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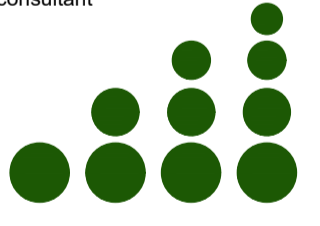
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service

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GLASSHOUSE  
INFRASTRUCTURE.

project number

0533

drawing title

SANBI KIRSTENBOSCH:  
Site Plan Layout

ref.no. ...

scale N.T.S

date NOV'23

drawing number

designed K JURIES

drawn T NIEFTAGODIEN

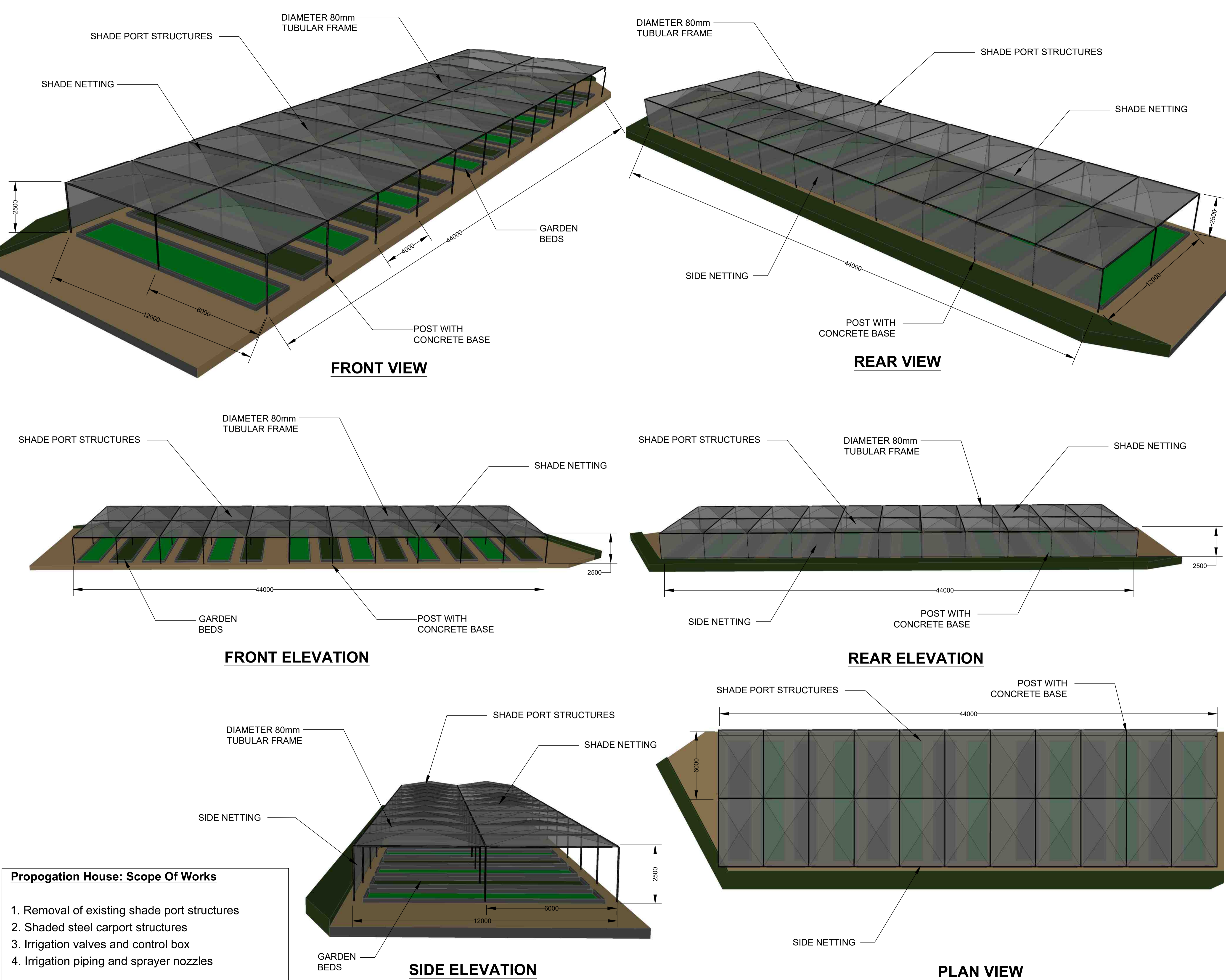
checked R ISHMAIL

revision

0533-PH2 -01

T0





- Propagation House: Scope Of Works**
1. Removal of existing shade port structures
  2. Shaded steel carport structures
  3. Irrigation valves and control box
  4. Irrigation piping and sprayer nozzles

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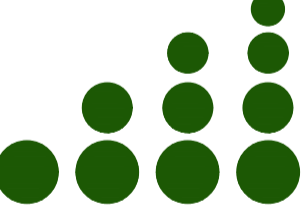
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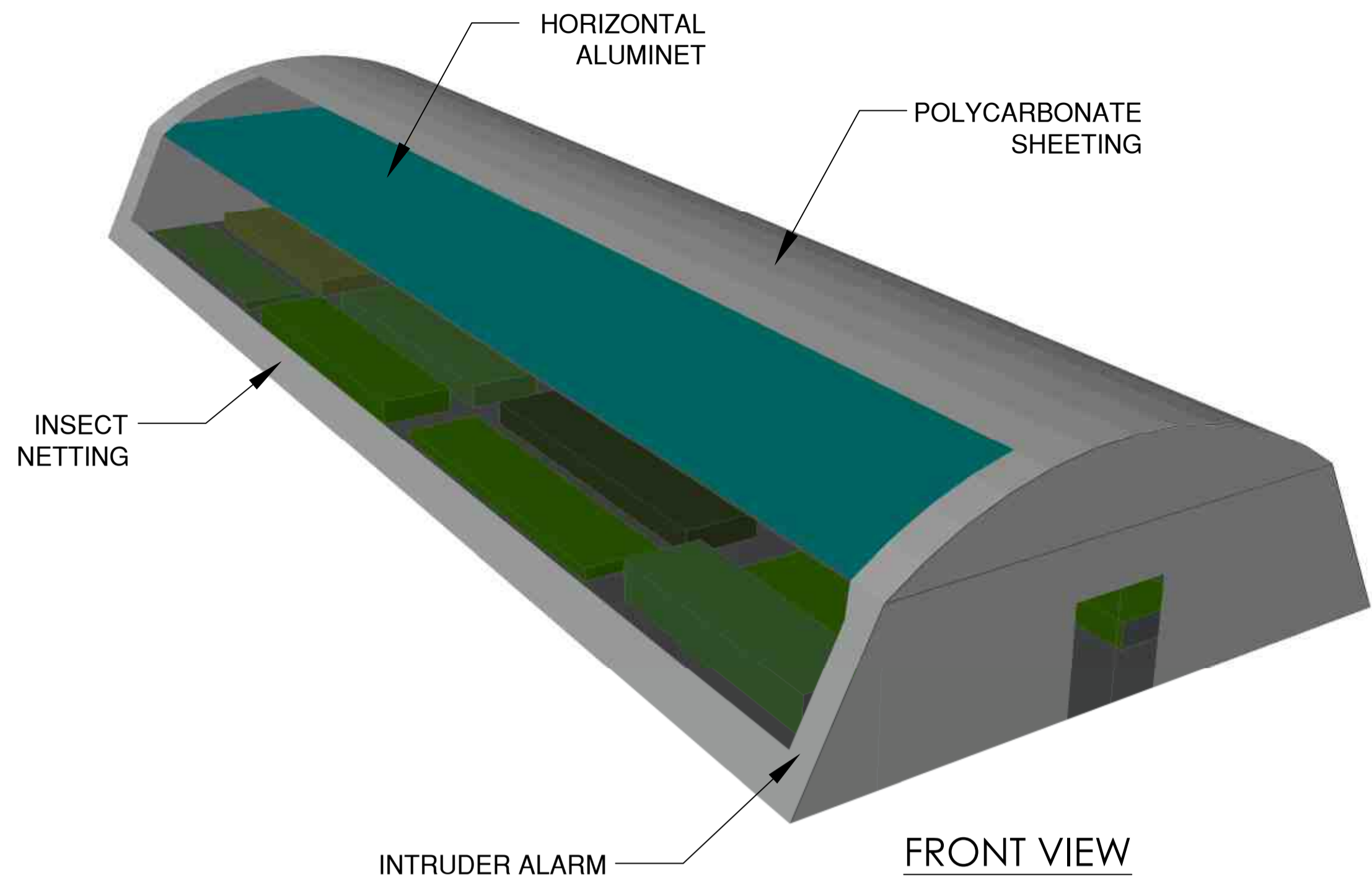
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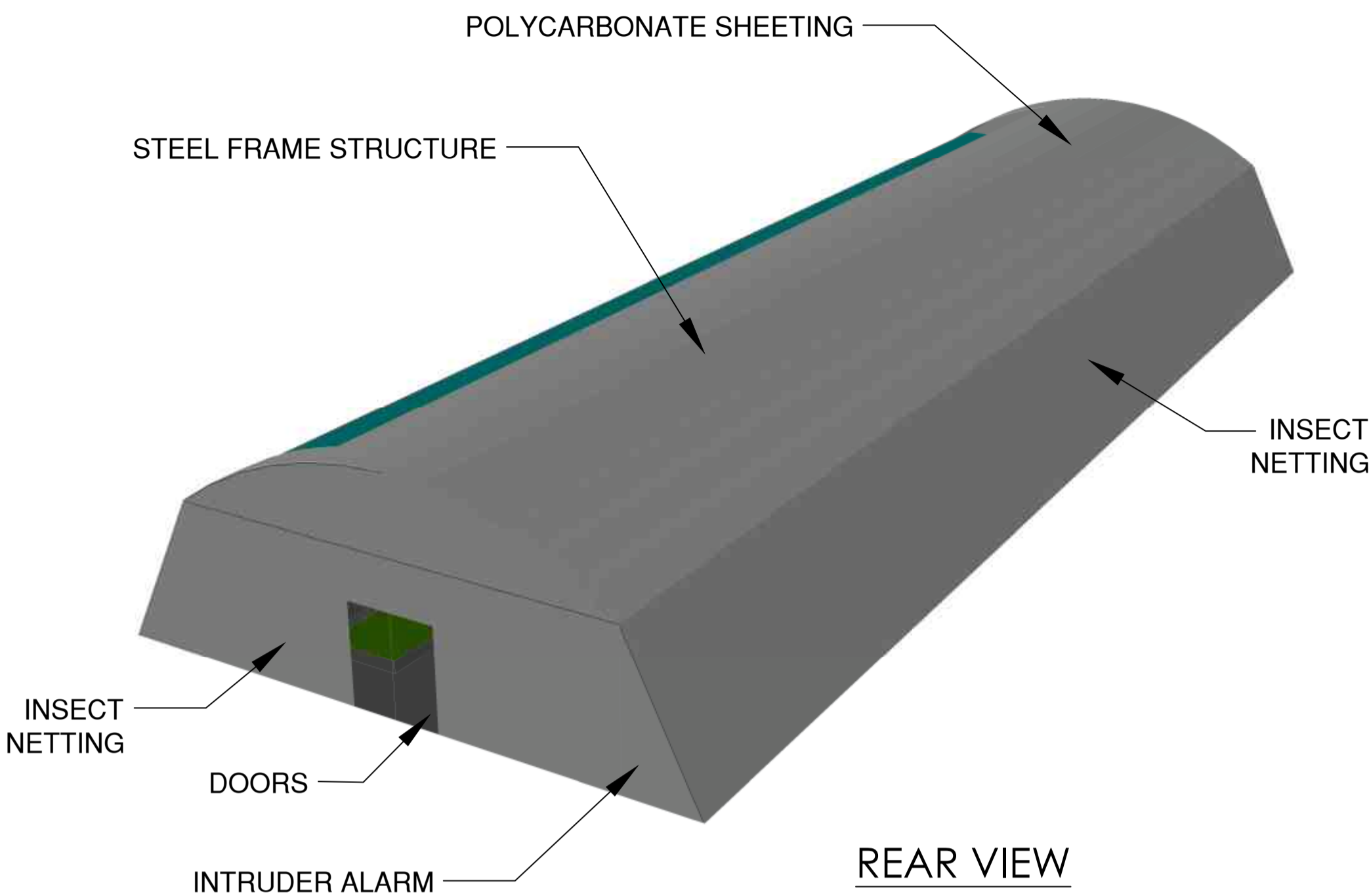
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N86 SHADED NURSERY**

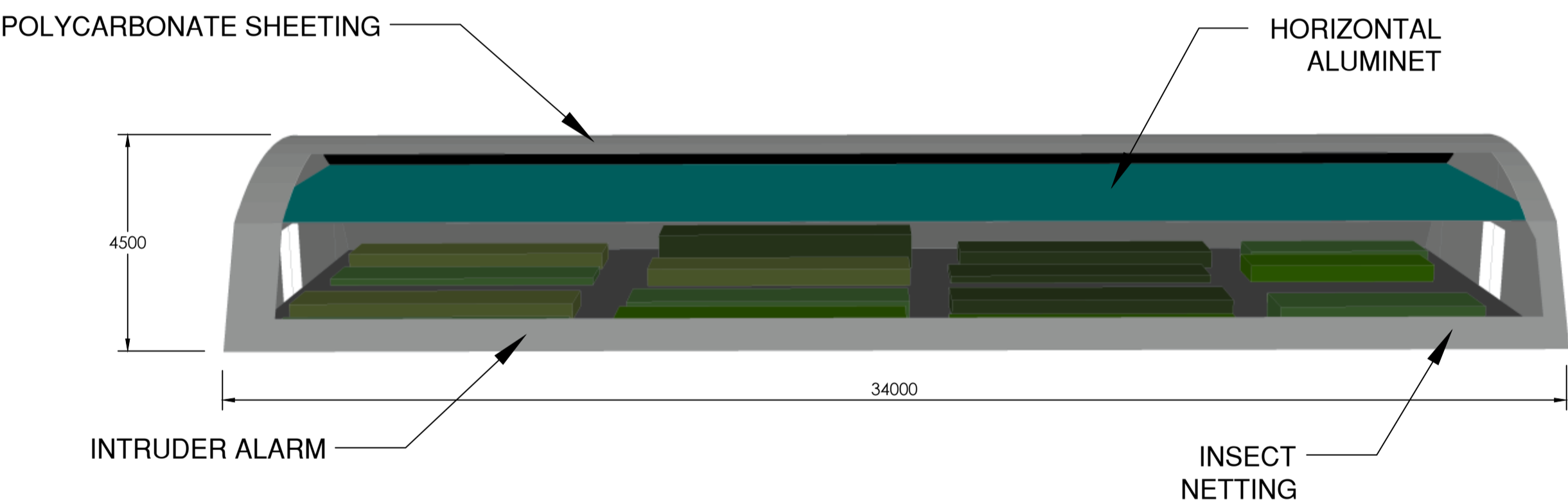
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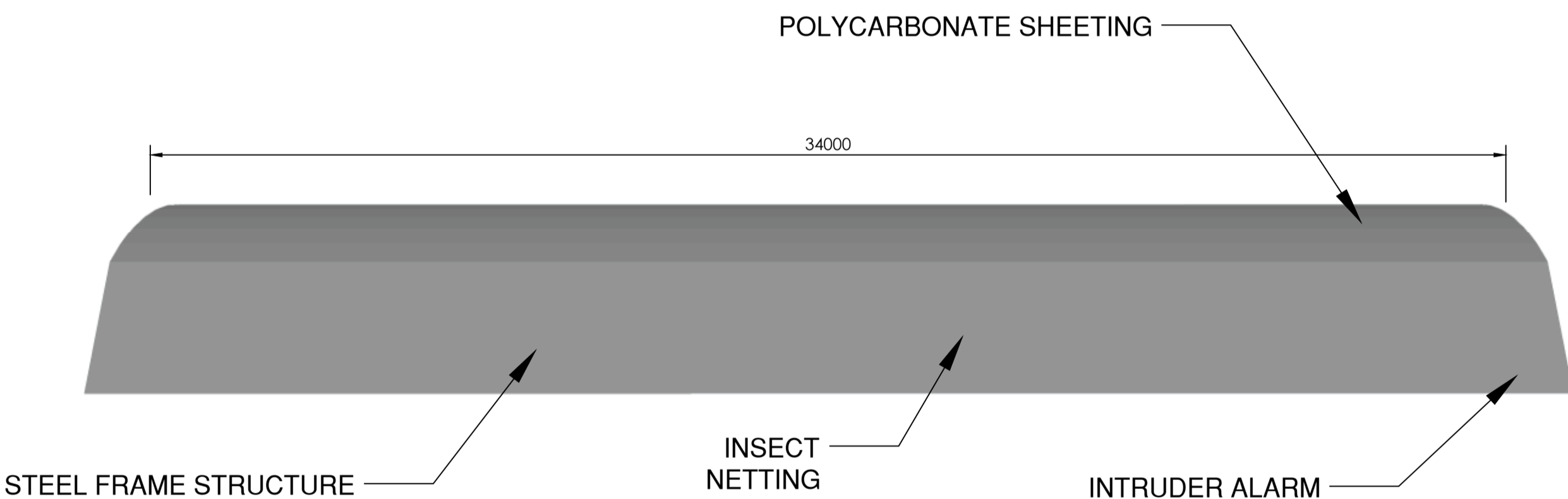
FRONT VIEW



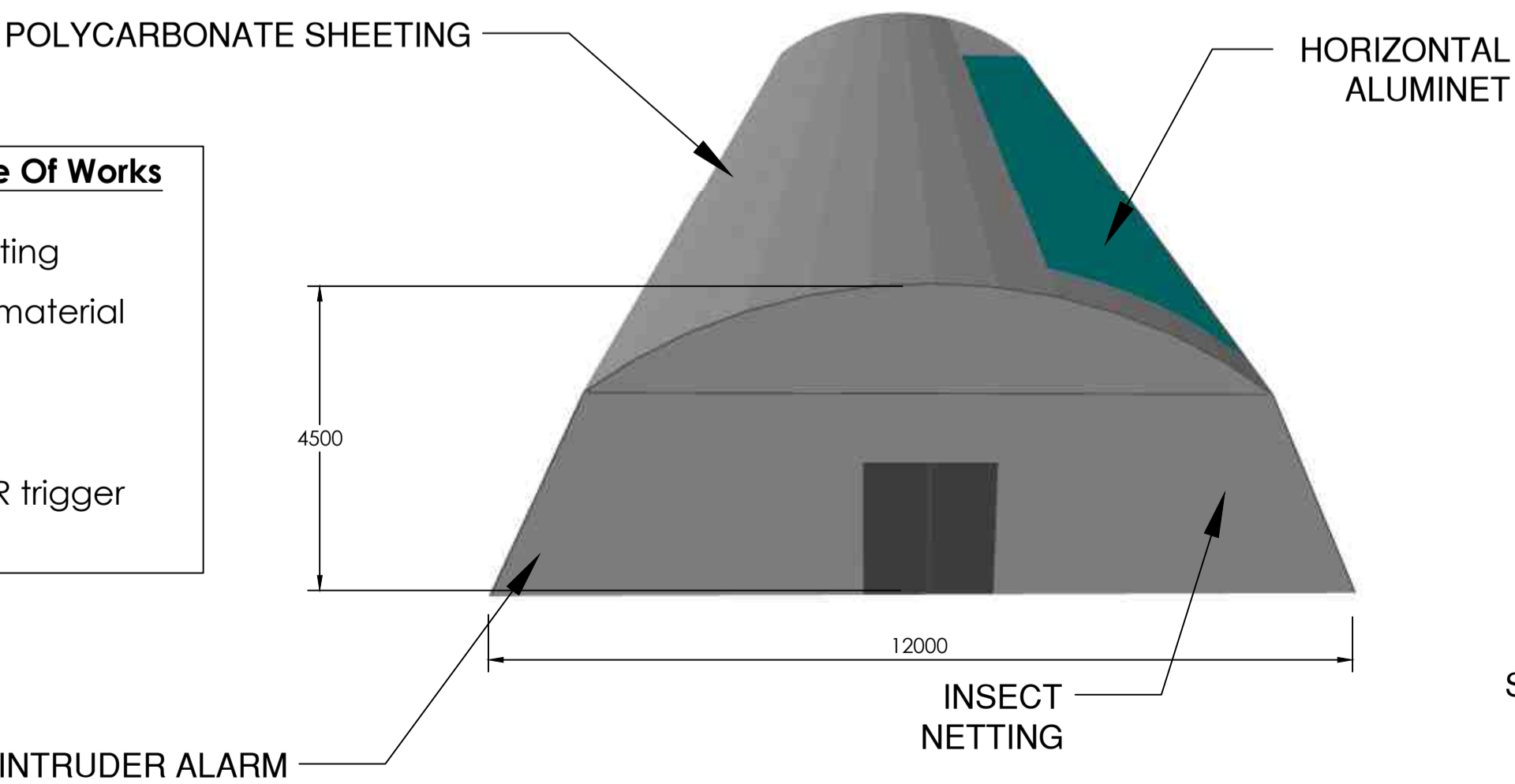
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SIDE 1 ELEVATION



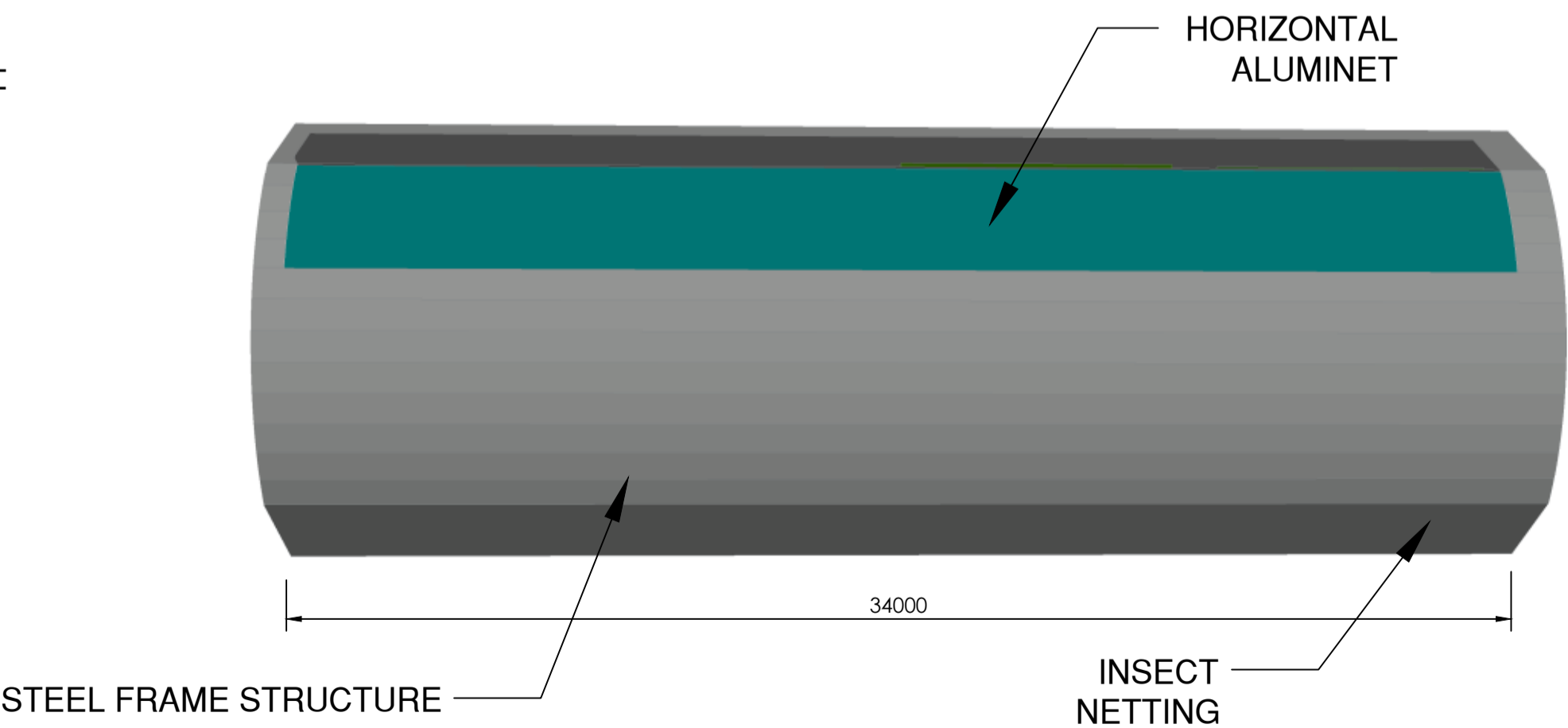
SIDE 2 ELEVATION



REAR ELEVATION

**N29 Pelargonium Nursery : Scope Of Works**

1. Replacement of insect netting
2. Replacement of aluminet material
3. Irrigation fogger solenoids
4. Replacement of doors
5. Reinstate Intruder alarm PIR trigger



