



MASTERSPEC®

User's Guide

MASTERSPEC®

A product of the American Institute of Architects

ARCOM

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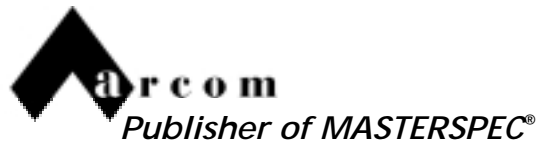
MASTERSPEC® User's Guide

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Throughout this License Agreement the word "System" refers to the AIA-copyrighted MASTERSPEC Specification System, comprised of the MASTERSPEC specification text and supporting documents in all computer formats, hard copy, the computer distribution CD-ROMs and diskettes, the MASTERSPEC User's Guide, and periodic updates.

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I HAVE READ AND AGREED TO THE ABOVE TERMS AND CONDITIONS

Authorized Signature	X	Date Signed
Print Name and Title		Firm Name



Chapter 1

Introduction to MASTERSPEC® and ARCOM

MASTERSPEC

MASTERSPEC is a product of The American Institute of Architects (AIA) and is produced and published for the AIA by ARCOM. MASTERSPEC has been the specification system of choice for more than 30 years. Currently, more than 10000 design firms, developers, contractors, manufacturers, institutions, and government agencies use MASTERSPEC. ARCOM Master Systems are the specification products produced by ARCOM that include the MASTERSPEC Specification System and ARCOM SPECWARE^J specification enhancement software.

MASTERSPEC is recognized worldwide as the most complete, technically correct, and thoroughly reviewed commercial master specification system available. Insurers offer discounts on professional liability insurance to MASTERSPEC Licensed Users. Current litigation frequently relies on MASTERSPEC as the representative standard of professional care.

Endorsements

The following organizations endorse MASTERSPEC and participate in the MASTERSPEC Review Committees:

- AIA The American Institute of Architects
- ACEC American Consulting Engineers Council
- ASID American Society of Interior Designers
- ASLA American Society of Landscape Architects
- CASE Consulting American Structural Engineers
- NLA National Landscape Association
- NSPE National Society of Professional Engineers

MASTERSPEC also has strategic alliances with the Construction Specifications Institute (CSI) and the International Interior Design Association (IIDA).

Review Committees

New and updated MASTERSPEC sections are reviewed by an independent committee of MASTERSPEC Licensed Users. The committees meet quarterly for two days in the ARCOM Alexandria, Virginia office. The AIA and the endorsing organizations fund these committees. Current committees include the following:

- MASTERSPEC Architectural Review Committee (MARC)
- MASTERSPEC Engineering Review Committee (MERC)
- MASTERSPEC Interiors Review Committee (MIRC)

- MASTERSPEC Landscape Review Committee (MLRC) by correspondence

MASTERSPEC is also reviewed by manufacturers, product and industry groups, and standards organizations on invitation from ARCOM.

MASTERSPEC Libraries

MASTERSPEC is available in distinct full-length section libraries organized by design discipline. Each library is updated quarterly.

- | | |
|---|-------|
| • Architectural/Structural/Civil | A/S/C |
| • Structural/Civil | S/C |
| • Mechanical/Electrical | M/E |
| • Electrical | E |
| • Interior Construction | IC |
| • Interior Construction Supplement to A/S/C | ICS |
| • Furnishings | F |
| • Landscape Architecture | LA |

MASTERSPEC Formats

Each library is divided into the following three formats:

- **Full Length** The most regularly used sections and frequently encountered conditions for a range of project sizes and types.
- **Short Form** Short Form sections are condensed from and compatible with MASTERSPEC full-length sections. Short Form sections include a limited range of products, streamlined material and quality-control requirements, and concise specifying methods.
- **Outline** Outline specifications for preliminary project use.

MASTERSPEC Versions

Each library also has two versions:

- **Basic** The most regularly used sections and frequently encountered conditions for a range of project sizes and types.
- **Supplemental** Sections where the subject matter is limited in scope and the work is more specialized or custom than covered in Basic.

Instructions for your specific MASTERSPEC library and version are included in Chapter three.

Other MASTERSPEC Specification Products

Other MASTERSPEC specification products are available in three abbreviated specification versions that are updated every two years. INTERIOR DESIGN and FURNISHINGS

include the Cover, Evaluations, Section Text, and Drawing Coordination Checklist.
SMALL PROJECT includes only the Section Text.

MASTERSPEC INTERIOR DESIGN^U A short-form specification for retail, light-commercial, Hospitality, institutional, office fit-out, and renovation projects.

MASTERSPEC SMALL PROJECT^U Specifications for less complex projects

MASTERSPEC FURNISHINGS^U

Supporting Documents

Each Basic, Supplemental, and Short Form MASTERSPEC section includes the following supporting documents. Each INTERIOR DESIGN section includes the first four documents.

Cover	Describes the content of the section text; related products and work, including products that could be inserted into the section if required, similar work normally specified elsewhere; and closely related work specified in other sections. Includes summary of changes in the update.
Evaluations	Describes characteristics and criteria for specifying the products and materials included in the section. Includes editing instructions referenced in editor's notes in the section text; the scope of the section, a description of product characteristics; special design and detailing considerations, if applicable; referenced standards; suggested reference materials; and a list of manufacturers. Product comparisons are included in some sections.
Section Text	In three-part format with editor's notes, alternative text, in-line optional text, and insert notes.
Drawing	Drawing requirements organized and related to the Coordination section content. Indicates items that should be Checklist shown on the drawings because they are not in the section text.
Specification Coordination Checklist	Includes a list of specification sections and requirements that relate to the section content. Provides a location for indicating items that will be furnished by the Owner; how to apply allowances, unit prices, and alternates to the section, if applicable; and other specification sections that may have requirements applicable to the section. This checklist is not included in the supporting documents for INTERIOR DESIGN.

Editing Assistance

MASTERSPEC is the only complete master specification system available. The Evaluations provide editing instructions for each specification section as well as product comparisons; a list of national manufacturers; reference standards; references; and a

discussion of the section topic and graphics, where appropriate. Sections include editor's notes with instructions for editing and selecting alternative text, in-line optional text, and insert notes. All section text is displayed for your review and editing by any combination of the methods listed below. Editor's notes and units of measure appear on-screen in color. Editor's notes are in hidden text and may be toggled on and off in your word processor. Other guide specification systems include numerous blanks in brackets where text is to be inserted, but few editing instructions.

You can edit MASTERSPEC using your word processor, your word processor enhanced with MASTERWORKS, the LINX automated specification editor, or any combination of these tools. Instructions for editing with your word processor are in Chapter 2. Instructions for editing with MASTERWORKS are in the MASTERWORKS User's Guide. Instructions for editing with LINX are in an on-line tutorial. LINX only operates with the full-length Basic and Supplemental Libraries.

ARCOM

ARCOM is a unique firm of architects, engineers, computer scientists, specification writers, editors, technical support personnel, product representatives, and marketing staff. ARCOM began in 1972 as a division of an architectural firm in Salt Lake City, Utah, offering a MASTERSPEC editing service and the distribution of MASTERSPEC on magnetic tape to larger architectural and engineering firms.

When design firms began to use minicomputers and then personal computers, ARCOM developed word-processor versions of MASTERSPEC and started an automation service for the AIA. In 1988, the AIA selected ARCOM as the sole source for MASTERSPEC quarterly updates. In December 1994, the AIA selected ARCOM to assume all responsibilities of MASTERSPEC. On January 1, 1995, the staff of the AIA Professional Systems Division and all research, writing, editing, marketing, sales, production, and support of MASTERSPEC transferred to ARCOM.

ARCOM has offices in Salt Lake City, Utah, and Alexandria, Virginia. The Salt Lake City office includes administration, accounting, word processing, programming, production, fulfillment, technical support, marketing, and sales functions. The Alexandria office includes specification research, writing, editing, word processing, technical support, and MASTERSPEC Review Committee support. The MASTERSPEC Technical Library is located in the Alexandria office.

ARCOM SPECWARE^J

ARCOM SPECWARE is the family of specification enhancement software provided by ARCOM to MASTERSPEC Licensed Users. SPECWARE includes the following:

MASTERWORKS^J Software that enhances your word processor to simplify editing of alternative text, select options to keep or delete, insert required text, and add project notes. The Multi File features automate spell checking, searching and replacing, formatting, and other text appearance functions. Specification output formats include project manuals, sheet specifications, drawing notes, and outline specifications. MASTERWORKS can also automate headers and

footers, reports, and tables of contents.

LINX¹

A stand-alone automated editor for MASTERSPEC that operates on standard full-length MASTERSPEC sections in the ARCOM Structured Text¹ database format. Text elements in each section are linked together hierarchically and semantically. All linked dependent text elements are marked for deletion when a parent text element is marked for deletion. This allows for easy removal of large quantities of text. LINX includes an interactive question-and-answer edit and an on-screen edit (including manual editing and override of system edits, automatic edits, and translation to a word processor format of your choice). LINX includes an extensive on-line help system with access to all MASTERSPEC supporting documents as help files and tutorials while you are editing.



Chapter 2 Installing and Editing MASTERSPEC

Introduction

MASTERSPEC is a copyrighted text database. Your License Agreement authorizes you to make as many copies as you need for one office location. You are also authorized to make one additional copy for backup purposes. You do not have authorization to make copies for any other purpose. If your firm has more than one office location, you must have a separate license for each location. For more information, refer to the Terms and Conditions in your License Agreement.

MASTERSPEC is not a software program. MASTERSPEC is a database of specification files for use with your specific word processor. All specification files and ARCOM supplied macro files are accessed through your word-processor.

MASTERWORKS is an ARCOM software program that must be installed if you want to take advantage of the editing and automation tools provided. Currently, this application is available for Microsoft® Word 97/2000, Microsoft Office 98/2001 for Macintosh and WordPerfect 8/9.

