STAGELINE®

RENTAL DIVISION - DIVISION LOCATION

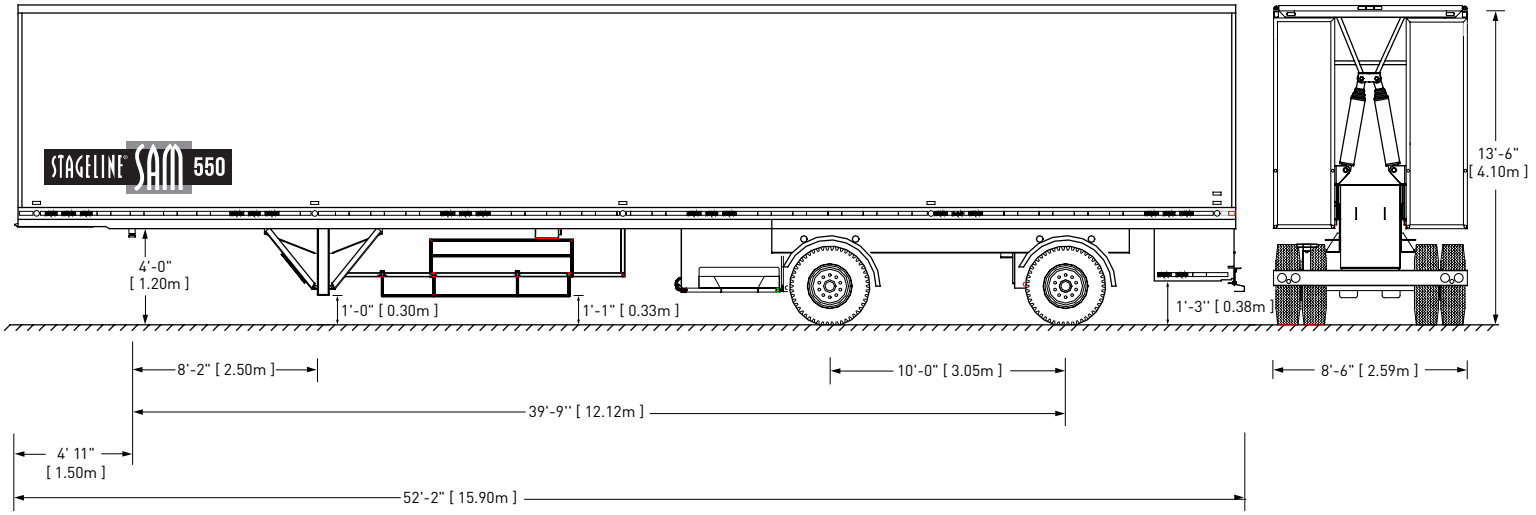
SAM550

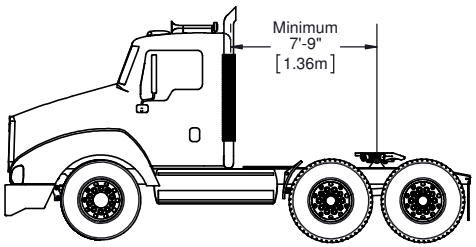
TECHNICAL DRAWINGS

2020

SAM550

MASS & DIMENSIONS



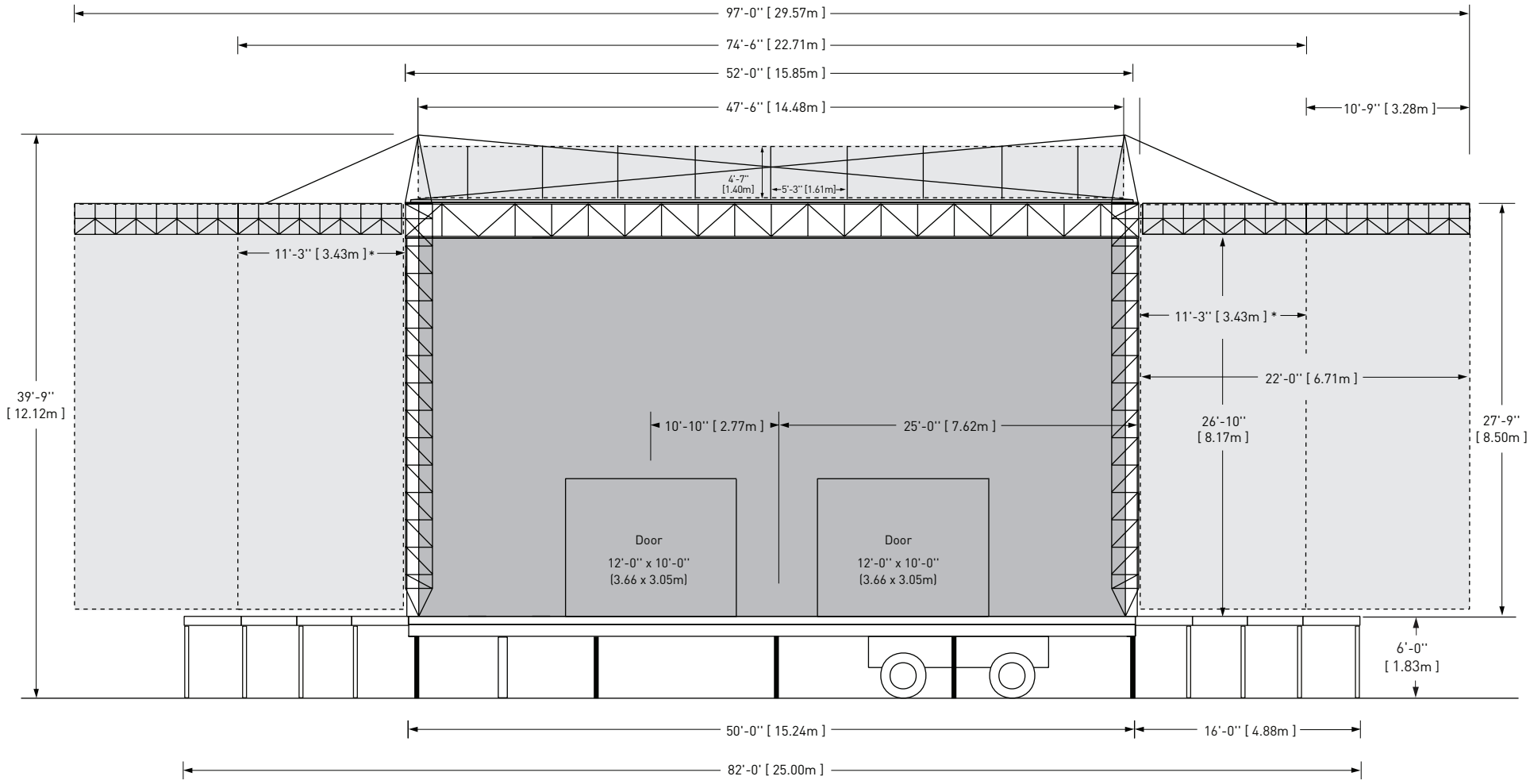


Mass SAM550	Unladen		Standard Equipment		Maximum Capacity	
	Lbs	Kg	Lbs	Kg	Lbs	Kg
Total Mass	54900	24900	60320	27360	-	-
