APPENDIX B

– DESIGN INFORMATION –

Additional design information relative to freeway and expressway guide signs is provided in Appendix C and information about the alphabets for highway signs, and the related letter spacing charts, are provided in Appendix D.
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Design Guidelines

There are general guidelines to follow in the design of highway signs in order to conform to basic standards. Many of these guidelines are mentioned in various Sections of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), while others are derived from accepted practice in sign design and layout. Highway signs with standardized designs conforming to the general guidelines (like most regulatory, warning, emergency management, school, railroad-highway grade crossing, and bicycle signs), are contained in this book and are shown with different standard sizes depending on the type of highway or facility where the sign is intended to be used.

Although some guide signs have also been standardized and are included in this book, most guide signs need to be designed separately because of the variability in message or legend. For most guide signs, there can be no rigid standardized sizes.

Sign Dimension

Message variability controls overall sign dimensions. Whenever practicable, the overall dimensions of the signs should be in multiples of 6 inches, or in the case of freeway and expressway guide signs, 12 inches.

Letter Style

Type of letters used shall be those shown in Appendix D of this Manual. As a guide to choice of alphabets, tests have shown that, for any given legend, better legibility can be obtained by using a relatively wide spacing between letters than by using wider and taller letters with a cramped space. Spacing charts for the alphabets are also provided in Appendix D.

Use of the Series B alphabet is usually limited to street name signs, parking signs, and other similar signs where limited breadth and stroke widths are required for design purposes.

Size of Lettering

For guide signs on expressways and freeways, the prescribed numeral and letter sizes, are provided in Appendix C of this Manual. The minimum sizes specified should be exceeded where conditions indicate a need for greater legibility.

Amount of Legend

The OMUTCD states that regardless of letter size, the legend on a guide sign must be kept to a minimum to be instantly legible.

Borders

With few exceptions, the OMUTCD requires all signs to have a border of the same color as the legend. A dark border should be set in from the edge, while a white border should extend to the edge of the panel.
Diagrammatic Signs

Design of diagrammatic signs follows the same principles and guidelines previously covered, plus additional guidelines necessary for the details related to the graphic components. Diagrammatic signs shall be designed in accordance with the following criteria:

- The graphic legend shall be of a plan view showing a simplified off-ramp arrangement.
- Only one destination may be shown for each arrowhead, with a maximum of two destinations per sign.
- The graphic should not depict deceleration lanes. A black on yellow “EXIT ONLY” panel should be used to supplement a lane drop graphic.
- The shaft for the exit ramp movement should be shorter than, but not separated from, the through movement graphic.
- Arrow shafts should contain lane lines where appropriate and route shields shall not be used as a substitute for arrowheads.
- Route shields, cardinal directions, and destinations should be clearly related to the arrowhead, and the arrowhead should point toward the route shield for the off movement.
- The cardinal direction should generally be placed adjacent to the route shield and the destination should be placed below and justified with the route shield.
- Exit number panels should be located toward the top left edge of the sign for a left exit and toward the top right edge for right exits.

The above guidelines were based upon the results of a research project conducted by the Federal Highway Administration. This research generated ideals for the various diagrammatic design features. These ideal features have been modified so that more economical designs could not be obtained.

Specific design standards for graphic components are presented in the table below and other recommended features are shown in the design illustrations in the following pages. The illustrations shown were designed through a trial and error procedure and will provide the designer with the guides and elements needed to design an economical diagrammatic sign while maintaining a clear and simple message.
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