

Cheat Sheet – Pipes – 2011

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

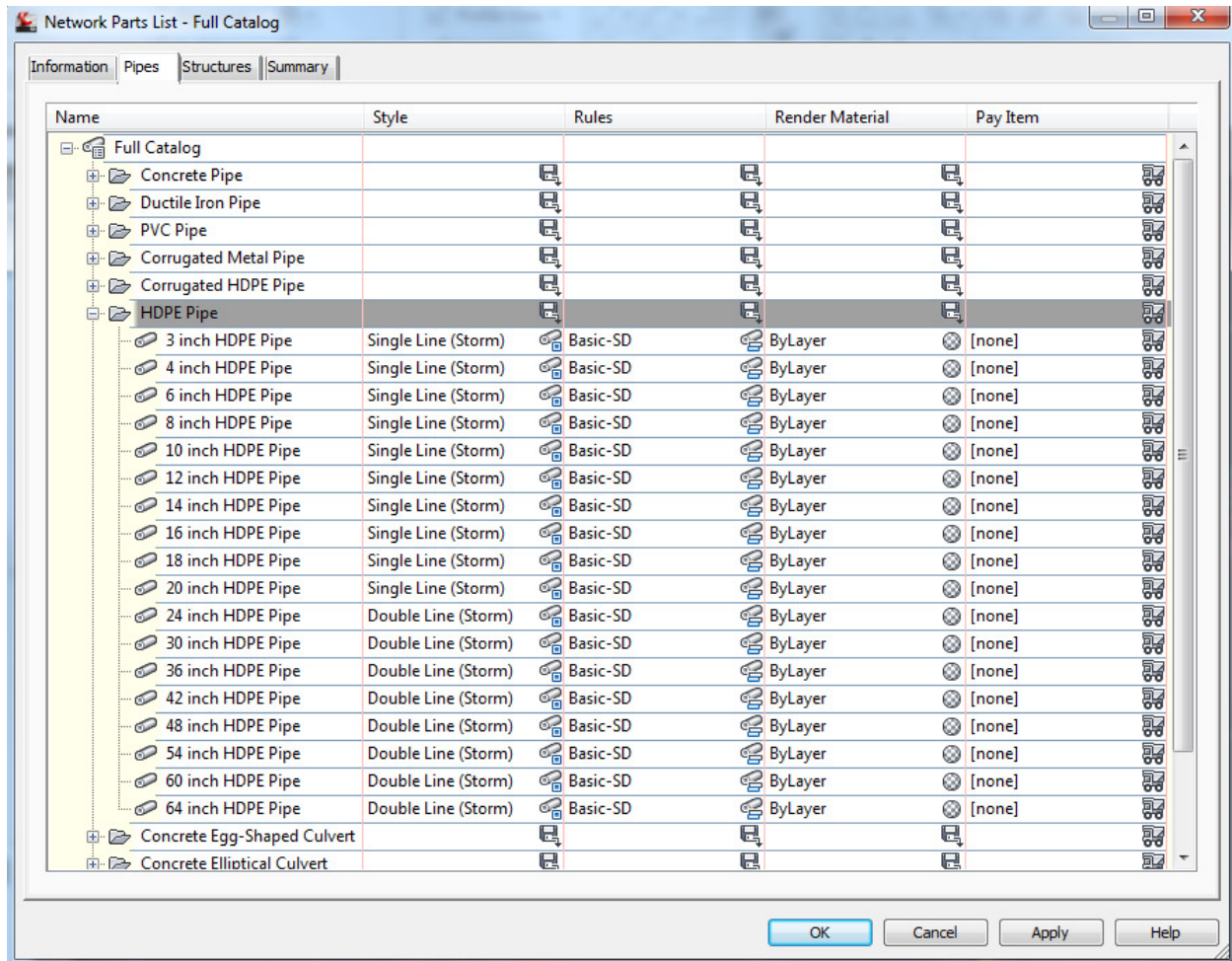
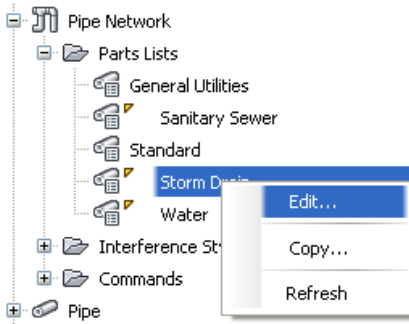


