

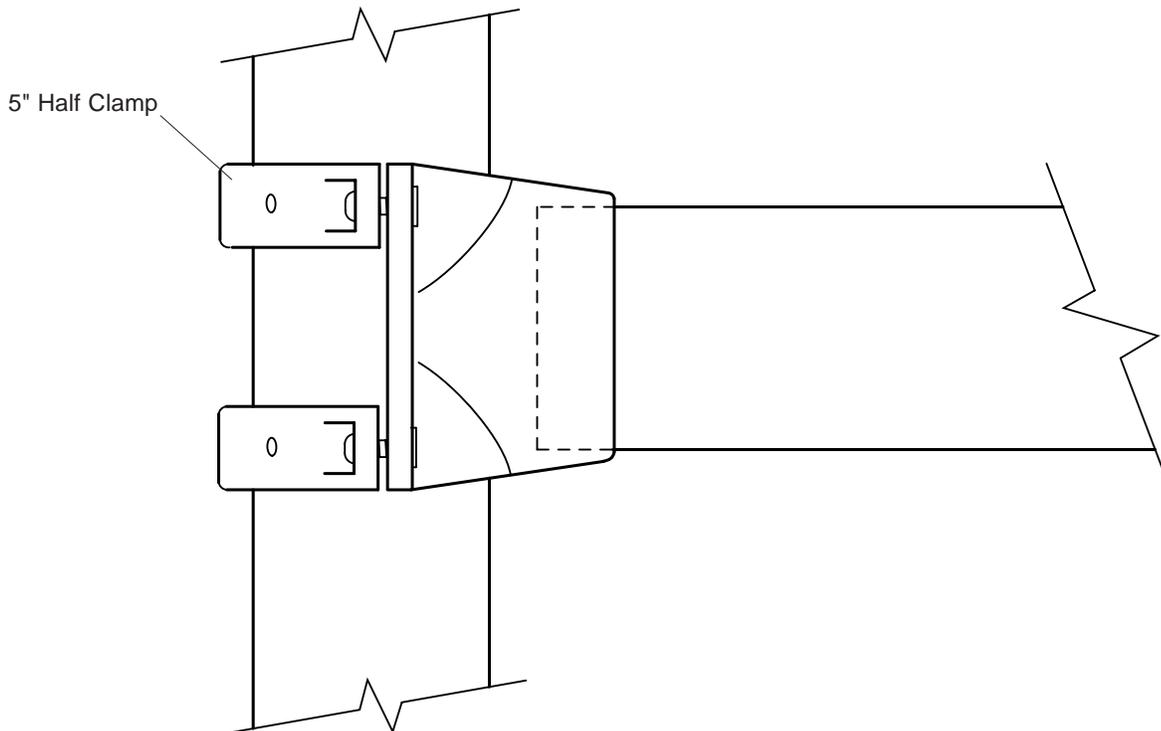
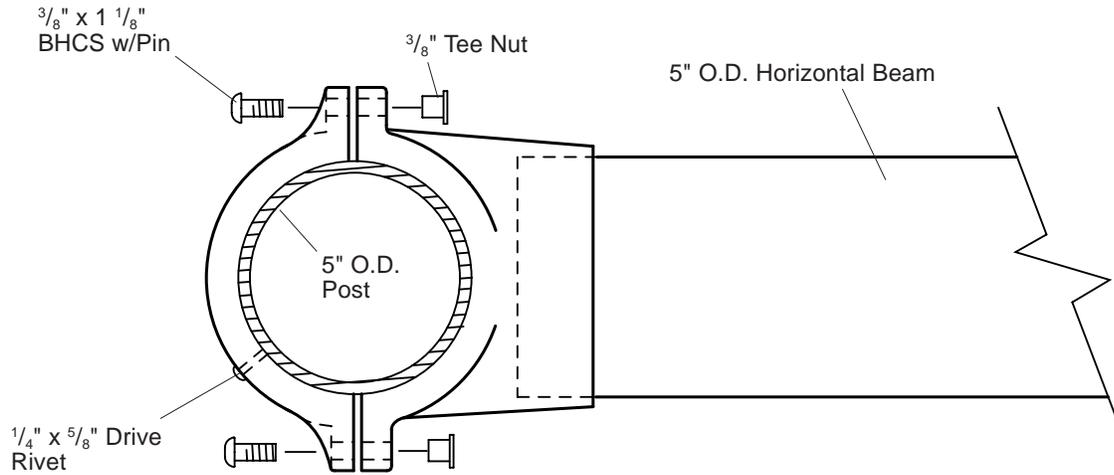
APPENDIX A:
PLAYGROUND EQUIPMENT MANUFACTURER'S
INSTALLATION INSTRUCTIONS

APPENDIX A:

Galaxy Park

**PLAYGROUND EQUIPMENT MANUFACTURER'S
INSTALLATION INSTRUCTIONS**

Installation Specifications



Parts List

Part#	Description	Qty
105327-01	5" Half Clamp, Specify Color	2
100198-00	$\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin, SST	4
100351-00	$\frac{3}{8}$ " Tee Nut, SST	4
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2

Specifications

Tee/Beam: 356 alloy treated to T-6 hardness and welded to 5" aluminum beams or mechanically fastened to 5" steel beams. Finish: Powdercoat, color specified.

Half Clamps: Cast aluminum. Finish: Powdercoat, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 2 lbs.

Installation Instructions

- 1) Locate and mark center of clamp location on 5" pipe.
- 2) With beam in position, fasten 5" half clamps to tee clamp using $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin and tee nuts as shown. Tighten cap screws evenly.
- 3) **IMPORTANT:** *Install drive rivets in half clamps by drilling holes in clamps and into 5" pipe using a $\frac{1}{4}$ " or "F"(only) drill bit. Insert rivet in hole, and hammer rivet pin in until it is flush with head.*

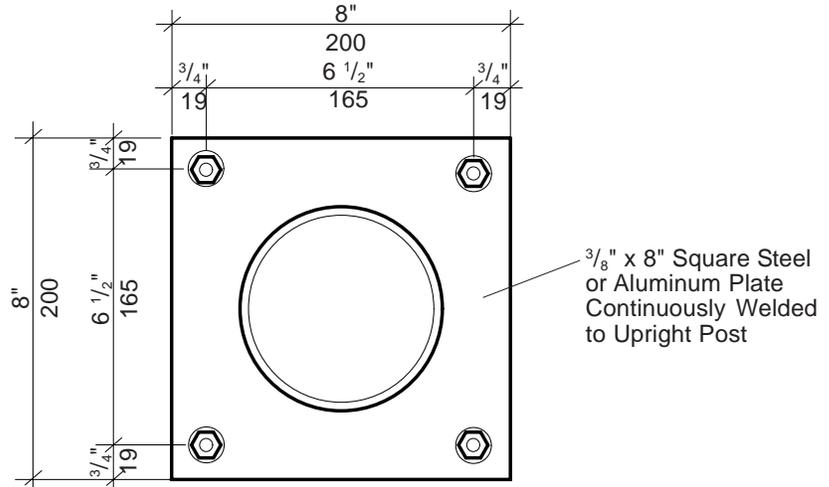
NOTE:
Surface mounting will not work in all applications. Consult Landscape Structures Inc. for your particular requirements.

CONCRETE SLAB SPECS

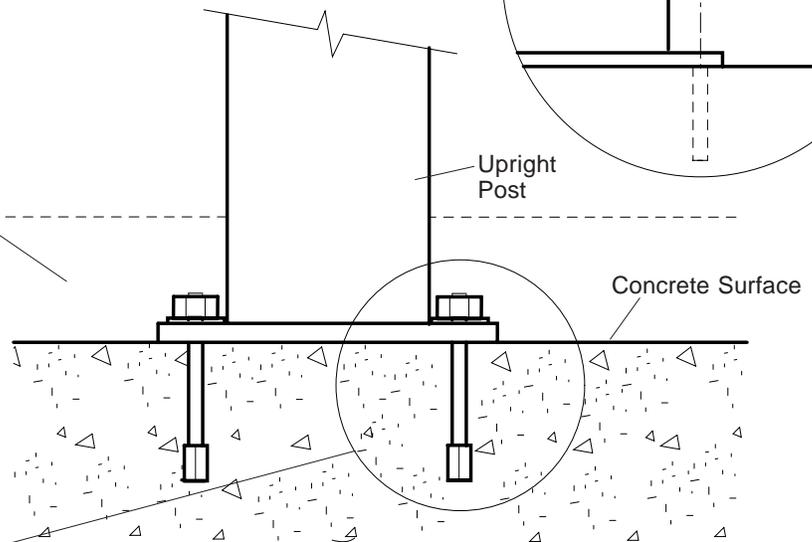
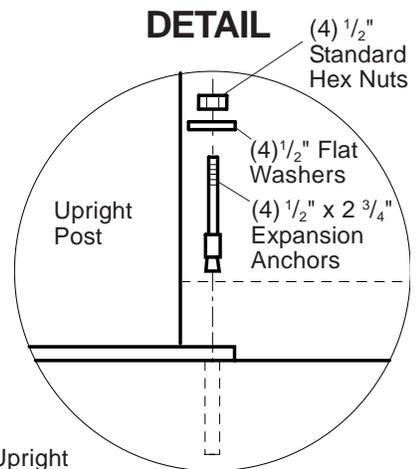
- Base under slab to be 4" - 6" of sand over a stable subgrade.
- Depth of concrete slab to be 4" - 6" with a wire mesh support.
- Minimum of 7 days curing time full cure after 30 days.
- Surface of concrete to be trowled smooth and acid etched.
- Concrete: 3000 PSI (Min)
30 Days 3500 PSI
 $\frac{3}{4}$ " Minus Crushed Rock

NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

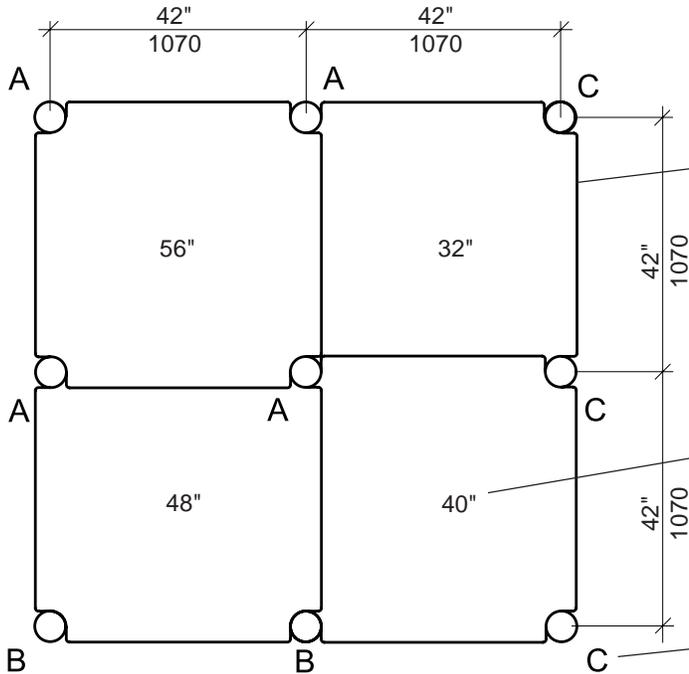
NOTE:
Drill 3" deep hole using hammer drill and $\frac{1}{2}$ " masonry bit. Tap anchors into concrete and secure with $\frac{1}{2}$ " standard hex nuts and $\frac{1}{2}$ " flat washers.



$\frac{3}{8}$ " x 8" Square Steel or Aluminum Plate Continuously Welded to Upright Post



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487, SECTION 9.)

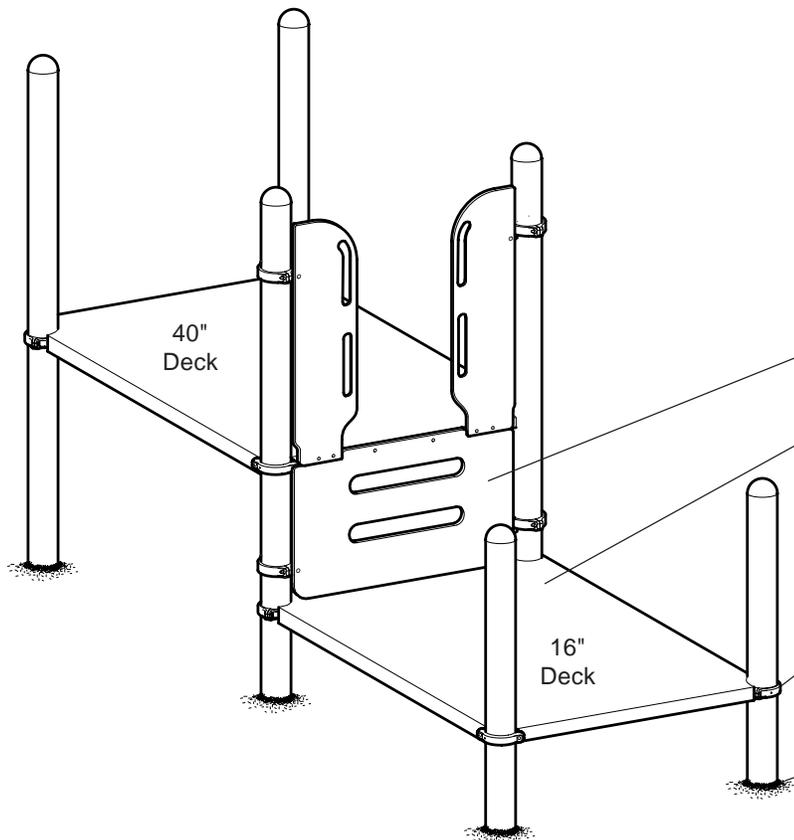


Enclosures or components are required on any decks higher than 28" as indicated on your plan drawing.

Dimension indicates center to center spacing of concrete footings.

Number indicates height of deck above finished grade.

Letter indicates post length as indicated on your plan drawing.



Enclosures/ Components - Refer to your plan drawing for locations and their respective spec sheets for installation.

Vertical Ladders - Refer to your plan drawing for locations and the Vertical Ladder spec sheet for installation.

Decks - Refer to your plan drawing for heights and orientation. Refer to the appropriate deck spec sheet for installation.

Deck Hanger Clamp Assembly - Refer to the appropriate Deck Assembly spec sheet for installation.

Concrete Footings - Refer to the Typical Concrete Footing spec sheet for installation.

Kick Plates - Refer to your plan drawing for locations and the Kick Plate spec sheet for installation.

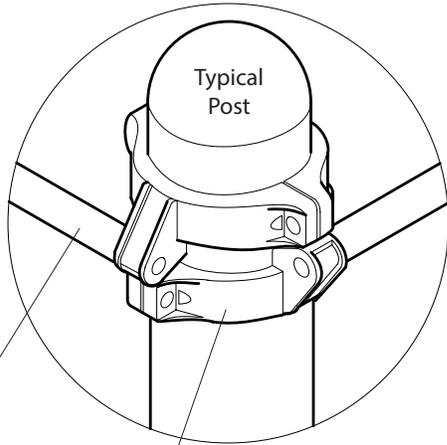
PlayBooster General Post/Tenderdeck Information

Installation Instructions

Before Starting, Read the General Construction Guidelines, Installation Hints, All Typical Detail Sheets and Specific Installation Instructions for Each Component Labeled on Your Plan.

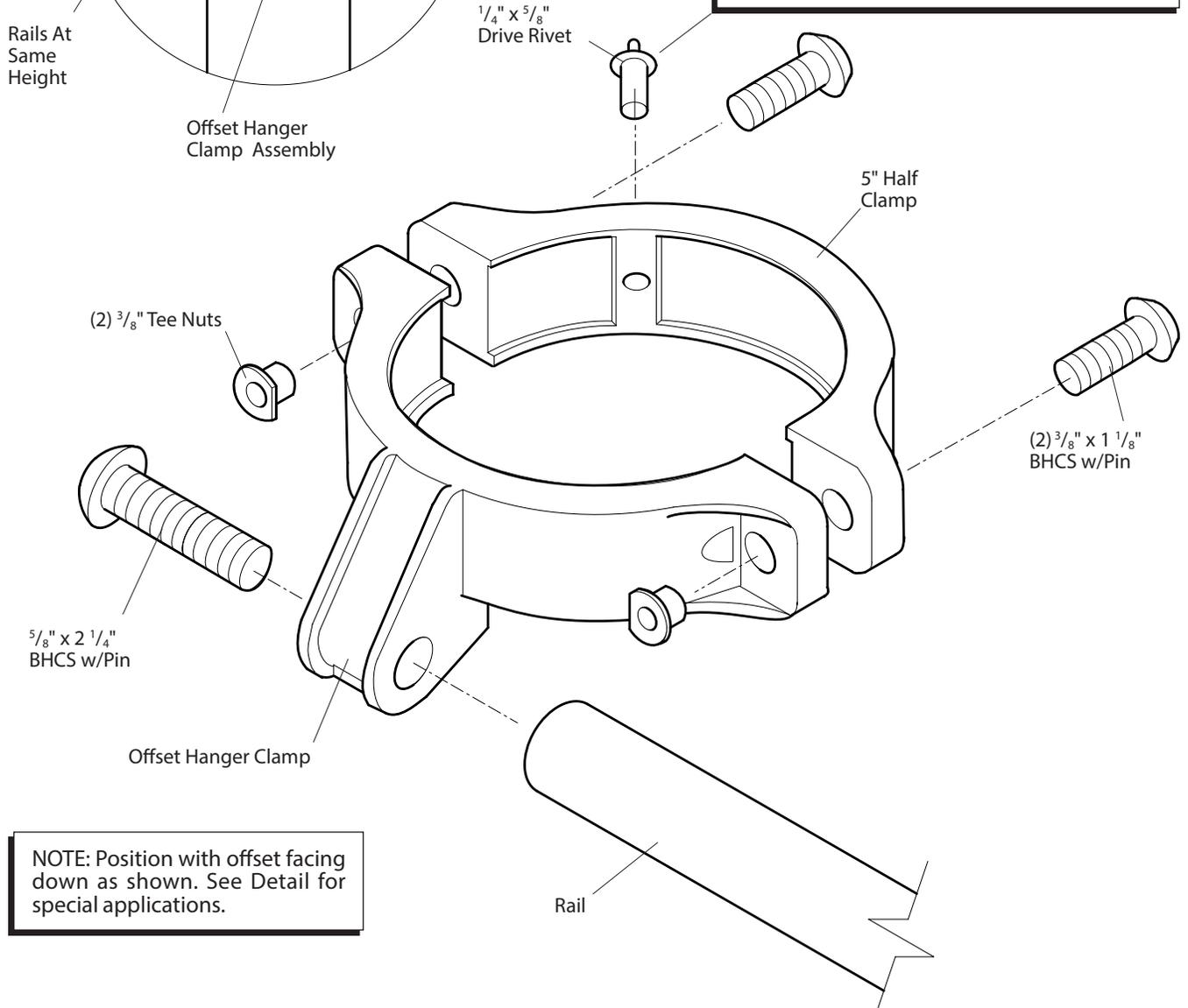
- 1) Dig footing holes spaced as shown on the plan and spec sheets. Refer to the Typical Concrete Footing Spec Sheet.
- 2) Note the post lengths as shown on the plan and set in their appropriate footing holes. The post length is indicated on the finished grade sticker on each post.
- 3) Mark the appropriate posts for the deck heights you are installing and attach decks to posts at marked height. Refer to the appropriate deck spec sheet for installation.
- 4) After all the posts are at proper heights and plumb, and the decks are at proper height and level, pour the concrete footings per the Typical Concrete Footing Spec Sheet.
- 5) Continue installing enclosures and components and pour concrete footings as you progress, making sure everything is plumb and level.
- 6) When installation is complete, install Drive Rivets in all clamps per the Typical Offset Hanger Clamp Spec Sheet.
- 7) Install protective surfacing under and around all equipment before users are allowed to play on the structure.

DETAIL
ASSEMBLED CLAMP



The Offset Hanger Clamp allows rails to be installed at same height for special applications, like at 90° to each other as shown, or when there are clamp conflicts, offset can be positioned upward.

NOTE: A drive rivet is not required in all applications. See General Rules for Use of Drive Rivets for more information.



NOTE: Position with offset facing down as shown. See Detail for special applications.

PlayBooster® 114261 Offset Hanger Clamp Assembly



PlayBooster 114261 Offset Hanger Clamp Assembly

J:\SPECS\123\12382100.P65

Parts List

Part#	Description	Qty
100198-00	$\frac{3}{8}$ " x $1 \frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
105327-01	5" Half Clamp, Specify Color	1
113729-00	Offset Hanger Clamp, Specify Color	1
100203-00	$\frac{5}{8}$ " x $2 \frac{1}{4}$ " BHCS w/Pin, SST	1

Specifications

Clamp: Cast aluminum. Finish: Powdercoat, color specified.

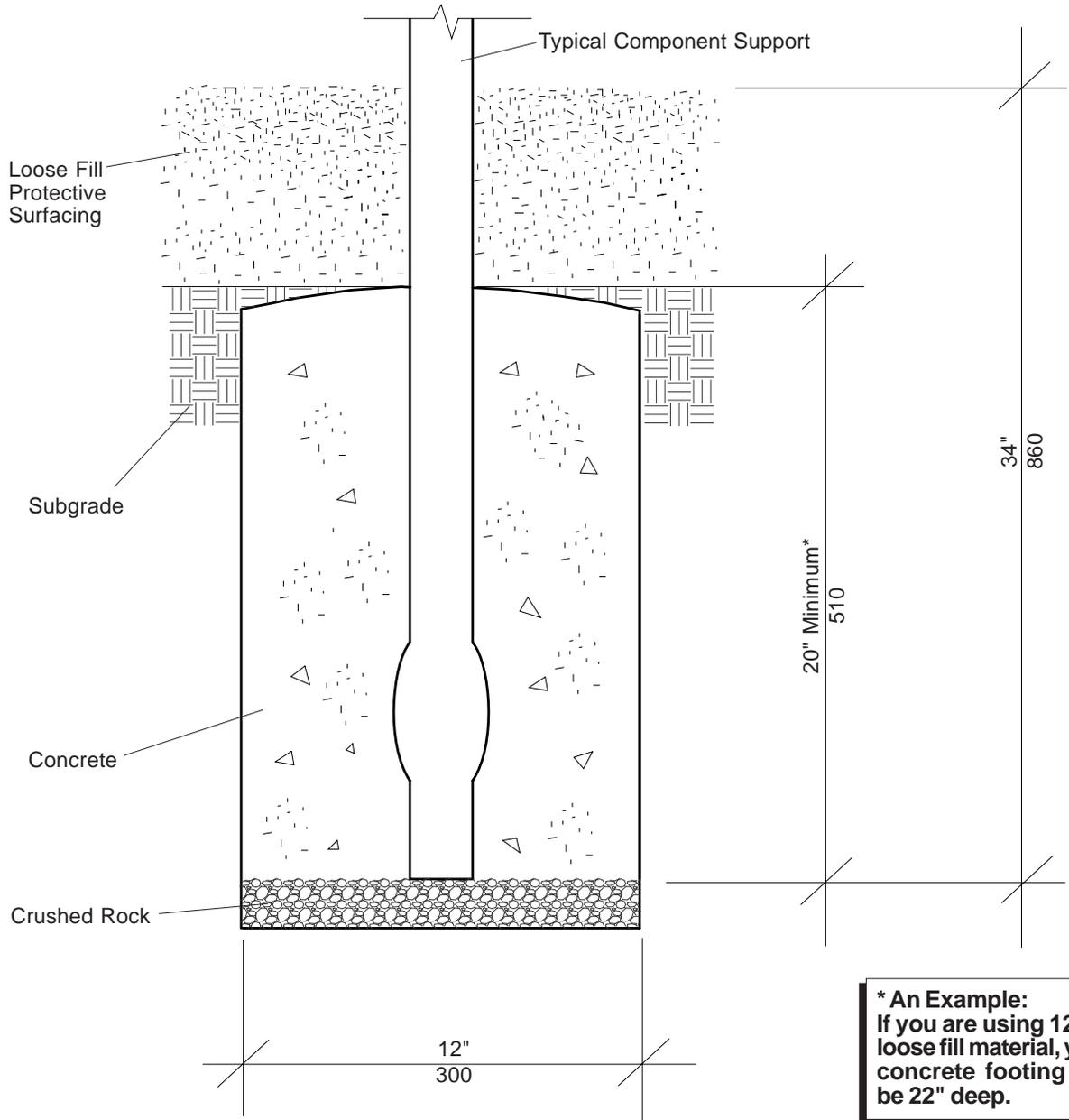
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{4}$ man hour

Weight: 3 lbs.

Installation Instructions

- 1) Locate and mark position of clamp on 5" post.
- 2) Position clamp in proper direction and assemble with $\frac{3}{8}$ " x $1 \frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts as shown and lightly tighten. Position rail against clamp and screw in $\frac{5}{8}$ " x $2 \frac{1}{4}$ " BHCS w/pin until rail bottoms out on clamp. Final tighten all fasteners.
- 3) **IMPORTANT:** *Drill through hole in 5" half clamp and into 5" post with a $\frac{1}{4}$ " or "F" (only) drill bit, insert rivet in hole and hammer rivet pin in until it is flush with head.*



Minimum 1.2 Cubic Feet of Concrete Required per Support.

PlayBooster Installation

- 1) Before starting installation, study your *PlayBooster* plan drawing and all installation instructions carefully for location of posts, deck heights, components and safety enclosures. Make sure slides are oriented away from the afternoon sun and that the structure is visible (easily supervised) and accessible.
- 2) Clear an area large enough for your *PlayBooster* and at least the required minimum use zone around it, as shown on your plan drawing. The subsurface must be well drained. If the soil does not drain naturally it must be tiled or sloped at $\frac{1}{8}$ " to $\frac{1}{4}$ " per foot to a storm sewer or a "French Drain". If your *PlayBooster* is over 30' in length it is recommended to install more than one "French Drain" or similar system to allow drainage from the center of the play area and decrease the overall slope. If this is not possible, the structure may need to be "stepped" to take up the grade change.
- 3) Overhead Obstructions: Overhead obstructions within the use zones of playground equipment that are not part of the play structure (for example, tree limbs) shall be at least 84 in. (2130 mm) above each designated play surface or 84 in. (2130 mm) above the pivot point of swings. All overhead utility line clearances above the use zone areas shall comply with all local, state, and national codes, such as the National Electrical Safety Code.
- 4) Locate all mainstructure post footing holes according to the dimensions shown on your *PlayBooster* plan. This can be accomplished by laying a deck on the ground and measuring from it; by laying out a base line string grid or using a builders transit. This step is very important and worth taking extra time to be precise. Location of component footings such as slide supports can be done at a later time.
- 5) Refer to the Typical Concrete Footing installation sheet. Dig holes to the proper width and depth as shown. (Only dig enough holes for one day's construction. Do not leave holes open over night.) Pour crushed rock in each hole **level with each other** and at least 4" deep as shown. This can be easily accomplished either with a builders transit or by laying out hole locations with a string grid, leveling the grid, and measuring down from the grid for each footing. Tamp the crushed rock down until compacted and at proper level. This step is important to ensure all posts will be at the proper height relative to each other, and it greatly simplifies installation. If the soils are loose or unstable, larger diameter holes may be necessary. Check with a local engineer if in doubt.
- 6) Start with the lowest deck and work your way to the highest deck following instructions on the installation sheets for typical post/deck assembly. Install barriers and roofs as located on the plan for stability.
- 7) After the posts are at proper heights and plumb, and the decks are at proper height and level, pour the concrete footings per the Typical Concrete Footing Detail.
- 8) During construction, the site and all the material on it must be secured when unattended to prevent children from playing on them. Do not leave decks with unprotected openings when unattended-use temporary barricades if necessary.
- 9) Install all other play components per the installation instructions. After all components and enclosures are properly attached, pour the remaining concrete footings per the Typical Concrete Footing Detail.
- 10) Install protective surfacing material.
- 11) Attach play hardware such as 'D' rings and swing seats last, **after** protective surfacing is in place and footings have cured at least 3 days.
- 12) Carefully and thoroughly inspect the entire *PlayBooster* to be sure all fastening hardware is tight. According to ASTM F1487, section 6.2 sharp points, edges and protrusions; any exposed bolt ends should not protrude beyond the face of the nut more than two (2) threads. This condition is not planned, but may exist in some applications because materials and finishes will vary. To remedy this situation, add a second nut or washer(s), extras have been added to the spare parts kit. See illustrations on reverse side of this sheet. Children should not be allowed on the structure until this inspection is complete.
- 13) Before children are allowed on the structure, the site must be cleaned and free of all construction debris and packaging material. Do not burn on the site.

Tools Required

Tools required for installation are an auger, or other equipment for digging 14" diameter footing holes; shovels, rubber mallet, drill (with $\frac{1}{4}$ ", $\frac{7}{16}$ ", $\frac{9}{16}$ ", $\frac{11}{16}$ " and $\frac{3}{8}$ " drill bits), tape measure, hex keys or allen wrenches, level, $\frac{3}{8}$ " socket set, hammer, open end wrench set, screw driver, for surface mount a hammer drill, $\frac{3}{8}$ " and $\frac{1}{2}$ " masonry bits and transit or string line to aid in layout. Some washable felt tip pens are also useful for marking clamp locations.

Materials Required

All *PlayBooster* materials are supplied except concrete for footings, protective surfacing material, and curbing or edging material. With the exception of the special wrenches required (for the pinned hex fasteners) no other tools are supplied.

Recycling

Many of our packaging materials can be recycled, please take the time to separate and deliver them to a recycler. Thank You.

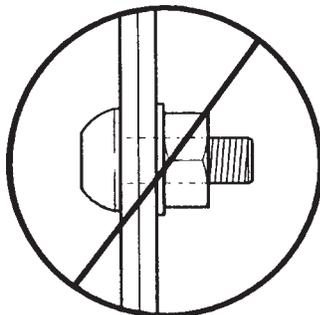
Installation Times

Installation times, as noted on the back of the installation sheets, are *approximate* and will vary depending on soil conditions, installer's equipment and ability. Times indicated *do not* include unloading or unpacking equipment. The man hours given are for one person installing (unless otherwise noted). Cut time in half for two people.

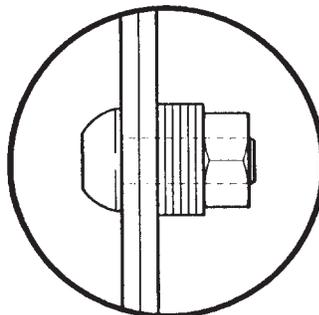
Technical Services

If you have any questions or concerns about the installation of your structure, call our Technical Services Department at: **1-800-328-0035** (7:30 - 5:30p.m. CST/M-F).

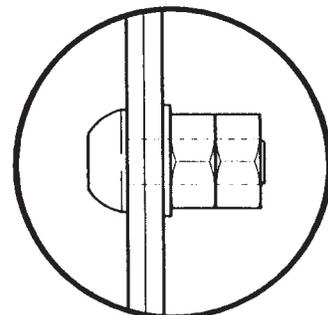
Illustrations For Note 10, (Reverse Side Of This Sheet)



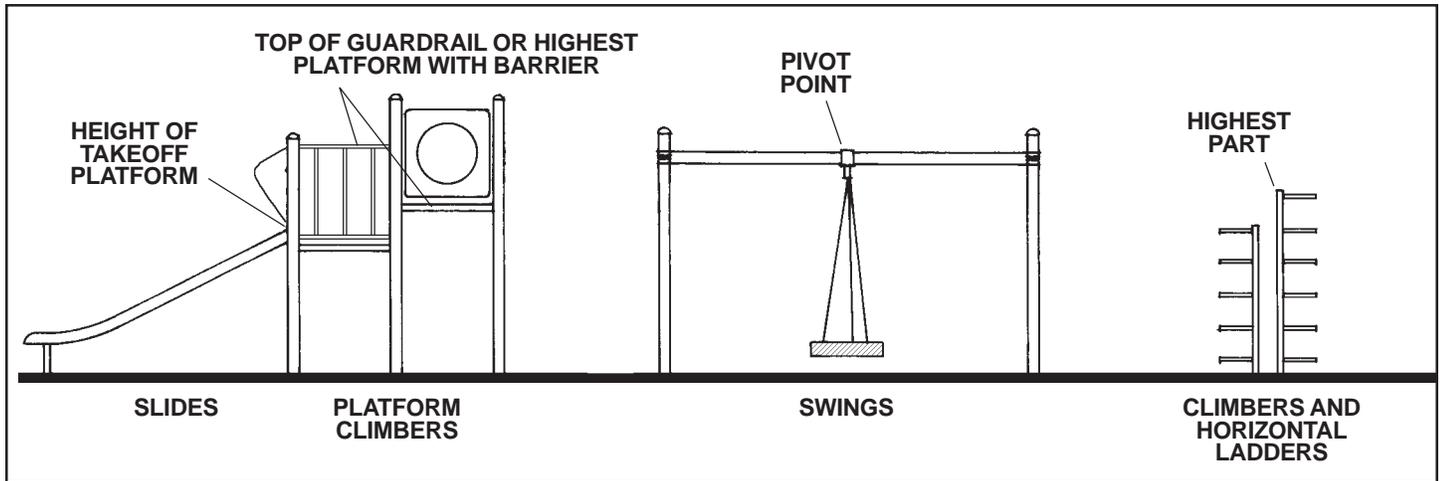
More Than Two (2)
Threads Exposed



Add Washers



Add Another Nut
(Align Flat Area)



- 1.) Determine the highest accessible part - by definition.
- 2.) Determine the type of surfacing material desired:
 - *Unitary* - Bound rubber type materials for the accessible areas.
 - *Loose-fill* - Sand, wood chips, etc. for non-accessible areas.
- 3.) Select a material that has a Critical Height value of at least the height of the highest accessible part.
 - According to the CPSC, Critical Height is defined as the maximum height from which the instrumented metal headform, upon impact, yields both a peak deceleration of no more than 200 G's and a HIC value of no more than 1,000 when tested in accordance with the procedure described in the ASTM Test Method F1292.
 - Request independent laboratory test results showing the critical height of each product per the above procedures for commercially available products. The CPSC has tested some common loose-fill materials that are commonly not tested as a protective surfacing. (See back page.)
- 4.) Cover the designated use zone with the desired materials. If a different type of material is used for the accessible route of travel, make sure the surfaces are maintained flush.



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

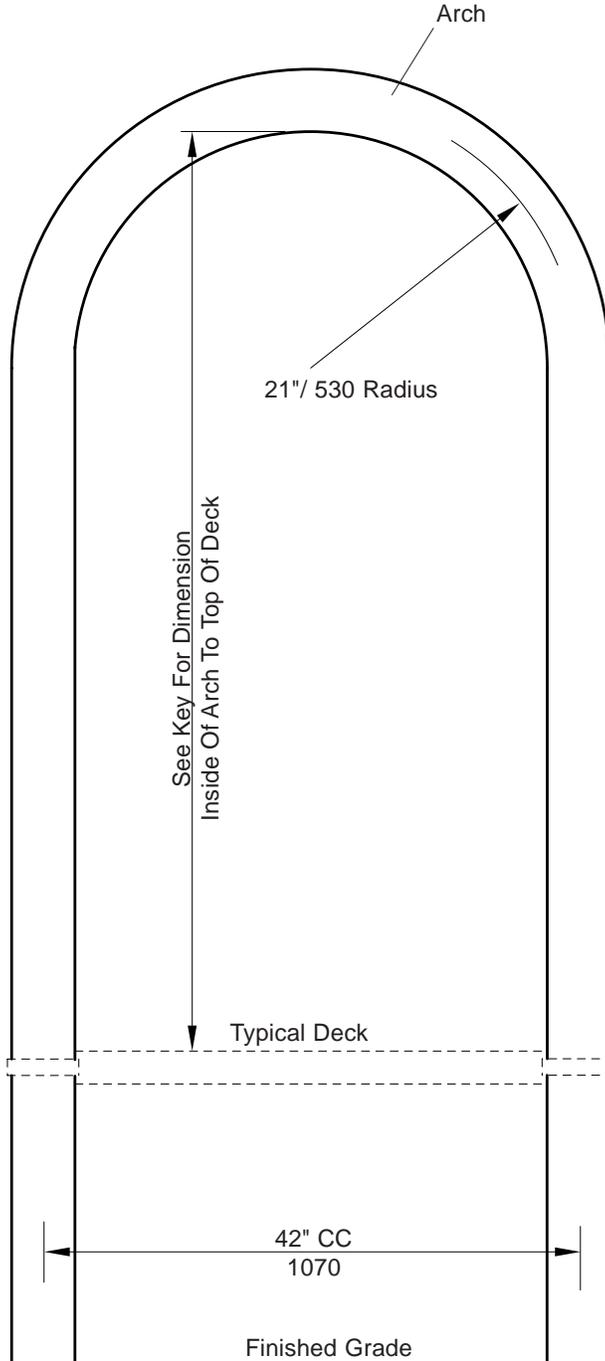
Critical Heights (in Feet)

Material	Uncompressed Depth			Compressed Depth *
	6"	9"	12"	9"
* Wood Mulch	7'	10'	11'	10'
* Double Shredded Bark Mulch	6'	10'	11'	7'
* Uniform Wood Chips	6'	7'	12'	6'
* Fine Sand	5'	5'	9'	5'
* Coarse Sand	5'	5'	6'	4'
* Fine Gravel	6'	7'	10'	6'
* Medium Gravel	5'	5'	6'	5'

NA = Not Available

- * **NOTE:** Compressed depths most accurately depict conditions on a playground.
- * An approximation of the maximum fall height from which a life-threatening head injury would not be expected to occur, based on tests in which a headform yielded both a peak deceleration of less than 200 G's and a HIC of less than 1000 upon impact.
- * Handbook for *Public Playground Safety*, published by the U.S. Consumer Products Safety Commission, Section 10, Table 2, page 21.

Critical Heights



Standard Concrete Footings Required w/ 34"/860 Bury

SPECIFICATIONS:
 Arch formed from 5" O.D. 6005-T5 aluminum tubing with 1/8" wall thickness. Unit is coated with a baked-on polyester powder-coating, color specified.

Key:

Deck Height	Dimension
32"/810	92 1/2"/2350
40"/1020	98 1/2"/2502
48"/1220	90 1/2"/2299
56"/1420	98 1/2"/2502
64"/1630	90 1/2"/2299
72"/1830	90 1/2"/2299
At Grade (No Deck)...	97 1/4"/2470

NOTE:
 Refer To Your Plan For Location Of Arches.

"How to distribute your hardware *Headache Free*"



We have received feedback from you, our customers, that the most common delay in completing your playground installation is lost or misplaced hardware.

Some of our most successful installations have used a "*check-out*" system with one person appointed to distribute the various hardware packages. Installation sheets are provided for each component that indicate hardware packages/items required to assemble that component. Refer to these sheets to determine which hardware items to request from the designated "*check-out*" person.

HELPFUL HINTS:

Read installation sheets.

Be sure to use the correct length hardware as specified on the installation sheets.

Be sure to use clamps in the correct location as indicated on the installation sheets.

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Be sure to use clamps in the correct location as indicated on the installation sheets.

Warning

Your playground may include equipment containing moving parts. Moving parts are more vulnerable to wear, mis-use and abuse than other non-moving parts. It is critical these parts be inspected and maintained according to our recommendations.

As the owner, it is your responsibility to perform preventative maintenance and record your findings. Failure to do so may create a hazard and cause serious injury or death.

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IMPORTANT SAFETY NOTES!

According to the U.S. Consumer Product Safety Commission (CPSC) nearly 70% of all playground injuries are caused by falls to the surface.

PLEASE INSTALL AND MAINTAIN ADEQUATE PROTECTIVE SURFACING UNDER AND AROUND YOUR PLAYSTRUCTURE!

Never let children play on the equipment before protective surfacing is installed.

Consult the CPSC's Handbook for Public Playground Safety, the ASTM F1487 Standard or your Landscape Structures representative for more information.



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Did you know that most of the packaging materials you receive on a Landscape Structures order are recyclable? Do you reuse or recycle everything you can from your playground sites? We're making it easier for you to do the right thing and keep these materials out of landfills!

FOAM/SCRIM SHEETS

Landscape Structures has partnered with our supplier to recycle foam/scrim material, the grey and white sheets that are layered between the large painted parts. This material is not usually accepted at general recycling facilities but this supplier will re-use it in their manufacturing of new packaging materials. It's easy! Just put the foam/scrim from your installation site in a box and ship it to the facility closest to you.

Here is a list of participating facilities throughout the U.S.:

Foam/Scrim Products Only

Pregis Plant
159 N San Antonio Ave.
Pomona, CA 91767

Pregis Plant
8201 W Elwin Ct.
Visalia, CA 93291

Pregis Plant
7574 Presidents Dr.
Orlando, FL 32809

Pregis Plant
1411 Pidco Dr.
Plymouth, IN 46563

Pregis Plant
300 Harris Rd.
Wurtland, KY 41144

Pregis Plant
3825 N Main St.
Granite Falls, NC 28630

Pregis Plant
18 Peck Ave.
Glens Falls, NY 12801

Pregis Plant
3500 S Highway 287
Corsicana, TX 75109

Pregis Plant
310 Old Station Rd.
Wenatchee, WA 98801

Foam/Scrim, Plastic Banding, Shrink Wrap

Anchor Facility
480 Broadway St.
St Paul, MN 55101

Anchor Facility
1501 Swasey Rd.
Hudson, WI 54016

Don't stop here! Most of the other packaging materials can also be recycled, reused or repurposed.

- **CORRUGATED CARDBOARD:** Boxes can be broken down and recycled at a local recycler, or reused for other storage.
- **SHRINK WRAP:** Contact your local plastic recycler and ask if they accept polyethylene plastic.
- **PLASTIC BANDING:** Contact your local plastic recycler and ask if they accept polypropylene.

If you have suggestions for recycling, reusing or repurposing other materials, please email them to: info@playlsi.com. Just one more way Landscape Structures is building healthy, sustainable communities.



Look for compliance to the following guidelines and standards whenever you install playground equipment. It's your assurance that the products you install meet the most rigorous safety and quality assurance standards.

Landscape Structures is a member in good standing of **IPEMA**, the **International Play Equipment Manufacturers Association**. IPEMA is a member-driven, international trade organization that represents and promotes an open market for manufacturers of play equipment.



In the interest of playground safety, IPEMA provides a Third Party Certification Service whereby a designated independent laboratory validates a participant's certification of conformance to ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, except sections 7.1.1, 10 and 12.6.1; CAN/CSA Z614, Children's Playspaces and Equipment Standards, except clauses 9.8, 10 and 11; or both. The use of the corresponding logo in the Landscape Structures Inc. catalog signifies that Landscape Structures Inc. has received written validation from the independent laboratory that the product(s) associated with the use of the logo conforms with the requirements of the indicated standards. Check the IPEMA website (www.ipema.org) to confirm product certification. The use zone and fall height requirements in this publication are shown to ASTM standards. The requirements for other standards may be different. According to the CSA, playground maintenance and inspection is a continuous and integral part of budgetary costs. The cost of inspection and maintenance shall be considered and incorporated into the budget at the time of design, purchase equipment and installation (11.1.1 Budgeting).

International Play Equipment Manufacturers Association

4305 N. Sixth St. Suite A
Harrisburg, PA 17110
www.ipema.org



The Consumer Product Safety Commission (CPSC) is a governmental organization that provides technical safety guidelines for designing, constructing, operating and maintaining public playgrounds.

U.S. Consumer Product Safety Commission

4330 East West Hwy.
Bethesda, MD 20814
www.cpsc.gov

The American Society for Testing and Materials (ASTM) is a scientific and technical organization that is a major developer of standards for testing different types of materials. In 1993, the ASTM published "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use," designation F1487-93. ASTM is more technical than the CPSC. ASTM revised its old standard and published a new standard in 1995, 1998, 2001, 2005, 2007 and again in 2011.

American Society for Testing and Materials

100 Barr Harbor Dr.
P.O. Box C700
West Conshohocken, PA 19428
www.astm.org



The Canadian Standards Association

Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



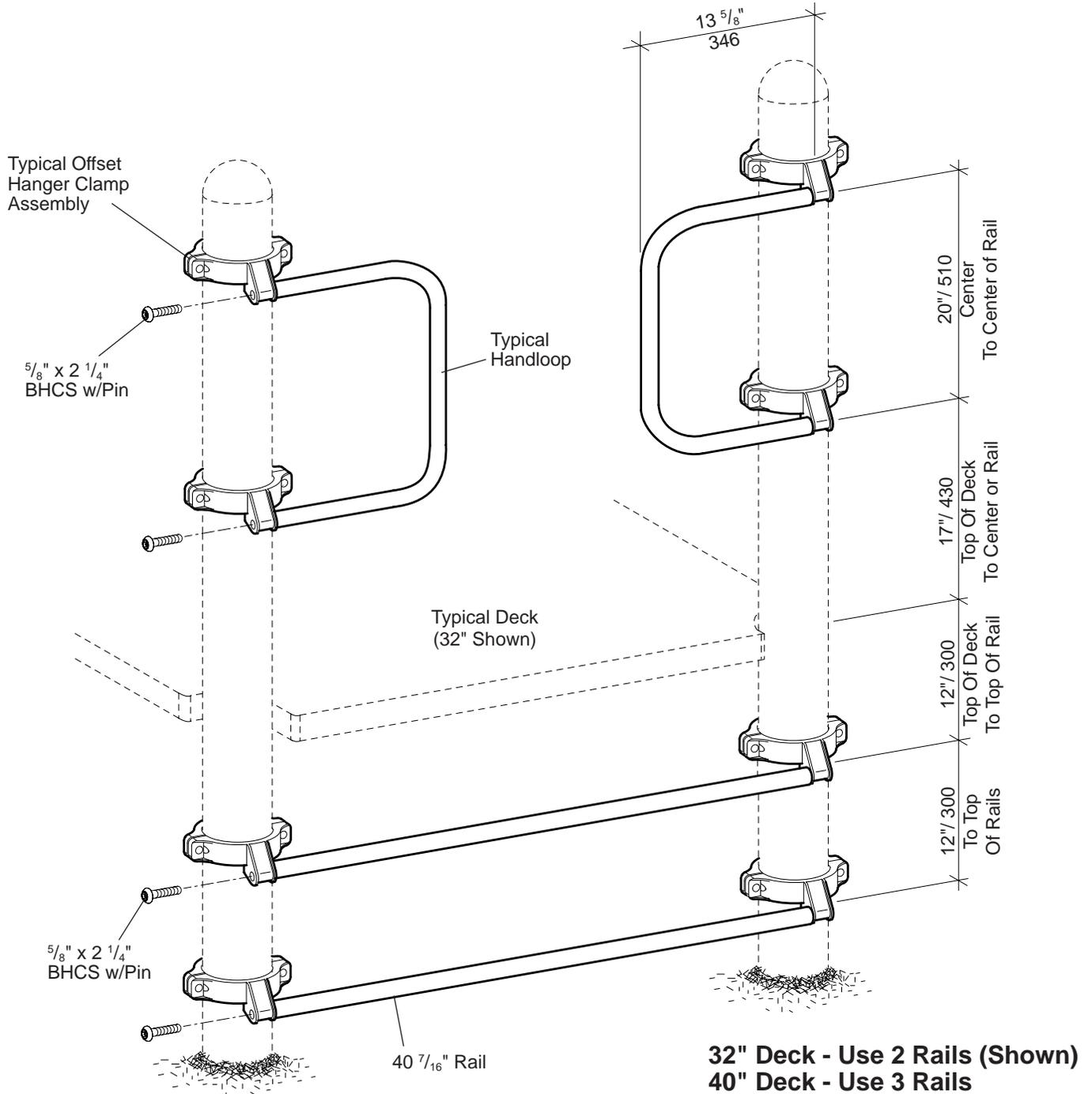
ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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Parts List

Part#	Description	Qty.
111275	Handloop Assembly	1
108542	Handloop, Specify Color	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	4
100203	$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin, SST	2
100351	$\frac{3}{8}$ " Tee Nut, SST.....	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
111276	Rail Assembly	1
108569	Rail, Specify Color	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	4
100203	$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin, SST	2
100351	$\frac{3}{8}$ " Tee Nut, SST.....	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2

Specifications

Handloop: Weldment comprised of 1.125" O.D. 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with $\frac{5}{8}$ " internal thread. Finish: TenderTuff™, color specified.

Rail: Weldment comprised of 1.125" O.D. 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with $\frac{5}{8}$ " internal thread. Finish: TenderTuff™, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{3}{4}$ man hour

Weight: 111275-00 (One) 11 lbs.
111276-00 (One) 11 lbs.

Installation Instructions

- 1) Mark locations of clamps on posts per dimensions on front of sheet.
- 2) Attach offset clamps to ends of rails/handloops using $\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/pin.
- 3) Position rail/handloop on marked position on posts and attach using 5" half clamps and $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " tee nuts. Refer to the Typical Offset Hanger Clamp Assembly Sheet.
- 4) Install drive rivets in half clamps per the Typical Offset Hanger Clamp Assembly Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

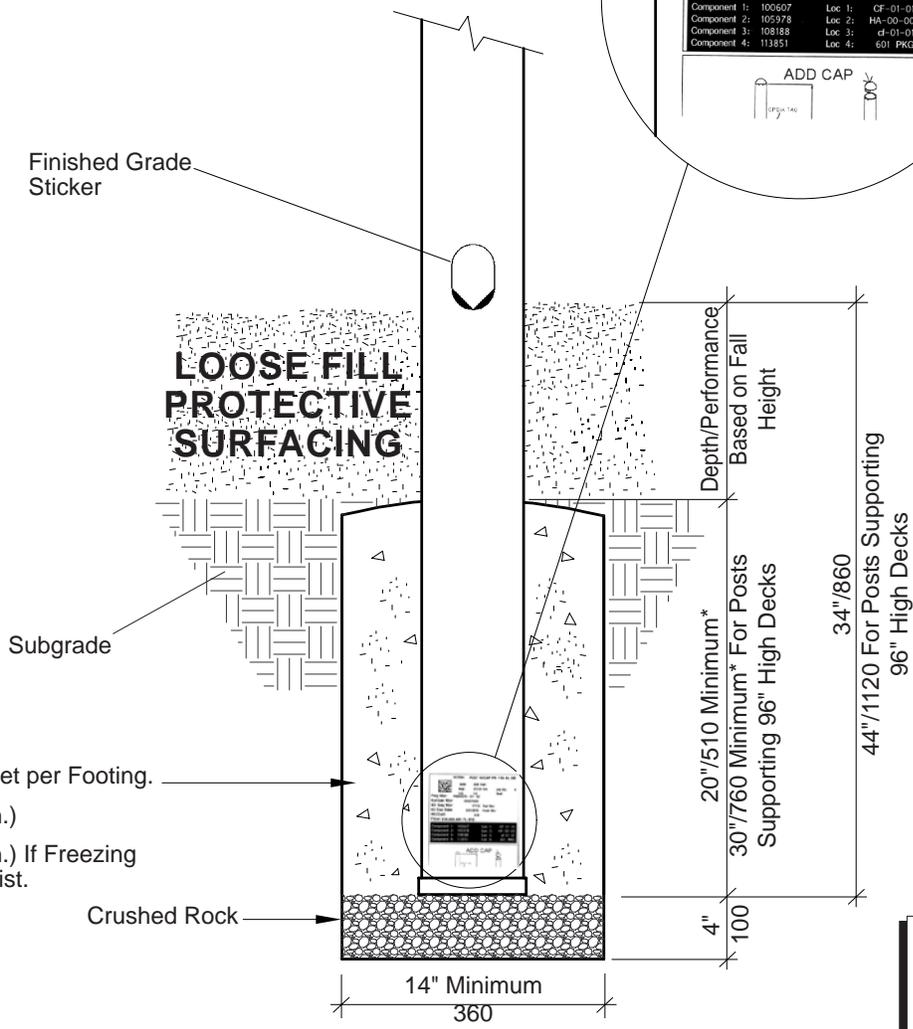
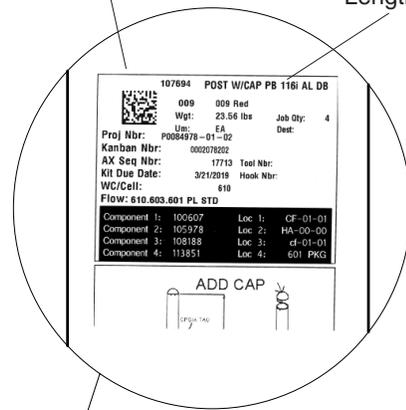
Post Specifications: Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height. All posts shall be powdercoated to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line (or 44" bury line for posts for 96" decks) required for correct installation and the top of the loose fill protective surfacing. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with (3) self sealing rivets. A molded low density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.

Steel Posts: All steel PlayBooster posts are manufactured from 5" O.D. tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.

Aluminum Posts: All aluminum PlayBooster posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness.

Part Number Label Example

Number Indicates Post Length



*** An Example:**
If you are using 12" of loose fill material, your concrete footing will be 22" deep.

PlayBooster® Concrete Footings, 5" Posts



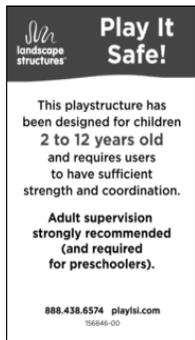
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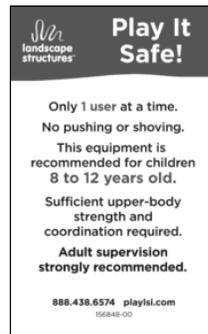
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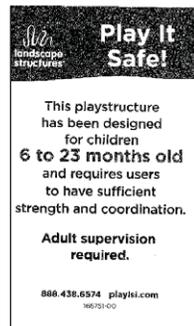
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Part No. 156846-00-000



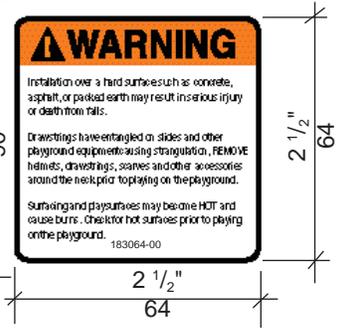
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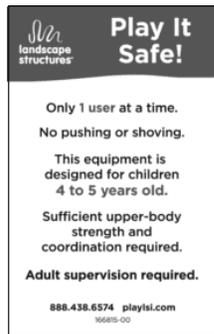
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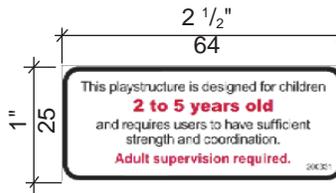
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Part No. 156850-00-000



Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

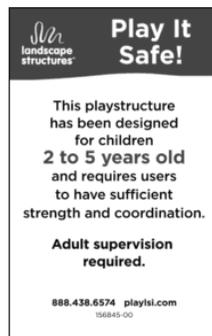
NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.



Part No. 156847-00-000



Part No. 156845-00-000



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

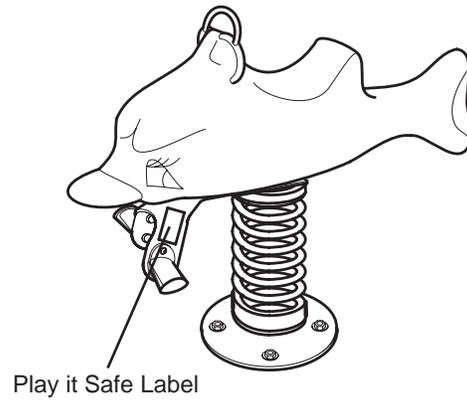
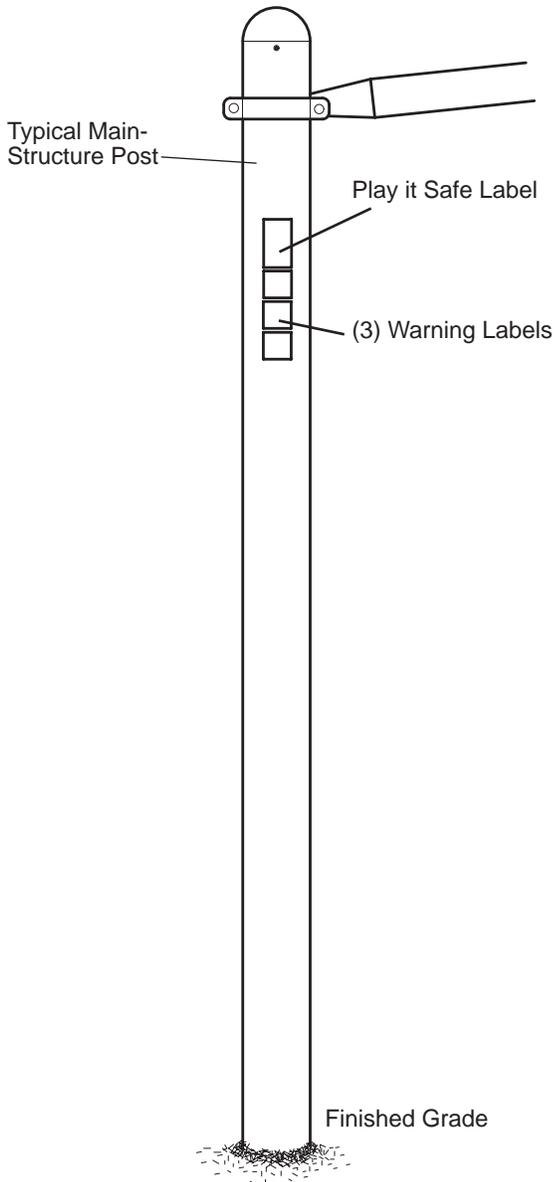
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- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
- 251723 Flat Large Play Safe Plate 2-5 Years w/Attaching HDW
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- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
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- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

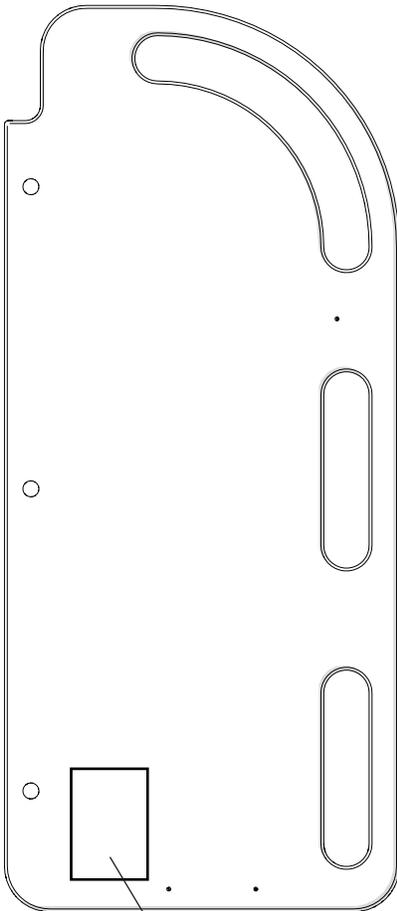




Warning Labels

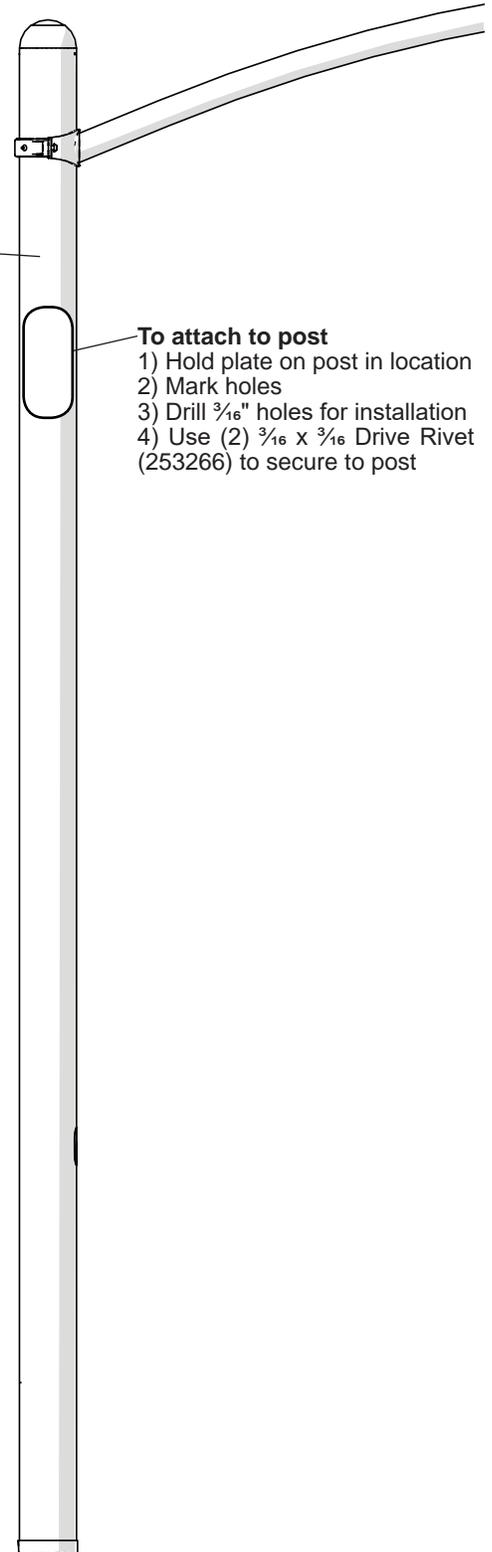
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 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
 - 2) Mark holes
 - 3) Drill $\frac{1}{8}$ " x $\frac{1}{2}$ " deep holes for installation
 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post



- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post



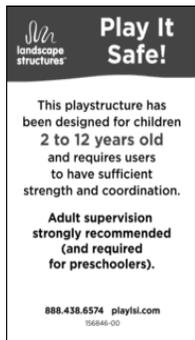
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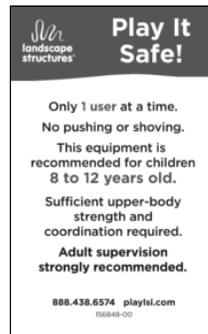
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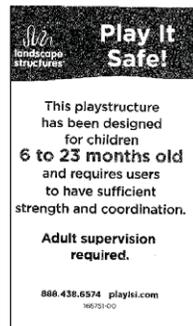
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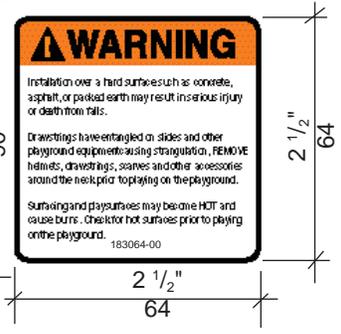
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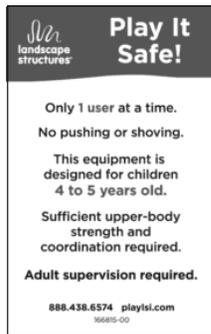
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Part No. 183064-00-000



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Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

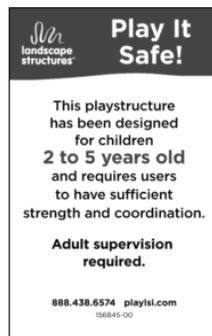
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Part No. 156847-00-000



Part No. 156845-00-000



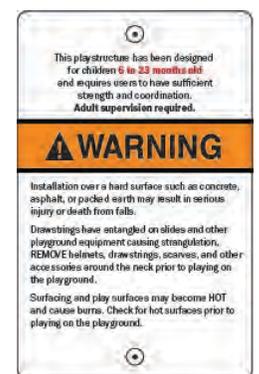
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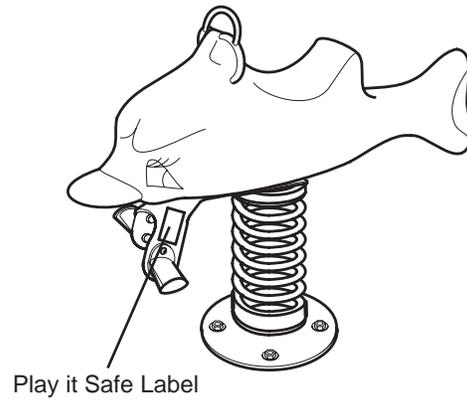
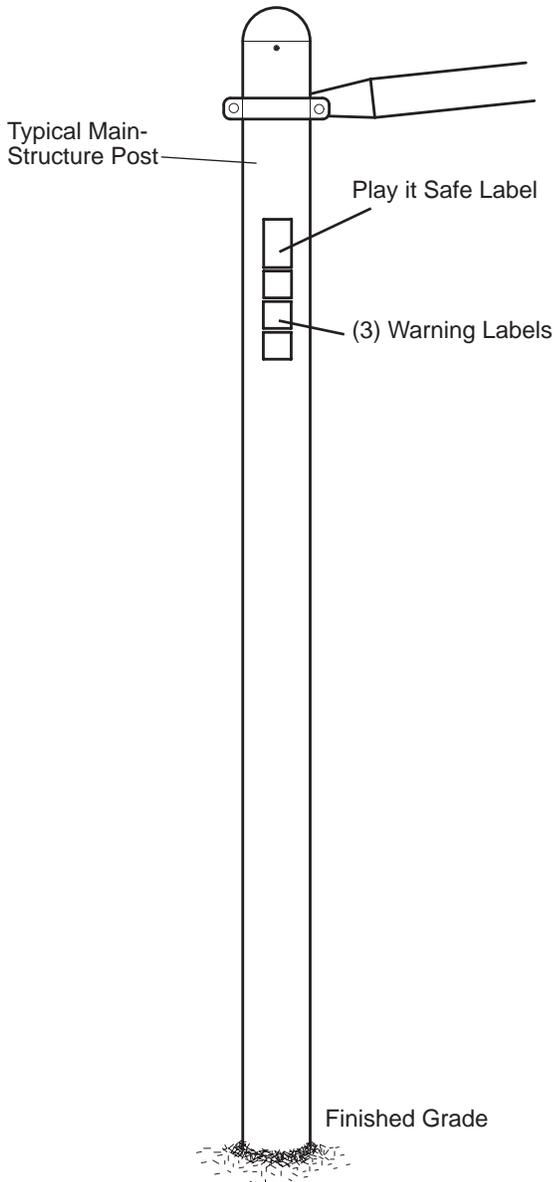
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- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

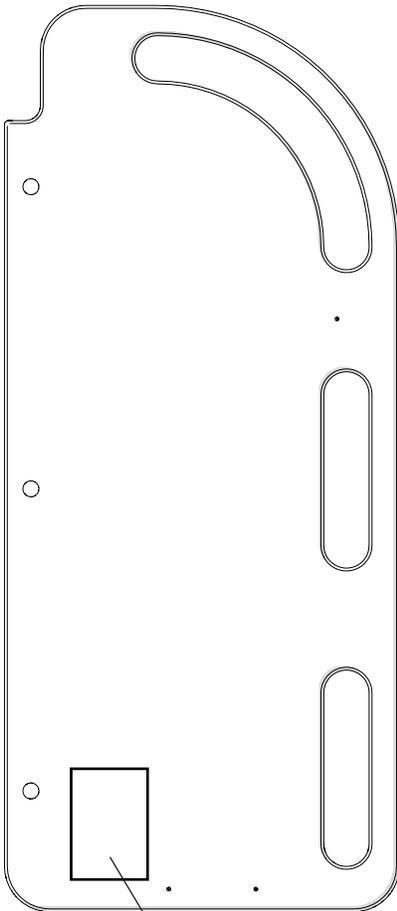




Warning Labels

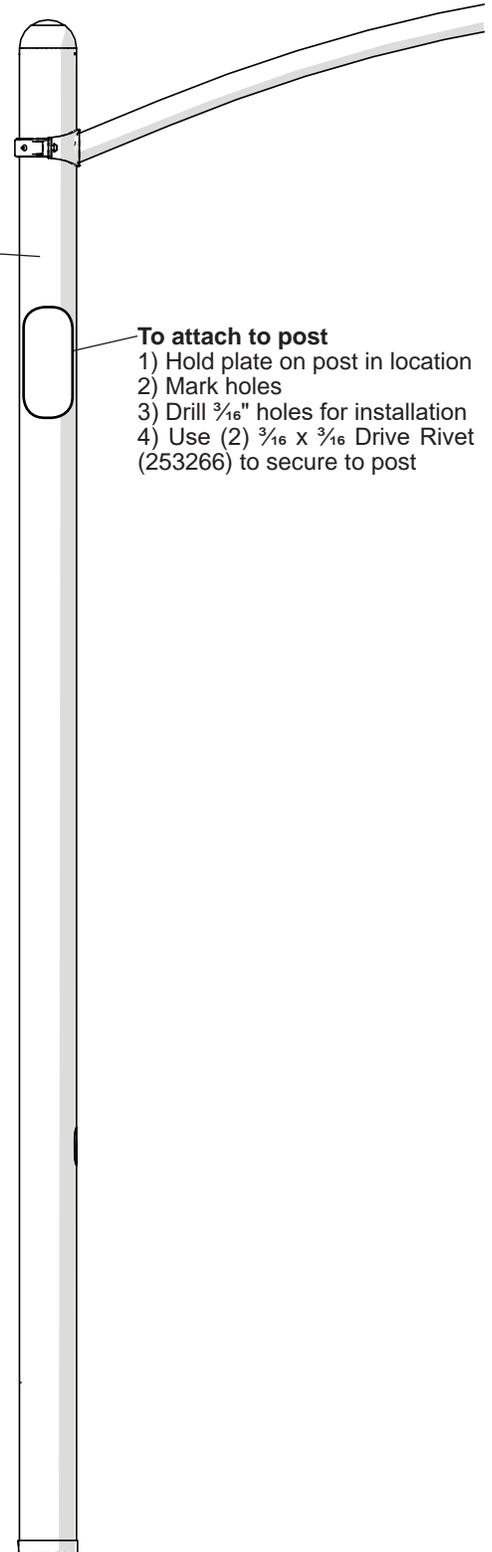
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Typical Main-Structure Post



- To attach to post**
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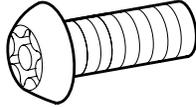


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structures®



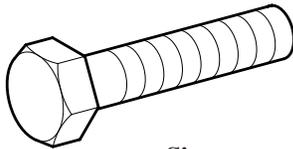
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



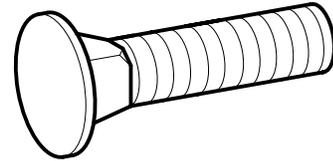
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1) SST- ANTI-SEIZE	SST-	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



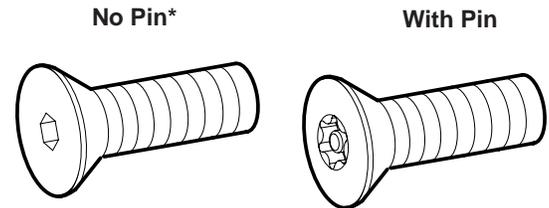
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

Flat Head Cap Screws (FHCS)



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque specifications will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

PS/PB/Evos/Weevos Common Parts/Torque Chart

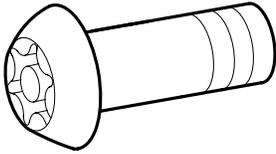
Sheet 1 of 9

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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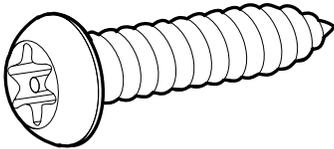
Document #26150400

BHCS w/Pin Limited Thread Bolts



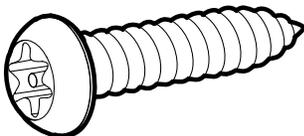
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



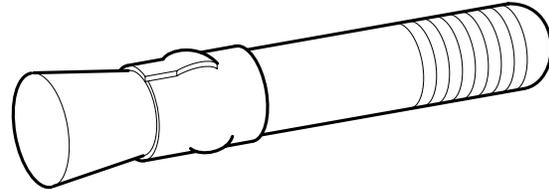
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



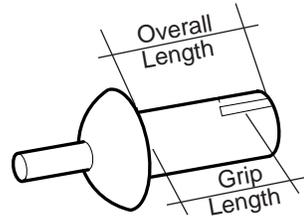
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

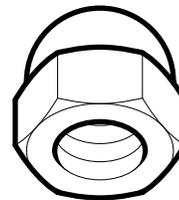
Drive Rivets



NOTE: For more detail see drive rivet detail page.

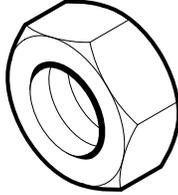
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



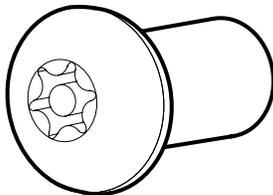
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



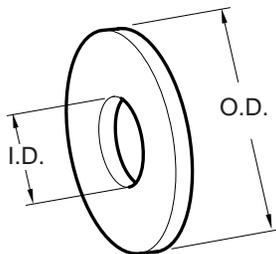
Part #	Sizes Inches	Mat'l or Grade
100326	5/16-18 UNC	SST
100321	3/8-16 UNC	SST-Pat
100327	3/8-16 UNC	SST
128296	3/8-16 UNC (Jam Nut)	SST
100328	7/16-14 UNC	SST
145021	7/16-14 UNC (Jam Nut)	SST
100322	1/2-13 UNC	SST
129692	1/2-13 UNC	SST-Pat
129693	1/2-13 UNC (Jam Nut)	SST
100323	5/8-11 UNC	SST

Flange Nut w/Pin



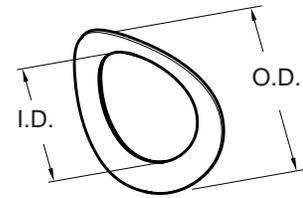
Part #	Sizes Inches	Mat'l or Grade
175006	5/16 x 18 UNC	SST
192064	M 8 x 24 mm	SST
100353	3/8-16 UNC	SST

Flat Washers



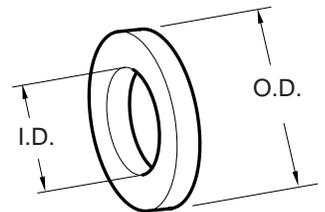
Part #	Sizes Inches	mm	or Grade	I.D.	O.D.
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



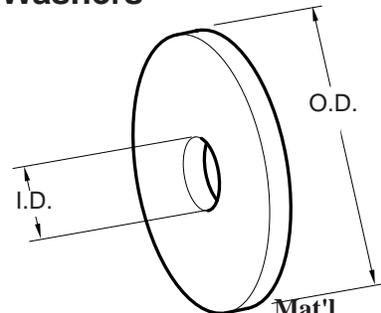
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



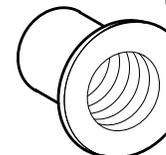
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



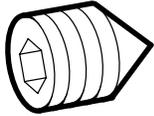
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes Inches	Mat'l or Grade
100351	3/8-16 UNC	SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



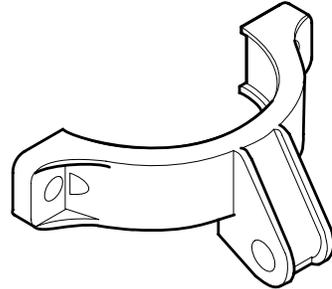
Part #	Mat'l or Grade
138915	SST

Double Clevis



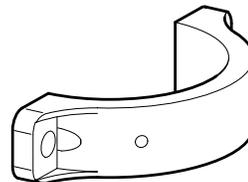
Part #	Mat'l or Grade
138917	SST

Offset Hanger Clamp (PlayBooster)



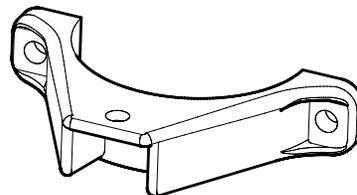
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



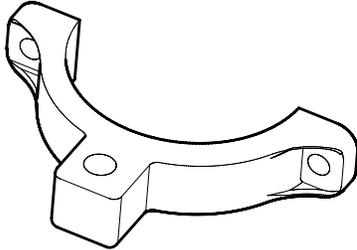
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



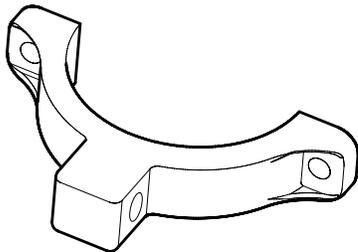
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



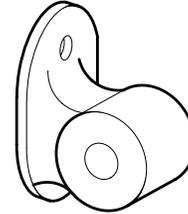
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



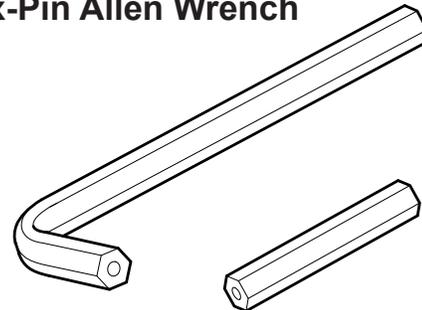
Part #	Mat'l
105330	Cast Aluminum

Offset Bolt Bracket (PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

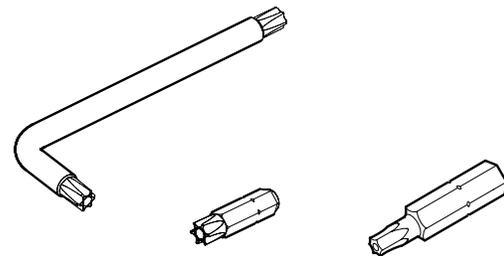
Hex-Pin Allen Wrench



Hex-Pin Driver

Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench

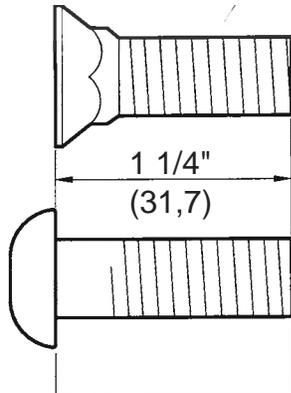


6-Lobe Driver

Torx-Pin Driver

Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



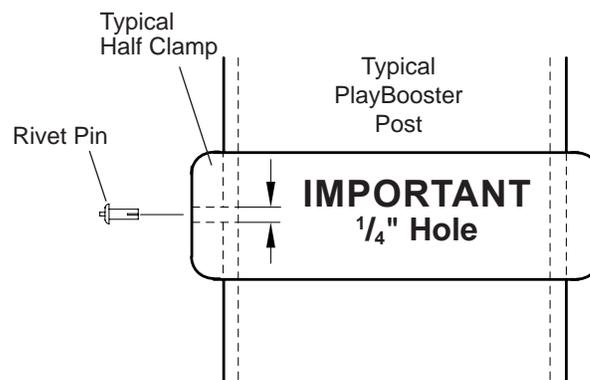
Example shows a 1 1/4" long plow bolt. Measurement method also applies to flathead cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

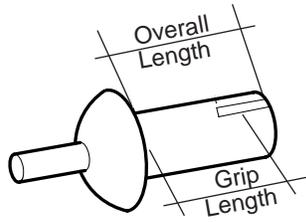
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



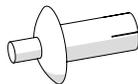
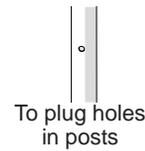
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



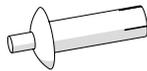
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

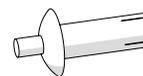


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



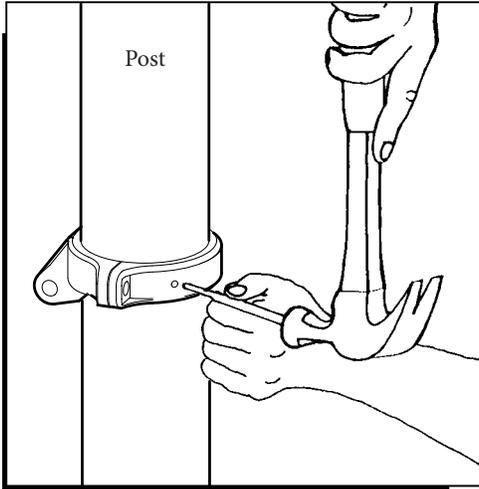
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



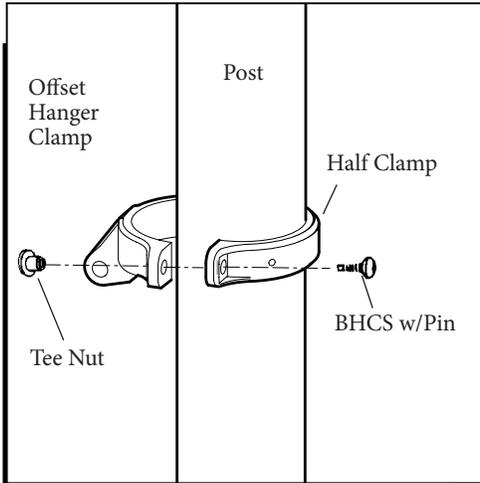
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



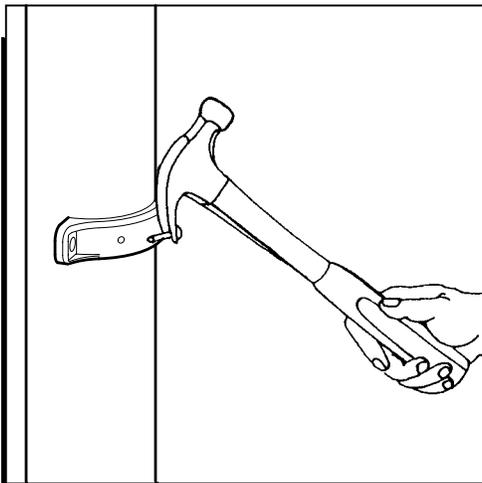
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench

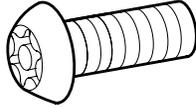


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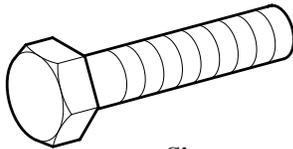
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



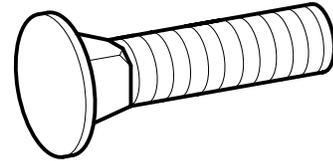
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1) SST- ANTI-SEIZE	SST-	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts

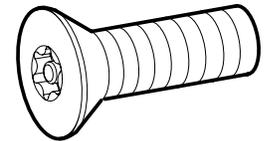
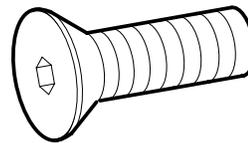


Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

Flat Head Cap Screws (FHCS)

No Pin*

With Pin



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque specifications will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

PS/PB/Evos/Weevos Common Parts/Torque Chart

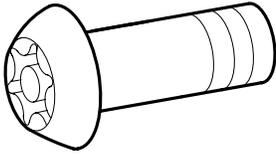
Sheet 1 of 9

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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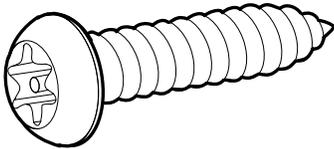
Document #26150400

BHCS w/Pin Limited Thread Bolts



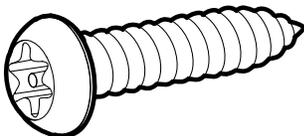
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



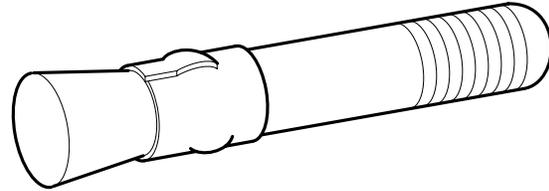
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



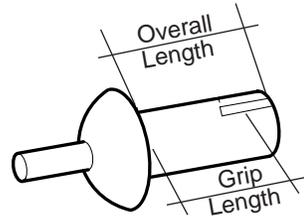
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

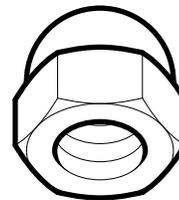
Drive Rivets



NOTE: For more detail see drive rivet detail page.

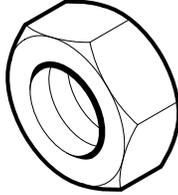
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



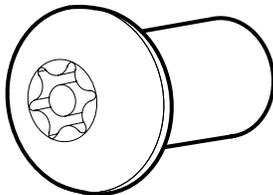
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



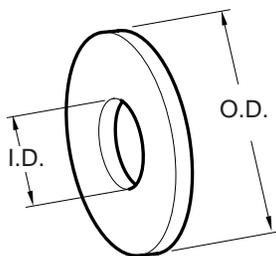
Part #	Sizes		Mat'l or Grade
	Inches	mm	
100326	5/16-18 UNC		SST
100321	3/8-16 UNC		SST-Pat
100327	3/8-16 UNC		SST
128296	3/8-16 UNC (Jam Nut)		SST
100328	7/16-14 UNC		SST
145021	7/16-14 UNC (Jam Nut)		SST
100322	1/2-13 UNC		SST
129692	1/2-13 UNC		SST-Pat
129693	1/2-13 UNC (Jam Nut)		SST
100323	5/8-11 UNC		SST

Flange Nut w/Pin



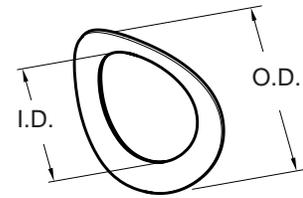
Part #	Sizes		Mat'l or Grade
	Inches	mm	
175006	5/16 x 18 UNC		SST
192064	M 8 x 24 mm		SST
100353	3/8-16 UNC		SST

Flat Washers



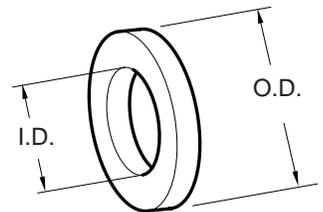
Part #	Sizes		or Grade	I.D.	O.D.
	Inches	mm			
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



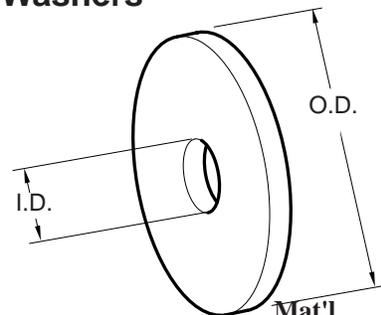
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



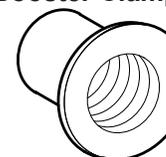
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



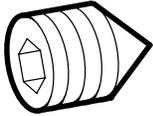
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100351	3/8-16 UNC		SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



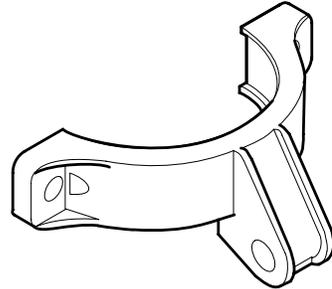
Part #	Mat'l or Grade
138915	SST

Double Clevis



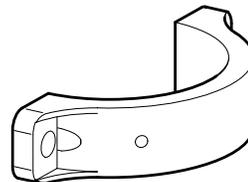
Part #	Mat'l or Grade
138917	SST

Offset Hanger Clamp (PlayBooster)



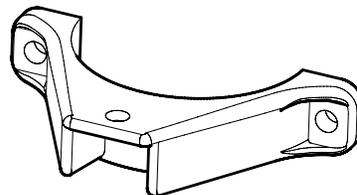
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



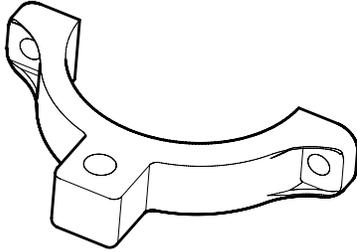
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



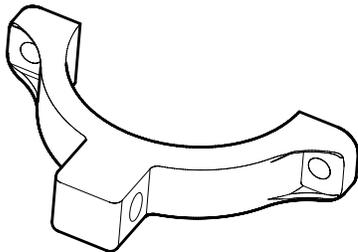
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



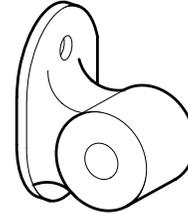
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



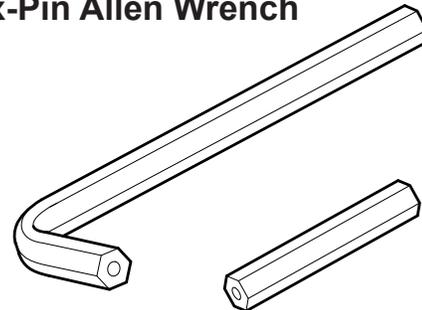
Part #	Mat'l
105330	Cast Aluminum

Offset Bolt Bracket (PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

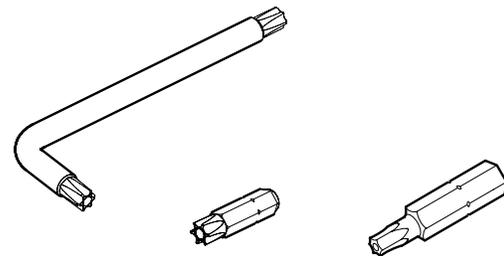
Hex-Pin Allen Wrench



Hex-Pin Driver

Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench

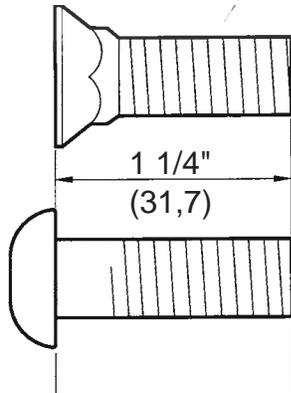


6-Lobe Driver

Torx-Pin Driver

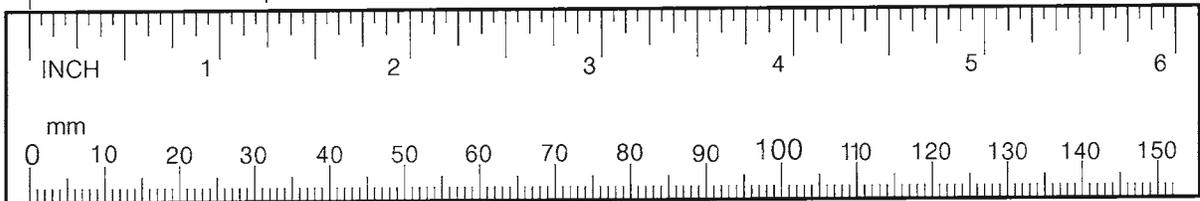
Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



Example shows a 1 1/4" long plow bolt. Measurement method also applies to flathead cap screws.

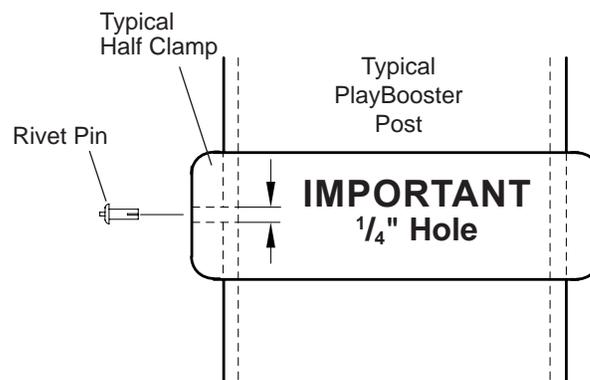
Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.



Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

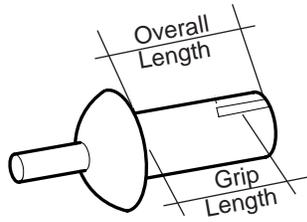
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



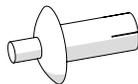
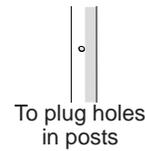
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



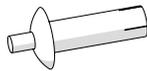
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



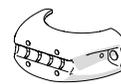
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

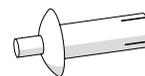


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



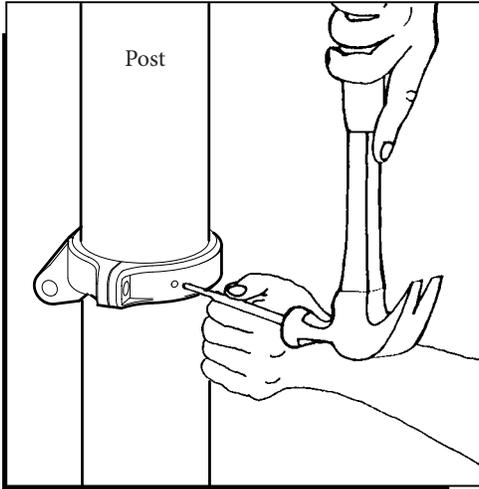
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



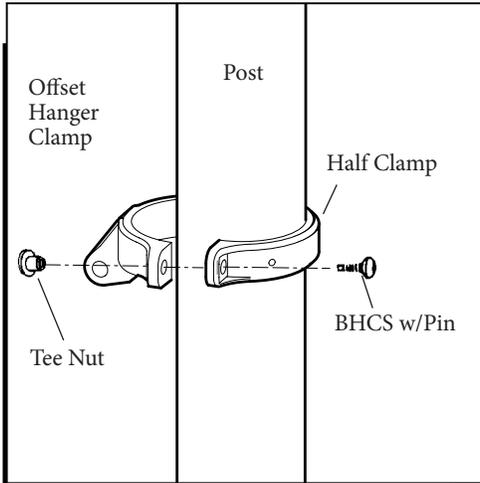
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



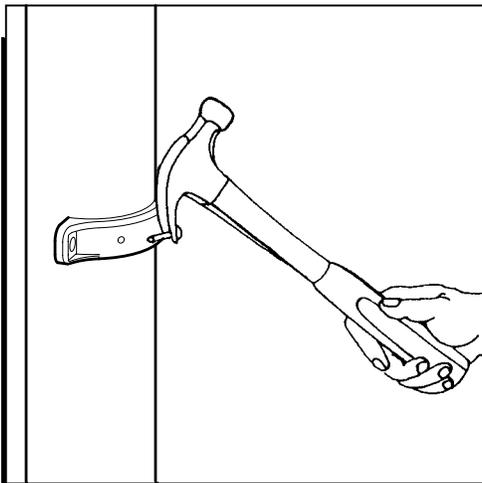
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



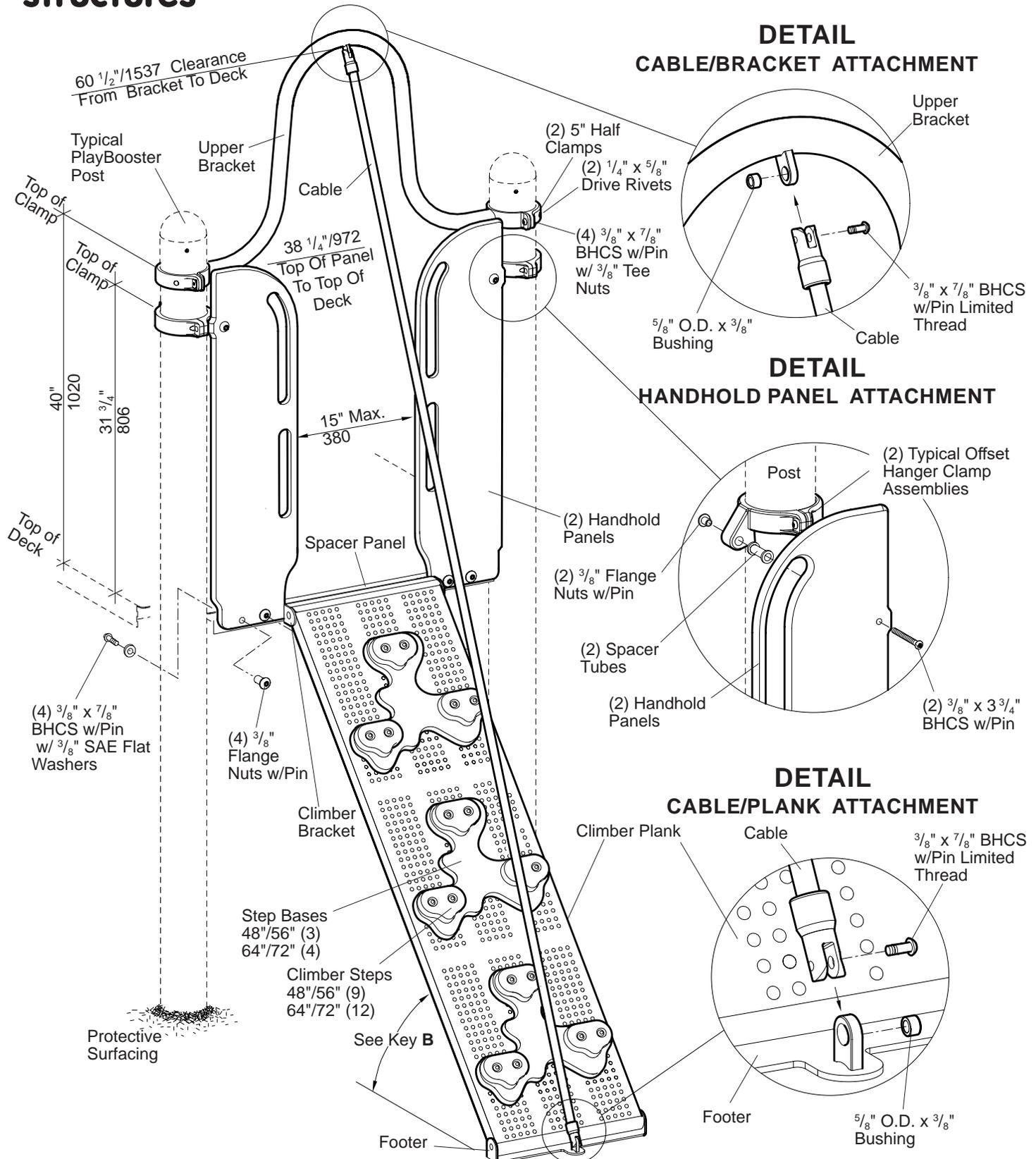
- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench



Parts List

Part#	Description	Qty.
152391	Climber Plank 48"/56", Specify Color	1
122130	Climber Plank 64"/72", Specify Color	1
165144	Upper Bracket, Specify Color	1
139563	Handhold Panel, Specify Color	2
122122	Climber Bracket, Specify Color	1
113729	Offset Hanger Clamp, Specify Color	2
105327	5" Half Clamp, Specify Color	4
122776	Spacer Panel, Specify Color	1
165147	121 1/4" Cable, (48" Deck)	1
165148	125" Cable, (56" Deck)	1
165149	140" Cable, (64" Deck)	1
165150	143" Cable, (72" Deck)	1
165145	Footer (DB), Specify Color	1
165146	Footer (SM), Specify Color	1
113468	Spacer Tube, Specify Color	2
Multiple *	Climber Assembly 48"/56"	1
122204	Climber Step, Specify Color	9
122595	Step Base, Specify Color	3
175695	48"/56" Cliff Hardware Package	1
123224	3/8" x 1 11/16" BHCS w/Pin, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
113027	3/8" x 1 3/8" BHCS w/Pin, SST	18
100327	3/8" Standard Hex Nut, SST	6
100353	3/8" Flange Nut w/Pin, SST	18
100365	3/8" SAE Flat Washer, SST	28
Multiple *	Climber Assembly 64"/72"	1
122204	Climber Step, Specify Color	12
122595	Step Base, Specify Color	4
175696	64"/72" Cliff Hardware Package	1
123224	3/8" x 1 11/16" BHCS w/Pin, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
113027	3/8" x 1 3/8" BHCS w/Pin, SST	24
100327	3/8" Standard Hex Nut, SST	6
100353	3/8" Flange Nut w/Pin, SST	24
100365	3/8" SAE Flat Washer, SST	34
175697	Cliff Climber Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100290	3/8" x 7/8" BHCS w/Pin Ltd. Thread Bolt, SST	2
127179	5/8" O.D. x 3/8" Bushing, SST	2
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100351	3/8" Tee Nut, SST	8
100353	3/8" Flange Nut w/Pin, SST	6
100365	3/8" SAE Flat Washer, SST	4
100610	1/4" x 5/8" Drive Rivet AL/SST	4
111392	2 Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor	2
100322	1/2" Standard Hex Nut, SST	2
100363	1/2" Flat Washer, SST	2

* = See Your L.S.I. Representative For Part Number

DB=Direct Bury
SM=Surface Mount

Specifications

Climber Bracket:	Fabricated from formed 3/16" x 2" HR flat steel. Finish: ProShield®, color specified.
Climber Plank:	Flange formed from 11 GA (.120") sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" diameter holes. Finish: TenderTuff, color specified.
Footer:	Weldment comprised of 1.660" O.D. RS40 (.108"-.132") galvanized steel tubing and 3/16" x 2" HR flat steel. Finish: ProShield, color specified.
Upper Bracket:	Weldment comprised of formed 1.660" O.D. RS-20 (.085"-.095") galvanized steel tubing and 1/4" x 1 3/4" wide steel half clamps. Finish: ProShield, color specified.
Climber Step/ Step Base/Panels:	Solid color Permalene®, color specified.
Cable:	Made of tightly woven, polyester-wrapped, six stranded galvanized-steel cable with a polypropylene core. Connector fabricated from 1.250" O.D. 6061-T6 aluminum.

**Offset Hanger
Clamp Assembly:** Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners are socketed and pinned tamper-proof in design, either stainless steel (SST) or carbon steel plated with zinc/nickel and iridescent chromate finish.

Installation Time: SM - Approx. 2 man hours
DB - Approx. 2 1/2 man hours

Concrete Req.: Approx. 2 cu. ft.

Area Req.: 6' / 1.83 m minimum use zone at exit

Weight: 48" & 56" - 138 lbs.

64" & 72" - 155 lbs.

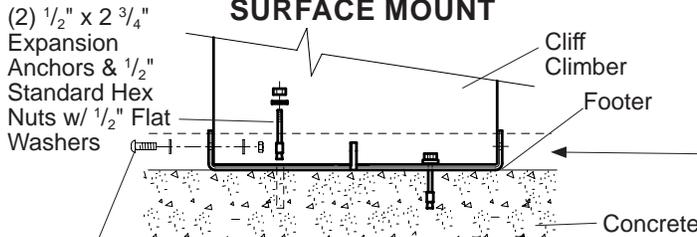
Fall Height: Deck Height

Installation Instructions

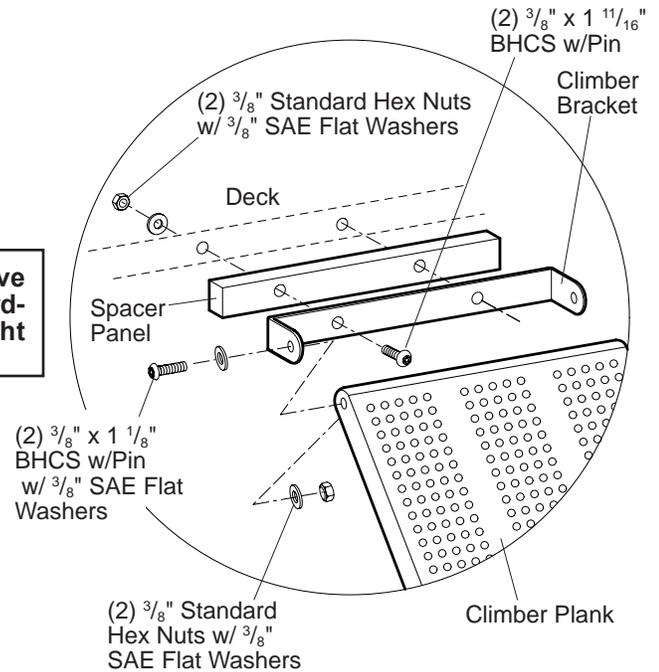
- 1) Dig footing holes spaced as shown.
- 2) Attach upper bracket to posts at height shown using 5" half clamps, 3/8" x 7/8" BHCS w/pin and 3/8" tee nuts.
- 3) Attach handhold panel to the face of the deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. See Detail.
- 4) Attach offset hanger clamp assemblies to posts at height shown. Using half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 5) Attach handhold panel to offset hanger clamp assemblies using 3/8" x 3 3/4" BHCS w/pin, spacer tubes and 3/8" flange nuts w/pin. See Panel Attachment Detail.
- 6) Attach step base and climber steps to the climber plank using 3/8" x 1 3/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Refer to the Step Attachment Detail.
- 7) Attach footer to climber plank and climber plank to climber bracket using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Plank Attachment Detail.
- 8) Attach climber bracket to the face of the deck using spacer panel, 3/8" x 1 11/16" BHCS w/pin and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Plank Attachment Detail.
- 9) Attach cable to upper bracket, using 5/8" O.D. x 3/8" bushing and 3/8" x 7/8" BHCS w/pin limited thread. Refer to the Cable/Bracket Attachment Detail.
- 10) Attach cable to the bottom of the climber plank, using 5/8" O.D. x 3/8" bushing and 3/8" x 7/8" BHCS w/pin limited thread. Refer to the Cable/Plank Attachment Detail.
- 11) **(Direct Bury)** With cliff climber in final position, pour concrete footings. Allow concrete footings to cure a minimum of 72 hours before users are allowed to play on the structure.
(Surface Mount) Mark anchor bolt locations on concrete slab through holes in footer and remove challenge climber from climber bracket. Drill 1/2" x 3" deep holes on marks into concrete using hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Reposition challenge climber and reattach to the climber bracket. Fasten footer to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- 12) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 13) Install protective surfacing before users are allowed to play on the structure.

Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

**DETAIL
SURFACE MOUNT**

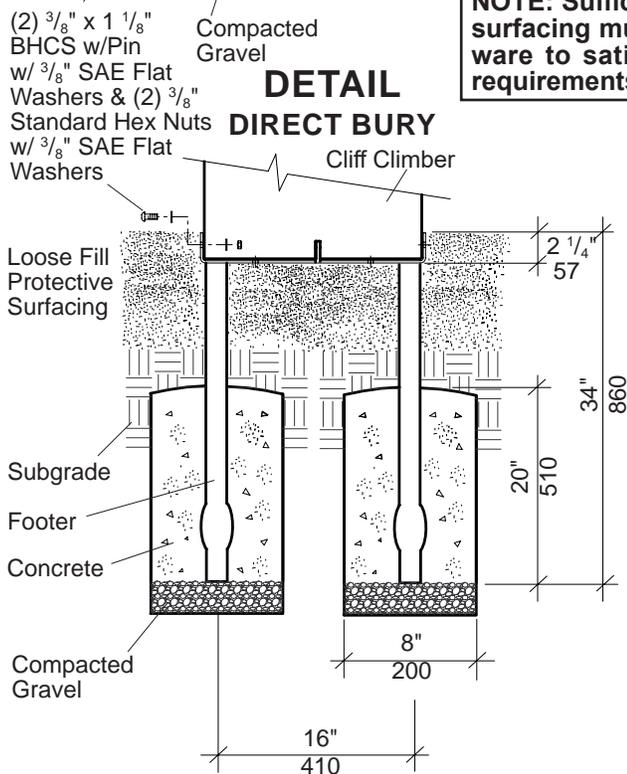


**DETAIL
PLANK ATTACHMENT**

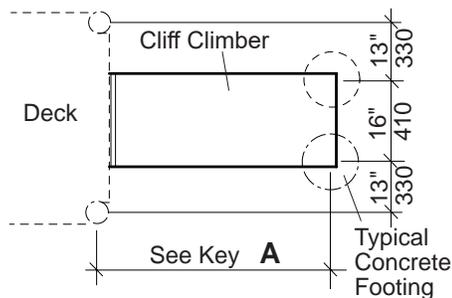


NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

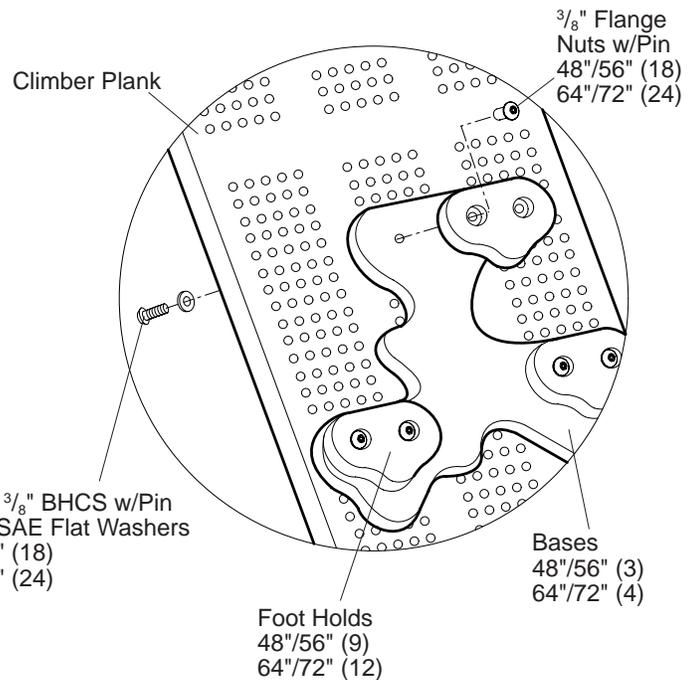
**DETAIL
DIRECT BURY**



PLAN VIEW/DB FOOTING LAYOUT

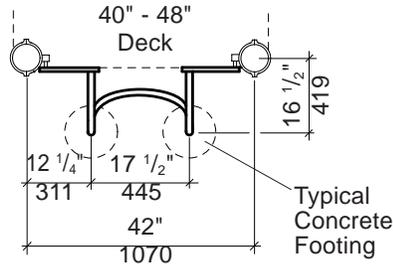


**DETAIL
FOOT HOLD ATTACHMENT**

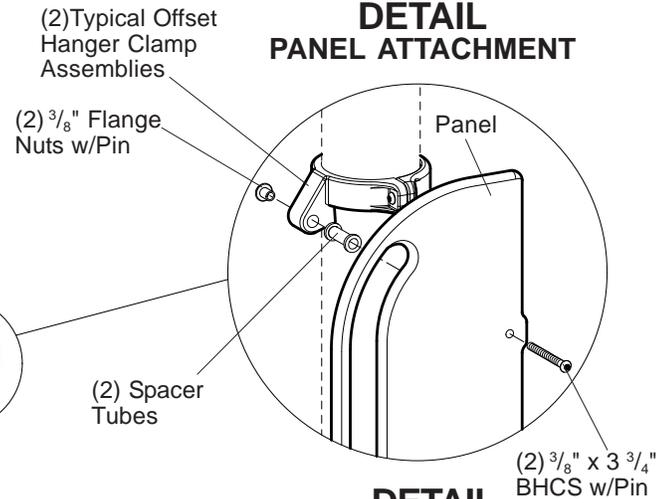


KEY	Height	Dimension "A"	Angle "B"
Off 48" / 1220 Deck	48" / 1220	48" / 1220	50°
Off 56" / 1490 Deck	56" / 1490	37" / 940	60°
Off 64" / 1630 Deck	64" / 1630	58" / 1470	50°
Off 72" / 1830 Deck	72" / 1830	47" / 1190	60°

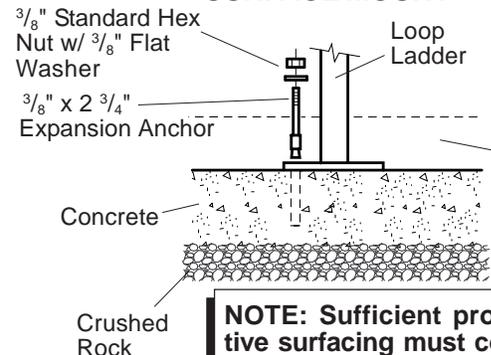
PLAN VIEW/ FOOTING LAYOUT



DETAIL PANEL ATTACHMENT

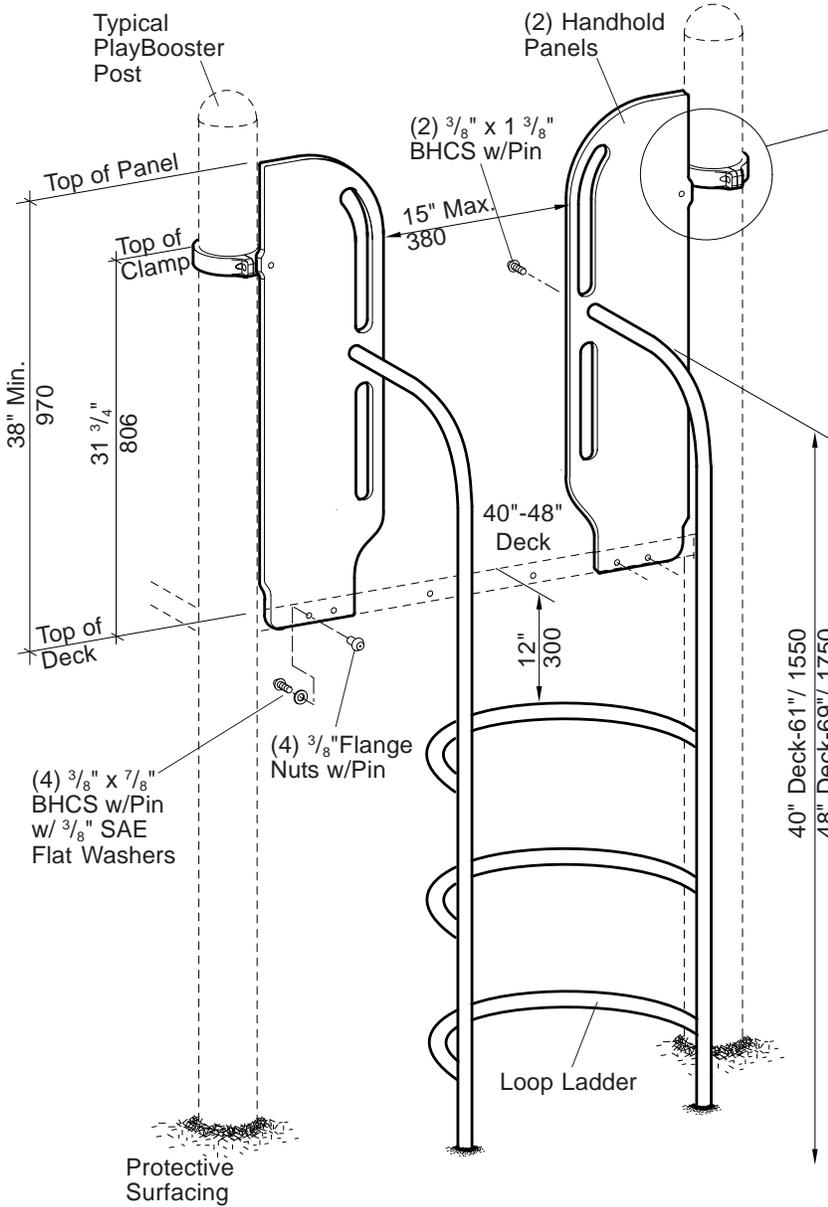
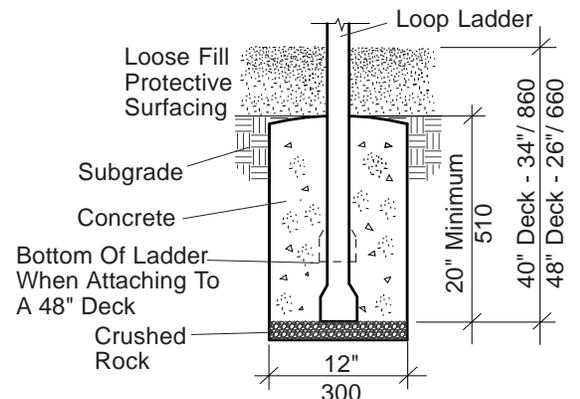


DETAIL SURFACE MOUNT



NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

DETAIL DIRECT BURY



Parts List

Part#	Description	Qty.
113558	Loop Ladder (40" & 48") DB, Specify Color	1
112913	Loop Ladder 40" SM, Specify Color	1
113567	Loop Ladder 48" SM, Specify Color	1
139563	Handhold Panel, Specify Color	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
113468	Spacer Tube, Specify Color	2
100610	1/4" x 5/8" Drive Rivet AL/SST	2
139892	Loop Ladder (Tenderdeck) Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	6
100365	3/8" SAE Flat Washer, SST	4
113027	3/8" x 1 3/8" BHCS w/Pin, SST	2
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
121256	2-Hole (SM) Hardware Package	1
100263	3/8" x 2 3/4" Expansion Anchor	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST	2

DB = Direct Bury

SM = Surface Mount

Specifications

Loop Ladder: Weldment comprised of 1.125" O.D. 11 GA (.120") black steel tubing. Finish: TenderTuff®, color specified.

Handhold Panel: Solid color Permalene® with 3/4" x 1 1/8" handholds, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: ProShield®, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: SM - Approx. 1 1/2 man hours

DB - Approx. 2 man hours

Concrete Req.: 26" - Approx. 2.6 cu. ft.

Weight: 64 lbs.

Fall Height: Deck Height

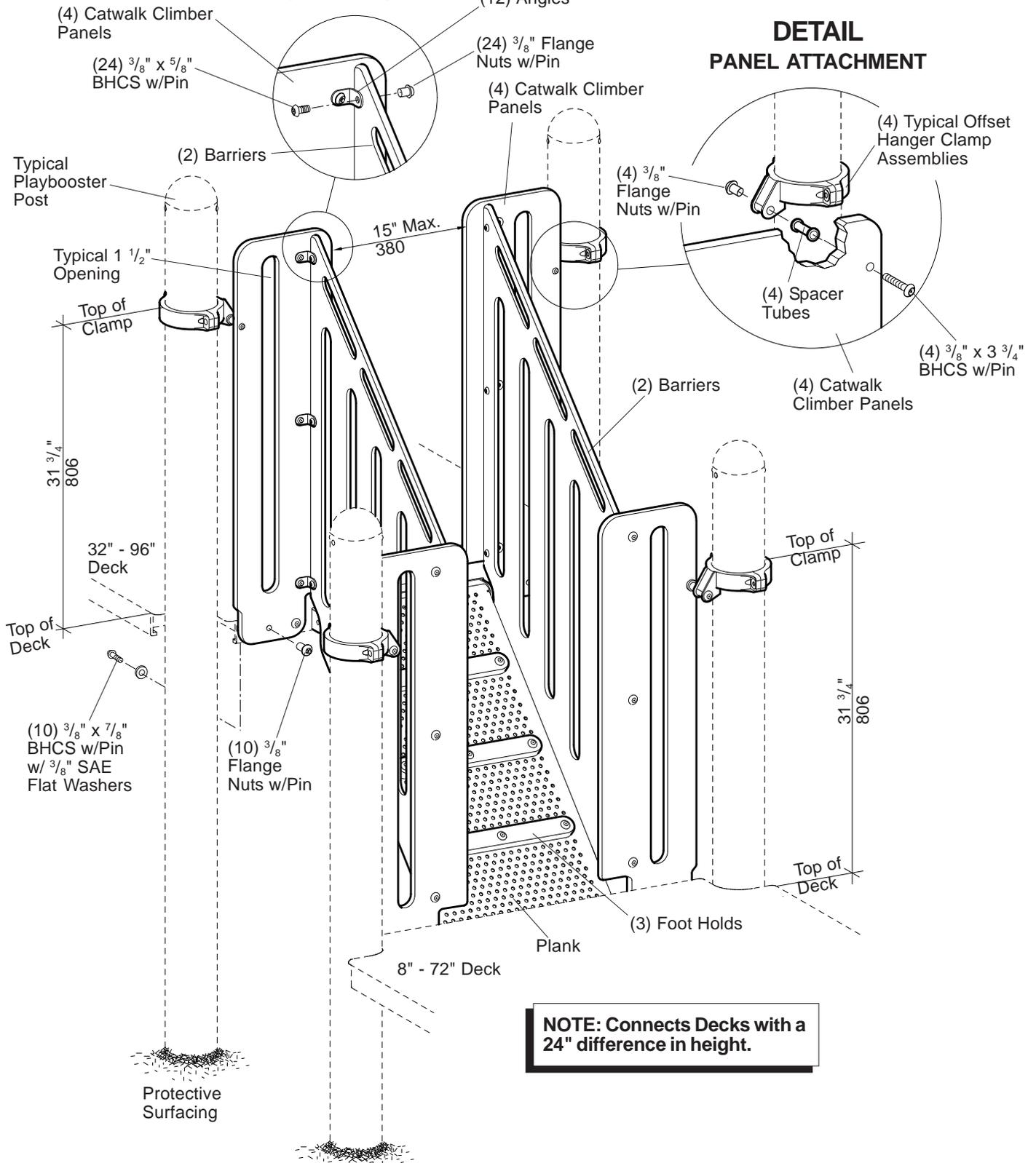
Installation Instructions

- 1) **(Direct Bury)** Dig footing holes spaced as shown.
- 2) Attach the handhold panels to the face of the deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
- 3) Attach offset hanger clamps to posts at height shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 4) Attach handhold panels to the offset hanger clamp assemblies using 3/8" x 3 3/4" BHCS w/pin, spacer tubes and 3/8" flange nuts w/pin. Refer to the Panel Attachment Detail.
- 5) Using a 7/16" drill bit, drill out the upper 1/8" pilot hole in each handhold panel for attachment of loop ladder.
- 6) Attach loop ladder to handhold panels using 3/8" x 1 3/8" BHCS w/pin.
- 7) **(Direct Bury)** With loop ladder plumb, pour concrete footings. Allow concrete footings to cure for a minimum of 72 hours before users are allowed to play on the structure.

(Surface Mount) With loop ladder plumb, drill 3/8" x 3" deep holes through mounting plates using hammer drill and 3/8" masonry bit. Tap expansion anchors into drilled holes. Fasten mounting plates to expansion anchors using 3/8" standard hex nuts with 3/8" SAE flat washers.
- 8) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
 ANGLE ATTACHMENT** (12) Angles

**DETAIL
 PANEL ATTACHMENT**



NOTE: Connects Decks with a 24" difference in height.

Parts List

Part#	Description	Qty.
128292	Plank, Specify Color	1
128302	Foot Hold, Specify Color	3
141224	Catwalk Climber Panel, Specify Color	4
141225	Catwalk Climber Barrier, Specify Color	2
122122	Bracket, Specify Color	2
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
113468	Spacer Tube, Specify Color	4
141480	Catwalk Climber Hardware Package	1
100195	3/8" x 5/8" BHCS w/Pin, SST	24
100196	3/8" x 7/8" BHCS w/Pin, SST	23
100198	3/8" x 1 1/8" BHCS w/Pin, SST	12
100327	3/8" Standard Hex Nut, SST	8
100351	3/8" Tee Nut, SST	8
100353	3/8" Flange Nut w/Pin, SST	47
100365	3/8" SAE Flat Washer, SST	31
105207	1/8" x 1 1/2" x 1 1/2" Angle, SST	12
124460	3/8" x 3 3/4" BHCS w/Pin, SST	4

Specifications

Plank: Flange formed from 11 GA (.120") sheet steel conforming to ASTM A1011. Standing surface is perforated with 1/4" diameter holes. Finish: TenderTuff, color specified.

Foot Hold: Solid color Permalene®, color specified.

Panel/Barrier: Solid color Permalene, color specified.

Bracket: Fabricated form formed 3/16" x 2" HR flat steel. Finish: ProShield®, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 1/16". Finish: ProShield, color specified.

Offset Hanger

Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

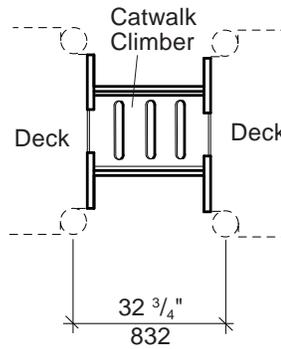
Installation Time: Approx. 2 1/2 man hours

Weight: 112 lbs.

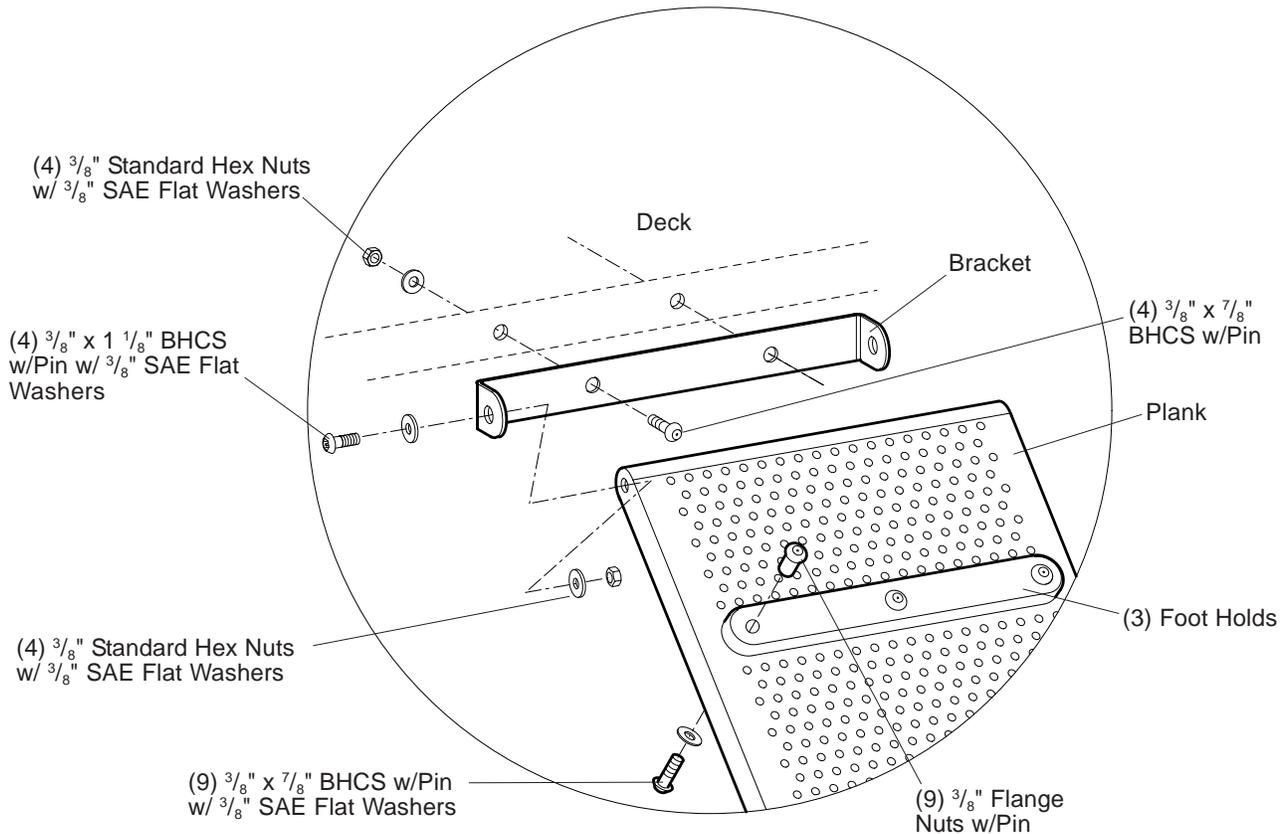
Installation Instructions

- 1) Attach Catwalk Climber panels to the face of the deck using 3/8" x 7/8" BHCS w/Pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin, as shown.
- 2) Attach offset hanger clamps to posts at height shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/Pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach Catwalk Climber panels to the offset hanger clamp assemblies using 3/8" x 3 3/4" BHCS w/Pin, spacer tubes and 3/8" flange nuts w/pin. Refer to the Panel Attachment Detail.
- 4) Attach foot holds to the plank using 3/8" x 7/8" BHCS w/Pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Refer to the Plank Attachment Detail.
- 5) Attach brackets to the face of the decks using 3/8" x 7/8" BHCS w/Pin and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Plank Attachment Detail.
- 6) Attach the plank to the brackets using 3/8" x 1 1/8" BHCS w/Pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
- 7) Attach barriers to the Catwalk Climber panels using angles, 3/8" x 5/8" BHCS w/Pin and 3/8" flange nuts w/pin, as shown. Refer to the Angle Attachment Detail.
- 8) Attach barriers to plank using 3/8" x 7/8" BHCS w/Pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
- 9) Install protective surfacing before users are allowed to play on the structure.

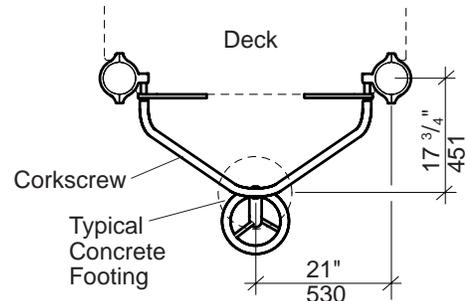
PLAN VIEW/FOOTING LAYOUT



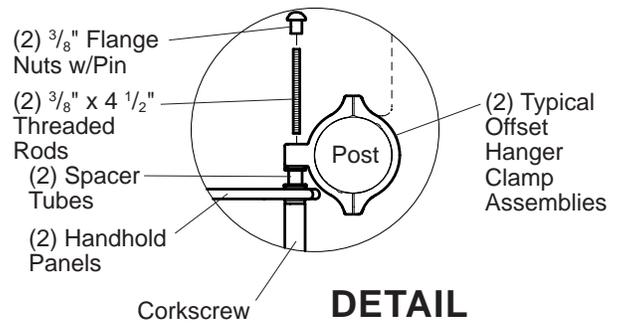
**DETAIL
PLANK ATTACHMENT**



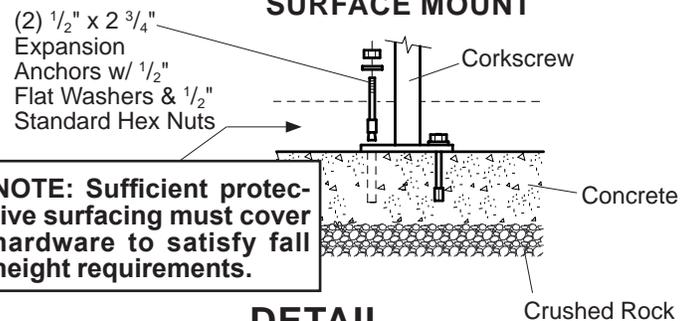
**PLAN VIEW/
FOOTING LAYOUT**



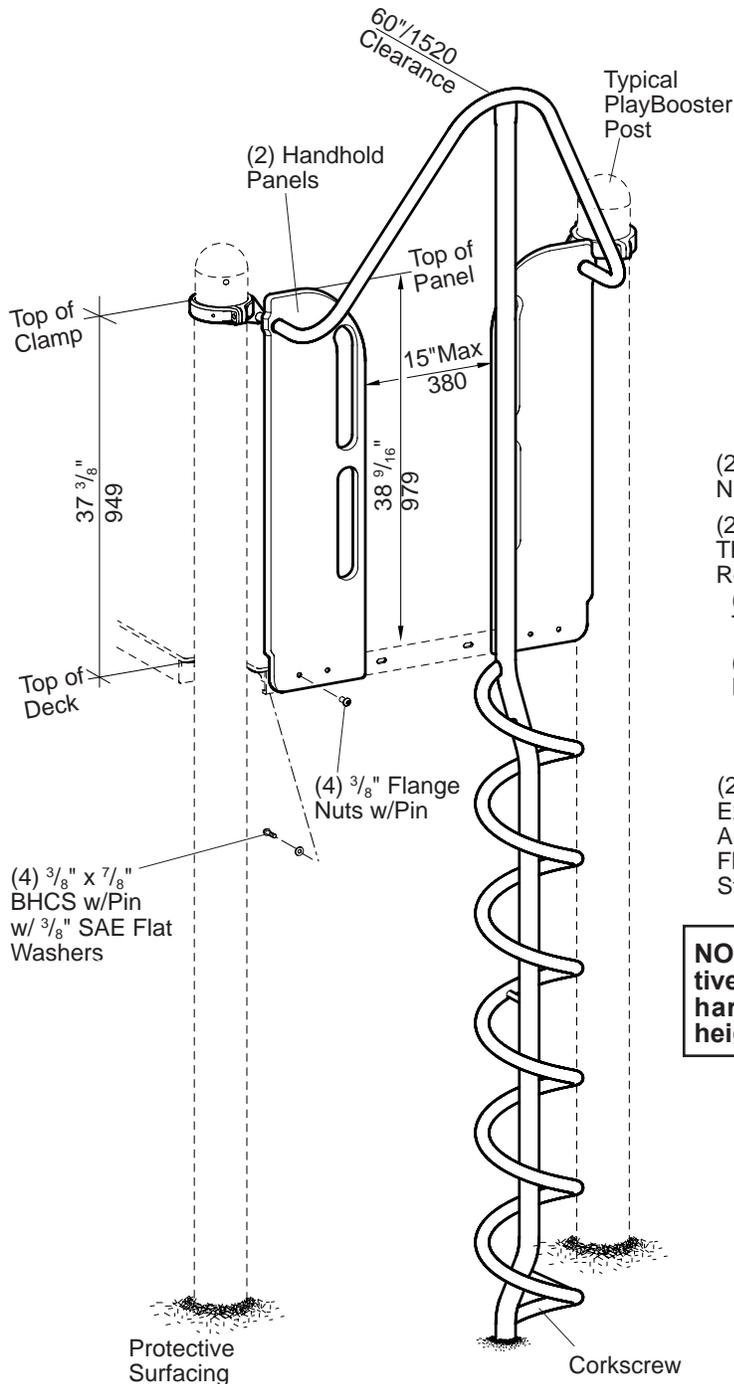
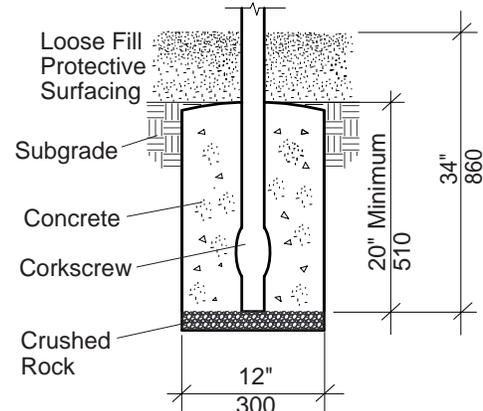
**DETAIL
HANDHOLD PANEL ATTACHMENT**



**DETAIL
SURFACE MOUNT**



**DETAIL
DIRECT BURY**



72" Deck Height Shown

PlayBooster® 148432 Corkscrews, 32"-72" Decks



PlayBooster® 148432 Corkscrews, 32"-72" Decks

Parts List

Part#	Description	Qty.
147954	Handhold Panel, Specify Color	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
147941	Corkscrew, 32" Deck (DB), Specify Color	1
147942	Corkscrew, 40" Deck (DB), Specify Color	1
147943	Corkscrew, 48" Deck (DB), Specify Color	1
146511	Corkscrew, 56" Deck (DB), Specify Color	1
146512	Corkscrew, 64" Deck (DB), Specify Color	1
146513	Corkscrew, 72" Deck (DB), Specify Color	1
146514	Corkscrew, 32" Deck (SM), Specify Color	1
146515	Corkscrew, 40" Deck (SM), Specify Color	1
146516	Corkscrew, 48" Deck (SM), Specify Color	1
146517	Corkscrew, 56" Deck (SM), Specify Color	1
146518	Corkscrew, 64" Deck (SM), Specify Color	1
146519	Corkscrew, 72" Deck (SM), Specify Color	1
113468	7/8" O.D. x 1 11/16" Spacer Tube, Specify Color.....	2
100610	1/4" x 5/8" Drive Rivet, AL/SST	2
148176	Pole Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100351	3/8" Tee Nut, SST.....	4
100353	3/8" Flange Nut w/Pin, SST.....	6
100365	3/8" SAE Flat Washer, SST.....	4
148081	3/8" x 4 1/2" Threaded Rod, SST	2
111392	2-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchors.....	2
100322	1/2" Standard Hex Nut, SST	2
100363	1/2" Flat Washer, SST	2

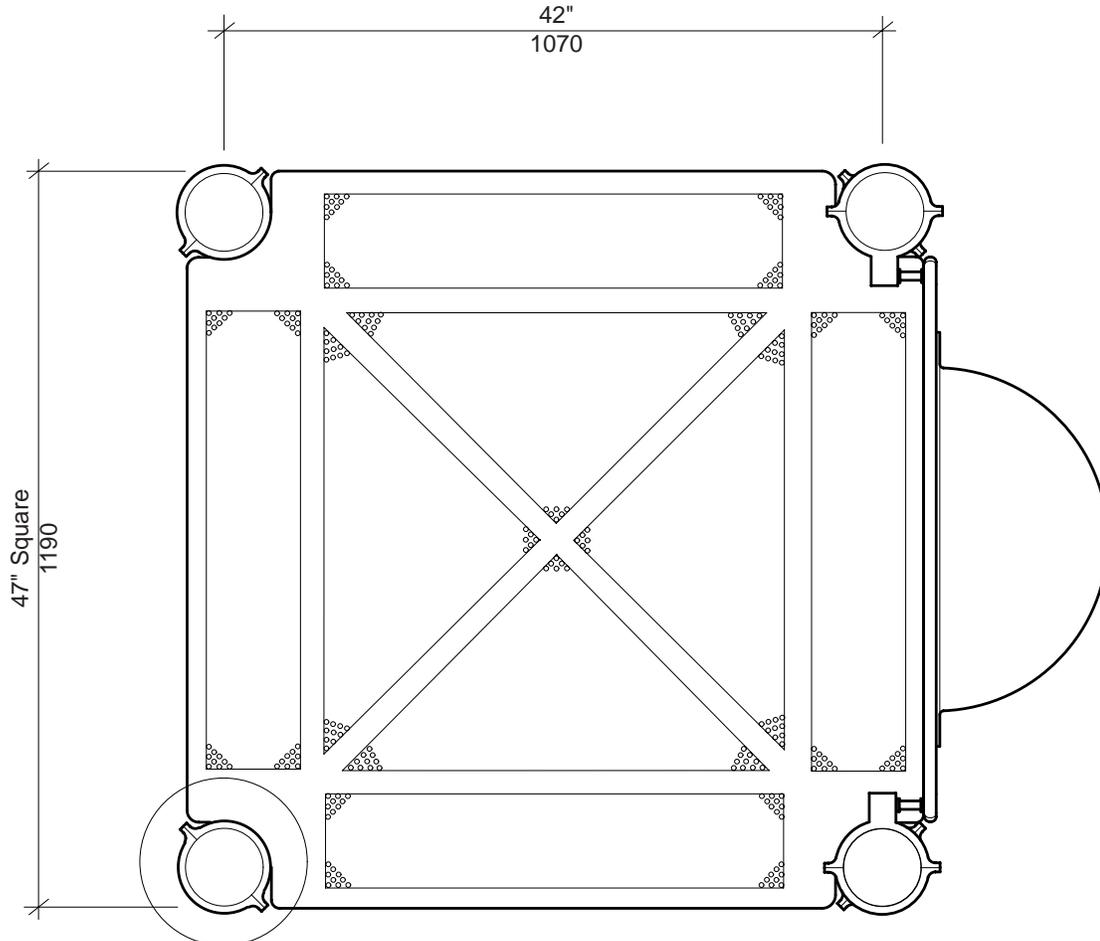
DB = Direct Bury
SM = Surface Mount

Specifications

Corkscrew:	Weldment comprised of 1.900" O.D. RS-40 (.120 - .130") galvanized steel tubing, and 1.315" O.D. RS-20 (.080" - .090") galvanized steel tubing. Finish: ProShield®, color specified.
Handhold Panel:	Solid color Permalene®, color specified.
Spacer Tube:	Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: ProShield, color specified.
Clamps:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	SM - Approx. 1 1/2 man hours DB - Approx. 2 man hours
Concrete Req.:	Approx. 1.3 cu. ft.
Weight:	67 lbs. (32"-48" Deck) 79 lbs. (56"-72" Deck)
Fall Height:	48" (1220 mm) - (32", 40" & 48" Deck Heights) 72" (1830 mm) - (56", 64" & 72" Deck Heights)

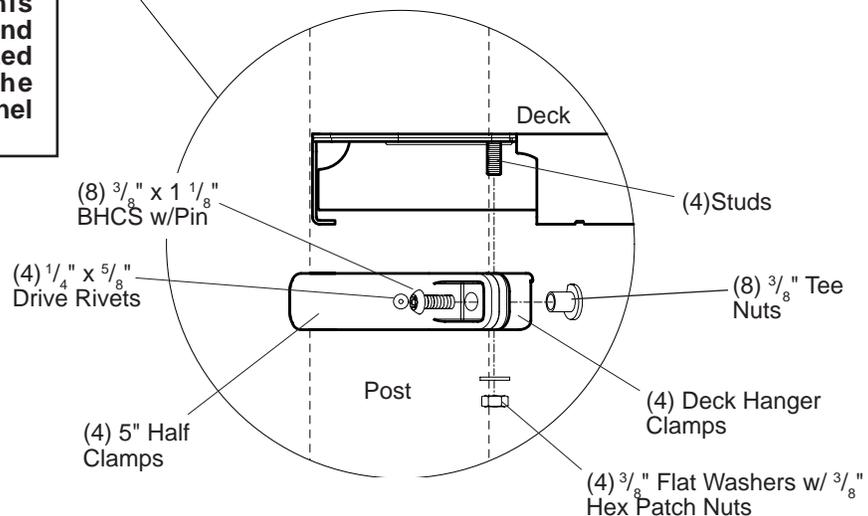
Installation Instructions

- (Direct Bury)** Dig footing hole as shown. Refer to the Plan View/Footing Layout.
- Attach offset hanger clamps to posts at heights shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- Attach handhold panels to the face of the deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
- Attach corkscrew to handhold panels and offset hanger clamps using 3/8" flange nuts w/pin, 3/8" x 4 1/2" threaded rods and spacer tubes. Refer to the Handhold Panel Attachment Detail. **NOTE: Turn 3/8" x 4 1/2" threaded rod into 3/8" flange nut w/pin until it bottoms out, before attaching corkscrew.**
- (Direct Bury)** With corkscrew plumb, pour concrete footing. Allow concrete footing to cure a minimum of 72 hours before users are allowed to play on the structure.
(Surface Mount) Drill 1/2" x 3" deep holes through support plate using hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Fasten support plates to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- Install protective surfacing before users are allowed to play on the structure.



**DETAIL
DECK HANGER CLAMP**

NOTE: When using this deck, ALL enclosures and components are mounted on the OUTSIDE of the posts like the bubble panel shown above.



Parts List

Part#	Description	Qty.
145656	Tenderdeck, Specify Color	1
105327	5" Half Clamp, Specify Color	4
106022	5" Deck Hanger Clamp, Specify Color	4
119491	Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	8
100321	$\frac{3}{8}$ " Hex Patch Nut, SST	4
100351	$\frac{3}{8}$ " Tee Nut, SST	8
100362	$\frac{3}{8}$ " Flat Washer, SST	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	4

Specifications

Square Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with $\frac{5}{16}$ " diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures $2\frac{5}{8}$ " x 47" x 47". Finish: TenderTuff™, color specified.

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

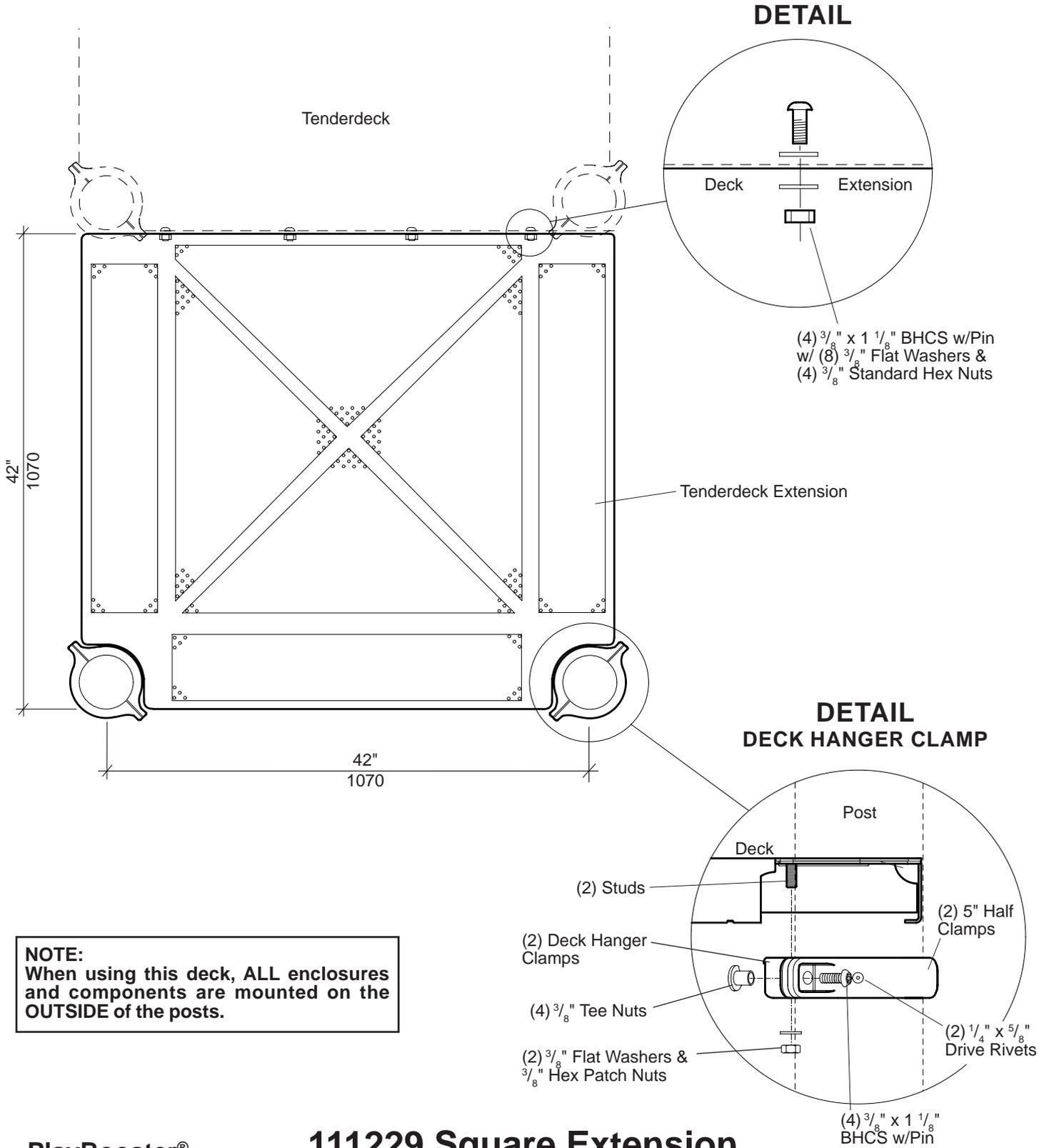
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour

Weight: 119 lbs.

Installation Instructions

- 1) Mark posts for the appropriate height of the deck you are installing.
- 2) Fasten hanger clamps to marked position on posts. See Detail on front of sheet.
- 3) Lift deck into position, lining up studs underneath deck with deck hanger clamp as shown. Attach with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " hex patch nuts.
- 4) Level deck and plumb posts. Install the drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) After all enclosures/components are installed, pour concrete footings per the Typical Concrete Footing Detail Sheet.
- 6) Install protective surfacing before users are allowed to play on the structure.



NOTE:
 When using this deck, ALL enclosures and components are mounted on the OUTSIDE of the posts.



PlayBooster® 111229 Square Extension

Parts List

Part#	Description	Qty.
145661	Square Deck Extension, Specify Color	1
105327	5" Half Clamp, Specify Color	2
106022	5" Deck Hanger Clamp, Specify Color	2
106556	Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	8
100327	$\frac{3}{8}$ " Standard Hex Nut, SST	4
100351	$\frac{3}{8}$ " Tee Nut, SST.....	4
100362	$\frac{3}{8}$ " Flat Washer, SST	10
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	2
100321	$\frac{3}{8}$ " Hex Patch Nut, SST.....	2

Specifications

Square Deck

Extension: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with $\frac{5}{16}$ " diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures $2\frac{5}{8}$ " x 42" x 47". Finish: TenderTuff™, color specified.

Deck Hanger Clamp Assembly:

Cast aluminum. Finish: ProShield®, color specified.

Fasteners:

Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

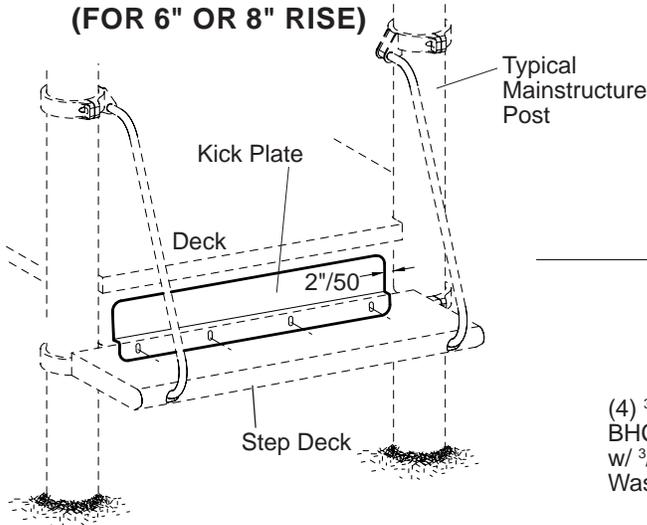
Installation Time: Approx. 1 man hour

Weight: 106 lbs.

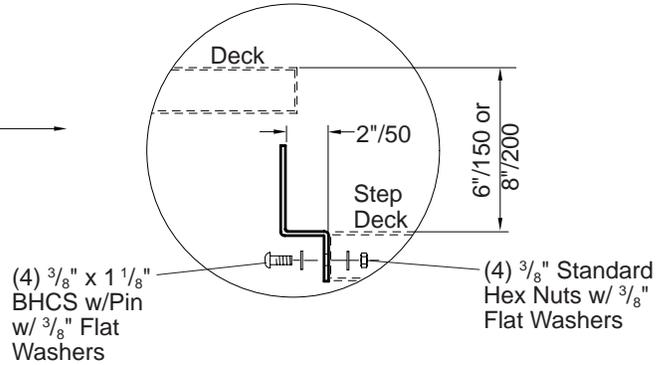
Installation Instructions

- 1) Mark posts for the appropriate height of the deck you are installing.
- 2) Fasten hanger clamps to marked position on posts. See Detail on front of sheet.
- 3) Lift deck into position, lining up studs underneath deck with deck hanger clamp as shown. Attach with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " hex patch nuts.
- 4) Attach extension to tenderdeck using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " standard hex nuts.
- 5) Level deck and plumb posts. Install the $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 6) After all enclosures/components are installed, pour concrete footings per the Typical Concrete Footing Spec Sheet.
- 7) Install protective surfacing before users are allowed to play on the structure.

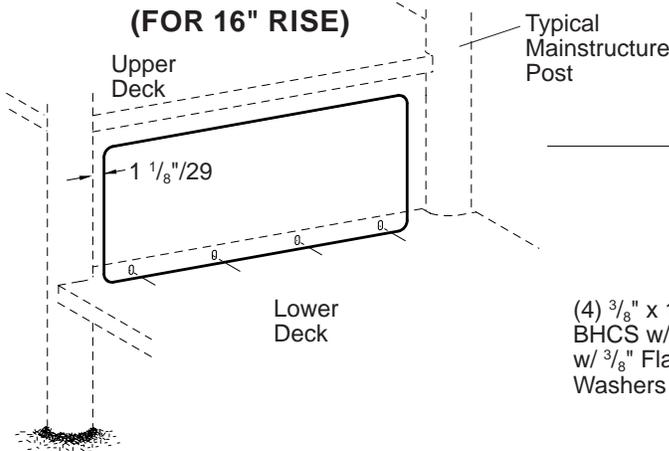
**KICK PLATE
(FOR 6" OR 8" RISE)**



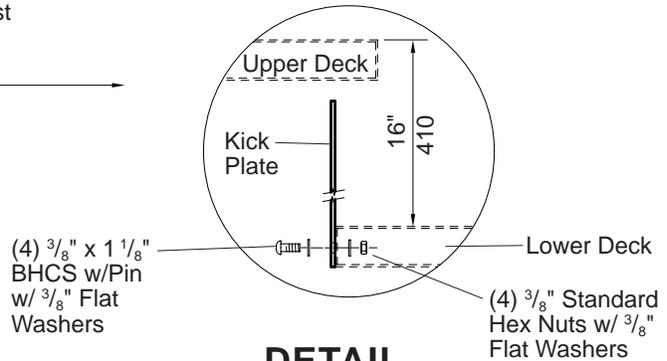
**DETAIL
KICK PLATE ATTACHMENT
(FOR 6" OR 8" RISE)**



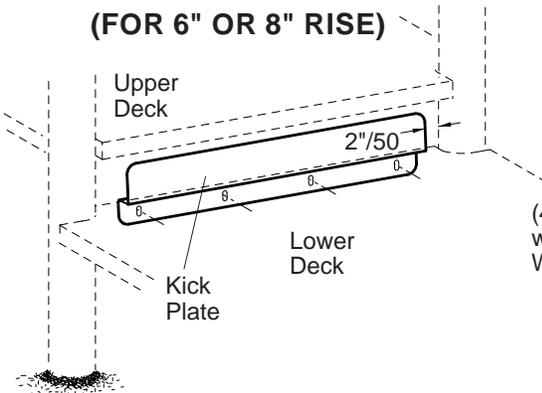
**KICK PLATE
(FOR 16" RISE)**



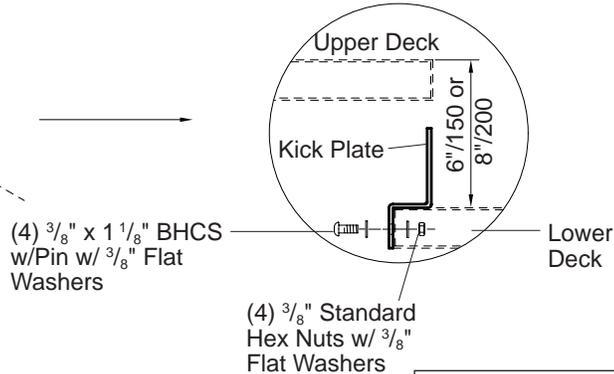
**DETAIL
KICK PLATE ATTACHMENT
(FOR 16" RISE)**



**KICK PLATE
(FOR 6" OR 8" RISE)**



**DETAIL
KICK PLATE ATTACHMENT
(FOR 6" OR 8" RISE)**



NOTE: Kick Plates mount to face of lower deck.

PlayBooster® 121948 Kick Plates, Tenderdecks, 6", 8" & 16"



PlayBooster® 121948 Kick Plates, Tenderdecks, 6", 8" & 16"

Parts List

Part#	Description	Qty.
121819	Kick Plate (For 6" or 8" Rise), Specify Color	1
121818	Kick Plate (For 16" Rise), Specify Color	1
156058	Kick Plate Tenderdeck Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST.....	4
100327	$\frac{3}{8}$ " Standard Hex Nut, SST	4
100362	$\frac{3}{8}$ " Flat Washer, SST	8

Specifications

Kick Plate: Fabricated from 11 GA (.120") HR flat steel. Finish: TenderTuff™, brown or gray in color.

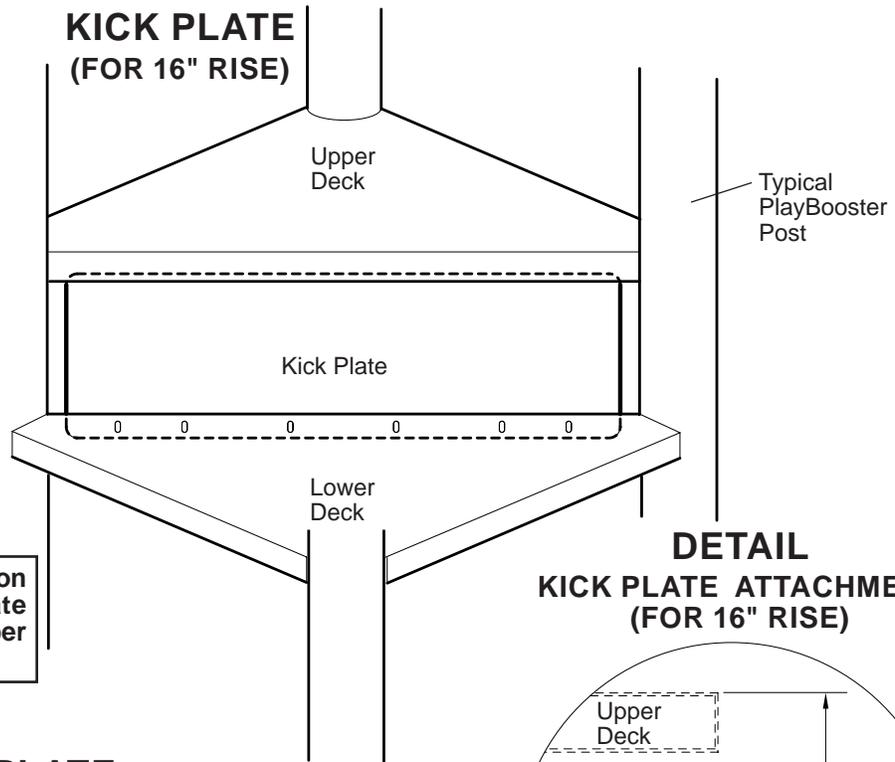
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{4}$ man hour
Weight: Kick Plate (For 6" or 8" Rise) 13 lbs.
 Kick Plate (For 16" Rise) 23 lbs.

Installation Instructions

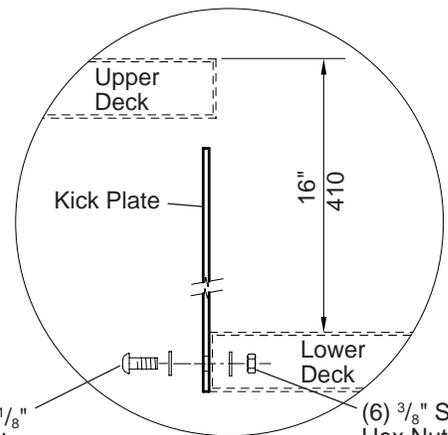
- 1) Locate kick plates as labeled on your plan drawing.
- 2) Attach kick plate using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " standard hex nuts with $\frac{3}{8}$ " flat washers, as shown. **NOTE:** *Kick plates mount to face of lower deck.*
- 3) Install protective surfacing before users are allowed to play on the structure.

**KICK PLATE
(FOR 16" RISE)**



NOTE: Tri-Deck configuration may require the kick plate to be mounted to the upper deck.

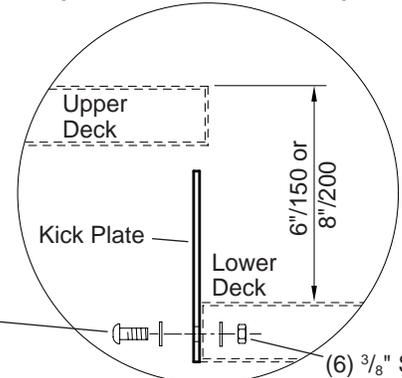
**DETAIL
KICK PLATE ATTACHMENT
(FOR 16" RISE)**



(6) $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin w/ $\frac{3}{8}$ " Flat Washers

(6) $\frac{3}{8}$ " Standard Hex Nuts w/ $\frac{3}{8}$ " Flat Washers

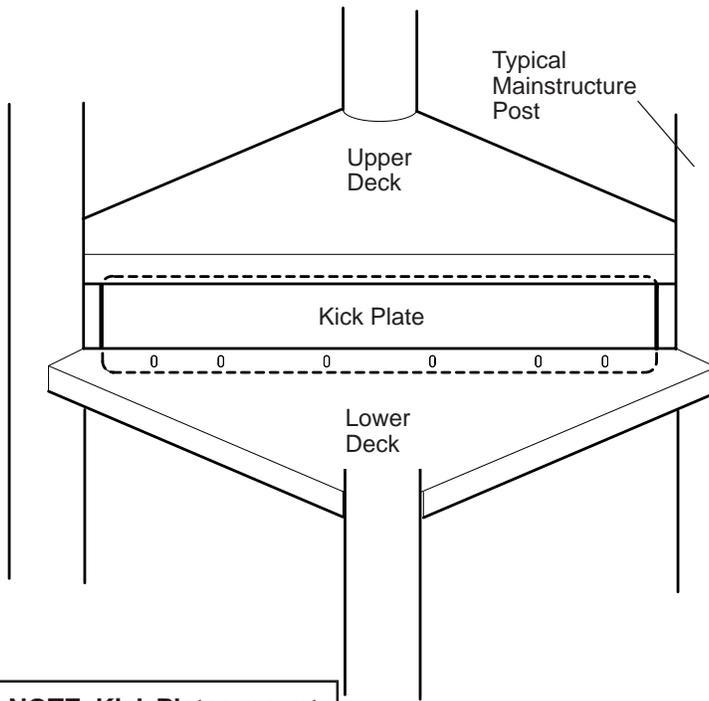
**DETAIL
KICK PLATE ATTACHMENT
(FOR 6" OR 8" RISE)**



(6) $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin w/ $\frac{3}{8}$ " Flat Washers

(6) $\frac{3}{8}$ " Standard Hex Nuts w/ $\frac{3}{8}$ " Flat Washers

**KICK PLATE
(FOR 6" OR 8" RISE)**



NOTE: Kick Plates mount to face of lower deck.

PlayBooster® 121949 Kick Plates, 90° Tri-Decks, 6", 8" & 16"



PlayBooster® 121949 Kick Plates, 90° Tri-Decks, 6", 8" & 16"

Parts List

Part#	Description	Qty.
121820	Kick Plate (For 6" or 8" Rise), Specify Color	1
121822	Kick Plate (For 16" Rise), Specify Color	1
156059	Kick Plate Tenderdeck Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	6
100327	$\frac{3}{8}$ " Standard Hex Nut, SST	6
100362	$\frac{3}{8}$ " Flat Washer, SST	12

Specifications

Kick Plate: Fabricated from 11 GA (.120") HR flat steel. Finish: TenderTuff™, color specified.

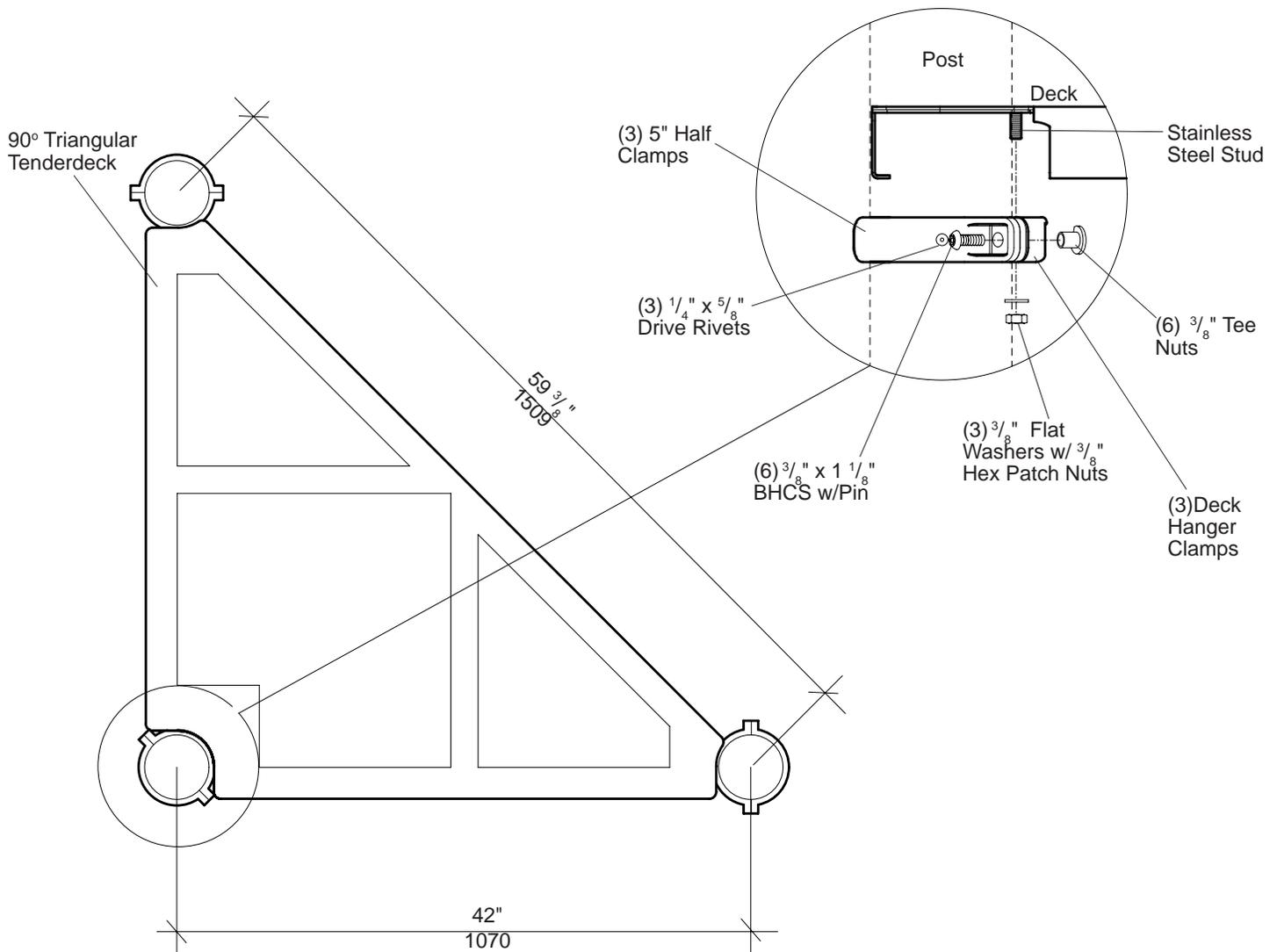
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{4}$ man hour
Weight: Kick Plate (For 6" or 8" Rise) 13 lbs.
 Kick Plate (For 16" Rise) 33 lbs.

Installation Instructions

- 1) Locate kick plates as labeled on your plan drawing.
- 2) Attach kick plate using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " standard hex nuts with $\frac{3}{8}$ " flat washers, as shown. **NOTE:** *Kick plates mount to face of lower deck.*
- 3) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
DECK HANGER CLAMP**



PlayBooster® 122197 90° Triangular Tenderdeck



PlayBooster® 122197 90° Triangular Tenderdeck

Parts List

Part#	Description	Qty.
145658	90° Tri-Deck, Specify Color	1
105327	5" Half Clamp, Specify Color	3
106022	Deck Hanger Clamp, Specify Color.....	3
120203	Triangular Deck Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	6
100321	$\frac{3}{8}$ " Hex Patch Nut, SST.....	3
100351	$\frac{3}{8}$ " Tee Nut, SST.....	6
100362	$\frac{3}{8}$ " Flat Washer, SST	3
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST.....	3

Specifications

Triangular Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with $\frac{5}{16}$ " diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures $2\frac{5}{8}$ " x $37\frac{3}{4}$ ". Finish: TenderTuff™, color specified.

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

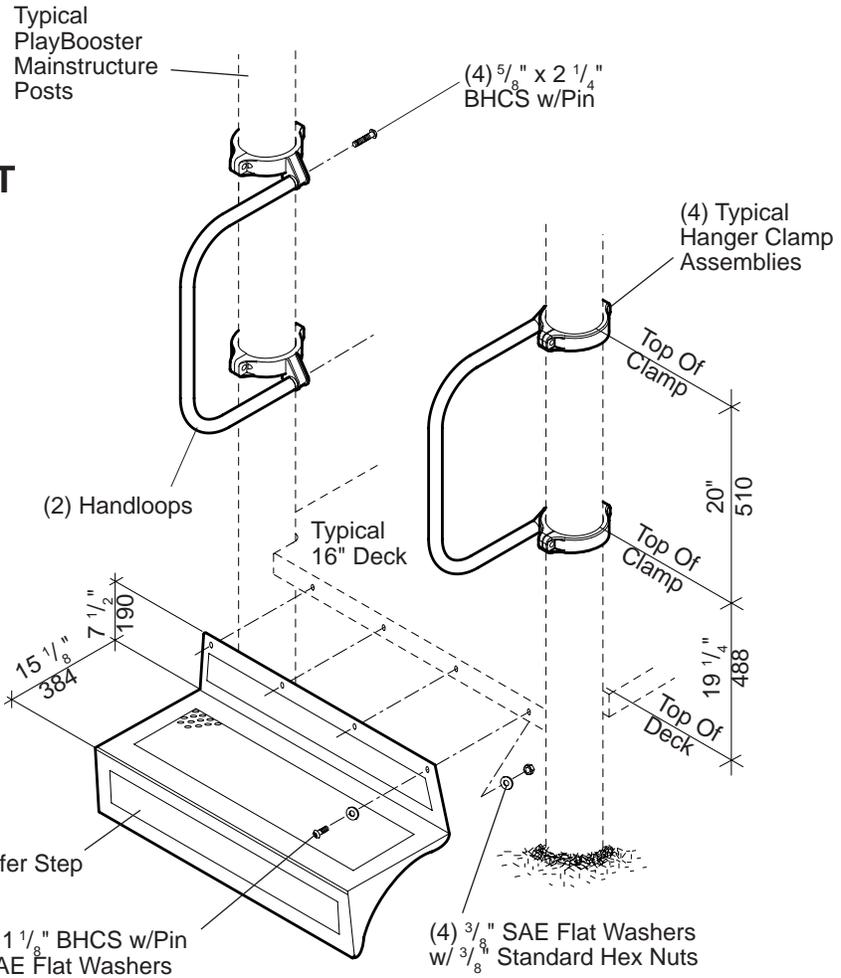
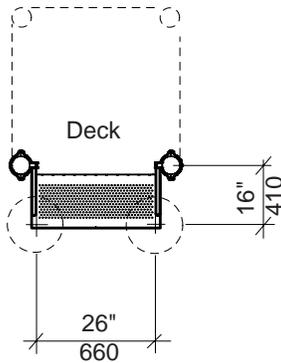
Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 67 lbs.

Installation Instructions

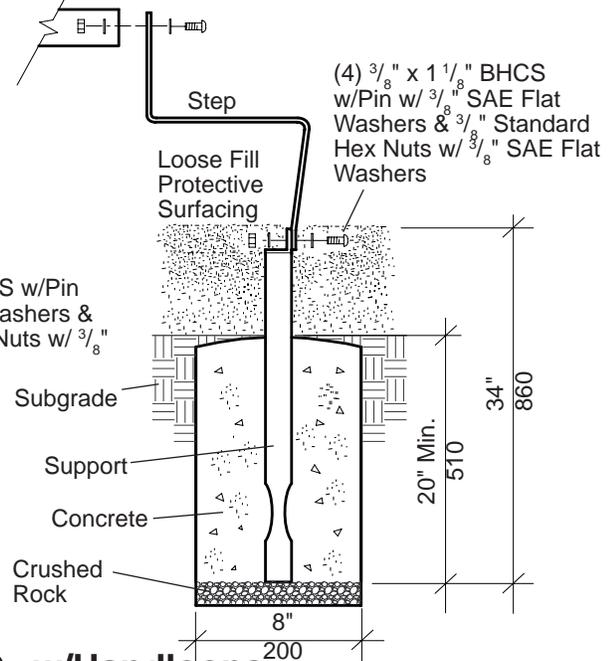
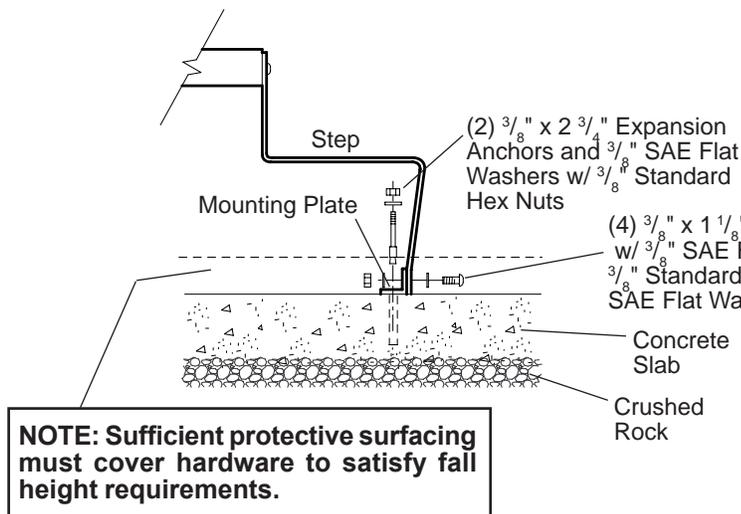
- 1) Mark posts for the appropriate height of the deck you are installing.
- 2) Fasten deck hanger clamps to marked position on posts. See Detail on front of sheet.
- 3) Lift deck assembly into position, lining up stud underneath deck with deck hanger clamp as shown. Attach using $\frac{3}{8}$ " hex patch nuts with $\frac{3}{8}$ " flat washers. With deck level and posts plumb, final tighten all hardware.
- 4) Install $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) After attachment of enclosures and components is complete, pour concrete footings. Allow concrete footings to cure a minimum of 72 hours before users are allowed to play on the structure.
- 6) Install protective surfacing before users are allowed to play on the structure.

PLAN/FOOTING LAYOUT



DIRECT BURY

SURFACE MOUNT





PlayBooster® 185852 Transfer Step, w/Handloops

Parts List

Part#	Description	Qty.
149024	Transfer Step, Specify Color	1
181342	Transfer Step, Support (DB), Specify Color	1
181343	Transfer Step, Mounting Plate (SM), Specify Color	1
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
108542	Handloop, Specify Color	2
125741	Transfer Step Leg Hardware Package (DB)	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100327	3/8" Standard Hex Nut, SST	4
100365	3/8" SAE Flat Washer, SST	8
125740	Transfer Step Leg Hardware Package (SM)	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100263	3/8" x 2 3/4" Expansion Anchor	2
100327	3/8" Standard Hex Nut, SST	6
100365	3/8" SAE Flat Washer, SST	10
127148	Transfer Step Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	8
100327	3/8" Standard Hex Nut, SST	4
114309	Handloop/Rail Hardware Package	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100203	5/8" x 2 1/4" BHCS w/Pin, SST	4
100351	3/8" Tee Nut, SST	8
100610	1/4" x 5/8" Drive Rivet, SST	4

DB = Direct Bury
SM = Surface Mount

Specifications

Step:	Formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Finish: TenderTuff™, color specified.
Step Support:	Weldment comprised of 1.660 O.D. RS20 (.080"-.095) and 1 3/4" x 1 3/4" x 1/8" HR angle. Finish: ProShield®, color specified.
Handloop:	Weldment comprised of 1.125" O.D. 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with 5/8" internal thread. Finish: TenderTuff, color specified.
Clamps:	Cast aluminum. Finish: ProShield®, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	Approx. 1 1/2 man hours
Concrete Req.:	DB - 1.16 cu. ft.
Weight:	SM - 69 lbs. DB - 77 lbs.

Specifications are subject to change without notice.

Installation Instructions

Direct Bury

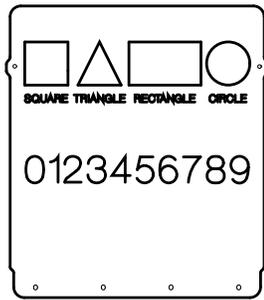
- 1) Dig footings spaced as shown.
- 2) Mark locations of clamps on posts per dimensions on front of sheet.
- 3) Attach offset hanger clamps to ends of handloops using 5/8" x 2 1/4" BHCS w/pin.
- 4) Position handloops with offset hanger clamps on marked positions on posts and attach using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Assembly Sheet.
- 5) Install drive rivets in half clamps per the Typical Offset Hanger Clamp Assembly Sheet.
- 6) Attach transfer step support to transfer step using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
- 7) Attach transfer step to deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers as shown.
- 8) With deck and steps in level position, pour concrete footings. Allow concrete to cure for a minimum of 72 hours before users are allowed to play on the structure.
- 9) Install protective surfacing before users are allowed to play on the structure.

Surface Mount

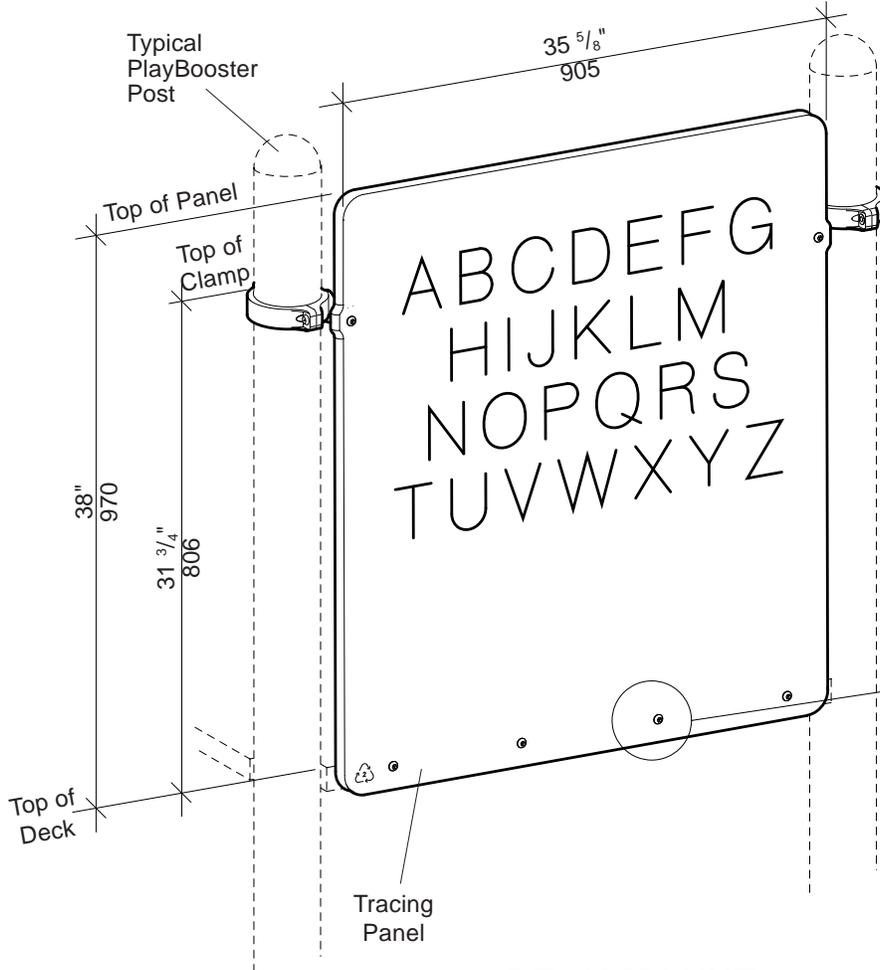
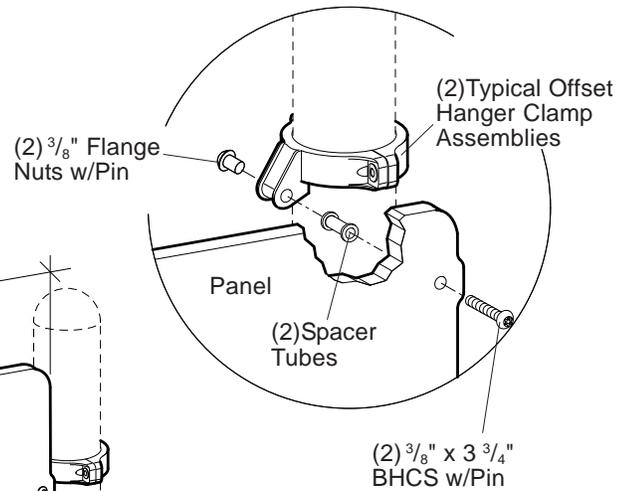
- 1) Mark locations of clamps on posts per dimensions on front of sheet.
- 2) Attach offset hanger clamps to ends of handloops using 5/8" x 2 1/4" BHCS w/pin.
- 3) Position handloops with offset hanger clamps on marked positions on posts and attach using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Assembly Sheet.
- 4) Install drive rivets in half clamps per the Typical Offset Hanger Clamp Assembly Sheet.
- 5) Attach transfer step mounting plate to transfer step using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
- 6) Attach transfer step to deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers as shown.
- 7) Mark holes for expansion anchors on concrete slab through step mounting plate.
- 8) Detach step from deck and drill 3/8" x 3" deep holes into concrete on marks using 3/8" masonry bit and hammer drill.
- 9) Reattach transfer step to deck.
- 10) With step over drilled holes, tap expansion anchors into drilled holes. Secure using 3/8" standard hex nuts with 3/8" SAE flat washers.
- 11) Install protective surfacing before users are allowed to play on the structure.

ECO 54590 Created new model number and added handloops to Parts List.

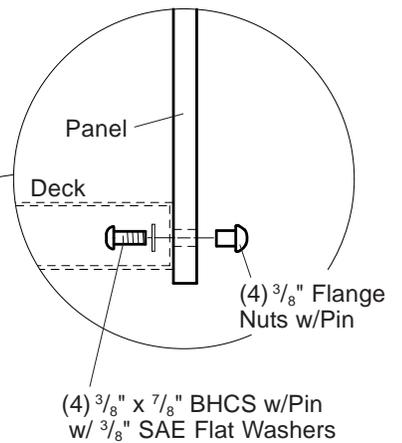
REVERSE SIDE



**DETAIL
PANEL ATTACHMENT**



**DETAIL
TENDERDECKS**



DECK MOUNT

Parts List

Part#	Description	Qty.
ABOVE DECK		
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
113468	Spacer Tube, Specify Color	2
114130	Tracing Panel, Specify Color	1
124900	Tenderdeck Mounting Hardware Package	1
124460	$\frac{3}{8}$ " x 3 $\frac{3}{4}$ " BHCS w/Pin, SST	2
100196	$\frac{3}{8}$ " x $\frac{7}{8}$ " BHCS w/Pin, SST	4
100198	$\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin, SST	4
100351	$\frac{3}{8}$ " Tee Nut, SST	4
100353	$\frac{3}{8}$ " Flange Nut w/Pin, SST	6
100365	$\frac{3}{8}$ " SAE Flat Washer, SST	4
BELOW DECK		
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
113468	Spacer Tube, Specify Color	2
113464	Angled Panel Bracket, Specify Color	1
114130	Tracing Panel, Specify Color	1
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	4
124947	Below Deck Mounting Hardware Package	1
124460	$\frac{3}{8}$ " x 3 $\frac{3}{4}$ " BHCS w/Pin, SST	2
100195	$\frac{3}{8}$ " x $\frac{5}{8}$ " BHCS w/Pin, SST	4
100198	$\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin, SST	8
100203	$\frac{5}{8}$ " x 2 $\frac{1}{4}$ " BHCS w/Pin, SST	2
100351	$\frac{3}{8}$ " Tee Nut, SST	8
100353	$\frac{3}{8}$ " Flange Nut w/Pin, SST	6

Specifications

Permalene® Panel:	Two color panel measures 35 $\frac{5}{8}$ " wide x 41" high, color specified.
Angled Panel Brkt:	Weldment comprised of .190" thick 5052 aluminum formed angle with (2) 6061-T6 aluminum threaded tubes 1 $\frac{1}{8}$ " O.D. x 1 $\frac{1}{2}$ " long. Finish: ProShield®, color specified.
Spacer Tube:	Made from 6061-T6 aluminum $\frac{7}{8}$ " O.D. x 1 $\frac{11}{16}$ ". Finish: ProShield, color specified.
Offset Hanger Clamp Assembly:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	Above Deck Approx. $\frac{3}{4}$ man hour Below Deck Approx. 1 man hour
Weight:	Above Deck 43 lbs. Below Deck 51 lbs.

Installation Instructions

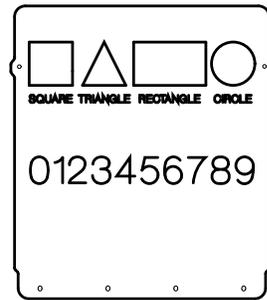
ABOVE DECK (See Sheet 1 of 2)

- 1) Attach panel to the face of the deck, using $\frac{3}{8}$ " x $\frac{7}{8}$ " BHCS w/pin with $\frac{3}{8}$ " SAE flat washers and $\frac{3}{8}$ " flange nuts w/pin. See Detail.
- 2) Attach offset hanger clamp assemblies to posts at height shown, using 5" half clamps and $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach panel to offset hanger clamp assemblies, using $\frac{3}{8}$ " x 3 $\frac{3}{4}$ " BHCS w/pin, spacer tubes and $\frac{3}{8}$ " flange nuts w/pin. See Panel Attachment Detail.
- 4) Install protective surfacing before users are allowed to play on the structure.

BELOW DECK (See Sheet 2 of 2)

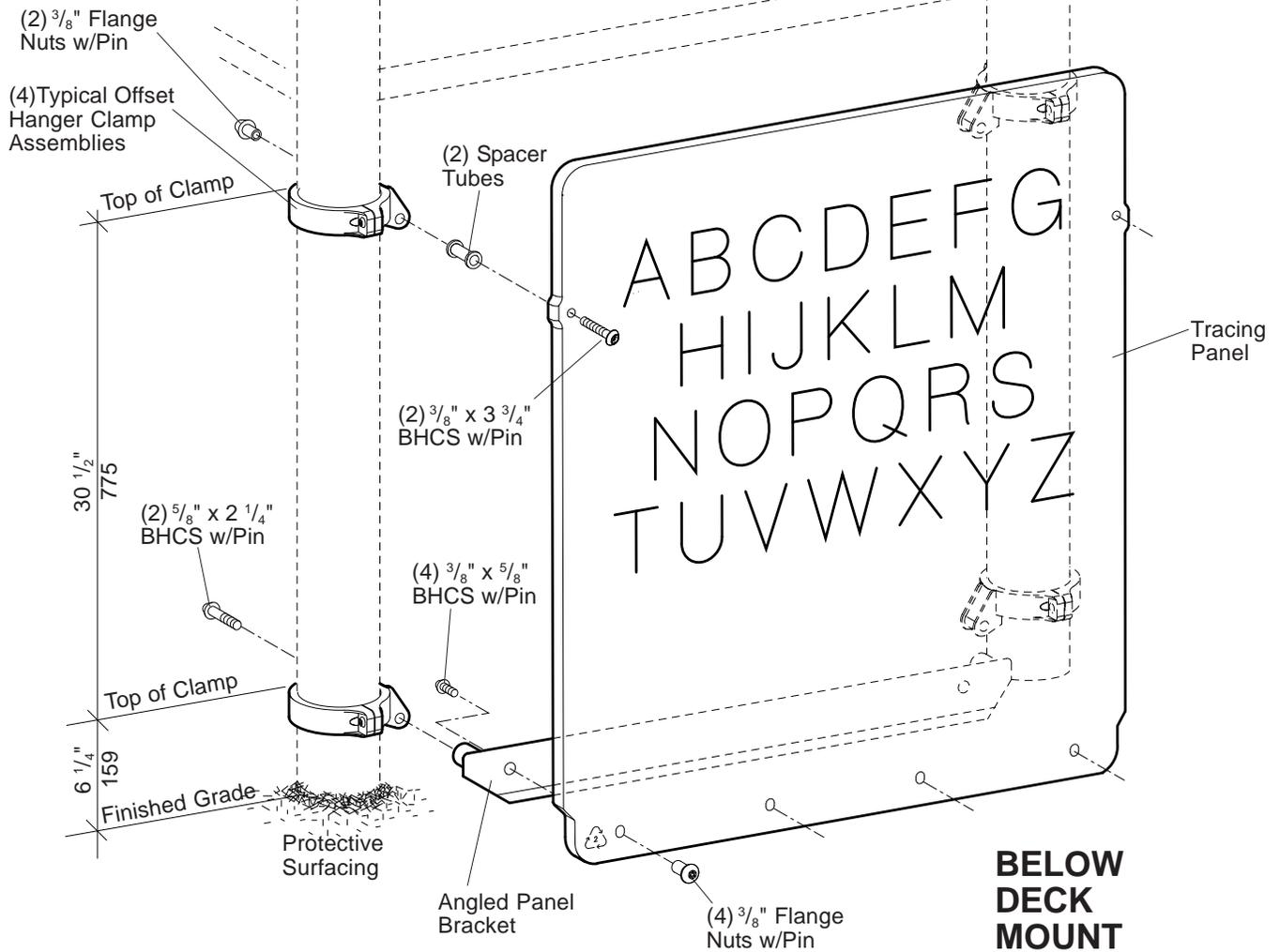
- 1) Attach offset hanger clamp assemblies to posts at height shown, using half clamps and $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach angled panel bracket to bottom of panel, using $\frac{3}{8}$ " x $\frac{5}{8}$ " BHCS w/pin and $\frac{3}{8}$ " flange nuts w/pin. See Below Deck Mount.
- 3) Attach angled panel bracket with panel to offset hanger clamp assemblies using $\frac{5}{8}$ " x 2 $\frac{1}{4}$ " BHCS w/pin. See Below Deck Mount.
- 4) Attach top of panel to offset hanger clamp assemblies, using $\frac{3}{8}$ " x 3 $\frac{3}{4}$ " BHCS w/pin, spacer tubes and $\frac{3}{8}$ " flange nuts w/pin. See Typical Attachment To Post Detail.
- 5) Install $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 6) Install protective surfacing before users are allowed to play on the structure.

REVERSE SIDE

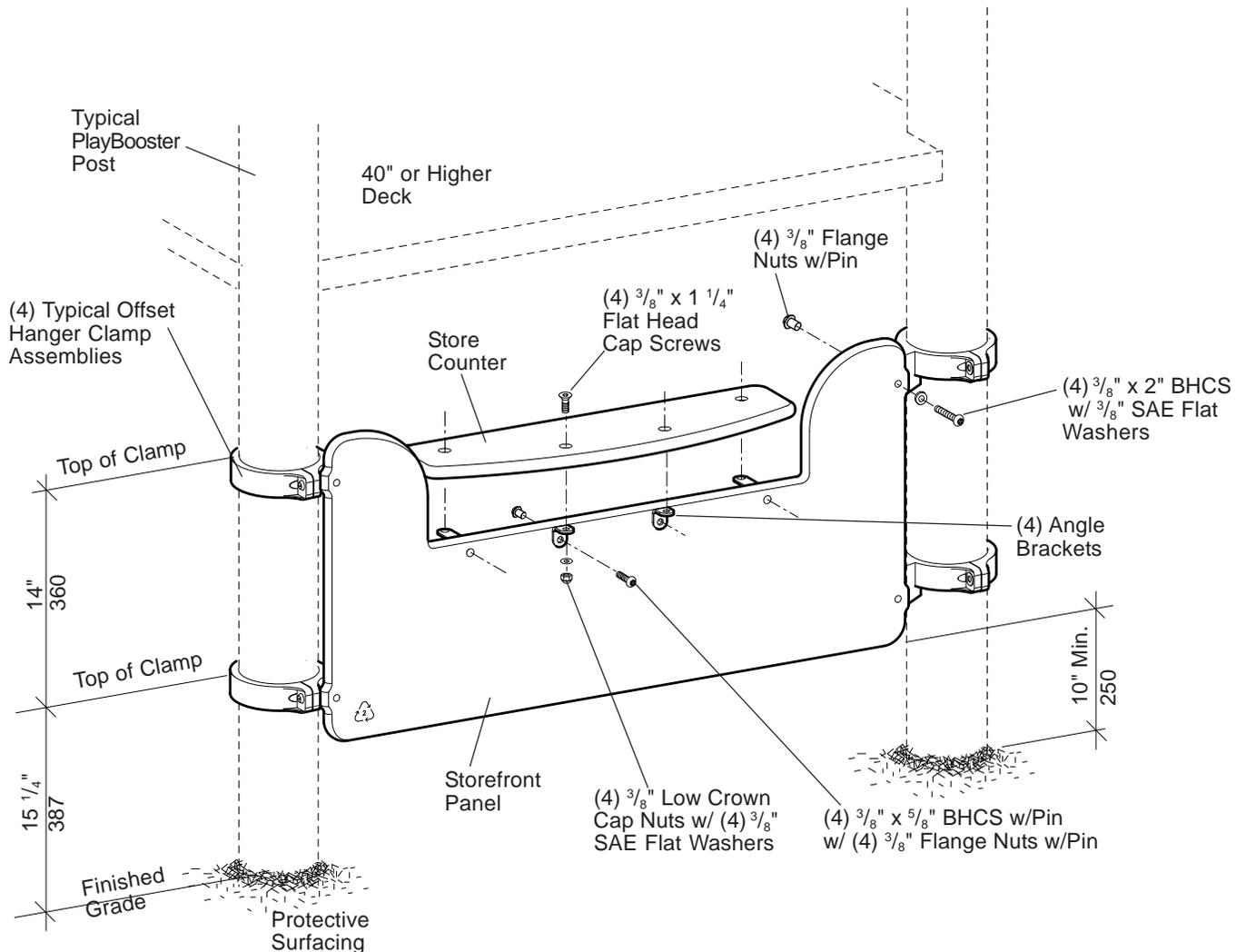


Typical
 PlayBooster
 Post

48" or Higher
 Deck



**BELOW
 DECK
 MOUNT**



NOTE:
This Panel is used at ground level only, under 40" or higher decks.



PlayBooster® 115254 Storefront Panel

Parts List

Part#	Description	Qty.
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
144581	Storefront Panel, Specify Color	1
144580	Store Counter, Specify Color	1
133444	Panel Attachment Hardware Package	1
100173	3/8" x 2" BHCS, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100351	3/8" Tee Nut, SST	8
100353	3/8" Flange Nut w/Pin, SST	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
100365	3/8" SAE Flat Washer, SST	4
188683	Store Counter Top Hardware Package	1
100195	3/8" x 5/8" BHCS w/Pin, SST	4
100252	3/8" x 1 1/4" Flat Head Cap Screw, SST	4
100349	3/8" Low Crown Cap Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	4
188664	Steel Angle Bracket, Silver	4

Specifications

Storefront Panel: Permalene® solid color. Panel measures 35 5/8" wide x 20" high, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

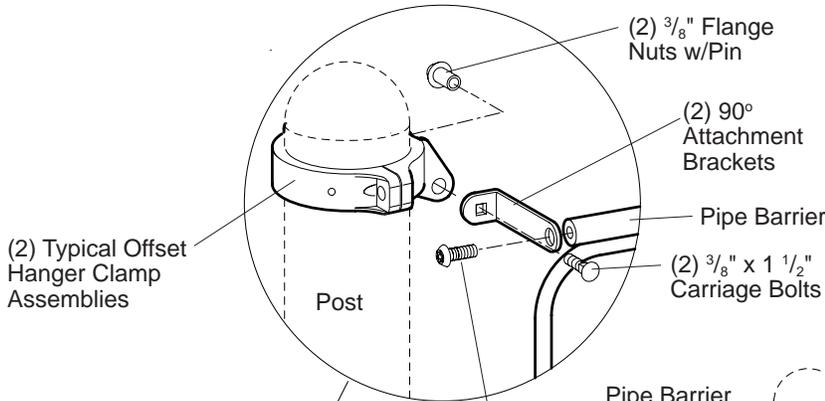
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour
Weight: 29 lbs.

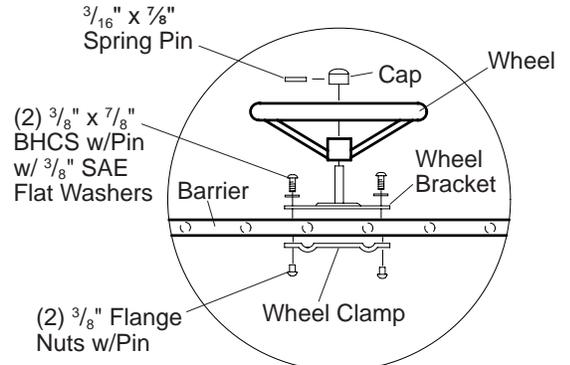
Installation Instructions

- 1) Attach offset hanger clamp assemblies to posts at height shown, using half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach panel to offset hanger clamp assemblies, using 3/8" x 2" BHCS with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
- 3) Attach angle brackets to storefront panel using 3/8" x 5/8" BHCS w/pin through angles and 3/8" flange nuts w/pin through panel. Attach store counter top to angle brackets using 3/8" x 1 1/4" flat head cap screws through counter top and 3/8" low crown cap nuts with 3/8" SAE flat washers underneath angles.
- 4) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
90° ATTACHMENT BRACKETS**

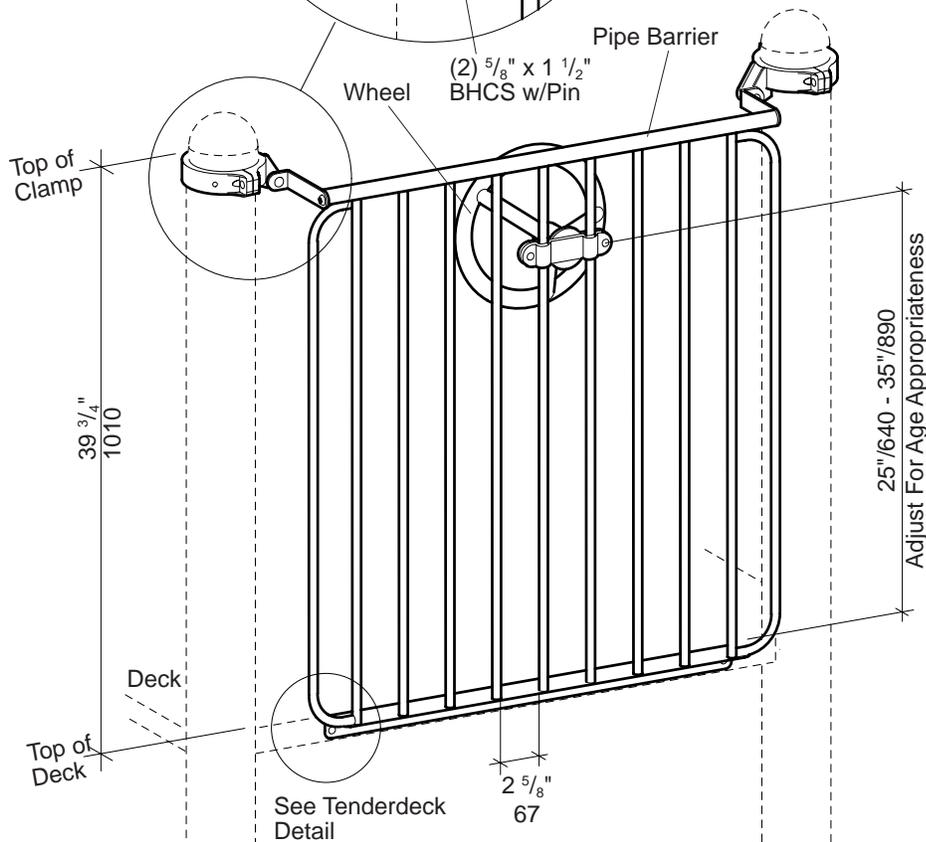
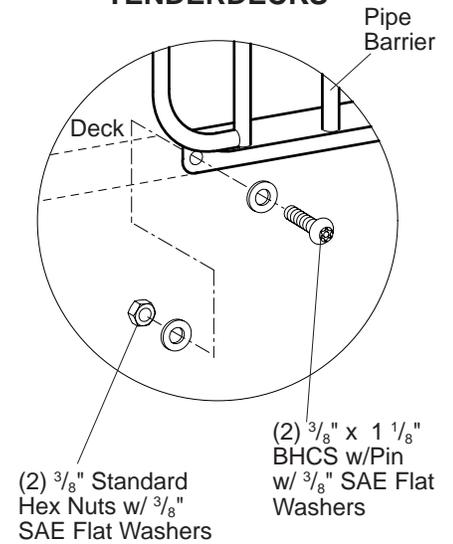


**DETAIL
WHEEL ASSEMBLY**



Refer to Wheel Assembly Details on the back of sheet 2.

**DETAIL
TENDERDECKS**



NOTE: Steering Wheel Infill Panel available. Refer to the Wheel Spec Sheet.

DECK MOUNT

Protective Surfacing

PlayBooster® 116244 Pipe Barrier, w/Wheel

Part#	Description	Qty.
ABOVE DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
127207	Wheel Clamp, Specify Color.....	1
127242	Steering Wheel Bracket, Specify Color.....	1
108432	Wheel, Specify Color	1
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	2
132739	Barrier, Above Deck Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	6
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	4
100353	3/8" Flange Nut w/Pin, SST.....	2
116017	3/8" x 1 1/2" Carriage Bolt w/Patch, SST.....	2
100327	3/8" Standard Hex Nut, SST.....	2
100365	3/8" SAE Flat Washer, SST.....	4
240354	Wire/Pipe Barrier Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100353	3/8" Flange Nut w/Pin, SST.....	2
237528	3/16" x 7/8" Spring Pin, SST	1
234353	Cap, White.....	1
100365	3/8" SAE Flat Washer, SST.....	2
BELOW DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
127207	Wheel Clamp, Specify Color.....	1
127242	Steering Wheel Bracket, Specify Color.....	1
108432	Wheel, Specify Color	1
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
113464	Angled Panel Bracket, Specify Color.....	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	4
240354	Wire/Pipe Barrier Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100353	3/8" Flange Nut w/Pin, SST.....	2
237528	3/16" x 7/8" Spring Pin, SST	1
234353	Cap, White.....	1
100365	3/8" SAE Flat Washer, SST.....	2
132741	Barrier, Below Deck Hardware Package	1
116017	3/8" x 1 1/2" Carriage Bolt, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	8
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	4
100353	3/8" Flange Nut w/Pin, SST.....	2

Specifications

Barrier:	Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Barrier measures 33 7/8" wide x 39 13/16" high. Finish: TenderTuff™, color specified.
90° Bracket:	Formed from 1/4" x 1 1/4" HRPO flat steel. Finish: ProShield®, color specified.
Wheel:	12" diameter cast A356 aluminum alloy. Finish: TenderTuff, color specified.
Angled Panel Brkt.:	Weldment comprised of .190" thick 5052 aluminum formed angle with (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: ProShield, color specified.

Specifications are subject to change without notice.

Wheel Bracket: Weldment comprised of formed 3/16" plate and 5/8" O.D. stainless steel shaft. Finish: ProShield, color specified.

Wheel Clamp: Formed from 3/16" x 2" HRPO zinc-plated. Finish: ProShield, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications)

Installation Time: Approx. 1 1/4 man hour

Weight: Above Deck 58 lbs.
Below Deck 62 lbs.

Installation Instructions

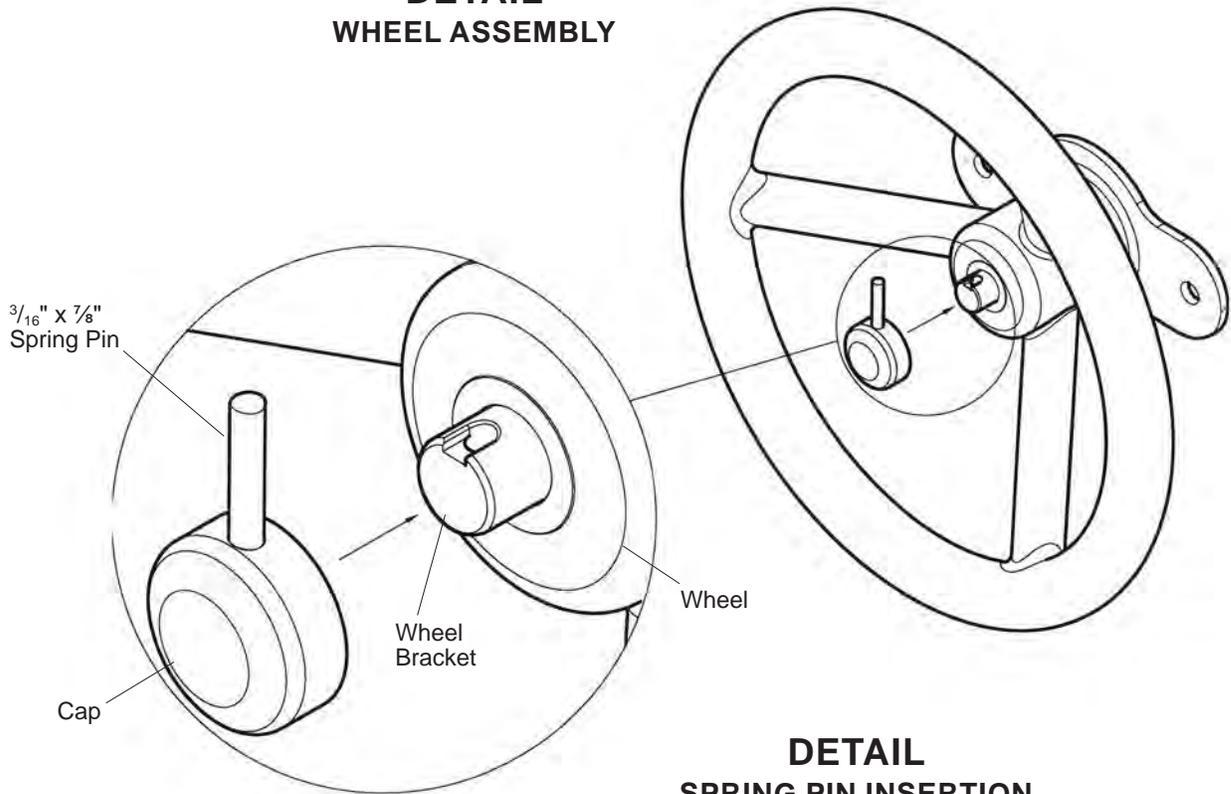
ABOVE DECK (See Sheet 1 of 2)

- 1) Attach pipe barrier to the face of the deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer To The Tenderdeck Detail..
- 2) Attach offset hanger clamps to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 4) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Attach wheel bracket and wheel clamp to barrier in desired position using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Slide wheel and cap onto wheel bracket shaft and tap 3/16" x 1" spring pin through cap and shaft. Refer To The Wheel Assembly Details on front of sheet 1 and the back of sheet 2.
- 6) Install protective surfacing before users are allowed to play on the structure.

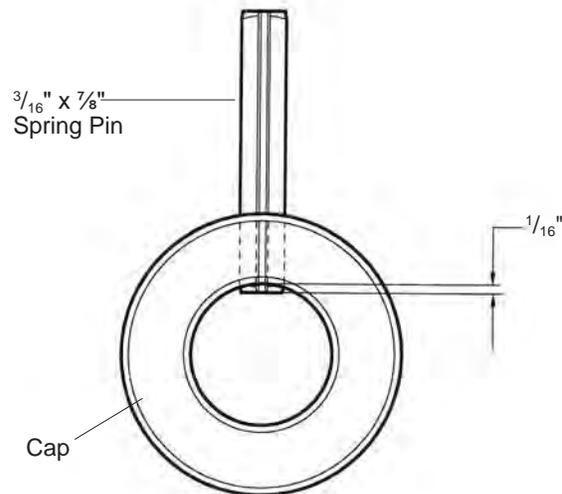
BELOW DECK (See Sheet 2 of 2)

- 1) Attach offset hanger assemblies to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach angled panel bracket to bottom of pipe barrier using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. See Below Deck Mount.
- 3) Attach angled panel bracket with pipe barrier to offset hanger clamp assemblies using 5/8" x 2 1/4" BHCS w/pin. See Below Deck Mount.
- 4) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 6) Attach wheel bracket and wheel clamp to barrier in desired position using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Slide wheel and cap onto wheel bracket shaft and tap 3/16" x 1" spring pin through cap and shaft. Refer To The Wheel Assembly Details on front of sheet 1 and the back of sheet 2.
- 7) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec sheet.
- 8) Install protective surfacing before users are allowed to play on the structure.

DETAIL
WHEEL ASSEMBLY

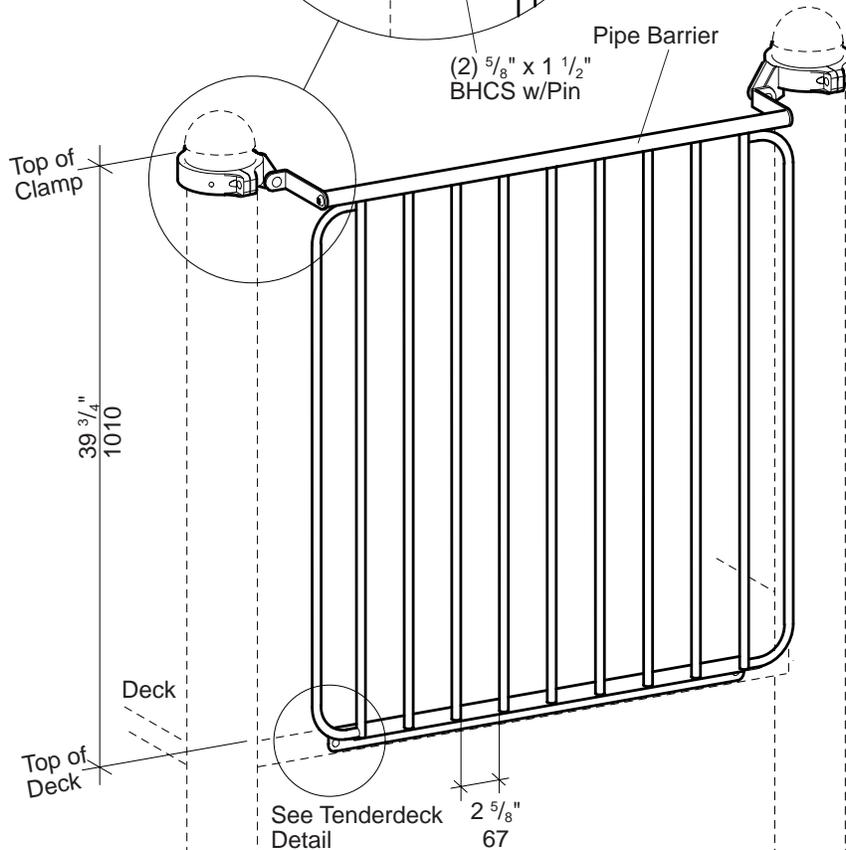
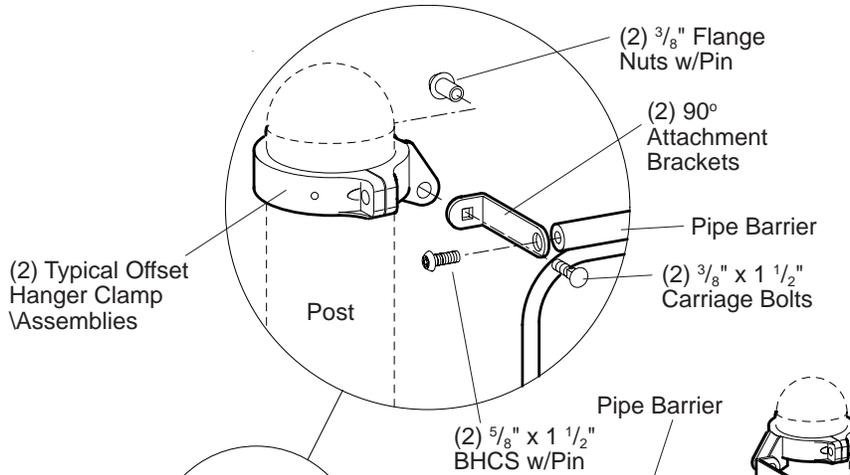


DETAIL
SPRING PIN INSERTION
(CAP BACK VIEW)

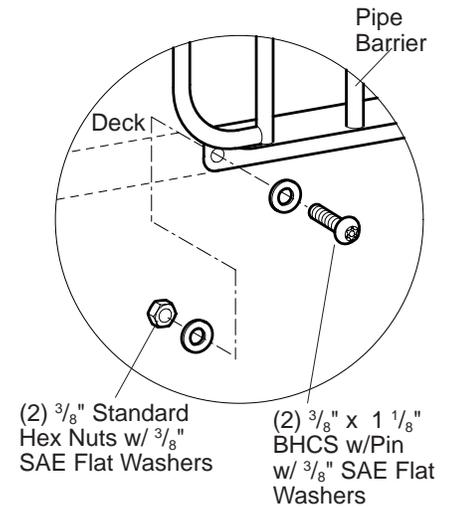


NOTE: To assist in the alignment of the cap to the wheel bracket shaft, tap spring pin through cap approximately $\frac{1}{16}$ ". Orient spring pin to groove on wheel bracket shaft. Slide cap in place and tap spring pin through cap and shaft until flush.

**DETAIL
90° ATTACHMENT BRACKETS**



**DETAIL
TENDERDECKS**



DECK MOUNT

Parts List

Part#	Description	Qty.
ABOVE DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
100610	1/4" x 5/8" Drive Rivet, AL/SST	2
132739	Barrier, Above Deck Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	6
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	4
100353	3/8" Flange Nut w/Pin, SST.....	2
116017	3/8" x 1 1/2" Carriage Bolt w/Patch, SST.....	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	4
BELOW DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
113464	Angled Panel Bracket, Specify Color.....	1
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
132741	Barrier, Below Deck Hardware Package	1
116017	3/8" x 1 1/2" Carriage Bolt, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	8
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	4
100353	3/8" Flange Nut w/Pin, SST	2

Specifications

Barrier:	Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Barrier measures 33 7/8" wide x 39 13/16" high. Finish: TenderTuff™, color specified.
90° Bracket:	Formed from 1/4" x 1 1/4" HRPO flat steel. Finish: ProShield®, color specified.
Angled Panel Brkt.:	Weldment comprised of .190" thick 5052 aluminum formed angle with (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: ProShield, color specified.
Offset Hanger Clamp Assembly:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications)
Installation Time:	Approx. 1 man hour
Weight:	Above Deck 52 lbs. Below Deck 56 lbs.