Mass on Axle	35700	16200	39100	17730	-	-
Mass on Hitch	19200	8700	21220	9630	-	-

Drawings may show stage equipped with optional accessories. May be sold separately.

SAM550

FRONT VIEW



WINDWALL

BANNER (For dimensions, please refer to Banner Book)

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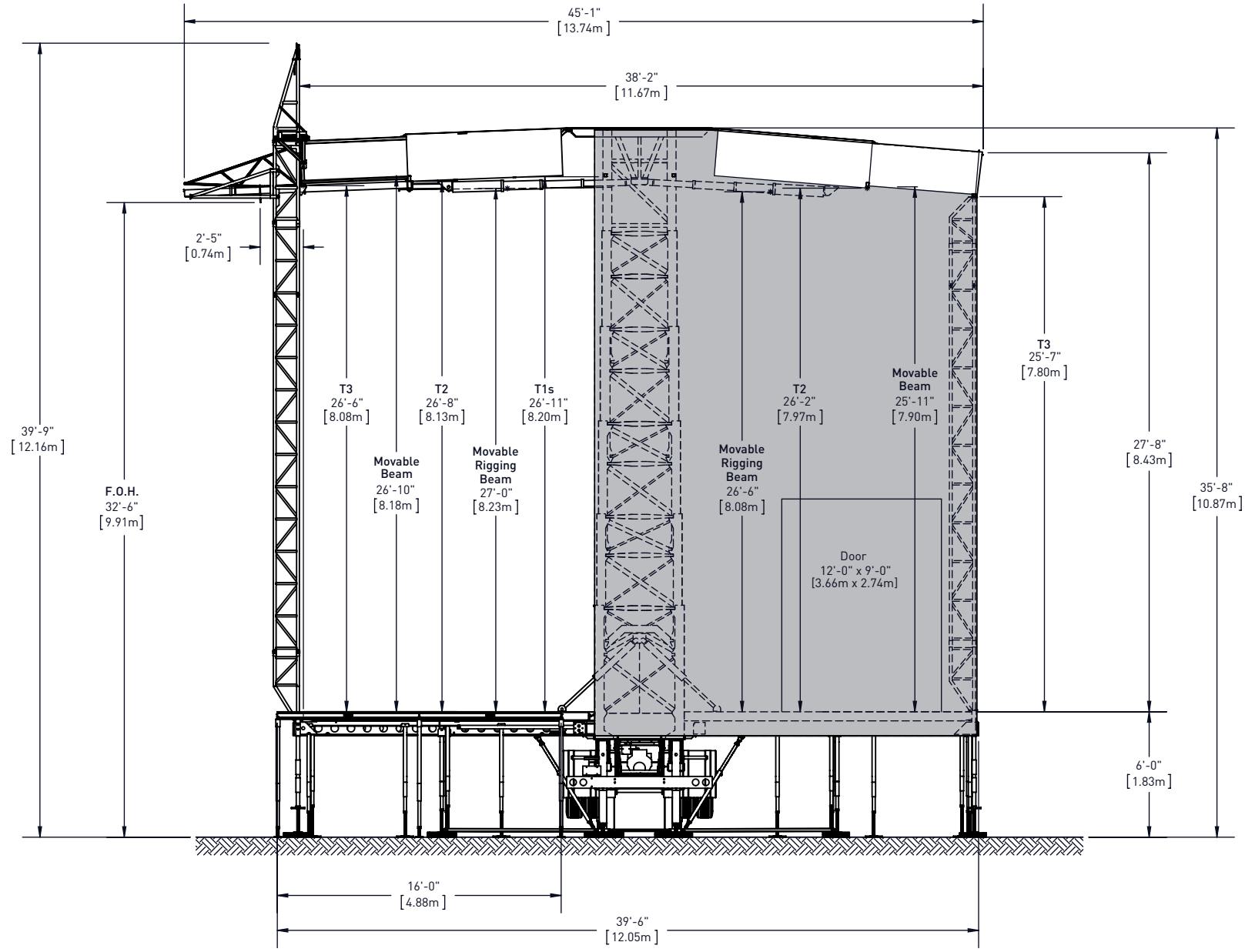
SAM550

