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This MANU-SPEC™ utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets (); delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies custom storm windows for exterior or interior application, manufactured by Allied Window, Inc. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 08580
SPECIAL FUNCTION WINDOWS
(CUSTOM ALUMINUM STORM WINDOWS)

PART 1 GENERAL

1.01 SUMMARY

Specifier Note: Revise paragraphs below to suit project requirements.

- A. Section Includes: Custom storm windows for exterior or interior application.
- B. Related Sections:
 - 1. Joint Sealers: Division 7 Joint Sealers Sections.
 - 2. Glass and Glazing: Division 7 Glass and Glazing Section.

1.02 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA™ product sheet, for specified products and installation instructions.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
 - 1. Indicate the following: Components complete with dimensions, material and details of anchoring and fastening; finishes, sealants and other information indicating compliance with specifications; window manufacturer's glazing instructions; and recorded field measurements on final drawings.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
 - 1. Components: Submit samples of anchors, fasteners, hardware, assembled corner sections and other materials and components if requested by architect.
 - a. Finish: Submit color samples, for approval by architect, which represent the allowable range of finish established from production material specified.



- E. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Warranty: Warranty documents specified herein.

1.03 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
1. Store inside, if possible, in a clean, well-drained area free of dust and corrosive fumes.
 2. Stack vertically or on edge so that water cannot accumulate on or within materials. Use nonstaining wood or plastic shims between components to provide water drainage and air circulation.
 3. Cover materials with tarpaulins or plastic hung on frames to provide air circulation.
 4. Keep water away from stored assemblies.

1.04 PROJECT CONDITIONS

- A. Existing Conditions: (Specify existing conditions affecting product use and installation.)

Specifier Note: Edit paragraph below. Determine head/jamb/sill details to facilitate optimum installation method. Measure exterior units to 1/8" (3.2 mm) and indicate if diagonal difference is over 3/8" (9.8 mm). Measure interior units to 1/8" (3.2 mm) and indicate if diagonal difference is over 1/4" (6.4 mm).

- B. Field Measurements: Verify actual measurements and openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

1.05 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
1. Window System: Window manufacturer shall provide written warranty against defects in materials and workmanship for a period of 5 years from the date of Substantial Completion.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 STORM WINDOWS

Specifier Note: Allied Window, Inc., custom designs, engineers and crafts unique storm windows that are nearly invisible and are suitable for application in a variety of projects, including historic restorations, office buildings, industrial plants, residences, schools and hospitals. Styles are available for both interior and exterior applications. Matching colors, custom shapes and special glazing

are routine. Custom screens are also offered. These secondary glazing units provide the traditional benefits of storm windows, such as energy savings, elimination of drafts and condensation problems, reduction of outside noise, UV light protection and reduced window maintenance. Units are custom designed to adapt to existing window openings.

A. Manufacturer: Allied Window, Inc.

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

1. Contact: 11111 Canal Road, Cincinnati, OH 45241; Telephone: (800) 445-5411, (513) 559-1212; Fax: (513) 559-1883; E-mail: info@alliedwindow.com; website: www.alliedwindow.com.

Specifier Note: Edit paragraph below to suit project requirements.

B. Proprietary Product(s): Custom storm windows, including the following:

1. Historic One Lite (HOL) installs on exterior.
2. Historic One Lite - Operating (HOL-OP) installs on exterior.
3. Allied One Lite (AOL) installs on exterior or interior.
4. Magnetic One Lite (MOL) installs on interior.
5. Magnetic One Lite - Operating (MOL-OP) installs on interior.
6. Monumental Magnetic One Lite (MMOL) installs on interior.
7. Slide-A-Way (SAW) installs on interior.
8. Bank One Lite (BOL) installs on interior or exterior.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

Specifier Note: Allied Window has standard products, but is dedicated to adapting to field conditions and the needs of any commercial or residential project. Modified products, combinations of products and special products are routine custom solutions. The goal is to achieve a balance of energy savings, aesthetics, cost, function and low maintenance. The use of commercial weight aluminum extrusions facilitates large panels and large openings. "Invisible" storm windows are achieved through narrow sightlines and matching the lines of existing windows. All products provide up to 50% energy savings and significant sound reduction characteristics. Exterior units can be utilized for protective glazing. Interior units can provide up to 99% UV protection. Between-glass mini-blinds, with remote control, are available for all interior magnetic units.

