

Triton College Building Information Modeling (BIM) Standards Manual

Architecture
Interior Design
Construction Management

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Triton College Building Information Modeling (BIM) Standards Manual

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General BIM Recommendations:

These BIM Standards are based on Revit Architecture 2008.

1. Drawings must ***always*** be created and edited on the network file server (your H:\ drive at Triton College). Create a new folder for yourself for each day that you do work. Name the folders according to the following convention: four digit year; space; two digit month; space; two digit day. Example: "2008 02 22." Do not use the C: hard drive because it is automatically erased when the computer is rebooted, which may occur if the computer freezes (this does happen from time to time). Do not use your USB plug-in flash drive, because then you do not have any backup in case you lose it or it becomes damaged. The network is much more reliable and is faster. Besides, you need to get used to working on a network environment, which is used in most offices.
2. Name your drawing according to the above date convention format first (four digit year; space; two digit month; space; two digit day followed by the name of the project; Example file name "2008 02 22 Unit 1.rvt."
3. While drawing in Revit, you must purposely use the "save" command approximately every ten minutes to be sure that you have your file continuously updated to the network drive. Revit is set up by default to autosave every 30 minutes. This can be changed to every 15 minutes, but when the file saves it disrupts your work flow. It is better to get into the habit of saving the file yourself frequently and keeping the autosave set to 30 minutes. When you save the file (or when Revit autosaves), the latest version is saved to the file name, such as 2008 02 22 Unit 1.rvt for example. The previous version is given a backup name 2008 02 22 Unit 1.0001.rvt after the first save. After the next save, the second version is given the backup name 2008 02 22 Unit 1.0002.rvt, and so on. The higher the numeric number after the save, the later the backup drawing is that was saved. But do not open and use the backup drawings; only use the file that has the original name 2008 02 22 Unit 1.rvt, unless you want to go back in time to an earlier version. The purpose of the backups is to provide you with a relatively recent file if for some reason, your original file is corrupted or lost.
4. At end of the editing session or end of each day, save the drawing to the network file server one last time and exit Revit. Copy the drawing file from your folder on the H: drive to your own USB plug-in flash drive. You could also copy the latest backup file (the one with the highest number). If the network drive fails, or your Revit file on the network drive is corrupt for some reason, copy the duplicate copy you made on your flash drive back to your folder on the H: drive. Do not save your files on the C: drive, because it is erased whenever the computer is rebooted and automatically every day after the studio is closed.

5. Never assume that either the network drive or any fixed or removable plug-in flash drives are error-free. You can never have too many backups.
6. Use Revit standard line weights.
7. Use Revit standard units of measurement (feet)
8. Use Revit standard colors for screen and drawings.
9. **When you begin a new drawing**, you should start it using a Template file that has all the variables properly set, text and dimension styles created, and has a title block loaded.

Layer Names, Line Weights and Line Patterns

Layers are not used in Revit.

Line patterns and Line weights are preset in Revit and should be kept that way.

Line Weights

For readability, your drawings should exhibit a variety of line weights in every drawing as below from lightest to darkest

1. Texture and material lines, poché
2. Object lines (edge of surface, change of plane)
3. Lettering and dimensions
4. Profile lines (cut through walls, doors, and windows in plan and section, edge of any surface which is adjoined by "air" in elevations and roof plans)
5. Base lines (line at ground in elevations and sections)

Below is the standard Revit line weight chart for the drawing itself. Note that they are given in inches, rather than millimeters, as we are used to seeing in AutoCAD. AutoCAD's "default" line weight is 0.30 mm which is roughly equal to line weight #3 in Revit.

Line Weights [X]

Model Line Weights | Perspective Line Weights | Annotation Line Weights

Model line weights control line widths for objects like walls and windows in orthographic views. They depend on view scale.

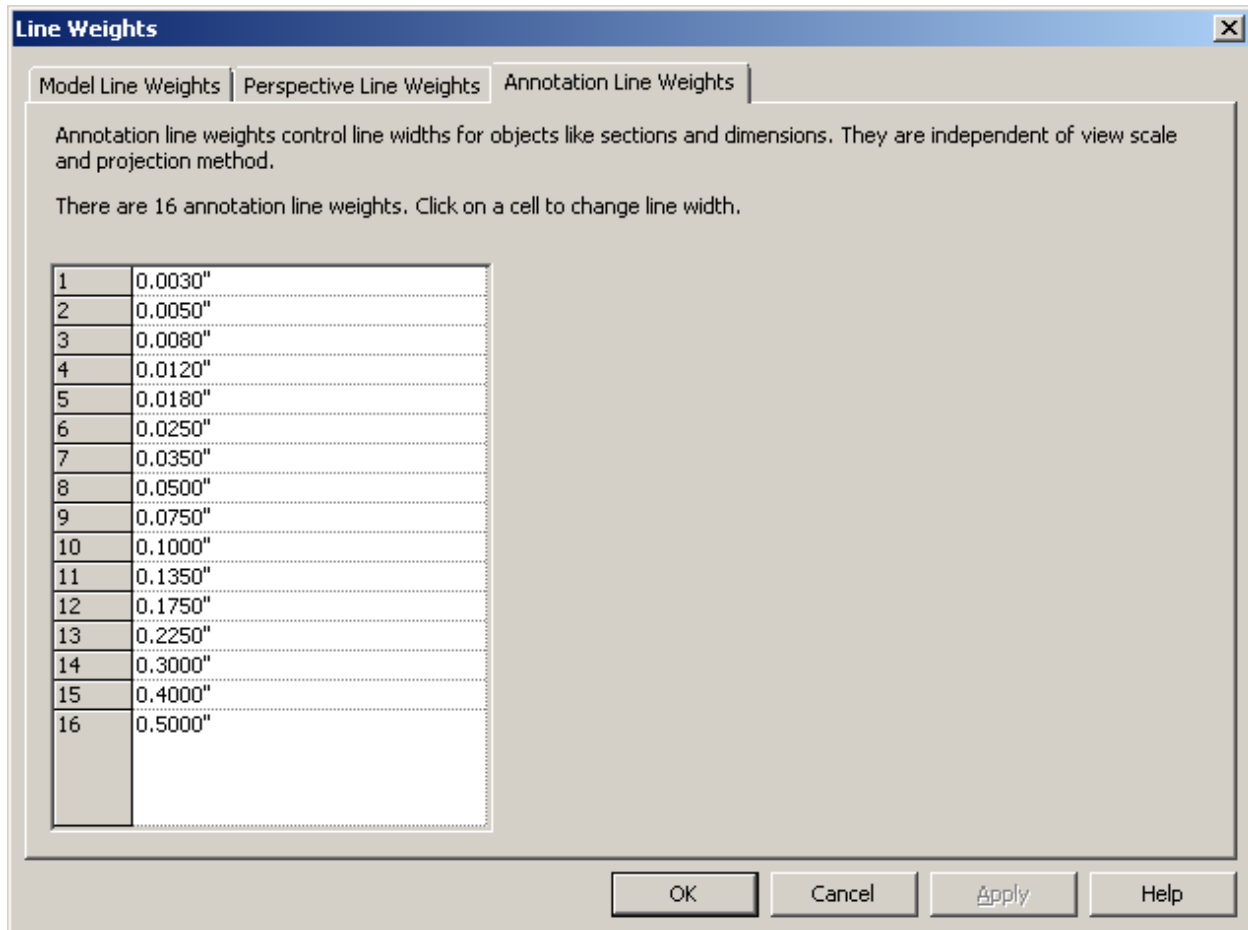
There are 16 model line weights. Each can be given a size for each view scale. Click on a cell to change line width.

	1" = 1'-0"	1/2" = 1'-0"	1/4" = 1'-0"	1/8" = 1'-0"	1/16" = 1'-0"	1/32" = 1'-0"
1	0.0030"	0.0030"	0.0030"	0.0030"	0.0030"	0.0030"
2	0.0070"	0.0070"	0.0070"	0.0050"	0.0030"	0.0030"
3	0.0120"	0.0120"	0.0110"	0.0080"	0.0040"	0.0030"
4	0.0180"	0.0180"	0.0160"	0.0120"	0.0060"	0.0040"
5	0.0250"	0.0250"	0.0220"	0.0180"	0.0090"	0.0060"
6	0.0350"	0.0350"	0.0300"	0.0250"	0.0130"	0.0090"
7	0.0500"	0.0500"	0.0420"	0.0350"	0.0180"	0.0130"
8	0.0750"	0.0750"	0.0600"	0.0500"	0.0250"	0.0180"
9	0.1000"	0.1000"	0.0900"	0.0750"	0.0350"	0.0250"
10	0.1350"	0.1350"	0.1200"	0.1000"	0.0500"	0.0350"
11	0.1750"	0.1750"	0.1550"	0.1350"	0.0650"	0.0500"
12	0.2250"	0.2250"	0.2000"	0.1750"	0.0850"	0.0650"
13	0.3000"	0.3000"	0.2500"	0.2250"	0.1100"	0.0850"
14	0.3000"	0.3000"	0.3000"	0.3000"	0.1500"	0.1100"
15	0.4000"	0.4000"	0.4000"	0.4000"	0.2000"	0.1500"
16	0.5000"	0.5000"	0.5000"	0.5000"	0.2500"	0.2000"

Add...
Delete

OK Cancel Apply Help

Below is the standard Revit line weight chart for annotations (such as text and dimensions):



Line Patterns (Linetypes)

Solid lines: **use for all visible objects**

_____ “solid” line pattern

Dashed lines: **use for objects to be demolished, hidden objects or objects that are above the cutting plane**

-----	“demolished” line pattern
-----	“overhead” line pattern
-----	“hidden 1/16” line pattern
-----	“hidden 1/8” line pattern
-----	“hidden 3/32” line pattern
-----	“hidden 3/16” line pattern
-----	“hidden 3/8” line pattern

Long dash – short dash – long dash: **use for column and beam and object centerlines**

____ - ____ - ____ - ____ “center” line pattern

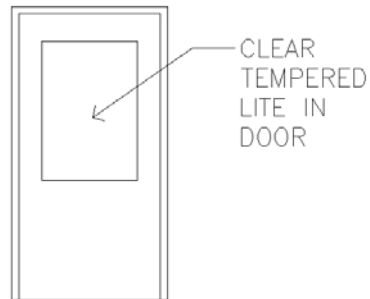
Long dash – two short dashes – long dash: **use for property lines**

____ - - ____ - - ____ “double dash” line pattern

Text Standards:

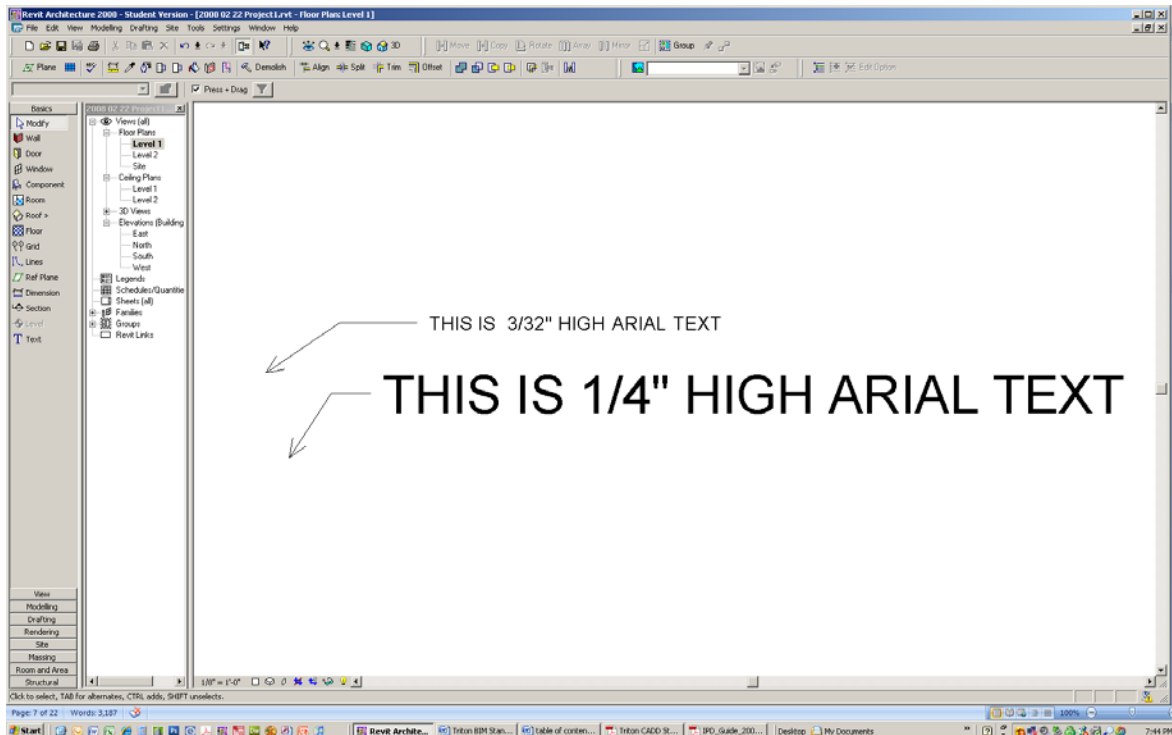
Text is always necessary in a drawing to tell the contractor in words what he or she is looking at in order to construct the building. There are a few rules to remember:

1. Text should always be drawn in the View in which it should appear.
2. Text is entered from the keyboard using the Text button on the Basics tab.
3. In general, do not use abbreviations.
4. If you absolutely need to use an abbreviation, do not use periods after the letters; example: OC rather than O.C.
5. Do not use a period after a line of text.
6. Text lines should always be neatly organized on the sheet.
7. Multiple lines of text should be left justified.
8. If text refers to a graphic object, there should be a “callout” arrow from the text to the object, like this:



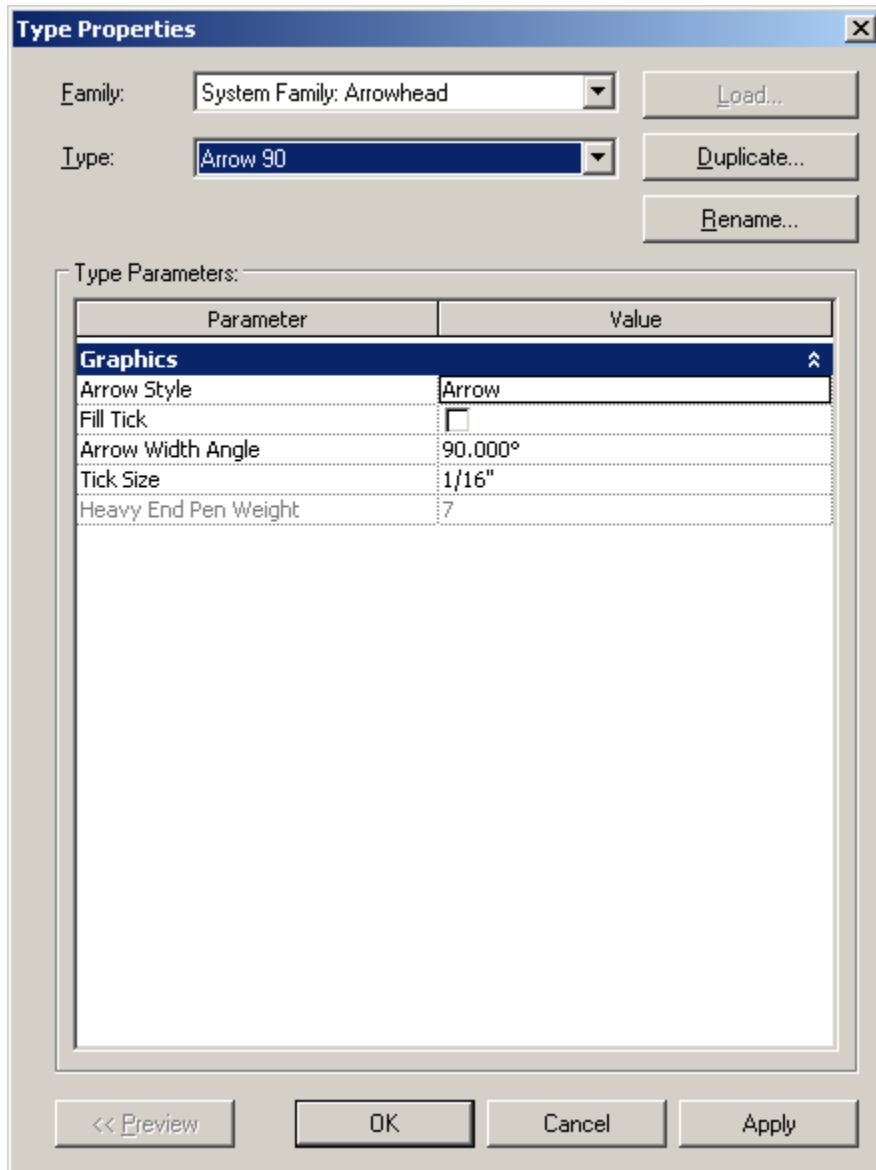
Text Standards:

The default text and callout arrows are not set up for good architectural drafting style, so you will need to create both a new type of arrow and a new text style. When you pick Text from the Basics tab, you have a choice of two types of text: 1/4" Arial or 3/32" Arial. The standard callout arrow head is a 30 degree angle. Very *Gauche*.

