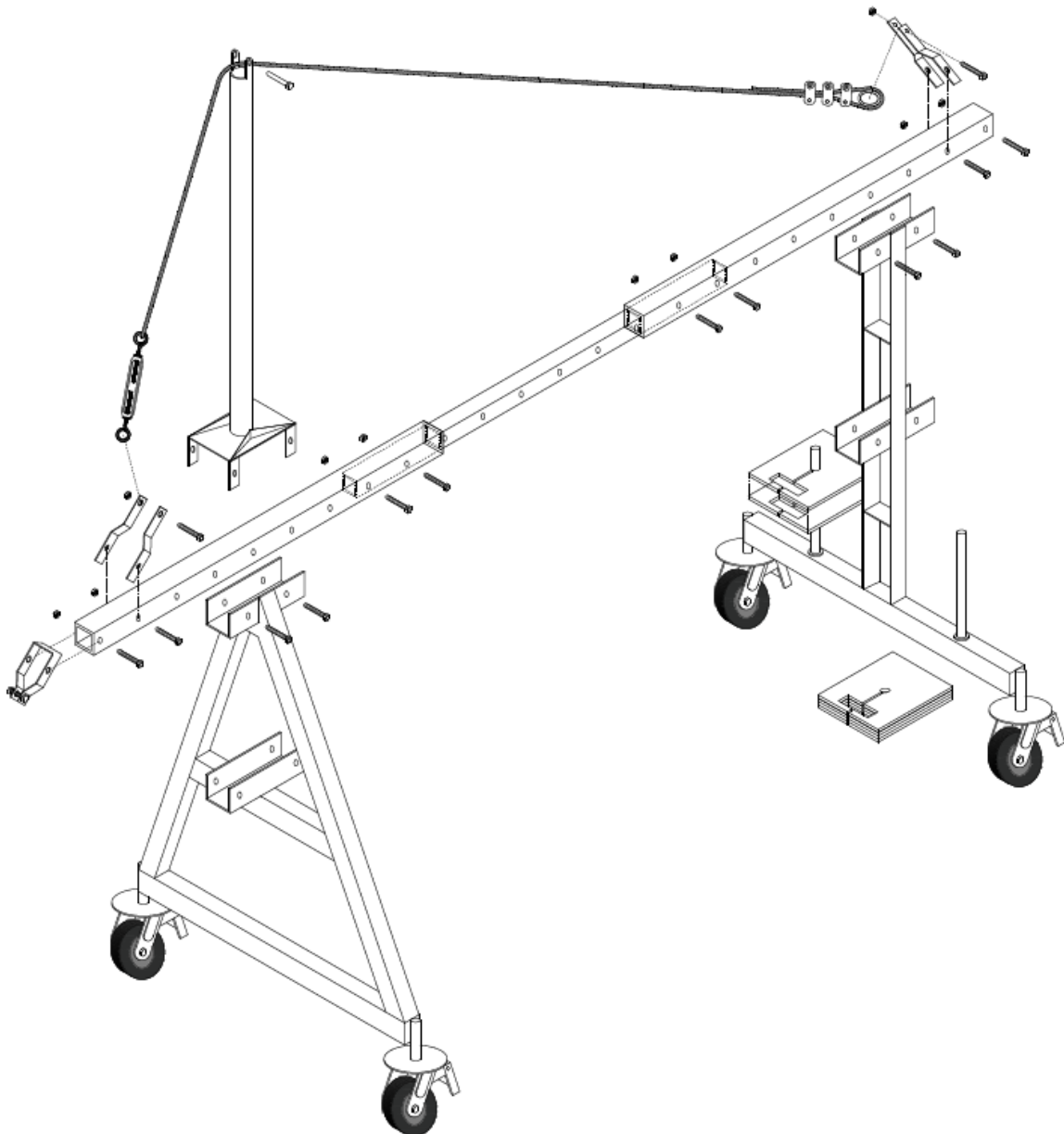


TRIANGULAR ROOF OUTRIGGER INSTRUCTIONS MANUAL

THIS INSTRUCTION MANUAL INCLUDES THE FOLLOWING:

1. General Rigging Instructions.
2. Outrigger Description.
3. Where and how to use a Triangular Roof Outrigger.
4. Counterweight Calculation Chart.



