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*The representations and warranties of B and B Sheet Metal made in this specification is true and correct as of September 4, 2007. For more up-to date information, or to ensure the correctness of the following information at any given time, please consult with a B and B Sheet Metal employee. Furthermore, all the information contained and specified below is true for stock products and thus any modifications or customizations to any product will change the nature and specifications particular to that product likely making some or all of the information herein inapplicable.*

## **SECTION 08 62 20**

### **SHEET METAL UNIT SKYLIGHTS**

**\*\*\*\*\* B and B Sheet Metal designs and fabricates an extensive line of sheet metal products for the construction industry in modern facilities employing state of the art techniques such as computerized press brakes and waterjet cutting. B and B Sheet Metal's products include flashings, fascia, copings, trim, gutters, leader and conductor heads, scuppers, downspouts, snow guards, finials, spires, cupolas, cornices, roof vents, skylights, louvers, and dormers using a variety of materials such as copper, pre-patinaed copper, lead-coated copper, zinc-coated copper, galvanized steel, stainless steel, terne-coated stainless steel, and aluminum.**

**This guide specification section can be used to specify the various roof mounted, sheet metal framed, glass panel, unit skylights manufactured by B and B Sheet Metal for a competitively bid project including:**

#### **Skylights for sloped roofs:**

**Flat.**

**Flat Vented.**

**Flat Ridge.**

#### **Skylights for flat roofs:**

**Gable.**

**Flat Pitch.**

**Vented Flat Pitch.**

**Hip Ridge.**

**Hip Vent.**

**Louver base skylights.**

**Glazed turret base skylights.**

**Interior and exterior protective screens for skylights.**

**B and B Sheet Metal provides both standard and custom designed sheet metal framed unit skylights and can recreate original skylights for historic preservation and renovation projects. The specifier will need to edit, modify, and expand this section for a specific project. Appropriate options and requirements need to be selected and non-applicable ones deleted. Contact B and B Sheet Metal for assistance in planning, designing, selecting options, and detailing custom installations.**

**The specification section is organized by placing information in three standard parts:**

- PART 1 - GENERAL**            **Describes administrative and procedural requirements.**
- PART 2 - PRODUCTS**       **Describes materials, products, and accessories to be incorporated into the construction project.**
- PART 3 - EXECUTION**       **Describes how the products will be installed at the construction site.**

**Throughout this product guide specification, references are made to other specification sections that might be contained in the project manual. These references are presented as examples and coordination reminders. For each project, these references will need to be revised to reflect actual sections being used.**

**The specifier will need to edit this product specification for a specific project to reflect the options and applications being used. The guide section has been written so that most editing can be accomplished by deleting unnecessary requirements and options. Options are indicated by [ ]. Notes to assist the specifier in selecting options and editing the specification guide are printed in bold and indicated with \*\*\*\*\*. For final editing, all brackets and notes will need to be deleted from the guide.**

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**PART 1 - GENERAL****1.1 SUMMARY**

**\*\*\*\*\* B and B Sheet Metal provides standard designed sheet metal framed unit skylights as well as custom fabrications to accommodate unique project requirements. Edit the following paragraph to reflect specific project requirements. \*\*\*\*\***

- A. Section includes: [Custom fabricated] [Manufactured] sheet metal framed, roof mounted, glass panel, unit skylights [for [\_\_\_\_\_] [historic restoration of [\_\_\_\_\_]].
- B. Related sections:

**\*\*\*\*\* List other specification sections dealing with work directly related to this section such as the following. \*\*\*\*\***

1. Section 06 10 00 - Rough Carpentry: Wood support curbs.
2. Section [07 30 33 - Steep Slope Roofing] [07 41 00 - Metal Roof Panels] [07 50 00 - Membrane Roofing] [\_\_\_\_\_]: Roof system to receive unit skylights.
3. Section 07 62 00 - Sheet Metal Flashings and Trim: Sheet metal flashings, counter flashings, and trim installed as part of roof system to prevent water penetration.
4. Section 07 92 00 - Joint Sealants: Sealants and backing material used for installation of sheet metal skylights.

