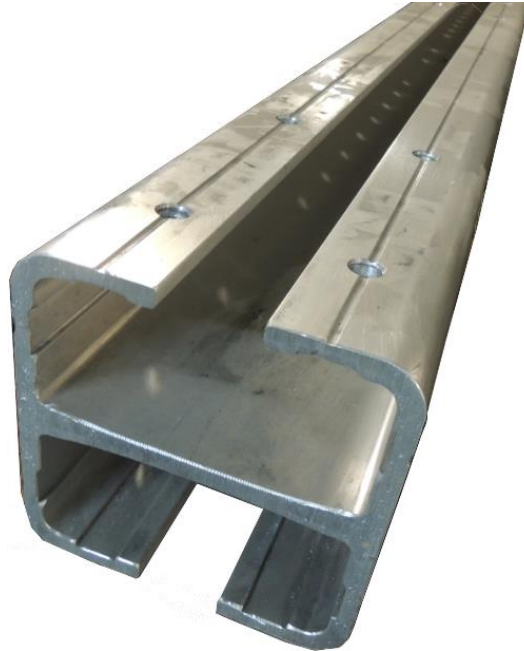


Bus, Aluminum, Integral Web Channel (IWCB), 8" x 8"



1. Scope

This standard covers the requirements for aluminum 8" x 8" Integral Web Channel Bus (IWCB). IWCB is also known as Integral Web Collector Bus.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Description
014352	12 ft IWCB Blank Section
630051	14.5 ft IWCB Blank Section
013878	17 ft IWCB Blank Section
014353	12 ft IWCB with Drilled Holes
014354	14.5 ft IWCB with Drilled Holes
014355	17 ft IWCB with Drilled Holes

2. Application

IWCB is used exclusively in building vaults to construct secondary network buses. This application is common in high-rise buildings and industrial plants.

IWCB is rigidly mounted on insulators which are mounted on walls or ceilings to optimize space and clearance inside dedicated in-building electric utility vault rooms. IWCB has narrow, shallow grooves extruded on the surface that indicate the center of drilled or punched holes where connectors, such as paddles, plates, insulators, and brackets can be attached.

Finished IWCB with drilled holes will be fabricated in-house by the SCL machine shop.

3. Industry Standards

IWCB shall meet the applicable requirements of the latest revision of the following industry standards.

ASTM B317; Standard Specification for Aluminum-Alloy Extruded Bar, Rod, Tube, Pipe, Structural Profiles, and Profiles for Electrical Purposes (Bus Conductor)

ASTM E527-12; Standard Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

ANSI H35.1; American National Standard Alloy and Temper Designation System for Aluminum

ANSI H35.2; American National Standard Dimensional Tolerances for Aluminum Mill Products

4. Requirements

IWCB shall be extruded from 6101-T61 aluminum alloy.

Finished IWCB shall be free of gouges, burrs, sharp edges, and sharp corners.

IWCB shall have an indoor AC (60 Hz) current rating of 6890 Amperes based on a temperature rise of 30°C above a 40°C ambient temperature in still but unconfined air. Aluminum Association tolerances apply unless noted otherwise.

IWCB shall be fabricated according to the dimensions and tolerances shown in Figure 4.

IWCB length tolerance shall be -0, +1/8 inch.

4.1 Hole Drilling Details for 8" x 8" IWCB

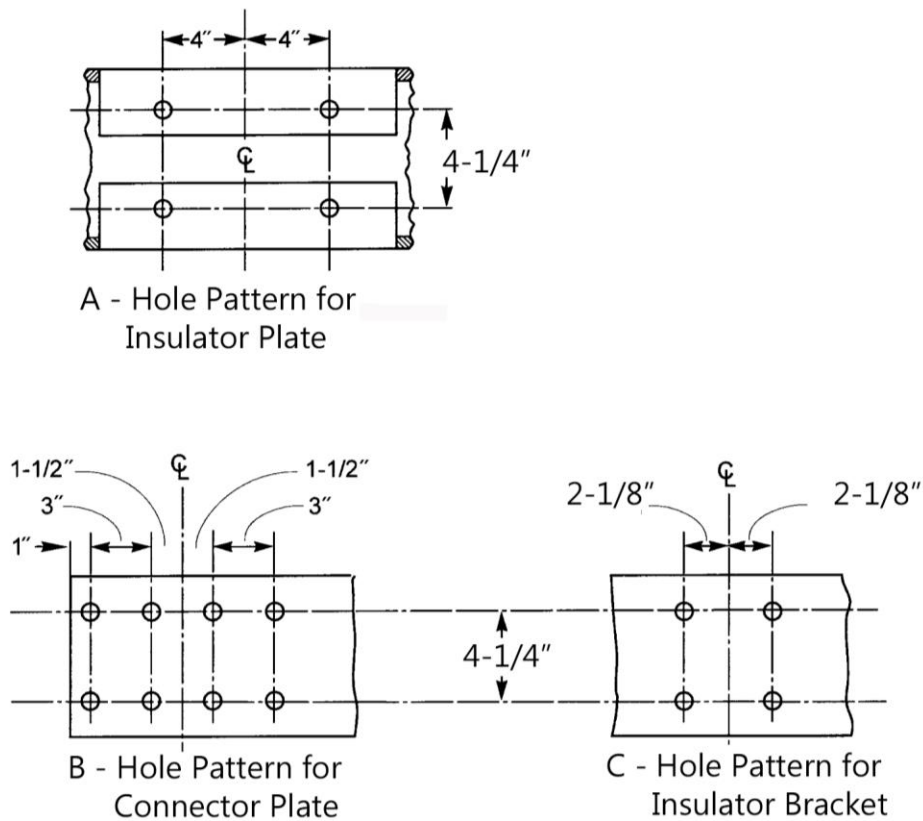
Finished IWCB shall have a combination of hole patterns drilled for the insulator plate, connector plate and insulator bracket as shown in Figure 4.1a.

