

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. 0006	3. EFFECTIVE DATE 09/14/01	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY US ARMY ENGINEER DISTRICT, HONOLULU CORPS OF ENGINEERS, BUILDING S-200 FORT SHAFTER, HAWAII 96858-5440 CONTRACT SPECIALIST: JODY MURAOKA	CODE	7. ADMINISTERED BY (If other than Item 6) CODE		
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)			(X)	9A. AMENDMENT OF SOLICITATION NO. DACA83-01-B-0004
			X	9B. DATED (SEE ITEM 11) 08/06/01
				10A. MODIFICATION OF CONTRACT/ORDER NO.
				10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

<input checked="" type="checkbox"/>	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc). SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor  is not,  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

FY01 BUP Barracks Repair, Buildng 503A, Fort Shafter, Oahu, HI

See Page 2 of 2 Pages

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF SIGNER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		_____ (Signature of Contracting Officer)	

1. CHANGES TO THE SOLICITATION. Attached hereto are new and revised pages to the solicitation. The revision mark "(Am-0006)" is shown on each new and revised page.

a. REVISED PAGES/PROVISIONS/CLAUSES/PARAGRAPHS. The following are revised pages to the solicitation. Changes are indicated in **bold** print. Although the entire section is being re-issued under Am-0006, only the following pages\provisions\clauses\paragraphs changed in this section.

Section 01000

Section 08520, Paragraphs 1.1, 1.2.1, 1.2.2, 1.2.3, 2.1, 2.1.1, 2.1.2, 2.1.3, 2.2, 2.4.1, 2.4.2, 2.4.3, 2.5 and 3.1

2. The bid opening date of September 20, 2001, 2:00 P.M., Hawaiian Standard Time, remains unchanged.

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DIVISION 08 - DOORS & WINDOWS

SECTION 08520

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## SECTION 08520

## ALUMINUM WINDOWS

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

## ALUMINUM ASSOCIATION (AA)

AA DAF-45 (1997) Designation System for Aluminum Finishes

## AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

**AAMA/NWWDA 101/I.S.2 (1997) Voluntary Specification for Aluminum, Vinyl (PVC), and Wood Windows and Glass Doors**

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 167 (1999) Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

ASTM E 283 (1991) Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

ASTM E 330 (1997e1) Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

ASTM E 331 (1996) Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

ASTM E 547 (1996) Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential

## INSECT SCREENING WEAVERS ASSOCIATION (ISWA)

ISWA IWS 089 (1990) Recommended Standards and Specifications for Insect Wire Screening (Wire Fabric)

## IRON AND STEEL SOCIETY (ISS)

ISS S&HRS Manual (1990) Steel Products Manual - Stainless and Heat Resisting Steels

NATIONAL FENESTRATION RATING COUNCIL (NFRC)

NFRC 100 (1997) Procedure for Determining Fenestration Product U-factors

NFRC 200 (1997) Procedure for Determining Fenestration Product Solar Heat Gain Coefficients at Normal Incidence

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 101 (2000) Safety to Life From Fire in Buildings and Structure

SCREEN MANUFACTURERS ASSOCIATION (SMA)

SMA ANSI/SMA 1004 (1987) Aluminum Tubular Frame Screens for Windows

## 1.2 WINDOW PERFORMANCE

Aluminum windows shall meet the following performance requirements. Testing requirements shall be performed by an independent testing laboratory or agency.

