Plumbing in Autodesk® Revit® MEP: You're No Longer Just a Subcategory MP1823

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Class Summary

This class is designed to improve design efficiency within Autodesk® Revit® MEP for the plumbing discipline.

Learning Objectives

At the end of this class, you will be able to:

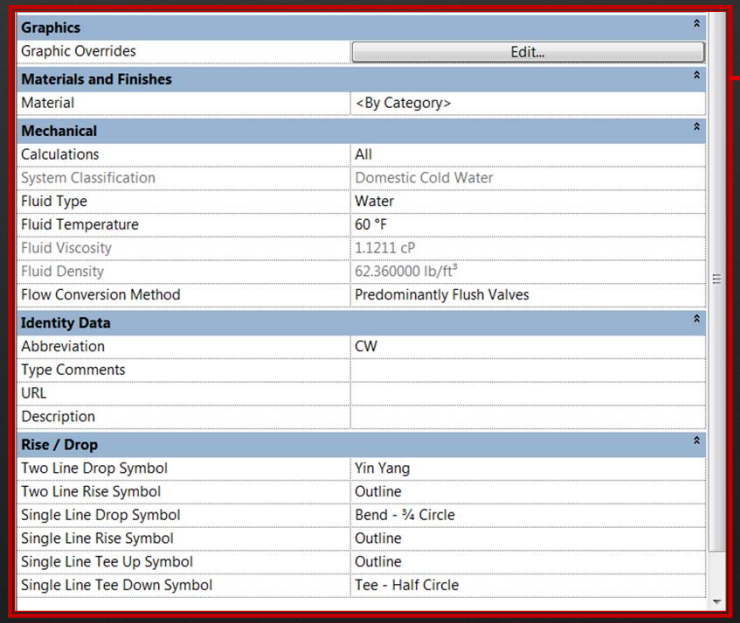
- Create new Pipe System Types
- Utilize the 2013 pipe routing preferences
- Modify look up tables
- Map Pipe Connectors for proper flow
- Create Rough – in Schedules
- Utilize the Fixture Units
- Create plumbing groups for re-use

Pipe System Types - Definitions

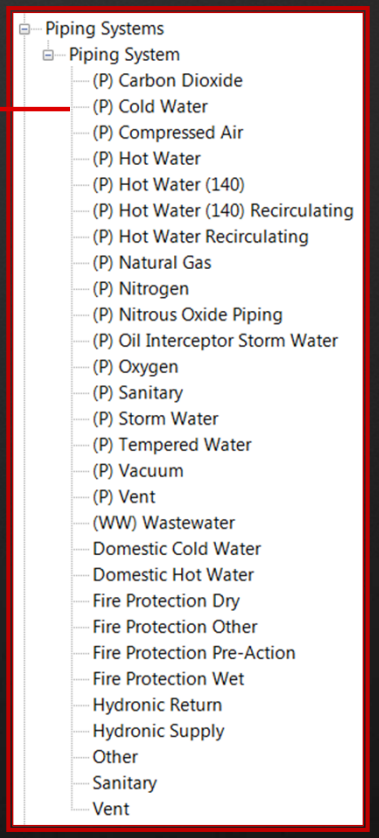
System Classification	System Type	Pipe Type
•Used in connectors and system browser •Limited to: Sanitary, Vent, Domestic Hot Water, Domestic Cold Water and Other	•Customizable •Reference the system classification	•Material Based •Contain routing preferences

Pipe System Types – Creation and Usage

- Contain information on:
  - Fluids
  - Flow Conversion
  - Symbology
  - Abbreviations
  - Graphic Overrides

