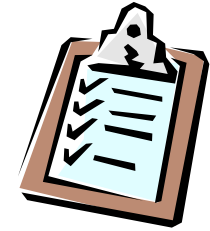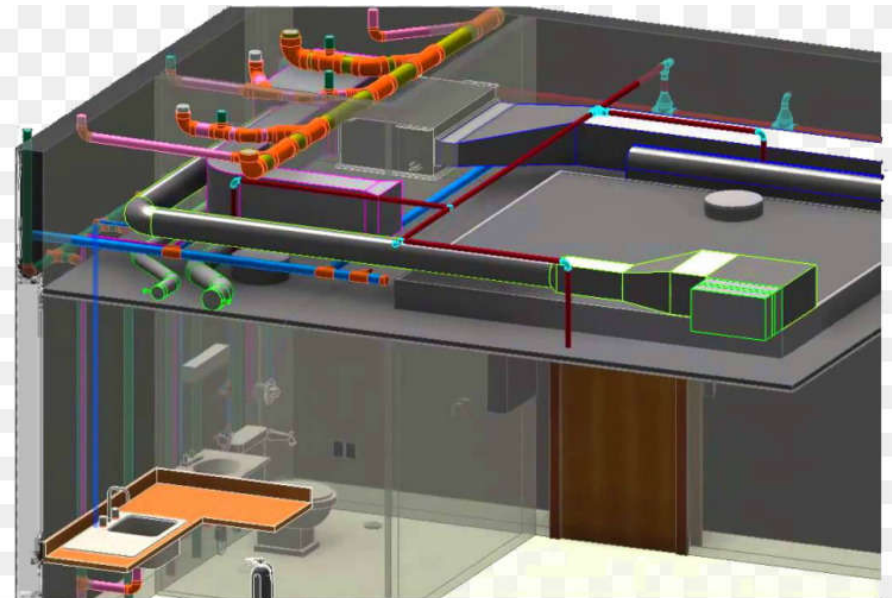# 4.2 Revit MEP

Ir Dr. Sam C. M. Hui
Department of Mechanical Engineering
The University of Hong Kong
E-mail: cmhui@hku.hk

Jun 2025

Contents

- Introduction
- Revit MEP tips
- Creating logical systems
- Mechanical systems & ductwork
- Mechanical piping
- Electrical systems
- Plumbing systems
- Fire sprinkler systems

Introduction

- Autodesk Revit & related software*

  - Architecture, Structure, MEP: design authoring

  - BIM 360: collaboration

  - Fabrication CADmep: MEP fabrication

  - Insight: energy & building performance analysis

  - Navisworks: project review on integrated models

  - ReCap Pro: reality capture and 3D scanning

  - Revit Live: immersive visualization

(*See also: Revit BIM https://www.autodesk.com/products/revit/overview & https://www.autodesk.com/collections/architecture-engineering-construction/building-design)

Introduction

- **Revit MEP** (MEP domain)
  - Help drive accurate design, analysis, and documentation of efficient building (services) systems from concept through construction
  - Typical applications:
    - Building systems modelling and layout
      - Duct and pipe system modelling
      - Duct and pipe sizing/pressure calculations
      - HVAC and electrical system design
      - Conduit and cable tray modelling
    - Sustainable design with building performance analysis

Introduction

- ## General Revit techniques:*

  - User interface

  - Revit elements & families

  - Working with views (plan, elevation, section, 3D)

  - Control object visibility/graphics

  - Setting up a project:

    - View templates, discipline settings, importing AutoCAD DWG, linking a Revit model, coordinating linked projects, adding & modifying levels & grids

Revit Working Environment
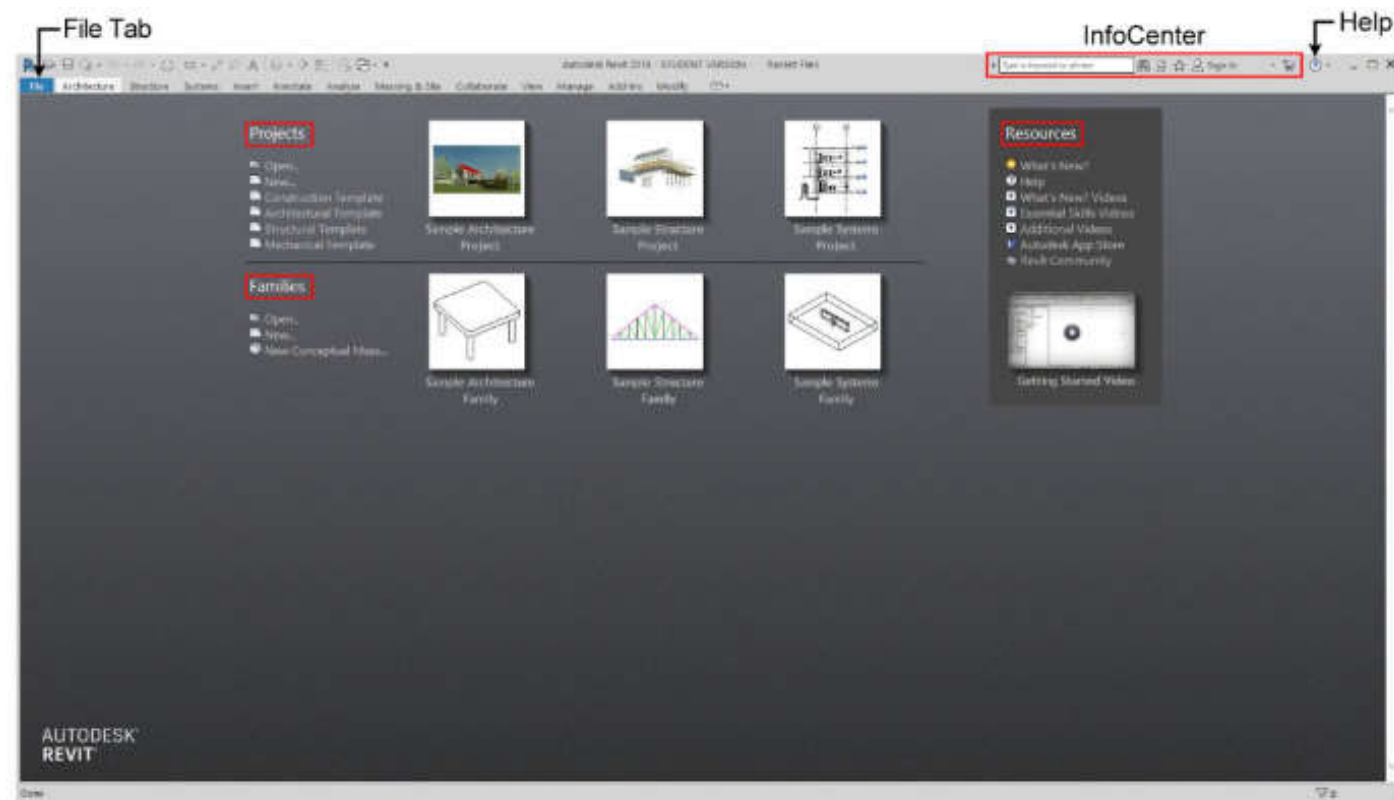
Projects

Open: Open a Revit related file. (or click a right icon to open a recent project file)

New: Use a Revit template file to start a new project.

Construction Template: Use default construction template to start a new project.

Architectural Template: Use default architectural template to start a new project.

Structure Template: Use default structure template to start a new project.

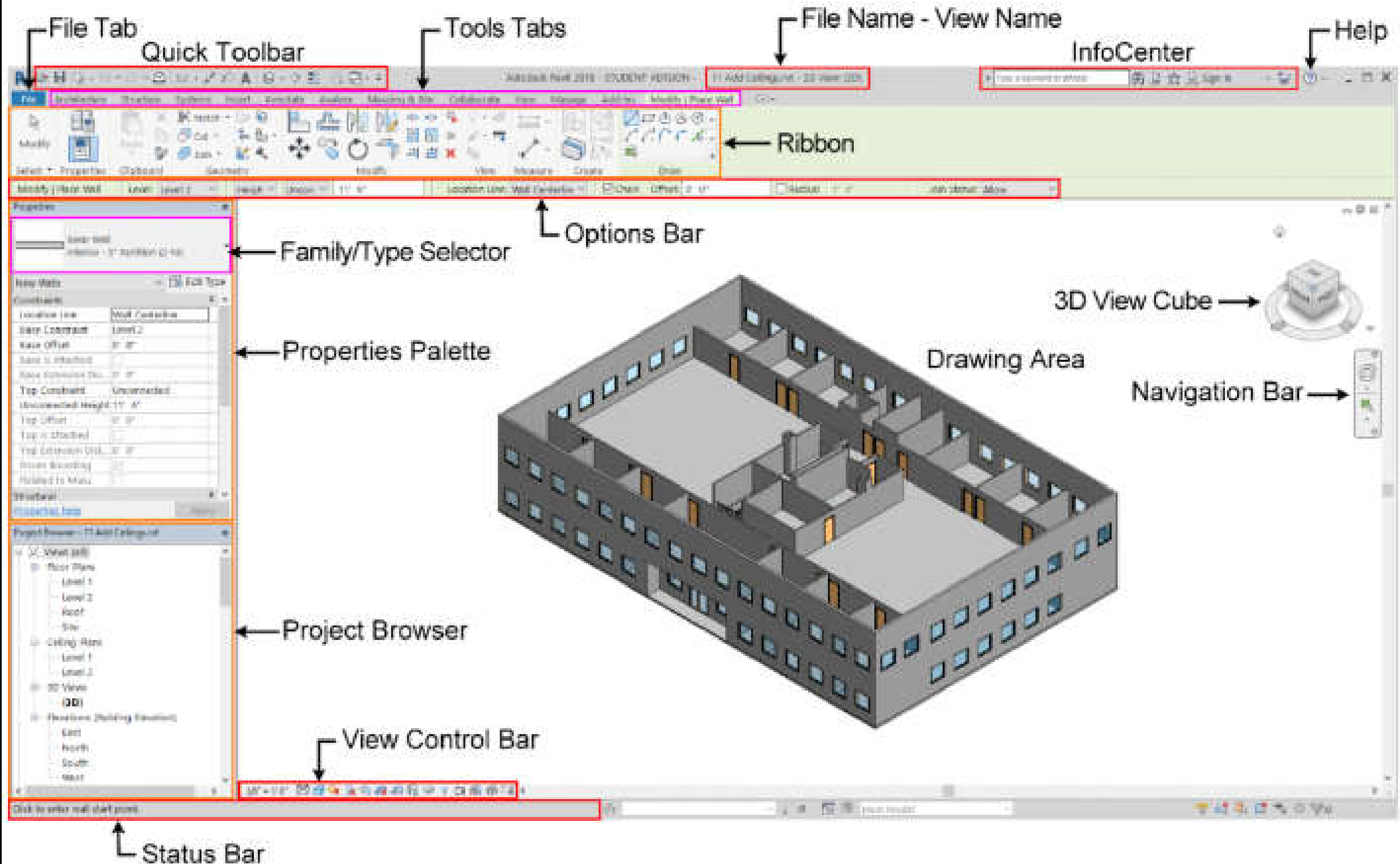**Mechanical Template**: Use default mechanical template to start a new project.

Families

Open: Open a Revit family file. (or click a right icon to open a recent family file)

**New**: Use a family template to start a new family.

New Conceptual Mass: Use default mass family template to create a conceptual massing model.

Project Editing Screen

File Tab

Quick Toolbar

Tools Tabs

File Name - View Name

InfoCenter

Help

Ribbon

Options Bar

Family/Type Selector

Properties Palette

3D View Cube

Drawing Area

Navigation Bar

Project Browser

View Control Bar

Status Bar

Introduction

- Architectural modelling:
  - Floor slab, setup levels
  - Walls, partitions, doors, windows, stairs
  - Ceiling, roof & room information

- MEP systems & components:
  - Mechanical (HVAC), hydronic piping, electrical, plumbing, fire protection
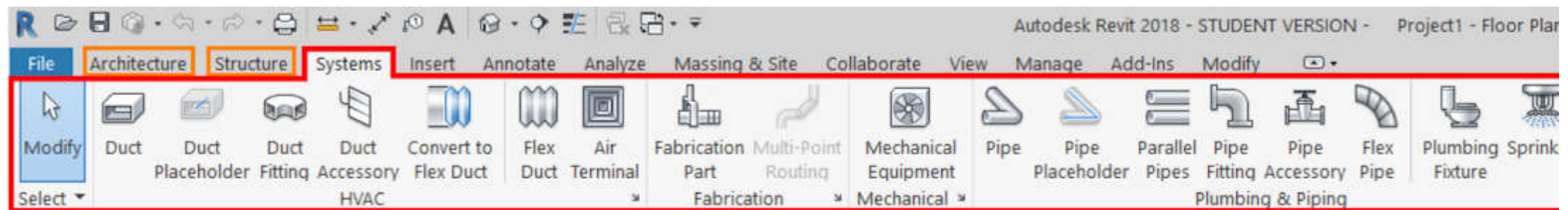
System Browser (press F9 function key): Use it to find all components & examine the hierarchies of MEP systems

Introduction

- ## Revit MEP techniques:

  - Starting Revit MEP projects*
    - Link architectural model
    - Copy & monitor elements
    - Set up & modify levels

  > You can experience & learn this in the practical training sessions.

  - MEP systems
    - Create systems
    - Connect components
    - Create spaces, zones and colour schemes

(*See also: Revit MEP tutorial: Create a new project and link architecture model https://www.cad-notes.com/revit-mep-tutorial-create-a-new-project-and-link-architecture-model/)

Introduction

- **Revit MEP techniques: (cont'd)**
  - Energy analysis
    - Analyse heating & cooling loads
    - Secondary analysis (e.g. air-side systems)
  - Piping systems (create & routing)
  - HVAC systems
    - Create systems, add air terminals & mechanical equipment, add ductwork, create & modify duct systems, automatic ductwork layouts

Introduction

- <u>Revit MEP techniques</u>: (cont'd)
    - Electrical systems
        - Create systems, place electrical components, create electrical circuits, cable trays & conduit, electrical panel schedules
    - Annotate construction documents
        - Add detail lines & symbols
    - Tags & schedules
        - Add tags, create & modify schedules

Introduction

- ## Revit MEP techniques: (cont'd)

  - Customize Revit (to improve productivity)*

  - Customize Family & Project Templates

    - Build your own Starter Family Templates

    - Work with vendor equipment (import files)

    - Build your MEP Project Templates

  - Customize Families & Parameters

    - Know when to use family-based shared parameters versus project parameters based on shared parameters

> Good templates will facilitate efficient work.

Revit MEP tips

- MEP design considerations:
  - Start with an overall approach to your model
    - Systematic planning (integrate design & modelling)
    - Decide if work sets are required & set these up*
  - Set up standards & templates (for Revit use)
  - Use of "families" (Revit) in a project
  - Level of details & design purpose
    - Start with boxes to represent the space of an item
  - Set up main branches, pipe runs etc. first

Revit MEP tips

- What to model
  - Need to draw some lines as where to stop
  - Are some things not needed to be modelled?
  - Keep in mind how large your model is or will be
  - The more small detail, the slower the performance
  - Is the small detail ever going to be seen?
    - Level of details
  - Useful viewpoints, e.g. reflected ceiling plan

Revit MEP tips

- [Project Browser](#)* – View naming organization
  - Think about a plan of attack
  - Recommend setting a standard for view naming and sticking to it
  - Utilise the Project Browser's organisation and filters capability
  - Recommend sort by sub-discipline
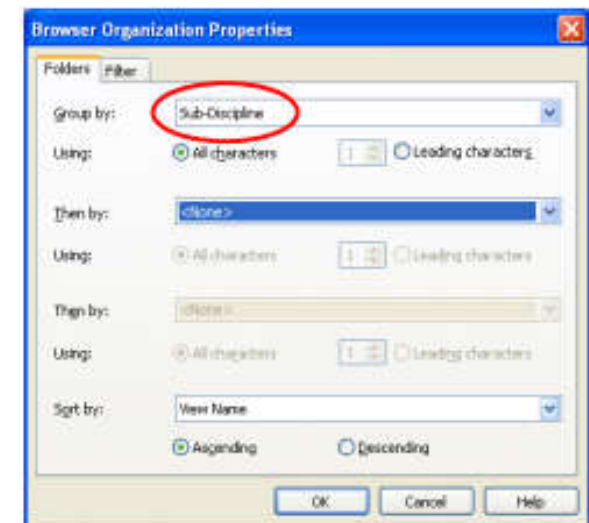
Revit MEP tips

- Clash Detection
  - Coordination models (with Navisworks)*
  - Run an interference check**
  - To access go to:
    - Tools > Interference Check >
    - Run Check
  - All interferences will be located
  - Can sometimes be a nuisance
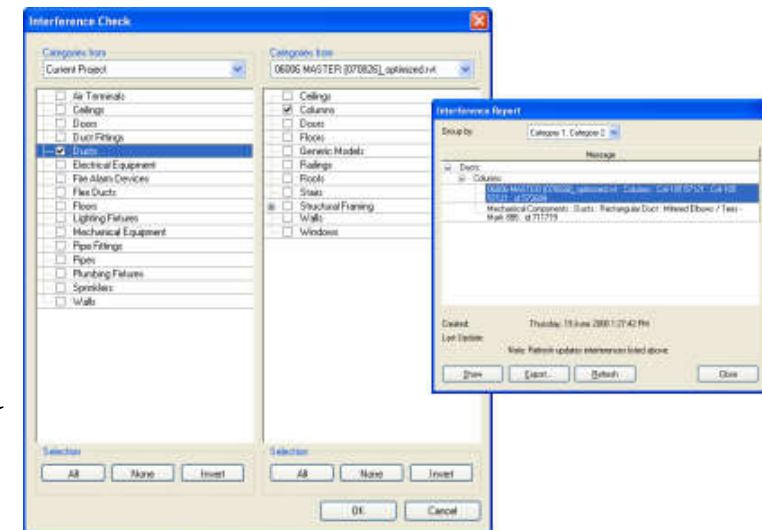
Revit MEP tips

- [Families](#)* – Tips & tricks
  - A family is a group of elements with a common set of properties, called parameters, and a related graphical representation
  - Use Family Editor to modify existing elements or create new ones to meet specific needs of a project
  - Be sure to start from the right family template
    - Ceiling based, wall based, floor based, face based
  - Work plane-based families:
    - Ability to place family items on any plane
  - Continually test the parameters (Flex the model)

> Revit Families is important for design productivity.

Revit MEP tips

- Schedules* (lists of any type of element in a project)
  - Will update with changes made to the elements in the model (e.g. electrical panel schedules)
  - Ability to add/remove columns, ability to format

- Spaces**
  - Create spaces to run heating & cooling load analysis (including plenums & shafts)
  - Ability to reference room names & numbers from linked model with space tags

Revit MEP tips

- [Documentation](#)
  - To communicate the design intent to team members, consultants, clients, and contractors
    - Such as project views, schedules, project phasing, annotation, detailing, construction documents
  - Prepare company standards & set up standard template you desire
  - Utilizing 2 views overlaid on each other
  - Pinning the view on a sheet (2D drawing)

(*See also: Document and Present the Design http://help.autodesk.com/view/RVT/2018/ENU/?guid=GUID-75DFA31F-1733-48C9-9856-1F323C0AE0E4)

MEP documentation (examples)
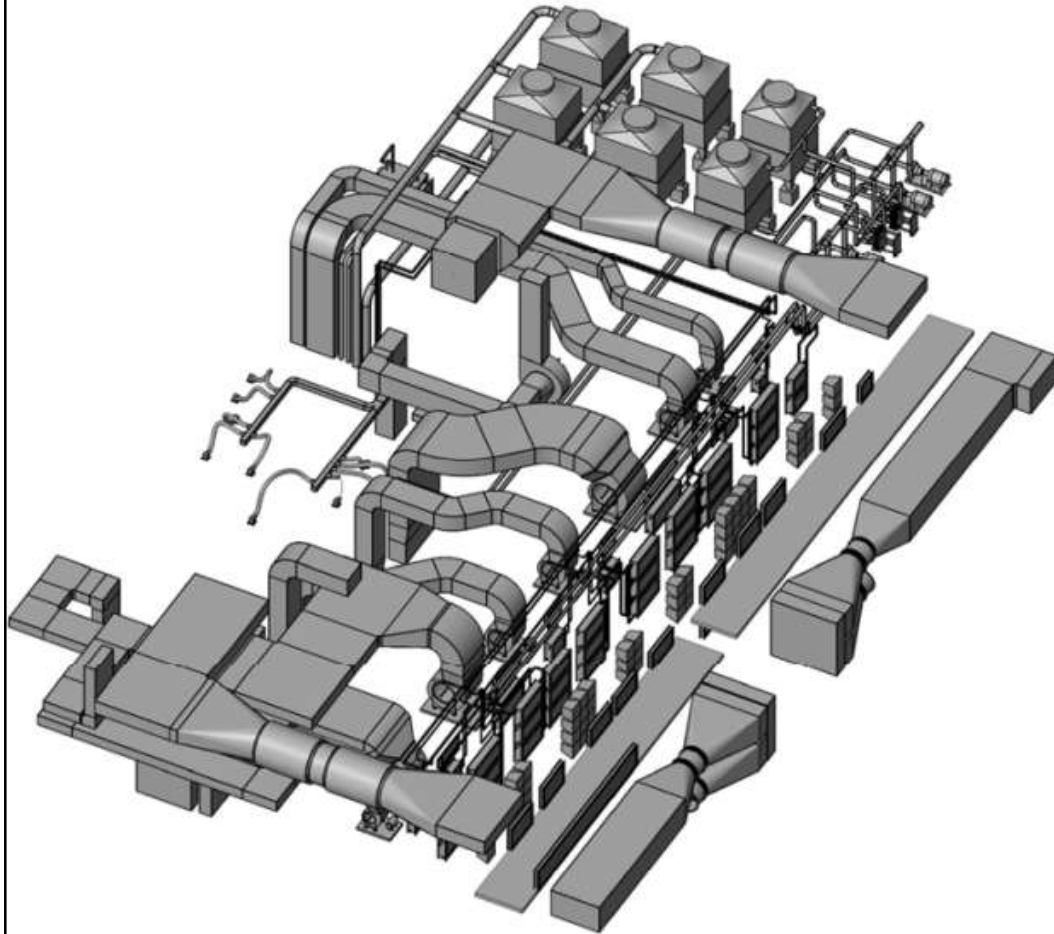
3D Model
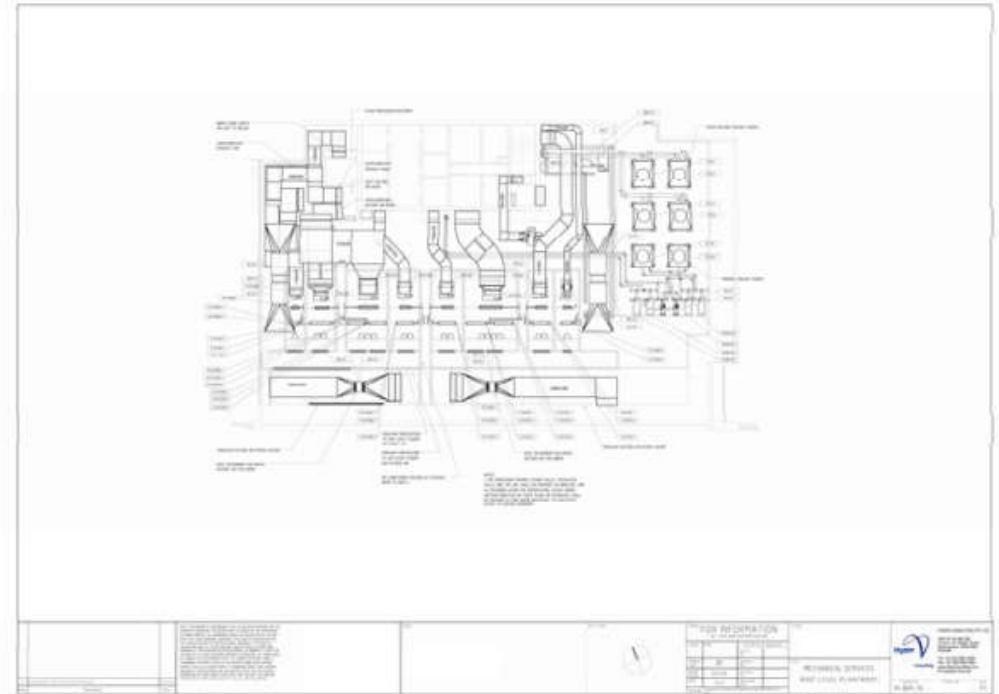
2D Documentation