### 1.2.1 Structural Performance

Structural test pressures on window units shall be for positive load (inward) and negative load (outward) in accordance with ASTM E 330. After testing, there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms or any other damage which could cause window to be inoperable. **There shall be no permanent deformation of any main frame, sash or ventilator member in excess of the requirements established by AAMA/NWWDA 101/I.S.2 for the window types and classification specified in this section.**

### 1.2.2 Air Infiltration

**Air infiltration shall not exceed the amount established by AAMA/NWWDA 101/I.S.2 for each window type when tested in accordance with ASTM E 283.**

### 1.2.3 Water Penetration

**Water penetration shall not exceed the amount established by AAMA/NWWDA 101/I.S.2 for each window type when tested in accordance with ASTM E 547 and ASTM E 331.**

### 1.2.4 Life Safety Criteria

Windows shall conform to NFPA 101 Life Safety Code when rescue and/or second means of escape are indicated.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When

used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Aluminum Windows  
Insect Screens

Drawings indicating elevations of window, rough-opening dimensions for each type and size of window, full-size sections, thicknesses of metal, fastenings, methods of installation and anchorage, connections with other work, type of wall construction, size and spacing of anchors, method of glazing, types and locations of operating hardware, mullion details, weatherstripping details, screen details including method of attachment, and window schedules showing locations of each window type.

SD-03 Product Data

Aluminum Windows

Manufacturer's descriptive data and catalog cut sheets.

Aluminum Windows

Manufacturer's preprinted installation instructions and cleaning instructions.

SD-04 Samples

Aluminum Windows

Manufacturer's standard color samples of the specified finishes.

SD-06 Test Reports

Aluminum Windows

Reports for each type of aluminum window attesting that identical windows have been tested and meet all performance requirements established under paragraph WINDOW PERFORMANCE.

SD-07 Certificates

Aluminum Windows

Certificates stating that the aluminum windows are AAMA certified conforming to requirements of this section. Labels or markings permanently affixed to the window will be accepted in lieu of certificates. Product ratings determined using NFRC 100 and NFRC 200 shall be authorized for certification and properly labeled by the manufacturer.

1.4 QUALIFICATION

Window manufacturer shall specialize in designing and manufacturing the type of aluminum windows specified in this section, and shall have a minimum of 5 years of documented successful experience. Manufacturer shall

have the facilities capable of meeting contract requirements, single-source responsibility and warranty.

#### 1.5 MOCK-UPS

Before fabrication, full-size mock-up of each type of aluminum window complete with glass and AAMA certification label for structural purposes and quality of hardware operation.

#### 1.6 DELIVERY AND STORAGE

Aluminum windows shall be delivered to project site and stored in accordance with manufacturer's recommendations. Damaged windows shall be replaced with new windows.

#### 1.7 WARRANTY

Manufacturer's standard performance guarantees or warranties that extend beyond a 1 year period shall be provided.

### PART 2 PRODUCTS

#### 2.1 ALUMINUM WINDOW TYPES

Aluminum windows shall consist of complete units including sash, glass, frame, weatherstripping, and hardware. **Windows shall conform to AAMA/NWWDA 101/I.S.2.** Windows shall be single-glazed. Operable windows shall permit cleaning the outside glass from inside the building.

##### 2.1.1 Awning/Hopper/Projected Windows

**Aluminum awning (A), hopper and projected windows shall conform to AAMA/NWWDA 101/I.S.2 TH-AW40 type consisting of hinged ventilators arranged in a single or vertical series within a common frame.** Ventilators shall be operated by a device which shall securely close the ventilator at both jambs without the use of additional manually-controlled locking device equipped with concealed four-bar friction hinges. Operating hardware, except ventilator arms and rotary operators, shall be concealed within frame and sill. Ventilator arms shall be concealed when windows are closed.

##### 2.1.2 Casement Windows

**Aluminum casement (C) windows shall conform to AAMA/NWWDA 101/I.S.2 C-AW40 type with ventilators which swing on side jamb.** Hinges shall be butt (close-up) type. Operators shall be as required for hinge type. Devices shall be provided to secure ventilators tightly in the frame in the closed position.

