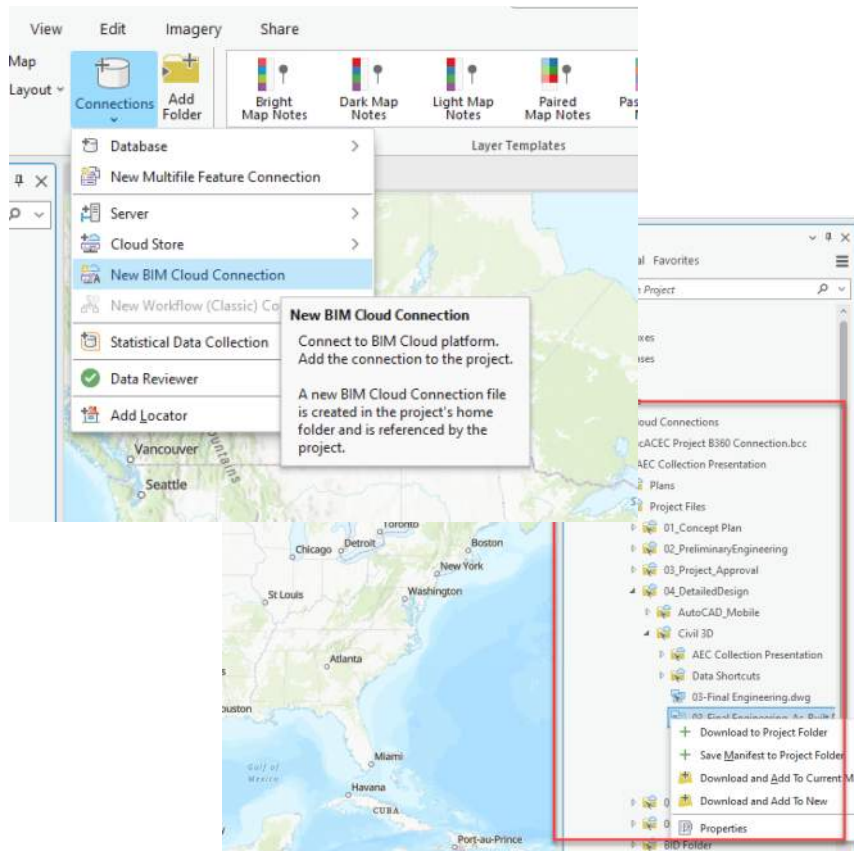
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# Autodesk Construction Cloud and Design Collaboration

- Utilize the power of the Autodesk Construction Cloud and Design Collaboration for Civil 3D
- Review design documents, add markups and issue assignment
- Share views and details with stakeholders in a web environment



# BIM Connection in ArcGIS Pro



- Connect directly to Autodesk Construction Cloud
- Attach geospatial and informational data directly to your ArcGIS Pro Map or Scene
- Publish Scene Packages to ArcGIS Online for use with GeoBIM



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# ESRI GeoBIM

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# BIM and GIS Collaboration



Image source Esri

- Bring project information and geospatial context together through a cloud-to-cloud connection between Autodesk Construction Cloud (BIM) and ArcGIS Online or Enterprise Server (GIS).



# ArcGIS GeoBIM - Bridging the Gap

- Visualize and evaluate project information in a web-based experience using ArcGIS GeoBIM and Autodesk BIM Collaborate Pro.
- AEC teams seamlessly collaborate and manage risks, costs, and timelines using data from multiple systems in a geospatial context.



Image source Esri

# Benefits

- See projects and assets in context
- Keep projects organized (single user interface)
- Reduce model conversions
- Communicate project performance
  - Issues
  - Completion
  - Timelines
  - Asset locations

