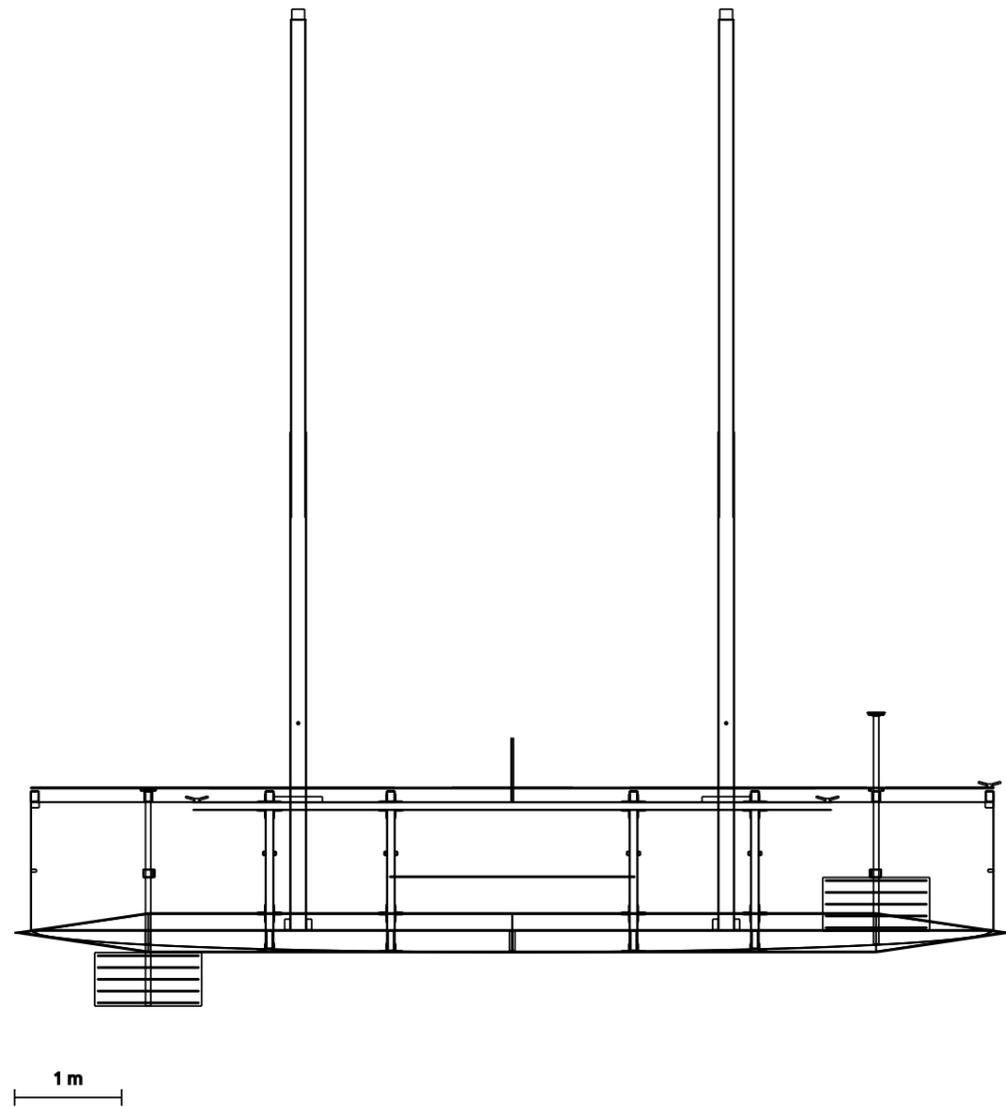
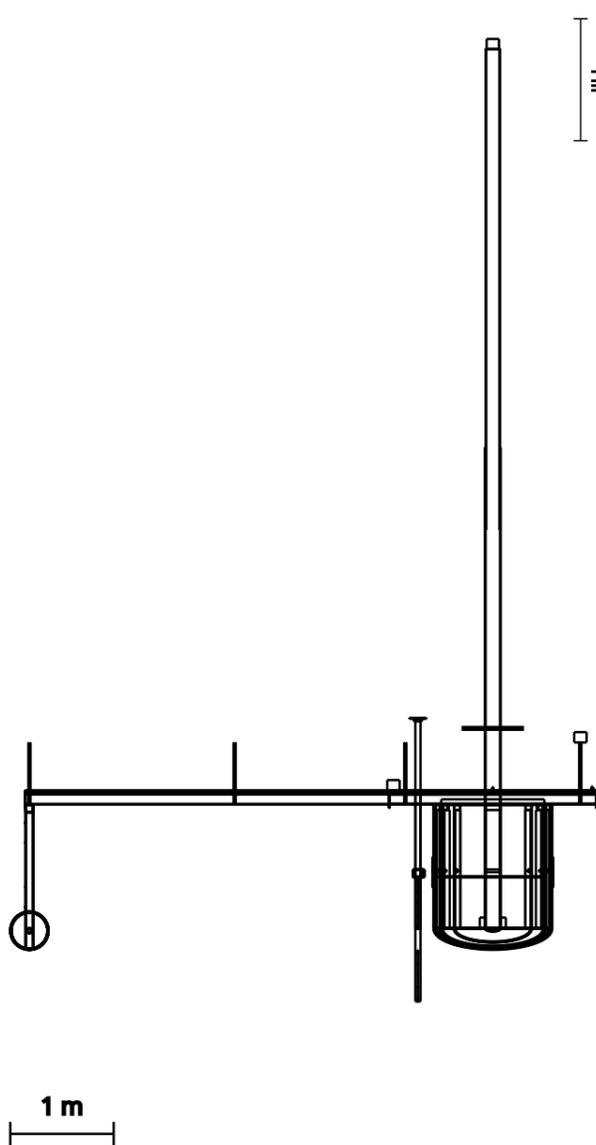


Lines Plan of Roti Proa II

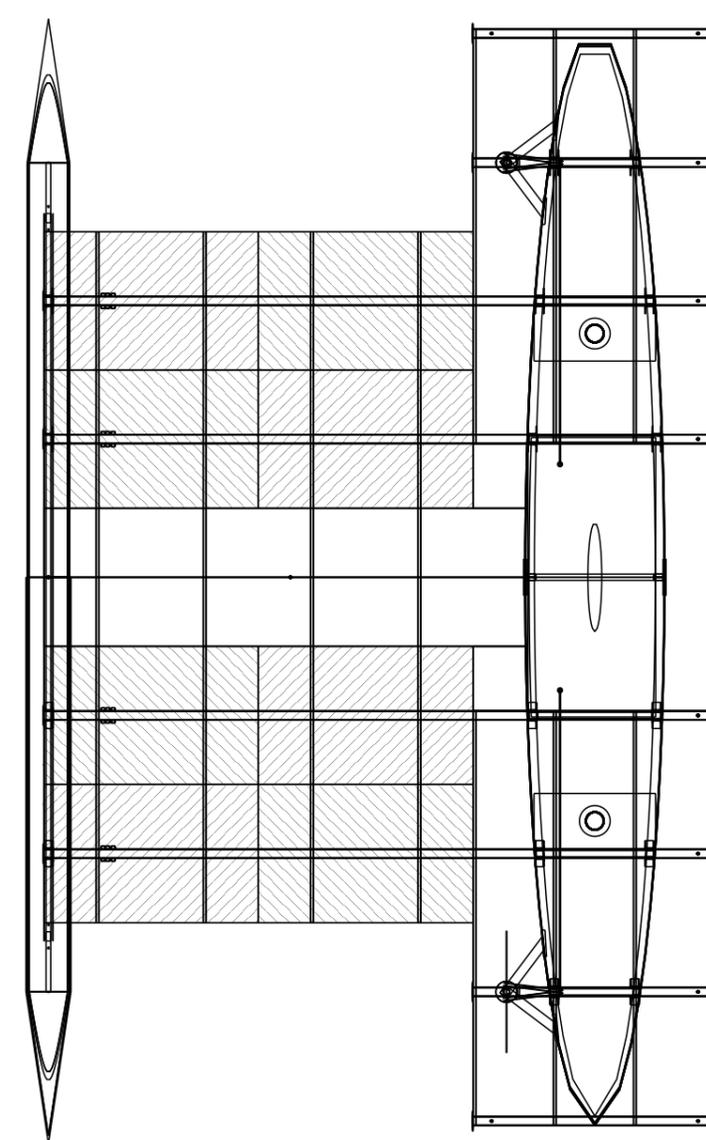
Profile (all sections)



Body Plan (all sections)



Full Breadth Plan



Proa Terminology

Vaka: main hull of the proa

Ama: outrigger hull

Aka: cross-beam connecting vaka with ama

Section Stations

Station	Y Position
rudder—lowered	-3403
midship	1
aka_0_0	1135
mast	2001
aka_1_0	2269
rudder—raised	3403
bow or stern	4462

Horizontal Stations

Station	Z Position
waterline	1
ama_centerline	185
mast_step	262
rudder_mount	703
gunwale	1375
overhead	1413
aka	1457
stringer	1520
panel	1536
deck	1540

Principal Dimensions

Parameter	Value
<i>Hull Dimensions</i>	
Length Overall (LOA)	9.30 m
Beam (Overall)	5.64 m
Vaka Length	9.00 m
Vaka Beam	1.15 m
Ama Length	9.30 m
Ama Diameter	0.37 m
<i>Vertical Dimensions</i>	
Freeboard	1.20 m
Deck Height	1.54 m
Design Waterline	0.00 m

Rig

Parameter	Value
Mast Height	8.50 m
Sail Area	60.5 m ²

Electric Propulsion System

Parameter	Value
Number of solar panels	8
Maximal power (each)	500 W
Electric motor power	4 kW
Onboard battery capacity	8 kWh

Notes

Pages 2–23 show the detailed lines plan of the RP2 solar-electric proa in the goosewing configuration (front rudder raised).

Views

- **Profile (Sheer Plan)** (pages 2–5)
- **Body Plan** (pages 6–12)
- **Full Breadth Plan** (page 13)
- **Horizontal Sections** (pages 14–23)

Section Locations: Sections are taken at midship (Y=0), at each aka, and at mast position. The asymmetric proa design requires showing the full beam rather than the traditional half-sections used for symmetric hulls.

Profile (all sections)

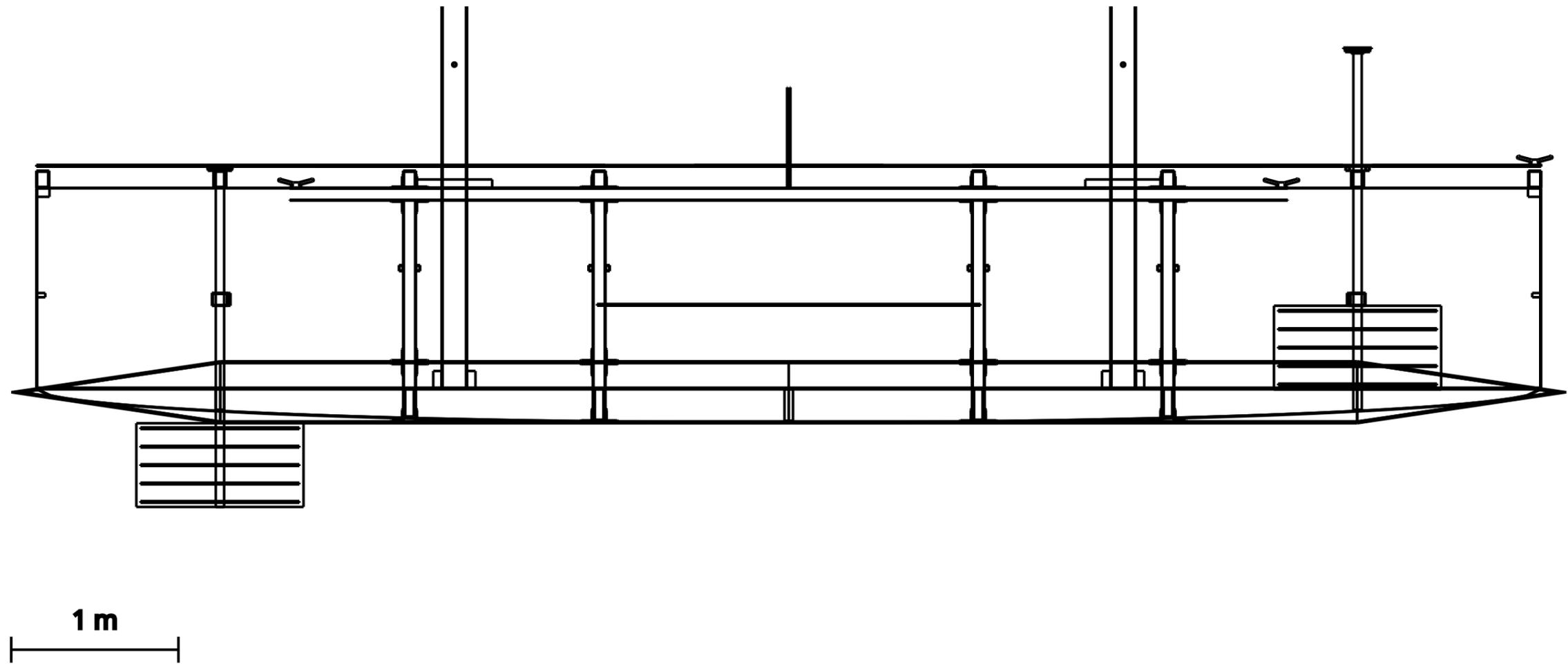


Figure 1: Profile—Vaka, ama and rudder sections overlaid

Profile Sections

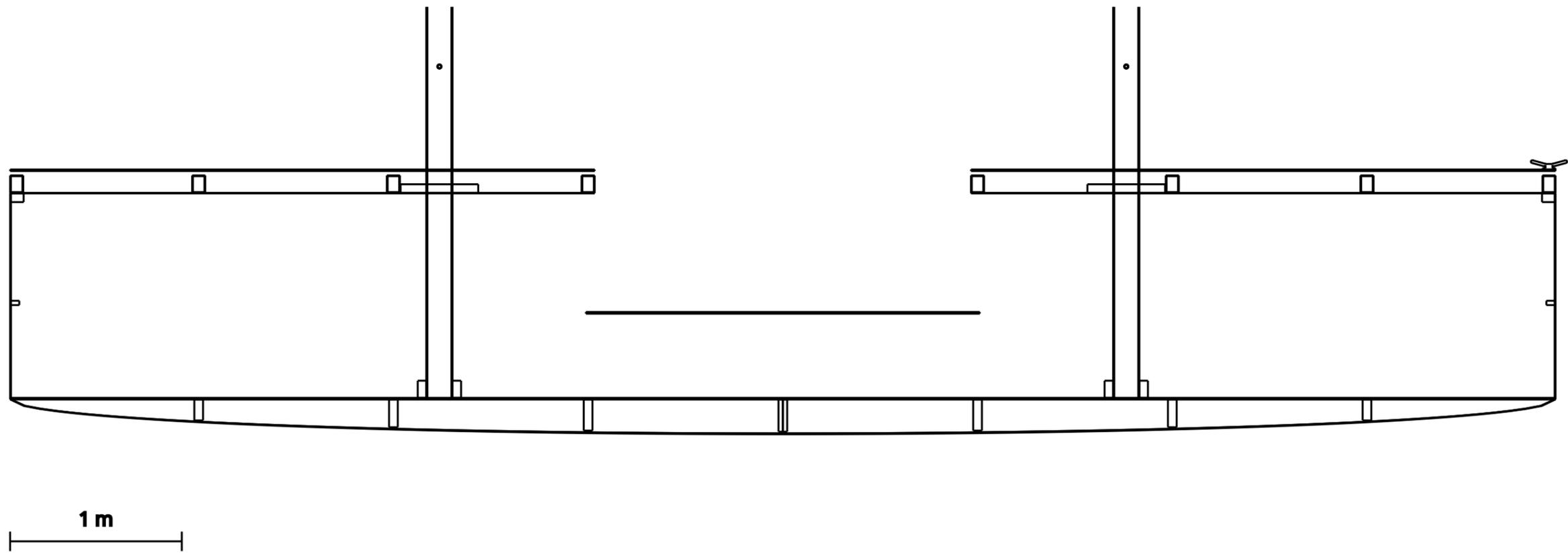


Figure 2: Profile—Vaka centerline section (X=4486mm)

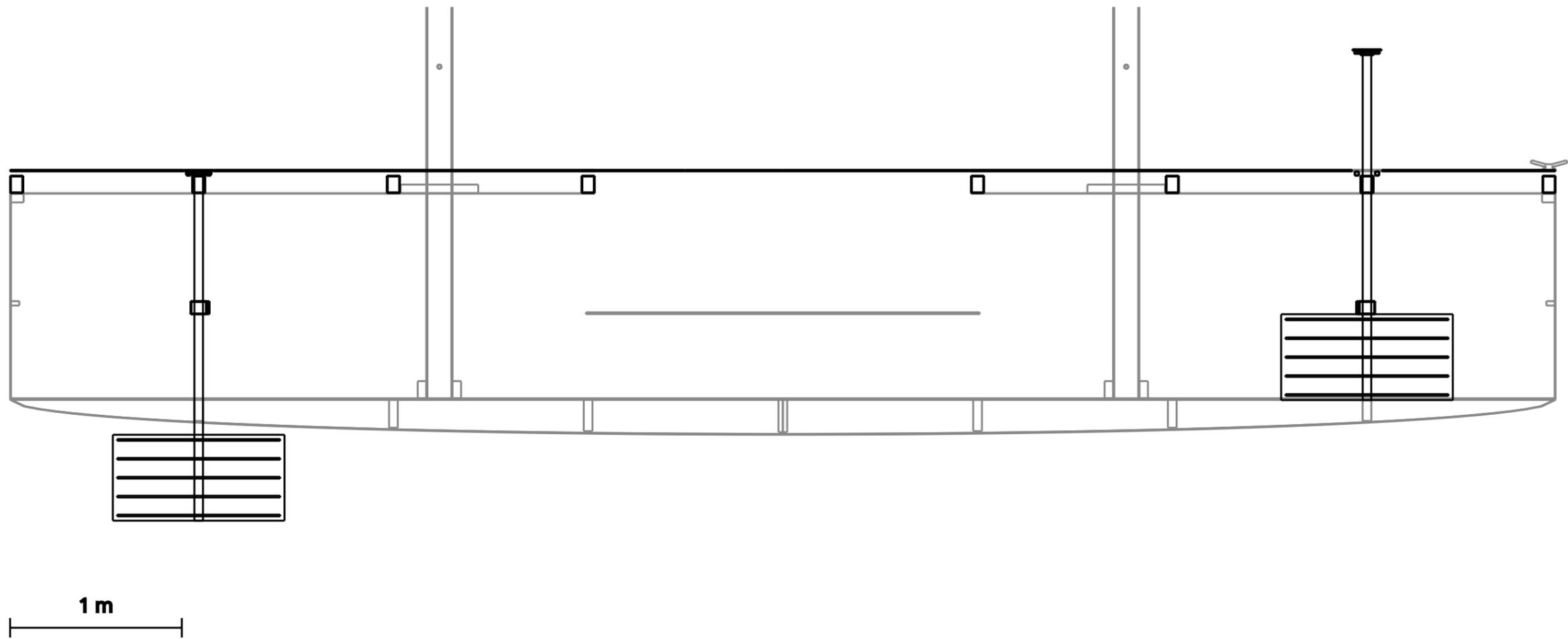


Figure 3: Profile—Rudder and vaka sections (rudder X=4336mm in black, vaka X=4486mm in grey; forward rudder raised)

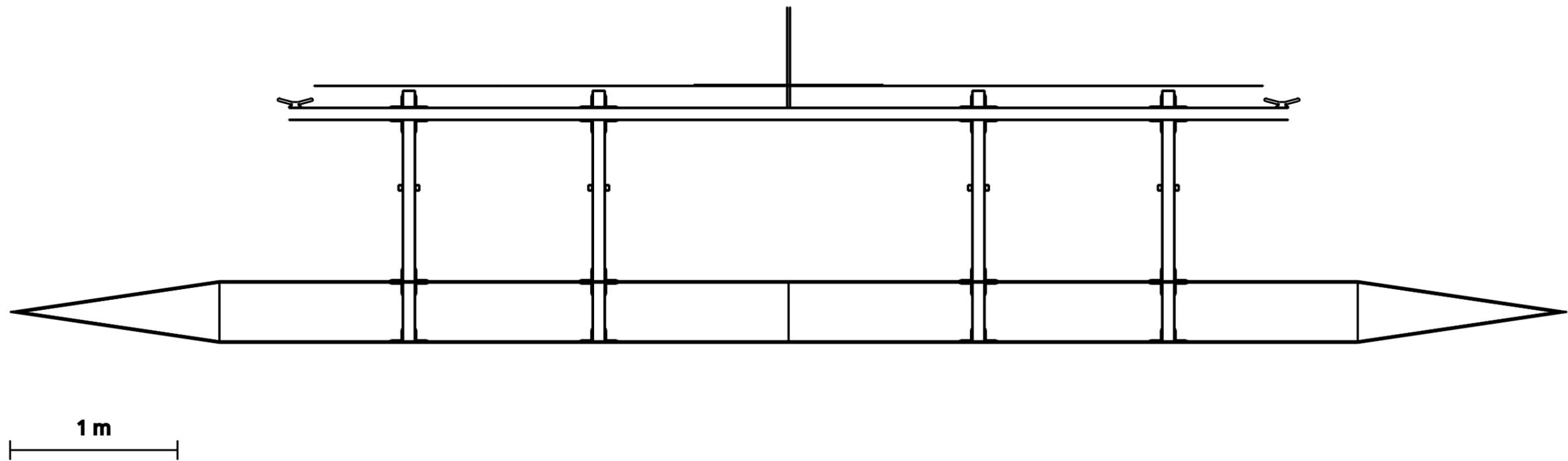


Figure 4: Profile—Ama centerline section ($X=0$)

Body Plan (all sections)

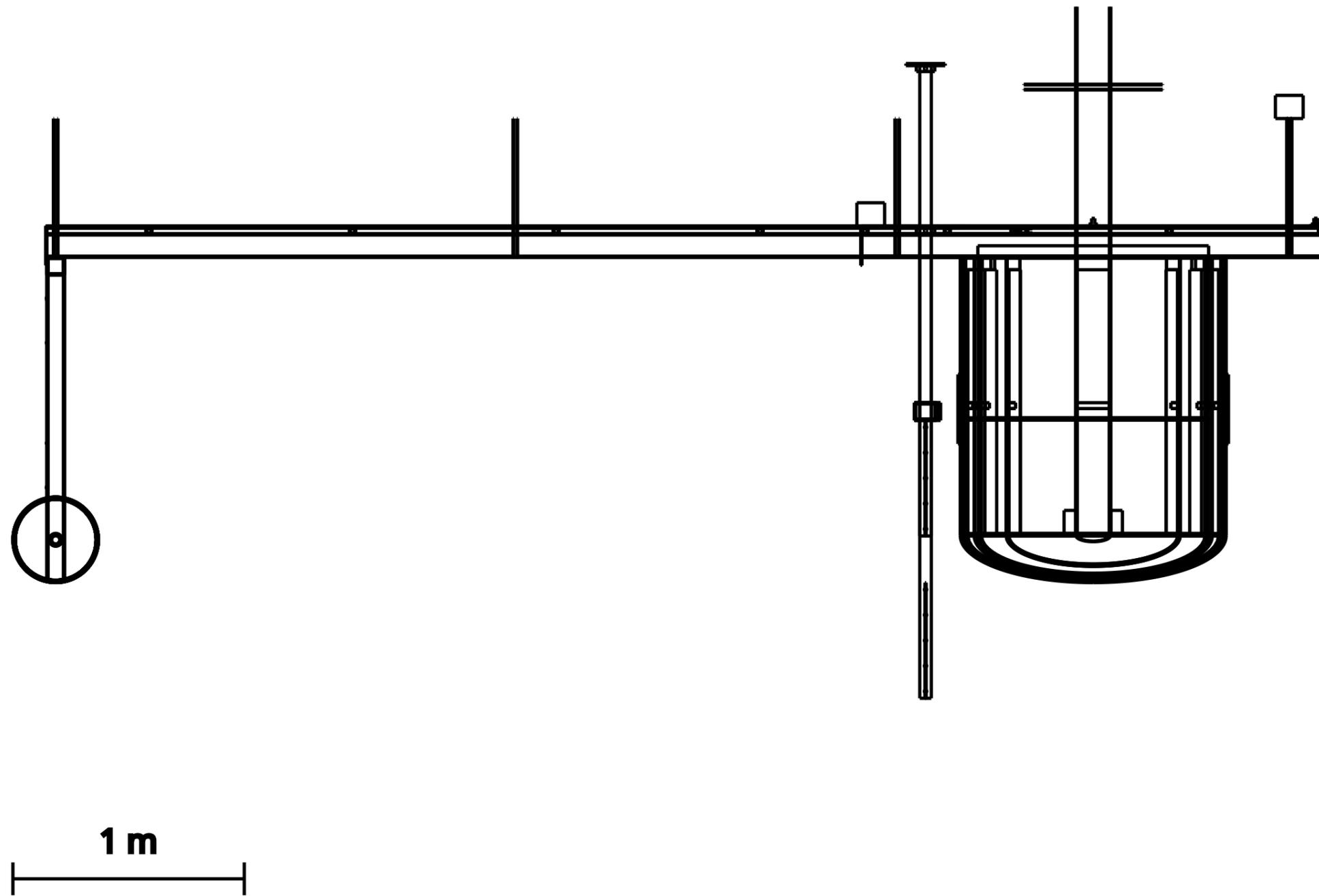


Figure 5: Combined body plan—All sections overlaid

Body Plan Sections



1 m

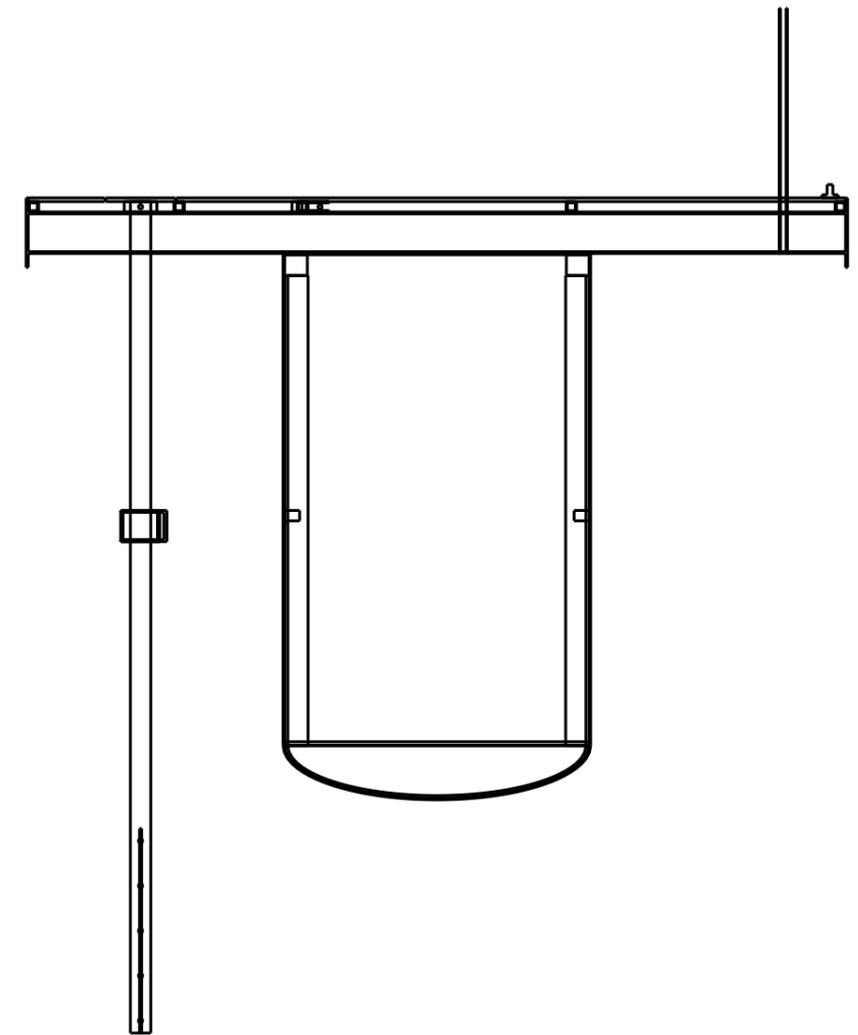


Figure 6: Body Plan—Section at rudder—lowered (Y=-3403mm)

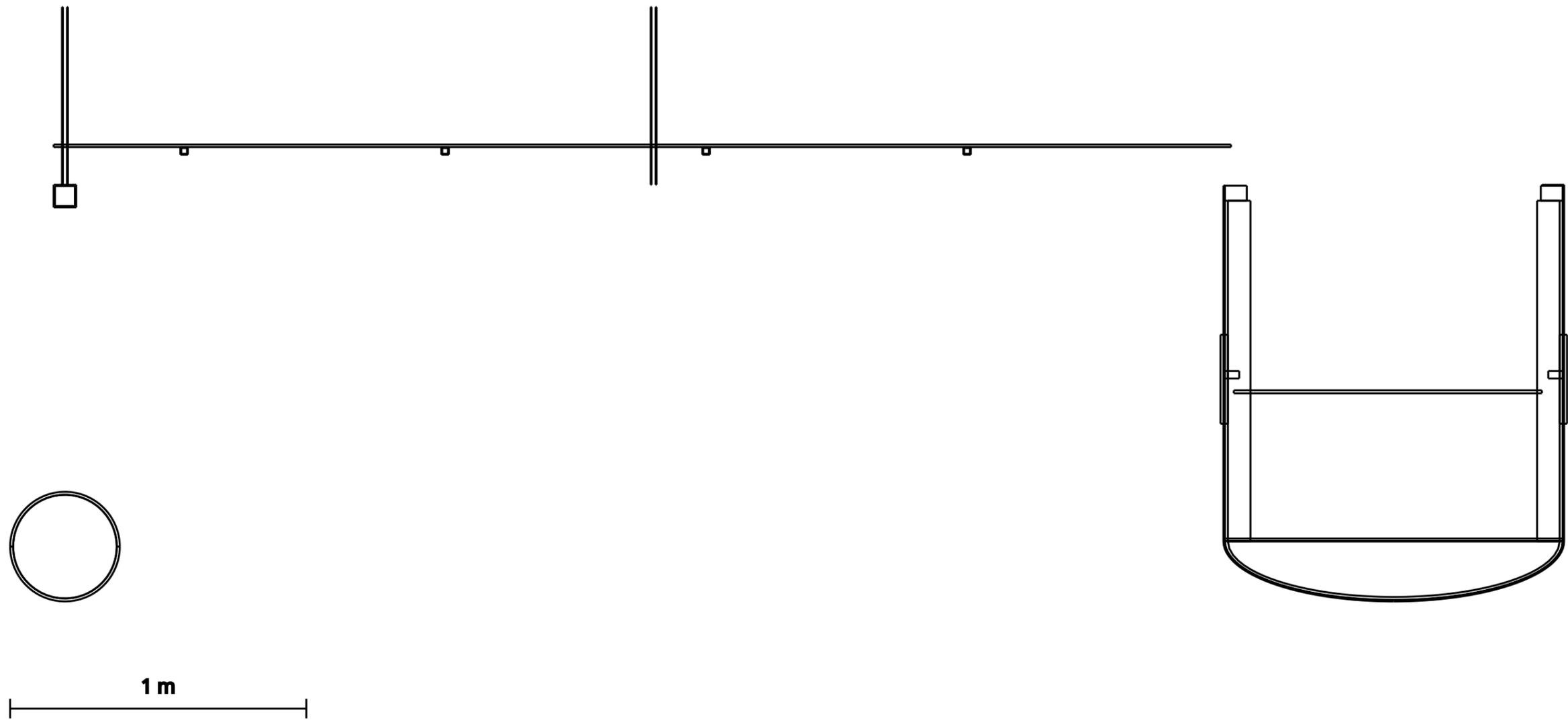


Figure 7: Body Plan—Section at midship (Y=1mm)

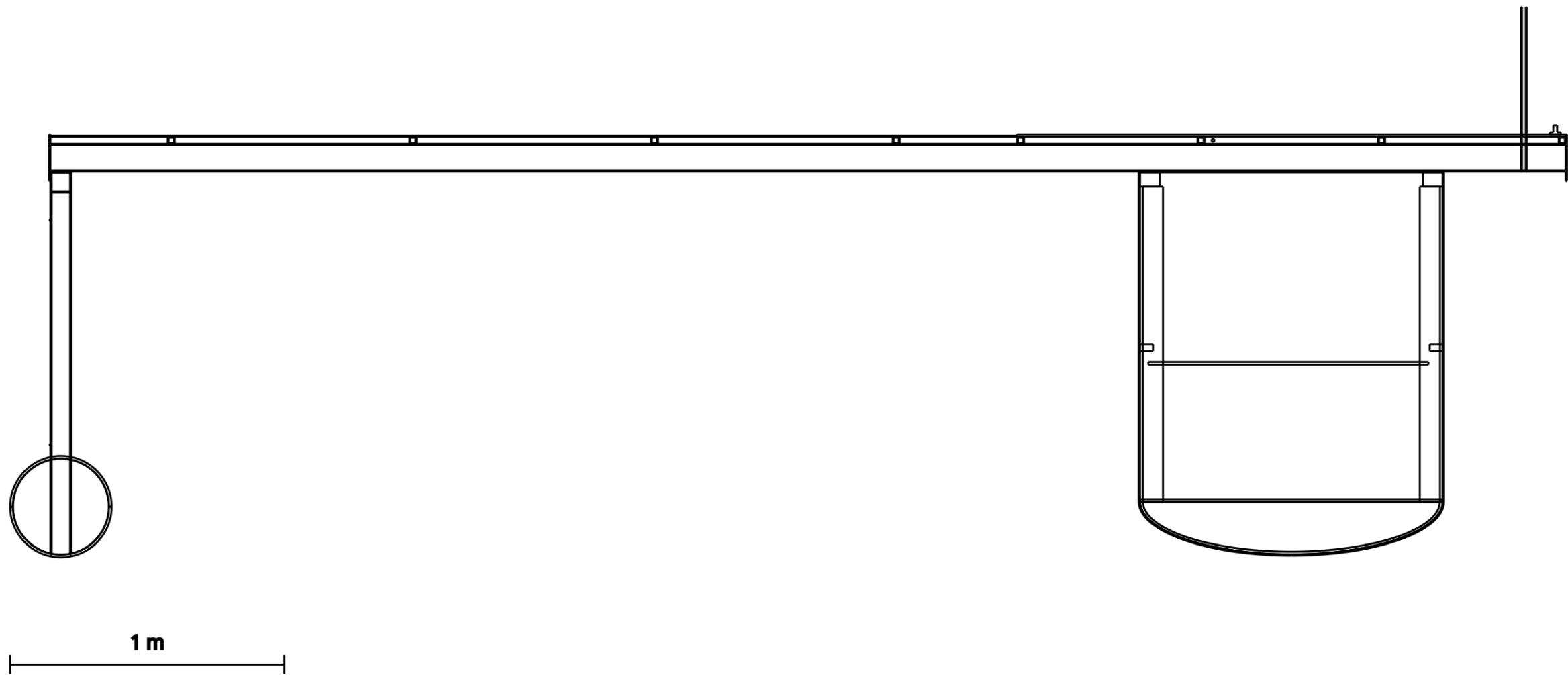


Figure 8: Body Plan—Section at aka_0.0 (Y=1135mm)

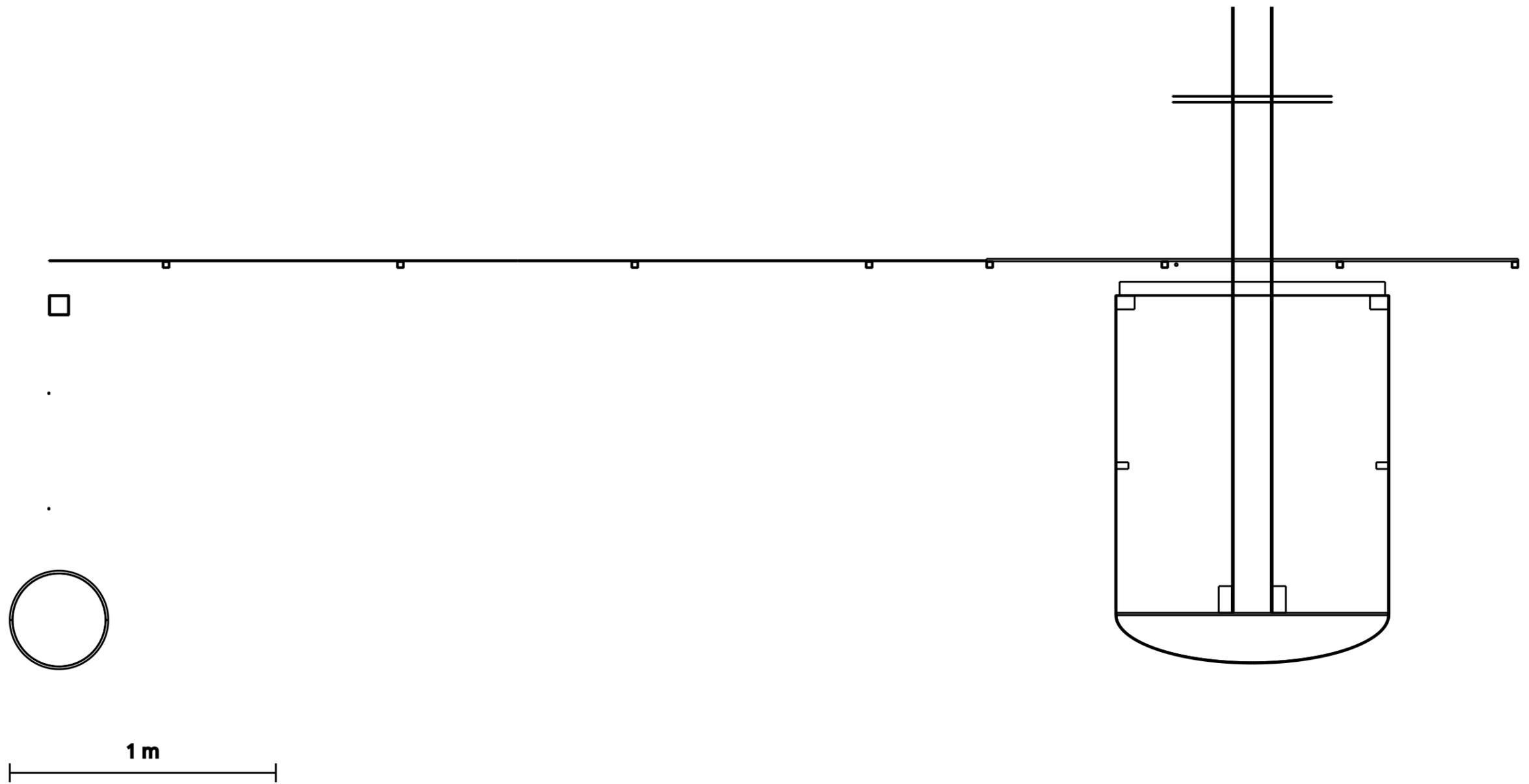


Figure 9: Body Plan—Section at mast (Y=2001mm)

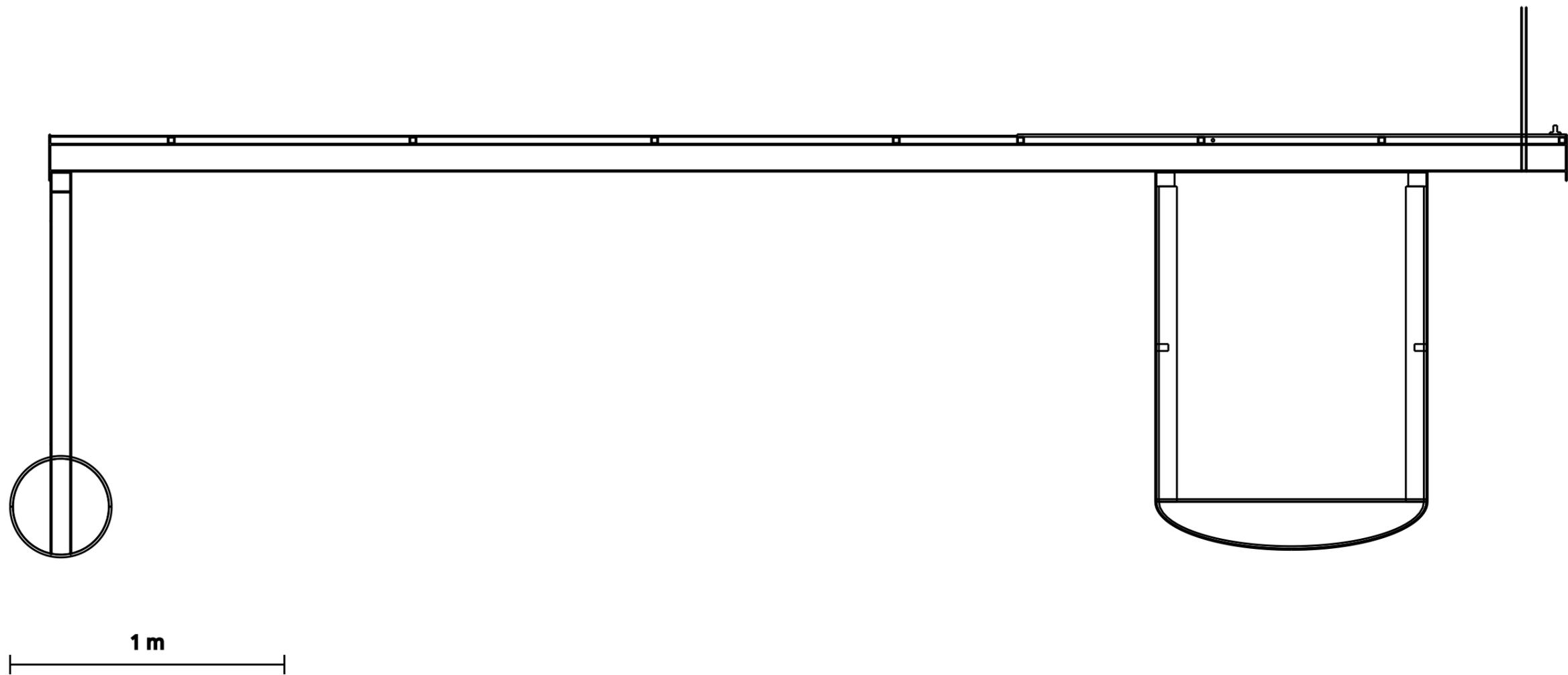
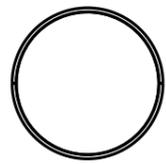