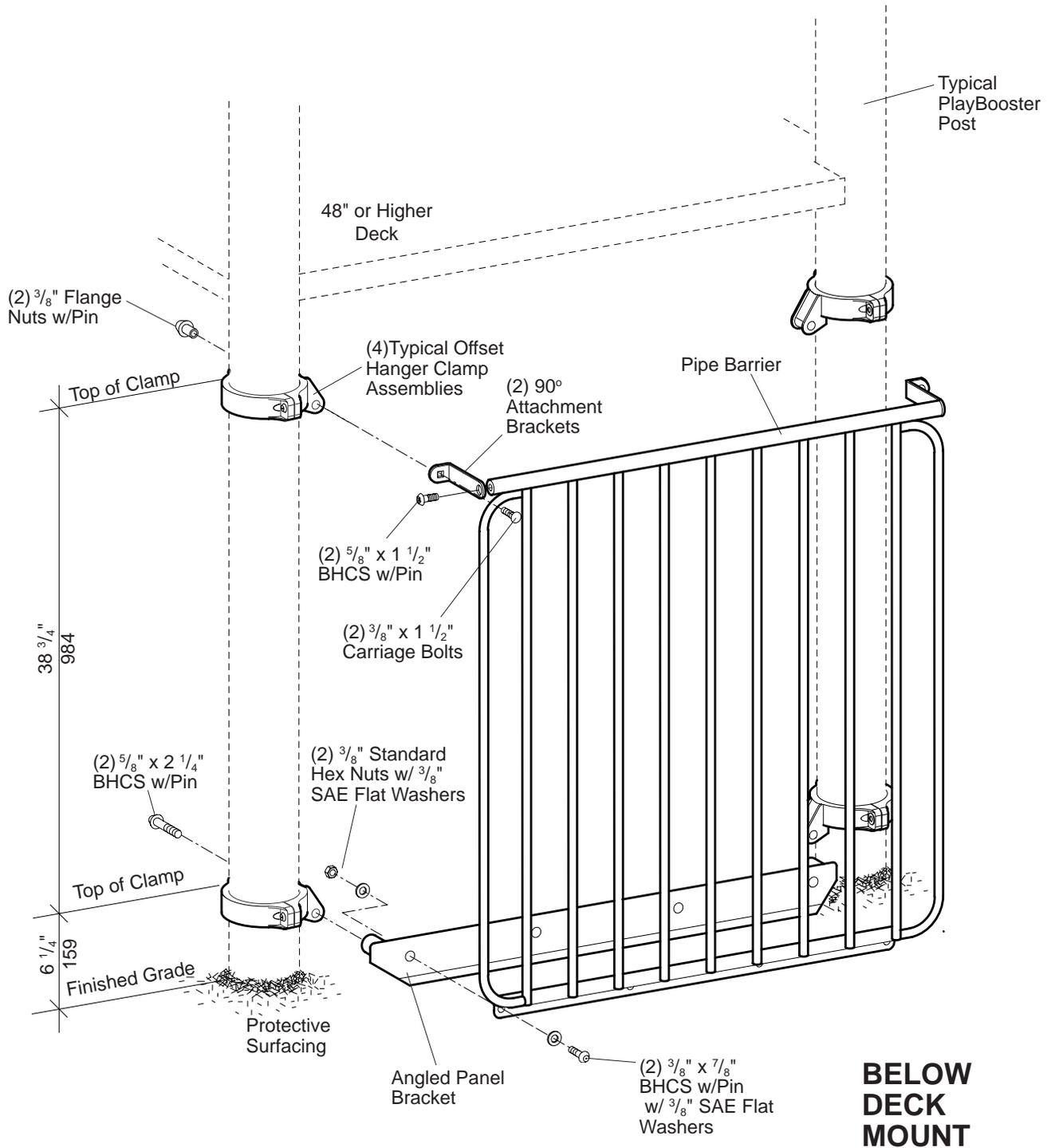
Installation Instructions

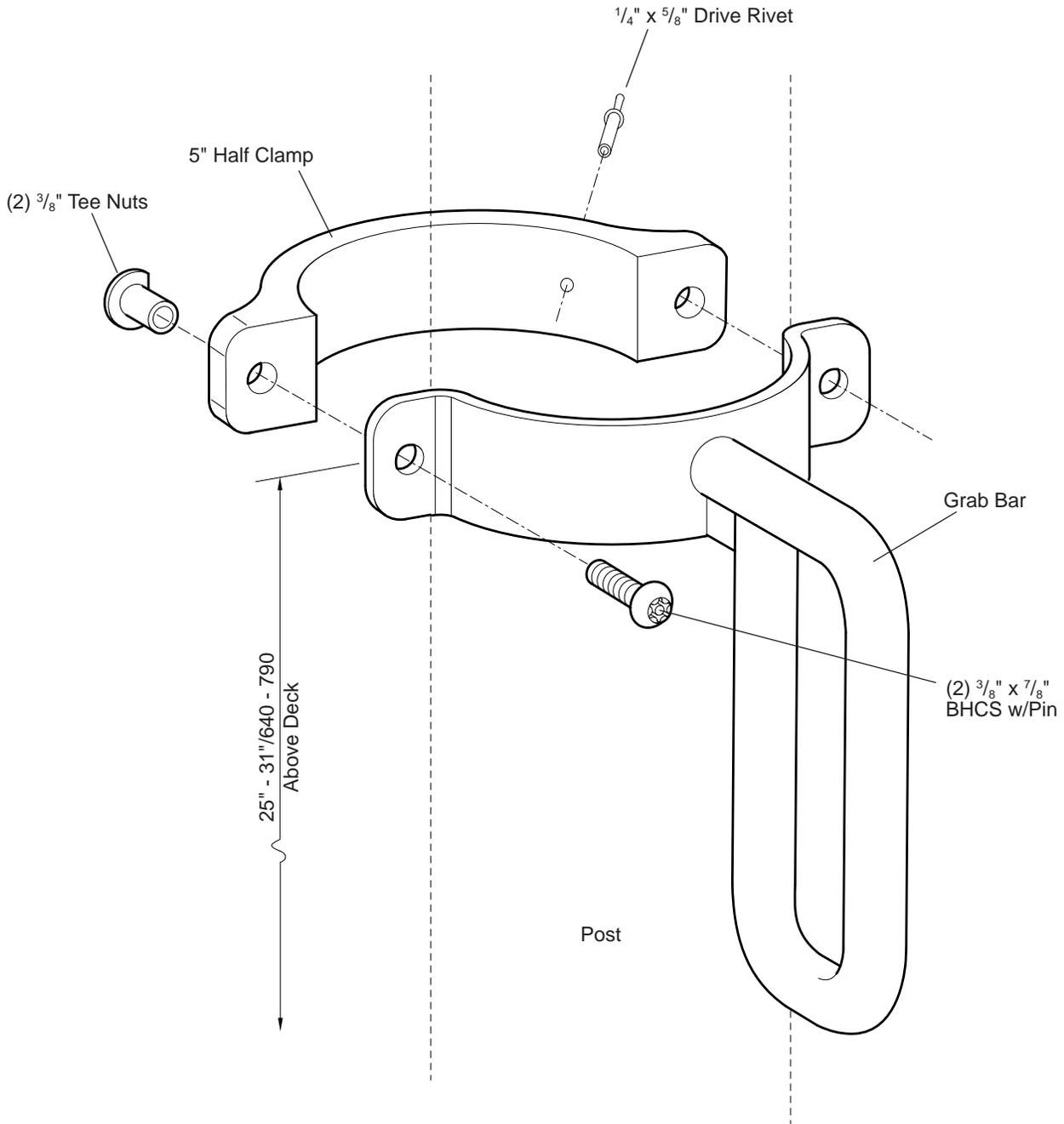
ABOVE DECK (See Sheet 1 of 2)

- 1) Attach pipe barrier to the face of the deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer To The Tenderdeck Detail..
- 2) Attach offset hanger clamps to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 4) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Install protective surfacing before users are allowed to play on the structure.

BELOW DECK (See Sheet 2 of 2)

- 1) Attach offset hanger assemblies to posts at height shown. Using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin and with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach angled panel bracket to bottom of pipe barrier using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. See Below Deck Mount.
- 3) Attach angled panel bracket with pipe barrier to offset hanger clamp assemblies using 5/8" x 2 1/4" BHCS w/pin. See Below Deck Mount.
- 4) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec sheet.
- 7) Install protective surfacing before users are allowed to play on the structure.







PlayBooster® 120901 Grab Bar

Parts List

Part#	Description	Qty.
105327	5" Half Clamp, Specify Color	1
141541	Grab Bar, Specify Color	1
106518	Grab Bar Hardware Package	1
100196	³ / ₈ " x ⁷ / ₈ " BHCS w/Pin, SST	2
100351	³ / ₈ " Tee Nut, SST.....	2
100610	¹ / ₄ " x ⁵ / ₈ " Drive Rivet, AL/SST	1

Specifications

Grab Bar: Weldment comprised of formed ⁷/₈" O.D. 11 GA (.120") and ¹/₄" x 1 ³/₄" stainless steel half clamp. Finish: TenderTuff™, color specified.

Half Clamp: Cast aluminum. Finish: ProShield®, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

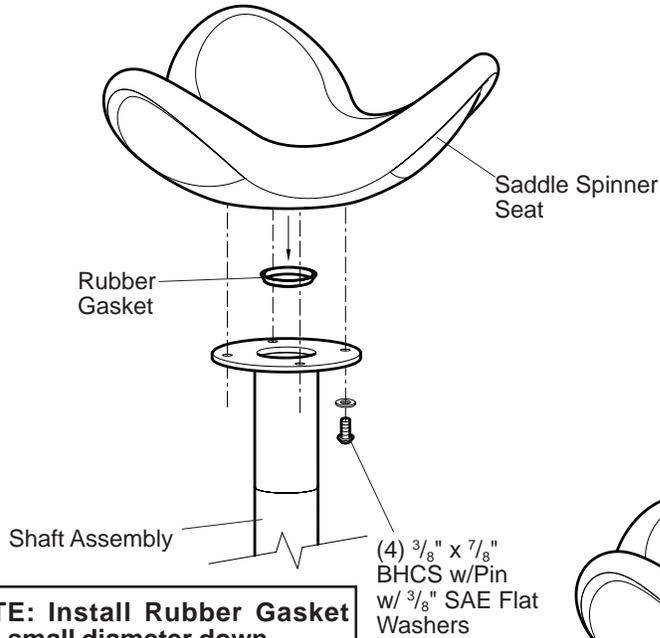
Installation Time: Approx. ¹/₄ man hour

Weight: 5 lbs.

Installation Instructions

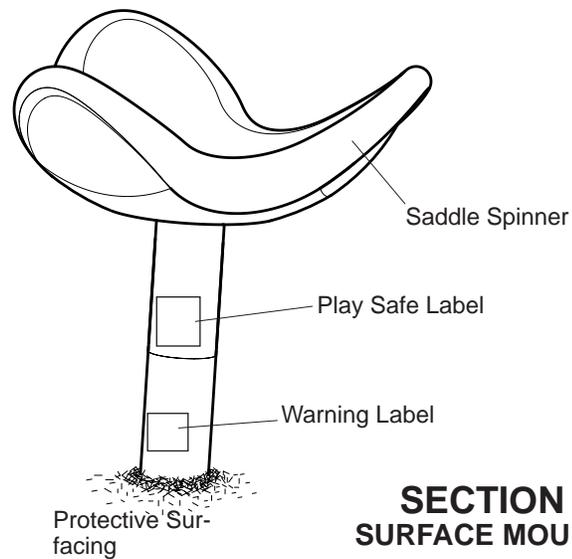
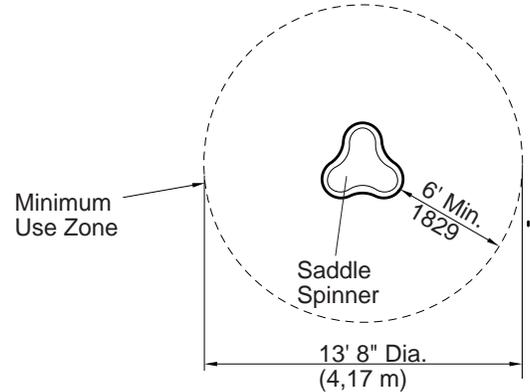
- 1) Attach grab bar to post at height shown, using a 5" half clamp, ³/₈" x ⁷/₈" BHCS w/pin and ³/₈" tee nuts.
- 2) Install ¹/₄" x ⁵/₈" drive rivet in 5" half clamp. Refer to the Offset Hanger Clamp Spec Sheet.
- 3) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
SADDLE SPINNER SEAT
ASSEMBLY**

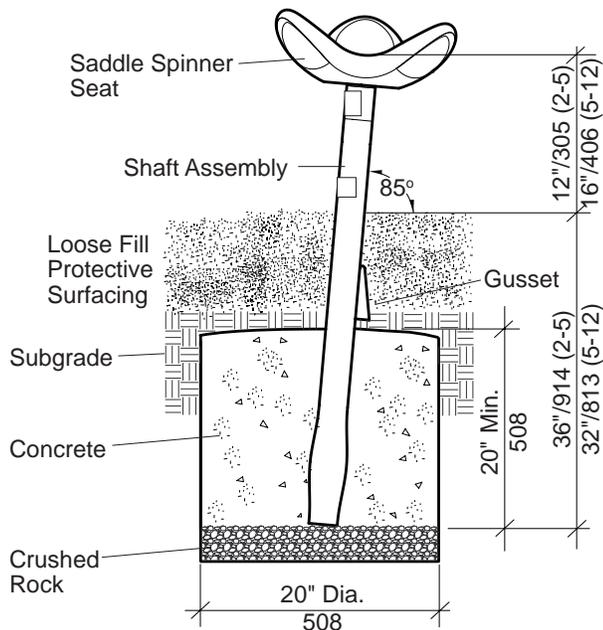


NOTE: Install Rubber Gasket with small diameter down.

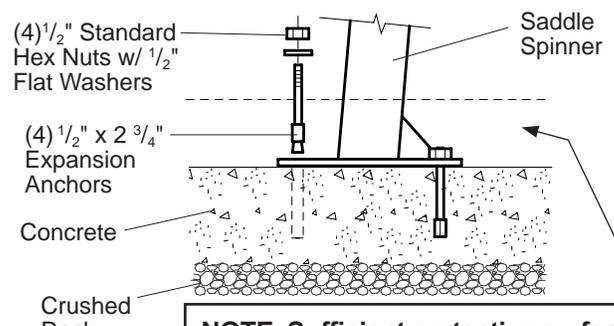
**DETAIL
MINIMUM USE ZONE**



**DETAIL
DIRECT BURY**



**SECTION
SURFACE MOUNT**



NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

Parts List

Part #	Description	Qty.
151539	Saddle Spinner Seat, Specify Color.....	1
197017	Shaft Assy., DB, Specify Color	*
247018	Shaft Assy. 12" Seat Height, SM, Specify Color.....	*
197011	Shaft Assy. 16" Seat Height, SM, Specify Color.....	*
211418	Spinner Seat Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	4
156845	Play Safe Label, 2-5 Yrs.....	1
156847	Play Safe Label, 5-12 Yrs.....	1
127935	5/16" x 2 15/32" Rubber Gasket.....	1
183064	Warning label.....	1
121348	4-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor	4
100322	1/2" Standard Hex Nut, SST	4
100363	1/2" Flat Washer, SST	4

* = Quantity Determined By Your Order

DB = Direct Bury

SM = Surface Mount

Specifications

Shaft Assembly: (Saddle Spinner Seat Post) Weldment comprised of 2.875" O.D. RS40 (.160"-.170" Wall) galvanized steel tubing, 1.250" O.D. steel shaft, 12 Ga. (.105") HR flat steel, and 1144 steel collar. Finish: ProShield®, color specified. (Sleeve/Plate) Weldment comprised of 1/4" sheet HRPO steel and 2.875" O.D. schedule 80 steel tubing. Finish: ProShield, color specified.

Rubber Gasket: Made from 50 durometer neoprene.

Saddle Spinner Seat: Rotationally molded from U.V. stabilized linear low density polyethylene measuring 18 1/4" wide x 7" high, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1 man hour (DB)
3/4 man hour (SM)

Weight: 36 lbs. (DB)
30 lbs. 12" Seat Height (SM)
32 lbs. 16" Seat Height (SM)

Area Req.: 13' 8" (4,17 m) diameter

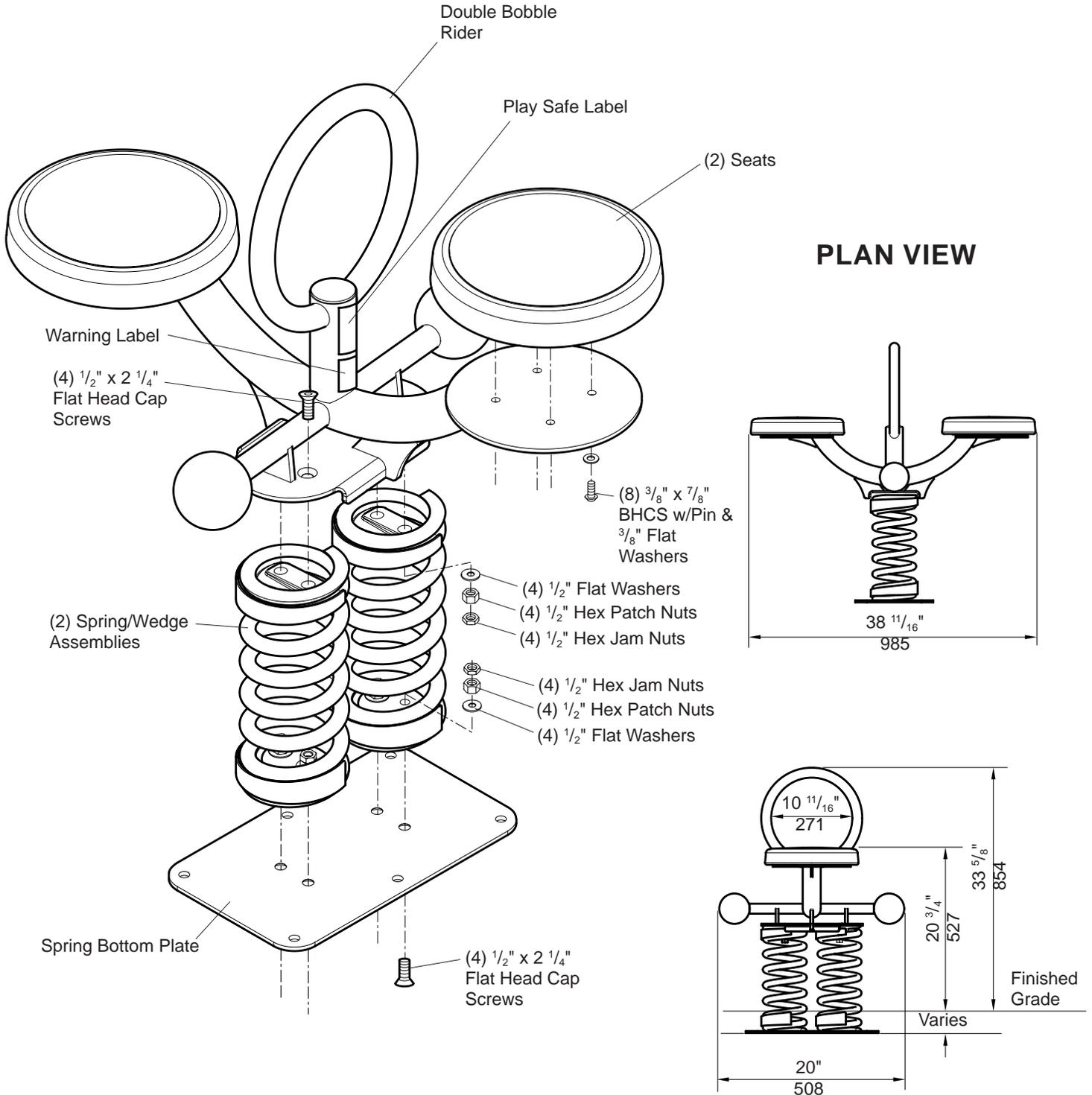
Min. Use Zone.: 6' (1,83 m)

Concrete: Approx. 3 1/2 cu. ft. (DB)

Fall Height: 12" (300 mm) 2-5 Years
16" (410 mm) 5-12 Years

Installation

- (Direct Bury)** Dig footing as shown. Refer to the Direct Bury Detail.
- Attach saddle spinner seat and rubber gasket to shaft assembly using 3/8" x 7/8" BHCS w/pin and 3/8" SAE flat washers. Refer to the Saddle Spinner Seat Attachment Detail. **NOTE:** *Install Rubber Gasket with small diameter down.*
- (Direct Bury)** Place the shaft assembly in footing hole. Place a level on the shaft assembly gusset, when gusset is plumb pour concrete footing. Allow concrete footing to cure a minimum of 72 hours before users are allowed to play on structure. **NOTE:** *Saddle spinner will have to be propped in position, until concrete has cured.*
(Surface Mount) Drill 1/2" x 3" deep holes through base plate using hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Attach shaft assembly base plate to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- If required to meet Canadian Standard (CSA Z614) requirement for water ponding, drill (3) 1/8" diameter drain holes on top side of seat, and (3) 1/8" diameter holes on bottom side of seat. **NOTE:** *Positions are prelocated on both sides of seat with an indent marking. Use caution to drill through one wall of plastic only.*
- Apply labels as shown.
- Install protective surfacing before users are allowed to play on the structure.





Kids In Motion 164075 Bobble Rider™, Double

Parts List

Part#	Description	Qty.
132912	Spring/Wedge Assembly, Black	2
160586	Seat, Black.....	2
185341	Double Bobble Rider, Specify Color.....	1
164058	Footer (DB), Black.....	1
164318	Spring Bottom Plate (SM), Black.....	1
183887	Double Bobble Rider Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100362	3/8" Flat Washer, SST	8
100363	1/2" Flat Washer, SST	8
129692	1/2" Hex Patch Nut, SST.....	8
129693	1/2" Hex Jam Nut, SST.....	8
130824	1/2" x 2 1/4" Flat Head Cap Screw, SST	8
156846	Play Safe Label 2-12 Years.....	1
183064	Warning Label	1
121868	Spring Animal Anchor Hardware Package (SM) ...	1
100262	1/2" x 6" Anchor Bolt.....	6
100322	1/2" Standard Hex Nut, SST	6
100363	1/2" Flat Washer, SST	6

DB = Direct Bury
SM = Surface Mount

Specifications

Double Bobble Rider:	Weldment comprised of 1.315" O.D. RS20 (.080"-.090" wall) galvanized steel tubing, 2.375" O.D. RS20 (.095"-.105" wall) galvanized steel tubing, 3/8" HRPO steel plate, 1/4" HRPO steel plate, and 4" diameter 10 GA. (.135") low carbon steel ball. Finish: ProShield®, color specified.
Spring:	Weldment comprised of 5 5/8" diameter 13/16" tempered alloy steel coil. Finish: ProShield, black in color.
Seat:	Rotationally molded from U.V. stabilized linear low density polyethylene, black in color.
Spring Bottom Plate:	Fabricated from 3/8" x 10" x 17" sheet HRPO steel. Finish: ProShield, black in color.
Footer:	Weldment comprised of 3 1/2" O.D. RS20 (.120" - .130" wall) galvanized steel tubing and 1/4" x 10" x 17" sheet HRPO steel. Finish: ProShield, black in color.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	SM - Approx. 2 man hours DB - Approx. 2 1/4 man hours
Concrete Req.:	DB - Approx. 5.25 cu. ft.
Area Req.:	15'-3" x 13'-8" (4,64 m x 4,17 m) Minimum Use Zone
Weight:	(SM) 113 lbs (DB) 137 lbs
Seat Height:	20 3/4" (527 mm)

Installation Instructions

(Direct Bury)

- 1) Dig footing hole as shown.
- 2) Attach Bobble Rider to spring/wedge assemblies using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts, as shown.
- 3) Attach spring/wedge assemblies to footer using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts.
- 4) Attach seats to Bobble Rider using 3/8" x 7/8" BHCS w/pin and 3/8" flat washers.
- 5) With footer plumb and Bobble Rider propped up, pour concrete footing and let cure for a minimum of 72 hours before using.
- 6) Apply labels as shown.
- 7) Install protective surfacing before users are allowed to play on the component.

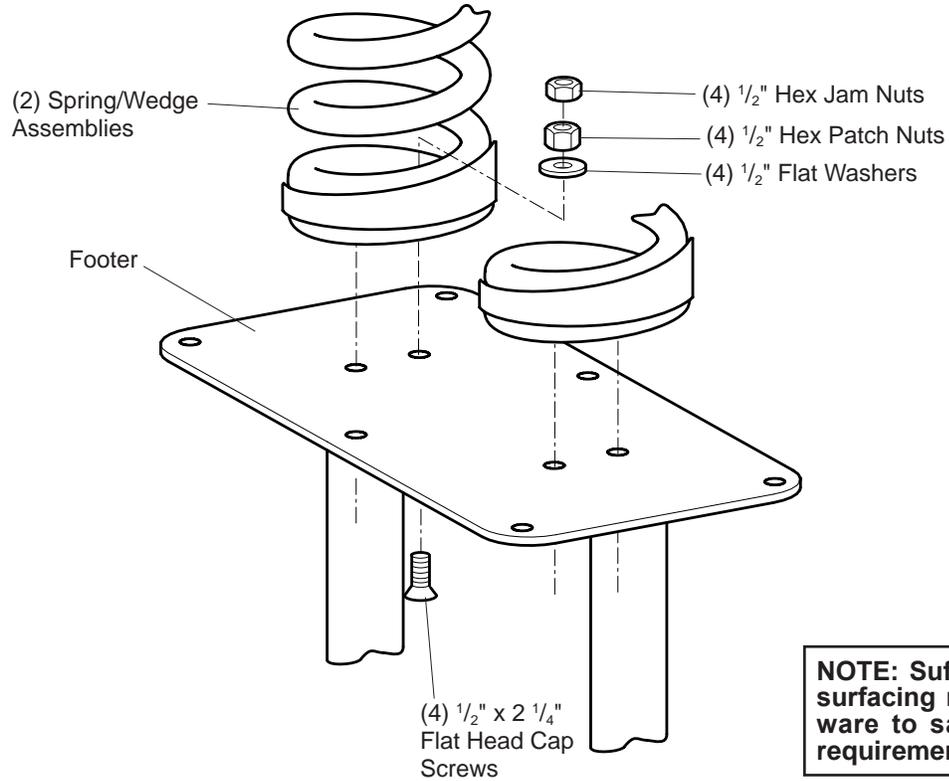
(Surface Mounting On A Concrete Slab)

- 1) Using the spring bottom plate as a pattern, make a plywood template for anchor bolt placement. Attach 1/2" x 6" anchor bolts with 1/2" standard hex nuts and 1/2" flat washers to holes in template.
- 2) Pour concrete slab and lay template on surface in level position. Push 1/2" x 6" anchor bolts into concrete and allow 3/4" to 7/8" of thread to protrude from concrete. Allow 72 hours before template removal.
- 3) Attach spring/wedge assemblies to spring bottom plate using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts.
- 4) Attach spring bottom plate to anchor bolts in concrete with 1/2" standard hex nuts and 1/2" flat washers.
- 5) Attach Bobble Rider to spring/wedge assemblies using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts, as shown.
- 6) Attach seats to Bobble Rider using 3/8" x 7/8" BHCS w/pin and 3/8" flat washers.
- 7) Apply labels as shown.
- 8) Sufficient protective surfacing for a 2' fall height should cover bottom plate and anchor bolts. (See ASTM F1487, Section 9.)

SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

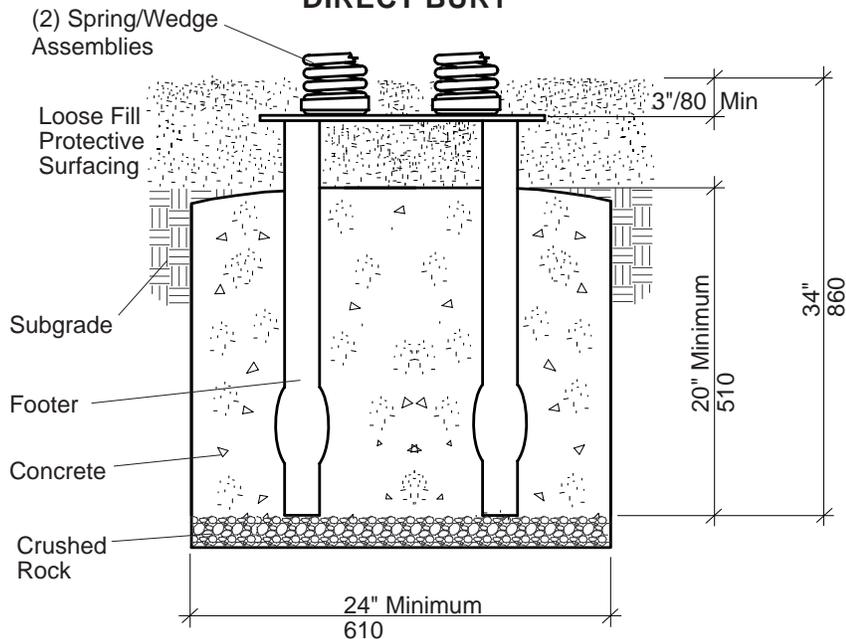
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**DETAIL
 DIRECT BURY
 BASE LEG ATTACHMENT**

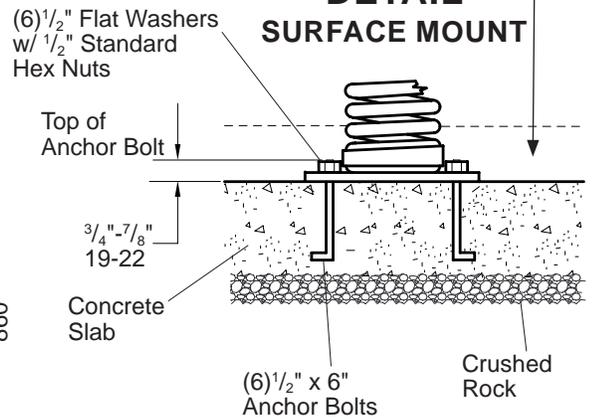


NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

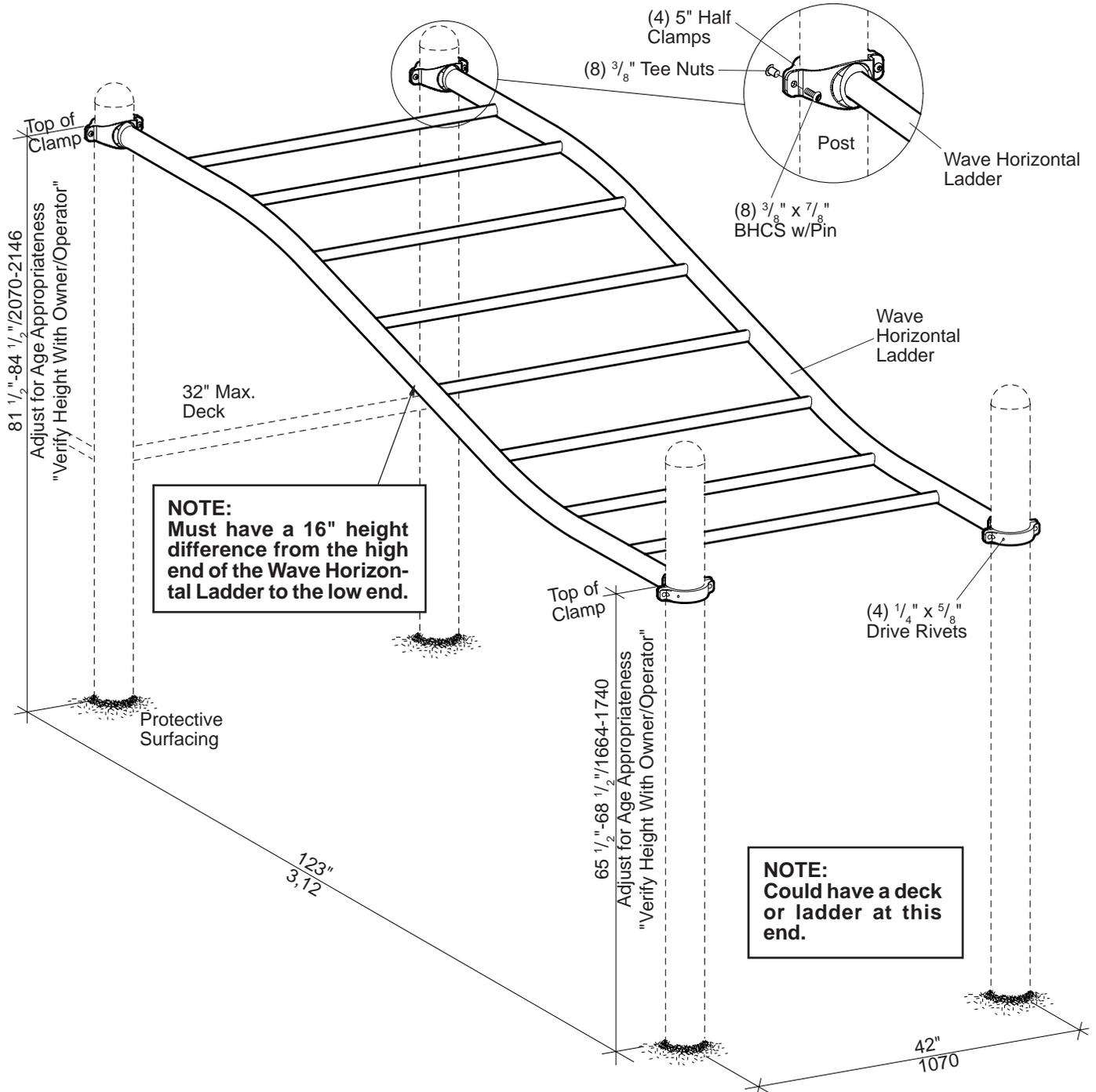
**DETAIL
 DIRECT BURY**



**DETAIL
 SURFACE MOUNT**



DETAIL
WAVE HORIZONTAL LADDER ATTACHMENT





PlayBooster® 119613 Horizontal Ladder, Wave

Parts List

Part#	Description	Qty.
145938	Wave Horizontal Ladder, Specify Color	1
105327	5" Half Clamp, Specify Color	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
149233	Horizontal Ladder, Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100351	3/8" Tee Nut, SST.....	8

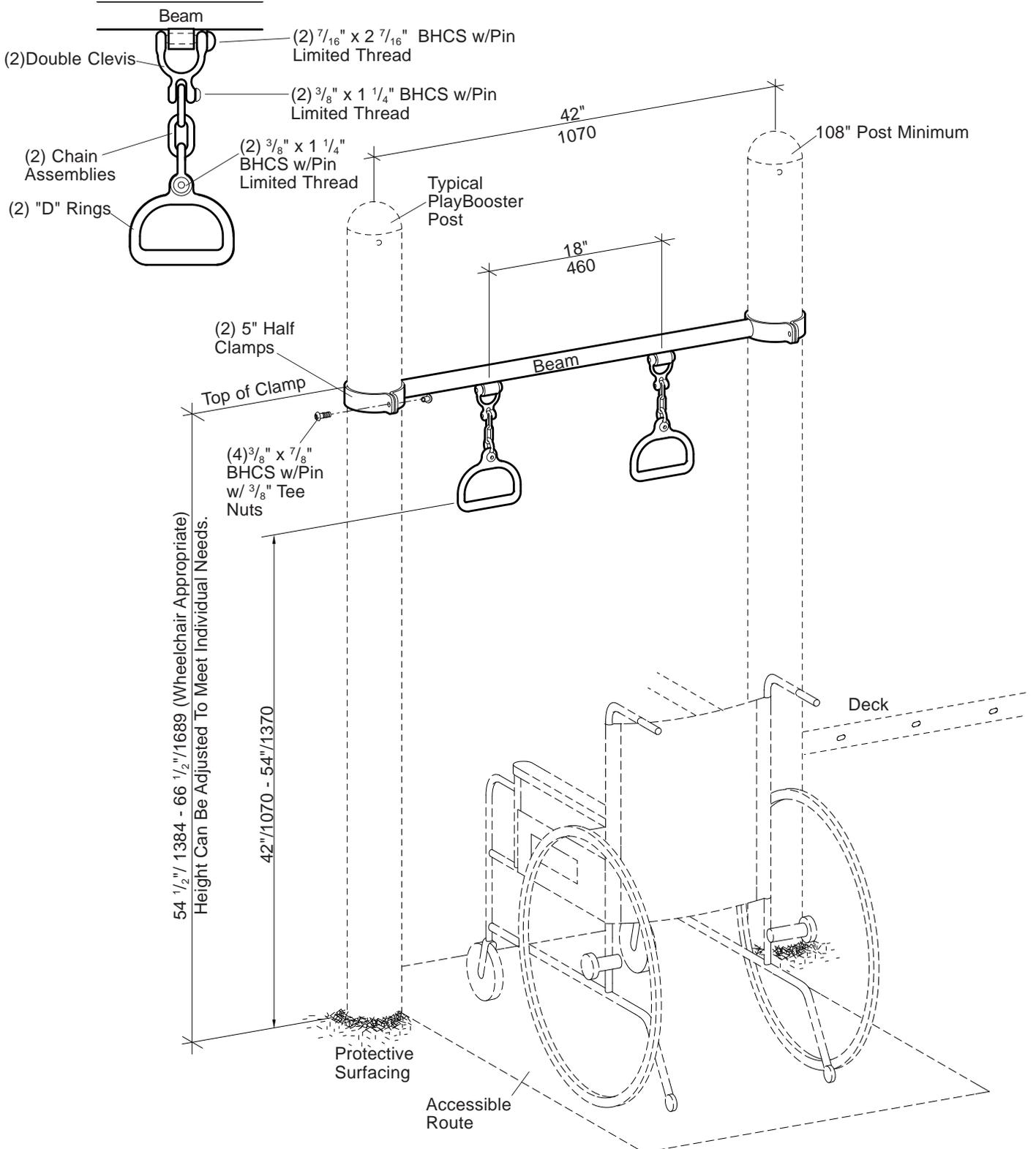
Specifications

- Ladder:** Weldment comprised of 2.375" O.D. RS-40 (.130"-.140") galvanized steel tubing, 1.315 O.D. RS-20 (.080"-.090") galvanized steel tubing and 1/4" HRPO flat steel. Finish: ProShield®, color specified.
- Clamp:** Cast aluminum. Finish: ProShield, color specified.
- Fasteners:** Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
- Installation Time:** Approx. 1 man hour
- Area Req.:** 6' (1,83 m) minimum use zone
- Weight:** 114 lbs.
- Max. Fall Height:** 82"-85" (2,08 m - 2,16 m)

Installation Instructions

- 1) Mark posts for the appropriate height of the ladder you are installing. Adjust height for age appropriateness. **NOTE: Must have a 16" height difference from the high end of the ladder to the low end.**
- 2) Lift ladder into position and attach to posts using 5" half clamps with 3/8" x 7/8" BHCS w/pin and 3/8" tee nuts.
- 3) Be sure ladder is level, if not, adjust clamps to do so.
- 4) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

DETAIL



Parts List

Part#	Description	Qty.
130843	Ring Pull Beam, Specify Color	1
105327	5" Half Clamp, Specify Color	2
100610	1/4" x 5/8" Drive Rivet, AL/SST	2
130923	"D" Ring w/Bolt Link Hardware Package	2
100292	3/8" x 1 1/4" BHCS w/Pin Limited Thread,SST	2
108440	"D" Ring, Brown.....	2
128045	Chain Assembly, Brown	2
131150	Ring Pull Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100292	3/8" x 1 1/4" BHCS w/Pin Limited Thread,SST	2
100351	3/8" Tee Nut, SST	4
138917	Double Clevis, SST	2
127068	7/16" x 2 7/16" BHCS w/Pin Limited Thread,SST	2

Specifications

Ring Pull Beam: Weldment comprised of 1.660" O.D. RS-20 (.085" - .095") galvanized steel tubing and 1/4" x 1 3/4" HRS clamps. Housings for double clevis are 1 1/4" O.D. x .312" wall steel tubing. SAE 841 dry bronze bushings are pressed into housings at factory. Finish: ProShield®, color specified.

"D" Rings: Cast from A356 aluminum alloy with a cast in place 841 bronze alloy bushing. Finish: TenderTuff™, brown in color.

Chain Assembly: 5/16" Low carbon steel straight link galvanized chain, with bolt link made from grade 316 stainless steel. Finish: TenderTuff, brown in color.

Double Clevis: Stainless Steel.

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour

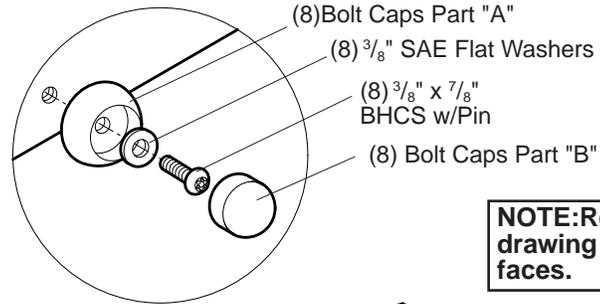
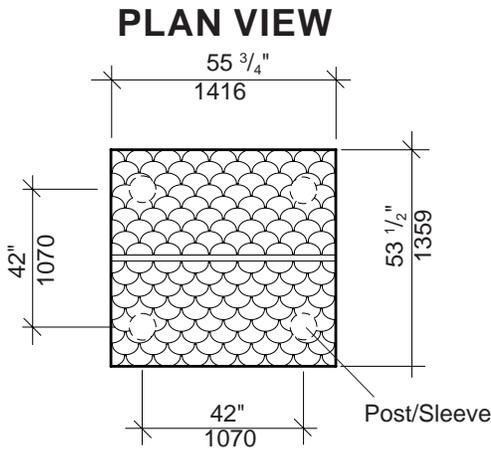
Weight: 15 lbs.

Max. Fall Height: 55" - 67" (1,40 m - 1,70 m)

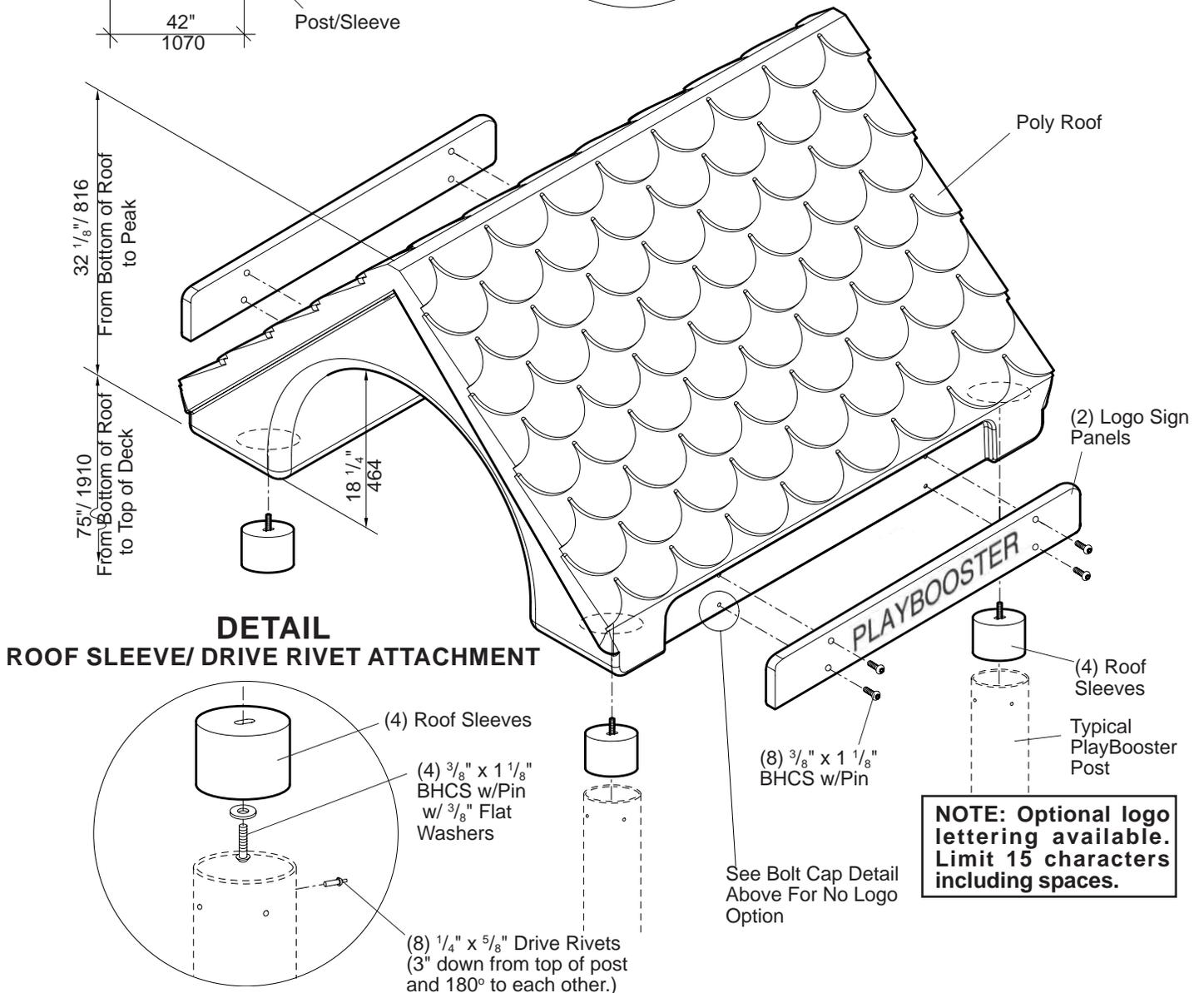
Installation Instructions

- 1) Attach double clevis to housings on beam using 7/16" x 2 7/16" BHCS w/pin limited thread bolts. Attach chain assembly to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread bolts. Attach "D" ring with bolt link to chain assembly using 3/8" x 1 1/4" BHCS w/pin limited thread bolt.
- 2) Mark posts for the appropriate height.
- 3) Lift beam into position and attach to posts using 5" half clamps, 3/8" x 7/8" BHCS w/pin and 3/8" tee nuts.
- 4) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
BOLT CAP ASSEMBLY
(FOR NO LOGO PANEL OPTION)**



NOTE: Refer to your plan drawing for direction roof faces.



NOTE: Optional logo lettering available. Limit 15 characters including spaces.

Parts List

Part#	Description	Qty.
127765	Poly Roof, Specify Color	1
127800	Roof Logo, Specify Color	2
116573	Roof Sleeve	4
135428	Roof Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100362	3/8" Flat Washer, SST	4
100365	3/8" SAE Flat Washer, SST	8
100610	1/4" x 5/8" Drive Rivet, AL/SST	8
108184	Bolt Cap Part A	8
108185	Bolt Cap Part B	8
135427	Roof/Logo Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	12
100362	3/8" Flat Washer, SST	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	8

Specifications

Poly Roof: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Roof Logo: Two color Permalene® roof logo measures 41" wide x 5 1/8" high, color specified.

Roof Sleeve: Cast from 319 almag.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

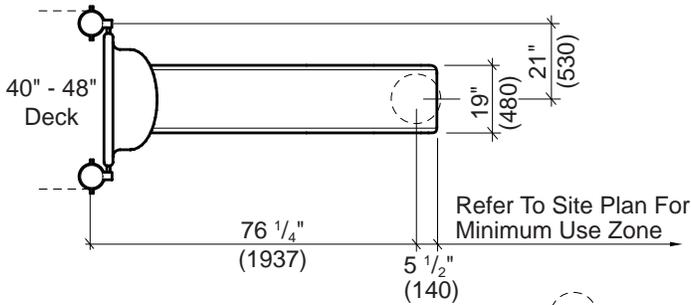
Installation Time: Approx. 2 man hours

Weight: w/Logo - 116 lbs.
w/o Logo - 105 lbs.

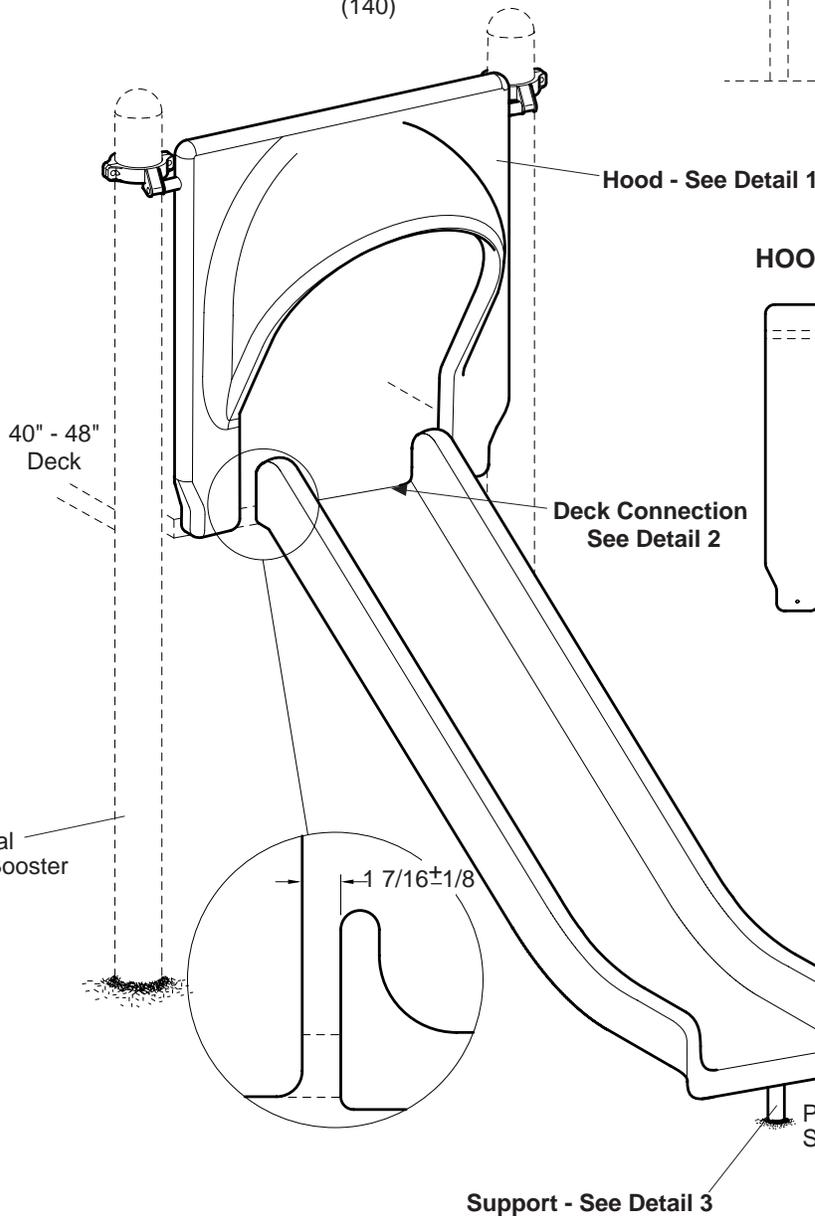
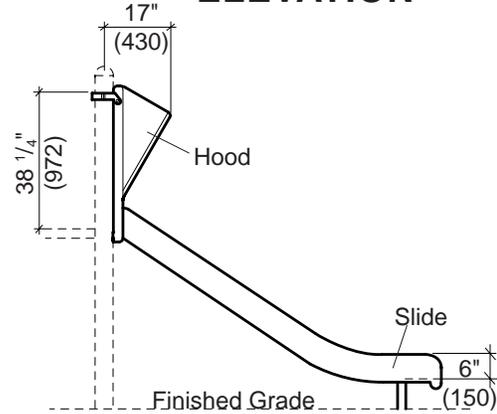
Installation Instructions

- 1) Attach roof sleeves to roof using 3/8" x 1 1/8" BHCS w/pin with 3/8" flat washers. Refer to the Roof Sleeve/Drive Rivet Attachment Detail.
- 2) **(With Roof Logo)** Attach roof logo to roof using 3/8" x 1 1/8" BHCS w/pin, as shown.
(Without Roof Logo) Attach bolt cap assembly to roof using bolt cap part "A", 3/8" SAE flat washer and fasten with 3/8" x 7/8" BHCS w/pin. Snap bolt cap part "B" onto bolt cap part "A". Refer to the Bolt Cap Assembly Detail.
- 3) With two people minimum, lift roof into position in the proper direction and insert roof sleeves into posts.
- 4) Drill 1/4" holes through roof sleeves using the predrilled 1/4" holes in posts as a guide. Insert 1/4" x 5/8" drive rivets into drilled holes and tap pin in until it is flush with rivet head. Refer to the Roof Sleeve/Drive Rivet Attachment Detail.
- 5) Install protective surfacing before users are allowed to play on the structure.

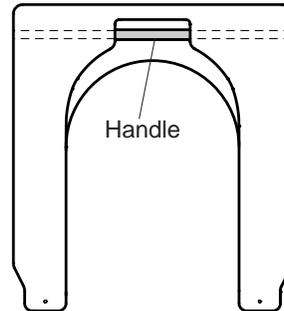
PLAN VIEW/ FOOTING LAYOUT



ELEVATION



HOOD - HANDLE DETAIL



PlayBooster® 123337 Single Slide, 40"- 48"

Parts List

Part#	Description	Qty.
127162	Single Slide, Specify Color	1
150941	Support, (DB), Specify Color.....	1
151033	Support, 40" Deck (SM), Specify Color.....	1
151003	Support, 48" Deck (SM), Specify Color.....	1
134180	Single Slide Hood, Specify Color	1
100583	40 7/16" Rail, Specify Color	1
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
132443	Spacer Tube, Specify Color.....	2
111506	Slide Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100362	3/8" Flat Washer, SST.....	4
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread Bolt, SST	2
100365	3/8" SAE Flat washer, SST.....	2
111442	Rubber Bushing.....	2
106578	Hood Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	4
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	4
100362	3/8" Flat Washer, SST.....	2
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	2
111392	2-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor.....	2
100322	1/2" Standard Hex Nut, SST.....	2
100363	1/2" Flat Washer, SST.....	2

DB = Direct Bury
SM = Surface Mount

Specifications

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Exit Support: Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: ProShield®, color specified.

Spacer Tube: Fabricated from 1.3125 O.D. x 16 Ga. (.065) steel tubing. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Rail: Extruded from 1.125" O.D. x .312" W. 6005-T5 aluminum. Finish: ProShield, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 2 man hours

Concrete Req.: Approx. 1.3 cu. ft.

Area Req.: Refer To Plan View

Weight: 93 lbs.

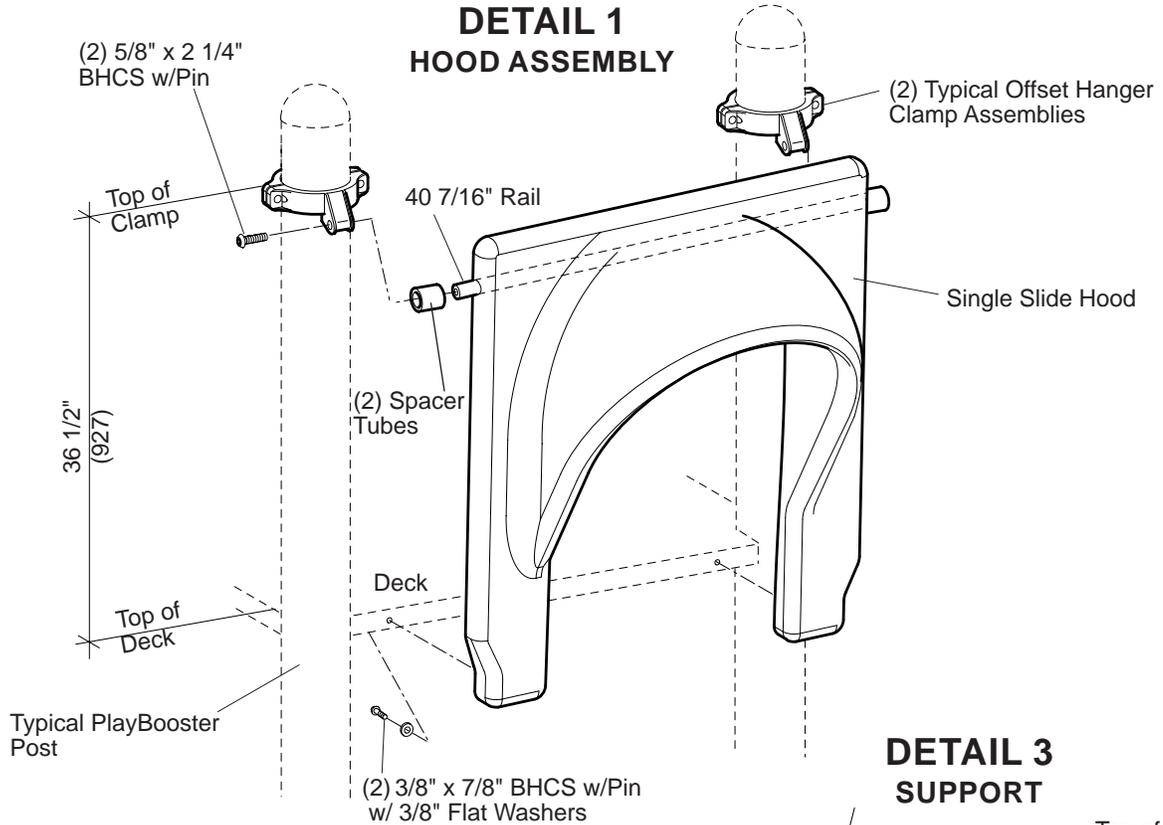
Fall Height: Deck Height

Installation Instructions

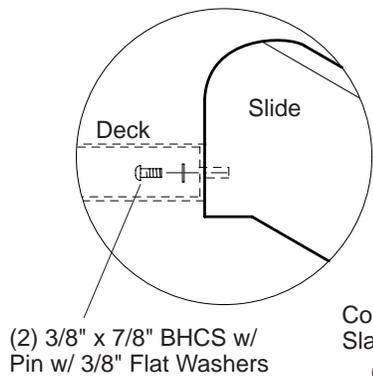
- 1) **(Direct Bury)** Dig footings spaced as shown.
- 2) Insert 40 7/16" rail through top of hood, place spacer tubes over each end of the 40 7/16" rail. Attach offset hanger clamps to ends of pipe bolt using 5/8" x 2 1/4" BHCS w/Pin. Position hood against face of deck with offset hanger clamps against posts. Line up holes in face of deck with inserts in bottom of hood and fasten using 3/8" x 7/8" BHCS w/Pin with 3/8" flat washers. Refer to Detail 1. Attach offset hanger clamps to posts using 5" half clamps with 3/8" x 1 1/8" BHCS w/Pin and 3/8" tee nuts.
- 3) Attach support to base of slide using 3/8" x 1 1/4" BHCS w/Pin limited thread bolt, 3/8" SAE flat washer, rubber bushing and 3/8" flat washer. **NOTE:** Attach bolts in the center of the slots to allow for expansion and contraction. Snug bolts down only, do not over-tighten. Refer to Detail 3.
- 4) Attach slide to the face of the deck using 3/8" x 7/8" BHCS w/Pin with 3/8" flat washers. Refer to Detail 2.
- 5) **(Direct Bury)** With support plumb pour concrete footings. Allow concrete footing to cure for a minimum of 72 hours before users are allowed to play on the structure.

(Surface Mount) Mark anchor bolt locations on concrete slab through holes in anchor plate and remove slide. Drill 1/2" x 3" deep holes on marks into concrete using a hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Reposition slide and reattach to the face of the deck following step 4. Fasten support to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- 6) Install protective surfacing before users are allowed to play on the structure.

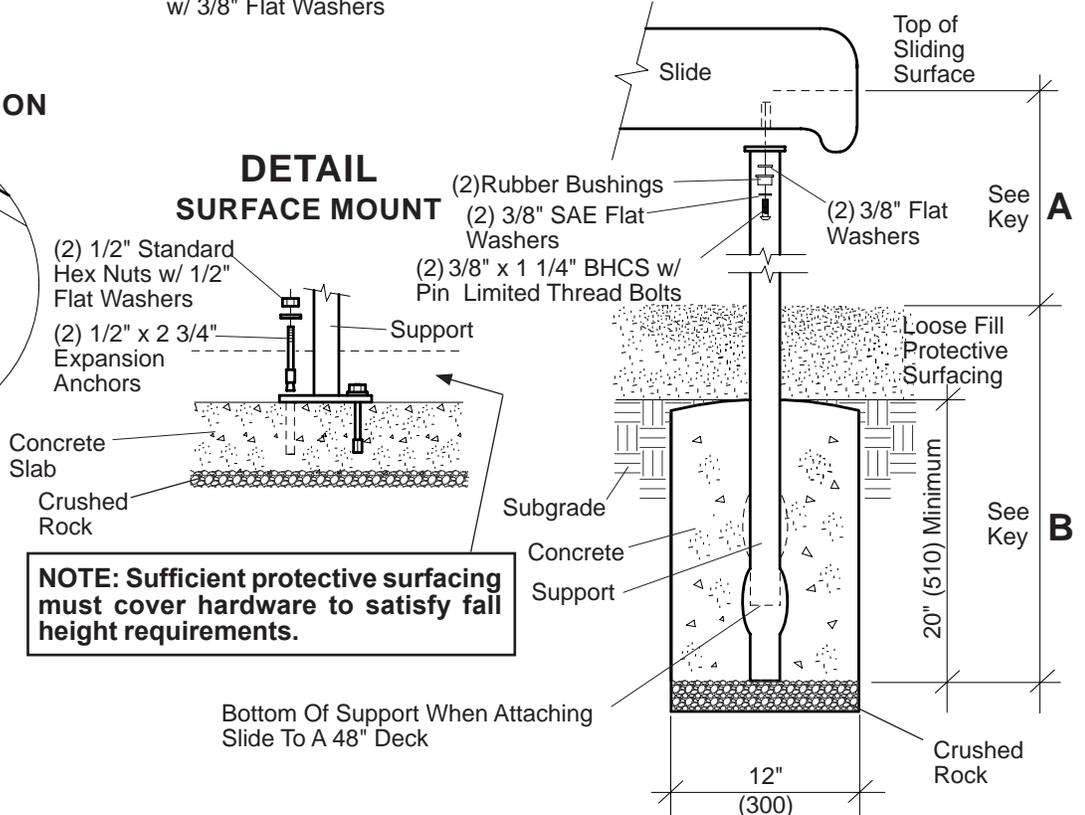
**DETAIL 1
HOOD ASSEMBLY**



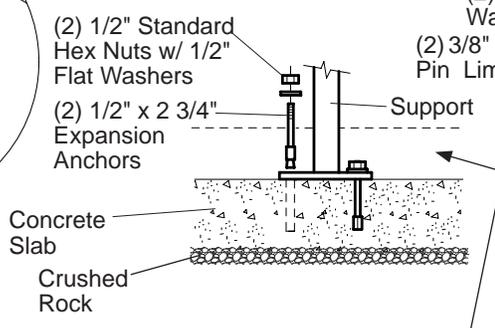
**DETAIL 2
DECK CONNECTION**



**DETAIL 3
SUPPORT**



**DETAIL
SURFACE MOUNT**

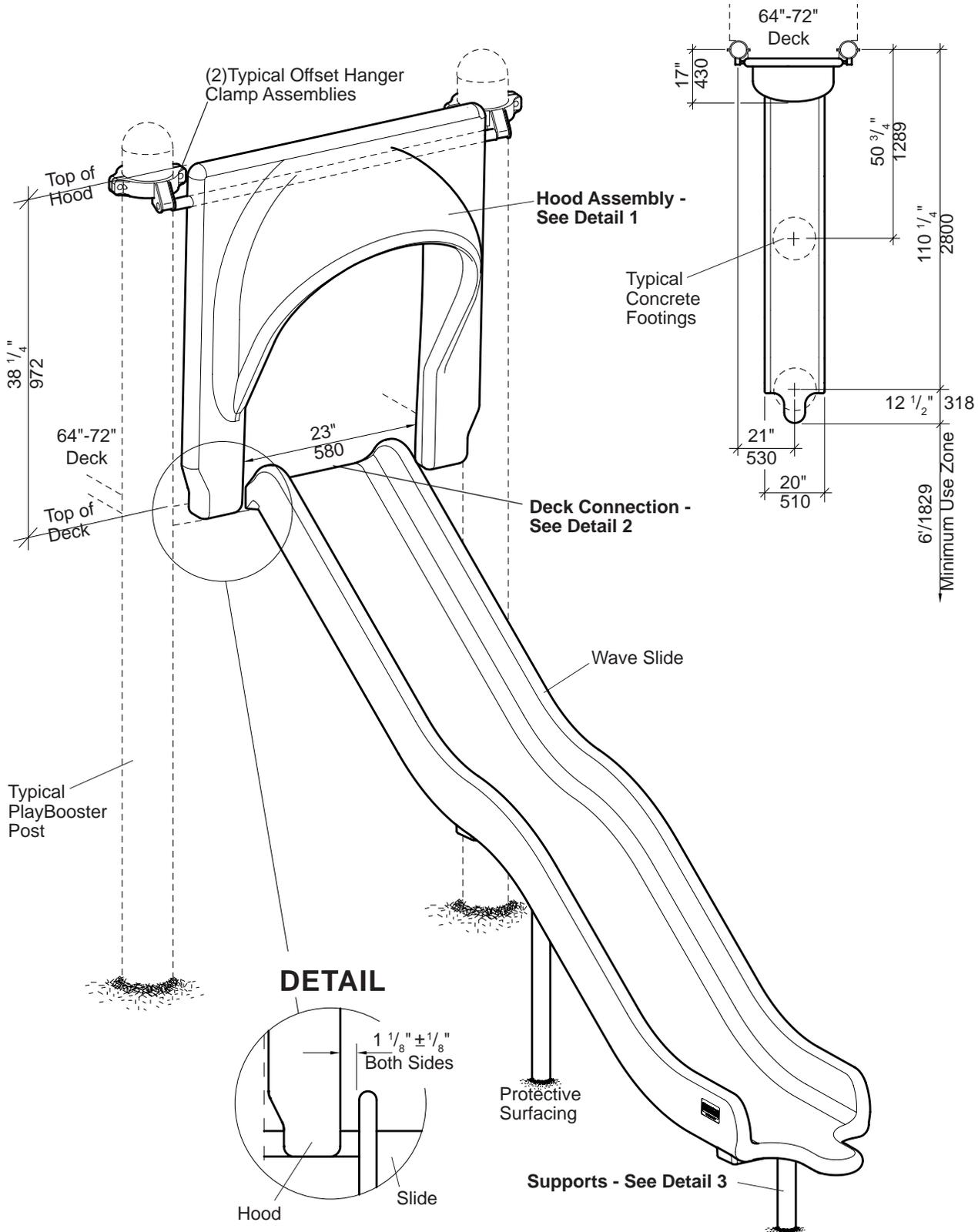


NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

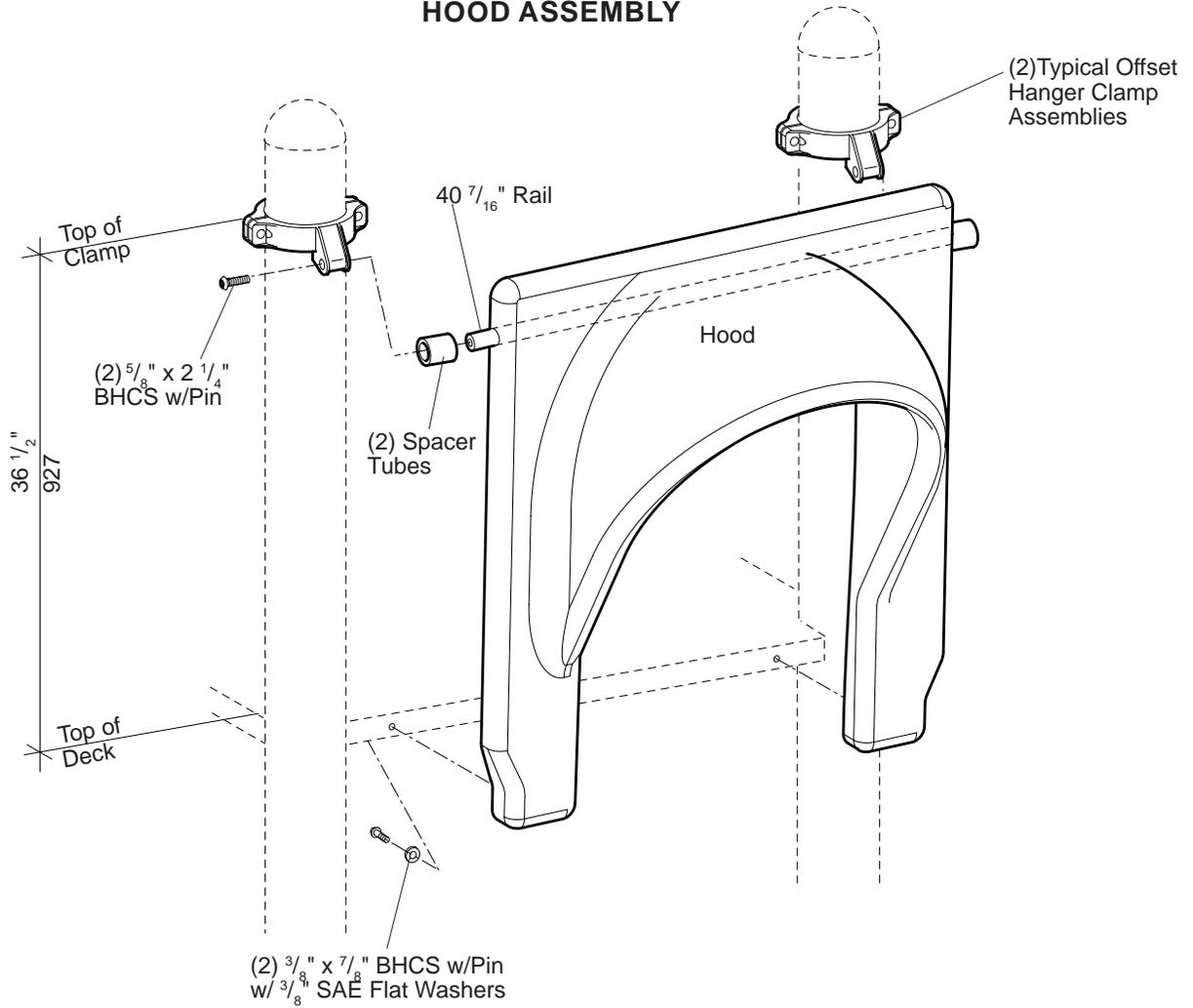
Bottom Of Support When Attaching Slide To A 48\" Deck

KEY:	
Deck Hgt.	Dimension
40\"	A = 8\" (200)
48\"	A = 11\" (280)
40\"	B = 37\" (940)
48\"	B = 34\" (860)

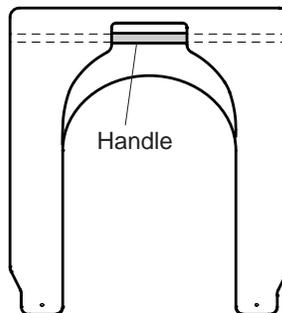
PLAN VIEW/ FOOTING LAYOUT



**DETAIL 1
HOOD ASSEMBLY**



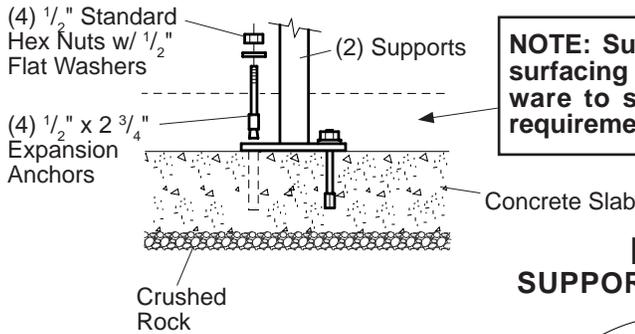
HOOD - HANDLE DETAIL



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

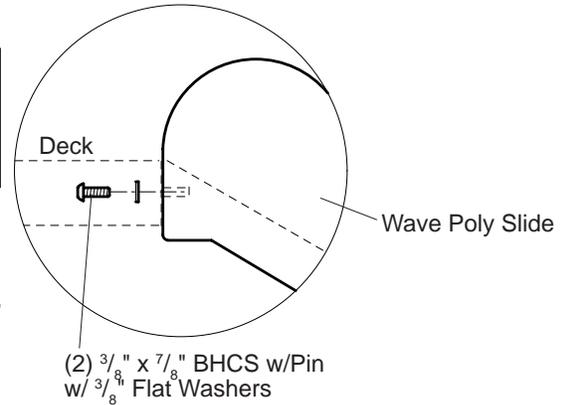
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**DETAIL 1
 SURFACE MOUNT**

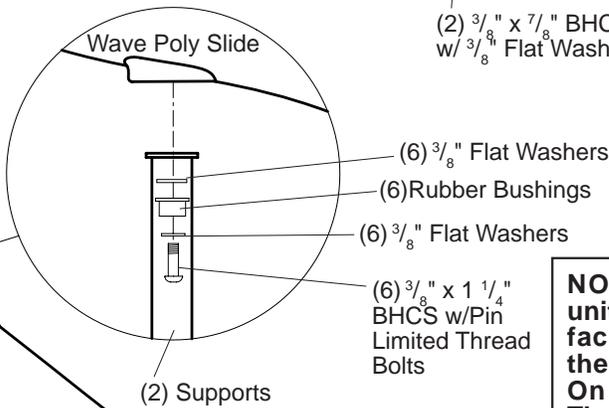


NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

**DETAIL 2
 DECK CONNECTION**

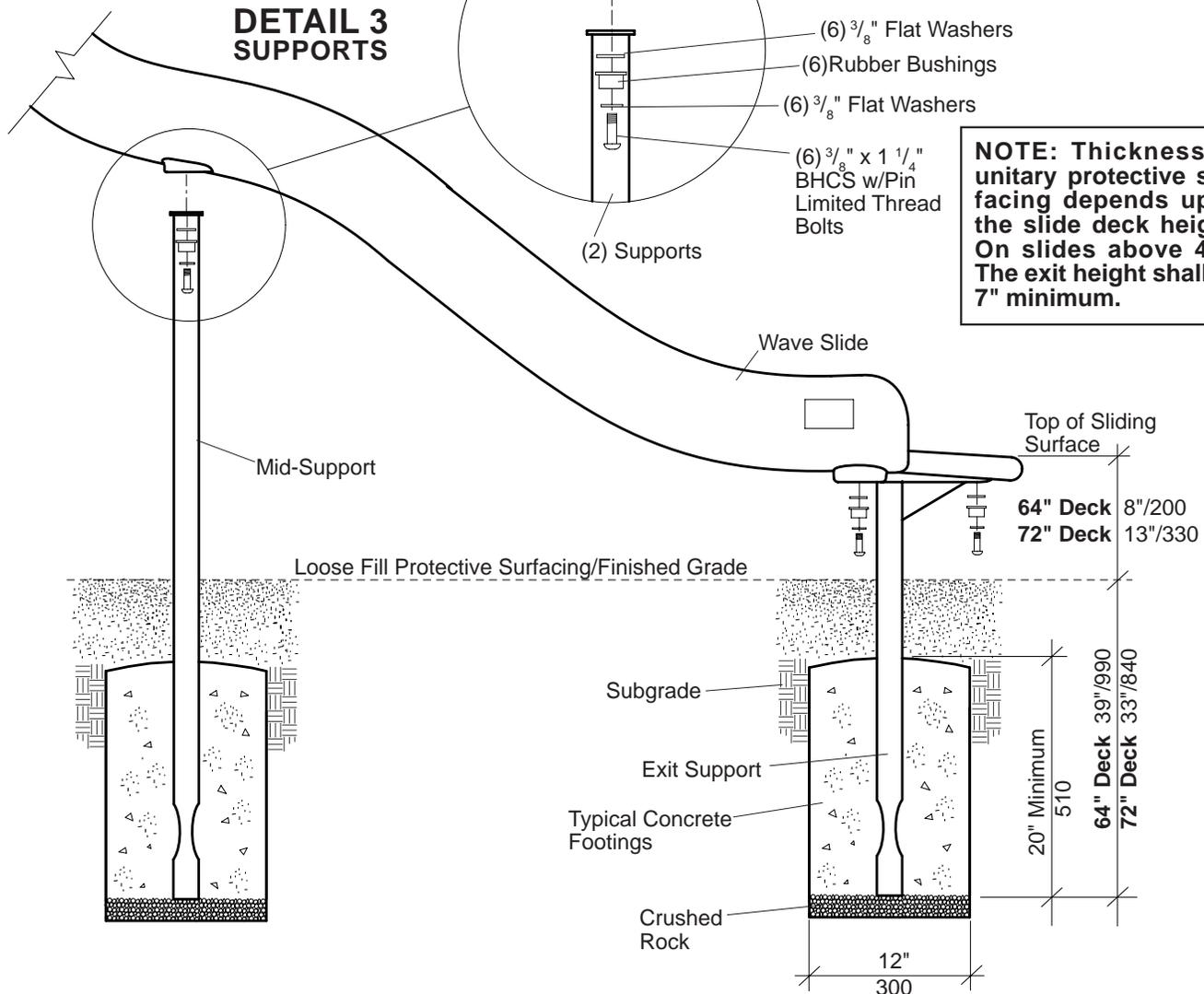


**DETAIL 3
 SUPPORT ATTACHMENT**



NOTE: Thickness of unitary protective surfacing depends upon the slide deck height. On slides above 48". The exit height shall be 7" minimum.

**DETAIL 3
 SUPPORTS**



Parts List

Part#	Description	Qty.
130612	Wave Slide, Specify Color	1
134180	Slide Hood, Specify Color.....	1
103201	Exit Support, (DB), Specify Color	1
130691	Mid-Support, (DB), Specify Color.....	1
131653	Exit Support, 64" Deck (SM), Specify Color.....	1
103198	Exit Support, 72" Deck (SM), Specify Color.....	1
131655	Mid-Support, 64" Deck (SM), Specify Color.....	1
131651	Mid-Support, 72" Deck (SM), Specify Color.....	1
100583	40 7/16" Rail, Specify Color.....	1
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
132443	Spacer Tube, Specify Color.....	2
131672	Slide Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread Bolt, SST.....	6
111442	Rubber Bushing	6
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100362	3/8" Flat Washer, SST	14
106578	Hood Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100362	3/8" Flat Washer, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100351	3/8" Tee Nut, SST.....	4
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	2
121348	4-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor	4
100322	1/2" Standard Hex Nut, SST	4
100363	1/2" Flat Washer, SST	4

DB = Direct Bury
SM = Surface Mount

Specifications

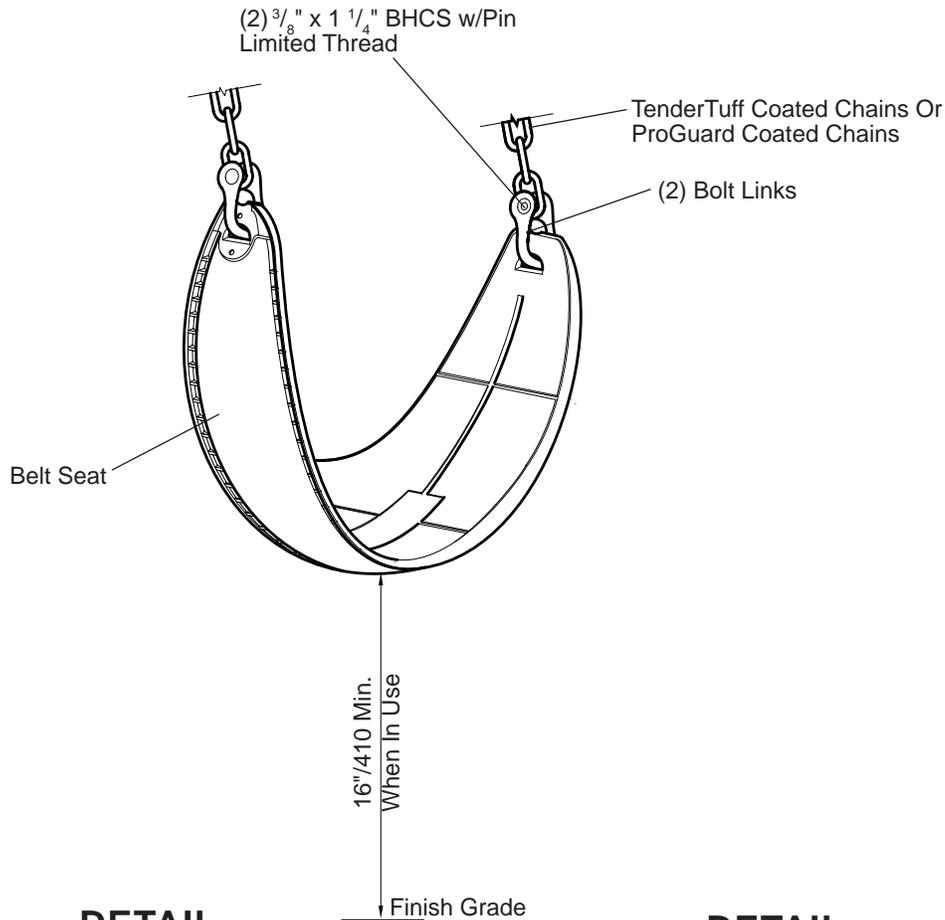
Hood/Slide:	Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
Mid-Support:	Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: ProShield®, color specified.
Exit Support:	Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" mounting plate. Finish: ProShield, color specified.
Spacer Tube:	Fabricated from 1.3125 O.D. x 16 Ga. (.065) steel tubing. Finish: ProShield, color specified.
Rail:	1 1/8" O.D. 6005-T5 aluminum extrusion with 5/16" wall. Finish: ProShield, color specified.
Offset Hanger Clamp Assembly:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time:	Approx. 3 man hours
Concrete Req.:	Approx. 2.6 cu. ft.
Area Req.:	6' (1.83 m) minimum use zone at exit
Weight:	121 lbs.
Fall Height:	64" Deck (1.63 m) 72" Deck (1.83 m)

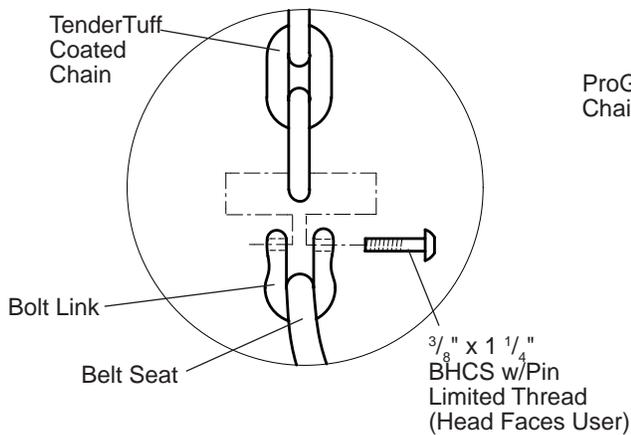
Installation Instructions

- (Direct Bury)** Dig footings spaced as shown.
- Insert 40 7/16" rail through hood, place spacer tubes over each end of the 40 7/16" rail, attach to offset hanger clamps as shown using 5/8" x 2 1/4" BHCS w/Pin. Position hood against face of deck and line up holes in hood and deck. Attach hood to deck using 3/8" x 7/8" BHCS w/Pin with 3/8" flat washers. See Detail 1.
- Attach offset hanger clamps to posts with 5" half clamps using 3/8" x 1 1/8" BHCS w/Pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- Attach supports to slide using 3/8" x 1 1/4" BHCS w/Pin limited thread bolts, 3/8" flat washers and rubber bushings. See Detail 3. **NOTE:** *Attach bolts in the center of the slots to allow for expansion and contraction. Snug bolts down only. Do not overtighten!*
- Attach slide to the face of the deck using 3/8" x 7/8" BHCS w/Pin and 3/8" flat washers. See Detail 2.
- (Direct Bury)** With supports plumb pour concrete footings. Allow concrete footings to cure for a minimum of 72 hours before users are allowed to play on the structure.

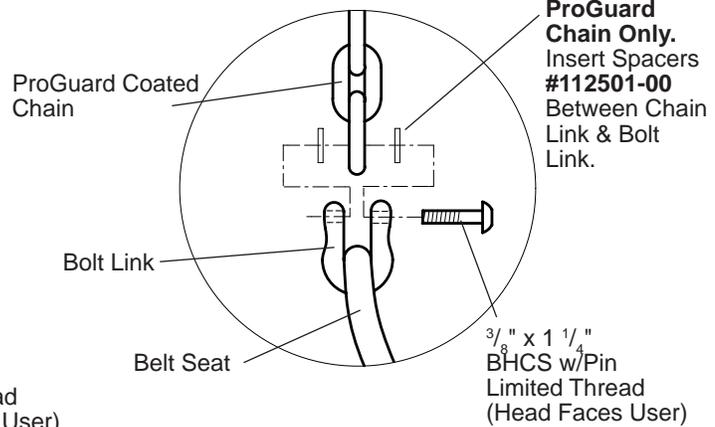
(Surface Mount) Mark anchor bolt locations on concrete slab through holes in anchor plate and remove slide. Drill 1/2" x 3" deep holes on marks into concrete using a hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Reposition slide and reattach to the face of the deck following step 6. Fasten anchor plates to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- Install protective surfacing before users are allowed to play on the structure.



**DETAIL
BOLT LINK**



**DETAIL
BOLT LINK**



Swings

174018 Belt Seat

Parts List

Part #	Description	Qty.
7 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
178679	57 7/16" Chain, TenderTuff, Specify Color.....	2
175251	57 7/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292-00	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
8 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152050	67 7/8" Chain, TenderTuff, Specify Color	2
174404	67 7/8" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
10 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152052	90 11/16" Chain, TenderTuff, Specify Color.....	2
174884	90 11/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2

Specifications

Chain Spacer: Made from white nylon measuring .080" x .785" O.D.

Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff®, color specified.

Belt Seats: Molded from U.V. stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") spring stainless steel sheet, and (4) .105" thick stainless steel washers. The belt seat elliptical shape measures 7" wide x 26" long x .700" thick.

Bolt Link: Stainless Steel.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight: 8 lbs. (7 Ft. Beam w/ProGuard Chains)
9 lbs. (7 Ft. Beam w/TenderTuff Chains)
8 lbs. (8 Ft. Beam w/ProGuard Chains)
9 lbs. (8 Ft. Beam w/TenderTuff Chains)
10 lbs. (10 Ft. Beam w/ProGuard Chains)
11 lbs. (10 Ft. Beam w/TenderTuff Chains)

Installation

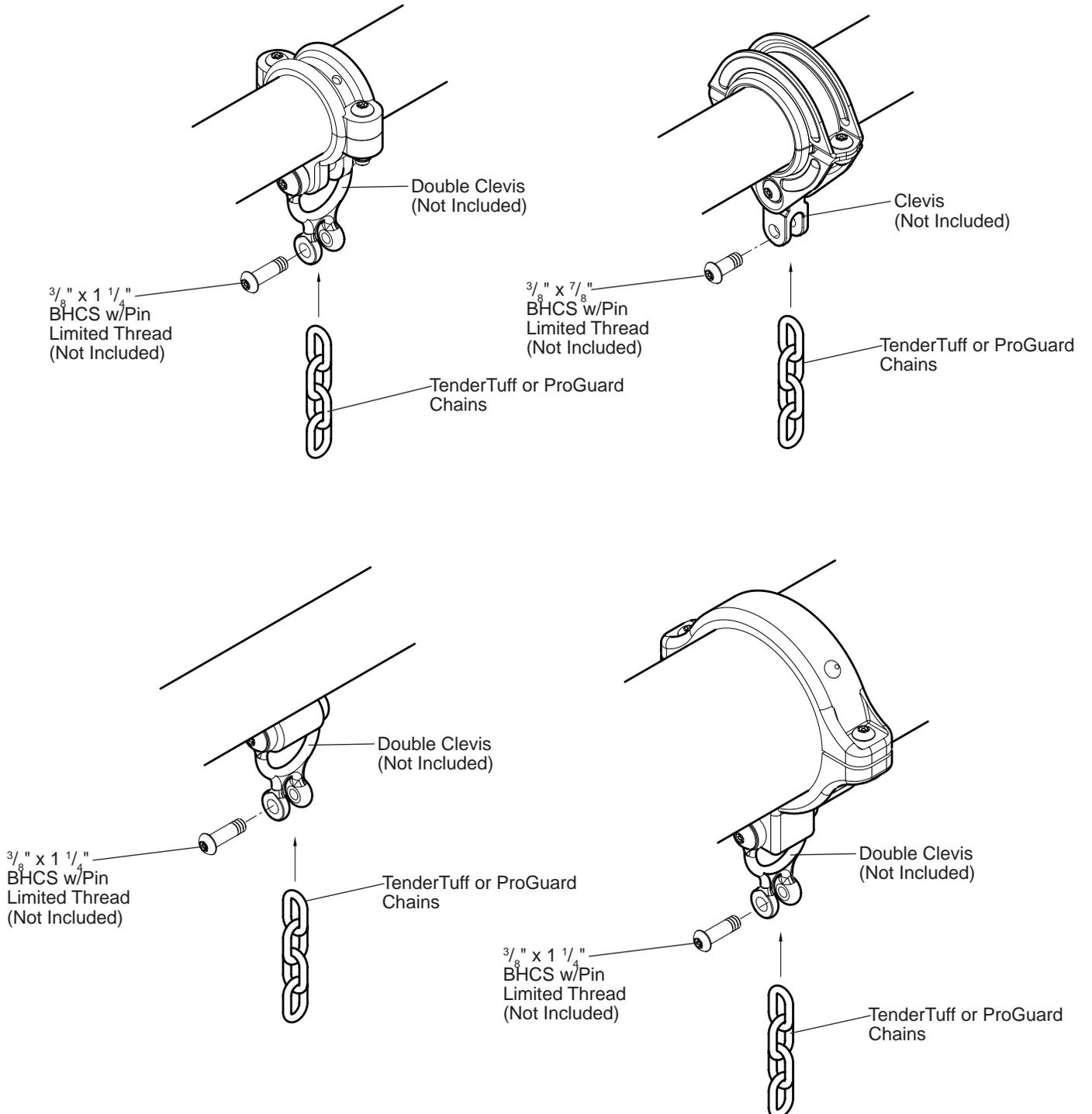
Swing Hangers With Double Clevis

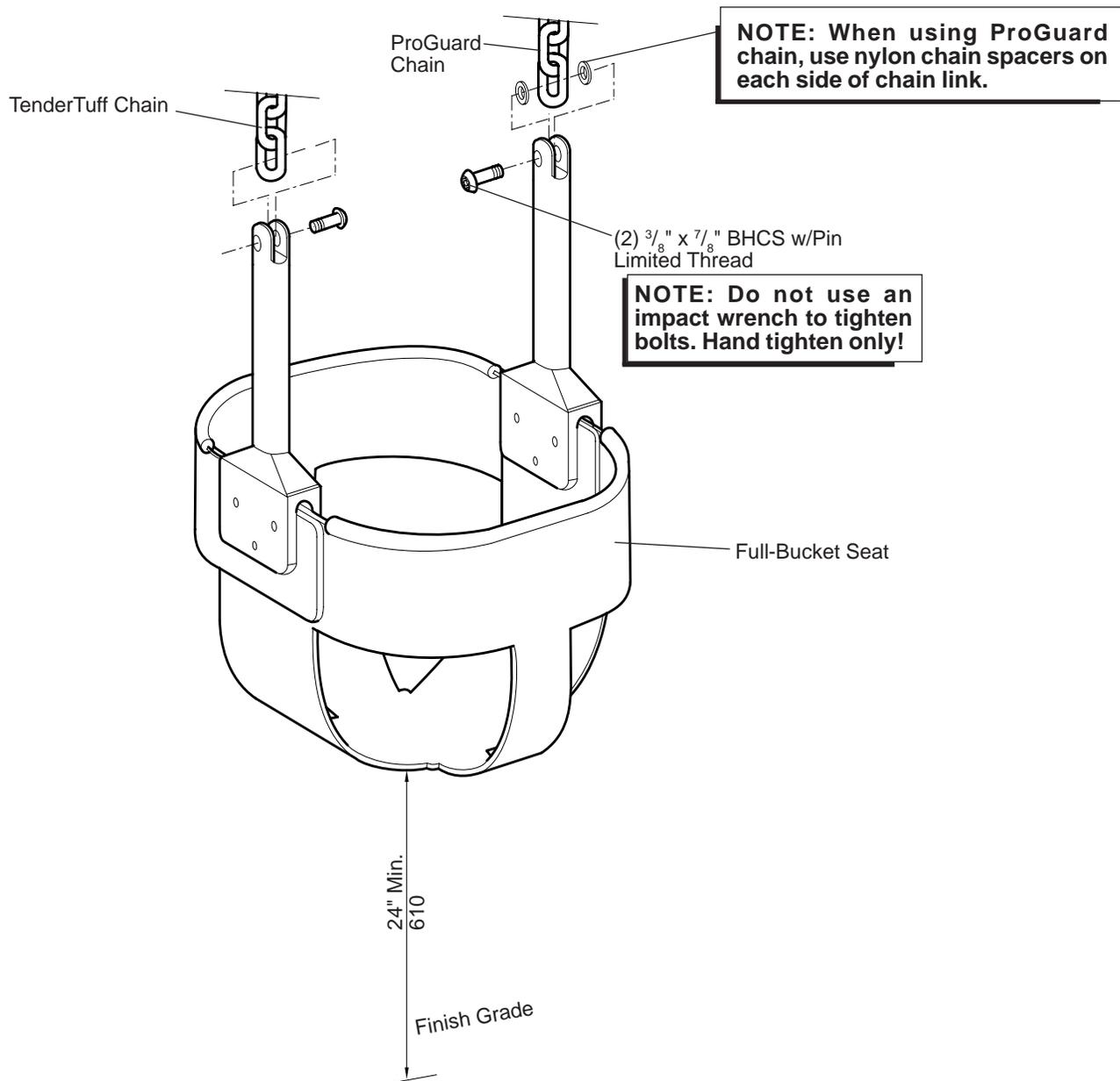
- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

SWING HANGER OPTIONS





Swings

176038 Full-Bucket Seat, w/Chains



Swings 176038 Full-Bucket Seat, w/Chains

Parts List

Part#	Description	Qty.
7 Ft. High Beam (5" Dia. Beam)		
186276	Full-Bucket Swing Seat, Black	1
141739	43 3/16" Chain, TenderTuff, Specify Color	2
175248	43 3/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
8 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
160110	52 9/16" Chain, TenderTuff, Specify Color	2
174882	52 9/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
10 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
152051	76 7/16" Chain, TenderTuff, Specify Color	2
174883	76 7/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
7 Ft. High Beam (Tot)		
186276	Full-Bucket Swing Seat, Black	1
152053	37 1/2" Chain, TenderTuff, Specify Color	2
175247	37 1/2" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
75" High Beam (Toddler)		
186276	Full-Bucket Swing Seat, Black	1
152016	29 7/8" Chain, TenderTuff, Specify Color	2
174881	29 7/8" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4

Specifications

Full-Bucket Seat: Seat shall be molded of U.V. stabilized, high quality, black rubber, encapsulating a 24 gauge stainless steel reinforcement plate. Handle cast from 356-T6 aluminum alloy with black polyarmor paint finish. Handle attaches to seat with (3) 1/4" x 1 5/16" long stainless steel rivets. The finished size of the full bucket shall be 9" deep x 10 1/2" wide.

Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff, color specified.

Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight:
 14 lbs. (7 FT. Beam 5" Dia. w/TenderTuff Chain)
 13 lbs. (7 FT. Beam 5" Dia. w/ProGuard Chain)
 14 lbs. (8 FT. Beam w/TenderTuff Chain)
 14 lbs. (8 FT. Beam w/ProGuard Chain)
 17 lbs. (10 FT. Beam w/TenderTuff Chain)
 16 lbs. (10 FT. Beam w/ProGuard Chain)
 12 lbs. (7 FT. Beam w/TenderTuff Chain)
 12 lbs. (7 FT. Beam w/ProGuard Chain)
 11 lbs. (75" Beam w/TenderTuff Chain)
 11 lbs. (75" Beam w/ProGuard Chain)

Installation Instructions

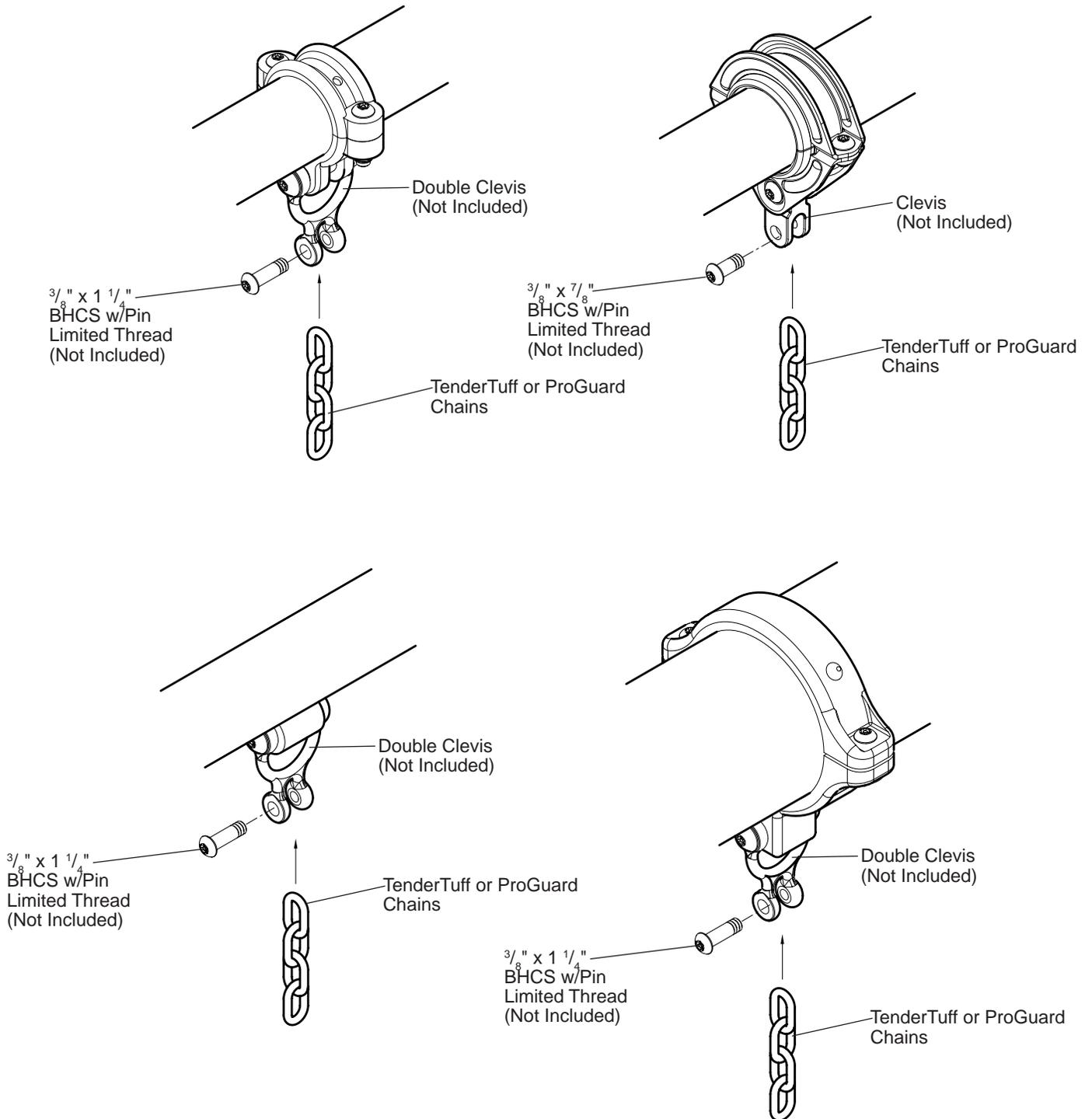
Swing Hangers with Double Clevis

- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

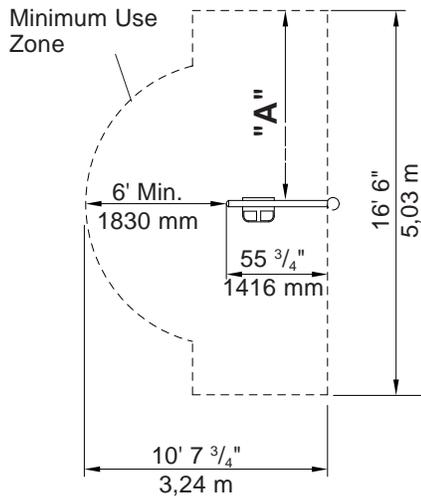
SWING HANGER OPTIONS



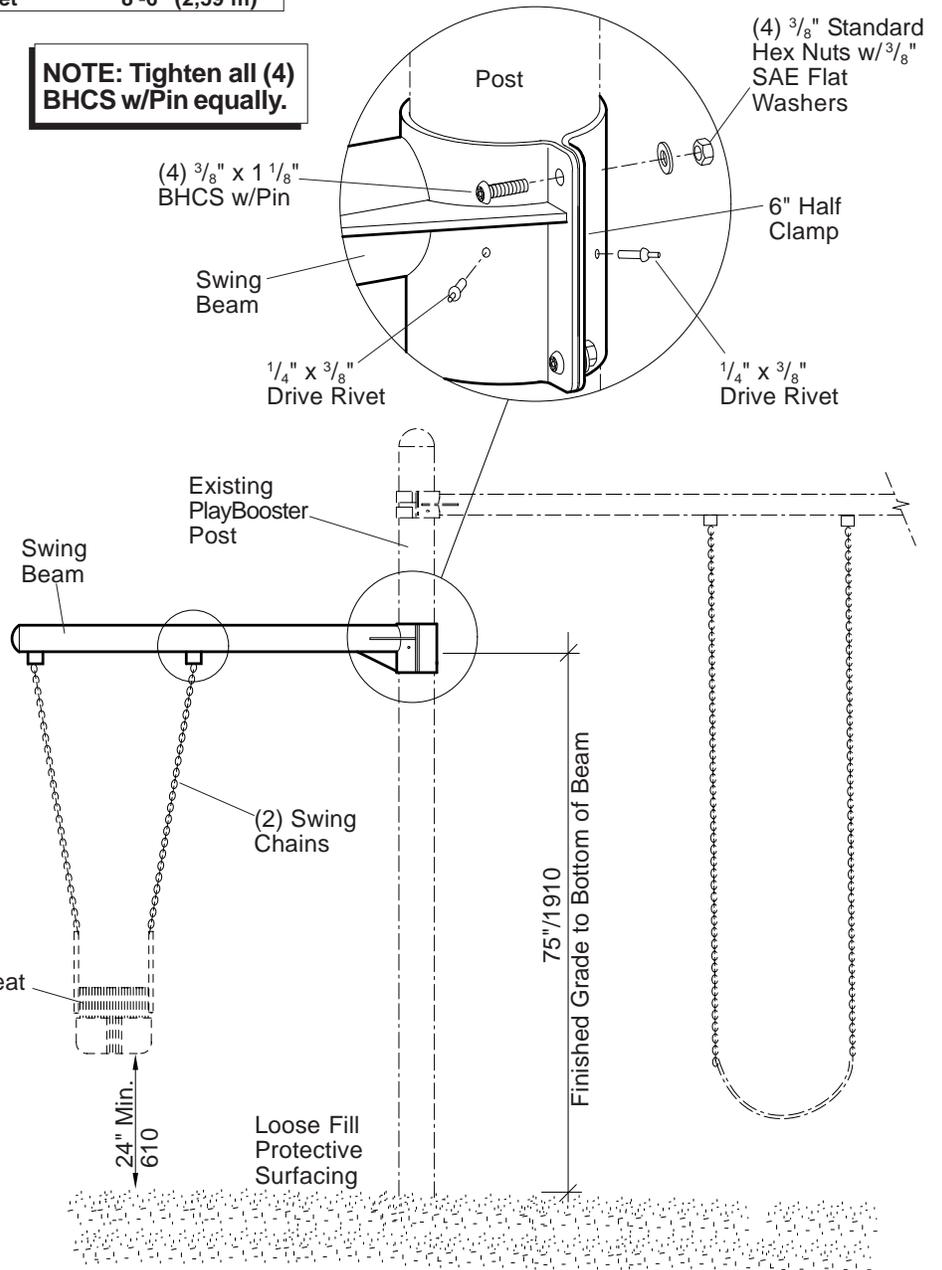
KEY	Dimension "A"
Seat Type	
Belt	N/A
Flat	N/A
Full Bucket	8'-6" (2,59 m)
Half Bucket	12'-6" (3,81 m)
Molded Bucket	N/A
Molded Bucket/Harness	N/A
Infant Full Bucket	8'-6" (2,59 m)

**DETAIL
SWING BEAM ATTACHMENT**

MINIMUM USE ZONE

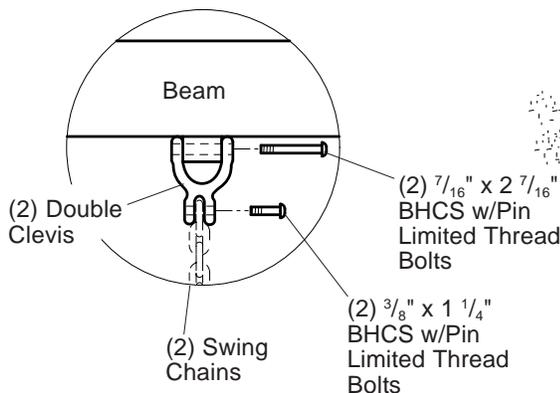


NOTE: Tighten all (4) BHCS w/Pin equally.



NOTE:
This Swing is designed for users up to 5 years of age.

**DETAIL
DOUBLE CLEVIS ATTACHMENT**



NOTE: Model number is for swing beam only, order swing seat with chains separately.

Swings 177337 Toddler Swing Add-On Beam, No Post



Swings 177337 Toddler Swing Add-On Beam, No Post

Parts List

Part#	Description	Qty.
135548-00	Swing Beam, Specify Color	1
154322-00	6" Half Clamp, Specify Color	1
116882-00	Beam Hardware Package	1
100198-00	3/8" x 1 1/8" BHCS w/Pin, SST	4
100327-00	3/8" Standard Hex Nut, SST	4
100365-00	3/8" SAE Flat Washer, SST	4
100611-00	1/4" x 3/8" Drive Rivet, AL/SST	2
132634-00	Double Clevis Hardware Package	1
127068-00	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread Bolt, SST.. 2	2
100292-00	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread Bolt, SST 2	2
138917-00	Double Clevis	2

Specifications

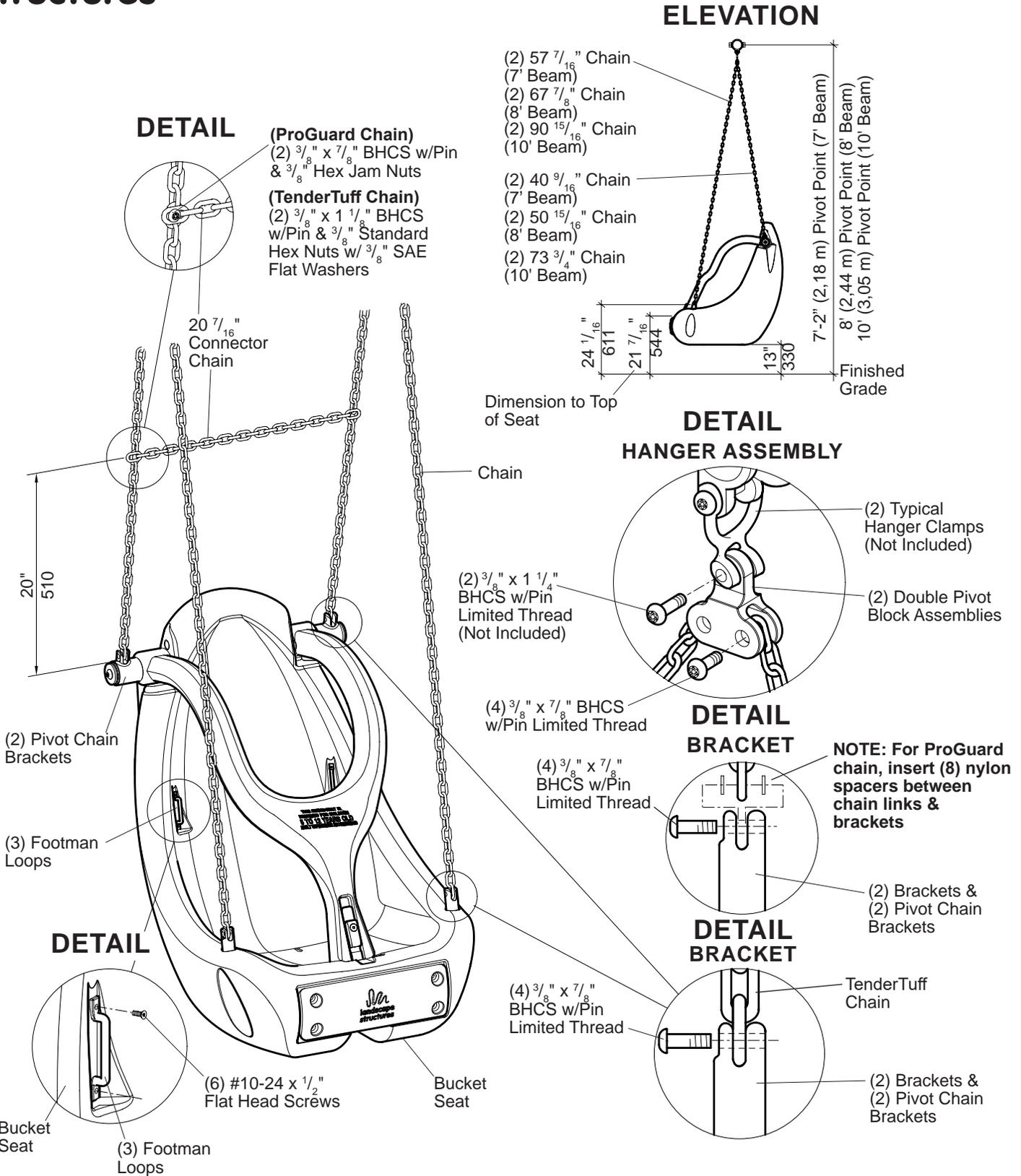
Swing Beam: Weldment comprised of 3.500" O.D. RS-20 (.120" - .130") galvanized steel tubing, 6" wide zinc plated steel clamp, 3.500" pipe cap, and 1 1/4" housings with bronze bushings. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour
Area Req.: 10' 7 3/4" x 17' (3,24 m x 5,18 m)
Weight: 31 lbs.

