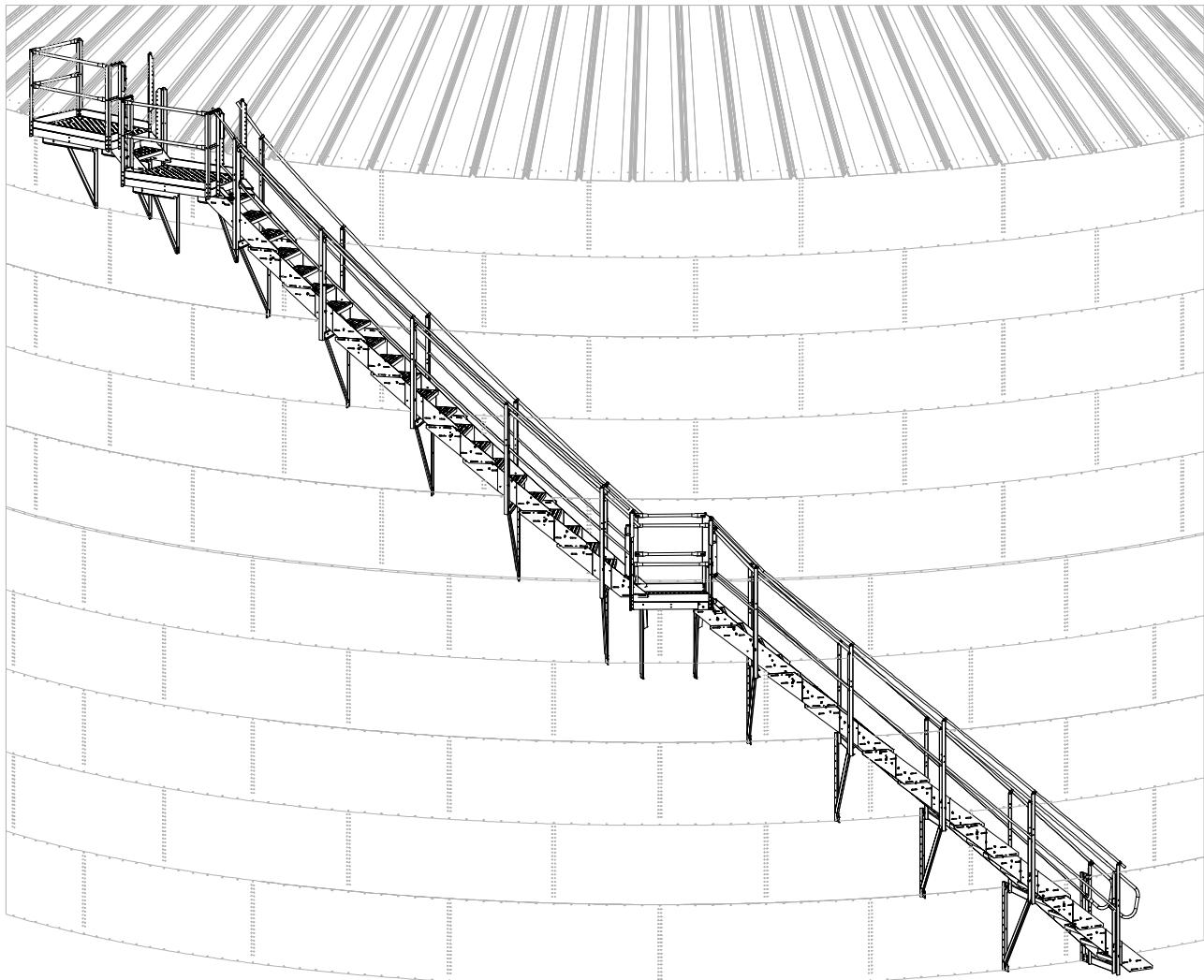


CC4400
44" C-Series Commercial Sidewall Stairs
Assembly Instructions

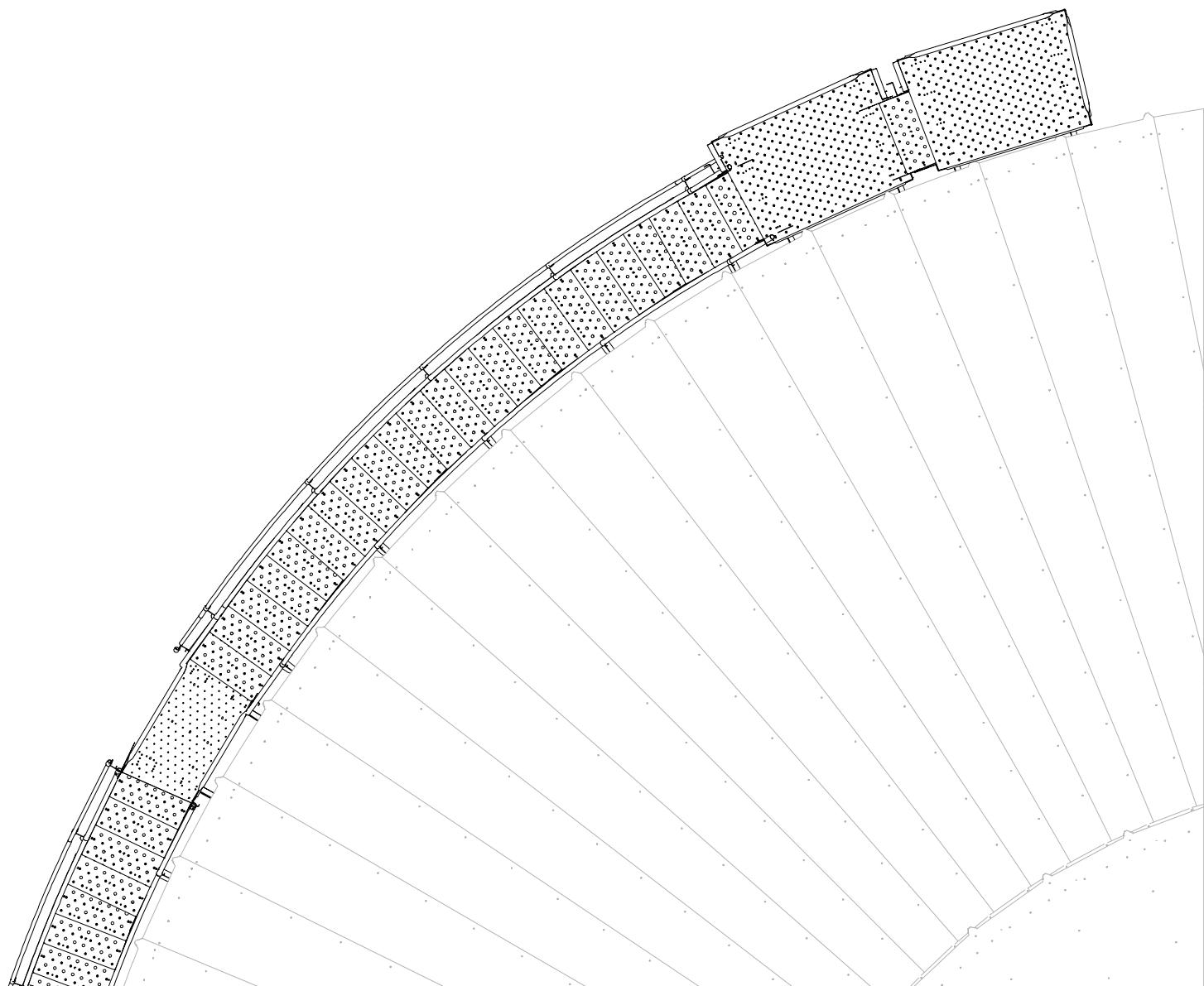


GREENE

C-Series Commercial Duty Sidewall Stairs

Document Guide

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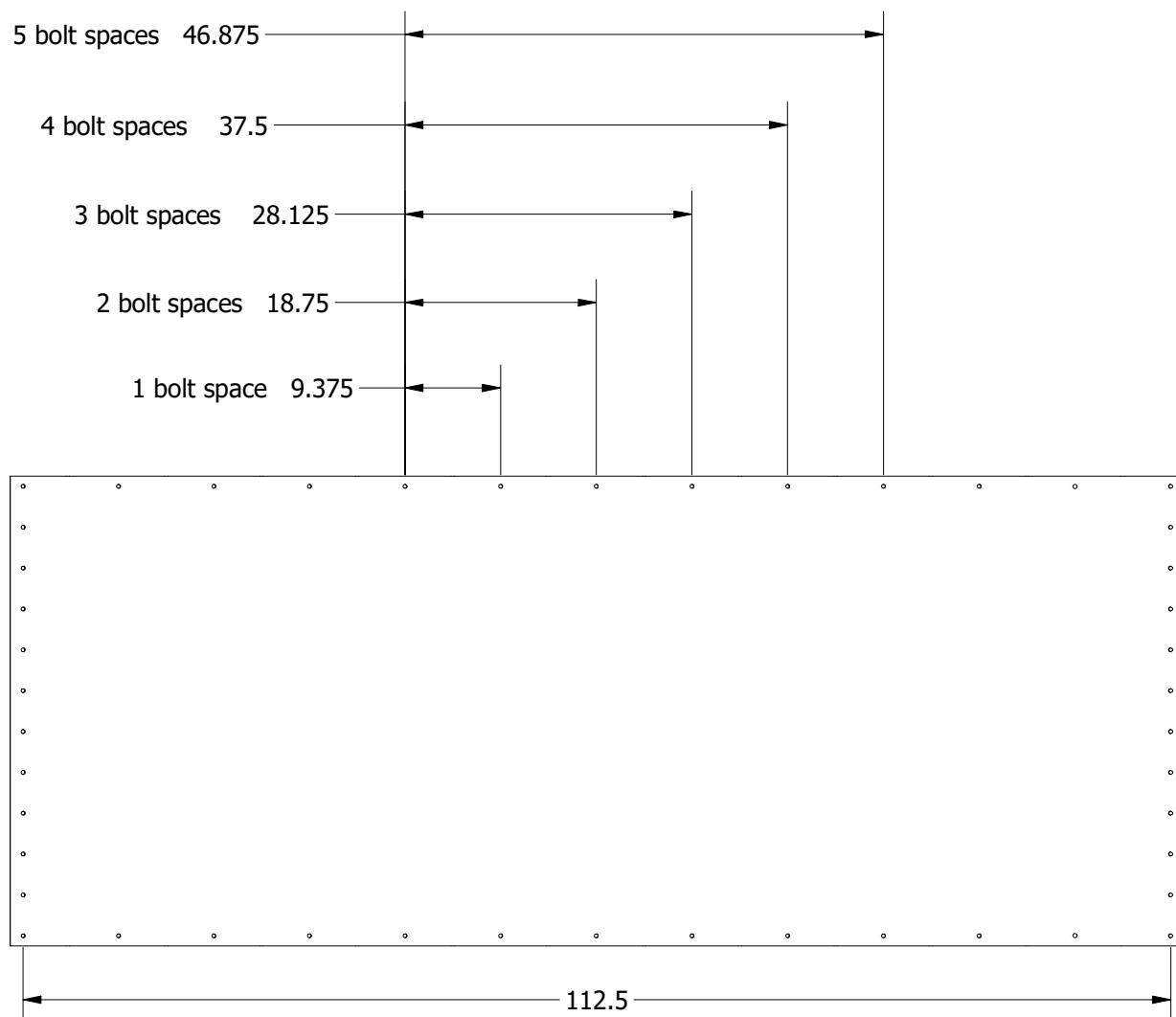
44" Bin Sheet Bolt Spacing

A standard 44" bin sheet is shown below. Wall bracket placement is marked by "Bolt Spaces" throughout these instructions. On a 44" sheet, a bolt space is equal to 9.375 inches. (Double punched sheets have 24 bolt holes, the spacing should be counted every other bolt space on double-punched sheets)

Use this page to convert distances given in bolt spaces to inches. Example: 5 SPC = 46.875"

Correct spacing between wall brackets is crucial for proper stair assembly.

NOTE: C-Series Commercial stairs are approved for installation on storage structures of other types, such as non-corrugated steel plating or slip-form concrete. These structures may not have a typical "bolt space" layout to follow. In these cases, always refer to the actual dimension value provided in inches regarding wall bracket placement.



44" Bin Sheet
(1 Sheet = 12 bolt spaces)

Securing Stairs to Structure

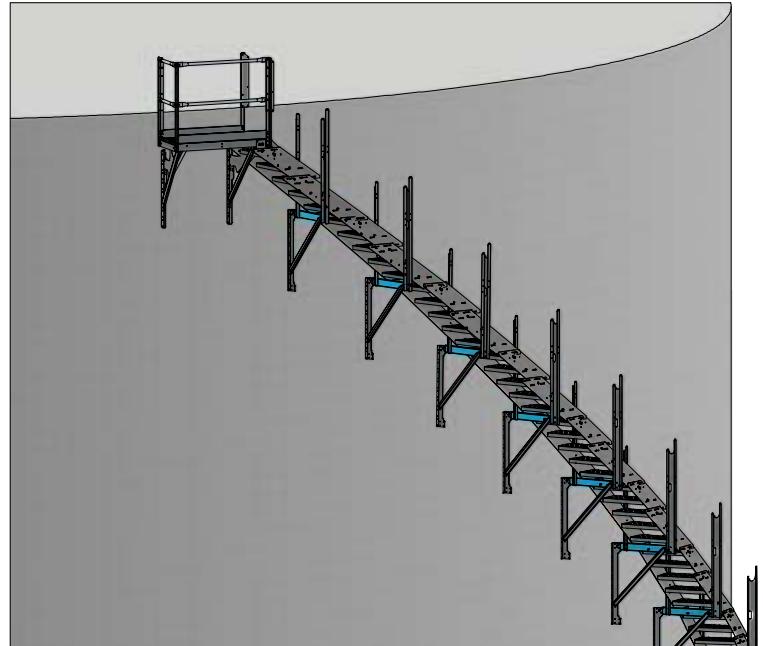
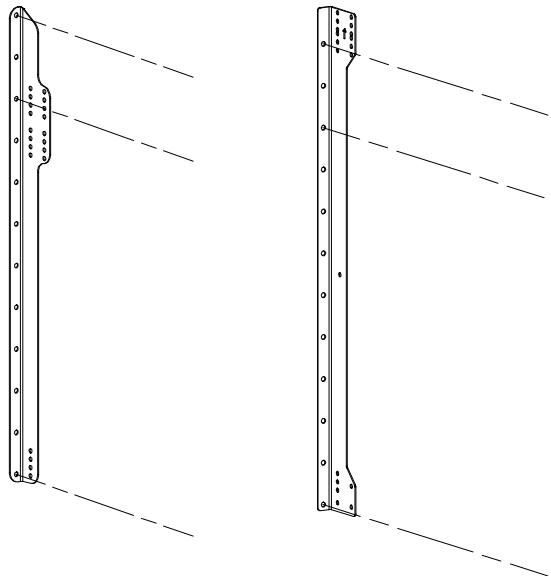
Typical steel grain silo with corrugated panels. 44" vertical seams align with top and bottom holes of bracket.

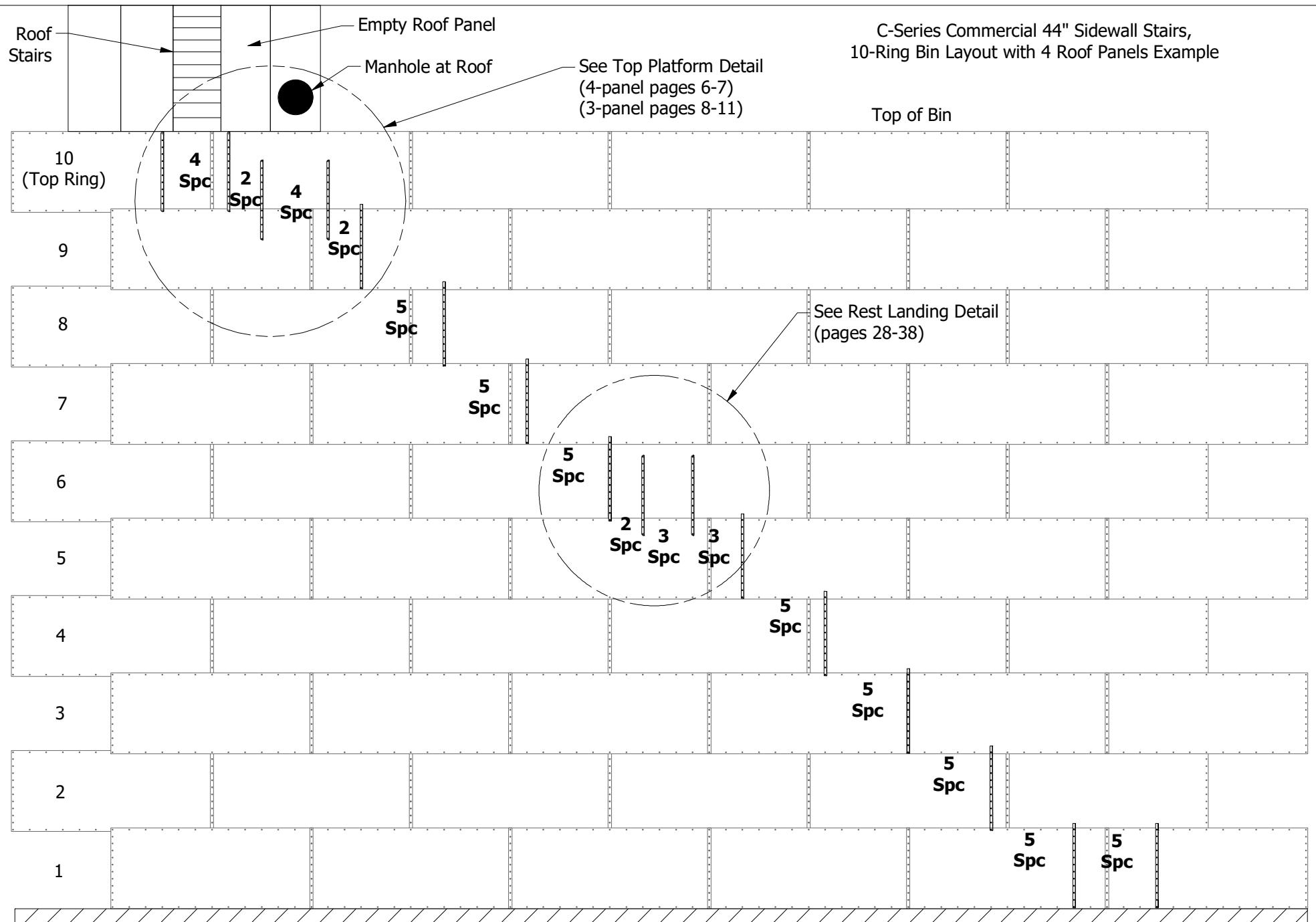


Other Mounting Options

Stairs can be installed on a concrete silo with continuous wall surface: We approve the use of the Hilti 3/8" x 3-3/4" zinc plated KWIK Bolt 1 Wedge Anchor (#2231456) for C-Series Commercial.

Use a minimum of three (3) anchors per wall bracket. One at the top , one at the bottom and at least one other between the middle and top of the wall mounting bracket. All anchor nuts torqued as specified by Hilti.





Overall Run Distance can be determined using this formula (single-punched bin sheets, 1 space = 9.375"):

Bolt Spaces: 7 + 5 per ring + 3 per rest landing = Total Bolt Spaces

Linear Feet = Total bolt spaces/1.28

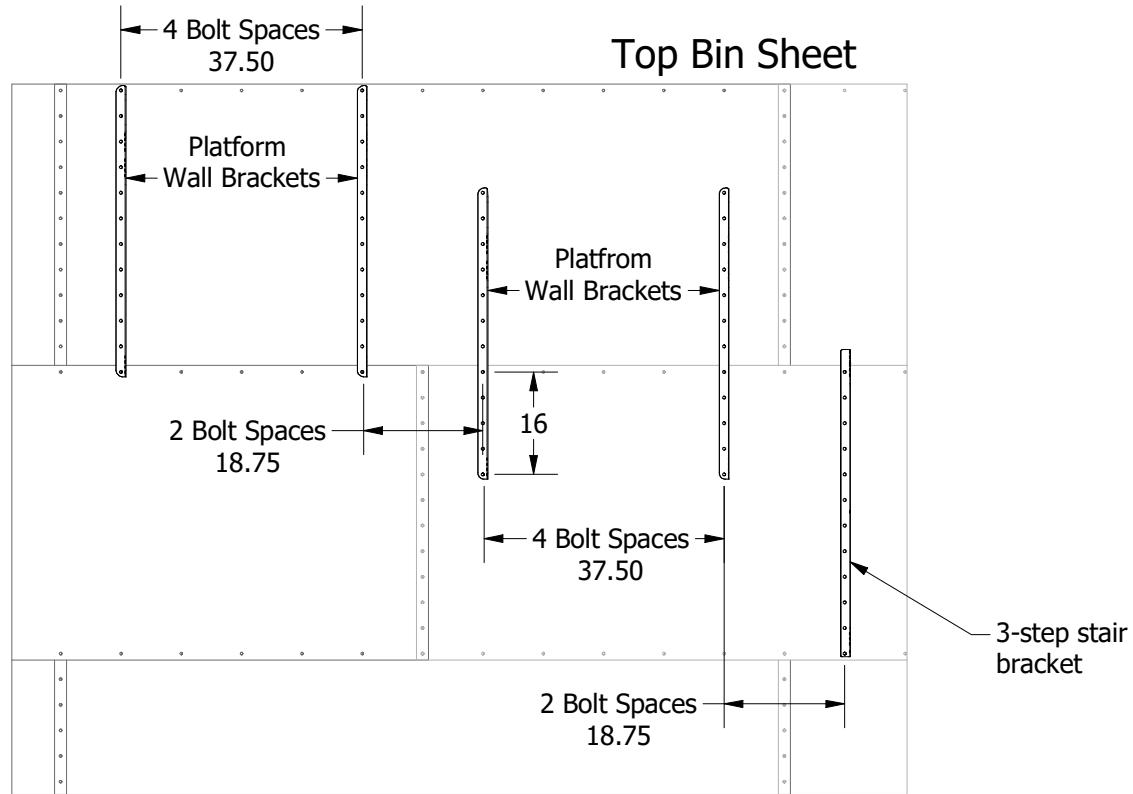
Bin sheets = Total bolt spaces/12

Platform Wall Bracket Horizontal Bolt Spacing, 4-Panel Roof

Align the platform wall brackets with the roof panels as shown. There should be an empty panel between the roof stair and manhole access.

