

SECTION 07 72 53 - SNOW GUARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pad-type, flat-mounted metal snow guards.
2. Pad-type, seam-mounted cast-metal snow guards.

1.2 ACTION SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

1. Pad-type, flat-mounted metal snow guards.
2. Pad-type, seam-mounted cast-metal snow guards.

B. Shop Drawings: Include roof plans showing layouts and attachment details of snow guards.

C. Samples:

1. Pad-Type Snow Guards: Full-size unit with installation hardware.
 - a. For units with factory-applied finishes, submit **[manufacturer's standard color selections][specified color]**.

D. Delegated Design Submittals: For snow guards, include analysis reports signed and sealed by the qualified professional engineer responsible for their preparation.

1. Include calculation of number and location of snow guards.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer's experience with providing delegated design engineering services of the kind indicated, including documentation that the engineer is licensed in the **[jurisdiction][state]** in which the Project is located.

B. Product Test Reports: For each type of snow guard, for tests performed by a qualified testing agency, indicating load at failure of attachment to roof system identical to roof system used on this Project.

1.4 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit adhesive-mounted snow guards to be installed, and adhesive cured, according to adhesive manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design snow guards, including attachment to roofing material and roof deck, as applicable for attachment method, based on the following:
 - 1. Roof snow load.
 - 2. Snow drifting
 - 3. Roof slope.
 - 4. Roof type.
 - 5. Roof dimensions.
 - 6. Roofing substrate type and thickness.
 - 7. Snow guard type.
 - 8. Snow guard fastening method and strength.
 - 9. Snow guard spacing.
 - 10. Coefficient of Friction Between Snow and Roof Surface: 0.
 - 11. Factor of Safety: 3.
- B. Performance Requirements: Provide snow guards that withstand exposure to weather and resist thermally induced movement without failure, rattling, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- C. Structural Performance: Snow guards to withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.
 - 1. Snow Loads: As indicated on Drawings.

2.2 PAD-TYPE SNOW GUARDS

- A. Pad-Type, Flat-Mounted Metal Snow Guards:
 - 1. Material:
 - a. Aluminum Sheet: **ASTM B209**, not less than **[0.032 inch][0.040 inch][0.050 inch][0.063 inch]** thick.
 - 1) Finish: **[Mill][Black epoxy coating][Powder coat finish complying with AAMA 2603, with a minimum dry film thickness of 1.5**

mils][High-performance organic two-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in color coat]<Insert finish>.

- a) Color: **[As selected by Architect from manufacturer's full range][Match sheet metal roofing]<Insert color>.**
- b. Metallic-Coated Steel Sheet: ASTM A653/A653M, with **G90** coating, not less than **[0.022 inch]<Insert dimension>** thick.
 - 1) Finish: **[Powder coat finish complying with AAMA 2603, with a minimum dry film thickness of 1.5 mils][High-performance organic two-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in color coat]<Insert finish>.**
 - a) Color: **[As selected by Architect from manufacturer's full range][Match sheet metal roofing]<Insert color>.**
- c. Steel Sheet: ASTM A606/A606M, not less than **[0.022 inch]<Insert dimension>** thick.
- d. Stainless Steel Sheet: ASTM A240/A240M, **[Type 304][Type 316]**, not less than **[0.0156 inch]<Insert dimension>** thick.
 - 1) Finish: ASTM A480/A480M, **[No. 2D][No. 2B][No. 3][No. 4]**.
- 2. Attachment: Manufacturer's tested system, capable of resisting design loads.
- B. Pad-Type, Flat-Mounted Plastic Snow Guards:
 - 1. Polycarbonate: ASTM D6098.
 - a. Color: As selected by Architect from manufacturer's full range.
 - 2. Attachment: Manufacturer's tested system, capable of resisting design loads.
- C. Pad-Type, Seam-Mounted Cast-Metal Snow Guards:
 - 1. Attachment: Manufacturer's tested system, capable of resisting design loads.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install snow guards according to manufacturer's written instructions.
 - 1. Space rows as indicated on **[Drawings][Shop Drawings]**.
 - 2. Space rows as recommended by manufacturer.
- B. Attachment for Standing-Seam Metal Roofing:

1. Do not use fasteners that will penetrate metal roofing or fastening methods that void metal roofing finish warranty.
2. Pad-Type, Flat-Mounted Snow Guards:
 - a. Adhere to metal roofing in accordance with manufacturer's written instructions.
3. Pad-Type, Seam-Mounted Snow Guards:
 - a. Install snow guards in straight rows.
 - b. Secure in place using stainless steel set screws, incorporating round nonpenetrating point.
 - c. Torque set screw in accordance with manufacturer's written instructions.
4. Rail-Type, Seam-Mounted Snow Guards:
 - a. Install brackets to vertical ribs in straight rows.
 - b. Secure with stainless steel set screws, incorporating round nonpenetrating point, on same side of standing seam.
 - c. Torque set screw in accordance with manufacturer's written instructions.
 - d. Install cross members to brackets.

END OF SECTION 07 72 53