2.03 STANDARD PRODUCTS

Specifier Note: Edit paragraphs below to suit project. The Historic One Lite (HOL) is an exterior unit with panels that remove directly to the interior, so there is no hardware on the exterior. Accordingly, the top sash of existing double-hung units needs to be operable. Interchangeable heavy duty screens are available. The HOL-A is utilized for inswing casements and the HOL-B is typically used for double-hung prime windows.

A. Historic One Lite (HOL):

1. HOL-A Masterframe with single removable panel.
2. HOL-B Masterframe with top fixed and removable panel at bottom.
3. HOL-C Masterframe with top and bottom panels removable.

Specifier Note: Edit paragraphs below to suit project. The Historic One-Lite Operating (HOL-OP) is an exterior unit with a fixed



upper lite and an operable bottom lite with exterior 1/2-screen. The glass/screen assembly is removable from the interior, so there is no hardware on the exterior. Accordingly, the top sash of existing double-hung units needs to be operable. A 1/2" (12.7 mm) build-out is provided to ensure adequate spacing for the operable panel.

B. Historic One Lite-Operating (HOL-OP):

1. HOL-OP Masterframe with top fixed and operable/removable bottom glass/screen assembly.

Specifier Note: Edit paragraphs below to suit project. The Allied One Lite (AOL) can be used on the interior or exterior. Removal of panels is achieved by the use of visible swivel clips or "invisible" cam clips and/or lift-out channels. The AOL is utilized for fixed sash and/or very large openings. The AOL-C-BIR can be utilized where the top lite of existing double-hung prime windows is inoperable. Interchangeable heavy duty screens are available. The Bank One Lite (BOL) is frequently utilized for eighteenth century structures.

C. Allied One Lite (AOL):

1. AOL-A Masterframe with single removable panel.
2. AOL-C Masterframe with top and bottom removable panels.
3. AOL-C-BIR Masterframe with top panel outside-removable, and bottom panel inside-removable

Specifier Note: Edit paragraphs below to suit project. The Magnetic One Lite (MOL) is for interior applications where the need for ventilation is limited. A tight seal at the jambs is achieved by adjoining permanent magnetic tape to either steel tape or steel channel. The head is secured in a receptor channel, and the sill has flexible sill-seal weatherstripping.

D. Magnetic One Lite (MOL):

1. MOL Single panel that is magnetically applied for easy removal.
2. MOL-ST stacked panels with horizontal mullion that supports top panel. Both panels magnetically applied. Bottom panel can be removed easily for ventilation.

Specifier Note: Edit paragraphs below to suit project. The Magnetic One Lite-Operating (MOL-OP) is for interior applications where the need for ventilation is deemed important. A tight seal at the jambs is achieved by adjoining permanent magnetic tape to either steel tape or steel channel. The head is secured in a receptor channel and the sill has 1/8" (3.2 mm) foam tape. An operating 1/2-screen is available for either interior or (preferably) exterior installation.

E. Magnetic One Lite Operating (MOL-OP):

1. MOL-OP Bottom is operable and top area is fixed. Entire unit removes easily for cleaning or painting.

Specifier Note: Edit paragraphs below to suit project. The Monumental Magnetic One Lite (MMOL) is for interior applications where the pieces of glass are very large and there is no need for ventilation. This model has a heavier frame than the standard MOL and special heavy duty handles at the sill. Glazing is 5/32" or 3/16" (3.9 or 4.8 mm). A tight seal at the jambs is achieved by adjoining permanent magnetic tape to either steel tape or steel channel. The head is secured in a receptor channel and the sill has v-seal weatherstripping.

F. Monumental Magnetic One Lite (MMOL):

1. MMOL Single panel that is magnetically applied, with removal by 2 people.

Specifier Note: Edit paragraphs below to suit project. The Slide-A-Way (SAW) is for interior applications where 2 or more horizontally sliding panels are preferred. Lift-out panels are secured by double-track system on all sides. Screens available. These units work well for large openings where they are used in combination with magnetic (MOL) or Allied One Lite (AOL) units.

G. Slide-A-Way (SAW):

1. SAW-2 Two panel unit with either side active.
2. SAW-3 Three panel unit with either center active or ends active.
3. SOL Single lift-out panel using SAW tracks at head and sill.

Specifier Note: Edit paragraphs below to suit project. The Bank One Lite (BOL) can be used on the interior or exterior. Removal of panel(s) is achieved by lifting the panel up and out of a top and bottom track. The jamb rails are sealed with Schlegel weatherstripping. The height of panels is limited to 36" (914 mm). The BOL is utilized where sightlines are critical, where a non-magnetic unit is required (exterior), or where the interior sill is not deep enough for a magnetic (MDL) unit.

