

# Mat Cutting

**Jeffrey Sward**  
**April 2025**

v 4.8

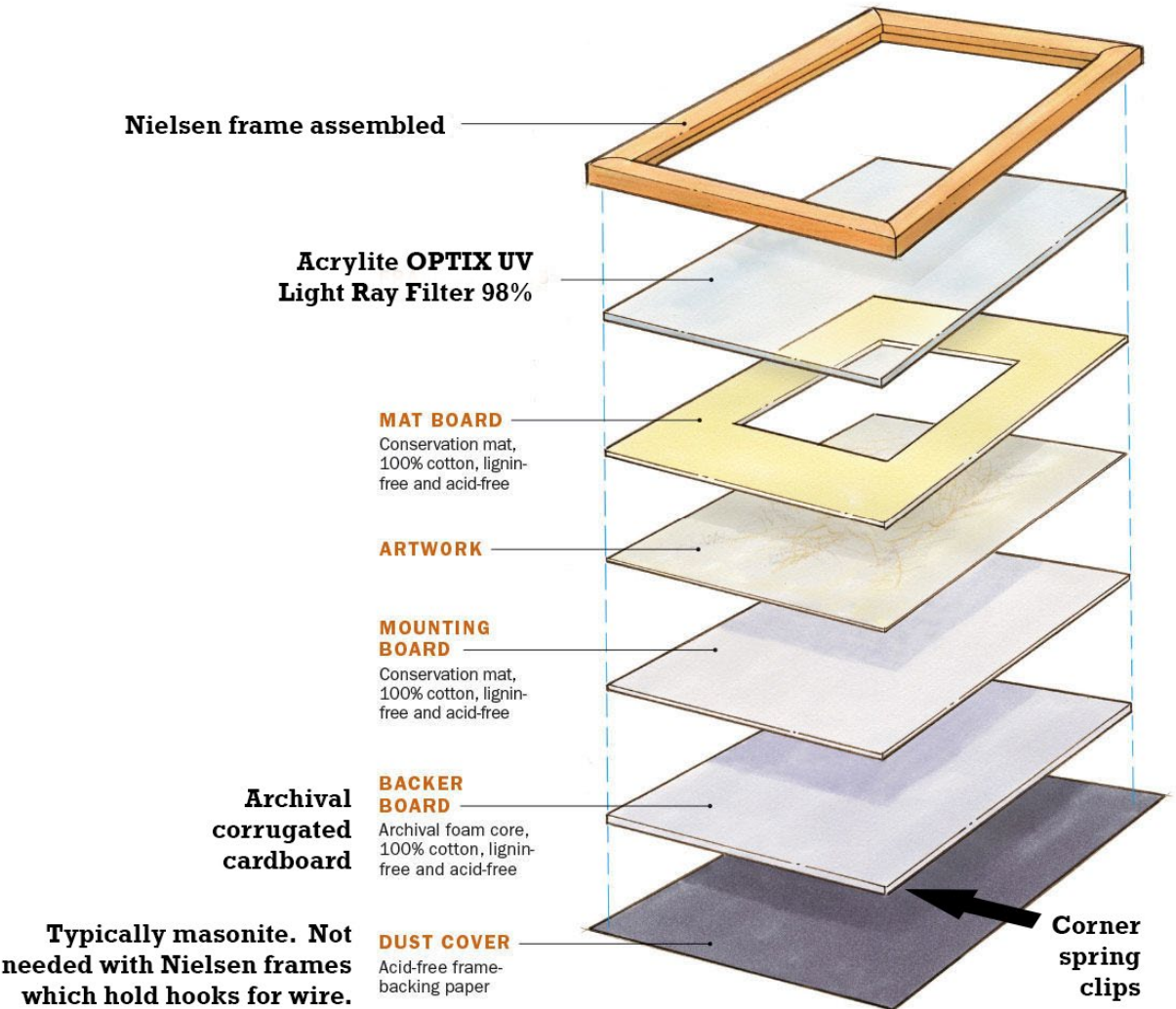
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# Determine Your Requirements

