SECTION 085113

ALUMINUM WINDOWS

Display hidden notes to specifier. (Don't know how? [Click Here](http://www.arcat.com/sd/display_hidden_notes.shtml))

\*\* NOTE TO SPECIFIER \*\* Winco Window Company; Aluminum Windows.

This section is based on the products of Winco Window Company, which is located at:

Winco Window Co.

6200 Maple Ave.

St. Louis, MO 63130-3305

Toll Free: 800-525-8089

Tel: 314-725-8088

Fax: 314-725-1419

Email: [Send Message to Winco Window Co.](http://admin.arcat.com/users.pl?action=UserEmail&company=Winco%20Window%20Co.&coid=36570&rep=146&fax=314-725-1419&mf=)

Web: [www.wincowindow.com](http://www.arcat.com/clickthru.pl?loc=www.wincowindow.com&coid=36570)

At Winco, we are committed to creating custom aluminum windows for commercial applications in both new and historic buildings — and everything in between. Working with customers, we develop custom window solutions, and with most of our products engineered and tested in house, we ensure premium performance every time. See why Winco has been a trusted leader in windows for more than 100 years.

In addition to meeting the HC (Heavy Commercial) standard, most Winco windows are also AW (Architectural Window) rated (the most stringent rating given by AAMA).

When you are looking for a window company that really understands your needs, that can deliver windows on your time schedule, to meet your budget, and that isn’t afraid to take a custom approach...then there really is only one choice...Winco, clearly.

Please contact your local sales representative for project specific requirements.

1. GENERAL
	1. SECTION INCLUDES
		1. Human Impact Resistant windows.
	2. RELATED SECTIONS
		1. Section 07900: Joint Sealers.
		2. Section 081316: Aluminum Terrace Doors.
		3. Section 08400: Entrances and Storefronts.
		4. Section 08490: Balanced Entrance Doors.
		5. Section 085653: Wind and Impact Security Windows.
		6. Section 08580: Special Function Windows.
		7. Section 08587: Pressure Resistant Windows.
		8. Section 08590: Window Restoration and Replacement.
		9. Section 08700: Hardware.
		10. Section 08800: Glazing.
	3. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section. Contact your local code officials for assistance and/or Winco for performance testing.

* + 1. AAMA/WDMA/CSA 101/I.S.2/A440 - Voluntary Specification for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
		2. AAMA 701/702 - Combined Voluntary Specifications for Pile Weather strip and Replaceable Fenestration Weather Seals.
		3. AAMA 501.8-14 – Standard Test Methods for Determination of Resistance of Human Impact of Window Systems Intended for us in Psychiatric Applications.
		4. AAMA 907 - Voluntary Specification for Corrosion Resistant Coatings on Carbon Steel Components.
		5. AAMA 910 - Voluntary "Life Cycle" Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
		6. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test/Consumer Products Safety Commission CPSC 16 CFR 1201.
		7. ASTM F1233 - Standard Test Method for Security Glazing Materials and Systems.
		8. LEED: The Leadership in Energy & Environmental Design; U.S. Green Building Council (USGBC).
	1. SUBMITTALS
		1. Submit under provisions of Section 01300.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings:
			1. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
			2. Manufacturer's head, jamb and sill details and section views for each window type specified.
		4. Schedules:
			1. Provide a window schedule indicating the type, size, color, and operation of each unit specified. Coordinate with window mark types found in the Contract Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if a pre-construction meeting is not scheduled.

* + 1. Verification Samples: For each finish product specified, two samples representing actual product, color, and patterns. Samples may be subsequently installed on the project.
		2. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

\*\* NOTE TO SPECIFIER \*\* Retain applicable paragraphs below for projects intended to be LEED-certified. Verify credits required with project LEED coordinator.

