Fixture Safety Guide



Revised July 2022

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Introduction

This Fixture Safety Guide contains detailed information to be used by Merchandise Service Organizations (MSO) engaged by Ace to install and/or secure racks and displays in an Ace store.

The purpose of this guide is to establish a consistent and safe criterion for MSO teams who are installing or securing fixtures and displays. The directions and procedures set forth in this guide are not to be considered optional, and alternatives will not be accepted without proper approval from Ace's Safety Compliance team.

The guide is organized into the following five areas of safety Installation.

- 1. Safety Shelf Bolting
- 2. Safety Pegboard Bolting
- 3. Racks & Displays
- 4. Stand-up Merchandise
- 5. General Safety Installation

For any questions or feedback about this guide, please contact the Retail Operations Department at (630)990-3571

Fixture / Display Safety Checklist

To be completed by the Merchandise Service Organization Team Lead.

By checking the boxes below, you are confirming that you have followed the safety guidelines outlined in the Ace Fixture Safety Guide and/or the manufactures installation instructions. Draw a line through any items that are not applicable.

Shelf Bolting

- Paint & Stain Gallons
- Paint Thinner
- Rust Stop
- Spray Paint
- Water Sealants
- Boxed Nails
- Lawn & Garden Chemicals
- Cleaning Chemicals
- Galvanized Plumbing Fittings
- Trash Bags
- Motor Oil
- Pool Chemicals

Pegboard Bolting

- Sockets
- Power Tool Accessories
- Threaded Wire
- Builder's Hardware
- Padlocks/Door Locks
- Chain
- □ Hammers/ Pry Bars/Clamps
- □ Garage Springs/Accessories
- Tie-downs/Bungees
- □ Brooms/Mops (if not on wall)
- Closet Shelving

Racks/Displays Which Need to Be Secured

- □ Brass Fittings Slider Display
- □ Faucet Repair Slider Display
- Galvanized Fitting Slider Display
- Stake Rack
- Vinyl Tubing Rack
- □ Cabinet Hardware Display
- Toilet Seat Rack
- □ Faucet Display
- □ Striking Tool Rack
- Cabot Stain Display
- Grill Divider Display

- Water Heater Display
- Pressure Washer Display
- Spices and Rubs Display
- Battery Endcap
- Wing Panel Displays (on endcaps)
- Chainsaw Display
- □ Westinghouse Lighting Display

Stand-up Merchandise That Needs Safety Stop Restraint

- □ Ladders (when merchandised facing the customer, non-book-cased)
- Copper Pipe
- PVC Pipe
- Drainpipe
- Conduit
- Roof Gutters
- Metal Flashing

General Fixture Installation Compliance

- Verified that proper wall blocking installed on walls for perimeter gondola securing.
- Verified that heavy duty uprights are installed in Paint department in required locations.
- Verified that all gondola sections are level and plumb.
- Verified that all gondola runs are straight using a ladder to obtain a bird's eye view.
- Verified that all gondola shelves are straight and level with no uneven gaps between.
- Verified that all end caps are level and plumb with end cap stabilizer bracket properly installed

Shelf Bolting

Shelves need to be loaded and leveled prior to bolting. Install bolts, nuts and washers (both sides) through pre-drilled holes underneath each shelf as seen in the pictures below.

The required hardware for each shelf being bolted together is;

- 1 Hillman #10-24 x ³/₄" bolt
- 1 Hillman #10 24 nuts



Shelving Bolts



The followong categories require shelf bolting

Nails / Screws



Household Cleaners

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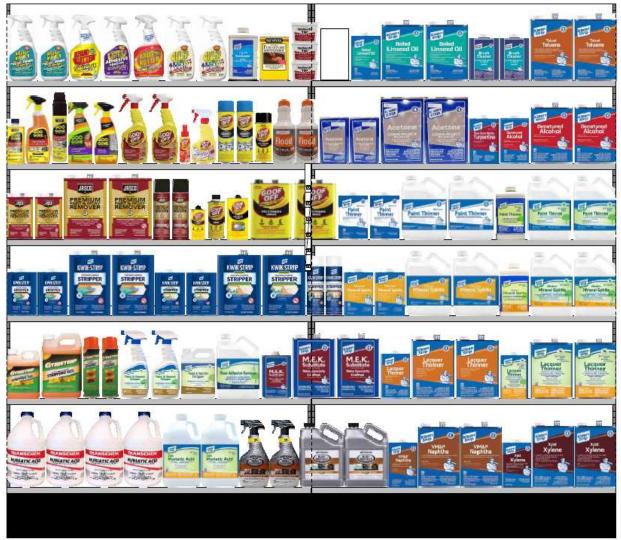
Lawn and Garden Chemicals

Motor Oil/Filters/Maintenance Chemicals/Hand Cleaners

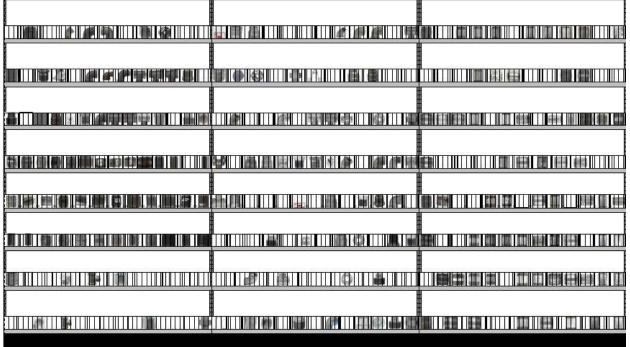


Paint and Stain – All Brands

Solvents / Thinners



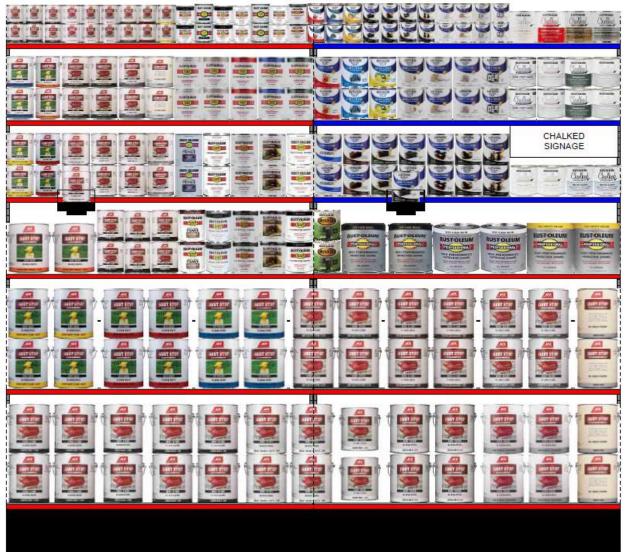
Plumbing Fittings (Galvanized and Black)



