

The following is a guide designed to provide 3M license plate customers with information relating to graphic license plate artwork, design, and production.

PRINTING CAPABILITIES

To better understand the design process, the license plate printing process will be explained.

Medium

All 3M license plates are printed on reflective sheeting. The sheeting is not as dimensionally stable as paper and therefore stretching may occur.

Registration

Because the sheeting stretches and is printed in a web offset manner, registration is plus or minus 1/32 of an inch per color.

Coverage

The coarseness of the sheeting may cause halftones over 80% tint value, to fill in. Halftones under 30% tint value may not print at all. Halftones are typically printed using 45 lpi. The angles may be adjusted by 3M in certain instances. Thin lines less than 1/32 of an inch, may break up or print unevenly.

Inks

The inks used for license plate printing are manufactured by 3M and are designed to be UV fade resistant. These inks are transparent in order to meet reflectivity standards. For optimum color matching, colors should be selected from the 3M Graphic License Plate Ink Colors. If the desired color cannot be found in this book, please use PANTONE® numbers to specify color. Metallic and fluorescent Pantone® inks (numbers 801-877) are not available for license plate printing.

DESIGN

Keep the following parameters in mind before starting any license plate design.

Size

Designs for use in the United States, Canada, and Mexico, should fit in a 11.5 x 5.5 inch rectangle. The resulting 1/4 margin is needed to ensure acceptable finished license plates, given the requirements of the sheeting and the production process. Bolt holes are .3125 inches in diameter and each are spaced (to bolt hole center) +/- 3.5 inches horizontal and +/- 2.375 inches vertical from the center of the plate. Please check with your state motor vehicle agency for specific plate geometry and design requirements (i.e. size and location of the alpha-numerics, sticker pockets, etc.).

Graphic Placement and Legibility

Avoid heavy coverage of ink in the alpha-numeric areas. Heavy coverage in these areas reduces legibility for law enforcement. Design elements (text and logos) dark in color should be spaced at least 1/4 of an inch away from the alpha-numerics.

Color

Unless special permission is obtained, only four spot colors may be used in any design including black. This does not include the roll coat color for the alpha-numerics. For example, a design could be comprised of three Pantone® CV colors in addition to black. While halftones and graduated tones can be used, a shift in these tones may result due to the unique properties of the reflective materials and printing processes.

Line Art

Avoid thin lines under 1/32 of an inch in width. Intricate solid shapes are acceptable. However, a small loss of detail may occur. Design elements (shapes), smaller than .008 x .008 inches and/or .008 inches in any dimension, will fail to print.

Trapping

Up to 1/16 of an inch overlap should be allowed for due to registration of plus or minus 1/32 of an inch. Dark colors and black should completely overprint lighter colors. Trapping between halftones is not necessarily required. This is up to the discretion of the designer and 3M TSS.

DESIGN SUBMISSIONS

3M TSS uses Adobe Illustrator, Adobe Photoshop, and Adobe Streamline, on Macintosh computers.

Compatibility

3M TSS accepts all Adobe Illustrator files. All placed or parsed bitmap files must be included separately.

3M TSS accepts all Adobe Photoshop files, as well.

Corel Draw users: Save files in the Illustrator format. Include all placed or embedded bitmaps as separate files.

3M TSS cannot work directly with .cdr files.

Corel Paint users: Save files in the tiff format, uncompressed.

Freehand and other vector art program users: Due to problems in the past with converting these files, check with 3M TSS before sending.

If you believe there may be a compatibility issue between your system and 3M TSS's, send black and white color separation printouts on paper or film at 100%. 3M TSS will scan and recreate artwork to match the original design. Before making printouts, fill all halftones 100% so that its shape can be clearly delineated. Include a composite print of the design at 100%. Specify all fonts used, color call outs, and halftone tint values if halftones are used. If photographs are incorporated into the design, please submit. 3M TSS will scan them for placement into the design.

Do not use compression software of any kind for vector files.

3M TSS does not use 3D or CAD software.

ELECTRONIC DESIGN

The following guidelines are for customers sending electronic files.

All license plate designs are completed in vector form (Adobe Illustrator) with placed photographs, if any. 3M TSS prefers that customers send original photographs and/or traditional illustrations for scanning and converting to spot color. 3M TSS will accept Adobe Photoshop files or tiff files of scanned or created material. However, the resolution cannot be increased.

Vector Artwork

Fonts, logos, halftone areas, gradient fill areas, and line art, should be constructed in a vector drawing program, such as Adobe Illustrator. This makes file sizes smaller and editing, trapping, and color separation easier.

Fill and/or stroke vector paths, using the PANTONE® colors. If using Adobe Illustrator, use default black instead of C:0%, M:0%, Y:0%, and K:100%. Use default white instead of C:0%, M:0%, Y:0%, and K:0%.

Convert all fonts to vector form by using Create Outlines in Adobe Illustrator or convert text to paths according to the vector program that is being used.

Bitmapped Artwork

Bitmapped artwork is any image, such as a scanned photograph or traditional illustration that is in pixel form. This artwork is commonly used or created in a paint program such as Adobe PhotoShop or Corel Paint. Bitmapped artwork can be successfully incorporated into a license plate design using a variety of methods. Again, 3M TSS prefers that the customer send continuous tone photographs and/or traditional illustrations for scanning, clipping path creation, spot color conversion, placing, and color separating. 3M TSS can accept scanned or created images from the customer, at a resolution of 300dpi, at 100% size. Line art should be scanned at 1200dpi, at 100%.

3M TSS will scan and convert any line art on paper or film.

Customers sending in pictures for scanning, should keep in mind that photographs and/or illustrations from previously printed materials such as books, magazines, and brochures will not scan well due to halftone dot patterns. Scanning such material may constitute a copyright violation, for which the customer, not 3M TSS will be held liable. Do not send website images or printouts thereof. Website images conform to IBM PC standards. That is the lowest possible image quality (8-bit color at 72dpi). These images are not usable.

Photographs and illustrations will be converted to spot colors. The finished result will be a compilation of monochromatic (single spot color) areas.

Save bitmapped artwork in the tiff file format. 3M TSS does not recommend image compression. If image must be compressed, use LZW compression only.

Please include a hardcopy or detailed layout for each design. This can be color, black and white laser prints, or drawn layouts. Include color call outs, identify the fonts used, and specify halftone values. This avoids any confusion concerning the design and its elements.

ELECTRONIC DISK FORMATS

Designs may be submitted on CD

Files may be e-mailed, but problems may arise due to file size and format. If too large, a Web Dropbox will be set-up for the designer to transfer artwork to 3M.