PLAN VIEW

0 2000 4000

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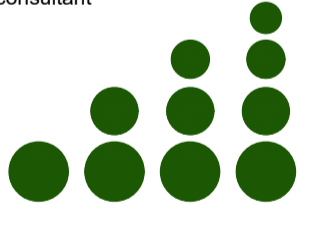
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project number **0533**

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N29 NURSERY**

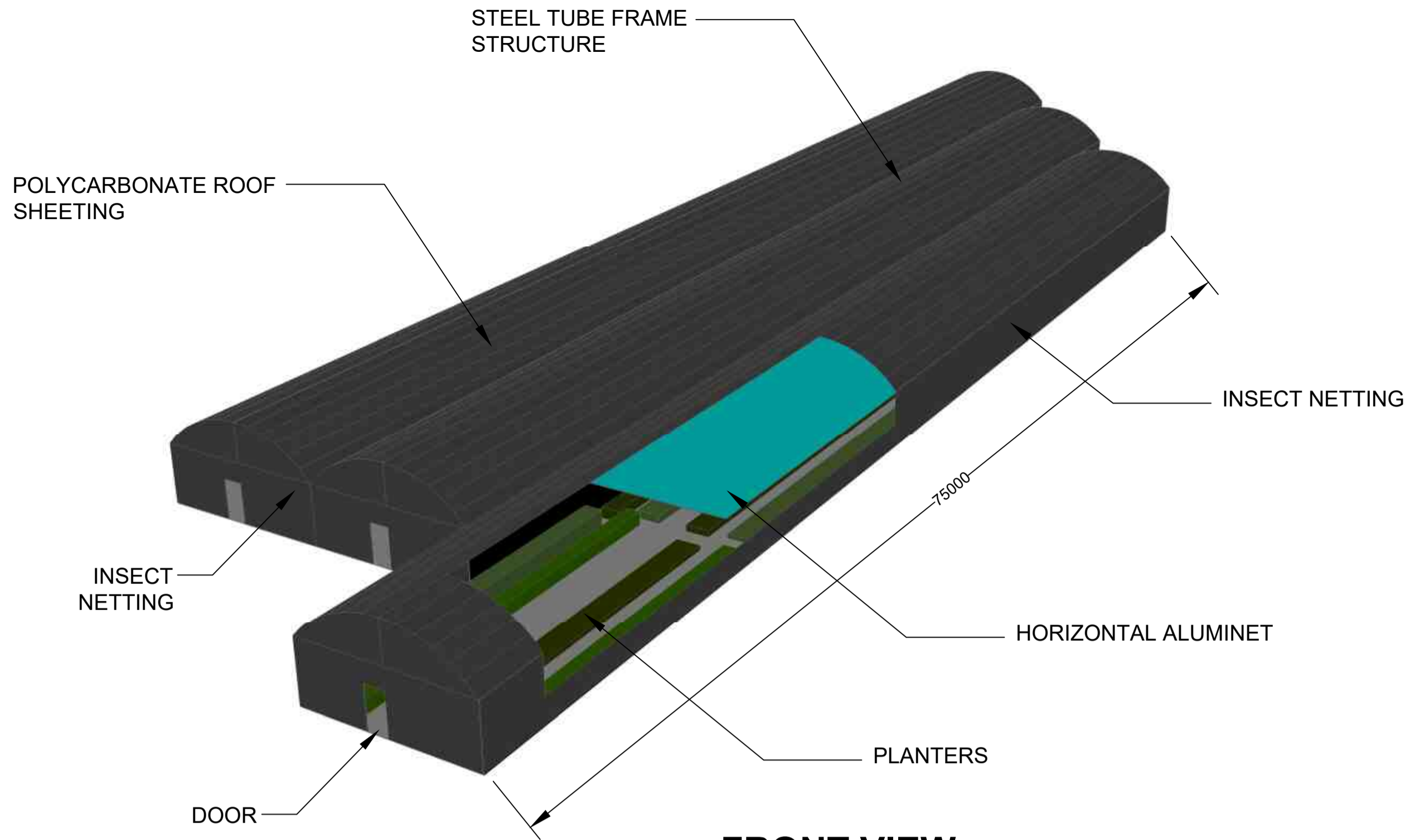
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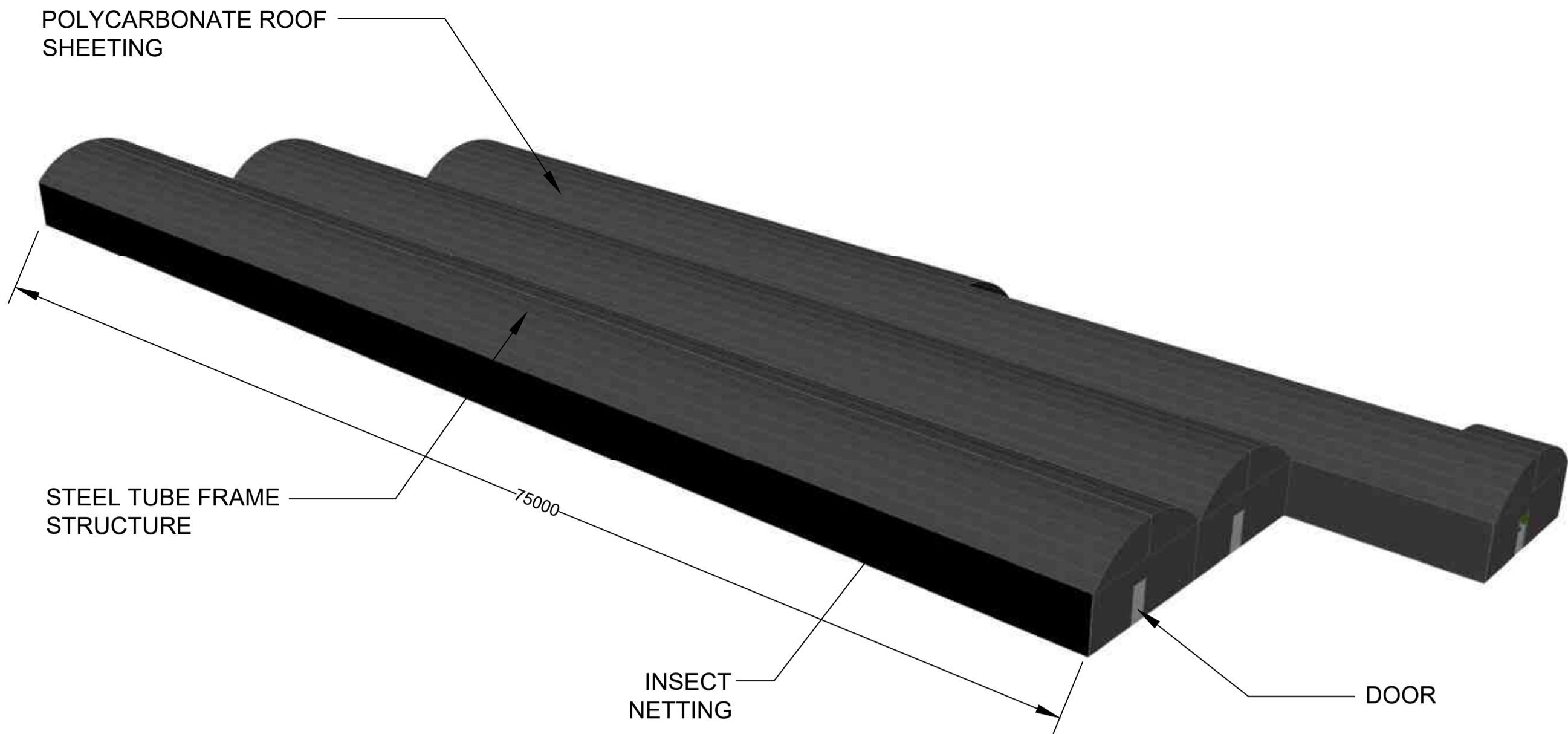
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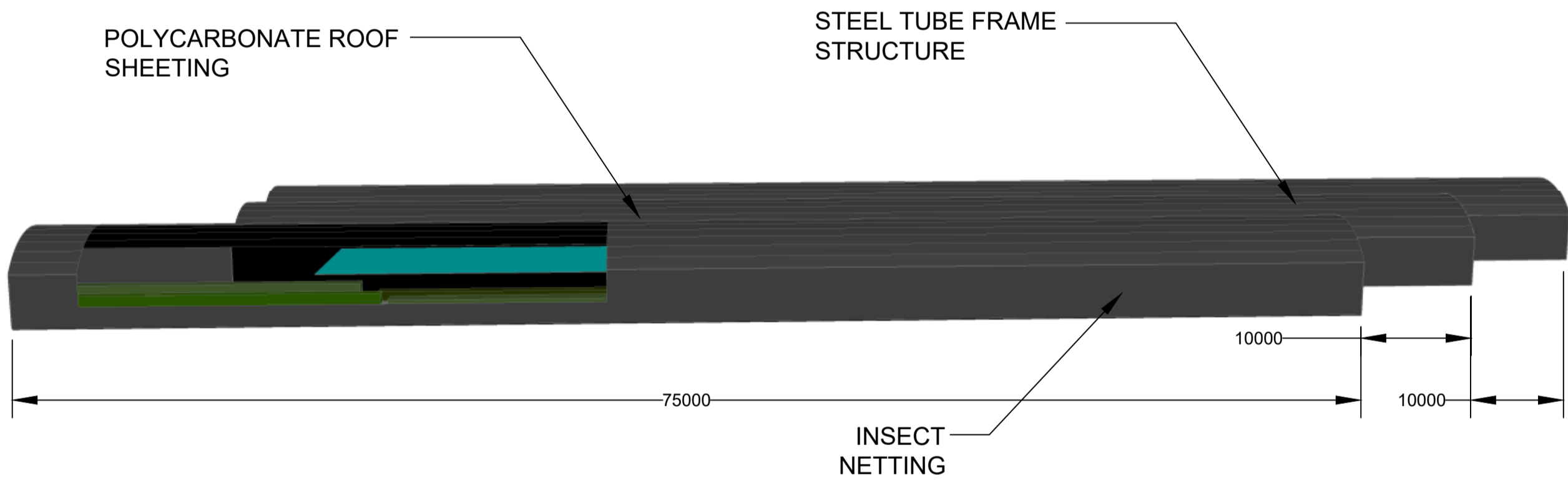
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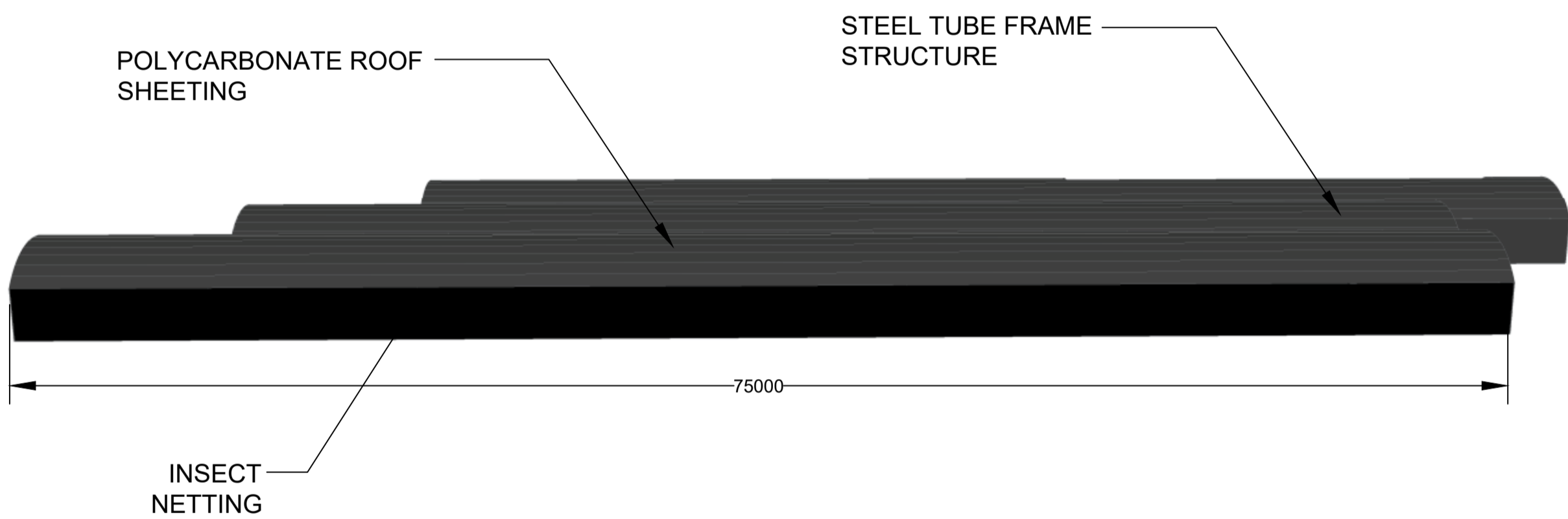
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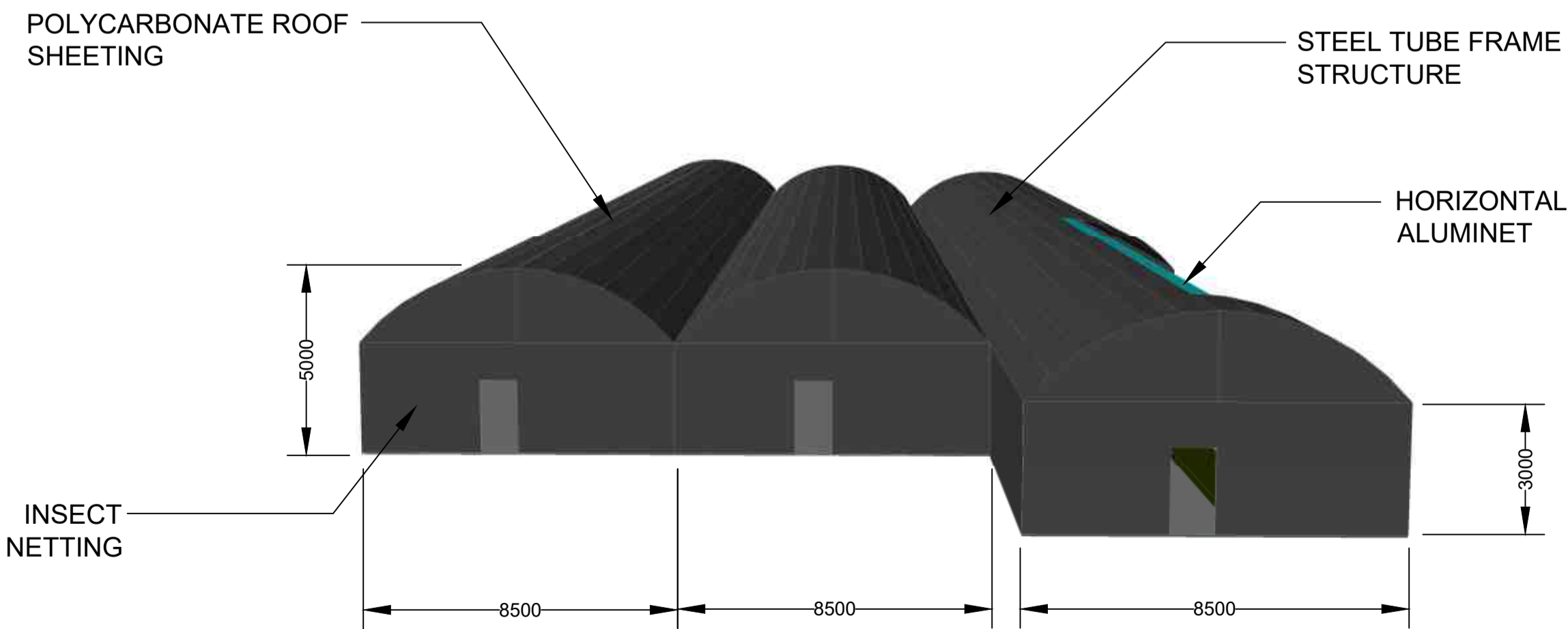
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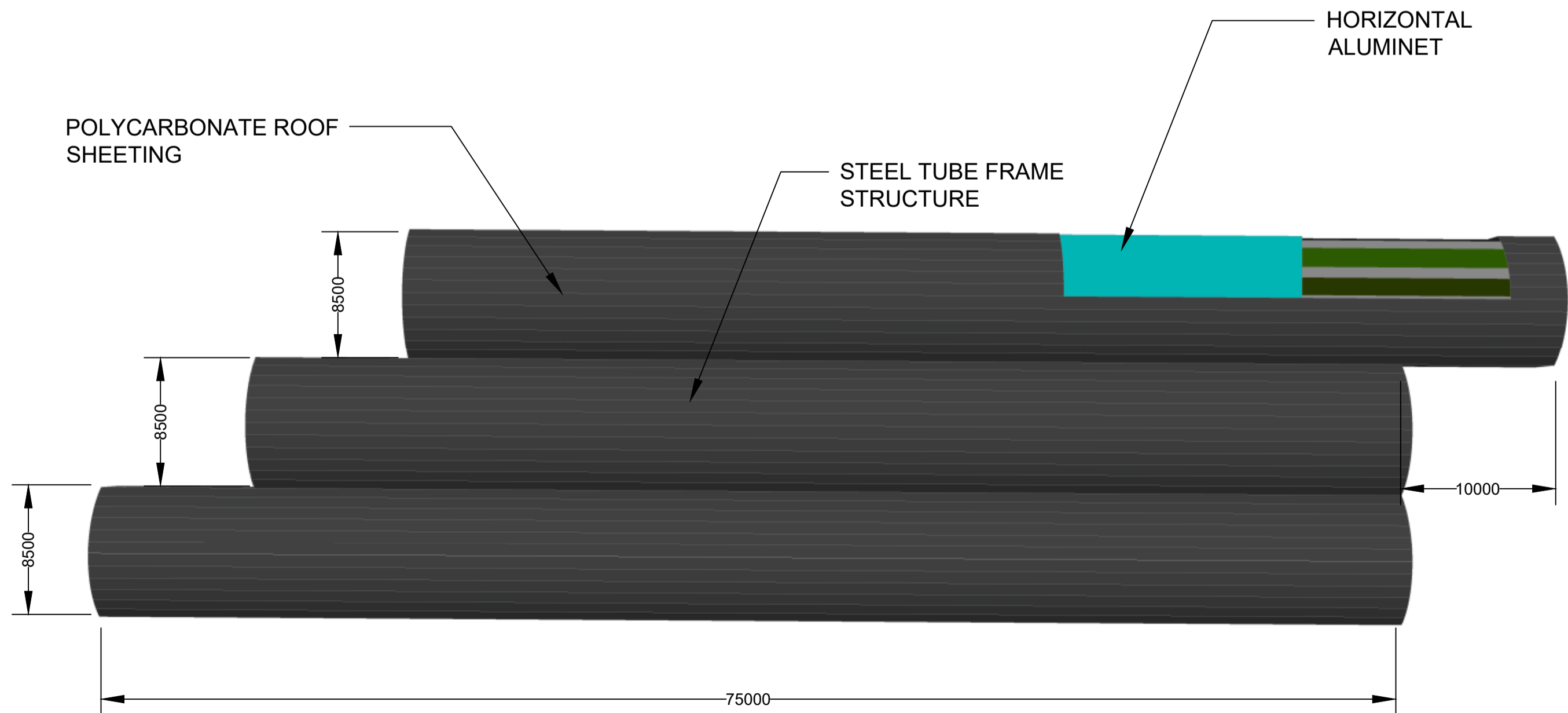
**SIDE 1 ELEVATION**



**SIDE 2 ELEVATION**



**REAR ELEVATION**



**PLAN VIEW**

- N49-79 NURSERY COMPLEX:**
- Scope of Works**
1. Replace worn/damaged insect netting
  2. Service all horizontal aluminet screens
  3. Replace worn/damaged aluminet
  4. Replacement of doors