Property	Value	Override	Child Override	Lock
General				
Labeling				
Default Styles				
Interference Default Style	Basic			
Pipe Default Style	SD Double Line			
Structure Default Style	SD Catch Basin			
Interference Render Material	ByLayer			
Structure Plan Label Style	Plan Name Station Northing Eas...			
Pipe Plan Label Style	Plan Length Size Material			
Structure Profile Label Style	Profile Above Name Sta Rim + P...			
Pipe Profile Label Style	Profile Length Size Material Slop...			
Structure Section Label Style	Profile Above Name Sta Rim + P...			
Pipe Section Label Style	Above Name Size + Inv Elev			
Render Material	ByLayer			
Default Parts List	Storm Drain			
Default Name Format				
Interference Check Name Template	InterferenceCheck - (<[Next C...			
Network Name Template	Network - (<[Next Counter(CP)...			
Interference Name Template	Interference - (<[Next Counter...			
Alignment From Network Name Template	Alignment - (<[Pipe Network Na...			
Structure Name Template	MH# <[Next Counter]>			
Pipe Name Template	SD# <[Next Counter]>			
Default Rules				
Pipe Default Rules	Basic			
Structure Default Rules	Basic			
Storm Sewers Migration Defaults				
Part Matching Defaults	Standard			
Parts List Used For Migration	Standard			
Default Profile Label Placement				
Dimension Anchor Option for Pipes	Fixed			
Dimension Anchor Elevation Value for ...	0.00'			
Dimension Anchor Plot Height Value fo...	0.0000"			
Dimension Anchor Option for Structures	Fixed			
Dimension Anchor Elevation Value for ...	0.00'			
Dimension Anchor Plot Height Value fo...	0.0000"			
Structure Label Placement	At Top of Structure			
Default Section Label Placement				
Dimension Anchor Option for Pipes	Fixed			
Dimension Anchor Elevation Value for ...	0.00'			
Dimension Anchor Plot Height Value fo...	0.0000"			
Dimension Anchor Option for Structures	Fixed			
Dimension Anchor Elevation Value for ...	0.00'			
Dimension Anchor Plot Height Value fo...	0.0000"			
Structure Label Placement	At Top of Structure			
Pipe Section Label Placement	At Bottom of Pipe			

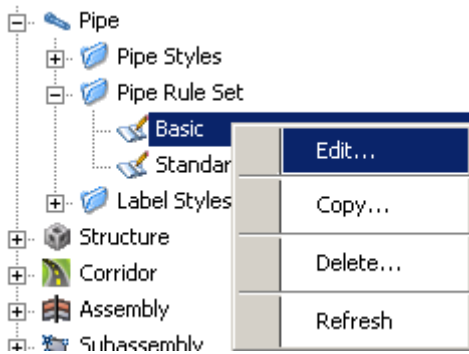
Set all default styles here. Typically you'll need a different style for both plan and profile for each object type.



