

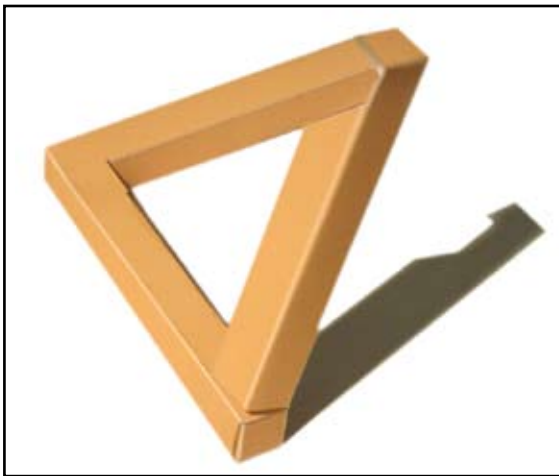
Project LITE

Light Inquiry Through Experiments

<http://lite.bu.edu>

Penrose Triangle

The Penrose Triangle is an example of a class of two-dimensional figures that appears to be realizable in three dimensions, but is not. The object is also referred to as an impossible triangle or Penrose tribar. Although it had already been found in 1934 by Swedish artist Oscar Reutersvard, it was the independent discovery and analysis of the object by Roger Penrose and Lionel Penrose in 1958 that brought impossible objects prominently to the attention of psychologists, artists (including Maurits Escher who incorporated the figure in several of his etchings) and the general public. The version included here consists of essentially three orthogonal rods. When viewed from one direction and distance, it will look like the impossible triangle.



Original References:

Ernst, B. *Adventures with Impossible Figures*. Tarquin Publications, 1986.

Penrose, L. S. and Penrose, R. "Impossible Objects: A Special Type of Visual Illusion." *British Journal of Psychology* 49, 31, 1958.

Reutersvard, O. *Omojliga Figurer I Farg*. Doxa Press, 1985.

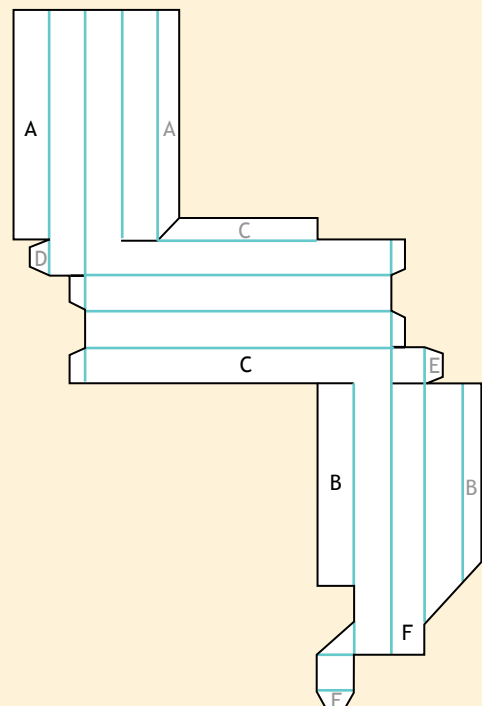
Credits:

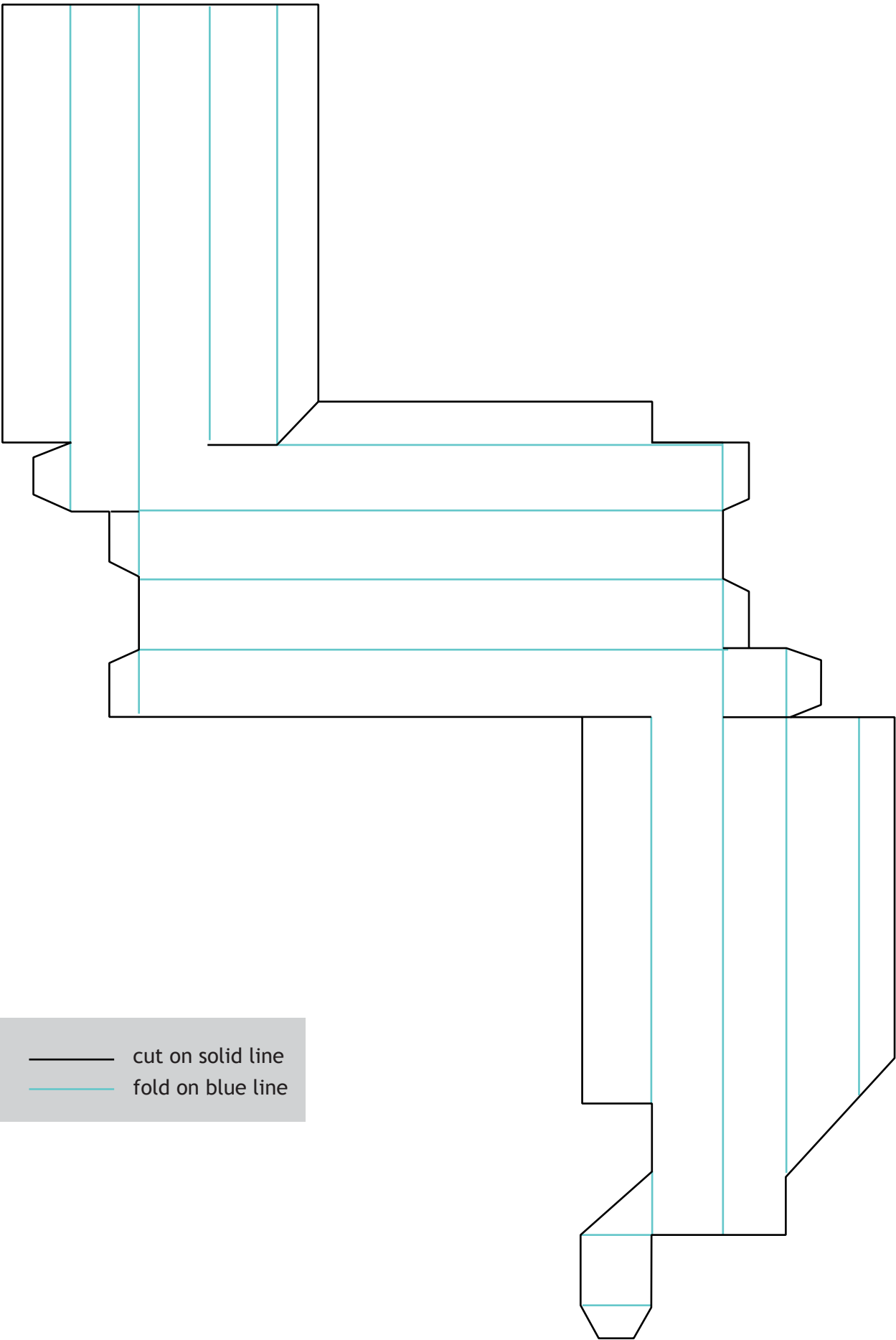
This version of the Penrose Triangle was designed by K. Brecher and R. Puno (Boston University) based on the model plan of Gage, S. in *Light and Illusion*, DK Publishing Inc., 1995.

Project LITE is supported by NSF Grant # DUE - 0715975.

