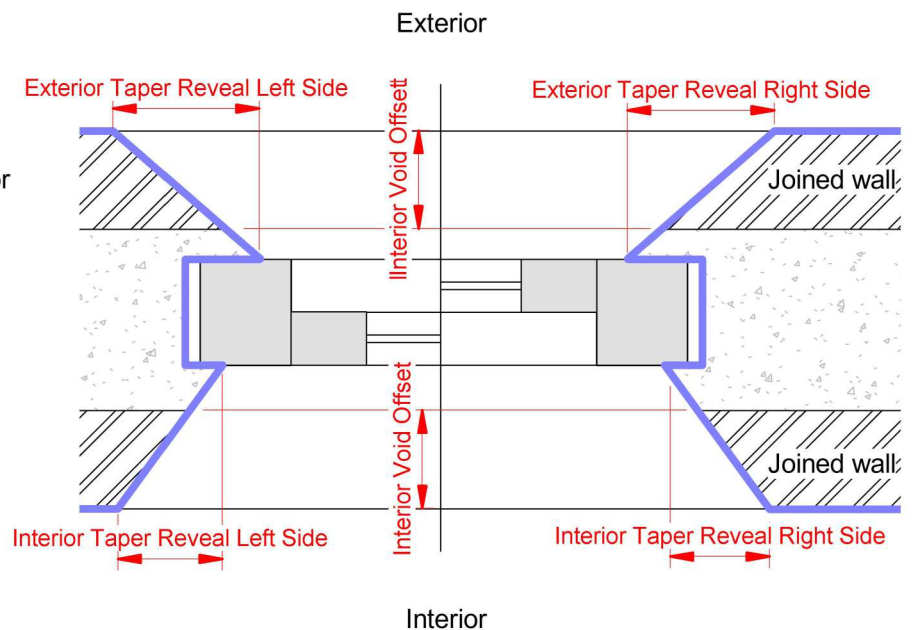
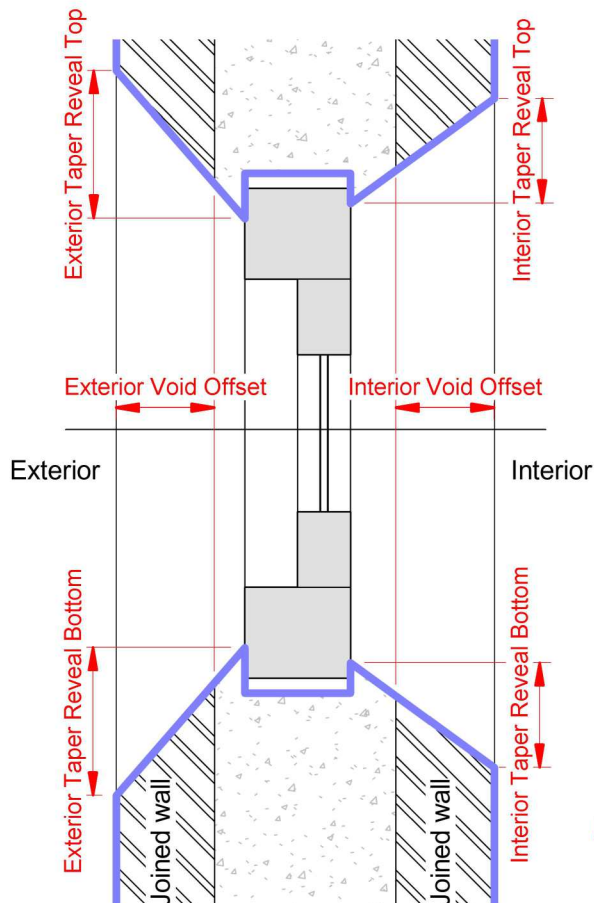
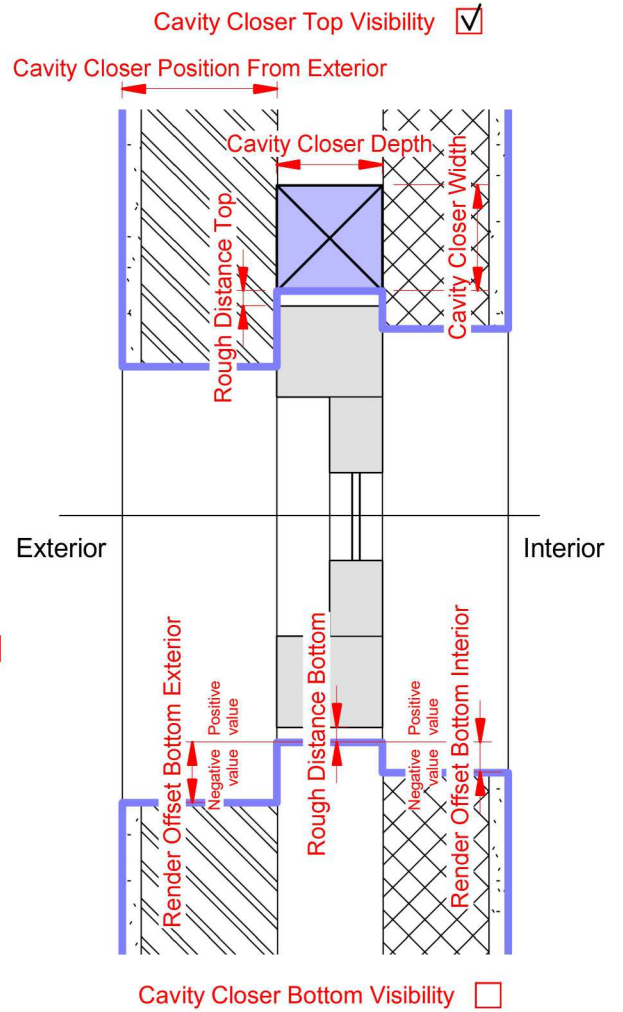
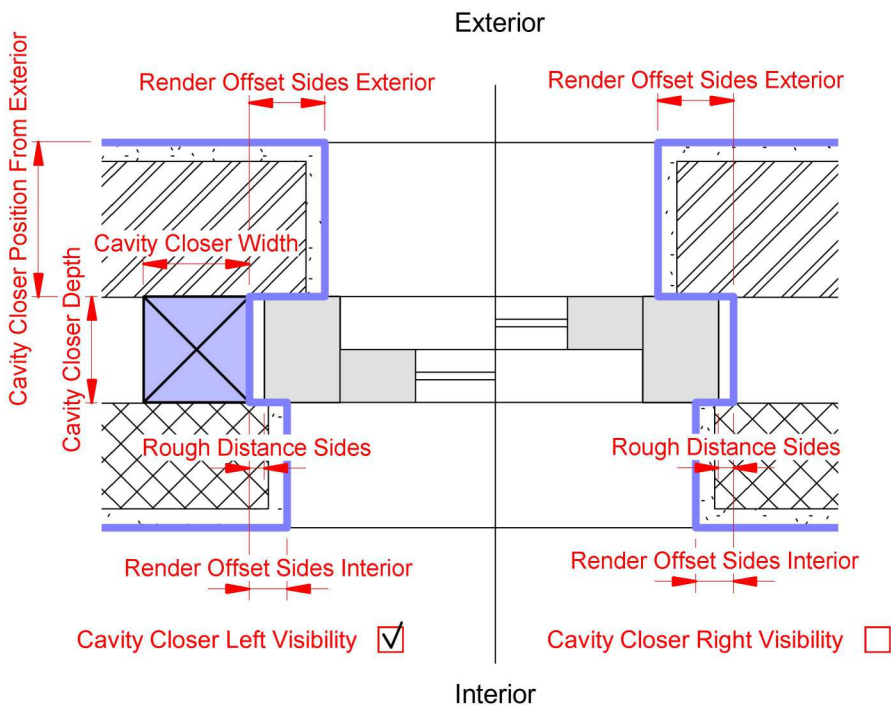


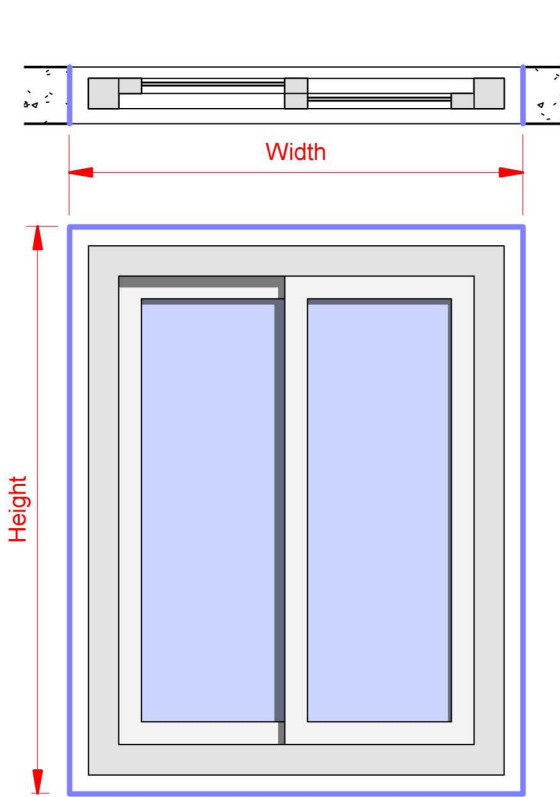


No	Parameters	Page	Type
<b>Constraints</b>			
1	Bay Frame Visibility	10	Yes/No - Instance
2	Cavity Closer Bottom Visibility	1	Yes/No - Instance
3	Cavity Closer Left Visibility	1	Yes/No - Instance
4	Cavity Closer Right Visibility	1	Yes/No - Instance
5	Cavity Closer Top Visibility	1	Yes/No - Instance
6	Double Window	6	Yes/No - Type
7	Exterior Sill Visibility	11,12	Integer - Type
8	Frame Dimensions	2	Yes/No - Type
9	Glass Visibility	6	Integer - Type
10	Handle Visibility	4,5	Yes/No - Instance
11	Interior Sill Interior Or Exterior Side Visibility	11,12	Integer - Type
12	Opening Lines	16	Yes/No - Instance
13	Roller Shutter Visibility	13,14	Integer - Type
14	Symbol Lines Arrow Interior	9	Yes/No - Type
15	Symbol Lines Arrow Offset	9	Length - Type
16	Symbol Lines Elevation 2D	9	Yes/No - Instance
17	Symbol Lines Elevation 3D	9	Yes/No - Instance
18	Symbol Lines Plan 2D	9	Yes/No - Instance
19	Window Bottom Trim Visibility	2	Yes/No - Instance
20	Window Trim Visibility	2	Yes/No - Instance
21	Sill Height	11	Length - Instance
<b>Graphics</b>			
22	W1-10 Visibility	3	Yes/No - Type
23	W1-10 Width %	3	Number - Type
24	W1-10 Height %	3	Number - Type
25	W1-10 Louver Angle	8	Angle - Instance
26	W1-10 Louver Count	8	Yes/No - Type
27	W1-10 Louver Visibility	8	Yes/No - Type
28	W1-10 Glazing Bar & Louver Horizontal Count	7,8	Integer - Type
29	W1-10 Glazing Bar Vertical Count	6	Integer - Type
30	W1-10 Offset Horizontal %	3	Number - Type
31	W1-10 Offset Vertical %	3	Number - Type
32	W1-10 Opening	6	Integer - Type
33	W1-10 Plan Symbol Line Visibility	9	Yes/No - Type
34	W1-10 Position Horizontal	3	Integer - Type
35	W1-10 Position Vertical	3	Integer - Type
36	W1-10 Sliding Frame Depth Position	6	Length - Type
37	W1-10 Transom	6	Yes/No - Type
38	W1-10 Integrated	6	Yes/No - Type
<b>Dimensions</b>			
39	Width	2	Length - Type
40	Height	2	Length - Type
41	Bay Frame Width Interior Left	10	Length - Instance
42	Bay Frame Width Interior Right	10	Length - Instance
43	Bay Frame Miter Angle Left	10	Angle - Instance
44	Bay Frame Miter Angle Right	10	Angle - Instance
45	Bay Frame Depth	10	Length - Instance
46	Cavity Closer Depth	1	Length - Instance
47	Cavity Closer Width	1	Length - Instance
48	Cavity Closer Position From Exterior	1	Length - Instance
49	Exterior Brick Sill Angle	11,12	Angle - Type
50	Exterior Sill Depth	11,12	Length - Type
51	Exterior Sill Drip Position	11,12	Length - Type
52	Exterior Sill Drip Radius	11,12	Length - Type
53	Exterior Sill Front Angle	11,12	Length - Type
54	Exterior Sill Height	11,12	Length - Type
55	Exterior Sill Side Offset	11,12	Length - Type
56	Exterior Sill Top Angle	11,12	Length - Type
57	Exterior Sill Vertical Offset	11,12	Length - Type
58	Interior Sill Height	11,12	Length - Type
59	Interior Sill Offset	11,12	Length - Type
60	Interior Sill Sides Offset	11,12	Length - Type
61	Interior Sill Vertical Offset	11,12	Length - Type
62	Exterior Taper Reveal Bottom	1	Length - Instance
63	Exterior Taper Reveal Left Side	1	Length - Instance
64	Exterior Taper Reveal Right Side	1	Length - Instance
65	Exterior Taper Reveal Top	1	Length - Instance
66	Interior Taper Reveal Bottom	1	Length - Instance
67	Interior Taper Reveal Left Side	1	Length - Instance
68	Interior Taper Reveal Right Side	1	Length - Instance
69	Interior Taper Reveal Top	1	Length - Instance
70	Exterior Void Offset	1	Length - Instance
71	Interior Void Offset	1	Length - Instance
72	Frame Width	4,5	Length - Type
73	Frame Position	4,5	Length - Instance
74	Glass Position	4,5,7	Length - Type
75	Glass Space	7	Length - Type
76	Glass Thickness	7	Length - Type

