

# MODEL SET UP

## A TUTORIAL

IN VECTORWORKS ARCHITECT



---

Written for Vectorworks Architect 2017

# TABLE OF CONTENTS

---

## **INTRODUCTION**

### **PART ONE – Stories, Layers & Levels defined**

Overview

Stories

Layers

Levels

Default Story Levels

### **PART TWO – Set-Up Exercise**

Create Levels

Create Stories

### **PART THREE – Understanding Wall Styles**

Wall Style Types

Unbounded Wall Style

Layer Bound Wall Style

Level Bound Wall Style

How Wall Styles Work

### **PART FOUR – The Wall/Slab Interface**

Fully Automated Wall Style

Slab Styles

## **SUMMARY**

# INTRODUCTION

---

This tutorial outlines the interrelationship between levels, layers, and stories as well as examines creating and editing both wall styles and slab styles leading to expected results in your building information model.

A number of example files are included that describe and let you test relevant concepts. Several variations of a “Model Set Up Worksheet” that can be used to gather required information to be used in your project files are also included.

Consult the Vectorworks Help system for detailed information on tools and commands.

## PART ONE

### Overview

Levels, layers, and stories are the three organizational elements in Vectorworks that regulate the elevation of all 3D objects and ensure that a building information model closely represents how an actual building is constructed. In addition, these elements provide the designer with superior change management opportunities as well as aiding in the export of certain file types. In Vectorworks, objects are drawn on a layer and that layer is placed in a story. Additionally, levels provide automated control over the height of objects. The number of levels, layers, and stories is virtually unlimited and will vary from project to project.

### Stories

Think of stories (Fig. 1) as containers for certain layers and *all* levels. Typically, stories are set up to coincide with the floor-to-floor relationship of a building. The ground floor (first floor in the USA), is usually set at elevation "0". This can be thought of as the "project zero" as all subsequent story heights will be taken from it – positive as you go up and negative as you go down. The "break" where one story ends and another begins is often set at the top of the structural system, either the framing, the slab or the floor sheathing. Story information

CANNOT be copied and pasted into a another file. However, story information *can* be included in a template file (.sta)

#### Quick Tip:

Level + Layer – indicated by a small icon representing a stack of paper followed by the level name and its elevation followed by the layer name

Level – indicated by the level name plus an elevation in brackets (the elevation is relative to the story the level is contained in "Local Zero"). These are sometimes referred to as "layerless" levels

Story – container for levels and layers. Height is indicated by the blue benchmark based on a "Project Zero"

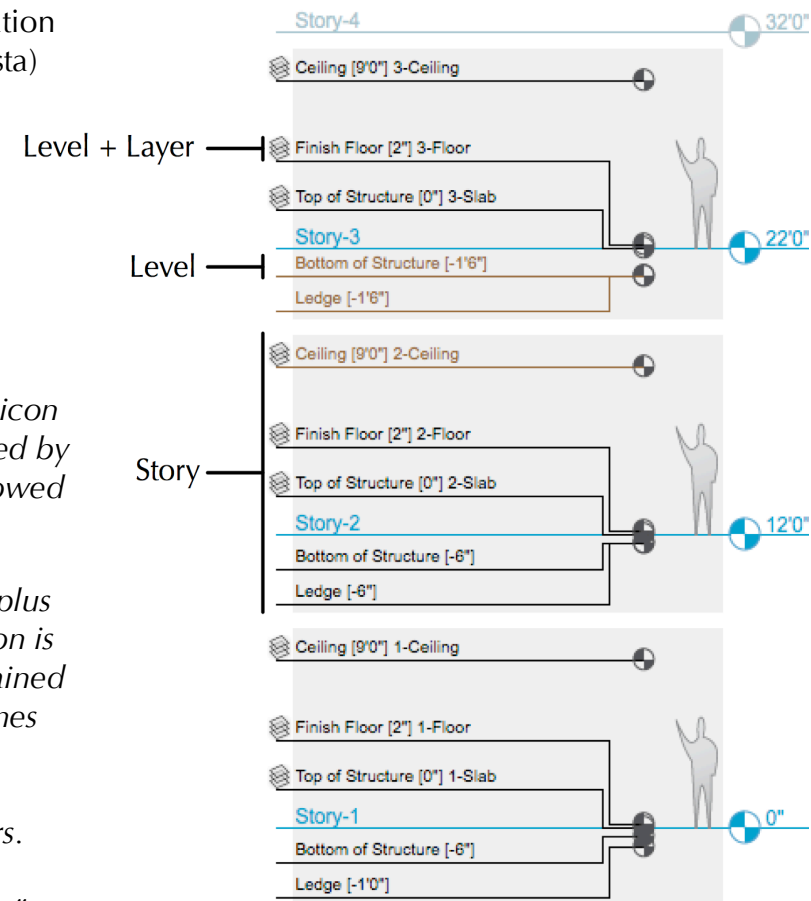


Fig. 1 Story Set-Up graphic

---

## Layers

Vectorworks has two types of layers: design layers and sheet layers. Sheet layers are for presentation and printing and are not relevant to this discussion. Design layers are a working space where all modeling and selected drafting is done. Notes, dimensions, etc. *can* be placed in either design layers or in the Annotation space of a sheet layer but that is a topic for another day.

When working on a layer, an object's height in the Object Info palette will be expressed relative to the bottom of the layer. For example, an object that's placed three feet above the floor will show as three feet high (as expected) regardless of where it is in the building. This height can be considered as being taken from the "local zero" or "layer elevation." Consequently, if that same object is measured from the ground or the "project zero," the height can be very different. For example, if the object is on the fifth floor, the height of the object will be fifty-one feet off the ground ("project zero") or one foot off the floor on the fifth floor ("local zero") of a layer that is fifty feet off the ground.

Layers can be either *story layers* where

they are placed in a story (equipping them with all the automated features described in the Stories and Levels sections) or just plain layers. An example of a non-story layer might be the column reference grid in a commercial project that will appear in more than one plan view of a multi-story building.

Additionally, when working in a Project Sharing environment, it may be necessary to create additional layers thus allowing multiple users to place objects within the model while maintaining visual access to the entire project.

## Levels (Story Levels)

Story Levels, or simply levels, define a horizontal plane in space letting you constrain or “bind” the top and bottom of certain elements at a given elevation. For example, the bottom of a wall can be bound to the slab level, and the top of the wall can be bound to a level at the underside of the floor structure above, closely approximating how you actually build a wall in the field. Additionally, a change in the floor-to-floor height of a story will cause these “level aware” objects to “stretch” and respond accordingly. In fact, *individual* wall components can be bound to levels letting them respond independently of each other. Therefore, in some situations, it’s possible to have *one* wall style accommodate several variations in building construction. Levels can be associated with a layer or left “layerless” but are *always* placed in a story.

Here are some “rules” when creating and editing levels:

### CREATING

- You CAN create multiple levels with the same name (but they must have different elevations).
- You CANNOT use a level with the

same name twice in the same story.

- A level CAN and should be used to control the elevation of recurring elements. For example, the Finish Floor might occur at the same elevation on each story.
- Levels CAN be created “on the fly.” For example, if you’re creating a story and see the need for a level that will help control the heights of all the bulkheads, you can create that level from within the story set-up pane. (Double click the story or choose Edit, choose the “New Level” button, then create the new Level.) This new level will ONLY appear in the list of level types for *that* story.

### EDITING

The steps for editing levels may appear a bit confusing at first. For example, when you first attempt to edit the list of entries in the “Default Story Levels” dialog, you CAN have multiple levels with the same layer associated with them (because you haven’t **created** a layer yet, you’ve really just made a list of possibilities).

HOWEVER, once you’ve created a story (that has a **layer** in it), that specific layer

you associated with the level of a given elevation is now “tied up.”

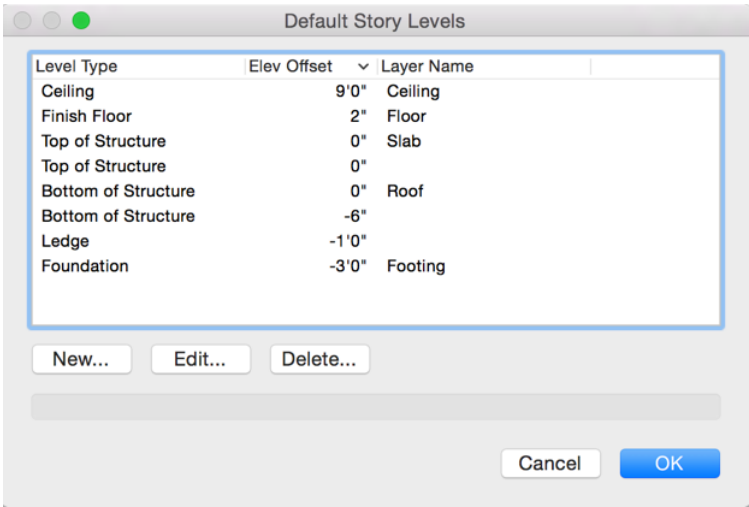
There is a strong argument for including a LAYER with any “significant” level. For example, a “significant” level might be a ceiling. Chances are, you’ll need to place elements like lighting, diffusers, smoke detectors, etc. at that elevation. By having created the layer, these items can be directly placed in your model and will be positioned at the prescribed elevation.

