

SPIRAL STAIRCASE INSTALLATION GUIDE

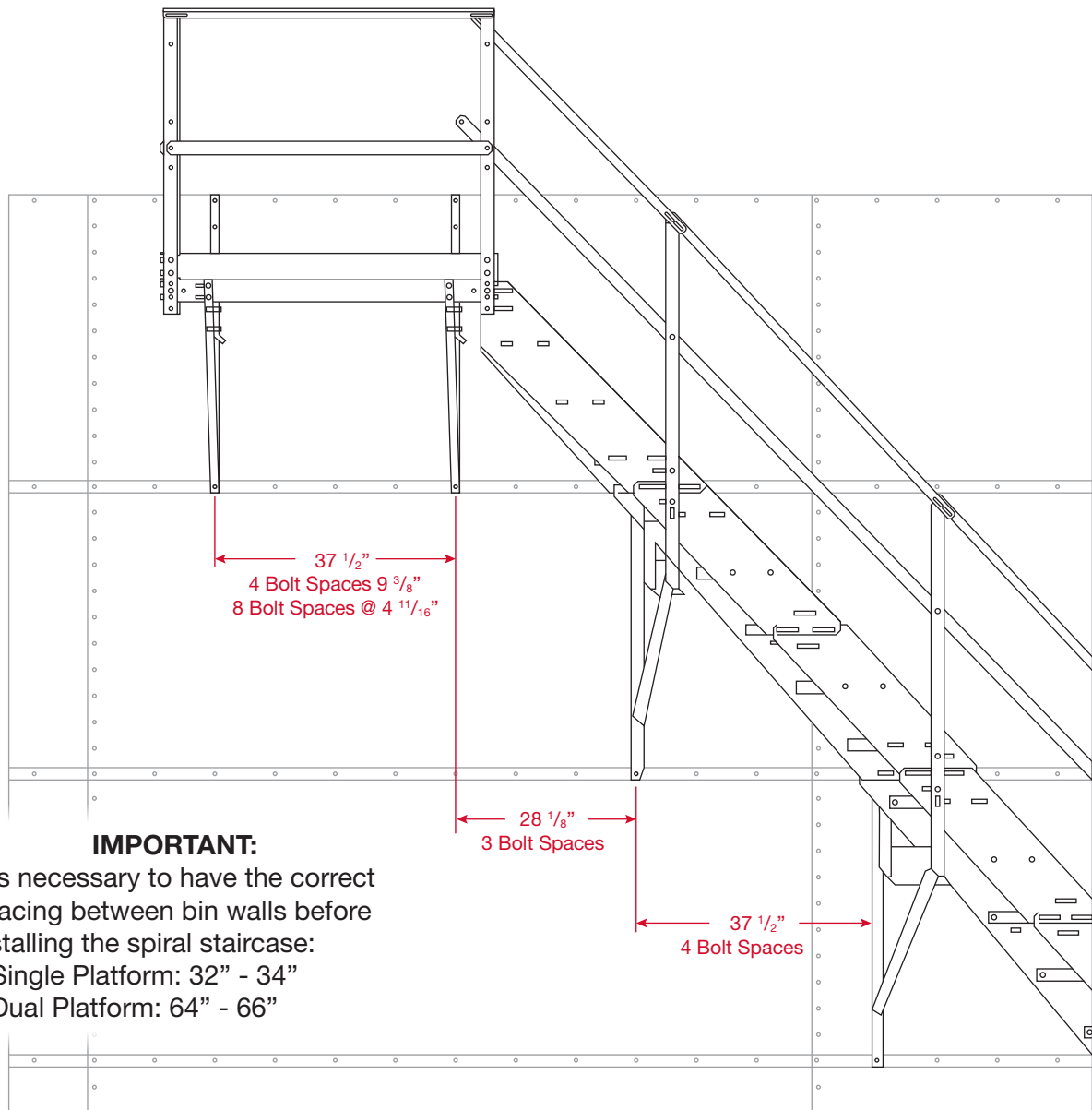


Fig 1 - Platform layout

PLATFORM LAYOUT:

The platform rests 12" below the eave and the A-frame brackets are 4 bolt spaces apart ($37\text{-}1/2''$). It is recommended to place two thirds of the platform under the roof ladder with the remainder under the manhole. The stair section assembly attaches to the platform and has an A-frame 3 bolt spaces ($28\text{ }1/8''$) from the platform A-frame. The stair section is included in the platform package.

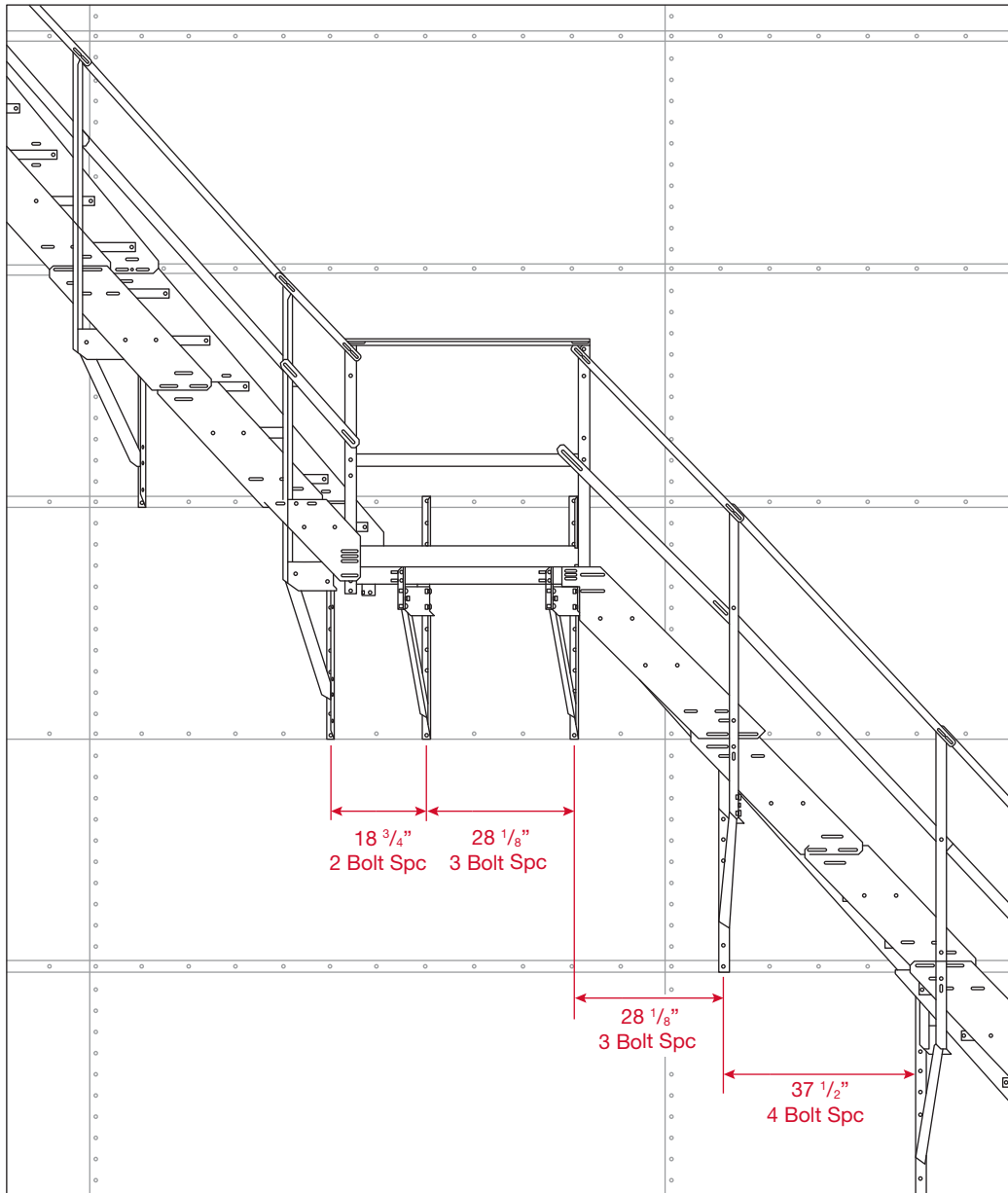


Fig 2 - Intermediate platform layout

INTERMEDIATE PLATFORM LAYOUT (OPTIONAL EQUIPMENT):

1. The platform should be laid out with the longer end toward the upward run of the stairs.
2. From the top down, the brackets are spaced 2, 3, 3 in terms of bolt spacing:
 - TWO from the last stair section.
 - THREE from the first middle platform wall bracket.
 - THREE from the last middle platform wall bracket to the next stair wall bracket.
3. Platform A-frame wall brackets should be assembled like the platform layout shows in Figure 4.

