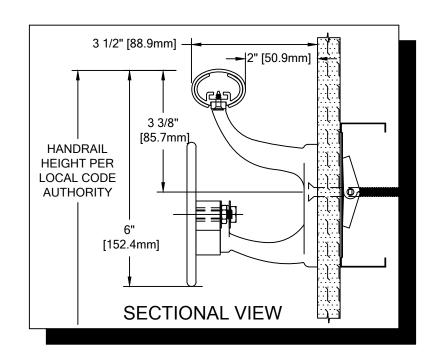
PLEASE READ

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

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

P-OASN 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 P-OASN HANDRAIL PLEASE CALL THE FACTORY AT (800) 233-8493 OR IN CANADA (888) 895-8955.

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.



IMPORTANT NOTES

- ALL LINEAL MATERIAL TO BE SUPPLIED IN STOCK LENGTHS. POWDER COATED HANDRAIL IN 12'-0", AND ALUMINUM AND ACROVYN IN 20'-0" LENGTHS. THIS MATERIAL IS TO BE FIELD CUT USING QUALITY EQUIPMENT TO INSURE THAT ALL CUTS ARE SQUARE. WHEN CUTTING MATERIAL SECTIONS, C/S RECOMMENDS USING AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT, TO MINIMIZE CHIPPING AND MAINTAIN JOINT ALIGNMENT.
- 2. THIS MATERIAL HAS BEEN MANUFACTURED TO CUSTOMER SPECIFIED DIMENSIONS AND CAN NOT BE CUT OR MODIFIED ON SITE. TO DO SO COULD VOID THE WARRANTY.
- 3. ALL DIMENSIONS ARE TYPICAL.
- 4. FOR DRYWALL/PLASTER WALL CONSTRUCTION, IT IS RECOMMENDED FOR FASTENERS TO BE ENGAGED INTO METAL/WOOD STUDS TO MAINTAIN MAXIMUM PULLOUT STRENGTH.
- 5. INSTALL OUTSIDE CORNERS FIRST.
- 6. INSTALL LONGEST RUN OF HANDRAIL FIRST.
- 7. ALUMINUM RETAINER SPLICE SHOULD NOT EXCEED 3" [76.2mm] DISTANCE FROM A BRACKET.
- 8. THE DISTANCE BETWEEN AN ACROVYN SPLICE JOINT AND AN ALUMINUM RETAINER SPLICE JOINT SHOULD NOT BE LESS THAN 12" [304.8mm].
- 9. MATERIAL MUST REACH 65°F MIN. TO 75° MAX. 24 HOURS PRIOR TO INSTALLATION. THIS IS ESSENTIAL TO MINIMIZE EXPANSION AND CONTRACTION.
- 10. MAY REQUIRE USE OF FIRE PUTTY WHEN INSTALLED ON FIRE WALL WITH TOGGLE BOLTS.
- 11. THIS HANDRAIL REQUIRES A MINIMUM OF 2 MOUNTING BRACKETS PER UNIT.

COMPONENTS & WALL FASTENERS



FASTENER #1 #10 X 3/4" PHILLIPS PANHEAD TEK SCREW (90H739002)



ACROVYN HANDRAIL COVER (24U800xxx)



ACROVYN HANDRAIL RETAINER (24A221000)



PLATFORM MOUNTING BRACKET (24M994xxx)



FASTENER #2 #6 X 5/8" PHILLIPS FLAT HEAD SMS (90H231002)



HANDRAIL END CAP (24I841xxx, LH) (24I840xxx, RH SHOWN)



HANDRAIL OUTSIDE CORNER ASSEMBLY



HANDRAIL RETAINER SPLICE BAR (90H150010)



FASTENER #3 1/4"-20 X 3/4" HEX HEAD MACHINE SCREW (90H008002)





BRACKET ADAPTER PLATE (24F230003)

