

KDOT Research Report Style Guide

Thank you for reading this guide to the publication style of KDOT Research Reports. The purpose of this document is to help authors know how to format and edit their reports. KDOT prefers all Research Reports submitted to us utilize either this Style Guide or the FHWA-RD-03-074 “Communications Reference Guide” if the research report is also being submitted for national publication (i.e., NCHRP, TRB, AASHTO, etc.). Our house style is based on the *Publication Manual of the American Psychological Association*, 6th Edition. For any items not discussed in this style guide, please refer to the *Publication Manual of the American Psychological Association*, 6th Edition. In cases where this style guide and the *American Psychological Association (APA)* do not recommend the same treatment of a particular item, this style guide should be followed by authors for reports.

All reports must be in Microsoft Word and must be in .docx (preferable) or .doc file format. A Word document containing the correct formatting and styles is available upon request.

Please note that styles have been provided for you in the styles ribbon (see Figure 0.1). Please apply the appropriate styles to your document so that the text will appear in the correct format with minimal manual editing on our part. Authors can locate the style ribbon by clicking on the Home tab in Microsoft Word. Clicking the arrow in the bottom right corner of the ribbon shows all styles at once. To apply a style to your document, simply place the cursor on the text and click on the name of the style.

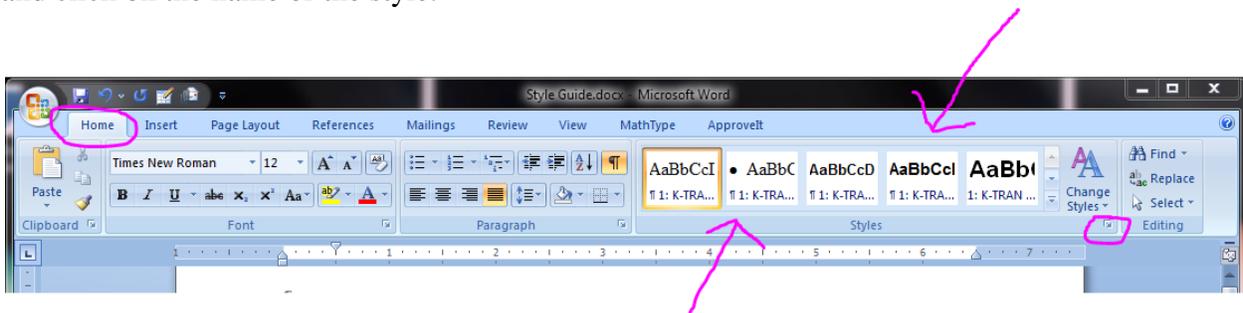


Figure 0.1: The Style Ribbon

Please do not add internal links to your document.

Chapter 1: Organization

1.1 General Guidelines

- The maximum number of pages for reports is 75 pages (excluding appendices). Any exceptions to this limit should be approved by KDOT prior to submission.
- The target audience for the report will be provided by KDOT (e.g., paving contractors, bridge designers, KDOT), and the report should be written with them in mind. Master's theses or doctoral dissertations may not satisfy this requirement.
- It is not necessary to provide chapter summaries, either in the introduction or in the body of the report.
- Literature reviews should be relevant to the central topic of research, and kept as brief as possible.
- All references must be clearly cited within the text of a report and included in the reference list. See Chapter 4 of this Style Guide for information on references.
- **The scope and conclusion of a research report must be consistent with the project proposal approved as Special Attachment No. 1 in the contract.**

1.2 Numbering

Sections should be numbered by chapter, section, subsection, etc. This document is an example of how your reports should be numbered:

Chapter 1: Name of Chapter (the name of this style is Heading 1)

1.1 Name of Section (the name of this style is Heading 2)

1.1.1 Name of Subsection (the name of this style is Heading 3)

1.1.1.1 Name of Next Level Subsection (the name of this style is Heading 4)

1.3 Components

Here is a list of sections and subsections that authors often include:

- Cover page
- Abstract
- Acknowledgments
- Table of Contents
- List of Tables
- List of Figures
- Introduction
 - Overview
 - Background
 - Problem Statement
 - Objectives
 - Scope
- Literature Review
- Methodology
- Results
- Discussion
- Applications
- Implementation
- Suggestions
- Conclusions
- Recommendations
- References

1.3.1 Cover Page

The cover page should include the title of the report; each author's name, academic and professional titles, and affiliations; the completion date; and the institution for which the report was prepared.

