



## **PRODUCT SPECIFICATIONS**

B & B Sheet Metal, 25-40 50<sup>th</sup> Avenue,  
Long Island City, New York 11101  
PHONE: 718-433-2501; FAX: 718-433-2709;  
EMAIL: info@bbsheetmetal.com  
WEBSITE: www.bbsheetmetal.com

## **SECTION 08 91 10 - DECORATIVE SHEET METAL FULL LOUVER DORMERS AND WALL LOUVER VENTS**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Section includes: [Custom fabricated] [Manufactured] decorative sheet metal [wall louvers vents] [and] [full louver dormers] for [sloped roof system] [exterior wall system] [\_\_\_\_\_] [historic restoration of [\_\_\_\_\_] [\_\_\_\_\_].
- B. Related sections:
1. Section [04 20 00 - Unit Masonry] [09 24 00 - Portland Cement Plastering] [\_\_\_\_]: Exterior wall system to receive wall louvers.
  2. Section [07 30 33 - Steep Slope Roofing] [07 41 00 - Metal Roof Panels] [\_\_\_\_]: Roof system to receive dormers.
  3. Section 07 62 00 - Sheet Metal Flashings and Trim: Sheet metal flashings, counter flashings, and trim installed [as part of roof system for flashing roof mounted dormers.] [to seal around perimeter of wall louvers.]
  4. Section 07 92 00 - Joint Sealants: Sealants and backing material used for installation of sheet metal.

#### **1.2 REFERENCES**

- A. American National Standards Institute (ANSI): ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
- B. American Society for Testing and Materials (ASTM):
1. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
  2. Section A308 - Steel Sheet, Terne (Lead-Tin Alloy) Coated by Hot-Dip Process.
  3. ASTM A653 - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
  4. ASTM B32 - Solder Metal.
  5. ASTM B101 - Lead-Coated Copper Sheet and Strip for Building Construction



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6. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
  7. ASTM B370 - Copper Sheet and Strip for Building Construction.
  8. ASTM C1036 - Flat Glass.
  9. ASTM C1048 - Heat Treated Float Glass, Kind HS, Kind FT Coated and Uncoated.
  10. ASTM C1172 - Laminated Architectural Flat Glass.
  11. ASTM E546 - Frost Point of Sealed Insulating Glass Units.
  12. ASTM E576 - Frost Point of Sealed Insulating Glass Units in Vertical Position.
  13. ASTM E773 - Accelerated Weathering for Sealed Insulating Glass Units.
  14. ASTM E774 - Classification of the Durability of Sealed Insulating Glass Units.
- C. CPSC 16 CFR 1201 - Consumer Product Safety Commission Safety Standard for Architectural Glazing Materials.
- D. International Code Council (ICC): ICC IBC - International Building Code.
- E. National Roofing Contractors Association (NRCA): NRCA Roofing Manual.
- F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA) – SMACNA Architectural Sheet Metal Manual.

### **1.3 SUBMITTALS**

- A. Submit in accordance with Section 01 33 00 - Submittal Procedures:
1. Product data.
  2. Shop drawings for decorative sheet metal [wall louvers] [and] [dormers] showing elevations, plans, dimensions, material gauges, fastening methods, and installation details for actual Project conditions. Where appropriate, provide perspective sketches or photographs to illustrate design.
  3. Sample of selected material and finish.
  4. Manufacturer's installation and maintenance instructions.



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### **1.4 QUALITY ASSURANCE**

- A. Manufacturer: Company specializing in manufacturer of sheet metal wall louvers and dormers with 5 years minimum successful, documented experience.
- B. Perform work in accordance with applicable details and requirements published in NRCA Roofing Manual and SMACNA Architectural Sheet Metal Manual.
- C. Comply with safety requirements of following standards. Where discrepancies exist, more stringent requirement shall govern.
  - 1. Consumer Product Safety Commission 16 CFR 1201.
  - 2. ICC IBC.

### **1.5 HANDLING**

- A. Deliver, store, and handle sheet metal fabrications to prevent denting, scratching, breaking, gouging, abrasion, soiling, discoloration, staining, or other damage.