All drilled holes shall have a diameter of 11/16" to accommodate 5/8" bolt.

Maximum allowable tolerances are as follows:

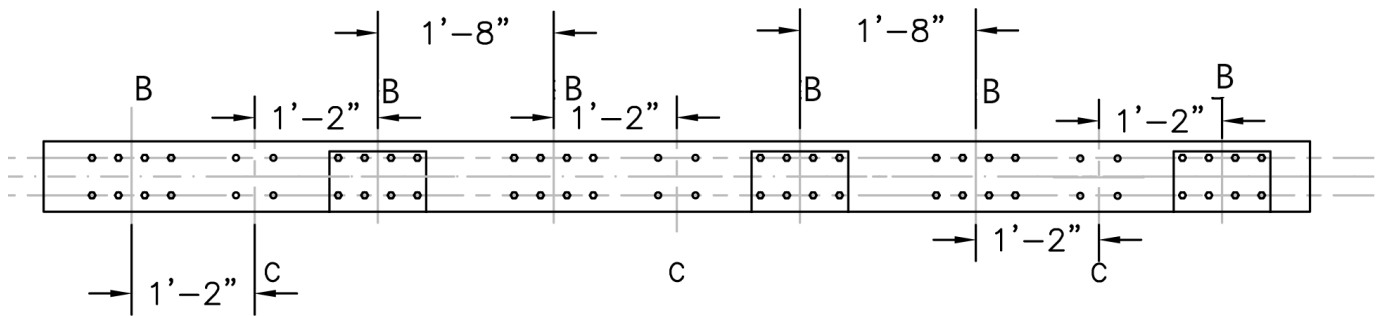
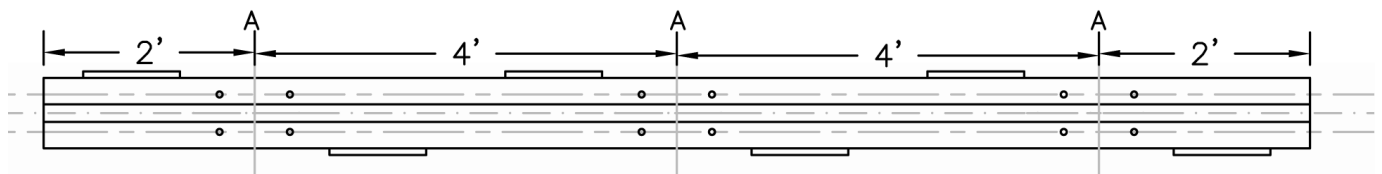
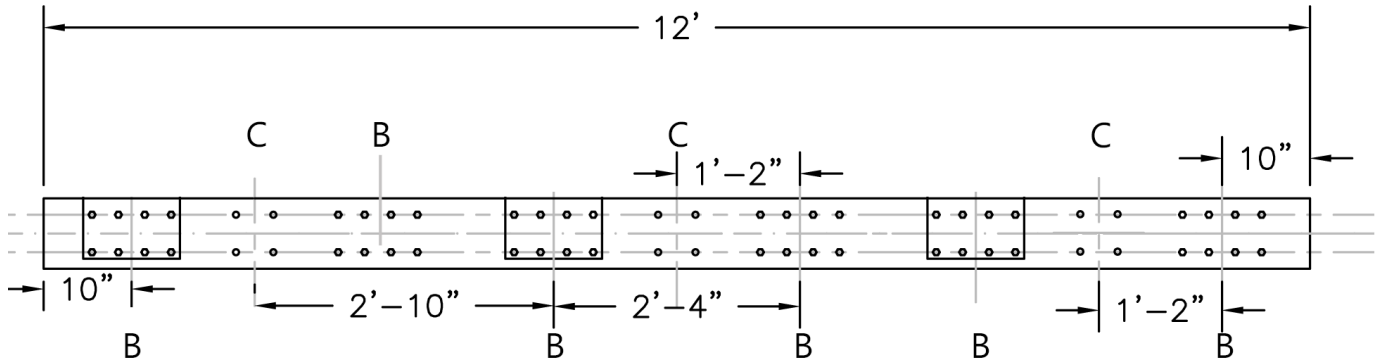
- Length, width: $\pm 1/16$ in
- Thickness, edge radius easing, hole diameter: $\pm 1/32$ in