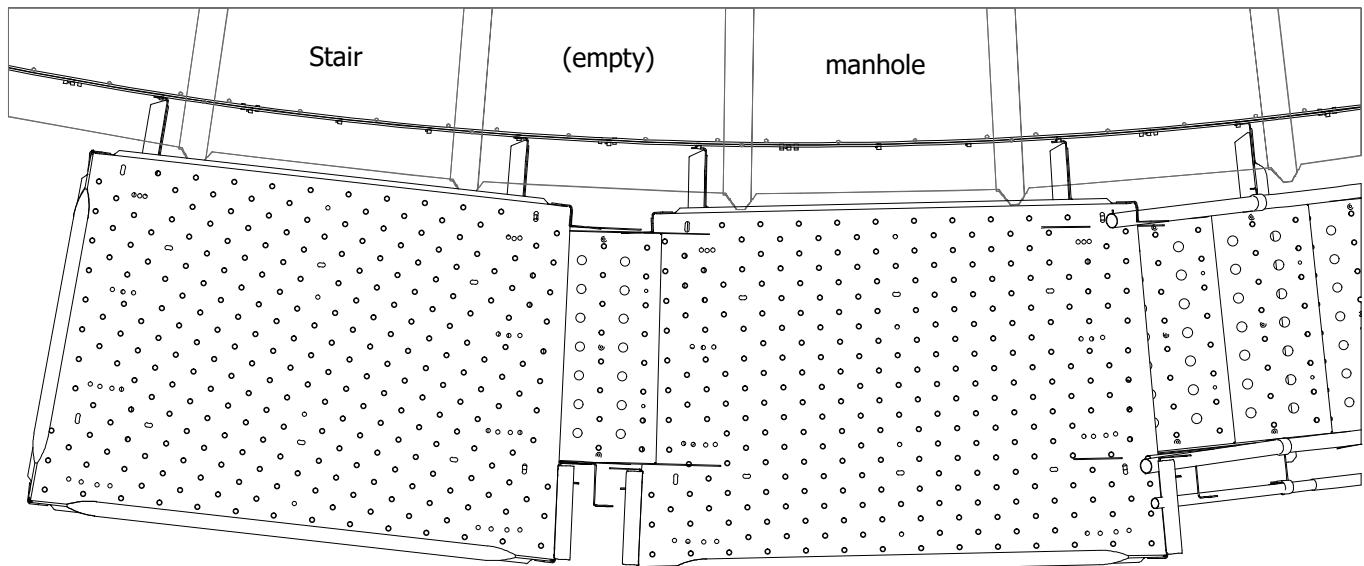
The horizontal spacing between the long eave platform wall brackets is 4 bolt spaces (37.50")

The horizontal spacing from the platform wall bracket to the 3-step stair wall bracket is 2 bolt spaces (18.75")



4-panel roof (Ideal layout)

Empty panel between roof stair and manhole,
single step between platforms



Eave Layout Platform Adjustment

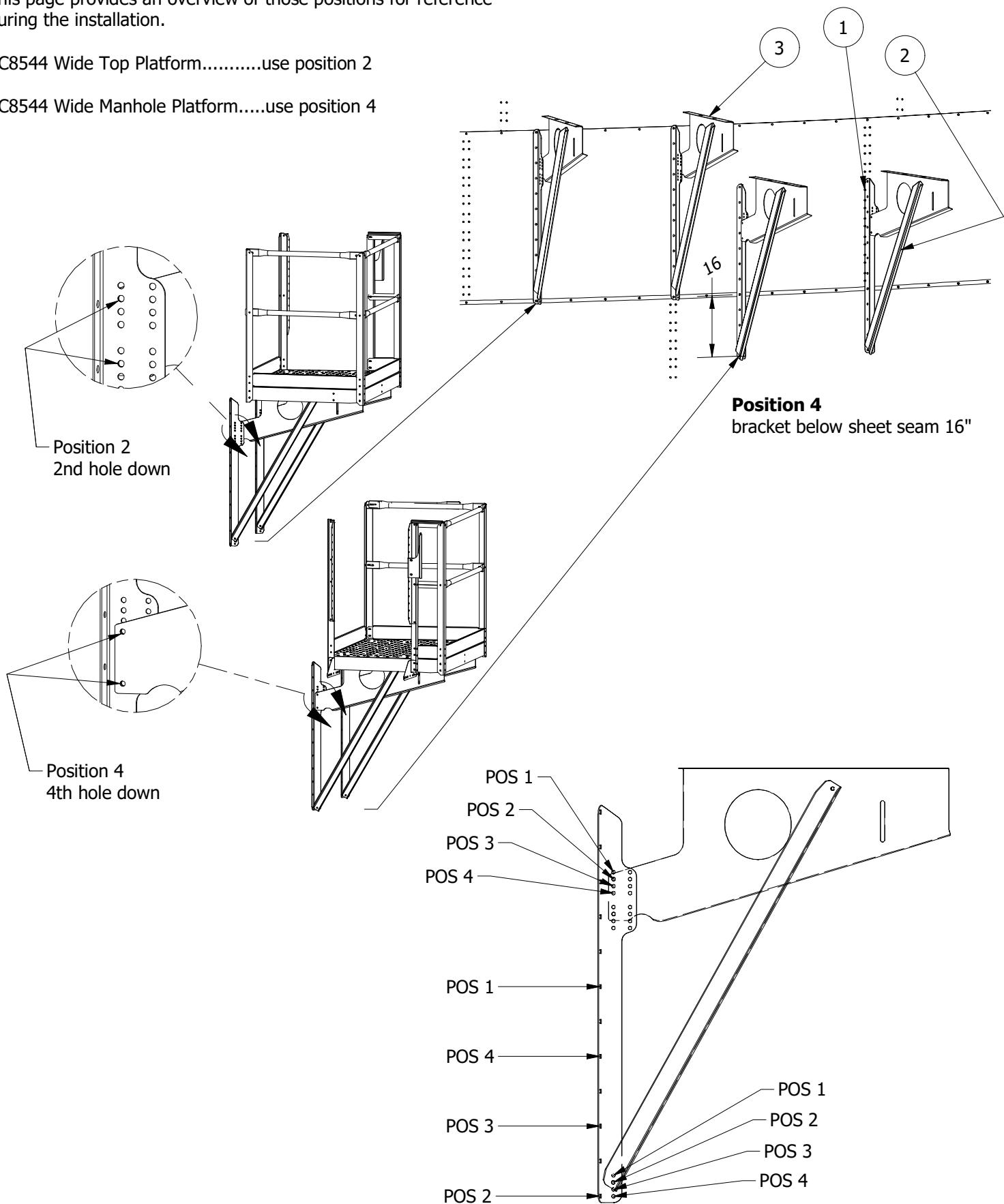
4-Panel

C-Series Platforms have four elevation positions to provide the correct step rise at different locations in the stair run. This page provides an overview of those positions for reference during the installation.

CC8544 Wide Top Platform.....use position 2

CC8544 Wide Manhole Platform.....use position 4

PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	CS-34401	Bracket, Wall, 44 Platform
2	CS-44002	Channel, Brace, 44
4	CS-34422	Brace, Plate, Wide Platform

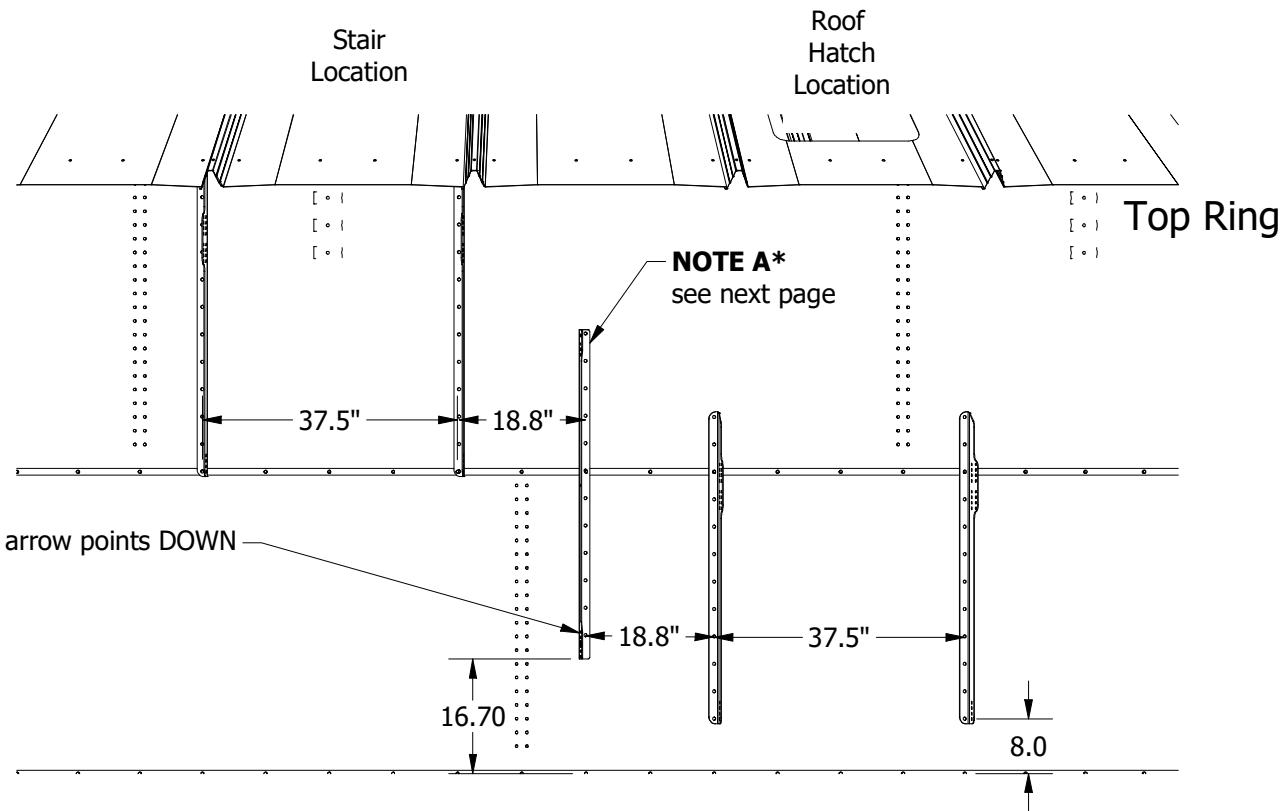


Platform Wall Bracket Horizontal Bolt Spacing, 3-Panel Roof

Align the platform wall brackets with the roof panels as shown. There should be an empty panel between the roof stair and manhole access.

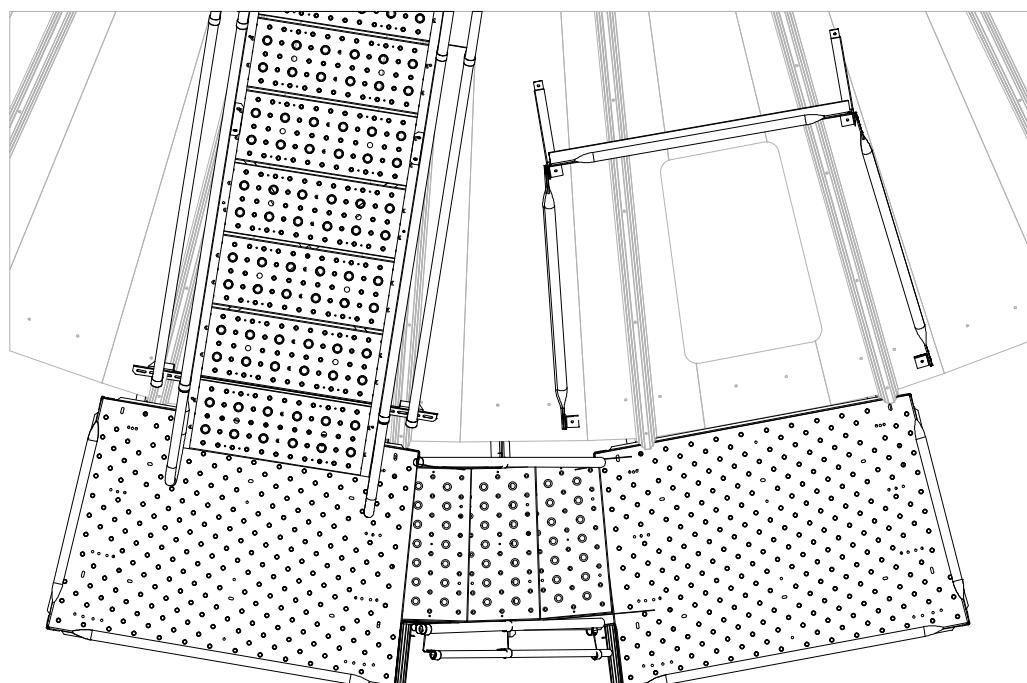
The horizontal spacing between the long eave platform wall brackets is 4 bolt spaces (37.50")

The horizontal spacing from the platform wall bracket to the 3-step stair wall bracket is 2 bolt spaces (18.75")



3-panel roof

Stair platform slightly offset from roof stair, with empty panel between stair and roof hatch



Elevation Adjustment Detail

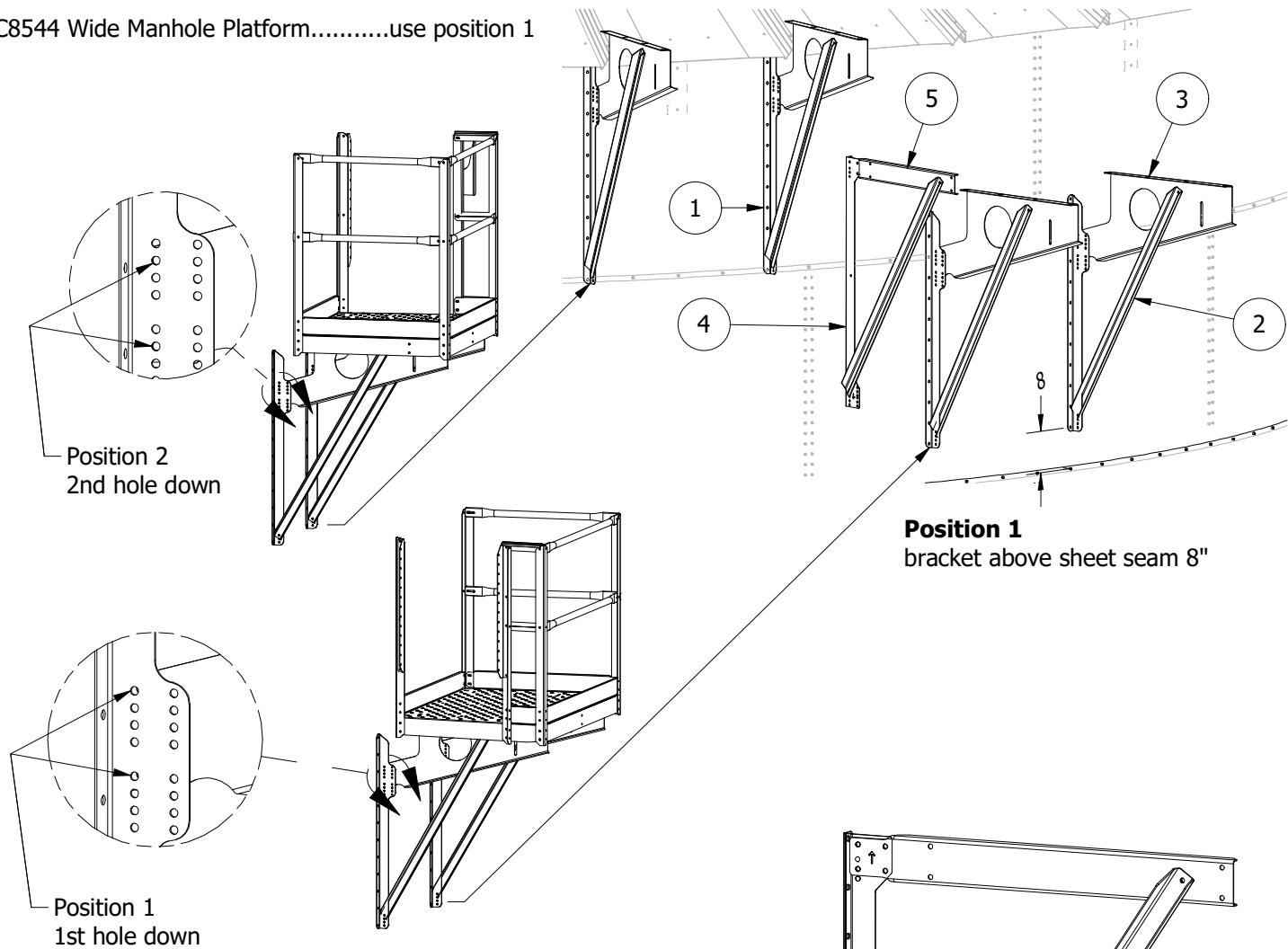
CRITICAL DIMENSIONS!

C-Series Platforms have four elevation positions to provide the correct step rise at different locations in the stair run. This page provides an overview of those positions for reference during the installation.

PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	CS-34401	Bracket, Wall, 44 Platform
2	CS-44002	Channel, Brace, 44
4	CS-34422	Brace, Plate, Wide Platform
5	CS-44001	Bracket, Wall, 44" Ring
6	CS-44002	Channel, Crossbar

CC8544 Wide Top Platform.....use position 2

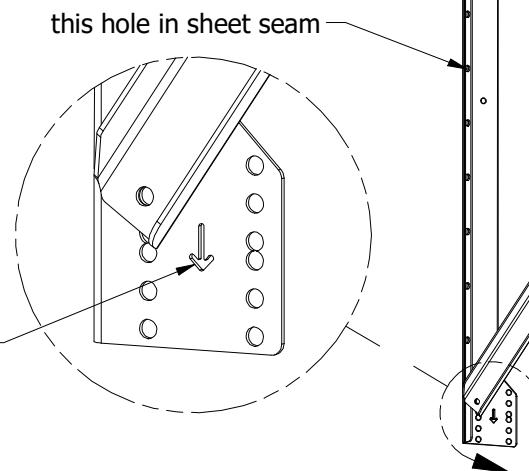
CC8544 Wide Manhole Platform.....use position 1



NOTE A

To line up the holes in the stair wall bracket with the sheet corrugation, assemble the frame with the arrow pointing DOWN as shown. The 6th hole down should be in the sheet seam.

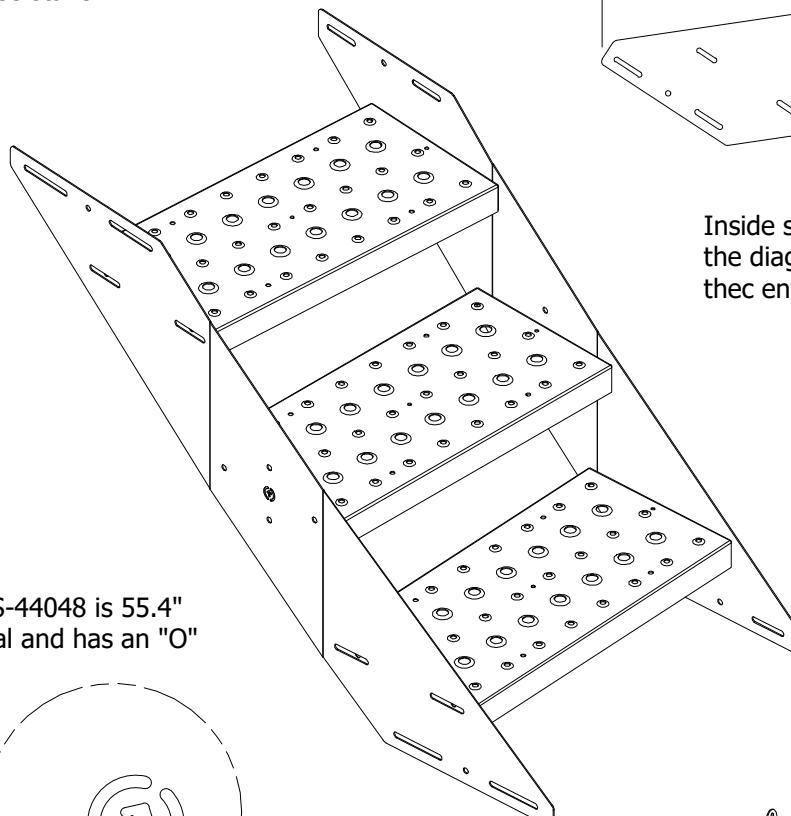
arrow points DOWN
when CC4403 is used
between hi-lo platforms



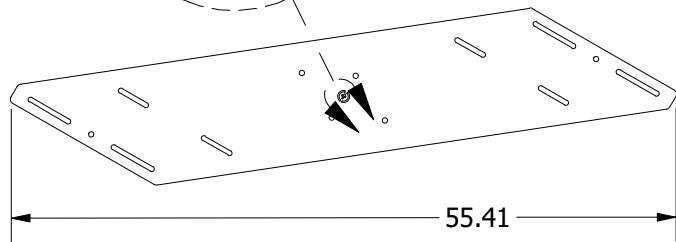
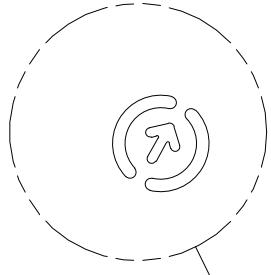
CC4403 (3-panel roof only)

3-step stair section

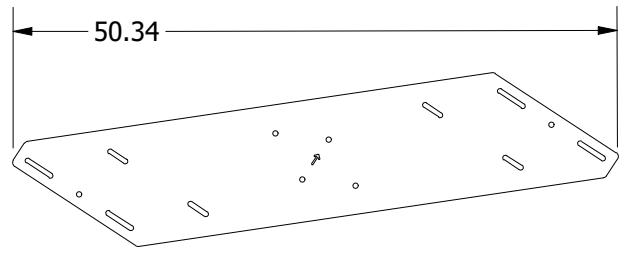
Clockwise stair wrap assembly is shown, mirror the assembly for counter-clockwise stairs.



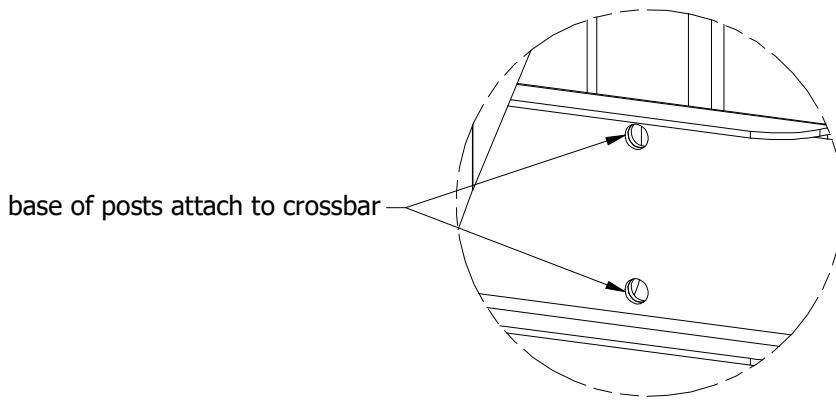
Outside siderail CS-44048 is 55.4" across the diagonal and has an "O" around arrow.