MASTERSPEC CD-ROM Folder Structure and Description

The MASTERSPEC CD-ROM's are divided into folders and subfolders similar to a hard disk. There are three main folders on the CD-ROMs, one for specification files (*Mastspec*, *Intdesgn*, *Outline*, or *Smalproj*), one for the GSA specification files and one for software (*Specware*). A fourth folder named *Adobe* on the MASTERSPEC and INTERIOR DESIGN CD-ROMs contains the Adobe Acrobat Reader software.

The *Mastspec* folder (Figure 1) has folders for supporting documents in Word 2.0 (*Word\Suptdocs*) and WordPerfect 5.1 (*Wp\Suptdocs*), tables of contents in Word 2.0 (*Word\Tocs*) and WordPerfect 5.1 (*Wp\Tocs*), and folders for specifications in the following word processor formats:

- Word 2.0 (*Word\Word2*)
- Word 6/7/95 automatically numbered sections (*Word\Word6_7*)
- Word 97/2000 for Office 97/2000 automatically numbered sections (*Word\Word97*)
- WordPerfect 5.1 (*Wp\Wp51*)
- WordPerfect 6.1/7/8/9 styled sections (*Wp\Wp6_7_8*)

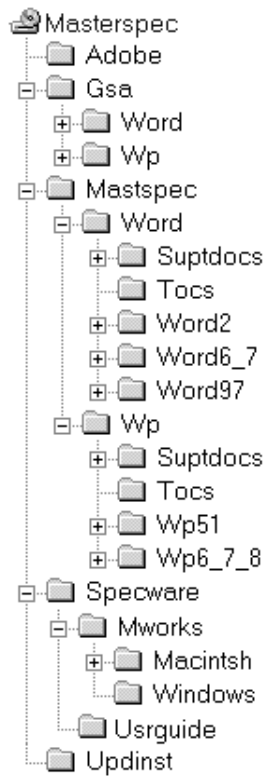


Figure 1 – MASTERSPEC CD-ROM Folder Structure

On all MASTERSPEC CD-ROMs, the *Specware\Mworks* folder contains the MASTERWORKS software and installation program. MASTERWORKS must be installed to use the editing and automation tools that enhance your word processor's capabilities. See Chapter 1 "MASTERWORKS Installation", in the *MASTERWORKS User's Guide*.

On the INTERIOR DESIGN and SMALL PROJECT CD-ROMs (Figures 2, 3, and 4), the *Intdesgn*, and *SmalProj* folders have tables of contents in Word 2.0 (*Word\Tocs*) and WordPerfect 5.1 (*Wp\Tocs*), and specification files in the following word processor formats:

- Word 6/7/95 automatically numbered sections (*Word\Word6_7*)
- Word 97 for Office 97 automatically numbered sections (*Word\Word97*)
- WordPerfect 6.1/7/8 styled sections (*Wp\Wp6_7_8*)

The INTERIOR DESIGN CD-ROM also has folders for the Adobe Acrobat Reader software (*Adobe*) and supporting documents in Word 2.0 (*Word\Suptdocs*) and WordPerfect 5.1 (*Wp\Suptdocs*).



2 – Installing and Editing MASTERSPEC

Figure 2 – INTERIOR DESIGN CD-ROM Folder Structure

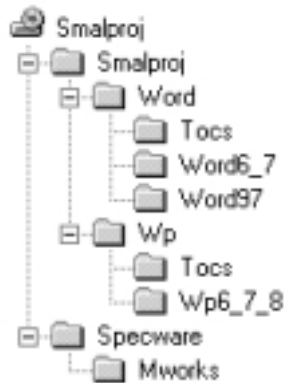


Figure 3 – SMALL PROJECT CD-ROM Folder Structure

MASTERSPEC Naming Convention

Each MASTERSPEC section is numbered and named according to CSI/CSC's 1995 *MasterFormat*. Each library table of contents on your CD-ROM lists the section number and title for all sections in that library. You can print the table of contents for reference.

Section Text

- fl_ Full Length Formats
- sf_ Short Form Formats
- ot_ Outline Formats
- id_ INTERIOR DESIGN
- sp_ SMALL PROJECT

Supporting Documents (Available for MASTERSPEC Basic, Supplemental, and MASTERSPEC INTERIOR DESIGN specifications.)

- cv_ Cover
- cvs Short Form Cover
- ev_ Evaluations
- evt Evaluations, Table
- eva Evaluations, Appendix A, etc.
- dc_ Drawing Coordination Checklist
- sc_ Specification Coordination Checklist (not in INTERIOR DESIGN)

GSA Documents

MASTERSPEC Division 1 Sections may not be used for U. S. Government projects without extensive editing. There are significant differences between Government and private acquisition and contracting practices. For this reason the General Services Administration has developed GSA Division 1 Sections to correspond, where practical, in subject matter, title and section number with the 1999 drafts of MASTERSPEC Division 1 sections. The documents are located on the CD-ROM in the GSA folder. A readme.txt file is included in

the folder to explain the similarities and differences between the GSA and MASTERSPEC Division 1 sections.

Adobe Acrobat Reader

The **ADOBE** folder contains Adobe Acrobat Reader software. This software is used to view Adobe pdf files. There is currently one pdf file used in the MASTERSPEC full-length specification supporting documents (08710evp.pdf). To view this file, the Adobe Acrobat Reader software must be installed. Instructions are in 08710eva.wpd or 08710eva.doc.

You do not have to install the Adobe Acrobat Reader software to use MASTERSPEC.

MASTERSPEC System Requirements

Recommended computer system requirements to install and use MASTERSPEC libraries and versions:

- Microprocessor: Intel (or compatible) 80486 or Pentium™ (Pentium recommended).
- Operating System: Windows 9.x-Me, Windows NT 4.0 or Windows 2000
- RAM (Random Access Memory): Minimum 16 megabytes for Windows 3.1/9x, or 32 megabytes for Windows NT/Windows 2000. (64 megabytes recommended)
- Hard Disk Space: Minimum 30 megabytes.
- Word Processor: Microsoft Word or WordPerfect® to edit your MASTERSPEC files and run MASTERWORKS.

Getting Started

You may create a master folder and copy all section files from the MASTERSPEC CD-ROM, or you may create a project folder and copy only those sections required for the project.

Remove the "read-only" attributes from the files in the MASTERSPEC master folder. "Read-only" attributes allow users to view, but not alter information. To change these attributes, perform the following tasks:

- In the MASTERSPEC master folder, click Select All from the Edit menu.
- Click Properties from the File Menu in File Manager or Windows Explorer.
- Deselect Read Only, and click OK.

Open and print the table of contents from the MASTERSPEC CD-ROM for reference. Select the sections required for your project. The table of contents will appear in the *Tocs* subfolder for each word processor folder (e.g., WordPerfect, Microsoft Word).

Copy the selected files for the project into the newly created project folder. You may use File Manager, Windows Explorer, or your word processor to copy the files.

Creating Project Specifications

You can create project-specific specifications with MASTERSPEC using the following steps:

For each Section:

Note: When you delete a paragraph, you must also delete all the subparagraphs or they will be incorrectly subordinate to the preceding paragraph.

- Review help, reference, and tutorial information in the supporting documents in hard copy reference manuals or on-line with MASTERWORKS.
- Review editor's notes included to help select and edit alternative text. These notes appear in blue and are in hidden text. They will not print unless the hidden text option is turned on.
- Select from alternative text and delete inapplicable article titles, paragraphs, and subparagraphs.
- Select optional text (options) in **boldface** and in brackets ([]) and delete inapplicable options.
- Insert required text where instructed by insert notes (notes) in **boldface** and in angle brackets (< >). Insert other project-specific text.
- For a proprietary specification with manufacturers and products listed, select manufacturers and products where instructed, add additional manufacturers and products as appropriate, and retain requirements that define salient features.
- For a nonproprietary specification with manufacturers or products listed, select manufacturers and products where instructed, add additional manufacturers and products as appropriate, retain and add to requirements that define salient features.
- For a nonproprietary specification that is descriptive only, delete manufacturers and products, retain and add to requirements that define salient features.
- Select units of measure to remain by choosing either English (IP) units shown in teal or SI (metric) units shown in red. You may also leave both units of measure.
- Edit headers and footers.
- Select section format.

For the Project:

- Print all sections.
- Produce and print the table of contents.

Editing in WordPerfect® 6.1/7.0/8.0/9.0

The WordPerfect sections contain editor's notes formatted as hidden text. To benefit from the instructions in the editor's notes, you should always toggle hidden text on while you are editing on-line. Otherwise, the editor's notes remain hidden. To turn on hidden text, select the **View** menu then click **Hidden Text**.

Supporting Documents

If you are using MASTERSPEC Full Length, Short Form sections or MASTERSPEC Interior Design sections, you should review the help, reference, and tutorial information in the supporting documents for each section. The supporting documents are available in hard copy and on-line using a browser.

The on-line supporting documents (Cover, Evaluations, and Drawing and Specification Coordination Checklists) on the CD-ROM are in HTML only. You will be able to access, review, copy and print them with LINX, MASTERWORKS, or your browser.

Inserting Text in WordPerfect

The MASTERSPEC styled sections make it easy to insert and remove text in your specifications. WordPerfect allows you to turn on reveal codes to display the formatting and style codes in the section.

Turn on reveal codes to see the exact cursor location in the reveal codes window.

- Select the **View** menu.
- Click **Reveal Codes**.

Turn on hidden text to display the editor's notes.

- Select the **View** menu.
- Click **Hidden Text**.

Now you are ready to insert new text. Because the styles are linked together, you can begin entering text when you place the cursor at the end of the previous paragraph and press (Enter). If you want to change the paragraph level, place the cursor anywhere within the new text and do the following:

- Select the **Format** menu.
- Click **Styles**.
- Scroll down the **Style List** box and highlight the desired paragraph level.
- Click **Apply**.

