



2012 Annual Conference Proceedings Author's Guide to Preparing a Manuscript

Congratulations on being selected to prepare a paper for the AREMA 2012 Annual Conference Proceedings. AREMA's *Conference Proceedings* and publications are an important reference for the railway engineering and maintenance-of-way community. Thank you for your contribution to our base of knowledge.

General Information

AREMA policy requires that the papers given at the Annual Conference, symposiums and workshops, or published in its publications be reviewed and recommended by an AREMA committee or by an ad hoc committee set up by the Board.

Papers to be presented at AREMA-sponsored conferences, symposiums and workshops must be submitted for review according to a timeline as outlined in this document. A paper that is for information only and is not to be presented may be submitted for review for publication at any time. Such papers, if favorably reviewed, will be published in the *AREMA Conference Proceedings* with related papers from the Annual Conference. Names of the authors of papers are made known to reviewers, but the names of reviewers are not revealed to authors.

Timelines for Submissions

The following dates and procedures apply to the review and acceptance of papers and presentations for the AREMA Annual Conference & Exposition.

December 2011

- Board develops final plan for conference sessions
- Special Subject Chairmen and Co-Chairmen selected
- AREMA Committee invited to suggest specific papers
- AREMA Board approves Session Chairmen and Co-Chairmen
- Call for Papers Deadline – December 15
- Abstracts reviewed by Program Chair and Functional Groups

February 2012

- Abstract Final Selection
- Authors notified of final decision on submissions
- Authors confirm participation



June 2012

- June 8 - Final Papers due for review
- June 29 - PowerPoint presentations due for review (including any video files). (PDF versions are acceptable for review for presentations without video clips)

July 2012

- July 23 - Final Papers and presentations due for publication

August 2012

- Presenter Registration Deadline – August 1
- Program Finalized – August 1

*****ABSOLUTELY NO CHANGES TO POWERPOINT PRESENTATIONS WILL BE ACCEPTED ON SITE*****

Submission of Publication Manuscripts

Electronic Submission of Manuscripts

Electronic submission is the preferred method for submitting manuscripts to AREMA for review.

Papers must be submitted online via the AREMA website. Go to www.arema.org and click on “Meeting” on the left toolbar. Click on “Presenters” from the call out menu. Click on the “Upload Paper” button to submit your paper. Fill out the online submission form and upload the manuscript. Electronic submissions of manuscripts **MUST** be in MS Word or Adobe PDF format. **They must be submitted for review by June 8, 2012.**

Please Note: PowerPoint presentations and speeches are NOT acceptable as submitted papers. A full text-based paper will be required for Publication. PowerPoint slides enhance the presentation of your paper.

After notification of **final paper acceptance**, authors must submit an electronic copy of the final manuscript, **revised according to reviewer comments (if any) and prepared in accordance with AREMA manuscript specifications.**

- Manuscripts are to be formatted with a font no smaller than 12 pt. Preferred fonts are Times New Roman or Arial.



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- One Electronic copy submitted via the AREMA online submission page at www.arema.org or on CD-ROM or USB drive. Format must be Adobe PDF format or MSWord 2003 or later. (MS Word 2007 is preferred.) **No other file formats will be accepted.**
- All authors and co-authors must be identified.
- No changes will be permitted in title or copy (other than suggested editing from the Review Committee) after the June 8 submission deadline.

Manuscripts that do not conform to the stated specifications are subject to considerable delay in publication pending return of the manuscript for revision or completion by the authors. Papers published by AREMA are subject to editorial modification in the interest of clarity, conciseness, consistency, adherence to established AREMA editorial style and economy.

Review

Papers and discussions submitted are reviewed and recommended by the appropriate AREMA committee. The final publication decision is made by AREMA on the basis of committee recommendation, priorities within a given subject area and available resources. **Primary authors will receive notification from AREMA via email to the submitting author's email address regarding acceptance or decline of papers for publication.**

Your paper and presentation will be reviewed by the Conference Program Committee to ensure consistency within the sessions and so that it will meet AREMA standards. Final approval of your paper and presentation will occur by **August 1, 2012**. If your paper or presentation does not meet AREMA standards, it will be withdrawn from the Conference and will not be included in the *Conference Proceedings*.

