Instructions to Authors

The Canadian Journal of Civil Engineering (Can. J. Civ. Eng.) publishes articles, technical notes, discussions, and book reviews in English or French, as outlined in the Editorial Policy (in the first issue of each volume).

To facilitate publication, authors must check symbols, abbreviations, and technical terms for accuracy, consistency, and readability. NRC Research Press maintains the right to preserve the technical quality of the Journal. Authors are requested to refer to a recent issue of the Journal for details of layout, especially for tables and reference lists. Manuscripts and illustrations must meet the requirements outlined below; otherwise, publication may be delayed.

Ethics

Authors must give assurance that no part of their manuscript reporting original work is being considered for publication, in whole or in part, elsewhere. The corresponding author must affirm that all of the authors have read and approved of the manuscript.

The Manuscript

An original and three copies of the manuscript, consisting of title page, abstract, main body of the text, references, list of symbols, tables, list of figure captions, and figures, should be submitted. The manuscript should be typewritten, double-spaced, on paper 8.5 × 11 in. (or ISO A4) with 1-in. (2.5 cm) margins. Typing should be on one side of the page only. Each page should be numbered, beginning with the title page.

Length — Articles should normally be limited to 10,000 words or word equivalents, including tables and figures. (As a guide, a typical figure should be counted as 250 words.) Technical notes, discussions, and book reviews should normally be limited to 3000, 2000, and 1000 words, respectively.

Spelling should follow that of Webster's Third New International Dictionary or the Oxford English Dictionary. Authors are responsible for consistency in spelling.

Abbreviations, nomenclature, and symbols for units of measurement should conform to international recommendations. SI units (Système international d'unités) should be used or SI equivalents should be given. This system is explained and other useful information is given in the Canadian Metric Practice Guide (1989) published by the Canadian Standards Association (178 Rexdale Blvd., Etobicoke, ON M6N 3T3, Canada). For practical reasons, some exceptions to SI units are allowed. Acronyms should be defined when they are first mentioned in the text.

The title page should contain the following. (i) The full title of the paper. (ii) Authors listed in the order in which they are to appear at the head of the printed article. (iii) Affiliation and address for each author. This should reflect the affiliation and address at the time of the study. Indicate current affiliations and addresses that differ from those in the by-line in a footnote. (iv) Name, address, telephone number, fax number, and e-mail address of the author responsible for correspondence. (v) Word count.

The Abstract should not be more than 200 words (shorter for notes), and on a separate page. The concise abstract should present the paper content accurately and should supplement, not duplicate, the title in this respect. Authors able to submit abstracts in both fluent English and French are encouraged to do so. References should not be cited in the abstract. Key words should not exceed 10 and should be placed directly below the abstract. Ideally, all key words used will be referenced in the Thesaurus of Engineering and Scientific Terms, published by the American Association of Engineering Societies, Washington, D.C.

Footnotes to material in the text should not be used unless they are unavoidable, but their use is encouraged in tables. Where used in the text, footnotes should be cited in the manuscript by superscript Arabic numbers (except in the tables, see below) and should be numbered serially beginning with any that appear on the title page. Each footnote should be typed on the manuscript page upon which the reference is made; footnotes should not be included in the list of references.

Equations should be clearly typed; triple-spacing should be used if superscripts and (or) subscripts are involved. Superscripts and subscripts should be legible and carefully placed. Distinguish between lowercase I and the numeral one, and between capital O and the numeral zero. A letter or symbol should represent only one entity and be used consistently throughout the paper. Each variable must be defined in the text, or in a list of symbols to appear after the reference list. Variables representing vectors, matrices, vector matrices, and tensors must be clearly identified. Numbers identifying equations must be in square brackets and placed flush with the left margin. In numbering, no distinction is made between mathematical and chemical equations.

Acknowledgements should be written in the third person and kept to a concise recognition of relevant contributions.

References — The author is responsible for verifying each reference against the original article. Each reference must be cited in the text using the surnames of the authors and the year, for example, (Walpole 1985) or Green and Brown (1990). Depending on the sentence construction, the names may or may not be in parentheses, but the year always is. If there are three or more authors, the citation should give the name of the first author followed by et al. (e.g., Green et al. 1991). If references occur that are not uniquely identified by the authors' names and year, use a, b, c, etc., after the year, for example, Green 1983a, 1983b; Green and Brown 1988a, 1988b, for the text citation and in the reference list.

The reference list must be double-spaced and placed at the end of the text. References must be listed in alphabetical order according to the name of the first author and not numbered. References with the same first author are listed in the following order. (i) Papers with one author only are listed first in chronological order, beginning with the earliest paper. (ii) Papers with dual authorship follow and are listed in alphabetical order by the last name of the second author. (iii) Papers with three or more authors appear after the dual-authored papers and are arranged chronologically.