Installation Instructions

- 1) Attach swing beam to post using 6" half clamp, 3/8" x 1 1/8" BHCS w/pin and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Swing Beam Attachment Detail. **NOTE: Tighten all (4) BHCS w/pin equally.**
- 2) Attach double clevises to beam using 7/16" x 2 7/16" BHCS w/pin limited thread bolts, and attach swing chains to double clevises using 3/8" x 1 1/4" BHCS w/pin limited thread bolts. Refer to the Double Clevis Attachment Detail.
- 3) Install Swing Seat per the installation sheet.
- 4) Drill through hole in 6" half clamp and into post with a 1/4" or "F" (only) drill bit. Install 1/4" x 3/8" drive rivet. Refer to the Swing Beam Attachment Detail.
- 5) Drill through hole in swing beam and into post with a 1/4" or "F" (only) drill bit. Install 1/4" x 3/8" drive rivet. Refer to the Swing Beam Attachment Detail.
- 6) Install protective surfacing before users are allowed to play on the structure.





Swings 177351 Molded Bucket Seat, w/Harness

Parts List

Part#	Description	Qty.
259433	Molded Bucket Seat Assembly, Specify Color.....	1
7 Ft. High Beam - ProGuard Finished Chains		
175251	57 7/16" Long, (Front).....	2
193869	49 9/16" Long, (Back).....	2
175653	20 7/16" Long, (Connector).....	1
8 Ft. High Beam - ProGuard Finished Chains		
174404	67 7/8" Long, (Front).....	2
175619	50 15/16" Long, (Back).....	2
175653	20 7/16" Long, (Connector).....	1
10 Ft. High Beam - ProGuard Finished Chains		
174884	90 11/16" Long, (Front).....	2
175623	73 3/4" Long, (Back).....	2
175653	20 7/16" Long, (Connector).....	1
7 Ft. High Beam - TenderTuff Chains		
178679	57 7/16" Long, (Front), Specify Color.....	2
179286	40 9/16" Long, (Back), Specify Color.....	2
174571	20 7/16" Long, (Connector), Specify Color.....	1
8 Ft. High Beam - TenderTuff Chains		
152050	67 7/8" Long, (Front), Specify Color.....	2
174572	50 15/16" Long, (Back), Specify Color.....	2
174571	20 7/16" Long, (Connector), Specify Color.....	1
10 Ft. High Beam -TenderTuff Chains		
152052	90 11/16" Long, (Front), Specify Color.....	2
175621	73 3/4" Long, (Back), Specify Color.....	2
174571	20 7/16" Long, (Connector), Specify Color.....	1
225662	Molded Seat w/Yoke Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	2
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	8
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	6
106035	Seat Mounting Bracket.....	2
112501	Nylon Spacer	8
128296	3/8" Hex Jam Nut, SST.....	2
207709	Footman Loop, SST.....	3
160307	Double Pivot Block Assy.....	2
162462	#10-24 x 1/2" Flat Head Screw, SST	6

Specifications

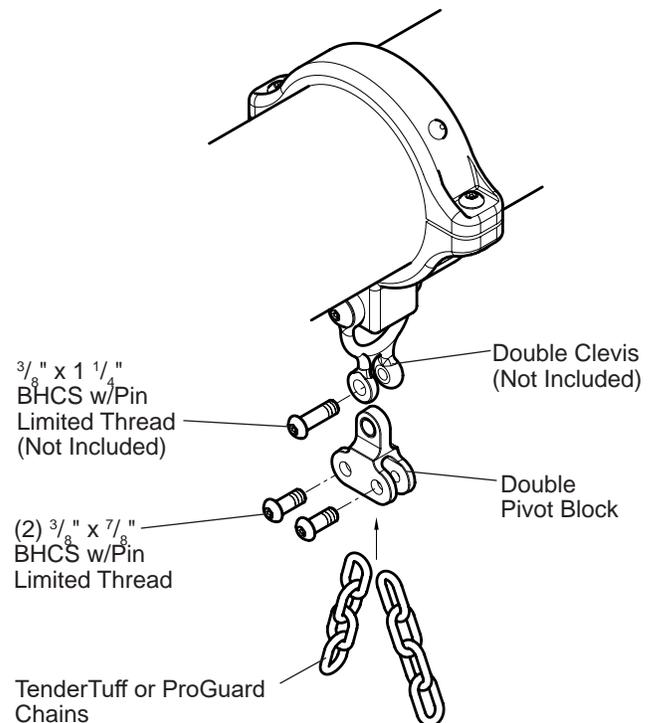
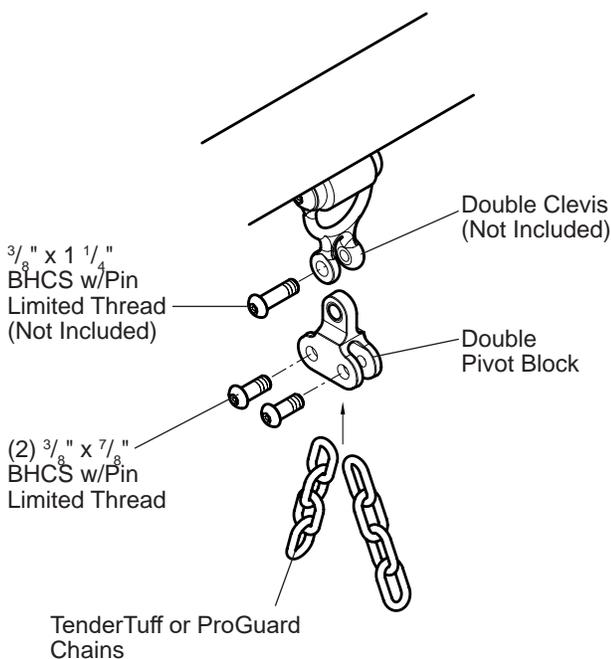
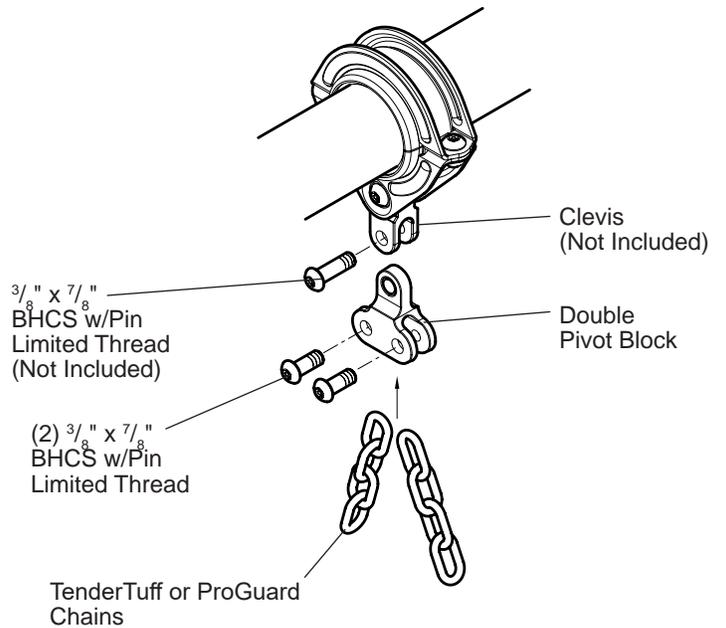
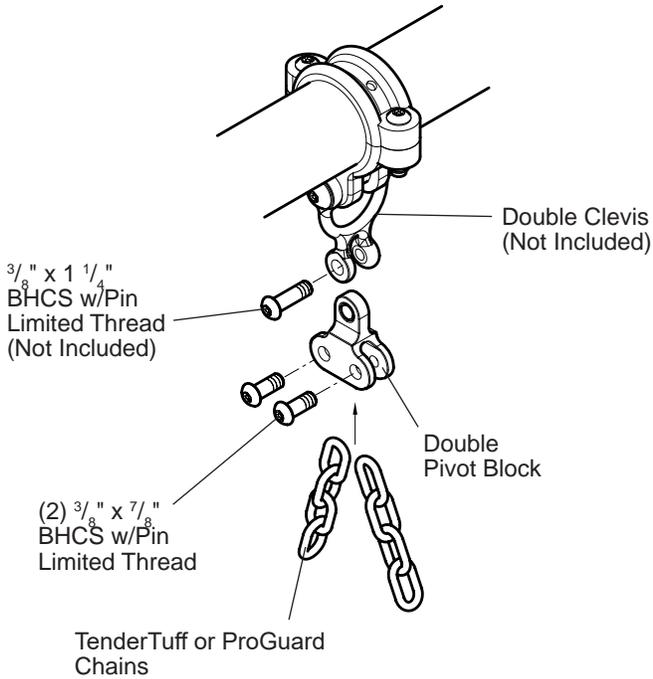
- Bucket Seat Assy:** (Bucket Seat & Yoke) Rotationally molded from U.V. stabilized linear low density polyethylene, color specified. (Pipebolt) Made from 1.125" O.D. 6005-T5 threaded anodized aluminum tube. (Bearings) UHMW PE lubricated. (Brackets) Made from 356-T6 aluminum.
- Chain/ProGuard:** Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.
- Chain/Coated:** Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff, color specified.

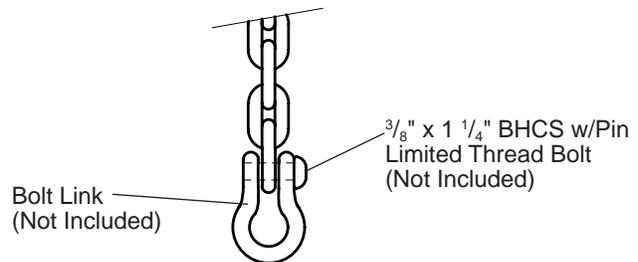
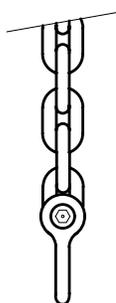
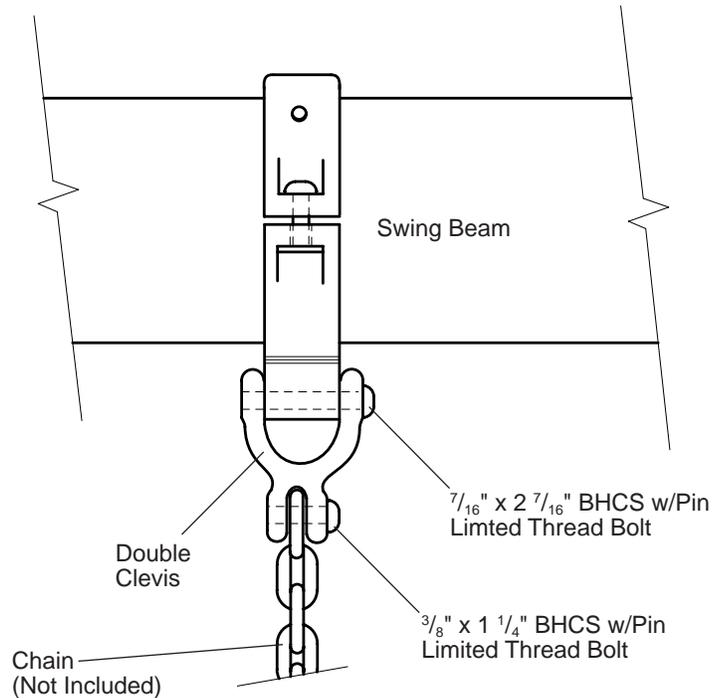
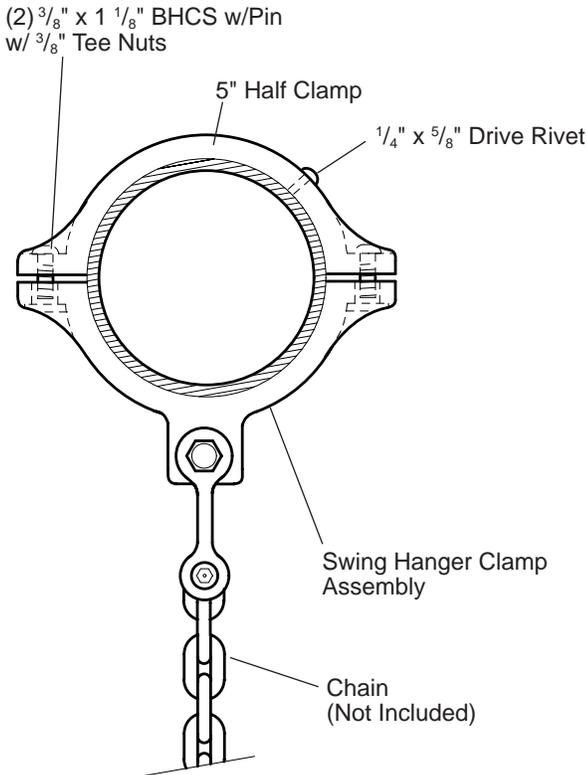
- Seat Mounting Bracket:** Cast from 535 aluminum magnesium.
- Bumper:** Molded from U.V. stabilized black EPDM rubber encapsulating 11 GA (.120") HRPO steel sheet.
- Dbl. Pivot Block:** Fabricated from 6061-T6 Aluminum with bronze oil impregnated bearing.
- Fasteners:** Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
- Installation Time:** Approx. 1 man hour
- Weight:** 50 lbs. (7 Ft. Beam w/ProGuard Chains)
53 lbs. (7 Ft. Beam w/TenderTuff Chains)
48 lbs. (8 Ft. Beam w/ProGuard Chains)
51 lbs. (8 Ft. Beam w/TenderTuff Chains)
51 lbs. (10 Ft. Beam w/ProGuard Chains)
55 lbs. (10 Ft. Beam w/TenderTuff Chains)

Installation Instructions

- 1) Insert seat mounting brackets into molded-in holes in front of bucket seat and attach ends of chain, using 3/8" x 7/8" BHCS w/pin limited thread. See Bracket Detail. **NOTE: For ProGuard coated chain, insert (4) nylon spacers between chain links and brackets.**
- 2) Attach ends of chain to pivot chain brackets, using 3/8" x 7/8" BHCS w/pin limited thread. See Bracket Detail. **NOTE: For ProGuard coated chain, insert (4) nylon spacers between chain links and brackets.**
- 3) Attach chains to double pivot blocks, using 3/8" x 7/8" BHCS w/pin limited thread.
- 4) **(Swing Hangers with Double Clevis)** Attach chains to swing hanger double clevis, using 3/8" x 1 1/4" BHCS w/pin limited thread.
(Anti-wrap Swing Hangers) Attach chains to anti-wrap swing hanger clevis, using 3/8" x 7/8" BHCS w/pin limited thread.
- 5) **(ProGuard Chain)** Attach connector chain to back swing chains at dimension shown, using 3/8" x 7/8" BHCS w/pin & 3/8" jam nuts. Refer to Detail.
(TenderTuff Chain) Attach connector chain to back swing chains at dimension shown, using 3/8" x 1 1/8" BHCS w/pin & 3/8" standard hex nuts with 3/8" SAE Flat Washers. Refer to Detail.
- 6) Attach footman loops, using #10-24 x 1/2" flat head screws, as shown. Footman loops are used for seat belts (not included).
- 7) Attach bumper to front of swing seat, using 3/8" x 7/8" BHCS w/pin with 3/8" SAE Flat Washers.
- 8) Install protective surfacing before users are allowed to play on the structure.

SWING HANGER OPTIONS





NOTE:
 Do Not Over-Tighten Limited Thread Bolt! Threads Should Not Protude Past Bolt Link.

NOTE:
 Position Bolt Head Inward Facing User.

Swings

111418 Swing Hanger, Belt Swing

Parts List

Part#	Description	Qty.
105327-01	5" Half Clamp, Specify Color	1
100198-00	$\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
100292-00	$\frac{3}{8}$ " x 1 $\frac{1}{4}$ " BHCS w/Pin Ltd. Thread Bolt, SST.....	1
121291-00	Swing Hanger Clamp Assy. Specify Color	1
121289-00	Swing Hanger Clamp, Specify Color	1
127068-00	$\frac{7}{16}$ " x 2 $\frac{7}{16}$ " BHCS w/Pin Ltd. Thread Bolt, SST	1
138917-00	Swing Hanger Double Clevis SST	1
100667-00	Oilite Bushing.....	1

Specifications

Hanger Clamp

Assembly: Cast aluminum. Finish: ProShield®, color specified.

Double Clevis: Stainless Steel.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

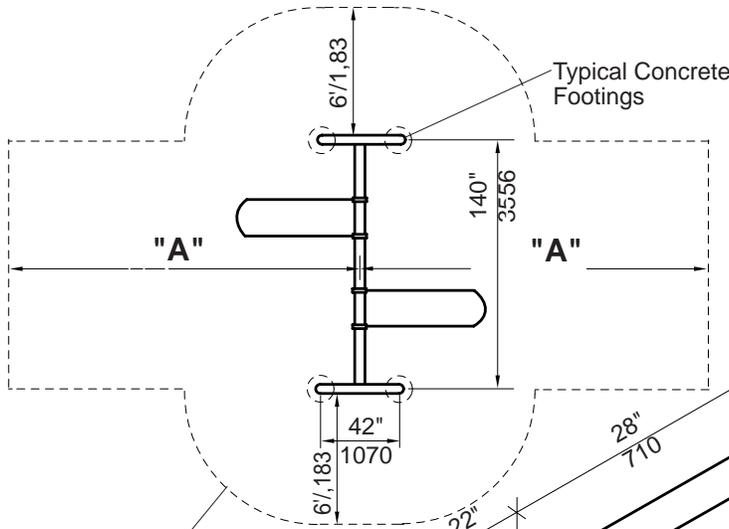
Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 6 lbs.

Installation Instructions

- 1) Locate and mark location of clamp on beam.
- 2) Attach 5" half clamp and swing hanger clamp to beam using $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts. *Tighten evenly.*
- 3) **IMPORTANT:** *Drill through holes in 5" half clamps and into 5" pipe with a $\frac{1}{4}$ " or "F" (only) drill bit, tap $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets through 5" half clamps and into pipe, to ensure that clamps remain secure.*
- 4) Attach swing chain to double clevis using $\frac{3}{8}$ " x 1 $\frac{1}{4}$ " BHCS w/pin limited thread bolts.
- 5) Attach swing seat to chains using bolt links with $\frac{3}{8}$ " x 1 $\frac{1}{4}$ " BHCS w/pin limited thread bolts. **NOTE:** *Do not over-tighten limited thread bolt. Threads should not protrude past bolt link. Position bolt head inward facing user.*

PLAN VIEW/FOOTING LAYOUT



KEY	Dimension "A"
Seat Type	
Belt	16'-0" (4,88 m)
Flat	16'-0" (4,88 m)
Full Bucket	12'-0" (3,66 m)
Half Bucket	16'-0" (4,88 m)
Molded Bucket	16'-0" (4,88 m)
Molded Bucket/Harness	13'-0" (3,96 m)
Infant Full Bucket	N/A

Minimum Use Zone

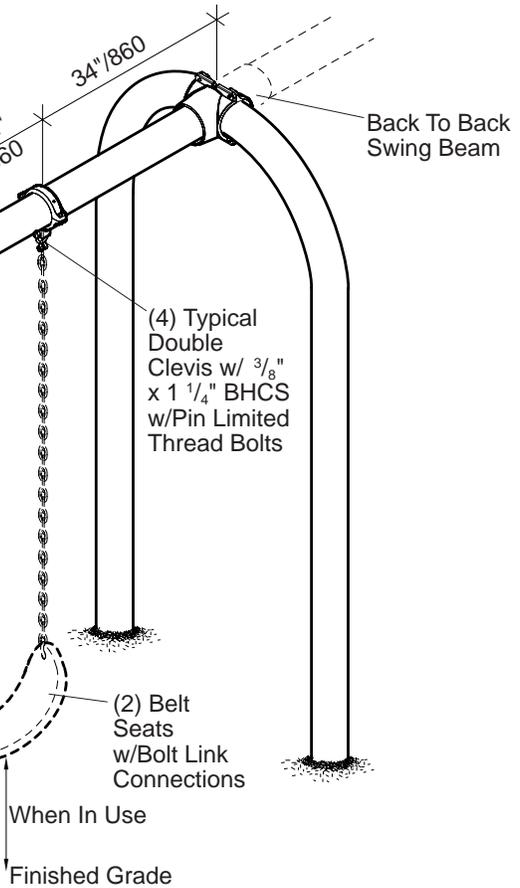
(2) Typical Tee Clamps-Center Beam In Middle Of Arch

99 3/4" / 2534
From Top of Surfacing to Center of Beam

(2) Arches

(4) Labels

Protective Surfacing



NOTE: Model numbers are for swing frames only, order swing seats with chains separately.

Model #221293 Additional Bay

Swings

221292/221293 Arch Swing Frame

Sheet 1 of 2



Swings 221292/221293 Arch Swing Frame

Parts List

Part#	Description	Qty.	
		2 Pl	Add. Bay
126749	Swing Arch, Specify Color.....	2	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	8	6
105327	5" Half Clamp, Specify Color.....	8	4*
216492	140" Swing Beam, Specify Color.....	1	1
121291	Swing Hanger Clamp Assy. Specify Color	4	4
121289	Swing Hanger Clamp, Specify Color.....	4	4
127068	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread, SST.....	4	4
138917	Swing Hanger Double Clevis.....	4	4
100667	Oilite Bushing.....	4	4
243802	Hdw Pkg 5iOD Swing Beam	1	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	8	8
234397	BHCS 6LP LTHD 7/16 x 1 11/16i, SST.....	8	8
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST.....	4	4
100351	3/8" Tee Nut, SST.....	8	8
156846	Play Safe Label, 2-12 Yrs.....	1	1
234937	7/16" D Cut Washer, SST.....	16	16
182213	Hot Surface Warning Label.....	1	1
182212	Entanglement Warning Label.....	1	1
115176	Hard Surface Warning Label.....	1	1
100330	7/16" Nylok Hex Nut.....	8	8

* = 5" Half Clamps From 2 PL. End Of Beam Need To Be Used.

Specifications

Arch Posts: See PlayBooster® (PB) General Specifications.

Swing Beam: Weldment comprised of tee clamps and 5" O.D. extruded 6005-T5 aluminum alloy tube with a .125" wall. Finish: ProShield®, color specified.

Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 8 man hours
Additional Bay 4 man hours

Concrete Req.: Approx. 7.5 cu. ft.
Additional Bay 3.75 cu. ft.

Area Req.: 24'-2 3/4" x 32' (7,39 m x 9,75 m)
Additional Bay 11'-8" x 32' (3,55 m x 9,75 m)

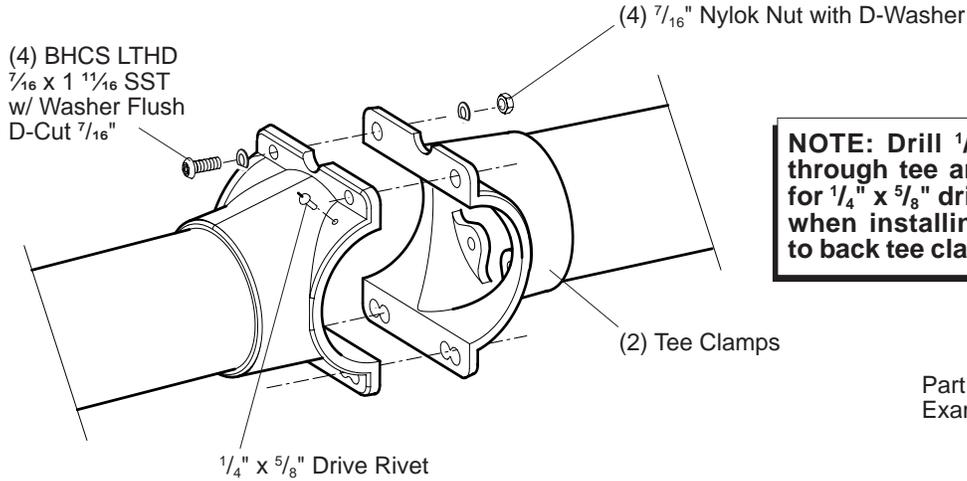
Weight: 204 lbs.
Additional Bay 124 lbs.

Fall Height: 96" (2,43 m)

Installation Instructions

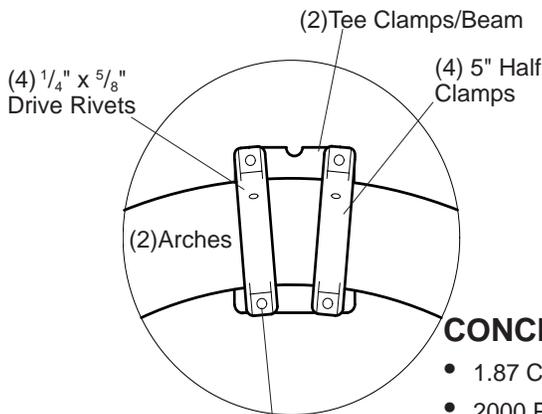
- 1) Dig footings, spaced as shown. Refer to the Concrete Footing Detail.
- 2) Set arches in footing holes and attach swing beam to center of arches using 5" half clamps with 7/16" BHCS w/Pin, 7/16" D-Cut Washers, and 7/16" Nylok nuts. Refer to the Tee Clamp Position Detail. Center of beam should be 99 3/4" above finished grade. When installing back to back swing beams refer to the Back To Back Tee Clamps Detail.
- 3) Level beam and plumb arches and temporarily prop in position. Pour concrete footings and let cure for 72 hours before proceeding.
- 4) Locate, mark and attach swing hanger clamps to beam in locations shown. Refer to the Typical Swing Hanger Clamp Spec Sheet.
- 5) **NOTE:** Refer to specific swing seat installation document for attaching chains and seats.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet. Refer to the Back To Back Tee Clamps Detail.
- 7) Apply Play Safe and Warning Labels, as shown.
- 8) Install protective surfacing before users are allowed to play on the swing.

**DETAIL
BACK TO BACK
TEE CLAMPS**



NOTE: Drill 1/4" hole through tee and arch for 1/4" x 5/8" drive rivet when installing back to back tee clamps.

**DETAIL
TEE CLAMP POSITION**

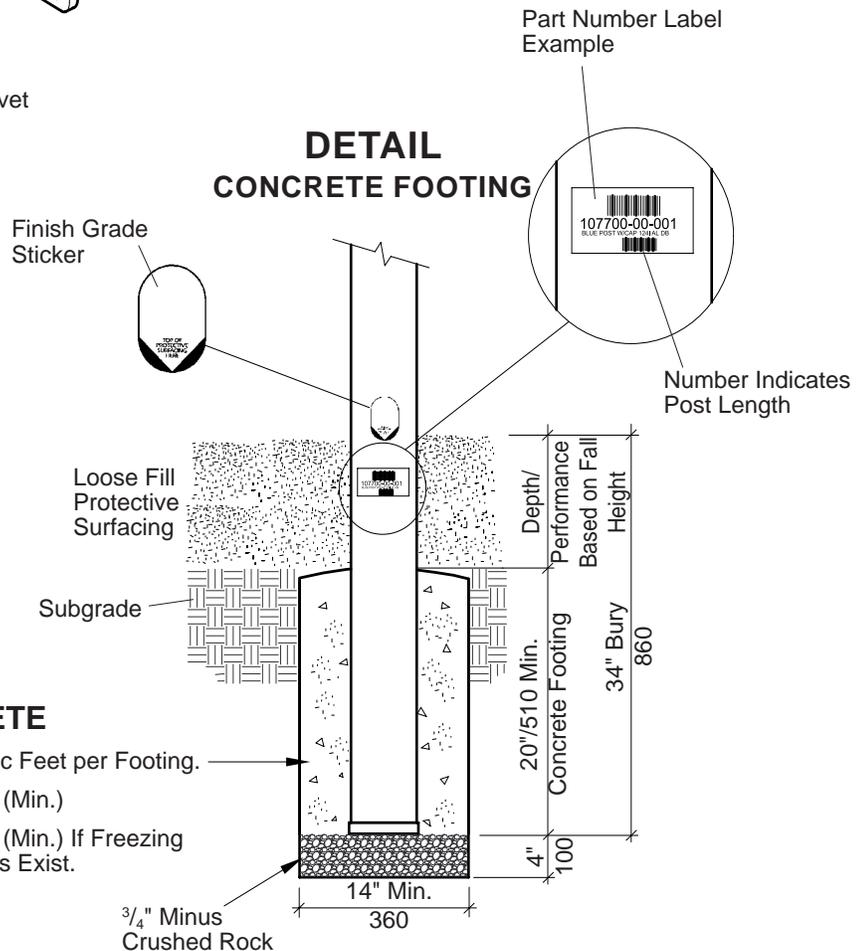


NOTE: Use inside holes for (4) 7/16 BHCS w/Pin limited thread w/D-Washer 7/16 Nylok Nut w/D-Washer

CONCRETE

- 1.87 Cubic Feet per Footing.
- 2000 PSI (Min.)
- 3000 PSI (Min.) If Freezing Conditions Exist.

**DETAIL
CONCRETE FOOTING**



APPENDIX A:

Morrison Park

**PLAYGROUND EQUIPMENT MANUFACTURER'S
INSTALLATION INSTRUCTIONS**

Installation Instructions (5-12 Equipment)

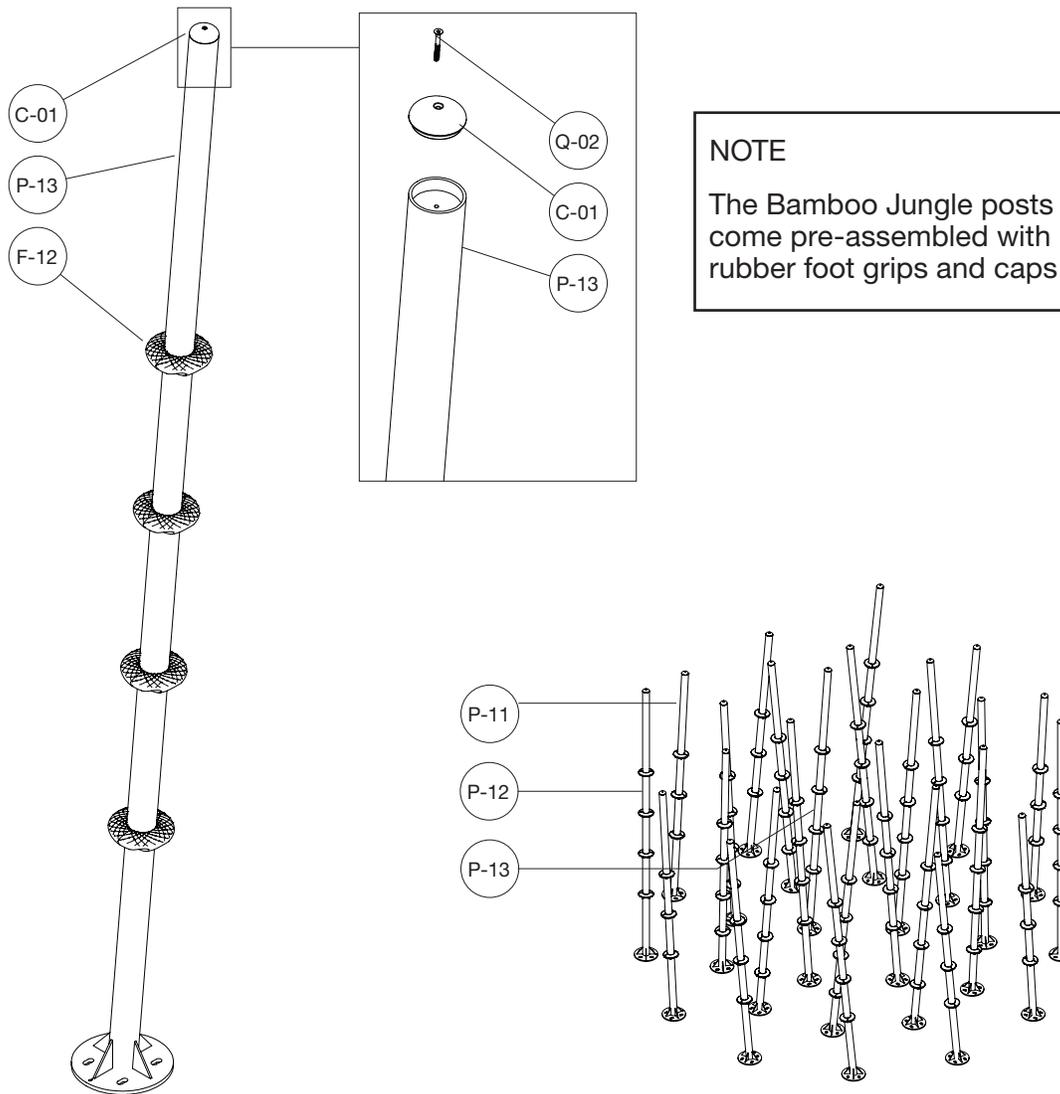


TrekFit[®] 

BAMBOO JUNGLE

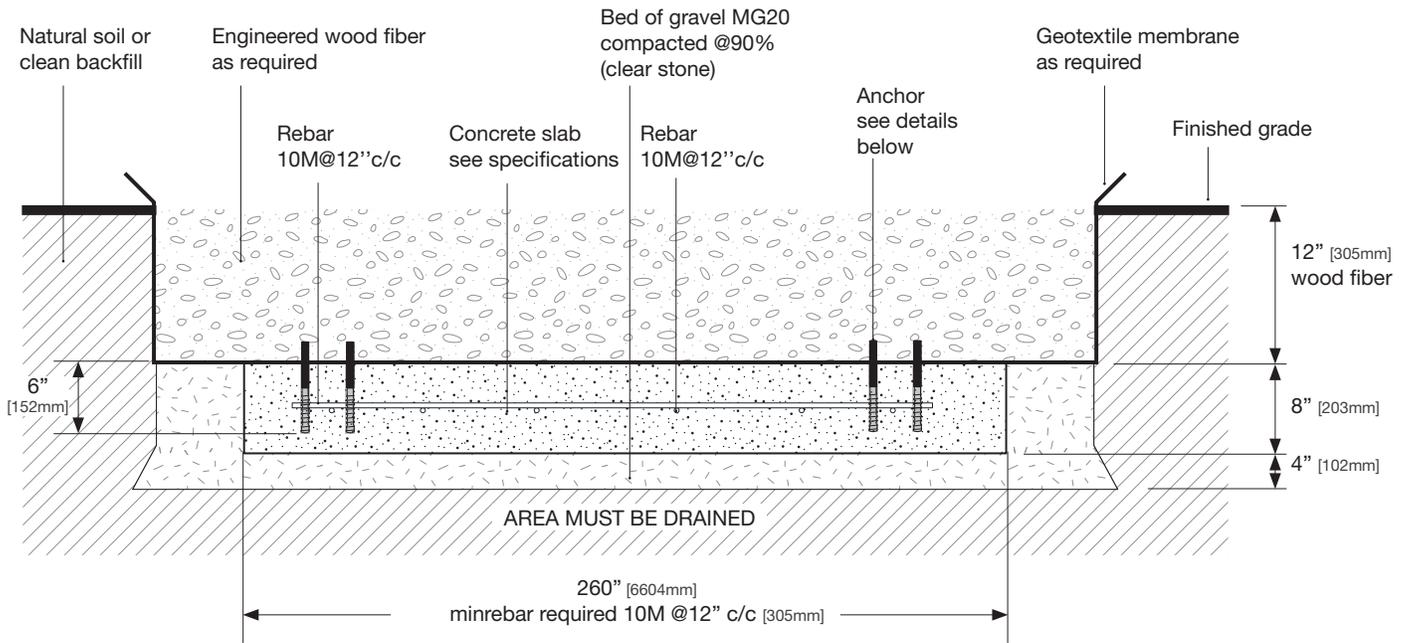
TREKFIT System

2020

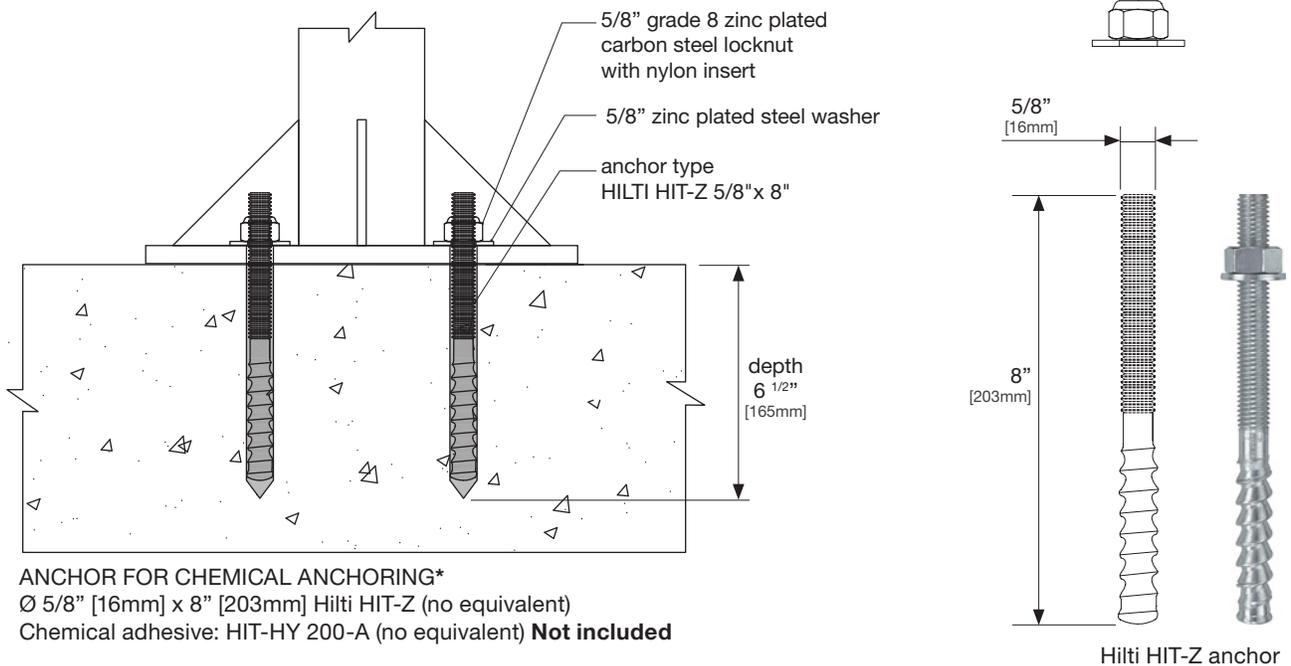


FOR REPLACEMENT PARTS, CONSULT THE CHART BELOW FOR PART NUMBERS

CODE	DESCRIPTION	MATERIAL
C-01	Cap 3-1/2" Ø	UHMW black polyethylene
C-12	Bamboo Insert Left + Right	Delrin
P-11	Bamboo post 11'	Zinc plated steel
P-12	Bamboo post 12'	
P-13	Bamboo post 13'	
Q-02	Anti-theft countersunk screw T30 Torx 1/4-20 x 2-1/4"	Stainless steel
Q-17	Hex nut 3/8-16"	
Q-18	Anti-theft button head screw T45 Torx 3/8-16 x 1-1/4"	
Q-26	3/8 Washer Mil spec	
F-12	Bamboo grip	EPDM



CONCRETE SLAB side view



*Anchors, washers and locknuts are included with the Bamboo Jungle

NOTES:

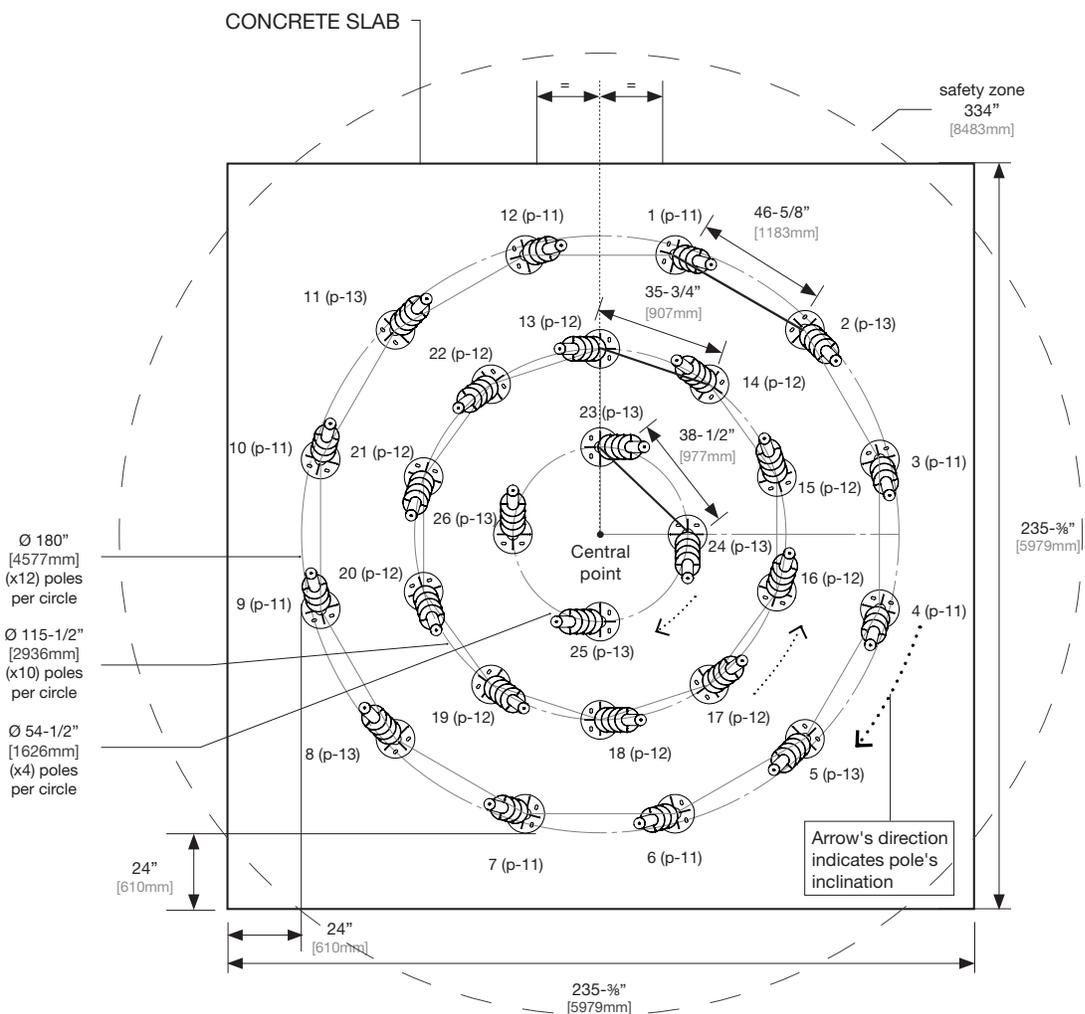
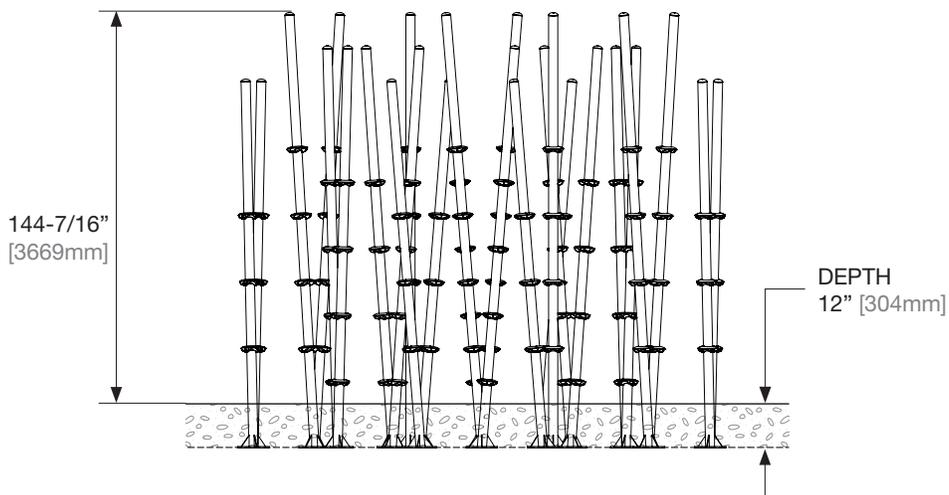
1. Use ARM.CSA G30.18-M92 400W. Galv. G164
2. The concrete must be mixed to achieve a minimum compression strength of 30 MPa @ 28 days with 4-6% air entrainment.
3. The anchor bolts must be Hilti type HIT-Z 5/8" x 8" zinc plated carbon steel, no equivalent

BAMBOO JUNGLE - JUNIOR - 26 POSTS

EQUIPMENT ASSEMBLY

Number of posts
per size

- P-11 : 8
- P-12 : 10
- P-13 : 8



"How to distribute your hardware *Headache Free*"



We have received feedback from you, our customers, that the most common delay in completing your playground installation is lost or misplaced hardware.

Some of our most successful installations have used a "*check-out*" system with one person appointed to distribute the various hardware packages. Installation sheets are provided for each component that indicate hardware packages/items required to assemble that component. Refer to these sheets to determine which hardware items to request from the designated "*check-out*" person.

HELPFUL HINTS:

Read installation sheets.

Be sure to use the correct length hardware as specified on the installation sheets.

Be sure to use clamps in the correct location as indicated on the installation sheets.

Warning

Your playground may include equipment containing moving parts. Moving parts are more vulnerable to wear, mis-use and abuse than other non-moving parts. It is critical these parts be inspected and maintained according to our recommendations.

As the owner, it is your responsibility to perform preventative maintenance and record your findings. Failure to do so may create a hazard and cause serious injury or death.

IMPORTANT SAFETY NOTES!

According to the U.S. Consumer Product Safety Commission (CPSC) nearly 70% of all playground injuries are caused by falls to the surface.

PLEASE INSTALL AND MAINTAIN ADEQUATE PROTECTIVE SURFACING UNDER AND AROUND YOUR PLAYSTRUCTURE!

Never let children play on the equipment before protective surfacing is installed.

Consult the CPSC's Handbook for Public Playground Safety, the ASTM F1487 Standard or your Landscape Structures representative for more information.





Look for compliance to the following guidelines and standards whenever you install playground equipment. It's your assurance that the products you install meet the most rigorous safety and quality assurance standards.

Landscape Structures is a member in good standing of **IPEMA**, the **International Play Equipment Manufacturers Association**. IPEMA is a member-driven, international trade organization that represents and promotes an open market for manufacturers of play equipment.



In the interest of playground safety, IPEMA provides a Third Party Certification Service whereby a designated independent laboratory validates a participant's certification of conformance to ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, except sections 7.1.1, 10 and 12.6.1; CAN/CSA Z614, Children's Playspaces and Equipment Standards, except clauses 9.8, 10 and 11; or both. The use of the corresponding logo in the Landscape Structures Inc. catalog signifies that Landscape Structures Inc. has received written validation from the independent laboratory that the product(s) associated with the use of the logo conforms with the requirements of the indicated standards. Check the IPEMA website (www.ipema.org) to confirm product certification. The use zone and fall height requirements in this publication are shown to ASTM standards. The requirements for other standards may be different. According to the CSA, playground maintenance and inspection is a continuous and integral part of budgetary costs. The cost of inspection and maintenance shall be considered and incorporated into the budget at the time of design, purchase equipment and installation (11.1.1 Budgeting).

International Play Equipment Manufacturers Association

4305 N. Sixth St. Suite A
Harrisburg, PA 17110
www.ipema.org



The Consumer Product Safety Commission (CPSC) is a governmental organization that provides technical safety guidelines for designing, constructing, operating and maintaining public playgrounds.

U.S. Consumer Product Safety Commission

4330 East West Hwy.
Bethesda, MD 20814
www.cpsc.gov

The American Society for Testing and Materials (ASTM) is a scientific and technical organization that is a major developer of standards for testing different types of materials. In 1993, the ASTM published "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use," designation F1487-93. ASTM is more technical than the CPSC. ASTM revised its old standard and published a new standard in 1995, 1998, 2001, 2005, 2007 and again in 2011.

American Society for Testing and Materials

100 Barr Harbor Dr.
P.O. Box C700
West Conshohocken, PA 19428
www.astm.org



The Canadian Standards Association

Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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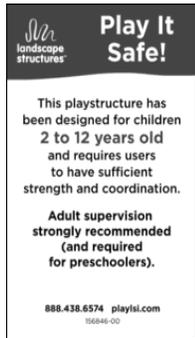
Part No. 156844-00-000



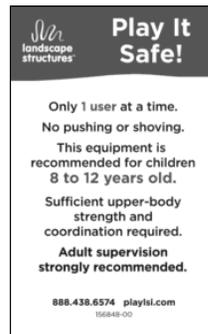
Part No. 182213-00-000



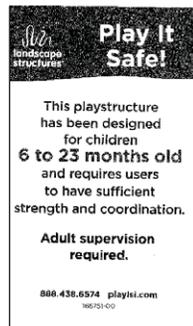
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Part No. 156846-00-000



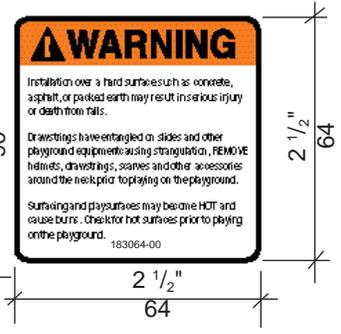
Part No. 156848-00-000



Part No. 166751-00-000



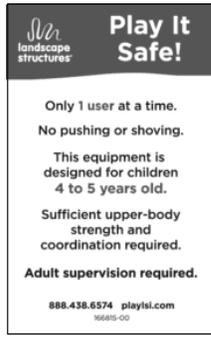
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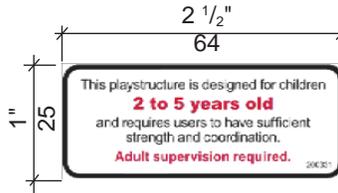
Part No. 183064-00-000



Part No. 156850-00-000



Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.

Part No. 156847-00-000

Part No. 156845-00-000



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

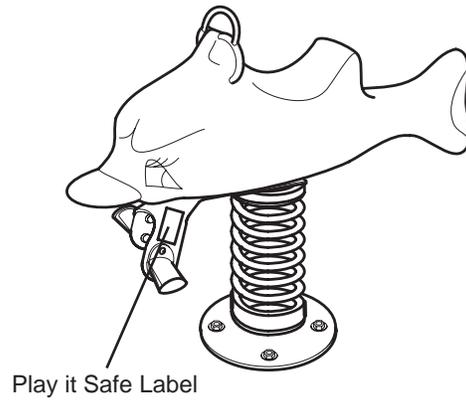
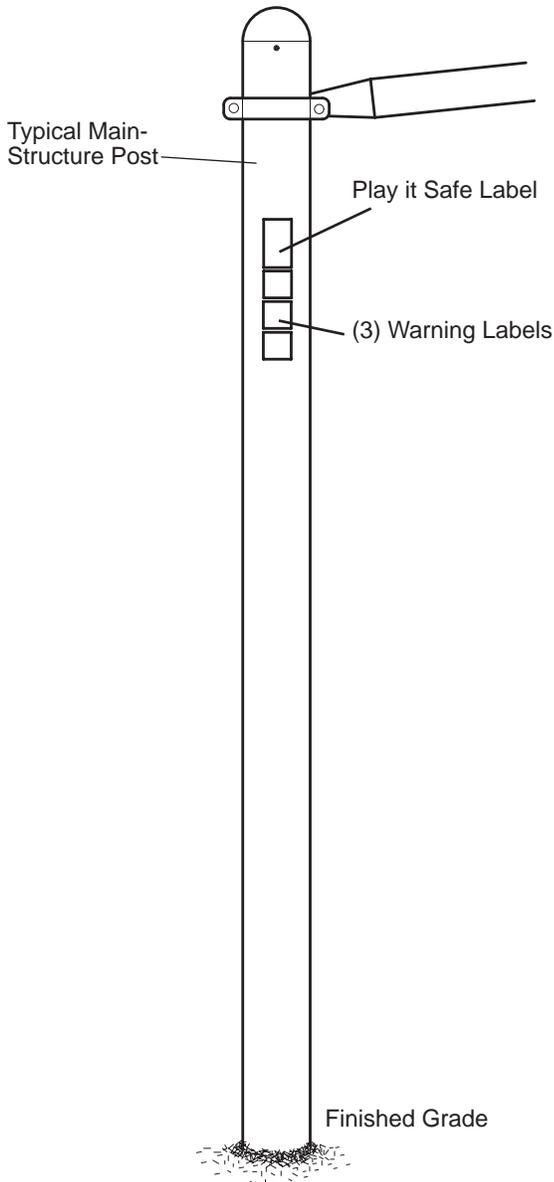
- 251714 5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
- 251723 Flat Large Play Safe Plate 2-5 Years w/Attaching HDW
- 251724 Flat Large Play Safe Plate 2-12 Years w/Attaching HDW
- 251725 Flat Large Play Safe Plate 5-12 Years w/Attaching HDW
- 251727 Flat Large Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
- 251730 Flat Small Play Safe Plate 2-12 Years w/Attaching HDW
- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

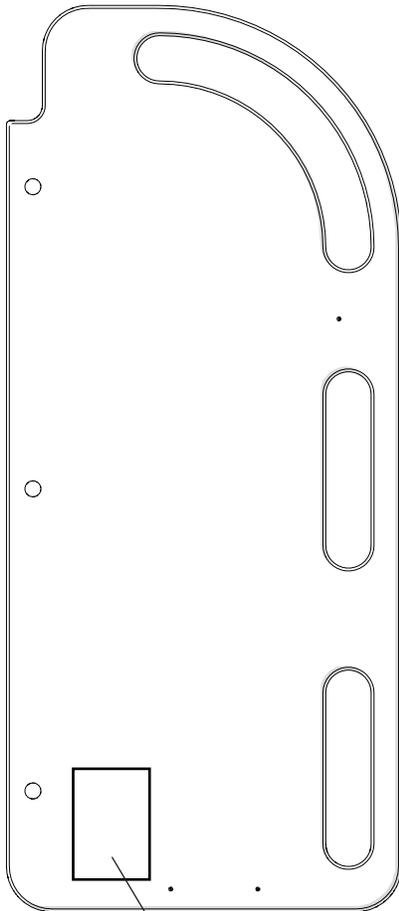




Warning Labels

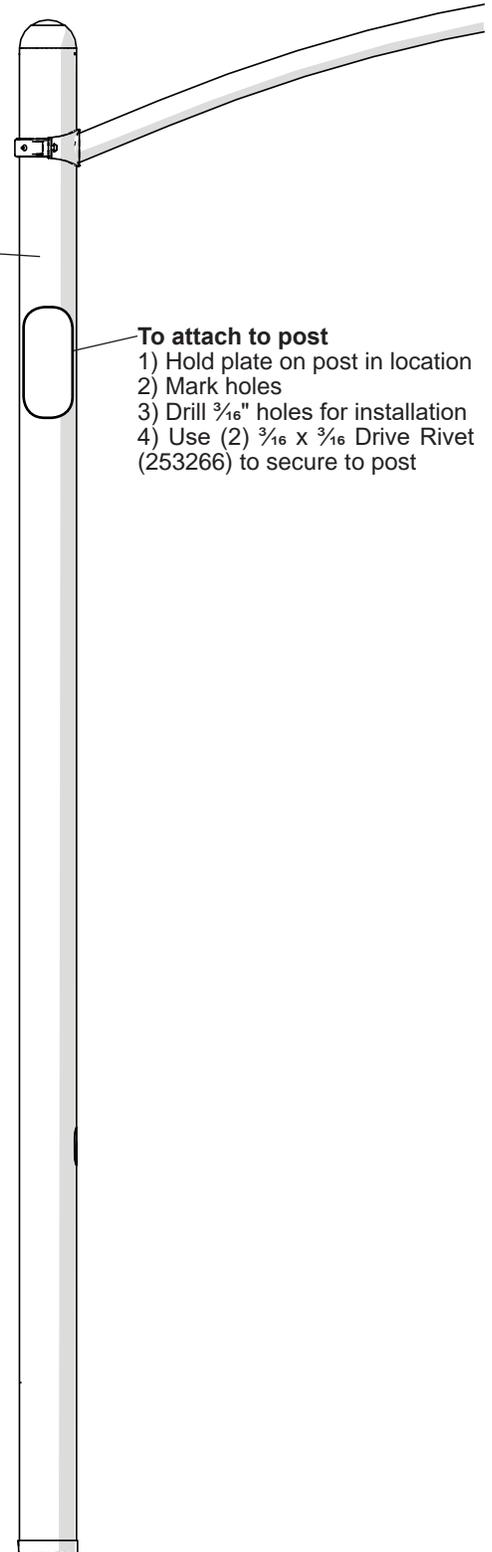
5" formed plate mounts to 5" posts.
 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
 - 2) Mark holes
 - 3) Drill $\frac{1}{8}$ " x $\frac{1}{2}$ " deep holes for installation
 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post

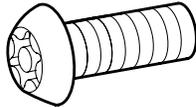


- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post

PB/PS/FP/Evos®/Weevos® **Warning Labels**

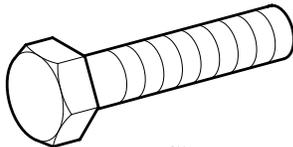
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



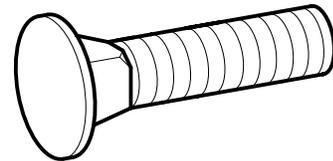
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1)	SST- ANTI-SEIZE	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



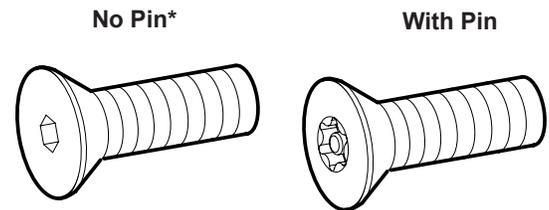
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

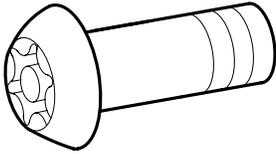
Flat Head Cap Screws (FHCS)



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

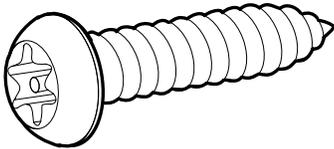
NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

BHCS w/Pin Limited Thread Bolts



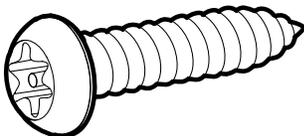
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



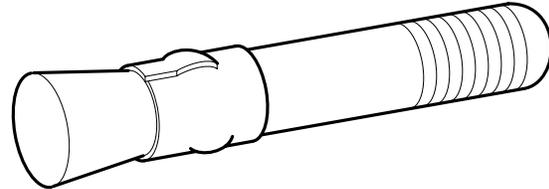
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



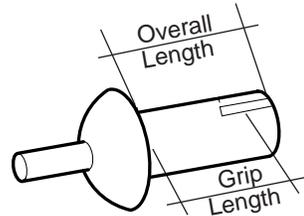
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

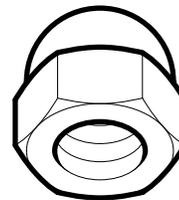
Drive Rivets



NOTE: For more detail see drive rivet detail page.

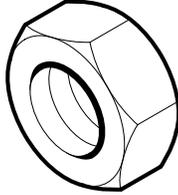
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



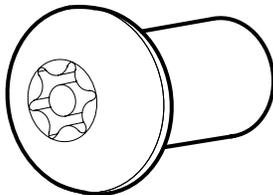
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



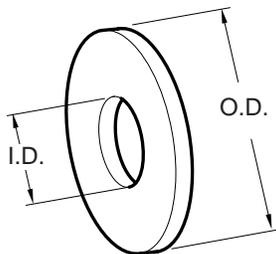
Part #	Sizes Inches	Mat'l or Grade
100326	5/16-18 UNC	SST
100321	3/8-16 UNC	SST-Pat
100327	3/8-16 UNC	SST
128296	3/8-16 UNC (Jam Nut)	SST
100328	7/16-14 UNC	SST
145021	7/16-14 UNC (Jam Nut)	SST
100322	1/2-13 UNC	SST
129692	1/2-13 UNC	SST-Pat
129693	1/2-13 UNC (Jam Nut)	SST
100323	5/8-11 UNC	SST

Flange Nut w/Pin



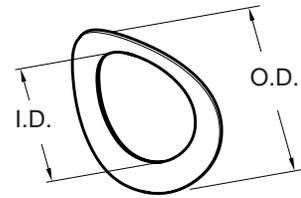
Part #	Sizes Inches	Mat'l or Grade
175006	5/16 x 18 UNC	SST
192064	M 8 x 24 mm	SST
100353	3/8-16 UNC	SST

Flat Washers



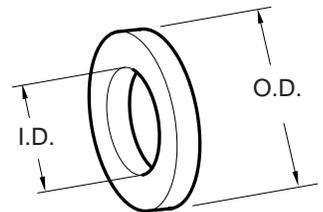
Part #	Sizes Inches	mm	or Grade	I.D.	O.D.
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



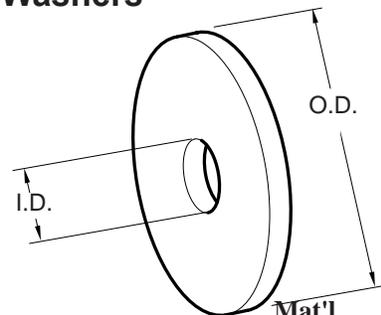
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



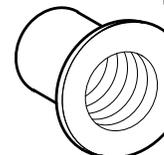
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



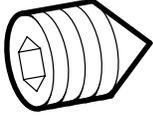
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes Inches	Mat'l or Grade
100351	3/8-16 UNC	SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



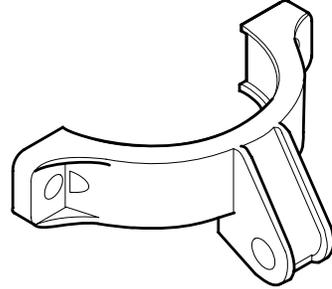
Part #	Mat'l or Grade
138915	SST

Double Clevis



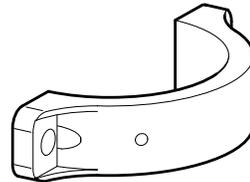
Part #	Mat'l or Grade
138917	SST

(PlayBooster)



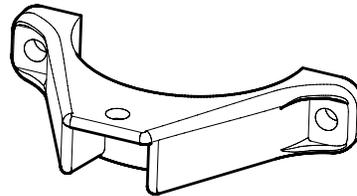
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



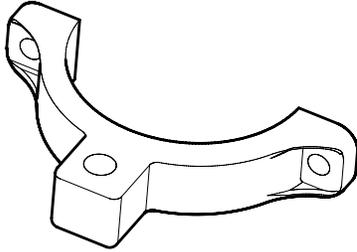
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



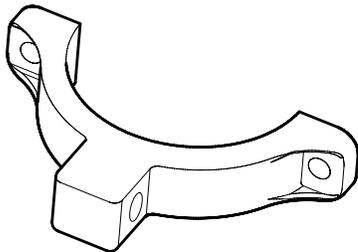
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



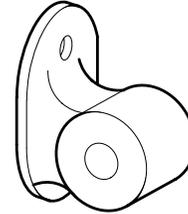
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



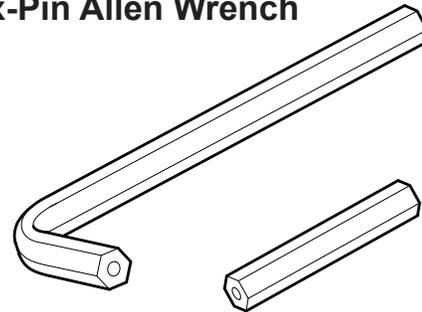
Part #	Mat'l
105330	Cast Aluminum

(PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

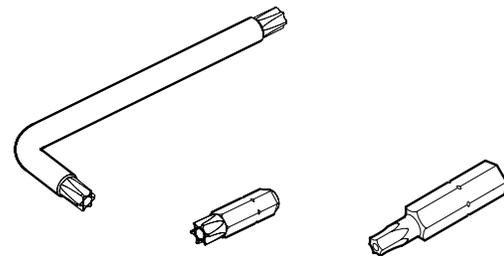
Hex-Pin Allen Wrench



Hex-Pin Driver

Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench

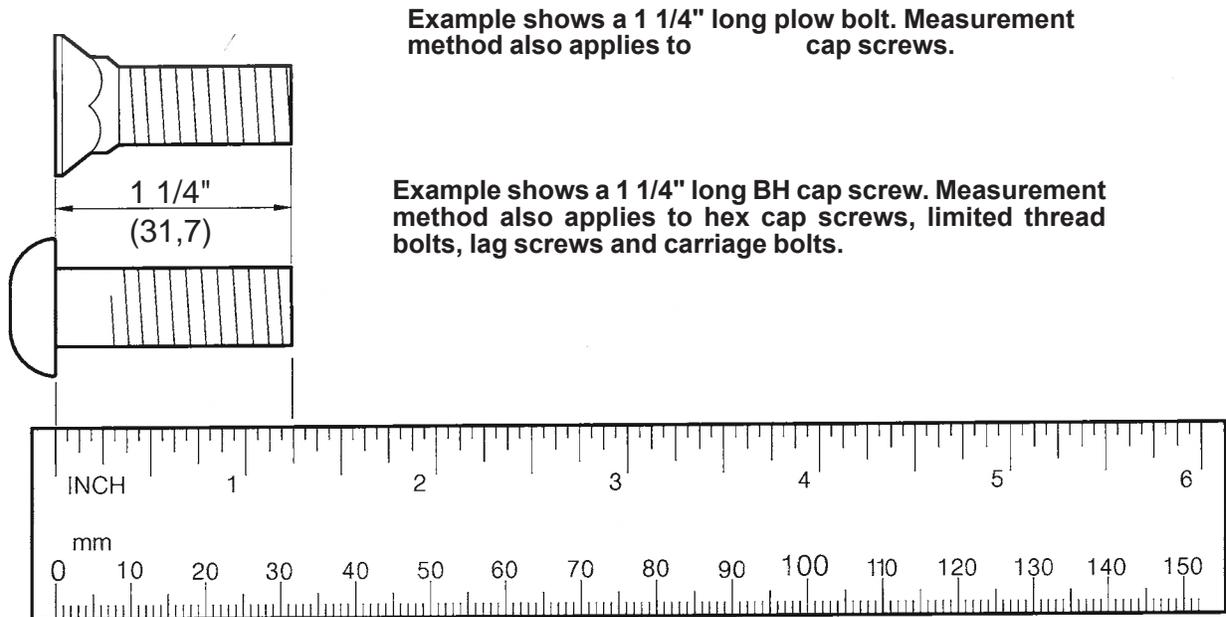


6-Lobe Driver

Torx-Pin Driver

Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



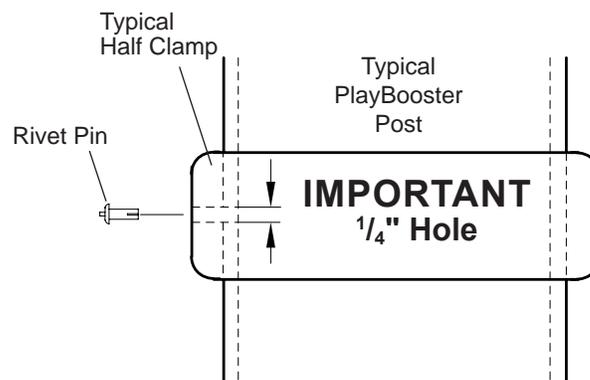
Example shows a 1 1/4" long plow bolt. Measurement method also applies to cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

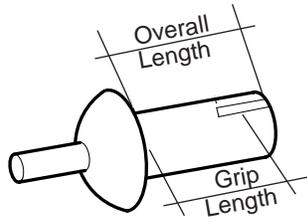
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



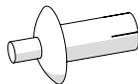
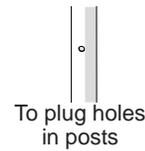
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



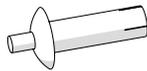
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



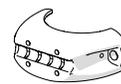
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

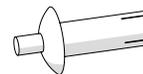


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



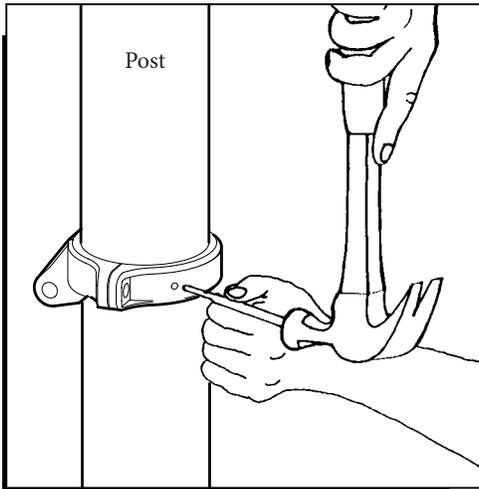
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



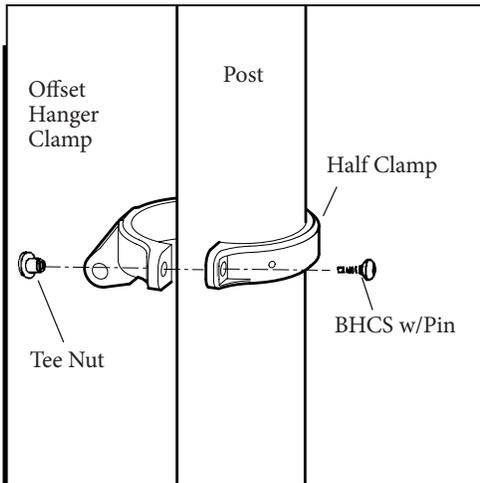
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



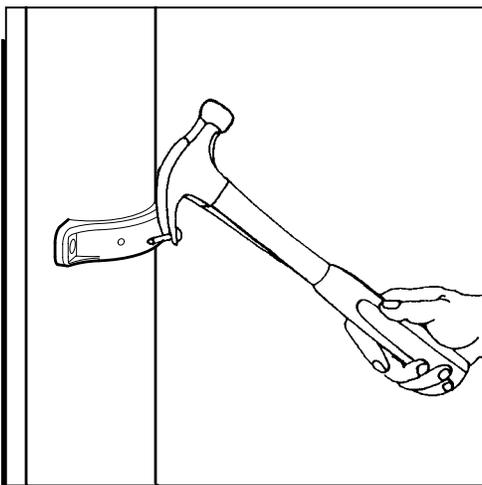
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



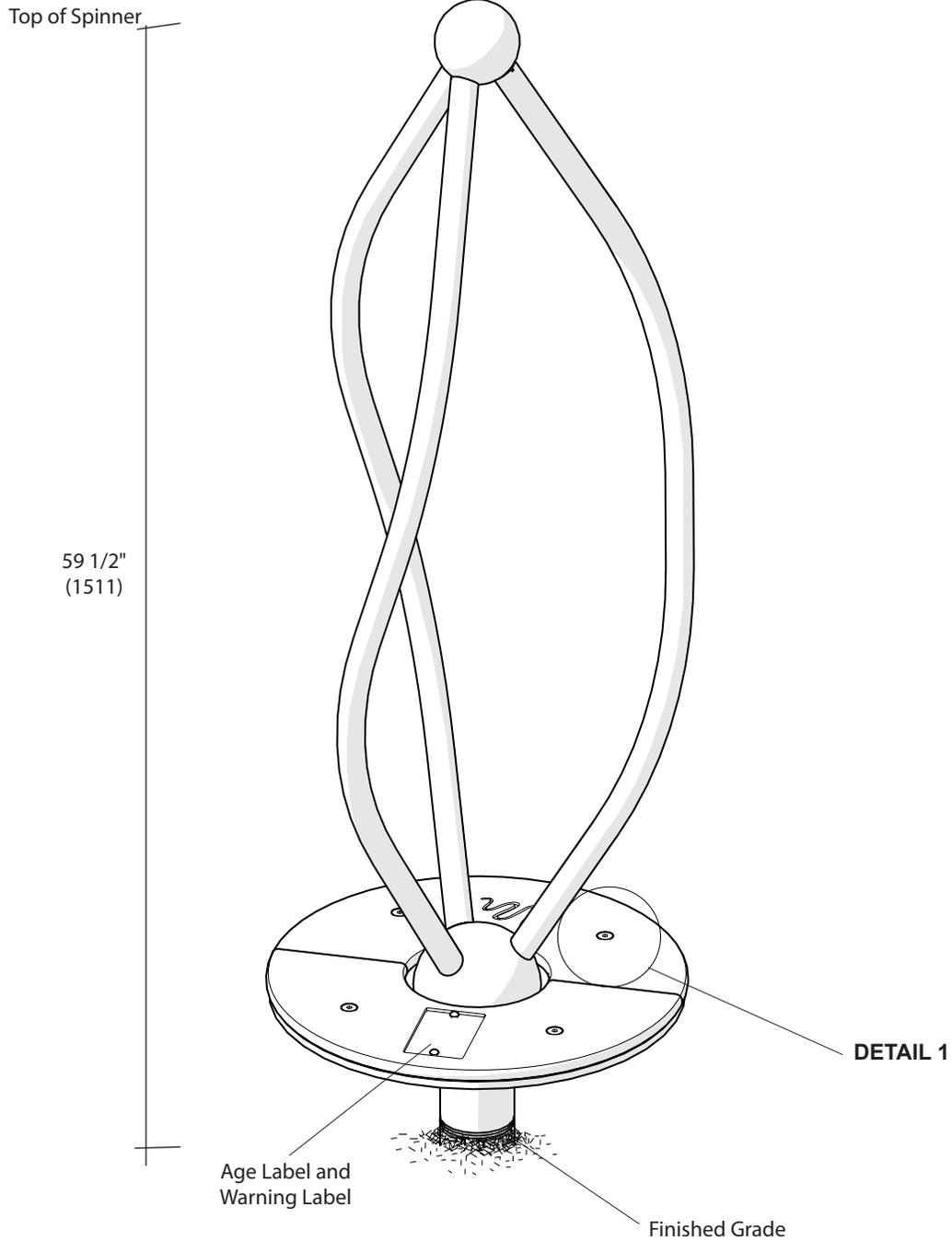
- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



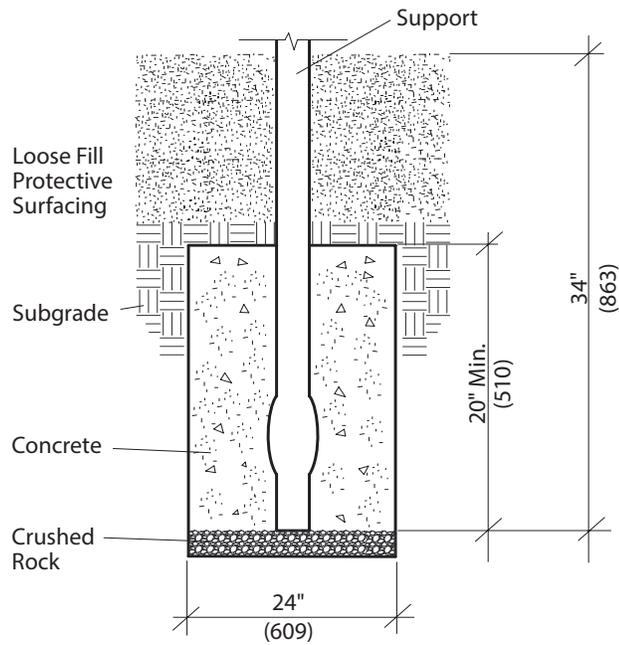
- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

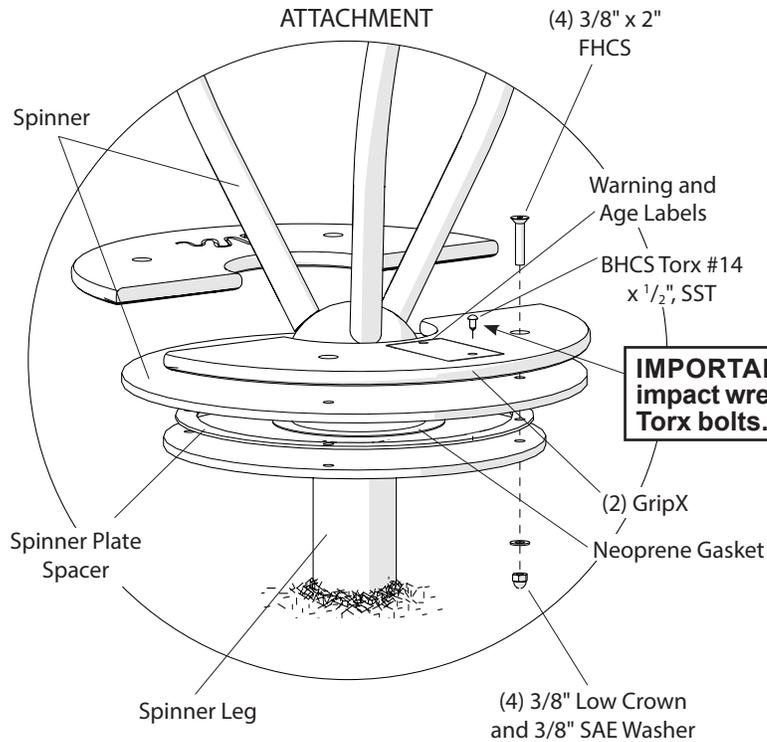
- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench



**DETAIL
DIRECT BURY**



**DETAIL 1
ATTACHMENT**



IMPORTANT! Do not use an impact wrench to tighten BHCS Torx bolts. Hand tighten only.

Parts List

Part#	Description	Qty.
219860	Twisted Spinner Weldt, Specify Color	1
245984	Spinner GripX, Black	1
246071	Spinner Leg W/Bearing Housing ASM, Specify Color. 1	
250541	Spinner Plate Spacer, Black.....	1
249181	Spinner GripX w/Label, Black.....	1
259476	Neoprene Gasket 12".....	1
259532	Hdw Pkg Curva™ Spinner.....	1
116695	FHCS 3/8" x 2" SST.....	4
100349	Nut L/C Cap 3/8"-16 SST.....	4
100365	Washer Flat SAE 3/8" SST.....	4
129671	BHCS Torx #14 x 1/2", SST.....	2
249825	Warning Label 5-12.....	1

Spinner Post: Weldment comprised of 1.315" O.D. RS20 (.075"-.091") galvanized steel tubing, 6" O.D. Sphere (.135" wall) and 4" O.D. STC Ball (.135" Wall). 3/8" HRPO flat steel. Finish: ProShield®, color specified.

Standing Post Assy: (Spinner Post) Weldment comprised of 3.50" O.D. 8GA (.149"-.182" wall) galvanized steel tubing, 2.00" O.D. steel shaft, 12 Ga. (.105") HR flat steel, and 1144 steel collar. Finish: ProShield, color specified. (Sleeve/Plate) Weldment comprised of 3/8" sheet HRPO steel and 3.500" O.D. schedule 80 steel tubing. Finish: ProShield®, color specified.

Neoprene Gasket: Multipurpose Neoprene Rubber 1/4" Thick, 60A Durometer

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Spinner Perm: Recycled permalene, black in color.

Installation Time: Approx. 1 man hour

Concrete Req.: Approx. 5.2 cu. ft.

Area Req.: 14' (4.27 m) diameter

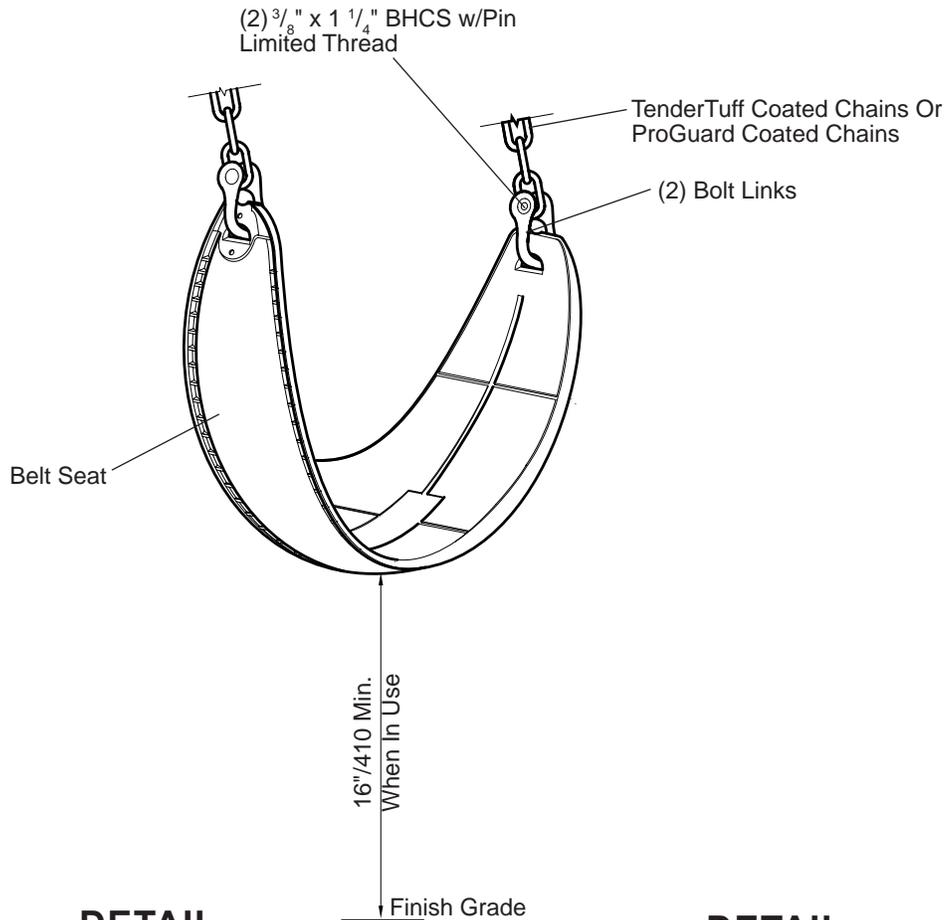
Min. Use Zone: 6' (1.82 m) minimum use zone

Weight: 117 lbs.

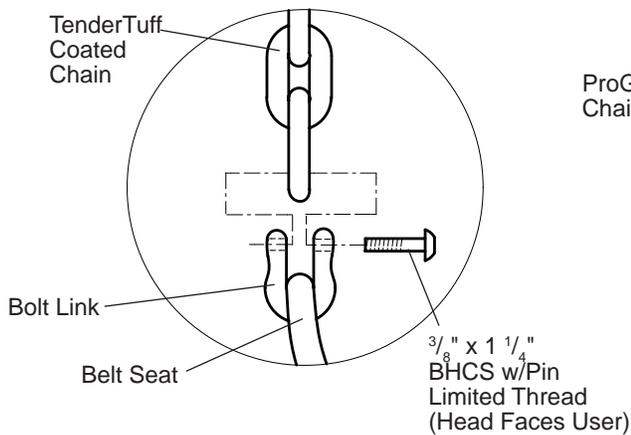
Fall Height: 9" (228 mm)

Installation Instructions

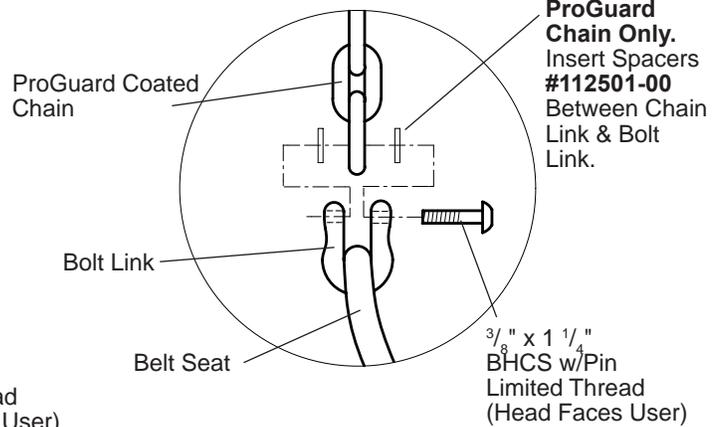
- 1) Dig footing as shown. Refer to the Direct Bury Detail.
- 2) Attach spinner post to spinner leg using (4) 3/8" x 2" FHCS and (4) 3/8" Low Crown and 3/8" SAE Washer as shown. Place neoprene gasket and spinner spacer plate.
- 3) Position spinner in footing hole and pour concrete footing. With spinner post plumb, prop to hold in position. Allow concrete to cure a minimum of 72 hours before users are allowed to play on the structure.
- 4) Attach label using #14 x 1/2" BHCS Torx.
- 5) Install protective surfacing before users are allowed to play on the structure.



**DETAIL
BOLT LINK**



**DETAIL
BOLT LINK**



Swings

174018 Belt Seat

Parts List

Part #	Description	Qty.
7 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
178679	57 7/16" Chain, TenderTuff, Specify Color.....	2
175251	57 7/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292-00	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
8 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152050	67 7/8" Chain, TenderTuff, Specify Color	2
174404	67 7/8" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
10 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152052	90 11/16" Chain, TenderTuff, Specify Color.....	2
174884	90 11/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight: 8 lbs. (7 Ft. Beam w/ProGuard Chains)
 9 lbs. (7 Ft. Beam w/TenderTuff Chains)
 8 lbs. (8 Ft. Beam w/ProGuard Chains)
 9 lbs. (8 Ft. Beam w/TenderTuff Chains)
 10 lbs. (10 Ft. Beam w/ProGuard Chains)
 11 lbs. (10 Ft. Beam w/TenderTuff Chains)

Installation

Swing Hangers With Double Clevis

- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Chain Spacer: Made from white nylon measuring .080" x .785" O.D.

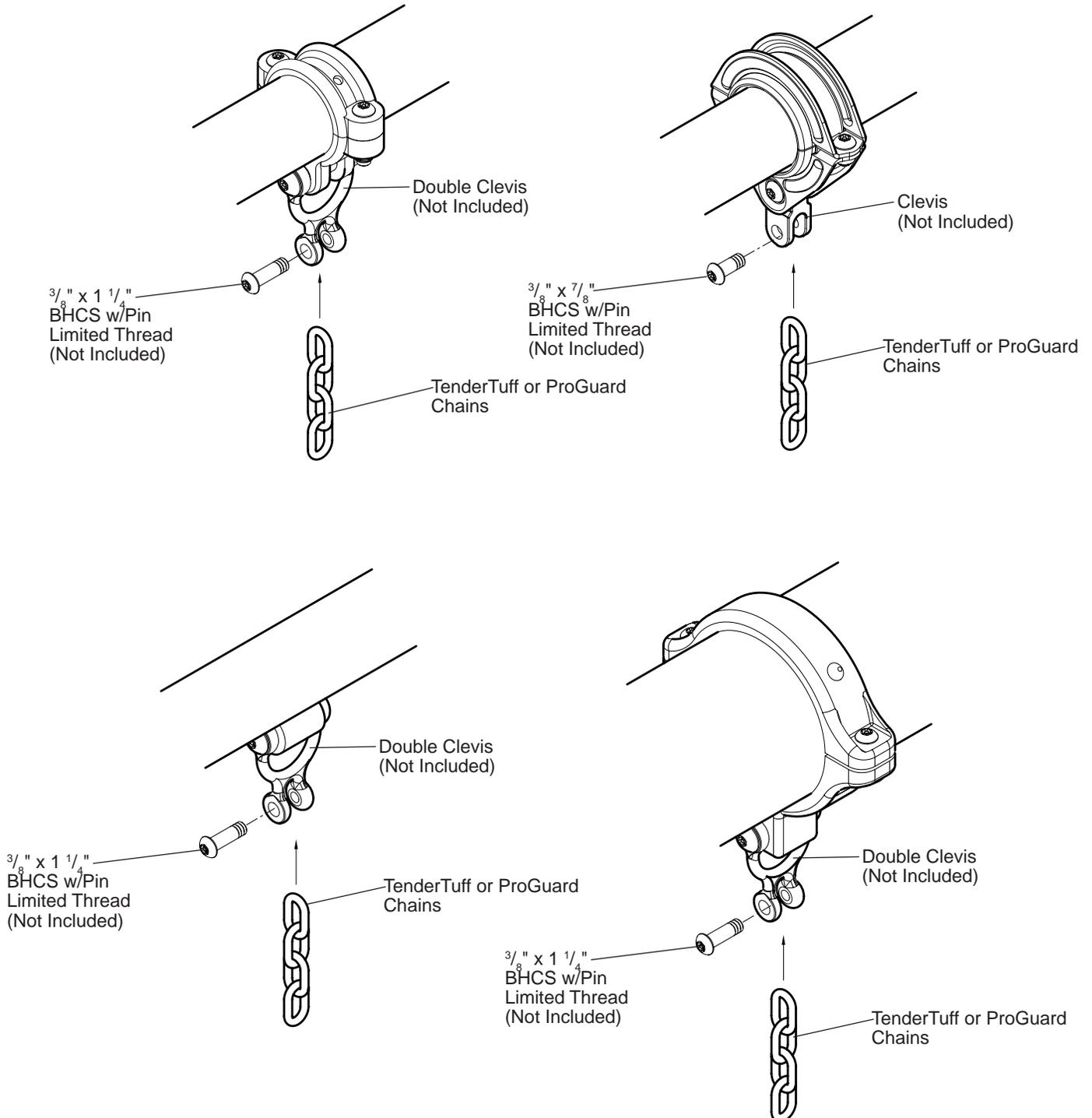
Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

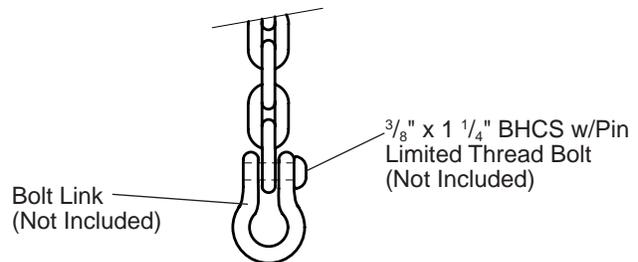
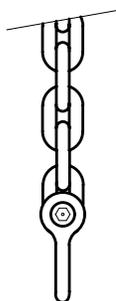
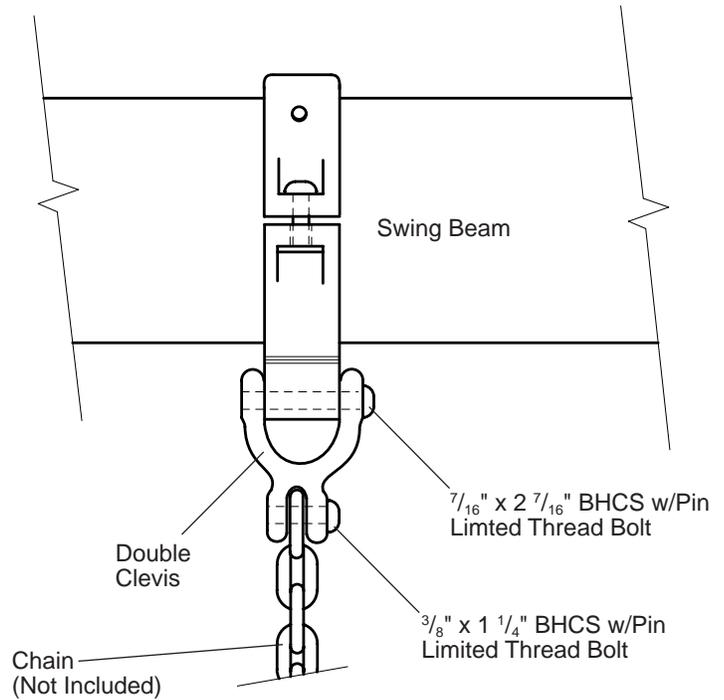
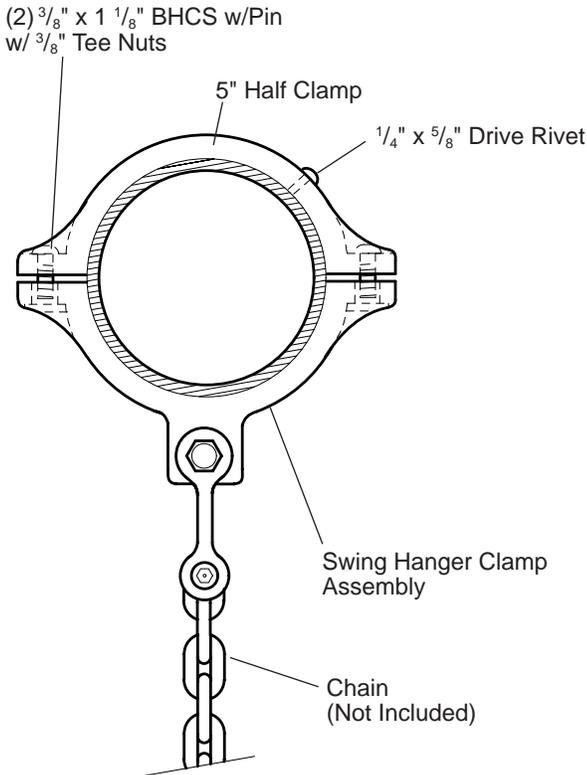
Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff®, color specified.

Belt Seats: Molded from U.V. stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") spring stainless steel sheet, and (4) .105" thick stainless steel washers. The belt seat elliptical shape measures 7" wide x 26" long x .700" thick.

Bolt Link: Stainless Steel.

SWING HANGER OPTIONS





NOTE:
 Do Not Over-Tighten Limited Thread Bolt! Threads Should Not Protude Past Bolt Link.

NOTE:
 Position Bolt Head Inward Facing User.

Swings

111418 Swing Hanger, Belt Swing

Parts List

Part#	Description	Qty.
105327-01	5" Half Clamp, Specify Color	1
100198-00	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
100292-00	$\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/Pin Ltd. Thread Bolt, SST.....	1
121291-00	Swing Hanger Clamp Assy. Specify Color	1
121289-00	Swing Hanger Clamp, Specify Color	1
127068-00	$\frac{7}{16}$ " x $2\frac{7}{16}$ " BHCS w/Pin Ltd. Thread Bolt, SST	1
138917-00	Swing Hanger Double Clevis SST	1
100667-00	Oilite Bushing.....	1

Installation Instructions

- 1) Locate and mark location of clamp on beam.
- 2) Attach 5" half clamp and swing hanger clamp to beam using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts. *Tighten evenly.*
- 3) **IMPORTANT:** *Drill through holes in 5" half clamps and into 5" pipe with a $\frac{1}{4}$ " or "F" (only) drill bit, tap $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets through 5" half clamps and into pipe, to ensure that clamps remain secure.*
- 4) Attach swing chain to double clevis using $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts.
- 5) Attach swing seat to chains using bolt links with $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts. **NOTE:** *Do not over-tighten limited thread bolt. Threads should not protrude past bolt link. Position bolt head inward facing user.*

Hanger Clamp

Assembly: Cast aluminum. Finish: ProShield®, color specified.

Double Clevis: Stainless Steel.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 6 lbs.



Swings 221292/221293 Arch Swing Frame

Parts List

Part#	Description	Qty.	
		2 PL	Add. Bay
126749	Swing Arch, Specify Color.....	2	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	8	6
105327	5" Half Clamp, Specify Color.....	8	4*
216492	140" Swing Beam, Specify Color.....	1	1
121291	Swing Hanger Clamp Assy. Specify Color	4	4
121289	Swing Hanger Clamp, Specify Color.....	4	4
127068	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread, SST.....	4	4
138917	Swing Hanger Double Clevis.....	4	4
100667	Oilite Bushing.....	4	4
243802	Hdw Pkg 5iOD Swing Beam	1	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	8	8
234397	BHCS 6LP LTHD 7/16 x 1 11/16i, SST.....	8	8
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST.....	4	4
100351	3/8" Tee Nut, SST.....	8	8
156846	Play Safe Label, 2-12 Yrs.....	1	1
234937	7/16" D Cut Washer, SST.....	16	16
182213	Hot Surface Warning Label.....	1	1
182212	Entanglement Warning Label.....	1	1
115176	Hard Surface Warning Label.....	1	1
100330	7/16" Nylok Hex Nut.....	8	8

* = 5" Half Clamps From 2 PL. End Of Beam Need To Be Used.

Installation Instructions

- 1) Dig footings, spaced as shown. Refer to the Concrete Footing Detail.
- 2) Set arches in footing holes and attach swing beam to center of arches using 5" half clamps with 7/16" BHCS w/Pin, 7/16" D-Cut Washers, and 7/16" Nylok nuts. Refer to the Tee Clamp Position Detail. Center of beam should be 99 3/4" above finished grade. When installing back to back swing beams refer to the Back To Back Tee Clamps Detail.
- 3) Level beam and plumb arches and temporarily prop in position. Pour concrete footings and let cure for 72 hours before proceeding.
- 4) Locate, mark and attach swing hanger clamps to beam in locations shown. Refer to the Typical Swing Hanger Clamp Spec Sheet.
- 5) **NOTE:** Refer to specific swing seat installation document for attaching chains and seats.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet. Refer to the Back To Back Tee Clamps Detail.
- 7) Apply Play Safe and Warning Labels, as shown.
- 8) Install protective surfacing before users are allowed to play on the swing.

Arch Posts: See PlayBooster® (PB) General Specifications.

Swing Beam: Weldment comprised of tee clamps and 5" O.D. extruded 6005-T5 aluminum alloy tube with a .125" wall. Finish: ProShield®, color specified.

Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 8 man hours
Additional Bay 4 man hours

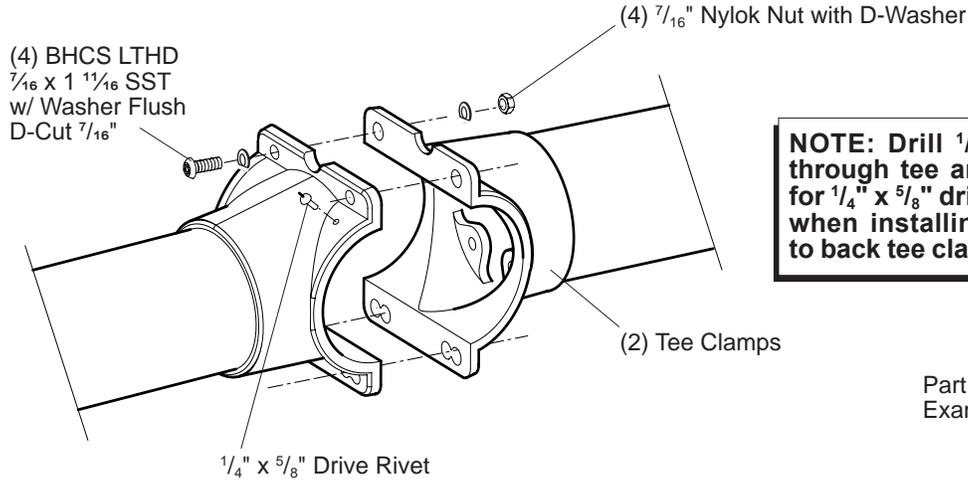
Concrete Req.: Approx. 7.5 cu. ft.
Additional Bay 3.75 cu. ft.

Area Req.: 24'-2 3/4" x 32' (7,39 m x 9,75 m)
Additional Bay 11'-8" x 32' (3,55 m x 9,75 m)

Weight: 204 lbs.
Additional Bay 124 lbs.

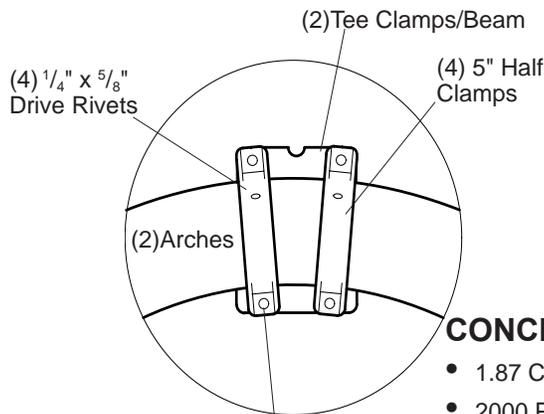
Fall Height: 96" (2,43 m)

**DETAIL
BACK TO BACK
TEE CLAMPS**



NOTE: Drill 1/4" hole through tee and arch for 1/4" x 5/8" drive rivet when installing back to back tee clamps.

**DETAIL
TEE CLAMP POSITION**

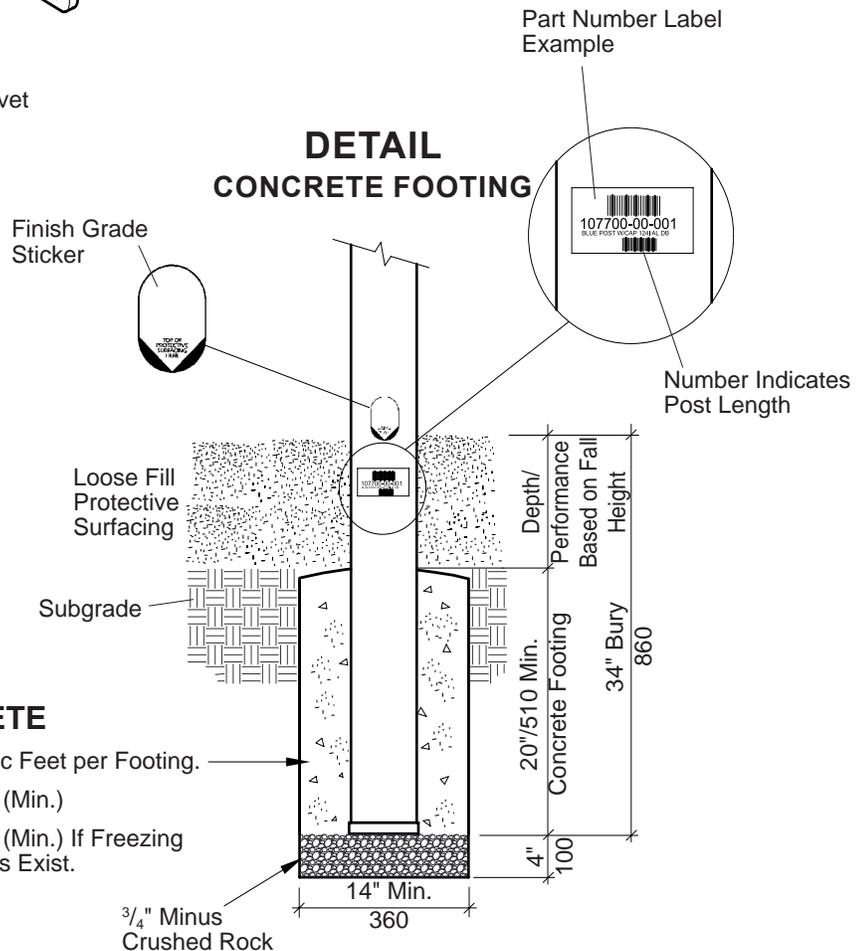


NOTE: Use inside holes for (4) 7/16 BHCS w/Pin limited thread w/D-Washer 7/16 Nylok Nut w/D-Washer

CONCRETE

- 1.87 Cubic Feet per Footing.
- 2000 PSI (Min.)
- 3000 PSI (Min.) If Freezing Conditions Exist.

**DETAIL
CONCRETE FOOTING**



Installation Instructions (2-5 Equipment)

"How to distribute your hardware *Headache Free*"



We have received feedback from you, our customers, that the most common delay in completing your playground installation is lost or misplaced hardware.

Some of our most successful installations have used a "*check-out*" system with one person appointed to distribute the various hardware packages. Installation sheets are provided for each component that indicate hardware packages/items required to assemble that component. Refer to these sheets to determine which hardware items to request from the designated "*check-out*" person.

HELPFUL HINTS:

Read installation sheets.

Be sure to use the correct length hardware as specified on the installation sheets.

Be sure to use clamps in the correct location as indicated on the installation sheets.

Warning

Your playground may include equipment containing moving parts. Moving parts are more vulnerable to wear, mis-use and abuse than other non-moving parts. It is critical these parts be inspected and maintained according to our recommendations.

As the owner, it is your responsibility to perform preventative maintenance and record your findings. Failure to do so may create a hazard and cause serious injury or death.

IMPORTANT SAFETY NOTES!

According to the U.S. Consumer Product Safety Commission (CPSC) nearly 70% of all playground injuries are caused by falls to the surface.

PLEASE INSTALL AND MAINTAIN ADEQUATE PROTECTIVE SURFACING UNDER AND AROUND YOUR PLAYSTRUCTURE!

Never let children play on the equipment before protective surfacing is installed.

Consult the CPSC's Handbook for Public Playground Safety, the ASTM F1487 Standard or your Landscape Structures representative for more information.





Look for compliance to the following guidelines and standards whenever you install playground equipment. It's your assurance that the products you install meet the most rigorous safety and quality assurance standards.

Landscape Structures is a member in good standing of **IPEMA**, the **International Play Equipment Manufacturers Association**. IPEMA is a member-driven, international trade organization that represents and promotes an open market for manufacturers of play equipment.