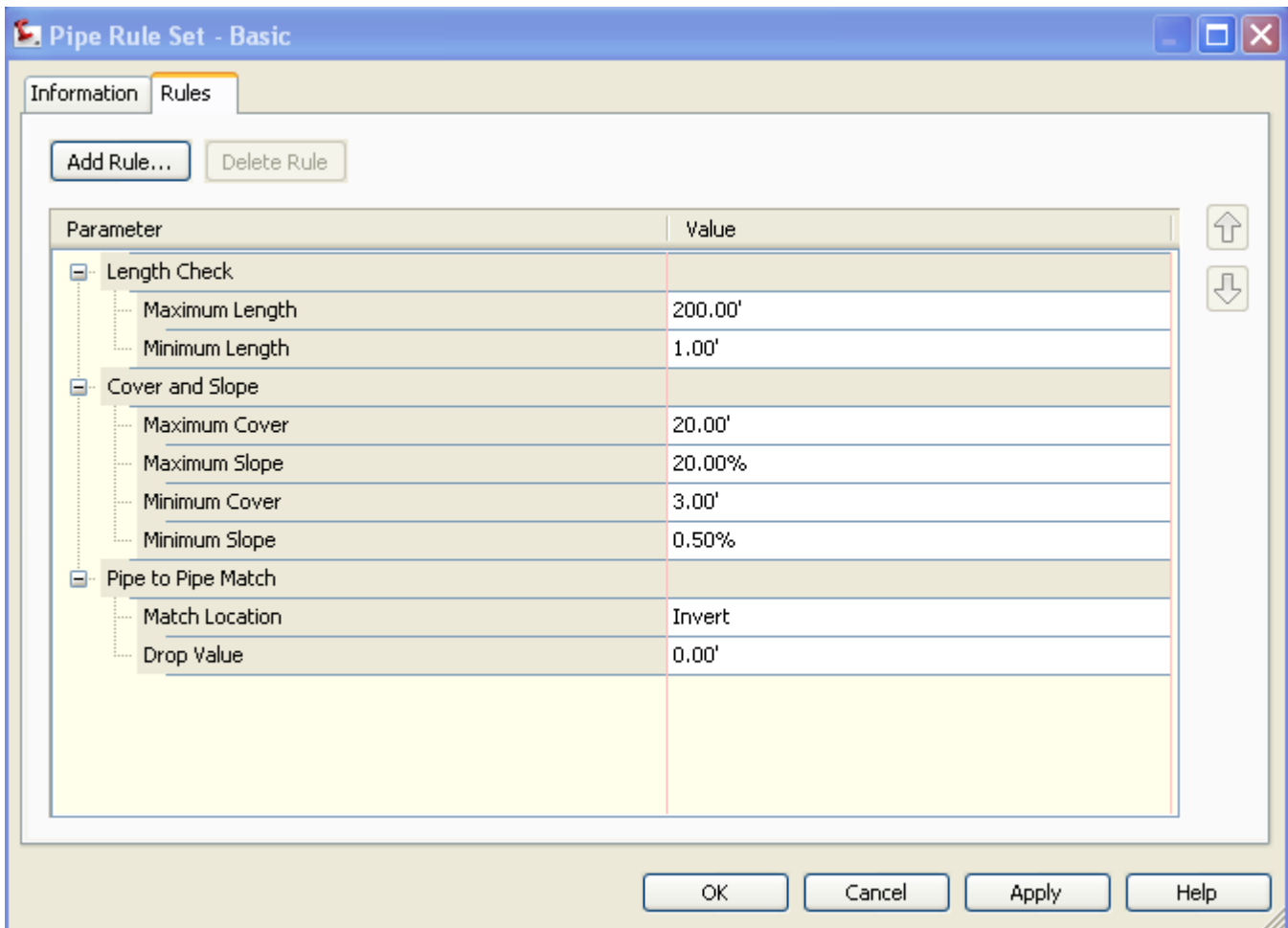
2. Right-click the part list you wish to use and select the edit button.