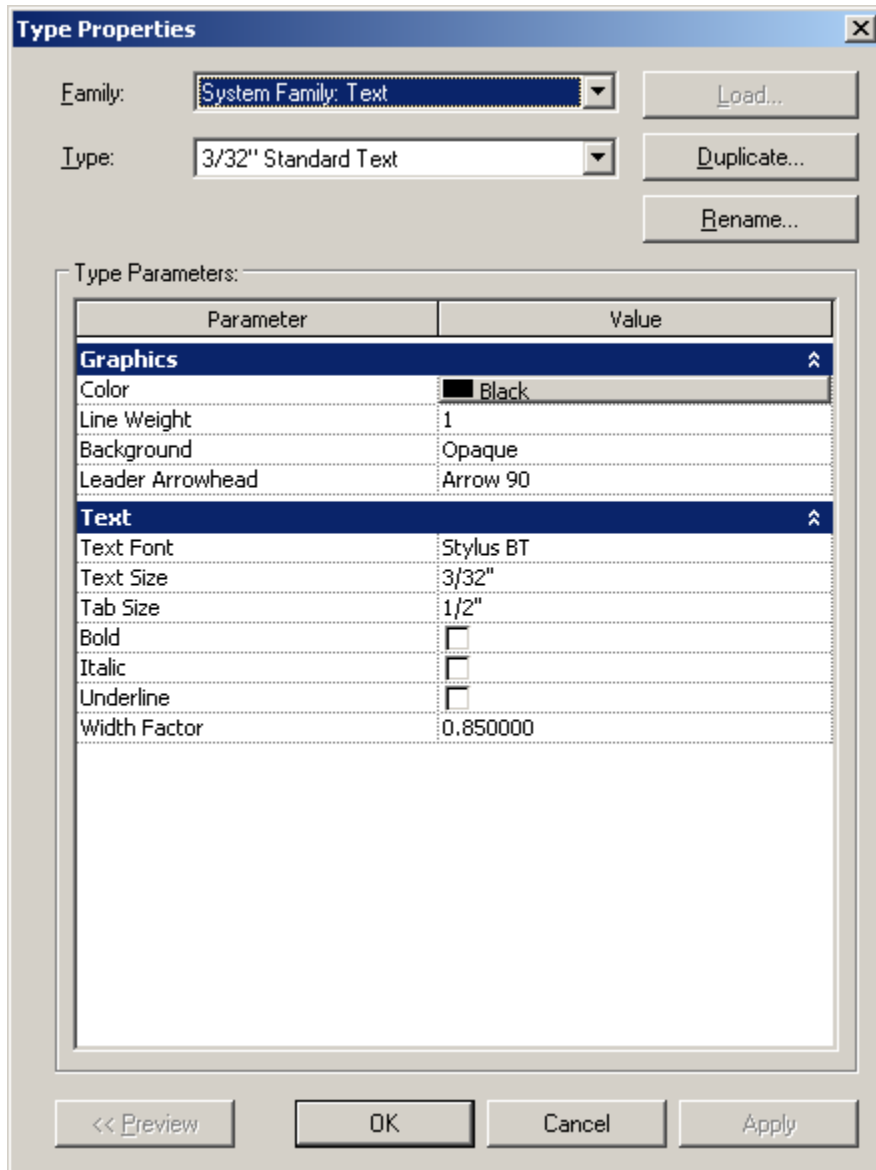


To create a new text style and callout arrowhead, start with the arrowhead. From pull down menu, select Settings, then Annotations, then Arrowhead.

Click "Duplicate." Give the new arrowhead a name like "Arrow 90." Change the Arrow Width Angle to 90 degrees. Change Tick Size to 1/16".

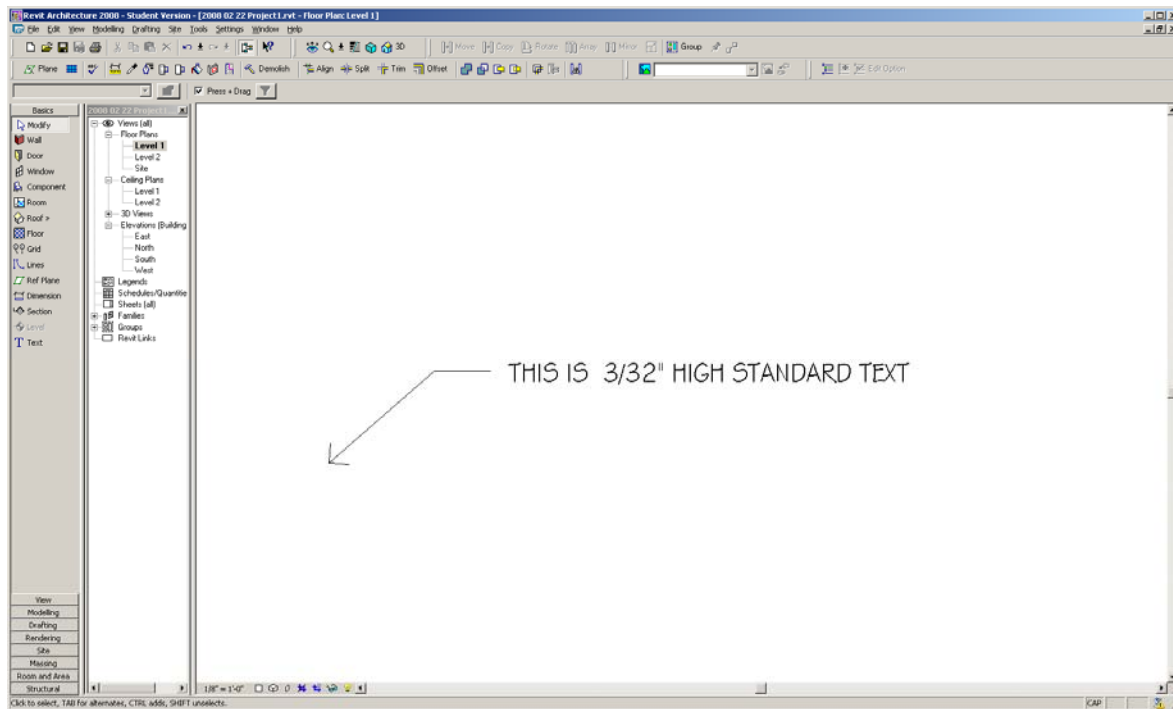


Next, change the text style. Click on a line of text that you have already entered, and click the “Element Properties” button on the Options bar. Click Edit/New, then Duplicate, Type in a name for the new text style such as “3/32” Standard Text.” Select the StylusBT text font. Change the Width factor to 0.85.



If you do not have Stylus BT font loaded, use RomanS font.

So this is how the new text style will look (very nice!):



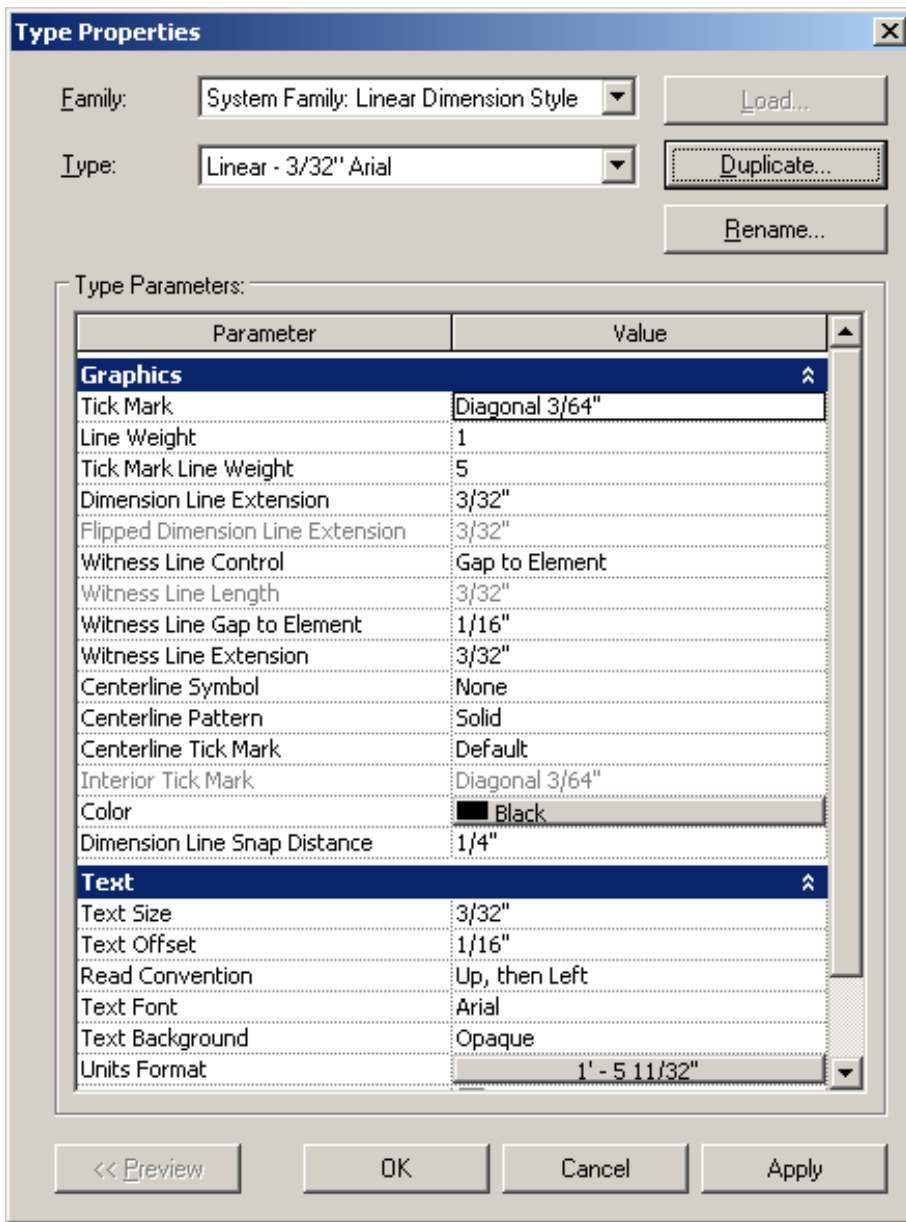
Changing Text:

Text changes are frequent during the process of making a drawing. If you want to change one line of type to new wording or add text to a line or paragraph, simply double-click on the text to change.

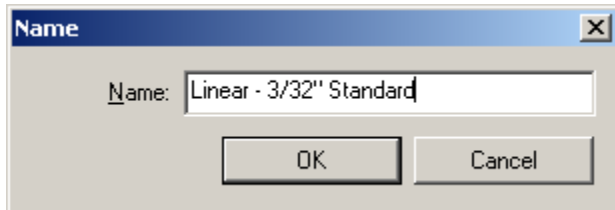
Dimensioning standards:

Dimensions are necessary for the contractor to construct the building. There are a few rules to remember:

1. Only dimension an object once, do not repeat its dimension on more than one drawing or sheet. This leads to errors.
2. Dimensions less than 12" are shown in inches only, such as 8 ½" Do not show this as 0'-8 ½" Zero feet is not expressed in standard architectural dimensioning. Note that this is not the default in Revit and must be changed. To change it, pull down the Settings menu, select "Project Units," then the "Length" button, then check the "Suppress 0 feet" check box. Select OK twice.
3. Dimensions equal to or greater than 12" are always shown in both feet and inches with a dash separating the feet from the inches, such as 1'-0" or 12'-6"
4. Use the bare minimum number of dimensions from which the contractor can build the building, but do not leave any out.
5. There are several things that must be changed from the standard Dimension style in Revit to make dimensions look good. You will need to create a new dimension style. Select the "Settings" pull down menu, then Annotations, Dimensions, Linear. This will bring up the Type Properties dialogue box for dimensions as shown below:

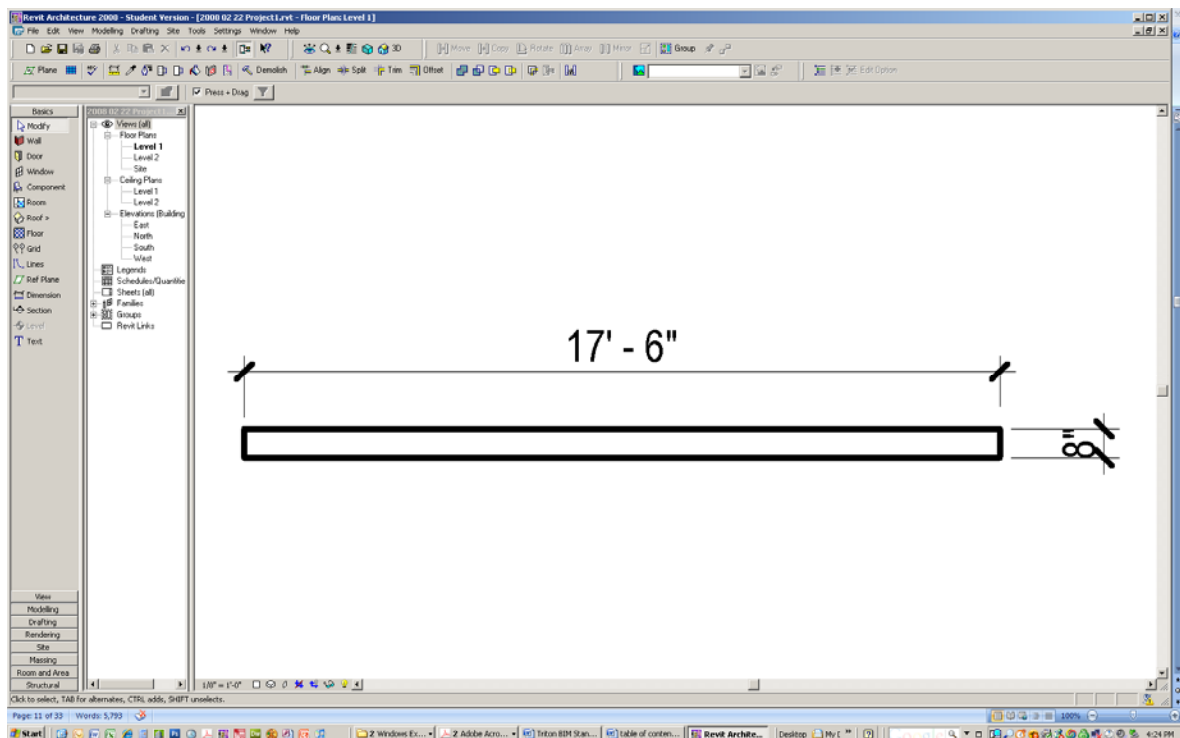


6. Click on the “Duplicate” button, and then type in a new name for your dimension style, such as “Linear – 3/32” Standard.”