In the interest of playground safety, IPEMA provides a Third Party Certification Service whereby a designated independent laboratory validates a participant's certification of conformance to ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, except sections 7.1.1, 10 and 12.6.1; CAN/CSA Z614, Children's Playspaces and Equipment Standards, except clauses 9.8, 10 and 11; or both. The use of the corresponding logo in the Landscape Structures Inc. catalog signifies that Landscape Structures Inc. has received written validation from the independent laboratory that the product(s) associated with the use of the logo conforms with the requirements of the indicated standards. Check the IPEMA website (www.ipema.org) to confirm product certification. The use zone and fall height requirements in this publication are shown to ASTM standards. The requirements for other standards may be different. According to the CSA, playground maintenance and inspection is a continuous and integral part of budgetary costs. The cost of inspection and maintenance shall be considered and incorporated into the budget at the time of design, purchase equipment and installation (11.1.1 Budgeting).

International Play Equipment Manufacturers Association

4305 N. Sixth St. Suite A
Harrisburg, PA 17110
www.ipema.org



The Consumer Product Safety Commission (CPSC) is a governmental organization that provides technical safety guidelines for designing, constructing, operating and maintaining public playgrounds.

U.S. Consumer Product Safety Commission

4330 East West Hwy.
Bethesda, MD 20814
www.cpsc.gov

The American Society for Testing and Materials (ASTM) is a scientific and technical organization that is a major developer of standards for testing different types of materials. In 1993, the ASTM published "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use," designation F1487-93. ASTM is more technical than the CPSC. ASTM revised its old standard and published a new standard in 1995, 1998, 2001, 2005, 2007 and again in 2011.

American Society for Testing and Materials

100 Barr Harbor Dr.
P.O. Box C700
West Conshohocken, PA 19428
www.astm.org



The Canadian Standards Association

Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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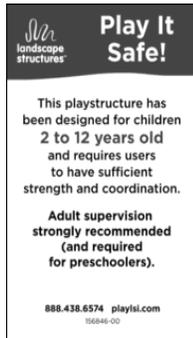
Part No. 156844-00-000



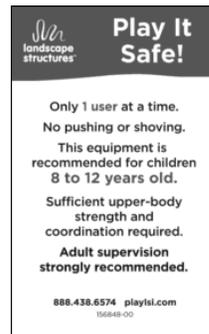
Part No. 182213-00-000



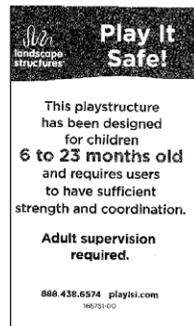
Part No. 115176-00-000



Part No. 156846-00-000



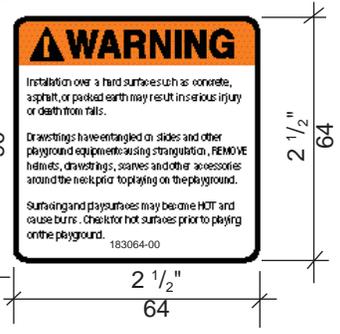
Part No. 156848-00-000



Part No. 166751-00-000



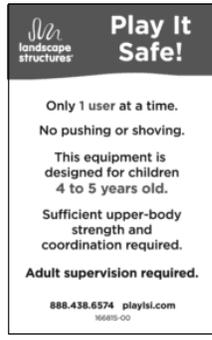
Part No. 182212-00-000



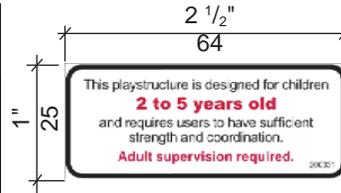
Part No. 183064-00-000



Part No. 156850-00-000



Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

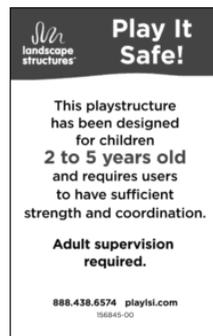
NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.



Part No. 156847-00-000



Part No. 156845-00-000



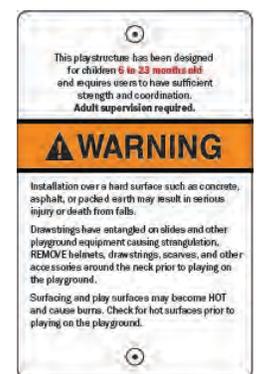
SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

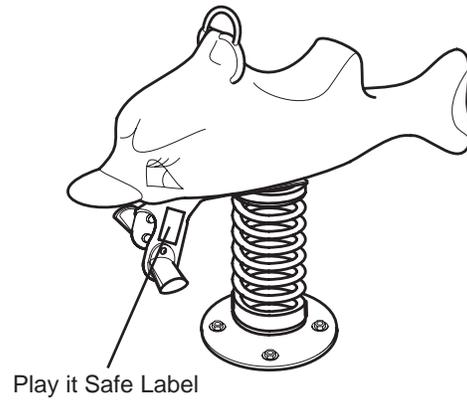
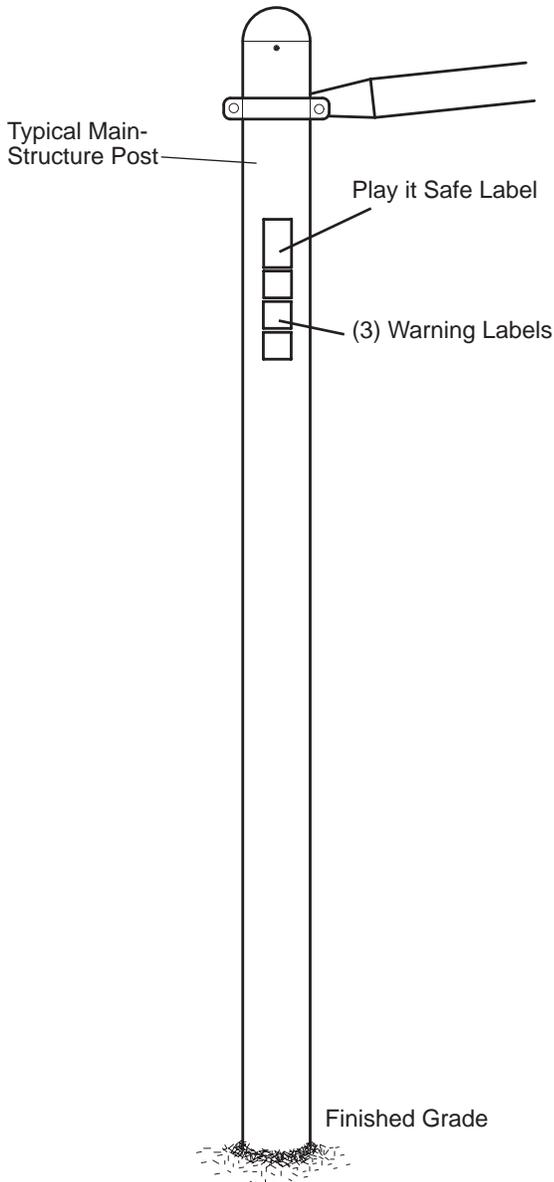
- 251714 5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
- 251723 Flat Large Play Safe Plate 2-5 Years w/Attaching HDW
- 251724 Flat Large Play Safe Plate 2-12 Years w/Attaching HDW
- 251725 Flat Large Play Safe Plate 5-12 Years w/Attaching HDW
- 251727 Flat Large Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
- 251730 Flat Small Play Safe Plate 2-12 Years w/Attaching HDW
- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

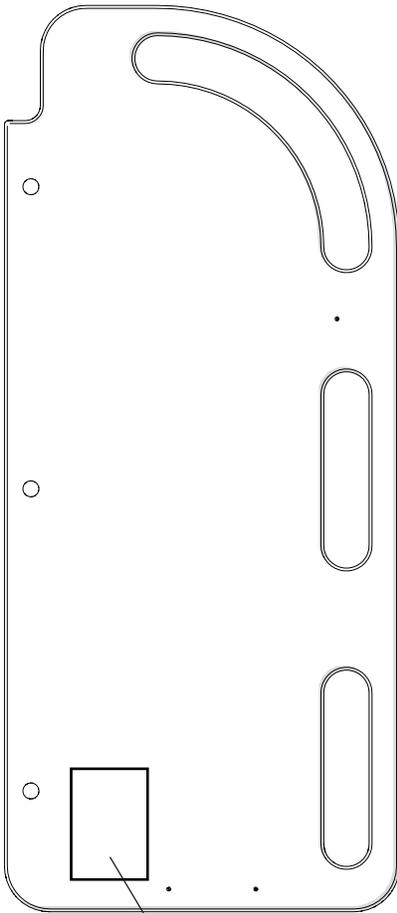




Warning Labels

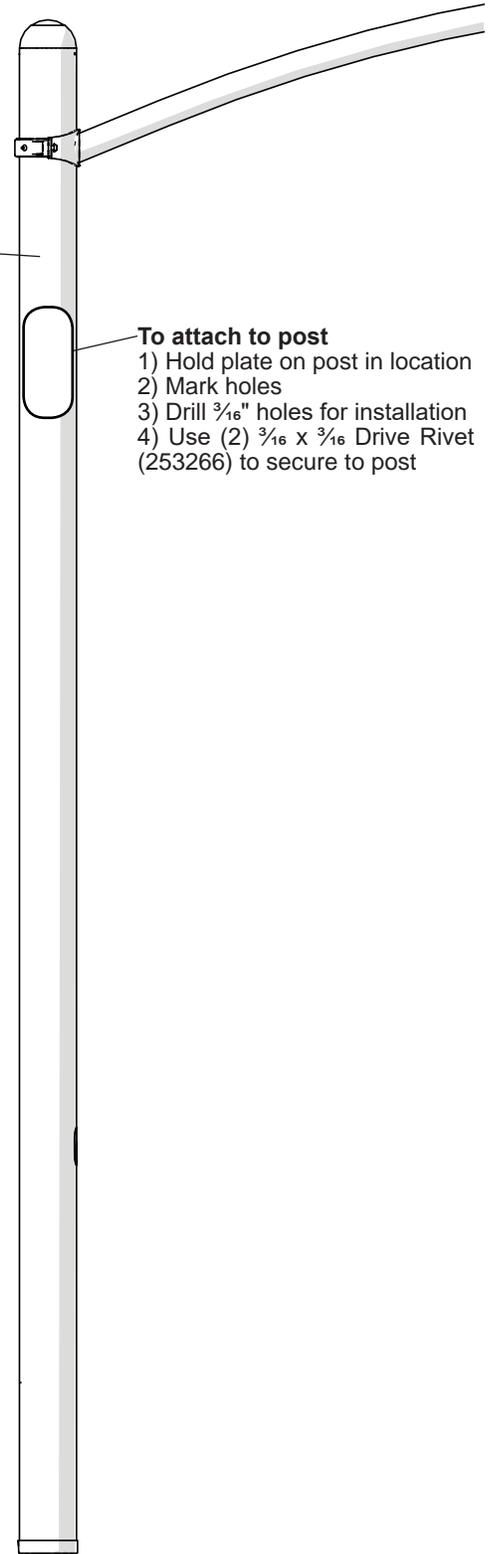
5" formed plate mounts to 5" posts.
 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
 - 2) Mark holes
 - 3) Drill $\frac{1}{8}$ " x $\frac{1}{2}$ " deep holes for installation
 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post



- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post

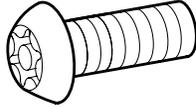


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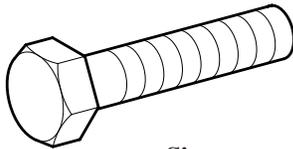
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



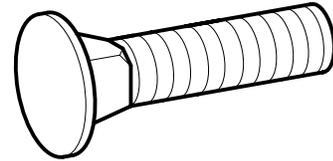
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1) SST- ANTI-SEIZE	SST-	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



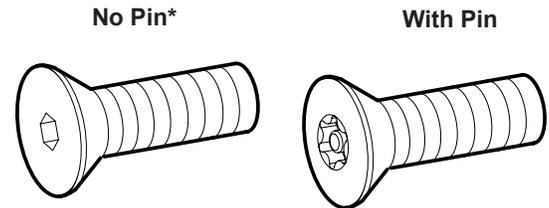
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

Flat Head Cap Screws (FHCS)



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

PS/PB/Evos/Weevos Common Parts/Torque Chart

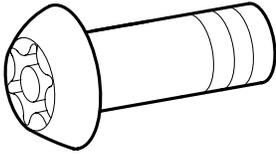
Sheet 1 of 9

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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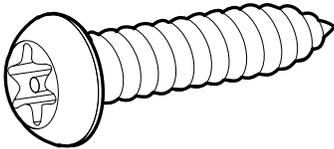
Document #26150400

BHCS w/Pin Limited Thread Bolts



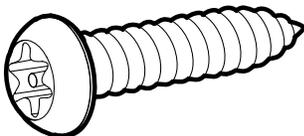
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



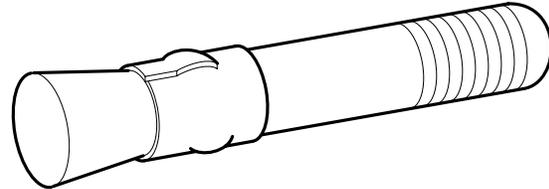
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



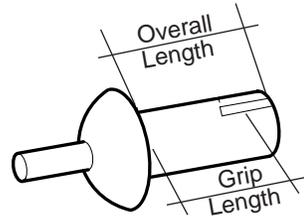
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

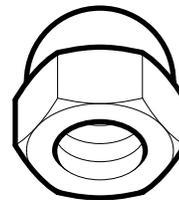
Drive Rivets



NOTE: For more detail see drive rivet detail page.

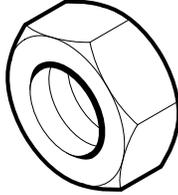
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



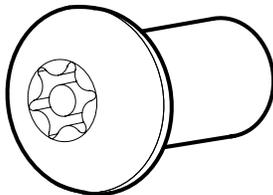
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



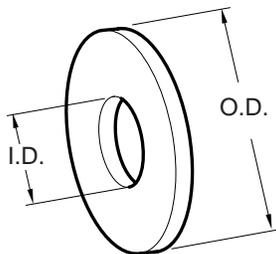
Part #	Sizes Inches	Mat'l or Grade
100326	5/16-18 UNC	SST
100321	3/8-16 UNC	SST-Pat
100327	3/8-16 UNC	SST
128296	3/8-16 UNC (Jam Nut)	SST
100328	7/16-14 UNC	SST
145021	7/16-14 UNC (Jam Nut)	SST
100322	1/2-13 UNC	SST
129692	1/2-13 UNC	SST-Pat
129693	1/2-13 UNC (Jam Nut)	SST
100323	5/8-11 UNC	SST

Flange Nut w/Pin



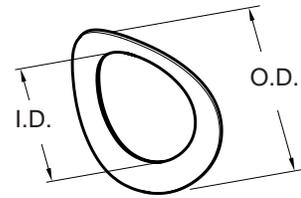
Part #	Sizes Inches	Mat'l or Grade
175006	5/16 x 18 UNC	SST
192064	M 8 x 24 mm	SST
100353	3/8-16 UNC	SST

Flat Washers



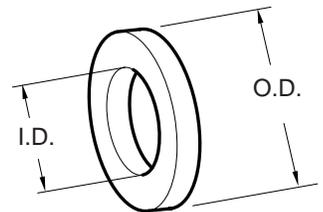
Part #	Sizes Inches	mm	or Grade	I.D.	O.D.
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



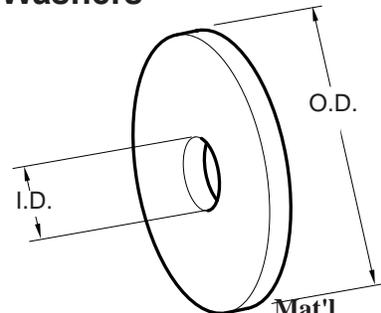
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



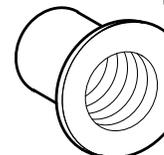
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



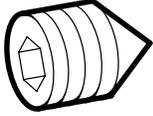
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes Inches	Mat'l or Grade
100351	3/8-16 UNC	SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



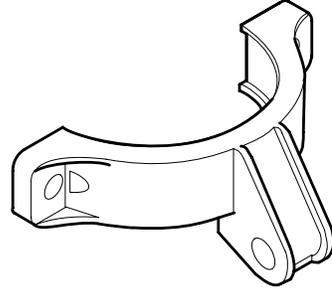
Part #	Mat'l or Grade
138915	SST

Double Clevis



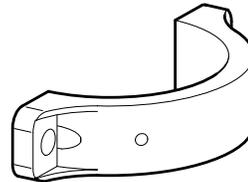
Part #	Mat'l or Grade
138917	SST

(PlayBooster)



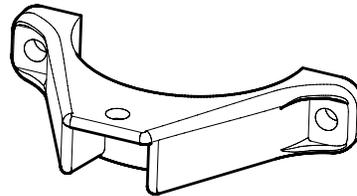
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



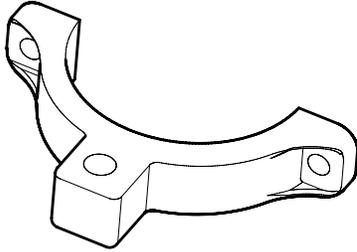
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



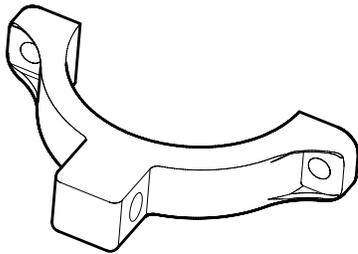
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



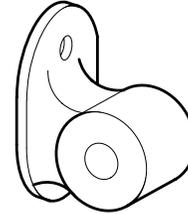
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



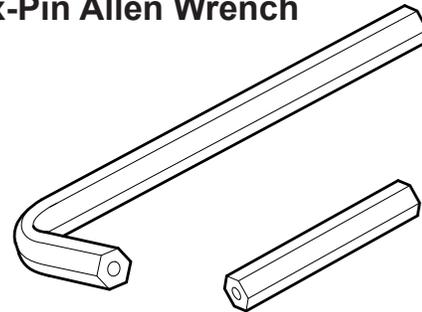
Part #	Mat'l
105330	Cast Aluminum

(PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

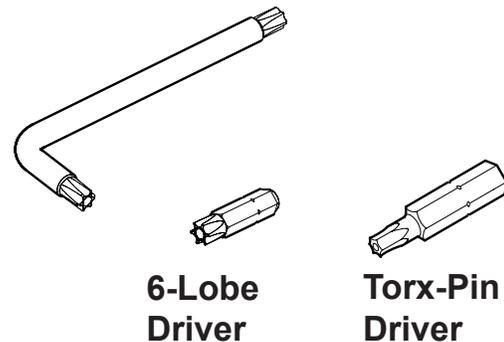
Hex-Pin Allen Wrench



Hex-Pin Driver

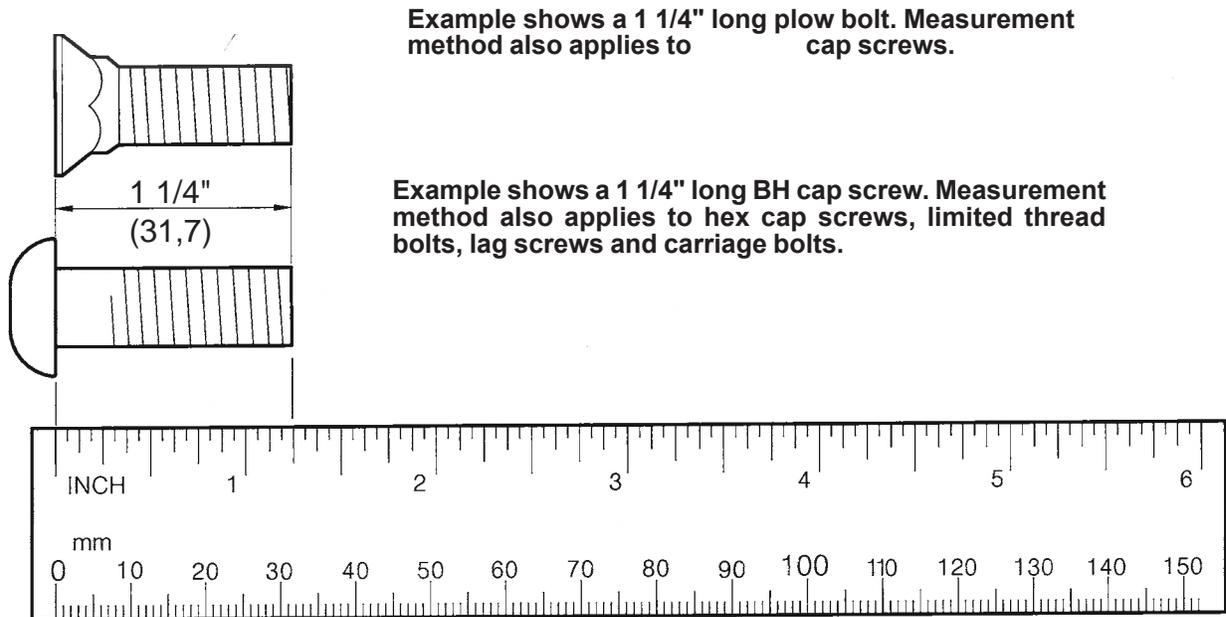
Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench



Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



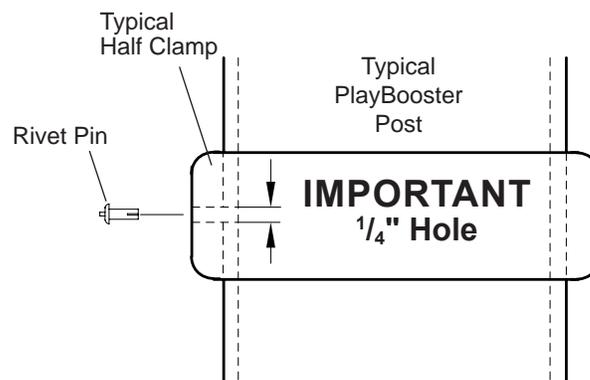
Example shows a 1 1/4" long plow bolt. Measurement method also applies to cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

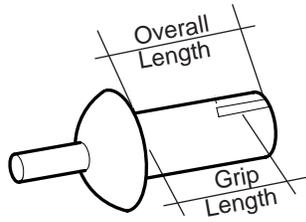
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



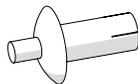
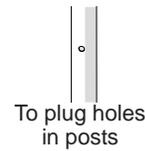
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



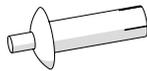
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



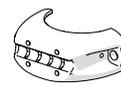
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

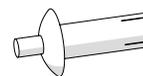


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



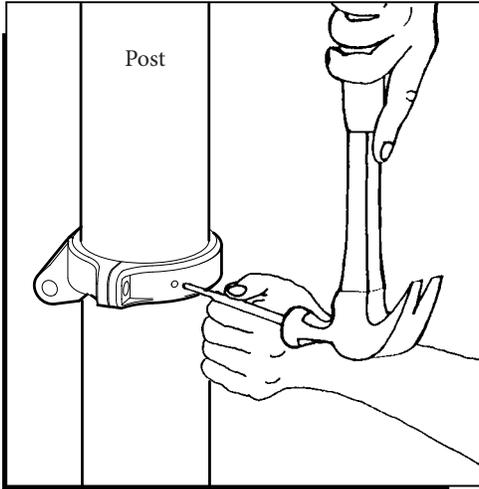
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



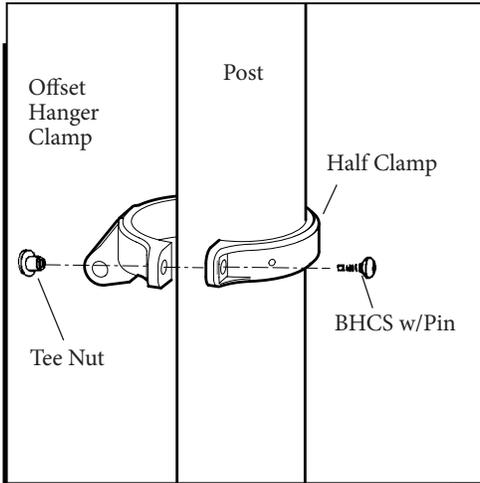
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



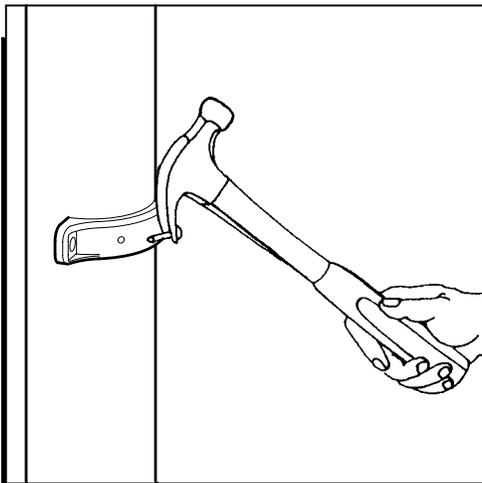
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.



- 2) Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.



- 3) Pull Out Drive Rivet Using Claw End of Hammer.

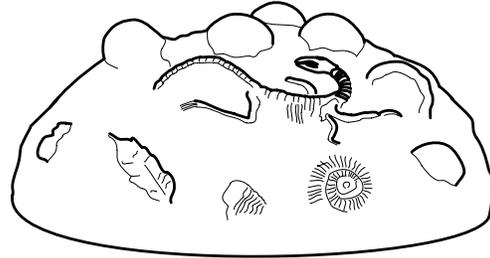
Tools Needed:

- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench

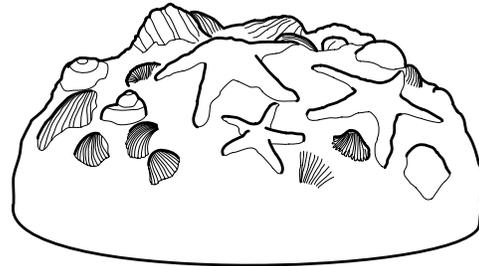
**170791
 T-Rex Bones**



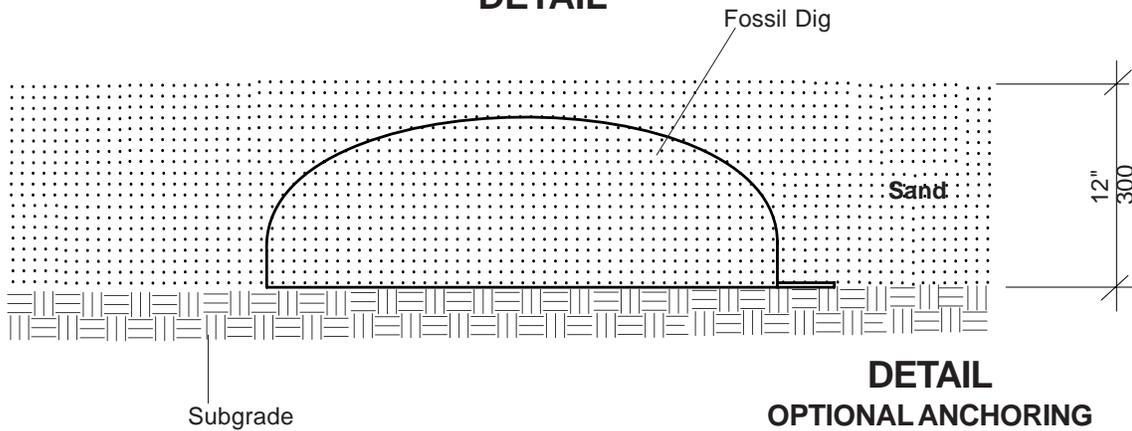
**170793
 Dino Eggs**



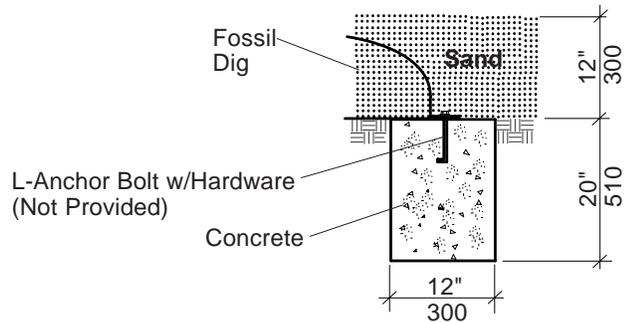
**170792
 Sea Shells**



DETAIL



**DETAIL
 OPTIONAL ANCHORING**



Play Naturally™

Sensory Play

Fossil Digs

Parts List

Part#	Description	Qty.
	Model #170791	
170963-00	T-Rex Bones Fossil Dig, Natural	*
	Model #170792	
171106-00	Sea Shell Fossil Dig, Natural	*
	Model #170793	
170965-00	Dino Eggs Fossil Dig, Natural	*

* = Quantity Determined By Your Order

Specs

Fossil Digs: Glass reinforced wet cast solid pour concrete product.
Finish: Latex paint made for concrete, natural colors.

Installation Time: 1/4 man hour

Weight: T-Rex - 230 lbs.

Seashell - 235 lbs.

Dino Egg - 235 lbs.

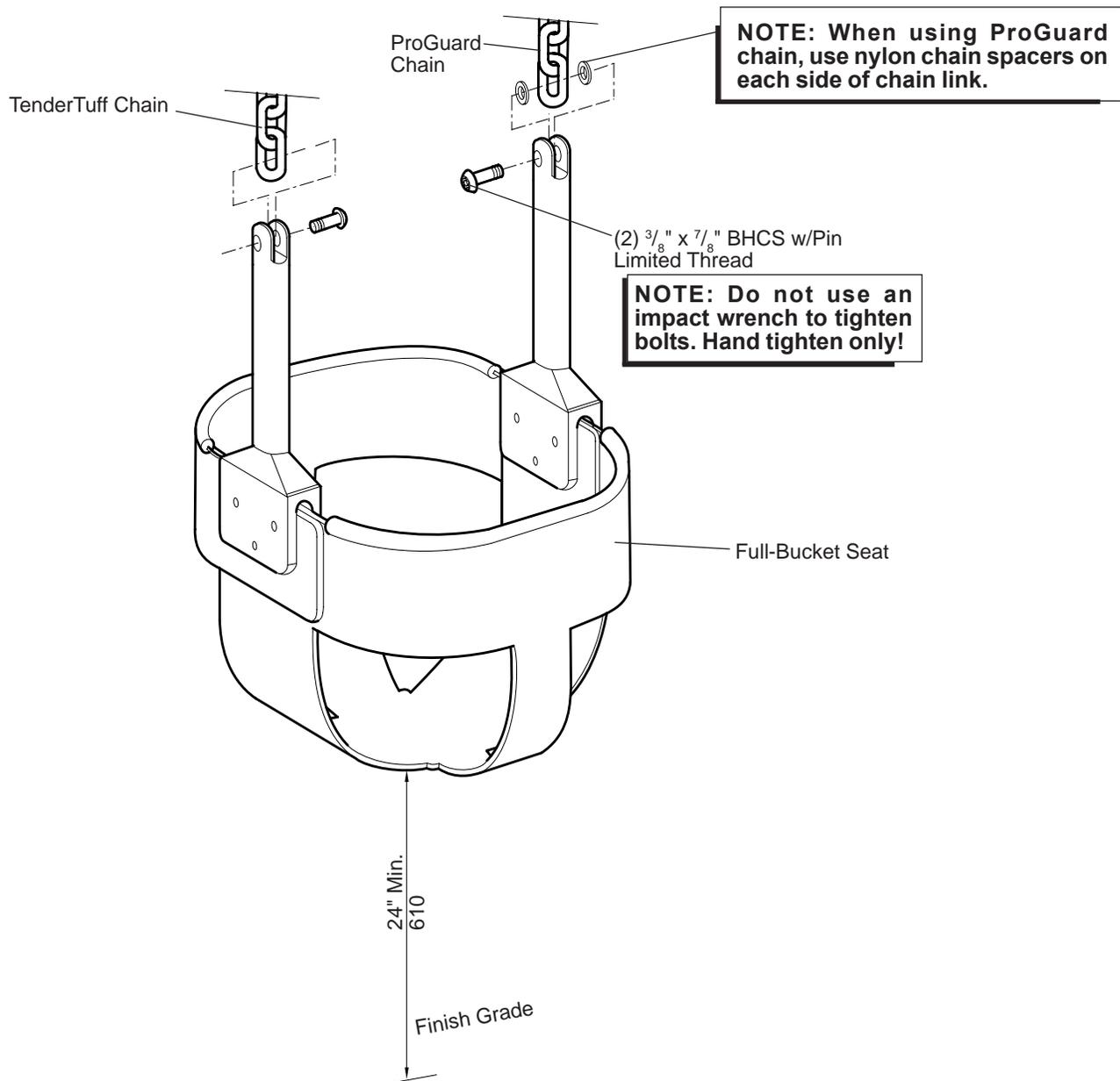
Actual Size: T-Rex - Approx. 27" (690 mm) wide x 8" (200 mm) high

Seashell - Approx. 27" (690 mm) wide x 8" (200 mm) high

Dino Egg - Approx. 27" (690 mm) wide x 8" (200 mm) high

Installation Instructions

- 1) To unload a fossil dig, a forklift is recommended. Be very careful to keep the fossil dig level to the ground when raising or lowering. Do not contact the concrete face of the fossil dig with forklift forks, chipping can occur.
- 2) Place fossil dig on subgrade, and cover with sand as shown.



Swings

176038 Full-Bucket Seat, w/Chains



Swings 176038 Full-Bucket Seat, w/Chains

Parts List

Part#	Description	Qty.
7 Ft. High Beam (5" Dia. Beam)		
186276	Full-Bucket Swing Seat, Black	1
141739	43 3/16" Chain, TenderTuff, Specify Color	2
175248	43 3/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
8 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
160110	52 9/16" Chain, TenderTuff, Specify Color	2
174882	52 9/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
10 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
152051	76 7/16" Chain, TenderTuff, Specify Color	2
174883	76 7/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
7 Ft. High Beam (Tot)		
186276	Full-Bucket Swing Seat, Black	1
152053	37 1/2" Chain, TenderTuff, Specify Color	2
175247	37 1/2" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
75" High Beam (Toddler)		
186276	Full-Bucket Swing Seat, Black	1
152016	29 7/8" Chain, TenderTuff, Specify Color	2
174881	29 7/8" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4

Full-Bucket Seat: Seat shall be molded of U.V. stabilized, high quality, black rubber, encapsulating a 24 gauge stainless steel reinforcement plate. Handle cast from 356-T6 aluminum alloy with black polyarmor paint finish. Handle attaches to seat with (3) 1/4" x 1 5/16" long stainless steel rivets. The finished size of the full bucket shall be 9" deep x 10 1/2" wide.

Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff, color specified.

Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight:
 14 lbs. (7 FT. Beam 5" Dia. w/TenderTuff Chain)
 13 lbs. (7 FT. Beam 5" Dia. w/ProGuard Chain)
 14 lbs. (8 FT. Beam w/TenderTuff Chain)
 14 lbs. (8 FT. Beam w/ProGuard Chain)
 17 lbs. (10 FT. Beam w/TenderTuff Chain)
 16 lbs. (10 FT. Beam w/ProGuard Chain)
 12 lbs. (7 FT. Beam w/TenderTuff Chain)
 12 lbs. (7 FT. Beam w/ProGuard Chain)
 11 lbs. (75" Beam w/TenderTuff Chain)
 11 lbs. (75" Beam w/ProGuard Chain)

Installation Instructions

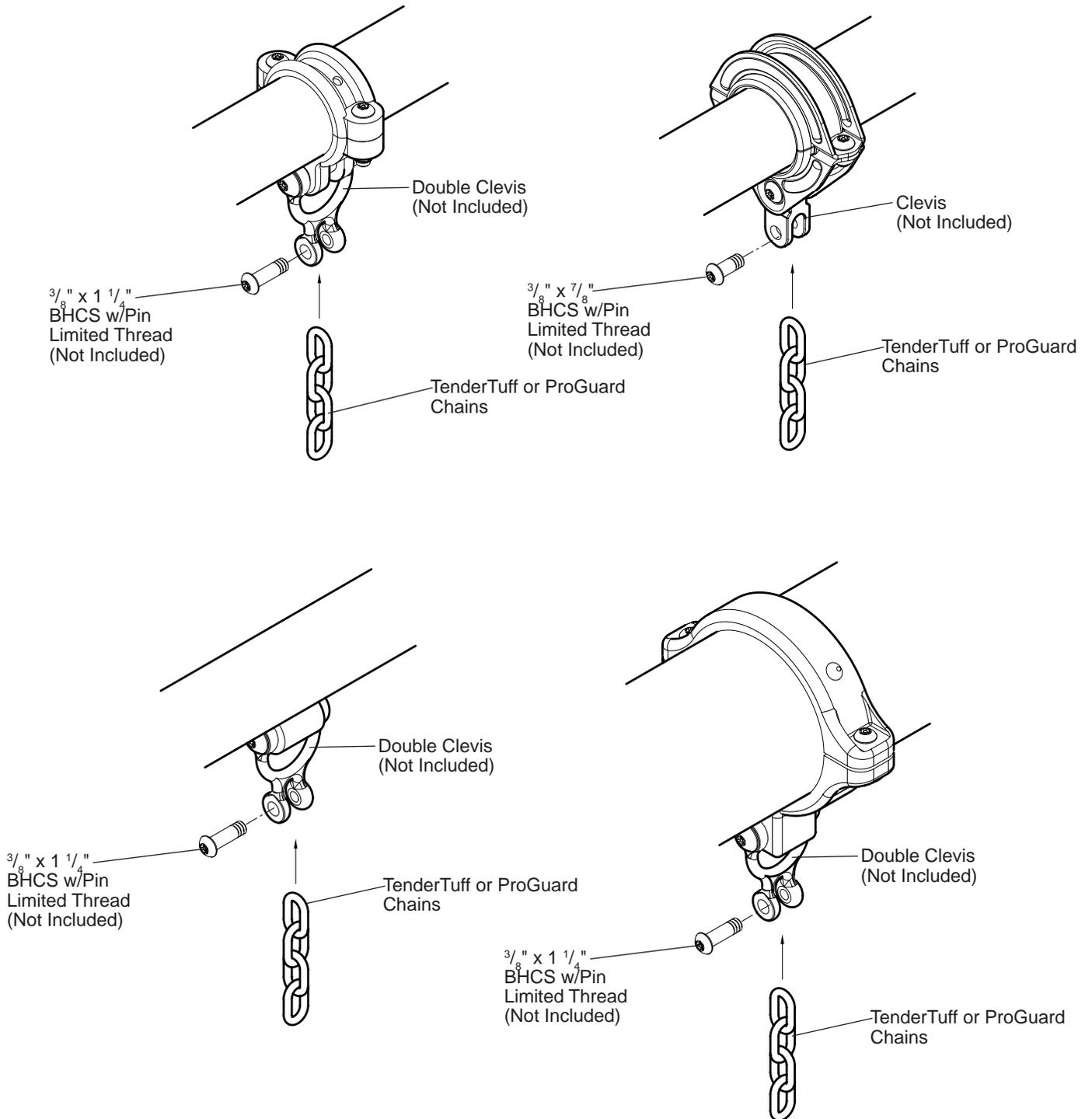
Swing Hangers with Double Clevis

- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

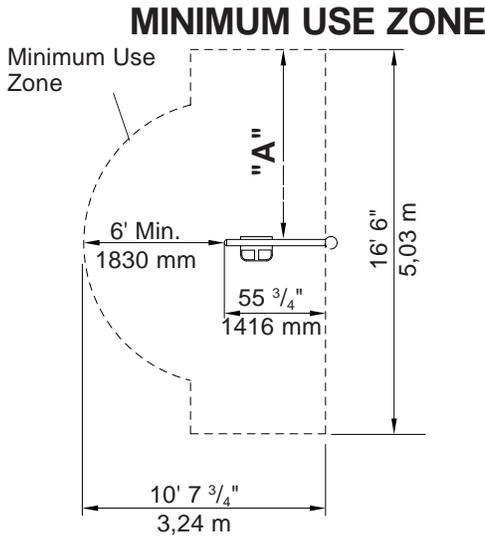
- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

SWING HANGER OPTIONS

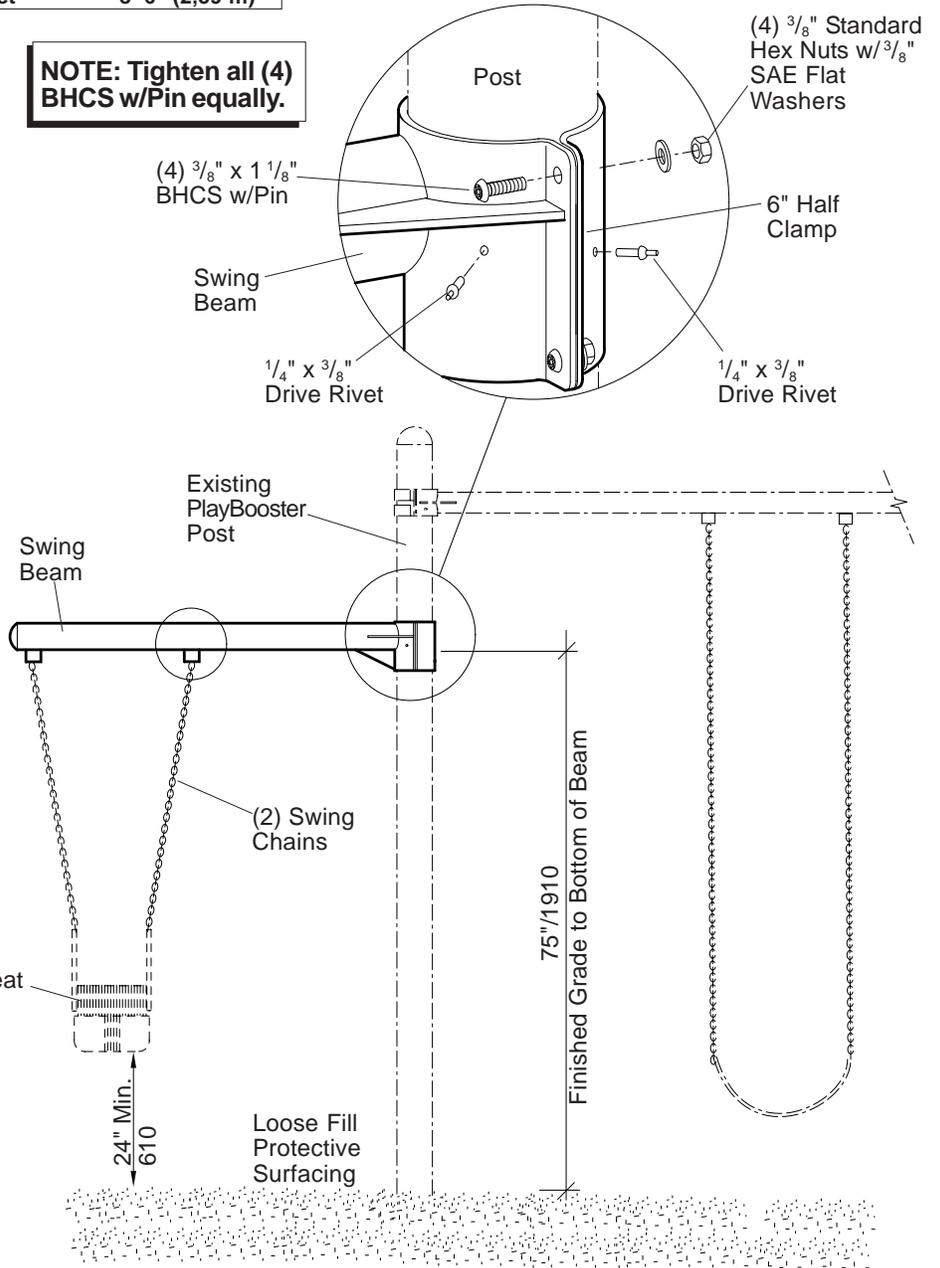


KEY	Dimension "A"
Seat Type	
Belt	N/A
Flat	N/A
Full Bucket	8'-6" (2,59 m)
Half Bucket	12'-6" (3,81 m)
Molded Bucket	N/A
Molded Bucket/Harness	N/A
Infant Full Bucket	8'-6" (2,59 m)

**DETAIL
SWING BEAM ATTACHMENT**

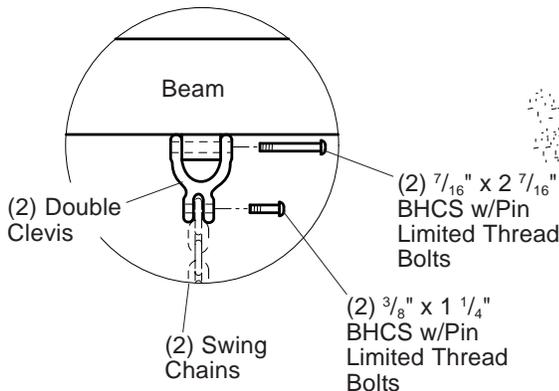


NOTE: Tighten all (4) BHCS w/Pin equally.



NOTE:
This Swing is designed for users up to 5 years of age.

**DETAIL
DOUBLE CLEVIS ATTACHMENT**



NOTE: Model number is for swing beam only, order swing seat with chains separately.

Swings 177337 Toddler Swing Add-On Beam, No Post



Swings 177337 Toddler Swing Add-On Beam, No Post

Parts List

Part#	Description	Qty.
135548-00	Swing Beam, Specify Color	1
154322-00	6" Half Clamp, Specify Color	1
116882-00	Beam Hardware Package	1
100198-00	3/8" x 1 1/8" BHCS w/Pin, SST	4
100327-00	3/8" Standard Hex Nut, SST	4
100365-00	3/8" SAE Flat Washer, SST	4
100611-00	1/4" x 3/8" Drive Rivet, AL/SST	2
132634-00	Double Clevis Hardware Package	1
127068-00	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread Bolt, SST..	2
100292-00	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread Bolt, SST	2
138917-00	Double Clevis	2

Specifications

Swing Beam: Weldment comprised of 3.500" O.D. RS-20 (.120" - .130") galvanized steel tubing, 6" wide zinc plated steel clamp, 3.500" pipe cap, and 1 1/4" housings with bronze bushings. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour
Area Req.: 10' 7 3/4" x 17' (3,24 m x 5,18 m)
Weight: 31 lbs.

Installation Instructions

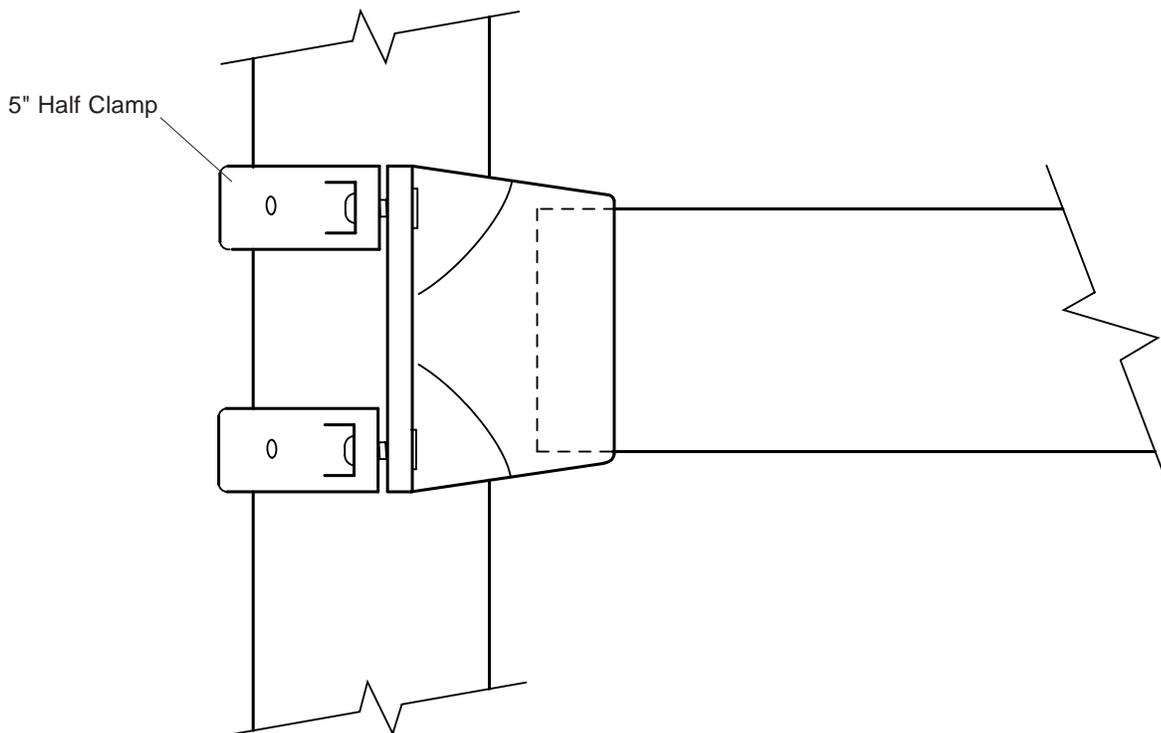
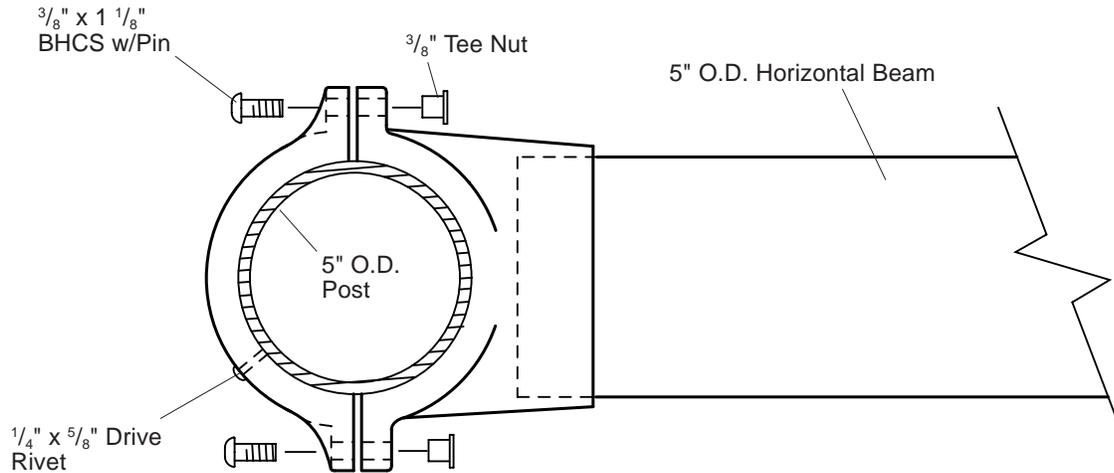
- 1) Attach swing beam to post using 6" half clamp, 3/8" x 1 1/8" BHCS w/pin and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Swing Beam Attachment Detail. **NOTE: Tighten all (4) BHCS w/pin equally.**
- 2) Attach double clevises to beam using 7/16" x 2 7/16" BHCS w/pin limited thread bolts, and attach swing chains to double clevises using 3/8" x 1 1/4" BHCS w/pin limited thread bolts. Refer to the Double Clevis Attachment Detail.
- 3) Install Swing Seat per the installation sheet.
- 4) Drill through hole in 6" half clamp and into post with a 1/4" or "F" (only) drill bit. Install 1/4" x 3/8" drive rivet. Refer to the Swing Beam Attachment Detail.
- 5) Drill through hole in swing beam and into post with a 1/4" or "F" (only) drill bit. Install 1/4" x 3/8" drive rivet. Refer to the Swing Beam Attachment Detail.
- 6) Install protective surfacing before users are allowed to play on the structure.

APPENDIX A:

Orlando Bell Park

**PLAYGROUND EQUIPMENT MANUFACTURER'S
INSTALLATION INSTRUCTIONS**

Installation Instructions (5-12 Equipment)



Parts List

Part#	Description	Qty
105327-01	5" Half Clamp, Specify Color	2
100198-00	$\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin, SST	4
100351-00	$\frac{3}{8}$ " Tee Nut, SST	4
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2

Specifications

Tee/Beam: 356 alloy treated to T-6 hardness and welded to 5" aluminum beams or mechanically fastened to 5" steel beams. Finish: Powdercoat, color specified.

Half Clamps: Cast aluminum. Finish: Powdercoat, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 2 lbs.

Installation Instructions

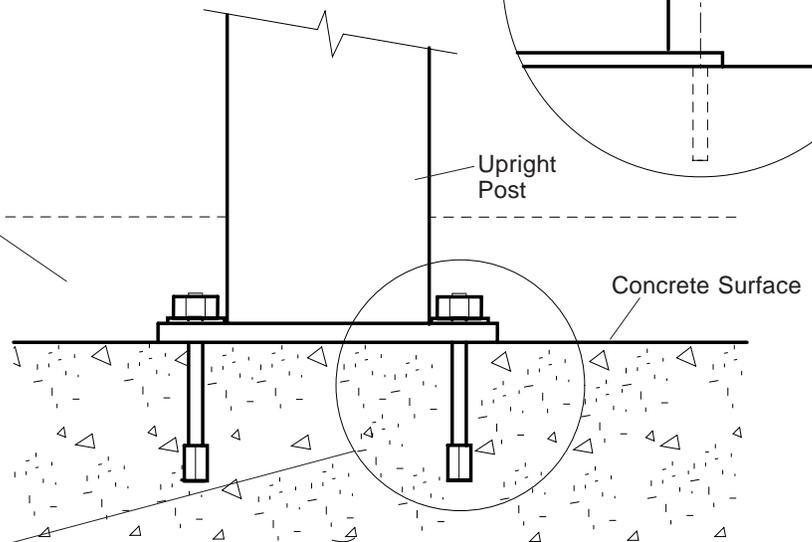
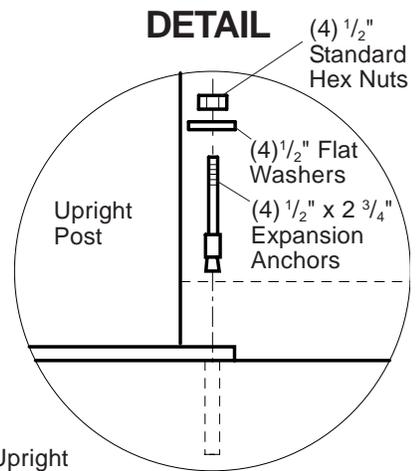
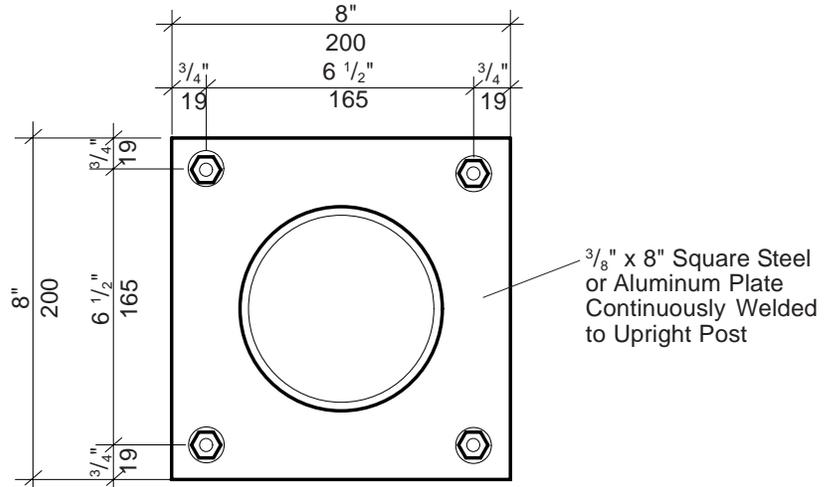
- 1) Locate and mark center of clamp location on 5" pipe.
- 2) With beam in position, fasten 5" half clamps to tee clamp using $\frac{3}{8}$ " x 1 $\frac{1}{8}$ " BHCS w/Pin and tee nuts as shown. Tighten cap screws evenly.
- 3) **IMPORTANT:** *Install drive rivets in half clamps by drilling holes in clamps and into 5" pipe using a $\frac{1}{4}$ " or "F"(only) drill bit. Insert rivet in hole, and hammer rivet pin in until it is flush with head.*

NOTE:
Surface mounting will not work in all applications. Consult Landscape Structures Inc. for your particular requirements.

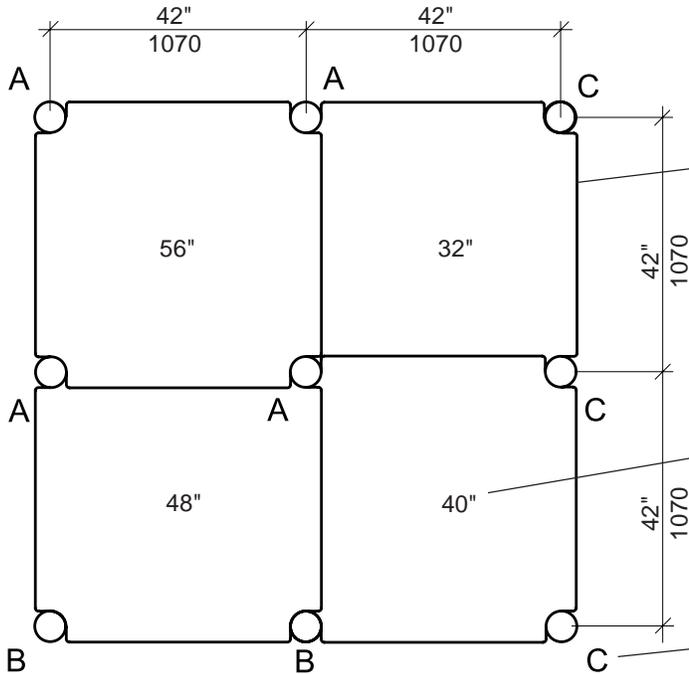
- CONCRETE SLAB SPECS**
- Base under slab to be 4" - 6" of sand over a stable subgrade.
 - Depth of concrete slab to be 4" - 6" with a wire mesh support.
 - Minimum of 7 days curing time full cure after 30 days.
 - Surface of concrete to be trowled smooth and acid etched.
 - Concrete: 3000 PSI (Min)
30 Days 3500 PSI
 $\frac{3}{4}$ " Minus Crushed Rock

NOTE: Sufficient protective surfacing must cover hardware to satisfy fall height requirements.

NOTE:
Drill 3" deep hole using hammer drill and $\frac{1}{2}$ " masonry bit. Tap anchors into concrete and secure with $\frac{1}{2}$ " standard hex nuts and $\frac{1}{2}$ " flat washers.



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487, SECTION 9.)

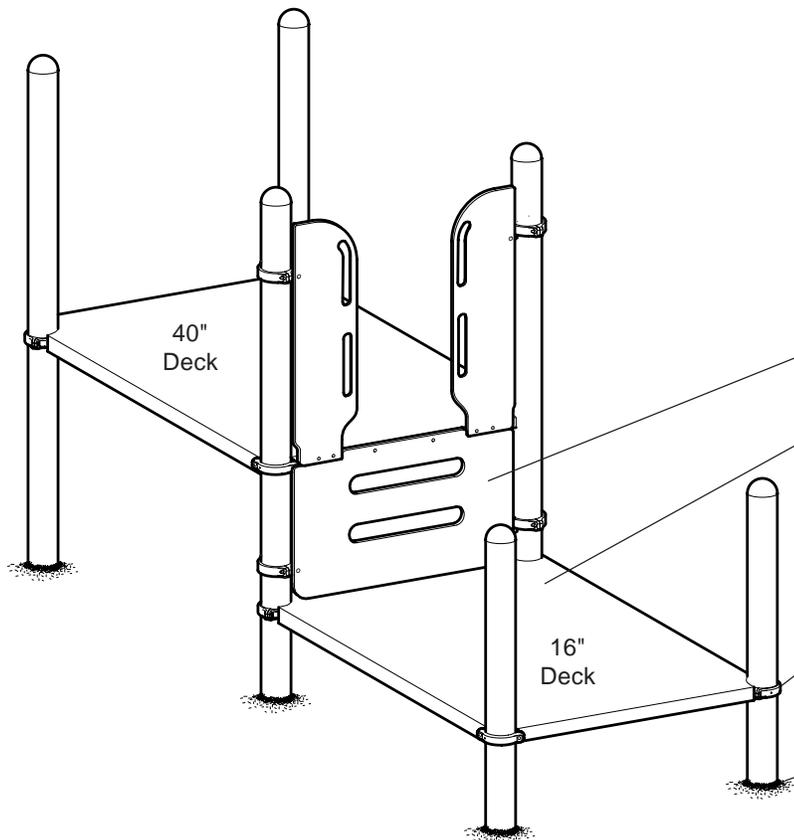


Enclosures or components are required on any decks higher than 28" as indicated on your plan drawing.

Dimension indicates center to center spacing of concrete footings.

Number indicates height of deck above finished grade.

Letter indicates post length as indicated on your plan drawing.



Enclosures/ Components - Refer to your plan drawing for locations and their respective spec sheets for installation.

Vertical Ladders - Refer to your plan drawing for locations and the Vertical Ladder spec sheet for installation.

Decks - Refer to your plan drawing for heights and orientation. Refer to the appropriate deck spec sheet for installation.

Deck Hanger Clamp Assembly - Refer to the appropriate Deck Assembly spec sheet for installation.

Concrete Footings - Refer to the Typical Concrete Footing spec sheet for installation.

Kick Plates - Refer to your plan drawing for locations and the Kick Plate spec sheet for installation.

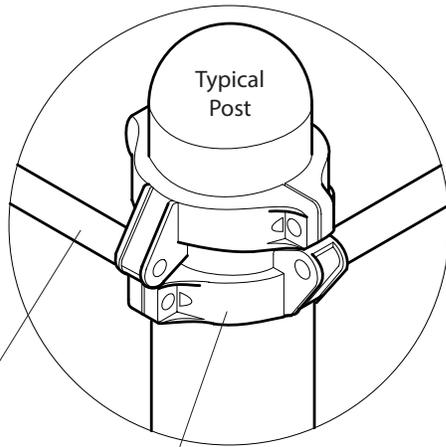
PlayBooster General Post/Tenderdeck Information

Installation Instructions

Before Starting, Read the General Construction Guidelines, Installation Hints, All Typical Detail Sheets and Specific Installation Instructions for Each Component Labeled on Your Plan.

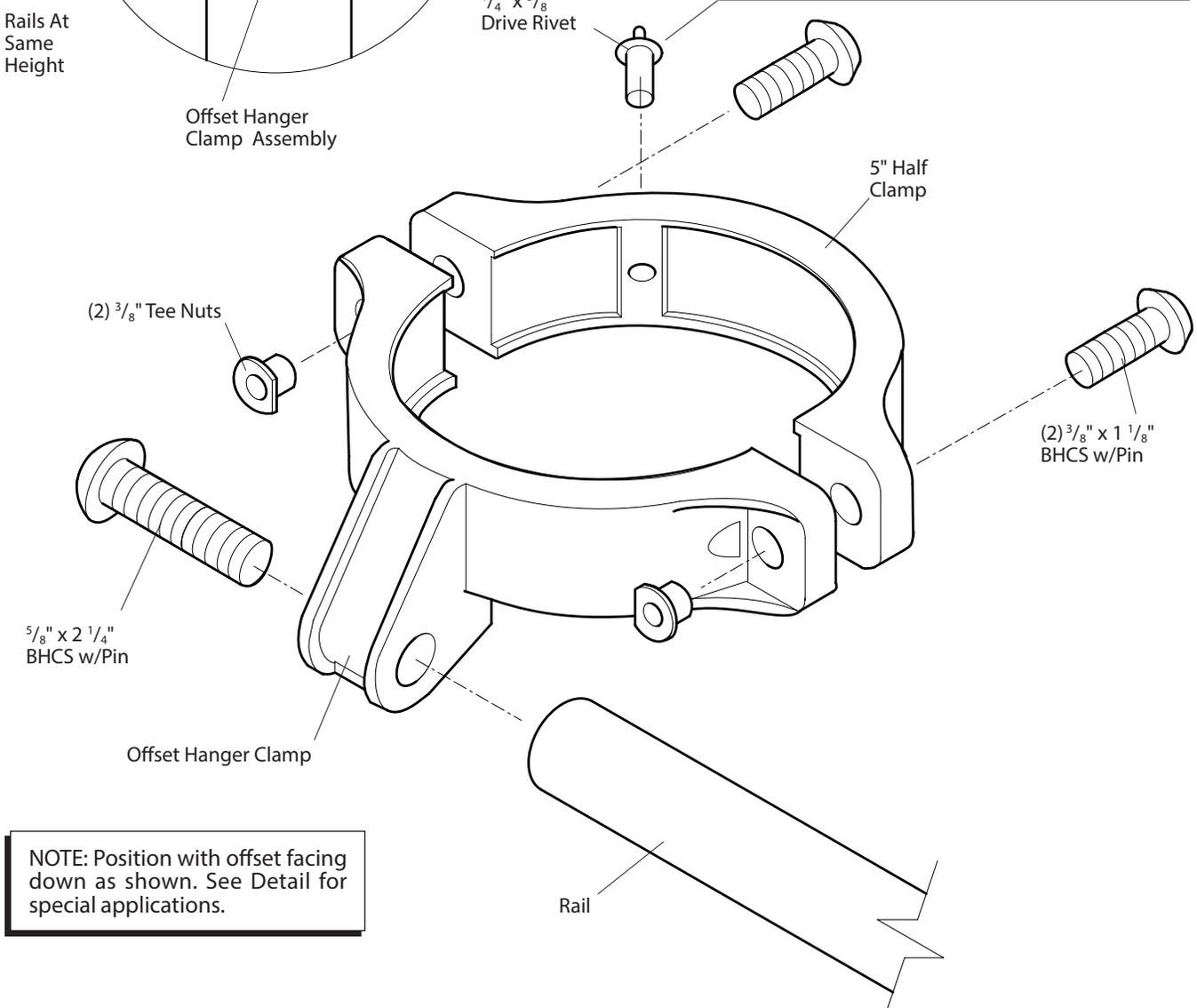
- 1) Dig footing holes spaced as shown on the plan and spec sheets. Refer to the Typical Concrete Footing Spec Sheet.
- 2) Note the post lengths as shown on the plan and set in their appropriate footing holes. The post length is indicated on the finished grade sticker on each post.
- 3) Mark the appropriate posts for the deck heights you are installing and attach decks to posts at marked height. Refer to the appropriate deck spec sheet for installation.
- 4) After all the posts are at proper heights and plumb, and the decks are at proper height and level, pour the concrete footings per the Typical Concrete Footing Spec Sheet.
- 5) Continue installing enclosures and components and pour concrete footings as you progress, making sure everything is plumb and level.
- 6) When installation is complete, install Drive Rivets in all clamps per the Typical Offset Hanger Clamp Spec Sheet.
- 7) Install protective surfacing under and around all equipment before users are allowed to play on the structure.

**DETAIL
ASSEMBLED CLAMP**



The Offset Hanger Clamp allows rails to be installed at same height for special applications, like at 90° to each other as shown, or when there are clamp conflicts, offset can be positioned upward.

NOTE: A drive rivet is not required in all applications. See General Rules for Use of Drive Rivets for more information.



NOTE: Position with offset facing down as shown. See Detail for special applications.

PlayBooster® 114261 Offset Hanger Clamp Assembly



PlayBooster 114261 Offset Hanger Clamp Assembly

J:\SPECS\123\12382100.P65

Parts List

Part#	Description	Qty
100198-00	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
105327-01	5" Half Clamp, Specify Color	1
113729-00	Offset Hanger Clamp, Specify Color	1
100203-00	$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin, SST	1

Specifications

Clamp: Cast aluminum. Finish: Powdercoat, color specified.

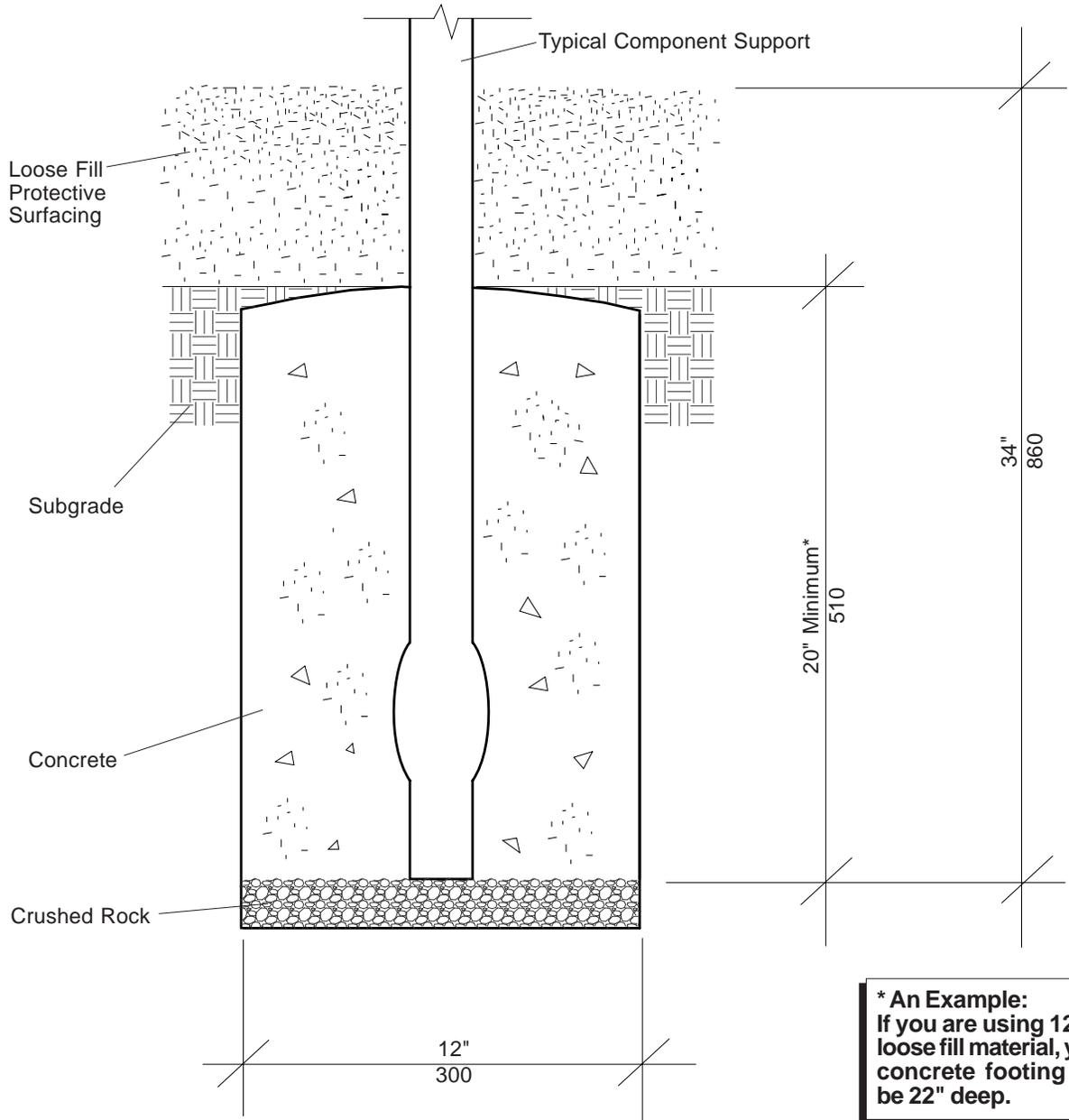
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{4}$ man hour

Weight: 3 lbs.

Installation Instructions

- 1) Locate and mark position of clamp on 5" post.
- 2) Position clamp in proper direction and assemble with $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts as shown and lightly tighten. Position rail against clamp and screw in $\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/pin until rail bottoms out on clamp. Final tighten all fasteners.
- 3) **IMPORTANT:** *Drill through hole in 5" half clamp and into 5" post with a $\frac{1}{4}$ " or "F" (only) drill bit, insert rivet in hole and hammer rivet pin in until it is flush with head.*



Minimum 1.2 Cubic Feet of Concrete Required per Support.

PlayBooster Installation

- 1) Before starting installation, study your *PlayBooster* plan drawing and all installation instructions carefully for location of posts, deck heights, components and safety enclosures. Make sure slides are oriented away from the afternoon sun and that the structure is visible (easily supervised) and accessible.
- 2) Clear an area large enough for your *PlayBooster* and at least the required minimum use zone around it, as shown on your plan drawing. The subsurface must be well drained. If the soil does not drain naturally it must be tiled or sloped at $\frac{1}{8}$ " to $\frac{1}{4}$ " per foot to a storm sewer or a "French Drain". If your *PlayBooster* is over 30' in length it is recommended to install more than one "French Drain" or similar system to allow drainage from the center of the play area and decrease the overall slope. If this is not possible, the structure may need to be "stepped" to take up the grade change.
- 3) Overhead Obstructions: Overhead obstructions within the use zones of playground equipment that are not part of the play structure (for example, tree limbs) shall be at least 84 in. (2130 mm) above each designated play surface or 84 in. (2130 mm) above the pivot point of swings. All overhead utility line clearances above the use zone areas shall comply with all local, state, and national codes, such as the National Electrical Safety Code.
- 4) Locate all mainstructure post footing holes according to the dimensions shown on your *PlayBooster* plan. This can be accomplished by laying a deck on the ground and measuring from it; by laying out a base line string grid or using a builders transit. This step is very important and worth taking extra time to be precise. Location of component footings such as slide supports can be done at a later time.
- 5) Refer to the Typical Concrete Footing installation sheet. Dig holes to the proper width and depth as shown. (Only dig enough holes for one day's construction. Do not leave holes open over night.) Pour crushed rock in each hole **level with each other** and at least 4" deep as shown. This can be easily accomplished either with a builders transit or by laying out hole locations with a string grid, leveling the grid, and measuring down from the grid for each footing. Tamp the crushed rock down until compacted and at proper level. This step is important to ensure all posts will be at the proper height relative to each other, and it greatly simplifies installation. If the soils are loose or unstable, larger diameter holes may be necessary. Check with a local engineer if in doubt.
- 6) Start with the lowest deck and work your way to the highest deck following instructions on the installation sheets for typical post/deck assembly. Install barriers and roofs as located on the plan for stability.
- 7) After the posts are at proper heights and plumb, and the decks are at proper height and level, pour the concrete footings per the Typical Concrete Footing Detail.
- 8) During construction, the site and all the material on it must be secured when unattended to prevent children from playing on them. Do not leave decks with unprotected openings when unattended-use temporary barricades if necessary.
- 9) Install all other play components per the installation instructions. After all components and enclosures are properly attached, pour the remaining concrete footings per the Typical Concrete Footing Detail.
- 10) Install protective surfacing material.
- 11) Attach play hardware such as 'D' rings and swing seats last, **after** protective surfacing is in place and footings have cured at least 3 days.
- 12) Carefully and thoroughly inspect the entire *PlayBooster* to be sure all fastening hardware is tight. According to ASTM F1487, section 6.2 sharp points, edges and protrusions; any exposed bolt ends should not protrude beyond the face of the nut more than two (2) threads. This condition is not planned, but may exist in some applications because materials and finishes will vary. To remedy this situation, add a second nut or washer(s), extras have been added to the spare parts kit. See illustrations on reverse side of this sheet. Children should not be allowed on the structure until this inspection is complete.
- 13) Before children are allowed on the structure, the site must be cleaned and free of all construction debris and packaging material. Do not burn on the site.

Tools Required

Tools required for installation are an auger, or other equipment for digging 14" diameter footing holes; shovels, rubber mallet, drill (with $\frac{1}{4}$ ", $\frac{7}{16}$ ", $\frac{9}{16}$ ", $\frac{11}{16}$ " and $\frac{3}{8}$ " drill bits), tape measure, hex keys or allen wrenches, level, $\frac{3}{8}$ " socket set, hammer, open end wrench set, screw driver, for surface mount a hammer drill, $\frac{3}{8}$ " and $\frac{1}{2}$ " masonry bits and transit or string line to aid in layout. Some washable felt tip pens are also useful for marking clamp locations.

Materials Required

All *PlayBooster* materials are supplied except concrete for footings, protective surfacing material, and curbing or edging material. With the exception of the special wrenches required (for the pinned hex fasteners) no other tools are supplied.

Recycling

Many of our packaging materials can be recycled, please take the time to separate and deliver them to a recycler. Thank You.

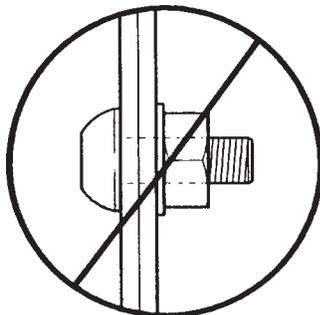
Installation Times

Installation times, as noted on the back of the installation sheets, are *approximate* and will vary depending on soil conditions, installer's equipment and ability. Times indicated *do not* include unloading or unpacking equipment. The man hours given are for one person installing (unless otherwise noted). Cut time in half for two people.

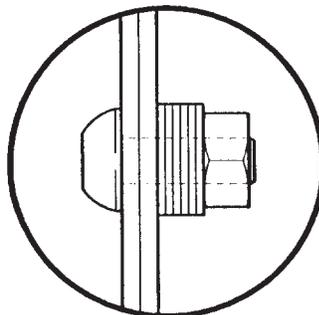
Technical Services

If you have any questions or concerns about the installation of your structure, call our Technical Services Department at: **1-800-328-0035** (7:30 - 5:30p.m. CST/M-F).

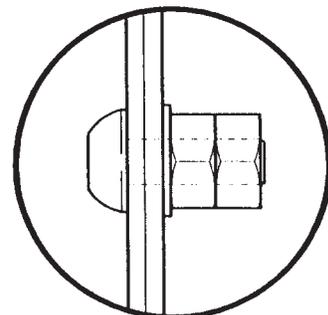
Illustrations For Note 10, (Reverse Side Of This Sheet)



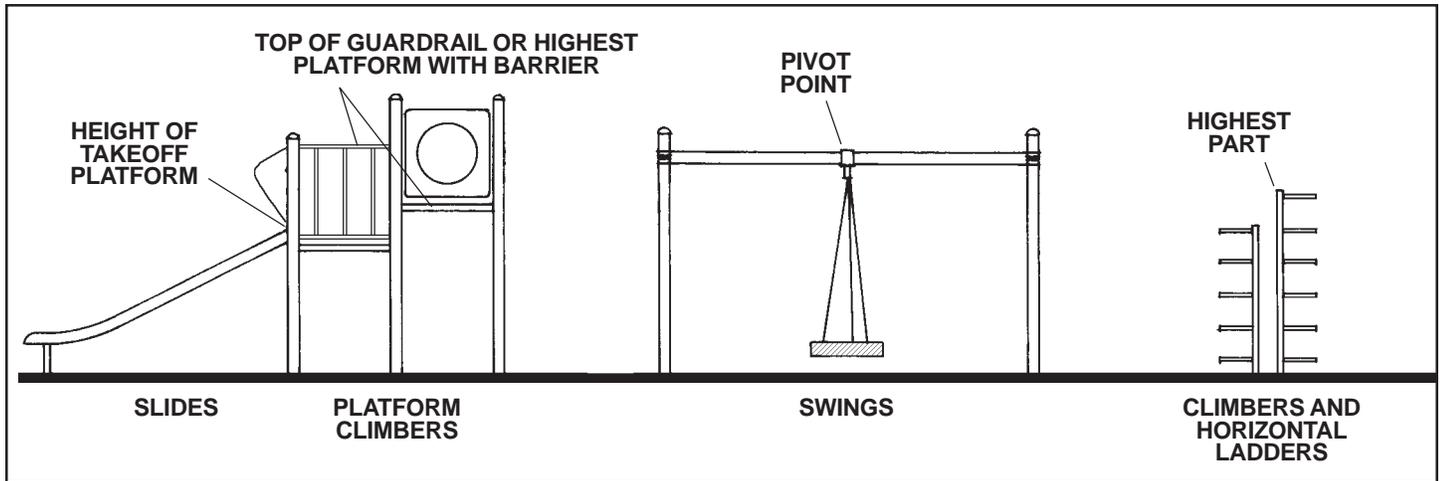
More Than Two (2)
Threads Exposed



Add Washers



Add Another Nut
(Align Flat Area)



- 1.) Determine the highest accessible part - by definition.
- 2.) Determine the type of surfacing material desired:
 - *Unitary* - Bound rubber type materials for the accessible areas.
 - *Loose-fill* - Sand, wood chips, etc. for non-accessible areas.
- 3.) Select a material that has a Critical Height value of at least the height of the highest accessible part.
 - According to the CPSC, Critical Height is defined as the maximum height from which the instrumented metal headform, upon impact, yields both a peak deceleration of no more than 200 G's and a HIC value of no more than 1,000 when tested in accordance with the procedure described in the ASTM Test Method F1292.
 - Request independent laboratory test results showing the critical height of each product per the above procedures for commercially available products. The CPSC has tested some common loose-fill materials that are commonly not tested as a protective surfacing. (See back page.)
- 4.) Cover the designated use zone with the desired materials. If a different type of material is used for the accessible route of travel, make sure the surfaces are maintained flush.



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

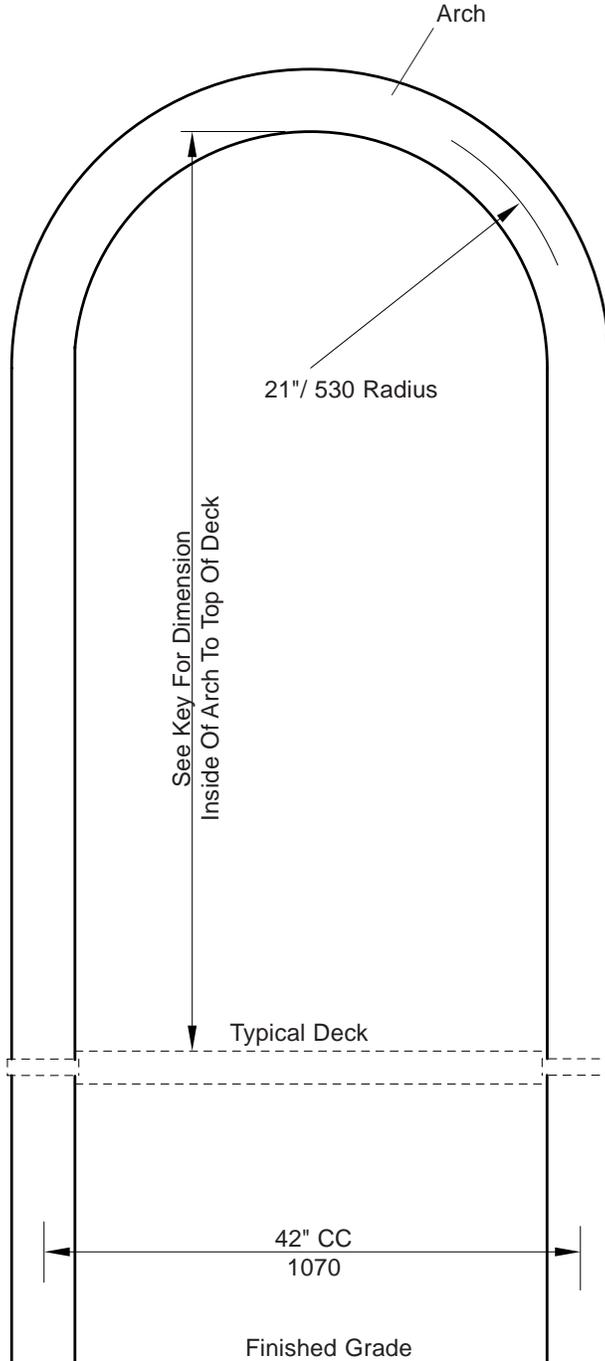
Critical Heights (in Feet)

Material	Uncompressed Depth			Compressed Depth *
	6"	9"	12"	9"
* Wood Mulch	7'	10'	11'	10'
* Double Shredded Bark Mulch	6'	10'	11'	7'
* Uniform Wood Chips	6'	7'	12'	6'
* Fine Sand	5'	5'	9'	5'
* Coarse Sand	5'	5'	6'	4'
* Fine Gravel	6'	7'	10'	6'
* Medium Gravel	5'	5'	6'	5'

NA = Not Available

- * **NOTE:** Compressed depths most accurately depict conditions on a playground.
- * An approximation of the maximum fall height from which a life-threatening head injury would not be expected to occur, based on tests in which a headform yielded both a peak deceleration of less than 200 G's and a HIC of less than 1000 upon impact.
- * Handbook for *Public Playground Safety*, published by the U.S. Consumer Products Safety Commission, Section 10, Table 2, page 21.

Critical Heights



Standard Concrete Footings Required w/ 34"/860 Bury

SPECIFICATIONS:
 Arch formed from 5" O.D. 6005-T5 aluminum tubing with 1/8" wall thickness. Unit is coated with a baked-on polyester powder-coating, color specified.

Key:

Deck Height	Dimension
32"/810	92 1/2"/2350
40"/1020	98 1/2"/2502
48"/1220	90 1/2"/2299
56"/1420	98 1/2"/2502
64"/1630	90 1/2"/2299
72"/1830	90 1/2"/2299
At Grade (No Deck)...	97 1/4"/2470

NOTE:
 Refer To Your Plan For Location Of Arches.

"How to distribute your hardware *Headache Free*"



We have received feedback from you, our customers, that the most common delay in completing your playground installation is lost or misplaced hardware.

Some of our most successful installations have used a "*check-out*" system with one person appointed to distribute the various hardware packages. Installation sheets are provided for each component that indicate hardware packages/items required to assemble that component. Refer to these sheets to determine which hardware items to request from the designated "*check-out*" person.

HELPFUL HINTS:

Read installation sheets.

Be sure to use the correct length hardware as specified on the installation sheets.

Be sure to use clamps in the correct location as indicated on the installation sheets.

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Be sure to use clamps in the correct location as indicated on the installation sheets.

Warning

Your playground may include equipment containing moving parts. Moving parts are more vulnerable to wear, mis-use and abuse than other non-moving parts. It is critical these parts be inspected and maintained according to our recommendations.

As the owner, it is your responsibility to perform preventative maintenance and record your findings. Failure to do so may create a hazard and cause serious injury or death.

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IMPORTANT SAFETY NOTES!

According to the U.S. Consumer Product Safety Commission (CPSC) nearly 70% of all playground injuries are caused by falls to the surface.

PLEASE INSTALL AND MAINTAIN ADEQUATE PROTECTIVE SURFACING UNDER AND AROUND YOUR PLAYSTRUCTURE!

Never let children play on the equipment before protective surfacing is installed.

Consult the CPSC's Handbook for Public Playground Safety, the ASTM F1487 Standard or your Landscape Structures representative for more information.



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Did you know that most of the packaging materials you receive on a Landscape Structures order are recyclable? Do you reuse or recycle everything you can from your playground sites? We're making it easier for you to do the right thing and keep these materials out of landfills!

FOAM/SCRIM SHEETS

Landscape Structures has partnered with our supplier to recycle foam/scrim material, the grey and white sheets that are layered between the large painted parts. This material is not usually accepted at general recycling facilities but this supplier will re-use it in their manufacturing of new packaging materials. It's easy! Just put the foam/scrim from your installation site in a box and ship it to the facility closest to you.

Here is a list of participating facilities throughout the U.S.:

Foam/Scrim Products Only

Pregis Plant
159 N San Antonio Ave.
Pomona, CA 91767

Pregis Plant
8201 W Elwin Ct.
Visalia, CA 93291

Pregis Plant
7574 Presidents Dr.
Orlando, FL 32809

Pregis Plant
1411 Pidco Dr.
Plymouth, IN 46563

Pregis Plant
300 Harris Rd.
Wurtland, KY 41144

Pregis Plant
3825 N Main St.
Granite Falls, NC 28630

Pregis Plant
18 Peck Ave.
Glens Falls, NY 12801

Pregis Plant
3500 S Highway 287
Corsicana, TX 75109

Pregis Plant
310 Old Station Rd.
Wenatchee, WA 98801

Foam/Scrim, Plastic Banding, Shrink Wrap

Anchor Facility
480 Broadway St.
St Paul, MN 55101

Anchor Facility
1501 Swasey Rd.
Hudson, WI 54016

Don't stop here! Most of the other packaging materials can also be recycled, reused or repurposed.

- **CORRUGATED CARDBOARD:** Boxes can be broken down and recycled at a local recycler, or reused for other storage.
- **SHRINK WRAP:** Contact your local plastic recycler and ask if they accept polyethylene plastic.
- **PLASTIC BANDING:** Contact your local plastic recycler and ask if they accept polypropylene.

If you have suggestions for recycling, reusing or repurposing other materials, please email them to: info@playlsi.com. Just one more way Landscape Structures is building healthy, sustainable communities.



Look for compliance to the following guidelines and standards whenever you install playground equipment. It's your assurance that the products you install meet the most rigorous safety and quality assurance standards.

Landscape Structures is a member in good standing of **IPEMA**, the **International Play Equipment Manufacturers Association**. IPEMA is a member-driven, international trade organization that represents and promotes an open market for manufacturers of play equipment.



In the interest of playground safety, IPEMA provides a Third Party Certification Service whereby a designated independent laboratory validates a participant's certification of conformance to ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, except sections 7.1.1, 10 and 12.6.1; CAN/CSA Z614, Children's Playspaces and Equipment Standards, except clauses 9.8, 10 and 11; or both. The use of the corresponding logo in the Landscape Structures Inc. catalog signifies that Landscape Structures Inc. has received written validation from the independent laboratory that the product(s) associated with the use of the logo conforms with the requirements of the indicated standards. Check the IPEMA website (www.ipema.org) to confirm product certification. The use zone and fall height requirements in this publication are shown to ASTM standards. The requirements for other standards may be different. According to the CSA, playground maintenance and inspection is a continuous and integral part of budgetary costs. The cost of inspection and maintenance shall be considered and incorporated into the budget at the time of design, purchase equipment and installation (11.1.1 Budgeting).

International Play Equipment Manufacturers Association

4305 N. Sixth St. Suite A
Harrisburg, PA 17110
www.ipema.org



The Consumer Product Safety Commission (CPSC) is a governmental organization that provides technical safety guidelines for designing, constructing, operating and maintaining public playgrounds.

U.S. Consumer Product Safety Commission

4330 East West Hwy.
Bethesda, MD 20814
www.cpsc.gov

The American Society for Testing and Materials (ASTM) is a scientific and technical organization that is a major developer of standards for testing different types of materials. In 1993, the ASTM published "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use," designation F1487-93. ASTM is more technical than the CPSC. ASTM revised its old standard and published a new standard in 1995, 1998, 2001, 2005, 2007 and again in 2011.

American Society for Testing and Materials

100 Barr Harbor Dr.
P.O. Box C700
West Conshohocken, PA 19428
www.astm.org



The Canadian Standards Association

Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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www.ipema.org



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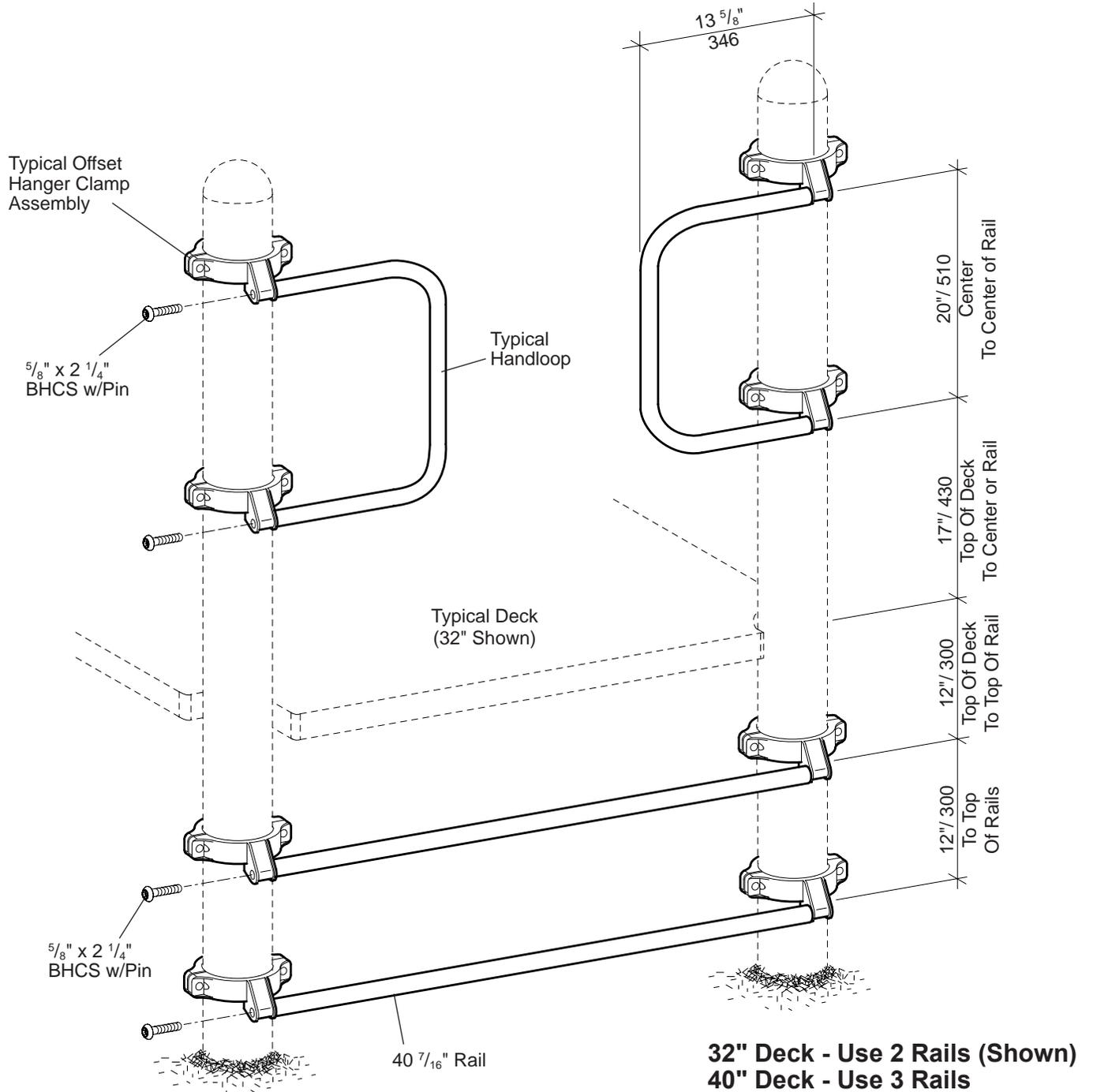


ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



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Parts List

Part#	Description	Qty.
111275	Handloop Assembly	1
108542	Handloop, Specify Color	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	4
100203	$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin, SST	2
100351	$\frac{3}{8}$ " Tee Nut, SST.....	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
111276	Rail Assembly	1
108569	Rail, Specify Color	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	4
100203	$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin, SST	2
100351	$\frac{3}{8}$ " Tee Nut, SST.....	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2

Handloop: Weldment comprised of 1.125" O.D. 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with $\frac{5}{8}$ " internal thread. Finish: TenderTuff™, color specified.

Rail: Weldment comprised of 1.125" O.D. 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts, with $\frac{5}{8}$ " internal thread. Finish: TenderTuff™, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{3}{4}$ man hour

Weight: 111275-00 (One) 11 lbs.
111276-00 (One) 11 lbs.

Installation Instructions

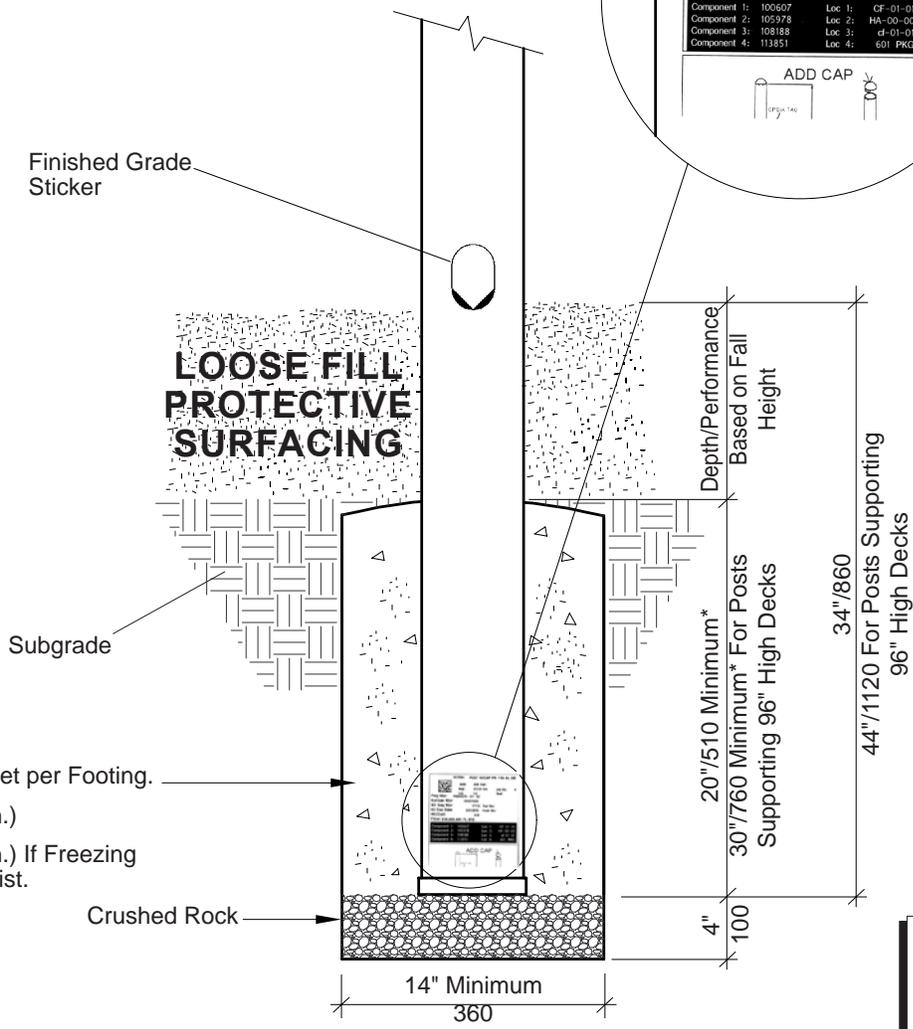
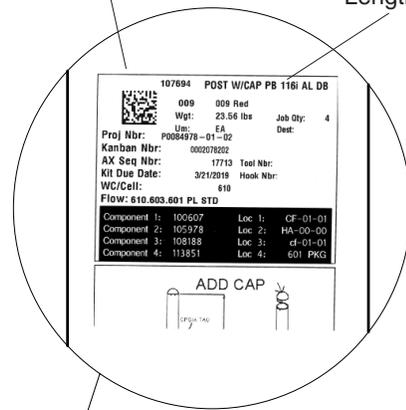
- 1) Mark locations of clamps on posts per dimensions on front of sheet.
- 2) Attach offset clamps to ends of rails/handloops using $\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/pin.
- 3) Position rail/handloop on marked position on posts and attach using 5" half clamps and $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " tee nuts. Refer to the Typical Offset Hanger Clamp Assembly Sheet.
- 4) Install drive rivets in half clamps per the Typical Offset Hanger Clamp Assembly Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

Post Post length shall vary depending upon the intended use and shall be a minimum of 42" above the deck height. All posts shall be powdercoated to specified color. All posts shall have a "finished grade marker" positioned on the post identifying the 34" bury line (or 44" bury line for posts for 96" decks) required for correct installation and the top of the loose fill protective surfacing. Top caps for posts shall be aluminum die cast from 369.1 alloy and powdercoated to match the post color. All caps shall be factory installed and secured in place with (3) self sealing rivets. A molded low density polyethylene cap, with drain holes, shall be pressed onto the bottom end of the post to increase the footing area.

Steel Posts: All steel PlayBooster posts are manufactured from 5" O.D. tubing with a wall thickness of .120" and shall be galvanized after rolling and shall have both the I.D. and the cut ends sprayed with a corrosion resistant coating.

Aluminum Posts: All aluminum PlayBooster posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221. Posts shall have a 5" outside diameter with a .125" wall thickness.

Part Number Label Example
Number Indicates Post Length



*** An Example:**
If you are using 12" of loose material, your concrete footing will be 22" deep.

PlayBooster® Concrete Footings, 5" Posts



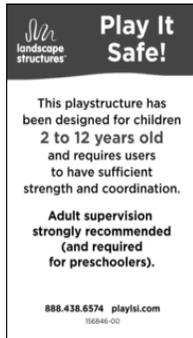
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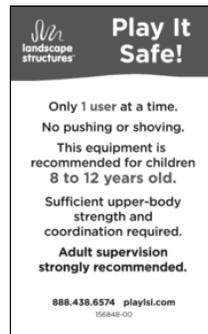
Part No. 182213-00-000



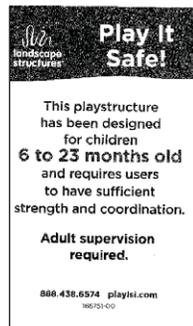
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Part No. 156846-00-000



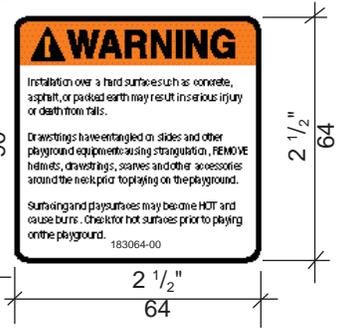
Part No. 156848-00-000



Part No. 166751-00-000



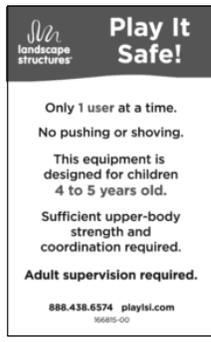
Part No. 182212-00-000



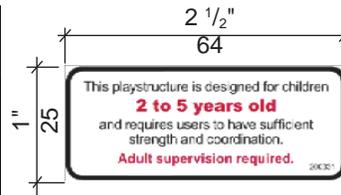
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Part No. 156850-00-000



Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000

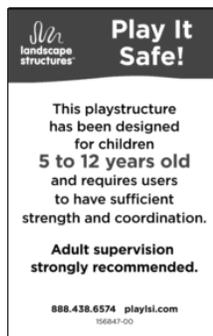


Part No. 200333-00-000

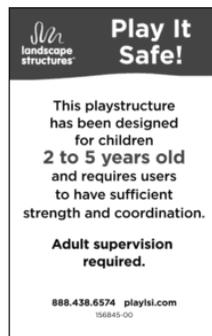
NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.



Part No. 156847-00-000



Part No. 156845-00-000



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

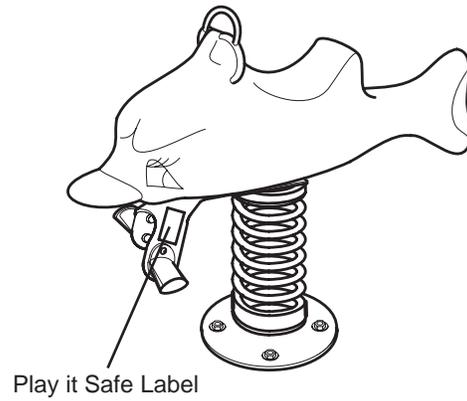
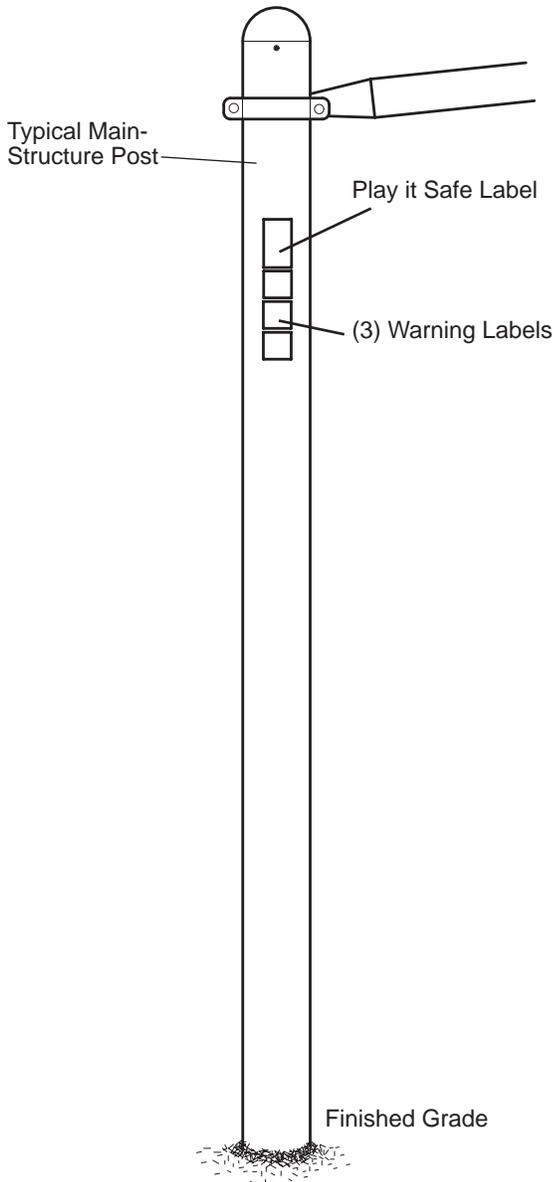
- 251714 5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
- 251723 Flat Large Play Safe Plate 2-5 Years w/Attaching HDW
- 251724 Flat Large Play Safe Plate 2-12 Years w/Attaching HDW
- 251725 Flat Large Play Safe Plate 5-12 Years w/Attaching HDW
- 251727 Flat Large Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
- 251730 Flat Small Play Safe Plate 2-12 Years w/Attaching HDW
- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

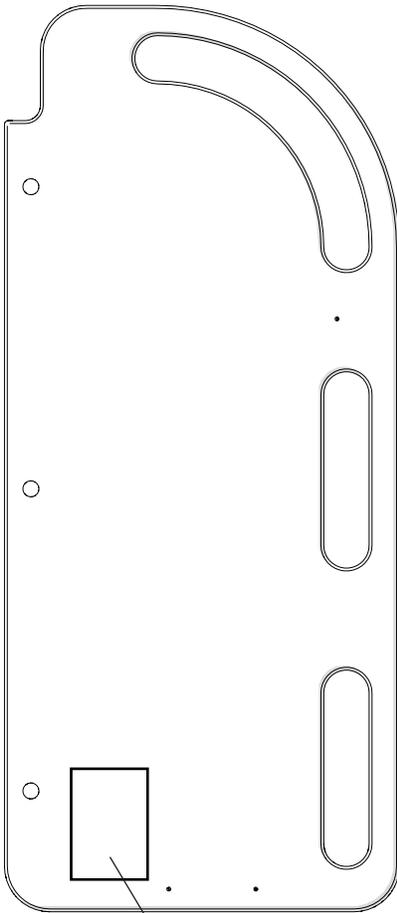




Warning Labels

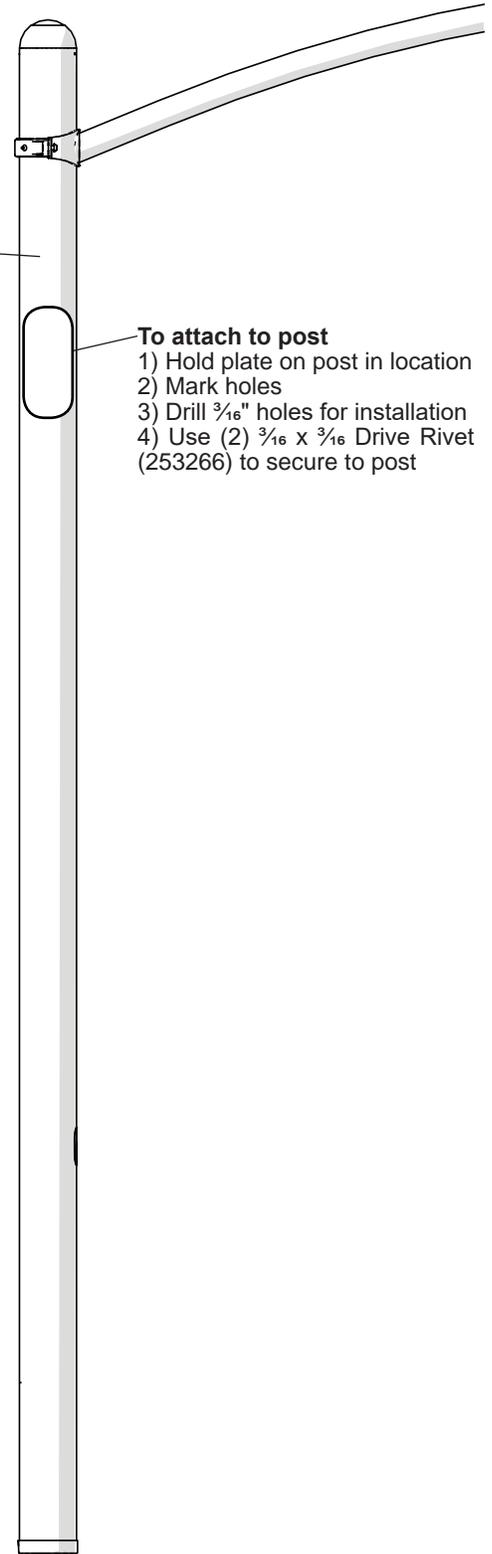
5" formed plate mounts to 5" posts.
 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
 - 2) Mark holes
 - 3) Drill $\frac{1}{8}$ " x $\frac{1}{2}$ " deep holes for installation
 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post



- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post



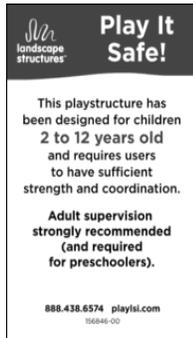
Part No. 156844-00-000



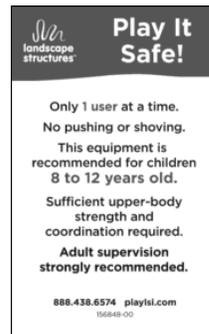
Part No. 182213-00-000



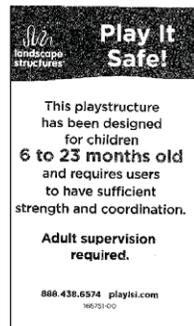
Part No. 115176-00-000



Part No. 156846-00-000



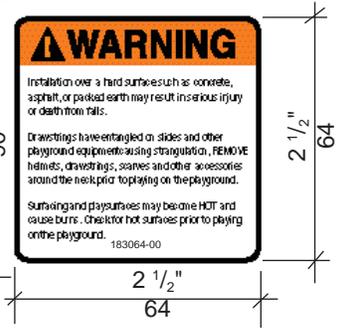
Part No. 156848-00-000



Part No. 166751-00-000



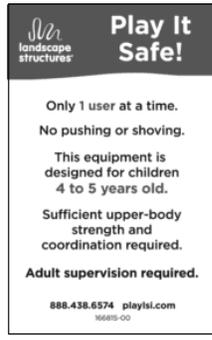
Part No. 182212-00-000



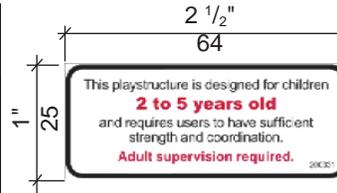
Part No. 183064-00-000



Part No. 156850-00-000



Part No. 166815-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.

