



General Notes to Specifier:

This Specification Section has been prepared to assist design professionals in the preparation of Project or Office Master Specifications. It follows guidelines established by the Construction Specifications Institute, and therefore may be used with most Master Specification systems with minor editing.

Edit carefully to suit Project requirements. Modify as necessary and delete items that are not applicable. Verify that referenced section numbers and titles are correct. Numbers and titles referenced are based on *MasterFormat, 2004 edition*.

This Section assumes the Project Manual will contain complete Division 1 documents, including Sections 01 25 13 Product Substitution Procedures, 01 33 00 – Submittal Procedures, 01 62 00 – Product Options, 01 66 00 – Product Storage and Handling Requirements, 01 7400 – Cleaning and Waste Management, 01 77 00 - Closeout Procedures, and 01 78 00 – Closeout Submittals. Close coordination with Division 1 Sections is required. If the Project Manual does not contain these Sections, additional information should be included under the appropriate articles.

This is an open proprietary specification allowing users the option of approving other manufacturers that comply with the criteria specified herein.

Notes to the specifier are contained in boxes and should be deleted from final copy.

Optional items requiring selection by the specifier are enclosed within brackets, e.g. [35] [40] [45]. Make appropriate selections and delete unused options.

Items requiring additional information are underlined blank spaces, e.g. _____.

Optional paragraphs requiring selection of one of the options are separated by “OR” within a box, e.g.

| |
|----|
| OR |
|----|

Bold face type identifies optional paragraphs and features that may be included or deleted depending on Project requirements. Convert the bold face type to regular type when including these paragraphs or features.

Revise footer to suit Project/Office requirements.

Electronic versions of this specification utilize automatic paragraph numbering. When editing is complete, delete all text on this page, then remove the section break at the top of the next page to remove this page from the document.



**SECTION 08 32 16
MASTER FORMAT™ 2004 EDITION
Moving Glass Wall Systems**

PART 1 – GENERAL

Specifier note: information & data contained in this Guide is accurate as of December 2020. Due to ongoing product updates, data may change over time. Please contact your local Milgard Representative for complete product details. Please visit milgard.com for the latest updates.

1.1 SUMMARY

A. Section Includes:

1. Moving Glass Wall System

B. Related Sections:

Specifier Note: Insert appropriate Section Numbers and Titles below for door flashing and installation sealant.

1. _____ - _____.
2. _____ - _____.
3. _____ - _____.
4. _____ - _____.
5. _____ - _____.

Specifier Note: Include appropriate language below if products specified in this Section are to be bid as alternates, otherwise delete following paragraph.

C. Alternates

1. Reference Section 01 23 00 - Alternates

1.2 SUBMITTALS

A. Reference Section 01 33 00 - Submittal Procedure; submit following items:

1. Product Data: Submit Milgard product data.
2. Shop Drawings: Include door schedule, elevations, sections, details, & multiple-door assembly details. Include head, sill & jamb conditions; operable parts & direction/handing; and special mullion reinforcement details.
3. Samples: Submit selection samples for verification, include the following:
 - 3.1. Exterior Color: Minimum 1x4 color chips on Aluminum substrate with painted or anodized colors: (Specify)
 - 3.2. Glass, showing specified tint color. (Specify)

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- B. Quality Assurance/Control Submittals:
 - 1. Qualifications: Proof of Manufacturer’s qualifications.
 - 2. U-Factor and Structural Rating charts required for NFRC and AAMA labeling requirements.
 - 3. Installation Instructions: AAMA 2400, (“Mounting Flange Installation”) or AAMA 2410 (“Flush Fin Installation”).
- C. Closeout Submittals: Reference Section 01 78 00 – Submit following items:
 - 1. Temporary door labels to identify doors that labels were applied to.
 - 2. Owner’s Manual/Maintenance Instructions.
 - 3. Special Warranties.

