A Standard Graphic Language for Scenic Design and Technical Production
By the USITT Graphic Standards Board

Background

There are two primary needs for standardized graphic language in the technical theatre industry. Theatre work is performed in a condensed time span that prohibits inefficient communication. The need for a standardized language to achieve effective communication is intensified by the mobility of the members of the trade. Professional [and some educational] designers and technicians frequently work by mail or telephone and travel from theatre to theatre or shop to shop. Their drawings must be meaningful to the members of each staff with whom they work. The most effective manner to attain that meaning is with a common graphic language. The second need for a consistent graphic language is of importance to educators preparing students for entry into the profession of scenic design or technical theatre. Lacking published standards, the educator can only assume a graphic language that is acceptable to the industry. If his or her assumptions are incorrect, he or she may provide improper training to students and hamper their professional growth.

A standard is an example for comparison and an authority that serves as a model. The word graphic implies the presentation of a picture described in sufficient detail to meet the intended needs. In combination these two words depict the purpose of this project: to present a series of models that may be used to aid the scenic drafter. Typically, graphic standards are begun when individuals or groups start to codify the existing practice. Usually it is felt that any new standard should have a basis in established drafting methods if it is to have value. Obviously, the theatre has arrived at this point without a uniform method, and some see no need for establishing a consistent mode. However, an agreed-upon set of standards, like those of other industries, would tend to improve the efficient use of graphic material in the theatre.

The Graphic Standards Board of USITT’s Education Commission has been empowered by the commission to devise a set of graphic standards for recommendation to the USITT membership as the standard graphic language for theatrical production. Standards will be recommended in the area of 1] scenic design and technical production, 2] lighting design, 3] audio design.

The initial effort of the Graphic Standards Board has been in the area of
scenic design and technical production. The board members have examined studies in this area conducted by Don Calvert, Harvey Sweet, Stephan M. Zapytowski, Sr., and others, and have used these studies as the basis for the recommendations that follow.

The concept of a standard must evolve from a logical basis. In this case, that basis is rooted in the only inflexible rule of technical drawing: that any graphic communication must be clear, consistent, and efficient. While these recommendations will not include specific guidelines for the spacing of objects on each plate, any graphic presentation should adhere to the general recommendation of clarity—do not crowd or unevenly space individual items on a plate. Equally important, all line weights, line types, symbols, conventions, and lettering should be consistent from plate to plate and in a given set of drawings. This does not mean that everyone will be expected to letter in the same manner or draw their arrowheads in precisely the same way. It means that each drafter should be able to establish his or her "style" within the guidelines of the recommended standards and conform to that style throughout the drawings for a particular project or production. Finally, the standards and symbols used in any recommended guide should be efficient—both in ease of drawing and in ease of comprehension for the reader.

Ground Plan

A great deal of drawing technical theatre, both in presentation and symbolism, is directly related to the drawing of the floor plan or ground plan. The specific definition of the ground plan is as follows: A floor or ground plan is a horizontal offset section with the cutting phase passing at whatever level, normally a height of 4'-0" above the stage floor, and is required to produce the most descriptive view of the set.

Line Weights

The USITT recommends a modified ANSI standard two-thickness line system. The approved line weights are as follows:

- Pen: Thin: .010" to .0125" width (ANSI standard = .016"
  Thick: .020" to .025" width (ANSI standard = .032"
- Pencil: Thin: .3 mm
  Thick: .5 mm

In either pen or pencil, an extra-thick line, .035" to .040" (.9 mm) may be infrequently used, as necessary, for emphasis (plate border, suitable section cutting plane line, etc.)

Conventions

There are a number of standard theatrical units such as chandeliers, shelves, and fireplaces that because of their varying styles and sizes should not be represented by standard symbols but need to be easily and repetitively drawn.

The drawing of these items should subscribe to the general guideline offered under the definition of the ground plan. In general, shelves, fireplaces, and similar items should be drawn by using a section cutting plane 4'-0" above the stage floor unless another view would be more descriptive. An item such as a chandelier should be indicated by a circle utilizing a hidden line, as it is not at the previously indicated 4'-0" cutting plane height. The circle should be drawn, in scale, the diameter of the chandelier at its widest point. The graphic should be placed in its proper position on the floor plan. Other suspended objects such as beams, drops not in contact with the stage floor (e.g., an act 2 drop on the act 1
floor plan), would be drawn in their appropriate outline, using the hidden line type. Another recommended convention involves the drafting of flats on the ground plan. They should be drawn in scale thickness and should have the space darkened between the two visible lines that are outlining the thickness of the flat.

