Design and Layout

Learning Objectives

After studying this chapter, you will be able to:

- Summarize the role of the graphic designer.
- List and explain the elements of design.
- Utilize the principles of design.
- Identify the elements that make up a layout.
- Explain the factors that determine how a layout design is developed.
- Differentiate between the design methods used in layout.
- Demonstrate how copyfitting is used to estimate layout space.
- Describe the methods used in preparing illustrations for layout.
- List the layout materials needed to produce a mechanical.

Important Terms

- comprehensive layout
- copyfitting
- elements of design
- layout elements
- layout base sheet
- photo cropping
- principles of design
- rough layout
- specifications
- thumbnail sketches

In graphic communications, design refers to the application of proper methods to produce a product that is both artistic and functional. A successful design requires the skillful use of design elements and principles. This chapter will cover the primary elements and principles of design and layout. Knowledge of common design techniques is critical in producing a layout and evaluating the visual quality of a product.

The Graphic Designer

The role of the graphic designer varies greatly within the graphic communications industry. This is because of the overlapping duties that are performed throughout the process of design and layout. In some companies, the same artist who is responsible for producing artwork may also be required to perform certain layout tasks. See Figure 5-1. It is very important for the design person to work closely with the printer, since the planned design could cause problems when it arrives to be printed. Limitations relating to folding, press size, and paper capabilities could be potential problem areas.

Today’s graphic designer might be an artist who prepares the artwork necessary for a portion of a product. Artwork could include freehand sketches, technical art, lettering, and calligraphy. In many cases, the graphic designer has little knowledge of the processes used in graphic reproduction. But the designer may also be responsible for pasting up camera-ready copy or producing a finished product with page layout software. This illustrates that the specific duties performed by design and layout personnel are very difficult to clearly define.

Figure 5-1. A graphic artist is commonly involved in several stages of production, from designing visual materials to performing layout tasks. (Screaming Color-Chapter One)

In the simplest of situations, a design artist would create the art images needed by the layout artist. Many companies, however, do not have the luxury of hiring people who only have specific design or layout skills. The design artist, in many companies, translates ideas into art and is also involved in layout and production in various stages.

Once the layout design is approved by a client or outside source, the elements are usually gathered and assembled by the same person who created the design. The design artist must initially express a visual idea. The idea becomes the foundation of the layout and is then developed into the final product.

Planning and organizing the design process is essential to having an efficient operation. A small printing facility, from a financial standpoint, often cannot afford to employ one person to perform design tasks. Therefore, designing may be left to the plant personnel, who may have very little design knowledge but are required to devise and complete layouts for production.

A knowledge of the fundamentals of design is required for both the design artist and the layout artist. The elements and principles of design are an accumulation of many factors that help solve the problem of producing an image that is both attractive and practical.

Elements of Design

Design involves the selection and arrangement of visual images to make a pleasing presentation.

Figure 5-2. Lines can be used to denote a specific meaning. Curved, loose lines imply a free spirit. Lines drawn straight imply a more straightforward or disciplined theme.

Lines

Lines are design elements that form the shapes of an image. Lines can be used to give the printed image a “personality.” Lines can be loose and free or they can be straight and sharp. See Figure 5-2. The repetition of lines creates patterns and adds emotional impact to the visual image.

The text and illustrations used in a design will have a tremendous impact upon the viewer; therefore, it is essential to develop a strong layout of visual materials.

A successful graphic designer must apply the fundamental principles of design. The basic elements of design are lines, shapes, mass, texture, and color.

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Shapes

Shapes are elementary forms that define specific areas of space. In many cases, a shape is defined by a line. The three basic shapes are the square, circle, and triangle. See Figure 5-4.

Each of the three basic shapes is associated with a psychological meaning, as shown in Figure 5-5. The visual attitude portrayed by the triangle is one of conflict or action. The square projects an attitude of honesty or equality, while the circle conveys a feeling of protection or infinity.

Mass

Mass is a measure of volume that adds definition to shapes in a visual presentation. The mass or solid portion of the shape provides a visual relationship with the other elements. See Figure 5-6.

Texture

The texture of a visual image is a projection of emphasized structure or weight. When measuring the texture of an object, the first inclination is to touch the surface. In graphic communications, texture is usually visual; there is no feeling gained through the sense of touch. See Figure 5-9.

