UPSIDE INNOVATIONS

ADA RAMP & STEP INSTALLATION MANUAL

Part #: HW9002

REQUIRED TOOLS:

- Reciprocating Saw with Metal Cutting Blade
- Drill
- 7/16” Drill Bit for Metal Drilling
- 1/4” Drill Bit for Wood Drilling
- 9/16” Standard Socket with Extension
- Ratchet Handle for 9/16” Socket
- Socket Adapter Bit for Drill (if using drill to drive socket)
- 9/16” Standard Wrench
- 5/16” Hex Head Driver Bit
- 3/16” Allen Wrench
- 3" C-Clamp (minimum)
- Tape Measure
- 4’ Level

RECOMMENDED TOOLS:

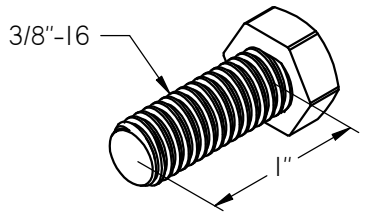
- Cordless Drill
- Extension Cords
- 9/16” Deep Well Socket
- Magnetic 5/16” Hex Head Driver Bit
- Vise-Grip style C-Clamp(s)
- Shop Vacuum

TOOLS THAT MAY BE REQUIRED:

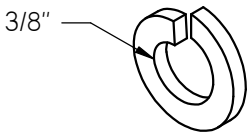
- Shovel
- Hammer Drill
- 3/8” Masonry Drill Bit

TABLE OF CONTENTS:

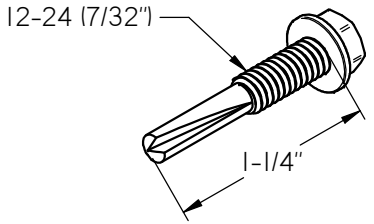
# COMMON HARDWARE PARTS



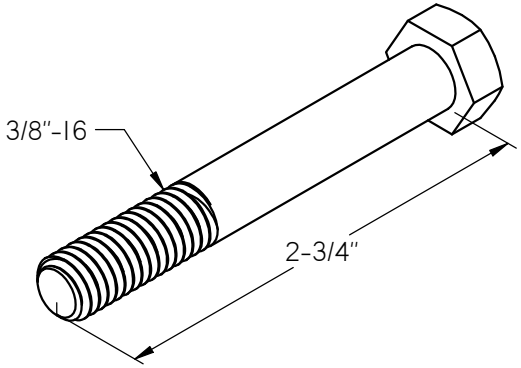

3/8"-16 X 1" HEX HEAD BOLT



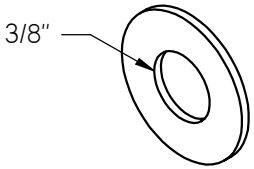

3/8" SPLIT LOCK WASHER



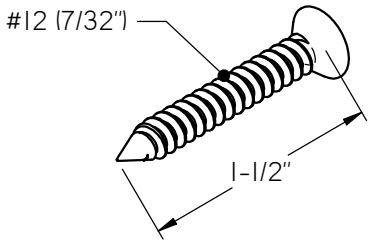

12-24 X 1-1/4" HEX HEAD
TEK SCREW



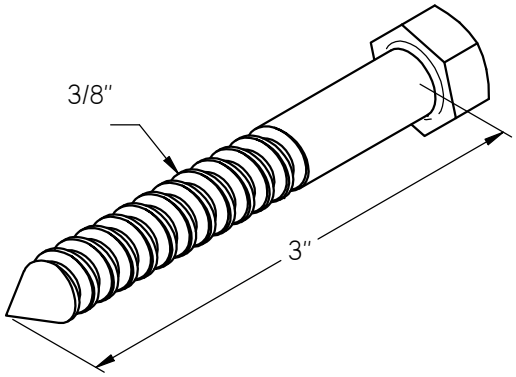

3/8"-16 X 2-3/4" HEX HEAD BOLT



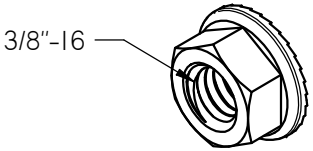

3/8" FLAT WASHER




#12 X 1-1/2" FLAT HEAD
PHILLIPS WOOD SCREW

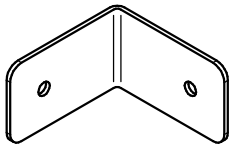



3/8" X 3" HEX HEAD LAG BOLT

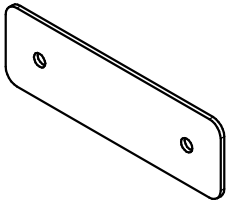



3/8"-16 HEX SERRATED
FLANGE LOCK NUT

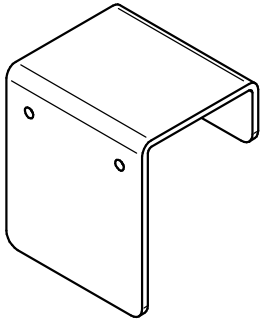
# BRACKETS, KEYS AND SPLICES



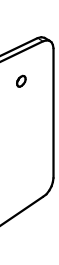
2-1/2" X 2-1/2" 90° BRACKET



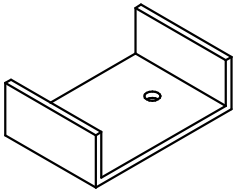
4-3/4" FLAT BRACKET



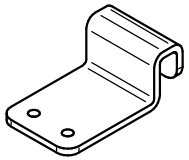
RAMP KEY



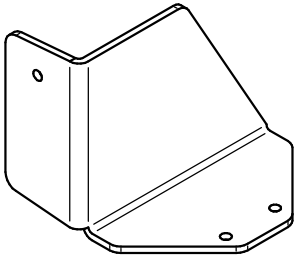
RAMP END KEY (LEFT)



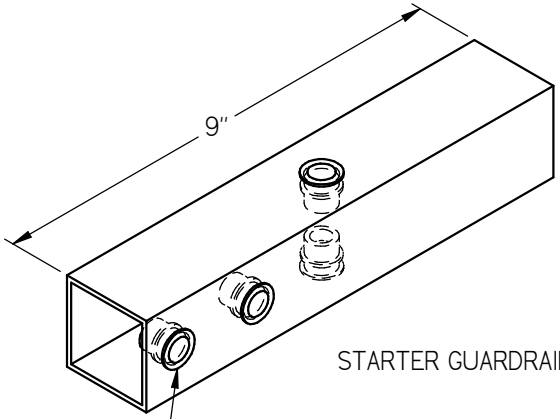
PLATFORM JOINT
HOOK BRACKET



STEP KEY

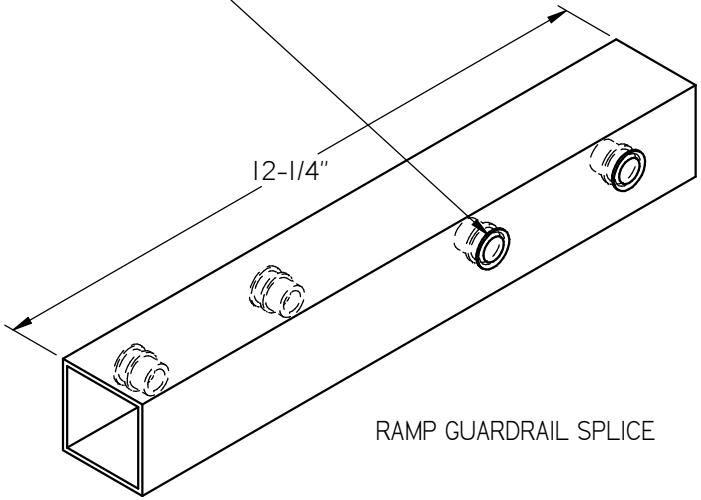


RAMP END KEY (RIGHT)



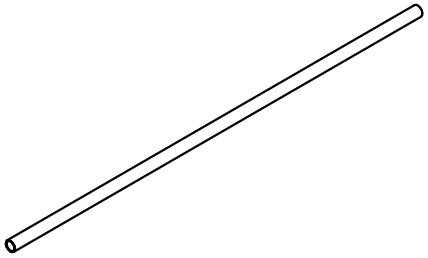

STARTER GUARDRAIL SPLICE

PRE-INSTALLED RIVET NUTS

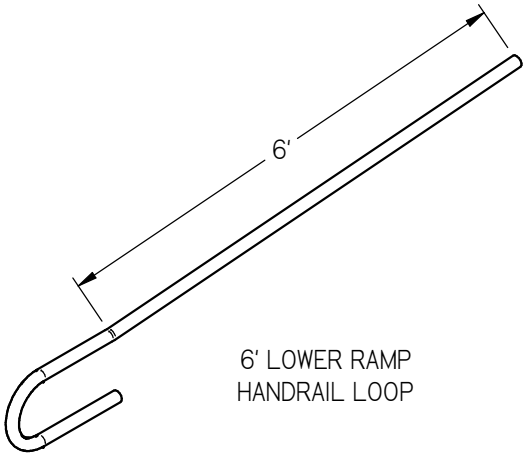



RAMP GUARDRAIL SPLICE

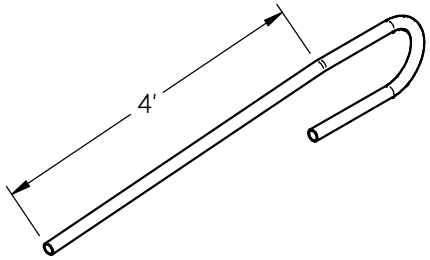
# HANDRAIL COMPONENTS



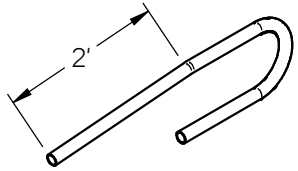
STRAIGHT RAMP HANDRAIL
SUPPLIED IN 2', 4', 6', 8' OR 10'
DEPENDING ON CONFIGURATION




6' LOWER RAMP
HANDRAIL LOOP

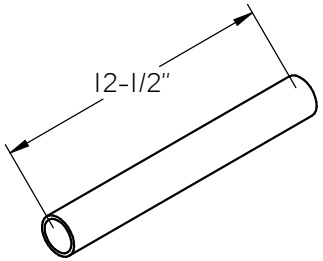



4' UPPER RAMP
HANDRAIL LOOP

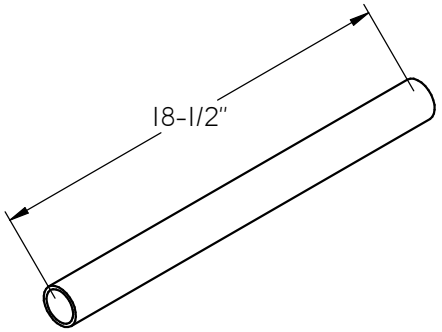



2' UPPER RAMP
HANDRAIL LOOP

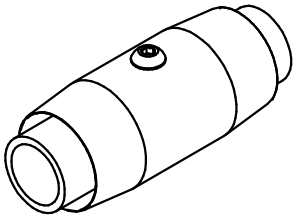
HANDRAIL ELBOW



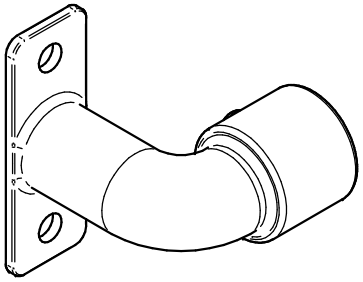

SWITCHBACK
HANDRAIL



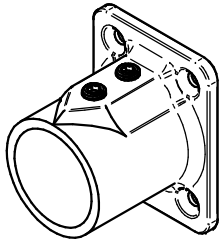

WALL CONNECTION
HANDRAIL



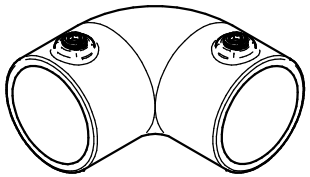
HANDRAIL SPLICE



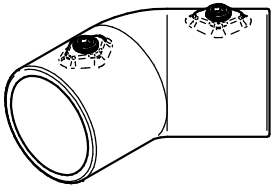
HANDRAIL LOOP
RETURN CASTING



HANDRAIL WALL
MOUNT CASTING

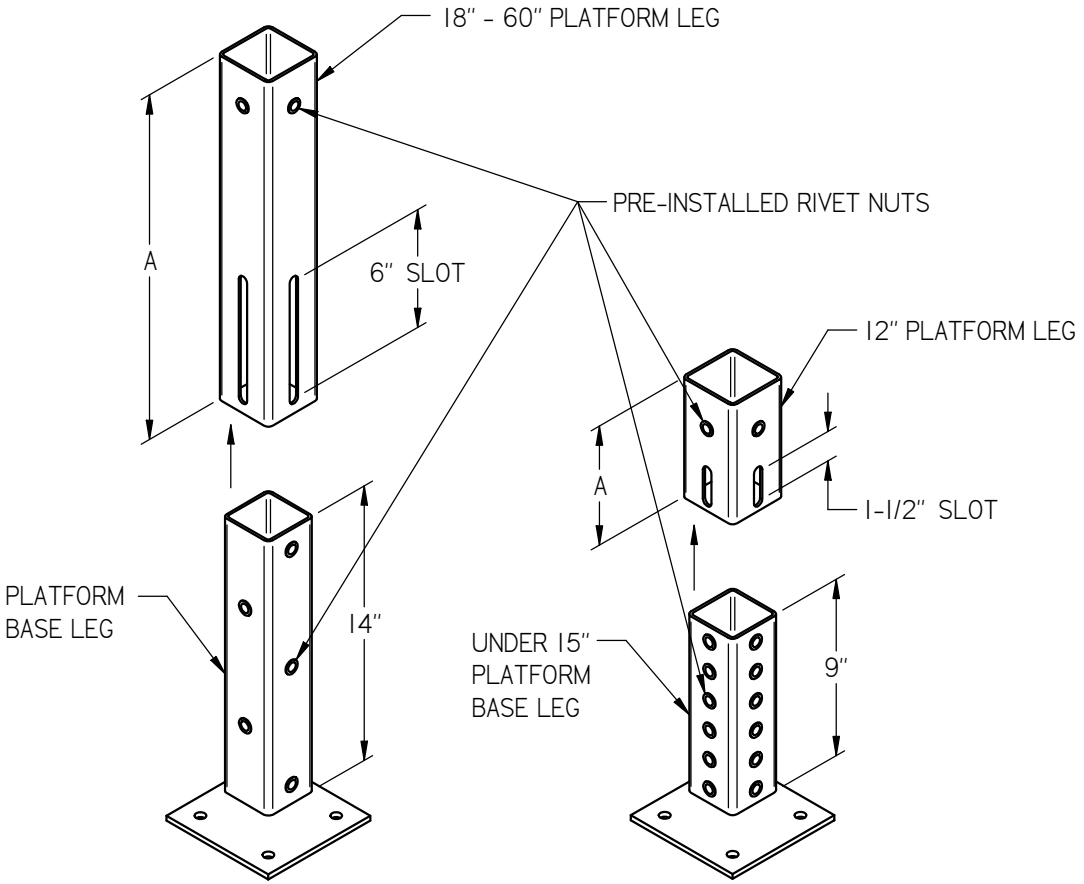


90° ELBOW
SPLICE CASTING



45° ELBOW
SPLICE CASTING

# PLATFORM LEG SIZING




| PLATFORM LEG SIZING CHART | | |
|---|---|---|
| PLATFORM HEIGHT | LEG SIZE | ACTUAL LEG LENGTH (DIM. "A") |
| * 8" - 15.5" | 12" | 6-1/16" |
| * 13.5" - 22.5" | 18" | 11-9/16" |
| 19.5" - 28.5" | 24" | 17-9/16" |
| 25.5" - 34.5" | 30" | 23-9/16" |
| 31.5" - 40.5" | 36" | 29-9/16" |
| 37.5" - 46.5" | 42" | 35-9/16" |
| 43.5" - 52.5" | 48" | 41-9/16" |
| 49.5" - 58.5" | 54" | 47-9/16" |
| 55.5" - 64.5" | 60" | 53-9/16" |

* NOTE: In order to achieve some of the lower heights in this range, the base leg may have to be cut off in order to fit properly.

