SECTION **01 60 00** - **PRODUCT REQUIREMENTS**

**Content Requests:**

Revise this Section by deleting and inserting text to meet Project-specific requirements.

1. GENERAL
	* + 1. SUMMARY

Section includes administrative and procedural requirements for selection of products including:

Product delivery, storage, and handling.

Product warranties.

Product selection.

Comparable products.

Hazardous products.

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

* + - 1. DEFINITIONS

Always retain this article. These definitions refer specifically to contents of this Section and are not repeated in Section 01 42 00 "References."

Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.

New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products unless otherwise indicated.

Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

Or Equal Product: Product that is demonstrated and approved through the submittal process to have the qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of named products. Submit named products if not accompanied by the words "or equal."

Retain "Basis-of-Design Product Specification" Paragraph when this specification method appears in Project Specifications. This method has been introduced for Owner approval of substitution requests by providing advanced inclusion of approved additional named manufacturers of comparable products without identification of each potential complying product. Specifier should ensure that named manufacturers' products meet specification requirements.

Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

Retain option in "Evaluating Comparable Products" Subparagraph below based upon intent of Specifications; option enables use of basis-of-design product's published characteristics without detailed inclusion of characteristics in the Section Text.

Evaluating Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the Specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.

* + - * 1. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:

Identification of basis-of-design product or fabrication method to be replaced, including Specification Section number and title, and Drawing numbers and titles.

Data indicating compliance with requirements specified in "Comparable Products" Article.

Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 01 33 00 "Submittal Procedures."

* + - * 1. Substitution: Refer to Section 01 25 00 "Substitution Procedures" for definition and limitations on substitutions.
				2. Safety Data Sheet (SDS): Product manufacturer's standard document complying with OSHA's Hazardous Communications Standard, 29 CFR 1910.1200.
				3. Hazardous Product: A product identified as hazardous in the product manufacturer's Safety Data Sheet.

If a product list is required as Project submittal, consider adding an "Action Submittals" Article and requirements for product list here in Part 1. Product list may require several stages of submittal, as Project progresses and purchasing decisions are made by Contractor.

* + - 1. ACTION SUBMITTALS

Submit within 10 days of Notification of Award and not less than 5 days prior to preconstruction conference.

Products List: List all products intended for use in Project.

Safety Data Sheets: For all products intended for use in Project.

* + - * 1. Before bringing any product into Installation that is not on the approved products list, submit revised product list and Safety Data Sheet and obtain Government approval.
			1. QUALITY ASSURANCE

Compatibility of Options: If Contractor is given option of selecting between 2 or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

Retain "Resolution of Compatibility Disputes between Multiple Contractors" Subparagraph below for Project constructed under multiple contracts. Specification Sections should indicate selection priorities. Below are for unforeseen circumstances only.

Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.

Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is inconspicuous.

Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:

Name of product and manufacturer.

Model and serial number.

Capacity.

Speed.

Ratings.

See individual identification Sections in Divisions 21, 22, 23, and 26 for additional equipment identification requirements.

* + - 1. COORDINATION

Modify or adjust affected work as necessary to integrate work of approved products and approved substitutions.

* + - 1. PRODUCT DELIVERY, STORAGE, AND HANDLING

This article eliminates need to include this information in each Section. Limit use of this article in each Section to unusual requirements.

Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions and Safety Data Sheets.

* + - * 1. Delivery and Handling:

Revise four subparagraphs below to suit Project.

Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.

Storage:

Provide a secure location and enclosure at Project site for storage of materials and equipment.

Store products to allow for inspection and measurement of quantity or counting of units.

Store materials in a manner that will not endanger Project structure.

Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.

Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.

Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.

Protect stored products from damage and liquids from freezing.

Delete subparagraph below if Owner provides own storage facilities.

Provide a secure location and enclosure at Project site for storage of materials and equipment by Government's construction forces. Coordinate location with Government.

* + - 1. PRODUCT WARRANTIES

Warranties specified in other Sections are to be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

Warranty in "Manufacturer's Warranty" Subparagraph below is manufacturer's standard and may have exclusions and limitations that do not suit Project. Check warranties and specify special warranties if manufacturers' warranties are unsuitable.

Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of Government or endorsed by manufacturer to Government.

Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Government and issued in the name of Government or endorsed by manufacturer to Government.

Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.

Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.

See other Sections for specific content requirements and particular requirements for submitting special warranties.

Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures."

Insert specific requirements if a single warranty must cover work by several contractors. Prepare draft of such warranty with advice of Owner's legal counsel and include it at end of this Section.

1. PRODUCTS
	* + 1. PRODUCT SELECTION PROCEDURES

This article defines procedures for product selection. See the Evaluations for a discussion of various specifying methods and a comparison table of terms in MasterSpec with those in the Construction Specifications Institute's "The CSI Project Delivery Practice Guide."

General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

First six subparagraphs below are examples only; revise to suit Project.

Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

Government reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.