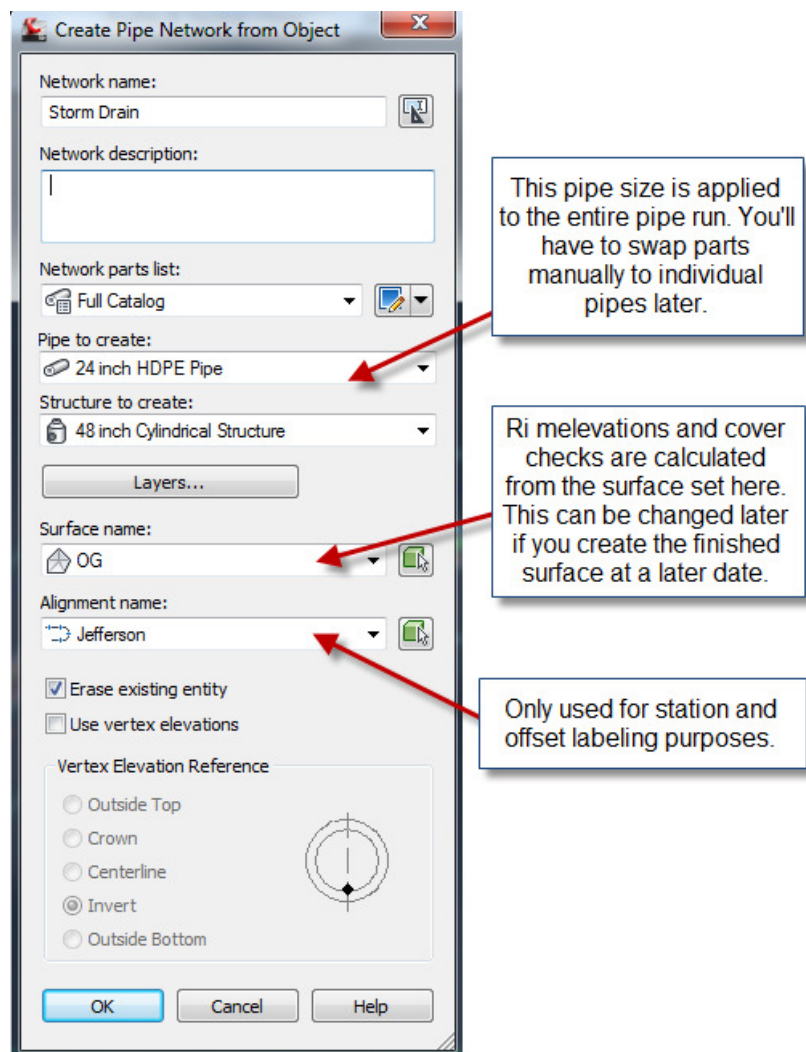
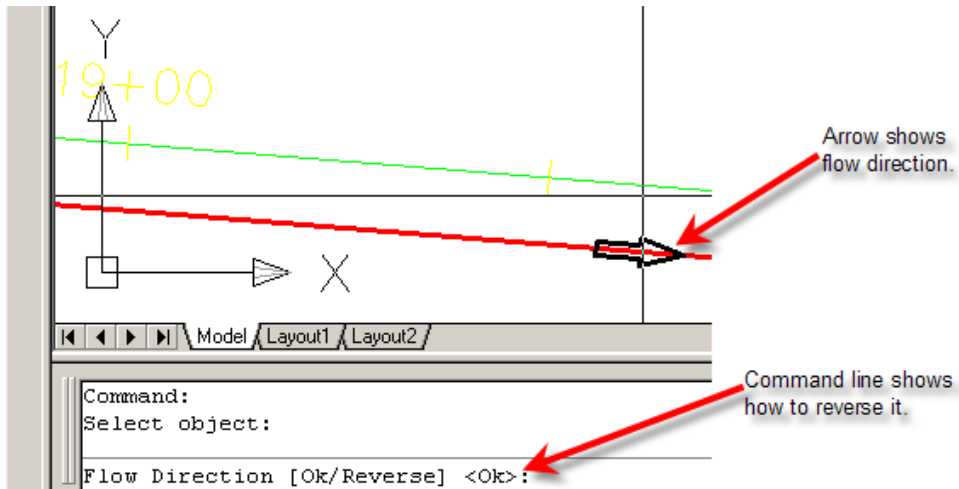
3. Right-click the “Basic” rule set, and then select edit.