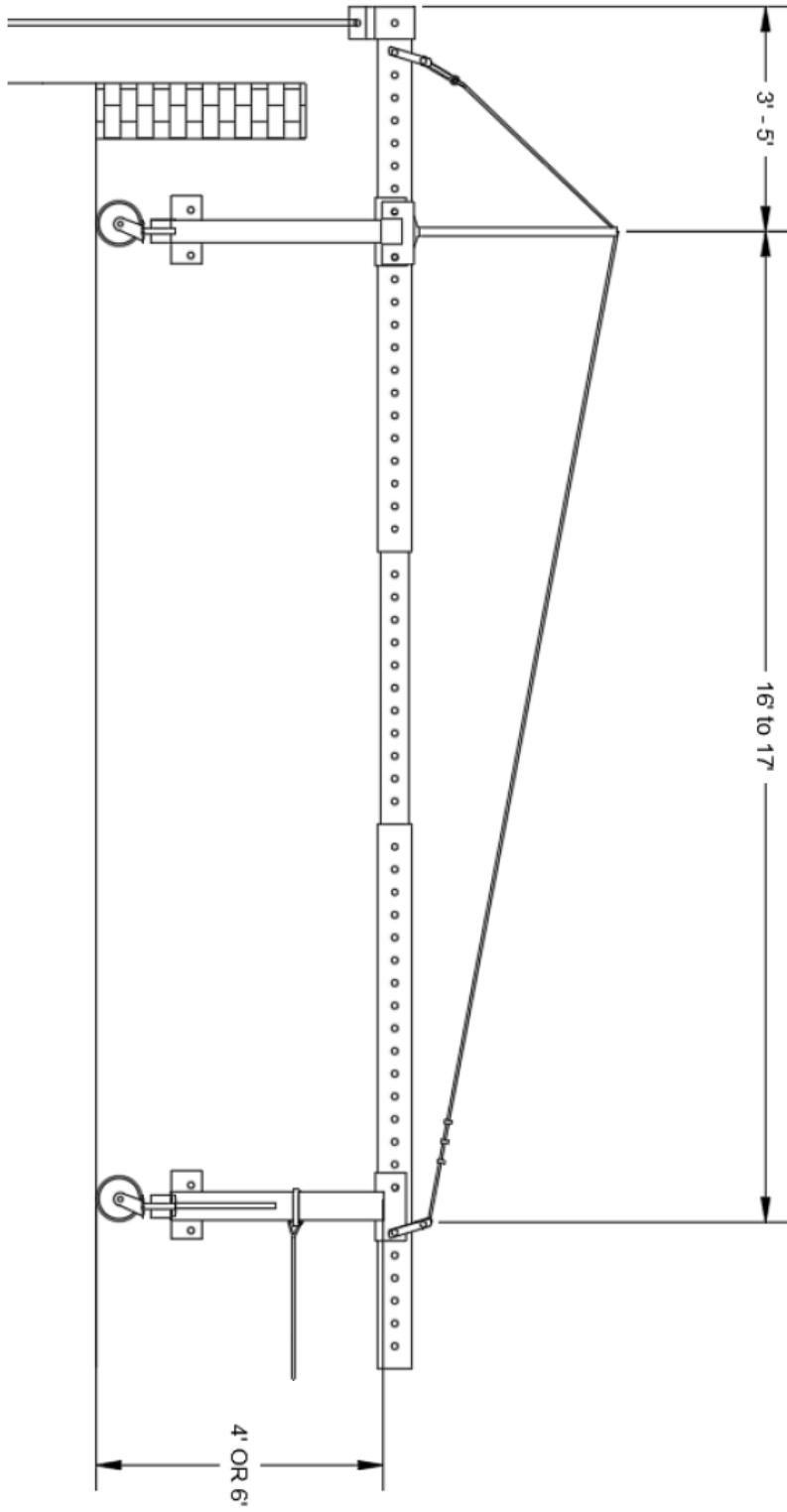
GENERAL RIGGING INSTRUCTIONS FOR THE TRIANGULAR ROOF OUTRIGGER

1. Only people familiar with the assembly, operation instruction manual, and equipment are authorized to assemble our TRIANGULAR ROOF OUTRIGGER.
2. Before assembling the TRIANGULAR ROOF OUTRIGGER, you must carefully inspect the roof conditions to ensure that the roof can support the load of the hanging scaffold, triangular roof outrigger, and counterweights.
3. Before starting to work, you must periodically check all components (wire rope conditions, shackles, counterweights, bolts, etc.)
4. When working on asphalt roofs, place scaffold planks or steel channels under the triangular roof outrigger's wheels to protect the roof and increase load distribution.
5. Whenever possible, try extending both square telescopic beams to their maximum. This will allow the outrigger to require fewer counterweights.
6. Check the last page chart that calculates the counterweights needed for your specific overhang.
7. Tiebacks are ALWAYS required when using the TRIANGULAR ROOF OUTRIGGER. Tiebacks must be installed following a continuous straight line from the telescopic square beams, leaving no "slack" and secured to a previously inspected permanent fixture.