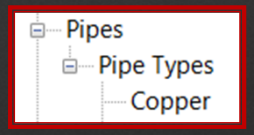


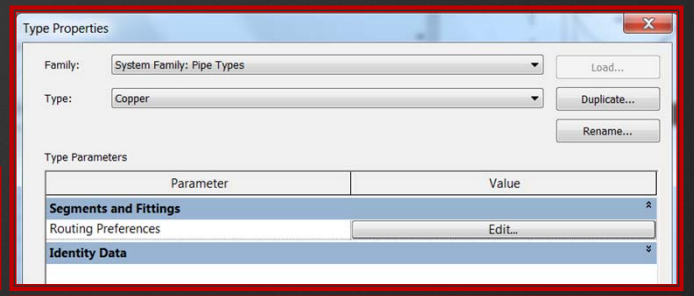
Graphics	
Graphic Overrides	Edit...
Materials and Finishes	
Material	<By Category>
Mechanical	
Calculations	All
System Classification	Domestic Cold Water
Fluid Type	Water
Fluid Temperature	60 °F
Fluid Viscosity	1.1211 cP
Fluid Density	62.360000 lb/ft³
Flow Conversion Method	Predominantly Flush Valves
Identity Data	
Abbreviation	CW
Type Comments	
URL	
Description	
Rise / Drop	
Two Line Drop Symbol	Yin Yang
Two Line Rise Symbol	Outline
Single Line Drop Symbol	Bend - ¾ Circle
Single Line Rise Symbol	Outline
Single Line Tee Up Symbol	Outline
Single Line Tee Down Symbol	Tee - Half Circle

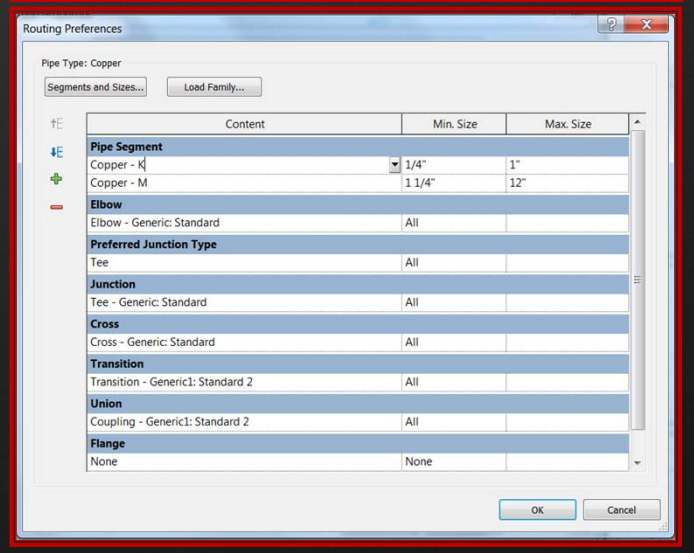


Pipe Routing Preferences

- Based on Pipe Material Types
- Not Specifically connected to one System Type or another.
- Allow for multiple pipe connection types, materials, or flanges based on size
- Segment description is an available field for scheduling.







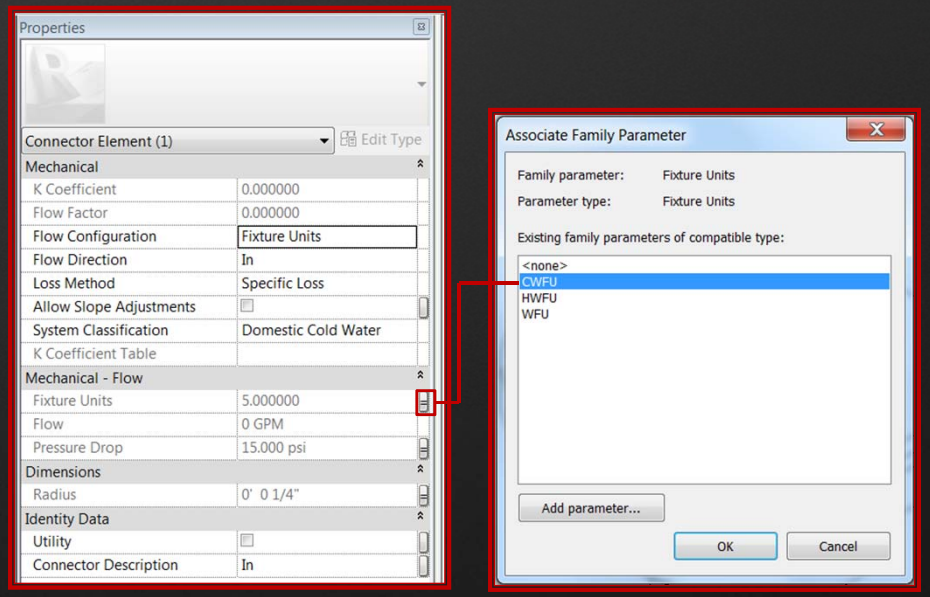
Modifying / Creating Look up Tables

- Use: Typically used for controlling multiple instance variables in pipe and conduit

