AUTODESK. UNIVERSITY

Bridging The Gap Between CIM and BIM with BIM 360

David Campbell

Application Specialist| @BrewGuyDC – Twitter & LinkedIn

Kevin Closson

Senior Application Specialist| @KevinClosson - LinkedIn

TOPCON SOLUTIONS Store

About the speakers

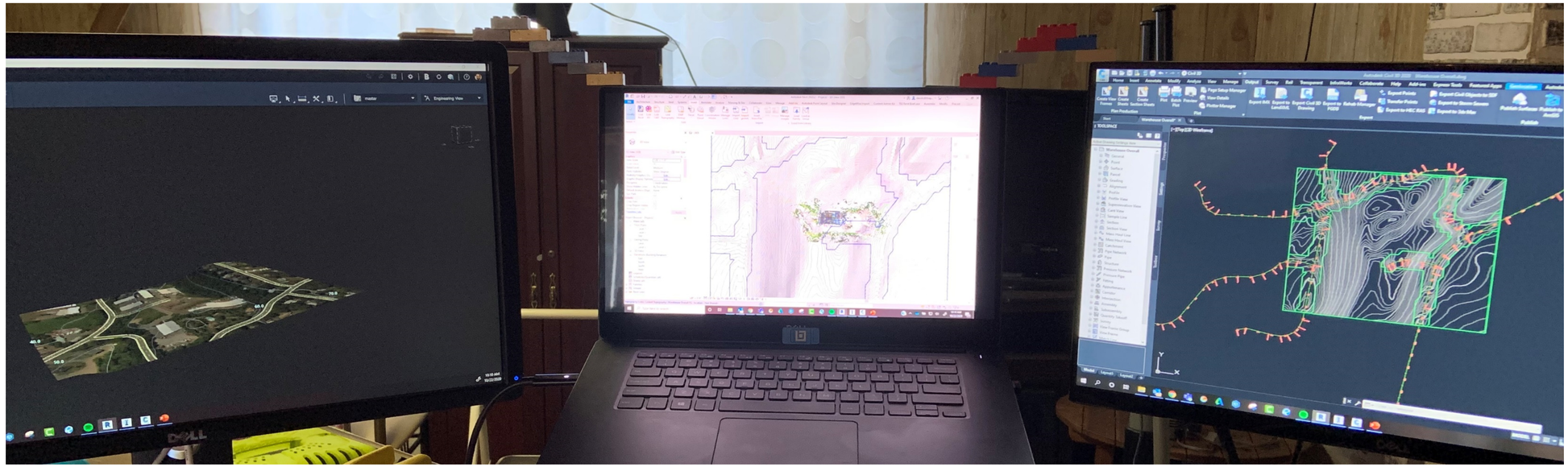
David Campbell and Kevin Closson

David Campbell and Kevin Closson are Application Specialists with Topcon Solutions. They work with many clients of different backgrounds to implement construction technology software. David is a vertical construction specialist, helping to tie workflows between software and hardware in the field, as well as in the office. Kevin is a horizontal construction specialist, helping to tie Civil Information to those who need it in the office and field.

Bridging The Gap

With our industry ever evolving, the need for real-time project collaboration is at an all time high. It has become evident that we must move away from siloed data efforts and bridge communication gaps between the various disciplines and remote project contributors.

How do we approach this gap, and what can help us alleviate these issues?



Learning Objectives

LEARNING OBJECTIVE 1

Learn about the communication gap between CIM and BIM

LEARNING OBJECTIVE 2

Learn to connect CIM data to BIM workflows

LEARNING OBJECTIVE 3

Learn how to enable collaboration with BIM 360

LEARNING OBJECTIVE 4

Evaluate the value of a Common Data Environment and connected workflows

Breaking down the terms

BIM- Building Information Modeling - “is a process supported by various tools, technologies and contracts involving the generation and management of digital representations of physical and functional characteristics of places. Building information models (BIMs) are computer files (often but not always in proprietary formats and containing proprietary data) which can be extracted, exchanged or networked to support decision-making regarding a built asset. BIM software is used by individuals, businesses and government agencies who plan, design, construct, operate and maintain buildings and diverse physical infrastructures.” – Wikipedia

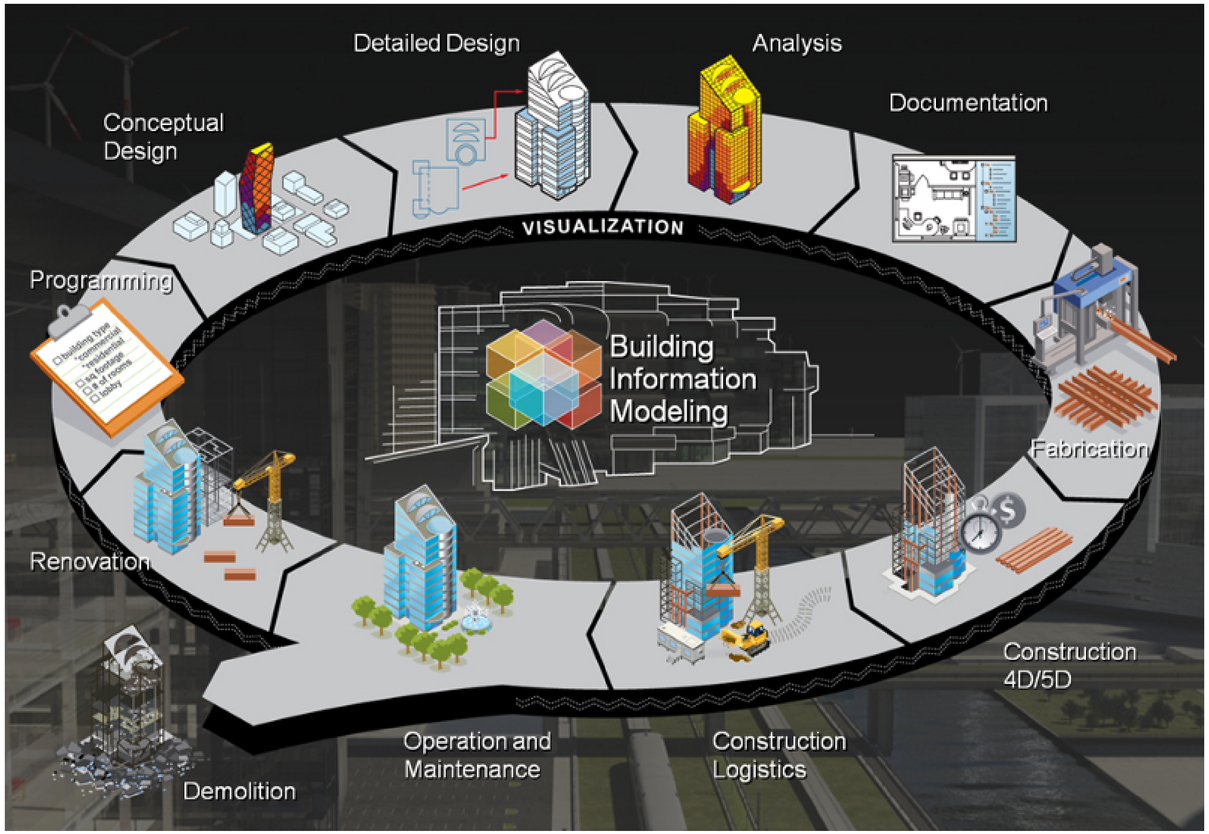
CIM – Civil Information Modeling - CIM is like BIM but more appropriately suited to horizontal projects such as roadways or tunnels. CIM enables stakeholders to come together and work on a set of 3D or 2D models. This creates an interactive project with real time collaboration. In addition, CIM technology can be used throughout the entire life cycle of construction.