- Size of final art work?
- Is archival acid free needed?
- Print loose in sandwich or photo corners?
- Nielsen frames ok?
- Mat cutter or free hand?
- Research gallery and/or exhibition framing requirements and conform to requirements

# Overall Scheme





## Side view assembled sandwich

# Plan for Cutting Window Mats

- Matting and framing applies to any flat art work. Therefore, there are more suppliers compared to photo only
  - Plan three times
  - Measure twice
  - Cut once

# Bill of Materials

- Board
- Nielsen frame parts
- Plexiglass
- Backing board Grey E Flute Corrugated Board
- Window mat
- Nielsen brand omni hanger with screw (do not use friction style)
- Picture hanging wire
  - Use wire rated at least twice actual weight
  - At least #4 rated 40 pounds
  - Twist end around. Cover twist with duct tape

# Board

- Hollinger Metal Edge
  - Pure white acid free 4-ply cotton rag board
  - Grey E Flute Corrugated Board
    - Acid/lignin-free buffered

# Nielsen frame parts

- Why Nielsen
  - Meets the "good enough" standard
  - Universally accepted by galleries
  - Available in many locations
- Dick Blick Art Materials
- Buy two bars at a time (usually)
- One frame = 4 bars = 2 @ package with two bars
  - 16x20 = 2@16 (one package) plus 2@20 (one package)
- Frame Hardware

# Nielsen Frame Tools

- Slotted screw driver
- Heavy duty wire cutters for steel
  - Wire cutters for soft brass will not work
  - Chrome Vanadium
  - Cuts 2.0mm piano wire
- Measuring tool
  - Rigid bar or metal tape measure (retractable)
- Mat cutter

# Plexiglass

- Danger danger Avoid Actual Glass
- Archival methods?
- UV-Filtering Acrylic
- Acrylite OPTIX UV Light Ray Filter 98%
  - Optix is a registered trademark of Plaskolite, Inc Columbus Ohio