To add a blank line above the paragraph, place your cursor at the end of the previous paragraph and:

- Press the *Enter* key then press the *Backspace* key.

To remove an extra blank line below the new paragraph, place the cursor at the end of the new paragraph and:

Press the *Right Arrow* key, then press the *Delete* key.

Adding Custom Editor's Notes

Special care must be taken when inserting custom editor's notes. To insert new editor's notes as described in "Inserting Text in WordPerfect" above, type the text of the editor's note. With the cursor in the text, apply the **CMT** style. If there is no blank line after your editor's note, place the cursor at the end of your editor's note and press *Enter* to insert a hard return. Your editor's note will appear like the other editor's notes. However, when you turn hidden text off, all the editor's notes will disappear except your custom note. If you select your note with the mouse and apply hidden text attributes, you will have an unwanted blank line when you turn hidden text off. You will not be able to get rid of this line. Follow these steps to convert your custom editor's notes to hidden text:

- Turn reveal codes on.
- Place the cursor at the end of the previous paragraph.
- Press the *Right Arrow* key once to move to the right of the **Style End** code.
- While holding down both the *Control* key and the *Shift* key, press the *Right Arrow* key twice or until you have selected the **Beginning Style** code of the first paragraph after your custom editor's note.
- If your custom editor's note consists of multiple paragraphs, select all paragraphs.
- While holding down the *Shift* key, press the *Left Arrow* key twice. All your custom editor's notes and surrounding codes should now be selected.
- Select the **Format** menu.
- Choose **Font**.
- Place a check mark in **Hidden**.
- Click **OK**.

Your custom editor's note is now in hidden text and should have the proper spacing when hidden text is on or off.

Printing Editor's Notes in WordPerfect

There are two advantages to editor's notes being in hidden text as opposed to WordPerfect comments. The first is that you can see the editor's notes in any view if you select **Hidden Text** from the **View** menu. The other is printing the editor's notes. The rule for editor's notes in hidden text is that "if you can see them, you can print them." To print editor's notes, turn hidden text on then print the section.

Changing Fonts, Margins, and Other Formatting Features

One of the advantages of styled sections is the ease of making formatting changes. To change the font in the entire section:

- Select the **Edit** menu.
- Choose **S**elect then **A**ll, or press (CTRL+A).
- Select the **F**ormat menu.
- Choose **F**ont.
- Choose the desired font then click **OK**.

If you want to change the editor's notes style font for appearance or emphasis, follow these steps:

- Select the **F**ormat menu.
- Choose **S**tyles.
- Choose **CMT** style.
- Click **Edit**.
- In the **Styles Editor** dialog select the **F**ormat menu.
- Choose **F**ont.
- Select the desired font then click **OK**.
- Click **OK** in the **Styles Editor**.
- Click **C**lose in the **Style List** dialog.

All editor's notes in the current section are now in the font you selected. A similar procedure is used to change margins, change colors, or make other formatting changes in the section. To change the top and bottom margins, follow these steps:

To delete existing margins:

- Select the **F**ormat menu.
- Choose **S**tyles.
- Choose **Document Style**.
- Choose **Edit**.
- In the **Styles Editor** dialog, note the **Top** and **Bottom** margin codes; drag them out of the dialog with your mouse to delete them.

To set new margins:

- Select the **F**ormat menu.
- Choose **M**argins.

- Change the **Top** and **Bottom** margin settings to your desired settings.
- Click **OK**.
- The new settings now appear as a code in the **Styles Editor** dialog window.
- Click **OK**.
- Click **Close** in the **Style List** dialog.

Your style changes take immediate effect on the entire section.

Editing in MICROSOFT® Word 6/7/95 and Word 97/2000

The Word 6/7/95 and Word 97 sections are in an automatically numbered outline format that allows you to easily insert and remove text. Word will automatically renumber the remaining or inserted paragraphs. The outline numbering is not affected by any text that is not part of the outline such as editor's notes, tables, etc.

Supporting Documents

If you are using MASTERSPEC Basic or Short Form sections, or MASTERSPEC Interior Design sections, you should review the help, reference, and tutorial information in the supporting document for each section. The supporting documents are available in word processor format on the MASTERSPEC CD-ROM, and on-line using a browser if you are using MASTERWORKS.

MASTERSPEC Paragraph-Numbered Sections

Paragraph-numbered sections contain the following text elements:

- Header
- Footer
- Editor's Notes
- Section Title
- Three Parts: GENERAL, PRODUCTS, and EXECUTION (Except in SLV and OUTLINE sections)
- Article Titles
- Paragraphs and subparagraphs (5 possible levels of subordination)
- Tables
- Data Sheets
- END OF SECTION Title

Introduction to Styles

Sections created for use with Microsoft Word are formatted using styles. Styles are a set of formats that you can easily apply to text. For each paragraph in a Word document, there is a

predefined style that includes left and right margins, tab settings, paragraph numbering, etc. Styles are used in Word for Windows sections for three reasons.

First, styles provide consistent and accurate formatting of the paragraph indenting and text wrapping used in the paragraph-numbering system. Second, styles ensure that paragraphs renumber correctly when sections are edited. Third, styles allow you to specify and quickly change the formatting characteristics for paragraphs with the same style. To change the format of paragraphs, simply change the format definition in the style; all the paragraphs with that style will automatically reformat to reflect the change.

Styles Used in Microsoft Word

The styles used in Word sections are hierarchical. Each style is based on one of the other styles. Every style originates from the Normal style. The Normal style is the only style that contains any font information. If you want to reformat the entire section in another font, change the font in the Normal style.

Removing Text

To delete text from the section, select the text to be deleted and press the *Delete* key. Word will automatically renumber the section.

Inserting Text by Changing the Paragraph Style

One way to insert paragraphs and subparagraphs in the Word outline format is to place the cursor where you want to insert a new paragraph, then press the *Enter* key. This will insert a blank paragraph for your new text. To change the paragraph to the appropriate subordinate level, place the cursor in the text, select a new style, and Word will automatically renumber the text.

Styles contain formatting information that you can apply to paragraphs and subparagraphs. The advantage of using styles instead of manually applying formats is that you can easily change your entire section's appearance by changing the formats in a particular style.

To change a style for a paragraph:

- Select the paragraph (or text string, such as a unit of measure) where the style will be applied.
- Click the **Style** drop-down list box on the formatting toolbar.
- Select a style by double-clicking the style or highlighting the style, then press *Enter*.

MASTERSPEC sections have eight levels of automatic paragraph numbering. In Word 6/7/95, each one is preceded by a **Heading #** and a unique style name from the table below.

Style Name	Description
PRT = Level 1	A paragraph in hidden text that corresponds to the Part titles.
ART = Level 2	The style used for the Article titles.
DST = Level 3	An outline level used only in sections that contain Data Sheets and is used for the Data Sheet title.

PR1 = Level 4	Paragraph level 1 follows Article titles and Data Sheet titles. Number style is an uppercase letter. <i>Example: A.</i>
PR2 = Level 5	Subparagraph level 2 follows a paragraph level 1 and is a number followed by a period. <i>Example: 1.</i>
PR3 = Level 6	Subparagraph level 3 follows a Subparagraph level 2 and is a lowercase letter followed by a period. <i>Example: a.</i>
PR4 = Level 7	Subparagraph level 4 follows a subparagraph level 3 and is a number followed by a parenthesis. <i>Example: 1)</i>
PR5 = Level 8	Subparagraph level 5 follows a subparagraph level 4 and is a lower case letter followed by a parenthesis <i>Example: a)</i>

Editing MASTERSPEC Sections

When you delete or add paragraphs, the paragraph numbering is automatically changed. The sections have been set up to recognize the style of the line before your insertion, and automatically apply that style to your added text. To change a style that has been automatically applied, put the cursor at the beginning of the line, select **Styles** on your toolbar, and assign the appropriate style. For additional help, refer to the instructions below for each style type. Paragraphs that follow your insertion are automatically renumbered.

As you scroll through a section, the cursor skips over the blank lines, allowing you to quickly move through the section. The blank lines have been incorporated into the style so spacing throughout the section remains uniform. To remove unwanted blank lines, highlight a paragraph. You will notice that the blank line is also highlighted. Choose **Format, Paragraph, Indents and Spacing**, and adjust **Before** or **After** to set the number of spacing points desired

One line equals 12 points. To remove a line, adjust the spacing up or down 12 points. The spacing is set by selecting **Format, Paragraph, Indents and Spacing**.

Text Insertion Instructions

When you create a new section or insert text in a section, you must pay attention to styles, paragraphs, and other text elements so the section retains its integrity.

Hint: *It is easier to edit sections if the Style Area on the left side of the screen is open, so you can see the paragraph styles for each paragraph. To open the Style Area, choose **NORMAL** from the **VIEW** menu. The Style Area option only exists in the normal view mode. Choose **Options** from the **Tools** menu. Click the **VIEW FOLDER** tab if the folder is not visible and enter **.03"** in the **STYLE AREA WIDTH** box. Click **OK**. There should be a vertical window on the left side of the screen displaying the paragraph styles.*

The following instructions help you insert text elements into an existing section using styles. To easily create new sections, use an existing paragraph-numbered section and the attached outline sample.

Microsoft Word automatically inserts a paragraph style based on the preceding paragraph. To change this style, use the styles drop-down menu to apply the style you want as described above.

Inserting Text in MASTERSPEC Styles

PART 1 - Title (Style PRT) – Part 2 and 3 also used. No Parts used in SLV and OUTLINE.