2D drawing for plantroom

MEP documentation (examples)
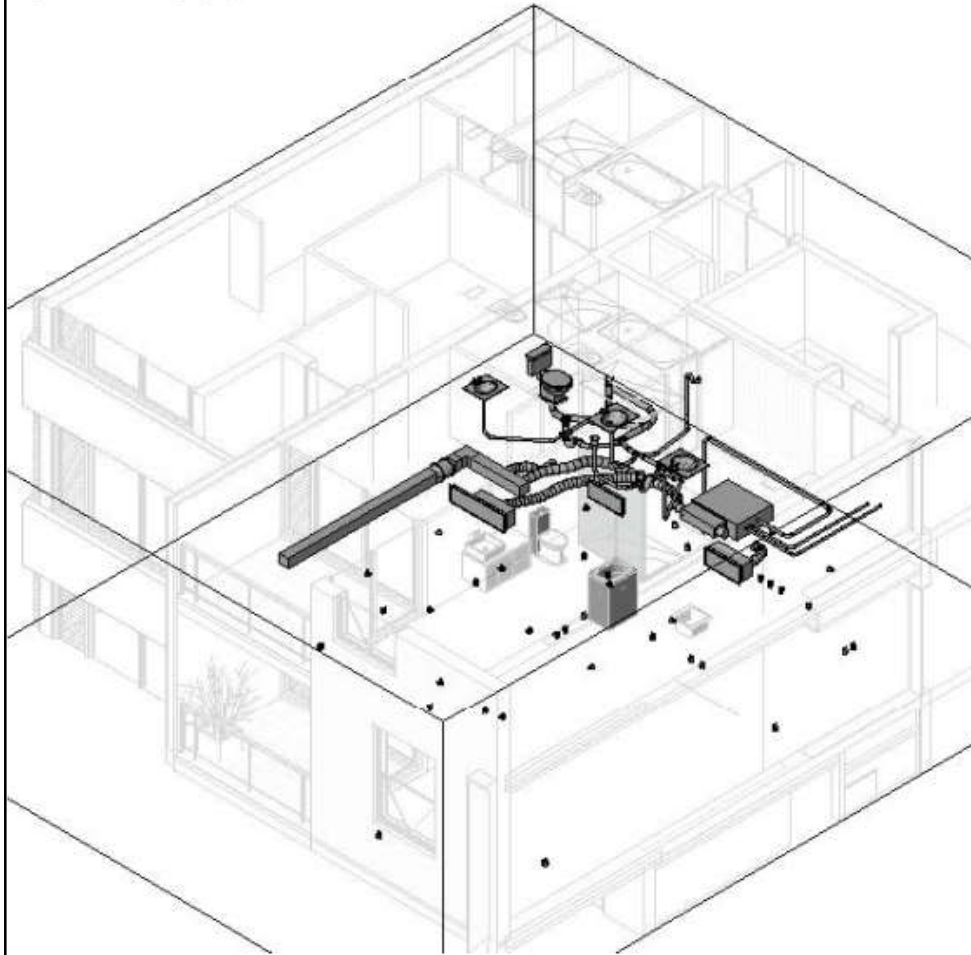
3D Model

2D Documentation
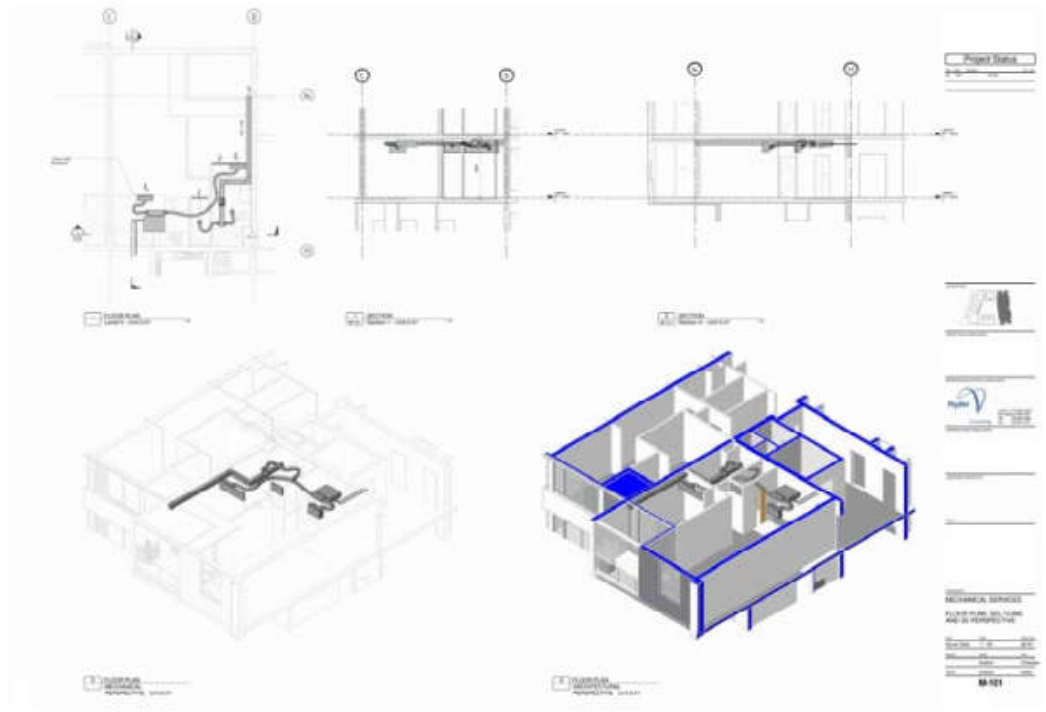
Drawings for different views

> Do you know how to communicate & present your BIM MEP models?

Revit MEP tips

- Working with IFC format In/Out of Revit
  - Such as: Architect produces model in ArchiCAD & ArchiCAD model exported out to IFC format
    - Integrity of IFC model checked in Solibri model checker & file size is reduced
  - IFC model is imported into Revit and linked into MEP model; MEP main design elements produced (duct work, piping etc) in 3D
  - MEP model exported back to IFC and issued back to Architect, along with DWF

Revit MEP tips

- Working with IFC format In/Out of Revit
  - Coordination and collaboration using Navisworks
  - All details & schematics were produced in AutoCAD
  - Still a way to go for 100% integrity of IFC model geometry
    - Export/Import settings limited in both Revit & ArchiCAD
    - File size of Arch model once imported to Revit is quite large (200MB+)

Revit MEP tips

- Navisworks* & rendering**
  - Formatting schedules
  - Coordination with other file types (e.g. IFC, DWG, DXF, SAT)
  - Coordination models & clash detection
  - Quick review of models for non-CAD users
  - Rendering & animations
    - Create a photorealistic image of the building model
    - Lighting simulation & raytracing technique

(*See also: Navisworks https://www.autodesk.com/products/navisworks/;
** Rendering http://help.autodesk.com/view/RVT/2018/ENU/?guid=GUID-4046977A-9323-4535-9AC0-4EF9A138A5A6)

Creating logical systems
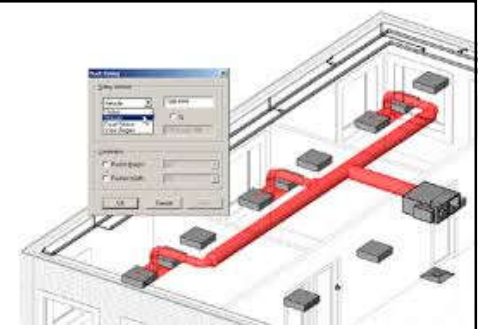
- Systems
  - They represent the transfer of information between families. They range from supply air to refrigerants to laboratory gases to anything else a building needs to operate
  - They are the logical connection between elements in the model
    - They are the link between the air terminal, the variable air volume (VAV) box, and the air handler, and they represent an additional layer of information above the physical connections made with duct and pipe

Selecting duct systems in the System Browser
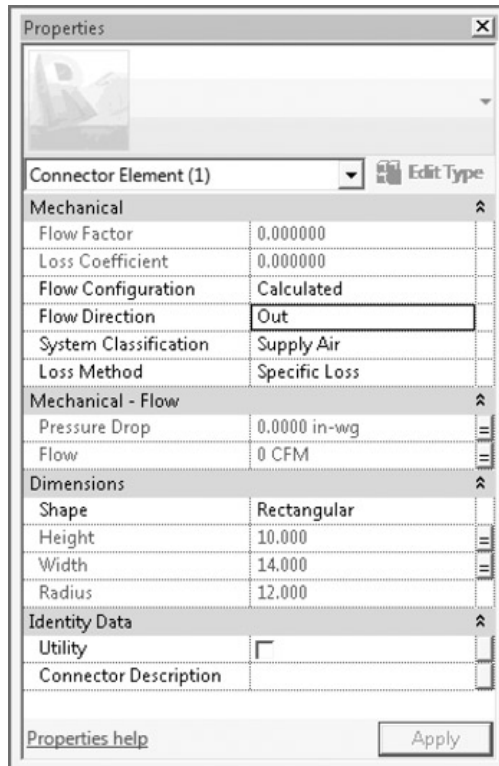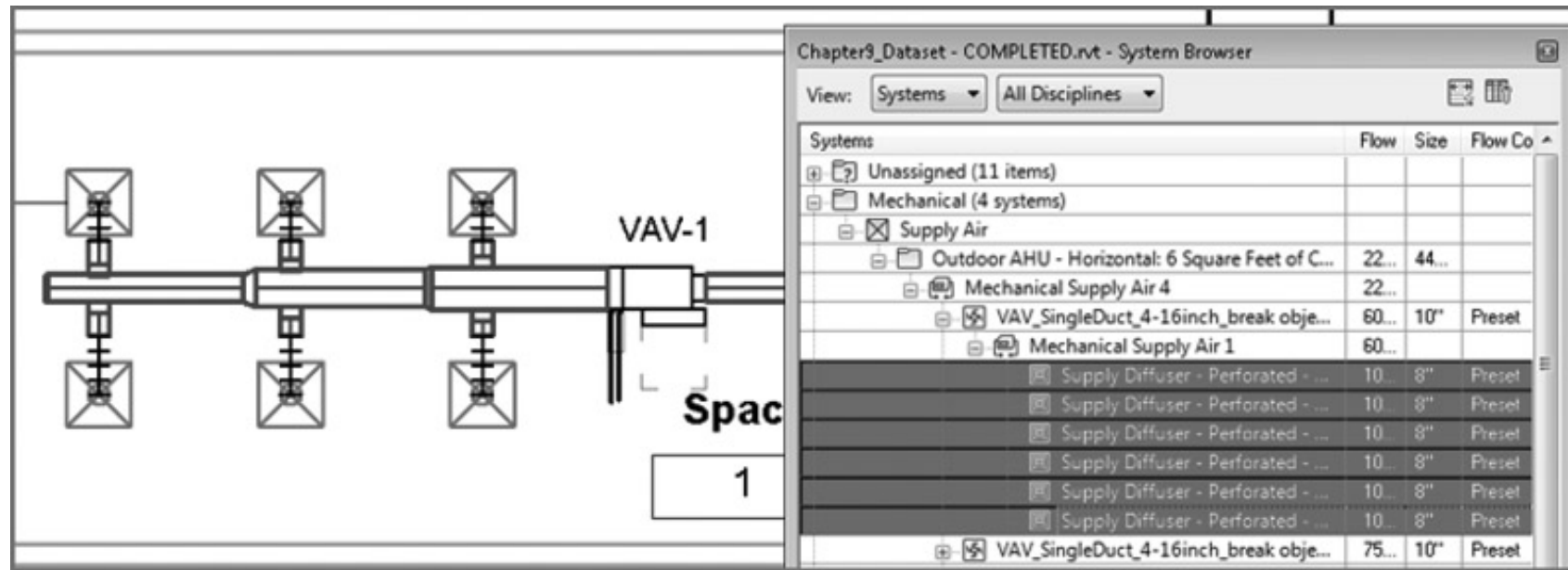
Parameters for duct connection
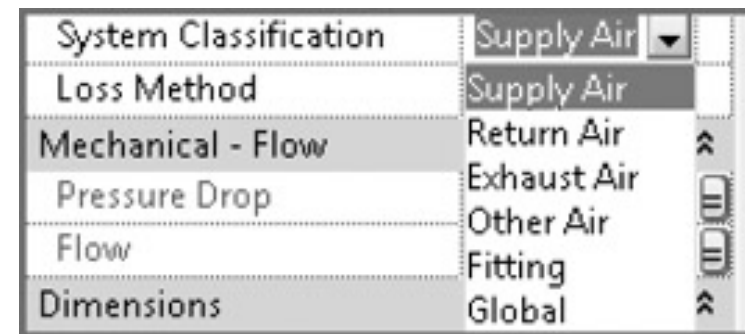
System classifications for duct connections

Set up piping (hydronic) systems & display properties
(for HVAC, plumbing & fire protection)

Overall system Sanitary 2

Vent 1 system

System Sanitary 2 objects

Sanitary 1 objects

System Browser - Project2

View: Systems ▾ All Disciplines ▾

Systems

- Unassigned (0 items)
- Mechanical (0 systems)
- Piping (4 systems)
  - Hydronic Supply
  - Sanitary
    - Sanitary 1
    - Sanitary 2
  - Vent
- Electrical (0 systems)

Piping Systems.rvt - Project Browser

- Families
  - Duct Systems
    - Duct System
      - Exhaust Air
      - Return Air
      - Supply Air
  - Piping Systems
    - Piping System
      - Domestic Cold Water
      - Domestic Hot Water
      - Fire Protection Dry
      - Fire Protection Other
      - Fire Protection Pre-Action
      - Fire Protection Wet
      - Hydronic Return
      - Hydronic Supply
      - Other
      - Sanitary
      - Vent

By understanding how to change and manage piping systems, the user can create and maintain different systems effectively

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Understanding child and parent relationships in Revit systems
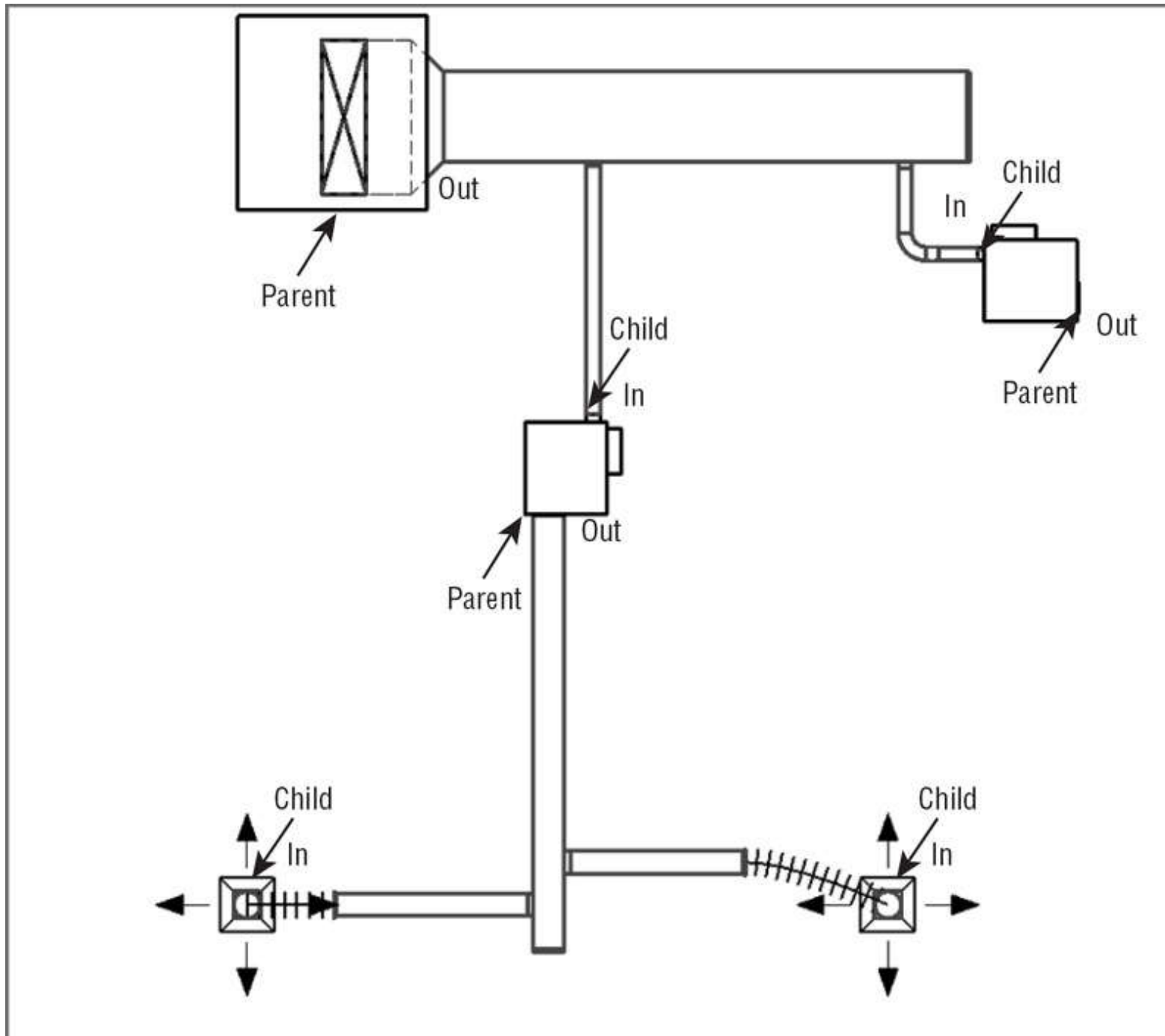
The system always starts with a child and ends with a parent, you could have many children but only one parent.

