

GUIDELINES FOR PREPARING ITS JPO REPORTS

Format for Research Reports

Standard research reports must follow the guidance in this document regarding formatting and font, type size, symbols, margins, page numbering, bullets, columns, and other elements as the preferred style. The report must be consistent throughout in format and style.

All reports are to be submitted as a 508-compliant, PDF file.

Order of Elements in Reports

This section lists the various components of a report in the order in which they should appear. However, please note that it is not necessary to use all elements in all reports. (For example, if a report does not contain references, there would be no need for a reference section in the report.)

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|-----------------------|--|
| Covers | Front Cover Inside Front Cover (R&D Foreword and Disclaimer Notice) |
| Front Matter | Technical Report Documentation Page (Form DOT F 1700.7) Acknowledgements (if any) Metric Conversion Chart Table of Contents List of Figures (including equations) List of Tables List of Abbreviations and Symbols |
| Body of Report | Executive Summary Main text separated into chapters Conclusions Recommendations |
| Back Matter | Appendices (Use consecutive pagination, do not use A-1, etc.) Glossary References Bibliography Index |
| Back Cover | Cover |

Note: Contractors' names may not appear in the report, except in block 9 of the Technical Report Documentation Page (form DOT F 1700.7). Contractor logos may not appear at all. Paid consultants should not be acknowledged anywhere else in FHWA publications.

If an acknowledgement page must be used, it should not contain contractor, author, or company names.

Inside Front Cover

Every FHWA report must contain the standard disclaimer notice below:

Notice

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in this document.

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this report only because they are considered essential to the objective of the document.

Type Arrangement and Typefaces

- The preferred font is Arial, 10 point for text.
- Margins should be 1 inch on all sides, including on pages with figures and tables.
- Single-spacing is preferred. Use the superscript and subscript features in Microsoft Word. (sample superscript)
- Paragraphs are not indented. Use paragraph spacing settings instead of carriage returns to create line spacing between paragraphs (i.e., 12 pt after paragraph to create one blank line).
- Use a single space after periods.
- Right margins should not be justified because type with ragged margins is easier to read and edit.
- Ensure that words are correctly divided, mathematical symbols or formulas are not divided between lines, and spacing is not excessive or erratic.
- Widows and orphans should be avoided. Please do not leave a single line of text at the top or bottom of a page.

References and Bibliography

- References and citations in the text should use superscript numbers. Place them after the end punctuation. If there is more than one reference, separate them with commas, but no spaces. Example:

This guide contains many references.^{1,5,7}

For more than three references, use a separate sentence in parentheses. Example:

This guide contains many references. (See references 1, 5, 7, and 18.)

- In the list of references in the appendix and in the bibliography, any style may be used as long as it is consistent and all reference elements are included (authors, title, publication number, publisher's name and city, publication date).
- References must be consistent in punctuation, the order of elements, and the amount of information supplied. When chapters or articles in larger volumes are referenced, please be mindful to provide inclusive page numbers, which can shorten the time it takes a reader to track down a particular reference.
- Use a single series of Arabic numbers beginning with 1 and continuing through the document and appendices.
- Each reference must be cited. Materials not cited may be listed in a bibliography placed at the end of the volume on the page(s) following the references.

Pagination

- The Technical Report Documentation Page (form DOT F 1700.7) is always unnumbered.
- Include front matter in the page count in the number of pages (block 21) of the form 1700.7.
- Front matter should use lowercase Roman numerals, such as ii, iii, etc. Start numbering with Arabic "1" at the Executive Summary/Introduction or, if there is no executive summary, at the start of Chapter 1.
- Use only one series of Arabic numbers from the first page of the report to the last. *Do not number appendix pages as A-I, B-I, etc.*
- Decimal numbers, hyphenated numbers, or numbers combined with letters for chapters, sections, or subsections should not be used as page numbers.
- Chapters must begin on the right-hand page (i.e., an odd-numbered page). Insert blank pages to achieve this effect. Blank pages are counted in the page number sequence, but no number is printed on the page. Do not label "this page intentionally left blank" when adding a blank page to start a new chapter on a right-hand page. Individual chapters, appendices, etc., should not have title pages.

Table of Contents

- At a minimum, chapter headings and first level headings should be included in the table of contents.
- Do not list front matter on the table of contents. List only the body of the text from page 1 through the appendices.

Headings

- Do not number subheadings. See the following box for preferred heading styles.

Chapter 1. Title

Font Formatting: Arial bold 24 pt and font color RGB: 0, 68, 131

Numbering: Arabic; followed by a period and one space

Alignment: Flush left

Paragraph Formatting: 12pt before, 48 pt after

Line Spacing: Multiple: 1.1 pt.

SECOND-LEVEL HEADING

All caps, bold, and flush left (i.e., at the left margin). No numbering is required. Paragraph spacing is 18 pt before and 12 pt after.

Third-Level Heading

Initial caps, bold, and flush left. Paragraph spacing is 12 pt before and 6 pt after.

Fourth-Level Heading

Initial caps, bold, italics, and flush left. Paragraph spacing is 12 pt before and 6 pt after.