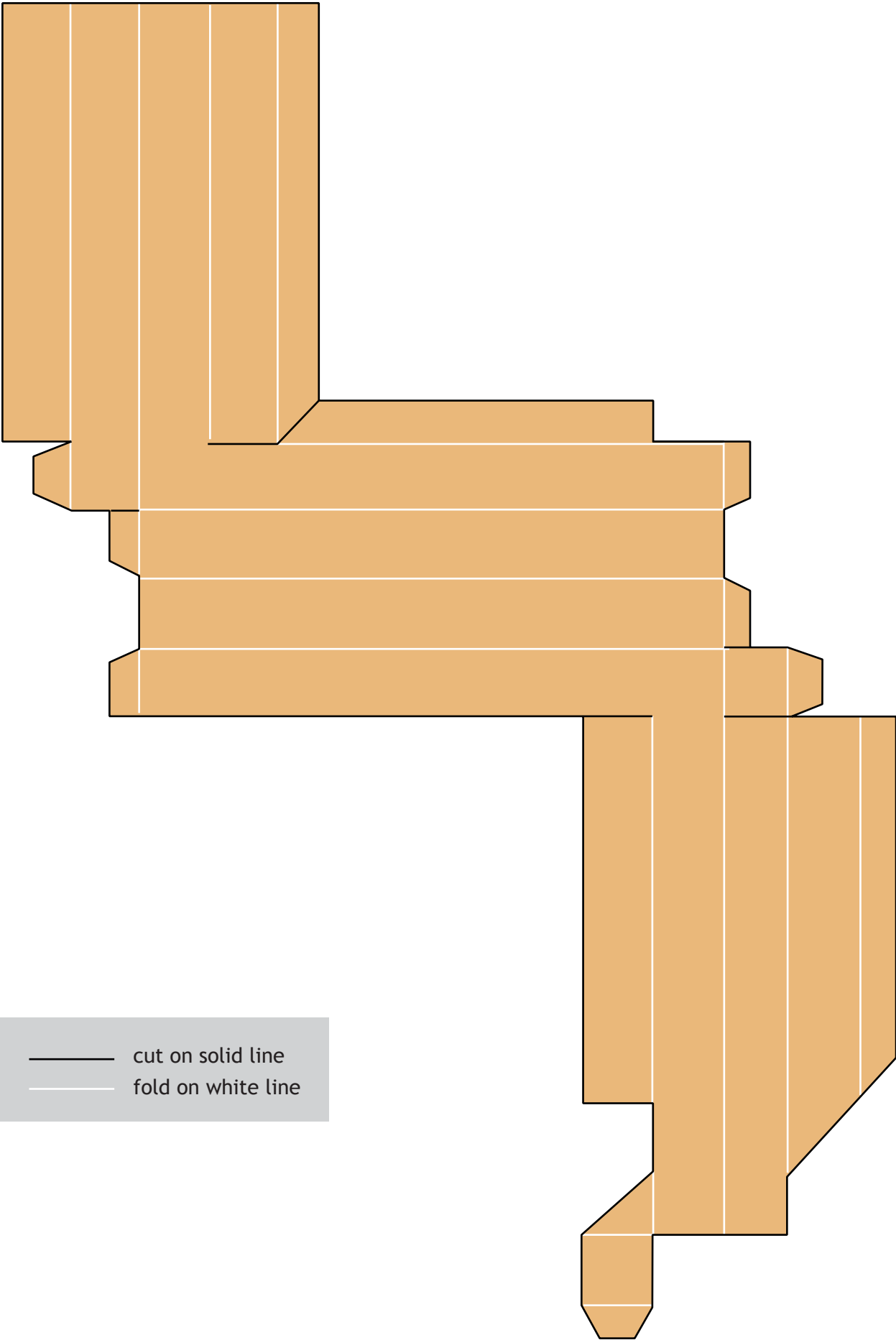
CONSTRUCTION GUIDE

- 1) Print one or more of the following pages on thick paper.
- 2) Cut out the pattern(s) on the black lines.
- 3) Carefully fold or score the pattern along the white lines (blue in the illustration to the right).
- 4) Form two arms by taping tabs A and B to their corresponding sides. Repeat with tab C for the center.
- 5) Close the ends of each arm by folding in tabs D and E.
- 6) Tape tab F to its corresponding side.