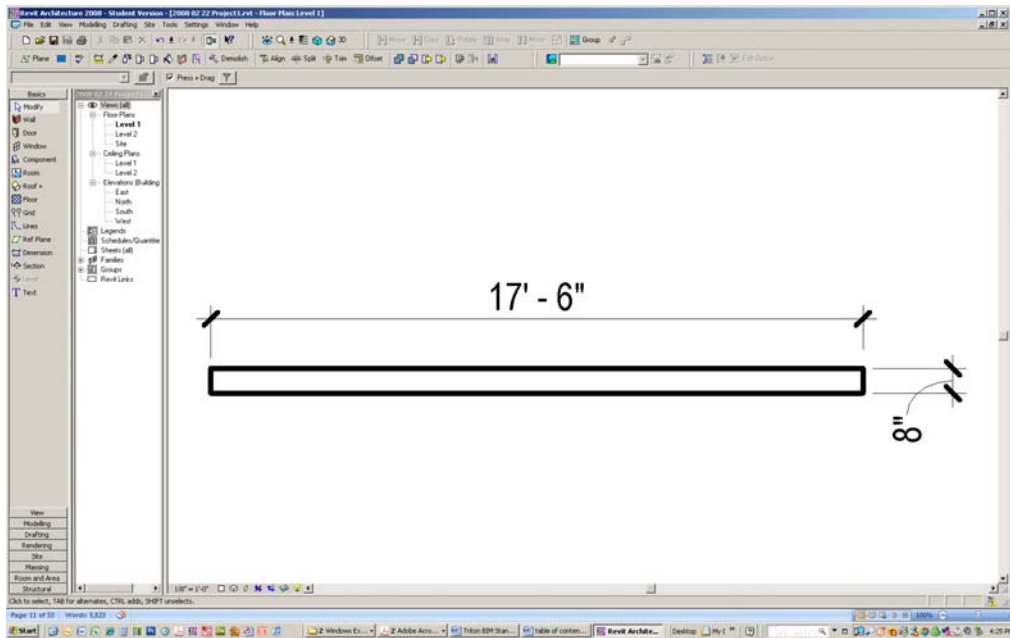


7. Make the following changes:
 - a. Change Tick Mark to “Diagonal 3/64”
 - b. Change Dimension Line Extension to 3/64”
 - c. Change Witness Line Gap to Element to 1/32”
 - d. Change Witness Line Extension to 3/64”
 - e. Change the Text Offset dimension to 0.
 - f. Change Text Font to “Arial Narrow”
 - g. Change Text Background to “Transparent”
 - h. Select “Units Format” button in the box, and check “Supress 0 feet.”

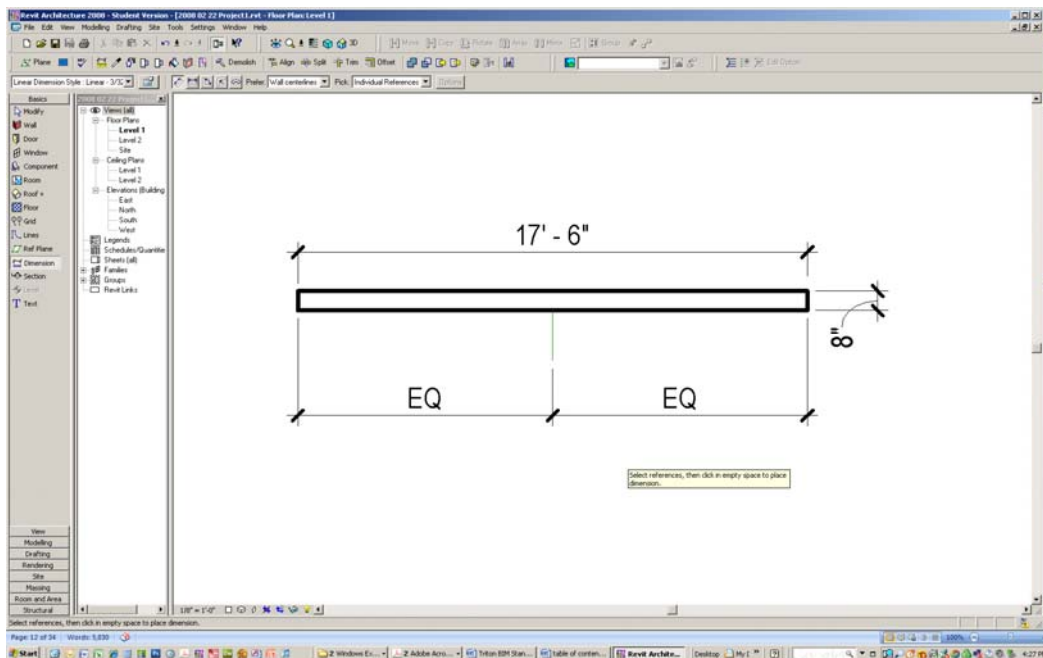
This is how your dimensions should look:



If the 8" dimension is crowding the witness lines and making it hard to read, you can drag the number outside of the dimension by clicking on the grip and dragging. If you do that, it could look like this:



8. If an object is placed on a center line of another object place a **CL** dimension symbol using text alongside.
9. If an object is placed at equal dimensions along a line, use the symbol **EQ** rather than an actual number, like this:



Drawing Scale:

Each view will be set to a scale. You can change the scale at anytime and all annotations will automatically be scaled accordingly.

There are thirteen architectural scales that are used for drawings in Revit:

- 1/64" = 1'-0"
- 1/32" = 1'-0"
- 1/16" = 1'-0"
- 1/8" = 1'-0" (for commercial building plans, elevations and building sections)
- 3/16" = 1'-0"
- 1/4" = 1'-0" (for house plans, elevations, and building sections)
- 1/2" = 1'-0" (for kitchen and bath plans and elevations)
- 3/8" = 1'-0"
- 3/4" = 1'-0" (for wall sections)
- 1" = 1'-0" (for millwork details)
- 1 1/2" = 1'-0" (for building details)
- 3" = 1'-0" (also called "Quarter Size")
- 6" = 1'-0" (also called "Half Size") for details

Full size "scale" for details is missing from the drop-down scale list but can be set using the "Custom Scale" dialogue and setting 1 = 1.

There are eleven standard scales in Revit that are normally used for site plans and civil engineering drawings:

- 1" = 10'-0"
- 1" = 20'-0"
- 1" = 30'-0"
- 1" = 40'-0"
- 1" = 50'-0"
- 1" = 60'-0"
- 1" = 80'-0"
- 1" = 160'-0"
- 1" = 200'-0"
- 1" = 300'-0"
- 1" = 400'-0"

Scale 1" = 100'-0" is missing from the drop-down scale list but it can be set using the "Custom Scale" dialogue and setting 1=1200

Scale 1" = 500'-0" is also missing from the drop-down scale list but it can be set using the "Custom Scale" dialogue and setting 1=6000

Etc.

Drawing Titles and North Arrows

Every individual drawing on a drawing sheet must have the following information centered under each drawing:

- Capital letter to identify the drawing – start in the upper left corner of the drawing with the letter **A** and continue horizontally across. The next drawing to the right will be lettered drawing **B**. After the top line is filled, move to the next line below. The first drawing on that line will be the next letter in sequence.
- Name of the drawing
- Scale
- North arrow for plans

Door Schedules:

Revit will automatically create a door schedule, but you will need to add certain columns to get the complete information.

Level 1 Door Schedule													
Mark	Description	Width	Height	Thickness	Type Mark	Door Material	Frame Material	Fire Rating	Jamb Detail	Head Detail	Sill Detail	Hardware Set	Comments
111	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
112	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
113	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
114	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
115	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
116	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
117	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	4	
118	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
119	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
120	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	6	
121	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
122	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
123	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
124	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
125	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
126	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
127	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
128	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
129	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
130	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
131	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
132	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
133	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
134	PR 3'-0" Sliding	6' - 0"	7' - 0"	1 3/4"	C	Aluminum & Glass	Aluminum		J3	H3	S2	9	
135	PR 3'-0" Sliding	6' - 0"	7' - 0"	1 3/4"	C	Aluminum & Glass	Aluminum		J3	H3	S2	9	
136	PR 3'-0"	3' - 0"	7' - 0"	1 3/4"	D	Aluminum & Glass	Aluminum		J4	H4	S2	7	
137	PR 3'-0"	3' - 0"	7' - 0"	1 3/4"	D	Aluminum & Glass	Aluminum		J4	H4	S2	7	
138	PR 3'-0"	6' - 0"	6' - 11 1/2"	1 3/4"	E	Aluminum & Glass	Aluminum		J5	H5	S2	8	Store Front Construction
139	PR 3'-0"	6' - 0"	6' - 11 1/2"	1 3/4"	E	Aluminum & Glass	Aluminum		J5	H5	S2	8	Store Front Construction
D101	PR 3'-0"	6' - 0"	6' - 10"	1 3/4"	B	Aluminum & Glass	Aluminum		J1	H1	S1	1	
D102	PR 3'-0"	6' - 0"	6' - 10"	1 3/4"	B	Wood	Wood		J2	H2	S2	1	
D103	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D104	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D105	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D106	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D107	PR 3'-0" Sliding	6' - 0"	6' - 8"	1 3/4"	C	Aluminum & Glass	Aluminum		J1	H1	S1	9	
D108	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D109	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	
D110	3'-0"	3' - 0"	6' - 8"	1 3/4"	A	Wood	HM	B	J2	H2	S2	2	

Fields to be selected for the Door Schedule are as follows:

Level

Mark: This is the individual door number and will be distinct for every door. It will appear in the door tag. Numbers should be preceded with the letter "D" and should start at number DB01 for the basement, D101 for the first floor, D201 for the second floor, etc. This limits you to 99 doors per floor, which for most buildings is OK.

Description: this will need to be filled manually in for every door, or each member of the door family could be edited to include this information; it includes a door width and an indication of whether doors are single or pair ("PR"), and gives a written description of doors that are not standard swing doors, such as "sliding," "pocket," "double pocket,"

“by-passing,” “by-parting,” “accordion,” “bifold,” “double-acting,” “overhead panel,” “overhead rolling,” “revolving,” or, if the two leaves are different sizes, you can specify each leaf width here. The reason for the door width is that the standard “width” parameter cannot be changed to note that there are two or three leaves in the door.

Width: this is fixed by the family member width.

Height: this is fixed by the family member height.

Thickness: this is fixed by the family member thickness; note that typical loaded door families in Revit all are 2” thick; this is incorrect – they should be either 1 3/8” thick for residential interior doors or 1 3/4” thick for commercial interior doors and all exterior doors.

Type Mark: this links the door in the schedule to an elevation of the door “type” which should be a letter, such as A, B, C, etc.

Door Material: you will need to create some new materials for doors, such as “Wood,” “HM,” and “Aluminum and Glass” To do that, open the project and select “Settings” from the pull down menu, then “Materials;” click on the “Duplicate” button and add the new material (one at a time). Note that this will not change the door family, but it will allow you to insert the material in the door schedule which will, in turn, make the addition to the door parameters.

Frame Material: same as Door Material – see above.

Fire Rating: Use UL label designations, A, B, C or D; leave blank if there is no label.

Jamb Detail: You should add this parameter to each door family. It will populate through all members of the family; typical references would be J1, J2, J3, etc. referring to a detail for the door jamb.

Head Detail: You should add this parameter to each door family. It will populate through all members of the family; typical references would be H1, H2, H3, etc. referring to a detail for the door head.

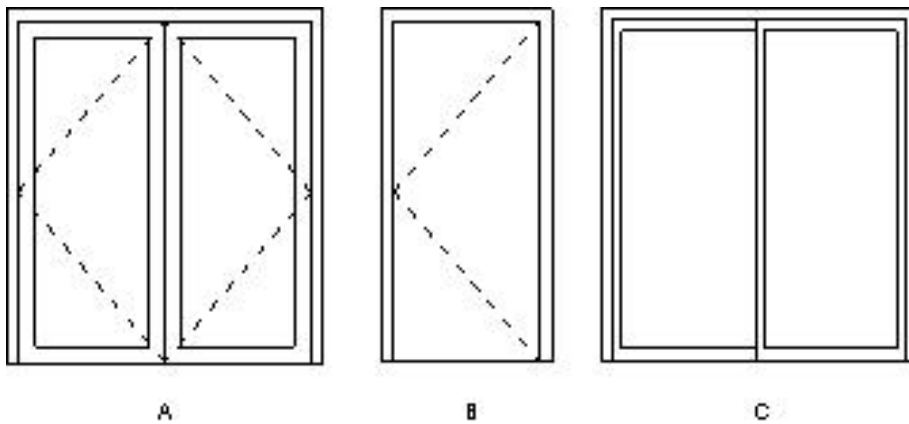
Sill Detail: You should add this parameter to each door family. It will populate through all members of the family; typical references would be H1, H2, H3, etc. referring to a detail for the door sill.

Hardware Set: You should add this parameter to each door family; a hardware set schedule listing every piece of hardware to be installed on each door should be included in the specifications (preferred) or on the drawings.

Comments

Drag completed schedule onto floor plan sheet or onto sheet A601.

To create a Door Type Legend, select from pull down menu “View”, then “New” then “Legend;” type in the name of the Legend “Door Types;” set scale to $\frac{1}{4}'' = 1'-0''$; from the Browser, select Families, Doors, drag the door types used in the project to the legend – note that they will come in as a plan view unless, as you drag them in, on the Options Bar, select Elevation:Front for the view; you will need to place text under each door in the legend indicating which “type” of door it is (A, B, or C, etc.). This is not automatic. If you add door types during the course of the job, you will need to add them to the Door Type Legend.



DOOR TYPES

Window Schedules:

Revit will automatically create a window schedule, but you will need to add certain columns to get the complete information.

Mark: This is the individual window number and will be distinct for every window. In order for this to work, you will need to load the “Window Tag Number” tag – it is not loaded by default. To do this, from the pull down menu, select “Settings,” “Annotation,” “Loaded Tags,” “Load,” “Annotation,” “Architectural,” “Window Tag – Number.rfa,” and select the “Open” button. Make sure that all window tags in the drawing are of this type (The default type of window tag gives all windows of the same type the same number). The individual window number will then appear in the window tag. Window numbers should be preceded with the letter “W” and should start at number WB01 for the basement, W101 for the first floor, W201 for the second floor, etc. This limits you to 99 windows per floor, which for most buildings is OK.

Type Mark: This links the window in the schedule to an elevation of the door “type” which should be a letter, such as A, B, C, etc. It will need to be filled in for each window type.

Operation: You will need to fill this information in for each family member.

Rough Width: You will need to fill this information in for each family member.

Rough Height: You will need to fill this information in for each family member.