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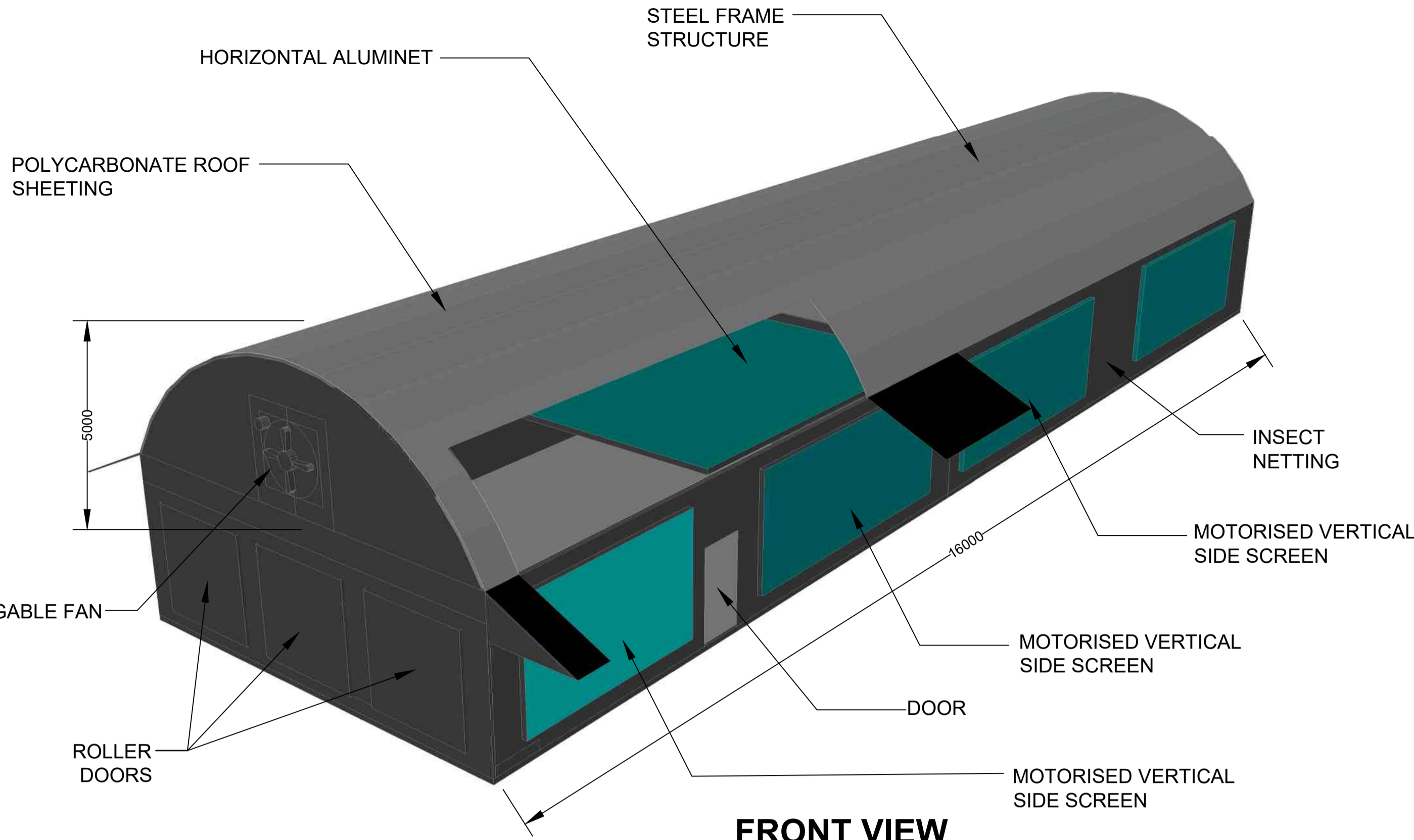
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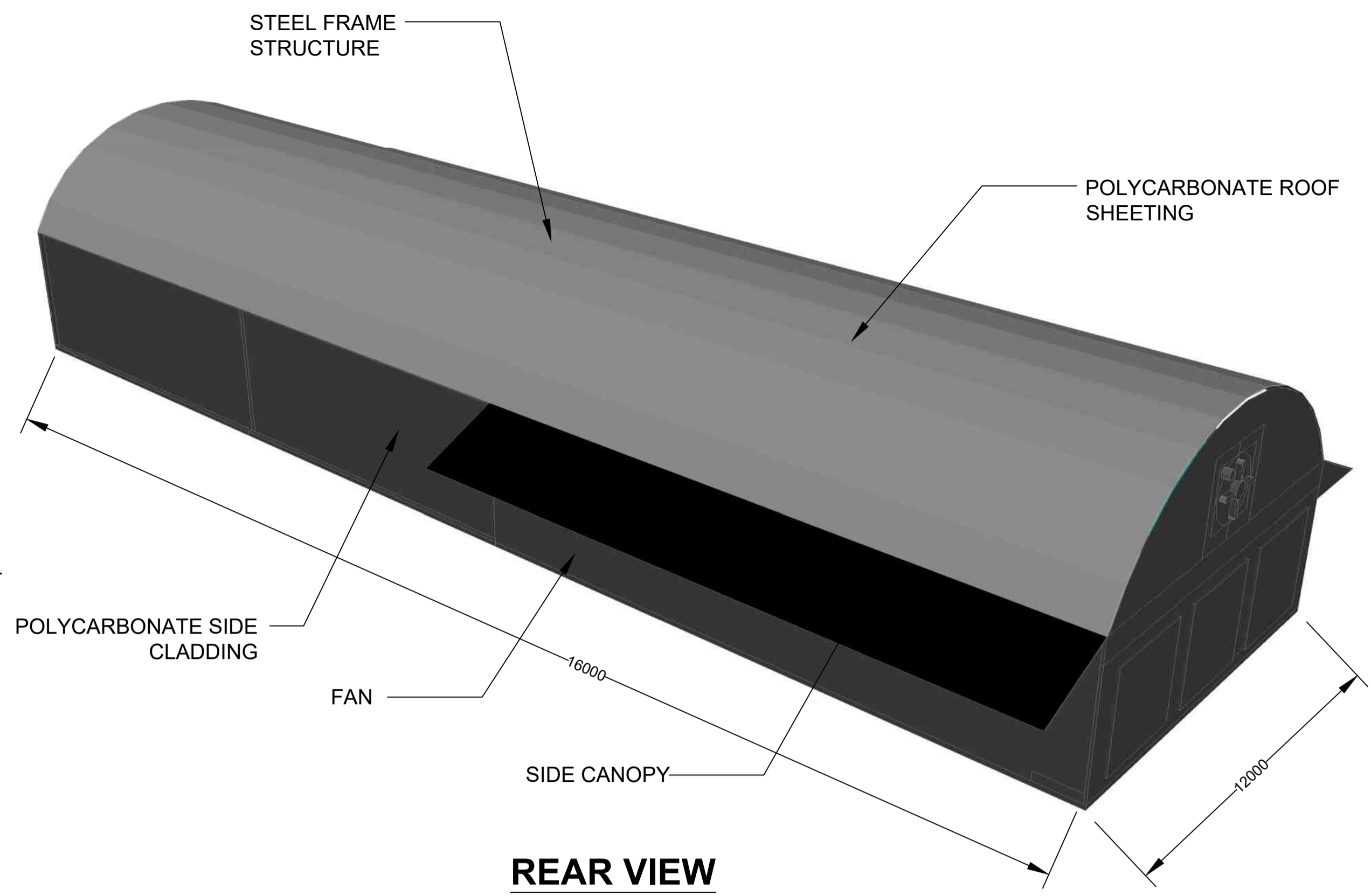
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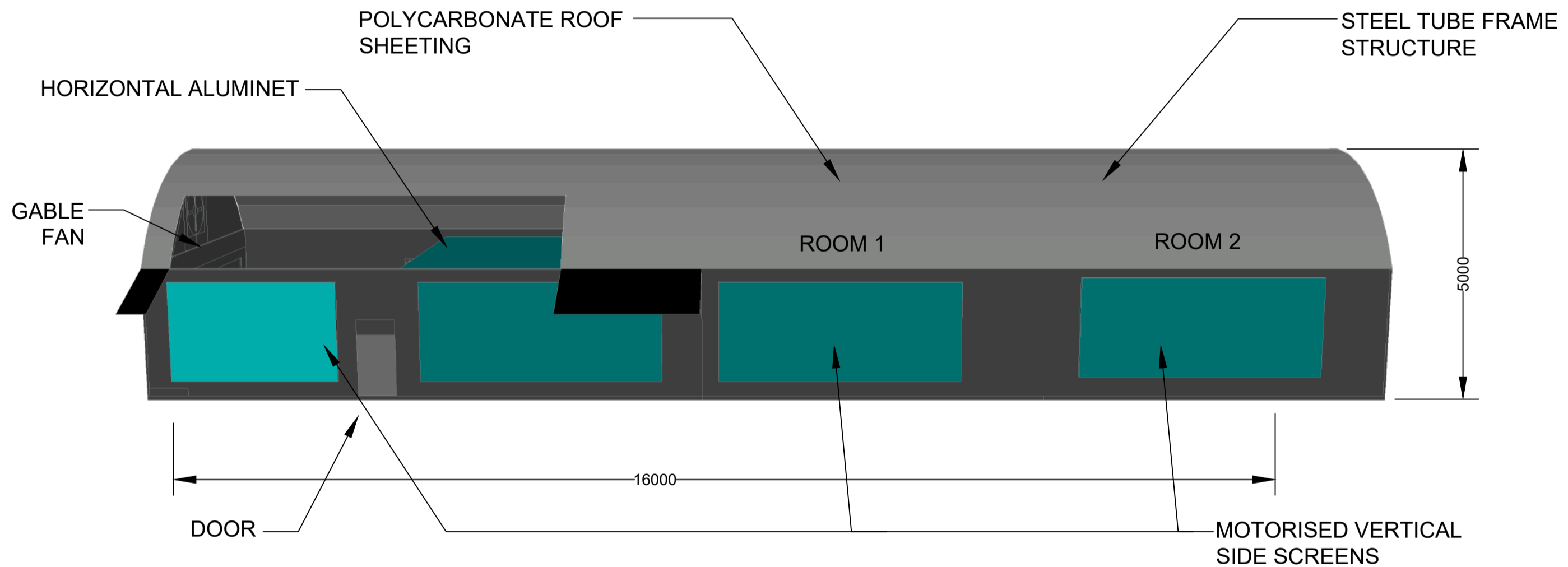
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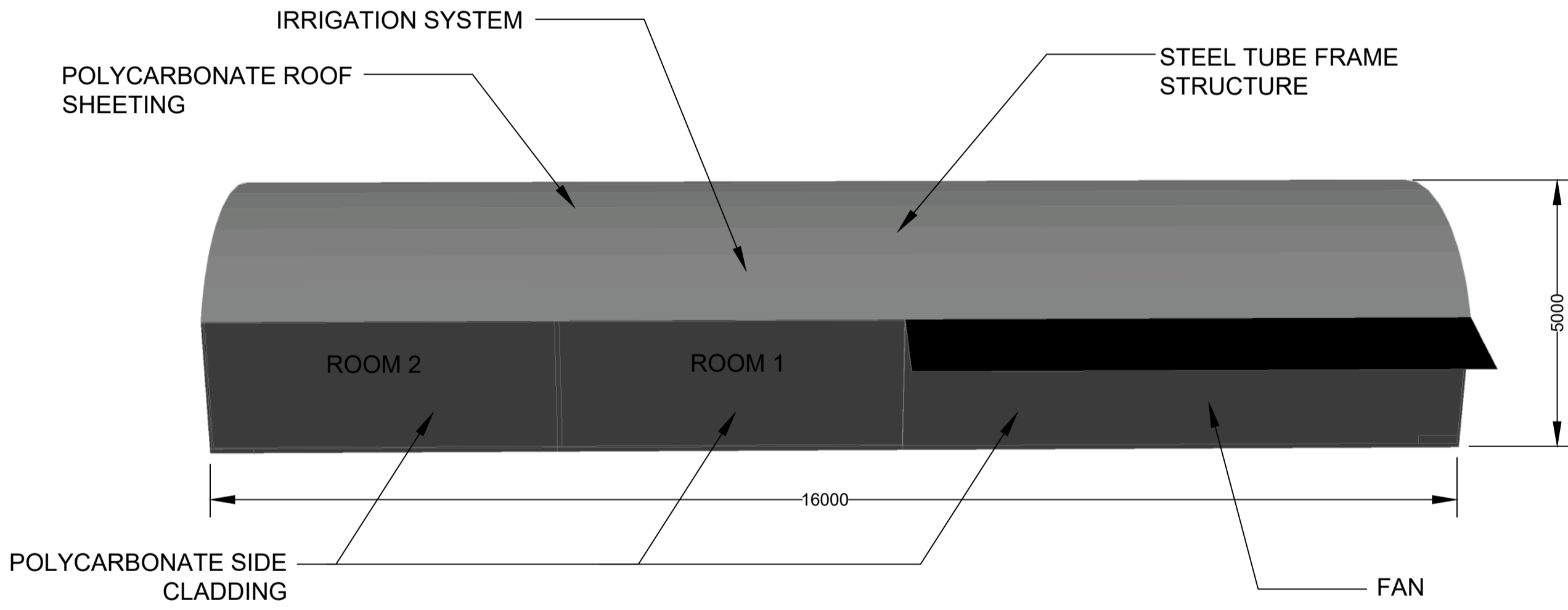
FRONT VIEW



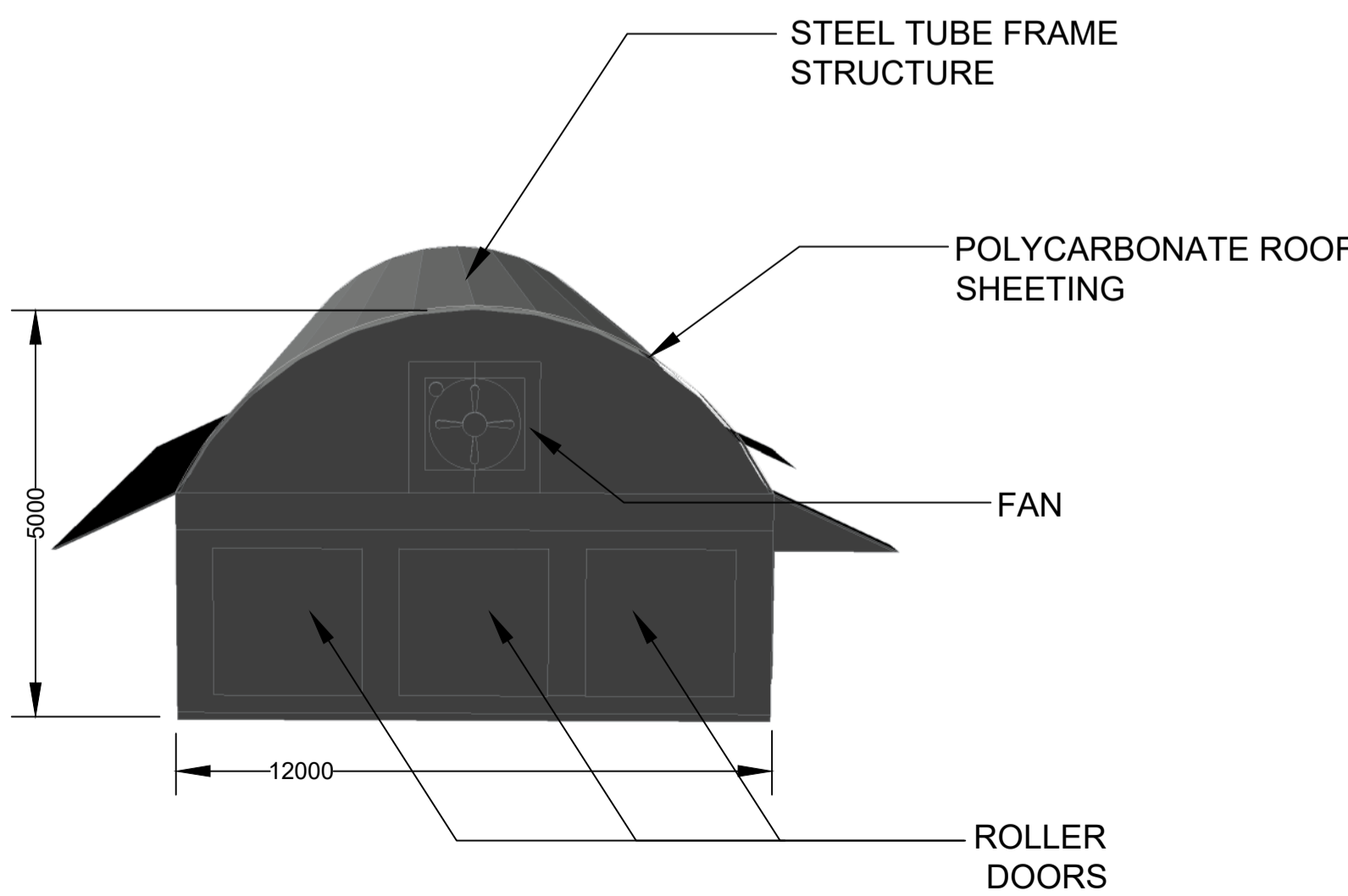
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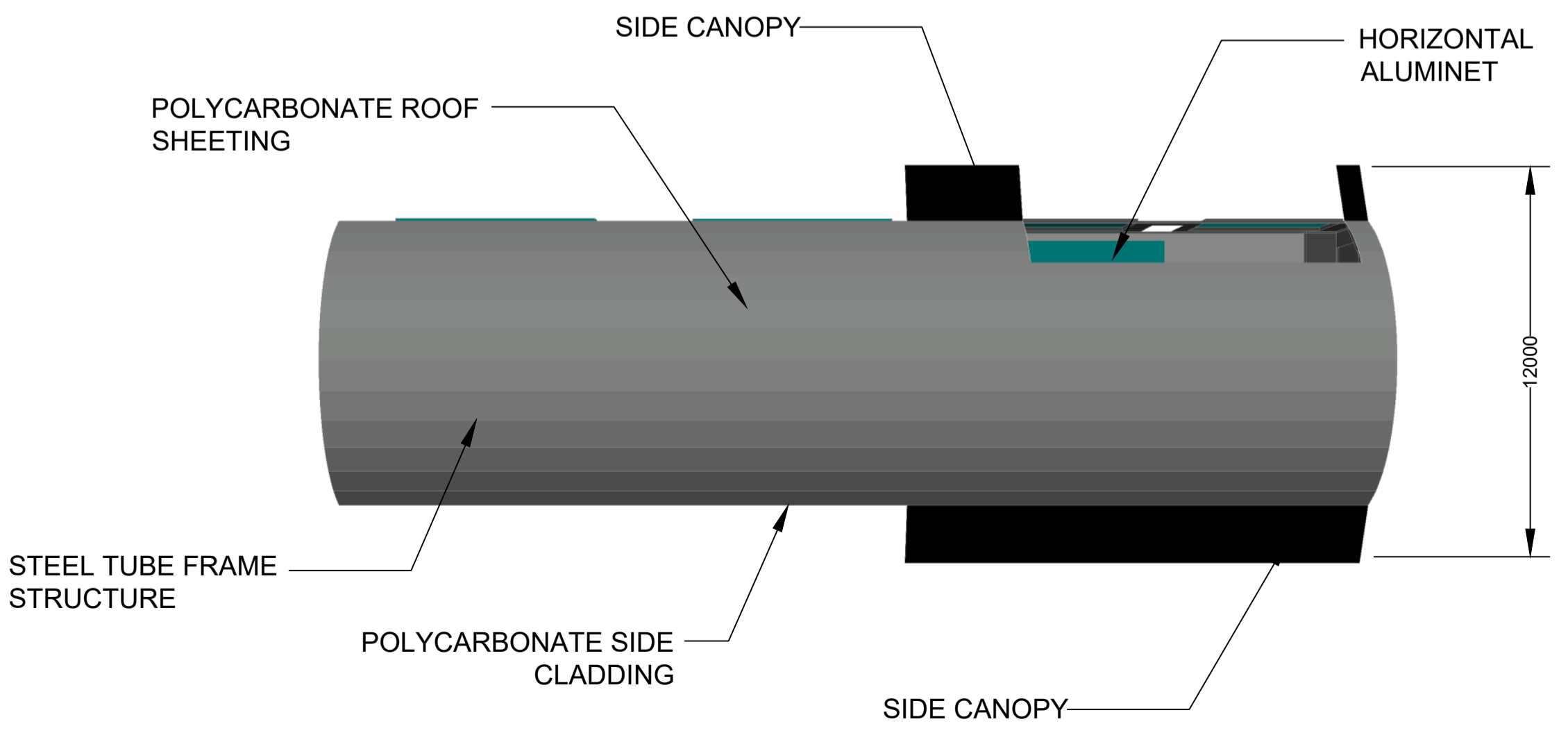
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SIDE 2 ELEVATION



REAR ELEVATION



PLAN VIEW

- Propagation House: Scope Of Works**
1. Refurbish aluminet cable mechanisms and clips
  2. Remove and install polycarbonate cladding
  3. Remove and install insect netting
  4. Remove and install aluminet material
  5. Reinstate fogger sprayer system
  6. Supply and install spray heads
  7. Service and repair ventilation fans
  8. Service hot bed thermal valves
  9. Service and repair fan dampers
  10. Temperature and humidity sensors
  11. Supply and install mist nozzles
  12. PIR intruder sensors
  13. Supply and install circulation pumps
  14. Repair external shade net rollers and motor arms and stabilize support system
  15. Servicing and refurbishment of horizontal aluminet motors and shafts

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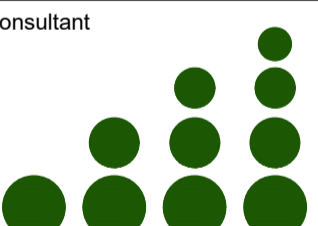
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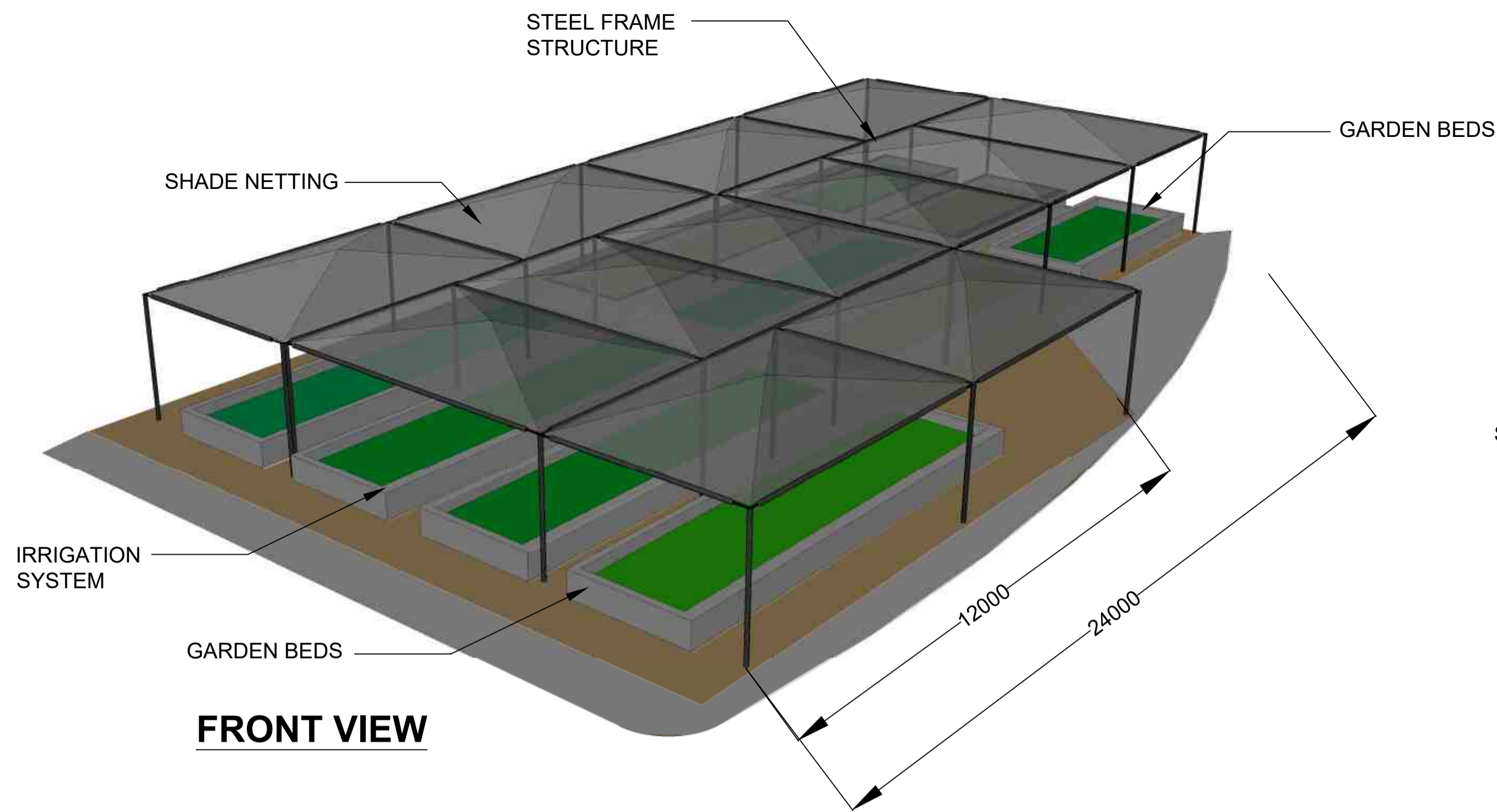
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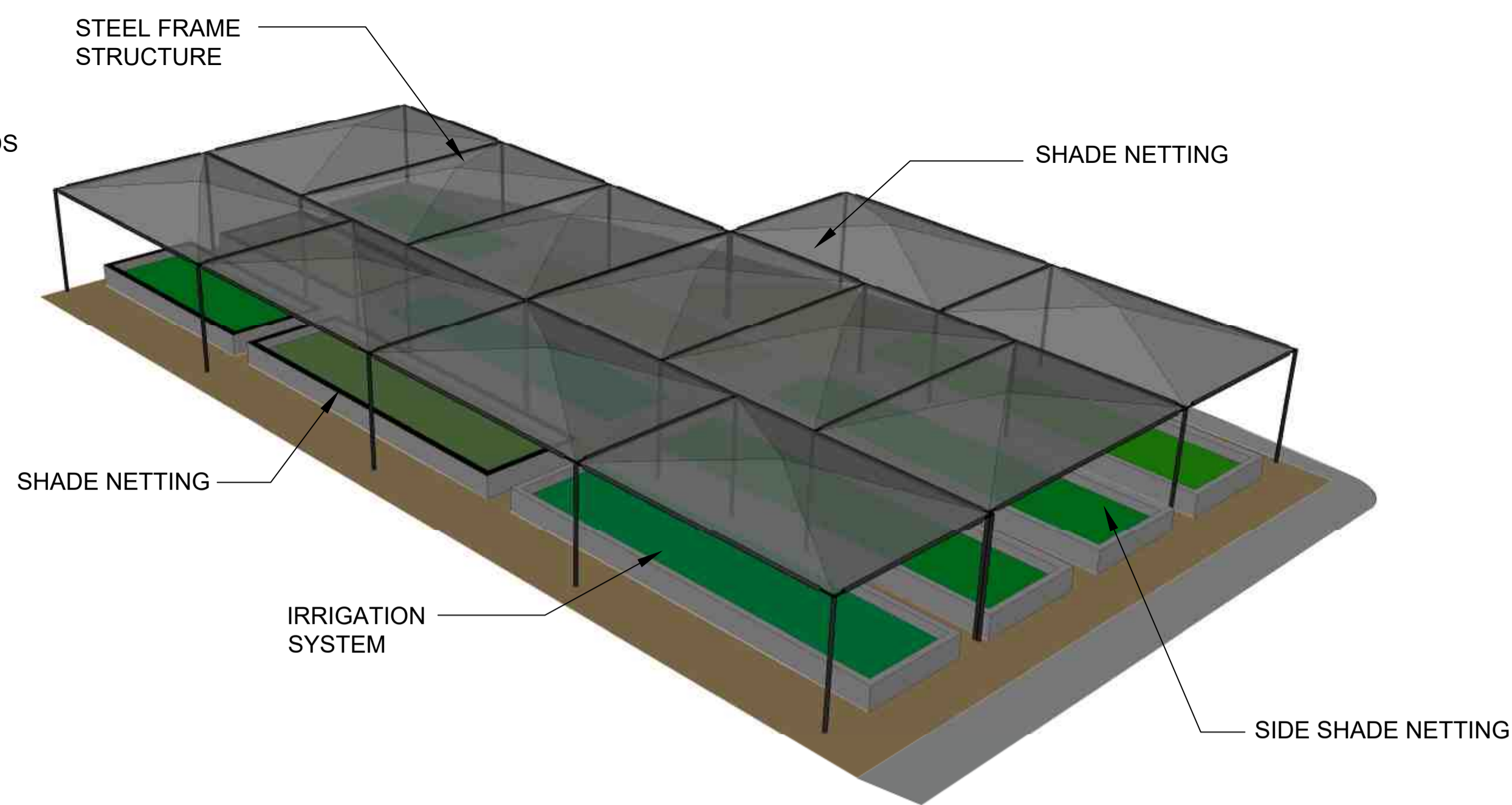
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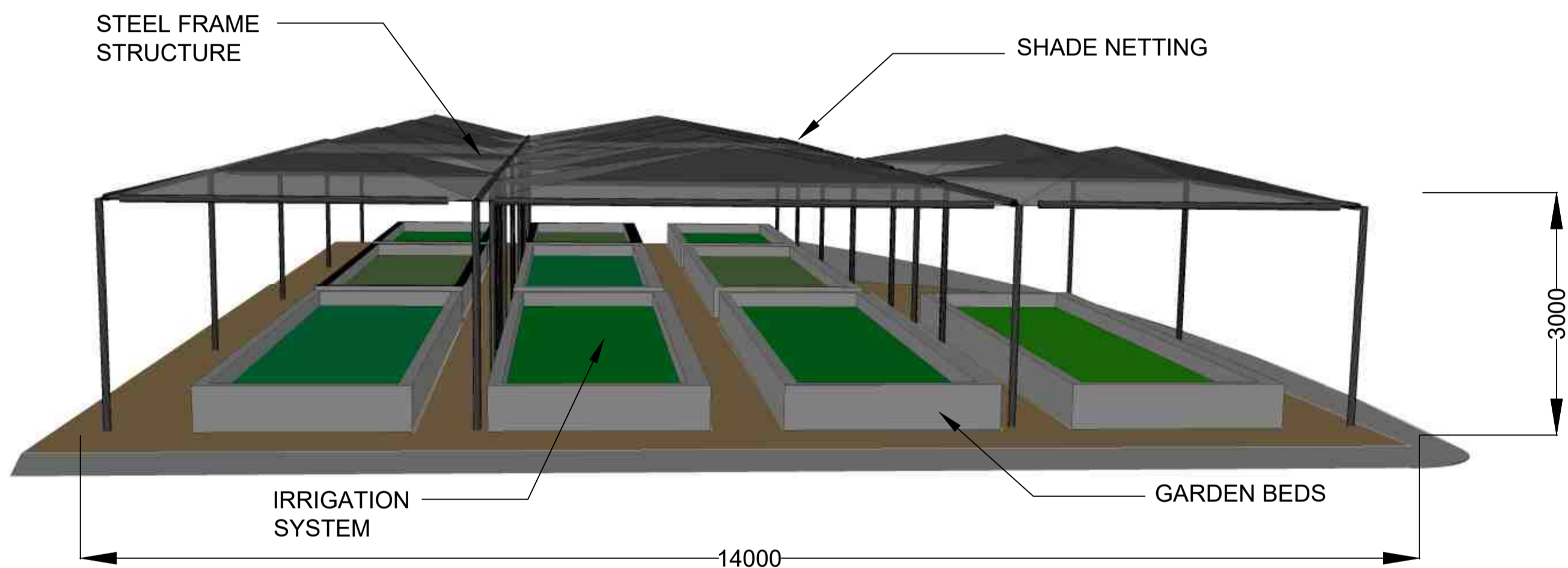
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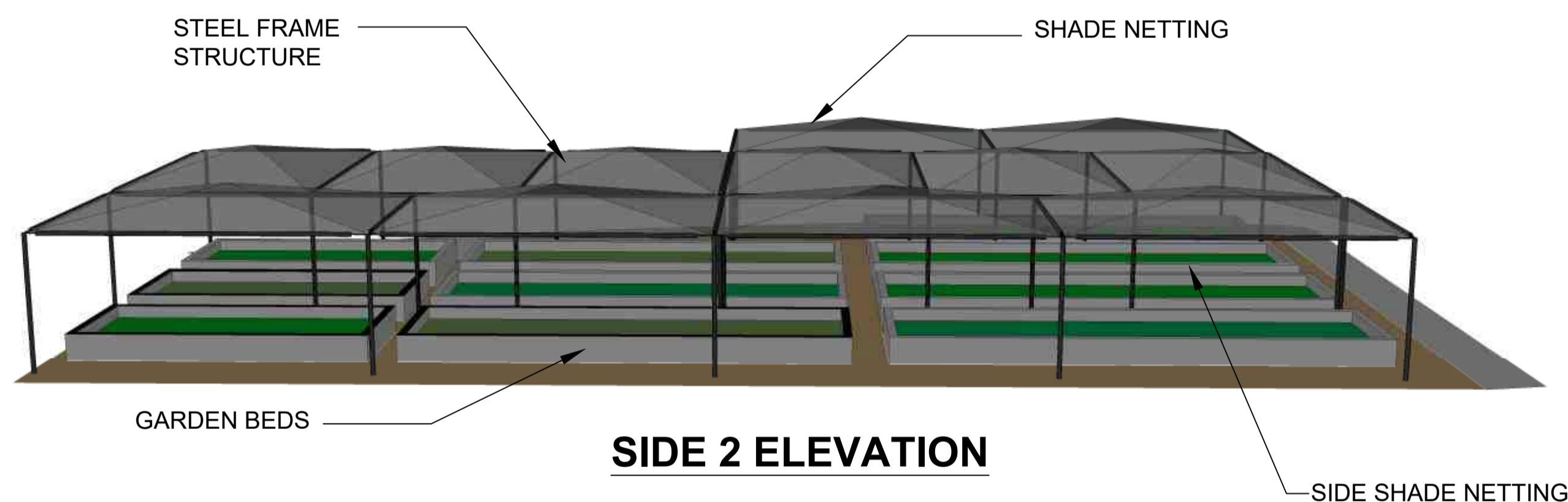
FRONT VIEW