1.3 QUALITY ASSURANCE

- A. Overall Standards: Comply with ANSI/AAMA/101/I.S.2, except where noted herein.
- B. Manufacturer Qualifications:
 - 1. Minimum 10 years’ experience in producing aluminum doors.
 - 2. Member AAMA & NFRC.
- C. Regulatory Requirements and Approvals:

| |
|--|
| Specifier Note: Insert local regulatory requirements |
|--|

- D. Certifications for Insulated Glass Units:
 - 1. Insulated glass units are certified to ASTM E2188/E2190 per the Associated Laboratories Incorporated (ALI) guidelines.
- E. AAMA: Doors shall be Gold Label or Silver Label certified with label attached to frame per AAMA requirements.
- F. NFRC: Doors shall be NFRC certified with temporary U-factor label applied to glass and an NFRC tab added to permanent AAMA frame label.

1.4 DELIVERY, STORAGE and HANDLING

- A. General: Reference Section 01 66 00 – Product Storage and Handling Requirements.
- B. Comply with Manufacturer’s/Dealer’s ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in Manufacturer’s standard packaging for protection of product.
- D. Storage & Protection: Store products away from exposure to environmental conditions that may be harmful to materials.
- E. Store materials off ground in an upright position. Provide cover from weather and construction activity.
- F. Follow Manufacturer’s instructions on label applied to units.



1.5 WARRANTY

Specifier Note: Select pertinent “Residential” warranty below for owner occupied single family residential and multi-family residential projects; select “Commercial” warranty for non-owner-occupied condominiums, multi-family and commercial projects.

A. Residential Special Warranty: (Owner Occupied Single Family Residential)

1. Lifetime Limited Warranty to original homeowner.
2. Transferability:
 - a. Warranty is Non-Transferable
 - b. Guarantee doors against defects in materials and workmanship including costs for replacement parts.
3. Submit, for Owner’s acceptance, Manufacturer’s Limited Lifetime Warranty document.

OR

B. Residential Special Warranty: (Owner Occupied Multi-Family Residential)

1. 10 Year Multi-Family Limited Warranty.

OR

C. Commercial Warranty:

1. 10 Year Warranty.
2. Guarantee doors against defects in materials and workmanship including costs for replacement parts.

Part 2 - PRODUCTS

2.1 MANUFACTURER

A. Products supplied by the following manufacturer:

Milgard Manufacturing, Inc.

1010 54th Avenue East

Tacoma, WA 98424

(800)-Milgard (645-4273)

milgard.com

Manufacturer’s Representative:

Specifier Note: Insert name, address and phone numbers of Manufacturer’s Representative below

Name: _____

Telephone: _____

Fax: _____

E-mail: _____

- B. Door Series: Milgard AX550 Series
- C. Substitutions: Reference Section 01 25 13 - Product Substitution Procedures

2.2 MANUFACTURED UNITS

- A. Proprietary Products:
 - 1. AX550 Series Doors
 - 2. Glazing
 - 3. Accessories
 - 4. Substitutions: No substitutions permitted.

2.3 MATERIALS

- A. Aluminum: Comply with requirements of AAMA/WDMA/DMA/CSA 101/I.S.2/A440-05, 6063-T5 temper for strength, corrosion resistance and application of required finish.
- B. Extruded frame member are to be 0.125" in thickness for structural wall
- C. Thermal Struts are to be Polyamide 66 6F25
- D. Weatherstripping:
 - 1. Fin seal polypropylene pile
 - 2. Foam Filled Leaf

Specifier Note: Verify that door flashing material and installation sealant is specified in appropriate sections.

