7 PRESENTATION STYLE

7.1 Project Templates

The Project templates files shall contain the essential file setup. The same template files shall be used for respective discipline to create both the Authoring Models (actual modelling) and Sheet Models (for drawing production).

Name	Description	Discipline	WorkStage
HAA-ARC_Template	Architectural template	Architecture	All stages
HAS-STR_Template	Structural template	Structure	All stages
HAB-MEP_Template	MEP template	MEP	All stages

7.2 Drawing Sheet Compilation

This section focuses on the techniques for drawing sheet compilation within Revit.

As per CIC BIM Standards, the key principle is that the architects, engineers and others involved in a project can produce good quality and consistent drawings from the model databases.

Where drawings are a product of the BIM process, traditional drawing conventions still apply.

Each drawing shall contain design information solely for the purpose of the intended use of the drawing. To maximize efficiency, a policy of minimum detailing without compromising quality and integrity shall be adopted and repetition of details should be eliminated.

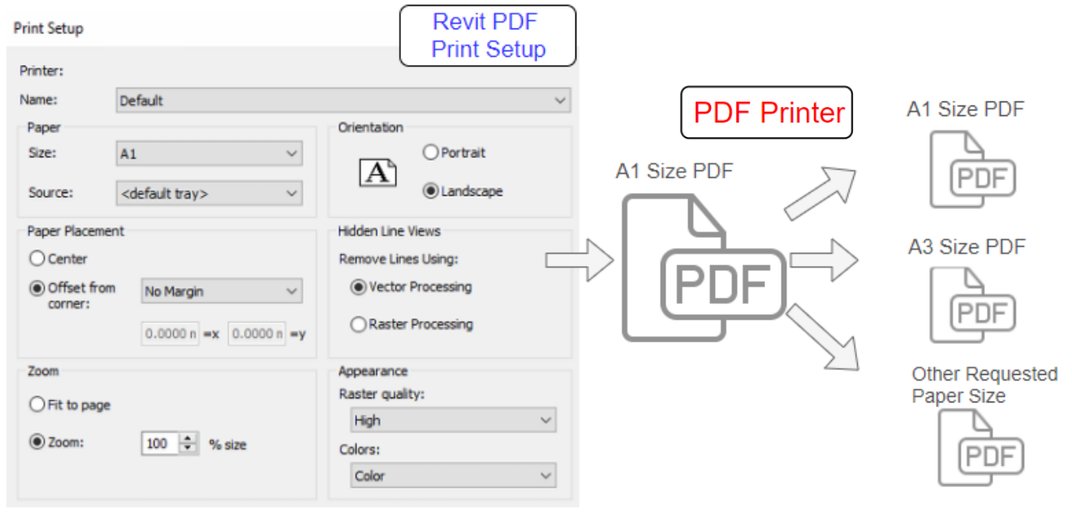
The numbers of drawings should be kept to a minimum and organised in logical manner.

7.3 Preparation for Publication

Prior to transmittal of the model, the file contents and structure need to be agreed. Drawing sheets from Revit shall be published to DWF (preferred), or stay in Raw format (*.rvt), where they can be checked, approved, issued and archived.

Printing

It is recommended to export all the sheets in A1 size in PDF regardless of the needs, to ensure the sheets are printed in correct scale and resolution. The user may then print the corresponding PDF files in required paper size.



7.4 Model and Drawing Detail

As per CIC BIM Standards, the maximum level of detail shall be given beforehand. This is a purpose driven item. If the project (model) is built for presentation purpose, maximum level of development is advised to be 300; other projects (models) built for Statutory Submission or Tendering to be LOD 350; construction projects (models) to be LOD 400, and as built projects (models) to be for LOD 500.

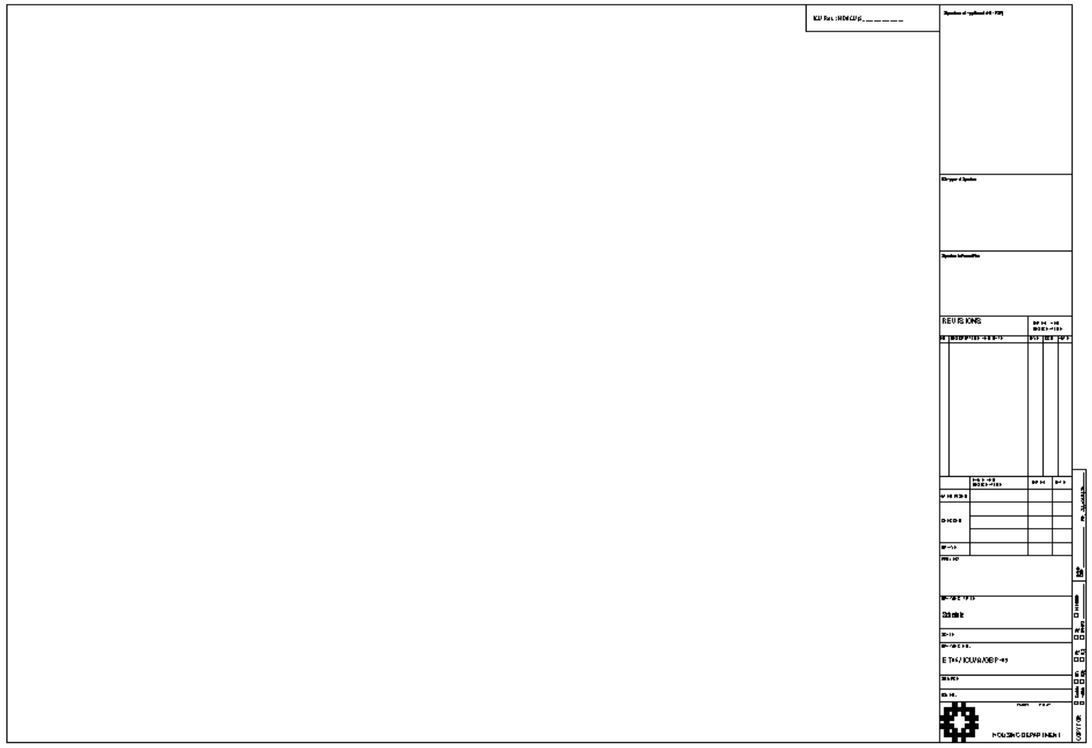
This is the general guideline for the project level of development. Project team shall formulate the details by studying the project purpose.

PS-01 Title block

- Titleblock family is available in central resource folder.
- Titleblock family may be edited to suit project's requirement.
- The modified titleblock family is to be saved under project resources folder.

Shared Parameter in titleblocks:

Parameter Function	Display Name	Parameter Type
Project Name	Project	Type parameter
Drawing Title	Drawing Title	Instance parameter
Drawing Number	Drawing No.	Instance parameter
Scale	Scale	Instance parameter
Revision / Description / Date / Issued By	Revision / Description / Date / By	Instance parameter
Drawn By / Checked By / Authorised By	Drawn / Checked / Authorised	Instance parameter
ICU Number	ICU No.	Instance parameter
Source	Source	Instance parameter



PS-02 Drawing List (Sheet list)

Information of sheet list should be managed by using DRAWING LIST under Schedule.

DRAWING LIST	
DRAWING NO.	DRAWING NAME
ET06/ICU/A/GBP-01	GENERAL NOTES
ET06/ICU/A/GBP-02	LOCATION PLAN & NOTES
ET06/ICU/A/GBP-03	DRAINAGE
ET06/ICU/A/GBP-04	GENERAL NOTES OF F.S
BIMSG - P	L11 - Plan
ET06/ICU/A/GBP-05	L11-Plan
BIMSG - 02	Construction Drawing
ET06/ICU/A/GBP-07	Schedule
BIMSG - P - DA1	Architectural Walls
BIMSG - P - DA2	Wall Finishes
BIMSG - P - DA3	Wall Opening
BIMSG - P - DA4	Precast Facade Panels
BIMSG - P - DA5	Curtain System/ Curtain Wall
BIMSG - P - DA6	Curtain Panel

PS-03 General Notes, Legends and Abbreviations

General Notes

General Notes are usually prepared on Drafting View/ Legends. However, the alignment within text note is not sufficiently flexible.

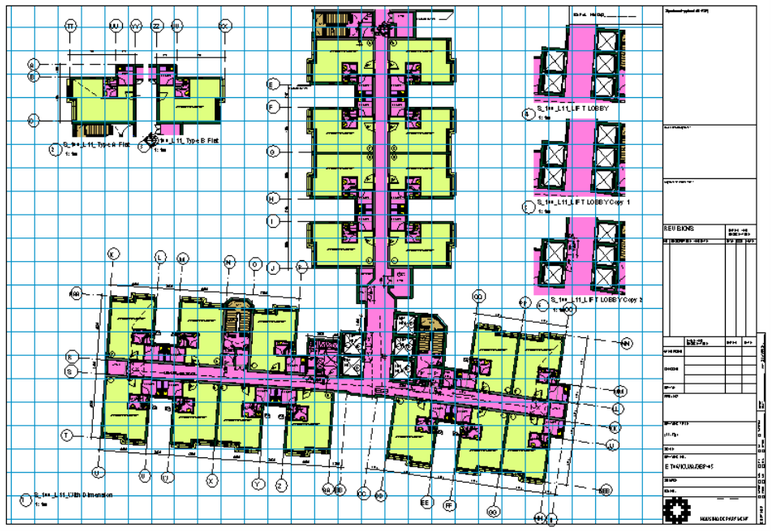
For clear and well-organized presentation, using a schedule to schedule out a placeholder family is suggested. A placeholder family should have no 2D and 3D significant appearance. Moreover, it should be built with at least two shared parameters for item number and information of General Notes. The alignment for the General Notes could then be controlled flexibly.