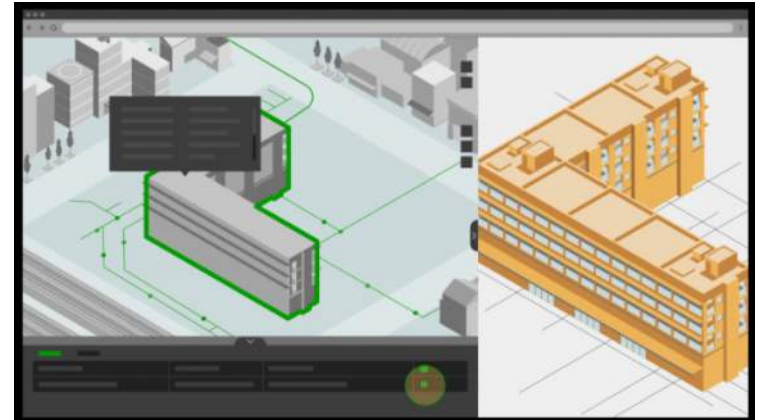


Image source Esri

# Design Coordination

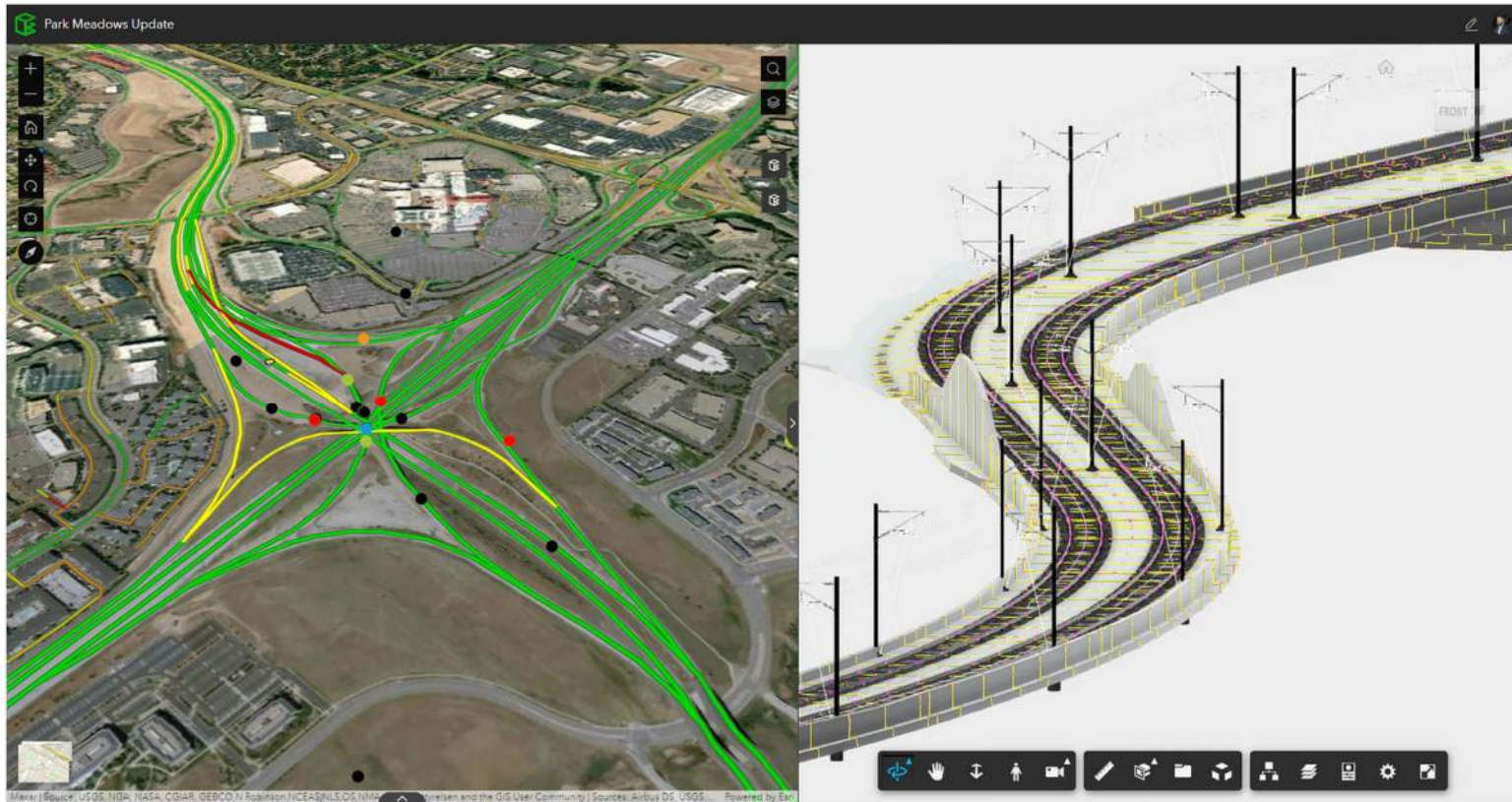


Image source  
Autodesk

Link up-to-date project information with geospatial context for improved design review, visualization, and exploration.



# Issue Coordination

The screenshot displays a web-based issue coordination interface. On the left, a map shows a road intersection with several colored markers. A central panel displays the details for issue #40: "Check install railing". On the right, a topographic map shows the same area with purple lines indicating the railing layout. Below the maps is a table of issues.