2.4 SYSTEM DESCRIPTION

- A. General Performance Requirements: Products and systems provided must be manufactured, fabricated, and installed to the following performance criteria:
 - 1. Comply with ANSI/AAMA/NWWDA 101/I.S.2, except as noted herein
 - 2. Performance Class: (Specify)
 - 3. Performance Grade: (Specify)
 - 4. U-Factor (NFRC 100): (Specify)
 - 5. SHGC – Solar Heat Gain Coefficient (NFRC 200): (Specify)
 - 6. OITC – Outdoor-Indoor Transmission Class (ASTM E90): (Specify)
 - 7. STC – Sound Transmission Class (ASTM E90): (Specify)
- B. Structural Requirements: Products and systems provided must be capable of withstanding wind loads based on testing units representative of those indicated for Project that pass AAMA/NWWDA 101/I.S.2/NAFS, Uniform Structural Load Test:
 - 1. Design Wind Loads: Determine design wind loads, according to ASCE, Section 6, applicable to Product from basic wind speeds (MPH) at 33 feet above grade, based upon mean roof heights indicated on Elevations/Drawings
 - a. Basic Wind Speed: (Specify)

- b. Importance Factor: (Specify)
- c. Exposure Category: (Specify)
- d. Wind Load Requirement: (Specify)

2.5 DOOR TYPES

Specifier Note: Select from the following door types based on project requirements. Please note related Nail Fin and Insert door styles. Delete door types not used.

- A. Multi-Slide Stacking Door – [11600 Series, Low Sill] [11601 Series, High Sill]:
 - 1. Frame: 5-3/4" minimum depth. Multi-Track Aluminum profile.
 - 2. Panel: 2-1/4", Aluminum with Polyamide 66 Strut.
 - 3. Sill (Specify):
 - a. 5-3/4" minimum depth with 1-3/4" mid-height sill Multi-Track Aluminum
 - b. 5-3/4" minimum depth with 3/4" low-height sill Multi-Track Aluminum
 - 4. Hardware:
 - a. Handle and lock (Specify):
 - 1. Interior and exterior pull with turn knob multi-point lock.
 - 2. Interior and exterior flush pull with up/down multi-point lock.
 - b. Rollers (Specify):
 - 1. Dual stainless steel, 1-3/16" diameter.
 - 2. Quad stainless steel, 1-3/16" diameter.
 - c. Raised monorail stainless steel track.
 - 5. Weatherstripping: Fin seal polypropylene pile.
- B. Multi-Slide Pocketing Door – [11610 Series, Low Sill] [11611 Series, High Sill]:
 - 1. Frame: 5-3/4" minimum depth. Multi-Track Aluminum profile.
 - 2. Panel: 2-1/4", Aluminum with Polypropylene Strut.
 - 3. Sill (Specify):
 - a. 5-3/4" minimum depth with 1-3/4" mid-height sill Multi-Track Aluminum
 - b. 5-3/4" minimum depth with 3/4" low-height sill Multi-Track Aluminum
 - 4. Hardware:
 - a. Handle and lock: Interior and exterior flush pull with up/down multi-point lock.
 - b. Rollers (Specify):
 - 1. Dual stainless steel, 1-3/16" diameter.
 - 2. Quad stainless steel, 1-3/16" diameter.
 - c. Raised monorail stainless steel track.
 - 5. Weatherstripping: Fin seal polypropylene pile.

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- C. Bi-Fold Door – [11620 Series, Low Sill] [11621 Series, High Sill]:
1. Frame: 5-7/8" depth. Aluminum profile.
 2. Panel: 2-1/4", Aluminum with Polyamide 66 Strut.
 3. Sill (Specify):
 - a. 5-7/8" depth with 2-1/4" mid-height sill Multi-Track Aluminum
 - b. 5-7/8" depth with 1-1/4" low-height sill Multi-Track Aluminum
 4. Hardware:
 - a. Handle and lock: Interior and exterior lever handle with turn knob, dead bolt and multi-point lock.
 - b. Twin Bolt Handle: Interior handle for shoot bolt operation with 90-degree activation
 - c. Hinges and Carriers:
 1. Centor E3 Carrier System
 5. Weatherstripping: Foam leaf and fin seal polypropylene pile.

