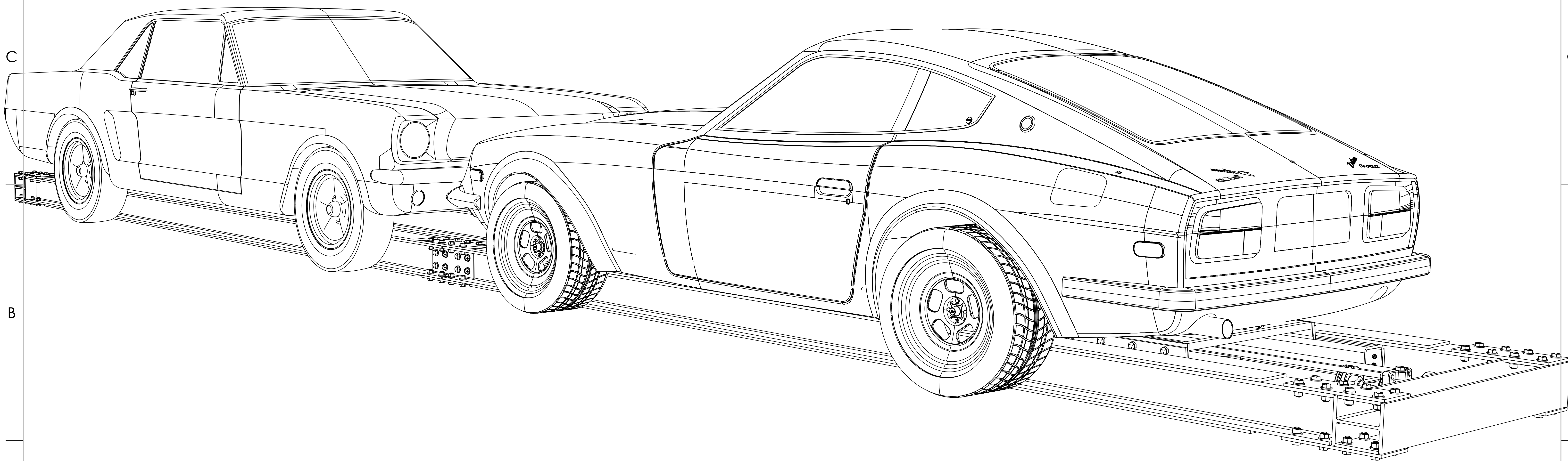


Slow Motion Car Crash



Slow Motion Car Crash Version 3

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Cover

SIZE **D** SCALE: 1:4.5
SHEET 1 OF 9

8 7 6 5 4 3 2 1

Duration of Crash is Variable from 4 days to multiple years.

Cars move too slowly to be dangerous.
Barriers are not necessary.

Cars (new for each event)
Usually found locally. Specific
character of sculpture
unique to the cars chosen.

Total movement of 6' or approximately 2m

[3'-0.00"]
0.91m

[3'-0.00"]
0.91m

Track and Cart used to control force transfer to car

[31'-1.49"]
9.49m

[5'-10.90"]
1.80m

Pump and speed control

Unit can be located up to 100 feet away from cars

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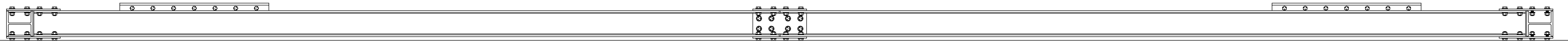
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Overview