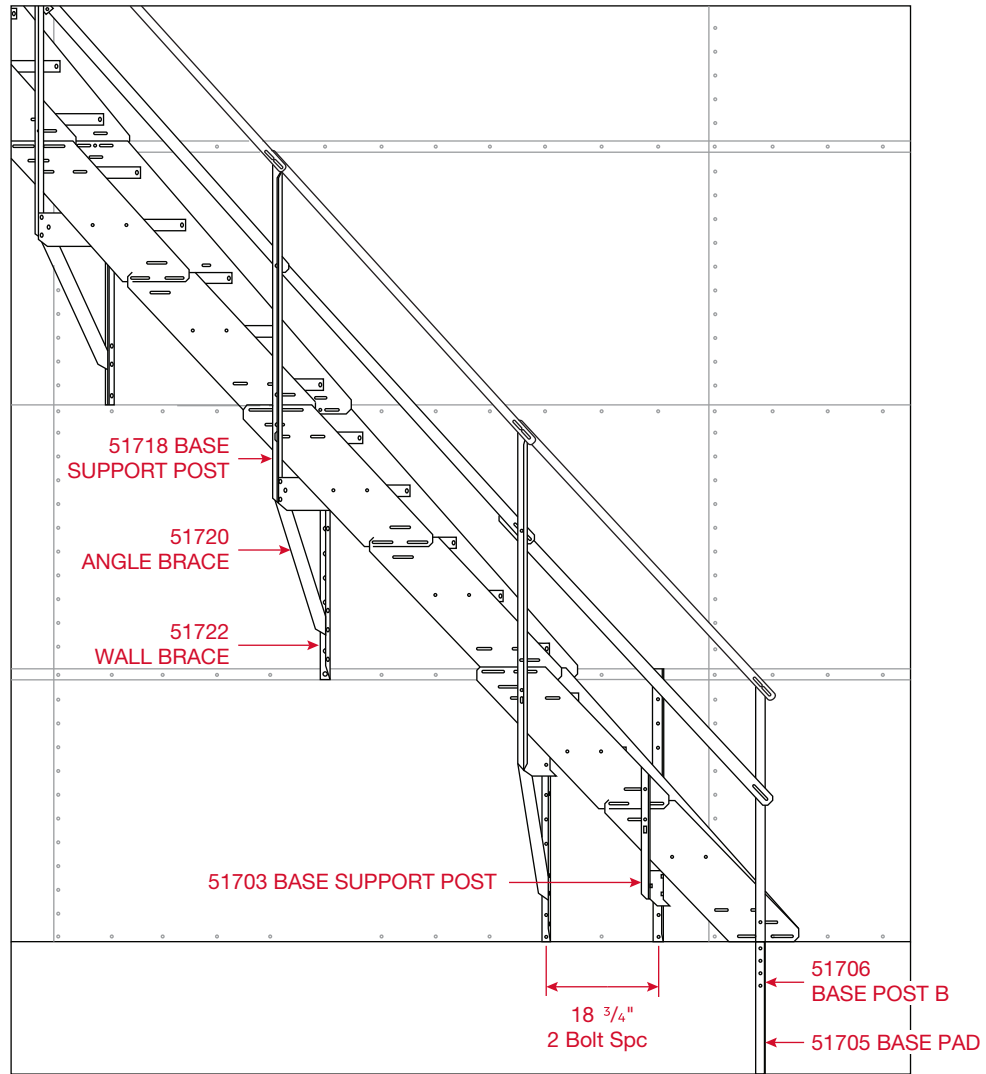


Fig 3 - Staircase layout

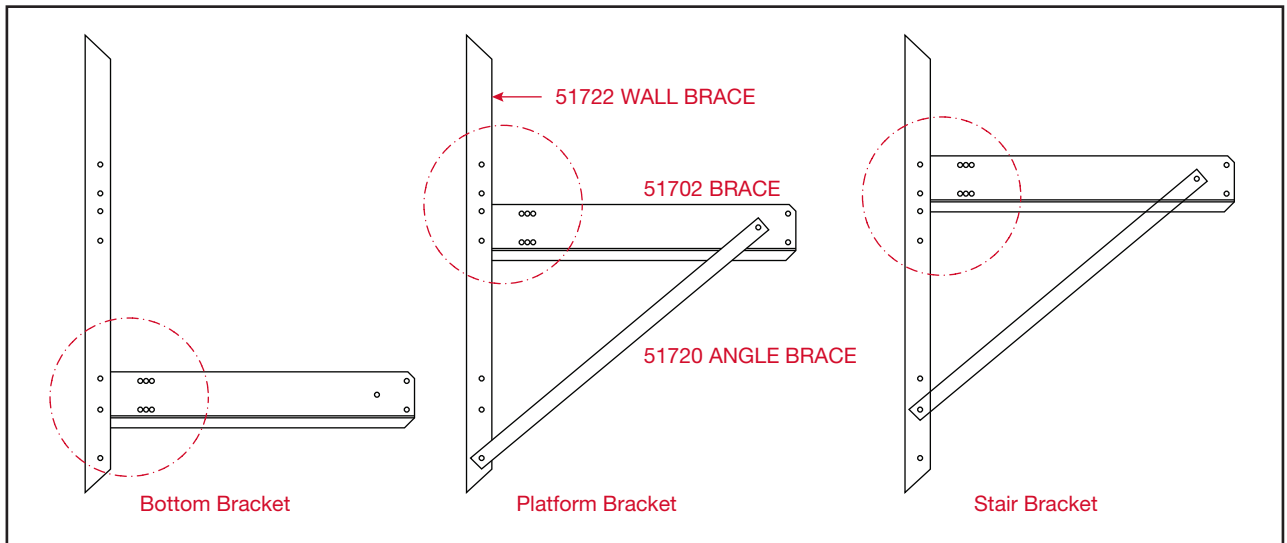


Fig 4 - Assemble A-Frames

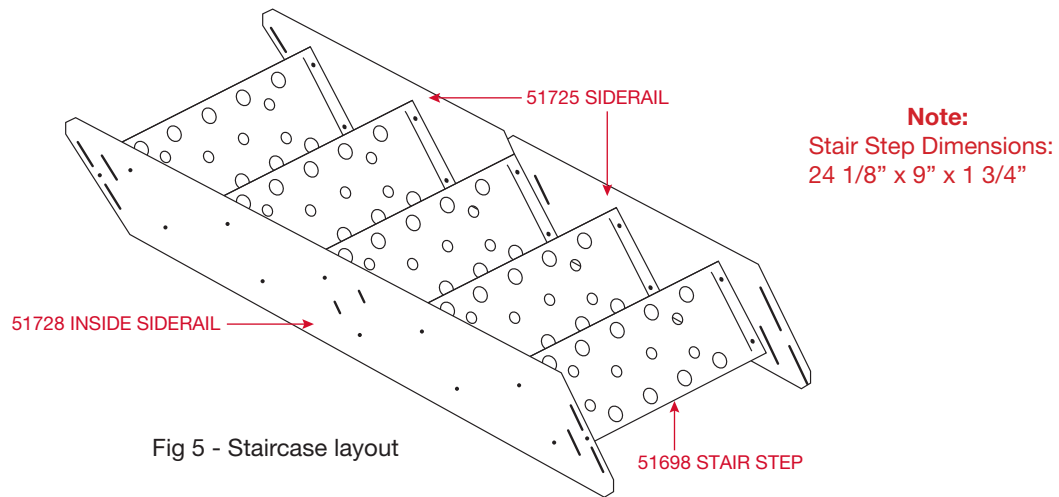


Fig 5 - Staircase layout

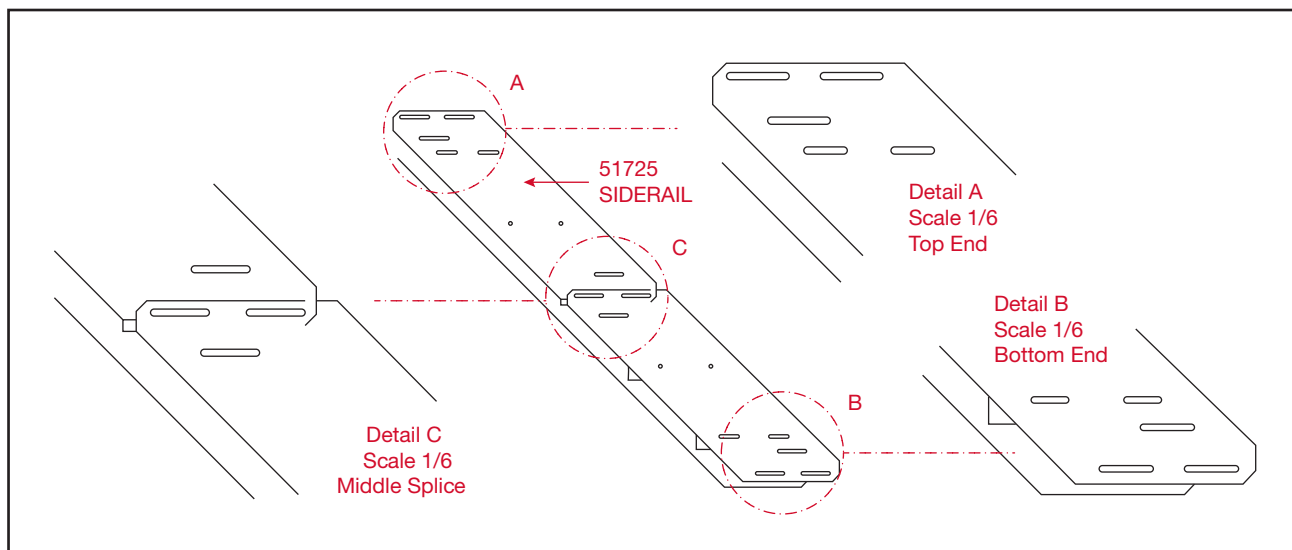


Fig 6 - Staircase detail

ASSEMBLE STAIR SECTIONS:

Note: Painted end of Side Rails are always UP

The basic stair section has five steps.

4. The A-frame attaches 4 bolt spaces (37 1/2") from the preceding A-frame.
5. The outside siderail on the stair sections are two pieces.