## **PART 2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS**

- A. B & B Sheet Metal, Inc.  
25-40 50th Avenue  
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P: 718-433-2501 F: 718-433-2709  
www.bbsheetmetal.com.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 25 13 - Product Substitution Procedures.

### **2.2 MATERIALS**

- A. Galvanized sheet steel: Zinc-coated steel sheet complying with ASTM A653, [26] [24] gauge thick.
- B. Kynar finished galvanized sheet steel: Zinc-coated steel sheet complying with ASTM A653 in [24] [22] gauge thickness and pre-finished with fluoropolymer Kynar coating in color selected by Architect from manufacturer's full range.]



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- C. Copper sheet: Plain copper sheet complying with ASTM B370 and weighing [16] [20] ounces per square foot.
- D. Pre-patinaed copper sheet: Copper sheet weighing [16] [20] ounces per square foot and complying with ASTM B370 with greenish-brown patina oxidation film; Evergreen Copper as provided by B & B Sheet Metal.
- E. Lead-coated copper: Copper sheet with a thin lead coating complying with ASTM B101 and weighing [16] [20] ounces per square foot.
- F. Zinc-coated copper: Copper sheet with a thin zinc coating complying with ASTM [\_\_\_\_\_] and weighing [16] [20] ounces per square foot; Freedom Gray Copper as provided by B & B Sheet Metal.
- G. Stainless steel: [26] [24] gauge corrosion resistant chromium, tin, and steel alloy complying with ASTM A167.
- H. Terne-coated stainless steel: 26 gauge stainless steel sheet with a hot dipped lead and tin terne coating complying with ASTM A167 and ASTM A308.
- I. Aluminum sheet: [0.032] [0.040] [0.050] [0.063] inch thick aluminum sheet complying with ASTM B209 and [mill finished.] [finished with fluoropolymer Kynar coating in color selected by Architect from manufacturer's full range.]
- J. Glazing:
- [1/4 inch thick, monolithic, clear, laminated safety glass complying with ASTM C1172, ANSI Z97.1, and CPSC 16 CFR.]
- [1/4 inch thick, monolithic, translucent, laminated safety glass fabricated by bonding two glass lites with white translucent interlayment and complying with ASTM C1172, ANSI Z97.1, and CPSC 16 CFR.]
- [1/4 inch thick, monolithic, clear wire glass with square mesh of woven stainless steel wire conforming to ASTM C1036, Type II.]
- [1/4 inch thick, monolithic, clear hammered wire glass with square mesh of woven stainless steel hammered wire conforming to ASTM C1036, Type II.]
- [1/4 inch thick, monolithic, clear, ribbed glass.]
- [1 inch thick, bronze tinted, insulating, fully tempered safety glass complying with ASTM E546, ASTM E576, ASTM E773, and ASTM E774.]



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1. Outer lite: 1/4 inch thick, bronze tinted, fully tempered safety glass heat treated in accordance with ASTM C1048, Kind FT to meet requirements of ANSI Z97.1 and CPSC 16 CFR to qualify as safety glass.
2. Inner lite: 1/4 inch thick, clear, fully tempered safety glass heat treated in accordance with ASTM C1048, Kind FT to meet requirements of ANSI Z97.1 and CPSC 16 CFR to qualify as safety glass.]

[1 inch thick, white translucent, insulating, laminated safety glass complying with ASTM E546, ASTM E576, ASTM E773, and ASTM E774.

1. Outer lite: 1/4 inch thick, translucent, laminated safety glass fabricated by bonding two glass lites with white translucent interlayment and complying with ASTM C1172, ANSI Z97.1, and CPSC 16 CFR.
2. Inner lite: 1/4 inch thick, clear, fully tempered safety glass heat treated in accordance with ASTM C1048, Kind FT to meet requirements of ANSI Z97.1 and CPSC 16 CFR to qualify as safety glass.]

[1 inch thick, low emissivity (low-E), insulating glass complying with ASTM E546, ASTM E576, ASTM E773, and ASTM E774.

1. Outer lite: 1/4 inch thick, fully tempered, low-E glass with neutral coating pyrolytically applied to produce durable surface and resulting in improved thermal performance and reduced solar heat gain complying with ASTM C1048, Kind FT to meet requirements of ANSI Z97.1 and CPSC 16 CFR to qualify as safety glass.
2. Inner lite: 1/4 inch thick, clear, fully tempered safety glass heat treated in accordance with ASTM C1048, Kind FT to meet requirements of ANSI Z97.1 and CPSC 16 CFR to qualify as safety glass.]

K. Sealant: [Silicone] [Polyurethane] [Acrylic] [\_\_\_\_\_] type specified in Section 07  
92 00 - Joint Sealants.

L. Solder: ASTM B32.

### **2.3 WALL LOUVER VENTS**

A. Type: [Manufactured sheet metal fixed blade wall louver vents; [Half Round] [Octagon] [Round Top] [Rectangle] [Triangle] Wall Louver as manufactured by B & B Sheet Metal.] [Sheet metal fixed blade wall louver custom designed in accordance with



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- design,  
shape, and dimensions illustrated on Drawings and reviewed shop drawings and custom fabricated by B & B Sheet Metal.]
- B. Louvers are to replicate existing historic louvers and design, materials, dimensions, fabrication methods, and installation details as shown on reviewed shop drawings shall match existing to the extent possible.
- C. Material: [Galvanized steel sheet] [Kynar finished galvanized steel sheet] [Copper sheet] [Evergreen pre-patinaed copper sheet] [Lead-coated copper sheet] [Freedom Gray zinc-coated copper sheet] [Stainless steel] [Terne-coated stainless steel] [Mill finished aluminum] [Kynar finished aluminum] [weighing [16] [20] ounces per square foot.] [in [22] [24] [26] gauge thickness,] [in [0.032] [0.040] [0.050] [0.063] inch thickness.
- D. Overall size: [[\_\_\_\_\_] inches wide by [\_\_\_\_\_] inches high.] [As dimensioned on Drawings.]
- E. Nominal frame depth: [[\_\_\_\_\_] inches.] [As dimensioned on Drawings.]
- F. Louver blades: [Horizontal] [Vertical], fixed, [Z-shaped] [V-shaped] [L-shaped] [Y-shaped] blades spaced at [[\_\_\_\_\_]inches.] [as dimensioned on Drawings.] [manufacturer's standard spacing as indicated on reviewed shop drawings.] Louver shall provide [50] [\_\_\_\_\_] percent free air flow.
- G. Perimeter frame: Fabricated from formed sheet metal members with mitered and [soldered] [welded] joints. Provide louver [with [\_\_\_\_\_] inches wide flange around perimeter.] [without a perimeter flange.]
- H. Insect screen: Equip louvers with [copper] [brass] [fiberglass] mesh insect screen in frame to match louver shape and attached to interior side of louver.
- I. Provide wall louvers with fasteners, anchors, and other hardware of type, size, and spacing as recommended by manufacturer for secure, rigid installation of louver in rough wall opening.

## **2.4 FULL LOUVER DORMERS**

- A. Type: [Manufactured sheet metal, projecting structure designed for mounting on sloping roof with [fixed glass window] [fixed blade louver ventilation panel]; [Arch Top] [Birdhouse] [Dog House] [Dolphin] [Eyebrow] [F.I.S.H.] [Half Round] [Pyramid] [Round Top] [Triangular] [Triangular Top] as manufactured by B & B Sheet Metal.] [Sheet metal, projecting structure designed for mounting on sloping roof with [fixed glass window] [fixed blade louver ventilation panel] custom designed in accordance with



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design, shape, and dimensions illustrated on Drawings and reviewed shop drawings and custom fabricated by B & B Sheet Metal.]