Pool Chemicals



Rust Stop



Spray Paint

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Trash Bags



Exterior Stains / Waterproofing



Pegboard Safety Bolting

Ace Hardware Peg Board Merchandising

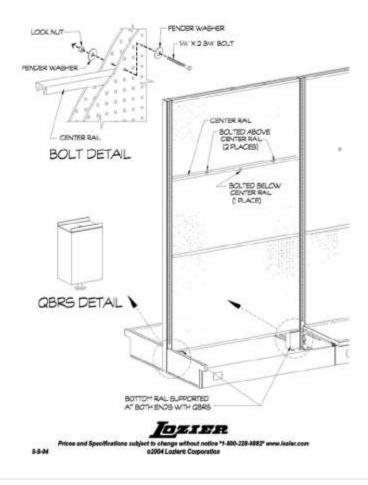
The following steps should be taken to safely merchandise the described product:

- The bottom rail should be firmly supported underneath by placing blocking under each end of the bottom rail and against the uprights. Location of these blocks is critical and must make firm contact between both the floor and the bottom rail. Suitable blocking (QBRS) is available from Lozier.
- The upper back on 84" high sections must be restrained by bolting the backs together around the center rail. The center rail should be located approximately vertically in the center of the upper back.

Hardware: 1/4" x 2-3/4" bolts, fender washers and lock nuts

Using the above hardware, bolt the backs together (both sides of the gondola) in two places above each rail and in one place below each center rail (for a total of three locations per center rail). Be sure to use fender washers on both sides.

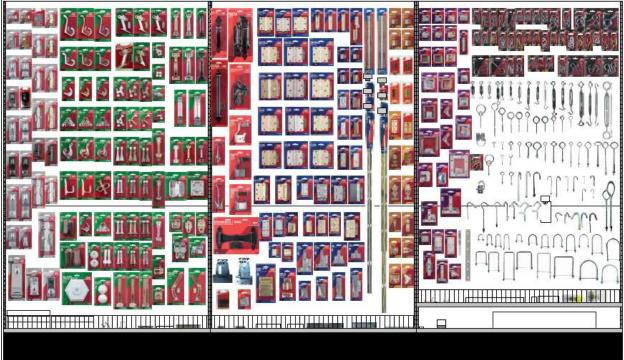
- 3) Maximum load per 10" Southern Imperial Peg Hooks w/Fast Back Connectors is 15 lbs.
- Following the above instructions and recommendations, the maximum load per 4 ft. section should not exceed 500 lbs.



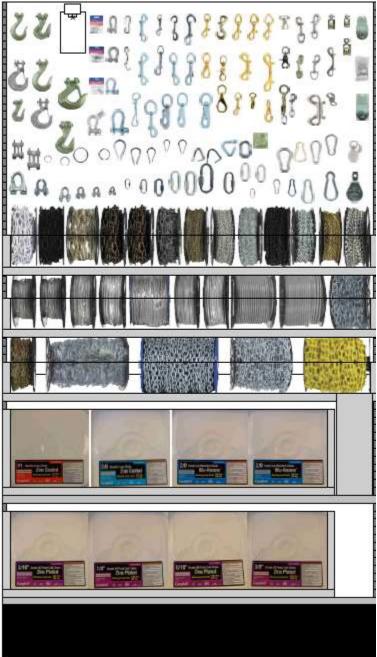
The followong categories require pegboard bolting

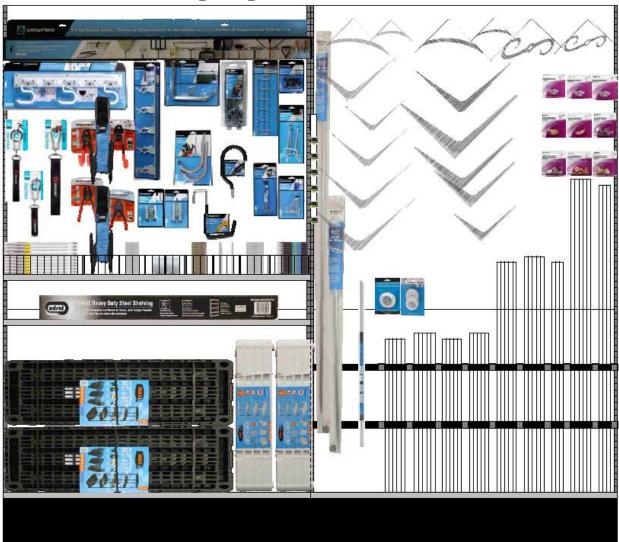
Mops/Brooms/Buckets (if not on wall)

Builders Hardware



Chain/Cable/Accessories



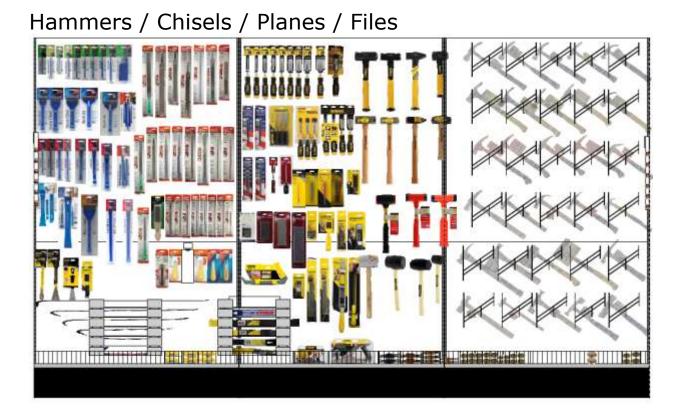


Household Shelving/Organization



Garage Springs and Accessories





Padlocks



Drill/Driving/Cutting Accessories



Sockets / Wrenches



Tie Downs / Bungees



Towing



Wall Mount Anchoring

INSTALLATION INSTRUCTIONS

WALL MOUNT BRACKET (DC2191)

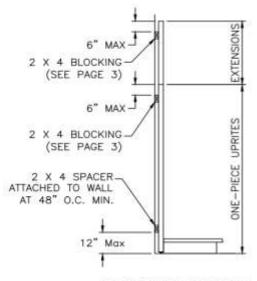
Anchoring of all Wall Sections is recommended for limiting deflection under loaded conditions. Wall Sections must be assembled per Display Shelving Installation Instructions 01-13. Wall Sections must have base brackets installed.