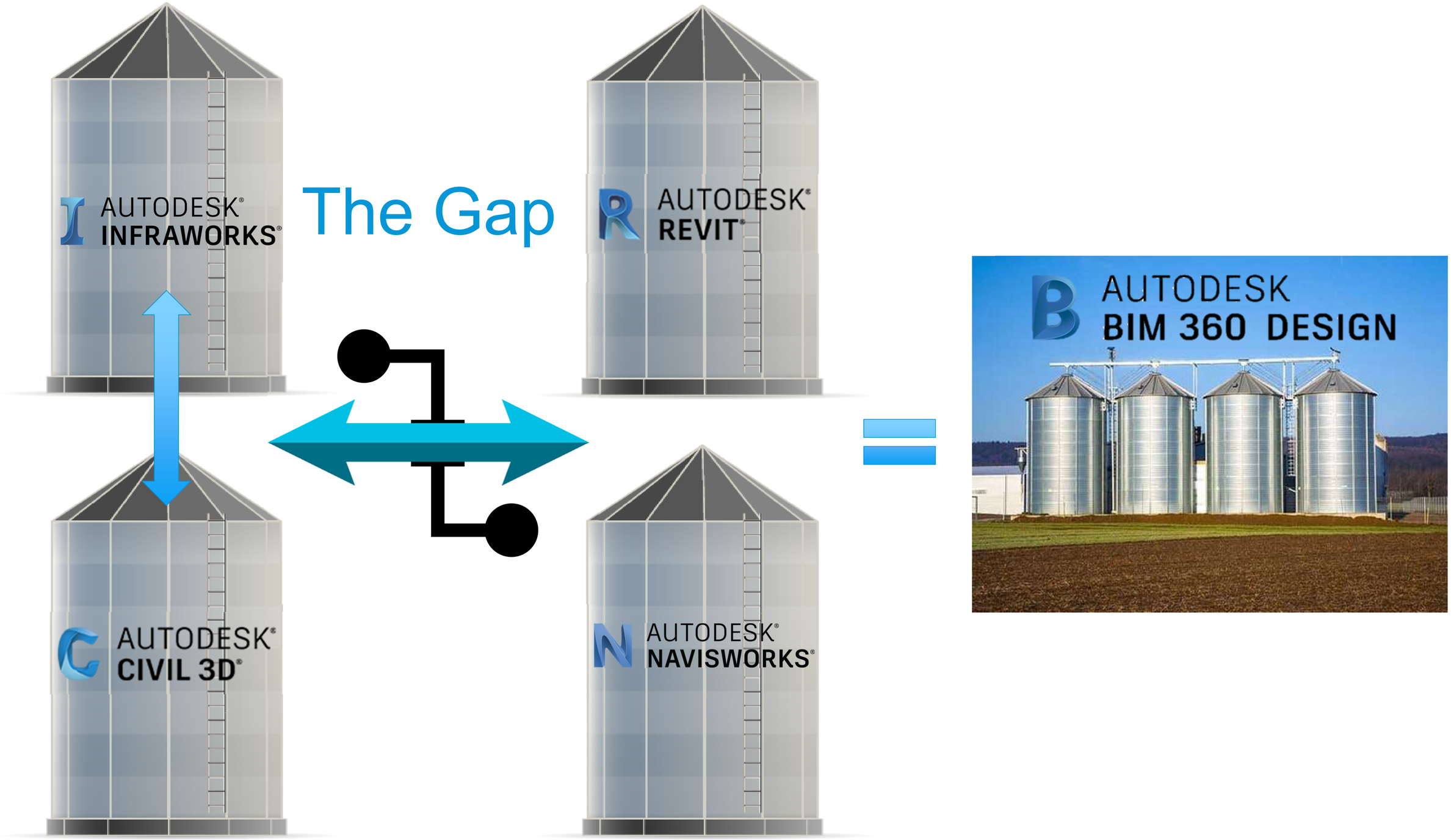
CIM – Construction Information Modeling – I believe this term fully incorporates both the civil space as well as the building space. The goal of CIM is to connect all processes for the common goal of a successful construction project. A construction project has so much more to it than the physical building and the changes associated, it all starts from the ground up.

Project lifecycle

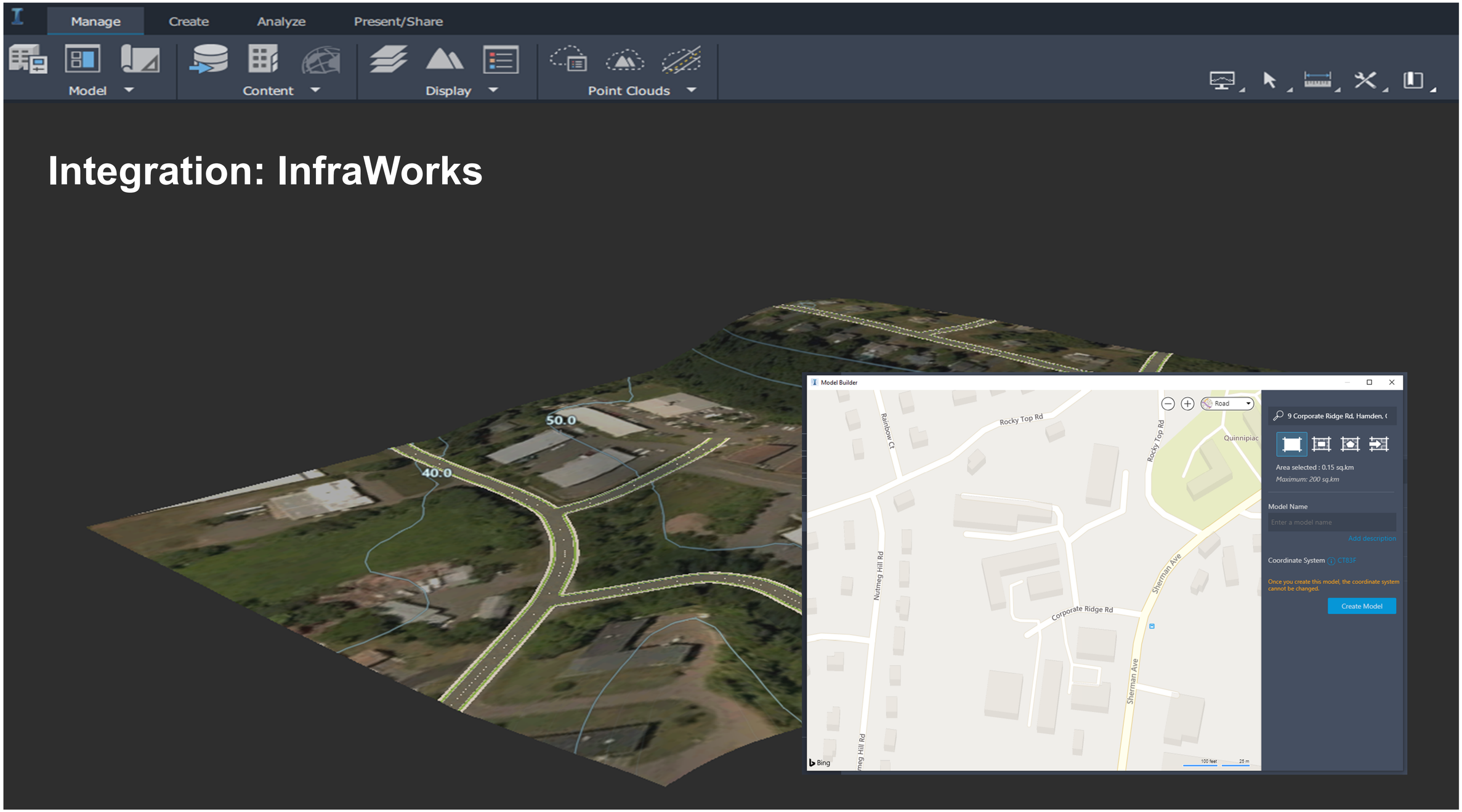
- A typical construction project will consist of many different phases.
- A building's lifecycle doesn't end until Demolition.

- Is documentation for the site updated frequently?
- How is this information managed?

