

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS **“Subject to homes of historical significance”**

- A. Submittals: Product Data
- B. Provide AAMA- or WDMA-certified aluminum windows with an attached label.
- C. **Design and install windows and glass doors that have NFRC ratings that meet or exceed ENERGY STAR U-factor $\leq .55$ and SHGC $\leq .30$.**
- D. **See NSP Green Building Practices Handbook, Section 3.2 Windows, for further requirements.**
- E. **Remove all deteriorated lumber pertaining to the window sill, frame and casing. Replace with materials of the same style, shape and design as closely as possible.**
- F. **Replace all broken, cracked, scratched, or clouded glass.**
- G. **Install or replace all broken or missing window locks, bar lifts, slides and springs.**
- H. **Repair any area affected by window repair to match the surrounding finish.**
- I. **All windows shall have screens.**
- J. **WINDOW GUARDS – Replace existing – Install security guards (burglar bars) on the interior of all windows. The security guards are to be the full size of the window and installed with proper accessories. At least one window in every bedroom needs to have a fire release installed.**

1.2 BASIS FOR REPLACEMENT

- A. **If all windows are not consistent in style the Contractor shall remove and replace the windows necessary to match the greater existing window style, with the requirements set forth in this section.**
- B. **If a window does not create an air tight seal, or is cloudy the Contractor shall remove and replace to match the other existing windows, with the requirements set forth in this section.**

PART 2 - PRODUCTS

2.1 ALUMINUM WINDOWS

- A. Window Types: The following types, as encountered in the field.
1. Awning.
 2. Casement.
 3. Single or Double hung.
 4. Dual action.
 5. Horizontal sliding
 6. Projected.
 7. Fixed.
- B. Performance Requirements: AAMA/WDMA/CSA 101/I.S.2/A440.
1. Performance Class: **R**
 2. Performance Grade: **20**
 3. Condensation-Resistance Factor: **45** per AAMA 1503.
 4. **Thermal Transmittance: Whole-window U-factor not more than 0.55 Btu/sq. ft. x h x deg F at 15-mph wind velocity and winter temperatures per NFRC 100.**
 5. **Solar Heat-Gain Coefficient: Whole-window SHGC not more than 0.30 per NFRC.**
- C. Construction: Provide units with a concealed, thermal break.
- D. Provide push-bar operators for casement and projected windows.
- E. Provide steel ball-bearing sash rollers with nylon tires for sliding windows.
- F. Equip units with charcoal-gray, coated-aluminum mesh insect screens at operable sashes.
- G. Glaze units with clear, low-e coated, sealed insulating glass, complying with Division 08 Section "Glazing."
- H. Finish: Baked-enamel finish, AA-C12C42R1x, complying with AAMA 2603

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set units level, plumb, and true to line, without warp or rack of frames and panels. Provide proper support and anchor securely in place.
- B. Set sill members in bed of sealant or with gaskets, as indicated, to provide weather tight construction.
- C. Adjust operating panels, screens, and hardware to provide a tight fit at contact points and weather stripping for smooth operation and weather tight closure. Lubricate hardware and moving parts.

- D. Clean aluminum surfaces and glass immediately after installing windows. Remove nonpermanent labels from glass surfaces.
- E. Install screens.

3.2 ALTERNATIVE

A. ARCHITECTURAL WINDOW FILM

- 1. If the NSP Construction Manager determines that the existing windows are in good working condition and have years of useful life remaining, then he/she may recommend that the Developer/Contractor install an architectural window film on the inside of the window in lieu of installing new windows that meet the specifications outlined in section 2.1,B above.
- 2. The film shall be equivalent to the following minimum specifications:
 - a. Total Solar Transmittance 34%
 - b. Total Solar Reflectance 23%
 - c. Total Solar Absorbance 43%
 - d. Winter U-Value 1.06
 - e. UV Rejection 99%
 - f. Total Solar Energy Rejected 50%
- 3. Recommended Manufacturer: SunTek Window Films, 345 Beaver Creek Drive, Martinsville, VA 24112. www.suntekfilms.com
 - a. Recommended Product: SymphonyDS – SYDS50 Dual-Reflective

END OF SECTION 085113