Usually, you would not change the Part titles, because they conform to standard specification section formats. If you need to reenter a Part title, do the following:

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new Part title.
- Press *Enter* to create a new paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PRT** from the list of styles and click **OK**.
- Type *PART* and press the *Space Bar*.
- Press the *Space Bar* again.
- Press (—) to insert a hyphen, then press the *Space Bar* again.
- Type the Part title (*GENERAL*, *PRODUCTS*, or *EXECUTION*).

Article Title (Style ART)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new Article title.
- Press *Enter* to create a new blank paragraph.
- Choose **Style** from the **Format** menu.
- Choose **ART** from the list of styles and click **OK**.
- Type the Article title.

Paragraph at Indentation Level 1 (Style PR1)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new paragraph.
- Press *Enter* to create a new paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PR1** (paragraph) from the list of styles and click **OK**.
- Type the paragraph text.

Subparagraph at Indentation Level 2 (Style PR2)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new paragraph.
- Press *Enter* to create a new blank paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PR2** (paragraph) from the list of styles and click **OK**.
- Type the paragraph text.

Subparagraph at Indentation Level 3 (Style PR3)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new paragraph.
- Press *Enter* to create a new blank paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PR3** (paragraph) from the list of styles and click **OK**.
- Type the paragraph text.

Subparagraph at Indentation Level 4 (Style PR4)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new paragraph.
- Press *Enter* to create a new blank paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PR4** (paragraph) from the list of styles and click **OK**.
- Type the paragraph text.

Subparagraph at Indentation Level 5 (Style PR5)

- Position the cursor with the arrow keys or mouse at the end of the paragraph where you want to insert the new paragraph.
- Press *Enter* to create a new paragraph.
- Choose **Style** from the **Format** menu.
- Choose **PR5** (paragraph) from the list of styles and click **OK**.
- Type the paragraph text.

The organization of a specification section is shown in the sample paragraph-numbered section at the end of this chapter.

Microsoft Word 6/7/95 Outline Format

The outline format in Word provides a hierarchical format to a section. The headings in the outline help you organize and rearrange the section text. By displaying only the headings, you can quickly move to a specific part of the section. You can use outline headings to rearrange the section's text and quickly execute formatting tasks. Word's **Outline** View displays the levels of headings and the text that belongs to each level.

Inserting Text in Microsoft Word 6/7/95 Outline View

When you switch to **Outline** View, the ruler is removed and the **Outline** toolbar appears. The text in your section is arranged in an outline format. Some paragraphs are headings and one of the eight heading styles has been applied.

Select **View | Outline**, or choose **Outline** on the **View** button. Move the cursor where you want to insert text and press *Enter*. This will give you a new blank number paragraph in which you can add text. You can promote or demote this paragraph using the appropriate arrow buttons or equivalent keystrokes.

- To increase the heading by one level, click the promote button in the toolbar or press *Alt+Shift+*the plus (+) key.
- To decrease the heading by one level, click the demote button in the toolbar or press *Alt+Shift+* the minus (-) key.

SECTION 99999 – SAMPLE PARAGRAPH-NUMBERED SECTION

PART 1 - GENERAL (*Paragraph Style PRT*) – Not used in OUTLINE sections.

1.1 ARTICLE TITLE (*Paragraph Style ART*)

A. Paragraph (*Paragraph Style PR1*)

1. Subparagraph (*Paragraph Style PR2*)

a. Subparagraph (*Paragraph Style PR3*)

b. Subparagraph (*Paragraph Style PR3*)

1) Subparagraph (*Paragraph Style PR4*)

a) Subparagraph (*Paragraph Style PR5*)

2. Subparagraph (*Paragraph Style PR2*)

3. Subparagraph (*Paragraph Style PR2*)

PART 2 - PRODUCTS (*Paragraph Style PRT*) – Not used in OUTLINE sections.

2.1 ARTICLE TITLE (*Paragraph Style ART*)

A. Paragraph (*Paragraph Style PR1*)

1. Subparagraph (*Paragraph Style PR2*)

a. Subparagraph (*Paragraph Style PR3*)

2. Subparagraph (*Paragraph Style PR2*)

PART 3 - EXECUTION (*Paragraph Style PRT*) – Not used in OUTLINE sections.

3.1 ARTICLE TITLE (*Paragraph Style ART*)

A. Paragraph (*Paragraph Style PR1*)

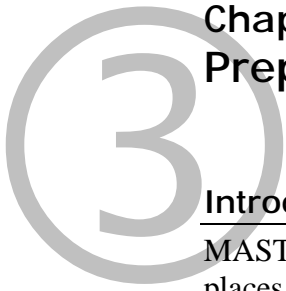
1. Subparagraph (*Paragraph Style PR2*)

2. Subparagraph (*Paragraph Style PR2*)

3. Subparagraph (*Paragraph Style PR2*)

B. Paragraph (*Paragraph Style PR1*)

END OF SECTION 99999



Chapter 3 Preparing Project Specifications

Introduction

MASTERSPEC sections are organized according to CSI's three-part section format that places subject matter in a uniform location in each section. CSI's *SectionFormat* defines the three parts as follows:

- | | |
|--------------------|--|
| Part 1 C General | Administrative, procedural, and temporary requirements unique to the section. |
| Part 2 C Products | Materials, products, equipment, systems, and assemblies required for inclusion in the project. |
| Part 3 C Execution | Preparatory actions and methods used to incorporate products into the project. In some sections product schedules follow Part 3. |

Information in each specification part is organized into articles, with subordinate paragraphs and subparagraphs following each article. Article titles are also organized according to CSI/CSC's guidelines. MASTERSPEC uses an alphanumeric paragraph-numbering system to designate parts, articles, paragraphs, and subparagraphs in a section. The paragraph-numbering system uses alternating letters and numbers to indicate levels of subordination. You may change the numbering system to a decimal system, delete the paragraph-numbering system, or add line numbering using MASTERWORKS. See the *MASTERWORKS User's Guide*, Chapter 4 – "Multi File Features, Document Format Dialog, Page Format Tab". MASTERWORKS can be used to change many default formats in MASTERSPEC.

MASTERSPEC can be edited manually on paper, on-screen using a word processor, on-screen using a word processor enhanced with MASTERWORKS, or on-screen using the LINX Automated Editor. The following instructions apply to all types of editing. Refer to Chapter 2 in this Guide for instructions on editing MASTERSPEC using your word processor. The *MASTERWORKS User's Guide* has instructions on the use of MASTERWORKS to enhance your word processor. Documentation for the LINX Automated Editor software is included with the software and may be accessed on-line.

Section Numbering and Naming Convention

MASTERSPEC sections follow CSI/CSC's *PageFormat* and *SectionFormat*. Each new and updated section is numbered and titled according to CSI/CSC's 1995 *MasterFormat*. Each number is five digits, in one of sixteen divisions, e.g., 06402. In word processor versions, a three-character suffix indicates the MASTERSPEC Library and Version, and the file extension indicates the word processor version, e.g. 06402f1_.doc. The MASTERSPEC Consolidated Table of Contents lists by division, the section number, section title, a list of libraries containing the section, the issue date, and a description of the section content.

Location of Specification Files on CD-ROM

MASTERSPEC section text files, supporting documents and MASTERWORKS software are distributed on CD-ROM media. Section text files are in the indicated *Mastspec\Word* and *Mastspec\Wp* folders for the following word processors:

Microsoft Word 2.0	<i>Word2</i>
Microsoft Word 6/7/95	<i>Word6_7</i>
Microsoft Word 97/2000	<i>Word97</i>
WordPerfect 5.1	<i>Wp51</i>
WordPerfect 6/7/8/9	<i>Wp6_7_8</i>

The supporting documents include the Cover, Evaluations, Drawing Coordination Checklist, and Specification Coordination Checklist. They are in the *\Specware\MWorks\Windows\Setup.exe* subfolder of the MASTERSPEC and MASTERSPEC INTERIOR DESIGN CD-ROMs. The Specification Coordination Checklist is not in MASTERSPEC INTERIOR DESIGN.

Getting Started

If sufficient hard-disk space is available on a personal computer or a network file server, create a MASTERSPEC master directory. All MASTERSPEC specification files should be copied from the distribution CD-ROM to the master directory.

To start a project specification, select the sections you need from the appropriate MASTERSPEC Library Table of Contents or from the Consolidated Table of Contents. Hard copy versions of the tables of contents are included with each quarterly update. Electronic versions are in the *Mastspec\Word\Tocs* or the *Mastspec\Wp\Tocs* subdirectory on the MASTERSPEC CD-ROM. Create a project directory and copy the appropriate section text files from the master directory to the project directory for editing. **Do not** edit the specification files in the master directory unless they are to be used as office masters.

Project specifications can be created directly from MASTERSPEC section text, but you can also prepare office masters with a pre-edit of MASTERSPEC sections. One method is to edit each section for manufacturers and products and then add office standard or client required language. Another method is to create several more narrower scope sections from one MASTERSPEC section by deleting options. For example, one Licensed User created the following office masters from SECTION 07511 B BUILT-UP ASPHALT ROOFING.

07511f11 Three or four ply with mineral cap over nailable deck.

07511f12	Three or four ply with mineral cap over non-nailable deck.
07511f13	Three or four ply with mineral cap over insulation.
07511f14	Three or four ply with aggregate over nailable deck.
07511f15	Three or four ply with aggregate over non-nailable deck.
07511f16	Three or four ply with aggregate over insulation.

These office masters may take less time to edit for each subsequent project, but must be updated when the MASTERSPEC section is updated. There should never be a need to completely rewrite MASTERSPEC sections to create office masters.

Alternative Text

Sections include alternative and optional text (options) that you select to keep or delete for each project. Alternative text includes articles, paragraphs, and subparagraphs. Keep alternative text applicable to each project and delete text that is not applicable.