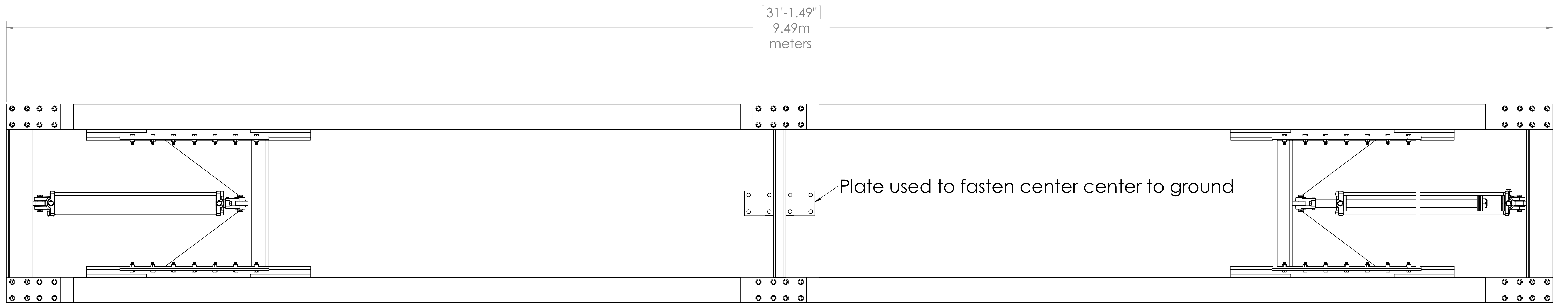
SIZE
D SCALE: 1:12
SHEET 2 OF 9

8 7 6 5 4 3 2 1

Steel Track installed at site.
Set up time 1 day



Side View

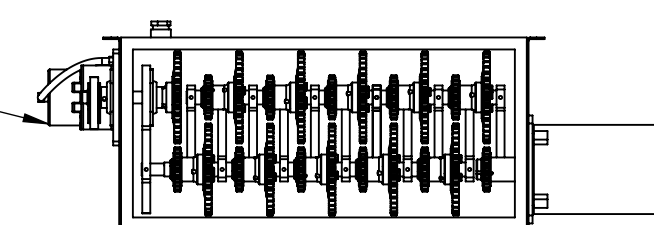


Top View

Pump supplies hydraulic fluid to cylinders that move the cars

Pump and speed control

Unit can be located up to 100 feet away from cars.
Hydraulic line from pump to each cylinder under car.

