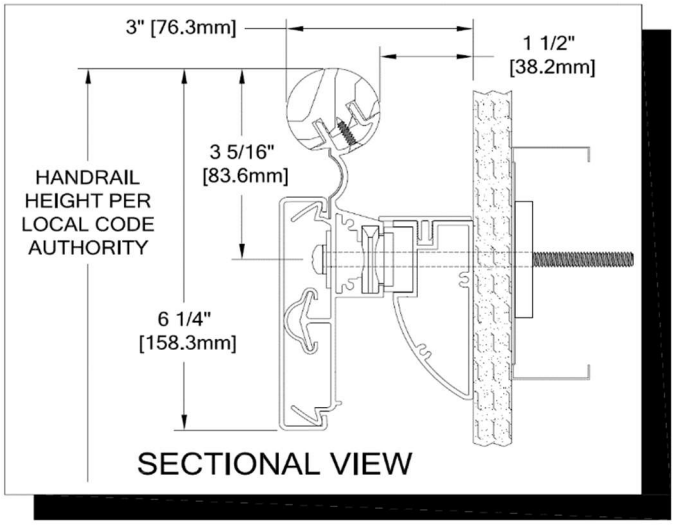
ATTENTION

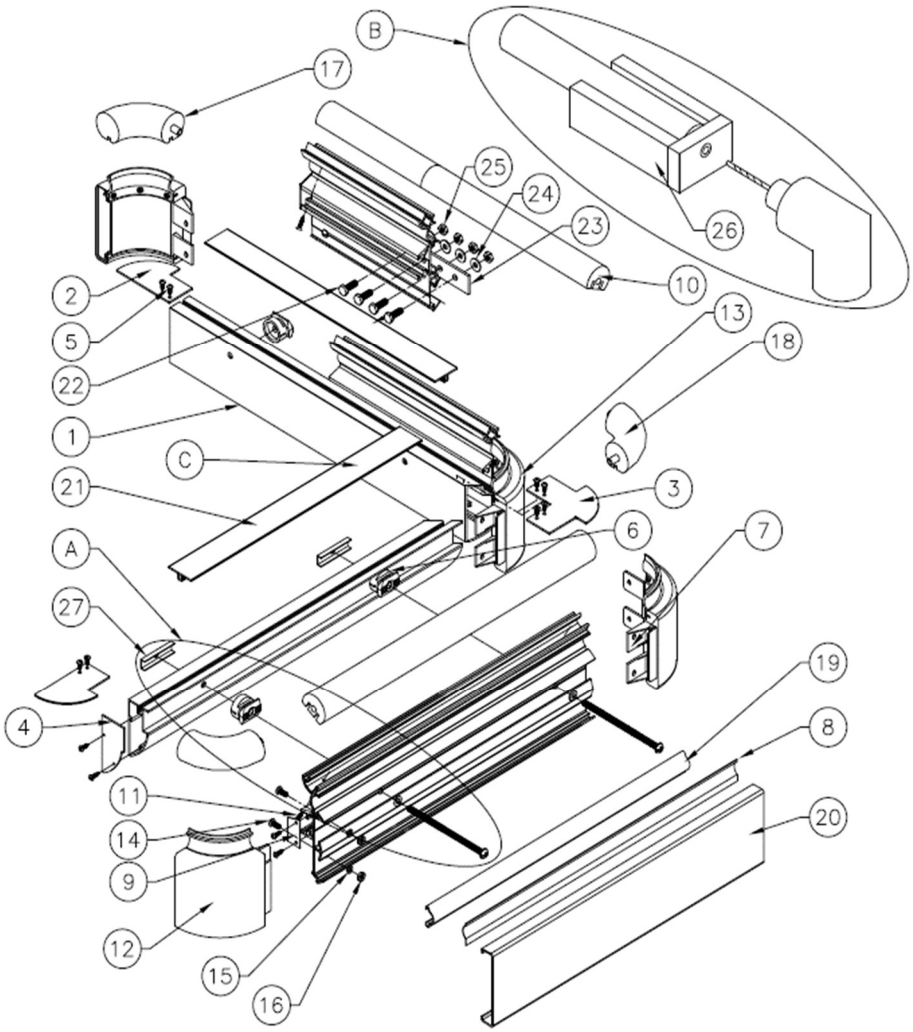
Please read these instructions thoroughly prior to beginning the **HRBW-10CQLCMHLN HANDRAIL** installation.

This instruction sheet is intended to provide a specific guide to follow for the installation of the **HRBW-10CQLCMHLN HANDRAIL.** Contained within is the technical information and installation techniques required to complete an efficient, neat, and long-lasting installation.

See "**HANDRAIL**– Supplemental Information" sheet for additional notes and other helpful installation tips.

Minimum length of **HRBW-10CQLCMHLN HANDRAIL** is **15-3/4" [400.3mm]** and requires at least 2 fasteners per bracket.