Preparing the Paper

The paper should be written with the following general principles in mind:

- The text should be written in simple, concise and effective language.
- Coverage of the subject should be complete, well organized and supported by understandable and usable tables, figures and references and include descriptions of the work methods.
- Data presented must be valid and any research methods described should be appropriate for the studies reported.
- Conclusions should be valid, appropriate and properly supported.
- The content of the paper should be new and original, deal with issues that are timely and have lasting value.



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- Papers in which special interests are advocated, are of a commercial nature, or deal with subject matter outside the general area of interest of AREMA, will not be considered. A paper may also be rejected if the thesis is descriptive of the properties of a product whose composition or manufacture is not disclosed. Generic names of products and equipment should be used unless the author considers the trade or manufacturers' names to be essential to the purpose of the paper.
- The content must not have been published elsewhere. However, in some cases, AREMA may accept papers that have been submitted to or published by other organizations, provided that the publication has had limited distribution and that the author has secured the necessary clearances and permissions. Such cases are handled individually; the author should contact the AREMA Executive Director/CEO.
- If the paper addresses governmental policies, the author should offer conclusions and recommendations in a way that recognizes sensitivities and alternative approaches.
- The paper must be useful to practitioners or researchers; research results should be related to their practical implications for railway infrastructure.

Papers submitted for review should not exceed a maximum of 7,500 words, including figures and tables (appendices should not be used). **Please submit electronic copies of papers.**

A principal or corresponding author must be designated for papers with multiple authors. AREMA will correspond only with the designated author, who has the responsibility for keeping the co-authors informed of visual aids, preprint, manuscript and all other AREMA requirements.

Research Sponsorship

Authors of papers that report results of research sponsored directly or indirectly by federal programs should indicate this sponsorship in an Acknowledgment section.

Clearances and Copyrighted Material

In accordance with stated copyright provisions, authors must assume full responsibility for securing any necessary clearances and written permissions for publication from any contracting or supervisory agencies involved in the research or from holders of copyrights on material used in the paper. It is essential that authors have concurrence from co-authors or co-workers before submitting papers for publication by AREMA and that all contributions to the work be properly acknowledged.



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Upon notification of acceptance for publication of a paper that contains previously copyrighted material, authors must obtain written permission from the copyright holder to publish the material in AREMA's *Conference Proceedings*. This permission must be attached to the manuscript when the paper is submitted for publication.

All AREMA publications are copyrighted by AREMA; and it is assumed that the material will not be published elsewhere without prior notice to AREMA and that AREMA will retain unrestricted rights to the material.

Photocopying or reproduction of papers by any means, electronic or otherwise, except for limited internal use of brief excerpts under the "Fair Use" provision, is strictly prohibited. Copyright violations are serious and will be enforced. For rulings on any contemplated reproduction under "Fair Use", please contact AREMA Headquarters with a written description of the proposed use.

Style

To achieve uniformity and consistency in publications, the AREMA editorial staff uses certain standard reference works for guidance. In matters of spelling, definition, and compounding of words, *Webster's Third International Dictionary* (unabridged) is generally followed. Published standards of scholarly organizations are accepted in questions of usage of technical terms. Other matters of style and usage are based on published documents that are widely accepted as authoritative (e.g., *Chicago Manual of Style, Words Into Type*). Authors should avoid jargon, acronyms, use of personal pronouns, and sexist language in their manuscripts. Technical terms that are beyond the reasonable scope of AREMA's readers should be explained.

Proofs

AREMA editors make every effort to preserve the meaning or emphasis of the author's language. Nevertheless, changes in meaning may be introduced inadvertently and errors may occasionally occur in print.

Some authors, therefore, may wish to see proofs of their papers before publication. Proofs may be obtained only by written request to the AREMA Executive Director/CEO. Authors are required to review the proofs within two days of receipt and to telephone or fax any corrections, subsequently mailing the corrected proofs to AREMA for verification within ten days. Decisions about whether changes (other than errors) will be made must rest with the editors. (The author requesting review of proofs will receive written notification approximately two weeks before proofs are mailed so that an alternate reader can be designated if the author will be unavailable at the scheduled time.)