Conversely, a scenario may occur where you may choose to create just a level, with no layer, such as a brick ledge. You will never actually place anything there; you’ll only use the level to constrain a wall component, or other “level aware” object, at that elevation.

**Default Story Levels**

Vectorworks ships with a number of pre-configured level types that comprise what is sometimes referred to as the “List of Possibilities” as this is the list you will choose from when including levels and layers in your stories. This is also the list you will choose from when making bounding decisions in your wall styles – more on that later. This list is accessed by going to the **Stories** tab in the

Organization Palette and in the lower right, clicking on the “Default Story Levels” button. This will be further described in Part Two. (See Fig. 2)



Fig, 2 Default Story Levels “List of Possibilities”

## PART TWO

### Set-Up Exercise

In this segment, we'll learn how to create levels, layers and stories in order to properly set up a model. We'll use the following workflow as a guide:

- Create the required default level types, including layers
- Create several stories
- Edit a Level
- Add a level "on the fly"

### Create Levels

(Also refer to Model Set-up Worksheets at the end of this tutorial)

Step 1 Open a new file (**File > New**). Select "Create blank document" from the dialog box. Set the drawing scale to 1/4" and choose "All Layers."

Step 2 In this step, we'll investigate the DEFAULT levels. Open the Organization palette (**Tools > Organization**) and choose the **Stories** tab. Choose the **Default Story Levels** button. As you can see, some default information has been created (see Fig. 2). Just to clarify, this information is the *default* information and *can* be altered and saved in a template file.

Notice that in the *Level Type* column,

there are some duplicates. However, reading across, you'll see that they are not exact duplicates - some levels have a layer associated with them and some don't. This is by design. As mentioned in part one, you **DO NOT** have to have a level associated with a layer, and you **CAN** have levels with the **SAME NAME** but with **DIFFERENT** elevations associated with them.

Recall from the discussion in part one that the elevation of a level is *relative to the story* it is associated with. Also, understand that whatever you name the **LEVEL**, that name will appear as a choice in the drop-down menu when it comes time to creating bounding conditions for a wall component. This will be explained further when we create a Wall Style in the third part.

Step 3 In this step, we'll start to modify the levels, making them project specific. To create a new level, click the **NEW** button.

The *New Default Story Level* dialog lets you either create a new level type or select from the list of defaults. (Fig. 3)

We'll select from the list – choose **Ledge**.

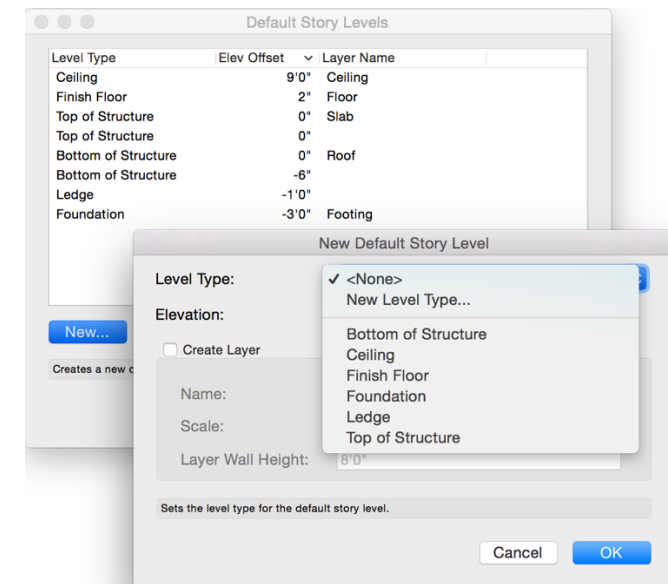


Fig. 3 New Default Story Level

Think of the level called “Ledge” as a brick ledge which is often times set at a lower elevation than the slab or floor system. If you were using wood siding, both the siding and the sheathing would “run long” to cover up the edge or side of the floor system. This is the intent for the level called “Ledge” – to act as that horizontal datum. (Fig. 4)

Type in a value in the *Elevation* field, in this case MINUS 6 inches. Notice we are choosing NOT to create a layer. The reason, as explained above, is that we need a horizontal plane or datum at a set elevation that we can instruct certain elements to “bind” or constrain themselves to vertically. However, there won’t actually be anything drawn there so a layer isn’t necessary.

Step 4 Creating a **new** Level Type – the process is similar.

From the Level Type drop-down, choose New Level Type, then give it a name and an elevation. (Fig. 5)

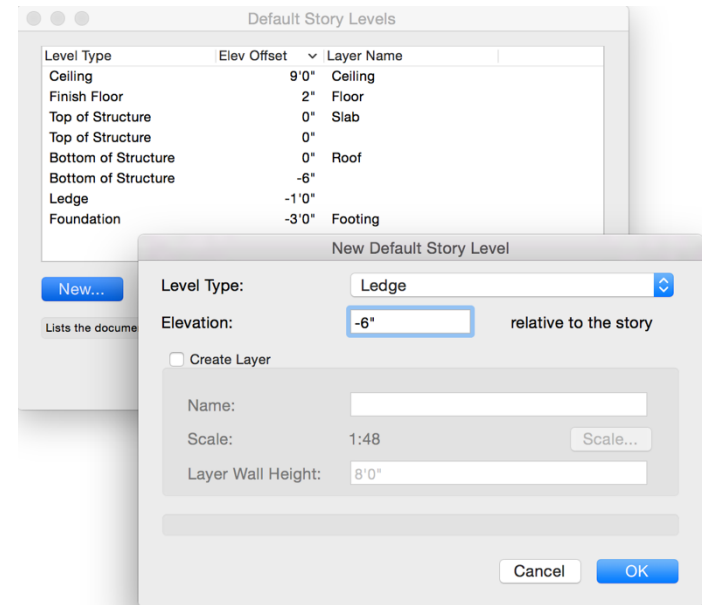


Fig. 4 Create a Level called “Ledge”

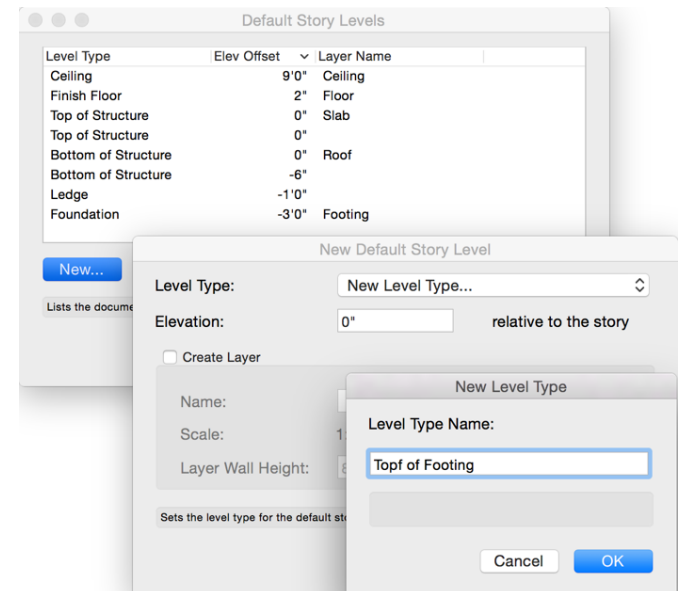


Fig. 5 Create a new level type

## Create Stories (Example File 1)

Step 1 In this step, we'll create several stories. Open the Organization palette (**Tools > Organization**) and choose the **Stories** tab. (Fig. 6)

Step 2 Choose **New** in the lower left side of the Organization Palette. In the **New Story** dialog we'll make some choices as to which levels and the associated layers will be included in this story. (*Do you recognize this list as the Default Story Levels?*) (Fig. 7)

- Choose a Name: – the default usually works fine (Story-1)
- Story Elevation: – this usually coincides with the Top of Slab for each story of the building. For the ground (first) floor, "0" is correct
- Layer Name – you can append the layer name with either a prefix or suffix. The default is shown. Try changing from prefix to suffix to see which you like. The dialog box is interactive and shows your changes.
- Create the following levels in this story: - this is where we will pick from the "list of possibilities" which, if you recall, is the Default Story Levels list that we created earlier.
- Place checkmarks beside the levels and the levels with layers

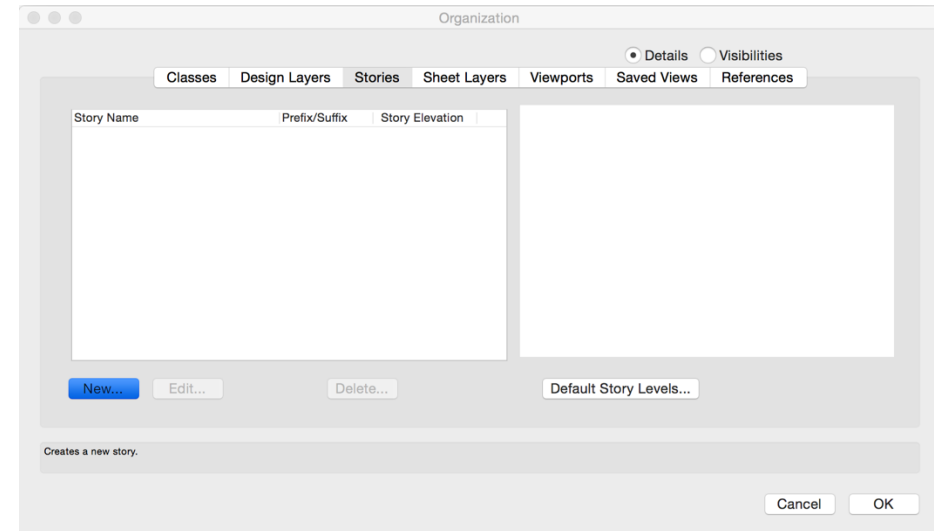


Fig. 6 Stories tab of Organization Palette

- Notice how you can only select one level type (per the "rules")
- If this were a real project, we'd need to be careful as to which "Ledge" to pick (same with the "Ceiling")