Figure 10: Body Plan—Section at aka.1.0 (Y=2269mm)



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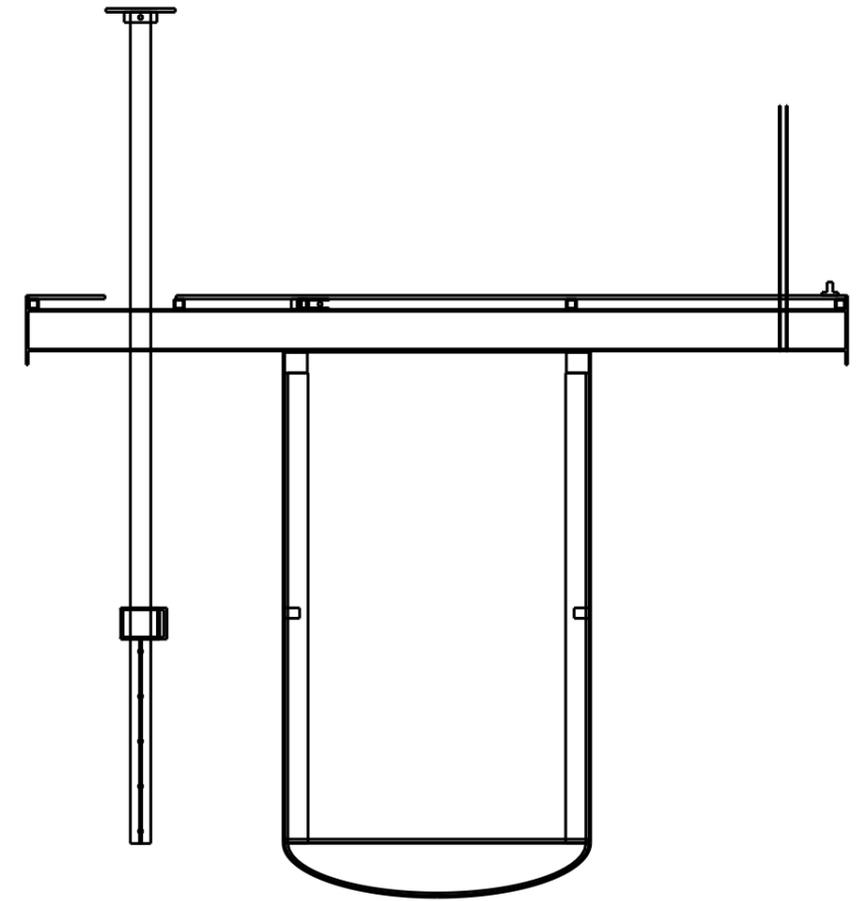


Figure 11: Body Plan—Section at rudder—raised (Y=3403mm)



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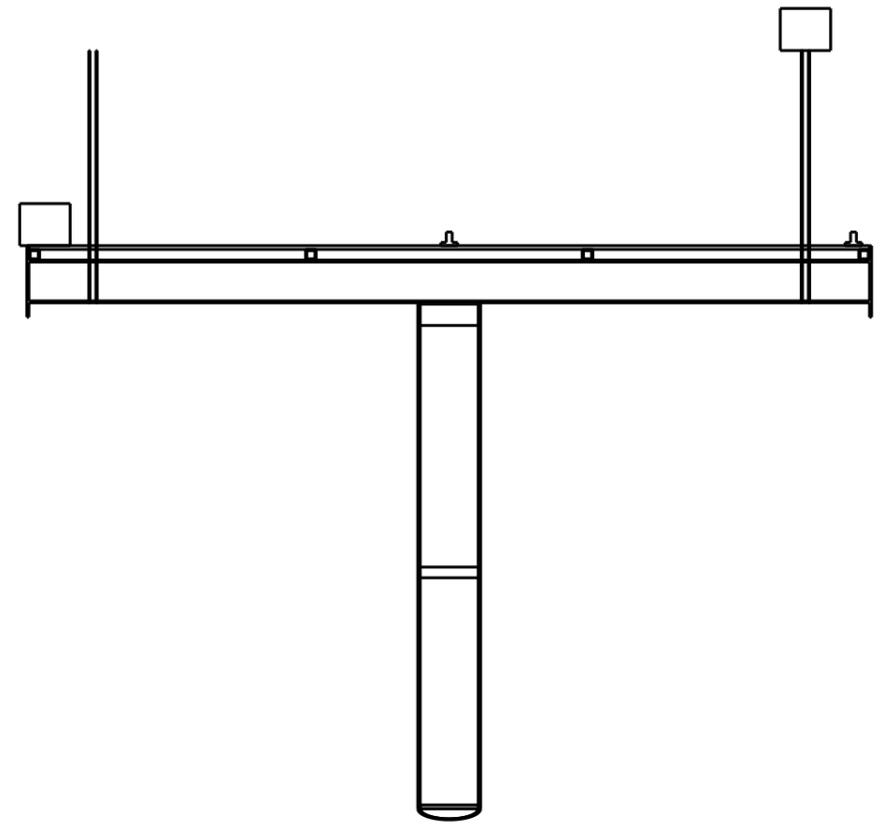


Figure 12: Body Plan—Section at bow or stern ($Y=4462\text{mm}$)

Full Breadth Plan (all horizontal sections)

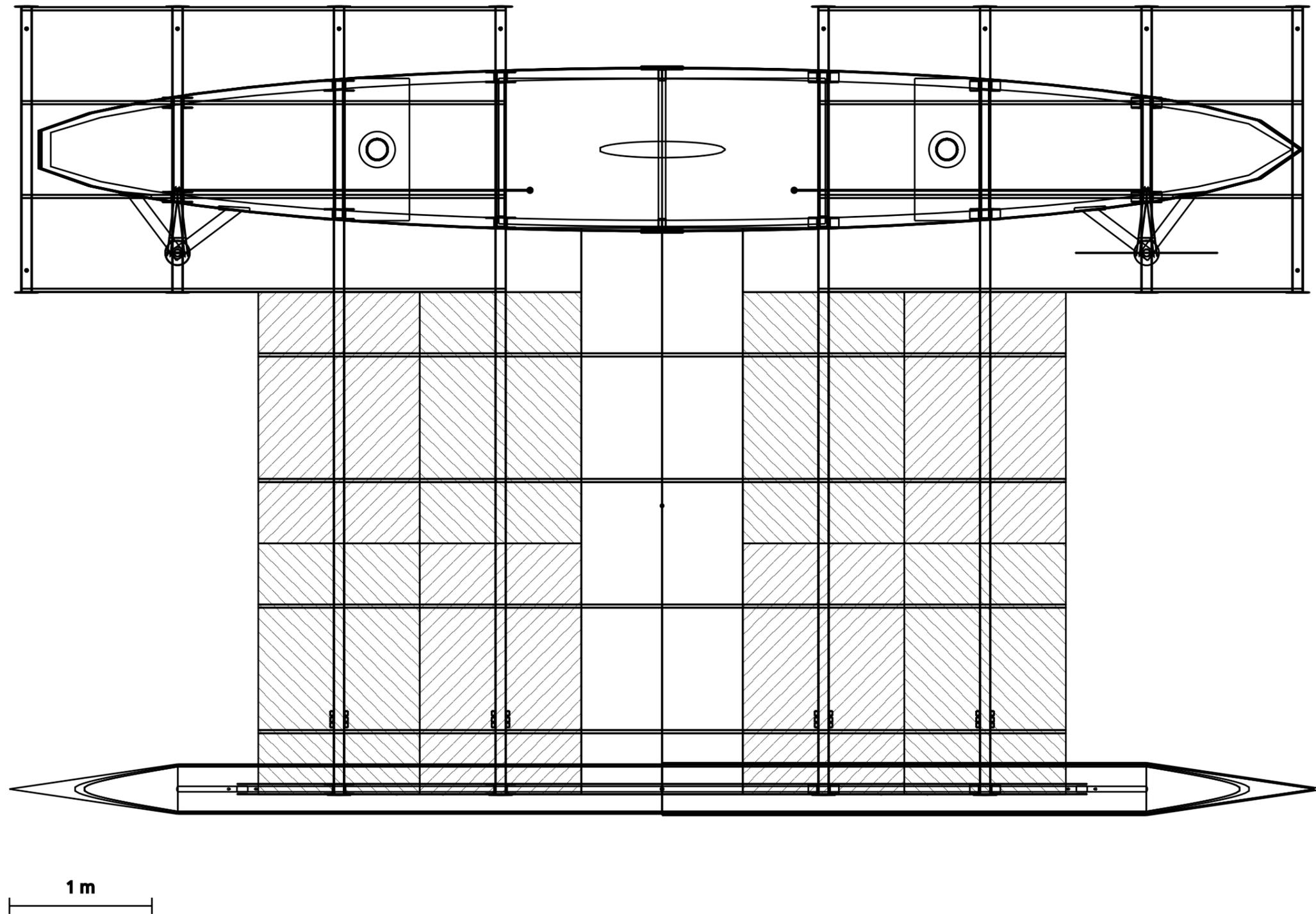


Figure 13: Full breadth plan—View from above (solar panels hatched)