SIDE VIEW



WINDWALL

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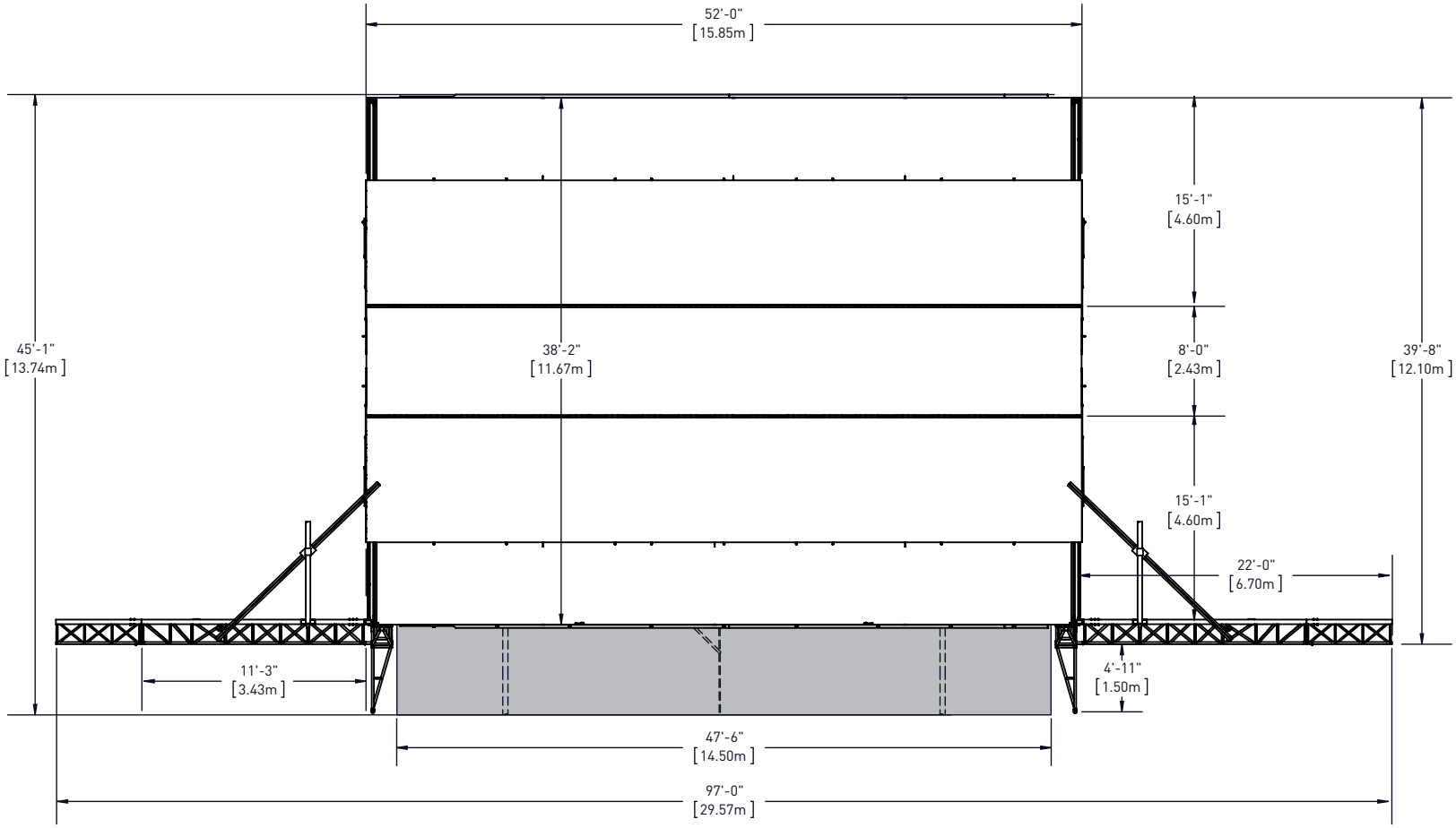
SAM550

ROOF VIEW



DOWNSTAGE

WINDWALL

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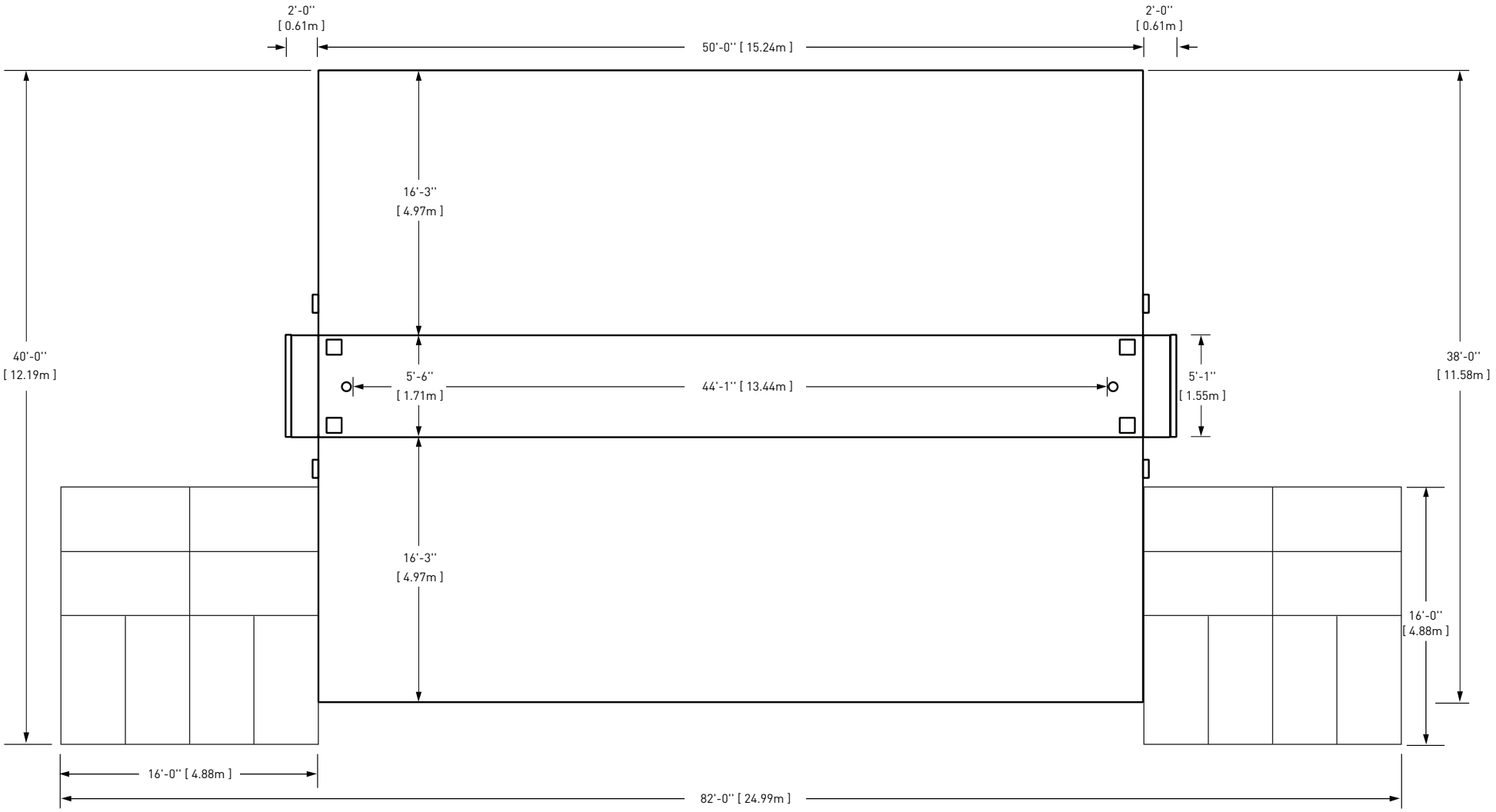
SAM550