Fifth-Level Heading

Initial caps, italics, and flush left. Paragraph spacing is 12 pt before and 6 pt after.

Sixth-Level Heading: Initial caps, bold, followed by a colon, and flush left. Paragraph spacing is 12 pt after.

Figures and Tables

- A figure or table should be placed near the first mention in the text.
- **Every table must have a unique caption *centered at the top*.** All tables must be numbered in a single sequence from the beginning of the volume through the appendices. Use this format for writing, punctuating, capitalizing, and centering table captions:

Table 1. Caption

- **Every figure must have a unique caption *centered at the bottom*.** All figures must be numbered in a single sequence from the beginning of the volume through the appendices. Figures include graphs, photos, formulas, equations, charts, etc. Use this format for writing, punctuating, capitalizing, and centering figure captions:

Figure 1. Caption

- To be Section 508 compliant, all figures must have alt text. Alt text must contain all the relevant information a person would get from examining the graphic element.
- Use text wrapping style “In Line with Text” for all figures.
- All tables must have a designated header row.
- Do not incorporate a table and table information into a figure (see example below). A table should be depicted in a Microsoft Word or Excel text table format rather than as part of a figure or graphic.

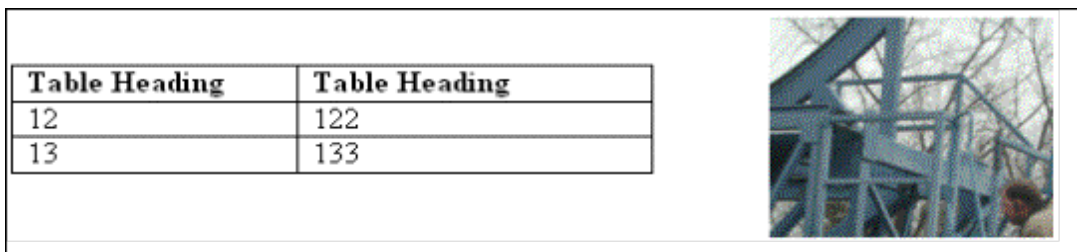


Figure 1. Example of Table Incorrectly Depicted as Part of the Graphic

- All captions must be in the same type style and font size.
- Spacing before and after captions should be consistent throughout the document.
- For reports of 30 pages or more, lists of figures and tables are required and are placed immediately following the table of contents. Lists of figures and tables can be on the same page if both fit completely.

Note: Do not use special symbol, math, or scientific fonts for equations. Instead, insert an equation as a figure (.jpg format) and number the equation as a figure.

Equations and Formulas

When using special symbol, math, or scientific fonts in equations and formulas, create a .jpg graphic file of the equation and insert it into the document as a graphic/picture. Keep in mind that not all computers, printers, and operating systems can interpret special math and scientific fonts. All equations must be numbered and captioned as a figure. See the following example:

$$PR_{LH} = \frac{8days \cdot 24hr / day - T_{DRIVING} - T_{HOME} - T_{LOAD/UNLOAD} - T_{SHIPPER/RECEIVER} + \frac{5min}{60min}}{T_{DRIVING}} = 0.7833$$

Figure 7. Equation

Notice that the equation was created as a graphic object (figure) and pasted into this document as a picture. It was not created as "text" or a "text box" using a special font through Microsoft Word. The caption above shows the normal equation and caption, which would be reflected in a report.

On the other hand, the 508 caption for the above equation would show the exact same information, but it would be more detailed than simply providing the name of the type of figure depicted and the name of the equation. The 508 caption would be the following:

Figure 7. Equation. PR subscript LH equals the sum of the following: 8 days times 24 hours per day minus T subscript driving minus T subscript home minus T subscript load/unload minus T subscript shipper/receiver, end of sum, that sum divided by T subscript driving, to that quotient add the quotient of 5 minutes divided by 60 minutes, the sum of which equals 0.7833.

Lists

Use Bullet and Numbering list styles to correctly embed structural tags for lists. Lists should be bulleted unless the sequence of items is critical; in which case Arabic (1, 2, 3, etc.) numerals followed by periods and one space may be substituted for bullets. In either case:

- Place a colon at the end of the text sentence preceding the list.
- Use the standard (Microsoft Word) round bullets.
- Use parallel rhetorical and grammatical structure, as in this list.
- Begin each entry with a capital letter.

- End each entry with a period if it forms a complete sentence; otherwise, only use a period at the end of the last bullet.
- Do not end the next-to-last item with "and" or "or."
- Short bulleted items (words, phrases, sentences) of a single line should have 3pt spacing before each. Long bulleted items (of more than one line) should have 6 pt spacing before.
- The last bullet should have 3 or 6 pt spacing before and 12 pt after.

Footnotes

- Use superscript figures without parentheses or brackets for footnote references (see *GPO Style Manual*).
- Footnotes must begin on the page carrying the footnote number. Avoid breaking a footnote between pages (see *GPO Style Manual*).
- Footnotes should be single-spaced.
- Asterisks, daggers, or italic superior letters may be used only when a numeral in a table or figure might cause confusion, such as being mistaken for an exponent (see *GPO Style Manual*).