**1.2 REFERENCES**

**\*\*\*\*\* List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable 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
  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 E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Differences.
  12. ASTM E546 - Frost Point of Sealed Insulating Glass Units.
  13. ASTM E576 - Frost Point of Sealed Insulating Glass Units in Vertical Position.
  14. ASTM E773 - Accelerated Weathering for Sealed Insulating Glass Units.
  15. 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 PERFORMANCE REQUIREMENTS**

- A. Design and install skylights to support:
1. 20 PSF live load plus dead load.
  2. Negative wind or uplift loads for Project location.
- B. Water leakage: None measured in accordance with ASTM E331.
- C. Unit to provide for expansion and contraction caused by cycling temperature range of 140 degrees F without causing detrimental effects to unit.

## **1.4 SUBMITTALS**

- A. Submit in accordance with Section 01 33 00 - Submittal Procedures:
  - 1. Product data.
  - 2. Shop drawings for sheet metal unit skylight showing configuration, elevations, plans, dimensions, material gauges, fastening methods, flashings, 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. Copy of warranty required by Paragraph 1.6 for review by Architect.
  - 5. Manufacturer's installation and maintenance instructions.

## **1.5 QUALITY ASSURANCE**

- A. Manufacturer: Company specializing in manufacturer of sheet metal framed, glass panel, unit skylights 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.

## **1.6 HANDLING**

- A. Deliver, store, and handle unit skylights to prevent breakage, scratching, gouging, abrasion, soiling, discoloration, staining, or other damage.

## **1.7 WARRANTY**

- A. Provide in accordance with Section 01 78 00 - Closeout Submittals: 1 year warranty to cover:
  - 1. Abnormal aging, deterioration, and other defects in materials and workmanship.
  - 2. Weathertightness of skylight.

## **PART 2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS**

- A. B and B Sheet Metal, 25-40 50th Avenue, Long Island City, New York 11101; 715-433-2501; 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**

**\*\*\*\*\* B and B Sheet Metal manufactures skylights in several materials and finishes as illustrated in their product data. Skylights are typically fabricated from materials that can be soldered such as galvanized steel, copper, lead-coated copper, zinc-coated copper, pre-patinaed copper, [stainless steel,] and terne-coated stainless steel. [Skylights can also be made in weldable materials like aluminum.] Contact B and B Sheet Metal for assistance in selecting material and gauge for skylights. Select required material and finish from the following options. Delete unnecessary materials.**

**Sheet steel can be coated with a thin layer of zinc to protect it from rusting by dipping it into molten zinc to produce galvanized sheet steel. B and B Sheet Metal provides exposed galvanized steel fabrications which may be field painted. It is available in 26 and 24 gauge thicknesses. In areas with frequent rainfall and acid deposition, the zinc coating may erode. \*\*\*\*\***

- A. Galvanized sheet steel: Zinc-coated steel sheet complying with ASTM A653, [26] [24] gauge thick.

**\*\*\*\*\* Four types of copper sheet are provided for skylights:**

**Plain copper sheet in weights of 16 and 20 ounces per square foot.**

**Pre-patinaed copper sheet (Evergreen): Copper sheet with a greenish-brown film caused by oxidation in weights of 16 and 20 ounces per square foot.**

**Lead-coated copper sheet: Copper sheet with a thin coating of lead in weights of 16 and 20 ounces per square foot.**

**Zinc-coated copper sheet (Freedom Gray): Copper sheet with a thin coating of zinc in weights of 16 and 20 ounces per square foot.**

**Copper and lead or zinc coated copper are highly ductile and easy to form and solder. When exposed over time, copper forms a greenish-brown crust produced by oxidation.**

\*\*\*\*\*

- B. Copper sheet: Plain copper sheet complying with ASTM B370 and weighing [16] [20] ounces per square foot.
- C. 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 and B Sheet Metal.
- D. Lead-coated copper: Copper sheet with a thin lead coating complying with ASTM B101 and weighing [16] [20] ounces per square foot.
- E. Zinc-coated copper: Copper sheet with a thin zinc coating complying with ASTM [\_\_\_\_\_] and weighing [16] [20] ounces per square foot.