No	Parameters	Page	Type
<b>Dimensions</b>			
77	Handle Depth	4,5	Length - Type
78	Handle Length	4,5	Length - Type
79	Handle Width	4,5	Length - Type
80	Louver Length	8	Length - Type
81	Louver Overlap	8	Length - Type
82	Louver Thickness	8	Length - Type
83	Glazing Bar Depth	7	Length - Type
84	Glazing Bar Width	7	Length - Type
85	Mullion & Transom Width	4,5	Length - Type
86	Render Offset Bottom Exterior	1	Length - Instance
87	Render Offset Bottom Interior	1	Length - Instance
88	Render Offset Sides Exterior	1	Length - Instance
89	Render Offset Sides Interior	1	Length - Instance
90	Render Offset Top Exterior	1	Length - Instance
91	Render Offset Top Interior	1	Length - Instance
92	Rough Distance Bottom	1	Length - Instance
93	Rough Distance Sides	1	Length - Instance
94	Rough Distance Top	1	Length - Instance
95	Roller Shutter Box Depth	13,14	Length - Type
96	Roller Shutter Box Height	13,14	Length - Type
97	Roller Shutter Box Sides Offset	13,14	Length - Type
98	Roller Shutter Guide Depth	13,14	Length - Type
99	Roller Shutter Guide Width	13,14	Length - Type
100	Roller Shutter Guide Steel Thickness	13,14	Length - Type
101	Roller Shutter Guide Exterior Offset	13,14	Length - Type
102	Roller Shutter End Slat Height	13,14	Length - Type
103	Sliding Frame Depth	4,5	Length - Type
104	Sliding Frame Width	4,5	Length - Type
105	Window Trim Bottom Offset	2	Length - Instance
106	Window Trim Depth	2	Length - Instance
107	Window Trim Offset	2	Length - Instance
108	Window Trim Width	2	Length - Instance

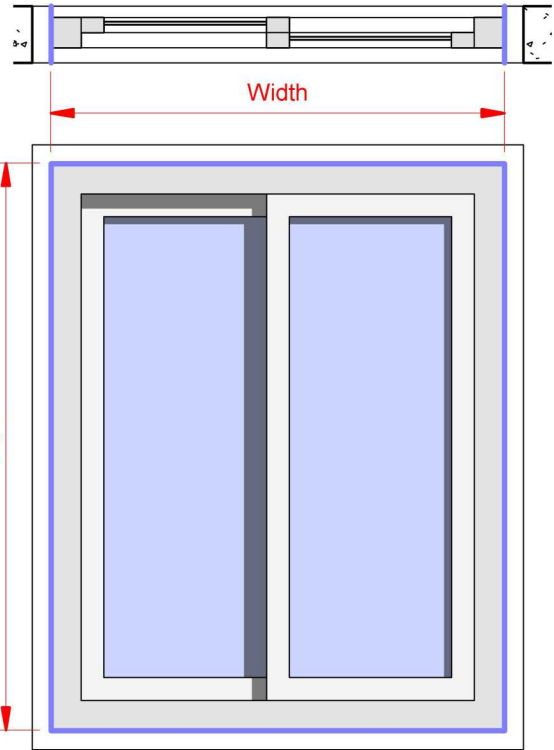
<b>Schedule</b>			
109	.Bay Frame		Yes/No - Instance
110	.Frame Depth		Length - Type
111	.Frame Width		Length - Type
112	.Glass Area With Glazing Bar	15	Area - Instance
113	.Glass Area Without Glazing Bar	15	Area - Instance
114	.Opening Area	15	Area - Instance
115	.Panel Double Glazing		Yes/No - Instance
116	.Roller Shutter		Yes/No - Instance
117	.Rough Height		Length - Instance
118	.Rough Width		Length - Instance
119	.Sliding Frame Depth		Length - Type
120	.Sliding Frame Width		Length - Type





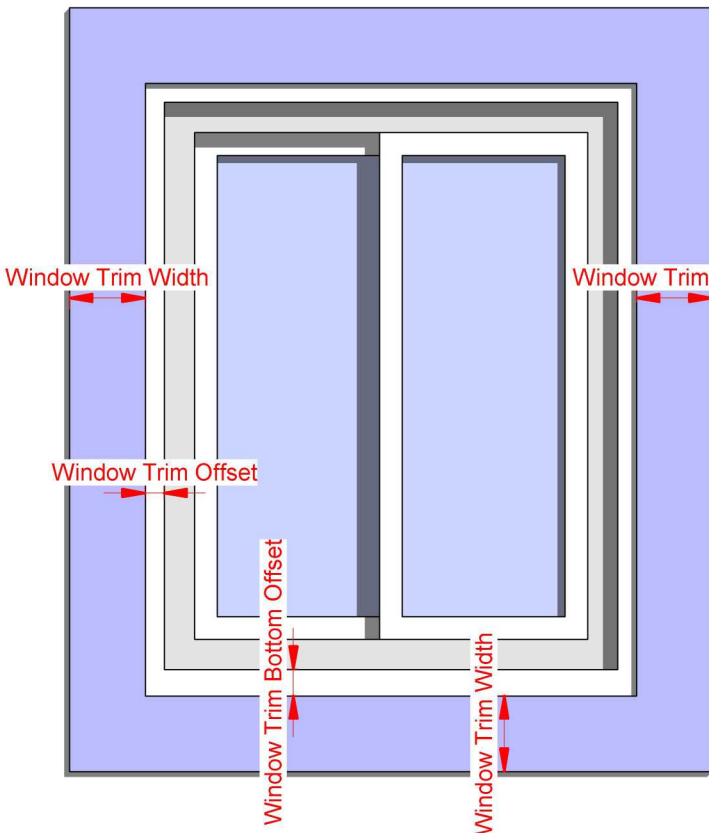
Frame Dimensions

Interior

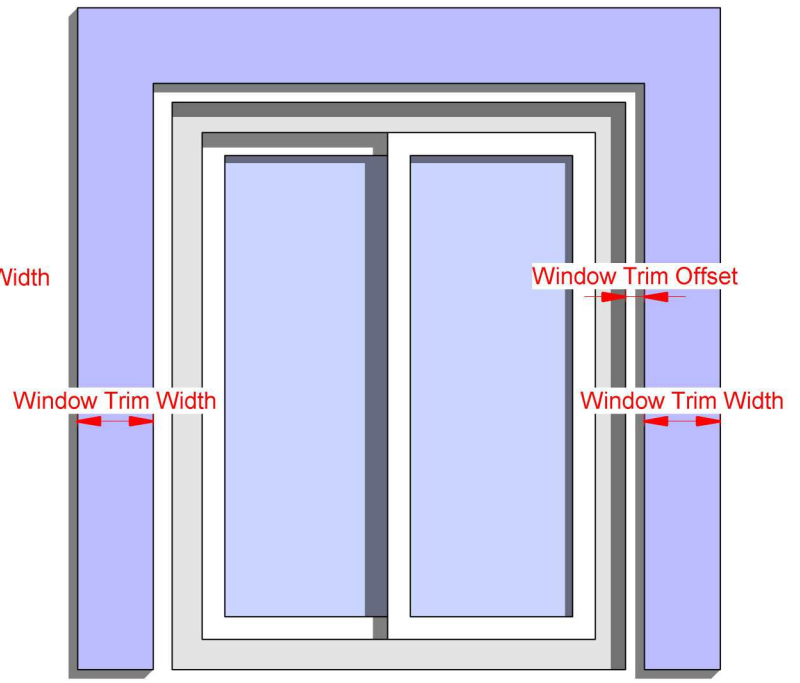


Frame Dimensions

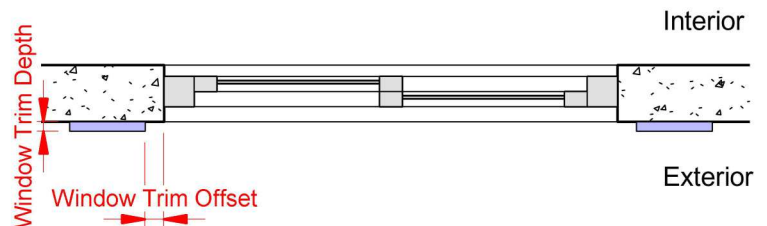
Exterior



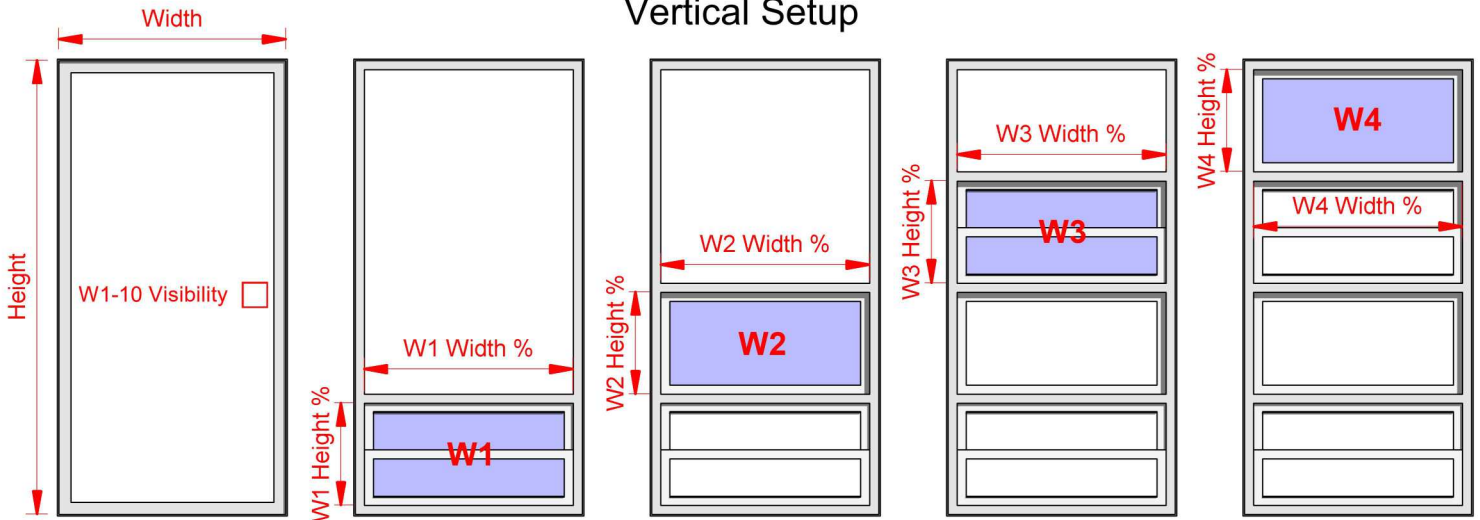
Window Trim Visibility   
Window Bottom Trim Visibility



