

P-OW HANDRAIL
WITH INTERNATIONAL OFFSET

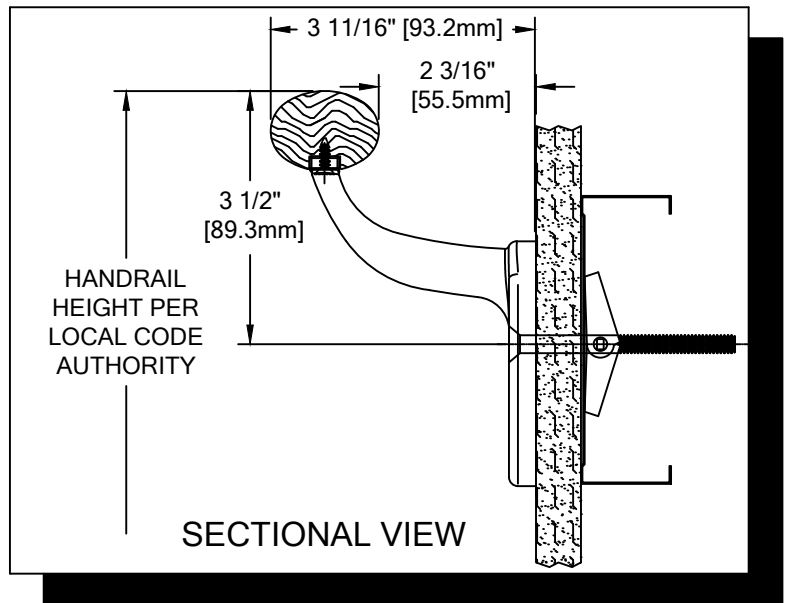
PLEASE READ

PLEASE READ THESE INSTRUCTIONS THOROUGHLY PRIOR TO BEGINNING THE P-OW-INT HANDRAIL INSTALLATION!

THIS INSTRUCTION SHEET IS INTENDED TO PROVIDE A SPECIFIC GUIDE TO FOLLOW FOR THE INSTALLATION OF THIS P-OW-INT HANDRAIL. CONTAINED WITHIN IS THE TECHNICAL INFORMATION AND INSTALLATION TECHNIQUES REQUIRED TO COMPLETE AN EFFICIENT, NEAT AND LONG-LASTING INSTALLATION.

INSPECT ALL MATERIALS FOR DAMAGE OR MISSING PARTS. IF YOU DISCOVER DAMAGED OR MISSING MATERIALS, IN THE USA PLEASE NOTIFY THE FACTORY AT (800) 233-8493, AND IN CANADA (888) 895-8955 FOR CUSTOMER SERVICE.

P-OW-INT HANDRAIL MUST BE INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID ANY PRODUCT WARRANTIES AND RESULT IN AN UNSUCCESSFUL INSTALLATION. FOR SPECIFIC QUESTIONS REGARDING THE INSTALLATION OF THIS P-OW-INT HANDRAIL PLEASE CALL THE FACTORY IN THE USA AT (800) 233-8493 OR EMAIL IWPTECHSUPPORT@C-SGROUP.COM. IN CANADA CALL (888) 895-8955.



IMPORTANT NOTES

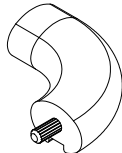
1. DUE TO WOOD BEING A NATURAL PRODUCT, COMPONENTS MAY GROW AND SHRINK AT DIFFERENT RATES. BECAUSE OF THIS, CS HAS DESIGNED THIS HANDRAIL TO UTILIZE A BEVEL AS SHOWN IN THESE INSTRUCTIONS (SEE FIGURE 1). THIS BEVEL MUST BE APPLIED AT ALL WOOD JOINTS AND MUST MATCH FACTORY BEVEL ON END CAPS.
2. DUE TO THE NATURE OF WOOD, COMPONENT COLORS MAY VARY. SORT WOOD COMPONENTS AND MATCH PARTS BY COLOR.
3. ALL WOOD HANDRAIL TO BE SUPPLIED IN STOCK LENGTHS OF 7'-0" TO 12'-0" VARIABLE. THIS MATERIAL IS TO BE FIELD CUT USING QUALITY EQUIPMENT TO INSURE THAT ALL CUTS ARE SQUARE. WHEN CUTTING MATERIAL SECTIONS, CS RECOMMENDS USING AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT, TO MINIMIZE CHIPPING AND MAINTAIN JOINT ALIGNMENT
4. RADIAL MATERIAL MAY BE SUPPLIED FACTORY FORMED OR IN STRAIGHT LENGTHS FOR FIELD FORMING. CONSULT FACTORY FOR OPTIONS.
5. ALL DIMENSIONS ARE TYPICAL.
6. FOR DRYWALL/PLASTER WALL CONSTRUCTION, IT IS RECOMMENDED FOR FASTENERS TO BE ENGAGED INTO METAL/WOOD STUDS TO MAINTAIN MAXIMUM PULLOUT STRENGTH. IF DURING INSTALLATION YOU ENCOUNTER SPECIAL WALL CONDITIONS THAT DO NOT ALLOW FOR DIRECT ATTACHMENT TO THE STUDS PLEASE CONSULT THE LOCAL AUTHORITY HAVING JURISDICTION.
7. INSTALL OUTSIDE CORNERS FIRST.
8. INSTALL LONGEST RUN OF HANDRAIL FIRST.
9. MATERIAL MUST REACH 65°F MIN. TO 75°F MAX. 24 HOURS PRIOR TO INSTALLATION. THIS IS ESSENTIAL TO MINIMIZE EXPANSION AND CONTRACTION OF MATERIAL.
10. MAY REQUIRE USE OF FIRE PUTTY WHEN INSTALLED ON FIRE WALL WITH TOGGLE BOLTS. REFERENCE INSTRUCTIONS 24FIREPUTTY FOR FIRE PUTTY INSTALLATION.
11. THIS HANDRAIL REQUIRES A MINIMUM OF 2 MOUNTING BRACKETS PER UNIT. THE MINIMUM END CAP-TO-END CAP HANDRAIL LENGTH IS 13 3/4" [349.1mm].
12. FOR MORE INFORMATION ON P-OW HANDRAIL SEE OUR WEBSTE AT www.c-sgroup.com.

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COMPONENTS & WALL FASTENERS



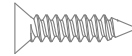
WOOD HANDRAIL
(24W240xxx)



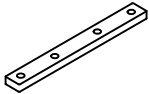
WOOD HANDRAIL ENDCAP
(RIGHT-HAND 24W449xxx SHOWN)
(LEFT-HAND 24W448xxx)
(CORNER 24W243xxx)



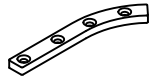
STAINLESS STEEL
MOUNTING BRACKET
(24S170000)
ALUMINUM POWDER COATED
BRACKET OPTIONAL
(24M991XXX)



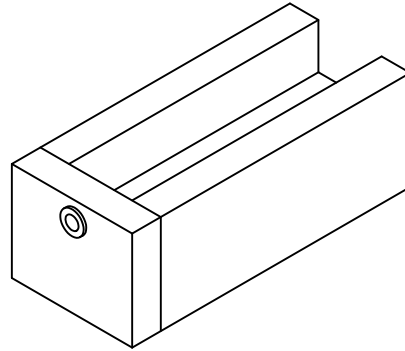
FASTENER #1
#6 X 5/8" S/S PHILLIPS
FLAT HEAD SMS
(90H231004)



HANDRAIL
SPLICE PLATE
(90H150010)



END CAP
MOUNTING PLATE
(90H142010)

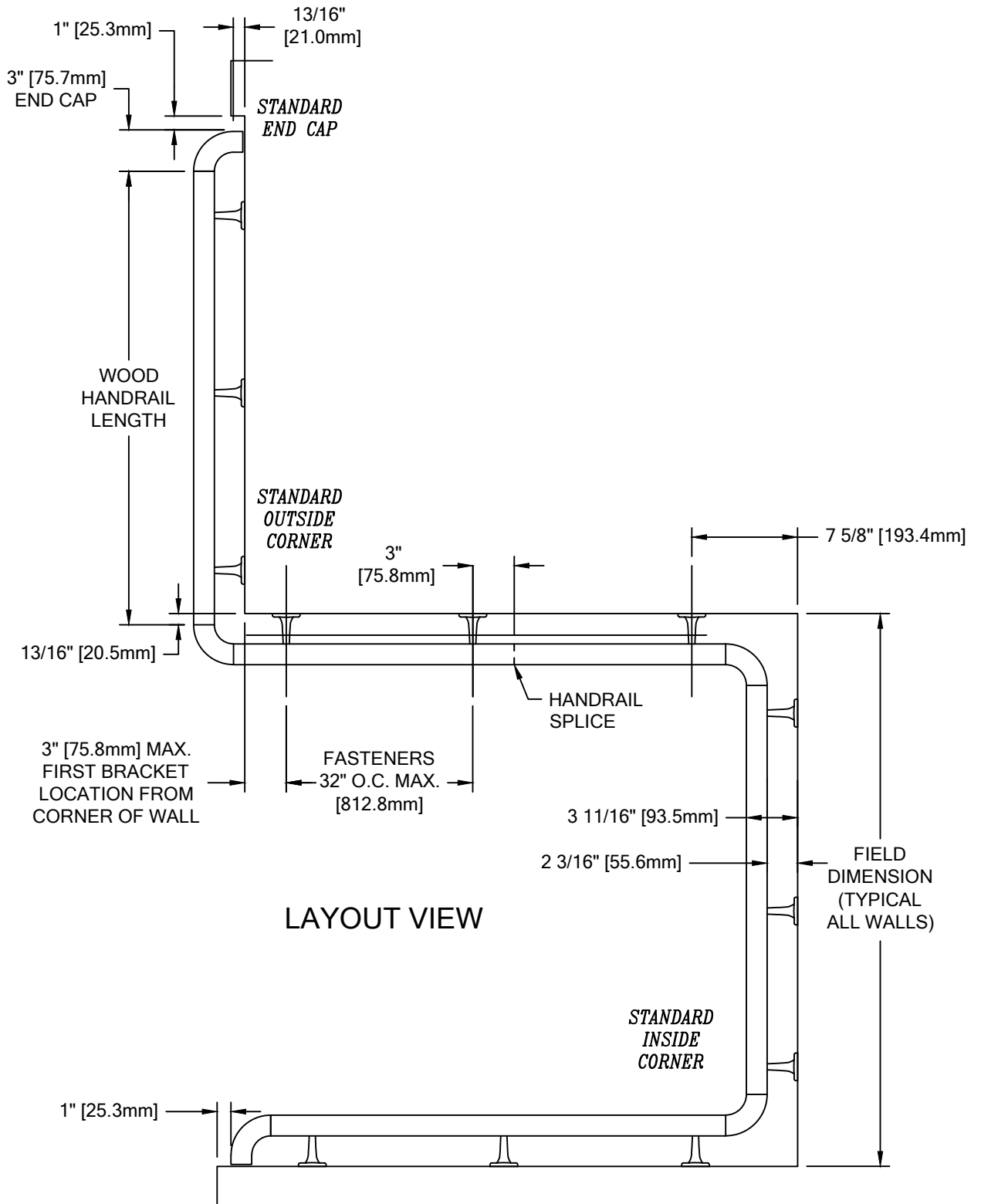


DRILL JIG
(90H113010)

WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		CS PART NUMBER
		WALL	RETAINER	
STEEL STUD/GYPSUM WALL	1/4-20 X 3" S/S FLAT HEAD BOLT WITH TOGGLE	3/4"	N/A	90H184002
CONCRETE/CONCRETE BLOCK	1/4" X 1 3/4" S/S FLAT HEAD MASONRY ANCHOR	3/16"	N/A	90H390000
WOOD STUD/GYPSUM WALL	#14 X 3" S/S PHILLIPS FLAT HEAD WOOD SCREW	7/32"	N/A	90H538004