\*\*\*\*\* **Stainless steel is an alloy of carbon steel typically containing chromium and nickel to enhance its resistance to corrosion. Skylights can be fabricated from either plain stainless steel or from terne-coated stainless steel in either 26 or 24 gauge thicknesses. Terne coating is a corrosion-protective coating consisting of a combination of lead and tin. Terne-coated stainless steel is glossy upon first exposure, but turns matte gray with exposure.** \*\*\*\*\*

- F. Stainless steel: [26] [24] gauge corrosion resistant chromium, tin, and steel alloy complying with ASTM A167.
- G. Terne-coated stainless steel: [26] [24] gauge stainless steel sheet with a hot dipped lead and tin terne coating complying with ASTM A167 and ASTM A308.

\*\*\*\*\* **Sheet aluminum skylights are provided in 0.025 inch thickness and in three thermoset polyester enamel finishes - brown, high gloss white, and bronze. Aluminum products can also be provided with a fluoropolymer Kynar coating in several colors.** \*\*\*\*\*

- H. Aluminum sheet: 0.025 inch thick aluminum sheet complying with ASTM B209 and finished with [thermoset polyester enamel finish with [brown] [high gloss white] [bronze] color.] [fluoropolymer Kynar coating in color selected by Architect from manufacturer's full range.]

\*\*\*\*\* **Eight glass types are offered for skylights. Edit the following paragraph to indicate type of glazing required.** \*\*\*\*\*

- I. 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.

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.]

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

K. Solder: ASTM B32.

### **2.3 UNIT SKYLIGHTS FOR SLOPED ROOFS**

**\*\*\*\*\* Three basic types of skylight are provided for installation on sloped roofs with either shingle, wood shake, or metal panels membranes:**

**Flat.**

**Flat Vented.**

**Flat Ridge.**

**These skylights can be customized based on size, number of glass panels, and type of curb. Refer to B and B Sheet Metal product literature illustrations and contact B and B Sheet metal for assistance in specifying and detailing customized designs. \*\*\*\*\***

A. Type: Sheet metal framed, glass panel, unit skylight for installation on sloped roof with [shingle] [wood shake] [metal panel] [\_\_\_\_\_] roof membrane; [Flat] [Flat Vented] [Flat Ridge] Sloped Roof Skylight as manufactured by B and B Sheet Metal.]

B. Rough roof opening size: [\_\_\_\_\_] inches wide by [\_\_\_\_\_] inches long.

C. Configuration:

**\*\*\*\*\* Include this description for Flat Sloped Roof Skylight. \*\*\*\*\***

Rectangular skylight with two glass panels installed level with plane of sloped roof.

**\*\*\*\*\* Include this description for Flat Vented Sloped Roof Skylight. \*\*\*\*\***

Rectangular skylight installed level with plane of sloped roof with two glass panels and one ventilation opening with sloped sheet metal cover and insect screen.

**\*\*\*\*\* Include this description for Flat Ridge Sloped Roof Skylight. \*\*\*\*\***

Rectangular, double pitched, skylight with four glass panels designed for installation along ridge of a sloped roof.

**\*\*\*\*\* Five different roof mounting curbs are provided for sloped roof skylights as illustrated in B and B Sheet Metal product literature. Depending on location of skylight in roof system, adjacent construction, and special Project requirements, skylight may required a combination of curb types. \*\*\*\*\***

- D. Roof mounting curb: [[Gutter Curb] [Common Bar Curb] [Puddy Bar Curb] [Roof Flange Curb] [ Custom Wall Flashing Curb] as manufactured by B and B Sheet Metal.] [As detailed on Drawings and reviewed shop drawings and designed to flash into room membrane and provide watertight installation.]