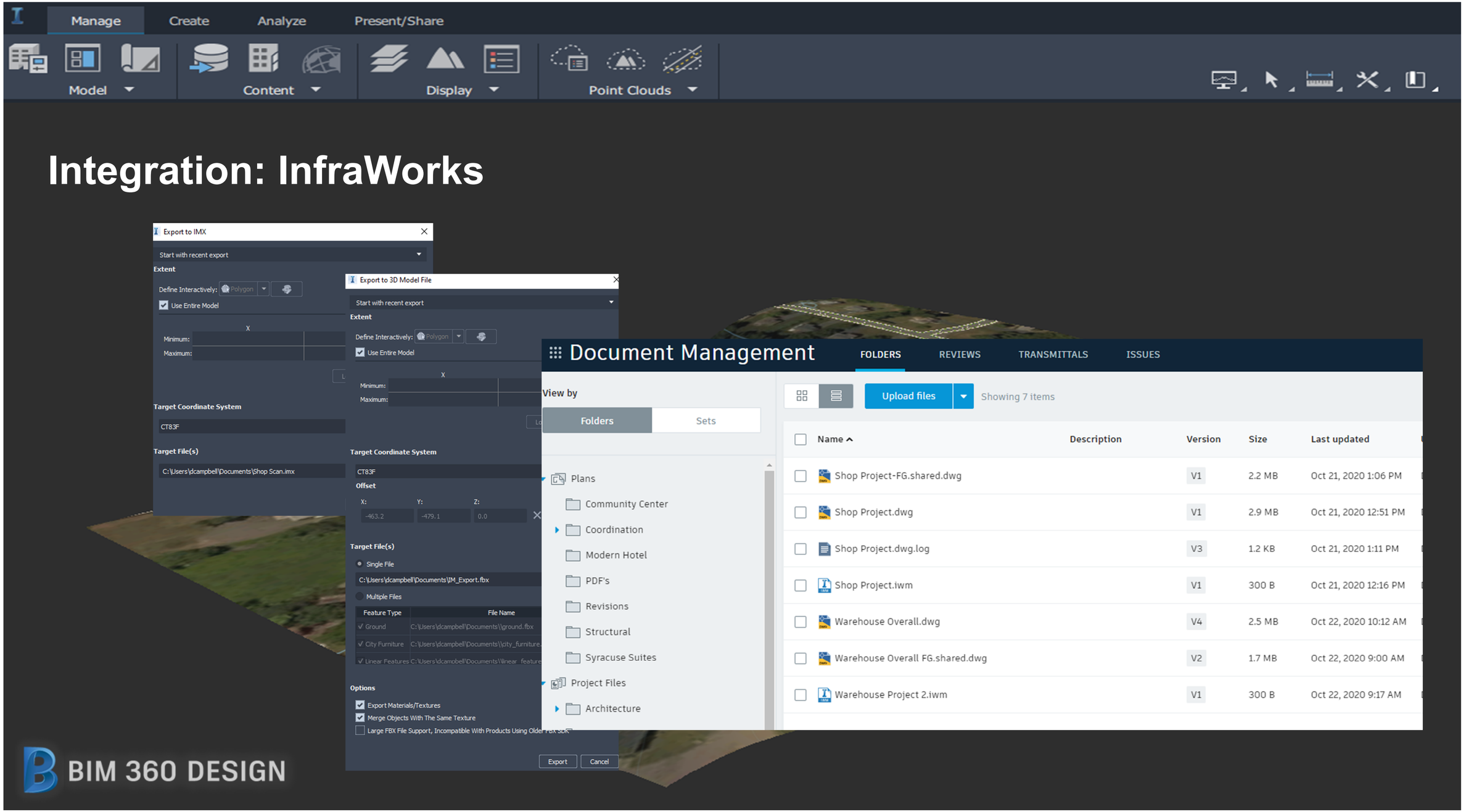



AUTODESK
INFRAWORKS
The Gap
AUTODESK
REVIT
AUTODESK
CIVIL 3D
AUTODESK
NAVISWORKS
=
AUTODESK
BIM 360 DESIGN

Integration: InfraWorks

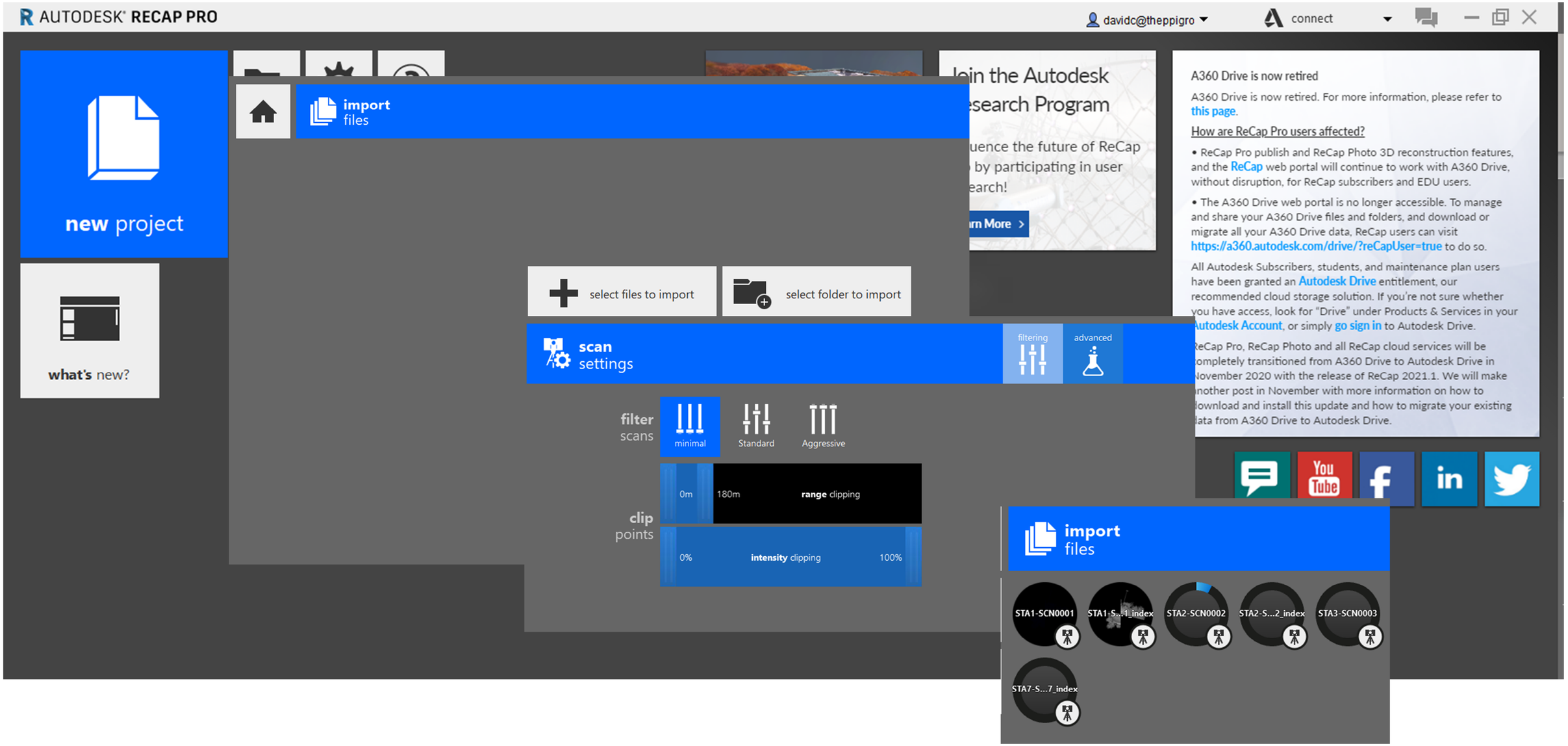


Integration: InfraWorks

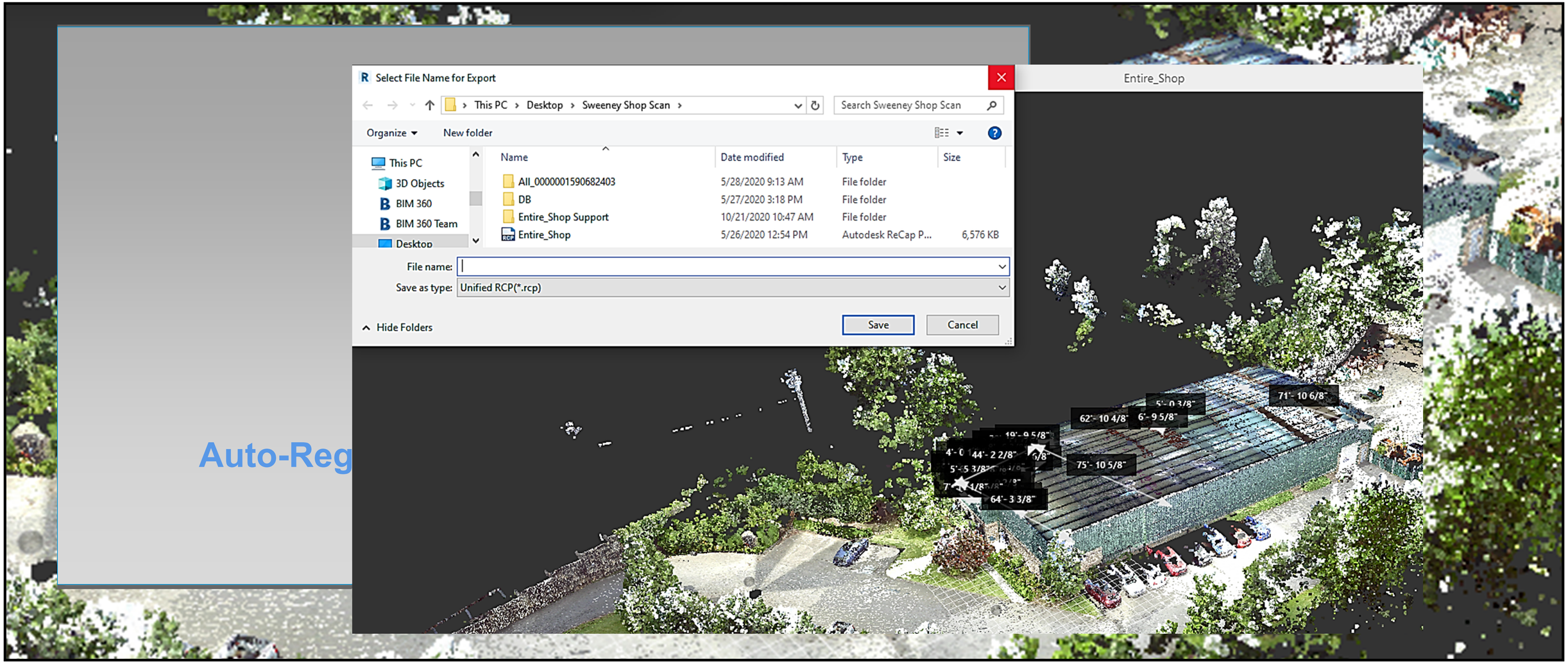


Strengthening Our Model…

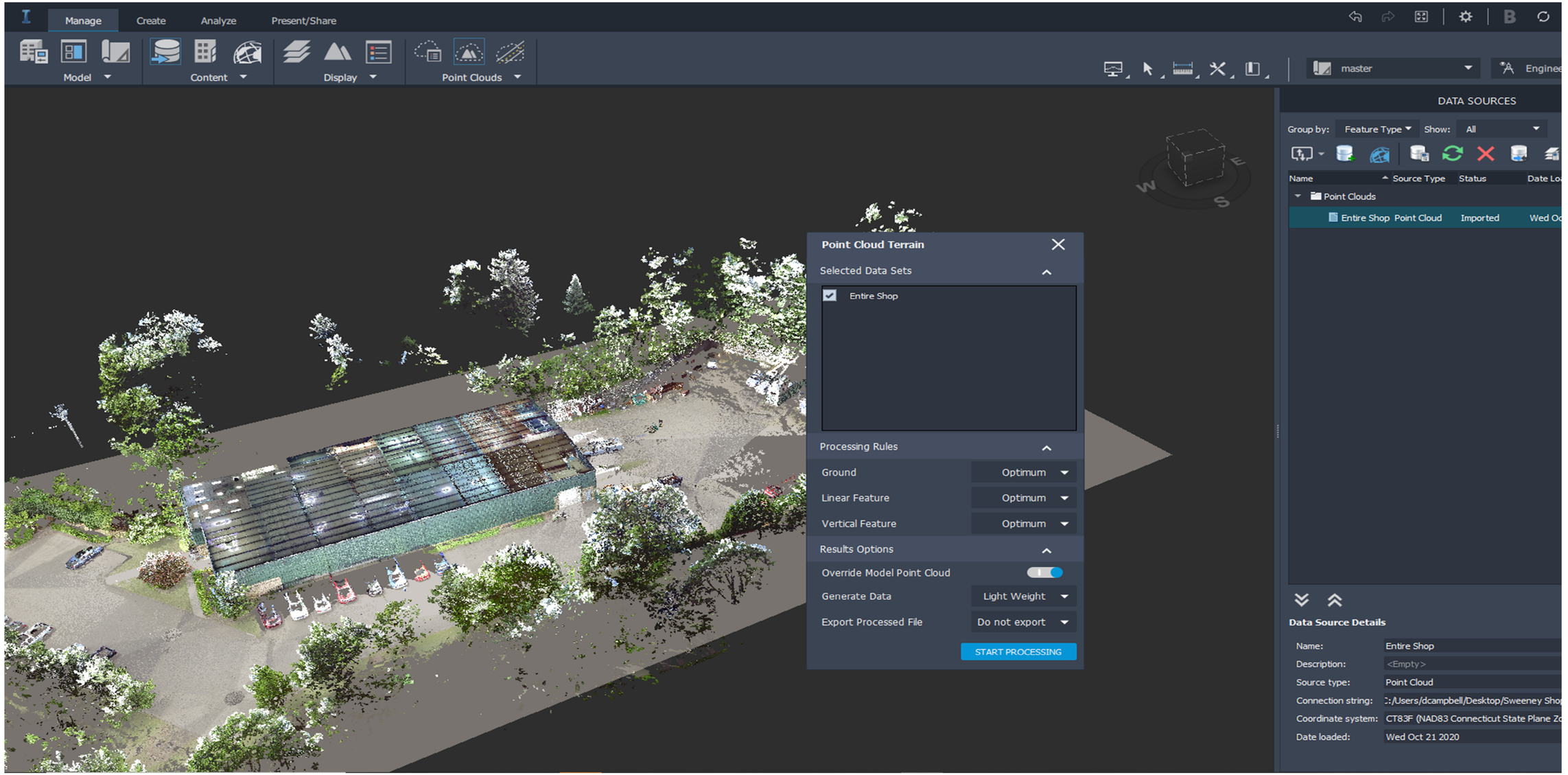
Recap Pro


AUTODESK RECAP PRO
davidc@theppigro
connect
new project
what's new?
import files
select files to import
select folder to import
scan settings
filtering
advanced
filter scans
minimal
Standard
Aggressive
clip points
0m
180m
range clipping
0%
intensity clipping
100%
Join the Autodesk Research Program
Learn More
A360 Drive is now retired
A360 Drive is now retired. For more information, please refer to this page.
How are ReCap Pro users affected?
• ReCap Pro publish and ReCap Photo 3D reconstruction features, and the ReCap web portal will continue to work with A360 Drive, without disruption, for ReCap subscribers and EDU users.
• The A360 Drive web portal is no longer accessible. To manage and share your A360 Drive files and folders, and download or migrate all your A360 Drive data, ReCap users can visit https://a360.autodesk.com/drive/?reCapUser=true to do so.
All Autodesk Subscribers, students, and maintenance plan users have been granted an Autodesk Drive entitlement, our recommended cloud storage solution. If you're not sure whether you have access, look for "Drive" under Products & Services in your Autodesk Account, or simply go sign in to Autodesk Drive.
ReCap Pro, ReCap Photo and all ReCap cloud services will be completely transitioned from A360 Drive to Autodesk Drive in November 2020 with the release of ReCap 2021.1. We will make another post in November with more information on how to download and install this update and how to migrate your existing data from A360 Drive to Autodesk Drive.
import files
STA1-SCN0001
STA1-S...1_index
STA2-SCN0002
STA2-S...2_index
STA3-SCN0003
STA7-S...7_index