<GENERAL NOTES>

A	B
1.	ALL DIMENSIONS SHALL BE READ BUT DO NOT SCALE.
2.	ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (mm) AND ARE STRUCTURAL TO STRUCTURAL UNLESS OTHERWISE STATED.
3.	ALL LEVELS INDICATED ON DRAWINGS ARE IN METERS (m) AND THE LEVELS MARKED ARE STRUCTURAL CONCRETE LEVELS, UNLESS O
4.	ALL DRAINAGE PROVISIONS SHOWING ON GENERAL BUILDING PLANS ARE FOR REFERENCE WITH REGARDS TO MODIFICATION APPLICAT
5.	ALL STRUCTURAL PLANS, CALCULATION & DETAILS SHALL BE SUBMITTED SEPARATELY.
6.	THIS SET OF GENERAL BUILDING PLANS IS PREPARED IN COMPLIANCE WITH THE REQUIREMENTS AS STIPULATED IN:

Legend

Legend should be created by using Detail Components, Legend Components with view settings, Region and text to indicate the 2D presentation. Detail Line is the last resort in preparing Legend.



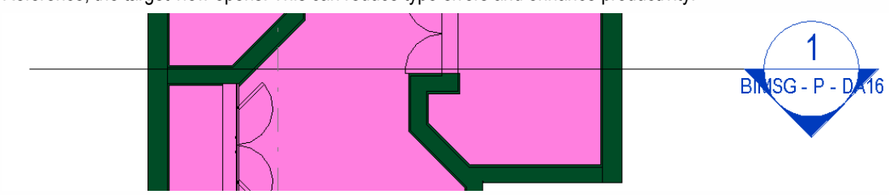
PS-04 Sheet Composition

Guide Grid

In Revit, the viewport of views placing on sheet cannot be assigned by coordinates as in CAD. However, Guide Grid can help in referencing sheets for organized presentation. Plans views of different floors can be placed at the same spot across different sheets.

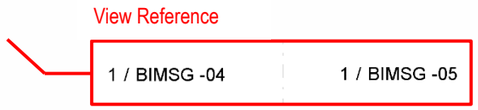
Cross Reference

The section mark should have capacity to retrieve the corresponding sheet number and the view number. By double clicking the View Reference, the target view opens. This can reduce typo errors and enhance productivity.



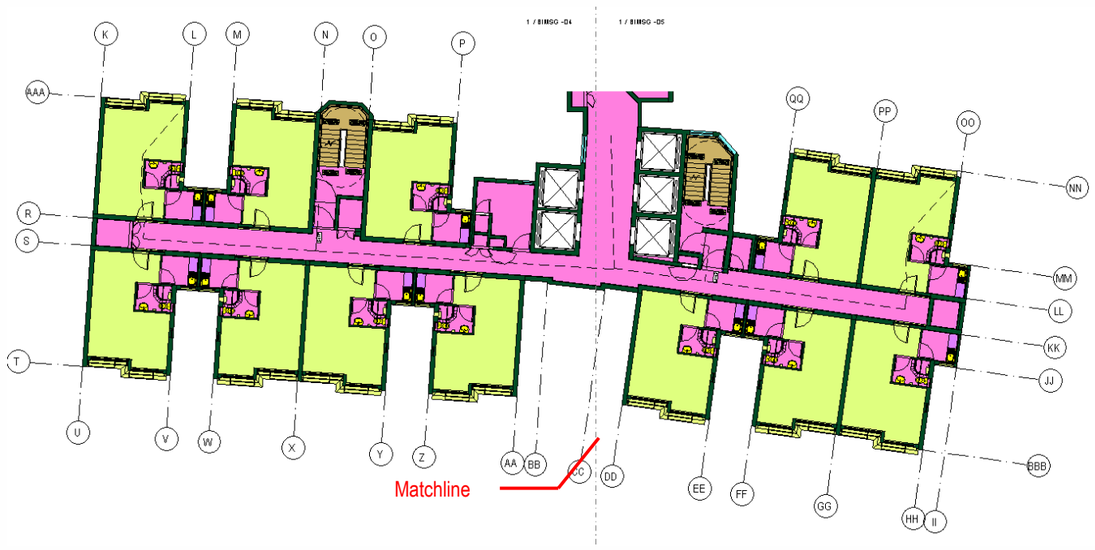
View Reference

View number and sheet number for corresponding view can be shown on plan using View Reference. By defining the correct view for the View Reference, it will be updated automatically when the information of the corresponding view number and sheet number is changed. By double clicking the View Reference, the target view opens. This can reduce typo errors and enhance productivity.



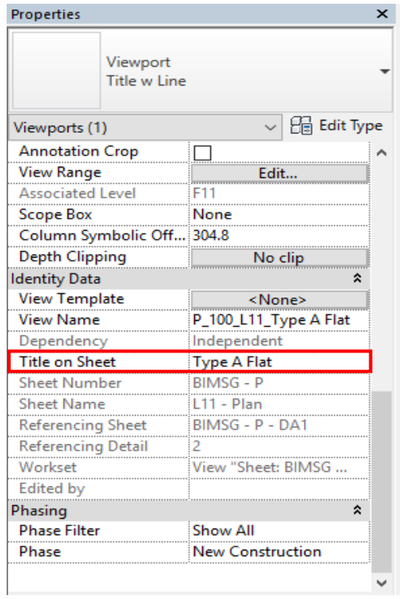
Matchline

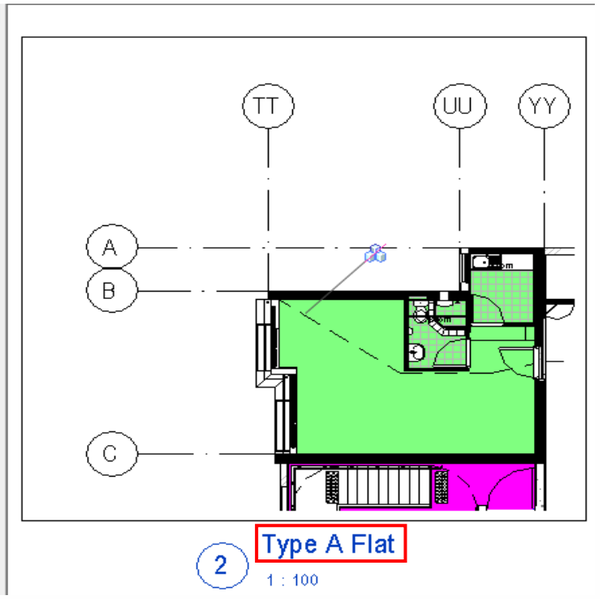
Matchline should be applied to show a plan with a large scale. After creating Matchline, corresponding dependent views with appropriate crop region should be prepared and assigned with correct View Reference.



Title on Sheet

Titles for the views on sheet can be managed by Title on Sheet for the viewport. The information of Title on Sheet can be independent of the corresponding view name.

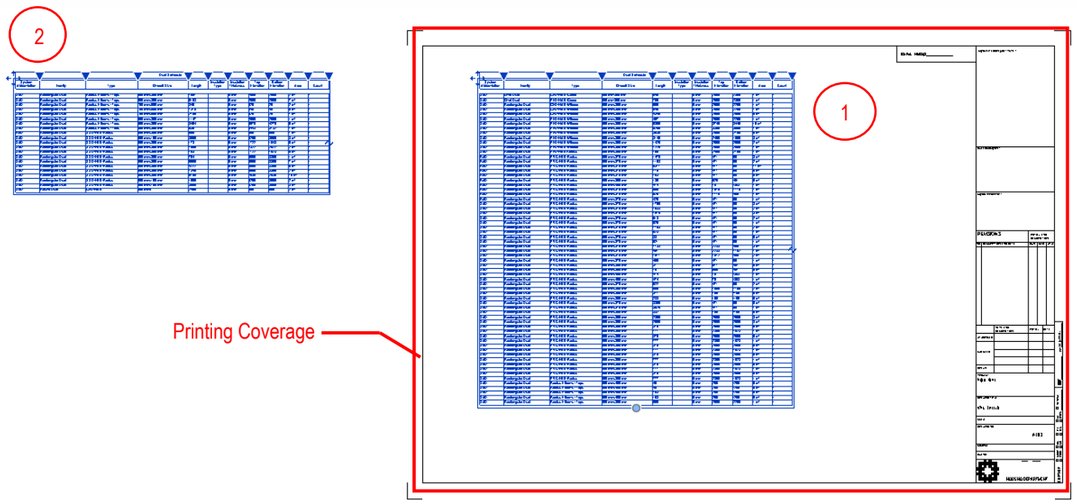




Scheduling on sheet

In Revit, only schedule view can be inserted into the sheet more than once. If there is not enough space for scheduling on sheet, the second portion should be placed outside the titleblock as it cannot be deleted. Furthermore, repeat the previous procedure for the first portion on another sheet.

Make sure the printing coverage is within the titleblock before proceeding to print out.



PS-05 View

Crop Region

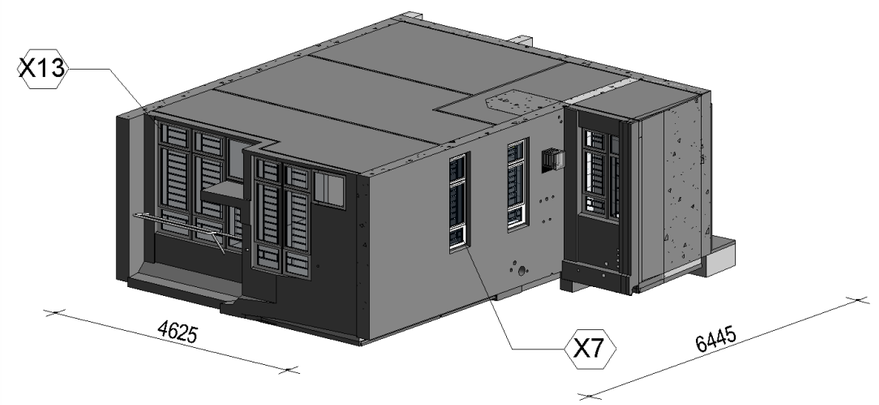
Crop Region can control the boundaries for the view. Datum elements such as levels and grids can adjust automatically according to the crop boundary. The size of the viewport on sheet can be modified by using Crop Region.

