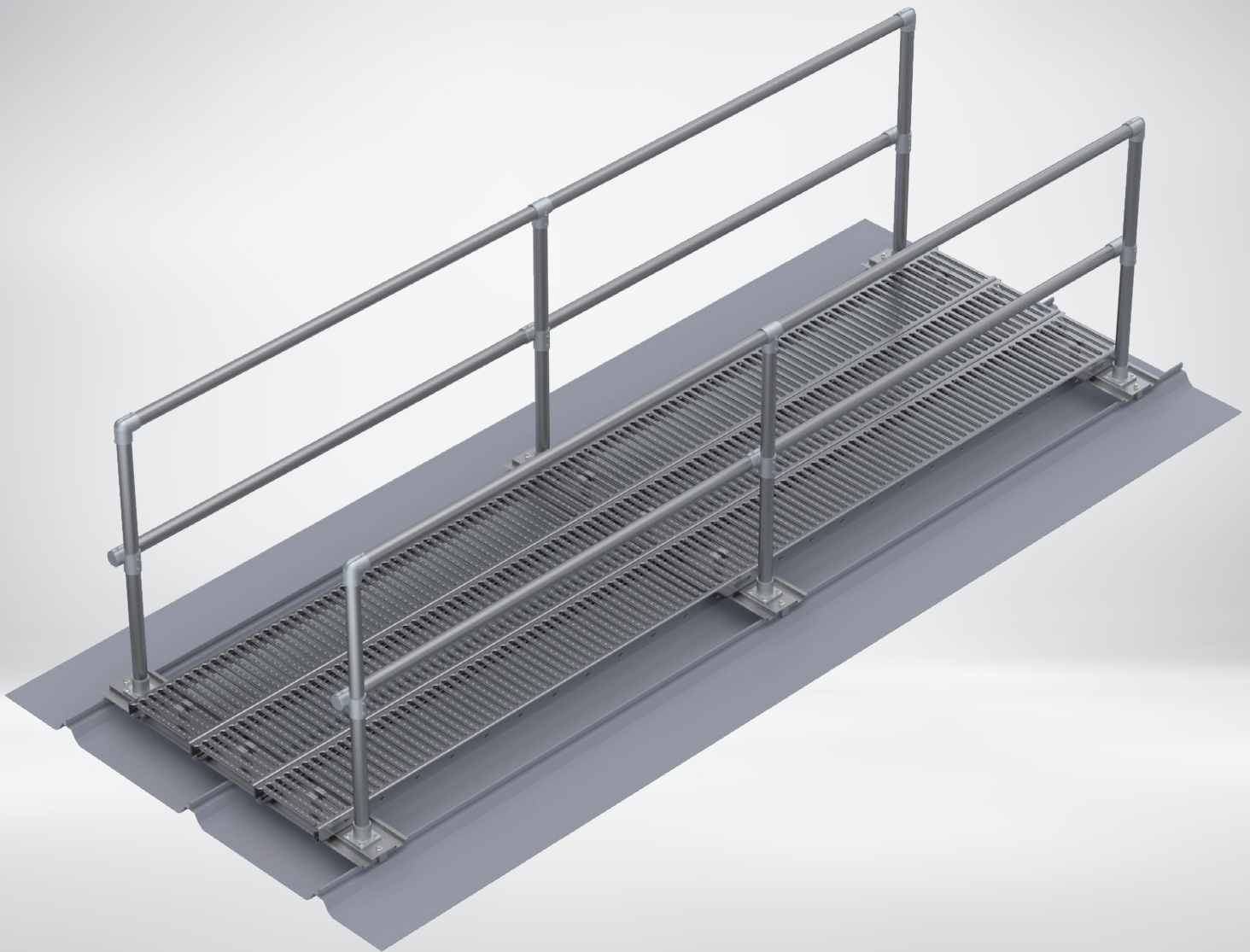


METALWALK® ROOFTOP WALKWAY & SAFETY HANDRAIL INSTALLATION INSTRUCTIONS - SSR PANELS



METALWALK® INSTALLATION INSTRUCTIONS CONTENTS

SECTION 1:	PAGES
WRITTEN INSTRUCTIONS	3 - 6
METALWALK® COMPONENTS	7
RAILING COMPONENTS	8
GRATING DETAIL	9
 SECTION 2:	
PARALLEL RUNS	10 - 14
 SECTION 3:	
PERPENDICULAR RUNS	15 - 21
 SECTION 4:	
PITCH CORRECTED SYSTEM	22 - 30
 SECTION 5:	
CORNER CONDITIONS	31
RIDGE CONDITION	32
CAGED LADDER CONDITION	33
SWING GATE	34
TOE KICK	35
HANDRAIL SYSTEM WITH METALWALK®	36 - 38
PERIMETER HANDRAIL	39



METALWALK® INSTALLATION INSTRUCTIONS FOR SSR PANELS

PART 1 GENERAL

- 1.01 PARALLEL RUNS - Up and down the slope, from ridge to eave.
- 1.02 PERPENDICULAR RUNS - Across roof high ribs (same as the ridge cap).
- 1.03 Use lengths of nominal 10', 12', 20' or 24'-0" grating sections and 10' or 21' handrail tubing to reduce waste. (Other lengths available.) Check roof plans provided by architect and METALWALK® drawings from manufacturer.
- 1.04 Assemble grating sections. Starting with male/female grating section and finish with male/male.
- 1.05 Support plates are provided for METALWALK® grating with or without handrail.
- 1.06 Remove debris and clean roof of metal shavings from drilling.
- 1.07 Spray cut ends of METALWALK® grating sections with Galvanizing Compound or rust inhibitive primer.

PART 2 TOOL LIST

- 2.01 Power chop saw with metal cutting blade, or tubing cutter, to accept 1.9" OD pipe.
- 2.02 Allen hex wrench 3/16" or 5/16" size (depends on fitting type).
- 2.03 Ratchet socket set, 3/8" drive, 1/2" hex head socket.
- 2.04 Box or open end 1/2" wrench, or adjustable wrench.
- 2.05 Electric screw gun, speed 0-2500 rpm, reversing.
- 2.06 Magnetic 5/16" hex head bit with 1/4" shank drive.
- 2.07 Electric drill with 5/16" drill bit.

PART 3 PRODUCTS

3.01 PARALLEL RUNS (Up and down the slope, from ridge to eave)

A. SUPPORT PLATE

- 1. Install S-5!® clamps on each seam corresponding to the number of 1" long holes in the support plate (Typical: 2 per support plate). Tighten S-5!® set screw to 130-150 inch lbs torque for 24 ga. panels. Set support plate directly on S-5!® Clamps and install supplied integral bolt and washer. Standard support plate spacing is maximum 6'0". (See roof layout drawing for variances.)

NOTE: Area to have handrail installed requires support plates with (4) pre-punched 5/16" diameter holes on one, or both, ends to accommodate square base flange.

Support plate will extend out from the roof panel major standing seam 3" to 6" inches.
(Other sizes available on special order.)

Determine from the drawings on which side of the METALWALK® grating the handrail is to be located.

- 2. Space support plates so that the grating sections butt end to end on the center of a support plate. No more than 12" of METALWALK® grating should project past the support plate at the ending run.
- 3. Add a support plate at intersections and termination of runs as required.



B. METALWALK® GRATING SECTIONS - PARALLEL RUNS

1. Align METALWALK® grating sections parallel to roof panel major ribs on the Support Plate.
2. Install (1) MHC25 Hold Down Clamp thru open rungs of each grating plank onto the support plate using (2) 12-14 x 3/4" self-drilling fasteners.
3. Fasteners should be centered to penetrate the mid-section of the support plate.
4. Use an electric screw gun with a magnetic 5/16" hex head bit set to a proper hold-down torque, minimum of 92 inch pounds.

3.02 PERPENDICULAR RUNS - Across roof high ribs, same direction as ridge cap.

A. METALWALK® GRATING SECTIONS

1. Install S-5!® Clamps directly on SSR rib. Spacing based on corresponding 1" long holes in the support plate. Tighten S-5!® Clamps to 130-150 inch lbs. for 24 ga. panels.
2. Set Support Plate directly on S-5!® Clamps and use supplied integral bolt & washer.
3. Install MHC25 clamp thru open rungs of each grating plank onto support plate using (2) 12-14 x 3/4" self-drilling fasteners. SEE NOTE BELOW

(NOTE: OFFSET MHC25 CLAMP FROM CENTER OF SUPPORT PLATE SO FASTENERS DO NOT PENETRATE SEAM)

B. SPLICE CHANNEL (IF REQUIRED)

1. Where two METALWALK® grating sections are butted end to end, on perpendicular runs, install a splice channel from the underside.
2. Center splice channel 1-1/2" either side of joint.
3. Fasten splice channel with 12-14 x 3/4" self-drilling fasteners into each grating section, total of (4) fasteners, (2) each side.
4. Install MHC25 clamp thru open rungs onto the splice channel using (2) 12-14 x 3/4" self-drilling fasteners per MHC25 Clamp. (1) per 12" wide plank.
5. ***Important** - Check the fastener locations and penetrations through the splice channel, that these will **not** penetrate the roof panel standing seam major rib area.

C. LEDGER ANGLE (IF REQUIRED)

1. Where METALWALK® grating sections butt into side of a parallel run, fasten a ledger angle using 12-14 x 3/4" self-drilling fasteners, equally spaced.
2. Rest end of grating section on ledger angle.
3. Install MHC25 clamp thru open rungs onto the ledger angle using 12-14 x 3/4" self-drilling fasteners. (1) per 12" wide plank. Use an electric screw gun with a magnetic 5/16" head bit set to the proper hold-down torque of minimum of 92 inch pounds. Do not over torque fasteners which could cause deformation of METALWALK® grating section.
4. ***Important** - Check the fastener locations and penetrations through the ledger angle, that these will **not** penetrate the roof panel standing seam major rib area.



3.03 HANDRAIL

A. VERTICAL POSTS

1. Position the Square Flange Base for the vertical post over the pre-punched holes with the set screws pointed out from the grating (to allow room for ease of tightening the set screws with an allen wrench). Secure the Square Flange Base to the support plate using (4) 5/16" x 1" bolts, (8) 7/8" washers and (4) lock nuts. 7/8" washers to be installed under each nut and bolt head. Tighten to 130-150 inch lbs torque.
2. Insert pre-cut 42-3/4" tubing, 1.9" OD into the Square Flange Base on support plate, make sure it bottoms out, then secure by tightening the (2) setscrews to 204 inch pounds.
3. Mark Vertical Posts from the top at 19" for receiving midrail Cross slip-on fitting (top of fitting).

B. MID-RAIL

1. Determine if mid-rail is to be located on the inside or outside of the railing.
2. Slide on Vertical Posts a Cross slip-on fitting with the open barrel to the side to receive midrail.
3. Secure temporarily in place at the pre-marked 19" (top of fitting) by tightening one setscrew lightly with Allen hex wrench.
4. Measure the distance from center to center of the two end vertical posts and add 2-1/4". Cut lengths from the standard 1.9" OD tubing and join together with the pre-tapered end or if cut to length, join together at the Vertical Post Cross slip-on fitting. If the tubing joint is mid-way between Vertical Posts an External Coupling (optional) slip-on fitting can be installed.
5. Assemble mid-rail by sliding tubing through all of the Cross slip-on fittings, adjust as necessary for alignment, tighten all setscrews to 204 inch pounds.
6. Install Metal Plug in the mid-rail tubing at each end of the Vertical Post OR install Elbow with a piece of vertical piece of tubing to connect with Elbow on top rail where handrail needs to extend past the end of the Vertical Post.

C. TOP RAIL

1. Measure the distance from center to center of the two end vertical posts. Cut lengths from the standard 1.9" OD tubing so that they will butt together at the Vertical Post Tee or join together with the pre-tapered end. If the tubing joint is mid-way between Vertical Posts an External Coupling (optional) slip-on fitting can be installed.
2. Slide on each Vertical Post a Tee slip-on fitting with the setscrew pointed away from METALWALK® grating.
3. Slide the 1.9" OD tubing through the Tee slip-on fittings. At each end Vertical Post install an Elbow. The top rail tubing should be resting on the Vertical Posts.
4. Secure in place by tightening setscrews with Allen hex wrench to 204 in. lbs.



D. CORNER CONDITION

1. OUTSIDE CORNER: Extend pipe past the tee and cross fitting of the last vertical post at desired corner. Field measure pipes to align with intersecting pipes at corner and cut to desired length.
2. Install Elbow slip-on fitting to the pipes in the desired direction of the adjacent top and mid-rail. Tighten setscrew to 204 inch lbs.
3. Attach elbow to top-rail and mid-rail of adjacent pipes and tighten setscrew to 204 inch lbs.
4. INSIDE CORNER: Extend pipe past the tee and cross fitting of the last vertical post at desired corner. Field measure pipes to align with intersecting pipes at corner and cut to desired length. Be sure not to extend pipe into METALWALK® walking area.
5. Install Elbow slip-on fitting to the pipes in the desired direction of the adjacent top and mid rail. Tighten setscrew to 204 inch lbs.
6. Attach elbow to top-rail and mid-rail of adjacent pipes and tighten setscrew to 204 inch lbs.

E. DIAGONAL SUPPORT - OPTIONAL AT RAIL-END POST – USE ONLY WHEN SPECIFIED

1. Before installing the top railing, on the desired rail-end vertical post, install Adjustable Elbow slip-on fitting, direct it out from railing at 90 degrees.
2. Use a pre-cut 42-3/4" post OR cut tubing to proper length and insert into the Adjustable elbow and lightly tighten setscrew.
3. Install on the tubing end Angle Base OR Adjustable Flange, and lightly tighten setscrews.
4. Place a support plate across roof panel major high ribs, positioned under the end of the diagonal tubing. Align Angle Base OR Adjustable Flange on the center 4" wide section of support plate and mark location of the mounting (4) holes of the Flange to the Support Plate (if not already pre-punched).
5. Remove support plate, center punch, and drill the (4) 5/16" diameter holes.
6. Secure the Angle Base OR Adjustable Flange to the support plate using (4) 5/16"-18 x 1" bolts with flat washers under each bolt head and the self-locking nut assembly. Tighten the self-locking nuts to a torque of 130 to 150 inch lbs.
7. Install support plate, slip together tube into flange, attach to roof panel per Part 3.01, Section A-1.
8. Secure in place by tightening setscrews with Allen hex wrench to 204 inch lbs.

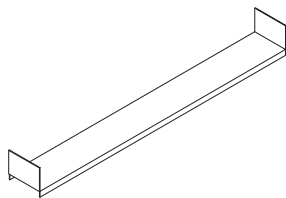
F. FINAL INSPECTION

1. Check for proper installation, proper torque setting of all bolts, nuts and setscrews, remove any metal shavings, all tools and equipment.
2. Spray cut ends of METALWALK® grating sections with galvanizing compound or rust inhibitive primer to prevent future rust.