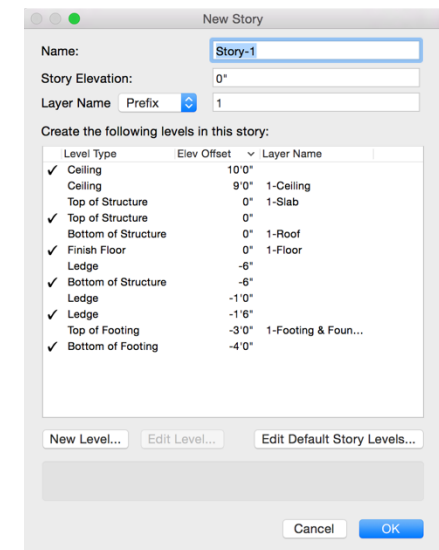


Fig. 7 Include levels and layers in story

Step 3 Click OK to accept the selections. The graphic on the right in the Organization dialog will populate reflecting the choices. (Fig. 8)

Subsequent stories are created in the same manner:

- choose **New** (Org palette lower left)
- Vectorworks will then “guess” at the Story Elevation – make changes to suite
- Add Levels & Layers

(Refer to Fig. 7)

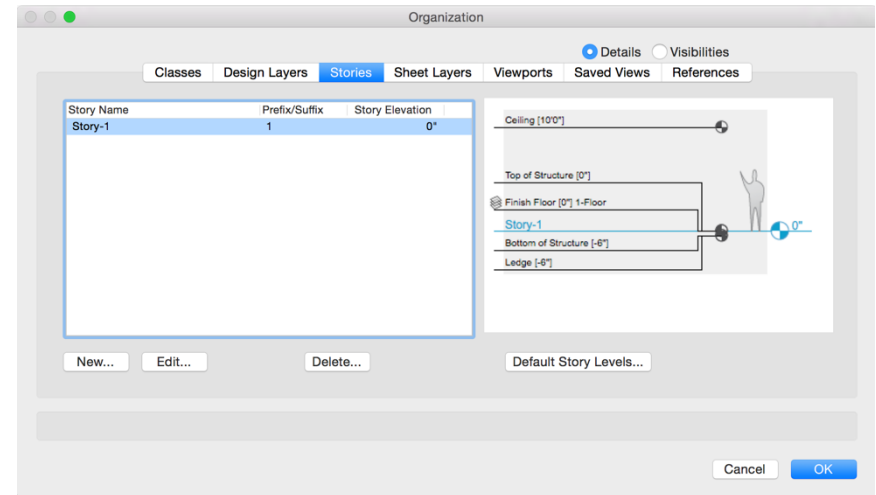


Fig. 8 Organization dialog reflecting selected levels and layers

## PART THREE

### Understanding Wall Styles

This segment focuses on why wall styles are created and how they can be crafted to respond to changes in height. Wall Styles let the designer create and save a digital representation of the construction of a given wall type as a resource within Vectorworks. Since the wall style is saved as a resource, it can be shared. Copies can be created and modified to meet specific conditions of a project. Wall styles rely on either a “hard coded” offset that informs the program “how far” to extend a component relative to a fixed height (in the first two wall style types outlined below) OR a more automated method using levels (in the level-bound wall style outlined below). Additionally, to take advantage of the power built into wall styles, it is essential to understand how they interface with levels, layers and stories.

There are three types of wall styles offering various levels of automation that work in conjunction with a method for “linking” them with slabs. The wall/slab interface will be examined more closely in a later section. Bear in mind, when Stories are used, all three wall style types may be used simultaneously in a project.

The most straightforward wall style type is the “Unbounded” type; the most automated is the “Fully Level Bound” type. Ultimately, you’ll find there are tradeoffs...

The most straightforward wall style type is the “Unbounded” type; the most automated is the “Fully Level

#### **Unbounded Wall Style** (Layer Elevation/ Layer Wall Height)

- Does NOT require Stories
- Component Bounding is set “Relative to Wall”
- All “Default Story Levels” are not used and can be deleted \*\*
- Uses “Wall Ht.” in Design Layers to establish heights
- Uses Layer Elevation/Layer Wall Height for Bounding of top and bottom
- Uses Offsets to establish offset heights for wall components
- Height of a wall can be set on a “per wall” basis in OIP
- Changes in elevation of Layers must be followed through on a “per layer” basis

---

### **Layer Bound Wall Style** (Stories with Layers/Levels)

- Requires the use of Stories
- Component Bounding is set “Relative to Wall”
- All levels are associated with a Layer
- Uses Offsets to establish offset heights for wall components
- Height of a wall can be set on a “per wall” basis in OIP
- Changes in elevation are accomplished via the Story dialog

### **Level Bound Wall Style** (Stories with “layerless” Levels)

- Requires the use of Stories
- Component Bounding is set “Relative to Story”
- Uses Levels to establish offset heights for wall components
- Height of a wall CANNOT be set on a “per wall” basis and is NOT available in OIP
- Changes in elevation are accomplished via the Story dialog

An exercise showing the automation when using level bound walls:

- Open Example File 2
- Tools > Organization > Stories
- Double-click on Story 3
- In the Edit Story dialog, change

Story Elevation to 30’, click OK

- In the Change Story Elevation dialog choose “Move this Story and all Stories above it”, click OK
- Click OK in the Organization palette

### HOW WALL STYLES WORK

Let’s look at the various parts of a wall style and the reasoning for their set up.

In the Resource Manager, be sure you have **Example File 2** selected as the active file.

- Select the wall style **Level Bound Wall Style**
- Right-click and choose **Edit**

The Edit Wall Style dialog will appear. (Fig. 9)

Name: give it a meaningful name as discussed above

Wall Type: Standard Wall has been selected, Curtain walls use this same interface

(Fig. 9) Look at the four tabs across the top – Definition, Insertion Options, Textures and Data. The **Insertion Options** tab is where the options for the **Container Class** are set and should be considered first. The graphic located just under the four tabs is also a part of the set-up for the Container Class.