DETERMINE THE CORRECT PLATFORM LEG SIZE

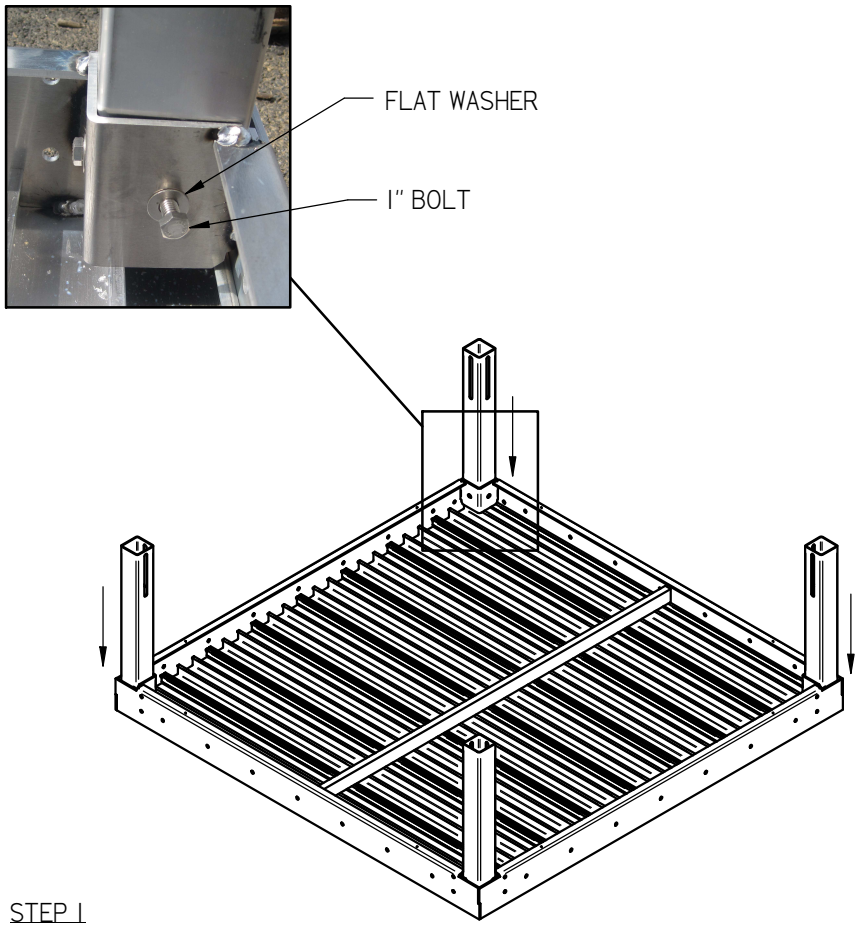
-Locate where the legs will rest on the ground.
-Measure up to the threshold height of the door as shown in the picture.
-Use the chart to the left to select the correct leg size for each corner of the platform that requires a leg.
-All legs except for the 12" leg have ±4.5" of adjustability from the nominal size.

NOTE: THE FIRST PLATFORM SET UNDER THE DOOR WILL REQUIRE 4 LEGS. ADDITIONAL PLATFORMS WILL REQUIRE EITHER 2 LEGS OR 1 LEG DEPENDING ON ITS LOCATION. SEE PAGE 21 FOR MORE DETAILS.

# THRESHOLD PLATFORM ASSEMBLY

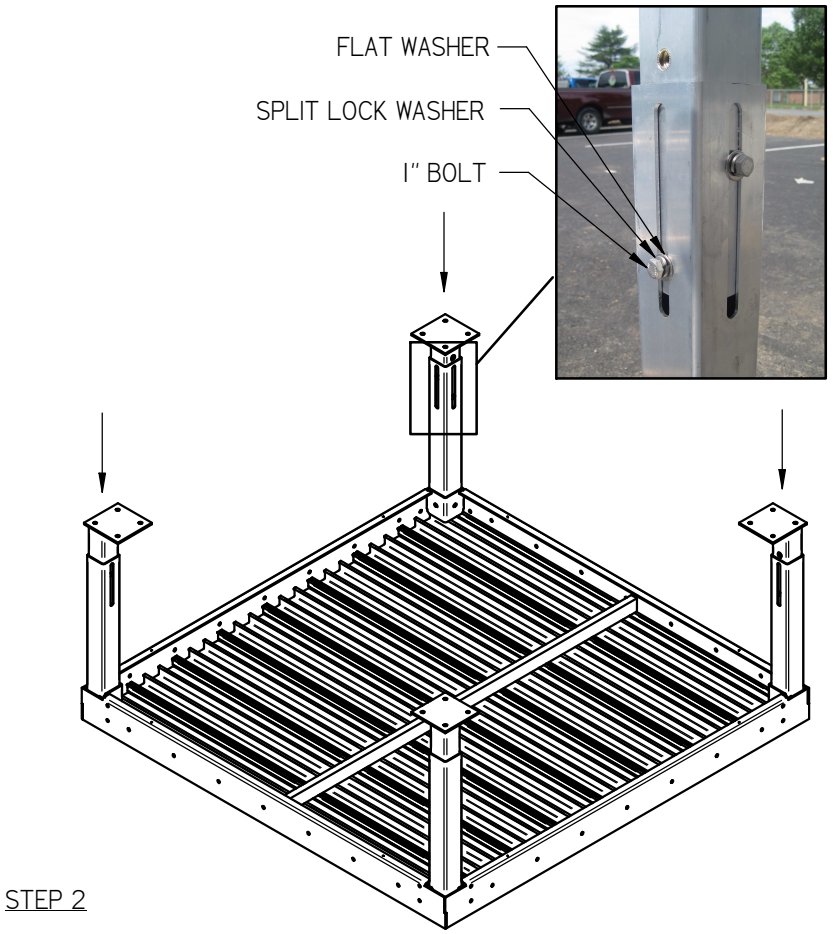
To begin installing a ramp or step, start by determining the height of legs required for the first platform set under the door threshold as described on page 5. Always start by setting the first platform at the door and working your way towards the ground, either with a ramp or a step.

NOTE: TIGHTEN ALL BOLTS TO A TORQUE OF 25 FT-LB.




STEP 1

-Lay the platform upside down on the ground.
-Insert 4 platform legs into the corner pockets and make sure the holes align as shown in the picture.
-Use (2) 1" bolts with (2) flat washers to secure each leg to each pocket (found in hardware kit HK0005).
-The bolts will thread into the pre-installed rivet nuts in the ends of the platform legs.



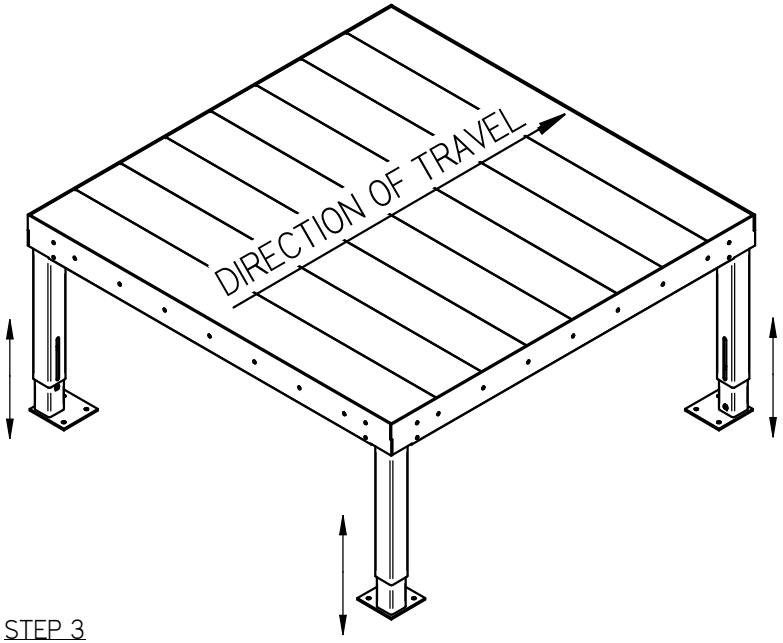

STEP 2

-Insert 4 platform base legs into the platform legs and make sure the holes align with the slots as shown in the picture.
-Use (2) 1" bolts with (2) lock washers and (2) flat washers to secure each base leg to each platform leg (found in hardware kit HK0005) at the desired height.
-The bolts will thread into the pre-installed rivet nuts in the base legs.
-This connection may need to be adjusted later in order to level the platform.

*CONTINUE TO NEXT PAGE*

# THRESHOLD PLATFORM ASSEMBLY

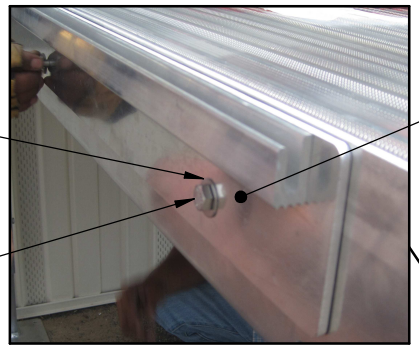
NOTE: DECKING DIRECTION SHOULD BE ORIENTED PERPENDICULAR TO THE MOST COMMON DIRECTION OF TRAVEL.

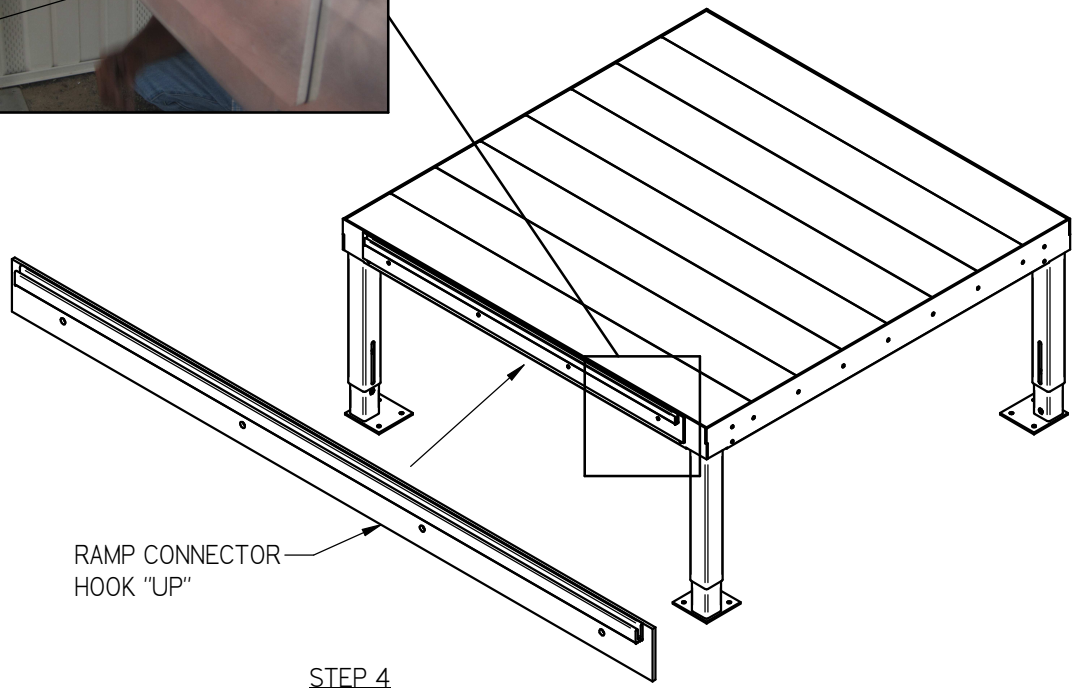



STEP 3

-Set the platform against the building just below the threshold (1/2" maximum)
-Use a 4' level to determine if the platform is level in both directions.
-If adjustments need to be made, loosen the (2) 1" bolts that connect the base leg to the platform leg and telescope the base leg up or down to the appropriate height and retighten the bolts.
-A bolt may need to be completely removed if it runs into the end of the slot.
-Reinstall the bolt in another hole that will appear at the opposite end of the same slot and retighten.

NOTE: IF MULTIPLE PLATFORMS ARE BEING INSTALLED, TURN TO PAGE 21 FOR MORE DETAILS.



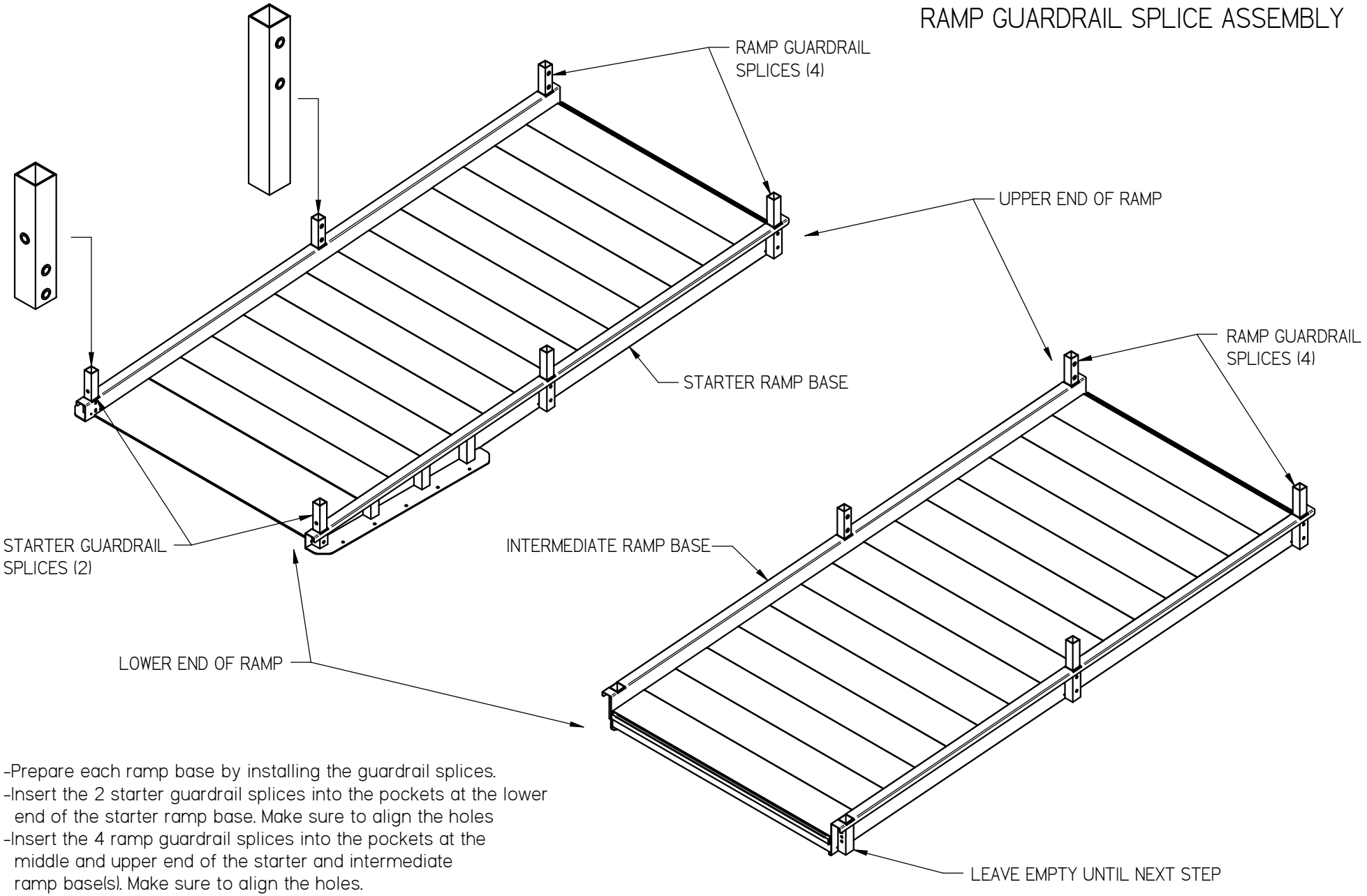




STEP 4

-Locate the ramp connector hook "up" and bolt it to the platform on the side that the ramp will be installed.
-Use (4) 1" bolts with (4) flat washers and (4) flange nuts (found in hardware kit HK0007) to secure the plate to the platform side through the four holes.

NOTE: IF A STEP IS BEING INSTALLED, A STEP HOOK WILL NEED TO BE USED. TURN TO PAGE 19 OR 20 FOR MORE DETAILS.