The purchaser of the fixture is responsible for determining the suitability of any specific wall or structure to which shelving is anchored, for the selection of and/or proper installation of the anchoring fasteners, hardware and materials, and for the workmanship of those performing anchoring. These guidelines are meant to illustrate typical types of anchoring and do not constitute any endorsement by Lozier of any specific anchoring application. Each application will vary due to the building, structure and materials used for anchoring, and professional advice should be sought for each anchored installation.

Anchoring situations other than those illustrated may be encountered. As a guideline, each anchoring location shown must provide a minimum of 450 pounds of pull-out resistance per fastener and be located as shown in these illustrations. Extreme care must be taken to insure that the building wall or other structure is solid and suitable for anchoring and will support the load being anchored to it.

CAUTION: DO NOT USE PLASTIC OR FIBER ANCHORS, CONCRETE NAILS, OR REGULAR NAILS.

CAUTION: DO <u>NOT</u> OVERTIGHTEN FASTENERS. OVERTIGHTENING CAN CAUSE MATERIAL DAMAGE OR THREAD DAMAGE, CAN WEAKEN THE CONNECTION, AND COULD CAUSE THE PRODUCT TO COLLAPSE CAUSING BODILY INJURY OR PROPERTY DAMAGE.



SINGLE LEVEL BLOCKING

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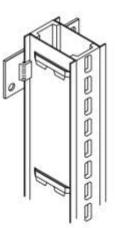
6336 PERSHING DRIVE OMAHA, NEBRASKA 68110 (800) 228-9882 11-83 REV. L OMPG120/SBPA219 11/16/18 PAGE 1 OF 3

INSTALLATION INSTRUCTIONS

WALL MOUNT BRACKET (DC2191)

CENTER UPRITES- Slide Wall Mount Bracket over Uprite Side Channel. (See FIGURE 2). Attach Wall Mount Bracket to approriate wall or 2 x 4 Blocking.

END UPRITES- Place Wall Mount Bracket over the lip of the Uprite side channel. (See FIGURE 3). Attach Wall Mount Bracket to appropriate wall or 2 x 4 Blocking.



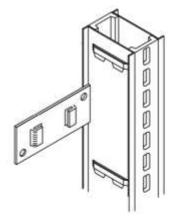
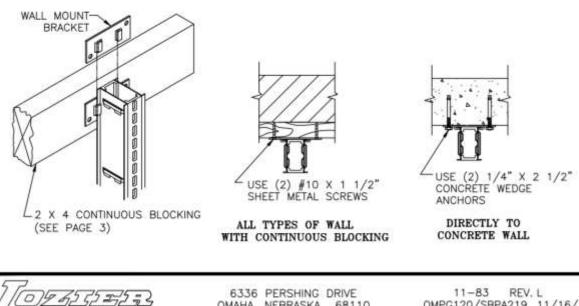


FIGURE 2 CENTER UPRITES

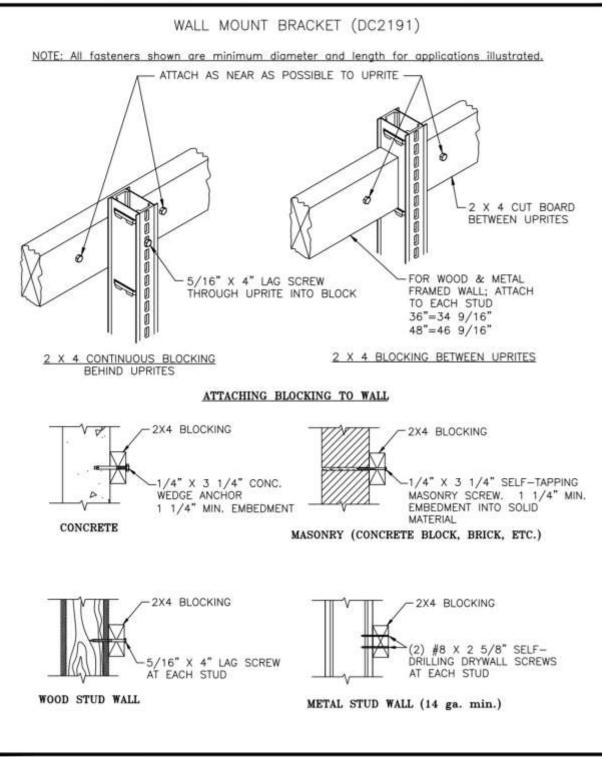
FIGURE 3 END UPRITES

NOTE: All fasteners shown are minimum diameter and length for applications illustrated.



11-83 REV. L OMPG120/SBPA219 11/16/18 PAGE 2 OF 3

INSTALLATION INSTRUCTIONS



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6336 PERSHING DRIVE OMAHA, NEBRASKA 68110 (800) 228-9882 11-83 REV. L OMPG120/SBPA219 11/16/18 PAGE 3 OF 3

The followong categories require wall mount anchoring

Stihl



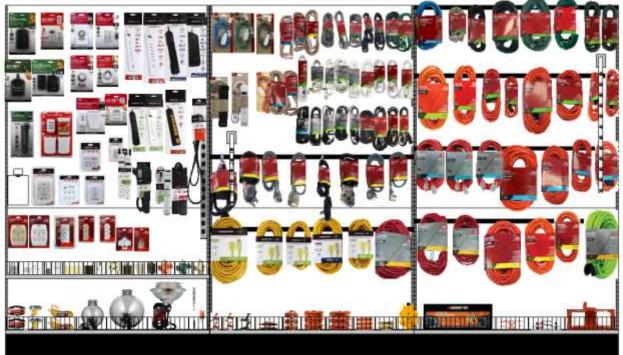
Cross tubes

The followong categories require cross tubes

Garden Hose



Electrical Cord Sets





Garage Door Springs



<u>Racks / Displays</u>

Vinyl Tubing Display

Installation notes - Install crossbars into the uprights at top and bottom behind display. Install 3 self-tapping screws per crossbar to secure display to the crossbars as shown in pictures below.