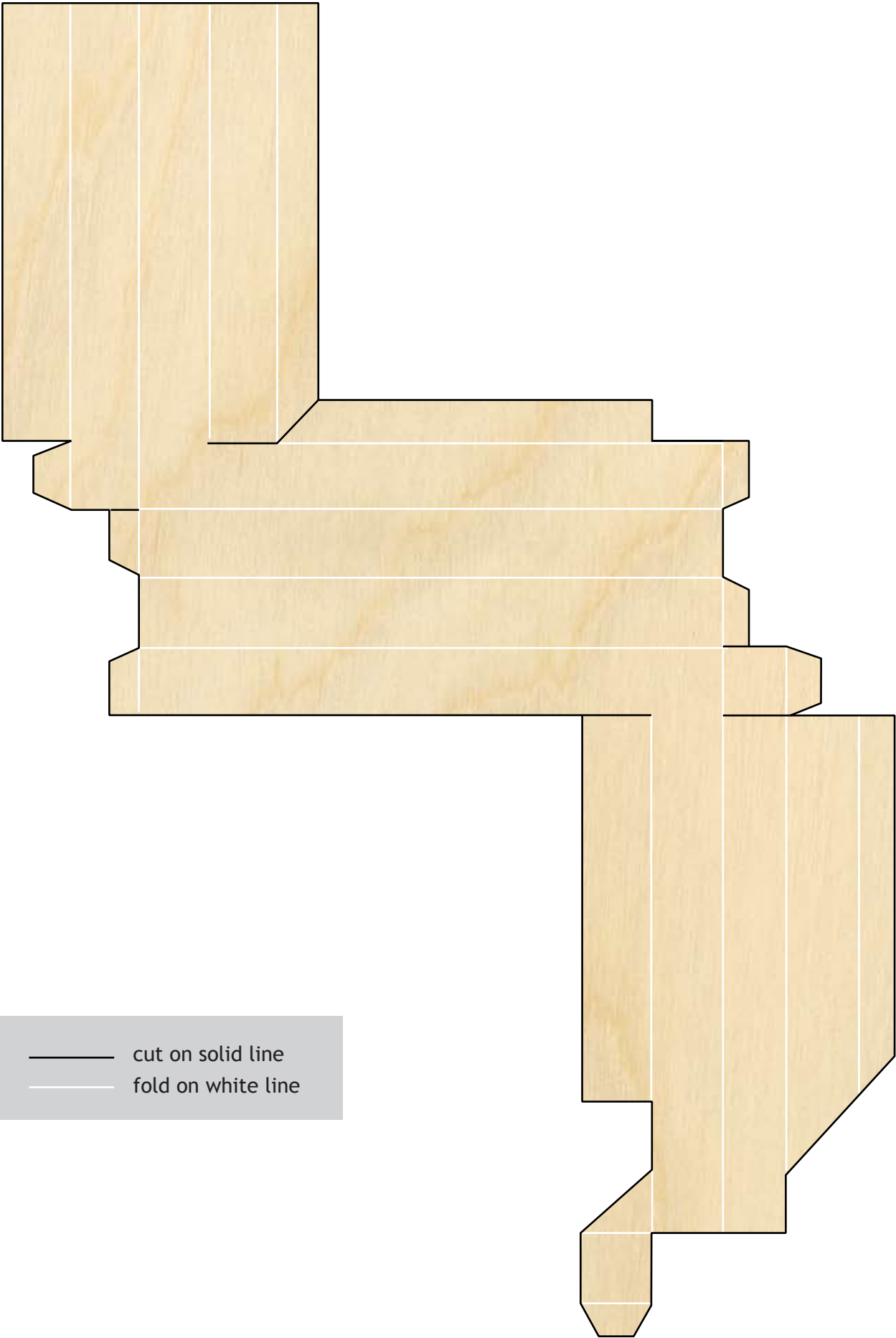




— cut on solid line
— fold on blue line



— cut on solid line
— fold on white line



— cut on solid line
— fold on white line