6. Attach the steps and tighten the steps to the inside siderail.
7. Tighten the round-hole connection to the outside side rail, but leave the slot connections loose for later adjustments.

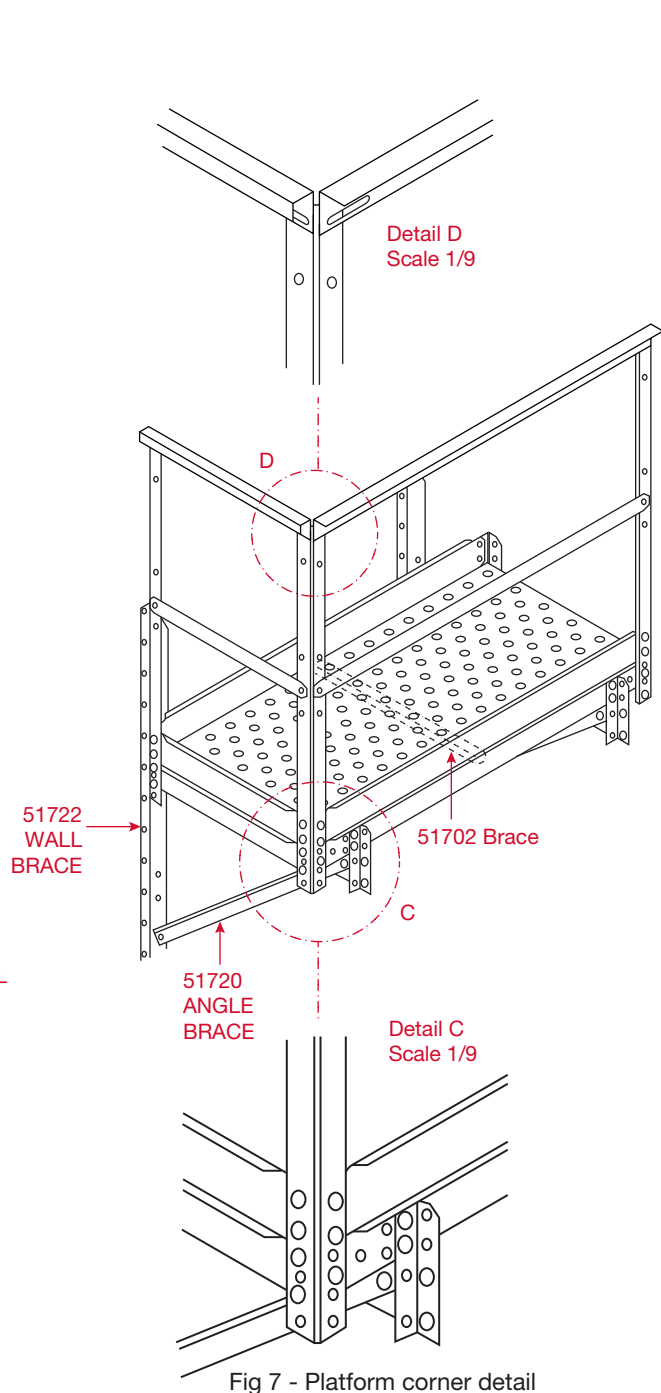
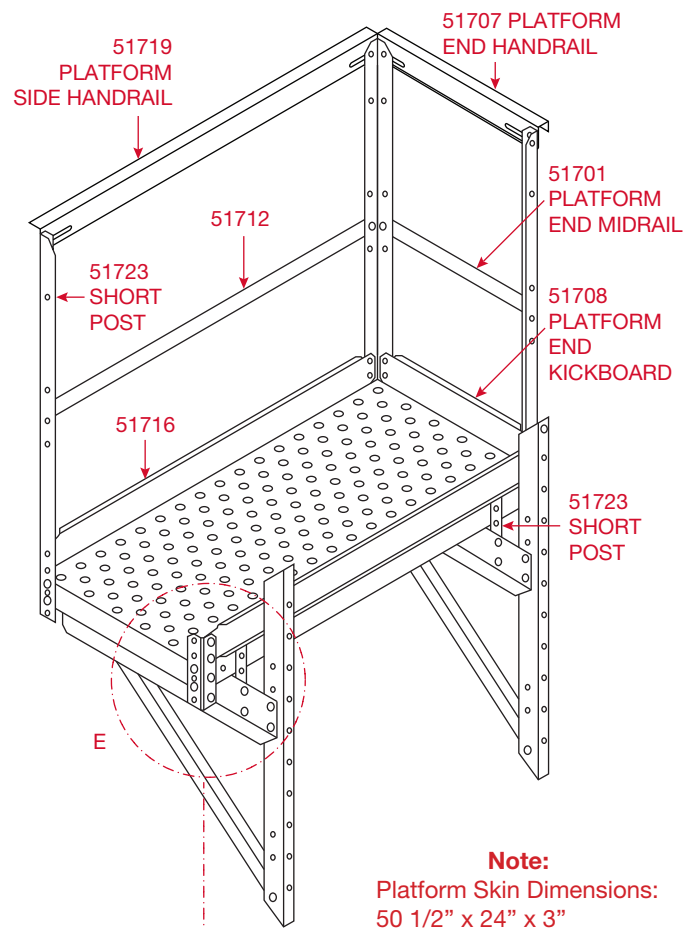


Fig 7 - Platform corner detail



Detail E
Scale 1/9

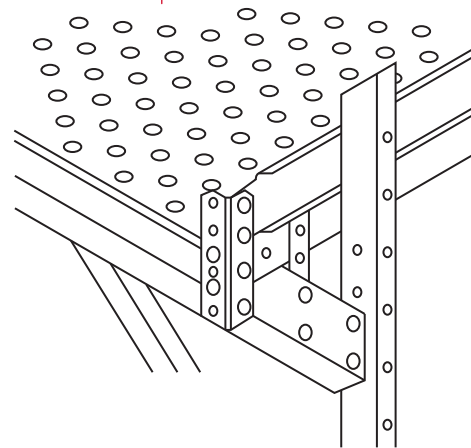


Fig 8 - Platform railing and support

ASSEMBLE TO PLATFORM:

These instructions are for putting the stairs on as the bin is being built.