**P-OW HANDRAIL
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LAYOUT VIEW



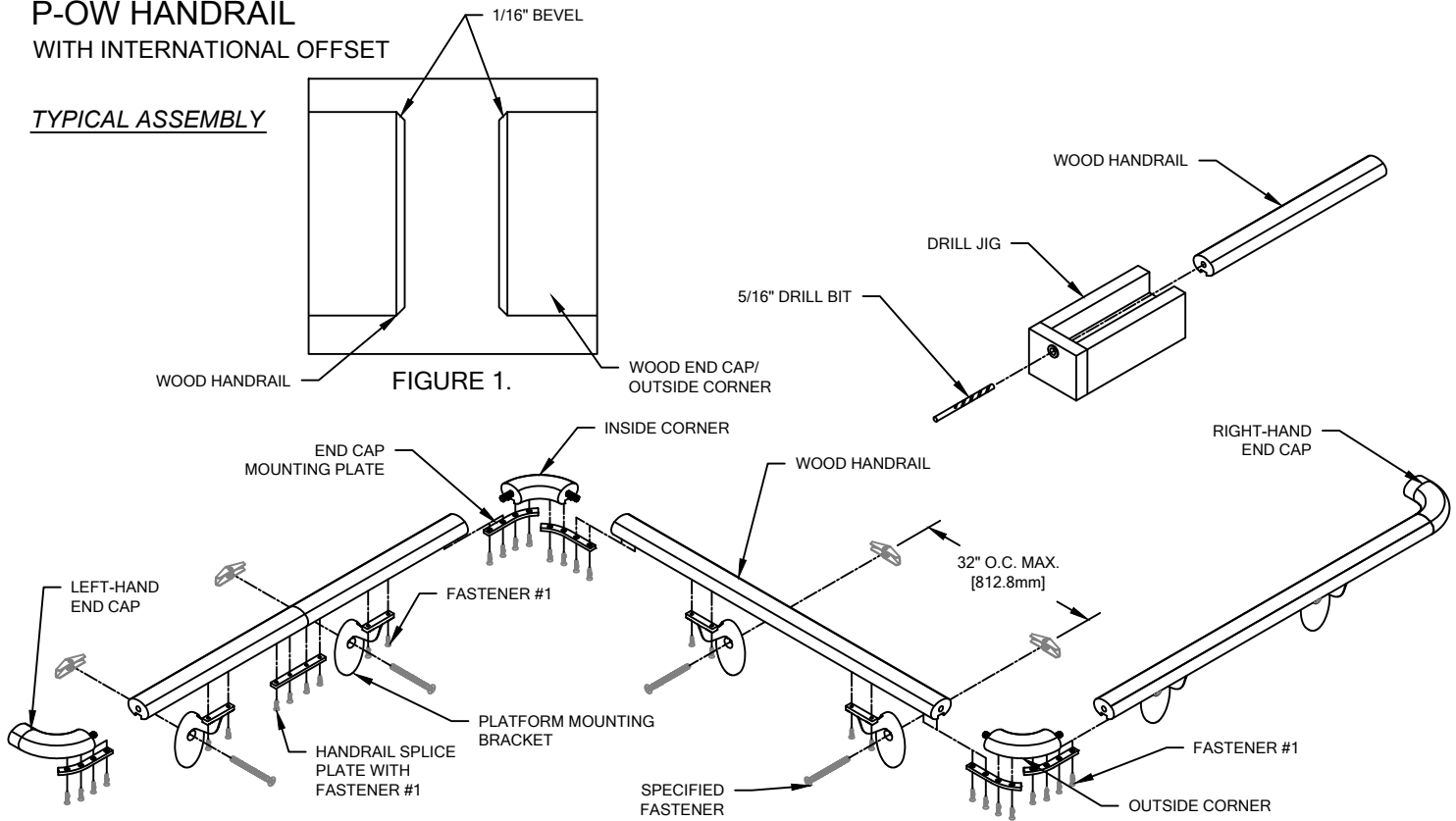
LAYOUT VIEW

IMPORTANT NOTES

1. WOOD HANDRAIL SPLICE SHOULD NOT EXCEED 3" [76.2mm] DISTANCE FROM A BRACKET.
2. TANGENT POINTS ON FACTORY FORMED RADIAL MATERIAL WILL BE MARKED APPROXIMATELY AND SHOULD BE CUT TO SUIT FIELD CONDITIONS.

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TYPICAL ASSEMBLY



NOTE: INSTALLATION OF LINEAL OR RADIAL P-OW HANDRAIL RAIL SHOULD BE DONE IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS.

