

WINSAFE



OPERATING INSTRUCTIONS FOR 1500 SERIES MODULAR OUTRIGGER BEAMS & ACCESSORIES

**THESE INSTRUCTIONS MUST BE READ AND UNDERSTOOD
BY ANYONE INSTALLING OR SUSPENDING EQUIPMENT
FROM WINSAFE MODULAR BEAMS AND ACCESSORIES.
ANY QUESTIONS MUST BE DIRECTED TO THE WINSAFE
DEALER OR DIRECTLY TO THE ADDRESS BELOW.**



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WARNING



1. Serious injury or death can result from improper use of this equipment. Read and understand all instructions for every component of your system before using them.
2. A complete suspended scaffold system is composed of four sub-systems. You must have instructions for each of the following systems:
 - Suspension system
 - Work platform
 - Hoist (suspension) system and suspension cables
 - Fall arrest system for each person on the platform
3. All components must be inspected prior to each usage.
4. Do not use equipment which has been damaged or which displays excessive wear. Inspect all equipment before and after each use. For replacement parts, contact your local dealer or Winsafe directly.
5. Review the rigging setup at the start of each day and check for changes made to the counterweights, the tie back cables, or the reach of the Modular Outrigger Beams.
6. DANGER—To avoid contact and shock hazards, beams should not be used in the vicinity of energized power lines or electrical lines.
7. RISK OF INJURY—Acids and other corrosive substances may severely affect the strength of metal beams and devices. Use extreme care around such materials and follow instructions.
8. Do not use Modular Beams during high winds, inclement weather, extreme temperatures or where any surrounding conditions impair safe use.
9. Read the Code of Safe Practices before installation and use of Winsafe Modular Beams and Accessories. All instructions contained herein must be carefully and strictly followed, including applicable SAIA Code of Safe Practices.
10. Every user of Winsafe Modular Outrigger Beam components must have a copy of these instructions on site while the equipment is in use.

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1 — INTRODUCTION

Modular Outrigger Beams are a temporarily installed system of engineered components extending out from a building in order to support a hanging scaffold. Winsafe provides various accessories and configurations for Modular Outrigger Beams.

The new 1500 Series line of Winsafe Outrigger Beams provide greater capacity for larger platforms with higher capacity hoists while retaining the convenience, versatility, and lightweight ease of handling of our standard 1000 Series outrigger beams. The 1500 Series can also be used in conjunction with Winsafe standard Outrigger Beams in certain applications.



Outrigger Beam Setup



Cable Truss System



Overhang Beam

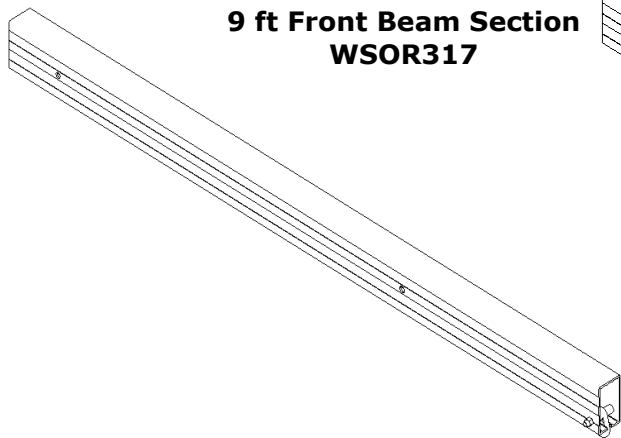


Outrigger Beam Dollies

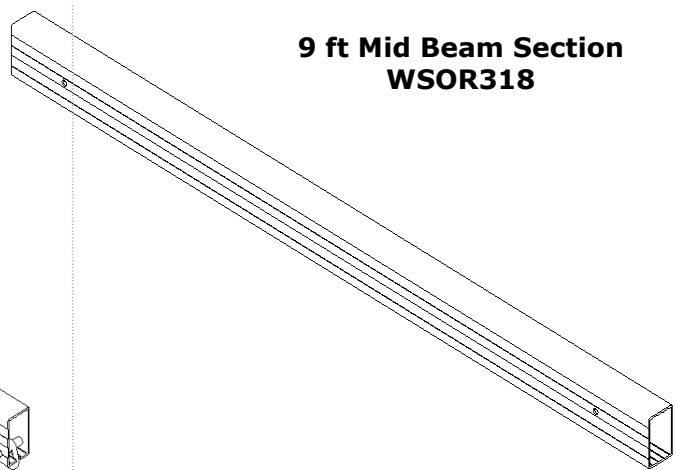
2 — OUTRIGGER BEAMS

Winsafe 1500 Series Outrigger Beams may be used individually or in pairs to support a hanging scaffold. The system includes two section and three section Outrigger Beams for overhangs of up to 54 inches at 1,500 lbs capacity and 60 inches at 1,200 lbs capacity.

2.1—Components

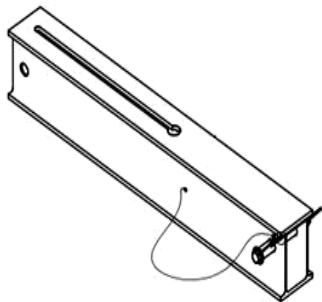


**9 ft Front Beam Section
WSOR317**

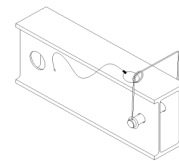


**9 ft Mid Beam Section
WSOR318**

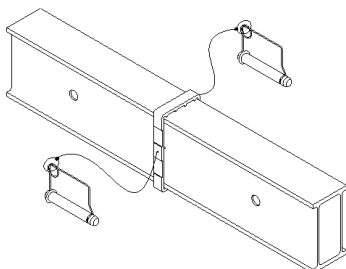
**SW (Saddle Weight) Rear Receiver
WSOR335**



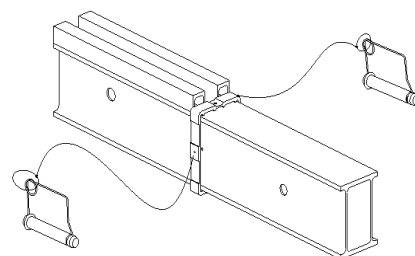
**LH (Longhorn) Rear Weight Receiver
WSOR334**



**32" Beam Splice for 1500 Series
WSOR319**



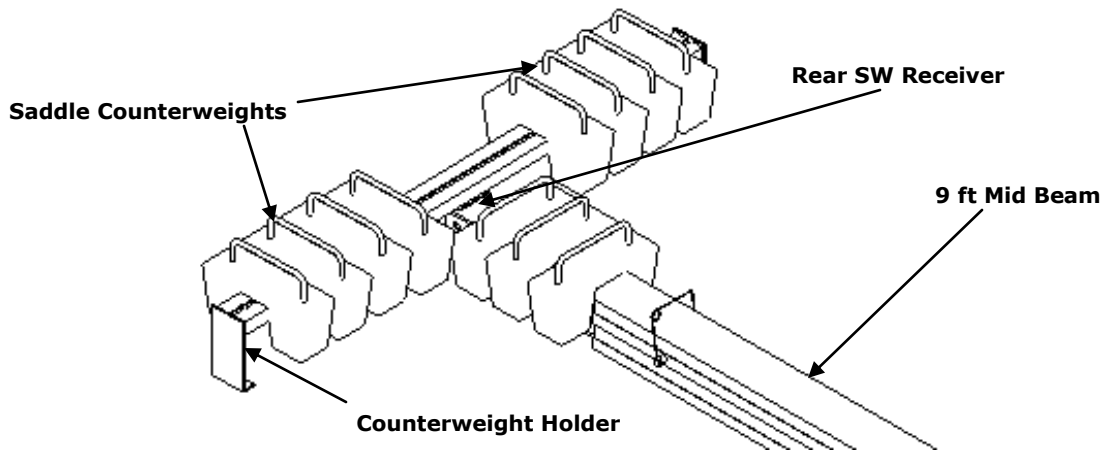
**Splice Adapter to 1000 Series
WSOR333**



Weights

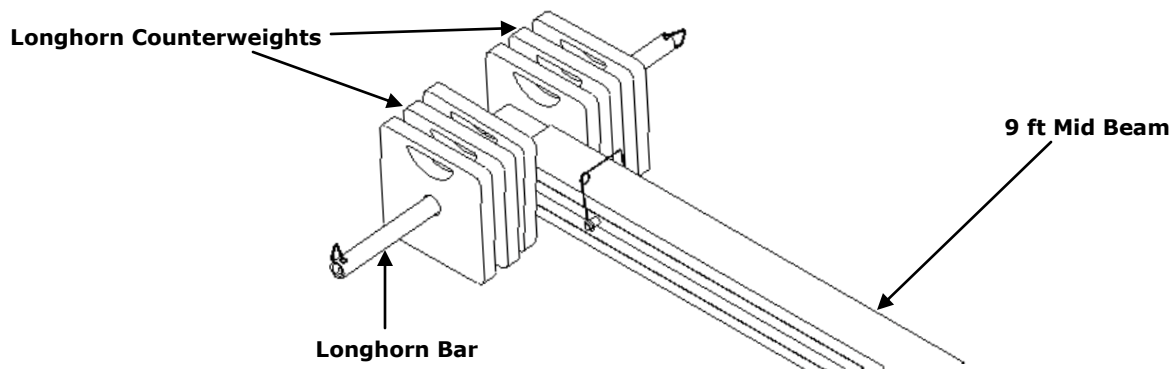
Modular Outrigger Beams generally use either one of two different types of counterweight systems: cast saddle style weights or flame cut weights. For cast saddle style weights use a Rear SW Receiver (WSOR335), which have a specific slot to accept these weights. Usually additional counterweight will be required beyond the capacity of the slot, requiring the use of a Counterweight Holder (WSOR42) to secure additional weights to the Rear SW Receiver. The Counterweight Saddle must rest on top of the Rear SW Receiver with the carriage bolt engaged into the slot.

Rear SW Receiver Holding Saddle Weights with Counterweight Holder



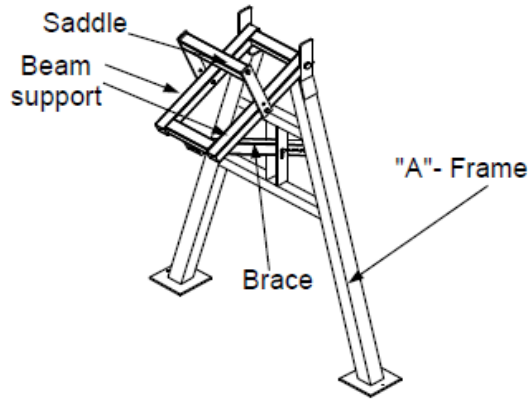
Flame cut weights are used with a LH Rear Receiver (WSOR344), use a Longhorn Bar. Thirty inch (WSOR43) and forty-two inch (WSOR70) Longhorn Bars are available. You attach the LH Rear Receiver to the Mid Beam (WSOR318) as shown below. Take care to lock all snap lock pins. If your weight system does not fall into either of these two categories, contact Winsafe for a custom weight holder system.

Rear LH Rear Receiver Holding Longhorn Weights



Beam Stand

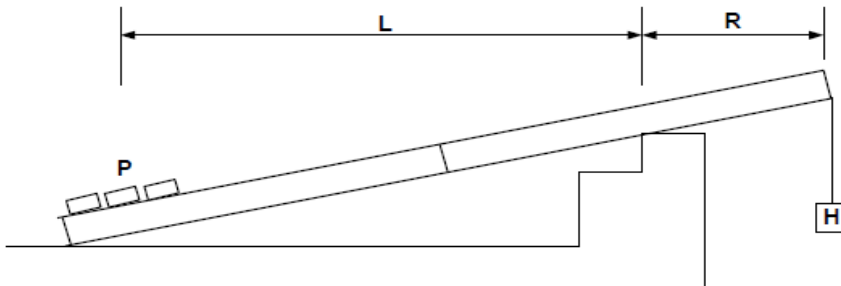
Winsafe Beam Stands are used whenever the building's parapet is structurally inadequate to support the loaded beam. Installation of the Outrigger Beam on the Beam Stand is described in Section 2.4. With the



introduction of the 1500 Series outrigger beams, the saddle height has been increased. Winsafe beam stands can be refitted with the new Beam Stand Saddle (WSBS004) in order to be used with 1500 Series outrigger beams as well as standard Winsafe outrigger beams.