8. Under no circumstances move the triangular roof outrigger while the suspended scaffold is hanging. First, lower the hanging scaffold to the ground and move the triangular roof outrigger.
9. Be sure to lock the caster wheel brake as soon as the assembly is completed and after each time that the Triangular Roof Outrigger is moved.

WHERE AND HOW TO USE A TRIANGULAR ROOF OUTRIGGER

The Triangular Roof Outrigger can be used with any suspended scaffold. The best and safest way is to install it and use it, as shown in the picture below

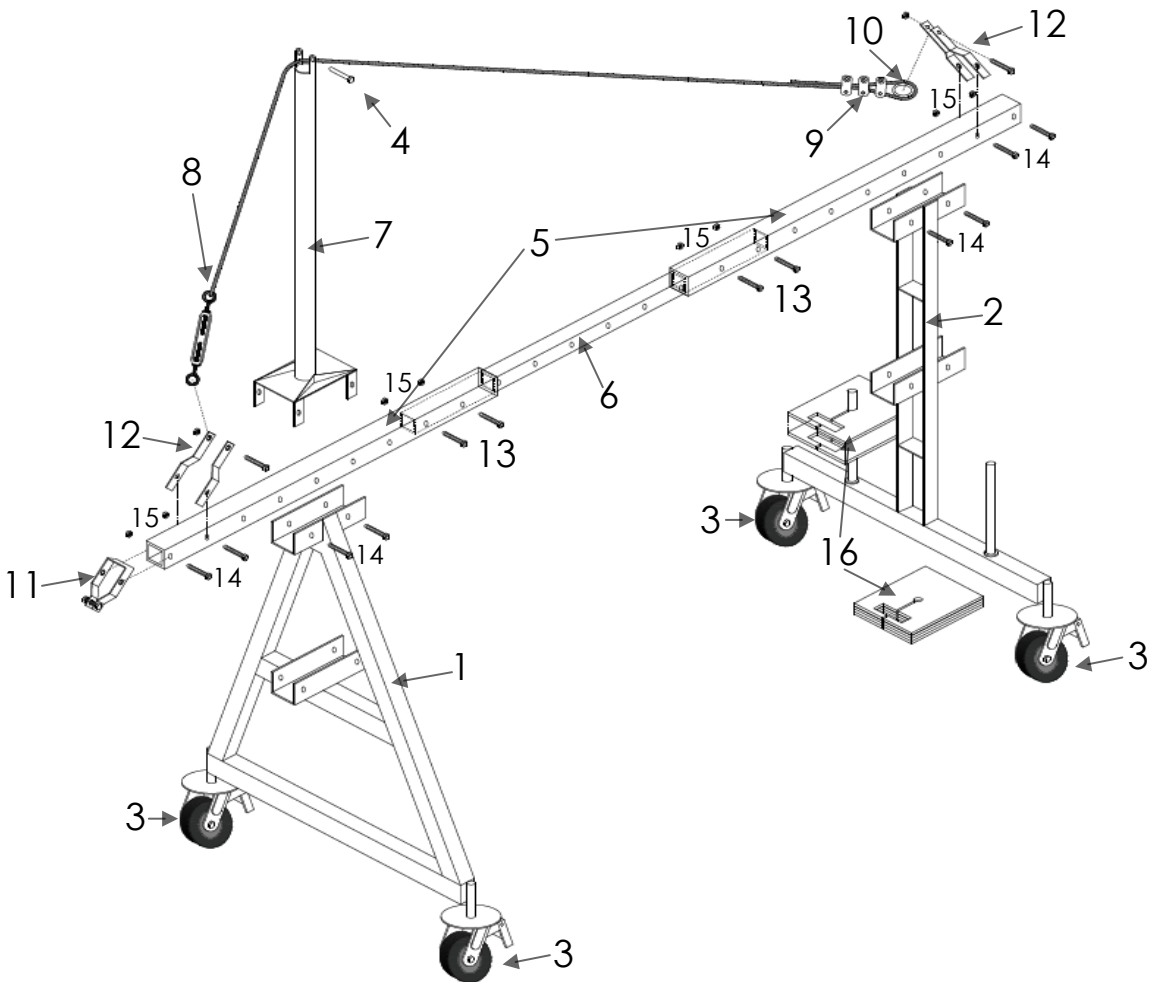
- a) Only people familiar with the assembly of the Triangular Roof Outrigger and people who have access to the Instructions Manual are allowed to assemble the Outrigger System.
- b) Consult the Building Engineer for Roof Load Capacity.
- c) Rigging of the Triangular Outrigger System must be on a flat concrete roof. When used on all other roofs, planks, plywood, or steel channels are always recommended under the caster wheels to obtain better load distribution and allow easier maneuvering.
- d) The maximum overhang from the front leg is never to exceed 5'.
- e) Be sure to tighten the reinforcing wire.
- f) Consult the Counterweight Calculation Chart on the last page to find the number of counterweights required.
- g) The General Instructions Section explains that tieback wire rope must always be used.
- h) Never ride a scaffold without all the necessary safety equipment.
- i) Inspect the Triangular Roof Outrigger and scaffold periodically before starting work.
- j) Remember to apply the Caster Wheel Brake when installing the Outrigger System and unlock only when moving the outrigger is needed. Be sure to lock the caster brakes each time after the scaffold is moved.
- k) Do not install the outrigger system on timber or metal roofs without consulting the building engineer for load capacities.
- l) Do not extend the square outrigger beam over 5' from the front leg.
- m) Do not move the Triangular Roof Outrigger while the suspended scaffold hangs off the ground.
- n) Do not use the roof's parapet wall instead of a front leg. The parapet wall is generally the weakest section of the roof.
- o) Do not cut, alter or modify the square telescopic beams without consulting the Manufacturer.
- p) Only use manufacturer-issued parts. Do not alter or substitute any lost, worn, or damaged parts. Instead, consult your dealer for replacement parts for the TRIANGULAR ROOF OUTRIGGER.