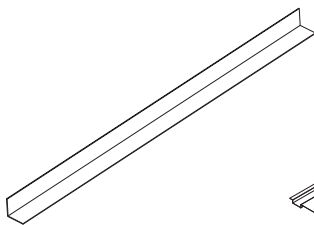
END OF SECTION



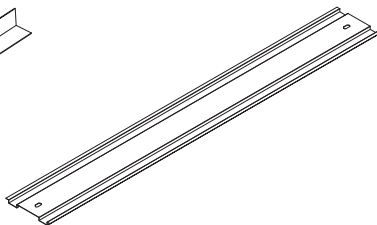
METALWALK® COMPONENTS



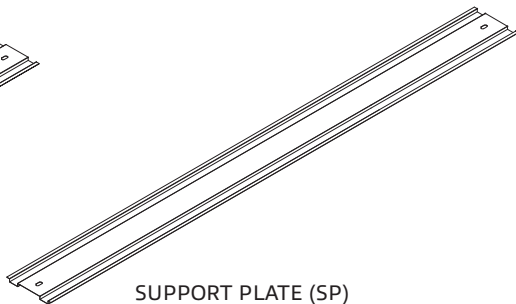
SPLICE CHANNEL (SC)
24", 36", OR 48"



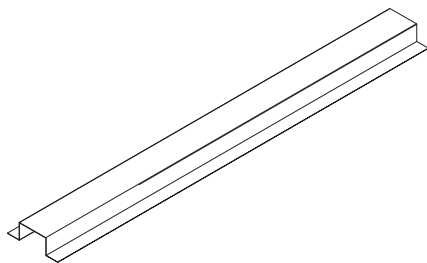
LEDGER ANGLE (LA)
24", 36", OR 48"



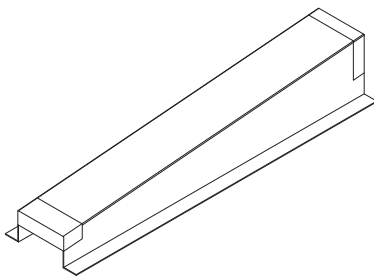
SUPPORT PLATE (SP)
24", 30", 36", OR 48"



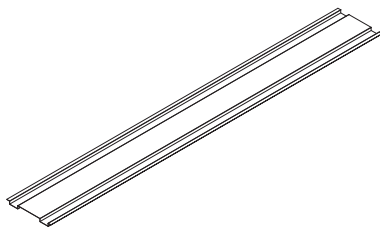
SUPPORT PLATE (SP)
54", 60", 72"



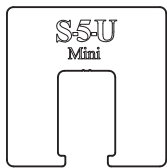
STANDARD HAT SECTION (HS)
FOR "R" PANEL INSTALLATION



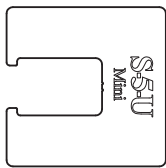
STANDARD PITCHED HAT SECTION (PHS)
FOR "R" PANEL INSTALLATION



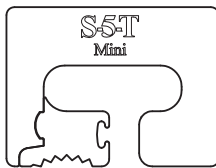
SUPPORT PLATE (SP)
FOR "R" PANEL INSTALLATION



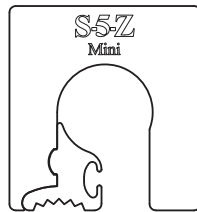
S-5-U CLAMP
(TOP MOUNT)



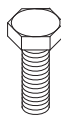
S-5-U CLAMP
(SIDE MOUNT)



S-5-T CLAMP
W/ INSERT



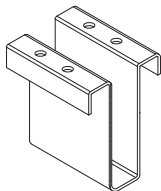
S-5-Z CLAMP
W/ INSERT



M8 BOLT
PACKAGED
SEPERATELY



SET SCREWS
PACKAGED
SEPERATELY



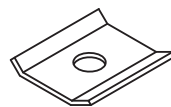
MHC25 HOLD DOWN CLAMP
(ATTACHES GRATING TO
PLATES)



12-14 X 3/4" SDST FASTENER
(FOR ALL FASTENER
APPLICATIONS)



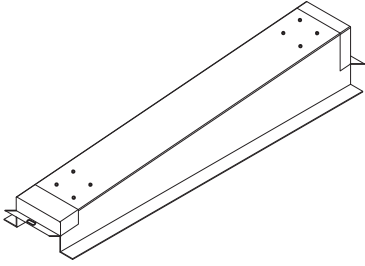
M8 X 60 METRIC BOLT
(FOR OPTIONAL BOLT
ASSEMBLIES)



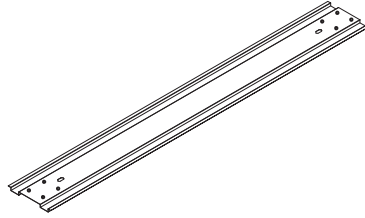
SW-2 SQUARE WASHER
FOR OPTIONAL BOLT
ASSEMBLIES



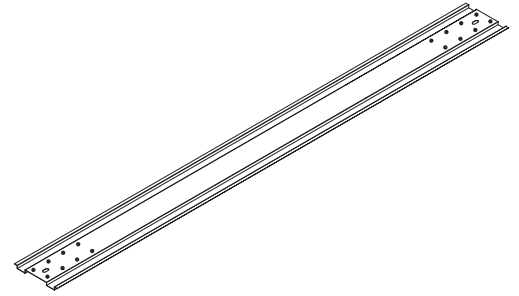
HANDRAIL COMPONENTS



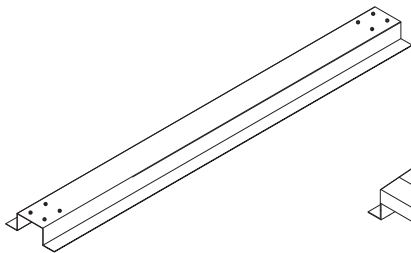
PHSR-PITCHED HAT FOR SSR
FOR PERPENDICULAR LEVEL RUNS



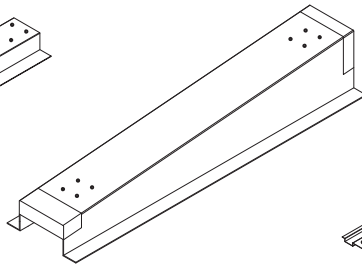
SPR RAILING SUPPORT PLATE FOR SSR
SPR-38 (SIZE BASED ON METALWALK® WIDTH)



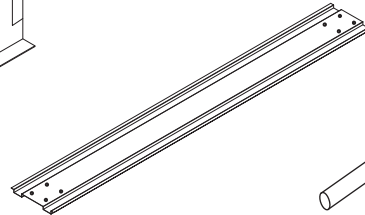
SPR RAILING SUPPORT PLATE FOR SSR
SPR-54 & 62 (SIZE BASED ON METALWALK® WIDTH)



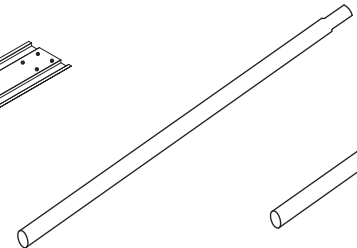
HSR-PITCHED HAT FOR "R"
PANEL FOR PERPENDICULAR
RUNS



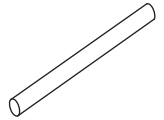
HSR-PITCHED HAT FOR "R"
PANEL FOR PERPENDICULAR
LEVEL RUNS



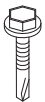
SPR RAILING SUPPORT
PLATE FOR "R" PANEL



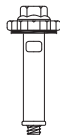
10'-6" LONG HORIZONTAL
PIPE W/ WEDGED END



42-3/4" LONG
VERTICAL POST



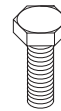
12-14 X 3/4" SDST
FASTENER



FAB-LOK FASTENER
FOR "R" PANEL INSTALL



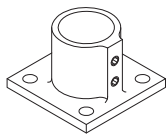
5/16" LOCK NUT
FOR RAIL BASE INSTALL



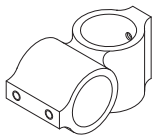
5/16" X 1" OR 1-1/2" LONG
FOR RAIL BASE INSTALL



1" DIA. FLAT WASHER
FOR RAIL BASE INSTALL



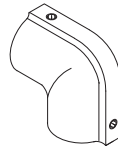
RAIL BASE #45SBC-8



CROSS #12-8



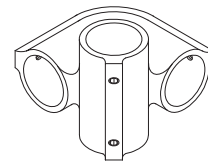
TEE #5E-8



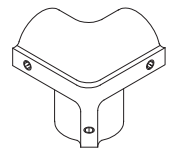
ELBOW #3-8
CORNER
CONDITION #1



PLUG #62AG-8



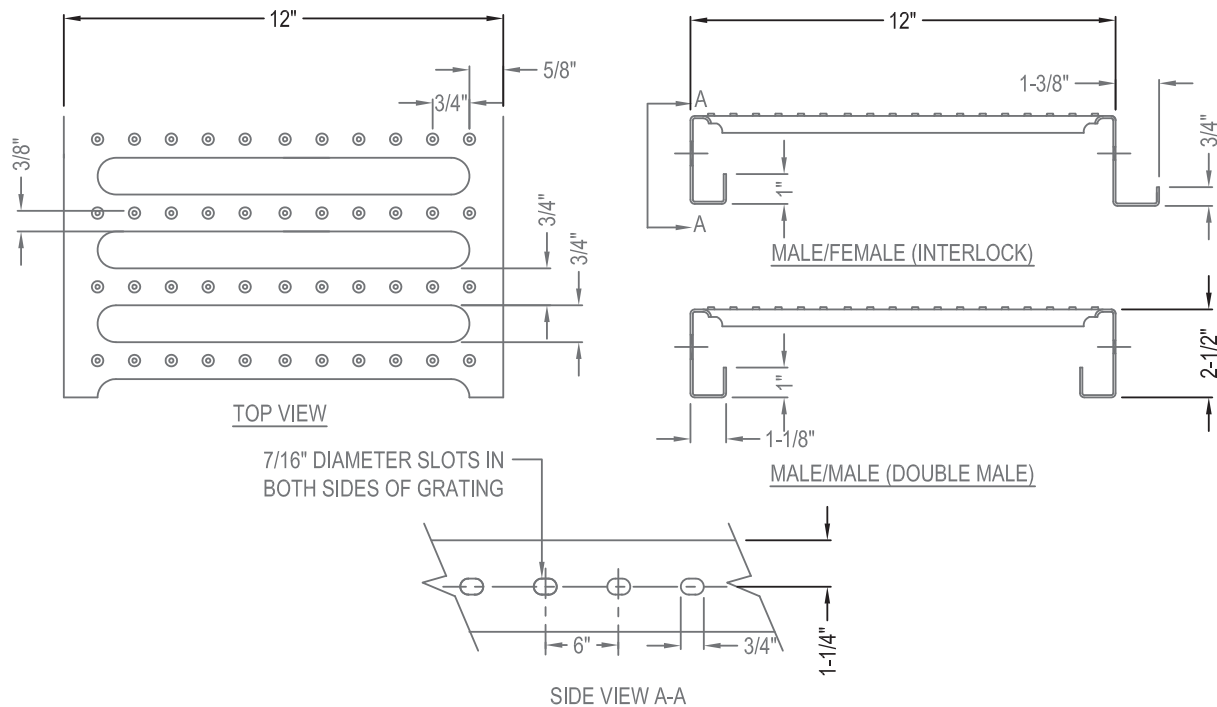
OUTSIDE
CORNER #20-8



SIDE OUTLET
ELBOW #9-8



GRATING SPEC



MAXIMUM ALLOWABLE CONCENTRATED LOAD (lbs/sf)

SIMPLY SUPPORTED SPAN				
LENGTH (ft.)	3'-0"	4'-0"	5'-0"	6'-0"
WEIGHT (lbs.)	529*	529	501	420

- (1) LOADS ARE CONTROLLED BY BENDING STRENGTH (DEFLECTION < L/240)
 (2) ALL LOADS ARE TOTAL LOADS (DEAD WEIGHT OF GRATING MUST BE SUBTRACTED TO OBTAIN LIVE LOAD)
 (3) LOAD VALUES CAN BE INCREASED BY AT LEAST 50% WHEN GRATING SECTIONS INTERLOCK TOGETHER
 *LOAD CONTROLLED BY 2" END BEARING STRENGTH (DEFLECTION < L/240)

FASTENER PERFORMANCE DATA

PULLOUT VALUES (average lbs. ultimate)					
FASTENER		STEEL GAUGE			
SIZE	POINT	24	18	14	12
12-14	Teks/3	211	551	1063	1631

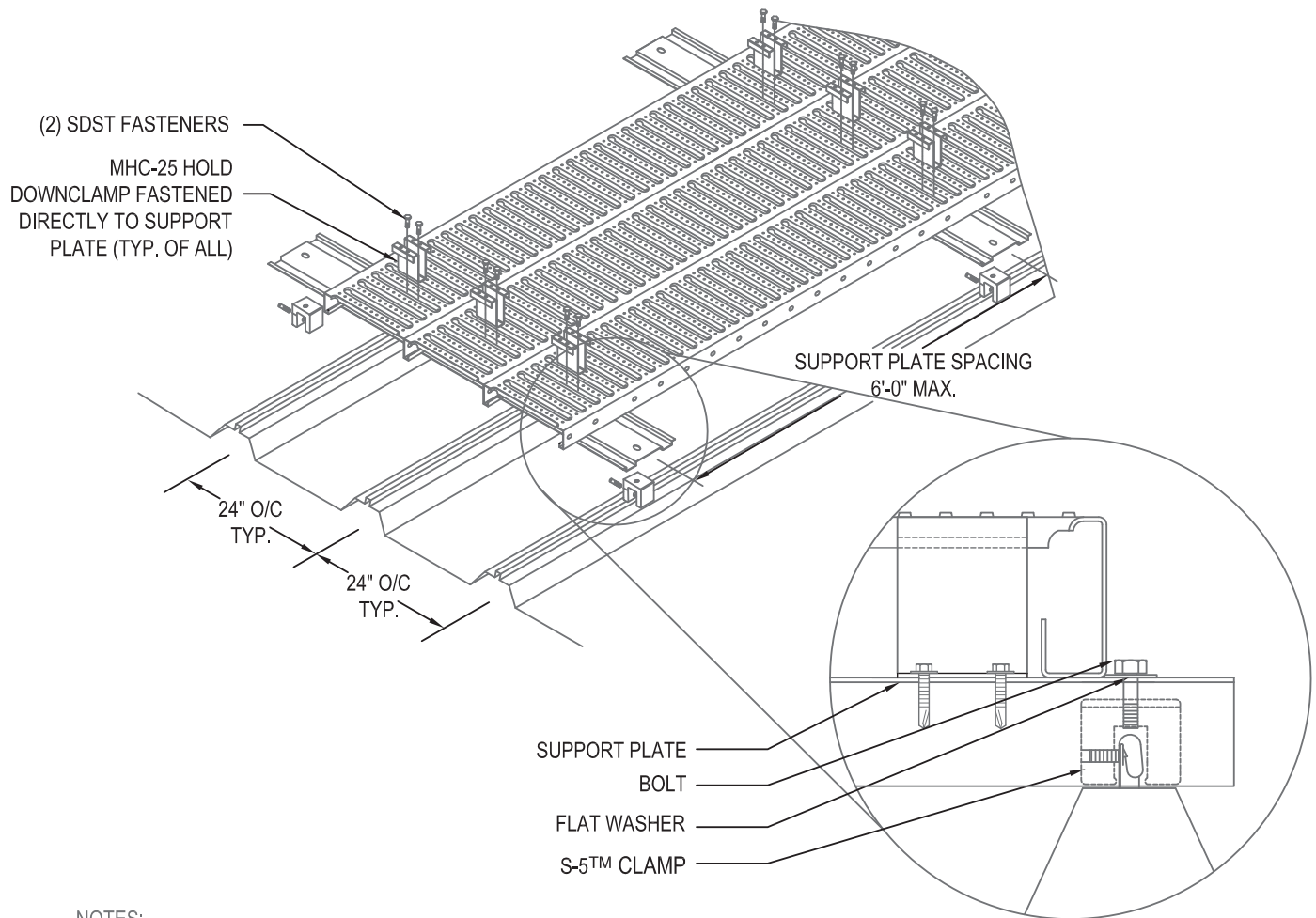
STRENGTH CHARACTERISTICS			
FASTENER		TENSILE	SHEAR
SIZE	POINT	(lbs.min.)	(avg.lbs.ult.)
12-14	Teks/3	2778	2000

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-008.



PARALLEL RUNS

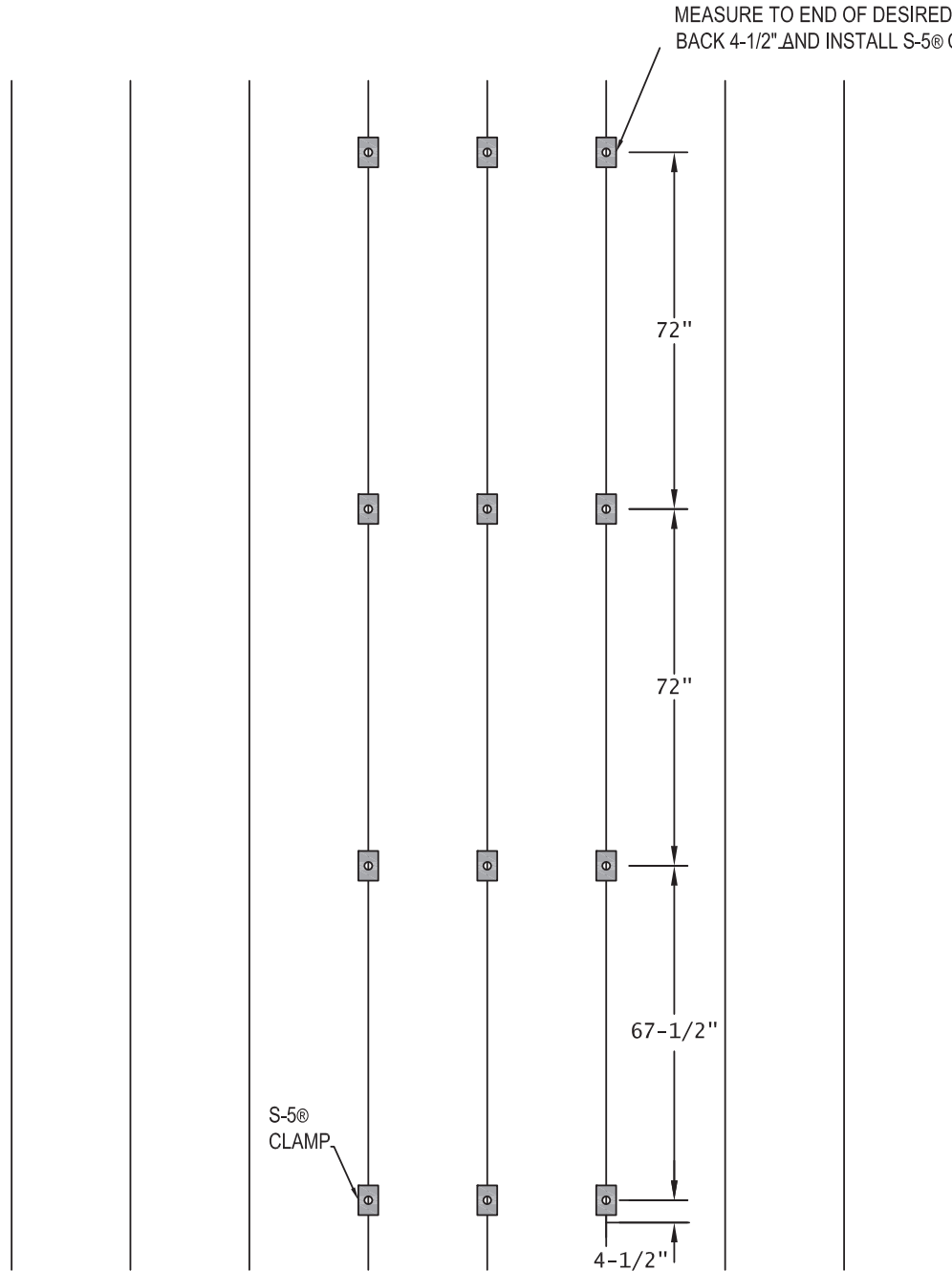


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5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-005.