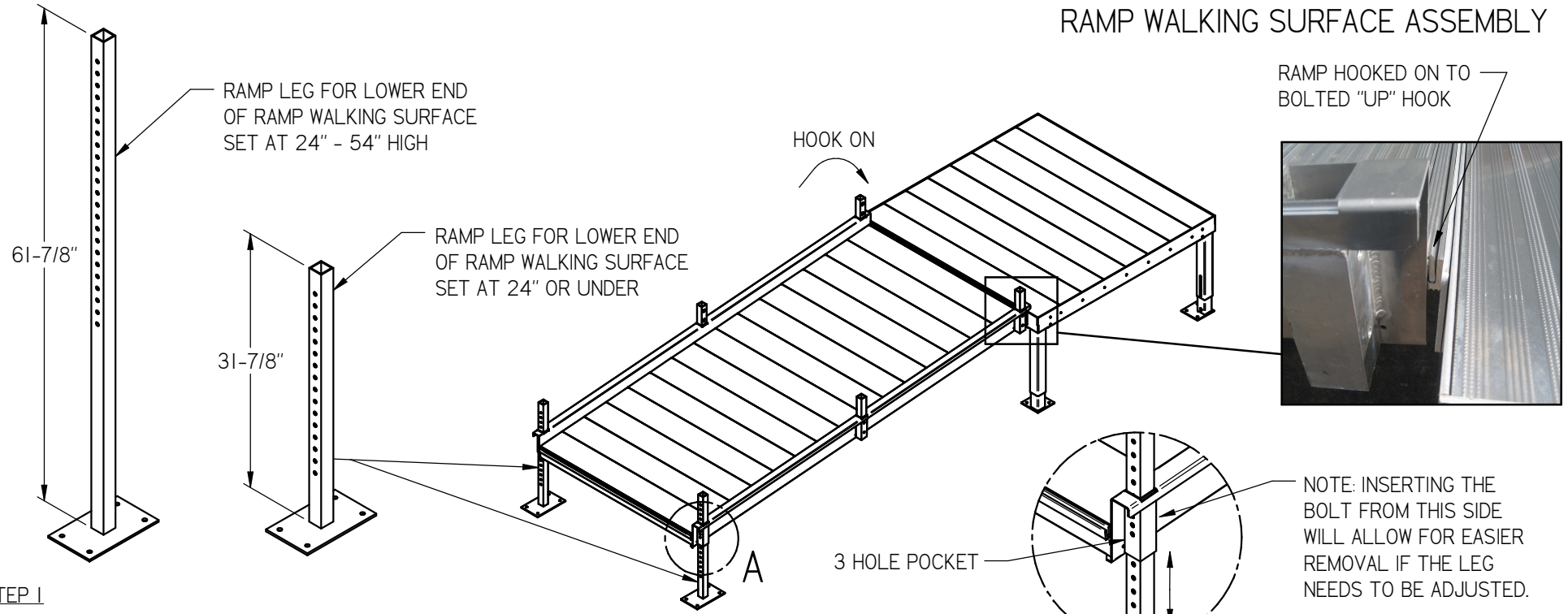
# RAMP GUARDRAIL SPLICE ASSEMBLY




-Prepare each ramp base by installing the guardrail splices.
-Insert the 2 starter guardrail splices into the pockets at the lower end of the starter ramp base. Make sure to align the holes
-Insert the 4 ramp guardrail splices into the pockets at the middle and upper end of the starter and intermediate ramp base(s). Make sure to align the holes.
-Thread the bolts into the splices through the holes in the pockets using (2) 1" bolts with (2) flat washers each, but do not tighten them until after fitting and bolting on the ramp guardrails (see page 11).
-The bolts and washers can be found in hardware kit HK0001 for the starter ramp base or HK0002 for the intermediate ramp base(s).

*CONTINUE TO NEXT PAGE*

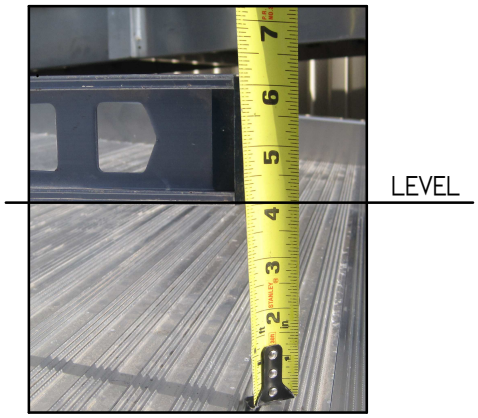
# RAMP WALKING SURFACE ASSEMBLY




DETAIL A

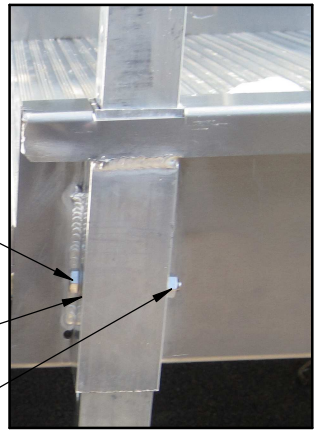
STEP 1

-Start by inserting two ramp legs into the pockets on the ramp base that have 3 holes as shown in DETAIL A.
-Temporarily insert a 2-3/4" bolt (found in hardware kit HK0002) through one of the three holes to set the leg at a height that allows the bottom of the ramp section to be about 8" - 10" lower than the platform.
-Lift the upper end of the ramp section and hook it on to the "up" hook that was previously bolted to the platform.




STEP 2

-Check to make sure the ramp is declining at a 1:12 slope. The ramp should drop 1" for every 12" (or 1 foot) of horizontal distance.
-Rest one end of the level on the ramp surface and then hold it so it is level. Over the length of the 4' level, the ramp surface should drop 4".
-Adjust the legs up or down until it drops 4" as shown in the picture to the left.
-To adjust the height, remove the 2-3/4" bolt from the 3 hole pocket and reinsert it along with a flat washer at the proper height. Use a flange nut on the other side to tighten the bolt in place.
-Also check to make sure the ramp surface is level across the width of the decking. Make adjustments as necessary.

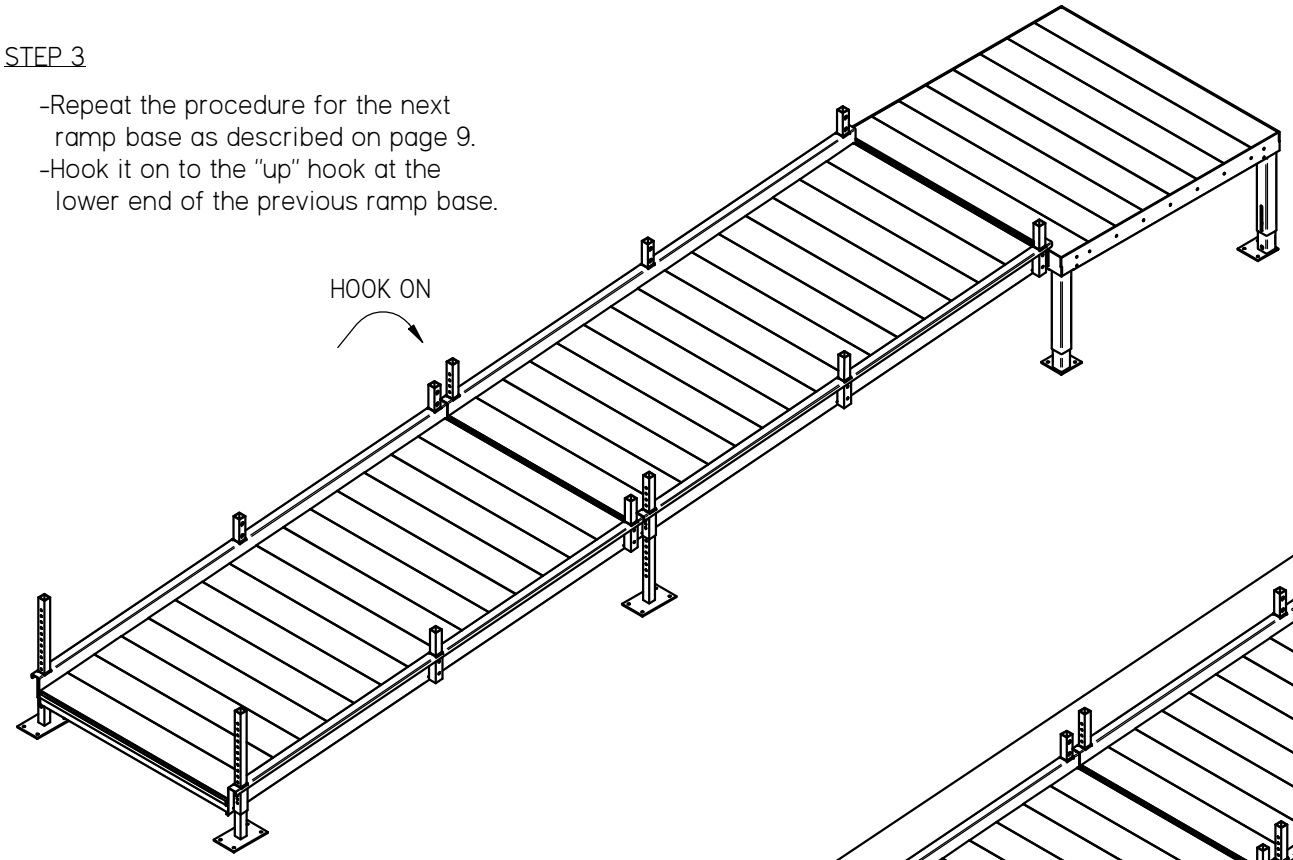



*CONTINUE TO NEXT PAGE*

# RAMP WALKING SURFACE ASSEMBLY

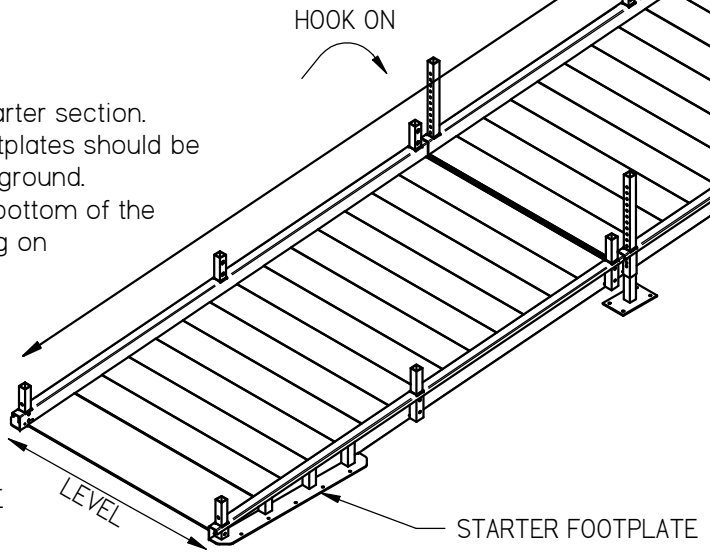
STEP 3

-Repeat the procedure for the next ramp base as described on page 9.
-Hook it on to the "up" hook at the lower end of the previous ramp base.




STEP 4

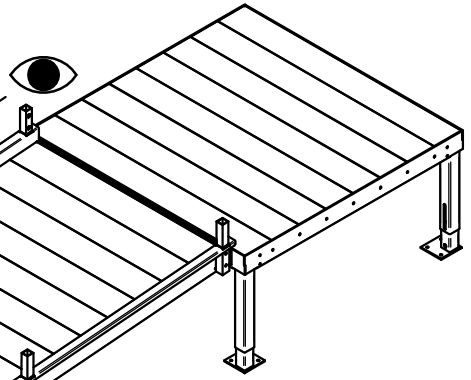
-Hook on the starter section.
-The starter footplates should be resting on the ground.
-Make sure the bottom of the starter is sitting on level ground.




CHECK TO MAKE SURE STARTER IS LEVEL

STEP 5

-Look down the length of the ramp and check to see if all the ramp edges are aligned. You may want to use a string line to check this.
-If they are not aligned, you must adjust the ramp legs slightly until all sections are in a straight line.
-Check this on both sides of the ramp if possible.



NOTE: IF A RESTING PLATFORM OR A 90° TURN ("L" RAMP) IS REQUIRED, TURN TO PAGE 23 FOR MORE DETAILS.

IF A SWITCHBACK PLATFORM IS REQUIRED, TURN TO PAGE 24 FOR MORE DETAILS.

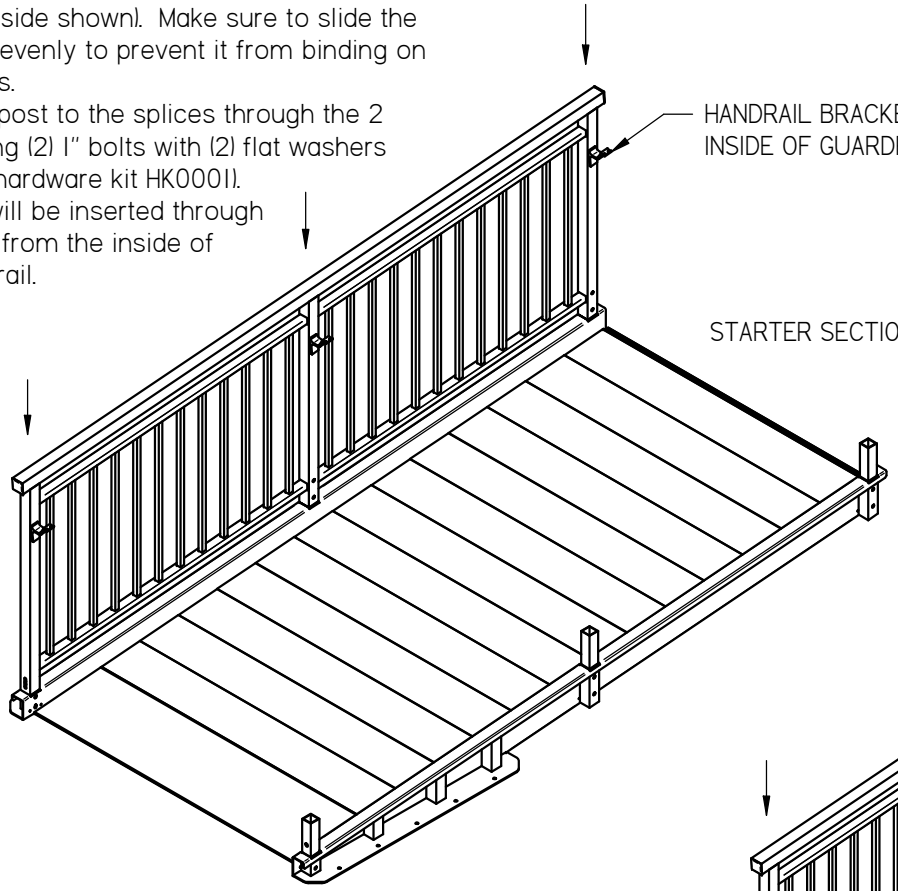
*CONTINUE TO NEXT PAGE*

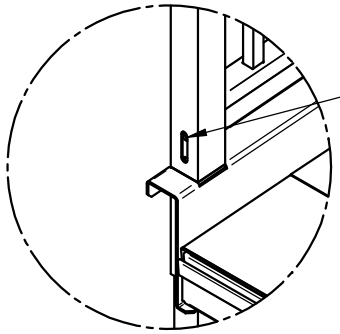
# RAMP GUARDRAIL ASSEMBLY

STEP 1

-Slide the 3 posts of a guardrail over top of the 3 splices on both sides of the starter section (only one side shown). Make sure to slide the rail down evenly to prevent it from binding on the splices.

-Bolt each post to the splices through the 2 holes using (2) 1" bolts with (2) flat washers (found in hardware kit HK0001). All bolts will be inserted through the posts from the inside of the guardrail.