OUTRIGGER DESCRIPTION

The outrigger set consists of the following:

| POS. | DESCRIPTION | QTY. |
|------|--|------|
| 1 | Front Frames 4' To 6' | 2 |
| 2 | Rear Frame 4' To 6' | 2 |
| 3 | 8" Caster Wheels or Leveling Jacks *Optional | 8 |
| 4 | Gravity Pins (4 to be used with Caster Wheels) | 5 |
| 5 | Outer Jib | 4 |
| 6 | Inner Jib | 2 |
| 7 | Reinforcement Brace | 2 |
| 8 | Wire Brace with Turnbuckle | 2 |
| 9 | Fist Grips | 6 |
| 10 | Thimble | 2 |
| 11 | Hangers with Grade 5 Bolts | 2 |
| 12 | Reversing Stirrup | 4 |
| 13 | Grade 5 Bolts 5/8" x 5" | 8 |
| 14 | Grade 5 Bolts 5/8" x 6" | 18 |
| 15 | Lock Nut 5/8" | 26 |
| 16 | 50 Lb Counterweights | * |



*Required amount of counterweights depends on load and overhang. Check the chart on the last page for counterweight requirements.
Check the Manufacturer's load capacities for all other components used with the Outriggers.

COUNTERWEIGHT CALCULATION CHART

*This chart shows the counterweight needed for different lifting loads and when the square telescopic beam is fully extended.

| LIFTING LOAD 1000 LB CAPACITY | 3' OVERHANG Counterweight load | 4' OVERHANG Counterweight load | 5' OVERHANG Counterweight load |
|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | 800 lbs. | 1065 lbs. | 1335 lbs. |

*This chart is accurate only when the Square telescopic beams are extended to their entire length of 20 feet.

To find the counterweight required per suspension jib, use the following formula:

$$W = \frac{L \times a \times 4^*}{b}$$

*Valid for a safety factor of 4.