* + 1. LEED Submittals: Manufacturer’s Product Data indicating compliance with the following LEED Credits:
			1. Energy and Atmosphere:
				1. EA Credit 1 - Optimize Energy Performance.
				2. EA Credit 2 - Renewable Energy.
			2. Materials and Resources:
				1. MR Credit 4.1 - Recycled Content: 10 percent (post-consumer and 1/2 pre-consumer).
				2. MR Credit 4.2 - Recycled Content: 20 percent (post-consumer and 1/2 pre-consumer).
				3. MR Credit 5.1 – Regional Materials: 10 percent extracted, processed and manufactured regionally.
				4. MR Credit 5.2 – Regional Materials: 20 percent extracted, processed and manufactured regionally.
			3. Indoor Environmental Quality:
				1. EQ Credit 4.1 - Low-Emitting Adhesives and Sealants.
				2. EQ Credit 4.2 - Low-Emitting Paints.
				3. EQ Credit 8.1 - Daylight and Views: Daylight 75 percent of spaces.
				4. EQ Credit 8.2 - Daylight and Views: Views for 90 percent of spaces.
	1. SYSTEM DESCRIPTION
		1. Test Units:
			1. Manufactured units shall conform to AAMA 501.8-14 “Standard Test Method for Determination of Resistance of Human Impact of Window Systems Intended for use in Psychiatric Applications. The units shall sustain impacts of 2,000 ft-lb as described in the test and meet the minimum performance requirements.
	2. QUALITY ASSURANCE
		1. Manufacturer Qualifications: All windows and window hardware specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years’ experience.
		2. Provide engineering calculations to determine the number, type and spacing of fasteners required to withstand the human impact loading stipulated in the above testing requirements.
		3. Code Compliance: Provide windows that comply with regulations of the code bodies having jurisdiction.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship if requested.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Testing for Air and Water as specified
			4. Refinish mock-up area as required to produce acceptable work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation in accordance with manufacturer’s recommendations.
		2. Protect units against damage from the elements, construction activities and other hazards before, during, and after installation.
	2. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
	3. WARRANTY
		1. At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.
1. PRODUCTS

MANUFACTURERS

* + 1. Acceptable Manufacturer: Winco Window Co., 6200 Maple Ave., St. Louis, MO 63130-3305. ASD. Toll Free: 800-525-8089. Tel: 314-725-8088. Fax: 314-725-1419. Web: [www.wincowindow.com](http://www.arcat.com/clickthru.pl?loc=www.wincowindow.com&coid=36570).

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600.
	1. MATERIALS
		1. Aluminum:
			1. Frame: Extruded aluminum, 6063-T6 alloy and temper, tensile strength of 25,000 psi.
			2. Access Panel: Extruded tubular aluminum, 6063-T6 alloy and temper, tensile strength of 25,000 psi.
	2. THERMAL FIXED WINDOWS – WINCO 8800 SERIES
		1. Acceptable Product:
			1. Winco 8800 Series: 4 inch Heavy Commercial Human Impact Window.
		2. Frame: Thermally broken.
			1. Wall Thickness: 0.094 inches (2 mm).
			2. Depth: 2-1/4 inches (57 mm).
			3. Corners: Closely fit and mechanically fastened with screws. Must be sealed using AAMA approved sealants in a multi-step process to provide sealant redundancy.
			4. Leg: Provide equal leg frame.
		3. Access Panel:
			1. Wall Thickness: 0.094 inches (2 mm).
			2. Panel Depth: 2 inches (50 mm).
			3. Corners: Mitered and mechanically fastened with screws. Joinery is sealed with small joint sealant.
		4. Thermal Barrier
			1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For purposes of this specification, as structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.
			2. The thermal barrier shall be thermal struts, consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions.
			3. Poured and de-bridged urethane thermal barriers shall not be permitted.
	3. HARDWARE

\*\* NOTE TO SPECIFIER \*\*Delete paragraphs not required for Project.

* + 1. Locks:
			1. Security activated locks that require special key that cannot be removed when the access panel is in an open position
			2. Multi point locking rods to allow lock and release operation with the security key.
		2. Hinge:
			1. 4-bar casement hinge.
	1. TRIM AND PANS

\*\* NOTE TO SPECIFIER \*\* Insert Winco Series number, trim Part Number or length in spaces provided for required trim and pans. Delete paragraphs below not required for trim and pans.