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Creating logical systems
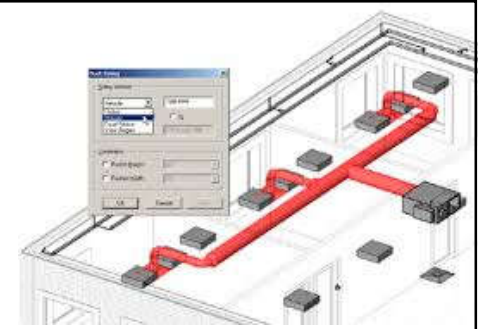
- Using System Filters
  - Control over the visibility of certain elements in views & the appearance those elements will have
  - Filters help us create high-quality documentation as well as providing a better way to examine our design and improve the coordination of our projects
  - Mastering filter options enables you to create your models with the standards that your office has developed over years of producing CAD drawings

Using System Filters

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)
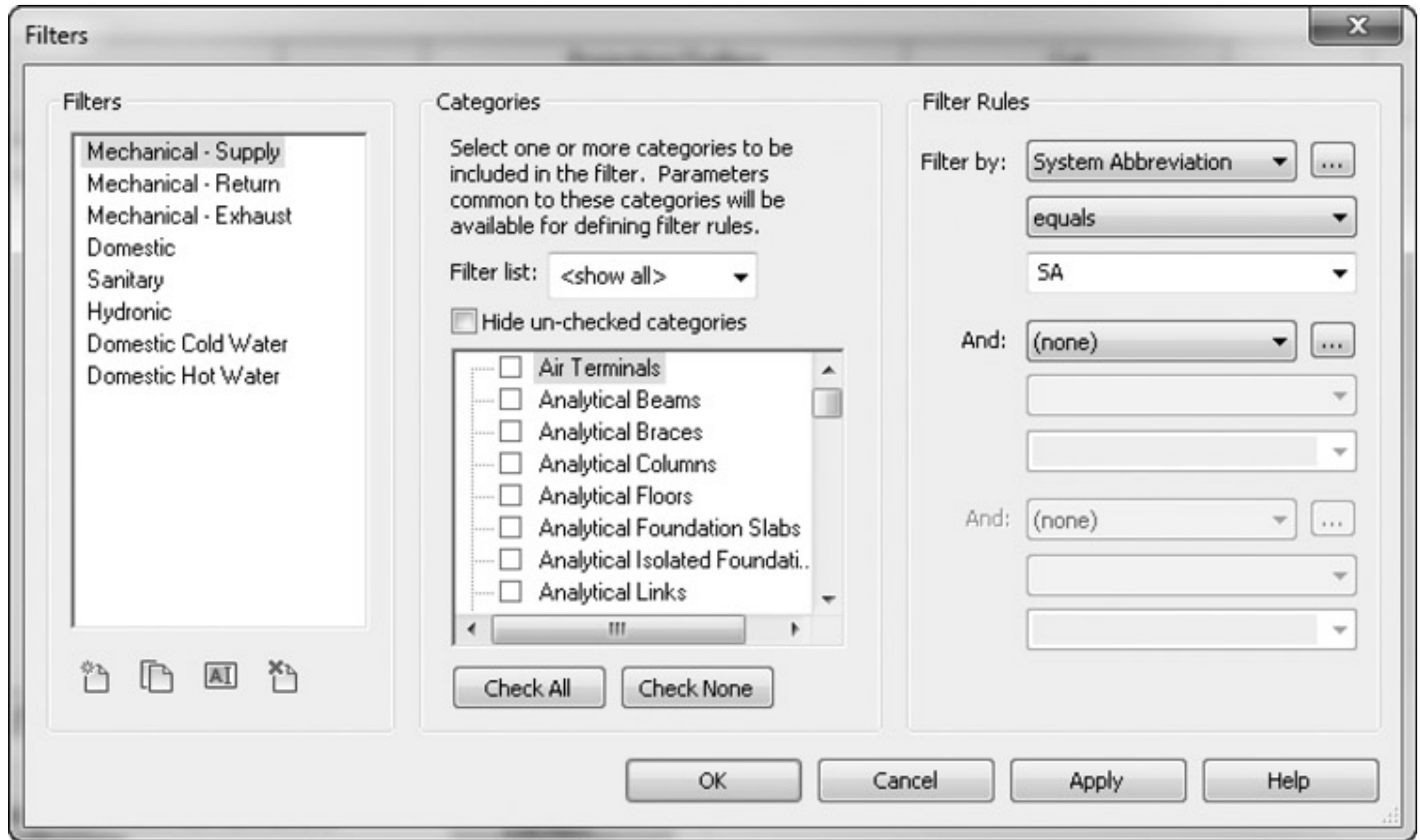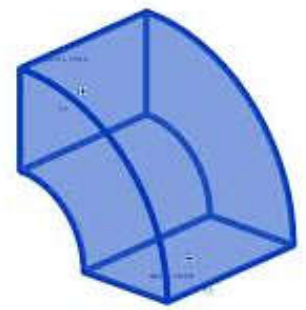
Mechanical systems & ductwork

- Ductwork*
  - Duct is presented as a single line at concept design or as a fully coordinated double line for a construction issue
  - Three main types: rectangular, round, and oval
- Air distribution components
  - Diffusers in a ceiling, duct-mounted sidewall diffusers, wall mounted, suspended
  - Diffuser hosting methods in Revit

Diffuser hosting methods
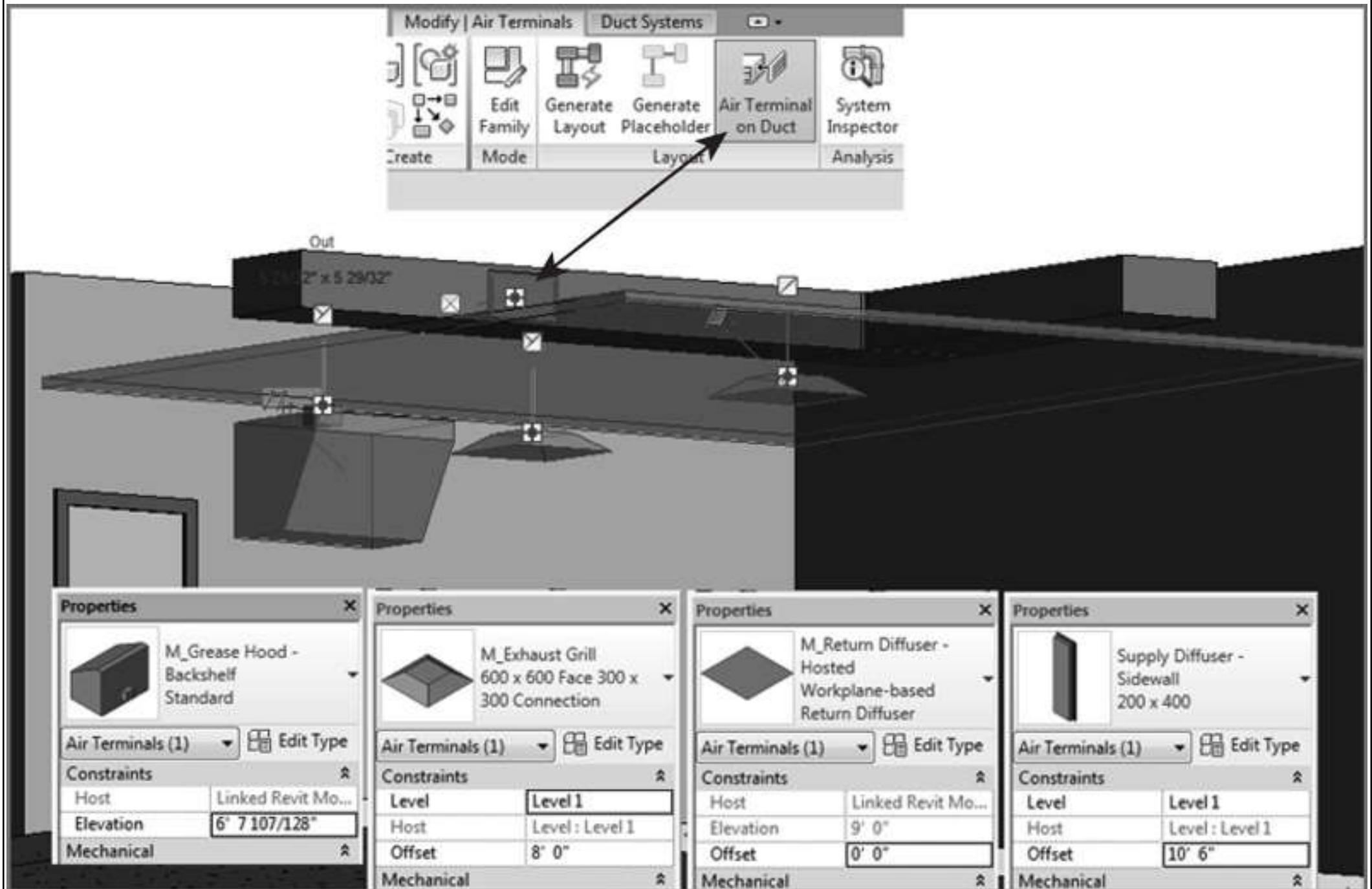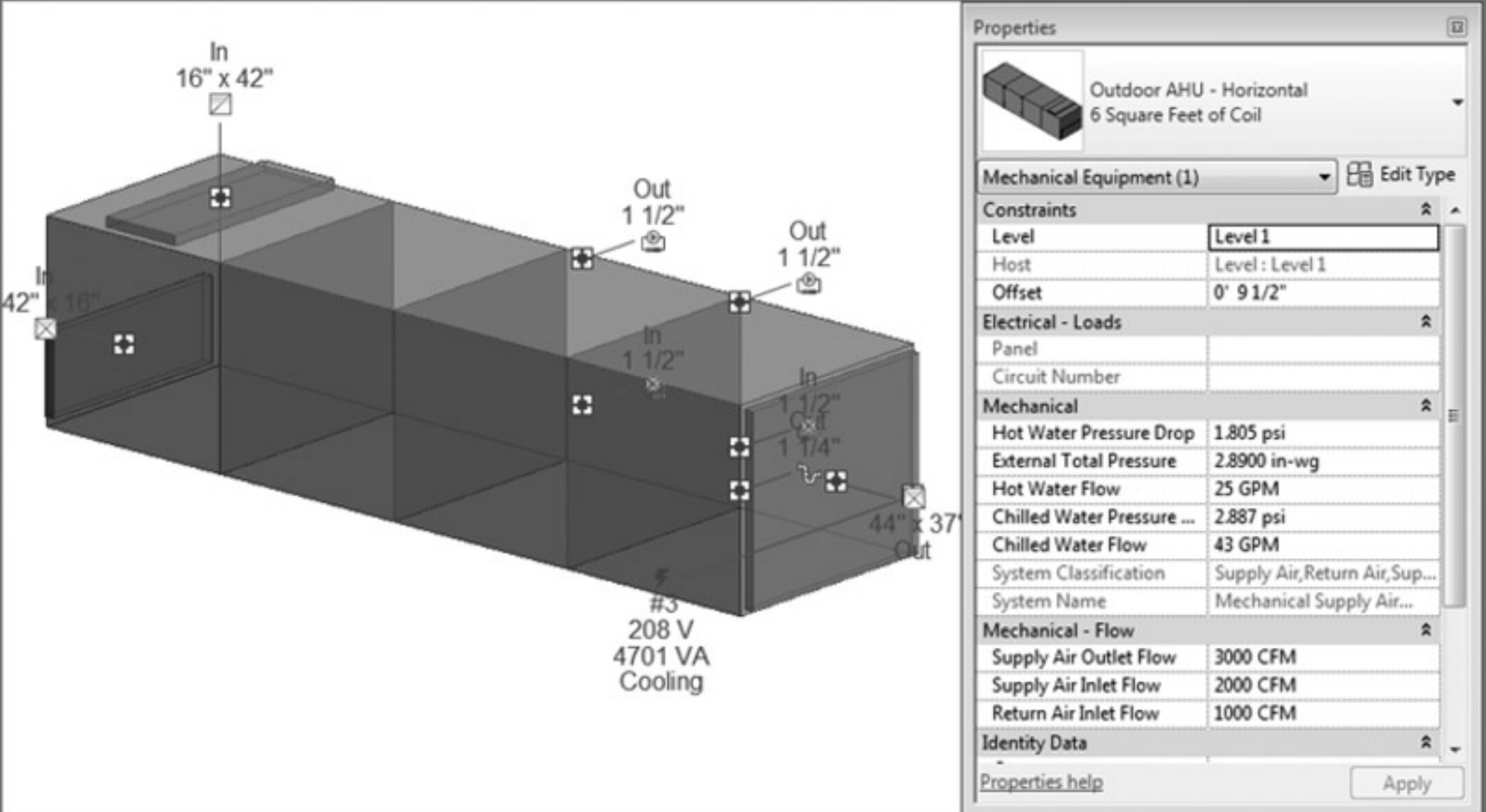
Mechanical systems & ductwork
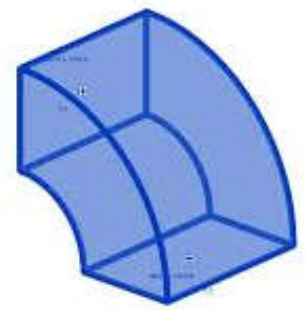
- [Mechanical equipment components](#)
  - Air conditioning/handling units
    - Floor mounted, skid mounted (w/ an offset or rail)
  - VAV boxes
    - Connection to water (chilled/hot) & electrical systems
  - Ductwork
    - Create using Duct Tool or Placeholder Duct Tool
    - Break up large systems to avoid slowing down the design process
    - Interference check for ducts and pipes

Basic AHU and type parameters

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Ductwork

Ducts
Oval—gored bends
Oval—mitred bends
Round
Rectangular—radius bends
Rectangular—mitered bends

Placeholder Ducts
Oval
Round
Rectangular

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Divide system using System Browser
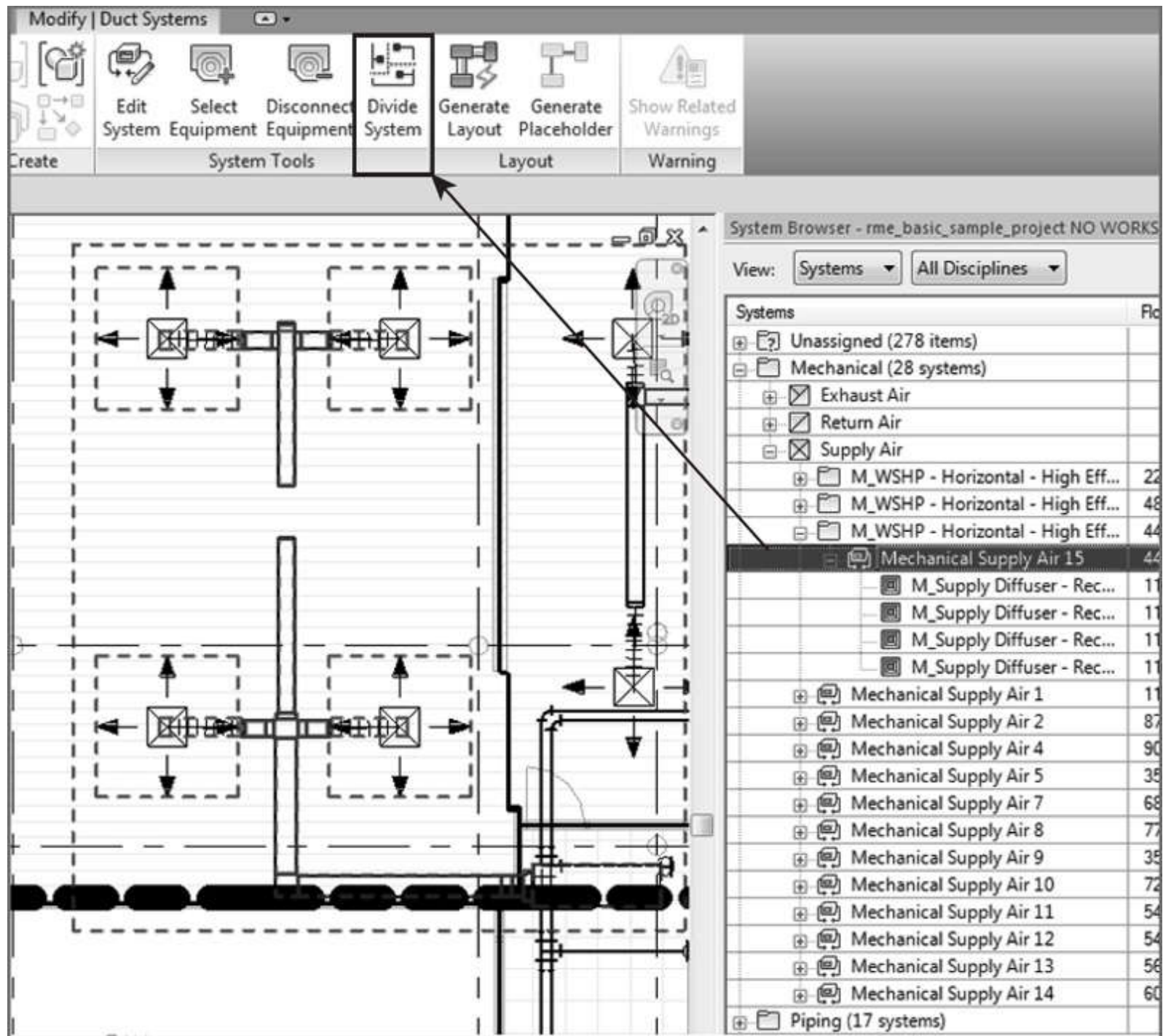
Mechanical systems & ductwork
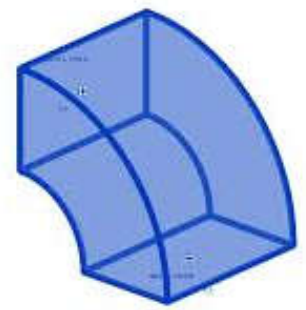
- Duct types & routing*

  - Create duct types (Extract and Supply)

  - Schematic layouts

  - Automatic duct routing

  - Manual duct routing

  - Adjust fittings & extend the design
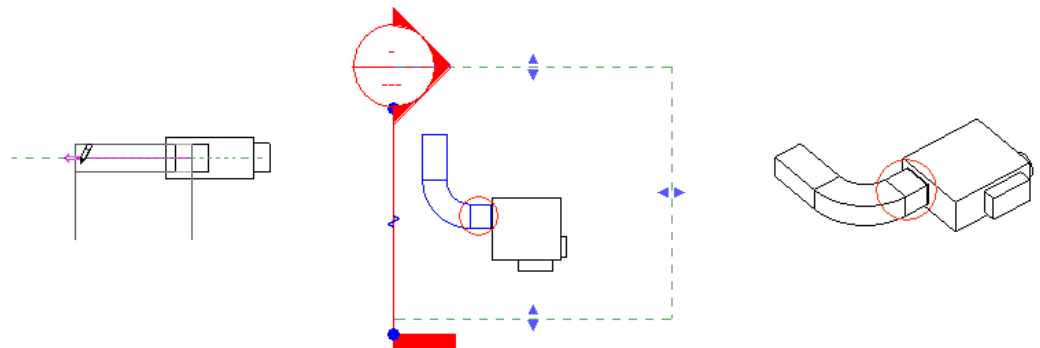
Automatic duct routing & manual editing
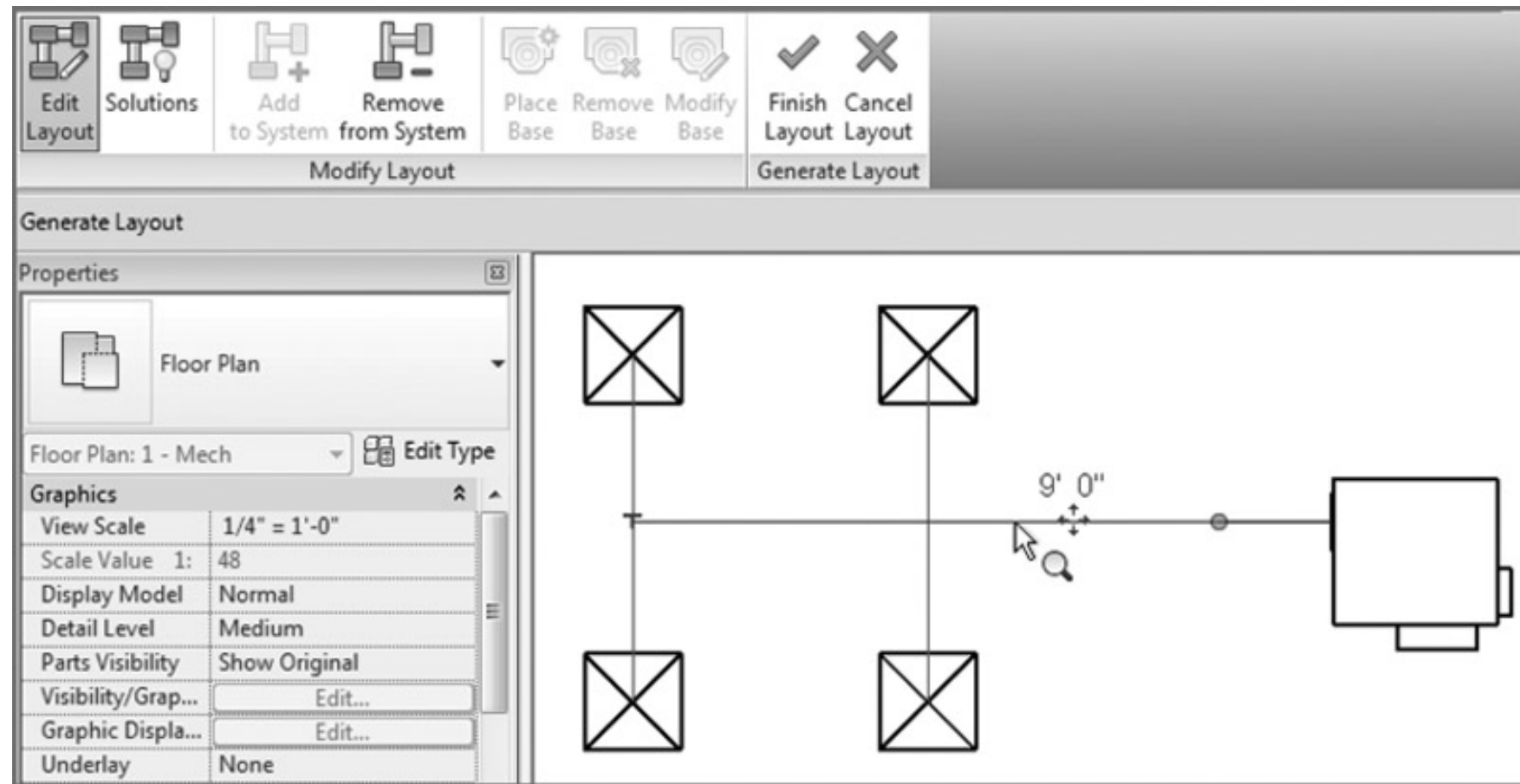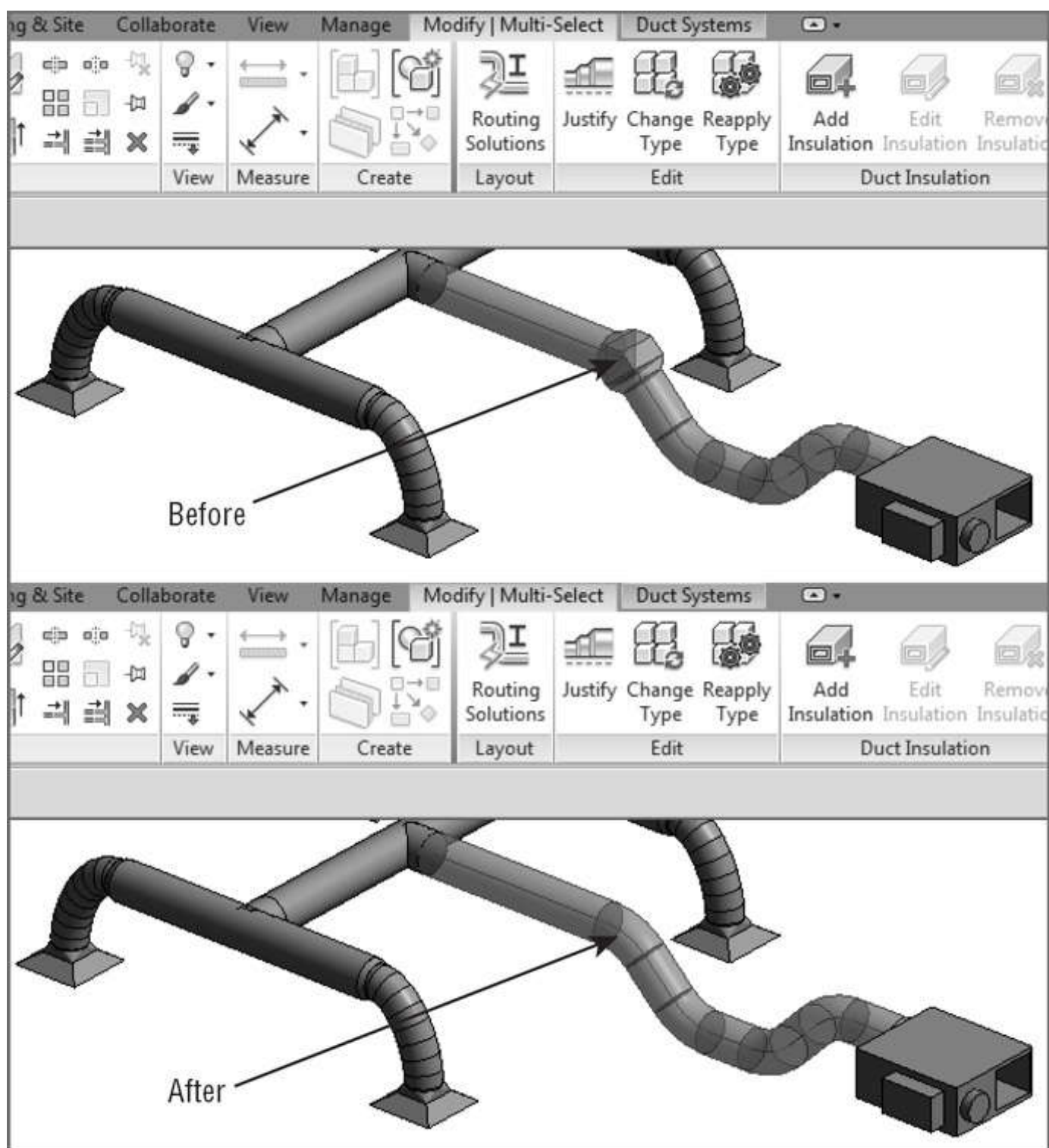
Adjusting & modifying duct fittings
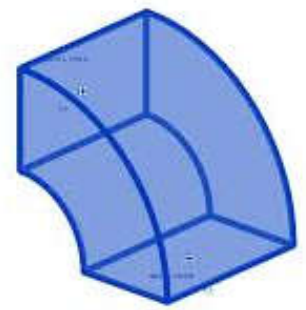
Mechanical systems & ductwork