Annotation Crop Region

Annotation Crop Region can control the annotation boundaries in the view. By default, it only displays in dependent views and callout views, but not in primary view.

Annotation in 3D view

The 3D view should be locked and the workplane should be defined before applying annotations, such as dimensions and tags, in 3D view.



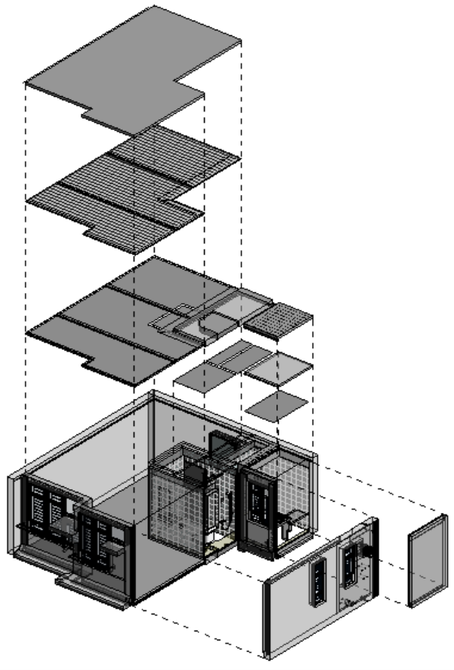
Sectional Perspective

Sectional Perspective view can be created by using the camera (Perspective view) and section box. Perspective point of view can be adjusted by eye and target elevation.

Displace Elements

Relationship between the elements in model can be presented clearly with 3D exploded views by Displace Elements and with Displacement Set Path (if necessary). However, all 2D elements such as dimensions, annotations and tags cannot be displaced.

Components cannot be modified in the exploded view by applying Displace Elements, unless the displacement set is reset.



PS-06 View Control

All the view controls only apply to current view.

Scale

All model files are modelled at 1:1 Scale. The Scale command in Revit mainly affects the scaling on annotations in a drawing.

Detail Level

Detail Level can control the geometry of the elements displayed in the view. For example, different levels of the structure (layers) of the basic wall and presentation style for pipe, duct and cable tray can be presented with different detail level. Therefore, appropriate detail level should be well defined for each deliverable. Generally, it is recommended to set Fine level in order to have all spatial dimensions and the highest detail level of families as this will apply to all the elements in the view. For drawing production purpose, refer to PS-07 Visibility Overrides.

Visual Style (Colour presentation wire frame)

Visual Style is the setting for graphic styles. For drawing production, Wire frame style is commonly used to show the edges of components and lines. By applying Shaded Visual Style or Realistic Visual Style, the elements can be displayed with the colours of its materials.

PS-07 Visibility Overrides

View-specific visibility and graphic display such as colouring, patterns, and line style etc. can be assigned using Visibility Overrides according to Model Categories, Annotation Categories, Filters, Worksets and Revit Links. In Revit, Filters have the highest priority in visibility override.

Special arrangements for specific categories in detail level are suggested to be set in Visibility Overrides for drawing production purpose. It is recommended to create a view template with the setting shown below and apply it to all plan drawing productions. However, it should be in Fine level for section and 3D in order to have the spatial dimension.

Visibility/Graphic Overrides

Model Categories | Annotation Categories | Analytical Model Categories | Imported Categories | Filters

Show model categories in this view

Filter list: <show all>

Visibility	Projection/Surface Lines	Projection/Surface Patte...	Projection/Surface Trans...	Cut Li...	Cut P...	Halftone	Detail Level
Duct Accessories							Fine
Duct Fittings							Fine
Center line							
Contour							
Duct Insulations							Fine
Duct Linings							Fine
Duct Placeholders							Fine
Ducts							Fine
Center line							
Drop							
Rise							
Pipe Accessories							Coarse
Pipe Fittings							Coarse
Center line							
Pipe Insulations							Coarse
Pipe Placeholders							Coarse
Pipes							Coarse
Center Line							
Drop							
Rise							

PS-08 View Templates

As all the View Control and Visibility Overrides mentioned above can only apply to the current view, View Templates for different deliverables should be prepared in order to facilitate drawing production. View template is frequently used for controlling the consistency of a certain batch of views for drawing production.

Naming Conversion

1	2	3
Drawing Purpose	Scale	View Type

Field 1: Drawing Purpose:

Drawing submission purpose (P-Presentation, S-Statutory Submissions, T-Tender, C-Construction)

Field 2: Scale

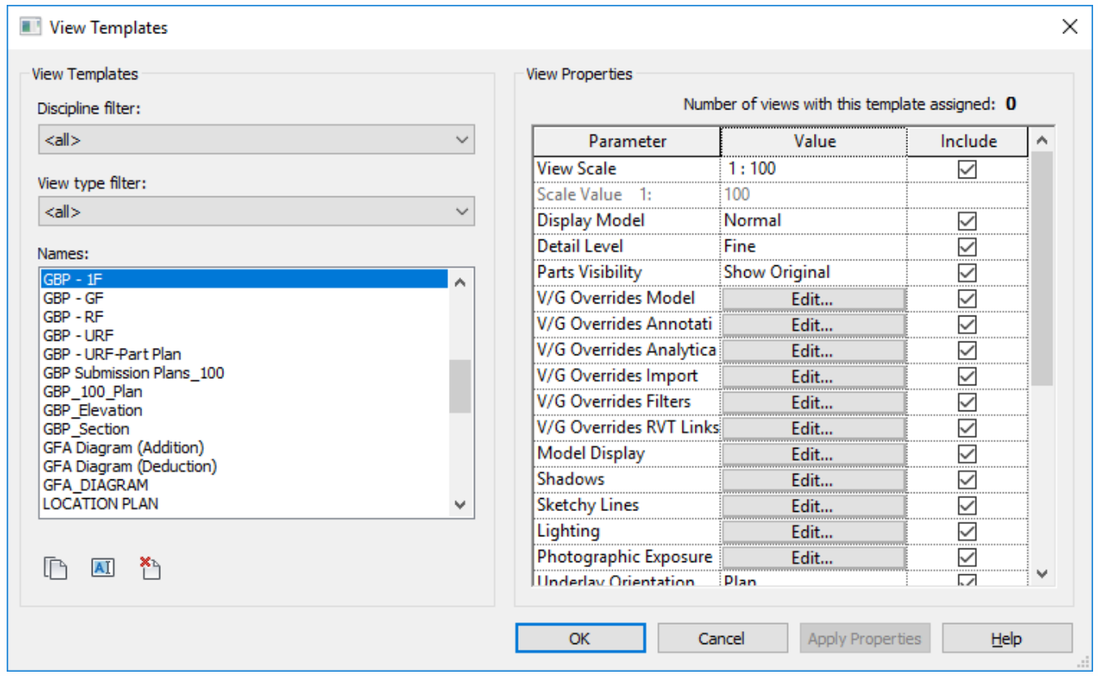
The scale of the view (50 / 100/ 500)

Field 3: View Type

Type of the views (Plan, Area Plan, Section, Elevation)

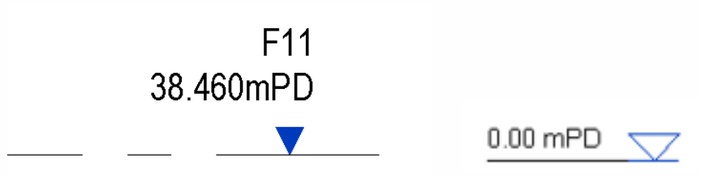
Examples:

Name	Description
S_100_Plan	View template for floor plan in 1:100 for GBP submission purpose
T_50_Section	View template for section in 1:50 for tender submission purpose
C_100_Elevation	View template for elevation in 1:100 for construction purpose



PS-09 mPD Level

Appropriate level marks should be prepared before starting a project. Suitable symbols (such as Structure floor level mark and finished floor level mark) and mPD should be required.



The elevation base of the level mark should be set as **Survey Point.**

PS-10 Annotation

Annotation includes:

- Symbols and Logos
- Tags
- Text assignments
- Dimension, etc.

According to the CIC BIM Standards, Text Style should be **ARIAL NARROW** where no pre-defined text standards exist. The appearance of text shall be consistent across a set of drawings. Annotation shall be legible, clear and concise. An opaque background should be considered as an aid to clarity. Text shall remain legible when drawings are plotted at reduced size. Wherever practical, lettering shall not be placed directly on top of lines or symbols. Dot style arrowheads shall be used instead of closed filled arrowheads when calling up hatched/shaded areas.

Symbols and Logos

Suitable symbols should be made available from within the project or central Resource folder.

Tags

Only shared parameters and some family parameters provided by family templates should appear in tags.

Only tags for listed categories such as the following may be assigned with a rotatory parameter:

Parameter
Rotate with component

Walls, Curtain Walls, Doors, Windows, Railings, Ramps, Stairs (Runs, Landings and Supports), Structural (Framing, Braces and Trusses), Property Boundary, Property Line Segments, Planting, Parking, Duct System, Pipe System etc.

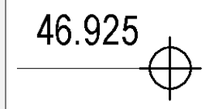
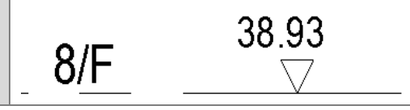
One rotatory and one non-rotatory tag should be prepared for each tag design.

Text Assignment

All text shall be restricted to the following sizes:

Text height (mm) Plotted full size	Line Weight Allocation	Usage
1.8	2	General text, dimensions, notes – used on A3 & A4 size drawings
2.5	3	General text, Dimensions notes
3.5	4	Sub-headings,
3.5	5	General text, dimensions, notes – A0 drawings
5.0	7	Normal titles, drawing numbers
7.0	8	Major titles

Alternative text sizes shall not be used without the consent of the BIM Co-ordinator.

