*Cascadia Guide Note: The following insert should be included in* ***PART 2*** *of the specification section under the article heading of Sub-framing Accessories. The Cascadia Clip® is designed to work with semi-rigid mineral fibre insulation boards such as ROXUL CAVITYROCK DD®. This does not limit the use of the Cascadia Clip® with other board, batt or spray insulation types or manufacturers.*

**2.01 ACCESSORIES**

A. Sub-framing Thermal Spacer: 100 % Pultruded glass fibre and thermoset polyester resin insulation clip.

1. Thermal Spacer thickness for top, base and web: 3/16 inches nominal.

*Cascadia Guide Note: Choose the clip depth that best matches the thickness of insulation board, batt or blanket used in the project. Select insulation thickness based on intended assembly Effective R-value (overall assembly U-value). See Cascadia Clip® User Guide, available at* [*www.cascadiaclip.com*](http://www.cascadiaclip.com)*, for table of whole-wall Effective R-values, or contact manufacturer for additional technical support.*

2. Thermal spacer depth: [2] [3.5] [4] [5] [6] inches nominal.

.1 Depth tolerance: ± 0.005 inches.

3. Basis of Design: Cascadia Windows Inc., Cascadia Clip*®*, [www.cascadiaclip.com](http://www.cascadiaclip.com).

B. Spacer Fasteners: High hex head washer head with sharp twin lead threaded design of heat treated corrosion resistant coated steel..

*Cascadia Guide Note: For steel framing choose 4 inch long screw fasteners for 2 inch clip, 5 inch long screw fastener for 3 1/2 inch clip, 6 inch long screw fastener for 4 inch clip, 7 inch long screw fastener for 5 inch clip, or, 8 inch long screw fastener for 6 inch clip.*

1. Fastener for steel framing: 1/4 - 14 x [4] [5] [6] [7] [8] inches long with hex head.

a. Acceptable material: Leland Industries Inc., Master Driller™ No. 2 Mini Drill Point with DT2000 coating.

*Cascadia Guide Note: For wood framing choose 4 inch long screw fasteners for 2 inch clip, 6 inch long screw fastener for 3 1/2 inch clip, 6 inch long screw fastener for 4 inch clip, 7 inch long screw fastener for 5 inch clip, or, 8 inch long screw fastener for 6 inch clip.*

2. Fastener for wood framing: 1/4 - 10 x [4] [6] [7] [8] inches long with hex head.

a. Acceptable material: Leland Industries Inc., Master Gripper™ with DT2000 coating.

*Cascadia Guide Note: For cast-in-place concrete and concrete masonry units choose 3 5/8 inches long screw fasteners for 2 inch clip, 5 1/8 inches long screw fastener for 3 1/2 inch clip, 5 5/8 inches long screw fastener for 4 inch clip, 6 5/8 inches long screw fastener for 5 inch clip, or, 7 5/8 inches long screw fastener for 6 inch clip.*

3. Fastener for cast-in-place concrete and concrete masonry units: 1/4 - 15 x [3 5/8] [5 1/8] [5 5/8] [6 5/8] [7 5/8] inches long concrete screw with hex head.

a. Acceptable material: Leland Industries Inc., Concrete Screw with DT2000 coating.

b. Embedment depth: 1 1/2 inches, except when into hollow concrete masonry unit, not less than 1 inch.

*Cascadia Guide Note: The following insert should be included in* ***PART 3*** *of the specification section under the article heading of Sub-framing Thermal Spacer Installation.*

*Cascadia Guide Note: Add the following paragraphs to the “PREPARATION” Article in PART 3 of the specification section when the sub-framing spacers are to be used in conjunction with a cast-in-place concrete or a concrete masonry unit substrate.*

A. Pre-drill concrete or concrete masonry unit substrate to 1/2 inch deeper than anticipated embedment depth of fastener into substrate.

1. Use drill diameter approximately 1/16 inches less than screw diameter in accordance with fastener manufacturer’s written recommendations.

B. Sub-framing: Ensure thermal spacer type is selected to accommodate orientation of vertical and horizontal sub-framing.

C. Sub-framing Thermal Spacer Installation: Install thermal spacers in accordance with spacer manufacturer’s written recommendations.

*Cascadia Guide Note: Verify the spacing of the sub-framing with the structural engineer and ensure that the information below is co-ordinated with Section 09 22 16 - Non-structural Metal Framing. If the sub-framing and Z-girt spacing is already included in the metal framing section, then delete the options that deal with the spacing.*

1. Thermal Spacer Installation: Clip thermal spacer to Z-girt and fasten girt directly to substrate [ [at 26 inches maximum on centre vertically and 16 inches maximum on center horizontally] [or as directed by [Cladding Engineer] [Consultant] ].

2. Installation sequence for spacers, sub-framing, and insulation - Option 1:

*Cascadia Guide Note: Use the following paragraph only when sub-framing is being installed which has not been pre-punched by the manufacturer to accept the thermal insulation clips. Cascadia manufactures steel sub-framing which is pre-punched to accept the Cascadia Clip fasteners. Refer to Section 09 22 16 - Non-structural Metal Framing. Delete the following paragraph if pre-punched metal sub-framing is specified.*

a. Pre-punch holes or pre-drill holes in Z-girts and tracks to accommodate fasteners.

b. Position Z-girts directly over thermal spacer before installation of fasteners.

c. Completely install thermal spacers and screws for first Z-girt / track. For subsequent girts:

1) Fasten top spacer with single screw through Z-girt and spacer into substrate ensuring spacer can pivot for accurate alignment.

2) Friction fit insulation in place before completing installation of remaining screws to secure Z-girt and thermal spacers.

a) Ensure insulation is tightly fitted with sides of insulation slightly compressed at each insulation spacer.

b) Ensure insulation pieces are in contact with no linear gaps between spacers.

3. Installation sequence for spacers, sub-framing, and insulation - Option 2:

*Cascadia Guide Note: Use the following paragraph only when sub-framing is being installed which has not been pre-punched by the manufacturer to accept the thermal insulation clips. Cascadia manufactures steel sub-framing which is pre-punched to accept the Cascadia Clip fasteners. Refer to Section 09 22 16 - Non-structural Metal Framing. Delete the following paragraph if pre-punched metal sub-framing is specified.*

a. Pre-punch or pre-drill holes in Z-girts and tracks to accommodate fasteners.

b. Position Z-girts directly over thermal spacer before installation of fasteners.

c. Completely install spacers, screws and sub-framing, prior to installing insulation.

d. Friction fit insulation in place as follows:

1) For semi-rigid insulation batts or boards, score or cut insulation down its centreline to 50 % maximum of its depth to enable fitting insulation in correct position.

2) Fold edges of insulation board back to enable friction fitting in correct position. Position edges of partially folded board into space between girts and thermal spacers, and flatten partially folded board against substrate.

3) Ensure insulation is tightly fitted with sides of insulation slightly compressed at each insulation spacer.

e. Install corrosion resistant stick pins or other mechanical insulation retention devices 16 inches maximum on centre along centreline of insulation batts or boards and in accordance with insulation manufacturer’s written recommendations.

1) Use sufficient number of stick pins or retention devices to ensure insulation remains flat and in correct position.

2) Use 3 minimum stick pins or retention devices for each 4 feet long batt or board.

f. Ensure insulation pieces are in contact with no linear gaps between spacers.

End of Inserts