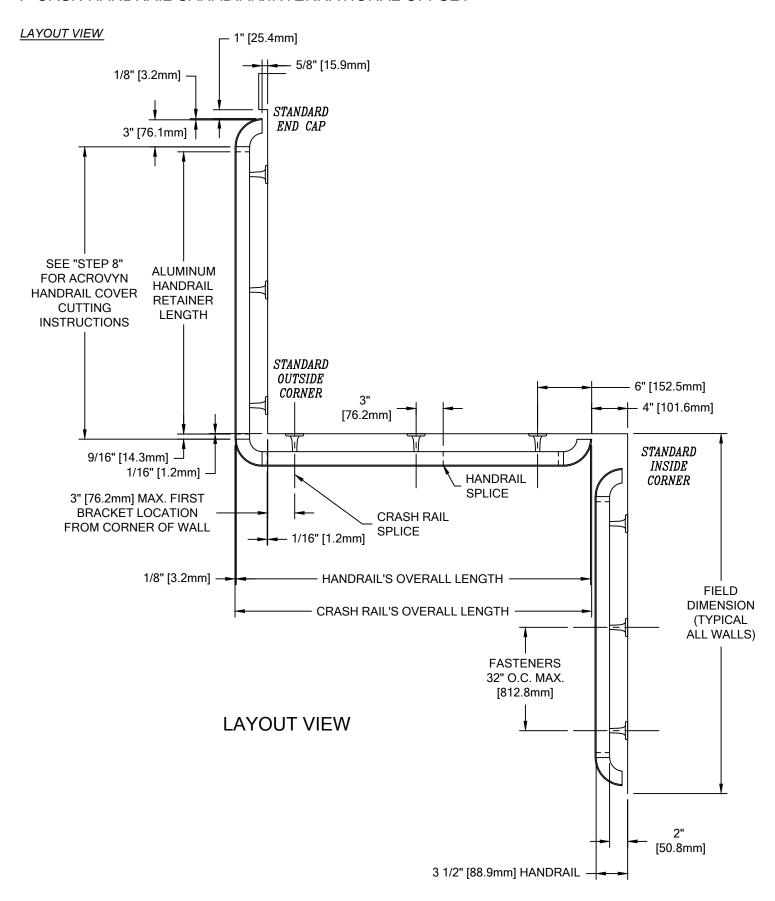




FASTENER #5 1/4"-20 HEX NUT (90H010001)

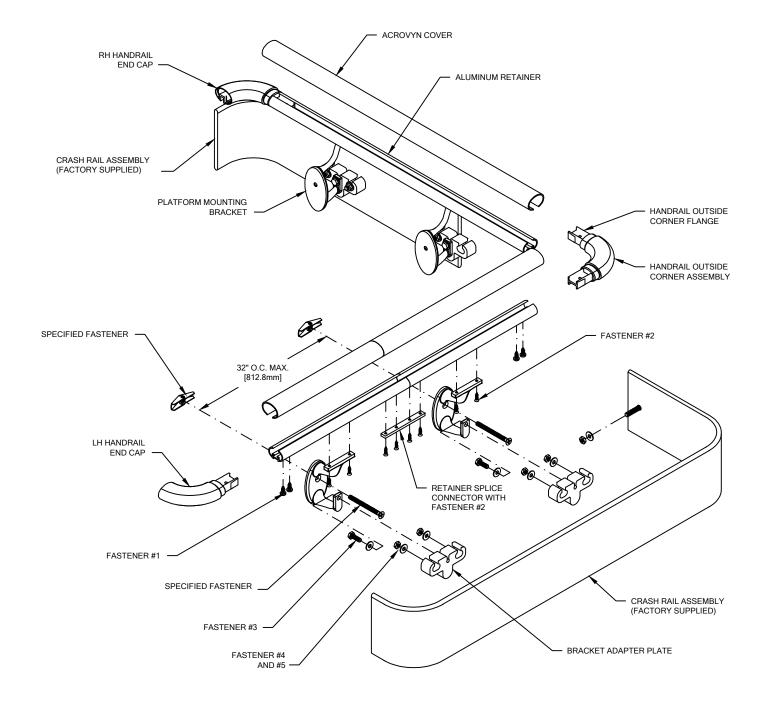
WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		C/S PART
		WALL	RETAINER	NUMBER
STEEL STUD/GYPSUM WALL	1/4-20 X 3" FLAT HEAD BOLT/TOGGLE WING	3/4"	N/A	90H138004
CONCRETE/CONCRETE BLOCK	1/4" X 1 3/4" FLAT HEAD MASONR ANCHOR	3/16"	N/A	90H037004
WOOD STUD/GYPSUM WALL	#14 X 3" PHILLIPS FLAT HEAD WOOD SCREW	7/32"	N/A	90H536002