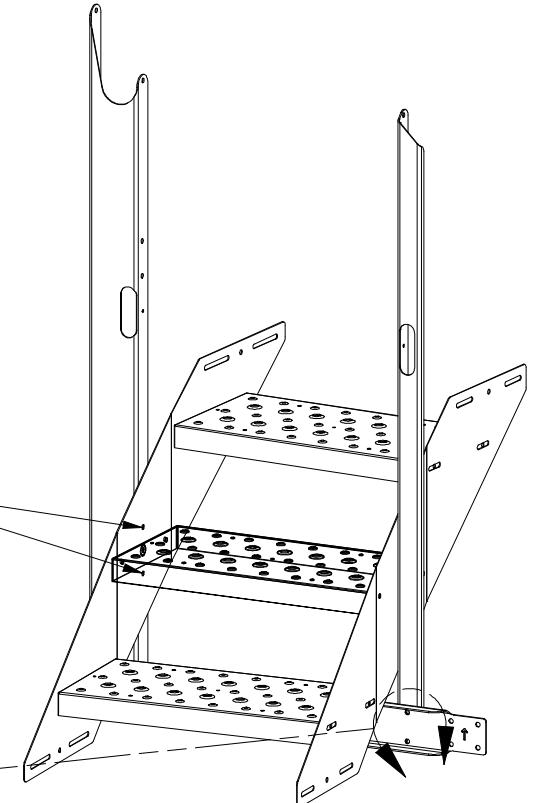
Inside siderail CS-44043 is 50.3" across the diagonal and has a plain arrow at the center



stair posts bolt above and below middle step
outside post is wider than inside post



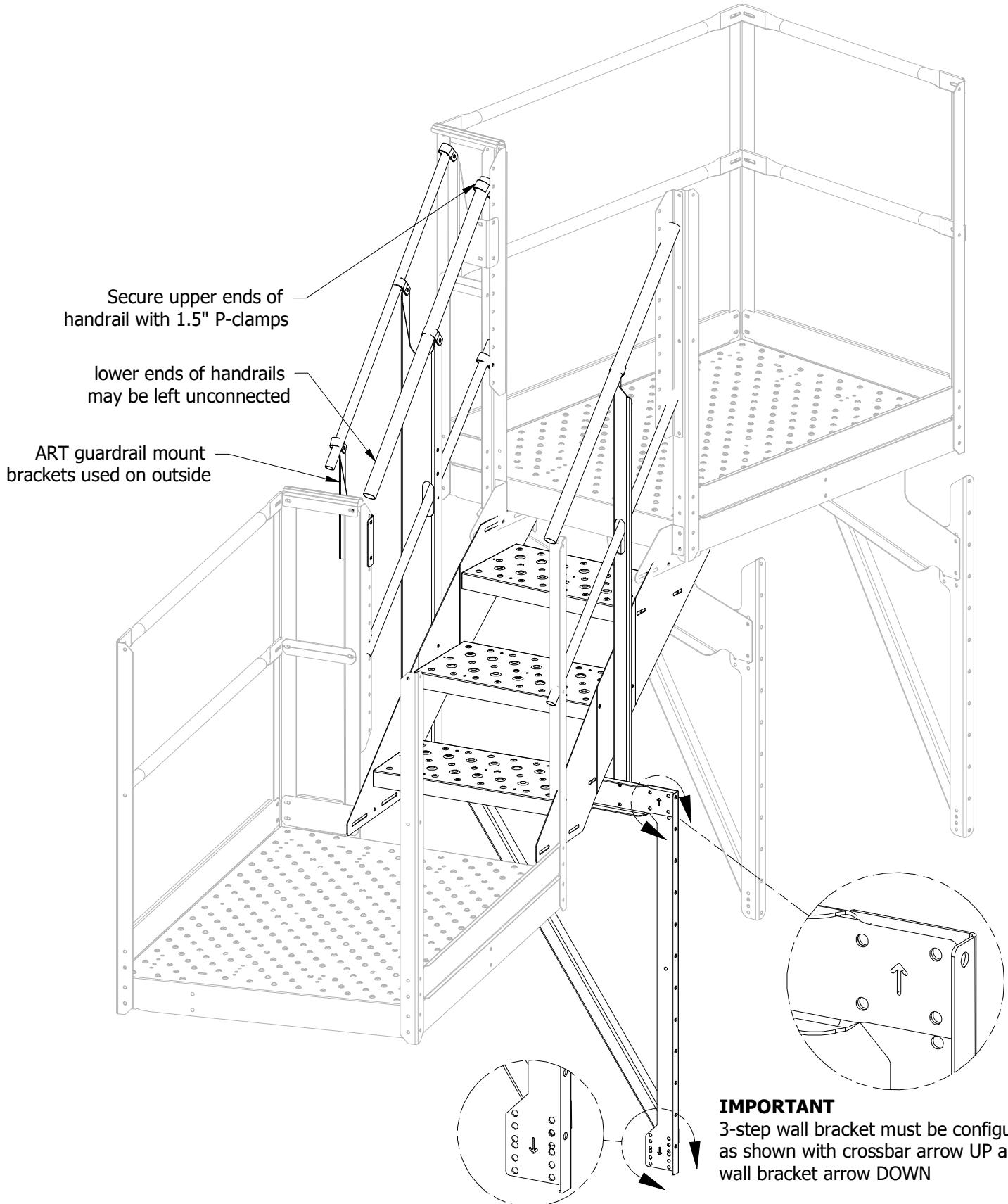
base of posts attach to crossbar



CC4403 (3-panel roof only) Midrail, Handrail and Guardrail

Tubing is to be cut to length as needed. Use the P-clamps to secure the ends of the railing to both platforms along the mounting plates and ART guardrail mount brackets.

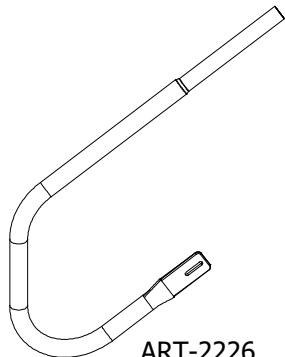
The 1" diameter tubing is used for midrails and outside guardrail, and the 1.5" tubing is used as handrails.



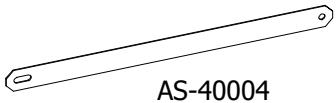
CC8544

Wide Platform, Single Entry (CCW entry shown)

Platform package includes these components for finishing stair (see pages 45-46)

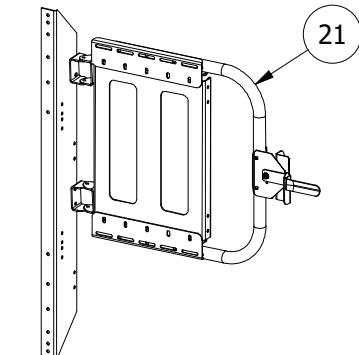
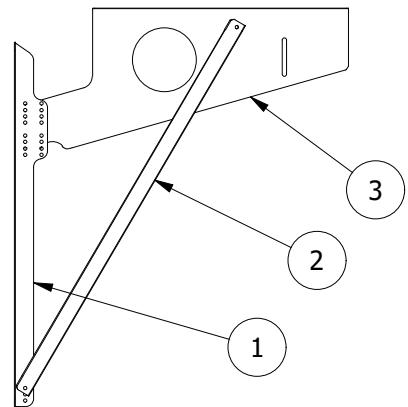
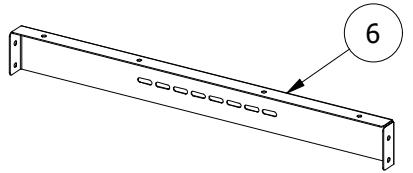
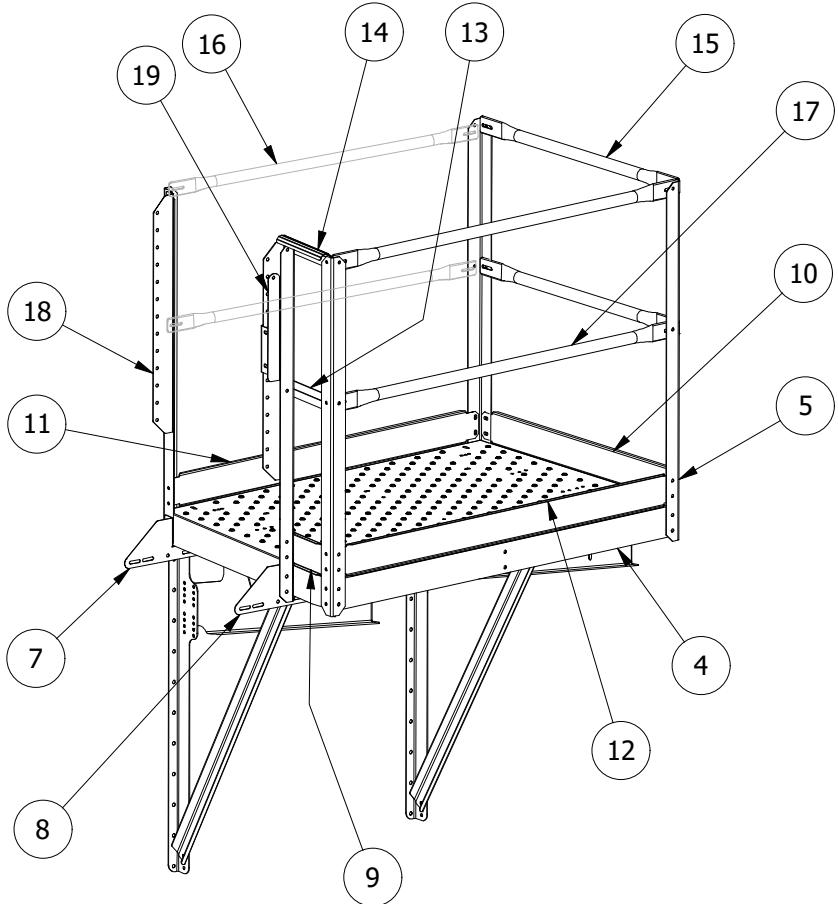


ART-2226



AS-40004

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CS-34401	Bracket, Wall, 44 Platform
2	2	CS-44002	Channel, Brace, 44
3	2	CS-34422	Brace, Plate, Wide Platform
4	1	CS-F30003	Tread, Platform, wide 55" x 37"
5	5	ARD-0024	Angle, Post, Platform Corner
6	1	CS-30029	Wide Platform center brace
7	1	CS-40421	Siderail Extension, wide platform, left
8	1	CS-40422	Siderail Extension, wide platform, right
9	1	ES-8516	Channel, Kickboard, 10"
10	1	ES-8513	Channel, Kickboard, 37"
11	1	ES-3504	Channel, Kickboard, 50"
12	1	CS-34454	Channel, Kickboard, 54"
13	1	ES-8515	Plat Entry Int Rail
14	1	CS-34412	Angle, Rounded Handrail, Platform Entry
15	2	TRS1503700	37" 1.5 in tube railing slotted end tabs
16	2	TRS1505000	50" 1.5 in tube railing slotted end tabs
17	2	TRS1505500	55" 1.5 in tube railing slotted end tabs
18	2	CS-30020	Bracket, Platform Handrail Mount
19	1	ART-0007	Entry Guardrail Post Right
20	1	ART-0008	Entry Guardrail Post Left
21	1	ASG100	Self-closing Gate



Single Entry Platform, Clockwise entry shown

(for stairs wrapping clockwise from bottom to top)

Step 1: Attach posts to platform skin

Platform assembly uses 3/8" hardware
except where noted otherwise



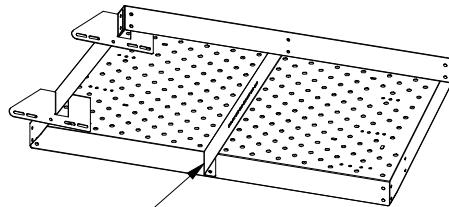
Clockwise wrap



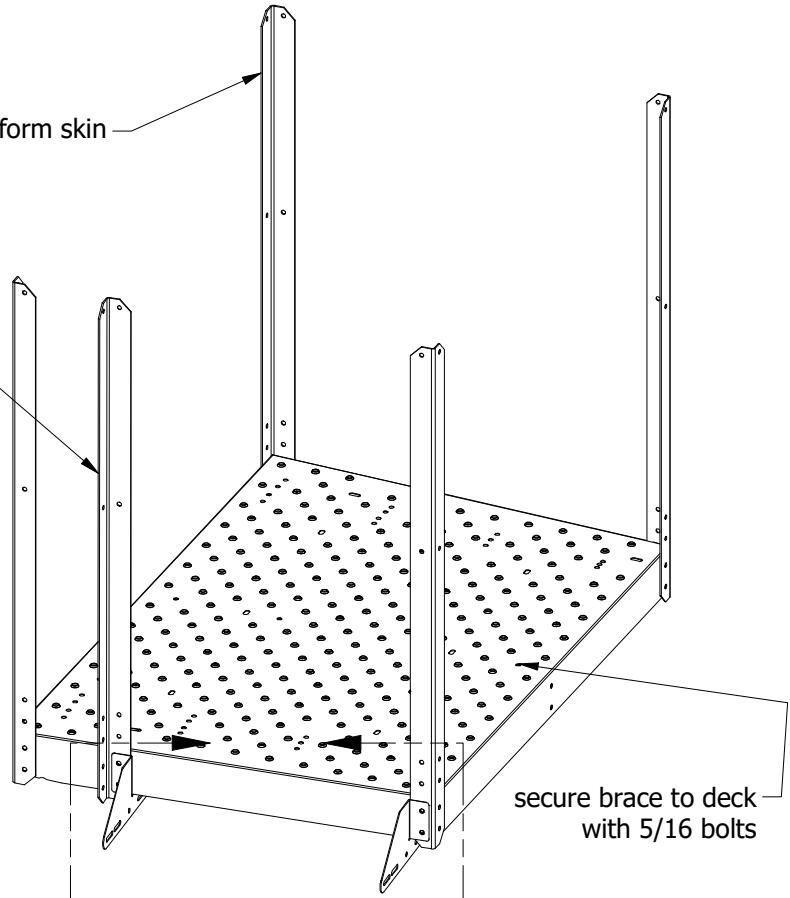
Counter-clockwise wrap

plumb posts in both directions and tighten bolts to platform skin

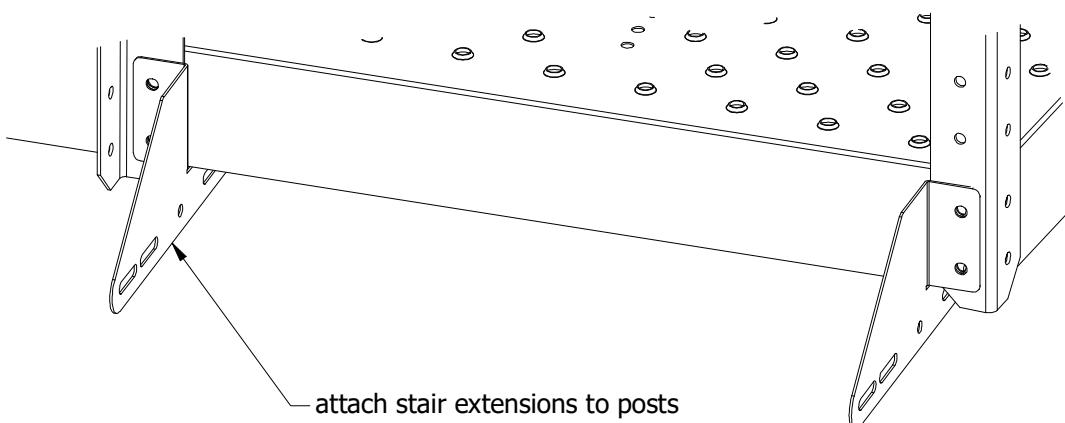
Attach corner posts and entry post
as shown. Entry post is oriented
with flange towards wider end
of platform (outside).



Attach middle brace to inside
of platform with 3/8" bolts



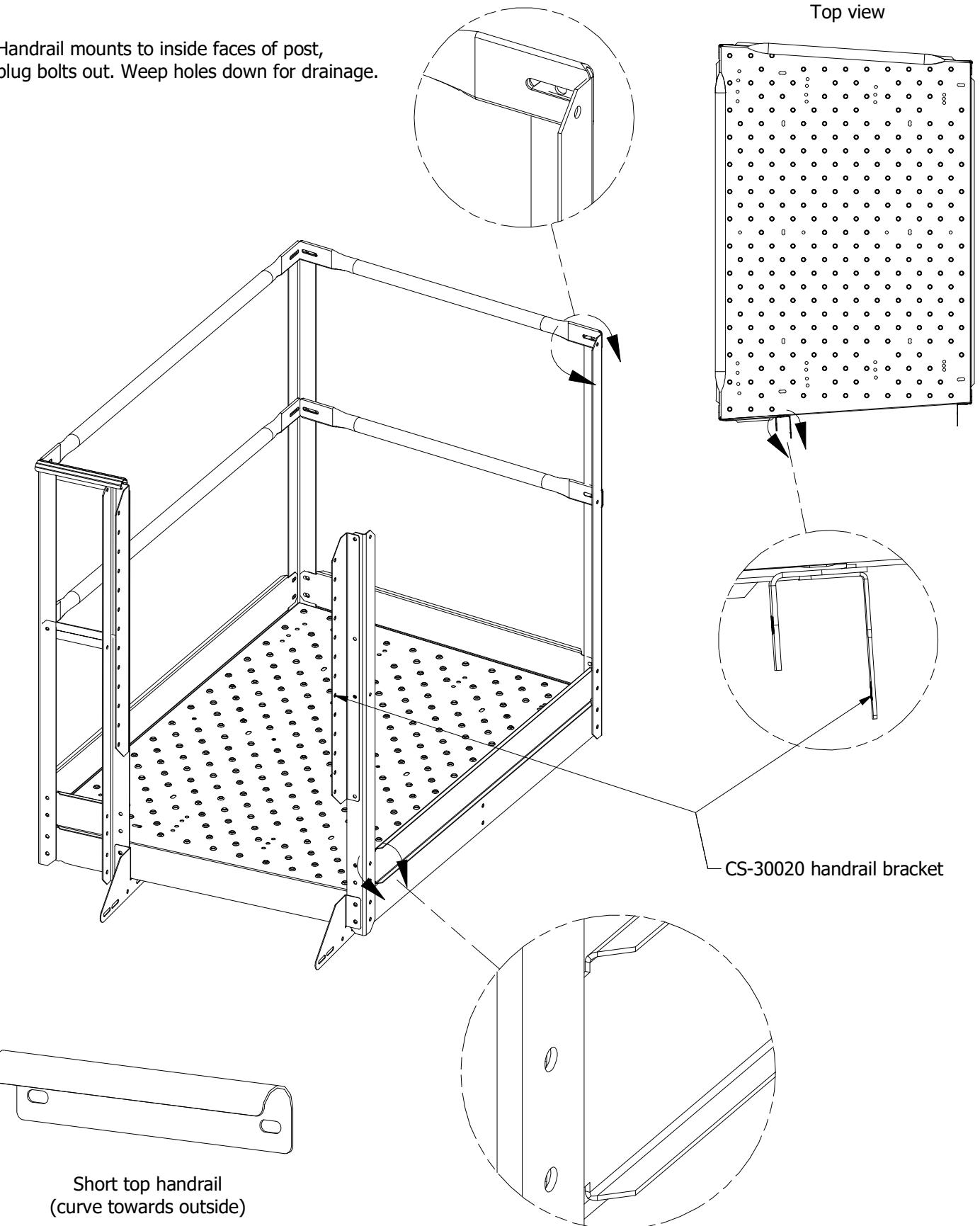
secure brace to deck
with 5/16 bolts



attach stair extensions to posts

Step 2: Attach the guarding rails and handrail brackets to posts

Handrail mounts to inside faces of post, plug bolts out. Weep holes down for drainage.

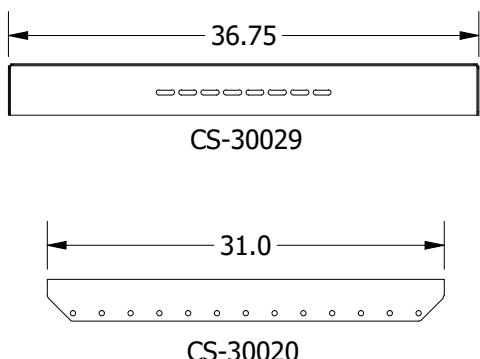
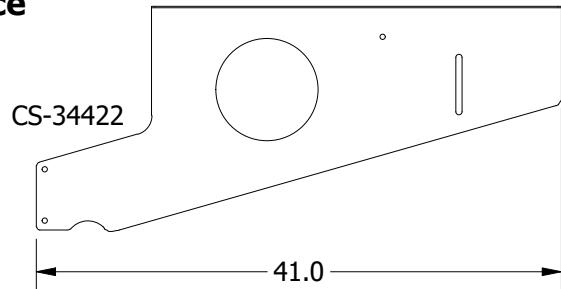
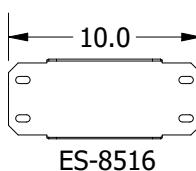
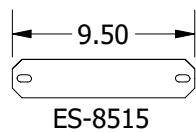
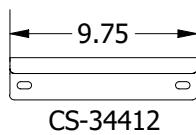


Short top handrail
(curve towards outside)

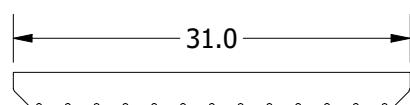
Kickboards bolt on inside faces of post with flanges pointing out

CC8544 Wide Platform

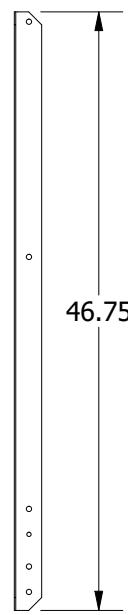
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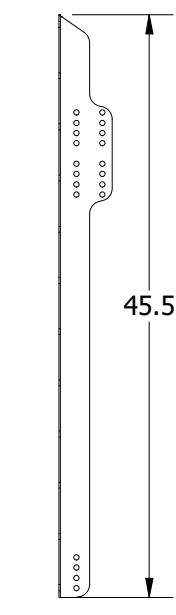
CS-30029



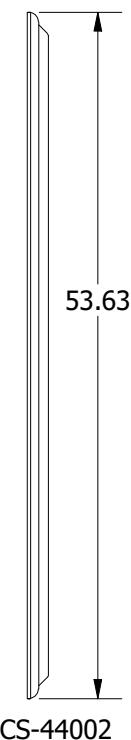
CS-30020



ARD-0024

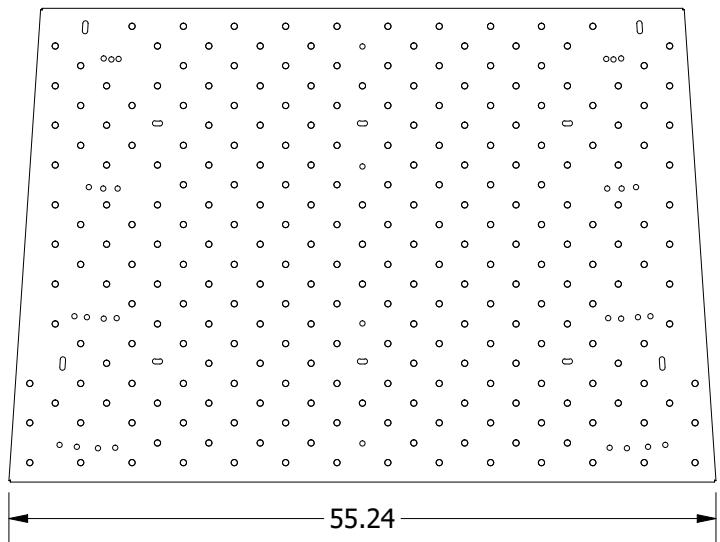


CS-44001

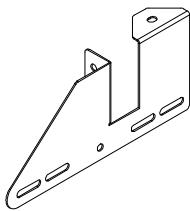


CS-44002

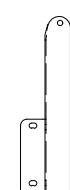
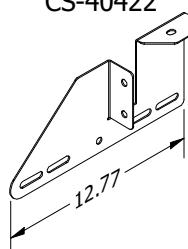
CS-F30003



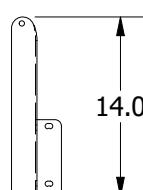
CS-40421



CS-40422



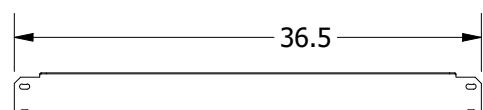
ART-0008



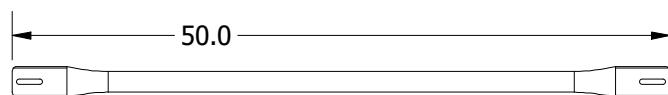
ART-0007



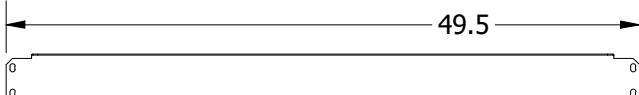
TRS1505500



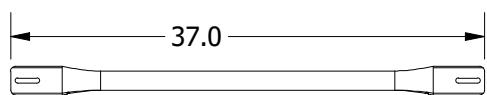
ES-8513



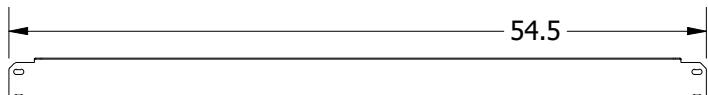
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ES-3504