2.2 – Outrigger Beam: Counterweight Calculation

This section describes the procedure for selecting the correct amount of counterweight. Counterweight must be calculated by a professionally competent person.



$$P = (4 \times H \times R) / L$$

Where: P = Counterweight needed (must have 4:1 safety ratio)

H = Hoist lifting capacity (not intended load)

L = Length from fulcrum to point of counterweight attachment

R = Reach

For example: A hoist lifts 1,500 lbs. We multiply this by 4 to include the required safety ratio. Therefore, a standard 1500 Series 18 ft beam system with 24" (2 ft) overhang would need a counterweight of:

$$P = \frac{(4 \times H \times R)}{L} = \frac{(4 \times 1500 \times 2)}{16} = 750 \text{ lbs / beam}$$

In addition to the calculation above, the correct amount of counterweight can be determined using the chart on the following page.

Counterweight Chart for the Sectional Outrigger

Max Load: 1,500 Lbs. at 54" Reach
1,200 Lbs. at 60" Reach

REACH:	18"	30"	42"	54"	60"
1,500 LB Load—2 PC—18' LG	550 LB	970 LB	1,450 LB	2,000 LB	N/A
1,200 LB Load—2 PC—18' LG	440 LB	780 LB	1,160 LB	1,600 LB	1,850 LB
1,500 LB Load—3 PC—27' LG	360 LB	620 LB	900 LB	1,200 LB	N/A
1,200 LB Load—3 PC—27' LG	280 LB	490 LB	720 LB	960 LB	1,100 LB

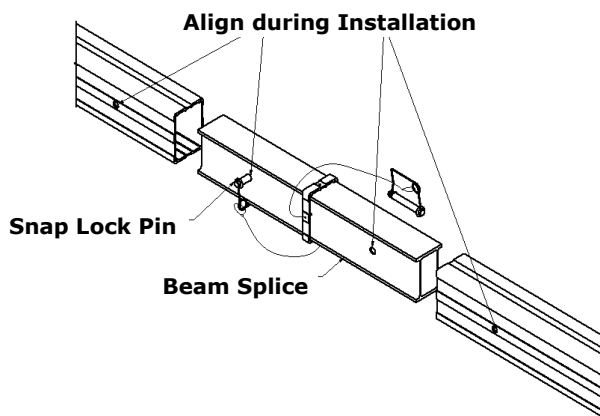
Notes

- Reach is the distance from the point of the wire rope at the end of the beam to the front supporting point, not to the vertical surface of the building. This reach should never exceed 4-1/2 ft when a 9 ft front beam is used.
- Always use sufficient counterweight and confirm that the necessary amount is in place before each use.

2.3—Installation Procedure for Outrigger Beam

The following steps outline the installation procedure for Winsafe Outrigger Beams. These directions assume that Beam Stands are not in use, and can be applied to the similar installation of 2-piece 18 ft and 3-piece 27 ft outrigger beams.

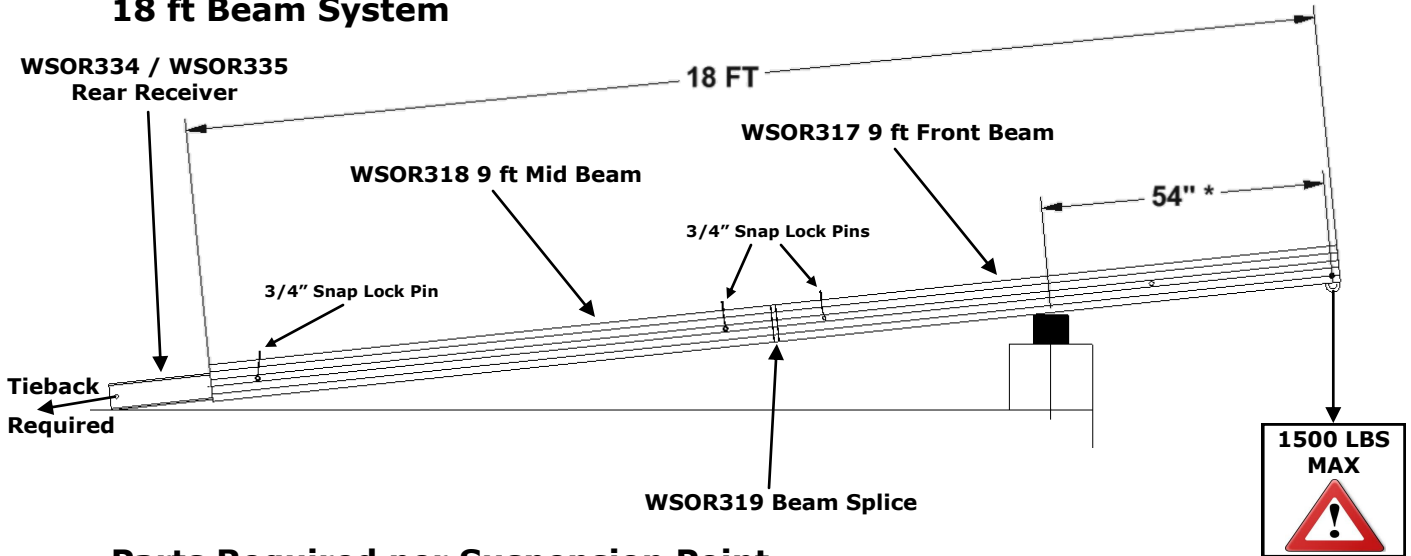
1. Select the desired length of the outrigger beam and determine the counterweight required. Select the appropriate beam sections and splices.
2. Insert either end of the beam splice as shown into the two beams being connected and insert both 3/4" dia. snap lock pins through the holes in the two beams and the corresponding holes on either end of the splice.
3. Position the beam where required and install the counterweights.
4. Attach the safety tie-backs.



Assembling Beams with Beam Splice

See Section 2.4 for the assembly of Outrigger Beams on Beam Stands.

18 ft Beam System



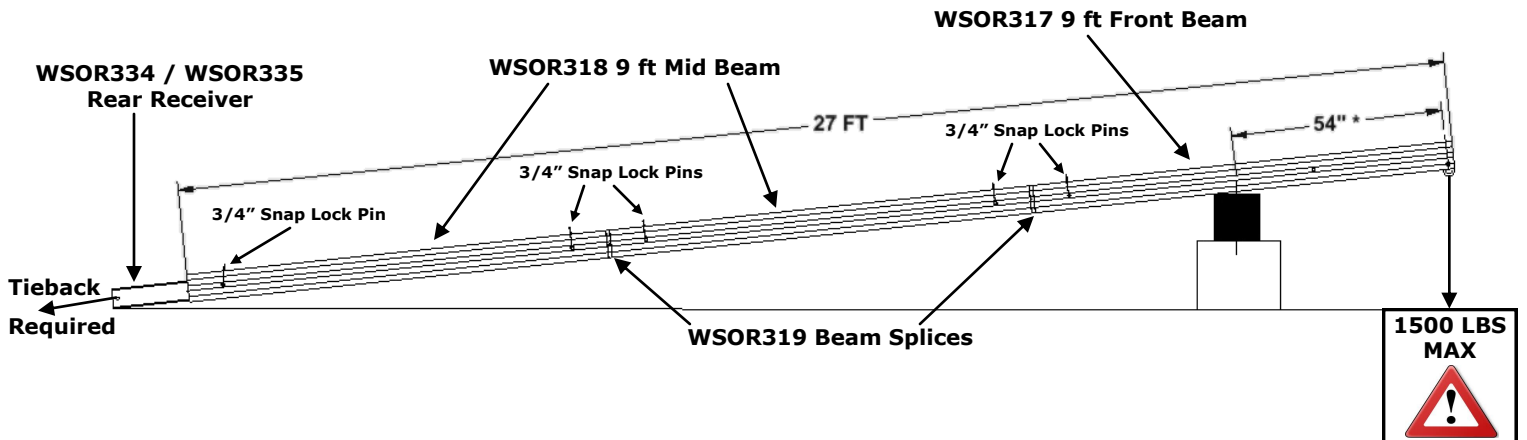
Parts Required per Suspension Point

→	WSOR317	9 ft Front Beam	x1
→	WSOR318	9 ft Mid Beam	x1
→	WSOR319	32" Beam Splices	x1
→	WSOR334 or WSSOR335	Rear CTWT Receiver	x1
→	WSOR###	Counterweight Holder	x1

Notes

- * **Reach may be increased up to 60 inches with a reduced load of 1,200 lbs.**
- Counterweight or clamp to structure in order to provide the necessary resistance to overturning with a safety factor of 4:1.
- Use a counterweight saddle or longhorn bar to secure additional weights as required.
- Always tie back in accordance with applicable regulations and safe work practices.
- All sections are Winsafe Beams with custom extrusion 7" H x 4" W @ 5.27 Lbs./Ft
- Material safety factors exceed 4 to 1 based on material yield strength with rated load at maximum reach.
- The roof, slab, and parapet of the structure (as applicable) must be verified as adequate to support loading by qualified persons.

27 ft Beam System



Parts Required per Suspension Point

→	WSOR317	9 ft Front Beam	x1
→	WSOR318	9 ft Mid Beam	x2
→	WSOR319	32" Beam Splices	x2
→	WSOR334 or WSSOR335	Rear CTWT Receiver	x1
→	WSOR###	Counterweight Holder	x1

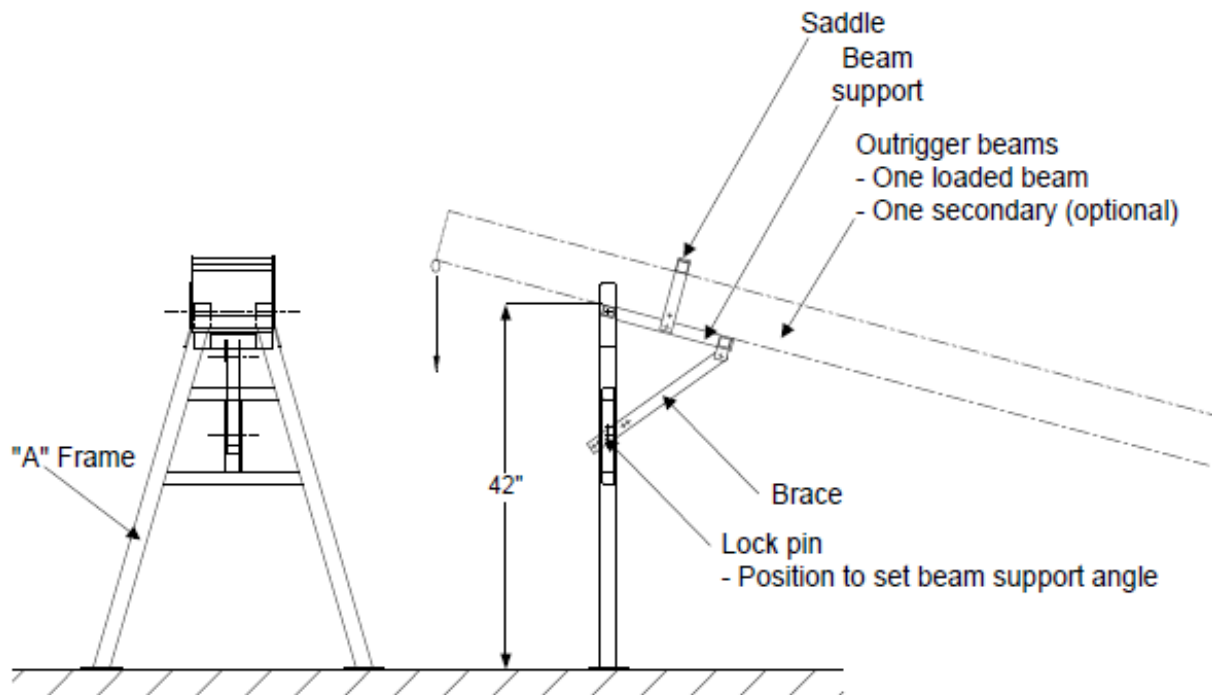
Notes

- ★ **Reach may be increased up to 60 inches with a reduced load of 1,200 lbs.**
- Counterweight or clamp to structure in order to provide the necessary resistance to overturning with a safety factor of 4:1.
- Use a counterweight saddle or longhorn bar to secure additional weights as required.
- Always tie back in accordance with applicable regulations and safe work practices.
- All sections are Winsafe Beams with custom extrusion 7" H x 4" W @ 5.27 Lbs./Ft
- Material safety factors exceed 4 to 1 based on material yield strength with rated load at maximum reach.
- The roof, slab, and parapet of the structure (as applicable) must be verified as adequate to support loading by qualified persons.