<u>Racks / Displays</u>

Cabinet Hardware Display

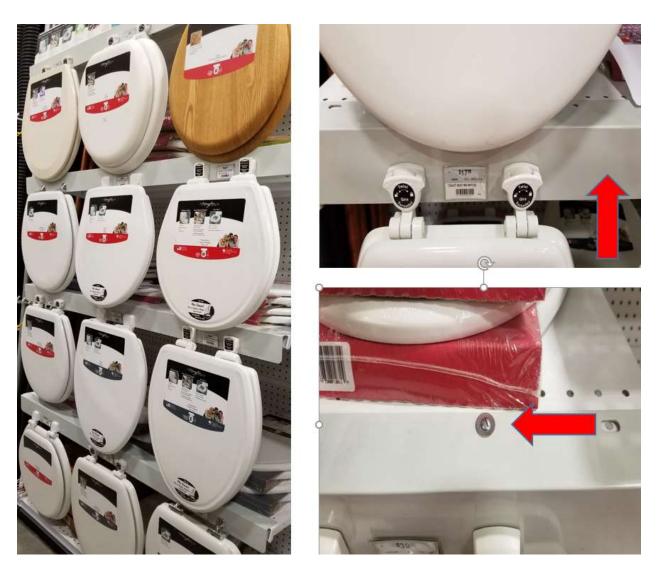
Installation notes – The mounting clips need to be installed on both sides of the display as shown in the picture below.



Racks / Displays

Toilet Seat Display

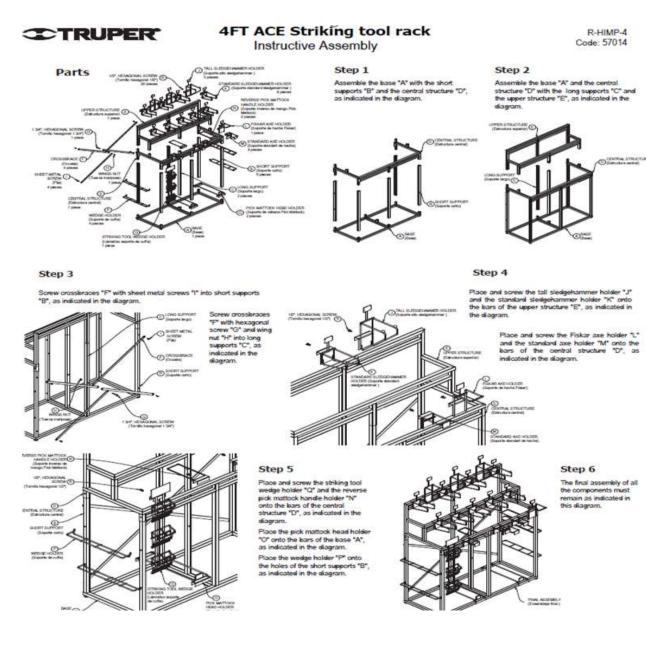
Installation notes – Install three bolts in the seat holder bracket to each shelf. One bolt on the left, one in the center and the other on the right side of the shelf.



Racks / Displays

Striking Tool Display

Installation notes – Follow the Truper installation instructions. The base deck needs to be removed as this display sits on the floor.



<u>Racks / Displays</u>

Stake Rack

Installation notes - Install two crossbars 6" below top of display and 6" from base of gondola at the bottom. Ensure that the display is secured as shown in pictures below. **Important! The rack <u>must</u> be merchandised exactly to planogram due to load bearing capacity**.



Racks / Displays

Water Heater Display

Installation notes - Secure each end of plastic tie strap to pegboard using bolts, washers & locknuts. Bolt will be secured on opposite side of gondola with lock nuts.

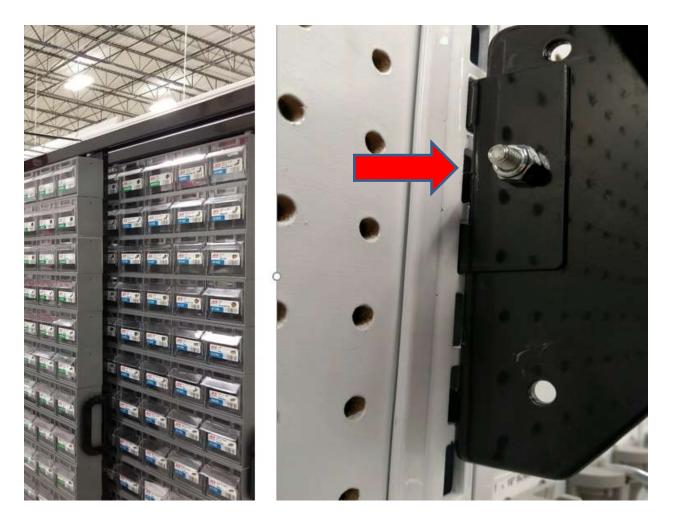
(2)1/4" x 2-3/4" bolts
(2) 1/4" x 1-1/4"fender washers
(2)1/4" lock nuts





Brass Fitting Sliding Rack and Faucet Repair Sliding Rack Displays

Installation notes - **!!!WARNING!!!** If the Guide Rail Bracket Retainers are not in the kit, DO NOT INSTALL THE UNIT. Assembly of the unit without these components presents a serious safety hazard and possible bodily injury.



Grill Fence Divider

Installation notes – **!!!IMPORTANT!!!** 180 lb. maximum weight limit. 90 lb. per side. Keep balanced.

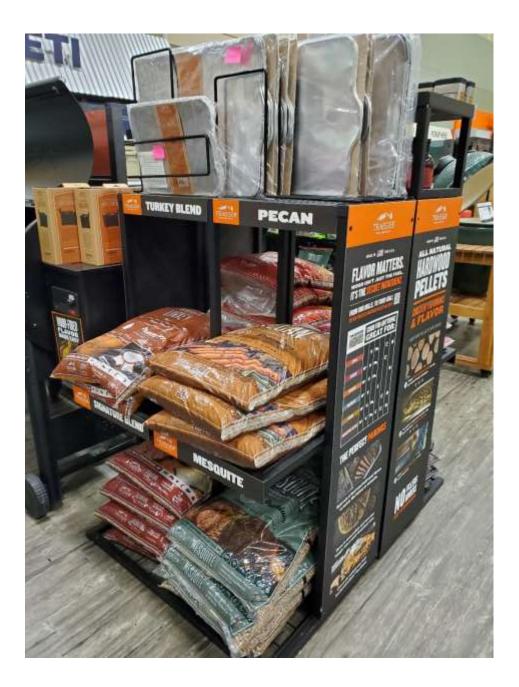


Sauces and Rubs Display

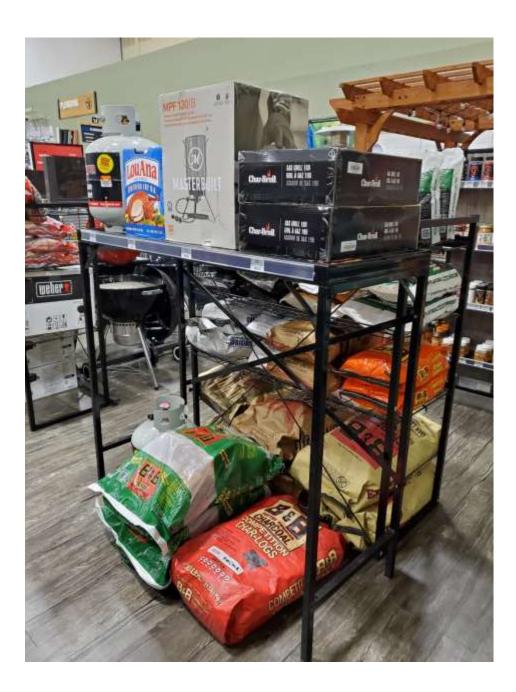
Installation note – Ensure shelves are fully and evenly seated in slots. When setting shelves, maintain balance. There is a maximum of 10 shelves per unit with **50 LBS MAX WEIGHT PER SHELF!!!**



Fuel Rack - Ace 9026052 - 200 lbs. capacity which needs to be evenly distributed



Pallet Bridge – Ace 9007632 – 100 lbs. total, evenly distributed



Cable Ties Mobile Merchandiser – Ace 9065243 – 1 lb. per hook, 55 lbs. per side of display.



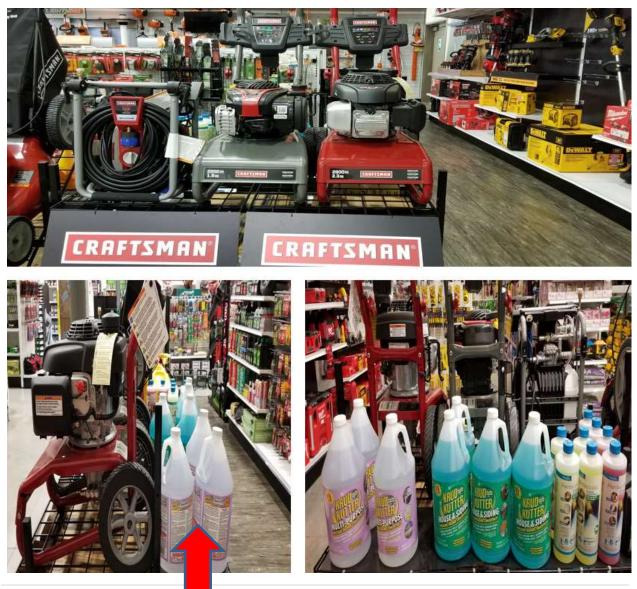
Faucet Display

Installation note – The display bracket must be secured into the upright.



Pressure Washers

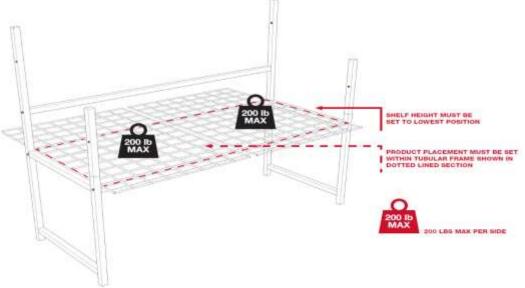
Installation notes – The liquid cleaners are heavy, as a result the rack can tip over if more than one pressure washer unit is removed from the display. Use caution when merchandising this unit.



Lawn Mowers

Installation notes – 200 lb. capacity per side. Use caution when merchandising to avoid the unit tipping over.





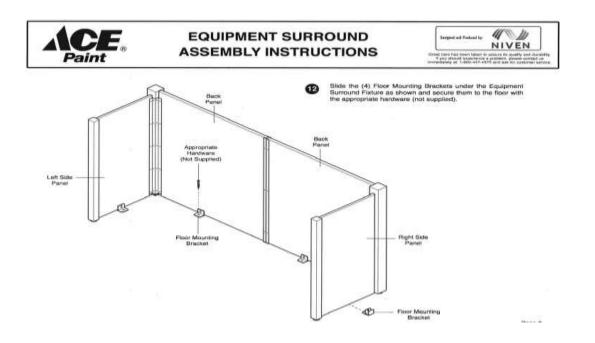
Canopy Signs

Installation notes - The Backyard & BBQ canopy signs need to be bolted to the shelf.



Paint Equipment Shroud

Installation Note – The equipment shroud should be bolted to the floor per the manufacturer's instructions.





Chainsaw Display

Installation notes – The display needs to secure to the shelf. Place display on shelf even with the front edge. Use screws provided to secure display to shelf from under the shelf through holes in shelf front.





 Place display on shelf even with front edge. Use screws provided to secure display to shelf from under the shelf through holes in shelf front.



 Chainsaw is placed as shown. IMPORTANT: place blade with cover behind hinged bracket on backboard to secure into place.

Westinghouse Lighting Display

Installation notes – Fully assemble the unit on the floor or a large worktable. Two people are required to lift and place the display onto the shelf. The minimum depth of the base deck is 22" and the display needs to be secured to a shelf with a minimum depth of 19". The display must be mounted to a shelf with a minimum weight rating of 210 lbs. or greater.

Follow the detailed instructions included within the display for proper installation.



Stand-up Merchandise Restraints

Installation notes - Measure and cut appropriate length of chain and attach link chain lap at one end and snap tie swivel eye at opposite end. Secure each end to dividers as shown in picture.

Hardware required;

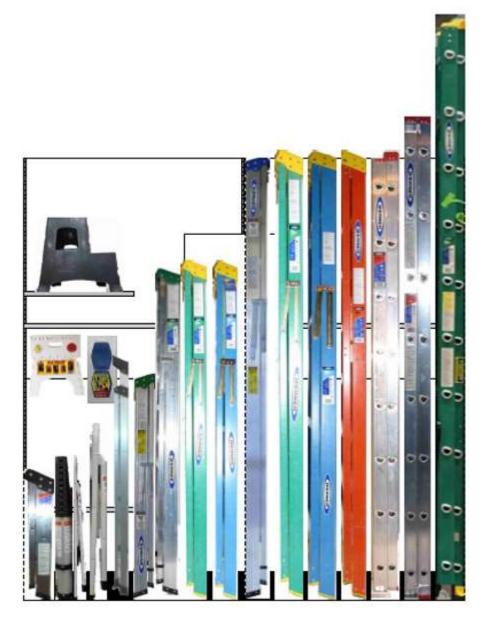
(1) Ace sku 52093 snap tie swivel eye 5/8" blk
(1) Ace sku 52025 link chain lap 5/16" x 1-1/2"
Ace sku 5364997 3/16" proof coil chain (yellow)