FLOOR VIEW



CAPACITY: 150lbs/ft² (732kg/m²)

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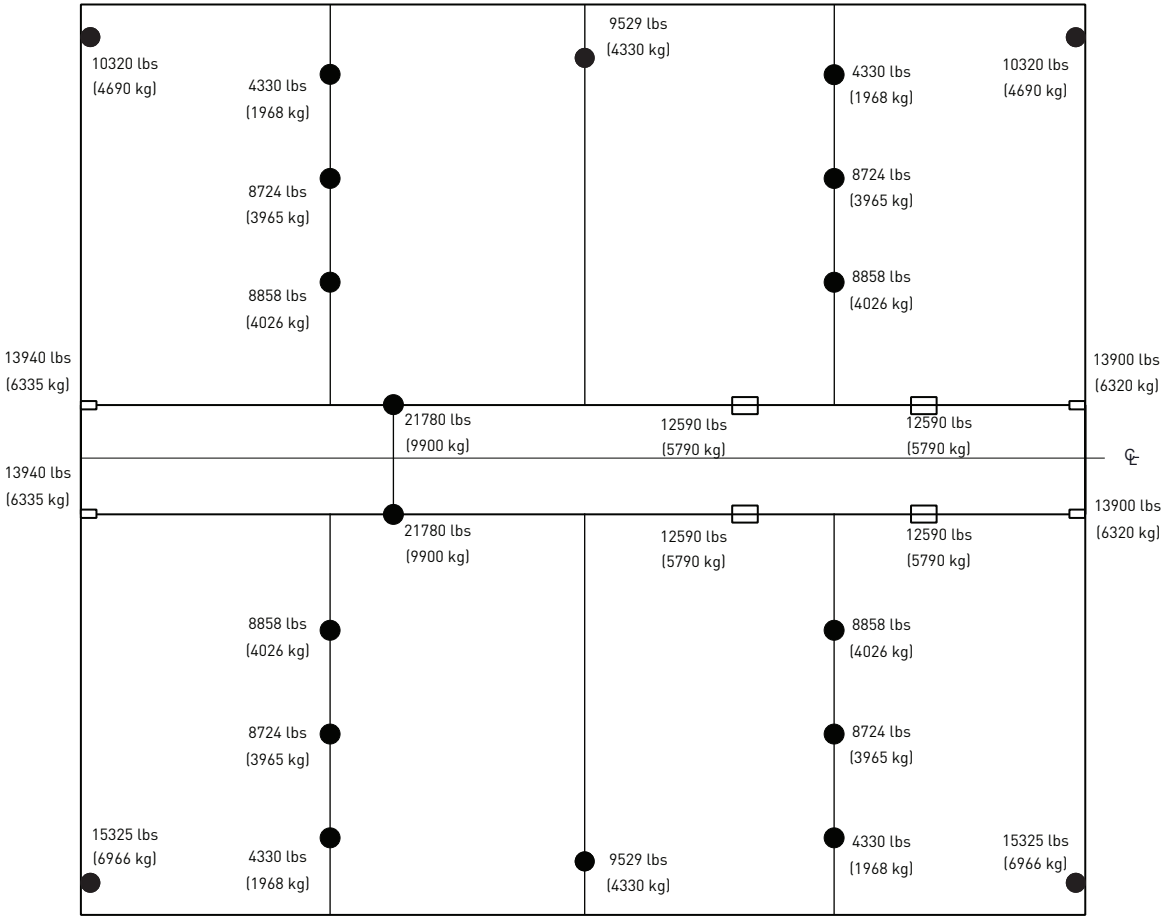
SAM550

DEAD LOAD GROUND SUPPPORT



● FLOOR STABILIZERS, EXTENSIONS AND LEVELLING JACKS

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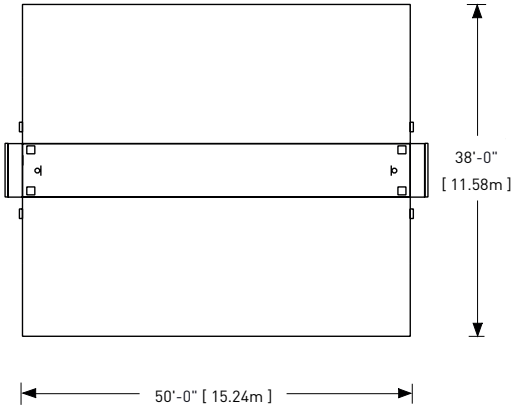
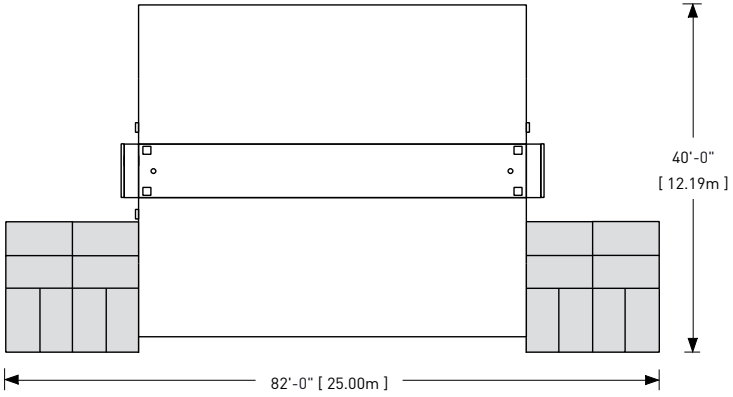
STANDARD CONFIGURATIONS





PLATFORM

Drawings may show stage equipped with optional accessories. May be sold separately.

A THOROUGH UNDERSTANDING OF THE INTER-RELATED LOADINGS SHOWN IN THIS RIGGING PLAN IS NEEDED IN ORDER TO SAFELY USE THIS MOBILE STAGE ROOF AND TAKE FULL ADVANTAGE OF THE MANY RIGGING OPPORTUNITIES IT OFFERS.

This mobile stage roof offers a variety of rigging options with regard to load capacity, placement and type.

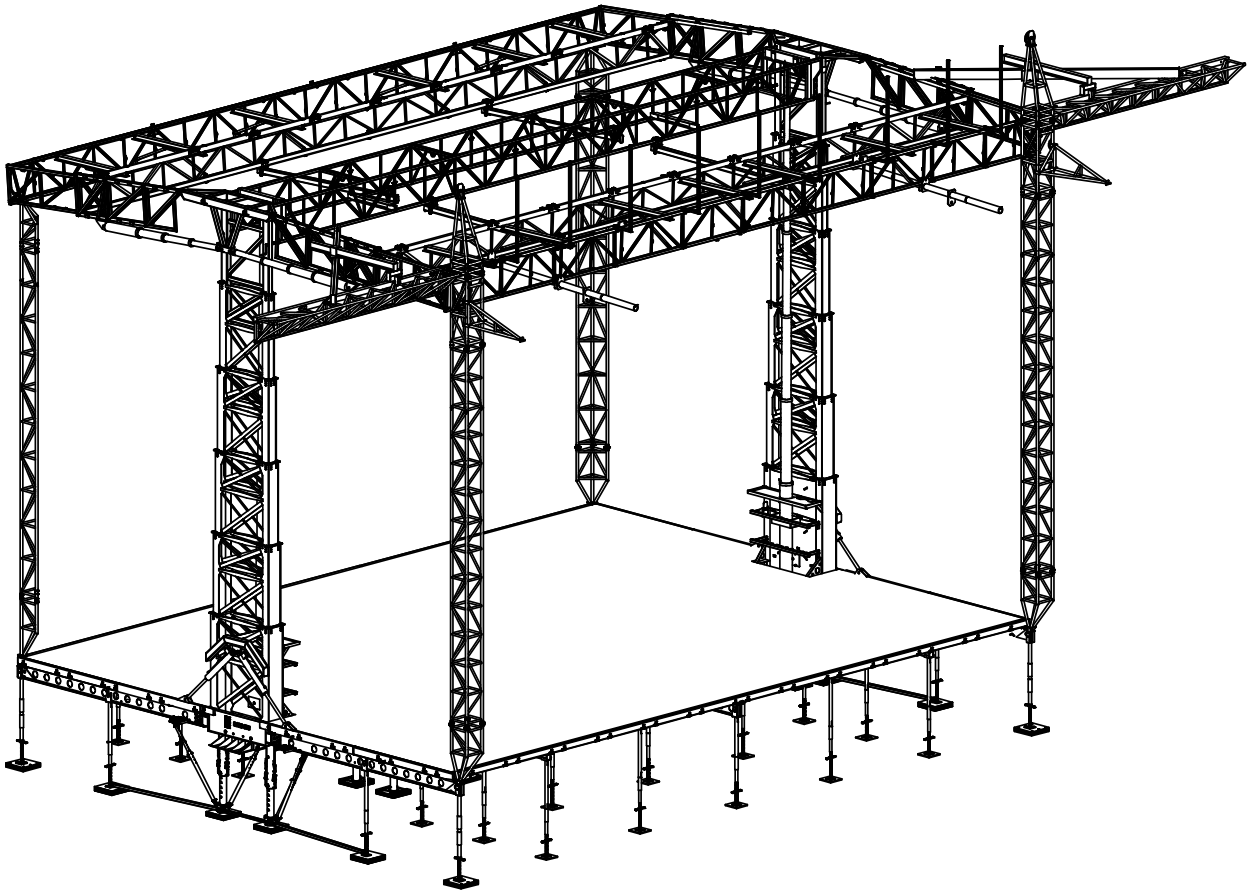
There are rigging pipes, trusses, roof rigging points and side overhang rigging beams.

This rigging plan locates and defines these rigging features, includes load capacity for each and describes maximum combinations of loads amongst features.

Take note of exclusions, maximum sub-totals in a group, load balance requirements, maximum lifting capacity of roof and maximum rigging load on roof.

The maximum load on the roof is less than the sum of the maximum load on each rigging feature.

Refer to Operator's Manual for procedures in regards to proper setup and setup methods of the stage and its options.



The information contained in the current document is final and must be considered as such. They are derived from design briefs and summarized to help the user plan rigging configurations safely. It is therefore mandatory that the user follows and respects the capabilities and limitations described herein. Overloading of stage components above their specified capacity may result in structural failure, equipment damage, injury or death. Stageline cannot be held responsible if the user, himself or subcontractors under his supervision, derogate from this document and/or the approved rigging plan. If a desired configuration cannot meet these requirements, the user must contact Stageline to analyse the case and obtain further instructions. Special restrictions and limitations may apply.

