SECTION 10200 - LOUVERS & VENTS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Provide & install metal wall louvers and screens exposed to view in finish work, including:
1. Exterior metal louvers.
2. Louvers at locations where HVAC ductwork terminates at exterior walls.
3. Other exposed exterior and interior louvers indicated on Drawings.

B. Extent: Extent of exterior louvers is shown on architectural drawings. Coordinate requirements, quantities and sizes with mechanical drawings. Louvers not shown on architectural drawing, but indicated on mechanical drawings shall be provided & installed as part of work of this section.

C. Related Sections: Section(s) related to this section include:
1. Sealant and Caulking: Division 7 Joint Treatment Section.
2. Dampers and Ductwork: Division 15 Dampers and Ductwork Sections.
3. Grilles and Registers: Division 15 Grilles and Registers Sections.

1.02 REFERENCES

A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified buy issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

B. American Society for Testing and Materials (ASTM):
1. ASTM B209 - Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
2. ASTM B221 - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.

C. Air Movement and Control Association (AMCA):
1. AMCA Standard 500 - Test Method for Louvers, Dampers, and Shutters.
2. AMCA Publication 261 - Directory of Licenses Products, current edition.

D. Sheet Metal and Air Condition Contractors National Association (SMACNA)
1. SMACNA - Architectural Sheet Metal Manual, current edition

E. American Architectural Manufacturer's Association (AAMA):
1. AAMA Standard 605 - Voluntary Specification for High Performance Organic Coating on Architectural Extrusions and Panels.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide louvers, which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage, or failure.

B. Louver Performance: where louvers are indicated to comply with specific performance requirements, provide units whose performance ratings have been determined in compliance with Air Movement and Control Association (AMCA) Standard 500.

1.04 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 sheet for specified products.
1.Performance Certificates: Submit performance certification, if not included in product data

C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
1. Include information necessary for fabrication and installation of louvers. Indicate materials, sizes, thickness, fastenings and profiles.

D. Quality Assurance Submittals: Submit the following:
1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
    a. Submit certified test results from an approved testing laboratory showing that the louvers proposed meet the criteria specified herein.
2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.

1.05 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
1. Deliver, store and handle products to avoid any distortion or damage due to moisture, physical abuse or other cause Louvers shall be free from nicks, scratches and blemishes. Replace defective or damaged materials with new.

1.06 PROJECT CONDITIONS

A. Field Measurements: Verify actual measurements/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.

1.07 WARRANTY

A. Project warranty refers to Conditions of the Contract for project warranty provisions. 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.

PART II PRODUCTS

2.01 WALL LOUVERS

A. Manufacturer: Industrial Louvers Inc. (ILI).
   1. Contact: 511 South 7th Street, Delano, MN 55328; Telephone: (763) 972-2981; Fax: (763) 972-2911.

B. Other Available Manufacturers – subject to compliance with requirements stated within.

2.02 DRAINABLE BLADE LOUVERS

A. ILI Model 458XP:
   1. Extruded aluminum frame and blades shall be designed to collect and drain water to exterior at sill by means of gutters in front edges of blades and of channels in jambs. Frames and blade thickness to be .081" (2.06 mm) extruded aluminum 6063 alloy. Sill and jamb frames shall be continuously welded and caulked to prevent water penetration to interior wall construction. Blades are attached by means of all-welded construction.

   2. Louvers shall bear the AMCA Certified Ratings Seal for both air performance and water penetration. Louvers shall have a minimum of 8.91 sq., ft. (0829 m2) (56 %) free area on 48" x48" (1219 x 1219) louver. Rating shall show a maximum water penetration of .01 oz. at an air flow rate of 1046 FPM. Static Pressure Loss shall be not more than 15 inch of water gauge at an air flow of 914 FPM free area velocity.

2.03 LOUVER ACCESSORIES

A. Exterior Aluminum Sill: Provide sill flashing of same material and finish as louvers where indicated on the drawings.
B. Louver Screens: Provide framed removable screens for exterior louvers.
   1. Screens shall be ½" (12.7 mm) mesh .063 (1.6 mm) flattened expanded aluminum mounted in extruded aluminum rewireable frames.
   2. Locate screens on inside face of louvers.

1. Screen frames shall have welded corners and be secured to the louver frame with machine screws, at each corner and at 12" (304.8 mm) c.o. between.

2.04 MATERIALS

A. Aluminum Sheet: ASTM B209 Alloy 3003 or 5005 with temper as required for forming or as otherwise recommended by metal producer to provide required finish.
B. Aluminum Extrusions: ASTM B221, Alloy 6063.
C. Fastenings: Provide stainless steel screws and fasteners for aluminum louvers and zinc-coated or stainless steel screws and fasteners for steel louvers. Provide other accessories as required for complete and proper installation.

2.05 FABRICATION

A. Fabrication Requirements:
   1. Performance: Fabricate as required for optimum performance with respect to water penetration, strength, durability and uniform appearance.
   2. Size:
      a. Fabricate louvers in masonry walls to outside dimensions indicated, with allowance of ¼" (6.4 mm) on each side for sealant joints.
      b. Verify sizes with final HVAC shop drawings, including detail dimensions of ductwork, dampers or other fittings abutting louvers.
   3. Field Measurements: Verify size, location and placement of louver units prior to fabrication.
   4. Shop Assembly:
      a. Fabricate to minimize field adjustments, splicing, mechanical joints and field assembly of units.
      b. Preassemble units in shop to greatest extent possible and disassemble as necessary for shipping and handling.
      c. Clearly mark units for reassemble and coordinated installation.
   5. Accessories: Include supports, anchorages and accessories required for complete assembly.
   6. Vertical Mullions: Provide vertical mullions of type and spacing indicated but not further apart than recommended by the manufacturer.
   7. Horizontal Mullions: Provide horizontal mullions at horizontal joints between louver units except where continuous vertical assemblies are indicated.
   8. Connections: Join frame and blade members to one another by welding, except where field bolted connections between frame members are made necessary by size of louvers.
   9. Spacing: Maintain equal blade spacing to produce uniform appearance.

1.06 FINISHES (FACTORY)

A. Shop Finishing: Factory finish louvers and accessories with an organic coating.
   1. Organic Coating: Clean and prime exposed aluminum surfaces and apply a Kynar 500/Hylar 5000 2-coat finish conforming to AAMA 605 in a standard color. Minimum dry film thickness shall be 1.2 mil.

B. Finish Protection: Provide finish protection as recommended by louver manufacturer.

PART 3 EXECUTION

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 substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 INSTALLATION Louver Installation:

1. Louvers shall be installed in accordance with manufacturers approved shop drawings and as shown. Provide all necessary fastenings and anchors required to a complete installation. Units to be installed plumb, level and in proper alignment with adjacent work.
2. Form tight joints within work of this Section. Fit exposed connections accurately.
3. Louvers shall be protected from damage from subsequent building operations.
4. Protect metal surfaces from corrosion or galvanic action by application of a heavy coating of bituminous paint on surfaces, which shall be in contact with concrete, masonry or dissimilar metals.