- B. Dormers are to replicate existing historic dormers and design, materials, dimensions, fabrication methods, and installation details as shown on reviewed shop drawings shall match existing to the extent possible.
- C. Material: [Galvanized steel sheet] [Kynar finished galvanized steel sheet] [Copper sheet] [Evergreen pre-patinaed copper sheet] [Lead-coated copper sheet] [Freedom Gray zinc-coated copper sheet] [Stainless steel] [Terne-coated stainless steel] [Mill finished aluminum] [Kynar finished aluminum] [weighing [16] [20] ounces per square foot.] [in [22] [24] [26] gauge thickness,] [in [0.032] [0.040] [0.050] [0.063] inch thickness.
- D. Fabrication: Fabricate dormers from formed sheet metal with [soldered] [welded] joints [and [fixed glass windows] [ventilating louver panels] as detailed on Drawings].
- E. Window glazing: Provide glass panels of shape and size illustrated on Drawings and reviewed shop drawings with [1/4] [1] inch thick [monolithic, clear, laminated safety glass] [monolithic, translucent white, laminated safety glass] [monolithic, clear wire glass] [monolithic, clear, hammered wire glass] [monolithic, clear, ribbed glass] [bronze tinted, insulating, fully tempered safety glass] [white translucent, insulating, laminated safety glass] [low-E), insulating glass] installed with removable metal stops and sealant.]
- [F. Louvered panels: Provide louvered panels of shape and size illustrated on Drawings and reviewed shop drawings with fixed [Z-shaped] [\_\_\_\_\_] blades and [copper] [brass] [fiberglass] insect screens. Louver shall provide [50] [\_\_\_\_\_] percent free air flow.

### **2.5 [WALL LOUVER] [AND] [DORMER] FABRICATION**

- A. Fabricate sections to profiles and dimensions indicated on Drawings and reviewed shop drawings.
- B. Intersections: Cope to fit accurately and solder.
- C. Edges: Turn back all exposed edges to form 1/2 inch hem.
- D. Permanently secure louver blades to perimeter frame to prevent vibration or noise due to passage of air. Slope blades at [45] [\_\_\_\_\_] degrees.
- E. Shop install screens in [wall louvers] [and] [dormers].
- F. Soldering: Clean and tin materials. Completely fill seams with solder. Soldering on exposed finished surfaces shall be neat, full flowing, and smooth. After soldering,



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remove flux and wipe and wash joints clean.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Coordinate provision of sheet metal [wall louvers] and] [dormers] with type and construction or installation of [exterior walls,] [roof deck and membrane,] [wood blocking and nailers,] [exterior wall finishes,] [\_\_\_\_\_] and other work related to sheet metal.
- B. Prior to submittal of shop drawings and fabrication, field verify required sizes and installation tolerances for sheet metal [wall louvers] [and] [dormers].
- C. Deliver sheet metal [wall louvers] [and] [dormers] to site in time for accurate placement and coordination with other work.
- D. Verify roof membrane terminations and base flashings are in place, sealed, and secure.
- E. Coat dissimilar materials in contact with sheet metal:
  - 1. Concrete and masonry: One coat bituminous paint.
  - 2. Wood: 2 coats aluminum paint.

### **3.2 INSTALLATION**

- A. Install sheet metal [louvers] [and] [dormers] in accordance with Drawings, reviewed shop drawings, manufacturer's instructions and NRCA Roofing Manual and SMACNA Architectural Sheet Metal Manual standards of workmanship.
- B. Do not allow sheet metal to come in contact with dissimilar materials.
- C. Do not install bent, twisted, scratched, or otherwise damaged sheet metal fabrications. Remove from site and replace.
- D. Erect [louvers] [and] [dormers] plumb and level without warp, twist, or distortion.
- E. Louvers: Secure louvers in rough wall opening framing with concealed fasteners and other hardware.



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1. Install sheet metal flashings and trim as detailed on Drawings and reviewed shop drawings to divert moisture to exterior.
  2. Install perimeter sealant and backing rod in perimeter joint around louver in accordance with Section 07 92 00 - Joint Sealants.]
- F. Dormers: Coordinate with construction of roof decking opening and installation of roofing system, wood curbs, blocking, and flashings.
1. Install on wood curbs as detailed on Drawings and reviewed shop drawings.
  2. Anchor dormers securely to roof structure to withstand lateral forces and inward and outward pressures.
- G. Protect finishes of exposed to view sheet metal fabrications. Avoid gouging, scratching, and denting. Use cotton gloves when handling and installing unprotected sheet metal in order to avoid soiling exposed to view surfaces.

### **3.3 CLEANING**

- A. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.
- B. Exercise care in removing mortar, cementitious materials, and sand from sheet metal surfaces. Do not wipe surfaces in order to avoid scratching.
- C. Wash exposed surfaces with solution of mild detergent applied with soft cloth. Wipe surfaces clean.

**END OF SECTION**