Certain authorities may require that a rig configuration plan, signed and sealed by a recognized member of a professional body, be available to allow the stage to be setup on their territory. This document was not intended to and cannot be used or considered as an official document or certificate to serve this purpose. Contact responsible authorities or Stageline for details.

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RIGGING RESTRICTIONS:

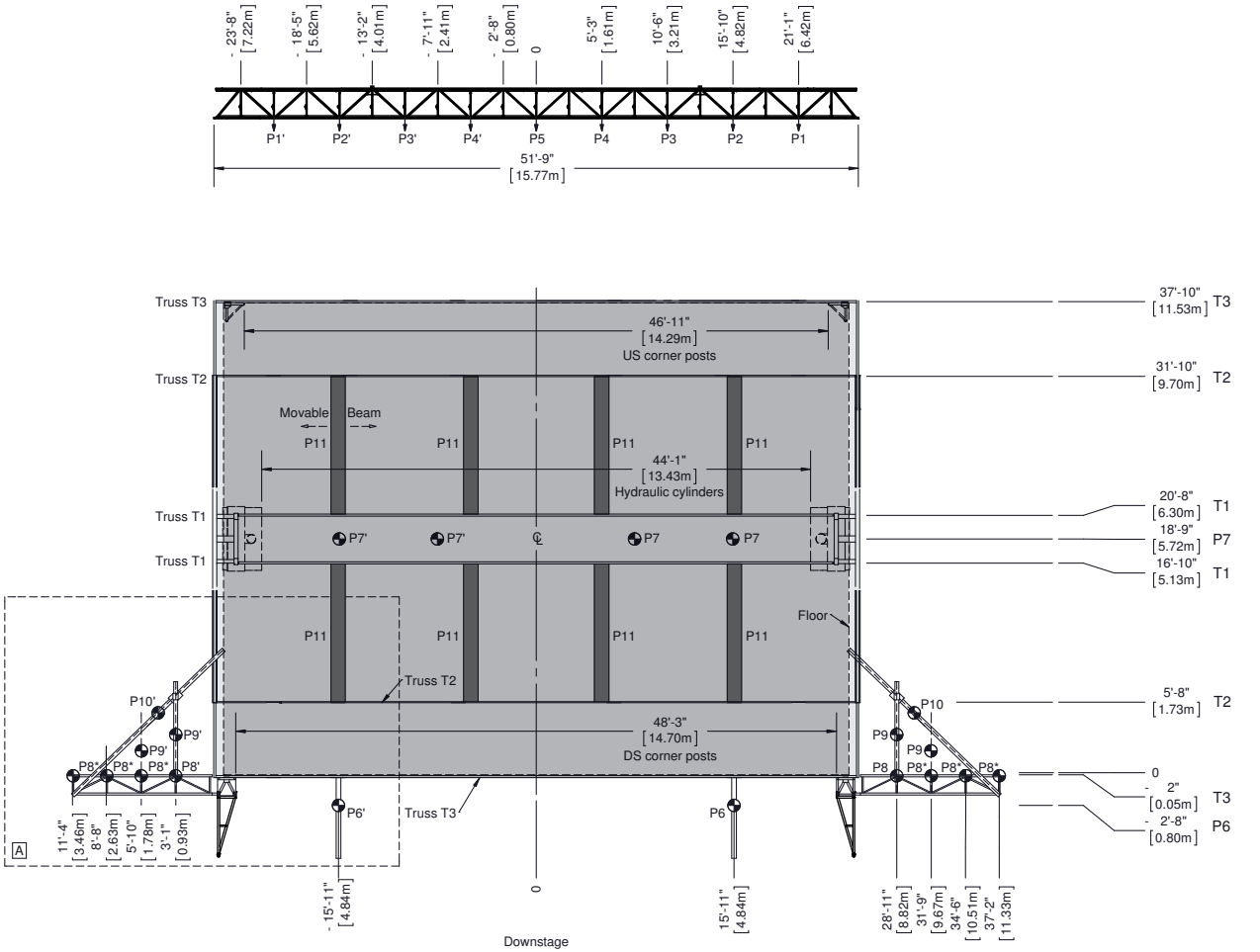
- MAXIMUM LOAD BEARING CAPACITY: 42 000 lb (19 048 kg). All corner posts must be installed and pinned, and telescopic columns pinned and secured.
- The sum of all rigging points shown in area A of both sides of roof cannot exceed 9000 lbs (4082 kg).
- Total load on P8s must not exceed 6600 lbs (2995 kg) per side and not exceed 6000 lbs (2722 kg) if using only P8*s.
- Total load on downstage T3 and P6s must not exceed 4400 lbs (2000 kg).
- Total load on P9 and P10 must not exceed 4000 lbs (1814 kg) per side.
- Capacity of side overhang truss must take into account the redistribution of weight from the P9 and P10 points.
- Loads on P11 points must be considered as a load on their respective adjoining truss(es) points.

LIFTING RESTRICTIONS

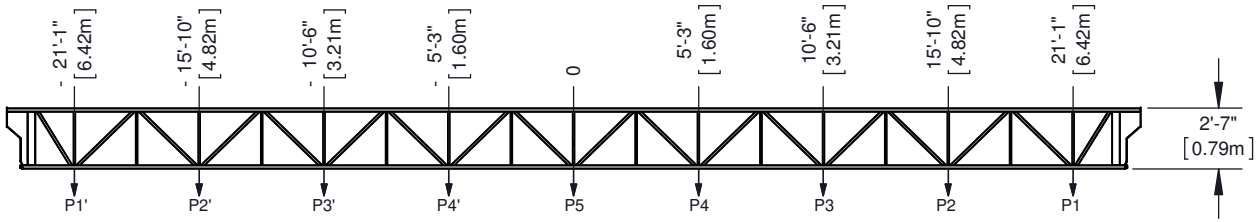
- MAXIMUM LIFTING CAPACITY IS 4000 lb (1814 kg).
- Maximum asymmetric load difference between front and rear of stage is 2000 lb (910 kg). This includes loads on T1 trusses.
- Load must be symmetrically distributed between right and left side of stage.