TYPICAL ASSEMBLY





P-OASN HANDRAIL CANADIAN/JNTERNATIONAL OFFSET ACROVYN COVER TYPICAL HANDRAIL ASSEMBLY ALUMINUM RETAINER RH HANDRAIL END CAP HANDRAIL OUTSIDE CORNER FLANGE PLATFORM MOUNTING HANDRAIL OUTSIDE CORNER ASSEMBLY SPECIFIED FASTENER 32" O.C. MAX. FASTENER #1 [812.8mm] FASTENER #2 LH HANDRAIL END CAP RETAINER SPLICE SPECIFIED FASTENER CONNECTOR WITH FASTENER #2

- 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. TO AVOID MISALIGNMENT PROBLEMS, USE CRASH RAIL WITH ATTACHED BRACKETS AS A TEMPLATE TO MARK BRACKET LOCATIONS ON THE WALL, REFERENCE STEP #10.
- 3. INSTALL MOUNTING BRACKETS USING APPROPRIATE FASTENERS. USE A LEVEL TO ENSURE THAT THE BRACKETS ARE LEVEL. WARNING: MOUNTING BRACKET LOCATIONS MUST BE IDENTICAL TO THE FACTORY INSTALLED STUDS ON THE BACKSIDE OF THE CRASH RAIL.
- 4. CUT THE CONTINUOUS ALUMINUM RETAINER TO LENGTH USING THE REQUIRED DEDUCTIONS (REFERENCE LAYOUT VIEW).

NOTE: IT IS RECOMMENDED THAT THE ACROVYN COVERS AND ALUMINUM RETAINER BE CUT WITH AN 80-100 TOOTH CARBIDE TIPPED SAW BLADE OR EQUIVALENT.

- 5. ATTACH END CAPS AND OUTSIDE CORNERS:
 - INSERT THE END CAP INTO THE RETAINER.
 - DRILL 1/8" DIAMETER PILOT HOLES THROUGH THE BOTTOM OF THE RETAINER AND END CAP, 7/8" [22.2mm] AND 1-9/16" [39.7mm] FROM THE END OF THE RETAINER.
 - REMOVE END CAP AND DRILL 11/64" CLEARANCE HOLES FOR #10 X 3/4" PHILLIPS PANHEAD SHEET METAL SCREWS.
 - ATTACH END CAP TO RETAINER WITH THE ABOVE MENTIONED SCREWS, UP THROUGH THE BOTTOM OF THE RETAINER.

NOTE: TO AID IN LOCATING THE END CAPS CORRECTLY, CUT A 4" [101.6mm] SECTION OF GUARD FROM SCRAP AND SNAP IT ON THE RETAINER. LOCATE THE CAP SO IT ALIGNS FLUSH WITH TOP AND BOTTOM OF THE GUARD.

- 6. DRILL 1/16" PILOT HOLES INTO THE RETAINER FOR MOUNTING BRACKET ATTACHMENT. MOUNTING BRACKETS ARE TO BE LOCATED 3" [76.2mm] FROM EACH END OF THE RETAINER AND 32" [612.6mm] ON CENTER ALONG LENGTH, AS REQUIRED.
- 7. FASTEN THE ALUMINUM RETAINER TO THE WALL BRACKETS IN SUCCESSION BY INSERTING TWO #6 X 5/8" PHILLIPS FLAT HEAD SHEET METAL SCREWS THROUGH THE UNDERSIDE OF BRACKET INTO THE RETAINER. CAUTION: OVER-TORQUEING MAY CAUSE THE FASTENERS TO STRIP.
- 8. CUT THE ACROVYN COVER TO THE PROPER LENGTH. THE COVER LENGTH IS DETERMINED BY MEASURING THE DISTANCE BETWEEN THE INSTALLED END CAPS AND/OR INSIDE/OUTSIDE CORNER ASSEMBLIES.