- Duct sizing*
  - Choosing a duct sizing method (see HVAC notes)
    - Friction
    - Velocity
    - Equal friction
    - Static regain
  - Add duct insulation & lining

- <u>System Inspector tool</u>: to inspect the duct system for airflow, pressure, and pressure loss

(*See also: Duct Sizing and Calculation Methods http://help.autodesk.com/view/RVT/2018/ENU/?guid=GUID-EFD12EAC-F54F-4C13-9E0A-7901CFE644C0)

Duct sizing tool
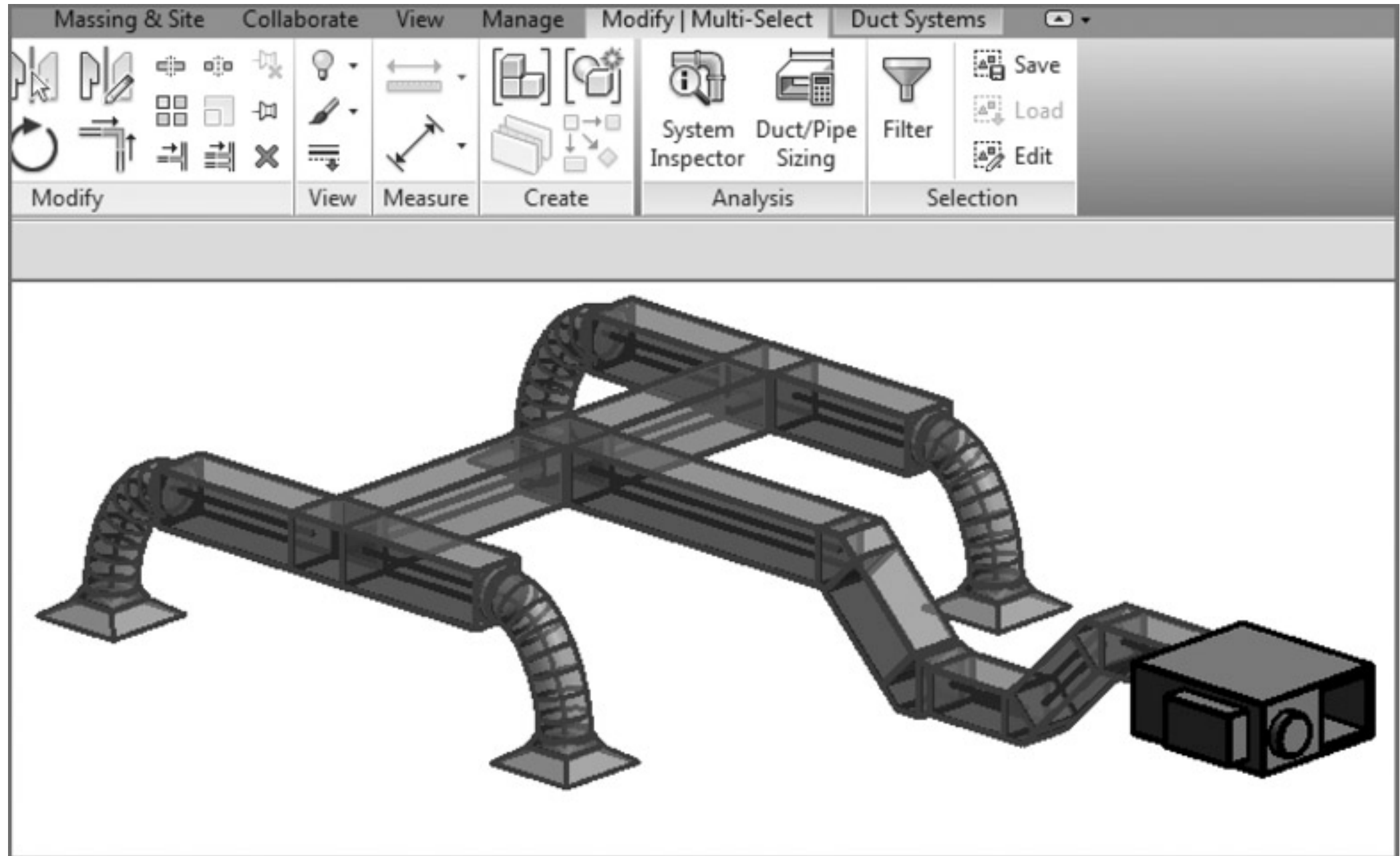
Mechanical piping

- <u>Piping systems</u>*
  - Simple two-pipe or complex multi-pipe
  - Pipe settings:
    - Piping systems
    - Pipe types (materials & fittings)
    - Pipe segments & sizes (nominal sizes)
    - Fluid table (for sizing pipes, determine pressure drop)
    - Slope table
    - Fitting angles
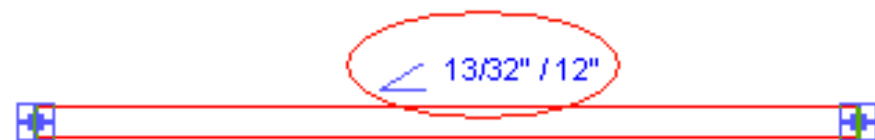
6' 0"   ∠ 13/32" / 12"   6' 3"

Creating piping systems

Ch11 Project.rvt - Project Browser

- Pipe Insulations
- Pipes
  - Pipe Types
    - PVC
    - Standard
- Piping Systems
  - Piping System
    - Domestic Cold Water
    - Domestic Hot Water
    - Fire Protection Dry
    - Fire Protection Other
    - Fire Protection Pre-Action
    - Fire Protection Wet
    - Hydronic Return
    - Hydronic Supply
    - Other
    - Sanitary
    - Vent
- Plumbing Fixtures
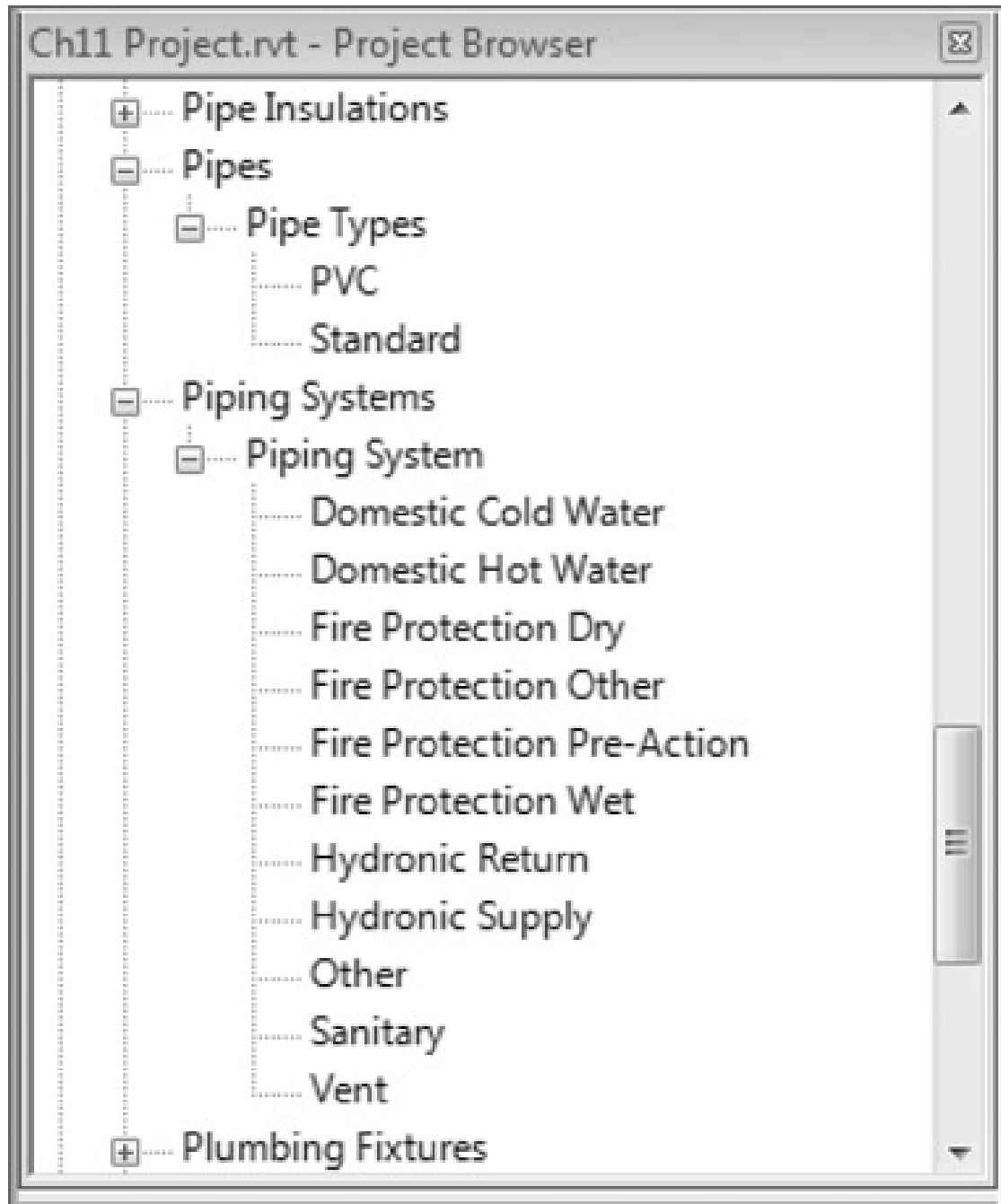
Domestic piping systems:
- Domestic cold water
- Domestic hot water
- Sanitary
- Vent

Fire-protection piping systems:
- Fire protection dry
- Fire protection wet
- Fire protection pre-action
- Fire protection other

Mechanical piping systems:
- Hydronic return
- Hydronic supply

Other (e.g. medical gas)

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Mechanical piping

- Pipe routing options:
  - Automatic pipe routing
  - Manual pipe routing
- Design tips:
  - Colour-coded systems & interference checking
  - Use project templates in piping layouts to improve productivity
  - Automate with pipe connectors & improve coordination
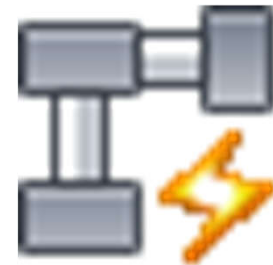
Create & edit piping systems
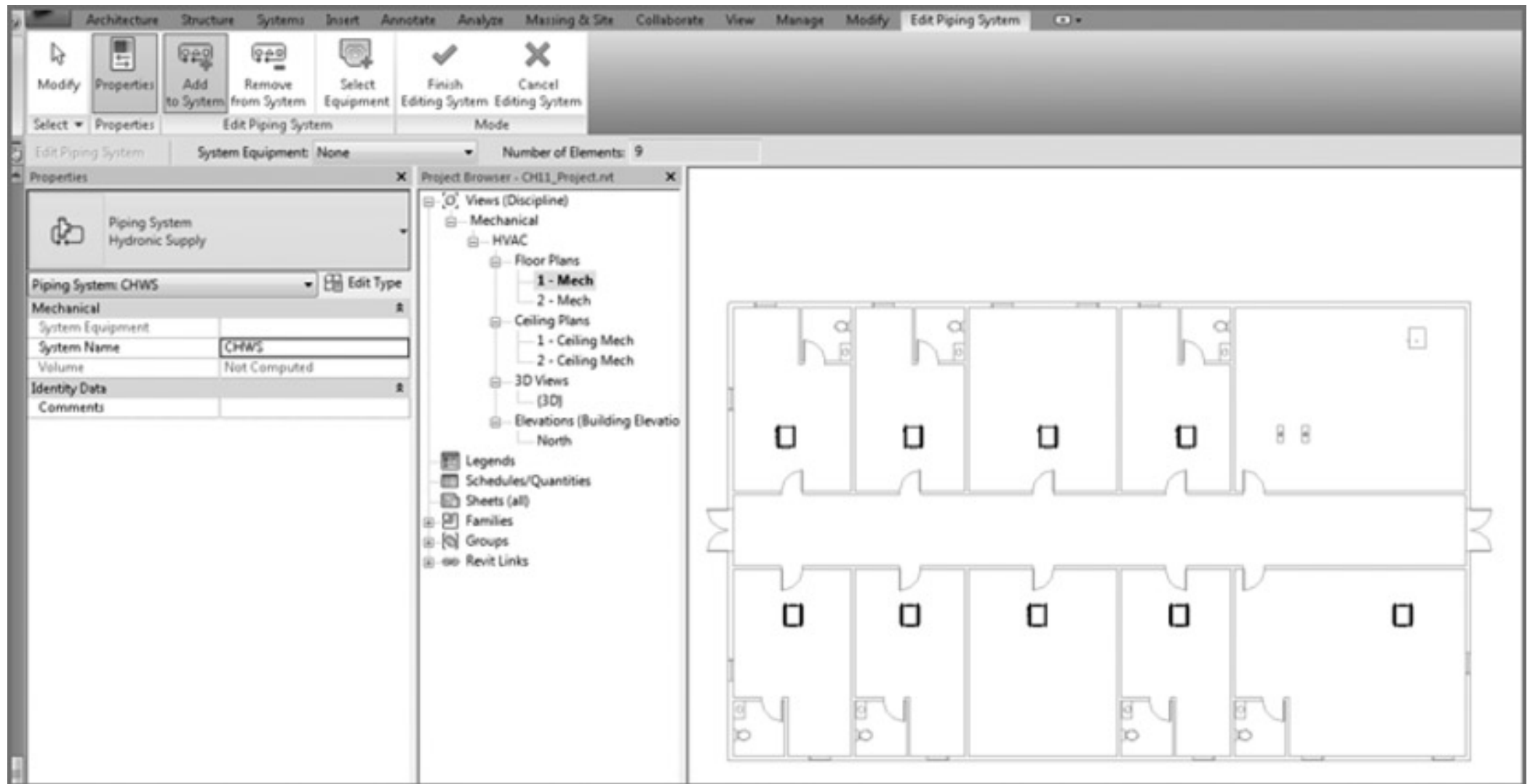
Mechanical piping

