

Lesson 4 – Sheets

Annotation - Annotate Tab

Temporary Dimension lines (object parameters) can be made “permanent”

Dimension – For manual dimensioning. Use TAB to cycle through points

- Aligned [DI] – For objects/edges.

- Linear – Pick points, then vert (or horiz)

- Angular – Angle between objects/edges

- Radial, Diameter – For curved objects with center points

- Arc Length – Measures and notes length of an arc. Arc, then endpoints.

Detail – “View-specific” graphics. Only visible in view (not 3D)

- Detail line – Graphical line work

- Region – Hatching inside drawn boundary

- Component – Detail-only component (i.e. anchor bolt)

Revisions – Not likely used in school

Insulation

Text [TX] – Type-driven. Font, size, etc... defined by “type”

- Type

 - Font – Available on the computer

 - Size – Actual text height

 - Tab Size – Tab settings

 - Bold, Italics Underline

Alignment - Justification

Check Spelling

Find/Replace [FR] – Find and/or replace text strings

Leader – Added to text (Modify tab).

- Left or Right, Straight or Arc

Tags

- Tag by Category [TG] - Revit decides depending on the object

- Tag All – All objects of a category (i.e doors) in the view

Room [RM] – Tags a pre-defined room.

- “Room & Area” under “Architecture” tab

Lesson 4 – Sheets (cont...)

Manage Tab - Settings

Materials - Add/Modify materials (global)

Object Styles – Appearance in views and printing of linework

“Model Objects” (architecture), Annotation (drafting)

Line Weight - Projection (Plans and Elevations), Cut (Sections)

Pen #'s = 16 pre-defined weights - 1 is smallest, 16 the largest.

Weights - See “Additional Settings/Line Weights”

Different sizes for view scales and perspectives

Line Color – Displayed in view, not print.

Line Pattern (Solid, Dashed, etc...) - See “Additional Settings/line patterns”.

Snap – Snap Off, Dimension/Angular Snap, Object Snap & Overrides

Project Information – Global. Accessed by title block labels

Project Name, Project Address, etc...

Project Units [UN]

Purge Unused - Removes unused families from current RVT.

Reduces file size. Be careful not to over purge

Additional Settings

Line Styles (“model lines”) – Line Weight, color and pattern

Tags - Type properties for Elevation, Section and Callout tags

Arrowheads – Leaders. Also dimensions if set for arrowheads.

Temporary Dimension - Default snaps for Witness Lines

Detail Level – Detail level per scale for new views

Lesson 4 – Sheets (cont...)

Drawing Set

Design phases – Six phases:

Programming – Laying out scope of project (sq footage, utilization, etc...)

Schematic Design (SD) – Sketches to initial presentations.

Design Development (DD) – Used for preliminary pricing and approvals

Construction Documents (CD) – Detailed drawings of entire project

Bidding/Permitting – “CD’s” used to select contractors, building permit, etc...

Construction Admin (CA) – Oversight of construction depends on “CD’s”

Documents – Two major document types:

1. Schematic Design (SD) – Presentation-oriented.

Usual minimal information (project name, scale, etc...)

Plans – Site and Floor

Elevations – Often shaded/colored

Perspectives – Sketches/Wireframes to Renderings

2. Construction Documents (CD/DD) – Detailed drawings and information.

Greater degree of standardization across disciplines (architect, engineers)

Document set ordered from front to back (large to small):

General – Title sheet, notes, map, etc...

Plans – Site, Floor, Demo, Ceiling (RCP), Finish, Power, etc...

Elevations

Sections (Building then Wall)

Details

Supporting documents include schedules (door, finish, etc...).

May be separate or be included on corresponding plan

Scale – Two elements:

1. Building Elements – To be built (Walls, Doors, Furniture, etc...)

2. Paper Elements – Limited to sheets (Title Block, Drafting symbols, etc...)

All methods/programs have mechanisms to resolve the issue of scale:

Hand drawing – Paper is full scale, building is scaled to fit paper.

CAD (1st Generation) – Building full scale, paper scaled to fit building

CAD (2nd Generation) – Both full scale, Scaled views (or “zooms”).

BIM – Uses scaled views of full size MODEL placed on full size “Sheets”

Lesson 4 – Sheets (cont...)

Drawing Set (cont...)

Sheets – Project Browser.

New Sheet (right-click) - Choose Titleblock (or load an RFA)

Drag view(s) from project browser to sheet

NOTE: A view can be used only once (can “duplicate”, i.e. Floor & Finish Plan)

Scale – “Sheets” are always full scale

Each view has a scale factor when inserted on a sheet

“Paper” elements scaled relative to “Building” elements

Rotation on Sheet (“Properties/Graphics”) – View can be rotated on sheet

Saved Position (Ribbon panel) – Use to share positioning between views.

View Title

Title from view’s name (“Title on Sheet” override in property panel)

Scale from view’s scale

To move: Click “View Title” object and drag.

To resize tail: Click inserted view, then drag tail’s blue dot.

“Edit Type”. Adjust title options:

On/Off/When multiple viewports

Show Extension Line

Crop – Limits area shown in view and on sheet.

In view control bar:

Show/Hide Crop region - Makes visible in both view and sheet

Crop view – Activates/Disables cropped area of view and on sheet

To resize – Click crop region and drag resizing circles

Multiple views - A sheet can have multiple and different views

Lesson 4 – Sheets (cont...)

Drawing Set (cont...)

Creating a Title block – “File/New/Title Block” and open template (RFT)

Common sheet (paper) sizes:

A – 8-1/2” x 11”. Letter

B – 12” x 18”. Also 11” x 17” Tabloid (Double letter size)

C – 18” x 24”. Typically, schematic

D – 24” x 36”. Used for residential and small projects

E – 36” x 48”. Large commercial projects

Create tab

Lines – Use drawing tools to create line work

Text - Use “Type” Properties and “duplicate” to change Font &/or Size

Check Spelling

Label (attribute) - Use “Type” Properties to adjust font & Size

1. Chose justification (ribbon bar)
2. Click to place
3. Choose category parameters (left side)
4. Arrow button to move to Label Parameters (right side)
5. “Sample Value” is default

Can combine several labels in one. Use “Break” to separate.

Insert tab – Importing graphics from outside Revit

CAD – Vector data (i.e. DWG, etc...)

To use Adobe Illustrator graphics, must use DWG format

Image – Raster data (i.e. JPG, PNG, etc...)

Manage tab – Object Styles (Line weights, etc...)