TRS1503700

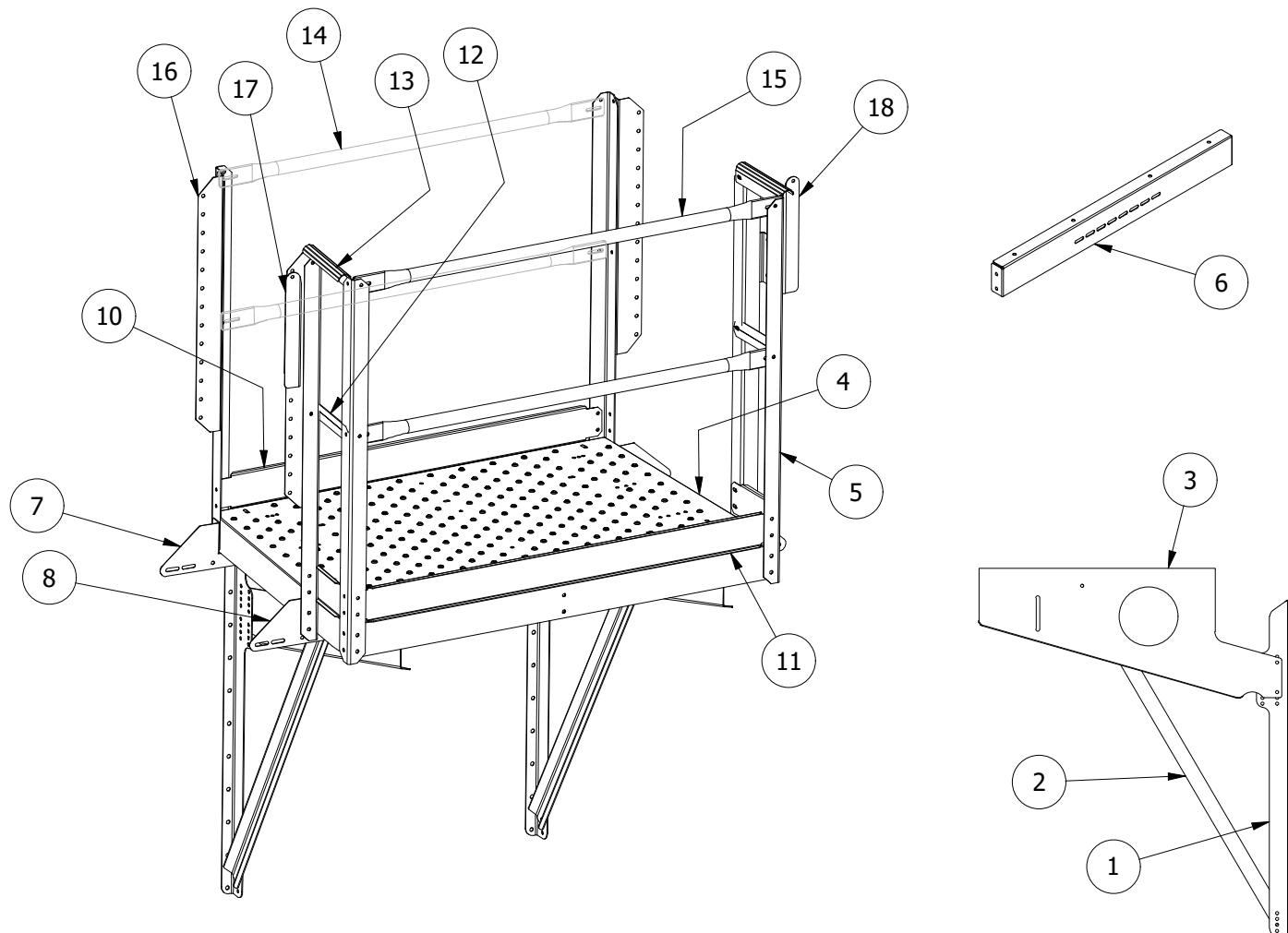


CS-34454

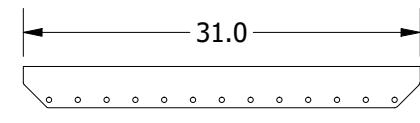
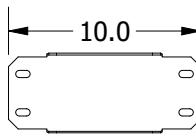
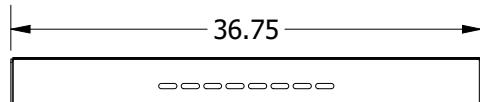
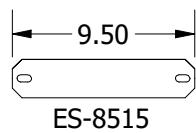
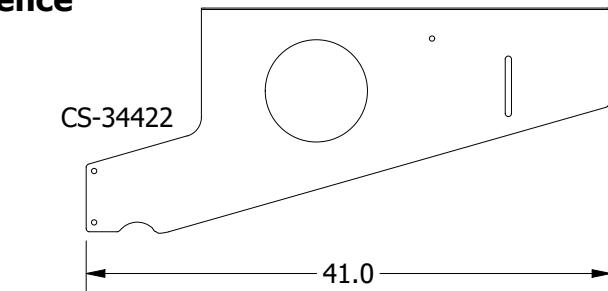
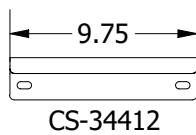
CC8644 Wide Platform

Bill of Materials

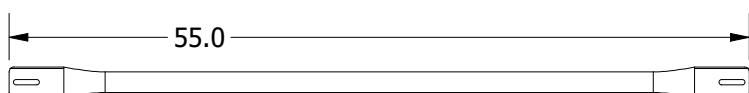
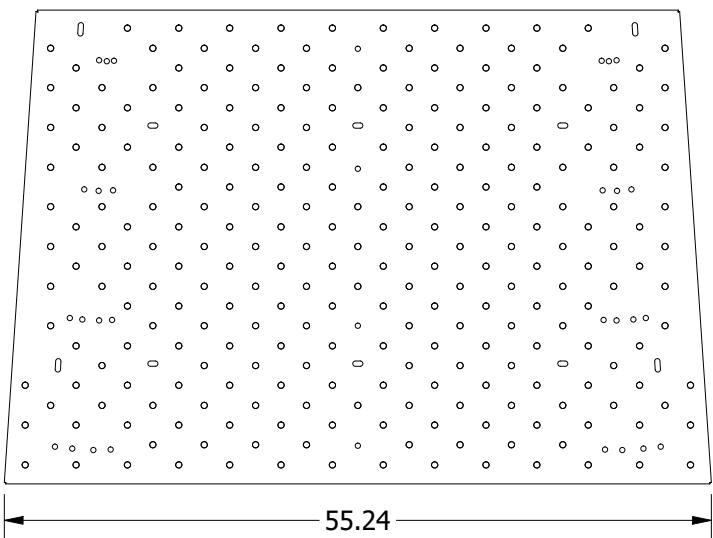
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CS-34401	Bracket, Wall, 44 Platform
2	2	CS-44002	Channel, Brace, 44
3	2	CS-34422	Brace, Plate, Wide Platform
4	1	CS-F30003	Tread, Platform, wide 55" x 37"
5	6	ARD-0024	Angle, Post, Platform Corner
6	1	CS-30029	Wide Platform center brace
7	2	CS-40421	Siderail Extension, wide platform, left
8	2	CS-40422	Siderail Extension, wide platform, right
9	2	ES-8516	Channel, Kickboard, 10"
10	1	ES-3504	Channel, Kickboard, 50"
11	1	CS-34454	Channel, Kickboard, 54"
12	2	ES-8515	Platform Entry Int Rail
13	2	CS-34412	Angle, Rounded Handrail, Platform Entry
14	2	TRS1505000	50" long 1.5 in tube railing slotted end tabs
15	2	TRS1505500	55" Long 1.5 in tube railing slotted end tabs
16	4	CS-30020	Bracket, Platform Handrail Mount
17	1	ART-0007	Entry Guardrail Post Right
18	1	ART-0008	Entry Guardrail Post Left



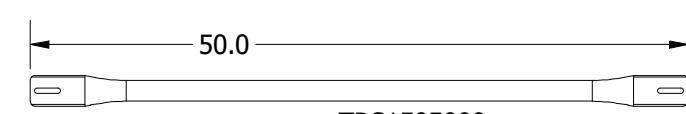
CC8644 Wide Platform Parts ID Reference



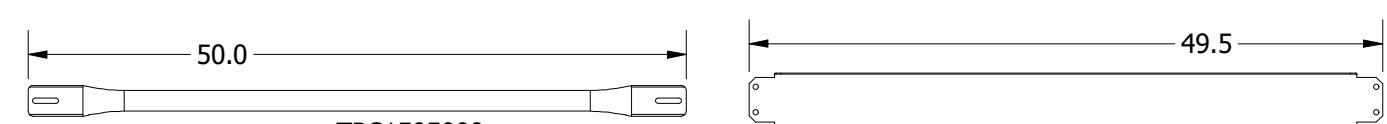
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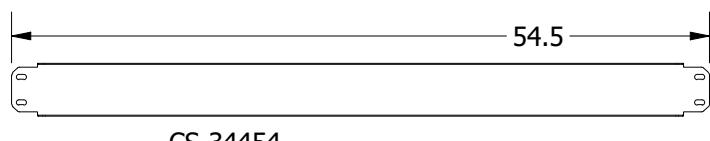
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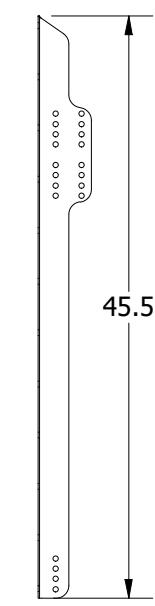
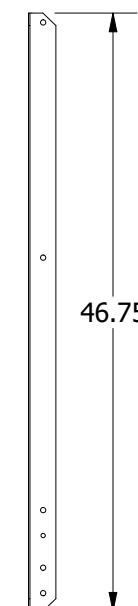
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ES-3504



CS-34454

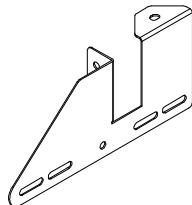


CS-44001

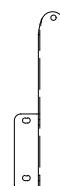
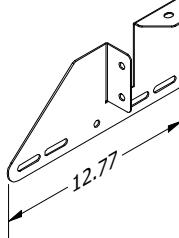


CS-44002

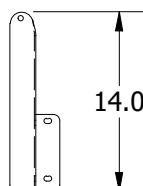
CS-40421



CS-40422

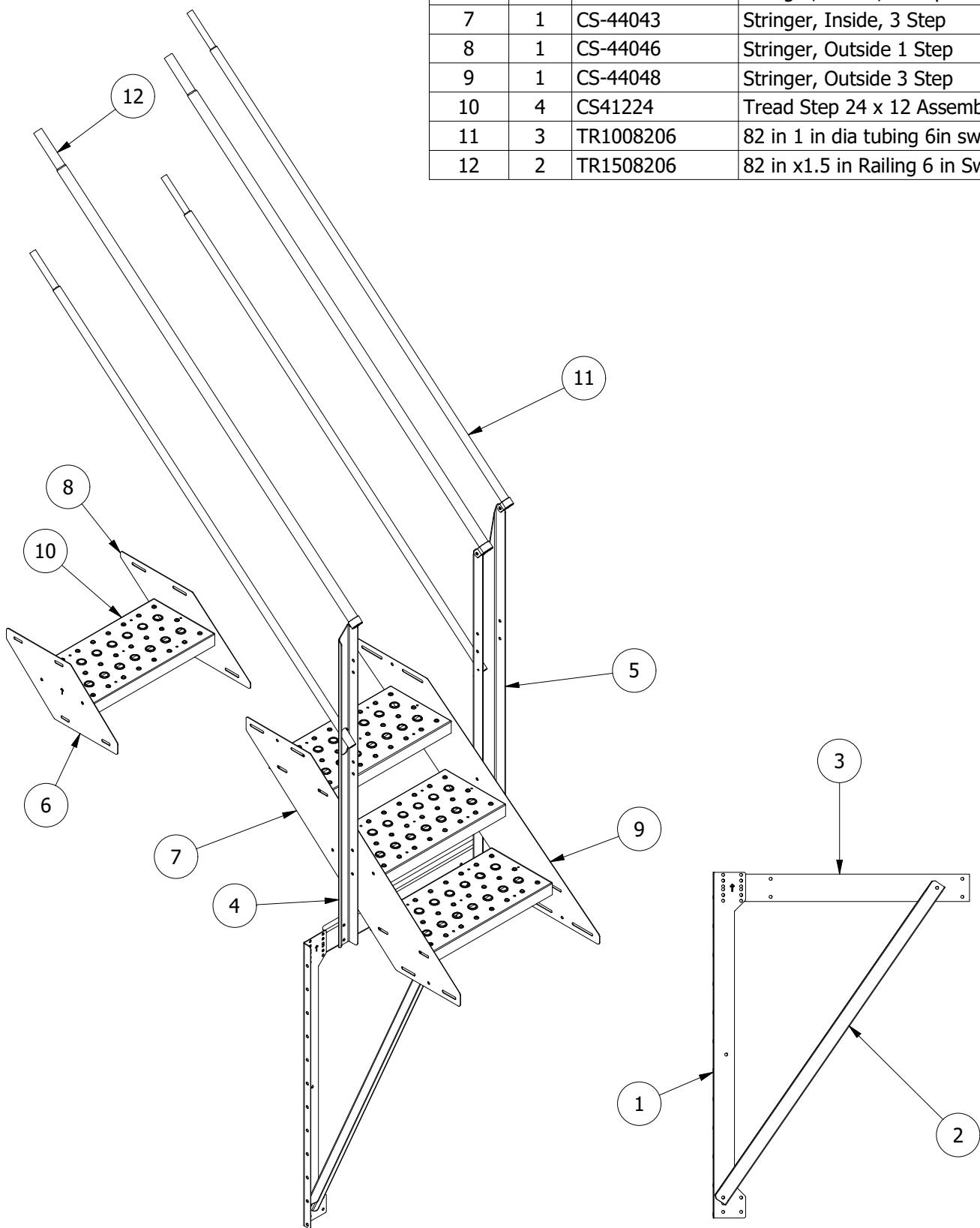


ART-0008



ART-0007

CC4404P
C-Series Commercial 44"
1+3 Step Stair Section



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CS-44001	Bracket, Wall, 44" Ring
2	1	CS-44002	Channel, Brace, 44
3	1	CS-40002	Channel, Crossbar
4	1	CS-40001	Post, Inside Stair
5	1	CS-40011	Post, Stair Rail, Guard Rail Outside
6	1	CS-44041	Stringer, Inside, 1 Step
7	1	CS-44043	Stringer, Inside, 3 Step
8	1	CS-44046	Stringer, Outside 1 Step
9	1	CS-44048	Stringer, Outside 3 Step
10	4	CS41224	Tread Step 24 x 12 Assembly
11	3	TR1008206	82 in 1 in dia tubing 6in swage
12	2	TR1508206	82 in x1.5 in Railing 6 in Swage

CC4404P overview of stair assembly

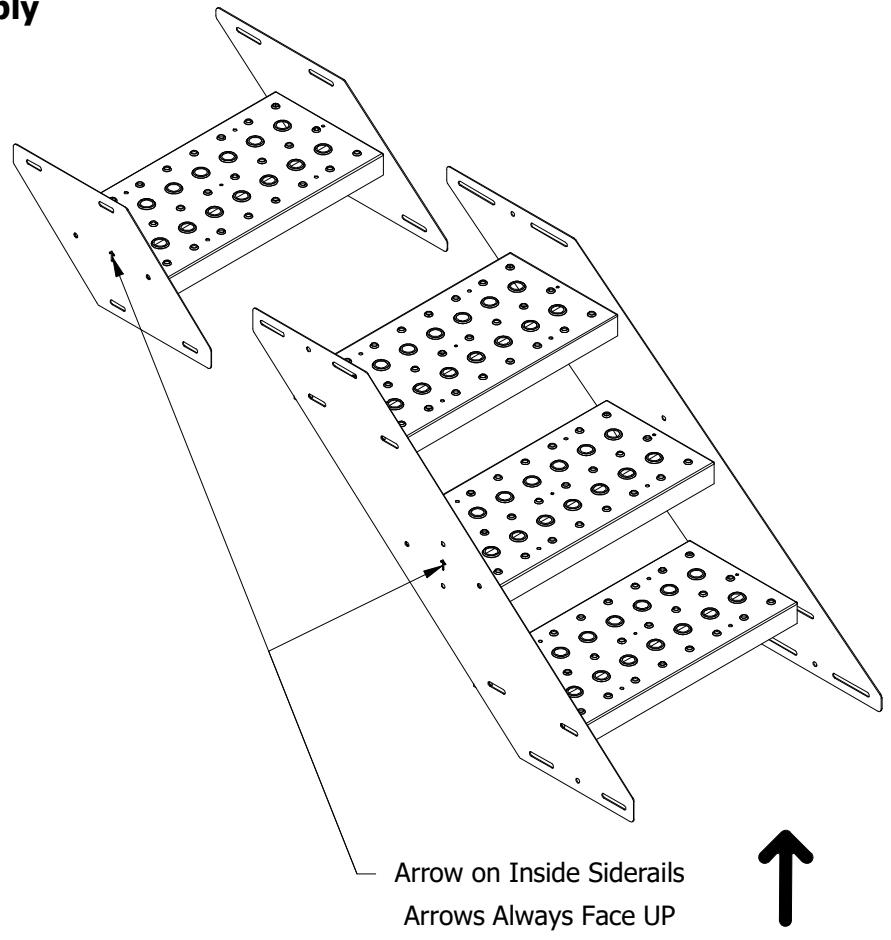
In the CC4404P stair section,

The lower 3-step uses a single siderail inside and outside.

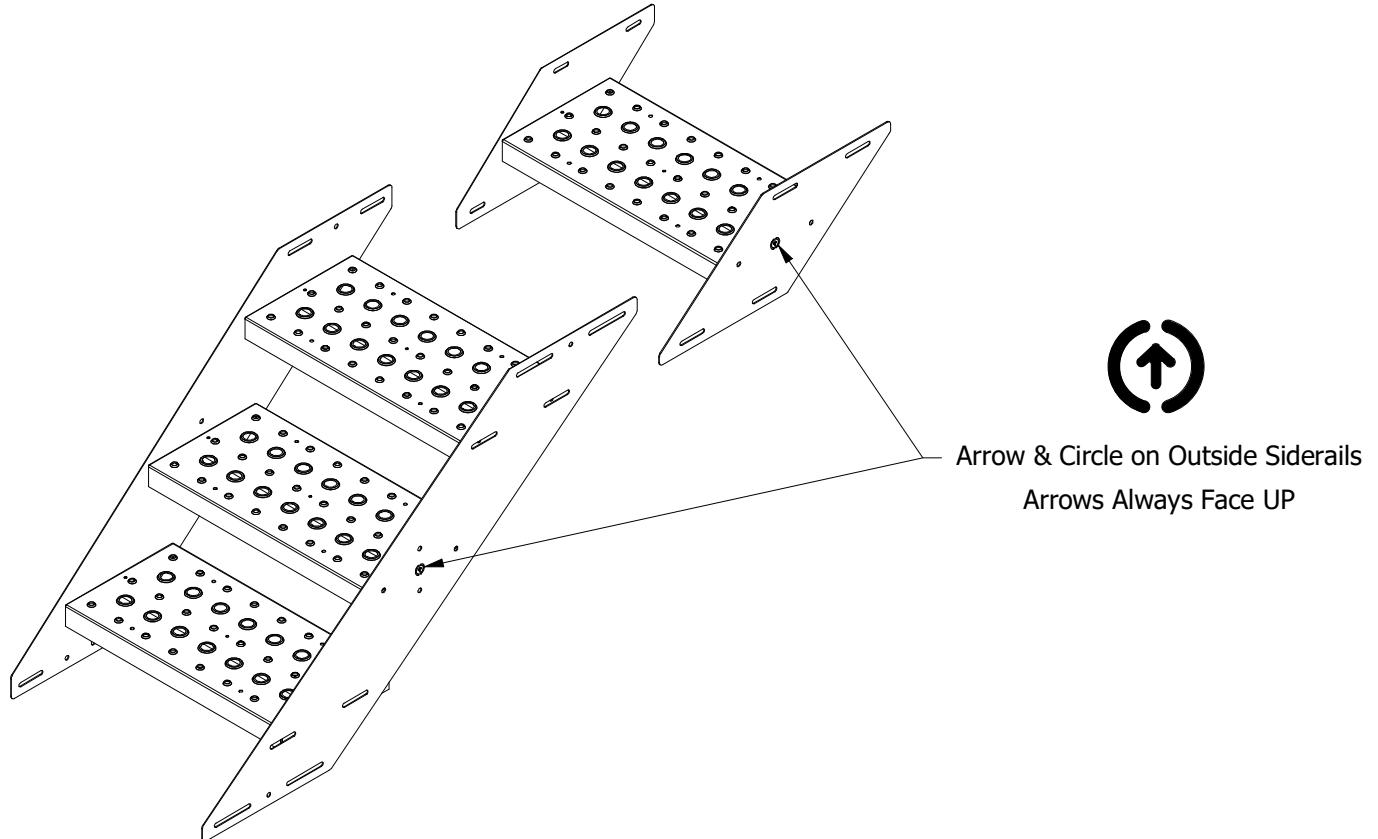
the upper section is also a single siderail inside and outside.

