AMC E-Learning

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CIVIL 3D

AUTODESK

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WHAT WILL YOU LEARN?

- The key differences between Civil 3D and AutoCAD
- What Civil 3D is capable of and how it enhances design workflows
- How to create and manage surfaces in Civil 3D, including exporting them to Revit
- An introduction to alignments
- Understanding corridors
- Overview of pipe networks and their components
- Understanding profile views to visualize design elevations
- Pressure networks
- Using electrical networks within Civil 3D
- Exploring catalogs, part families, and part sizes
- Understanding the difference between Properties and Toolspace

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VS

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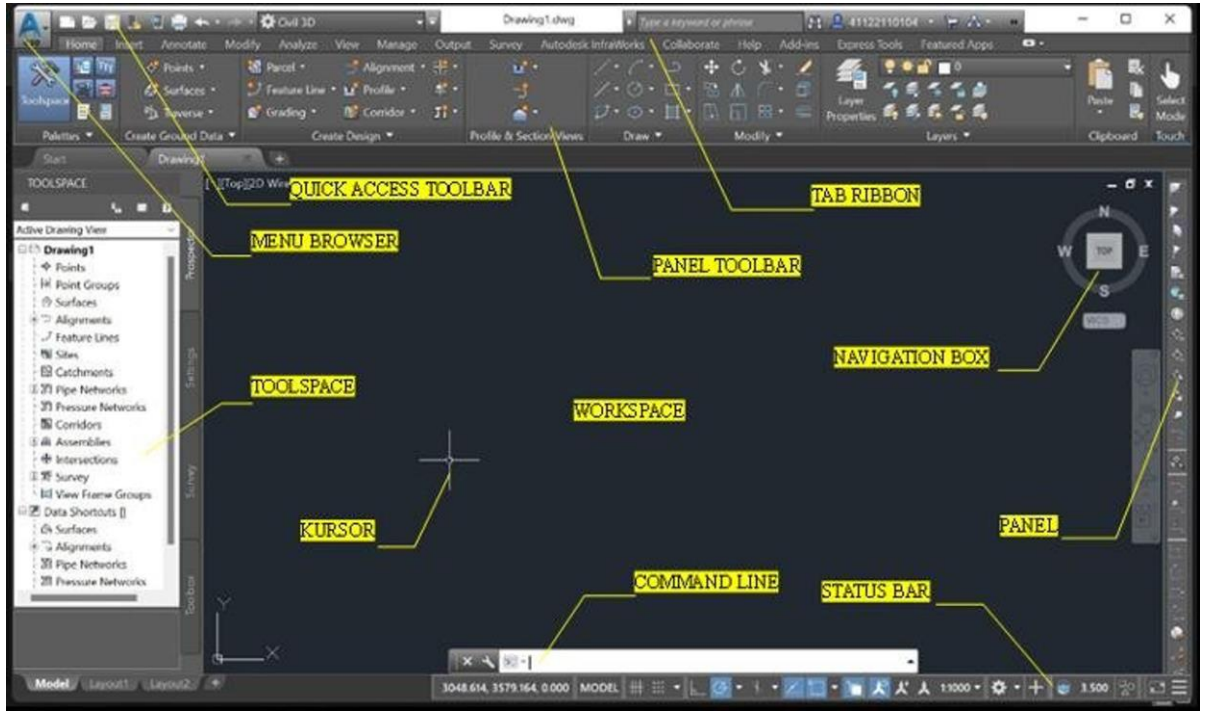
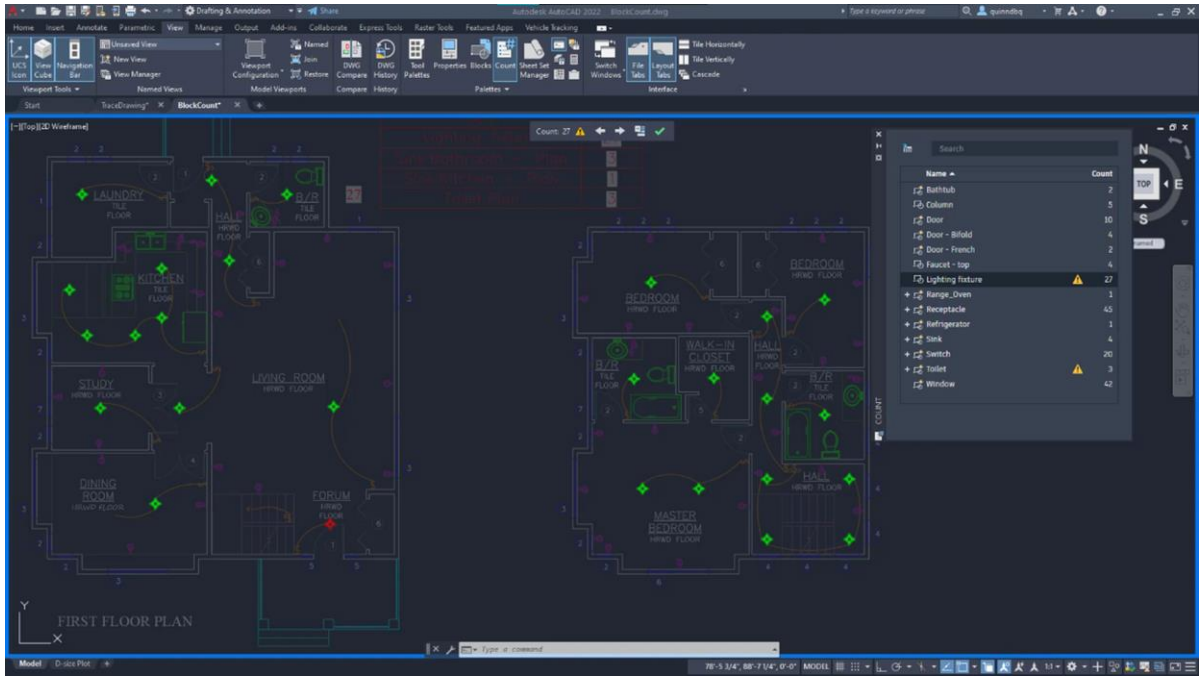


AUTOCAD

CIVIL



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WHAT CIVIL 3D CAN DO?

- ❑ Survey & Surface Modeling – Import points, create terrain models, analyze topography
- ❑ Alignment & Profile Design – Design roads, rail, and pipelines with precise geometry
- ❑ Corridor Modeling – Build 3D models for roads and compute quantities
- ❑ Pipe Network Design – Design storm, sewer, and water systems with flow analysis
- ❑ Grading & Earthworks – Automate grading and calculate cut/fill volumes
- ❑ Plan Production – Automate plan/profile sheets and dynamic annotations
- ❑ Data & BIM Integration – Collaborate via BIM 360, Infra Works, Revit & GIS
- ❑ Customization – Automate with Dynamo, Python, or .NET API

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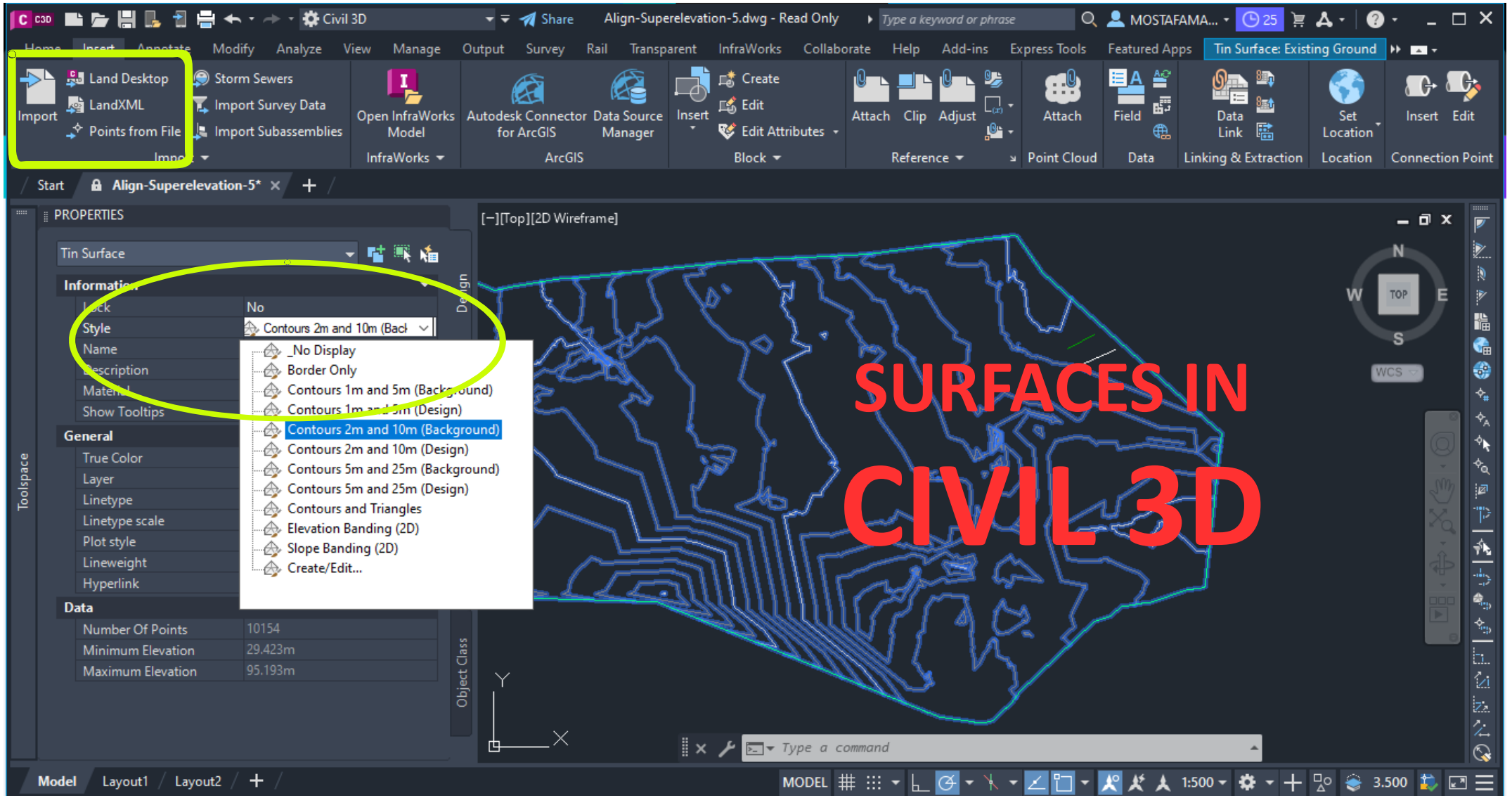
Civil 3D
Align-Superelevation-5.dwg - Read Only
Tin Surface: Existing Ground
Land Desktop
LandXML
Points from File
Import
Storm Sewers
Import Survey Data
Import Subassemblies
Open InfraWorks Model
Autodesk Connector for ArcGIS
Data Source Manager
Create
Edit
Edit Attributes
Attach
Clip
Adjust
Field
Data Link
Set Location
Insert
Edit
InfraWorks
ArcGIS
Block
Reference
Point Cloud
Data
Linking & Extraction
Location
Connection Point
Start
Align-Superelevation-5*
PROPERTIES
Tin Surface
Information
Style
Contours 2m and 10m (Background)
_No Display
Border Only
Contours 1m and 5m (Background)
Contours 2m and 10m (Design)
Contours 5m and 25m (Background)
Contours 5m and 25m (Design)
Contours and Triangles
Elevation Banding (2D)
Slope Banding (2D)
Create/Edit...
General
Data
Number Of Points
10154
Minimum Elevation
29.423m
Maximum Elevation
95.193m
[−][Top][2D Wireframe]
SURFACES IN
CIVIL 3D
Type a command
Model
Layout1
Layout2
MODEL
1:500
3.500