Where products are accompanied by the term "as selected," Government will make selection.

Descriptive, performance, and reference standard requirements in Specifications establish salient characteristics of products.

Retain "Or Equal" Subparagraph below only if products are specified by name and the term "or equal" is used; MasterSpec does not follow this practice. As an alternative, consider using "Products" or "Manufacturers" paragraphs where Owner allows naming of available products or manufacturers but does not limit selection to those named and does not consider unnamed products as substitutions, which may require a Change Order or Construction Change Directive.

Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

Submit additional documentation required by Government in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by Government, whose determination is final.

Provision of an unnamed product is not considered a substitution if the product complies with requirements.

Product Selection Procedures:

Retain "Sole Product" or "Sole Manufacturer/Source" Subparagraph below, or both, where a single product or manufacturer is named in individual Sections.

Retain "Limited List of Products" or "Non-Limited List of Products" Subparagraph below, or both, where multiple products are named in individual Sections. Retain one of first two options in first subparagraph if substitutions will be permitted during the Contract period. If retaining third option, note exceptions in individual Specification Sections.

"Non-Limited List of Products" Subparagraph below describes product selection procedure that complies with many public agencies' requirements that define the naming of manufacturers and products in specifications as serving the limited purpose of defining a standard of quality, but not for the purpose of limiting selection to those manufacturers and products named. Approval of manufacturers and products is solely through the submittal process.

Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide 1 of the products listed or an unnamed product that complies with requirements.

Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."

Provision of an unnamed product is not considered a substitution if the product complies with requirements.

Retain "Limited List of Manufacturers" or "Non-Limited List of Manufacturers" Subparagraph below, or both, where multiple manufacturers are named. Retain one of first two options in first subparagraph if substitutions will be permitted during the Contract period. If retaining third option, note exceptions in individual Specification Sections.

"Non-Limited List of Manufacturers" Subparagraph below describes product selection procedure that complies with many public agencies' requirements that define the naming of manufacturers and products in specifications as serving the limited purpose of defining a standard of quality, but not for the purpose of limiting selection to those manufacturers and products named. Approval of manufacturers and products is solely through the submittal process.

Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by 1 of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.

Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."

Provision of products of an unnamed manufacturer is not considered a substitution if the product complies with requirements.

Retain "Basis-of-Design Product" Subparagraph below if a single product is named in individual Specification Sections or is indicated on Drawings as the basis of design, and if a list of manufacturers' names offering comparable products is included.

Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, provide the specified or indicated product or a comparable product that complies with the requirements. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.

Consider adding additional product requirements paragraphs here if applicable to Project; these may include requirements, such as Buy American Act requirements.

Visual Matching Specification: Where Specifications require the phrase "match Government's sample," provide a product that complies with requirements and matches Government's sample. Government's decision will be final on whether a proposed product matches.

If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 01 25 00 "Substitution Procedures" for proposal of product.

* + - * 1. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.

Retain subparagraph below for LEED v4 and LEED v4.1 projects requiring submittals documenting Environmental Product Declarations, Health Product Declarations, and multi-attribute optimization.

Select products for which sustainable design documentation submittals are available from manufacturer.

* + - 1. COMPARABLE PRODUCTS

Conditions for Consideration of Comparable Products: Government will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Government may return requests without action, except to record noncompliance with the following requirements:

Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.

Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.

Evidence that proposed product provides specified warranty.

List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.

Samples, if requested.

Government's Action on Comparable Products Submittal: If necessary, Government will request additional information or documentation for evaluation within 7 days of receipt of a request for a comparable product. Government will notify Contractor of approval or rejection of proposed comparable product within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

Government's Approval of Submittal: Indication of approval in web-based Project management software. See Section 01 33 00 "Submittal Procedures."

Provision of a comparable product is not considered a substitution if the product complies with requirements.

Use product specified if Government does not issue a decision on use of a comparable product request within time allocated.

Retain "Submittal Requirements, Two-Step Process" or "Submittal Requirements, Single-Step Process" Paragraph below based upon office practice. First paragraph describes traditional two-step submittal process for comparable product followed by full submittal. Second paragraph describes single-step submittal process option usable when Project schedule will not be adversely affected by late rejection of submittal.

* + - * 1. Submittal Requirements, Single-Step Process: When acceptable to Government, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by Government of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.
			1. HAZARDOUS PRODUCT REQUIREMENTS

Submit complete list of products and Safety Data Sheets for all products intended for use in the Project.

List Format: Sortable spreadsheet digital file with columns for manufacturer and product name, subcontractor name, supplier name, Specification Section number and name, and hazard classification indicated on Safety Data Sheet.

Safety Data Sheets: Submit 3-ring binder with copy of products list sorted by manufacturer and product name followed by Safety Data Sheets organized alphabetically by manufacturer and product name.

1. EXECUTION (Not Used)

If reference to a special warranty form was added where a single warranty must cover work by several contractors, insert form here and delete "(Not Used)" above.

END OF SECTION