Refer to pages 6-7 for 4-panel roof;
assemble as separate sections

Refer to pages 8-11 for 3-panel roof;
assemble as single section

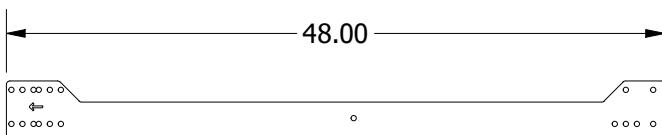


Arrow on Inside Siderails
Arrows Always Face UP

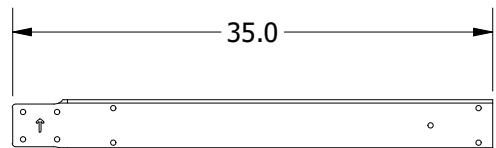


Arrow & Circle on Outside Siderails
Arrows Always Face UP

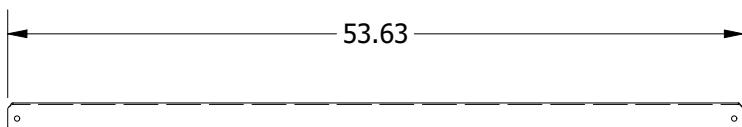
CC4404P Parts ID



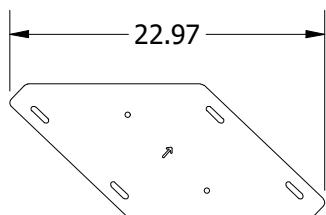
CS-44001



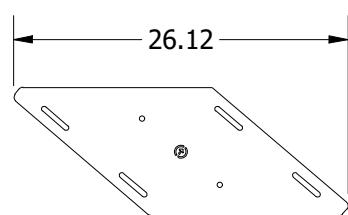
CS-40002



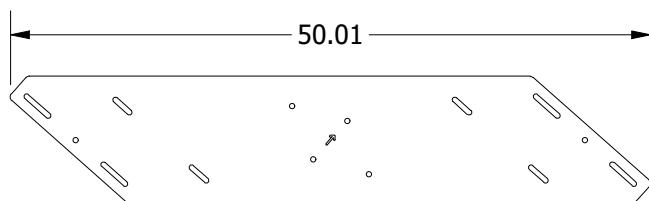
CS-44002



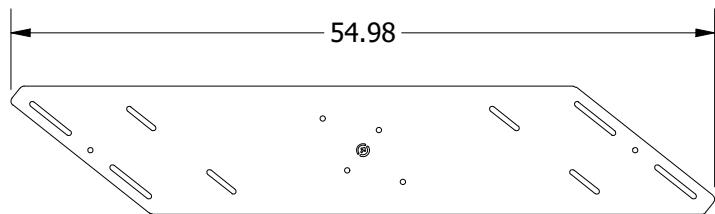
CS-44041



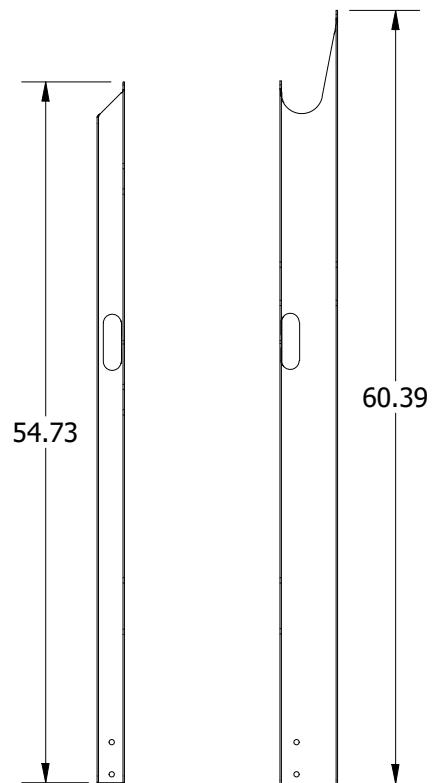
CS-44046



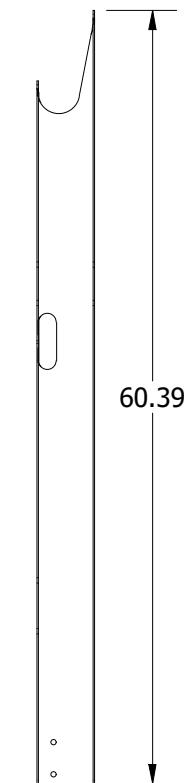
CS-44043



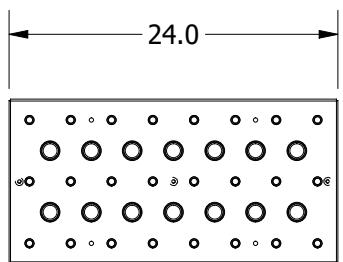
CS-44048



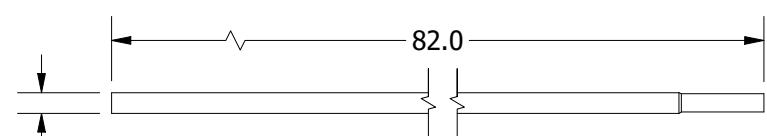
CS-40001



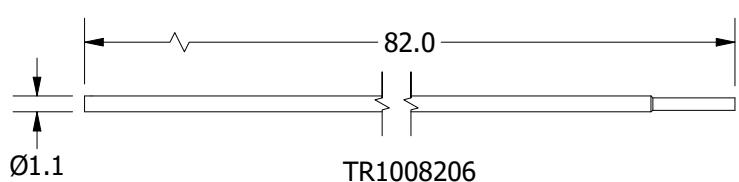
CS-40011



CS41224



TR1508206

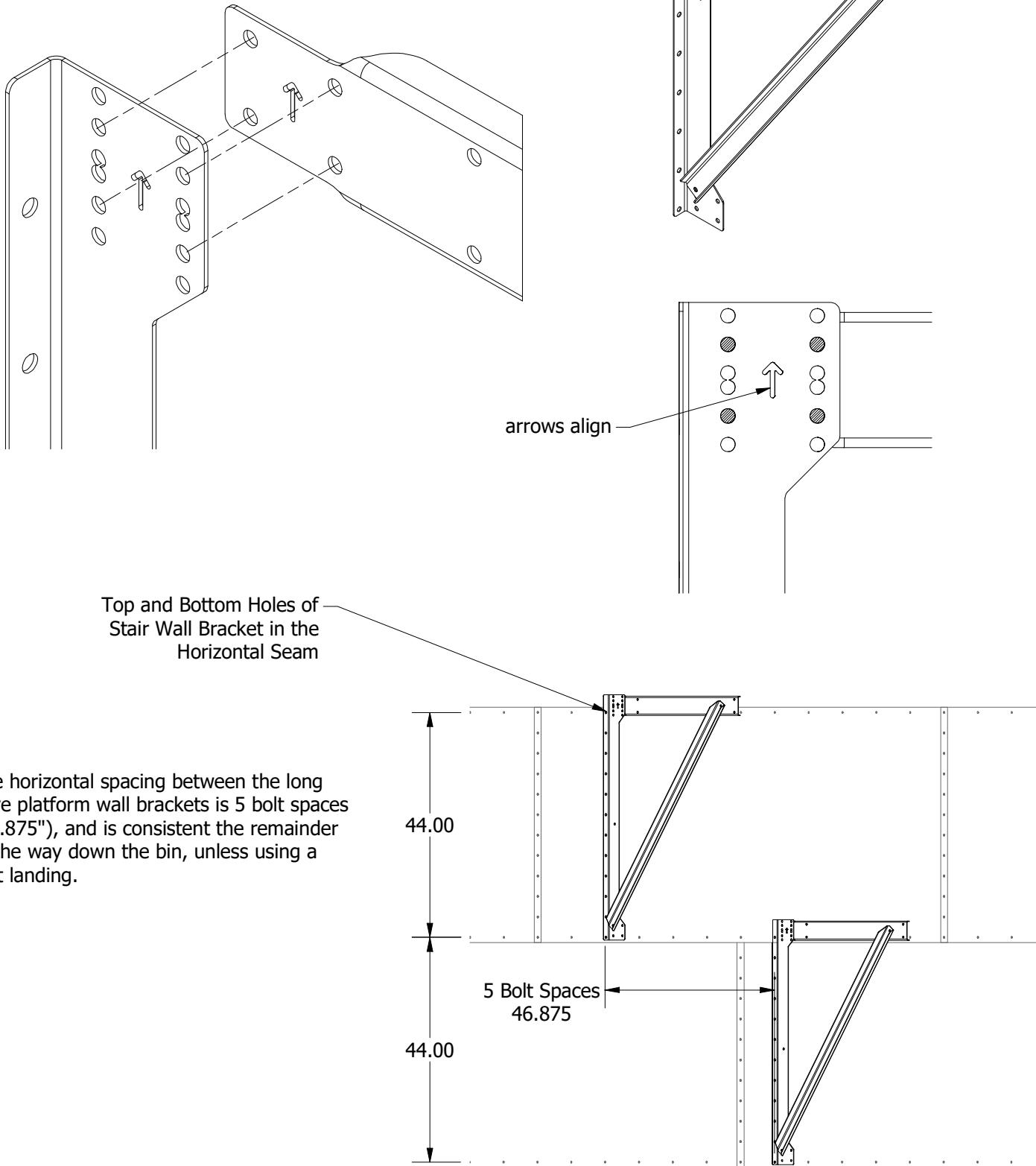


TR1008206

Stair Wall Bracket

Default Position and Wall Spacing

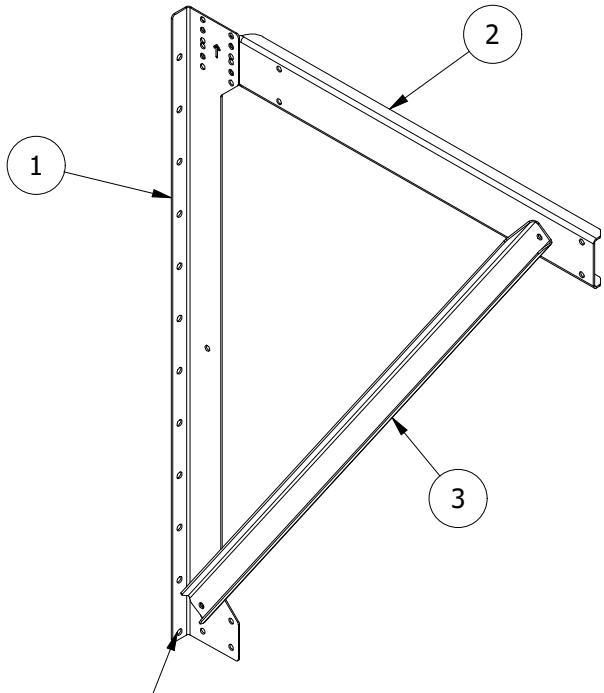
Like the platform wall brackets, the stair wall brackets provide elevation adjustments for different stair configurations. The standard seam-to-seam placement is shown below, with the crossbar attaching to the center set of bolt holes. Use 3/8" hardware and level the crossbar before tightening down the bolts.



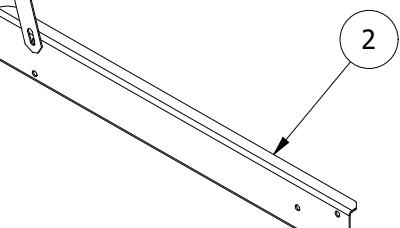
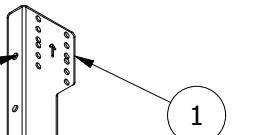
A-Frame Layouts

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CS-44001	Bracket, Wall, 44" Ring
2	1	CS-40002	Channel, Crossbar
3	1	CS-44002	Channel, Brace



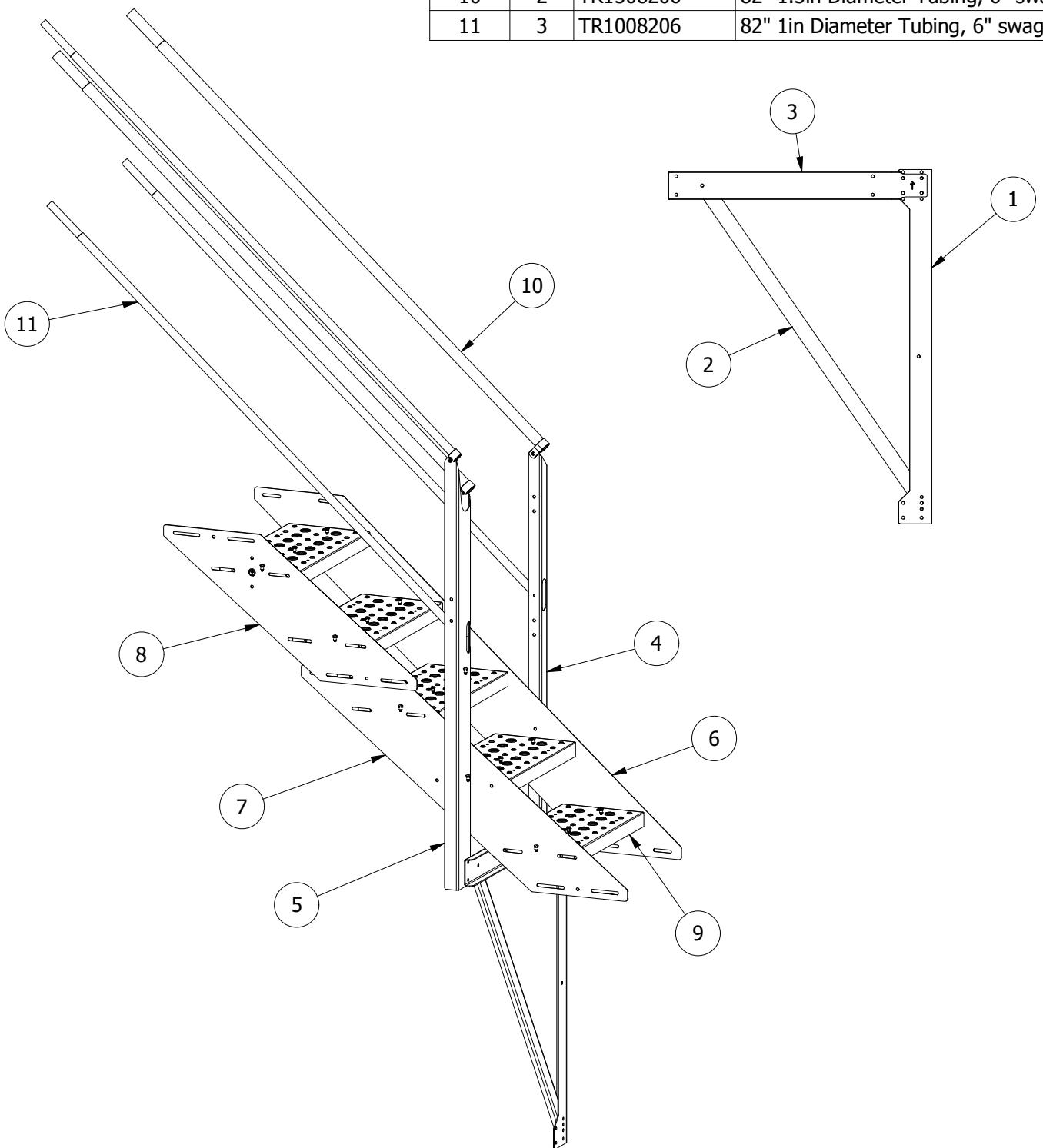
Always include seal between bracket and bin sheet



See page 45

CC4400
C-Series Commercial 44"
5-Step Stair Section

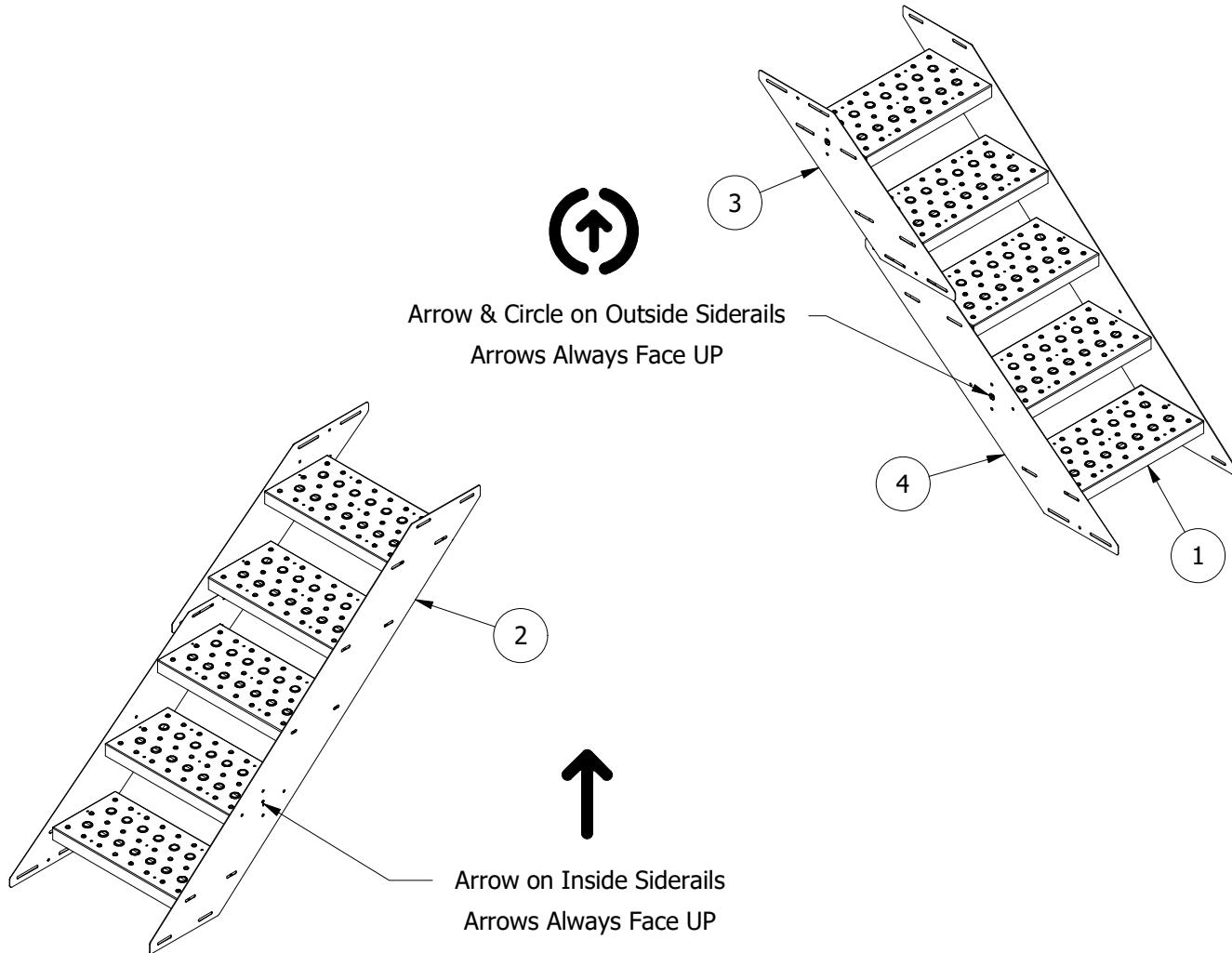
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CS-44001	Bracket, Wall, 44" Ring
2	1	CS-44002	Channel, Brace, 44
3	1	CS-40002	Channel, Crossbar
4	1	CS-40001	Post, Inside Stair
5	1	CS-40011	Post, Stair Rail, Guard Rail Outside
6	1	CS-44045	Stringer, Inside 5 Step 18-156
7	1	CS-44048 CW	Stringer, Outside 3 Step 18-105
8	1	CS-44047 CW	Stringer, Outside 2 Step 18-105
9	5	CS41224	Tread Step 24 x 12 Assembly
10	2	TR1508206	82" 1.5in Diameter Tubing, 6" swage
11	3	TR1008206	82" 1in Diameter Tubing, 6" swage



CC4400
Commercial 44"
5-Step Stair Section

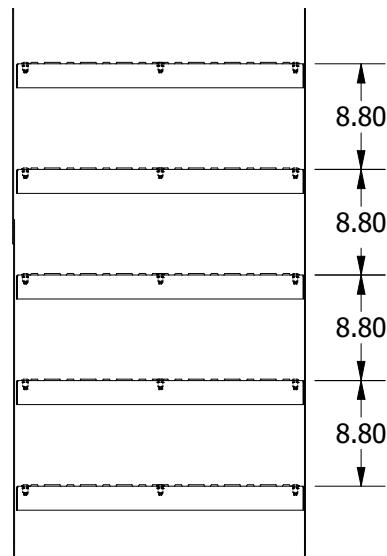
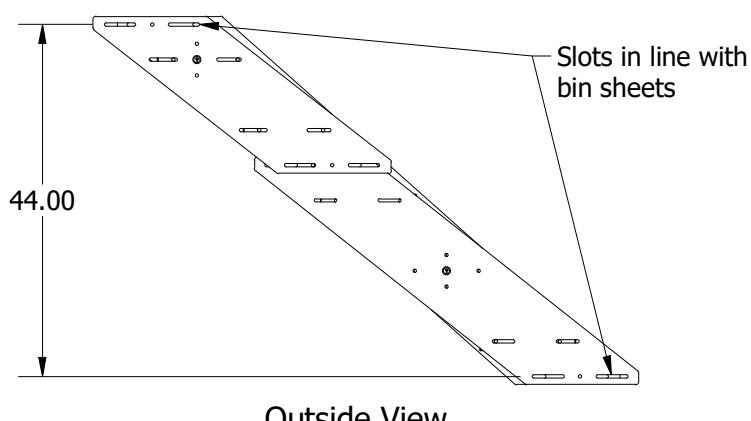
On the CC4400 stair section,
the inside siderail is a one piece 5-step,
the outside siderail is a two piece, 3-step and 2-step.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	5	CS41224	Tread Step 24 x 12 Assemble
2	1	CS-44045	Siderail, Inside, 5 Step
3	1	CS-44047	Siderail, Outside, 2 Step
4	1	CS-44048	Siderail, Outside, 3 Step



The step rise is 8.8".

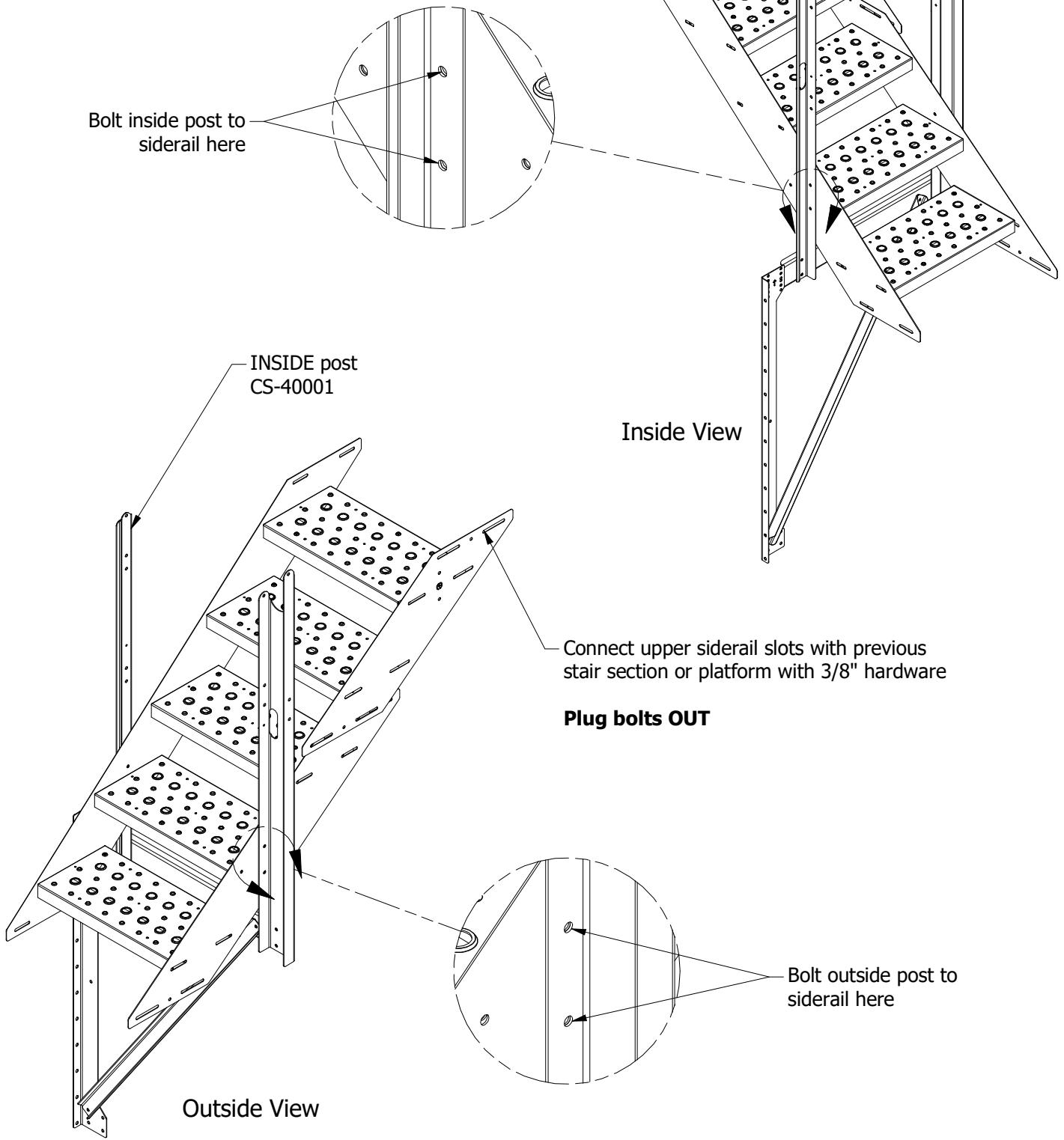
The top and bottom slots of the siderails should stay in line with the seams of the 44" bin sheets.