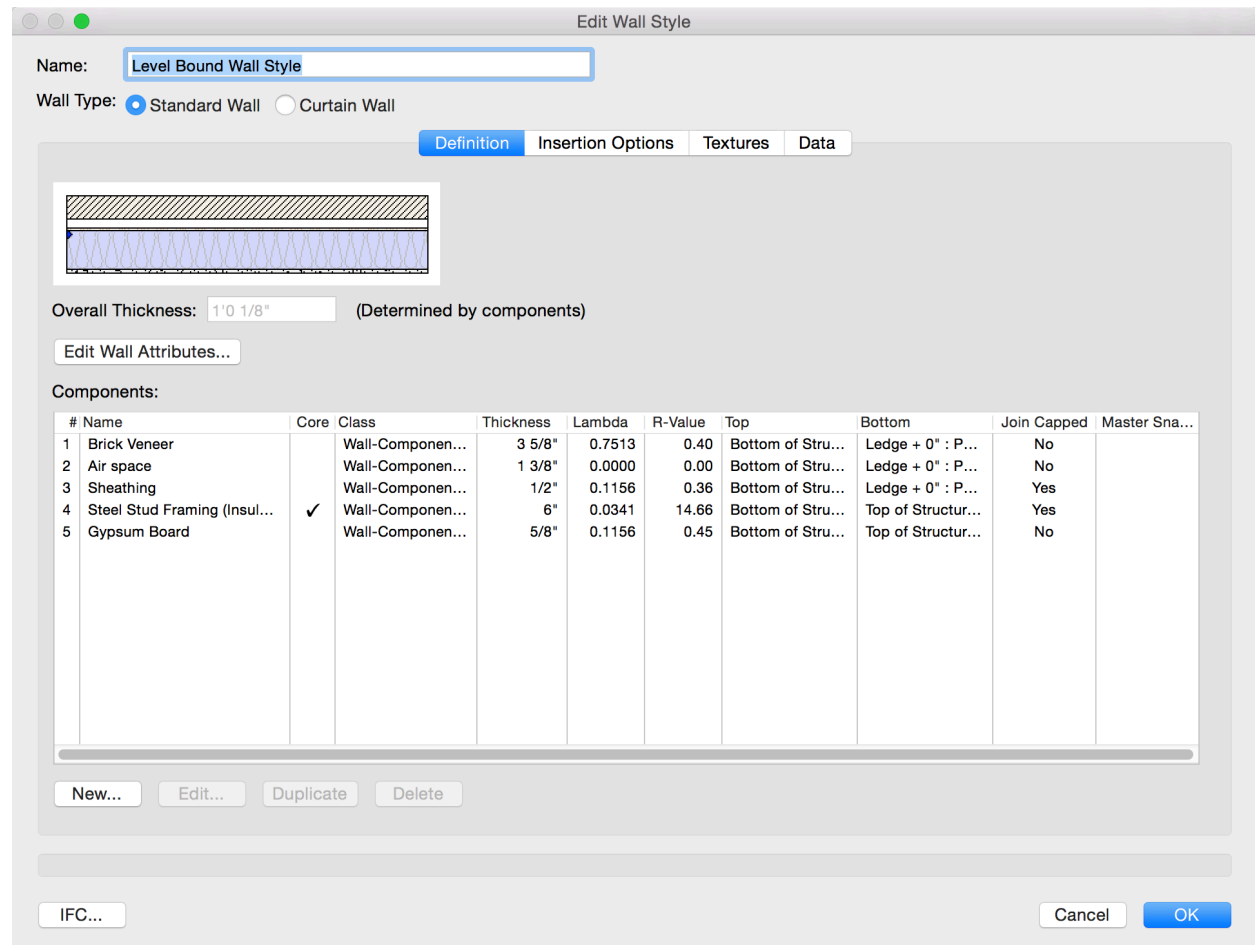


Fig. 9 Edit Wall Style dialog

Choose the Insertion Options tab to open the dialog. (Fig. 10) Notice the **Top Bound** and **Bottom Bound** drop-down options. These bounding options let you decide where the top and bottom of the container class of a wall style will be located in elevation relative to the layer it's drawn on, the story it's placed in and the level it's bound to.

In this example, the **Bottom Bound** is set to *Top of Structure*. (The selections in the drop-down come from the Default Level types or "list of possibilities" we discussed in part one). This sets the insertion point for the bottom of the wall positioning it so that it bears on the top of the floor system exactly how it is built in the field. The Bottom Bound condition also sets the insertion point for doors that are placed in a wall, automatically locating them properly such that their sill will also rest on the top of the floor system.

The **Top Bound** is set to *Bottom of Structure (Story Above)*. This lets the top of the wall run to the underside of the floor system above. The top and bottom **Offset** are set at "0" as they are not needed for this wall style. The **Class** is set to *Wall-Exterior*. This defines the container class for the wall and all its components. The remaining field entries define properties like "R-values" that are important but are not relevant to this discussion. Click on the **Definition** tab to return to the Edit Wall Style dialog.

The screenshot shows the 'Edit Wall Style' dialog box with the 'Insertion Options' tab selected. The 'Name' field is 'Level Bound Wall Style'. The 'Wall Type' is 'Standard Wall'. The 'Height' section has 'Height' set to 'Determined by bounds', 'Top Bound' set to 'Bottom of Structure [Story Above]', 'Top Offset' set to '0"', 'Bottom Bound' set to 'Top of Structure', and 'Bottom Offset' set to '0"'. The 'Caps' are set to 'Both' and the 'Class' is 'Wall-Exterior'. The 'Curtain Wall Cut Plane' is '4'0"'. The 'Control Offset' is '0"'. The 'Energos' section has 'Include in Calculations' checked, 'Object Boundary Type' set to 'Exterior Veneer Wall', and 'Calculated R-Value' of '17.35 sq ft F h/Btu'. There is an 'Advanced...' button next to the R-value. The 'Manual R-Value' is '0'. At the bottom, there is a note: 'The default height of the wall. If the top bound and bottom bound are different, the height cannot be determined until the wall is created.' and buttons for 'IFC...', 'Cancel', and 'OK'.

Fig. 10 Insertion Options dialog

The button **Edit Wall Attributes** in the Edit Wall Style dialog lets you access the dialog where the graphic attributes for the container class are chosen. (Fig. 11)

As shown in the figure below (Fig. 12) in the top portion of the dialog, it is recommended that all of the attributes be set to “Class Style.”

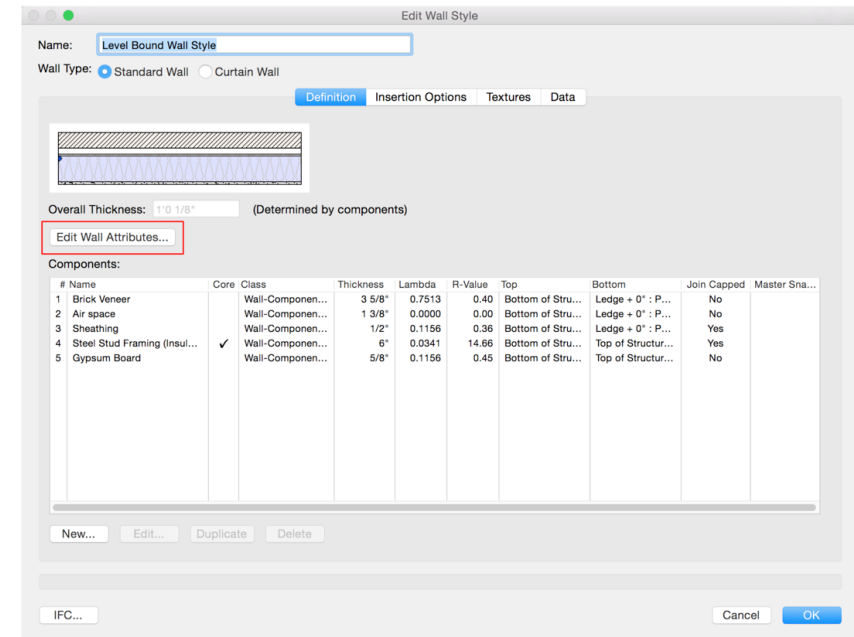


Fig. 11 Edit Wall Attributes

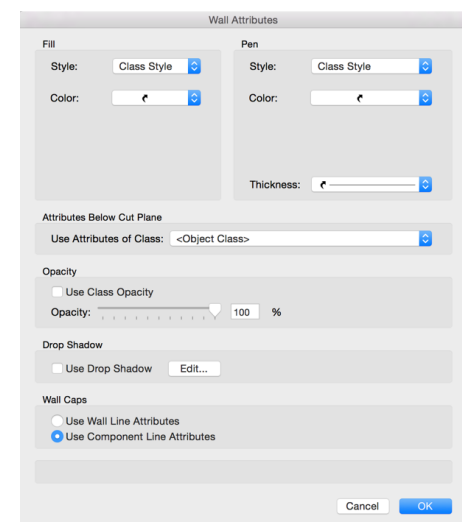


Fig. 12 Wall Attributes

Now let’s look at the lower portion of the Edit Wall Style dialog. The **Definitions** tab lets you define and edit components within the wall style. (Fig. 13) We’ll be looking at most of these entries in more detail when we look at an individual component. However, the two columns that are selectable at this level are the first column “#” that lets you reposition components by moving them up and down in the list. Typically wall styles are set up so that the *outer* component is at the *top* of the list. The third column, “Core” lets you select which component will be the structural component of the wall style but also, more importantly, sets up the relationship between the wall style and a slab style (floor system). This will be discussed later in the Wall/Slab Interface section.

Now let’s look at an individual component. In fact, we’ll look at two in order to compare and contrast the set-up of the bounding conditions.

Double-click on (or choose Edit) “Steel Stud Framing (Insulated)” to open the Wall Component Settings dialog for this component. (Fig. 14)

Components:

#	Name	Core	Class	Thickness	Lambda	R-Value	Top	Bottom	Join Capped	Mast
1	Brick Veneer		Wall-Componen...	3 5/8"	0.7513	0.40	Bottom of Stru...	Ledge + 0" : P...	No	
2	Air space		Wall-Componen...	1 3/8"	0.0000	0.00	Bottom of Stru...	Ledge + 0" : P...	No	
3	Sheathing		Wall-Componen...	1/2"	0.1156	0.36	Bottom of Stru...	Ledge + 0" : P...	Yes	
4	Steel Stud Framing (Insul...	✓	Wall-Componen...	6"	0.0341	14.66	Bottom of Stru...	Top of Structur...	Yes	
5	Gypsum Board		Wall-Componen...	5/8"	0.1156	0.45	Bottom of Stru...	Top of Structur...	No	

New... Edit... Duplicate Delete

Fig. 13 List of Wall Components

This component (the framing in the wall) will bear ON the slab. (you can see this in section in one of the Model Set-up Worksheets, “Commercial – concrete/steel”)

Let’s look at the **Component Top** pane. There are two options – *Relative to Wall* and *Relative to Story*. *Relative to Story* lets you choose a level type from the drop-down (this is also the Default Level Types or “list of possibilities” we looked at in part one). The current selection is set to “Bottom of Structure (Story Above).” This lets the top of the wall run to the underside of the floor system above. If you choose *Relative to Wall*, the component will respond in the same manner as the container class (Insertion Options) which is set to the same bounding condition - “Bottom of Structure (Story Above).”

The **Component Bottom** pane includes the same two choices – *Relative to Wall* and *Relative to Story*. For this particular component, either choice will work as we want the component to bear on the top of the structure (the same place the container class’s component is set to). Choosing *Relative to Story* and setting the bounding to “Top of Structure” serves to differentiate this component’s bottom bounding condition from the one discussed next. However, to be clear, either choice will result in a properly positioned wall.