## **2.4 UNIT SKYLIGHTS FOR FLAT ROOFS**

**\*\*\*\*\* Five basic types of skylight are provided for installation on flat roofs with built-up or single ply roof membranes:**

**Gable.**

**Flat Pitch.**

**Vented Flat Pitch.**

**Hip Ridge.**

**Hip Vent.**

**These skylights can be customized based on size, number of glass panels, and type of curb. These skylights can also be provided with a base structure which raises the unit above the flat roof plane. There are two types of base: Louver base and turret base with glass panels. Refer to B and B Sheet Metal product literature illustrations and contact B and B Sheet Metal for assistance in specifying and detailing customized designs. \*\*\*\*\***

- A. Type: Sheet metal framed, glass panel, unit skylight [with raised base structure] for installation on a flat roof with [built-up] [shingle ply] [\_\_\_\_\_] roof membrane; [Gable] [Flat Pitch] [Vented Flat Pitch] [Hip Ridge] [Hip Vent] Flat Roof Skylight as manufactured by B and B Sheet Metal.]
- B. Rough roof opening size: [\_\_\_\_\_] inches wide by [\_\_\_\_\_] inches long.
- C. Configuration:

**\*\*\*\*\* Include this description for Gable Flat Roof Skylight. \*\*\*\*\***

Rectangular, double pitched skylight with four rectangular glass panels and two triangular glass panels at each gable end installed level with plane of flat roof.

\*\*\*\*\* **Include this description for Flat Pitch Flat Roof Skylight.** \*\*\*\*\*

Rectangular, single pitched skylight with two glass panels and solid metal sides.

\*\*\*\*\* **Include this description for Vented Flat Pitch Flat Roof Skylight.** \*\*\*\*\*

Rectangular, single pitched skylight with two glass panels, one ventilation opening with sloped sheet metal cover and insect screen, and solid sheet metal sides.

\*\*\*\*\* **Include this description for Hip Ridge Flat Roof Skylight.** \*\*\*\*\*

Pyramid shaped skylight with four triangular glass panels.

\*\*\*\*\* **Include this description for Hip Vent Flat Roof Skylight.** \*\*\*\*\*

Pyramid shaped skylight with four trapezoidal glass panels and one ventilation opening at apex of pyramid with sloped sheet metal cover and insect screen.

\*\*\*\*\* **Flat roof skylights can be provided with a box-shaped base structure to raise skylight above the flat roof plane. Two type of base are provided by B an B Sheet Metal:**

**Louver Base: Sides of base are fixed louver panels.**

**Turret Base: Sides of base are glass panels providing additional light through skylight.**

**Include and edit the following paragraph if base structures are required for flat roof skylights. \*\*\*\*\***

D. Base structures: Provide skylight with box-shaped base structure to rise skylight above flat roof plane.

\*\*\*\*\* **Include the following paragraph for Louver Base. Typically fixed, Z-shaped louver blades are provided with either copper, brass, or fiber insect screens.** \*\*\*\*\*

1. Type: Sheet metal base to match material and rough roof opening of skylight with side panels with fixed [Z-shaped] [flat] [V-shaped] [L-shaped] blades providing [\_\_\_\_\_] percentage free air flow and [copper] [bras] [fiber] insect screens; Louver Base as manufactured by B and B Sheet Metal.

\*\*\*\*\* **Include the following paragraph for Turret Base.** \*\*\*\*\*

2. Type: Sheet metal base to match material and rough roof opening of skylight with glazed side panels; Turret Base as manufactured by B and B Sheet Metal.