Optional Text (Options)

Options are words and phrases enclosed in square brackets ([]) and in boldface for easy identification. In some cases, only one option from those shown should be selected. In other cases, you may select one or more options. When deleting options, the text, bracket pair and the boldface must be removed. When selecting an option to keep, the text remains, but the bracket pair and boldface must be removed. MASTERWORKS software helps you select options to keep or delete, remove bracket pairs and boldface text, delete options entirely, and insert additional options. See *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features" for instructions on the automated selection of optional text.

Editor's Notes

Editor's notes are included in section text where the selection or editing of alternative text is required. In hard copy, they are in shaded boxes. In word processor files, they are in hidden text, blue color, do not have paragraph numbers, start at the left margin, and end at the right margin. Editor's notes are in hidden text and will not print unless hidden text is turned on. You can print sections with or without editor's notes, and select whether or not to display them on-screen. Editor's notes should always be displayed when editing on-screen, and should be printed on all hard copy for manual editing. This will reduce the possibility that editing instructions will be overlooked. Some Users delete each editor's note that has been addressed and leave applicable notes when a decision has not been made.

Editor's notes provide instructions to help you retain, delete, revise, or replace text, and typically include the following information:

- Mandatory choice of alternative paragraphs
- Optional choices that can be left to the Contractor
- Refer to editing instructions or additional criteria in the Evaluations
- Coordination required with other choices located elsewhere in the section
- Criteria to be used in making choices
- Consideration for choices; such as cost, energy efficiency, etc.
- Required additional text

Insert Notes (Notes)

MASTERSPEC section text includes insert notes (notes) that are phrases enclosed in angle brackets (< >) and in **boldface** for easy identification. The phrases prompt you to fill in the appropriate information and may offer an example. In some cases, notes are included after options and prompt you to add a custom requirement to the listed requirements. For each project, notes can be replaced with appropriate text, deleted if inappropriate, or kept for later editing. Notes can be edited or custom notes added when you are creating office masters. See the *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features", for instructions on how to replace notes with text, remove bracket pairs and **boldface**, delete notes, and insert additional notes.

Project Notes

MASTERSPEC section text does not include project notes, but does include a project notes style. This style lets you insert project-specific notes and comments, to you, any member of the design team or the Owner. Project notes are the equivalent of yellow self-stick notes.

Project Notes are in hidden text and may be converted to editor's notes by changing the style to **CMT** or by selecting the "Keep" option in MASTERWORKS Single-File features.

Units of Measure

Section text includes both inch-pound (IP) and SI (metric) units. You may select either unit or both units. No editing is required if both units remain unless you want to change the appearance order with the help of MASTERWORKS. When selecting IP units with MASTERWORKS, the program deletes the IP and SI enclosing style codes, the SI parentheses, and SI text, leaving only the IP units. If you select SI units, MASTERWORKS deletes the IP and SI enclosing style codes, the IP text, and the parentheses around the SI unit, leaving only the SI text. See *MASTERWORKS User's Guide*, Chapter 3, "Single-File Features, Units of Measure", for instructions on the automated selection of units of measure.

Editing MASTERSPEC

MASTERSPEC is a comprehensive commercial master specification system. Requirements are included in the section text for a range of materials, products, and applications.

MASTERSPEC always provides more information than is needed for a specific project. As a result, you must do the following as a minimum edit:

- Delete section text that is overly stringent, is redundant with another section, or does not apply to the project.
- Add requirements and special options unique to the project. Edit the manufacturers and products list. Add local and regional manufacturers and products.

MASTERSPEC section text includes full paragraphs and subparagraphs as alternative text. You often select appropriate alternative paragraphs without the need for any editing.

Only one of several alternative paragraphs is usually retained, unless more than one type of product or material is required, or unless the selection is left to the Contractor.

If more than one product or material is retained, each one must be uniquely identified both in the specifications and on the drawings. One method is to include designations as part of the descriptive names in the specifications. These designations could be in the form of alphanumeric designations, such as in "Metal Locker MLB1" and "Metal Locker MLB2," or words and numbers, such as "Locker Type 1" and "Locker Type 2." The first method requires only the alphanumeric designations on the drawings. The second method requires both the name and designation on the drawings. If designations are not used, descriptive names such as "Wardrobe Lockers" and "Corridor Lockers" must be used to distinguish products and materials in the specifications and on the drawings.

Many MASTERSPEC sections have articles that contain requirements about only one type of activity, product, or material. This organization makes editing easier by allowing you to delete the article and all the subordinate text if it is not applicable. Example Article titles are

"Preconstruction Testing", "Source Quality Control", and "Field Quality Control." Where the project work is minor, not critical, or not complex enough to justify these activities, the articles and all their subordinate text can be deleted.

Leaving unnecessary or inapplicable MASTERSPEC text in the section can obscure the true extent of the work, causing bidders to allow for unnecessary contingencies in pricing the project. You should diligently proceed to remove all unnecessary text. Do not assume that quality control is increased and professional liability is reduced by retaining requirements that do not apply to the project.

Preparation for Editing

Before editing each MASTERSPEC section, you should become familiar with the section. Scan the Cover, Evaluations, Section Text, Drawing Coordination Checklist, and Specification Coordination Checklist. Review the section content, identify possibilities that could be overlooked, and identify subjects requiring further investigation.

The Cover describes the content of the section text and related products and work. It includes products that could be inserted into the section if required, similar work usually specified elsewhere, and closely related work specified in other sections.

The Evaluations describe characteristics and criteria for specifying the products and materials included in the section. They include an overview of products that might otherwise be difficult to extract from manufacturers' literature. The Evaluations include the following:

- Editing instructions, which are also referenced in editor's notes in the section text
- Scope of the section
- Description of product characteristics
- Special design and detailing considerations, if applicable
- Referenced standards and suggested reference materials
- List of manufacturers
- Tables of products and manufacturers (not in all Evaluations)

At the beginning of many Evaluations, one or more editing instructions are included that generally relate directly to specific parts of the section text. An editor's note in the section text refers back to the applicable editing instruction number in the Evaluations. The editing instructions provide more extensive and detailed instructions than is possible with editor's notes. You should always scan these instructions and the remainder of the Evaluations before editing the section text.

The editing instruction that typically occurs in a section where manufacturers and products are named is a reminder that these national manufacturers and products are only examples and are not recommended or endorsed by the AIA or ARCOM.

Drawing Coordination Checklists contain organized drawing requirements that relate to the section content. They indicate items not in the section text that should be on the drawings.

Specification Coordination Checklists contain a list of other sections and requirements that relate to the section content. They provide a location to indicate items to be furnished by the Owner; how to apply allowances, unit prices, and alternates to the section, if applicable; and other sections that may have requirements applicable to the section.

Editing Sequence

The first step with MASTERSPEC sections that contain manufacturers and products is to edit the manufacturers, products, and materials in Part 2. You should retain products and materials applicable to the project and delete those that are not. If necessary, add local and regional manufacturers and products. This first step is the basis for the edit of installation requirements in Part 3 and general requirements in Part 1.

Note: Some sections, for example, those in Division 15 with mechanical piping, the first step is to edit the applications portion in Part 3. This is because the application paragraphs describe the components of the system specified in Part 2.

The second step is to edit Part 3. You should select and coordinate the installation requirements that relate to products and materials in Part 2.

The third step is to edit Part 1. You should coordinate the requirements of Part 1 with the products and materials specified in Parts 2 and 3. This includes editing the "Summary" Article to reflect the content of the section.

Note: Items in Part 1 can add cost to the project while not necessarily adding quality. Requirements such as mockups or restrictive installer qualifications may be unnecessary for smaller or less-complex projects.

The "Related Sections" paragraph in Part 1 should also be edited. It should only list products, construction, and equipment that the Contractor might expect to find in this section but are specified elsewhere. Other sections may contain requirements that need to be coordinated with the section being edited. These sections should not be listed in the "Related Sections" Paragraph, because no one would expect to find the requirements from these sections in the section being edited.

If required by the Owner, a "Reference Standards Article" can be added to Part 1 with standards copied from the Evaluations. If standards are added, you should always verify the designation, title, and date of the standard because an update of the standard may have occurred since the section was last issued. If a more current standard date is used, you should review the standard and the section text to determine if any changes are required.

Manufacturers and Products

MASTERSPEC includes manufacturers' names and products in Part 2 of the section text. Only manufacturers with products that are distributed nationally are included. Regional and local manufacturers that meet specified requirements can be added to or replace names on the list.

You should verify that the standard products of each selected manufacturer comply with the specified performance and descriptive requirements. The section text should state if custom units are required. When editing product requirements, do not restrict or add proprietary

features that only one manufacturer can meet, unless you really intend to limit selection to products from that manufacturer.

Manufacturer and product lists are preceded by standard MASTERSPEC paragraphs, as follows:

The following "nonproprietary" paragraphs indicate that the Contractor may select any manufacturers or products on the following list, or any other manufacturers or products that meet the specified requirements. With either paragraph, manufacturers or products other than those listed

are not required to be submitted as substitutions, but they must be shown to comply with requirements by following the submittal procedures for comparable products.

- "Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:"
- "Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified in other Part 2 articles of this Section."
- "Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:"
- "Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, those specified in other Part 2 articles of this Section."

The following "semiproprietary" paragraphs require the Contractor to select only manufacturers or products named in the section text, either in a list following these paragraphs or elsewhere in the section text, that could be in another article in Part 2. With either paragraph, manufacturers and products, other than those listed, must be submitted as substitutions and must comply with requirements. Division 1 Section 01600 - PRODUCT REQUIREMENTS establishes the default requirements for whether or not substitutions will be considered.

- "Manufacturers: Subject to compliance with requirements, provide products by one of the following:"
- "Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers indicated in other Part 2 articles of this Section."
- "Products: Subject to compliance with requirements, provide one of the following:"
- "Products: Subject to compliance with requirements, provide one of the products indicated in other Part 2 articles of this Section."