Color

Color is an important element to be considered when planning or designing a printed product.
Color can draw attention and produce a strong emotional and psychological impact. Different colors have traditional and symbolic meanings. A basic understanding of color is essential to creating a good design.

Color should be used to add interest and variety to a design. A small amount of color can heighten the visual quality of a page.

Color moods
Different colors project different moods. Yellow, orange, and red are considered to be warm colors and often denote aggression, excitement, and danger. Red is considered the most active of these three. Blue, green, and violet are considered to be cool colors and are associated with nature and passiveness.

Color wheel
A color wheel is a visual tool that illustrates the basics of color. It is an arrangement of colors that provides a means of identifying colors in a consistent manner. See Figure 5-12.

The wheel is based on three primary colors, from which all other colors can be made. The primary colors are red, yellow, and blue. Mixing any two will produce a secondary color. The secondary colors are green, orange, and violet.

Two systems of color formation, additive and subtractive, use different primary colors. The additive primaries are red, green, and blue. The subtractive primaries are cyan, magenta, and yellow. Color formation is covered in detail in Chapter 8.

The colors that are positioned across from each other on the color wheel are known as complementary colors. Red and green, orange and blue, and yellow and violet are complementary colors. See Figure 5-13.

Produced not only by mixing colors, but also by arranging colors in a layout so they have a direct effect on each other. Chapter 8 includes a detailed description of color theory and how it relates to graphic communication.

**Principles of Design**

In the process of designing a printed product, many different ideas are generated through the use of design elements. To ensure the images have a pleasing relationship, design principles must be applied to sort out or select the right ideas.

The basic principles of design are balance, contrast, unity, rhythm, and proportion. These principles are used by the design artist to create an image that is both visually pleasing and functional.

**Balance**

Balance describes the even distribution of images to create a pleasing visual effect. Balance has one of the most important psychological influences on human perception. Consciously and unconsciously, people have a basic need for balance.

This principle can be illustrated by the placement of letters on a scale, as shown in Figure 5-14.

Visually, a judgment can be made by the value of each image. The type of balance in Figure 5-14A is symmetrical and is called formal. The type of balance in Figure 5-14B is asymmetrical and is called informal.

**Formal balance** is achieved when all of the elements on a page are of equal weight and are positioned symmetrically. **Informal balance** may be achieved by changing the value, size, or location of elements on a page. The use of various colors and color intensities can also create informal balance.

For example, two squares of equal size but different color values (such as pink and dark red) will appear to be unequal in size when placed side by side.

Balance is a guiding principle of design. The layout should be considered as a whole when positioning the elements. See Figure 5-15.
**Contrast**

Contrast is the variation of elements in a printed product. When used, contrast gives meaning to a design. Lines drawn thick might have little meaning by themselves. Adding thin lines, however, can enhance the design and eliminate monotony. See Figure 5-16.

Figure 5-16. A variation of mass or other elements adds contrast and attracts attention to an area of an image.

Figure 5-17. Using contrast emphasizes one element in relation to another. A tree appears taller when it is placed on a flat plane.

Care must be taken when combining contrasting elements so that the uniform effect of the total design remains unaffected. A page of many contrasting designs might create confusion. See Figure 5-19.

Figure 5-19. Too much contrast between elements can cause confusion.

Balance must be maintained to ensure that one primary element dominates the layout. This principle can be used to draw attention and keep the reader’s attention from jumping from one element to another.

**Unity**

Unity is the proper balance of all elements in an image so that a pleasing whole results and the image is viewed as one piece. Every element must be in proper position to create a harmonious image. A design can be moved and manipulated to create an interesting and functional combination of elements.

Figure 5-21. Unity results when all of the elements in an image are arranged as a whole.

Choosing type styles is also important to achieving unity. See Figure 5-20. A unified design is the result of viewing the layout as a whole and not as separate elements. This principle is also called harmony. See Figure 5-21.

Figure 5-20. A type style that corresponds visually to the subject reflects unity in the design. Small dots forming the type represent stars in the sky.

Rhythm

The movement of a reader’s eye is often determined by the shapes used in the image. The square reflects horizontal and vertical movement. The triangle reflects diagonal movement, and the circle reflects a curve.

Rhythm in a design results when the elements have been properly used to create visual movement and direction. See Figure 5-22. Rhythm can also be achieved through the use of a pattern or repetition. Patterns can be used in contrast with an element to create an effective design. See Figure 5-23.

Figure 5-22. Images that imply movement or direction give rhythm to a design.