DETAIL B

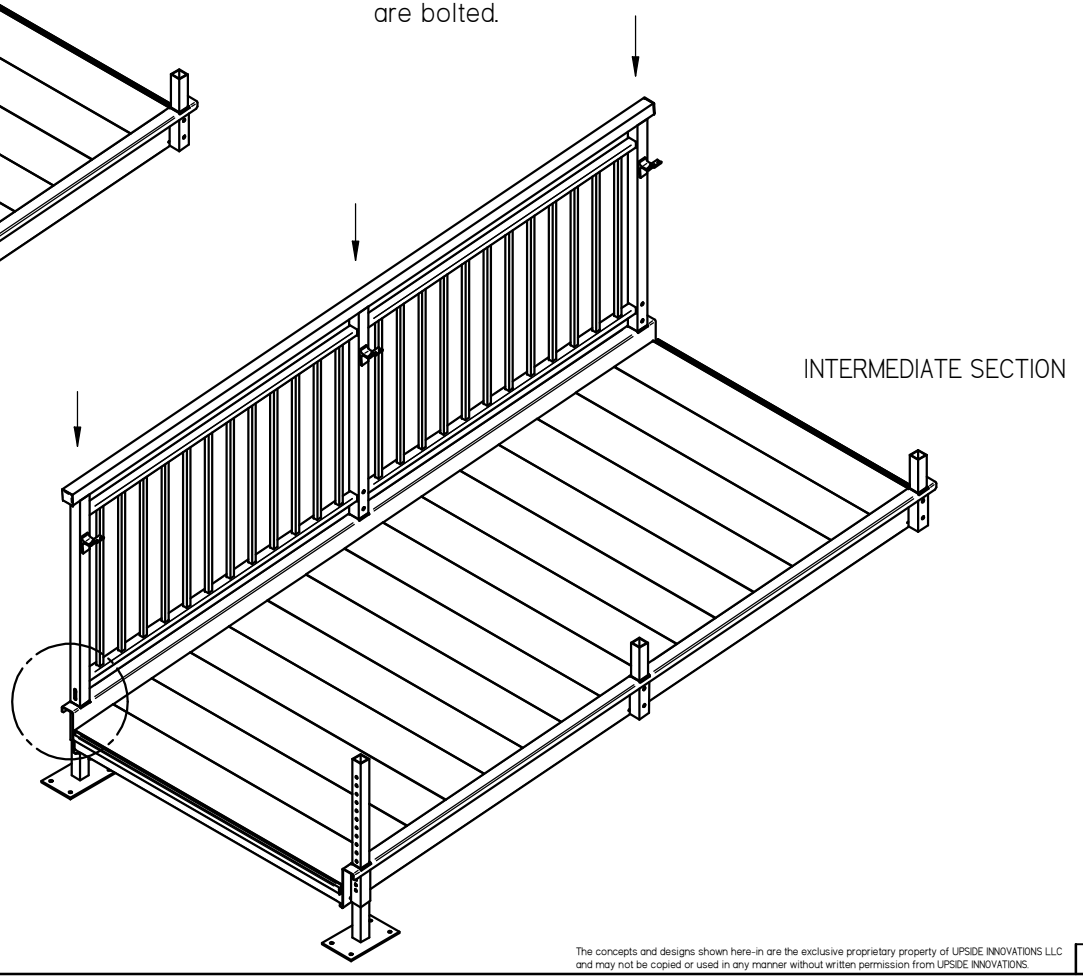
STEP 2

-Slide the 3 posts of a guardrail over top of the 2 splices and 1 ramp leg on both sides of each of the intermediate sections (only one side shown). Make sure to slide the rail down evenly to prevent it from binding on the splices.

-Bolt the two upper posts to the splices through the two holes using (2) 1" bolts with (2) flat washers (found in hardware kit HK0002). All bolts will be inserted from the inside of the guardrail.

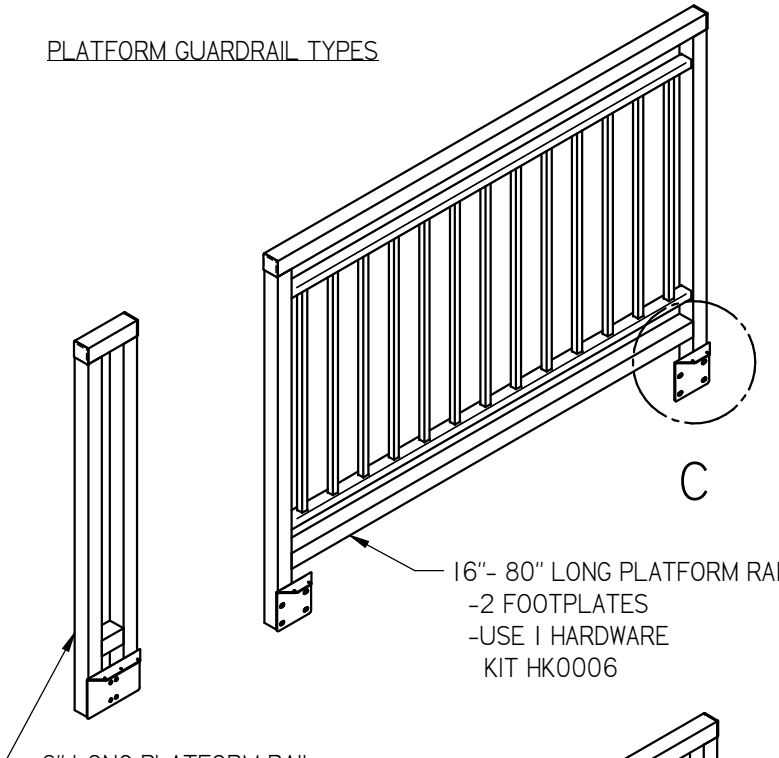
-Bolt the lower post through the slot and the leg as shown in DETAIL B with a single 2-3/4" bolt, flat washer and flange nut (found in hardware kit HK0002).

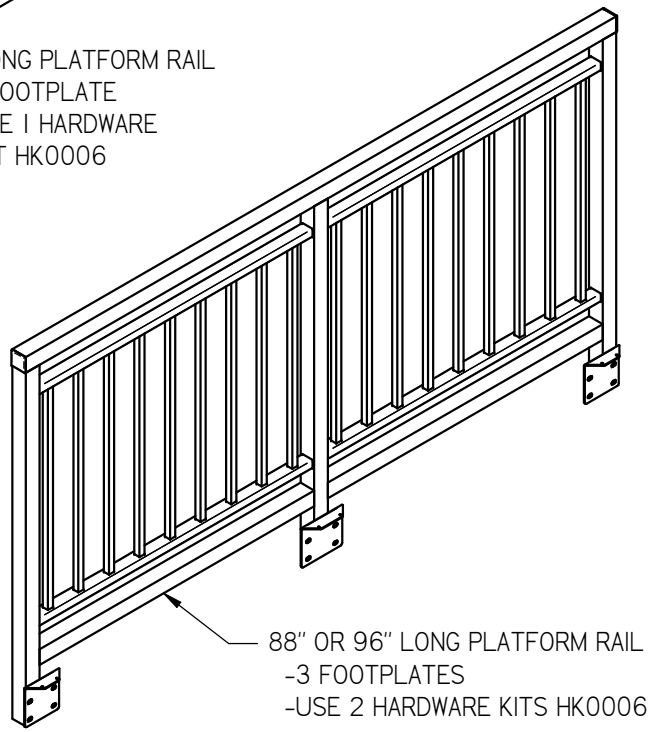
-Continue with all other ramp sections until all ramp guardrails are bolted.

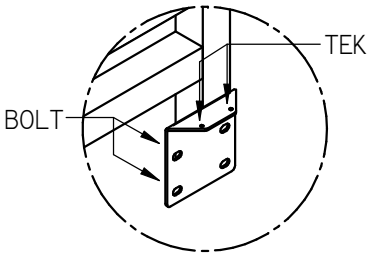


# PLATFORM GUARDRAIL ASSEMBLY

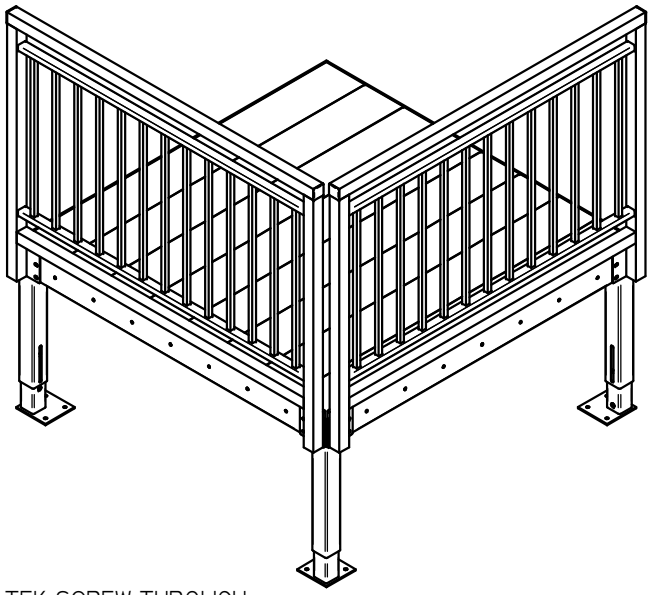
PLATFORM GUARDRAIL TYPES




DETAIL C

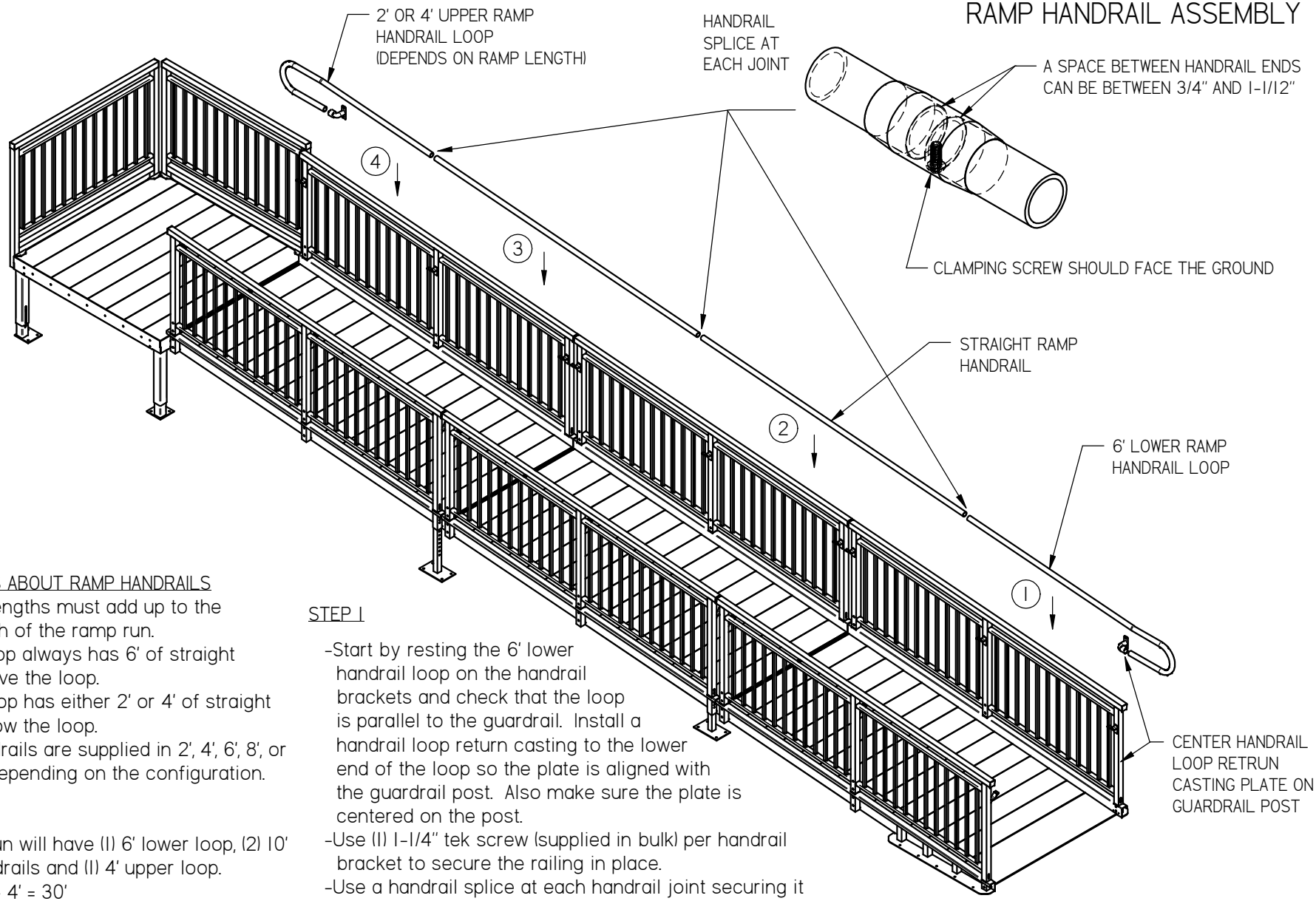
STEP 1

-All open sides of each platform must have a guardrail.
-Set the top flanges of the guardrail footplates on the top surface of the platform and align the bolt holes in the footplates with the holes in the platform edges. Use (2) 1" bolts, (2) flat washers and (2) flange nuts (found in hardware kit HK0006) to bolt each footplate to the platform edge as shown in DETAIL C.
-In some cases, holes will need to be drilled through the platform edge if they do not exist for a rail that does not take up the entire width of the platform side. Use the slots in the footplate as a template to drill (2) 7/16" holes in the platform edge.

STEP 2

-Use the 1-1/4" tek screws (also found in hardware kit HK0006) to attach the top of each guardrail footplate to the deck. Use the screw to drill through the decking surface using the small pilot holes in the footplates as a guide. See the picture above.

# RAMP HANDRAIL ASSEMBLY




GENERAL NOTES ABOUT RAMP HANDRAILS

- -All handrail lengths must add up to the overall length of the ramp run.
- -The lower loop always has 6' of straight handrail above the loop.
- -The upper loop has either 2' or 4' of straight handrail below the loop.
- -Straight handrails are supplied in 2', 4', 6', 8', or 10' lengths depending on the configuration.

EXAMPLES

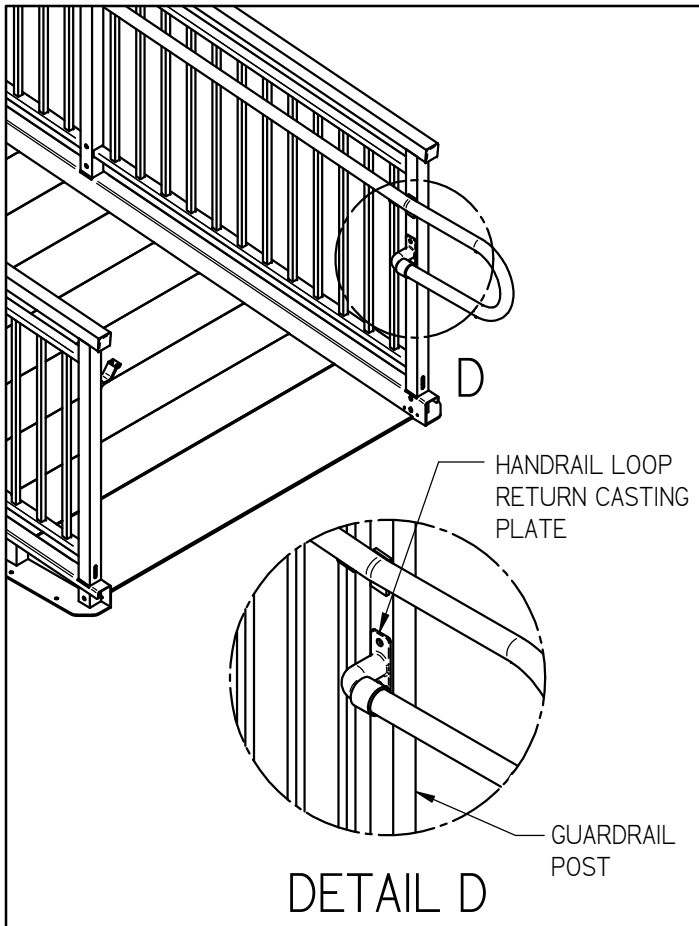
- -A 30' ramp run will have (1) 6' lower loop, (2) 10' straight handrails and (1) 4' upper loop. 6' + 10' + 10' + 4' = 30'
- -A 24' ramp run will have (1) 6' lower loop, (2) 8' straight handrails and (1) 2' upper loop. 6' + 8' + 8' + 2' = 24'
- -Handrails will be supplied to the customer depending on the custom configuration of the ramp.

STEP 1

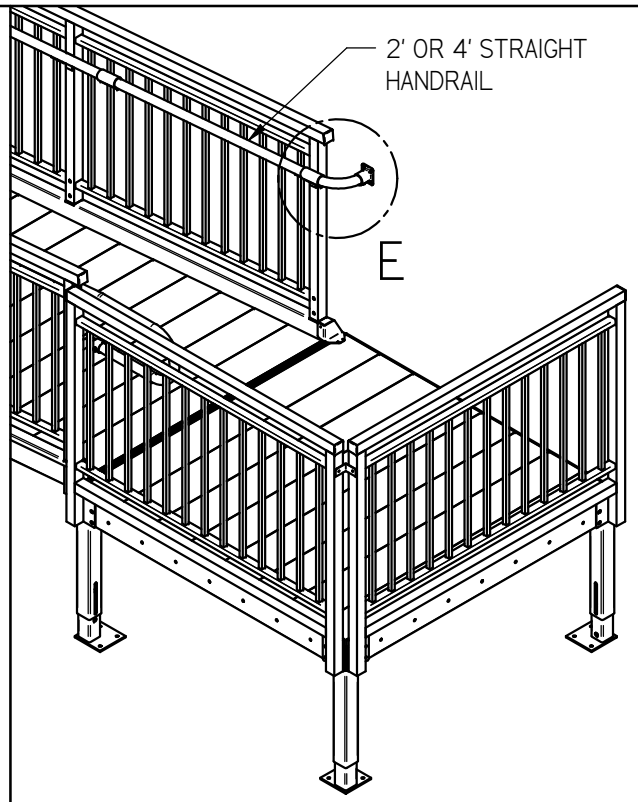
- -Start by resting the 6' lower handrail loop on the handrail brackets and check that the loop is parallel to the guardrail. Install a handrail loop return casting to the lower end of the loop so the plate is aligned with the guardrail post. Also make sure the plate is centered on the post.
- -Use (1) 1-1/4" tek screw (supplied in bulk) per handrail bracket to secure the railing in place.
- -Use a handrail splice at each handrail joint securing it in place with the clamping screw.
- -Continue up the ramp with the straight handrails and the upper handrail loop making sure to connect the handrails to each handrail bracket. Install another handrail loop return casting at the end of the upper loop. Repeat for the opposing guardrail.
- -Continue to page 14 for details on the end connections.