AREMA will not, as a general rule, make alterations to the original manuscript submitted for publication other than corrections of any errors inadvertently introduced during the editing process. Because alterations are costly, authors should not consider this review process an opportunity to revise or update their papers. If an author insists on significant alterations, publication of the paper may be delayed or dropped.

Manuscript Specifications

General

- 1) Submit **double-spaced** electronic copy of manuscript (see instructions below for submittal). The type face should be Times New Roman or Arial, should be clearly legible and no smaller than 12-point type.
 - 2) The manuscript submitted should be structured in the following order:
 - a) Title (But not a separate Title Page)
 - b) Authors' names and affiliations
 - c) Number of words
 - d) Abstract
 - e) Body of paper, including an introduction and conclusion (tables, graphics and figures may be included in the body of the text)
 - f) Acknowledgements
 - g) References, if applicable
 - h) Separate listing of all table titles and figure captions
 - 3) Subheads should be typed or marked as follows:
 - a) **FIRST-LEVEL HEAD** (all capitals, boldface, on separate line)
 - b) **Second-Level Head** (initial capitals, boldface, on separate line)
 - c) *Third-Level Head* (initial capitals, italic, on separate line)
 - d) **Fourth-Level Head** (initial capitals, boldface, flush left, run into text and followed by two spaces and subsequent text)
- NOTE: The first paragraphs under the first three levels of subheads should not be indented.*
- 4) Italicize or underline any words that should be in italics.
 - 5) **Double-space all text material**, including references, table titles, and figure captions. Leave at least 1-in. (2.5-cm) margins on all sides of all pages.
 - 6) Do not include headers, footers, page numbers, etc. in the final paper for publication.

Length of Papers

The length of each manuscript paper, including the abstract, may not exceed a **maximum of 7,500 words**; that is, a manuscript that is only the text should contain no more than 7,250 words (250 words will be included in the Abstract). *NOTE: Authors are encouraged to keep papers to the minimum length possible consistent with providing only essential information of interest to the reader. **Many papers can convey the message in 2,000 to 3,000 words and are more likely to be read at this length.***

When line art, photographs, or tables are submitted to accompany the text, reduce the maximum number of manuscript words by 250 words for each item (e.g., if two figures and three tables are submitted, the amount of text can be no more than 6,250 words). Large figures or tables, i.e., those that take up more than a single manuscript page, require a reduction of 250 words for each page.

The number of words should be noted on the first page of the manuscript. (Most word processing programs have a feature that enables the user to automatically determine the word count for a document.) *Overlong manuscripts will be returned to the author to be shortened, most likely delaying publication of the paper. Petitions submitted in advance to the Executive Director/CEO to exceed the above limits will be entertained.*

Length and Content of Abstracts

Each paper must have an abstract. The abstract must be no longer than 250 words, self-contained and not require reference to the paper to be understood. Sometimes, only the abstract of a paper is read, whereas in other cases, an abstract prompts further reading of the entire paper. The primary objective and scope of the study or the reasons the paper was written should be stated; the techniques or approaches should be described only to the extent necessary for comprehension; and the findings and conclusions should be presented concisely and informatively. The abstract should not contain unfamiliar terms that are not defined, reference citations, or display equations or lists.

Manuscript Parts

The parts of the manuscript should be ordered in the following sequence: title, abstract, word count, body of paper, acknowledgement, references, and a separate listing of table titles and figure captions.

Author's Name and Affiliation



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The names, current affiliations, complete mailing addresses, telephone numbers, and fax numbers of all authors should be listed. If the research presented was performed while the author had another affiliation, and the author wishes that affiliation listed in addition to the current one, it should be noted that both affiliations are to be used.