* + 1. Provide trim and pans as indicated on Drawings.
		2. Sub Frame and Closure Plate.
		3. Sill Starter.
		4. Winco Sills: \_\_\_\_\_ inches (\_\_\_\_\_mm).
		5. Sub-Sill: \_\_\_\_\_ Series.
		6. Sill Extension: \_\_\_\_\_ inches (\_\_\_\_\_mm).
		7. PVC Comp. Channel (Frame Filler): For \_\_\_\_\_ inch (\_\_\_\_\_mm) frame depth.
		8. Strap Anchor.
		9. Snap Cover: Part # \_\_\_\_\_.
		10. Base Clip: Part # \_\_\_\_\_.
		11. Replacement Pan Systems:

\*\* NOTE TO SPECIFIER \*\* Insert Winco trim Part Number in spaces provided. Delete paragraphs below not required.

* + - 1. Pan Head, Jamb and Sill: Part # \_\_\_\_\_.
			2. Pan Head and Jamb: For use with Part # \_\_\_\_\_.
			3. Pan Extender: For use with Part # \_\_\_\_\_.
			4. Pan Sill: For use with Part # \_\_\_\_\_.
			5. Pan Sill: Part # \_\_\_\_\_.
			6. Pan Jamb: Part # \_\_\_\_\_.
			7. Pan Head: Part # \_\_\_\_\_.
			8. Multi-Purpose Pan: Part # \_\_\_\_\_.
	1. BLINDS
		1. Head Rail: 1.085 inch wide by 0.875 inch high by 0.050 inch thick (27 mm by 22 mm by 1.3 mm).
		2. Bottom Rail: 1 inch wide by 0.355 inch high by 0.050inch thick (25 mm by 9 mm by 1.3 mm).
		3. Rail Material: 6063-T5 extruded aluminum alloy and temper with a baked on polyester powder coat finish conforming to AAMA 603.8-1985.
		4. Ladder Cord Locations: Shall not exceed 6 inches (152 mm) from end of the slot or 24 inches (610 mm) apart.
		5. Tilt Control: Tilt control knob shall have slip feature to minimize damage due to over tilting of blind.
		6. Tilt Control: Provide angled tilt control knobs.
		7. Knobs: Provide removable key operated knobs.
		8. Knobs: Provide Low Profile knobs.
		9. Knobs: Provide Thumb turn knobs.
	2. MULLIONS

\*\* NOTE TO SPECIFIER \*\* Retain paragraphs below for mullions or grids. Delete paragraphs not required. Insert Winco Series number, mullion Part Number and window depth in spaces provided.

* + 1. Mullion:

\*\* NOTE TO SPECIFIER \*\* Retain one of the following four paragraphs. Consult Winco for availability of mullions.

* + - 1. Non-Thermal Mullion: Part #\_\_\_\_\_.
			2. Thermal Mullion: Part #\_\_\_\_\_.
		1. Window Depth: \_\_\_\_\_ inches (\_\_\_\_\_ mm).
		2. Winco Window Series: \_\_\_\_\_.
		3. Stack:

\*\* NOTE TO SPECIFIER \*\* Retain one of the following two paragraphs if stacking windows. Delete if no stacking.

* + - 1. Vertical.
			2. Horizontal.
	1. FINISH

\*\* NOTE TO SPECIFIER \*\* Retain one of the following two paragraphs for anodic or paint finish.

* + 1. Anodic Finish: All exposed areas of aluminum windows and components shall receive a two-step finish: clear anodize components, then color coat with electrostatically deposited finish in accordance with Aluminum Association Designation AA-M12-C22-A, color as indicated.

\*\* NOTE TO SPECIFIER \*\* Select color requirement. Delete six of the following seven paragraphs. Insert a custom color where required.

* + - 1. Color: To be selected by the Architect from the manufacturer’s standard colors.
			2. Color: As noted in the Window Schedule.
			3. Color: A41, Class I clear anodized at 0.7 mils or greater in accordance with AAMA 611-98 (WINCO Finish 215 Clear).
			4. Color: A31, Class II clear anodized at 0.4 mils or greater in accordance with AAMA 611-98 (WINCO Finish 110 Champagne).
			5. Color: A44, Class I color anodized at 0.7 mils or greater in accordance with AAMA 611-98 (WINCO Finish 111 Light Bronze, 112 Medium Bronze or 113 Dark Bronze, 115 Black).
		1. Paint Finish: Finish all exposed areas of aluminum windows and components with the following:
			1. 70 percent Kynar in accordance with AA-M12-C42-R1X, AAMA 2605-98
			2. 50 percent Kynar in accordance with AA-M12-C42-R1X, and AAMA 2604-98.