8. Attach the platform A-frame to begin installation.

IMPORTANT: See wall bracket layout drawing for up and down indicators

9. Attach the mid-brace to the bottom of the platform skin through the pre-punched holes.
10. Attach platform skin to A-frames with the four short platform mount posts.
11. Attach the platform posts and the kick board post to the corners of the platform.

ATTACH THE KICK BOARDS, HAND AND INTERMEDIATE RAILS:

12. Attach stair section to platform with the hole in the platform skin and the bottom hole of the posts on the inside and outside siderail.
 - The shallow holes on the outside siderail are for smaller bins (type 60' and under) and the deep holes are for larger bins.
13. The top of the siderail is flush with the deck to clear the kickboard.

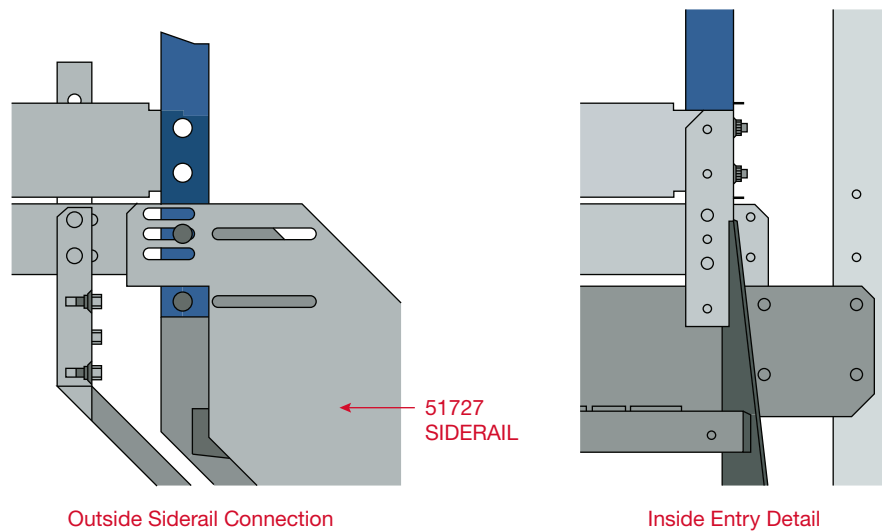


Fig 9 - Kickboard and rails

14. Keep the inside siderail as close to the centre of the adjustment slot as possible to keep the stairs from creeping forward down the bin.
 - Continue to monitor this as you put successive sections on by watching the connections of the short post to the siderail.
 - Stay as close as possible to the centre to keep the post plumb.
15. Tighten stair sections from the inside out and from the top down.
 - Always level the bottom step before tightening the outside siderail splice.
 - Use the slotted connection on the outside siderail to adjust steps for even fan pattern.
16. Tighten all connections.

ATTACH STAIR SECTIONS:

17. Attach the A-frame to the bottom of the siderail using the top hole on the short post and the top hole (of the two) in the baluster post directly above the wall cross.
 - After jacking the bin, the A-frame will fit into place and be ready to attach the bin wall.
18. The bin wall brackets call for one bolt at the top and bottom of the bracket on the horizontal bolt seam, see Figure 1.
19. When attaching the next stair sections, use the same procedure as the stair section on the platform, except level the middle step and tighten the upper splice.
20. Level the bottom step and tighten the middle splice. The wall brackets assemblies are placed at 4 bolt spaces (37 1/2") around the bin.

ASSEMBLY AND FINISHING OF BOTTOM SECTION:

21. Attach the "51700 Bottom Knee Brace" to the rear inside hole of the bottom step.
22. Attach the other end of bottom knee brace to "51722 Wall Brace" in the hole that would normally have a knee brace as pictured on page 9.

Note: On some bin diameters this may not work. If the stair system has to be severely deformed to use the hole, drill the hole to allow for connection.

23. Attach the "51710 Bottom Brace" to the inside and outside siderails under the bottom step so to not be in the walk path when coming off the step.
 - On bins with a rolled flange bottom ring, it may be necessary to move the bottom brace up to the step bolts for the upper holes.
24. If possible, attach the bottom post to the bottom brace bracket.
 - If that causes the post to be misaligned with the hand and midrails, then attaching them separately to the outside siderail will be adequate.



Fig 10 - 51700 Bottom Knee Brace

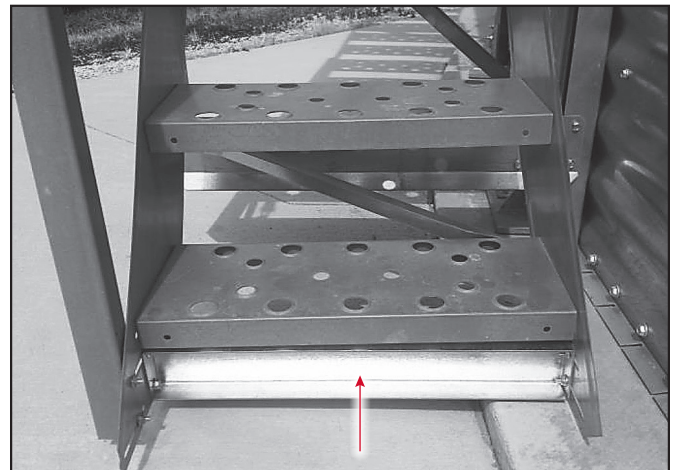


Fig 11 - 51710 Bottom Brace

ATTACH BOTTOM SECTION:

The bottom section uses a special configuration of the A-frame.

- For assembly, see the A-frame drawing, see Figure 4.

It attaches in the middle of the stair section and is two bolt spaces (18 3/4" +/-) from the last wall mount.

There is a baluster post, bottom brace bracket, and bottom knee brace included with the platform that attaches to the bottom of the bottom section.

- This allows the handrail to end at the bottom of the stairs and braces the bottom two steps and post.

Note: Gate is optional equipment.