- Pipe fittings
  - End caps
  - Tee, tap, wye or cross
  - Transitions, couplings, or unions
  - Flange
- Placing valves
- Adding piping insulation
- Defining systems visibility through filters
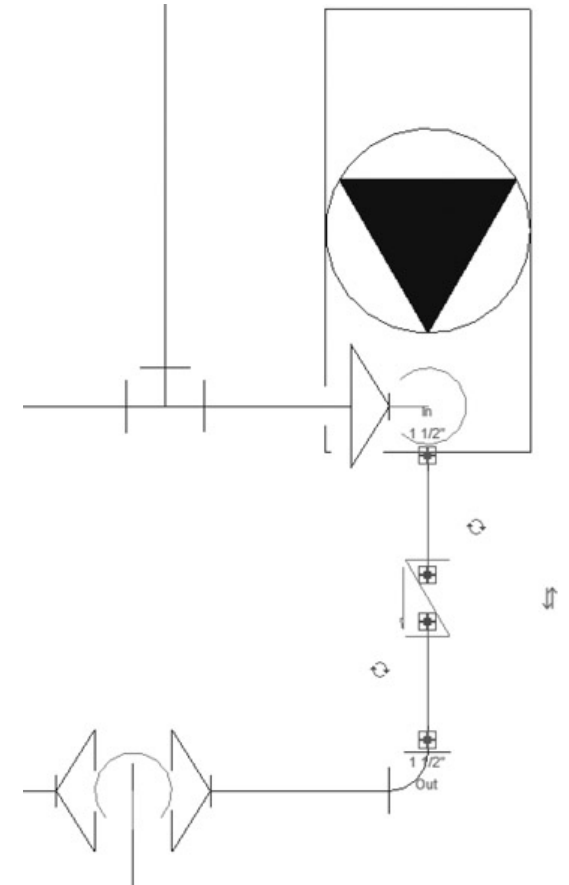
The same model displayed without filter overrides (on the left) and with overrides (to the right)
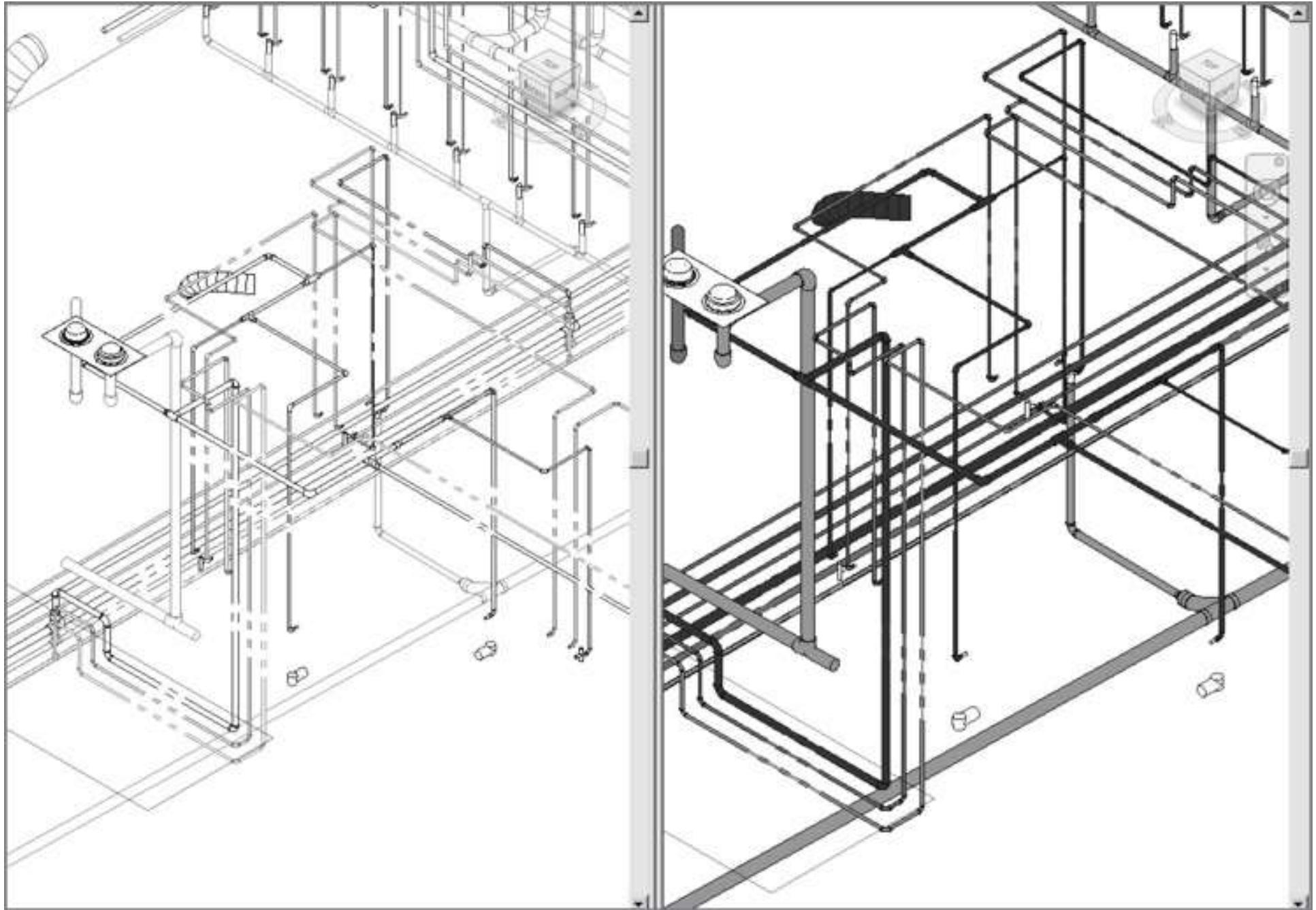
Different views of hydronic piping systems
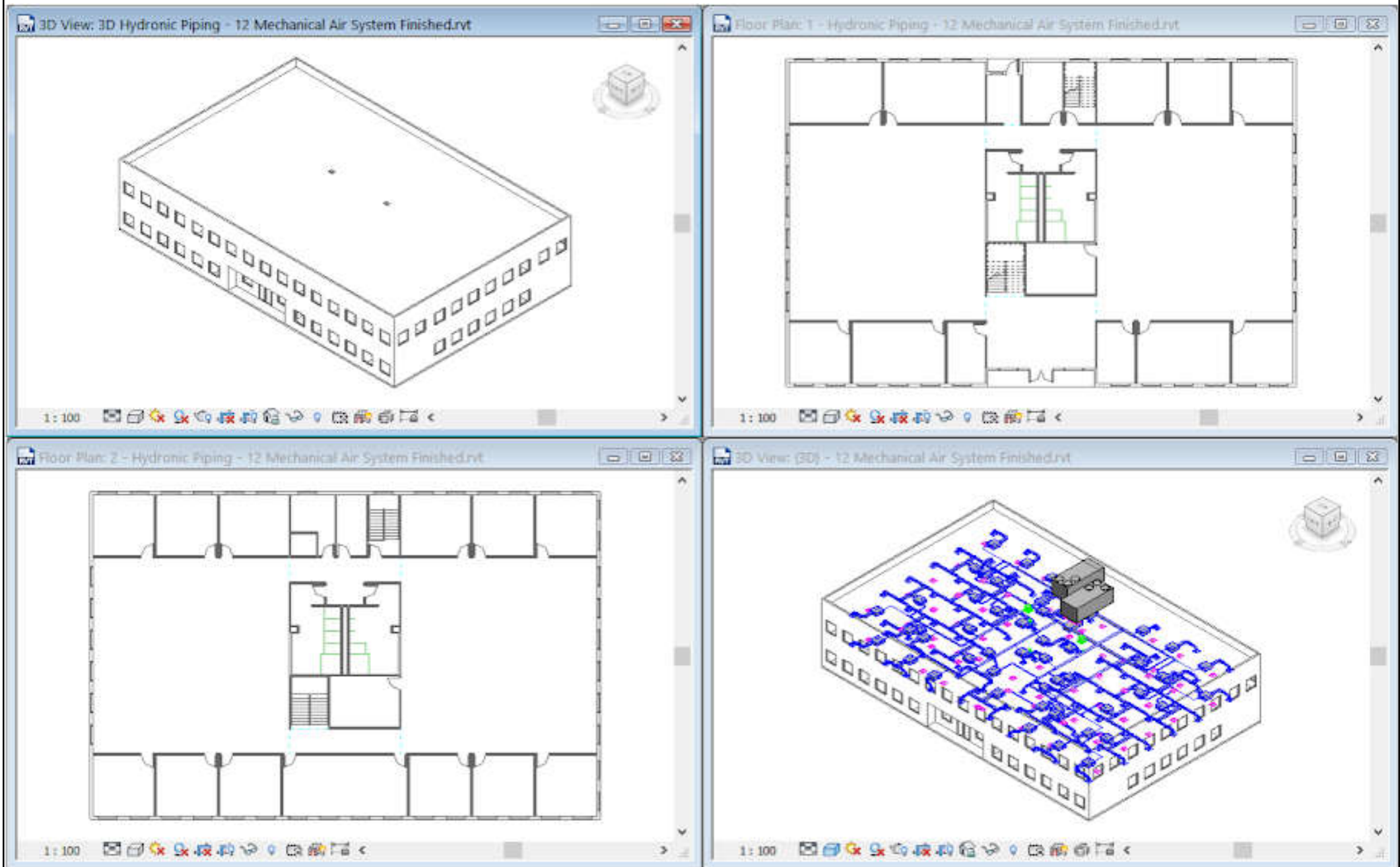
3D view of hydronic piping systems
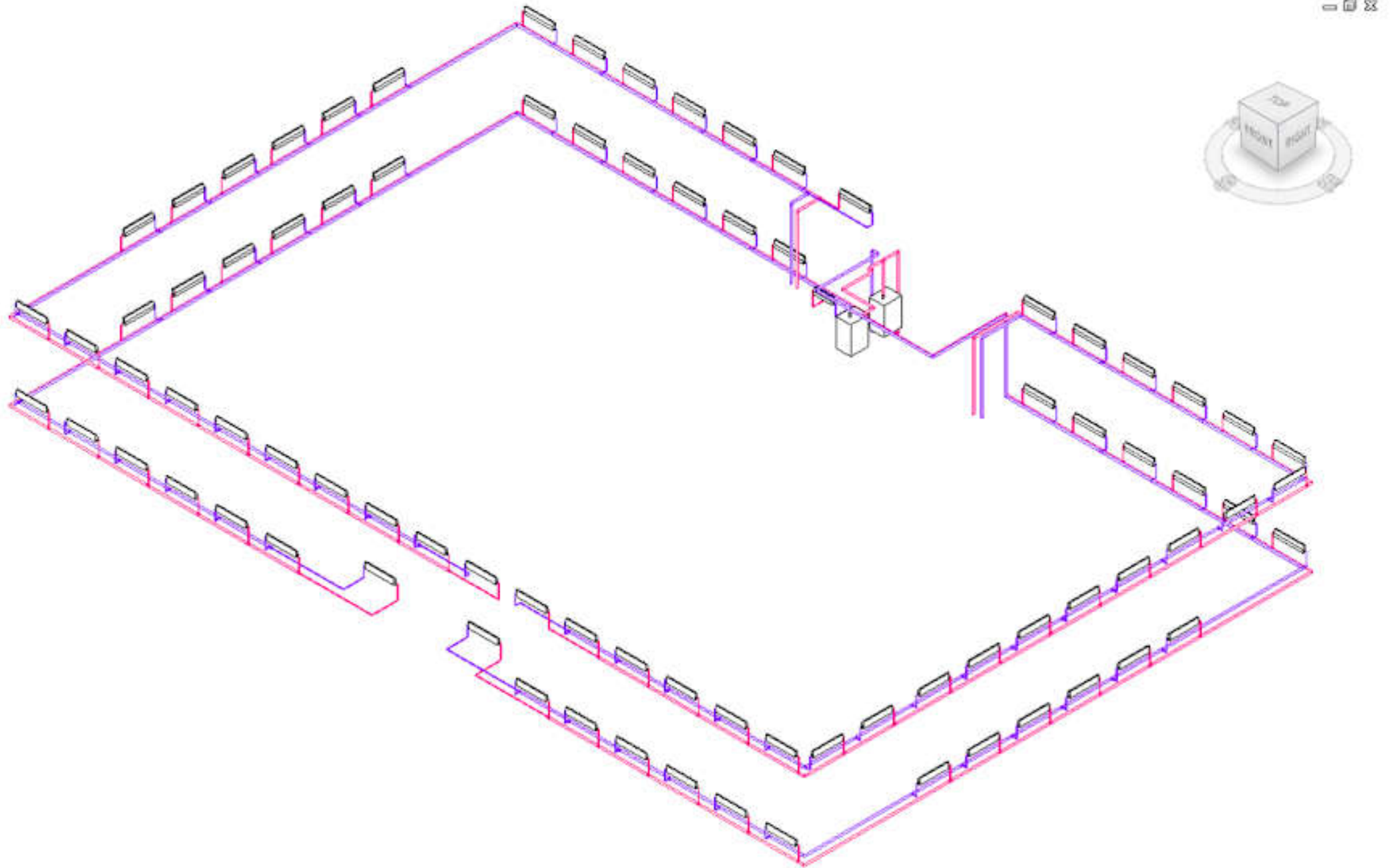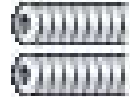
Electrical systems

- Use Revit MEP to create electrical systems (circuits) to place devices, lighting fixtures, and electrical equipment in a project*
  - Work with electrical components
  - Create & edit circuits
  - Create & edit switch systems
  - Electrical sizing & calculations
- Need to understand electrical services design requirements & process

Typical components of electrical systems

- Systems tab ➤ Electrical panel ➤
  - ✎ (Wire)
  - ✎ (Cable Tray)
  - ▦ (Conduit)
  - ▦▦ (Parallel Conduits)
  - ⬭ (Cable Tray Fitting)
  - ⬚ (Conduit Fitting)
  - ⬚ (Electrical Equipment)
  - ◉ (Device)
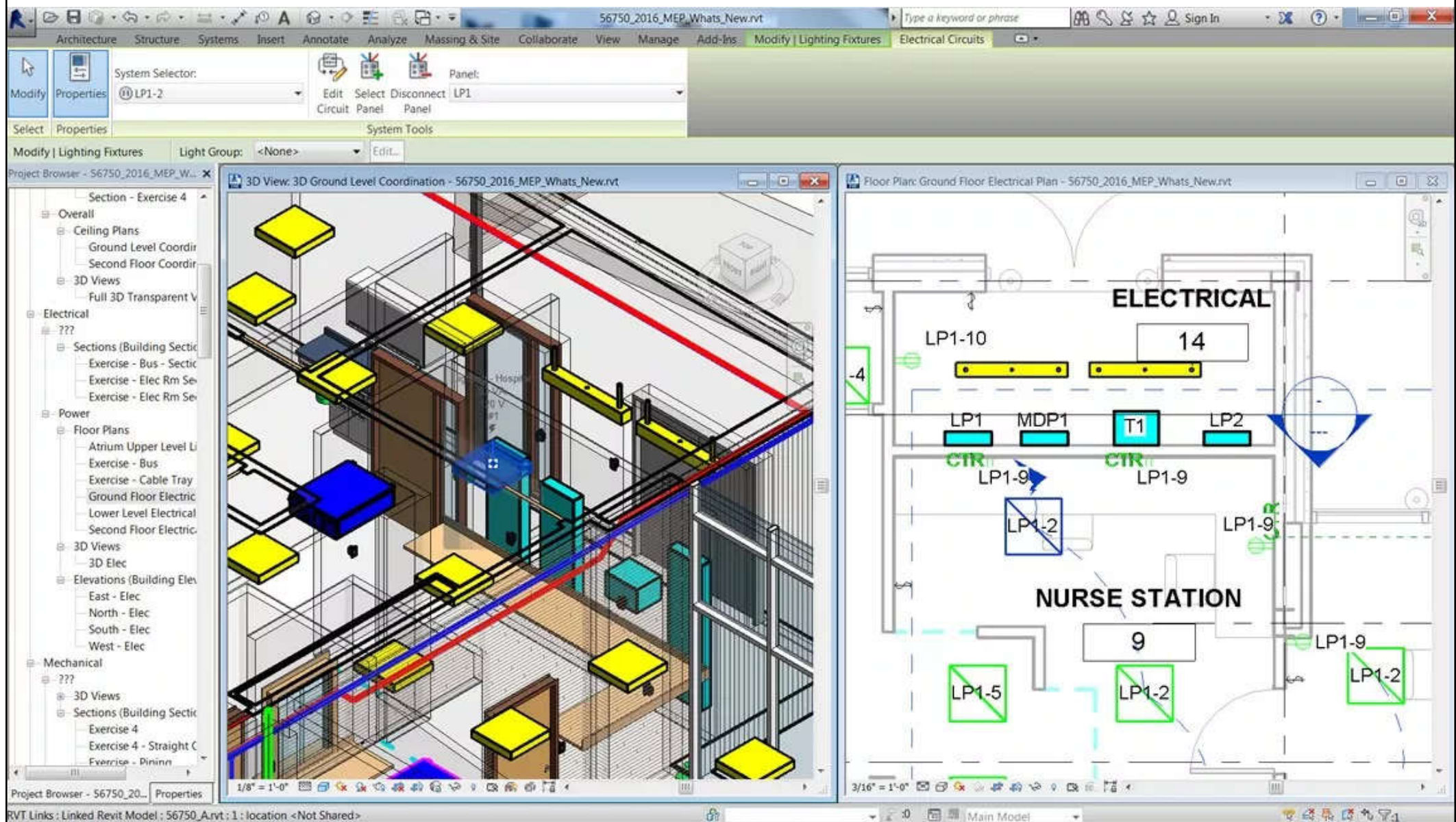 - ✎ (Lighting Fixture)

Power Switch

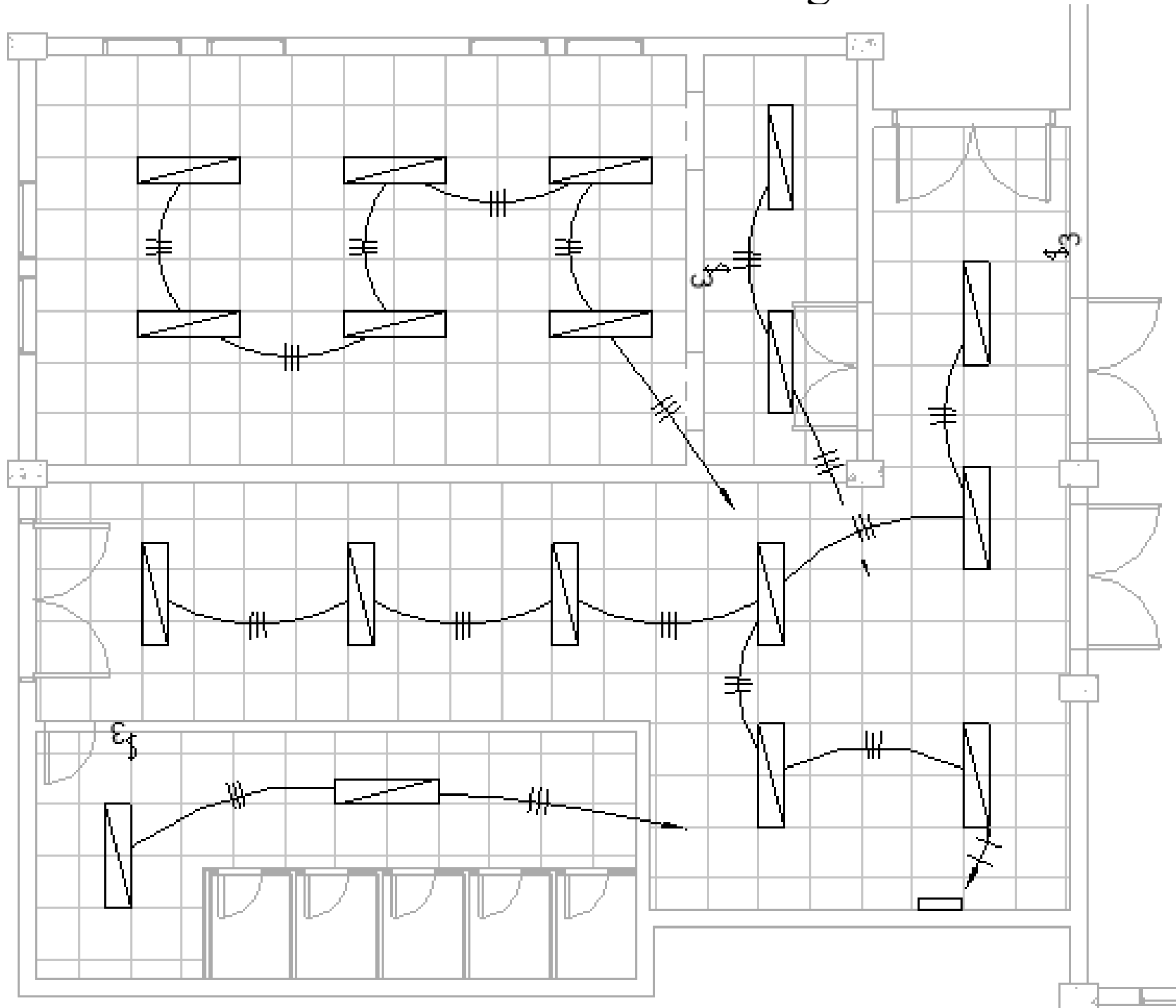Create Systems
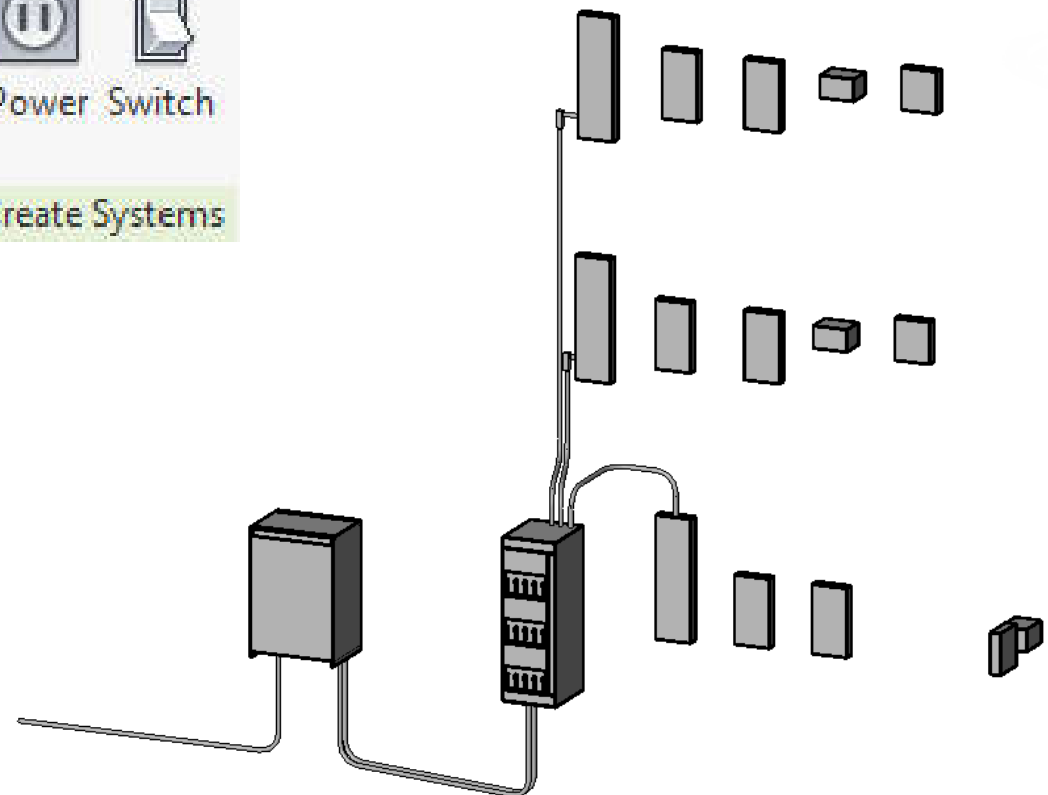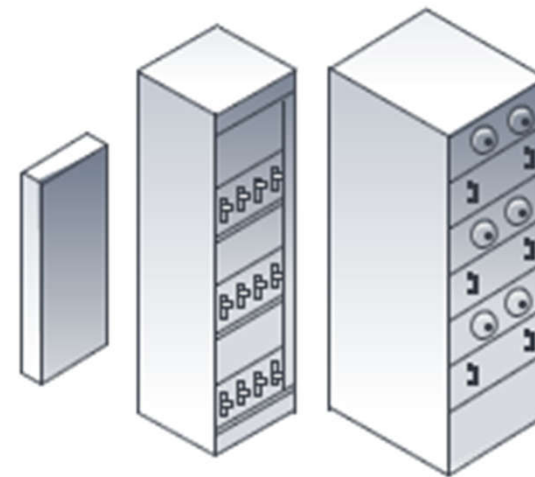
Electrical systems

- Electrical loads
  - Lighting and power for a space
  - These loads affect the cooling & heating loads analysis according to the lighting & power schedules

- Electrical family parameters*
  - Specify the parameter type & properties
  - Customize electrical families
  - Facilitate productivity & improve accuracy

(*See also: Electrical Family Parameters http://help.autodesk.com/view/RVT/2018/ENU/?guid=GUID-4E5DD909-DD4C-41B9-83DB-37E9F7CA9639)

Electrical system design in Revit MEP

Create circuit and wiring

An example of electrical circuit schedule

			Electrical Circuit Schedule				
Circuit Number	Load Name	Voltage	Length	Voltage Drop	Breaker Size	Apparent Current	Wire Size
HA							
1	Lighting Room 103, 104, 105	277 V	288' - 5 3/4"	5 V	20 A	10 A	1-#8, 1-#8, 1-#8
2	Exterior Lighting - Entrance	277 V	311' - 3 5/32"	2 V	20 A	2 A	1-#12, 1-#12, 1-#12
3	Site Lighting	277 V	78' - 3 1/2"	0 V	20 A	1 A	1-#12, 1-#12, 1-#12
4	Site Lighting	277 V	57' - 8 5/8"	0 V	20 A	0 A	1-#12, 1-#12, 1-#12
5	SPARE	277 V	0' - 0"	0 V	20 A	0 A	1-#12, 1-#12, 1-#12
6	SPARE	277 V	0' - 0"	0 V	20 A	0 A	1-#12, 1-#12, 1-#12
7,9,11	ELEVATOR	480 V	28' - 11 1/16"	1 V	50 A	27 A	3-#6, 1-#6, 1-#10
8,10,12	TA	480 V	7' - 0 17/32"	0 V	50 A	14 A	3-#6, 1-#6, 1-#10
HB							
1	Lighting STAIR 3 S3	277 V	82' - 2 23/32"	0 V	20 A	1 A	1-#12, 1-#12, 1-#12
2	Lighting STAGE 115	277 V	103' - 1 7/32"	1 V	20 A	1 A	1-#12, 1-#12, 1-#12
3	Lighting AUDITORIUM/THEAT	277 V	232' - 9 3/16"	4 V	20 A	5 A	1-#12, 1-#12, 1-#12
4	Exterior Lighting	277 V	76' - 6 25/32"	0 V	20 A	0 A	1-#12, 1-#12, 1-#12
5	Lighting Room 102, 100, S3, 1	277 V	279' - 3 3/16"	5 V	20 A	5 A	1-#12, 1-#12, 1-#12
6	Site Lighting	277 V	101' - 3 27/32"	0 V	20 A	0 A	1-#12, 1-#12, 1-#12
7	Lighting Room 112, 113, 102,	277 V	131' - 6 7/16"	1 V	20 A	2 A	1-#12, 1-#12, 1-#12
8	Lighting Room 118, 117, 116	277 V	57' - 7 17/32"	0 V	20 A	2 A	1-#12, 1-#12, 1-#12
15	SPARE	277 V	0' - 0"	0 V	20 A	0 A	
17	SPARE	277 V	0' - 0"	0 V	20 A	0 A	
19,21,23	TB	480 V	6' - 6 1/8"	0 V	50 A	11 A	3-#6, 1-#6, 1-#10
20	SPARE	277 V	0' - 0"	0 V	20 A	0 A	

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Plumbing systems

- They are logical entities that facilitate calculations for flow & sizing of equipment

- They are independent of the piping that is placed in a project to show the routing & connections between plumbing fixtures

- 3 types of plumbing: domestic hot water, domestic cold water & sanitary systems
  - Can also create custom system types, e.g. compressed air system

