

The MSJC Specifications are not written as a guide specification with instructions or recommendations to the specifier. There is a commentary published with the Code and the Specifications, which gives some background information and suggestions on using the standards. A much more comprehensive handbook has been written by The Masonry Society, entitled the *Masonry Designers' Guide Based on Building Code Requirements for Masonry Structures* (ACI 530/ASCE 5/TMS 402) and *Specification for Masonry Structures* (ACI 530.1/ASCE 6/TMS 602). A *Masonry Designers Guide* has been published for each edition of the Code and Specification published. The MSJC Specification also includes a checklist of mandatory items to which the specifier must respond, and a checklist of optional items where methods and materials other than the standard requirements may be specified. Items required in addition to the MSJC Specifications must also be addressed in the project specifications. The MSJC Specifications must be well coordinated with the project specifications (including Division 1 requirements) to avoid overlaps, duplications, conflicts, and omissions.

The Code mandates use of the MSJC Specifications, and at the same time states that the MSJC Specifications do not govern where different provisions are specified. This allows the specifier to alter requirements through the project specifications. While the intent is to permit the project specification to impose more stringent requirements, it is equally possible that less stringent requirements could be specified, and these would take precedence over the MSJC Specifications.

The Masonry Society's *Annotated Guide to Masonry Specifications* is the best resource available for detailed description and discussion of typical masonry specification requirements. It is based on the MSJC Code and Specification and is intended to guide the specifier through the many decisions required in compiling masonry project specifications. The following discussion is intended to provide general guidance on preparing project specifications which must be coordinated with the MSJC Specification. Topics are listed in the order in which they appear in CSI's SectionFormat™.

18.3.1 General

References. The correct title, document number, issuing body, and date of the MSJC Specification should be given in the list of references. The MSJC Specification includes a list of ASTM references, which should be checked for conflicts and omissions. The mandatory checklist then requires that sections, parts, and articles of the MSJC Specifications excluded from the project specs be indicated, and articles at variance with the project specifications be listed. This list will vary for each project.

Quality assurance. The checklists use the term "quality assurance" ambiguously to indicate both construction submittals, inspection, and preconstruction testing. The mandatory checklist asks that the specifier define the submittal reporting and review procedure, which should be the same as requirements outlined in Division 1 of the project specifications. The mandatory checklist also requires that the specifier designate the quality assurance level appropriate to the project (refer to Chapter 17 for a discussion of MSJC Level 1, Level 2, and Level 3 quality assurance). The level of quality assurance designated includes minimum requirements for testing, submittals, and inspection. Check the articles on inspection agency and testing agency services and duties for conflicts with Division 1 requirements.

Loadbearing masonry. The mandatory checklist requires that the specifier designate when grout strength must be verified by test.

18.3.2 Products

Materials. The mandatory checklist contains a number of product-related items. The MSJC Specification lists all of the ASTM clay, concrete, and stone masonry unit and material standards that are applicable to structural masonry systems. The specifier must indicate which units will be used and specify the required grade, type, size, and color as applicable. Mortar and grout ingredients must be specified, including any acceptable admixtures. The type and grade of reinforcement are required by the MSJC Code to be shown on the drawings, and by the MSJC Specifications to be given in the project specs. Wire fabric, if used, must be designated as either smooth or deformed. While the Specification does list ASTM requirements for the materials used for anchors and ties, it does not specify the anchors and ties themselves. The exact types and sizes required for the project, including any proprietary products, must be given in the project specifications.

Although the Code includes design requirements for masonry veneers, only passing reference is made to flashing and weep holes. The MSJC Specifications do not include material or installation requirements for these items, so flashing and weep holes must still be covered in the project specifications. All required accessories, including flashing and weep-hole materials, must be specified, as well as the size and shape of joint fillers, and the size and spacing of pipes and conduits to be furnished and installed by the mason. If prefabricated masonry elements are used, specify any requirements supplemental to ASTM C901, *Standard Specification for Prefabricated Masonry Panels*.

The optional checklist includes requirements to specify if acid cleaners are permitted.

Mixes. Specify grout requirements at variance with the MSJC Specification.

18.3.3 Execution

Preparation. The optional checklist asks the specifier to note when wetting of the masonry units is required to ensure good bond between units and mortar. However, the wording in the Specification itself prescribes these limits correctly as high-suction clay masonry units with initial rates of absorption in excess of 1 g/min/sq in., when tested in accordance with ASTM C67, *Standard Method of Sampling and Testing Brick and Structural Clay Tile*. The specifier should indicate, though, when tests are required, whether suction tests are to be laboratory or field conducted, and the method of wetting to be used when it is determined necessary. Units should not be wetted when the initial rate of absorption is acceptable, nor during winter construction.

Installation. There are several items on the optional checklist that apply to installation of the masonry. The specifier must indicate, first of all, if the pattern of units in the project is anything other than one-half running bond, and if the joints are other than $\frac{3}{8}$ inch. Collar joints $\frac{3}{4}$ in. wide or less are to be solidly filled with mortar unless otherwise required