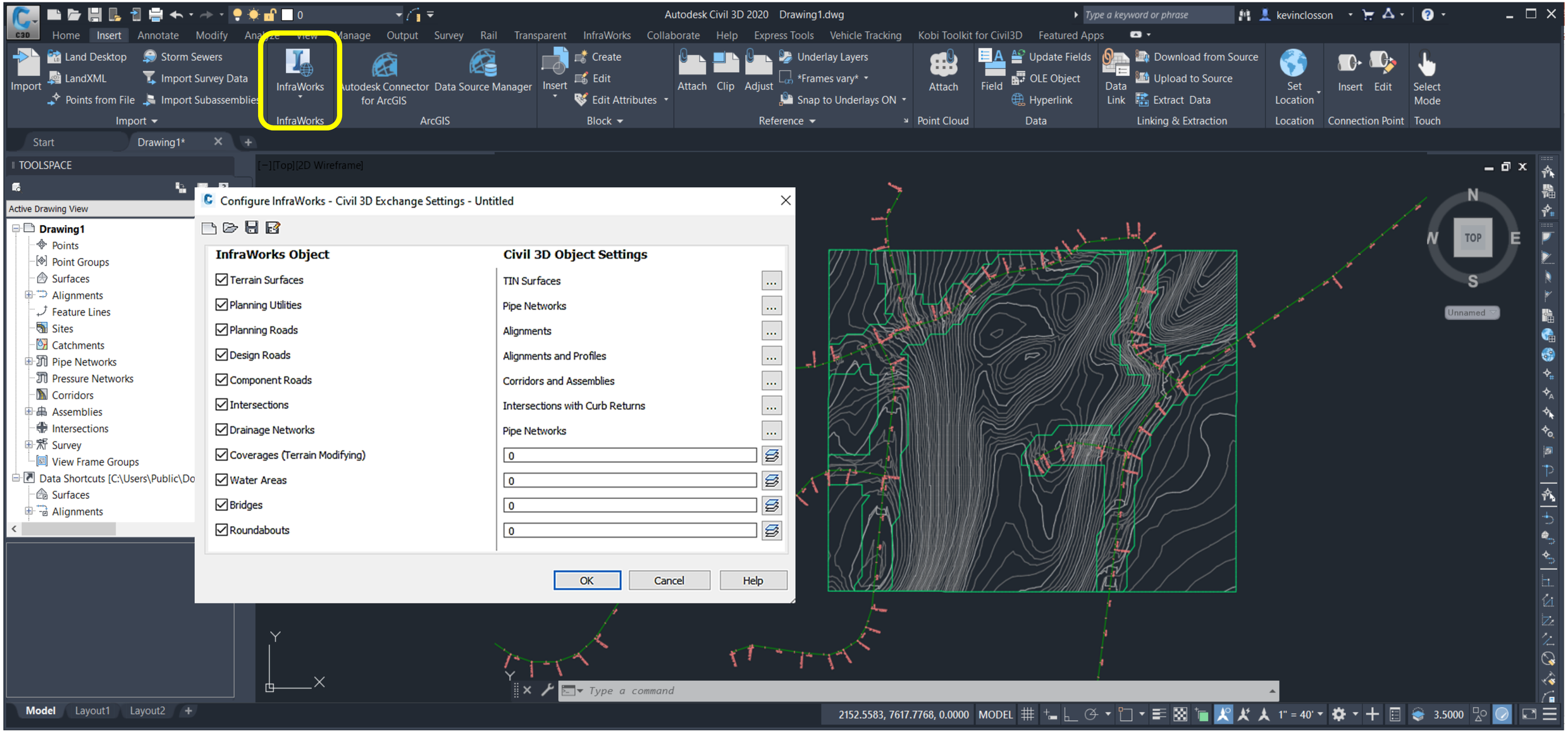
Recap Pro


Select File Name for Export
This PC › Desktop › Sweeney Shop Scan ›
Search Sweeney Shop Scan
Organize
New folder
This PC
3D Objects
BIM 360
BIM 360 Team
Desktop
Name
Date modified
Type
Size
All_0000001590682403
5/28/2020 9:13 AM
File folder
DB
5/27/2020 3:18 PM
File folder
Entire_Shop Support
10/21/2020 10:47 AM
File folder
Entire_Shop
5/26/2020 12:54 PM
Autodesk ReCap P...
6,576 KB
File name:
Save as type:
Unified RCP(*.rcp)
Hide Folders
Save
Cancel
Entire_Shop
Auto-Reg
62'- 10 4/8"
6'- 9 5/8"
71'- 10 6/8"
44'- 2 2/8"
75'- 10 5/8"
64'- 3 3/8"