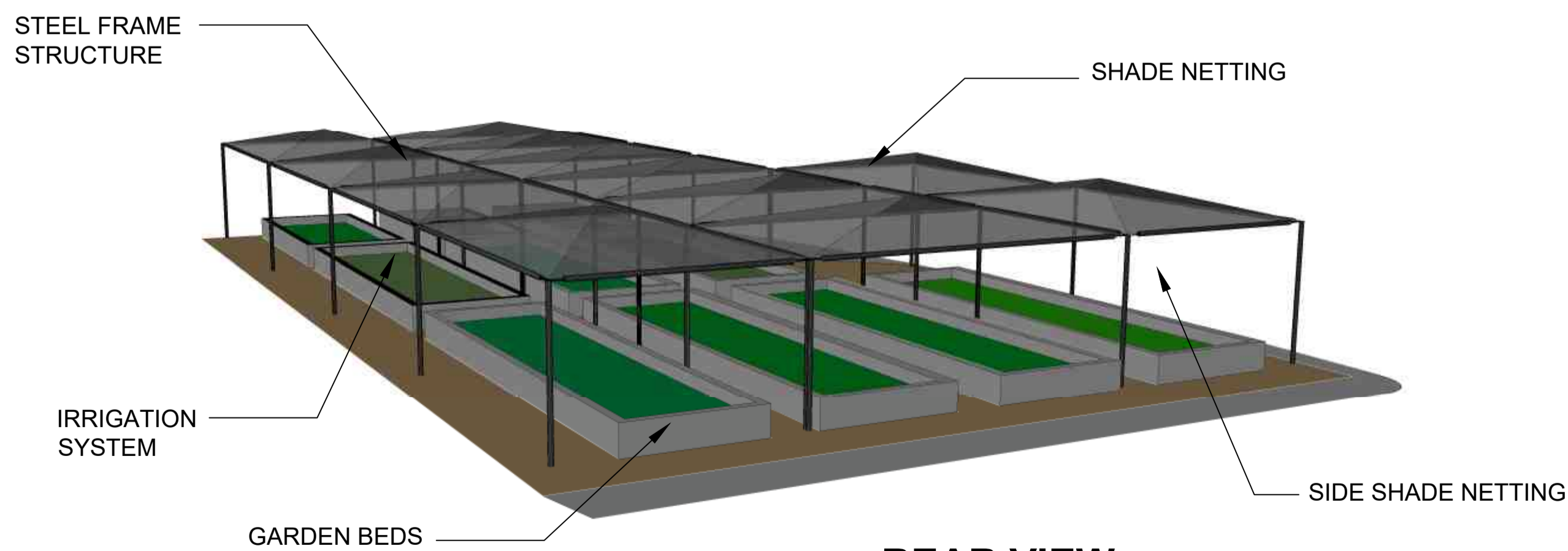
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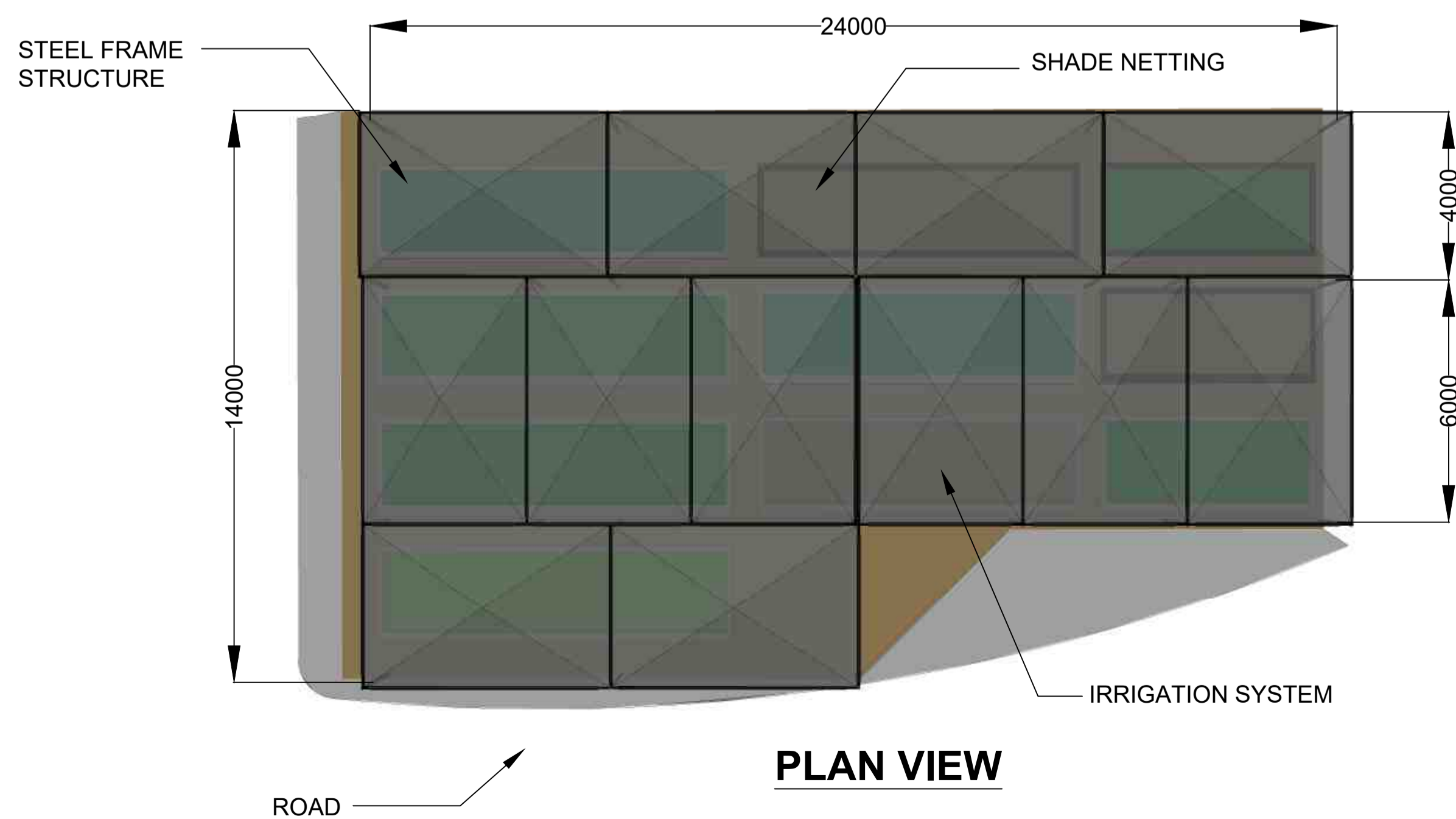
SIDE 1 ELEVATION



SIDE 2 ELEVATION



REAR VIEW



PLAN VIEW

**N16 Erica Collection Nursery: Scope Of Works**

- 1.Remove timber frame structures with shade netting
- 2.Install steel shade port structures including side netting
- 3.Rinstall hangers and reinstate irrigation system

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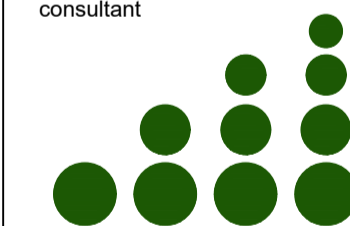
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drawing title  
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N16 ERICA  
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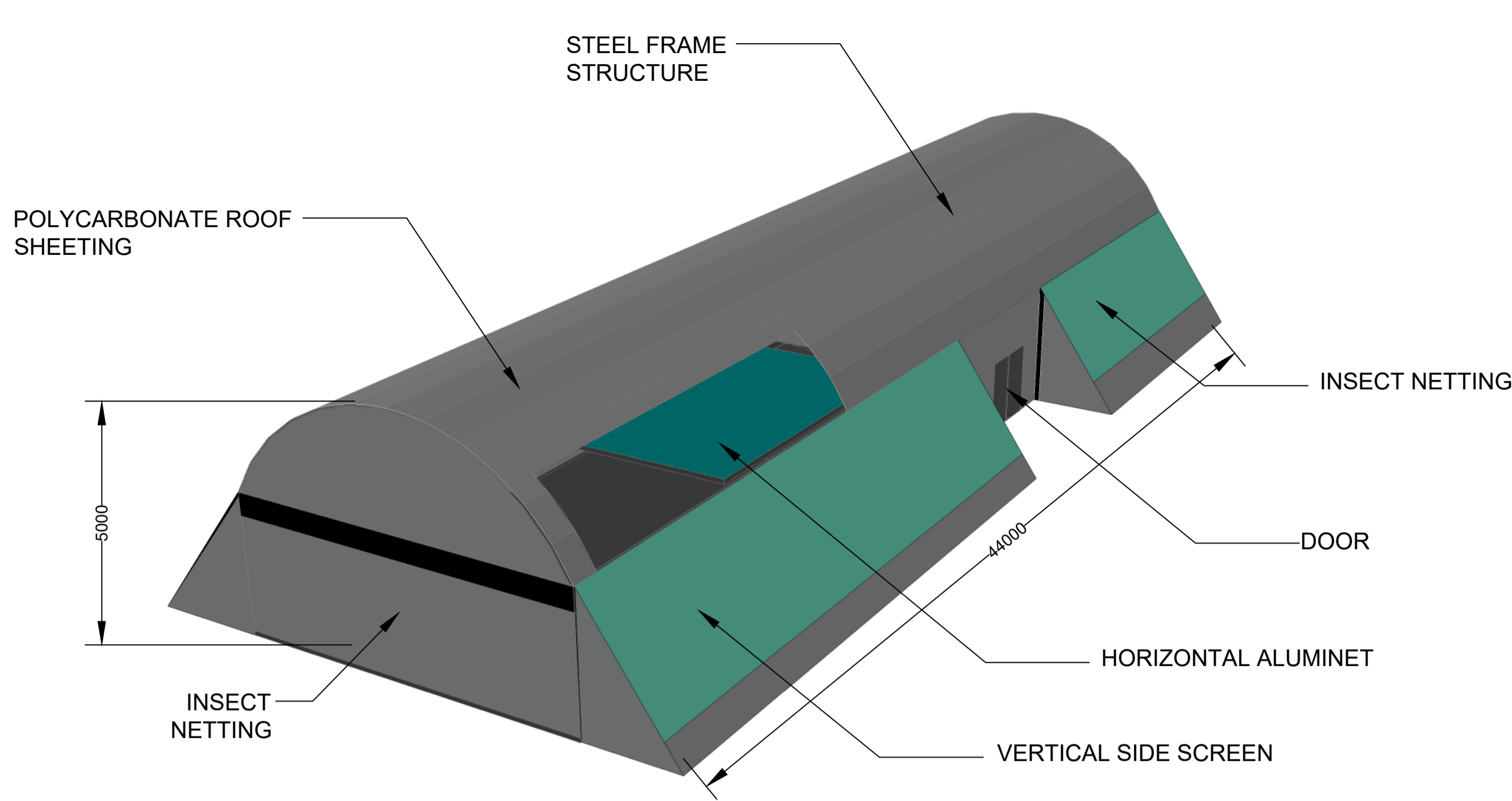
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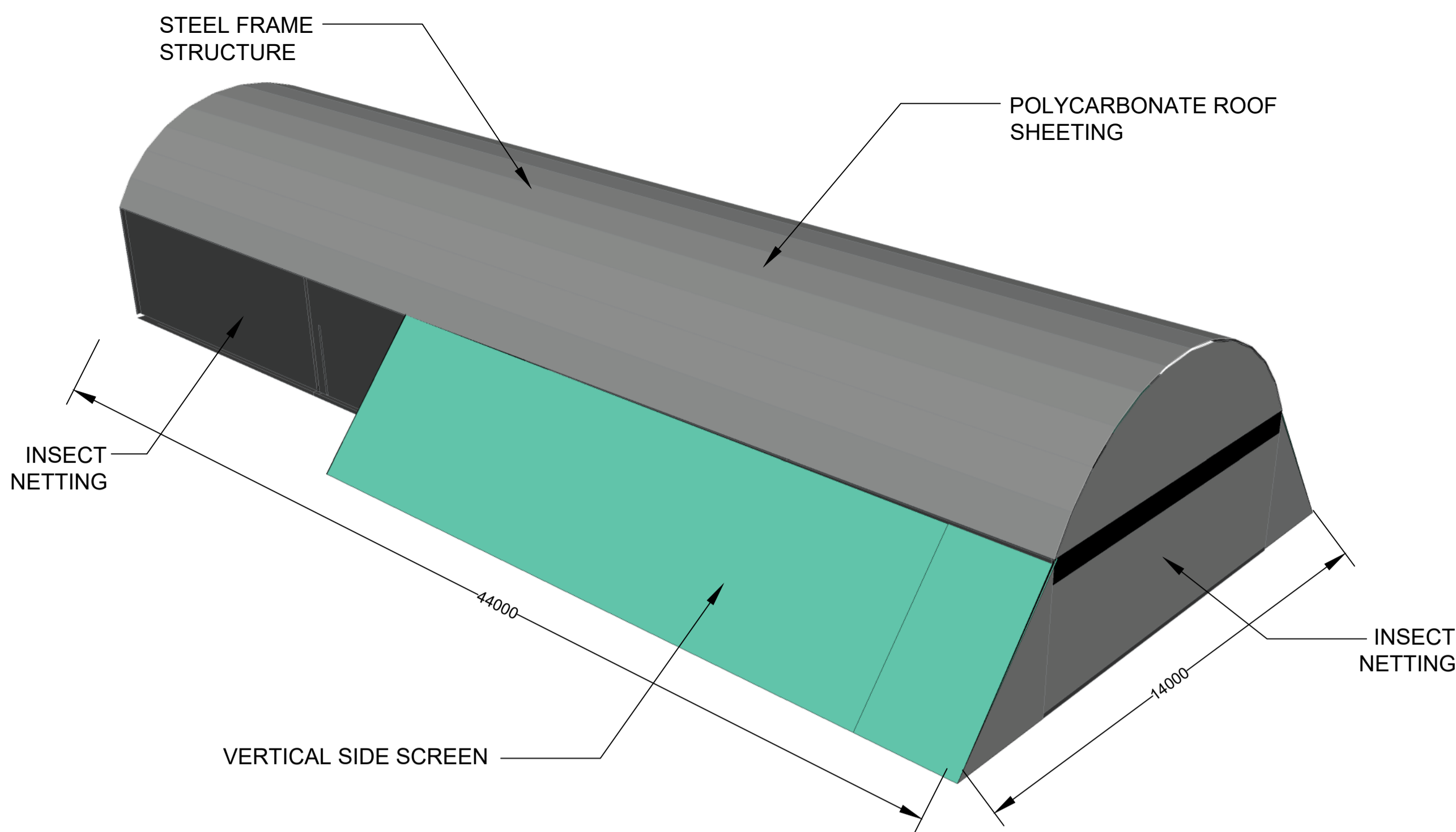
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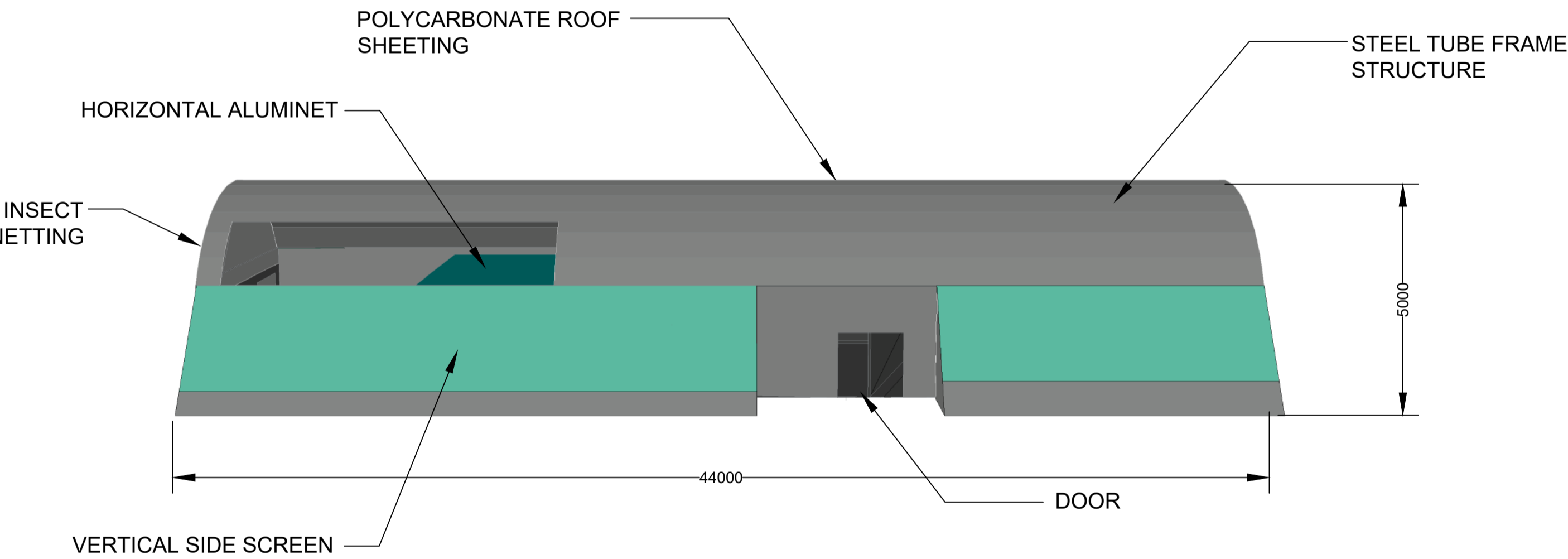
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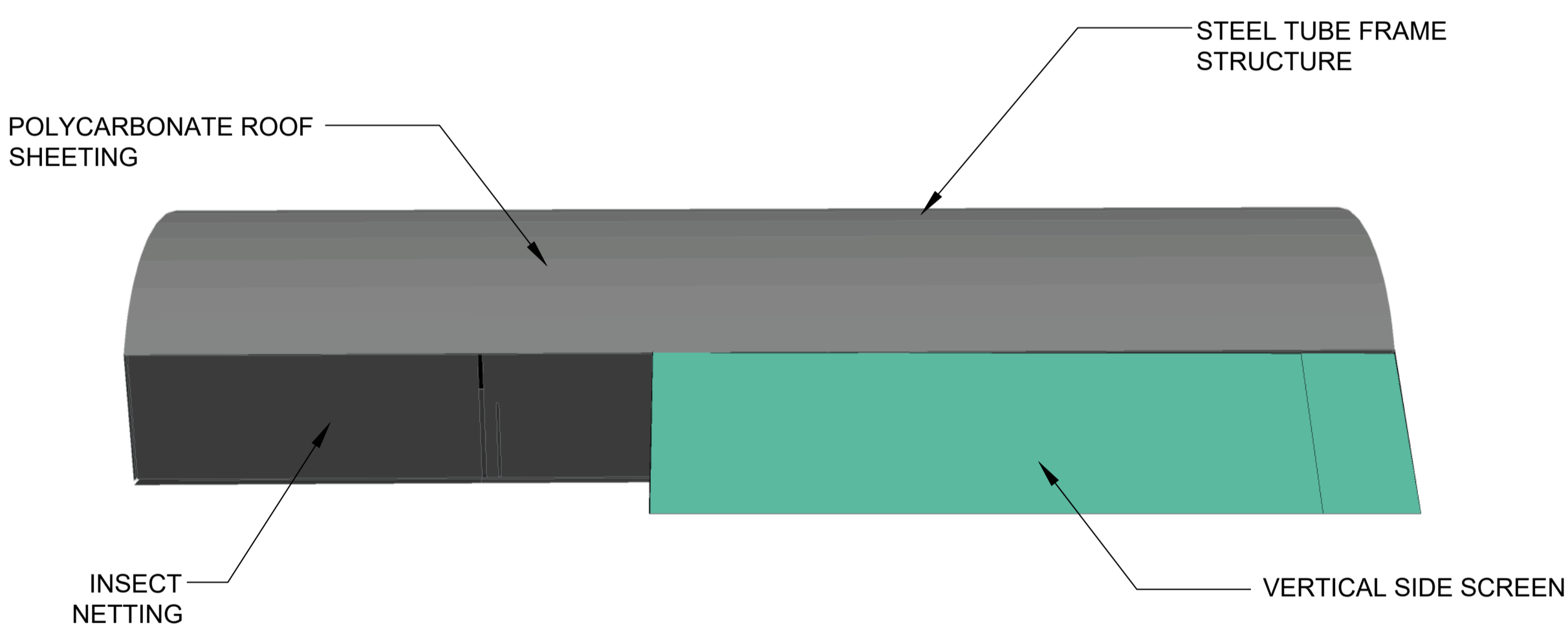
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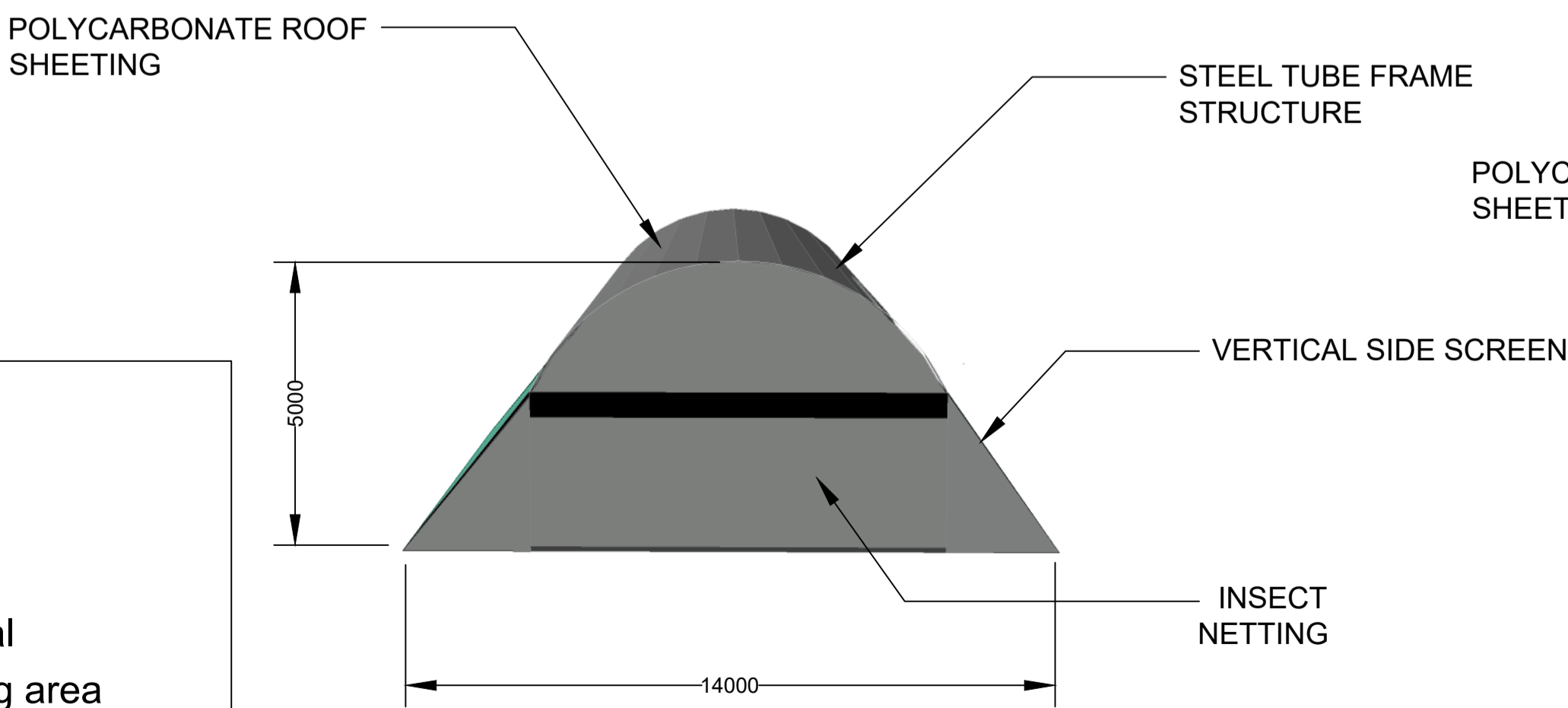
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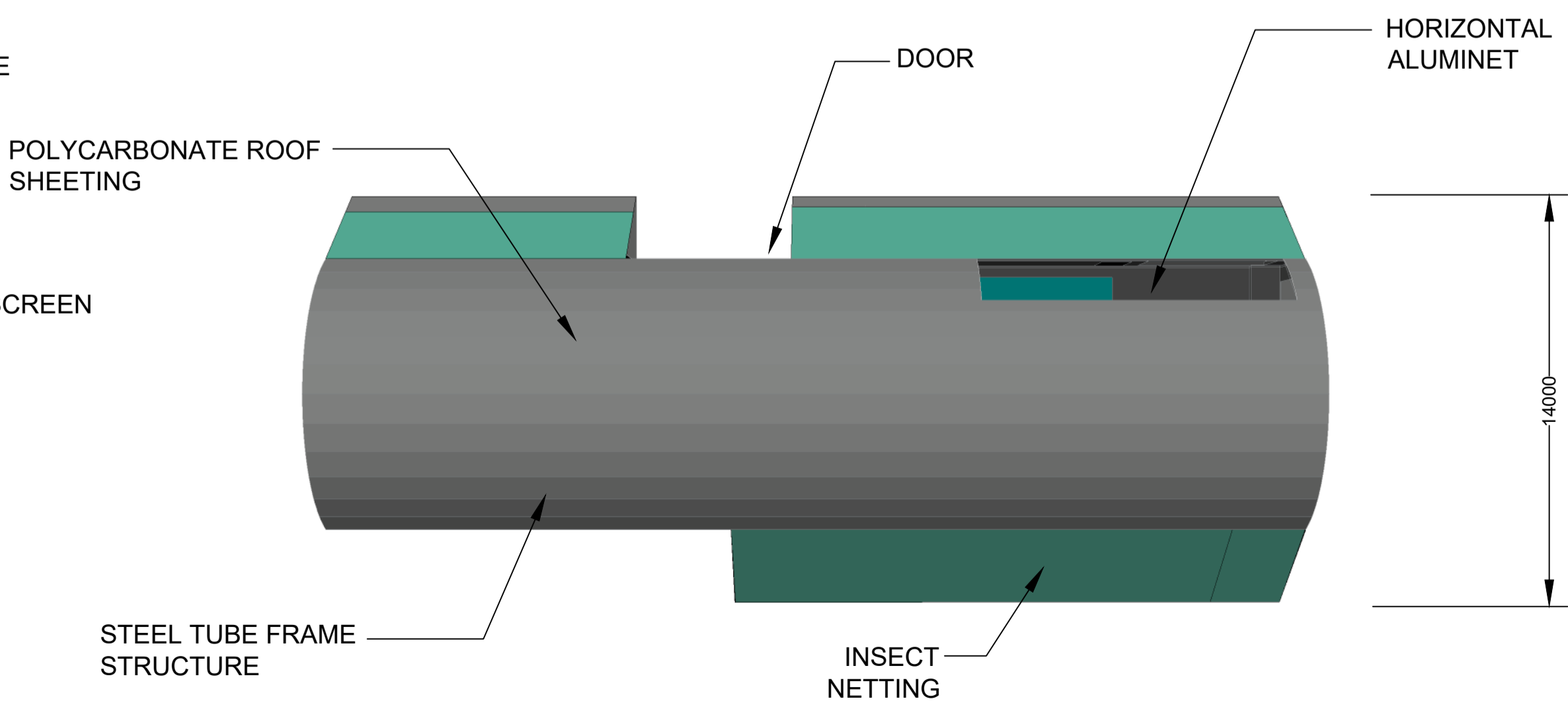
SIDE 1 ELEVATION



