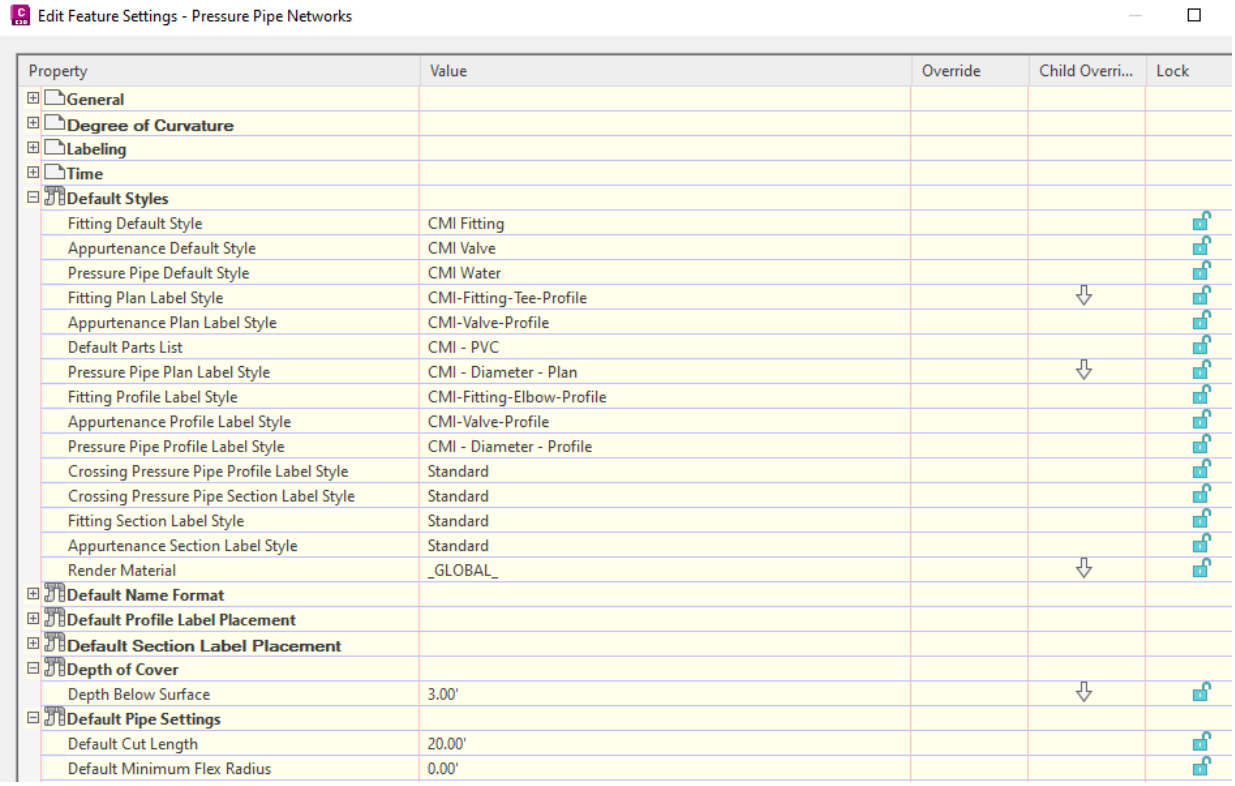
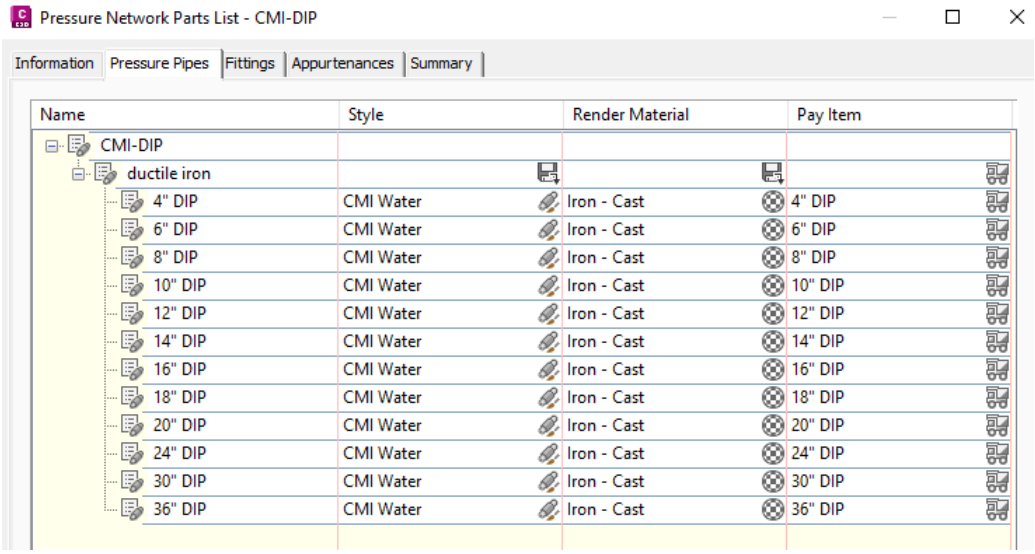
Cheat Sheet – Pressure Pipes

1. Edit the feature settings for the pressure network. Under the settings tab, right-click on “Pressure Network” and then select “Edit Feature Settings”.



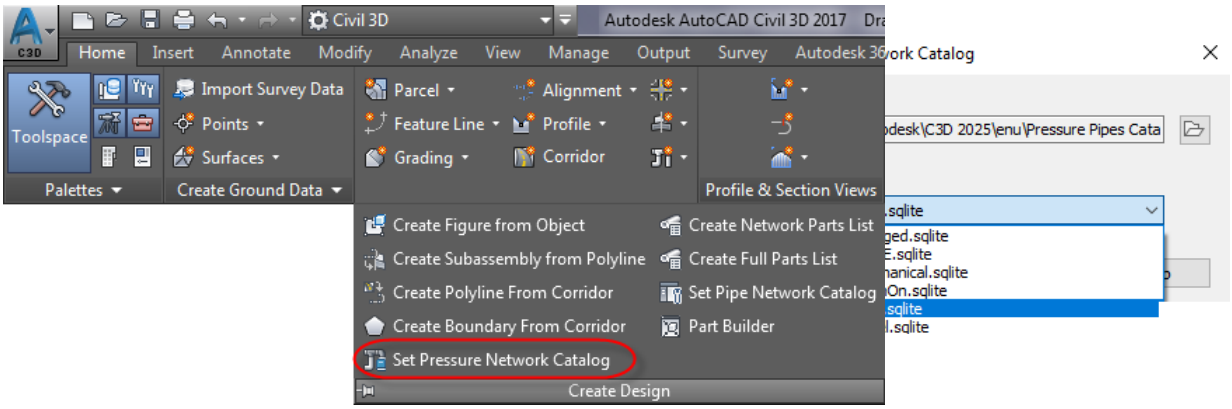
Property	Value	Override	Child Overri...	Lock
General				
Degree of Curvature				
Labeling				
Time				
Default Styles				
Fitting Default Style	CMI Fitting			
Appurtenance Default Style	CMI Valve			
Pressure Pipe Default Style	CMI Water			
Fitting Plan Label Style	CMI-Fitting-Tee-Profile			
Appurtenance Plan Label Style	CMI-Valve-Profile			
Default Parts List	CMI - PVC			
Pressure Pipe Plan Label Style	CMI - Diameter - Plan			
Fitting Profile Label Style	CMI-Fitting-Elbow-Profile			
Appurtenance Profile Label Style	CMI-Valve-Profile			
Pressure Pipe Profile Label Style	CMI - Diameter - Profile			
Crossing Pressure Pipe Profile Label Style	Standard			
Crossing Pressure Pipe Section Label Style	Standard			
Fitting Section Label Style	Standard			
Appurtenance Section Label Style	Standard			
Render Material	_GLOBAL_			
Default Name Format				
Default Profile Label Placement				
Default Section Label Placement				
Depth of Cover				
Depth Below Surface	3.00'			
Default Pipe Settings				
Default Cut Length	20.00'			
Default Minimum Flex Radius	0.00'			

2. Right-click the part list you wish to use and select the edit button.



Name	Style	Render Material	Pay Item
CMI-DIP			
ductile iron			
4" DIP	CMI Water	Iron - Cast	4" DIP
6" DIP	CMI Water	Iron - Cast	6" DIP
8" DIP	CMI Water	Iron - Cast	8" DIP
10" DIP	CMI Water	Iron - Cast	10" DIP
12" DIP	CMI Water	Iron - Cast	12" DIP
14" DIP	CMI Water	Iron - Cast	14" DIP
16" DIP	CMI Water	Iron - Cast	16" DIP
18" DIP	CMI Water	Iron - Cast	18" DIP
20" DIP	CMI Water	Iron - Cast	20" DIP
24" DIP	CMI Water	Iron - Cast	24" DIP
30" DIP	CMI Water	Iron - Cast	30" DIP
36" DIP	CMI Water	Iron - Cast	36" DIP

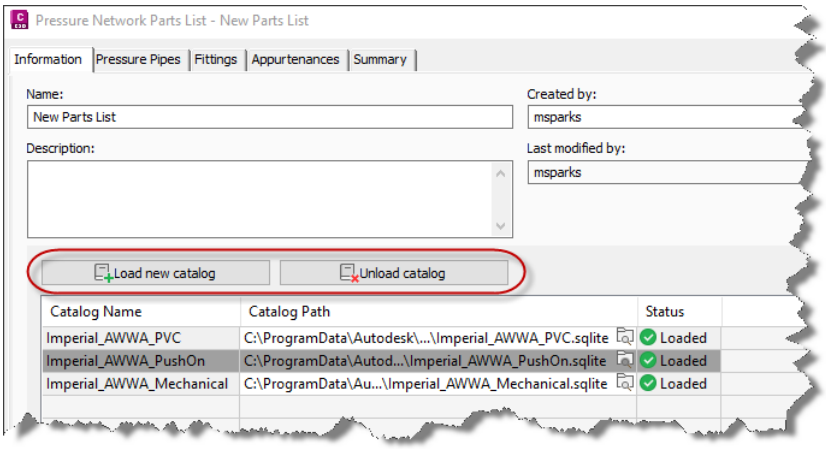
3. Create and Edit a Parts List



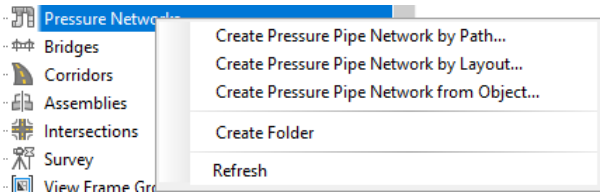
Set the catalog to the desired material and then create a new parts list for that material. For example, PVC contains a fire hydrant, while others do not.

CMI - PVC				
Butterfly Valve_ DI_ FF_ Long Body_ Class 150A_ AWWA C504				
Butterfly Valve_ DI_ FF_ Long Body_ Class 150B_ AWWA C504				
Butterfly Valve_ DI_ FF_ Long Body_ Class 250B_ AWWA C504				
Butterfly Valve_ DI_ FF_ Short Body_ Class 150A_ AWWA C504				
Butterfly Valve_ DI_ FF_ Short Body_ Class 150B_ AWWA C504				
Butterfly Valve_ DI_ FF_ Short Body_ Class 250B_ AWWA C504				
Butterfly Valve_ DI_ MJF_ Class 250B_ AWWA C504				
Butterfly Valve_ DI_ WFR_ FF_ AWWA C504				
Gate Valve_ FF_ 200 PSI_ AWWA C500				
Gate Valve_ FF_ NRS_ 200 PSIG_ AWWA C509				
Gate Valve_ FF_ OS&Y_ 200 PSIG_ AWWA C509				
Gate Valve_ FFxMJF_ NRS_ 200 PSIG_ AWWA C509				
Gate Valve_ MJF_ 200 PSIG_ AWWA C509				
Gate Valve_ MJF_ 200 PSI_ AWWA C500				
Gate Valve_ MJF_ with Bypass_ 150 PSI_ AWWA C500				
Gate Valve_ MJF_ without Bypass_ 150 PSI_ AWWA C500				
Gate Valve_ MJxMJ BELL_ MJF_ 200 PSIG_ AWWA C509				
Gate Valve_ PFS_ 200 PSIG_ AWWA C509				
Hydrant_ MJ				
Hydrant_ 42in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	
Hydrant_ 48in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	
Hydrant_ 54in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	
Hydrant_ 60in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	
Hydrant_ 66in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	
Hydrant_ 72in_ Bury Depth_ MJ	CMI Fire Hydrant	ByLayer	[none]	

Civil 3D allows you to add mutliple catelogs to parts list (see figure below). This way the software allows companies to have one parts list for all needed parts as an option.

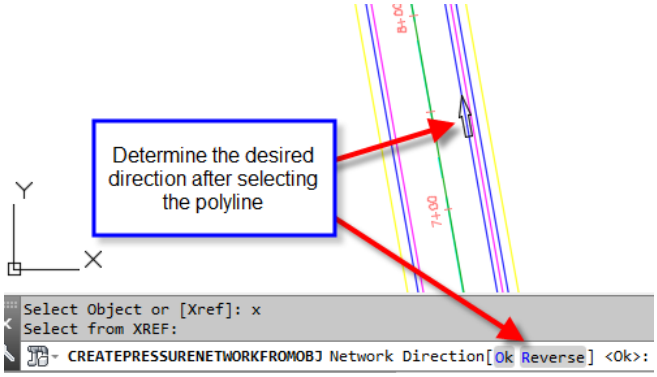


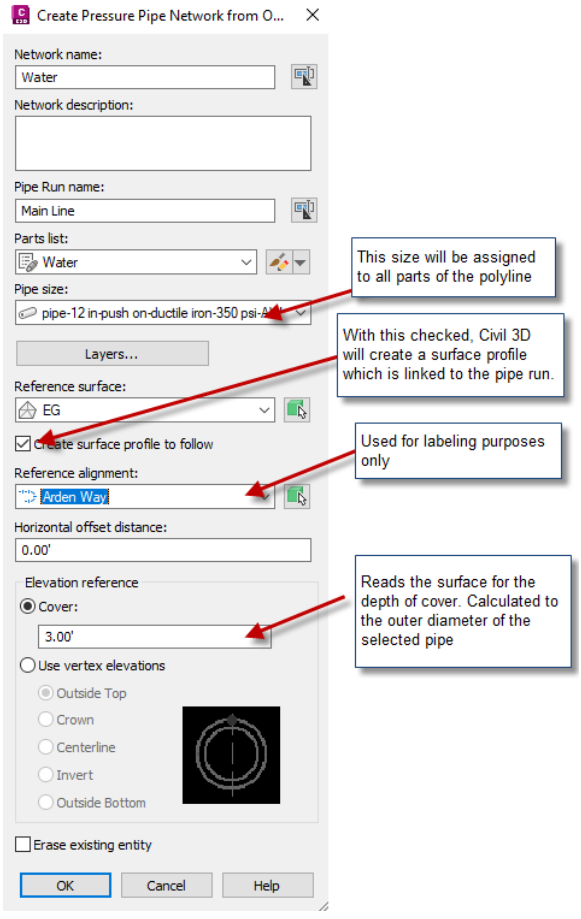
4. Three choices for creating a pressure pipe network: (a) Create from Object, (b) Create By Layout (c) Create By Path



CAD Masters recommends that you use by path or from object, this way the pressure pipe network will be linked to an alignment and profile pairing.

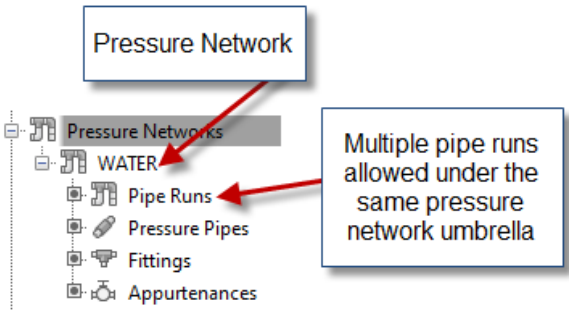
a. "Home" ribbon tab > Pipe Network > Create Pressure Network from Object



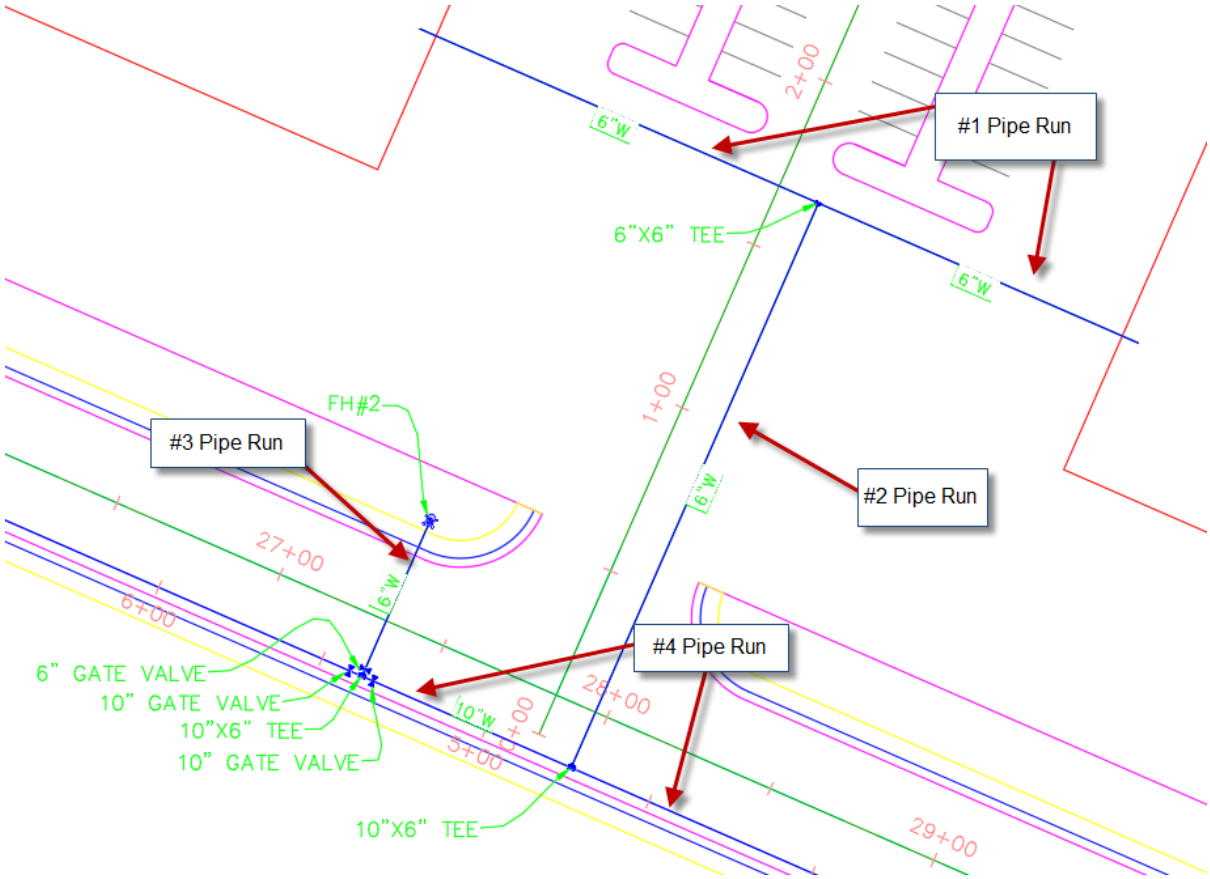


b. Create Profile View for the newly created pressure pipe network.

Many times, the pipe network will be shown on a different alignment. The edits will be done on the associated alignment and profile view associated to the pressure pipe network.



Example of Defining Pipe Runs



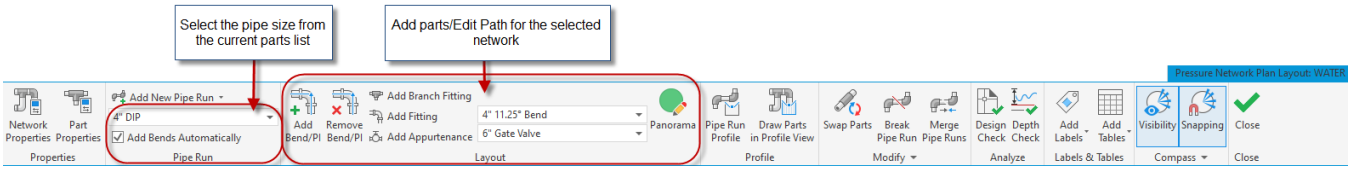
5. “Modify” ribbon tab > Pressure Pipe Network > Network Tools > Draw Parts in Profile

   Either select the entire pipe network or select the parts you wish to show in the profile view. You can also click on a part, then right-click and choose add part to profile view. This is also available in the right-click menu after selecting a part. Alternatively, use the Pipe Network tab of the Profile View Properties to turn pipes on and off.

6. “Pressure Network” ribbon tab > Add Labels ... or "Home" tab > Add Labels

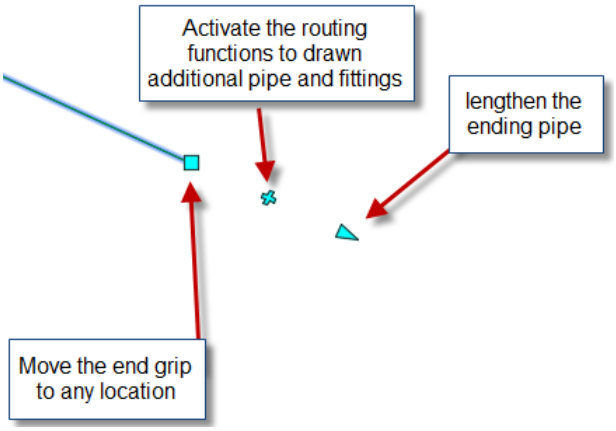
Different Methods of Editing a Pressure Network

1. Plan View (Select Pressure Pipe in Plan View)



   a. Add/Remove PI's will automatically add a bend and update the linked alignment and profile.

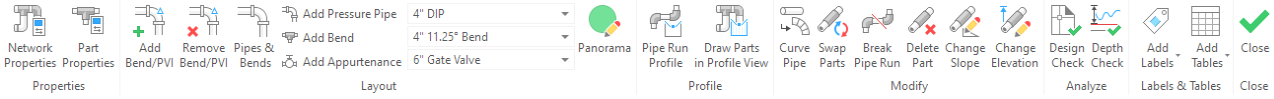
   b. At the end of the pipe run, you can use the grips.



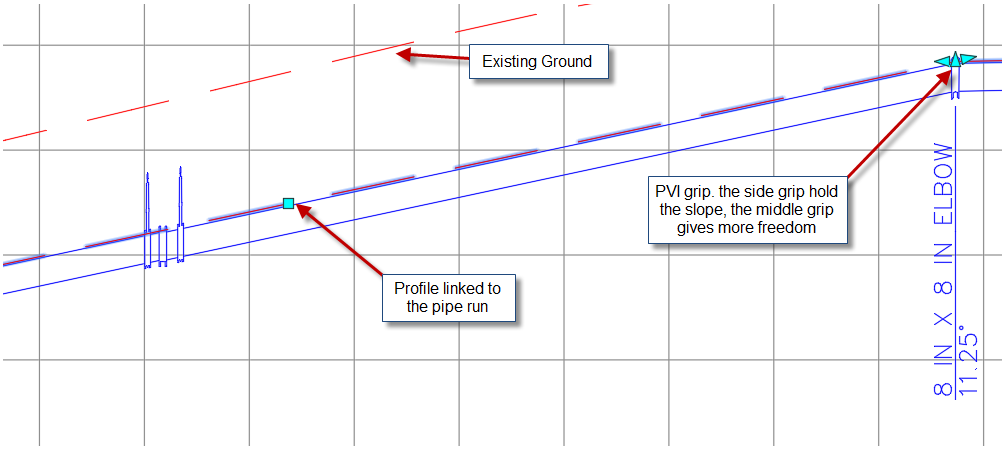
   c. Under the Layout panel, you can also manually place fittings and appurtenances

   d. The Branch Fitting function will connect two different pipe runs, either with T's or Cross fittings.

2. Profile View (Select Pressure Pipe in Profile View)

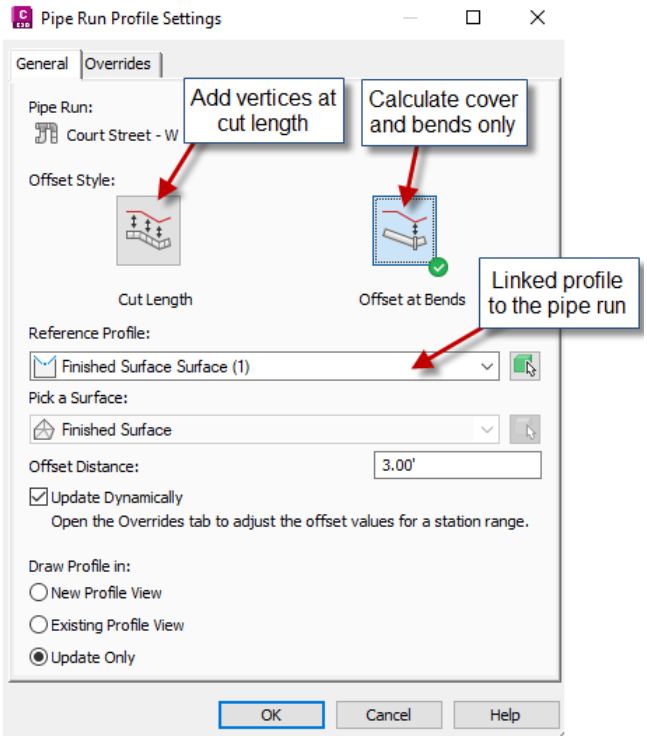


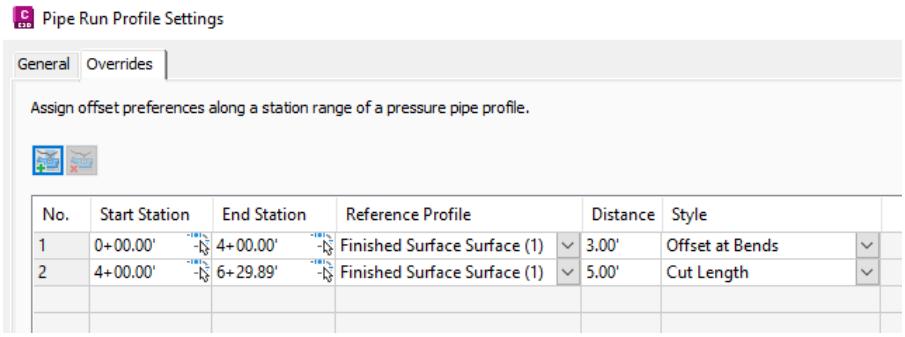
   a. Use grips to edit the



b. Pipe Run Profile

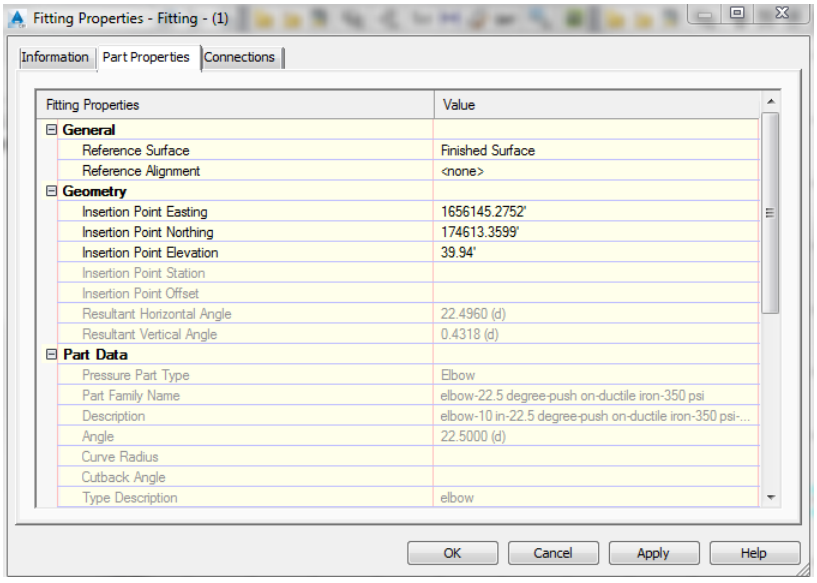
This command allows you to edit the profile and override station ranges of the linked profile.