Plumbing fixtures & piping to create a sanitary system
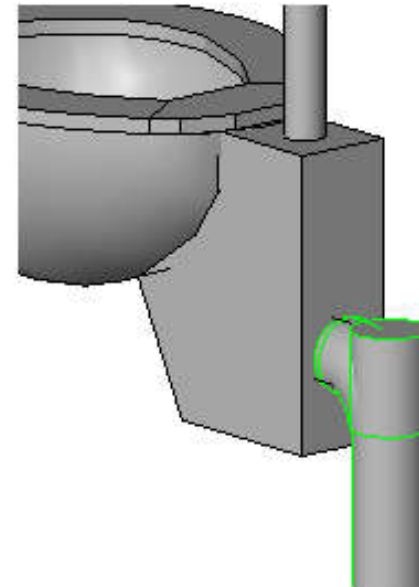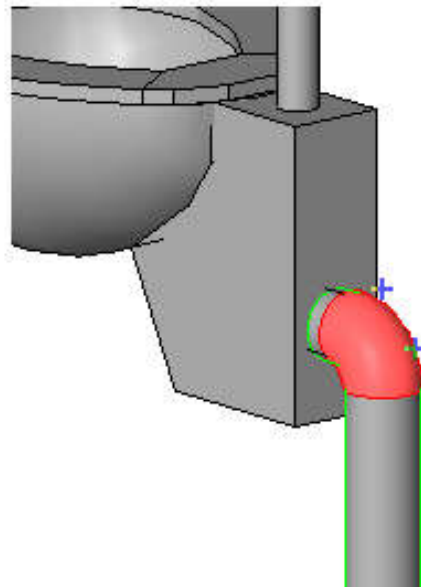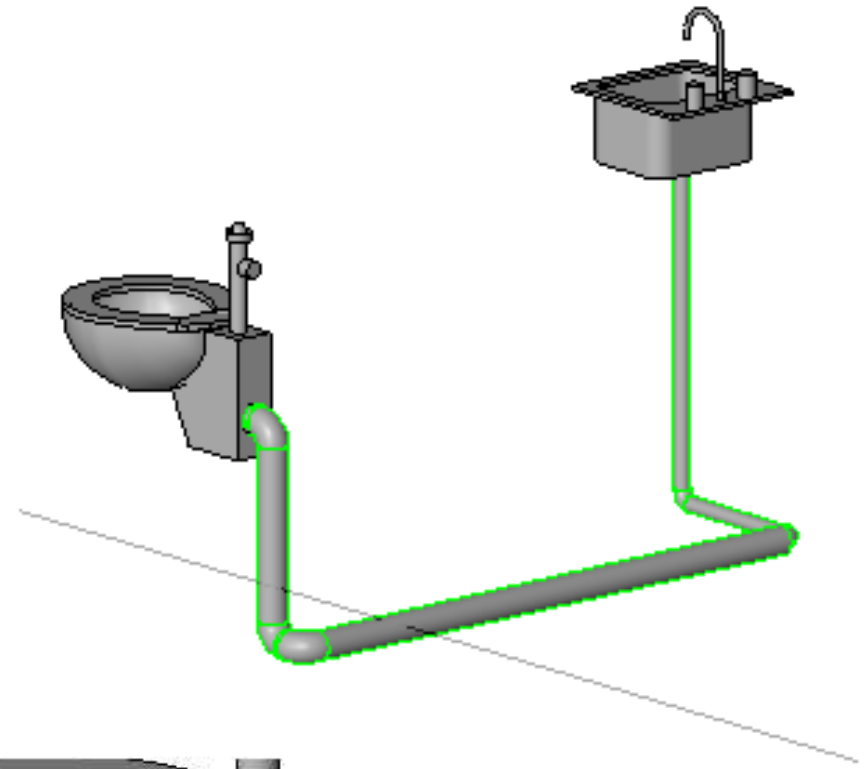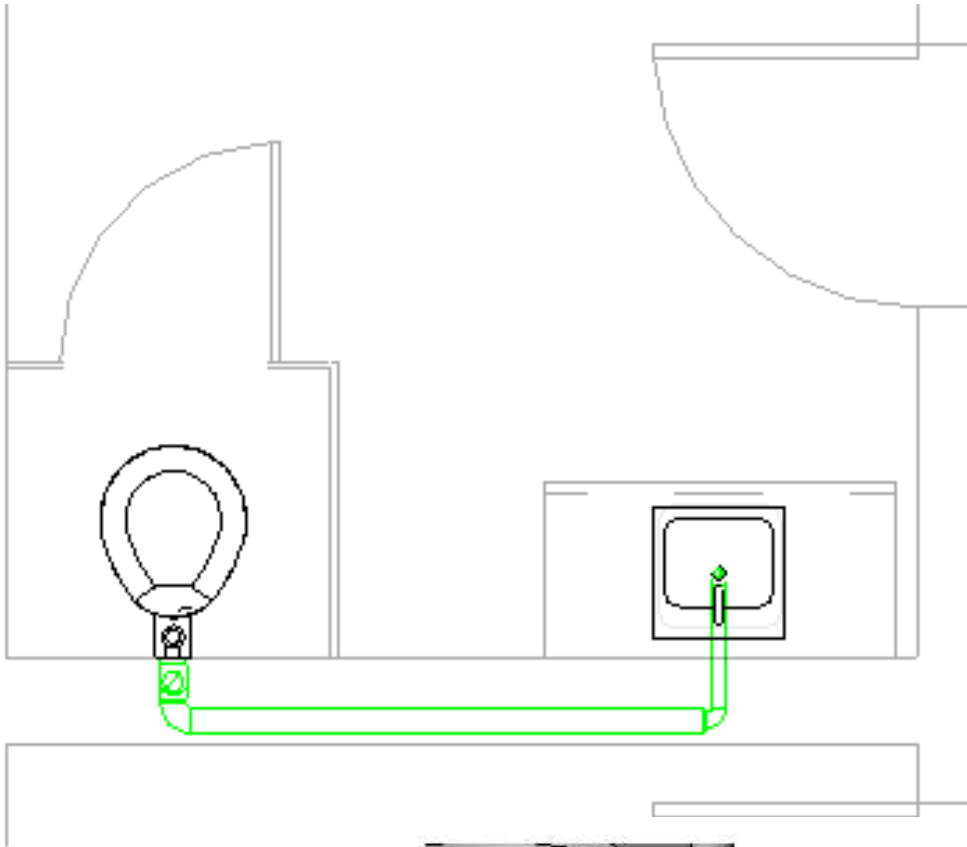
Plumbing systems

- Pipe sizing & calculation methods
    - Revit automatically calculates specific pipe sizing for the systems using friction and/or velocity sizing methods
    - Computes pressure losses in piping based on the geometry and roughness of piping, fluid density, and fluid dynamic viscosity
    - Uses the Excess Head (K) method to compute the head loss through a fitting

$$h_L = K \frac{V^2}{2g}$$

Plumbing systems

- With BIM, a plumbing designer has to become a "virtual pipe installer"

- Configuring the plumbing views is important
  - Global settings and view-specific settings
    - Need to adjust several settings so the pipes are properly displayed
  - Defining systems visibility through filters
    - Define colour, line patterns & line weights
    - Display 3D views, using workset visibility to turn off unnecessary ones

Visibility/Graphic overrides for plumbing systems
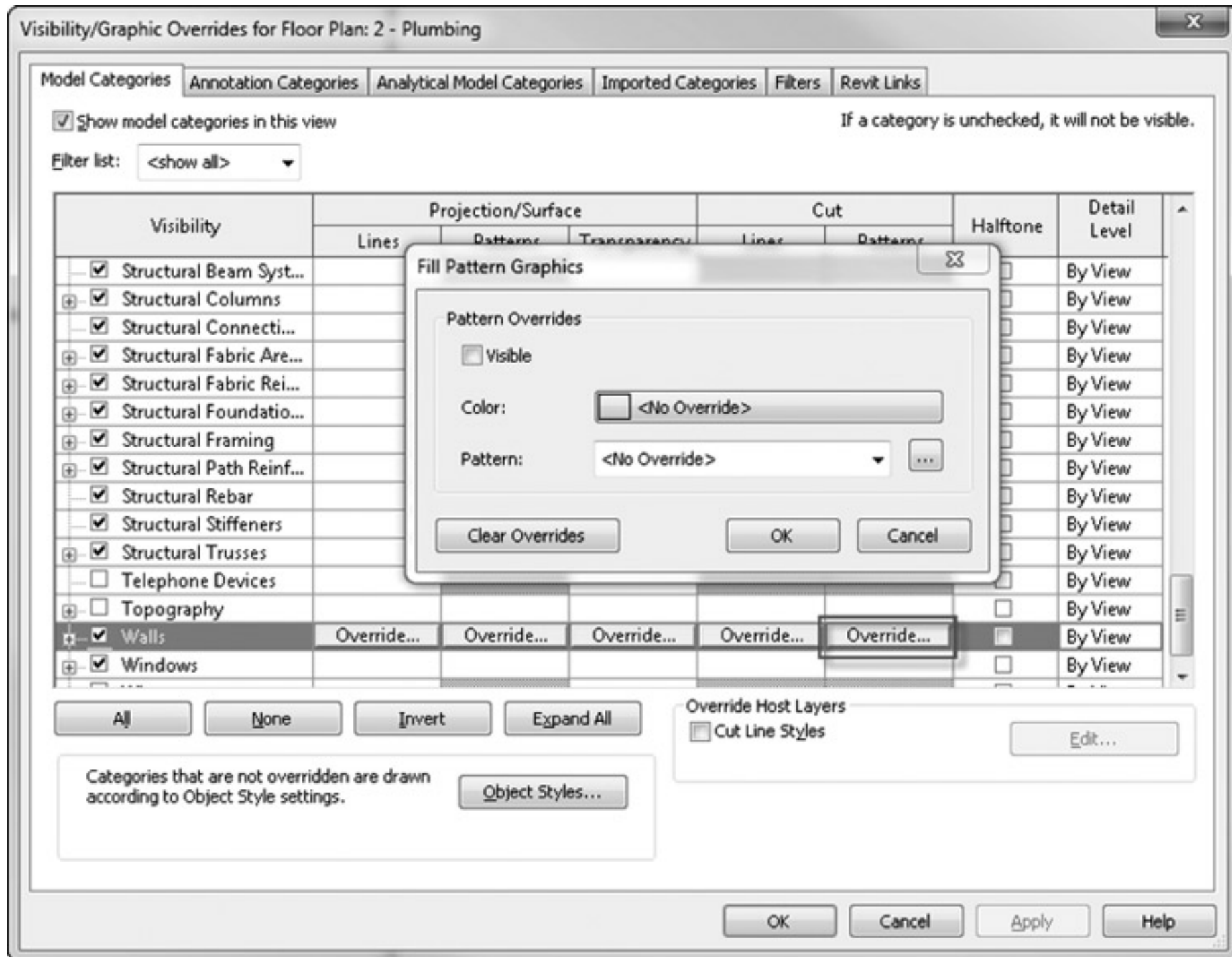
Plumbing systems

- Working with plumbing fixtures
  - They normally are placed by the architect during schematic design to coordinate usability and meet the requirements of governing codes
  - Use plumbing fixture family or type catalog
  - Create plumbing fixture schedule

Plumbing Fixture Schedule						
Type Mark	Description	Type Comme	Manufacturer	Model	Keynote	Count
P-1	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	AMERICAN STANDARD	CADET	12" ROUGH-IN	1
P-2	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	KOHLER	CIMARRON	12" ROUGH-IN	1
P-3	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	CRANE	2200.11	10" ROUGH-IN	1
P-4	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	ZURN	201100.11	12" ROUGH-IN	1
P-4	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	ZURN	201100.11	12" ROUGH-IN	1
P-4	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	ZURN	201100.11	12" ROUGH-IN	1
P-4	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	ZURN	201100.11	12" ROUGH-IN	1
P-4	PROVIDE W/ENLONGATED OPEN FRONT SEAT	18" ADA	ZURN	201100.11	12" ROUGH-IN	1

Plumbing systems

- Working with architectural linked-in plumbing models
  - Coordinated with any architectural plan changes
  - Two methods to create custom pipe assemblies:
    - Pipe assembly created with sweeps
    - Assemble nested families
      - Can allow for better quantity take-offs for all the fittings, create more-accurate dimensional information when supplied by manufacturers, and be easier for the designer to create
      - The downside is that it produces a larger family file

Two methods to create custom pipe assemblies
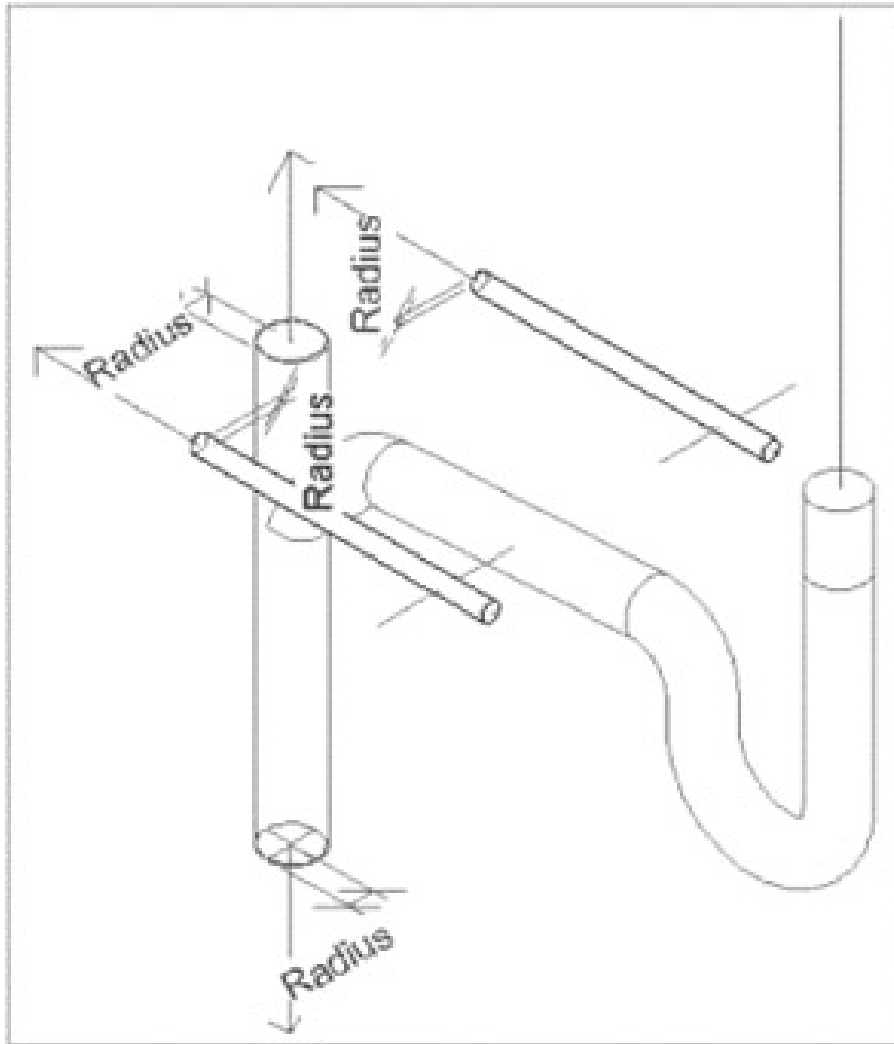
A pipe assembly created with sweeps

Nested pipe assembly
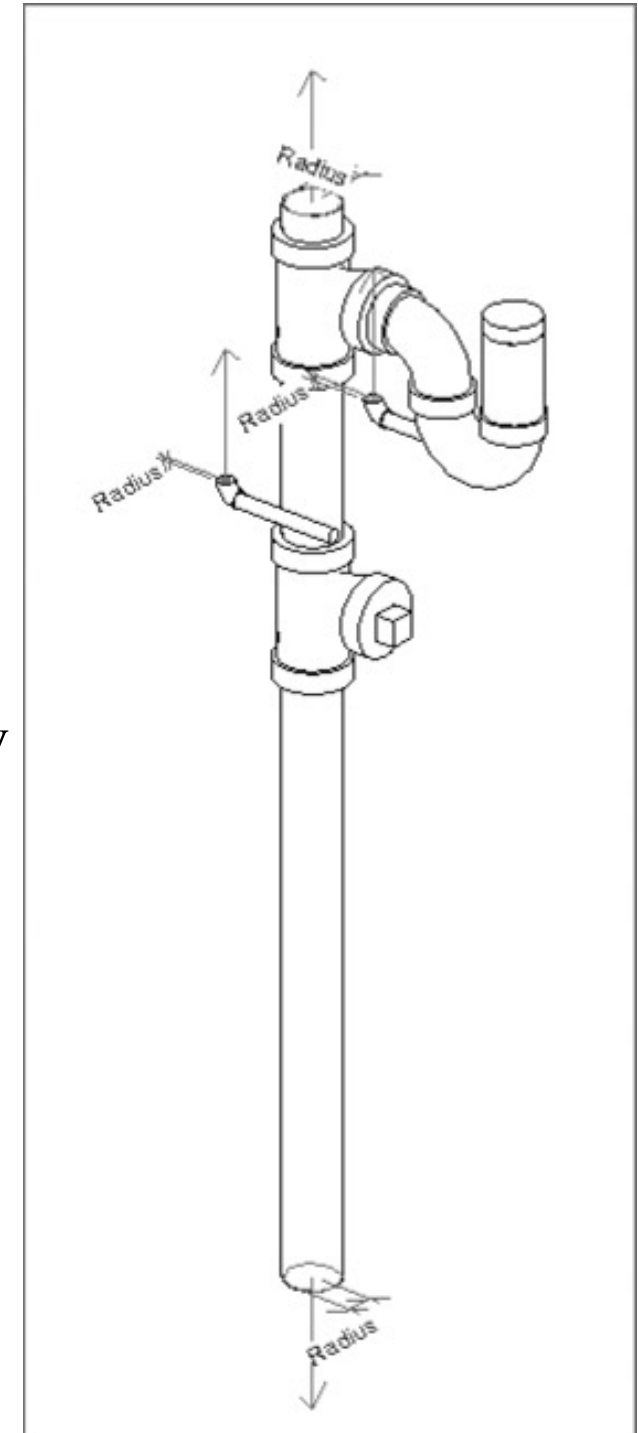
Copying/Monitoring plumbing fixtures
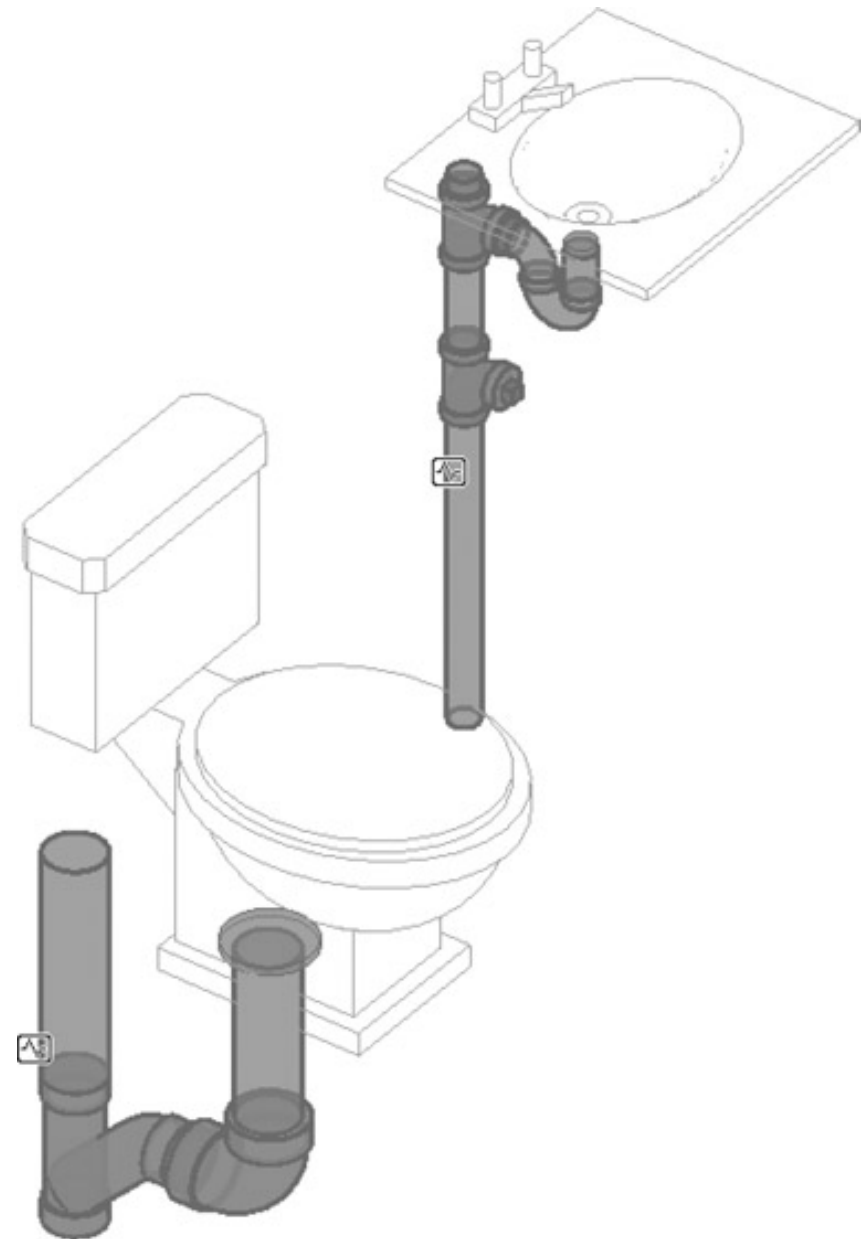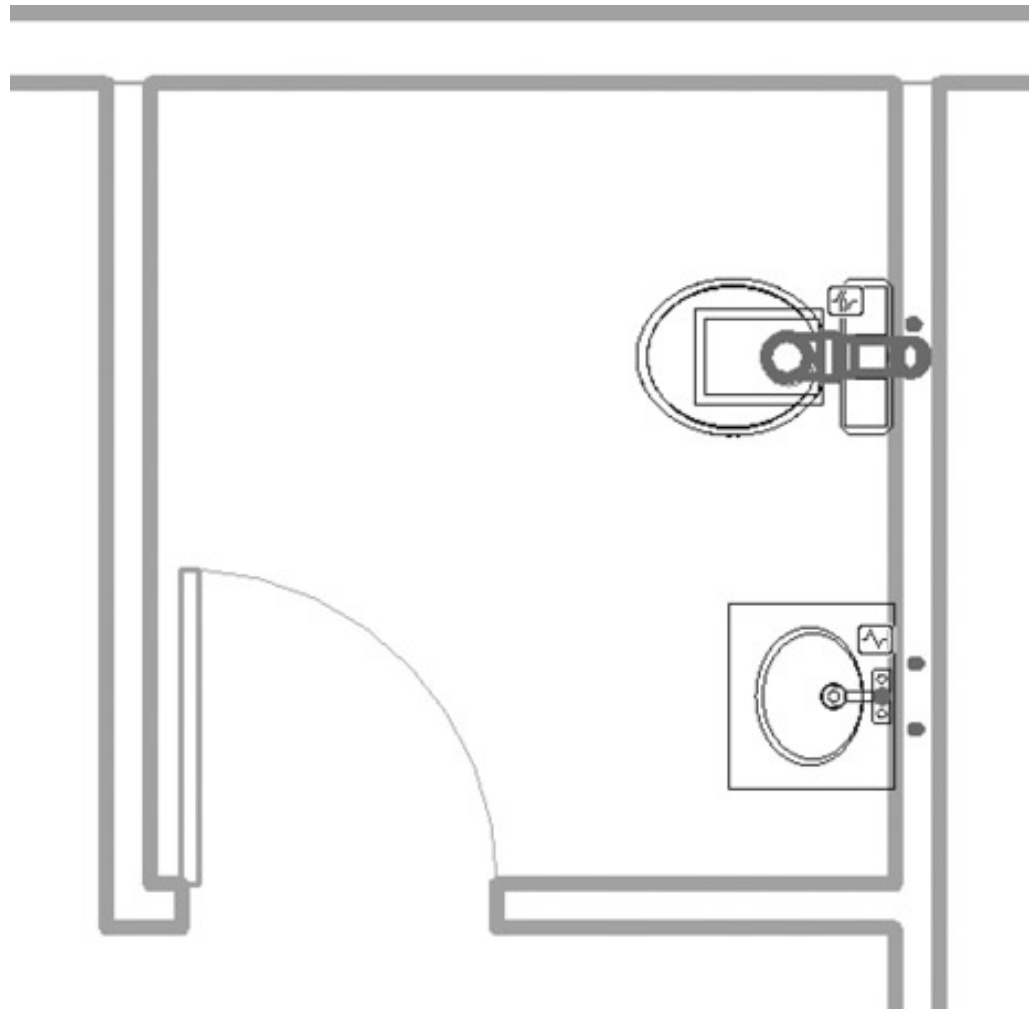
Collaborate with the architect:
When the architect moves a plumbing fixture,
you will receive a warning that you need to
coordinate your view

(Source: Bokmiller, D., Whitbread, S. and Hristov, P., 2013. *Mastering Autodesk Revit MEP 2014*, Sybex, Indianapolis, Ind.)