Window Trim Visibility   
Window Bottom Trim Visibility

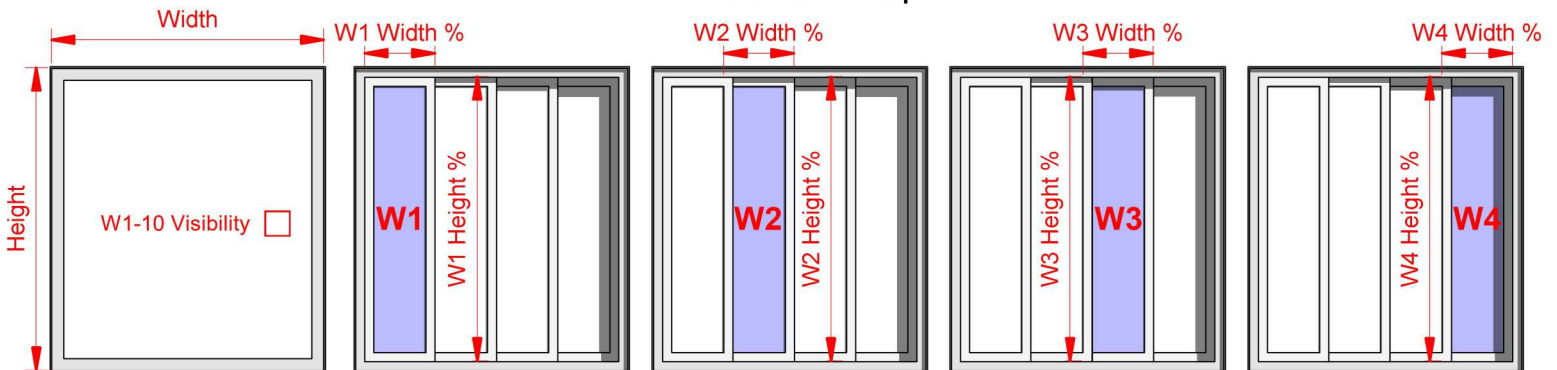


### Vertical Setup



Parameters				
W1-10 Visibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
W1-10 Width %	100	100	100	100
W1-10 Height %	25	25	25	25
W1-10 Position Horizontal	0	0	0	0
W1-10 Position Vertical	0	0	1	1
W1-10 Offset Horizontal %	0	0	0	0
W1-10 Offset Vertical %	0	25	25	0

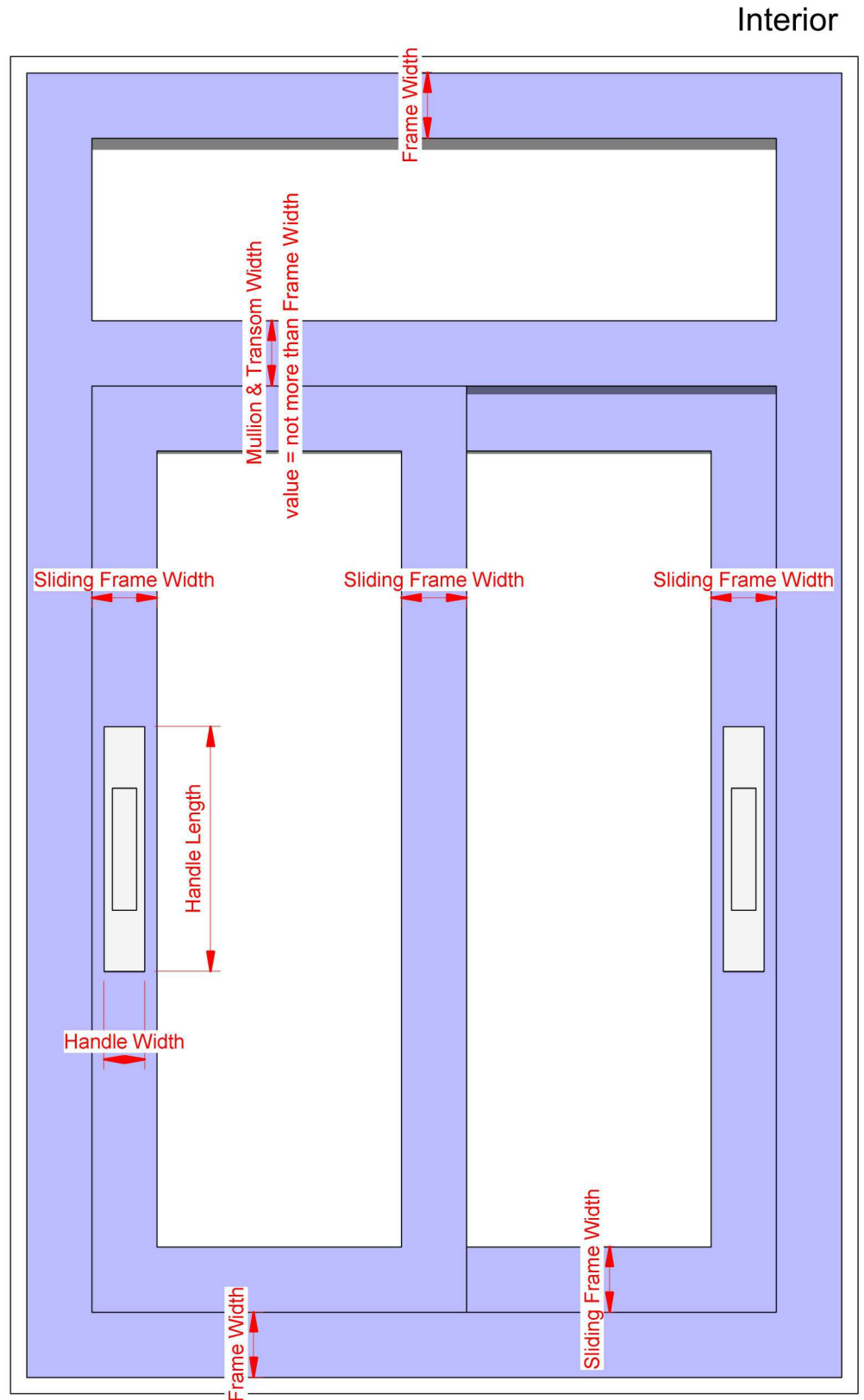
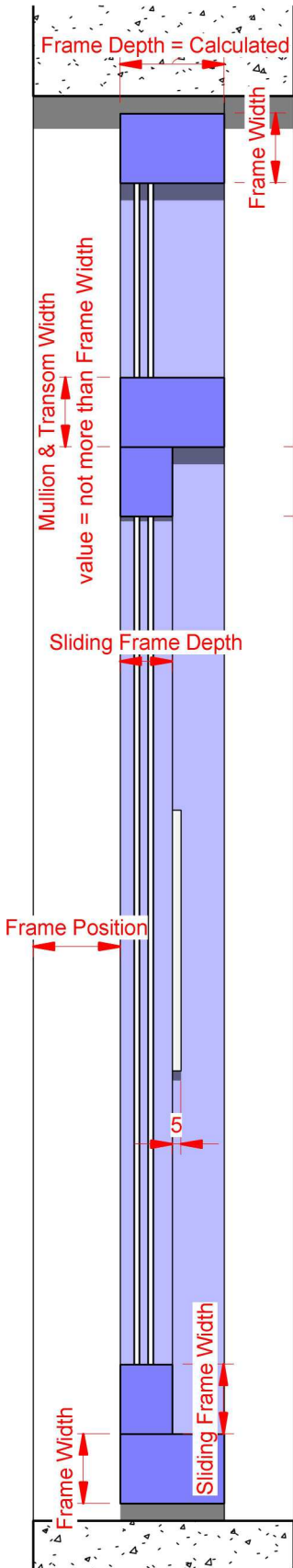
### Horizontal Setup



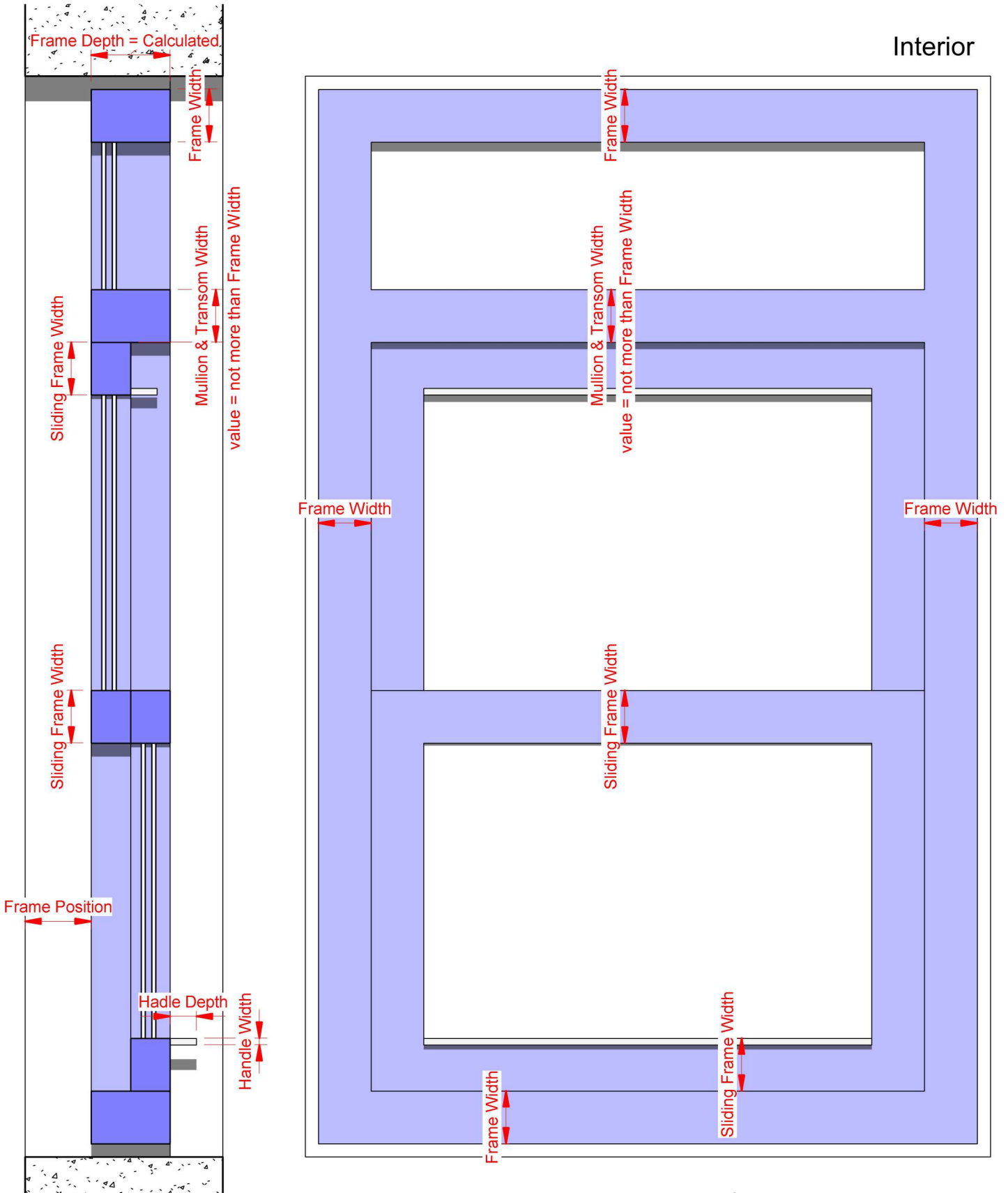
Parameters				
W1-10 Visibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
W1-10 Width %	25	25	25	25
W1-10 Height %	100	100	100	100
W1-10 Position Horizontal	0	0	1	1
W1-10 Position Vertical	0	0	0	0
W1-10 Offset Horizontal %	0	25	25	0
W1-10 Offset Vertical %	0	0	0	0