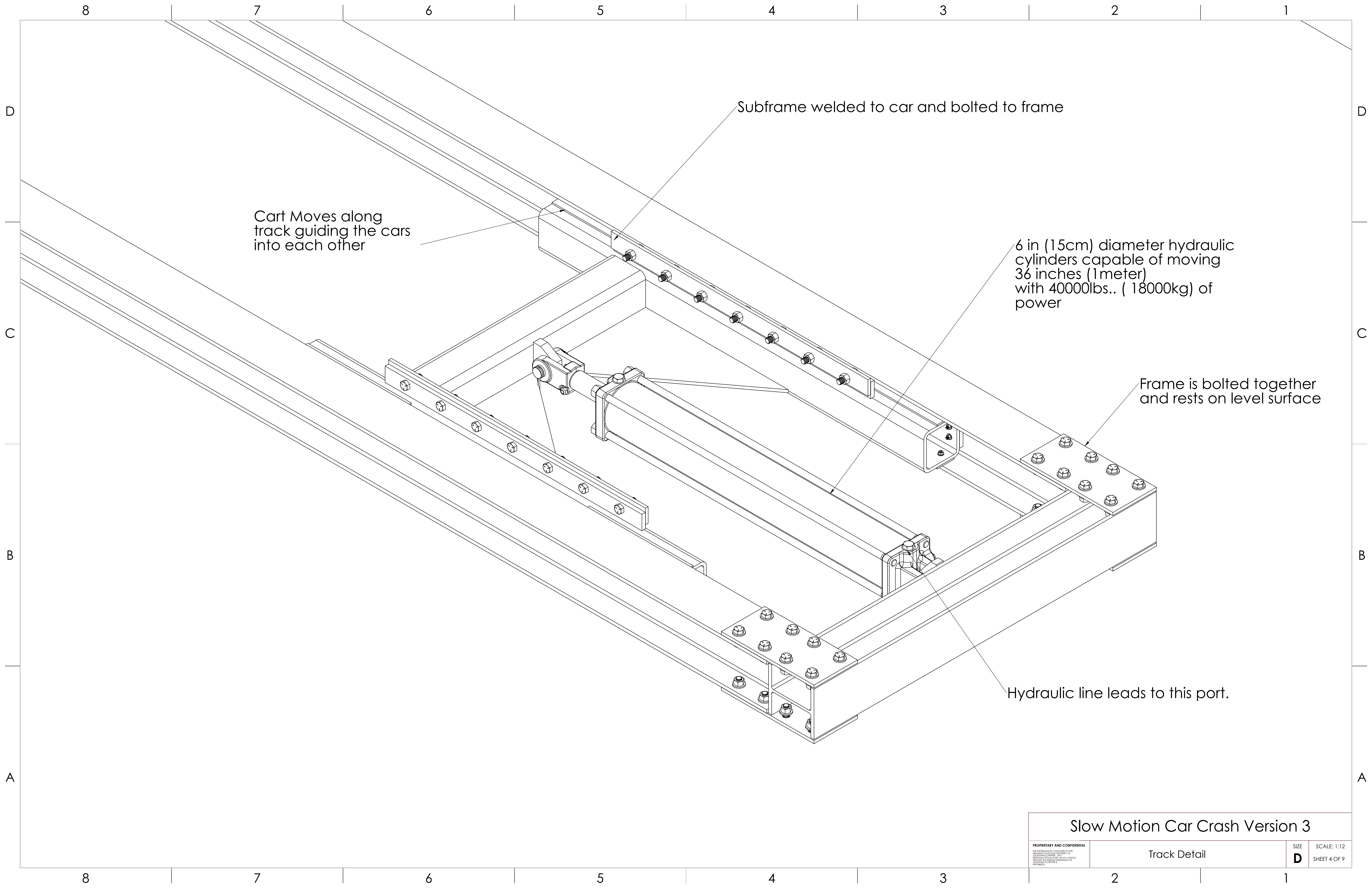


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Track

SIZE D SCALE: 1:12
SHEET 3 OF 9



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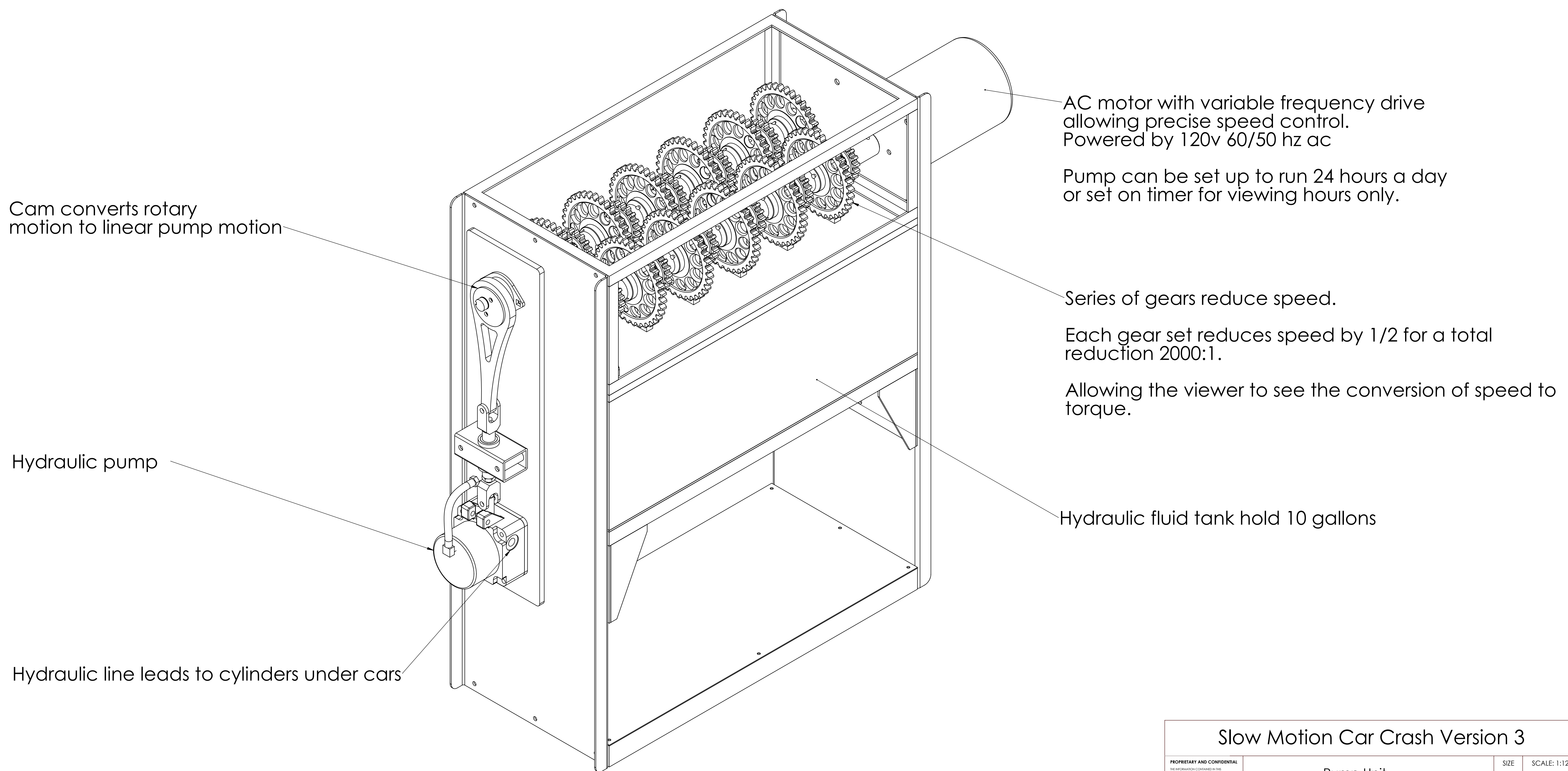
Track Detail

