DETAILED LENTICULAR DESIGN GUIDE

When creating designs for large format lenticular, there are several factors to consider and incorporate into your file. The following points are based on a photoshop layered file approach for the a desired effect, but can be adapted across similar programs.

Layered 3D

When creating designs for Layered 3D there are several factors to consider and incorporate into your file. The following points are based on a Photoshop layered file approach, but can be adapted to similar programs.

1. Backgrounds must be wider than the final image to account for parallax or the side-to-side shift of views. Typically this means whenever possible add at least 1/2" to the left and right sides of the background. Example: your cropped art is 10" wide at 300 dpi. That makes your design 3000 pixels wide. To ensure the background layers have enough art to cover the depth you would increase your canvas to 3300 pixels (1 extra inch at 300 dpi). Tracer can create this additional image canvas if necessary.

2. If objects will be "cut out" of the background to be layered with the foreground, the removed area of the background must be cloned or retouched to cover the void area. Any holes in the art may be exposed during the depth process and will need to be filled in. This is work Tracer will perform when given flat or layered art as needed.

3. Elements that are on the side crop lines will need to be extended similar to the background layer, but not as much distance is required. Typically an additional 1/8" to 1/4" beyond crop will work. The best method is to have the complete object on the layer and move it into place on the larger canvas.

4. Elements that are in the foreground (above WINDOW PLANE) typically should NOT break or go beyond the crop edge. The depth effect is diminished or even destroyed when foreground objects slide past the crop. Exceptions are possible, as when the object is low detail or small in relation to the overall design. This will need to be evaluated per design.

5. Elements that overlap are a good depth cue and will enhance the perception of depth.

6. Logos, body text or other important type/copy should be placed on the layers that make up the WINDOW PLANE. This plane does not shift in depth so the highest clarity of the elements will be maintained. Follow the TYPE sizing guidelines to ensure readability.

7. Vector graphics that are part of a design should be placed (rasterized) into the layered file at 100% file resolution, e.g. a logo from Illustrator that will be 4" wide in the art should be placed into Photoshop 4" wide at 300 dpi. When possible, send the vector graphics along with the layered file.

8. <u>Overall file resolution:</u> For designs up to 16" x 20" the file should be no less than 300 dpi at 100% size. Designs larger than that may be created at no less than 200 dpi and should be approved by Tracer. Avoid scaling elements up more than 130% to achieve the desired size. Use higher resolution art or scans whenever possible. This rule does not apply to designs that are full vector art.

Flip

Flip and Morph effects both require 2 or more images.

1. Create the file(s) 100% of final size at 300 dpi to maintain clarity. Design must include 1/8" bleed all around. The file size requirement does not pertain to an all vector design.

2. Flip images work best when the two images share similar color and contrast. While this is not mandatory, it should be noted that extremes of color and contrast differences will increase the potential for GHOSTING.

3. Flip images work best when viewed in an up & down motion. Keep this in mind when formatting your design. Very tall vertical designs will not flip as well or as fast as a shorter, horizontal design. Stationary POP lenticular must be viewed with a side to side motion. The viewing distance and optical pitch will be adjusted as necessary for optimum functionality.

4. Flip backgrounds work best when they are either common or very similar in color and detail. Again, this is not mandatory but will ensure clean, clear flips.

5. Art may be provided as one file with individual layers of each image, or two separate files of equal size.

Morph

1. Morph effect files require two images. It is best to have the objects as clipped art on transparent layers. Morph effects work best on well-defined shapes for the start and end of the morph.

2. The size and placement differences between morph targets should be kept to a minimum. A small object in the upper left corner morphing to a large one in the lower right will tend to blur too much during the morphing frames for clear viewing.

3. Like Flips, the morph background works best when it is common or similar art.

Zoom

1. Zoom effects work well with logos, text and well defined objects. Full bleed or large object zooms will tend to blur too much for clarity.

2. Create zoom elements from vector art when available. Non-vector art should follow the 100% size at 300ppi guidelines. The higher the resolution, the sharper the detail on the focal point of the zoom.

3. Zooms work best when the subject stays in one place over the series of views. Avoid having the zoom subject moving across the width or height of the piece.

4. Zoom elements can rotate around, flip over or change their appearance (color, texture, surface material) during the zoom for added interest.

5. Avoid thin, linear patterns and small point size strokes in the zoom elements. These tend to produce a distracting MOIRE effect under the lens.

6. Backgrounds that remain constant will help focus the viewer's attention on the zoom or morph effects when the zoom or morph elements are separate from the background.

7. When creating zoom elements, you can provide us one image at a resolution equal to 300ppi at the largest size, or provide the large and small views. Our production process will create transition views.

**Zoom and Morph effects share similar design principles. Both involve a change in shape or size of an image element over a number of views. Unlike a Flip, these effects can impart a sense of motion. Most design tips from Flip can apply with the addition of a few key ones noted here.

Motion

Motion effects require a series of images to convey the sense of motion. Typical motion cards are viewed in an up & down fashion with the lenses running horizontally. This allows clear, distinct frames to be viewed in sequence.

1. Motion can utilize a variety of source art from full motion video, motion picture footage, cartoon animation or computer generated 3D animations.

2. Use the highest quality footage available, using source files only whenever possible. Typical video footage produces low resolution digitized image sequences. High-Definition DV now available offers much better source material. See our Helpful Hints guide for info on the choices.

3. Motion elements work best when they follow some 'directional' restraints. Elements that move in place or from top to bottom (or vice-versa) work better than elements that move across the width of the design in regards to residual ghosting.

4. 'Cyclical' motion elements work very well to both impart a great sense of motion and to minimize blur or GHOSTING. A runner, a bicyclist, a plane's propeller all exhibit cycling motions that repeat as the viewer rotates the piece.

5. Keep background motion to a minimum. A background that moves across an image will tend to blur or GHOST enough to distract from the subject's motion.

Type elements for all lenticular effects should follow the **TYPE GUIDELINES** *on the next page for size and font usage.*

Type Guidelines

When using text in your lenticular design, it is important to maintain the clarity of the message and legibility of the information. The lenticular surface tends to break up finer details such as small type and following these tips will result in better readability.

In order to maintain readability, use this list for minimum font point sizes:

Lens Pitch	Minimum Point Size
20	24
30-40	18
50-60	14
75	12
100+	8

This is intended to create an acceptable minimum level of readability only. For better clarity please use point sizes 3 to 5 larger than indicated here whenever possible. When pre- flighting your files, we will advise you of any fonts that are of print concern.