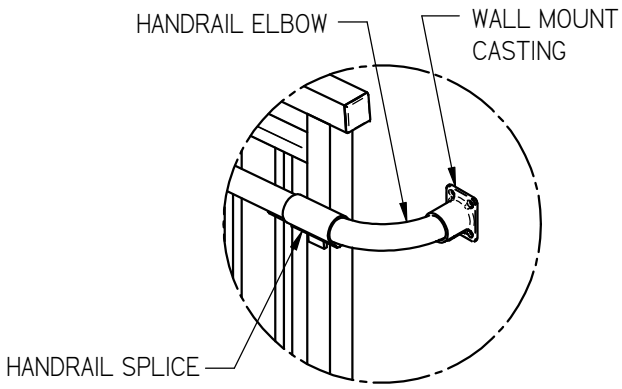
*CONTINUE TO NEXT PAGE*

# RAMP HANDRAIL ASSEMBLY




DETAIL D




DETAIL E

STEP 2

HANDRAIL LOOPS (LOWER AND UPPER)

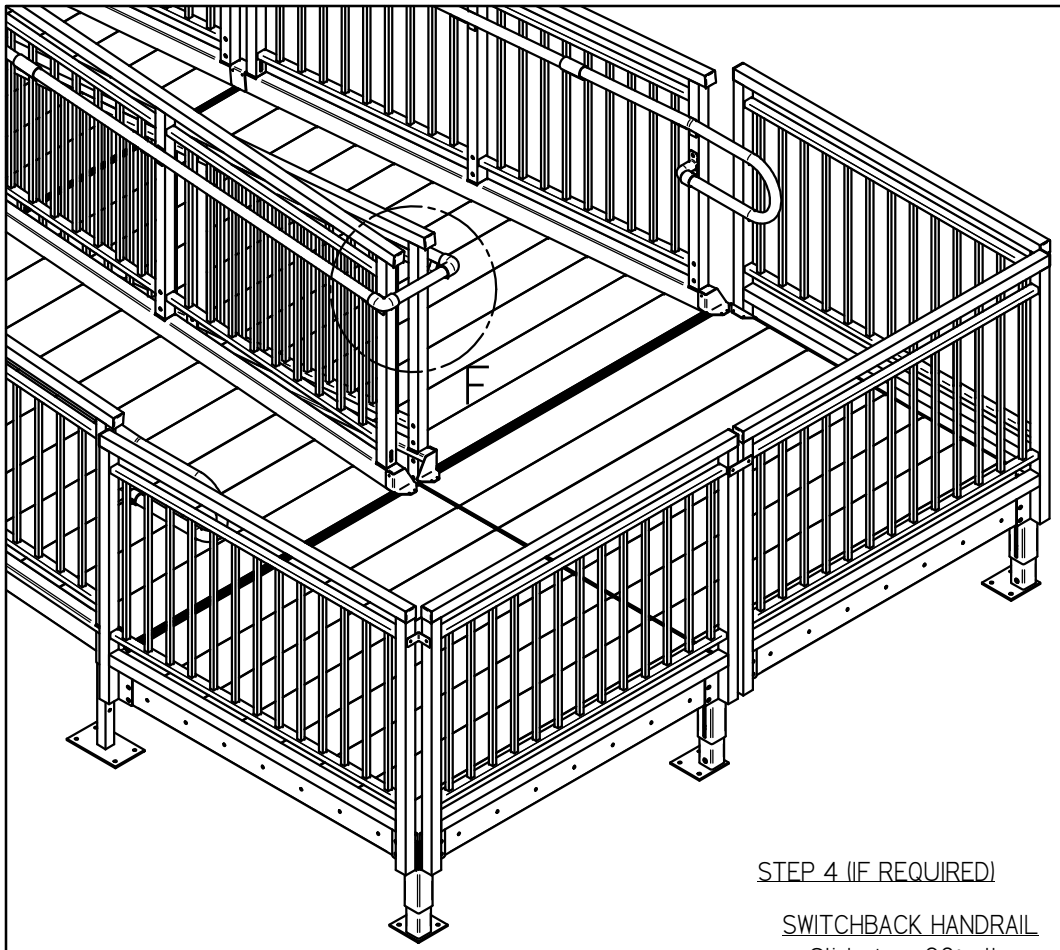
-Clamp the handrail loop return casting plate to the guardrail post with a c-clamp.
-Using the hole as a guide, drill a 7/16" hole through both walls of the post. Secure the plate to the post with a 2-3/4" bolt, washer and flange nut (found in hardware kit HK0008).
-Remove the c-clamp and repeat the drilling and bolting for the other hole.

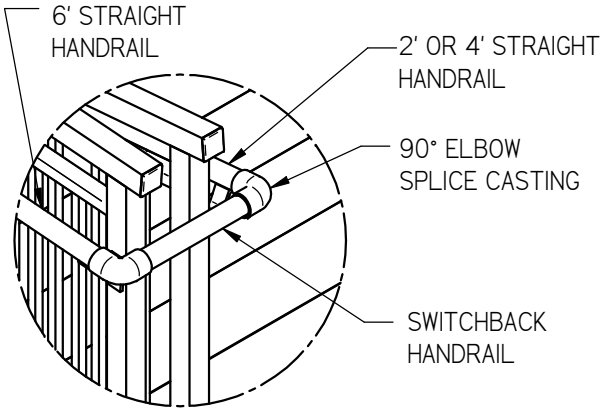
STEP 3 (IF REQUIRED)

HANDRAIL ELBOWS (RETURN TO WALL)

-Use an outer handrail splice to connect the elbow to the end of a straight handrail as shown in DETAIL E.
-Insert the other end of the elbow into the wall mount casting.
-Secure the wall mount casting to the wall of the building using (4) 1-1/2" screws (found in hardware kit HK0010). Use wood screws to attach the wall mount casting to the building wall.
-Tighten the two set screws in the wall mount casting.
-An additional straight handrail and outer handrail splice may be required if the ramp guardrail is further away from the building.

*CONTINUE TO NEXT PAGE*




DETAIL F

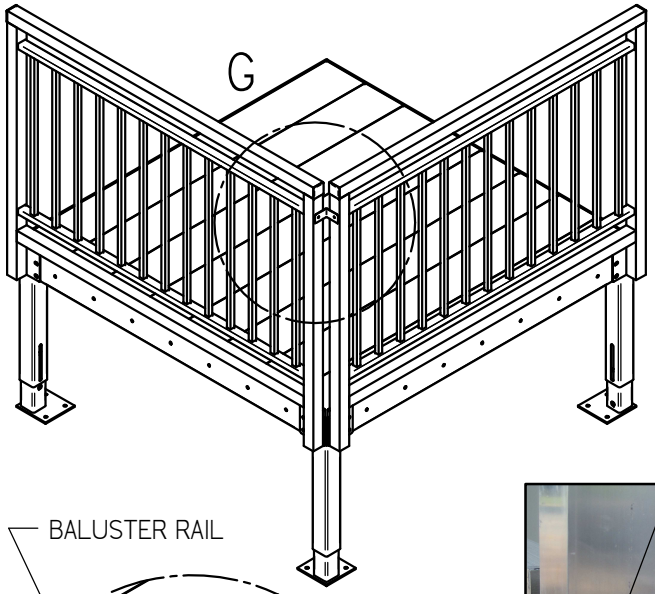
STEP 4 (IF REQUIRED)

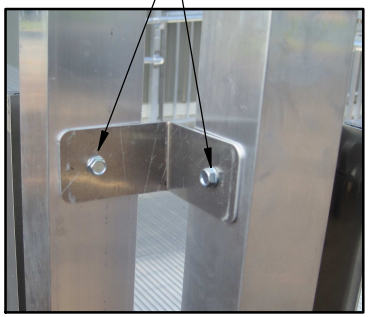
SWITCHBACK HANDRAIL

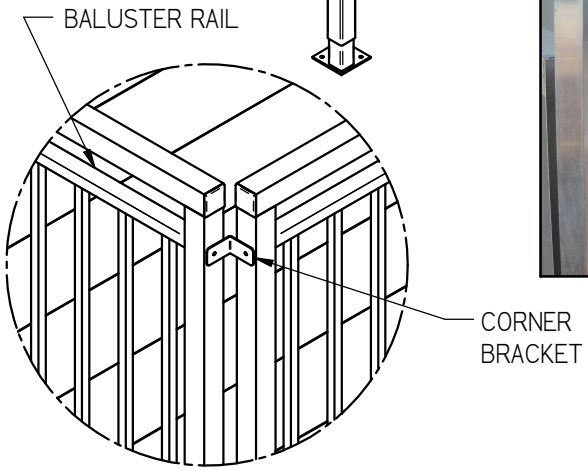
- -Slide two 90° elbow castings over the ends of a switchback handrail.
- -Then slide the two elbow castings over the ends of the two handrails that need to be connected on the inside of a switchback or 180° turn in the ramp configuration as shown in DETAIL F.
- -Tighten the two set screws on both of the elbow castings to secure the switchback handrail to the handrails previously attached to the ramp guardrail. The set screws should face the ground.

NOTE: SINCE THERE ARE NO LOOPS AT THIS CONNECTION, THERE WILL BE A 6' STRAIGHT HANDRAIL LEADING UP THE RAMP AND EITHER A 2' OR 4' STRAIGHT HANDRAIL GOING DOWN THE RAMP FROM THE SWITCHBACK HANDRAIL.

*CONTINUE TO NEXT PAGE*



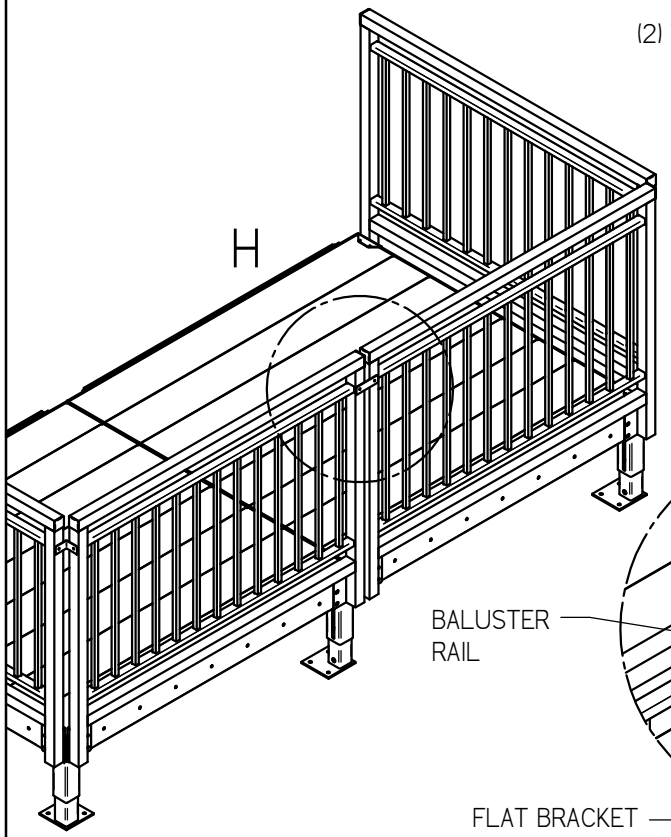



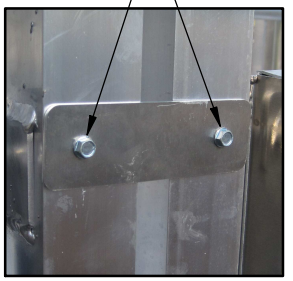

DETAIL G

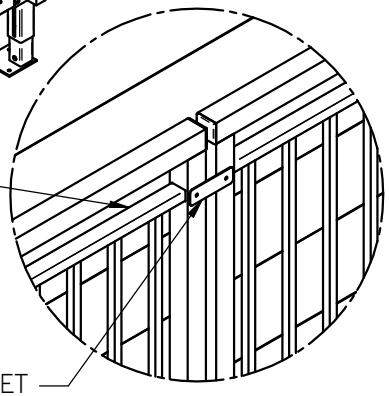
CORNER BRACKETS

-Any two platform rails that meet at a corner should be connected by a corner bracket.
-Use a c-clamp to hold the corner bracket in place to one of the guardrail posts. The top of the bracket should be flush with the top of the baluster rail as shown in DETAIL G.
-Use a 1-1/4" tek screw (supplied in bulk) to secure the bracket to the adjacent rail. The hole in the bracket should be used as a drilling guide.
-Remove the c-clamp and use another 1-1/4" tek screw to secure the other side of the bracket where the clamp was initially.

# INSTALLING BRACKETS AND KEYS



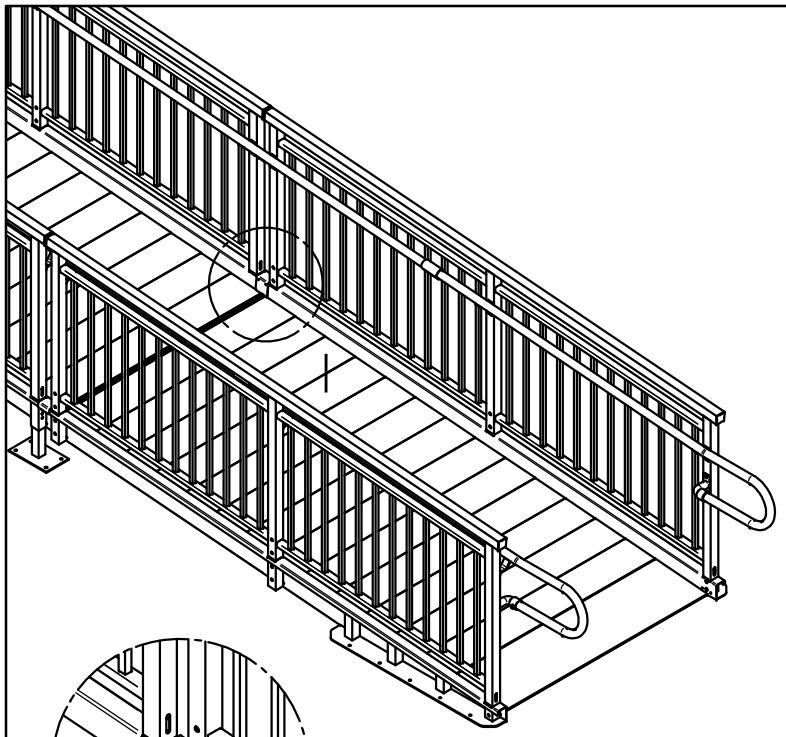

DETAIL H

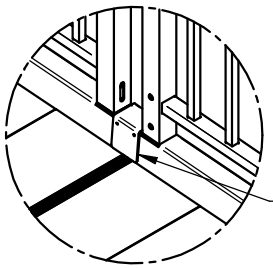
FLAT BRACKETS

-Any two platform rails that are aligned along platform edges should be connected by a flat bracket.
-Use a c-clamp to hold the flat bracket in place to one of the guardrail posts. The top of the bracket should be flush with the top of the baluster rail as shown in DETAIL H.
-Use a 1-1/4" tek screw (supplied in bulk) to secure the bracket to the adjacent rail. The hole in the bracket should be used as a drilling guide.
-Remove the c-clamp and use another 1-1/4" tek screw to secure the other side of the bracket where the clamp was initially.

