

House Bevel Transom Designs by George McGinn

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“House Bevel” Designs in Transoms and Larger window Panels.

The “house” bevel was a favorite for interior and exterior spaces in the 1880’s through the early 1900’s. Today these bevels are still manufactured but in limited sizes.

Here is an image of a 30 3/4” width and 14 3/4” high transom. It uses a top and bottom border of 1” high bevels in addition to house bevels, 3” square bevels and half squares at the sides. The photo shows about 1/4 of the width.

Photo #1



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In this document I address transom design but the same points are valid for larger window layouts, often used in stairway windows in the late 1800s.

Item A – The main design concern is related to the **height** of the opening. Usually a panel is made from 1/8” to 1/2” smaller than an existing opening in each dimension for ease of insertion, possible sagging in an existing opening and any small measurement differences (sometimes it is difficult to achieve very accurate interior measurements). Wood shims at installation and the molding trim make up this difference.

The cause of this height concern is that **modern stock** “house” bevels come in only two sizes:

- Small - 4 1/4” wide and 6 1/8” high
- Large - 4 1/4” wide and 6 5/16” high

Not much difference! There is also a “half-house” which is 2 1/8” and 6 1/4”, splitting the difference of the two full ones, and is useable with either.

Conclusion A: With the availability of the “half house”, variations in the perimeter trim, and the use of small shims in the lead came, I can fabricate to within 1” to 1 1/2” of **any length**.

Item B – For the heights possible, without the need for excessive grinding, I use three elements:

- Small or larger house bevels, a small difference of 6/16” in total height.
- Different perimeter came (the metal used to secure the glass elements). The widths allow for something in the range of 1/2” total difference. The zinc perimeter came values are:
 - 9/32”
 - 3/8”
 - 1/2”
- The addition of a rectangular bevel border on the top and bottom of the panel, as shown in Photo #1. Since there are many stock bevel widths this allows for a close fit to most opening heights. The available stock bevels come in the following heights. With a border top and bottom the height effect is twice the bevel width.
 - 3/4”, 1”, 1 1/2”, 2”, 3” and 4”

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- Combinations of these bevels could be used to do a double border top and bottom, for additional possibilities.

Conclusion B: With the use of a top and bottom border a close match to any height can be achieved. The photograph above used 9/32" zinc came and 1" border bevels to achieve the desired 14 3/4" height for an existing 15" opening.

Historical Restoration Comment:

There are USA companies that make custom sized bevels. However the cost is often as high as 10 times the "stock" bevel cost. In addition there is a design setup charge that results in a significant cost per item for small quantity runs.

In my opinion the **only situation** that might warrant the use of custom bevels is when an historically correct restoration is designed or required due to the historical designation of a building. Then cost is not the main concern but rather accuracy in matching the original or other existing window treatments.

Other Design Layouts:

If the opening height is smaller than 12 1/2", the design offered in Photo #1 will not work even without the border. An alternative layout is shown in below.

Photo #2



The width is addressed as before. The **smallest height** this layout will fit, using the 9/32" perimeter zinc and the smaller house bevels, is **10 3/4"**. If the opening is under 10 1/2", a house bevel treatment is not possible.

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Height design Chart:

Starting point is:

- the small house bevels at 6 1/8" height,
- 9/32" perimeter zinc came,
- no bevel border.

This yields a height of 12 3/4".

House Bevel Effect:

Bevel Size	Total Height Effect
6 5/16" House	6/16"

Came Effect:

Came Width	Total Height Effect
3/8 "	3/16"
1/2"	7/16"

Top and Bottom Bevel Effect:

Bevel Width	Total Height Effect
3/4"	1 1/2"
1"	2"
1 1/2"	3"
2"	4"
3"	6"
4"	8"

So with all these variations many heights can be accommodated.