2.4—Installation Procedure for Outrigger Beams on Beam Stands

1. Raise the "A" frame to the vertical position and remove the retaining saddle.
2. Set the Beam on the support and adjust the support angle to match the Beam. Install the lock pin at the lower end of the brace to secure the support position.
3. Fit the retaining saddle snugly over the Beam, then insert the pin to secure it.
4. If a secondary suspension is used, a second beam may also be installed. With the Beam(s) in place, re-install the retaining saddle to secure the Beam(s) to the stand.
5. After the Beam (or Beams) is in place, install counterweights, tie-back(s), and suspension cables.

Beam Stand Installation



Notes

- If the Beam Stand is used on completed roofing, it is usually necessary to provide wood or other protective materials under the stand's feet. Take care to prevent protective load spreading materials from shifting or tipping when subjected to a load.
- Beam Stands with a 72" clearance are also available.

2.5—Installation Guidelines for WSOR333 Splice Adapter

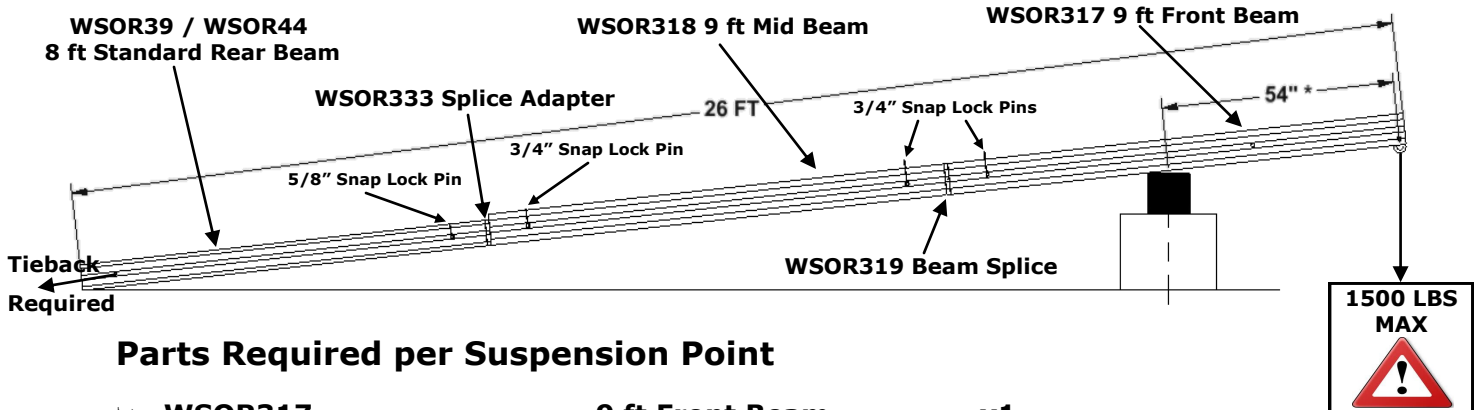
This section describes how the 1500 Series components can be used with sections from the standard 1000 Series Winsafe outrigger beams with the use of the WSOR333 Splice Adapter.



Never combine or assemble either Series of Winsafe outrigger beams that do not adhere to these guidelines.

- A standard 1000 Series beam must be used with 2 or more 1500 Series beams at the front of the outrigger beam system.
- Do not use the Splice Adapter and standard 1000 Series beams when using only 2 beam sections or when using a cable truss assembly.

26 ft Beam System using WSOR333 Splice Adapter



Parts Required per Suspension Point

→ WSOR317	9 ft Front Beam	x1
→ WSOR318	9 ft Mid Beam	x1
→ WSOR319	32" Beam Splice	x1
→ WSOR333	Splice Adapter	x1
→ WSOR39 or WSSOR44	SW or LH Rear Beam	x1
→ WSOR###	Counterweight Holder	x1

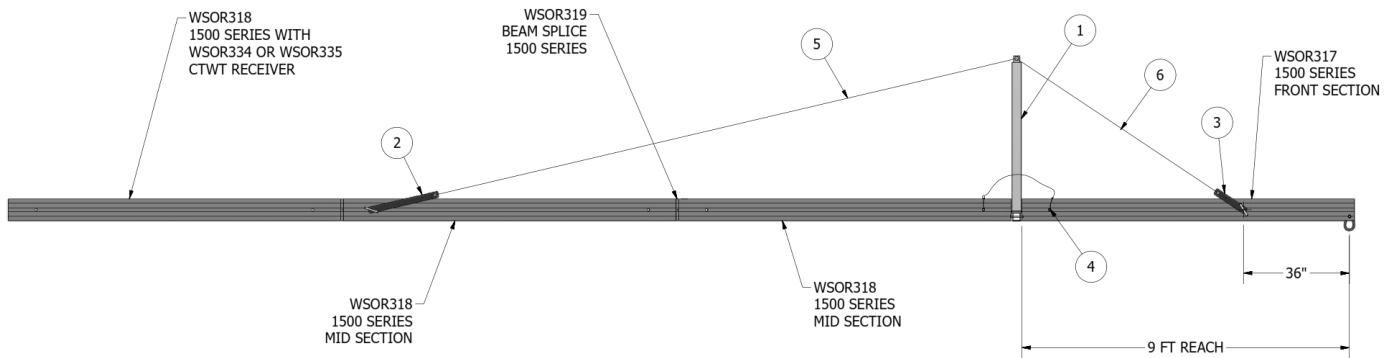
Notes

- * **Reach may be increased up to 60 inches with a reduced load of 1,200 lbs.**
- Counterweight or clamp to structure in order to provide the necessary resistance to overturning with a safety factor of 4:1.
- Use a counterweight saddle or longhorn bar to secure additional weights as required.
- Always tie back in accordance with applicable regulations and safe work practices.

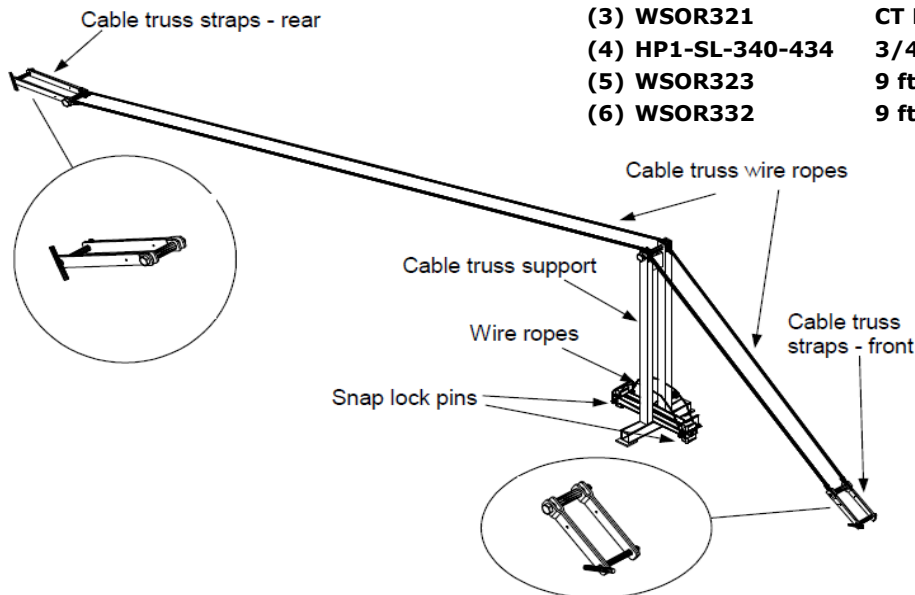
3 — CABLE TRUSS SYSTEMS

Similar to our standard outrigger beam systems, Winsafe offers 1500 Series Cable Truss Systems to provide 1,500 lbs capacity at longer reaches. The 1500 Series Cable Truss kits consist of the WSOR324 9 ft Cable Truss assembly or the WSOR420 13.5 ft Cable Truss assembly. All Winsafe outrigger beams that are required to complete the system are sold separately from the kits.

9 ft Reach Cable Truss System

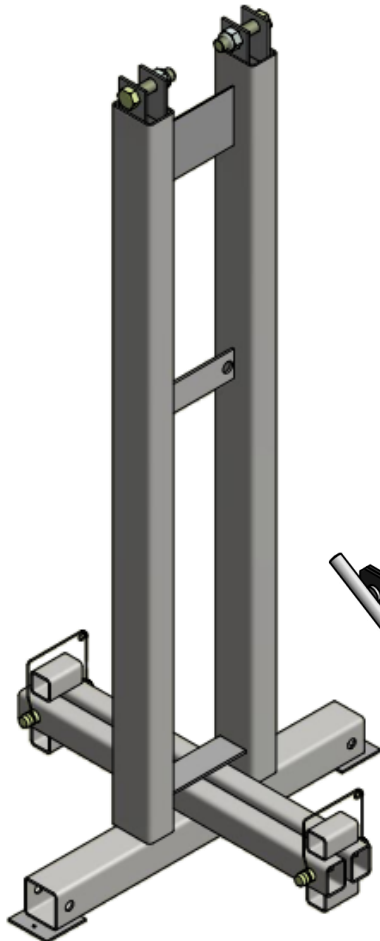


- | | |
|--------------------|-----------------------------------|
| (1) WSOR320 | 9 ft Cable Truss Support |
| (2) WSOR327 | CT Rear Strap Assembly |
| (3) WSOR321 | CT Front Strap Assembly |
| (4) HP1-SL-340-434 | 3/4" Dia. x 4.75" Lock Pin |
| (5) WSOR323 | 9 ft CT Rear Wire Rope |
| (6) WSOR332 | 9 ft CT Front Wire Rope |