Proportion

Proportion is the relationship between elements in an image. The use of proportion helps to achieve balance and unity in a layout. All elements should be in proportion to each other. See Figure 5-24.

When using different type styles, it is important that they are in proportion to the other elements on the page. See Figure 5-25. Using proportion is a means of developing an aesthetically pleasing relationship between each of the elements in the layout.
A basic knowledge of design elements and principles is key to understanding the guidelines used in layout. The finished layout or mechanical must exhibit sound principles of design. The process of preparing a layout sheet is often performed by the same artist responsible for the design.

**Layout Elements**

*Layout* is the arrangement of printing elements on a layout sheet. The paste-up version of the base sheet, or mechanical, is made up of the elements ready for reproduction. Planning a layout involves choosing elements that best represent the design. The elements of layout are body type, display type, illustrations, and white space.

The arrangement of elements in a layout must be pleasing to the eye and easy to read. The layout artist or designer is responsible for assembling the elements to make a composition. The layout artist plays a very important role in planning each job.

If the same elements were given to several artists, it is very probable that different layouts would be submitted. If each layout applies valid principles of design, it might be impossible to say one is better than another. Layouts may be judged differently by different people.

The major objective of the layout is that the printed material must be clearly seen and read. The layout artist must consider each element independently and determine how each one relates to the complete product.

**Body type**

*Body type* is the printed type that makes up the text in a layout. Body type must be chosen to reflect the intent of the message. The text must be clearly legible and must relate to the topic. Typically, a topic aimed at a contemporary audience would use a modern typeface. See Figure 5-26. The placement of type requires proper spacing or *air*. White space can be just as important as the type itself.

Usually, the body type itself is not the focal point of the layout. The text will contain a message that expands upon the other elements. All of the elements, including type, are positioned in a logical progression of importance to meet the layout objectives. Some layout elements will be primary, while others become secondary, according to the objectives of the layout.

**Display type**

*Display type* is the type that conveys the main message of the layout. It is intended to draw attention. Newspaper and magazine headlines are typical examples of display type. See Figure 5-27. The display line is key to the success of a message. If the display type creates interest, the reader will proceed to the body.

The display line in an advertisement leads the reader to other information. After reading the display material, the person must be satisfied or directed to continue reading the text. The style of display type is very important because it must correspond to the visual message. Some type styles can be very dramatic, as illustrated in Figure 5-28. In such cases, the topic and type style must be compatible. Fine-line display type, for example, is usually not appropriate when used with heavy mass images.

Some type styles are directional and lead the eye of the reader. Sometimes, the layout designer organizes the display line for an ad using hand-lettered display type.

The entire layout must be looked at when choosing a typeface. The display line must be distinctive and appropriate. To properly select a typeface, the job objective must be fully understood by the layout artist.
Illustrations

The illustrations in a layout include the ornamentation, photographs, and artwork, such as line art. Illustrations are common in most printed materials. For example, display ads typically include illustrations of the product.

The message provided by an illustration can be very revealing. See Figure 5-29. The old saying, “A picture is worth a thousand words,” applies to many printed materials. Pictorial images are a very strong way of conveying a message. In some cases, an illustration may convey the message by itself. See Figure 5-30. Illustrations add another dimension to the layout; they can increase understanding of the product, as well as interest in the product.

White space

White space includes areas of the layout that are void of printed images. Filling up the entire design space will usually not produce good results. The utilization of white space or air can add to the visual quality of a layout.

The distance between elements can be very valuable when white space is used according to sound design principles. It provides a brief period for absorbing the printed matter.

If used excessively, white space can be disorienting. When ideas are too greatly separated, flow and meaning can be lost. White space is very important and must be used properly to create flow, unity, and organization for the reader.

Developing a Layout

There are a number of factors to consider in developing a layout. Five areas that must be addressed by the layout artist are the objective of the project, the message the product will send, the style and format to be used, the layout requirements for production, and printing requirements. Each factor contributes to making decisions that will influence production of the final product.

Layout objective

The layout objective is a statement that describes the intent or purpose of an identifiable end product. The objective outlines the goal of the layout artist. For example, an objective might state that the final printed piece should inform the reader, through text and illustrated material, how a piece of equipment will help in a specific production situation.

The objective describes what the information on the printed page is intended to do. Knowing the purpose helps the layout artist determine which text and illustrations will be best for the job.