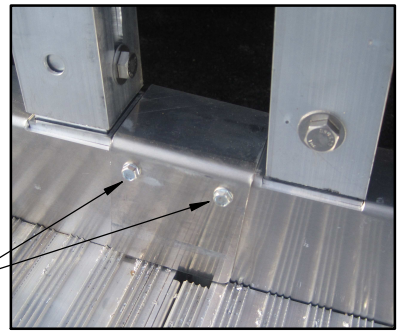
*CONTINUE TO NEXT PAGE*

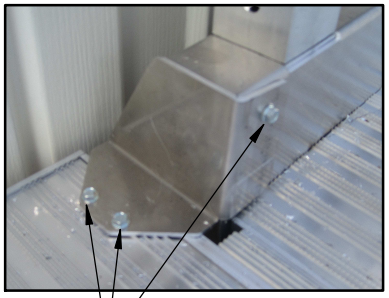
# INSTALLING BRACKETS AND KEYS

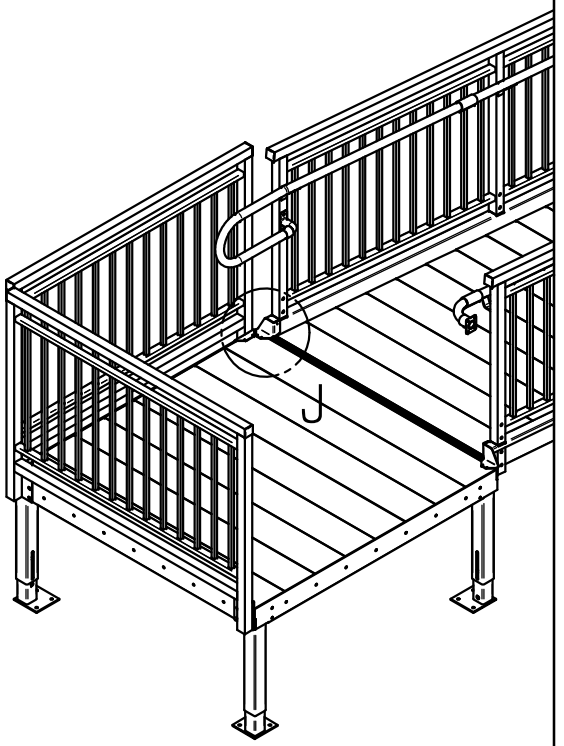


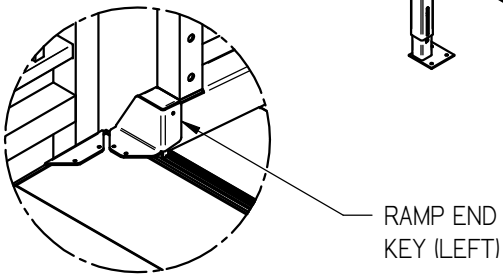




DETAIL I




DETAIL J

RAMP KEYS

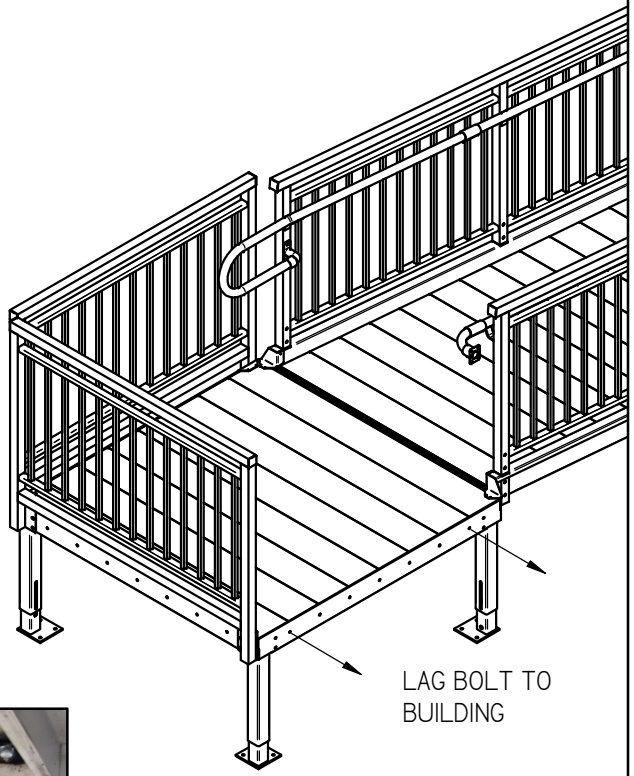
-At each ramp section joint, two ramp keys are required to secure the two sections together.
-Hook the key over the ramp edge with the long flange against the ramp deck as shown in DETAIL I. The key will fit between the two ramp guardrail posts that are about 3-1/2" apart.
-Use (2) 1-1/4" tek screws (supplied in bulk) to secure the ramp key to the ramp edge. The holes in the key should be used as a drilling guide.

RAMP END KEYS

-Wherever a ramp meets a platform, two ramp end keys (1 left and 1 right) are required to secure the two together.
-Orient the end key as shown in DETAIL J over the end of the ramp edge.
-Use (3) 1-1/4" tek screws (supplied in bulk) to secure the ramp key to the ramp edge and platform decking as shown in the picture above. The holes in the key should be used as a drilling guide.

*CONTINUE TO NEXT PAGE*

# LAG BOLTING AND ANCHORING





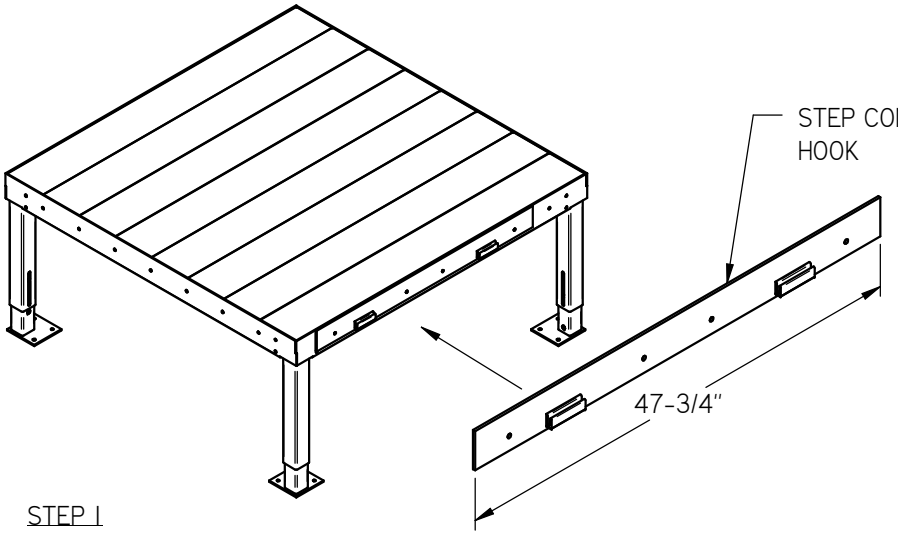
LAG BOLTING

-Each platform at the door threshold height should be lag bolted to the building with (2) 3" lag bolts with flat washers (found in hardware kit HK0011) in order to reinforce the structural integrity of the ramp or step.
-Drill two 1/4" holes into the building through the outer holes in the platform edge. The locations are marked with arrows in the drawing above.
-Then insert the lag bolts through the platform edge holes into the drilled holes and tighten the bolts until the platform is secured to the building.

CONCRETE ANCHORING (IF REQUIRED)

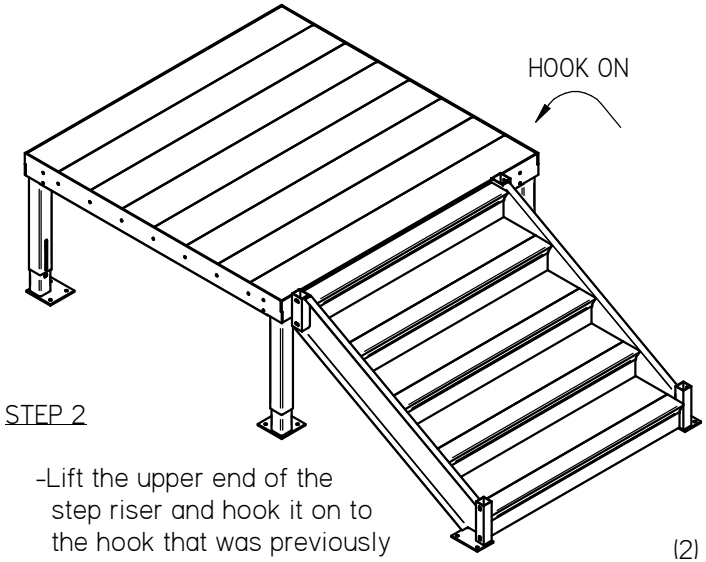
-Some job sites require that the footplates be anchored to a concrete surface or footing.
-Secure each footplate to the concrete using a 3/8" concrete anchor. The anchor shown in the picture is a concrete wedge anchor that is 3-3/4" long. Any 3/8" anchor is acceptable.
-Install the anchors according to the concrete anchor manufacturer's instructions.
-Only 1 anchor is required per footplate. Extra holes exist in each footplate for installation convenience.

# STEP ASSEMBLY - 30" OR UNDER



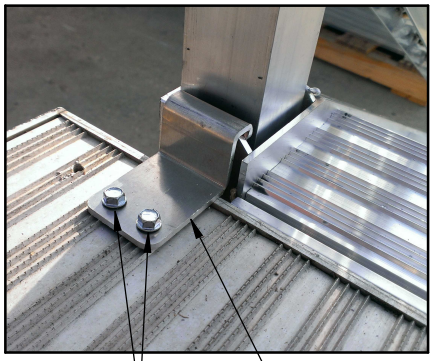

STEP 1

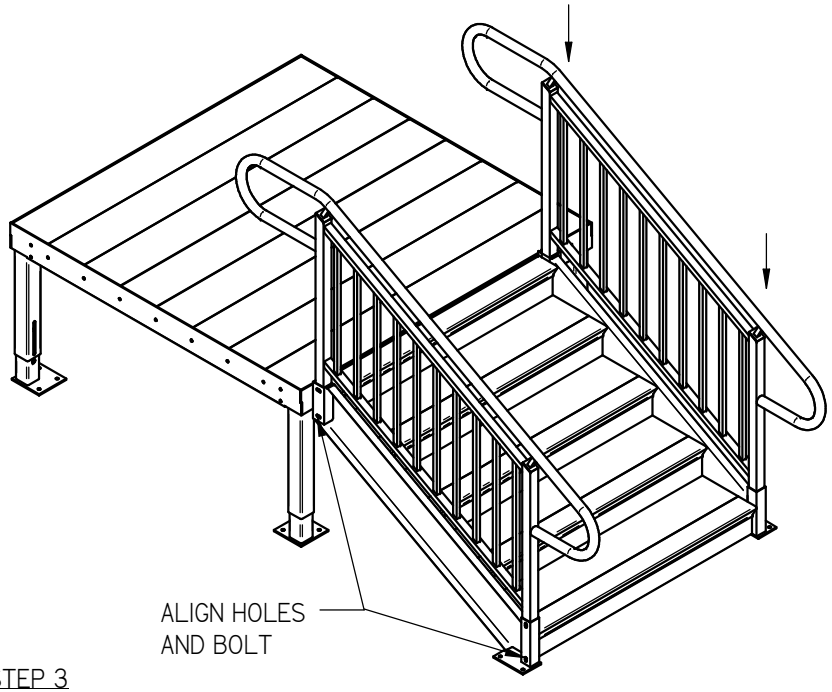
-Refer to pages 5-7 for instructions on how to assemble the platform.
-Locate the step connector hook and bolt it to the platform on the side that the step will be installed. As shown, the step is off center of the platform, away from the building. Consult the job-specific layout to determine where the step should be connected to the platform.
-Use (4) 1" bolts with (4) flat washers and (4) flange nuts (found in hardware kit HK0007) to connect the plate to the platform side through the four holes. If holes in the platform edge are missing, they will need to be drilled through with a 7/16" drill bit.




STEP 2

-Lift the upper end of the step riser and hook it on to the hook that was previously bolted on the platform.




STEP 3

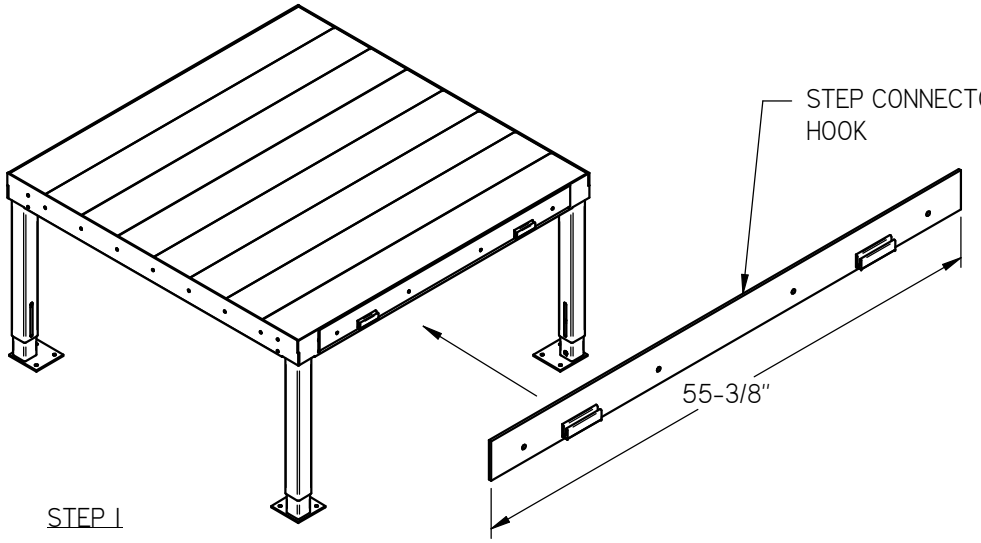
-Insert the step guardrail posts into the upper and lower pockets on the step riser until the pre-installed rivet nuts in the posts align with the slots in the pockets.
-Use (8) 1" bolts with flat washers (found in hardware kit HK0003) to secure the four posts to the four pockets. Thread the bolts into the rivet nuts in the step rail posts through the slots in the upper and lower pockets on the step riser.

STEP 4

-At the top of each step, two step keys are required to secure the step to the platform.
-Orient the key as shown against the back side of the upper pockets on the step riser.
-Use (2) 1-1/4" tek screws (supplied in bulk) to secure the step key to the platform decking. The holes in the key should be used as a drilling guide.

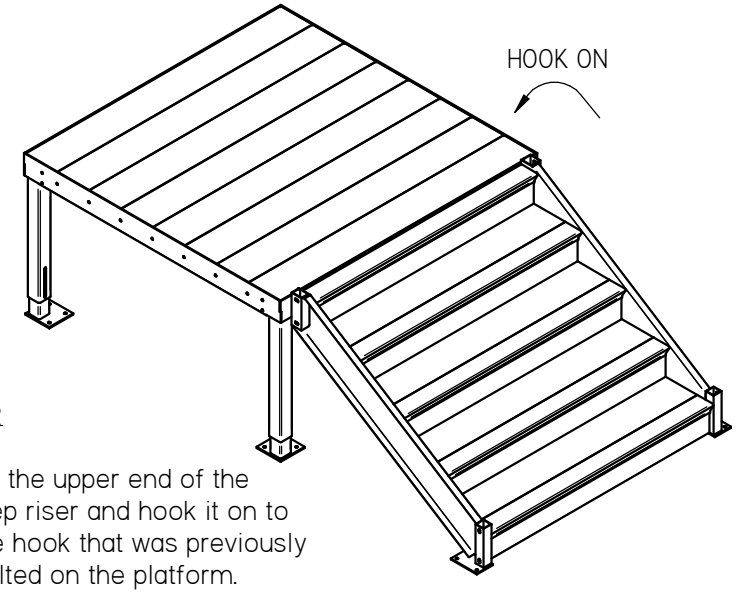
*CONTINUE TO PAGE 12 FOR PLATFORM GUARDRAIL ASSEMBLY*

# STEP ASSEMBLY - OVER 30"




STEP 1

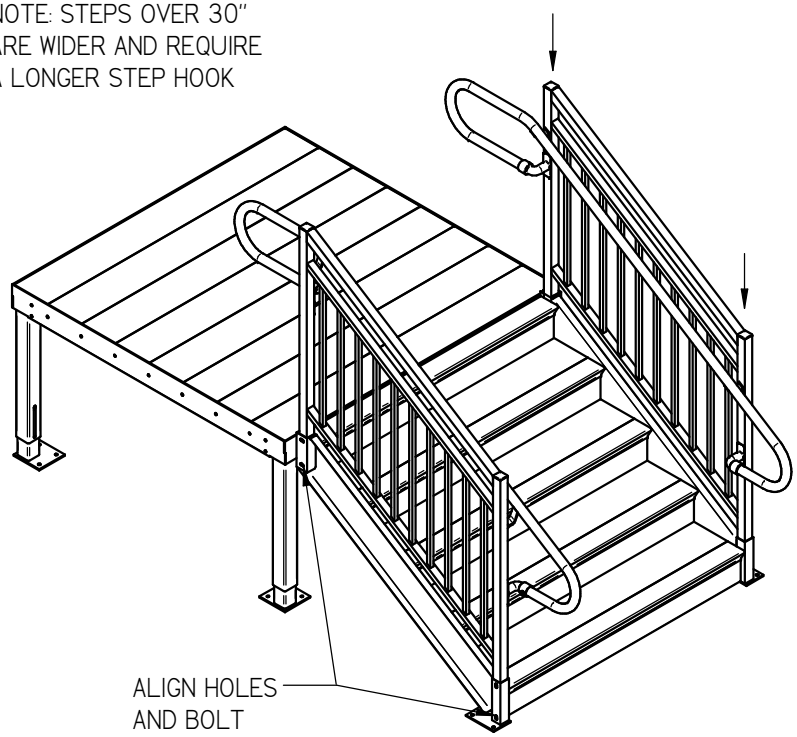
-Refer to pages 5-7 for instructions on how to assemble the platform.
-Locate the step connector hook and bolt it to the platform on the side that the step will be installed. As shown, the step is on center of the platform. Consult the job-specific layout to determine where the step should be connected to the platform.
-Use (4) 1" bolts with (4) flat washers and (4) flange nuts (found in hardware kit HK0007) to connect the plate to the platform side through the four holes. If holes in the platform edge are missing, they will need to be drilled through with a 7/16" drill bit.