Part No. 156847-00-000

Part No. 156845-00-000



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

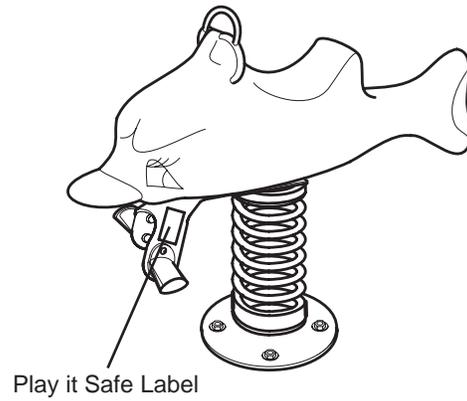
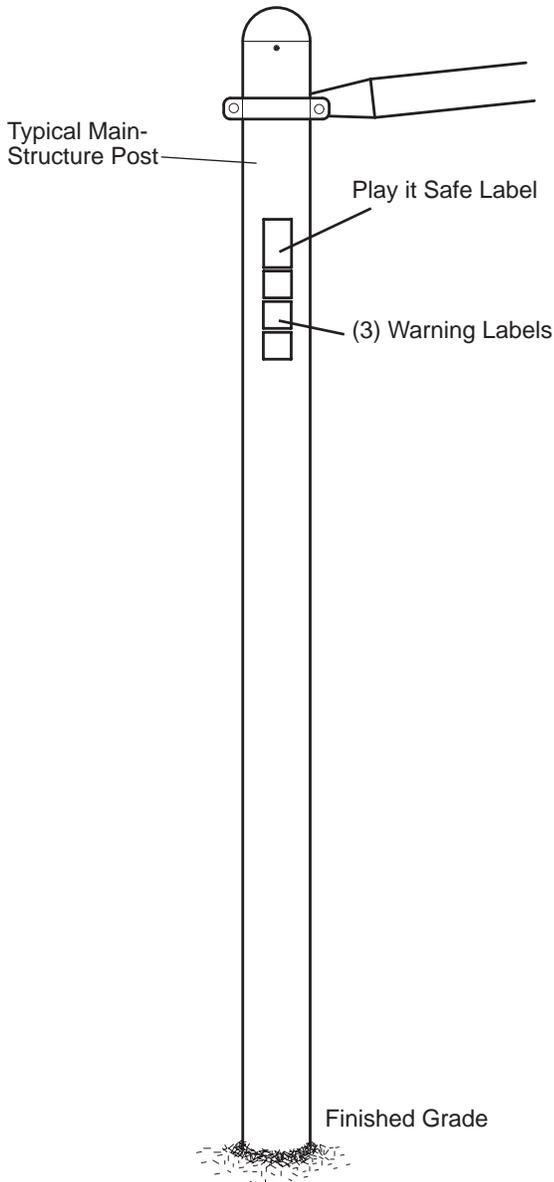
- 251714 5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
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- 251724 Flat Large Play Safe Plate 2-12 Years w/Attaching HDW
- 251725 Flat Large Play Safe Plate 5-12 Years w/Attaching HDW
- 251727 Flat Large Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
- 251730 Flat Small Play Safe Plate 2-12 Years w/Attaching HDW
- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

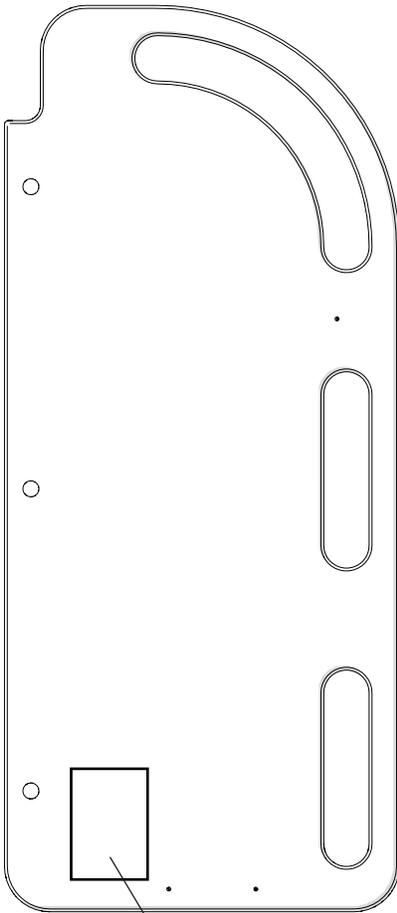




Warning Labels

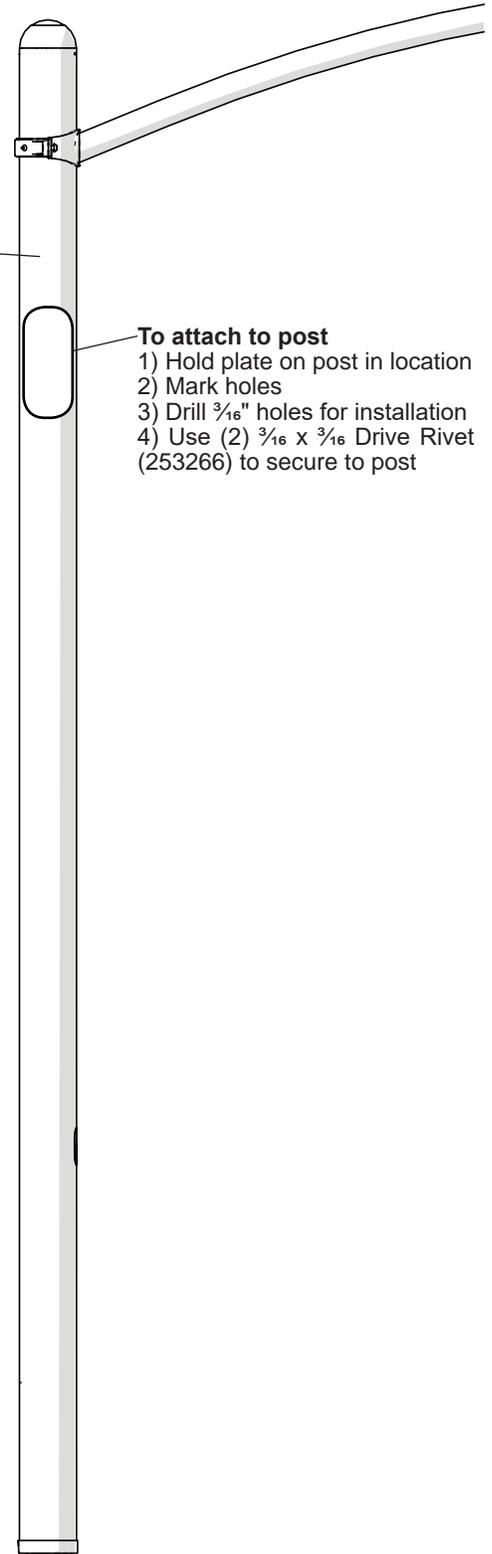
5" formed plate mounts to 5" posts.
 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
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 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post

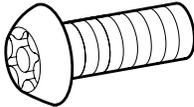


- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post

PB/PS/FP/Evos®/Weevos® **Warning Labels**

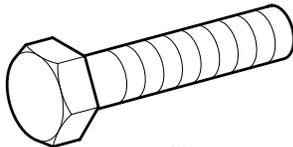
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



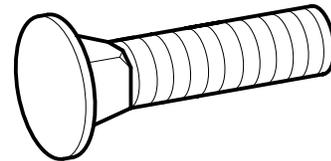
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1)	SST- ANTI-SEIZE	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



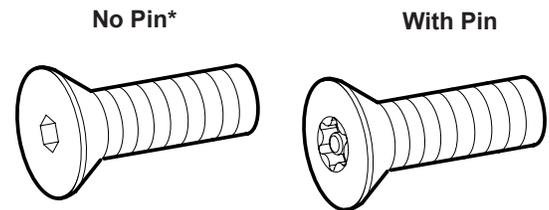
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

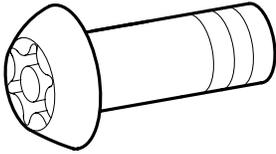
Flat Head Cap Screws (FHCS)



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

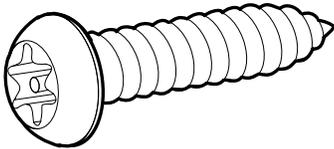
NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

BHCS w/Pin Limited Thread Bolts



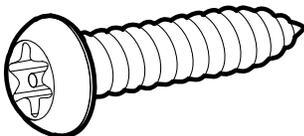
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



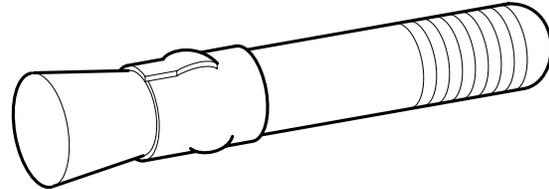
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



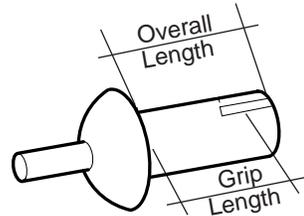
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

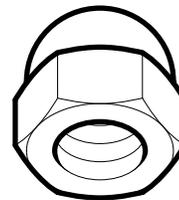
Drive Rivets



NOTE: For more detail see drive rivet detail page.

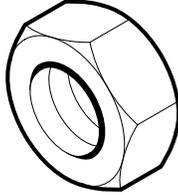
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



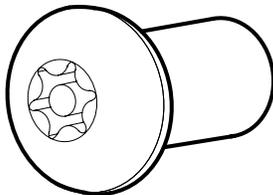
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



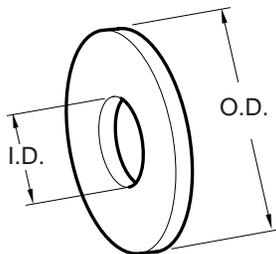
Part #	Sizes Inches	Mat'l or Grade
100326	5/16-18 UNC	SST
100321	3/8-16 UNC	SST-Pat
100327	3/8-16 UNC	SST
128296	3/8-16 UNC (Jam Nut)	SST
100328	7/16-14 UNC	SST
145021	7/16-14 UNC (Jam Nut)	SST
100322	1/2-13 UNC	SST
129692	1/2-13 UNC	SST-Pat
129693	1/2-13 UNC (Jam Nut)	SST
100323	5/8-11 UNC	SST

Flange Nut w/Pin



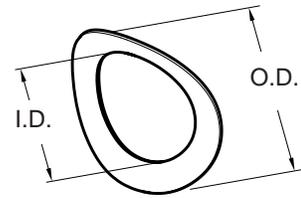
Part #	Sizes Inches	Mat'l or Grade
175006	5/16 x 18 UNC	SST
192064	M 8 x 24 mm	SST
100353	3/8-16 UNC	SST

Flat Washers



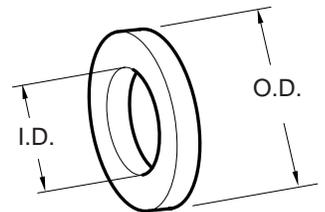
Part #	Sizes Inches	mm	or Grade	I.D.	O.D.
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



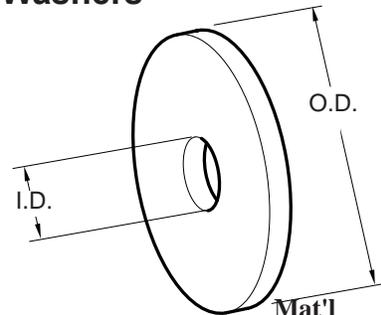
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



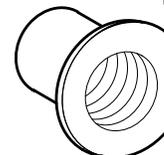
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



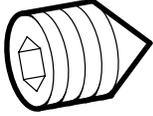
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes Inches	Mat'l or Grade
100351	3/8-16 UNC	SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



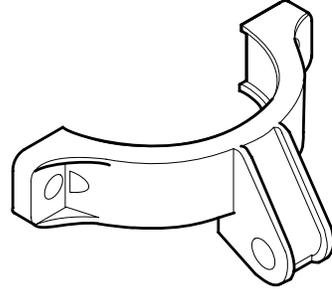
Part #	Mat'l or Grade
138915	SST

Double Clevis



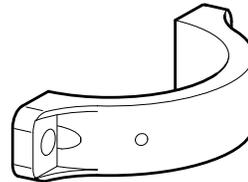
Part #	Mat'l or Grade
138917	SST

(PlayBooster)



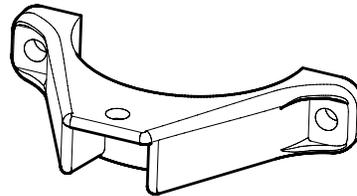
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



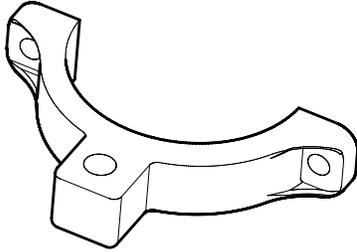
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



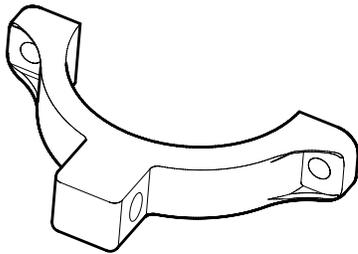
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



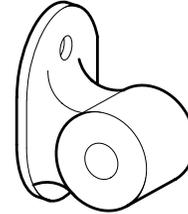
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



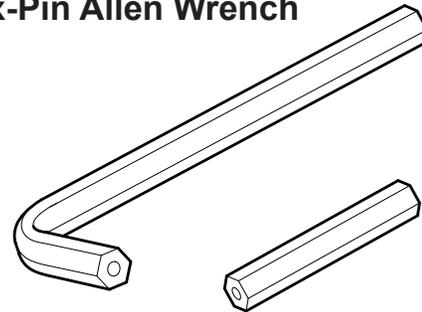
Part #	Mat'l
105330	Cast Aluminum

(PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

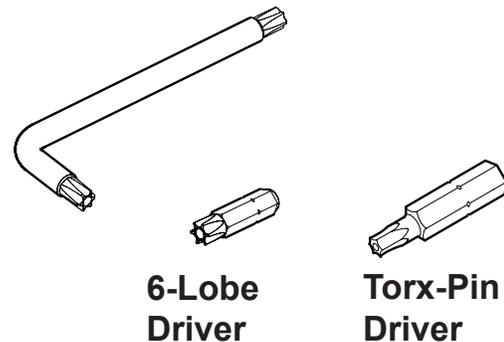
Hex-Pin Allen Wrench



Hex-Pin Driver

Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench

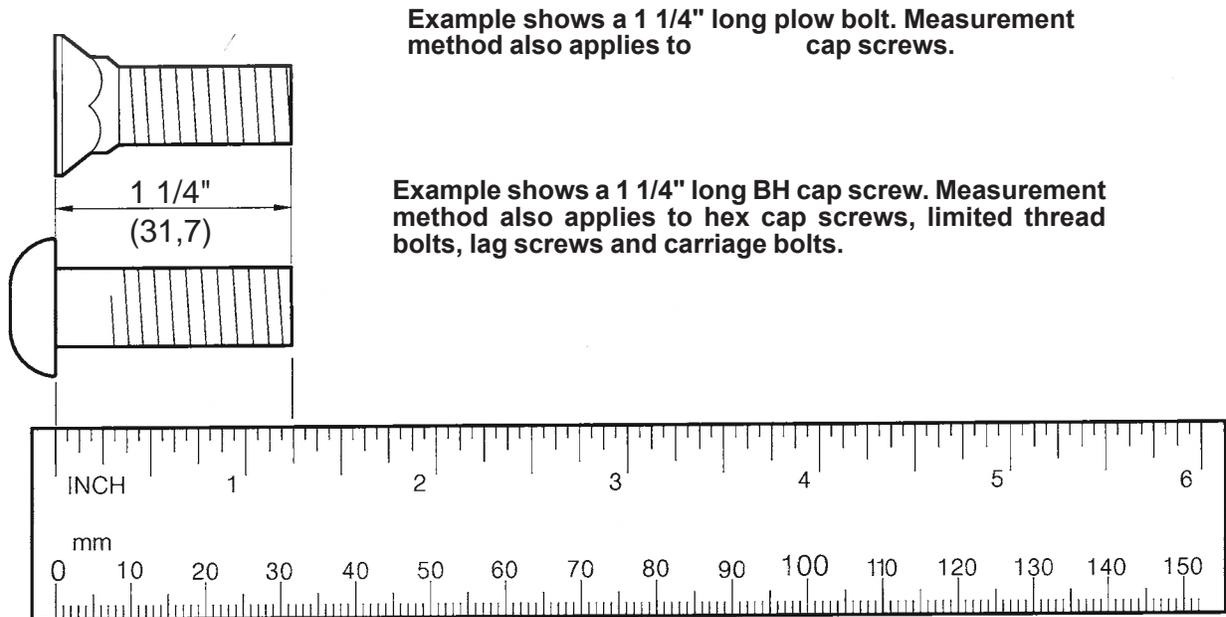


6-Lobe Driver

Torx-Pin Driver

Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



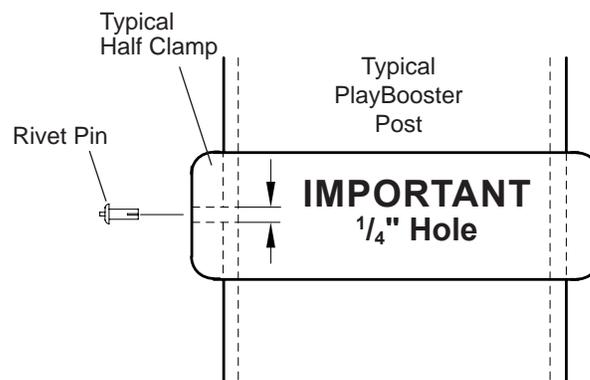
Example shows a 1 1/4" long plow bolt. Measurement method also applies to cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

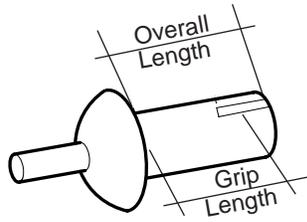
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



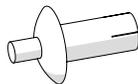
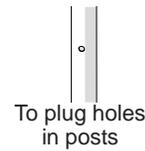
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



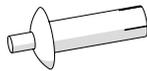
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



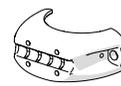
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

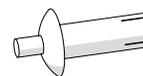


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



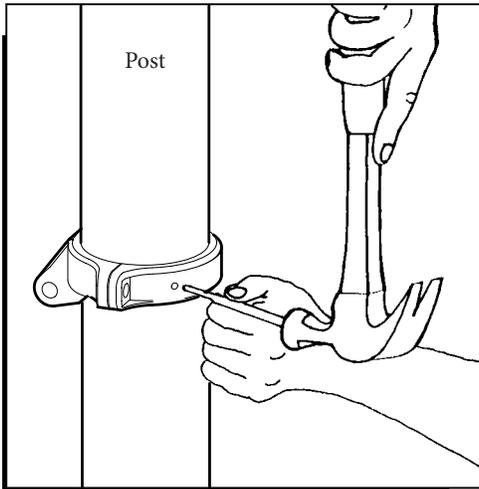
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



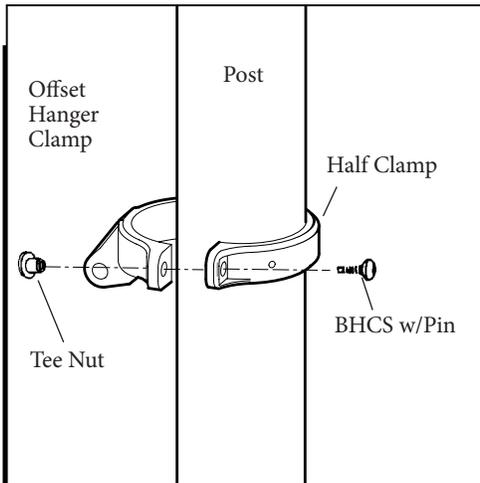
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



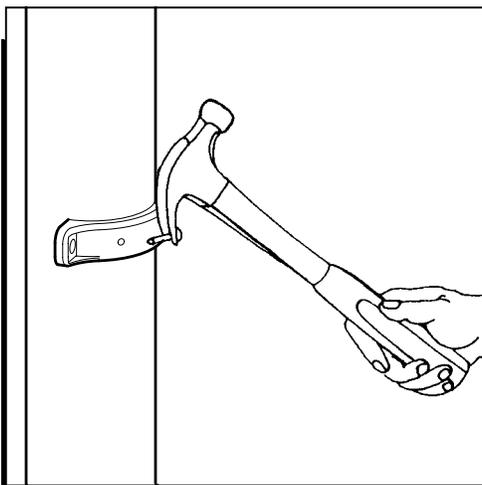
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench

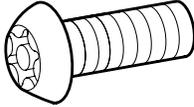


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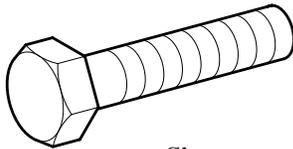
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



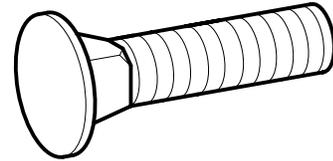
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1)	SST- ANTI-SEIZE	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



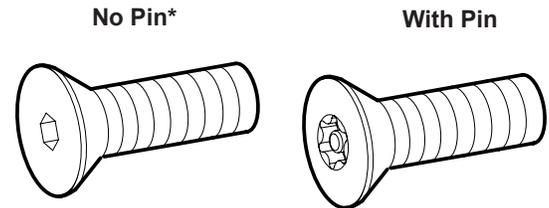
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

Flat Head Cap Screws (FHCS)



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

PS/PB/Evos/Weevos Common Parts/Torque Chart

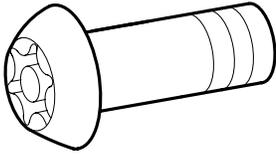
Sheet 1 of 9

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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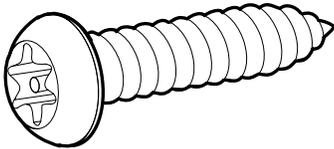
Document #26150400

BHCS w/Pin Limited Thread Bolts



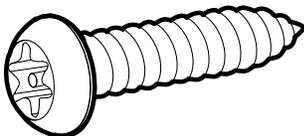
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



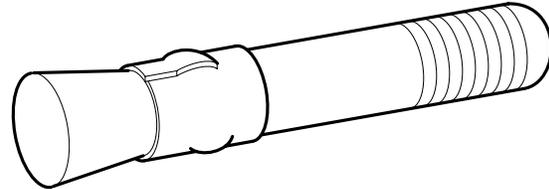
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



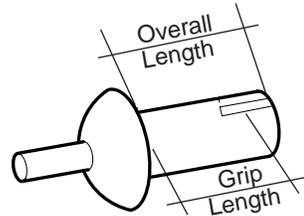
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

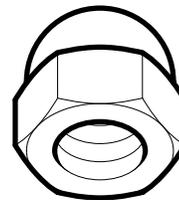
Drive Rivets



NOTE: For more detail see drive rivet detail page.

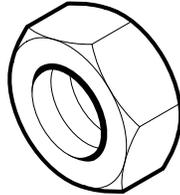
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



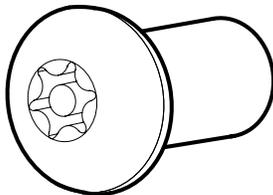
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



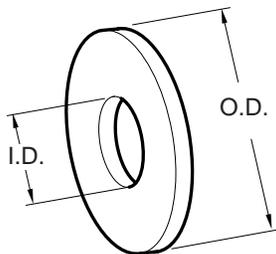
Part #	Sizes Inches	Mat'l or Grade
100326	5/16-18 UNC	SST
100321	3/8-16 UNC	SST-Pat
100327	3/8-16 UNC	SST
128296	3/8-16 UNC (Jam Nut)	SST
100328	7/16-14 UNC	SST
145021	7/16-14 UNC (Jam Nut)	SST
100322	1/2-13 UNC	SST
129692	1/2-13 UNC	SST-Pat
129693	1/2-13 UNC (Jam Nut)	SST
100323	5/8-11 UNC	SST

Flange Nut w/Pin



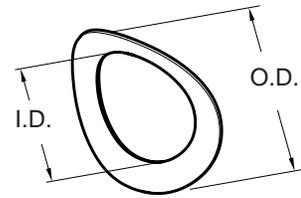
Part #	Sizes Inches	Mat'l or Grade
175006	5/16 x 18 UNC	SST
192064	M 8 x 24 mm	SST
100353	3/8-16 UNC	SST

Flat Washers



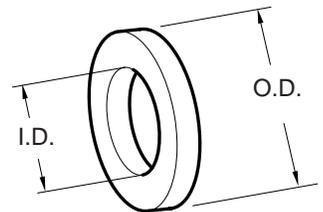
Part #	Sizes Inches	mm	or Grade	I.D.	O.D.
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



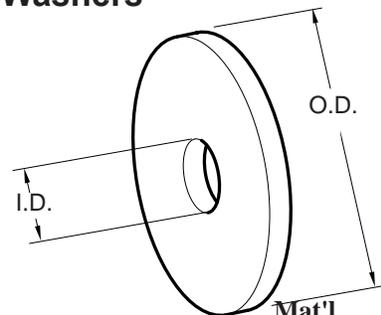
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



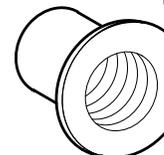
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



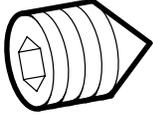
Part #	Sizes Inches	mm	Mat'l or Grade	I.D.	O.D.
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes Inches	Mat'l or Grade
100351	3/8-16 UNC	SST

Set Screw



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



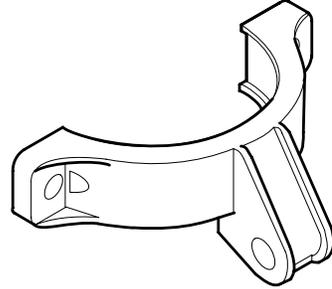
Part #	Mat'l or Grade
138915	SST

Double Clevis



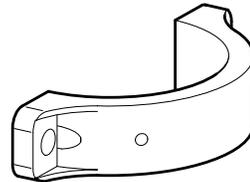
Part #	Mat'l or Grade
138917	SST

(PlayBooster)



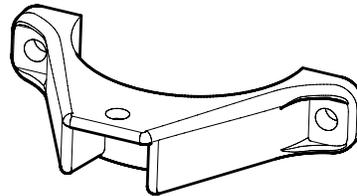
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



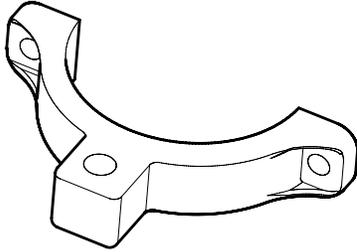
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



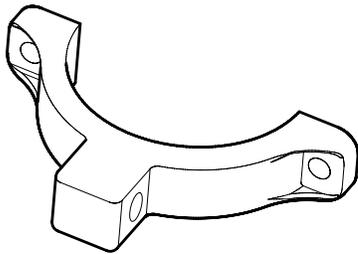
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



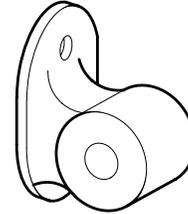
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



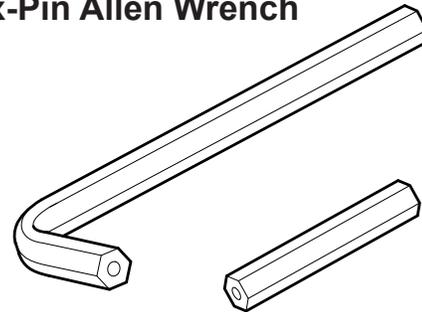
Part #	Mat'l
105330	Cast Aluminum

(PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

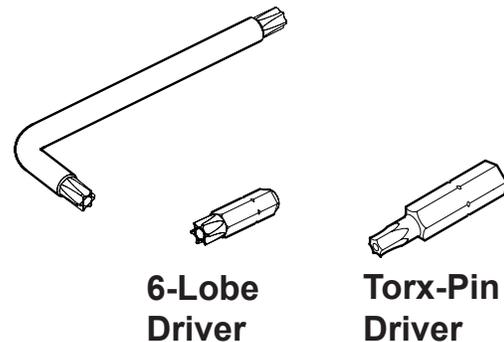
Hex-Pin Allen Wrench



Hex-Pin Driver

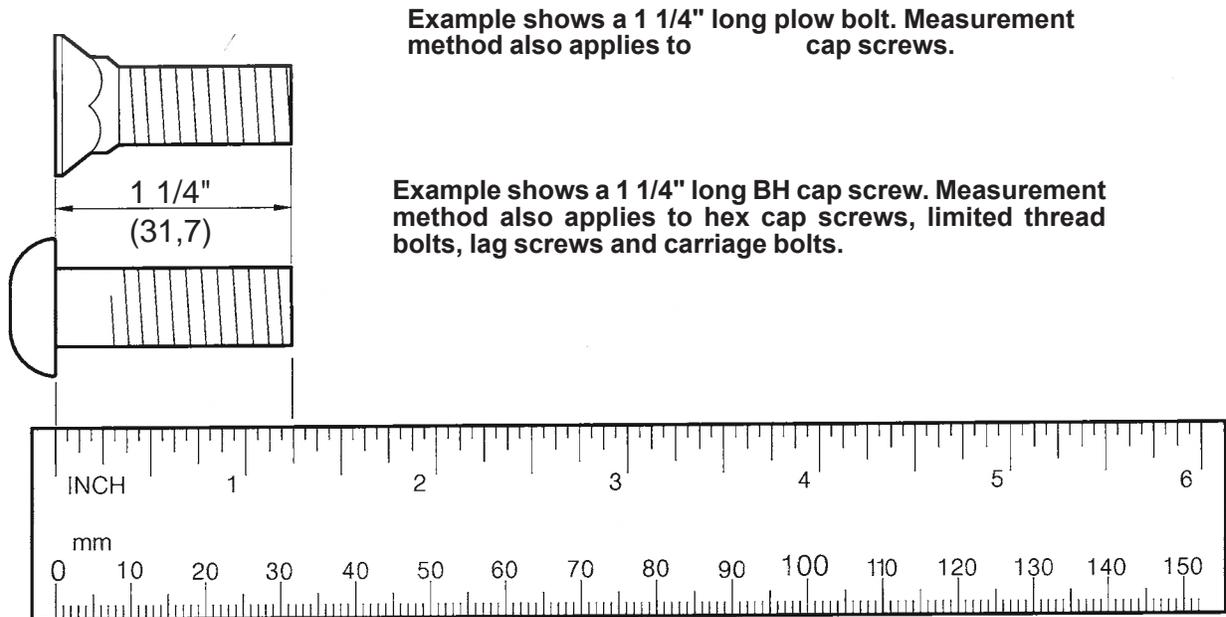
Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench



Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



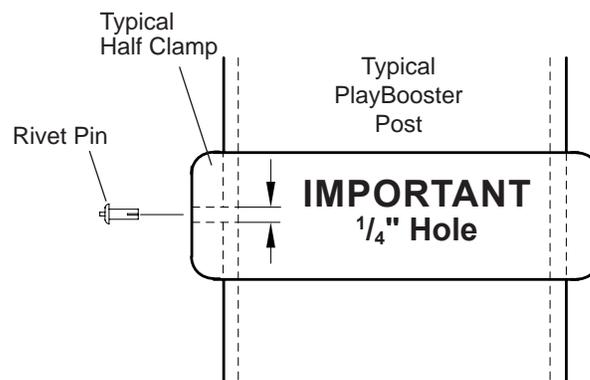
Example shows a 1 1/4" long plow bolt. Measurement method also applies to cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

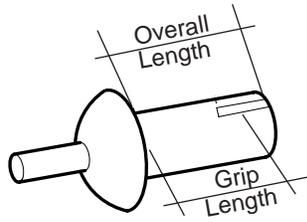
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



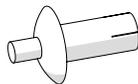
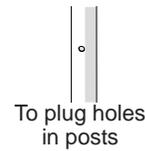
GL = Grip Length
OL = Overall Length

Drive Rivet



100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



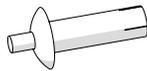
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



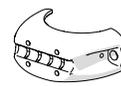
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

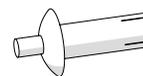


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



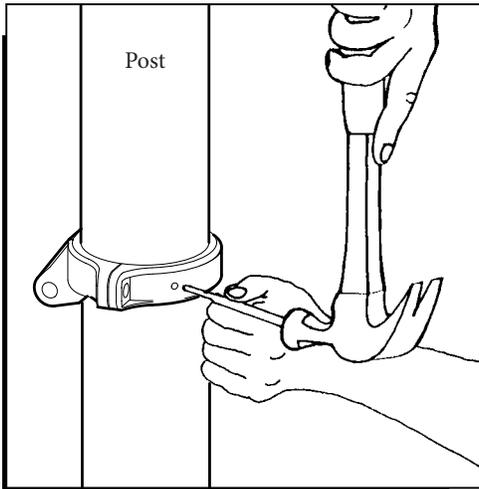
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



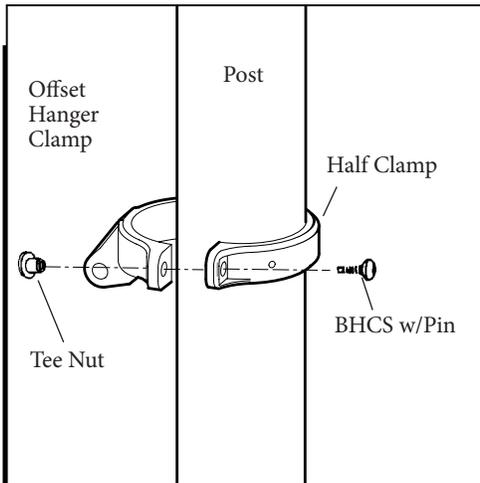
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



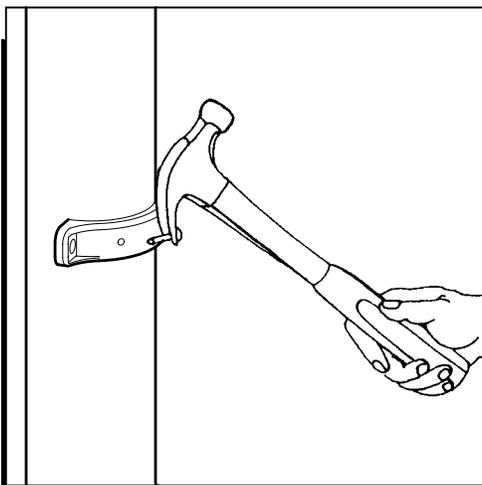
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

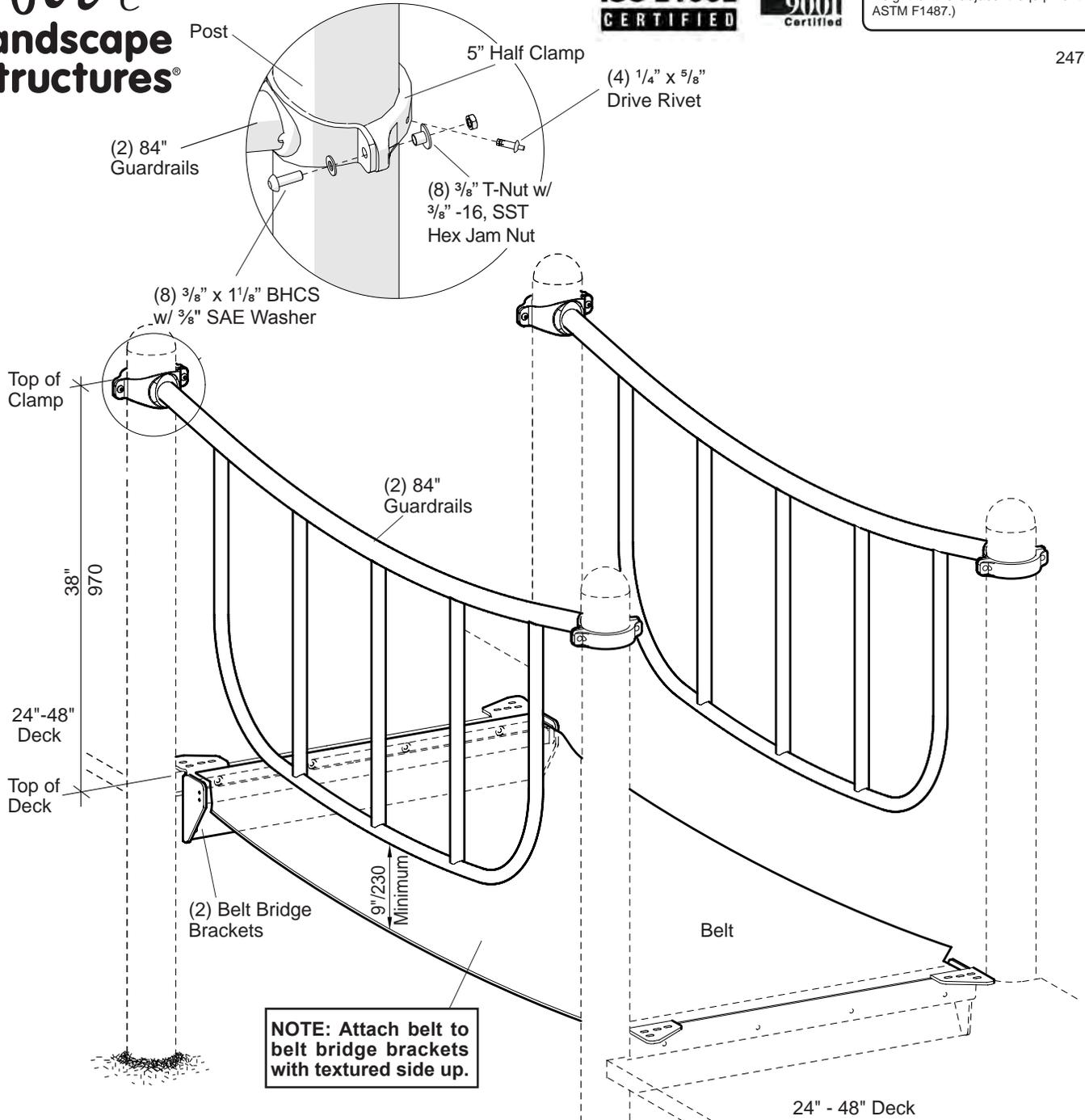
- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench

**DETAIL
GUARDRAIL ATTACHMENT**

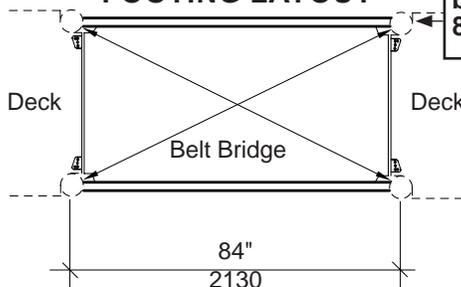


SAFETY NOTE
Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

24794300



**PLAN VIEW
FOOTING LAYOUT**



IMPORTANT: The diagonal dimensions between posts are critical and must be $88 \frac{15}{16}'' \pm \frac{1}{4}''$.

NOTE: Belt Bridge attaches to Tenderdecks only.

Protective Surfacing

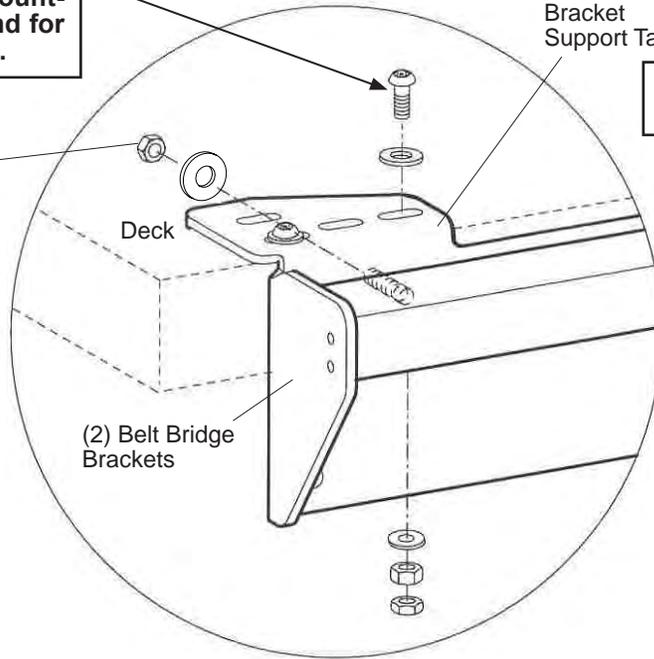
**DETAIL
 BELT BRIDGE BRACKET**

NOTE: See installation sheet 2 and 3 for mounting holes to be used and for proper length hardware.

(4) Belt Bridge Bracket Support Tabs

NOTE: Field drill $\frac{3}{8}$ " diameter hole through support tab.

(8) $\frac{3}{8}$ " Hex Patch Nuts w/ $\frac{3}{8}$ " Flat Washers



(2) Belt Bridge Brackets

**DETAIL
 BELT ATTACHMENT**

(2) Rectangular Tubes

(2) Belt Bridge Brackets

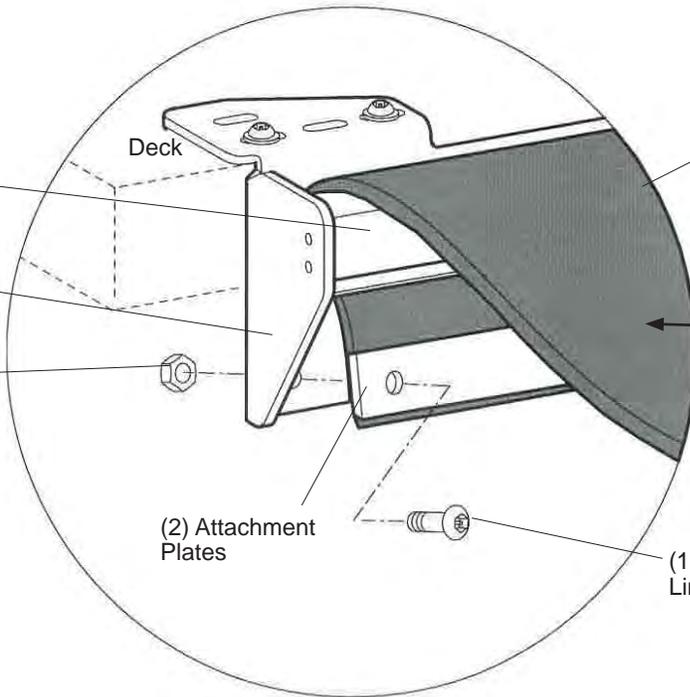
(10) $\frac{3}{8}$ " Low Crown Hex Nuts

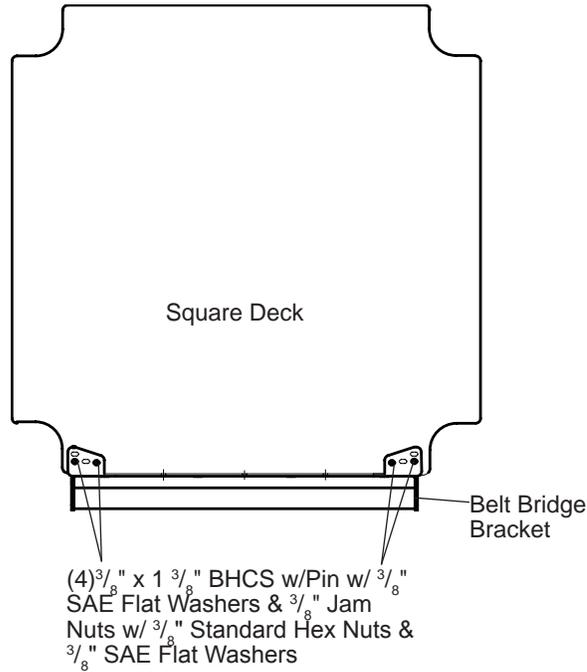
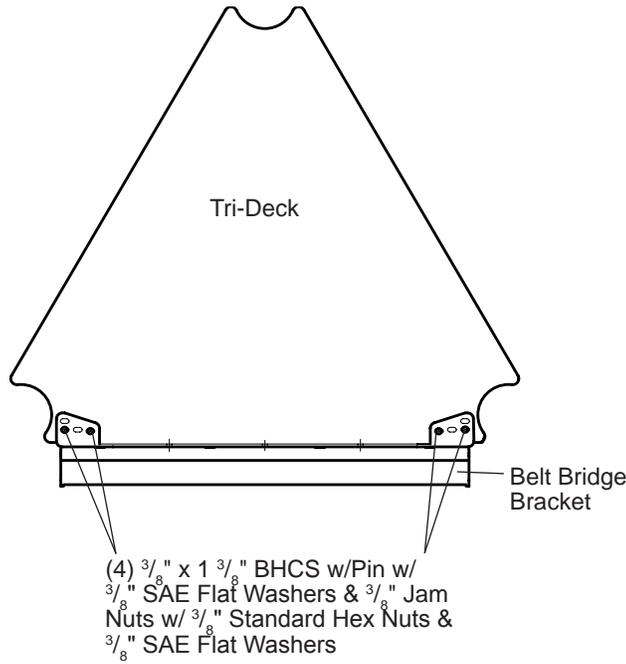
(2) Attachment Plates

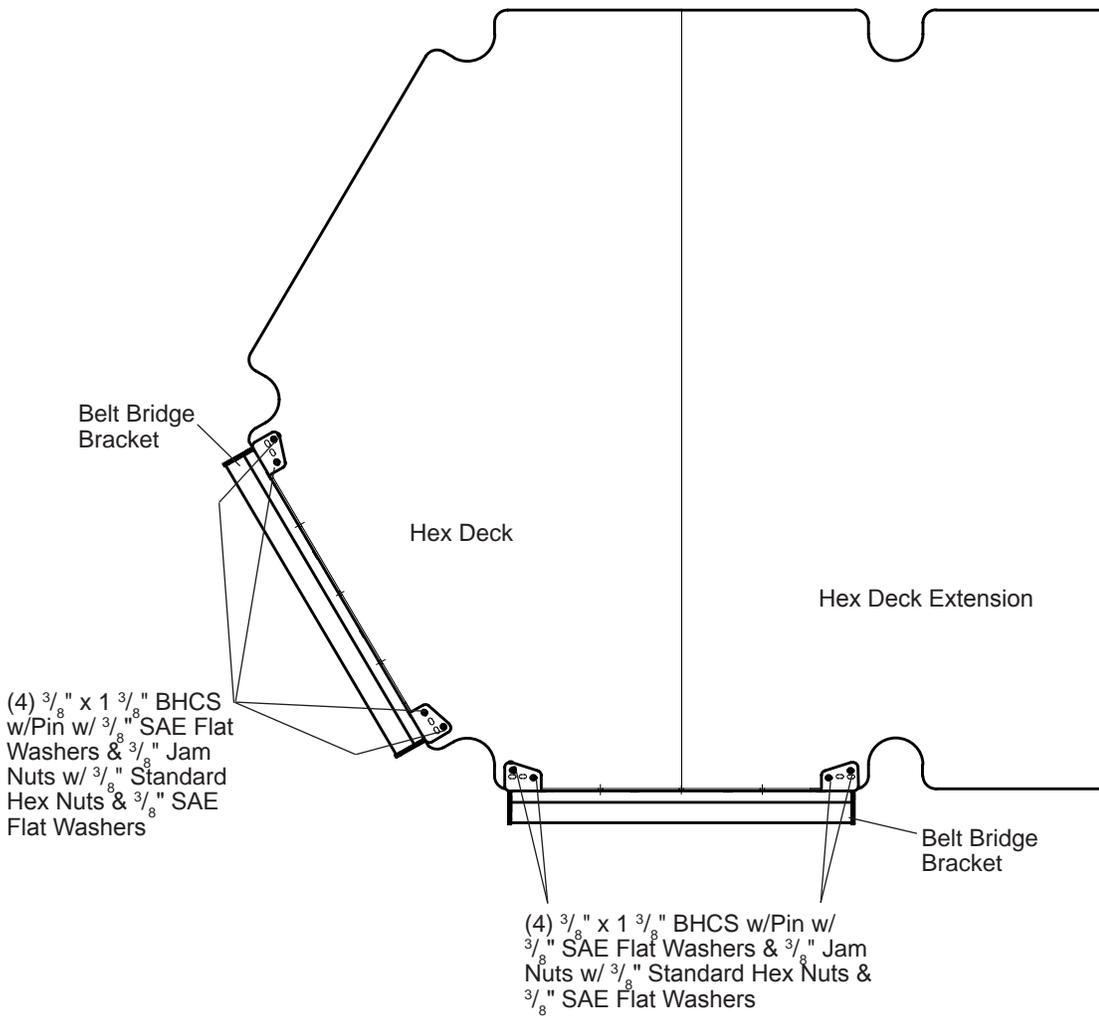
Belt

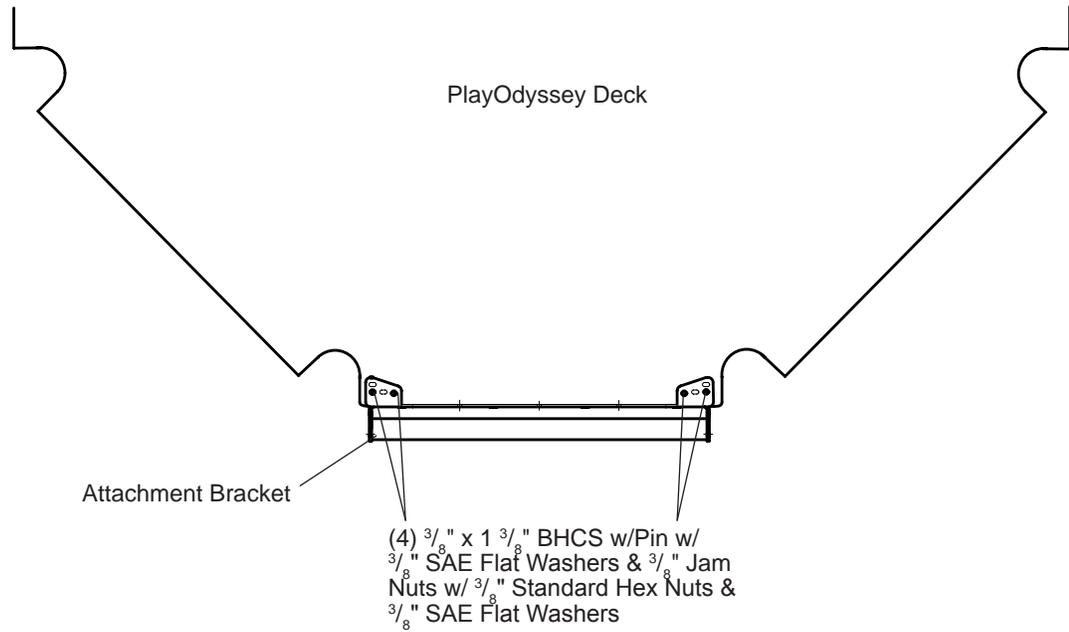
NOTE: Attach belt to belt bridge brackets with textured side up.

(10) $\frac{3}{8}$ " x 1 $\frac{1}{4}$ " BHCS w/Pin Limited Thread Bolts









Parts List

Part#	Description	Qty.
228428	Belt 42" x 93", Black.....	1
141269	84" Guardrail, Specify Color.....	2
134698	Belt Bridge Bracket, Specify Color.....	2
119801	Attachment Plate, Specify Color.....	2
105327	5" Half Clamp, Specify Color.....	4
247612	Belt Bridge Hardware Package	1
100292	$\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/Pin Ltd. Thread Bolt, SST.....	10
100321	$\frac{3}{8}$ " Hex Patch Nut, SST.....	8
100327	$\frac{3}{8}$ " Standard Hex Nut, SST.....	8
100365	$\frac{3}{8}$ " SAE Flat Washer, SST.....	16
113027	$\frac{3}{8}$ " x $1\frac{3}{8}$ " BHCS w/Pin, SST.....	8
100362	$\frac{3}{8}$ " Flat Washer, SST.....	8
128296	$\frac{3}{8}$ " Hex Jam Nut, SST.....	8
100349	$\frac{3}{8}$ " Low Crown Hex Nut, SST.....	10
247798	Hardware AL/ST Clamp PB	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST.....	8
100351	$\frac{3}{8}$ " Tee Nut, SST.....	8
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST.....	4
128296	$\frac{3}{8}$ " Hex Jam Nut, SST.....	8
100365	$\frac{3}{8}$ " SAE Washer, SST.....	8

Belt: Made from .315" thick mini rough top 3-ply rubber belting with polyester fabric plies, 42" wide x 93" long, black in color.

Belt Bridge Brkt: Weldment comprised of $\frac{1}{4}$ " HRS rectangular steel tubing and formed $\frac{1}{4}$ " HRS flat steel. Finish: ProShield®, color specified.

Attachment Plate: Fabricated from $\frac{1}{4}$ " HRS flat steel. Finish: ProShield®, color specified.

Guardrail: Weldment comprised of 1.900" O.D. RS-20 (.090" - .100") galvanized steel tubing beam, 1.315" O.D. RS-20 (.080" - .090") and $\frac{1}{4}$ " x $3\frac{1}{4}$ " steel half clamps. Finish: ProShield, color specified.

Half Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

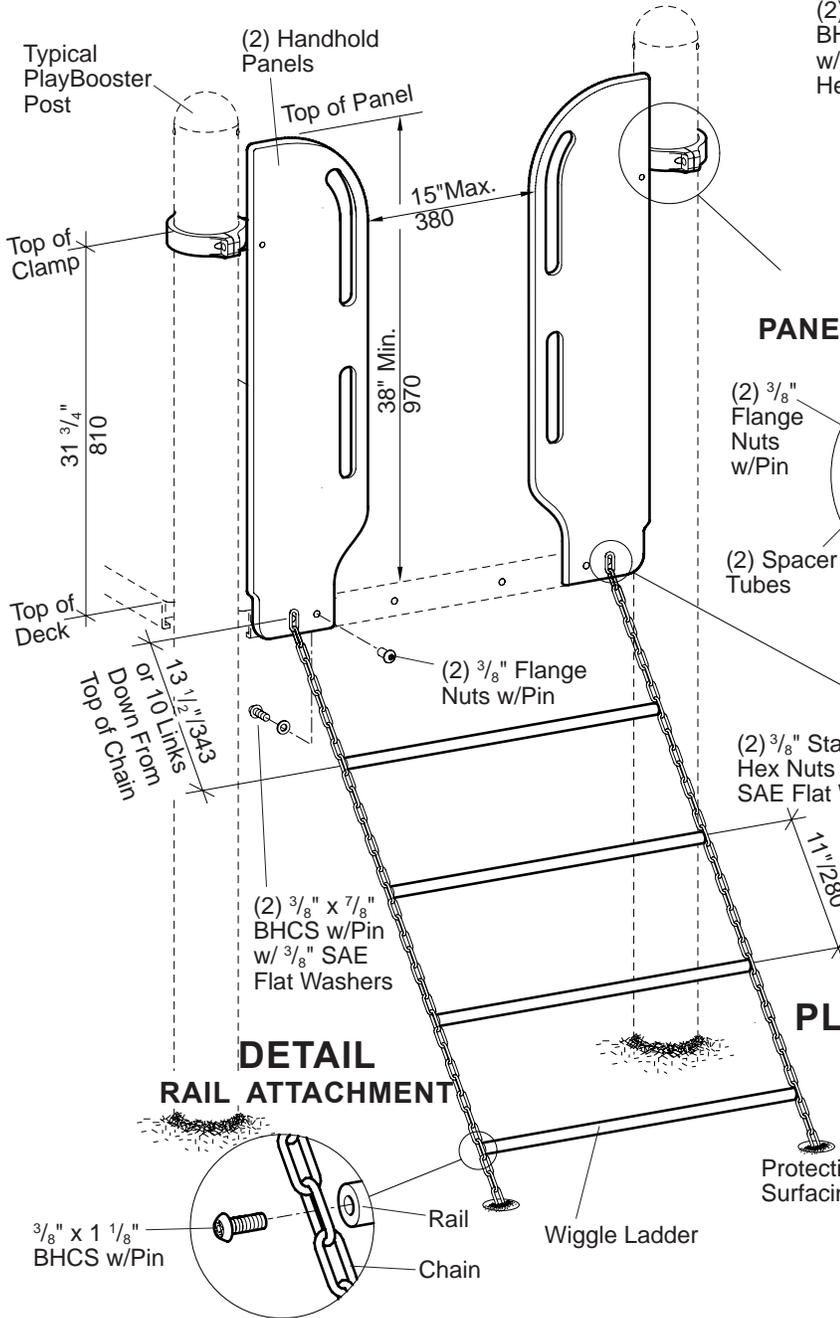
Installation Time: Approx. 4 man hours

Weight: 219 lbs.

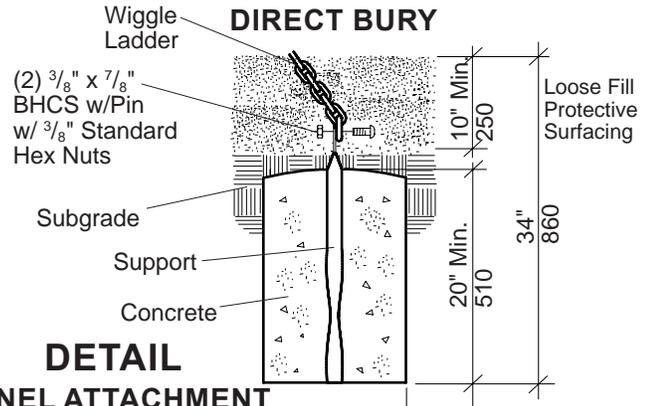
Fall Height: Deck Height

Installation Instructions

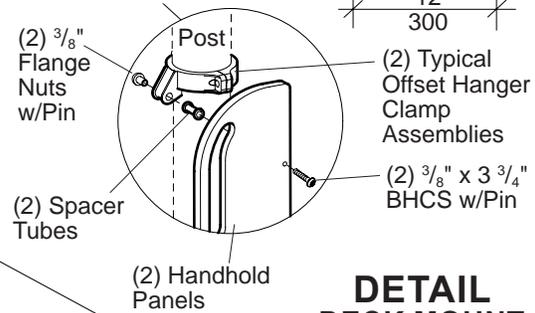
- 1) With mainstructure posts and decks in position, attach guardrails to mainstructure posts at height shown, using 5" half clamps, $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin, $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " hex jam nuts with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " T-Nuts. Refer to the Guardrail Attachment Detail.
- 2) Loosely attach (1) belt bridge bracket to the face of the deck using $\frac{3}{8}$ " hex patch nuts with $\frac{3}{8}$ " flat washers. Refer to the Belt Bridge Bracket Detail.
- 3) Feed the belt over the top of the rectangular tubing on the belt bridge bracket. Attach the belt to the top holes in the belt bridge bracket using the attachment plate, $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts and $\frac{3}{8}$ " low crown hex nuts. Refer to the Belt Attachment Detail. **NOTE: Attach belt to belt bridge brackets with textured side up.**
- 4) Attach the other end of the belt to the top holes in the belt bridge bracket using the attachment plate, $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts and $\frac{3}{8}$ " low crown hex nuts. Refer to the Belt Attachment Detail.
- 5) Attach the belt bridge bracket with belt to the face of the deck using $\frac{3}{8}$ " hex patch nuts with $\frac{3}{8}$ " SAE flat washers. Tighten belt bridge brackets to the face of the deck both ends. Refer to the Belt Bridge Bracket Detail.
- 6) Drill $\frac{3}{8}$ " holes through the top of the deck, using the belt bridge bracket support tabs as a drilling guide. **NOTE: See installation sheet 2 and 3 for specific mounting holes to be used and for proper length hardware.**
- 7) If the belt requires more tension, move the belt to the bottom holes in the belt bridge bracket. Refer to the Belt Bridge Bracket Detail.
- 8) Install $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets in all 5" half clamps. Refer to the Offset Hanger Clamp Spec Sheet.
- 9) Install protective surfacing before users are allowed to play on the structure.



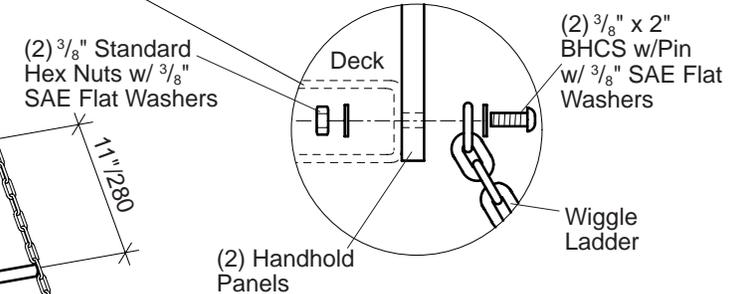
DETAIL DIRECT BURY



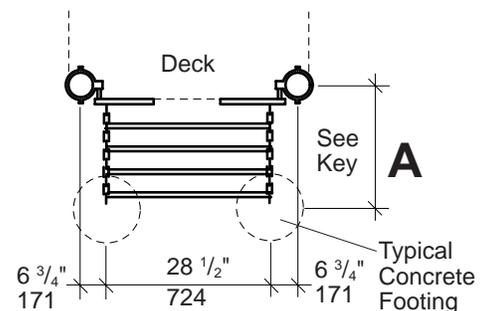
DETAIL PANEL ATTACHMENT



DETAIL DECK MOUNT



PLAN VIEW/FOOTING LAYOUT



KEY Height	Dimension "A"
Off 32" / 810 Deck	28" / 710
Off 40" / 1020 Deck	30" / 760
Off 48" / 1220 Deck	31" / 790
Off 56" / 1490 Deck	31" / 790
Off 64" / 1630 Deck	34" / 860
Off 72" / 1830 Deck	39" / 990

NOTE: Dimensions shown in KEY are based on 12" of protective surfacing and top of supports 2" below subgrade. Dimensions will vary if your depth of protective surfacing varies. Read installation instructions.

PlayBooster® 123284 Wiggly Ladder, DB



PlayBooster® 123284 Wiggle Ladder, 32"-72" Decks, DB

Parts List

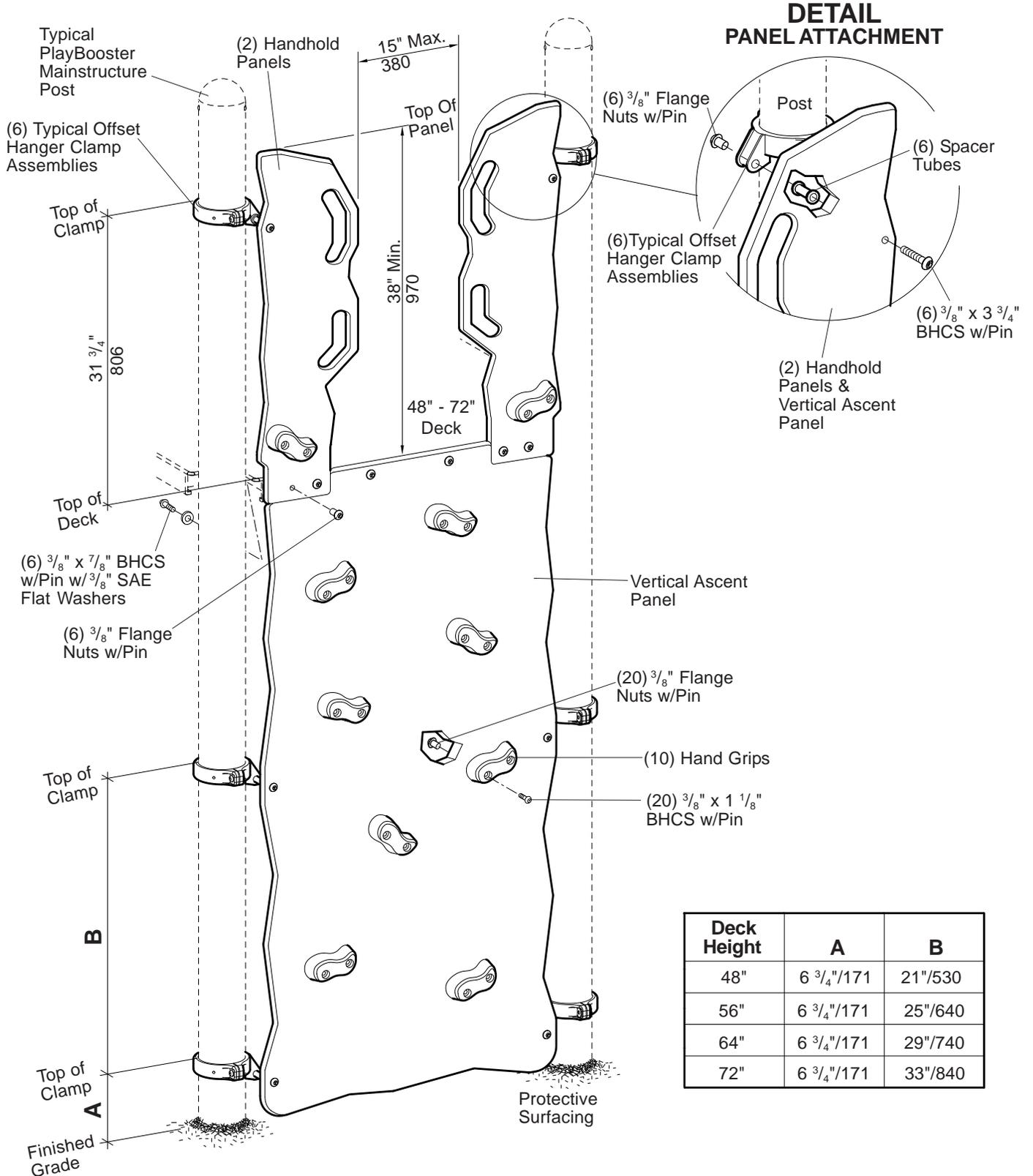
Part#	Description	Qty.
139563	Handhold Panel, Specify Color	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
113468	Spacer Tube, Specify Color	2
118029	Support (DB)	2
152159	(32" Deck) 54 7/16" Chain, Specify Color	2
119813	(32" Deck) Rail, Specify Color	2
190455	(32" Deck) Wiggle Ladder Hardware Package	1
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100327	3/8" Standard Hex Nut, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	6
100173	3/8" x 2" BHCS w/Pin, SST	2
152055	(40" Deck) 59 15/16" Chain, Specify Color	2
119813	(40" Deck) Rail, Specify Color	3
190456	(40" Deck) Wiggle Ladder Hardware Package	1
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	10
100327	3/8" Standard Hex Nut, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	6
100173	3/8" x 2" BHCS w/Pin, SST	2
152056	(48" Deck) 68 1/4" Chain, Specify Color	2
152057	(56" Deck) 76 3/4" Chain, Specify Color	2
119813	(48" & 56" Deck) Rail, Specify Color	4
190457	(48" & 56" Deck) Wiggle Ladder Hardware Pkg	1
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	12
100327	3/8" Standard Hex Nut, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	6
100173	3/8" x 2" BHCS w/Pin, SST	2
152157	(64" Deck) 84 5/16" Chain, Specify Color	2
119813	(64" Deck) Rail, Specify Color	5
190458	(64" Deck) Wiggle Ladder Hardware Package	1
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	14
100327	3/8" Standard Hex Nut, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	6
100173	3/8" x 2" BHCS w/Pin, SST	2
152158	(72" Deck) 92 7/8" Chain, Specify Color	2
119813	(72" Deck) Rail, Specify Color	6
190454	(72" Deck) Wiggle Ladder Hardware Package	1
124460	3/8" x 3 3/4" BHCS w/Pin, SST	2
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	16
100327	3/8" Standard Hex Nut, SST	4
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	6
100173	3/8" x 2" BHCS w/Pin, SST	2

DB = Direct Bury

Chain:	4/0 Chain zinc plated. Finish: TenderTuff®, color specified.
Rail:	Fabricated from 1 3/16" diameter x 27 15/16" long CRS solid bar stock with both ends tapped 3/8". Finish: TenderTuff, color specified.
Support:	Fabricated from 1.315" O.D. RS-20 (.080" - .090") galvanized steel tubing.
Handhold Panel:	Solid color Permalene®, color specified.
Spacer Tube:	Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: ProShield®, color specified.
Offset Hanger Clamp Assembly:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	Approx. 2 1/2 man hours
Concrete Req.:	Approx. 2.6 cu. ft.
Weight:	Off 32" Deck - 41 lbs. Off 40" Deck - 47 lbs. Off 48" Deck - 52 lbs. Off 56" Deck - 53 lbs. Off 64" Deck - 58 lbs. Off 72" Deck - 64 lbs.
Fall Height:	Deck Height

Installation Instructions

- 1) Attach chains and outside holes of handhold panels to the face of deck using 3/8" x 2" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Attach inside holes of handhold panels to the face of deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Refer to the Deck Mount Detail.
- 2) Attach offset hanger clamps to posts at heights shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach handhold panels to the offset hanger clamp assemblies using 3/8" x 3 3/4" BHCS w/pin, spacer tubes and 3/8" flange nuts w/pin. Refer to Panel Attachment Detail.
- 4) Attach wiggle ladder rails between chains using 3/8" x 1 1/8" BHCS w/pin. Refer to the Rail Attachment Detail. **NOTE: First rail attaches 13 1/2" or (10) links down from the top of the chain, attach the remaining rails 11" between rails, as shown.**
- 5) Determine footing locations by pulling chains tight and laying end on subgrade. Dig footing holes where chains meet subgrade to the width and depth shown.
- 6) Fasten chains to the supports using 3/8" x 7/8" BHCS w/pin and 3/8" standard hex nuts.
- 7) Pour concrete into footing holes. Push supports into concrete until chain is tight and top of support is positioned 1 3/4" above subgrade. Temporarily brace supports into position until concrete has cured. Refer to the Direct Bury Detail.
- 8) After concrete has cured a minimum of 72 hours, remove support brace and install protective surfacing before users are allowed to play on the structure.



Deck Height	A	B
48"	6 3/4"/171	21"/530
56"	6 3/4"/171	25"/640
64"	6 3/4"/171	29"/740
72"	6 3/4"/171	33"/840

PlayBooster® 145624 Vertical Ascent®, 48"-72"



PlayBooster® 145624 Vertical Ascent®, 48"-72"

Parts List

Part#	Description	Qty.
182957	Vertical Ascent Handhold Panel, Specify Color.....	2
145597	Vertical Ascent Panel, 48" Deck, Specify Color	1
145596	Vertical Ascent Panel, 56" Deck, Specify Color	1
145595	Vertical Ascent Panel, 64" Deck, Specify Color	1
145585	Vertical Ascent Panel, 72" Deck, Specify Color	1
105327	5" Half Clamp, Specify Color	6
113729	Offset Hanger Clamp, Specify Color	6
113468	Spacer Tube, Specify Color	6
100610	1/4" x 5/8" Drive Rivet, AL/SST	6
145792	Hand Grip Set	1
143110	Hand Grip, Blue	2
143110	Hand Grip, Yellow	2
143110	Hand Grip, Red	3
143110	Hand Grip, Green	3
145616	Vertical Ascent Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	6
100198	3/8" x 1 1/8" BHCS w/Pin, SST	32
100351	3/8" Tee Nut, SST	12
100353	3/8" Flange Nut w/Pin, SST	32
100365	3/8" SAE Flat Washer, SST	6
124460	3/8" x 3 3/4" BHCS w/Pin, SST	6

Specifications

Hand Grip: Made from Polyester Resin. Hand Grips measure approx. 5 3/4" long x 2 1/4" wide x 1 3/4" high.

Panels: Solid color Permalene®, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. Finish: ProShield®, color specified.

Clamps: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 2 man hours

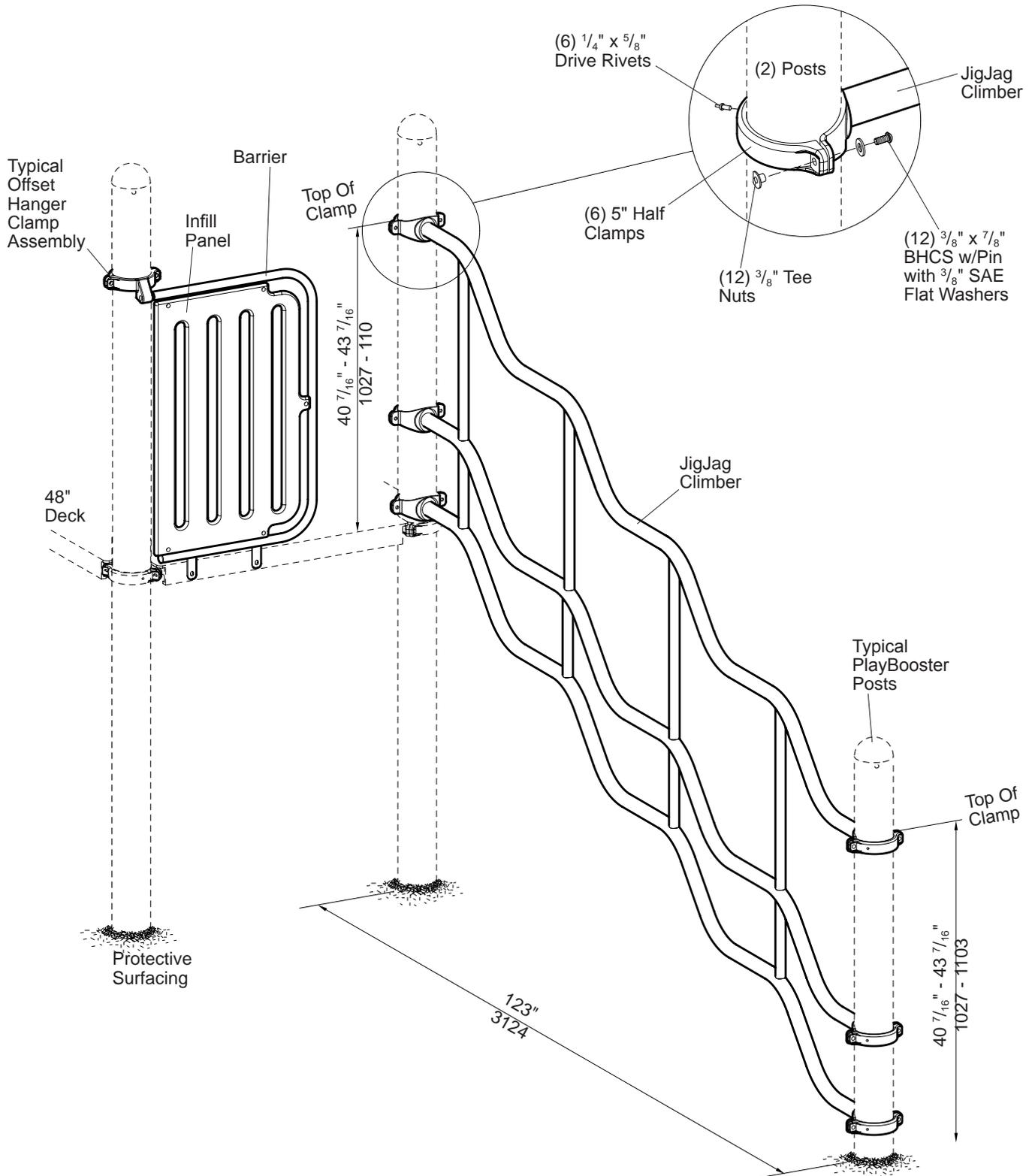
Weight: 48" Deck Height - 83 lbs.
56" Deck Height - 91 lbs.
64" Deck Height - 99 lbs.
72" Deck Height - 106 lbs.

Fall Height: 53 1/2"/1358 (48" Deck Height)
61 1/2"/1562 (56" Deck Height)
69 1/2"/1765 (64" Deck Height)
77 1/2"/1968 (72" Deck Height)

Installation Instructions

- 1) Attach handhold panels and vertical ascent panel to deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin, as shown.
- 2) Attach handhold panels and vertical ascent panel to offset hanger clamps using 3/8" x 3 3/4" BHCS w/pin, spacer tubes and 3/8" flange nuts w/pin. Refer to the Panel Attachment Detail.
- 3) Attach offset hanger clamps to posts at heights shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 4) Attach hand grips to handhold panels and vertical ascent panel using 3/8" x 1 1/8" BHCS w/pin and 3/8" flange nuts w/pin, as shown.
- 5) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 6) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
JIGJAG CLIMBER
ATTACHMENT**



PlayBooster® 201887 JigJag Climber, Ground to Deck w/Permalene® Barrier

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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Parts List

Part#	Description	Qty.
201099	JigJag Climber, Specify Color.....	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	7
105327	5" Half Clamp, Specify Color.....	7
113729	5" Offset Hanger Clamp, Specify Color.....	1
170930	Barrier, Specify Color.....	1
170931	Barrier Infill Panel, Specify Color.....	1
151072	1 1/8" O.D. x 1 1/8" Al. Spacer, Specify Color.....	2
170993	Single Barrier w/Infill Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	5
100198	3/8" x 1 1/8" BHCS w/Pin, SST	2
100199	3/8" x 2 1/4" BHCS w/Pin, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	1
100327	3/8" Standard Hex Nut, SST	2
100351	3/8" Tee Nut, SST.....	2
100353	3/8" Flange Nut w/Pin, SST	5
100365	3/8" SAE Flat Washer, SST.....	9
223694	JigJag Climber Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	12
100351	3/8" Mod T-Nut, SST	12
100365	3/8" SAE Flat Washer, SST.....	12

Infill Panel: Recycled Permalene®, color specified.

Barrier: Weldment comprised of 1.125" (28,57 mm) O.D. 11 GA. (.120") (3,05 mm) steel tube per ASTM A513 with 203 or 303 stainless steel threaded inserts with 5/8" (15,87 mm) internal threads and 1/4" (6,35 mm) tabs. Finish: TenderTuff™, color specified.

JigJag Climber: Weldment comprised of 1.900" (48,26 mm) O.D. RS40 (.120"-.130") (3,05 mm-3,30 mm) wall galvanized steel tube, 1.315" (33,40 mm) O.D. RS20 (.080"-.090") (2,03 mm-2,29 mm) wall galvanized steel tube and 1/4" (6,35 mm) HRPO flat steel. Finish: ProShield, color specified.

Clamps: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 2 man hours
Weight: 129 lbs.
Fall Height: 66" (1676 mm)

Installation Instructions

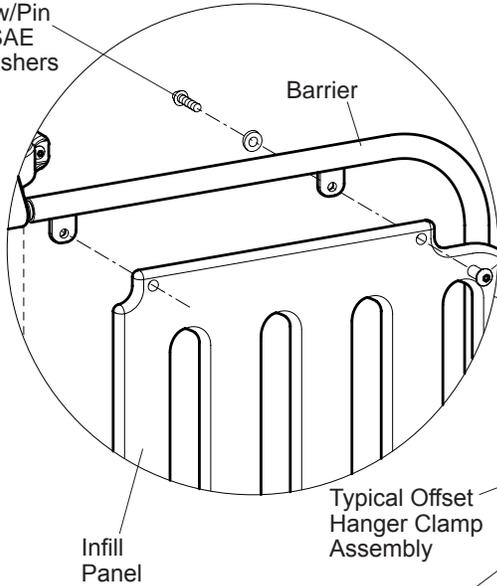
Refer to your Site Plan for your configuration.

- Place 1 1/8" O.D. x 1 1/8" spacers between barrier tabs and deck. Attach barrier to deck using 3/8" x 2 1/4" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
- Attach offset hanger clamp assembly to barrier using 5/8" x 2 1/4" BHCS w/pin.
- Attach offset hanger clamp assembly to post using 5" half clamp, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- Attach infill panel to barrier using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin. Refer to the Infill Panel Attachment Detail.
- Attach JigJag climber to posts at height shown, using 5" half clamps, 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" tee nuts. Refer to the JigJag Climber Attachment Detail.
- Install 1/4" x 5/8" drive rivets in all 5" half clamps. Drill through clamps and into 5" post with a 1/4" or "F" (only) drill bit, insert drive rivet in hole through clamp and into post. Hammer drive rivet pin in until flush with head. Refer to the Offset Hanger Clamp Spec Sheet.
- Install protective surfacing before users are allowed to play on the structure.

DETAIL

INFILL PANEL ATTACHMENT

(5) $\frac{3}{8}$ " x $\frac{7}{8}$ " BHCS w/Pin w/ $\frac{3}{8}$ " SAE Flat Washers



(5) $\frac{3}{8}$ " Flange Nuts w/Pin

Typical PlayBooster Mainstructure Post

Top Of Clamp

Typical Offset Hanger Clamp Assembly

$\frac{5}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin

$39\frac{3}{4}$ "

1009

Top Of Deck

Infill Panel

Barrier

15" Max.
380

Deck

**DETAIL
BARRIER ATTACHMENT**

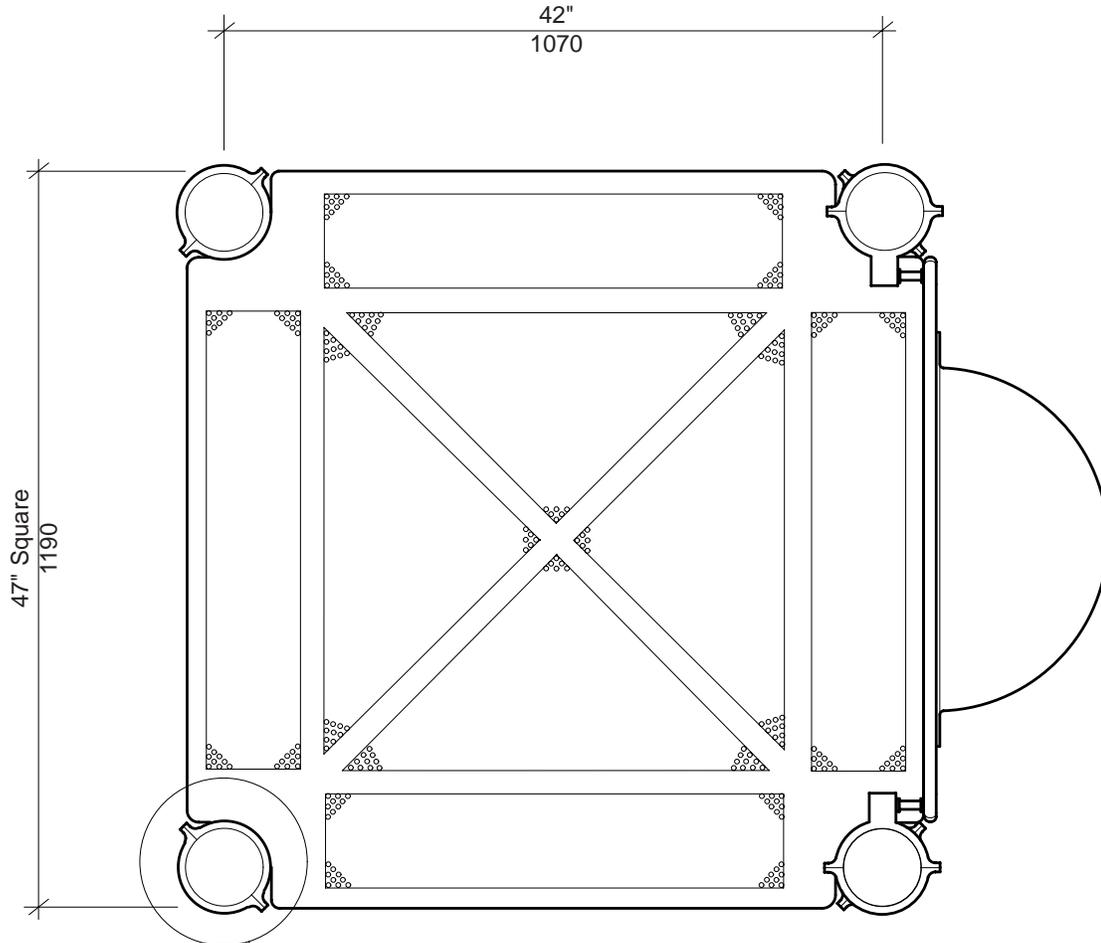
Barrier

(2) $\frac{3}{8}$ " Standard Hex Nuts w/ $\frac{3}{8}$ " SAE Flat Washers

(2) $1\frac{1}{8}$ " O.D. x $1\frac{1}{8}$ " Spacers

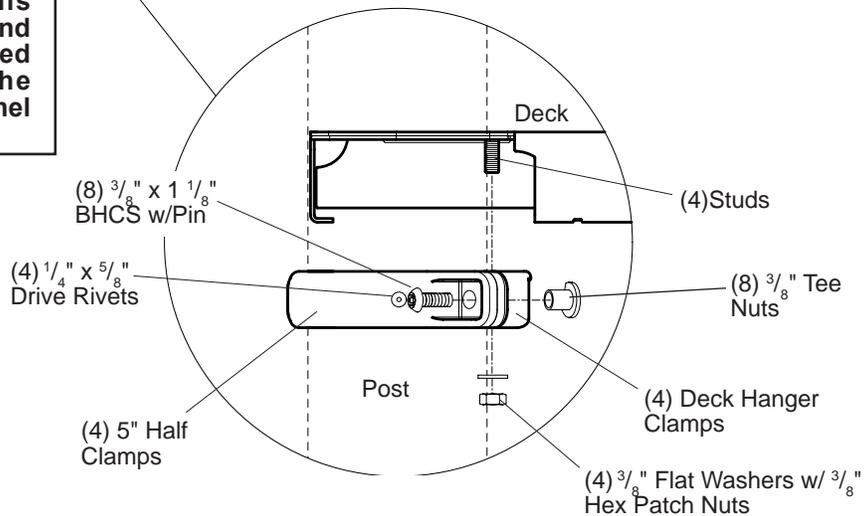
(2) $\frac{3}{8}$ " x $2\frac{1}{4}$ " BHCS w/Pin w/ $\frac{3}{8}$ " SAE Flat Washers

PlayBooster® 201887 JigJag Climber, Ground to Deck w/Permalene® Barrier



**DETAIL
DECK HANGER CLAMP**

NOTE: When using this deck, ALL enclosures and components are mounted on the OUTSIDE of the posts like the bubble panel shown above.



Parts List

Part#	Description	Qty.
145656	Tenderdeck, Specify Color	1
105327	5" Half Clamp, Specify Color	4
106022	5" Deck Hanger Clamp, Specify Color	4
119491	Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	8
100321	$\frac{3}{8}$ " Hex Patch Nut, SST	4
100351	$\frac{3}{8}$ " Tee Nut, SST	8
100362	$\frac{3}{8}$ " Flat Washer, SST	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, SST	4

Square Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with $\frac{5}{16}$ " diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures $2\frac{5}{8}$ " x 47" x 47". Finish: TenderTuff™, color specified.

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

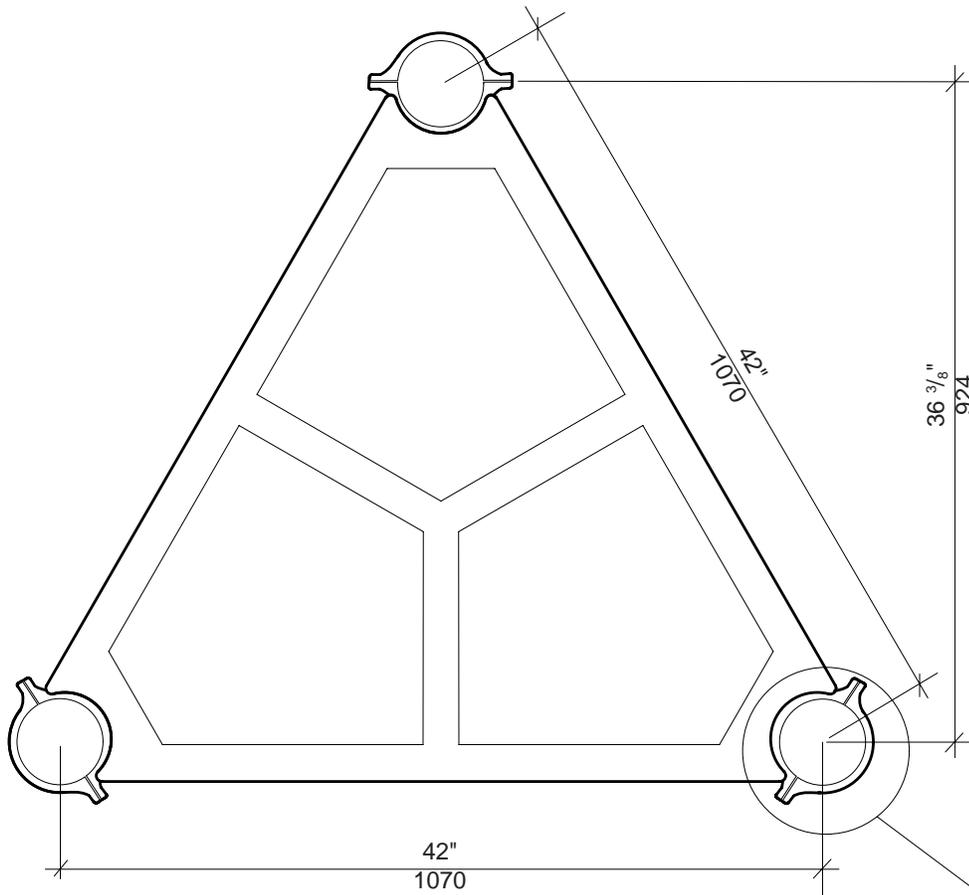
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour

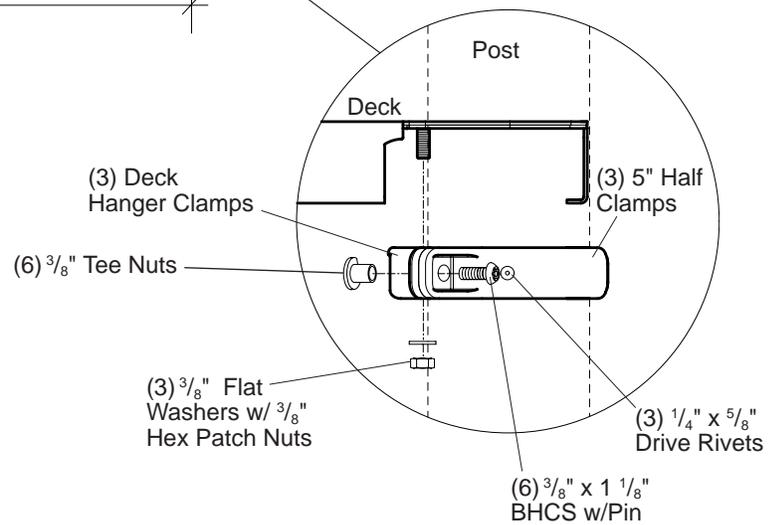
Weight: 119 lbs.

Installation Instructions

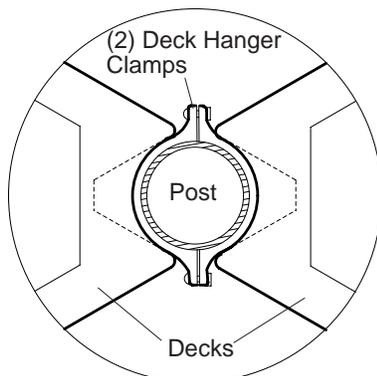
- 1) Mark posts for the appropriate height of the deck you are installing.
- 2) Fasten hanger clamps to marked position on posts. See Detail on front of sheet.
- 3) Lift deck into position, lining up studs underneath deck with deck hanger clamp as shown. Attach with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " hex patch nuts.
- 4) Level deck and plumb posts. Install the drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) After all enclosures/components are installed, pour concrete footings per the Typical Concrete Footing Detail Sheet.
- 6) Install protective surfacing before users are allowed to play on the structure.



**DETAIL
DECK HANGER CLAMP**



DETAIL



**Configuration
for Back to Back
Decks at Same
Height.**



PlayBooster® 111231 Triangular Tenderdeck

Parts List

Part#	Description	Qty.
145657	Tri-Deck, Specify Color	1
105327	5" Half Clamp, Specify Color	3
106022	Deck Hanger Clamp, Specify Color.....	3
120203	Triangular Deck Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	6
100321	$\frac{3}{8}$ " Hex Patch Nut, SST.....	3
100351	$\frac{3}{8}$ " Tee Nut, SST.....	6
100362	$\frac{3}{8}$ " Flat Washer, SST	3
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	3

Triangular Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with $\frac{5}{16}$ " diameter holes. Deck face has (4) slotted holes for face mounting components. The finished size measures $2\frac{5}{8}$ " x $37\frac{3}{4}$ ". Finish: TenderTuff™, color specified.

Deck Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

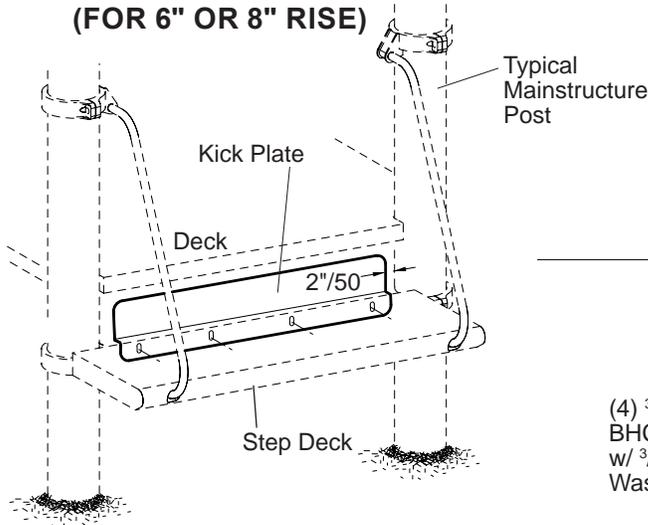
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour
Weight: 61 lbs.

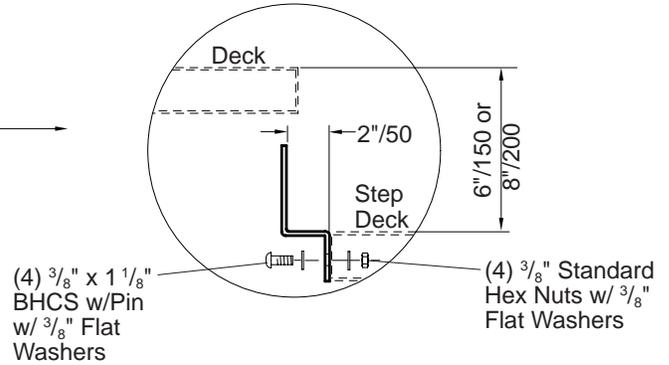
Installation Instructions

- 1) Mark posts for the appropriate height of the deck you are installing.
- 2) Fasten deck hanger clamps to marked position on posts. See Detail on the front of this sheet.
- 3) Lift deck assembly into position, lining up stud underneath deck with deck hanger clamp as shown. Attach using $\frac{3}{8}$ " hex patch nuts with $\frac{3}{8}$ " flat washers. With deck level and posts plumb, final tighten all hardware.
- 4) Install $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) After attachment of enclosures and components is complete, pour concrete footings. Allow concrete footings to cure a minimum of 72 hours before users are allowed to play on the structure.
- 6) Install protective surfacing before users are allowed to play on the structure.

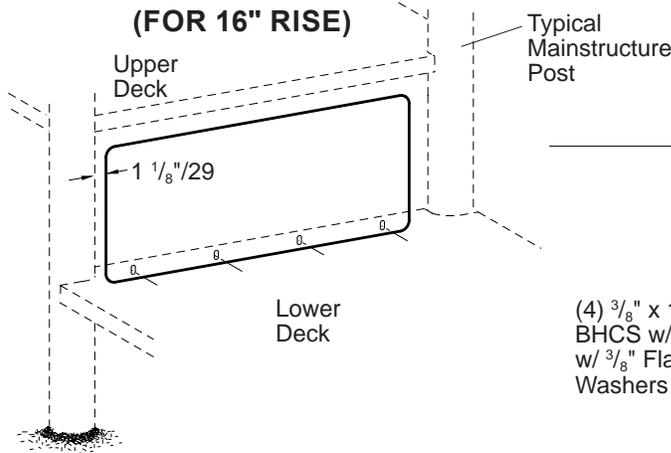
**KICK PLATE
(FOR 6" OR 8" RISE)**



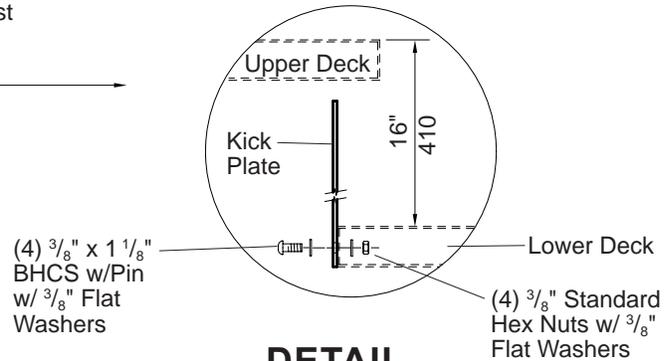
**DETAIL
KICK PLATE ATTACHMENT
(FOR 6" OR 8" RISE)**



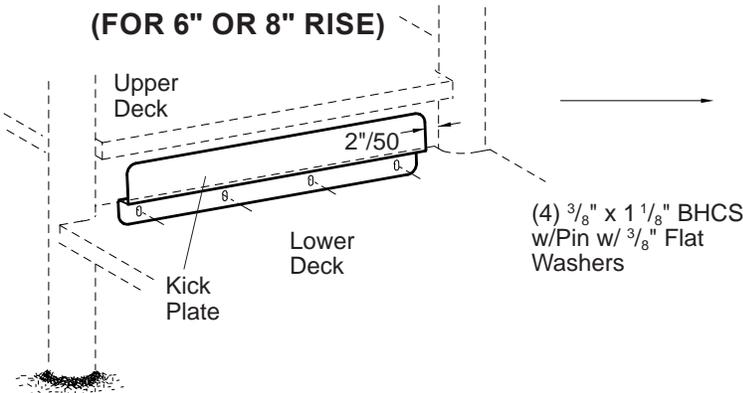
**KICK PLATE
(FOR 16" RISE)**



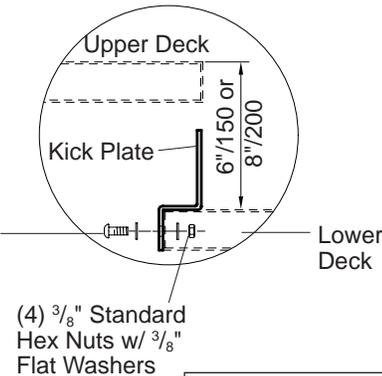
**DETAIL
KICK PLATE ATTACHMENT
(FOR 16" RISE)**



**KICK PLATE
(FOR 6" OR 8" RISE)**



**DETAIL
KICK PLATE ATTACHMENT
(FOR 6" OR 8" RISE)**



NOTE: Kick Plates mount to face of lower deck.

PlayBooster® 121948 Kick Plates, Tenderdecks, 6", 8" & 16"



PlayBooster® 121948 Kick Plates, Tenderdecks, 6", 8" & 16"

Parts List

Part#	Description	Qty.
121819	Kick Plate (For 6" or 8" Rise), Specify Color	1
121818	Kick Plate (For 16" Rise), Specify Color	1
156058	Kick Plate Tenderdeck Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST.....	4
100327	$\frac{3}{8}$ " Standard Hex Nut, SST	4
100362	$\frac{3}{8}$ " Flat Washer, SST	8

Kick Plate: Fabricated from 11 GA (.120") HR flat steel. Finish: TenderTuff™, brown or gray in color.

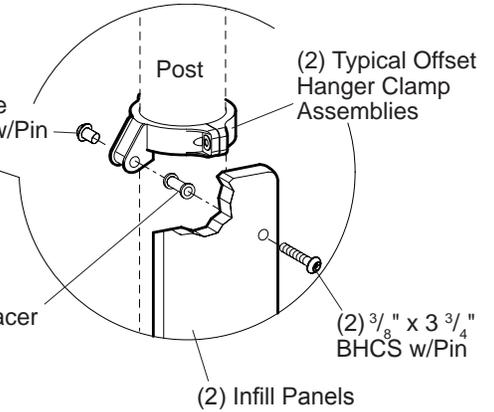
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{4}$ man hour
Weight: Kick Plate (For 6" or 8" Rise) 13 lbs.
 Kick Plate (For 16" Rise) 23 lbs.

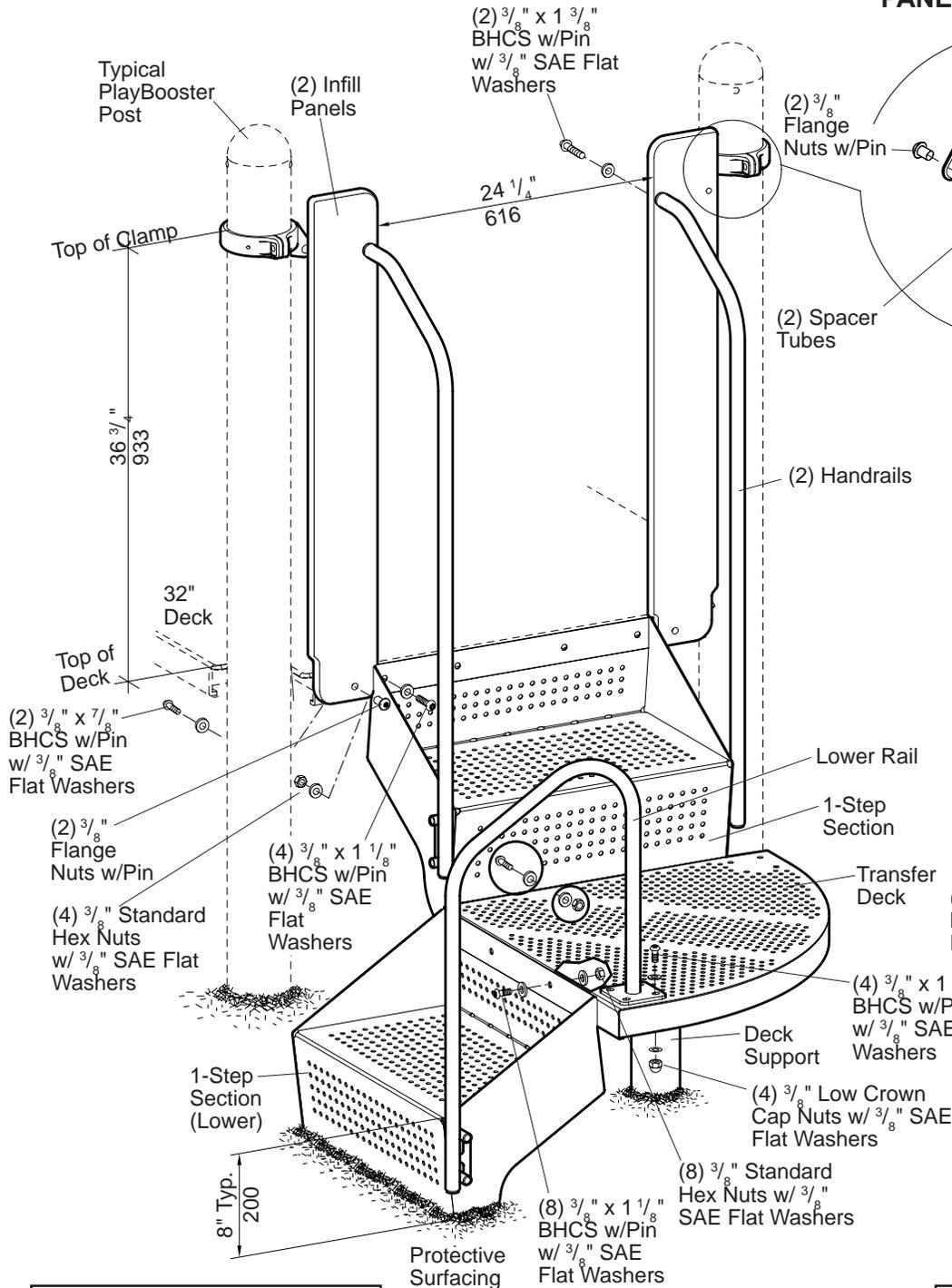
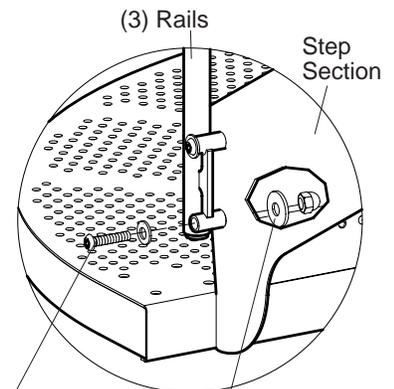
Installation Instructions

- 1) Locate kick plates as labeled on your plan drawing.
- 2) Attach kick plate using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " flat washers and $\frac{3}{8}$ " standard hex nuts with $\frac{3}{8}$ " flat washers, as shown. **NOTE:** *Kick plates mount to face of lower deck.*
- 3) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
PANEL ATTACHMENT**



**DETAIL
HANDRAIL ATTACHMENT**



NOTE: Protective surfacing adjacent to the transfer deck must be accessible.