PARALLEL RUNS - S-5!® CLAMP PLACEMENT



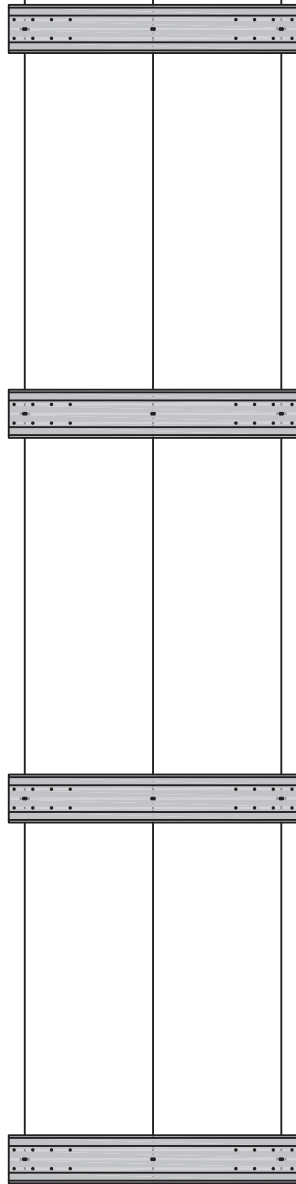
STEP 1 - MEASURE TOTAL LENGTH OF PARALLEL RUN. FROM EDGE OF DESIRED STARTING POINT OF GRATING, MEASURE 4-1/2" AND INSTALL S-5!® CLAMP (SEE TORQUE GUIDE IN BOX). INSTALL ADDITIONAL CLAMPS BASED ON QUANTITY OF SLOTS IN SUPPORT PLATE AND SPACING SHOWN TO LEFT.



NOTE:
THE QUANTITY OF S-5!® CLAMPS IS DETERMINED BY THE QUANTITY AND SPACING OF THE 1" SLOTS IN THE SUPPORT PLATE. QUANTITY WILL VARY BASED ON RIB SPACING AND METALWALK WIDTH.



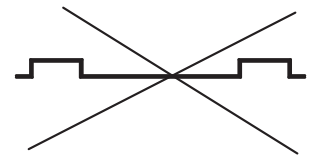
PARALLEL RUNS - SUPPORT PLATE ATTACHMENT



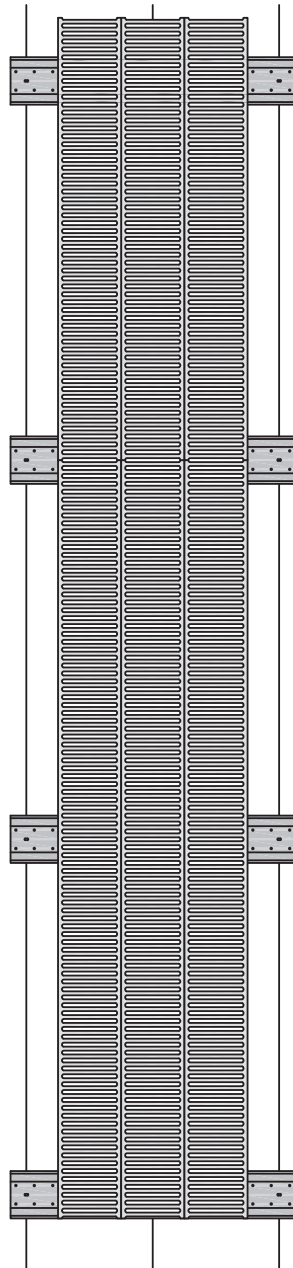
STEP 2 - ATTACH SUPPORT PLATES TO S-50® CLAMPS THRU THE 1" SLOTS IN THE SUPPORT PLATE. USE THE M-8 BOLTS SUPPLIED WITH THE S-50® CLAMPS.



SUPPORT PLATE
NOTE: THIS SIDE UP



PARALLEL RUNS - GRATING PLACEMENT



STEP 3 - PLACE GRATING ON SUPPORT PLATES STARTING WITH INTERLOCK PANEL AND ENDING WITH MALE/MALE PLANK (SEE BELOW). GRATING CAN BE SHIFTED LEFT OR RIGHT BASED ON HANDRAIL OR ROOFTOP UNITS.

CAUTION: IF HANDRAIL IS BEING USED, BE SURE THERE IS ADEQUATE ROOM TO INSTALL HANDRAIL BASE.

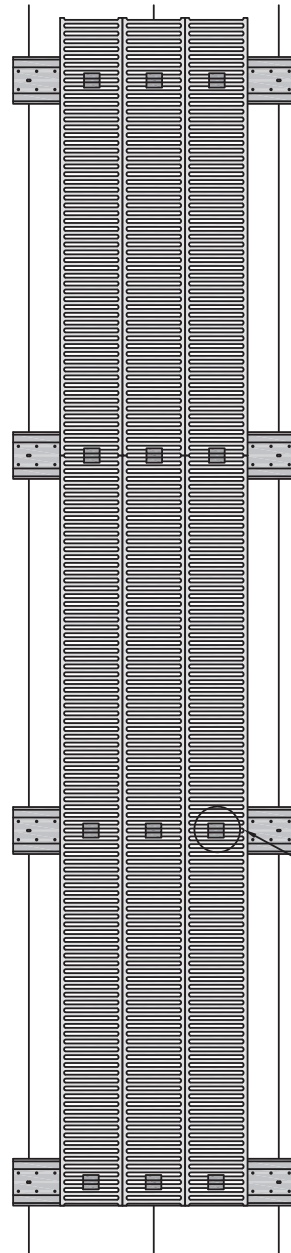


INTERLOCK (FM)

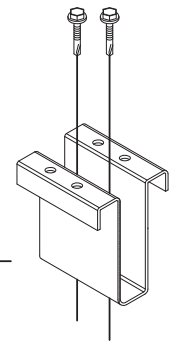


MALE/MALE (MM)

PARALLEL RUNS - GRATING ATTACHMENT

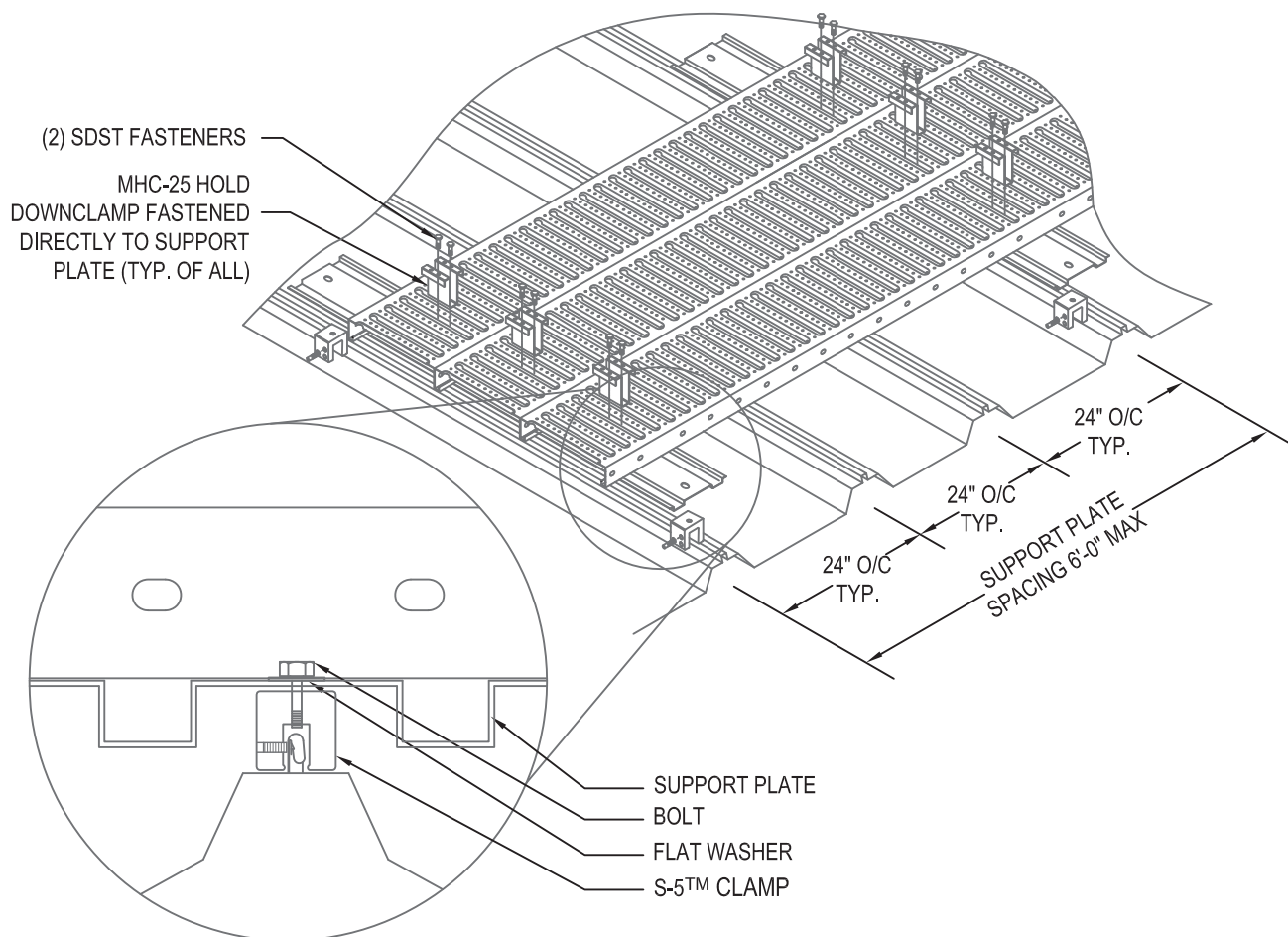


STEP 4 - INSERT 1 EA. MHC25 CLIP (SEE BELOW) IN CENTER OF EACH PLANK AT SUPPORT PLATE LOCATIONS. FASTEN CLAMP TO SUPPORT PLATE USING 2 EA. 12-14X7/8" SDST FASTENER.



MHC25 CLIP

PERPENDICULAR RUNS



NOTES:

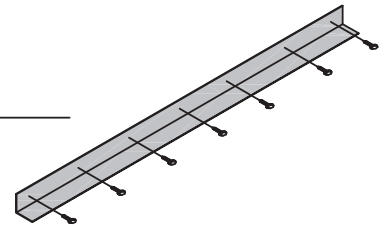
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-006.



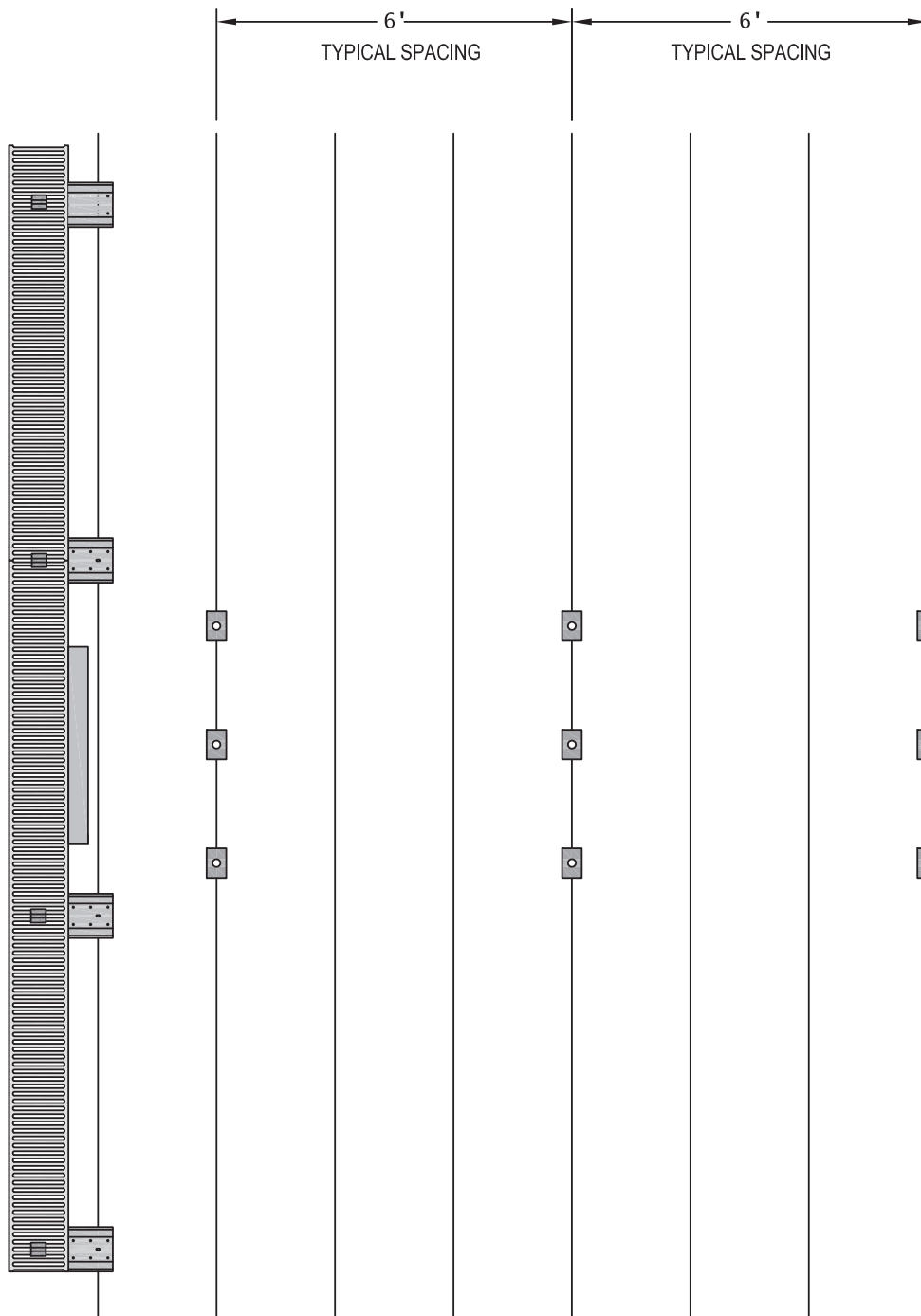
PERPENDICULAR RUNS - LEDGER ANGLES

STEP 1 - DETERMINE INTERSECTION OF PERPENDICULAR RUN TO PARALLEL RUN. ATTACH LEDGER ANGLE FLUSH WITH BOTTOM OF GRATING USING 12-14X7/8" SDST FASTENERS. (SEE BELOW)

24" WIDE USE 5 EA. FASTENERS
36" WIDE USE 7 EA. FASTENERS
48" WIDE USE 9 EA. FASTENERS



PERPENDICULAR RUNS - S-5!® CLAMP PLACEMENT



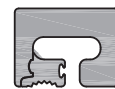
STEP 2 - INSTALL S-5!® CLAMPS AT CLOSEST RIB TO LEDGER ANGLE. (SEE TORQUE GUIDE IN BOX) INSTALL ADDITIONAL CLAMPS BASED ON QUANTITY OF SLOTS IN SUPPORT PLATE AND SPACING.