SIDE 2 ELEVATION



REAR ELEVATION



PLAN VIEW

- N16 Nursery: Scope Of Works**
1. Temperature and light sensors
  2. Remove and install insect netting
  3. Replace doors including locksets
  4. Remove and install aluminet material
  5. Supply and install windows at potting area
  6. Refurbish aluminet cable mechanisms and clips
  7. Steel frame side structure with canopy
  8. Servicing and refurbish of horizontal aluminet

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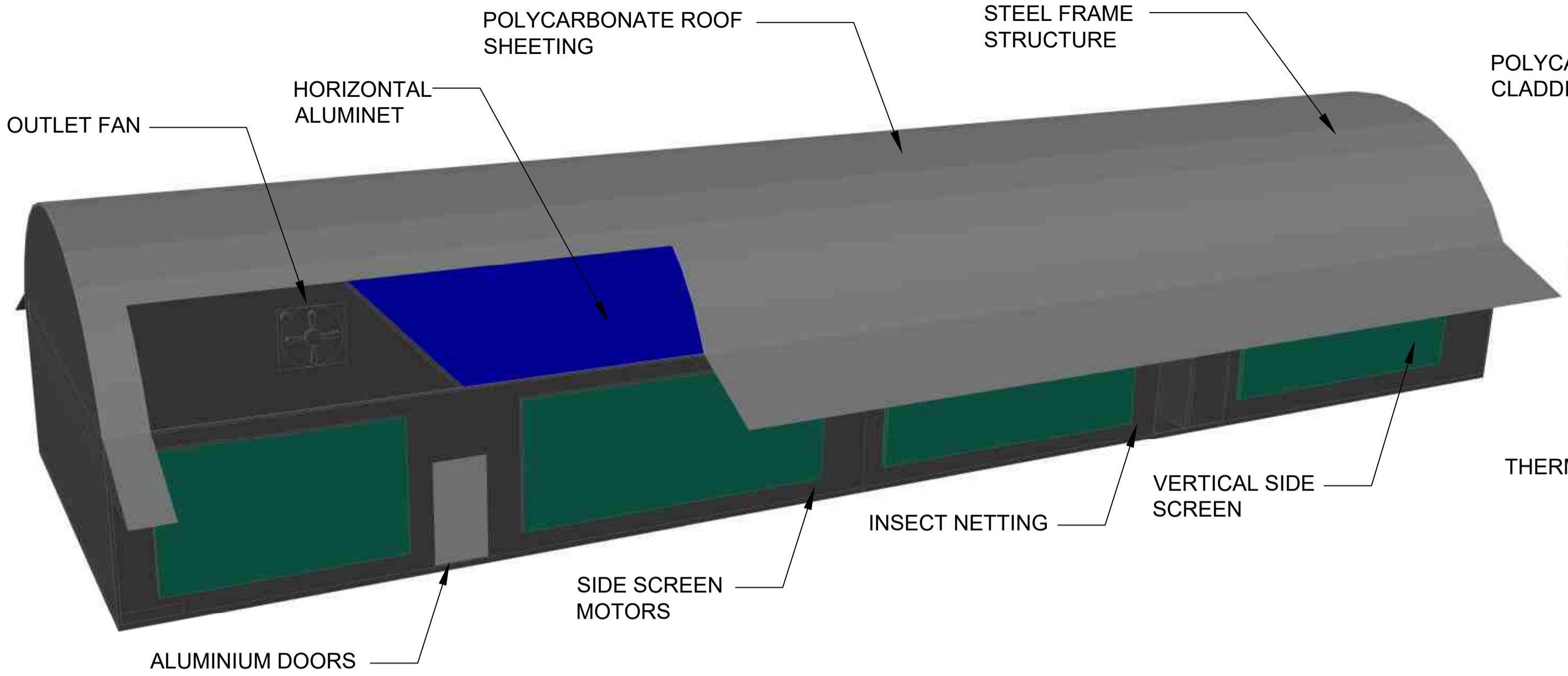
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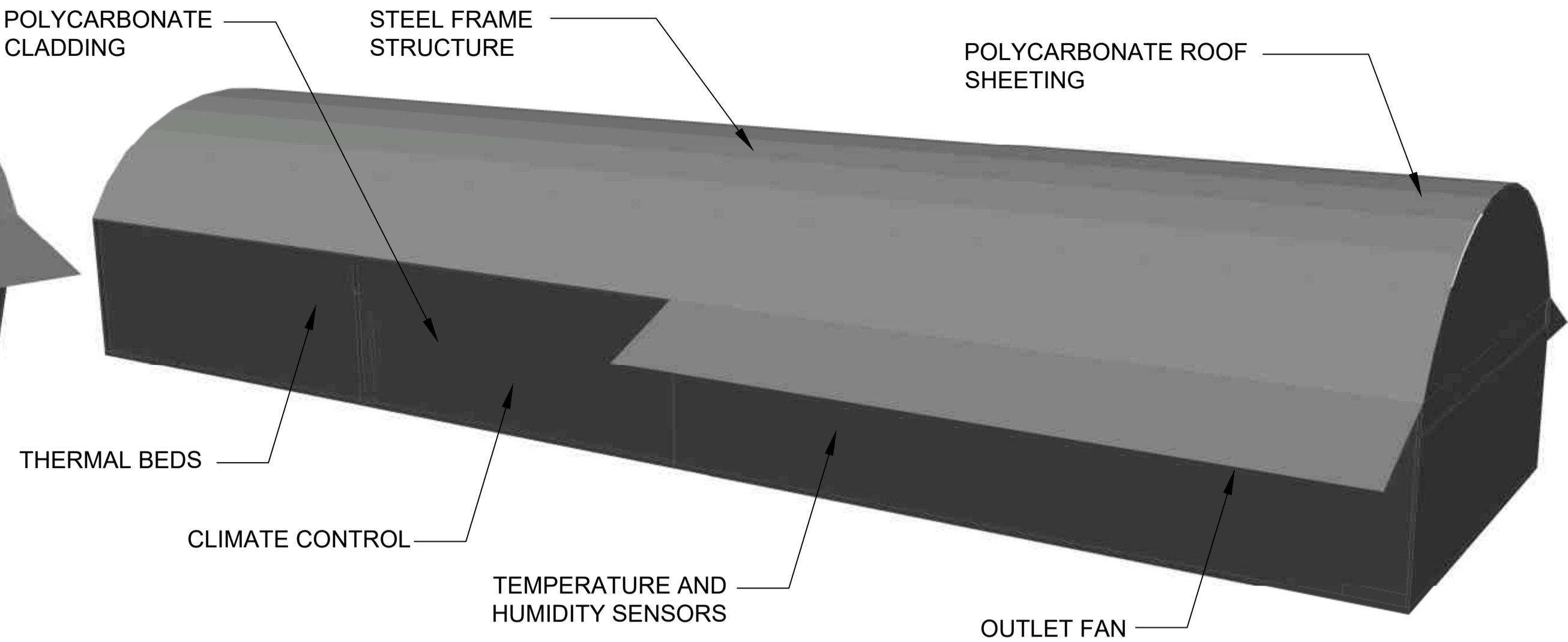
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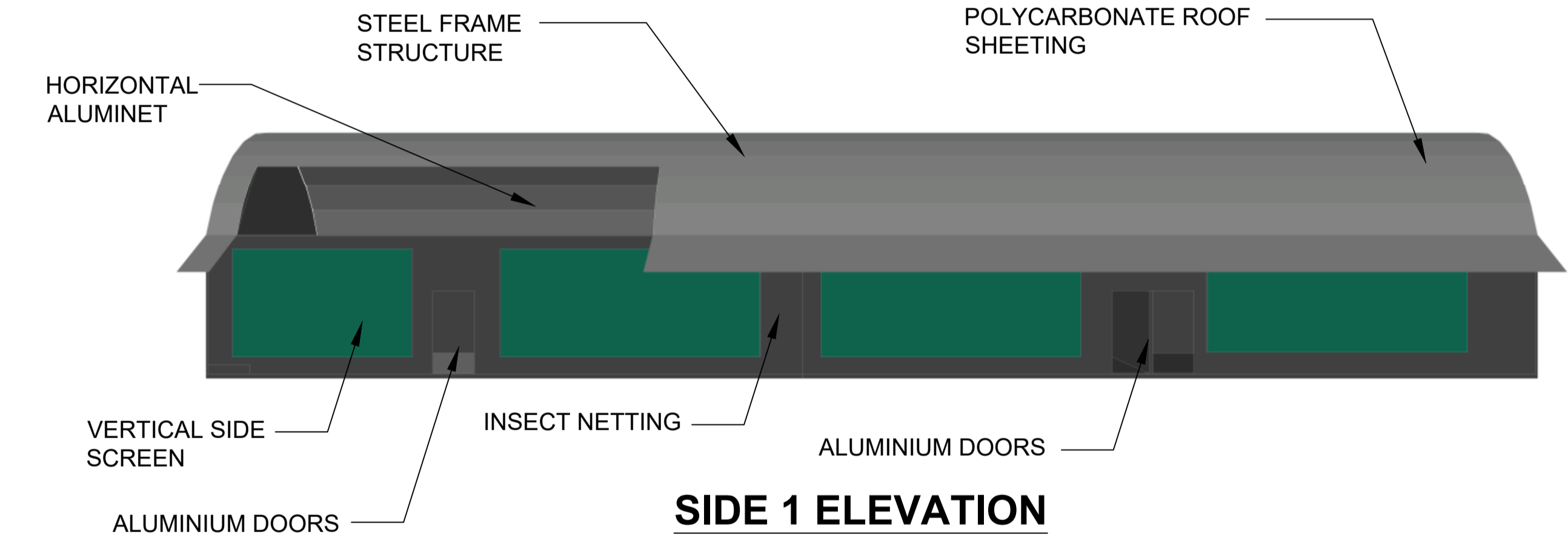
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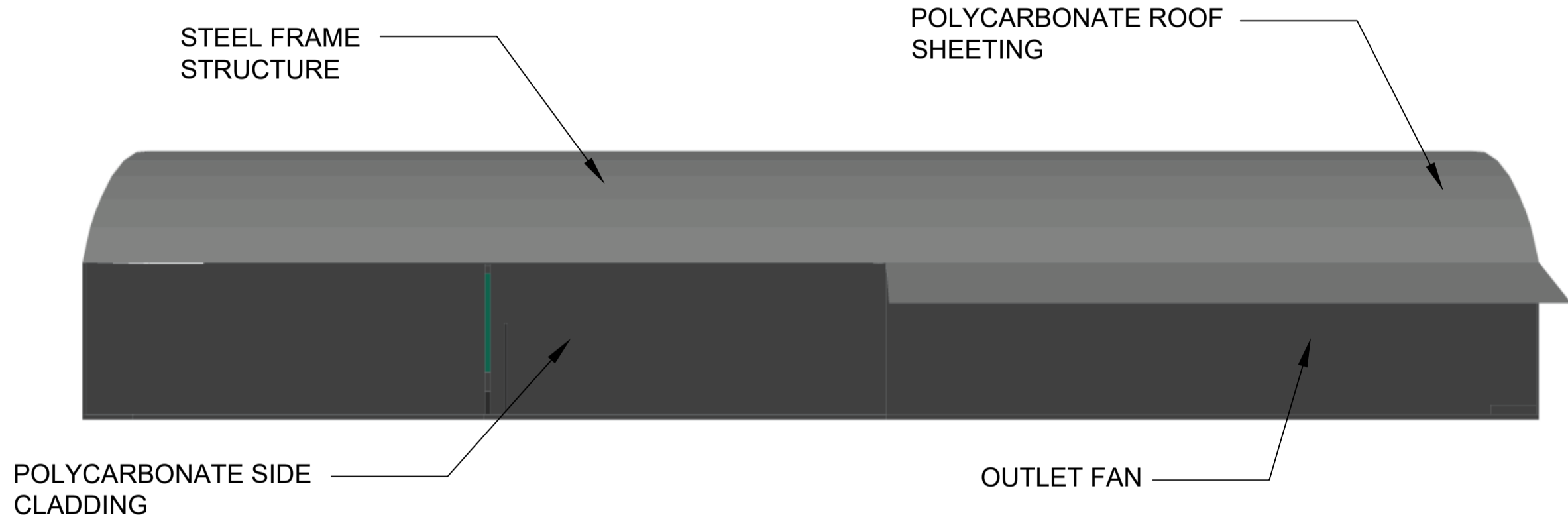
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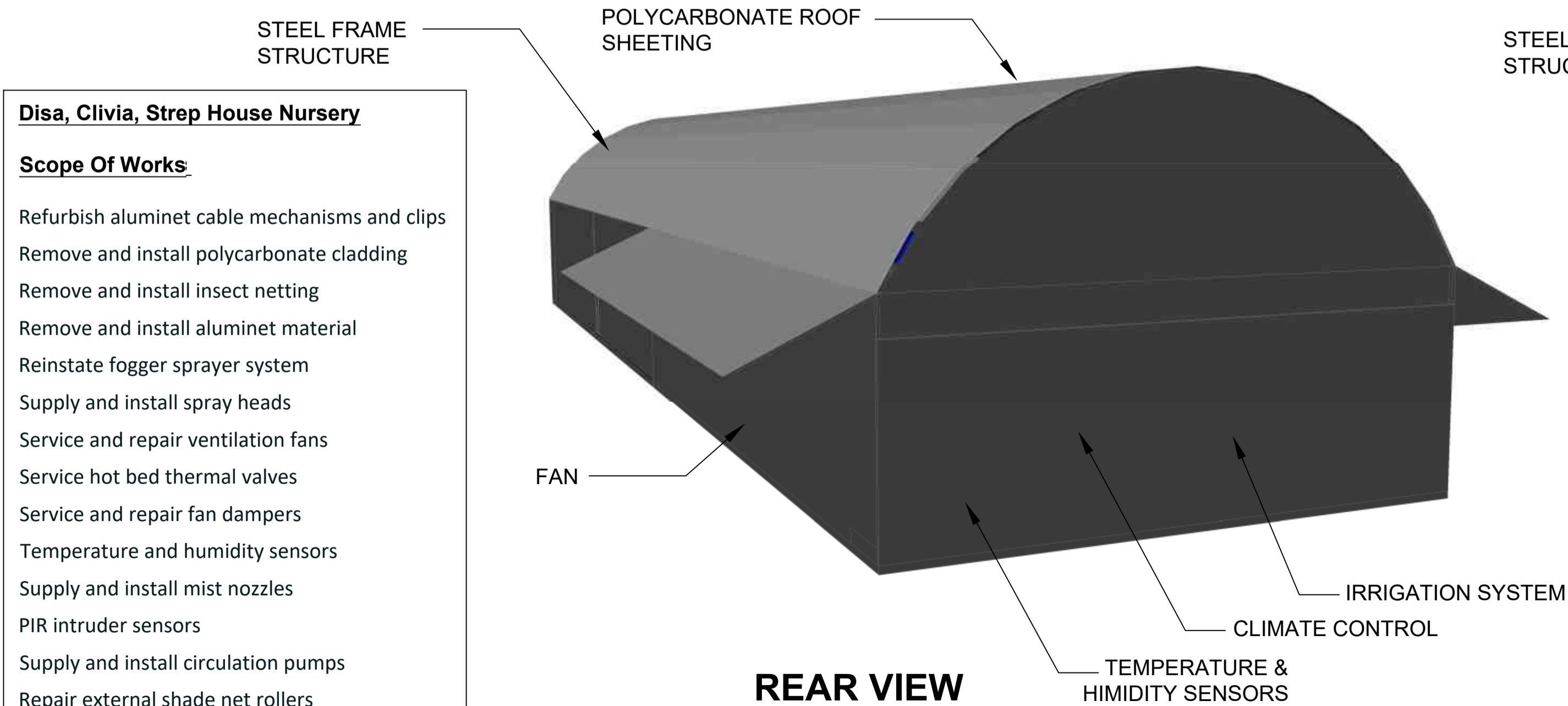
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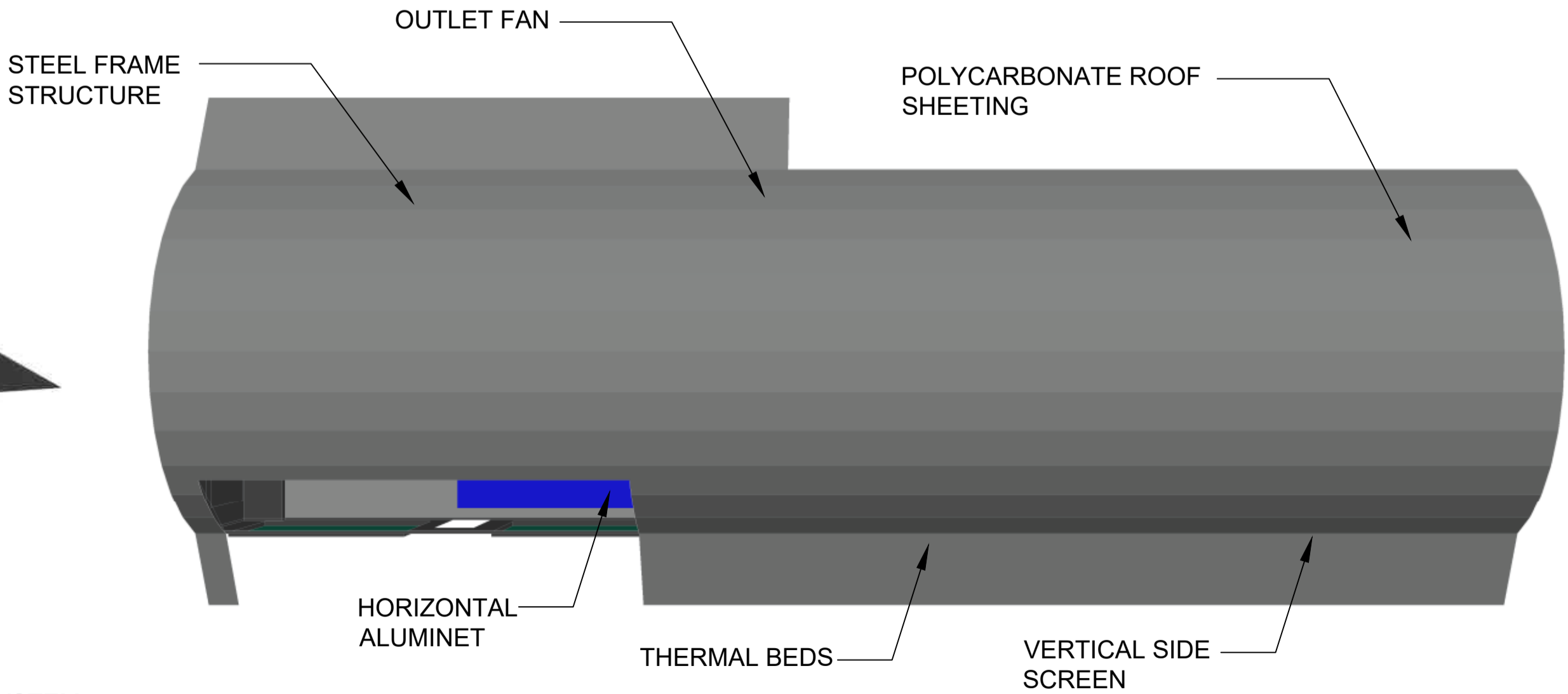
SIDE 1 ELEVATION