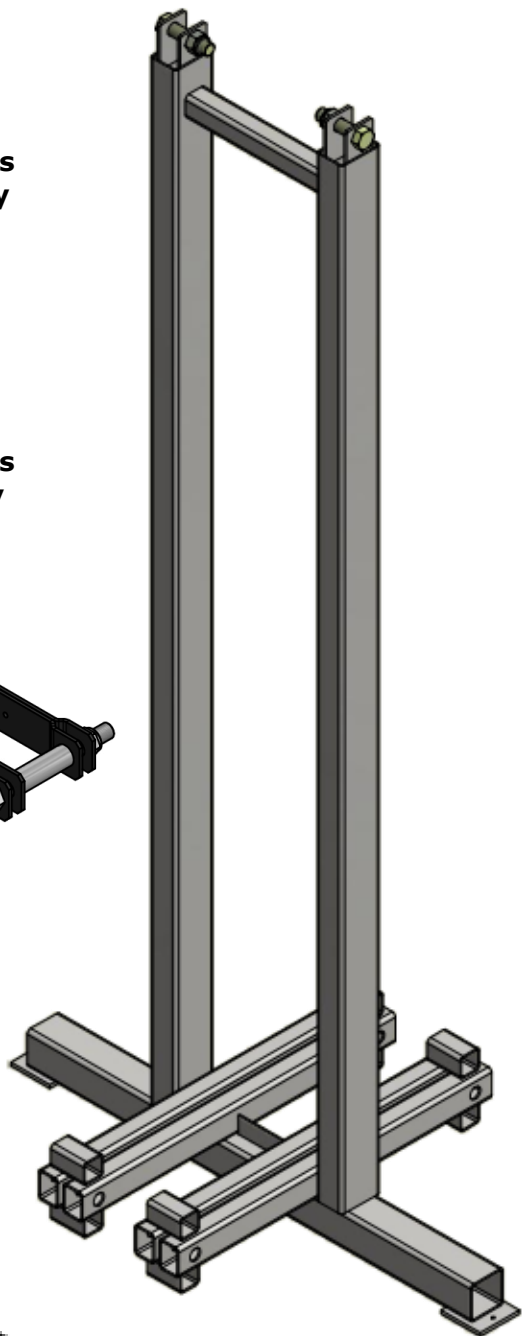


3.1—Main Components

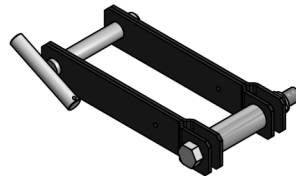
WSOR320 9 ft Cable Truss Support



WSOR419 12 ft Cable Truss Support



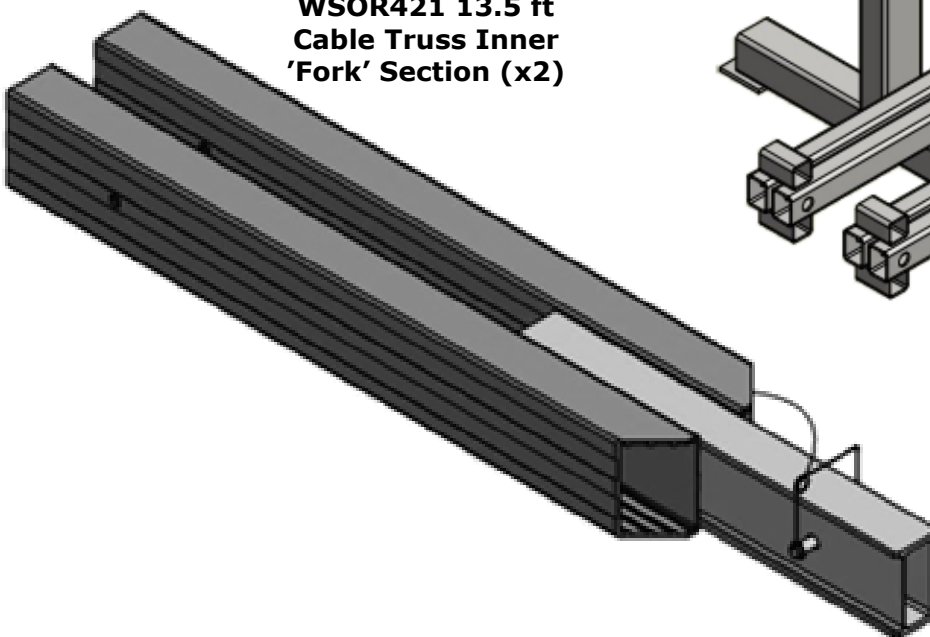
WSOR321 Cable Truss Front Strap Assembly



WSOR327 Cable Truss Rear Strap Assembly



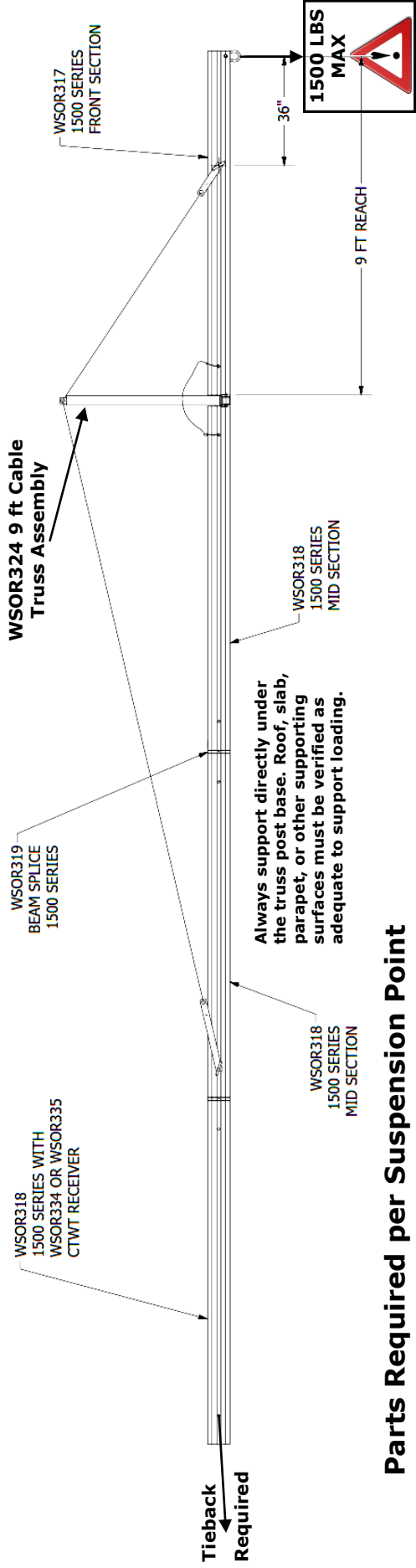
WSOR421 13.5 ft Cable Truss Inner 'Fork' Section (x2)



3.2—Installation Procedure for the 9 ft Cable Truss System

1. Installation and use of the 9 ft reach Cable Truss System requires a clear space of at least 27 ft behind the parapet. Winsafe Cable Truss Systems are assembled in the following sequence: Mid Beam, Beam Splice, second Mid Beam, Beam Splice, third Mid Beam, Cable Truss Mast, and lastly the Front Beam, as shown in the figure on the following page.
2. Assemble the Mid Beam (WSOR318), Beam Splice (WSOR319), second Mid Beam (WSOR318), Beam Splice (WSOR319), and third Mid Beam (WSOR318) by following the assembly procedure in Section 2.3. Confirm the retaining pins are inserted fully and locked with the retaining clip.
3. Attach the Front Beam (WSOR317) with the third Mid Beam through the Cable Truss Support (WSOR320). The Cable Truss Support pins to the third Mid Beam at the rear and Front Beam at the front, similar to a Beam Splice. Confirm that the retaining pins are inserted fully and locked with the retaining clip.
4. Check to ensure that cable truss wire ropes are attached to their respective Cable Truss Straps. Pin the Cable Truss Strap (WSOR321) to a hole provided in the Front Beam approximately 3 feet along its length using the 7/8" diameter Retaining Pin (WSOR331). Similarly, pin the Cable Truss Strap (WSOR327) to the middle Mid Beam using the 3/4" diameter Retaining Pin (WSOR328), replacing the normal splice pin.
5. Attach the suspension cable to the Front Beam pear link, or to the optional Sliding Collar (see following images). Only one suspension cable per beam may be attached.
6. When moving the Cable Truss System into position, confirm that the support for the front of the Beam is located directly beneath the feet of the Cable Truss Support. Do not support the Cable Truss System from the Beam on either side of the Cable Truss Support, as this will place the load directly on the Beam instead of the Support and can damage the aluminum Beam.
7. Install the counterweights in accordance with the chart on the following page. If the sliding collar is used, then the reach is determined by measuring the distance between the sliding collar and the Cable Truss Support vertical mast. The pear link is 9 feet from the Cable Truss Support.
8. Install tie-backs in accordance with safe work practices and local regulations.

3.3—9 ft Reach Cable Truss System Overview

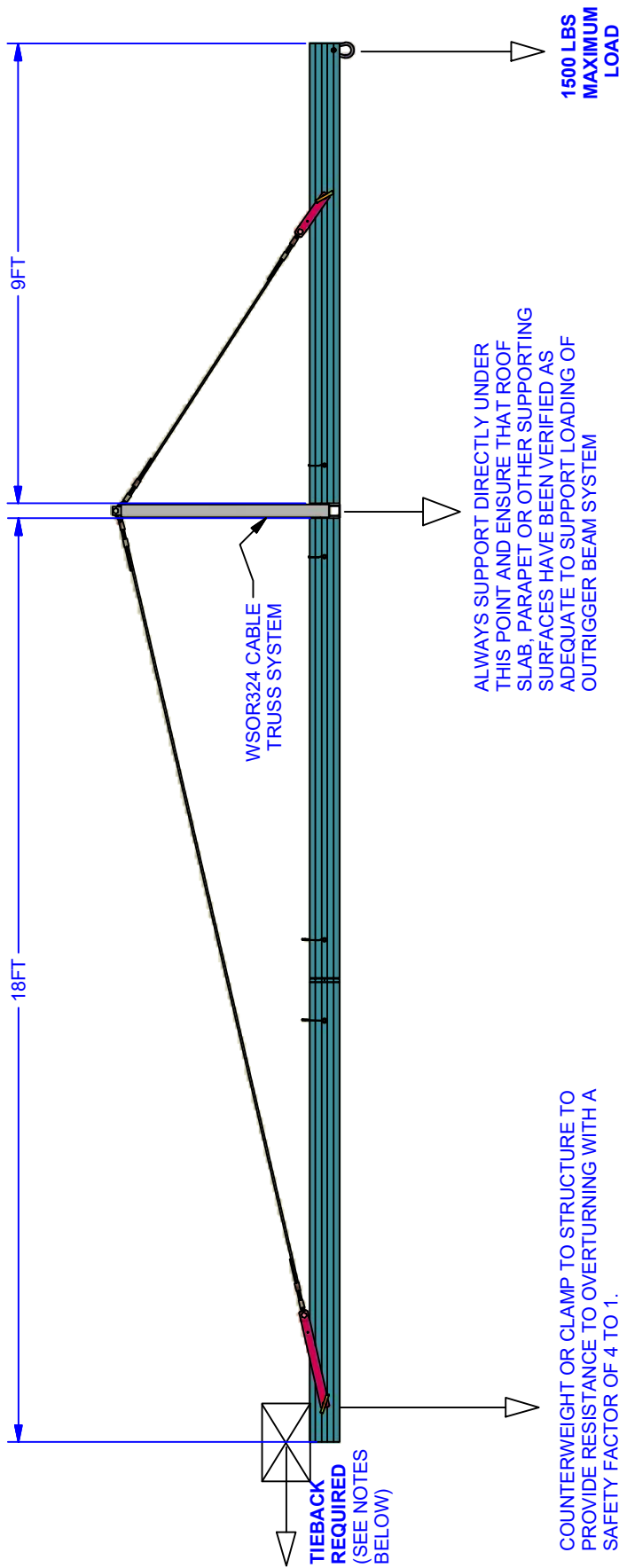


Parts Required per Suspension Point

WSOR324	9 ft Cable Truss Assembly	x1
WSOR317	9 ft Front Beam	x1
WSOR318	9 ft Mid Beam	x3
WSOR319	32" Beam Splices	x2
WSOR334 or WSOR335	Rear CTWT Receiver	x1
WSOR###	Counterweight Holder	x1 (x2 required depending on counterweight Requirement & arrangement)

Notes

- Counterweight or clamp to structure in order to provide the necessary resistance to overturning with a safety factor of 4:1.
- Use a counterweight saddle or longhorn bar to secure additional weights as required. A counterweight chart showing the required amount for sample reaches can be found on the next page.
- Always tie back in accordance with applicable regulations and safe work practices.
- All sections are Winsafe Beams with custom extrusion 7" H x 4" W @ 5.27 Lbs./Ft
- Material safety factors exceed 4 to 1 based on material yield strength with rated load at maximum reach.
- The roof, slab, and parapet of the structure (as applicable) must be verified as adequate to support loading by qualified persons.



COUNTERWEIGHT OR CLAMP TO STRUCTURE TO PROVIDE RESISTANCE TO OVERTURNING WITH A SAFETY FACTOR OF 4 TO 1.

REFER TO TABLE BELOW FOR REQUIREMENTS. USE COUNTERWEIGHT ADAPTERS TO SECURE ADDITIONAL WEIGHTS AS REQUIRED.

TIEBACK IN ACCORDANCE WITH APPLICABLE REGULATIONS AND SAFE WORK PRACTICES.