S-5-U®



S-5-U®



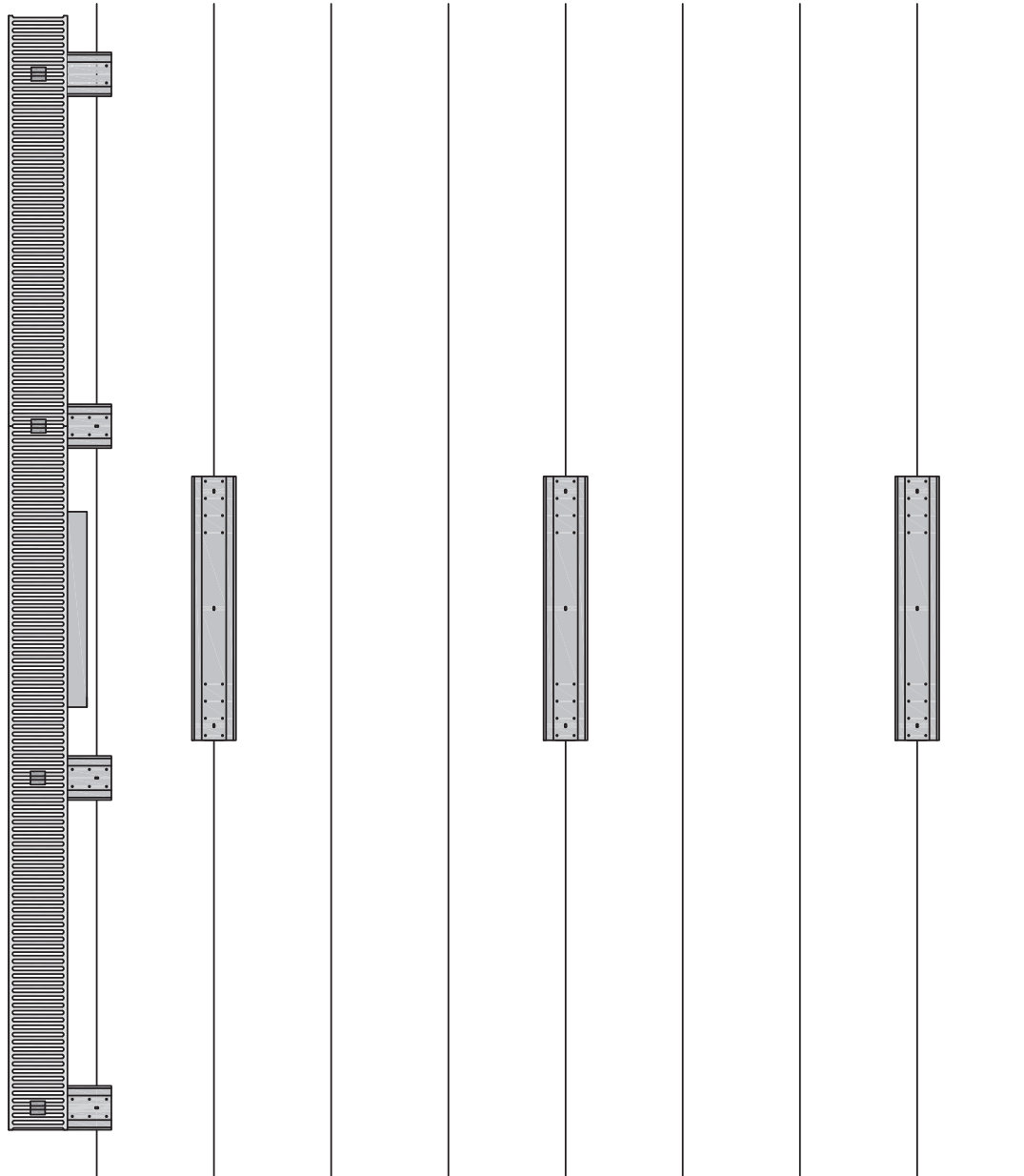
S-5-T®



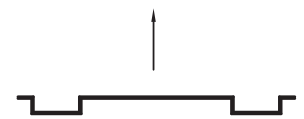
S-5-Z®

NOTE:
THE QUANTITY OF S-5 CLAMPS IS DETERMINED BY THE QUANTITY AND SPACING OF THE 1" SLOTS IN THE SUPPORT PLATE. QUANTITY WILL VARY BASED ON RIB SPACING AND METALWALK WIDTH.

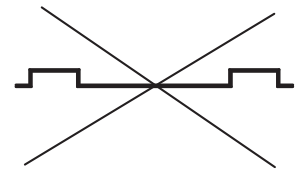
PERP. RUNS - SUPPORT PLATE ATTACHMENT



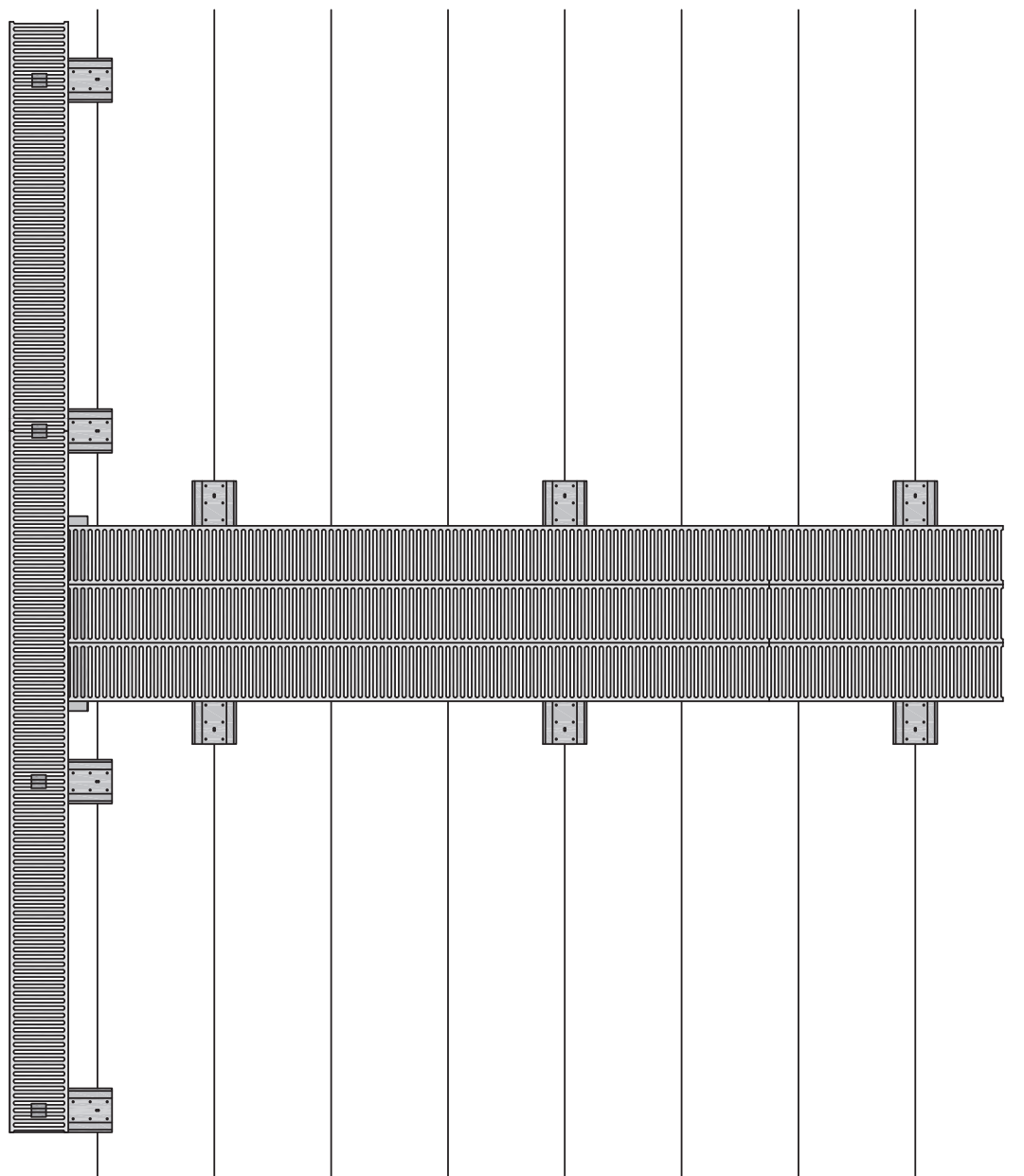
STEP 3 - ATTACH SUPPORT PLATES TO S-50® CLAMPS THRU THE 1" SLOTS IN THE SUPPORT PLATE. USE THE M-8 BOLTS SUPPLIED WITH THE S-50® CLAMPS.



SUPPORT PLATE
NOTE: THIS SIDE UP



PERP. RUNS - GRATING PLACEMENT

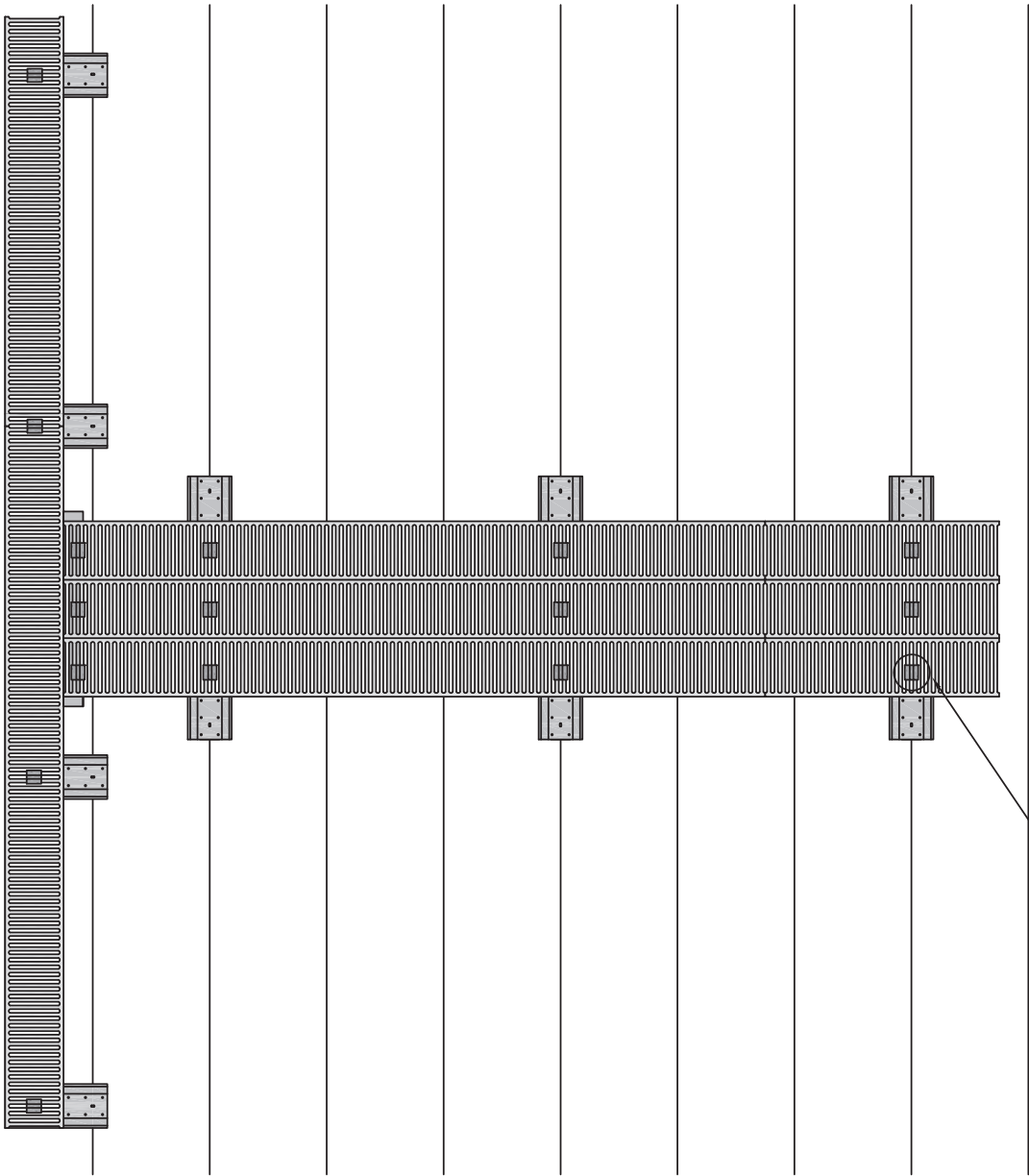


STEP 4 - PLACE GRATING ON SUPPORT PLATES STARTING WITH INTERLOCK PANEL AND ENDING WITH MALE/MALE PLANK (SEE BELOW). GRATING CAN BE SHIFTED LEFT OR RIGHT BASED ON HANDRAIL OR ROOFTOP UNITS.

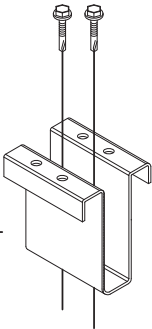
CAUTION: IF HANDRAIL IS BEING USED, BE SURE THERE IS ADEQUATE ROOM TO INSTALL HANDRAIL BASE.



PERP. RUNS - GRATING ATTACHMENT



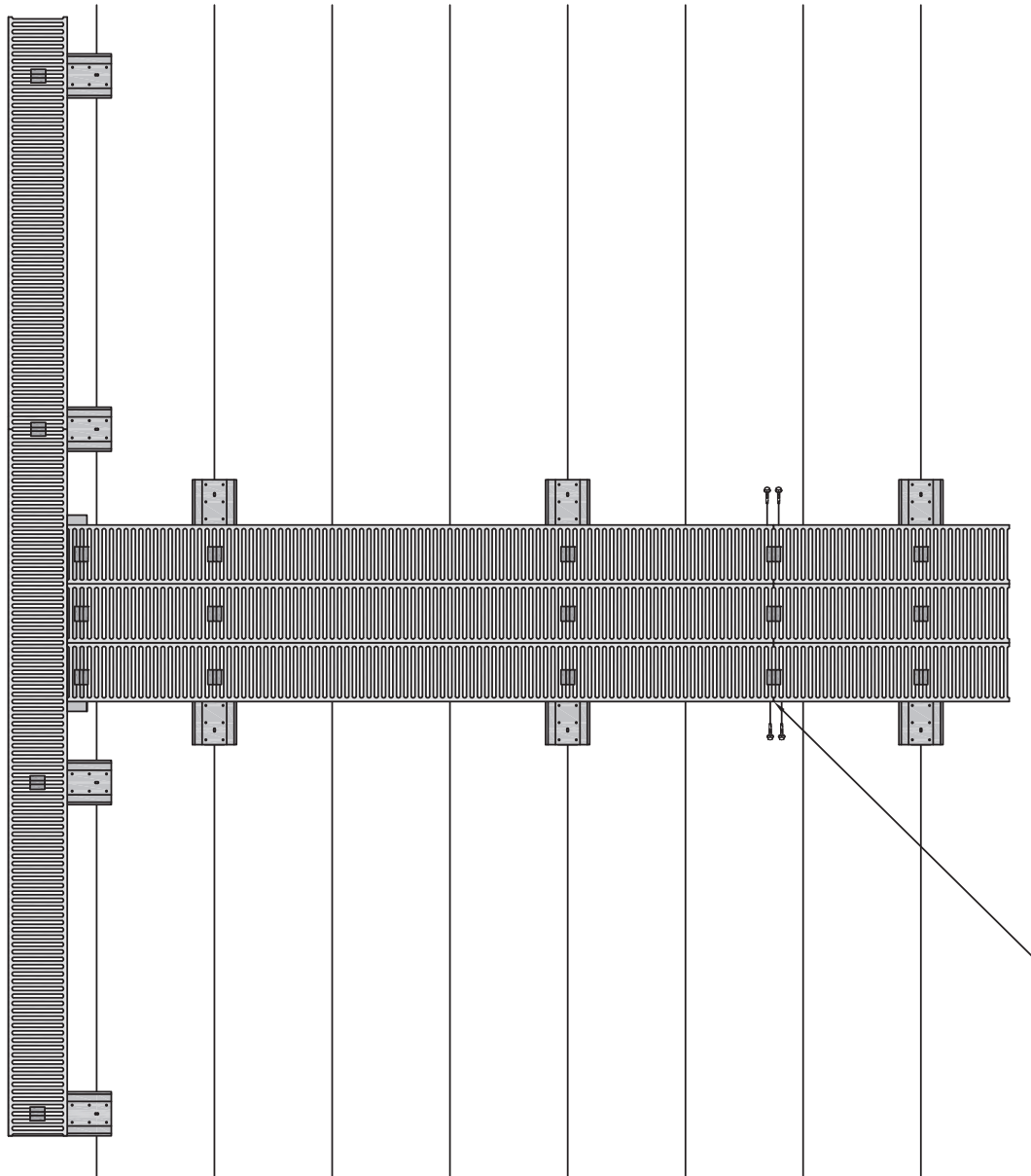
STEP 5 - INSERT 1 EA. MHC25 CLIP (SEE BELOW) IN CENTER OF EACH PLANK AT SUPPORT PLATE LOCATIONS. FASTEN CLAMP TO SUPPORT PLATE USING 2 EA. 12-14X7/8" SDST FASTENER.