1.3.2 Abstract

An abstract is required for each research report, and must include the results of the project. There may be readers that see the abstract as a stand-alone piece before they see the report as a whole, so authors must make sure that the abstract is brief (usually not longer than 250 words) and detailed. An abstract must be able to be read apart from the report as a whole. Other researchers in your field will decide whether or not they want to read your report based on your abstract, so you should tell them why they should be interested (without saying, “You should be interested in reading my report because...”).

Here are a few more ideas about what we expect in an abstract:

In addition to information about the purpose, scope, and research methods used, the informative abstract summarizes the results, conclusions, and any recommendations. The informative abstract retains the tone and essential scope of the report, omitting its details (Alred, Brusaw, & Oliu, 2006).

1.3.3 Acknowledgments

Often, people who contributed to the research, but who did not participate in the writing of the report (and who could therefore not be considered co-authors) are listed here. Project monitors are often named in this section. Please note that this is a professional acknowledgment section—only persons or institutions that supported your work in a professional aspect should be listed here. Please do not use this space to acknowledge family, friends, or other persons or institutions that supported your work in a personal aspect.

1.3.4 Table of Contents

These can be automatically generated using the Table of Contents feature in Word. Leader dots should be used between the entry and the page number (Figure 1.1). This list should include sections, subsections, and appendices (if the report contains them).

Table of Contents	
Abstract.....	i
Acknowledgements.....	ii
Table of Contents.....	iii
List of Tables.....	v
List of Figures.....	vi
Chapter 1: Introduction.....	1
1.1 Background.....	1
1.2 Problem Statement.....	2

Figure 1.1: Leader Dots in a Table of Contents

1.3.5 Conclusions

The conclusions should include the major findings presented in the body of the report and should fulfill the expectations set forth in the introduction. No new information or analysis should be presented here. You may wish to address ambiguous data or unanswered questions or concerns in this section. You may also wish to clearly communicate any limitations to your research, i.e., include a mild caution about conclusions that *cannot* reasonably be drawn from the data you have presented. In this section, you should tell the reader the implications of your research—tell the reader why your report is important (again, without saying, “my report is important because...”).

1.3.6 Recommendations

Recommendations should provide KDOT guidance to implement the major findings of the report. They should flow directly from the conclusions and be fully supported by information presented in the body of the report. The recommendations should be as specific as possible, actionable, and address the problem(s) detailed in the project proposal.

Chapter 2: Layout

The margins for the entire document are 1 inch.

2.1 Body Text

The body text should be set in Times New Roman, 12 point font, with the line spacing set to at least 22 points. The first line of every paragraph should be indented 0.5 inches. This paragraph style can be found in the ribbon and is called “body text.”

2.2 Figures

Figures should be detailed and should contribute to the understanding of the information presented in the report. Figures are numbered according to their chapter and order. For example, the first figure in Chapter 1 would be called Figure 1.1. Next would be Figure 1.2, Figure 1.3, and so on. Chapter 2 would start with Figure 2.1, Figure 2.2, etc. Figures should only be numbered 1, 2, 3, and so on, if the report is written using the FHWA-RD-03-074 “Communications Reference Guide” (i.e., if the report is being submitted for national publication).

Please make sure that the figure is editable in every way by not embedding the figure caption or number in the figure itself. Figures must not be blurry or hard to decipher. Do not link figures to separate files or programs.

Captions should appear on the same line as the figure label. Each word in the caption except for prepositions should be capitalized. Figure captions and labels appear underneath the figure, as shown:

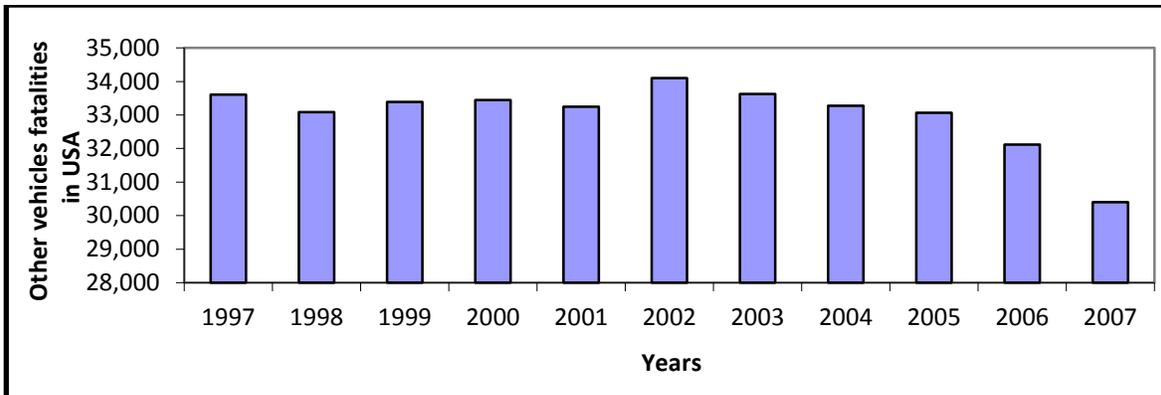


Figure 2.1: Trend in Other Vehicle Fatalities in the U.S., 1997-2007
 Source: NHTSA Traffic Safety Facts (2008)

This style can be found in the ribbon, and it is called “figure caption.”

Charts and graphs should be designed in such a way that they are easily understood when rendered in black and white. We do not publish print reports; however, many readers choose to print the PDF of reports, and they usually do so in black and white.

If you are including photographs as figures, please insert them directly into the document. Please make sure that the photos are high resolution and that they show exactly what you want them to feature with minimal background detail. Any unnecessary elements should be cropped out. Please make sure that the size of your photo is appropriate—small enough to economize space and not to give any undue emphasis, but large enough to show detail where necessary. Photos should be .jpg with a resolution of 200 to 300 dpi.

Please do not submit the photos or figures as separate files—insert them into the document.

2.3 Tables

The guidelines for tables are similar to those for figures. If a table is the first table in the first chapter of the report, then the label should be Table 1.1, followed by Table 1.2, Table 1.3, and so on. Chapter 2 would start with Table 2.1, Table 2.2, etc. Tables should only be numbered 1, 2, 3, and so on, if the report is written using the FHWA-RD-03-074 “Communications Reference Guide” (i.e., if the report is being submitted for national publication).

Tables that appear in the body of the report must be fully editable. Screenshots or saved images are not acceptable. Do not link tables to separate files or programs.

Table labels and captions appear above the table, together on one line.

As a general rule, the text within a table should be oriented toward the bottom of the cell with the cells sized in order to economize vertical space within the report. The column on the left should be left aligned, with the other columns centered under their headings, as in the example below:

Table 2.1: Method Quality Matrix

Item	Method			
	New Method*	LCA	EIO-LCA	DEP
Method of Acquisition	2	2	2	2
Independence of Source	1	1	1	1
Data Representation	1	1	1	2
Time Relevance	1	2	2	1
Graphical Representation	1	2	2	2
Technological Representation	1	1	1	1

*Using the Example Agency of 941 buildings

**All values come from the information each method would utilize from the same source

This style can be found in the ribbon, and it is called “table caption.”

2.4 Equations

Equations should be numbered by chapter as well: the first equation in the first chapter is numbered Equation 1.1. Equations should only be numbered 1, 2, 3, and so on, if the report is written using the FHWA-RD-03-074 “Communications Reference Guide” (i.e., if the report is being submitted for national publication).

If the equation is short enough, the equation should appear on the left side of a single line, with the equation label on the right side of the line:

$$IQ = \left(\frac{SL}{PL-10} \right) * V * 0.55 \quad \text{Equation 2.1}$$

If the equation is too long for this type of layout, please place the equation label on the second line on the right-hand side:

$$Y = 0.19955 + 0.01468ALCO - 0.0722HL - 0.0674PCI + 0.0095AFAM - 0.0677HMRR$$

Equation 2.2

If the equation contains variables that must be defined, you may use the “equation variables” style to format these below the equation.

Microsoft Word 2010 and newer versions include built-in support for writing and editing equations. KDOT prefers that authors use these built-in tools to write equations in their reports.

2.5 Appendices

Appendices should contain any information that can be considered supplemental or tangential to the information supplied in the main body of the report. Appendices should be labeled using the Heading 1 style and should be lettered Appendix A, Appendix B, and so on. Tables and figures included in appendices should be labeled as Table A.1, Table A.2, Table A.3, or Figure A.1, Figure A.2, Figure A.3, etc.

