USER MANUAL

Framer for SketchUp is a parametric wall framing extension used for modeling stud-framed walls of any customizable size (imperial or metric), with bottom and top plate options, customizable wallboard options, such as OSB, plywood, Zip, Densglass and drywall. Parametric framed openings are easily added and include customizable headers, multiple jacks and sill plates. Framed openings cut out wallboard. Framing members are modeled as components and can be reported per wall section. Framer for SketchUp works with Estimator for SketchUp for real-time takeoff generation.

Wall Tool: Used to model walls from assigned parameters, including number of bottom plates (regular or treated), top plates, stud spacing, start and end stud/corner conditions. Walls may be rectangular, gable or shed (assign pitch).

Door Tool: Used to model framed door openings from assigned parameters, including header size and plies (single, double, triple), number of jacks (1-4), width and header height.

Window Tool: Used to model framed window openings from assigned parameters, including header size and plies (single, double, triple), number of jacks (1-4), number of sills, width, height and header height.

Lumber Tool: Used to model standalone framing members, such as beams, joists, studs, bracing, regular and treated plates, headers, etc.

Blocking Tool: Used to model blocking between studs at any chosen location. Blocking may be staggered or solid, flat or edgeways.

Reports Tool: Used to generate simple or detailed HTML or CSV (Excel) reports listing framing components and wall parameters on a per wall basis.

Configure Materials Tool: Used to customize framing member sections/sizes, metric or imperial, as well as assign customizable material textures to framing members.

Help Tool: Used to open the Framer for SketchUp User Manual
Wall Tool

Wall Tool User Interface Overview:

- Choose from Rectangular, Gable or Shed
- Choose stud sized from customizable list
- Choose number of regular or treated bottom plates (0-2)
- Choose number of top plates (0-2)
- Choose start post (1 stud, T, 2 stud, California, 3 stud)
- Choose end post (1 stud, T, 2 stud, California, 3 stud)
- Choose thickness of wallboard on right side of wall
- Choose wallboard material (OSB, drywall, etc.)
- Choose start offset for wallboard (cover wall ends, etc.)
- Choose end offset for wallboard (cover wall ends, etc.)
- Choose thickness of wallboard on left side of wall
- Choose wallboard material (OSB, drywall, etc.)
- Choose start offset for wallboard (cover wall ends, etc.)
- Choose end offset for wallboard (cover wall ends, etc.)
- Choose stud spacing (default is 16")
- Choose wall height (enter 0 for variable height walls)
- Enter roof pitch (i.e. 10:12) for gable and shed walls
- Choose OK to model wall or Cancel

Wall Types:

- Type: Drop-down list (default is Rectangular).
  Choose from Rectangular, Shed or Gable.
  If Shed or Gable, make sure to enter the roof pitch in Roof Slope (in degrees or x:12).

Wall Section:

- Section: Choose stud size from a customizable list in this drop-down. Common stud sizes come pre-loaded in Framer, but users may create their own sections in Configure Materials.
Start and End Posts - Walls in Framer are modeled one wall at a time, just as they are built/installed in the field. Users may choose how to start and end walls to best suit corners and intersections. 2-Stud California corners are fairly common. Users must choose Right or Left facing, which is as name implies, facing the right or left of the wall being modeled, with anticipation of next intersecting wall. Please note that T-Posts do not recognize intersecting wall size, nor will T's displace an existing stud in the intersecting wall. If they are the same, no problem, if the intersecting wall is narrower, new T studs (which match wall being modeled) will stick out (for example, a 2x6 wall intersecting a 2x4 wall)

Right and Left Wallboard- To avoid confusion between Exterior and Interior of walls, Right and Left Wallboard are the terms used to reference the type of wallboard (sheathing, drywall, etc.) to be used on each side of the wall being modeled (referencing side of the wall being modeled). Users may choose a sheathing material for the Exterior of the building and drywall for the Interior of the building. Drywall may be on both right and left sides on interior walls. Users may completely customize their list of material types and thicknesses in the Configure Materials tool to be discussed later in this manual.

### Right Wallboard:

<table>
<thead>
<tr>
<th>Right Wallboard:</th>
<th>0</th>
<th>1 stud</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2 studs Conventional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 studs L-California</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 studs R-California</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 studs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 stud with T studs</td>
</tr>
</tbody>
</table>

Choose thickness (0 by default for no wallboard) of wallboard from this drop-down list (same for Right and Left. Users may customize these sizes in the Configure Materials tool.)