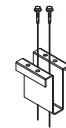
MHC25 CLIP



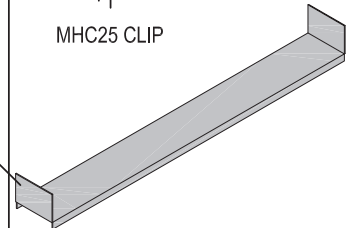
PERP. RUNS - SPLICE CHANNEL



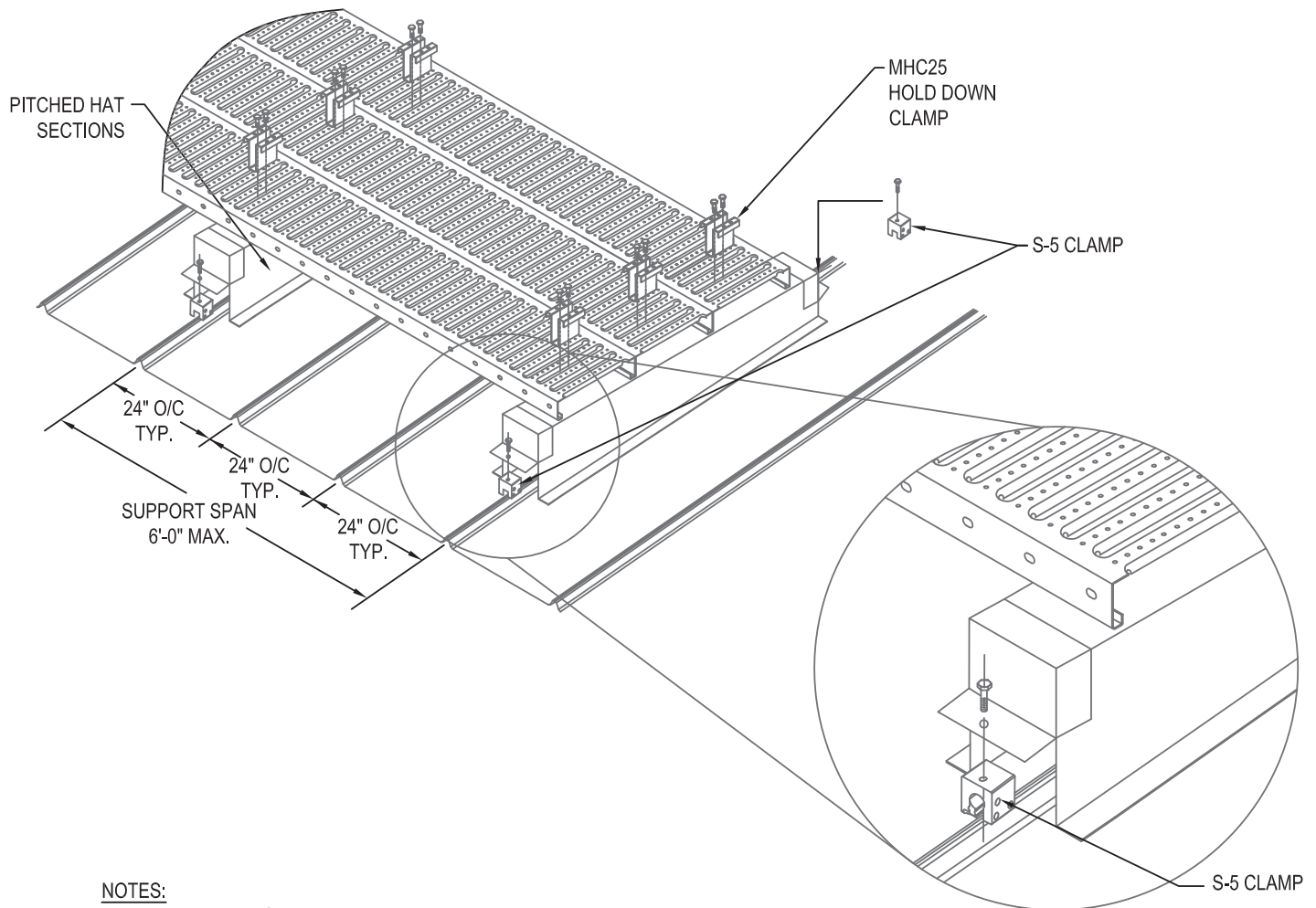
INSTALL SPLICE CHANNEL WHERE PLANKS BUTT TOGETHER. TOP OF SPLICE CHANNEL SHOULD BE FLUSH WITH BOTTOM OF GRATING. INSERT 1 EA. MHC25 CLIP IN CENTER OF EACH PLANK AT SPLICE CHANNEL. FASTEN CLIP TO SPLICE CHANNEL USING 2 EA. 12-14X7/8" SDST FASTENER. FASTEN 2 EA. 12-14X7/8" ON EACH EXTERIOR SIDE OF SPLICE CHANNEL.



MHC25 CLIP



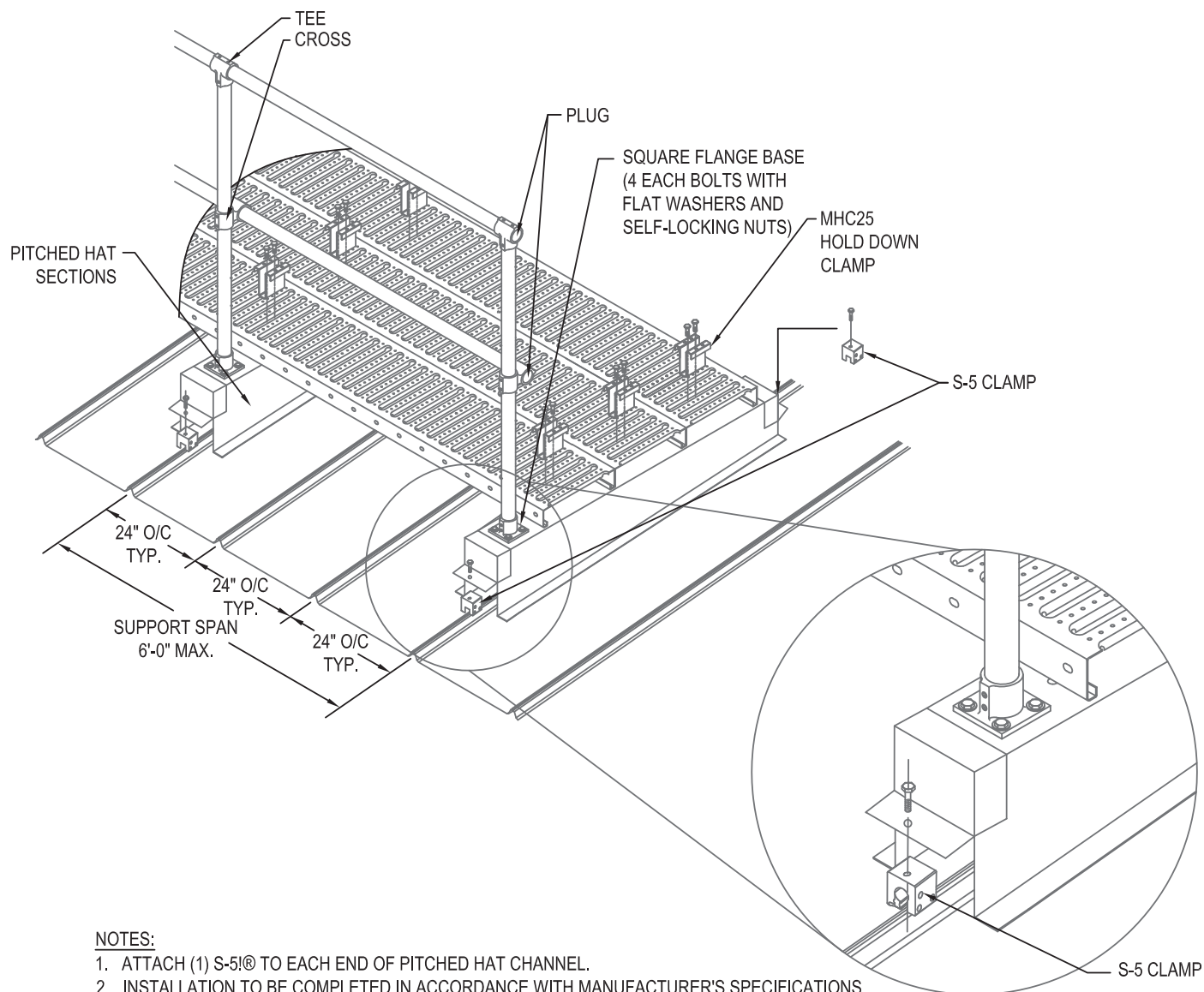
LEVEL RUNS - NO HANDRAIL



NOTES:

1. ATTACH (1) S-5® TO EACH END OF PITCHED HAT CHANNEL.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-034.

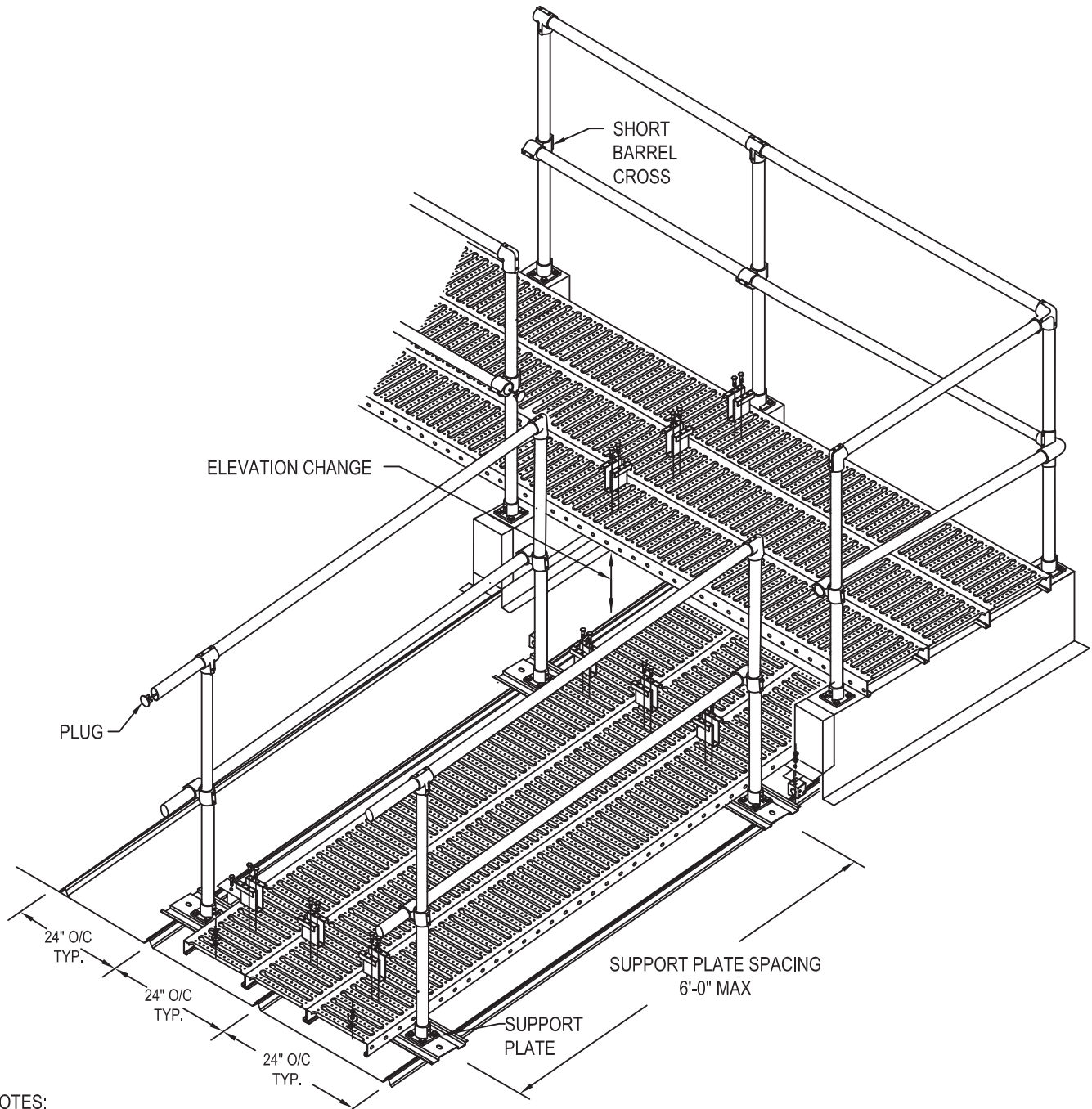
LEVEL RUNS - HANDRAIL 1 SIDE



NOTES:

1. ATTACH (1) S-5!® TO EACH END OF PITCHED HAT CHANNEL.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
6. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-009.

LEVEL RUNS - PAR/PERP INTERSECTION

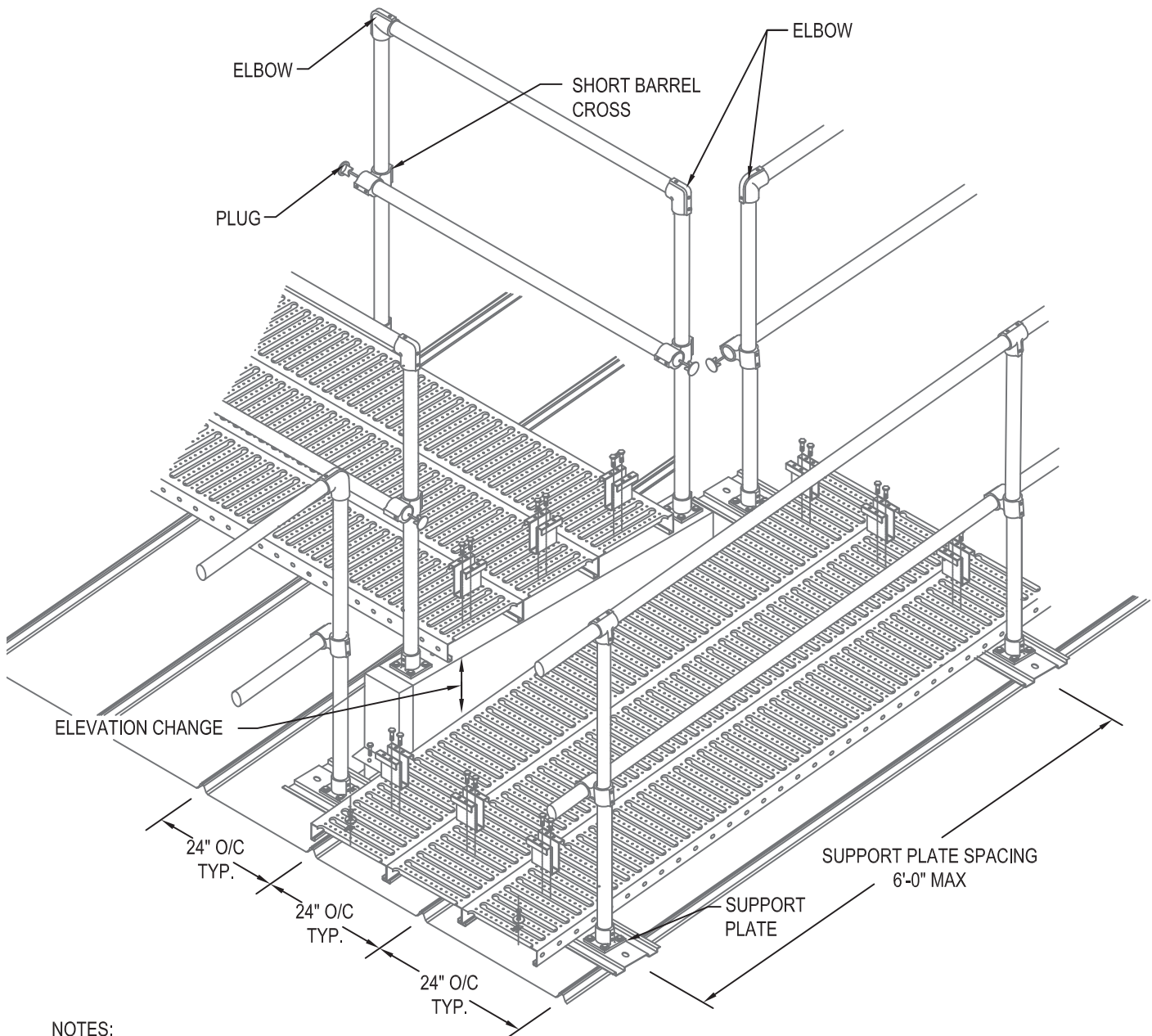


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-012.



LEVEL RUNS - PARALLEL PAST PERP.

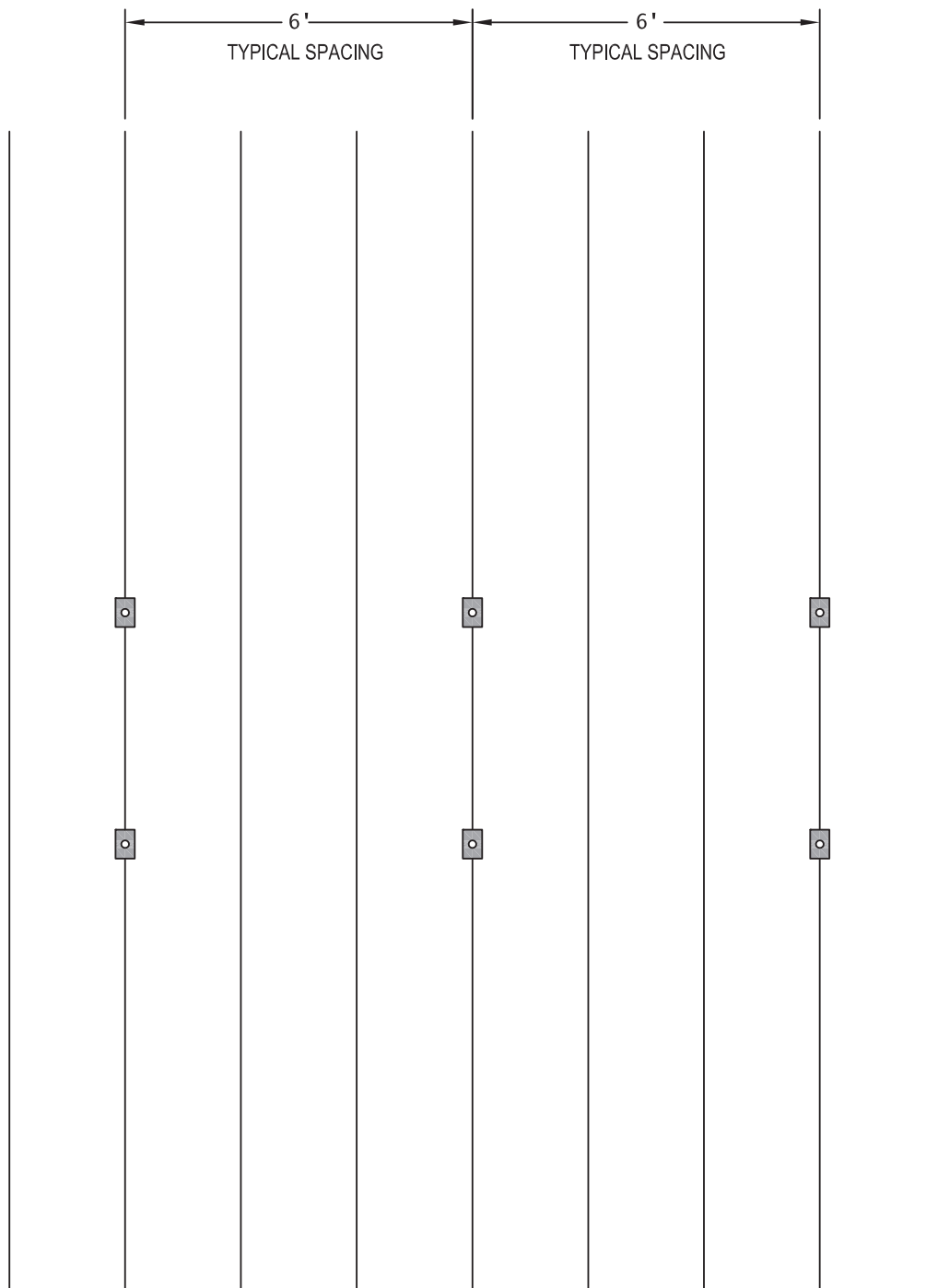


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
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5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-011.