Chapter 3: Usage Items

3.1 Numbers

Always spell out numbers beginning a sentence, or recast the sentence so that the number does not appear at the beginning (*APA* 4.32).

Spell out numbers zero through nine; use numerals for numbers 10 and greater. However, always use numerals to express a quantity if the number immediately precedes a unit of measurement (*APA* 4.31).

Use a space, not a hyphen, between the numeral and the abbreviation or symbol. The exception to this rule is in the case of measures of angles, in which case no space is used (*APA* 4.31 and 4.40):

4.5 ft, 12 °F, but 45° angle

For expressions including two or more quantities, do not repeat the abbreviation or symbol (*APA* 4.27):

16-30 kHz 0.3, 1.5, and 3.0 mg/dl

APA notes that units of measurement used without a numeral should always be spelled out (*APA* 4.40).

3.2 Abbreviations, Acronyms, and Initialisms

Terms, names of organizations, etc., should be spelled out the first time they are used in the abstract and in the body of the report. The acronym, initialism, or abbreviation follows in parenthesis in the text and in the abstract. The acronym, initialism, or abbreviation can be used in the subsequent text in the abstract and in the text of the report.

Units of measure should be spelled out upon the first usage in the abstract and in the body of the report, with the abbreviation following in parentheses. The unit of measure may be abbreviated in subsequent uses. *Inches* should always be spelled out.

Omit the period after every technical abbreviation.

For more information regarding abbreviations, please see *APA* 4.22-4.30, pages 106–111.

3.3 Capitalization Style for Titles, Chapter and Section Headings, Figure and Table Captions

See *APA* 4.14-4.20 for further information.

- Capitalize all major words in titles of books and articles within the body of the paper.
- Conjunctions, articles, and short prepositions are not considered major words; however, capitalize all words of four letters or more.
- Capitalize all verbs (including linking verbs), nouns, adjectives, adverbs, and pronouns.
- When a capitalized word is a hyphenated compound, capitalize both words.
- Capitalize the first word after a colon or a dash in a title.

Chapter 4: References

Please note that any idea that did not originate with you as an author must be attributed to its source, whether it is quoted verbatim or not. Please be especially careful with paraphrasing or summarizing. **Any report with undocumented or improperly documented sources will be returned to the authors for rework.**

For help with references, please use the *Publication Manual of the American Psychological Association*, 6th Edition. Chapters 6 and 7 will be particularly useful. Please also utilize the resources your university has at your disposal.

4.1 In-Text Citations

We use what is called the author-date system of documentation with a reference list (see *APA* 6.11-6.21). Each entry in a reference list must correspond to an in-text citation and vice versa.

The author's last name and the year of publication should be placed in parenthesis in the text after a quotation or reference. If the author's surname is used in the text, simply place the year of publication in parenthesis after the surname (*APA* 6.11-6.21). For example:

“Kessler (2003) found that among epidemiological samples...”

“Early onset results in a more persistent and severe course (Kessler, 2003).”

For sources with only **one or two authors**, all names are listed for each reference in the text. For example:

Walker and Allen (2004)

(Walker & Allen, 2004)

For sources with **three to five authors**, list all authors in the first citation; in subsequent citations, list only the last name of the first author, followed by “et al.” and the year of publication. For example:

First citation: “Kisangau, Lyaruu, Hosea, and Joseph (2007) found...”

Subsequent citations: “Kisangau et al. (2007) found...”

First citation: (Kisangau, Lyaruu, Hosea, & Joseph, 2007)

Subsequent citations: (Kisangau et al., 2007)

For sources with **six or more authors**, list only the first author’s surname followed by “et al.” and the year of publication. The entry in the reference list will contain the names of all the authors. For example:

Wasserstein et al. (2005)

(Wasserstein et al., 2005)

For further information about in-text citations, please refer to the *Publication Manual of the American Psychological Association*, 6th edition, sections 6.11-6.21, and especially Table 6.1 on page 177.

4.2 Reference Lists

The reference list appears at the end of the paper. Entries appear in alphabetical order.

Please include enough information in the citation so that KDOT and readers can locate each of your sources. Your reference list should allow readers to assess each source’s usefulness and legitimacy, as well as serve as a resource for readers’ and your future research.