Lettering

Lettering should be legible, and the style should allow for easy and rapid execution. Characters that generally conform to the single-stroke Gothic style meet these requirements. Only uppercase letters should be used on drawings unless lowercase letters are needed to conform with other established standards or nomenclature.

Title Block

The title block should be in the same location on all drawings of a single project. The title block should be located in either the lower right-hand corner of the drawing or in a strip along the bottom of the drawing. In either case, the block should include the following information:

1. Name of producing organization and/or theatre
2. Name of production; act and scene, if appropriate
3. Drawing title
4. Drawing number
5. Predominant scale of the drawing
6. Date the drawing was drafted
7. Designer of the production
8. Drafter, if different from the designer
9. Approval of drawing, if applicable

A.1. USITT-approved line types

<table>
<thead>
<tr>
<th>TYPE</th>
<th>STYLE</th>
<th>NOTES</th>
<th>EXTRA THICK (2 LINES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PLATE BORDER</td>
<td>A</td>
<td></td>
<td>THICK</td>
</tr>
<tr>
<td>2. CUTTING PLANE</td>
<td>B</td>
<td></td>
<td>THICK</td>
</tr>
<tr>
<td>3. SECTION OUTLINE</td>
<td>C</td>
<td></td>
<td>THICK</td>
</tr>
<tr>
<td>4. VISIBLE OUTLINE</td>
<td>D</td>
<td></td>
<td>THICK</td>
</tr>
<tr>
<td>5. HIDDEN CONSTRUCTION</td>
<td>E</td>
<td>THIN</td>
<td></td>
</tr>
<tr>
<td>6. PLATER, CEILING AND SET LINE</td>
<td>F</td>
<td>THIN - NOTE INDICATES TYPE</td>
<td>THIN - LABEL ON AXIS</td>
</tr>
<tr>
<td>7. CENTER LINE (ALL APPLICATIONS)</td>
<td>G</td>
<td>THIN</td>
<td></td>
</tr>
<tr>
<td>8. LEADER LINE</td>
<td>H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. EXTENSION AND DIMENSION LINES</td>
<td>I</td>
<td>THIN - FULL ARROWHEAD PREFERRED</td>
<td></td>
</tr>
<tr>
<td>10. SECTION INTERIOR</td>
<td>J</td>
<td>THIN - FINISH AT 45° ANGLE TO EDGE OF PAPER OR AS CLARITY REQUIRES</td>
<td></td>
</tr>
<tr>
<td>11. BREAK LINES</td>
<td>K</td>
<td>THIN - BOTH APPLICATIONS</td>
<td></td>
</tr>
<tr>
<td>12. PHANTOM LINE</td>
<td>L</td>
<td>THIN - USED WHEN AN OBJECT REFLECTS BETWEEN FOURS; ALSO USED AS AN ALTERNATE POSITION LINE, AND USED TO DESIGNATE THE LOCATION OF ADJACENT FRAMES</td>
<td></td>
</tr>
</tbody>
</table>

13. Any "special" lines not listed above should be noted in the legend of each sheet.
1. Dimensions must be clear, consistent, and easily understood.

2. Dimensions should be oriented to read from the bottom and/or the right hand side of the plate.

3. Metric dimensions less than one meter are to be noted as a zero, decimal point, and portion of meter in numerals. All measurements one meter and greater shall be given as a whole meter number, decimal point, and portion of meter: 0.1m, 0.52m, 1.5m, 2.35m.

4. Dimensions less than 1'-'0" are given in inches without a foot notation, such as: 6", 9\(\frac{1}{2}\), etc.

5. Dimensions 1'-'0" and greater include the whole feet with a single apostrophe followed by a dash and then inches followed by a double apostrophe: 7'-0\(\frac{1}{2}\), 18'-5\(\frac{1}{4}\), 1'-3".

6. Dimensions that require more space than available between extension lines are placed in proximity to the area measured, parallel with the bottom edge of the sheet, and directed to the point of reference by means of a leader line.

7. Platform and tread heights are given in inches above the stage floor. Such heights are placed in circles at or near the centers of the platform or tread; \(\bigcirc\), \(\bullet\).

8. Direction of arrows (when used to indicate elevation change on stairs, ramps, etc.) points away from the primary level of the drawing.

9. Radii

10. Diameter

11. Centers

12. Angles
18.3b. Furniture plot ground plan

18.3d. Stage manager’s ground plan for inclusion in promptbook

8.3c. Shift plot, The Importance of Being Earnest. Courtesy Daniel Crump, scene designer
18.1b. Pencil rendering of You Can't Take It with You. Courtesy Dana Kenn, scene designer.