Manufacturer: You will need to fill this information in for each family member.

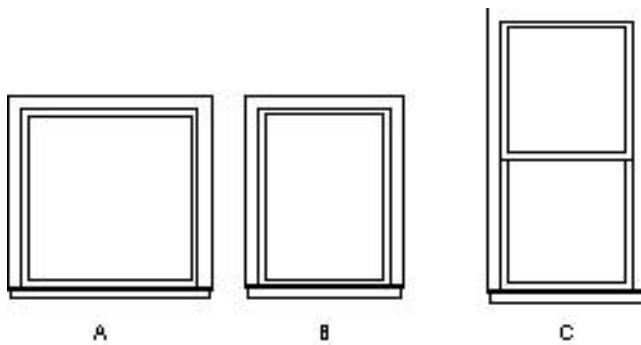
Comments:

Drag completed schedule onto floor plan sheet or onto sheet A601.

Window Schedule						
Mark	Type Mark	Operation	Rough Width	Rough Height	Manufacturer	Comments
W101	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W102	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W103	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W104	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W105	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W106	B	Fixed	3' - 2"	4' - 2"	Pella	Tempered Glass
W107	B	Fixed	3' - 2"	4' - 2"	Pella	Tempered Glass
W108	B	Fixed	3' - 2"	4' - 2"	Pella	Tempered Glass
W109	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W110	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W111	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W112	C	Fixed	3' - 5"	4' - 3"	Kawneer	
W113	C	Fixed	3' - 5"	4' - 3"	Kawneer	
W114	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W115	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W116	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W117	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W118	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W119	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W120	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W121	D	Sliding	6' - 4"	3' - 6"	Marvin	
W122	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W123	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W124	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W125	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W126	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W127	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W128	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W129	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W130	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W131	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W132	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W133	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W134	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W135	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W136	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W137	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W138	A	Double-Hung	4' - 2"	4' - 2"	Marvin	
W139	A	Double-Hung	4' - 2"	4' - 2"	Marvin	

Grand total: 39

To create a Window Type Legend, select from pull down menu “View”, then “New” then “Legend;” type in the name of the Legend “Window Types;” set scale to $\frac{1}{4}'' = 1'-0''$; from the Browser, select Families, Windows, drag the window types used in the project to the legend – note that they will come in as a plan view unless, as you drag them in, on the Options Bar, select Elevation:Front for the view; you will need to place text under each door in the legend indicating which “type” of door it is (A, B, or C, etc.). This is not automatic. If you add window types during the course of the job, you will need to add them to the Window Type Legend.



WINDOW TYPES

Room Finish Schedules:

Revit will automatically create a room finish schedule, but you will need to select the following fields:

Number: This is the three-digit number assigned by you to the room when you tag rooms. Start with room B01 for the first room in the upper left corner of the Basement, then B02, B03, etc. On first floor, Room 101, 102, 103, etc. Change heading of this column in schedule to "Room Number." You can have up to 99 rooms per floor using this system.

Name: This the room name assigned by you when you tag the room. Change heading of this column in schedule to "Room Name."

Room Finish

Base Finish

Wall Finish

Ceiling Finish

Unbounded Height: Change heading of this column in schedule to "Ceiling Height."

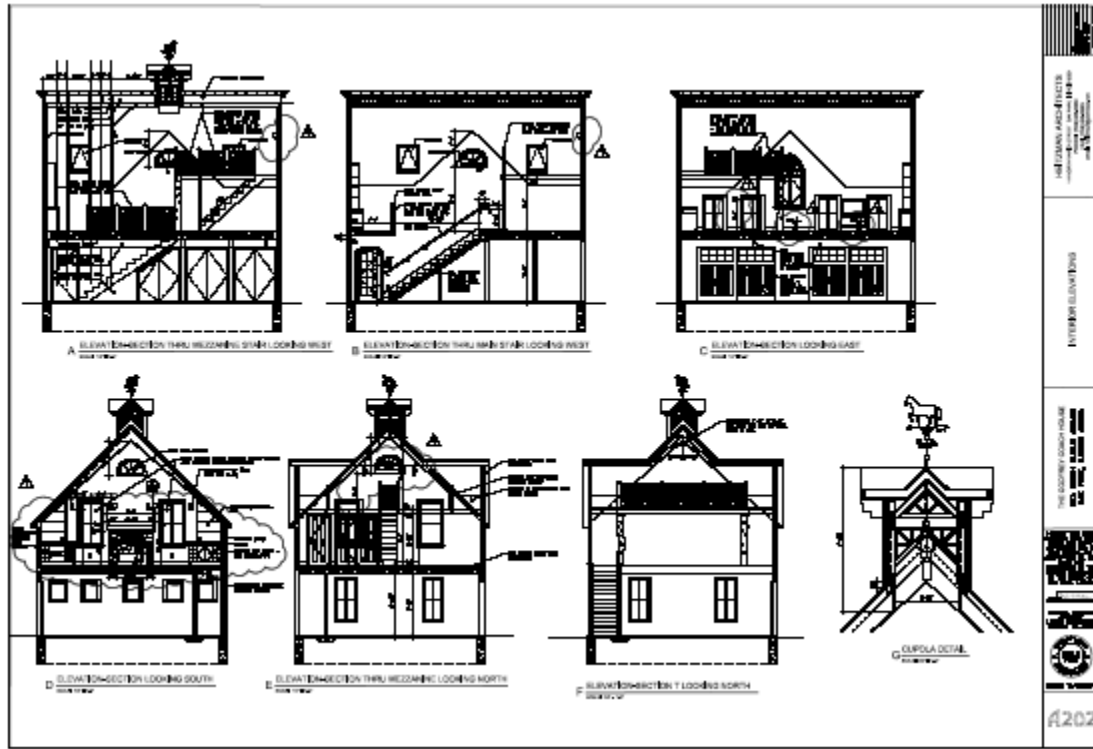
Comments

Change the title of the Schedule to "First Floor Room Finish Schedule"

Drag onto floor plan sheet or onto sheet A601.

First Floor Room Finish Schedule							
Room Number	Room Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Ceiling Height	Comments
101	DEAN'S OFFICE	CPT (NIC)	OAK, SS	DWP	ACT1	9' - 0"	
102	CONFERENCE ROOM	OAK, SS	OAK, SS	DWP	ACT1	9' - 0"	
103	OFFICE	CPT (NIC)	OAK, SS	DWP	ACT2	9' - 0"	
104	OFFICE	CPT (NIC)	OAK, SS	DWP	ACT2	9' - 0"	
105	OFFICE	CPT (NIC)	OAK, SS	DWP	ACT2	9' - 0"	
106	CORRIDOR	CPT (NIC)	WOOD, PTD	DWVC	ACT1	9' - 0"	
107	LIBRARY	OAK, SS	OAK, SS	DWP	ACT1	9' - 0"	
108	RECEPTION	OAK, SS	OAK, SS	DWVC	ACT2	9' - 0"	
109	WORK ROOM	VCT1	VBC1	DWP	ACT1	9' - 0"	
110	OFFICE	CPT (NIC)	OAK, SS	DWP	ACT2	9' - 0"	

Sheet Titles And Sheet Numbering



Typical Drawing Sheet

I CERTIFY THAT THESE DRAWINGS WERE MADE UNDER OUR DIRECT SUPERVISION AND IN OUR OFFICES, AND COMPLY WITH ALL THE RULES AND REGULATIONS OF THE BUILDING DEPARTMENT OF THE VILLAGE OF OAK PARK, ILLINOIS

SIGNED: 

FRANK E. HEITZMAN
ARCHITECT
ILLINOIS REGISTRATION
NUMBER: D1-0200



EXPIRES 11/30/2004

A202

Lower right hand corner of drawing sheet showing the drawing number

The following standards for sheet numbering comes from “The Uniform Drawing System” published by the Construction Specifications System Institute (CSI) in 1997 and incorporated into the National Institute of Building Sciences (NIBS) United States National CAD Standard, 2005.

1. All drawings must be assigned a sheet number. The sheet number should appear in the lower right corner of the drawing.
2. The first letter of a sheet number indicates the discipline name. Immediately after this is a three-digit number indicating the type of drawing and its sequence in the set. Thus, a typical drawing sheet number would look like this: A101. This would be the first architectural plan, usually the site plan or the basement floor plan. Sheets should be numbered consecutively within a series from 01 to 99.
3. Sheets are bound into “sets” and should be organized in the following sequence of disciplines:

C = Civil (earthworks, cut and fill, retaining walls, ponds, parking lots, streets, sidewalks, sewer and water outside of building, electrical power and lighting and telecommunications outside of building)

L = Landscape (topsoil, trees, shrubs, turf, ground cover, brick or stone paving benches, usually only outside of building)

A = Architectural

S = Structural

M = Mechanical (Heating, Ventilating and Air Conditioning)

P = Plumbing (inside building)

Q=Equipment (freezers, refrigerators, etc. - pre-manufactured items that are built-in and need to be connected to water, sewer, electricity or gas)

F = Fire Protection (fire sprinklers, standpipes, fire extinguishers)

E = Electrical (power and lighting)

T = Telecommunications (telephone, CCTV, cable TV, wired computer network, intercom, sound, security and other low-voltage equipment)

I = Interior Furnishings (furniture, sometimes carpet, and built-in custom or standard millwork and cabinets)

4. Drawings within a discipline are numbered sequentially with three-digit numbers according with the following system:

100 series: site plans, floor plans, and reflected ceiling plans, selective demolition plans – starting with A101, which is usually the site plan.

200 series: exterior elevations – starting with A201

300 series: building sections – starting with A301

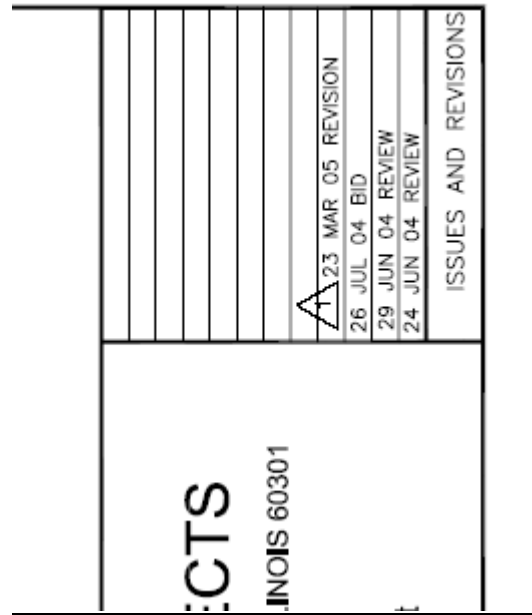
400 series: large scale "blown up" plans, elevations and wall sections – starting with A401

500 series: details and interior elevations – starting with A501

600 series: schedules (such as room finish schedules, door schedules, window schedules) and diagrams (plumbing riser diagrams, single line electrical diagrams) - on small projects, schedules and diagrams can be included on the plan sheets - starting with A601

“Issues” Date Format

From time to time, a drawing may be “issued.” For instance, it could be sent to the Owner for review, sent to the building department for a permit, sent to bidders for bidding, sent to the contractor for construction, or sent to the contractor to obtain a price for a proposed revision. Whenever an issue is made, a record copy must be made of the drawing at that stage of its development for future reference if a dispute develops about what was included on the drawing at that point in time. The date of the issue is placed in the “Issues and Revisions” block in the upper right hand corner of the individual drawing. Only drawings that have been issued for a specific purpose will receive a date as shown below. Thus not every drawing in the set will have identical information in this block.

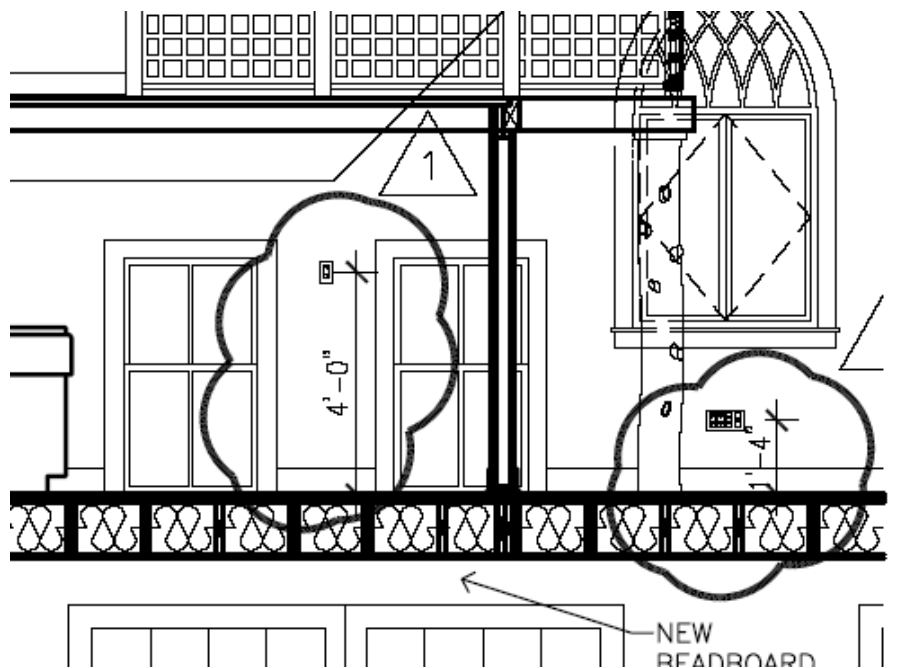


*Upper right hand corner of drawing sheet:
Issues and Revisions Block*

Drawing Revision Format

Drawings are revised frequently. If a drawing is revised after it is issued for construction, the part that is changed must be “clouded,” a small triangle with a number in it is placed next to each cloud. The number corresponds to the revision number for that sheet, and it is noted in the “Issues and Revisions” block with a date after it. The triangles with numbers in them remain on the drawing throughout its life to memorialize the approximate location of each revision, however, only the last revision’s “clouds” remain on the drawing. See the example below. Not every sheet in the set will have the same revision dates but may have the same revision numbers, for instance, if the plan is changed on August 1, but the elevations are not changed until October 15, the plan revisions are clouded given the revision number 1 (and dated 1 AUG 2005). When the elevations are changed, those changes are clouded and are also given the revision number 1 (and dated 15 OCT 2005). Thus every sheet has its own sequence of revision numbers possibly with different dates.

If a drawing is revised prior to when it is issued for construction, there is usually no need to “cloud” and number the changes. If a drawing is changed during the bidding period, it is not clouded but it is dated and the date recorded in the “Issues and Revisions” block as per the following example: “24 JUL 2008 Addendum No. 2”



Example of a revised drawing that has been “clouded” indicating location of revision and given a revision number in a small triangle

Items to show in each type of drawing:**Cover Sheet**

Name and address of project
General Notes
Index of drawings
Material symbols
Legend of symbols
Perspective rendering of building (optional)

Note that abbreviations are not normally used in BIM drawings, with exception of the following:

Do not use periods after abbreviations:

@: At (the rate of)
∅: Diameter
B/: Bottom of
BOT: Bottom
CFM: Cubic Feet per Minute
DN: Down
EQ: Equal
F: Farenheit
GSF: Gross Square Feet
HVAC: Heating, Ventilating and Air Conditioning
L: Angle
LF: Linear Feet
NIC: Not in Contract
NSF: Net Square Feet
OC: On Center
PSF: Pounds per Square Foot
PSI: Pounds per Square Inch
SF: Square Feet
T/: Top of
TYP: Typical
UNO: Unless Noted Otherwise
W/:With

Items to Show on the Site Plan (usually at a scale 1" = 20'-0")

Property lines with dimensions and angles

Building setback lines with dimensions and angles

Easements with dimensions and angles

North arrow showing true north and "plan" north

Note that plan north should always be up throughout the drawing set – never change the north orientation of any plan in the set for convenience – it is very confusing

If the plan is very long in the north-south direction, it may fit the sheet better by rotating north so that it is to the left

Location of the bench mark and its elevation

The "bench mark" is the location from which all vertical elevations are measured – it is usually the top of a fire hydrant in the vicinity or the top of a street curb.