Canadian Journal of Civil Engineering
Names of periodicals should be written out in full. References to unpublished reports and to private communications should be given in parentheses in the text or as footnotes; for a private communication, author’s initials and year of communication should be given. References should follow the form used in current issues of the Journal, as in the following examples.


**Tables** must be typed on separate pages, placed after the list of references, and numbered with Arabic numerals in the order cited in the text. The title of the table should be a concise description of the content. Column headings should be brief, but may be amplified by footnotes. Vertical rules should not be used. A copy of the Journal should be consulted to see how tables are set up and where the lines in them are placed. Footnotes in tables should be designated by symbols (in the order *, †, ‡, §, ll, ¶, #) or superscript lowercase italic letters. Descriptive material not designated by a footnote may be placed under a table as a Note. Numerous small tables should be avoided, and the number of tables should be kept to a minimum.

**Figure captions** should be listed on a separate page and placed after the tables.

**Appendices** — Figures and tables used in an appendix should be numbered sequentially but separately from those used in the main body of the paper, for example, Fig. A1, Table A1, etc.

**Computer programs** — It is not the policy of the Journal to publish detailed printouts of computer program statements. Where the availability of these details enhances the usefulness of the paper, the author should submit two copies of the program for deposit (see “Supplementary material”).

**Supplementary material** — The National Research Council of Canada maintains a depository in which supplementary material may be placed, either at the request of the author or suggestion of the Editor. Such material may include extensive tables of data, detailed calculations, and maps not essential for understanding and evaluating the paper. Such material must be clearly marked when the manuscript is submitted. Tables and figures should be numbered in sequence separate from those published with the paper (e.g., Fig. D1, Table D1). The supplemental material should be referred to by footnotes. Copies of material in the depository may be purchased from the Depository of Unpublished Data, CISI, National Research Council of Canada, Ottawa, ON K1A 0S2, Canada.

**Discussions** — An original and two copies of discussions should be submitted. The manuscript should be typewritten and in double-spaced format.

**Illustrations**

Each figure or group of figures should be planned to fit, after appropriate reduction, into the area of either one or two columns of text. The maximum finished size of a one-column illustration is 8.6 x 23.7 cm (3.4 x 9.3 in.) and that of a two-column illustration is 18.2 x 23.7 cm (7.2 x 9.3 in.). The figures (including halftones) must be numbered consecutively in Arabic numerals, and each one must be referred to in the text and must be self-explanatory. All terms, abbreviations, and symbols must correspond with those in the text. Only essential labelling should be used, with detailed information given in the caption. Each illustration must be identified by the figure number and the authors’ names on the back of the page or in the left-hand corner, well away from the illustration area.

**Line drawings** should be made with black ink or computer-generated in black on high-quality white paper or other comparable material. For computer-generated graphics, supply a laser print at the highest resolution available. Photocopies are not acceptable. All lines must be sufficiently thick (0.5 points minimum) to reproduce well, and all symbols, superscripts, subscripts, and decimal points must be in good proportion to the rest of the drawing and large enough to allow for any necessary reduction without loss of detail. Avoid small open symbols; these tend to fill in upon reproduction. Lettering produced by dot matrix printers or typewriters, or by hand, is not acceptable. The same font style and lettering sizes should be used for all figures of similar size in any one paper.

**Photographs** should be continuous tone on glossy paper. Prints must be of high quality, on glossy paper, with strong contrast. The copies for reproduction should only show essential features, be trimmed, and mounted on thin flexible white bristol board with no space between those arranged in groups. A photograph, or group of them, should be planned to fit into the area of either one or two columns of text with no further reduction. Electron micrographs or photomicrographs should include a scale bar directly on the print. The best results will be obtained if the authors match the contrast and density of all figures arranged as a single plate.

**Colour illustrations** will be at the author’s expense. Further details on prices are available from Evelyn Kidd, Managing Editor of the Journal (613-999-3789; fax: 613-952-7656; e-mail: evelyn.kidd@nrc.ca).

NRC Research Press prefers the submission of electronic illustration files for accepted manuscripts and will use these electronic files whenever possible. **Four sets of paper versions of figures must be submitted to the Editorial Office**, even if electronic versions are to be submitted for use in production.

If electronic files are not available, paper versions of the figures will be scanned. Note that the scanner will easily reproduce flaws (e.g., correction fluid, smudges). Submission of noncontinuous (screened) photographs and scanned illustrations printed out on laser printers is not recommended as moirés develop; a moiré is a noticeable, unwanted pattern generated by rescanning or rescreening an illustration that already contains a dot pattern.

**Preparation of Electronic Illustration Files**

Authors must supply copies of the original electronic files (i.e., the files directly from the software application that they
were created in) and high-quality laser proofs of the images. Electronic files (i.e., figure number and figure content) should match the laser proofs. On the disk label, identify (i) the software application and version; (ii) file name(s), size, and extension; and (iii) if the files have been imported from another software. If you have compressed your files, indicate what compression format was used. PC or Macintosh versions of True Type or Type 1 fonts should be used. Do not use bitmap or nonstandard fonts. Electronic graphics can be accepted on the following disks: 3½” disks, 100 MB Zip cartridge, and CD-ROM.