Name	Annotation Symbol
Spot Elevation Symbol on Plans	
Level Symbol on Elevations and Sections	

Line Weights

Line weights in all the HA templates shall be set as follows according to UK Standard.

Once the line weight has been set, it may be changed in very exceptional circumstances only. When the final production requires a different line weight, change the pen assignment but not the line thickness. E.g. use Pen 4 instead of Pen 3 for an element that requires thicker line weight.

Model Line Weights

	1 : 10	1 : 20	1 : 50	1 : 100	1 : 200	1 : 500	1 : 2000
1	0.1300 mm	0.1300 mm	0.1300 mm	0.0600 mm	0.0600 mm	0.0600 mm	0.0600 mm
2	0.1500 mm	0.1500 mm	0.1500 mm	0.1300 mm	0.0600 mm	0.0600 mm	0.0600 mm
3	0.1800 mm	0.1800 mm	0.1800 mm	0.1500 mm	0.1300 mm	0.0600 mm	0.0600 mm
4	0.2000 mm	0.2000 mm	0.2000 mm	0.1800 mm	0.1500 mm	0.1300 mm	0.0600 mm
5	0.2500 mm	0.2200 mm	0.2200 mm	0.2000 mm	0.1800 mm	0.1500 mm	0.0600 mm
6	0.3500 mm	0.2500 mm	0.2500 mm	0.2200 mm	0.2000 mm	0.1800 mm	0.1300 mm
7	0.4000 mm	0.3500 mm	0.3500 mm	0.2500 mm	0.2200 mm	0.2000 mm	0.1500 mm
8	0.5000 mm	0.4000 mm	0.4000 mm	0.3500 mm	0.2500 mm	0.2200 mm	0.1800 mm
9	0.6000 mm	0.5000 mm	0.5000 mm	0.4000 mm	0.3500 mm	0.2500 mm	0.2000 mm
10	0.7000 mm	0.6000 mm	0.6000 mm	0.5000 mm	0.4000 mm	0.3500 mm	0.2200 mm
11	1.0000 mm	0.7000 mm	0.7000 mm	0.6000 mm	0.5000 mm	0.4000 mm	0.2500 mm
12	1.4000 mm	1.0000 mm	1.0000 mm	0.7000 mm	0.6000 mm	0.5000 mm	0.3500 mm
13	2.0000 mm	1.4000 mm	1.4000 mm	1.0000 mm	0.7000 mm	0.6000 mm	0.4000 mm
14	3.0000 mm	2.0000 mm	2.0000 mm	1.4000 mm	1.0000 mm	0.7000 mm	0.5000 mm
15	4.0000 mm	3.0000 mm	3.0000 mm	2.0000 mm	1.4000 mm	1.0000 mm	0.6000 mm
16	5.0000 mm	4.0000 mm	4.0000 mm	3.0000 mm	2.0000 mm	1.4000 mm	0.7000 mm

Perspective Line Weights

1	0.0600 mm
2	0.1300 mm
3	0.1500 mm
4	0.1800 mm
5	0.2000 mm
6	0.2200 mm
7	0.2500 mm
8	0.3500 mm
9	0.4000 mm
10	0.5000 mm
11	0.6000 mm
12	0.7000 mm
13	1.0000 mm
14	1.4000 mm
15	2.0000 mm
16	3.0000 mm

Annotation Line Weights

1	0.0600 mm
2	0.1300 mm
3	0.1500 mm
4	0.1800 mm
5	0.2000 mm
6	0.2200 mm
7	0.2500 mm
8	0.3500 mm
9	0.4000 mm
10	0.5000 mm
11	0.6000 mm
12	0.7000 mm
13	1.0000 mm
14	1.4000 mm
15	2.0000 mm
16	3.0000 mm

Line Patterns

Typical line patterns are defined below:

Name	Pattern															
	1		2		3		4		5		6		7		8	
	Type	Value	Type	Value	Type	Value	Type	Value	Type	Value	Type	Value	Type	Value	Type	Value
AEC_Centre	Dash	12	Space	4	Dash	4	Space	4								
ARC_Dash 1.5mm	Dash	1.5	Space	1.5												
ARC_Dash 3mm	Dash	3	Space	3												
ARC_Dash 3mm Loose	Dash	3	Space	6												
ARC_Dash 9mm	Dash	9	Space	4												
ARC_Dash Doc 3mm	Dash	3	Space	2	Dot		Space	2								
ARC_Dash Dot 6mm	Dash	6	Space	4	Dot		Space	4								
ARC_Dash Dot Dot 6mm	Dash	6	Space	4	Dot		Space	4	Dot		Space	4				
ARC_Dot 4mm	Dot		Space	4												
ARC_Dot 1mm	Dot		Space	1												
ARC_Dot 2mm	Dot		Space	2												
ARC_Double Dash	Dash	15	Space	4	Dash	6	Space	4	Dash	6	Space	4				
ARC_Hidden 2mm	Dash	2	Space	1												
ARC_Triple Dash	Dash	15	Space	4	Dash	6	Space	4	Dash	6	Space	4	Dash	6	Space	4
Demolished	Dash	3	Space	1.5												
Elevation Swing	Dash	2	Space	1												
Grid Line	Dash	12	Space	3	Dash	3	Space	3								
Hidden	Dash	4	Space	2												
Overhead	Dash	2.5	Space	1.5												
Window Swing	Dash	6	Space	3	Dash	3	Space	3								

Line Patterns

Name:	Line Pattern
AEC_Centre	
AEC_Dash 1.5mm	
AEC_Dash 3mm	
AEC_Dash 3mm Loose	
AEC_Dash 9mm	
AEC_Dash Dot 3mm	
AEC_Dash Dot 6mm	
AEC_Dash Dot Dot 6mm	
AEC_Dot 1mm	
AEC_Dot 2mm	
AEC_Dot 4mm	
AEC_Double Dash	
AEC_Hidden 2mm	
AEC_Triple Dash	
Demolished	
Elevation Swing	
Grid Line	
Hidden	
Overhead	
Window Swing	

Line Styles

Typical line styles are defined below:

Line Styles

Line Styles

Category	Line Weight Projection	Line Color	Line Pattern
Lines	1	RGB 000-166-000	Solid
<Area Boundary>	6	RGB 128-000-255	Solid
<Beyond>	1	Black	Solid
<Centerline>	1	Black	AEC_Centre
<Demolished>	1	Black	Demolished
<Fabric Envelope>	1	RGB 127-127-127	AEC_Dash 3mm
<Fabric Sheets>	1	RGB 064-064-064	Solid
<Hidden>	1	Black	Hidden
<Overhead>	1	Black	Overhead
<Room Separation>	1	Black	AEC_Dash 3mm
<Sketch>	3	Magenta	Solid
<Space Separation>	1	Black	AEC_Dash 3mm
AEC_1-Solid	1	Black	Solid
AEC_3-Soild	3	Black	Solid
AEC_5-Soild	5	Black	Solid
AEC_6-Soild	6	Black	Solid
AEC_7-Soild	7	Black	Solid
AEC_8-RNF_Mesh	8	Black	AEC_Dash Dot 6mm
AEC_8-Soild	8	Black	Solid
AEC_9-Soild	9	Black	Solid
AEC_10-DPC	10	Magenta	Solid
AEC_10-DPM	10	RGB 000-128-000	AEC_Double Dash
AEC_10-Soild	10	Black	Solid
AEC_11-Rebar	11	Black	Solid
Axis of Rotation	6	Blue	AEC_Centre
Hidden Lines	1	RGB 000-161-000	AEC_Dash 3mm
Insulation Batting Lines	1	Black	Solid
Lines	1	RGB 000-161-000	Solid
Medium Lines	3	Black	Solid
Thin Lines	1	Black	Solid
Wide Lines	5	Black	Solid

Dimensioning

Default dimension styles exist in the accompanying templates and new styles shall be added only if authorised by the BIM Co-ordinator.

- Where practical, all dimensioning shall be created using relevant software dimensioning tools. The dimension text shall not be exploded or overridden but can be appended to e.g. “1200 (Typ.)”.
- Where practical, avoid duplicate dimensioning either within a drawing or within a set of drawings.
- Where practical, dimension lines shall not be broken and shall not cross other dimension lines.
- In general, dimensions shall be placed on a drawing so they may be read from the bottom or right-hand side of the drawing.
- In general, dimension text shall be placed above the dimension line and shall be clear of other lines so that they are legible.
    - In general, dimension styles shall adopt standard engineering style dimensioning using closed filled 20° arrow head. (Deviation: Architectes may use diagonal tick style)
    - Dimension units shall be predefined within the style, and not left to default to the project units.
    - Default dimension styles shall not be overridden.

Dimension style naming convention

Field 1	Field 2	Field 3	Field 4	Filed 5
Text size	String type / Fonts	Tick mark	(Units)	Description

Field 1: **Text Size**

Size of text used on the dimension in the appropriate units.

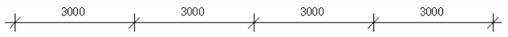
1.8 1.8mm

2.5 2.5mm

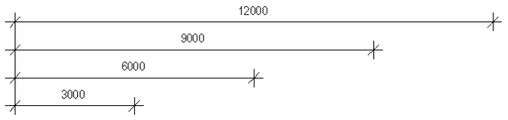
Field 2: **String Type** (optional)

Dimension String Type

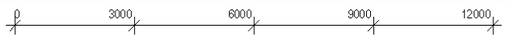
CON Continuous



BAS Baseline



ORD Ordinate



If the string type is fixed for the entire project, string type is not a necessary part of dimension naming.

Font (optional)

ALN Arial Narrow

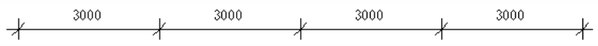
ARL Arial

If the font is fixed for the entire project, font is not a necessary part of dimension naming.

Field 3: **Tick Mark**

Description of the tick mark used on the dimension style such as Dot, Arrow or diagonal tick marks.