Outline of the building (s)

Elevation of the first floor with relation to the bench mark

First floor elevation is usually set at 0'-0" for convenience

Topographic contours

Existing

Cut and fill

New

Stoops

Streets

Existing

Removed

New

Sidewalks

Existing

Removed

New

Driveways

Parking lots
Curb cuts

Retaining walls

Walls

Fences

Exterior steps

Slopes of hard surfaces

Air conditioner condensing unit

Trees and large shrubs
Existing
Removed
New

Manholes

Catch basins

Yard drain inlets

Fire hydrants

Yard sprinkler locations

Power poles

Street lights

Signs

Lawn drain tiles

Drainage ditches

Site utilities
Sewer, Water, Gas, Power, Telephone, Cable TV, Water Meter,
Gas meter, Power meter

Items to Show on the Basement Plan (usually at a scale 1/4" = 1'-0" or for large buildings, or 1/8" = 1'-0")

- Foundation walls
- Footings (show with dashed lines)
- Stoop arms (show with dashed lines)
- Steel beams supporting floor structure above (show with centerlines)
- Steel columns
- Column footings (show with dashed lines)
- Interior partition walls and doors
- Stairs
- Furnace
 - Furnace flue
- Hot water heater
 - Hot water heater flue
- Power panel board
- Floor drains
- Sump pump location
- Windows
- Window wells
- Escape window
- Dimensions
- Schedules:
 - Room Finish Schedule
 - Door Schedule
 - Window Schedule

Items to Show on the Floor Plans (usually at a scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Walls in plan

Walls are cut 3'-0" above floor

Overhead objects

Hidden objects

Receptacles

Power

Telephone

Cable TV

Network wiring

Hose bibs

Floor registers

Doors

Swing doors

Single

Pair

Bifold doors

Pocket doors

Bypass doors

Double-acting doors

Windows

Double hung windows

Casement windows

Awning windows

Hopper windows

Sliding windows

Pivoting windows

Fixed windows

Stairs

Minimum width:

36" for one and two family dwellings or where serving an occupant load of 50 or less

44" for all other stairs

Handrails:

On at least one side for one and two family dwellings

On both sides for all other stairs

Minimum Headroom: 6'-8" clear

Minimum riser height:

7 ¾" for one and two family dwellings

7" for all other buildings

Maximum tread width:

10" for one and two family dwellings

11" for all other buildings

Maximum height between landings: 12'-0"

Show direction of each stair with an arrow that points in the upward or downward direction – label arrows UP or DN

Show thicker interior walls where plumbing riser sewer or vent pipes are located (usually 2x6 walls instead of 2x4)

Fireplaces

Kitchen cabinets and appliances

Plumbing fixtures

Fireplace

Hearth

Flue

Heating registers

Slope of garage floor slab

Area drains

Basement window wells and drains

Downspouts

Splashblocks

Dimensions

Overall dimension

Face of finished walls

Centerlines of doors

Centerlines of windows

Schedules:

Room Finish Schedule

Door Schedule

Window Schedule

Items to Show on Roof Plan (usually at a scale 1/4" = 1'-0" or for large buildings, 1/8" = 1'-0")

Slopes

Materials

Gutters and downspouts

Parapets

Skylights

Dimensions

Operation

Items to Show on the Reflected Ceiling Plans (usually at a scale 1/4" = 1'-0", or for large buildings, 1/8" = 1'-0")

Lights

Switches and conduit runs

Ceiling tile pattern

Identification of ceiling changes of plane

Heads of doors

Door swings

Items to Show on the Exterior Elevations (usually at a scale 1/4" = 1'-0", or for large buildings, 1/8" = 1'-0")

Doors

Show hinge side with dashed lines

Windows

Show hinge side on casements, awnings, hoppers and pivoting windows

Show arrows depicting double hung, single hung, and sliding sash direction

Show the letter F for fixed glazing

Wall materials

Roofing materials

Change of plane

Light fixtures

Hose bibs

Mailboxes

House numbers

Vertical dimensioning

Floor elevation levels

Items to Show on the Interior Elevations (usually at a scale of 1/4" = 1'-0")

Doors

 Show hinge side

Baseboard

Moldings

 Chair rail

 Crown molding

 Plate rail

Wainscotting

Millwork

Light fixtures

Vertical dimensioning

Items to Show in the Wall Sections (usually at a scale of 3/4" = 1'-0")

Vertical dimensions

Floor elevation marks

Materials

Sheathing

Exterior finish

Interior finish

Insulation – show minimum R-value

Floor deck

Finish flooring

Baseboard

Wall moldings

Roof sheathing

Roof underlayment

Roofing

Roof ventilation

Structural information

Foundation and footing

Wall structure

Floor joists

Ceiling joists

Roof rafters

Bridging

Reinforcing bars in foundation walls

Drainage bed of gravel under concrete floor slab

Vapor retarder under concrete floor slab

Welded wire fabric mesh reinforcing in concrete floor slab

Dampproofing

Items to Show in the Details (various large scales)

Plan and Section of a fireplace ($1 \frac{1}{2}'' = 1'-0''$)

Riser and tread of a stair ($1 \frac{1}{2}'' = 1'-0''$)

Section detail of a lintel above a window or other opening
($3'' = 1'-0''$)

Section and plan of cabinets ($1'' = 1'-0''$)

Threshold detail ($1 \frac{1}{2}'' = 1'-0''$)

Column cladding ($3'' = 1'-0''$)

CSI (“Construction Specifications Institute”) Format for Organization of Specifications and Materials:

- Division 1: General Requirements
- Division 2: Existing Conditions
- Division 3: Concrete
- Division 4: Masonry
- Division 5: Metals
- Division 6: Wood, Plastics and Composites
- Division 7: Thermal and Moisture Protection
- Division 8: Openings
- Division 9: Finishes (interior finishes)
- Division 10: Specialties (for example, signs, toilet accessories)
- Division 11: Equipment (for example, kitchen equipment)
- Division 12: Furnishings
- Division 13: Special Construction (for example, greenhouses)
- Division 14: Conveying Equipment (elevators, escalators, lifts)
- Division 21: Fire Suppression
- Division 22: Plumbing
- Division 23: Heating, Ventilating and Air Conditioning
- Division 26: Electrical
- Division 27: Communications
- Division 28: Electronic Safety and Security
- Division 31: Earthwork
- Division 32: Exterior Improvements
- Division 33: Utilities

Terms Commonly used in Architecture, Interior Design, and Construction Management

ACCESS PANEL: A small metal or wood door flush with a wall or ceiling surface which provides a closure over a valve or other operable device which is recessed into the wall or located above a ceiling. The access door may be keyed and lockable.

ACCESS FLOOR: Removable metal or concrete floor panels about 18" to 24" square which are supported on short steel pedestals so that wiring and ductwork may be installed, changed and maintained below the floor. The raised floor may be carpeted or tiled to create a finished floor surface.

ACOUSTICAL TILE, ACOUSTICAL PANEL: A ceiling or wall tile finishing material with an inherent property to absorb sound; usually made of mineral, fiber or insulated metal materials. Not "Acoustic Tile" or "Acoustical Board."

ACRYLIC (PAINT), ACRYLIC LATEX - A paint composed of acrylic resins, thinned with water.

ADDENDUM- Written or graphic instruments issued prior to the execution of the Contract which modify or interpret the bidding documents, including Drawings and Specifications, by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Construction Contract is executed. (Plural-"Addenda".)

ADHESIVE: A sticky substance to bond one material to another. Use the term "Adhere" instead of "Glue." Do not use "Glue," "Cement," or "Mastic."

ADMIXTURE - A chemical which is added to concrete to accelerate or retard the setting process or to create air bubbles in the concrete, called "accelerators," or "air entraining agents."

ADVERTISEMENT FOR BIDS- Published public notice soliciting bids for a construction project. Most frequently used to conform to legal requirements pertaining to projects to be constructed under public authority, and usually published on newspapers of general circulation in those districts from which the public funds are derived.

AGGREGATE- Any of various hard, inert materials, like sand, gravel, crushed stone, or pebbles added to cement to make concrete, mortar, or plaster.

AGREEMENT- (1) A legally enforceable promise or promises between two or among several persons. (2) On a construction project, the document stating the essential terms of the Construction Contract which incorporates by reference the other Contract Documents. (3) The document setting forth the terms of the Contract between the Architect and a consultant.

AIR CONDITIONING SYSTEM- The process of treating air for simultaneous control of temperature, humidity, cleanliness, and distribution.

ALKYD (PAINT)- A paint composed of a chemically synthesized, alkyd derived base, thinned with mineral spirits. The current version of "oil" based paints.

ALTERATION: A planned or executed change to an existing building, short of complete demolition of the building. See also DEMOLITION and SELECTIVE DEMOLITION.

ALTERNATE: Mechanism used in Bid Documents to seek separate bids for a different design than the "Base Bid" design. May be "Additive" or "Deductive" alternates.

APPROVE: The term "approved," when used in conjunction with the Architect's action on the Contractor's submittal, applications, and requests, is limited to the Architect's duties and responsibilities as stated in General and Supplementary Conditions.

APRON- (1) A finish strip applied below the stool of a window to cover the rough plaster or dry wall edge.
(2) A paved or hard packed area abutting a garage door or other opening.

ARCHITECTURAL PROGRAM — A document stipulating the physical provisions needed to support the operational requirements. An architectural program includes names, numbers sizes and descriptions of spaces and adjacency diagrams and may also include lists of major furnishings and equipment for each space, significant architectural characteristics of each space, and consequential engineering requirements.

AREAWAY- An uncovered space next to the fountain walls of a building, for entrance of light and air to the basement.

ARRIS - Sharp edge of a finished member.

AS-BUILT DRAWING - A drawing or print marked by the Contractor to show actual conditions of a project as constructed after construction.

ASHLAR- A rectangular pattern of stone used in a wall.

ASPHALTIC CONCRETE: This is the term used for paving for roads and driveways. Not "Asphalt" or "Bituminous" Concrete.

ASTRAGAL- A small molding attached to one or both meeting stiles of a double door, used to provide a tight, draft-free fit.

AWARD- The acceptance of a bid or negotiated proposal by an owner.

BACKFILL- The material (earth, gravel, or sand) used for refilling around a foundation wall.

BACKUP- The inner portion of a masonry wall, usually finished with face brick, stone ashlar, stucco, or other decorative or protective veneer on the outside.

BALUSTER- Any of a number of closely spaced vertical supports for a railing or balustrade.

BATT INSULATION - A preformed section of flexible fiberglass or mineral wool insulation with or without a vapor barrier covering on one side (either kraft paper or aluminum foil) sized to fit snugly in a framed cavity between studs or joists.

BATTEN- A narrow strip of wood or metal used to cover vertical joints between boards or panels.

BAY - An opening in a wall; a horizontal area division of a building, usually defined as the space between two columns or piers.

BEAM- A horizontal load-supporting member of a building which directly supports a floor; may be of wood steel, or concrete; transmits load horizontally to vertical columns or bearing walls. Normally beams are larger and are spaced further apart than "joist."

BEARING WALL- A wall which supports any vertical load in a building (such as floors, roofs, joist, beams or girder) as well as its own weight.

BEARING- The area of contact between a structural member (beam, girder, footing) and its underlying support (column, bearing wall, load bearing ground).

BELT - A horizontal course of decorative stone or brick exposed to the exterior face and encircling a masonry building.

BEVELED WOOD SIDING - Horizontal wood boards of varying widths, (usually 4", 6", 8", or 10") with lower edge thicker than upper edge.

BID - A complete and signed proposal to do the construction work or designated portion thereof for the dollar amount stated in the bid.

BIM (Building Information Modeling) — A model-based technology linked with a database of project information used to create a digital representation of the building process to facilitate exchange and interoperability of information in digital format. BIM addresses geometry, spatial relationships, geographic information, quantities and properties of building components.

BIDDER- One who submits a bid for a prime contract with the Owner, as distinct from a sub-bidder who submits a bid to another bidder. Technically, a bidder is not a contractor on a specific project until a contract exists between him and the Owner.

BIDDING DOCUMENTS- The advertisement or invitation to bid, instructions to Bidders, the bid form the drawings, the specifications, and any Addenda issued prior to receipt of bids.

BLANKET INSULATION - Roll type fiberglass insulation for installation over ceilings or on wall surfaces either laid flat or secured with impaling pins.

BMP - BEST MANAGEMENT PRACTICES — Methods, both structural and non-structural, intended to minimize as much as possible the transference of surface contaminants to surface and/or ground water.

BOARD FOOT- A unit of measure represented by a board one foot long, one foot wide and nominally one inch thick, or 144 cubic inches.

BOARD MEASURE- A system of cubic measurement for lumber; the basic unit is a board foot.

BOND- The arrangement of bricks in certain overlapping patterns to give the finished structural unit additional strength and to allow the individual elements to act together as a cohesive, integrated unit. Commonly used bonds are Running, common, English, and Flemish bonds.

BORROWED LIGHT (OR "LITE")- An interior window between rooms which allows light from one room to enter another - use instead "Aglazed opening."

BOX CULVERT — A channel or conduit that can be placed beneath roads to allow something such as water to travel from one side of the roadway to the other. Box culverts usually are constructed of metal pipe or concrete.

BRACE- A structural member which reinforces a column, beam, or truss.

BRACKET- A horizontally projecting support for an overhanging weight such as cornice.

BRIDGING- A method of bracing wood or steel floor joists by providing lateral members between the joists. Cross-bridging forms an "x" shape between joists. The purpose of bridging is to distribute loading to several joists.

BROWNFIELD — Abandoned, idled, or underused industrial and commercial facilities/sites where expansion or redevelopment is complicated by real or perceived environmental contamination. They can be in urban, suburban, or rural areas. EPA's brownfield initiative helps communities mitigate potential health risks and restore the economic vitality of such areas or properties.

BTU -- British thermal unit — Standard measure of energy expenditure or use. The amount of heat energy required to raise the temperature of one pound of water at its greatest density (39.2 F) by one degree Fahrenheit at sea level.

BUDGET- The sum established by the Owner as available for the entire Project, including the construction budget, land costs, equipment costs, financing costs, compensation for professional services, contingency allowance, and other similar established or estimated costs.

BUILDING CODES — Federal, state and local regulations dictating the construction of a facility. Codes pertain to structure, building materials, accessibility to the handicapped, mechanical systems, electrical systems, glazing, foundations and numerous other items.

BUILDING PERMIT- A permit issued by a village, town, city, county, state or federal governmental authority allowing construction of a project in accordance with approved Drawings and Specifications.

BUILDING SECTIONS — In the conceptual and schematic design stages, building sections show the stacking of various components and spaces by providing a visual slice of a portion of a building. In the design development and construction documents stages, building sections show construction details.

BUILDING TYPE- A classification of a building according to principal activities or uses for which it was constructed, such as housing, jail, shopping center. This is not the same as an "occupancy type" of building codes.

BUILT-UP ROOFING - roofing system used on relatively flat surfaces - hot asphalt or coal tar pitch mopped on with several plies (3 to 4) of roofing felts. May be smooth surfaced, painted with fibrated aluminum paint, or graveled on top.