The remaining selections in the panes to the right define the graphic attributes of the component and are all set to “Class Style.”

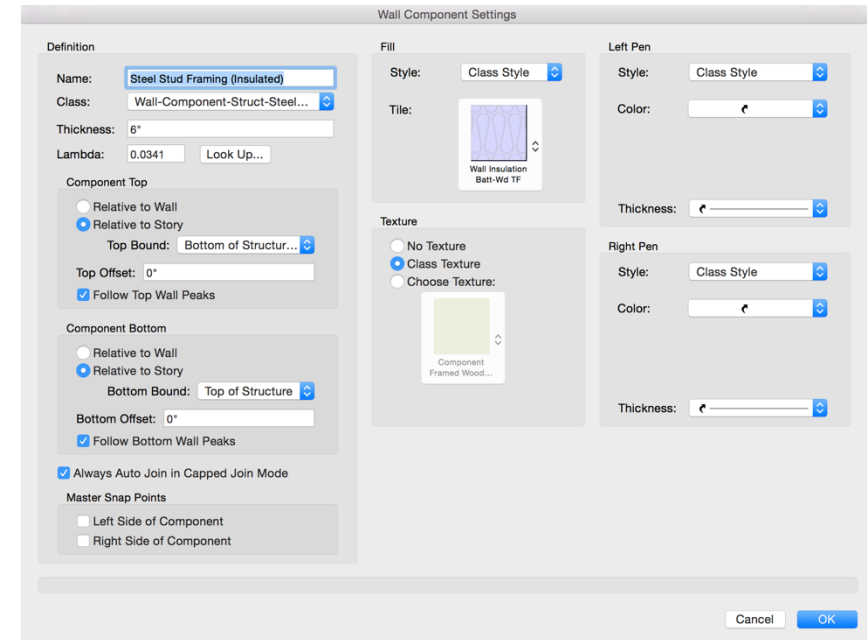


Fig. 14 Wall Component Settings for Steel Stud component

Now let's look at the settings for the Brick Veneer component. (Fig. 15) To get things to work out correctly, we need to select *Relative to Story* and the proper bounding condition, particularly for the bottom bounding. Can you guess why? Let's have a closer look.

Once again, it may help to look at the Model Set-up Worksheet "*Commercial – concrete/steel.*" For this component, we need the bottom of it to "run long" to cover the side (or edge) of the floor system (slab). Therefore, its **Component Bottom** is set to *Relative to Story* and its Bottom Bound is set to "*Ledge.*" The sheathing component needs to behave similarly and will be set up the same way.

The **Component Top** should be set to "Bottom of Structure (Story Above)" – the same as the other components.

If you look through the example *Model Set-up Worksheets*, you'll see several iterations on this theme. In fact, some of the default level types have been renamed. *Top of Slab* may make more sense than *Top of Structure*. Just keep in mind, whatever naming convention you choose, you must make those changes in the Default Level Types dialog. Your updated Level names will then appear in the dropdown menu of your wall style dialog boxes.

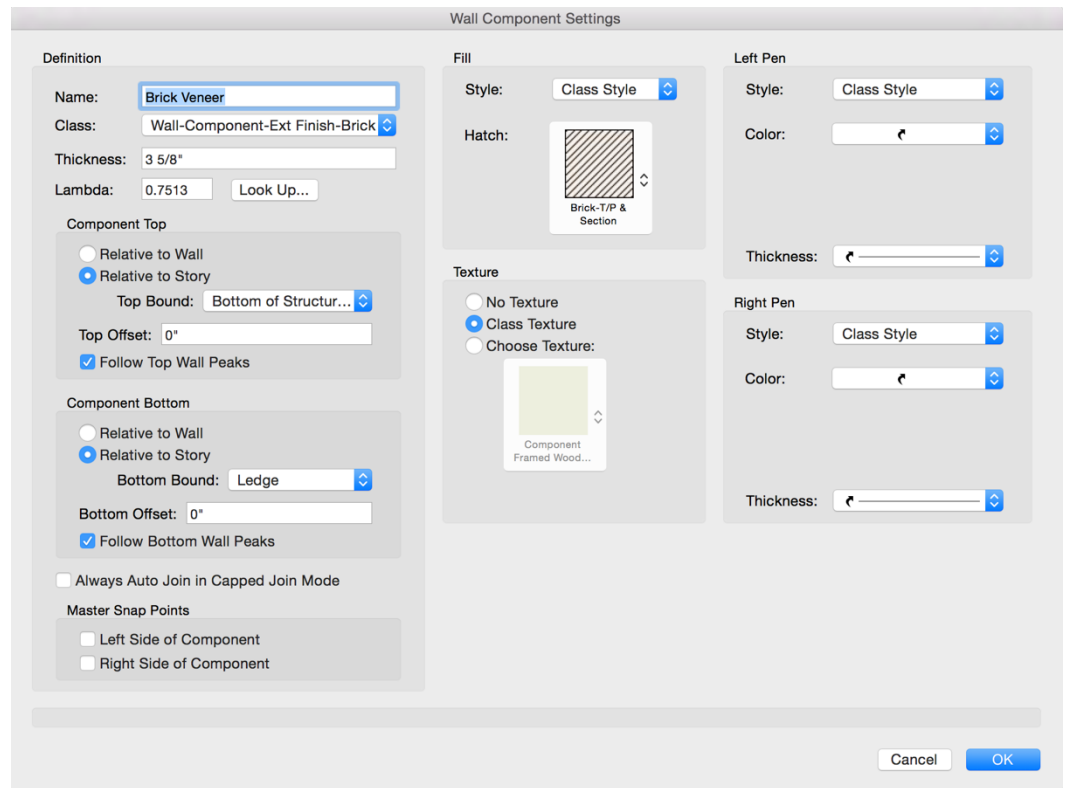


Fig. 15 Wall Component Settings for brick veneer component

## PART FOUR

### The Wall/Slab Interface

So we saved the best for last; we'll look at one of the more powerful features in Vectorworks - the interaction between wall styles and slab styles. To take advantage of this interaction, we must look at the wall/slab interface as an assembly. Walls can impact slabs and vice versa – slabs can affect walls.

The explanations in previous sections are NOT all for naught as you MUST understand how to set up and manipulate components within a wall style. That's the first half of the equation. The second half of the equation, is how to set up components within a Slab Style via Edge Offsets so they can respond to walls.

To experience this interaction first-hand, a perfect example is a double-height or "loft" space. (See Example File 3) In the example file, the slab representing the floor of the loft "knows" to cut back the appropriate components to a selected location within the wall as opposed to the walls in the "double height" space where there is no slab, the components are left untouched and the walls run continuously from lower floor to upper floor.

### HOW DOES IT WORK

In this segment we'll look at the set-up for a fully automated wall style as well as the set up for a slab style.

#### The Fully Automated Wall Style

The set-up for the fully automated wall style differs slightly from those discussed previously and involves tweaking the bottom bounding condition of a couple of the components.

The set-up for the Container Class (Insertion Options) is unchanged from previous discussions - the Container Class's **Bottom Bounding** is set to "*Top of Structure*." The purpose, as explained above, is to inform the program where to place the bottoms of doors. (If you experiment, you'll see that a door is set at whatever elevation is chosen as the Bottom Bounding condition). Additionally, as discussed above, the **Top Bounding** for the Container Class is also unchanged and can be set to *Bottom of Structure (Story Above)*.

The *main difference* in setting up the fully automated wall style is setting the **Bottom Bounding** condition for the **components that will be affected by the slab**. The Core component and those components to the

inside of the core will be set to “*Bottom of Structure*.” The components to the outside of the core will be set to “*Ledge*.”

In affect, what this does is lets the slab “cut back” the components of the wall where that interaction is necessary and at the same time, lets the components outboard of the wall style’s core component “run long” and respond to the varying conditions required to cover the side of the floor system. (Take a look at one of the Model Set-up Worksheets)

## Slab Styles

Slab Styles are like wall styles in many ways - the designer creates a container class followed by component classes.

The container class is set up under the Insertion Options tab. (Fig. 16) The main element to pay attention to is the **Datum LayerZRef**. This defines where the slab is located vertically based on a selection from the drop-down. The list in the drop-down should look familiar as it is a list of the Default Level types we looked at in parts one and two. Typically, *Top of Structure* is chosen as this corresponds to the “story break” on each floor of the building.