LEVEL RUNS - S-5!® CLAMP ATTACHMENT



STEP 1 - USING THE ROOF LAYOUT DRAWING, DETERMINE THE LOCATIONS OF THE PITCHED HAT CHANNELS. INSTALL 2 EA. S-5!® CLAMPS BASED ON DIMENSION FROM FRONT AND REAR SLOTTED HOLES. TIGHTEN TO TORQUE SPECS LOCATED IN BOX.



S-5-U®



S-5-U®



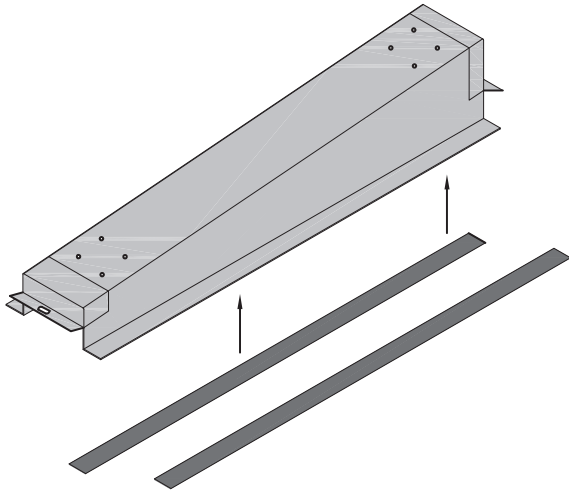
S-5-T®



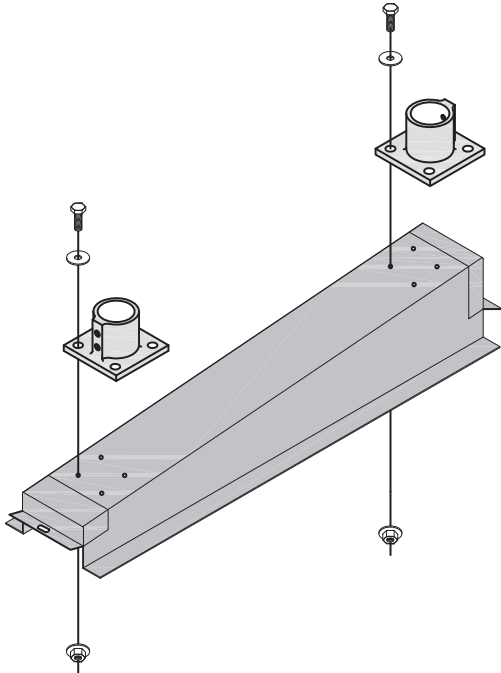
S-5-Z®



LEVEL RUNS - BASE & GASKET ATTACHMENT



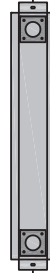
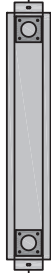
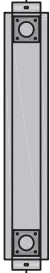
STEP 2 - INSTALL NEOPRENE GASKET TO BOTTOM OF BOTH LEGS OF THE PITCHED HAT CHANNEL.



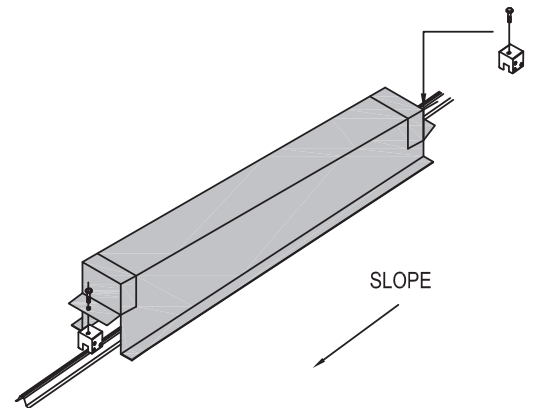
STEP 3 - DETERMINE WHICH SIDE HANDRAIL IS TO BE INSTALLED ON. INSTALL RAIL BASE TO PITCHED HAT CHANNEL. USE 4 EA. 5/16" X1" BOLT, 4 EA. 7/8" WASHERS & 4 EA. LOCK NUTS PER RAIL BASE.

NOTE: INSTALL ALL BASES TO PITCHED HATS BEFORE INSTALLING PITCHED HATS TO THE ROOF.

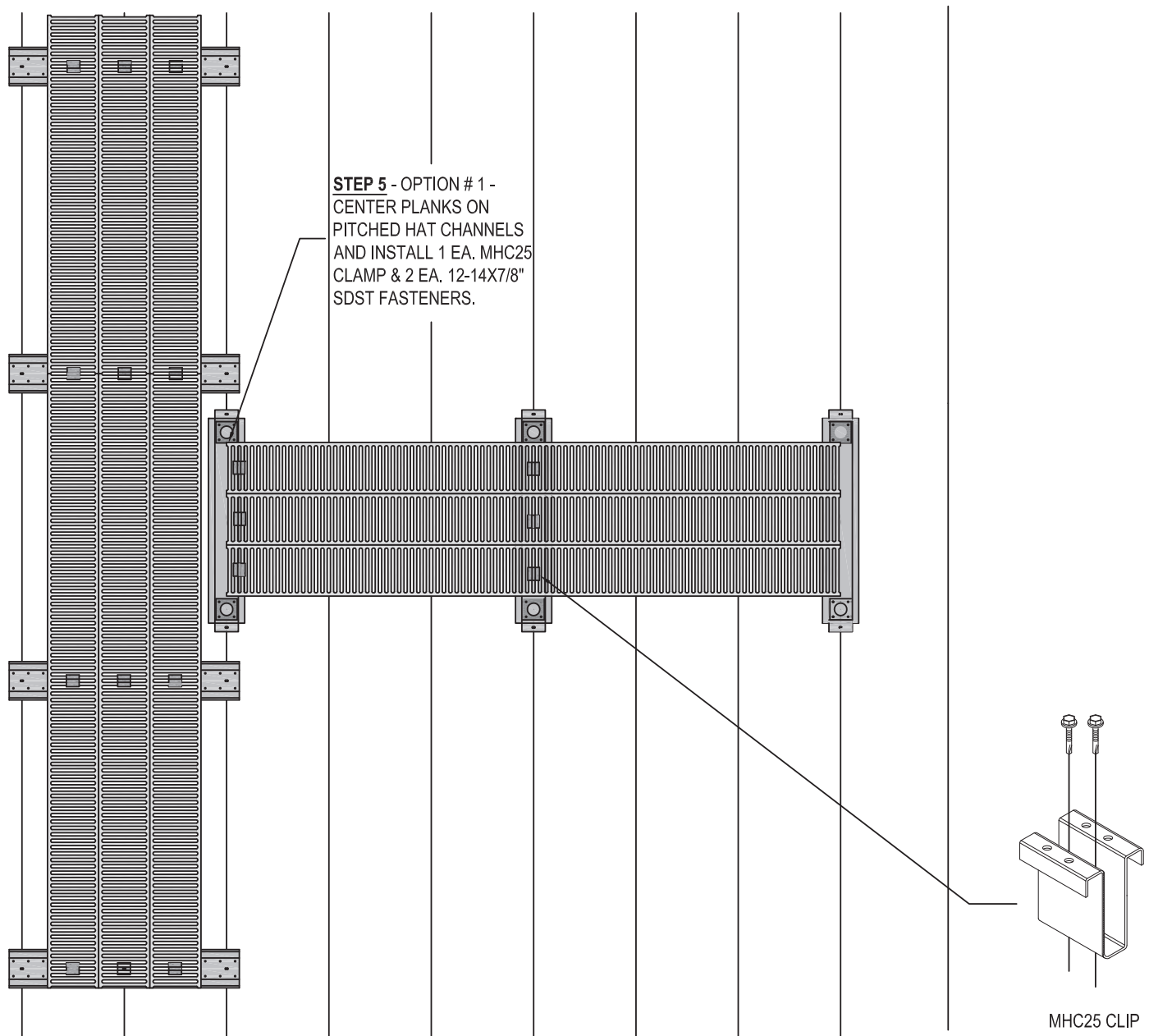
LEVEL RUNS - PITCHED HAT ATTACHMENT



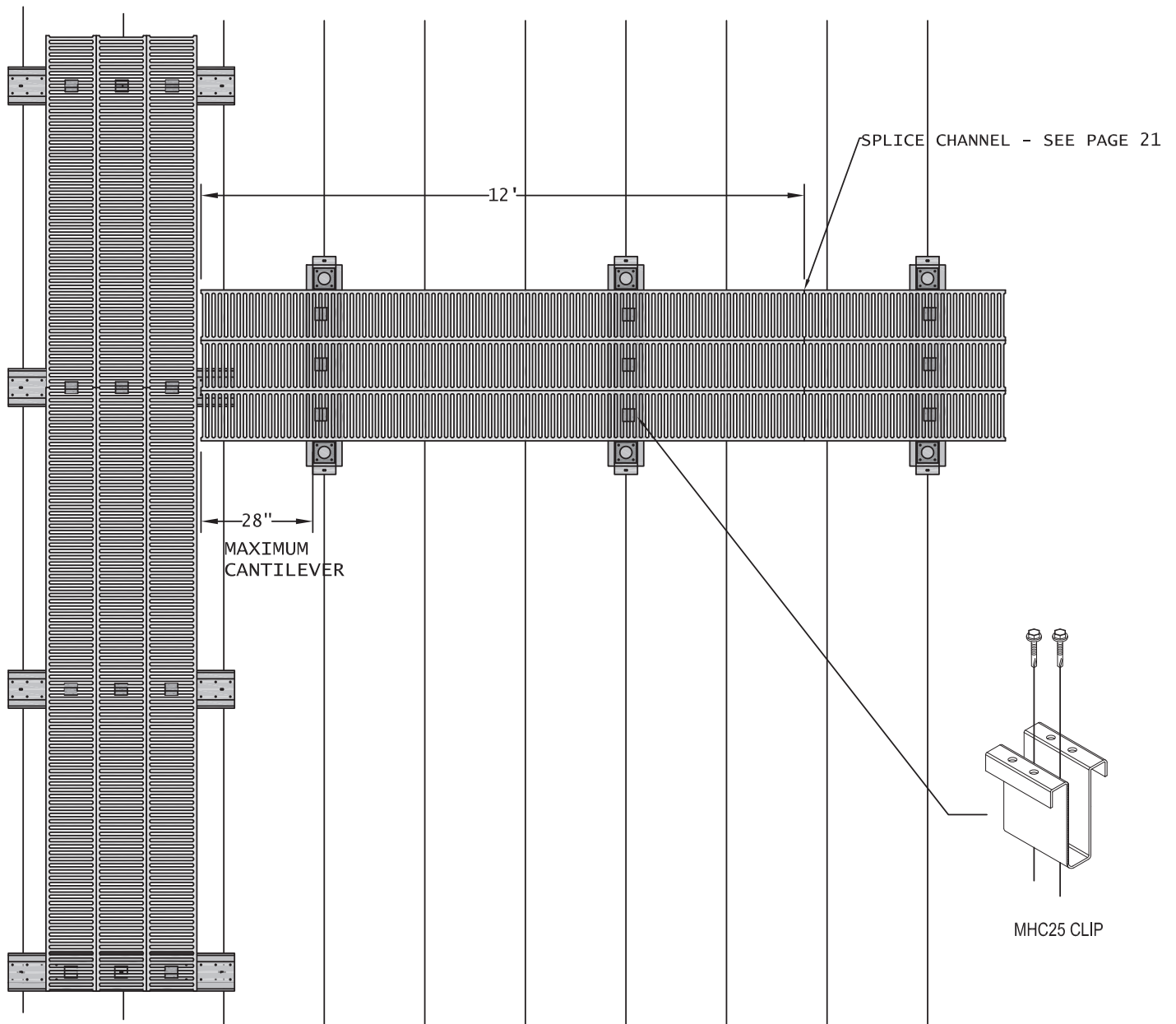
STEP 4 - INSTALL PITCHED HATS TO SSR PANEL USING 2 EA. S-5® CLAMPS AND M8 BOLTS SUPPLIED WITH CLAMP. ATTACH S-5® CLAMP TO SSR PANEL THRU SLOTTED HOLE AT EACH END OF PITCHED HAT CHANNEL. SEE IMAGE BELOW.



