

# Cor-Lok/Cut-Lok Flooring and Grandstand Layout

#### Models:

**48' DIAMETER** 



**PNEG-222** 

Version 5.0

Date: 10-11-21







#### **Contents**

| Chapter 1  | Safety Precautions   |    |
|------------|--|----|
|            | Safety Guidelines  |    |
|            | Cautionary Symbol Definitions  |    |
|            | Safety Cautions  |    |
|            | Safety Decals Safety Sign-off Sheet                                    |    |
| Chapter 2  | Floor Installation   |    |
| Chapter 2  | Fan Placement Diagram  |    |
|            | Full Floor Installation  |    |
|            | Undersplice Specifications   |    |
|            | Installing the Undersplice   |    |
|            | Installing the Undersplice and Oversplice for Small Grain Floor Planks | 19 |
| Chapter 3  | 20 Gauge Grandstand Identification                                     | 21 |
| Chapter 4  | Flashing Installation  | 23 |
| Chapter 5  | Grandstand Layout at Center Well for Recirculating System              | 25 |
| Chapter 6  | Well Installation Cut Detail   | 27 |
| Chapter 7  | Bundle and Plank Layouts   | 29 |
| -          | 48' Split Floor Bundle Layout  | 30 |
|            | 48' Split Floor Plank Layout   |    |
|            | 48'-1" Plank Lengths (Optional)  |    |
| Chapter 8  | 48' Grandstand Layout for Recirculating System                         |    |
| Chapter 9  | Cor-Lok/Cut-Lok and Grandstand Layouts (33' Max. Wall Height)          |    |
|            | 2.66" Bins 5 Rings and 4.00" Bins 4 Rings                              |    |
|            | 2.66" Bins 6 Rings   |    |
|            | 2.66" Bins 7 Rings and 4.00" Bins 5 Rings                              |    |
|            | 2.66" Bins 9 Rings   |    |
|            | 4.00" Bins 7 Rings   |    |
|            | 2.66" Bins 10 Rings  |    |
|            | 2.66" Bins 11 Rings and 4.00" Bins 8 Rings                             |    |
|            | 2.66" Bins 12 Rings  |    |
|            | 4.00" Bins 9 Rings   |    |
| Chapter 10 | 20 Gauge Floor Support Requirements                                    |    |
|            | 2.66" Corrugation Grandstand Chart                                     |    |
| Chapter 11 | · ·  |    |
| •          | Installing the Stiffener Flashing Support                              |    |
| Chapter 12 | Installing the Air Flow Supports                                       |    |
|            | Limited Warranty — N.A. Grain Products                                 | 61 |

# **1** Safety Precautions

#### **Topics Covered in this Chapter**

- Safety Guidelines
- Cautionary Symbol Definitions
- Safety Cautions
- 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. Read and save these instructions.

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-0001-4

#### **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  |
|------------------|--|
| <b>△</b> DANGER  | This symbol indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death. |
| <b>WARNING</b>   | This symbol indicates a potentially hazardous situation which, if not avoided, can result in serious injury or death.  |
| <b>A CAUTION</b> | This symbol indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury. |
| NOTICE           | 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 Cautions**

#### **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

#### 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

#### **Sharp Edge Hazard**

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



ST-0036-2

#### **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.

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

#### **GSI Decals**

1004 E. Illinois Street Assumption, IL 62510 Phone: 1–217–226–4421

| Location                         | Decal No. | Decal  | Description             |
|----------------------------------|-----------|--|-------------------------|
| Located next to aeration system. | DC-969    | Excessive vacuum (or pressure) may damage roof. Use positive aeration system. Make sure all roof vents are open and unobstructed. Start roof fans when supply fans are started. Do not operate when conditions exist that may cause roof vent icing. | Caution Vacuum Pressure |

#### **Chapter 1: Safety Precautions**

| Location              | Decal No. | Decal  | Description                     |
|-----------------------|-----------|--|---------------------------------|
| On bin door<br>covers | DC-GBC-1A | Rotating flighting could kill or dismember.  Repert Clear of all augers.  DO NOT ENTER this bin!  If you must enter the bin:  1. Shut off and lock out all power.  2. Use a safety harness and safety line.  3. Station another person outside the bin.  4. Avoid the center of the bin.  5. Wear proper breathing equipment or respirator.  Failure to heed these warnings could result in serious injury or death.   | Warning Keep Clear of<br>Augers |
| On bin door<br>covers | DC-GBC-2A | UNLOADING INSTRUCTIONS:  1. Use CENTER FLOOR OUTLET ONLY until NO grain remains above this outlet.  2. Side floor outlets to be used ONLY when above condition is satisfied.  3. Lock all side floor outlets to avoid accidental premature use.  4. See manufacturers instructions for proper use of factory supplied sidedraw (wall) discharge systems.  Failure to heed these warnings could result in serious injury, death, structural damage or collapse of tank. | Warning Unload Instructions     |

#### 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

# **2** Floor Installation

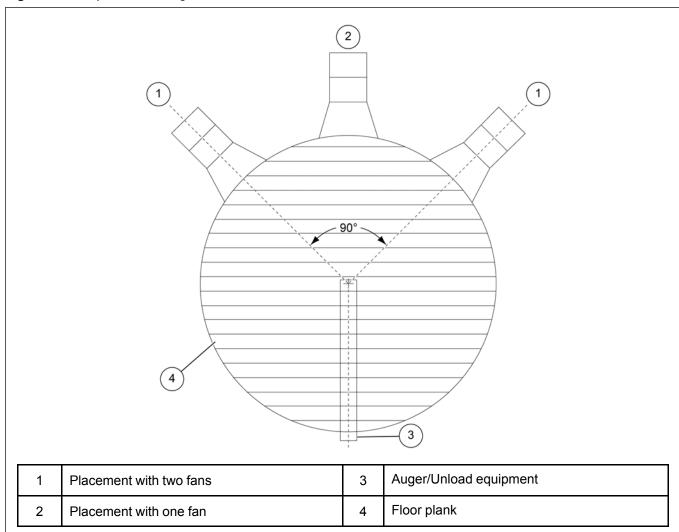
#### **Topics Covered in this Chapter**

- Fan Placement Diagram
- Full Floor Installation
- Undersplice Specifications
- Installing the Undersplice
- Installing the Undersplice and Oversplice for Small Grain Floor Planks

#### **Fan Placement Diagram**

- 1. For uniform air flow, place the fans (1 and 2) in relation to the unloading tube (3) as shown below.
- 2. Floor planks (4) should be perpendicular to the unloading tube (3).

Figure 2-1 Fan placement diagram



#### **Full Floor Installation**

Using the GSI recommended method for full floor installation should save construction time and eliminate the problem of improper installation which could invalidate your warranty. Note the following dimensions as shown below.

- Dimension "A" is the leg-to-leg spacing along the centerline of a given plank.
- Dimension "B" is the amount of stagger between supports under adjacent planks and is half of dimension "A".
- Dimension "C" is the distance from the center of the unload auger to the nearest row of supports and is half of dimension "B".

Dimensions "A", "B" and "C" are shown on the appropriate grandstand layout for wall heights under 32'. For taller bins, grandstand quantity as well as dimensions "A" and "B" are given in the grandstand layout on 2.66" Corrugation chart, page 50 and 4.00" Corrugation chart, page 51.

- 1. Layout centerlines of tank. Make sure one centerline (5) is in line with the direction of the flooring planks (4) while the other centerline (5) is perpendicular with the flooring planks (4).
- 2. From the centerline that is perpendicular to the flooring planks, measure the distance of "C" dimension and mark a chalk line (6).
- 3. From the line chalked (6), measure over the distance of "B" dimension and chalk another line. Repeat this procedure across the bin until reaching the wall in both directions. When completed, there should be a set of parallel lines (perpendicular to the floor planks (4)) with "B" dimension distance between each line.

Figure 2-2 Full floor installation

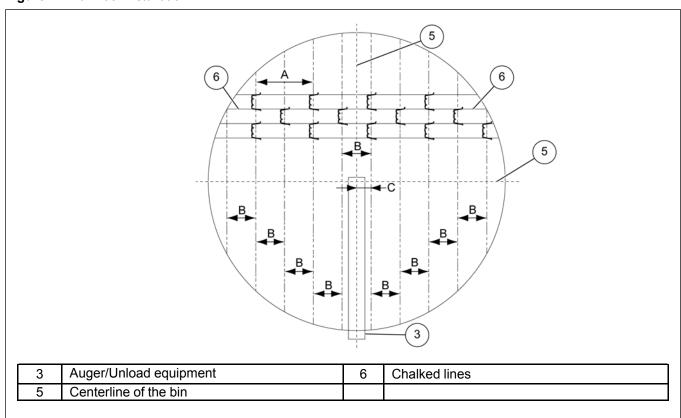
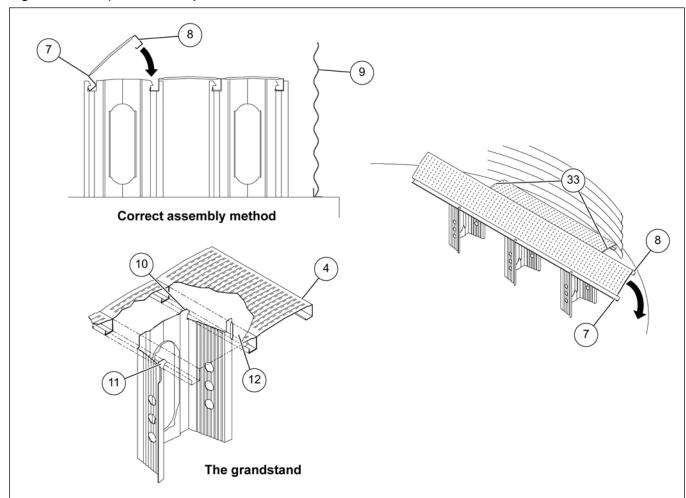


Figure 2-3 Floor plank assembly



**IMPORTANT:** The first piece of flooring must start at the proper distance from the centerline of the bin. Refer to the Chapter 8, page 35 for floor layout. The first piece may need to be trimmed for length to fit at the proper location.

| 4 | Floor plank       | 10 | Inside hook         |
|---|-------------------|----|---------------------|
| 7 | Open channel edge | 11 | Outside hook        |
| 8 | Flat edge         | 12 | Straight tab        |
| 9 | Sidewall          | 33 | Ends of floor plank |

- 4. Install the flooring starting at the sidewall (9) on the opposite side of the unload auger (3).
- 5. Floor planks (4) should be placed perpendicular to the unload auger (3) with the outside edge the correct distance from the center of the bin. Refer to the *Chapter 8, page 35*.
- 6. Make sure that the flat edge (8) of the floor plank (4) is facing the sidewall (9) and the open channel edge (7) is facing towards the center of the bin.
- 7. Position the supports for the first/shortest floor plank (4) according to the number of bin rings and corrugation as shown in the grandstand layout charts and illustrations. (Refer to 2.66" Corrugation chart, page 50 and 4.00" Corrugation chart, page 51.)

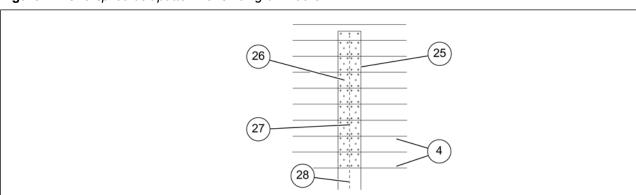
- 8. Attach the flashing to flooring and sidewall (9) to hold floor plank (4) in place. Refer to the *Chapter 4*, page 23 for flashing installation.
- 9. Attach two flashings to the both ends (33) of first floor plank here, just to hold it in place.
  - **NOTE**: These two flashings will need to be removed and repositioned when installing the rest of the flashing.
- 10.POSITION THE NEXT ROW OF SUPPORTS ACCORDING TO THE CHALK LINES (6) and support layout. The straight tab (12) should "snap" under the first (previous) floor piece.
- 11. After the supports in the row are correctly positioned, install the next floor piece by hooking the open channel edge (7) under the outside hooks (11) of the floor supports.
- 12.Push down sharply on the edge of the floor piece until it snaps into the previous floor piece.

  Continue this process for the rest of the floor cutting planks for the center and intermediate wells as needed.
- 13.Refer to the *Chapter 5*, page 25 for center well support locations.

#### NOTE:

- Whenever there is more than dimension "B" divided by three inches (B/3") of plank (4) unsupported beside the sidewall (9), there should be a support on that plank (4) or a support on each of the planks (4) adjacent to it such that no more than dimension "B" divided by three inches (B/3") is unsupported.
- For example: 2.66" bin with 8 rings has a "B" dimension of 22". Take 22"/3" = 7.33" (Round to 7"). Therefore, there should be no more than 7" of unsupported floor plank (4).
- 14. Some floor planks (4) will need to be spliced together. Refer to the *Figure 6-1, page 27*, and *48'-1" Plank Lengths (Optional), page 34* for more information.
- 15.Install plank length "A" first, then install the corresponding plank length "B" by butting plank "B" up against plank "A".
- 16.Make sure that the planks are supported by a grandstand on each side of the splice. Continue this until the floor is complete.

Figure 2-4 Oversplice bolt pattern for small grain floors

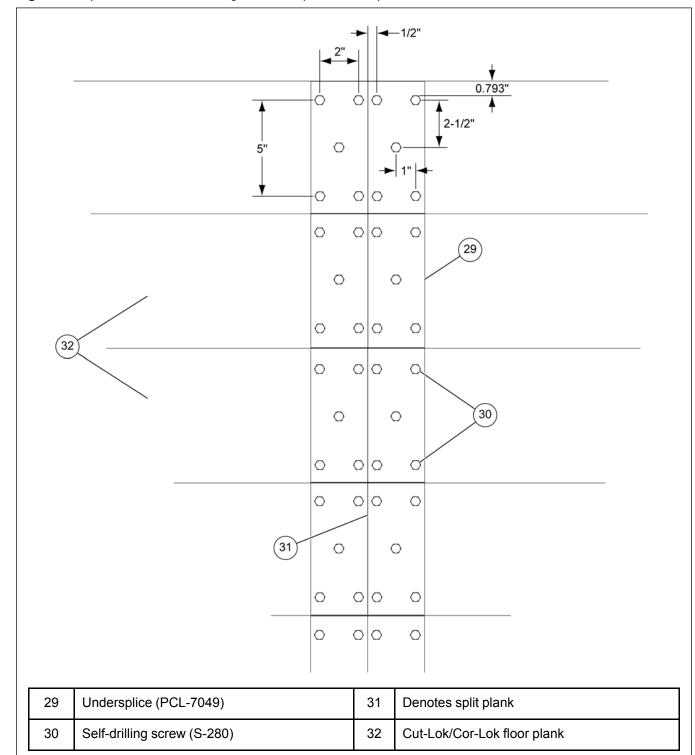


| 4  | Floor plank                   | 27 | Splice seam                                       |
|----|-------------------------------|----|---|
| 25 | Floor oversplice (CLF-1763SG) | 28 | Dashed lines indicate items under the oversplice. |
| 26 | Self-drilling screw (S-280)   |    |   |

#### **Undersplice Specifications**

- 1. The undersplice should be installed underneath the planks at the split after both plank lengths have been butted together.
- 2. Each splice has to be installed as each row of planks are installed. Below figure shows the layout of the undersplice plates (29) and the screw pattern used to secure them.

Figure 2-5 Specifications for installing the undersplice to floor planks

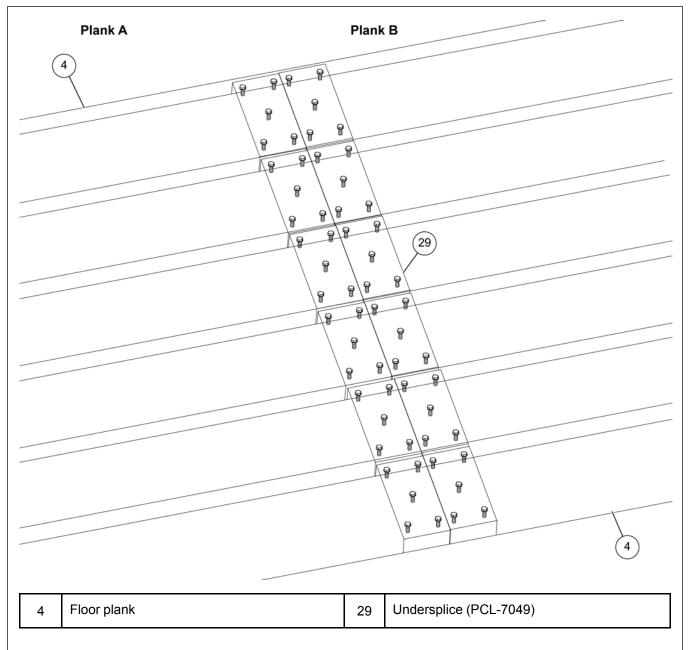


#### **Installing the Undersplice**

- 1. Place floor plank (4) ends together.
- 2. Place the undersplice (29) under the floor planks (4). Make sure the undersplice (29) extends 3" across each floor plank (4).
- 3. The undersplice (29) should extend 3" under each floor plank (4). The undersplice (29) should be screwed in place as shown in *Figure 2-4, page 16*.
- 4. Repeat for all the plank locations requiring a splice.

**NOTE:** Small grain perforated floors include an oversplice that is installed at the same time as the undersplices.

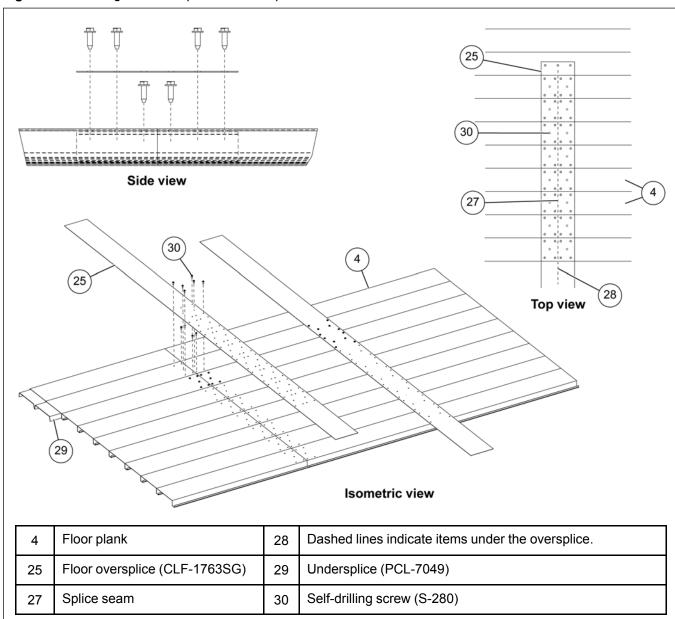
Figure 2-6 Installing the undersplice



## Installing the Undersplice and Oversplice for Small Grain Floor Planks

- 1. Place plank ends together.
- 2. Place the undersplice (29) under the planks. Make sure the undersplice (29) extends 3" across each plank.
- 3. Install the undersplice (29) to the planks using two self-drilling screws (30) per splice to hold it in place.
- 4. Place the oversplice (25) over the length of the plank splice seams.
- 5. Install the oversplice (25) to the planks and undersplices (29) using three self-drilling screws (30) per each undersplice.

Figure 2-7 Installing the undersplice and oversplice

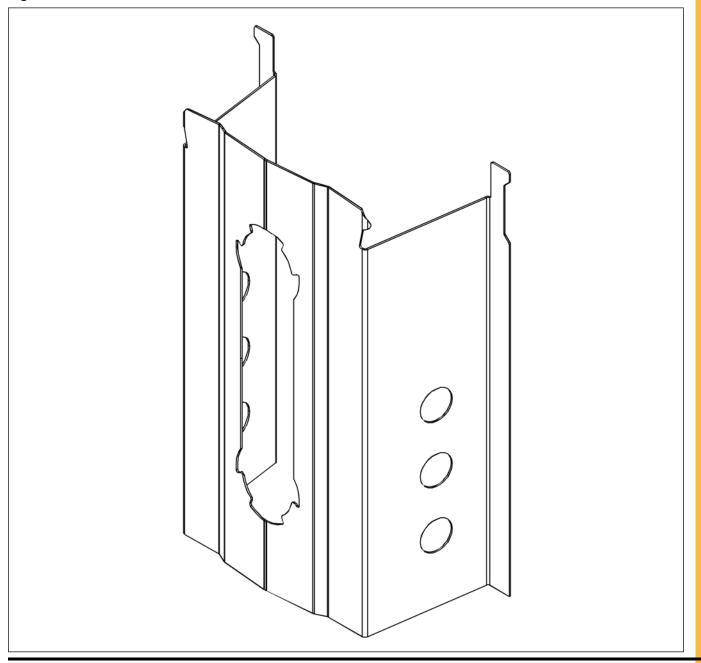


# **3** 20 Gauge Grandstand Identification

Table 3-1 20 gauge grandstand identification

| Plenum clearance | Grandstand color code |
|------------------|-----------------------|
| 11-7/8"          | Blue                  |
| 14-3/8"          | White                 |
| 17-3/16"         | Yellow                |

Figure 3-1 Grandstand identification

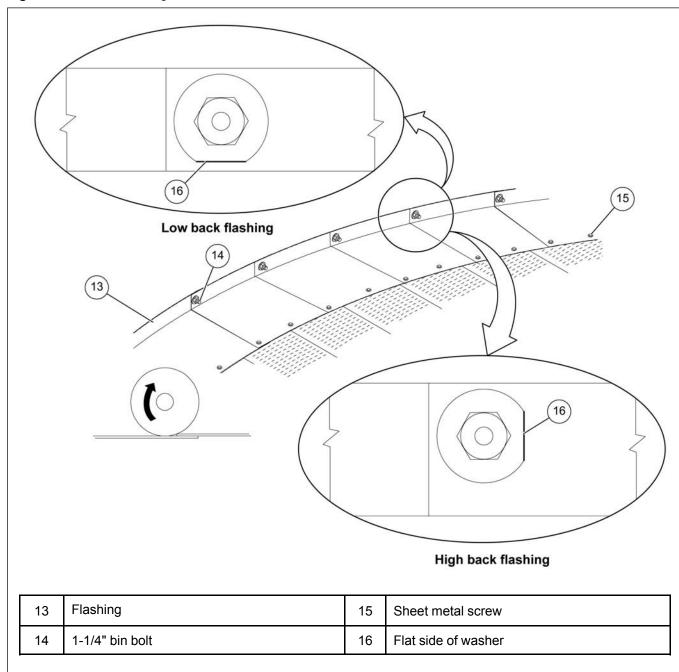


# 4 Flashing Installation

- 1. If a bin sweep auger will be used, overlap flashing (13) so that the sweep with climb up on to the next flashing (13) section when rotating (usually clockwise).
- 2. This will prevent the rotating/slipping outer wheel of the sweep from catching on the flashing (13) edges.

**NOTE**: All GSI power sweeps and carry-in sweeps manufactured after April 2002 run clockwise.

Figure 4-1 Formed flashing installation

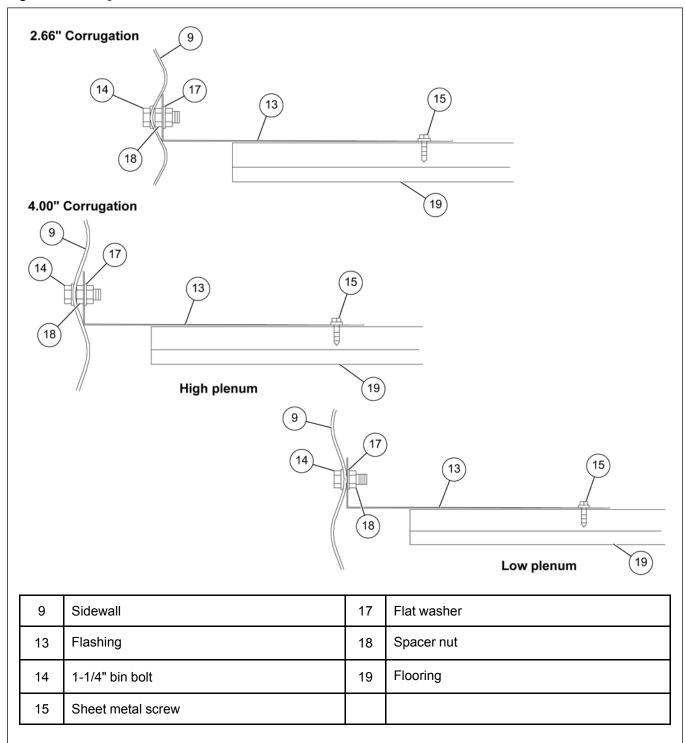


3. After floor (19) is in place, place 1-1/4" bin bolts (14) through the pre-punched holes in the sidewall (9). Refer the below figure to determine the correct sequence for placing the spacer nuts (18) and flat washers (17).

NOTE: Bolt (14) heads should be on the outside of the bin.

- 4. Finger tighten the spacer nuts (18) until all flashing (13) is installed, then go back and fully tighten.
- 5. While holding the flashing (13) flat and pushing in towards the sidewall (9), fasten the flashing (13) to the floor (19) with two sheet metal screws (15).

Figure 4-2 Corrugation details

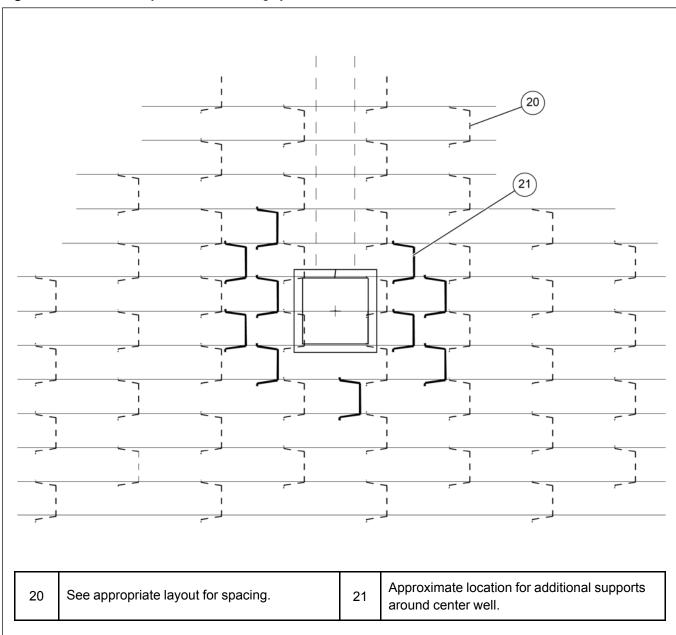


# **5** Grandstand Layout at Center Well for Recirculating System



Support all center wells to concrete.

Figure 5-1 Grandstand layout for recirculating system

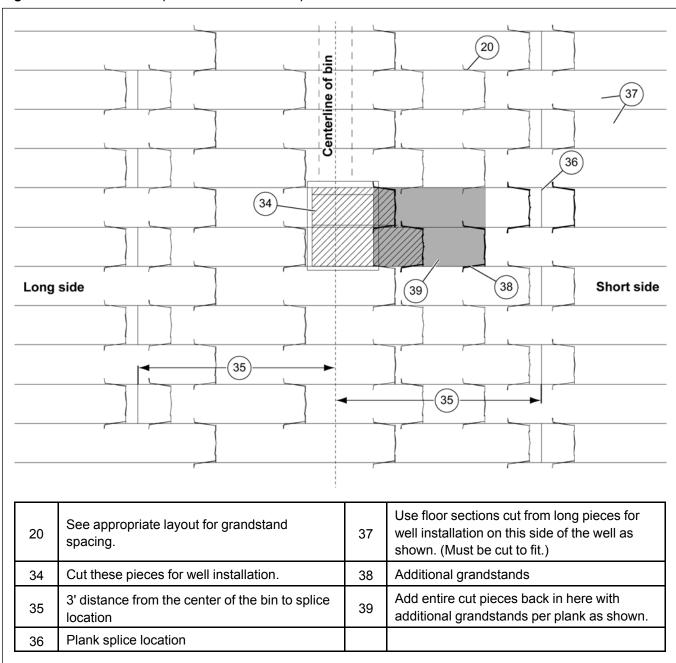


## 6 Well Installation Cut Detail



Support all center wells to concrete.

Figure 6-1 Well installation plank cut detail for 48' split floor



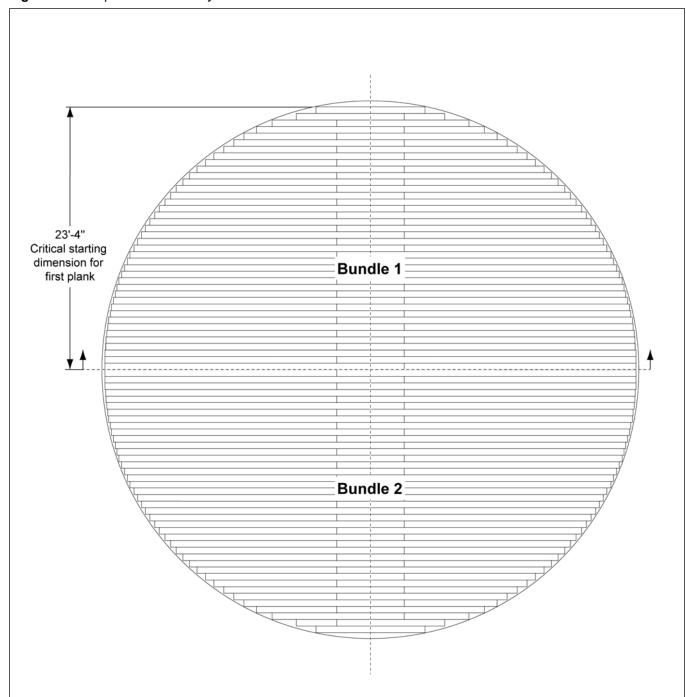
# 7 Bundle and Plank Layouts

#### **Topics Covered in this Chapter**

- 48' Split Floor Bundle Layout
- 48' Split Floor Plank Layout
- 48'-1" Plank Lengths (Optional)

#### 48' Split Floor Bundle Layout

Figure 7-1 48' Split floor bundle layout



NOTE: The 48' floor is split up into two identical bundles. You will need two bundles to complete the flooring. Except for the first plank, each length of flooring is split into two plank lengths, an "A" length and a "B" length. The seams of these splits are staggered every other plank length. The bundle is arranged so that the "A" plank is installed together with the "B" plank. Begin installation starting with plank A from the outside of the bin working towards the center of the bin.

Table 7-1 48' Split plank floor bundle layout chart

| Plar    | nk Bundle Layo | ut by Plank | Number  | Pla     | nk Bundle Layo | out by Plank | Length  |
|---------|----------------|-------------|---------|---------|----------------|--------------|---------|
| Stack 1 | Stack 2        | Stack 3     | Stack 4 | Stack 1 | Stack 2        | Stack 3      | Stack 4 |
| 7A      | 5A             | 3A          |         | 121"    | 99"            | 69"          |         |
| 8B      | 6B             | 4B          | 2B      | 131"    | 110"           | 86"          | 43"     |
| 7B      | 5B             | 3B          | 1       | 193"    | 171"           | 141"         | 116"    |
| 8A      | 6A             | 4A          | 2A      | 203"    | 182"           | 158"         | 115"    |
| 15A     | 13A            | 11A         | 9A      | 183"    | 171"           | 157"         | 140"    |
| 16B     | 14B            | 12B         | 10B     | 185"    | 177"           | 164"         | 149"    |
| 15B     | 13B            | 11B         | 9B      | 255"    | 243"           | 229"         | 212"    |
| 16A     | 14A            | 12A         | 10A     | 257"    | 249"           | 236"         | 221"    |
| 23A     | 21A            | 19A         | 17A     | 220"    | 212"           | 204"         | 194"    |
| 24B     | 22B            | 20B         | 18B     | 223"    | 216"           | 208"         | 199"    |
| 23B     | 21B            | 19B         | 17B     | 292"    | 284"           | 276"         | 266"    |
| 24A     | 22A            | 20A         | 18A     | 295"    | 288"           | 280"         | 271"    |
| 31A     | 29A            | 27A         | 25A     | 240"    | 236"           | 232"         | 226"    |
| 32B     | 30B            | 28B         | 26B     | 241"    | 238"           | 234"         | 229"    |
| 31B     | 29B            | 27B         | 25B     | 312"    | 308"           | 304"         | 298"    |
| 32A     | 30A            | 28A         | 26A     | 313"    | 310"           | 306"         | 301"    |
| 39A     | 37A            | 35A         | 33A     | 247"    | 246"           | 245"         | 243"    |
| 40B     | 38B            | 36B         | 34B     | 247"    | 247"           | 246"         | 244"    |
| 39B     | 37B            | 35B         | 33B     | 319"    | 318"           | 317"         | 315"    |
| 40A     | 38A            | 36A         | 34A     | 319"    | 319"           | 318"         | 316"    |

#### NOTE:

- 1. Charts are arranged to mimic the bundles as if you were standing at the end of the bundle where all the plank edges are butted flush together.
- 2. The 48' floor requires two identical bundles to complete the floor.
- 3. Plank banding and sub-banding are separated by gray areas in tables.

#### 48' Split Floor Plank Layout

Figure 7-2 48' Split floor plank layout

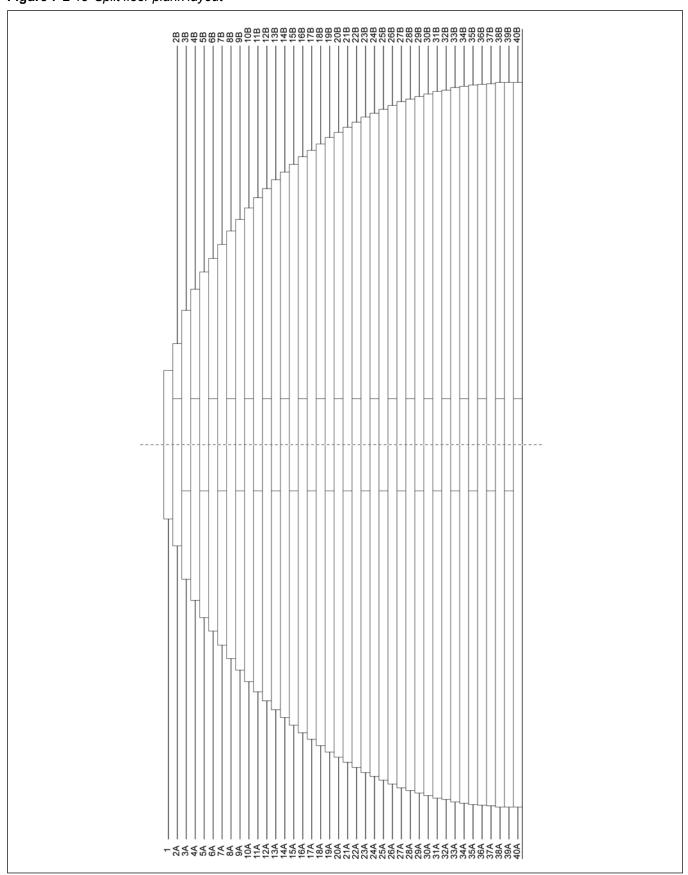


Table 7-2 48' Split floor plank layout chart

| Plank # | Plank Length | In Inch | In Metric | Plank # | Plank Length | In Inch | In Metric |
|---------|--------------|---------|-----------|---------|--------------|---------|-----------|
| 1       | 9'-8"        | 116     | 294.64    |         |              |         |           |
| 2A      | 9'-7"        | 115     | 292.1     | 2B      | 3'-7"        | 43      | 109.22    |
| 3A      | 5'-9"        | 69      | 175.26    | 3B      | 11'-9"       | 141     | 358.14    |
| 4A      | 13' - 1-1/2" | 157-1/2 | 400.05    | 4B      | 7' - 1-1/2"  | 85-1/2  | 217.17    |
| 5A      | 8'-3"        | 99      | 251.46    | 5B      | 14'-3"       | 171     | 434.34    |
| 6A      | 15' - 1-1/2" | 181-1/2 | 461.01    | 6B      | 9' - 1-1/2"  | 109-1/2 | 278.13    |
| 7A      | 10'-1/2"     | 120-1/2 | 306.07    | 7B      | 16'-1/2"     | 192-1/2 | 488.95    |
| 8A      | 16'-11"      | 203     | 515.62    | 8B      | 10'-11"      | 131     | 332.74    |
| 9A      | 11'-8"       | 140     | 355.6     | 9B      | 17'-8"       | 212     | 538.48    |
| 10A     | 18'-5"       | 221     | 561.34    | 10B     | 12'-5"       | 149     | 378.46    |
| 11A     | 13'-11"      | 157     | 396.46    | 11B     | 19'-11"      | 229     | 581.40    |
| 12A     | 19'-8"       | 236     | 599.44    | 12B     | 13'-8"       | 164     | 416.56    |
| 13A     | 14'-3"       | 171     | 434.34    | 13B     | 20'-3"       | 243     | 617.22    |
| 14A     | 20'-9"       | 249     | 632.46    | 14B     | 14'-9"       | 177     | 449.58    |
| 15A     | 15'-3"       | 183     | 464.82    | 15B     | 21'-3"       | 255     | 647.7     |
| 16A     | 21' - 4-1/2" | 256-1/2 | 651.51    | 16B     | 15' - 4-1/2" | 184-1/2 | 468.63    |
| 17A     | 16'-2"       | 194     | 492.76    | 17B     | 22'-2"       | 266     | 675.64    |
| 18A     | 22'-7"       | 271     | 688.34    | 18B     | 16'-7"       | 199     | 505.46    |
| 19A     | 17'-0"       | 204     | 518.16    | 19B     | 23'-0"       | 276     | 701.04    |
| 20A     | 23'-4"       | 280     | 711.2     | 20B     | 17'-4"       | 208     | 528.32    |
| 21A     | 17'-8"       | 212     | 538.48    | 21B     | 23'-8"       | 284     | 721.36    |
| 22A     | 24'-0"       | 288     | 731.52    | 22B     | 18'-0"       | 216     | 548.64    |
| 23A     | 18'-4"       | 220     | 558.8     | 23B     | 24'-4"       | 292     | 741.68    |
| 24A     | 24'-7"       | 295     | 749.3     | 24B     | 18'-7"       | 223     | 566.42    |
| 25A     | 18'-10"      | 226     | 574.04    | 25B     | 24'-10"      | 298     | 756.92    |
| 26A     | 25'-1"       | 301     | 764.54    | 26B     | 19'-1"       | 229     | 581.66    |
| 27A     | 19'-4"       | 232     | 589.28    | 27B     | 25'-4"       | 304     | 772.16    |
| 28A     | 25'-6"       | 306     | 777.24    | 28B     | 19'-6"       | 234     | 594.36    |
| 29A     | 19'-8"       | 236     | 599.44    | 29B     | 25'-8"       | 308     | 782.32    |
| 30A     | 25'-10"      | 310     | 787.4     | 30B     | 19'-10"      | 238     | 604.52    |
| 31A     | 20'-0"       | 240     | 609.6     | 31B     | 26'-0"       | 312     | 792.48    |
| 32A     | 26'-1"       | 313     | 795.02    | 32B     | 20'-1"       | 241     | 612.14    |
| 33A     | 20'-3"       | 243     | 617.22    | 33B     | 26'-3"       | 315     | 800.1     |
| 34A     | 26'-4"       | 316     | 802.64    | 34B     | 20'-4"       | 244     | 619.76    |
| 35A     | 20'-5"       | 245     | 622.3     | 35B     | 26'-5"       | 317     | 805.18    |
| 36A     | 26' - 5-1/2" | 317-1/2 | 806.45    | 36B     | 20' - 5-1/2" | 245-1/2 | 623.57    |
| 37A     | 20'-6"       | 246     | 624.84    | 37B     | 26'-6"       | 318     | 807.72    |
| 38A     | 26'-7"       | 319     | 810.26    | 38B     | 20'-7"       | 247     | 627.38    |
| 39A     | 20'-7"       | 247     | 627.38    | 39B     | 26'-7"       | 319     | 810.26    |
| 40A     | 26'-7"       | 319     | 810.26    | 40B     | 20'-7"       | 247     | 627.38    |

#### 48'-1" Plank Lengths (Optional)

The following plank lengths start at the sidewall and work towards the center of the bin. Refer to the grandstand layout on 2.66" Corrugation chart, page 50 and 4.00" Corrugation chart, page 51 for floor drawing.

| 1 <sup>st</sup> Plank (A) |              |         |  |  |  |  |
|---------------------------|--------------|---------|--|--|--|--|
| Plank #                   | Plank Length | In Inch |  |  |  |  |
| 1                         | 9'-8"        | 116"    |  |  |  |  |
| 2                         | 13'-12"      | 158"    |  |  |  |  |
| 3                         | 17'-6"       | 210"    |  |  |  |  |
| 4                         | 20'-3"       | 243"    |  |  |  |  |
| 5                         | 22'-6"       | 270"    |  |  |  |  |
| 6                         | 24'-3"       | 291"    |  |  |  |  |

| 1 <sup>st</sup> Plank (A) |              |          |  |  |  |  |
|---------------------------|--------------|----------|--|--|--|--|
| Plank #                   | Plank Length | In Inch  |  |  |  |  |
| 7A                        | 14'-1"       | 169"     |  |  |  |  |
| 8A                        | 14'-11"      | 179"     |  |  |  |  |
| 9A                        | 15'-8"       | 188"     |  |  |  |  |
| 10A                       | 16'-5"       | 197"     |  |  |  |  |
| 11A                       | 17'-1'       | 205"     |  |  |  |  |
| 12A                       | 17'-8"       | 212"     |  |  |  |  |
| 13A                       | 18'-3"       | 219"     |  |  |  |  |
| 14A                       | 18'-9"       | 225"     |  |  |  |  |
| 15A                       | 19'-3"       | 231"     |  |  |  |  |
| 16A                       | 19'-9"       | 237"     |  |  |  |  |
| 17A                       | 20'-2"       | 242"     |  |  |  |  |
| 18A                       | 20'-7"       | 247"     |  |  |  |  |
| 19A                       | 21'-0"       | 252"     |  |  |  |  |
| 20A                       | 21'-4"       | 256"     |  |  |  |  |
| 21A                       | 21'-8"       | 260"     |  |  |  |  |
| 22A                       | 22'-0"       | 264"     |  |  |  |  |
| 23A                       | 22'-4"       | 268"     |  |  |  |  |
| 24A                       | 22'-7"       | 271"     |  |  |  |  |
| 25A                       | 22'-10"      | 274"     |  |  |  |  |
| 26A                       | 23'-1"       | 277"     |  |  |  |  |
| 27A                       | 23'-4"       | 280"     |  |  |  |  |
| 28A                       | 23'-6"       | 282"     |  |  |  |  |
| 29A                       | 23'-8"       | 284"     |  |  |  |  |
| 30A                       | 23'-10"      | 286"     |  |  |  |  |
| 31A                       | 24'-0"       | 288"     |  |  |  |  |
| 32A                       | 24'-1"       | 289"     |  |  |  |  |
| 33A                       | 24'-3"       | 291"     |  |  |  |  |
| 34A                       | 24'-4"       | 292"     |  |  |  |  |
| 35A                       | 24'-5"       | 293"     |  |  |  |  |
| 36A                       | 24' – 5-1/2" | 293-1/2" |  |  |  |  |
| 37A                       | 24'-6"       | 294"     |  |  |  |  |
| 38A                       | 24'-7"       | 295"     |  |  |  |  |
| 39A                       | 24'-7"       | 295"     |  |  |  |  |
| 40A                       | 24'-7"       | 295"     |  |  |  |  |

| 2 <sup>nd</sup> Plank (B) |              |           |
|---------------------------|--------------|-----------|
| Plank #                   | Plank Length | In Inch   |
| 7B                        | 12'-0"       | 144"      |
| 8B                        | 12'-11"      | 155"      |
| 9B                        | 13'-8"       | 164"      |
| 10B                       | 14'-5"       | 173"      |
| 11B                       | 15'-1'       | 181"      |
| 12B                       | 15'-8"       | 188"      |
| 13B                       | 16'-3"       | 195"      |
| 14B                       | 16'-9"       | 201"      |
| 15B                       | 17'-3"       | 207"      |
| 16B                       | 17'-9"       | 213"      |
| 17B                       | 18'-2"       | 218"      |
| 18B                       | 18'-7"       | 223"      |
| 19B                       | 19'-0"       | 228"      |
| 20B                       | 19'-4"       | 232"      |
| 21B                       | 19'-8"       | 236"      |
| 22B                       | 20'-0"       | 240"      |
| 23B                       | 20'-4"       | 244"      |
| 24B                       | 20'-7"       | 247"      |
| 25B                       | 20'-10"      | 250"      |
| 26B                       | 21'-1"       | 253"      |
| 27B                       | 21'-4"       | 256"      |
| 28B                       | 21'-6"       | 258"      |
| 29B                       | 21'-8"       | 260"      |
| 30B                       | 21'-10"      | 262"      |
| 31B                       | 22'-0"       | 264"      |
| 32B                       | 22'-1"       | 265"      |
| 33B                       | 22'-3"       | 267"      |
| 34B                       | 22'-4"       | 268"      |
| 35B                       | 22'-5"       | 269"      |
| 36B                       | 22' - 5-1/2" | 269'-1/2" |
| 37B                       | 22'-6"       | 270"      |
| 38B                       | 22'-7"       | 271"      |
| 39B                       | 22'-7"       | 271"      |
| 40B                       | 22'-7"       | 271"      |

# **8** 48' Grandstand Layout for Recirculating System

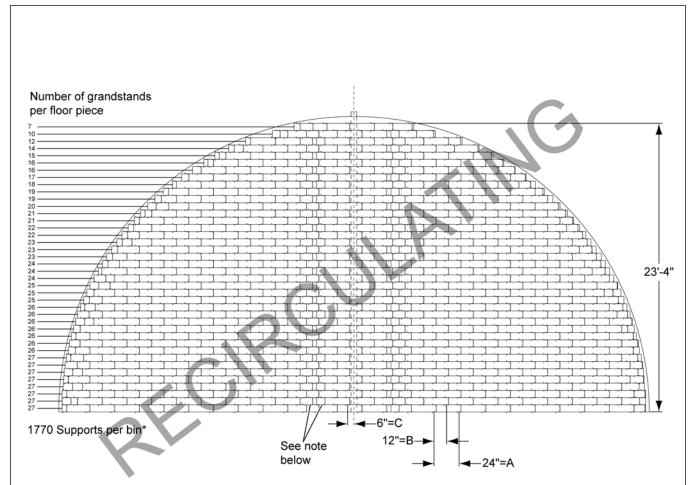
#### 2.66" Bins 8 Rings Maximum and 4.00" Bins 6 Rings Maximum



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 8-1 2.66" bins 8 rings maximum and 4.00" bins 6 rings maximum



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

NOTE: Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 6".

\* Ten supports per tank were added for center well. Refer to the Chapter 5, page 25 for center well grandstand layout.

# **9** Cor-Lok/Cut-Lok and Grandstand Layouts (33' Max. Wall Height)

#### **Topics Covered in this Chapter**

- 2.66" Bins 5 Rings and 4.00" Bins 4 Rings
- 2.66" Bins 6 Rings
- 2.66" Bins 7 Rings and 4.00" Bins 5 Rings
- 2.66" Bins 8 Rings and 4.00" Bins 6 Rings
- 2.66" Bins 9 Rings
- 4.00" Bins 7 Rings
- 2.66" Bins 10 Rings
- 2.66" Bins 11 Rings and 4.00" Bins 8 Rings
- 2.66" Bins 12 Rings
- 4.00" Bins 9 Rings

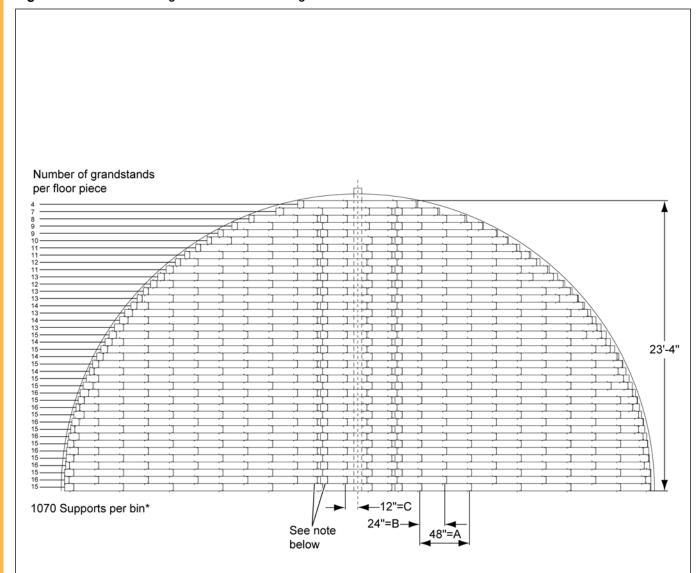
#### 2.66" Bins 5 Rings and 4.00" Bins 4 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-1 2.66" bins 5 rings and 4.00" bins 4 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 8".

\* Two supports per tank were added for center well (not shown on layouts).

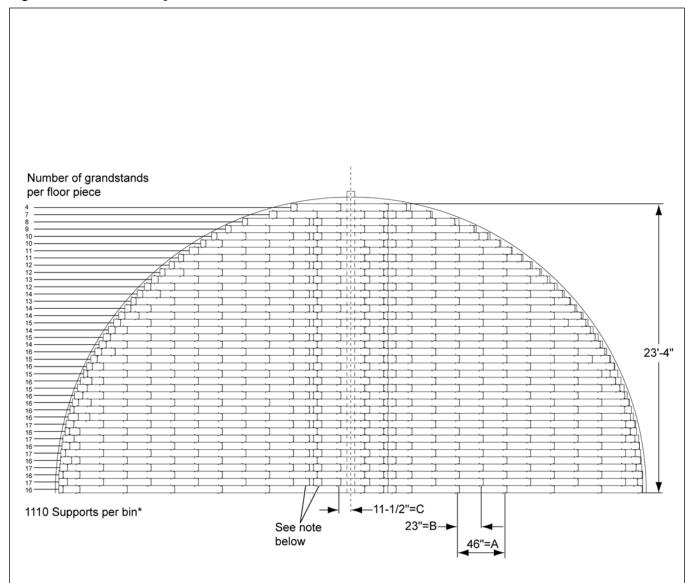
#### 2.66" Bins 6 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-2 2.66" bins 6 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 8".

\* Two supports per tank were added for center well (not shown on layouts).

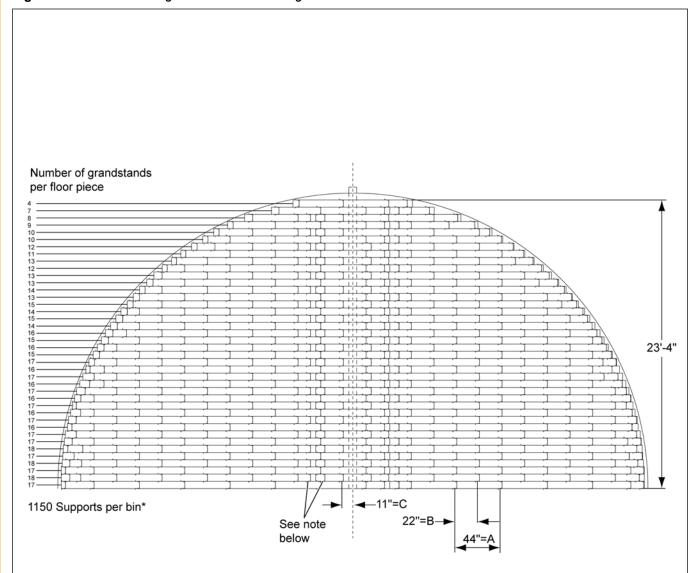
#### 2.66" Bins 7 Rings and 4.00" Bins 5 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-3 2.66" bins 7 rings and 4.00" bins 5 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 7".

\* Two supports per tank were added for center well (not shown on layouts).

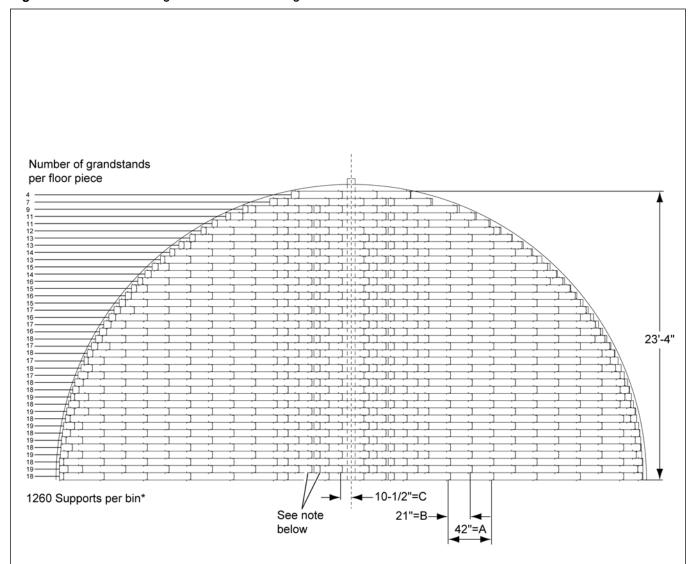
#### 2.66" Bins 8 Rings and 4.00" Bins 6 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-4 2.66" bins 8 rings and 4.00" bins 6 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 7".

\* Two supports per tank were added for center well (not shown on layouts).

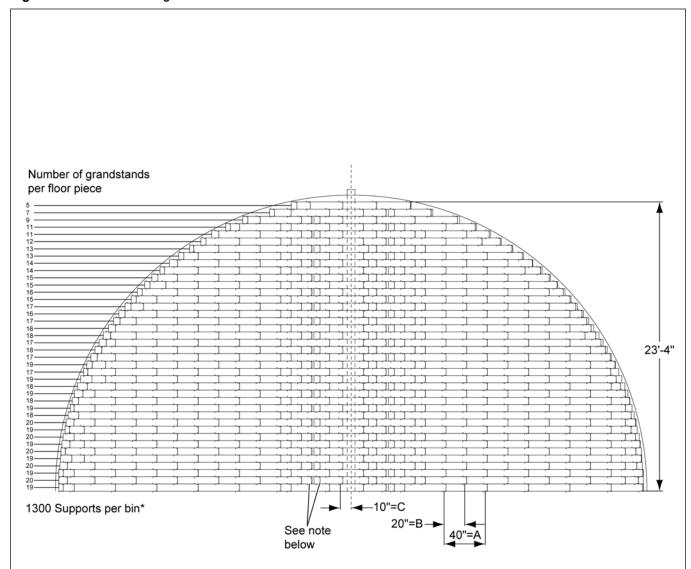
#### **2.66" Bins 9 Rings**



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-5 2.66" bins 9 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 7".

\* Two supports per tank were added for center well (not shown on layouts).

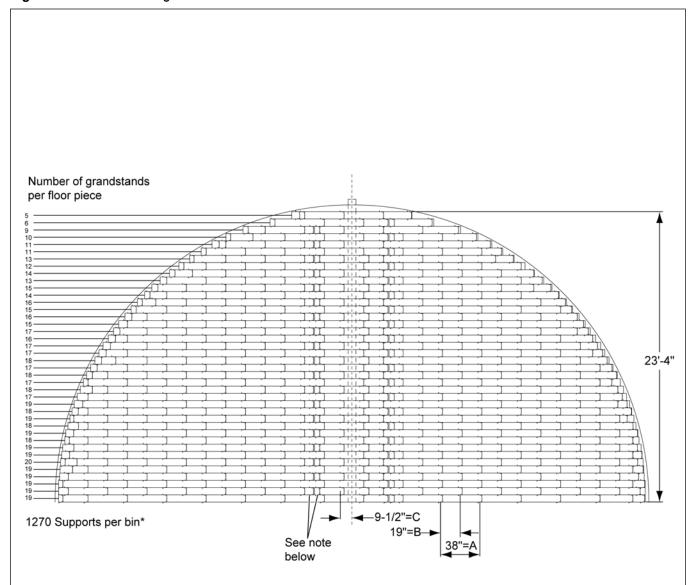
#### 4.00" Bins 7 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

**Figure 9-6** 4.00" bins 7 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 6".

\* Two supports per tank were added for center well (not shown on layouts).

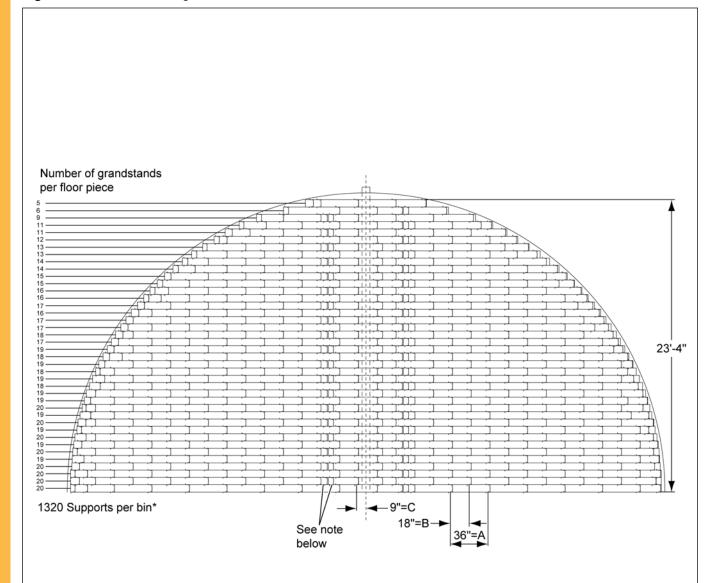
#### 2.66" Bins 10 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-7 2.66" bins 10 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 6".

\* Two supports per tank were added for center well (not shown on layouts).

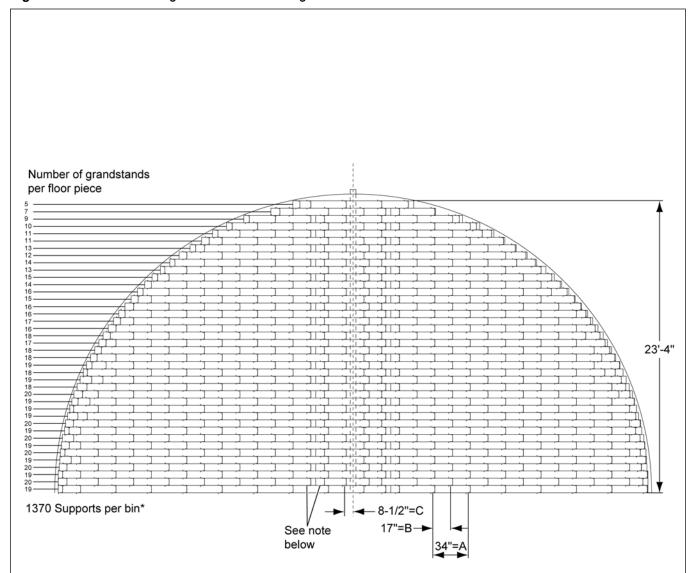
#### 2.66" Bins 11 Rings and 4.00" Bins 8 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-8 2.66" bins 11 rings and 4.00" bins 8 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 6".

\* Two supports per tank were added for center well (not shown on layouts).

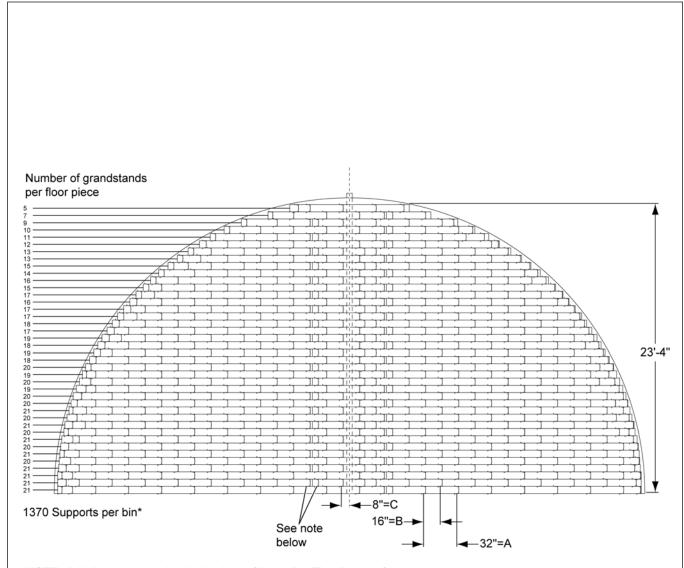
#### 2.66" Bins 12 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-9 2.66" bins 12 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 5".

\* Two supports per tank were added for center well (not shown on layouts).

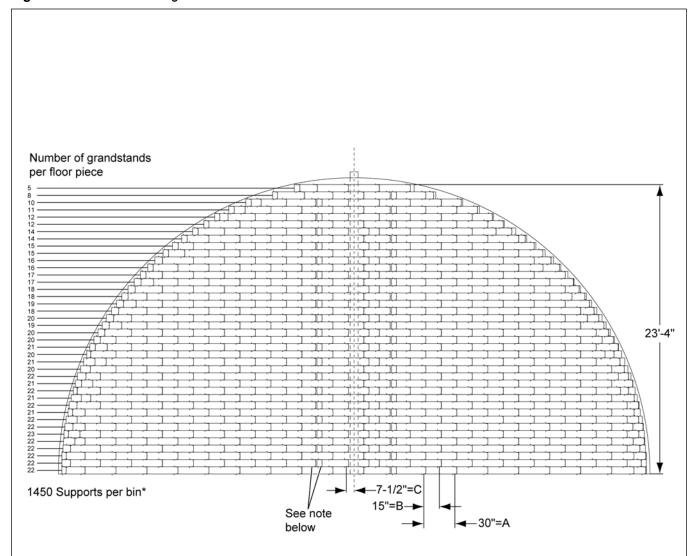
#### 4.00" Bins 9 Rings



Support all center wells to concrete.

**IMPORTANT:** The first piece of flooring must start at the proper distance from the center of the bin. The first few pieces may have to be trimmed to fit correctly.

Figure 9-10 4.00" bins 9 rings



**NOTE:** Add the grandstands at both sides of the splice. The distance from the end of the plank to the grandstand should not exceed more than 7".

**NOTE:** Every other row to be staggered. Unsupported ends of the floor pieces not to exceed 5".

\* Two supports per tank were added for center well (not shown on layouts).

### **NOTES**

# 10 20 Gauge Floor Support Requirements

#### **Topics Covered in this Chapter**

- 2.66" Corrugation Grandstand Chart
- 4.00" Corrugation Grandstand Chart

#### 2.66" Corrugation Grandstand Chart

Table 10-1 Narrow/2.66" corrugation - 20 gauge grandstand floor support chart

|       |              |              |                     |              | F            | ull floo     |              |              |               |               | type flo<br>aller flo |               |               | rugatio       | n             |               |               |                        |               |               |
|-------|--------------|--------------|---------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------------|---------------|---------------|
| Dia.  | 12'          | 15'          | 18'                 | 21'          | 24'          | 27'          | 30'          | 33'          | 36'           | 39'           | 42'                   | 45'           | 48'           | 54'           | 60'           | 72'           | 75'           | 78'                    | 90'           | 105'          |
| Rings |              |              |                     |              |              |              |              |              |               |               |                       |               |               |               |               |               |               |                        |               |               |
| 3     | 57/27<br>62  |              |                     |              |              | oort spa     |              |              |               |               |                       |               |               |               |               | F             | loor stv      | les list ir            | n order o     | of            |
| 4     | 54/27<br>62  | 58/29<br>80  | 54/27<br>120        |              | supp         | ort qua      | intity       |              |               |               |                       |               |               |               |               |               | reasing       | strength               | า 18 Gaเ      |               |
| 5     | 54/27        | 58/29        | 54/27               | 52/26        | 56/28        | 54/27        | 54/27        | 50/25        | 50/25         | 50/25         |                       |               |               |               |               |               | Cor-          | Lok Cut                | -Lok          |               |
| 6     | 62<br>54/27  | 80<br>54/27  | 120<br>54/27        | 160<br>52/26 | 205<br>52/26 | 249<br>48/24 | 304<br>50/25 | 390<br>50/25 | 470<br>48/24  | 576<br>48/24  | 48/24                 | 48/24         | 48/24         | 44/22         | 44/22         |               |               |                        |               | ĺ             |
|       | 62<br>54/27  | 88<br>52/26  | 120<br>48/24        | 160<br>50/25 | 215<br>48/24 | 275<br>48/24 | 333<br>48/24 | 390<br>46/23 | 487<br>44/22  | 586<br>46/23  | 695<br>44/22          | 806<br>44/22  | 909           | 1196<br>42/21 | 1430<br>42/21 |               |               |                        |               |               |
| 7     | 62           | 96           | 138                 | 168          | 225          | 275          | 347          | 425          | 523           | 606           | 735                   | 836           | 933           | 1236          | 1477          |               |               |                        |               |               |
| 8     | 48/24        | 48/24        | 48/24               | 46/23        | 46/23        | 46/23        | 44/22        | 44/22        | 44/22         | 44/22         | 42/21                 | 42/21         | 42/21         | 40/20         | 40/20         |               |               |                        |               |               |
| _     | 70<br>48/24  | 100<br>48/24 | 144<br>42/21        | 182<br>42/21 | 230<br>42/21 | 300<br>44/22 | 363<br>42/21 | 435<br>42/21 | 523<br>40/20  | 624<br>42/21  | 750<br>40/20          | 866<br>40/20  | 977           | 1296<br>38/19 | 1544<br>36/18 |               |               |                        |               | ļ             |
| 9     | 70           | 100          | 144                 | 190          | 243          | 303          | 387          | 465          | 565           | 656           | 790                   | 906           | 1019          | 1346          | 1697          |               |               | Cor-Lok                |               |               |
| 10    | 42/21        | 42/21        | 42/21               | 42/21        | 42/21        | 42/21        | 40/20        | 40/20        | 38/19         | 38/19         | 38/19                 | 36/18         | 36/18         | 34/17         | 34/17         | it di         |               | and nun<br>shaded      |               | ings          |
| 10    | 75           | 110          | 144                 | 190          | 250          | 309          | 397          | 479          | 597           | 716           | 820                   | 986           | 1109          | 1486          | 1779          |               | ale III       | Silaueu                | ı area.<br>ı  |               |
| 11    | 42/21<br>75  | 42/21<br>110 | 42/21<br>144        | 42/21<br>190 | 40/20<br>265 | 40/20<br>319 | 38/19<br>417 | 36/18<br>525 | 36/18<br>620  | 36/18<br>746  | 34/17<br>900          | 34/17<br>1036 | 34/17<br>1163 | 32/16<br>1566 | 32/16<br>1883 |               |               |                        |               |               |
| 40    | 38/19        | 40/20        | 40/20               | 40/20        | 38/19        | 38/19        | 36/18        | 34/17        | 34/17         | 34/17         | 32/16                 | 32/16         | 32/16         | 30/15         | 30/15         | 26/13         | 26/13         | 26/13                  | 24/12         | 22/11         |
| 12    | 80           | 115          | 154                 | 202          | 280          | 345          | 441          | 550          | 659           | 786           | 950                   | 1096          | 1230          | 1660          | 1993          | 3300          | 3580          | 3870                   | 5520          | 8110          |
| 13    | 38/19<br>80  | 38/19<br>120 | 38/19<br>166        | 36/18<br>220 | 36/18<br>290 | 36/18<br>360 | 34/17<br>470 | 32/16<br>600 | 32/16<br>710  | 30/15<br>880  | 30/15<br>1010         | 30/15<br>1160 | 28/14<br>1390 | 28/14<br>1760 | 26/13<br>2300 | 24/12<br>3540 | 24/12<br>3840 | 24/12<br>4150          | 22/11<br>5960 | 20/10<br>8820 |
| 14    | 34/17        | 34/17        | 34/17               | 34/17        | 34/17        | 34/17        | 32/16        | 30/15        | 30/15         | 28/14         | 28/14                 | 26/13         | 26/13         | 26/13         | 24/12         | 22/11         | 22/11         | 22/11                  | 20/10         | 18/9          |
|       | 90<br>32/16  | 130<br>32/16 | 180<br>32/16        | 230<br>32/16 | 300<br>32/16 | 380<br>32/16 | 500<br>30/15 | 630<br>28/14 | 750<br>28/14  | 930<br>26/13  | 1070<br>26/13         | 1310<br>24/12 | 1480<br>24/12 | 1870<br>24/12 | 2460<br>22/11 | 3820<br>22/11 | 4410<br>20/10 | 4480<br>20/10          | 6480<br>18/9  | 9680<br>18/9  |
| 15    | 95           | 140          | 190                 | 250          | 320          | 400          | 520          | 670          | 790           | 990           | 1140                  | 1400          | 1590          | 2000          | 2650          | 3820          | 4500          | 4870                   | 7120          | 9680          |
| 16    | 30/15        | 30/15        | 30/15               | 30/15        | 28/14        | 28/14        | 28/14        | 28/14        | 26/13         | 24/12         | 24/12                 | 24/12         | 22/11         | 22/11         | 20/10         | 20/10         | 20/10         | 18/9                   | 18/9          | 16/8          |
|       | 100<br>28/14 | 150<br>28/14 | 205<br>28/14        | 260<br>26/13 | 360<br>26/13 | 450<br>26/13 | 550<br>26/13 | 670<br>26/13 | 840<br>24/12  | 1060<br>24/12 | 1220<br>22/11         | 1400<br>22/11 | 1710<br>20/10 | 2160<br>20/10 | 2880<br>20/10 | 4150<br>18/9  | 4500<br>18/9  | 5340<br>18/9           | 7120<br>16/8  | 10760<br>16/8 |
| 17    | 106          | 160          | 215                 | 290          | 380          | 480          | 590          | 710          | 900           | 1060          | 1320                  | 1510          | 1860          | 2350          | 2880          | 4550          | 4950          | 5340                   | 7910          | 10760         |
| 18    | 26/13<br>110 | 26/13<br>170 | 24/12<br>240        | 24/12<br>310 | 24/12<br>400 | 24/12<br>510 | 24/12<br>630 | 24/12<br>760 | 24/12<br>900  | 22/11<br>1140 | 22/11<br>1320         | 20/10<br>1640 | 20/10<br>1860 | 18/9          | 18/9<br>3170  | 16/8<br>5060  | 16/8<br>5500  | 16/8<br>5940           | 16/8<br>7910  | 14/7<br>12150 |
|       | 110          | 24/12        | 24/12               | 22/11        | 22/11        | 22/11        | 22/11        | 22/11        | 22/11         | 22/11         | 20/10                 | 20/10         | 18/9          | 2570<br>18/9  | 16/8          | 16/8          | 16/8          | 16/8                   | 14/7          | 14/7          |
| 19    |              | 180          | 240                 | 340          | 440          | 550          | 680          | 820          | 970           | 1140          | 1430                  | 1640          | 2040          | 2570          | 3520          | 5060          | 5500          | 5940                   | 8920          | 12150         |
| 20    |              | 22/11        | 22/11               | 22/11        | 22/11        | 22/11        | 20/10        | 20/10        | 20/10         | 20/10         | 20/10                 | 18/9          | 18/9          | 16/8          | 16/8          | 14/7          | 14/7          | 14/7                   | 14/7          | 12/6          |
|       |              | 190          | 260                 | 340<br>20/10 | 440<br>20/10 | 550<br>20/10 | 740<br>20/10 | 890<br>20/10 | 1060<br>20/10 | 1240<br>20/10 | 1430<br>18/9          | 1800<br>18/9  | 2040<br>16/8  | 2860<br>16/8  | 3520<br>14/7  | 5710<br>14/7  | 6200<br>14/7  | 6710<br>14/7           | 8920<br>12/6  | 13990<br>12/6 |
| 21    |              |              |                     | 370          | 470          | 740          | 740          | 890          | 1060          | 1240          | 1570                  | 1800          | 2270          | 2860          | 3970          | 5710          | 6200          | 6710                   | 10280         | 13990         |
| 22    |              |              |                     | 18/9         | 18/9         | 18/9         | 18/9         | 18/9         | 18/9          | 18/9          | 18/9                  | 16/8          | 16/8          | 16/8          | 14/7          | 12/6          | 12/6          | 12/6                   | 12/6          |               |
| 23    |              |              |                     | 400<br>18/9  | 520<br>18/9  | 660<br>16/8  | 810<br>16/8  | 970<br>16/8  | 1160<br>16/8  | 1360<br>16/8  | 1570<br>16/8          | 2000<br>16/8  | 2270<br>16/8  | 2860<br>14/7  | 3970<br>14/7  | 6580<br>12/6  | 7140<br>12/6  | 7730<br>12/6           | 10280         | I             |
|       |              |              |                     | 400<br>16/8  | 520<br>16/8  | 730<br>16/8  | 900<br>16/8  | 1080<br>16/8 | 1290<br>16/8  | 1510<br>16/8  | 1740<br>16/8          | 2000<br>16/8  | 2270<br>14/7  | 3230<br>14/7  | 3970<br>12/6  | 6580<br>12/6  | 7140<br>12/6  | 7730                   | J             |               |
| 24    |              |              |                     | 450          | 580          | 730          | 900          | 1080         | 1290          | 1510          | 1740                  | 2000          | 2560          | 3230          | 4570          | 6580          | 7140          |                        |               |               |
| 25    |              |              |                     | 14/7<br>500  | 14/7<br>650  | 14/7<br>820  | 14/7<br>1010 | 14/7<br>1220 | 14/7<br>1450  | 14/7<br>1700  | 14/7<br>1960          | 14/7<br>2260  | 14/7<br>2560  | 14/7<br>3230  | 12/6<br>4570  |               | Supi          | oort spa               | acina         |               |
| 26    |              |              |                     | - 550        | _ 000        | 14/7         | 14/7         | 14/7         | 14/7          | 14/7          | 14/7                  | 14/7          | 14/7          | 12/6          | 12/6          |               |               | ort qua                |               |               |
|       |              | ut-Lok o     |                     |              |              | 820<br>12/6  | 1010<br>12/6 | 1220<br>12/6 | 1450<br>12/6  | 1700<br>12/6  | 1960<br>12/6          | 2260<br>12/6  | 2560<br>12/6  | 3720<br>12/6  | 4570<br>12/6  |               | D             | lalı fla :             |               |               |
| 27    | nui          | mber of      | rings ar<br>haded a |              | om           | 950          | 1160         | 1410         | 1670          | 1960          | 2260                  | 2600          | 2950          | 3720          | 4570          |               |               | lok floor<br>ail suppo |               |               |
| 28    |              | uns          | iaucu d             | ica.         |              | 12/6<br>950  | 12/6<br>1160 | 12/6<br>1410 | 12/6<br>1670  | 12/6<br>1960  | 12/6<br>2260          | 12/6<br>2600  | 12/6<br>2950  | 12/6<br>3720  |               |               | required      | d if diam              | eter and      |               |
|       |              |              |                     |              |              | 12/6         | 12/6         | 12/6         | 12/6          | 12/6          | 2200                  | 2000          | 2300          | 3120          | J             | nu            |               | rings ar               |               | om            |
| 29    |              |              |                     |              |              | 950          | 1160         | 1410         | 1670          | 1960          |                       |               |               |               |               |               | uns           | haded a                | rea.          |               |

<sup>\*</sup> For Aeration Systems recessed in the concrete, add one ring for proper spacing.

When using FL-3102-3 or FL-3102-6 (3", 6") Grandstands, increase the listed quantities by 33% (Standard quantity x 1.33).

Quantities of Grandstands are minimum required for installation - Due to varying conditions and construction techniques at floor and wall penetrations, additional supports may need to be ordered.

**How to read the chart:** For example, a 12' diameter bin with 7 rings would have spacing of 54/27 (the top numbers). Meaning A=54" and B=27". The number of supports needed would be 62, (the bottom number).

#### 4.00" Corrugation Grandstand Chart

Table 10-2 Wide/4.00" corrugation - 20 gauge grandstand floor support chart

| Full floor supports required for plank type flooring 4.00" corrugation (* Based upon 13-1/2" or taller floor heights) |              |                      |              |               |              |              |              |              |               |               |               |               |               |               |               |   |               |                      |               |               |
|---|--------------|----------------------|--------------|---------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|---------------|----------------------|---------------|---------------|
| Dia.  | 12'          | 15'                  | 18'          | 21'           | 24'          | 27'          | 30'          | 33'          | 36'           | 39'           | 42'           | 45'           | 48'           | 54'           | 60'           | 72'   | 75'           | 78'                  | 90'           | 105'          |
| Rings   |              | t spaciı<br>t quanti |              |               |              |              |              |              |               |               |               |               |               |               |               |   |               |                      |               |               |
| 3   | 54/27<br>62  | 58/29<br>80          | 54/27<br>120 | 52/26<br>150  | 56/28<br>202 | 54/27<br>249 | 50/25<br>333 | 50/25<br>390 | 50/25<br>470  | 50/25<br>576  | 46/23<br>695  | 52/26<br>735  | 48/24<br>869  |               |               |   |               |                      |               |               |
| 4   | 54/27<br>62  | 54/27<br>88          | 54/27<br>120 | 52/26<br>160  | 52/26<br>214 | 48/24<br>275 | 50/25<br>333 | 50/25<br>390 | 50/25<br>470  | 50/25<br>576  | 46/23<br>695  | 48/24<br>775  | 48/24<br>869  | 46/23<br>1156 | 44/22<br>1430 |   |               |                      |               |               |
| 5   | 54/27<br>62  | 52/26<br>96          | 48/24<br>138 | 50/25<br>168  | 48/24<br>224 | 48/24<br>275 | 48/24<br>347 | 46/23<br>425 | 44/22<br>523  | 46/23<br>606  | 46/23<br>695  | 44/22<br>836  | 44/22<br>933  | 42/21<br>1236 | 42/21<br>1477 |   |               |                      |               |               |
| 6   | 48/24<br>70  | 48/24<br>100         | 48/24<br>138 | 46/23<br>182  | 46/23<br>230 | 44/22<br>303 | 44/22<br>363 | 44/22<br>435 | 44/22<br>523  | 42/21<br>656  | 42/21<br>751  | 42/21<br>866  | 42/21<br>977  | 40/20<br>1296 | 38/19<br>1650 |   |               |                      |               |               |
| 7   | 42/21<br>75  | 42/21<br>110         | 42/21<br>144 | 42/21<br>190  | 42/21<br>249 | 42/21<br>309 | 42/21<br>387 | 40/20<br>480 | 40/20<br>565  | 40/20<br>686  | 38/19<br>821  | 38/19<br>946  | 38/19<br>1057 | 36/18<br>1416 | 34/17<br>1779 |   |               | ige Cor-             |               |               |
| 8   | 42/21<br>75  | 42/21<br>110         | 42/21<br>144 | 42/21<br>190  | 40/20<br>265 | 40/20<br>319 | 38/19<br>417 | 36/18<br>525 | 36/18<br>620  | 36/18<br>746  | 34/17<br>900  | 34/17<br>1036 | 34/17<br>1163 | 32/16<br>1566 | 32/16<br>1883 | 28/15<br>3550   |               | meter ar<br>are in s |               |               |
| 9   | 38/19<br>80  | 40/20<br>115         | 38/19<br>166 | 38/19<br>220  | 38/19<br>277 | 36/18<br>355 | 34/17<br>471 | 34/17<br>555 | 32/16<br>695  | 32/16<br>830  | 32/16<br>951  | 30/15<br>1156 | 30/15<br>1303 | 30/15<br>1660 | 28/14<br>2160 | 28/15<br>3550   | 24/12<br>3850 | 24/12<br>4160        | 24/12<br>5970 | 20/10<br>8820 |
| 10  | 36/18<br>90  | 34/17<br>130         | 34/17<br>180 | 34/17<br>230  | 34/17<br>300 | 34/17<br>380 | 32/16<br>500 | 32/16<br>600 | 30/15<br>750  | 28/14<br>930  | 30/15<br>1010 | 28/14<br>1230 | 28/14<br>1390 | 26/13<br>1870 | 24/12<br>2460 | 22/11<br>3820   | 22/11<br>4150 | 22/11<br>4480        | 20/10<br>6480 | 18/9<br>9680  |
| 11  | 32/16<br>95  | 30/15<br>150         | 32/16<br>190 | 32/16<br>250  | 32/16<br>320 | 32/16<br>400 | 30/15<br>520 | 30/15<br>650 | 28/14<br>790  | 26/13<br>990  | 26/13<br>1140 | 24/12<br>1400 | 24/12<br>1590 | 24/12<br>2000 | 22/11<br>2650 | 20/10<br>4150   | 20/10<br>4500 | 20/10<br>4870        | 18/9<br>7120  | 16/8<br>10760 |
| 12  | 28/14<br>100 | 28/14<br>160         | 28/14<br>210 | 28/14<br>280  | 28/14<br>360 | 28/14<br>450 | 28/14<br>550 | 28/14<br>670 | 26/13<br>840  | 24/12<br>1060 | 24/12<br>1220 | 22/11<br>1510 | 22/11<br>1710 | 20/10<br>2350 | 20/10<br>2880 | 18/9<br>4550  | 18/9<br>4950  | 18/9<br>5340         | 16/8<br>7910  | 16/8<br>10760 |
| 13  | 26/13<br>110 | 26/13<br>170         | 26/13<br>220 | 26/13<br>290  | 24/12<br>400 | 24/12<br>510 | 24/12<br>630 | 24/12<br>760 | 24/12<br>900  | 22/11<br>1140 | 22/11<br>1320 | 20/10<br>1640 | 20/10<br>1860 | 18/9<br>2570  | 18/9<br>3170  | 16/8<br>5060  | 16/8<br>5500  | 16/8<br>5940         | 16/8<br>7910  | 14/7<br>12150 |
| 14  |              |                      | 22/11<br>260 | 22/11<br>340  | 22/11<br>440 | 22/11<br>550 | 22/11<br>680 | 22/11<br>820 | 20/10<br>1060 | 20/10<br>1240 | 20/10<br>1430 | 18/9<br>1800  | 18/9<br>2040  | 16/8<br>2860  | 16/8<br>3520  | 16/8<br>5060  | 16/8<br>5500  | 16/8<br>5940         | 14/7<br>8920  | 14/7<br>12150 |
| 15  |              |                      |              | 20/10<br>370  | 20/10<br>480 | 20/10<br>600 | 20/10<br>740 | 20/10<br>890 | 20/10<br>1060 | 18/9<br>1360  | 18/9<br>1570  | 18/9<br>1800  | 16/8<br>2270  | 16/8<br>2860  | 16/8<br>3520  | 14/7<br>5710  | 14/7<br>6200  | 14/7<br>6710         | 14/7<br>8920  | 12/6<br>13990 |
| 16  |              |                      |              | 18/9<br>400   | 18/9<br>520  | 18/9<br>660  | 18/9<br>810  | 18/9<br>970  | 18/9<br>1160  | 18/9<br>1360  | 18/9<br>1570  | 16/8<br>2000  | 16/8<br>2270  | 16/8<br>2860  | 14/7<br>3970  | 12/6<br>6580  | 12/6<br>7140  | 12/6<br>7730         | 12/6<br>10280 |               |
| 17  |              |                      |              |               | 16/8<br>580  | 16/8<br>730  | 16/8<br>900  | 16/8<br>1080 | 16/8<br>1290  | 16/8<br>1510  | 16/8<br>1750  | 16/8<br>2000  | 16/8<br>2270  | 14/7<br>3230  | 14/7<br>3970  | 12/6<br>6580  | 12/6<br>7140  | 12/6<br>7730         |               |               |
| 18  |              |                      |              |               | 16/8<br>580  | 16/8<br>730  | 16/8<br>900  | 16/8<br>1080 | 16/8<br>1290  | 16/8<br>1510  | 16/8<br>1750  | 16/8<br>2000  | 14/7<br>2560  | 14/7<br>3230  | 12/6<br>4570  |   | Supp          | ort spa              | cing          |               |
| 19  |              |                      | ut-Lok o     | nly<br>number |              | 14/7<br>820  | 14/7<br>1010 | 14/7<br>1220 | 14/7<br>1450  | 14/7<br>1700  | 14/7<br>1970  | 14/7<br>2260  | 14/7<br>2560  | 12/6<br>3720  | 12/6<br>4570  |   | supp          | ort qua              | ntity         |               |
| 20  | -1           | of rings a           |              | e botton      |              | 12/6<br>950  | 12/6<br>1160 | 12/6<br>1410 | 12/6<br>1670  | 12/6<br>1960  | 12/6<br>2270  | 12/6<br>2600  | 12/6<br>2950  | 12/6<br>3720  |               | •   | monora        | Lok floor            | orts are      |               |
| 21  |              |                      |              |               |              | 12/6<br>950  | 12/6<br>1160 | 12/6<br>1410 | 12/6<br>1670  | 12/6<br>1960  | 12/6<br>2270  | 12/6<br>2600  | 12/6<br>2950  |               |               | required if diameter and<br>number of rings are in<br>bottom unshaded area. |               |                      |               |               |

<sup>\*</sup> For Aeration Systems recessed in the concrete, add one ring for proper spacing.

When using FL-3102-3 or FL-3102-6 (3", 6") Grandstands, increase the listed quantities by 33% (Standard quantity x 1.33).

Quantities of Grandstands are minimum required for installation - Due to varying conditions and construction techniques at floor and wall penetrations, additional supports may need to be ordered.

Floor styles in order of increasing strength are 18 gauge Cor-Lok, Cut-Lok and Dura-Lok.

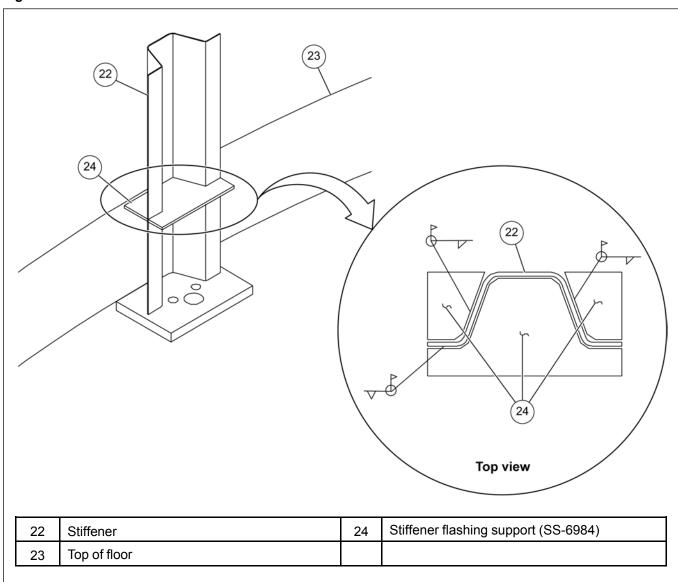
**How to read the chart:** For example, a 12' diameter bin with 5 rings would have spacing of 54/27 (the top numbers). Meaning A=54" and B=27". The number of supports needed would be 62, (the bottom number).

### **NOTES**

# 11 Installing the Stiffener Flashing Support

- 1. Install the floor and support system, cutting the floor to go around the internal stiffeners as required.
- 2. Break the stiffener flashing support (24) into its three components.
- 3. Lay the stiffener flashing supports (24) on top of the flooring (23) and weld the flashing supports (24) to the stiffener (22) as close as possible. Fasten the flashing to the wall, flashing support (24) and floor. Seal all spaces by welding or caulking.
- 4. Paint all welds with good quality zinc rich paint.
- 5. Stiffener flashing supports (24) must be ordered separately from the standard floor and flashing.

Figure 11-1 Internal universal stiffeners



### **NOTES**

## 12 Installing the Air Flow Supports

- 1. Determine the spacing and quantity of air flow supports required from the *Table 12-1*, *page 57*. Make sure that the correct supports have been ordered for use with the proper depth of plank (either 1-1/8" or 1-3/8" deep).
- 2. Mark the center of the bin.
- 3. Install the discharge auger.
- 4. Mark the spacing lines parallel to the discharge auger.
- 5. Start on the side of the bin opposite from the discharge auger and place the first two rows of supports on the spacing lines.

**NOTE:** The air flow supports are installed at an angle in an overlapping pattern, so the ends will overlap. Refer to the Figure 12-2, page 58 for floor layouts.

- 6. Install the channel lock flooring on the first two rows of supports and secure in place with sidewall flashing.
- 7. Finish placing supports on the spacing lines and installing the floor planks.
  - a. Single supports are used next to the sidewall and at the ends of split floor planks in order to maintain the floor manufacturer's recommended minimum distance from the end of a plank to a support.
  - b. Double supports are used at the sump and along the sides of the discharge auger for spacing of 16" or less and for recirculating bin equipment.
  - c. Full supports may have to be overlapped or angled to provide support at walls and to maintain spacing and flashing requirements.

Figure 12-1 Methods of support placement

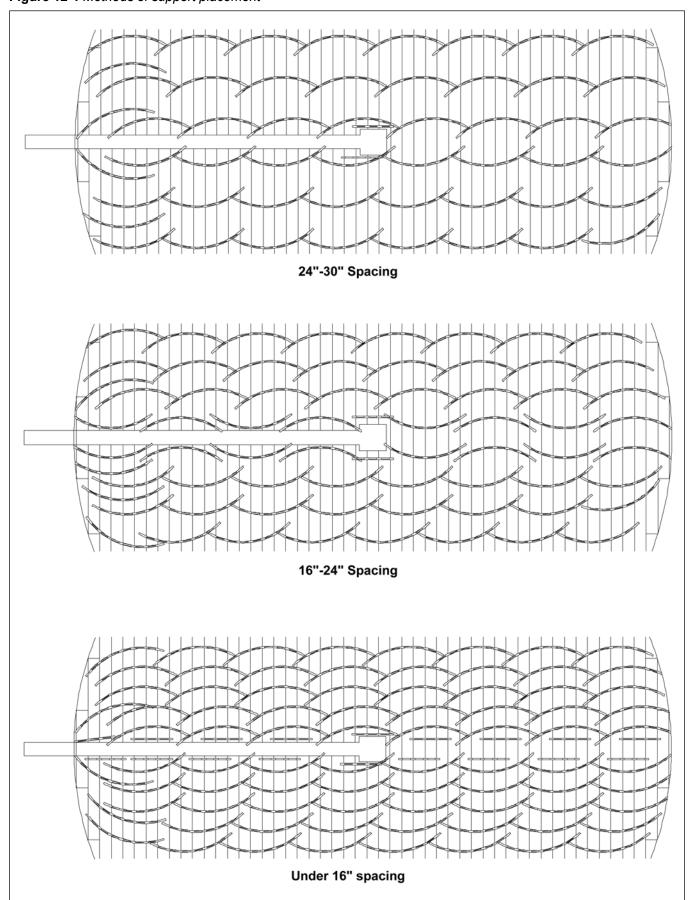


Table 12-1 \* Installation, spacing and quantities of air flow supports under channel lock floors

|                               |                |      |        |        | Bin dia | ameter | - Num  | ber of | suppo  | rts    |      |        |        |      |        |        |
|-------------------------------|----------------|------|--------|--------|---------|--------|--------|--------|--------|--------|------|--------|--------|------|--------|--------|
| 0                             | б              | 18'  | diame  | ter    | 21'     | diame  | ter    | 24'    | diame  | ter    | 27'  | diame  | ter    | 30'  | diame  | ter    |
| Grain<br>depth at<br>sidewall | Spacing        | Full | Double | Single | Full    | Double | Single | Full   | Double | Single | Full | Double | Single | Full | Double | Single |
| 18'                           | 30"            | 34   | 2      | 8      | 48      | 2      | 10     | 60     | 2      | 12     | 84   | 2      | 14     | 88   | 2      | 14     |
| 24'                           | 26"            | 36   | 2      | 8      | 56      | 2      | 10     | 74     | 2      | 12     | 92   | 2      | 14     | 104  | 2      | 14     |
| 27'                           | 24"            | 44   | 2      | 8      | 62      | 2      | 10     | 76     | 2      | 12     | 92   | 2      | 14     | 112  | 2      | 14     |
| 32'                           | 20"            | 54   | 2      | 10     | 64      | 2      | 12     | 84     | 2      | 14     | 106  | 2      | 16     | 130  | 2      | 18     |
| 40'                           | 16"            | 58   | 10     | 14     | 80      | 12     | 16     | 104    | 14     | 18     | 128  | 16     | 20     | 160  | 18     | 22     |
| 48'                           | 13"            | 72   | 10     | 16     | 98      | 12     | 20     | 126    | 14     | 22     | 158  | 16     | 24     | 190  | 18     | 28     |
| 53'                           | 12"            | 76   | 10     | 18     | 106     | 12     | 22     | 140    | 14     | 24     | 172  | 16     | 28     | 210  | 18     | 30     |
| 68'                           | 10"            | 86   | 10     | 22     | 116     | 12     | 26     | 156    | 14     | 28     | 212  | 16     | 32     | 250  | 18     | 36     |
| 16'                           | 24" and<br>12" | 68   | 10     | 8      | 82      | 12     | 10     | 104    | 14     | 12     | 120  | 16     | 14     | 140  | 18     | 14     |
| (for grain flo                | ow)            |      |        |        |         |        |        |        |        |        |      |        |        |      |        |        |

|                               |  |      |        |        | Bin dia | ameter | r - Nun | nber of | suppo  | orts   |         |         |        |       |         |        |
|-------------------------------|--|------|--------|--------|---------|--------|---------|---------|--------|--------|---------|---------|--------|-------|---------|--------|
| Overing                       | б  | 33'  | diame  | ter    | 36'     | diame  | ter     | 42'     | diame  | ter    | 48'     | diame   | ter    | 60'   | diamet  | er     |
| Grain<br>depth at<br>sidewall | Spacing  | Full | Double | Single | Full    | Double | Single  | Full    | Double | Single | Full    | Double  | Single | Full  | Double  | Single |
| 18'                           | 30"  | 116  | 2      | 16     | 136     | 2      | 18      | 172     | 2      | 20     | Use 2   | 24" spa | cing   | Use 2 | 24" spa | cing   |
| 24'                           | 24' 26" 124 2 16 144 2 18 200 2 20 Use 24" spacing Use 24" spacing |      |        |        |         |        |         |         |        |        |         | cing    |        |       |         |        |
| 27'                           | 24"  | 136  | 2      | 16     | 154     | 2      | 18      | 212     | 2      | 20     | 274 2 2 |         |        | 422   | 2       | 30     |
| 32'                           | 20"  | 150  | 2      | 20     | 184     | 2      | 22      | 242     | 2      | 26     | 326     | 2       | 28     | 498   | 2       | 36     |
| 40'                           | 16"  | 192  | 20     | 24     | 234     | 22     | 28      | 314     | 24     | 32     | 410     | 28      | 36     | 620   | 34      | 46     |
| 48'                           | 13"  | 238  | 20     | 30     | 278     | 22     | 34      | 368     | 24     | 38     | 488     | 28      | 44     | 762   | 34      | 56     |
| 53'                           | 12"  | 262  | 20     | 34     | 306     | 22     | 36      | 416     | 24     | 42     | 534     | 28      | 48     | 838   | 34      | 60     |
| 68'                           | 10"  | 296  | 20     | 40     | 356     | 22     | 44      | 478     | 24     | 50     | 652     | 28      | 58     | 1024  | 34      | 72     |
| 16'                           | 24" and<br>12"   | 168  | 20     | 16     | 188     | 20     | 18      | 264     | 24     | 20     | 350     | 28      | 20     | N/A   | N/A     | N/A    |
| (for grain flo                | ow)  | •    |        |        |         |        |         |         |        |        |         |         |        |       |         |        |

#### NOTE:

- 1. Use a maximum spacing of 16" for perforated corrugated flooring.
- 2. The number of supports listed is based on the maximum peaked capacity of each bin.
- 3. Use extra single supports for the split floors.
- 4. Extra supports are required for grain recirculating equipment. Use the manufacturer's recommendation for the number and spacing of extra supports.
  - For grain flows, air flow supports are doubled in a 14' diameter in the center of the floor.
- 5. Contact a representative for air flow supports required for larger bins and deeper grain depths.
- 6. \* Increase the number of supports by 5% when used with 6-3/4" wide MFS floor planks.

Figure 12-2 Floor layouts

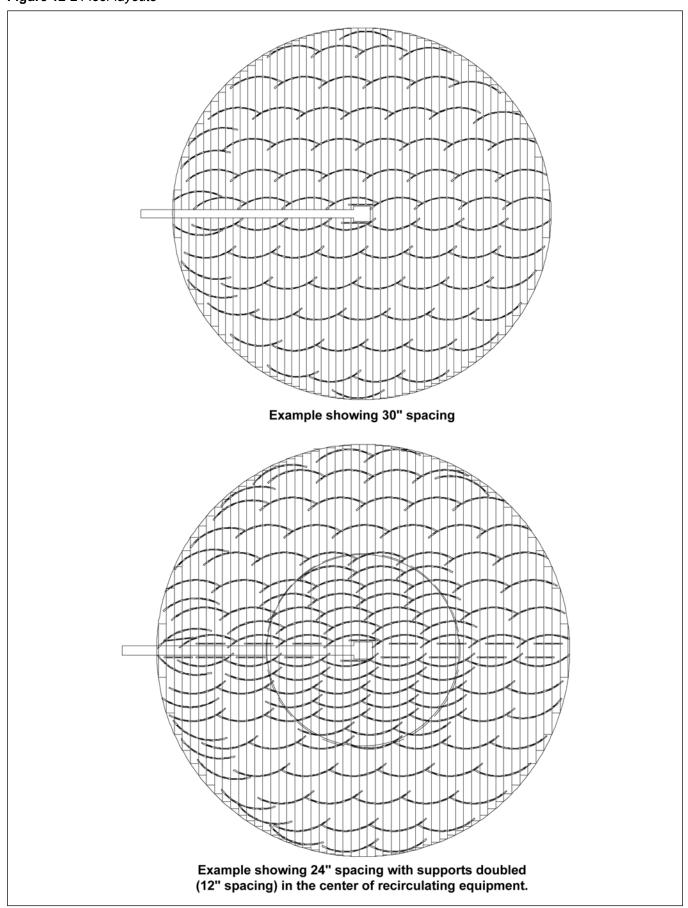


Table 12-2 Installation, spacing and quantities of air flow supports under channel lock floors york and chief bins

|                               |                |      |        |        | Bin dia | ameter | - Num  | ber of | suppoi | rts    |      |        |        |      |         |        |
|-------------------------------|----------------|------|--------|--------|---------|--------|--------|--------|--------|--------|------|--------|--------|------|---------|--------|
| 0                             | 5              |      | 15'-6" |        |         | 18'-7" |        |        | 21'-8" |        |      | 24'-9" |        | 2    | 27'-10" | J      |
| Grain<br>depth at<br>sidewall | Spacing        | Full | Double | Single | Full    | Double | Single | Full   | Double | Single | Full | Double | Single | Full | Double  | Single |
| 18'                           | 30"            | 26   | 2      | 8      | 36      | 2      | 8      | 50     | 2      | 10     | 64   | 2      | 12     | 80   | 2       | 14     |
| 24'                           | 26"            | 30   | 2      | 8      | 42      | 2      | 8      | 56     | 2      | 10     | 74   | 2      | 12     | 92   | 2       | 14     |
| 27'                           | 24"            | 32   | 2      | 8      | 44      | 2      | 8      | 60     | 2      | 10     | 78   | 2      | 12     | 98   | 2       | 14     |
| 32'                           | 20"            | 38   | 2      | 10     | 52      | 2      | 10     | 72     | 2      | 12     | 92   | 2      | 14     | 116  | 2       | 16     |
| 40'                           | 16"            | 46   | 10     | 14     | 64      | 12     | 14     | 86     | 14     | 16     | 114  | 14     | 18     | 142  | 16      | 20     |
| 48'                           | 13"            | 54   | 10     | 16     | 78      | 12     | 16     | 106    | 14     | 20     | 136  | 14     | 22     | 172  | 16      | 24     |
| 53'                           | 12"            | 58   | 10     | 18     | 84      | 12     | 18     | 114    | 14     | 22     | 148  | 14     | 24     | 184  | 16      | 28     |
| 68'                           | 10"            | 70   | 10     | 22     | 98      | 12     | 22     | 134    | 14     | 26     | 174  | 14     | 28     | 220  | 16      | 32     |
| 16'                           | 24" and<br>12" | 60   | 10     | 8      | 72      | 12     | 8      | 88     | 14     | 10     | 106  | 14     | 12     | 126  | 16      | 14     |
| (for grain flo                | ow)            |      |        |        |         |        |        |        |        |        |      |        |        |      |         |        |

|                               |                |      |        |        | Bin dia | meter  | - Num  | ber of s | uppoi  | rts    |      |        |        |      |        |        |
|-------------------------------|----------------|------|--------|--------|---------|--------|--------|----------|--------|--------|------|--------|--------|------|--------|--------|
| Oustra                        | б              |      | 31'    |        |         | 34'    |        |          | 37'-1" |        |      | 40'-3" |        |      | 43'-4" |        |
| Grain<br>depth at<br>sidewall | Spacing        | Full | Double | Single | Full    | Double | Single | Full     | Double | Single | Full | Double | Single | Full | Double | Single |
| 18'                           | 30"            | 98   | 2      | 14     | 116     | 2      | 16     | 136      | 2      | 18     | 160  | 2      | 20     | 182  | 2      | 22     |
| 24'                           | 26"            | 112  | 2      | 14     | 132     | 2      | 16     | 154      | 2      | 18     | 182  | 2      | 20     | 208  | 2      | 22     |
| 27'                           | 24"            | 120  | 2      | 14     | 142     | 2      | 16     | 166      | 2      | 18     | 196  | 2      | 20     | 224  | 2      | 22     |
| 32'                           | 20"            | 140  | 2      | 18     | 168     | 2      | 20     | 198      | 2      | 22     | 232  | 2      | 26     | 260  | 2      | 26     |
| 40'                           | 16"            | 174  | 18     | 22     | 208     | 20     | 24     | 244      | 22     | 28     | 286  | 24     | 32     | 330  | 26     | 32     |
| 48'                           | 13"            | 210  | 18     | 28     | 252     | 20     | 30     | 298      | 22     | 34     | 350  | 24     | 38     | 402  | 26     | 38     |
| 53'                           | 12"            | 228  | 18     | 30     | 272     | 20     | 34     | 316      | 22     | 36     | 378  | 24     | 42     | 434  | 26     | 42     |
| 68'                           | 10"            | 270  | 18     | 36     | 324     | 20     | 40     | 384      | 22     | 44     | 450  | 24     | 50     | 520  | 26     | 50     |
| 16'                           | 24" and<br>12" | 148  | 18     | 14     | 170     | 20     | 16     | 194      | 22     | 18     | 224  | 24     | 20     | 252  | 26     | 22     |
| (for grain flo                | ow)            |      |        |        |         |        |        |          | •      |        |      | •      |        |      |        |        |

| Bin diameter - Number of supports |         |      |        |        |      |        |        |      |         |        |  |  |
|-----------------------------------|---------|------|--------|--------|------|--------|--------|------|---------|--------|--|--|
|                                   | ס       |      | 49'-6" |        |      | 55'-8" |        |      | 61'-10" |        |  |  |
| Grain depth<br>at sidewall        | Spacing | Full | Double | Single | Full | Double | Single | Full | Double  | Single |  |  |
| 18'                               | 24"     | 288  | 2      | 28     | 362  | 2      | 32     | 444  | 2       | 36     |  |  |
| 24'                               | 20"     | 346  | 2      | 28     | 436  | 2      | 32     | 536  | 2       | 36     |  |  |
| 27'                               | 20"     | 346  | 2      | 28     | 436  | 2      | 32     | 536  | 2       | 36     |  |  |
| 32'                               | 20"     | 346  | 2      | 28     | 436  | 2      | 32     | 536  | 2       | 36     |  |  |
| 40'                               | 16"     | 428  | 28     | 36     | 540  | 32     | 42     | 664  | 36      | 46     |  |  |
| 48'                               | 13"     | 524  | 28     | 44     | 660  | 32     | 52     | 812  | 36      | 56     |  |  |
| 53'                               | 12"     | 566  | 28     | 48     | 714  | 32     | 54     | 878  | 36      | 60     |  |  |
| 68'                               | 10"     | 676  | 28     | 58     | 852  | 32     | 68     | 1050 | 36      | 72     |  |  |
| (for grain flow)                  |         | -    |        |        |      |        |        | -    |         |        |  |  |

#### **Chapter 12: Installing the Air Flow Supports**

Table 12-3 Installation, spacing and quantities of air flow supports under channel lock floors behlen bins

|                               |                |      | I      | Bin dia | meter - I | Numbe  | r of sup | ports |         |        |      |        |        |
|-------------------------------|----------------|------|--------|---------|-----------|--------|----------|-------|---------|--------|------|--------|--------|
| 0.00                          | Di Di          |      | 16'-5" |         |           | 19'-8" |          |       | 22'-11" |        |      | 26'-3" |        |
| Grain<br>depth at<br>sidewall | Spacing        | Full | Double | Single  | Full      | Double | Single   | Full  | Double  | Single | Full | Double | Single |
| 18'                           | 30"            | 30   | 2      | 8       | 42        | 2      | 10       | 56    | 2       | 12     | 70   | 2      | 14     |
| 24'                           | 26"            | 32   | 2      | 8       | 46        | 2      | 10       | 64    | 2       | 12     | 80   | 2      | 14     |
| 27'                           | 24"            | 36   | 2      | 8       | 50        | 2      | 10       | 68    | 2       | 12     | 86   | 2      | 14     |
| 32'                           | 20"            | 42   | 2      | 10      | 60        | 2      | 12       | 80    | 2       | 14     | 102  | 2      | 16     |
| 40'                           | 16"            | 50   | 10     | 14      | 72        | 12     | 16       | 98    | 14      | 18     | 124  | 16     | 20     |
| 48'                           | 13"            | 60   | 10     | 16      | 88        | 12     | 20       | 118   | 14      | 22     | 152  | 16     | 24     |
| 53'                           | 12"            | 66   | 10     | 18      | 94        | 12     | 22       | 126   | 14      | 24     | 164  | 16     | 28     |
| 68'                           | 10"            | 78   | 10     | 22      | 110       | 12     | 26       | 150   | 14      | 28     | 194  | 16     | 32     |
| 16'                           | 24" and<br>12" | 64   | 10     | 8       | 78        | 12     | 10       | 96    | 14      | 12     | 114  | 16     | 14     |
| (for grain flo                | w)             |      |        |         |           |        |          | -     |         |        | -    |        |        |

|                               |                |      |        | Bin dia | meter - | Numbe  | er of su | pports |        |        |       |        |        |
|-------------------------------|----------------|------|--------|---------|---------|--------|----------|--------|--------|--------|-------|--------|--------|
| Orraire                       | g              |      | 29'-6" |         |         | 36'-1" |          |        | 42'-8" |        |       | 49'-3" |        |
| Grain<br>depth at<br>sidewall | Spacing        | Full | Double | Single  | Full    | Double | Single   | Full   | Double | Single | Full  | Double | Single |
| 18'                           | 30"            | 90   | 2      | 14      | 130     | 2      | 18       | 178    | 2      | 20     | 286*  | 2      | 28     |
| 24'                           | 26"            | 102  | 2      | 14      | 148     | 2      | 18       | 202    | 2      | 20     | 286*  | 2      | 28     |
| 27'                           | 24"            | 108  | 2      | 14      | 160     | 2      | 18       | 218    | 2      | 20     | 344** | 2      | 28     |
| 32'                           | 20"            | 128  | 2      | 18      | 188     | 2      | 22       | 260    | 2      | 26     | 344   | 2      | 28     |
| 40'                           | 16"            | 158  | 18     | 22      | 232     | 22     | 28       | 320    | 24     | 32     | 426   | 28     | 36     |
| 48'                           | 13"            | 192  | 18     | 28      | 282     | 22     | 34       | 390    | 24     | 38     | 520   | 28     | 44     |
| 53'                           | 12"            | 206  | 18     | 30      | 306     | 22     | 36       | 422    | 24     | 42     | 562   | 28     | 48     |
| 68'                           | 10"            | 246  | 18     | 36      | 364     | 22     | 44       | 504    | 24     | 50     | 670   | 28     | 58     |
| 16'                           | 24" and<br>12" | 136  | 18     | 14      | 188     | 22     | 18       | 246    | 24     | 20     | N/A   | N/A    | N/A    |
| (for grain flo                | w)             |      |        |         |         |        |          |        |        |        |       |        |        |

<sup>\*</sup> Use 24" spacing

<sup>\*\*</sup> Use 20" spacing

#### Limited Warranty — N.A. Grain Products

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 from the date of shipment (or, if shipped by vessel, 14 months from the date of arrival at the port of discharge). If, in GSI's sole judgment, a product is found to have a defect in materials and/or workmanship, GSI will, at its own option and expense, repair or replace the product or refund the purchase price. This Limited Warranty is subject to extension and other terms as set forth below.

**Warranty Enhancements:** The warranty period for the following products is enhanced as shown below and is in lieu of (and not in addition to) the above stated warranty period. (Warranty Period is from date of shipment.)

|              | Product   | Warranty Period |
|--------------|---|-----------------|
| Storage      | Grain Bin Structural Design  Sidewall, roof, doors, platforms and walkarounds Flooring (when installed using GSI specified floor support system for that floor) Hopper tanks (BFT, GHT, NCHT, and FCHT) | 5 Years         |
|              | Dryer Structural Design – (Tower, Portable and TopDry) • Includes (frame, portable dryer screens, ladders, access doors and platforms)  | 5 Years         |
| Conditioning | All other Dryer parts including: • Electrical (controls, sensors, switches and internal wiring)   | 2 Years         |
|              | All Non-PTO Driven Centrifugal and Axial Fans   | 3 Years         |
|              | Bullseye Controllers  | 2 Years         |
|              | Bucket Elevators Structural Design  | 5 Years         |
| Material     | Towers Structural Design  | 5 Years         |
| Handling     | Catwalks Structural Design  | 5 Years         |
|              | Accessories (stairs, ladders and platforms) Structural Design   | 5 Years         |

#### **Conditions and Limitations:**

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH HEREIN; SPECIFICALLY, GSI DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) ANY 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.

The sole and exclusive remedy for any claimant is set forth in this Limited Warranty and shall not exceed the amount paid for the product purchased. This Warranty only covers the value of the warranted parts and equipment, and does not cover labor charges for removing or installing defective parts, shipping charges with respect to such parts, any applicable sales or other taxes, or any other charges or expenses not specified in this Warranty. GSI shall not be liable for any other direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. Expenses incurred by or on behalf of a claimant without prior written authorization from the GSI warranty department shall not be reimbursed. 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. Prior to installation, the end-user bears all responsibility to comply with federal, state and local codes which apply to the location and installation of the products.

This Limited Warranty extends solely to products sold by GSI and does not cover any parts, components or materials used in conjunction with the product, that are not sold by GSI. GSI assumes no responsibility for claims resulting from construction defects, unauthorized modifications, corrosion or other cosmetic issues caused by storage, application or environmental conditions. Modifications to products not specifically delineated in the manual accompanying the product at initial sale will void all warranties. 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.

#### **Notice Procedure:**

In order to make a valid warranty claim a written notice of the claim must be submitted, using the RMA form, within 60 days of discovery of a warrantable nonconformance. The RMA form is found on the OneGSI portal.

#### Service Parts:

GSI warrants, subject to all other conditions described in this Warranty, Service Parts which it manufactures for a period of 12 months from the date of purchase unless specified in Enhancements above.

(Limited Warranty - N.A. Grain Products revised 01 October 2020)

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.



1004 E. Illinois St. Assumption, IL 62510-0020 Phone: 1-217-226-4421 Fax: 1-217-226-4420 www.gsiag.com