2.6 GLAZING

- A. Tempered Insulated Glass Units: ASTM E 774, Class A:
1. Glazing Type: Dual (Specify)
 - a. Cardinal 270 Low-E/Clear
 - b. Cardinal 366 Low-E/Clear
 - c. Cardinal 180 Low-E/Clear
 - d. Clear/Clear
 - e. Clear/4th Surface HP Coating
 - f. Laminated/Clear
 - g. Clear/Laminated
 - h. Cardinal 270 Low-E/4th Surface HP Coating
 - i. Cardinal 366Low-E/4th Surface HP Coating
 - j. Cardinal 180 Low-E/4th Surface HP Coating
 - k. Laminated/Laminated
 - l. Cardinal 270 Low-E/Laminated
 - m. Cardinal 366 Low-E/Laminated
 - n. Cardinal 180 Low-E/Laminated
 2. Glazing Type: Triple (Specify)
 - a. Cardinal 270 Low-E/Clear/4th Surface HP Coating
 - b. Cardinal 270 Low-E/Clear/ Cardinal 270 Low-E
 - c. Cardinal 270 Low-E/Clear/Cardinal 180 Low-E

Specifier Note: Most common types of insulated units are included above, but other types may be available for special applications. If more than one type of glazing is required for the Project, be certain that type for each door is clearly noted on drawings or in door schedule.

3. Overall IG Unit Thickness (Specify):
 - a. Dual Glazed 1"
 - b. Triple Glazed 1-1/4"

Specifier Note: Warm edge spacers are not available on some units, including certain oversize units.

4. Spacer Type:
 - a. Cardinal Endure
5. Gas Filled: (Specify)
 - a. Air, Argon, Other
6. Glass Thickness: (Specify)
 - a. Per Manufacturer's Specifications
 - b. Special: Per Manufacturer's Approval
 1. 5/32" 3/16", 1/4", 7/32" Laminate, Other

2.7 INSECT SCREENS: Provide tight fitting screen (with hardware) for operating doors

- A. Retractable Screen (Multi-Slide Stacking and Multi-Slide Pocket only)
 1. Brio 612 Retractable Pleated Insect Screen.

2.8 FABRICATION

- A. Fabricate frames and panels with straight joinery with proprietary corner joinery system.
- B. Factory exterior glaze with snap in glazing bead and wedge gasket. Insulated glass units shall be reglazable without dismantling sash framing.

2.9 FINISH

- A. Frame and Sash Color: (Specify)
 1. Interior/Exterior (must be same color):
 - a. Paint: AAMA 2605 [White] [Tan]
 - b. Anodized: Class I [Dark Bronze] [Clear]
- B. Grids Between Glass (GBG) Muntin's:
 1. Single Color – [White] [Tan] [Bronze Anodized] [Clear Anodized]
- C. Hardware:
 1. Interior/Exterior (will be same finish): [Black] [Satin Nickel]
- D. Screen Frame Color:
 1. Powder Coated Black

2.10 SOURCE QUALITY CONTROL:

- A. Inspect doors in accordance with Manufacturer's Quality Control Program as required by AAMA Gold Label Certification.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine openings in which doors will be installed.
 - 1. Verify that framing complies with AAMA 2400 (Mounting Flange Installation) & AAMA 2410 (Flush Fin Installation).
 - 2. Verify that fasteners in framed walls are fully driven and will not interfere with door installation.
- B. Coordinate with responsible entity to correct unsatisfactory conditions.
- C. Commencement of work by installer is acceptance of substrate conditions.

3.2 INSTALLATION

Specifier Note: Installation Instructions (AAMA 2400/2410) are adequate for normal installation conditions in framed construction. Masonry walls and unusual conditions may require additional information in this article.

- A. Install doors in framed walls in accordance with AAMA 2400 (“Mounting Flange Installation”) and/or AAMA 2410 (“Flush Fin Installation”).
- B. Do not remove temporary labels.
- C. Install insect screens on operable doors.
 - 1. Hold Screens: [Please coordinate with local supplier.]

3.3 CLEANING AND FINISHING

- A. Reference Section 01 74 00 – Cleaning and Waste Management.
- B. Remove temporary labels and retain for Closeout Submittals.
- C. Clean soiled painted surfaces and glass using a mild detergent and warm water solution with soft, clean cloths.

END OF SECTION

Issue Date: March 1, 2021.