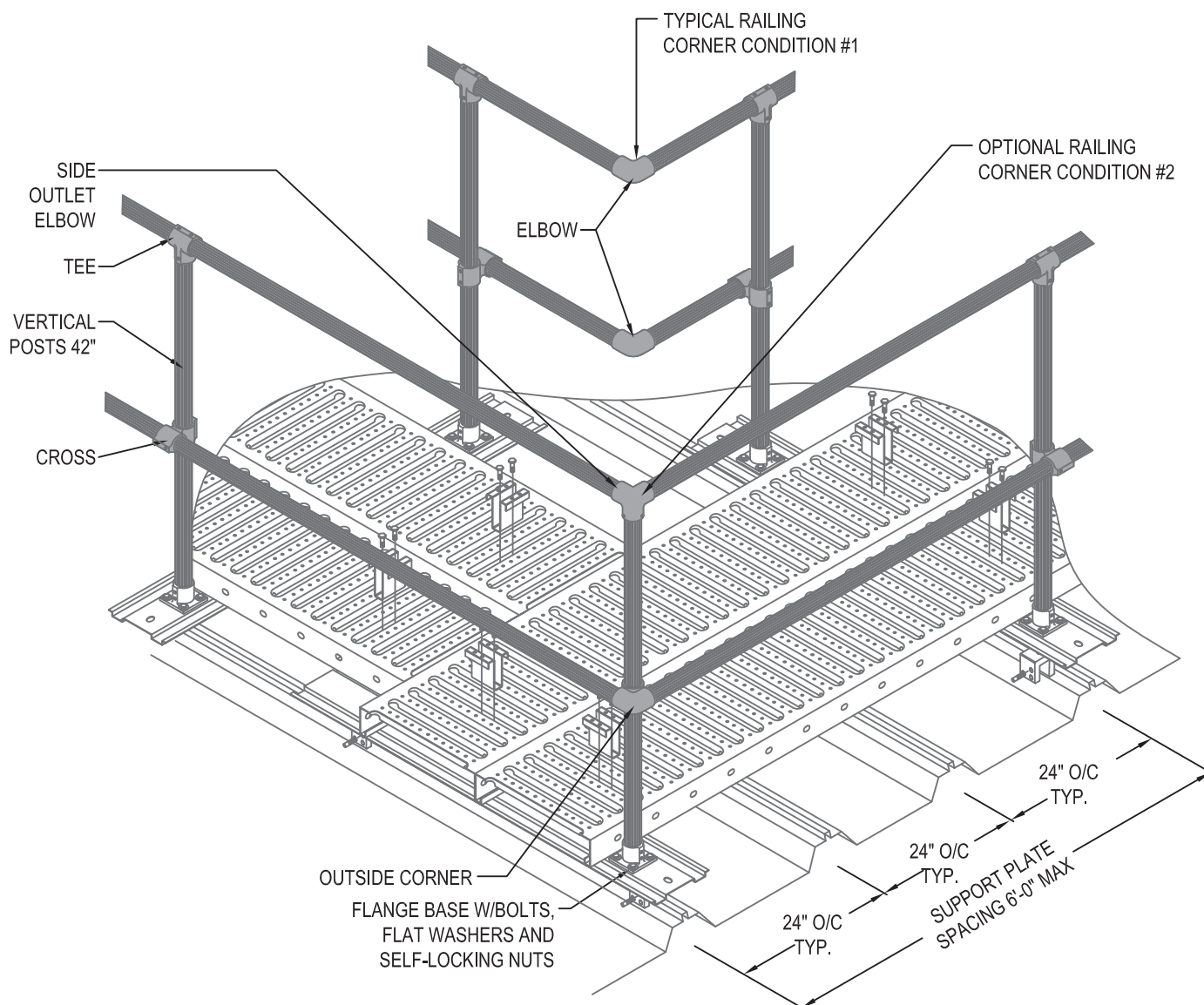
LEVEL RUNS - STARTING POINT OPTION #1



LEVEL RUNS - STARTING POINT OPTION #2



RAILING CORNER

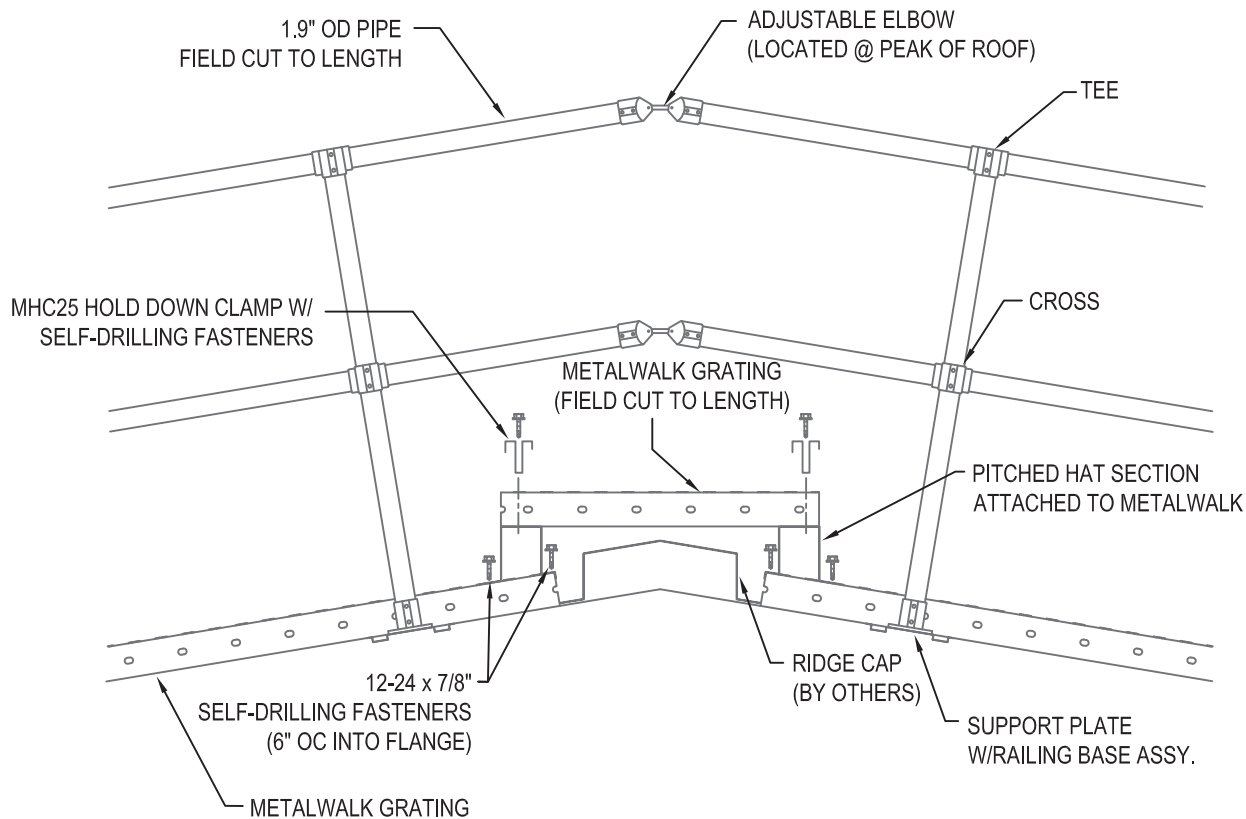


NOTES:

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2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
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5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-035.



RIDGE CROSSOVER WITH SAFETY HANDRAIL



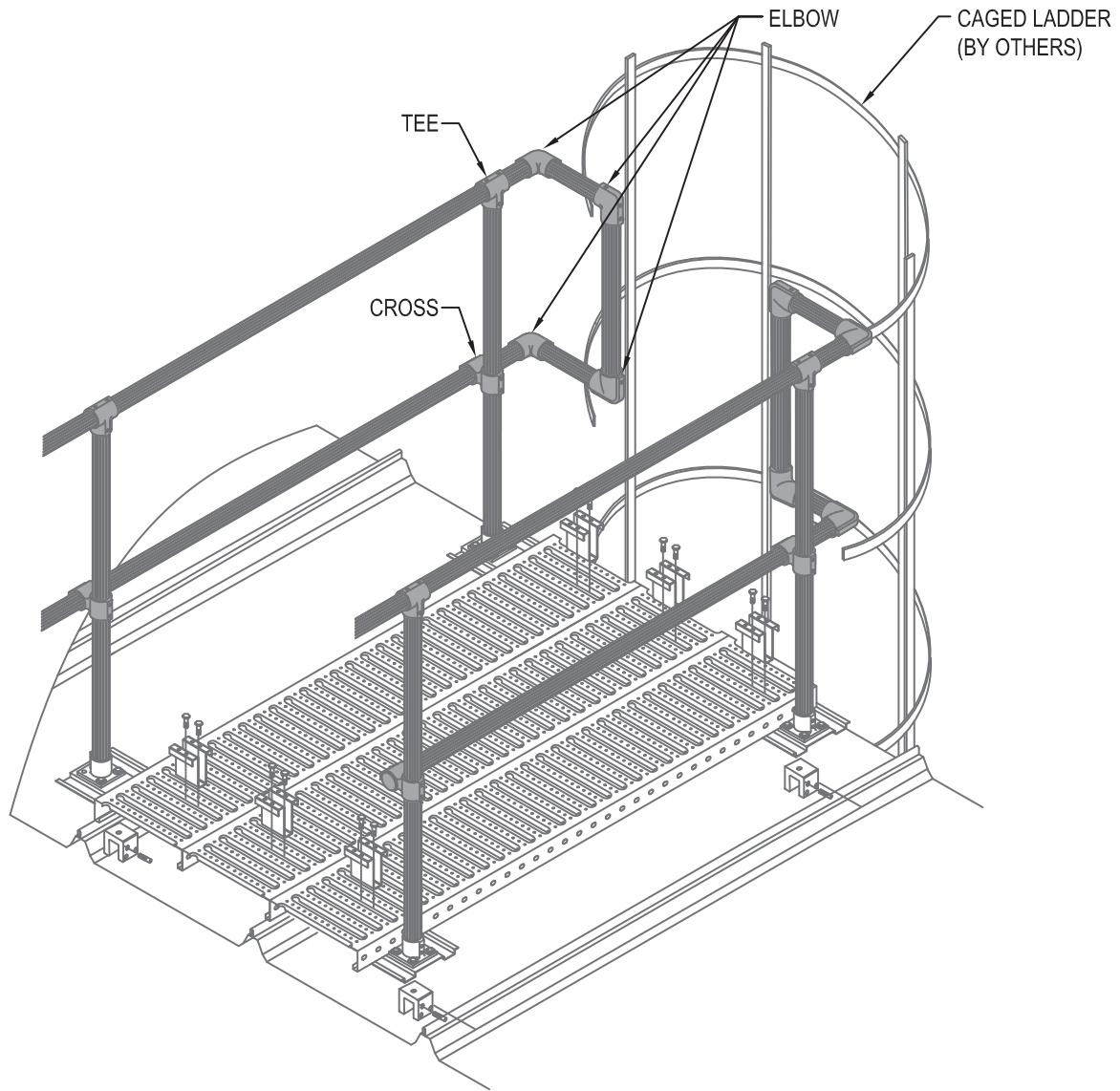
PARALLEL TO PANEL VIEW

NOTES:

1. SPECIAL APPLICATION WITH TRANSITION OVER RIDGE CAP.
2. RIDGE CAP WIDTH & HEIGHT VARIES PER BUILDING SPECIFICATIONS.
3. REFER TO STANDARD INSTALLATION INSTRUCTIONS FOR ATTACHMENT OF METALWALK TO ROOF AND ASSEMBLY OF HANDRAIL COMPONENTS.
4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. DO NOT SCALE DRAWING.
6. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
7. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
8. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-007.



36" WIDE, 2 SIDED HANDRAIL, CAGED LADDER TRANSITION

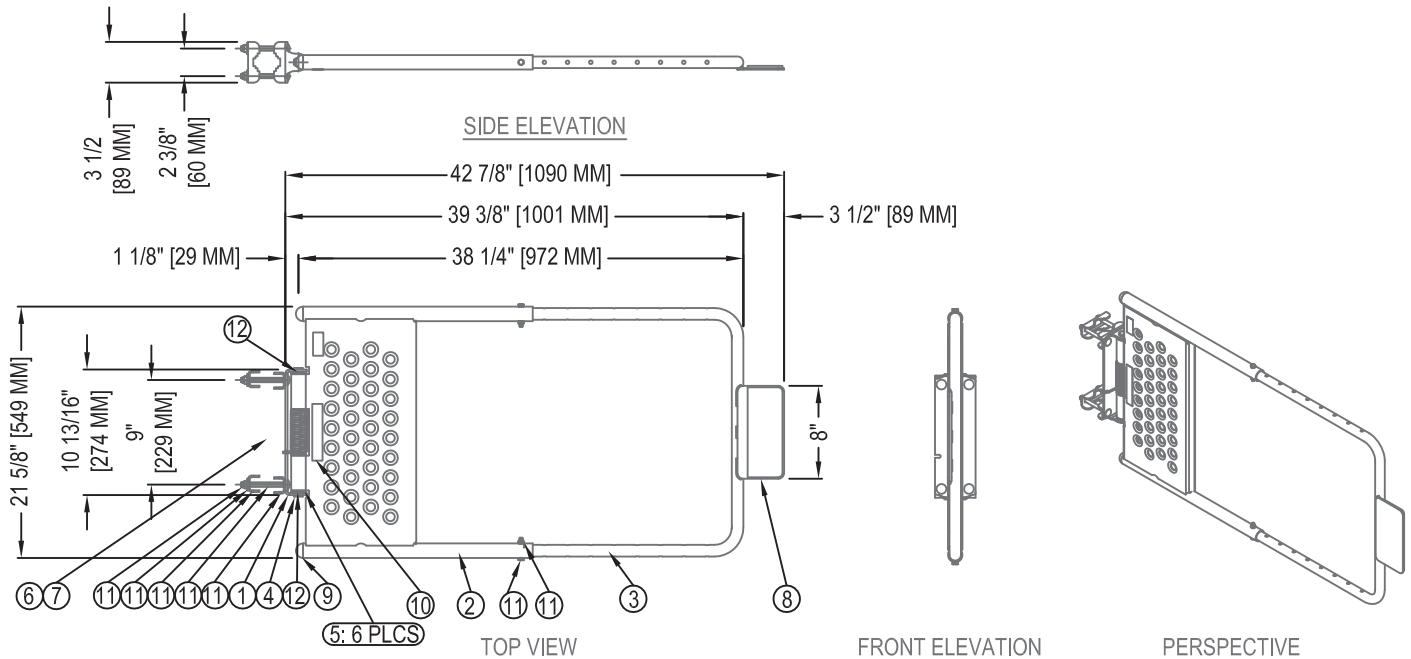


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER CAGED LADDER CONDITION - PAGE 33.



SWING GATE



PARTS LIST

ITEM	PART #	DWG	DESCRIPTION	ITEM	QT
1	D0900066-02	D0900066	SWING GATE MNTING PLATE FORMED	1	1
2	D0900067	D0900067	SWING GATE PANEL 2440 WELDMNT	1	1
3	D0900086	D0900086	SWING GATE PANEL TUBE 2440 WELDMNT	1	1
4	D0900069	D0900069	PIVOT TUBE 3/4 SST PANEL GATE	1	1
5	D0900077	D0900077	SAFETY GATE PIVOT BUSHING BLACK NYLON	6	6
6	A-301-0389	B0900027	TORSION SPRING (SST) FOR GATE	1	1
7	A-301-0365	A0900030	ROUND CAP - DIP MOLDED END-CAP BLACK	1	1
8	D0900064	D0900064	FOAM PAD FOR PLATE	1	1
9	A-301-0682		BALL HEAD PLUG 1.250" BLACK REF C-40-U-21 RODON	2	2
10	D0080091	D0080091	LABEL PLACEMENT FOR SWING GATES	1	1
11	SU0072	SU0072	SWING GATE MOUNTING HARDWARE KIT	1	1
12	D0900095	D0900095	WASHER 1.25 OD, 0.766 ID, 0.016 THICK PTFE	2	2
13	I0900005	I0900005	SWING GATE INSTRUCTIONS	1	1
14	A-303-0412	A-303-0412	CARTON PAD - 24.5 X 21.5 42ECT B/C FLUTE KR	1	1
15	A-303-0413	A-303-0413	CARTON 21.75 X 3.5 X 24.75 FOL 42ECT B/C FLUTE KR GL	1	1

NOTES:

- ALL POWDER COATED MODELS, ASSEMBLE HARDWARE ITEMS AFTER CURING.
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DO NOT SCALE DRAWING.
- THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
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- CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-043.

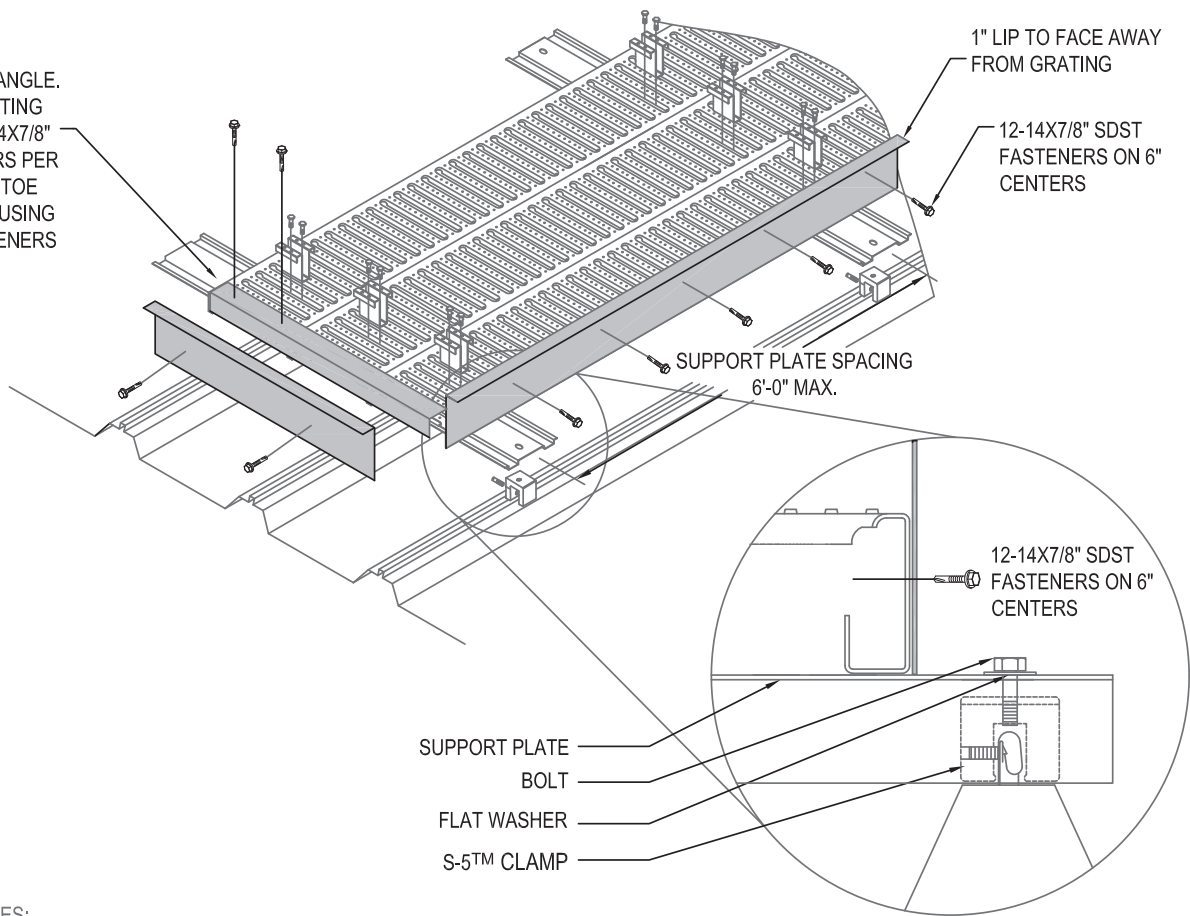
FEATURES:

- 24" - 40" ADJUSTABLE SELF CLOSING GATE
- STANDARD FINISH "SAFETY YELLOW"
- OTHER FINISHES AVAILABLE UPON REQUEST.



TOE-KICK

OPTIONAL END ANGLE.
FASTEN TO GRATING
USING 2EA, 12-14X7/8"
SDST FASTENERS PER
PLANK. ATTACH TOE
KICK TO ANGLE USING
12-14X7/8" FASTENERS
ON 6" CENTERS.

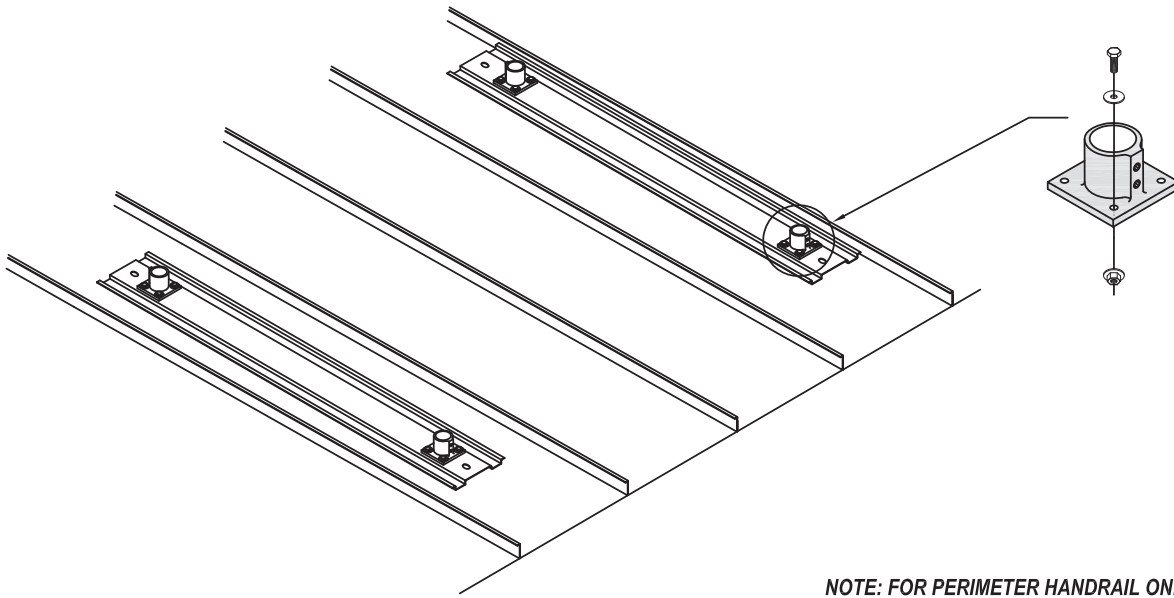


NOTES:

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4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-005.