- Components:
  - Lookup table .csv file
    - Path location available in the revit.ini file
  - Revit Family File .rfa
    - Lookup table referenced (with .csv extension) under “Other”
    - Parameters are instance parameters
    - Units of parameters must match .csv file ## formatting (i.e.. Length)

Connectors and Flow Information

- Connectors contain:
  - System Information
  - Flow Information
  - Pressure Drop Information
  - Size Information
- All information should be mapped to parameters



Tips For Sloped Piping

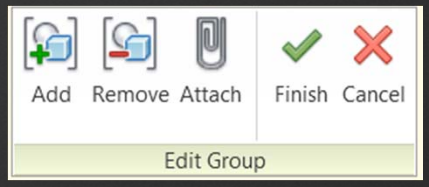
- Create a routing preference with correct fittings
- Ignore slope to connect
- “Toggle” to a tee
- Windows Tile, and “Walking Sections”
- Consider non-hosted families
- Start at the highest point and work backwards

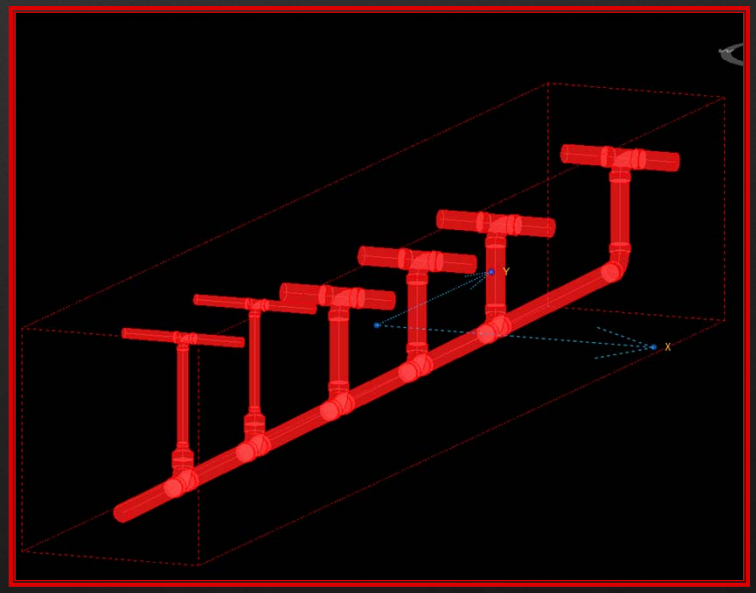
Fixture Units

- Utilize the information in the System type
  - Fluid
  - Flow Conversion
- Set at the connector element
- System MUST be closed

Plumbing Groups

- Repeating layouts can be reused on multiple levels
- Work best with un-hosted families
- Calculate flow and pressure drop information





Rough In Schedules

- Parameters – out of the box or custom – can be added to a schedule
- All data is pulled from the 3D fixture elements in the model
- Can be re-used on future projects
- Do not have to be stored in your model

PLUMBING FIXTURE SCHEDULE									
		CONNECTIONS							
DESIG	TYPE	CW	HW	SAN	TW	VENT	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	COMMENTS
LAV-1	WALL MOUNTED LAV	1/2"	1/2"	1 1/2"	0"	0"	KOHLER	BRENHAM	
UR-1	WALL MOUNTED BACK OUTLET URINAL	1"	0"	3"	0"	0"	AMERICAN STANDARD	WASHBROOK	ADA Compliant
WC-1	WALL MOUNTED WATER CLOSET	1"	0"	3"	0"	0"	AMERICAN STANDARD	AFWALL	

Note: Save precious design time by filling out basis of design information in your families rather than inputting the data for every project