These alternative paragraphs give you the following options:

- With paragraphs titled "Available Manufacturers," list available manufacturers known to you
- With paragraphs titled "Available Products," list available products known to you

- With paragraphs titled "Manufacturers," list only those manufacturers that have products that are specifically selected or allowed for the project
- With paragraphs titled "Products," list only those products specifically selected or allowed for the project
- If you do not want to list any manufacturers or products, delete paragraphs and names of manufacturers and products. This will result in a nonproprietary, nonrestrictive specification in which reliance is placed entirely on using descriptive, performance, reference standard, or a combination of methods to establish salient features of products.

The following "basis of design" paragraphs indicate that the design is based on the product named and the Contractor may select that product or another product of a manufacturer listed. Products of other manufacturers must be shown to comply with requirements by following the submittal procedures for comparable products. Products of manufacturers other than those listed are required to be submitted as substitutions.

- "Basis-of-Design Product: The design for [**product**] named in [**Part 2 "<insert title>" Article**] is based on [**product name and manufacturer**]. Subject to compliance with requirements, provide the named product or a comparable product by one of the other manufacturers listed."
- "Basis-of-Design Product: The design for [**product**] is based on <**insert product name and manufacturer**>. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:"
- "Basis-of-Design Product: The design for [**product**] is based on <**insert product name and manufacturer**>. Subject to compliance with requirements, provide the named product or a comparable product by one of the other manufacturers in other Part 2 articles of this Section."

These alternative Basis-of-Design Product paragraphs give you the following option:

- List one product known to you to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other
- characteristics for purposes of evaluating comparable products of other named manufacturers.
- List only those manufacturers specifically selected or allowed for the project from which comparable products may be accepted.

Method of Specifying Examples

The Evaluations in SECTION 01600 B PRODUCT REQUIREMENTS describe the methods of specifying used in MASTERSPEC and provide a comparison to those defined in CSI's *Manual of Practice*. A table is included that compares the wording in Division 1 and individual Sections of MASTERSPEC and CSI specifying methods. Examples of Part 2 text with fictitious product and manufacturer names are shown below to demonstrate alternatives when you specify products and manufacturers. MASTERSPEC can be edited to produce any of the specifying methods for manufacturers and products.

Available Products/Available Manufacturers (Nonproprietary)

The following example is from a nonproprietary specification where specific products are named in the same article where other product requirements are also specified. It demonstrates the use of alphanumeric designations to distinguish between two or more different products of the same type. These alphanumeric designations should be used on the drawings to indicate where each of the products is located.

2.1 RESILIENT ATHLETIC FLOOR TILE, AFT-1

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Sport Floor; Floor Co.
 - 2. Game Court; Rubber Inc.
 - 3. Game Tile; Sports Floors, Inc.
- B. Material: Rubber.
- C. Style: Solid surface.
- D. Installation Method: Adhesive.
- E. Traffic-Surface Texture: Smooth.
- F. Size: 36 inches square.
- G. Thickness: 1/4 inch.
- H. Weight: Not less than 10 lb per tile.
- I. Color and Pattern: As selected by Architect from manufacturer's full range.

Products/Manufacturers (Semiproprietary)

This example is from a semiproprietary specification in which specific products are named. It also demonstrates the use of alphanumeric designations to distinguish between two different products of the same type.

2.1 RESILIENT ATHLETIC FLOOR TILE, AFT-2

- A. Products: Subject to compliance with requirements, provide one of the following:

1. Grid Tile; Plastic Grids, Inc.
 2. Pool Deck; Sports Floors, Inc.
- B. Thickness: 1/2 inch.
- C. Color: As selected by Architect from manufacturer's full range.

Product/Manufacturer (Proprietary)

This example is from a proprietary specification with only one product and manufacturer listed. Because only one type of product is required, an alphanumeric designation is not included in the Article title; however, such designation could be inserted to identify the location of this product on the drawings.

2.1 SHEET VINYL ATHLETIC FLOORING

- A. Product: Provide the following:
1. Court Floor, Beige; Basketball Floor Co.

Descriptive (Nonproprietary)

This example is from a nonproprietary, descriptive specification where products are not named. Because only one product of this type is required, an alphanumeric designation is not included in the Article title; however, such a designation could be inserted to identify the location of this product on the drawings.

2.1 RUBBER-STRIP TILE

- A. Materials and Construction: Close-nap, carpetlike tiles of rubber-fabric strips, made from recycled tires, bonded to a dry-adhesive backing that acts as a catalyst with installation adhesive to form tile-to-substrate bond.
- B. Size: 12 inches square.
- C. Thickness: 3/8 inch.
- D. Color and Pattern: As selected by Architect from manufacturer's full range.
- E. Fire-Test-Response Characteristics: Passing 16 CFR 1630 (DOC FB1B70).

Basis of Design (Semiproprietary)

The following example is from a semiproprietary specification where the method of specifying is naming one product as the basis of design.

2.1 MANUFACTURERS

- A. Basis-of-Design Product: The basis of design for toilet and bath accessories are the products named in Part 2 "Toilet and Bath Accessories" article. Provide either the named product or a comparable product by one of the following:
 - 1. Toilet and Bath Accessories:
 - a. A & J Washroom Accessories, Inc.
 - b. American Specialties, Inc.
 - c. Bobrick Washroom Equipment, Inc.
 - d. Bradley Corporation.
 - e. General Accessory Manufacturing Co. (GAMCO).
 - f. McKinney/Parker Washroom Accessories Corp.
 - g. <Insert manufacturer.>

2.3 TOILET AND BATH ACCESSORIES

- A. Paper Towel Dispenser <Insert drawing designation, e.g., TBA-1>:
1. Basis-of-Design Product: <Insert manufacturer and product.>
 2. Mounting: [**Recessed**] [**Surface**].
 3. <Insert towel types and capacities.>
 4. Material: Stainless steel.
 5. Lockset: Tumbler type.
 6. Refill Indicators: Pierced slots at sides or front.

Product Schedules

Some MASTERSPEC sections include a product schedule at the end of Part 3. The schedule is an alternative method of specifying two or more products of the same type and form, but differ in one or more respects. If the project requires a 4-inch-high rubber topset base and a 6-inch-high rubber cove base, a schedule can be used to describe the requirements for each base.

In the schedule, include separate lists for each type of product required with manufacturers and product names and a description of the construction and features of each. After editing the schedule, you must coordinate product features with all requirements specified in Part 2. MASTERSPEC sections that include a product schedule in the section text also include an example schedule in the Evaluations for reference.

When using product schedules, you should retain one of the following paragraphs in the "Manufacturers" Article that refers to product schedules:

The following "nonproprietary" paragraphs are for use in Part 2 when product schedules are specified at the end of Part 3. They indicate that the Contractor may select any manufacturer or product on the list or any other manufacturer or product that meets the specified requirements. With either paragraph, manufacturers or products other than those listed are not required to be submitted as substitutions, but they must be shown to comply with requirements by following the submittal procedures for comparable products.

"Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers indicated in the [**Product**] Schedule at the end of Part 3."

"Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products indicated in the [**Product**] Schedule at the end of Part 3."

The following "semiproprietary" paragraphs are for use in Part 2 when product schedules are specified at the end of Part 3. They require the Contractor to select only manufacturers or products on the list. With either paragraph, manufacturers or products other than those listed must be shown to comply with requirements. Section 01600 - PRODUCT REQUIREMENTS establishes the default requirement whether or not substitutions will be considered.

- "Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers indicated for each designation in the **[Product]** Schedule at the end of Part 3."
- "Products: Subject to compliance with requirements, provide one of the products indicated for each designation in the **[Product]** Schedule at the end of Part 3."

The following "basis of design" paragraph is for use in Part 2 when product schedules are specified at the end of Part 3. It indicates that the design is based on the product named and the Contractor must select that product or another product of a manufacturer listed. Products of other manufacturers must be shown to comply with requirements by following the submittal procedures for comparable products. Products of manufacturers other than those listed are required to be submitted as substitutions.

"Basis-of-Design Product: The design for **[product]** named in **[Part 3 "<insert title>" Schedule]** is based on **[product name and manufacturer]**. Subject to compliance with requirements, provide the named product or a comparable product by one of the other manufacturers listed."

Sample Door Hardware Schedule

The following is an example of a completed schedule that you may consider adapting to specify door hardware set requirements. The example contains the kind of data that would be inserted and the order in which it should be listed, as recommended by DHI. You must insert appropriate product requirements in the Door Hardware Schedule for each door hardware set required for the Project.

This example names actual manufacturers' products, using model numbers. Manufacturers are identified by abbreviations.

Products of randomly selected manufacturers are included in the sample to demonstrate how to specify names of products and manufacturers and not to indicate products equivalent in appearance and performance. Products and manufacturers named are neither recommended nor endorsed by the American Institute of Architects or ARCOM.

3.8 DOOR HARDWARE SCHEDULE (Example - Naming Manufacturers' Products)

Hardware Set No. 1

3	Hinges	TB2714	MCK	626
1	Lockset	8205 LNL	SGT	626
1	Closer	4011 – Regular - Alum	LCN	689
1	Kick Plate	#48 - 10 x 2 inches L.D.W.(254 x 51 mm L.D.W.)	NTQ	630
1	Wall Stop	407	IVS	626
1	Set Smoke Seal	5050	NGP	

Hardware Set No. 2

1	Electric Hinge	T4B3386 MM x NRP	MCK	626
1	Electric Hinge	T4B3386 CC x NRP	MCK	626
1	Hinge	T4B3386 x NRP	MCK	626
1	Electrified Panic Exit Device	E90075L x FSE x 9992L - M	VD	626
1	Cylinder	320200	MED	626
1	Closer	4110 Cush Alum	LCN	689
1	Kick Plate	#48 - 10 x 2 inches L.D.W. (254 x 51 mm L.D.W.)	NTQ	630
1	Threshold	R50SA x Miter	PEM	627
1	Weather Stripping	303AV Head and Jamb	PEM	627
1	Sweep	307AV	PEM	627
1	Access Control	7183 x 7804 Box	VD	
1	Relay	7000 (JB7)	VD	
1	Heater	7801	VD	
1	Set Communication Cable	7865, 7866, 7868	VD	
1	Power Supply	MPB-851	VD	

Access control shall release electrified panic exit device outside trim and shall shunt monitoring hinge. Monitor door position at security panel.