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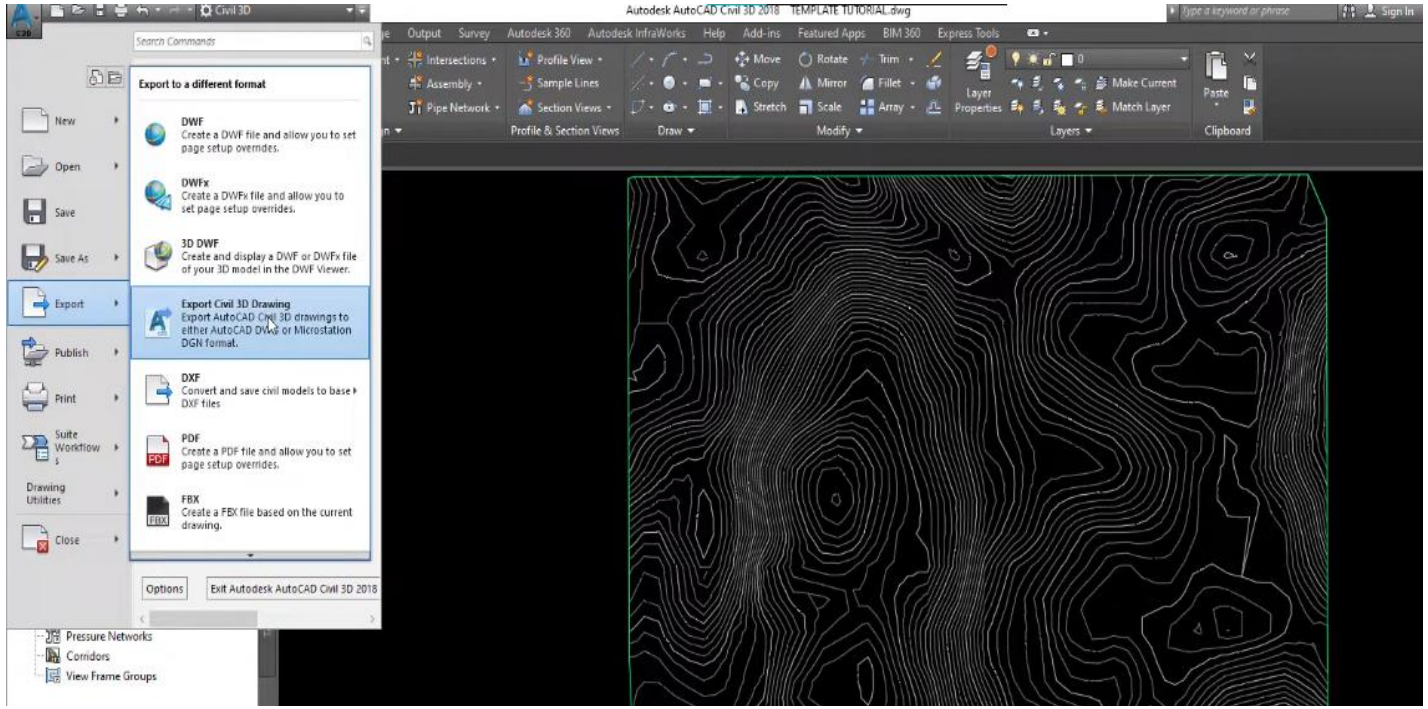
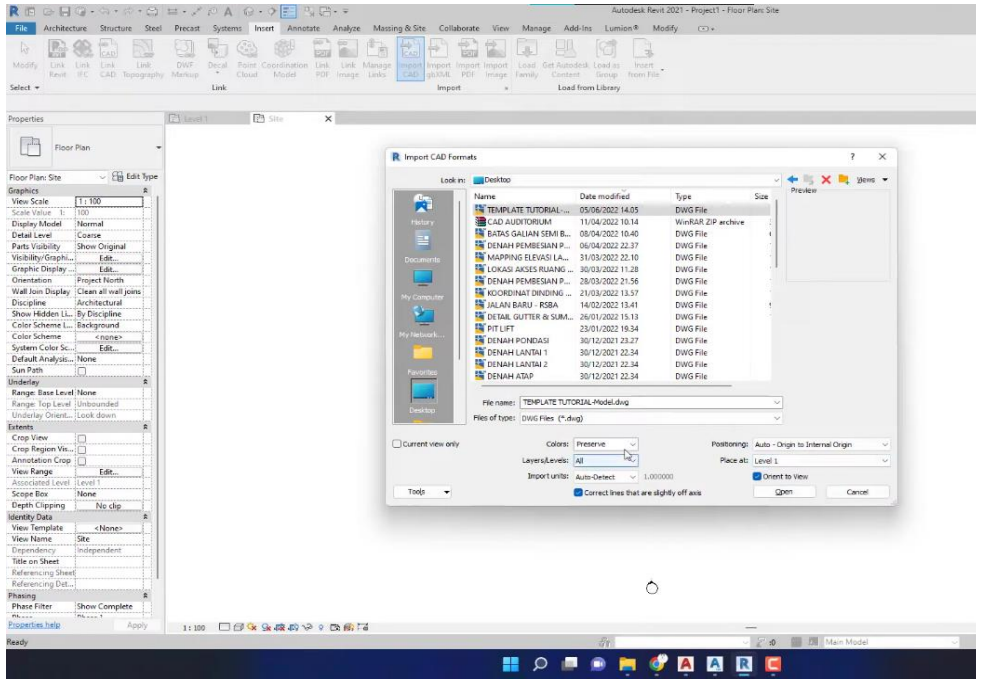
EXPORT SURFACE TO REVIT





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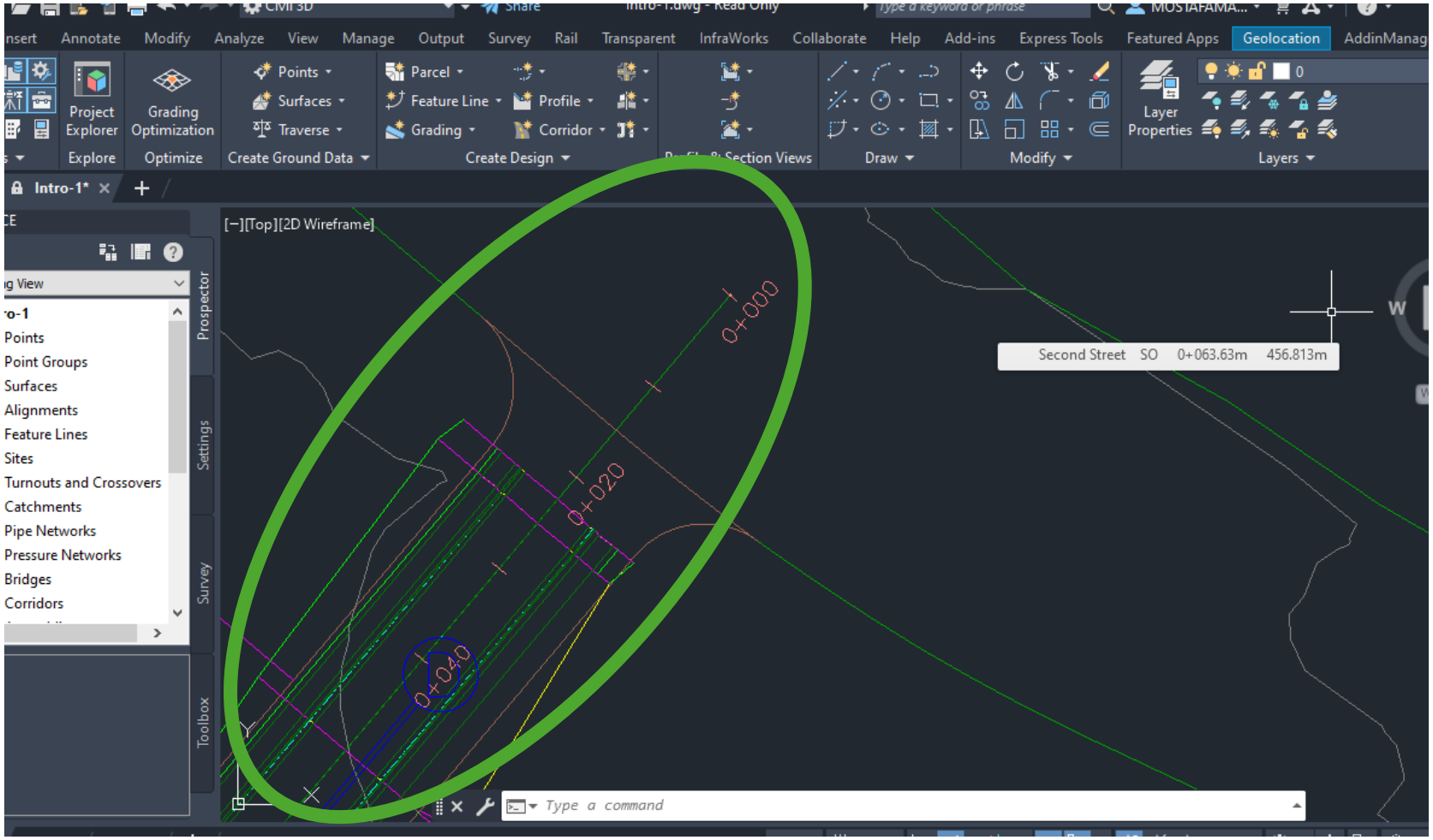
WHAT IS AN ALIGNMENT ?