- H. Bank One Lite (BOL):
 - 1. BOL single panel (lift-out) with no masterframe.
 - 2. BOL-C top panel (lift-out) is outside removable. Bottom panel (lift-out) is inside or outside removable; no masterframe.

2.04 MATERIALS

- A. Aluminum: 6063-T5 alloy and temper with minimum ultimate strength of 22,000 psi (152 MPa) and a yield strength of 16,000 psi (110 MPa).
- B. Corner Keys: Extruded aluminum.
- C. Fasteners: Zinc plated, cadmium plated or other noncorrosive metal compatible with aluminum.
- D. Hardware: Nylon or zinc diecast.

Specifier Note: Select glass thickness and type below. Glazing muntins 1 1/4" (3.2 mm) available to divide glass within panels. Contact factory for information on special glazing materials for UV reduction, sound reduction and protective glazing.

- E. Glass:
 - 1. Thickness: (1/8" (3.2 mm)) (5/32" (3.9 mm)) (3/16" (4.8 mm)).
 - 2. Annealed Glass: ASTM C1036.
 - 3. Tempered Glass: ASTM C1043.
 - 4. Low-E Glass: Pyrolytic hard coat.
 - 5. Laminated Glass: PVB Interlayer.

Specifier Note: Select screen material below.

- F. Screen Cloth: 18 x 16 mesh (Charcoal aluminum) (Black aluminum) (Fiberglass) (Bronze wire) (Stainless steel).
- G. Glazing Gaskets: Removable and reusable vinyl glazing gasket manufactured from virgin polyvinyl chloride.
- H. Weatherstripping: Pile type for operating units. Tracks lined with Stan-pro #525-160, with Schlegel #301-2432-500 at meeting rail.

2.05 FABRICATION

- A. Frame Members: Fabricate from extruded aluminum with wall thickness not less than 0.062" (1.6 mm). Miter corners and join with corner keys fabricated from extruded aluminum.
- B. Removable Inserts: Fabricated to be held in place with cam-action clips, to be easily removable and furnished with full bottom rail lift handle.

Specifier Note: Retain below only if operable units are specified.

- C. Operable Sash: Vertically operating sash shall be equipped with heavy duty spring loaded latches, which engage at various sash positions for ventilation and full bottom rail lift handle.

Specifier Note: Paragraph below applies only to HOL, HOL-OP and AOL-C-BIR units.

- D. Sill Expander: H type fabricated from extruded aluminum, with minimum wall thickness of 0.062" (1.6 mm) and minimum web thickness of 0.125" (3.2 mm), modified to permit weepage.

Specifier Note: Paragraph below applies only to MOL, MOL-ST, MOL-OP and MMOL.

- E. Hardware/Magnetic Seal: U-channel head receptor fabricated from extruded aluminum, with minimum wall thickness of 0.046" (1.2 mm), sill weatherstripping is flexible foam sill-seal and a magnetic seal of one of the following:
 - 1. Foam-backed steel tape applied to aluminum U-channel.
 - 2. Foam-backed steel tape applied directly to prime window frame system.
 - 3. Foam-backed steel tape applied to aluminum angle.
 - 4. Steel angle or channel.

2.06 FINISHES

Specifier Note: Select finish and color below to suit project requirements.

- A. Baked Acrylic: In accordance with AAMA 603.6 (White) (Beige) (Black) (Bronze) colors standard, with 15 year warranty.
- B. 2 Part Polyurethane: Match custom color sample provided, with 5 year warranty.
- C. Baked Acrylic: In accordance with AAMA 603.6. Custom color to match color sample provided (limited to large projects).
- D. Mill finish.
- E. Clear Anodic: In accordance with Class 1, AA-M12C22A32.
- F. Colored Anodic: In accordance with Class 1, AA-M12C22A42, bronze color.
- G. Fluoropolymer: 70% Kynar 500 or Hylar 5000 resin coating in accordance with AAMA 2604; color selected by the architect from the manufacturer's range of standard colors limited to large projects).

PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
 - 1. Verify that openings are dimensionally within allowable tolerances, plumb, level, clean, provide a solid anchoring surface and are in accordance with approved shop drawings.
 - 2. Do not install windows until unsatisfactory conditions are corrected.

END OF SECTION