END OF SECTION 08711

DOOR HARDWARE

08711 - 37

Environmental Considerations

Recent MASTERSPEC sections include environmental considerations in the Evaluations. The following three paragraphs are from SECTION 09622 B RESILIENT ATHLETIC FLOORING. Similar environmental information is included where appropriate in new and updated sections. The information is not exhaustive and you may need to consider other environmental issues as required by individual owners and local regulations.

Recycled rubber and vinyl are used to produce smooth and nondirectional textured tiles. Of the manufacturers listed at the end of these Evaluations, only American Floor Products currently advertises the use of recycled rubber and vinyl for solid-surface tiles. For use under its sheet vinyl, Advantage advertises an optional pad that incorporates recycled rubber. Contact manufacturers to verify the extent of recycled materials used in products and whether materials are recycled postconsumer waste or manufacturing waste.

Recycled truck and bus tires are used to produce rubber-strip tile. These tiles have a close-nap, carpetlike surface made from rubber-fabric strips bonded to a flexible dry-adhesive backing. The backing reacts with separate adhesives applied to the substrate to form the tile-to-substrate bond.

VOC restrictions of authorities having jurisdiction may affect the selection of installation adhesives for adhered flooring. The Section Text places responsibility on the flooring manufacturers for selecting appropriate adhesives for substrates and conditions indicated. If specific adhesive requirements or VOC restrictions are inserted in the Section Text, verify requirements of authorities having jurisdiction. If odor and indoor-air quality during installation and curing are concerns, consult manufacturers for recommendations.

Coordinating Drawings with Specifications

Producing good construction documents requires an intensive coordination effort involving both Drawings and Specifications. Because master guide specifications exist before Drawings are prepared for each specific project, they must be general and broad in scope. All checklist items may not apply to every project. With proper planning and communication, the production team can begin producing Drawings with an awareness of specification content. MASTERSPEC Drawing Coordination Checklists offer the principal means for simplifying and organizing the coordination process, but Editor's Notes within the Section Text and in the Evaluations also often include instructions about what should be indicated on the Drawings.

Complementary functions are served by the Drawings and Specifications. Understanding which kind of information each should contain and how they should interrelate is essential. The following general rules are recommended for location of information on Drawings and in Specifications:

- I. Drawings should contain information that is more clearly shown graphically. This includes the following:
 - A. Locations.
 - B. Number of units.

- C. Size. Exceptions include dimensions of manufactured products that are used repetitively -- these are better described in the Specifications.
 - D. Shape or configuration.
 - E. Interrelationships between components and systems.
 - F. Names of products coordinated with the names used in the Specifications to identify products generically as opposed to using of proprietary product names. As little qualitative information as possible should be conveyed by names -- let the Specifications handle that.
- II. Specifications should contain information more easily presented in words This includes the following:
- A. Quality required.
 - B. Procedures to be used.
 - C. Definitions of terms.

Tables and schedules may be located either on the Drawings or in the Specifications. The choice is usually related to the table or schedule size, but it is also useful to consider what is traditional practice, .e., here the contractor will expect to find them. MASTERSPEC avoids using words "as shown on the Drawings" to enable this flexibility, but does use "as indicated" if the information may be either on the Drawings or in separate schedules.

Although the AIA General Conditions of the Contract for Construction state that the Drawings and Specifications are complementary, i.e., they have equal weight, bidders often overlook products that are not at least mentioned on the Drawings. Building officials often require certain information to be placed on the Drawings despite the fact that it is better specified than drawn.

Frequently Asked Questions

- What is included with MASTERSPEC?
A CD-ROM containing the MASTERSPEC specification sections and MASTERWORKS software for your word processor, The *MASTERSPEC User's Guide*, and the *MASTERWORKS User's Guide*. Reference binders with hard copy versions of the MASTERSPEC specifications, including all supporting documents, may be ordered separately.
- Are the specification sections ready for use on any project?
MASTERSPEC specifications are master specifications. Each section must be edited to be specific for each project. Selections must be made from alternative and optional text and additional project-specific text must be added. Selection of manufacturers and products must be made and additional manufacturers inserted, where applicable.
- What computer skills are required to use MASTERSPEC?
A working knowledge of Microsoft Windows 3.x, 9x, NT 4.0 or Windows 2000 including File Manager or Windows Explorer. You should know how to create folders, copy files, and delete files. You must be familiar with one of the supported

word processors, including editing tools and automatic paragraph-numbering methods, especially multilevel paragraph numbering for Microsoft Word.

- Do I need to install the specification sections on my computer?

A MASTERSPEC specification sections are provided in specific word processing formats. Each section is ready to use with your word processor. We recommend that you create a master directory on your computer hard-disk drive and copy all sections to that directory. You use the MASTERSPEC sections text to create project specifications or office masters. For each project, create a project directory, then copy sections from the master directory to the project directory for editing.

- Are MASTERSPEC specifications available for all word processors?

MASTERSPEC specifications and MASTERWORKS software are available for the most recent versions of Microsoft Word and, WordPerfect for Windows, and the Macintosh. MASTERSPEC versions are available for older versions of Microsoft Word and WordPerfect, but you will not have access to the additional capability of MASTERWORKS.

4

Chapter 4 MASTERSPEC⁷ OUTLINE Specifications

Introduction

OUTLINE Specifications are designed to help you produce complete, accurate, and professional outline specifications with minimal time and effort. Each section of OUTLINE is based on the Full Length and Short Form MASTERSPEC section of the same number and title. OUTLINE is a concise master guide specification set that directly corresponds in content and terminology to requirements that are appropriate for outline specifications. MASTERWORKSTM software is included for use with your word processor to simplify many editing and formatting tasks. You can produce specifications in several formats including project manuals, sheet specifications, and drawing notes.

Full Length and Short Form MASTERSPEC libraries are available from ARCOM to help you produce project specifications for construction projects of any size, complexity, or duration. OUTLINE specification sections could be produced by significant editing of the text in Full Length MASTERSPEC sections, but the effort would be time consuming. OUTLINE Specifications provide an appropriate guide to produce project outline specifications.

Appropriate Use

Outline specifications are typically produced during the design development stage of a project. They are required by AIA Document B141, the agreement between the Owner and the Architect, along with drawings and other documents to "identify major materials and systems and establish in general their quality levels." Outline specifications are not for bidding, negotiation, or construction.

CSI's *Manual of Practice*, Chapter FF/180, "Preliminary Project Descriptions and Outline Specifications," includes the following purposes for preparing an outline specification:

- Provide a basis to produce or revise cost estimates, time schedules, and value-engineering studies.
- Record product decisions early in the documentation process, and provide a checklist for the project team when selecting products and methods during development of the Project Manual.
- Provide a means of communication among members of the project design team and between the team and the Owner.
- Help control the decision-making process and encourage clarity in the construction documents.
- Reduce the potential for design changes at later stages and the consequent inefficient use of design team time.
- Coordinate terminology in the construction documents.
- Assist owners in understanding proposed materials and systems.

OUTLINE helps you create project specifications that meet all of the above criteria.

Format, Section Numbering, and Naming Convention

OUTLINE sections are written in brief, concise statements. They are in paragraph-numbered format and automatically renumber during editing. Sections follow CSI's recommended outline specification format. They are not in three-part format and do not include part titles. Each section is numbered and titled to match the corresponding Full Length MASTERSPEC section. The date on the right side of the header is the issue date of the OUTLINE as well as the corresponding Full Length MASTERSPEC section.

Each OUTLINE A/S/C section follows the order and uses the same terminology as the corresponding Full Length and Short Form MASTERSPEC section. This makes editing of the final project specifications based on Full Length or Short Form MASTERSPEC much easier. The table of contents lists the issue date, section number, and section title. OUTLINE A/S/C sections include Divisions 1 through 14 with sections for architectural, structural, and civil work, and selected sections from Divisions 15 and 16 for mechanical and electrical work.

There are a few sections in Full Length and Short Form MASTERSPEC A/S/C that are not in OUTLINE A/S/C. Some A/S/C sections are Evaluations only and no section text is available for inclusion in OUTLINE A/S/C. These Evaluations sections include the following:

- 01000 – General Requirements
- 02455 – Driven Piles
- 07510 – Built-up Bituminous Roofing
- 07530 – Elastomeric Membrane Roofing
- 07550 – Modified Bituminous Membrane Roofing
- 08460 – Automatic Entrance Doors
- 08515 – Aluminum and Wood Windows
- 08631 – Translucent-Insulating-Panel Skylights
- 08710 – Door Hardware
- 09400 – Terrazzo
- 09910 – Painting
- 09920 – Interior Painting
- 10615 – Demountable Partitions

Each OUTLINE M/E section follows the order and uses the same terminology as the corresponding Full Length and Short Form MASTERSPEC section. This makes editing of the final project specifications based on Full Length and Short Form MASTERSPEC much easier. The table of contents lists the issue date, section number, and section title. OUTLINE M/E sections include Divisions 1, selected sections from Division 2, 3, 5, 6, 7, 8, 9, 10, 13 and Divisions 15 and 16.

There are a few sections in Full Length and Short Form MASTERSPEC M/E that are not in OUTLINE M/E. Some M/E sections are Evaluations only and no section text is available for inclusion in OUTLINE M/E. These Evaluations sections include the following:

- 01000 – General Requirements
- 09910 – Painting
- 13920 – Fire Pumps
- 15510 – Heating Boilers and Accessories
- 15540 – Fuel-Fired Heaters
- 15560 – Fuel-Fired H&V Units
- 15830 – Fans

Location of Specification Files on CD-ROM

OUTLINE specifications for supported word processors and MASTERWORKS software are available on CD-ROM. Specification sections are in the *Outline\Word* and *Outline\Wp* folders for the following word processors:

- Microsoft Word 6/7/95
- Microsoft Word 97/2000
- WordPerfect 6/7/8/9

Getting Started

If sufficient hard-disk space is available on your personal computer or network file server, create an OUTLINE master directory. Copy all OUTLINE files from the distribution CD-ROM to the OUTLINE master directory.

To start an outline project specification, select the appropriate sections from the table of contents, create a project directory, and copy the selected files from the master directory to the project directory for editing. **Do not** edit the specification files in the master directory unless they are used as office masters. Edit only the files in each project directory.

Editing Assistance Features

Alternative and Optional Text (Options)

Sections include alternative text and optional text (options). Alternative text includes articles, paragraphs, and subparagraphs. You keep alternative text specific to each project. You delete all text not specific to each project.

Options include words and phrases enclosed in square brackets ([]) and in **bold** for easy identification. In some cases, only one option from those shown should be selected. In other cases, you may select one or more options. When deleting options, the bracket pair and the bold text are removed. When selecting an option, the bracket pair and bold are removed, leaving only the text. MASTERWORKS software is included to help you select options, remove bracket pairs and bold text, delete options entirely, and insert additional options. See Chapter 3 – Single File Features in the *MASTERWORKS User's Guide*, for instructions on the automated selection of optional text.

Editor's Notes

Editor's notes are included where the selection or editing of alternative text is required. In hard copy, they are in shaded boxes. In word processor files, they are in hidden text, in blue color, do not have paragraph numbers, start at the left margin, and end at the right margin. Since editor's notes are in hidden text, they will not print unless hidden text is turned on. The appearance of editor's notes on-screen and in hard copy may be customized with MASTERWORKS.

Insert Notes (Notes)

Sections include insert notes (notes), which are phrases enclosed in angle brackets (< >) and in bold for easy identification. The phrases prompt you to fill in the appropriate information and may offer an example. In some cases, notes are included after options to prompt you to enter a custom requirement. For each project, notes are replaced with text, deleted, or kept for later editing. MASTERWORKS Multi File Features help you replace notes with text, remove bracket pairs and bold text, delete notes entirely, and insert additional notes.

Project Notes

A project notes style is included in OUTLINE sections. This style lets you insert project specific notes to any member of the design team. Project notes are the equivalent of yellow self-stick notes. They are in hidden text and may be converted to editor's notes by selecting the "Keep" option in MASTERWORKS Single File Features.

MASTERSPEC specification sections do not include project notes. With MASTERWORKS you can add project specific notes, reminders, and comments to other members of the design team.

Units of Measure

Sections include both inch-pound (IP) and SI (metric) units. You may select either unit or both units. No editing is required if both units remain unless you want to change the appearance order with the help of MASTERWORKS. When selecting IP units with MASTERWORKS, the program deletes the IP and SI enclosing style codes, the SI parentheses, and SI text, leaving only the IP units. If you select SI units only, MASTERWORKS deletes the IP and SI enclosing style codes, the IP text, and the parentheses around the SI unit, leaving only the SI text. See *MASTERWORKS User's Guide*, "Multi File Features," for instructions on the automated selection of units of measure.

Recommended Editing Sequence

OUTLINE Specifications may be edited in any sequence. MASTERWORKS will help with many editing, formatting, and production functions. A typical sequence may include the following:

Select project sections and copy the files from the master directory to a project directory for editing.

Use MASTERWORKS on each section in the project directory to:

- Review editor's notes.
- Select from alternative text and delete inapplicable article titles, paragraphs, and subparagraphs.
 - Caution:** If a paragraph is deleted that is followed by subparagraphs, the subparagraphs can be incorrectly subordinate to the preceding paragraph. Those "hanging" subparagraphs should also be deleted.
- Select optional text and delete inapplicable options.
- Replace insert notes with text and insert other project specific text.
 - Insert manufacturer names, product names, and descriptions where prompted by an insert note, unless a nonproprietary specification is required.
 - If a proprietary specification is needed, delete unnecessary descriptive requirements.
 - Select units of measure.

Use MASTERWORKS on all sections in the project directory to:

- Produce consistent headers and footers.
- Select section format.
- Print the sections.
- Produce and print the table of contents.

Project Specification Formats

Although OUTLINE sections follow the recommended CSI outline specification format, several options to format the final documents and condense each section to the shortest appropriate form are provided. MASTERWORKS helps you produce several final formats, including the following:

- Project Manual format (the default) includes the following:

Section number and title
Headers and footers
Part and Article titles
Paragraphs and subparagraphs
End of section titles
Triple spacing of section titles
Double spacing of article titles
and paragraphs
Single spacing of subparagraphs

Copyright 1998 AIA
SECTION 00000 - [SECTION TITLE]
Part 1 –GENERAL
1.1 ARTICLE TITLE
A. Paragraph
Subparagraph
2. Subparagraph
B. Paragraph
1.2 ARTICLE TITLE
A. Paragraph
END OF SECTION 00000
[SECTION TITLE] 00000 - 1

- Sheet Specification format includes the following:

Section number and title
 Article titles
 Paragraphs and subparagraphs
 Double spacing of section titles
 Single spacing of articles, titles, paragraphs, and subparagraphs

SECTION 00000 - [SECTION TITLE]	
1.2	ARTICLE TITLE
	A. Paragraph
Subparagraph	
	2. Subparagraph
	B. Paragraph
1.2	ARTICLE TITLE
	A. Paragraph

- Drawing Notes format includes the following:

Section number and title
 Paragraphs and subparagraphs
 Single Spacing of paragraphs and subparagraphs.

SECTION 00000 - [SECTION TITLE]	
	A. Paragraph
Subparagraph	
	2. Subparagraph
	B. Paragraph
	C. Paragraph

See Chapter 4 - Multi File Features in the *MASTERWORKS User's Guide*, for information about automated formatting of alternative specification formats.

Custom Office Masters

OUTLINE sections can be modified to satisfy personal preferences and office standards. Office masters are produced by an edit that includes the selection, deletion, and addition of alternative and optional text; deletion, replacement, and addition of insert notes; insertion of office standard text, manufacturers, products, editor's notes, and project notes; and modification of headers and footers.

If sufficient hard-disk space is available on a single personal computer or on a network file server, create an office master folder. All OUTLINE section files should be copied from the distribution CD-ROM to the office master folder. These files are edited to create the office master specifications. This office master folder would become the source of sections copied to each project directory for editing.

MASTERWORKS also includes a template for producing new sections. When you open the template, you are prompted for the section number and title. The section number and title will be inserted in the default locations in the section. Then you delete inapplicable sample text and insert your text under the appropriate part and article headings and insert other articles to suit the subject of the section. You may use MASTERWORKS to apply consistent styles to your text so the new section is fully compatible with MASTERWORKS and other OUTLINE sections.

Frequently Asked Questions

- What is included with OUTLINE?

OUTLINE includes this *User's Guide*, a printed copy of the OUTLINE specifications, a CD-ROM containing the specification sections, MASTERWORKS software for your word processor, and the *MASTERWORKS User's Guide*.

- Are the specification sections ready for use on any project?

OUTLINE specifications are master specifications. Each section must be edited to be specific for each project. Selections must be made from alternative and optional text. Names of manufacturers and products must be inserted where applicable.

- What computer skills are required to use OUTLINE?

A working knowledge of Microsoft Windows 3.x, 9.x, Me or NT 4.0, 2000 including File Manager or Windows Explorer. You should know how to create folders, copy files, and delete files. You must be familiar with one of the supported word processors, including editing tools and automatic paragraph numbering methods, especially multilevel paragraph numbering for Microsoft Word.

- Do I need to install the specification sections on my computer?

OUTLINE specification sections are provided in specific word processing formats. Each section is ready to use with your word processor. We recommend that you create a master directory on your computer hard-disk drive and copy all sections to that directory. For each project, create a project directory, then copy sections from the master directory to the project directory for editing.

- Are OUTLINE specifications available for all word processors?

OUTLINE specifications and MASTERWORKS software are available for current versions of Microsoft Word for Windows and the Macintosh and WordPerfect for Windows. Although other word processor versions may work with OUTLINE files, you would not have access to the additional capability of MASTERWORKS.

- Where do I start?

See the "Getting Started" section in this Chapter on page 3-2. Read the instructions for installing MASTERWORKS for your word processor in Chapter 1 of the *MASTERWORKS User's Guide*. Start your word processor, point and click on MASTERWORKS on the menu bar, and let OUTLINE and MASTERWORKS go to work for you.



Appendix Contact Information

Technical Support

The OUTLINE and MASTERWORKS User's Guides and MASTERWORKS on-line help will answer questions about capability and use of the software. You may also contact the ARCOM staff by mail, e-mail, telephone, or fax.

Offices

ARCOM
The Aspen Building
332 East 500 South Street
Salt Lake City, UT 84111B3309
Telephone: (801) 521B9162

ARCOM
King Street Station
225 Reinekers Lane
Alexandria, VA 22314B2875
Telephone: (703) 684B9153

Software and Technical Support by Telephone, Fax, or E-mail

Telephone:	(800) 424B5080
Fax:	(801) 521B9163
E-mail:	support@arcomnet.com

Specification Writer and Information Specialist by Telephone, Fax, or E-mail

Telephone:	(800) 200B6652
Fax:	(703) 684B9182
E-mail:	support@arcomnet.com

Internet and Electronic Mail Addresses

ARCOM Web Site:	www.arcomnet.com
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