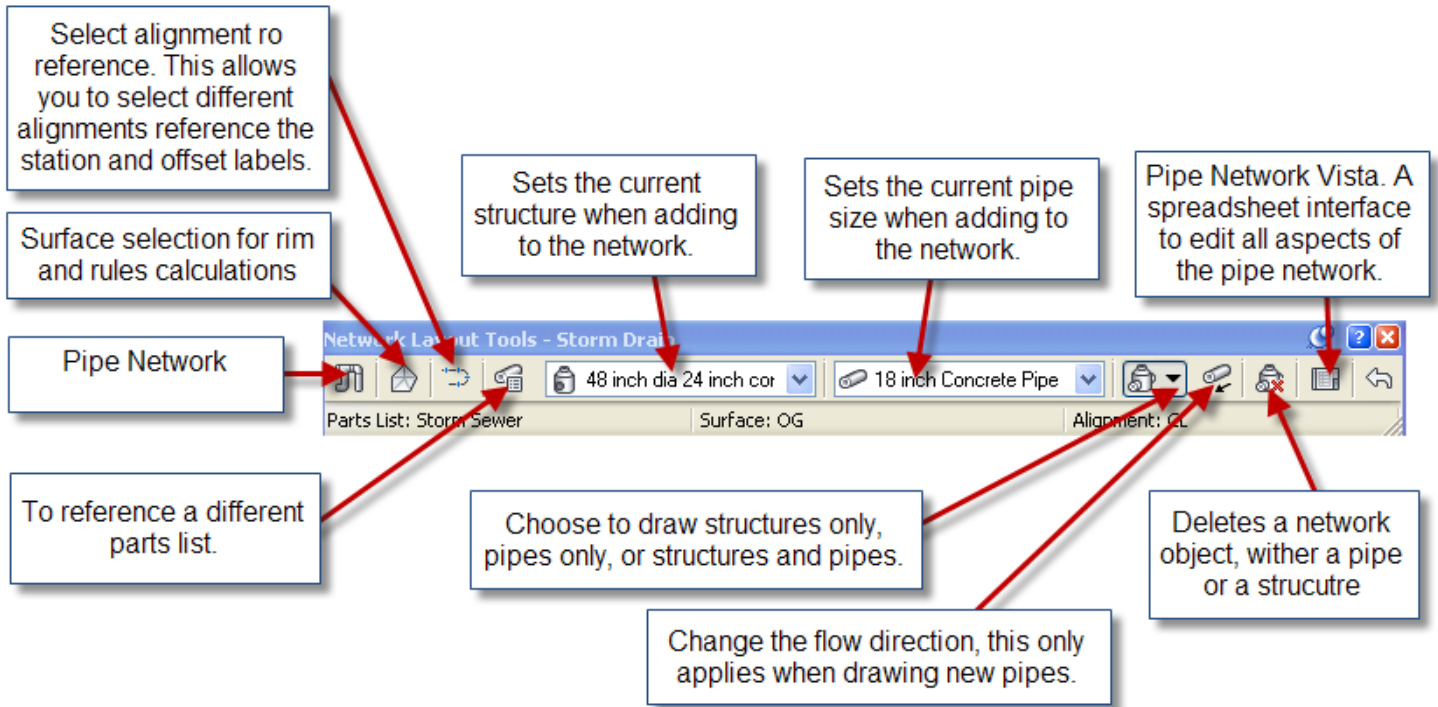
Add and delete the desired rules and change the order to determine how they react.



4. This next step is to either draw the pipe run or convert a polyline to a pipe network. You should make a note to realize that structures and pipes can only be connected together if they are in the same pipe network. Therefore you can start with one polyline, but then you need to edit the network in order to add more objects to the pipe network.
 - a. **“Home” ribbon tab > Pipe Network > Create Pipe Network from Object**



b. When editing a pipe network or creating a pipe network by **“Home” ribbon tab > Pipe Network > Create Pipe Network from Object**



5. **“Modify” ribbon tab > 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.