Figure 4.1a. Hole Drilling Details



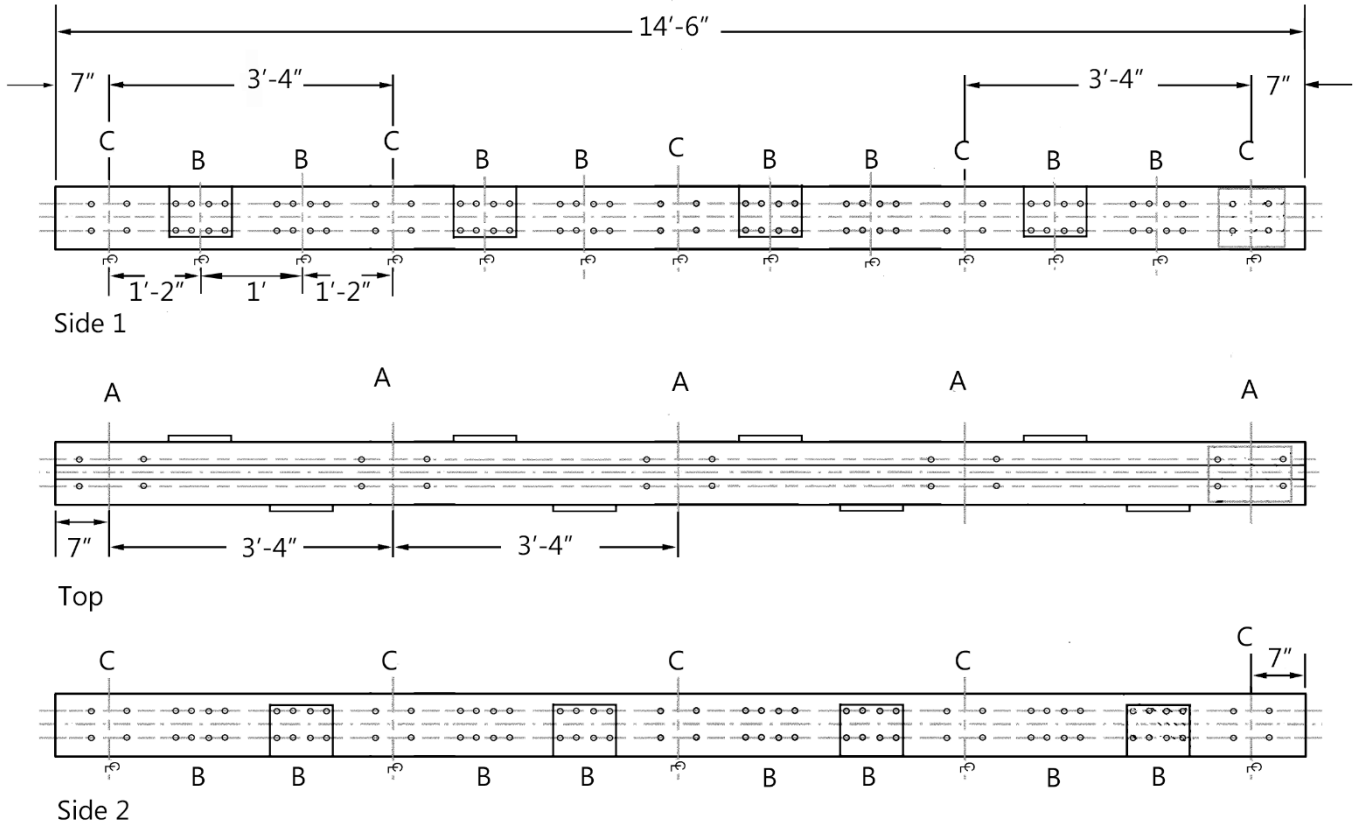
12 ft IWCB shall be drilled according to drilling pattern shown in Figure 4.1a and 4.1b.