\*\* NOTE TO SPECIFIER \*\* Select color requirement. Delete two of the following three paragraphs. Insert a custom color where required.

* + - 1. Color: To be selected by the Architect from the manufacturer’s standard colors.
			2. Color: As noted in the Window Schedule.
			3. Color: \_\_\_\_\_\_\_\_\_\_\_\_\_.
	1. GLAZING

\*\* NOTE TO SPECIFIER \*\* Retain the following paragraph if glass and glazing will be specified in Division 8 Section, Glazing (recommended). Transfer glass data from this Section to Section 08800 and delete remaining paragraphs below.

* + 1. Refer to Section 08800, Glazing: Glass and installation.

\*\* NOTE TO SPECIFIER \*\* If glass will be specified in this Section, coordinate with Section 08800 and retain the following paragraph and other required paragraphs, below.

* + 1. Refer to Section 08800, Glazing: Glass installation.
		2. Glazing: All units shall be factory glazed with butyl tape, silicone cap bead on the exterior, with glazing vinyl and extruded snap-in aluminum glazing bead on the interior.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs, or delete this paragraph if allowing manufacturer to use the standard glazing technique.

* + - 1. Interior glazed.
			2. Exterior glazed.

\*\* NOTE TO SPECIFIER \*\* Retain one of the following paragraphs for tinted or reflective glass. Insert color, product name and manufacturer of glass. Delete one or both paragraphs, if not required.

* + - 1. Tinted Glass: (Tint Color) \_\_\_\_\_, (Product Name) \_\_\_\_\_ as manufactured by \_\_\_\_\_ with bronze colored spacer.
			2. Reflective Glass: (Color) \_\_\_\_\_, (Product Name) \_\_\_\_\_ as manufactured by \_\_\_\_\_ with bronze colored spacer.

\*\* NOTE TO SPECIFIER \*\* Retain the following paragraph for Series 8800 blind window units. Provide glazing of 1/8 inch (3.2 mm) or 1/4 inch (6.4 mm).

* + 1. Access Panel Glazing: Windows shall be interior glazed; exterior light shall be structurally glazed, and interior light shall be marine glazed ½ inch mar resistant polycarbonate Makrolon AR2 clear or equivalent.

\*\* NOTE TO SPECIFIER \*\* Select glass type. Delete one of the following two paragraphs. If retaining insulating glass, insert glass type and thickness and air space thickness. If retaining monolithic, insert glass type.

* + 1. Glass Type: Insulating.
			1. Exterior Lite: \_\_\_\_inch (\_\_\_\_mm) \_\_\_\_\_\_\_\_.
			2. Air Space: \_\_\_\_\_inch (\_\_\_\_\_mm).
			3. Interior Lite: \_\_\_\_inch (\_\_\_\_mm) \_\_\_\_\_\_\_\_.
		2. Glass Type: Monolithic; \_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if no impact resistant windows.

* + 1. Glass Type: Impact Resistant, as follows:

\*\* NOTE TO SPECIFIER \*\* Retain one of the following eight paragraphs for glazing for Impact Windows. Delete all but one window Series number from the title.

* + - 1. Laminated Glass for Winco 8800 Series Large Missile Impact (LMI) Windows: 1/4 inch heat strengthened outer lite with 0.090 inch Saflex interlayer and 1/4 inch heat strengthened inner lite.
			2. Insulated Glass for Winco 8800 Series Large Missile Impact (LMI) Windows: 1/4 inch heat strengthened outer lite, 1/2 inch air space with laminated inner lite (1/4 inch heat strengthened outer lite with 0.090 inch Saflex interlayer and 1/4 inch heat strengthened inner lite).

\*\* NOTE TO SPECIFIER \*\* Retain one of the following paragraphs for blast resistant glazing beads.

* + 1. Glazing Bead, Dual Glazed: Exterior lite 1/4 inch (6.4 mm) monolithic, interior lite 1/8 inch (3.2 mm) monolithic.
		2. Glazing Bead, Dual Glazed: Exterior lite 1/4 inch (6.4 mm) monolithic, interior lite 5/8 inch (16 mm) insulated.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Final operating adjustment shall be made after glazing work is complete. Operating sash and ventilator shall operate smoothly and shall be weathertight when in locked position
		3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION