

TopDry — Platforms and Bin Stairs

Models:
24 FT – 36 FT

Installation Manual

PNEG-2077
Version 1.1

Date: 09-27-16



PNEG-2077

All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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NOTES

1 Safety Precautions

Topics Covered in this Chapter

- Safety Guidelines
- Cautionary Symbol Definitions
- Safety Precautions
- Safety Guidelines for Bins
- Safety Decals
- Safety Sign-off Sheet

Safety Guidelines

Safety guidelines are general-to-specific safety rules that must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in **SERIOUS INJURY** or **DEATH**.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which must be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.








Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

ST-0001-3

Cautionary Symbol Definitions

Cautionary symbols appear in this manual and on product decals. The symbols alert the user of potential safety hazards, prohibited activities and mandatory actions. To help you recognize this information, we use the symbols that are defined below.

Table 1-1 Description of the different cautionary symbols

Symbol	Description
	This symbol indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.
	This symbol indicates a potentially hazardous situation which, if not avoided, can result in serious injury or death.
	This symbol indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.
	This symbol is used to address practices not related to personal injury.
	This symbol indicates a general hazard.
	This symbol indicates a prohibited activity.
	This symbol indicates a mandatory action.

ST-0005-2

Safety Precautions

Use Personal Protective Equipment

- Use appropriate personal protective equipment:

Eye Protection



Respiratory Protection



Foot Protection



Hearing Protection



Head Protection



Fall Protection



Hand Protection



- Wear clothing appropriate to the job.
- Remove all jewelry.
- Tie long hair up and back.

ST-0004-1

Follow Safety Instructions

- Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.
- Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.
- If you do not understand any part of this manual or need assistance, contact your dealer.



ST-0002-1

Chapter 1: Safety Precautions

Maintain Equipment and Work Area

- Understand service procedures before doing work. Keep area clean and dry.
- Never service equipment while it is operating. Keep hands, feet, and clothing away from moving parts.
- Keep your equipment in proper working condition. Replace worn or broken parts immediately.



ST-0003-1

Prevent Roof Damage Due to Vacuum Pressure

- Roof damage can result from excessive vacuum or internal pressure from fans or other air moving systems. The manufacturer does not warrant this type of roof damage.
- Adequate ventilation or “makeup air” devices must be provided for all powered air handling systems.
- The manufacturer does not recommend the use of downward flow systems (suction).
- Severe roof damage can result from any blockage of air passages.
- Operating fans during high humidity or cold weather conditions can cause air exhaust or intake ports to freeze.



ST-0028-2

Safety Guidelines for Bins

Safety guidelines must be followed at all times. This manual is written to help you understand safe operating procedures and problems that can be encountered by the operator and other personnel when using this equipment. Save these safety guidelines for future reference.

As owner or operator, you are responsible for understanding the requirements, hazards, and precautions that exist and to inform others as required. Unqualified persons must stay out of the work area at all times.

Alterations must not be made to the equipment. Alterations can produce dangerous situations resulting in **SERIOUS INJURY** or **DEATH**.

This equipment must be installed in accordance with the current installation codes and applicable regulations, which should be carefully followed in all cases. Authorities having jurisdiction must be consulted before installations are made.

When necessary, you must consider the installation location relative to electrical, fuel and water utilities.

Personnel operating or working around equipment must read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

This product is intended for the use of grain storage only. Any other use is a misuse of the product.

Sidewall bundles or sheets must be stored in a safe manner. The safest method of storing sidewall bundles is by laying them horizontally with the arch of the sheet upward, like a dome. Sidewall sheets stored on edge must be secured so that they cannot fall over and cause injury. Use care when handling and moving sidewall bundles.


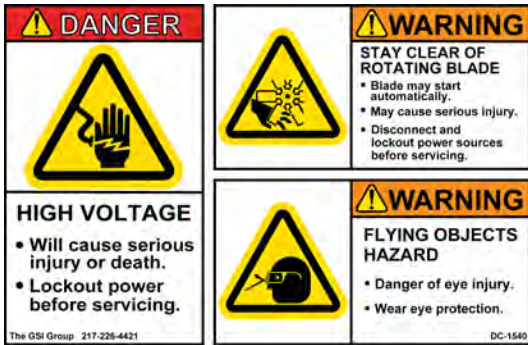



This product has sharp edges, which may cause serious injury. To avoid injury, handle sharp edges with caution and always use proper protective clothing and equipment.

ST-0035

Safety Decals

The safety decals on your equipment are safety indicators which must be carefully read and understood by all personnel involved in the installation, operation, service and maintenance of the equipment.

Location	Decal No.	Decal	Description
Left and right middle, inside and outside	DC-2180		Non-text fan Warnings
Left middle outside and right middle inside	DC-1540		Danger High Voltage Warning Stay Clear of Rotating Blade Warning Flying Objects Hazard
Left middle outside and right middle inside	DC-995		Warning Shear Point

To replace a damaged or missing decal, contact us to receive a free replacement.

GSI Decals

1004 E. Illinois St.
 Assumption, IL 62510
 Tel: 1-217-226-4421

Safety Sign-off Sheet

Below is a sign-off sheet that can be used to verify that all personnel have read and understood the safety instructions. This sign-off sheet is provided for your convenience and personal record keeping.

Date	Employee Name	Supervisor Name

ST-0007

NOTES

2 Intermediate Platform

Topics Covered in this Chapter

- Assembling the Intermediate Platform Sections
- Installing the Wall Attachment Brackets
- Installing the Intermediate Platform
- Installing the Handrails for Intermediate Platform

Assembling the Intermediate Platform Sections

The intermediate platform is made of two 3-panel platform that are installed separately onto the sidewall and spliced together by a platform splice.

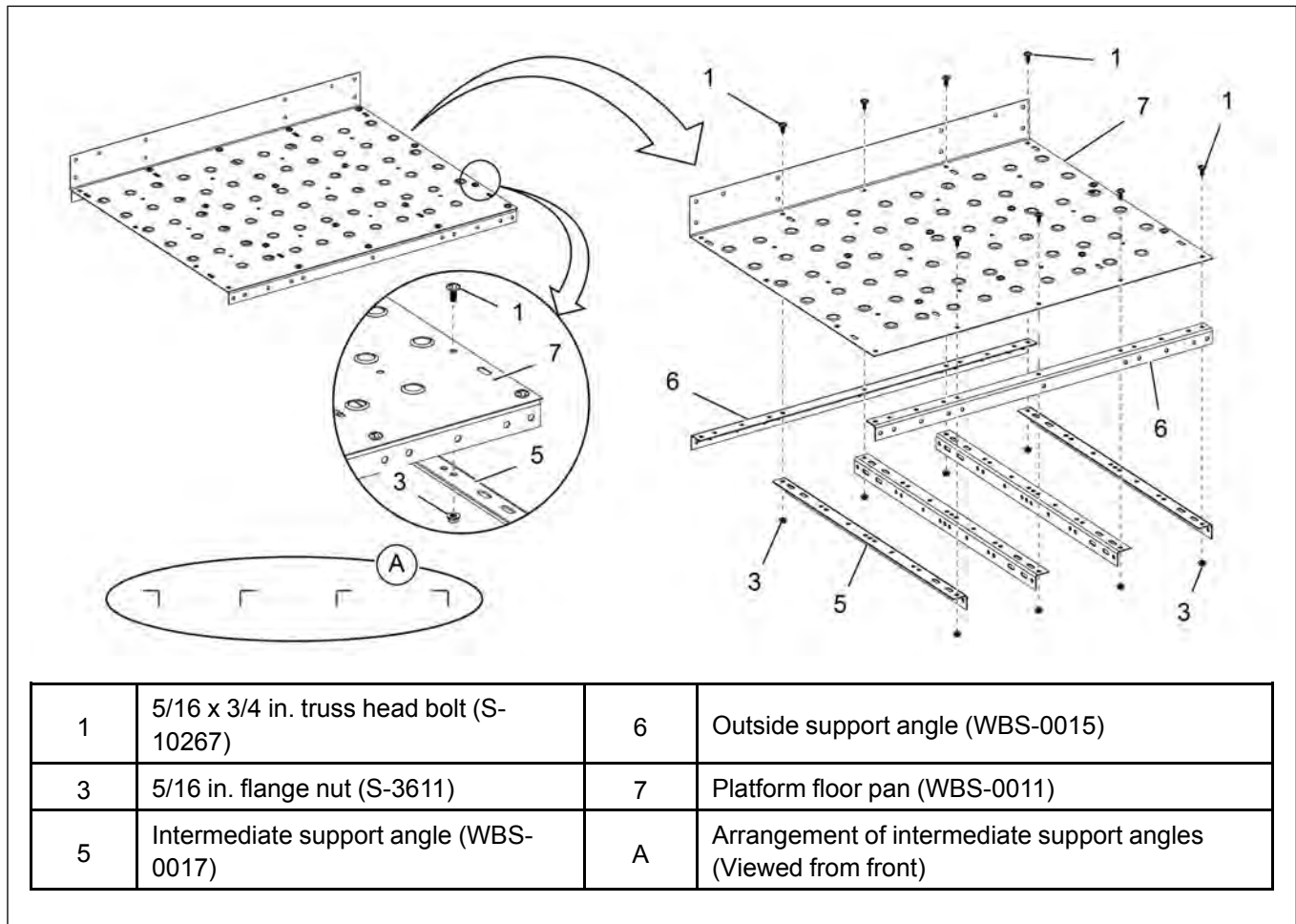
Assembling the First Platform Section

1. Assemble the four intermediate support angles (5), outside support angles (6) and platform floor pan (7) together with sixteen truss head bolts (1) and sixteen flange nuts (3).

IMPORTANT: Arrange Intermediate support angles (5) as shown (A).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

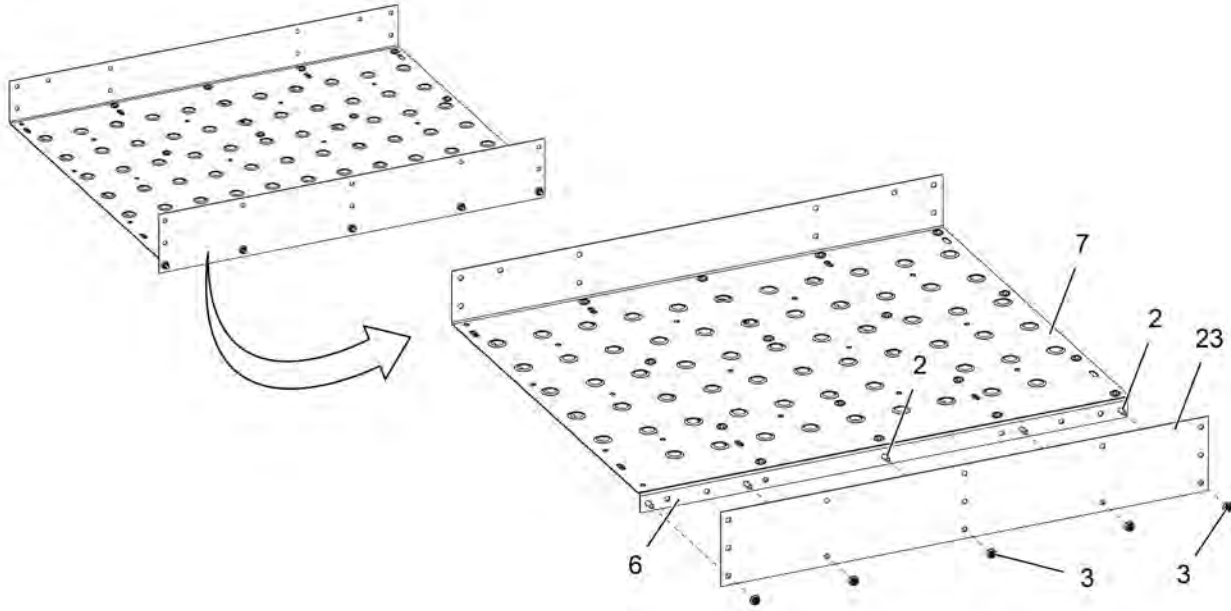
Figure 2-1 Assembling the platform floor (first platform section)



2. Assemble the inside kick plate (23) to the outside support angle (6) at the end of platform floor pan (7) using flange bolts (2) and flange nuts (3).

NOTE: Tighten the flange bolts (2) before the platform is installed to the bin.

Figure 2-2 Assembling the inside kick plate (first platform section)



2	5/16 x 3/4 in. flange bolt (S-6606)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	23	Inside kick plate (WBS-0014)
6	Outside support angle (WBS-0015)		

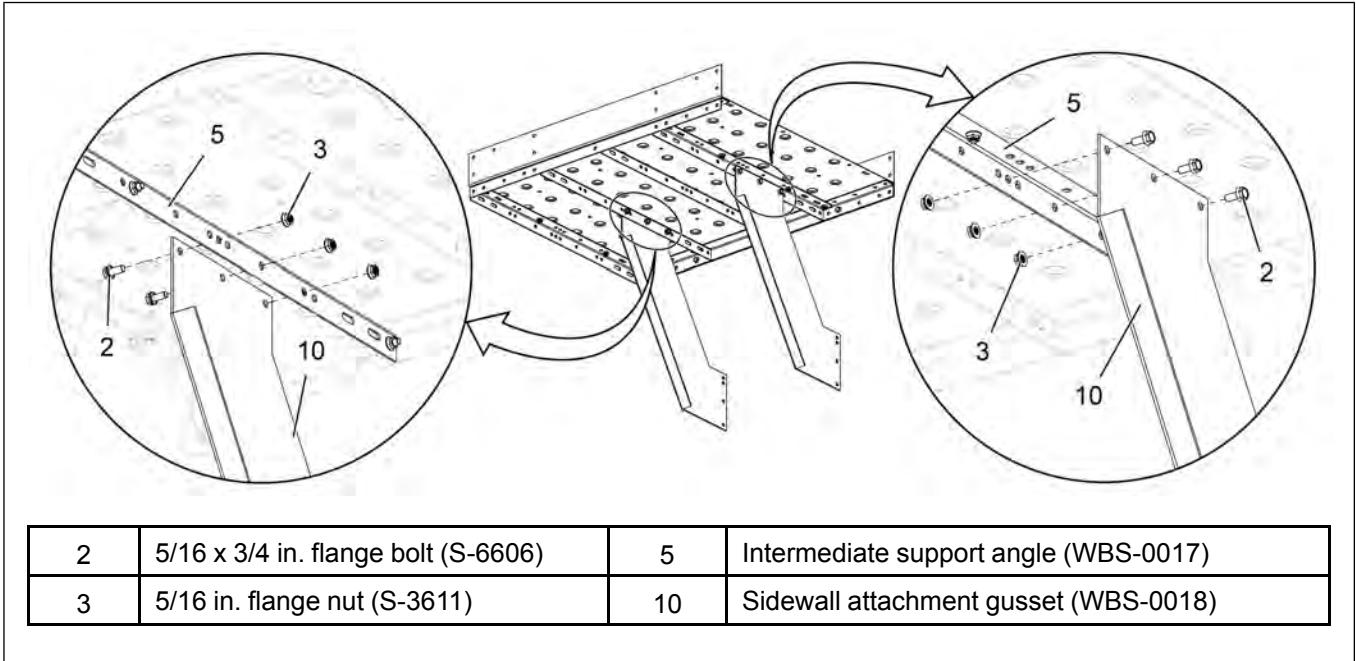
Chapter 2: Intermediate Platform

3. Assemble the two sidewall attachment gussets (10) to the intermediate support angles (5) in the assembled platform using flange bolts (2) and flange nuts (3).

NOTE:

- *Align the first hole of the sidewall attachment gusset (10) to the third circular hole of the intermediate support angle (5).*
- *Make sure the four bolt pattern in sidewall attachment gusset (10) is at the bottom and facing the bin wall.*
- *Hand tighten the flange bolts (2) before the platform is leveled on the bin.*

Figure 2-3 Assembling the sidewall attachment gussets (first platform section)



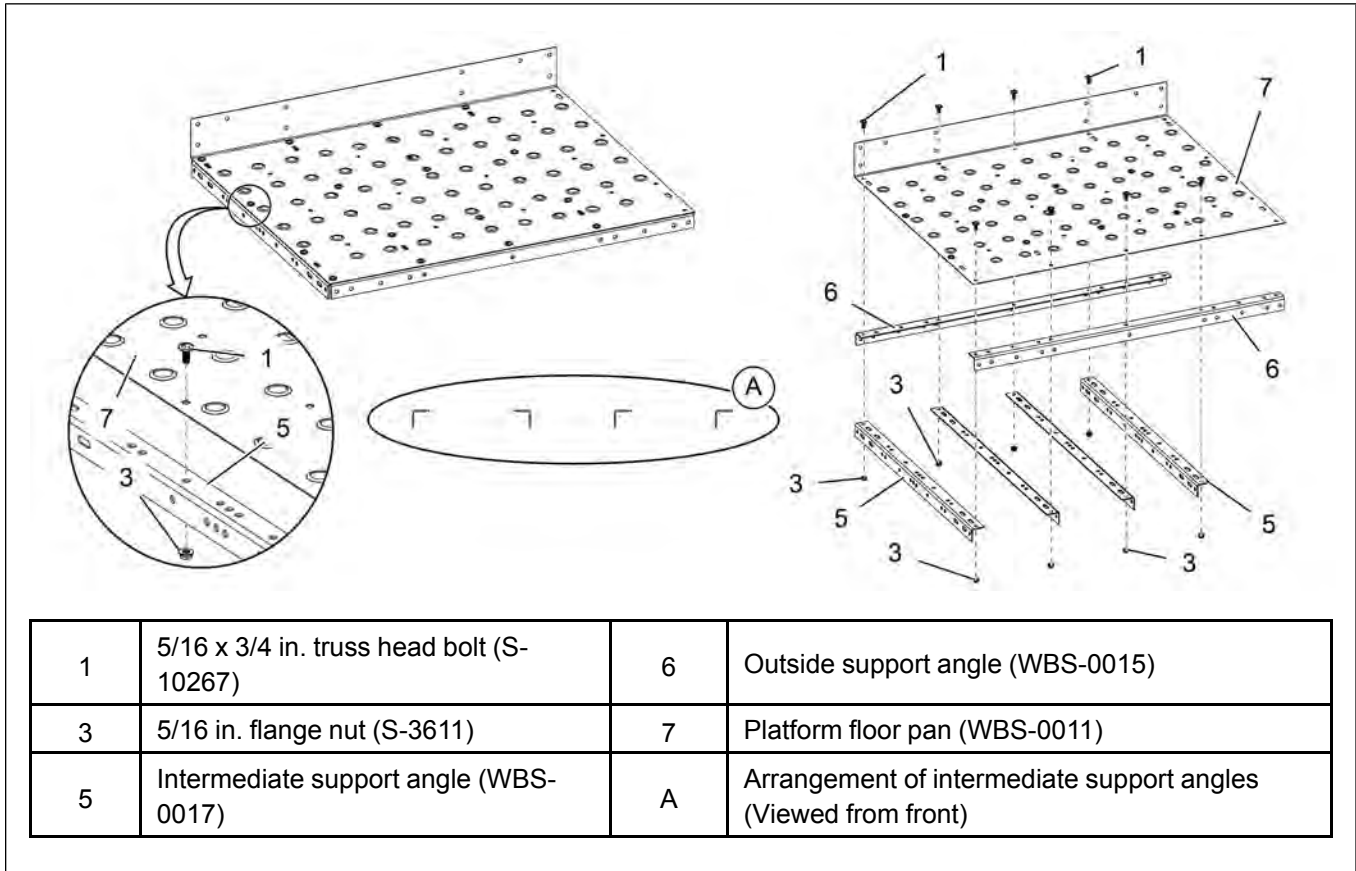
Assembling the Second Platform Section

1. Assemble the four intermediate support angles (5), outside support angles (6) and platform floor pan (7) together with sixteen truss head bolts (1) and sixteen flange nuts (3).

IMPORTANT: Arrange Intermediate support angles (5) as shown (A).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

Figure 2-4 Assembling the platform floor (second platform section)

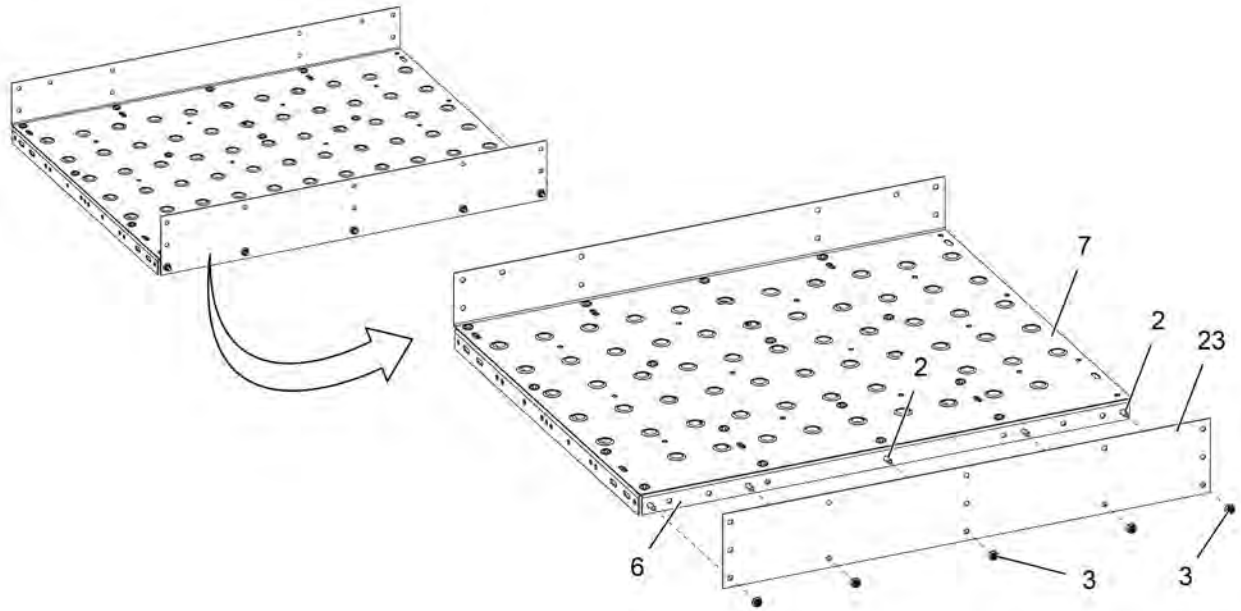


Chapter 2: Intermediate Platform

2. Assemble the inside kick plate (23) to the outside support angle (6) at the end of platform floor pan (7) using flange bolts (2) and flange nuts (3).

NOTE: Tighten the flange bolts (2) before the platform is installed to the bin.

Figure 2-5 Assembling the inside kick plate (second platform section)

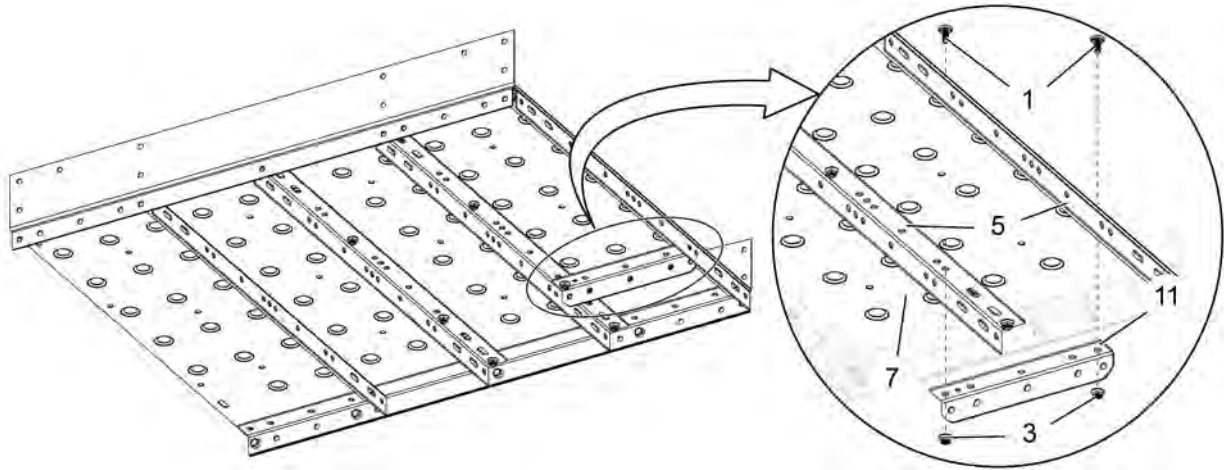


2	5/16 x 3/4 in. flange bolt (S-6606)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	23	Inside kick plate (WBS-0014)
6	Outside support angle (WBS-0015)		

3. Assemble the stringer support bracket (11) to the platform floor pan (7) using the truss head bolts (1) and flange nuts (3).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

Figure 2-6 Assembling the stringer support bracket (second platform section)



1	5/16 x 3/4 in. truss head bolt (S-10267)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	11	Stringer support bracket (WBS-0027)
5	Intermediate support angle (WBS-0017)		

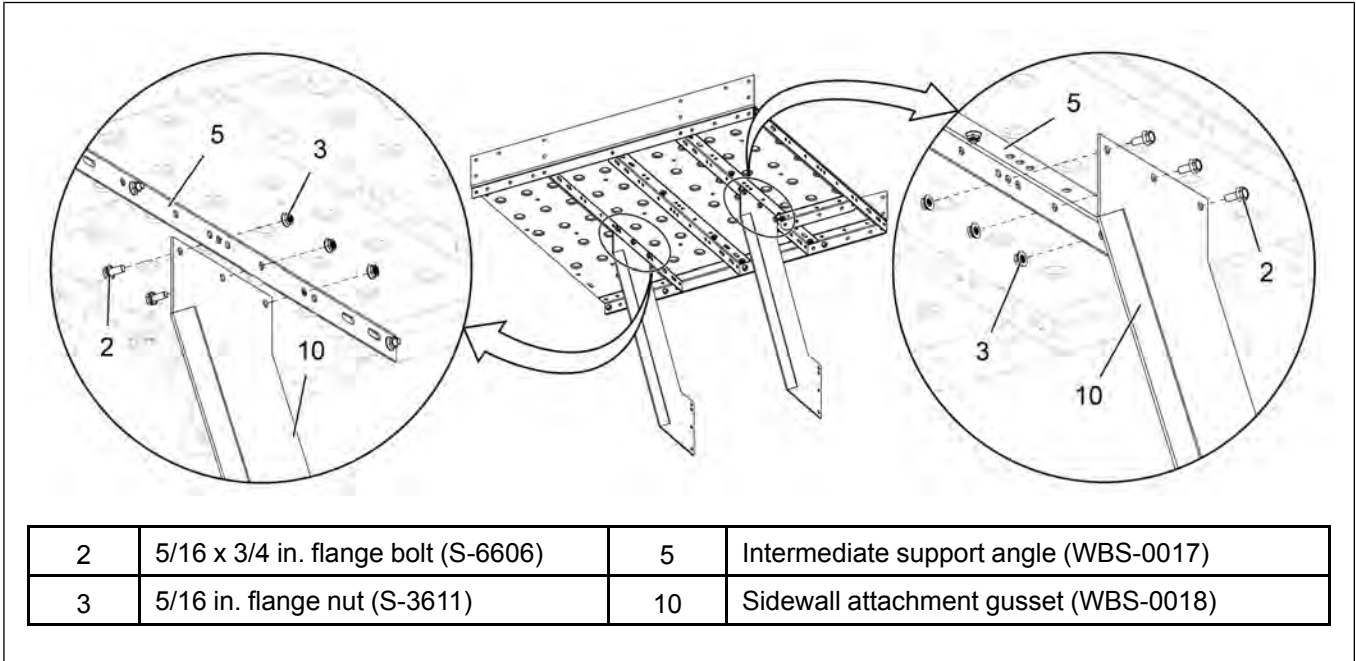
Chapter 2: Intermediate Platform

4. Assemble the two sidewall attachment gussets (10) to the intermediate support angles (5) in the assembled platform using flange bolts (2) and flange nuts (3).

NOTE:

- *Align the first hole of the sidewall attachment gusset (10) to the third circular hole of the intermediate support angle (5).*
- *Make sure the four bolt pattern in sidewall attachment gusset (10) is at the bottom and facing the bin wall.*
- *Hand tighten the flange bolts (2) before the platform is leveled on the bin.*

Figure 2-7 Assembling the sidewall attachment gussets (second platform section)



Installing the Wall Attachment Brackets

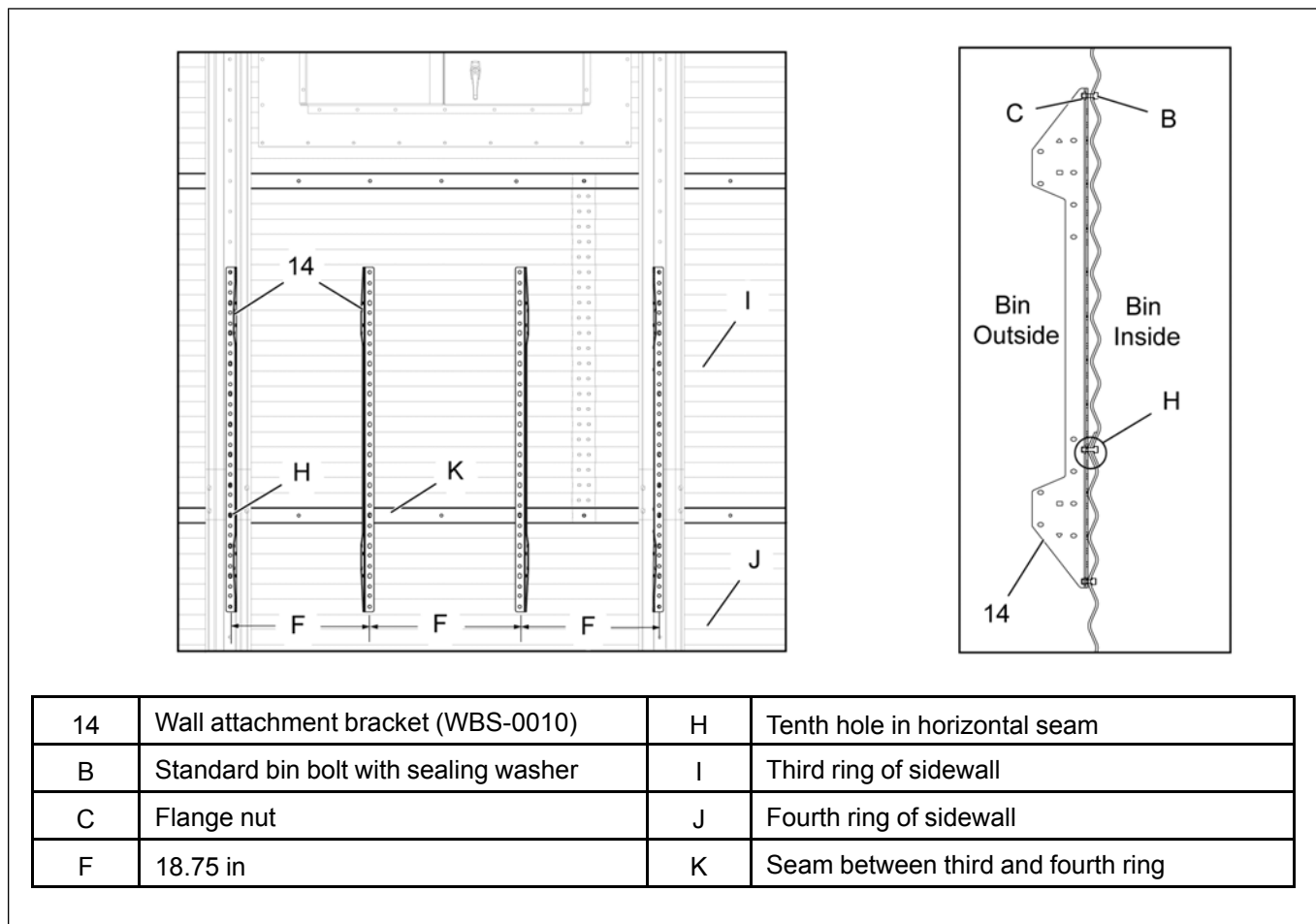
Four wall attachment brackets are installed on the sidewall for the installation of the intermediate platform assembly.

1. Align the tenth hole (H) from the bottom of each wall attachment bracket (14) to the seam (K) between the third ring (I) and the fourth ring (J) of the sidewall.
2. After aligning the tenth hole (H) to the seam, using a bubble level or plumb line, mark and field drill one hole (top most hole) in the third ring (I) and one hole (bottom most hole) in the fourth ring (J) where a hole in the wall attachment bracket (14) lines up on a hill.
3. Install standard bin bolts (B) and flange nuts (C) to secure the wall attachment brackets (14) to the sidewall.

NOTE:

- The bolts must be installed with the bolt head on the inside of the bin.
- Install each wall attachment bracket (14) with the angle open outward, and a hole to hole gap (F) of 18.75 in.
- Install the outer two wall attachment brackets (14) to the stiffeners in the sidewall.
- Install the inner two wall attachment brackets (14) to the sidewall.

Figure 2-8 Installing the wall attachment brackets



Installing the Intermediate Platform

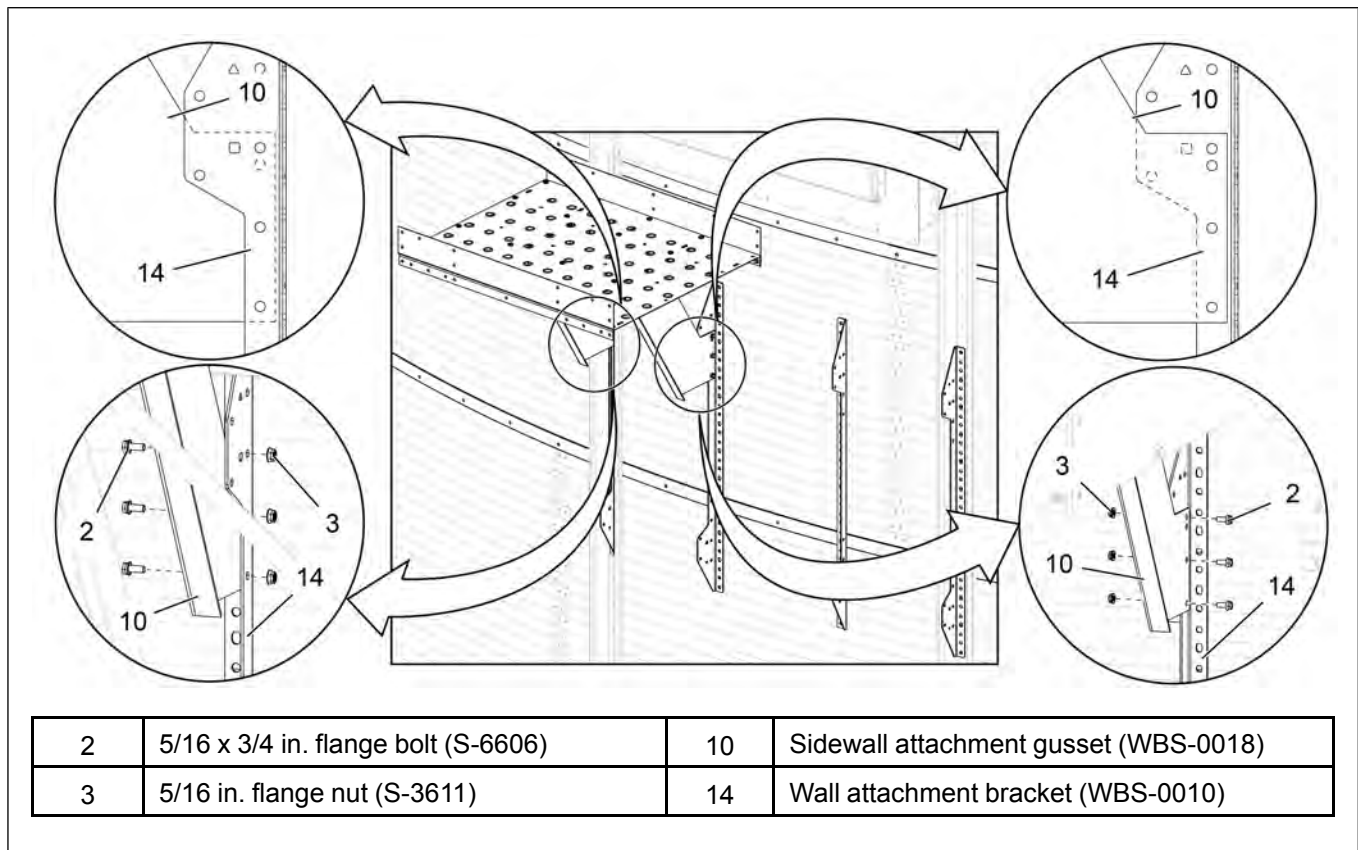
The following procedure is for the installation of the intermediate platform located below the access door. The two 3-panel platforms are installed separately onto the sidewall and spliced together using the platform splice.

1. To install the first platform section, attach the two sidewall attachment gussets (10) in the platform assembly to the two wall attachment brackets (14) using flange bolts (2) and flange nuts (3).

NOTE:

- Align the top hole of the sidewall attachment gusset (10) to the hole next to the square in the wall attachment bracket (14) to position the platform assembly below the access door.
- Install the sidewall attachment gusset (10) on the outside of the angle in the wall attachment brackets (14).
- Tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) before tightening the bolts connecting the sidewall attachment gussets (10) and the intermediate support angles (14) underneath the platform to aid in leveling the platform assembly.

Figure 2-9 Installing the sidewall attachment gussets for first platform

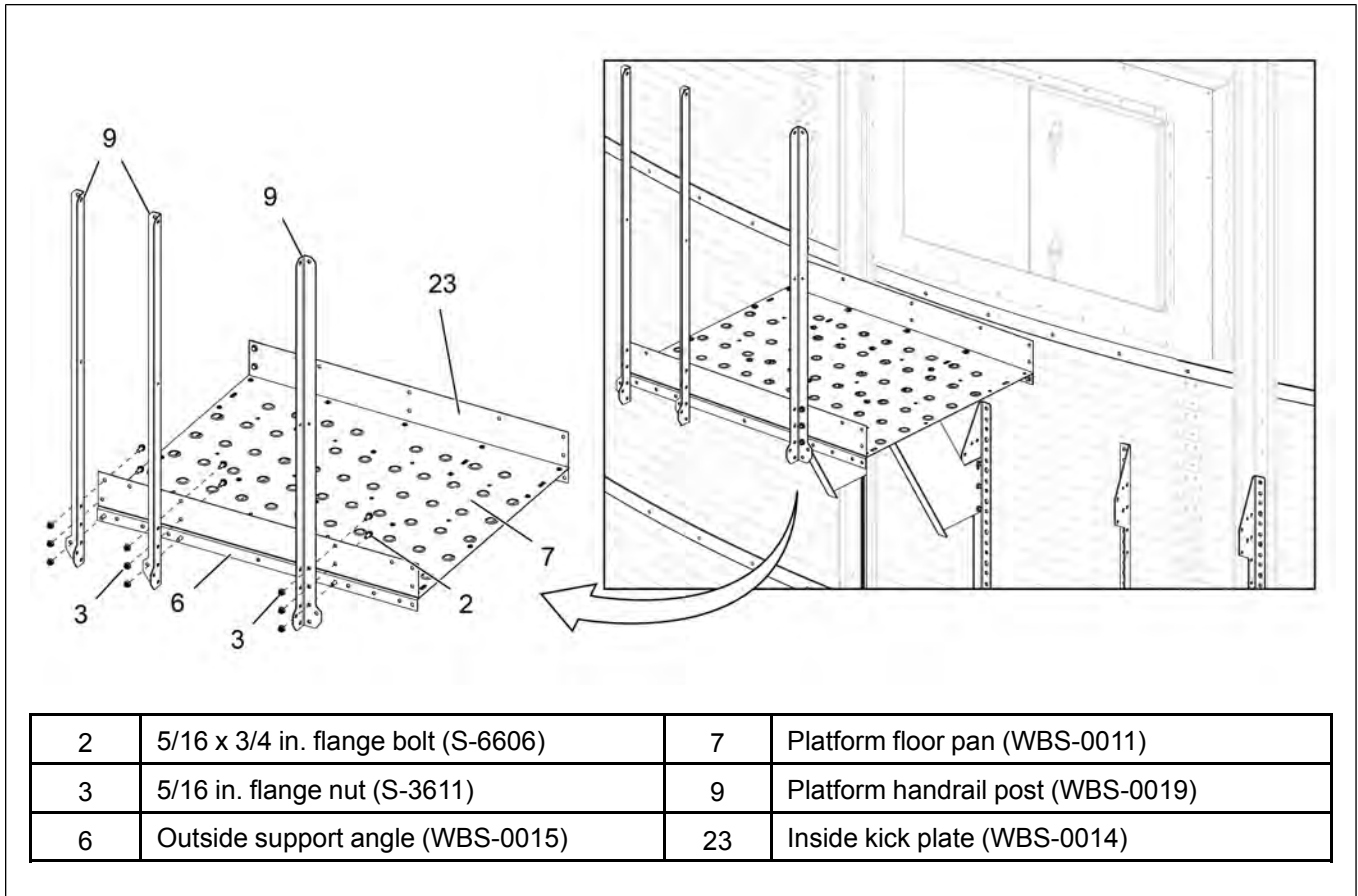


- Install the three handrail posts (9) to the outside support angle (6) and the platform floor pan (7) using flange bolts (2) and flange nuts (3).

NOTE:

- Install the flange bolts (2) with the bolt head towards the inside of the platform.
- Hand tighten the flange bolts (2).

Figure 2-10 Installing the handrail posts for first platform

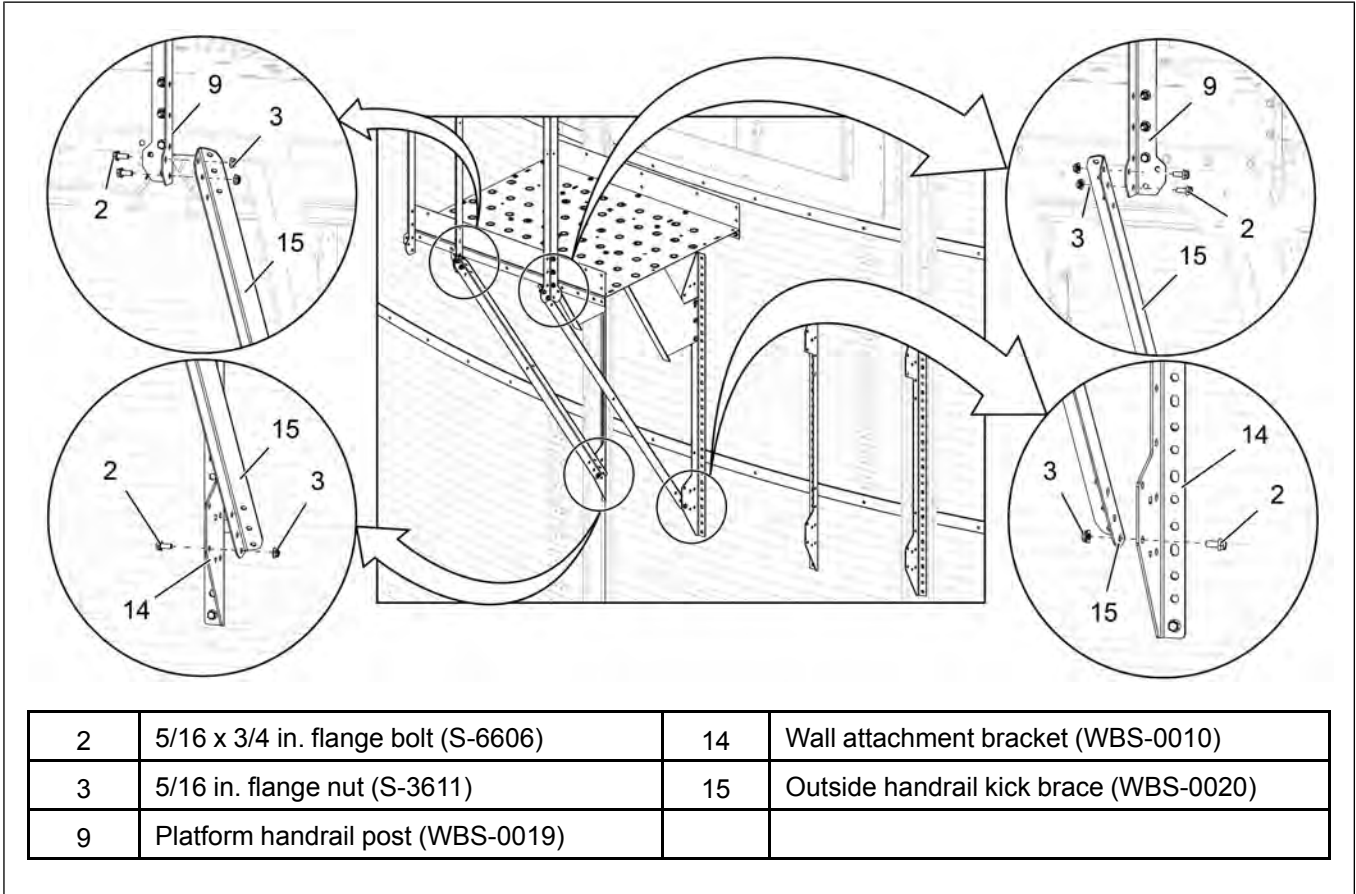


Chapter 2: Intermediate Platform

3. Install the two outside handrail kick braces (15), securing one end of each kick brace to the bottom hole of the wall attachment bracket (14) and the other end to the two holes in handrail post (9) using flange bolts (2) and flange nuts (3).

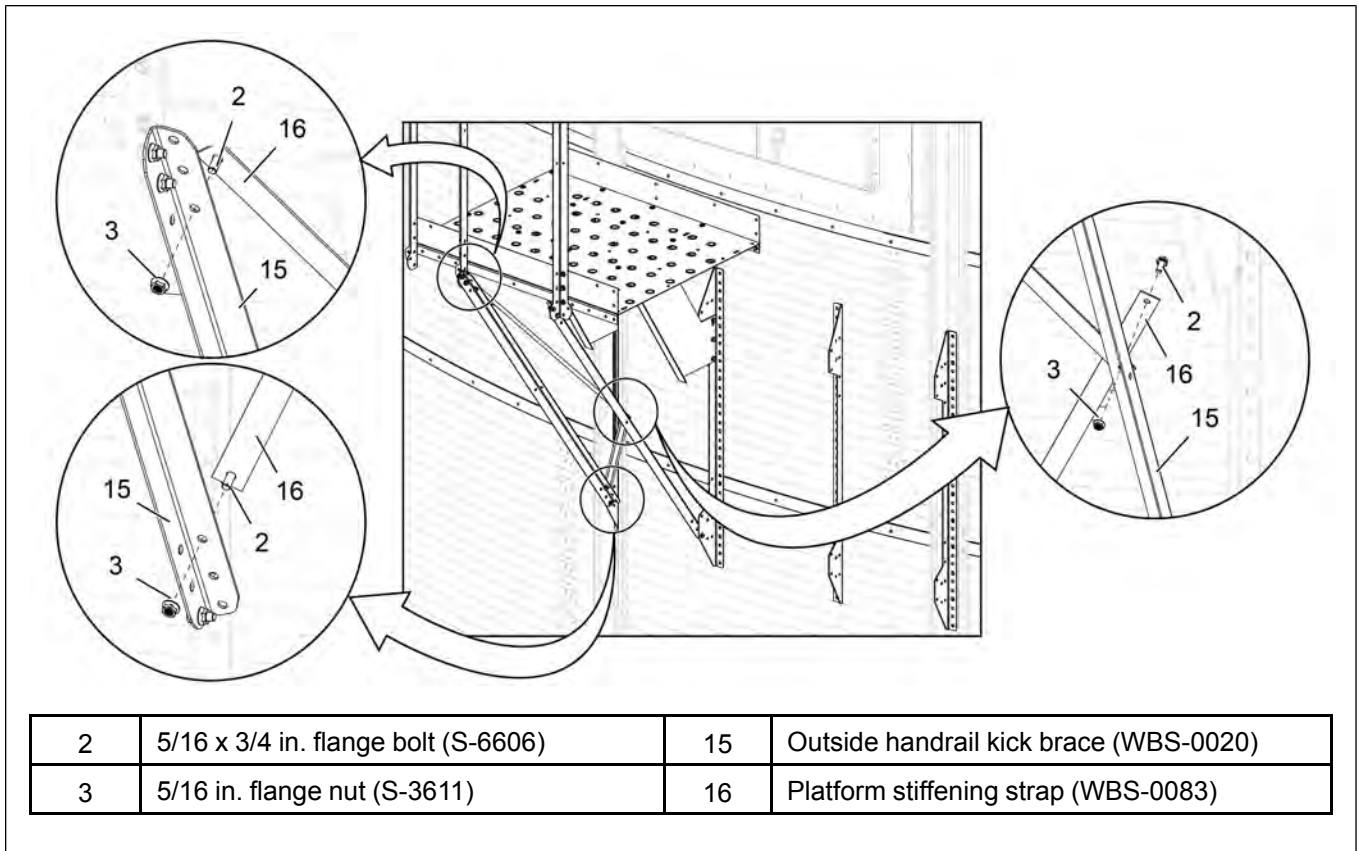
NOTE: Leave the flange bolts (2) hand tight until the platform stiffening straps (16) are attached in the next step.

Figure 2-11 Installing the outside handrail kick braces for first platform



4. Install the two platform stiffening straps (16) to the outside handrail kick braces (15) using flange bolts (2) and flange nuts (3).

Figure 2-12 *Installing the platform stiffening straps for first platform*



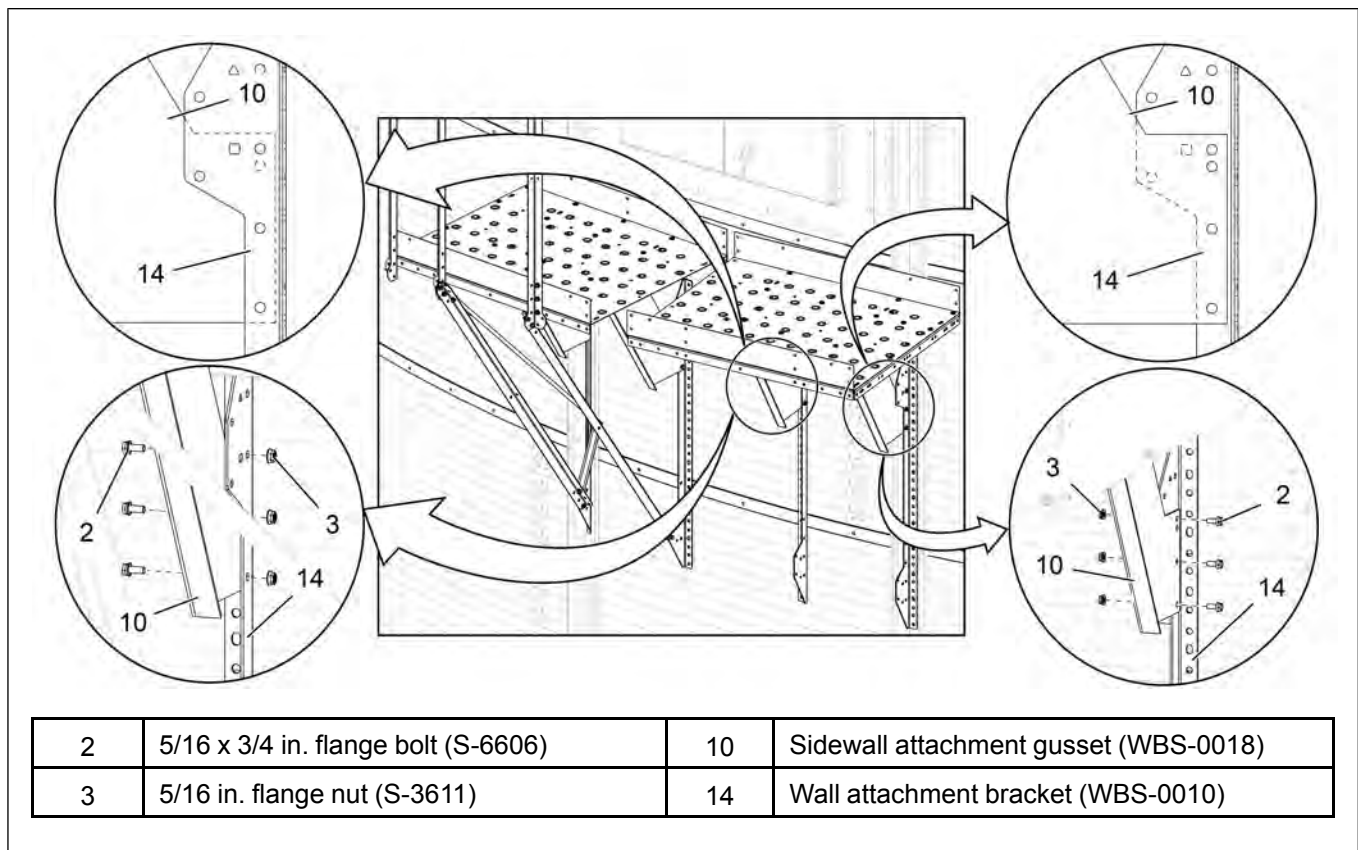
Chapter 2: Intermediate Platform

- For installing the second section, attach the two sidewall attachment gussets (10) in the second platform section to the two wall attachment brackets (14) using flange bolts (2) and flange nuts (3).

NOTE:

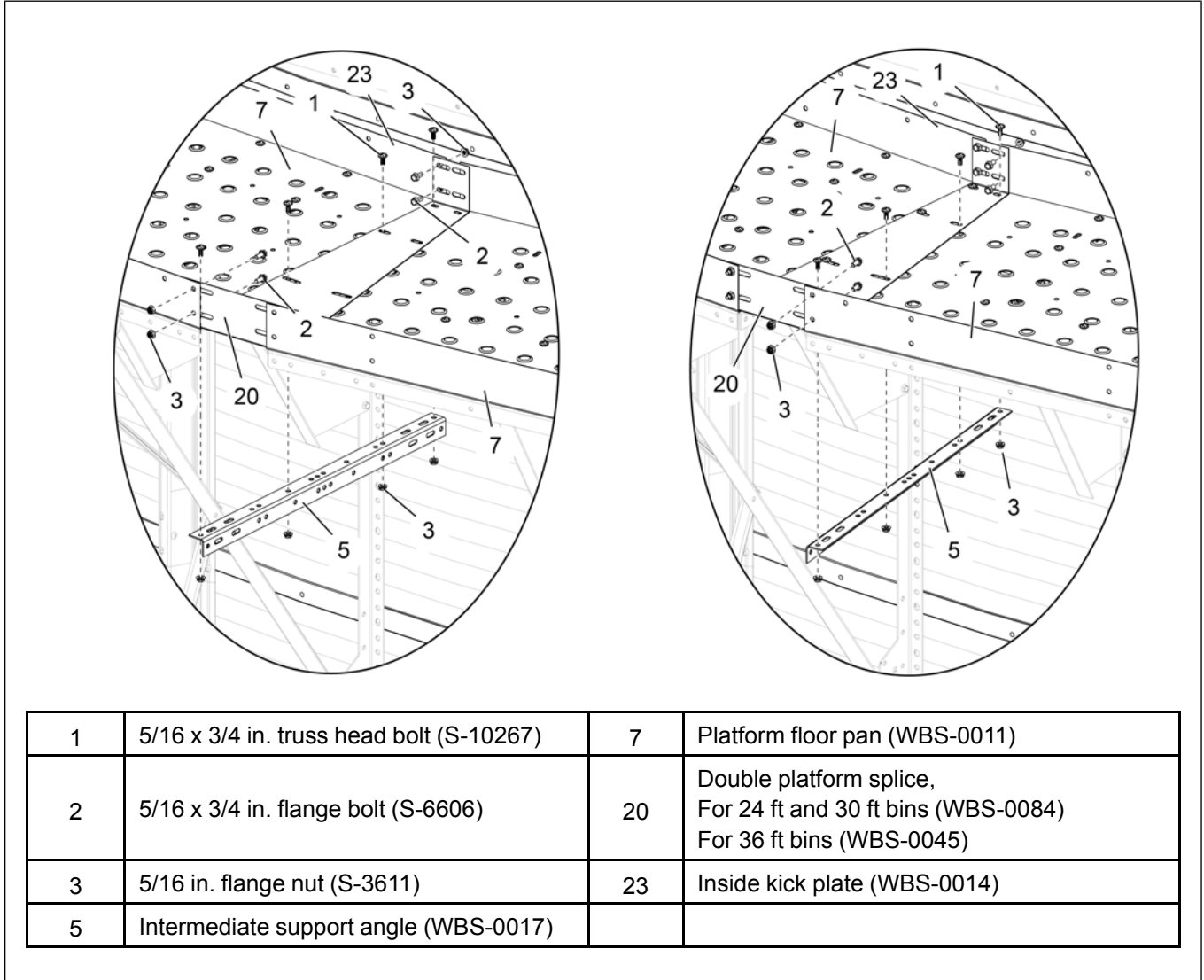
- Align the top hole of the sidewall attachment gusset (10) in the second platform section to the hole next to the square in the wall attachment bracket (14) to position the platform section assembly below the access door.
- Install the sidewall attachment gusset (10) on the outside of the angle in the wall attachment bracket (14).
- Tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) before tightening the bolts connecting the sidewall attachment gussets (10) and the intermediate support angles (14) underneath the platform to aid in leveling the second platform section.

Figure 2-13 Installing the sidewall attachment gussets for second platform



6. Install the double platform splice (20) with intermediate support angles (5) to the platform floor (7) in each section and inside kick plate (23) using eight truss head bolts (1), eight flange bolts (2) and sixteen flange nuts (3) to secure the two platform sections.

Figure 2-14 *Installing the double platform splice*



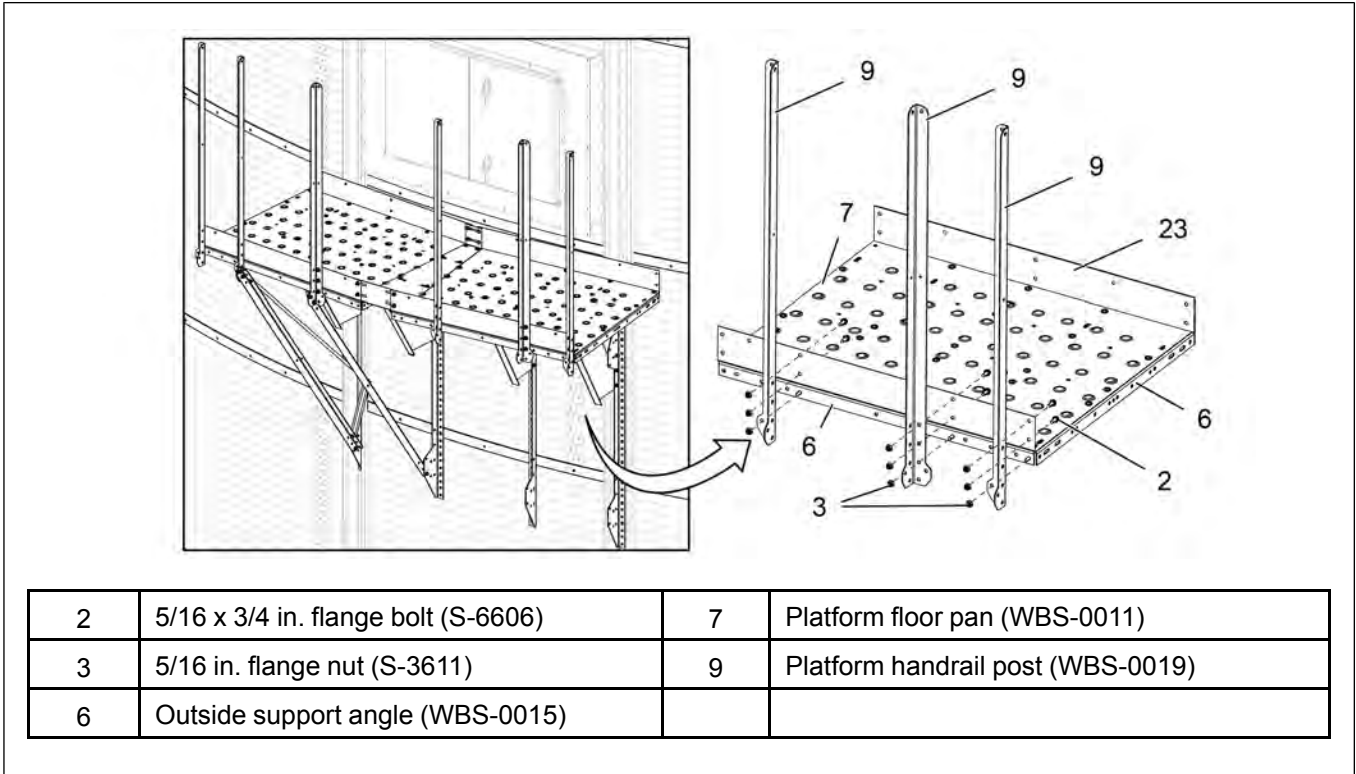
Chapter 2: Intermediate Platform

7. Install the three handrail posts (9) to the outside support angle (6) and platform floor pan (7) in the second platform section using the flange bolts (2) and flange nuts (3).

NOTE:

- Install the flange bolts (2) with the bolt head towards the inside of the platform.
- Hand tighten the flange bolts (2).

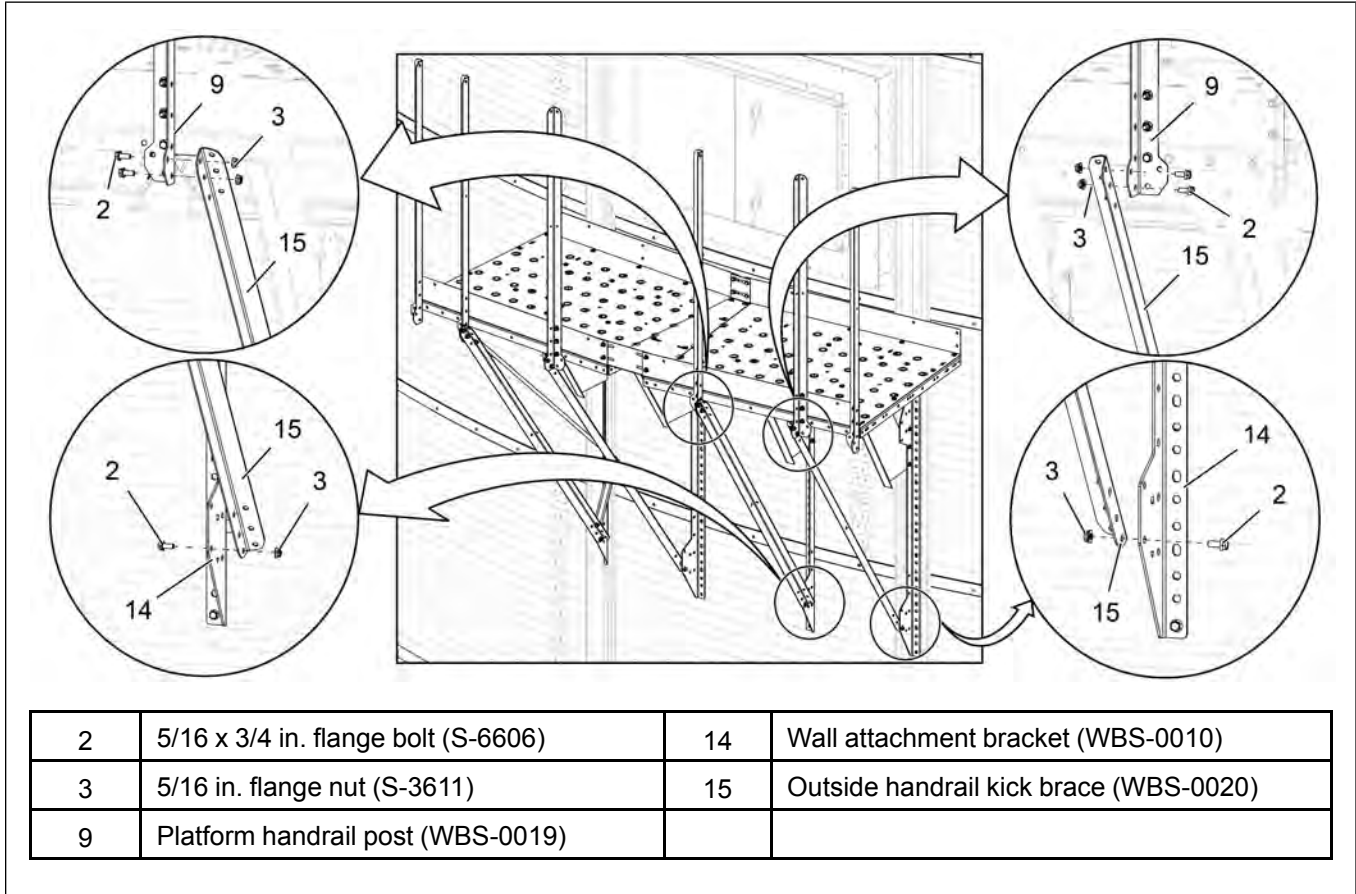
Figure 2-15 Installing the handrail posts for second platform



- Install the two outside handrail kick braces (15), securing one end of each kick brace to the bottom hole of the wall attachment bracket (14) and the other end to the two holes in handrail post (9) using flange bolts (2) and flange nuts (3).

NOTE: Leave the flange bolts (2) loose until the platform stiffening straps (16) are attached in the next step.

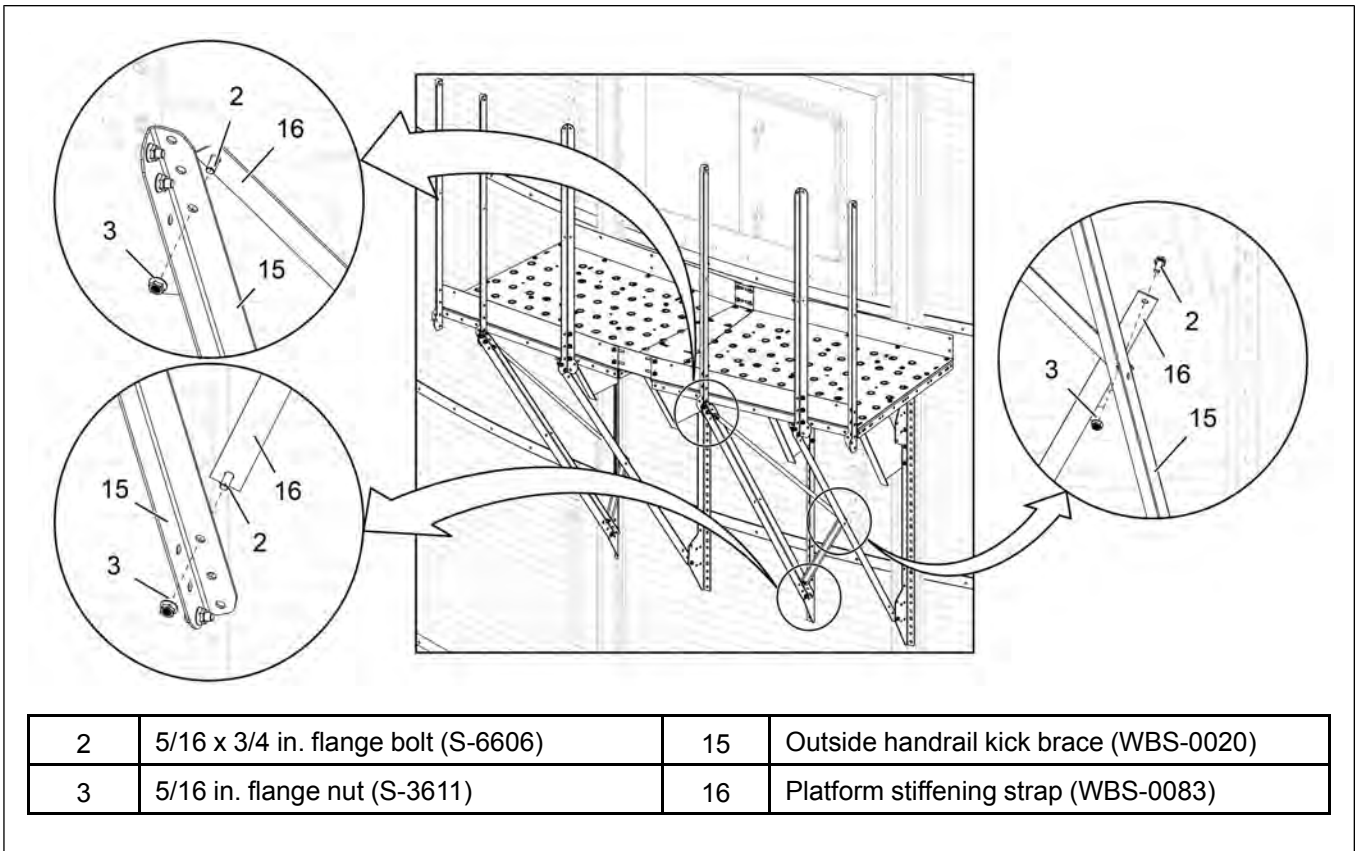
Figure 2-16 Installing the outside handrail kick braces for second platform



Chapter 2: Intermediate Platform

9. Install the two platform stiffening straps (16) to the outside handrail kick braces (15) with flange bolts (2) and flange nuts (3).

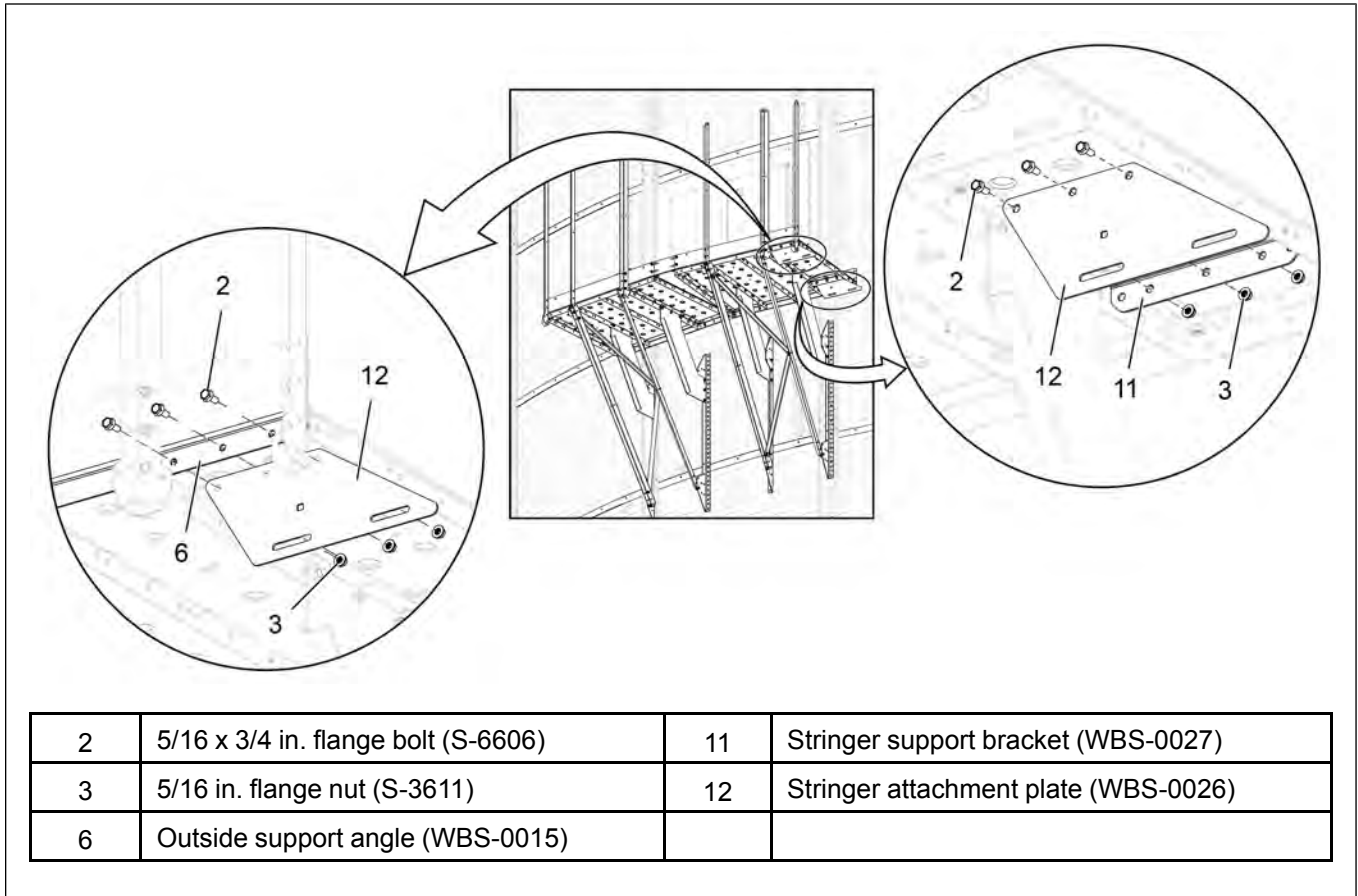
Figure 2-17 Installing the platform stiffening strips for second platform



10. Tighten and level the handrail posts (9).
11. Tighten the outside handrail kick braces (15) and the platform stiffening straps (16).

12. Install a stringer attachment plate (12) to the outside of the stringer support bracket (11) using flange bolts (2) and flange nuts (3).
13. Install a stringer attachment plate (12) to the inside of the outside support angle (6) using flange bolts (2) and flange nuts (3).

Figure 2-18 *Installing the stringer attachment plates for second section*



Installing the Handrails for Intermediate Platform

The following procedure is for the installation of handrails for the intermediate platform located below the access door.

1. Install the handrail brackets (17) to the top end of the handrail posts (9) with flange bolts (2) and flange nuts (3).

NOTE: Install the flange bolts (2) from the inside of the platform and flange nuts (3) on the outside.

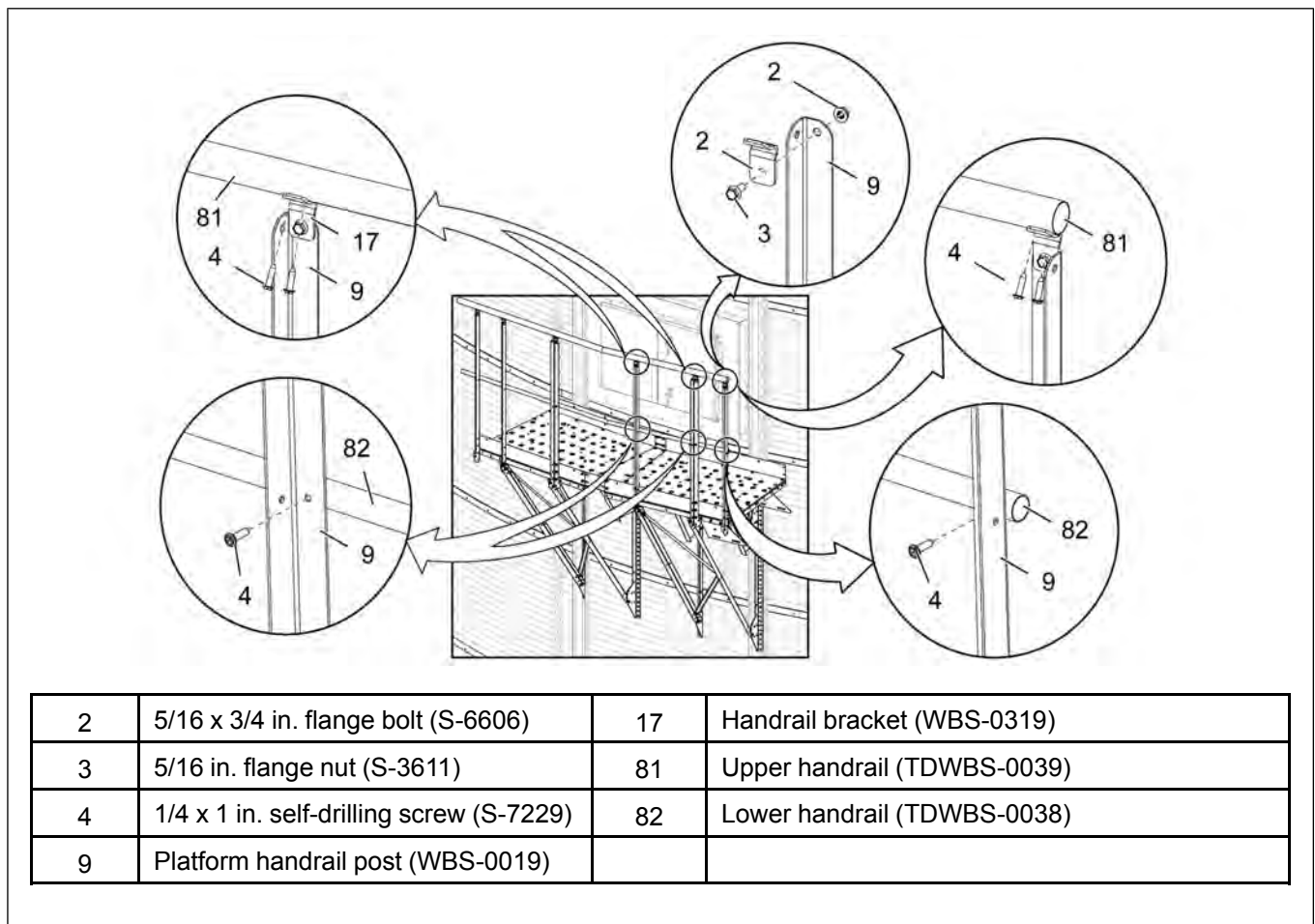
2. Install the intermediate platform upper handrail (81) to the handrail brackets (17) using two self-drilling screws (4) per bracket in the platform sections.

NOTE: Install the self-drilling screw (4) from the outside of the handrail bracket (17).

3. Align the intermediate platform lower handrail (82) with the hole located in the middle of the handrail posts (9) and secure using self-drilling screws (4) in the platform sections.

NOTE: Install the self-drilling screw (4) from the outside of the handrail post (9).

Figure 2-19 Installing the handrails



3 Assembling Winding Bin Stair Sections

Topics Covered in this Chapter

- Assembling the 4–Step Winding Bin Stair Section
- Assembling the 5–Step Winding Bin Stair Section
- Assembling the Standard Sidewall Attachment Bracket
- Assembling the Bottom Sidewall Attachment Bracket

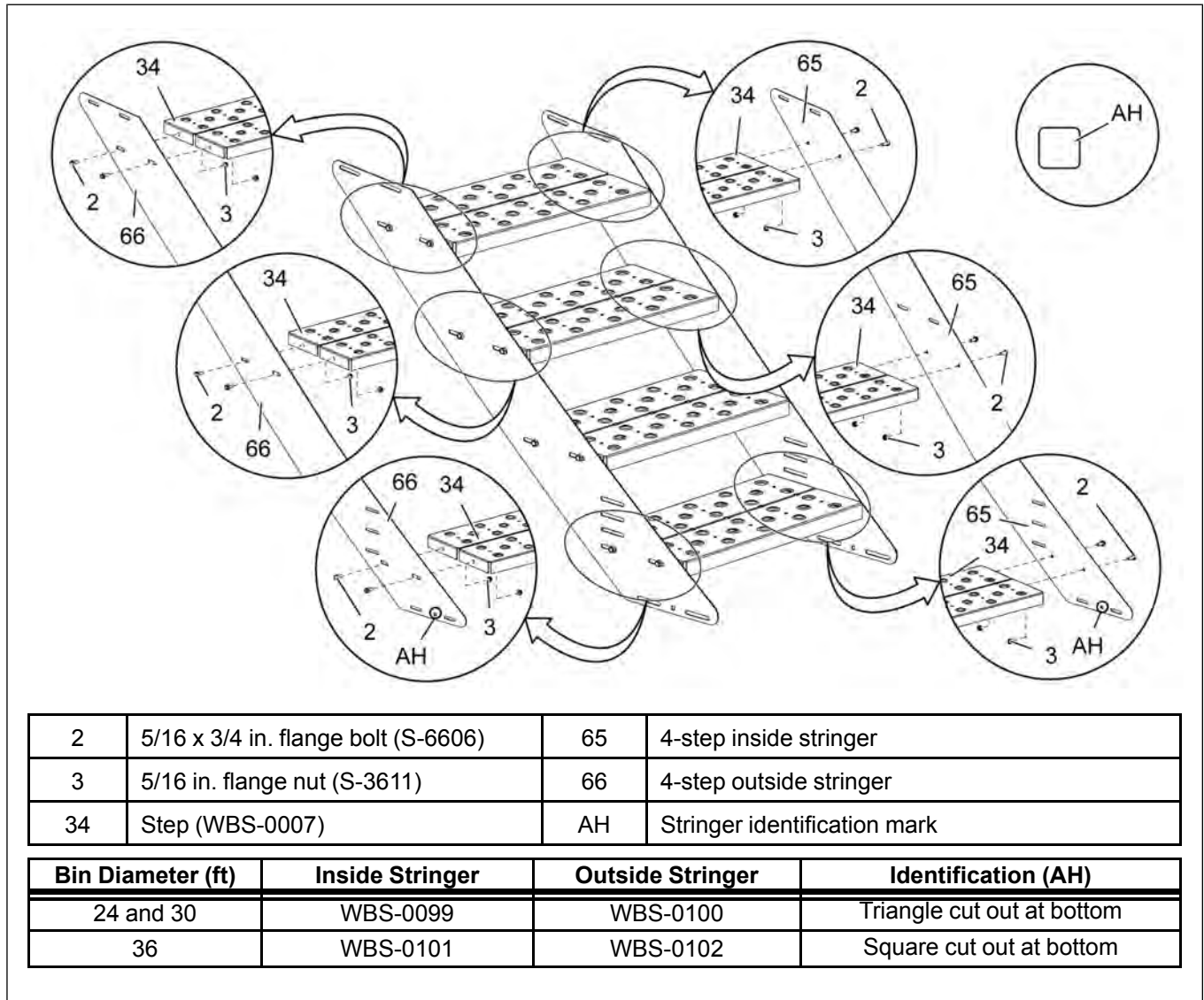
Assembling the 4-Step Winding Bin Stair Section

Place an inside stringer (65) and a outside stringer (66) at a distance and assemble the four stair steps (34) in between using flange bolts (2) and flange nuts (3).

NOTE:

- Orient the stringers to ensure the three slot pattern (vertical) is at the bottom of the stairs assembly.
- Install the flange bolts (2) from the outside of the stringer sections and flange nuts (3) on the inside.
- Leave the flange bolts (2) loose in the slots to allow the stairs to wrap correctly around the bin.

Figure 3-1 Assembling the 4-step stair section



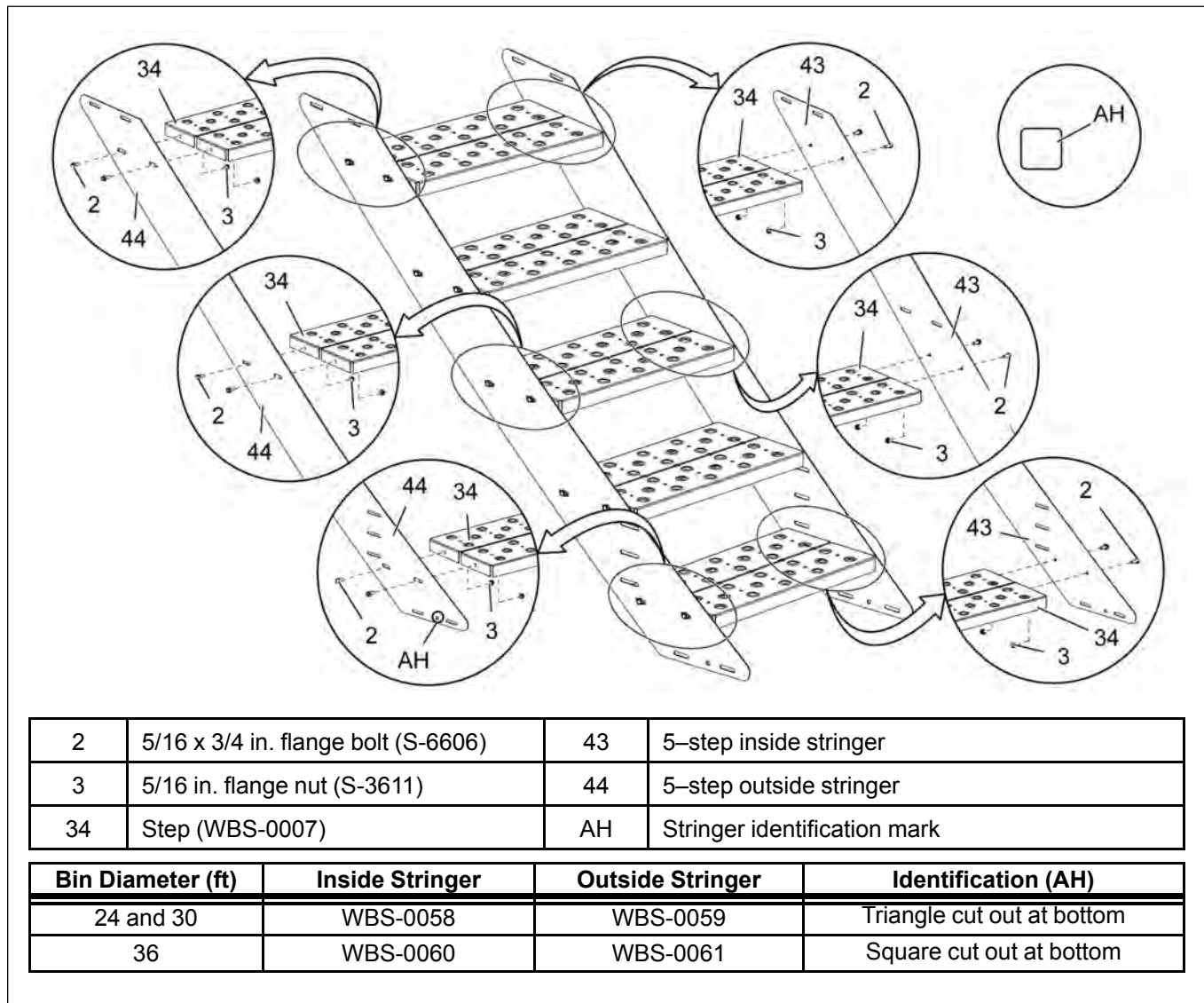
Assembling the 5-Step Winding Bin Stair Section

Place an inside stringer (43) and a outside stringer (44) at a distance and assemble the five stair steps (34) in between using flange bolts (2) and flange nuts (3).

NOTE:

- Orient the stringers to ensure the three slot pattern (vertical) is at the bottom of the stairs assembly.
- Install the flange bolts (2) from the outside of the stringer sections and flange nuts (3) on the inside.
- Leave the flange bolts (2) loose in the slots to allow the stairs to wrap correctly around the bin.

Figure 3-2 Assembling the 5-step stair section

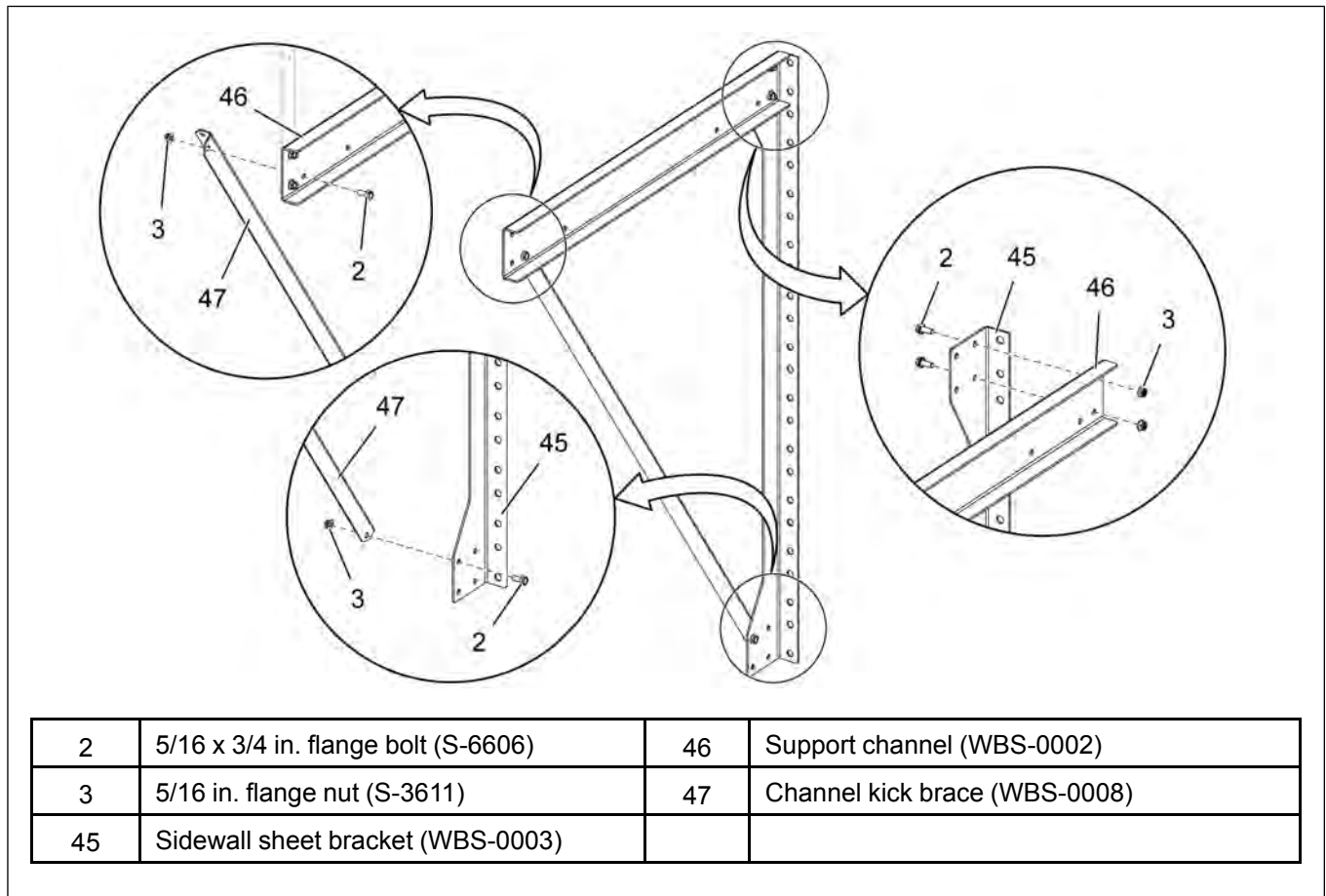


Assembling the Standard Sidewall Attachment Bracket

The standard sidewall attachment bracket will be used in all rings except the bottom ring for installing the winding bin stairs.

1. Using a square, attach the support channel (46) to the top of sidewall sheet bracket (45) and secure them using flange bolts (2) and flange nuts (3).
2. Attach a channel kick brace (47) to the support channel (46) and sidewall sheet bracket (45) with flange bolts (2) and flange nuts (3).

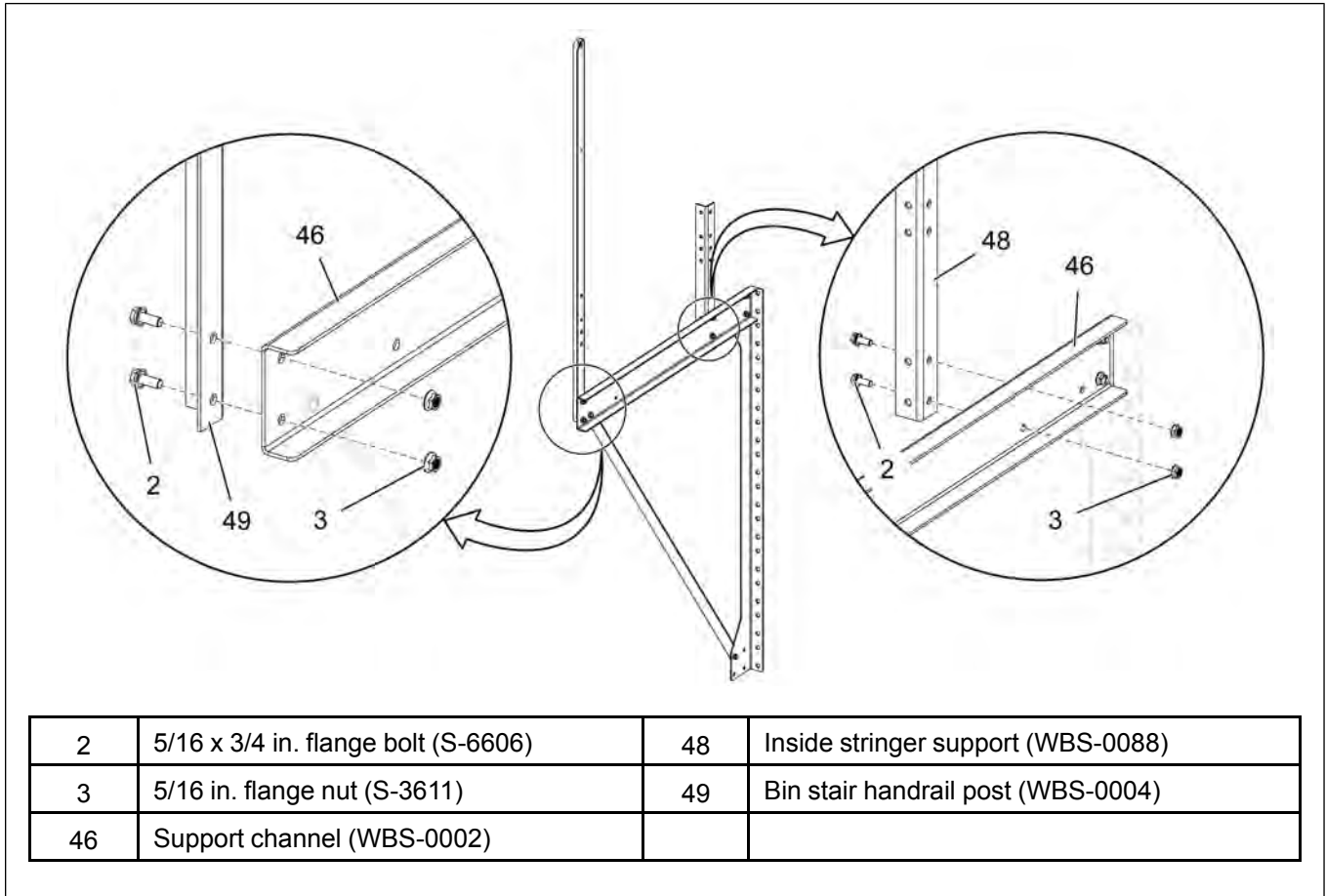
Figure 3-3 Assembling the Standard Sidewall Attachment Bracket



3. Attach the inside stringer support (48) and bin stair handrail post (49) to the support channel (46) using flange bolts (2) and flange nuts (3).

NOTE: *If an inside handrail is needed, replace inside stringer support (48) with another bin stair handrail post (49).*

Figure 3-4 *Assembling the Standard sidewall attachment bracket*



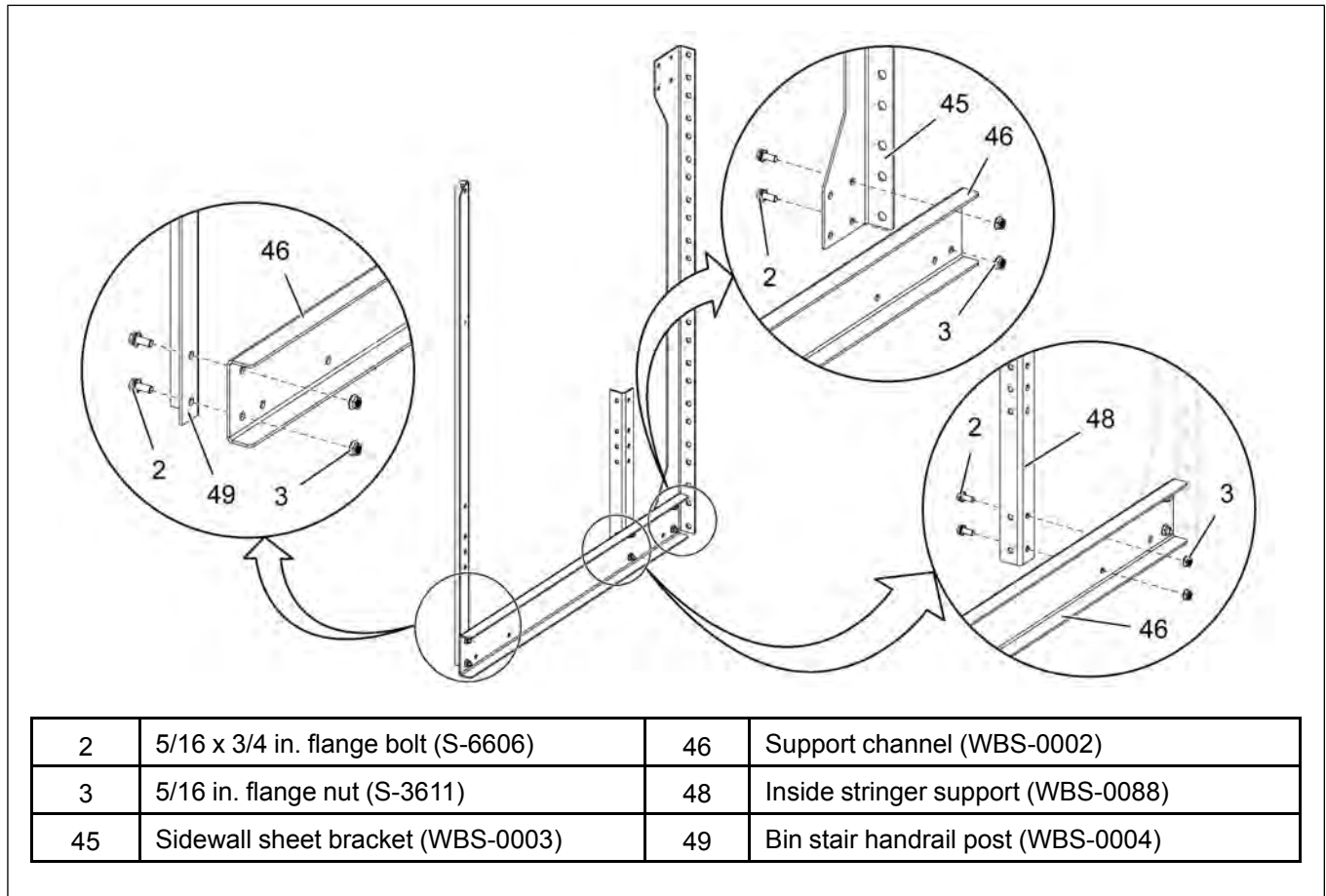
Assembling the Bottom Sidewall Attachment Bracket

The bottom sidewall attachment bracket will be used only in the bottom ring for installing the winding bin stairs.

1. Using a square, attach the support channel (46) to the bottom of the sidewall sheet bracket (45) and secure them using flange bolts (2) and flange nuts (3).
2. Attach the inside stringer support (48) and bin stair handrail post (49) to the support channel (46) using flange bolts (2) and flange nuts (3).

NOTE: If an inside handrail is needed, replace inside stringer support (48) with another bin stair handrail post (49).

Figure 3-5 Assembling the bottom sidewall attachment bracket



4 Installing Winding Bin Stairs (Intermediate to Eave)

Topics Covered in this Chapter

- Installing the Sidewall Attachment brackets (Intermediate Platform to Eave Platform)
- Installing the Stair Sections (Intermediate Platform to Eave Platform)
- Installing the Winding Bin Stair Handrails

Installing the Sidewall Attachment brackets (Intermediate Platform to Eave Platform)

1. Align and install a sidewall attachment bracket assembly (U) to the sidewall on the horizontal seam (K) using standard bin bolts (B) and flange nuts (C).

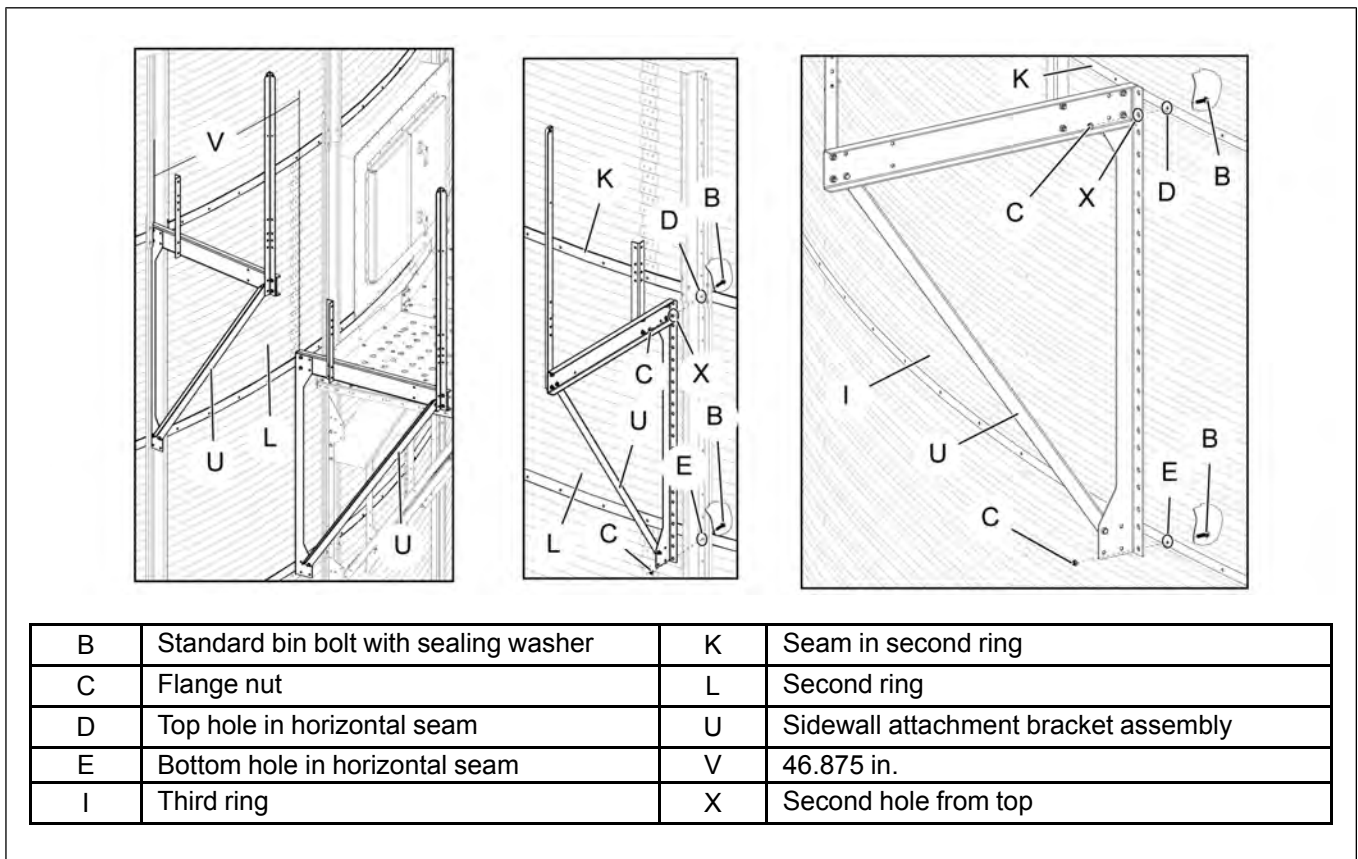
NOTE:

- Align the second hole (X) from the top and the last hole of the sidewall attachment bracket assembly (U) with the top (D) and bottom (E) holes in the horizontal seam (K) of the third ring (I).
- Install the first sidewall attachment bracket assembly (U) to the hole in the horizontal seam next to the intermediate platform assembly.
- The bolts must be installed with the bolt head on the inside of the bin.

2. Repeat the above step to continue installing another sidewall attachment bracket assembly (U) (one ring above) around the sidewall towards the eave.

NOTE: Install the sidewall attachment bracket assembly (U) with a hole to hole gap (V) of 46.875 in.

Figure 4-1 Installing the Sidewall Attachment brackets

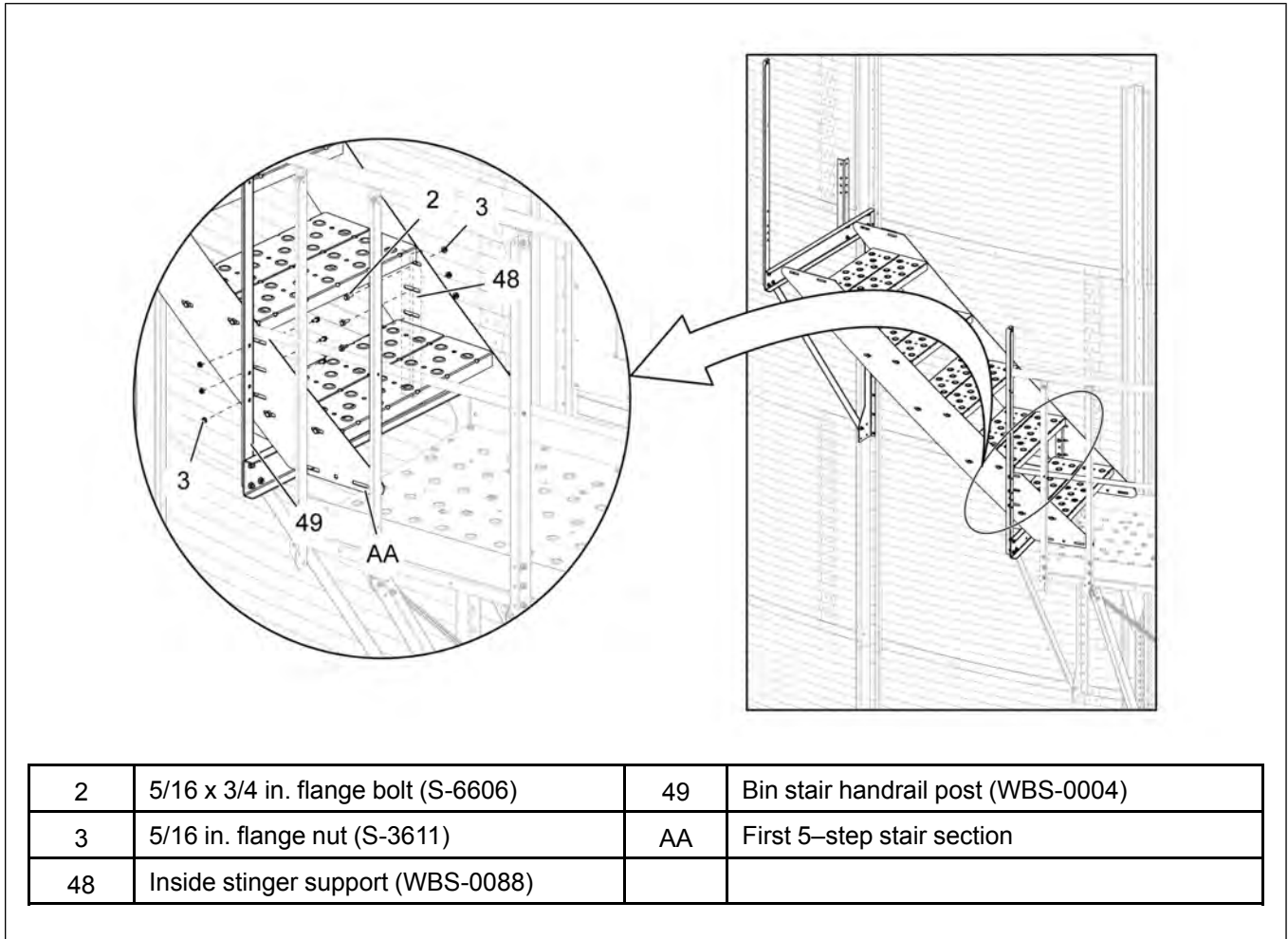


Installing the Stair Sections (Intermediate Platform to Eave Platform)

1. Align the bottom end of the first 5-step stair section (AA) to the handrail post (49) and the inside stringer support (48) and secure using flange bolts (2) and flange nuts (3).

NOTE: Hand-tighten the flange bolts (2).

Figure 4-2 Installing the first 5-step stair section



Chapter 4: Installing Winding Bin Stairs (Intermediate to Eave)

- Align the bottom end of the next 5-step stair section (AB) to the top end of the first 5-step stair section (AA) and secure using flange bolts (2) and flange nuts (3).

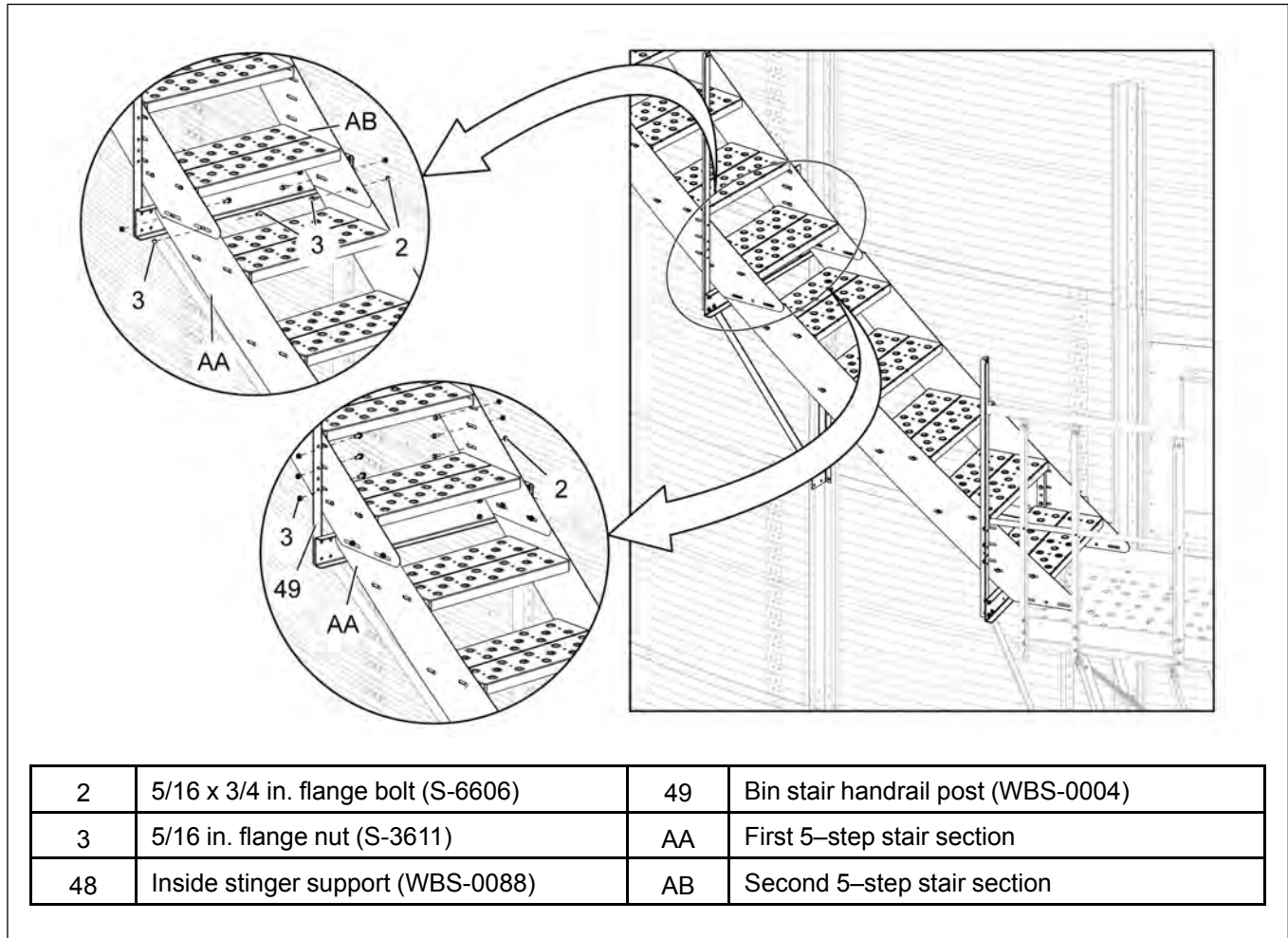
NOTE: Hand-tighten the flange bolts (2).

- Align the bottom end of the next 5-step stair section (AB) to the handrail post (49) and the inside stringer support (48) and secure using flange bolts (2) and flange nuts (3).

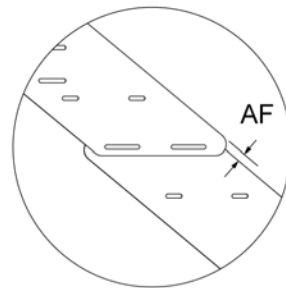
NOTE: The top end of the 5-step stair section (AB) will be aligned to the eave platform whenever it is installed.

NOTE: Hand-tighten the flange bolts (2).

Figure 4-3 Installing the next 5-step stair section



IMPORTANT: As the stair sections are being installed, make sure that any offset (AF) between the stringers is consistent throughout the winding bin stair assembly.



- Leave all flange bolts (2) hand tight until the eave platform is installed to the bin wall.

Installing the Winding Bin Stair Handrails

The following procedure is for the installation of outer handrails for the winding bin stair assembly

1. Install the handrail brackets (17) to the end of bin stair handrail posts (49) using flange bolts (2) and flange nuts (3).

NOTE: *Install the flange bolts (2) from the inside of the stairs assembly and flange nuts (3) on the outside.*

2. Starting at the top of the winding bin stair assembly and working towards the bottom, orient the upper handrail (41) with the swaged end up and secure it to the handrail brackets (17) using two self-drilling screws (4) per bracket.

NOTE:

- *The swage at the top end will need to be cut off before it is attached to the handrail post in the platform.*
- *Install the self-drilling screws (4) from the outside of the handrail brackets (17).*

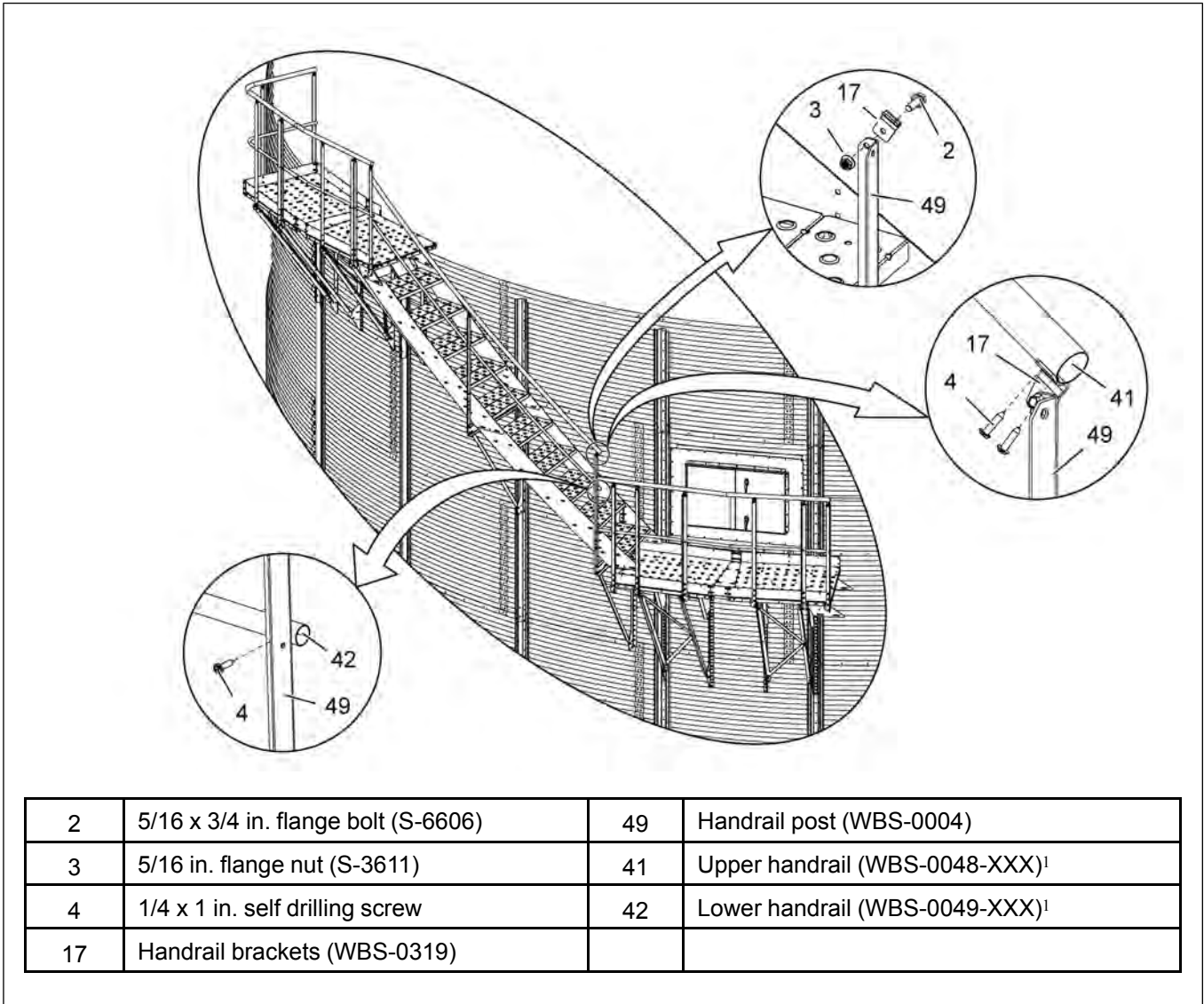
3. Starting at the top of the winding bin stair assembly and working towards the bottom, orient and align the lower handrail (42) to the holes located in the middle of the handrail posts (49) and secure using self drilling screws (4).

NOTE:

- *The swage at the top end will need to be cut off before it is attached to the handrail post in the platform.*
- *Install the self-drilling screws (4) from the outside of the roof handrail posts (49).*

Chapter 4: Installing Winding Bin Stairs (Intermediate to Eave)

Figure 4-4 Installing the handrails of Winding stairs for Eave platform



1. XXX-Denotes the bin diameter

5 Eave Platform

Topics Covered in this Chapter

- Assembling the Eave Platform
- Installing the Eave Platform
- Installing the Eave Platform Handrails

Assembling the Eave Platform

The eave platform is made of two 3-panel platform that are installed separately onto the sidewall and spliced together by a platform splice.

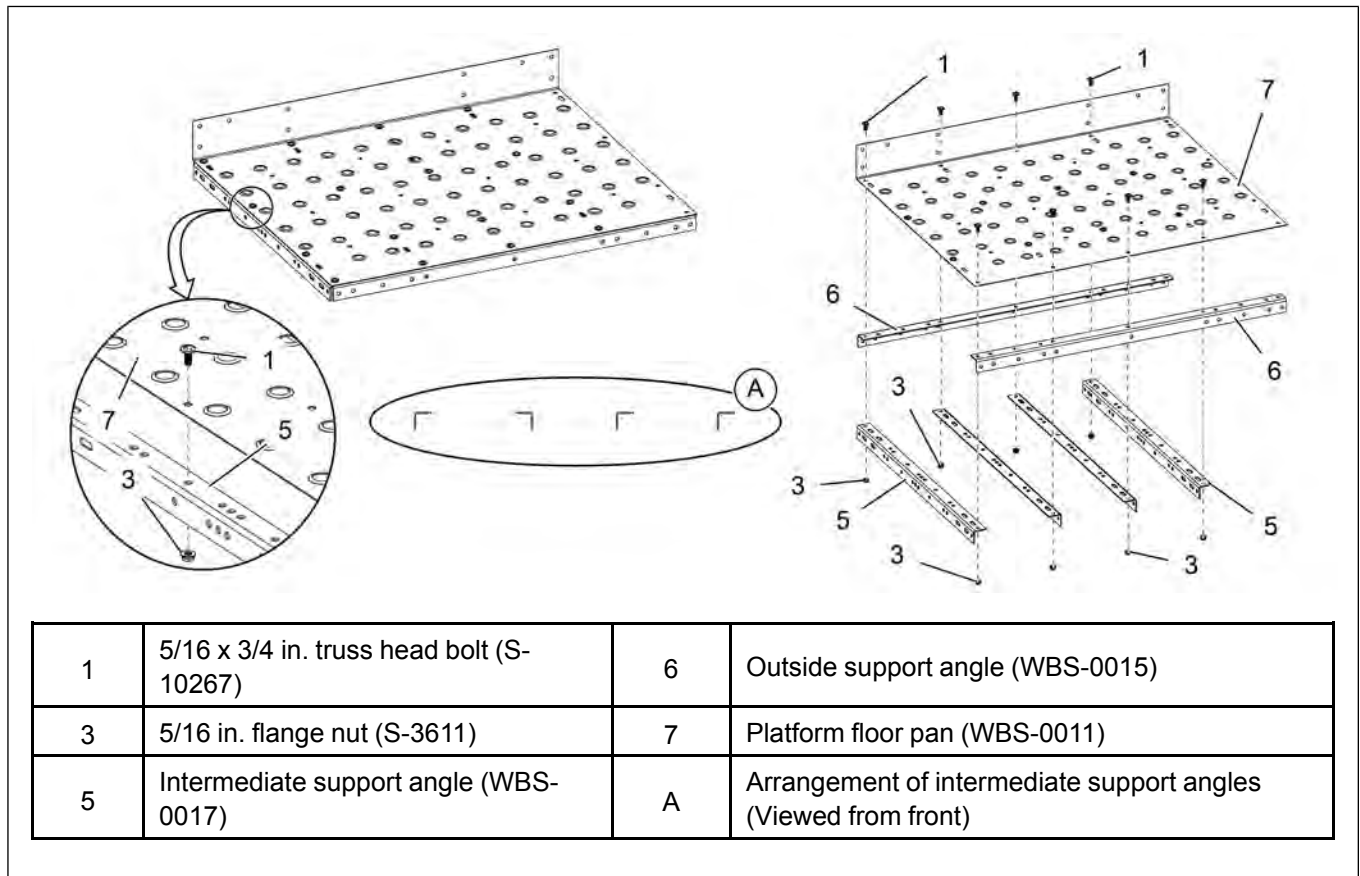
Assembling the First Platform Section

1. Assemble the four intermediate support angles (5), outside support angles (6) and platform floor pan (7) together with sixteen truss head bolts (1) and sixteen flange nuts (3).

IMPORTANT: Arrange the intermediate support angles (5) as shown (A).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

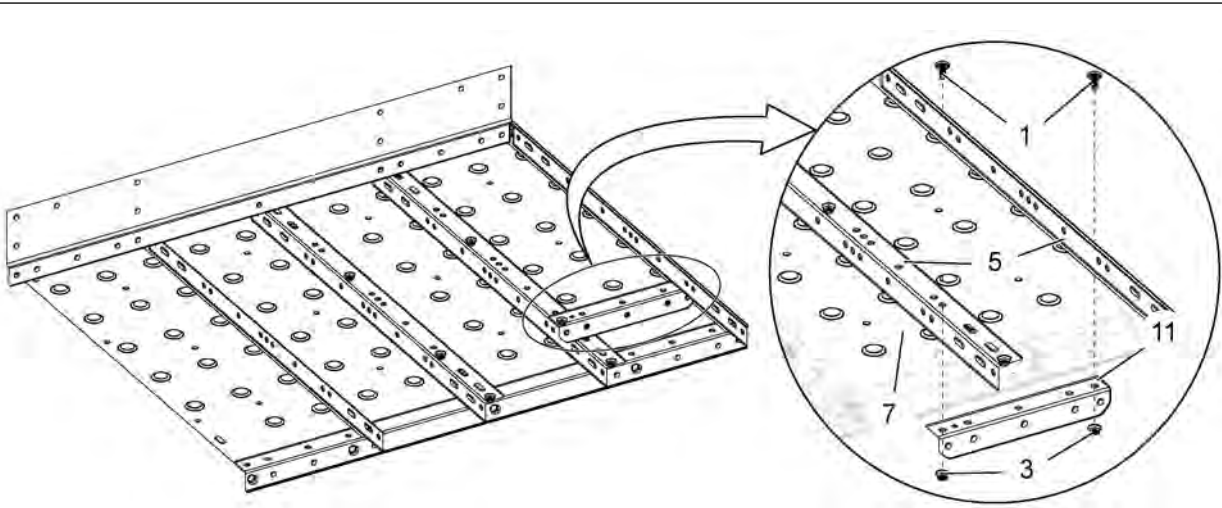
Figure 5-1 Assembling the platform floor (first platform section)



2. Assemble the stringer support bracket (11) to the platform floor pan (7) using the truss head bolts (1) and flange nuts (3).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

Figure 5-2 Assembling the stringer support bracket (first platform section)



1	5/16 x 3/4 in. truss head bolt (S-10267)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	11	Stringer support bracket (WBS-0027)
5	Intermediate support angle (WBS-0017)		

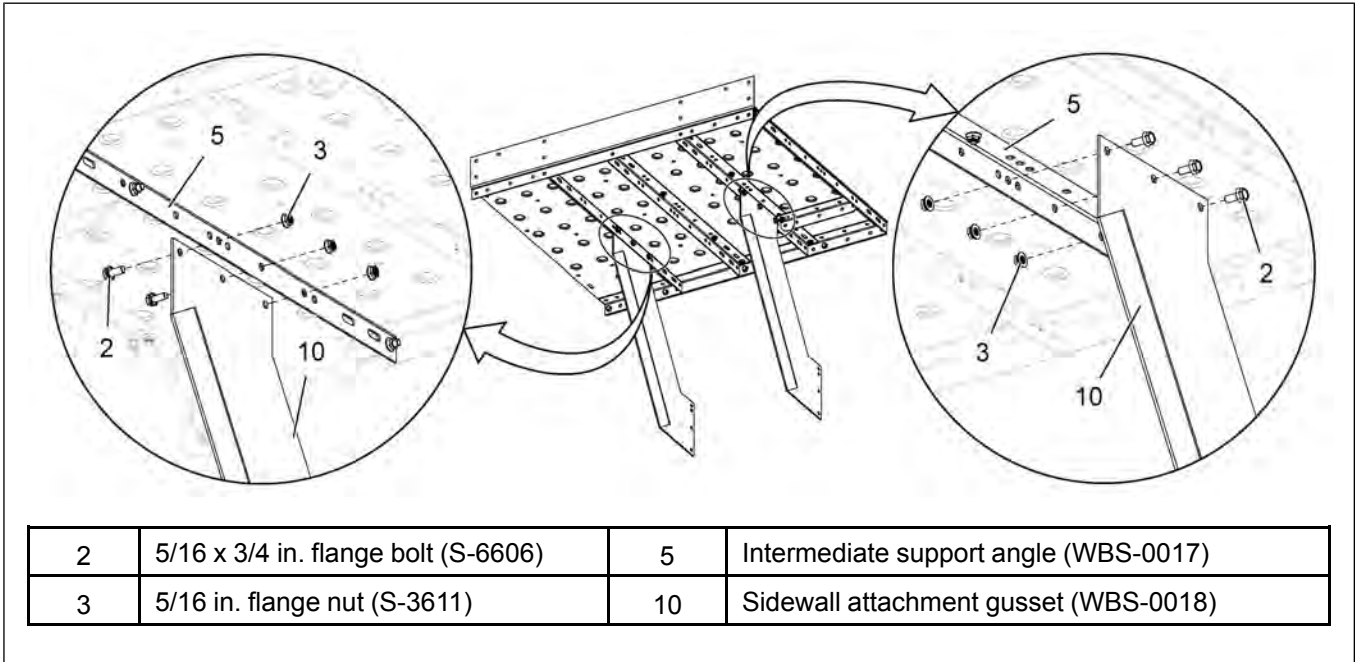
Chapter 5: Eave Platform

3. Assemble the two sidewall attachment gussets (10) to the intermediate support angles (5) in the assembled platform using flange bolts (2) and flange nuts (3).

NOTE:

- Align the first hole of the sidewall attachment gusset (10) to the third circular hole of the intermediate support angle (5).
- Hand tighten the flange bolts (2) before the platform is leveled on the bin.

Figure 5-3 Assembling the sidewall attachment gussets (first platform section)



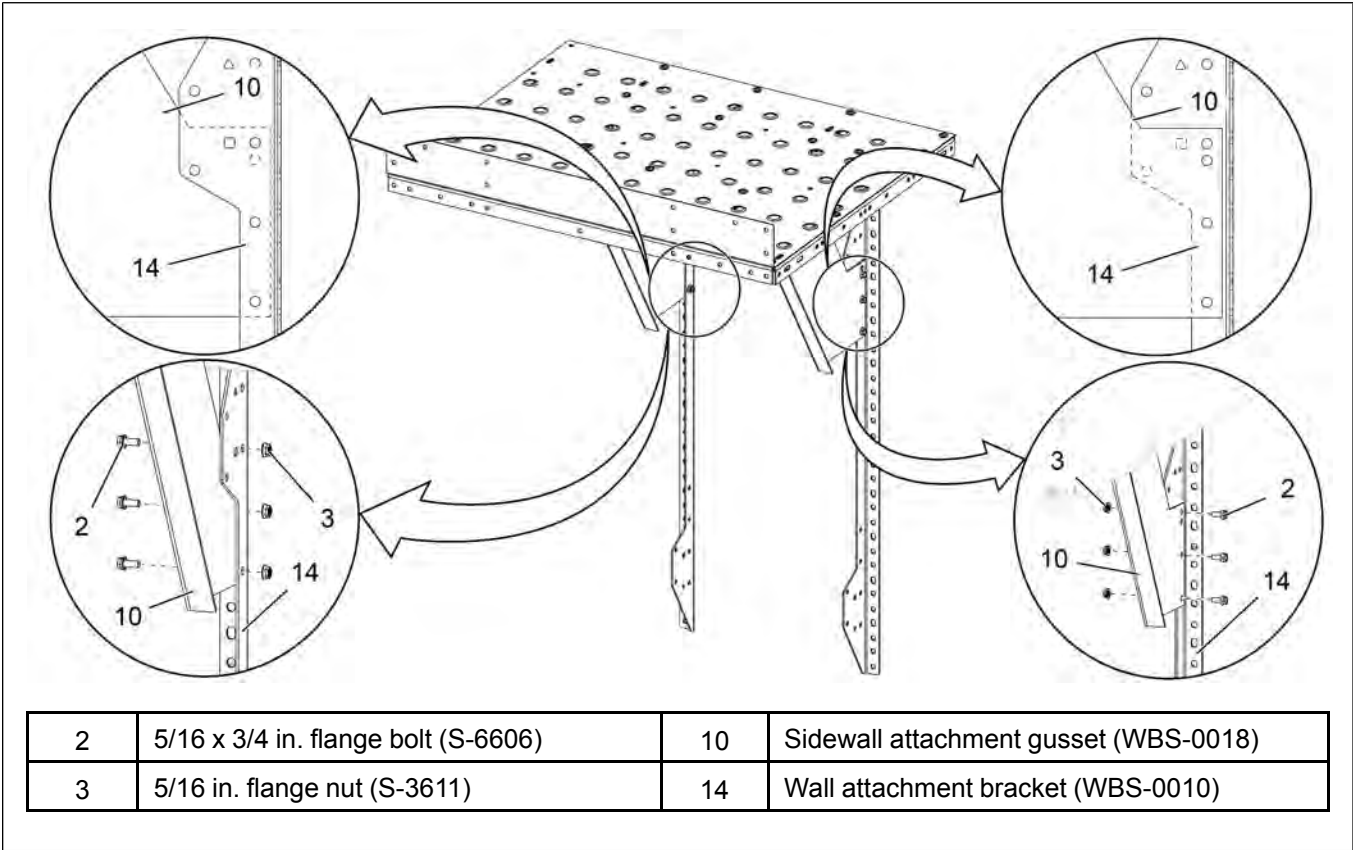
NOTE: Make sure the four bolt pattern in sidewall attachment gusset (10) is at the bottom and facing the bin wall.

4. Assemble the two wall attachment brackets (14) to the sidewall attachment gussets (10) using flange bolts (2) and flange nuts (3).

NOTE:

- Align the top hole of the sidewall attachment gusset (10) to the hole next to the square in the wall attachment bracket (14) to position the platform assembly above the eave.
- Hand tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) to aid in leveling the platform assembly.

Figure 5-4 Assembling the wall attachment brackets to the sidewall attachment gussets (first platform section)

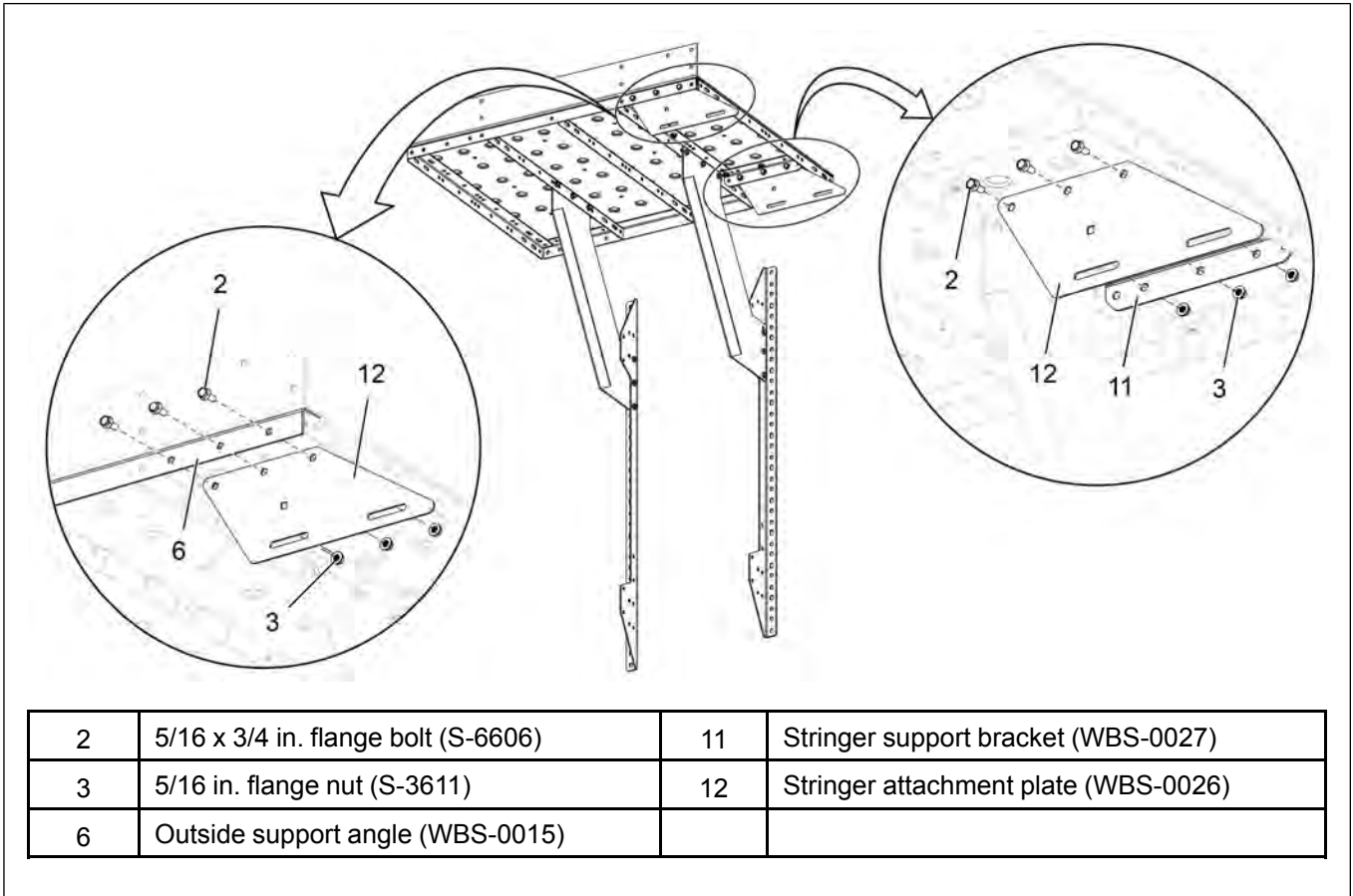


5. Assemble a stringer attachment plate (12) to the outside of the stringer support bracket (11) using flange bolts (2) and flange nuts (3).

6. Assemble a stringer attachment plate (12) to the inside of the outside support angle (6) using flange bolts (2) and flange nuts (3).

Chapter 5: Eave Platform

Figure 5-5 Assembling the stringer attachment plates (first platform section)



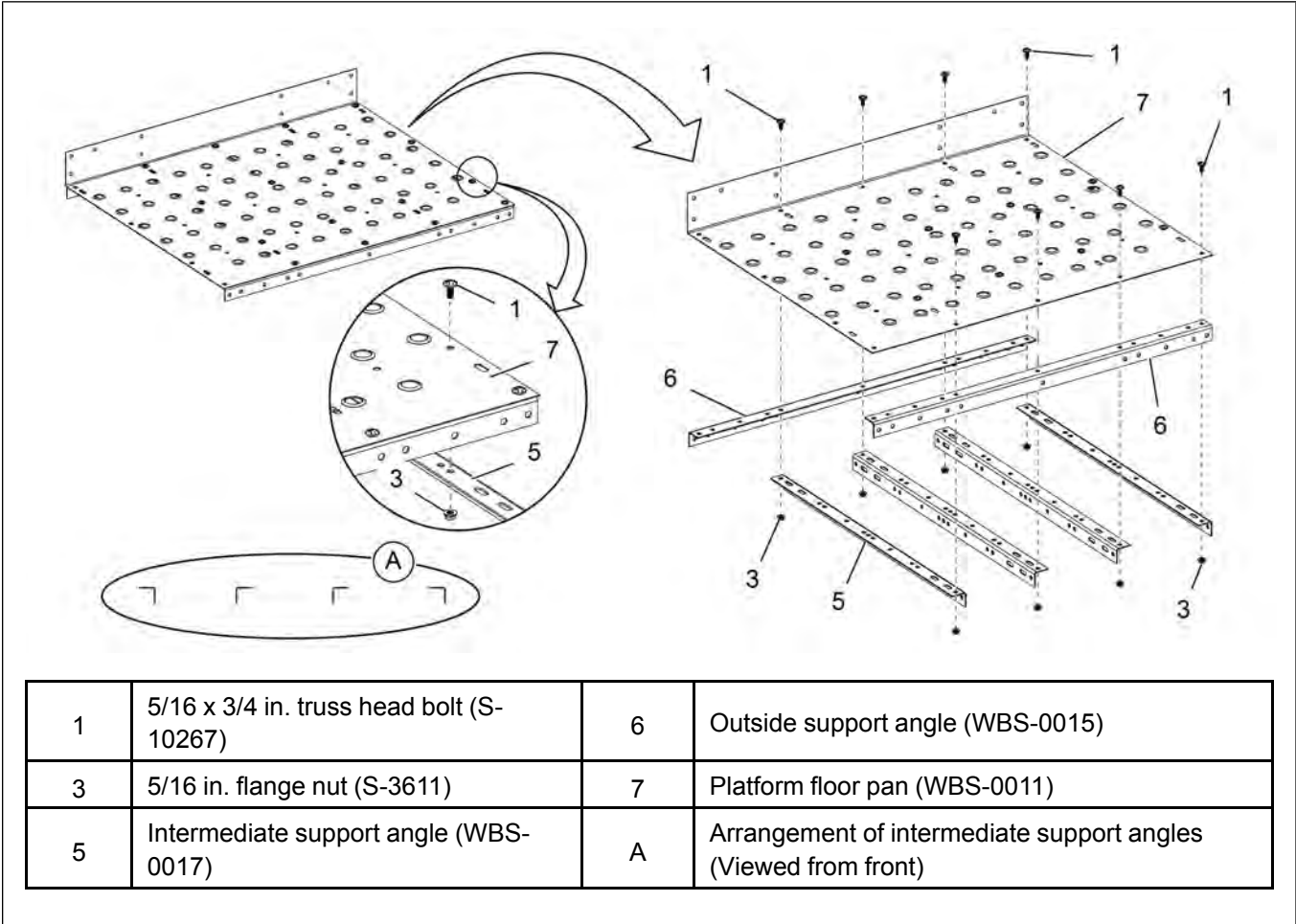
Assembling the Second Platform Section

1. Assemble the four intermediate support angles (5), outside support angles (6) and platform floor pan (7) together with sixteen truss head bolts (1) and sixteen flange nuts (3).