# Tools and Nielsen Parts

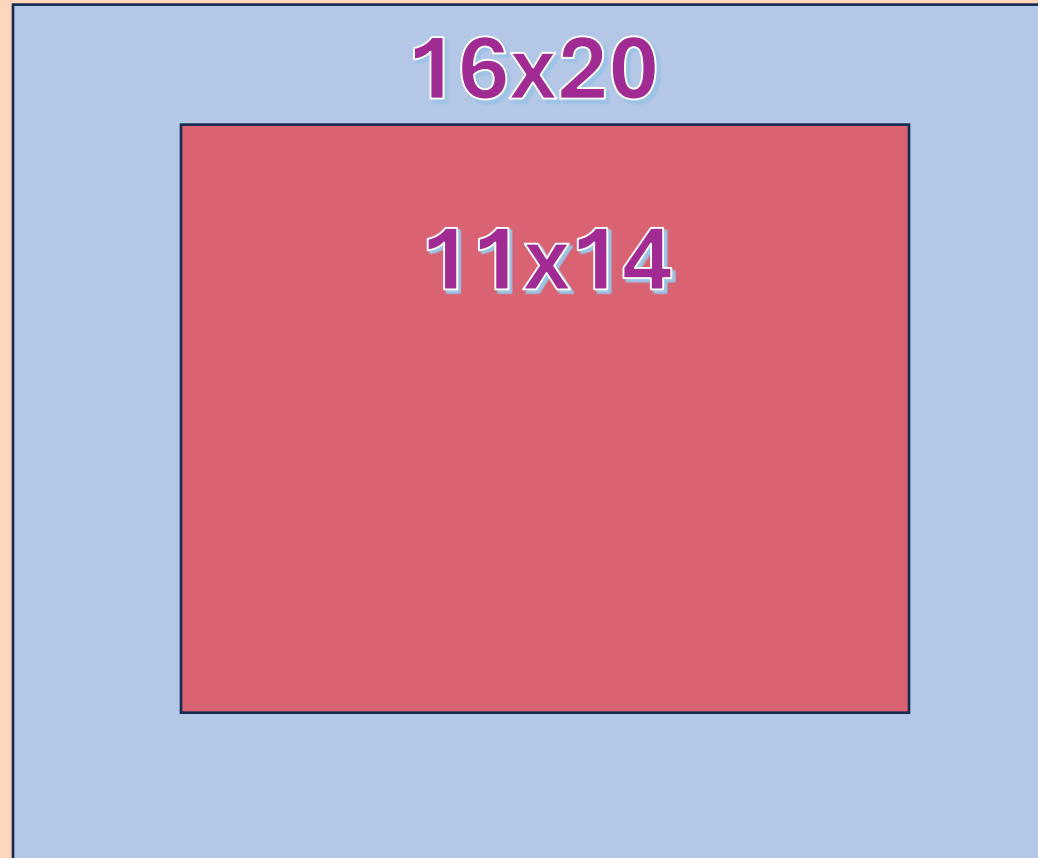


# Assembled Nielsen Frame Back

# Logan Mat Cutter



# Window mat



# Standard Mat Sizing

- Bw = board width
- Bh = board height
- Ww = window width
- Wh = window height
- Lrm = left and right margins
- Tm = top margin
- Bm = bottom margin

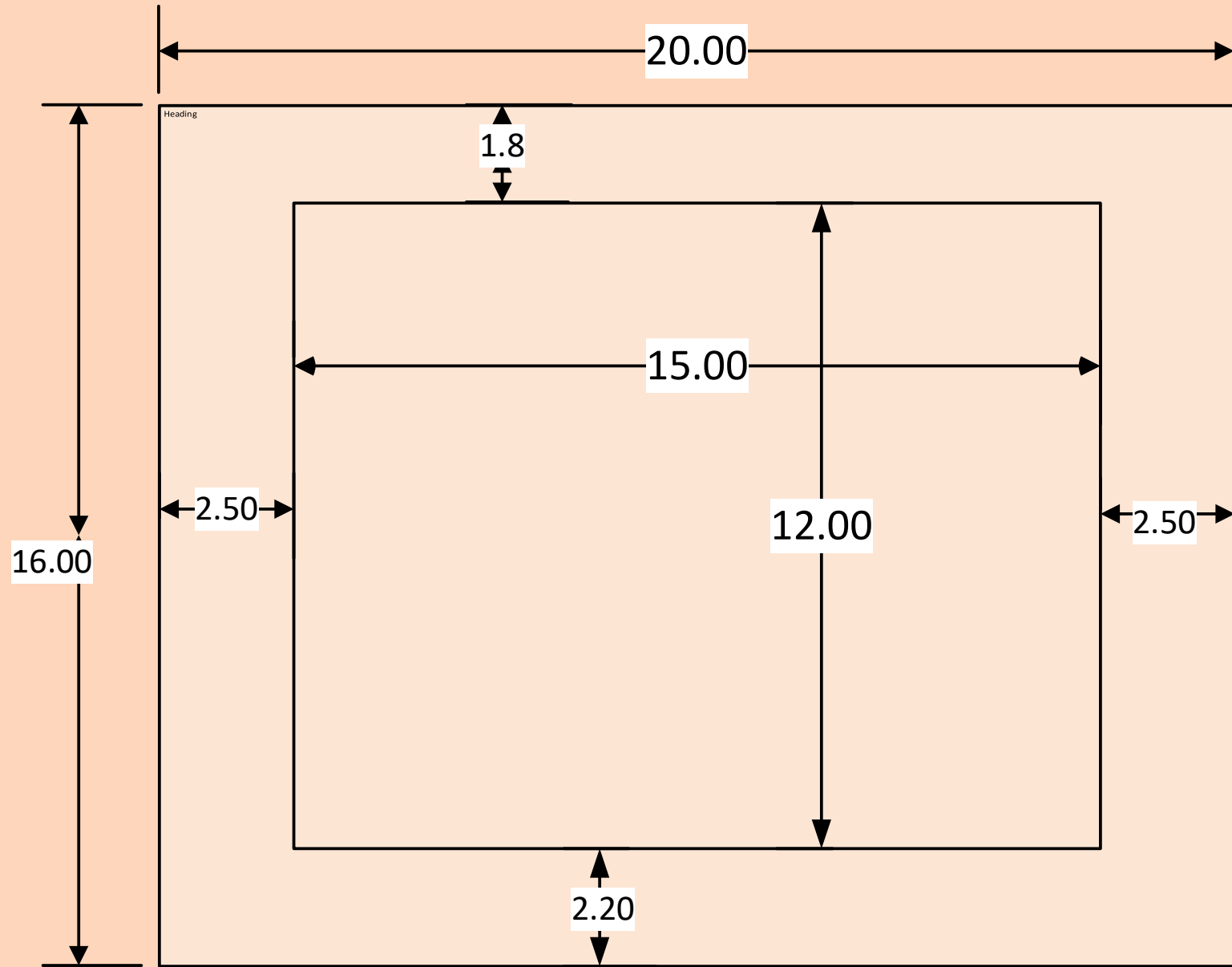
$$\text{Lrm} = (\text{Bw} - \text{Ww}) \times 50\%$$