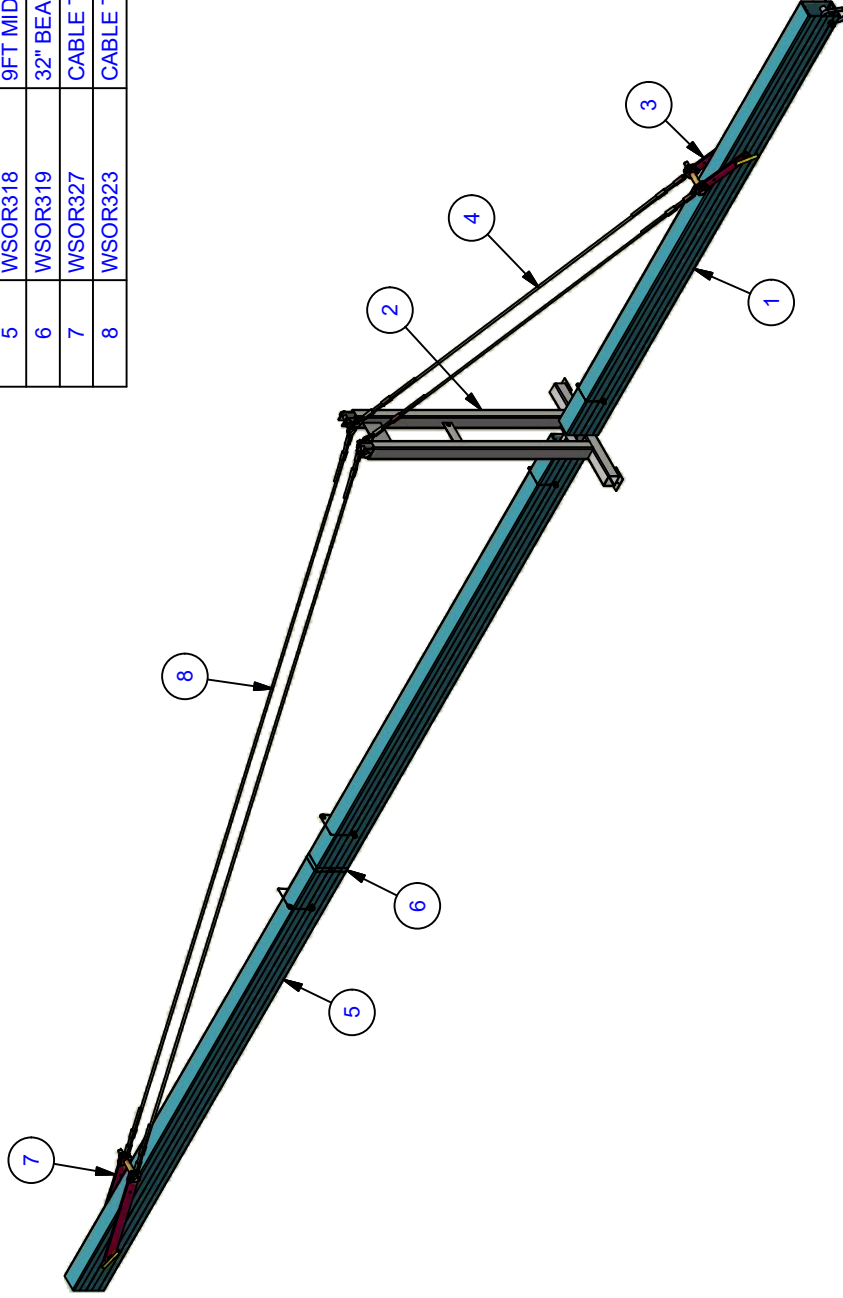
COUNTERWEIGHT REQUIRED		
#	MAX. LOAD	COUNTERWEIGHT
1	1000 LBS	2000 LBS
2	1500 LBS	3000 LBS

 WINSAFE <small>A DIVISION OF AAR ACCESS GROUP INC.</small>	REV. AND BOM SEE SHEET 2	 <small>UNLESS OTHERWISE SPECIFIED</small>	DRAWN: SS	DATE: 3/15/2018	SCALE:
	TITLE: 9FT 1500 SERIES CABLE TRUSS SYSTEM WITH 18 FT BACK	DO NOT SCALE <small>UNLESS OTHERWISE SPECIFIED</small>	CHECK: RV	APP: RV	DRAWING NO.: SK031418-1

This drawing is the property of Winsafe Corp. It is to be used only for the project and the information contained therein are property of Winsafe Corp., and will not be used in whole or in part for any other project without the written permission of Winsafe Corp.

Parts List

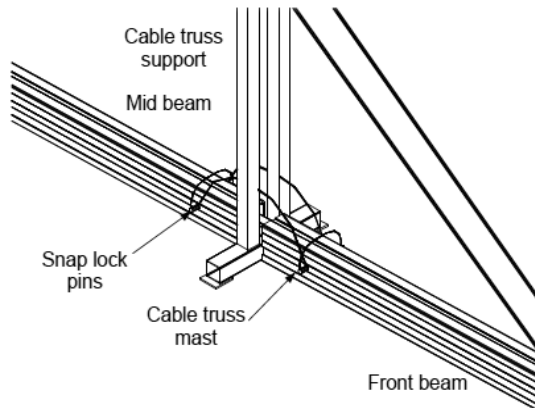
ITEM	PART NUMBER	DESCRIPTION	QTY
1	WSOR317	9FT FRONT - 1500 SERIES BEAM	1
2	WSOR320	9FT CABLE STRUSS STAND - 1500 SERIES	1
3	WSOR321	CABLE TRUSS STRAP - 10" ASSY 1500 SERIES	1
4	WSOR332	CABLE TRUSS FRONT ROPES	2
5	WSOR318	9FT MID BEAM - 1500 SERIES BEAM	2
6	WSOR319	32" BEAM SPLICE - 1500 SERIES	1
7	WSOR327	CABLE TRUSS STRAP ASSY - 1500 SERIES	1
8	WSOR323	CABLE TRUSS REAR ROPES - 1500 SERIES	2



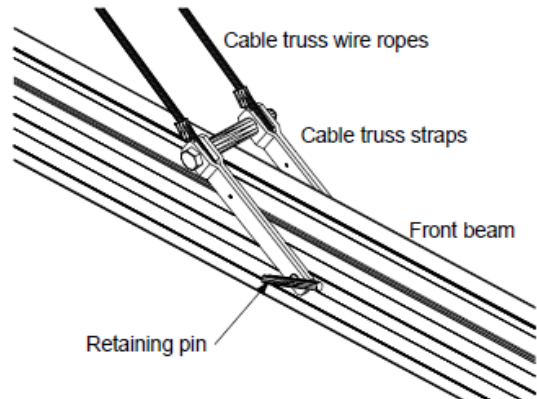
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	TITLE: 9FT 1500 SERIES CABLE TRUSS SYSTEM WITH 18 FT BACK	CHECK: RV APP: RV	DRAWING NO.: SK031418-1
DO NOT SCALE UNLESS OTHERWISE SPECIFIED <small>Dimensions are in inches unless otherwise specified</small>			DRAWING NO.: SK031418-1 SHEET 2 OF 2

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

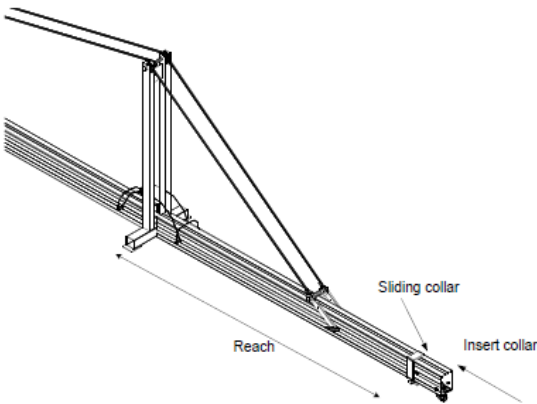
9 ft Reach Cable Truss Assembly Details



Assembly of Cable Truss Support to Beams

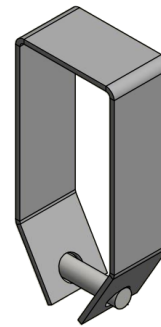


Assembly of Cable Truss Wires with Cable Truss Straps



Adjustable Reach with WSH6 Sliding Collar

WSH6 Sliding Collar (Optional)



Notes

- Cable Truss Masts for Cable Truss Supports must be held on solid surfaces capable of carrying the applied load. Do not use insulating boards or other non-rigid materials under the Cable Truss Mast.
- A Sliding Collar (WSH6) must be used when working at less than a 9 foot reach.
- Counterweight or clamp to the structure to resist overturning with a safety factor of 4 to 1.
- Use counterweight saddles or a long horn bar to secure additional weights as needed.
- Always tie back in accordance with applicable regulations and safe work practices.

3.4—Installation Procedure for 13.5 ft Cable Truss System

1. Installation of the 13.5 ft reach Cable Truss System requires a clear space of at least 33 ft behind the parapet. The Cable Truss System is assembled starting from the rear of the outrigger beam assembly and moving forward toward the front that will extend over the parapet.
2. Assemble the 9 ft Mid Beam (WSOR318), 32" Beam Splice (WSOR319), second 9 ft Mid Beam, 32" Beam Splice (WSOR319), third 9 ft Mid Beam, and Inner Forked Beam Section (WSOR421) by following the procedure presented in Section 2.3. Confirm that the retaining pins are inserted fully and locked with the retaining clip.
3. Attach the 9 ft Front Beam (WSOR317) to another Inner Forked Beam Section (WSOR421) that will be mounted to the other side of the 13.5 ft Cable Truss Support (WSOR419) facing the edge of the parapet. The second Inner Forked Section pins to a 9 ft Front Beam and the Cable Truss Support similar to how you connect to a Beam Splice. Confirm the retaining pins are inserted and retaining clips are locked.
4. Pin the Front Cable Truss Strap (WSOR321) to the hole in the 9 ft Front Beam approximately 46 inches from the front of the using the Retaining Pin. When pinning the strap assembly to the beams, confirm the retaining pins are fully inserted and the retaining clips are locked.
5. Pin the Rear Cable Truss Strap (WSOR327) to the 9 ft Mid Beam using the attached Retaining Pin instead of the 32" Beam Splice pin.
6. Attach one suspension cable to the 9 ft Front Beam pear link or to the optional Sliding Collar (WSH6).
7. When moving the Cable Truss System into position, take care to ensure the support for the front of the Beam is located directly beneath the feet of the Cable Truss Support. Do not support the Cable Truss System by the Beam on either side of the Cable Truss Support as this places the load on the aluminum beam instead of the Support and can cause damage to the Beam.
8. Install the counterweights according to the chart on the following pages. If a Sliding Collar is in use, then the reach is determined by measuring the distance between the Collar and the Cable Truss Support vertical mast. The pear link is 13.5 ft/162" from the Cable Truss Support.
9. Install tie-backs in accordance with safe work practices and local regulations.

3.5—13.5 ft Reach Cable Truss System Overview

Parts Required per Suspension Point

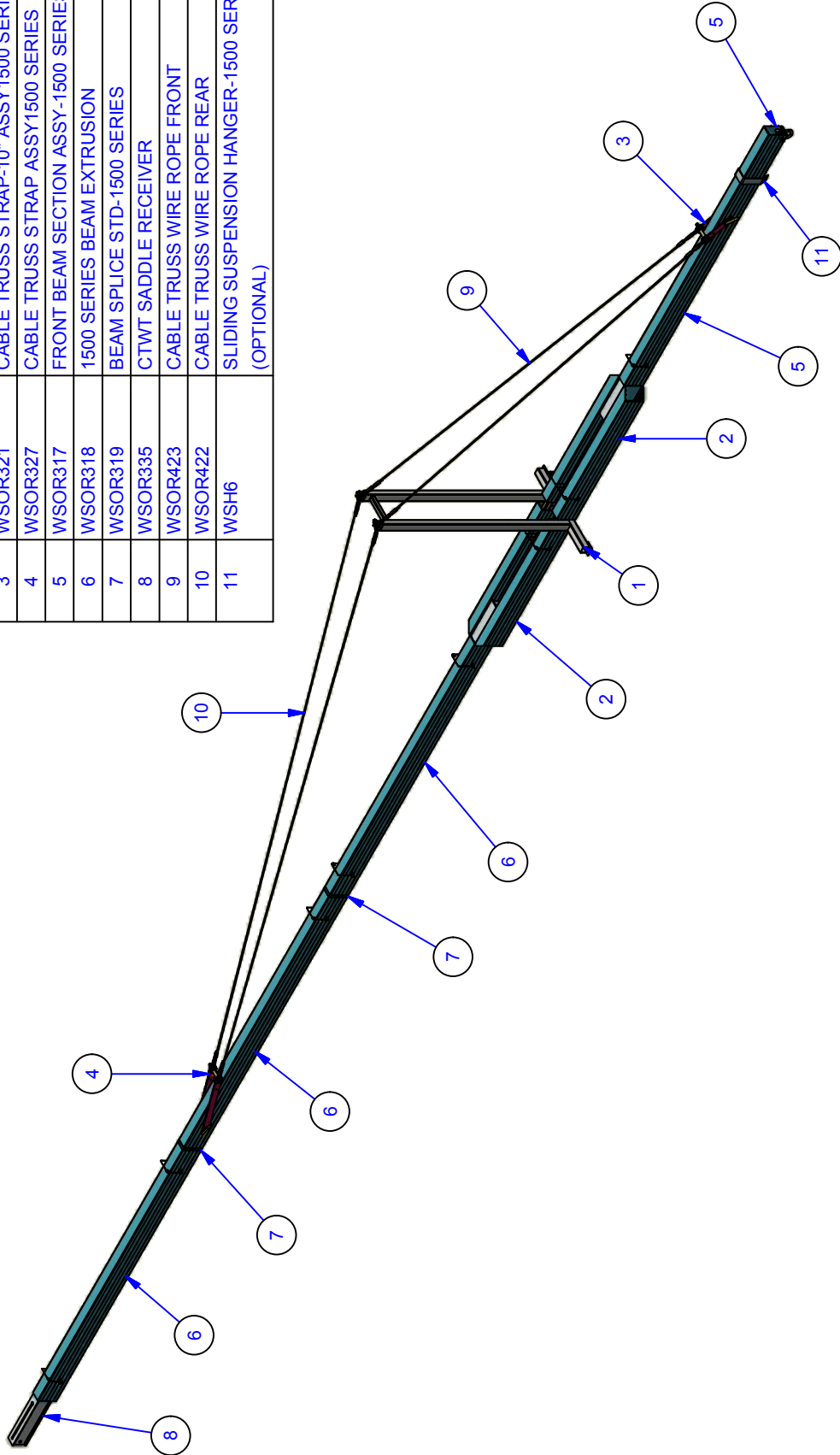
→	WSOR420	13.5 ft Cable Truss Assembly	x1
		WSOR420 assembly includes:	
	→	WSOR419 13.5 ft Cable Truss Support	x1
	→	WSOR421 Inner Forked Beam Section	x2
→	WSOR317	9 ft Front Beam	x1
→	WSOR318	9 ft Mid Beam	x3
→	WSOR319	32" Beam Splices	x2
→	WSOR334 or WSOR335	Rear CTWT Receiver	x1
→	WSOR###	Counterweight Holder	x1
		(x2 required depending on counterweight requirement & arrangement)	