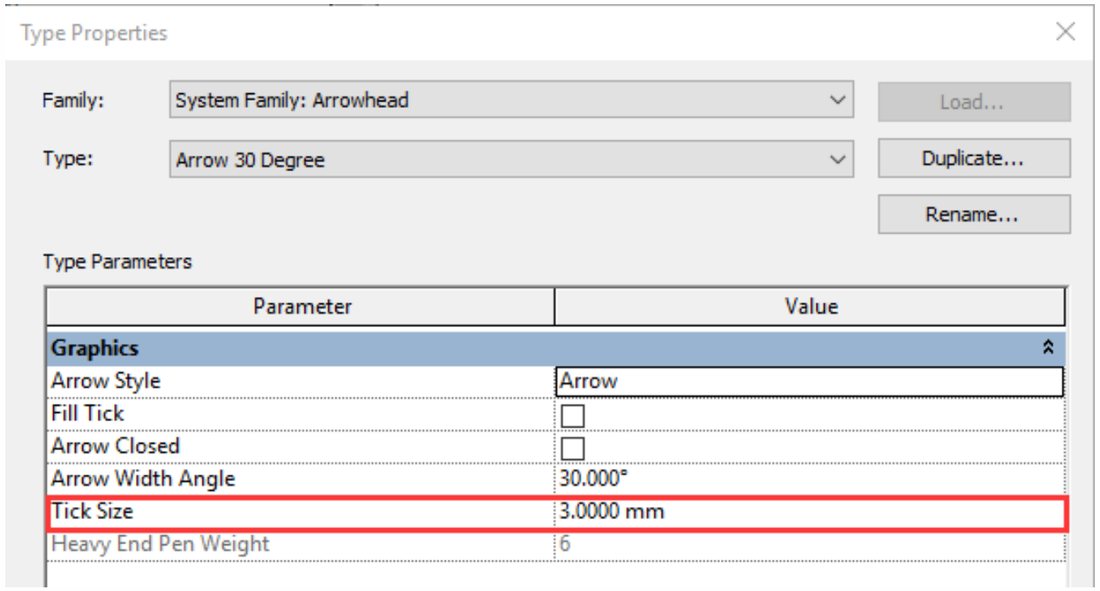
Diagonal



Arrow

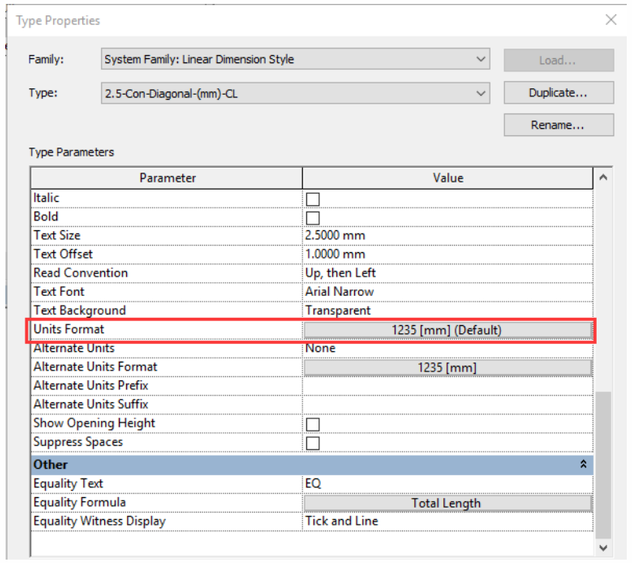
FillDot

If the size of the available tick mark is not suitable, you could revise the tick mark size under Settings – Additional Settings – Arrowhead



Field 4: **(Units)**

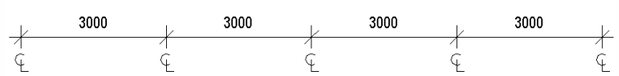
The reporting units of the dimension style is “mm”



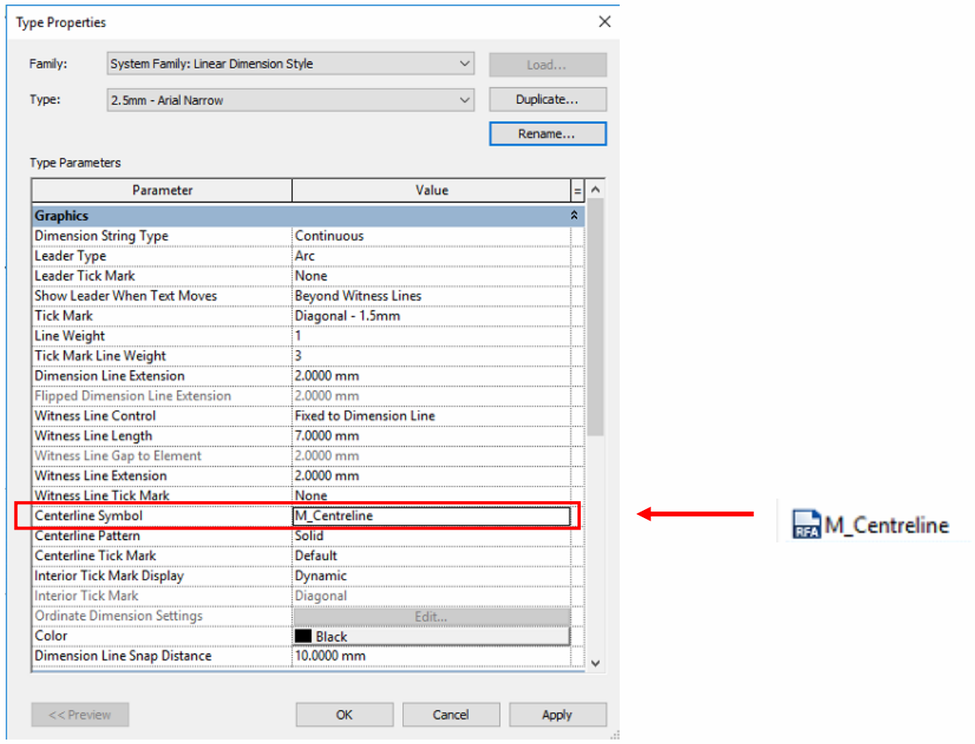
Field 5: **Description** (Optional)

Provision for distinguishing specific dimension styles.

CL Centreline



Make sure the Generic Annotation Family, such as M_Centreline from Revit Library/Annotation, is loaded into the Revit project.