Horizontal Sections

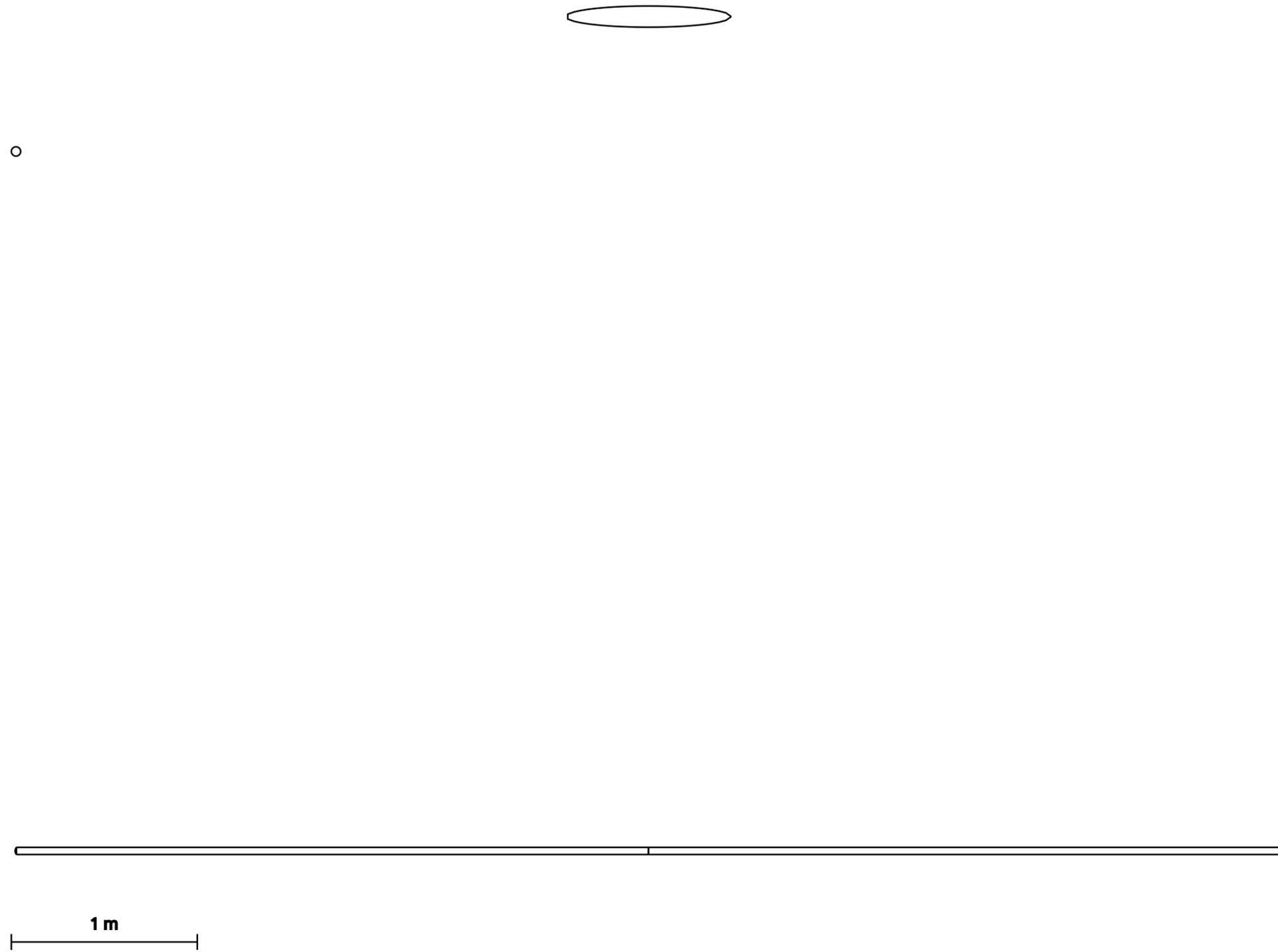


Figure 14: Horizontal Section—waterline ($Z=1\text{mm}$)

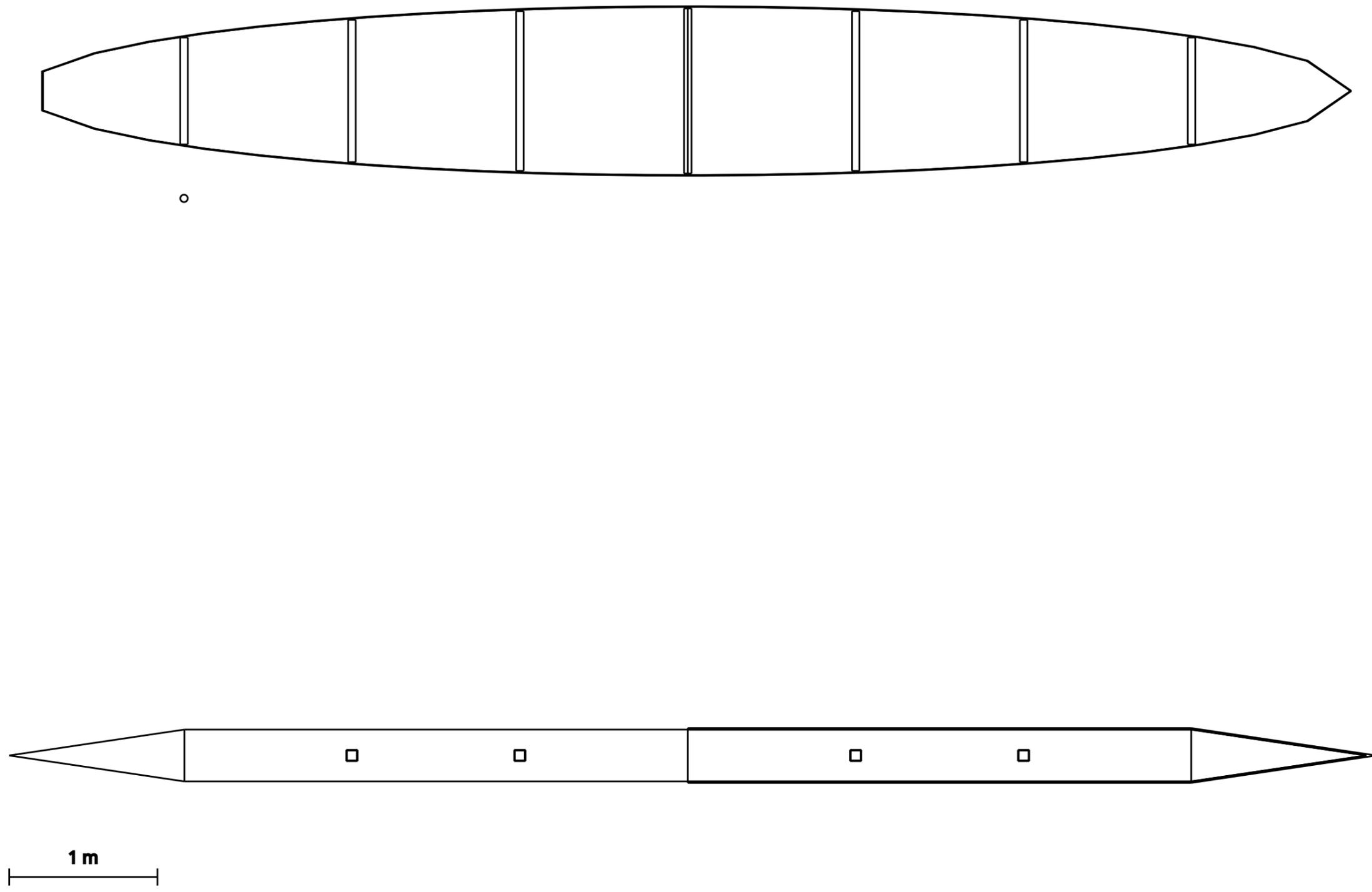


Figure 15: Horizontal Section—ama_centerline (Z=185mm)

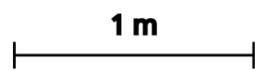
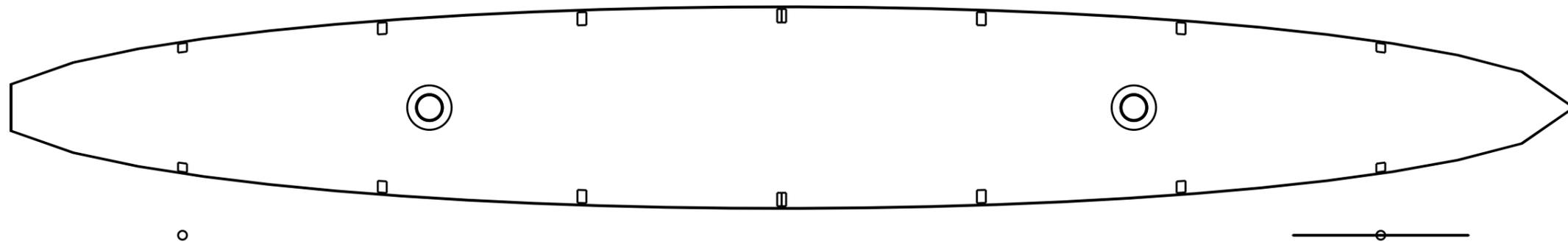
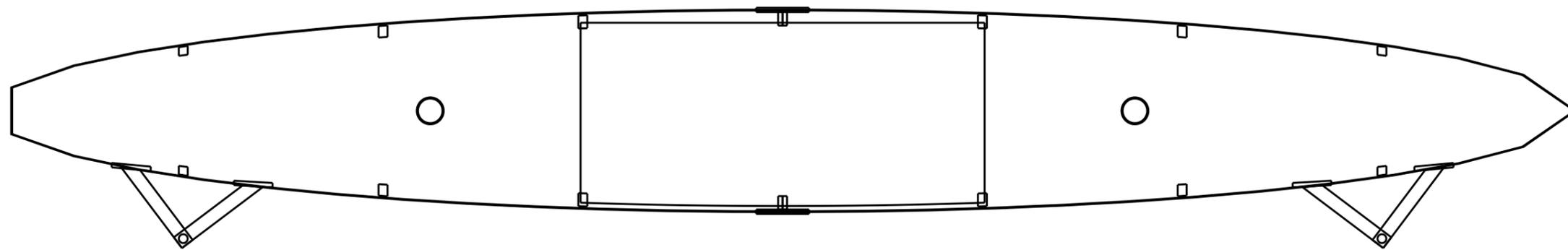


Figure 16: Horizontal Section—mast_step (Z=262mm)



1 m

□ . . □ □ . . □

Figure 17: Horizontal Section—rudder_mount (Z=703mm)

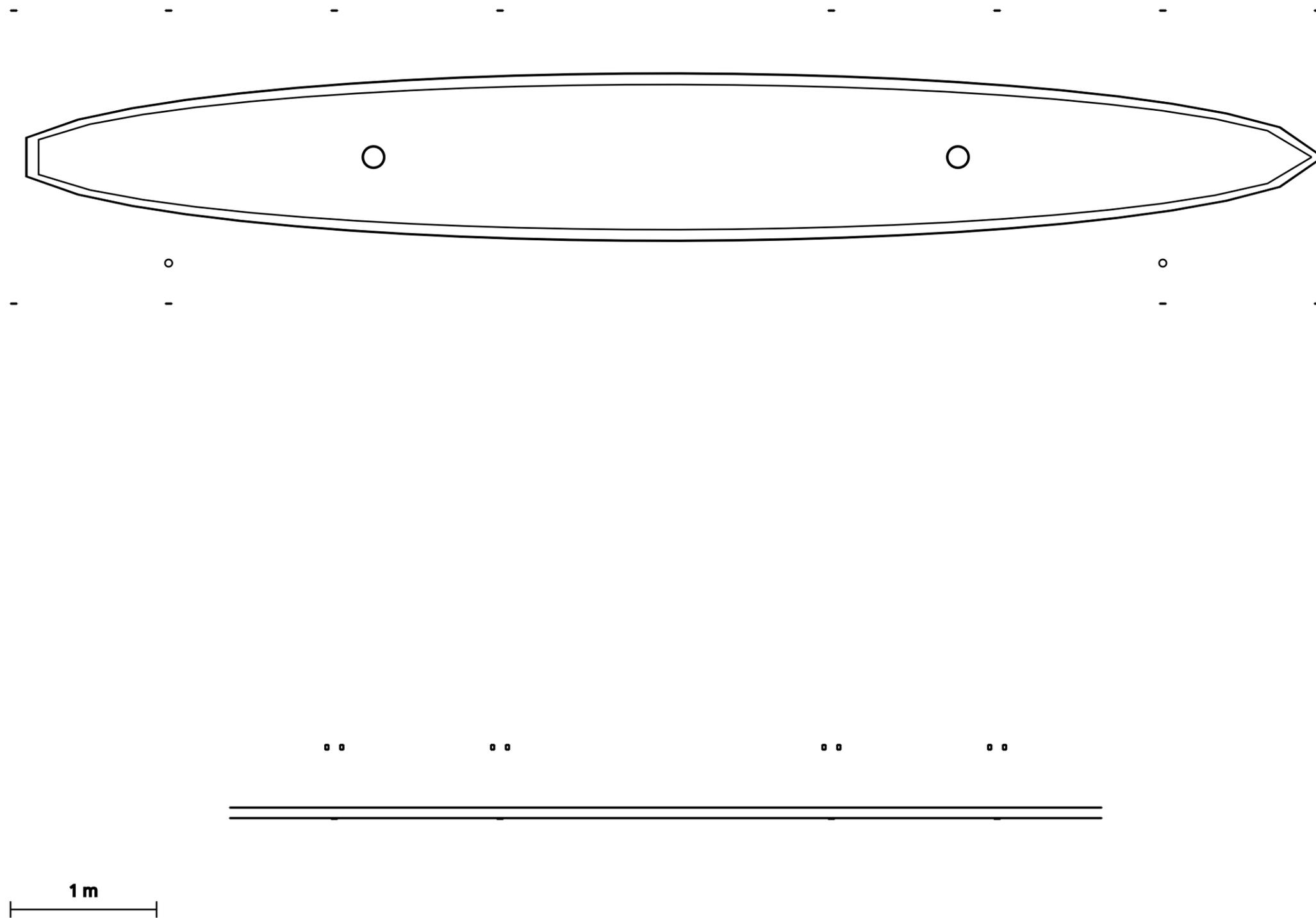


Figure 18: Horizontal Section—gunwale (Z=1375mm)

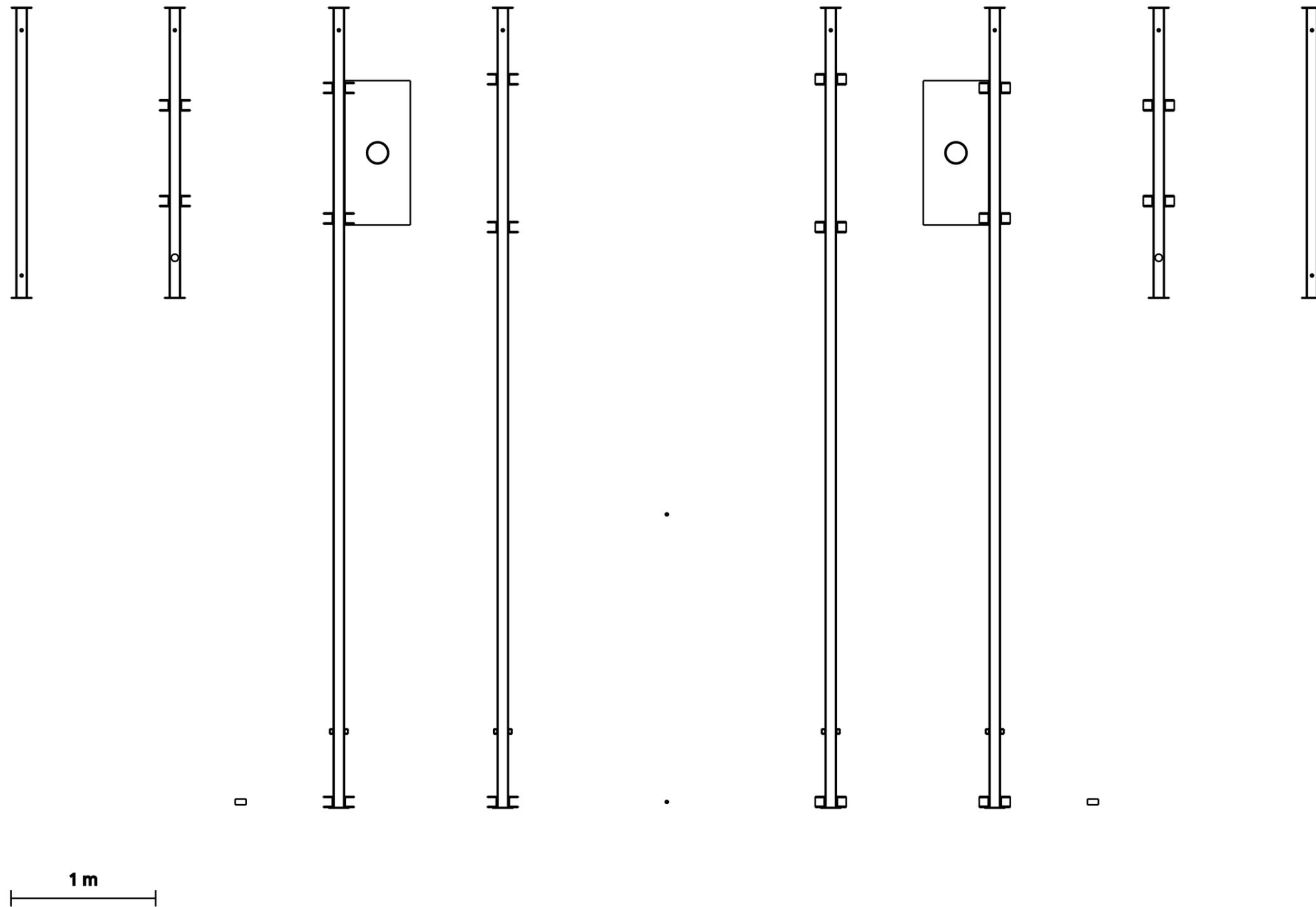


Figure 19: Horizontal Section—overhead (Z=1413mm)

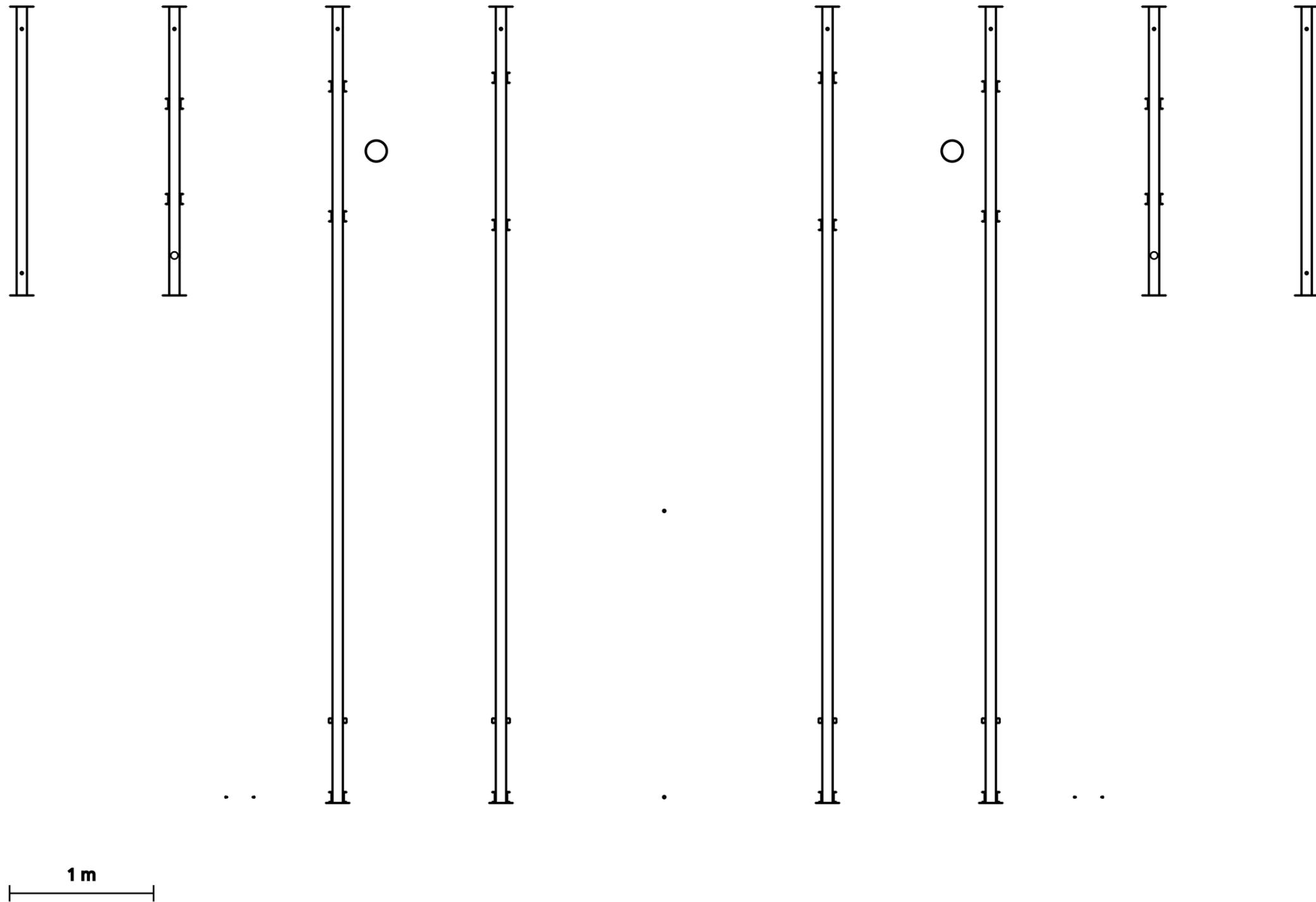


Figure 20: Horizontal Section—aka ($Z=1457\text{mm}$)