Notes

- Counterweight or clamp to structure in order to provide the necessary resistance to overturning with a safety factor of 4:1.
- Use a counterweight saddle or longhorn bar to secure additional weights as required. A counterweight chart showing the required amount for sample reaches can be found on the next page.
- Always tie back in accordance with applicable regulations and safe work practices.
- All sections are Winsafe Beams with custom extrusion 7" H x 4" W @ 5.27 Lbs./Ft
- Material safety factors exceed 4 to 1 based on material yield strength with rated load at maximum reach.

Parts List

ITEM	PART NUMBER	DESCRIPTION	QTY
1	WSOR419 S	CABLE TRUSS SUPPORT 13.5 FT 1500 SERIES	1
2	WSOR421 S	13.5 FT CT INNER SECTION 1500 SERIES	2
3	WSOR321	CABLE TRUSS STRAP-10" ASSY1500 SERIES	1
4	WSOR327	CABLE TRUSS STRAP ASSY1500 SERIES	1
5	WSOR317	FRONT BEAM SECTION ASSY-1500 SERIES	1
6	WSOR318	1500 SERIES BEAM EXTRUSION	3
7	WSOR319	BEAM SPLICE STD-1500 SERIES	2
8	WSOR335	CTWT SADDLE RECEIVER	1
9	WSOR423	CABLE TRUSS WIRE ROPE FRONT	2
10	WSOR422	CABLE TRUSS WIRE ROPE REAR	2
11	WSH6	SLIDING SUSPENSION HANGER-1500 SERIES (OPTIONAL)	1



TITLE:
13.5' CABLE TRUSS ASSY - 1500 SERIES

DRAWN: FY **DATE:** 1/25/2016 **SCALE:**

CHECK: HV **APP:** HV

DRAWING NO.:
WSOR420-S

REV **DESCRIPTION** **DATE** **APPROVED**

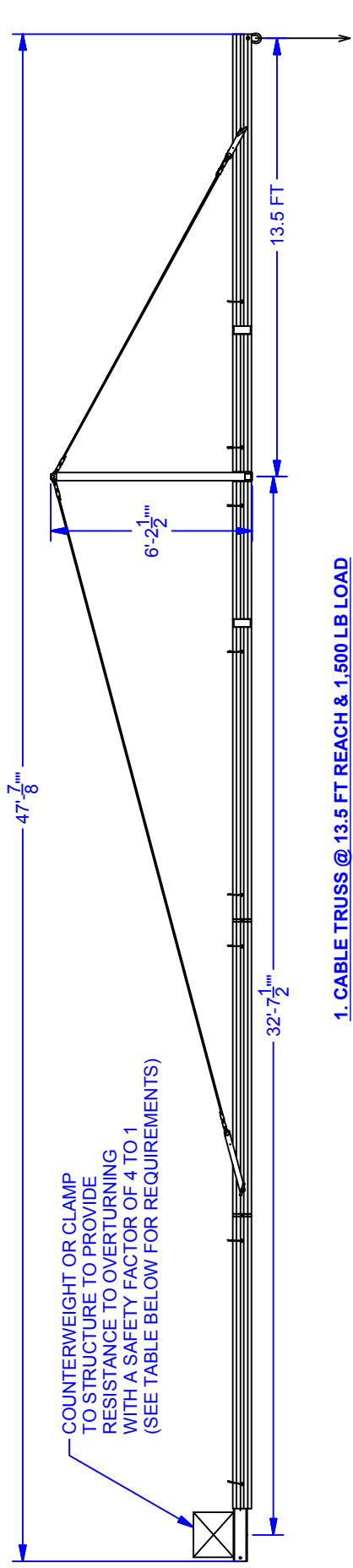
Ba ADDED P.4 FOR 1,000 LB CAPACITY APR 11, 18 RM

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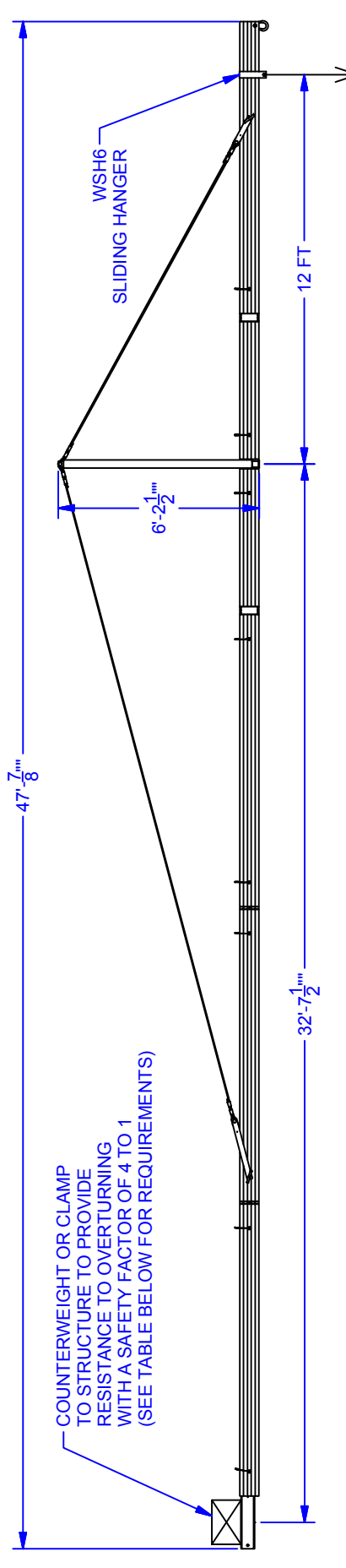
ANGULAR ± 0.5°
FRACTIONAL ± 1/32"
2 P.L.C. DEC. ± 0.001"
4 P.L.C. DEC. ± 0.0005"

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
Ba	ADDED P.4 FOR 1,000 LB CAPACITY	APR 11, 18	RM



1. CABLE TRUSS @ 13.5 FT REACH & 1,500 LB LOAD

CAPACITY @ 13.5FT REACH
= 1,500 LB



2. CABLE TRUSS @ 12 FT REACH & 1,500 LB LOAD

CAPACITY @ 12FT REACH
= 1,500 LB

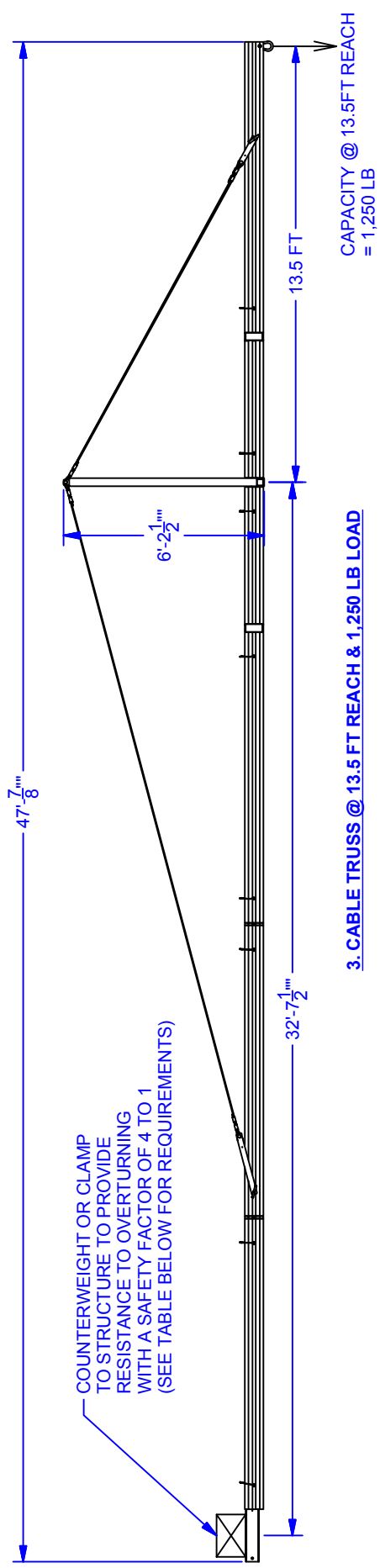
COUNTERWEIGHT REQUIREMENTS		
MAX. LOAD	REACH	COUNTERWEIGHT
1 1,500 LB	13.5 FT	2,500 LB
2 1,500 LB	12 FT	2,210 LB

NOTES:
ROOF, SLAB, PARAPET OR OTHER SUPPORTING SURFACES
MUST BE VERIFIED AS ADEQUATE TO SUPPORT LOADING
BY OTHERS

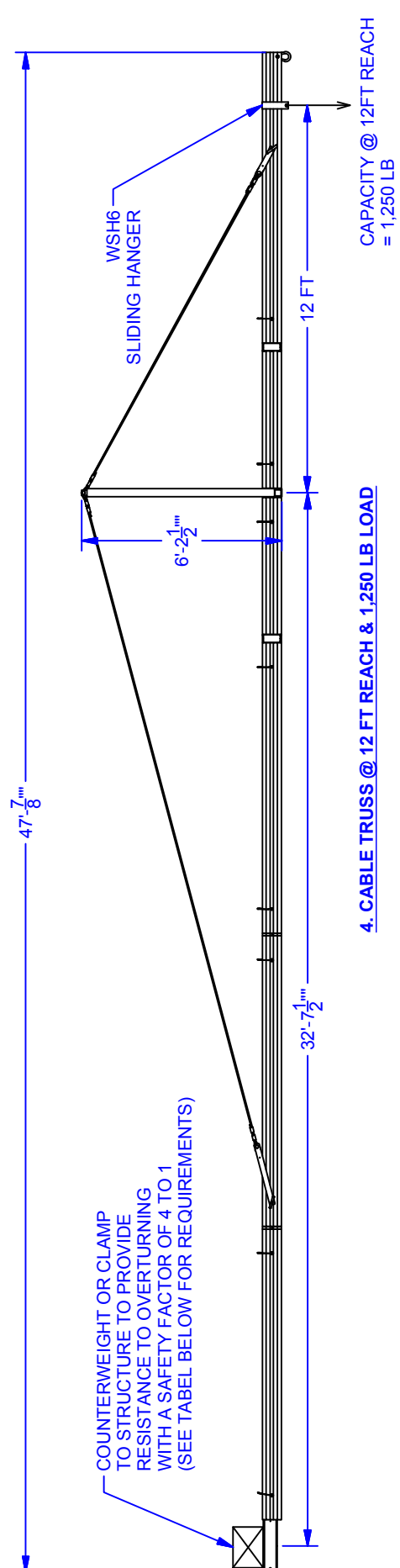


TITLE:
13.5' CABLE TRUSS ASSY - 1500 SERIES

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DO NOT SCALE	UNLESS OTHERWISE SPECIFIED	CHECK:	HV	APP:	HV
ANGULAR ± 0.5°	FRACTIONAL ± 1/32"	DRAWING NO.:		WSOR420-S	
2-P.L.C. REC. ± 0.01"	4-P.L.C. REC. ± 0.008"				