BUTT JOINT- The cut ends of sheet or boards placed adjacent to one another with no overlap.

BUTTRESS- An external structure usually brick or stone, built against a wall to support or reinforce it.

BY OWNER: The term "by Owner" means that work shown or described in the contract documents and labeled with this designation is not included in the General Contractor's contract, but will be completed under a separate contract with another contractor by the Owner. Coordination and scheduling of the work thus described shall be the responsibility of the General Contractor.

BY OTHERS: The term "by others" means that work shown or described in the contract documents and labeled with this designation is not included in the specific sub-trade's contract, but will be required to be done within the General Contractor's contract.

CAISSON- A deep foundation type which is constructed by boring a large diameter hole in the ground and filling it with concrete.

CAMBER-A slight upward arching given to a beam, girder, or truss to prevent sagging due to weight.

CANT STRIP- A slanted or angled board laid at roof-wall intersection or in back of a parapet, to transition from horizontal to vertical for a roof membrane.

CANTILEVER- A structural member projecting horizontally well beyond its vertical support.

CASE WALL- A partition to enclose mechanical and plumbing systems.

CASEMENT- A type of window having a sash with hinges on one side allowing the window to open. Most contemporary casement windows swing outward.

CASING- The exposed trim molding, around a door or window; may be either flat or molded.

CASING BEAD - A plaster stop - do not use for gypsum wallboard trim.

CAULK- An archaic term meaning to fill small cracks with a linseed oil and whiting compound called "caulk" which is not very flexible and will not provide a water tight joint -- use the term "seal" or "sealant" instead.

CEMENT - Portland Cement for use in concrete, grout, mortar, cement plaster and stucco.

CEMENT PLASTER - Material made from Portland cement sand and water for use on exterior walls and soffits, and on high use interior surfaces or in high humidity interior spaces. "Stucco" is cement plaster.

CERTIFICATION FOR PAYMENT- A signed statement from the Architect to the Owner confirming the amount of money due the Contractor for Work accomplished and/or materials and equipment suitably stored.

CHALKBOARD - Do not use the term "Blackboard" which is archaic since contemporary chalkboards are not normally black.

CHAMFER - To bevel or round off a right angle corner.

CHANGE ORDER - A written order to the Contractor signed by the Contractor, Owner, and the Architect, issued after the execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

CHIPBOARD - Use the term "particle board" instead.

CIRCUIT BREAKER — A device designed to open and close an electrical circuit by non-automatic means and, when applied within its rating, to open the circuit automatically on a predetermined overcurrent without damage to itself.

CLERESTORY WINDOW - A window or series of windows in a wall above the eye line, for lighting and/or ventilation of the building.

CMU - Concrete Masonry Unit - Do not use "Cement Block" or "Cinder Block."

CODES - Regulations, ordinances or statutory requirements of a village, town, city, county, state, or federal government relating to building construction, adopted and administered for the protection of the public health, safety, and welfare.

COLUMN - A vertical load-carrying structural member supporting horizontal members (beams, girders, etc.).

COMPLETE - The term "complete" means all surfaces or areas of a construction item.

CONCRETE - A mixture of Portland cement, large and small aggregate, water and admixture.

CONDUCTOR - See "down spout".

CONDUIT - A protective metal tube for electric wiring.

CONSTRUCTION ADMINISTRATION — Managing the construction phase of a project, which begins with the bidding and generally ends 30 days after completion of construction. This role typically includes

review of shop drawings, site visits, review of contractor pay applications, issue and review changes, punching the project and closeout of the construction phase.

CONSTRUCTION DOCUMENTS - The term "Construction Documents" means the Scope of Work list and reference drawings contained within the Volume by that name.

CONSTRUCTION JOINT - A joint in concrete flatwork or walls which is necessary for stopping the pour for the day - do not use "cold joint."

CONSTRUCTION MANAGEMENT — A project delivery method whereby the client retains a construction manager to provide certain preconstruction expertise including cost estimating, value engineering, scheduling and coordination of all activities during the construction phase of the project.

CONSTRUCTION MANAGER AT RISK — A sole proprietorship, partnership, corporation or other legal entity that assumes the financial risk for construction, rehabilitation, alteration, or repair of a facility at a contracted price. The construction manager at risk serves as a general contractor and provides consultation to the client regarding construction during and after the design of the facility.

CONSTRUCTION DOCUMENTS - Working Drawings and Specifications.

CONSULTANT - An individual or organization engaged by the Owner or Architect to render professional consulting services, supplementing the Architect's services. Types of consultants could be Engineers, acoustical, energy, or cost consultants.

CONTRACT DOCUMENTS - The term "Contract Documents" means all of the documents which make up the Contract between Owner and Contractor, including the Contract itself, the General and Special Conditions, the Technical Specifications, the Construction Documents (Scope of Work and Drawings), all Addenda issued prior to signing of the Contract and Change Orders issued by the Owner and agreed to by the Contractor after the signing of the Contract.

CONTRACT ADMINISTRATION - The duties and responsibilities of the Architect during the Construction Phase, which includes observation of construction, checking shop drawings, and approving pay requests.

CONTRACT DOCUMENTS - The Owner-Contractor Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications, and all addenda issued prior to execution of the contract.

CONTRACTOR - In construction terminology, the person or organization responsible for performing the Construction Work and identified as such in the Owner-Contractor Agreement.

CONTROL JOINT - A groove which is formed, sawed, or tooled in a concrete or masonry structure to regulate the location and the amount of cracking and separation resulting from the dimensional change of different parts of the structure, thereby avoiding the development of high stresses.

COPING - Top of a parapet, usually stone or metal, to prevent water from getting into the parapet.

COR-TEN - Proprietary name for a brand of weathering steel made by the Inland Steel Company - use the generic term "weathering steel" instead.

CORBEL - Masonry which is stepped out from each course to project from a wall.

CORNICE - A horizontal molding along the top of the wall or ceiling.

COURSE - A continuous horizontal layer of masonry.

CPM – CRITICAL PATH METHOD — A process used to estimate project duration by sequencing individual project components based on which has the least amount of scheduling flexibility.

CRAWL SPACE - An unfinished, accessible space below the first floor, generally less than full story height, but at least 1'-6" high clear under the joists or beams.

CRICKET - A small saddle on a roof used to divert water around a chimney or other small projection (see saddle).

CRIPPLE - A short supplemental wall framing member used between the door or window header (or window sill) and sill plate.

CURB - (1) The stone or concrete edging of a side walk or paved street;
(2) the raised edge of a floor or well opening.

CURTAIN WALL - An exterior wall which encloses but does not support the structural frame of the building.

DAMPPROOFING - An impermeable coat or coats of asphalt brushed or sprayed on the foundation basement wall to prevent the passage of moisture.

DATUM - A reference elevation to which other elevations are measured.

DEAD LOAD - The part of the total building load contributed by the structural building elements and materials.

DEFLECTION - The displacement in a structural member that occurs when a load is applied to the structure.

DELETE - To take something out of the building or contract - do not confuse with "omit" which means not to install something in the first place.

DEMISING WALL- An interior wall or partition used to sub-divide tenant spaces from one another.

DEMOLITION- Removal of an entire building -- see also "alteration" and "selective demolition."

DETAIL- A drawing, at a larger scale, of a part of another drawing, indicating in detail the design, location, composition and correlation of the elements and materials shown. (Usually referring to a plan detail.)

DIRECTED: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect," "requested by the Architect," and similar phrases.

DIVISION (OF THE SPECIFICATIONS)- One of the sixteen organizational subdivisions used in the specifications and in construction information filing. (List them).

DOUBLE HUNG WINDOW- A type of window containing two movable sash sections which slide open vertically.

DOWNSPOUT- A pipe to carry rainwater from the gutter or roof to the ground or the sewer -- can be sheet metal, plastic, or other type of piping material.

DRAWING- do not use "print," "blueprint," or "sheet"

DRIP- A projecting part of a sill or cornice that sheds rain water and protects structural parts below.

DRYWALL- Gypsum board for interior wall and ceiling finish material.

DUCT- A rectangular or round sheet metal or fiberglass pipe used to convey warm or cooled air.

DUMBWAITER- an elevator too small for a person - used for vertically transporting food, mail, dishes, trays, etc.

EAVES- The lower or outer edge of a roof which overhangs the side wall of a building.

ELASTOMERIC- A material which is inherently rubbery for sealants, flashings, and waterproof membranes.

ELEVATION-(1) A drawing of the front, side, or rear of the building drawn to scale. (2) The height above surface of the earth or the vertical distance from a given reference elevation.

ENGLISH BASEMENT- A basement with half its height above grade level.

EVACUATION- The removal of earth from its natural position, or the depression resulting from the removal of earth.

EXPANSION JOINT- A joint in concrete, masonry, or metal designed for movement - expansion and contraction -- not a "control joint," or "construction joint."

EXPANSION SHIELD- a drilled-in lead shaft, into which a bolt is screwed, expanding the shaft tight against the hole -- used for anchoring materials onto concrete or masonry surfaces.

FACADE- The front of a building.

FACE BRICK- A good grade of brick used to finished the exterior of building walls.

FASCIA: (1) Any relatively broad flat vertical surface like that on the outside of a cornice.
(2) A finishing board used to conceal rafter ends.

FEASIBILITY STUDY- A detailed investigation and analysis conducted to determine the financial, economic, technical or other advisability of a proposed project.

FEE- A term used to denote payment for a professional service, (not including compensation for reimbursable expenses, such as travel, long distance telephone calls, photo copy, printing or mailing).

FELT PAPER- Archaic term - an asphalt-impregnated used as a covering for wall sheathing or for plies of built-up roofing, usually weighing 15 lbs. per 100 square feet -- use the term "building paper" for use over wall sheathing, and "ply" for roofing felts.

FENESTRATION- The design and disposition or arrangement of windows or other openings in a building wall.

FIBERBOARD- A building board of wood or other plant fibers compressed and bonded into a sheet, usually 4'-0" x 8'-0" x 2" thick.

FIBERGLASS- Finespun filaments of glass made into a yarn, used in blankets as insulation; or it may be added to gypsum or concrete products to increase tensile strength -- do not use the term "glass fiber."

FILL- Soil, gravel, or sand used to equalize or raise the surface of the earth.

FINISHED FLOOR- The top or wearing surface of a floor system, of hardwood, vinyl, terrazzo, or ceramic tile.

FIRE RESISTANCE- The ability of a wall or floor assembly to maintain structural stability and act as an effective barrier to the transmission of heat for a stipulated period of time. Measured in hours, such as 2 hr, 1hr, 2hr, 3hr, or 4hr.

FIRE STOPPING- Solid wood members placed between studs to retard the spread of flame within the framing cavity.

FIREPROOFING- The use of incombustible materials to protect steel structured membrane of a building so it can withstand a fire without losing structural integrity, for a stipulated period of time. Measured in hours, such as 1 hr, 2hr, 3hr, or 4hr.

FLAKE BOARD- use the term "particle board" instead.

FLAME SPREAD CLASSIFICATION- A standard measurement of the relative surface burning characteristics of a building material when tested by ASTM E 84. Classes are A, B, or C.

FLASHING- The strips of sheet metal, copper, lead, or tin used to cover and protect structural angles and joints, to prevent water seepage or leaks.

FLOAT FINISH- The surface of concrete finished by a continuous spreading of the material with a flat board.

FLUE- The duct or open space within a chimney through which combustion gasses and smoke are allowed to escape.

FOOTING- The projecting course at the base of a foundation wall which distributes the building load over a wider area of the soil.

FOYER- The entrance hall of a house or other building type.

FURNISH: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

FURRING- The strips of wood or metal applied to wall or other surface to make it plumb or true to line, which will provide a fastening surface for a finish covering -- be more precise by using the terms "wood furring" or "metal furring."

FURRING CHANNEL- cold rolled steel channel for suspension of plaster or drywall ceilings - usually 3/4" or 1 2" deep.

GABLE- The triangular-shaped wall at the end of a building between the slopes of a roof.

GAGE- Same as "gauge" -- thickness of metal.

GAMBREL ROOF- A ridged roof, with sides having two pitches or slopes.

GENERAL CONTRACT-(1) Under the single contract system, the Contract Between the Owner and the Contractor for construction of the entire Work. **(2)** Under the separate contract system, that Contract between the Owner and a Contractor for construction of architectural and structural Work.

GENERAL CONDITIONS (OF THE CONTRACT FOR CONSTRUCTION)- That written part of the Contract Documents which sets forth many of the rights, responsibilities and relationships of the parties involved.

GIRDER- A Horizontal load supporting member of a building which supports a beam or beams.

GIRT- A secondary horizontal framing member extending between columns or studs to stiffen the framing system; also to provide support for the siding or sheathing.

GIS -- GEOGRAPHIC INFORMATION SYSTEM — A computer mapping system used to gather, store and work with geographic data

GLAZED OPENING- glass window in an interior wall or partition -- do not use the term "window," "vision panel," "light," "lite," or "borrowed light."

GMP -- GUARANTEED MAXIMUM PRICE CONTRACT — Limits the design and construction costs of a project. The designer/builder is compensated for actual costs incurred plus a fee. The design and construction costs must not to exceed the ceiling cost set by the client.

GRADE BEAM - A horizontal load-bearing foundation member but end-supported on piles, piers, or caissons like a standard beam; not ground-supported like a foundation wall.

GRADE- Level of the earth's surface.

GREEN – Process of selection of materials and systems that use materials that are made from renewable resources, are affordable and contain low amounts of embodied energy.

GRILLAGE- A system of beams, laid crosswise to form a foundation to evenly distribute the load.

GROSS AREA- The total enclosed floor area of all floors of a building measured from the outside surface of the exterior walls.

GROUNDS- The strips of wood or metal placed around a wall opening to establish the finished plane for the palter or concrete.

GROUT- A thin, fluid mortar mixture of Portland cement, fine aggregate and water used to fill small joints and cavities in masonry work -- do not use mortar in place of grout.

GUARD RAIL- A protective railing around an open raised platform.

GYP BOARD- See gypsum wallboard.

GYP SUM WALLBOARD- A prefabricated sheet used in drywall construction made of gypsum covered with paper which can be painted, or wall papered -- use the term "drywall" instead.

HANDRAIL- Single railing on wall at stair -- use "railing" for a protective barrier.

HANGER- Any suspended structural member to which other members are attached.

HARDBOARD- manufactured flat wood panel used for interior finish material -- do not use the terms "Masonite," or "pressed board."

HARDWOOD- wood obtained from deciduous trees, mainly used for finished wood trim, doors, panels, and furniture -- no specific species, could be oak, birch, ash, poplar, teak, mahogany, butternut, etc.

HEAD ROOM- The distance between the top of a finished floor and the lowest part of the floor above.

HEADER- In masonry, a brick laid across the thickness of a wall with one end toward the face of wall. In carpentry, a wood beam set at right angles to joists at a floor opening to provide a support for joist which are interrupted by the opening.

HEARTH- The floor of a fire place, and the projection of noncombustible flooring material in front of the fireplace.

HIP ROOF- A room whose four sides slope to a common point or to ridge; has no gabled ends.

HOISTWAY- shaft for elevators and dumbwaiters.

HOLLOW METAL- break-formed sheet metal used for doors, windows and frames.

HVAC – Heating, Ventilating and Air Conditioning

IN KIND: The term "in kind" means of the same type, size, material, etc. as the existing item.

INDICATED: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, other paragraphs or schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.

INSTALL- The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."

INSTALLER: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application, and similar operations.

INSULATION- Any material used to slow down the transfer of heat.

JACK RAFTER- The diagonal sloping ridge rafter of a hip roof.