Conveying a message

The message or visual effect delivered by a printed image helps determine how the layout will be planned. Identifying the audience gives direction to the layout artist. For example, one ad might be designed for young people, while another might be aimed at the elderly. The design of each ad should be unique and must reflect the intent of the printed piece.

Design of the end product also determines the tone or mood of the message. If a lighthearted or humorous mood is intended, a dramatic photograph might not achieve the desired effect. All of the elements should reflect the message of the end product.

Style and format

Style includes the type text, display type, and illustrations of the design. Some printed pieces will require a set style, while others do not. For instance, the style used in this textbook is quite different from the styles used in advertisements. The designer must choose the elements that will work best.

Deciding how to organize the format of the printed piece is of primary importance. Will a single sheet carry the message, or will a booklet do a better job? The format will also be determined by its intended use. For example, if the printed piece is to be posted, it should not be printed on both sides.

Layout requirements

The different methods of layout and the schedule to complete the job must be considered in planning a layout. A layout may need to be developed as a sketch, a rough, or a comprehensive. It may be necessary to perform all three.

A sketch is an idea in pictorial form with little detail. Sketches are often helpful because they provide a picture indicating possible placement of the elements. A rough is more illustrative of the final product; it provides the style of the type as well as the position of the elements. A comprehensive is the third and final method of layout. It is the presentation of what the finished product will indeed look like. When planning a layout, the artist should decide which methods will be necessary to reach the final product in a timely manner.

An estimate of the time it will take to complete the job is essential from a planning standpoint. Most printed pieces are produced to meet a deadline and must be delivered by a specified date. The planner must decide whether the job can be completed in the time allowed.
Printing requirements

The printing process that follows production has a strong influence on how a layout is developed. The size of the product, the quantity to be printed, paper requirements, color use, and operations following the printing must all be considered.

The finished dimension of a printed piece must be determined before beginning layout. The finished size will have a bearing on every production step. One important concern is the size of the press required to run the job. The finished size also determines the size of the paper to be used in printing.

The number of pages to be printed and the number of copies required are also factors to consider because they will help determine the printing requirements. Deciding the most economical way of printing the job is essential. The designer or editor must estimate the approximate number of pages to be printed so that final plans for printing can be made.

Printing requirements include the kind of stock or paper to be used. The necessary stock must be available at the designated time for printing. A custom stock may need to be ordered and may require additional time. Other considerations in ordering stock are the size of the order, paper weight (thickness), and opacity.

Multicolor printing is another factor to consider when planning a layout. Different jobs require different amounts of color. A one-color or black and white job requires different layout methods than a two-color, or four-color job. The layout artist must decide whether to use color when planning the layout.

Once the job is printed, further finishing operations might be required, such as trimming the job to the final size. Other finishing operations may include folding, scoring, creasing, varnishing, and binding. Knowing the operations that will be required after printing is important in planning the job.

Layout Methods

Choosing the right method to develop a layout can be very difficult and requires careful planning and thinking by the layout artist. The design methods used in layout are thumbnail sketches, the rough layout, and the comprehensive layout. Much of the decision depends on the factors that have already been discussed. The size of the job, the objective, and use of color are all important considerations. The layout artist must have a vision of how to arrive at the final product.

The layout can make or break the appearance of the final product. Many times, a number of layout ideas are discarded before one is chosen. Each method must be carefully analyzed to produce a strong, functional layout.

Thumbnail sketches

Thumbnail sketches are simple, rapidly drawn designs for a layout. See Figure 5-31. Different approaches can be taken in drawing sketches. Sketching is a means of testing the visual appeal of a printed piece.

A refined layout is sometimes made before doing a comprehensive layout. See Figure 5-33. A rough layout is a sketched version of the final product. The display lines and illustrations of a rough are very similar to the elements of the final product. The text material is located in a greeked (illegible) block or whatever form it will take in the finished product. The rough has a closer resemblance to the intended printed piece than the thumbnail sketches. Sometimes, a refined layout may be made, Figure 5-33. Since the refined layout is closer to the final layout, it can be used as the final layout when time is a major factor. Special notations for type size, type style, or color can be made on a tissue overlay or on the layout.

Comprehensive layout

A comprehensive layout shows how the printed piece will look when finished. The layout artist is making a close version of the finished product; therefore, exact detail is essential. See Figure 5-34. The body type is usually ruled in and the display type is drawn as it will appear in the finished piece. Any art sketched previously now has a photograph or accurate line art in its place. Special effects become a part of the comprehensive layout, and colors can also be added.