NOTE: The illustration shown is a left hand orientation. Refer to the site plan drawing for the orientation



PlayBooster® 152911 Transfer Module, 32", w/Handrails

Parts List

Part#	Description	Qty.
100610	1/2" x 5/8" Drive Rivet, AL/SST	2
105327	5/8" Half Clamp, Specify Color	2
113468	7/8" O.D. x 1 1/16" Spacer Tube, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
181371	Deck Support (DB), Specify Color	1
181373	Deck Support (SM), Specify Color	1
181374	Step Support (DB), Specify Color	1
181376	Step Support (SM), Specify Color	1
144696	1-Step Section, Specify Color	2
152638	1-Step Handrail, Specify Color	2
152641	Lower Rail, Specify Color	1
153398	Transfer Deck, Specify Color	1
153885	Infill Panel, Specify Color	2
204034	Transfer Module Hardware Package	1
100173	3/8" x 2" BHCS, SST	6
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100198	3/8" x 1 3/8" BHCS w/Pin, SST	20
100327	Standard Hex Nut, SST	16
100351	Tee Nut, SST	4
100353	Flange Nut w/Pin, SST	4
100365	SAE Flat Washer, SST	54
113027	3/8" x 1 3/8" BHCS w/Pin, SST	8
124460	3/8" x 3 3/8" BHCS w/Pin, SST	2
100378	3/8" Fender Washer, SST	6
100349	3/8" Low Crown Cap Nut, SST	12
111393	4-Hole (SM) Hardware Package	1
100263	3/8" x 2 3/8" Expansion Anchors	4
100327	3/8" Standard Hex Nut, SST	4
100365	3/8" SAE Flat Washers, SST	4
121256	2-Hole (SM) Hardware Package	1
100263	3/8" x 2 3/8" Expansion Anchors	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washers, SST	2

DB=Direct Bury
SM=Surface Mount

Installation Time: SM - Approx. 3 man hours
DB - Approx. 4 man hours
Concrete Req.: Approx. 3.4 cu. ft.
Weight: SM - 180 lbs.
DB - 195 lbs.
Fall Height: Deck Height

Installation Instructions

- (Direct Bury)** Dig footings as shown. Refer to your Plan View/Footing Layout.
 - Attach the deck support to the transfer deck using 3/8" x 7/8" BHCS w/pin and 3/8" low crown cap nuts with 3/8" SAE flat washers. **NOTE: Make sure 3/8" rod on support is under support strap on deck as shown.** Refer to the Deck Support Attachment Detail.
 - Attach the 1-step section to the transfer deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
 - Attach the 1-step section to the face of the mainstructure deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
 - Attach the step support to the 1-step section (lower) using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer to the Step Support Attachment Detail.
 - Attach the 1-step section (lower) to the transfer deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers.
 - Attach offset hanger clamps to posts at heights shown using 5" half clamps, 3/8" x 1 1/8" BHCS w/pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
 - Attach infill panels to the face of the mainstructure deck using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
 - Attach infill panels to offset hanger clamp assemblies using 3/8" x 3 3/4" BHCS, spacer tubes and 3/8" flange nuts w/pin. See Panel Attachment Detail.
 - Attach the handrails to the steps using 3/8" x 2" BHCS with 3/8" SAE flat washers and 3/8" low crown cap nuts with 3/8" fender washers. Refer to the Handrail Attachment Detail.
 - Attach the handrails to the infill panels using 3/8" x 1 3/8" BHCS w/pin and 3/8" SAE flat washers.
 - Attach the lower rail to the transfer deck using 3/8" x 1 3/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" low crown cap nuts with 3/8" SAE flat washers.
 - Attach the lower rail to the 1-step section (lower) using 3/8" x 2" BHCS with 3/8" SAE flat washers and 3/8" low crown cap nuts with 3/8" fender washers. Refer to the Handrail Attachment Detail.
 - (Direct Bury)** With transfer deck and steps level and supports plumb, pour concrete footings. Allow concrete footings to cure a minimum of 72 hours before users are allowed to play on the structure.
- (Surface Mount)** Mark holes for expansion anchors on concrete slab through support plates. Detach the module from the mainstructure and slide module aside, drill 3/8" x 3" deep holes on marks using hammer drill and 3/8" masonry bit. Reposition module over drilled holes and tap expansion anchors into drilled holes. Fasten support plates to expansion anchors using 3/8" standard hex nuts with 3/8" SAE flat washers. Reattach module to structure.
- Install 1/2" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- Install protective surfacing before users are allowed to play on the structure.

Deck: Flange formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is perforated with 5/16" diameter holes and measure 29" per (2) sides. Finish: TenderTuff™, color specified.

Railings: Weldment comprised of formed 1 1/8" O.D. x 11 GA (.120") steel tubing with 203 or 303 stainless steel inserts with 3/8" internal threads. Finish: TenderTuff, color specified.

Step Sections: Formed from 12 GA (.105") sheet steel conforming to ASTM A1011. Standing surface is 24 3/8" wide x 14" deep and is perforated with 5/16" diameter holes. Finish: TenderTuff, color specified.

Panel: Solid color Permalene® panel, color specified.

Deck Support: Weldment comprised of 3 1/2" O.D. RS-20 (.125") galvanized steel tubing and 3/8" O.D. x 5" long rod. Finish: ProShield®, color specified.

Step Support: Weldment comprised of 1.660 O.D. RS20 (.080"-.095) and 1 3/4" x 1 3/4" x 1/8" HR angle. Finish: ProShield, color specified.

Spacer Tube: Made from 6061-T6 aluminum 7/8" O.D. x 1 11/16". Finish: ProShield, color specified.

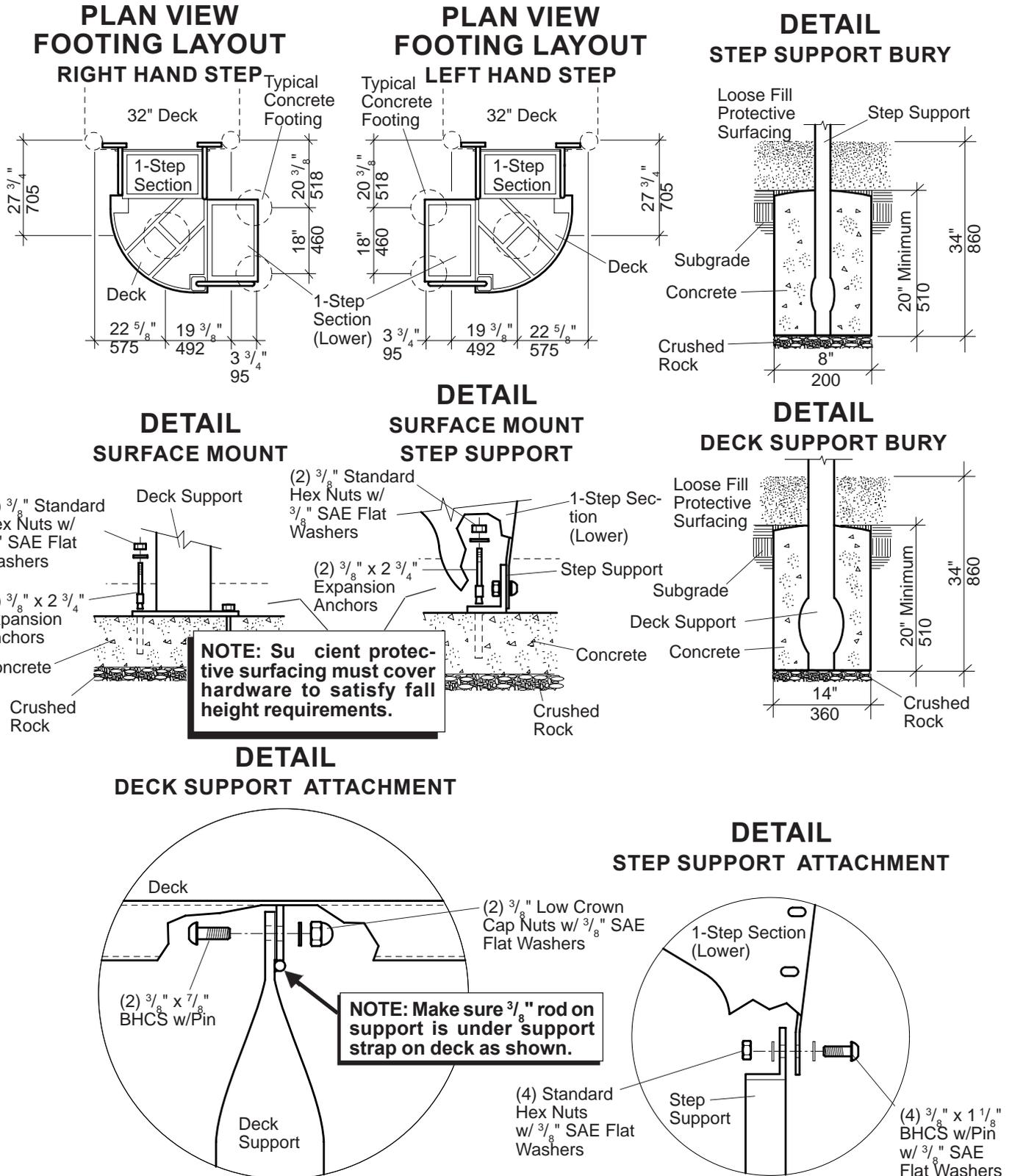
Clamps: Cast aluminum. Finish: ProShield, color specified.

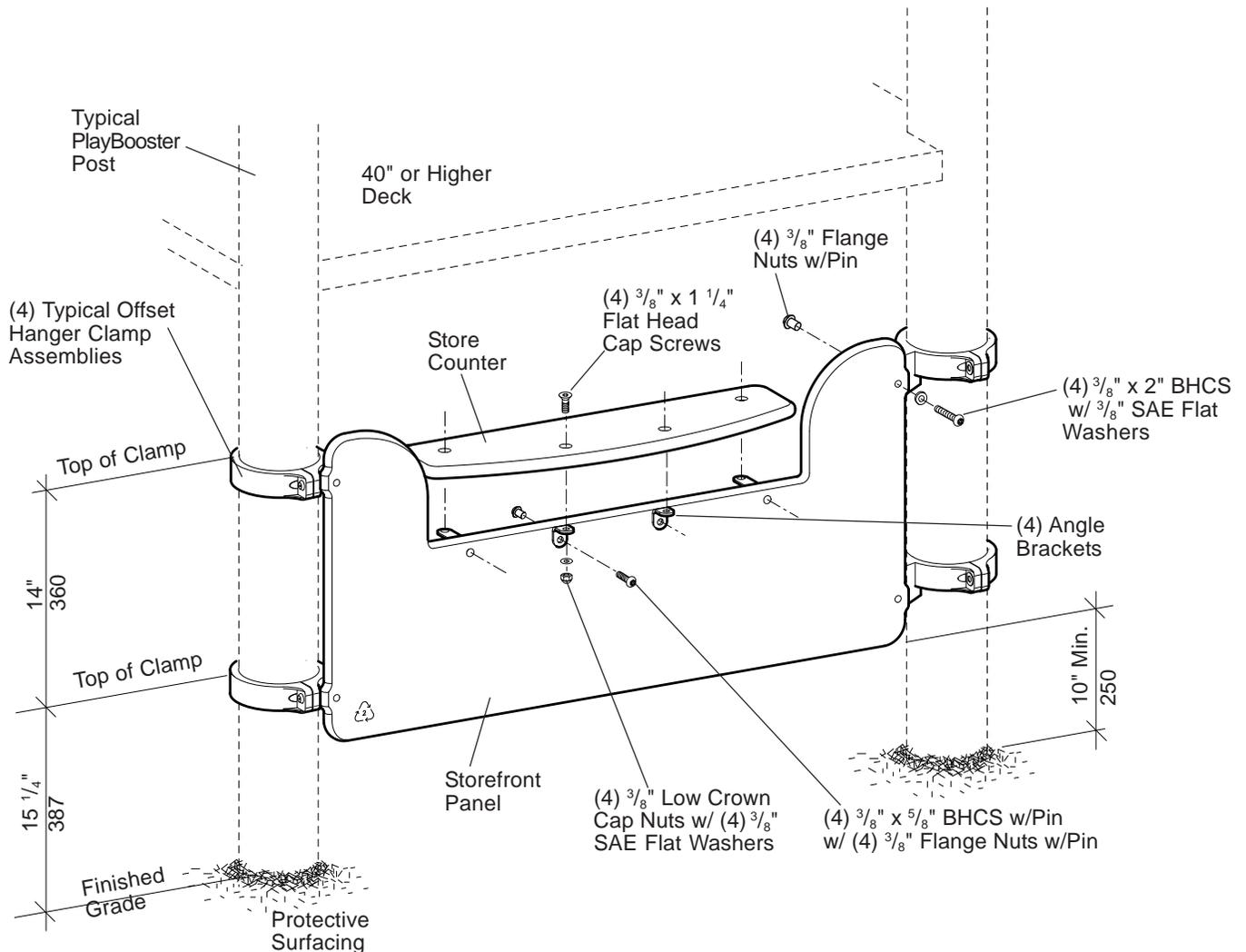
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

NOTE: Refer to the site plan drawing for proper orientation.

SAFETY NOTE
Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

204022a





NOTE:
This Panel is used at ground level only, under 40" or higher decks.



PlayBooster® 115254 Storefront Panel

Parts List

Part#	Description	Qty.
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
144581	Storefront Panel, Specify Color	1
144580	Store Counter, Specify Color	1
133444	Panel Attachment Hardware Package	1
100173	3/8" x 2" BHCS, SST	4
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100351	3/8" Tee Nut, SST	8
100353	3/8" Flange Nut w/Pin, SST	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
100365	3/8" SAE Flat Washer, SST	4
188683	Store Counter Top Hardware Package	1
100195	3/8" x 5/8" BHCS w/Pin, SST	4
100252	3/8" x 1 1/4" Flat Head Cap Screw, SST	4
100349	3/8" Low Crown Cap Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	4
188664	Steel Angle Bracket, Silver	4

Specifications

Storefront Panel: Permalene® solid color. Panel measures 35 5/8" wide x 20" high, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield®, color specified.

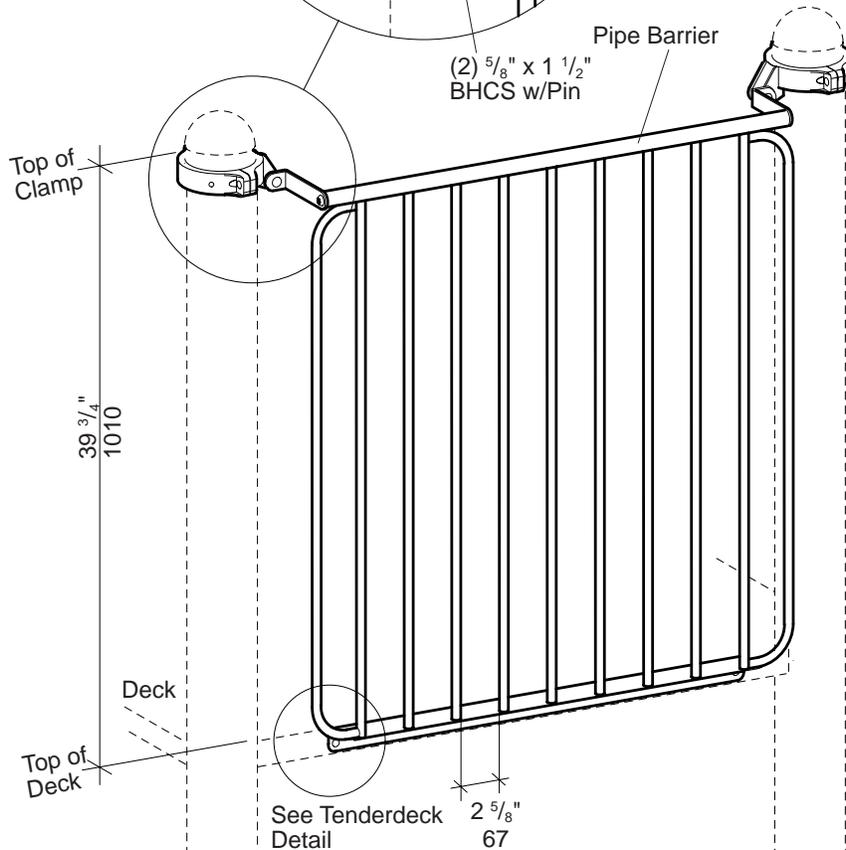
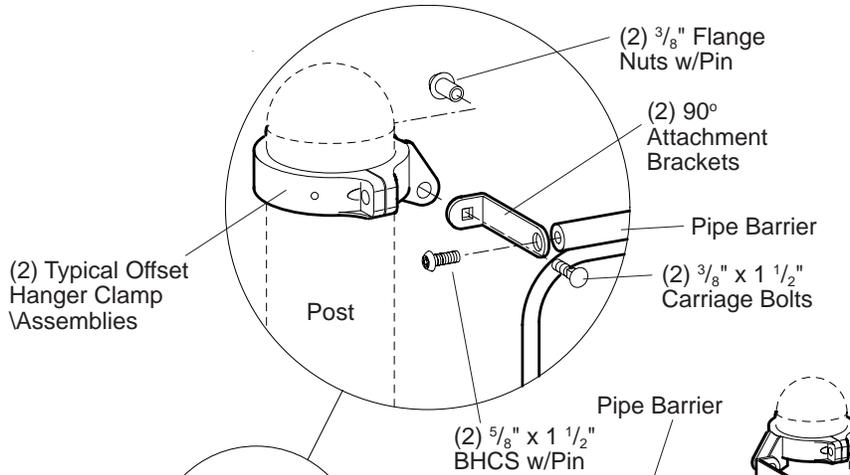
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour
Weight: 29 lbs.

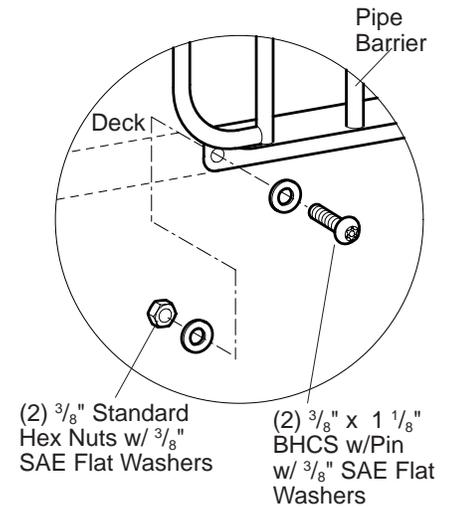
Installation Instructions

- 1) Attach offset hanger clamp assemblies to posts at height shown, using half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach panel to offset hanger clamp assemblies, using 3/8" x 2" BHCS with 3/8" SAE flat washers and 3/8" flange nuts w/pin.
- 3) Attach angle brackets to storefront panel using 3/8" x 5/8" BHCS w/pin through angles and 3/8" flange nuts w/pin through panel. Attach store counter top to angle brackets using 3/8" x 1 1/4" flat head cap screws through counter top and 3/8" low crown cap nuts with 3/8" SAE flat washers underneath angles.
- 4) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.

**DETAIL
90° ATTACHMENT BRACKETS**



**DETAIL
TENDERDECKS**



DECK MOUNT

Parts List

Part#	Description	Qty.
ABOVE DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
100610	1/4" x 5/8" Drive Rivet, AL/SST	2
132739	Barrier, Above Deck Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	6
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	4
100353	3/8" Flange Nut w/Pin, SST.....	2
116017	3/8" x 1 1/2" Carriage Bolt w/Patch, SST.....	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	4
BELOW DECK		
132755	Pipe Barrier, Specify Color	1
128824	90° Attachment Bracket, Specify Color.....	2
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
113464	Angled Panel Bracket, Specify Color.....	1
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
132741	Barrier, Below Deck Hardware Package	1
116017	3/8" x 1 1/2" Carriage Bolt, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST.....	8
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST.....	4
100353	3/8" Flange Nut w/Pin, SST	2

Barrier: Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Barrier measures 33 7/8" wide x 39 13/16" high. Finish: TenderTuff™, color specified.

90° Bracket: Formed from 1/4" x 1 1/4" HRPO flat steel. Finish: ProShield®, color specified.

Angled Panel Brkt.: Weldment comprised of .190" thick 5052 aluminum formed angle with (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: ProShield, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications)

Installation Time: Approx. 1 man hour
Weight: Above Deck 52 lbs.
 Below Deck 56 lbs.

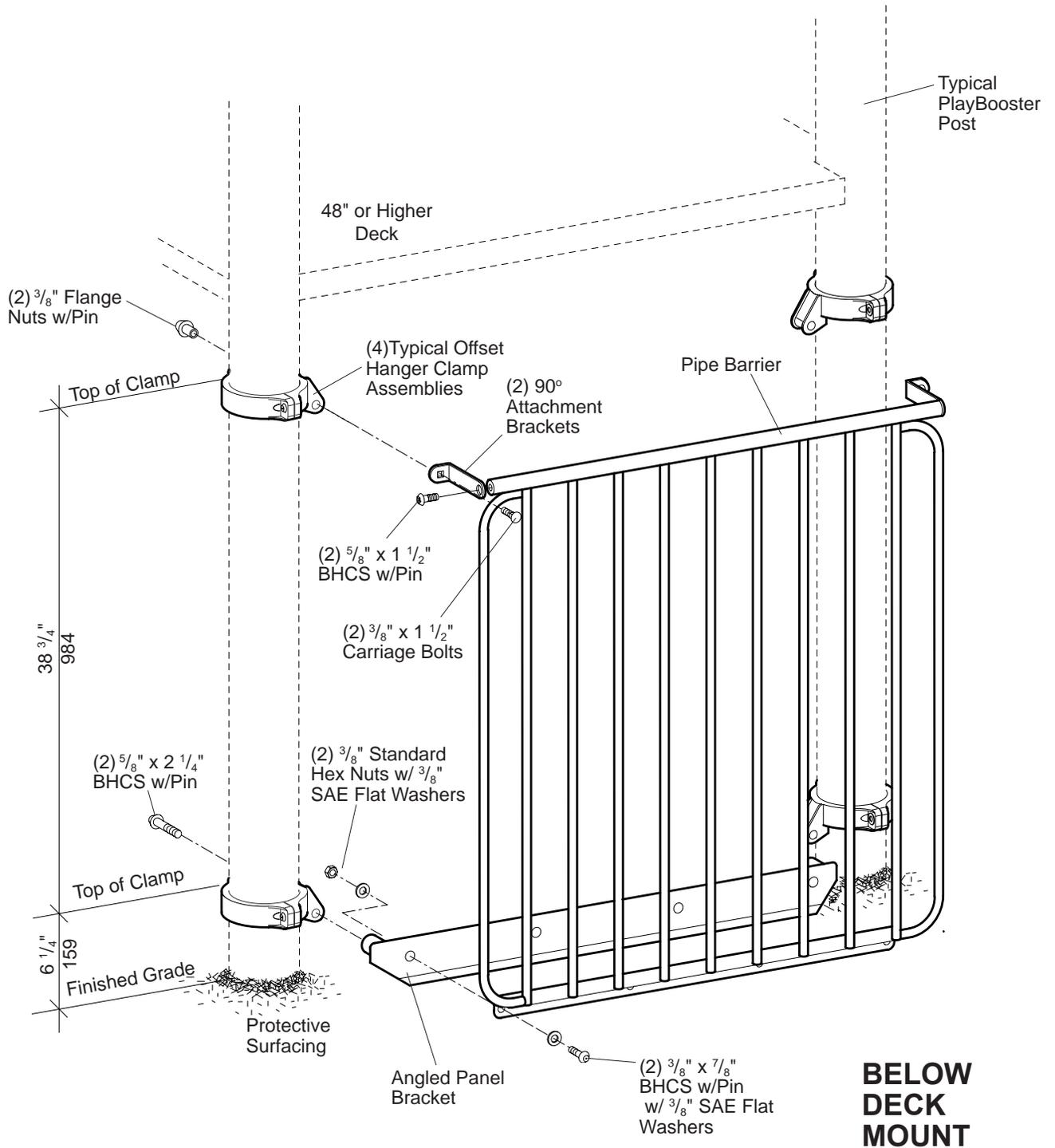
Installation Instructions

ABOVE DECK (See Sheet 1 of 2)

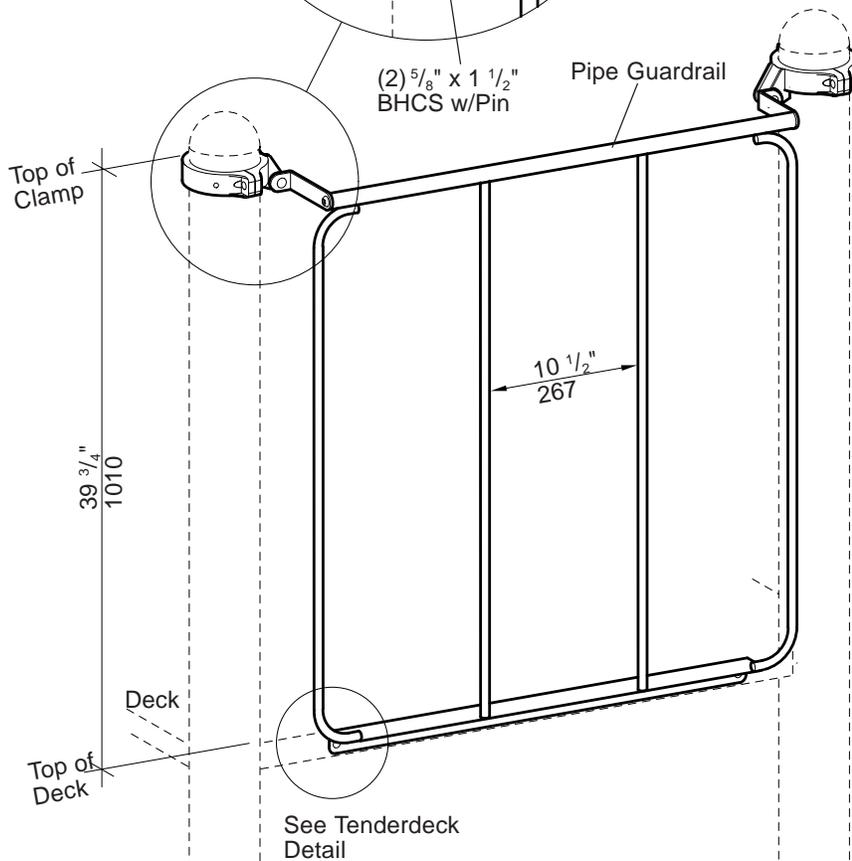
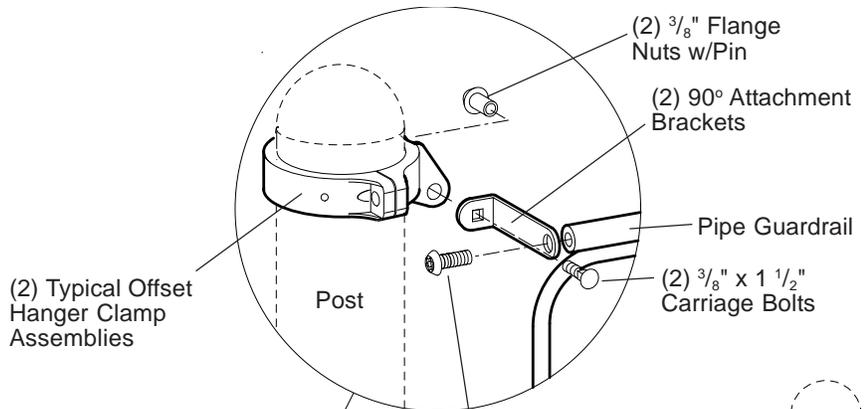
- 1) Attach pipe barrier to the face of the deck using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer To The Tenderdeck Detail..
- 2) Attach offset hanger clamps to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 4) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Install protective surfacing before users are allowed to play on the structure.

BELOW DECK (See Sheet 2 of 2)

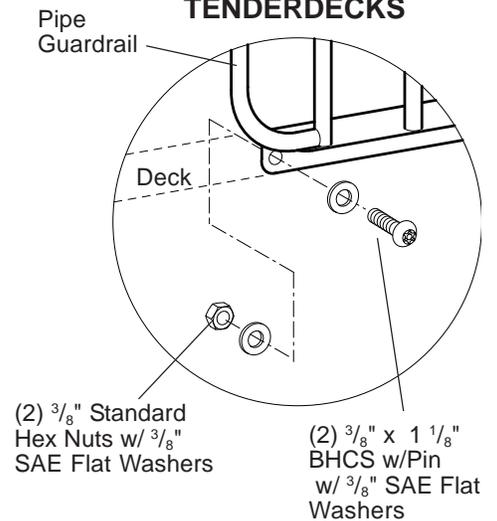
- 1) Attach offset hanger assemblies to posts at height shown. Using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin and with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach angled panel bracket to bottom of pipe barrier using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. See Below Deck Mount.
- 3) Attach angled panel bracket with pipe barrier to offset hanger clamp assemblies using 5/8" x 2 1/4" BHCS w/pin. See Below Deck Mount.
- 4) Attach the 90° attachment brackets to pipe barrier using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Attach the 90° attachment brackets to the offset hanger clamps using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec sheet.
- 7) Install protective surfacing before users are allowed to play on the structure.



**DETAIL
90° ATTACHMENT BRACKETS**



**DETAIL
TENDERDECKS**



DECK MOUNT



Parts List

Part#	Description	Qty.
ABOVE DECK		
132758	Pipe Guardrail, Specify Color	1
128824	90° Attachment Bracket, Specify Color	2
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
100610	1/4" x 5/8" Drivet Rivet, AL/SST	2
132739	Barrier, Above Deck Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	6
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST	4
100353	3/8" Flange Nut w/Pin, SST	2
116017	3/8" x 1 1/2" Carriage Bolt w/Patch, SST	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST	4
BELOW DECK		
132758	Pipe Guardrail, Specify Color	1
128824	90° Attachment Bracket, Specify Color	2
105327	5" Half Clamp, Specify Color	4
113729	Offset Hanger Clamp, Specify Color	4
113464	Angled Panel Bracket, Specify Color	1
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
132741	Barrier, Below Deck Hardware Package	1
116017	3/8" x 1 1/2" Carriage Bolt, SST	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST	8
100196	3/8" x 7/8" BHCS w/Pin, SST	2
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST	8
100201	5/8" x 1 1/2" BHCS w/Pin, SST	2
100327	3/8" Standard Hex Nut, SST	2
100365	3/8" SAE Flat Washer, SST	4
100353	3/8" Flange Nut w/Pin, SST	2

Specifications

Guardrail:	Weldment comprised of 5/8" solid steel vertical rails, 1 1/8" O.D. x 11 GA (.120") steel horizontal rails with 203 or 303 stainless steel welded inserts with 5/8" internal threads, 1 1/2" x 1 1/2" x 29 1/2" angle iron. Guardrail measures 33 7/8" wide x 39 13/16" high. Finish: TenderTuff™, color specified.
Angled Panel Brkt.:	Weldment comprised of .190" thick 5052 aluminum formed angle with (2) 6061-T6 aluminum threaded tubes 1 1/8" O.D. x 1 1/2" long. Finish: ProShield®, color specified.
90° Bracket:	Formed from 1/4" x 1 1/4" HRPO flat steel. Finish: ProShield, color specified.
Offset Hanger Clamp Assembly:	Cast aluminum. Finish: ProShield, color specified.
Fasteners:	Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).
Installation Time:	Approx. 1 man hour
Weight:	Above Deck 27 lbs. Below Deck 31 lbs.

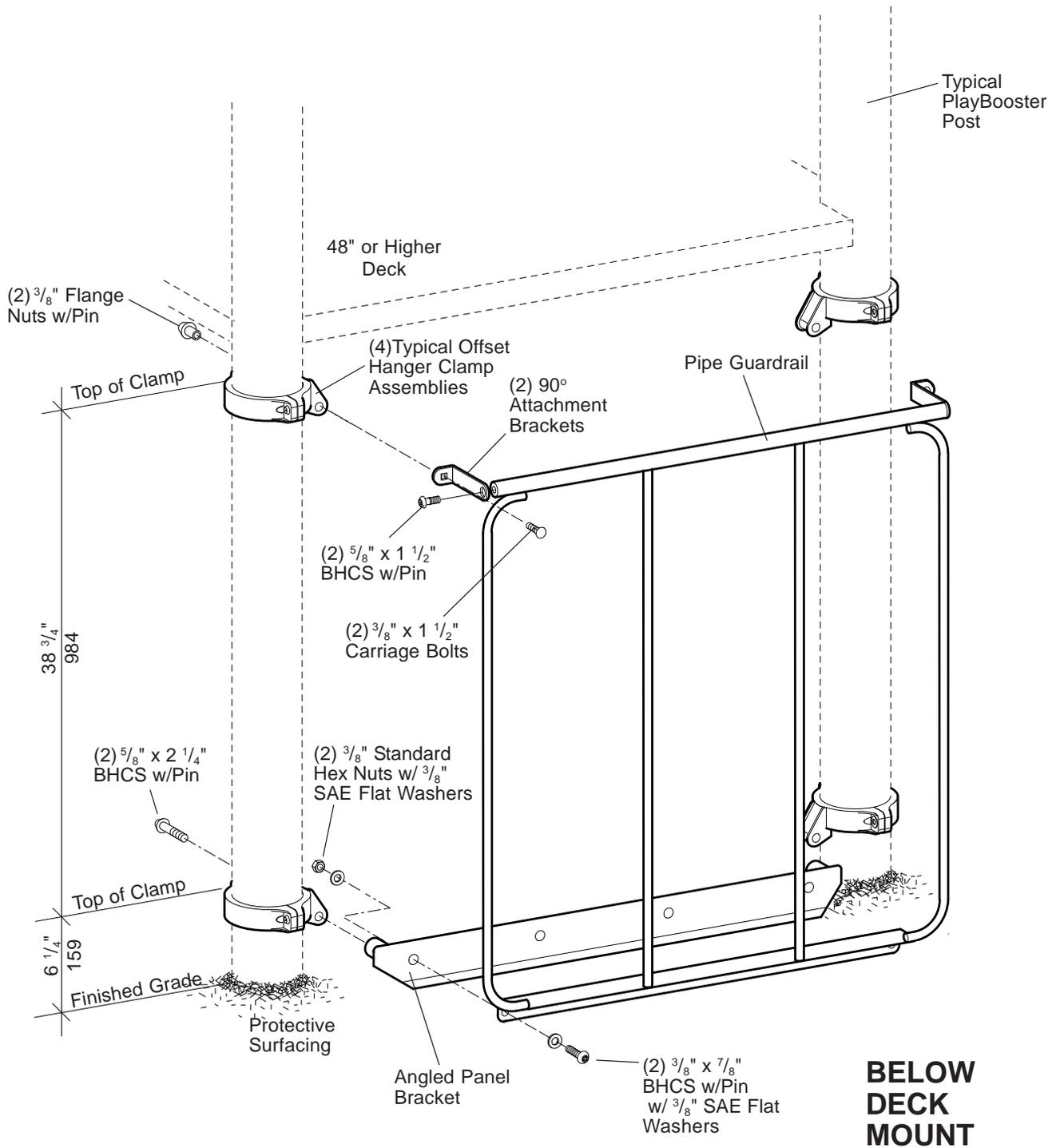
Installation Instructions

ABOVE DECK (See Sheet 1 of 2)

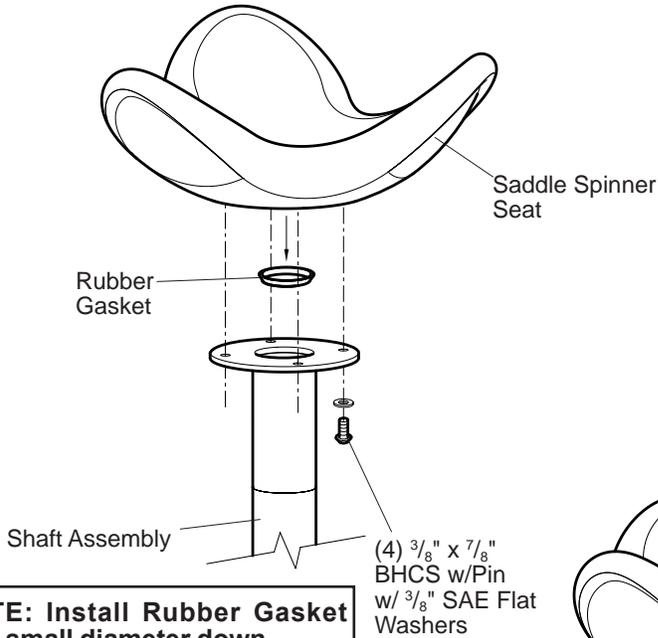
- 1) Attach guardrail to the face of the deck, using 3/8" x 1 1/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. Refer To The Tenderdeck Detail.
- 2) Attach offset hanger clamps to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 3) Attach the 90° attachment brackets to pipe guardrail, using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 4) Attach the 90° attachment brackets to the offset hanger clamps, using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 6) Install protective surfacing before users are allowed to play on the structure.

BELOW DECK (See Sheet 2 of 2)

- 1) Attach offset hanger assemblies to posts at height shown, using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer To The Typical Offset Hanger Clamp Spec Sheet.
- 2) Attach angled panel bracket to bottom of pipe guardrail, using 3/8" x 7/8" BHCS w/pin with 3/8" SAE flat washers and 3/8" standard hex nuts with 3/8" SAE flat washers. See Below Deck Mount.
- 3) Attach angled panel bracket with pipe guardrail to offset hanger clamp assemblies, using 5/8" x 2 1/4" BHCS w/pin. See Below Deck Mount.
- 4) Attach the 90° attachment brackets to pipe guardrail, using 5/8" x 1 1/2" BHCS w/pin. Refer To The 90° Attachment Bracket Detail.
- 5) Attach the 90° attachment brackets to the offset hanger clamps, using 3/8" x 1 1/2" carriage bolts and 3/8" flange nuts w/pin. Refer To The 90° Attachment Bracket Detail.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec sheet.
- 7) Install protective surfacing before users are allowed to play on the structure.

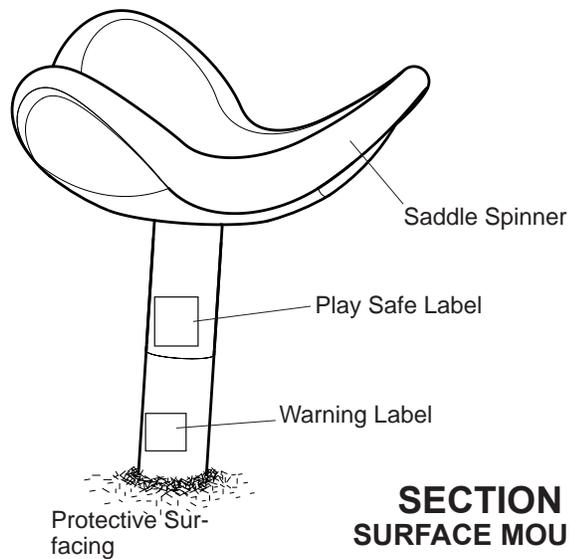
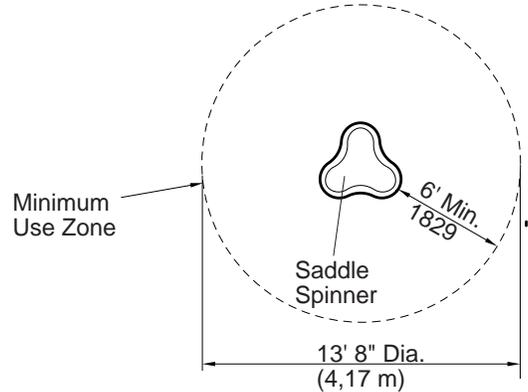


**DETAIL
SADDLE SPINNER SEAT
ASSEMBLY**

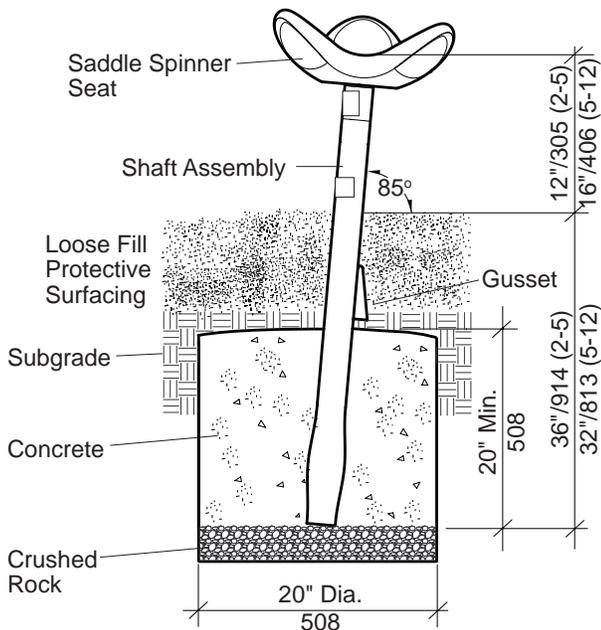


NOTE: Install Rubber Gasket with small diameter down.

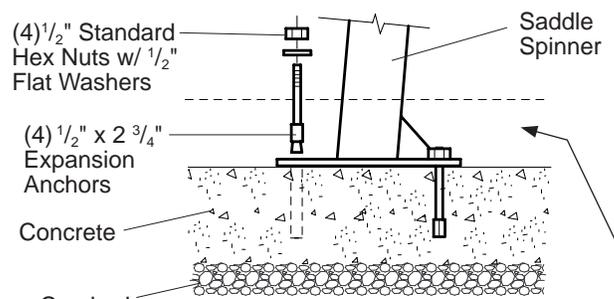
**DETAIL
MINIMUM USE ZONE**



**DETAIL
DIRECT BURY**



**SECTION
SURFACE MOUNT**



NOTE: Surface protective surfacing must cover hardware to satisfy fall height requirements.



Kids In Motion 152179 Saddle Spinner

Parts List

Part #	Description	Qty.
151539	Saddle Spinner Seat, Specify Color.....	1
197017	Shaft Assy., DB, Specify Color	*
247018	Shaft Assy. 12" Seat Height, SM, Specify Color.....	*
197011	Shaft Assy. 16" Seat Height, SM, Specify Color.....	*
211418	Spinner Seat Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100365	3/8" SAE Flat Washer, SST	4
156845	Play Safe Label, 2-5 Yrs.....	1
156847	Play Safe Label, 5-12 Yrs.....	1
127935	5/16" x 2 15/32" Rubber Gasket.....	1
183064	Warning label.....	1
121348	4-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor	4
100322	1/2" Standard Hex Nut, SST	4
100363	1/2" Flat Washer, SST	4

* = Quantity Determined By Your Order

DB = Direct Bury

SM = Surface Mount

Installation

- 1) **(Direct Bury)** Dig footing as shown. Refer to the Direct Bury Detail.
- 2) Attach saddle spinner seat and rubber gasket to shaft assembly using 3/8" x 7/8" BHCS w/pin and 3/8" SAE flat washers. Refer to the Saddle Spinner Seat Attachment Detail. **NOTE:** *Install Rubber Gasket with small diameter down.*
- 3) **(Direct Bury)** Place the shaft assembly in footing hole. Place a level on the shaft assembly gusset, when gusset is plumb pour concrete footing. Allow concrete footing to cure a minimum of 72 hours before users are allowed to play on structure. **NOTE:** *Saddle spinner will have to be propped in position, until concrete has cured.*
(Surface Mount) Drill 1/2" x 3" deep holes through base plate using hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Attach shaft assembly base plate to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- 4) If required to meet Canadian Standard (CSA Z614) requirement for water ponding, drill (3) 1/8" diameter drain holes on top side of seat, and (3) 1/8" diameter holes on bottom side of seat. **NOTE:** *Positions are prelocated on both sides of seat with an indent marking. Use caution to drill through one wall of plastic only.*
- 5) Apply labels as shown.
- 6) Install protective surfacing before users are allowed to play on the structure.

Shaft Assembly: (Saddle Spinner Seat Post) Weldment comprised of 2.875" O.D. RS40 (.160"-.170" Wall) galvanized steel tubing, 1.250" O.D. steel shaft, 12 Ga. (.105") HR flat steel, and 1144 steel collar. Finish: ProShield®, color specified. (Sleeve/Plate) Weldment comprised of 1/4" sheet HRPO steel and 2.875" O.D. schedule 80 steel tubing. Finish: ProShield, color specified.

Rubber Gasket: Made from 50 durometer neoprene.

Saddle Spinner Seat: Rotationally molded from U.V. stabilized linear low density polyethylene measuring 18 1/4" wide x 7" high, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1 man hour (DB)
3/4 man hour (SM)

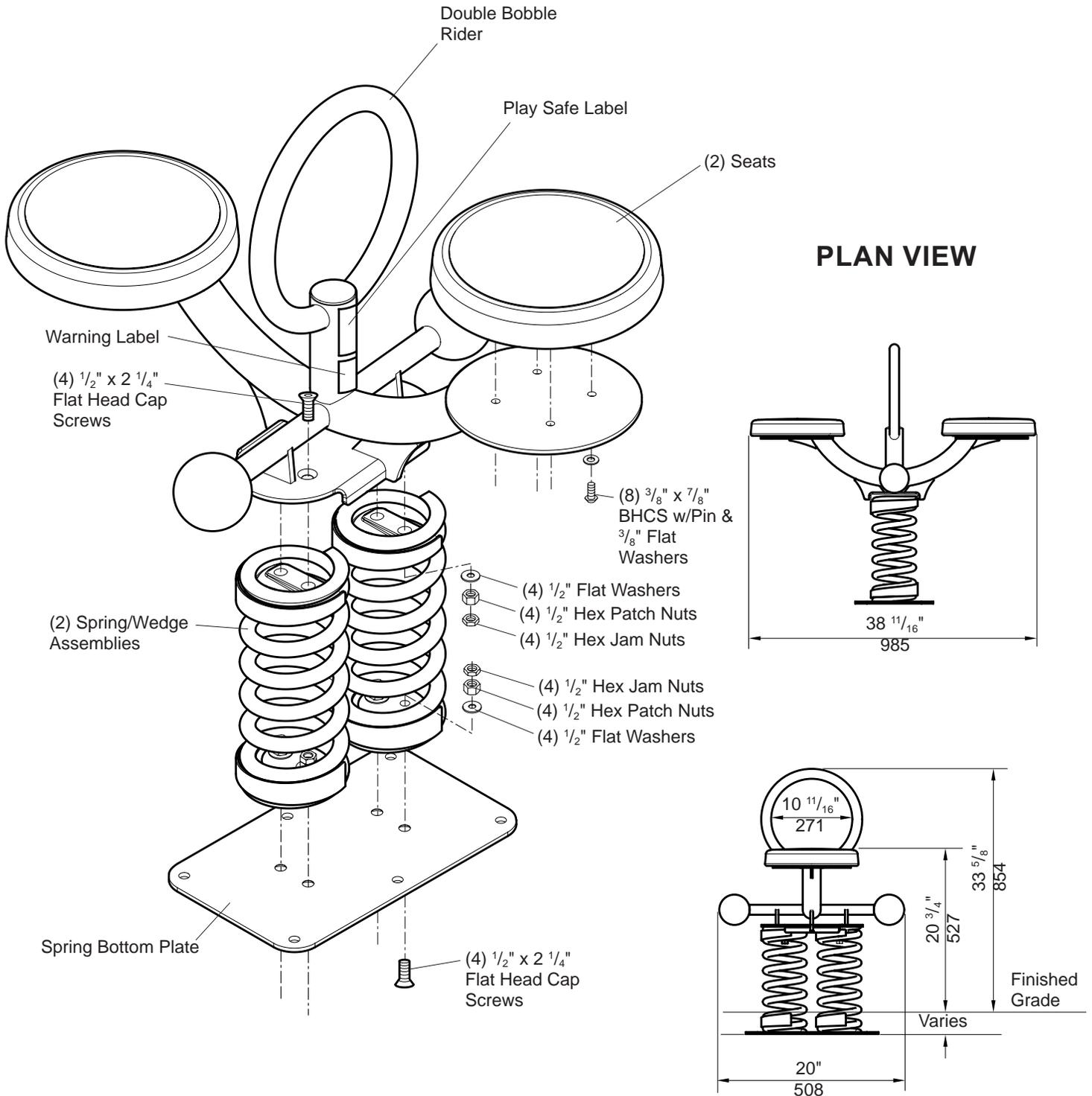
Weight: 36 lbs. (DB)
30 lbs. 12" Seat Height (SM)
32 lbs. 16" Seat Height (SM)

Area Req.: 13' 8" (4,17 m) diameter

Min. Use Zone.: 6' (1,83 m)

Concrete: Approx. 3 1/2 cu. ft. (DB)

Fall Height: 12" (300 mm) 2-5 Years
16" (410 mm) 5-12 Years





Kids In Motion 164075 Bobble Rider™, Double

Parts List

Part#	Description	Qty.
132912	Spring/Wedge Assembly, Black	2
160586	Seat, Black.....	2
185341	Double Bobble Rider, Specify Color.....	1
164058	Footer (DB), Black.....	1
164318	Spring Bottom Plate (SM), Black.....	1
183887	Double Bobble Rider Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100362	3/8" Flat Washer, SST	8
100363	1/2" Flat Washer, SST	8
129692	1/2" Hex Patch Nut, SST.....	8
129693	1/2" Hex Jam Nut, SST.....	8
130824	1/2" x 2 1/4" Flat Head Cap Screw, SST	8
156846	Play Safe Label 2-12 Years.....	1
183064	Warning Label	1
121868	Spring Animal Anchor Hardware Package (SM) ...	1
100262	1/2" x 6" Anchor Bolt.....	6
100322	1/2" Standard Hex Nut, SST	6
100363	1/2" Flat Washer, SST	6

DB = Direct Bury
SM = Surface Mount

Double Bobble Rider:

Weldment comprised of 1.315" O.D. RS20 (.080"-.090" wall) galvanized steel tubing, 2.375" O.D. RS20 (.095"-.105" wall) galvanized steel tubing, 3/8" HRPO steel plate, 1/4" HRPO steel plate, and 4" diameter 10 GA. (.135") low carbon steel ball. Finish: ProShield®, color specified.

Spring:

Weldment comprised of 5 5/8" diameter 13/16" tempered alloy steel coil. Finish: ProShield, black in color.

Seat:

Rotationally molded from U.V. stabilized linear low density polyethylene, black in color.

Spring

Bottom Plate:

Fabricated from 3/8" x 10" x 17" sheet HRPO steel. Finish: ProShield, black in color.

Footer:

Weldment comprised of 3 1/2" O.D. RS20 (.120" - .130" wall) galvanized steel tubing and 1/4" x 10" x 17" sheet HRPO steel. Finish: ProShield, black in color.

Fasteners:

Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time:

SM - Approx. 2 man hours
DB - Approx. 2 1/4 man hours

Concrete Req.:

DB - Approx. 5.25 cu. ft.

Area Req.:

15'-3" x 13'-8" (4,64 m x 4,17 m) Minimum Use Zone

Weight:

(SM) 113 lbs
(DB) 137 lbs

Seat Height:

20 3/4" (527 mm)

Installation Instructions

(Direct Bury)

- 1) Dig footing hole as shown.
- 2) Attach Bobble Rider to spring/wedge assemblies using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts, as shown.
- 3) Attach spring/wedge assemblies to footer using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts.
- 4) Attach seats to Bobble Rider using 3/8" x 7/8" BHCS w/pin and 3/8" flat washers.
- 5) With footer plumb and Bobble Rider propped up, pour concrete footing and let cure for a minimum of 72 hours before using.
- 6) Apply labels as shown.
- 7) Install protective surfacing before users are allowed to play on the component.

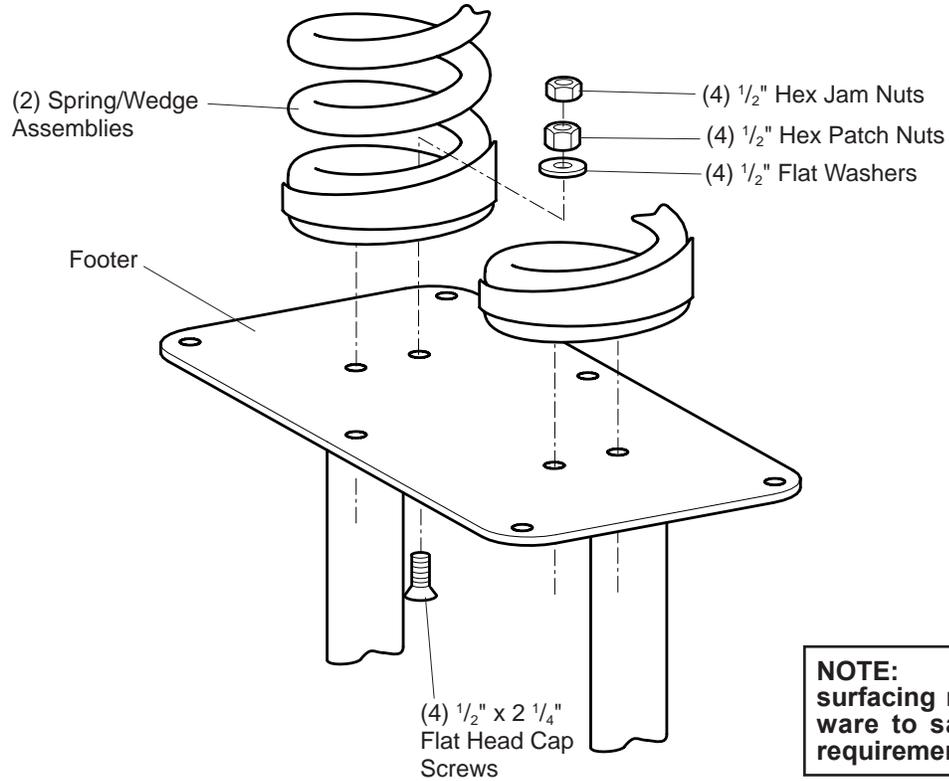
(Surface Mounting On A Concrete Slab)

- 1) Using the spring bottom plate as a pattern, make a plywood template for anchor bolt placement. Attach 1/2" x 6" anchor bolts with 1/2" standard hex nuts and 1/2" flat washers to holes in template.
- 2) Pour concrete slab and lay template on surface in level position. Push 1/2" x 6" anchor bolts into concrete and allow 3/4" to 7/8" of thread to protrude from concrete. Allow 72 hours before template removal.
- 3) Attach spring/wedge assemblies to spring bottom plate using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts.
- 4) Attach spring bottom plate to anchor bolts in concrete with 1/2" standard hex nuts and 1/2" flat washers.
- 5) Attach Bobble Rider to spring/wedge assemblies using 1/2" x 2 1/4" flat head cap screws, 1/2" flat washers, 1/2" hex patch nuts and 1/2" hex jam nuts, as shown.
- 6) Attach seats to Bobble Rider using 3/8" x 7/8" BHCS w/pin and 3/8" flat washers.
- 7) Apply labels as shown.
- 8) Sufficient protective surfacing for a 2' fall height should cover bottom plate and anchor bolts. (See ASTM F1487, Section 9.)

SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

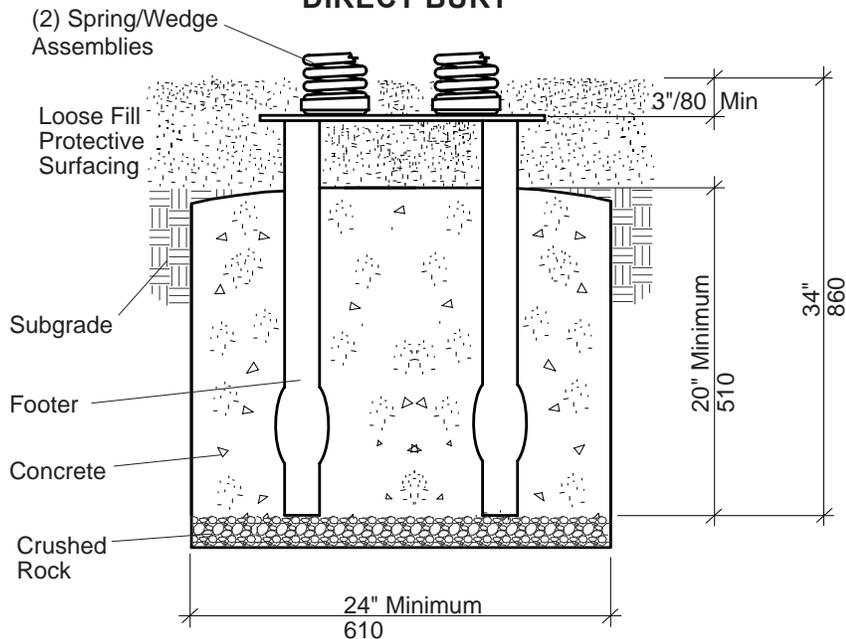
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**DETAIL
 DIRECT BURY
 BASE LEG ATTACHMENT**

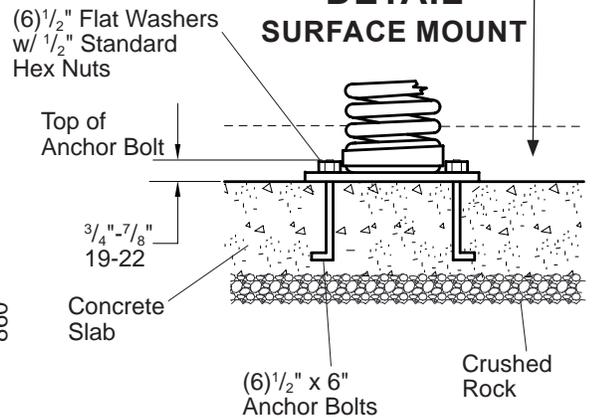


NOTE: protective surfacing must cover hardware to satisfy fall height requirements.

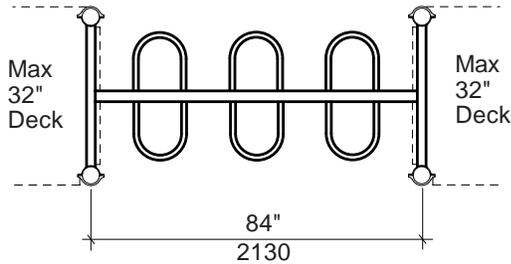
**DETAIL
 DIRECT BURY**



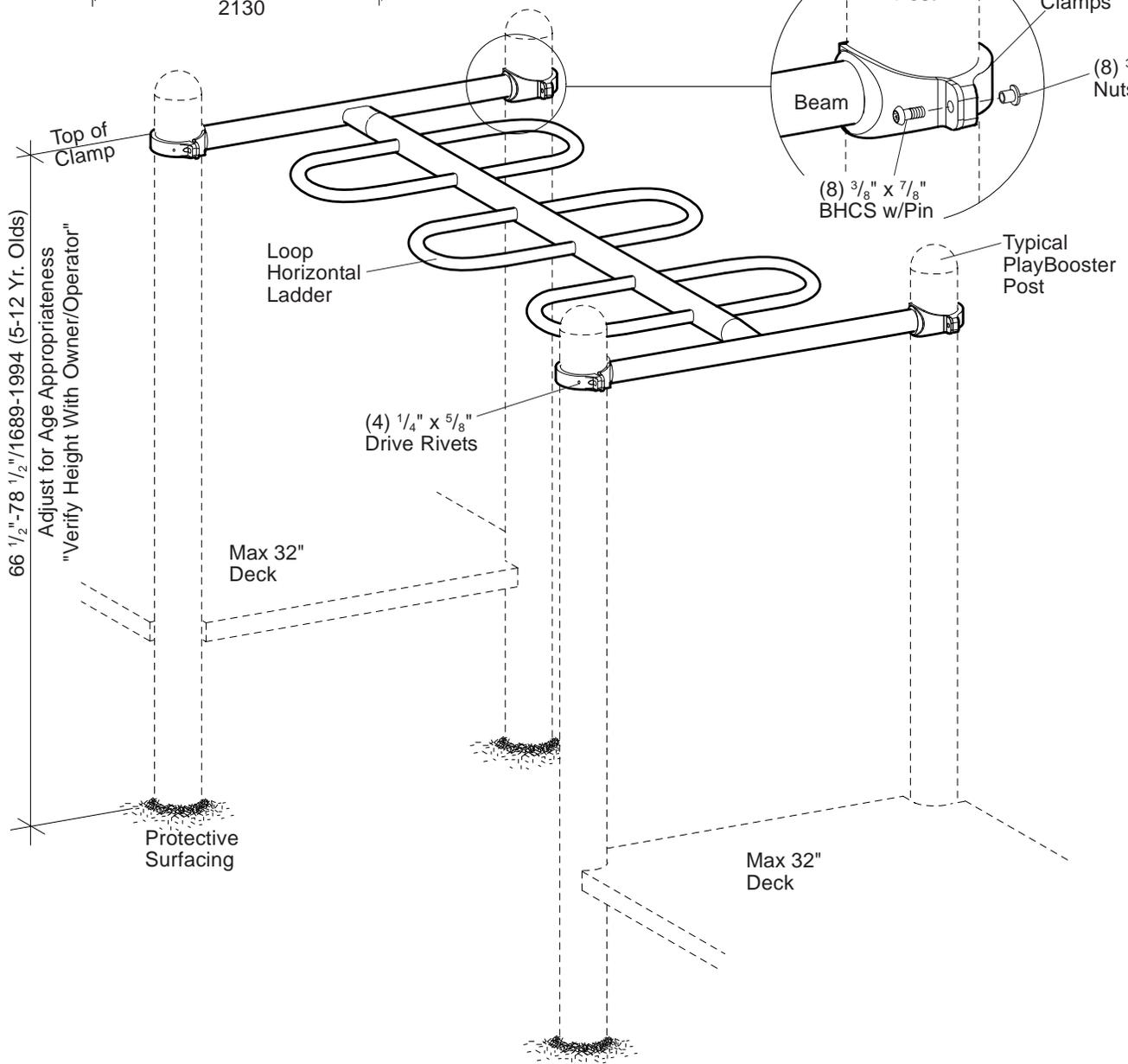
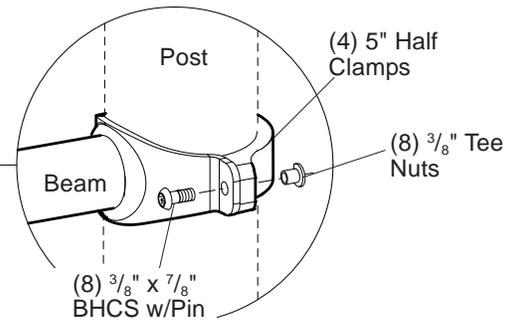
**DETAIL
 SURFACE MOUNT**



PLAN VIEW



DETAIL BEAM ATTACHMENT



PlayBooster® 119805 Horizontal Ladder, Loop, Single Beam 84"

Parts List

Part#	Description	Qty.
145940	Loop Horizontal Ladder, Specify Color	1
105327	5" Half Clamp, Specify Color	4
100610	1/4" x 5/8" Drive Rivet, AL/SST	4
149233	Horizontal Ladder, Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	8
100351	3/8" Tee Nut, SST	8

Specifications

Loop Ladder: Weldment comprised of 2.375" O.D. RS-40 (.130"-.140") galvanized steel tubing, 1.315" O.D. x RS-20 (.080"-.090") galvanized steel tubing and 1/4" HRPO flat steel. Finish: ProShield®, color specified.

Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour

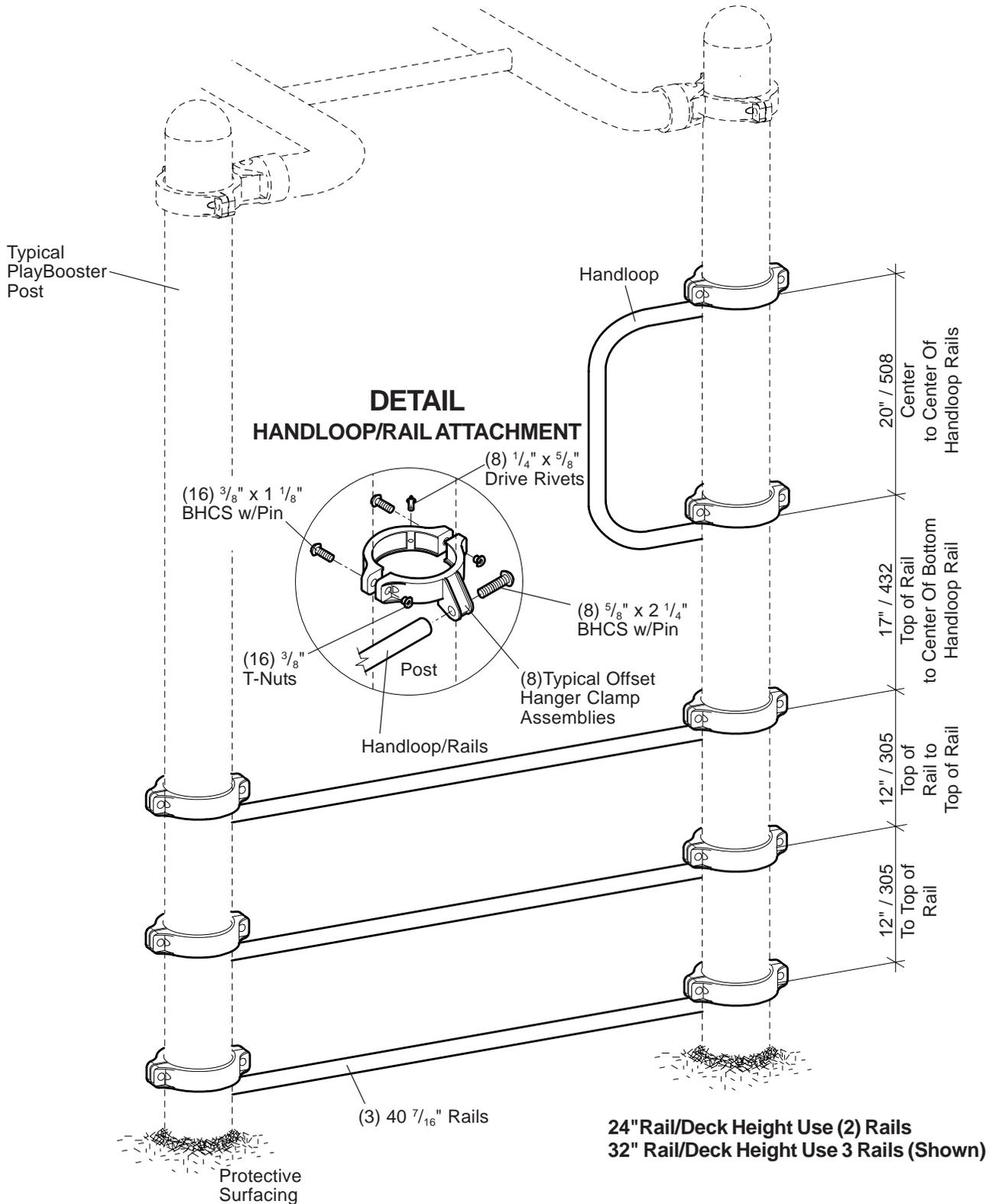
Area Req.: 6' (1,83 m) minimum use zone

Weight: 79 lbs.

Max. Fall Height: 67"-79" (1,70 m - 2,00 m) 5-12 Yr. Olds.

Installation Instructions

- 1) Mark posts for the appropriate height of the loop horizontal ladder. Adjust height for age appropriateness.
- 2) Lift loop horizontal ladder into position and attach to posts using 5" half clamps with 3/8" x 7/8" BHCS w/pin and 3/8" tee nuts.
- 3) Be sure loop horizontal ladder is level, if not, adjust clamps to do so.
- 4) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.



Parts List

Part#	Description	Qty
24" Rail/Deck Height		
108542-00	Handloop, Specify Color	1
108569-00	Rail, Specify Color	2
105327-01	5" Half Clamp, Specify Color	6
113729-00	Offset Hanger Clamp, Specify Color	6
100610-00	1/4" x 5/8" Drive Rivet, SST	6
124342-00	Handloop/Rail Hardware Package	3
100198-00	3/8" x 1 1/8" BHCS w/Pin, SST	12
100203-00	5/8" x 2 1/4" BHCS w/Pin, SST	6
100351-00	3/8" Tee Nut, SST	12
32" Rail/Deck Height		
108542-00	Handloop, Specify Color	1
108569-00	Rail, Specify Color	3
105327-01	5" Half Clamp, Specify Color	8
113729-00	Offset Hanger Clamp, Specify Color	8
100610-00	1/4" x 5/8" Drive Rivet, SST	8
124342-00	Handloop/Rail Hardware Package	4
100198-00	3/8" x 1 1/8" BHCS w/Pin, SST	16
100203-00	5/8" x 2 1/4" BHCS w/Pin, SST	8
100351-00	3/8" Tee Nut, SST	16

Specifications

Rail/ Handloop: Fabricated from 1 1/8" O.D. steel tubing with 303 stainless steel welded 5/8" threaded inserts in each end. Finish: Coated with TenderTuff, color specified.

Offset Hanger

Clamp Assembly: Cast aluminum. Finish: Powdercoat, color specified.

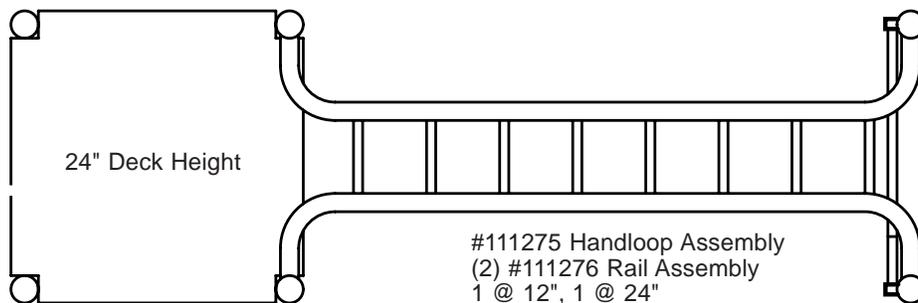
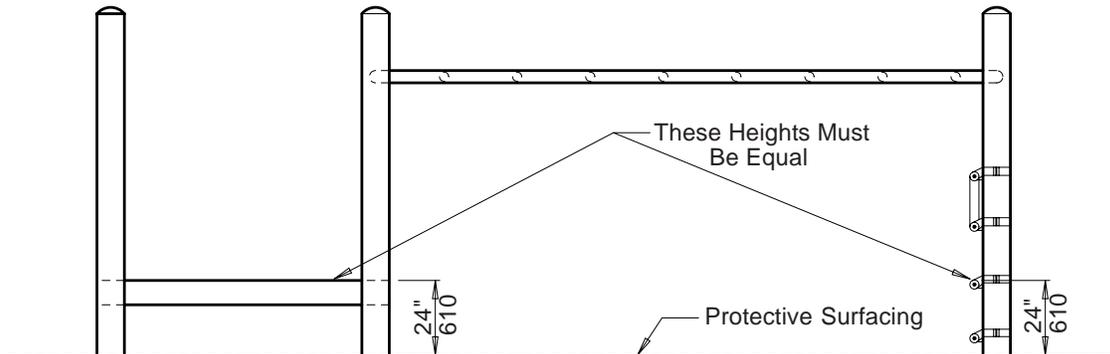
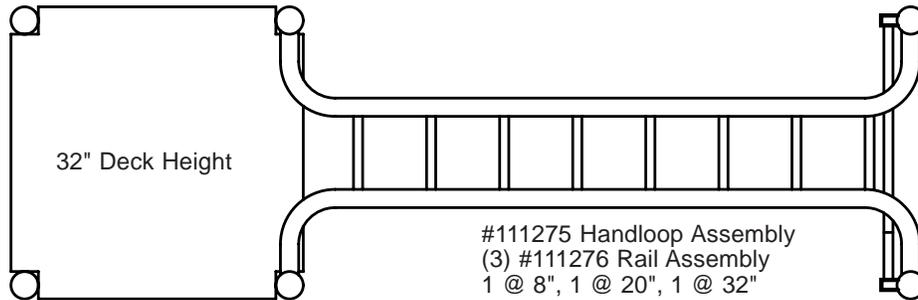
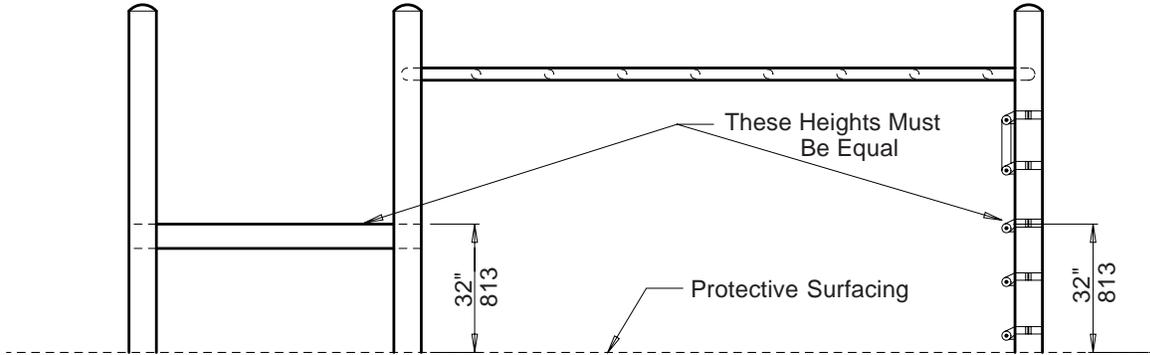
Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 1 man hour

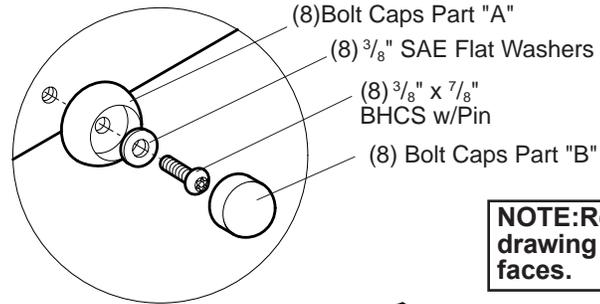
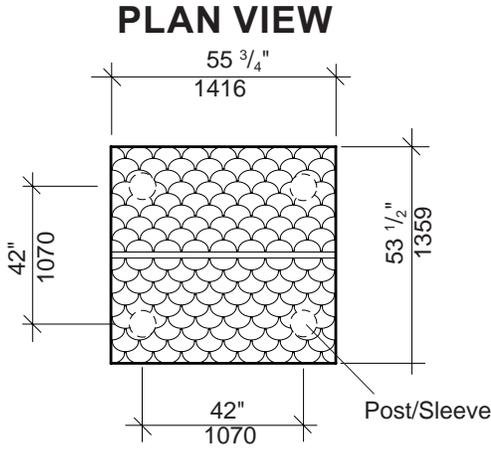
Weight: 34 lbs. (24")
46 lbs. (32")

Installation Instructions

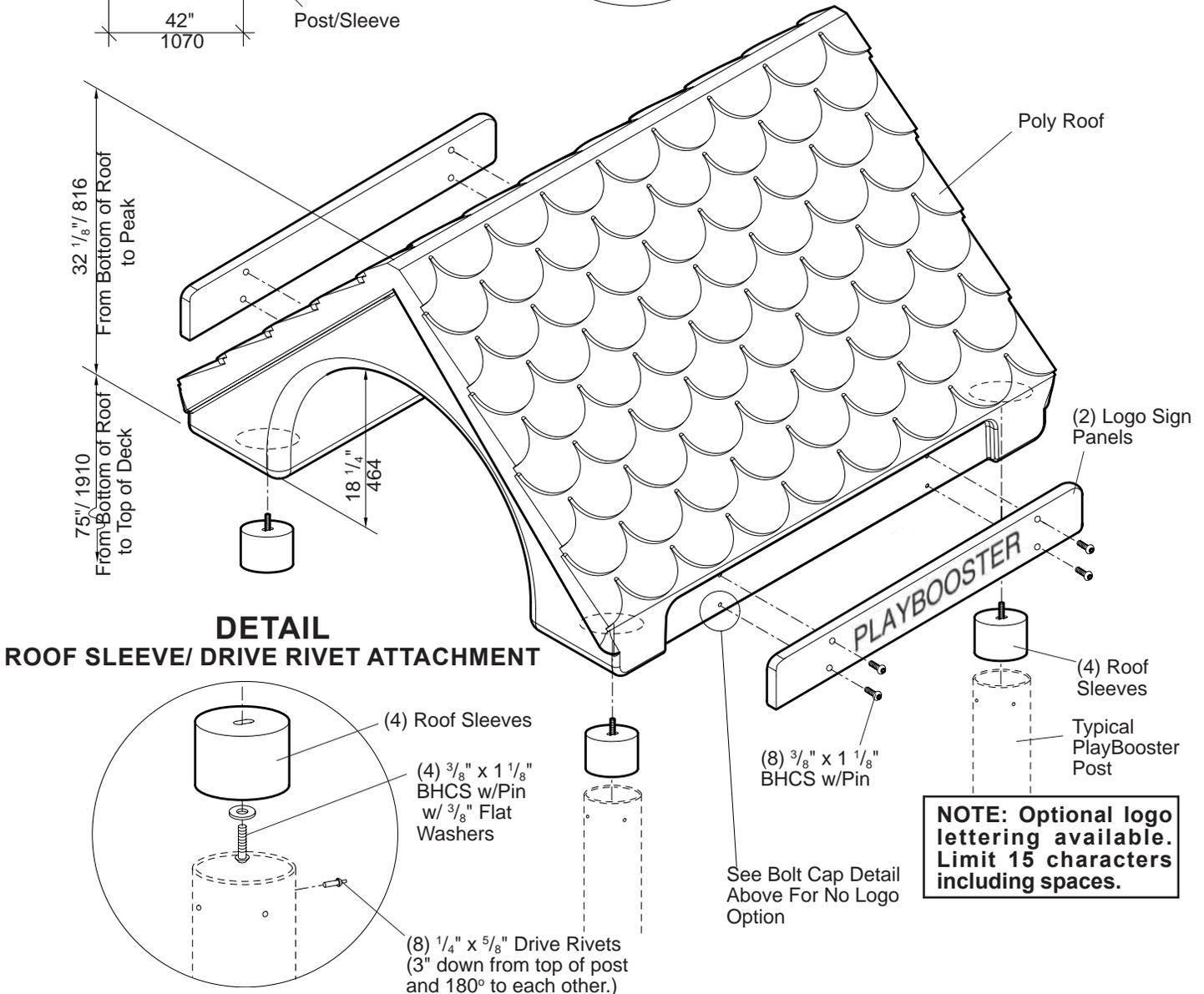
- 1) Mark locations of clamps on posts per dimensions on front of sheet.
- 2) Attach offset clamps to ends of rails/handloops using 5/8" x 2 1/4" BHCS w/pin.
- 3) Position rails/handloop on marked position on posts and attach using 5" half clamps and 3/8" x 1 1/8" BHCS w/pin with 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 4) Install drive rivets in half clamps per the Typical Offset Hanger Clamp Spec Sheet.
- 5) Install protective surfacing before users are allowed to play on the structure.



**DETAIL
BOLT CAP ASSEMBLY
(FOR NO LOGO PANEL OPTION)**



NOTE: Refer to your plan drawing for direction roof faces.



NOTE: Optional logo lettering available. Limit 15 characters including spaces.

Parts List

Part#	Description	Qty.
127765	Poly Roof, Specify Color	1
127800	Roof Logo, Specify Color	2
116573	Roof Sleeve	4
135428	Roof Hardware Package	1
100196	$\frac{3}{8}$ " x $\frac{7}{8}$ " BHCS w/Pin, SST	8
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	4
100362	$\frac{3}{8}$ " Flat Washer, SST	4
100365	$\frac{3}{8}$ " SAE Flat Washer, SST	8
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	8
108184	Bolt Cap Part A	8
108185	Bolt Cap Part B	8
135427	Roof/Logo Hardware Package	1
100198	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	12
100362	$\frac{3}{8}$ " Flat Washer, SST	4
100610	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	8

Poly Roof: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Roof Logo: Two color Permalene® roof logo measures 41" wide x 5 $\frac{1}{8}$ " high, color specified.

Roof Sleeve: Cast from 319 almag.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

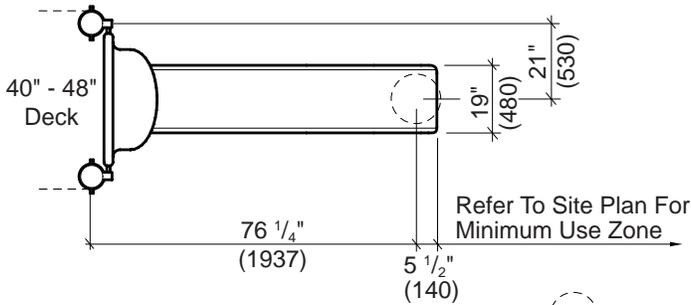
Installation Time: Approx. 2 man hours

Weight: w/Logo - 116 lbs.
w/o Logo - 105 lbs.

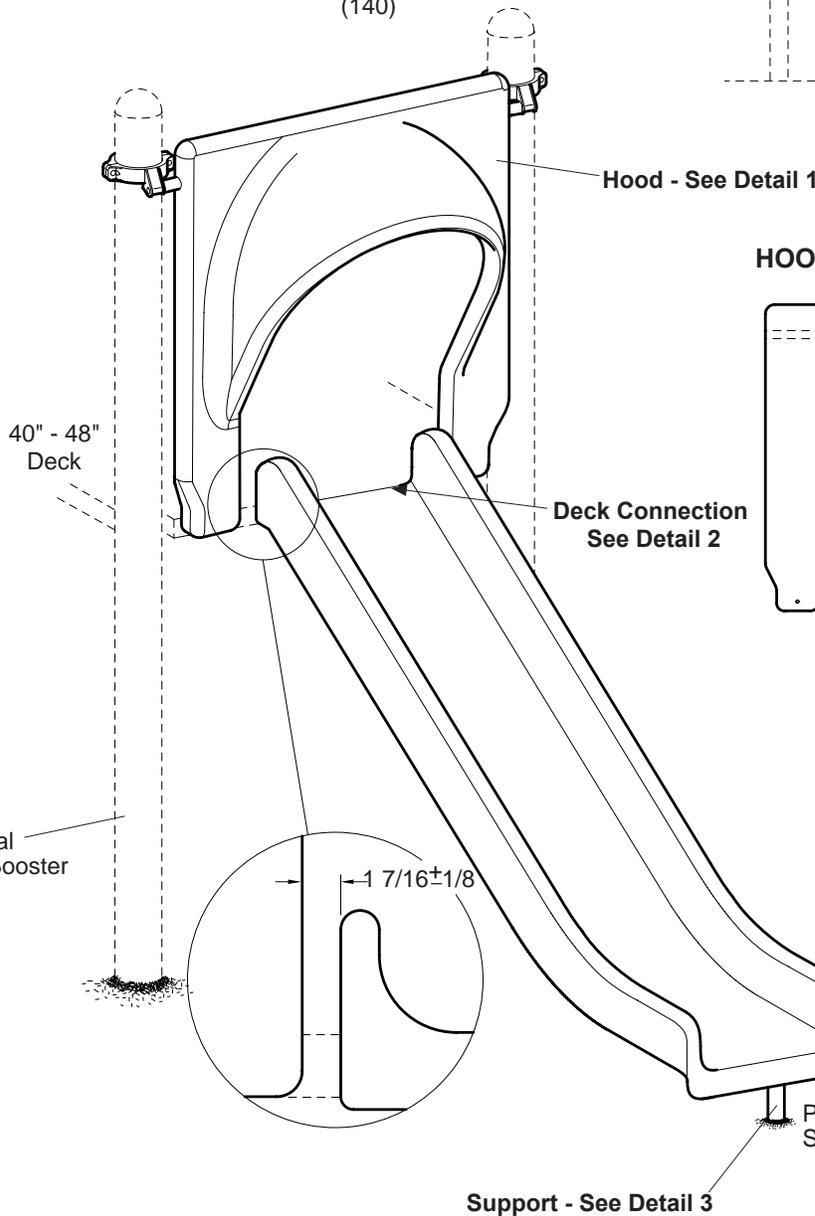
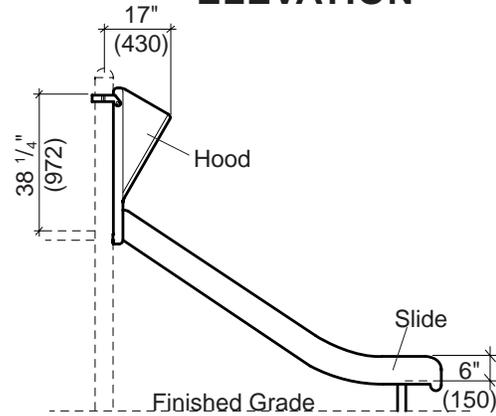
Installation Instructions

- 1) Attach roof sleeves to roof using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin with $\frac{3}{8}$ " flat washers. Refer to the Roof Sleeve/Drive Rivet Attachment Detail.
- 2) **(With Roof Logo)** Attach roof logo to roof using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin, as shown.
(Without Roof Logo) Attach bolt cap assembly to roof using bolt cap part "A", $\frac{3}{8}$ " SAE flat washer and fasten with $\frac{3}{8}$ " x $\frac{7}{8}$ " BHCS w/pin. Snap bolt cap part "B" onto bolt cap part "A". Refer to the Bolt Cap Assembly Detail.
- 3) With two people minimum, lift roof into position in the proper direction and insert roof sleeves into posts.
- 4) Drill $\frac{1}{4}$ " holes through roof sleeves using the predrilled $\frac{1}{4}$ " holes in posts as a guide. Insert $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets into drilled holes and tap pin in until it is flush with rivet head. Refer to the Roof Sleeve/Drive Rivet Attachment Detail.
- 5) Install protective surfacing before users are allowed to play on the structure.

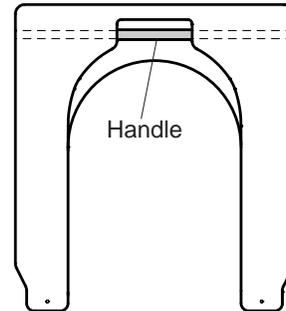
PLAN VIEW/ FOOTING LAYOUT



ELEVATION



HOOD - HANDLE DETAIL



Parts List

Part#	Description	Qty.
127162	Single Slide, Specify Color	1
150941	Support, (DB), Specify Color.....	1
151033	Support, 40" Deck (SM), Specify Color.....	1
151003	Support, 48" Deck (SM), Specify Color.....	1
134180	Single Slide Hood, Specify Color	1
100583	40 7/16" Rail, Specify Color	1
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
132443	Spacer Tube, Specify Color.....	2
111506	Slide Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST.....	2
100362	3/8" Flat Washer, SST.....	4
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread Bolt, SST	2
100365	3/8" SAE Flat washer, SST.....	2
111442	Rubber Bushing.....	2
106578	Hood Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST.....	2
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	4
100203	5/8" x 2 1/4" BHCS w/Pin, SST.....	2
100351	3/8" Tee Nut, SST.....	4
100362	3/8" Flat Washer, SST.....	2
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	2
111392	2-Hole (SM) Hardware Package	1
100266	1/2" x 2 3/4" Expansion Anchor.....	2
100322	1/2" Standard Hex Nut, SST.....	2
100363	1/2" Flat Washer, SST.....	2

DB = Direct Bury
SM = Surface Mount

Installation Instructions

- (Direct Bury)** Dig footings spaced as shown.
- Insert 40 7/16" rail through top of hood, place spacer tubes over each end of the 40 7/16" rail. Attach offset hanger clamps to ends of pipe bolt using 5/8" x 2 1/4" BHCS w/Pin. Position hood against face of deck with offset hanger clamps against posts. Line up holes in face of deck with inserts in bottom of hood and fasten using 3/8" x 7/8" BHCS w/Pin with 3/8" flat washers. Refer to Detail 1. Attach offset hanger clamps to posts using 5" half clamps with 3/8" x 1 1/8" BHCS w/Pin and 3/8" tee nuts.
- Attach support to base of slide using 3/8" x 1 1/4" BHCS w/Pin limited thread bolt, 3/8" SAE flat washer, rubber bushing and 3/8" flat washer. **NOTE: Attach bolts in the center of the slots to allow for expansion and contraction. Snug bolts down only, do not over-tighten. Refer to Detail 3.**
- Attach slide to the face of the deck using 3/8" x 7/8" BHCS w/Pin with 3/8" flat washers. Refer to Detail 2.
- (Direct Bury)** With support plumb pour concrete footings. Allow concrete footing to cure for a minimum of 72 hours before users are allowed to play on the structure.
(Surface Mount) Mark anchor bolt locations on concrete slab through holes in anchor plate and remove slide. Drill 1/2" x 3" deep holes on marks into concrete using a hammer drill and 1/2" masonry bit. Tap expansion anchors into drilled holes. Reposition slide and reattach to the face of the deck following step 4. Fasten support to expansion anchors using 1/2" standard hex nuts with 1/2" flat washers.
- Install protective surfacing before users are allowed to play on the structure.

Slide: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Exit Support: Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" mounting plate. Finish: ProShield®, color specified.

Spacer Tube: Fabricated from 1.3125 O.D. x 16 Ga. (.065) steel tubing. Finish: ProShield, color specified.

Hood: Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.

Rail: Extruded from 1.125" O.D. x .312" W. 6005-T5 aluminum. Finish: ProShield, color specified.

Offset Hanger Clamp Assembly: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

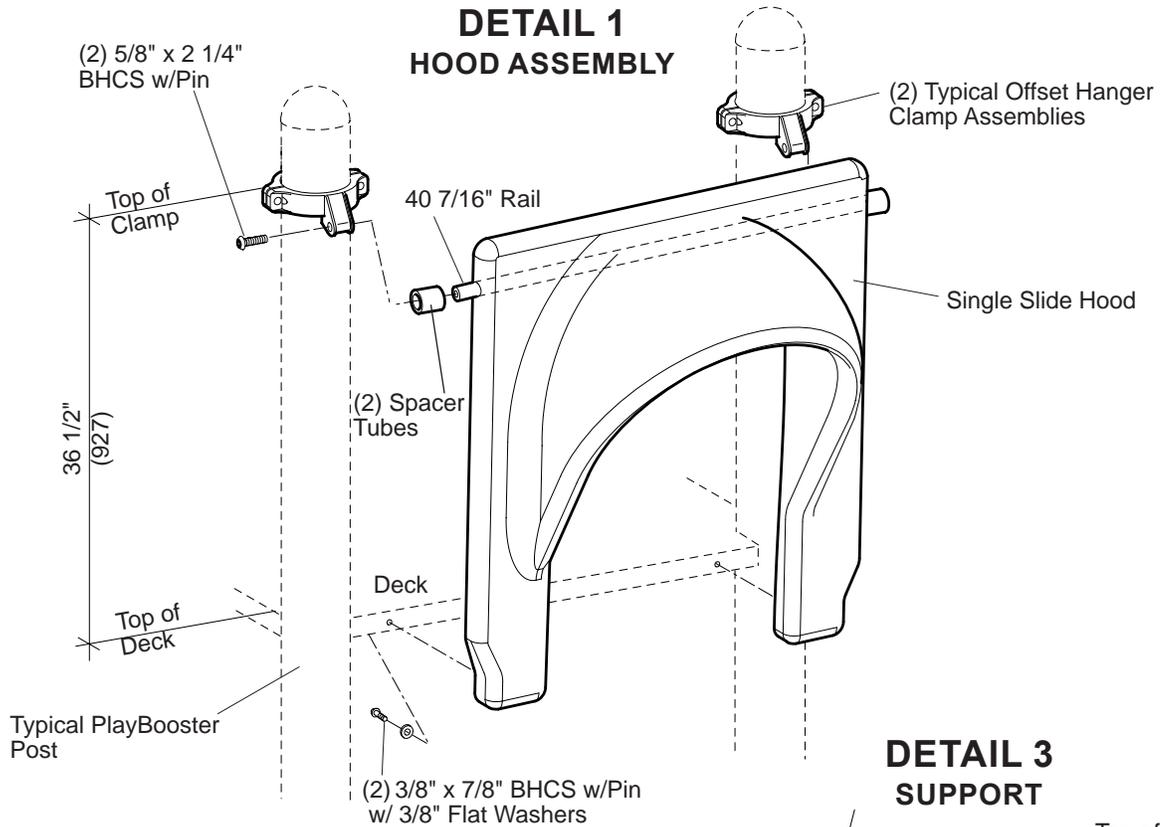
Installation Time: Approx. 2 man hours

Concrete Req.: Approx. 1.3 cu. ft.

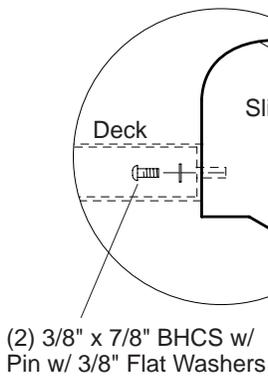
Area Req.: Refer To Plan View

Weight: 93 lbs.

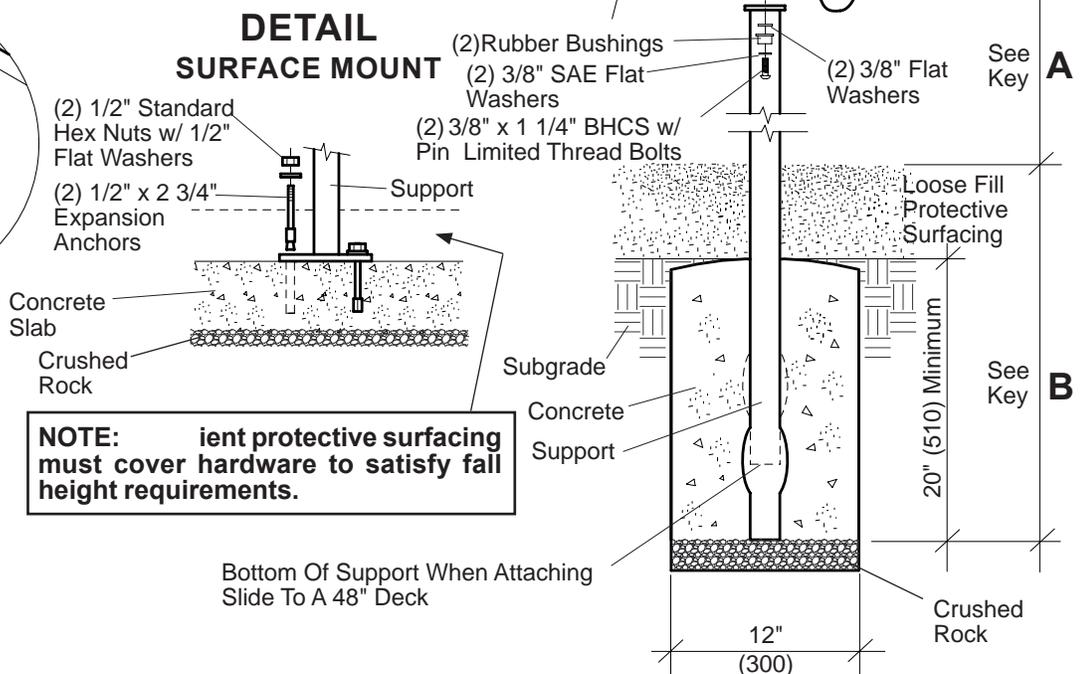
Fall Height: Deck Height



DETAIL 2 DECK CONNECTION

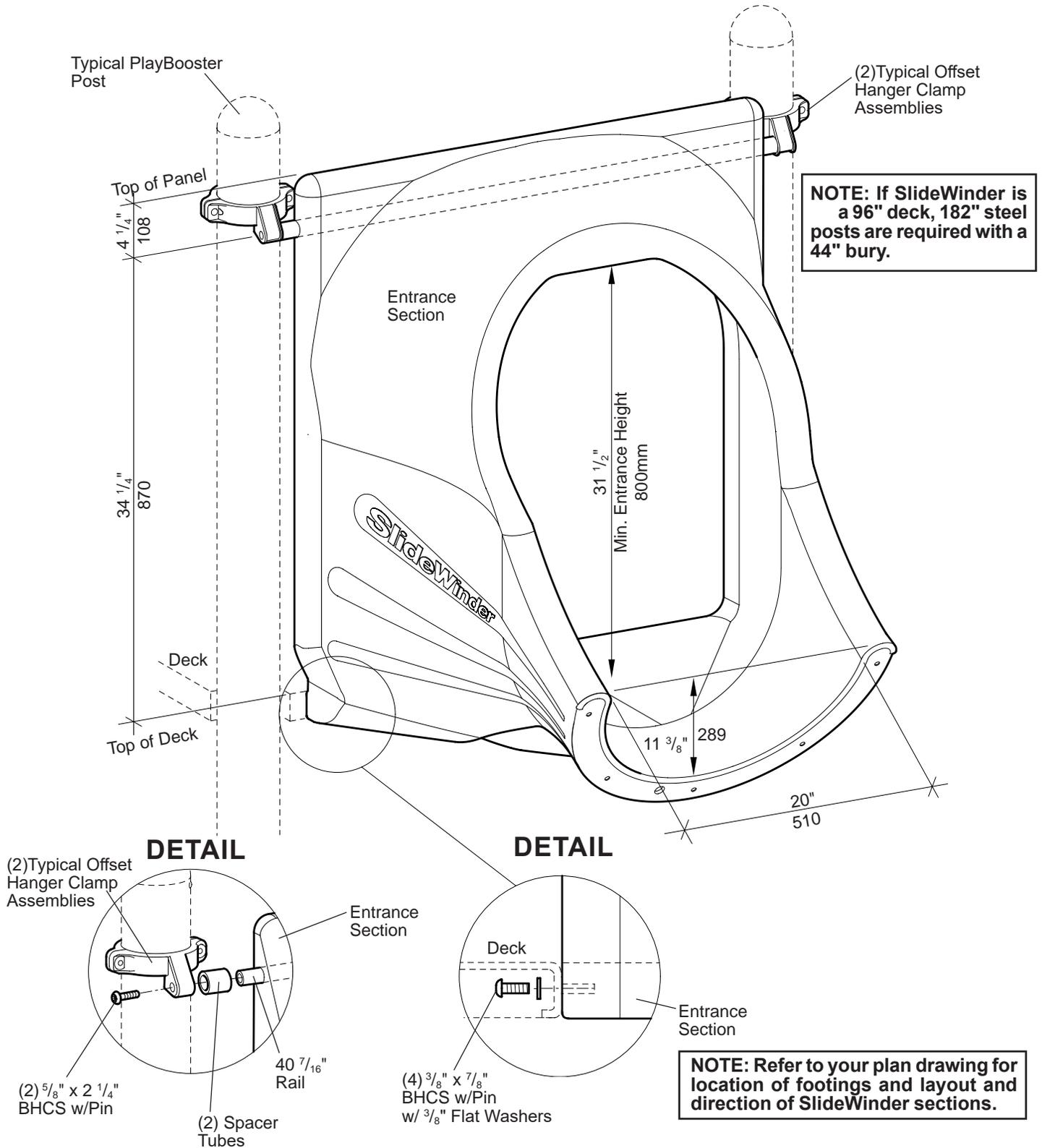


DETAIL 3 SUPPORT

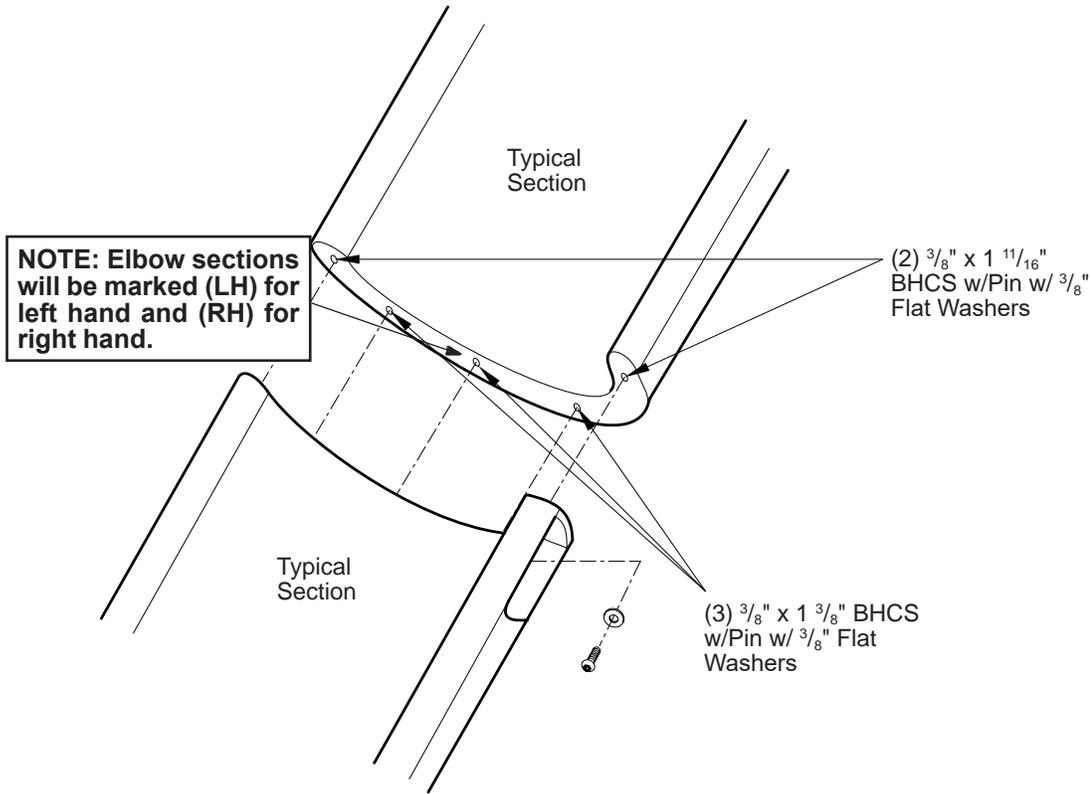


KEY:	Deck Hgt.	Dimension
	40"	A = 8" (200)
	48"	A = 11" (280)
	40"	B = 37" (940)
	48"	B = 34" (860)

ENTRANCE SECTION ATTACHMENT



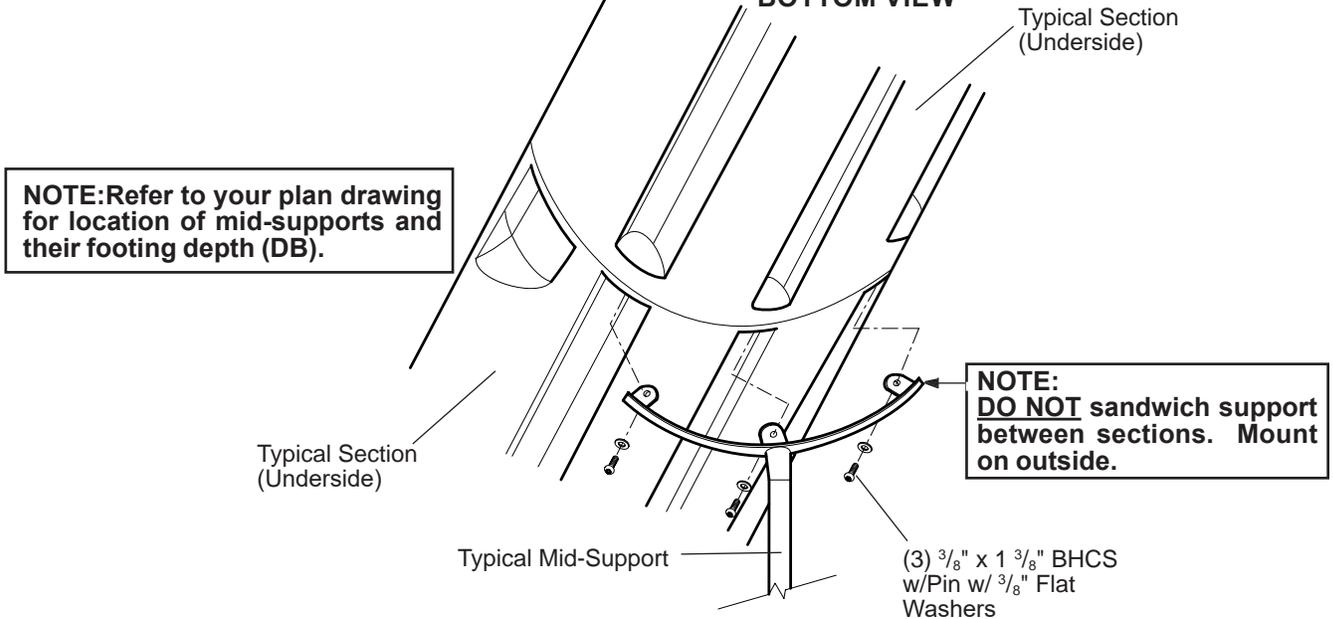
**DETAIL
 TYPICAL SLIDE SECTION**



NOTE: Elbow sections will be marked (LH) for left hand and (RH) for right hand.

NOTE: Fasten top of slide section with pockets to bottom of slide section without pockets.