JALOUSIES- Adjustable glass louvers in doors or windows to regulate light and air or exclude rain.

JAMB- The side framing or finish of a doorway or window.

JOINT FILLER- material which fills the entire depth of a joint and in itself does not form a waterproof joint -- may be topped with sealant to provide water tightness.

JOIST- A horizontal closely spaced framing member supporting a floor or ceiling.

KERF- A narrow slot cut in to the face of a material such as wood or metal.

KEystone- The central topmost stone or brick of an arch.

KING POST- The vertical member at the center of a triangular truss.

KNEE- A brace placed diagonally at the center of a triangular truss.

LALLY COLUMN - A steel pipe column which is encased in concrete and another steel jacket on the outside to provide fire proofing.

LATH- Strips of wood (in older existing construction) or expanded metal used as base for plaster walls.

LATTICE- Any openwork panel of crossed strips, rods, or bars of wood or metal, used as a screen.

LEADER- archaic term -- use "down spout" instead.

LEED (Leadership in Energy and Environmental Design) Green Building Rating System — A voluntary, nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

LEED AP — A LEED Accredited Professional is one who has demonstrated a thorough understanding of green building practices and principles and familiarity with LEED requirements, resources, and processes.

LIEN- See "mechanic's lien".

LIGHT (OR "LITE")- A window pane or section of a window sash for a single pane of glass.

LIGHTWEIGHT CONCRETE- concrete which uses lightweight aggregate such as expanded shale or clay instead of crushed stone -- normally weighs about 110 pcf.

LIGHT WELL- A n open area within a building or in a subsoil space around a basement window, which provides light and air.

LINTEL- A piece of wood, stone, or steel placed horizontally across the top of door and window openings to support the wall above the opening.

LIQUIDATED DAMAGES — The cost a contractor is assessed if work is not completed by a pre-determined date. In theory, it is the cost the owner is being impacted by the project not being able to be occupied.

LITE- See "light".

LIVE LOAD- That part of the total load on structural members that is not a permanent part of the structure. it may be variable, as in the case of loads contributed by people, furniture, wind, snow or earthquake loads.

LOAD-BEARING PARTITION - A vertical structural interior wall supporting a floor or roof.

LOFT-

(1) An attic-like space below the roof of a house or barn;
(2) any of the upper stories of a warehouse or factory,
(3) A type of apartment unit which is usually built within an old factory and which provides the occupant with large, open, high-ceiling spaces. Usually only a bathroom is enclosed and plumbing is minimal. Interiors are finished by occupant.

LOUVER- A slatted ventilator pitched to keep out rain or snow.

LVL – “Laminated Veneer Lumber” a type of “engineered wood” used for structural headers, columns and beams – it is stronger, straighter, and more uniform than typical sawn lumber and is easy to handle and use, but won't warp, twist, bow, or shrink. LVL is created by using engineering technology to laminate several layers of lumber together.

MANSARD ROOF- A roof with two slopes or pitches on each of the four sides, the lower slopes steeper than the upper.

MASONRY- Brick, concrete block, or stone.

MECHANIC'S LIEN- A legal charge on property in favor of persons supplying labor or materials for a building for the value of labor or materials supplied by them. Clear title to the claim for the labor, materials

or professional services is settled through the "release of liens" which is accomplished through a form given to the owner by the contractor.

METAL- used to denote products fabricated from thin sheet steel.

METAL LATH- Expanded metal used for plaster lath -- do not use the terms "mesh" or "chicken wire."

METAL TRIM - edge trim for drywall -- do not use the term "casing bead" which is for plaster.

MEZZANINE- An intermediary floor having less than 1/3 of the area than the floor below.

MILL CONSTRUCTION- A type of "slow-burning" construction made of masonry walls, heavy timber framing, and planked or laminated wood floors.

MILLWORK- Doors, windows and door frames, mantels, panel work, stairways, and woodwork.

MITER- A joint formed by two pieces of material cut to meet at an angle.

MOLDING- A finishing piece to cover construction joists or edges, usually a long narrow strip of plain or curved wood; may be ornamented.

MONITOR- A raised rectangular and roofed structure on a roof having windows or louvers for ventilating or lighting the building.

MOP BASIN- Floor mounted sink for building maintenance purposes -- do not use terms "slop sink" or "service sink," which are wall-mounted sinks.

MORTAR- A bonding agent in masonry work, made of lime, sand, and cement mixed with water.

MUD- A common term for joist compound products.

MULLION- Vertical framing which divides windows into major sections.

MUNTIN- The vertical or horizontal bars which divide lights (panes of glass) in a window.

NEWEL- The vertical post around which the steps of a winding staircase turn; the post at the top or bottom of a staircase, supporting the handrail or a balustrade.

NOSING- The rounded projecting edge of a stair tread or landing.

OAKUM- A loose fiber from hemp or rope, used as a backing for caulking joints in cast iron drain piping.

OFFSET- A ledge formed by a difference in the thickness of a wall.

OMIT- to leave something out by intention.

ON CENTER (O.C.)- The distance from the center of one structural member to the center of another, term used for spacing studs, joists, rafters.

OPTION- term used in construction documents to indicate that contractor may use one of several products at his or her choice.

OSB – "Oriented Strand Board" – inexpensive wood panels made from wood chips and glue, with chips oriented in the long direction of the board – they come in 4'-0" x 8'-0" sheets usually ½" thick, but also other sizes, and are used for wall and roof sheathing.

PARAPET- An exterior low wall along the edge of a roof, balcony, ridge, or terrace.

PARGING- A coating of cement mortar (Portland cement, sand, and water mix), on a masonry wall, used to waterproof the outside surface of an exterior wall or masonry foundation.

PARQUET FLOOR- A hardwood floor laid in small rectangular or square patterns, not in long strips.

PARTY WALL- A wall built along the dividing line between adjoining buildings for their common use.

PATCH: The term "patch" means to remove any damaged or defective material within the area to be patched, and to replace it with new material, fitted in a workmanlike manner so as to provide a continuous plumb, level, and/or true to line surface, uninterrupted by flaws, defects, or blemishes.

PARTICLE BOARD - A wood and glue composite panel for sheathing, underlayment, subflooring, and substrate for veneers and plastic laminate for millwork.

PARTITION- A non-bearing wall which divides space and supports only its own weight.

PEOPLE MOVER — An automated transportation system that is used to move large quantities of people a short distance, usually within a major activity center such as an airport.

PENTHOUSE- A building on the roof of a building to enclose mechanical or elevator equipment; also, an apartment on the roof of a high-rise apartment.

PERFORMANCE BOND- An insurance document purchased by the contractor from a bidding company (a "surety") which guarantees that the work will be performed in accordance with the Contract Documents.

PERMEABILITY- The property of material to permit a fluid (or gas) to pass through it; in construction, commonly refers to water vapor permeability of a sheet material or assembly and is defined as Water Vapor Permeance per unit thickness.

PERMIT- A document issued by a local, state, county, or federal governmental authority having jurisdiction to authorize specific work on a building.

PIER- A column; a foundation type shaped like a column underground, created by drilling a hole and filling it with concrete.

PILASTER- Half-column attached to or projecting from a wall.

PILE- A timber, steel, or concrete pole which is driven into the ground to serve as support for the foundation.

PITCH- The slope or incline of a roof, expressed in inches of rise per foot of length, or by the ratio of the rise to the total roof span.

PLANK- A piece of unfinished structural lumber 2 to 4 inches thick and at least 8 inches wide.

PLASTER- A mixture of gypsum, sand, and water, used as a finished surface for walls and ceilings, applied over gypsum, metal or wood lath.

PLASTIC INSULATION- Generic term for polystyrene ("Styrofoam") or urethane insulation.

PLASTIC LAMINATE- Thin sheet material of plastic composition used for finishing of interior millwork - do not use the terms "Formica," or "Melamine."

PLATE- A horizontal wood framing member which provides bearing and anchorage for wall, floor, ceiling, and roof framing.

PLENUM- An enclosed chamber for horizontal distribution of ventilation air, such as the space between a suspended finished ceiling and the floor above.

PLINTH- A square block at the base of a column, pedestal, or door casing.

PLY- A term to denote the number of thickness or layers as "3-ply"; for roofing felt, veneers, etc.

PLYWOOD- A fabricated wood product constructed of three or more layers of veneer joined with glue, laid with grain or adjoining plies at right angles.

PORTALS- A door, gate, or entrance, especially one of imposing appearance.

POST- A vertical wood structural column.

PRESTRESSED CONCRETE- A method of giving tensile strength by stressing the reinforcing in the concrete before it sets, then releasing the tension after the concrete has hardened.

PRIMER- A first base coat of paint to seal the surface of the finished material and equalize suction differences.

PROJECT SITE: The term "Project Site" is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.

PROJECT MANUAL- The 8 1/2"x 11" paper size bound book of written documents prepared by the Architect for a Project, including the bidding requirements, Conditions of the Contract and technical Specifications, used by the Contractor in bidding & building the project.

PROPRIETARY PRODUCT- A product produced by only one manufacturer to his own design, and not available from competing manufactures.

PROSCENIUM- In a theater, the front area of the stage still visible to the audience when the curtain is lower; the curtain and the opening that surrounds it.

PROVIDE: The term "provide" means "to furnish and install, complete and ready for the intended use."

PUNCH LIST — A list of incomplete or unacceptable items, which ideally is compiled when the project is 99 percent complete. The contractor should perform its own punch list prior to the architect's review, however, it is the architect's list that generally is referred to as the punch list.

PURLIN- A structural roof framing member laid horizontally across the roof beams to support a roof deck.

PVC -- POLYVINYL CHLORIDE — The most common form of plastic, it is used in a range of products, including clothing, building materials and upholstery

QUANTITY SURVEY- Detailed analysis and listing of all items of material and equipment and quantities of each necessary to construct a Project.

QUARRY TILE- Thick type of ceramic tile which is composed of fired clays and shales used for floors and bases.

QUEEN POST- Either of two vertical members of a triangular truss, each being equidistant from the apex.

QUOIN- The external corner of a building; any of the large square stones by which the corner is marked.

RABBET (ALSO REBATE)- A longitudinal channel, groove, or recess cut out of the edge or face of a member to receive another member, or one to receive a frame inserted in a door or window opening; the recess into which glass is installed in a window sash.

RACKING- Lateral stress exerted on an assembly. See test Procedure ASTM E 72.

RAFTER- A closely spaced sloping framing member supporting a roof.

RAIL- The cross of horizontal piece of a door, window sash, or panel. The top horizontal member of a balustrade.

RAKE- A board or molding placed along the sloping sides of a frame gable to cover the ends of the siding.

RANDOM- Without uniformity of dimension or design; e.g., masonry wall with stones placed irregularly, not in a straight course.

REBUILD: The term "rebuild" means to reconstruct a portion or portions of the building completely and properly using new or salvaged materials acceptable to the Owner and Architect.

RECORD DRAWINGS- Sometimes called "as-built" drawings, these are normally modified from the construction documents to conform to all changes made during construction.

REFINISH- To put finish back into its original condition -- do not use the terms "refurbish," "rehabilitate," "remodel," "renew," or "renovate."

REGULATION: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

REINFORCEMENT- A system of steel rods or mesh cast into concrete for accepting stresses.

RELOCATE- To move an item from one location and install in another location.

REMODEL- use the term "alter" instead.

REPAIR: The term "repair" means to fix and restore a portion or portions of the building to a sound, acceptable state of operation and serviceability or appearance. Repairs will be expected to last approximately as long as a replacement.

REPLACE: The term "replace" means to remove an existing element or elements from the building and install a new element of like kind or a salvaged element acceptable to the Owner and Architect, completely and properly anchored to the substrate and surrounding materials; also the term can mean to provide a substitute or replacement for an item.

RESET: The term "Reset" means to remove an existing element or elements from the building and reinstall it completely and properly anchored to the substrate and surrounding materials.

RESILIENT BASE- wall base material -- use this term generically instead of "vinyl base," or "rubber base."

RESILIENT FLOORING- Either tile or sheet goods for flooring material made from vinyl or rubber.

RESILIENT TILE- Floor tile -- use this term generically instead of "vinyl composition tile," "vinyl tile" or "rubber tile."

RETAINING WALL- A wall built to keep a bank of earth from sliding.

RETENTION BASIN — An area that captures stormwater runoff and discharges it by means of infiltration or evaporation as opposed to directing it to some other body of water. Also commonly referred to as a detention basin.

RFI -- REQUEST FOR INFORMATION — Contractor-initiated query concerning plans and/or specifications.

RFP — REQUEST FOR PROPOSAL - Announcement, often by a government agency, of a willingness to consider proposals for the performance of a specified project or program component. RFPs often are issued when proposals for a specific research project are being sought.

RFQ — REQUEST FOR QUALIFICATIONS - Procurement tool routinely used by state and local governments and the private sector to select partners in major systems acquisitions, mainly those involving real estate development transactions. This differs from the traditional approaches in that it places greater emphasis on the actual qualifications of the potential contractor rather than how well the potential contractor responds to detailed project specifications and requirements.

RIDGE- The top horizontal edge or peak of a roof.

RIGID INSULATION- High density fiberglass or cellular glass insulation.

RIPARIAN HABITAT — Aquatic or terrestrial ecosystem associated with a body of water, such as a stream, lake or wetlands; or is dependent upon the existence of perennial, intermittent or ephemeral surface or subsurface water drainage. Riparian areas usually are characterized by dense vegetation and abundance and diversity of wildlife.

RISER- The vertical part of a stair step; a vertical HVAC, plumbing, or electrical run or extension.

ROLL ROOFING- A roofing material made of compressed fibers saturated with asphalt, and coated with small gravel supplied in rolls.

ROOF HATCH- use this term instead of the archaic term "scuttle."

ROOFING FELT- See "felt paper".

RUNNER CHANNEL- Cold rolled steel channel 1 2" deep used for suspended ceiling framing.

SADDLE- A roof crossing between two adjoining roofs to the ends of the valley.

SANITARY SEWER- A sewer designed to carry sewage from bathroom, toilet room, and kitchen waste, not usually storm water.

SASH- The framework which holds the glass in a window or door.

SAWTOOTH ROOF- A roof composed of a series of single-pitch roofs whose shorter or vertical side has windows for light and air.

SCORE- To cut a surface of a material part way through with a sharp blade before braking; glass and ceramic tile are cut using this method.

SCRATCH COAT- The first coat of plaster applied to a wall, scratched or scored to provide a bond for the second coat.

SCREED- (1) A metal or wood strip placed at intervals on a wall or floor to gauge thickness of plaster or concrete.

(2) To level, as in pulling a straight edge across a concrete slab within the formwork.

SCRIBE- To score or mark along a cutting line.

SCUTTLE- A framed opening in a ceiling or roof, fitted with a lid or a cover.

SEAL COAT- A fine thin coating of asphalt paving with bituminous material to provide water resistance.

SEAL- (1) An embossing device or stamp used by a design professional on his Drawings and Specifications as evidence of his registration in the state where the Work is to be preformed.

(2) To provide sealant at a joint to make it water tight.

SEALANT- A semi-liquid or "elastomeric" water proofing material placed in a joint between materials to create a water tight joint or to fill small openings in wall or ceiling systems to prevent leakage of sound or to create a finished appearance and seal between dissimilar materials.

SEALER- A base coating of paint to seal and equalize suction differences and prevent absorption of subsequent coats.

SEAMLESS FLOORING- Sheet flooring material with joints field welded or sealed.

SECTION (DRAWING)- A drawing of a surface revealed by an imaginary plane cut through the project, or portion thereof, in such a manner as to show the composition of the surface as it would appear if the part intervening between the cut plane and the eye of the observer were removed.