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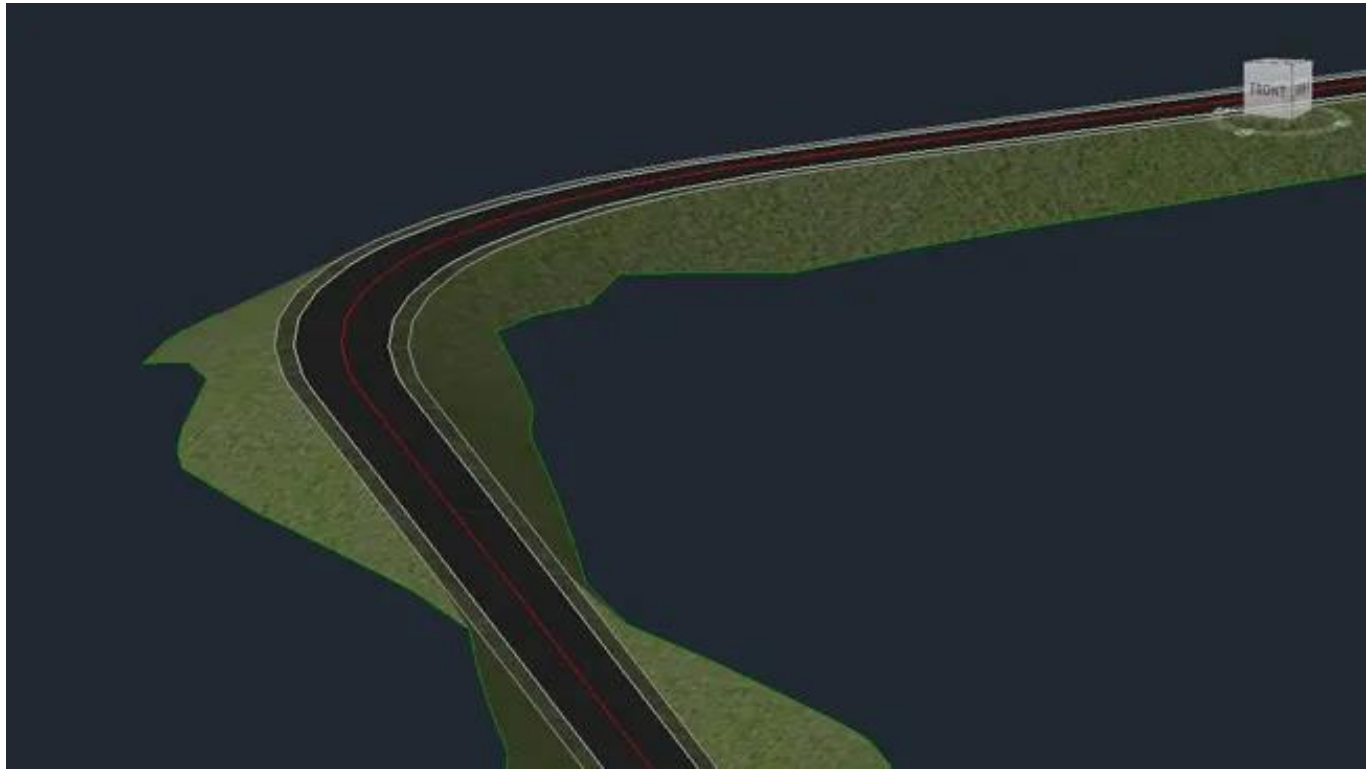
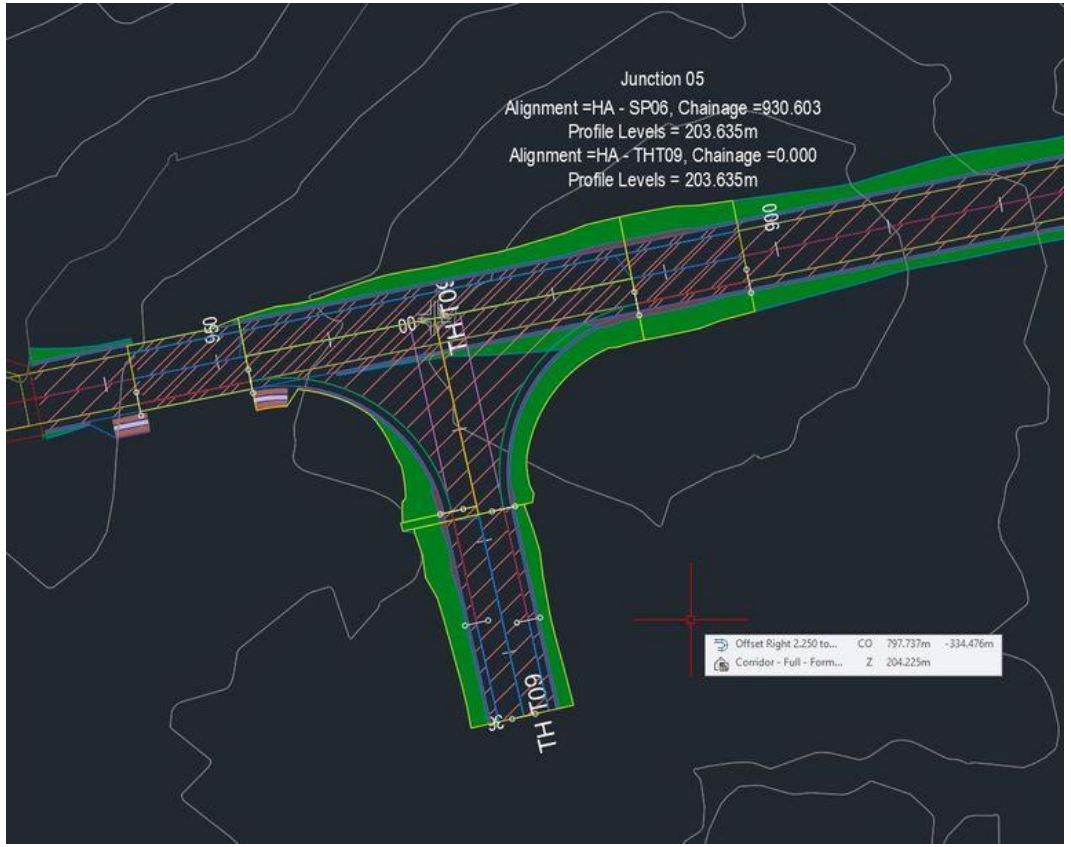
CORRIDOR MODELING





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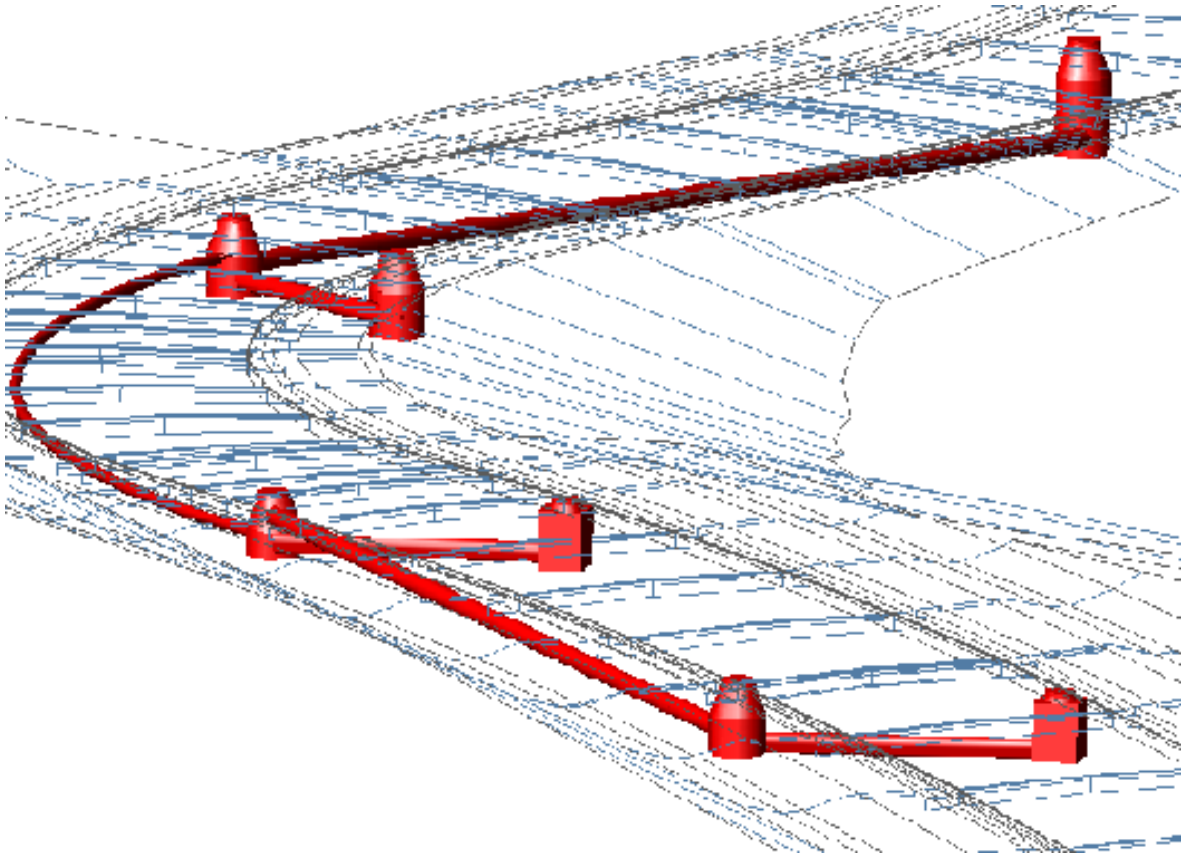
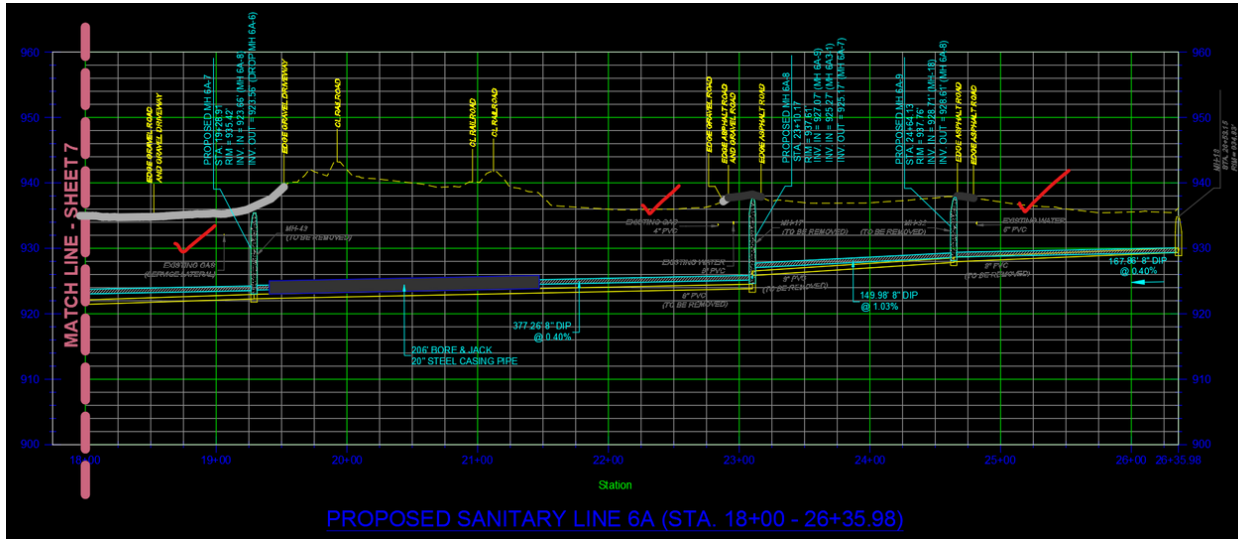
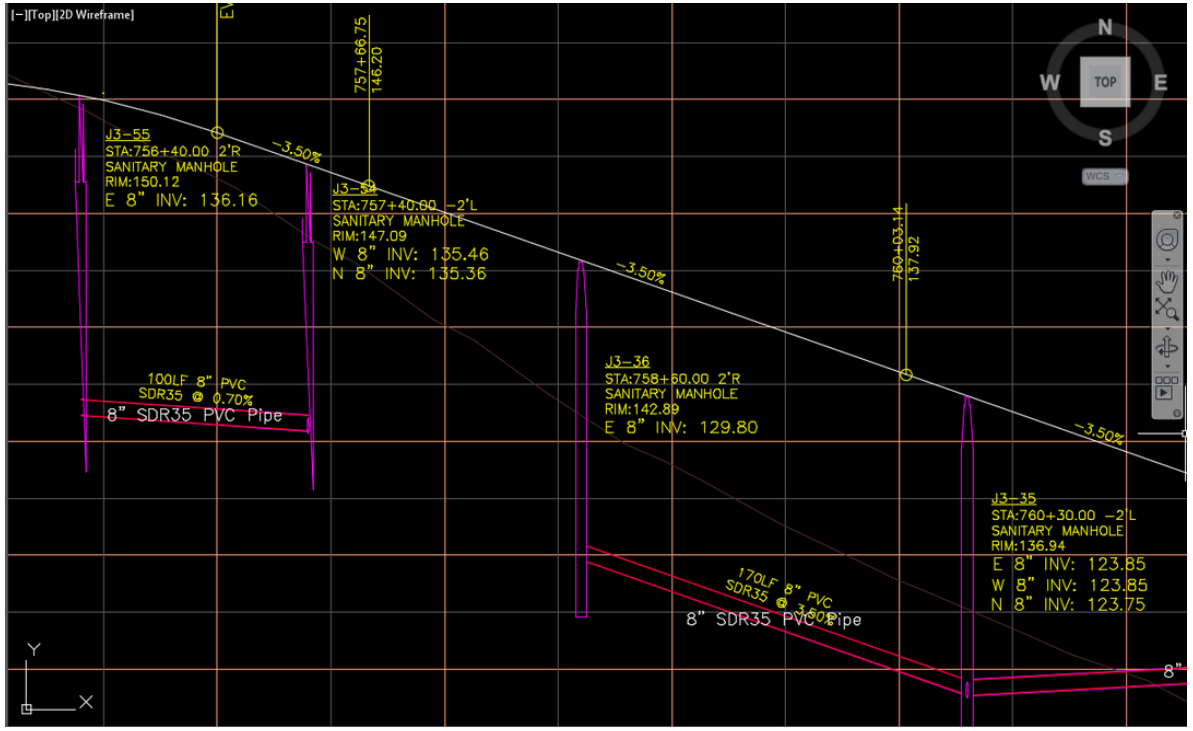
GRAVITY (PIPE) NETWORKS



PROFILE VIEW





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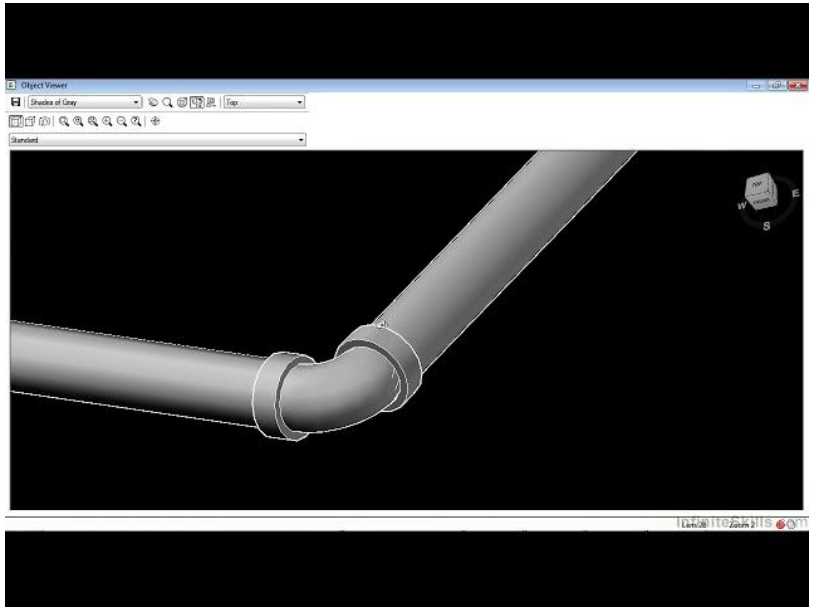
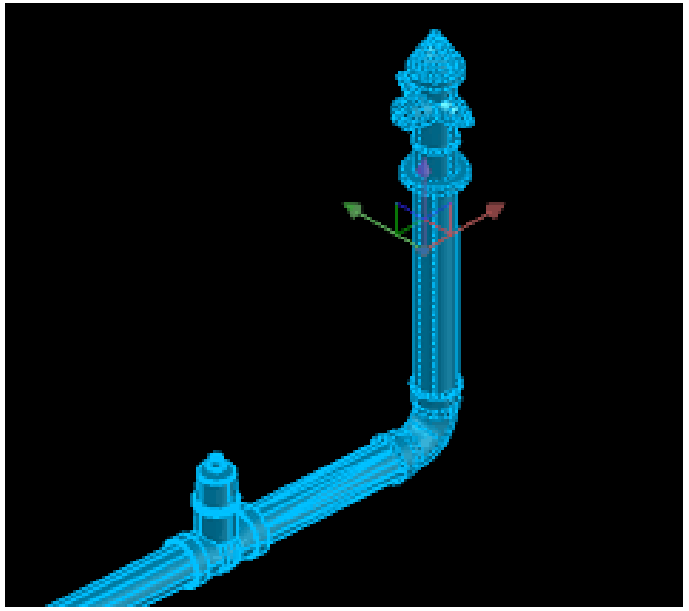
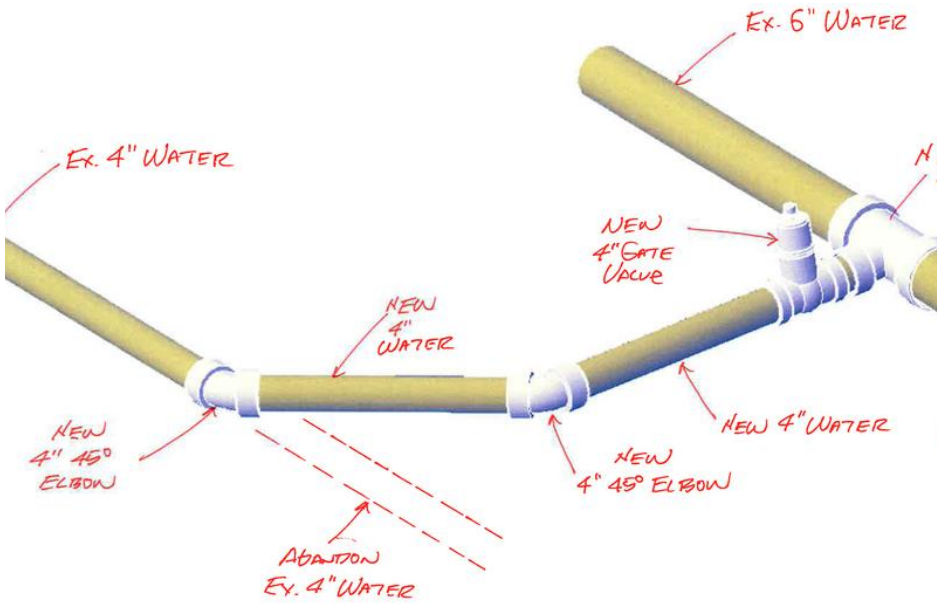
PRESSURE NETWORKS







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ELECTRICAL NETWORKS

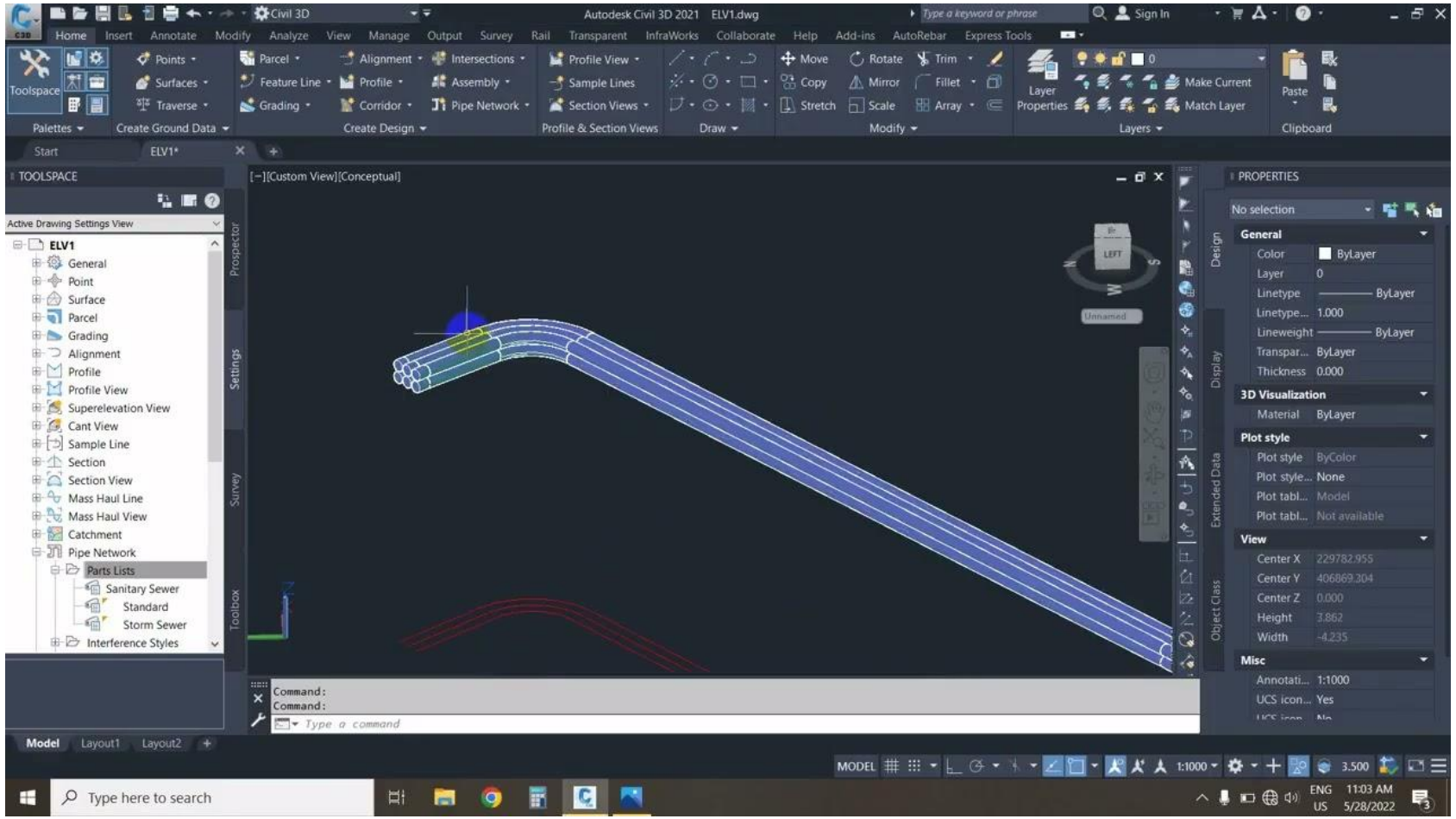
MV

LV

SL

SM

TEL



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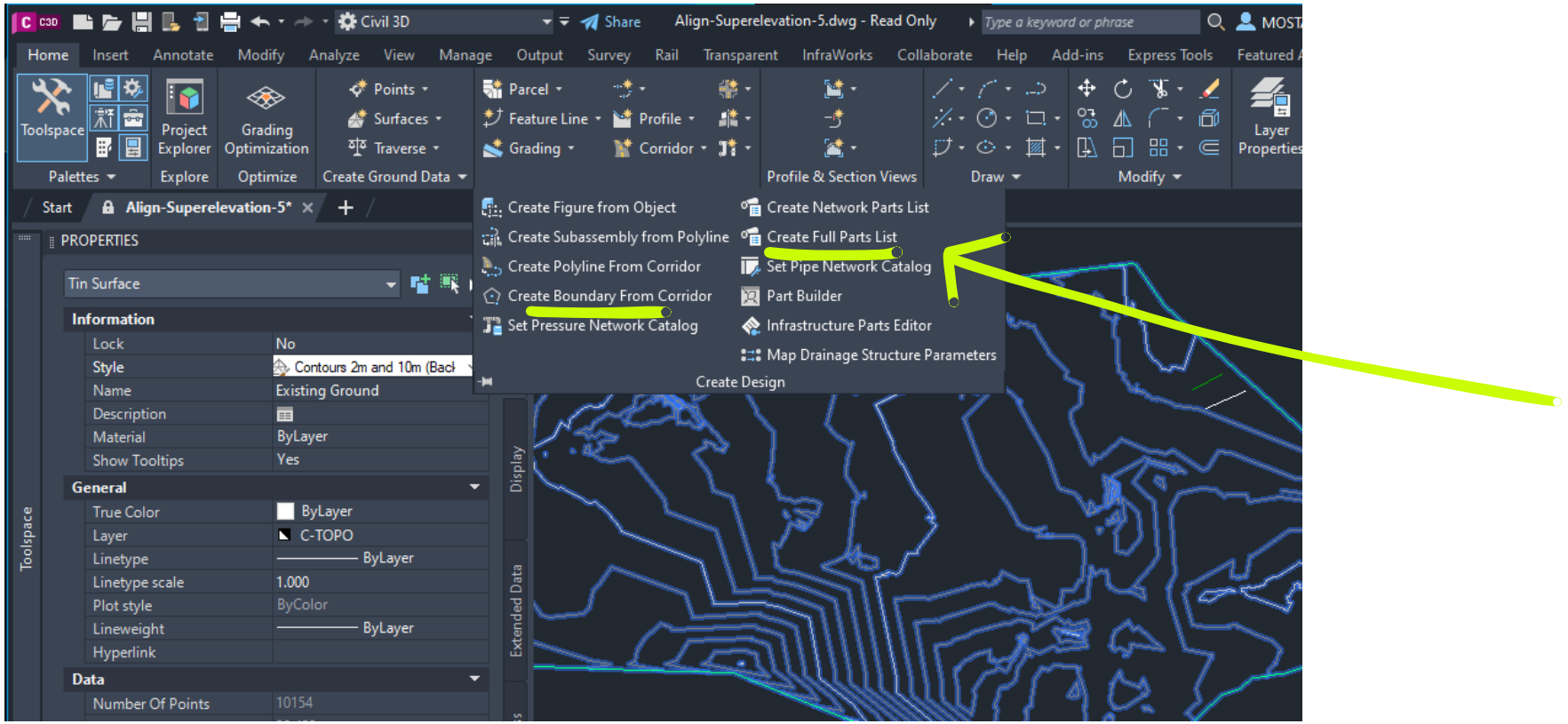
CATALOGS



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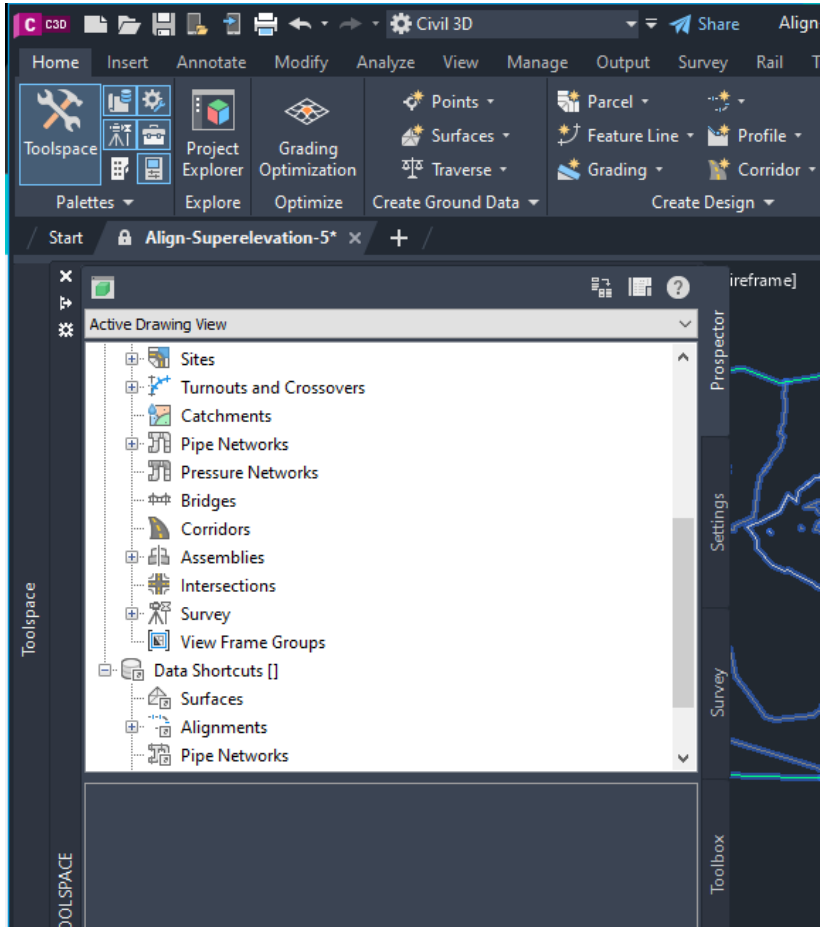
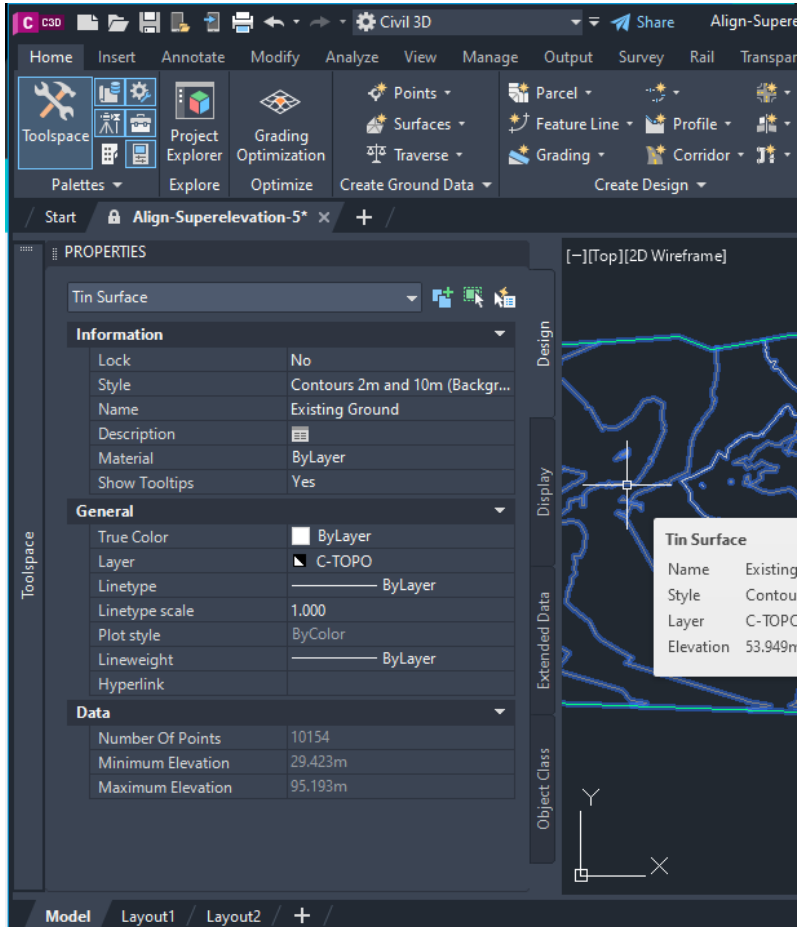
TOOLSPACE AND PROPERTIES





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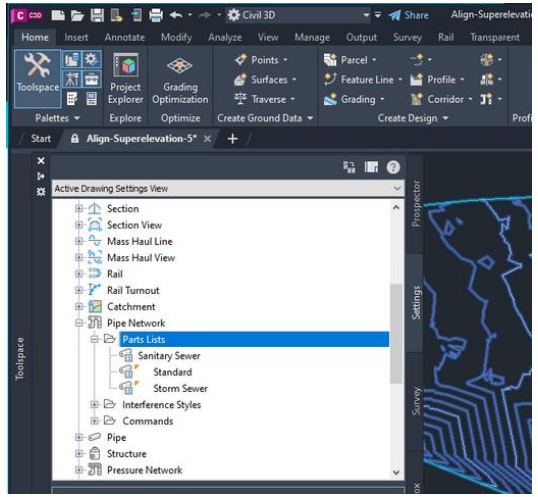
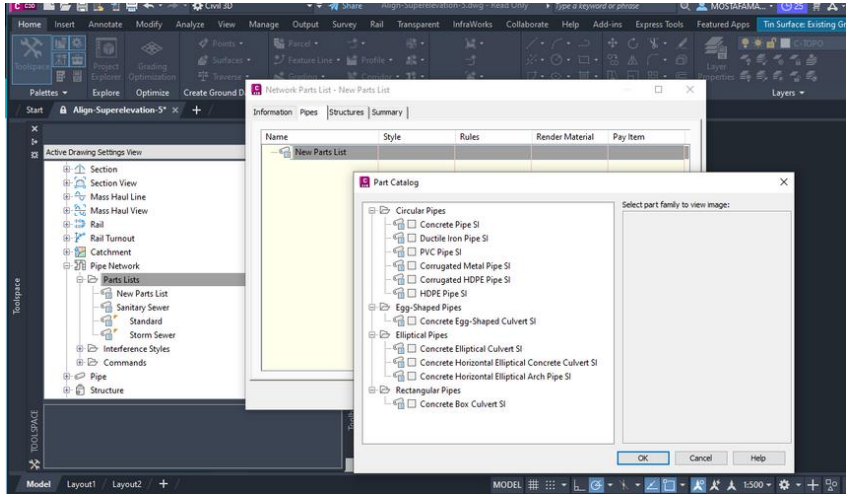
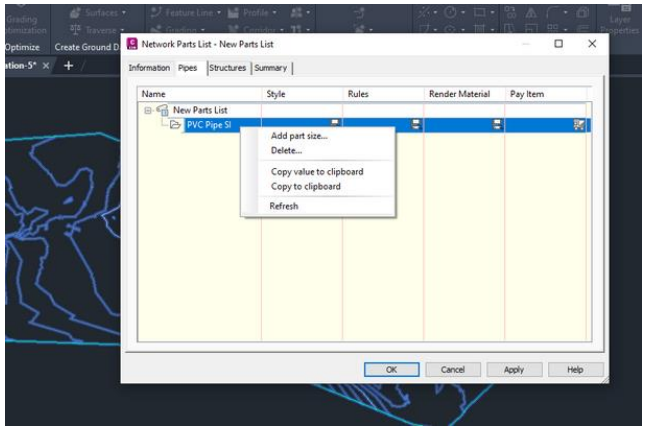
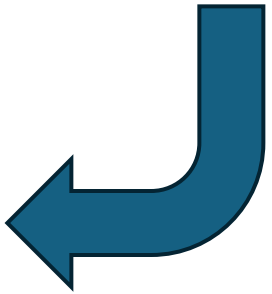
PART FAMILIES









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THANK YOU
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