SECTION 07

SNOW GUARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Snow guards for standing seam metal roofs.
2. Non-penetrating attachment system.

B. Related Sections:
1. Division 1: Administrative, procedural, and temporary work requirements.
2. Section [07410 - Metal Roof Panels:] [07610 - Sheet Metal Roofing:] [_____ - _____:] Metal roof panels.
3. Section 07730 - Roof Accessory Attachment System.

1.2 REFERENCES

A. Aluminum Association (AA) - Aluminum Standards and Data, 2003 Edition.

B. ASTM International (ASTM):
1. A581/A581M-95b(2004) - Standard Specification for Free-Machining Stainless Steel Wire and Wire Rods.
2. A582-05 - Standard Specification for Free-Machining Stainless Steel Bars.
3. B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
4. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
5. E527-83(2003) - Standard Practice for Numbering Metals and Alloys.

1.3 SYSTEM DESCRIPTION

A. Attachment system to provide attachment to standing seam metal roofs:
1. With only minor dimpling of panel seams.
2. Without penetrations through roof seams or panels.
3. Without use of sealers or adhesives.
4. Without voiding roof warranty.

B. Loading: Design snow guard system to resist minimum in-service vector load of [__] pounds per linear foot of eave.

C. Factor of safety: Utilize a factor of safety ≥ [2] [____] to determine allowable loads from ultimate tested clamp tensile load values.

1.4 SUBMITTALS

A. Submittals for Review:
1. Shop Drawings: Show locations of snow guards on roof and attachment spacing.
2. Product Data: Include product description and installation instructions.
3. Samples:
   a. Clamp samples.
   b. Cross member samples including coupler and other hardware.

B. Quality Control Submittals:
1. Test results: Results of product load testing, issued by a recognized independent testing laboratory, showing load-to-failure value of attachment.

C. Sustainable Design Submittals:
1. Regionally manufactured products: Certify location of material manufacturer and distance from manufacturer to project site.

D. Closeout Submittals:
   1. Certification: Installer's certification that snow guard system was installed in accordance with manufacturer's instructions and approved Shop Drawings.

1.5 QUALITY ASSURANCE

A. Mockup:
   1. Size: Minimum [__] feet long.
   2. Show: Snow guard attachment, cross members, and accessories.
   3. Locate [where directed.] [____.]
   4. Approved mockup may remain as part of the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Contract Documents are based on LMCurbSnowGuard [one rod] [two rod] by LMCurbs – 1-800-284-1412. 827 Fisher Rd. Longview, TX. 75604. www.lmcurbs.com

B. Substitutions: [Under provisions of Division 1.] [Not permitted.]

2.2 COMPONENTS

A. Clamps:
   1. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
   2. Clamp model: LMClamp.
   3. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point.
   4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 10 mm diameter, flanged head.

B. Snow Straps: Lower / Upper:
   1. Manufactured from 6061-T6 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.

C. Stop Collar:
   1. Manufactured from Type 303 stainless steel conforming to ASTM A581/A581M or ASTM A 582.

D. Cross Members:
   1. Manufactured from 6061-T6 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
   2. Provide coupler ensuring alignment and structural continuity at end joints.

**** OR ****

E. Cross Members:
   1. Manufactured from Type 303 stainless steel conforming to ASTM A581/A581M or ASTM A 582.
   2. Provide coupler ensuring alignment and structural continuity at end joints.

**** OR ****

F. SnoClips: Aluminum, with rubber foot, minimum 3 inches wide.

PART 3 - EXECUTION

3.1 EXAMINATION
A. Prior to beginning installation, verify that:
   1. Panel seaming is complete.
   2. Panel attachment is sufficient to withstand loads applied by snow guard system.

3. Installation will not impede roof drainage.

3.2 PREPARATION

A. Clean areas to receive attachments; remove loose and foreign matter that could interfere with installation or performance.

3.3 INSTALLATION

A. Install system in accordance with manufacturer's instructions and approved Shop Drawings.

B. Place clamps at maximum 24 inches on center or as required by in-service loads.

C. Place clamps in straight, aligned rows.

D. Install set screws into clamps.

E. Tighten set screws to manufacturer's recommended torque.

F. Use stainless steel stop collars at each end of each assembly, and at a frequency and spacing of one for each 48 feet of assembly.

G. Slide on [one SnoClip] [two SnoClips] per panel between panel seams.

H. Install cross members through holes in Snow Straps.

I. Install couplers at cross member end joints.

J. Tighten set screws against cross members at all stop collar locations.

K. Do not cantilever cross members more than 3 inches beyond last clamp at ends.

END OF SECTION