References

- 1) The reference list should contain only those references cited in the text, numbered in the order in which they are first cited. Bibliographic lists will not be published.
- 2) Denote a reference at the appropriate place in the text by an underlined or italic Arabic numeral in parentheses, e.g., (2).
- 3) Do not give as a reference unpublished material, personal communications, telephone conversations or similar material that would not be available to readers in printed form in a library or from the originating agency. Instead, if unpublished work is cited in text, state in the text within parentheses the author's name along with the term *unpublished date*.
- 4) The manuscript for the reference list should be double-spaced.
- 5) Do not repeat a reference in the list and do not use *ibid.*, *idem.*, *op. Cit.*, or *loc., cit.* If a reference is cited more than one time in the text, repeat the number first assigned to the reference.
- 6) Be sure that references are complete. Include the names of corporate or personal authors or editors, title of article, chapter, book or report; publisher or issuing agency; location of publisher and year of publication; volume and issue or report number; page numbers; and NTIS data. References to program manuals, tapes or other documentation for models should refer to the specific edition being cited and should list the specific department within an agency that has responsibility for the model's continuing use and development. If a reference has no date, use "undated."

Metrication

Measurements in papers must be provided either in U.S. customary units only or in both SI and U.S. customary units. AREMA follows *Standard Practice for Use of the International System of Units (SI)*, published by ASTM as E380-93.

- 1) Pay particular attention to determining whether weight is to be expressed in mass (kilograms) or in force (Newtons) and express pound force per square inch (lbf/in.²) of pressure or stress in Pascals (Pa).



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- 2) Use prefixes instead of powers for SI units.

When using both SI and U.S. customary units:

- 1) In text, provide units of measure in both SI and U.S. customary units, placing the customary units first and the SI units immediately following in parentheses.
- 2) In figures and tables, provide only customary units and show base unit conversions in a footnote, for example, 0.6 mi. = 1 km. Alternatively, in figures, customary units may be shown on the top and right axes of data plots, in which case, no footnote is necessary.



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Common conversion factors are presented below:

Metric Conversion Factors

| When You Know | Multiply By | To Find |
|-------------------------------------|---------------|---|
| Length | | |
| inches (in.) | 25.4 | millimeters (mm) |
| inches (in.) | 2.54 | centimeters (cm) |
| feet (ft) | 0.305 | meters (m) |
| Yards | 0.914 | meters (m) |
| miles (mi) | 1.61 | kilometers (km) |
| Area | | |
| Square inches (in. ²) | 645.1 | millimeters squared (mm ²) |
| Square feet (ft ²) | 0.093 | meters squared (m ²) |
| Square yard (yd ²) | 0.836 | meters squared (m ²) |
| Acres | 0.405 | hectares (ha) |
| Square miles (mi ²) | 2.59 | kilometers squared (km ²) |
| Volume | | |
| fluid ounces (fl oz) | 29.57 | milliliters (ml) |
| Gallons (gal) | 3.785 | liters (1.0000) |
| cubic feet (ft ³) | 0.028 | meters cubed (m ³) |
| cubic yards (yd ³) | 0.765 | meters cubed (m ³) |
| Mass | | |
| Ounces (oz) | 28.35 | grams (g) |
| Pounds (lb) | 0.454 | kilograms (kg) |
| short tons (2,000 lb)(T) | 0.907 | megagrams (Mg) |
| Temperature (exact) | | |
| Fahrenheit (°F) | (-32)/1.8 | Celsius (°C) |
| Illumination | | |
| footcandles (fc) | 10.76 | lux (lx) |
| footlamberts (fl) | 3.426 | Candela/m ² (cd/m ²) |
| Force and Pressure or Stress | | |
| poundforce (lbf) | 4.45 | Newtons (N) |
| poundforce per square inch (psi) | 6.89 | |

Equations

- 1) Present equations as stacked fractions, in accordance with preferred mathematical practice.
- 2) Carefully distinguish the following:
 - a) All capital and lowercase letters
 - b) Capital O, lowercase o, and 0 (zero)
 - c) Lowercase l (el) and number 1 (one)
 - d) Letter X, Greek χ , and multiplication sign \times
 - e) Prime ' , apostrophe ' , and superscript ¹
 - f) English and Greek letters such as
B and β , k and κ
n and η , u and μ
p and ρ , and w and ω

If Greek letters are handwritten, identify by spelling out letter in margin of manuscript.