Parts List

1. Ligature Resistant Mounting Bracket (24A336000)
2. Top End Plate (24F420000)
3. Top Outside Corner Plate (24F421000)
4. End Closing Plate (24F258000)
5. #6 x 1/2" 18-8 S/S Pin-In-Torx Tamper-Resistant SMS (90H881002)
6. Quick Lock (24I821000)
7. Aluminum Retainer (24A369000)
8. Acrovyn Accent Reveal (24N021xxx)
9. 10C Quick Lock Retainer End Plate (24F254004)
10. Wood Handrail (24W001xxx)
11. #6 x 5/8" Phillips Flat Head SMS (90H231002)
12. Crash Rail End Cap Assembly
13. Crash Rail Outside Corner Assembly
14. #10-24 x 1/2" Round Head Slotted Machine Screw (90H369002)
15. #10 Lock Washer (90H370002)
16. #10 Hex Nut (90H368002)
17. *Wood Handrail End Cap*
    a. Right Hand (24W012xxx)
    b. Left Hand (24W013xxx)
18. Wood Handrail Outside Corner (24W019xxx)
19. RC-10 Cushion (24U967108H)
20. *Acrovyn Crashrail Cover*
    a. Solid Color (24U009xxx)
    b. Acrovyn Woodgrains and Brushed Metals Color (24U616xxx)
21. Top Plate (24A337000)
22. 1/4-20 x 1/2" Hex Head Machine Screw (90H052002)
23. Retainer Splice Bar (24I976000)
24. 1/4" Lock Washer (90H006003)
25. 1/4-20 Hex Nut (90H010001)
26. Wood Handrail Drill Jig (90H110010)
27. Specified Fastener (see table on bottom of page 3)

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Mississauga, ON | 888.895.8955 | 905.274.3611

www.c-sgroup.com
IWPTechSupport@c-sgroup.com

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INSTALLATION INSTRUCTIONS

1. Establish handrail height above finish floor. Deduct 3-5/16" [83.6mm] and snap a chalk line at that height to mark the locations of the fasteners for the handrail bracket.

2. Cut the ligature resistant mounting bracket and handrail retainers to length using the required deductions (see layout view). For outside corners, the mounting bracket should be mitered together. Pre-drill clearance holes for the specified wall fastener in the ligature resistant mounting bracket 3" [76.2mm] from each end. Reference chart on bottom of page 3 for correct drill diameters. All other bracket holes must not exceed 16" [406.4mm] on center. Attach closing plates at the end of each ligature resistant mounting bracket where necessary by using two (2) #6 x 1/2" tamper-resistant sheet metal screws.

NOTE: When splicing the aluminum retainer, use the splice bar as a template and pre-drill the aluminum retainer with 9/32" drill bit.

3. Place a quick lock at each clearance hole on the ligature resistant bracket. Use the appropriate fasteners and attach the bracket and handrail retainer assemblies to the wall at the pre-drilled locations. See figure "A" callout on page 1. The quick lock is used for a spacer only. It does not have to be engaged.

4. Cut accent reveal to length and insert into slot provided in the top section of the aluminum retainer.

5. Where the retainer will have an end cap / outside corner, attached the 10C Quick Lock retainer end plate to the retainer using two (2) #6 x 1/2" sheet metal screws

6. Cut wood top rail to exact length of retainer. See figure "B" call out on page 1 for drilling cut end of rail. Bevel the cut edges on handrail end slightly with 150 grit sandpaper to match bevel on wood end caps. Touch up sanded edges with stain marker. Using the holes in the aluminum retainer as a guide, drill 3/32" diameter pilot holes 3/8" dep into the wood handrail. Attach the top rail to the retainer using the #6 x 5/8" Phillips flat head sheet metal screws.

7. Attach all end caps / outside corners:
   a. Attach crash rail portion of end cap to the retainer:
      i. Use end cap as template to drill 7/32" pilot holes in retainer.
      ii. Attach end cap / outside corners by sliding the end cap onto the end of the aluminum retainer and securing into position using two (2) #10-24 x 1/2" round head slotted machine screw with lock washer and #10 hex nut at each end cap and four (4) at each outside corner.

   b. Attach handrail portion of end cap to retainer:
      i. Slide the end cap dowel into the alignment hole in the rail. Wood glue must be applied to the dowel prior to insertion.
      ii. Apply hot melt glue (not supplied) on the reverse side of the end cap where the adaptor fits into the bottom groove of the top cap.

NOTE: To aid in locating the crash rail end caps correctly, cut a 4" [101.6mm] section of cover from scrap and snap it on the retainer. Locate the cap so it aligns flush with the top and bottom of the cover.

8. Cut RC-10 cushion to length noting required deductions (see layout view) and install onto aluminum retainer.

9. Cut Acrovyn crash rail cover to length. The cover length is determined by measuring the distance between the installed end caps and / or outside corner assemblies. Install the Acrovyn crash rail cover onto the lower portion of the retainer.