3. CABLE TRUSS @ 13.5 FT REACH & 1,250 LB LOAD



4. CABLE TRUSS @ 12 FT REACH & 1,250 LB LOAD

COUNTERWEIGHT REQUIREMENTS		
MAX. LOAD	REACH	COUNTERWEIGHT
1,250 LB	13.5 FT	2,070 LB
1,250 LB	12 FT	1,850 LB

NOTES:
 ROOF, SLAB, PARAPET OR OTHER SUPPORTING SURFACES
 MUST BE VERIFIED AS ADEQUATE TO SUPPORT LOADING
 BY OTHERS



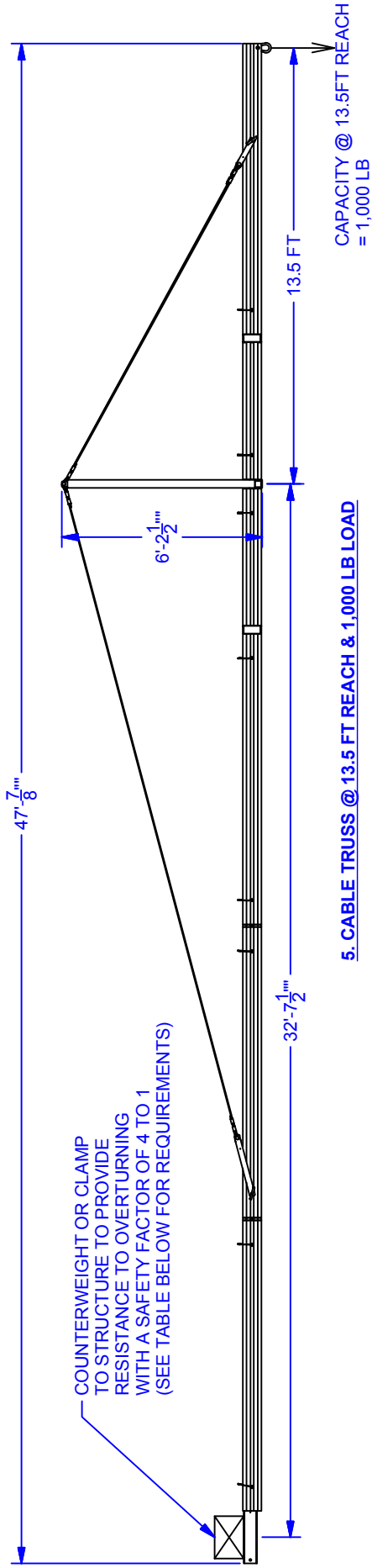
WINSAFE
 A DIVISION OF AAR ACCESS GROUP INC.

TITLE:
 13.5' CABLE TRUSS ASSY - 1500 SERIES

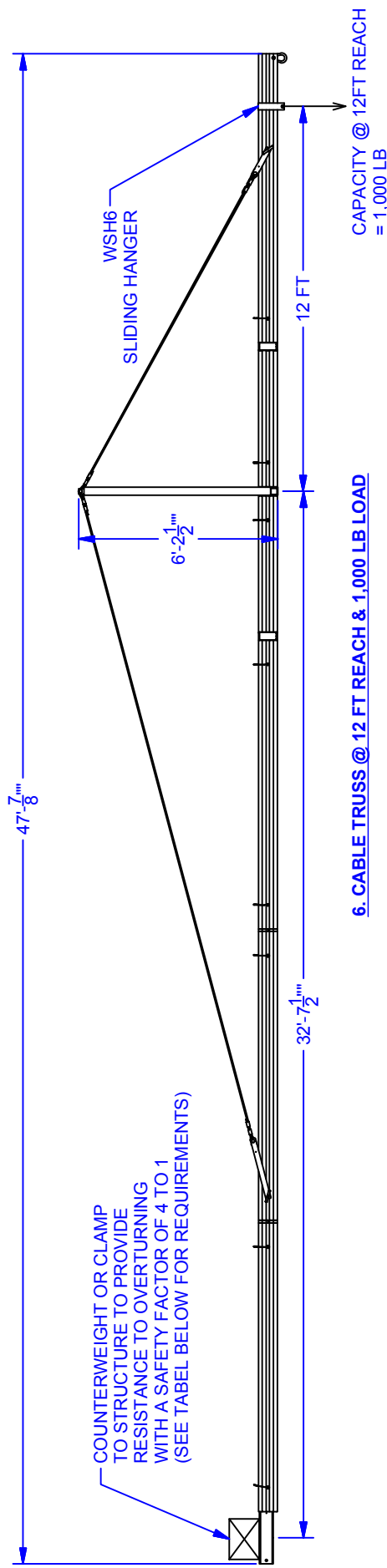
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DO NOT SCALE			
UNLESS OTHERWISE SPECIFIED			
ANGULAR	± 0.5°		
FRACTIONAL	± 1/32"		
2-P.L.C. DEC.	± 0.001"		
4-P.L.C. DEC.	± 0.0008"		

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DRAWING NO.:	WSOR420-S	
BY:	Ba	



5. CABLE TRUSS @ 13.5 FT REACH & 1,000 LB LOAD



6. CABLE TRUSS @ 12 FT REACH & 1,000 LB LOAD

COUNTERWEIGHT REQUIREMENTS		
MAX. LOAD	REACH	COUNTERWEIGHT
1,000 LB	13.5 FT	1,660 LB
1,000 LB	12 FT	1,480 LB

NOTES:
 ROOF, SLAB, PARAPET OR OTHER SUPPORTING SURFACES
 MUST BE VERIFIED AS ADEQUATE TO SUPPORT LOADING
 BY OTHERS



WINSAFE
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TITLE:
13.5' CABLE TRUSS ASSY - 1500 SERIES

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	UNLESS OTHERWISE SPECIFIED				
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	FRACTIONAL	± 1/32"			
	2-P.L.C. DEC.	± 0.001"			
	4-P.L.C. DEC.	± 0.0008"			

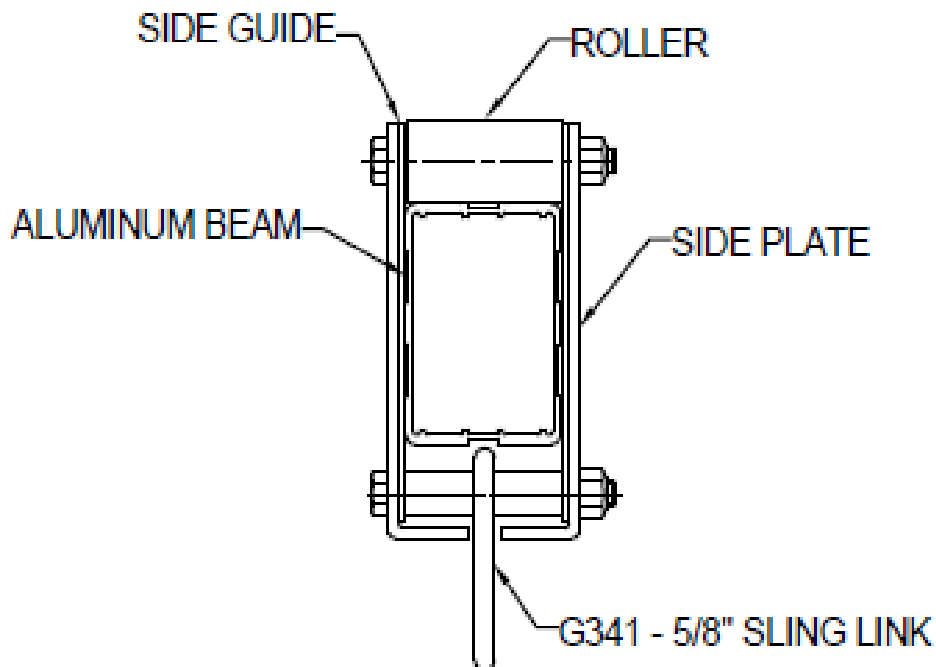
CHECK: HV	APP: HV
DRAWING NO.: WSOR420-S	Ba

SHEET 4 OF 4

4 — ROLLING TROLLEY

The Rolling Trolley Beam is used to provide safe, adjustable suspensions points in order to be able to provide suspensions points at varying lengths past the parapet and to access places such as sloped surfaces of buildings and other structures. Winsafe's 1500 Series Rolling Trolley (WSOR362) can be used in these configurations.

1. On a Straight Beam—5 ft max. reach; no extra components required.
2. On a 9 ft Cable Truss—9 ft max. reach; requires an 9 foot Front Beam and two sets of Beam Trolley Straps (WSOR443 x4).



**Aluminum Beam Trolley
(WSOR362)**

FALL ARREST EQUIPMENT

When working on suspended platforms, it is vital that all workers wear fall arrest equipment. While working on four-line platforms, the fall arrest system may consist of a horizontal lifeline on the platform to which the operators attach their lanyards. The operators on both two and four-line platforms must wear a full body harness with a lanyard. For two-line platforms, each operator must have an independent vertical lifeline system. This consists of a vertical lifeline, a roof anchorage, and personal fall arrest equipment including a full body harness, lanyard, and rope grab.

All components of the fall arrest system must be inspected prior to each daily use by the operator, and periodically by a competent and qualified person. This includes the lifeline, the anchorage, and the connector to the anchorage, as well as the worker's harness, lanyard, and rope grab. The rope grab, lanyard, and harness should be inspected to ensure they are functioning properly and do not show signs of wear. Any equipment that does not pass inspection must be immediately removed from service.

Lifelines

Use only polyester blend, nylon, or other synthetic fibre rope with a rated breaking strength in excess of 7500 lbs. Never use a natural fibre lifeline. The lifeline should always lay firm and never soft. The line should be free of strands that are cut, burned, or damaged in any way, as well as any lubricants, dirt, or any other substance that may negatively affect the operation of the rope grab. When the rope grab is installed on the lifeline, test it by exerting a moderate force on the large ring and ensure that it has locked on the lifeline. Then cease applying the force and confirm the rope grab moves freely in both directions on the line.

Install the lanyard on the line by attaching the double locking snap hook of the lanyard to the large attachment ring. Only use lanyards with double locking snap hooks. Test the attachment of the lanyard to the attachment

ring by exerting a force on the lanyard. Once the lanyard is attached to the rope grab, use the lanyard to raise or lower the rope grab. Never hold the cam open as you would be interfering with the operation of the rope grab. While work is in progress, position the rope grab at shoulder height on the lifeline.

Safety Codes

Always follow all applicable safety codes for the region you are working in. The anchorage should be located in line with the work area to eliminate the possibility of a pendulum fall. The lifeline must have a snap hook, ladder snap, or carabineer that is compatible with the anchorage and rated at 5000 lbs. or greater.

The Safety Guidelines (Code of Safe Practices) sets forth some common sense procedures for safely erecting, dismantling and using suspended scaffolding equipment. Since equipment and scaffolding systems differ, reference must always be made to the instructions and procedures of the supplier and/or manufacturer of the equipment.

Since field conditions can vary and are beyond the control of Winsafe, safe and proper use of scaffolding is the sole responsibility of the employer and user. Any suspended stages, modular outrigger beam components, or system layouts provided by Winsafe that are not covered in this manual can only be used with proper design, engineering, and instruction. Always consult with a competent person, the scaffold supplier, or Winsafe directly if you have any questions regarding the safe use of this equipment.

CODE OF SAFE PRACTICES

It shall be the responsibility of all employers and users to read and comply with the following common sense guidelines as they pertain to the safety of all personnel during the erection and use of suspended powered scaffolds, modular beams, and accessories. These guidelines are not all-inclusive, nor do they supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If a portion of these guidelines are in conflict with any state, provincial, local, or federal statute or regulation, said statute or regulation shall supersede these guidelines. It shall be the responsibility of each employer and user to comply there with and also to be knowledgeable of government regulations pertaining to suspended power scaffolding, modular beams, and accompanying accessories.