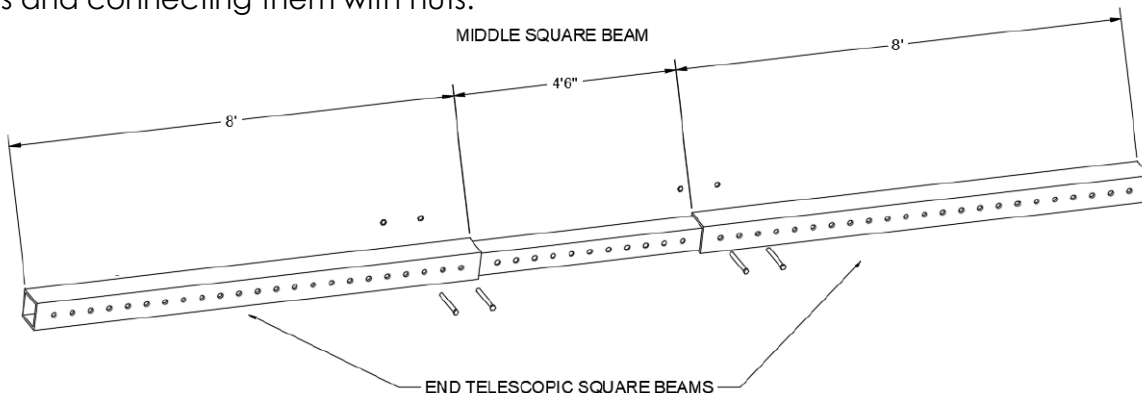
Example:

- MAXIMUM PERMISSIBLE LOAD PER JOB L = 1000 LBS.
 - NOMINAL HOIST CAPACITY A = 3 FT.
- OVERHANG B = 15 FT.
- DISTANCE BETWEEN THE FRONT (A) AND THE REAR (B) FULCRUMS

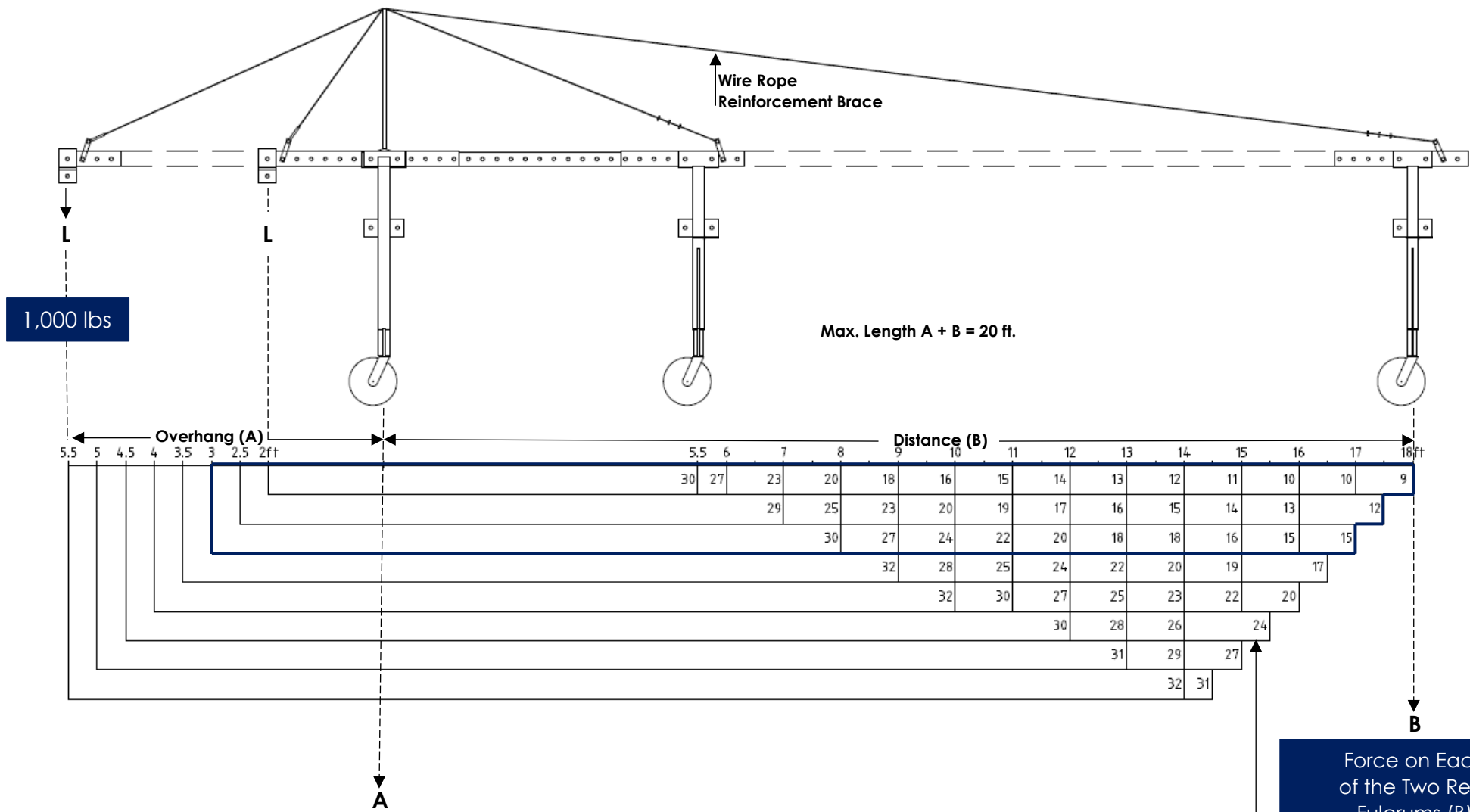
$$W = \frac{1000 \times 3 \times 4}{15} = 800 \text{ lbs}$$