### The Frame System

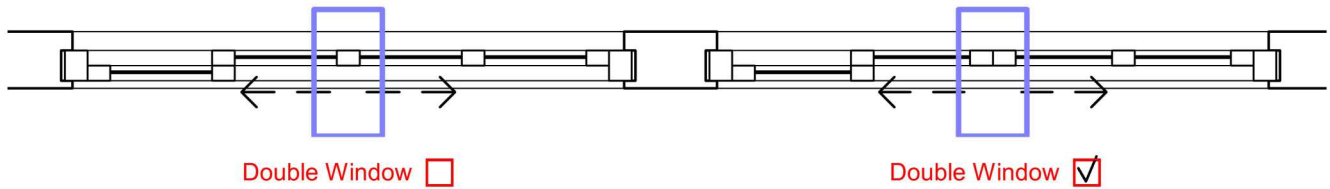
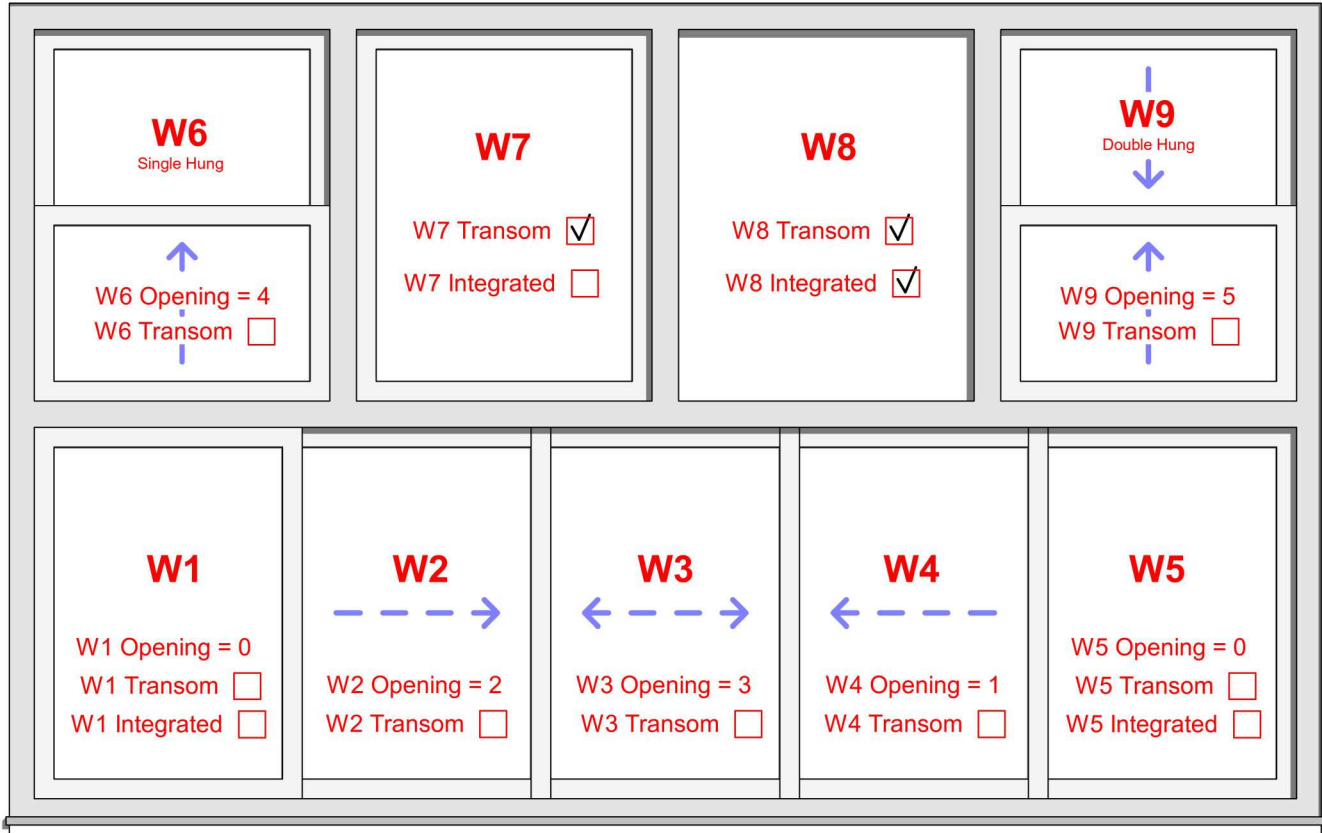
Frame & Sliding frame Dimensions  
Handle  
(Sliding Window)



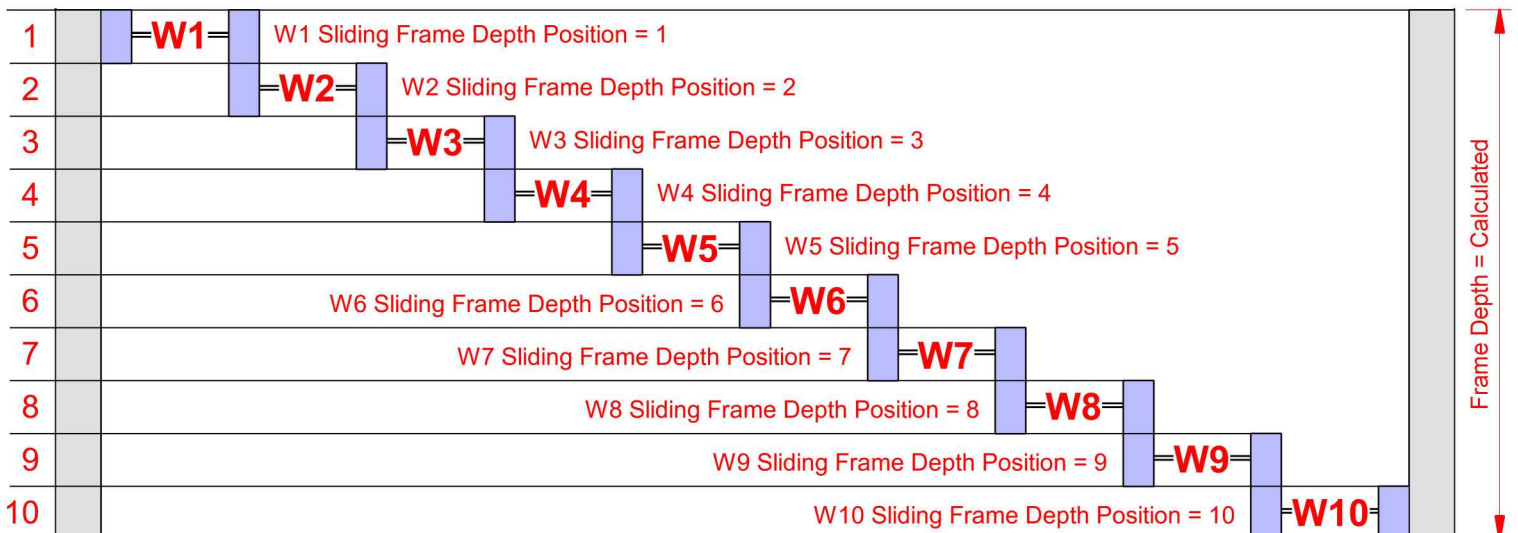
Handle Visibility



Interior



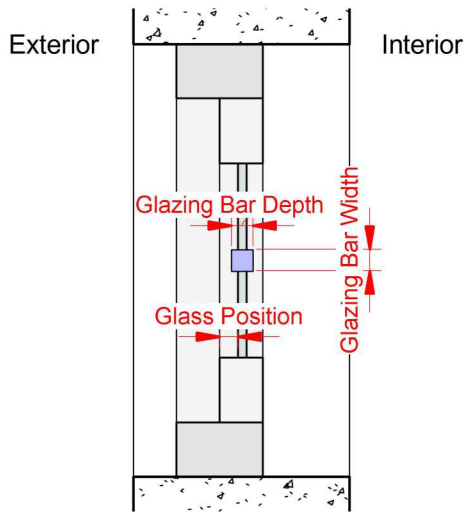
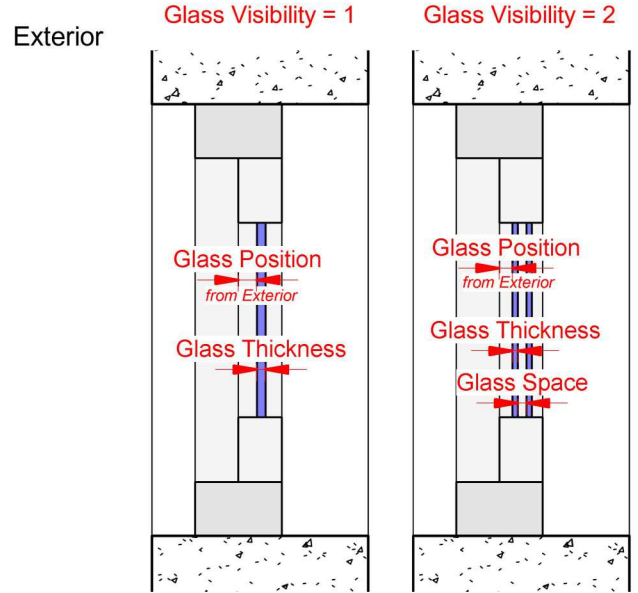
Exterior



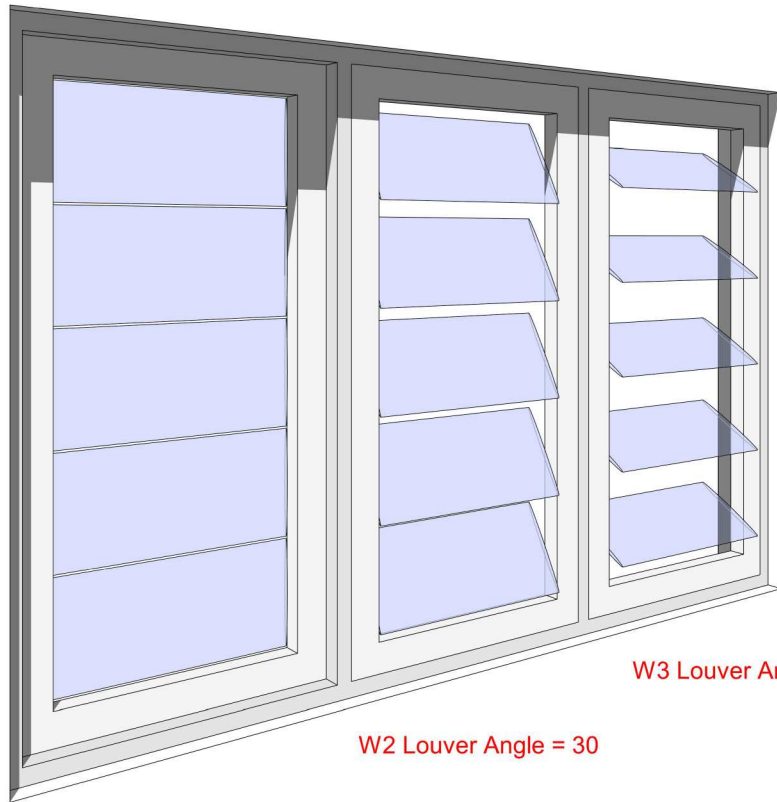
Interior



Glass material for each pane



- W1 Louver Visibility
- W1 Glazing Bar & Louver Horizontal Count = 0
- W1 Glazing Bar Vertical Count = 2
- W2 Louver Visibility
- W2 Glazing Bar & Louver Horizontal Count = 3
- W2 Glazing Bar Vertical Count = 2
- W3 Louver Visibility
- W3 Glazing Bar & Louver Horizontal Count = 3
- W3 Glazing Bar Vertical Count = 0