Specifications

Specifications provide the information relating to type style, type size, line or column width, color use, page organization, and other facts pertaining to a printed product. Specifications or specs are the overall guidelines used in layout.
Manuscripts are commonly marked with specifications identifying the typeface and type size to be used. The specs are used to convert the original copy on the manuscript to the text in the final layout. See Figure 5-36.

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Specifications are also used in printing, binding, and finishing. A printing spec sheet may list information on the type of paper to be used, color specifications, and other requirements. See Figure 5-38.
length, or letter spacing. The layout planner or artist is heavily involved in copyfitting during various stages of production. If the amount of copy is greater than the space allocated, the total design is affected.

Copyfitting also involves estimating the amount of space needed for a certain amount of text. The amount of space needed must be known by the layout artist to design a comprehensive layout.

In desktop publishing, copyfitting is commonly completed for layout on a computer screen. See Figure 5-39. A desktop publishing system can be used to copyfit text and illustrations, move copy, draw line art, and finalize layout.

There are also manual counting techniques used in copyfitting. The most common method is counting the total number of characters in a body of text. If there is a partial line, the number of characters it contains is counted and added to the total from the preceding step. This total represents the number of characters to the left of the vertical line. Next, the number of characters to the right of the vertical line is counted.

The text will measure 5 picas deep and 18 picas wide. This example was for type that is set solid. If leading is added, the amount of leading space in points must be added to the type size. If the type were set as 10 points with 2 points of leading (10/12), the calculation would be as follows:

\[
10 \times 6 = 60 \text{ points}
\]

4. Convert the measure from points to picas. One pica is equal to 12 points.

\[
60 \div 12 = 5 \text{ picas}
\]
Illustrations are sized properly, and that they have the right contrast, unity, and proportion. The layout artist must make sure that the principles used in design and layout are followed when processing illustrations. The surface of the image can scratch very easily; never write on an overlay that is placed on the image area of photos. Crop marks should appear in the margin or in an area that will not be reproduced.

Figure 5-40. The number of characters in a block of text can be determined by drawing a vertical line through the shortest line of copy and counting characters on both sides of the line.

Photo cropping

The complete image of a photograph often cannot be used because some portion of the print is not needed. In many cases, the composition of the photo must be edited or cropped. Photo cropping is a method of indicating what portion of the print is to be used or reproduced. A cropped photo separates the desired image from the unwanted areas. Crop marks border the area to be used. Marks are placed in the white margin of the print with a grease pencil or a similar marker that will not damage the photograph. See Figure 5-42.

Crop marks set the photograph dimensions. Two sets of marks can be used along the top and bottom of the image to establish width. Pairs of marks on each side of the image indicate depth or height. The final image will only use the portion of the photograph that lies within the crop marks.

Photo sizing

In graphic production, it is often necessary to use photographs at sizes other than the original. Many times, the photo must be enlarged or reduced by a certain percentage to fit the space. For example, if a photo measures 6" x 6" and the design space is only 3" x 3", the photo would have to be reduced to half its original size or by 50 percent. A 35 mm slide might have to be enlarged to twice its original size (200 percent) or more to provide a printed image of the required size.

A proportional scale or “proportion wheel” is commonly used to size illustrations for enlargement or reduction. See Figure 5-43. The scale can be used to determine the correct reproduction percentage by comparing the original size of the photo with the reproduction size. The numbers along the inner portion of the scale represent the original size, and the numbers along the outer portion represent the reproduction size. When the scale is rotated to match the two sizes, the resulting percentage of enlargement or reduction is indicated by an arrow pointing to a windowed scale located on the inner portion of the proportion wheel.

When sizing a photo, it is important to remember that the image will retain the same shape and proportion. For example, a rectangle will reproduce as a smaller or larger rectangle. The dimensions change, but the proportion remains the same.

Figure 5-42. Crop marks drawn along the border of a photograph show the area of the image to be used.

Figure 5-43. A sampling of proportional scales used to determine reproduction sizes for photographs or for other illustrations.

Precise reproduction percentages and often, cropping are necessary to produce the required results and fit the design space. Sometimes, it might be necessary to use a different photograph or illustration to meet the specifications of the job.