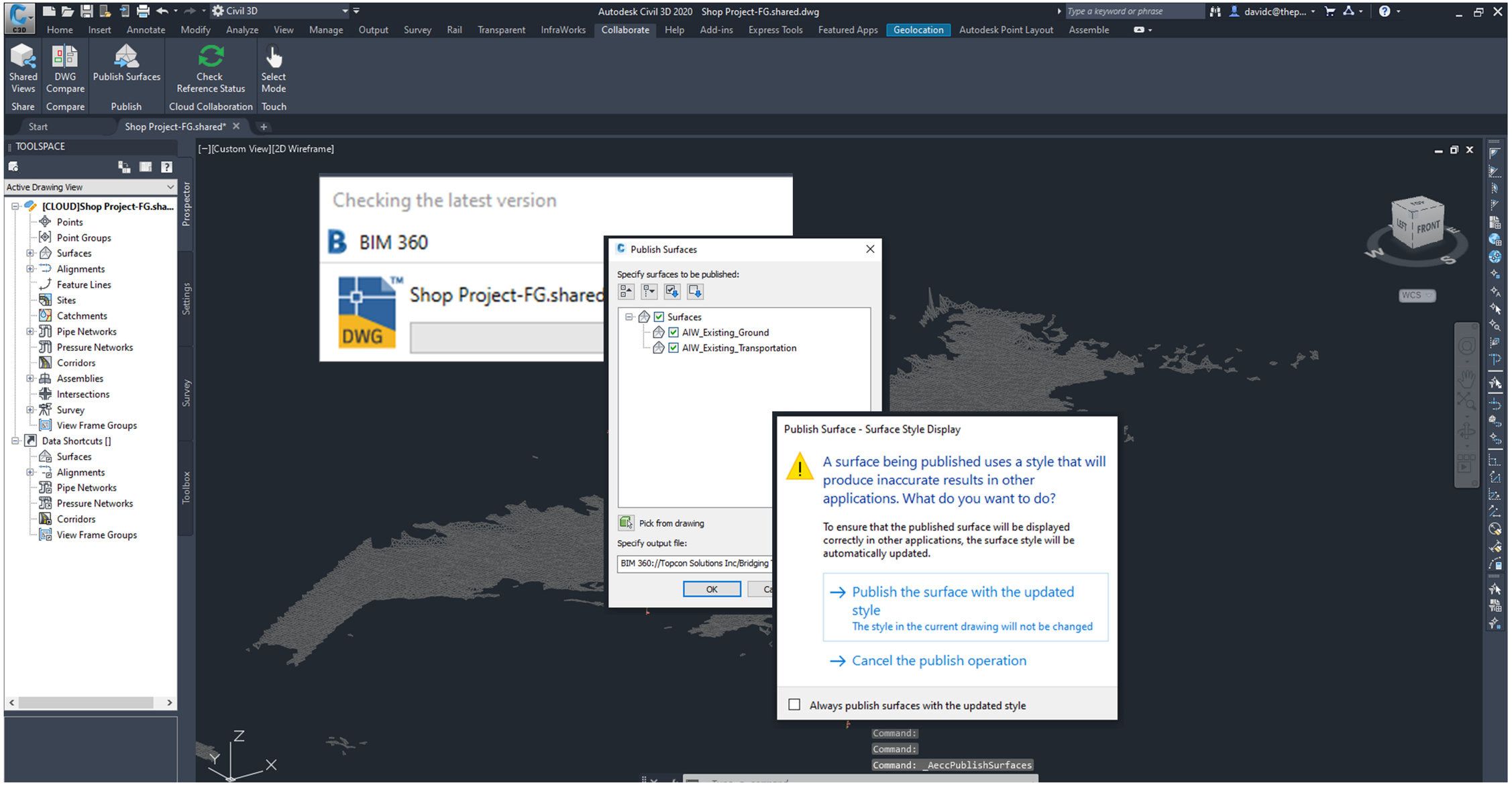
Strengthening Data



Civil 3D: Import Configuration

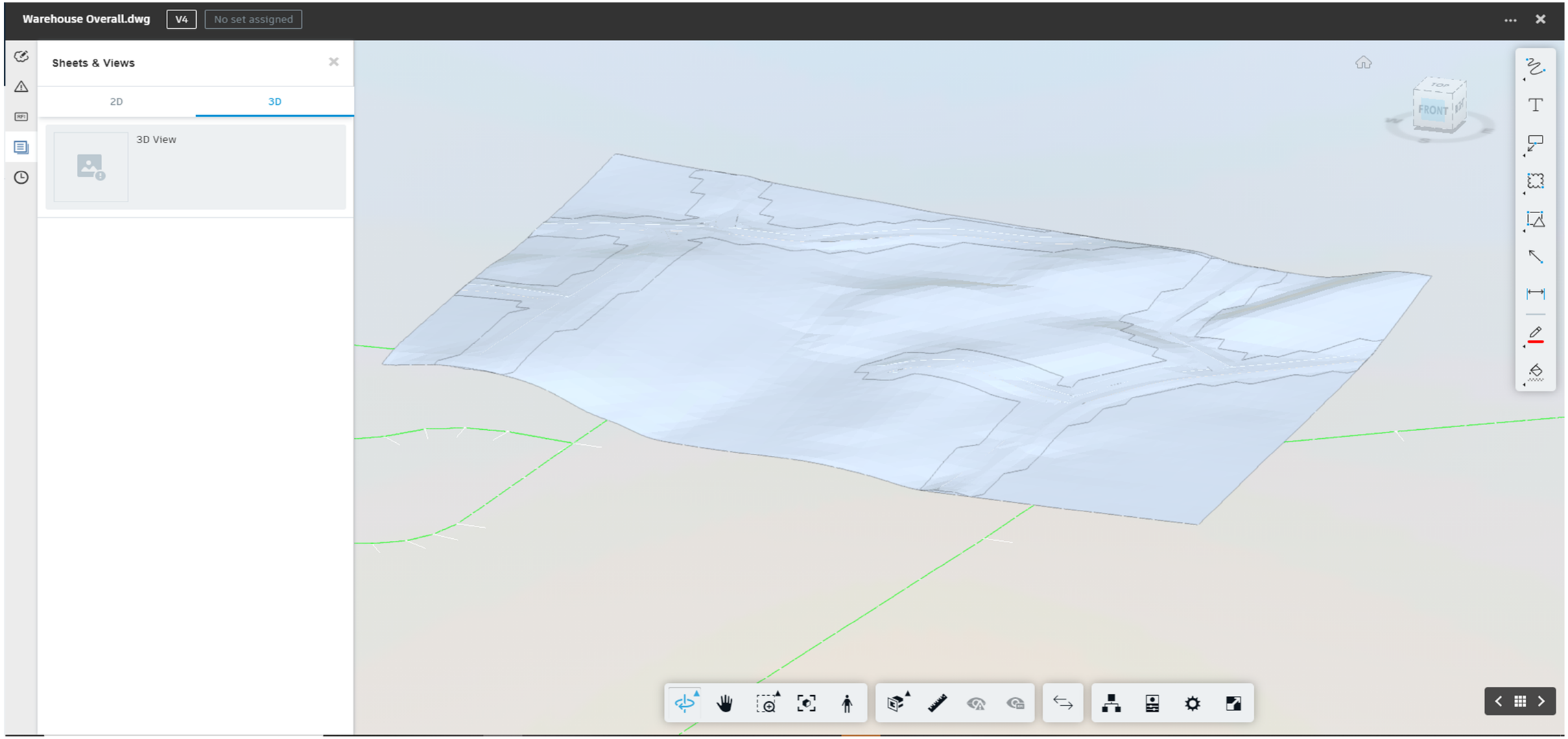


BIM 360: Publishing Process

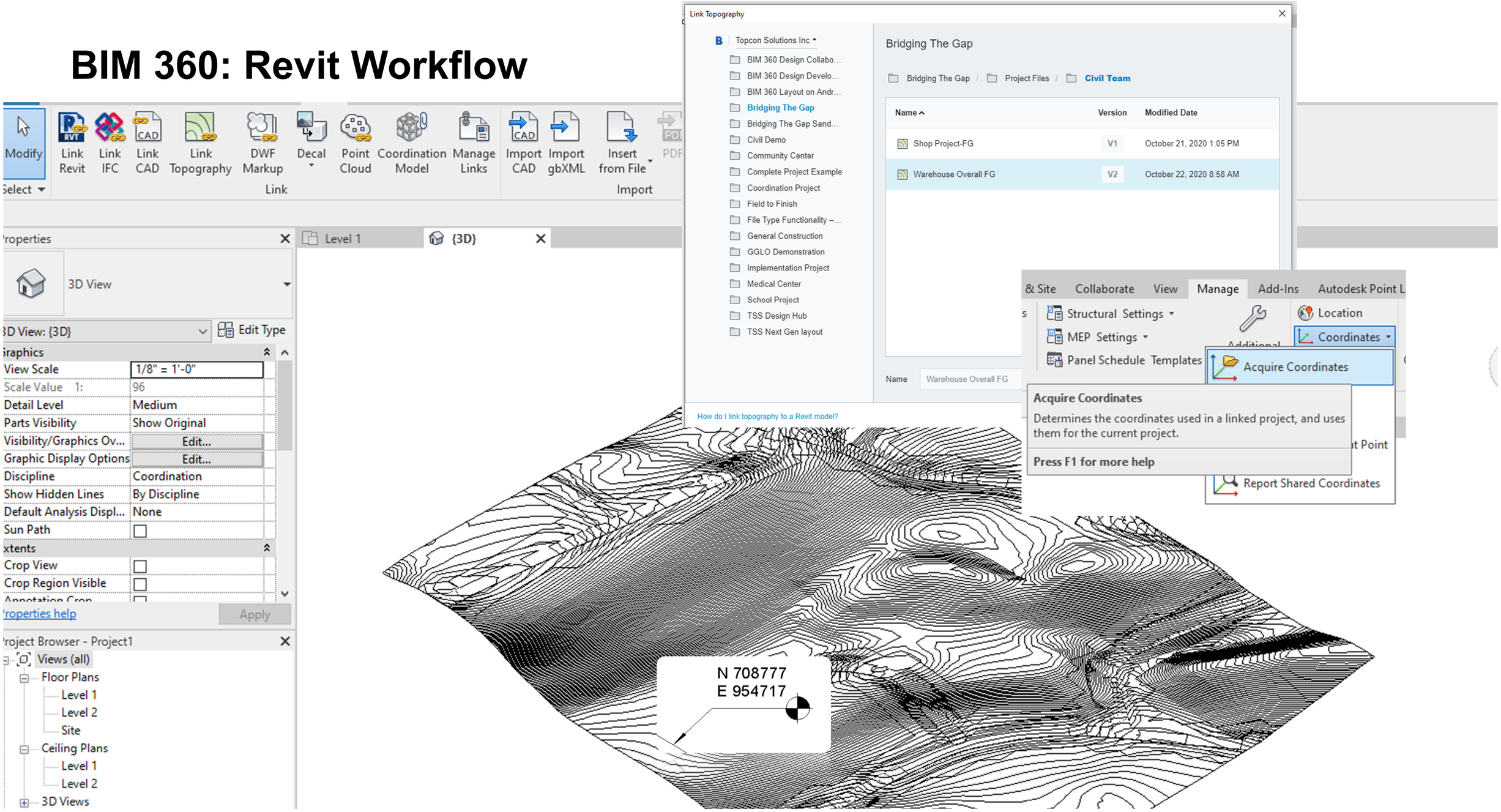


CIM – BIM Workflows

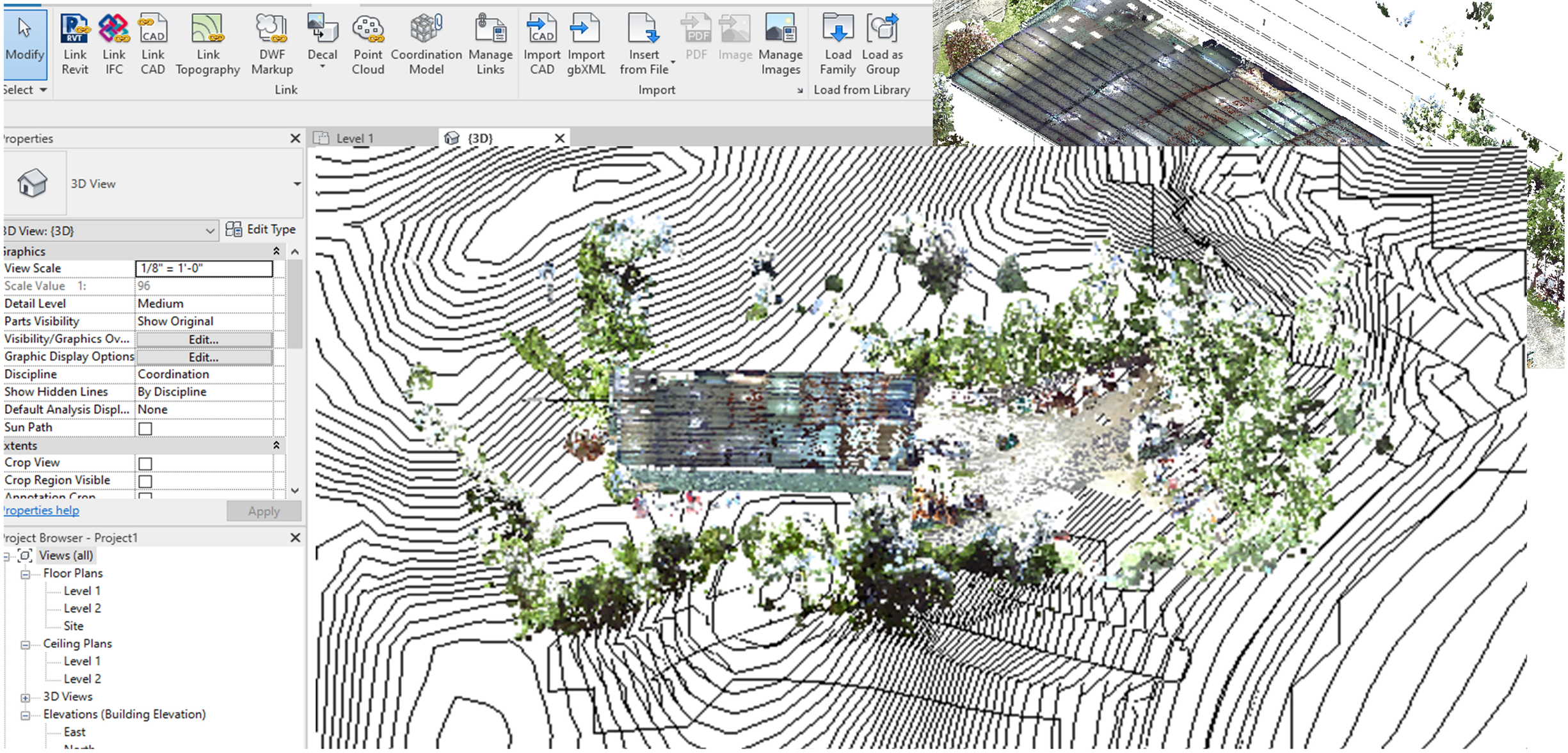
BIM 360: Common Data Environment