IMPORTANT: Arrange Intermediate support angles (5) as shown (A).

NOTE: Tighten the truss head bolts (1) before the platform floor is installed to the bin.

Figure 5-6 Assembling the platform floor (second platform section)

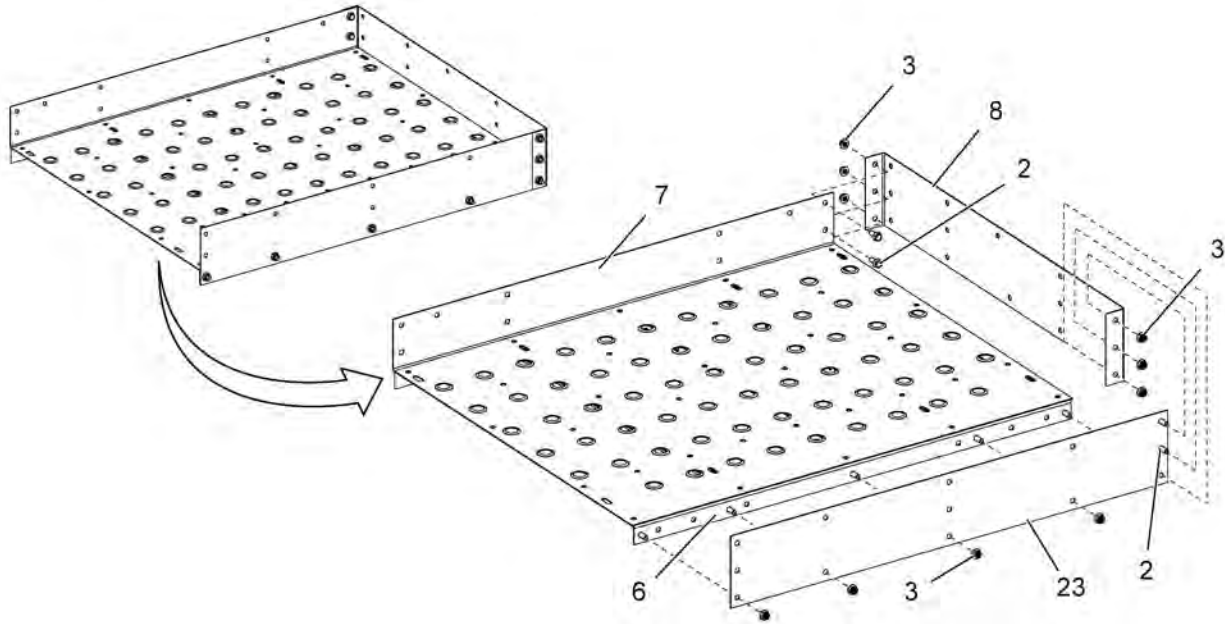


Chapter 5: Eave Platform

- Assemble the platform end toe board (8) and the inside kick plate (23) to end of platform floor pan (7) and the outside support angle (6) using flange bolts (2) and flange nuts (3).

NOTE: Tighten the flange bolts (2) before the platform is installed to the bin.

Figure 5-7 Assembling the platform end toe board and inside kick plate (second platform section)



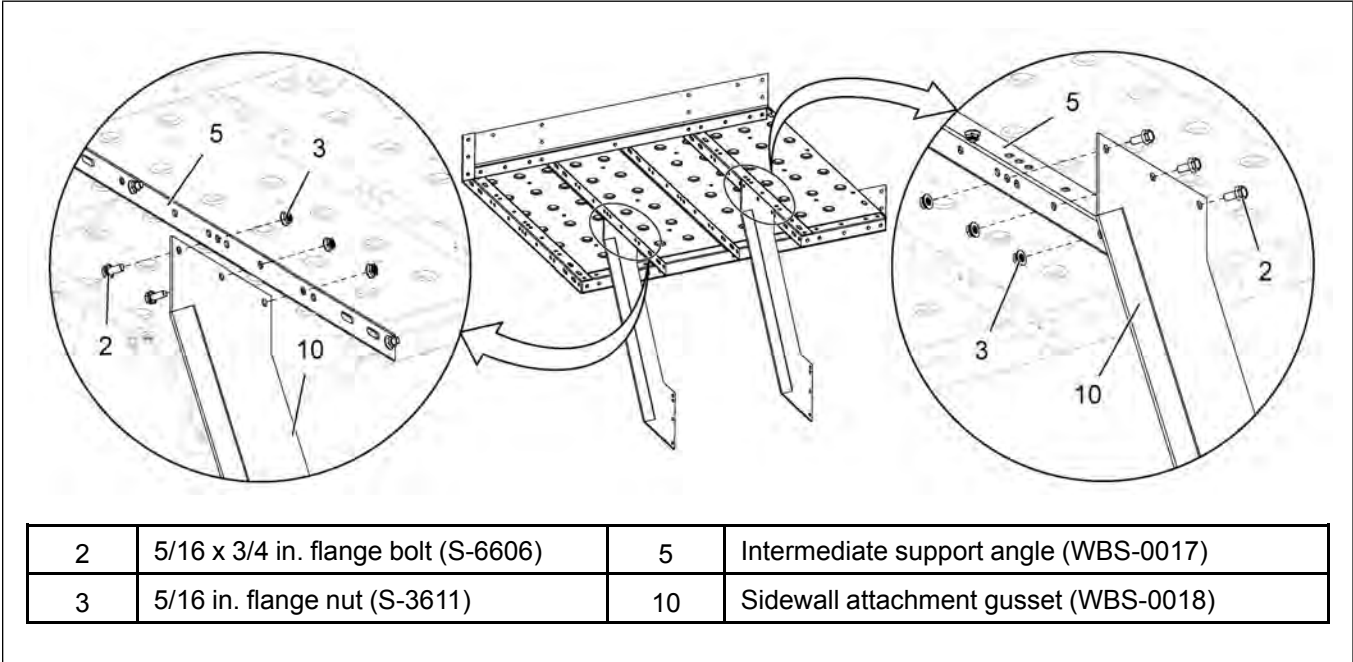
2	5/16 x 3/4 in. flange bolt (S-6606)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	8	Platform end toe board (WBS-0022)
6	Outside support angle (WBS-0015)	23	Inside kick plate (WBS-0014)

3. Assemble the two sidewall attachment gussets (10) to the intermediate support angles (5) in the assembled platform using flange bolts (2) and flange nuts (3).

NOTE:

- Align the first hole of the sidewall attachment gusset (10) to the third circular hole of the intermediate support angle (5).
- Hand tighten the flange bolts (2) before the platform is leveled on the bin.

Figure 5-8 Assembling the sidewall attachment gussets (second platform section)



NOTE: Make sure the four bolt pattern in sidewall attachment gusset (10) is at the bottom and facing the bin wall.

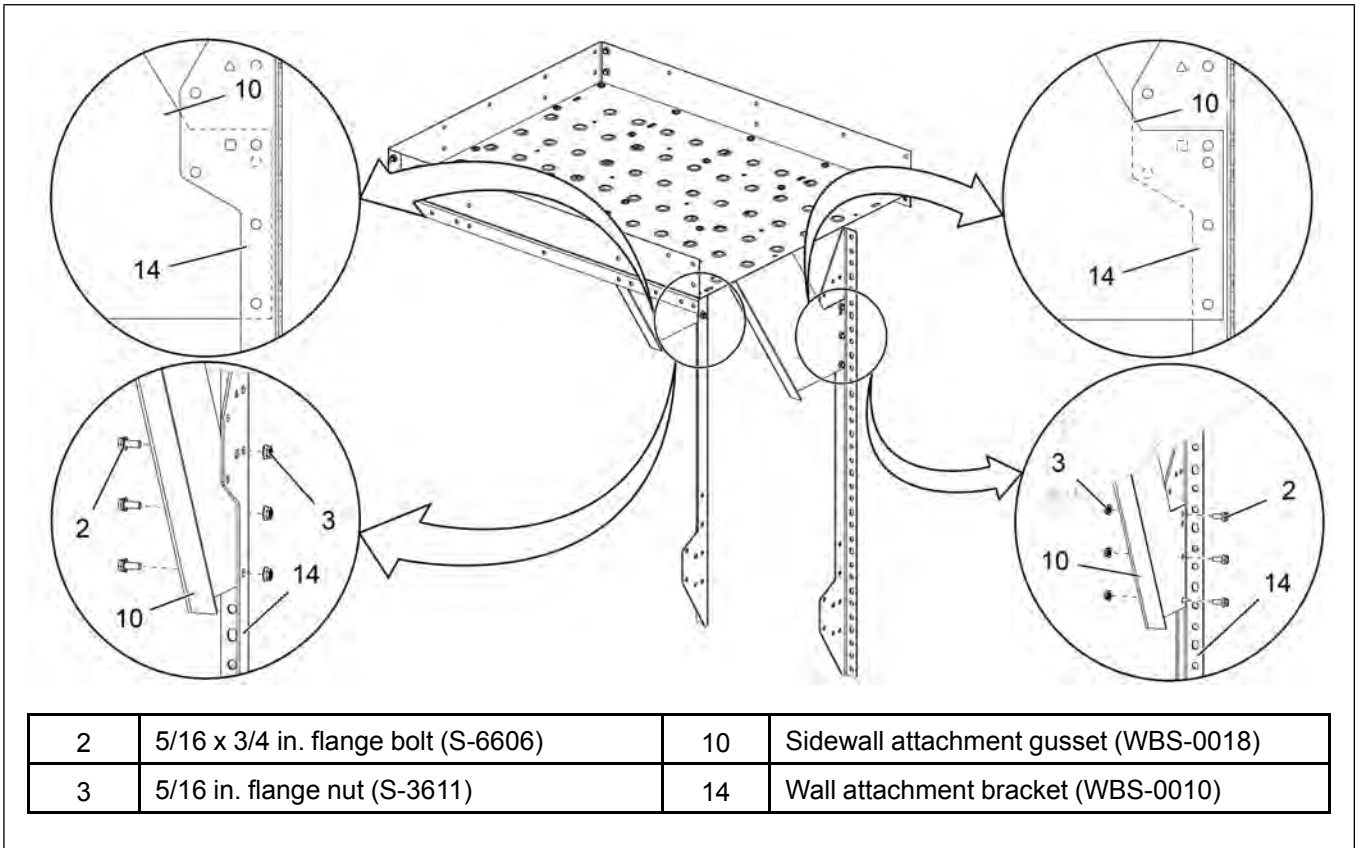
Chapter 5: Eave Platform

4. Assemble the two wall attachment brackets (14) to the sidewall attachment gussets (10) using flange bolts (2) and flange nuts (3).

NOTE:

- Align the top hole of the sidewall attachment gusset (10) to the hole next to the square in the wall attachment bracket (14) to position the platform assembly above the eave.
- Hand tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) to aid in leveling the platform assembly.

Figure 5-9 Assembling the wall attachment brackets to the sidewall attachment gussets (second platform section)



Installing the Eave Platform

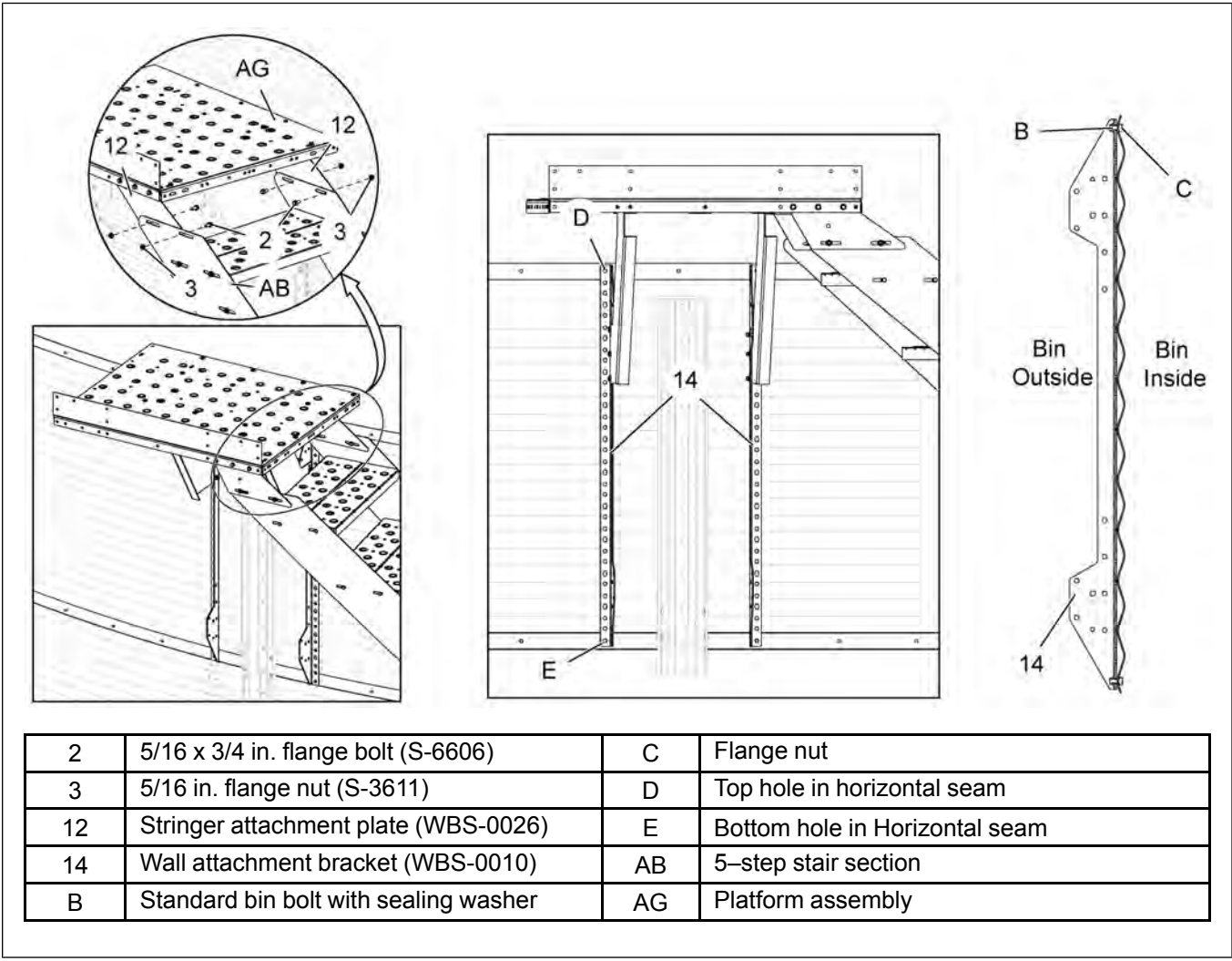
The following procedure is for the installation of the eave platform located above the eave. The two 3-panel platforms are installed separately onto the sidewall and spliced together using the platform splice.

1. To install the first platform section, align the bottom end of the stringer attachment plates (12) in the platform (AG) to the top end of the 5-step stair section (AB) using flange bolts (2) and flange nuts (3).
2. After aligning the stringer attachment plates, align and install the two wall attachment brackets (14) in the platform (AG) to the holes on the horizontal seam in the sidewall using standard bin bolts (B) and flange nuts (C).

NOTE:

- The bolts must be installed with the bolt head on the inside of the bin.
- Tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) before tightening the bolts connecting the sidewall attachment gussets (10) and the intermediate support angles (14) underneath the platform to aid in leveling the platform assembly.
- Align the first and last hole of the wall attachment bracket (14) with the top (D) and bottom (E) holes in the horizontal seam of the first ring.

Figure 5-10 Installing the first platform section



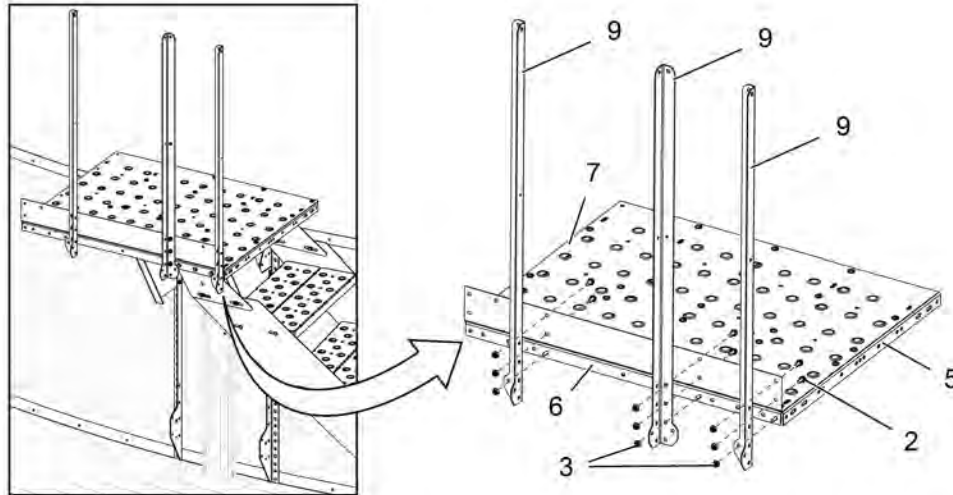
Chapter 5: Eave Platform

3. Install the three handrail posts (9) to the outside support angle (6) and platform floor pan (7) in the first platform section using the flange bolts (2) and flange nuts (3).

NOTE:

- Install the flange bolts (2) with the bolt head towards the inside of the platform.
- Hand tighten the flange bolts (2).

Figure 5-11 Installing the handrail posts for first platform section

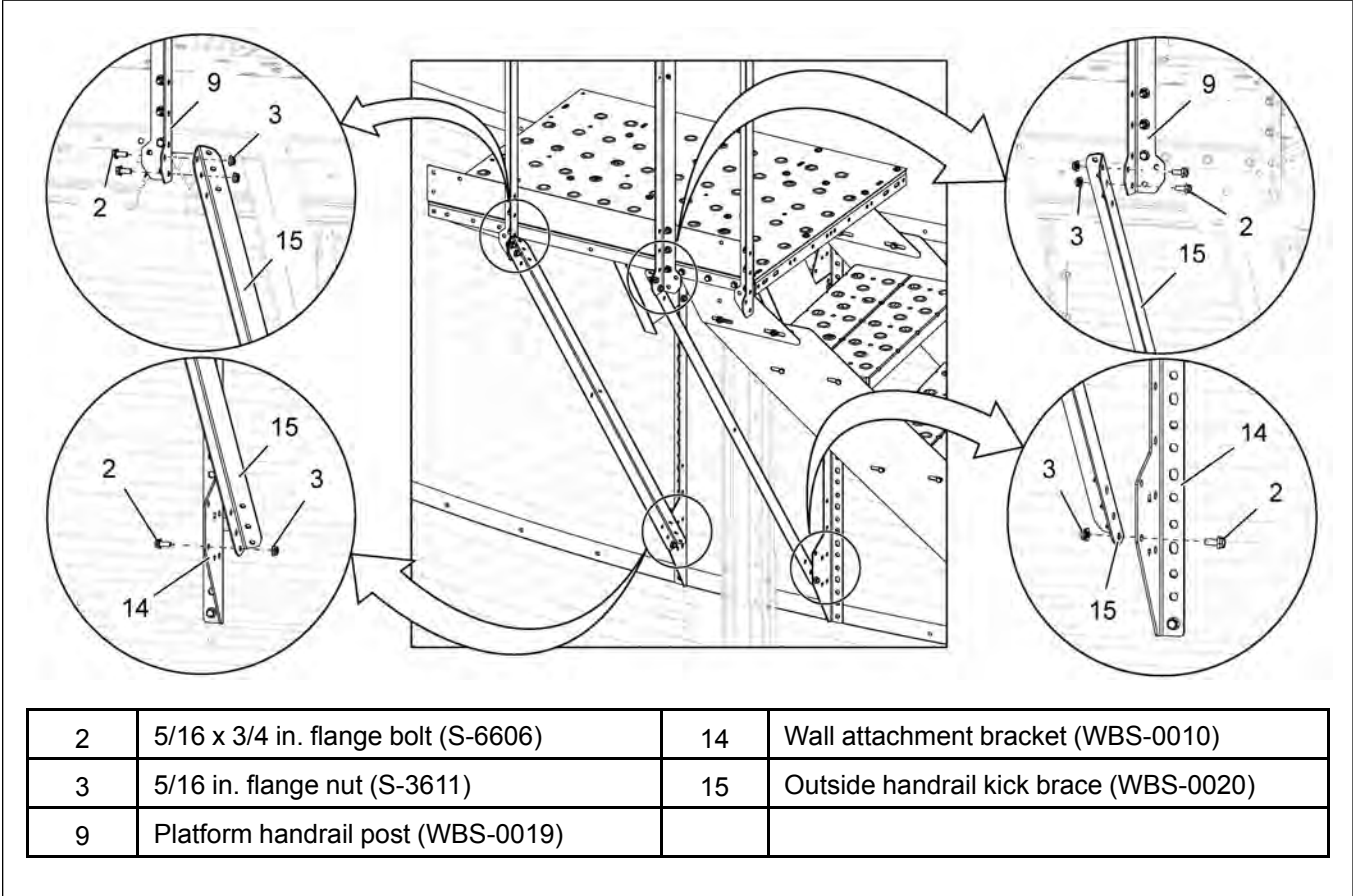


2	5/16 x 3/4 in. flange bolt (S-6606)	6	Outside support angle (WBS-0015)
3	5/16 in. flange nut (S-3611)	7	Platform floor pan (WBS-0011)
5	Intermediate support angle (WBS-0017)	9	Platform handrail post (WBS-0019)

4. Install the two outside handrail kick braces (15), securing one end of each support to the bottom hole of the wall attachment bracket (14) and the other end to the two holes in handrail post (9) using flange bolts (2) and flange nuts (3).

NOTE: Leave the flange bolts (2) loose until the platform stiffening straps (16) are attached in the next step.

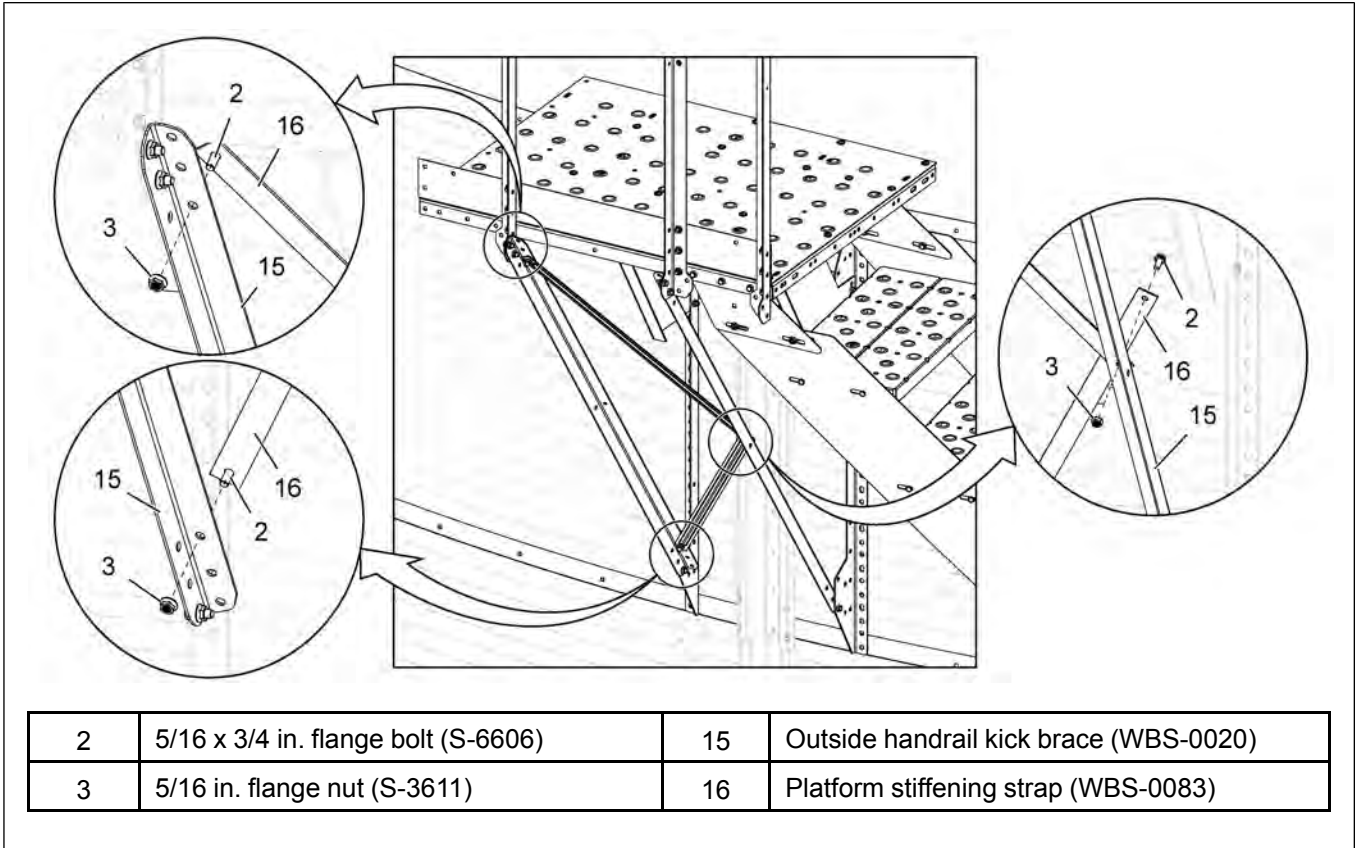
Figure 5-12 Installing the outside handrail kick braces for first platform section



Chapter 5: Eave Platform

5. Install the two platform stiffening straps (16) to the outside handrail kick braces (15) with flange bolts (2) and flange nuts (3) as shown.

Figure 5-13 Installing the platform stiffening strips for first platform section

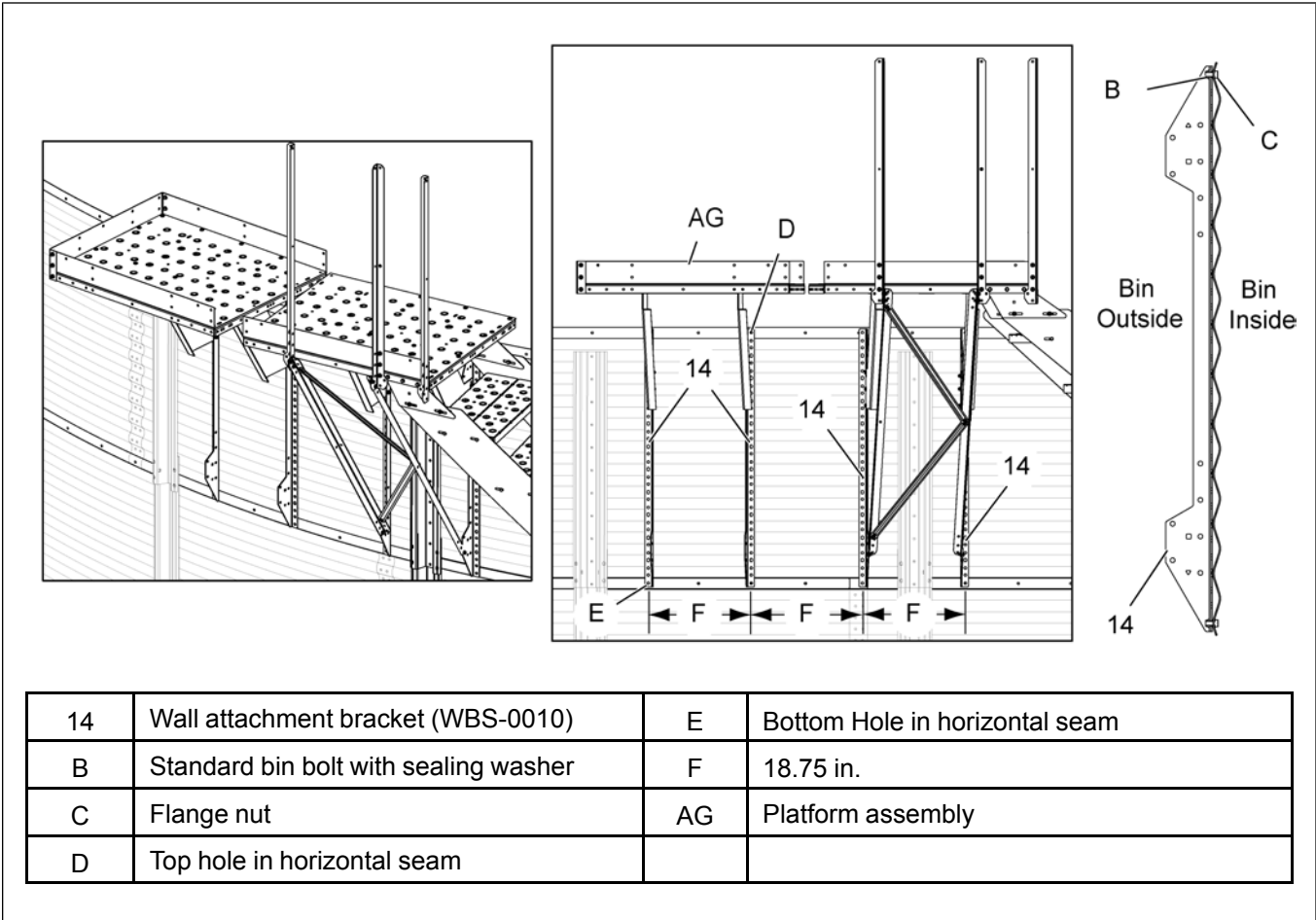


6. To install the second platform section, align and install the two wall attachment brackets (10) in the platform (AG) to the holes on the horizontal seam in the sidewall using standard bin bolts (B) and flange nuts (C).

NOTE:

- The bolts must be installed with the bolt head on the inside of the bin.
- Tighten the flange bolts (2) between the sidewall attachment gussets (10) and wall attachment brackets (14) before tightening the bolts connecting the sidewall attachment gussets (10) and the intermediate support angles (14) underneath the platform to aid in leveling the platform assembly.
- Align the first and last hole of the wall attachment bracket (14) with the top (D) and bottom (E) holes in the horizontal seam of the first ring.
- Align and install the wall attachment bracket of the second platform with the angle open outward, and a hole to hole gap (F) of 18.75 in. with the adjacent wall attachment bracket in the first platform.

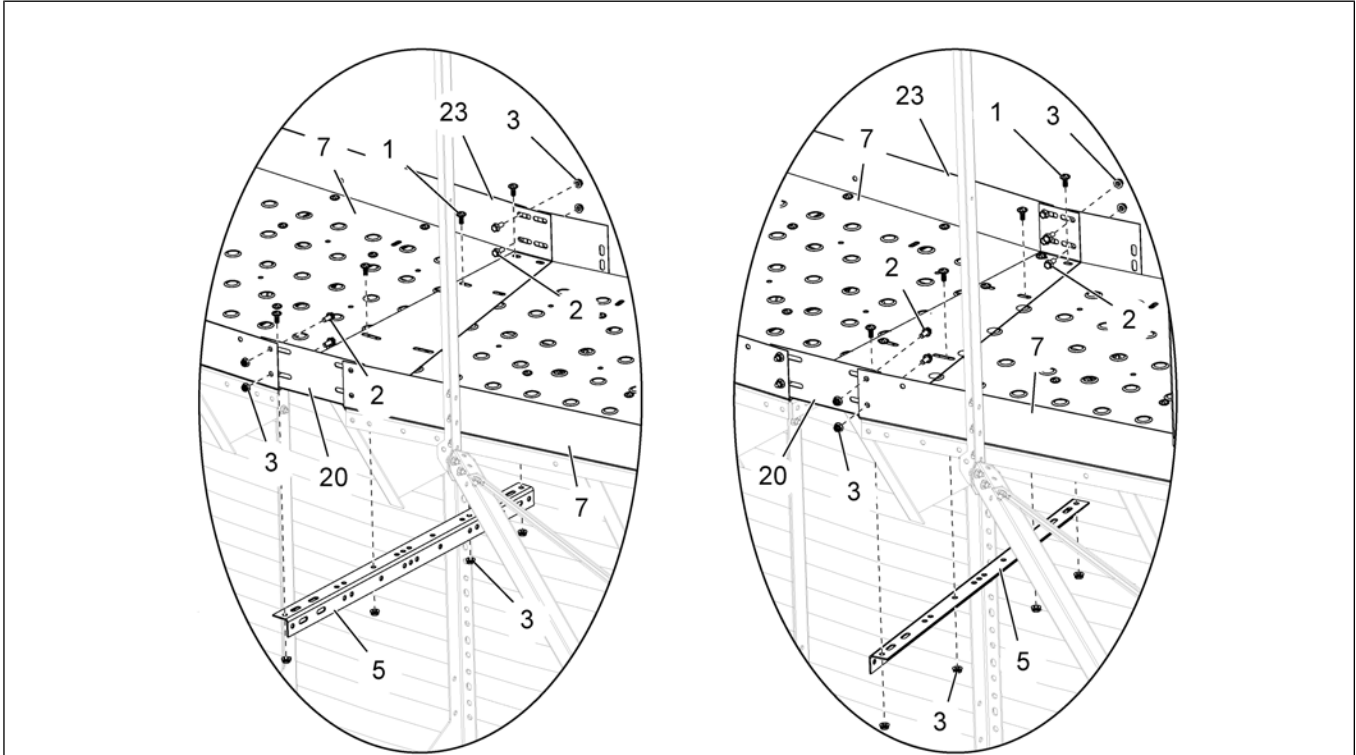
Figure 5-14 Installing the second platform section



Chapter 5: Eave Platform

7. Install the double platform splice (20) with intermediate support angles (5) to the platform floor (7) in each section and inside kick plate (23) using eight truss head bolts (1), eight flange bolts (2) and sixteen flange nuts (3) to secure the two platform sections.

Figure 5-15 *Installing the double platform splice for second section*



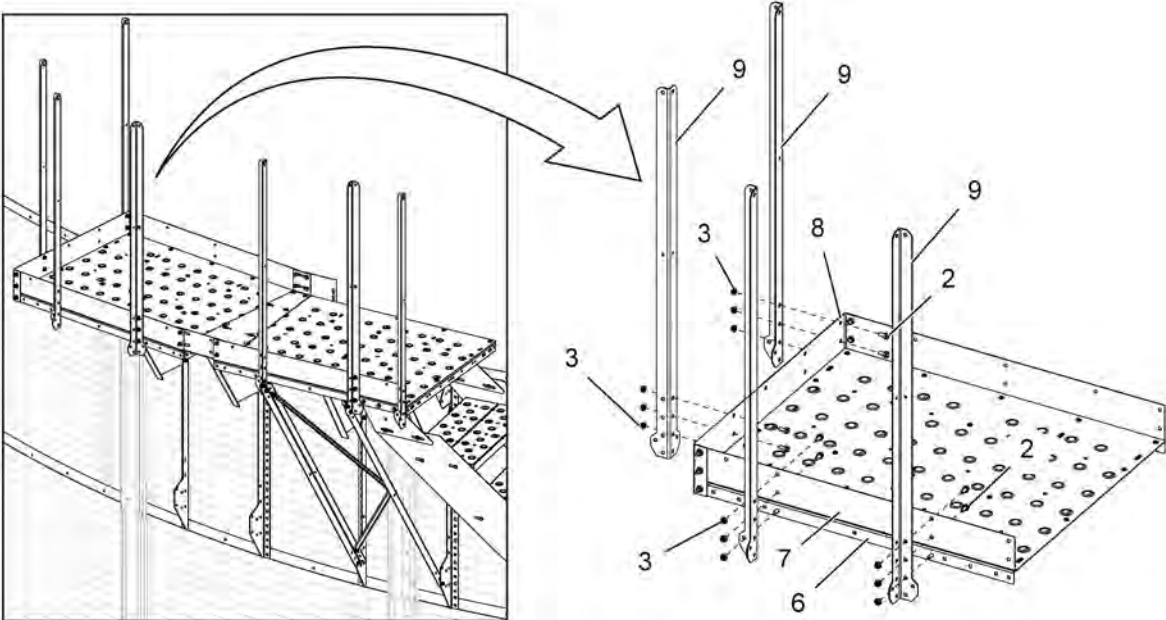
1	5/16 x 3/4 in. truss head bolt (S-10267)	7	Platform floor pan (WBS-0011)
2	5/16 x 3/4 in. flange bolt (S-6606)	20	Double platform splice, For 24 ft and 30 ft bins (WBS-0084) For 36 ft ft bins (WBS-0045)
3	5/16 in. flange nut (S-3611)	23	Inside kick plate (WBS-0014)
5	Intermediate support angle (WBS-0017)		

8. Install the four handrail posts (9) to the outside support angle (6) platform floor pan (7) and the platform end toe board (8) using flange bolts (2) and flange nuts (3).

NOTE:

- Install the flange bolts (2) with the bolt head towards the inside of the platform.
- Hand tighten the flange bolts (2).

Figure 5-16 Installing the handrail posts for second platform section



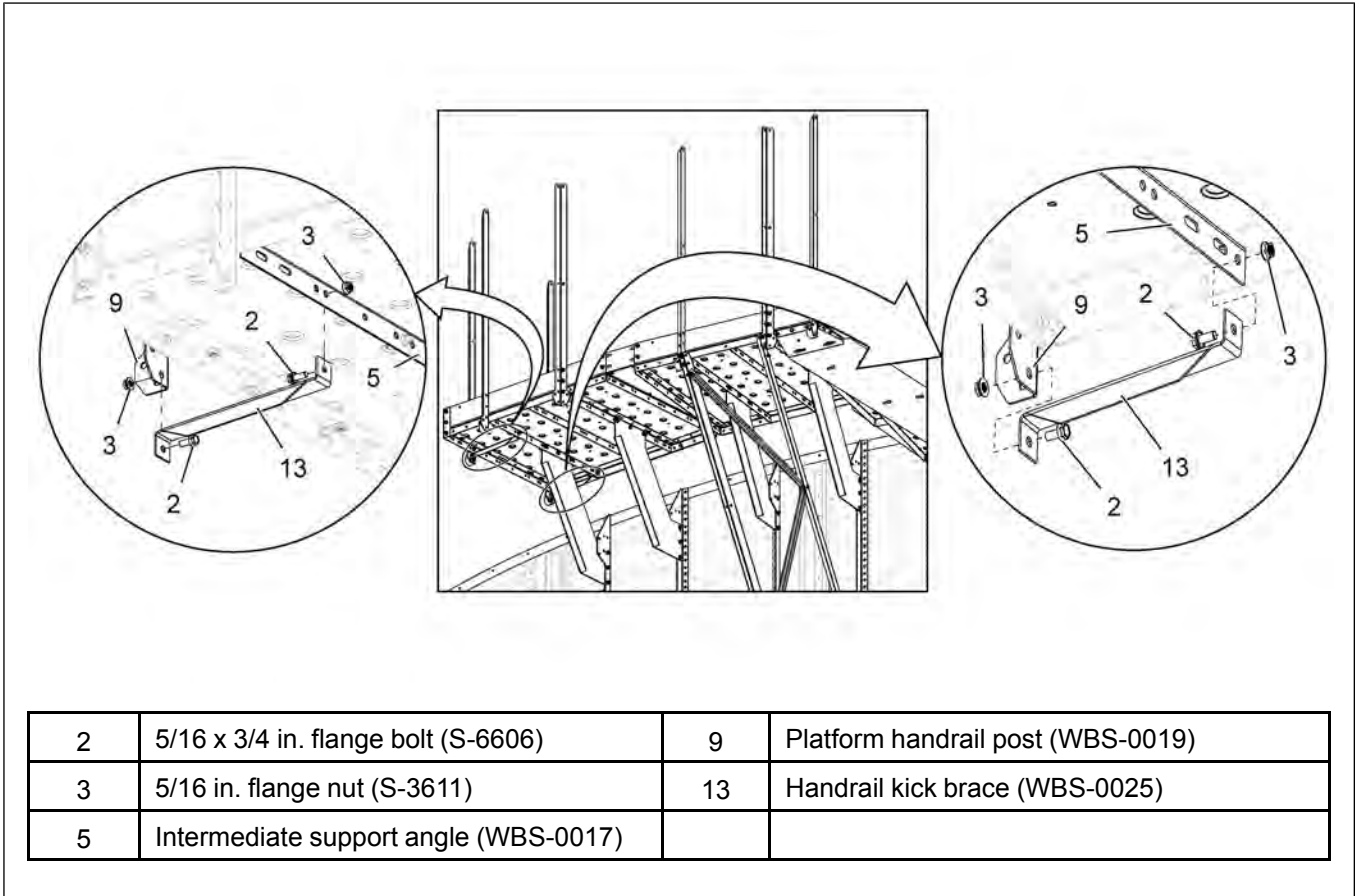
2	5/16 x 3/4 in. flange bolt (S-6606)	7	Platform floor pan (WBS-0011)
3	5/16 in. flange nut (S-3611)	8	Platform end toe board (WBS-0022)
6	Outside support angle (WBS-0015)	9	Platform handrail post (WBS-0019)

Chapter 5: Eave Platform

9. Install the two handrail kick braces (13) between the intermediate support angle (5) and the handrail posts (9) underneath the platform assembly using flange bolts (2) and flange nuts (3).

NOTE: Hand tighten the handrail kick braces (13).

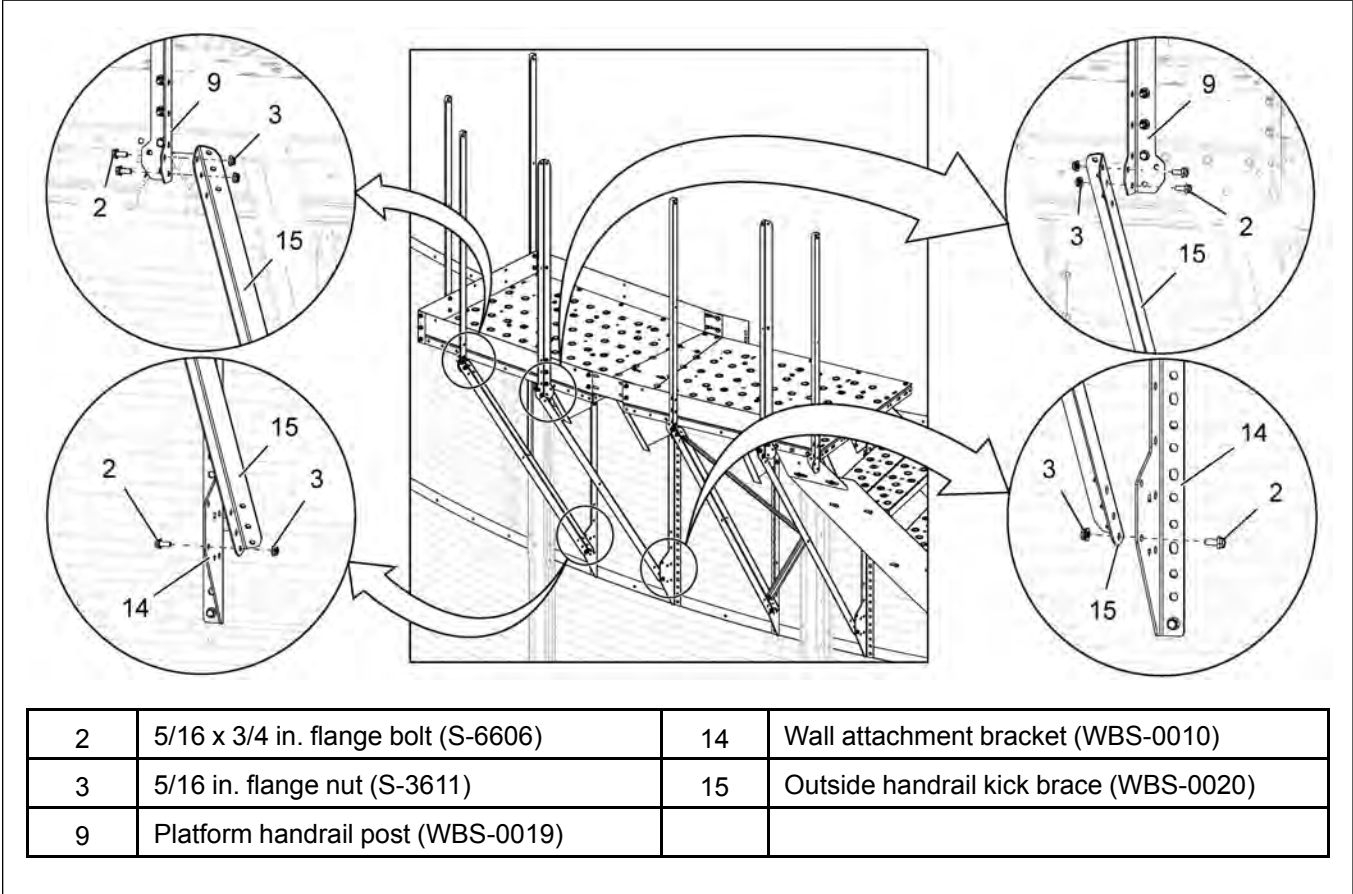
Figure 5-17 Installing the handrail kick braces for second platform



10. Install the two outside handrail kick braces (15), securing one end of each support to the bottom hole of the wall attachment bracket (14) and the other end to the two holes in handrail post (9) using flange bolts (2) and flange nuts (3).

NOTE: Leave the flange bolts (2) hand tight until the platform stiffening straps (16) are attached in the next step.

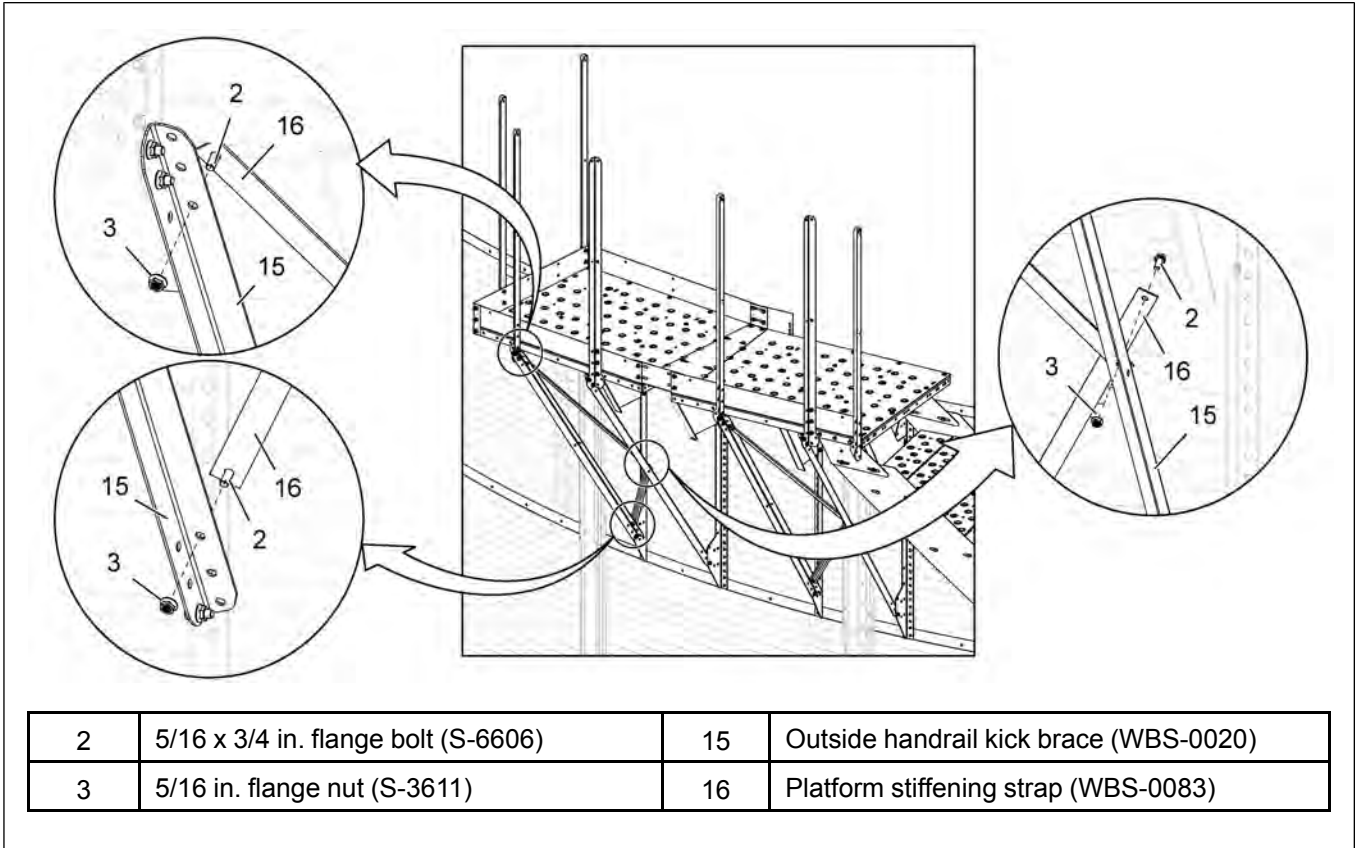
Figure 5-18 Installing the outside handrail kick braces for second platform



Chapter 5: Eave Platform

11. Install the two platform stiffening straps (16) to the outside handrail kick braces (15) using flange bolts (2) and flange nuts (3).

Figure 5-19 Installing the platform stiffening straps for second platform



12. Tighten and level the handrail posts (9).

13. Tighten the outside handrail kick braces (15) and the platform stiffening straps (16).

Installing the Eave Platform Handrails

The following procedure is for the installation of handrails for the eave platform above the eave.

1. Install the handrail brackets (17) to the top end of the handrail posts (9) with flange bolts (2) and flange nuts (3).

NOTE: *Install the flange bolts (2) from the inside of the platform and flange nuts (3) on the outside.*

2. Install the single platform upper handrail (18) to the handrail brackets (17) using two self-drilling screws (4) per bracket.

NOTE: *Install the self-drilling screw (4) from the outside of the handrail bracket (17).*

3. Install the double platform upper handrail (21) to the handrail brackets (17) using two self-drilling screws (4) per bracket.

IMPORTANT: *Insert the end (smaller diameter) of the double platform upper handrail (21) into the single platform upper handrail (18) of the first platform section before securing with the self-drilling screws (4).*

NOTE: *Install the self-drilling screw (4) from the outside of the handrail bracket (17).*

4. Align the single platform lower handrail (19) with the hole located in the middle of the handrail posts (9) and secure using self-drilling screws (4).

NOTE: *Install the self-drilling screw (4) from the outside of the handrail post (9).*

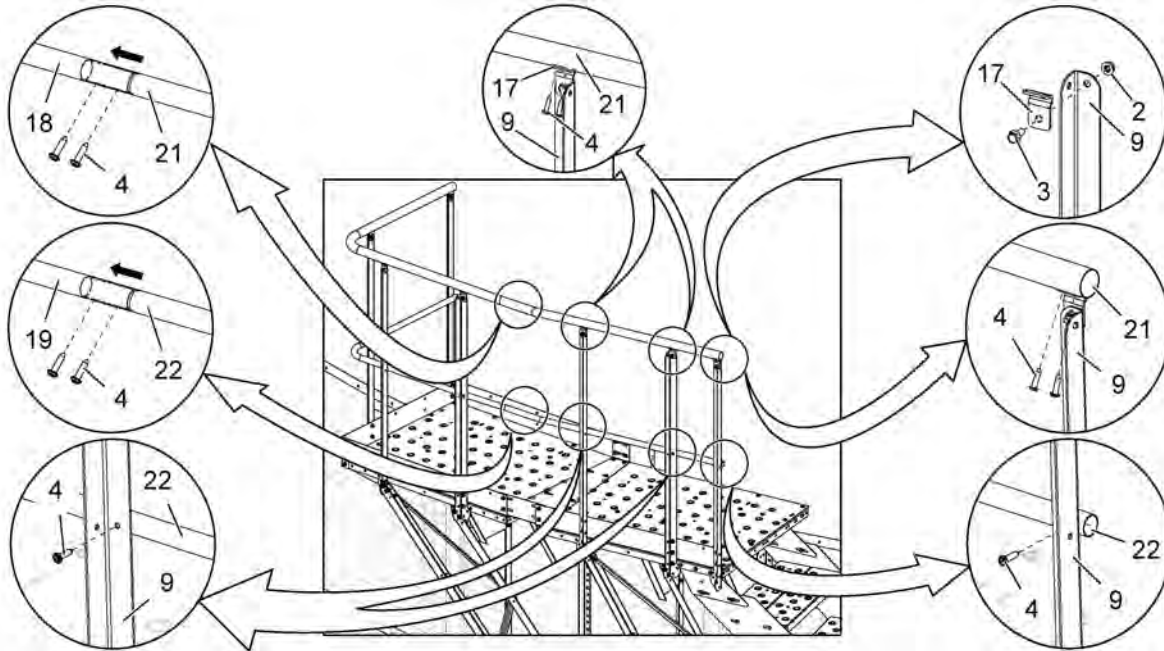
5. Align the double platform lower handrail (22) with the hole located in the middle of the handrail posts (9) and secure using self-drilling screws (4).

IMPORTANT: *Make sure to insert the end (smaller diameter) of the double platform lower handrail (22) into the single platform lower handrail (19) in the first platform section before securing with the self-drilling screws (4).*

NOTE: *Install the self-drilling screw (4) from the outside of the handrail post (9).*

Chapter 5: Eave Platform

Figure 5-20 Installing the eave platform handrails



2	5/16 x 3/4 in. flange bolt (S-6606)	18	Single platform upper handrail (WBS-0023)
3	5/16 in. flange nut (S-3611)	19	Single platform lower handrail (WBS-0024)
4	1/4 x 1 in. self-drilling screw (S-7229)	21	Double platform upper handrail (WBS-0039)
9	Platform handrail post (WBS-0019)	22	Double platform lower handrail (WBS-0038)
17	Handrail bracket (WBS-0319)		

6 Installing Winding Bin Stairs (Intermediate to Bin Bottom)

Topics Covered in this Chapter

- Installing the Sidewall Attachment Brackets (Intermediate Platform to Bin Bottom)
- Installing the Stair Sections (Intermediate Platform to Bin Bottom)
- Installing the Winding Bin Stair Handrails

Installing the Sidewall Attachment Brackets (Intermediate Platform to Bin Bottom)

Installing the Sidewall Attachment brackets

1. Align and install the sidewall attachment bracket assembly (U) to the sidewall on the horizontal seam (K) using standard bin bolts (B) and flange nuts (C).