**Park Meadows Service - Issues: Check install railing**

assigned_to	Stephen Brockwell
company	Eari
created_at	2021-05-25T21:09:15.175Z
due_date	2021-06-16T00:00:00.000Z
id	e67a29a9-c3ee-420e-ac3b-a196946b708d
identifier	40
issueGUID	2953dd02-d45d-4fc0-bef4-04b986e44945_e67a29a9-c3ee-420e-ac3b-a196946b708d
itemid	um:adsk:wipprod:dm:lineag-e:8r2d9db52v:CLT1K5nh_1miw
linked_document	20191016_ParkMeadow_A LT02_BraidRamp.dwg
location	
projectId	b2953dd02-d45d-4fc0-bef4-04b986e44945
status	open
sub_type	Safety

**Issue #40: Check install railing**

**Details** | Attachments | Activity

**Title**  
Check install railing

**Status**  
open

**Type**  
Safety > Safety

**Location**  
Unspecified

**Assigned to**  
Stephen Brockwell

**Company**

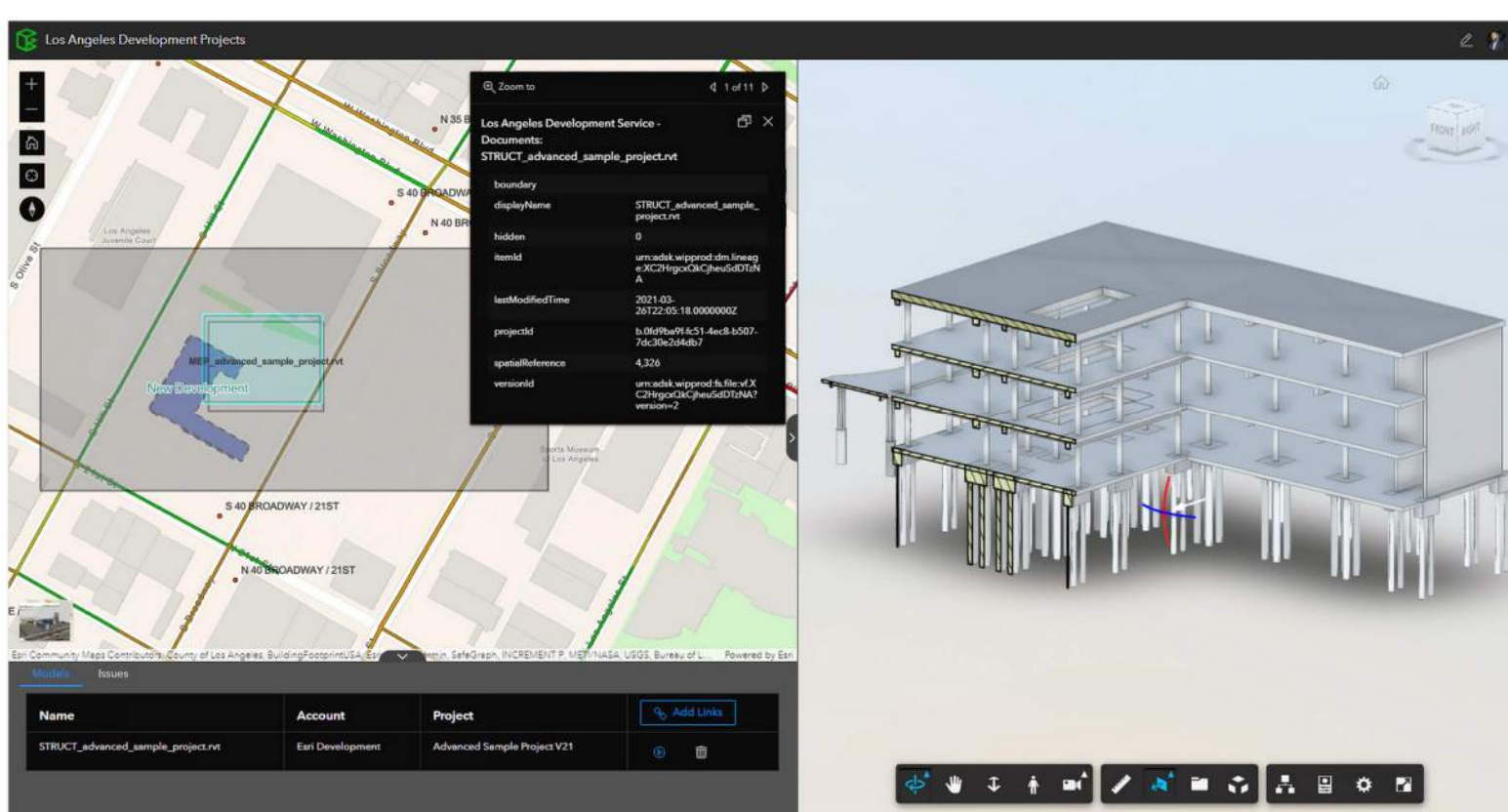
Model	Issue	Open	Observation	Safety	Correct material spec?	Assigned to	Company	Created At	Due At
42	open	Observation	Safety	Correct material spec?	-	Aaron Chevront	Eari	6/15/2021, 5:00:00 PM	
40	open	Safety	Safety	Check install railing	-	Stephen Brockwell	Eari	6/15/2021, 5:00:00 PM	
50	open	Punch List	Punch List	Punch issue	-	Aaron	Eari	7/15/2021,	

Take advantage of a unified web environment for issue mapping and management.