Plumbing systems

- Choosing pipe settings & pipe routing options
  - Apply the appropriate pipe material & pipe fittings
    - To get the invert elevation for sloping systems
  - Model sloping pipe:
    - Use either auto-route or manual routing feature
    - Locate the sanitary point of connection (POC) outside the building (draw from the main first)
  - Annotate invert elevation & the slope
    - Apply parametric elevation and slope annotations

Sanitary layout with sloped piping

Level 2
10' - 0"

Level 1
0' - 0"

-3' 7 21/128'

1/8" / 12'
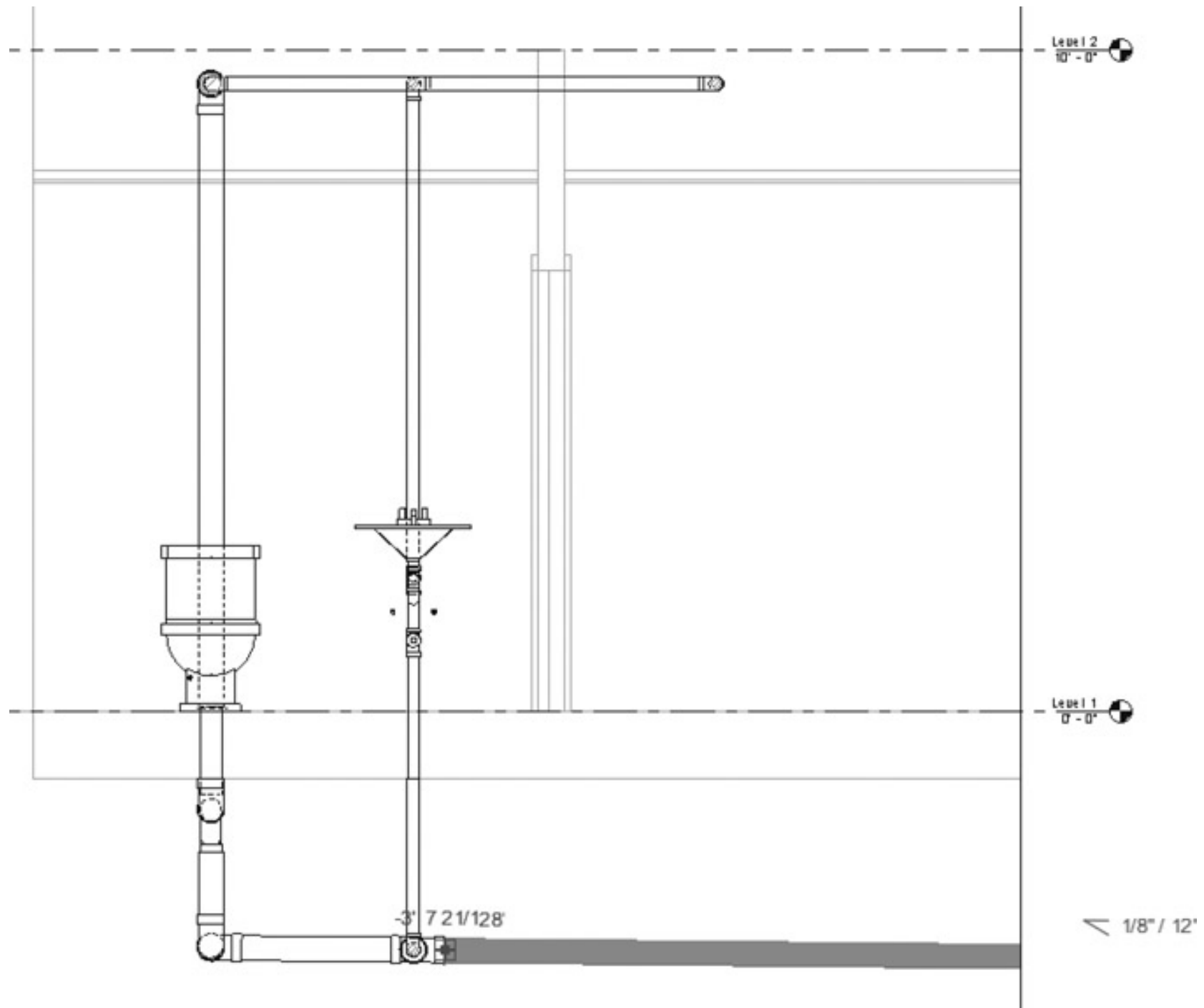
Plumbing systems

- Using pipe fittings
    - Revit fitting families:
        - End cap
        - Tee, tap, wye, or cross
        - Transitions, couplings, or unions
        - Flange
    - Pipe fitting controls
    - Placing valves & pipe accessories
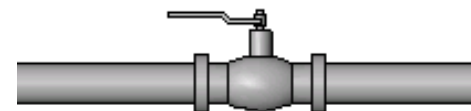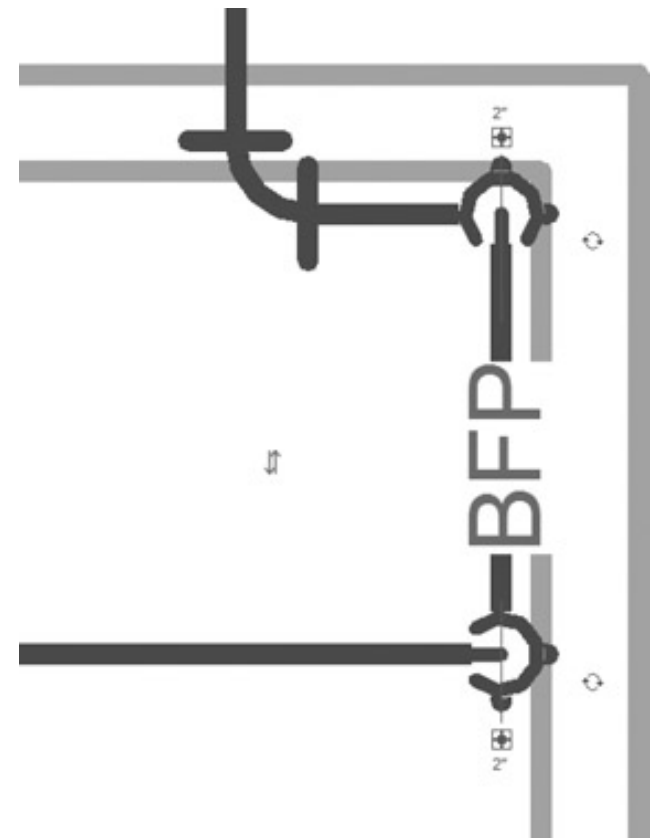
Plumbing systems

- Video: Revit MEP Lesson 16: How To Create a Sanitary Plumbing System (13:16)
  - https://youtu.be/ASHODy2NpyA
  - Demonstrate how to create a sanitary system on Revit MEP

- More video tutorials on plumbing:
  - REVIT MEP EXAM REVIEW_MODELING_HOW TO DO PLUMBING IN REVIT 2017 (26:25) https://youtu.be/ESHY_ojZYlw
  - REVIT MEP EXAM REVIEW_MODELING_HOW TO DO PLUMBING PART 2 IN REVIT 2017 (23:45) https://youtu.be/N1eICAUmAXQ
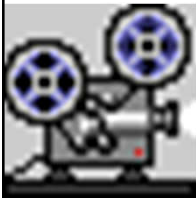
Plumbing systems

- Revit MEP tutorial for plumbing:
  - https://www.cad-notes.com/tag/revit-mep-basic/page/2/
  - Placing the Sanitary Components
  - Creating Water Supply Route
  - Connecting Plumbing Fixture to Pipe Route
  - Creating Drain Route
  - Modifying Route

Revit MEP tutorial: Placing the Sanitary Components
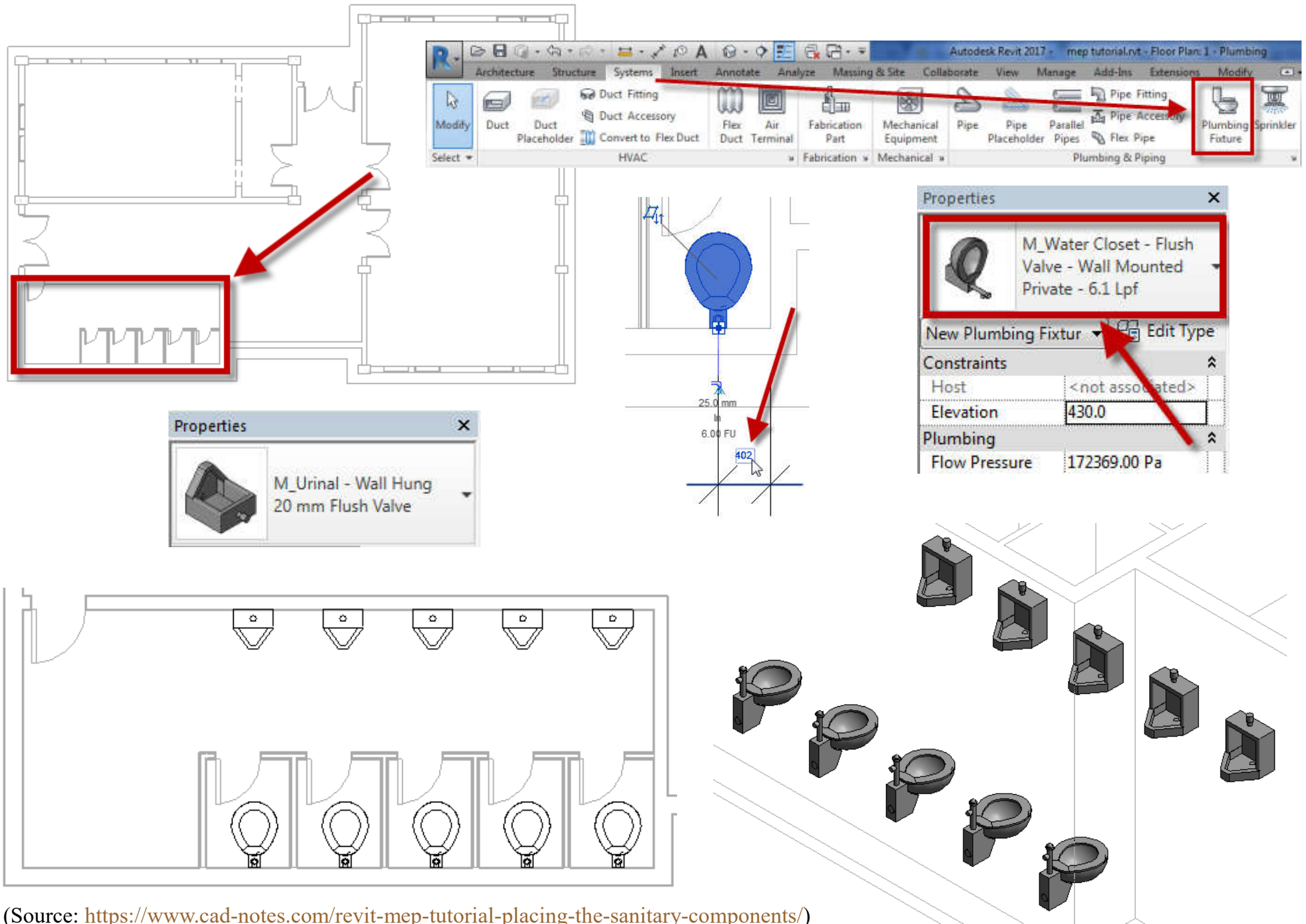
Revit MEP tutorial: Creating Water Supply Route
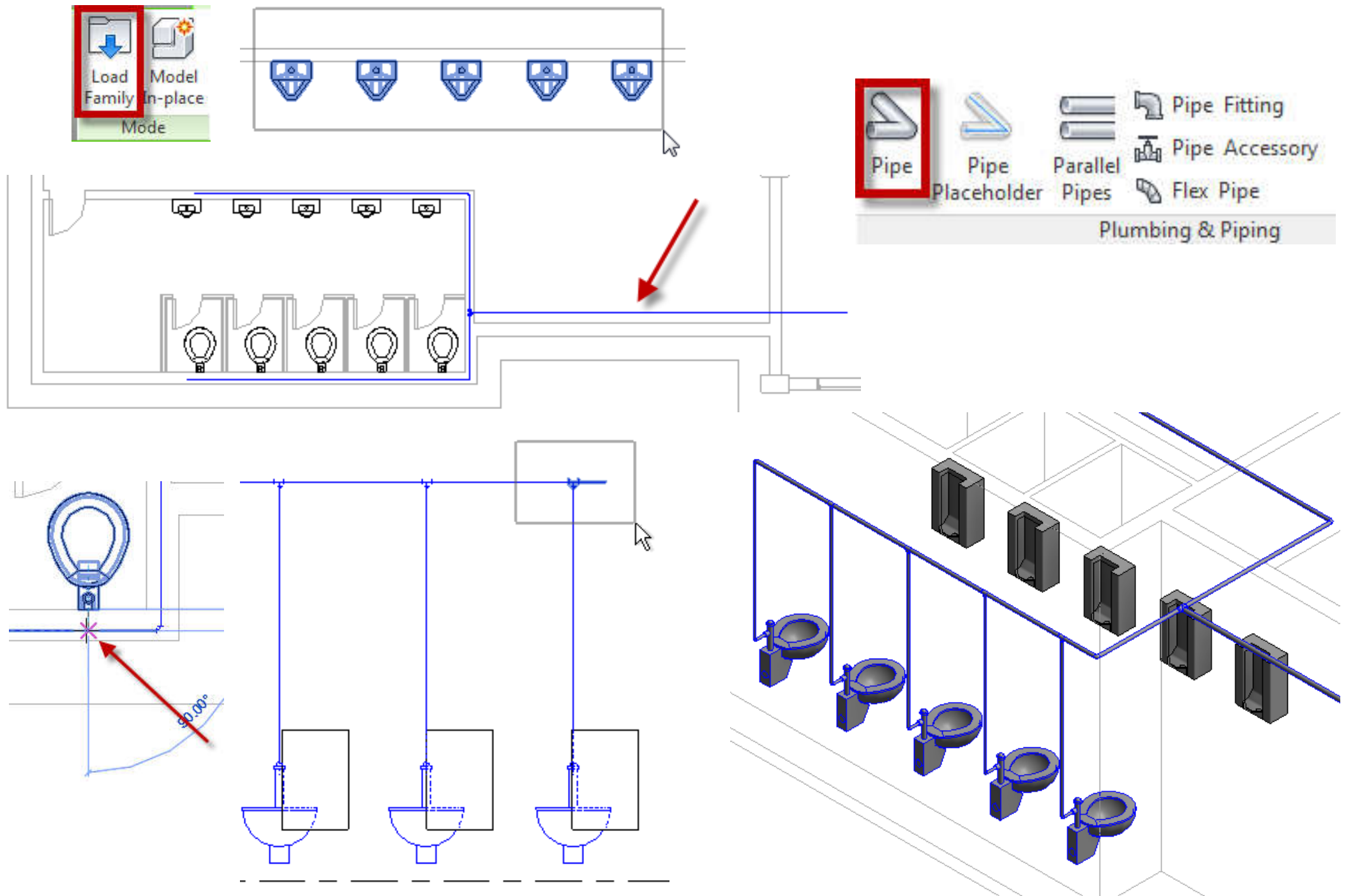
# Revit MEP tutorial: Connecting Plumbing Fixture to Pipe Route