A. GENERAL GUIDELINES

1. Post these safety guidelines in a conspicuous place and ensure that all persons who erect, use, locate or dismantle suspended scaffold systems are fully aware of them.
2. NEVER TAKE CHANCES — If you are at all in doubt concerning the safety or use of suspended scaffold, consult you scaffold supplier.
3. FOLLOW ALL EQUIPMENT MANUFACTURER'S RECOMMENDATIONS — Along with all state, provincial, local, and federal codes, ordinances, and regulations pertaining to suspended scaffolding.
4. CHECK FOR HAZARDS — Survey the job site for hazards such as exposed electrical wires, obstructions that could overload or tip the suspended scaffold when raised or lowered, unguarded roof edges, inadequate openings, missing tieback anchorages, or the need for overhead protection when exposed to a danger from falling objects. These conditions must be checked for, and corrected if needed, before installing or using suspended scaffold systems.

5. INSPECT ALL EQUIPMENT BEFORE EACH USE — Never use equipment that is damaged or defective in any way. Tag said equipment and remove it from the job site.
6. ALWAYS USE FALL ARREST EQUIPMENT — When using suspended scaffolds, always wear appropriate P.P.E. (personal protective equipment) for working at height, as well as all other site-required P.P.E. (See Section E for further details).
7. ALWAYS OBEY MANUFACTURER'S INSTRUCTIONS — Take care to erect, use, and dismantle suspended powered scaffold equipment in accordance with their design and the manufacturer's recommendations.
8. NEVER TAMPER WITH EQUIPMENT — Do not erect, dismantle, or alter suspended scaffold systems unless under the supervision of a competent person. Do not use the suspended scaffold for purposes or in ways for which it was not intended.
9. USERS MUST BE TRAINED — Specifically on how to safely operate equipment and how to handle an emergency situation. If in doubt, consult a qualified person.
10. INSPECT ERECTED SCAFFOLDS — All scaffolds erected and in use should be continuously inspected by the users to ensure they are maintained in safe working condition. Report any unsafe findings to your supervisor.
11. ALWAYS BE AWARE OF WEATHER CONDITIONS — Take care when operating and storing equipment in adverse or windy conditions.
12. CHECK FOR POWER LINES — Suspended platforms must never be operated near live power lines unless proper precautions are taken. Consult your local power service company for advice.
13. DO NOT WORK ON SCAFFOLDS UNDER THE FOLLOWING CONDITIONS
 - When covered by snow, ice, or other slippery materials. Except as necessary for the removal of said substances.
 - During storms or high wind, unless a competent person has determined it is safe and workers are protected by personal fall arrest systems and/or wind screens (Modular Platforms must be secured against wind loads).
 - If you feel dizzy, unsteady in any way, or are impaired by drugs, alcohol, or any other substance.

B. RIGGING GUIDELINES

1. When rigging on exposed roofs or floors, wear fall arrest equipment. When rigging from overhead supports, such as bridges or beams, wear fall arrest equipment.
2. Roof anchorages, parapet clamps, outrigger beams, or other supporting devices, including tiebacks and their anchorages, must be capable of supporting the rated load of the hoist with a safety factor of four.
3. Verify that the building or structure will support the suspended loads with a safety factor of at least four.
4. Overhead rigging, including counterweights, must be secured from unintentional movement in any direction.
5. Suspended scaffold outrigger beams must be stabilized either by counterweights or bolts (direct connections). Counterweights used to balance the Modular Platform must be capable of resisting at least four times the tipping moment imposed when the scaffold is operating at the rated load of the hoist, or a minimum of 1½ times the tipping moment imposed by the scaffold when it's operating at the stall load of the hoist; whichever is greater.
6. Counterweights must not be removed from the scaffold system until the Modular Platform is lowered to the ground and disassembled.
7. Outrigger Beams that do not use counterweights must be installed and secured on the roof structure with devices specifically designed for that purpose.
8. Tie back all transportable rigging devices with wire rope and hardware that has strength equal to the hoist rope.
9. Install tiebacks at right angles to the face of the building and secure, without slack, to a structurally sound portion of the structure. In the event tiebacks cannot be installed directly behind the beams, use two tiebacks, at opposing angles to prevent movement.
10. Always rig so the suspension points are directly above the hoisting machines.
11. The platform must be secured to prevent swaying when in use. Do not tie it to window cleaning anchors other than to secure it when not in use.
12. Never allow the wire suspension rope to become slack unless the platform is safely resting on a flat surface, or another suspension rope has been rigged to the platform.

C. WIRE ROPE AND HARDWARE GUIDELINES

1. Scaffold components from different manufacturers must not be intermixed unless they fit together without being forced and the scaffold's structural integrity is maintained.
2. Scaffold components from different manufacturers should not be modified to make them fit together, unless a competent person determines the resulting scaffold is structurally sound.
3. Use only wire rope and attachments as specified by the hoisting machine manufacturer. Do not use wire rope that is kinked, bird-caged, corroded, undersized, or damaged in any way.
4. Suspension ropes supporting adjustable suspension scaffolds must have a diameter large enough to permit proper functioning of both brake and hoist mechanisms. The load end of wire suspension ropes must be equipped with proper size thimbles, and secured by eye-splicing or other equivalent means.
5. The stall load of any scaffold hoist must not exceed three times its rated load.
6. When winding drum hoists are used and the scaffold is extended to its lowest point of travel, there must be enough rope remaining to wrap four times around the drum.
7. Clean, lubricate, and handle wire rope in accordance with the wire rope or hoist manufacturer's instructions to avoid kinks and damage.
8. Coil and uncoil wire rope in accordance with the wire rope or hoist manufacturer's instructions.
9. Use thimbles at all wire rope suspension terminations.
10. Use J-type clamps or swaged fittings to fasten wire ropes.
Do not use U-Clamps.
11. Tighten wire rope clamps in accordance with the clamp manufacturer's instructions.
12. Wire ropes used with traction hoists must have prepared ends in accordance with the manufacturer's recommendations.
13. Inspect wire rope during each ascent and descent.
14. Do not expose wire rope to fire, undue heat, corrosive atmosphere, chemicals, to passage of electrical currents, or to damage from tools or improper handling.

D. POWER SUPPLY GUIDELINES

1. BE SURE YOUR POWER SUPPLY CONFORMS TO HOIST MANUFACTURERS RECOMMENDATIONS.
2. Ground all electrical power sources, power cord connections, and protect circuit breakers.
3. Use power cords or air hoses of proper size and ensure that they are long enough for the job.
4. Power cord or air hose connections must be restrained to prevent their separation.
5. Tie off power cords or air hoses to the suspended scaffold to prevent them from falling.
6. Protect power cords or air hoses at sharp edges.
7. Ensure that air hoists have a clean supply of lubricated air.

E. FALL ARREST EQUIPMENT GUIDELINES

1. EACH PERSON ON A SUSPENDED POWERED SCAFFOLD MUST BE ATTACHED TO A FALL ARREST SYSTEM AT ALL TIMES.
2. Each lifeline must be fastened to a separate anchorage.
3. When wrapping lifelines around structural members, the lines must be protected and a suitable anchorage system must be used.
4. Protect lifelines at sharp corners to prevent chafing.
5. Rig fall arrest systems to prevent free falls in excess of six feet.
6. Lifelines must be suspended freely without contacting structural members or the building façade.
7. Use a lifeline size and construction that is compatible with the fall arrester and complies with applicable safety codes.
8. Be sure the fall arrester is installed on the lifeline in the proper direction, above your head, and in accordance with the manufacturers' recommendations.
9. Use a harness that is properly sized and fitted.
10. Be sure your harness has a lanyard attached to the D-ring at the center of the back.
11. Guardrail systems must be installed along all open sides and ends of platforms, and must be in place before the scaffold is released for use by employees, other than erection/dismantling crews.

12. When screens and mesh are used, they must extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports.

F. ACCESS

1. Suspended scaffolds must be tied or otherwise secured to prevent them from swaying. This is to be determined as necessary by a competent person. Window cleaning anchors may be used for this purpose. Angulated roping and static lines may also be used.
2. Direct access to or from another surface is permitted only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.
3. For two-point adjustable suspension scaffolds, access to one platform from another may only take place when the platforms are at the same height, or are abutting, or the platforms have walk-through stirrups specifically designed for that purpose.
4. For most activities, there must be no more than a 14 inch gap between the scaffold platform and the structure being worked on. For lathing and plastering, a gap of 18 inches is permitted.

G. STABILITY

1. Suspended scaffolds must be tied, or otherwise secured, to prevent them from swaying, as determined to be necessary by a competent person. Window cleaning anchors may be used for this purpose. Angulated roping and static lines may also be used.
2. No more than two employees should occupy suspension scaffolds designed for a working load of 500 pounds (non-mandatory).
3. No more than three employees should occupy suspension scaffolds designed for a working load of 750 pounds (non-mandatory).
4. Scaffolds and modular platforms shall be reconfigured on the ground and only under the supervision and direction of a competent person.

H. SOME ADDITIONAL GUIDELINES

1. USE ALL EQUIPMENT AND ALL DEVICES IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. Always read and follow all labels affixed to the equipment. Never rig or use modular outrigger beam components if any label is obscured or missing. Contact the equipment supplier or Winsafe for a replacement label.
2. Do not overload, modify, or substitute equipment.
3. Scaffold components from different manufacturers must not be intermixed, unless they fit together without being forced or modified, and while preserving the structural integrity of the scaffold setup.
4. Always refer to the label charts on you suspended stages to determine the correct working load for your platform configuration. The total combined weight of each worker and all materials should not exceed the rated working load.
5. Never attempt to straighten or reuse a deformed piece of outrigger beam or suspended platform equipment.
6. Do not apply impact loads to any parts.
7. Any parts that have been exposed to excessive heat, as in the case of fire, should be immediately removed from service and destroyed due to loss of structural strength.
8. Do not allow unstable objects, such as barrels, boxes, loose brick, tools, and debris to accumulate on the work surface.
9. Care should be taken to operate the platform hoists such that the working or standing surface remains level.
10. Before commencing work operations, pre-load wire rope and equipment with the maximum working load, then retighten rigging clamps to the manufacturer's recommendations.
11. Use guard rails, midrails, and toeboards as required by local, state, and federal regulations. Their use is recommended in all cases.
14. All components must be securely fastened to prevent them from falling off the platform.
15. Use bumper rollers or buffers to prevent damage to the structure or equipment.
16. Do not use acids or other corrosive substances on a platform without consulting the platform manufacturer for specific instructions.

17. Clean and service equipment regularly.
18. Always maintain at least four wraps of wire rope on drum type hoists.
19. Traction hoists must have wire rope that is long enough to reach from the highest point of support to the lowest possible landing, plus reeving lengths.
20. Do not join platforms unless the installation was designed for that purpose.
21. When re-rigging for another drop, be sure sufficient wire rope is available before moving the suspended scaffold system horizontally.
DO NOT MOVE SUSPENDED SCAFFOLDS HORIZONTALLY WHEN OCCUPIED IF IT IS NOT SPECIFICALLY DESIGNED TO DO SO.
22. Do not permit oil, grease, or slippery material to accumulate on climbing or gripping surfaces.
23. Do not use platform floors if the surface is damaged or has deteriorated.
24. Always refer to the label charts on your suspended stages to determine the correct working load for your platform setup. The total combined weight of each worker and all materials should not exceed the rated working load for your platform setup. Do not overload.
25. Do not ride the platform if it is being moved to another location. Tools, materials, and equipment should not be left on platforms that are being moved.
26. Scaffolds and tools shall not be allowed to contact unprotected, energized electrical lines or equipment. Maintain a minimum safe distance of at least 10 ft (3 M). Consult the power company to shut off power or insulate/relocate the line if working closer than 10 ft (3 M).
27. Each end of a platform shall extend over its suspension support center line no more than shown on the platform labels or platform layout drawing of that specific length or configuration.
28. WHEN WELDING FROM SUSPENDED SCAFFOLDS:
 - a) Be sure the platform is grounded to the structure.
 - b) Insulate wire rope above and below the platform to protect from damage by the welding torch or electrode.
 - c) Insulate the wire rope at its suspension point and be sure it does not contact the structure along its entire length.