STEP 2

-Lift the upper end of the step riser and hook it on to the hook that was previously bolted on the platform.

NOTE: STEPS OVER 30" ARE WIDER AND REQUIRE A LONGER STEP HOOK




STEP 3

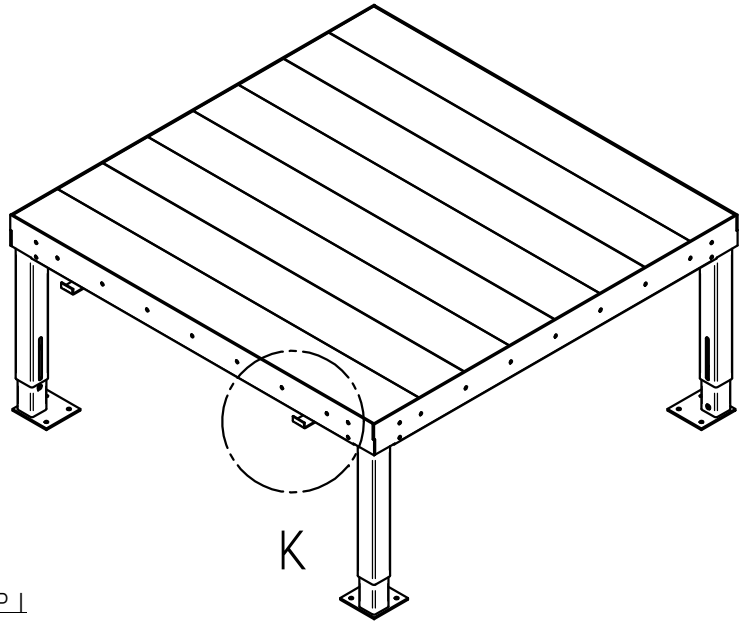
-Insert the step guardrail posts into the upper and lower pockets on the step riser until the pre-installed rivet nuts in the posts align with the slots in the pockets.
-Use (8) 1" bolts with flat washers (found in hardware kit HK0003) to secure the four posts to the four pockets. Thread the bolts into the rivet nuts in the step rail posts through the slots in the upper and lower pockets on the step riser.
-Steps over 50" high will have three posts per guardrail instead of two as shown. Hardware kit HK0004 will need to be used for steps over 50" since it will require 4 extra bolts and washers.

STEP 4

-See step 4 on page 19 for instructions on installing step keys.

*CONTINUE TO PAGE 12 FOR PLATFORM GUARDRAIL ASSEMBLY*

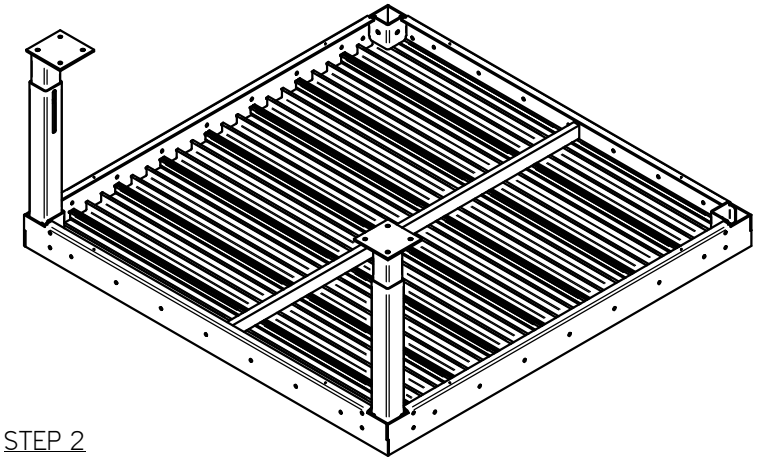
# ADDITIONAL PLATFORMS ASSEMBLY




STEP 1

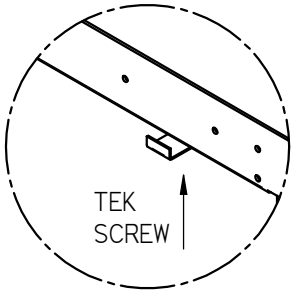
-To prepare for an additional platform, locate two platform joint hook brackets and tek screw them on to the edge of the platform through the two pilot holes in the bottom of the platform edge with 1-1/4" tek screws as shown in DETAIL K.

NOTE: IT IS USUALLY EASIER TO TEK SCREW THE BRACKETS TO THE PLATFORM WHEN IT IS UPSIDE DOWN ON THE GROUND.



STEP 2

-Prepare the second platform by adding two appropriately sized legs to the corners opposite of the side that will be joined with the existing platform.




DETAIL K



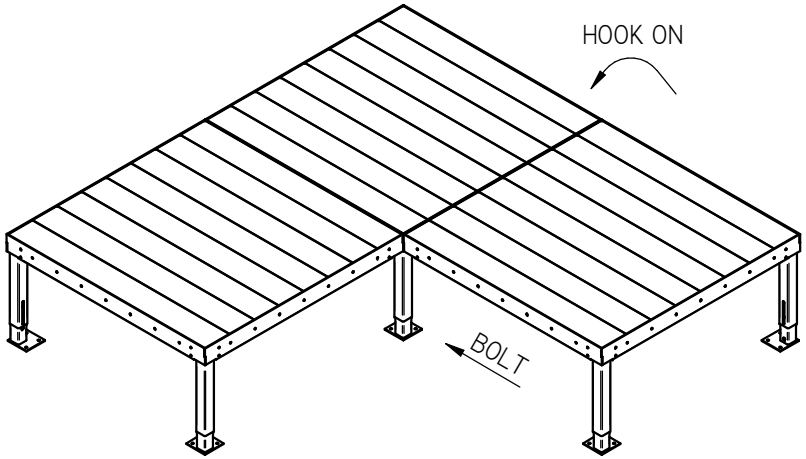

STEP 3

-Hook the second platform on to the platform joint hook brackets on the existing platform and align the platform sides.
-Climb under the platforms and bolt the two platforms together through four evenly spaced holes in the platform edges with (4) 1" bolts, (4) flat washers and (4) flange nuts (found in hardware kit HK0007).
-Make sure the platform is level in both directions and adjust the legs if necessary.
-Continue in the same manner for a long run of platforms.

NOTE: THE PLATFORMS MUST BE BOLTED TOGETHER. THE BRACKETS ARE ONLY TO BE USED TO TEMPORARILY HOOK ONE PLATFORM TO ANOTHER WHILE BOLTING.

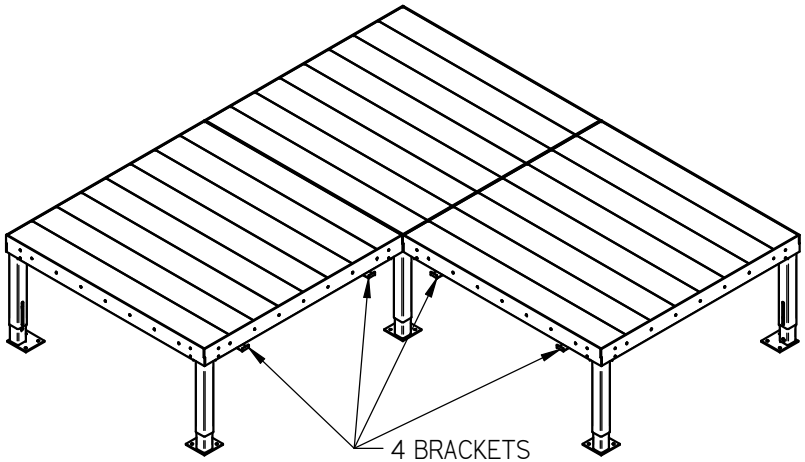
*CONTINUE TO NEXT PAGE*

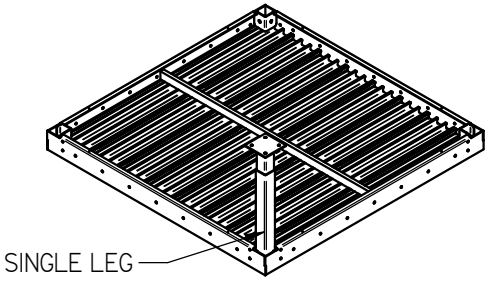
# ADDITIONAL PLATFORMS ASSEMBLY




STEP 4 (IF REQUIRED)

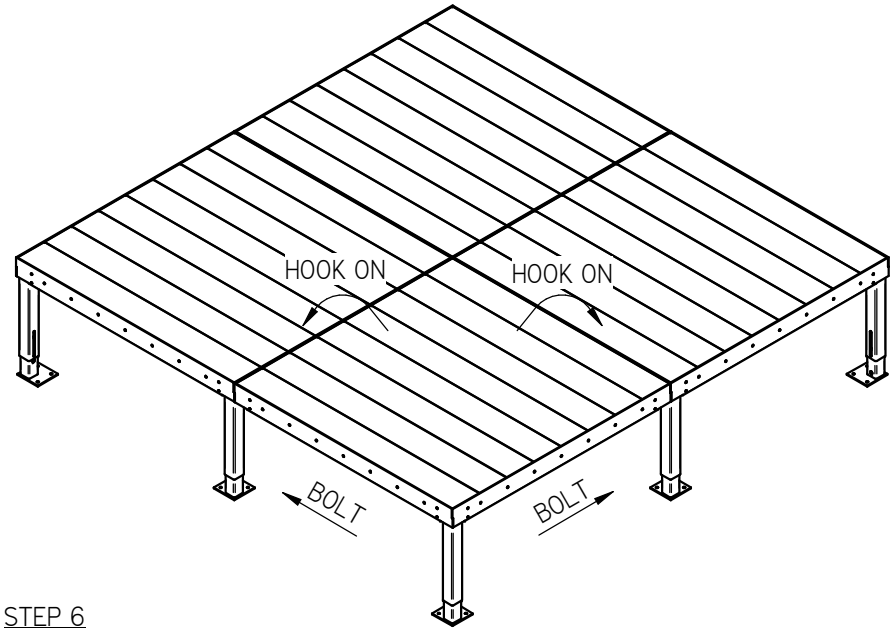
-If additional platforms are required extending outward from the building, tek screw two more platform joint hook brackets to the existing platform and prepare another platform with two legs (shown in step 2 on the previous page.
-Hook the additional platform on and bolt through the edges (shown in step 3).



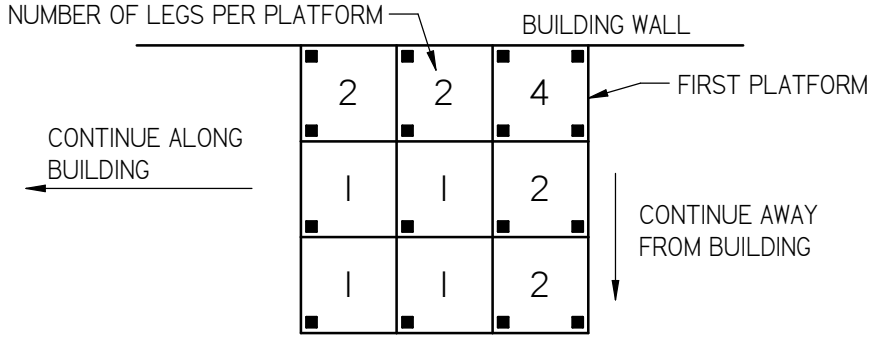

STEP 5 (IF REQUIRED)

-To prepare for a platform bolting to 2 other platforms, tek screw 4 platform joint hook brackets in the locations shown above.
-This platform will require only one leg as shown since the other three corners will be supported by existing legs.




STEP 6

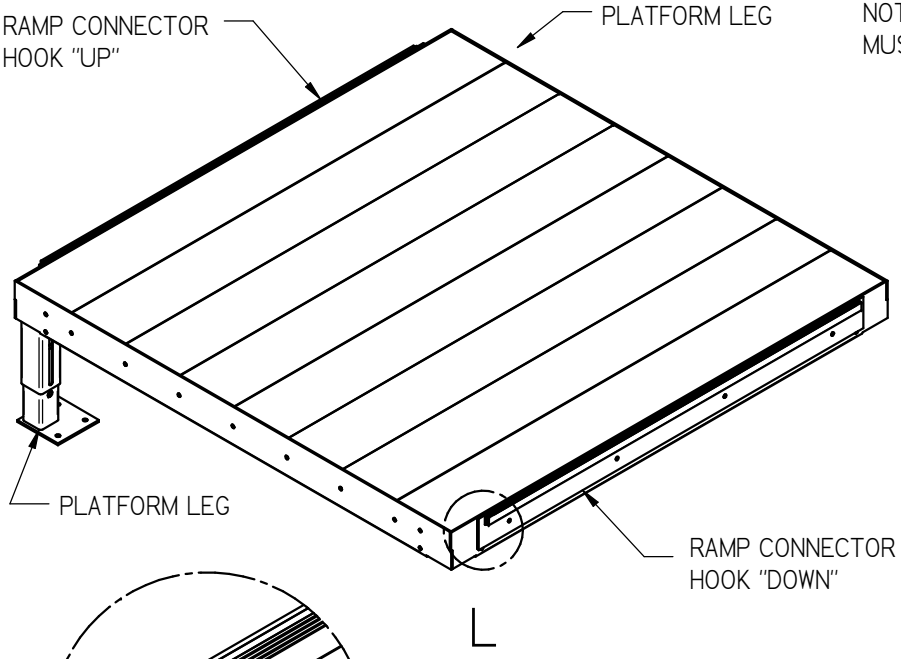
-Bolt the single leg platform to the two existing platforms through the holes in BOTH of the mating platform edges with (4) 1" bolts, (4) flat washers and (4) flange nuts each (use 2 hardware kits HK0007).
-To make this platform larger, continue in the same manner using the diagram below to determine how many legs to use on each platform extending outward from the building.



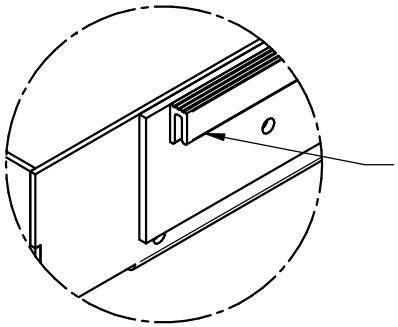

*CONTINUE TO NEXT PAGE*

# RESTING PLATFORM ASSEMBLY

NOTE: ANY RAMP RUN LONGER THAN 30' MUST HAVE A RESTING PLATFORM.




L




DETAIL L

STEP 1

-To prepare for a resting platform, install 2 legs as shown in step 2 on page 21. Then locate a ramp connector hook "up" and a ramp connector hook "down".
-Bolt the ramp connector hooks to the resting platform with (4) 1" bolts, (4) flat washers and (4) flange nuts (found in hardware kit HK0007) as shown with the "up" hook on the same side of the platform that has two platform legs and the "down" hook on the side opposite the 2 legs.