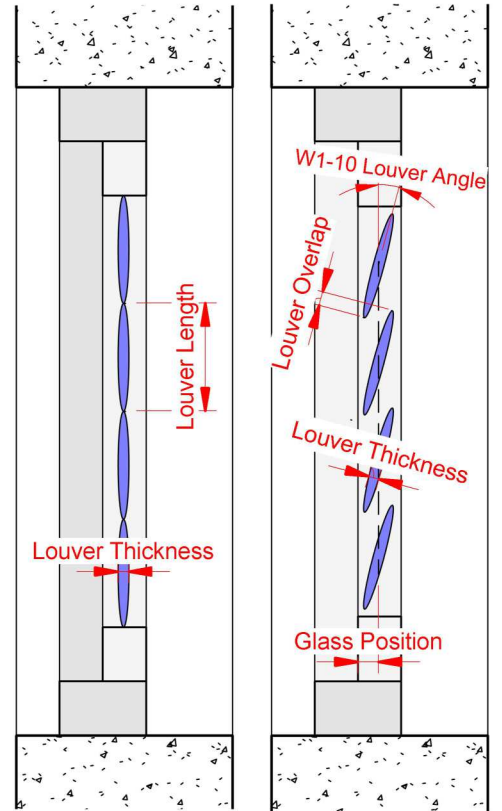


W1 Louver Angle = 0

W2 Louver Angle = 30

W3 Louver Angle = 60

Exterior



W1 Louver Visibility

W2 Louver Visibility

W1 Louver Count

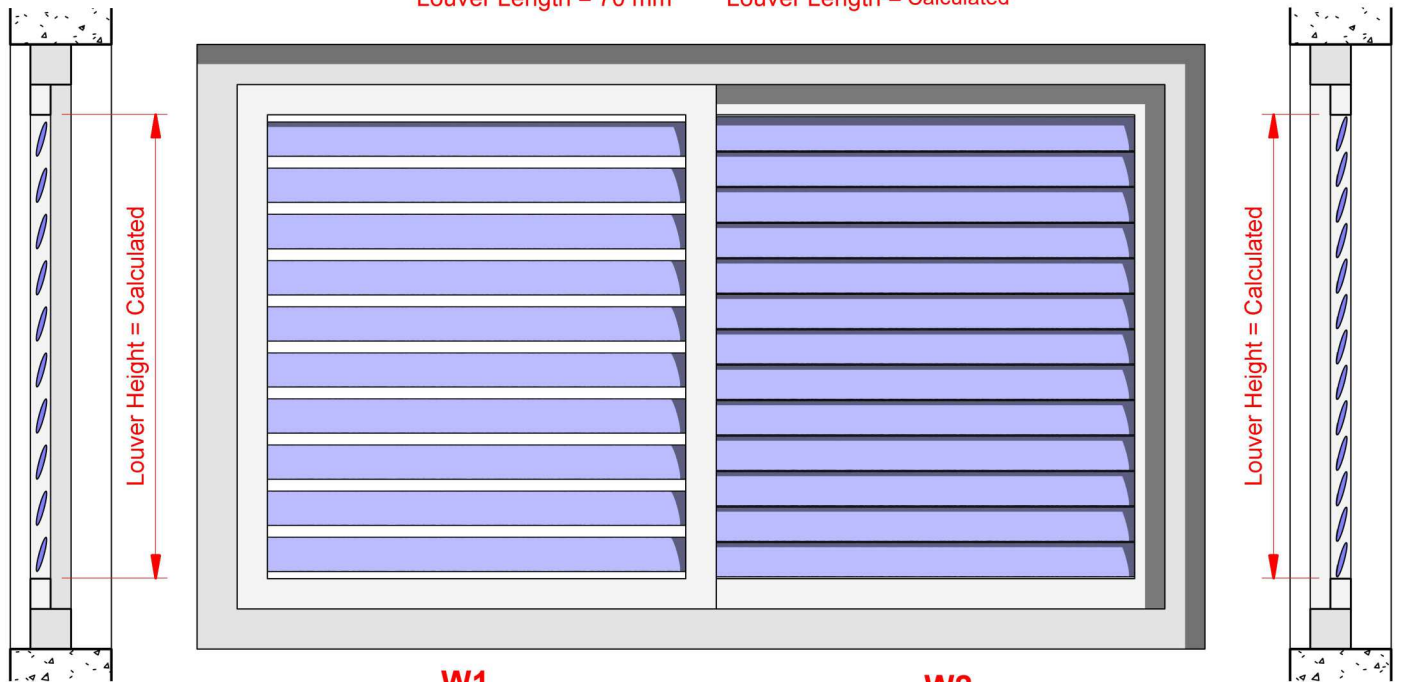
W2 Louver Count

W1 Glazing Bar & Louver Horizontal Count = Calculated

W2 Glazing Bar & Louver Horizontal Count = 10

Louver Length = 70 mm

Louver Length = Calculated



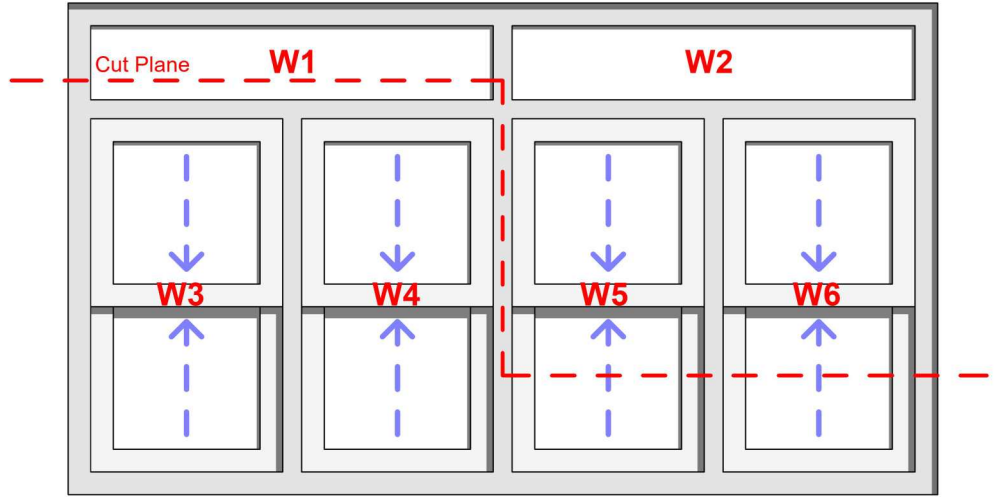
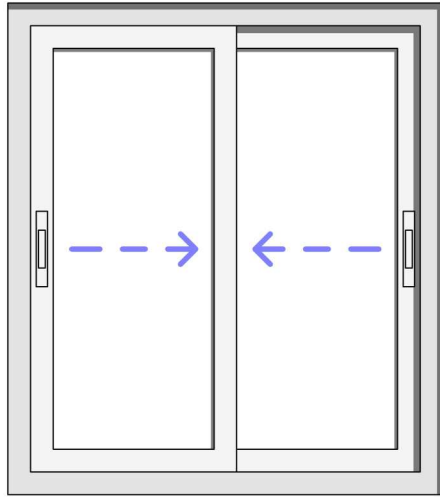
W1