SIZE **D** SCALE: 1:12
 SHEET 4 OF 9

Gear reduction and pump unit.

A series of gears reduce motor speed from 1000 rpm to 0.5 rpm.

A hydraulic pump converts rotary motion into pressurized fluid and is sent via hoses to the cylinders under the car.



Cam converts rotary motion to linear pump motion

Hydraulic pump

Hydraulic line leads to cylinders under cars

AC motor with variable frequency drive allowing precise speed control. Powered by 120v 60/50 hz ac

Pump can be set up to run 24 hours a day or set on timer for viewing hours only.

Series of gears reduce speed. Each gear set reduces speed by 1/2 for a total reduction 2000:1.

Allowing the viewer to see the conversion of speed to torque.

Hydraulic fluid tank hold 10 gallons

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Setup:

We will need a local shop big enough to work on a car.
The shop should have a welder and basic metalworking tools.
A car lift will make things easier.
Something like an autobody repair shop would be perfect.

We will need a local assistant or two that has metal working/mechanical/sculpture knowledge.
It's best if the cars and sculpture components are in place in the shop before we arrive.
It takes 7 to ten days to install.

Steps:

Prepare the cars. Remove the gas tanks batteries and fluids from the cars. 3 days

Weld the metal subframes used to attach the cars to the mechanism into the cars. 5 days

Once the cars are ready they can be transported to the site.

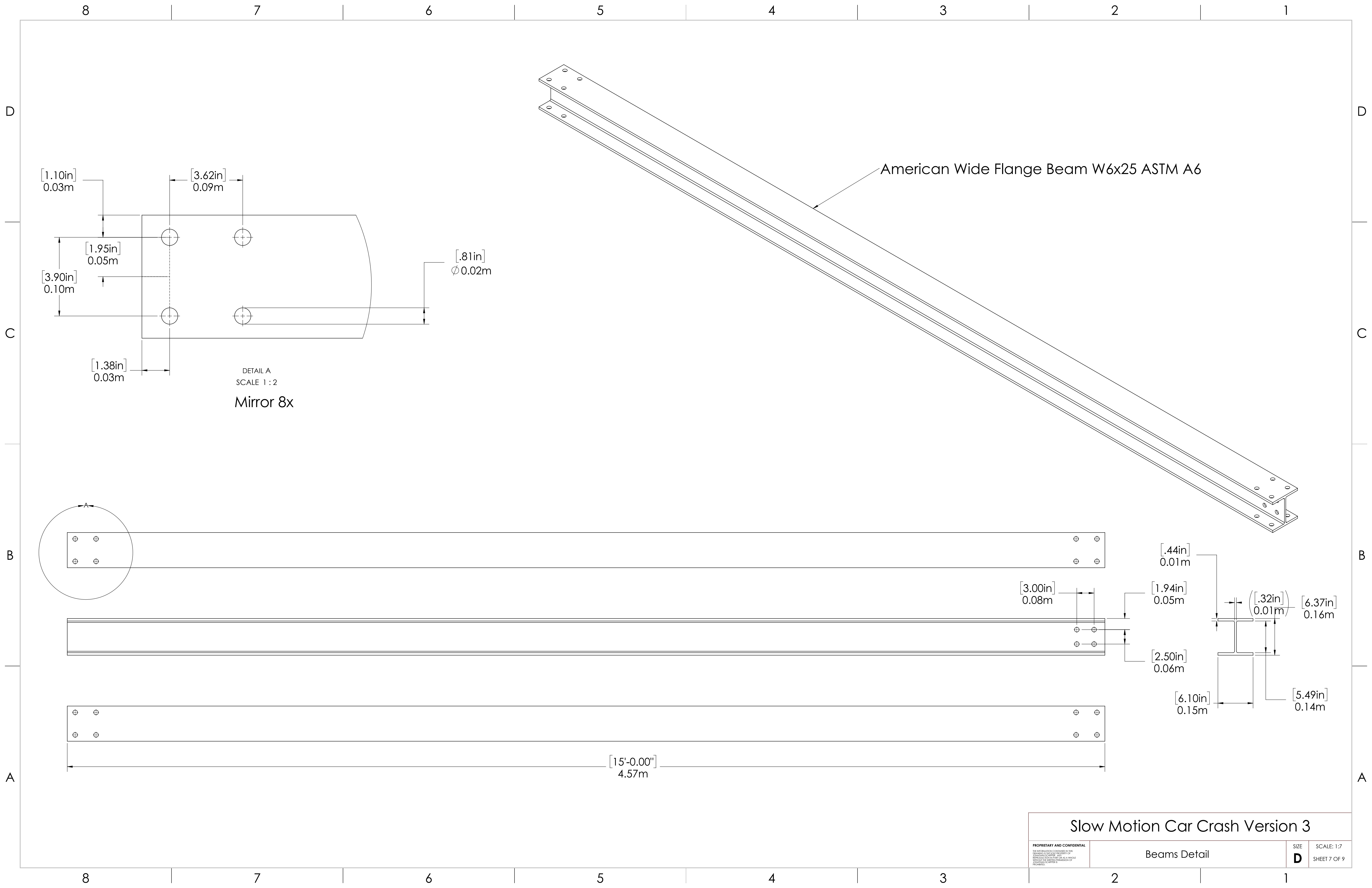
The track is assembled on-site and the cars are moved into position and bolted to the track. 2 days

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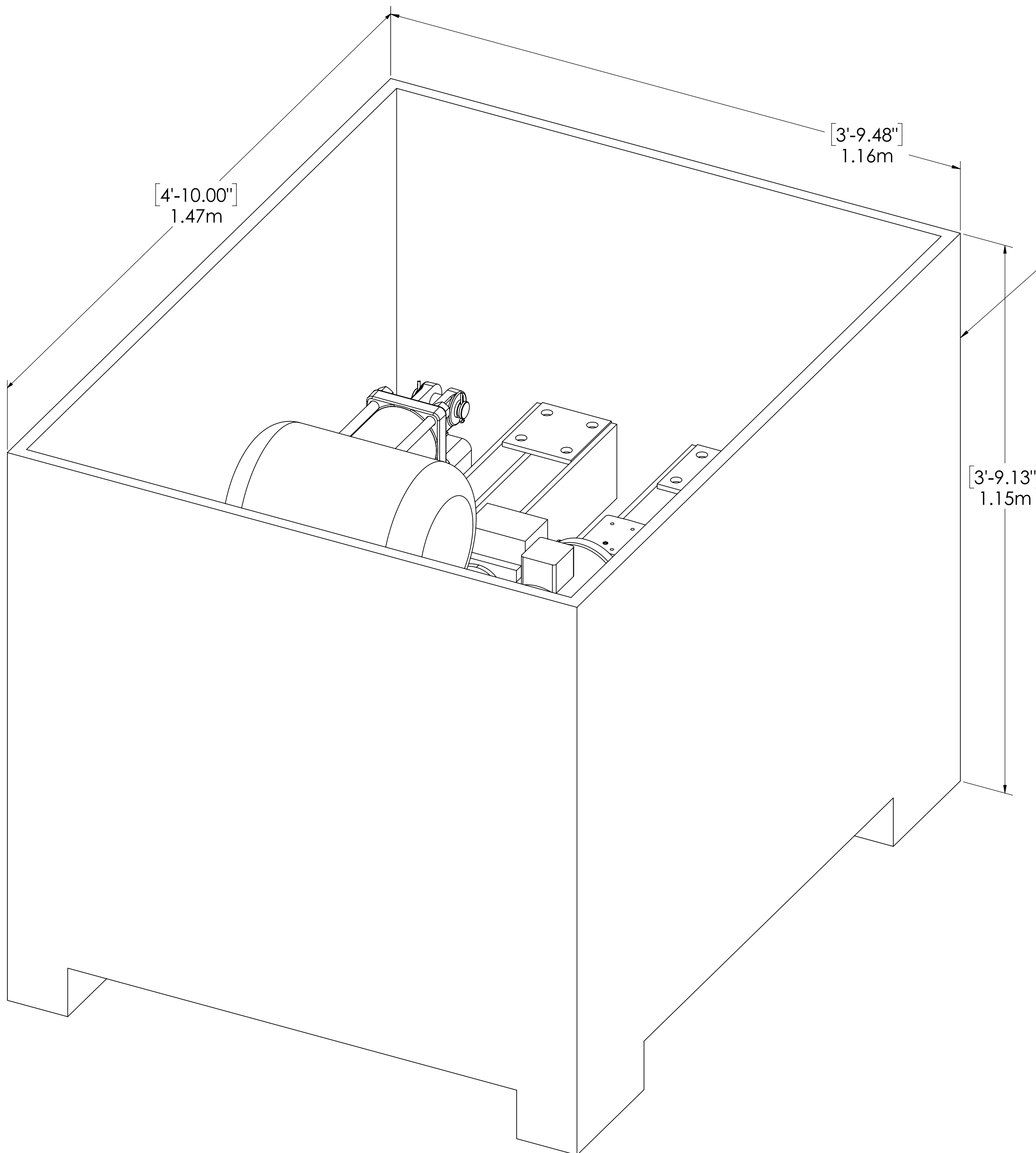
Setup Overvier

SIZE
D SCALE: 1:12
SHEET 6 OF 9



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Crate about 150kg

End weldment about 52kg each

Cylinders about 70kg each

Carts about 170Kg each

Item	Weight	Quantity	Total
Carts	170	2	340
Cylinders	70	2	140
End Weldment	52	2	104
Power Unit	50	1	50
Misc	250	1	250
Total Estimate			934

Slow Motion Car Crash Version 3

8

7

6

5

4

3

2

1

D

D

C

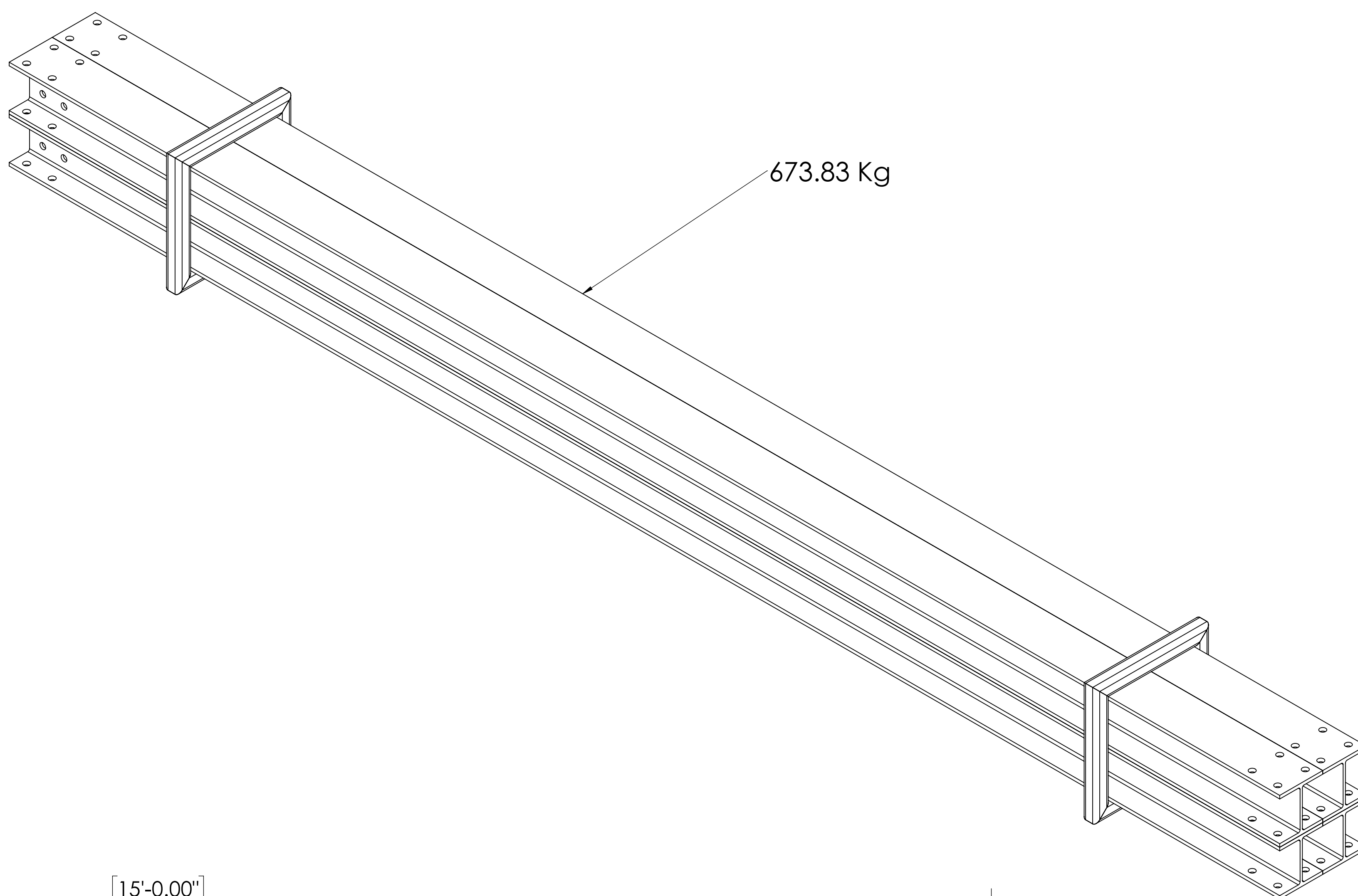
C

B

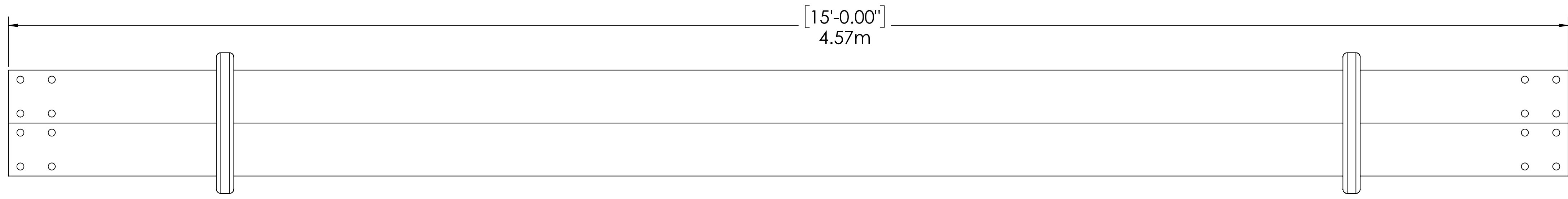
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A

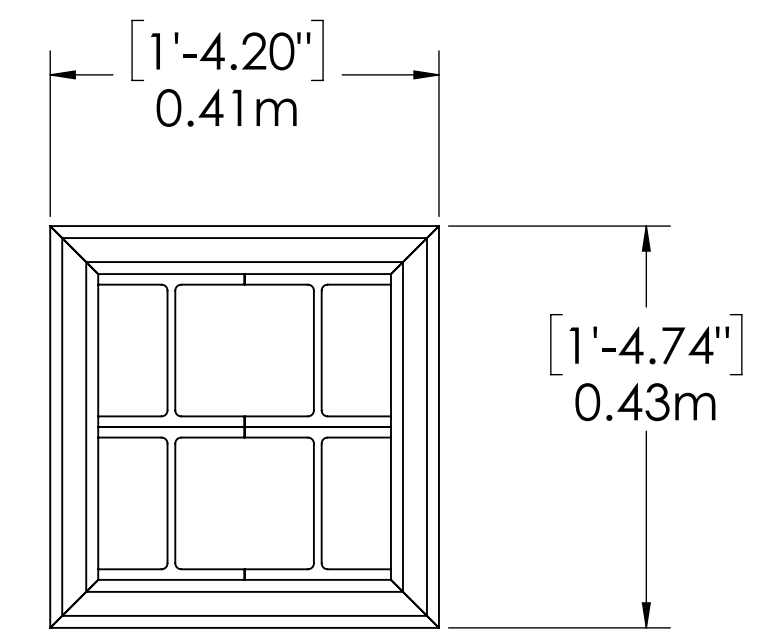
A



673.83 Kg



[15'-0.00"]
4.57m



[1'-4.20"]
0.41m

[1'-4.74"]
0.43m

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Shipping Beams

SIZE
D SCALE: 1:8
SHEET 9 OF 9

8

7

6

5

4

3

2

1