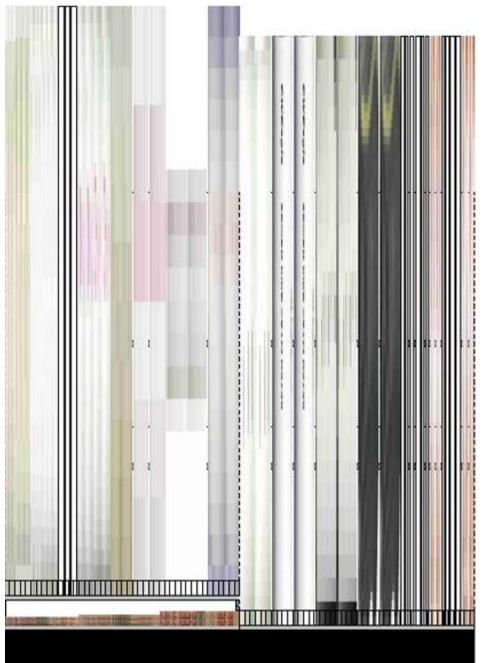
Stand-up Merchandise Restraints

The following categories require these restraints.

Ladders

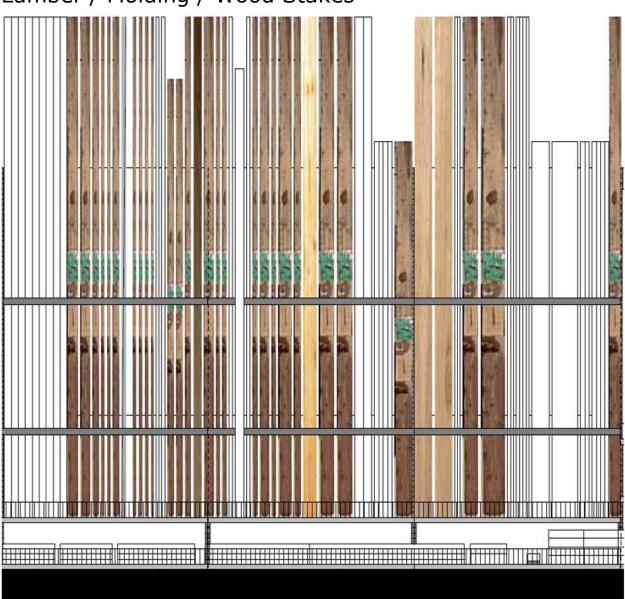


Pipe / Copper Tubing



Electrical Conduit





Lumber / Molding / Wood Stakes

Gutters



Garage Springs

Installation notes – Because of their weight, the garage springs should be set on a cross tube. The peg hook should not exceed 6 inches.



Liquid Paint

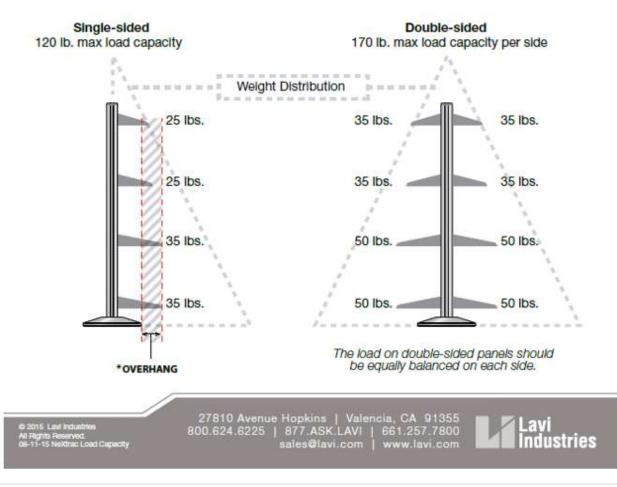
Standard duty 22" base decks have a load capacity of 800 pounds. The weight of a 5-gallon bucket is around 60 pounds. From a load standpoint the standard base deck is sufficient. When a Load Easer is installed the load capacity increases to 1300 pounds.



Lavi Impulse Fixtures

Recommended Load Criteria for NeXtrac[®] In-Queue Merchandise System

- · Loads should be distributed evenly across the length of the shelf.
- Keep heavy merchandise near the bottom of the panel and keep as close to the back wall as possible. Try to avoid heavy merchandise extending beyond the post base.*
- Do not stack more than 4 shelves high.
- Do not use more than two (2) 12-inch-deep shelves per panel side. These should be located towards the lower half of panel.
- Periodically check post-to-base connection and tighten as needed.

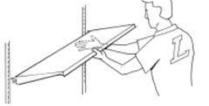


Shelf Load Limits

ALLOWABLE SHELF LOAD LIMITS Do Not Exceed!

"S" & "TL" STYLE - Install flat or 17° downslant. To install, tilt front edge slightly upward and insert tabs into Uprite slots. Lift up on rear of Shelf while lowering front to desired position.

"DL" STYLE - Install flat, 17° downslant, 30° downslant or 15° upslope (7° thru 19°). To install, insert tabs on Shelf straight into slots in Uprite.



HELPFUL HINTS:

Lift and position "S" & "TL" Style Shelves by gripping front edge of Shelf with one hand and lifting rear edge from underneath with the palm of the other hand when lowering into level position from tilted entry into Uprite slots.

When removing "DL" Style Shelves, lift rear of Shelf to disengage bracket and relax lifting pressure while pulling the Shelf away from the Uprite.

SHELF	SHELF	REC	OM	IEN	DED	UNI	FOR	M LO	AD	CAP/	CIT	(IN	LBS.	
Style Shelves & Decks	Flat	300	500	500	500	500	500	500	500	500	500	400	400	NOTE: Reduce capacitie shown by 30% when only the front half of the shelf/ deck is loaded or by 50% if the shelf/deck is less than 36° wide.
	17°Downslant	300	250	250	250	250	250	250	250	250	250	200	200	
	Deck	_	-	600	-	600	_	600	_	800	800	800	800	
"HL" & "HDSD" Style Shelves and Decks	Flat	_	<u></u>	_	-	600	600	600	_	700	700	600	600	
	30°Downslant	-	0-0	- 22	-	125	125	125	_	-	_	-	_	
	17°Downslant	-		-	-	250	250	250				-	-	
	Deck			-		-	-	900	-	1200	1200	1200	1200	
"DL"	Flat	300	500	500	500	500	500	500	-	500	500	400	400	
	30°Downslant	125	125	125	125	125	125	125	-	125	125	100	100	
	17°Downslant	300	250	250	250	250	250	250	-	250	250	200	200	
	15° Upslope	200	300	300	300	300	300	300	-	-			-	