Image source  
Autodesk



# Document Review

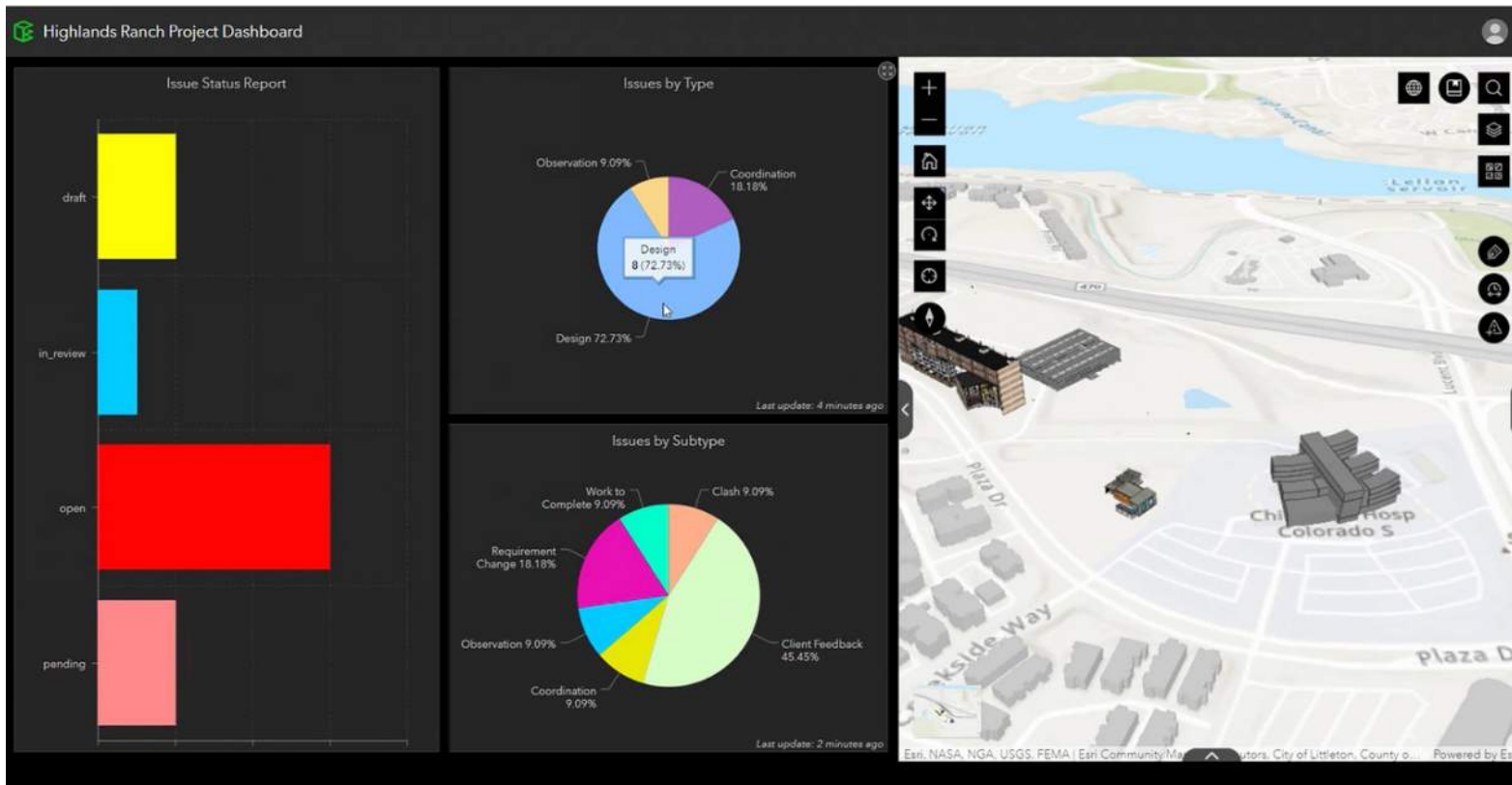


- Connect documentation to relevant ArcGIS features for more efficient and secure access to the latest project updates.

Image source  
Autodesk



# Performance Analyses



Understand and monitor project status, including issue locations, completion, timelines, and distribution across teams

Image source Autodesk





# Thank You

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