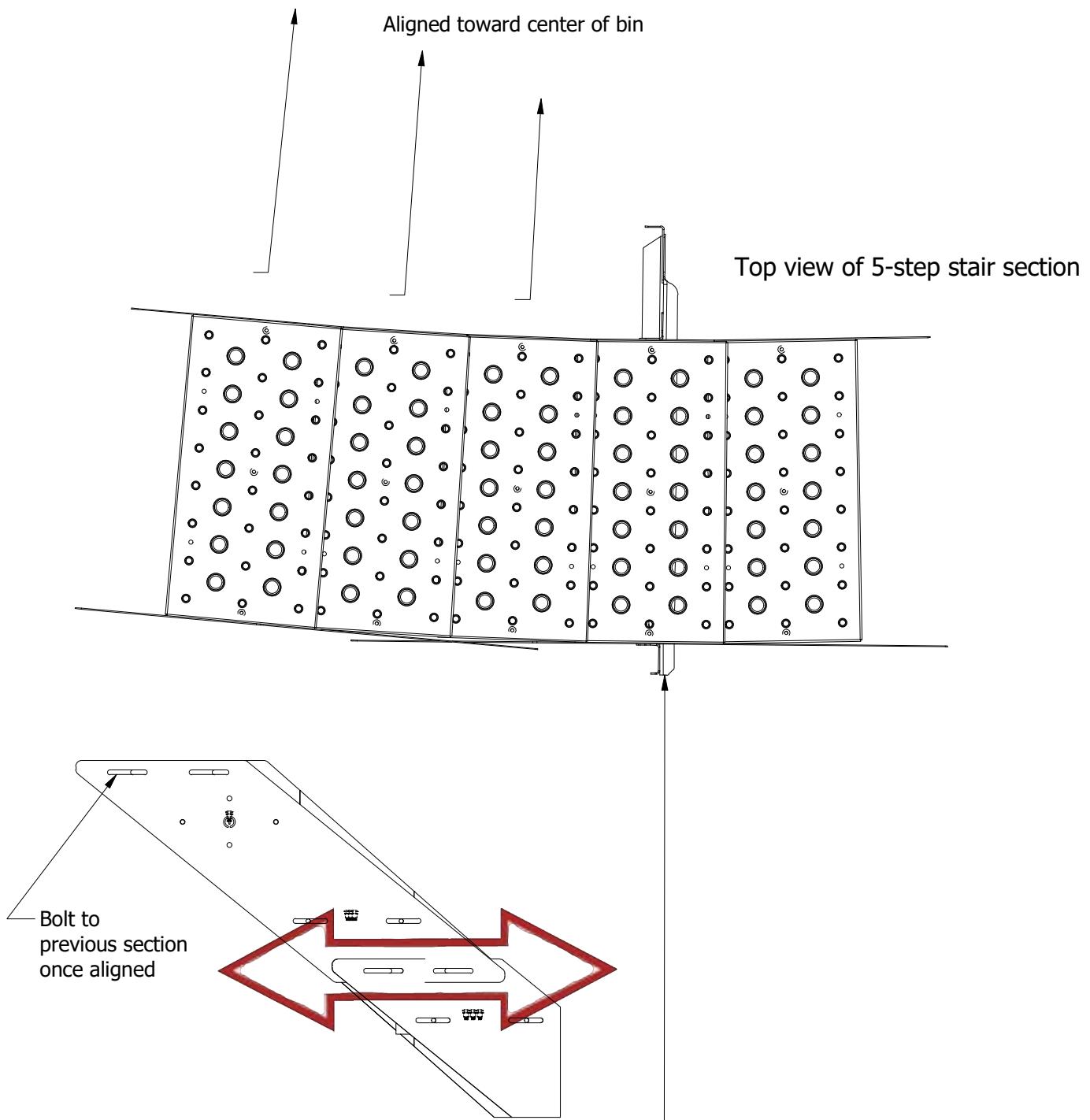
Attach Posts and Stairs to Support Frame

Attach the inside and outside posts to the siderails at the 2nd step from the bottom. Bolt at the holes shown in detail views.

Continue down the bin with 5-step sections until a rest landing should be added (see page 28)



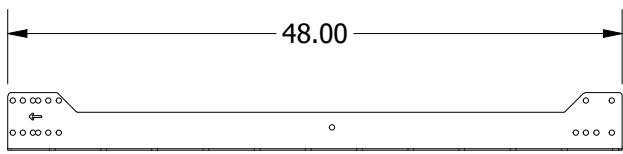
Correct Alignment of Stair Components



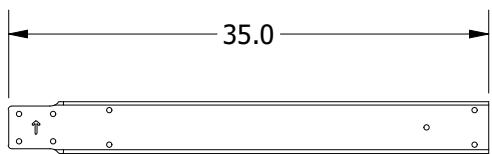
The Slotted Siderail system is designed to fit a range of bin diameters.

Before the stair section bolts are tightened all the way, some adjustment should be made to "fan" the steps and align the A-frames along the radial from the bin center.

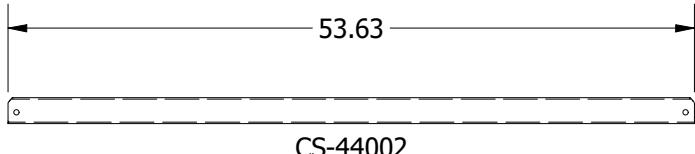
CC4400 Parts ID



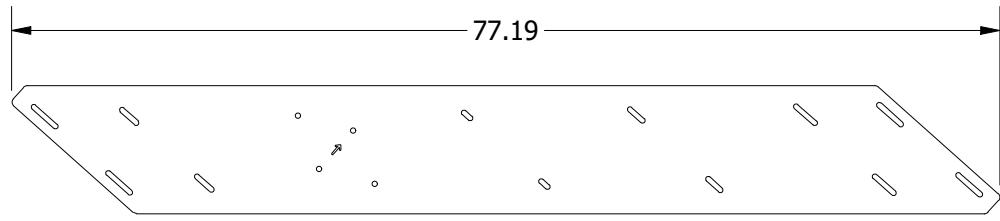
CS-44001



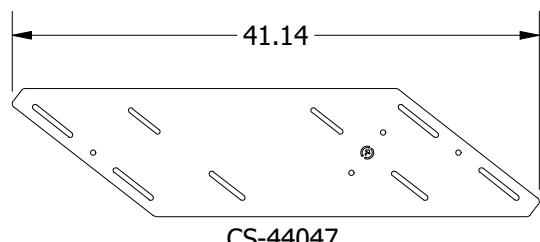
CS-40002



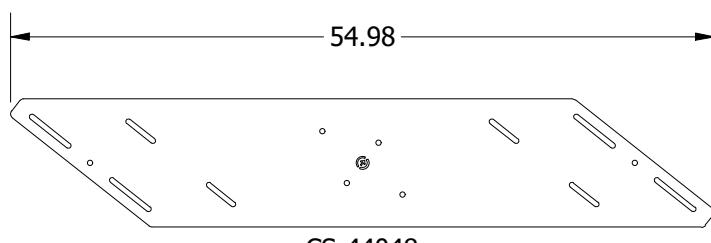
CS-44002



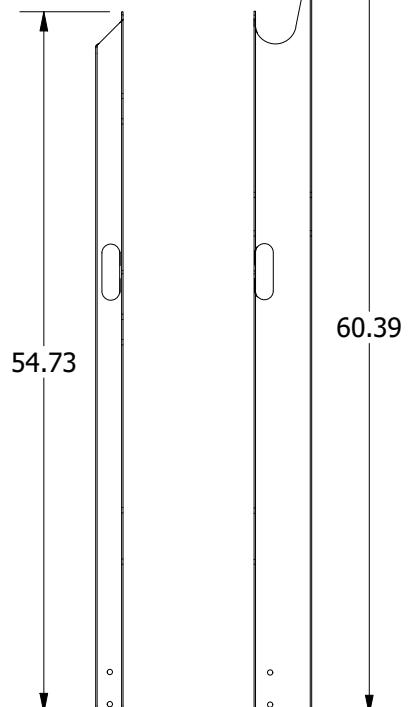
CS-44045



CS-44047

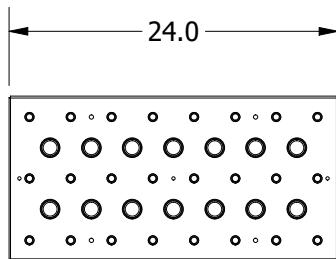


CS-44048

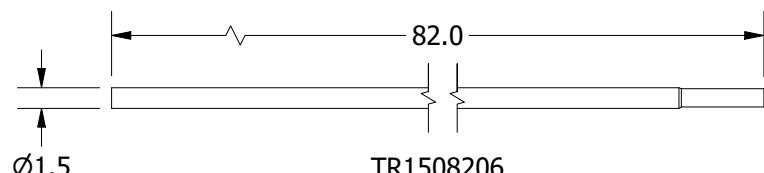


CS-40001

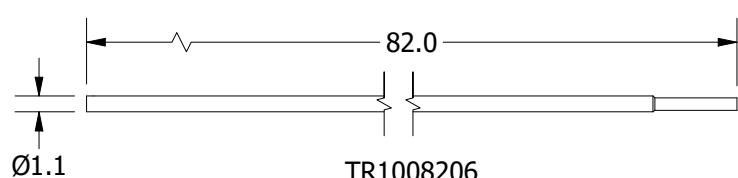
CS-40011



CS41224



TR1508206



TR1008206

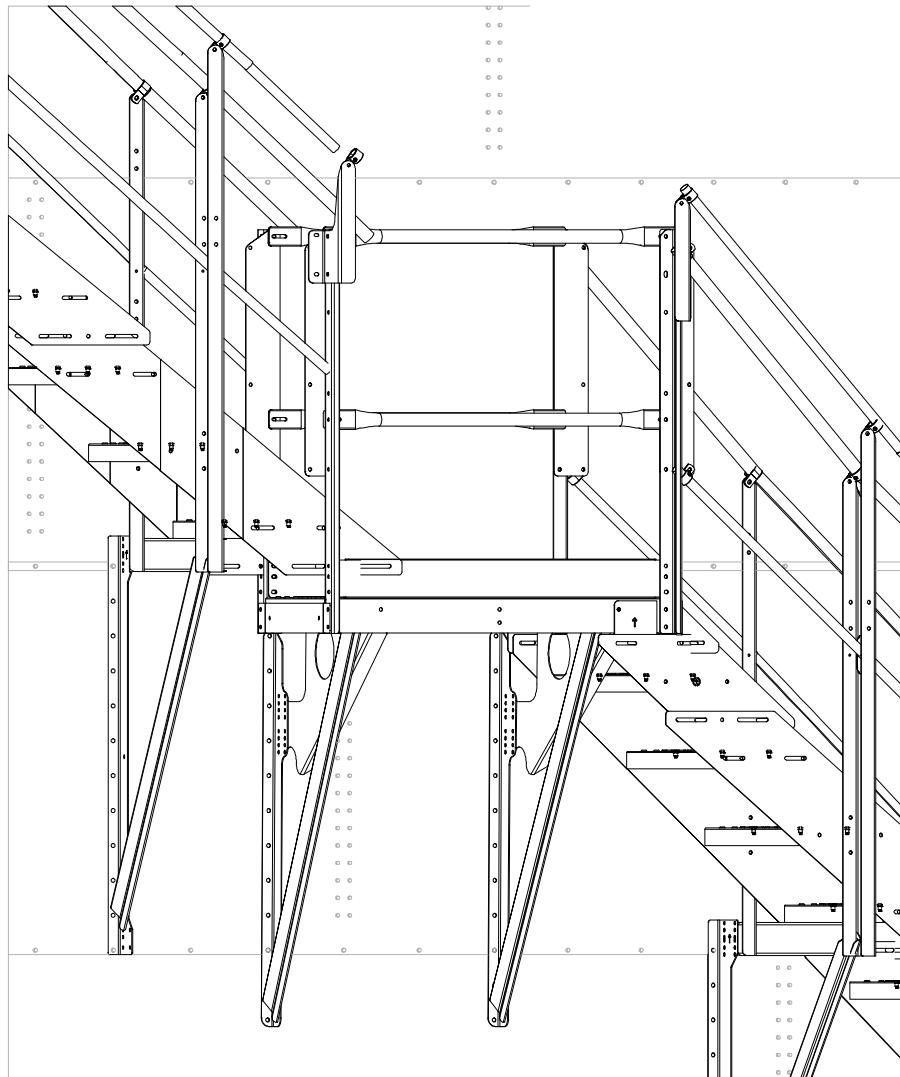
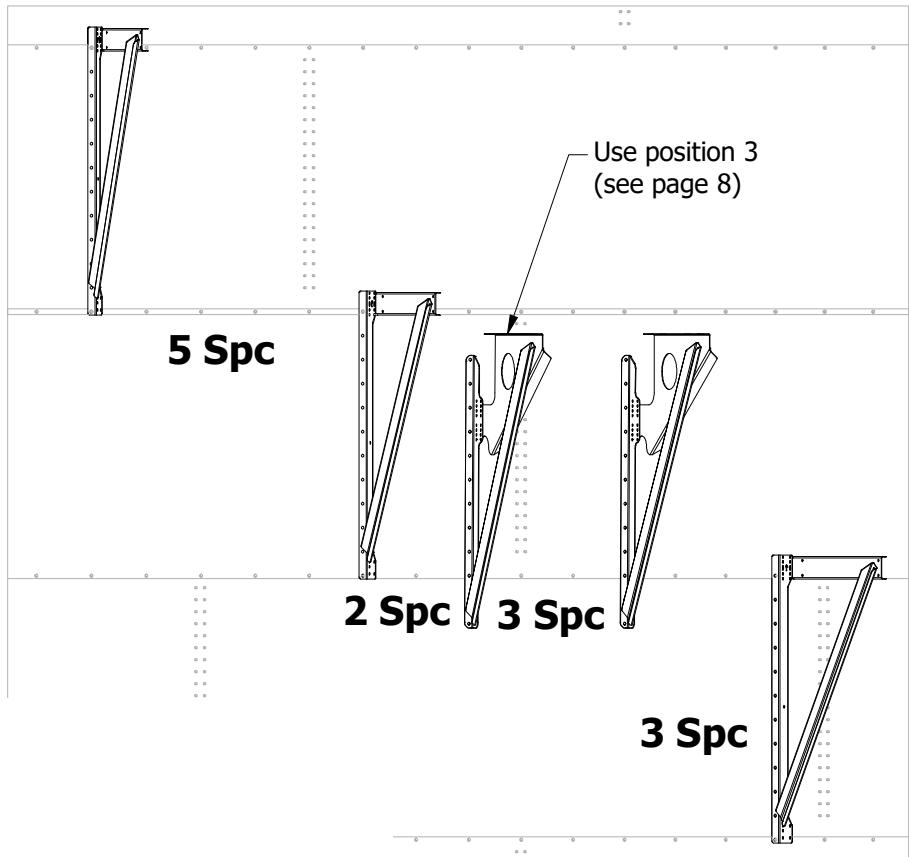
Wall Bracket Bolt Spacing

CC3644S Short Rest Landing Platform

For the brackets supporting a rest landing CC3644S (shown below), there is a progression of 5 spaces, 2 spaces, 3 spaces, 3 spaces. The layout then returns to 5 bolt spaces between each wall bracket.

Rest landings should be installed every 6th ring, or evenly divided over total rings after top platforms.

Example:
CC422 includes 3 rest landings for 22 rings.
Subtract 1 ring for top platforms and divide by 3.
 $21/3 = 7$ rings

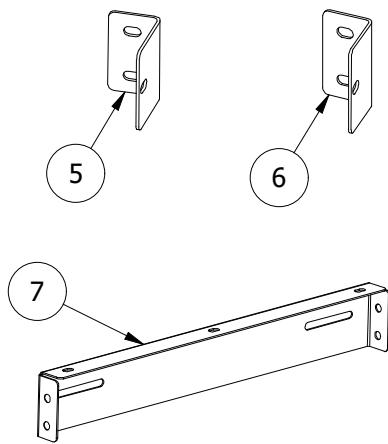


Completed platform and handrail detail

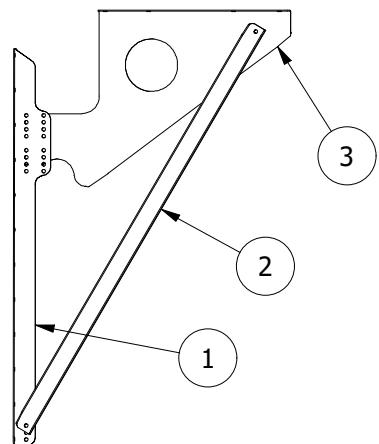
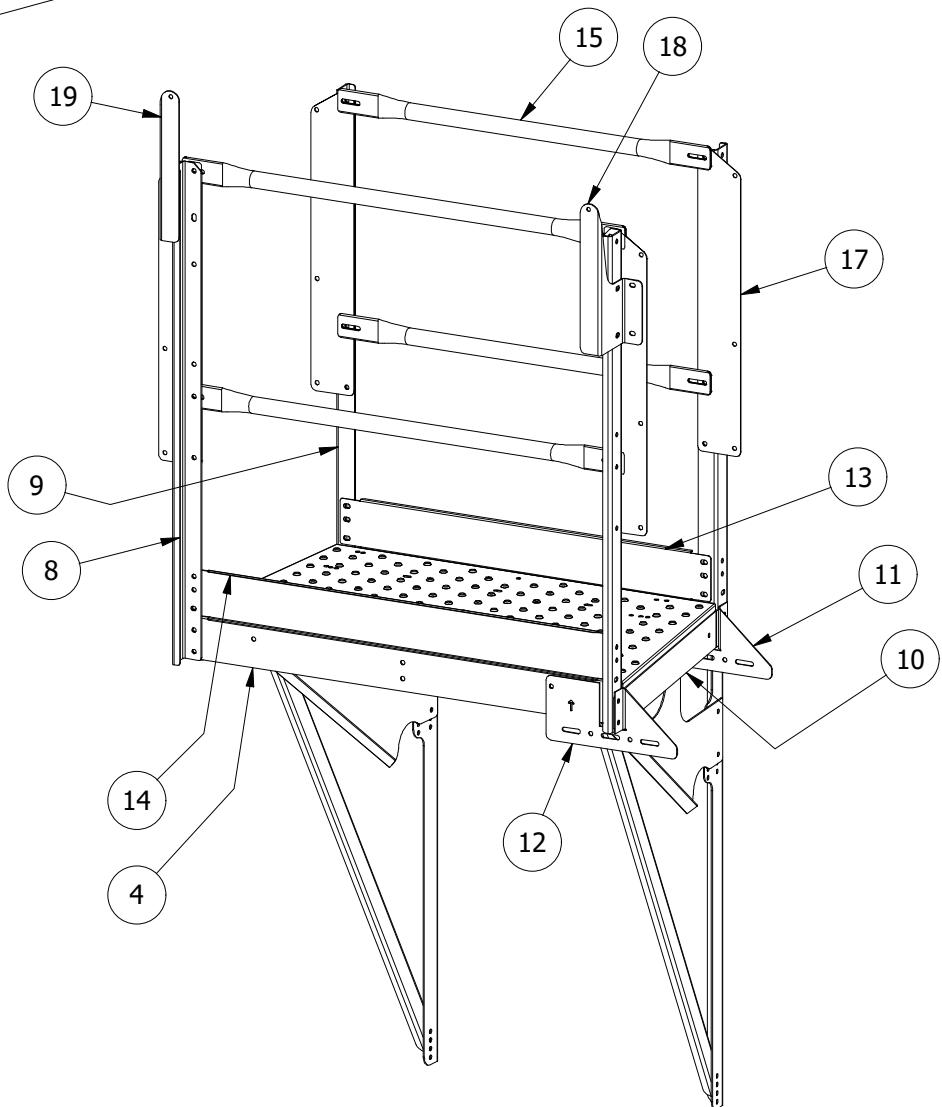
CC3644S
C-Series Commercial 44"
Short Platform

Rest Landing

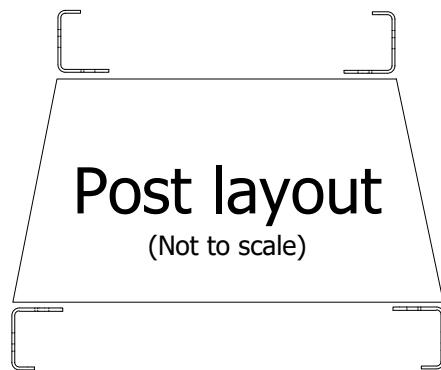
Install a rest landing every 6th ring, or divided evenly among the remaining rings after the top platforms



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CS-34401	Bracket, Wall, 44 Platform
2	2	CS-34402	Brace, Plate, Platform
3	2	CS-44002	Channel, Brace, 44
4	1	CS-F30002	Tread, platform, Short, Trapezoid 44x24
5	2	CS-40005	Bracket, Brace, Acute
6	2	CS-40006	Bracket, Brace, Obtuse
7	1	CS-3009	Bracket, Support, Platfrom
8	2	CS-34500	Angle, Post, J-channel, Right
9	2	CS-34501	Angle, Post, J-channel, Left
10	2	CS-34414	Bracket, Faceplate
11	1	CS-40410	Lower Stringer Extension, Right 44
12	1	CS-40411	Lower Stringer Extension, Left 44
13	1	CS-34409	Channel, Kickboard, Inside, Short
14	1	CS-34410	Channel, Kickboard, Outside, Short
15	2	TRS1503700	37 Long 1.5 in tube railing slotted end tabs
16	2	TRS1504400	44 Long 1.5 in tube railing slotted end tabs
17	4	CS-30010	Bracket, Plate, Handrail
18	1	ART-0007	Entry Guardrail Post Right
19	1	ART-0008	Entry Guardrail Post Left



C-Series Commercial Platform Assembly

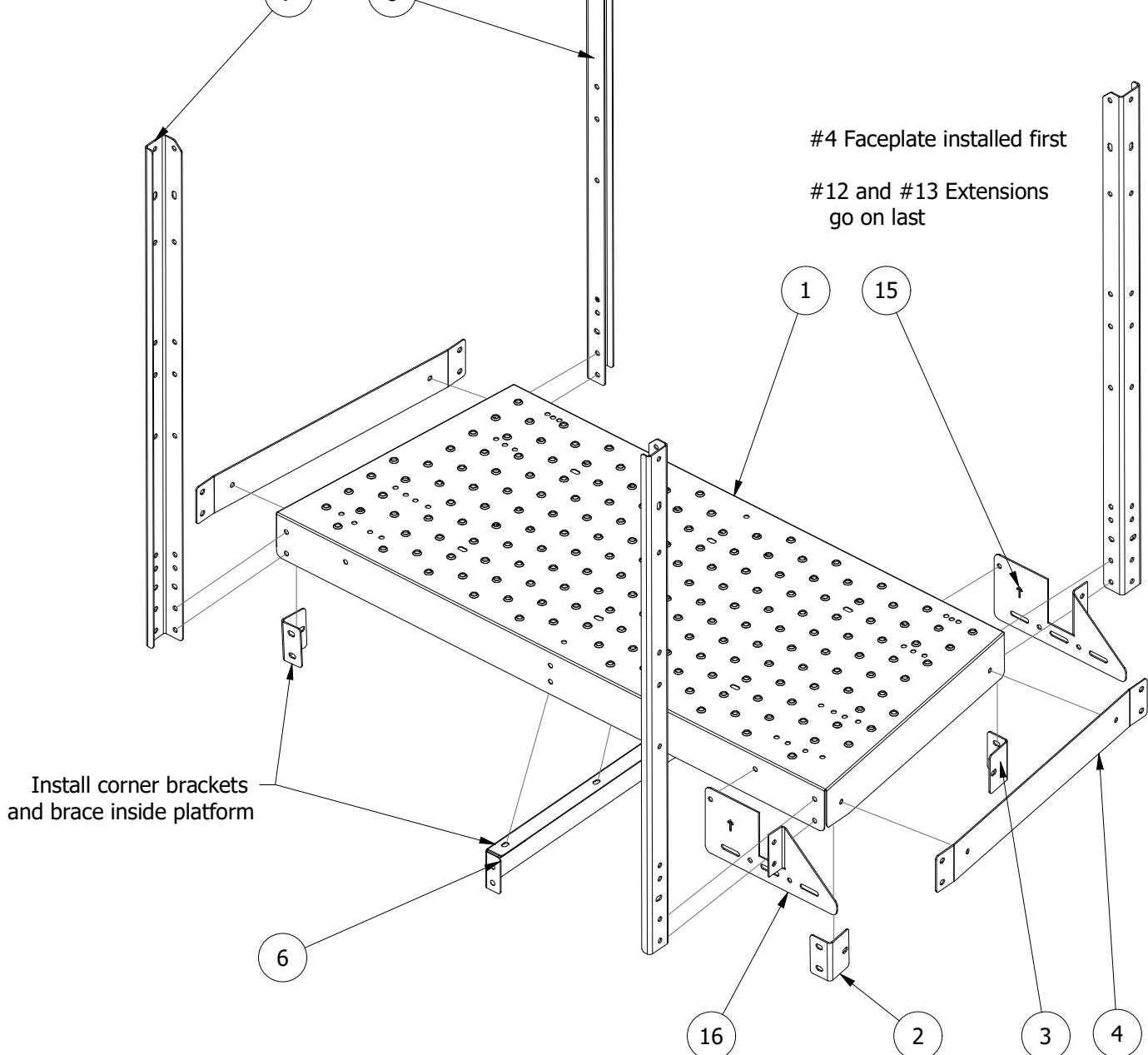


Post layout

(Not to scale)

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CS-F30002	Tread, Platform, Trapezoid 44x24
2	2	CS-40005	Bracket, Brace, Angle, Acute
3	2	CS-40006	Bracket, Brace, Angle, Obtuse
4	2	CS-34414	Bracket, Faceplate
6	1	CS-3009	Bracket, Support, Platfrom
7	2	CS-34500	Angle, Post, J-channel, Right
8	2	CS-34501	Angle, Post, J-channel, Left
15	1	CS-40410	Lower Stringer Extension, Right
16	1	CS-40411	Lower Stringer Extension, Left