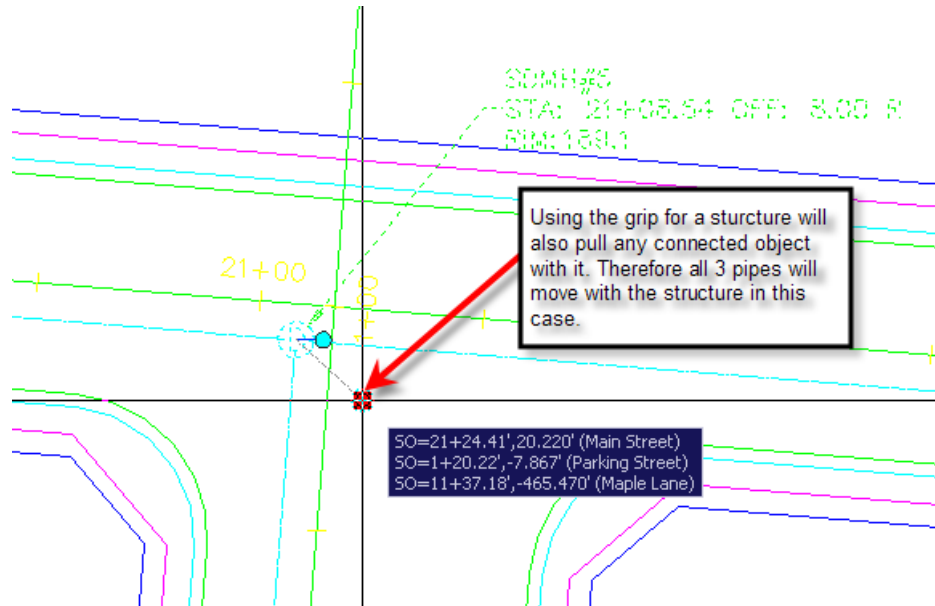
6. **“Pipe Network” ribbon tab > Add Labels ... or “Home” tab > Add Labels**

Choose either “Entire Network Plan”, “Entire Network Profile”, “Single Part Plan”, or “Single Part Profile”. You may also click on a part, then right-click and choose add label.

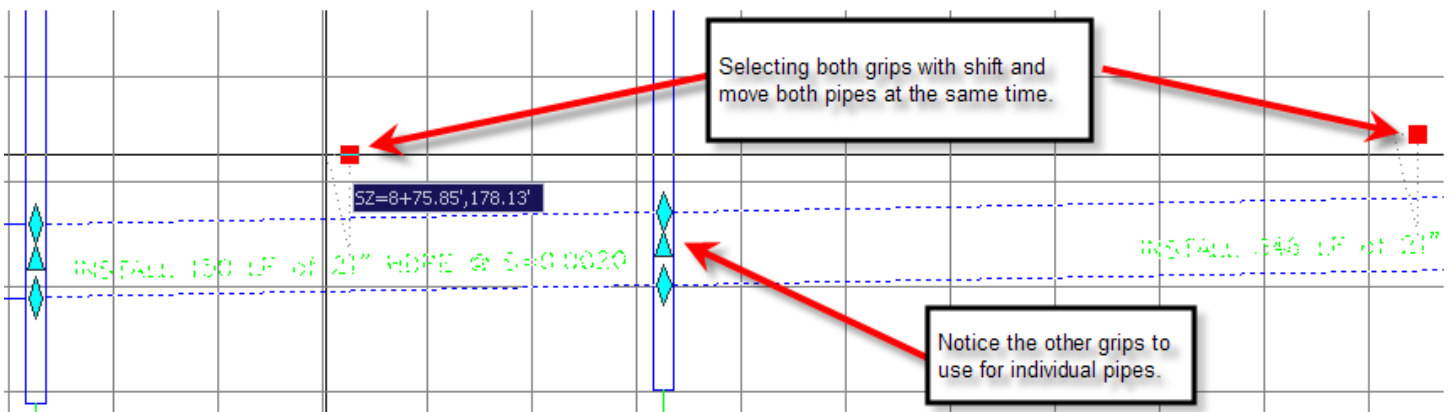
Different Methods of Editing a Pipe Network