### Bottom plates:

<table>
<thead>
<tr>
<th>Bottom plates:</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top plates:</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Start post:</td>
<td>1 stud</td>
<td></td>
</tr>
<tr>
<td>End post:</td>
<td>1 stud</td>
<td></td>
</tr>
</tbody>
</table>

Choose the type and number of bottom plates (0-2). Treated plates will appear differently and be assigned own layer for differentiation and estimating purposes.

Choose number of top plates.

Choose start and posts from drop-down lists.
Choose Right and Left Wallboard Material. Note, if zero thickness is chosen, no wallboard will be modeled despite selection. Users may completely customize this list. A variety of wallboard types come pre-installed in Framer.

**NOTE:** Drywall48 references 4' drywall sheets. Drywall54 is for 54" (4'-6") sheets for users in the US who use 9' walls (common height). Framer will report the coverage (Area) of wallboard. For users wishing to differentiate wallboard sizes for estimating purposes, this additional material type was generated. Users may create custom material types, as well as delete those they do not want, in the Configure Materials Tool.

**Wallboard Start and End Offsets** - When walls intersect with one another, there are times when users may wish to offset the start and or end of the wallboard on the wall being modeled. Offsets provide a tool for this need. A positive number for the start will PULL the end of the sheathing to cover an adjacent wall, as in **Figure A and Figure B**. A negative number for the Start Offset will push the end of the sheathing in the direction of the wall being modeled, by x distance. A negative number for the End Offset will PUSH the end of the sheathing back, as shown in **Figure C**, to accept an adjacent wall. Note that these offsets, as well as any wall parameters may be edited at any time by **right-click** context menu, **Edit Framer Wall**.

**Figure A** - This 2x6 wall intersection leaves a sheathing gap of 6"  
**Figure B** - A Start Offset of 6" PULLS sheathing start out to cover end  
**Figure C** - This 2x6 wall has a -6" End Offset to hold sheathing back for adjacent wall.

<table>
<thead>
<tr>
<th>Start Offset:</th>
<th>0</th>
<th>Enter positive or negative offset for Start and/or End if necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Offset:</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

| Spacing: | 1' 4" | Enter Stud Spacing (default is 16") |
| Height:  | 9' 1 1/8" | Enter Wall Height (zero will trigger variable height option to choose top along Blue Axis) |
| Roof slope: | 0 | For Shed and Gable Wall Types - enter roof pitch in degrees or x:12 |

**Editing Wall Parameters** - Users may edit wall parameters at any time by using the right-click context menu, **Edit Framer Wall**. This will bring up the dialog box to allow for any edits. **NOTE**, any manual changes made to a wall will be deleted, as the wall will be rebuilt based on the edited parameters.
**Modeling a Wall** - To model a wall, choose the Wall Tool and enter wall parameters as outlined previously. Upon clicking the OK button, the cursor icon will become the pencil icon. Choose the start point of the wall by clicking once, then move in the direction of the wall (typically along the Red or Green axis) as shown in Figure D. Either type in the desired wall length and hit Enter, OR click on the desired end point. The wall will be modeled instantly.

![Figure D](image)

**TAB Key** - Framer provides functionality for toggling which side of the line to model the wall, as well as allowing for wallboard thickness while modeling walls. This is accomplished with the use of the TAB key on your keyboard. After you have started a wall, press the TAB key once to switch sides of the wall. Press the TAB key again to show wallboard (Figure E), thus offsetting the wall path by the thickness of the wallboard. This can come in handy when modeling a framed exterior wall where the sheathing is flush with the slab, for example.

![Figure E](image)

**MOVE/RESIZE FRAMER WALL** - To edit the start or endpoint of a wall, select the wall and use the right-click context menu Move/Resize Framer Wall. Upon executing this command the 2D outline of the wall will be displayed. You will notice yellow grips at each corner of the wall and along either side. The CORNER grips (Figure F) are for resizing or modifying the start and/or end of a wall. Simply select a grip on the end to modify and stretch it out to the new point, then hit Enter. The wall is rebuilt in the new size.

![Figure F](image)

**IMPORTANT** - To move a wall modeled using Framer, you MUST use the MOVE tool provided by Framer, NOT using SketchUp's Move command. While you may move the wall using this way, any future edits to the wall will cause issues. In order to properly move a wall, select the wall and using the same right-click context menu Move/Resize Framer Wall and choose a yellow grip on the desired side of the wall (Figure G) and move it into the new position, hit Enter.

![Figure G](image)
Door Tool

**Adding Door Openings**- To add a door opening to any wall, simply select the wall to receive the opening. Then open the Door Tool UI shown below to enter parameters.