SIDE 2 ELEVATION



REAR VIEW



PLAN VIEW

**Disa, Clivia, Strep House Nursery**

**Scope Of Works**

Refurbish aluminet cable mechanisms and clips

Remove and install polycarbonate cladding

Remove and install insect netting

Remove and install aluminet material

Reinstate fogger sprayer system

Supply and install spray heads

Service and repair ventilation fans

Service hot bed thermal valves

Service and repair fan dampers

Temperature and humidity sensors

Supply and install mist nozzles

PIR intruder sensors

Supply and install circulation pumps

Repair external shade net rollers

Repair motor arms and stabilise support system

Servicing and refurbish horizontal aluminet

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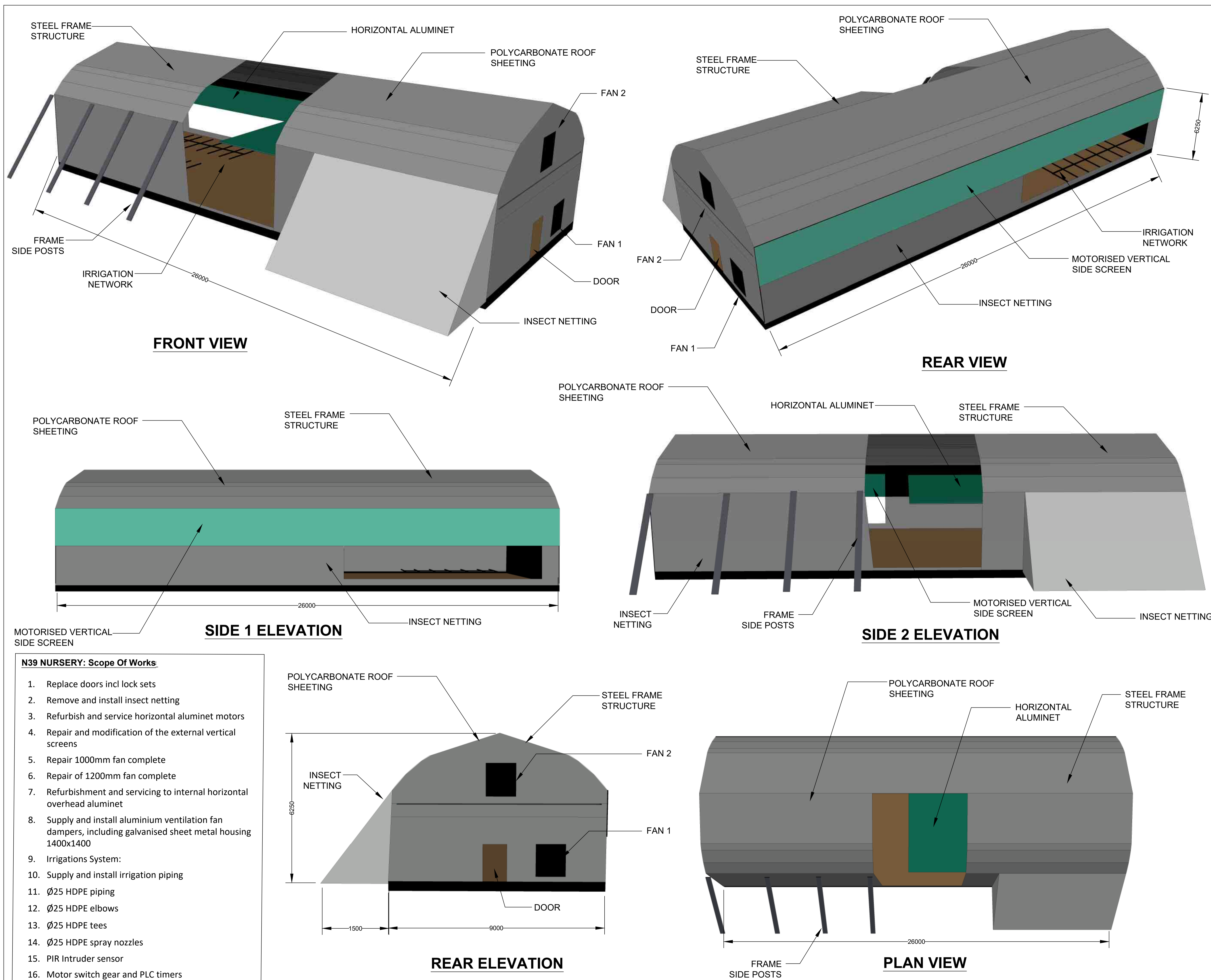
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SANBI KIRSTENBOSCH:  
DISA-CLIVIA-STREP HOUSE  
NURSERIES

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..	K JURIES
scale	drawn
N.T.S	T NIEFTAGDIEN
date	checked
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drawing number	revision
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- N39 NURSERY: Scope Of Works**
1. Replace doors incl lock sets
  2. Remove and install insect netting
  3. Refurbish and service horizontal aluminet motors
  4. Repair and modification of the external vertical screens
  5. Repair 1000mm fan complete
  6. Repair of 1200mm fan complete
  7. Refurbishment and servicing to internal horizontal overhead aluminet
  8. Supply and install aluminium ventilation fan dampers, including galvanised sheet metal housing 1400x1400
  9. Irrigations System:
  10. Supply and install irrigation piping
  11. Ø25 HDPE piping
  12. Ø25 HDPE elbows
  13. Ø25 HDPE tees
  14. Ø25 HDPE spray nozzles
  15. PIR Intruder sensor
  16. Motor switch gear and PLC timers

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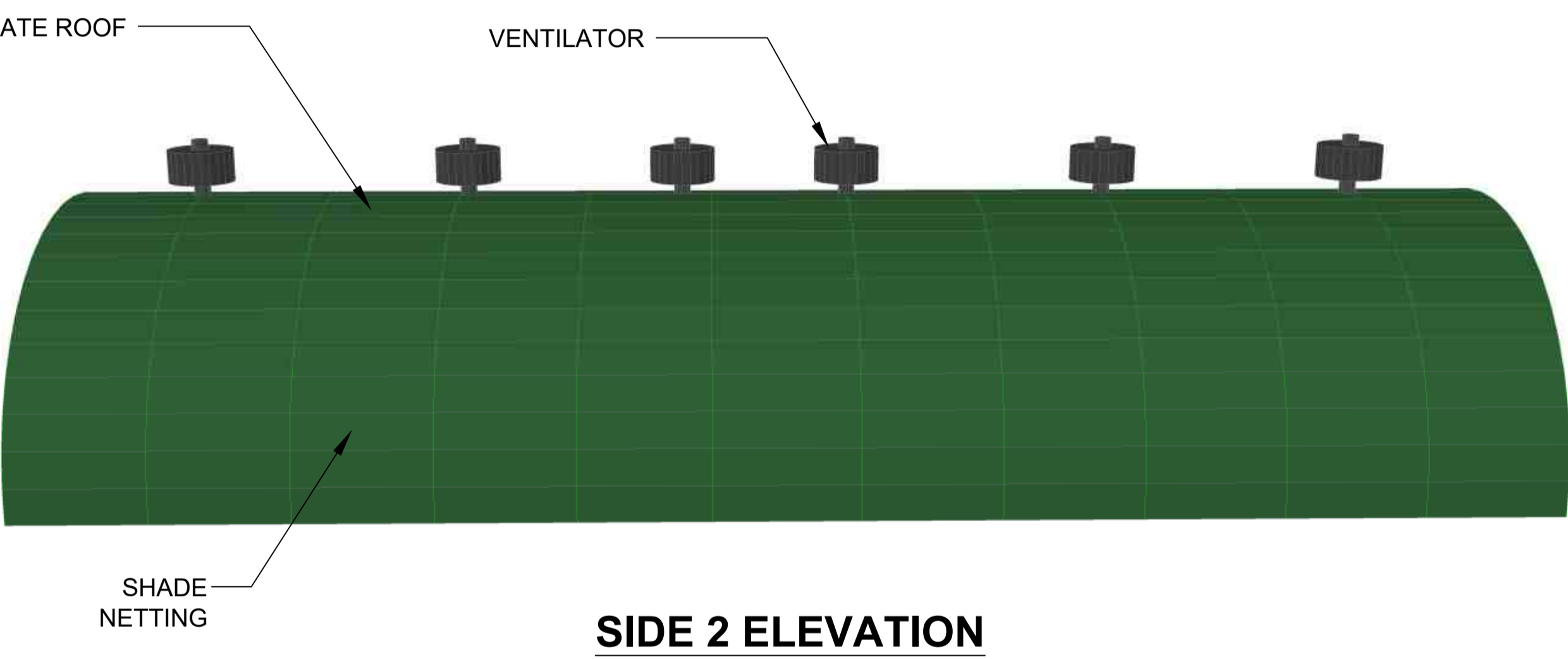
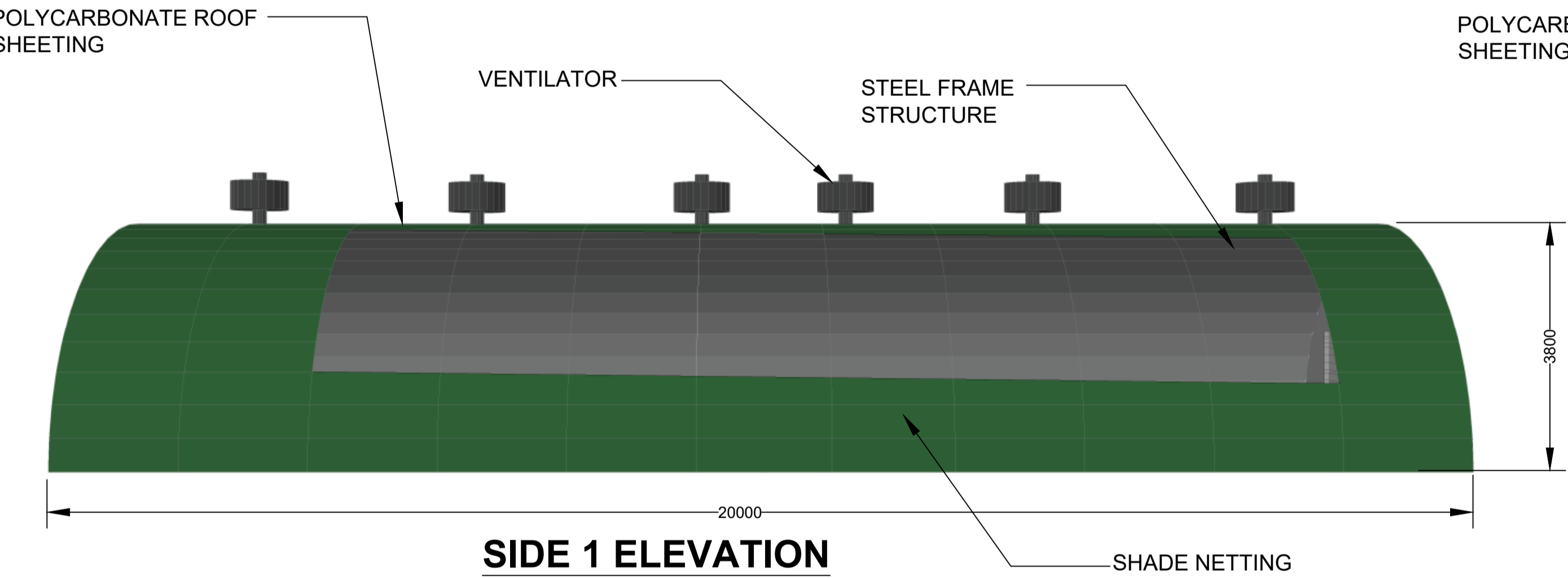
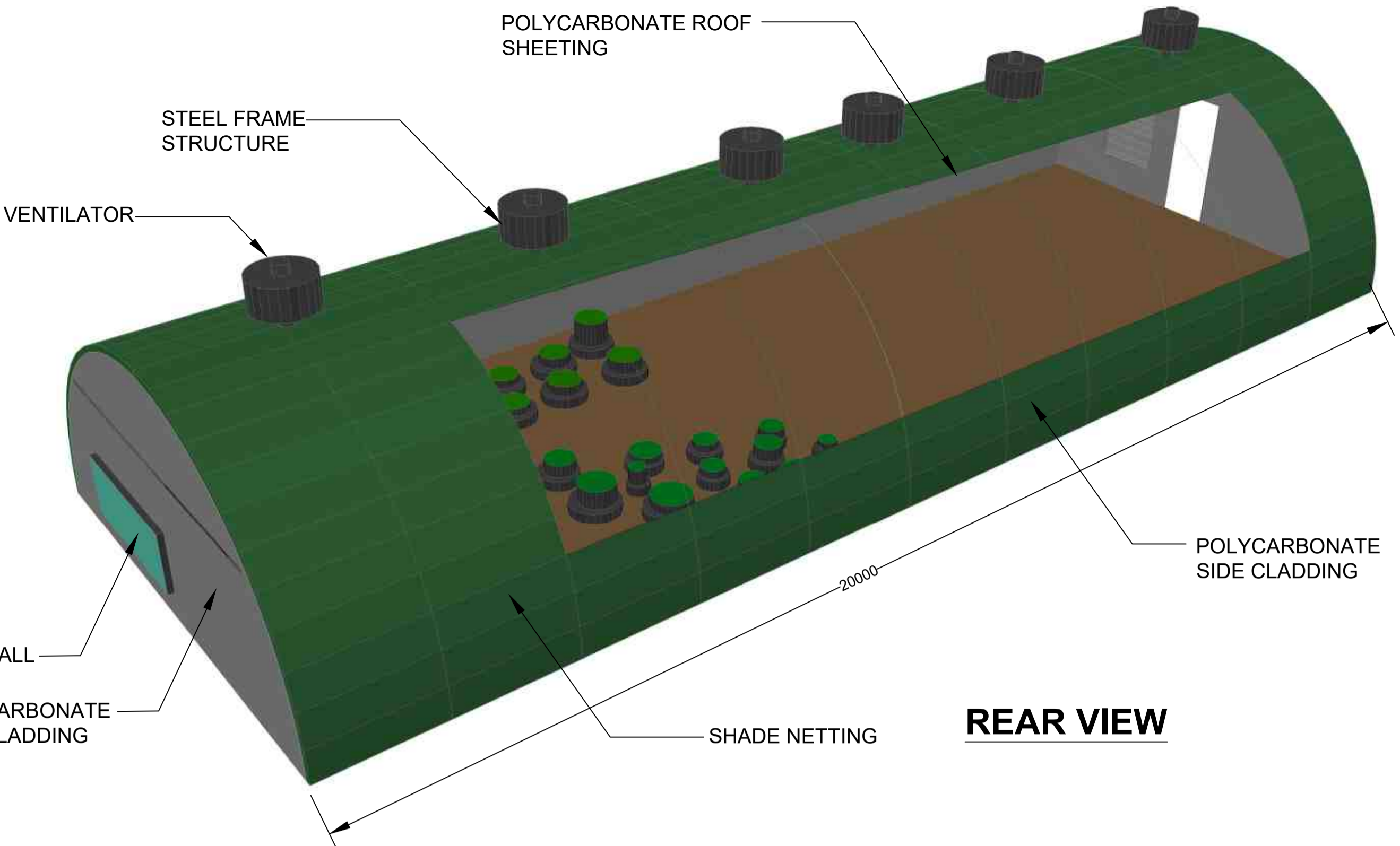
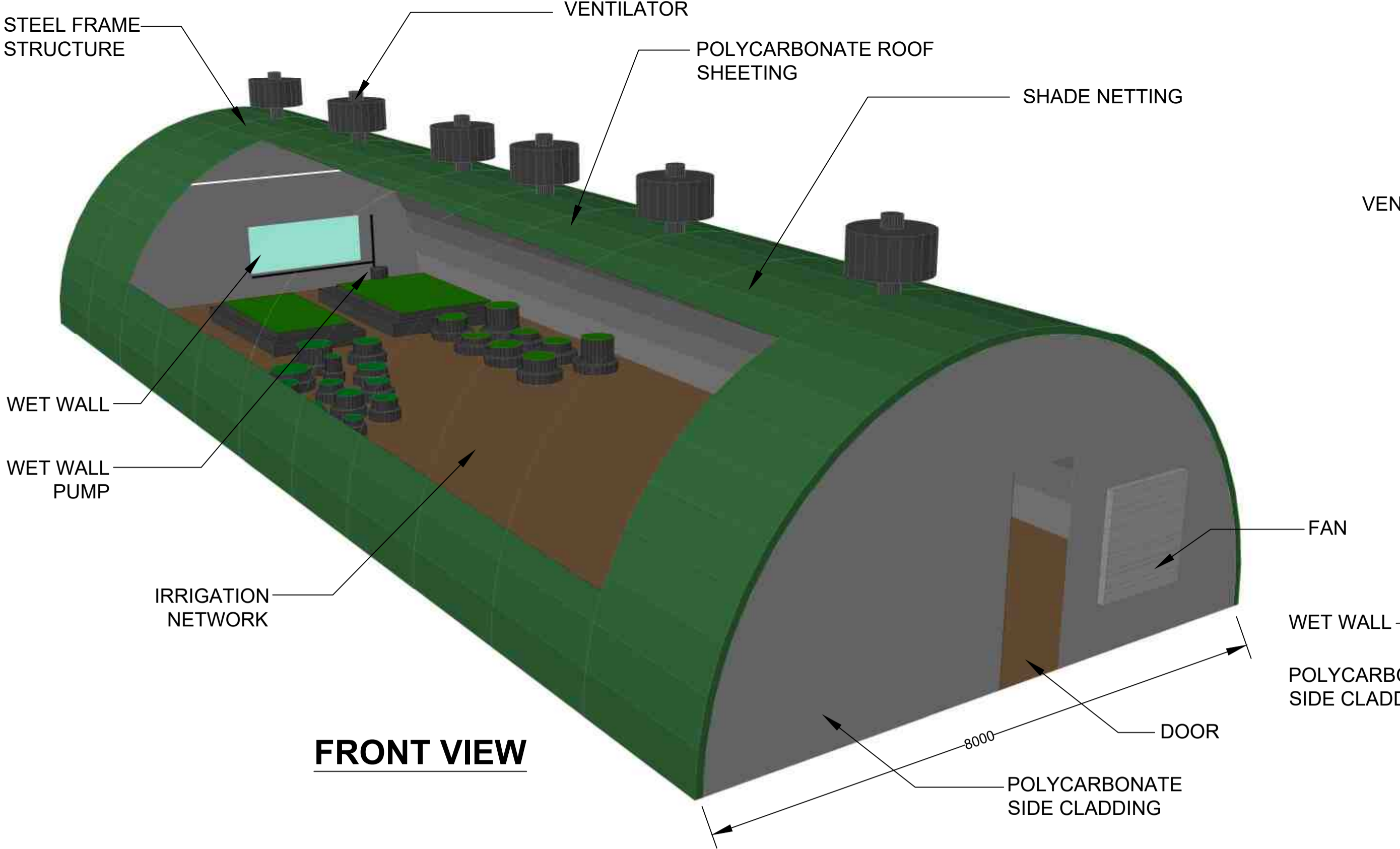
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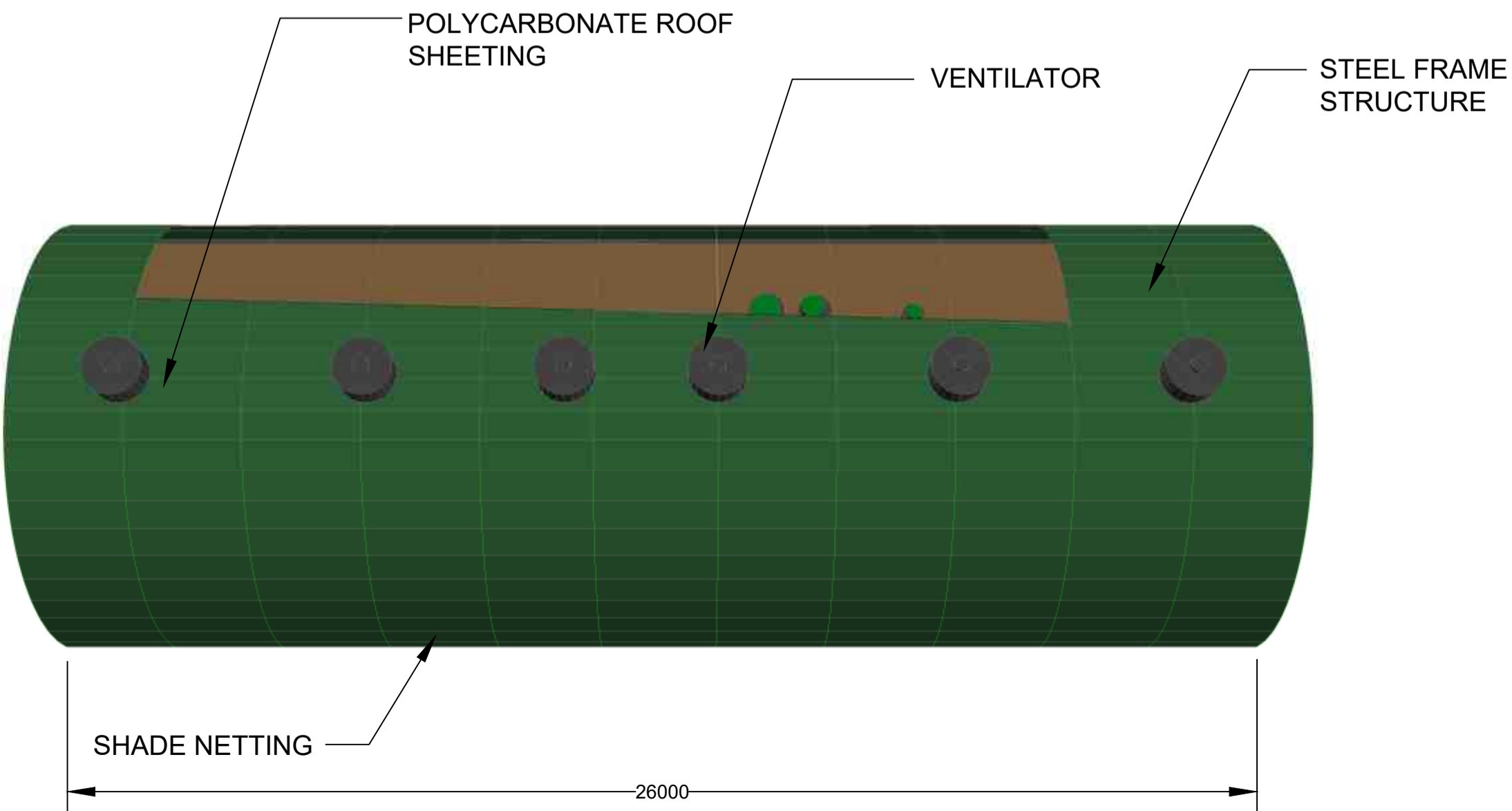
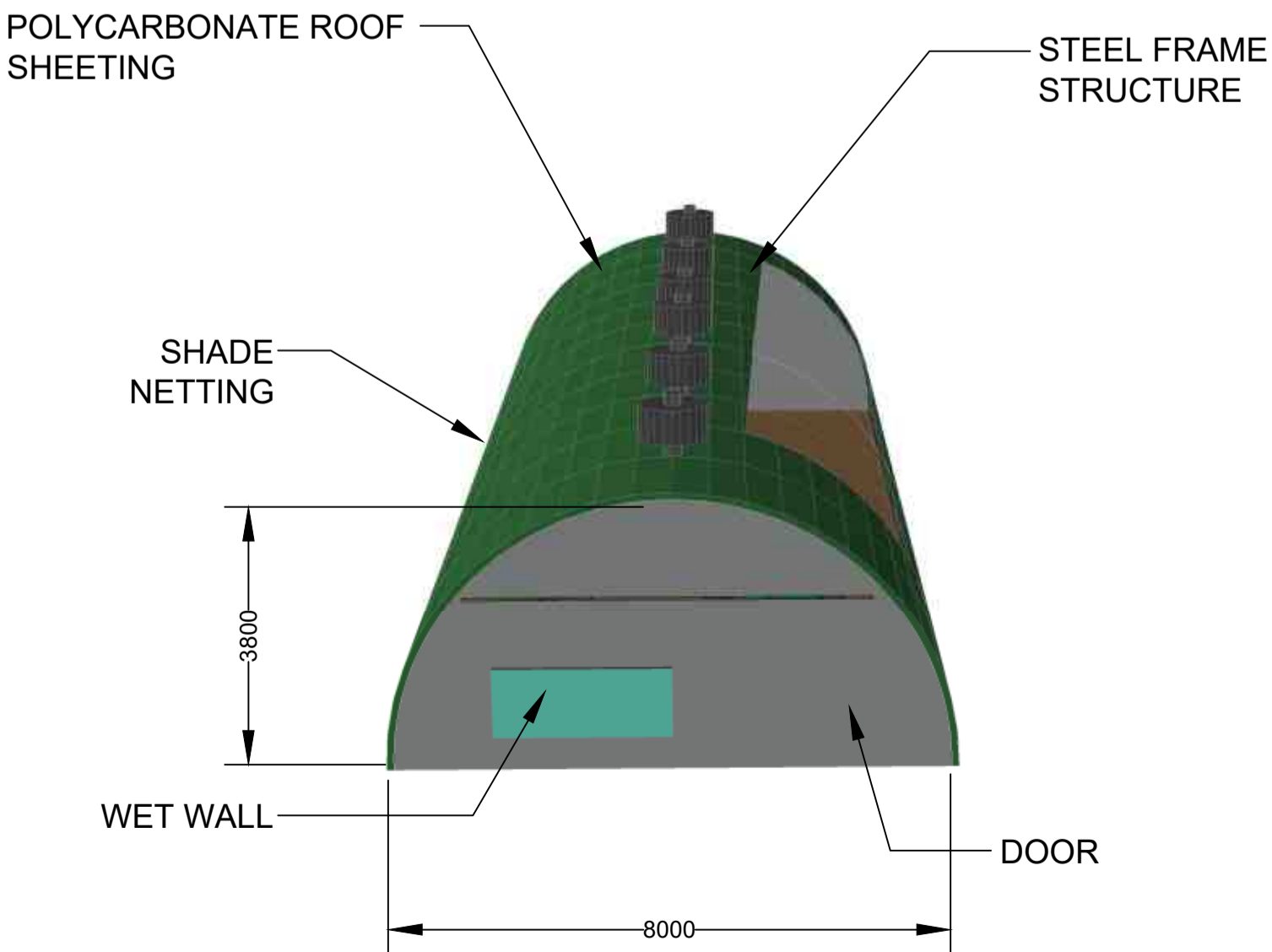
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service	SANBI KIRSTENBOSCH: INVESTIGATION, DESIGN PROCUREMENT AND CONSTRUCTION MONITORING FOR THE REPAIRS AND UPGRADE OF EXISTING NURSERIES AND GLASSHOUSE INFRASTRUCTURE.	
project number	0533	
drawing title	SANBI KIRSTENBOSCH: N49-79 NURSERY	
ref.no.	--	designed K JURIES
scale	N.T.S	drawn T NIEFTAGDIEN
date	NOV23	checked R ISHMAIL
drawing number	0533-PH2-10	
revision		T0