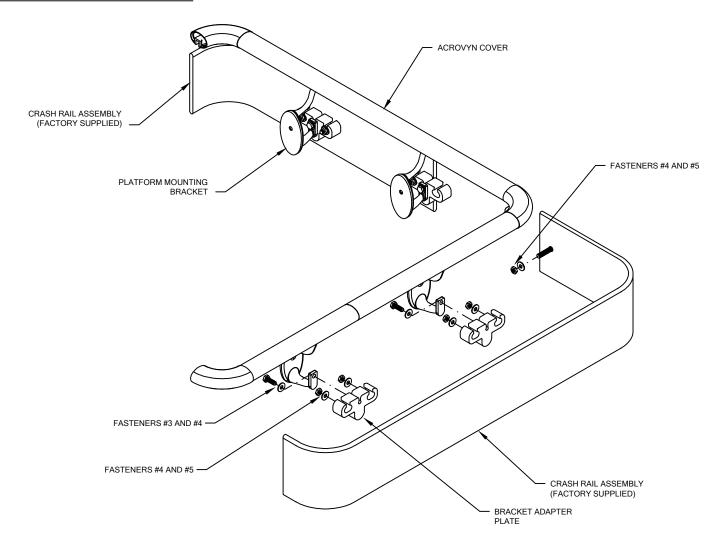
NOTE: IT IS RECOMMENDED THAT THE ACROVYN COVER BE CUT SLIGHTLY LONGER (1/32" [0.8mm] UP TO 5'-0" [1.5m], 1/16" [1.6mm] OVER 5'-0" [1.5m]) THAN THE MEASURED DISTANCE. THIS ADDITIONAL LENGTH WILL PROVIDE FOR A TIGHTER GUARD-TO-END CAP FIT.

9. STARTING AT ONE END, SNAP THE ACROVYN COVER ONTO THE RETAINER ALONG THE LENGTH OF THE HANDRAIL

NOTE: MANUFACTURER RECOMMENDS ALL PRINTED "PRODUCT IDENTIFICATION" ON THE REAR OF THE ACROVYN PROFILE SHALL BE ORIENTED IN THE SAME DIRECTION DURING INSTALLATION TO ENSURE PROPER ALIGNMENT AT SPLICE BUTT JOINTS.



TYPICAL CRASH RAIL ASSEMBLY



NOTE: THIS MATERIAL HAS BEEN MANUFACTURED TO CUSTOMER SPECIFIED DIMENSIONS AND CAN NOT BE CUT OR MODIFIED ON SITE. TO DO SO COULD VOID THE WARRANTY.

10. ATTACH CRASH RAIL TO THE WALL MOUNTING BRACKETS:

- DISTRIBUTE MATERIAL. MATCH THE NUMBER ON THE BACK OF THE RAIL TO THE MARK NUMBER ON THE DRAWING. SOME LARGE RUNS REQUIRE MORE THAN ONE PIECE OF CRASH RAIL. THESE ARE NOTED WITH A MARK NUMBER AND A LETTER, I.E., 2001A, 2001B.
- LOCATE A BRACKET ADAPTER PLATE ON EACH SET OF THREADED STUDS ON THE BACKSIDE OF THE CRASH RAIL.
- SECURE THE BRACKET ADAPTER PLATE BY INSTALLING A 1/4" WASHER AND 1/4-20 NUT ONTO EACH THREADED STUD.
- ALIGN EACH MOUNTING BRACKET WITH THE BRACKET ADAPTER PLATE'S THREADED HOLE.
- INSERT 1/4-20 HEX HEAD BOLT AND 1/4" WASHER THROUGH THE MOUNTING BRACKET AND INTO THE MOUNTING BRACKET'S THREADED HOLE. THE BRACKET ADAPTER PLATE IS SLOTTED TO ACCOMMODATE ANY SLIGHT MISALIGNMENT.
- FASTENERS MUST BE TORQUED TO 150 IN/LBS.



Muncy, Pennsylvania ● (800) 233-8493 ● Fax (570) 546-5169 Mississauga Ontario ● (888) 895-8955 ● Fax (905) 274-6241 www.c-sgroup.com 9/20/11 CDN/DP