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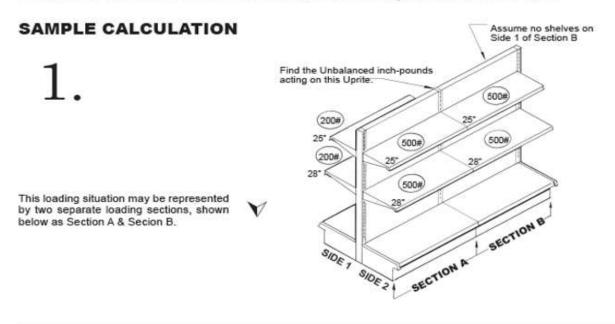
Unbalanced Load Calculations

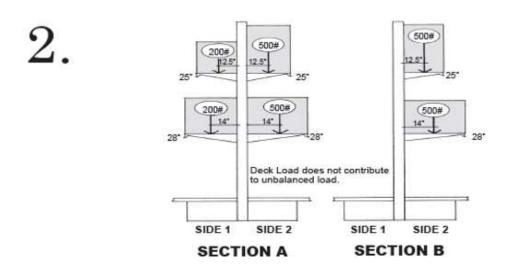
Unbalanced Load Calculations

When heavily loading wall shelving <u>or</u> loading <u>or</u> unloading island shelving, it is important to determine if you are creating an unbalanced load that exceeds the maximum allowable load. The sample calculation below illustrates how you can determine your unbalanced load in inch-pounds.

NOTE:

Inch-pounds are a measure of the shelf loads acting at a distance (1/2 shelf depth) from the Uprite.





Unbalanced Load Calculations (continued)



NOTE:

Shelf depth is divided by 2 because an evenly distributed shelf load is calculated as a total load at center of shelf depth.

Shelf load is divided by 2 because a shelf load is supported by two uprites.

WALL SECTION UNBALANCED LOAD CALCULATION:

The method used to determine the unbalanced inch-pounds on a wall section is the same as the method shown for an island section. Simply consider the side without shelves having a load of zero.

NOTE: See Wall Section Warnings on page 7.

	(Shelf depth ÷ 2)	х	(Shelf load ÷ 2)		SIDE 1	SIDE 2
SECTION	12.5"	×	100#	=	1,250" #	
	14"	x	100#	=	1,400" #	
	12.5"	х	250#	=		3,125" #
	14"	х	250#	=		3,500" #
SECTION B	12.5"	х	250#	=		3,125" #
	14"	ं	250#	=		3,500" #
	TOTAL (2,650" #	13,250" # (See Caution Below)			

13,250 inch-pounds Subtract the smaller unbalanced load from the larger: - 2,650 inch-pounds NOTE: " # indicates inch-pounds.

= 10,600 inch-pounds

This is the total unbalanced load acting on the uprite and must never exceed 12,000 inch-pounds with "06" Base Brackets or 15,000 inch-pounds with "LB" Base Brackets.

CAUTION:

In this example (for "06" Base Brackets), 10,600 inch-pounds does not exceed the 12,000 inch-pound limit. However, note that the total of Section A and B on Side 2 is 13,250 inch-pounds. This means that Side 2 would exceed the 12,000 inch-pound limit if loaded before Side 1, or if Side 1 was unloaded before Side 2. Therefore, in the above example, Side 1 (the side with the smaller load) must be loaded before Side 2 is loaded, and Side 2 must be unloaded to less than 12,000 inch-pounds before Side 1 is unloaded.

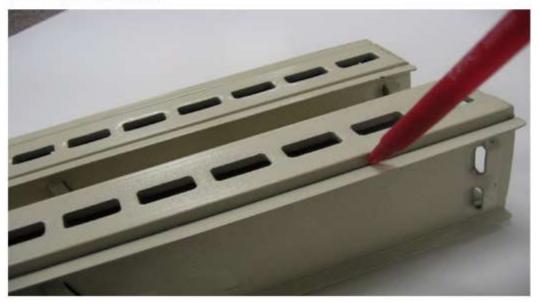
DO NOT EXCEED 12,000 IN-LBS UNBALANCED LOAD WITH "06" BASE BRACKETS! DO NOT EXCEED 15,000 IN-LBS UNBALANCED LOAD WITH "LB" BASE BRACKETS!

Heavy Duty Uprights

The use of heavy duty uprights, base brackets and upper shelves will be required in all sections where Paint and Stain gallons are being merchandised. Upon receipt of fixtures it is important to identify and separate these Heavy Duty up- rights from the fixture shipment so that they can be easily

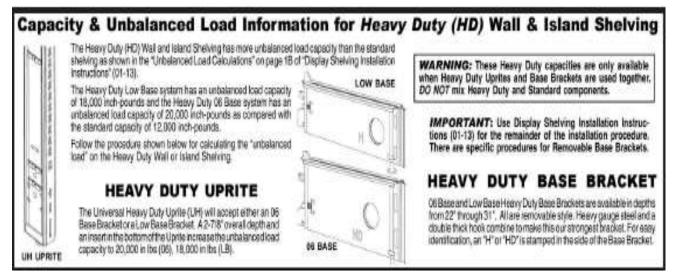
Identifying Lozier Uprites...Standard Duty vs. Heavy Duty

Photo below shows the Heavy Duty Uprite (front with red pointer) face channel protrudes out from the side rail back retainer by approx. 3/16". The Standard Duty Uprite (shown behind HD in photo) has face channel flush with the side rail.



accessed and installed in the required areas as indicated on the floor plan below.

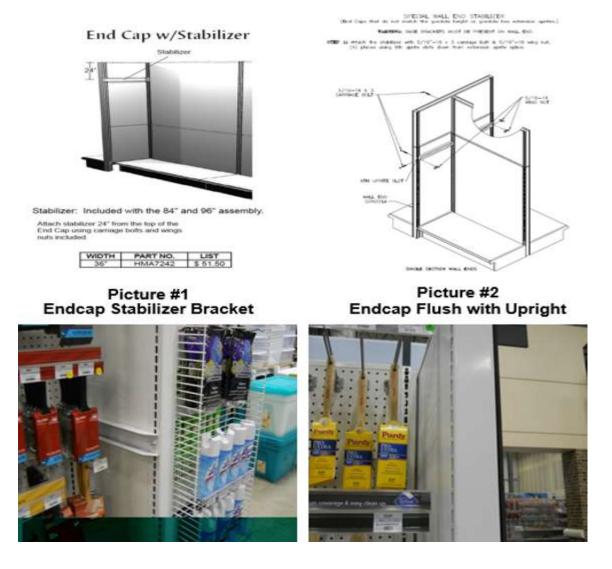
Heavy Duty Uprights (continued)