<table>
<thead>
<tr>
<th>Door Properties</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Header type:</td>
<td>Double (single, double, triple)</td>
</tr>
<tr>
<td>Header section:</td>
<td>2x8 (customizable)</td>
</tr>
<tr>
<td>Header bottom plate:</td>
<td>0 (choose to add or not)</td>
</tr>
<tr>
<td>Header top plate:</td>
<td>0 (choose to add or not)</td>
</tr>
<tr>
<td>Number of Jacks:</td>
<td>1 (choose number)</td>
</tr>
<tr>
<td>Rough width:</td>
<td>2’ 6” (enter)</td>
</tr>
<tr>
<td>Rough height:</td>
<td>6’ 11” (enter)</td>
</tr>
</tbody>
</table>

Choose OK to place opening or Cancel

**Place Door Openings**- Upon clicking OK, X-Ray mode is enacted so that you may see behind the wallboard. Default position is referencing the Center of the door opening (Figure H), but pressing the TAB Key will toggle between Center, Right and Left position. Note, the door outline will be RED if an opening will not fit in the wall chosen and at that location, or GREEN if OK. Click the location to place the opening. Press enter if only one opening is desired, or continue placing same size opening in same wall if desired. Pressing Enter will commit the opening to the wall, displacing any studs in the path and cutting out any wallboard on either side.

**EDIT/MOVE/DELETE Door**- The Right-Click context menu is used for these commands. At any time, a door opening may be Edited (change parameters). Select the wall, right-click > Edit Framer Door to edit parameters. To move a door opening, right-click > Move Framer Door to choose new location for door opening. If there are more than one door opening in a selected wall, the first opening will highlight in BLUE. Use the TAB Key to toggle the openings until the desired opening is highlighted, then move. To Delete an opening, the same TAB key functionality is applied to select the opening to delete. Right-click > Delete Framer Door, select the door opening to delete and press ENTER.
**Window Tool**

*Adding Window Openings* - To add a window opening to any wall, simply select the wall to receive the opening. Then open the Window Tool UI shown below to enter parameters.

![Window Tool UI](image)

**Window Properties**

- **Header type**: Double
  - Enter header plies (single, double, triple)
- **Header section**: 2x4
  - Choose header size (customizable)
- **Header bottom plate**: 0
  - Choose to add a plate on bottom or not
- **Header top plate**: 0
  - Choose to add a plate on top or not
- **Sill plate**: 1
  - Choose number of sill plates (1-2)
- **Number of Jacks**: 1
  - Choose number of jacks (1 default - 4)
- **Rough width**: 3'
  - Enter Window Width
- **Rough height**: 5'
  - Enter Window Height
- **Rough header height**: 6' 11"
  - Enter Header Height
- **OK**
- **Cancel**
  - Press OK to add opening or Cancel

**Place Window Openings** - Upon clicking OK, X-Ray mode is enacted so that you may see behind the wallboard. Default position is referencing the Center of the window opening (Figure I), but pressing the TAB Key will toggle between Center, Right and Left position. Note, the window outline will be RED if an opening will not fit in the wall chosen and at that location, or GREEN if OK. Click the location to place the opening. Press enter if only one opening is desired, or continue placing same size opening in same wall if desired. Pressing Enter will commit the opening to the wall, displacing any studs in the path and cutting out any wallboard on either side.

![Figure I](image)

**EDIT/MOVE/DELETE Window** - The Right-Click context menu is used for these commands. At any time, a window opening may be Edited (change parameters). Select the wall, right-click > Edit Framer Window to edit parameters. To move a window opening, right-click > Move Framer Window to choose new location for door opening. If there are more than one door opening in a selected wall, the first opening will highlight in BLUE. Use the TAB Key to toggle the openings until the desired opening is highlighted, then move. To Delete an opening, the same TAB key functionality is applied to select the opening to delete. Right-click > Delete Framer Window, select the window opening to delete and press ENTER.
Lumber Tool

**Standalone Lumber Tool** - This tool may be used to model individual lumber components. Available lumber types at this time are:

- Beam
- Brace
- Fascia
- Header
- Plate
- Plate_Treated
- Stud

To model an individual framing component, select the tool and then choose the TYPE from the drop-down menu. Another drop-down menu will display to choose the size of the component. These lumber types are customizable and may be added, edited, etc. in the Configure Materials Tool.

Reports

**Reports** - This tool may be used to generate reports, either Simple (display wall parameters and size) or Detailed (display list of framing components in each wall). Reports may be generated as HTML reports to view on your screen, or saved as CSV (Excel) files. To generate a report, select a wall or walls and open the reports UI as shown below.

![Report properties](image)
Configure Materials

Configure Materials - All framing material types have configurable sizes and textures which are customizable. Sections can be edited, deleted, etc. to suit your needs and workflow. Framer comes pre-loaded with a variety of common-sized framing members. The image below shows the User Interface.

![Material Editor](image-url)