- Cycad Tunnel 2 Nursery: Scope Of Works**
- 1.Remove and install polycarbonate sheeting of nursery tunnels x3
  - 2.Air circulation fan (1000mm dia) ) replace electrical motor and belt
  - 3.Air circulation fan (1000mm dia) service louvre centrifugal actuator and paint frame
  - 4.High pressure fogging actuator valve required
  - 5.Aluminate shade net material
  - 6.Aluminet shade net mechanism with guide wires, pulleys and mounting brackets
  - 7.Repair and service fan/louvre control mechanism
  - 8.Supply and install aluminium louvres to extract fan
  - 9.Supply and install 1,6m x 1,0m water wall medium
  - 10.Repair and service water wall pump with 1,1kW motor
  - 11.Irrigation system:Ø25 HDPE piping, Solenoid valves, Ø25 HDPE spray nozzles



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discipline

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UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.**

project number

0533

drawing title

**SANBI KIRSTENBOSCH:  
CYCAD TUNNEL 2 NURSERY**

ref.no. ..

designed K JURIES

scale N.T.S

drawn T NIEFTAGODIEN

date NOV23

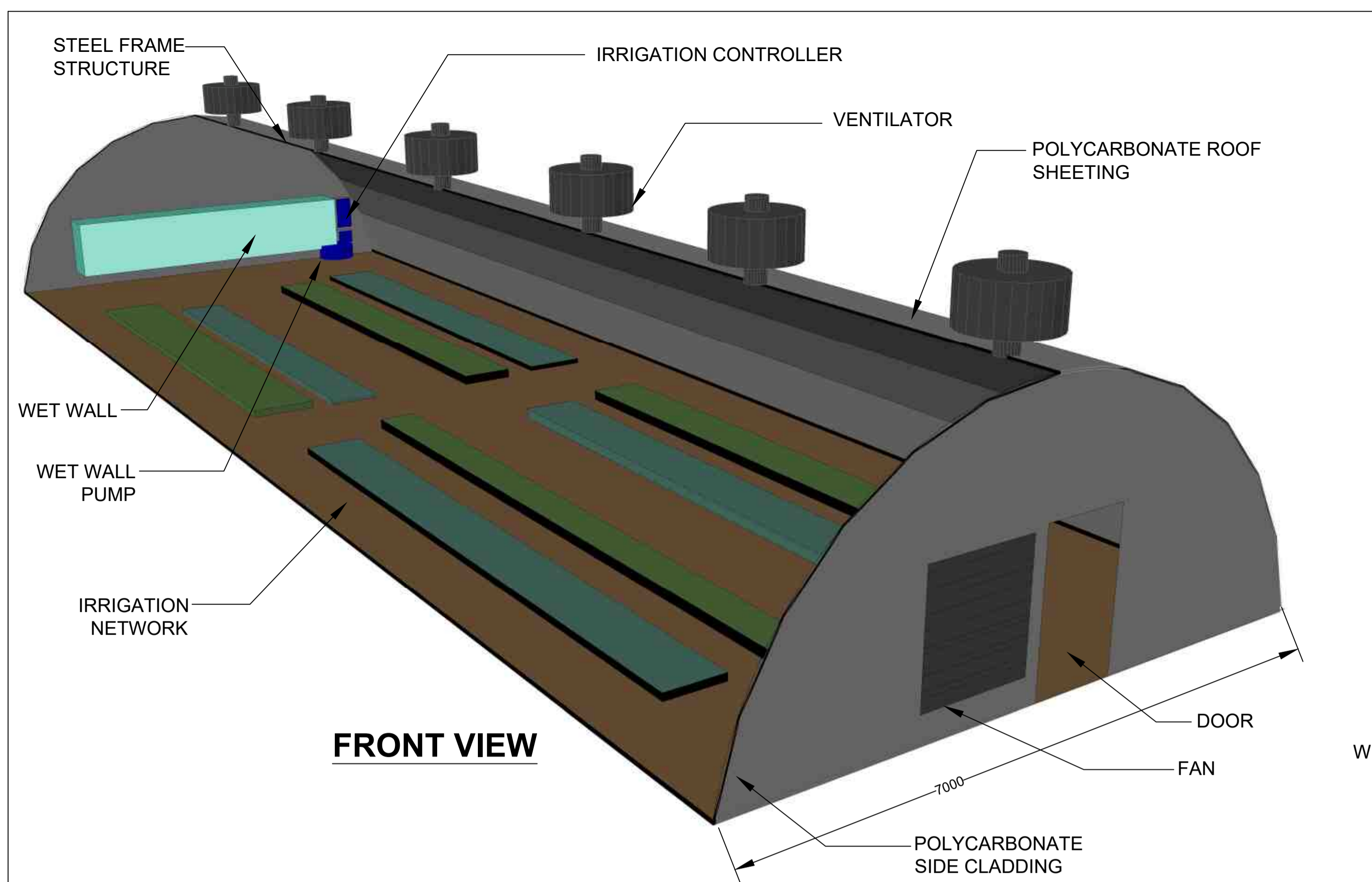
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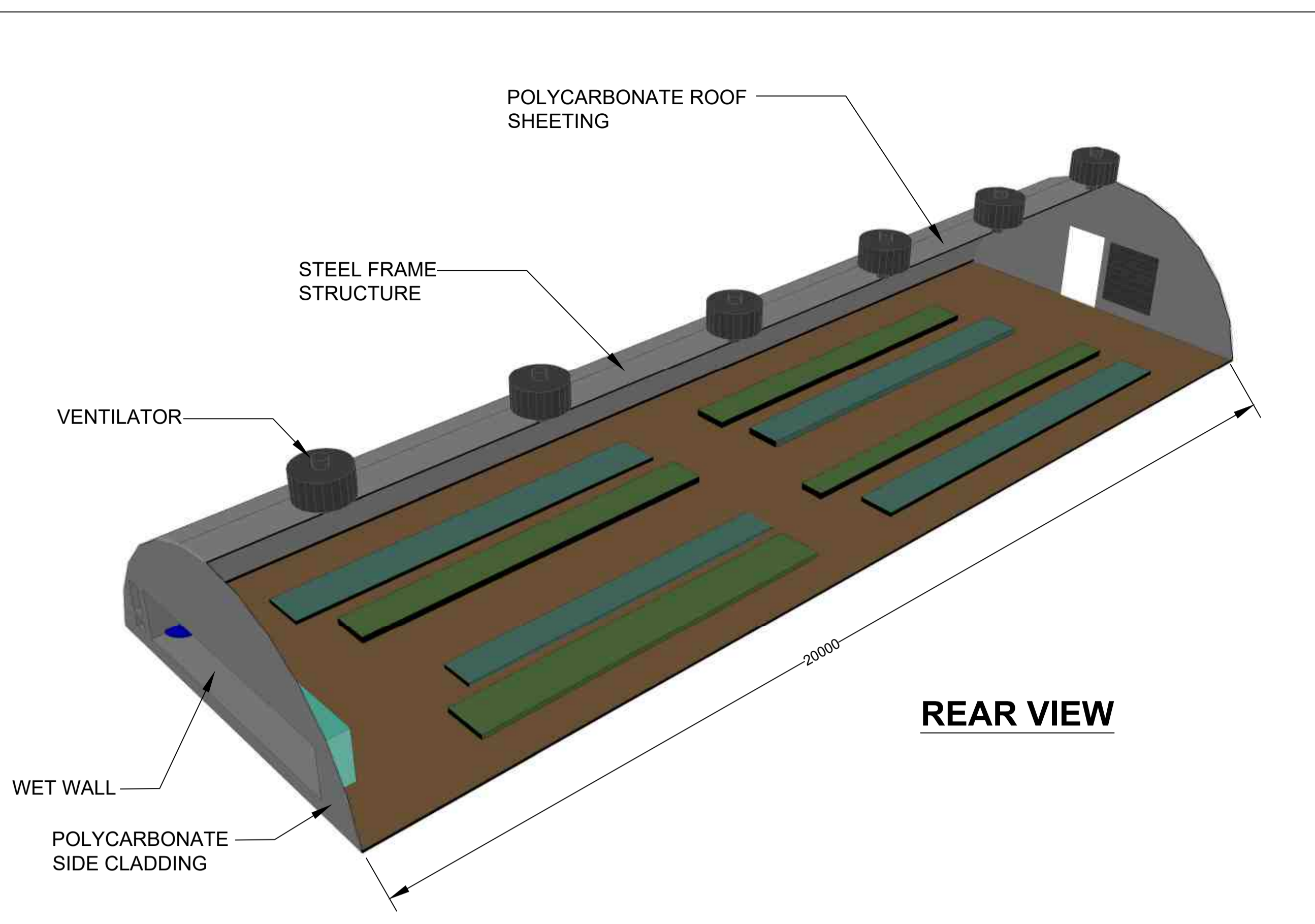
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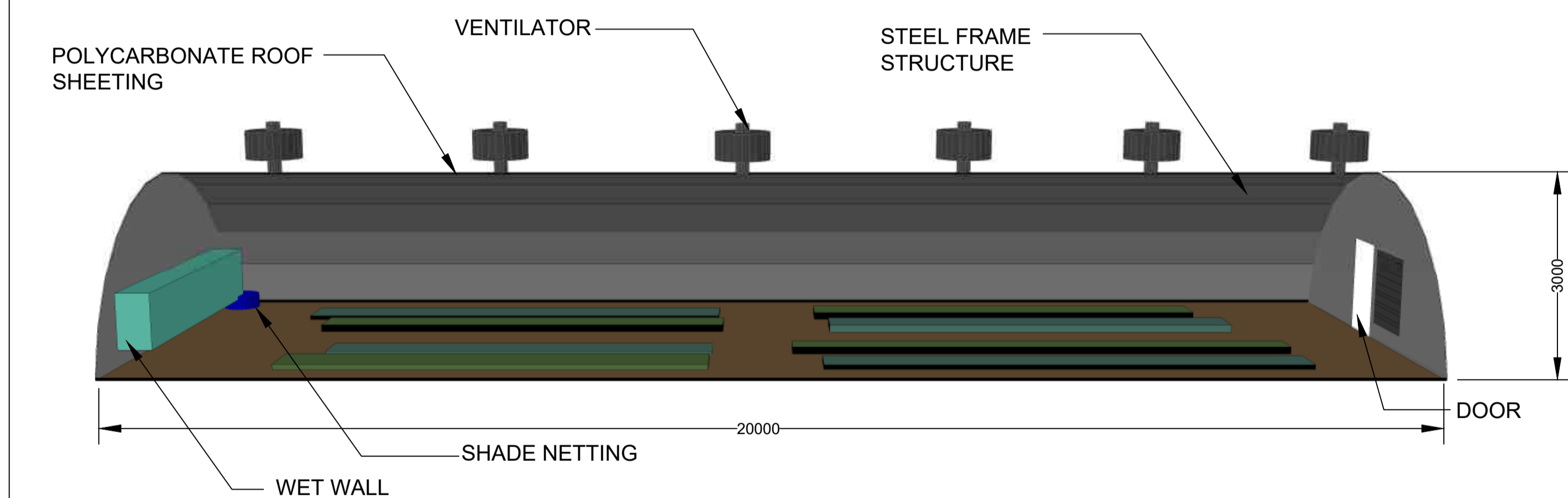
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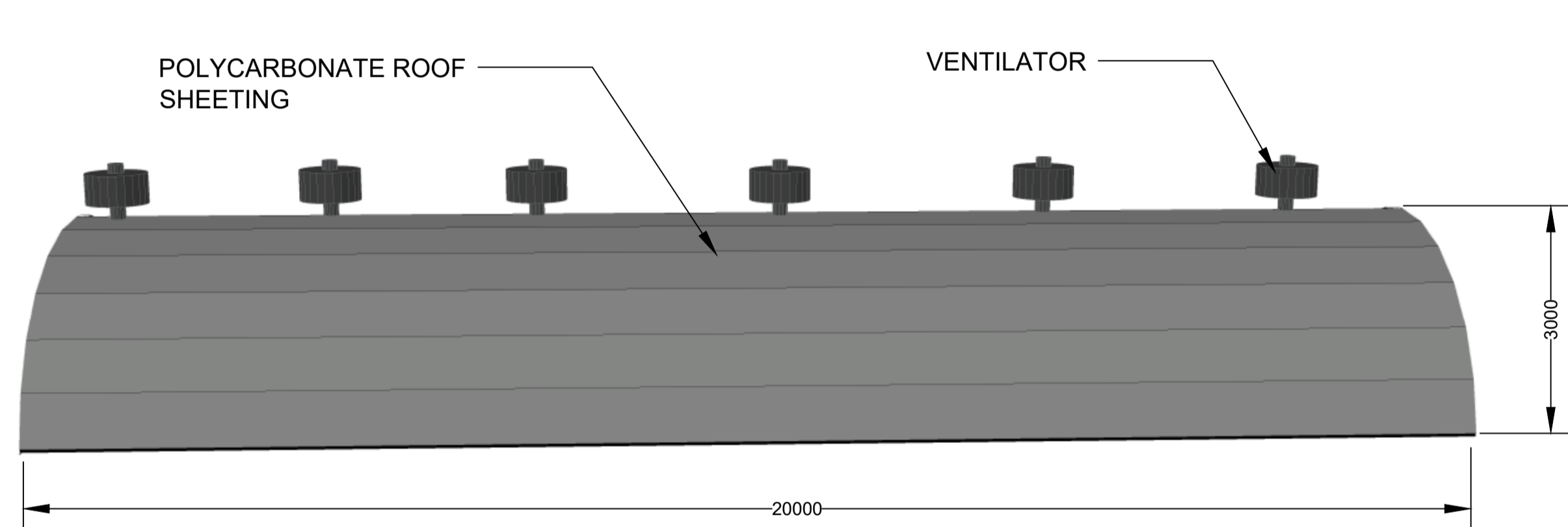
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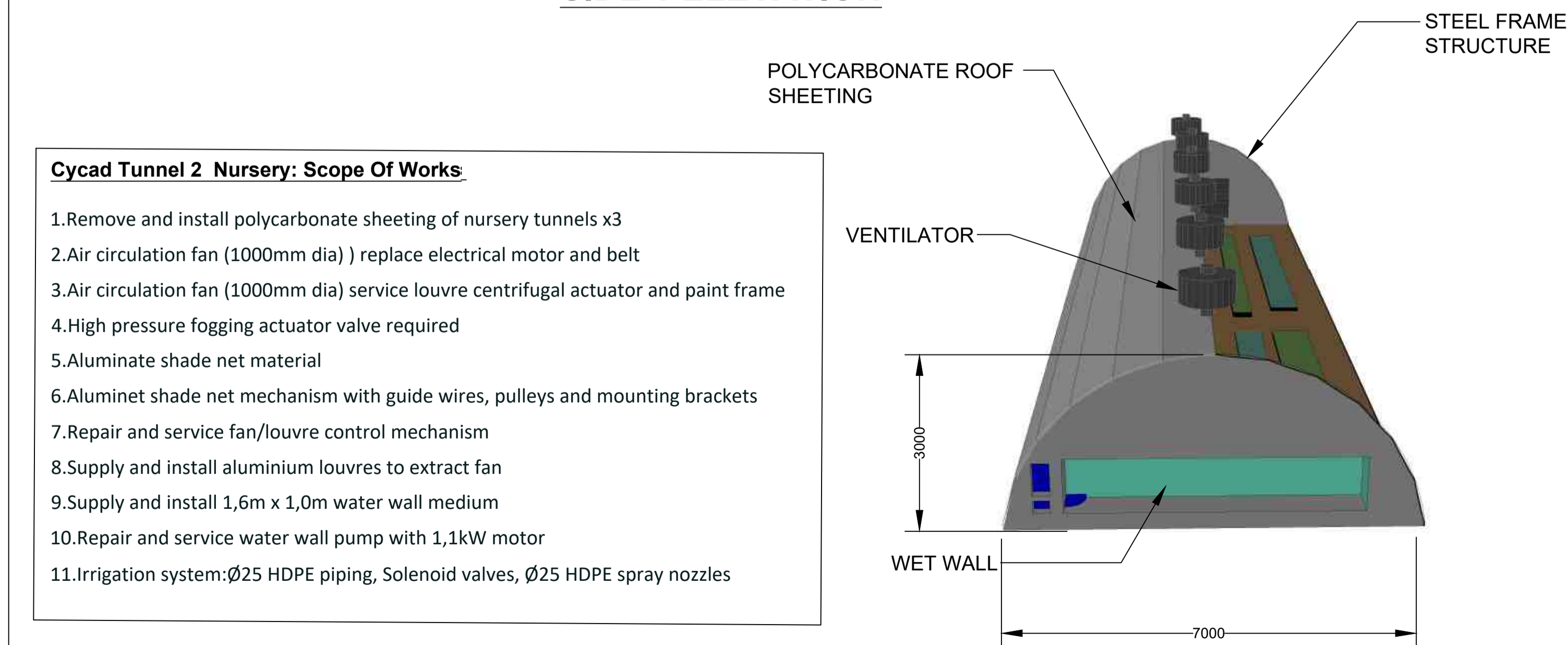
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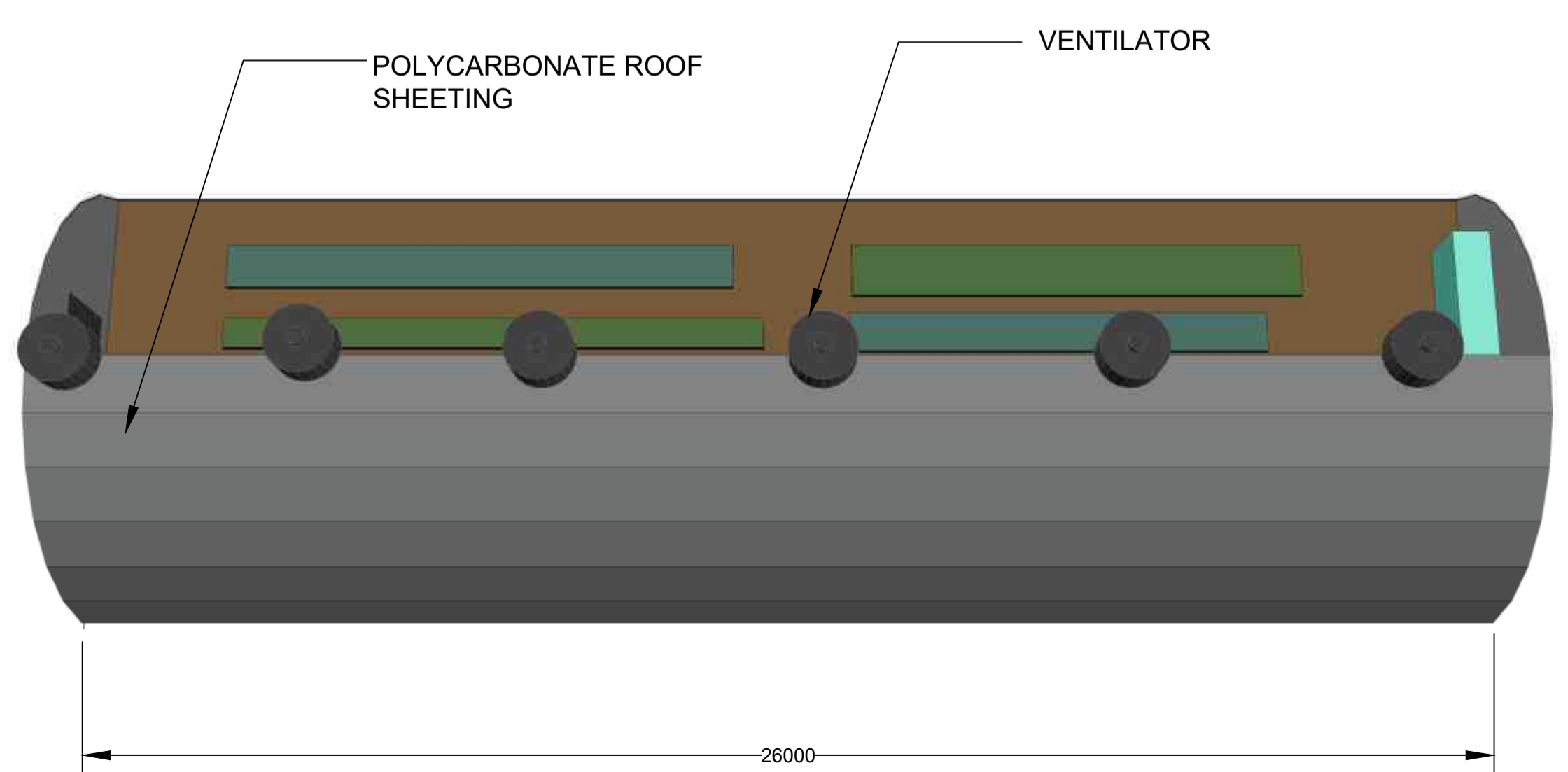
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SIDE 2 ELEVATION