Fig 12 - Image of the optional gate

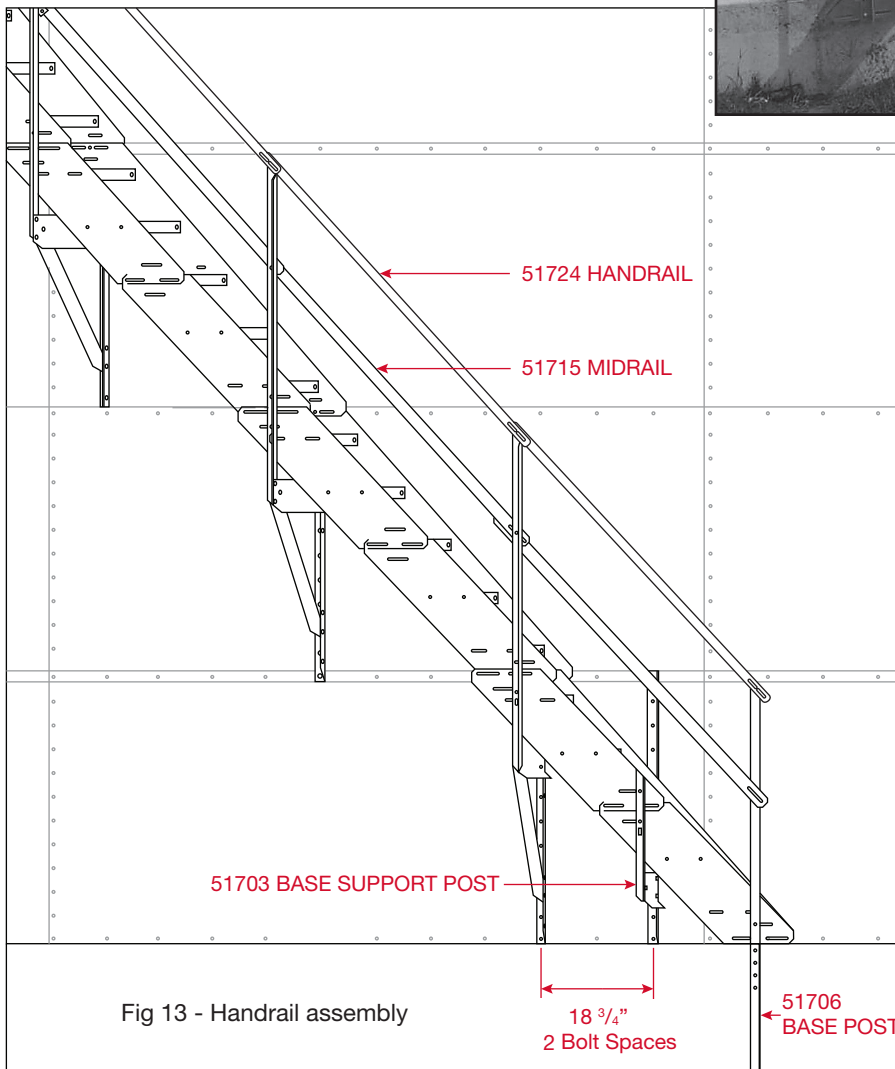
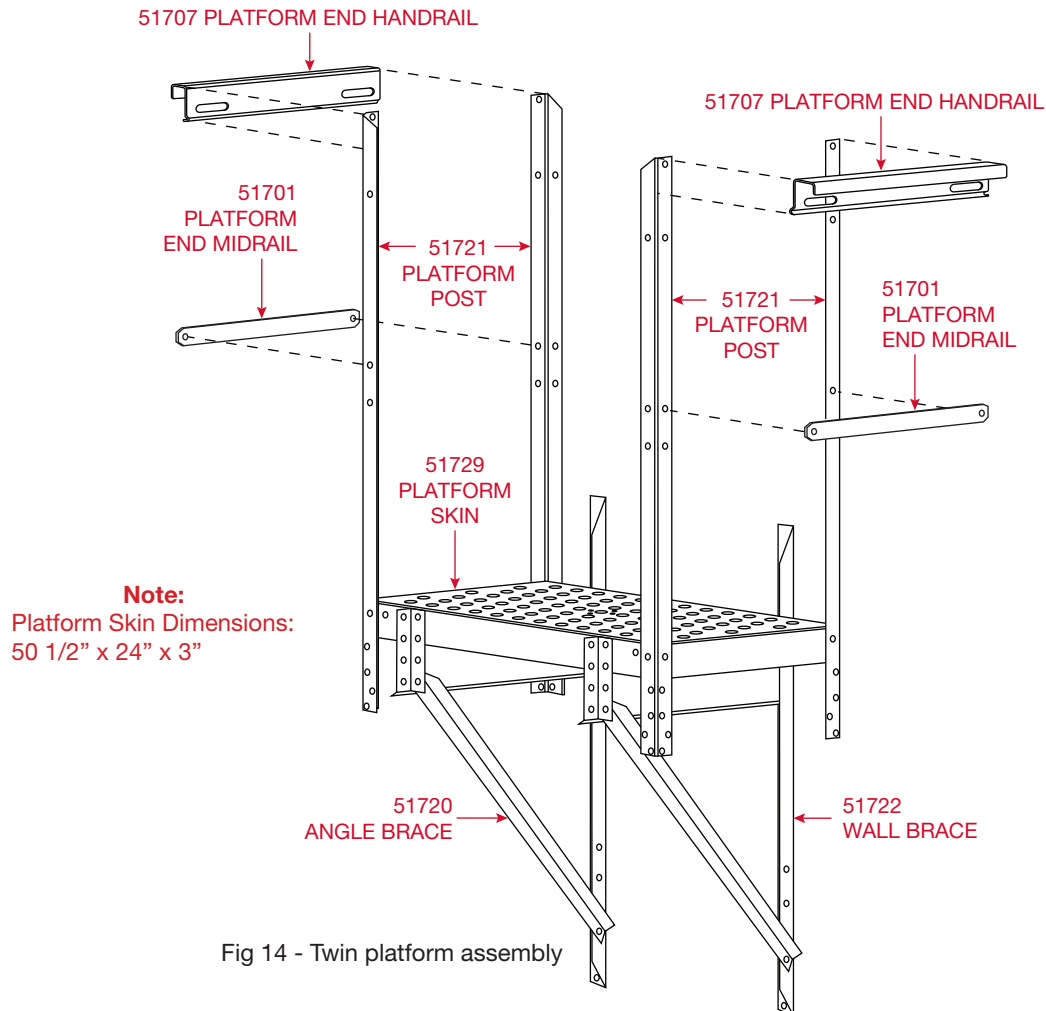


Fig 13 - Handrail assembly

ATTACH HANDRAIL:

Shape the handrails according to the circumference of the bin and attach them to the baluster posts.

Midrails bolt on the posts through the slots and are to be entered between each baluster post.



TWIN PLATFORM (OPTIONAL EQUIPMENT):

On standard 32" and 44" bin sheets the platform Wall Brackets will attach 4 bolts (35.5") apart.

- Attach Wall Brace to the bin.
- In the lowest hole of the Wall Brace attach Angle Braces.
- Assemble Platform.
- On the Platform skin, attach Posts to corners as shown.
- Attach Platform to Wall Braces using the holes in the post under the platform skin and the bottom hole of the Post to the Wall Brace.
- Attach Angle Braces to the 2nd and 3rd holes from the bottom of the Posts.
- Attach Handrail on the outside of the Posts.
- Tighten Platform.

Twin bin spacing must be 64–68" between bins.