W2

Louver Height / Louver Length = W1 Glazing Bar & Louver Horizontal Count

Louver Height / W2 Glazing Bar & Louver Horizontal Count = Louver Length

Symbol Lines Elevation 2D



Symbol Lines Arrow Interior



W1 Plan Symbol Line Visibility

W4 Plan Symbol Line Visibility

W2 Plan Symbol Line Visibility

W5 Plan Symbol Line Visibility

W3 Plan Symbol Line Visibility

W6 Plan Symbol Line Visibility

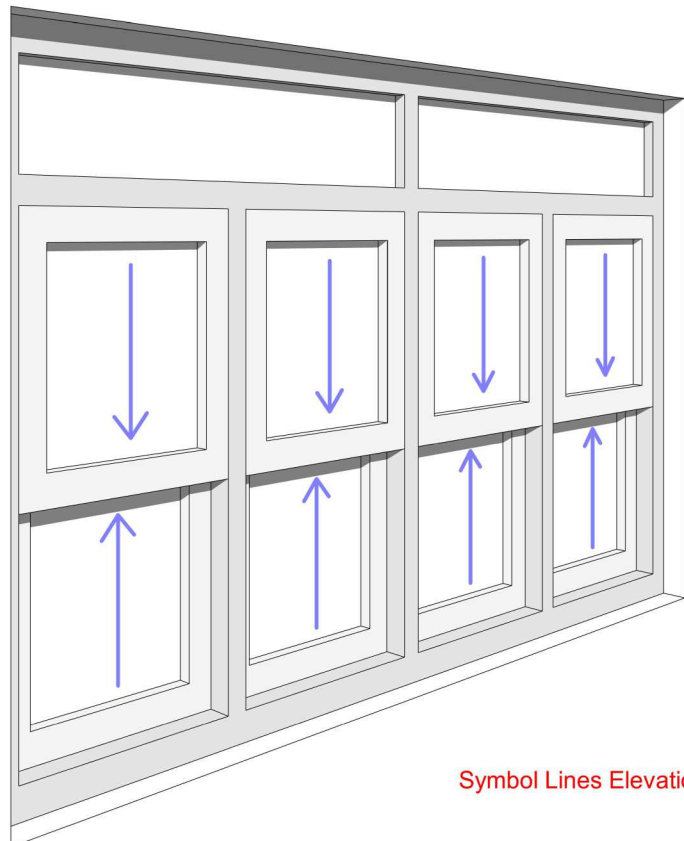
Symbol Lines Arrow Offset

Symbol Lines Arrow Interior



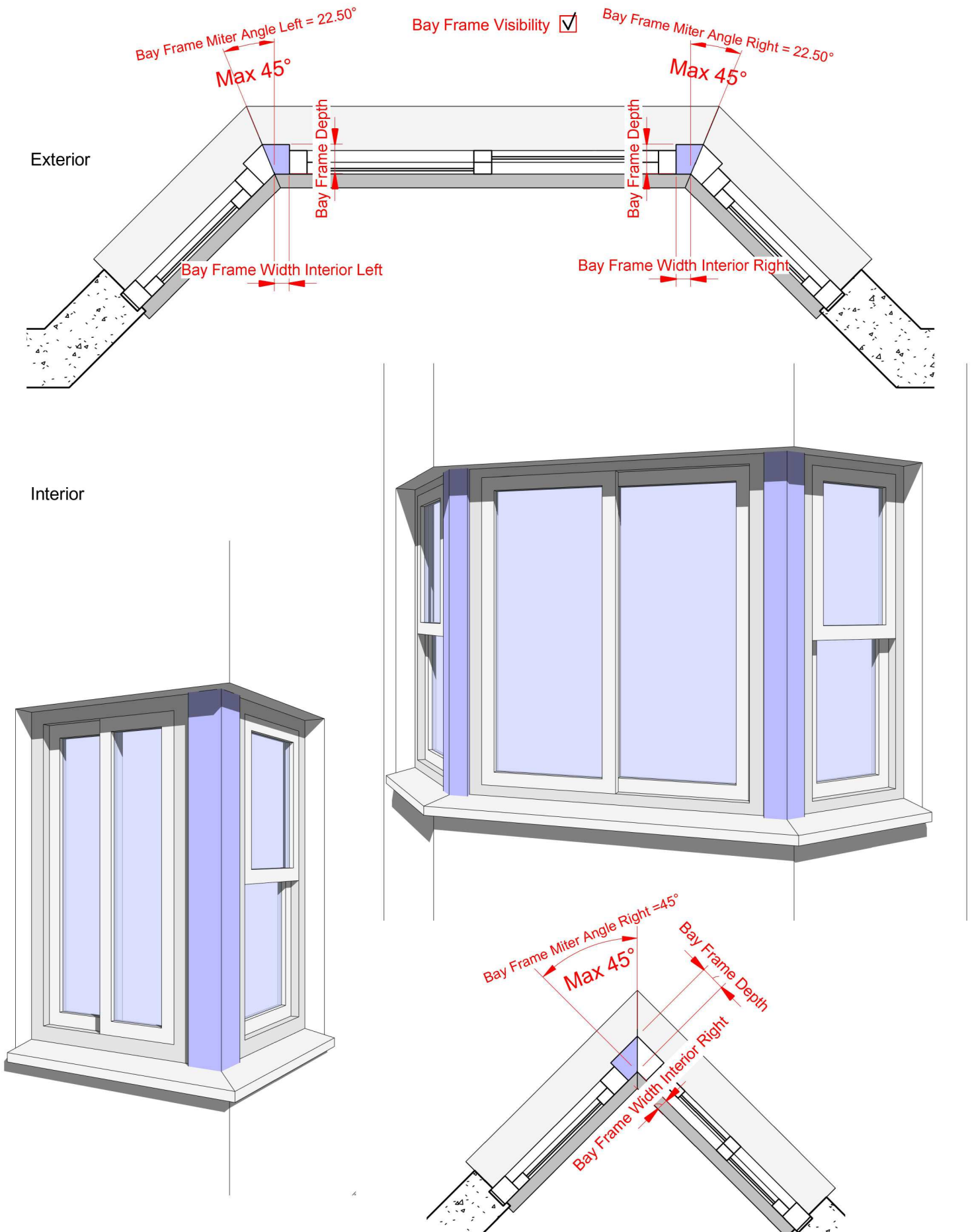
Symbol Lines Plan 2D

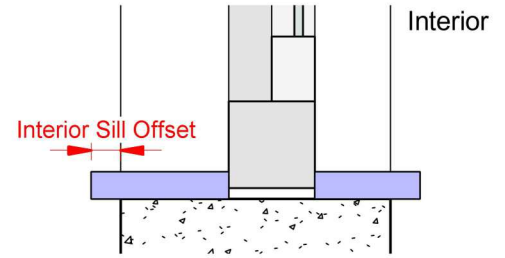
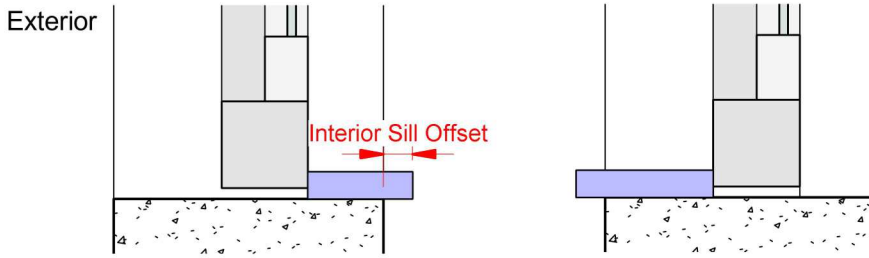
Symbol Lines Plan 2D



Symbol Lines Elevation 3D

Symbol Lines Elevation 3D





Interior Sill Interior Or Exterior Side Visibility = 1

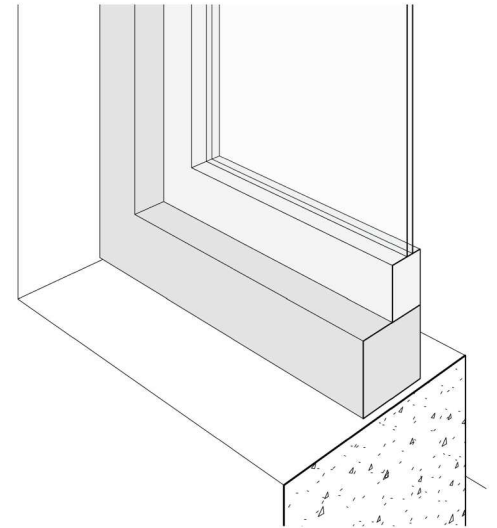
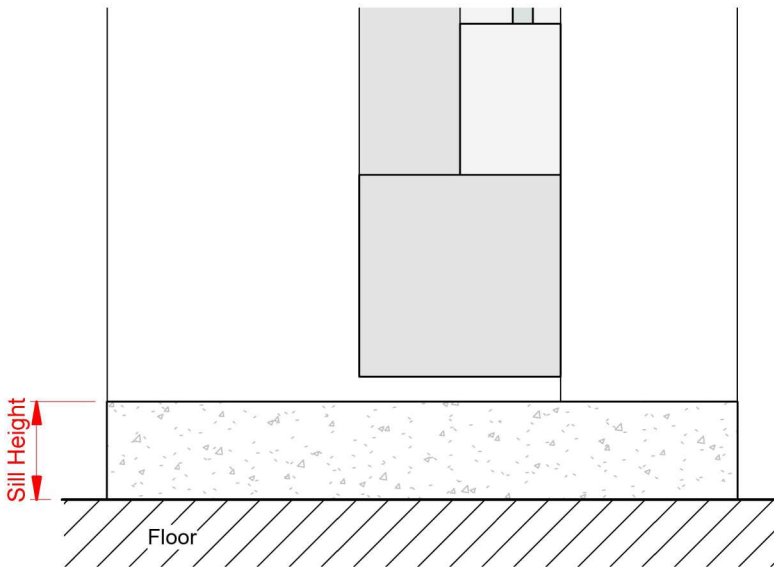
Interior Sill Interior Or Exterior Side Visibility = 2

Interior Sill Interior Or Exterior Side Visibility = 3

Exterior Sill Visibility = 0

Exterior Sill Visibility = 0

Exterior Sill Visibility = 0

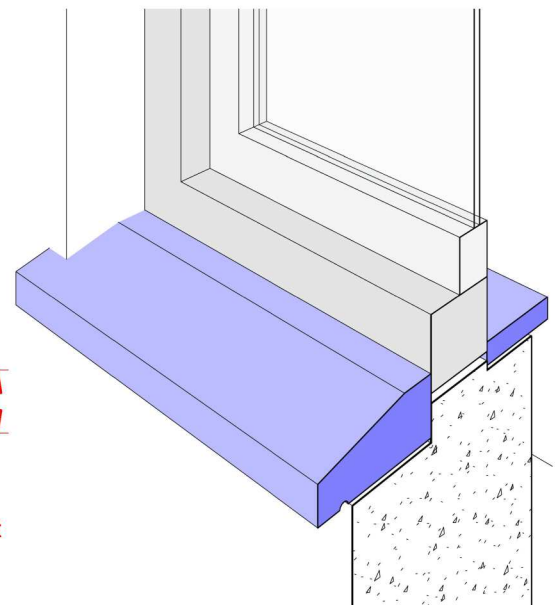
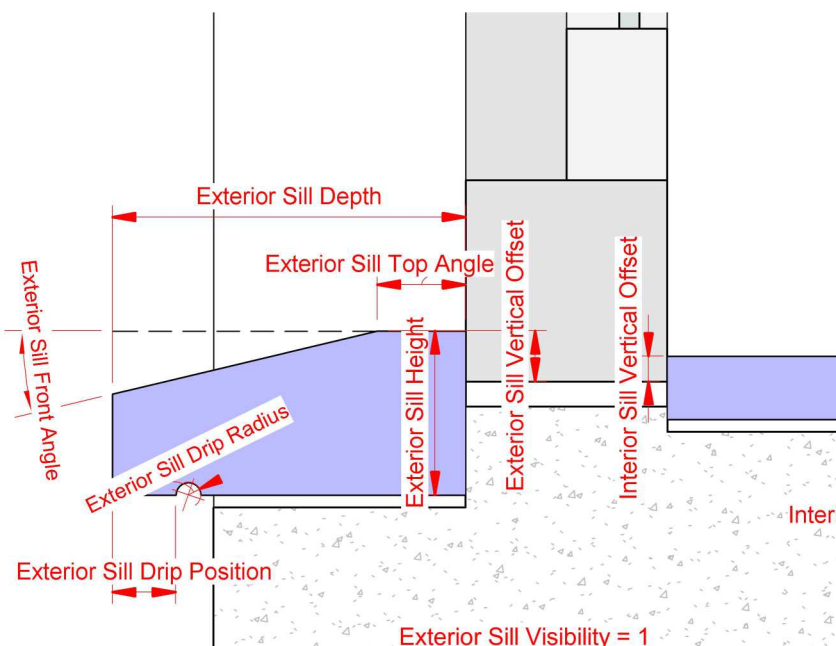


Exterior Sill Visibility = 0

Interior Sill Interior Or Exterior Side Visibility = 0

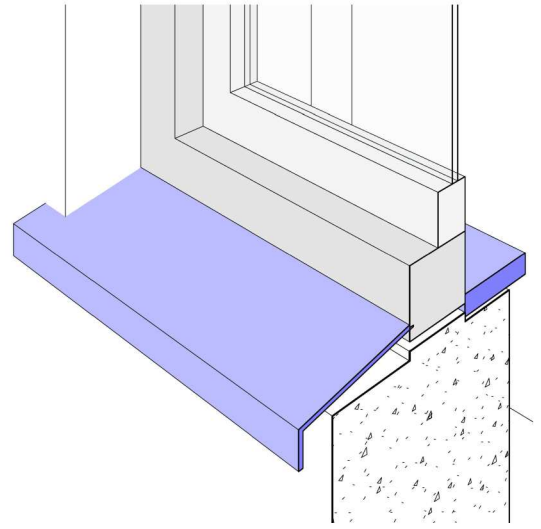
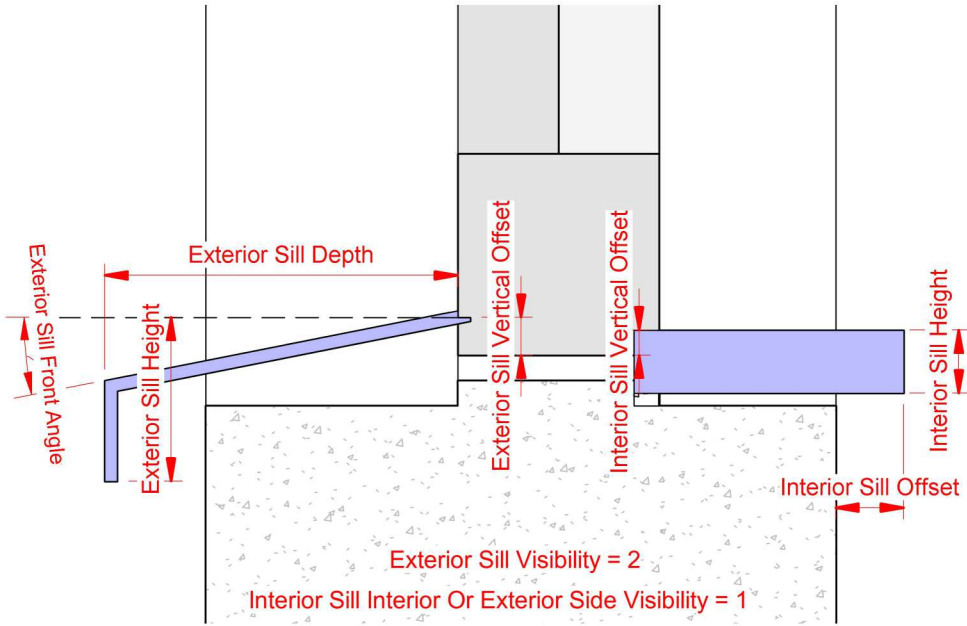
Exterior