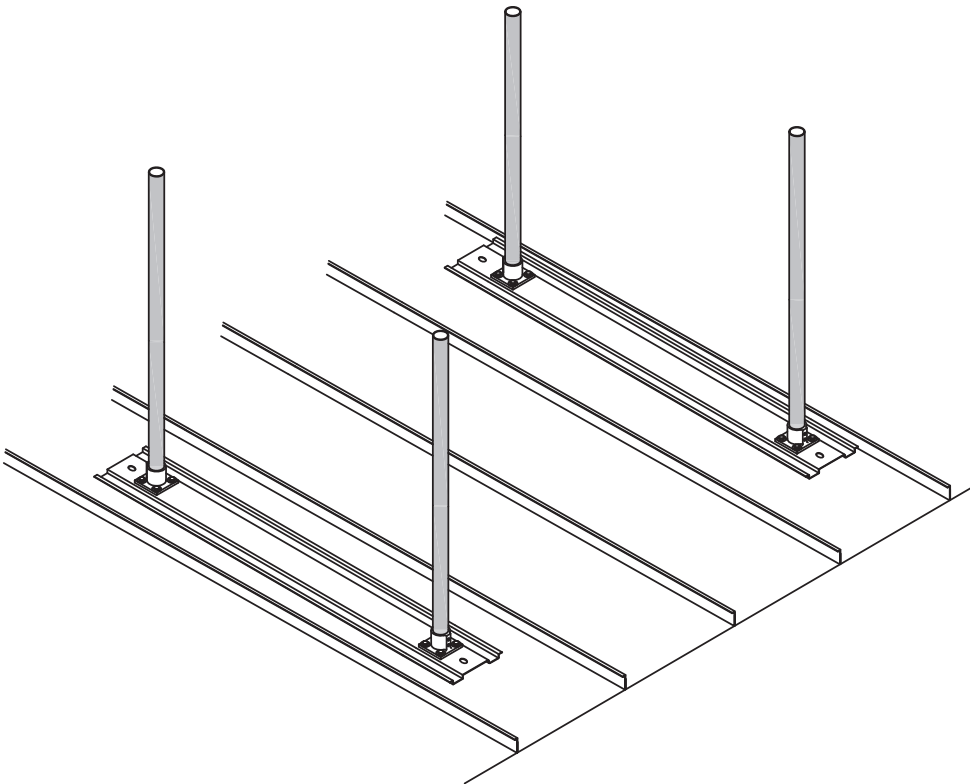


HANDRAIL SYSTEM



STEP 1 - ATTACH RAIL BASE TO SUPPORT PLATE USING 1 EA. 5/16" BOLT WITH 7/8" WASHER AND 1 EA. LOCK NUT PER HOLE. SIDE SHOWN SHOULD BE FACING OUT. SEE DIAGRAM.

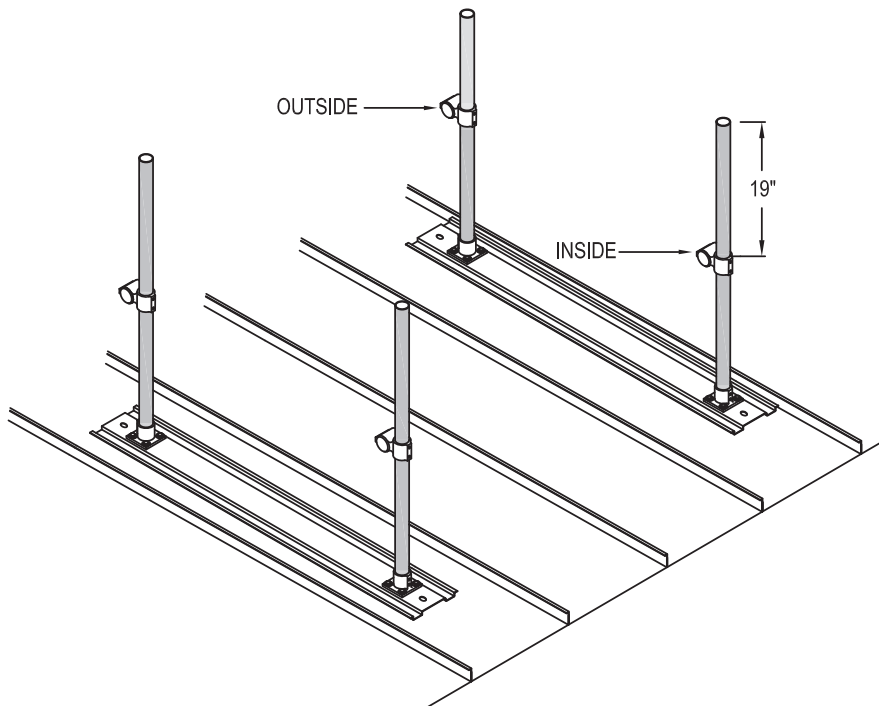
NOTE: FOR PERIMETER HANDRAIL ONLY - SEE PAGE 39



STEP 2 - INSERT 42-3/4" VERTICAL POST INTO RAIL BASE. USING A 3/16" HEX WRENCH, TIGHTEN BOTH SET SCREWS TO 16 FT POUNDS.

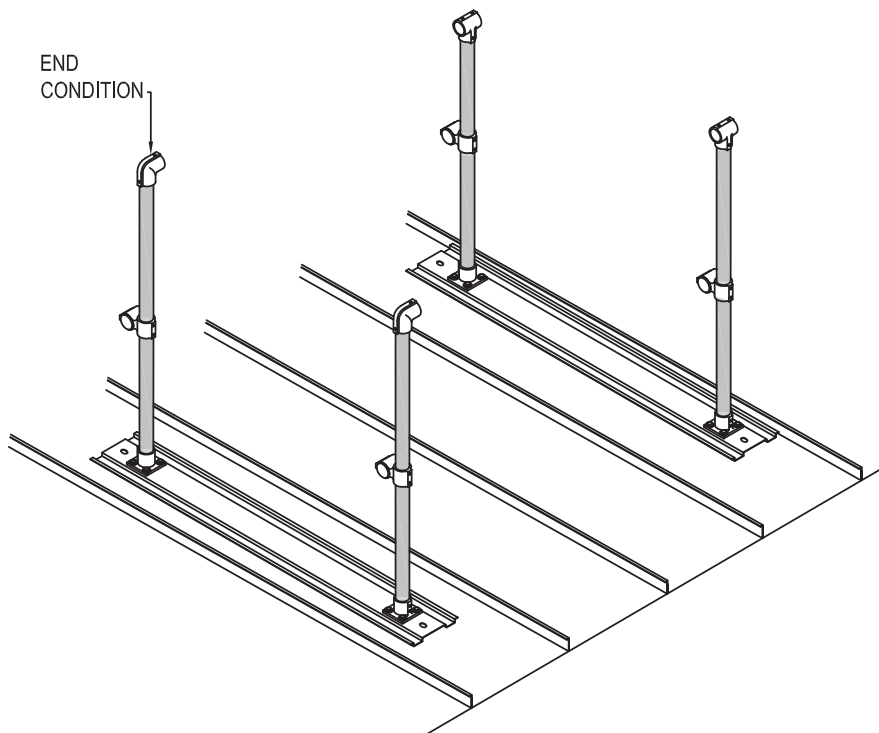


HANDRAIL SYSTEM



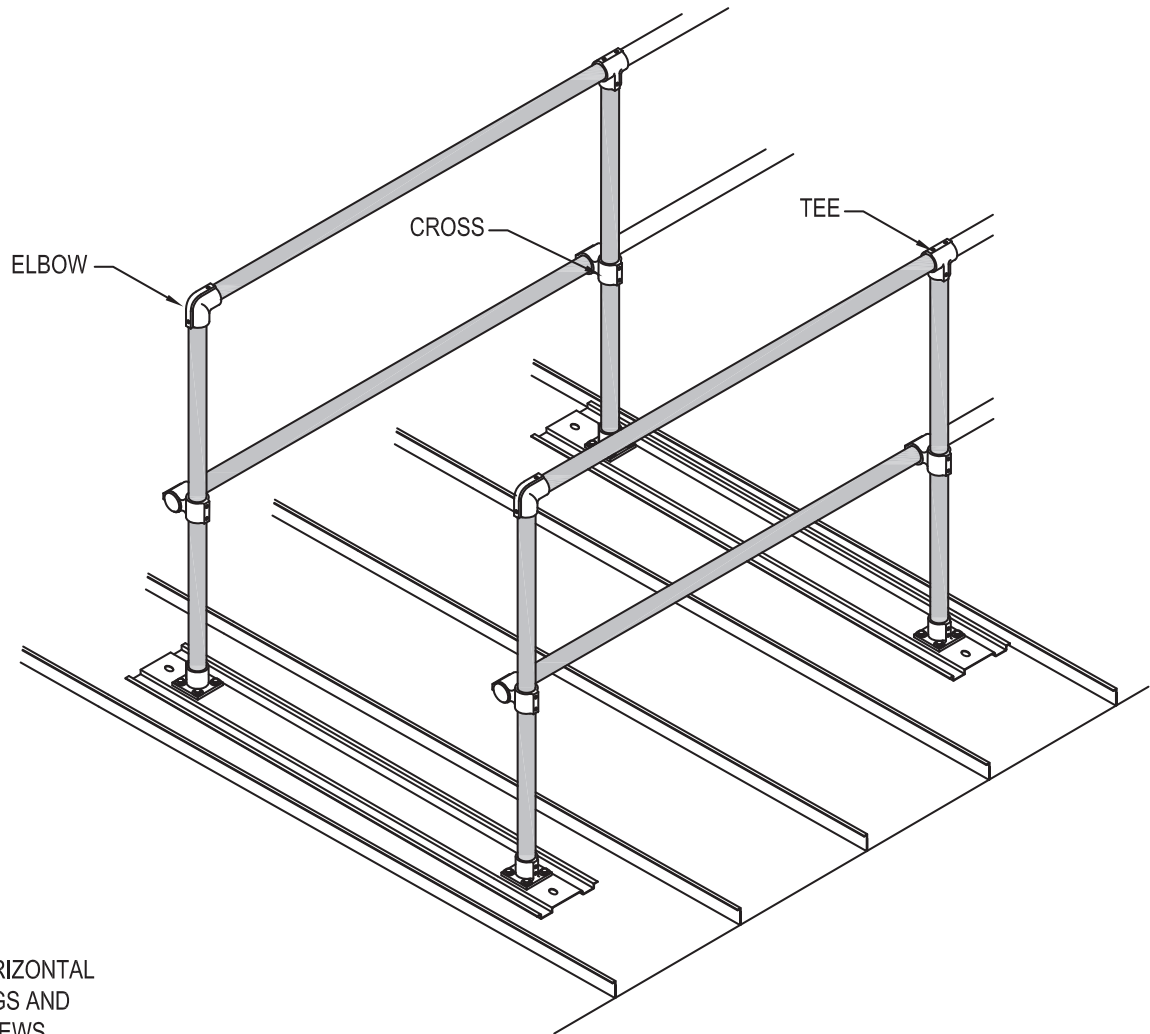
STEP 3: MEASURE 19" FROM TOP OF POST AND INSTALL CROSS. MEASUREMENT TO TOP OF CROSS FITTING. CROSS CAN BE INSTALLED ON INSIDE OR OUTSIDE OF POST.

NOTE: BOTH CROSSES INSIDE OR OUTSIDE.



STEP 4: INSTALL TEE AT TOP OF POST.
NOTE: BE SURE TO ALLOW ROOM FOR HORIZONTAL RAIL TO BE INSTALLED. INSTALL ELBOW AT END CONDITION.

HANDRAIL SYSTEM



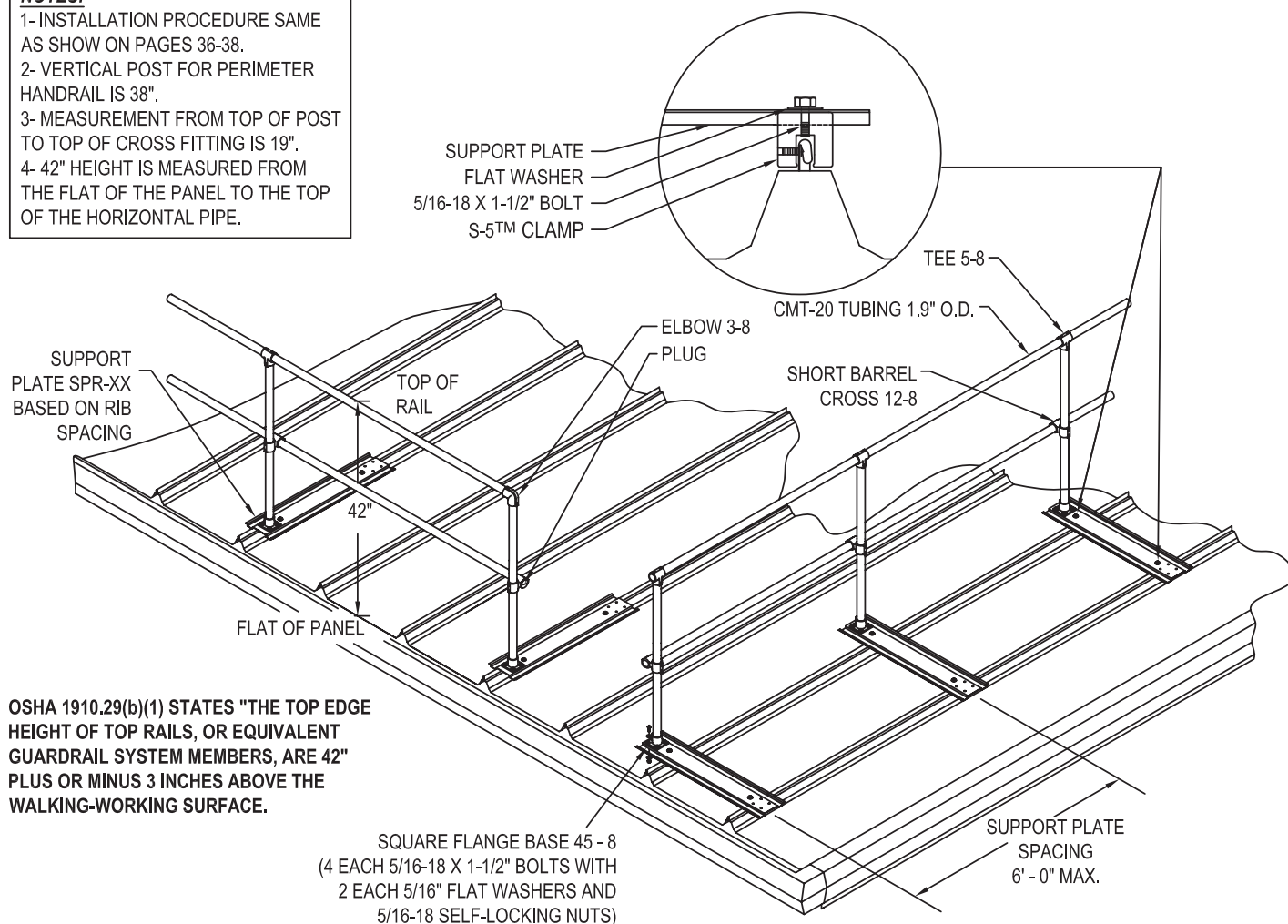
STEP 5: SLIDE HORIZONTAL
RAIL THRU FITTINGS AND
TIGHTEN SET SCREWS.

NOTE: SEE "CORNER CONDITIONS" PAGE 31.

HANDRAIL SYSTEM - PERIMETER RAILING

NOTES:

- 1- INSTALLATION PROCEDURE SAME AS SHOW ON PAGES 36-38.
- 2- VERTICAL POST FOR PERIMETER HANDRAIL IS 38".
- 3- MEASUREMENT FROM TOP OF POST TO TOP OF CROSS FITTING IS 19".
- 4- 42" HEIGHT IS MEASURED FROM THE FLAT OF THE PANEL TO THE TOP OF THE HORIZONTAL PIPE.



OSHA 1910.29(b)(1) STATES "THE TOP EDGE HEIGHT OF TOP RAILS, OR EQUIVALENT GUARDRAIL SYSTEM MEMBERS, ARE 42" PLUS OR MINUS 3 INCHES ABOVE THE WALKING-WORKING SURFACE.

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5018-023.