CENTRE SECTION PARTS

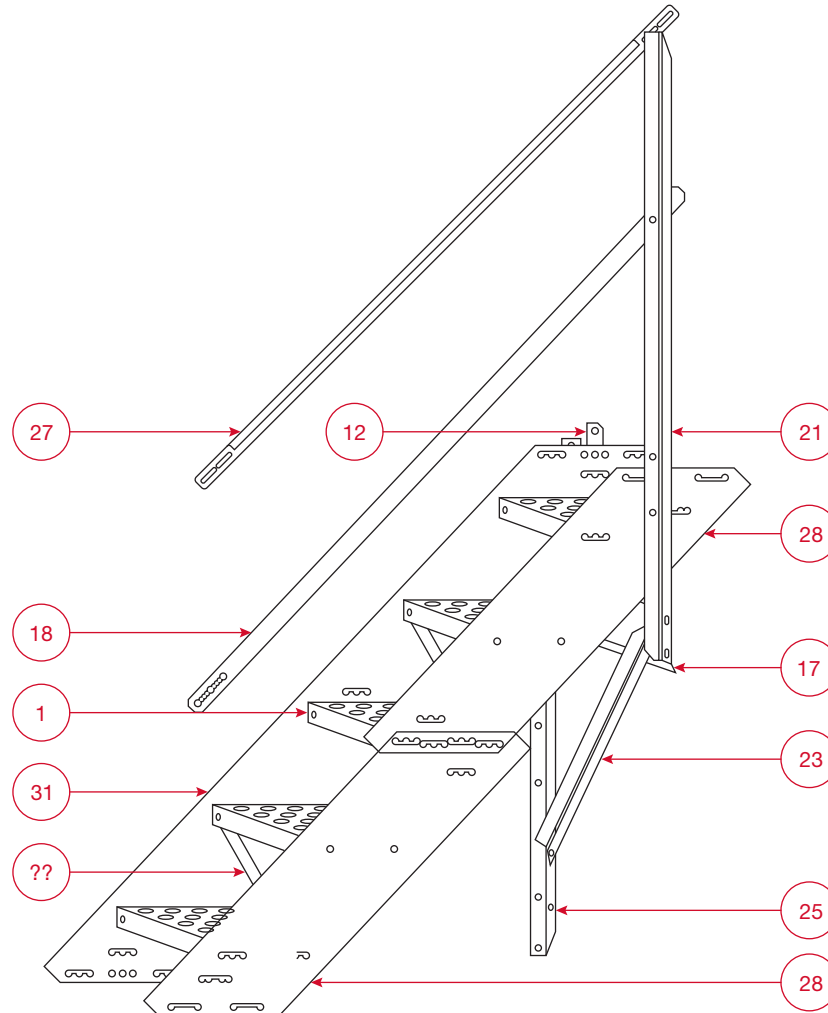


Fig 15 - Centre section

Table 1 - 9 Ring Bin Staircase Pkg

ITEM	PART #	DESCRIPTION
1	51698	STAIR STEP - 24-1/8" x 9" x 1-3/4"
12	51709	SHORT POST
17	51714	HORIZONTAL SUPPORT
18	51715	MIDRAIL
21	51718	BASE SUPPORT POST
23	51720	ANGLE BRACE
25	51722	WALL BRACE
27	51724	HANDRAIL
28	51725	SIDERAIL
31	51728	45 INSIDE SIDERAIL

STAIRS TO PLATFORM TOP CONNECTION PARTS

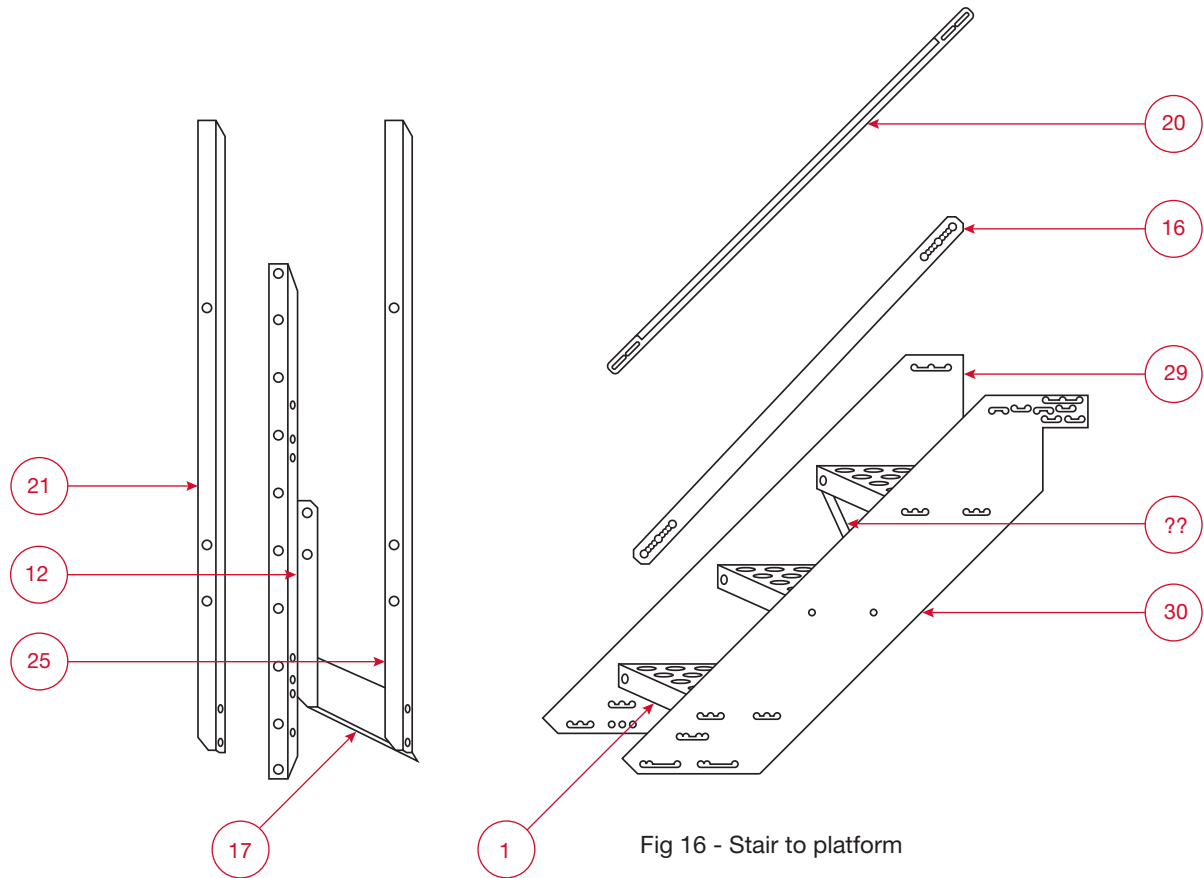


Fig 16 - Stair to platform

Table 2 - 9 Ring Bin Staircase Pkg

ITEM	PART #	DESCRIPTION
1	51698	STAIR STEP - 24-1/8" x 9" x 1-3/4"
12	51709	SHORT POST
16	51713	MIDRAIL
17	51714	HORIZONTAL SUPPORT
20	51717	HANDRAIL
21	51718	BASE SUPPORT POST
25	51722	WALL BRACE
29	51726	SIDERAIL
30	51727	SIDERAIL

PLATFORM SECTION PARTS

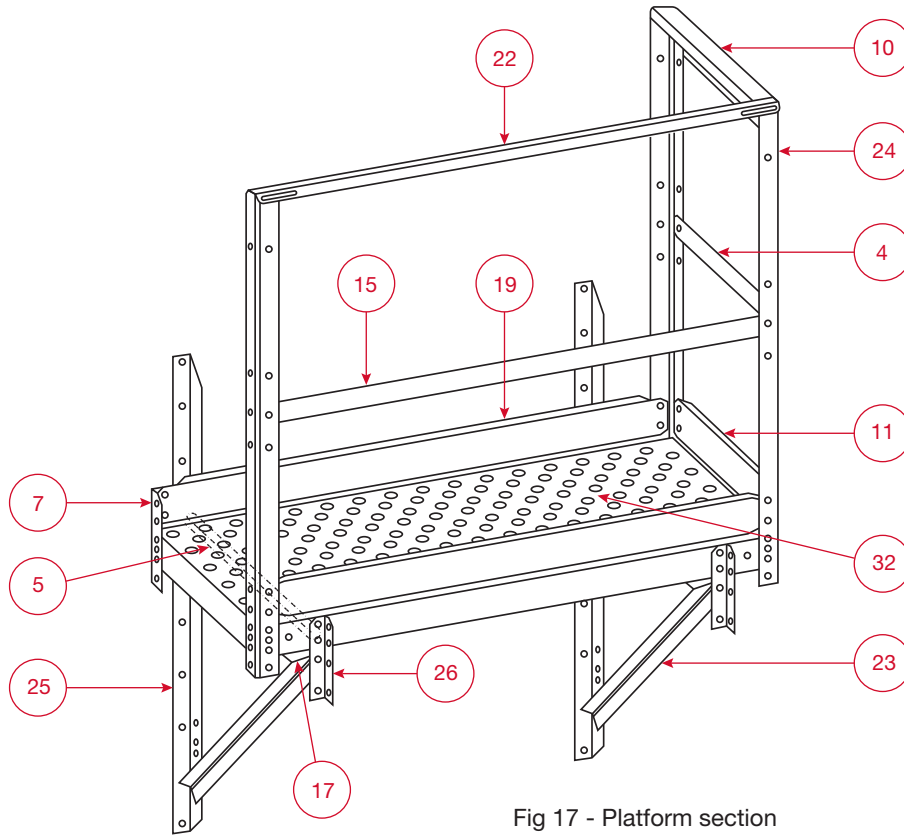


Fig 17 - Platform section

Table 3 - 9 Ring Bin Staircase Pkg

ITEM	PART #	DESCRIPTION	QTY
4	51701	PLATFORM END MIDRAIL	1
5	51702	BRACE	1
7	51704	PLATFORM SHORT POST	1
10	51707	PLATFORM END HANDRAIL	1
11	51708	PLATFORM END KICKBOARD	1
15	51712	PLATFORM SIDE MIDRAIL	1
17	51714	HORIZONTAL SUPPORT	10
19	51716	PLATFORM SIDE KICKBOARD	2
22	51719	PLATFORM SIDE HANDRAIL	1
23	51720	ANGLE BRACE	11
24	51721	PLATFORM POST	3
25	51722	WALL BRACE	11
26	51723	SHORT POST	4
32	51729	PLATFORM SKIN - 50-1/2" x 24" x 3"	1