Interior



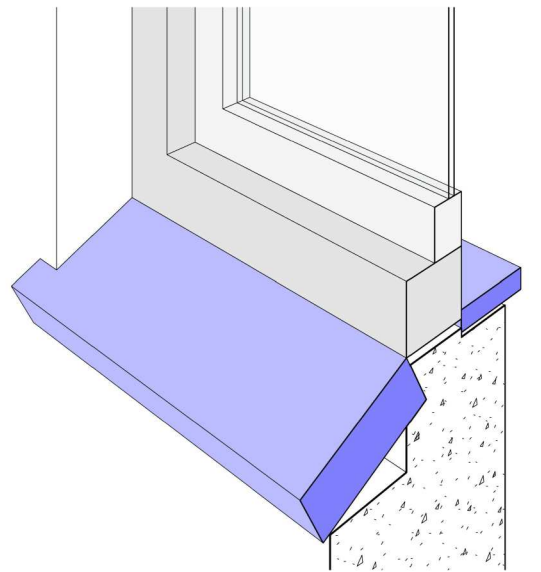
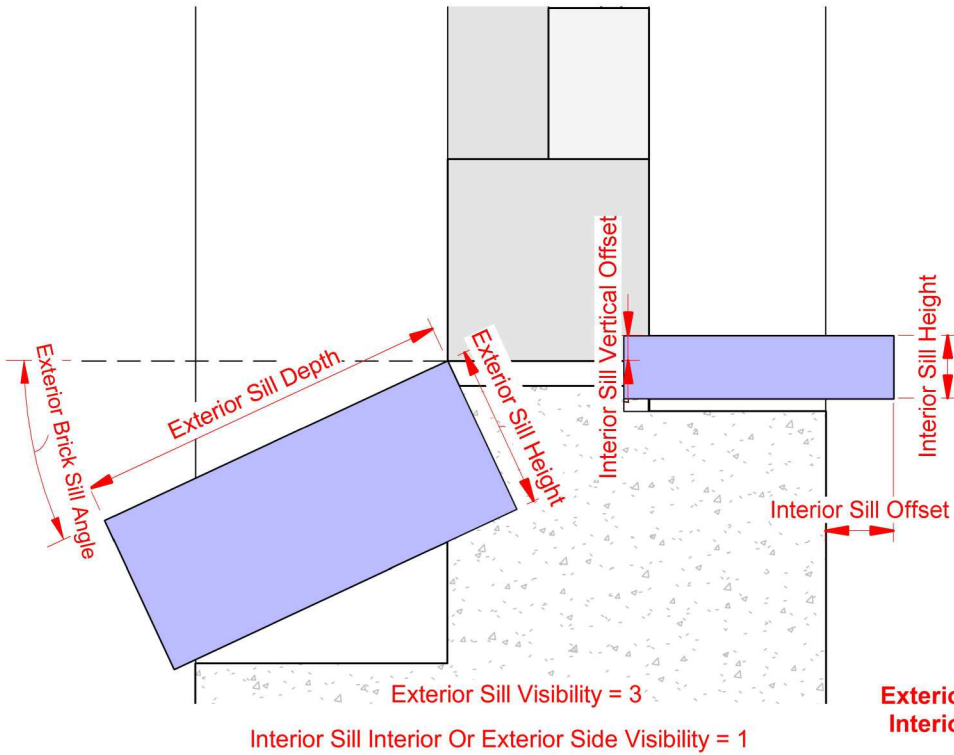
Exterior Sill Visibility = 1  
Interior Sill Interior Or Exterior Side Visibility = 1

**Note:**  
Exterior Sill Vertical Offset = up to Exterior Sill Height  
Interior Sill Vertical Offset = up to Interior Sill Height

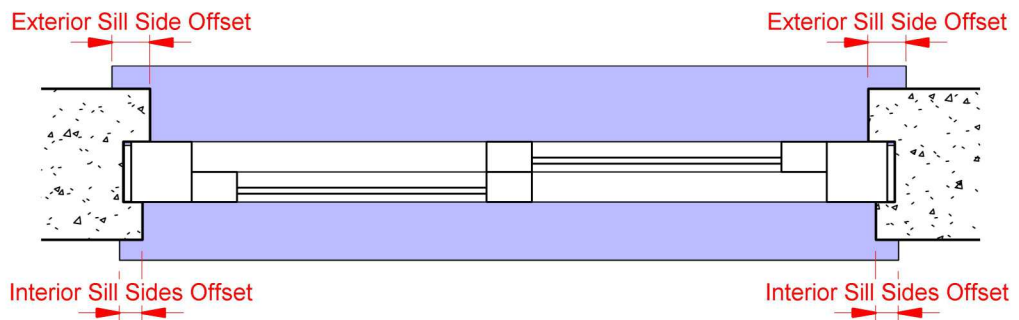


Exterior

Interior



**Note:**  
 Exterior Sill Vertical Offset = up to Exterior Sill Height  
 Interior Sill Vertical Offset = up to Interior Sill Height



Interior

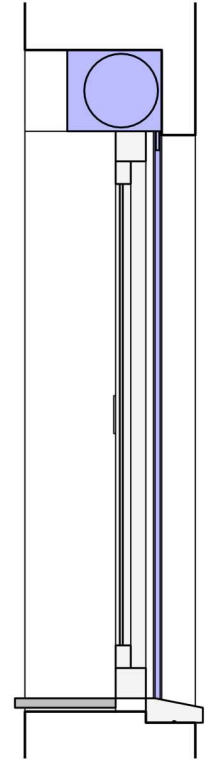
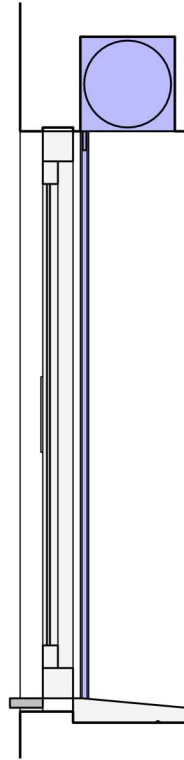
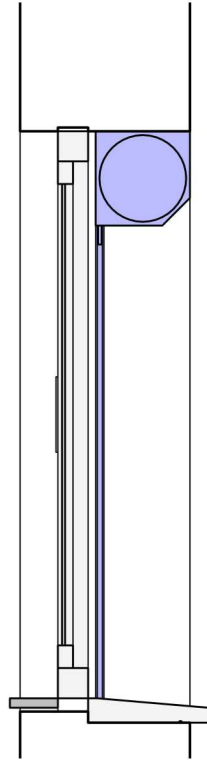
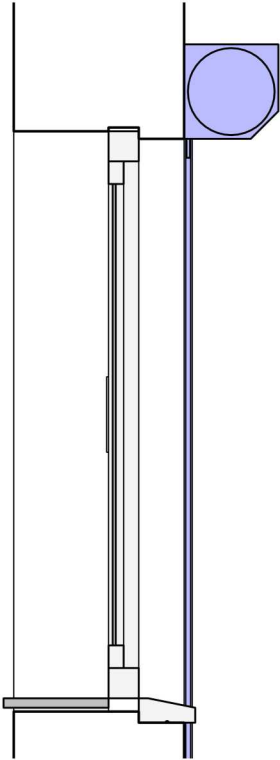
Exterior

Type 1

Type 2

Type 3

Type 4

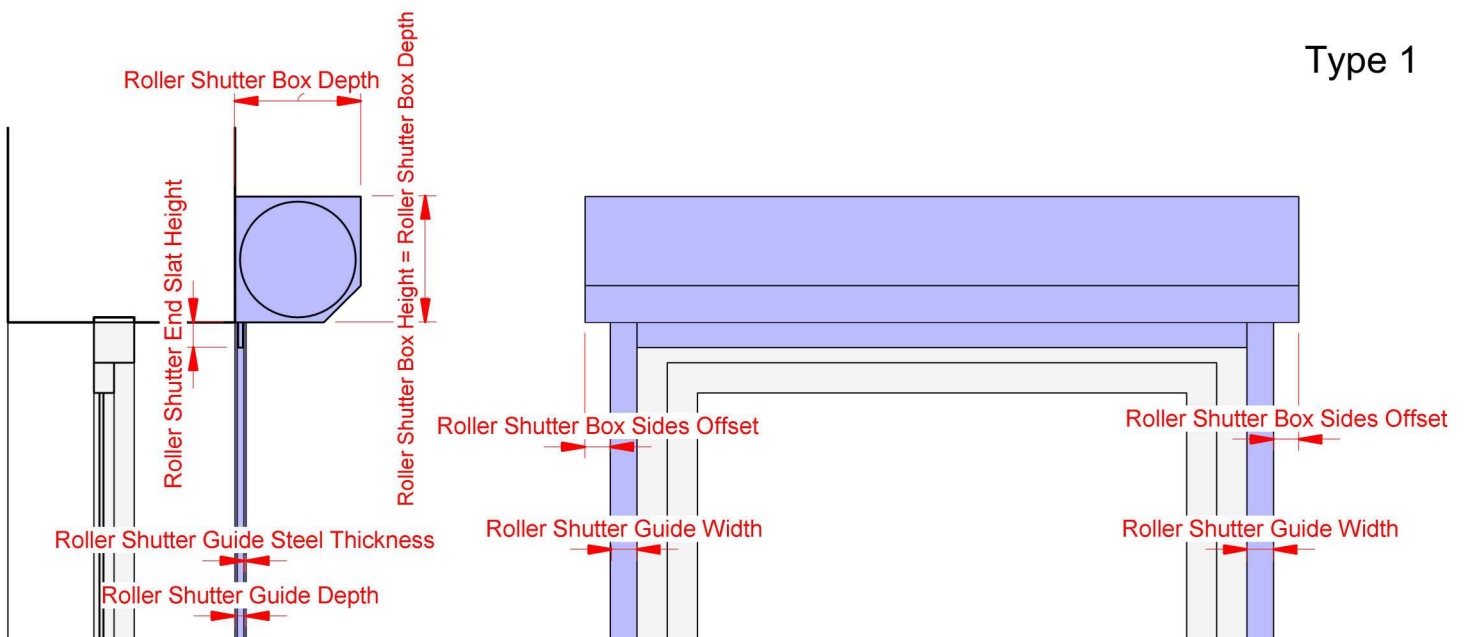


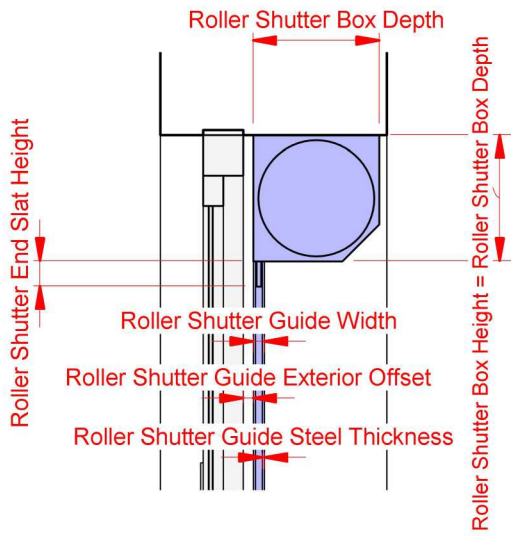
Roller Shutter Visibility = 1

Roller Shutter Visibility = 2

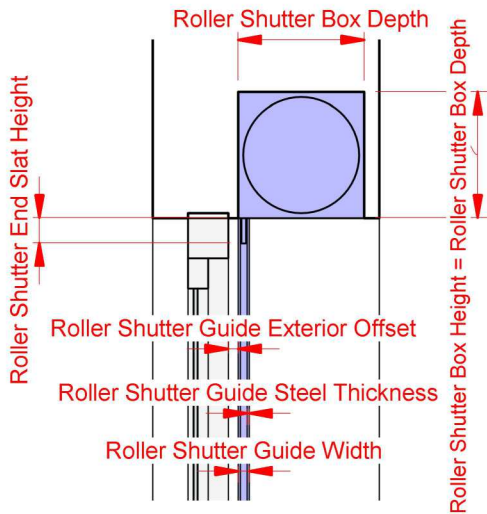
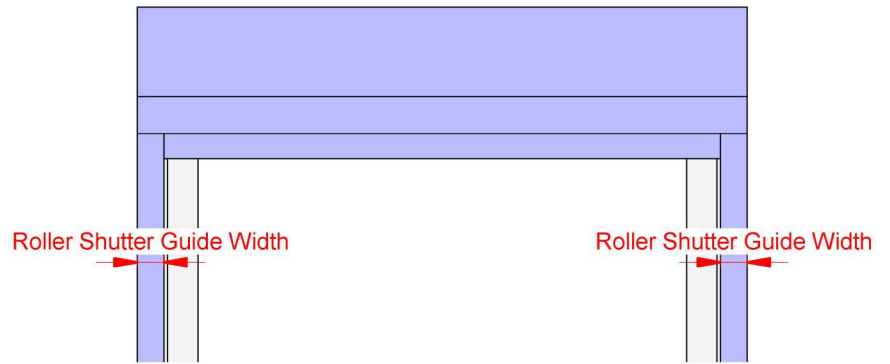
Roller Shutter Visibility = 3