##### 2.1.3 Fixed Windows

**Aluminum fixed (F) windows shall conform to AAMA/NWWDA 101/I.S.2 F-AW40 type, non-operable glazed frame, complete with provisions for reglazing in the field.**

#### 2.2 WEATHERSTRIPPING

**Weatherstripping for ventilating sections shall be of type designed to meet water penetration and air infiltration requirements specified in this section in accordance with AAMA/NWWDA 101/I.S.2, and shall be manufactured**

**of material compatible with aluminum and resistant to weather.**

Weatherstrips shall be factory-applied and easily replaced in the field. Neoprene or polyvinylchloride weatherstripping are not acceptable where exposed to direct sunlight.

### 2.3 INSECT SCREENS

Insect screens shall be aluminum window manufacturer's standard design, and shall be provided where scheduled on drawings. Insect screens shall be fabricated of roll-formed tubular-shaped aluminum frames conforming to SMA ANSI/SMA 1004 and (18 x 16) aluminum mesh screening conforming with ISWA IWS 089, Type III.

### 2.4 ACCESSORIES

#### 2.4.1 Fasteners

**Fastening devices shall be window manufacturer's standard design made from aluminum, non-magnetic stainless steel, cadmium-plated steel, nickel/chrome-plated steel in compliance with AAMA/NWWDA 101/I.S.2.** Self-tapping sheet metal screws will not be acceptable for material thicker than 1/16 inch.

#### 2.4.2 Hardware

**Hardware shall be as specified for each window type and shall be fabricated of aluminum, stainless steel, cadmium-plated steel, zinc-plated steel or nickel/chrome-plated steel in accordance with requirements established by AAMA/NWWDA 101/I.S.2.**

#### 2.4.3 Window Anchors

**Anchoring devices for installing windows shall be made of aluminum, cadmium-plated steel, stainless steel, or zinc-plated steel conforming to AAMA/NWWDA 101/I.S.2.**

#### 2.4.4 Subframe Receptors

Furnish extruded aluminum subframe receptors.

### 2.5 GLASS AND GLAZING

Aluminum windows shall be designed for inside glazing, field glazing, and for glass types scheduled on drawings and specified in Section 08810 GLASS AND GLAZING. **Units shall be complete with glass and glazing provisions to meet AAMA/NWWDA 101/I.S.2.** Glazing material shall be compatible with aluminum, and shall not require painting.

### 2.6 FINISH

#### 2.6.1 Anodized Aluminum Finish

Exposed surfaces of aluminum windows shall be finished with anodic coating conforming to AA DAF-45: Architectural Class I, AA-M10-C22-A44, color anodic coating, 0.7 mil or thicker. Finish shall be free of scratches and other blemishes.

#### 2.6.2 Color

Color shall be in accordance with Section 09915 COLOR SCHEDULE.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

Aluminum windows shall be installed in accordance with approved shop drawings and manufacturer's published instructions. **Aluminum surfaces in contact with masonry, concrete, wood and dissimilar metals other than stainless steel, zinc, cadmium or small areas of white bronze, shall be protected from direct contact using protective materials recommended by AAMA/NWWDA 101/I.S.2.** The completed window installation shall be watertight in accordance with Section 07900 JOINT SEALING. Glass and glazing shall be installed in accordance with requirements of this section and Section 08810 GLASS AND GLAZING. All fasteners and subframe anchors shall be corrosive resisting material compatible with aluminum or Type 316 stainless steel conforming to ISS S&HRS Manual and ASTM A 167, type and size as specified or otherwise approved for the applicable requirement.

#### 3.2 ADJUSTMENTS AND CLEANING

##### 3.2.1 Hardware Adjustments

Final operating adjustments shall be made after glazing work is complete. Operating sash or ventilators shall operate smoothly and shall be weathertight when in locked position.

##### 3.2.2 Cleaning

Aluminum window finish and glass shall be cleaned on exterior and interior sides in accordance with window manufacturer's recommendations. Alkaline or abrasive agents shall not be used. Precautions shall be taken to avoid scratching or marring window finish and glass surfaces.

-- End of Section --