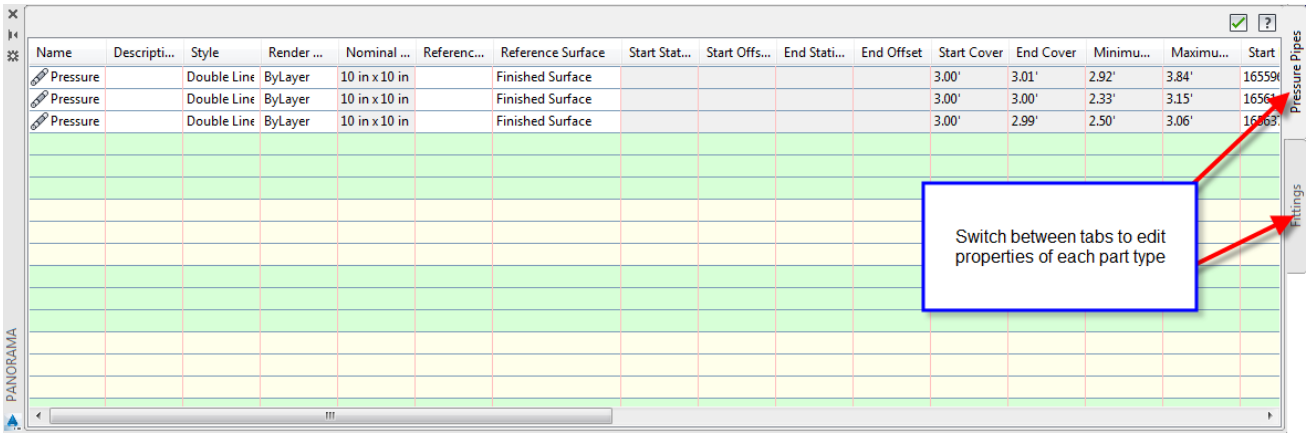


3. Pipe and Fitting Properties

Pressure Pipe Properties	Value
General	
Reference Surface	Finished Surface
Reference Alignment	<none>
Geometry	
Start Part	
End Part	Fitting - (1)
Bearing	S80° 42' 04"E
Start Station	
End Station	
Start Offset	
End Offset	
Slope	-0.65%
Pipe Start Easting	1655969.5002'
Pipe Start Northing	174642.1404'
Pipe End Easting	1656144.9052'
Pipe End Northing	174613.4205'
Start Centerline Elevation	38.78'
End Centerline Elevation	39.93'
Start Invert Elevation	38.36'
End Invert Elevation	39.52'
Start Outside Crown Elevation	39.24'
End Outside Crown Elevation	40.40'
2D Length	177.74'
3D Length	177.74'
Minimum Cover	2.92'
Maximum Cover	3.84'
Part Data	
Part Family Name	pipe-push on-ductile iron-350 psi
Description	pipe-10 in-push on-ductile iron-350 psi-AWWA C151
Cut Length	18.00'
Diameter Inside	
Diameter Outside	11.100"
Type Description	standard
Minimum Flex Radius	0.00'
Thickness	0.550"
Nominal Diameter Description	10 in x 10 in
Id Coating Inside	
Id Coating Outside	
Id Material	ductile iron
Pressure Class	350psi
Maximum Pressure	
Schedule	
SDR	
Series	
Strength Class	
Thickness Class	
Compatible Standard	AWWA C151
Connection Point Count	2
Fid Manufacturer	
Model Name	
Version Number	



4. Using the Edit Pipe Network Vista.



5. Other Tips and Tricks

   a. Use the Swap Part command to change one or more pressure parts. This command is in the ribbon if you select and pressure part first.

   b. To select an individual part, you must select it twice. The first time it will select the entire pipe run, the second time it will select the individual part.

   c. Use Design Check and Depth Check to analyze the pressure network for open connections and cover violations.