10. Using the end plate / outside corner plate as a template, mark the hole locations and drill 5/32" pilot holes. Install the end plates with two (2) #6 x 1/2" tamper-resistant sheet metal screws (four (4) per outside corner plate).

11. Cut the continuous top plate to the proper length by measuring the distance between the installed end plates and / or outside corner plates.

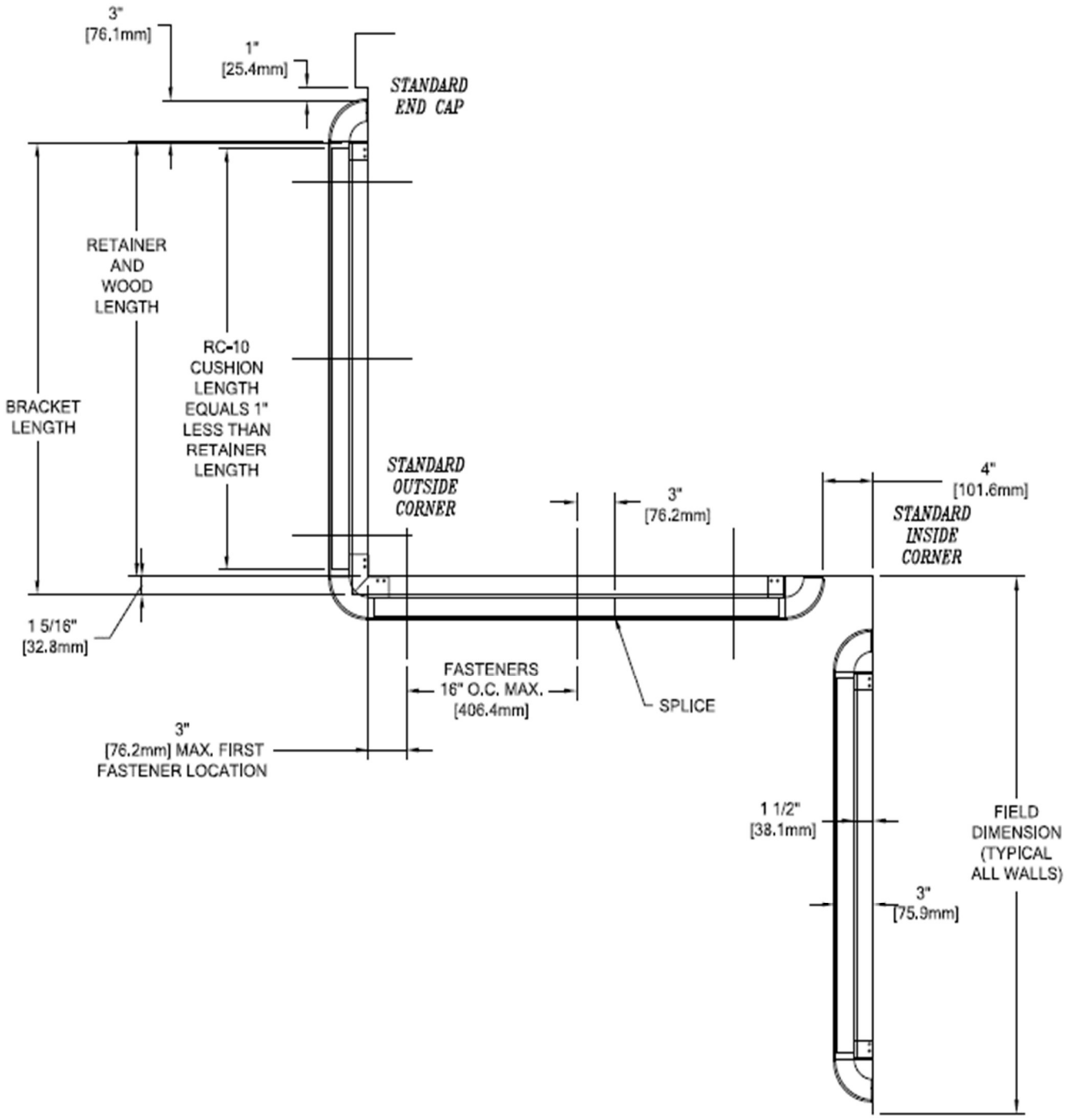
12. Install the top plate onto the ligature resistant bracket. Place a wood block on top of the top plate. While holding the top plate somewhat level, use a rubber mallet to strike the wood block.

NOTE: Do not hammer directly onto the top plate as this may cause damage to the top plate.

13. Work down along the length of the top plate, driving the top plate approximately half onto the ligature resistant bracket. Return and drive the top plate the remainder of the way in until the top plate is seated flush with the end plates and / or outside corner plates.

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WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETER		CS PART NUMBER
		WALL	RETAINER	
20. GA. Steel Stud / Gypsum Wall (High Load)	1/4-20 x 5" S/S Phillips Pan Head Machine Screw 1/4" S/S Toggle Wing 1/4" Lock Washer 1/4" Flat Washer	1/2"	9/32"	90H872004 90H873004 90H006003 90H024002

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