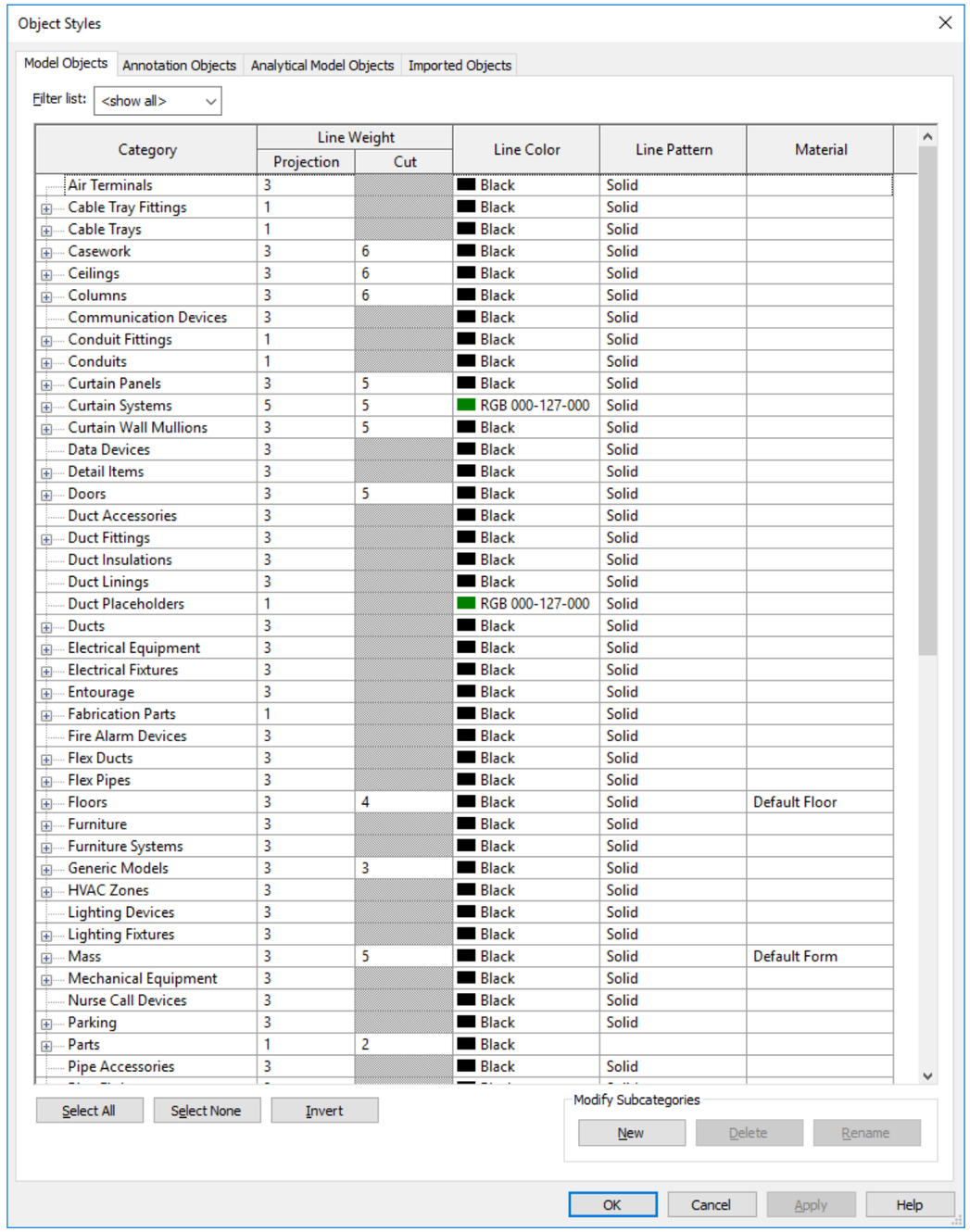


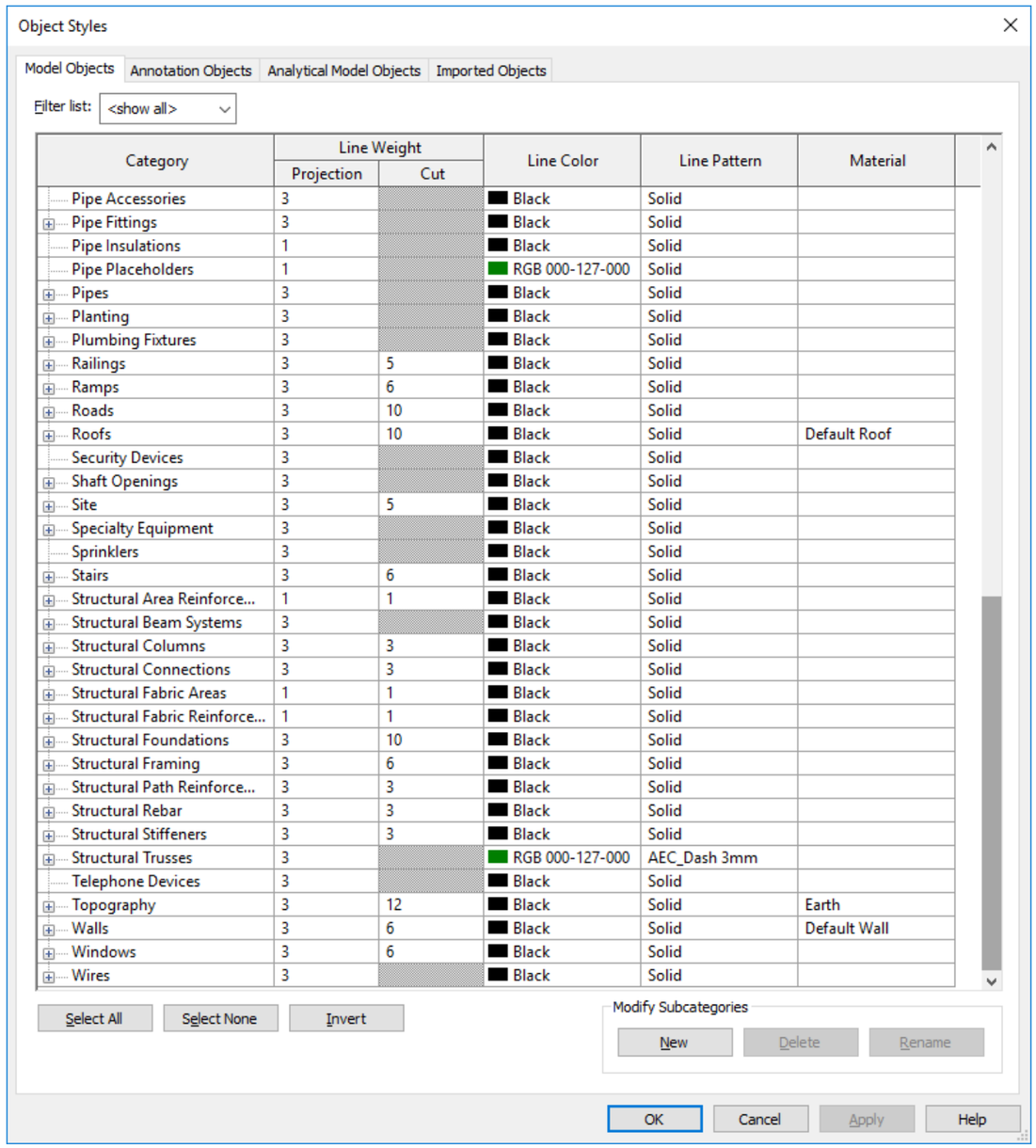
Examples:

Name	Description
1.8-Con-Arrow-(mm)	Dimension with text size at 1.8mm,
2.5-Con-Diagonal-(mm)-CL	
2.5-Arrow-(deg)	

PS-11 Object Styles – Model

Typical Object Styles are defined below:





Category	Line Weight		Line Color	Line Pattern	Material
	Projection	Cut			
Pipe Accessories	3		Black	Solid	
Pipe Fittings	3		Black	Solid	
Pipe Insulations	1		Black	Solid	
Pipe Placeholders	1		RGB 000-127-000	Solid	
Pipes	3		Black	Solid	
Planting	3		Black	Solid	
Plumbing Fixtures	3		Black	Solid	
Railings	3	5	Black	Solid	
Ramps	3	6	Black	Solid	
Roads	3	10	Black	Solid	
Roofs	3	10	Black	Solid	Default Roof
Security Devices	3		Black	Solid	
Shaft Openings	3		Black	Solid	
Site	3	5	Black	Solid	
Specialty Equipment	3		Black	Solid	
Sprinklers	3		Black	Solid	
Stairs	3	6	Black	Solid	
Structural Area Reinforce...	1	1	Black	Solid	
Structural Beam Systems	3		Black	Solid	
Structural Columns	3	3	Black	Solid	
Structural Connections	3	3	Black	Solid	
Structural Fabric Areas	1	1	Black	Solid	
Structural Fabric Reinforce...	1	1	Black	Solid	
Structural Foundations	3	10	Black	Solid	
Structural Framing	3	6	Black	Solid	
Structural Path Reinforce...	3	3	Black	Solid	
Structural Rebar	3	3	Black	Solid	
Structural Stiffeners	3	3	Black	Solid	
Structural Trusses	3		RGB 000-127-000	AEC_Dash 3mm	
Telephone Devices	3		Black	Solid	
Topography	3	12	Black	Solid	Earth
Walls	3	6	Black	Solid	Default Wall
Windows	3	6	Black	Solid	
Wires	3		Black	Solid	

PS-12 2D Details

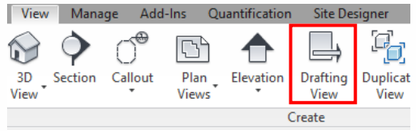
Although CIC standard suggests that Fully assemble compilation of views and sheets within the BIM environment is preferable, it is not necessary to build full set of drawing compilation within Revit.

- Most of the details in 1:20, 1:10 or 1:5 could be sourced from CAD database. It is only necessary to keep a blank sheet in a sequence to occupy the drawing number.
- Make sure the titleblock in CAD and Revit are identical.
- All other drawing settings from CAD and Revit are identical, e.g. font style and size, annotation setting, line weight and line type.

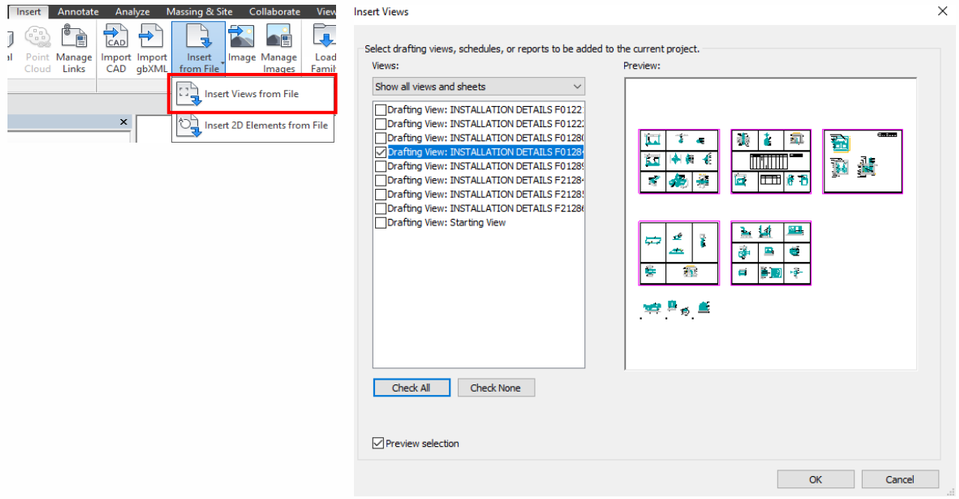
The following guidance demonstrate how to prepare and manage the detail drawings within Revit.

Detail Views Management

- Detail View model file mastering all the detail views for each discipline should be created.
- Insert existing details in CAD format into Drafting View in Detail View model file.



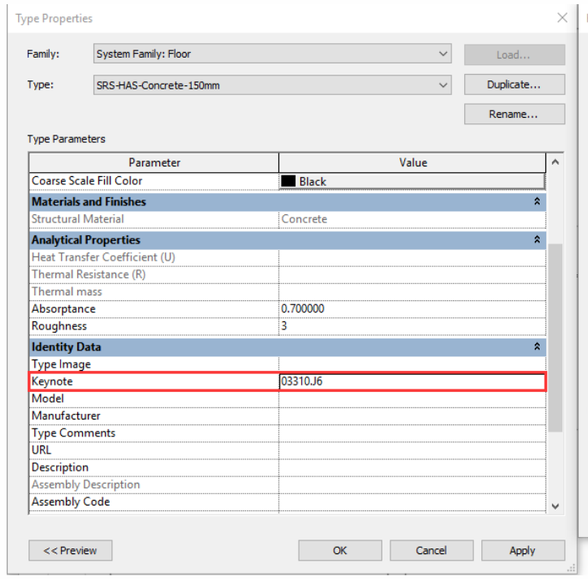
- All the presentation style for the imports, such as text, line weight and colour fill etc, should be modified according to the presentation requirements.
- During drawing production, suitable details can be added to the drawing file by “Insert Views from File” from corresponding Detail View file.