$$\text{Tm} = (\text{Bh} - \text{Wh}) \times 45\%$$

$$\text{Bm} = (\text{Bh} - \text{Wh}) \times 55\%$$

$$\text{Bh} = \text{Tm} + \text{Bm} + \text{Wh}$$

$$\text{Bw} = (\text{Lrm} \times 2) + \text{Ww}$$



**Mat for  
11x14  
on  
16x20**

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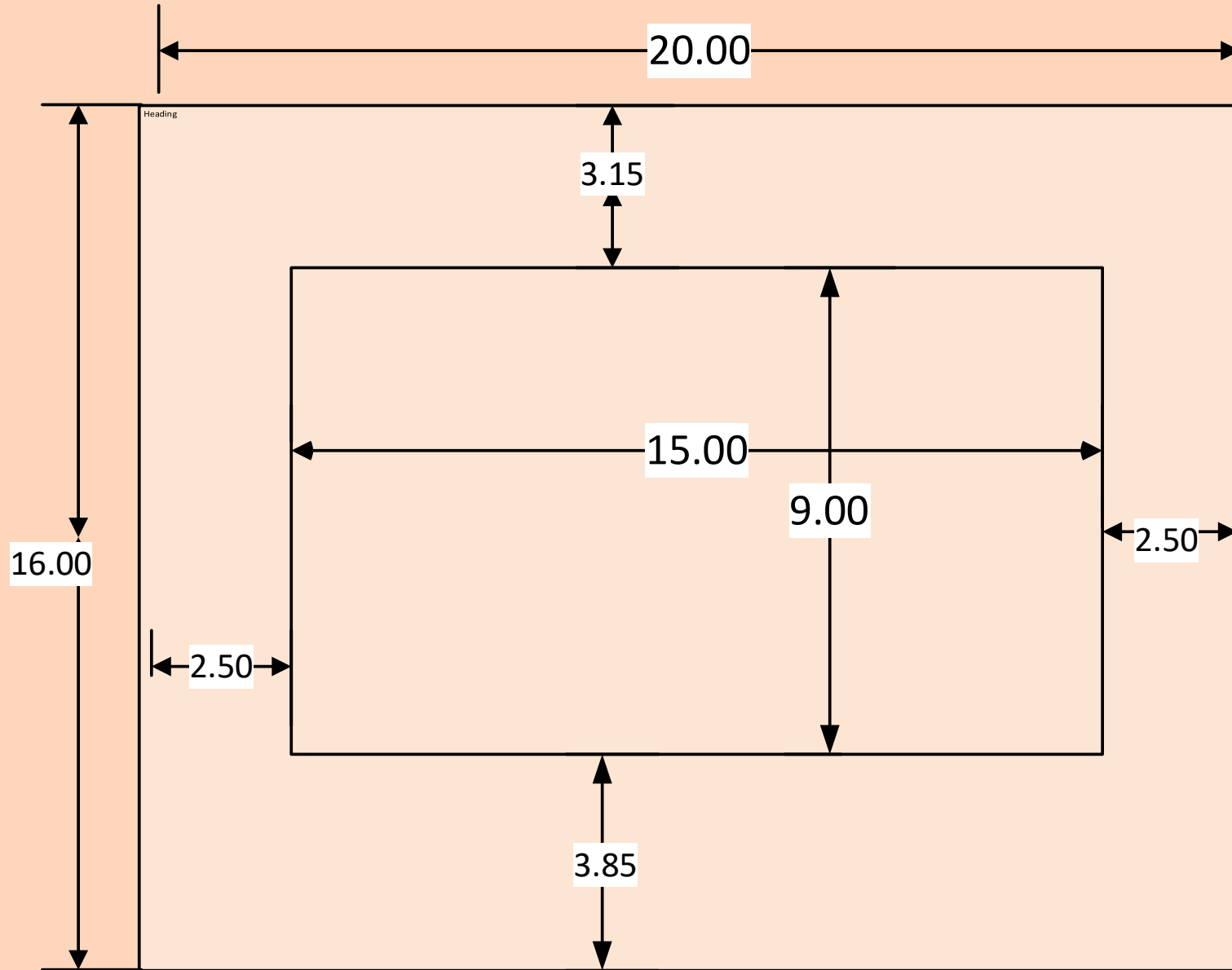
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**Mat for  
8x14 on  
16x20**