Each of the two rear Height Adjusters must be loaded with 800 lbs. Since our counterweights weigh 50lbs. each, it is necessary to use 2 x 800 lbs. or 2 x 16 Counterweights.

When assembling the Triangular Roof Outrigger, remember to insert each of the END TELESCOPIC SQUARE BEAMS on each end of the MIDDLE SQUARE BEAM. When assembling the beams, remember that you must overlap them with two holes and then secure them by inserting two 5/8" bolts through the holes and connecting them with nuts.



IF YOU CAN NOT EXTEND THE BEAMS TO THEIR FULL LENGTH, MORE COUNTERWEIGHTS WILL BE REQUIRED. CONSULT THE CHART ABOVE AND APPLY THE FORMULA.



1,000 lbs

Max. Force on Each of the 2 Front Fulcrums (A) = 697 lbs

Force on Each of the Two Rear Fulcrums (B)
Counterweight + 220 lbs
 2

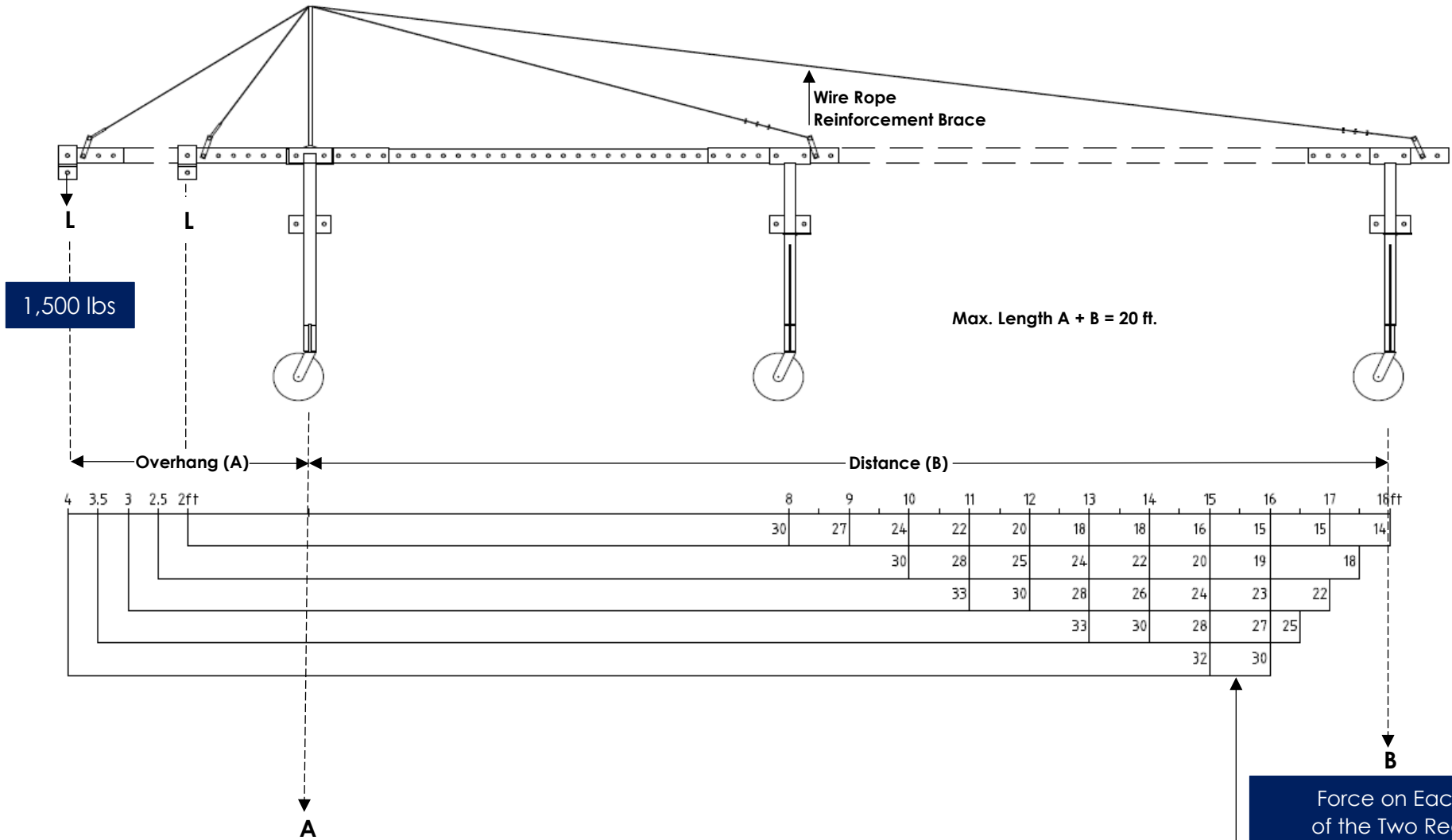
Number of Counterweights for 1 Jib.
 1 Counterweight = 50lbs

Number of Counterweights Required for 1 Suspension Jib for a Load (L) of

1,000 lbs

This Table is Prepared for Assemblies **With** a Wire Rope Reinforcement Brace. It is Also Applicable to Assemblies **Without** Brace on Condition that the Overhang Does Not Exceed 3.0 ft.

Note: The Counterweight Bar (51 lbs) and ½ the Weight of the Outrigger's (B) Length Has Been Deducted from The Counterweight Required to Determine the Number of Weights Needed Per Jib.



1,500 lbs

Max. Length A + B = 20 ft.

| Overhang (A) | Distance (B) | 4 | 3.5 | 3 | 2.5 | 2ft | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18ft |
|--------------|--------------|---|-----|---|-----|-----|----|----|----|----|----|----|----|----|----|----|------|
| | | | | | | | 30 | 27 | 24 | 22 | 20 | 18 | 18 | 16 | 15 | 15 | 14 |
| | | | | | | | | | 30 | 28 | 25 | 24 | 22 | 20 | 19 | | 18 |
| | | | | | | | | | | 33 | 30 | 28 | 26 | 24 | 23 | 22 | |
| | | | | | | | | | | | | 33 | 30 | 28 | 27 | 25 | |
| | | | | | | | | | | | | | | 32 | 30 | | |