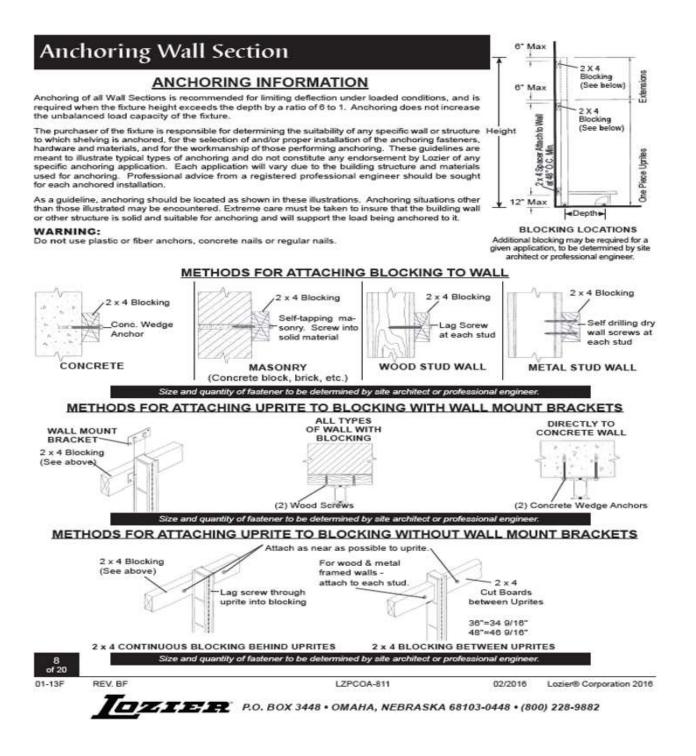
Reference the Lozier catalog and instructions for more information.

End Cap Stabilizer Brackets

Every endcap will require the installation of an endcap Stabilizer Bracket as shown in picture #1 below. Ensure that the endcaps are level and plumb before securing bracket. There should be no uneven gap between the back panel of the endcap and the adjacent uprights as shown in picture #2 below.



Wall Anchoring



Wide Span Shelving – Floor Anchoring

2. FLOOR ANCHOR

WIDE SPAN SHELVING

Floor anchors are required when:

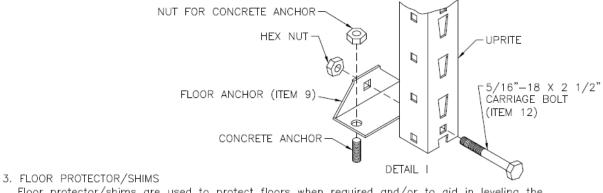
- a. The ratio of the height of the unit to the overall depth of the unit exceeds 6:1.
- b. Alignment of rows need to be maintained.

c. When hand stackers are used.

- d. Post load needs to be spread over a larger area.
- e. When bottom of the bottom beam is more than 6" from the floor.

Bolt floor anchor onto the bottom of the post using hardware provided as shown in Detail I. Anchor to floor using a wedge-style anchor suitable for concrete. Anchor material, finish, diameter and embedment shall be determined by the customer for the specific site requirement.

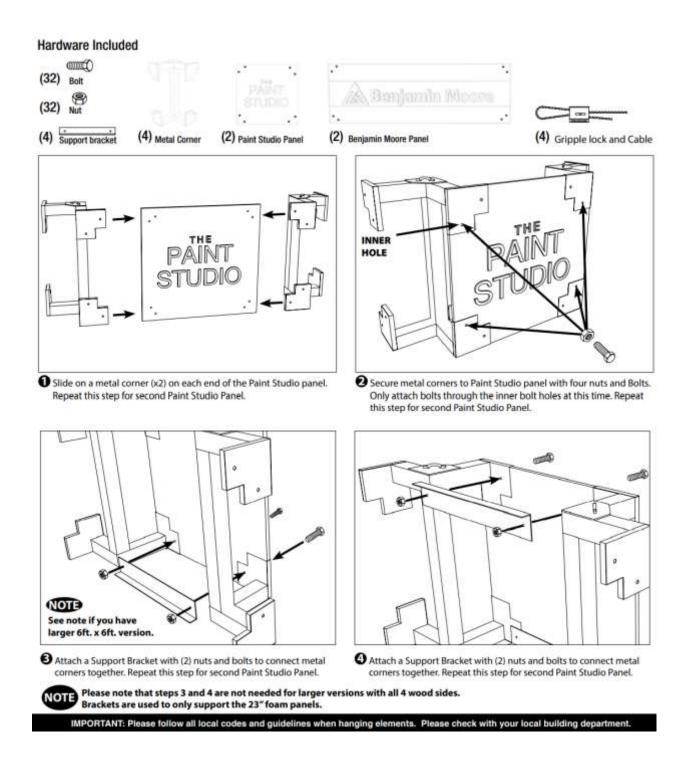
The minimum anchor diameter shall be 1/4" and the minimum embedment shall be 1 1/8".



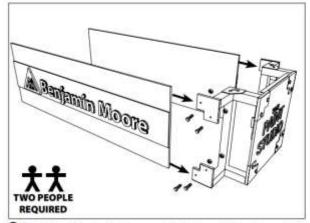
Floor protector/shims are used to protect floors when required and/or to aid in leveling the system when required (by stacking the shims).

Note: See the complete Lozier wide span shelving installation instructions in the Ace Project Place Library under the 'Lozier' folder.

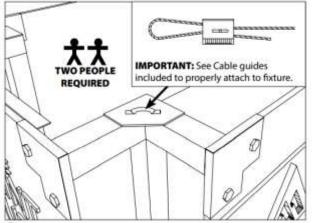
<u>General Safety Information</u> Overhead Paint Sign Installation Guide



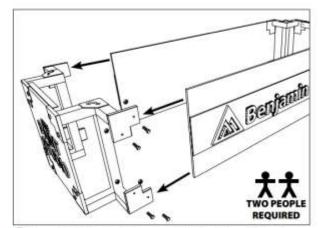
Overhead Paint Sign Installation Guide – cont'd



Slide in both Benjamin Moore panels into the paint studio panel with (x4) nuts and bolts on each panel. Two people are required for this step.



Use supplied cable and gripple locks at (4) hanging points.



Ocnnect both Benjamin Moore panels to the other paint studio panel with (x4) nuts and bolts on each panel. Two people are required for this step.