\*\*\*\*\* **Five different roof mounting curbs are provided for flat roof skylights and louver**

**and turret bases as illustrated in B and B Sheet Metal Product literature. Depending on location of skylight in roof system, adjacent construction, and special Project requirements, skylight may required a combination of curb types. \*\*\*\*\***

- E. Roof mounting curb: [[Gutter Curb] [Common Bar Curb] [Puddy Bar Curb] [Roof Flange Curb] [ Custom Wall Flashing Curb] as manufactured by B and B Sheet Metal.] [As detailed on Drawings and reviewed shop drawings and designed to flash into roof system and provide watertight installation.]

## **2.5 PROTECTIVE SCREENS**

**\*\*\*\*\* B and B Sheet Metal provides wire mesh protective screens that can be installed on either the interior side or the exterior side of flat and sloped roof skylights. Installed on the exterior top side of a skylight, a screen can protect against glass breakage due to severe weather conditions and from vandalism. Installed on the bottom interior side a screen prevents large pieces of broken glass from causing serious injury. Screens can be installed on both top and bottom sides of skylight. Edit and include this article if skylights are to be equipped with protective screens. \*\*\*\*\***

- A. Equip skylights with wire mesh protective screens installed on [exterior top side of skylight] [and] [on bottom interior side of skylight].
- B. Size: As required to completely cover [exterior glazed area] [and][interior roof opening].
- C. Construction:
  - 1. Frame: 3/8 inch galvanized steel rod.
  - 2. Screen: 1-1/4 inches diamond mesh of woven 0.105 inch diameter galvanized wire.
  - 3. Provide screen frame with attachment tabs and screw type fasteners for anchoring screens to sheet metal frame of skylight.

## **2.6 SKYLIGHT FABRICATION**

- A. Design and shop fabricate unit skylights to meet performance requirement specified in Paragraph 1.3.
- B. Fabricate skylights from formed sheet metal members with [soldered] [welded] joints and mitered corners as detailed on Drawings and reviewed shop drawings. Design glazing bars to accommodate spans and Project loads:
  - 1. Spans greater than 48 inches: Triangular tubular member with flashing and drainage flanges; Puddy Bar as provided by B and B Sheet Metal.

2. Spans less than 48 inches: Y-shaped flanged member: Common Bar as provided by B and B Sheet metal.
  3. Glazed panels: 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].
    - a. Factory glaze skylights. Install glass on setting blocks. Secure with removable metal stops and resilient gaskets. Ensure weathertightness.
- C. Fabricate skylights free of visual distortion and defects.
- D. Provide for removal of condensation with internal gutter and nonclogging weepholes.
- E. Fabricate to drain water entering joints, or migrating moisture occurring within unit, to exterior.
- F. Edges: Turn back all exposed edges to form 1/2 inch hem.
- G. Soldering: Clean and tin materials. Completely fill seams with solder. Soldering on exposed finished surfaces shall be neat, full flowing, and smooth. After soldering, remove flux and wipe and wash joints clean.

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION**

**\*\*\*\*\* Edit the following paragraph to reflect required coordination between provision of skylights and construction of other building elements. \*\*\*\*\***

- A. Coordinate provision of skylights with type and installation of roof deck and membrane, wood blocking and nailers, [\_\_\_\_\_] and other work related to sheet metal skylights.
- B. Prior to submittal of shop drawings and fabrication, field verify required sizes and installation tolerances for sheet metal skylights.
- C. Deliver sheet metal skylights 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 skylights 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 skylights. Remove from site and replace.
- D. Secure skylights in place using concealed fasteners unless shown otherwise. Lap and seal all joints. Exposed fasteners shall be covered with sealant.
- E. Install sealants to achieve weathertightness in accordance with recommendations of skylight manufacturer and general installation requirements of Section 07 92 00 - Joint Sealants.
- F. Protect finishes of exposed to view sheet metal surfaces. 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 protective materials from surfaces.
- B. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.
- C. Exercise care in removing mortar, cementitious materials, and sand from sheet metal skylights. Do not wipe surfaces in order to avoid scratching.
- D. Wash exposed surfaces with solution of mild detergent applied with soft cloth. Remove dirt from corners. Wipe surfaces clean.

**END OF SECTION**