1. Using Grips

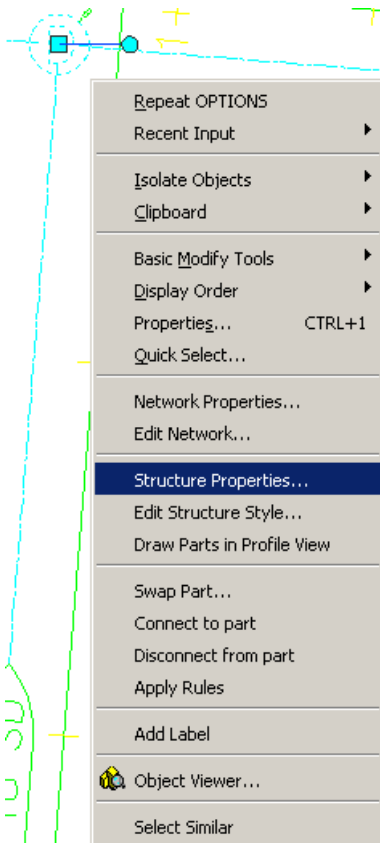
- a. Plan View – Hot gripping structures will pull all objects that are connected to it.



- b. Profile View – You can hot grip the invert, centerline, or crown of a pipe. You can also multi-hot-grip grips by holding down shift while selecting the grip.

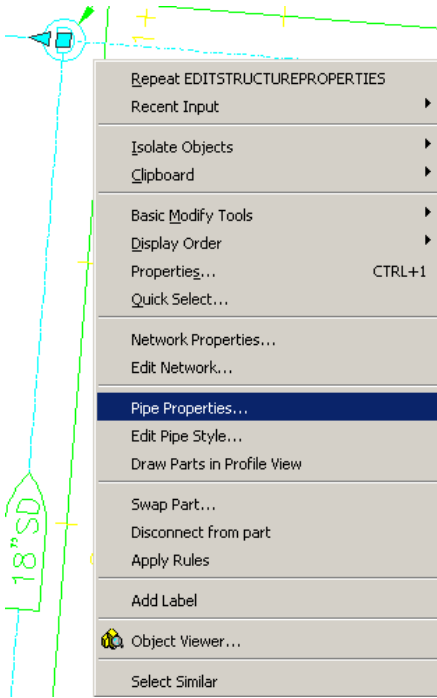


2. Using the part properties – one part at a time.



Click on a structure, right-click, and then choose “Structure Properties”.

Structure Properties	Value
General	
Surface Elevation At Insertion Point	189.072'
Reference Surface	OG
Reference Alignment	Main Street
Geometry	
Structure Rotation Angle	0.0000 (d)
Structure Offset	8.000'
Structure Station	21+08.54
Structure Northing	320093.3713'
Structure Easting	2004556.4581'
Connected Pipes	3
Insertion Rim Behavior	
Insertion Rim Elevation	189.072'
Surface Adjustment Value	0.000'
Automatic Surface Adjustment	true
Sump Behavior	
Sump Elevation	175.310'
Sump Depth	2.000
Control Sump By:	Depth
Part Data	
Part Type	Struct_Junction
Part Subtype	Concentric
Part Description	Concentric Cylindrical Structure
Part Size Name	Concentric Structure 48 dia 24 frame 24 cone 5 wall 6 floor
Structure Shape	BoundingShape_Cylinder
Vertical Pipe Clearance	34.000"
Rim to Sump Height	13.762'
Wall Thickness	5.000"
Floor Thickness	6.000"
Material	CONC
Frame	Standard
Grate	Standard
Cover	Standard
Frame Height	4.000"
Frame Diameter	24.000"
Frame Length	
Frame Width	
Barrel Height	
Barrel Pipe Clearance	6.000"
Cone Height	24.000"
Slab Thickness	
Inner Structure Diameter	48.000"
Structure Height	14.262'
Structure Diameter	58.000"



Click on a pipe, then right-click and choose “Pipe Properties”.