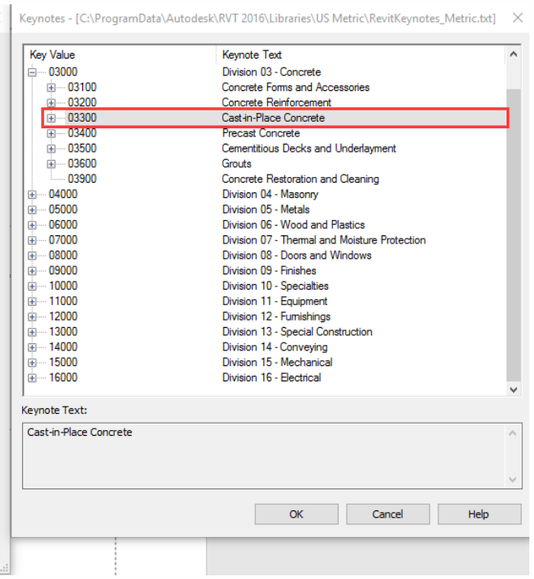
- Common details drawn in Revit files or existing projects should be inserted back to the Detail View model file by using the same insertion approach mentioned above.

PS-13 Keynote

- Keynote is a parameter available for all model elements (including detail components) and materials. The parameter could be tag by using a keynote tag family. The keynote value is derived from a separate text file that contains a list of keynotes.
- Keynote files are text files that define the categories and keynote values assigned to element types, material and individual elements.
- Keynote is a database which could be linked to E-spec for tendering specification preparation.
- Default keynoting data provided in Revit are based on the 1995 Construction Specification Institute (CSI) Master format system, which use 16 divisions to organise construction processes and materials. This system is widely used in the United States.



Keynote in elements



Keynote database

PS-14 ICU GBP Submission Drawing Set-up

Modelling

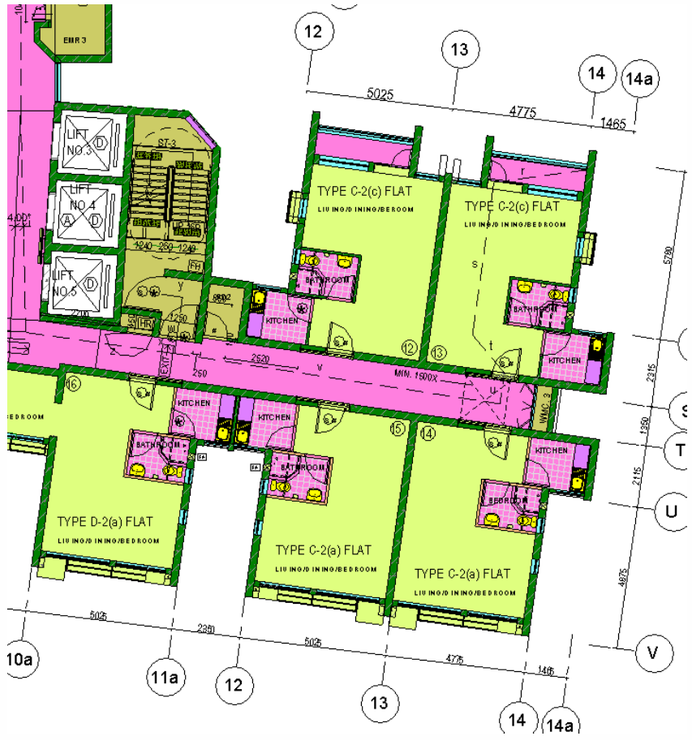
- All annotations such as dimensions and tags should be added in drawing files.
- Apply suitable filters to different categories and elements and override the visibility setting for Revit Links if necessary.
- For complicated presentation styles, such as more than one hatch for a category, duplicate of views with wire frame visual style and suitable visibility settings should be prepared. By overlapping the views on sheet using Grid Guide, the drawings can fulfil the authority requirements.

Essential Parameter

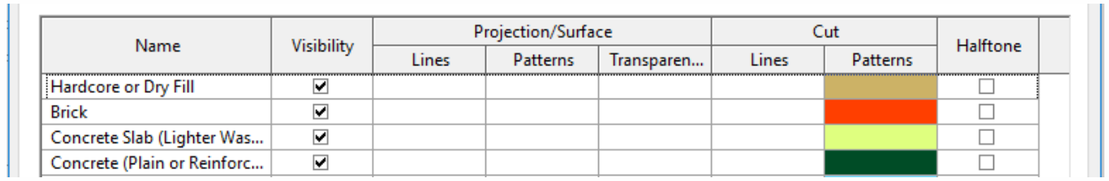
Drawing Production

a) ICU GBP Submission (DDRP)

i. Annotation / Presentation



Filter setup:



Name	Visibility	Projection/Surface			Cut		Halftone
		Lines	Patterns	Transparen...	Lines	Patterns	
Hardcore or Dry Fill	☑						☐
Brick	☑						☐
Concrete Slab (Lighter Was...	☑						☐
Concrete (Plain or Reinforc...	☑						☐

PNAP ADM-9

Material / Description	Preferred Colour		RGB Colour System
Hardcopy or Dry File	Putty		204, 178, 102
Brick	Orange Red		255, 63, 0
Concrete Slab (Lighter Wash)	Witch Haze		223, 255, 127
Concrete (Plain or Reinforced)	British Racing Green		0, 76, 38
Solid Concrete Blocks	Electric Blue		127, 223, 255
Hollow Concrete Blocks	Purple		191, 127, 255
Lightweight Partition (e.g. Plasterboard)	Macaroni and Cheese		255, 191, 127
Plaster or Cement Rendering	Wild Willow		204, 204, 102
Impermeable / Non-absorbent Floor or Wall	Neon Pink		255, 127, 223
Glass	Electric Blue		127, 255, 255
Timber	Muesli		153, 133, 76
Metal Work Or Steel	Heliotrope		223, 127, 255
Stone Finish	Dark Grey		173, 173, 173
Sanitary Fittings	Yellow		255, 255, 0
Demolition Works / Deletion of Approved Works	Blue		0, 63, 255
Underline for Revision	Venetian Red		204, 0 51

PS-15 MEP Drawing Production

Modelling

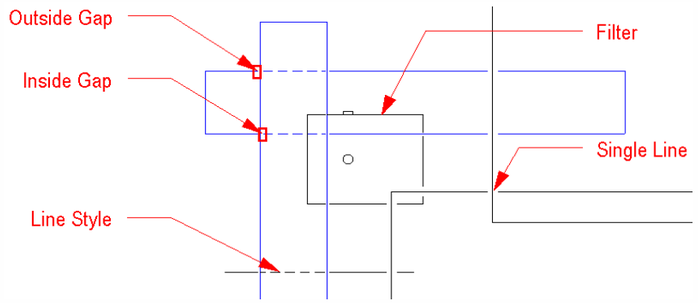
View Range

- Please set appropriate setting for floor plan within model files in order to produce suitable drawing production.

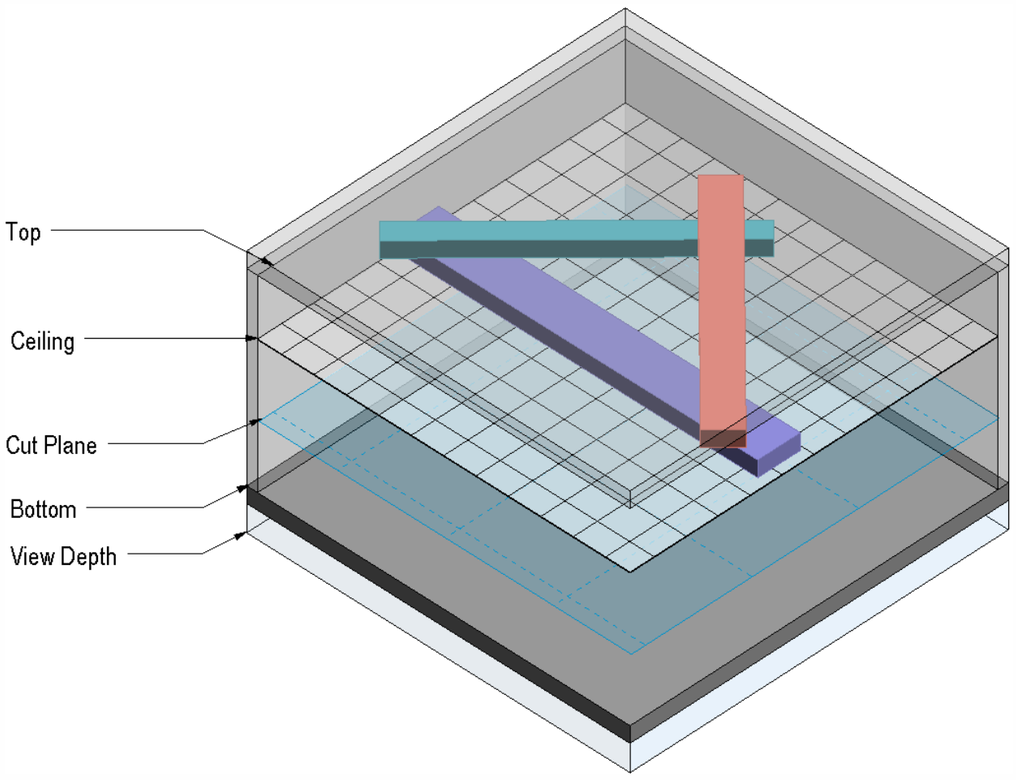
Setting	Value
Show Hidden Lines	By Discipline
View Range	Top: Level Above Cut Plane: 1200 Bottom: Associated Level View Depth: Associated Level
Visual Style	Hidden Line

Hidden Line Presentation

- The figures below indicate the corresponding settings in Revit. Please set appropriate setting according to the requirements of the drawing production.



