

Instructions for 51450 Manhole guardrail

Mounting hardware chart at end (A),(B),(C).

Install roof stair first if applicable. On the side beside the manhole, leave the lowest post and mounting foot of the roof stairs off, the post for the manhole guard may replace it. Lay the Handrail (HR1048) across the lower edge of the Manhole, place one end against the roof stairs. If the ends of the Handrail clear the roof ribs continue. If ends of handrail hit a rib adjust handrail to clear ribs set posts. If the Left Post (MG001) does not fit against the stairs, the Stair Post and Foot will need to be installed.

If no roof stairs are used center handrail to set posts. (Fig1)

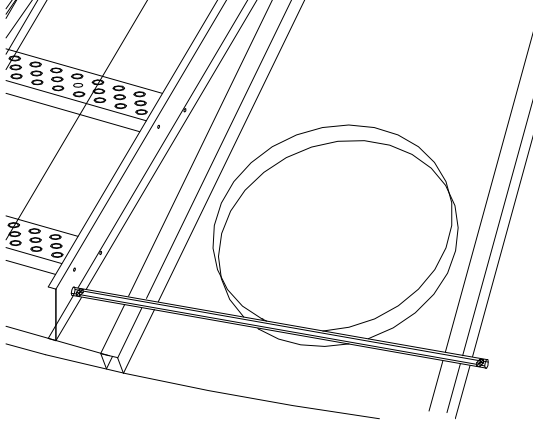


Fig 1

Install the Left Post (MG0001) on to the lowest edge of roof beside roof stair siderail. Plumb post and attach to roof and siderail. Drill a 5/16 hole through the roof sheet attach with 5/16 hardware (A). Drill a 5/16 hole through the post and siderail. Attach with 5/16 hardware (B). Attach Left Knee Brace (MG0005) to Left Post and the roof panel attach with 5/16 hardware (A-B). (Fig 2)

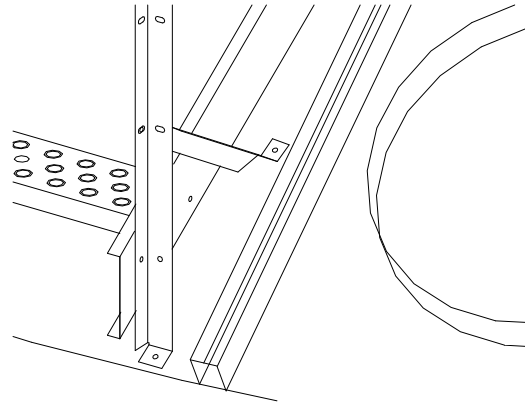


Fig 2

Attach the Center Rail (MG0004) and Diagonal Brace (MG0003) to the center of the post. (Fig 3)

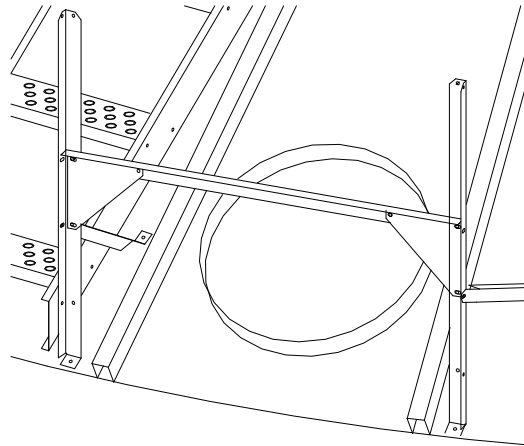


Fig 3

Attach Right Post (MG0002) to Center Rail plumb, and attach to the roof. Attach Right Knee Brace (MG0006) to post and roof panel. (Fig 3)

Attach the Upper Handrail (HR1048) between post Hardware (C) (Fig 4).

Measure from the Lower Left Post beside stairs up the roof 46". If there is room between the roof rib and the roof stairs, attach post same as the first. If not, place the post outside of the roof rib and attach to roof. Plumb post and attach Left Knee Brace to post and roof. (Fig 4)

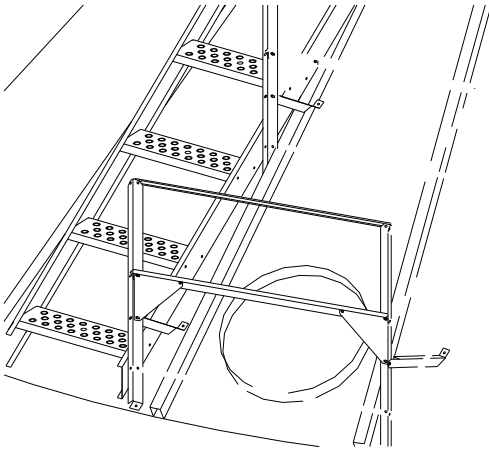


Fig 4
 Attach Center Rail and Diagonal Brace to Upper Left Post. Attach Center Rail and Diagonal Brace to Upper Right Post. Attach 3 Handrails (HR1048) between the 2 Right Pos and plumb Upper Right Post and attach to roof. Attach Right Knee Brace. (Fig5)

When installing Handrails, install Lower Handrail at the eave of the bin after the Side Handrail are installed and tightened. Attach the rest of the Handrails and tighten all bolts. **(The lowest Handrail of the upper set may be left off to allow for the manhole lid to open all the way).**

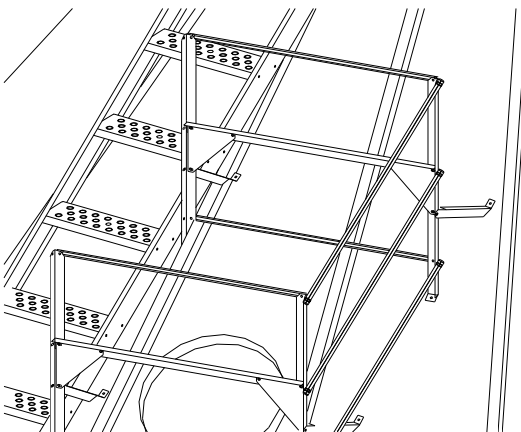
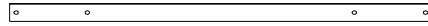


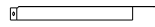
Fig 5
 Tight all bolts.



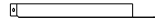
(7)HR1048 Handrail



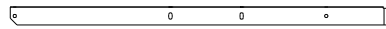
(2) MG0004 Handrail



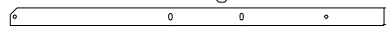
(2) MG0006 Right Knee Brace



(2)MG0005 Left Knee Brace



(2) MG0002 Right Post



(2) MG0001 Left Post



(4) MG0003
 Diagonal
 Brace

(8)MG0007
 Backer
 Plate

- (A)
 5/16 hardware for mounting to roof
 5/16 x 1 Bin Bolt
 5/16 Backing washer under roof
 5/16 nut

- (B)
 Attaching post, knee braces, angle handrail and diagonal brace
 5/16 x 3/4 cap screw
 5/16 Flat washer on slots
 5/16 nut

- (C)
 Attaching round handrail
 5/16 x 1 1/2 carriage bolt
 5/16 whiz lock nut