Pipe Properties	Value
General	
Pipe Flow Direction Method	End to Start
Flow Direction	End to Start
Reference Surface	OG
Reference Alignment	Main Street
Geometry	
Pipe Start Structure	SDMH#5
Pipe End Structure	SDMH#4
Bearing	S85° 23' 53"E
Pipe Start Station	21+08.54
Pipe End Station	26+16.54
Start Offset	8.000'
End Offset	8.000'
Pipe Slope (Hold Start)	0.20%
Pipe Slope (Hold End)	-0.20%
Pipe Slope	-0.20%
Start Invert Elevation	177.310'
End Invert Elevation	178.326'
Start Crown Elevation	179.060'
End Crown Elevation	180.076'
Pipe Start Easting	2004556.4581'
Pipe Start Northing	320093.3713'
Pipe End Easting	2005062.8204'
Pipe End Northing	320052.6142'
Start Centerline Elevation	178.185'
End Centerline Elevation	179.201'
Minimum Cover	9.425'
Maximum Cover	9.955'
2D Length - Center to Center	508.000'
3D Length - Center to Center	508.001'
2D Length - To Inside Edges	504.005'
3D Length - To Inside Edges	504.006'
Resize Behavior	
On Resize, Hold:	Invert
Part Data	
Part Type	Pipe
Part Subtype	Undefined
Part Description	Concrete Pipe
Part Size Name	21 inch Concrete Pipe
Cross Sectional Shape	SweptShape_Circular
Wall Thickness	3.000"
Material	RCP
Minimum Curve Radius	0.833'
Manning Coefficient	10.000
Hazen Williams Coefficient	10.000
Darcy Weisbach Factor	10.000
Inner Pipe Diameter	21.000"

3. Using the Edit Pipe Network Vista.

Status	Name	Description	Style	Rule Set	Override...	Render ...	Shape	Inner Di...	Inner Wi...	Inner He...	Referen...	Start Off...	Start Sta...	End Station	End'
✓ 0	Pipe - (1)	Concrete Pip	Double Line (	Basic	No	ByLayer	Circular	21.000"			CL	-74.635'	1+60.72'	5+41.01'	-94.075'
✓ 0	Pipe - (2)	Concrete Pip	Double Line (	Basic	No	ByLayer	Circular	21.000"			CL	-94.075'	5+41.01'	8+51.10'	96.436'
✓ 0	Pipe - (3)	Concrete Pip	Double Line (	Basic	No	ByLayer	Circular	21.000"			CL	96.436'	8+51.10'	12+33.57'	-78.609'
✓ 0	Pipe - (4)	Concrete Pip	Double Line (	Basic	No	ByLayer	Circular	21.000"			CL	-78.609'	12+33.57'	14+90.88'	-121.436'

4. Other Tips and Ticks

- To change a manhole or pipe to different part, simply select the part, right-click and select **Swap Part**.
- To change a pipe network globally you can change the pipe or structure rules, and then use the command **"Pipe Network" ribbon tab > Apply Rules** to set the rules to the desired parts.
- Renaming and renumbering pipes and structures can be accomplished by running the command **"Pipe Network" ribbon tab > Rename Parts**.
- With multiple pipes going in and out of a structure, you match the elevation of one of the pipes. In structure properties, go to the Connected Pipes tab, highlight all the pipes you wish to modify and then right-click and choose the desired option. Highlight the desired pipe to match and choose the drop amount.