TWIN PLATFORM PARTS

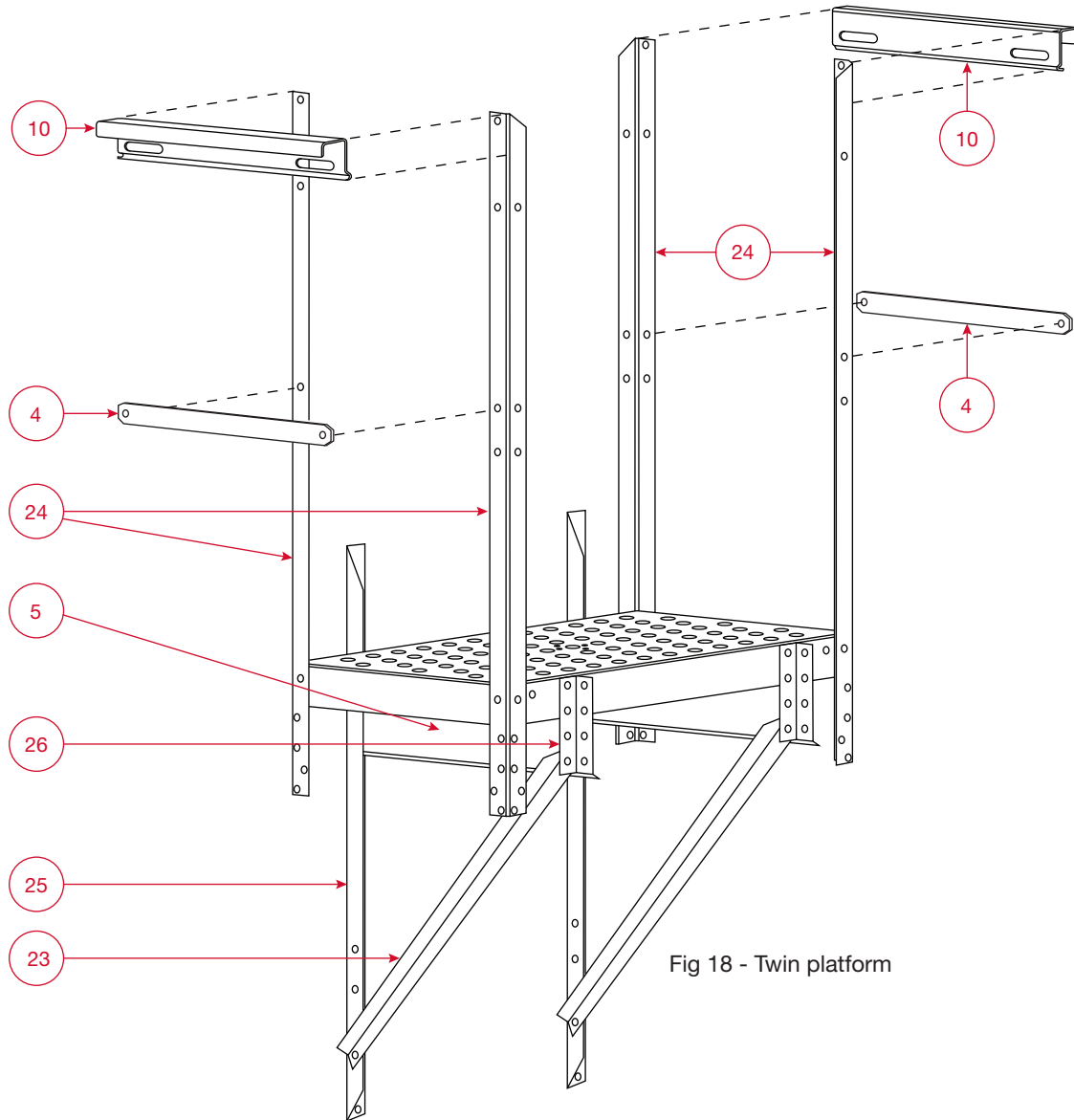


Fig 18 - Twin platform

Table 4 - 9 Ring Bin Staircase Pkg

ITEM	PART #	DESCRIPTION	QTY
4	51701	PLATFORM END MIDRAIL	1
5	51702	BRACE	1
10	51707	PLATFORM END HANDRAIL	1
23	51720	ANGLE BRACE	11
24	51721	PLATFORM POST	3
25	51722	WALL BRACE	11
26	51723	SHORT POST	4
32	51729	PLATFORM SKIN - 50-1/2" x 24" x 3"	1