Max. Force on Each of the 2 Front Fulcrums (A) = 950 lbs

Force on Each of the Two Rear Fulcrums (B)
Counterweight + 220 lbs
 2

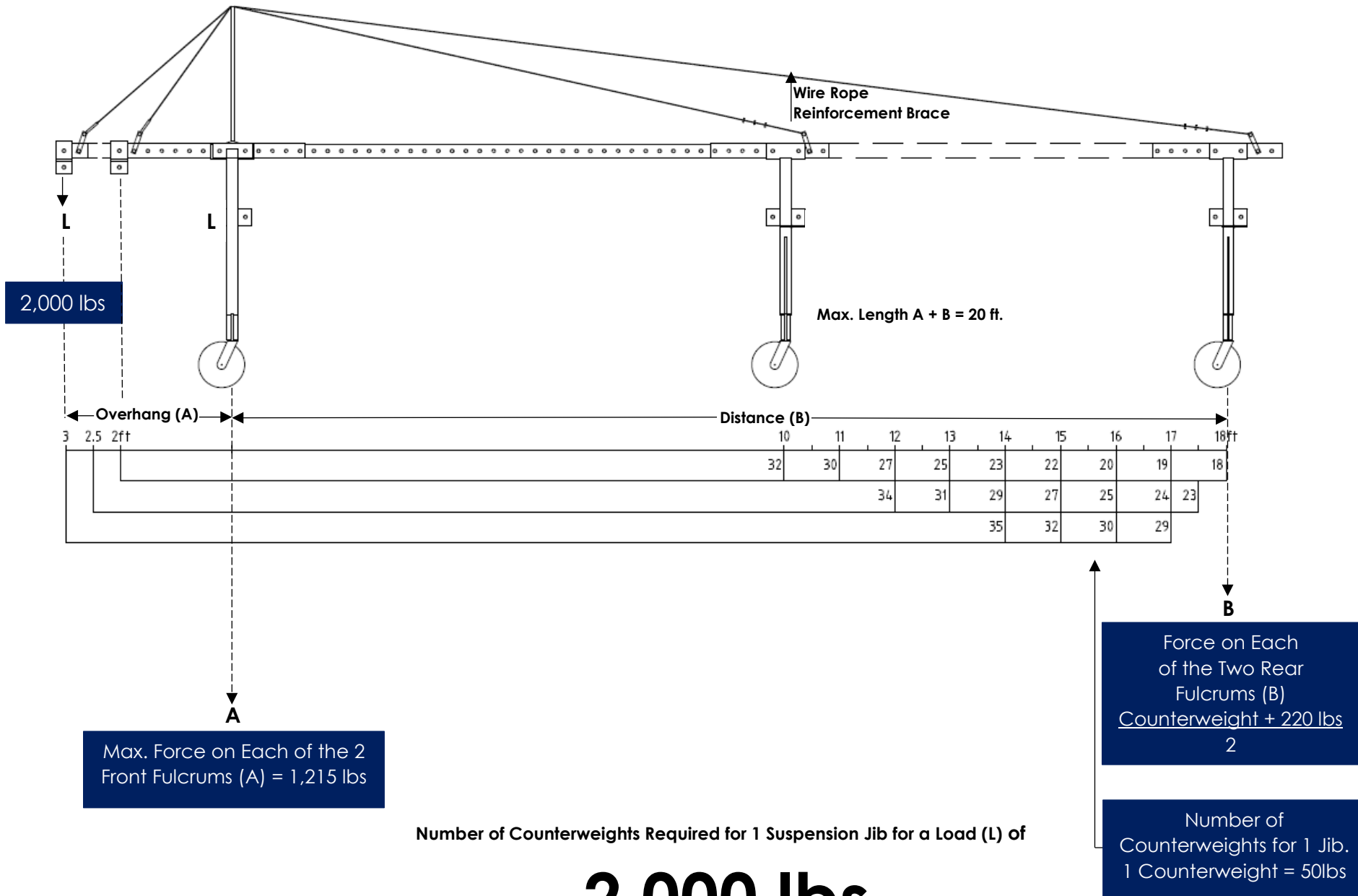
Number of Counterweights for 1 Jib.
 1 Counterweight = 50lbs

Number of Counterweights Required for 1 Suspension Jib for a Load (L) of

1,500 lbs

This Table is Prepared for Assemblies **With** a Wire Rope Reinforcement Brace. It is Also Applicable to Assemblies **Without** Brace on Condition that the Overhang Does Not Exceed 3.0 ft.

Note: The Counterweight Bar (51 lbs) and ½ the Weight of the Outrigger's (B) Length Has Been Deducted from The Counterweight Required to Determine the Number of Weights Needed Per Jib.



Number of Counterweights Required for 1 Suspension Jib for a Load (L) of

2,000 lbs

This Table is Prepared for Assemblies **With** a Wire Rope Reinforcement Brace. It is Also Applicable to Assemblies **Without** Brace on Condition that the Overhang Does Not Exceed 3.0 ft.

Note: The Counterweight Bar (51 lbs) and 1/2 the Weight of the Outrigger's (B) Length Has Been Deducted from The Counterweight Required to Determine the Number of Weights Needed Per Jib.