Figure 4.1b. Stock Number 014353 – 12 ft Drilling Pattern



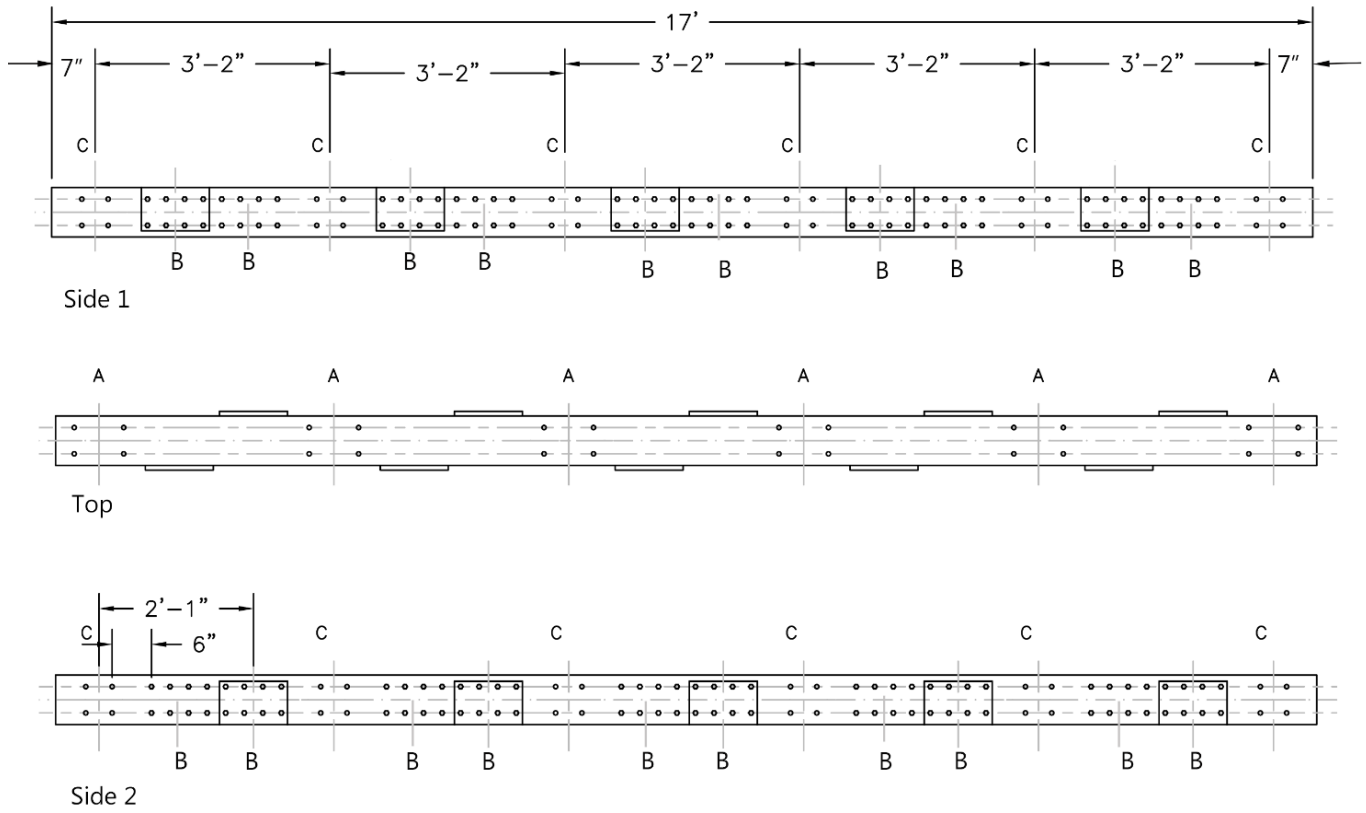
14.5 ft IWCB shall be drilled according to drilling pattern shown in Figure 4.1a and 4.1c.

Figure 4.1c. Stock Number 014354 – 14.5 ft Drilling Pattern



17 ft IWCB shall be drilled according to drilling pattern shown in Figure 4.1a and 4.1d.

Figure 4.1d. Stock Number 014355 – 17 ft Drilling Pattern



5. Packaging

Each standard package shall be legibly marked with the following information.

- Manufacturer identification
- Seattle City Light purchase order number
- Seattle City Light stock number
- Quantity contained

6. Issuance

Stock Unit: EA

7. Approved Manufacturers

Sapa Extrusions Americas, Mountain Top, PA.

Sapa is the only known manufacturer of IWCB at this time.

8. References

Alcoa Engineered Products; Drawing #61648, Revision D, August 19, 1999

9. Sources

Aluminum Electrical Conductor Handbook; Chapter 13, "Bus Conductor Design and Application"

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