NOTES:

- Line array beam can be positioned at 3'1'' (0.93m) or 5'10'' (1.78m) from roof extension panel. Shortest beam is 3' 2'' (0.98 m) long and longest is 5' 8'' (1.72 m).
- Movable beams must be attached to truss rigging points.

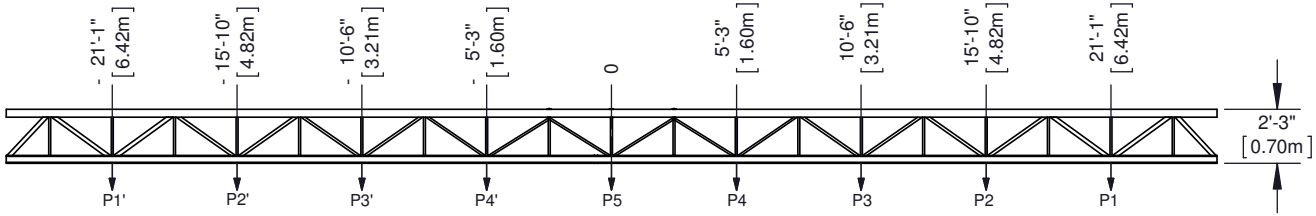


Truss T1



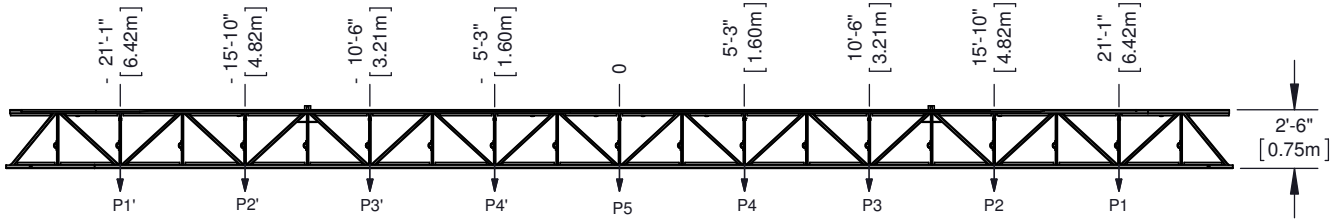
Truss T1**: $\frac{\text{Load } P1}{\text{Capacity } P1} + \frac{\text{Load } P2}{\text{Capacity } P2} + \frac{\text{Load } P3}{\text{Capacity } P3} + \frac{\text{Load } P4}{\text{Capacity } P4} + \frac{\text{Load } P5}{\text{Capacity } P5} \leq 1.00$

Truss T2



Truss T2**: $\frac{\text{Load } P1}{\text{Capacity } P1} + \frac{\text{Load } P2}{\text{Capacity } P2} + \frac{\text{Load } P3}{\text{Capacity } P3} + \frac{\text{Load } P4}{\text{Capacity } P4} + \frac{\text{Load } P5}{\text{Capacity } P5} \leq 1.00$

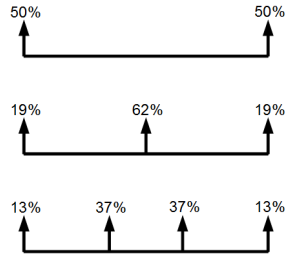
Truss T3



Truss T3**: $\frac{\text{Load } P1}{\text{Capacity } P1} + \frac{\text{Load } P2}{\text{Capacity } P2} + \frac{\text{Load } P3}{\text{Capacity } P3} + \frac{\text{Load } P4}{\text{Capacity } P4} + \frac{\text{Load } P5}{\text{Capacity } P5} \leq 1.00$

MAXIMUM LOAD CAPACITY		
Point No.	Lbs	Kg
P1, P2	2200	1000
P3	1500	680
P4	1000	455
P5	1500	680
P6	1000	455
P7, P8	2200	1000
P9 & P10	4000	1815
P11	2200	1000

UDL CHART



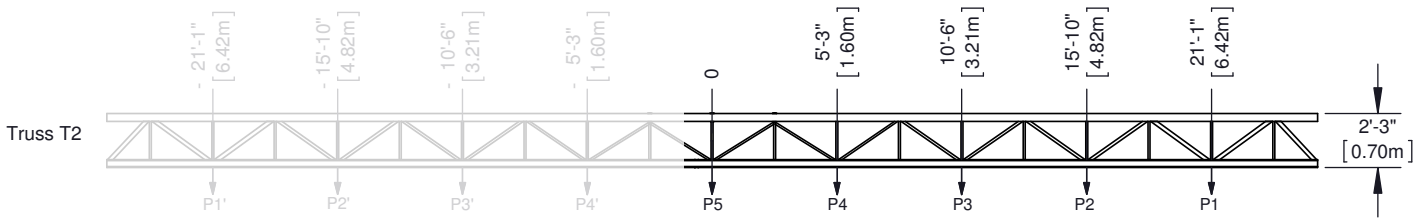
*** Valid for symmetric loads only. In other cases, contact Stageline for assistance.*

Drawings may show stage equipped with optional accessories. May be sold separately.

WHEN CALCULATING THE LOAD ON A SAM550 TRUSS, USE FOLLOWING METHOD.

Each truss in the roof must be visualized as 2 trusses put together that share a center point.

Examples: Truss T2 on a SAM550.
Points from left to right are P1', P2', P3', P4', P5, P4, P3, P2, P1. We will only verify loads on 1 side of the truss, Meaning P1 thru P5.



CALCULATION EXAMPLE #1:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 3000lbs.
Each motor will be hung from the P1 points.

- 0.50 x 3000 (50% of weight, see UDL chart) / 2200 (the capacity of the P1 on the T2 truss) = 0.68.
- 0.68 = 68 %, as 1.00 would equal 100 %.