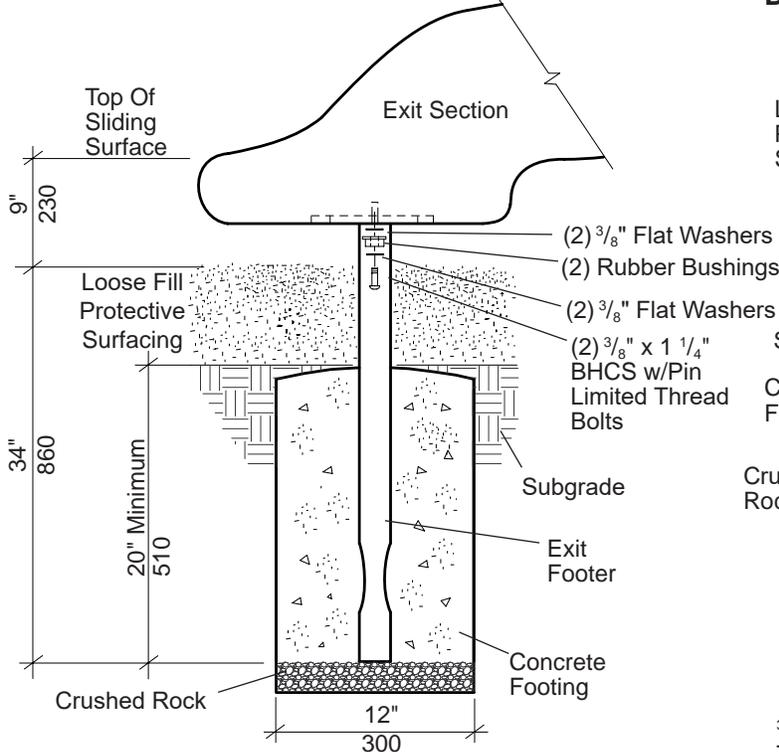
**DETAIL
 TYPICAL MID-SUPPORT
 (48\" - 96\" SLIDES ONLY)
 BOTTOM VIEW**



NOTE: Refer to your plan drawing for location of mid-supports and their footing depth (DB).

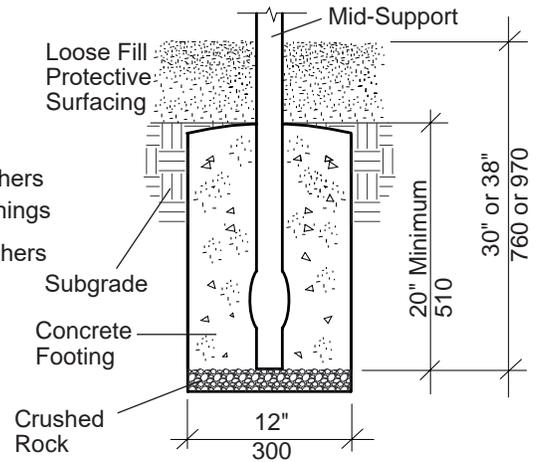
NOTE: DO NOT sandwich support between sections. Mount on outside.

**DETAIL
DIRECT BURY / EXIT SECTION**

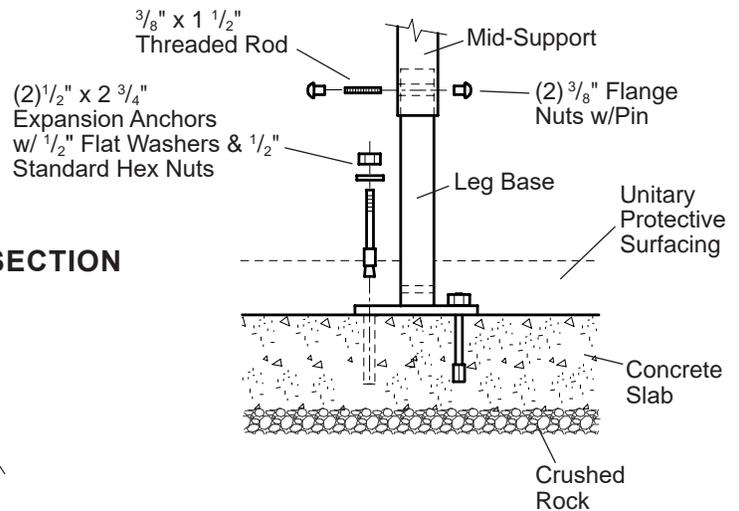


NOTE: Attach bolts in the center of the footer slots to allow for expansion and contraction. Snug bolts down only, do not overtighten!

**DETAIL
DIRECT BURY / MID-SUPPORTS**

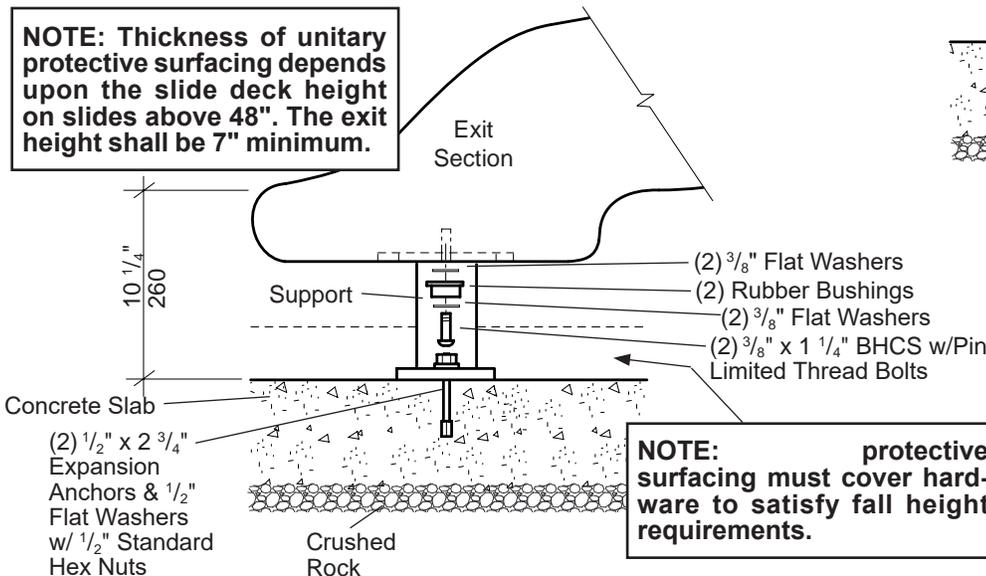


**DETAIL
SURFACE MOUNT / MID-SUPPORTS**



NOTE: Exit Heights may vary if the protective surfacing is not level. Do not put pressure/tension on the entrance section when adjusting the exit height.

**DETAIL
SURFACE MOUNT / EXIT SECTION**



NOTE: Thickness of unitary protective surfacing depends upon the slide deck height on slides above 48". The exit height shall be 7" minimum.

NOTE: protective surfacing must cover hardware to satisfy fall height requirements.



PlayBooster® 124863 SlideWinder2®, 32"-96"

Parts List

Part#	Description	Qty.
124867	Right Elbow Section, Specify Color	*
124868	Left Elbow Section, Specify Color	*
125655	Straight Section (15 1/4" Long), Specify Color	*
124864	Straight Section (30 1/2" Long), Specify Color	*
100583	40 7/16" Rail, Specify Color	1
105327	5" Half Clamp, Specify Color	2
113729	Offset Hanger Clamp, Specify Color	2
100610	1/4" x 5/8" Drive Rivet, AL/SST	2
125562	Support Base (SM), Specify Color	*
128434	66" Mid-Support (DB), Specify Color	*
128077	82" Mid-Support (DB), Specify Color	*
128078	106" Mid-Support (DB), Specify Color	*
128079	20 3/4" Mid-Support (SM), Specify Color	*
128080	29" Mid-Support (SM), Specify Color	*
128081	37 1/8" Mid-Support (SM), Specify Color	*
128082	45 1/4" Mid-Support (SM), Specify Color	*
128261	Exit Footer (DB), Specify Color	1
128262	Exit Footer (SM), Specify Color	1
124876	Entrance Section, Specify Color	1
124877	Exit Section, Specify Color	1
132443	Spacer Tube, Specify Color	2
121371	Entrance/Deck Mounting Hardware Package	1
100196	3/8" x 7/8" BHCS w/Pin, SST	4
100362	3/8" Flat Washer, SST	4
154942	SlideWinder Section Hardware Package	*
100362	3/8" Flat Washer, SST	*
113027	3/8" x 1 3/8" BHCS w/Pin, SST	*
123224	3/8" x 1 11/16" BHCS w/Pin, SST	*
124342	Rail Hardware Package	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST	4
100203	5/8" x 2 1/4" BHCS w/Pin, SST	2
100351	3/8" Tee Nut, SST	4
125670	Mid-Support Hardware Package (SM)	*
100266	1/2" x 2 3/4" Expansion Anchor	*
100322	1/2" Standard Hex Nut, SST	*
100353	3/8" Flange Nut w/Pin, SST	*
100363	1/2" Flat Washer, SST	*
115813	3/8" x 1 1/8" Threaded Rod, SST	*
128373	Exit Support Hardware Package (DB)	1
100292	3/8" x 1 1/4" BHCS w/Pin Limited Thread Bolt, SST	2
100362	3/8" Flat Washer, SST	4
111442	Rubber Bushing	2
128343	Exit Support Hardware Package (SM)	1
100266	1/2" x 2 3/4" Expansion Anchor	2
100292	3/8" x 1 1/4" BHCS w/Pin Limited Thread Bolt, SST	2
100322	1/2" Standard Hex Nut, SST	2
100362	3/8" Flat Washer, SST	4
100363	1/2" Flat Washer, SST	2
111442	Rubber Bushing	2

DB = Direct Bury
 SM = Surface Mount
 * = Quantity Varies Per Deck Height

Slide Sections:	Rotationally molded from U.V. stabilized linear low density polyethylene, color specified.
Rail:	1 1/8" O.D. 6005-T5 aluminum extrusion with 5/16" walls. Finish: ProShield®, color specified.
Mid-Support:	Weldment comprised of 1.900" O.D. RS-20 (.090" - .100") galvanized steel tubing and 3/16" x 1 1/4" zinc plated steel strap. Finish: ProShield, color specified.
Support Base (SM):	Weldment comprised of 1.660" O.D. RS-20 (.085" - .095") galvanized steel tubing and 1/4" x 3" x 8" mounting plate. Finish: ProShield, color specified.
Spacer Tube:	Fabricated from 1.3125 O.D. x 16 Ga. (.065) steel tubing. Finish: ProShield, color specified.
Exit Footer:	Weldment comprised of 2.375" O.D. RS-20 (.095" - .105") galvanized steel tubing and 1/4" x 3" x 7 1/2" mounting plate. Finish: ProShield, color specified.
Offset Hanger Clamp Assy.:	Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 32" - 48" Approx. 3 man hours
 56" - 72" Approx. 4 man hours
 96" Approx. 5 man hours

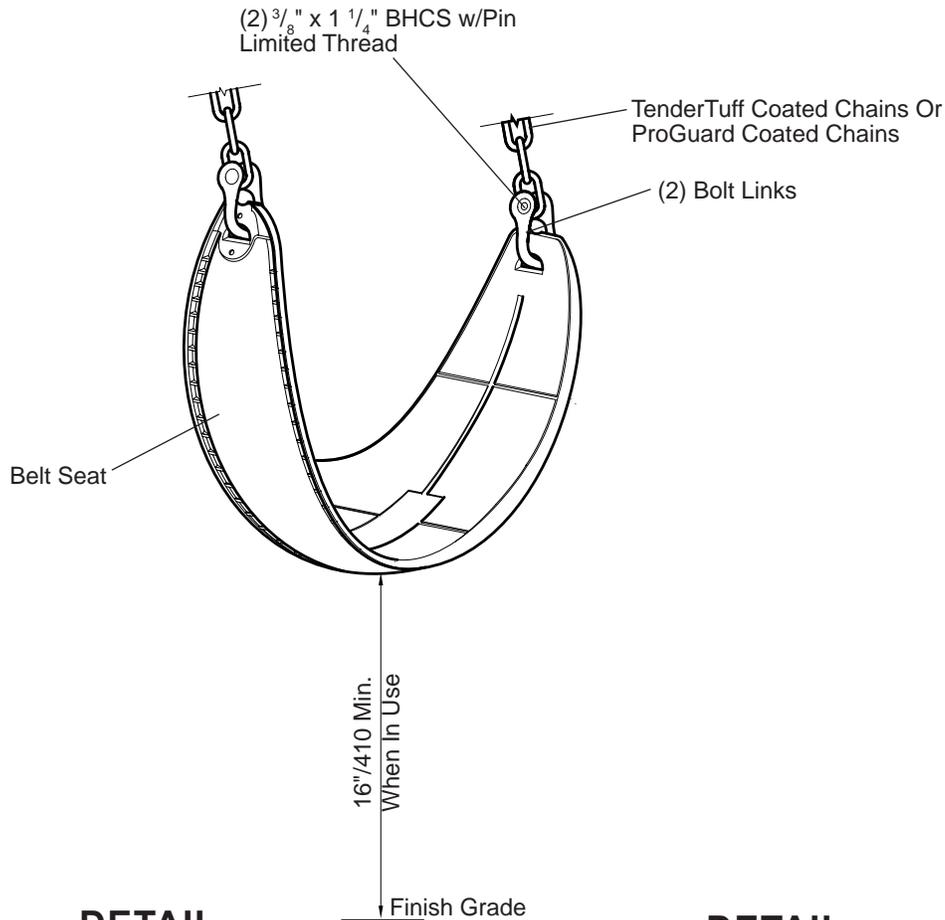
Concrete Req.: 30" Depth - Approx. 1.3 cu. ft.
 34" Depth - Approx. 1.5 cu. ft.
 38" Depth - Approx. 1.8 cu. ft.

Weight: 32" - 134 lbs.
 40" - 146 lbs.
 48" - 172 lbs.
 56" - 184 lbs.
 64" - 197 lbs.
 72" - 247 lbs.
 96" - 265 lbs.

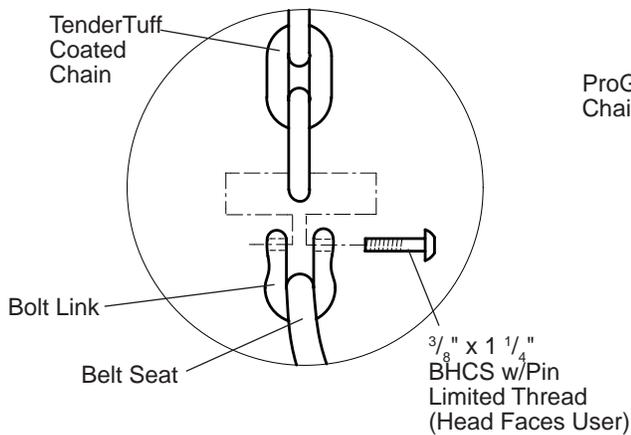
Fall Height: Deck Height

Installation Instructions

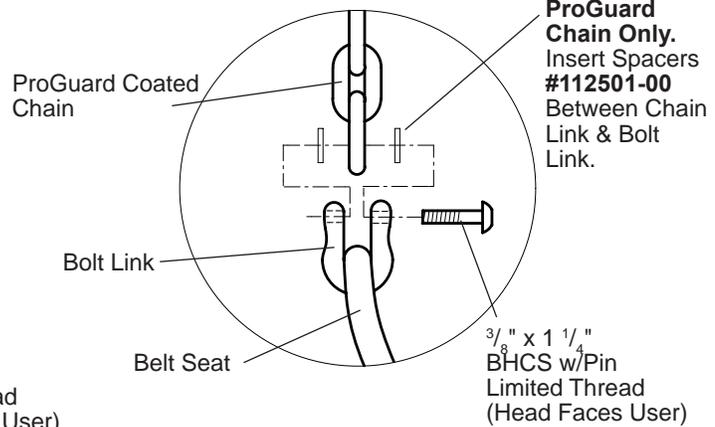
- 1) Refer to your plan drawing for location of footings and direction of SlideWinder sections.
- 2) **(Direct Bury)** Dig footing holes spaced as shown, depending upon slide. Refer to the Direct Bury Exit Section and Direct Bury Mid-Support Details.
- 3) Place 40 7/16" rail in entrance section, place spacer tubes over each end of the 40 7/16" rail, attach offset hanger clamps using 5/8" x 2 1/4" BHCS w/Pin.
- 4) Fasten SlideWinder sections together loosely starting in the middle and working your way to the outside of each section, using 3/8" x 1 3/8" BHCS w/Pin with 3/8" flat washers on the 3 inside holes and 3/8" x 1 11/16" BHCS w/pin with 3/8" flat washers on the 2 outside holes. When all bolts are started, pull the tops flush with each other and tighten. The left elbow section reads (LH) and the right elbow section reads (RH). Attach entrance and exit section last. Refer to the Typical Slide Section Detail.
- 5) **(Direct Bury)** If required attach mid-supports, refer to your plan drawing for locations. Attach mid-supports to slide using 3/8" x 1 3/8" BHCS w/Pin. Refer to the Typical Mid-Support Detail.
(Surface Mount) If required attach mid-supports, refer to your plan drawing for locations. Assemble mid-supports by placing support base inside mid-support and attach using 3/8" x 1 1/2" threaded rod and 3/8" flange nuts w/pin. Refer to the Surface Mount/Mid-Support Detail. Attach mid-supports to slide using 3/8" x 1 3/8" BHCS w/Pin. Refer to the Typical Mid-Support Detail.
- 6) Attach exit footer to base of slide using 3/8" x 1 1/4" BHCS w/Pin limited thread bolts, 3/8" flat washers, rubber bushings and 3/8" flat washers. **NOTE: Attach bolts in the center of the slots to allow for expansion and contraction. Snug bolts down only, do not overtighten. See Direct Bury/Exit Section Detail.**
- 7) With SlideWinder fully assembled, attach entrance section to the face of the deck using 3/8" x 7/8" BHCS w/Pin and 3/8" flat washers.
- 8) Attach offset hanger clamps to posts using 5" half clamps, 3/8" x 1 1/8" BHCS w/Pin and 3/8" tee nuts. Refer to the Typical Offset Hanger Clamp Spec Sheet.
- 9) **(Direct Bury)** With supports plumb pour concrete footings. Allow concrete footings to cure for a minimum of 72 hours before users are allowed to play on the structure.
(Surface Mount) Mark anchor bolt locations on concrete slab through holes in anchor plates. Drill 1/2" x 3" deep holes on marks into concrete using a hammer drill and 1/2" masonry bit. Tap 1/2" x 2 3/4" expansion anchors into drilled holes and fasten using 1/2" standard hex nuts with 1/2" flat washers.
- 10) Install protective surfacing before users are allowed to play on the structure.



DETAIL BOLT LINK



DETAIL BOLT LINK



Swings

174018 Belt Seat

Parts List

Part #	Description	Qty.
7 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
178679	57 7/16" Chain, TenderTuff, Specify Color.....	2
175251	57 7/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292-00	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
8 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152050	67 7/8" Chain, TenderTuff, Specify Color	2
174404	67 7/8" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
10 Ft. High Beam		
128842	Belt Swing Seat, Black.....	1
152052	90 11/16" Chain, TenderTuff, Specify Color.....	2
174884	90 11/16" Chain, ProGuard.....	2
132672	Bolt Link w/Bolt & Spacers	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2
112501	Chain Spacer.....	4
132635	Bolt Link w/Bolt Hardware Package	1
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST	2
138915	Bolt Link, SST.....	2

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight: 8 lbs. (7 Ft. Beam w/ProGuard Chains)
 9 lbs. (7 Ft. Beam w/TenderTuff Chains)
 8 lbs. (8 Ft. Beam w/ProGuard Chains)
 9 lbs. (8 Ft. Beam w/TenderTuff Chains)
 10 lbs. (10 Ft. Beam w/ProGuard Chains)
 11 lbs. (10 Ft. Beam w/TenderTuff Chains)

Installation

Swing Hangers With Double Clevis

- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread, as shown.
- 2) Attach chains to belt seat using bolt links with 3/8" x 1 1/4" BHCS w/pin limited thread. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Chain Spacer: Made from white nylon measuring .080" x .785" O.D.

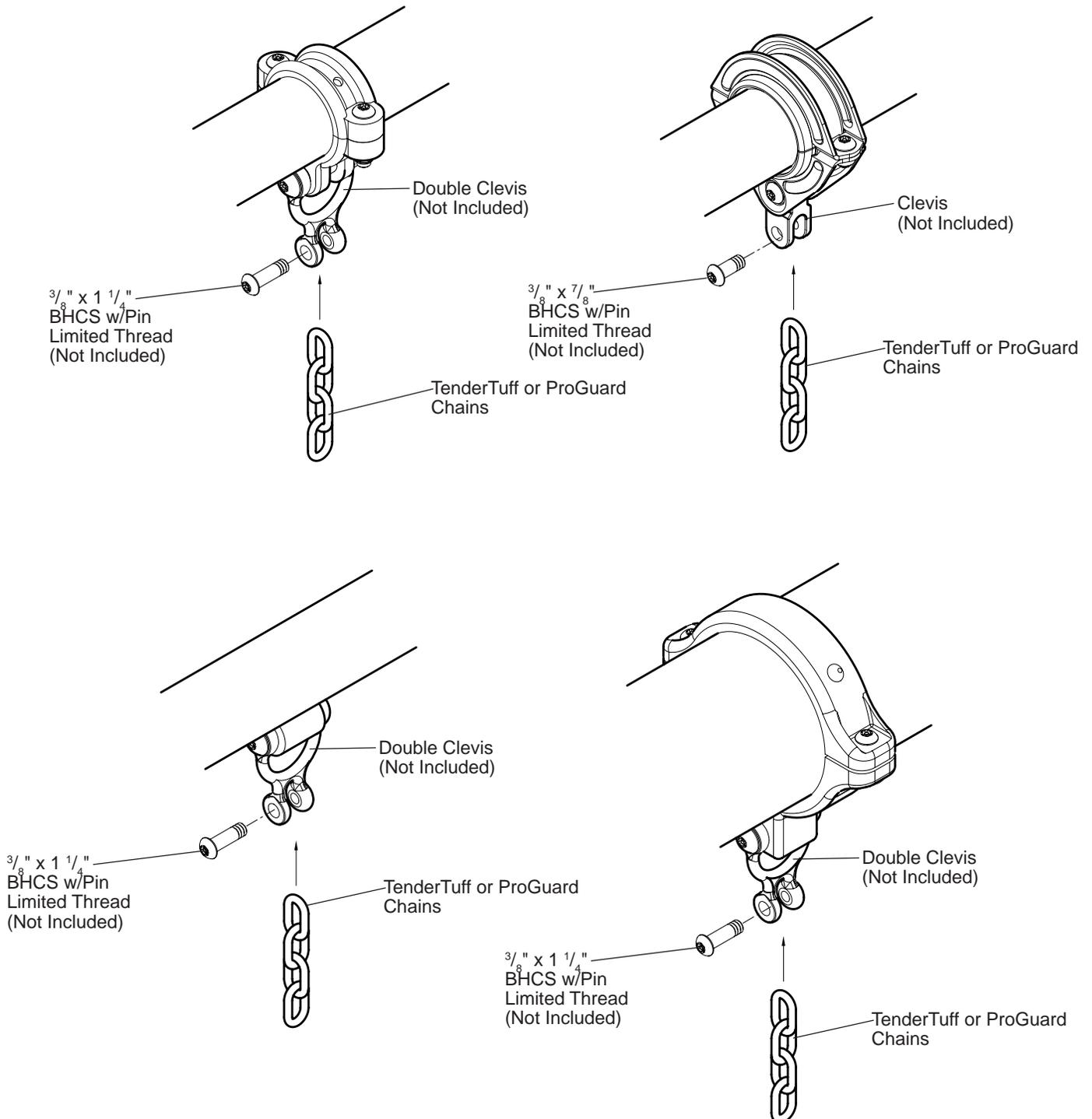
Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

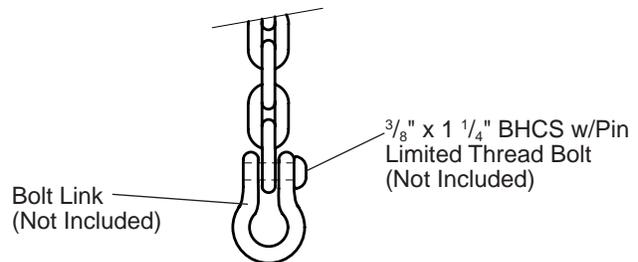
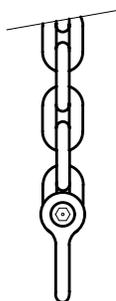
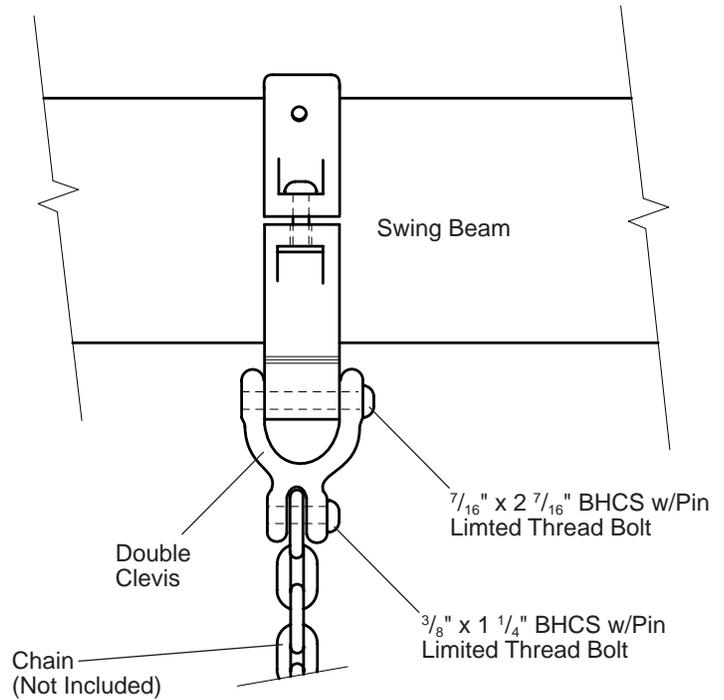
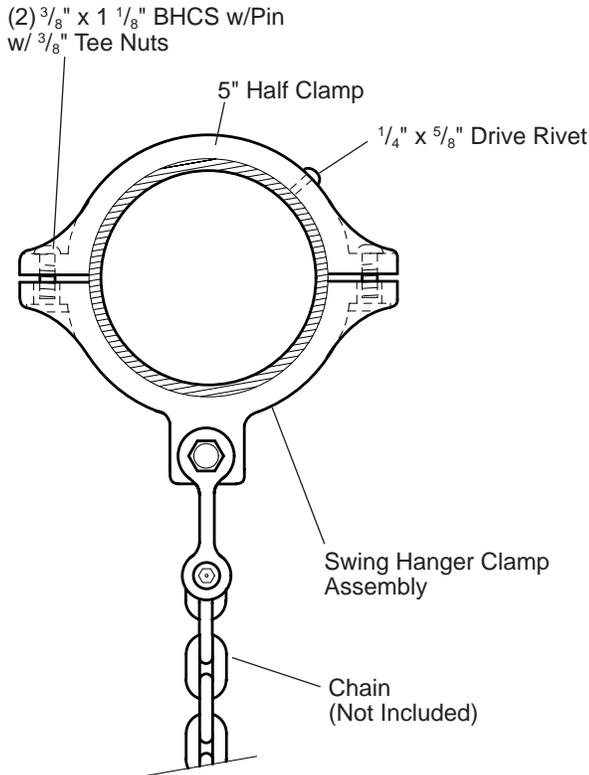
Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff®, color specified.

Belt Seats: Molded from U.V. stabilized black EPDM rubber encapsulating a weldment comprised of a 22 GA (.029") spring stainless steel sheet, and (4) .105" thick stainless steel washers. The belt seat elliptical shape measures 7" wide x 26" long x .700" thick.

Bolt Link: Stainless Steel.

SWING HANGER OPTIONS





NOTE:
 Do Not Over-Tighten Limited Thread Bolt! Threads Should Not Protude Past Bolt Link.

NOTE:
 Position Bolt Head Inward Facing User.

Swings

111418 Swing Hanger, Belt Swing

Parts List

Part#	Description	Qty.
105327-01	5" Half Clamp, Specify Color	1
100198-00	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
100292-00	$\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/Pin Ltd. Thread Bolt, SST.....	1
121291-00	Swing Hanger Clamp Assy. Specify Color	1
121289-00	Swing Hanger Clamp, Specify Color	1
127068-00	$\frac{7}{16}$ " x $2\frac{7}{16}$ " BHCS w/Pin Ltd. Thread Bolt, SST	1
138917-00	Swing Hanger Double Clevis SST	1
100667-00	Oilite Bushing.....	1

Installation Instructions

- 1) Locate and mark location of clamp on beam.
- 2) Attach 5" half clamp and swing hanger clamp to beam using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts. *Tighten evenly.*
- 3) **IMPORTANT:** *Drill through holes in 5" half clamps and into 5" pipe with a $\frac{1}{4}$ " or "F" (only) drill bit, tap $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets through 5" half clamps and into pipe, to ensure that clamps remain secure.*
- 4) Attach swing chain to double clevis using $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts.
- 5) Attach swing seat to chains using bolt links with $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts. **NOTE:** *Do not over-tighten limited thread bolt. Threads should not protrude past bolt link. Position bolt head inward facing user.*

Hanger Clamp

Assembly: Cast aluminum. Finish: ProShield®, color specified.

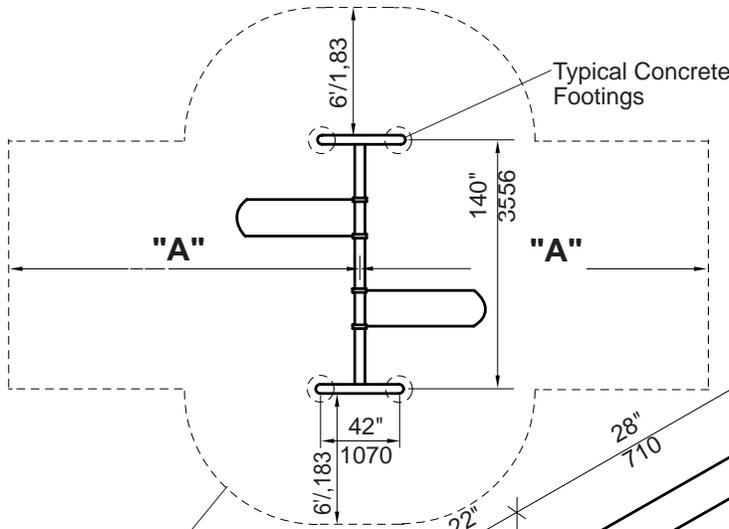
Double Clevis: Stainless Steel.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 6 lbs.

PLAN VIEW/FOOTING LAYOUT



KEY	Dimension "A"
Seat Type	
Belt	16'-0" (4,88 m)
Flat	16'-0" (4,88 m)
Full Bucket	12'-0" (3,66 m)
Half Bucket	16'-0" (4,88 m)
Molded Bucket	16'-0" (4,88 m)
Molded Bucket/Harness	13'-0" (3,96 m)
Infant Full Bucket	N/A

Minimum Use Zone

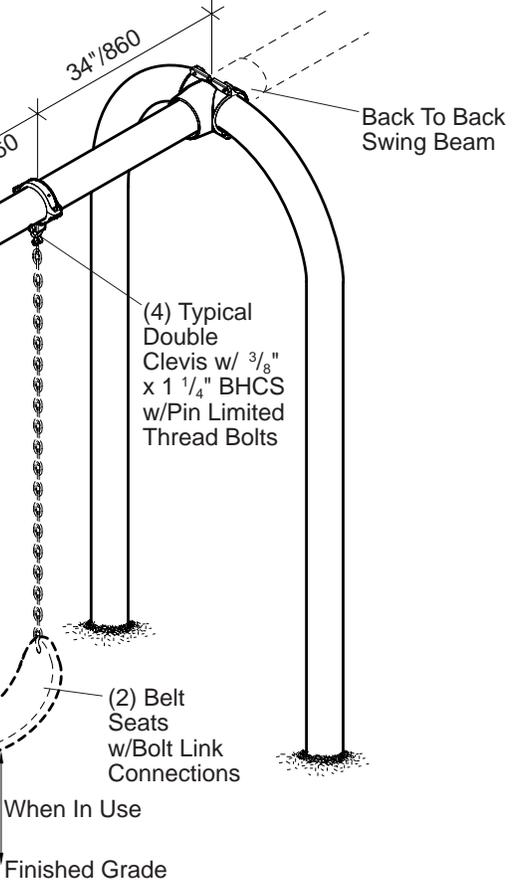
(2) Typical Tee Clamps-Center Beam In Middle Of Arch

99 3/4" / 2534
From Top of Surfacing to Center of Beam

(2) Arches

(4) Labels

Protective Surfacing



NOTE: Model numbers are for swing frames only, order swing seats with chains separately.

Model #221293 Additional Bay

Swings

221292/221293 Arch Swing Frame

Sheet 1 of 2



Swings 221292/221293 Arch Swing Frame

Parts List

Part#	Description	Qty.	
		2 PL	Add. Bay
126749	Swing Arch, Specify Color.....	2	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	8	6
105327	5" Half Clamp, Specify Color.....	8	4*
216492	140" Swing Beam, Specify Color.....	1	1
121291	Swing Hanger Clamp Assy. Specify Color	4	4
121289	Swing Hanger Clamp, Specify Color.....	4	4
127068	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread, SST.....	4	4
138917	Swing Hanger Double Clevis.....	4	4
100667	Oilite Bushing.....	4	4
243802	Hdw Pkg 5iOD Swing Beam	1	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	8	8
234397	BHCS 6LP LTHD 7/16 x 1 11/16i, SST.....	8	8
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST.....	4	4
100351	3/8" Tee Nut, SST.....	8	8
156846	Play Safe Label, 2-12 Yrs.....	1	1
234937	7/16" D Cut Washer, SST.....	16	16
182213	Hot Surface Warning Label.....	1	1
182212	Entanglement Warning Label.....	1	1
115176	Hard Surface Warning Label.....	1	1
100330	7/16" Nylok Hex Nut.....	8	8

* = 5" Half Clamps From 2 PL. End Of Beam Need To Be Used.

Installation Instructions

- 1) Dig footings, spaced as shown. Refer to the Concrete Footing Detail.
- 2) Set arches in footing holes and attach swing beam to center of arches using 5" half clamps with 7/16" BHCS w/Pin, 7/16" D-Cut Washers, and 7/16" Nylok nuts. Refer to the Tee Clamp Position Detail. Center of beam should be 99 3/4" above finished grade. When installing back to back swing beams refer to the Back To Back Tee Clamps Detail.
- 3) Level beam and plumb arches and temporarily prop in position. Pour concrete footings and let cure for 72 hours before proceeding.
- 4) Locate, mark and attach swing hanger clamps to beam in locations shown. Refer to the Typical Swing Hanger Clamp Spec Sheet.
- 5) **NOTE:** Refer to specific swing seat installation document for attaching chains and seats.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet. Refer to the Back To Back Tee Clamps Detail.
- 7) Apply Play Safe and Warning Labels, as shown.
- 8) Install protective surfacing before users are allowed to play on the swing.

Arch Posts: See PlayBooster® (PB) General Specifications.

Swing Beam: Weldment comprised of tee clamps and 5" O.D. extruded 6005-T5 aluminum alloy tube with a .125" wall. Finish: ProShield®, color specified.

Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 8 man hours
Additional Bay 4 man hours

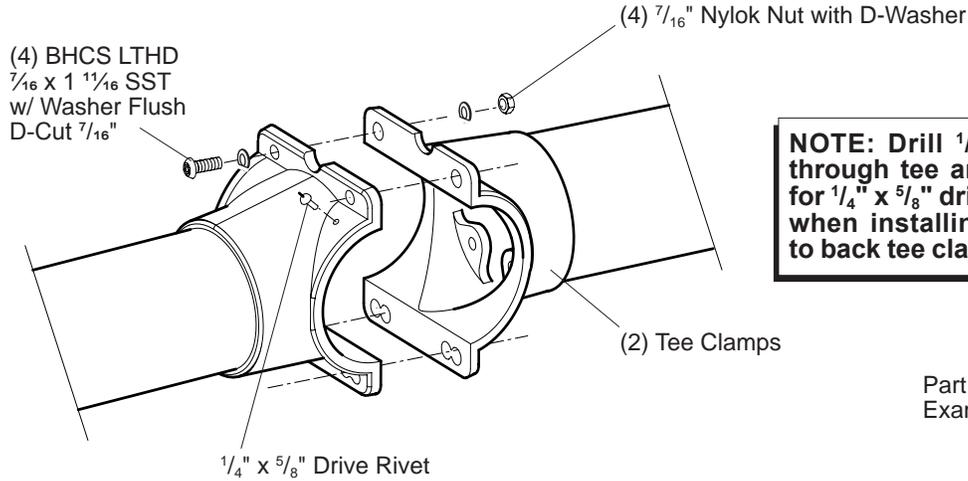
Concrete Req.: Approx. 7.5 cu. ft.
Additional Bay 3.75 cu. ft.

Area Req.: 24'-2 3/4" x 32' (7,39 m x 9,75 m)
Additional Bay 11'-8" x 32' (3,55 m x 9,75 m)

Weight: 204 lbs.
Additional Bay 124 lbs.

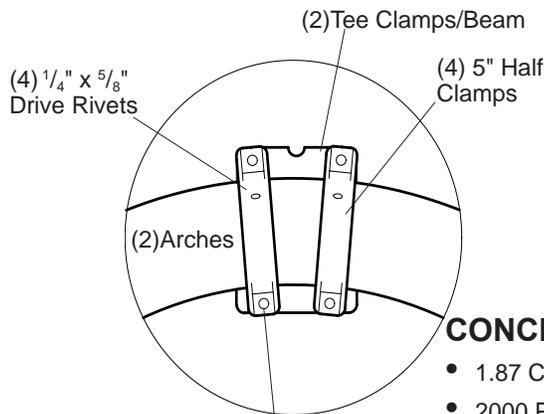
Fall Height: 96" (2,43 m)

**DETAIL
BACK TO BACK
TEE CLAMPS**



NOTE: Drill 1/4" hole through tee and arch for 1/4" x 5/8" drive rivet when installing back to back tee clamps.

**DETAIL
TEE CLAMP POSITION**

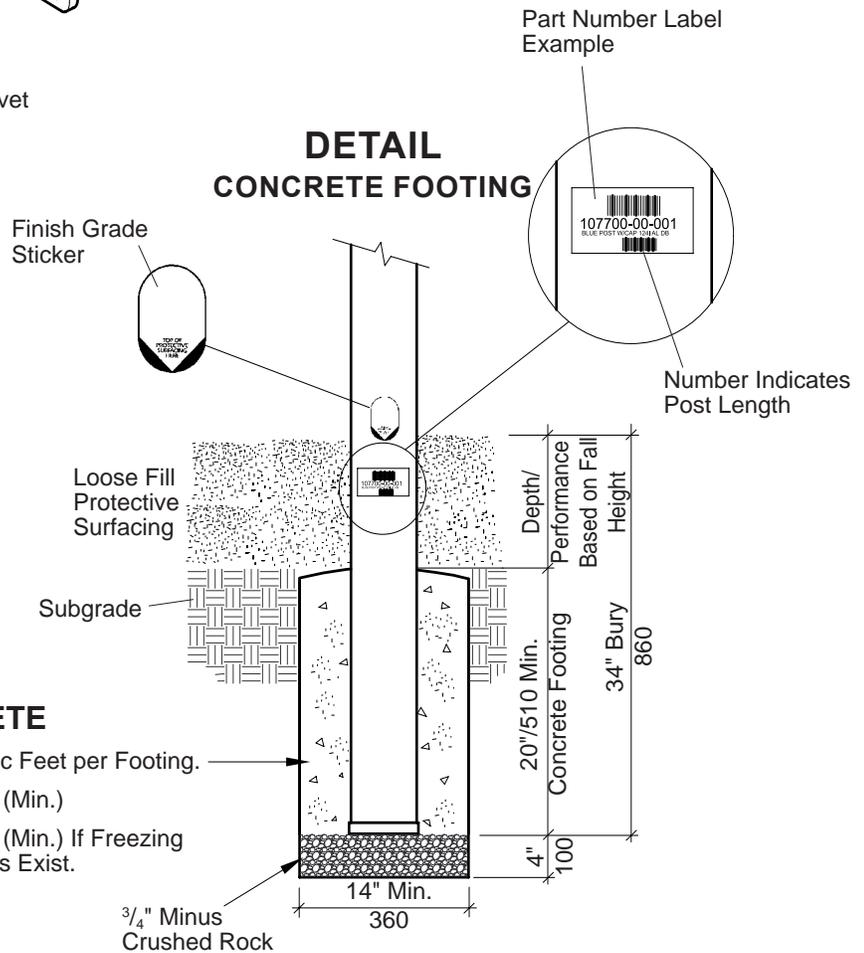


NOTE: Use inside holes for (4) 7/16 BHCS w/Pin limited thread w/D-Washer 7/16 Nylok Nut w/D-Washer

CONCRETE

- 1.87 Cubic Feet per Footing.
- 2000 PSI (Min.)
- 3000 PSI (Min.) If Freezing Conditions Exist.

**DETAIL
CONCRETE FOOTING**



Number Indicates Post Length

Installation Instructions (2-5 Equipment)

"How to distribute your hardware *Headache Free*"



We have received feedback from you, our customers, that the most common delay in completing your playground installation is lost or misplaced hardware.

Some of our most successful installations have used a "*check-out*" system with one person appointed to distribute the various hardware packages. Installation sheets are provided for each component that indicate hardware packages/items required to assemble that component. Refer to these sheets to determine which hardware items to request from the designated "*check-out*" person.

HELPFUL HINTS:

Read installation sheets.

Be sure to use the correct length hardware as specified on the installation sheets.

Be sure to use clamps in the correct location as indicated on the installation sheets.

Warning

Your playground may include equipment containing moving parts. Moving parts are more vulnerable to wear, mis-use and abuse than other non-moving parts. It is critical these parts be inspected and maintained according to our recommendations.

As the owner, it is your responsibility to perform preventative maintenance and record your findings. Failure to do so may create a hazard and cause serious injury or death.

IMPORTANT SAFETY NOTES!

According to the U.S. Consumer Product Safety Commission (CPSC) nearly 70% of all playground injuries are caused by falls to the surface.

PLEASE INSTALL AND MAINTAIN ADEQUATE PROTECTIVE SURFACING UNDER AND AROUND YOUR PLAYSTRUCTURE!

Never let children play on the equipment before protective surfacing is installed.

Consult the CPSC's Handbook for Public Playground Safety, the ASTM F1487 Standard or your Landscape Structures representative for more information.





Look for compliance to the following guidelines and standards whenever you install playground equipment. It's your assurance that the products you install meet the most rigorous safety and quality assurance standards.

Landscape Structures is a member in good standing of **IPEMA**, the **International Play Equipment Manufacturers Association**. IPEMA is a member-driven, international trade organization that represents and promotes an open market for manufacturers of play equipment.



In the interest of playground safety, IPEMA provides a Third Party Certification Service whereby a designated independent laboratory validates a participant's certification of conformance to ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, except sections 7.1.1, 10 and 12.6.1; CAN/CSA Z614, Children's Playspaces and Equipment Standards, except clauses 9.8, 10 and 11; or both. The use of the corresponding logo in the Landscape Structures Inc. catalog signifies that Landscape Structures Inc. has received written validation from the independent laboratory that the product(s) associated with the use of the logo conforms with the requirements of the indicated standards. Check the IPEMA website (www.ipema.org) to confirm product certification. The use zone and fall height requirements in this publication are shown to ASTM standards. The requirements for other standards may be different. According to the CSA, playground maintenance and inspection is a continuous and integral part of budgetary costs. The cost of inspection and maintenance shall be considered and incorporated into the budget at the time of design, purchase equipment and installation (11.1.1 Budgeting).

International Play Equipment Manufacturers Association

4305 N. Sixth St. Suite A
Harrisburg, PA 17110
www.ipema.org



The Consumer Product Safety Commission (CPSC) is a governmental organization that provides technical safety guidelines for designing, constructing, operating and maintaining public playgrounds.

U.S. Consumer Product Safety Commission

4330 East West Hwy.
Bethesda, MD 20814
www.cpsc.gov

The American Society for Testing and Materials (ASTM) is a scientific and technical organization that is a major developer of standards for testing different types of materials. In 1993, the ASTM published "Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use," designation F1487-93. ASTM is more technical than the CPSC. ASTM revised its old standard and published a new standard in 1995, 1998, 2001, 2005, 2007 and again in 2011.

American Society for Testing and Materials

100 Barr Harbor Dr.
P.O. Box C700
West Conshohocken, PA 19428
www.astm.org



The Canadian Standards Association

Nearly all equipment developed by Landscape Structures is certified to meet CAN/CSA-Z614-07, the Children's Playspaces and Equipment Standard, through IPEMA.

The European Standard was developed by the European Committee for Standardization. The majority of Landscape Structures products have been designed to be TUV certified by a third-party validator to EN 1176: 2008, the European Standard for Playground Equipment.



ISO 9001:2008 has a process-orientated structure, is customer focused and emphasizes continuous improvement in quality.



ISO 14001:2004 drives us toward operating in a manner that is environmentally conscious.



PS/PB/FP/Evos/Weevos Guidelines & Standards

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 (763) 972-3391 1-888-LSI-INST (1-888-574-4678) FAX (763) 972-3185

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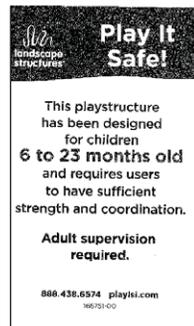
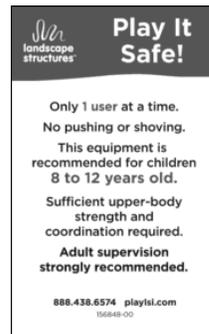
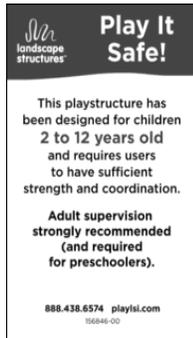
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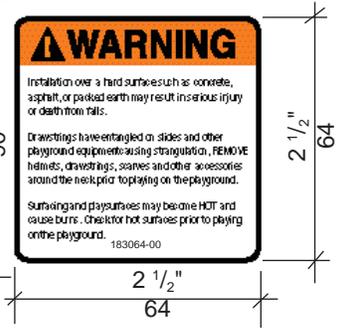
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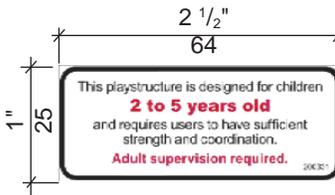
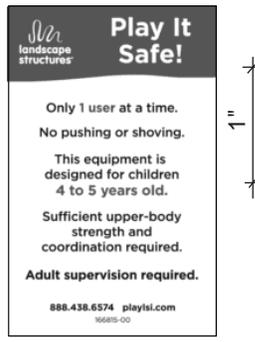
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Part No. 182212-00-000



Part No. 183064-00-000



Part No. 200331-00-000



Part No. 200332-00-000



Part No. 200333-00-000

NOTE: The Playstructure design will determine which Play It Safe sticker will be supplied.

INSTRUCTIONS:

Surface must be clean and dry prior to applying sticker. Peel backing sheet away from back of sticker and place sticker in position. Using backing sheet, rub over face of sticker to burnish down into place. Choose a location visible to adults in a conspicuous location on product. Stickers work best on painted parts. Where possible, avoid placing on rotationally-molded plastic parts, TenderTuff-coated parts or where children may step and wear off sticker. This applies to both Freestanding Play items and Composite Playstructures. Apply sticker adjacent to or visible from the primary entrance to the structure. Apply 4'-5' above the surface. Apply at least (1) one to every structure and (2) two to large Composite Playstructures.

Part No. 156847-00-000

Part No. 156845-00-000



SAFETY NOTE
 Choose a protective surfacing material that has a Critical Height Value of at least the height of the Highest Accessible Part/Fall Height of the adjacent equipment. (Ref. ASTM F1487.)

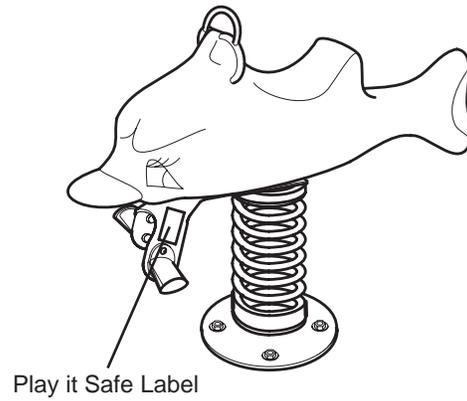
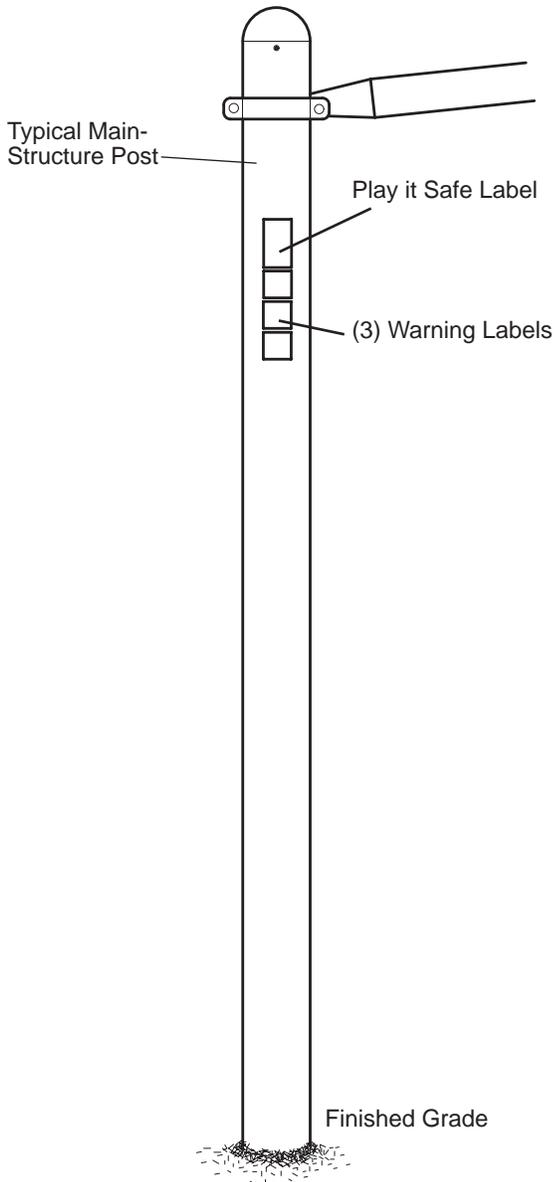
- 251714 5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251736 5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251712 5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251713 5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251715 5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251716 5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251720 3.5i Formed Play Safe Plate 6-23 Months w/Attaching HDW
- 251717 3.5i Formed Play Safe Plate 2-5 Years w/Attaching HDW
- 251718 3.5i Formed Play Safe Plate 2-12 Years w/Attaching HDW
- 251719 3.5i Formed Play Safe Plate 5-12 Years w/Attaching HDW
- 251721 3.5i Formed Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251722 3.5i Formed Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251726 Flat Large Play Safe Plate 6-23 Month w/Attaching HDW
- 251723 Flat Large Play Safe Plate 2-5 Years w/Attaching HDW
- 251724 Flat Large Play Safe Plate 2-12 Years w/Attaching HDW
- 251725 Flat Large Play Safe Plate 5-12 Years w/Attaching HDW
- 251727 Flat Large Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251728 Flat Large Play Safe Plate 1.5-12 Years w/Attaching HDW

- 251731 Flat Small Play Safe Plate 6-23 Month w/Attaching HDW
- 251729 Flat Small Play Safe Plate 2-5 Years w/Attaching HDW
- 251730 Flat Small Play Safe Plate 2-12 Years w/Attaching HDW
- 251735 Flat Small Play Safe Plate 5-12 Years w/Attaching HDW
- 251732 Flat Small Play Safe Plate 1.5-5 Years w/Attaching HDW
- 251733 Flat Small Play Safe Plate 1.5-12 Years w/Attaching HDW

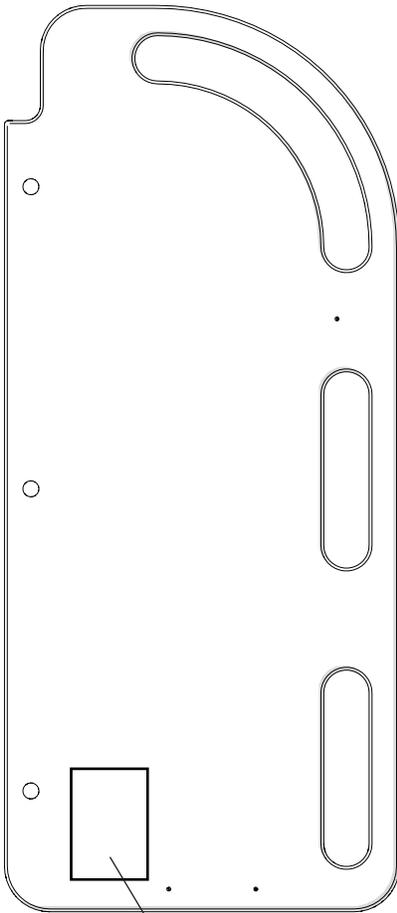




Warning Labels

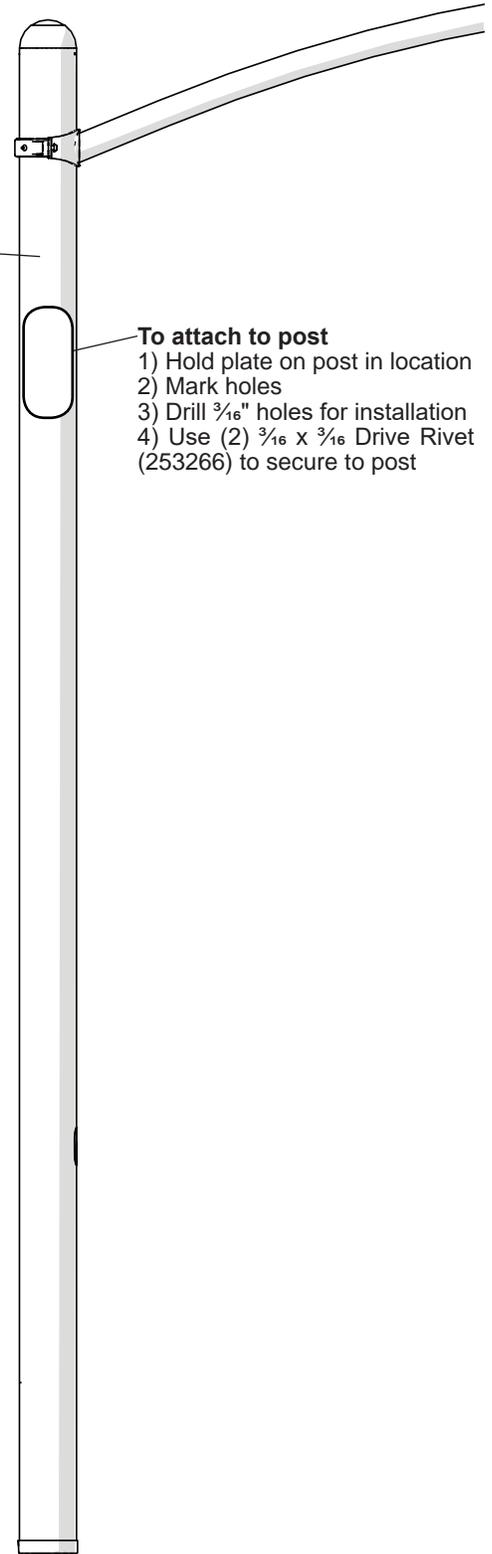
5" formed plate mounts to 5" posts.
 3.5" formed plate mounts to 3.5" posts

Large flat plate mounts to flat surfaces



- To attach to permalene**
- 1) Hold plate on surface in location
 - 2) Mark holes
 - 3) Drill $\frac{1}{8}$ " x $\frac{1}{2}$ " deep holes for installation
 - 4) Use (2) TorX #14 x $\frac{1}{2}$ " Cap Screw (129671) to attach to panel

Typical Main-Structure Post



- To attach to post**
- 1) Hold plate on post in location
 - 2) Mark holes
 - 3) Drill $\frac{3}{16}$ " holes for installation
 - 4) Use (2) $\frac{3}{16}$ x $\frac{3}{16}$ Drive Rivet (253266) to secure to post

PB/PS/FP/Evos®/Weevos® **Warning Labels**

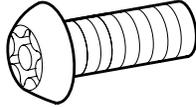


landscape
structures®



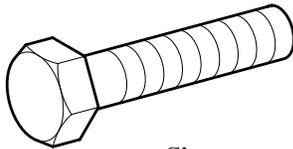
Common Parts & Fasteners

Button Head Cap Screws BHCS w/Pin



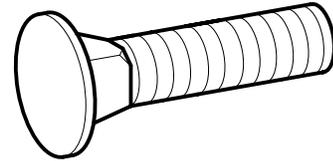
Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
137277	1/4" x 3/8"	(6,4 x 9,5)	SST-PAT	10	1.4
131849	5/16" x 1/2"	(7,9 x 12,7)	SST-PAT	10	1.4
223807	5/16" x 3/4"	(7,9 x 19,0)	SST-PAT	10	1.4
132626	5/16" x 7/8"	(7,9 x 22,2)	SST-PAT	10	1.4
192071		M 8 x 24 mm	SST-PAT	10	1.4
100195	3/8" x 5/8"	(9,5 x 15,9)	SST-PAT	15	2
100196	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	15	2
100198	3/8" x 1 1/8"	(9,5 x 28,6)	SST-PAT	15	2
113027	3/8" x 1 3/8"	(9,5 x 34,9)	SST-PAT	15	2
100171	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
123224	3/8" x 1 11/16"	(9,5 x 42,9)	SST-PAT	15	2
100173	3/8" x 2"	(9,5 x 50,8)	SST-PAT	15	2
100199	3/8" x 2 1/4"	(9,5 x 57,2)	SST-PAT	15	2
100174	3/8" x 2 1/2"	(9,5 x 63,5)	SST-PAT	15	2
100175	3/8" x 2 3/4"	(9,5 x 69,9)	SST-PAT	15	2
100176	3/8" x 3"	(9,5 x 76,2)	SST-PAT	15	2
100168	3/8" x 3 1/4"	(9,5 x 82,6)	SST-PAT	15	2
100200	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	15	2
124460	3/8" x 3 3/4"	(9,5 x 95,2)	SST-PAT	15	2
100201	5/8" x 1 1/2"	(15,9 x 38,1)	SST-PAT	50	7
127551	5/8" x 1 1/2"	(15,9 x 38,1)	SST- ANTI-SEIZE	50	7
100203	5/8" x 2 1/4"	(15,9 x 57,2)	SST-PAT	50	7

Hex Cap Screws



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100206	3/8" x 1"	(9,5 x 25,4)	SST-PAT	15	2
100208	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100209	3/8" x 1 3/4"	(9,5 x 44,4)	SST-PAT	15	2
135682	3/8" x 3 1/8"	(9,5 x 79,3)	SST-PAT	15	2
135683	3/8" x 4 5/8"	(9,5 x 117,5)	SST	15	2
100214	3/8" x 5"	(9,5 x 127)	SST-PAT	15	2
121499	7/16" x 1 3/4"	(11,1 x 114,3)	SST-PAT	15	2
100216	1/2" x 1 1/4"	(12,7 x 31,7)	SST	15	2
131862	1/2" x 2 1/4"	(12,7 x 57,1)	SST-PAT	20	2.8

Carriage Bolts

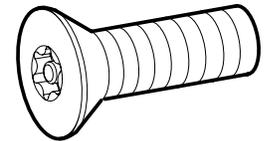
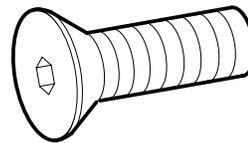


Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
100135	5/16" x 1 1/4"	(7,9 x 31,8)	SST-PAT	5	0.7
100147	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	15	2
116017	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	15	2
100148	3/8" x 1 3/4"	(9,5 x 44,5)	SST-PAT	15	2

Flat Head Cap Screws (FHCS)

No Pin*

With Pin



Part #	Inches	Sizes mm	Mat'l or Grade	Recommended Torque	
				Ft./lbs	Kgm
148686	3/8" x 3/4"	(9,5 x 19,05)	SST-PAT	13	1.8
100252*	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	13	1.8
151421	3/8" x 1 1/2"	(9,5 x 38,1)	SST-PAT	13	1.8
148765	3/8" x 3 1/2"	(9,5 x 88,9)	SST-PAT	13	1.8
130824*	1/2" x 2 1/4"	(12,5 x 57,2)	SST	20	2.8

NOTE: These are recommended torque applications per fastener size. When fasteners are used with plastic or wood products, the torque will be excessive and we recommend that the installer apply some caution when tightening the fasteners. Plastic or wood products should begin to deform slightly. Fasteners indicated with "-Pat" includes a locking patch type material and should cure for 72 hours for maximum strength.

PS/PB/Evos/Weevos Common Parts/Torque Chart

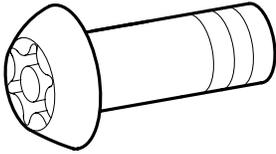
Sheet 1 of 9

601 7TH STREET SOUTH, DELANO, MINNESOTA 55328-8605 888-574-4678 LSI Install Help 888-438-6574 LSI Direct 763-972-5200 Int. FAX (763) 972-3185

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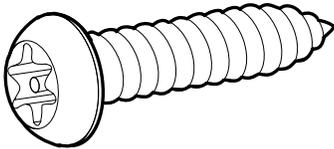
Document #26150400

BHCS w/Pin Limited Thread Bolts



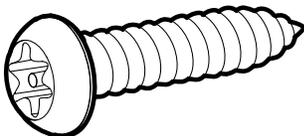
Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100290	3/8" x 7/8"	(9,5 x 22,2)	SST-PAT	21	3
100292	3/8" x 1 1/4"	(9,5 x 31,8)	SST-PAT	21	3
157704	7/16" x 2"	(11,11x 51)	SST-PAT	40	5.5
127068	7/16" x 2 7/16"	(11,11x61,91)	SST-PAT	40	5.5

Lag Screws



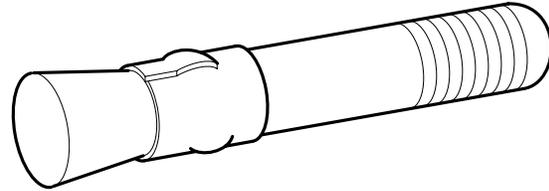
Part #	Sizes		Mat'l or Grade	Head Type
	Inches	mm		
100127	5/16" x 1 1/4"	(7,9 x 31,8)	SST	Hex Head
168198 (Shown)	3/8" x 1 1/2"	(9,5 x 38,1)	SST	Button Head
139039 (Shown)	3/8" x 2"	(9,5 x 50,8)	SST	Button Head

Screw, Type AB Thread BHCS w/Pin



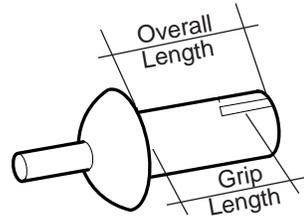
Part #	Size	Mat'l or Grade
129671	#14 x 1/2"	SST
127872	#14 x 3/4"	SST
136232	#14 x 1"	SST
129672	#14 x 1 1/4"	SST

Expansion Anchors (Used To Secure Components To Concrete Slabs)



Part #	Sizes		Mat'l or Grade	Recommended Torque	
	Inches	mm		Ft./lbs	Kgm
100263	3/8" x 2 3/4"	(9,5 x 69,9)	Alloy Steel	15	2
100266	1/2" x 2 3/4"	(12,7 x 69,9)	Alloy Steel	20	2.8

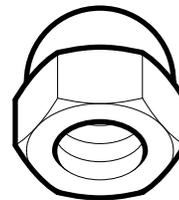
Drive Rivets



NOTE: For more detail see drive rivet detail page.

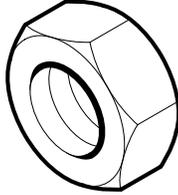
Part #	Sizes		Mat'l
	Inches	mm	
100612	3/16" x 3/8"	(4,7 x 9,5)	Alum Rivet/Alum Pin
100609	1/4" x 3/16"	(6,4 x 4,8)	Alum Rivet/Alum Pin
100611	1/4" x 3/8"	(6,4 x 9,5)	Alum Rivet/SST Pin
113300	1/4" x 1/2"	(6,4 x 12,7)	Alum Rivet/Alum Pin
100610	1/4" x 5/8"	(6,4 x 15,9)	Alum Rivet/SST Pin
139152	1/4" x 3/4"	(6,4 x 19,05)	Alum Rivet/Alum Pin
100613	1/4" x 7/8"	(6,4 x 22,2)	Alum Rivet/Alum Pin
118158	1/4" x 1"	(6,4 x 25,4)	Alum Rivet/Alum Pin

Low Crown Cap Nut



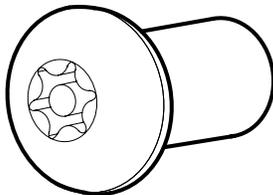
Part #	Size Inches	Mat'l
100349	3/8" -16 UNC	SST

Standard Hex Nuts



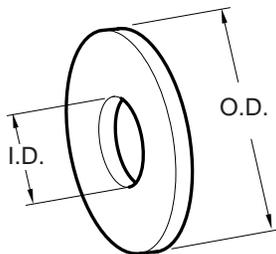
Part #	Sizes		Mat'l or Grade
	Inches	mm	
100326	5/16-18 UNC		SST
100321	3/8-16 UNC		SST-Pat
100327	3/8-16 UNC		SST
128296	3/8-16 UNC (Jam Nut)		SST
100328	7/16-14 UNC		SST
145021	7/16-14 UNC (Jam Nut)		SST
100322	1/2-13 UNC		SST
129692	1/2-13 UNC		SST-Pat
129693	1/2-13 UNC (Jam Nut)		SST
100323	5/8-11 UNC		SST

Flange Nut w/Pin



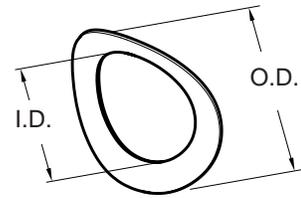
Part #	Sizes		Mat'l or Grade
	Inches	mm	
175006	5/16 x 18 UNC		SST
192064	M 8 x 24 mm		SST
100353	3/8-16 UNC		SST

Flat Washers



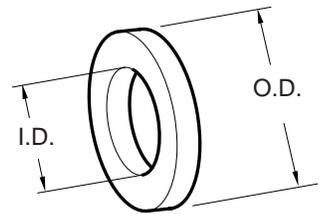
Part #	Sizes		or Grade	I.D.	O.D.
	Inches	mm			
122039	1/4"	(6,3)	SST	0.312	.734
100362	3/8"	(9,5)	SST	0.406	1.002
112793	7/16"	(11,1)	SST	0.505	1.262
100363	1/2"	(12,7)	SST	0.536	1.262
100366	5/8"	(15,9)	SST	0.688	1.750
123737	1 1/8"	(28,6)	SST	1.140	1.750

Curved Spring Washer



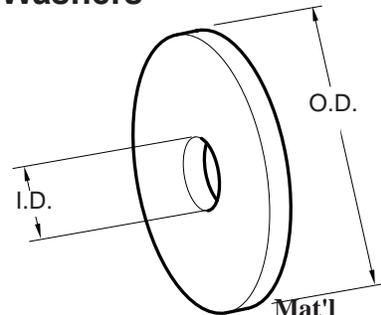
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100380	1/2"	(12,7)	SST	0.531	0.795

SAE Flat Washers



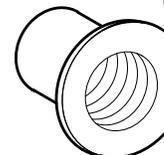
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100364	1/4"	(6,35)	SST	0.281	0.625
223956	5/16"	(7,92)	SST	0.344	0.688
100365	3/8"	(9,5)	SST	0.411	0.816
113550	1/2"	(12,7)	SST	0.531	1.062
129500	5/8"	(15,9)	SST	0.686	1.342

Fender Washers



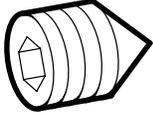
Part #	Sizes		Mat'l or Grade	I.D.	O.D.
	Inches	mm			
100378	3/8" x 1 1/2"	(9,53 x 38,1)	SST	0.406	1.500
100379	1/2" x 2"	(12,7 x 50,8)	SST	0.531	2.000

Tee Nut (PlayBooster Clamps)



Part #	Sizes		Mat'l or Grade
	Inches	mm	
100351	3/8-16 UNC		SST

Set Screw



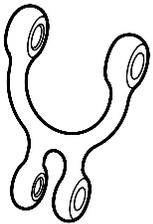
Part #	Sizes		Mat'l or Grade
	Inches	mm	
100298	3/8" x 7/16"	(9,5 x 11,1)	SST

Bolt Link



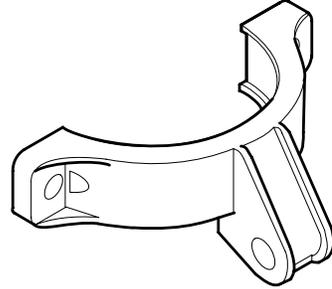
Part #	Mat'l or Grade
138915	SST

Double Clevis



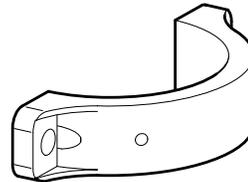
Part #	Mat'l or Grade
138917	SST

(PlayBooster)



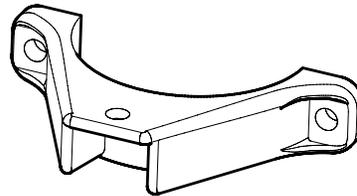
Part #	Mat'l
113729	Cast Aluminum

Half Clamp (PlayBooster)



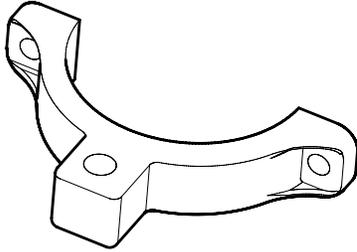
Part #	Mat'l
105327	Cast Aluminum

Deck Hanger Clamp (PlayBooster)



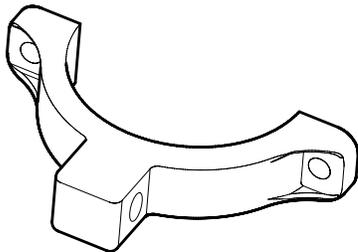
Part #	Mat'l
106022	Cast Aluminum

Swing Hanger Clamp



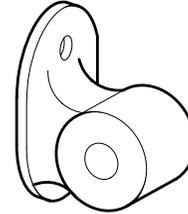
Part #	Mat'l
121289	Cast Aluminum

Ring/Rail Hanger Clamp (PlayBooster)



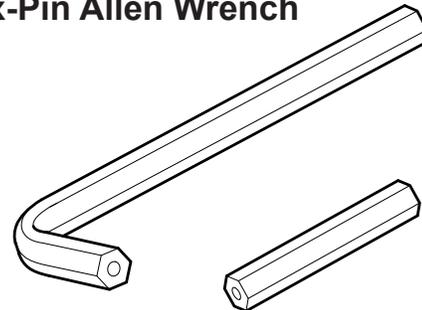
Part #	Mat'l
105330	Cast Aluminum

(PlayShaper)



Part #	Mat'l
113895	Cast Aluminum

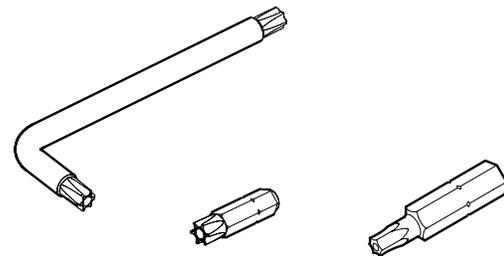
Hex-Pin Allen Wrench



Hex-Pin Driver

Part #	Description
100685	Hex-Pin Allen Wrench
100686	Hex-Pin Driver (Used With A 5/16" Socket)

6-Lobe Wrench

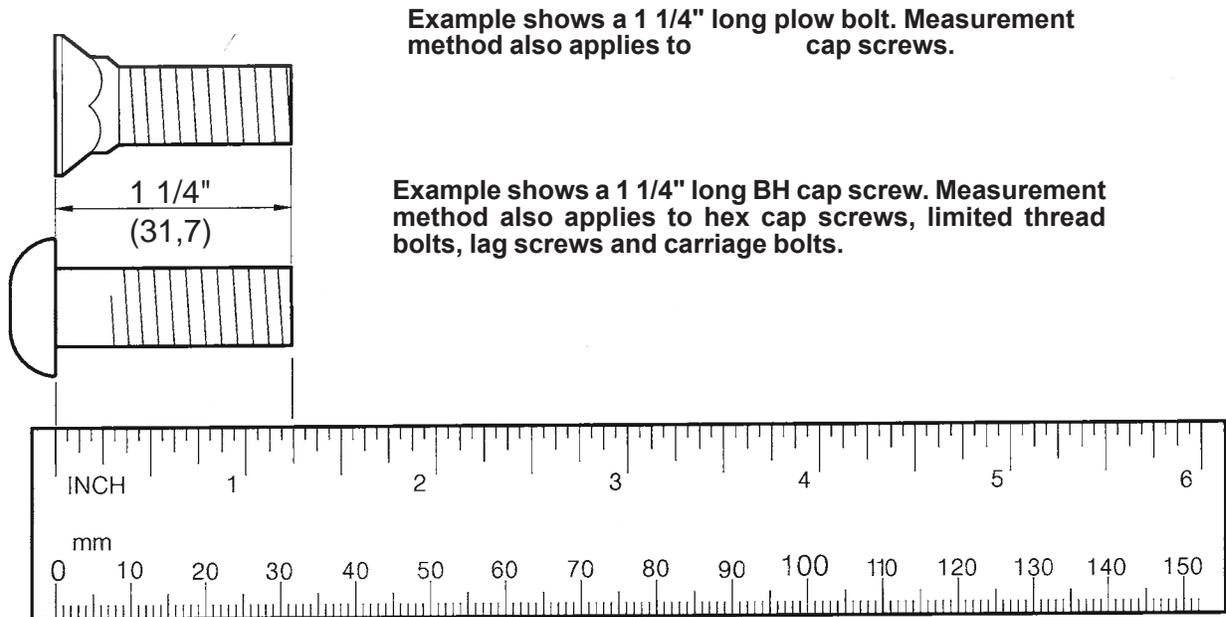


**6-Lobe
 Driver**

**Torx-Pin
 Driver**

Part #	Description
148680	6-Lobe Wrench (T-40)
146017	6-Lobe Wrench (T-45)
146007	6-Lobe Driver (T-45) (Used With A 5/16" Socket)
127463	Torx-Pin Driver (T-27) (Used With A 1/4" Socket)

HOW TO DETERMINE BOLT LENGTHS



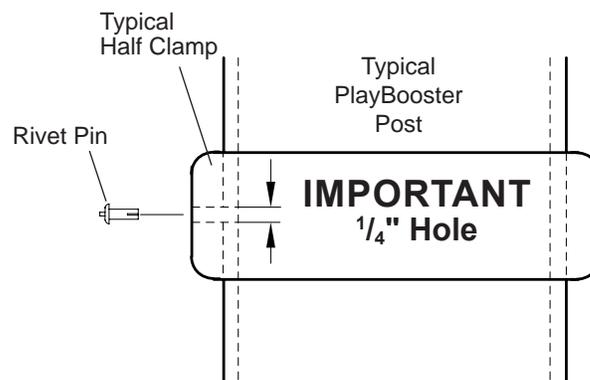
Example shows a 1 1/4" long plow bolt. Measurement method also applies to cap screws.

Example shows a 1 1/4" long BH cap screw. Measurement method also applies to hex cap screws, limited thread bolts, lag screws and carriage bolts.

Rule: Measurements should be based on the part of the screw that penetrates the surface.

General Rules For Use Of Drive Rivets

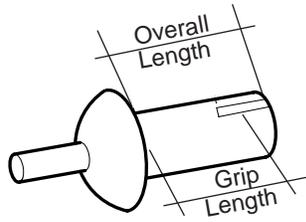
- Rivets are used to provide additional assurance for load carry capacity.
- Refer to the Spec Sheet Parts List and follow Installation Instructions for each component.
- Decks and Overhead Events always need rivets.



NOTE: Use Only Bit Size "F" or 1/4" Drill Bit.

After Play Component Assembly is Complete, Drill Hole into Post Through Half Clamp, Insert Rivet in Hole, and Hammer Rivet Pin in Until it is Flush with Head.

Drive Rivets Details



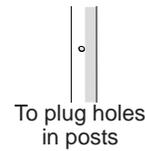
GL = Grip Length
OL = Overall Length

Drive Rivet

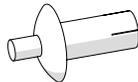


100609
1/4" x 3/16" GL (6,4 x 4,8)
1/4" x 11/32" OL (6,4 x 8, 7)
Alum Rivet/ Alum Pin

Common Use



To plug holes
in posts



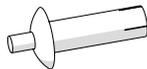
100611
1/4" x 3/8" GL (6,4 x 9,5)
1/4" x 17/32" OL (6,4 x 13, 5)
Alum Rivet/ SST Pin



218924
Locking Clamp



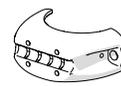
192691
Post Topper



100610
1/4" x 5/8" GL (6,4 x 15,9)
1/4" x 51/64" OL (6,4 x 20, 2)
Alum Rivet/ SST Pin



105327
5" Half Clamp



195922
Rope Clamp

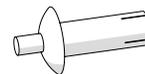


156806
Pod Casting

Other Speciality Drive Rivets



100613
1/4" x 7/8" GL (6,4 x 22,2)
1/4" x 63/64" OL (6,4 x 25, 4)
Alum Rivet/ Alum Pin



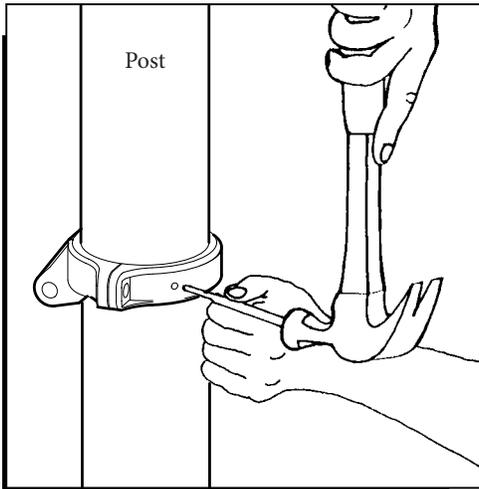
113300
1/4" x 1/2" GL (6,4 x 12,7)
1/4" x 21/32" OL (6,4 x 16, 7)
Alum Rivet/ Alum Pin



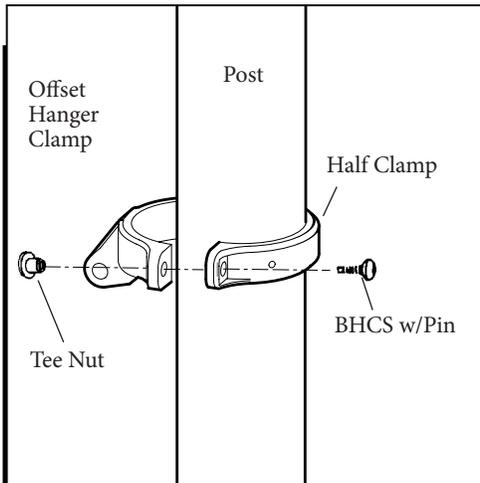
118158
1/4" x 7/8" GL (6,4 x 25,4)
1/4" x 1 5/32" OL (6,4 x 29, 3)
Alum Rivet/ Alum Pin



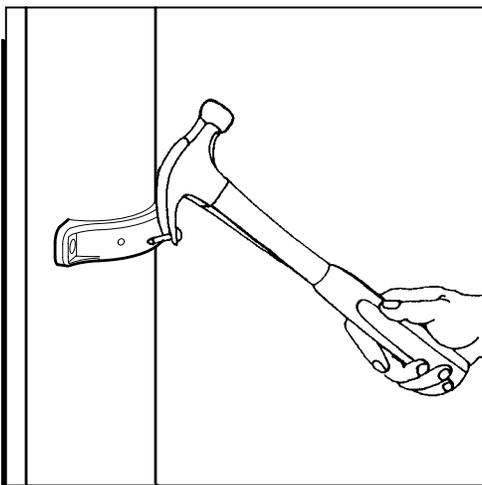
139152
1/4" x 3/4" GL (6,4 x 19,05)
1/4" x 29/32" OL (6,4 x 23, 0)
Alum Rivet/ Alum Pin



- 1) **Drive Center Pin of Rivet Straight into Post Using $\frac{1}{8}$ " Diameter Punch and Hammer.**



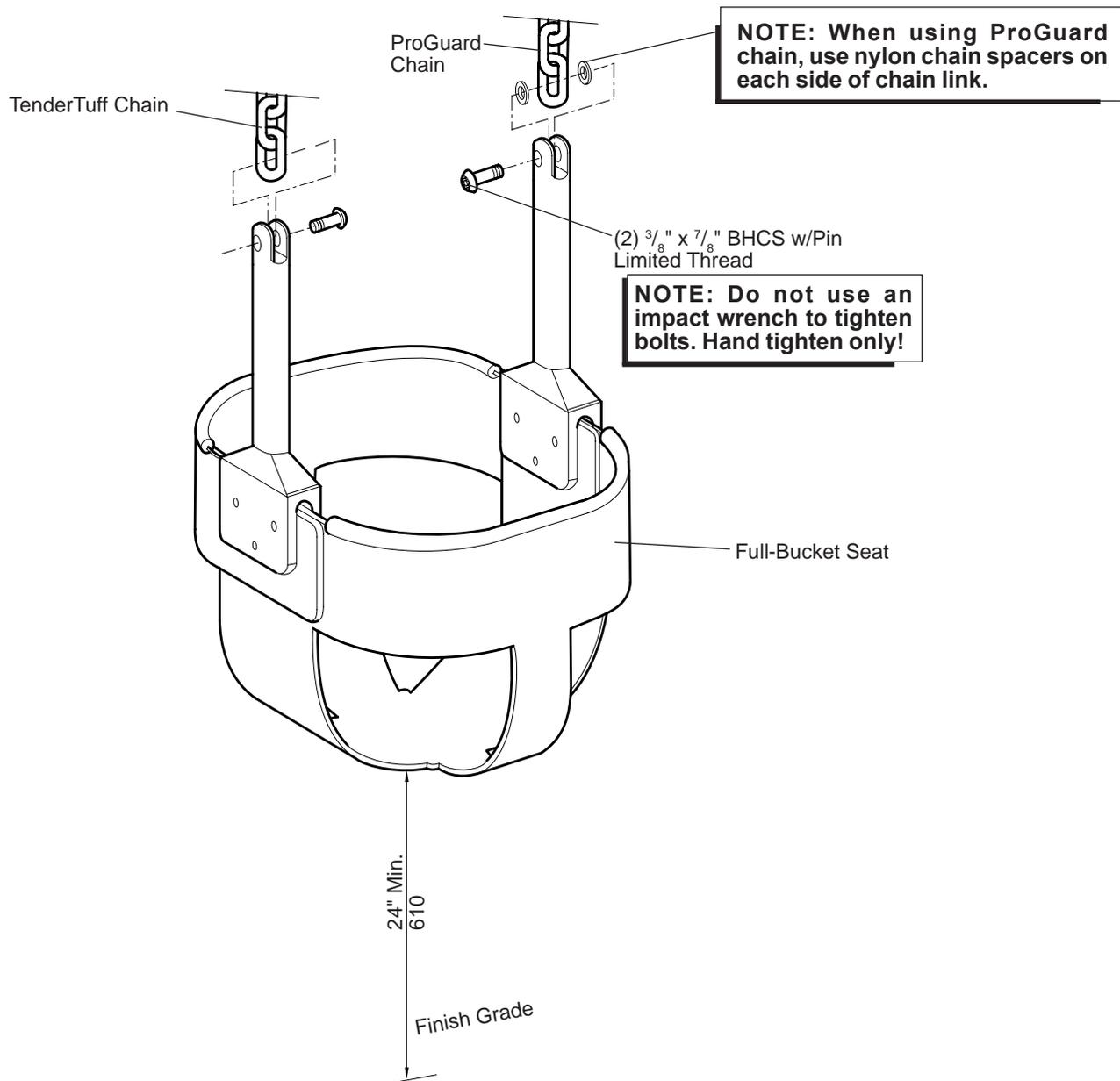
- 2) **Unbolt BHCS w/Pin and Tee Nuts from Clamp Using Tamperproof Hex Wrench. Remove Offset Hanger Clamp. Lightly Tap on Half Clamp with Hammer Until Head of Drive Rivet Pulls Away From Half Clamp.**



- 3) **Pull Out Drive Rivet Using Claw End of Hammer.**

Tools Needed:

- Claw Hammer
- $\frac{1}{8}$ " Diameter Steel Punch
- Tamperproof Hex Wrench



Swings

176038 Full-Bucket Seat, w/Chains



Swings 176038 Full-Bucket Seat, w/Chains

Parts List

Part#	Description	Qty.
7 Ft. High Beam (5" Dia. Beam)		
186276	Full-Bucket Swing Seat, Black	1
141739	43 3/16" Chain, TenderTuff, Specify Color	2
175248	43 3/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
8 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
160110	52 9/16" Chain, TenderTuff, Specify Color	2
174882	52 9/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
10 Ft. High Beam		
186276	Full-Bucket Swing Seat, Black	1
152051	76 7/16" Chain, TenderTuff, Specify Color	2
174883	76 7/16" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
7 Ft. High Beam (Tot)		
186276	Full-Bucket Swing Seat, Black	1
152053	37 1/2" Chain, TenderTuff, Specify Color	2
175247	37 1/2" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4
75" High Beam (Toddler)		
186276	Full-Bucket Swing Seat, Black	1
152016	29 7/8" Chain, TenderTuff, Specify Color	2
174881	29 7/8" Chain, ProGuard	2
138414	Bucket Seat Hardware Package	1
100290	3/8" x 7/8" BHCS w/Pin Limited Thread, SST	2
112501	Chain Spacer (For ProGuard Chains Only)	4

Full-Bucket Seat: Seat shall be molded of U.V. stabilized, high quality, black rubber, encapsulating a 24 gauge stainless steel reinforcement plate. Handle cast from 356-T6 aluminum alloy with black polyarmor paint finish. Handle attaches to seat with (3) 1/4" x 1 5/16" long stainless steel rivets. The finished size of the full bucket shall be 9" deep x 10 1/2" wide.

Chain/Coated: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: TenderTuff, color specified.

Chain/ProGuard: Steel 3/16" straight link chain, 800 lb. working load limit. Finish: ProGuard.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: 1/4 man hour per seat

Weight:
 14 lbs. (7 FT. Beam 5" Dia. w/TenderTuff Chain)
 13 lbs. (7 FT. Beam 5" Dia. w/ProGuard Chain)
 14 lbs. (8 FT. Beam w/TenderTuff Chain)
 14 lbs. (8 FT. Beam w/ProGuard Chain)
 17 lbs. (10 FT. Beam w/TenderTuff Chain)
 16 lbs. (10 FT. Beam w/ProGuard Chain)
 12 lbs. (7 FT. Beam w/TenderTuff Chain)
 12 lbs. (7 FT. Beam w/ProGuard Chain)
 11 lbs. (75" Beam w/TenderTuff Chain)
 11 lbs. (75" Beam w/ProGuard Chain)

Installation Instructions

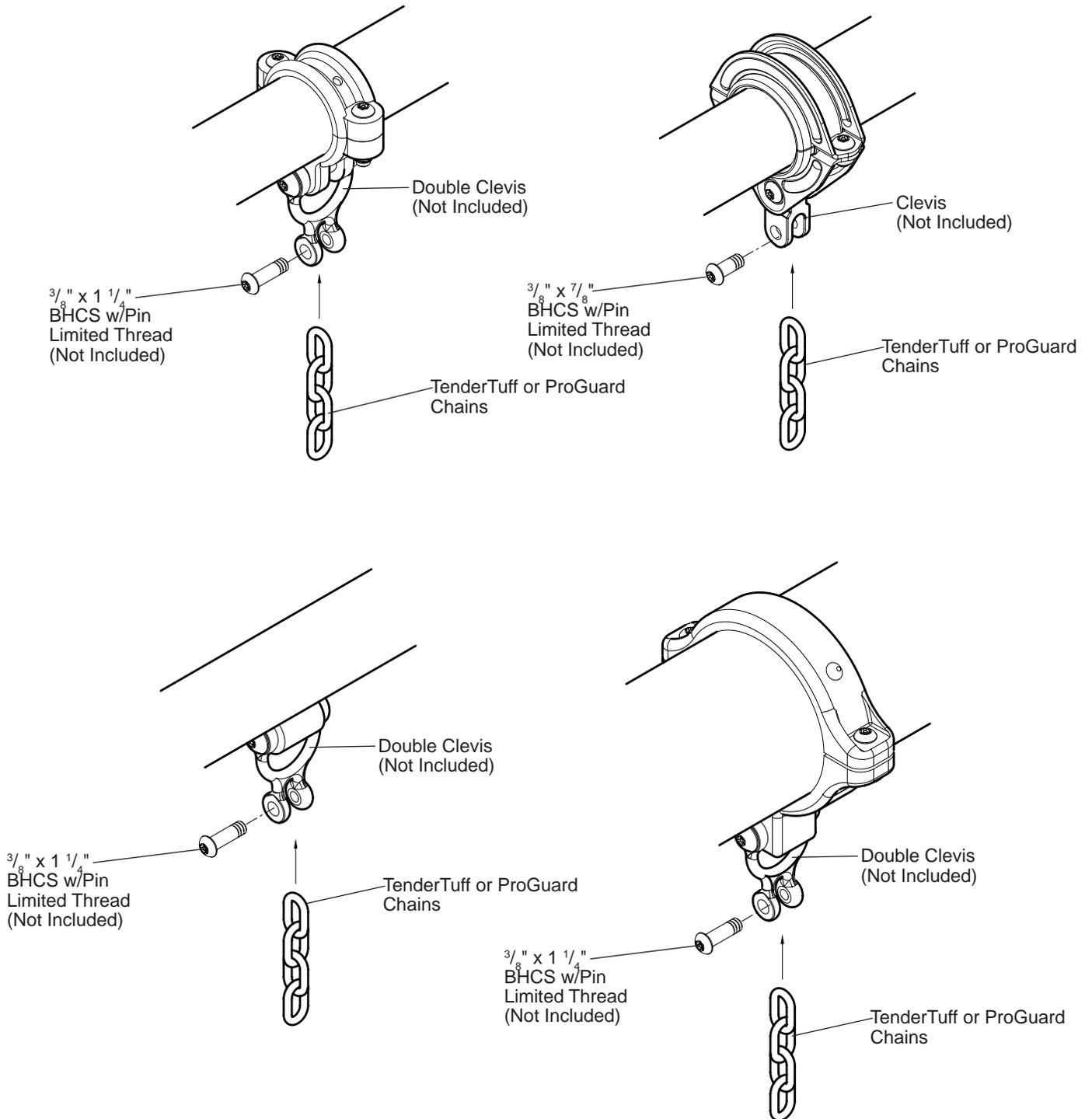
Swing Hangers with Double Clevis

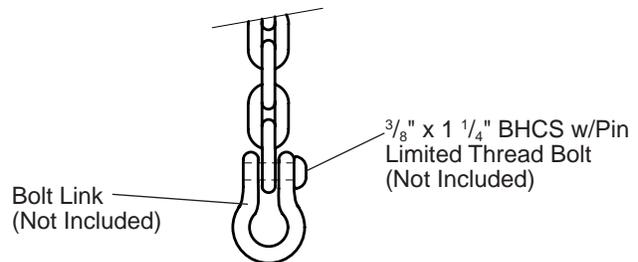
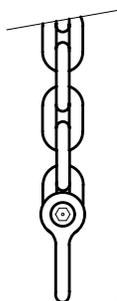
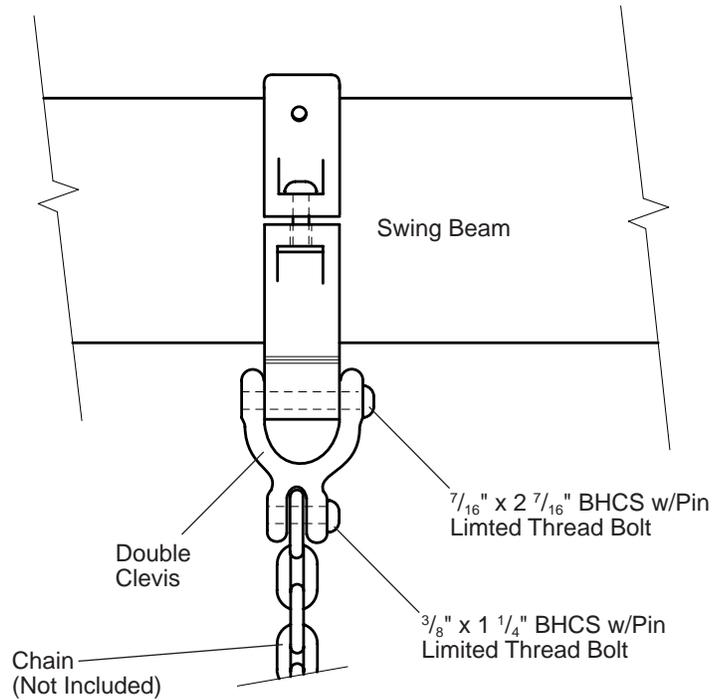
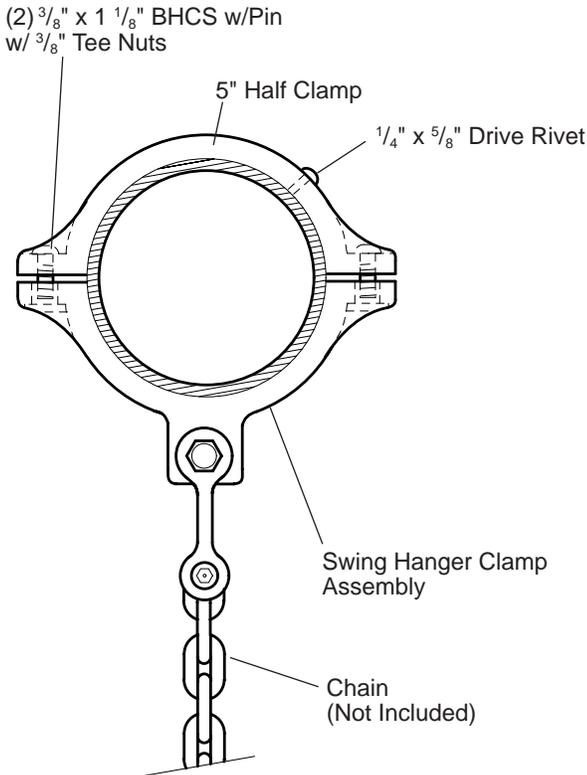
- 1) Attach chains to double clevis using 3/8" x 1 1/4" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

Anti-wrap Swing Hangers

- 1) Attach chains to aluminum clevis using 3/8" x 7/8" BHCS w/pin limited thread bolts, as shown.
- 2) Attach chains to full-bucket seat using 3/8" x 7/8" BHCS w/pin limited thread bolts. Be sure bolt heads face user. **NOTE:** Use chain spacers as shown when installing ProGuard chains.
- 3) Install protective surfacing before users are allowed to play on the structure.

SWING HANGER OPTIONS





NOTE:
 Do Not Over-Tighten Limited Thread Bolt! Threads Should Not Protude Past Bolt Link.

NOTE:
 Position Bolt Head Inward Facing User.

Swings

111418 Swing Hanger, Belt Swing

Parts List

Part#	Description	Qty.
105327-01	5" Half Clamp, Specify Color	1
100198-00	$\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/Pin, SST	2
100351-00	$\frac{3}{8}$ " Tee Nut, SST.....	2
100610-00	$\frac{1}{4}$ " x $\frac{5}{8}$ " Drive Rivet, AL/SST	1
100292-00	$\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/Pin Ltd. Thread Bolt, SST.....	1
121291-00	Swing Hanger Clamp Assy. Specify Color	1
121289-00	Swing Hanger Clamp, Specify Color	1
127068-00	$\frac{7}{16}$ " x $2\frac{7}{16}$ " BHCS w/Pin Ltd. Thread Bolt, SST	1
138917-00	Swing Hanger Double Clevis SST	1
100667-00	Oilite Bushing.....	1

Installation Instructions

- 1) Locate and mark location of clamp on beam.
- 2) Attach 5" half clamp and swing hanger clamp to beam using $\frac{3}{8}$ " x $1\frac{1}{8}$ " BHCS w/pin and $\frac{3}{8}$ " tee nuts. *Tighten evenly.*
- 3) **IMPORTANT:** *Drill through holes in 5" half clamps and into 5" pipe with a $\frac{1}{4}$ " or "F" (only) drill bit, tap $\frac{1}{4}$ " x $\frac{5}{8}$ " drive rivets through 5" half clamps and into pipe, to ensure that clamps remain secure.*
- 4) Attach swing chain to double clevis using $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts.
- 5) Attach swing seat to chains using bolt links with $\frac{3}{8}$ " x $1\frac{1}{4}$ " BHCS w/pin limited thread bolts. **NOTE:** *Do not over-tighten limited thread bolt. Threads should not protrude past bolt link. Position bolt head inward facing user.*

Hanger Clamp

Assembly: Cast aluminum. Finish: ProShield®, color specified.

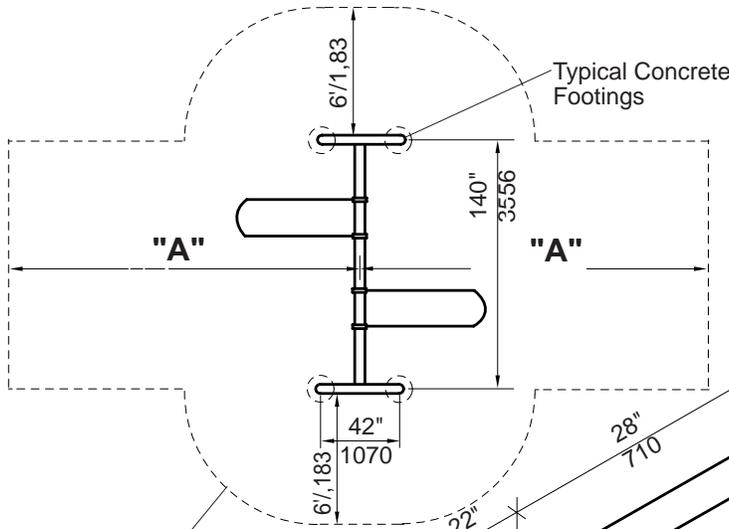
Double Clevis: Stainless Steel.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. $\frac{1}{2}$ man hour

Weight: 6 lbs.

PLAN VIEW/FOOTING LAYOUT



KEY	Dimension "A"
Seat Type	
Belt	16'-0" (4,88 m)
Flat	16'-0" (4,88 m)
Full Bucket	12'-0" (3,66 m)
Half Bucket	16'-0" (4,88 m)
Molded Bucket	16'-0" (4,88 m)
Molded Bucket/Harness	13'-0" (3,96 m)
Infant Full Bucket	N/A

Minimum Use Zone

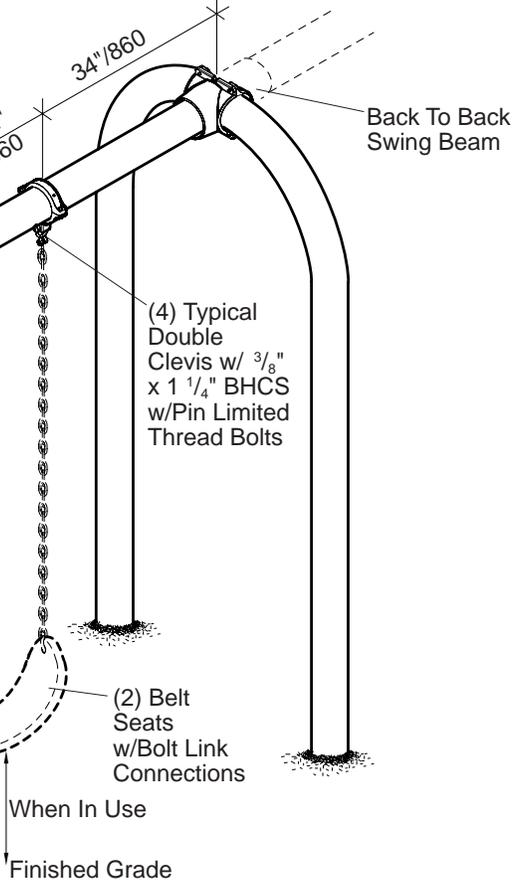
(2) Typical Tee Clamps-Center Beam In Middle Of Arch

99 3/4" / 2534
From Top of Surfacing to Center of Beam

(2) Arches

(4) Labels

Protective Surfacing



NOTE: Model numbers are for swing frames only, order swing seats with chains separately.

Model #221293 Additional Bay

Swings 221292/221293 Arch Swing Frame



Swings 221292/221293 Arch Swing Frame

Parts List

Part#	Description	Qty.	
		2 PL	Add. Bay
126749	Swing Arch, Specify Color.....	2	1
100610	1/4" x 5/8" Drive Rivet, AL/SST.....	8	6
105327	5" Half Clamp, Specify Color.....	8	4*
216492	140" Swing Beam, Specify Color.....	1	1
121291	Swing Hanger Clamp Assy. Specify Color	4	4
121289	Swing Hanger Clamp, Specify Color.....	4	4
127068	7/16" x 2 7/16" BHCS w/Pin Ltd. Thread, SST.....	4	4
138917	Swing Hanger Double Clevis.....	4	4
100667	Oilite Bushing.....	4	4
243802	Hdw Pkg 5iOD Swing Beam	1	1
100198	3/8" x 1 1/8" BHCS w/Pin, SST.....	8	8
234397	BHCS 6LP LTHD 7/16 x 1 11/16i, SST.....	8	8
100292	3/8" x 1 1/4" BHCS w/Pin Ltd. Thread, SST.....	4	4
100351	3/8" Tee Nut, SST.....	8	8
156846	Play Safe Label, 2-12 Yrs.....	1	1
234937	7/16" D Cut Washer, SST.....	16	16
182213	Hot Surface Warning Label.....	1	1
182212	Entanglement Warning Label.....	1	1
115176	Hard Surface Warning Label.....	1	1
100330	7/16" Nylok Hex Nut.....	8	8

* = 5" Half Clamps From 2 PL. End Of Beam Need To Be Used.

Installation Instructions

- 1) Dig footings, spaced as shown. Refer to the Concrete Footing Detail.
- 2) Set arches in footing holes and attach swing beam to center of arches using 5" half clamps with 7/16" BHCS w/Pin, 7/16" D-Cut Washers, and 7/16" Nylok nuts. Refer to the Tee Clamp Position Detail. Center of beam should be 99 3/4" above finished grade. When installing back to back swing beams refer to the Back To Back Tee Clamps Detail.
- 3) Level beam and plumb arches and temporarily prop in position. Pour concrete footings and let cure for 72 hours before proceeding.
- 4) Locate, mark and attach swing hanger clamps to beam in locations shown. Refer to the Typical Swing Hanger Clamp Spec Sheet.
- 5) **NOTE:** Refer to specific swing seat installation document for attaching chains and seats.
- 6) Install 1/4" x 5/8" drive rivets in all 5" half clamps. Refer to the Typical Offset Hanger Clamp Spec Sheet. Refer to the Back To Back Tee Clamps Detail.
- 7) Apply Play Safe and Warning Labels, as shown.
- 8) Install protective surfacing before users are allowed to play on the swing.

Arch Posts: See PlayBooster® (PB) General Specifications.

Swing Beam: Weldment comprised of tee clamps and 5" O.D. extruded 6005-T5 aluminum alloy tube with a .125" wall. Finish: ProShield®, color specified.

Clamp: Cast aluminum. Finish: ProShield, color specified.

Fasteners: Primary fasteners shall be socketed and pinned tamperproof in design, stainless steel (SST) per ASTM F 879 unless otherwise indicated (see specific product installation/specifications).

Installation Time: Approx. 8 man hours
Additional Bay 4 man hours

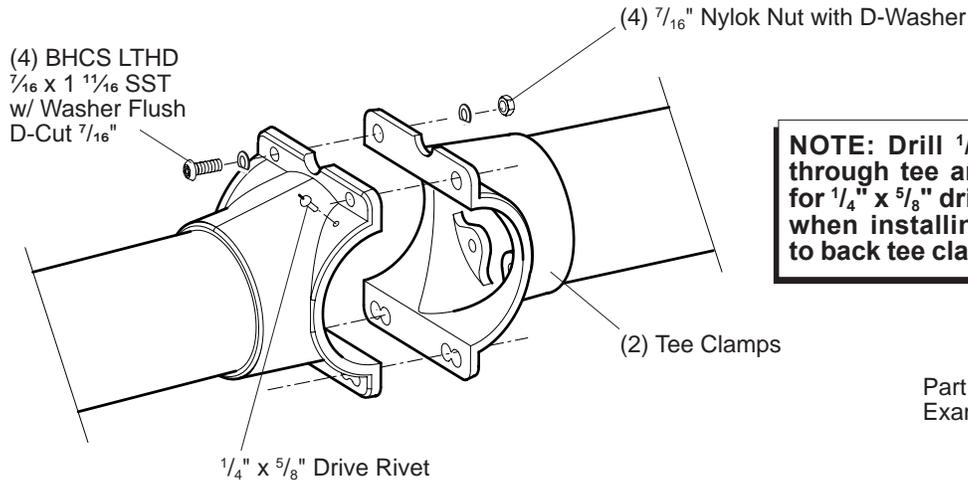
Concrete Req.: Approx. 7.5 cu. ft.
Additional Bay 3.75 cu. ft.

Area Req.: 24'-2 3/4" x 32' (7,39 m x 9,75 m)
Additional Bay 11'-8" x 32' (3,55 m x 9,75 m)

Weight: 204 lbs.
Additional Bay 124 lbs.

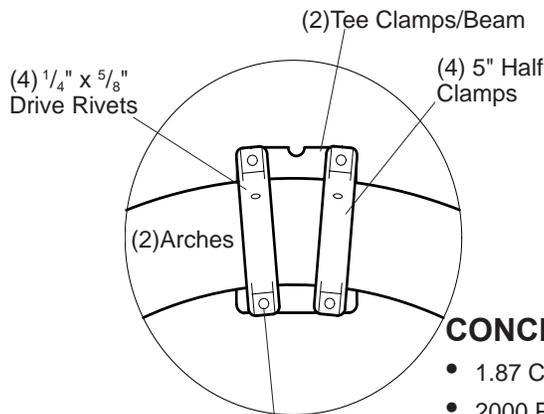
Fall Height: 96" (2,43 m)

**DETAIL
BACK TO BACK
TEE CLAMPS**



NOTE: Drill 1/4" hole through tee and arch for 1/4" x 5/8" drive rivet when installing back to back tee clamps.

**DETAIL
TEE CLAMP POSITION**



NOTE: Use inside holes for (4) 7/16 BHCS w/Pin limited thread w/D-Washer 7/16 Nylok Nut w/D-Washer

CONCRETE

- 1.87 Cubic Feet per Footing.
- 2000 PSI (Min.)
- 3000 PSI (Min.) If Freezing Conditions Exist.

**DETAIL
CONCRETE FOOTING**