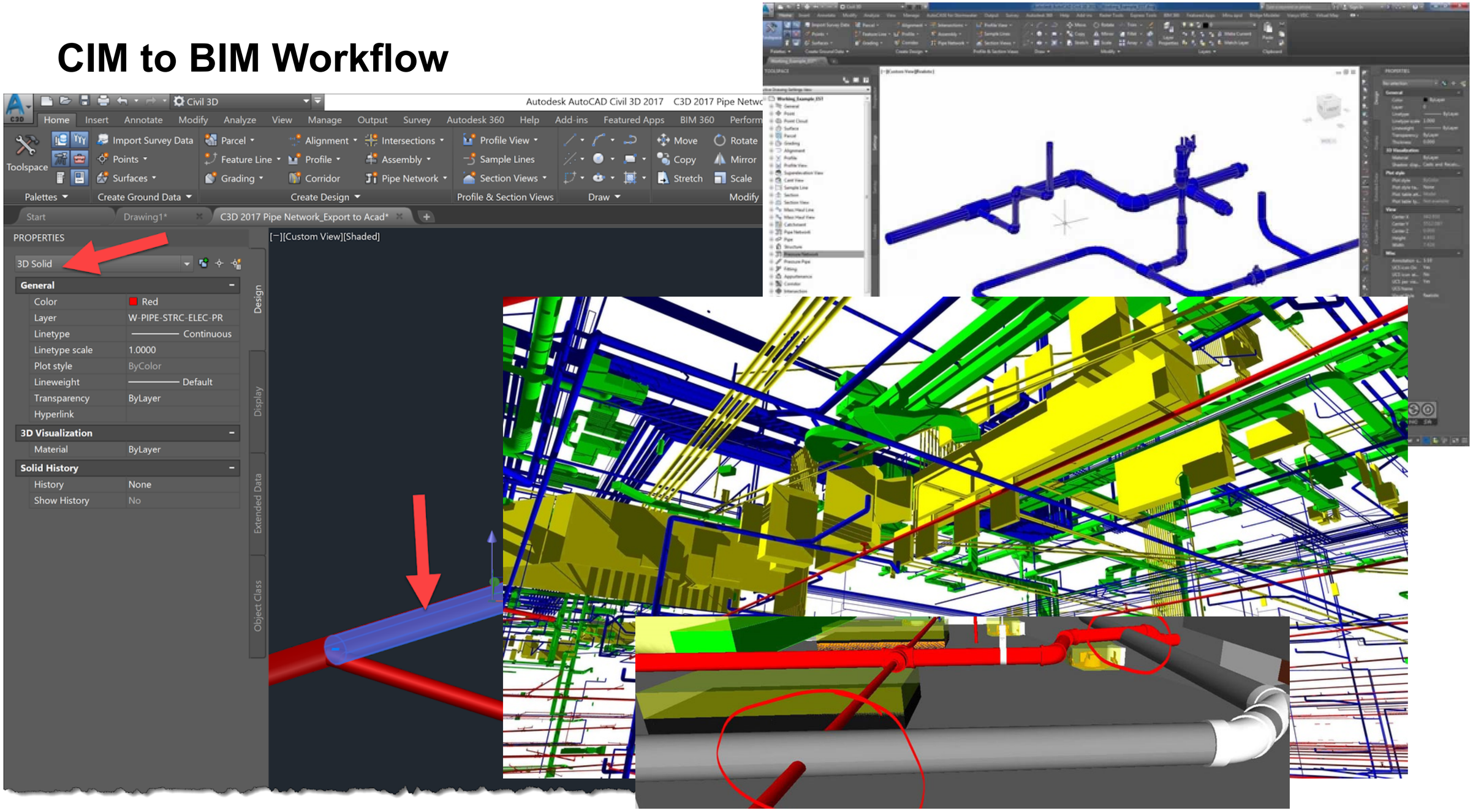
BIM 360: Revit Workflow



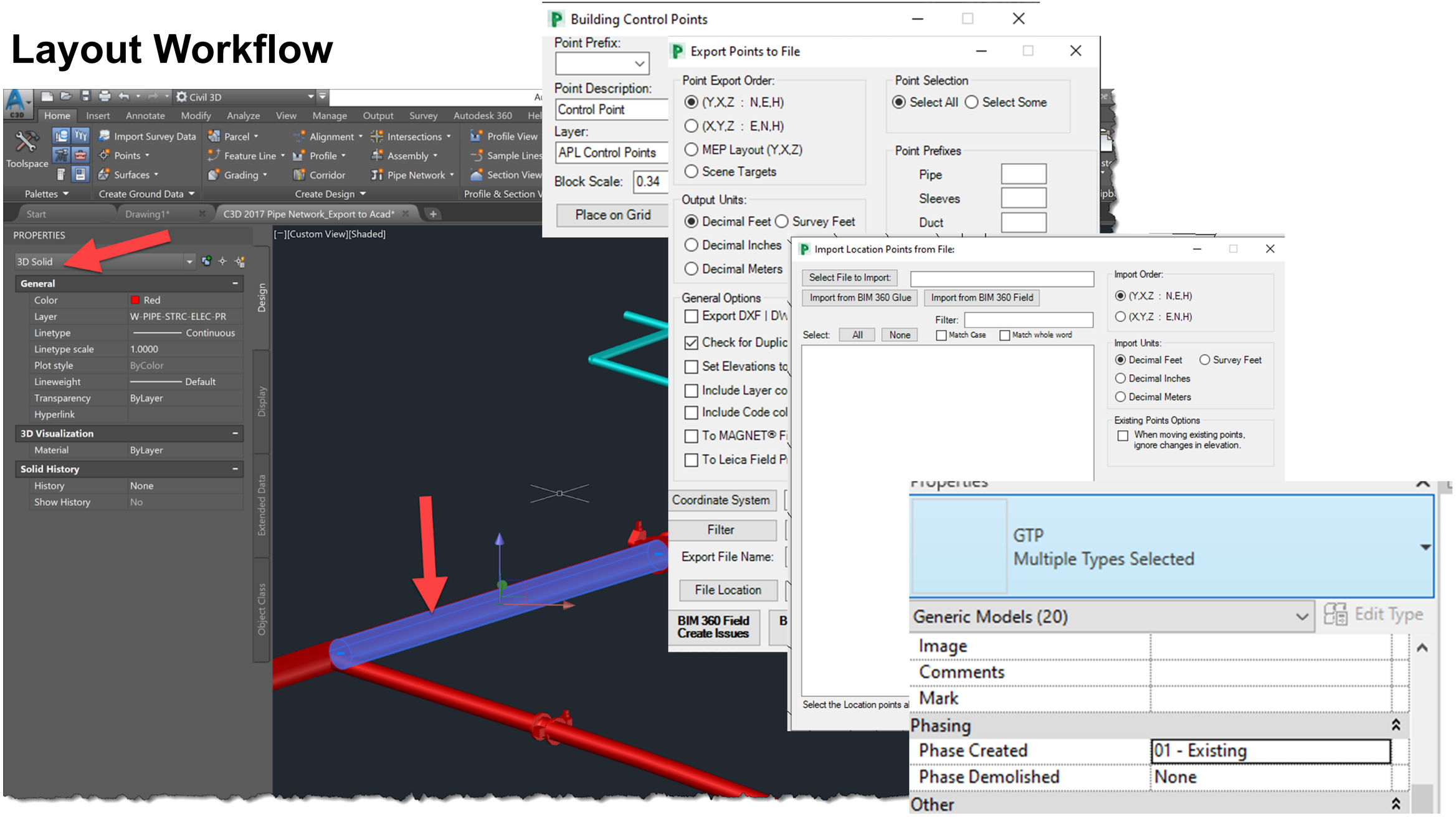
BIM 360: Complete Workflow



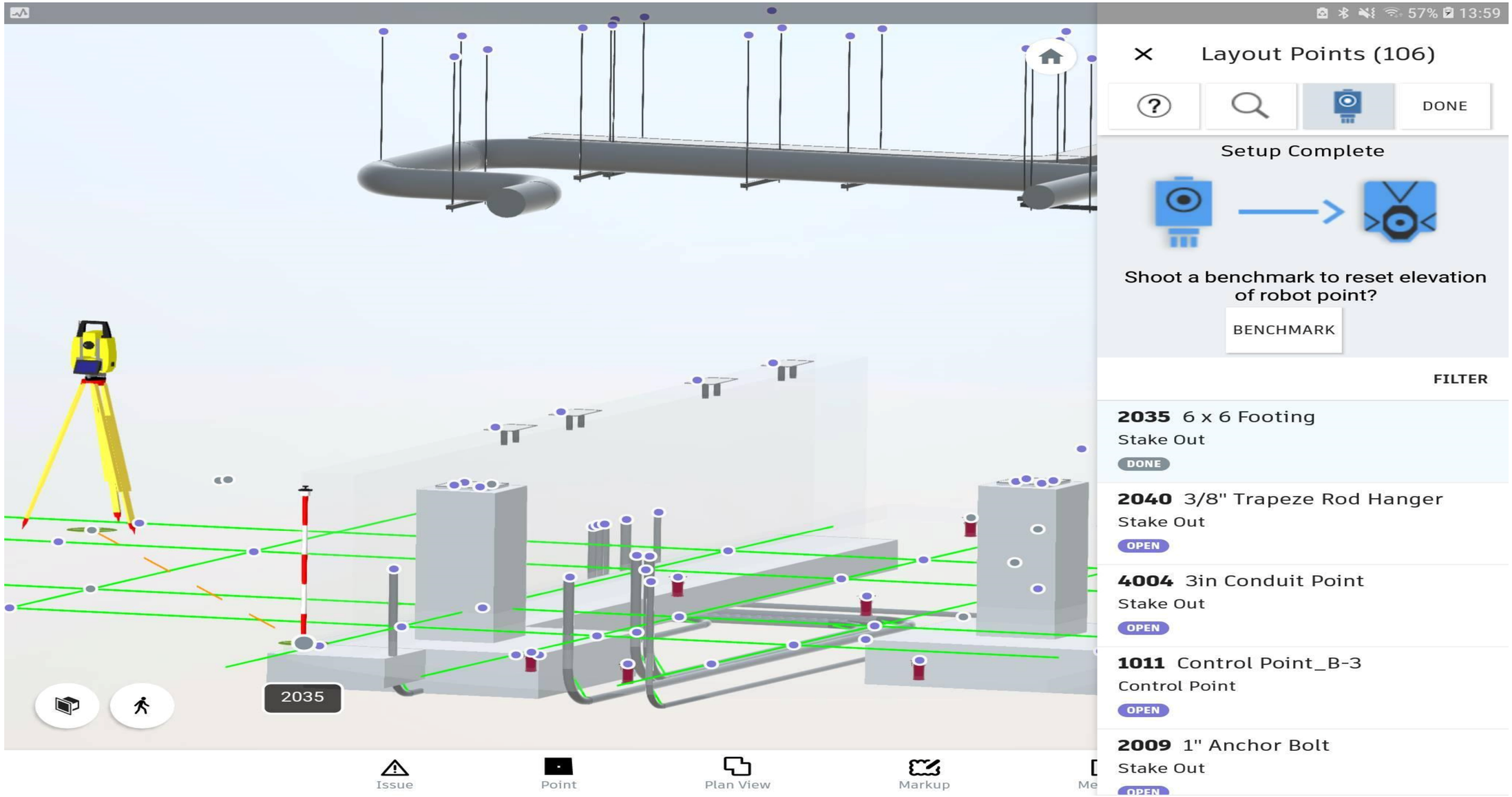
CIM to BIM Workflow



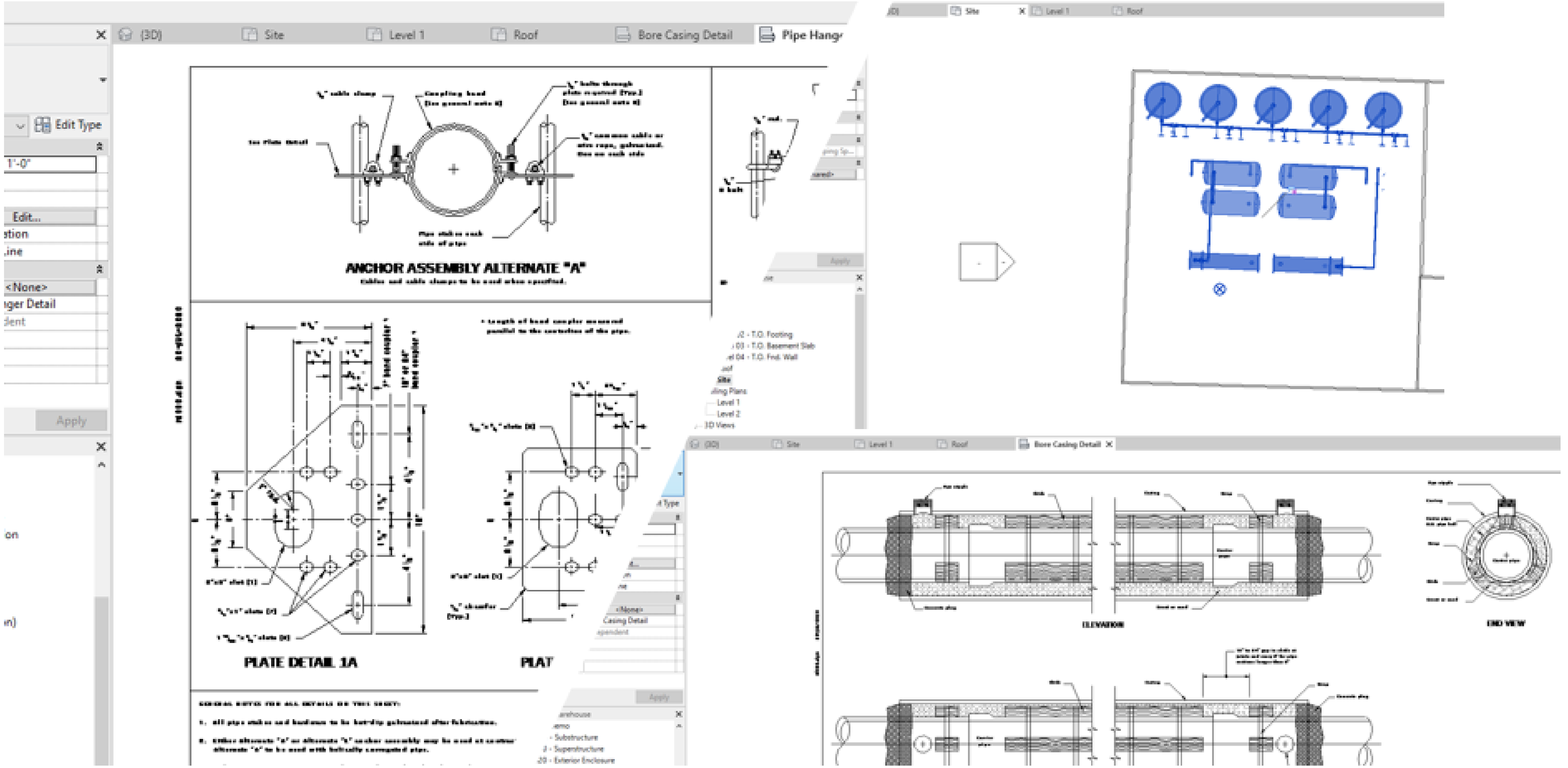
Layout Workflow



Layout Workflow



Aggregating Data



Civil Space

Building Space

Construction

AUTODESK. UNIVERSITY

Thank you for joining us!

David Campbell

Application Specialist| @BrewGuyDC – Twitter & LinkedIn

Kevin Closson

Senior Application Specialist| @KevinClosson – LinkedIn

(800) 247-1927 | topconsolutions.com

TOPCON SOLUTIONS Store