SECTION (MATERIAL)- Sometimes loosely used to describe a rolled steel shape, such as "W section" -- use the term "W member" instead.

SELF-EDGE- Plastic laminate edging in which the horizontal surface overlaps the vertical edge surface and is cut off flush with the vertical surface -- this will expose a dark brown edge of the plastic laminate material and will be visible.

SEPTIC TANK- A covered tank in which waste matter is decomposed by natural bacterial action, draining into a drainage field.

SERVICE SINK- Wall-mounted sink for building maintenance purposes -- do not use the terms "slop sink" or "mop basin."

SEWER- An underground system of pipes which carry off waste matter or storm water to a sewage treatment plant or to an area of natural drainage.

SHAKE- A shingle formed by splitting a short log into a number of tapered sections.

SHEATHING- The first covering of boards, plywood, or wallboard placed over exterior wall studding or roof rafters -- not "sheeting."

SHEET FLOORING- Resilient linoleum, vinyl or rubber flooring installed wall to wall.

SHEET METAL- Usually thin steel sheets.

SHEET PILING- Planking or steel plates driven close together vertically, to form a temporary wall around an excavation.

SHIM- To build up low areas; to level or adjust height.

SHINGLE- A roofing type using tapered pieces of cedar or asphalt composition pieces nailed one overlapping the other.

SHOP DRAWINGS- Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the Work will be fabricated and/or installed.

SHORING- Structural bracing used as temporary support for a building during construction.

SICK BUILDING SYNDROME (SBS) — Building whose occupants experience acute health and/or comfort effects that appear to be linked to time spent therein, but where no specific illness or cause can be identified.

SILL- A horizontal piece forming the bottom frame of a door or window.

SITE- Geographical location of the Project, usually defined by legal boundary lines.

SLEEPER- A strip of wood anchored to a concrete floor or nailed to subflooring and to which the finishes floor is nailed.

SLUMP- A concrete test method to evaluate water/cement ratio consistency.

SOFFIT- The undersurface of a building member, as of a cornice, arch or stairway.

SOFTWOOD- Type of lumber from conifer evergreen trees, such as pine, fir, larch, cedar, and redwood.

SOIL- Use this term instead of "earth" or "dirt."

SPAN- The horizontal clear distance between supports, as those of a bridge, or between two piers.

SPANDREL BEAM- A beam which lies in the same vertical plane as the exterior wall.

SPANDREL- A portion of an exterior wall between a window on one floor and a window on the floor above.

SPECIFICATIONS-

(1) A detailed description of requirements, composition and materials for a proposed building;
(2) Apart of the Contract Documents contained in the Project Manual consisting of written descriptions of a technical nature of materials, equipment construction systems, standards and workmanship. Under the Uniform System, the Specifications comprise sixteen Divisions.

SPRAYED FIREPROOFING- Mineral fiber composition applied to structural steel members by spraying with an applicator gun used to obtain a specific fire rating for the structure to comply with building code requirements.

SQUARE- (1) 100 Square feet of roofing surface;
(2) edges of an object which are at a right angle to each other.

STAGGER- To offset building members or fasteners in a horizontal or vertical plane in alternating sequence.

STAGING- A temporary scaffolding to support workers and materials during construction.

STANDARD- An approved criterion governing the quality of a construction material, operation, functional requirement, or method of assembly.

STICK BUILT- Constructed by means of building stud-by-stud and joist-by-joist in the field from raw materials.

STICK BUILDING- Light weight wood framed building -- type 5 construction by the BOCA/National Building Code.

STILE- The upright or vertical outside piece of a sash, door, or panel.

STOCK- Standard size raw building materials or standard equipment.

STONE- Granite, marble, limestone, slate used for fabricated interior or exterior finishes.

STORM SEWER- A sewer carrying only storm water (but never sanitary waste).

STORY (A CODE TERM)- A horizontal division of a building; that portion between one floor and the floor above.

STRETCHER- A brick laid lengthwise in a wall.

STRIKE- In stone setting or bricklaying, to finish a mortar joint with a stroke of the trowel, simultaneously removing extruding mortar and smoothing the surface of the mortar remaining in the joint; strike off.

STRINGER- The inclined structural framing member supporting the treads and risers of a stair.

STUCCO- Plaster made from Portland cement, sand, and water used as an exterior wall surface finish; usually applied over a galvanized metal lath or wood lath base.

STUD- A vertical wood or metal framing member to which sheathing and finished surfaces are nailed, as the supporting elements in walls and partitions.

SUB STRUCTURE- That part of a building structure below the ground.

SUBCONTRACTOR- A person or organization who has a direct Contract with a prime Contractor to perform a portion of the Work at the site.

SUBFLOOR- A floor laid on top of the floor joists, to which the finished floor is fastened.

SUBSOIL DRAIN- Also called a "footing drain". A perforated 4" diameter pipe which is installed on the outside of the footing surrounded by pea gravel, which allows storm water in the soil to drain into it and be carried off to the sewer system or to a sump pit inside the basement, and from there pumped out back to the gravel surface or into the sewer.

SUBSTANTIAL COMPLETION: The term "Substantial Completion" means the date on which the Architect issues a Certificate of Substantial Completion based on an inspection of the Work, by which it can be determined that the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for the use for which it is intended. A Certificate of Substantial Completion may be issued for each individual building as it is completed, if this is in the Owner's best interests.

SUPERSTRUCTURE- That part of a building structure above the foundation or ground level.

SUPPLIER- A person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

SURVEY- Boundary and/or topographic mapping of a site.

TACKBOARD- A bulletin board made of cork or other resilient tackable surface.

TERRA COTTA- A hard, brown-red fired, clay product, typically used as exterior ornament. Can be glazed, or unglazed.

TERRAZZO- A durable floor finish made of small chips of colored stone or marble, embedded in cement and polished in place to a high glaze.

TESTING LABORATORIES - A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

THERMAL BRIDGE- A thermally conducive area of an exterior enclosure which will allow heat to transfer from the interior of the building to the exterior at a greater rate than the other parts of the enclosure.

THERMAL BREAK- A separation between exterior and interior materials by an insulation material. Typically refers to a feature of a window wall system.

THRESHOLD- A strip of wood, stone, or metal placed beneath a door to cover a change in floor materials, to receive weather-stripping and, sometimes, an automatic door closer.

THRU- Short version of the word "Through" as used in drawings.

TOEBOARD- Raised protective edge (usually 4" high) at edges of landings, balconies, mezzanines, etc. where there is no wall or knee wall, but only a guard rail.

TOE SPACE- Recess at base of cabinets.

TONGUE AND GROOVE- A factory formed notch and mating projection on wood flooring or deck.

TOPSOIL- Soil used for planting trees, shrubs, ground cover, or grasses.

TRADES: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

TRUSS- Triangular structural framing members formed into a single plane for supporting loads over long spans, in wood or steel, or both.

TYPICAL- Means that the item referred to is repeated several times in similar circumstances and locations.

UNDERLAYMENT- A smooth, hard sheet material, such as hardboard, cement board, plywood, or particle board, placed over rougher substrates to achieve a surface suitable for application of finishes such as resilient flooring or ceramic tile.

UNDISTURBED EARTH- Soil which has not previously been excavated.

VAPOR RETARDER- A plastic sheet used to retard condensation in walls, floors, and ceilings, applied on the warm-in-winter side of the wall or ceiling structure or over the ground surface in a crawl space -- do not use the term "vapor barrier."

VERMICULITE- An inorganic mineral product that expands several times its initial volume when exposed to a high temperature (about 1000 degree F).

VITRIFIED TILE- A pipe made of clay, baked hard, then glazed so it is impervious to moisture; used particularly for underground drainage.

WAINSCOT- The lower part of an interior wall when its surface finish is different from that of the upper.

WAIVER OF LINEN- An instrument by which a person or organization who has or may have a right of mechanic's lien against the property of another relinquishes such right. Waivers of linen are provided to the owner by the general contractor and his sub-contractors & suppliers, at the time a pay request is submitted.

WALL- Vertical enclosure of a building or occupancy separation, usually load bearing.

WALL BEARING CONSTRUCTION- A structural system in which the floor and roof systems are carried directly by the masonry walls rather than by structural framing system.

WALLBOARD- A manufactured fibrous compressed material cut into sheets, used for sheathing (may be particle board, hardboard, or similar product).

WARM AIR SYSTEM- A heating system in which furnace-heated air moves to living space through a series of ducts, circulated by natural convection (gravity system) or by a fan blower in the ductwork (forced system) to registers in the floor, walls or ceilings.

WATERPROOFING- A procedure to make a material impervious to water or dampness, designed to resist a head of water (water pressure). Any of the material used to waterproof -- do not use the terms "roofing," "membrane," or "dampproofing."

WEATHERING STEEL- Steel designed to rust to a certain extent on its surface, then stop rusting -- Cor-Ten is one manufacturer's trade name for weathering steel.

WEATHERSTRIP- A thin strip of metal, felt, wood, etc., used to cover the joint between a door or window sash and the jamb, casing, or sill; to keep out air, dust, rain, etc.

WINDOW WELL- See "light well".

WOOD- Use the term for solid softwoods only, otherwise use the terms "hardwood," "plywood," or "particle board."

WROUGHT IRON- A soft, pure form of iron easily molded into bars and worked into ornamental shapes; widely used for decorative railings, gates and panels.

ZONING ORDINANCE- The control by a municipality of the use of land and buildings, the height and bulk of buildings, the density of population, the relation of a lot's building coverage to open space, the size and location of yards and setbacks, and the provision of any ancillary facilities such as parking. Zoning, established through the adoption of a municipal ordinance, is a principal instrument in implementing a master plan.

Glossary and Acronyms Used in BIM and Related Technology"

2D: Two dimensional (a flat drawing showing only length and width)

3D: Three dimensional (solid drawing showing length, width and height)

4D: 3D drawing plus time (scheduling) information

5D: 4D drawing plus cost information

AEC: Architecture, Engineering and Construction Industry

API: Application Programming Interface - a type of connectivity software that provides for data sharing across different platforms; this is an important feature when developing new or upgrading existing distributed systems. This technology is a way to achieve the total cross-platform consistency that is a goal of open systems.

Application: Software

ASP: Application Service Provider (former name for SaaS – see below)

B2B: Business to Business: electronic commerce transactions between businesses

BIM: Building Information Modeling

BIM Authoring Tools: Software applications including the following that are used for creating and revising the Building Information Model:

Autodesk, San Raphael, California: [Revit](#)

Bentley, Exton, Pennsylvania: [Architecture](#)

Graphisoft, Budapest, Hungary: [ArchiCAD](#)

Nemetschek, Munich Germany: [Allplan](#) and [Vectorworks](#)

BIM Audit and Analysis tools:

Energy analysis: [Ecotect](#)

Code compliance checking: [Solibri Model Checker](#)

Clash detection: [Navisworks Jetstream](#)

COTS: Commercial Off-the-Shelf software (such as Revit or AutoCAD)

Enterprise: A loosely formed grouping of companies established for a common purpose, such as designing or constructing a building

Extranet: a private network that uses Internet protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with suppliers, vendors, partners, customers or other businesses. An extranet can be viewed as part of a company's Intranet that is extended to users outside the company (e.g.: normally over the Internet).

IAI: International Alliance for Interoperability (www.iai-na.org) The Alliance is a global standards-setting organization representing widely diverse constituencies—from architects and engineers, to research scientists, to commercial building owners and contractors, to government officials and academia, to facility managers, and to software companies and building product manufacturers. Alliance members are committed to promoting effective means of exchanging information among all software platforms and applications serving the AEC+FM community by adopting a single Building Information Model (BIM). The National Institute for Buildings (NIBS) "buildingSMARTalliance" is the former North American Chapter of the IAI.

iDAM: Internet Digital Asset Management software

IFC: Industry Foundation ClassES: created by the International Alliance for Interoperability (IAI) (www.iai-na.org); specifications for AEC project information sharing through the project life cycle, globally, across disciplines and technical applications, published in the EXPRESS language for software development and in eXtensible Markup Language (ifcXML) for eCommerce and Internet purposes.

Intranet: a private computer network that uses Internet protocols, network connectivity to securely share part of an organization's information or operations with its employees.

IPD: Integrated Project Delivery

NBIMS: National Building Information Model Standards created under the control of NIBS's "buildingSMARTalliance"

NIBS: National Institute for Building Science (<http://www.nibs.org/>) ; a non-profit, non-governmental organization bringing together representatives of government, the professions, industry, labor and consumer interests to focus on the identification and resolution of problems and potential problems

that hamper the construction of safe, affordable structures for housing, commerce and industry throughout the United States; authorized by the U.S. Congress in the Housing and Community Development Act of 1974, Public Law 93-383. In establishing NIBS, Congress recognized the need for an organization that could serve as an interface between government and the private sector. The Institute's public interest mission is to: improve the building regulatory environment; facilitate the introduction of new and existing products and technology into the building process; and disseminate nationally recognized technical and regulatory information.

OCPM: Online Collaboration and Project Management (through an SaaS software such as Autodesk's "Constructware")

PIM: Project Information Management - similar to OCPM through software such as Newforma

Raster: In computer graphics, a raster graphics image or bitmap, is a data structure representing a generally rectangular grid of pixels, or points of color, viewable via a monitor, paper, or other display medium. Raster images are stored in image files with varying formats

Raster Graphics File Formats:

BMP: also called "bitmap" or device-Independent bitmap (DIB); an image file format; not compressed; no animation; Microsoft developed it and uses it for Windows.

GIF: "Graphics Interchange Format" is a bitmapped image file format with very good compression format for image files, but supports a maximum of 256 colors, so is not used for pictures; can be used for publishing on the web; supports animation.

JPG: also called JPEG; "Joint Photographic Experts Group" bitmapped image file format; is widely used for photographs; supports 16.7 million colors; no animation; .

MP3: digital coding and compression standard for audio and video files; from MPEG: "Moving Picture Experts Group" there are MPEG-1 (or MP1) and MP2 earlier file formats, also.

PNG: "Portable Network Graphics" bitmapped image file format with very good compression for image files. It was created as a free substitute format for the GIF format which originally required payment of royalty fees to the inventors of the compression format; can be used for publishing on the web; does not support animation.

TGA: Truevision Graphics Adapter format; (TARGA is an acronym for Truevision Advanced Raster Graphics Adapter) raster graphics File Format developed by Truevision, an early manufacturer of graphics cards for computers; video games still use this format.

TIF: also called TIFF; "Tagged Image File Format;" developed in mid 80s for desktop scanner format; standard format for high resolution photographs.

SaaS: Software as a Service: a web based software application accessible via the Internet; customers pay to use the software on demand but do not own it; it is used for transfer of information or program management on a design and/or construction project, share information, drawings and images; example: NewForma (www.newforma.com)

SMS: Short Message Service (text messaging) a means of sending short messages to and from mobile phones.

NCS: National Cad Standard from the NIBS buildingSMARTalliance

UDS: Uniform Drawing System - the UDS was created in 1998 by the Construction Specifications Institute (CSI), in conjunction with the American Institute of Architects (AIA), in a effort to bring the same benefits of standardization to the drawing side of the construction documentation that the CSI MasterFormat has brought to specifications. It is now a part of the NIBS buildingSMARTalliance "National CAD Standard" (NCS) available at <http://www.buildingsmartalliance.org/ncs/>

Tekla: Finnish software company that created the industry standard BIM program for steel and precast concrete structural design and fabrication called "Tekla Structures."

END OF TRITON COLLEGE BIM STANDARDS MANUAL