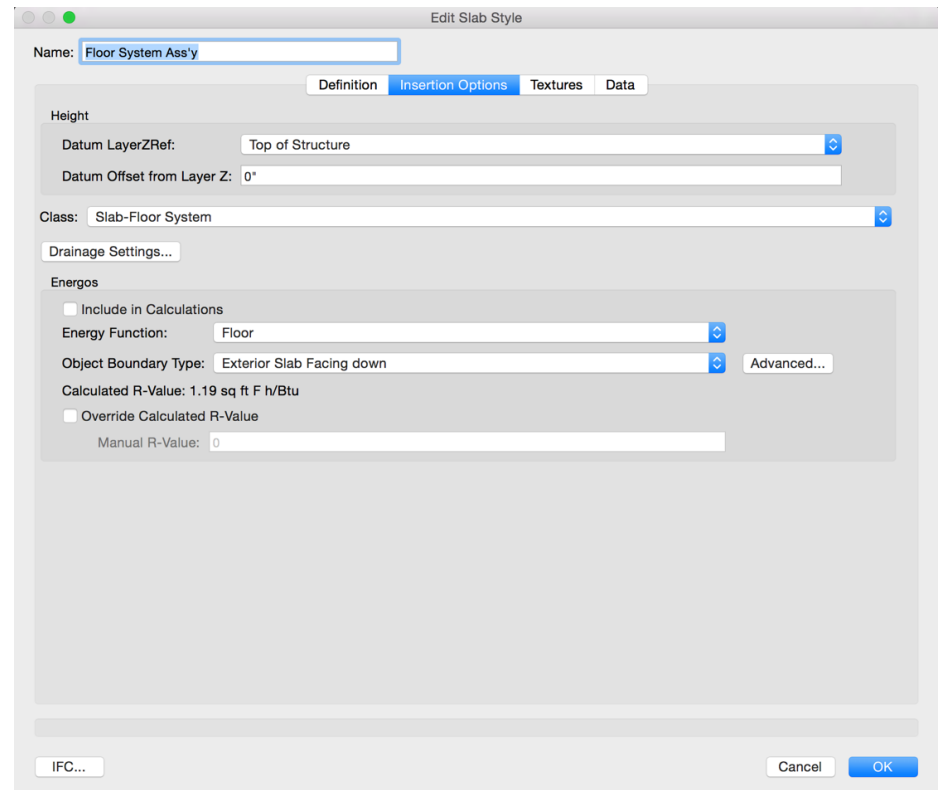


Fig. 16 Slab Style Container Class

Now we'll look at the components within a slab style and how they can be made to respond to walls. As noted above, there's an interaction between walls and slabs. In a wall style, we define what component will be the "Core." Now, in the **Slab Style**, we set each component's "Edge Offset" *relative to the core* or a face of one of the components of the wall style. (See Fig. 17)

Each component of the slab style is given an edge offset that instructs it how much of a wall to cut away. This is the "magic" that lets the walls and slabs interact in Example File 3:

- Where there is no slab, the walls are left untouched
- Where a slab exists, certain components of the wall are "cut back."

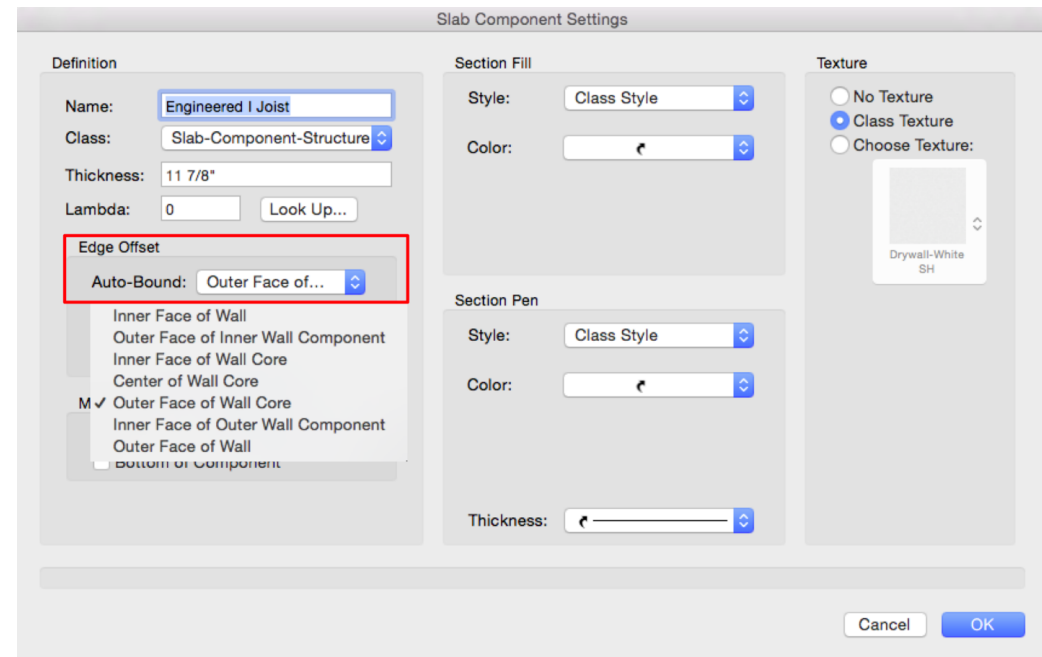


Fig. 17 Example of setting the Edge Offset of a component

---

## IN SUMMARY

It is indeed difficult to generalize as there are numerous methods of construction and the thought that “one size fits all” quickly breaks down. However, it IS possible to determine what the predominant conditions in a project might be and develop a wall style and slab style suitable for those conditions. Below are the set-up instructions at a glance:

### Wall Style Set-up

- Set Container Class Bottom Bound to **Top of Structure** (or whatever you choose to name it)
- Set those components outboard of the “Core” to **Ledge**
- Set the Core and those components inboard to **Bottom of Structure**

### Slab Style Set-up

- Set Container Class Datum LayerZRef to **Top of Structure**
- Using the Edge Offset dialog, determine how each component should respond to a given component in a wall style
- The slab MUST be “Auto-Bounded” or “Auto-Bounded with Manual Edge” for this interaction to occur

## END NOTES, SUGGESTIONS AND OBSERVATIONS

Additional knowledge beyond the scope of this tutorial regarding the manipulation of the edge condition of slabs may help in designing a project.

Every wall style should have a name that properly identifies its intended purpose. An example might be “ 6” Steel Stud w/ Brick Veneer.” Individual folders for wall style “types” can be created and organized within the Resource Manager. Perhaps a folder called “Exterior Wall Styles” can help with this organization. For commercial work, where tagging walls with an ID is common, under the DATA tab, there is a field called “Mark” that lets you assign a character to the wall style. This character will then show as the “type” when tagging a wall with the ID Label tool.

You may get additional “mileage” out of using “Follow Wall Peaks” as well as just reshaping the top or bottom of the wall using the Reshape tool.

It is typical to create a story above the roof. This is so that walls and some other objects that have a top bounding condition, will have a story with a level embedded in it in which to bind to.

### Suggested Levels and Layers

- Top of Structure w/ Slab Layer – the floor

---

system is created here

- Finish Floor w/ Floor Layer – walls and most interior objects are modelled here
- Bottom of Structure – wall components that will be “cut back” with a slab can be bound here
- Ledge(s) – wall components that need to “run long” in varying conditions can be bound here
- Ceiling(s) w/ Ceiling Layer – used mainly in commercial work where ceilings are suspended. Lighting, supplies & returns, exit signage, emergency lighting, etc. are placed here.