Roller Shutter Visibility = 4

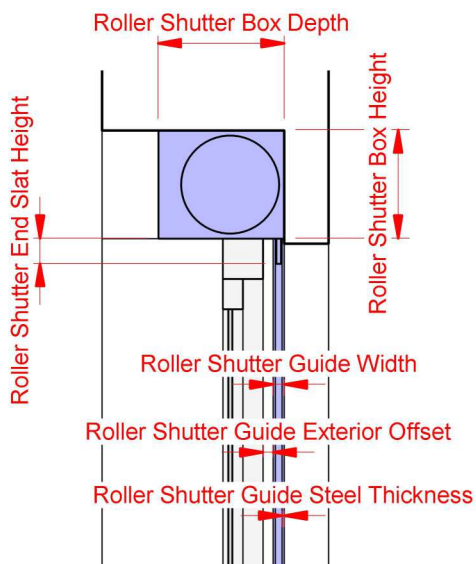
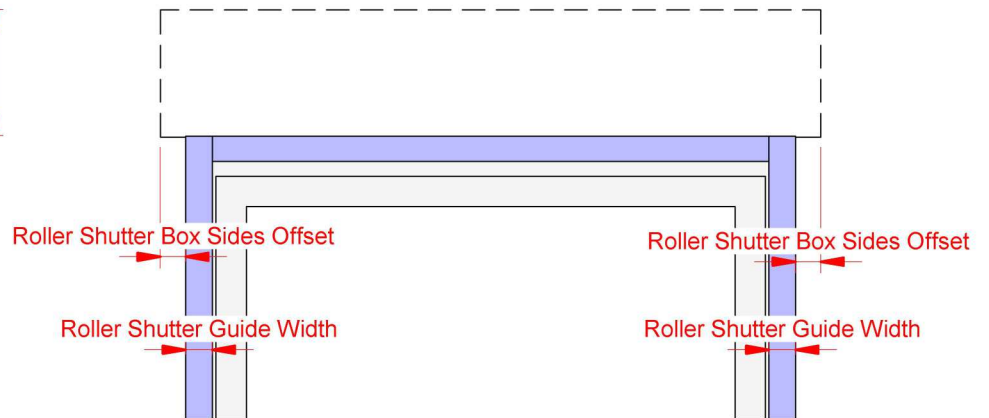




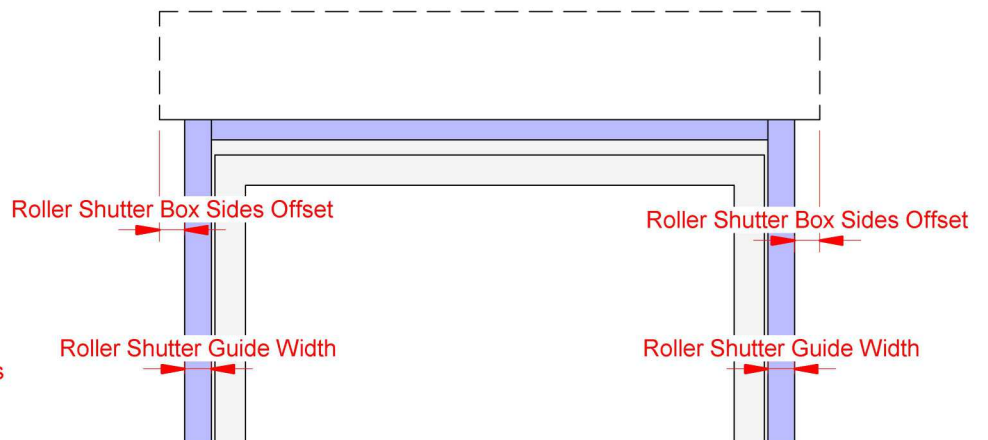
Type 2



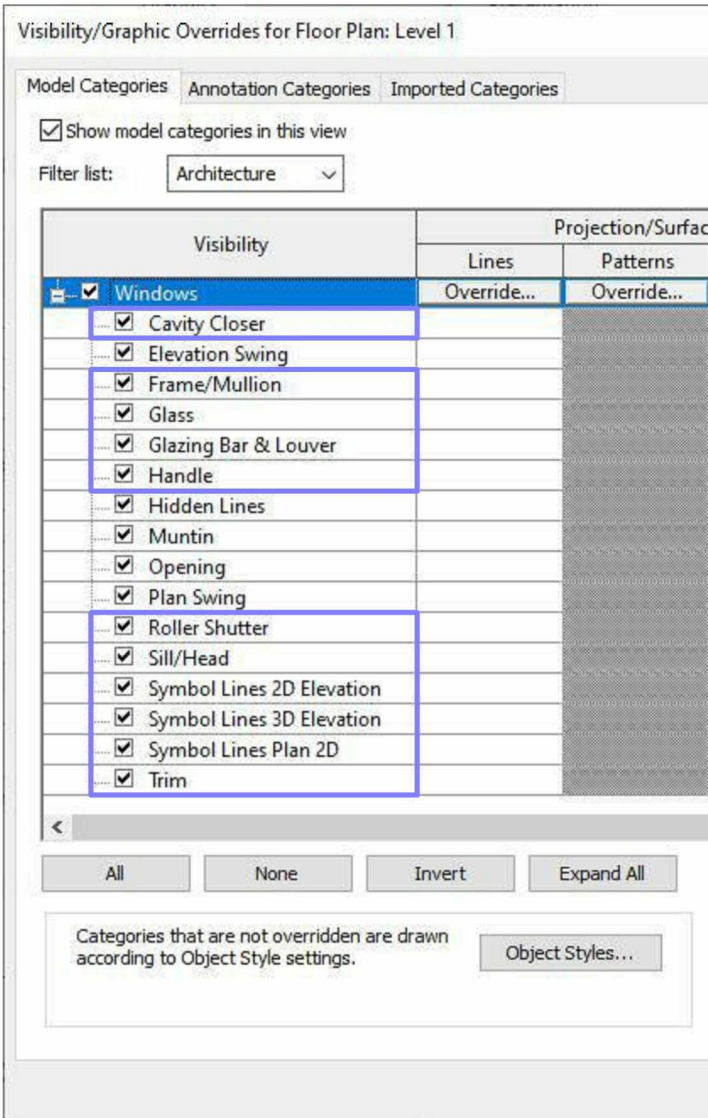
Type 3



Type 4

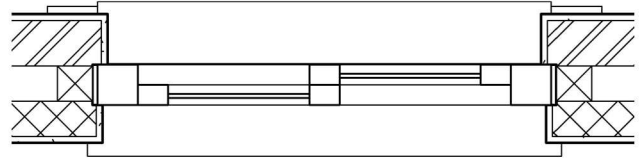




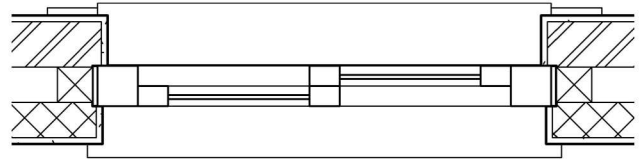


Exterior

Detail Level: Fine



Detail Level: Medium



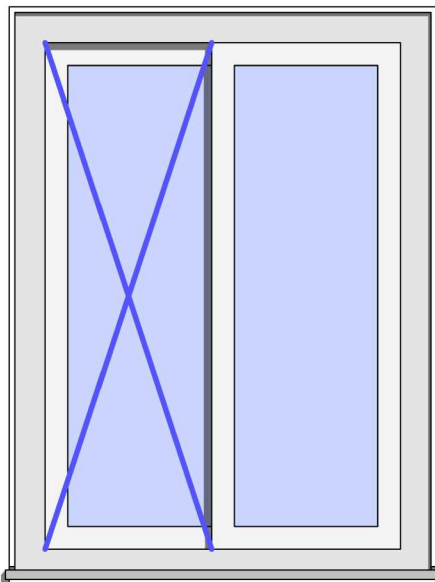
Detail Level: Coarse



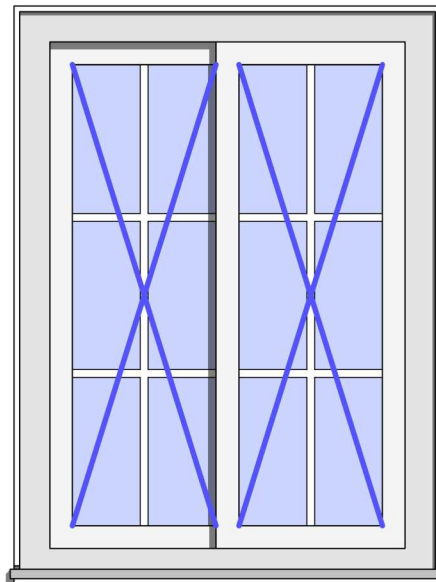
Interior

Shared Parameters:

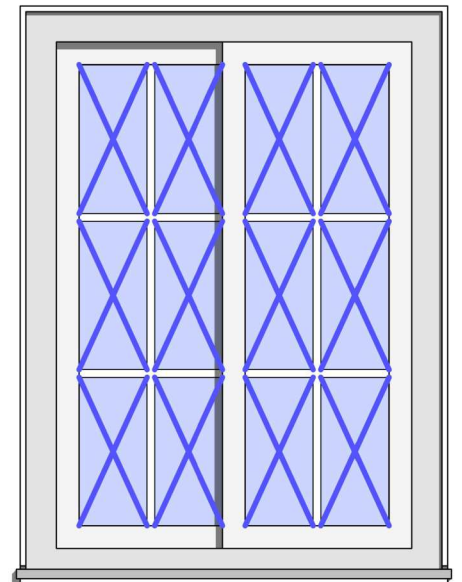
- .Bay Frame
- .Frame Depth
- .Frame Width
- .Panel Double Glazing
- .Roller Shutter
- .Rough Height
- .Rough Width
- .Sliding Frame Depth
- .Sliding Frame Width



.Opening Area



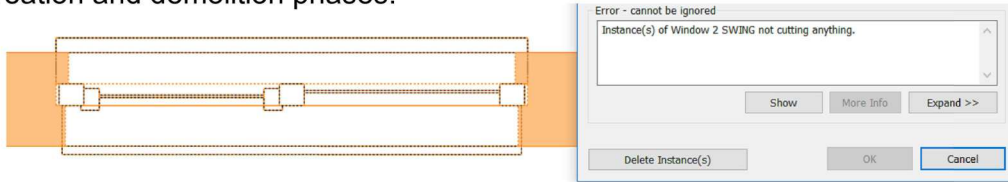
.Glass Area With Glazing Bar



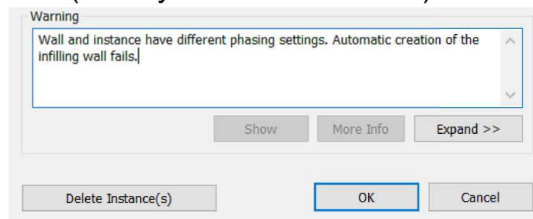
.Glass Area Without Glazing Bar

Instead of the simple opening tool, this family uses various voids for the wall opening, to provide features like rough distance, render offsets, and taper reveals. This causes issues in the following scenarios:

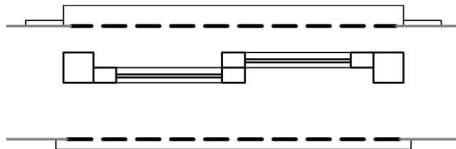
1. When placing the same window (copied instance or newly loaded) in the exact same place with different creation and demolition phases.



2. Getting a warning when host wall has **"Phase Created: Existing"**, and window has **"Phase Created: New Construction"** (usually used in renovation).



3. Wall opening lines are hidden when host wall has **"Phase Created: Existing"**, and window has **"Phase Created: New Construction"** (usually used in renovation).



### Solutions:

1. Move one of the window instances by a small distance (min 0,2 mm/0,55 decimal inches), applied either to the **Sill Height** or **Frame Position** (instance parameters).
2. Apply a small distance to the **Exterior Void Offset** (instance parameter) (min 0,2 mm/0,55 decimal inches)
3. Activate instance parameter **"Opening Lines"** and setup visibility via Visibility/Graphic.