All figures should be submitted at their final published size. For figures with several parts (e.g., a, b, c, d, etc.) created using the same software application, assemble them into one file rather than sending several files.

Remember that the more complex your artwork becomes, the greater the possibility for problems at output time. Avoid complicated textures and shadings, especially in vector illustration programs; this increases the chance for a poor-quality final product.

**Bitmap (raster) files** — Bitmaps are image files produced using a grid format in which each square (or pixel) is set to one level of black, colour or grey. A bitmap (rasterized) file is broken down into the number of pixels or picture elements per inch (ppi). Pixels per inch is sometimes referred to as dots per inch (dpi). The higher the resolution of an image, the larger the number of pixels contained within the rectangular grid.

The proper resolution should be used when submitting bitmap artwork. The minimum requirements for resolution are 600 dpi for line art, 1200 dpi for finelines (line art with fine lines or shading), 300 dpi for halftones and colour, and 600 dpi for combinations (halftones with lettering outside the photo area).

All **colour** files submitted must be as CMYK (cyan, magenta, yellow, and black). These colours are used in full-colour commercial printing. RGB graphics (red, green, and blue; colours specifically used to produce an image on a monitor) will not print correctly.

**Vector files** — Vector files are image files produced using elements such as lines and shapes. Typically these files are used for line drawings.

**Bitmaps inside vector files** — Bitmaps can be imported into vector/draw applications only for the purpose of adding and overlaying information, lines, text, etc. Bitmaps should not be resized, cropped, rotated, or otherwise manipulated after importing. The preferred graphic application of NRC Research Press is CorelDraw! For other applications that can be used, see the electronic graphics list at http://www.nrc.ca/cgi-bin/cisti/journals/rp/rp2_prog_e?cjce_graphics_e.html.

The Publication Process

**Submission** — Authors should submit the original copy and three duplicates of their papers directly to Dr. Donald Mavinic, Editor, Canadian Journal of Civil Engineering, Department of Civil Engineering, The University of British Columbia, Vancouver, BC V6T1Z4, Canada (604-822-2523; fax: 604-822-0568; e-mail: cjce@civil.ubc.ca). Once the paper has been accepted, subsequent correspondence should be with NRC Research Press, National Research Council of Canada, Ottawa, ON K1A0R6, Canada.

**Submission of electronic copy** — Authors are requested to submit the final accepted manuscript only, both in hard copy format and on disk. Text files and figure files should be submitted on separate disks. All disks must be labeled clearly with the authors’ names. Text (including tables) should be provided in a word-processing format (any form of WordPerfect, Microsoft Word, or TeX is preferable, IBM compatible or Macintosh). TeX macros for preparing papers for submissions are available at ftp://ftp.tex.ac.uk/tex-archive/macros/latex/contrib/supported/nrc/, ftp://ftp.dante.de/tex-archive/macros/latex contrib.supported/nrc, and ftp://ctan.tug.org/tex-archive/macros/latex/contrib.supported/nrc. Identify the word-processing software, version number, and type of computer used (IBM or Macintosh). For figures, see the section “Preparation of Electronic Illustration Files.” Include a statement in the letter accompanying the manuscript that the version on the disk exactly matches the final hard copy version.

**Copyright material** — Whenever a manuscript contains material (tables, figures, charts, etc.) that has been previously published and, hence, is protected by copyright, it is the obligation of the author to secure written permission from the holder of the copyright to reproduce the material for both the print and electronic formats. These letters must accompany the submitted manuscript.

**Galley proofs** — A galley proof, illustration proofs, the copy-edited manuscript, and a reprint order form are sent to the corresponding author. Galley proofs must be checked very carefully, as they will not be proofread by NRC Research Press, and must be returned within 48 hours of receipt. The proof stage is not the time to make extensive corrections, additions, or deletions, and the cost of changes introduced at the proof stage and deemed to be excessive will be charged to the author. Questions concerning galley proofs should be addressed to Garbo Jeng (613-993-0369; fax: 613-952-7656; e-mail: garbo.jeng@nrc.ca).

**Reprints** — If reprints are desired, the reprint order form must be filled out completely and returned with payment (cheque, credit card number, purchase order number, or journal voucher) together with the corrected proofs and manuscript. Orders submitted after the Journal has been printed are subject to considerably higher prices. The Journal does not provide free reprints, and reprints are not mailed until a purchase order number or payment is received.

**Copyright transfer** — All authors are required to complete a copyright transfer form assigning all rights to NRC. Copyright transfer forms are available from the Editor, in any current issue of the Journal, or on the web site of NRC Research Press.

Requests for permission to reproduce or republish the paper, in whole or in part, should be sent to NRC Research Press.

---

NRC Research Press
National Research Council of Canada
Ottawa, ON K1A 0R6
Canada

Revised February 2001