STEP 2

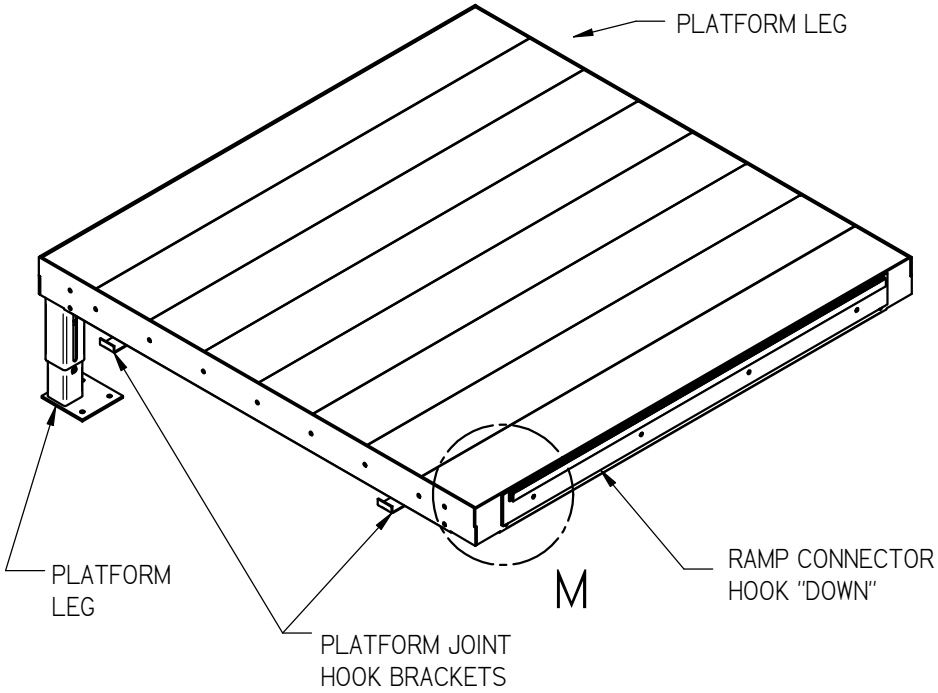
-Hook the resting platform on the lower end of the previous ramp base and make sure the ends of the two hooks are aligned.

STEP 3

-Prepare the next ramp base and hook it on to "up" hook on the resting platform making sure the ends of the two hooks are aligned.

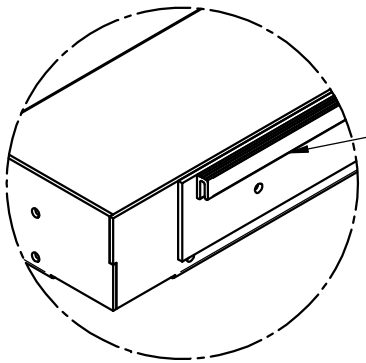
*RETURN TO PAGE 10 TO CONTINUE RAMP ASSEMBLY*

# SWITCHBACK PLATFORM ASSEMBLY

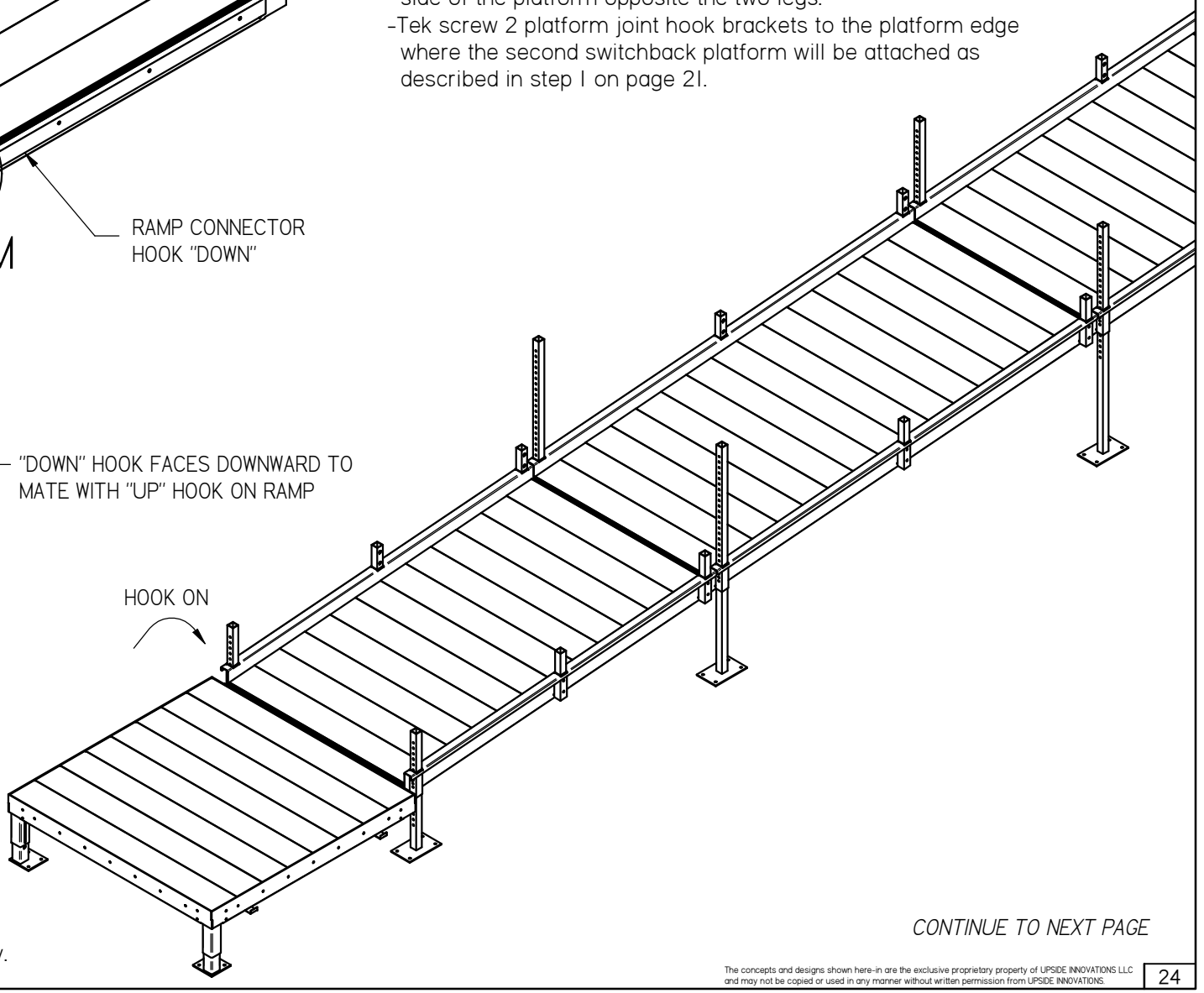



STEP 1

-To prepare for a resting platform, install 2 legs as shown in step 2 on page 21. Then locate a ramp connector hook "down".
-Bolt the ramp connector hook to the first switchback platform with (4) 1" bolts, (4) flat washers and (4) flange nuts (found in hardware kit HK0007) as shown with the "down" hook on the side of the platform opposite the two legs.
-Tek screw 2 platform joint hook brackets to the platform edge where the second switchback platform will be attached as described in step 1 on page 21.




DETAIL M

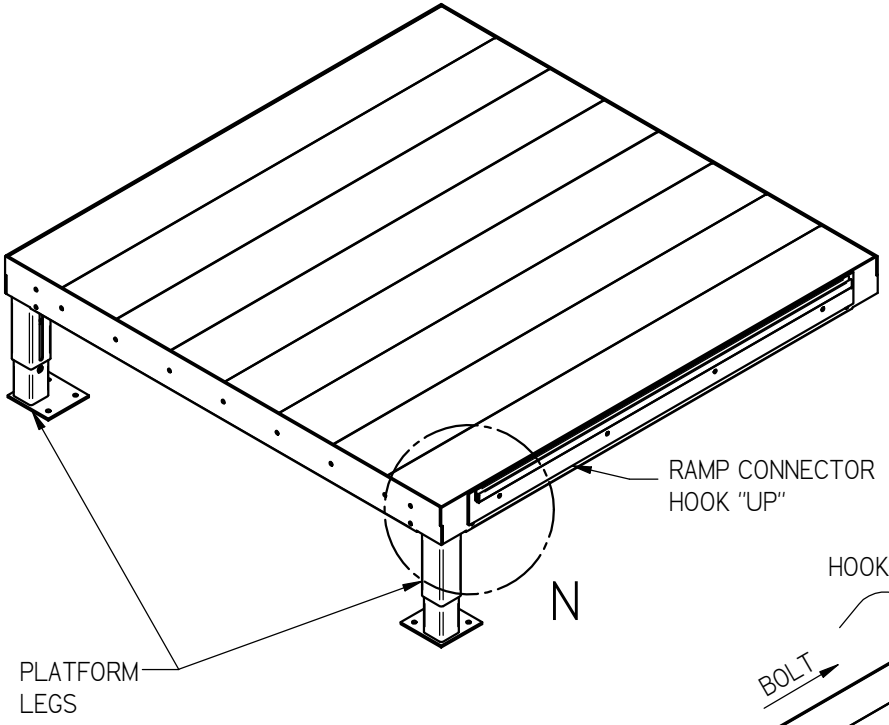


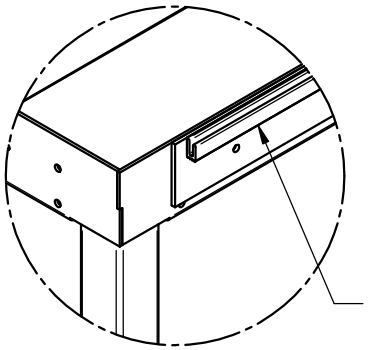

STEP 2

-Hook the first switchback platform on the lower end of the previous ramp base and make sure the ends of the two hooks are aligned.
-Make sure the platform is level in both directions and adjust the legs if necessary.

*CONTINUE TO NEXT PAGE*

# SWITCHBACK PLATFORM ASSEMBLY

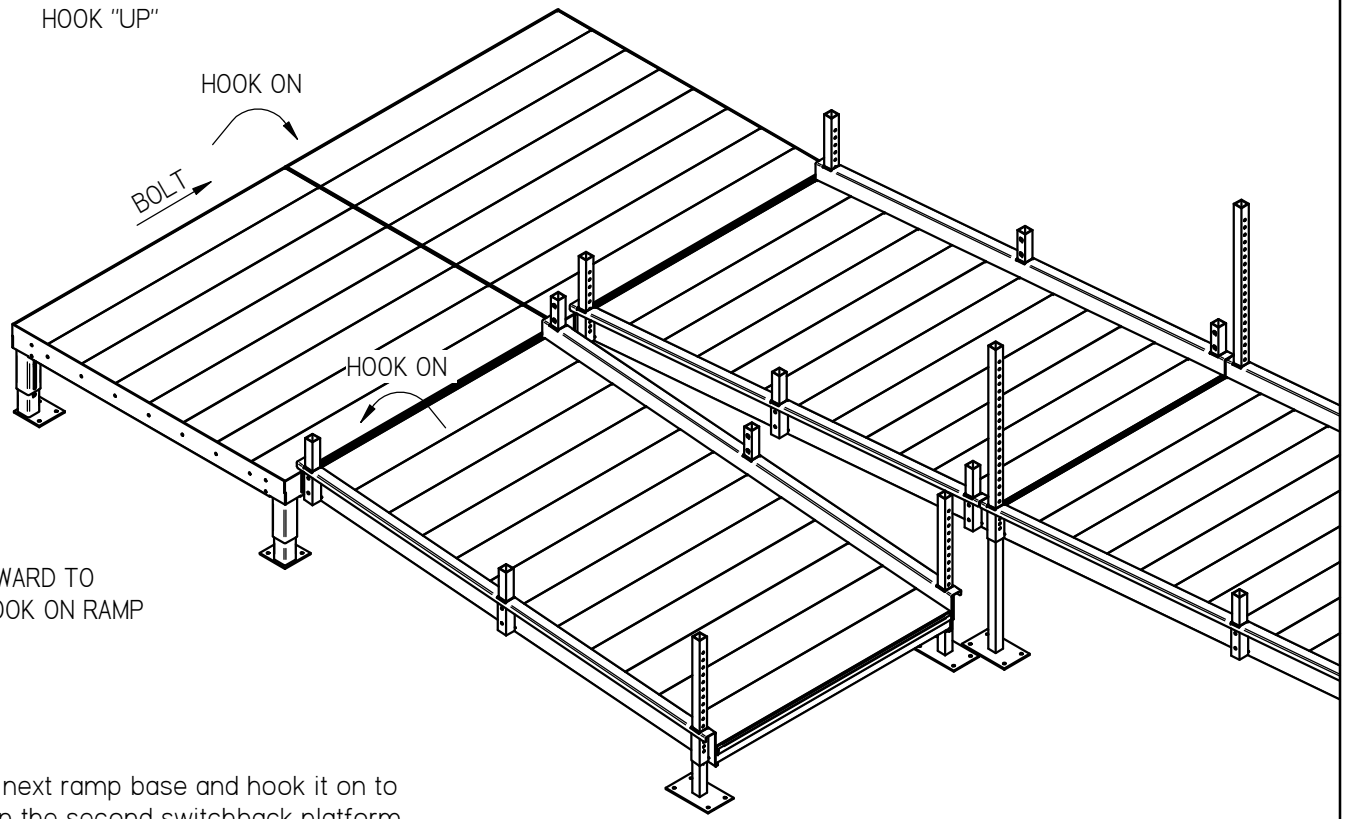



DETAIL N

STEP 3

-To prepare the second resting platform, install 2 legs as shown in step 2 on page 21. Then locate a ramp connector hook "up".
-Bolt the ramp connector hook to the second switchback platform with (4) 1" bolts, (4) flat washers and (4) flange nuts (found in hardware kit HK0007) as shown with the "up" hook on the side of the platform next to the 2 legs.
-Climb under the platforms and bolt the 2 platforms together through 4 evenly spaced holes in the platform edges with (4) 1" bolts, (4) flat washers and (4) flange nuts (found in hardware kit HK0007). Depending on how low to the ground these platforms are, it may be easier to bolt them together upside down and flip them over before hooking them on to the upper ramp section.
-Make sure the platform is level in both directions and adjust the legs if necessary.




STEP 4

-Prepare the next ramp base and hook it on to "up" hook on the second switchback platform making sure the ends of the two hooks are aligned.

*RETURN TO PAGE 10 TO CONTINUE RAMP ASSEMBLY*

☑ CHECK OFF THE ITEMS BELOW TO MAKE SURE YOUR RAMP OR STEP IS PROPERLY INSTALLED

---

- ☐ ALL BOLTS HAVE BEEN TIGHTENED TO A TORQUE OF 25 FT-LB
- ☐ ALL RAMP HANDRAILS HAVE BEEN INSTALLED ACCORDING TO PAGES 13 - 15
- ☐ ALL GUARDRAIL BRACKETS HAVE BEEN INSTALLED ACCORDING TO PAGE 16
- ☐ ALL RAMP KEYS HAVE BEEN INSTALLED ACCORDING TO PAGE 17
- ☐ ALL STEP KEYS HAVE BEEN INSTALLED ACCORDING TO PAGE 19
- ☐ ALL THRESHOLD HEIGHT PLATFORMS HAVE BEEN LAG BOLTED TO THE BUILDING ACCORDING TO PAGE 18
- ☐ ALL FOOTPLATES HAVE BEEN ANCHORED TO A CONCRETE SURFACE ACCORDING TO PAGE 18 (IF REQUIRED)
- ☐ ALL MATING PLATFORMS HAVE BEEN BOLTED TOGETHER ACCORDING TO PAGES 21 - 22

You have reached the end of the installation instructions. If you need assistance, please contact us: (513)-889-2492

## CLEANING ALUMINUM RAMPS

Aluminum is a light, but strong material that is common for outdoor, commercial applications because of its weather-resistant properties; aluminum doesn't rust because it forms a natural layer of oxide. Oxidation is a confusing process because it is a form of corrosion, but, unlike oxidation that occurs on other metals, it does not jeopardize the structural integrity of the aluminum – it actually strengthens the material. Oxidation creates a protective barrier against water and rust, but it can make the aluminum less attractive overtime. Cleaning the ramp will decrease the chances of severe oxidation.

Step 1: The first step is to make sure that all debris including mud, dust, and leaves are all cleared off the ramp. To do this, you must start at the top of the ramp with a stiff-bristled push-broom, and sweep all the debris down the ramp; the edge guards that run along both edges of the ramp prevent the debris from being pushed over the sides. The stiff-bristled push-broom is recommended to clean out the grooves of the ramp, but don't try to scrub the ramp with the broom as it might scratch the aluminum.

Step 2: After brushing off the aluminum ramp, rinse it with water and mild detergent such as dish soap. Use a generous amount of dish soap over the length of the ramp, and put a concentrated amount on tough spots. Let it sit for a couple of minutes. Next, hose off or lightly pressure wash the ramp to remove the soap and dirt. It is suggested to use filtered water if possible because unfiltered water may contain sulfur, chlorine, fluoride, and other minerals that could be damage the aluminum over time. Make sure that all dish soap is washed off before the wheelchair ramp is used.

Step 3: If there is dirt on the ramp still, use a towel and dish soap to scrub the area. Do not use steel wool or scour pads because these materials can scratch the aluminum and give it a dull appearance. Do not use harsh cleaners like baking soda or alkali-based cleaners as these can cause discoloration. If you want to try a new type of cleaner, test an area on the underside of the ramp to see if it discolors the aluminum.

Step 4: If the wheelchair ramp has already oxidized, try spot-treating the oxidized areas with an aluminum cleaner like Aluma Kleen or Aluma Bright.