Urinal

Water closet

Floor plan

M_Inline Pump - Circulator
4.6 LPS - 2.9 Meter Head

Inline pump

Revit MEP tutorial: Creating Drain Route
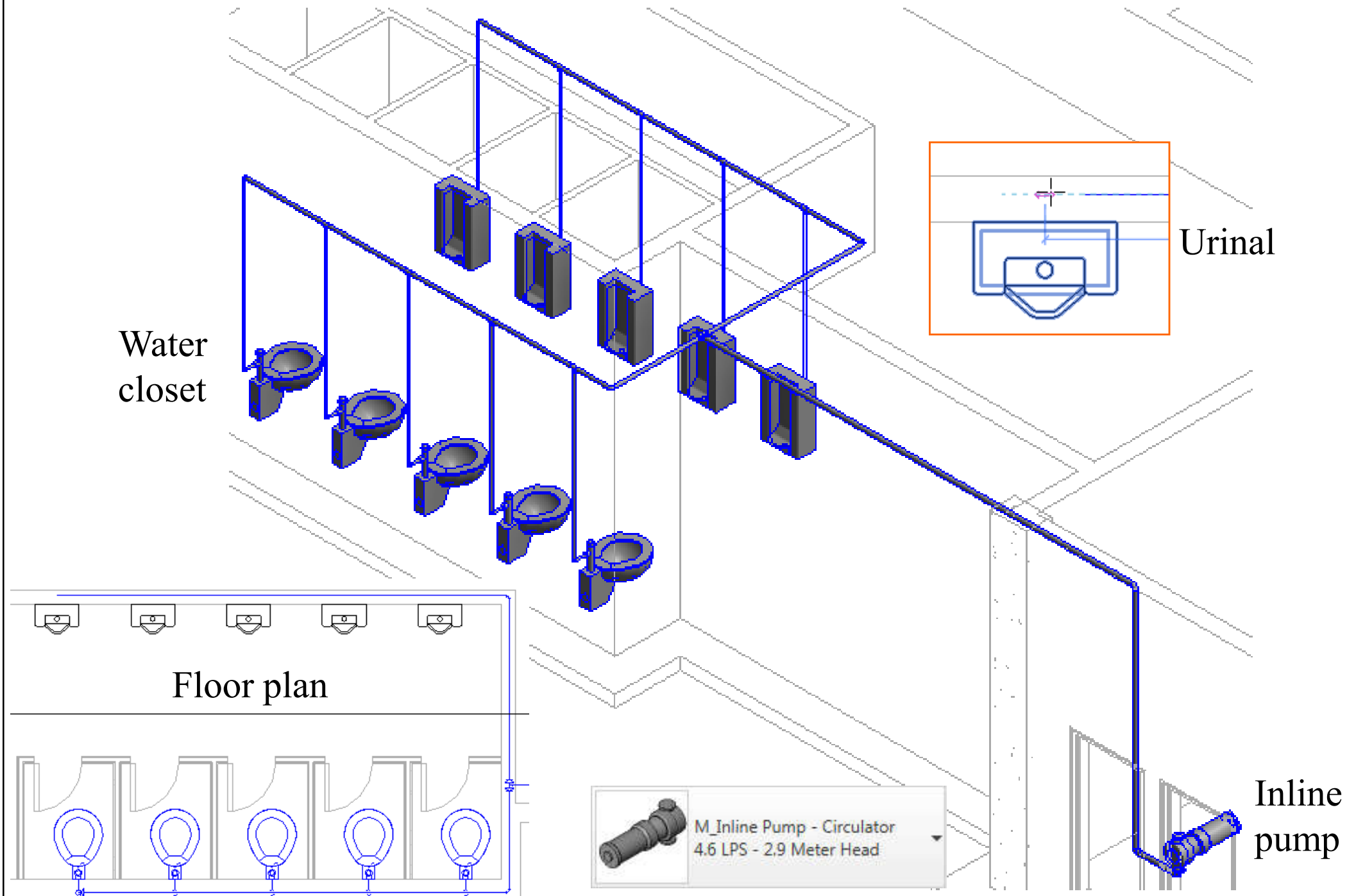
(Source: https://www.cad-notes.com/revit-mep-tutorial-creating-drain-route/)
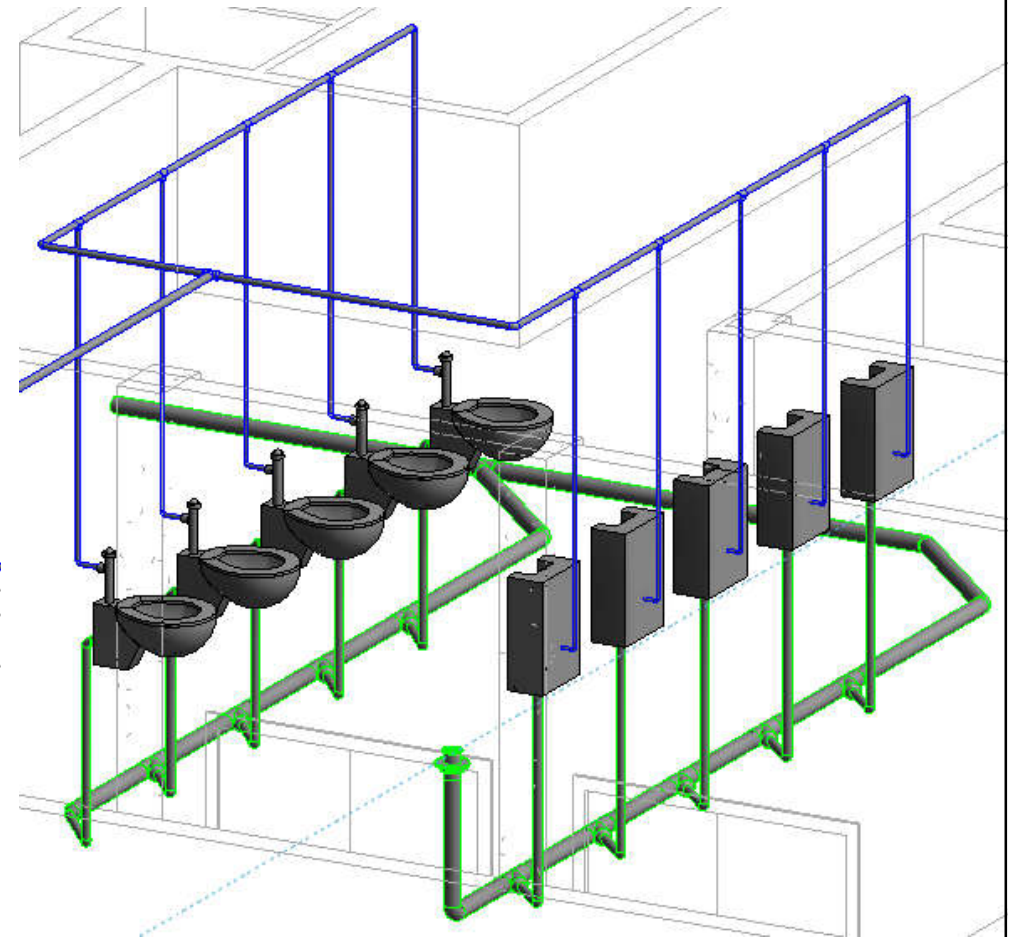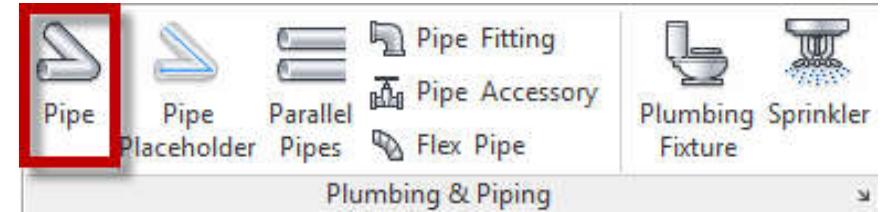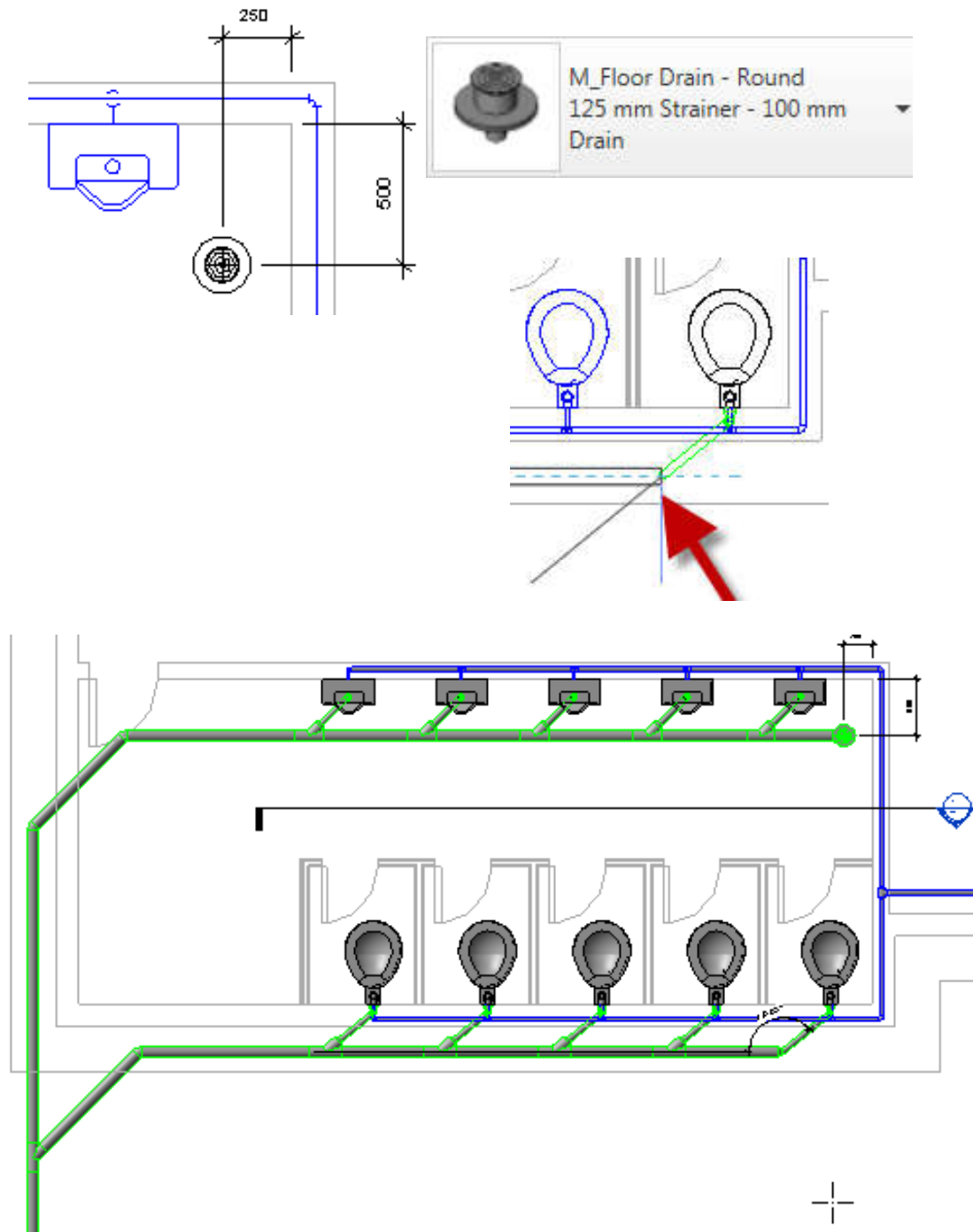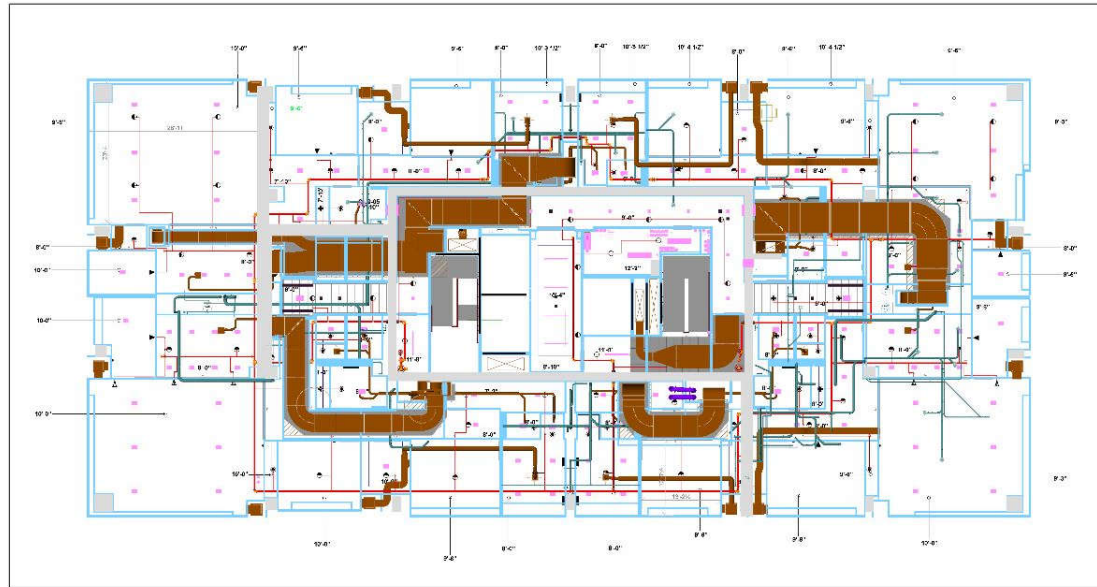
Revit MEP tutorial: Modifying Route
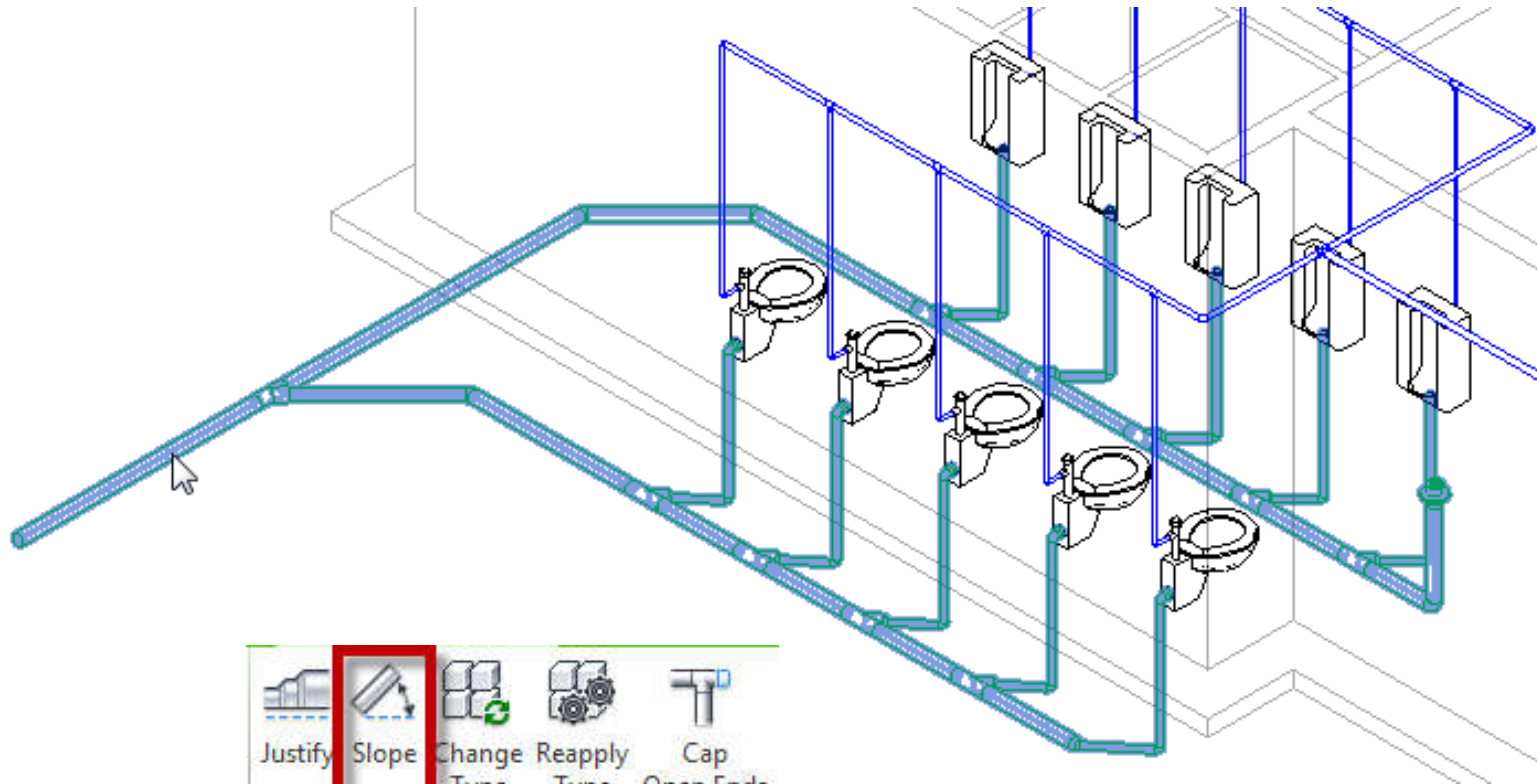
Change the pipe size from urinal

Justify | Slope | Change Type | Reapply Type | Cap Open Ends

Edit
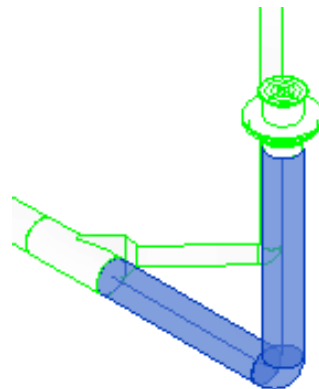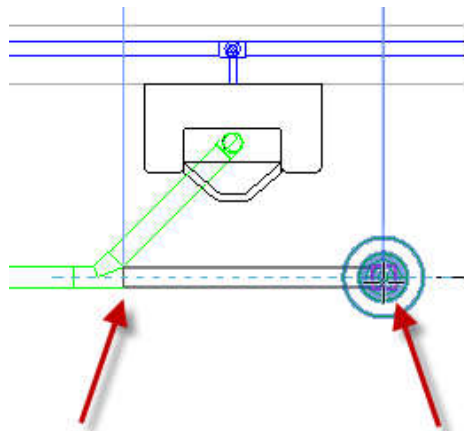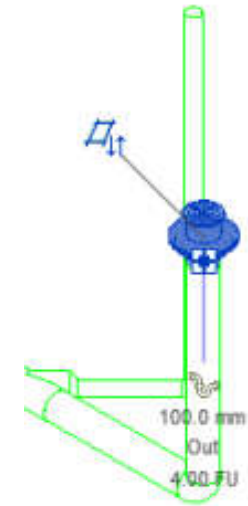
Change the pipe slope

M_Floor Drain - Round
125 mm Strainer - 50 mm
Drain

100.0 mm
Out
4/00 FU
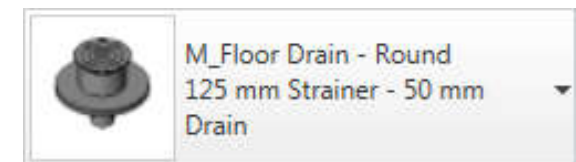
Fire sprinkler design drawings from a proprietary program
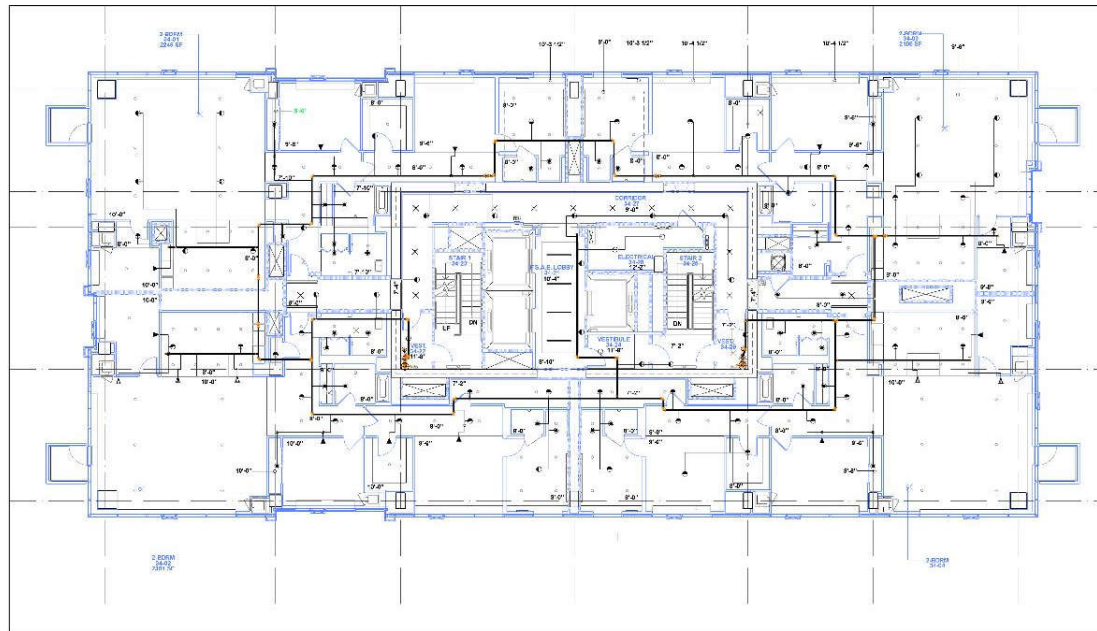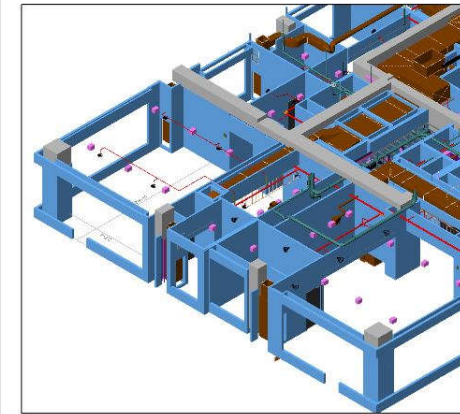
ISOMETRIC A

ISOMETRIC B

ISOMETRIC C

FIRE SPRINKLER PLAN

(Source: https://www.autosprink.com/)

Nonhosted sprinkler heads

Modify | Sprinklers   Flow: 100 GPM

Properties ☒

Victaulic - V2704- Quick Response
Spray Upright
Standard

Sprinklers (1)   ▼   🔲 Edit Type

Constraints		≫
Level	Level 1	
Host	Floor : Generic - 12"	
Offset	12' 6"	
Mechanical		≫
System Classification	Fire Protection Wet	
System Type	Fire Protection Wet	
System Name	Fire Protection Wet 2	
System Abbreviation		
Pressure Drop		
Identity Data		≫
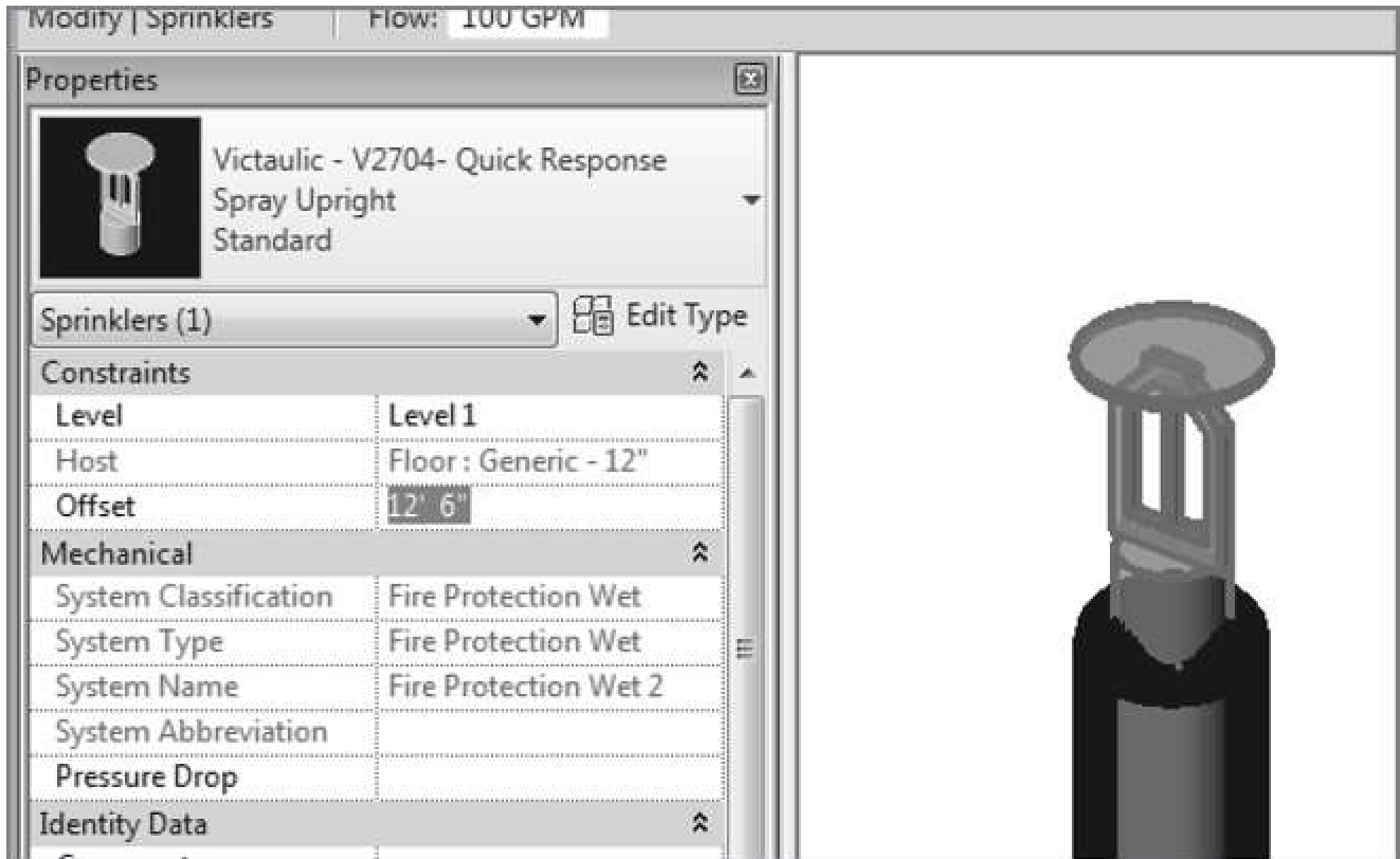
*Also refer to the details & information from fire equipment manufacturer, such as Victaulic
http://www.victaulic.com/

An example of fire sprinkler layout