- 3) Number all displayed equations with Arabic numerals in parentheses placed flush right.

Footnotes

Do not use footnotes to the text. Incorporate such notes within the text.

Preparation of Tables

- 1) Tables should supplement, not duplicate, the text.
- 2) Prepare each table, along with its title, single-spaced within the body of the text.
- 3) Number tables consecutively in the order first cited in text, using Arabic numerals.
- 4) Tables should duplicate the following style as closely as possible
 - a) All tabular material should be single-spaced.
 - b) Above table, place titles flush left to align with the left margin of the table and highlight by using boldface letters. *NOTE: "TABLE" in all capital letters and use initial capital letters for the remaining words in the title.*

- c) Give each column in the table a head except the first (sub) column. Place abbreviated measurement terms in parentheses under the column head. All heads should be aligned in “flush left” format.
 - d) Leave a half line of space after the column heads and insert a rule that extends across the full width of the table.
 - e) Insert another half line of space and full-width rule at the end of the table (and above the footnotes, if any).
 - f) Use lower-case italic superscript letters for footnotes.
 - g) When a dash (--) is used in a table, indicate its meaning in a footnote (missing data, incomplete research, data not applicable or unavailable, or problem investigated but no results).
- 5) Check the accuracy of all totals included in tables before submitting paper.
 - 6) For use of measurements, see section on metrication.
 - 7) Note that the size of type in a table affects the legibility when it is reproduced.

Figures

Line art must be original computer graphic. ***Photocopies, pencil drawings, blueprints or ozalid prints, and negatives are not acceptable.***

Use the following guidelines in preparing figures for publication.

- 1) Give each figure a caption. If a figure contains several parts (a, b, c, etc.), cite each part in the caption and label each corresponding part on the figure using the same size type as that in the rest of the figure.
- 2) Number figures consecutively in the order first cited in text, using Arabic numerals. Reference must be made to each figure by number at the appropriate place in the text.
- 3) **Size and proportion:** For legibility, AREMA requires that after figures have been reduced for publication, the type be no smaller than 6-points (1.6 mm or 1/16 in.; Harvard Graphics character size 1.5). In addition, lettering, symbols, and line weights must be **uniform and the same size throughout the figure**; that is, if lettering used on the ordinate and abscissa is in 10-point type (Harvard Graphics 2), symbols used to identify data points should also be in 10-point. The following diagram shows how the legibility of the original is affected by reduction for publication.



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100%

| Type | Symbols |
|--|-------------------|
| 10-point type | 10-point symbols: |
| FIGURE 1(a) Monitoring of traffic... | v □ ● μ |
| Figure (a) Monitoring of traffic... | % # × ° + = |
| 8-point type: | 8-point symbols: |
| FIGURE 1(a) Monitoring of traffic... | v □ ● μ |
| Figure (a) Monitoring of traffic... | % # × ° + = |
| 6-point type: | 6-point symbols: |
| FIGURE 1(a) Monitoring of traffic... | v □ ● μ |
| Figure (a) Monitoring of traffic... | % # × ° + = |

Appendices

Do not use appendices. Include pertinent material in the paper itself or, where necessary, include a note that background material, such as derivation of formulas, specifications or survey forms is available from the author or in another report (cite that report in the reference list).



Biographical Sketch Example

Harold V. Axel

Harold Axel is the Manager, Bridges and Structures for the East Westchester and Northern Railway, a position he has held for the past 8 years. Harold joined the EW&N after 15 years with Metro South, where he served as structural draftsman, B&B Foreman and B&B Master. He holds a certified engineering technologist qualification from Hudson College and now makes his home in upstate New York. Harold is currently chairman of the subcommittee on Bridge Loading of AREMA Committee 15.

Some key features of a Biographical Sketch:

- ⇒ *Should not exceed 8 lines.*
- ⇒ *Should be suitable to be read directly to the audience by the Session Chairman.*
- ⇒ *Include your current position.*
- ⇒ *Include where you previously worked and key positions held.*
- ⇒ *Include your affiliation with any AREMA technical committees.*
- ⇒ *Educational background is optional.*
- ⇒ *Should make reference to your current location if not obvious.*