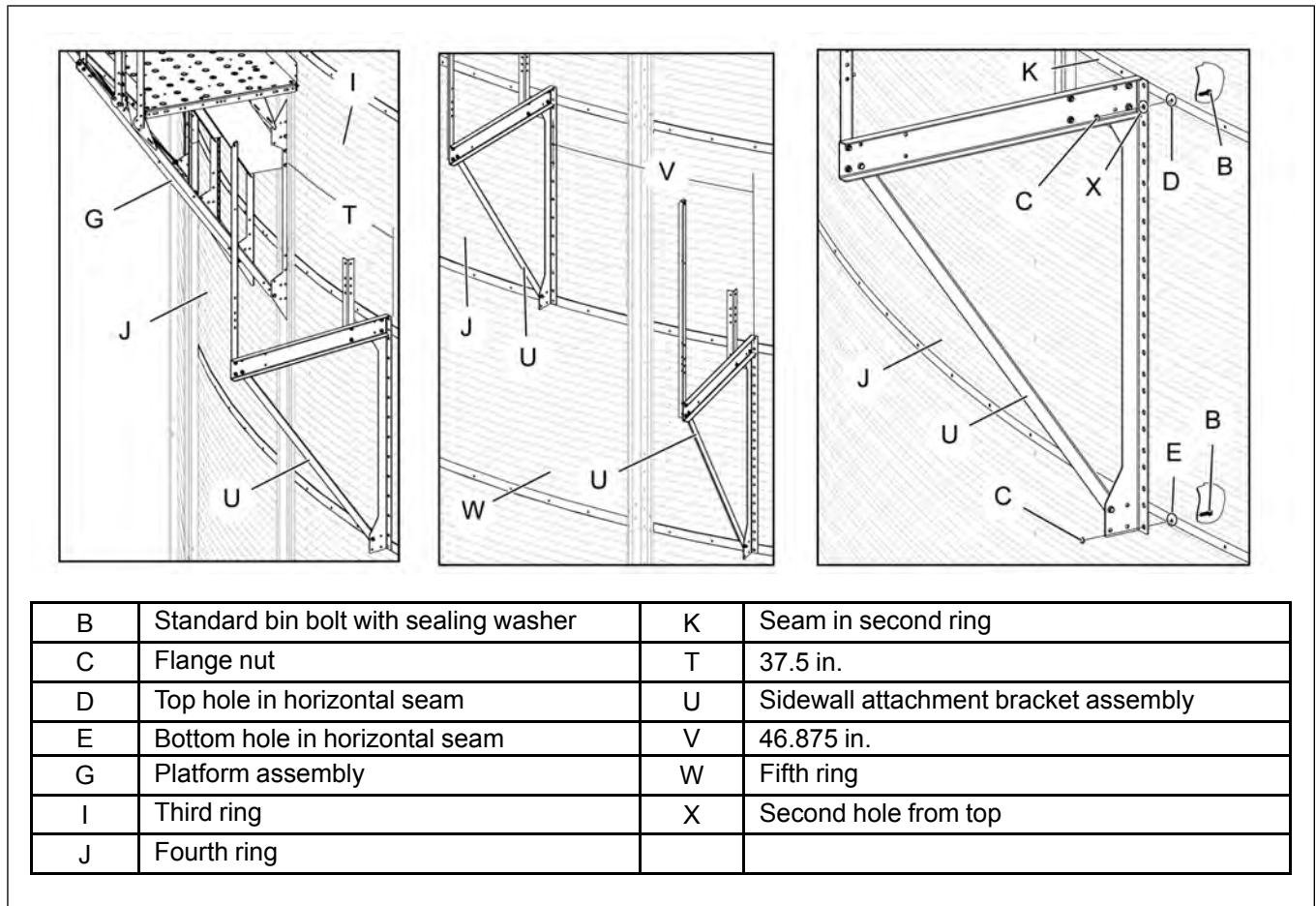
NOTE:

- Align the second hole (X) from the top and the last hole of the sidewall attachment bracket assembly (U) with the top (D) and bottom (E) holes in the horizontal seam (K) of the fourth ring (J).
- Install the first sidewall attachment bracket assembly (U) with a hole to hole gap (T) of 37.5 in. between the sidewall attachment bracket assembly (U) and the right-most wall attachment bracket in the platform assembly (G).
- The bolts must be installed with the bolt head on the inside of the bin.

2. Repeat the above step to continue installing the sidewall attachment brackets (U) (one ring below) around the sidewall for the remaining rings.

NOTE: Install each sidewall attachment bracket assembly (U) with a hole to hole gap (V) of 46.875 in.

Figure 6-1 For above eave platform bin stairs



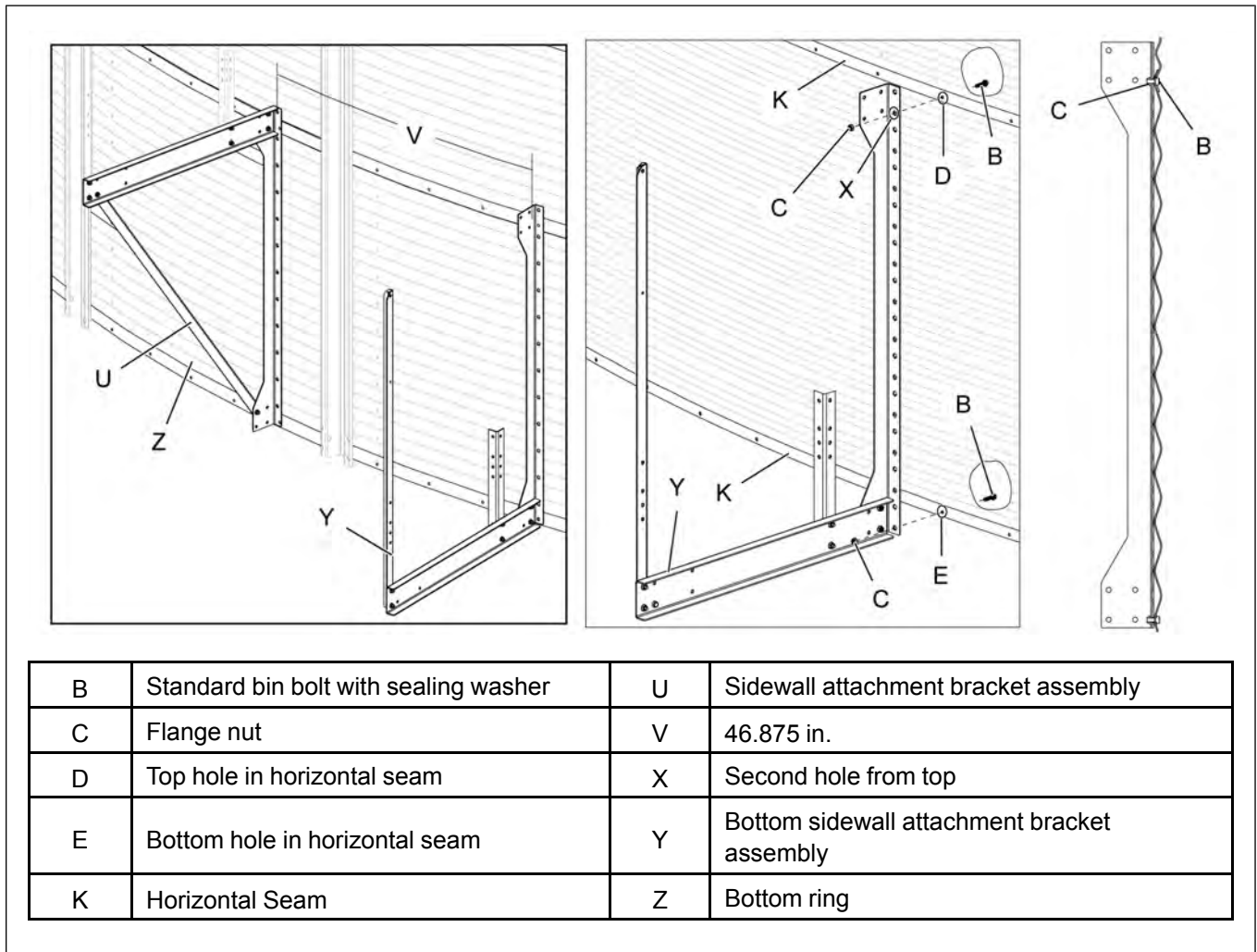
Installing the Sidewall Attachment bracket to the Bottom Ring

Align and install the bottom sidewall attachment bracket assembly (Y) on the sidewall in the horizontal seam (K) using standard bin bolts (b) and flange nuts (C).

NOTE:

- Align the second hole (X) from the top and the last hole of the bottom sidewall attachment bracket assembly (Y) with the top (D) and bottom (E) holes in the horizontal seam (K) of the bottom ring (Z).
- Install the bottom sidewall attachment bracket assembly (Y) with a hole to hole gap (V) of 46.875 in.
- The bolts must be installed with the bolt head on the inside of the bin.

Figure 6-2 Installing the sidewall attachment bracket to the bottom ring



NOTE: If the bin has a rolled lip instead of the base angle, then the sidewall attachment bracket will need to be field cut to allow the bracket to mount against the bin wall.

Installing the Stair Sections (Intermediate Platform to Bin Bottom)

In a bin with intermediate platform, each sidewall ring will have a 4-step stair section installed to the platform first followed by the 5-step stair sections for each sidewall ring.

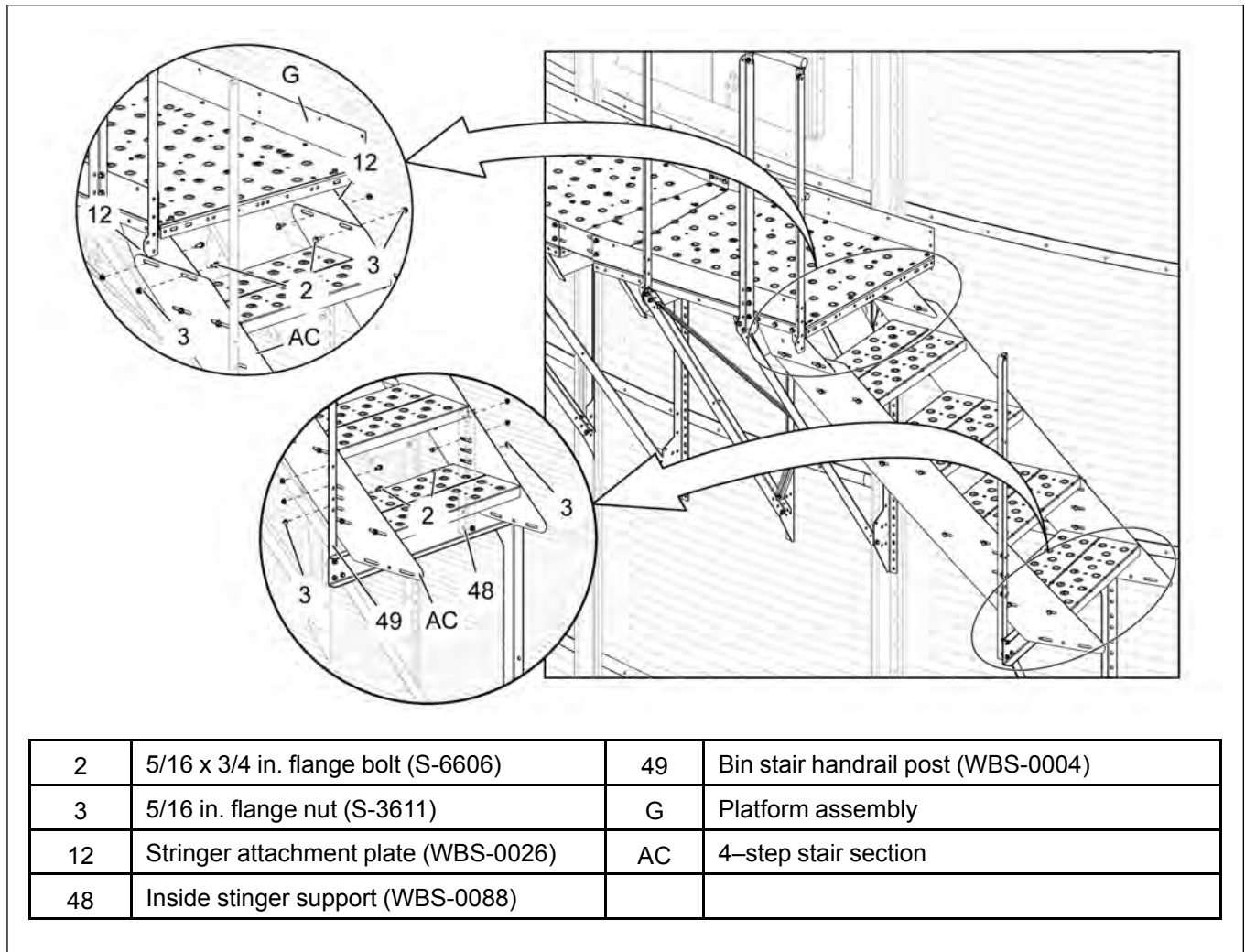
1. Align the top end of the 4-step stair section (AC) to the bottom end of the stringer attachment plates (12) in the platform (G) and secure using the flange bolts (2) and flange nuts (3).

NOTE: Hand-tighten the flange bolts (2).

2. Align the bottom end of the 4-step stair section (AC) to the handrail post (49) and the inside stringer support (48) and secure using flange bolts (2) and flange nuts (3).

NOTE: Hand-tighten the flange bolts (2).

Figure 6-3 Installing the 4-step stair section



3. Align the top end of the next 5-step stair section (AD) to the bottom of the 4-step stair section (AC) and secure using flange bolts (2) and flange nuts (3).

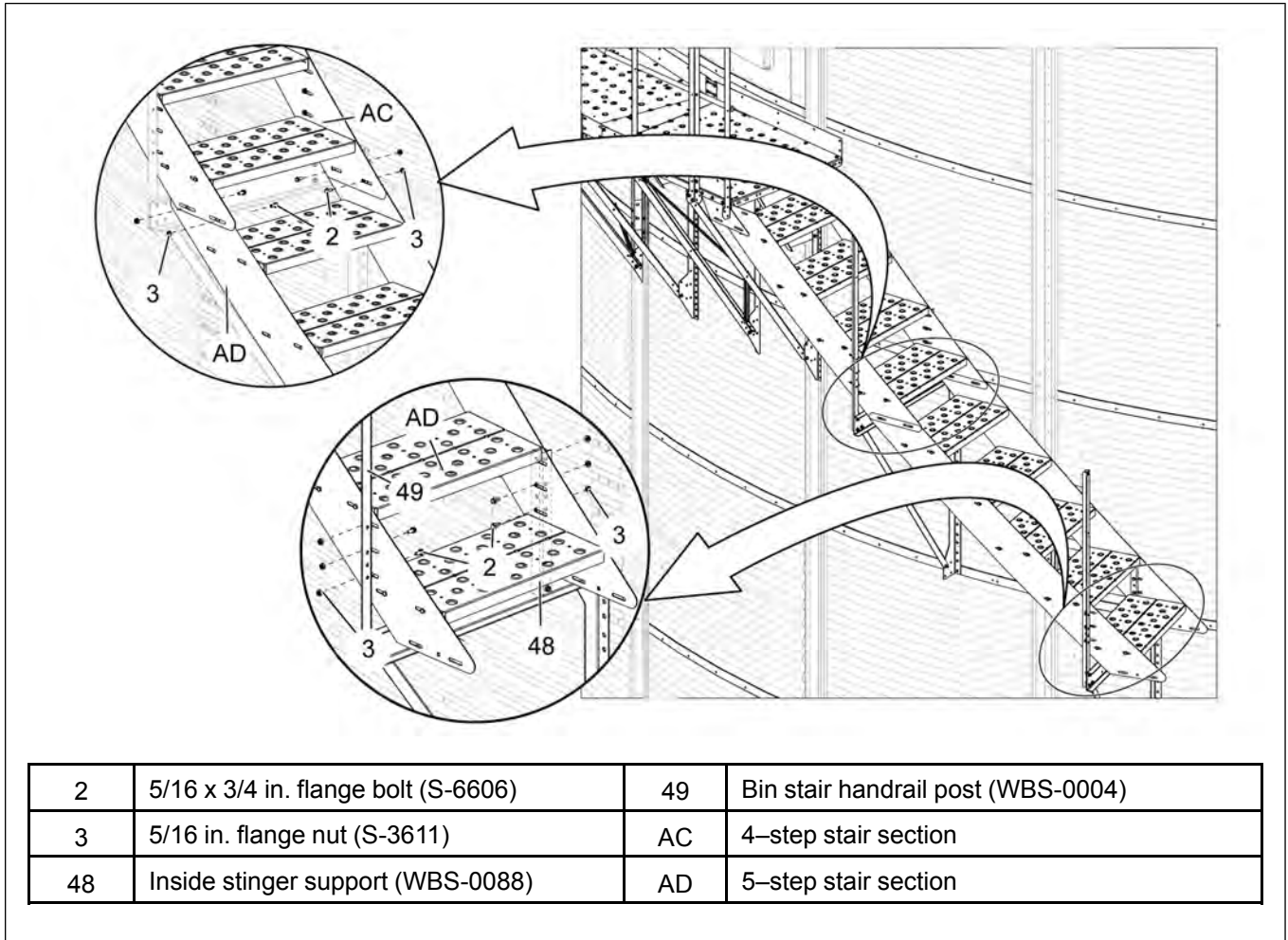
NOTE: Hand-tighten the flange bolts (2).

4. Align the bottom end of the 5-step stair section (AD) to the handrail post (49) and the inside stringer support (48) and secure using flange bolts (2) and flange nuts (3).

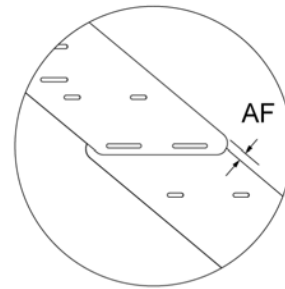
NOTE: Hand-tighten the flange bolts (2).

Chapter 6: Installing Winding Bin Stairs (Intermediate to Bin Bottom)

Figure 6-4 Installing the 5-step stair section



IMPORTANT: As the stair sections are being installed, make sure that any offset (AF) between the stringers is consistent throughout the winding bin stair assembly.



- Align the top end of the last 5-step stair section (AE) to the bottom of the previous 5-step stair section (AD) and secure using flange bolts (2) and flange nuts (3).

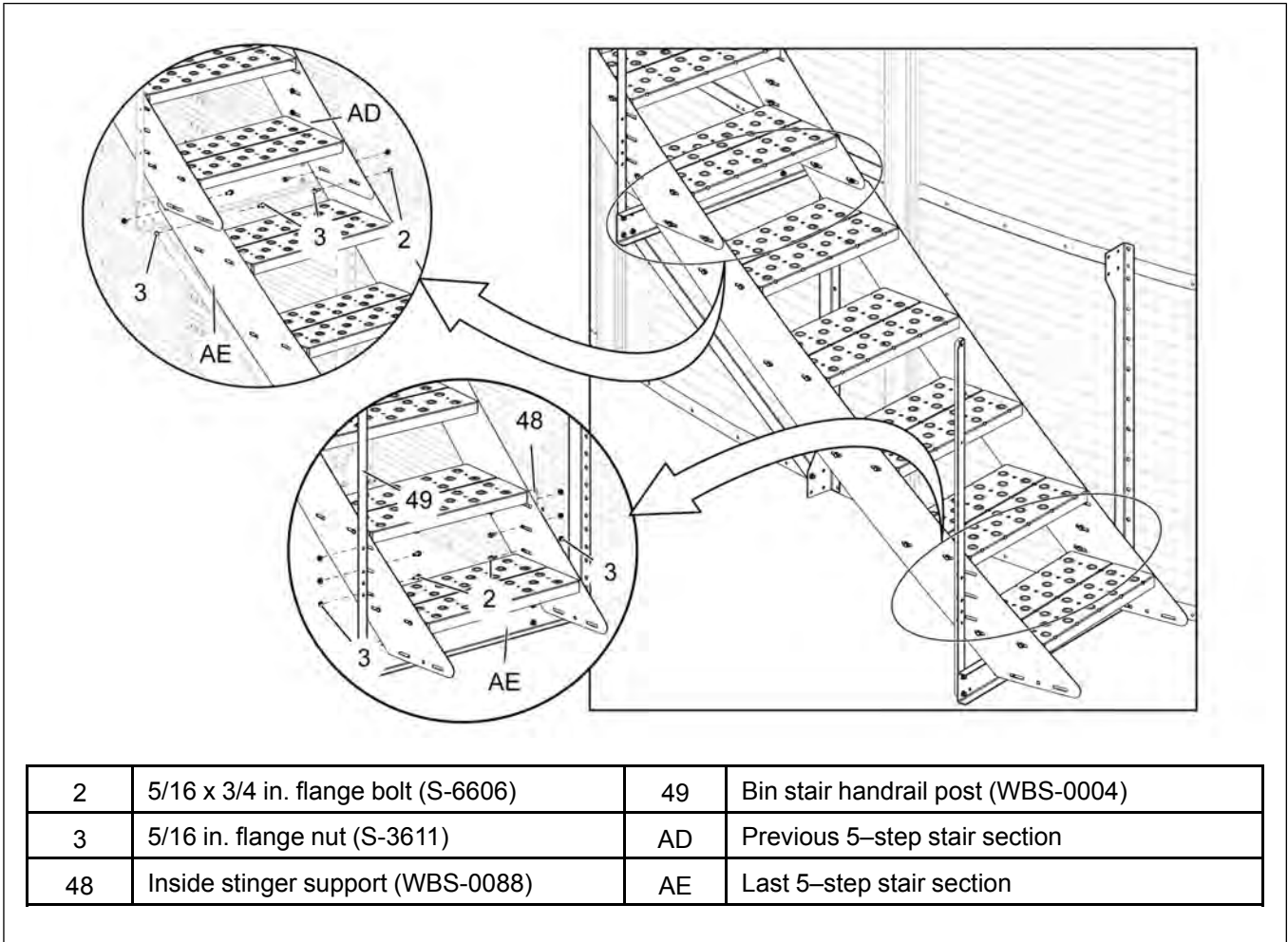
NOTE: Hand-tighten the flange bolts (2).

- Align the bottom end of the 5-step stair section (AE) to the handrail post (49) and the inside stinger support (48) and secure using flange bolts (2) and flange nuts (3).

NOTE: Hand-tighten the flange bolts (2).

Chapter 6: Installing Winding Bin Stairs (Intermediate to Bin Bottom)

Figure 6-5 Installing the last 5-step stair section



7. Tighten all the flange bolts (2) after all stair sections are installed to the bin wall.

Installing the Winding Bin Stair Handrails

The following procedure is for the installation of outer handrails for the winding bin stair assembly

1. Install the handrail brackets (17) to the end of bin stair handrail posts (49) using flange bolts (2) and flange nuts (3).

NOTE: *Install the flange bolts (2) from the inside of the stairs assembly and flange nuts (3) on the outside.*

2. Starting at the top of the winding bin stair assembly and working towards the bottom, orient the first upper handrail (41) with the swaged end up and secure it to the handrail brackets (17) using two self-drilling screws (4) per bracket.

NOTE:

- *The swage at the top end will need to be cut off before it is attached to the handrail post in the platform.*
- *Install the self-drilling screws (4) from the outside of the handrail brackets (17).*

3. Install the next upper handrail (41) over the installed handrail and secure it to the handrail brackets (17) using two self-drilling screws (4) per bracket with swaged end up.

NOTE:

- *The swaged end should be pushed into the handrail as far as it can go.*
- *Install the self-drilling screws (4) from the outside of the handrail brackets (17).*

4. Starting at the top of the winding bin stair assembly and working towards the bottom, orient and align the first lower handrail (42) to the holes located in the middle of the handrail posts (49) and secure using self drilling screws (4).

NOTE:

- *The swage at the top end will need to be cut off before it is attached to the handrail post in the platform.*
- *Install the self-drilling screws (4) from the outside of the roof handrail posts (49).*

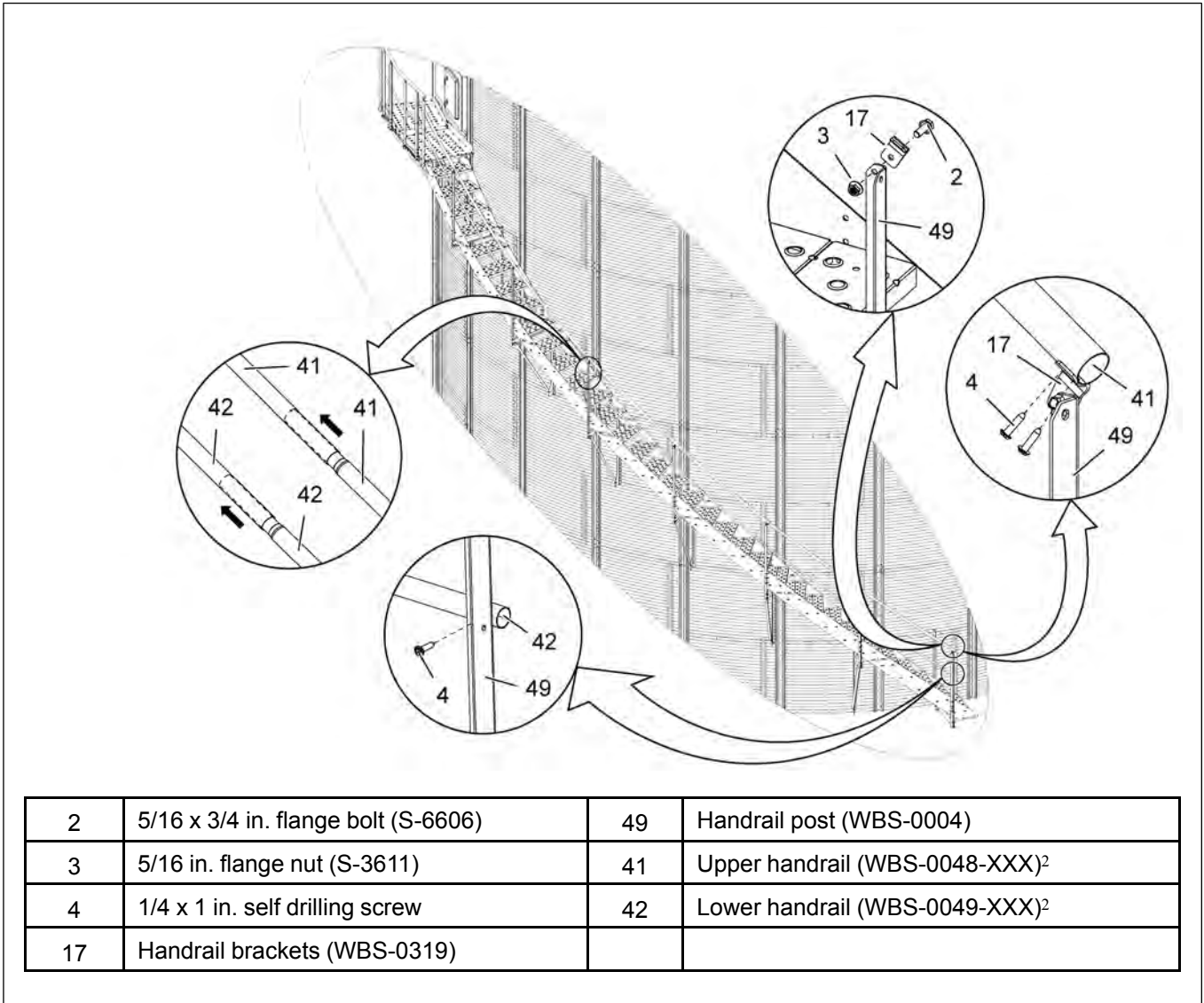
5. Align the next lower handrail (42) to the holes located in the middle of the handrail posts (49) over the installed handrail and secure using self drilling screws (4) with swaged end up.

NOTE:

- *The swaged end should be pushed into the handrail as far as it can go.*
- *Install the self-drilling screws (4) from the outside of the roof handrail posts (49).*

Chapter 6: Installing Winding Bin Stairs (Intermediate to Bin Bottom)

Figure 6-6 Installing the handrails of Winding stairs for Intermediate platform



² XXX-Denotes the bin diameter

GSI Group, LLC Limited Warranty

The GSI Group, LLC (“GSI”) warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user’s sole remedy (and GSI’s only obligation) is to repair or replace, at GSI’s option and expense, products that in GSI’s judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
AP/Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1-3/4" and 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems Farm Fans Zimmerman	Portable and Tower Dryers	2 Years
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years

* Warranty prorated from list price:
 0 to 3 years - no cost to end-user
 3 to 5 years - end-user pays 25%
 5 to 7 years - end-user pays 50%
 7 to 10 years - end-user pays 75%

** Warranty prorated from list price:
 0 to 3 years - no cost to end-user
 3 to 5 years - end-user pays 50%

† Motors, burner components and moving parts not included.
 Portable dryer screens included.
 Tower dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

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This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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