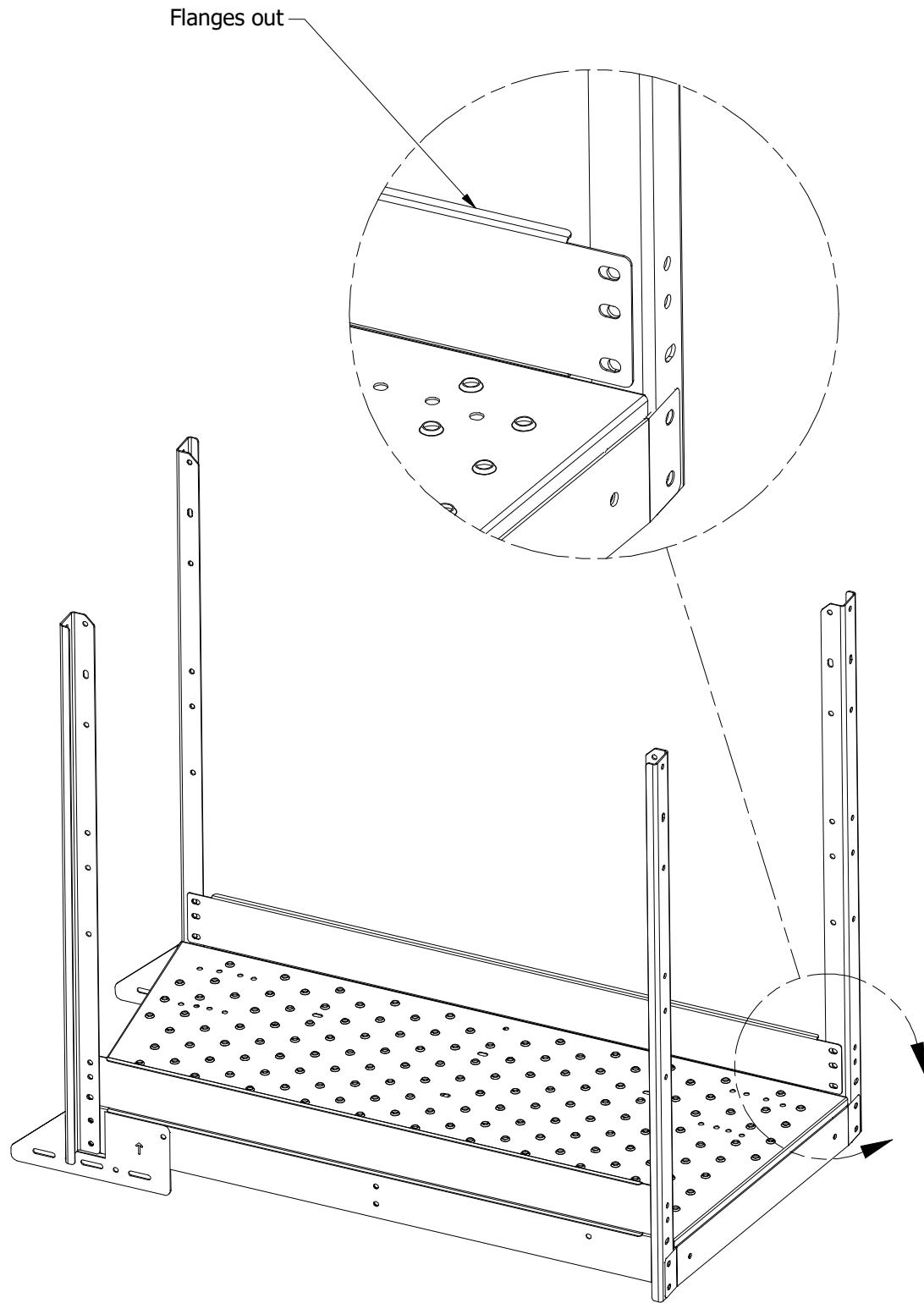
Clockwise configuration is depicted: mirror assembly for Counter-Clockwise stairs



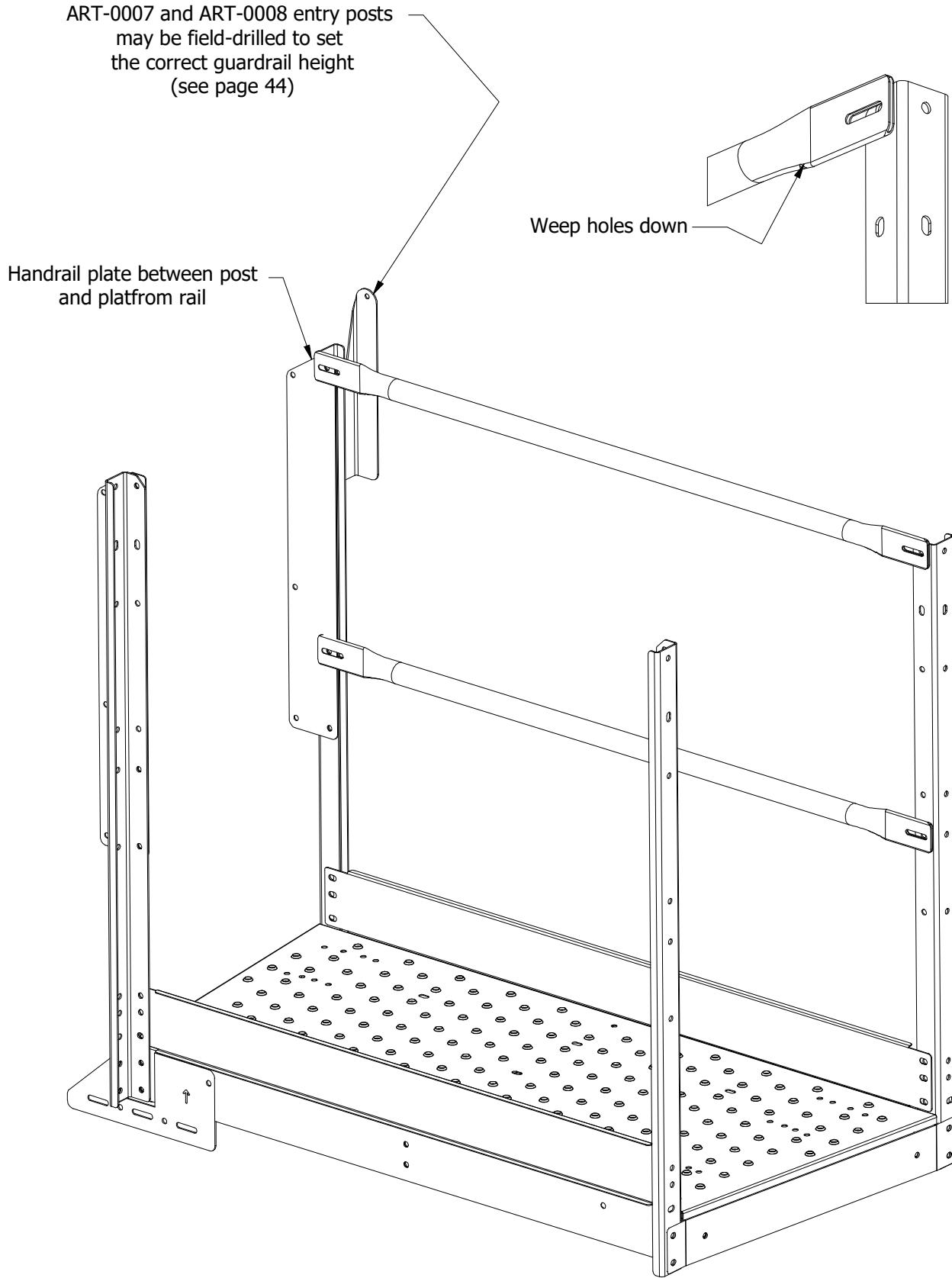
C-Series Commercial Platform Assembly

Note:

On manhole platform and rest landings, there is no end kickboard
Additionally, the top bolts should be left out of the side kickboards
to allow clearance of incoming siderails



C-Series Commercial Platform Assembly

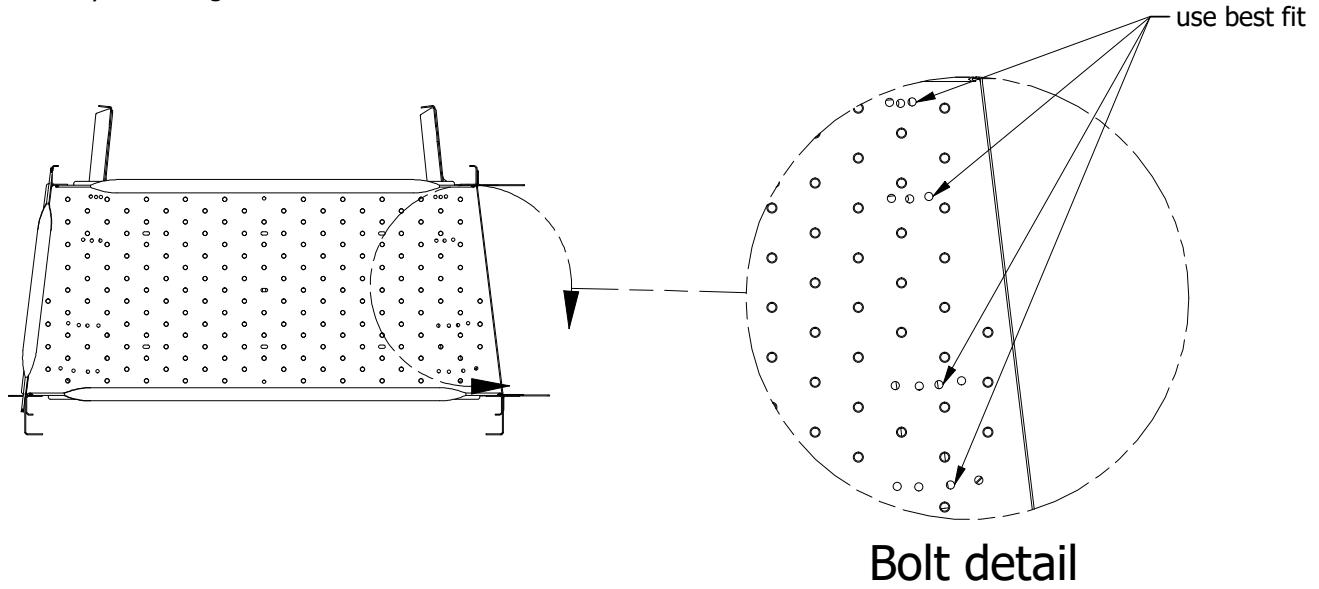


C-Series Commercial Platform Assembly

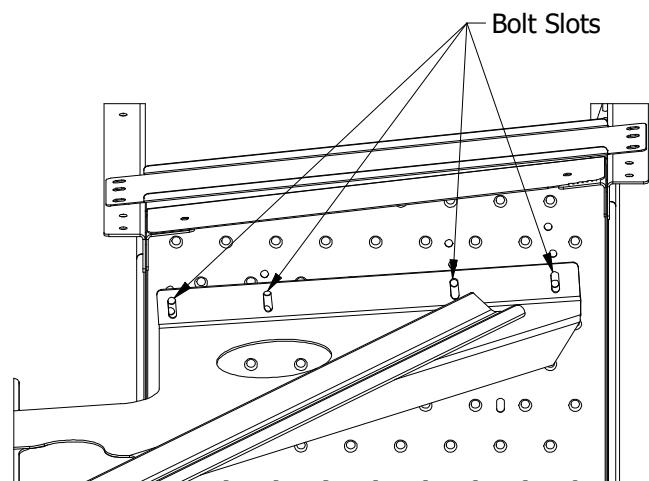
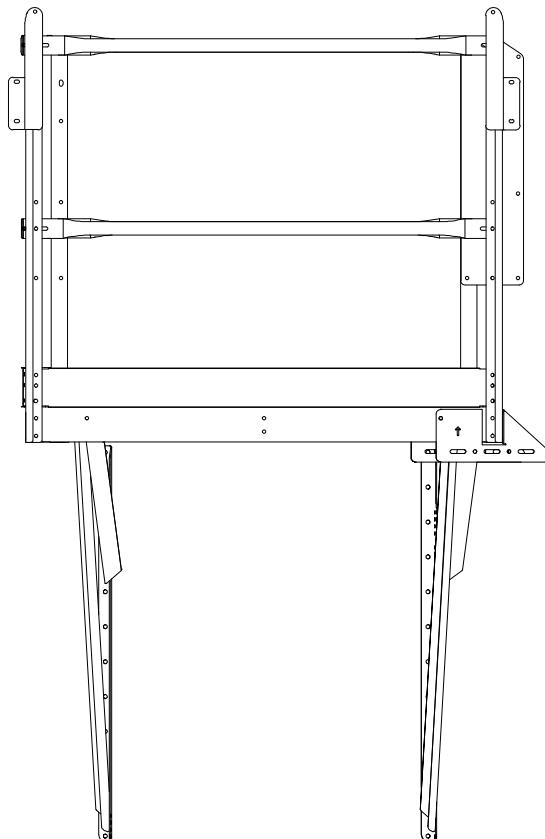
Center the platform assembly on top of the A-frame wall mounts.

Use 4 bolts to attach each wall mount plate to the platform.

Use the bolt holes in the platform that best align with the A-frame mounts, this will vary according to the bin diameter.

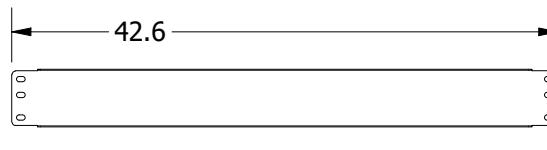
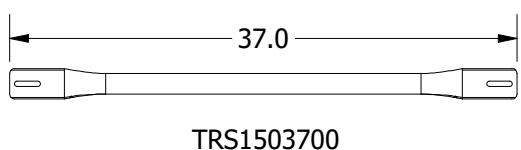
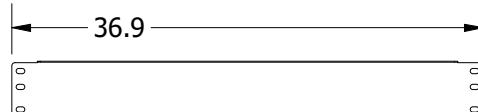
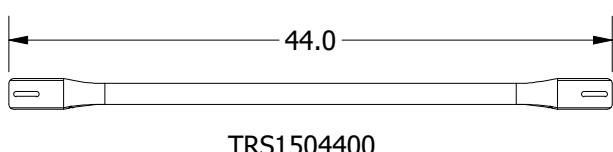
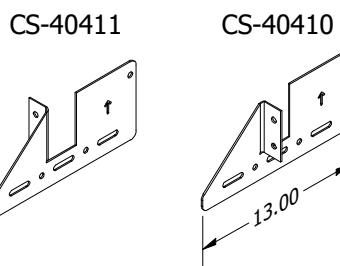
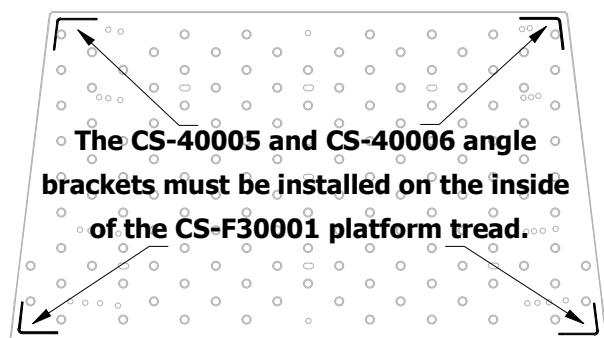
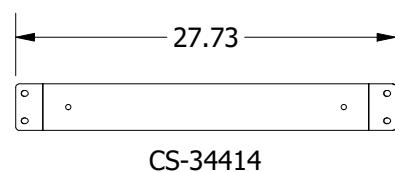
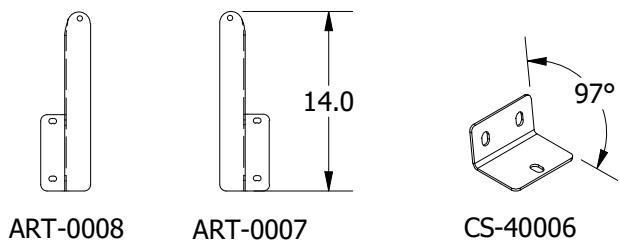
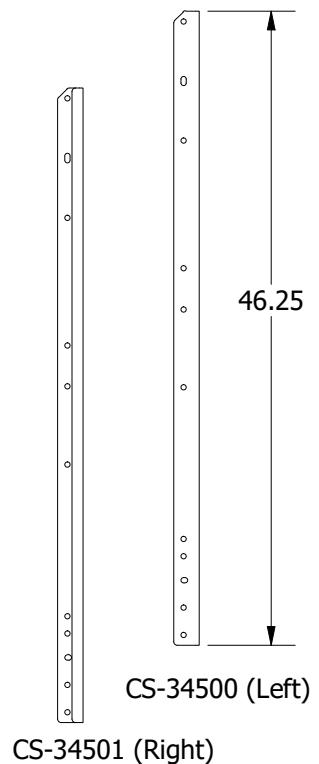
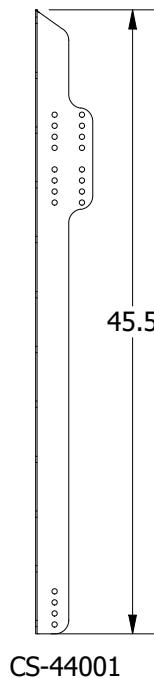
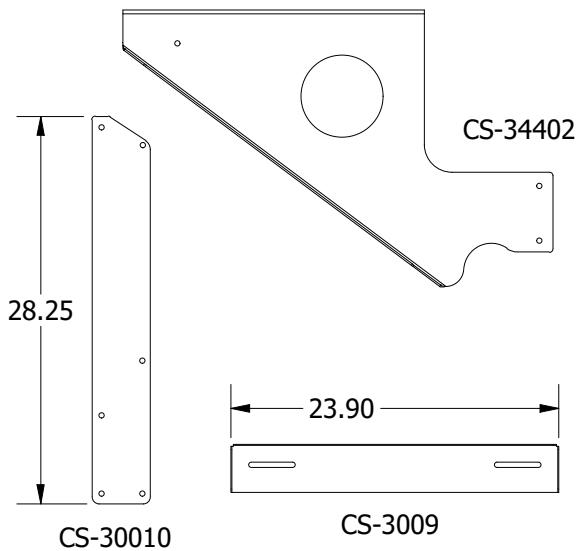


Bolt detail

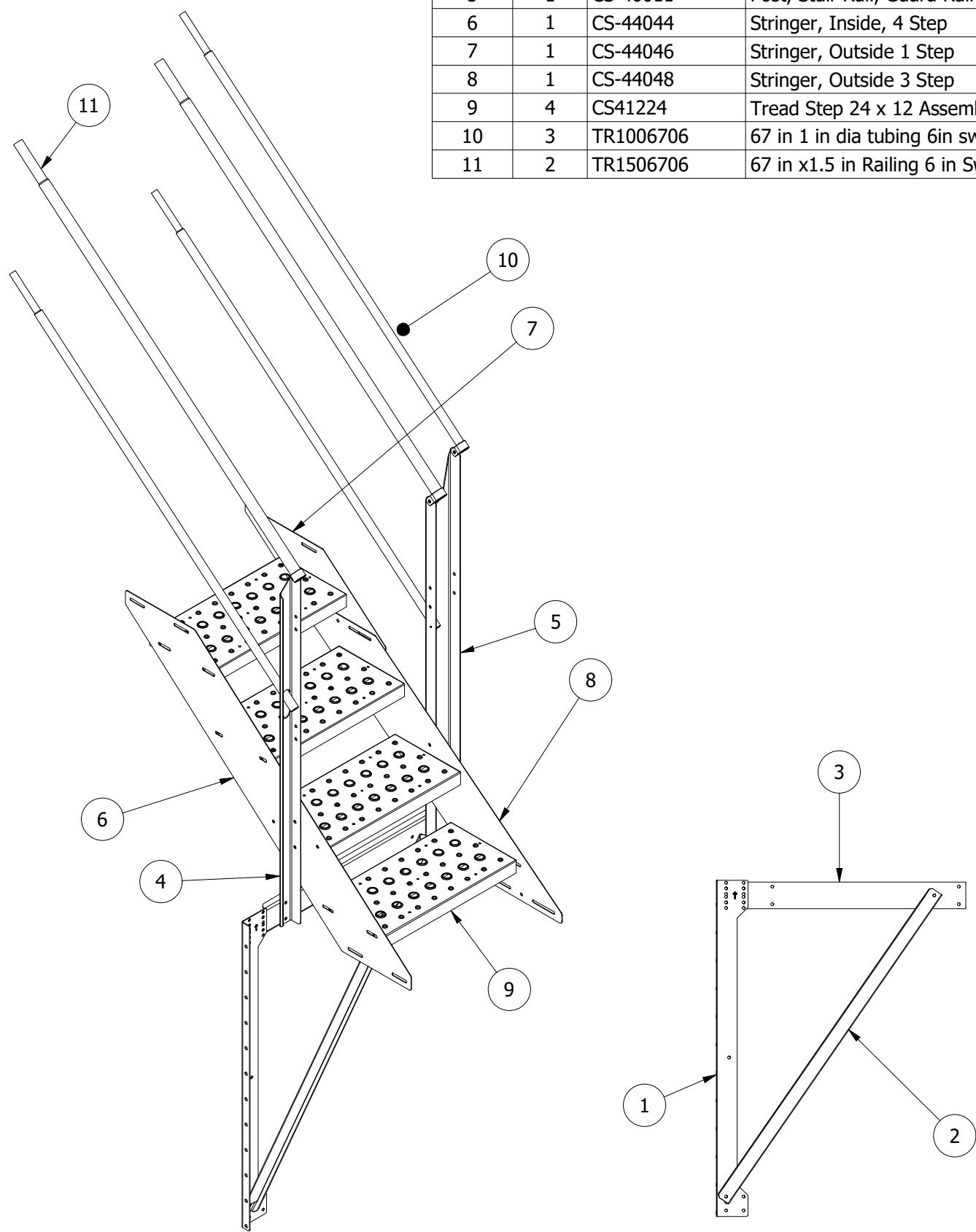


Underside View of
Platform Attachment

CC3644S Short Platform Parts ID Reference



CC4404
C-Series Commercial 44"
4-Step Stair Section

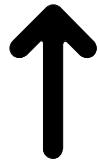


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CS-44001	Bracket, Wall, 44" Ring
2	1	CS-44002	Channel, Brace, 44
3	1	CS-40002	Channel, Crossbar
4	1	CS-40001	Post, Inside Stair
5	1	CS-40011	Post, Stair Rail, Guard Rail Outside
6	1	CS-44044	Stringer, Inside, 4 Step
7	1	CS-44046	Stringer, Outside 1 Step
8	1	CS-44048	Stringer, Outside 3 Step
9	4	CS41224	Tread Step 24 x 12 Assembly
10	3	TR1006706	67 in 1 in dia tubing 6in swage
11	2	TR1506706	67 in x1.5 in Railing 6 in Swage

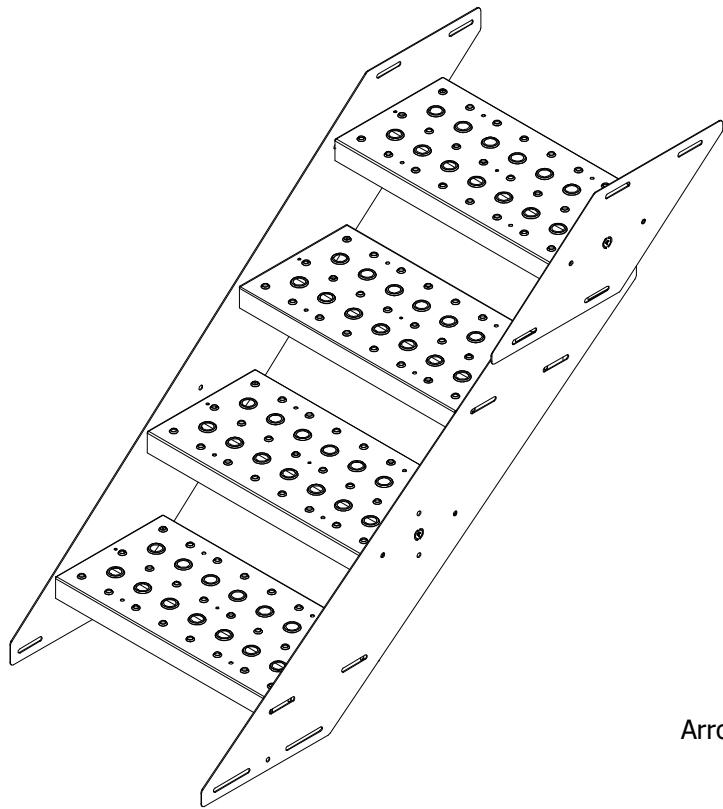
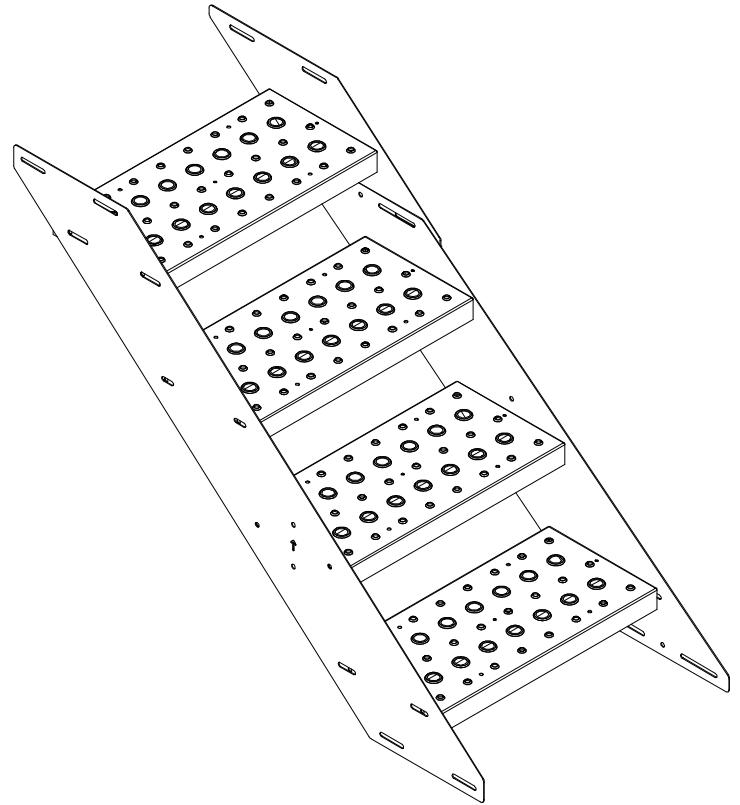
CC4404 C-Series
Commercial 44"
4 Step Stair Section

On the CC4404 stair section,
the inside siderail is a one piece 4-step,
the outside siderail is a two piece, 3-step and 1-step.