1. USING "LOCAL CODE" REQUIREMENTS, ESTABLISH HANDRAIL HEIGHT ABOVE FINISH FLOOR. DEDUCT 3 3/8" [85.7mm] AND SNAP A CHALK LINE AT THAT HEIGHT. THIS MARKS THE LOCATION OF THE HOLE FOR THE MOUNTING BRACKET FASTENERS.
2. DRILL CLEARANCE HOLES IN WALL SURFACE FOR MOUNTING HARDWARE. REFERENCE CHART ON PAGE 2 FOR CORRECT DRILL DIAMETERS.

NOTE: SEE LAYOUT VIEW TO AID IN MOUNTING BRACKET LOCATION.

3. INSTALL MOUNTING BRACKETS USING APPROPRIATE FASTENERS. USE A LEVEL TO ENSURE THAT THE BRACKETS ARE LEVEL.
4. CUT THE WOOD HANDRAIL TO LENGTH USING THE REQUIRED DEDUCTIONS (REFERENCE LAYOUT VIEW). BEVEL THE HANDRAIL EDGES SLIGHTLY WITH 150 GRIT SANDPAPER TO MATCH THE WOOD END CAP BEVEL. TOUCH UP SANDED EDGES WITH STAIN PENCIL. (SEE FIGURE 1 ABOVE)

NOTE: IT IS RECOMMENDED THAT WOOD HANDRAIL BE CUT WITH AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT.

5. TO ENSURE PROPER ALIGNMENT OF HANDRAIL TO END CAP, USE THE DRILL JIG TO DRILL A HOLE FOR DOWEL PIN IN EACH END OF THE HANDRAIL. SEE ILLUSTRATION ABOVE.
 - LOCATE HANDRAIL TIGHT AGAINST DRILL JIG'S BOTTOM DRILL BUSHING.
 - DRILL 5/16" PILOT HOLE, 7/8" DEEP, IN EACH END OF THE HANDRAIL.
 - CONTINUALLY CLEAN OUT WOOD CHIPS AS THE PILOT HOLE IS BEING DRILLED.
6. ATTACH WOOD END CAPS TO WOOD HANDRAIL BY SLIDING THE END CAP DOWEL INTO THE ALIGNMENT HOLE IN THE HANDRAIL. BEFORE APPLYING WOOD GLUE, DRY FIT COMPONENTS TOGETHER TO DOUBLE CHECK FIT. APPLY WOOD GLUE INTO THE HOLE AND HANDRAIL SURFACE PRIOR TO END CAP INSERTION. TITEBOND WOOD GLUE IS RECOMMENDED FOR THIS APPLICATION. WIPE OFF ANY EXCESS GLUE.
7. ATTACH AN END CAP MOUNTING PLATE TO THE BOTTOM OF THE HANDRAIL AT THE END CAPS. USE THE MOUNTING PLATE AS A TEMPLATE TO DRILL 1/16" PILOT HOLES INTO THE WOOD. FASTEN THE MOUNTING PLATE TO THE HANDRAIL AND END CAP/OUTSIDE CORNER WITH FOUR #6 X 5/8" PHILLIPS FLAT HEAD SHEET METAL SCREWS.
8. DRILL 1/16" PILOT HOLES INTO THE WOOD HANDRAIL FOR MOUNTING BRACKET ATTACHMENT. MOUNTING BRACKETS ARE TO LOCATED 3" [76.2mm] FROM EACH END OF THE WOOD HANDRAIL AND 32" [812.6mm] ON CENTER ALONG LENGTH, AS REQUIRED.
9. FASTEN THE WOOD HANDRAIL TO THE WALL BRACKETS IN SUCCESSION BY INSERTING TWO #6 X 5/8" S/S PHILLIPS FLAT HEAD SHEET METAL SCREWS THROUGH THE UNDERSIDE OF THE BRACKET INTO THE WOOD HANDRAIL. **CAUTION:** OVER-TORQUEING MAY CAUSE THE FASTENERS TO STRIP.

NOTE: WHEN FIELD FORMING RADIUS HANDRAIL, BE SURE TO APPLY NEEDED PRESSURE FROM BRACKET TO BRACKET.

6/15/18