Setting	Value
Draw MEP Hidden Lines	☑
Line Style	MEP Hidden
Inside Gap	0.4 mm
Outside Gap	0.4 mm
Single Line	0.8 mm



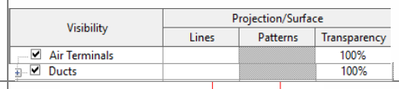
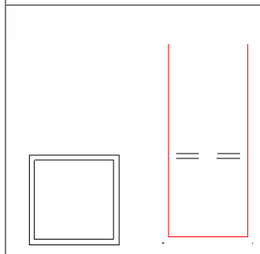
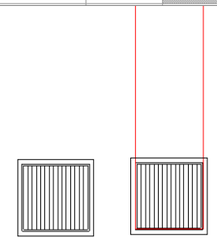
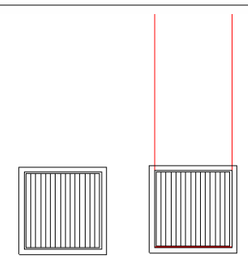
Show different MEP disciplines on sheet

- Apply visibility settings below for Revit Links on the views (Floor Plan)

	Discipline	Detail Level
Plumbing and Water Services	Plumbing	Course
Air Conditioning and Mechanical Ventilation	Mechanical	Medium
Electrical	Electrical	Fine
Electrical (Trunking)	Electrical	Medium
Fire Services	Plumbing	Course
Utility Services	Plumbing	Medium
Drainage and Sewage	Plumbing	Course

Revit Links	Halftone	Underlay	Display Settings
ARC Link			By Linked View/ Custom
ARC Ceiling		Y	By Linked View
STR		Y	By Linked View/ Custom
Different MEP disciplines			By Linked View/ Custom

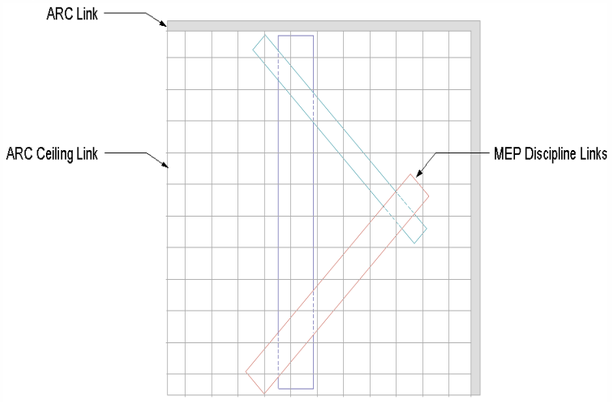
- Extra visibility settings for linked files can be applied in Drawing File to override the presentation style. However, relative display setting should be set as “By Host View”/ “Custom”.

	Method 1 Set transparency for corresponding category	Method 2 Wireframe
		
		

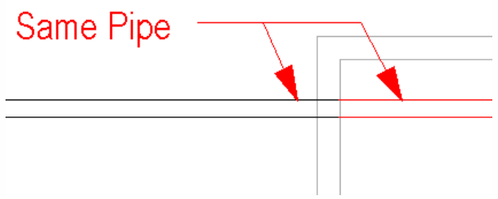
Drawing Preparation

- All annotations such as dimensions and tags should be added in drawing files.
- Apply suitable filters for different categories and elements and override the visibility setting for Revit Links if necessary.
- For complicated presentation styles, such as more than one hatch for a category, duplicate of views with wire frame visual style and suitable visibility settings should be prepared.
- For Size-dependent Presentation:
  - Annotation presented using the top view of family or size-dependent symbols should be prepared within the family using detail items.
  - If there is an extrusion or object located on top of the family, its size-dependent symbols (detail items) cannot be shown properly.
  - Following suggestions can solve the problem. However, be aware of the effects to other families and objects.

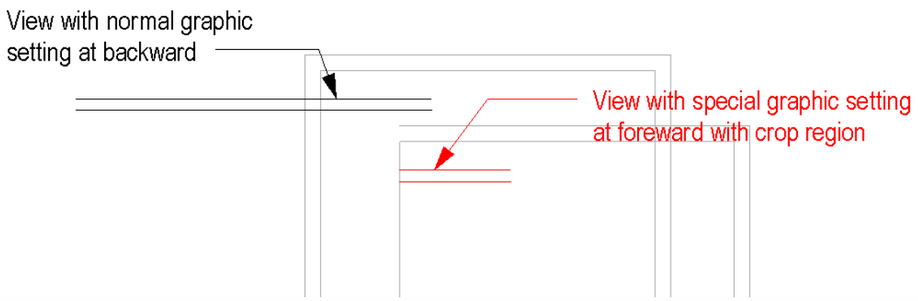
- By overlapping the views and corresponding Ceiling Plans on sheet using Guide Grid, the drawings can fulfil the authority requirements.



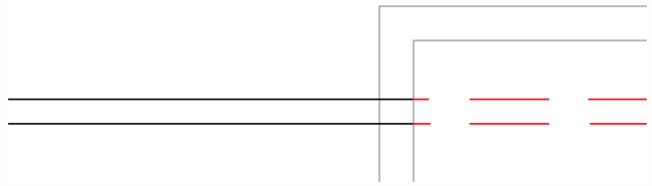
- Overlapping views techniques can be applied to a situation showing more than one view settings in same category. For example, FS pipes within pump room should be in red colour.



- To achieve above presentation, insert the view with normal graphic setting into the sheet and then overlap it by the view with other special graphic setting. Please be careful on the order of the view insertion, the last view inserted into the sheet is on the top. Therefore, it is not necessary to split the pipeworks and assign relevant information.

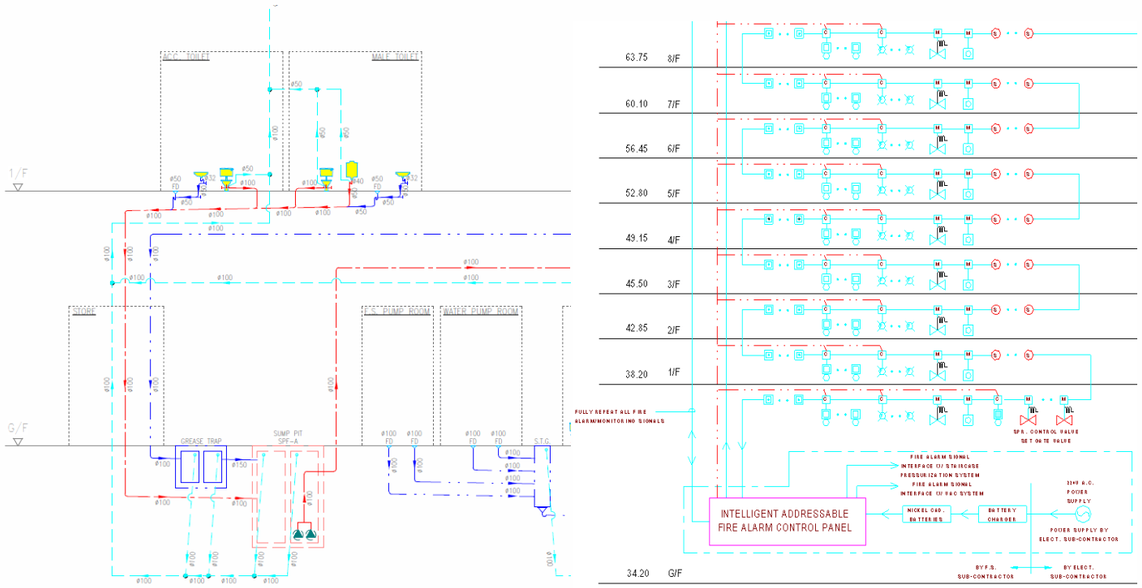


- If line style is required to be hidden, adding a masking region in the normal view is suggested. Then apply the above techniques.



Schematic Diagram

- Since no tool can convert the 3D model into schematic diagram directly in Revit 2016, you are advised to draw an independent schematic diagram in Drafting Views by using Detail Line. This production method is almost the same method as used in AutoCAD. Insert existing details in CAD format into Drafting View in Detail View model file.
- Using appropriate line style and line weight to draw the diagram. Examples of Schematic Diagram created in Revit are shown below:



Drawing Production

MEP Colour filter set up:

System type	Preferred colour	RGB Colour System
Fresh Water Pipe (FRWP)	CYAN	000, 255, 255
Flushing Water Pipe (FLWP)	GREEN	000, 255, 000
Hot Water Pipe (HWP)	RED	255, 000, 000
Irrigation Water Pipe (IRWP)	MAGENTA	000, 255, 255
Rain Water Pipe (RWP)	ORANGE	000, 255, 255
Supply Air Duct (SAD)	CYAN	000, 255, 255
Exhaust Air Duct (EAD)	GREEN	000, 255, 000
Fresh Air Duct (FAD)	BLUE	000, 000, 255
Return Air Duct (RAD)	MAGENTA	255, 000, 255
Transfer Air Duct (TAD)	LAKE PLACID BLUE	000, 128, 255
Primary Air Duct (PAD)	ORANGE	192, 192, 192
Kitchen Exhaust Duct (KED)	RED	255, 128, 000
Toilet Exhaust Duct (TED)	GRAY	000, 255, 000
Condenser Drain Pipe (CDP)	ORANGE	255, 255, 000

Components	Preferred colour		RGB Colour System
Condenser Water Return Pipe (CWR)	DARK GREEN		000, 128, 064
Condenser Water Supply Pipe (CWS)	LAKE PLACID BLUE		000, 128, 255
Cable Tray and Cable Tray Fittings	GREEN		000, 255, 000
Conduit and Conduit Fittings	CYAN		000, 255, 255
Wires	CYAN		000, 255, 255
Sprinkler	RED		255, 000, 000

System type	Preferred colour		RGB Colour System
Chilled Water Return Pipe (CHWR)	GREEN		000, 255, 000
Chilled Water Supply Pipe (CHWS)	YELLOW		255, 255, 000
Fire Services Pipe (FSP)	RED		255, 000, 000
Sprinkler Pipe (SPR)	RED		255, 000, 000
Town Gas Pipe (GAS)	CYAN		000, 255, 255
Waste Pipe (WP)	CYAN		000, 165, 165
Vent Pipe (VP)	CYAN		000, 255, 255