BOTTOM SECTION PARTS

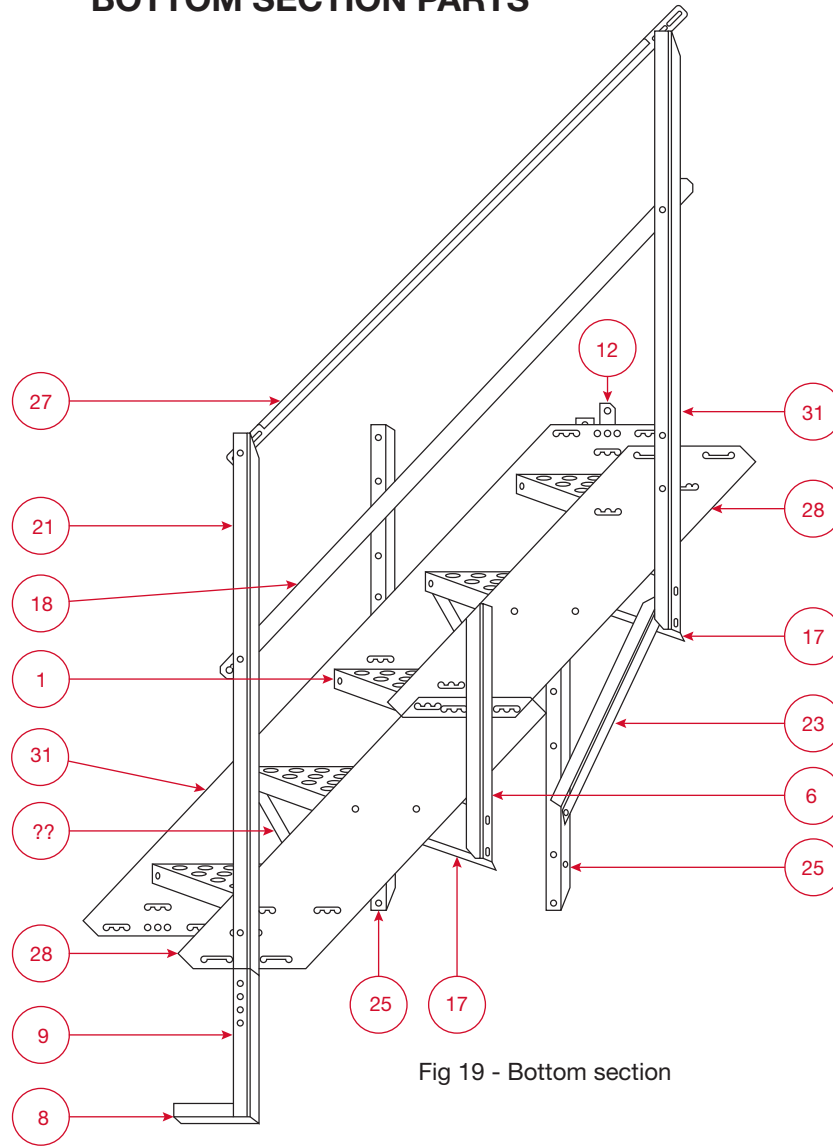


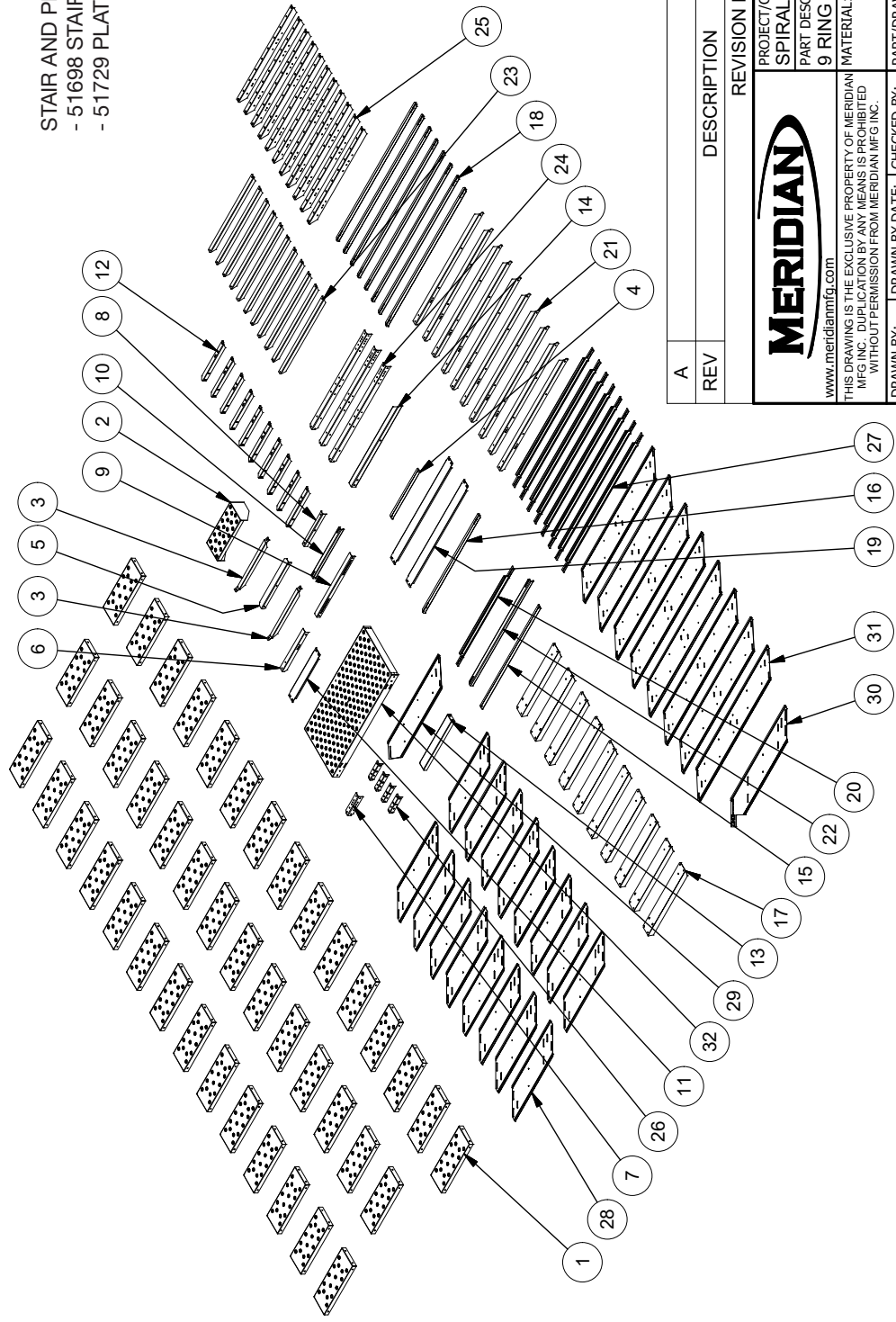
Fig 19 - Bottom section

Table 5 - 9 Ring Bin Staircase Pkg

ITEM	PART #	DESCRIPTION	QTY
1	51698	STAIR STEP - 24-1/8" x 9" x 1-3/4"	43
8	51705	BASE PAD	1
9	51706	BASE POST B	1
12	51709	SHORT POST	10
17	51714	HORIZONTAL SUPPORT	10
18	51715	MIDRAIL	8
21	51718	BASE SUPPORT POST	10
23	51720	ANGLE BRACE	11
25	51722	WALL BRACE	11
27	51724	HANDRAIL	8
28	51725	SIDERAIL	16
31	51728	45 INSIDE SIDERAIL	8

ITEM	QTY	MASS	PART #	DESCRIPTION	ITEM	QTY	MASS	PART #	DESCRIPTION
1	43	5.399 lbmass	51698	STAIR STEP 1007	17	10	3.981 lbmass	51714	HORIZONTAL SUPPORT 1003
2	1	5.606 lbmass	51699	BOTTOM PLATFORM 1???	18	8	3.878 lbmass	51715	MIDRAIL 1019
3	2	1.414 lbmass	51700	BOTTOM KNEE BRACE 1026	19	2	4.754 lbmass	51716	PLATFORM SIDE KICKBOARD 1014
4	1	0.984 lbmass	51701	PLATFORM END MIDRAIL 1011	20	1	3.572 lbmass	51717	HANDRAIL 1031
5	1	1.800 lbmass	51702	BRACE 1008	21	10	5.541 lbmass	51718	BASE SUPPORT POST 1001
6	1	1.972 lbmass	51703	BASE SUPPORT POST 1018	22	1	3.576 lbmass	51719	PLATFORM SIDE HANDRAIL 1012
7	1	1.008 lbmass	51704	PLATFORM SHORT POST 1025	23	11	3.192 lbmass	51720	ANGLE BRACE 1045
8	1	1.341 lbmass	51705	BASE PAD 1040	24	3	5.641 lbmass	51721	PLATFORM POST 1009
9	1	2.732 lbmass	51706	BASE POST B 1028	25	11	3.778 lbmass	51722	WALL BRACE 1002
10	1	1.682 lbmass	51707	PLATFORM END HANDRAIL 1013	26	4	0.476 lbmass	51723	SHORT POST 1029
11	1	2.185 lbmass	51708	PLATFORM END KICKBOARD 1015	27	8	5.260 lbmass	51724	HANDRAIL 1020
12	10	1.512 lbmass	51709	SHORT POST 1021	28	16	7.053 lbmass	51725	SIDERAIL 1006
13	1	4.638 lbmass	51710	BOTTOM BRACE 1024	29	1	8.713 lbmass	51726	SIDERAIL 1032
14	1	5.834 lbmass	51711	POST 1016	30	1	9.373 lbmass	51727	SIDERAIL 1????
15	1	2.100 lbmass	51712	PLATFORM SIDE MIDRAIL 1010	31	8	12.976 lbmass	51728	45 INSIDE SIDERAIL 1005
16	1	2.729 lbmass	51713	MIDRAIL 1030	32	1	26.490 lbmass	51729	PLATFORM SKIN 1023

STAIR AND PLATFORM DIMENSIONS:
- 51698 STAIR STEP - 24-1/8" x 9" x 1-3/4"
- 51729 PLATFORM SKIN - 50-1/2" x 24" x 3"



REV	DESCRIPTION	DATE	DESIGNER
A			BP

REVISION HISTORY	
PROJECT/CUSTOMER NAME:	SPIRAL STAIRS
PART DESCRIPTION:	9 RING BIN STAIRCASE PKG
MATERIAL:	WEIGHT: 828.06 lbmass FABRICATION: XXX

DRAWN BY:	DRAWN BY DATE:	CHECKED BY:	PART/DRAWING NUMBER:	SCALE:	SHEET No:
BP	10/18/2019	DS	40668	A 1 / 58	1 OF 1



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