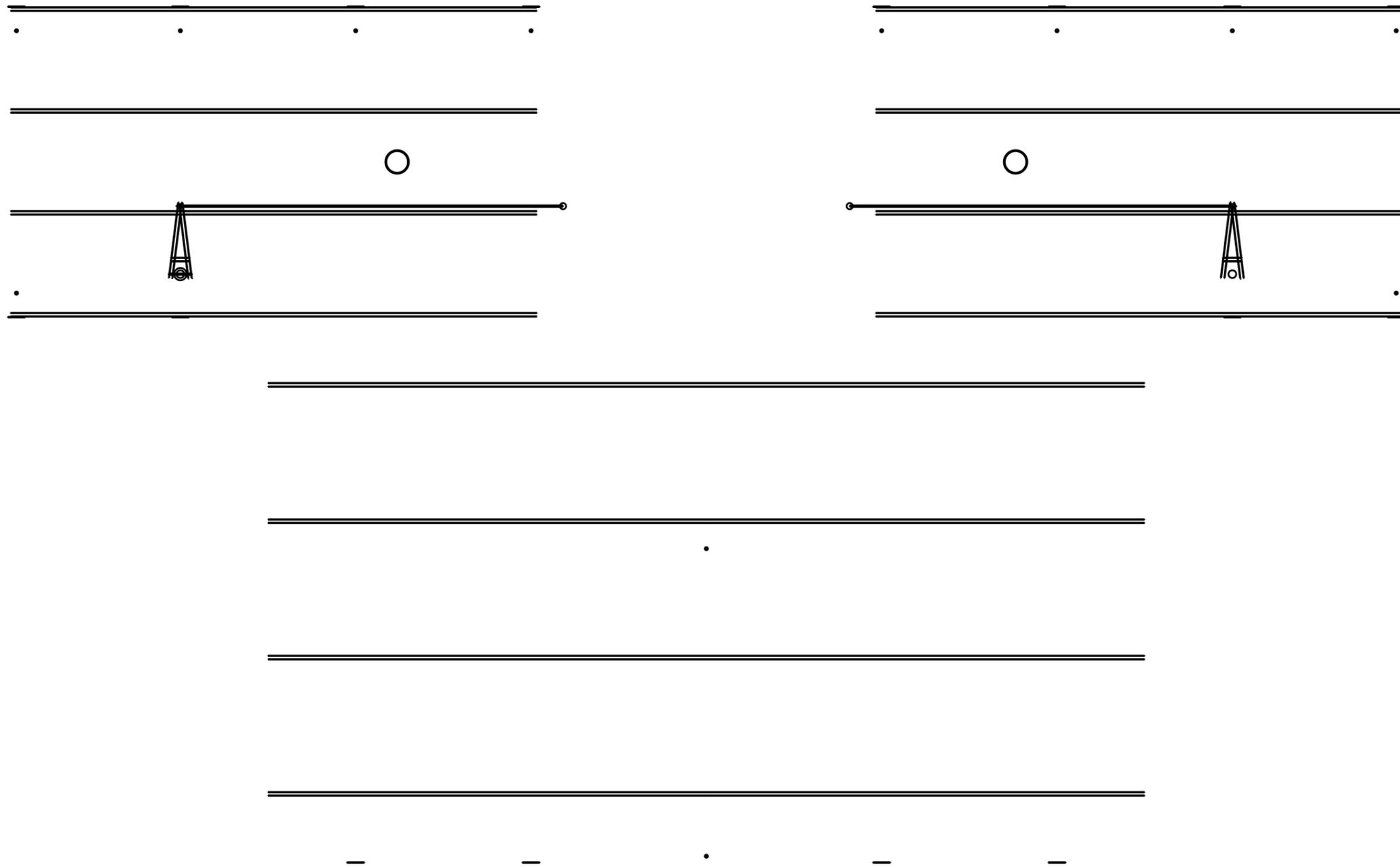
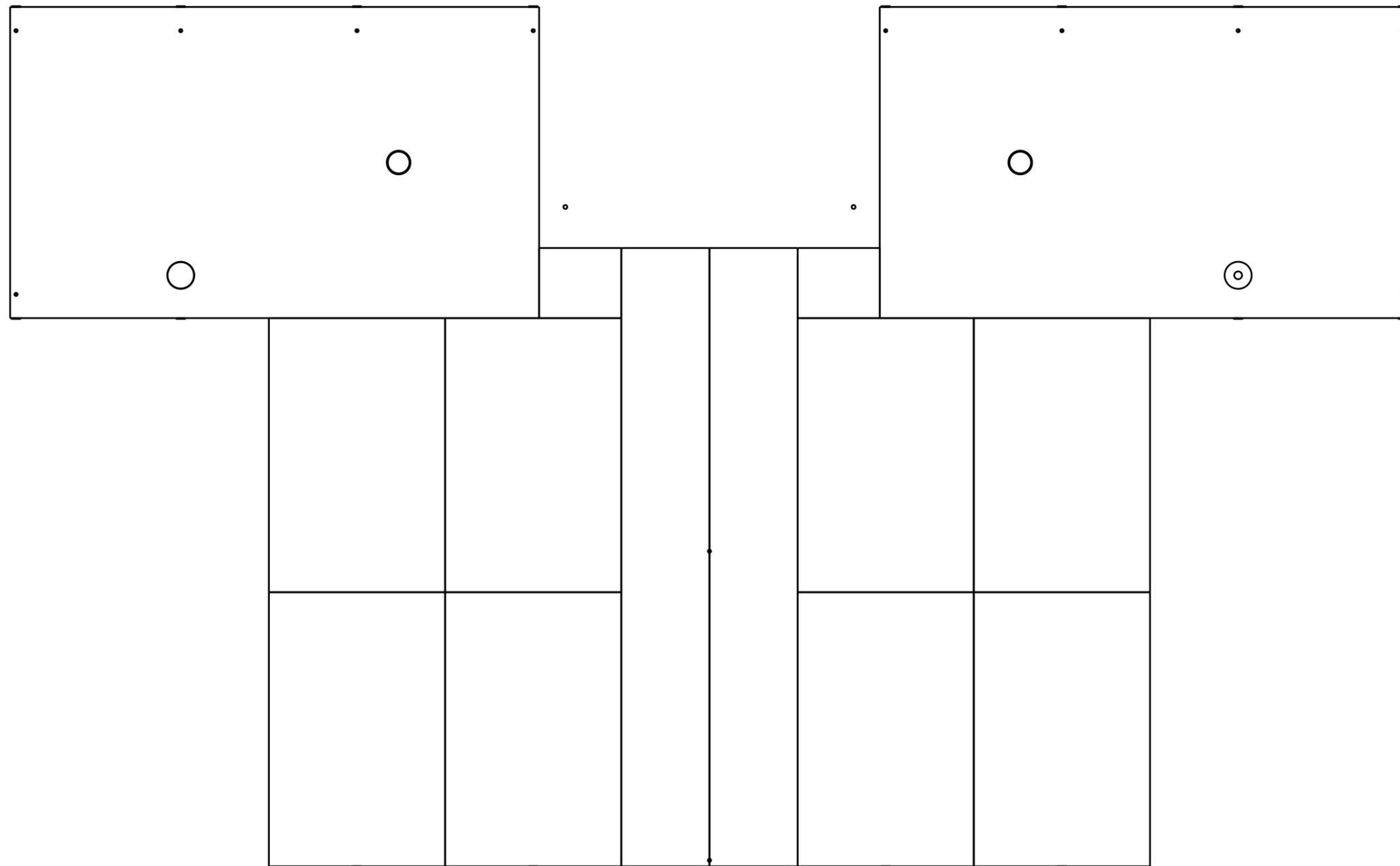
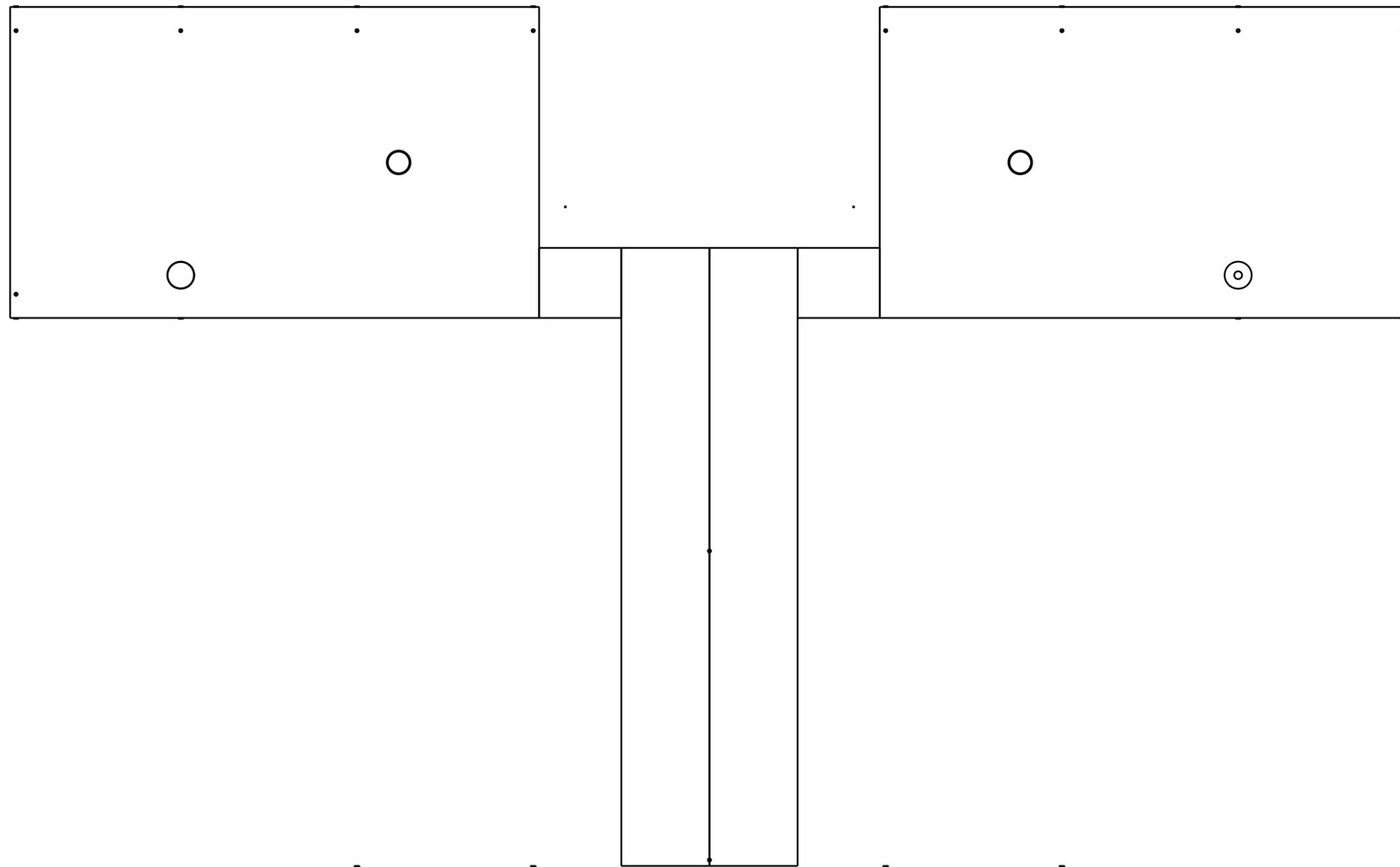


Figure 21: Horizontal Section—stringer (Z=1520mm)



1 m

Figure 22: Horizontal Section—panel (Z=1536mm)



1 m

Figure 23: Horizontal Section—deck (Z=1540mm)