This section is used with each rest landing

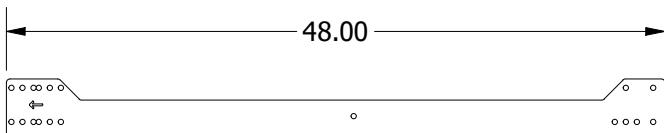


Arrow on Inside Siderails
Arrows Always Face UP

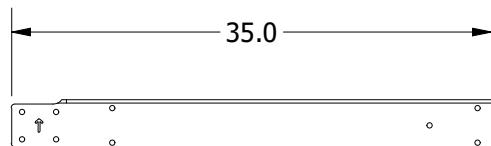


Arrow & Circle on Outside Siderails
Arrows Always Face UP

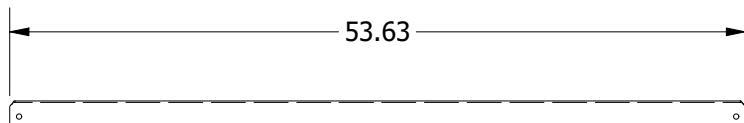
CC4404 Parts ID



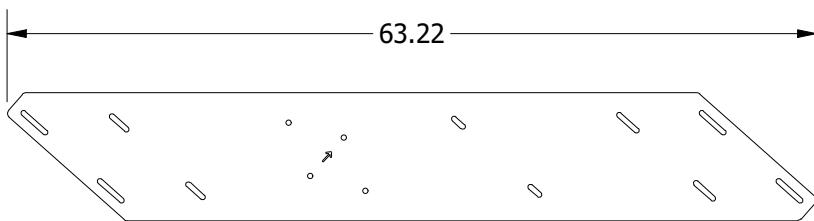
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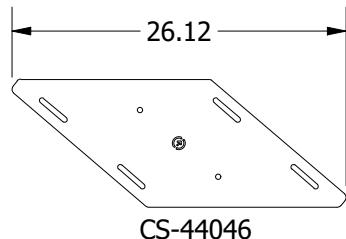
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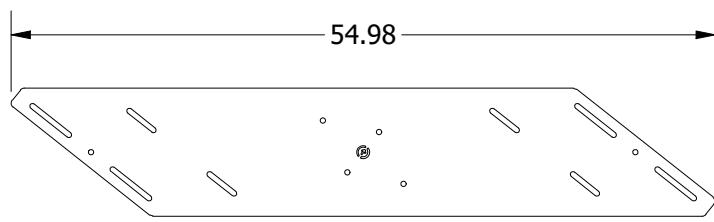
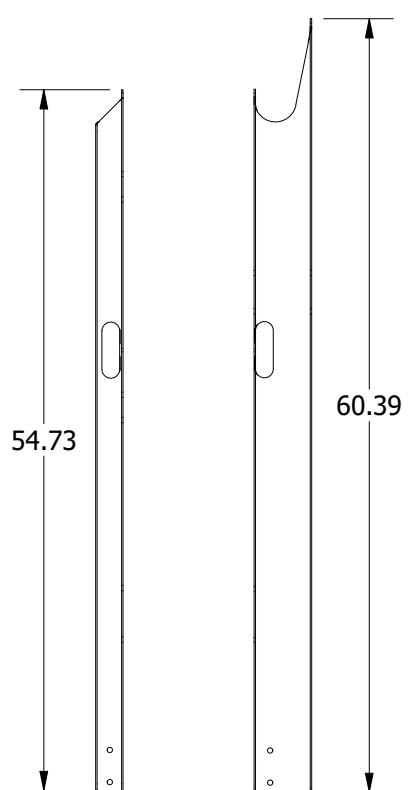
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CS-44044



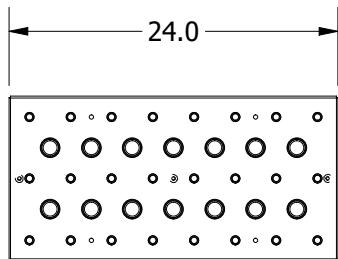
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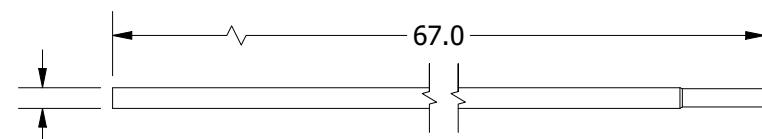
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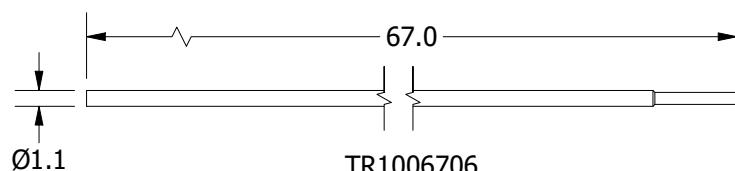
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CS41224



TR1506706



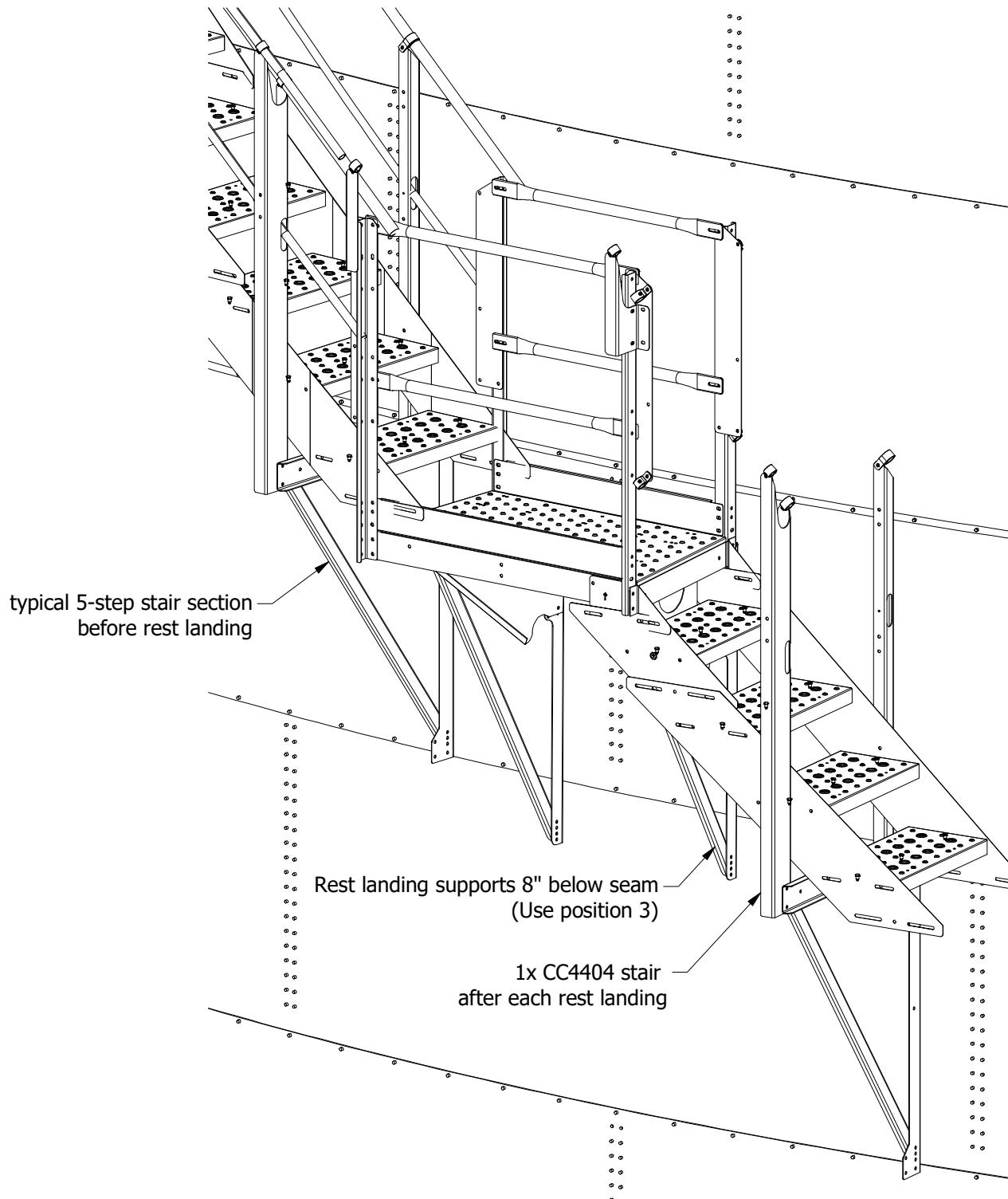
TR1006706

Rest Landing Overview

Once rest landing has been secured to the support frames, add the CC4404 stair section below the platform before continuing with 5-step stair sections. The slotted siderail splices should be in line with the horizontal sheet seams.

There is an alternative configuration for installing the rest landing wall brackets in a single sheet. In this configuration, the 4-step stair section must be used above the rest landing.

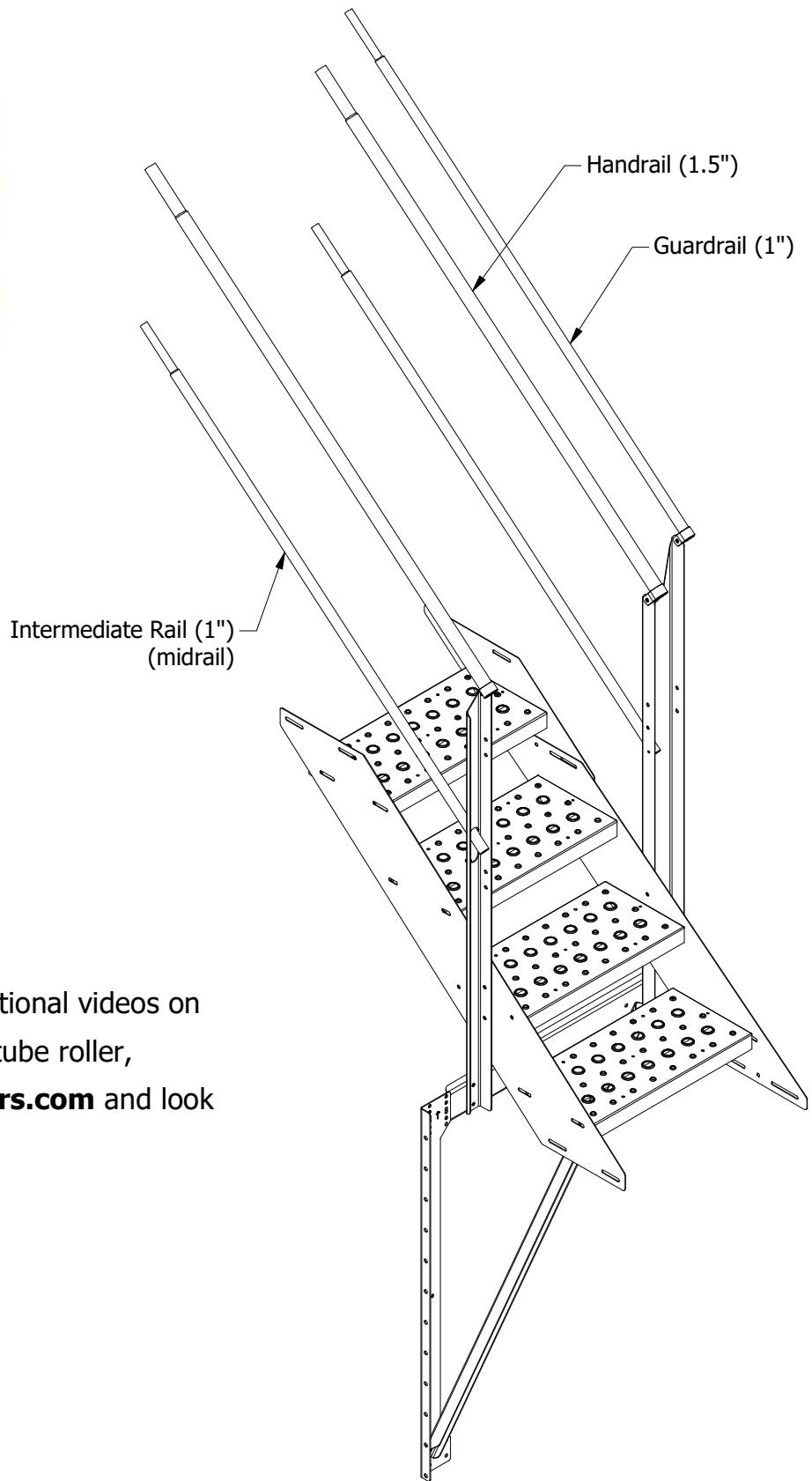
The diagram shows the standard configuration with the rest landing offset below the sheet seam and the 4-step section below the rest landing.



Installing Handrails

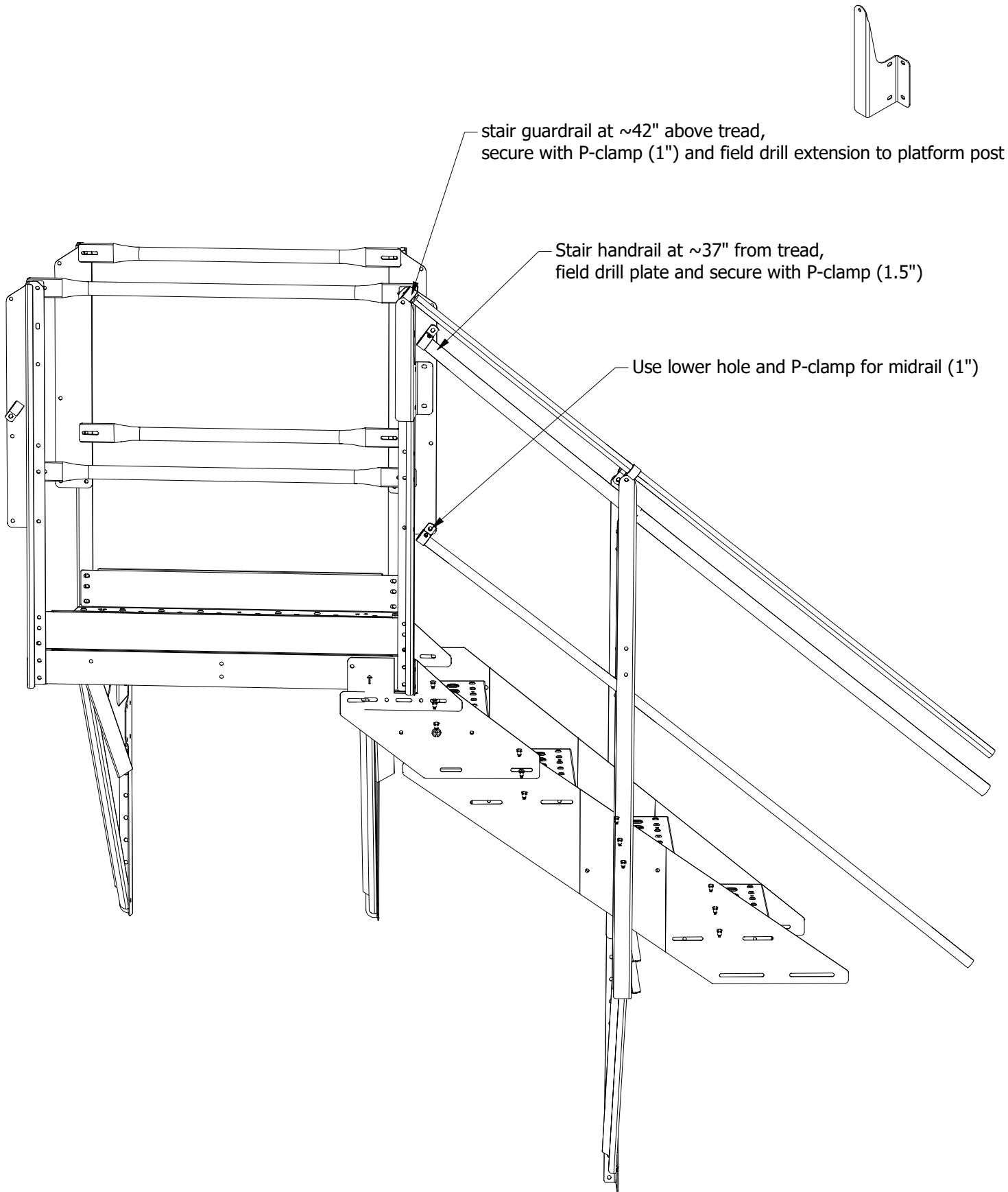
Using a Tube Roller Former as shown in the picture, curve all rails to fit the diameter of the bin.

The swaged ends of the rails should face up the stairs.



For more information and instructional videos on handrail installation and using a tube roller, go to our website at greenestairs.com and look for the  YouTube channel link.

C-Series Commercial Platforms Midrail, Handrail, and Guardrail



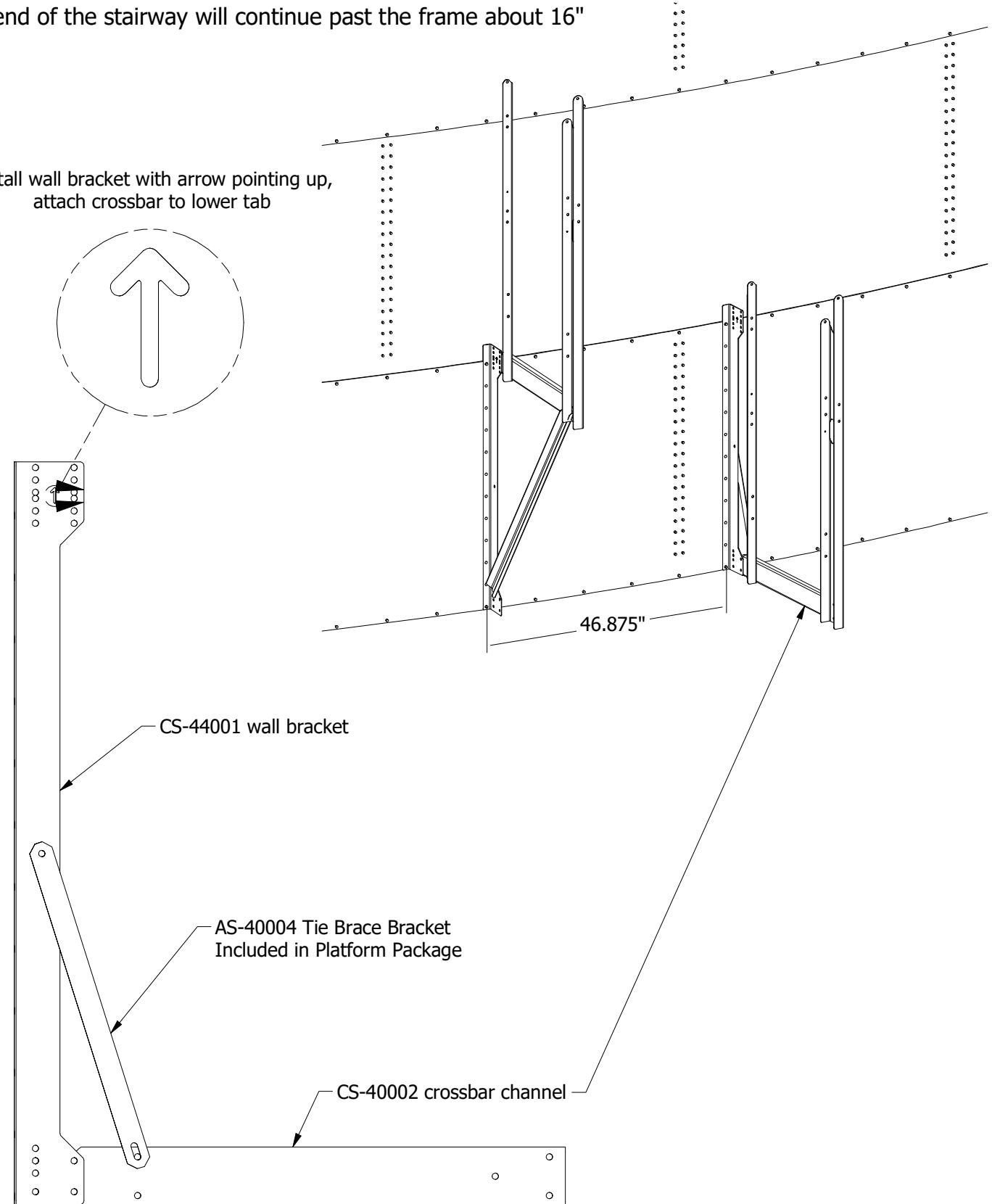
C-Series Commercial Platforms Midrail, Handrail, and Guardrail



Finishing Base of Stair

To finish the stairway the final frame is assembled in the bottom step configuration. The wall bracket is still 5 spaces from the previous frame, but the crossbar is attached at the base of the wall bracket and the kneebrace is not used. Instead, attach the AS-40004 tie brace between the inside post and the crossbar to support the stair section.

The end of the stairway will continue past the frame about 16"



Bottom Stair Section Assembly

Install the siderails and treads to finish the stair run. Use the handrail loops from the platform package to terminate the stair handrails and secure the flattened ends to the inside of the posts with self-tapping screws.

Secure the handrail loops with self-tapping screws through the underside of the P-clamps into the sleeved handrails.