So the T2 truss is at 68 % of its total capacity.

CALCULATION EXAMPLE #2:

1 lighting truss on 3 motors, total uniformly distributed weight of the truss is 3000lbs.
The motors will be hung from P1', P5, P1.

- **P1**
  0.19 x 3000 (19% of weight, see UDL chart) / 2200 (capacity P1) = 0.26, so this one point will use 26 % of the truss capacity.
- **P5**
  0.62 x 3000 (62% of weight, see UDL chart) / 1500 (capacity P5) = 1.24.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

0.26 + 1.24 = 1.5
So the T2 truss is at 150 % of its total capacity.

CALCULATION EXAMPLE #3:

1 lighting truss on 4 motors, total uniformly distributed weight of the truss is 3000lbs. The motors will be hung from LP1', P3', P3 and P1.

- **P1**
  0.13 x 3000 (13% of weight, see UDL chart) / 2200 (capacity P1) = 0.18, so this one point will use 18 % of the truss capacity.
- **P3**
  0.37 x 3000 (37% of weight, see UDL chart) / 1500 (capacity P3) = 0.74.

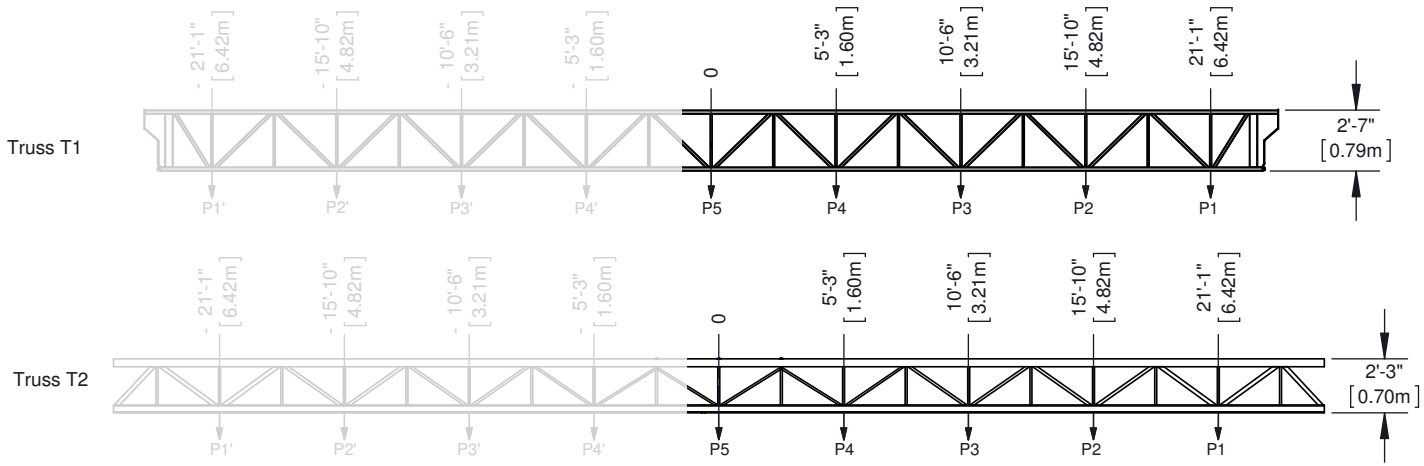
Now that we have the loads for both points, we add them together to determine the total load on the truss.

0.18 + 0.74 = 0.92
So the T2 truss is at 92 % of its total capacity.

WHEN CALCULATING THE LOAD ON A SAM550 TRUSS, USE FOLLOWING METHOD.

Each truss in the roof must be visualized as 2 trusses put together that share a center point.

Examples: Trusses T1 and T2 on a SAM550.
Points from left to right are P1', P2', P3', P4', P5, P4, P3, P2, P1. We will only verify loads on 1 side of the truss, Meaning P1 thru P5.



CALCULATION EXAMPLE #4:

1 screen on 4 motors, total uniformly distributed weight of the screen is 3500lbs. The motors will be hung 4' from the upstage T2 truss, on P11 points (movable beams), at P1', P4', P4 and P1.

- Weight distribution on trusses

T1 truss = 4' (distance from T2 truss) / 11'2'' (distance between T1 and T2 trusses) = 0.36, so 36% of the weight from each motor will be distributed to the T1 truss,
T2 truss = 7'2'' (distance from T1 truss) / 11'2'' (distance between T1 and T2 trusses) = 0.64, so 64% of the weight will be distributed to the T2 truss.

- T1, P1

0.13 x 3500 (13% of weight, see UDL chart) x 0.36 (weight transfer on T1) / 2200 (capacity P1)
= 0.07, so this one point will use 7% of the truss capacity.

- T1, P4

0.37 x 3500 (37% of weight, see UDL chart) x 0.36 (weight transfer on T1) / 1000 (capacity P4)
= 0.47

Now that we have the loads for both points, we add them together to determine the total load on the T1 truss.

0.07 + 0.47 = 0.54
So the T1 truss is at 54% of its total capacity.

- T2, P1

0.13 x 3500 (13% of weight, see UDL chart) x 0.64 (weight transfer on T2) / 2200 (capacity P1)
= 0.13, so this one point will use 19% of the truss capacity.

- T2, P4

0.37 x 3500 (37% of weight, see UDL chart) x 0.64 (weight transfer on T2) / 1000 (capacity P4)
= 0.83

Now that we have the loads for both points, we add them together to determine the total load on the T2 truss.

0.13 + 0.83 = 0.96
So the T2 truss is at 96% of its total capacity.

- P11 @ P1

0.13 x 3500 (13% of weight, see UDL chart) / 2200 (capacity P11)
= 0.21, so this one point will use 21% of the beam capacity.

- P11 @ P4

0.37 x 3500 (37% of weight, see UDL chart) / 2200 (capacity P11)
= 0.59, so this one point will use 59% of the beam capacity.

So none of the points on the P11s exceed the movable beams capacity.