# Cutting Window Mats with the Logan Mat Cutter 1-8

1. Marking and cutting is done on the reverse with the obverse facing down
2. Note the width of each edge in the middle of each edge. This will making setting the guides faster.
3. Make marks on board using decimal inches and one of the clear rulers marked in inch tenth. Do not try to convert to English fractions.
4. Mark three dots for each edge. Connect the dots with a straight edge. The square isn't. The dots tend to be more accurate.
5. When step three is done the reverse will show a rectangle with the lines overflowing the corners.
6. Use a backing board. Make sure the actual board is aligned in the cutter. The backing board should be offset in both directions so it does not touch the guides.
7. Use white eraser to prop up the floating end of the mat board.
8. Follow Logan directions on making cuts..

# Cutting Window Mats with the Logan Mat Cutter 9-13

9. The guide can be aligned to the decimal parts with the clear ruler lined up on an whole inch mark.
10. It is better to convert the English decimal unit to metric using Excel. The mat cutter has a metric scale which is more accurate than English fractions.
11. Make each cut three times without moving anything. Especially make sure the corners are being cut at both ends.
12. Move the board clockwise for each next cut. ("to the right.")
13. If the center does not fall out on its own something bad happened. Minor problems can be fixed with a #16 exacto, but it might be better to start over

# Photo corners

- If necessary, cut an oval out of the extra large corners to facilitate print insertion.
- Mark the board with the locations.
- When marking the marks allow for the thickness of the blue line. The blue line centers are at the one inch mark. Some additional slack for print insertion is likely necessary, either when making the marks or when placing the corners in the next step. Insert a blue 3x5 card in the corner and paste one at a time. The use of the card allows for slack. The edges of the 3x5 card align to the marks on the board. Align one edge of the card to one line, followed by the other edge of the card with the other line, while keeping the glue part of the corner in the air. Keeping the card steady, lower the corner into place.

# Supply Sources

- Dick Blick Art Materials
  - PO Box 1769 - Galesburg, IL 61402-1769
  - 601 N Placentia Ave, Fullerton, CA 92831
- Hollinger Metal Edge
  - 9401 Northeast Drive Fredericksburg, VA 22408
  - 293 South Main Street Ste 100, Orange (Commerce store is closed)
- Archival Methods (Eventual Successor to Light Impressions)
  - 655 Driving Park Avenue Suite #5 / Dock #8 Rochester, NY 14613

# Notes About Photoshop and Lightroom

Attribute	Photoshop	Lightroom
Introduced	1987	2007
Scope	Manipulation, creation, and enhancement of single images. Pixel level perfection. Fine-tuning, retouching, precise local adjustments.	Organizing and processing groups of photos. Quick access to frequently used controls.
Target user base	Creative professionals. Photographers as well as photo retouchers, fine artists, graphic designers, compositing artists, etc.	Photographers

- Full chart link in references at end

# References

- Presentation pdfs  
<https://www.jeffreysward.com/speaking/speaking.htm>
- Photoshop – Lightroom comparison chart  
<https://www.jeffreysward.com/editorials/psvslr.htm>
- Links page for photographic resources  
<https://www.jeffreysward.com/editorials/photores.htm>

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