Photo layout

Photographs are not pasted down along with the other elements on a mechanical. Usually, a space for the photo is outlined on the layout with a thin black line (called a keyline). A block of opaque material the exact size of the photo is sometimes used, instead of a keyline. A figure number is assigned to the space and the photo. The number indicates where to place the screened halftone of the photograph when making the mechanical. See Figure 5-44.

Photo markup

Photo markup involves writing directions or specifications for the visual images used in layout. A marked-up photo is shown in Figure 5-45. Markings should be carefully placed on the border or outside the image area of photos. Crop marks should appear in the margin or in an area that will not be reproduced.

Photographs must be handled very carefully when they are used in layout. The surface of the image can scratch very easily; never write on an overlay that is placed on top of a photo. The pressure from a pen or pencil can indent the surface. Damage to a photo can leave an unwanted mark or reflection during reproduction or screening.
Line art

Line art is artwork that is drawn by hand or electronically and is normally pasted up at the same size on a mechanical. If necessary, the original art can be enlarged or reduced. Then, the correctly sized line art can be pasted onto the mechanical. See Figure 5-46.

Sketches and drawings are marked in the same manner as photographs. They must be cropped, sized, and located. Information that is marked up on illustrations might include the job title and number, location in the printed piece, a figure number if applicable, the percentage for enlargement or reduction, the reproduction size, and the name of the layout artist.

When line art and tone material are used together, the tone material is placed on an overlay. For example, if the tone material is going to be used to place color in line art, it must be cut to the shape of the art and placed in register on the overlay.

Clip art

Clip art is preprinted artwork that is designed to be cut and pasted up on the mechanical. The artwork is normally cut from a sheet of clip art. See Figure 5-47. Today, clip art is commonly available in electronic form. It can be printed out and pasted up in the traditional manner, or added directly to an electronic page layout.

Clip art is commonly used for seasonal designs, such as Thanksgiving or Christmas newspaper ads. Pieces of clip art save the artist from having to draw Christmas trees, wreaths, turkeys, and other common images.

Layout Materials

The two most common working surfaces used in layout and design are a drawing board and light table. A drawing board provides an area where the layout can be taped down for paste-up. A T-square is used to align the mechanical on the board. See Figure 5-49.

A light table is used in layout for the placement of translucent images, such as page negatives or color separations. Light passing through the images allows for easier alignment or registration.
Layout base sheet

A layout base sheet is the paste-up surface or board used in layout. The elements making up the layout design are pasted up on the base sheet as it is developed into a mechanical.

Various kinds of base sheet stock are available. Base sheets must have a surface that can accept a variety of adhesives and ink drawings. Sizes typically depend on the size of the copyboard of the process camera used to photograph the finished mechanical.

Preprinted base sheets are often used to make mechanicals when the same type of job is done repeatedly. Artists using preprinted sheets do not align paste-up materials with a T-square. Preprinted base sheets have grids printed with nonreproducing blue lines that serve as a guide for image placement. The grid lines are often measured at intervals of one pica. See Figure 5-50.

Thin plastic sheets are used with base sheets as overlays when preparing a mechanical. Overlays are usually frosted or clear plastic and are used to align images supporting color on top of the base sheet. They contain the elements that will print as color or screened color. Register marks are used to align the overlay with the mechanical. See Figure 5-51.

Preprinted base sheets are often used to make mechanicals when the same type of job is done repeatedly. Artists using preprinted sheets do not align paste-up materials with a T-square. Preprinted base sheets have grids printed with nonreproducing blue lines that serve as a guide for image placement. The grid lines are often measured at intervals of one pica. See Figure 5-50.

Workmarks

Workmarks are lines that guide the placement of materials on a base sheet. Corner or trim marks are always placed on the sheet. Center marks are usually positioned and are essential for color work. See Figure 5-52A. Workmarks serve as guidelines for the paste-up artist as well as the mechanical stripper.

A nonreproducing blue pencil or pen is commonly used to draw workmarks on a layout base sheet. These lines or other marks will not appear when the page is shot.

Trim marks are usually drawn one-eighth inch in length for paste-up or to designate bleeds. Refer to Figure 5-52B. A bleed is an image that extends to the end of a printed sheet. A bleed image, when printed, appears outside the trim area of the sheet and is cut away when the sheet is trimmed to the final size.

Review Questions

Please do not write in this text. Write your answers on a separate sheet of paper.

1. In graphic communications, design refers to the use of proper methods to produce a product that is both ______ and ______.