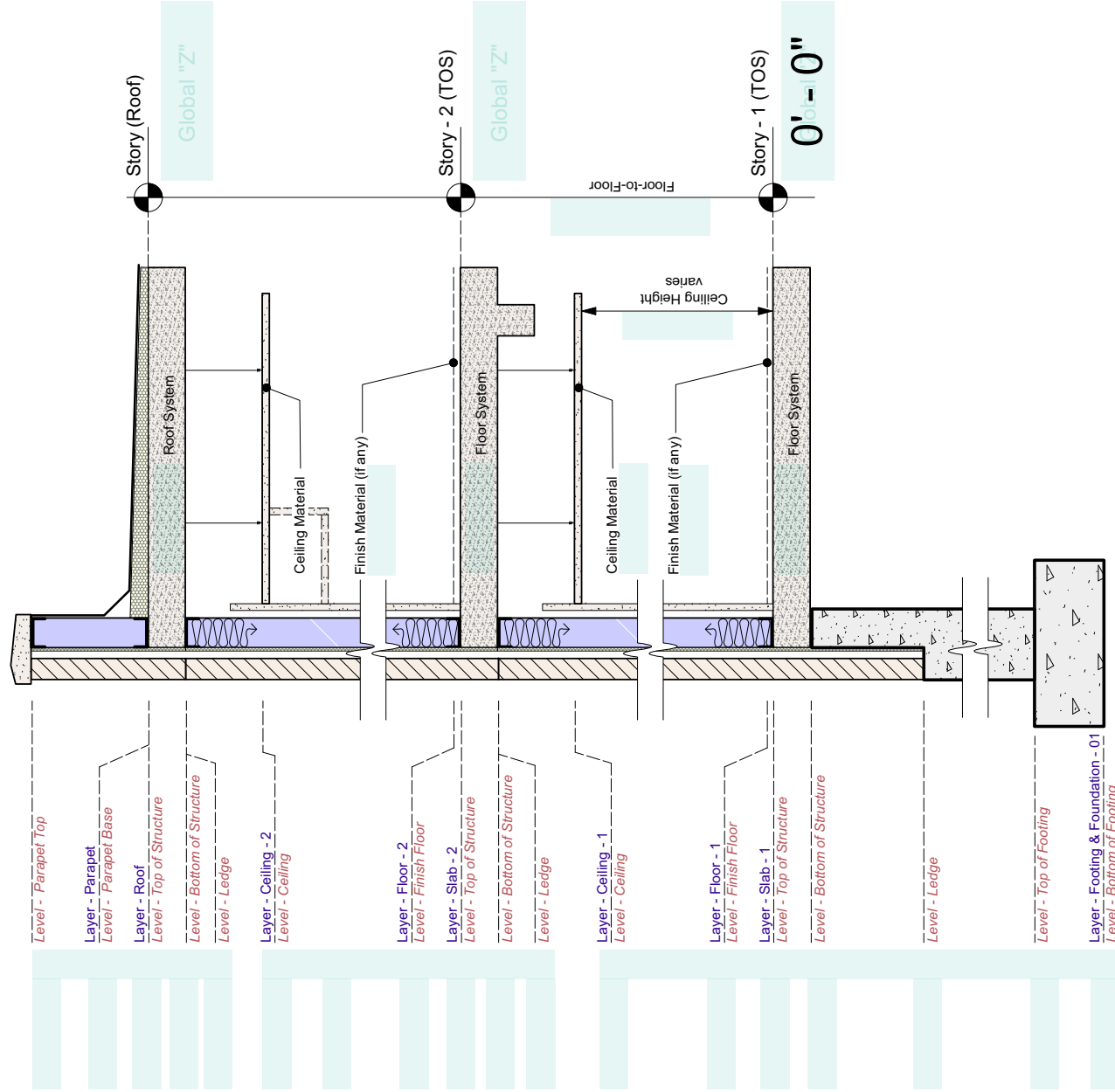
## \*\* Deleting Default Story Levels

Deleting the default story levels may help eliminate a possible source of confusion when developing and using this type of wall style. The deletion of the default story levels should only be done when this wall style type is the ONLY one used in the set up of the model. Once done, the file can be saved as a template (.sta) file.

Organization Palette > Stories > Default Story Layers > pick ‘em, Delete ‘em  
Organization Palette > Design Layers > Level Types > pick ‘em, Delete ‘em



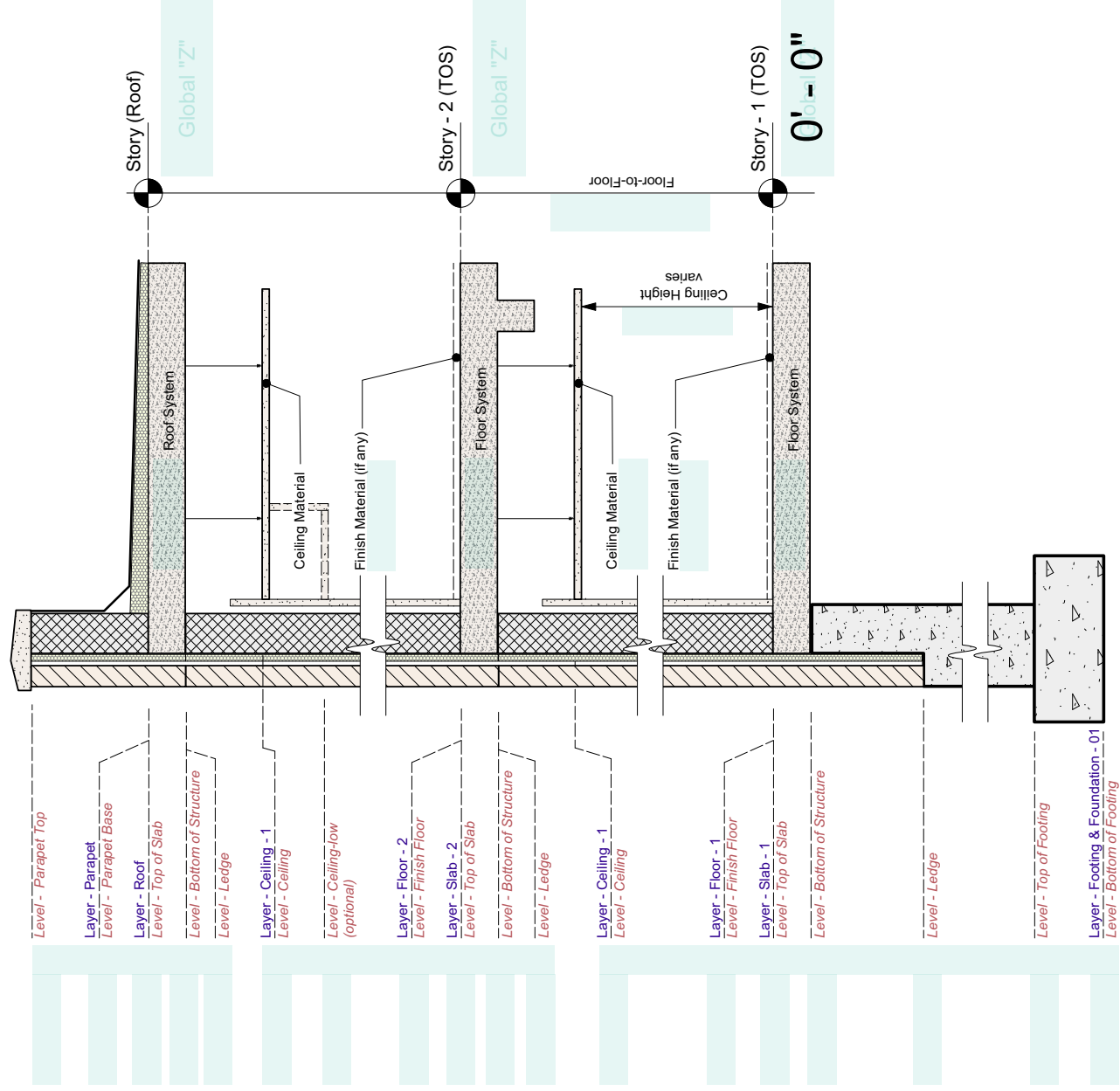
## Commercial - concrete/steel



1. Start by entering Floor-to-Floor height(s)
2. Determine thickness of materials, enter known values
3. Calculate & enter value for floor-to-floor

NOTES: Elevational information for Levels is entered relative to the STORY they live in

## Commercial - concrete

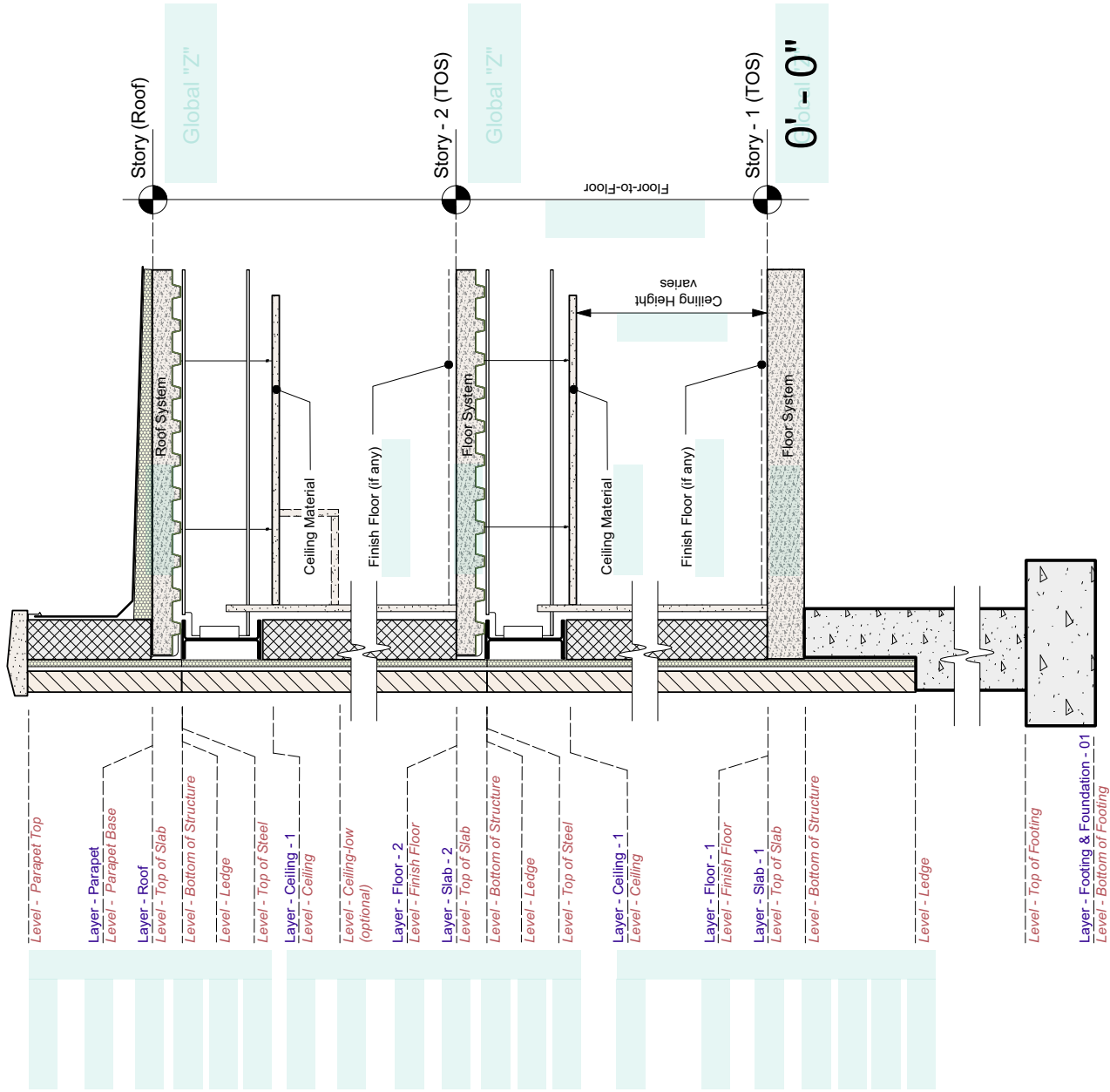


1. Start by entering Floor-to-Floor height(s)
2. Determine thickness of materials, enter known values
3. Calculate & enter value for floor-to-floor