Please refer to the *Publication Manual of the American Psychological Association*, 6th edition, sections 6.22-6.26, for more information on building a reference list. For specific reference examples, see Chapter 7.

- This example is from a scholarly journal; note the volume, issue, and page numbers (*APA* 7.01):

Light, M.A., & Light, I.H. (2008). The geographic expansion of Mexican immigration in the United States and its implications for local law enforcement. *Law Enforcement Executive Forum Journal*, 8(1), 73-82.

- For sources that are articles in scholarly journals that are accessed online, please provide the DOI or a *stable* URL (From APA 7.01):

Herbst-Damm, K.L., & Kulik, J.A. (2005). Volunteer support, marital status, and the survival times of terminally ill patients. *Health Psychology, 24*, 225-229. doi:10.1037/0278-6133.24.2.225

Sillick, T.J., & Schutte, N.S. (2006). Emotional intelligence and self-esteem mediate between perceived early parental love and adult happiness. *E-Journal of Applied Psychology, 2*(2), 38-48. Retrieved from <http://ojs.lib.swin.edu.au/index.php/ejap>

- When citing a report related to a government agency, cite the report number:

Brigs, D.W., & Chatfield, B.V. (1987). *Integrated highway information systems* (NCHRP Report 133). Washington, DC: Transportation Research Board, National Research Council.

- When citing websites, you must include the URL. Retrieval dates are not necessary unless the website is likely to undergo frequent change:

KU Institute for Policy & Social Research. (2013). *Kansas statistical abstract 2012* (47th ed.). Retrieved from <http://ipsr.ku.edu/ksdata/ksah/>

4.3 Citing Google Maps or Google Earth

Authors of KDOT research reports often include maps and satellite imagery obtained from Google Maps or Google Earth. These resources must be properly cited in your report and reference list. Proper citation format is as follows (APA 7.07, Example 53):

Google Maps. (2015). Kansas State Capitol Visitor Center [Street map]. Retrieved from <https://www.google.com/maps/place/Kansas+State+Capitol+Visitor+Center,+300+SW+10th+St,+Topeka,+KS+66612/@39.0602249,-96.2192798,10z/data=!4m5!1m2!2m1!1skansas+statehouse!3m1!1s0x87bf03054f1090ab:0xdb988932a5cda3f8>

The required reference elements are (Trinity College Library, n.d.):

1. Cartographer/Author: Google Maps, Google Earth
2. Copyright date: Year
3. Title or description of map: If no title is given, create a short description.
For Google Earth, use the image details: location, co-ordinates, elevation.
4. Map type: Street map, Satellite imagery, etc.
5. URL: Stable link to the map cited

In-text citations should be handled like any other reference type. For example:

Google Maps (2015)

(Google Maps, 2015)

For further help with citing maps, please see the following guide provided by the Trinity College Library: <http://citesource.trincoll.edu/apa/apagooglemap.pdf>.

4.4 Examples of Frequently Used References

The following references are provided as an example of resources frequently used by authors of KDOT research reports.

ASTM D4253-00. (2000). *Standard test methods for maximum index density and unit weight of soils using a vibratory table*. West Conshohocken, PA: ASTM International. doi: 10.1520/D4253-00, www.astm.org

Kansas Department of Transportation. (2007). *Standard specifications for state road & bridge construction*. Topeka, KS: Author.

Kansas Department of Transportation. (2013). *Aggregates for on grade concrete (Special provision 07-11004-R08). Special provision to the standard specifications, 2007 Edition*. Topeka, KS: Author.

KT-22 Kansas Test Method. (2010). Making and curing compression and flexural test specimen in the field. *Kansas Department of Transportation construction manual, part V*. Topeka, KS: Kansas Department of Transportation.

KTMR-22 Kansas Test Method. (2012). *Resistance of concrete to rapid freezing and thawing*. Topeka, KS: Kansas Department of Transportation.

References

- Alred, G.J., Brusaw, C.T., Oliu, W.E. (2006). *Handbook of technical writing* (8th ed.). New York: Bedford/St. Martin's.
- American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author.
- Hacker, D. (2004). *A pocket style manual* (4th ed.). Boston: Bedford/St. Martin's.
- Trinity College Library. (n.d.). *APA style – Google Map*. Retrieved from <http://citesource.trincoll.edu/apa/apagooglemap.pdf>