SECTION 08 91 19.10

STATIONARY METAL WALL LOUVERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for stationary metal wall louvers and brick vents as indicated on Drawings and as specified herein.

1.02 SUBMITTALS

A. Shop Drawings
   1. Include plans, elevations, sections, details, and attachments to other Work. Show blade profiles, angles, spacing and mullions.

B. Product Data
   1. Catalog cuts, specifications, and installation instructions for louvers indicated, showing conformance with specified properties and performance criteria, and with appropriate AMCA Certified Rating Seals.

C. Samples
   1. Samples for Initial Selection: For units with factory-applied color finishes.
   2. Samples for Verification: For each type of metal finish required.

D. Warranties in accordance with Article 1.06.

1.03 QUALITY ASSURANCE

A. Louvers shall be rated by AMCA (Air Movement and Control Assoc.). Units shall be marked with the required AMCA Certified Ratings Seal.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle products of this Section as recommended by manufacturer to protect from damage.

1.05 WARRANTY

A. Finish shall be fully warranted against chipping, peeling, cracking, crazing, blistering, chalking and fading for a period of 10 years.

PART 2 PRODUCTS

2.01 ALUMINUM LOUVERS

A. Type
   1. Stationary extruded louvers, minimum 4" deep unless indicated otherwise.

B. Properties
   1. Material: 6063T5 aluminum alloy
   2. Frame extrusions: not less than 0.081” thick
   3. Blades: not less than 0.061” thick
   4. Blade profile: Drainable
   5. Free area: not less than 40%.

C. Performance criteria
   1. Wind loads: Louvers shall be designed to withstand the effects of wind loads without permanent deformation of louver components, noise or metal fatigue caused by louver-blade rattle or flutter, or permanent damage to fasteners and anchors. Determine wind loads based on a uniform pressure of 40 lbf/sq.ft. acting inward or outward. For louvers located at a height greater than 60 feet, follow requirements of section 6.5 of ASCE 7-05.
   2. Wind driven rain: Provide louvers complying with requirements specified, as demonstrated by testing according to AMCA 500-L.
      a. Point of beginning water penetration: Not less than 1050 fpm.

b. Air performance: Not more than 0.20 inch w.g. static pressure drop at 1000 fpm free-area velocity.

3. High velocity wind-driven rain: Mechanical louvers, i.e. louvers associated with mechanical equipment shall meet an A rating per AMCA standard 550 for wind driven rain penetration for a 50 MPH wind velocity with a rainfall of eight inches per hour as required by section MC 501.2.2.1 of the 2014 NYC Mechanical Code.
4. Seismic: Louvers, including attachments to other construction, shall be capable of withstanding the effects of earthquake motions determined according to ASCE 7-10, Chapter 13.

D. Fabrication
1. Form frames with mitered or coped members, welded or riveted and soldered joints. Form ends of blades flat against frame jamb and weld, or rivet and solder blades to frame at each end to ensure watertight joints. Reinforce units with concealed plates, angles, tees or other shapes to form rigid unit. Allow for expansion and contraction.
2. Assemble louvers in factory to minimize field splicing and assembly.
3. Maintain equal louver blade spacing to produce uniform appearance.
4. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining material tolerances, and perimeter sealant joints.
5. Provide mullions of type and at spacings indicated, but not more than recommended by manufacturer, or 60” o.c., whichever is less.

E. Finishes
1. The finishes shall be certified as complying fully with requirements of AAMA Specification 2605-11.
a. Finish as indicated on Drawings as follows:
1) Color as selected by Project Architect from manufacturer’s standard colors.
2) Protect exposed factory finished surfaces prior to shipping.
b. 10 year warranty for finish
c. Sills
1) Same material and finish as louvers.

2.02 LOUVER SCREENS

A. General
1. Fabricate removable screen frames of same metal and finish as louvers. Locate screens on inside face of louvers, unless otherwise indicated. Secure screens to louver frames with machine screws at each corner and spaced 12" o.c along frame perimeter.

B. Bird Screens
1. Anodized 0.051 minimum thickness aluminum wire; 1/2" mesh maximum, 1/4" mesh minimum.

2.03 BLOCK AND BRICK VENTS

A. Block/Brick Vents
1. Extruded (6063T5 alloy) or cast aluminum (#319 alloy) masonry size units, minimum 0.125" thick aluminum with 1/4" structural ribs. Provide aluminum insect screening secured to interior face of vent. Provide aluminum duct extending through wall as required to suit condition.

B. Finish: Match finish of louvers - in Par. 2.01.E.

2.04 FASTENERS AND ANCHORS

A. Bolts, Nuts, Lags, Washers, Screws and Anchors
1. Same material as items being installed unless otherwise indicated. Types, gages and lengths to suit unit installation conditions. Aluminum or stainless steel for exterior locations or for items anchored to exterior walls.

2.05 MISCELLANEOUS

A. Provide protection for aluminum against galvanic action wherever dissimilar materials are in contact, by painting the complete contact surfaces of the dissimilar material with 7 to 9 mils of epoxy paint similar to Tnemec Chembuild Series 135 or Series 27 Typoxy. Do not coat paint beyond surface in contact.

B. Isolate the aluminum from concrete and masonry by coating aluminum with 7 to 9 mils of epoxy paint similar to Tnemec Chembuild Series 135 or Series 27 Typoxy. Do not coat paint beyond surface in contact.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates and openings, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

3.03 INSTALLATION

A. Install Work of this Section in accordance with manufacturer's printed instructions, except as shown otherwise on Drawings.

B. Install units plumb, level and in proper alignment with adjacent construction.

C. Form tight joints with exposed connections accurately fit together.

D. Provide concealed anchorages wherever possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to form weathertight connection.

E. Where louvers are in contact with concrete, masonry or dissimilar metal, coat contacting surface with heavy coat of bituminous paint.

3.04 ADJUSTING

A. Restore louvers and vents damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.
   1. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

3.05 CLEANING

A. Clean exposed surfaces of louvers and vents that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
   1. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.

END OF SECTION