NOTES: Elevational information for Levels is entered relative to the STORY they live in

Model Set-up Worksheet

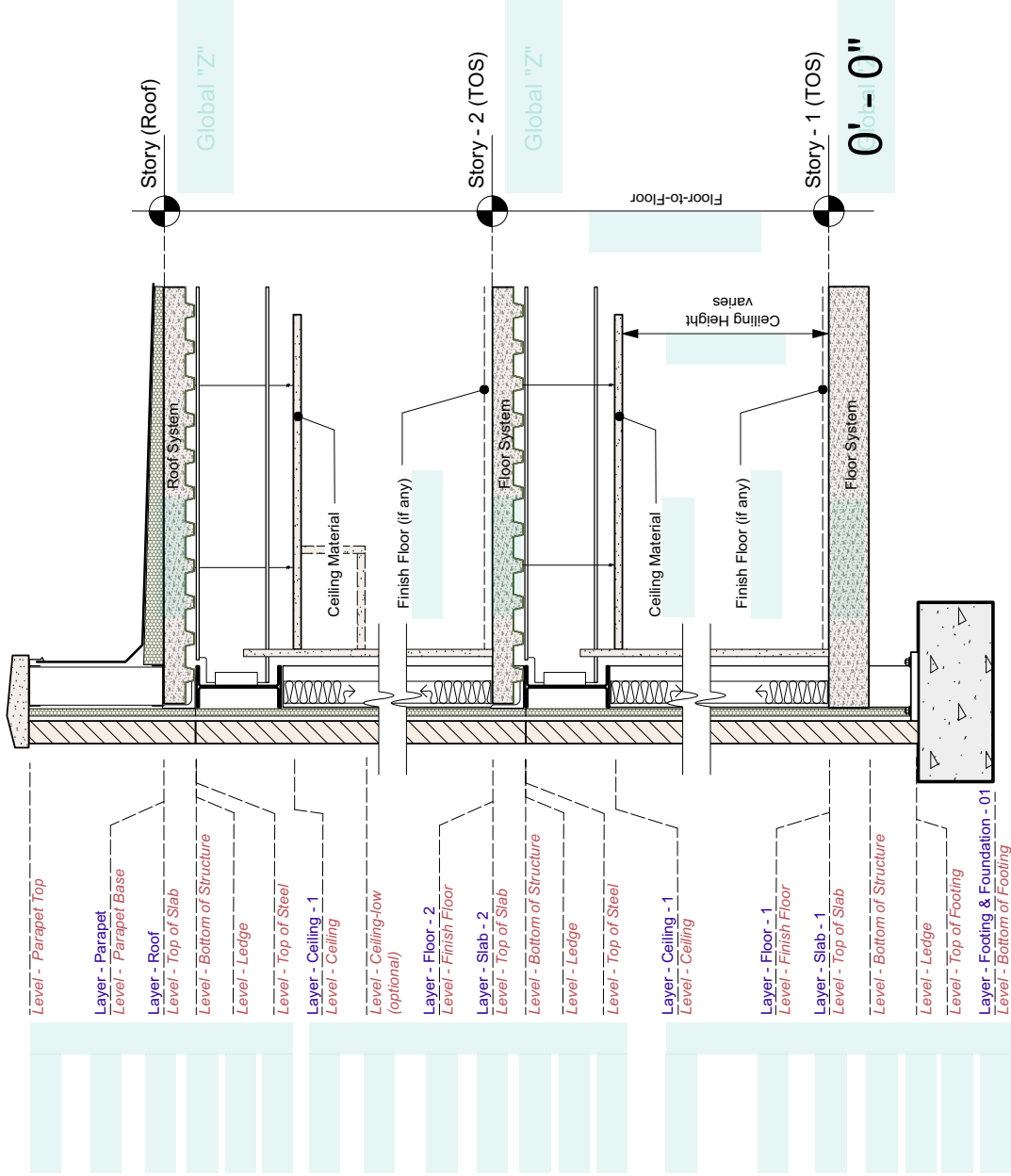
Commercial - steel frame/block infill



1. Start by entering Floor-to-Floor height(s)
  2. Determine thickness of materials, enter known values
- NOTES: Elevational information for Levels is entered relative to the STORY they live in

# Model Set-up Worksheet

## Commercial - steel frame

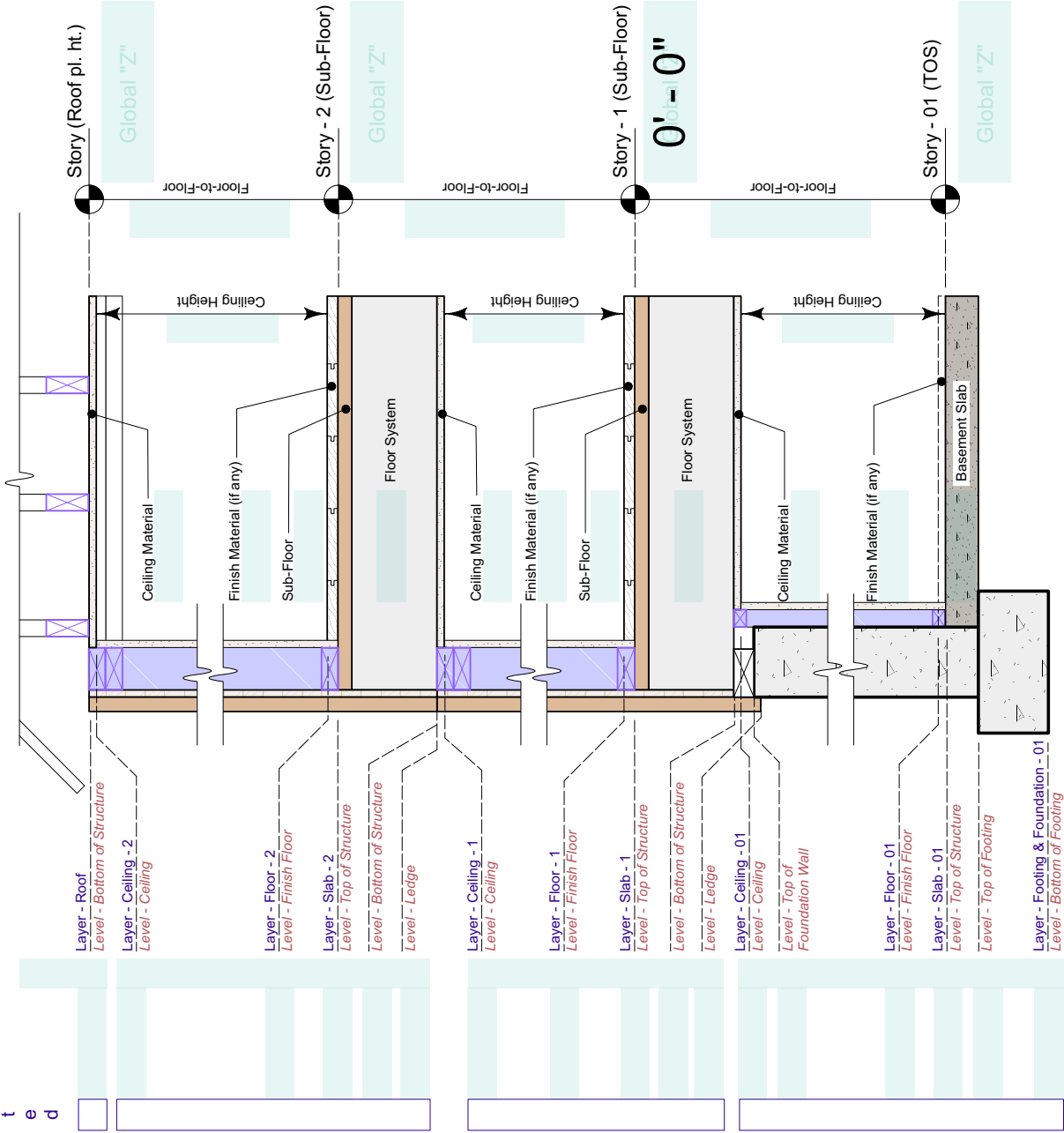


1. Start by entering Floor-to-Floor height(s)
  2. Determine thickness of materials, enter known values
- NOTES: Elevational information for Levels is entered relative to the STORY they live in

# Model Set-up Worksheet

## Residential

Created



1. Enter Ceiling Height
  2. Determine thickness of materials, enter known values
  3. Calculate & enter value for floor-to-floor
- NOTE: Walls are drawn/placed on the Floor Layer  
Elevational information for Levels is calculated/entered relative to the STORY they live in