REAR ELEVATION



PLAN VIEW

- Cycad Tunnel 2 Nursery: Scope Of Works**
- 1.Remove and install polycarbonate sheeting of nursery tunnels x3
  - 2.Air circulation fan (1000mm dia) ) replace electrical motor and belt
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  - 11.Irrigation system:Ø25 HDPE piping, Solenoid valves, Ø25 HDPE spray nozzles

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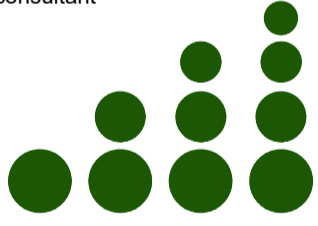
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GLASSHOUSE  
INFRASTRUCTURE.**

project number

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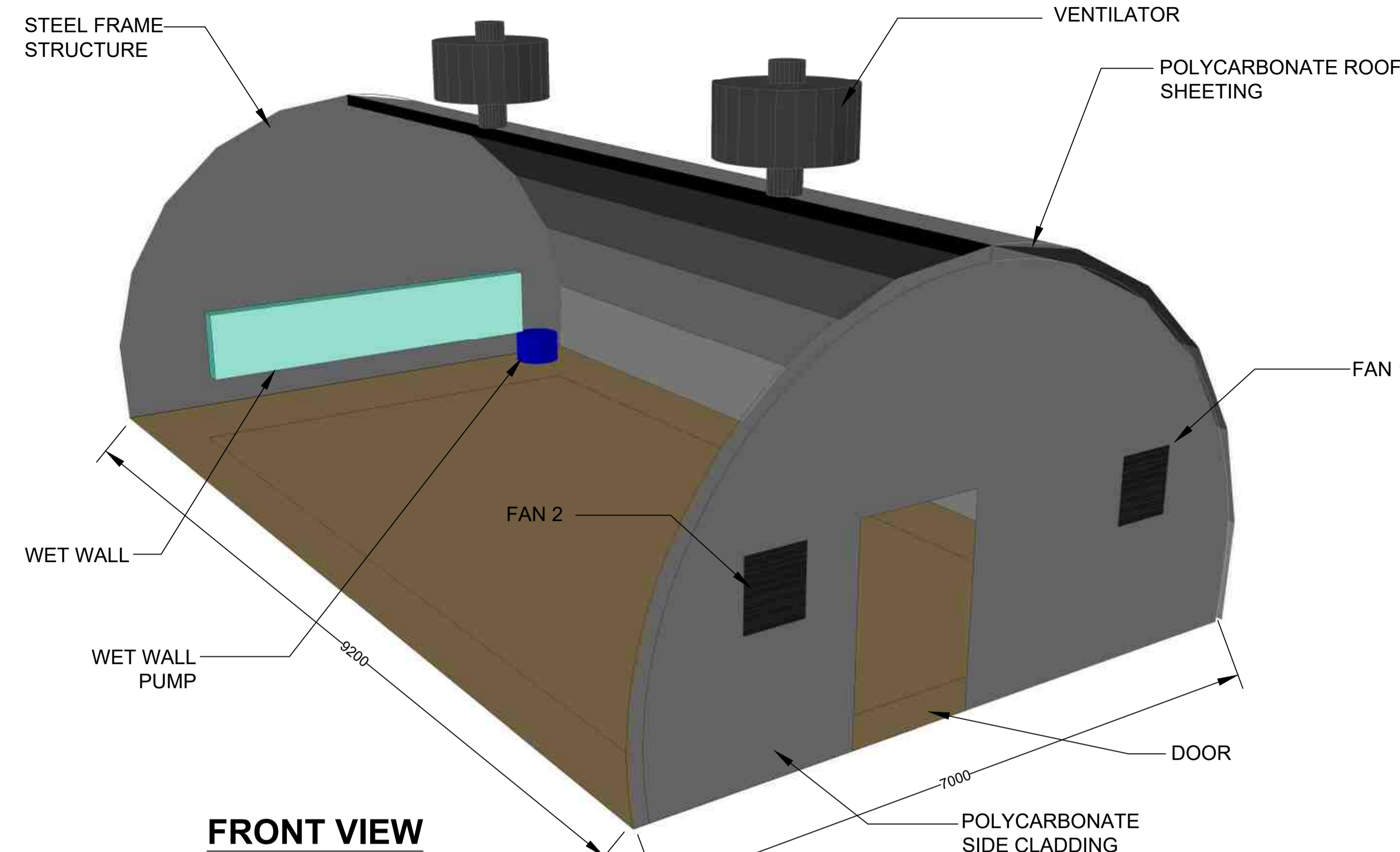
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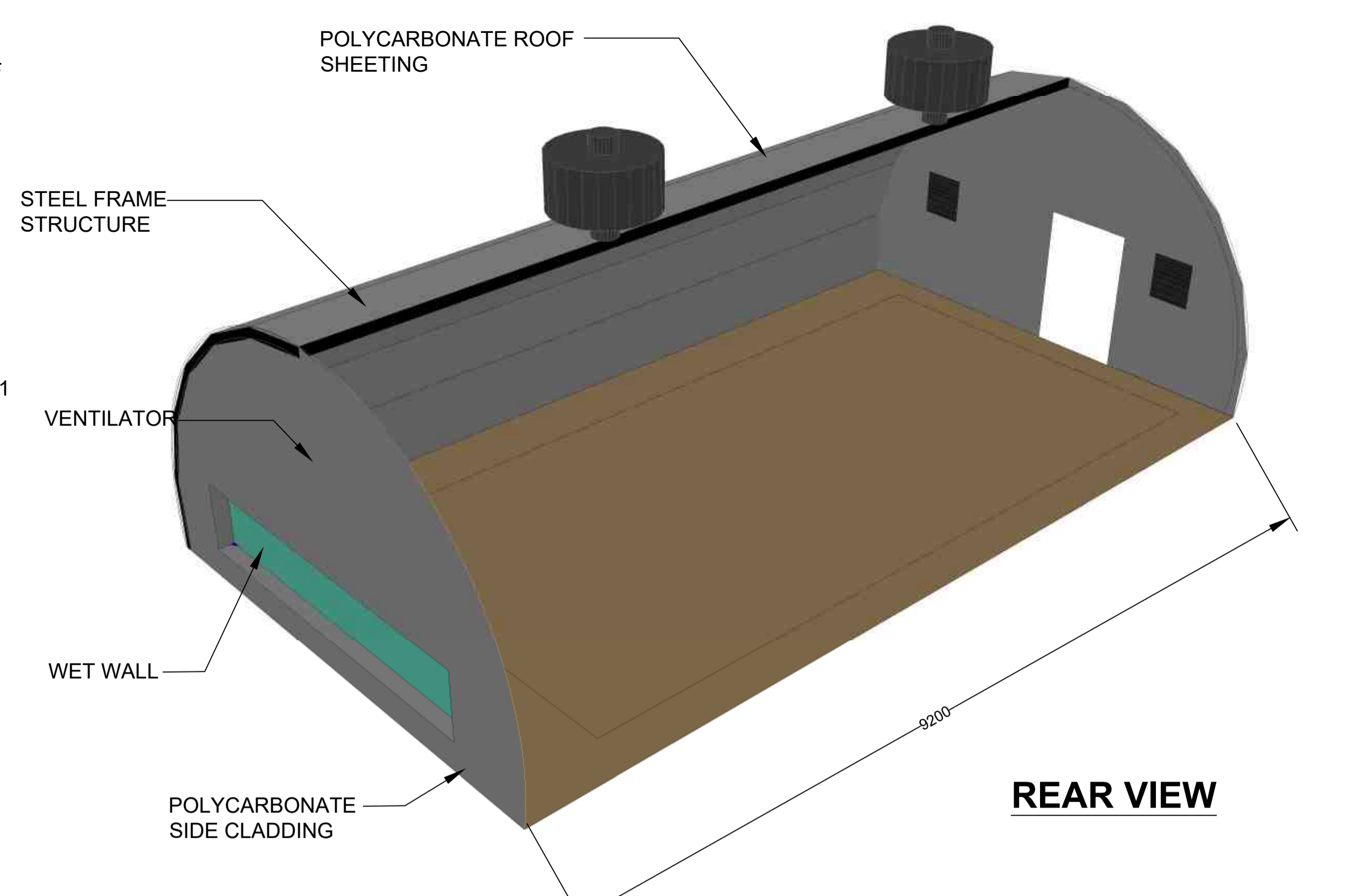
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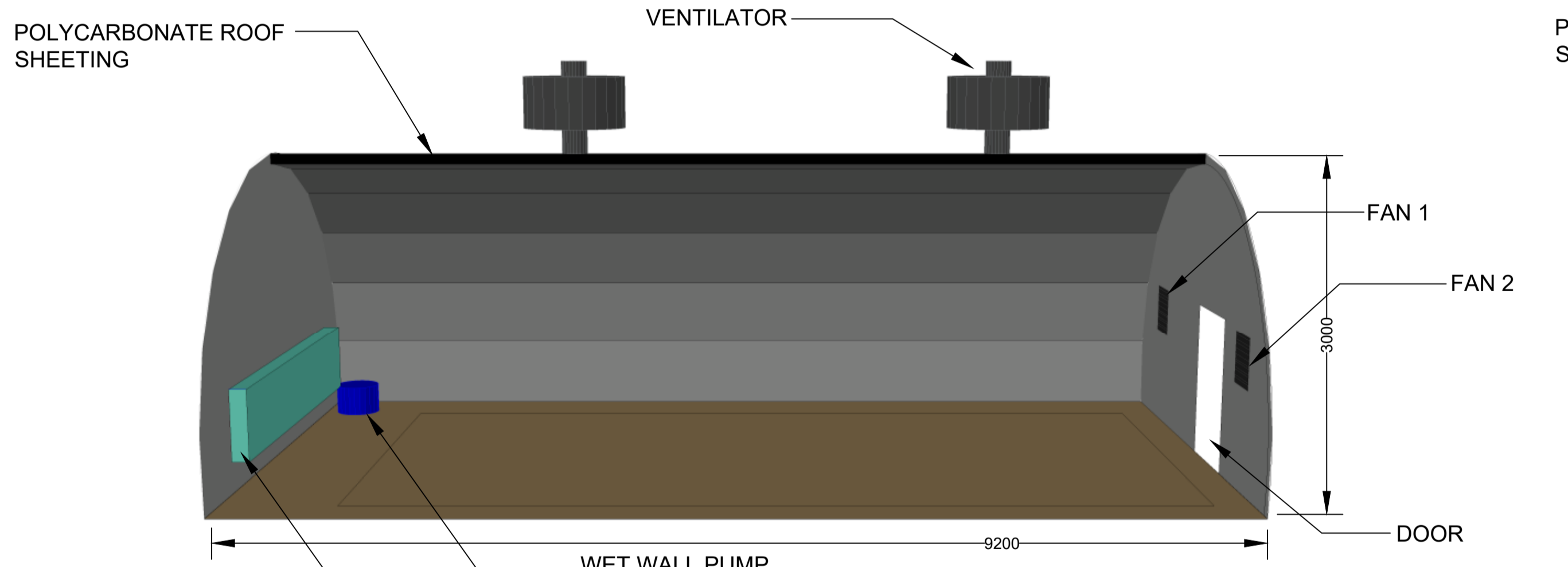
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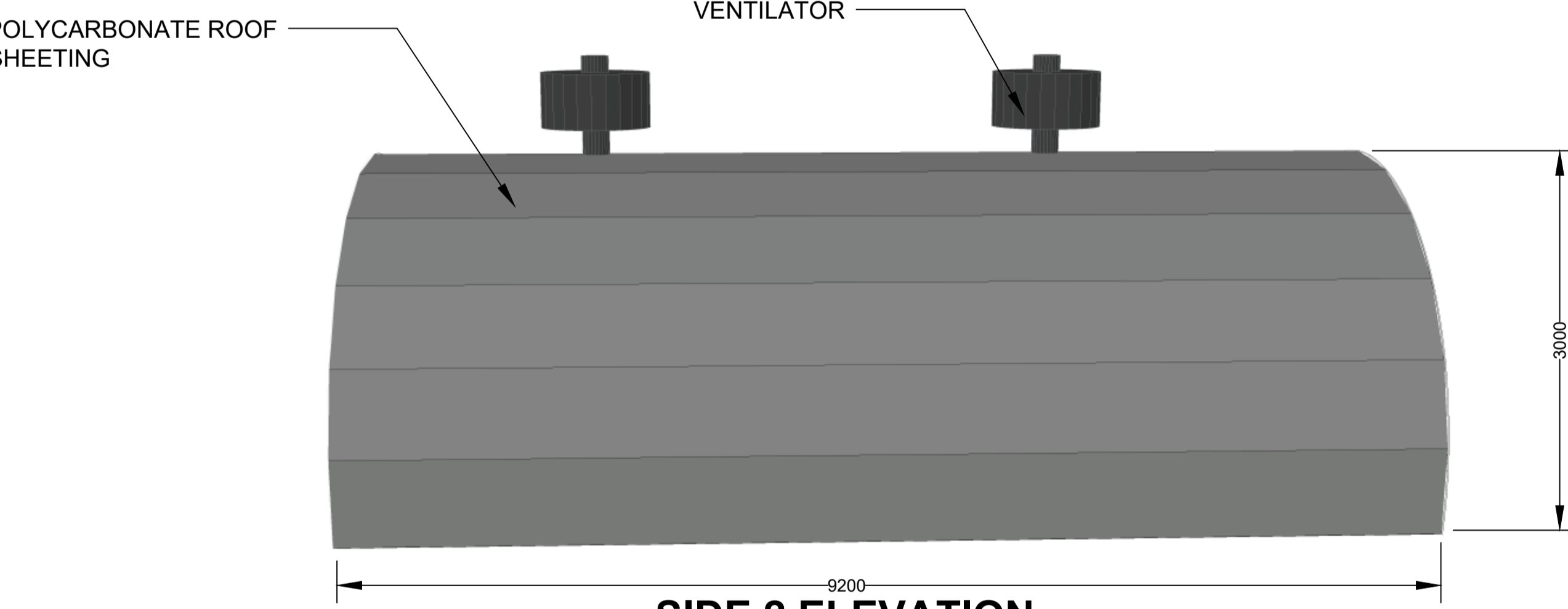
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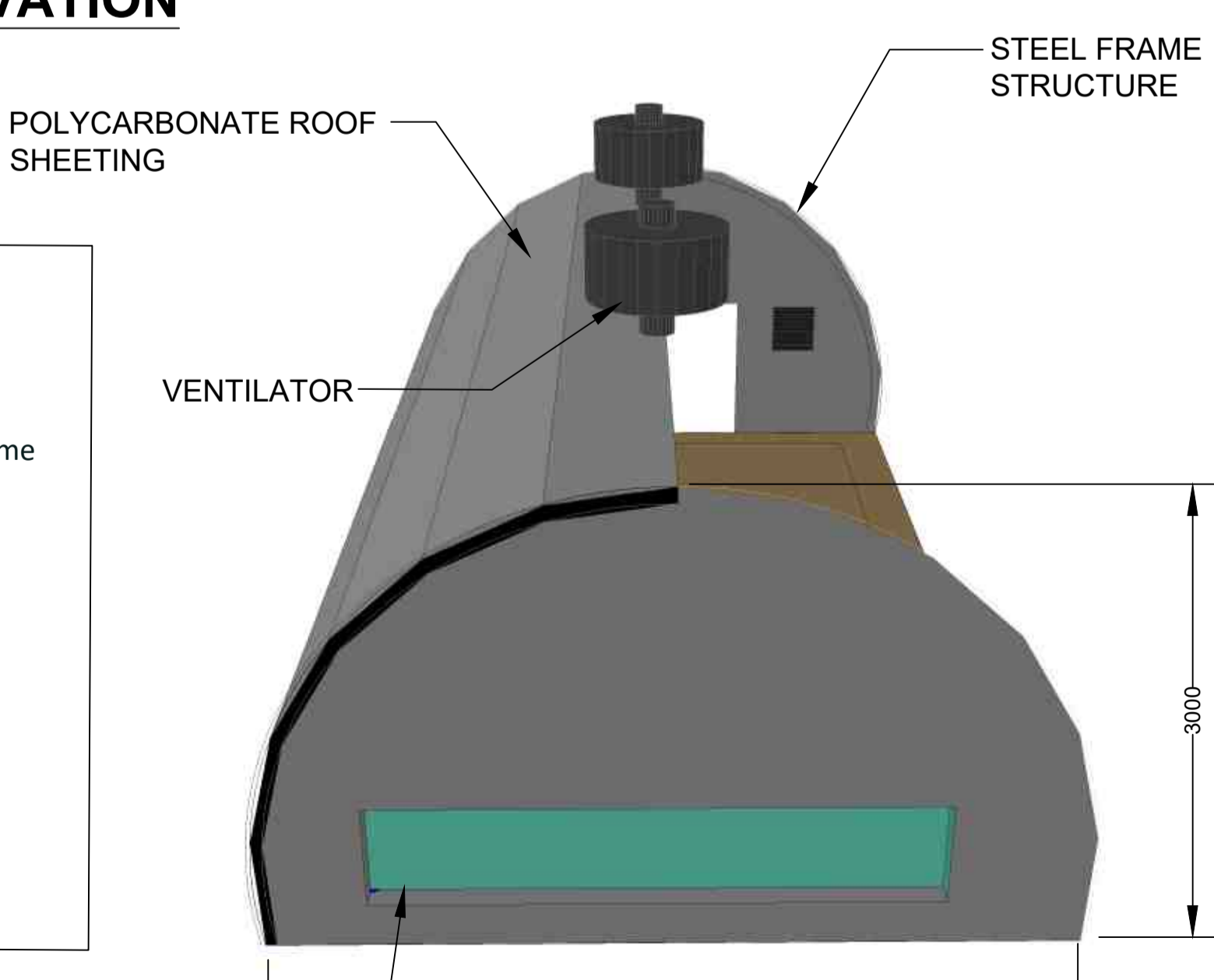
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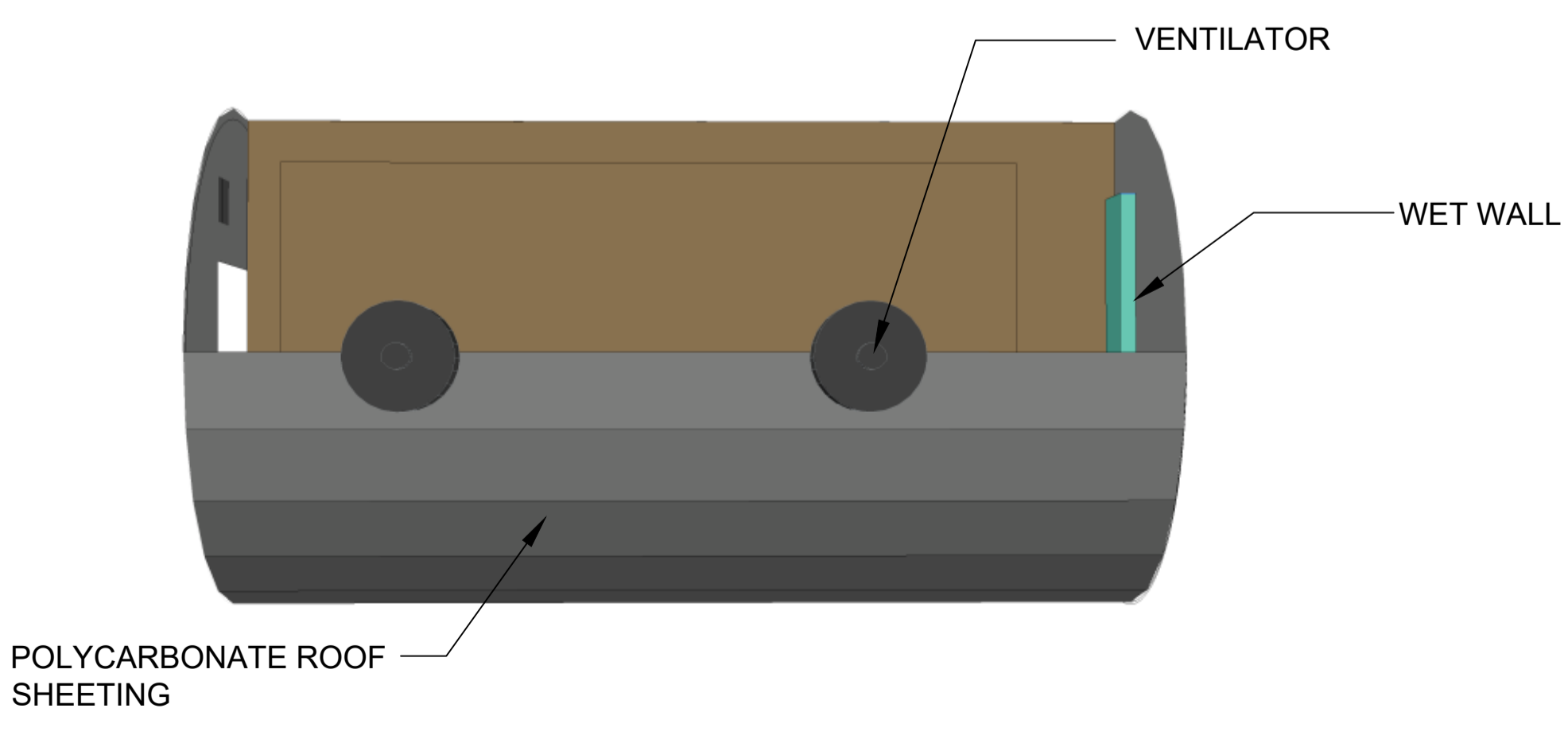
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SIDE 2 ELEVATION



REAR ELEVATION



PLAN VIEW

- Cycad Tunnel 2 Nursery: Scope Of Works**
- 1.Remove and install polycarbonate sheeting of nursery tunnels x3
  - 2.Air circulation fan (1000mm dia) ) replace electrical motor and belt
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  - 11.Irrigation system:Ø25 HDPE piping, Solenoid valves, Ø25 HDPE spray nozzles

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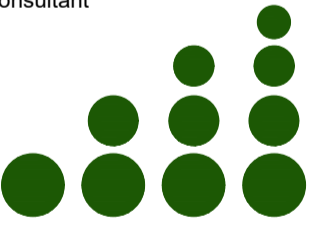
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0027

discipline: **STRUCTURAL**

service: **SANBI KIRSTENBOSCH:  
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CONSTRUCTION MONITORING  
FOR THE REPAIRS AND  
UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.**

project number: **0533**

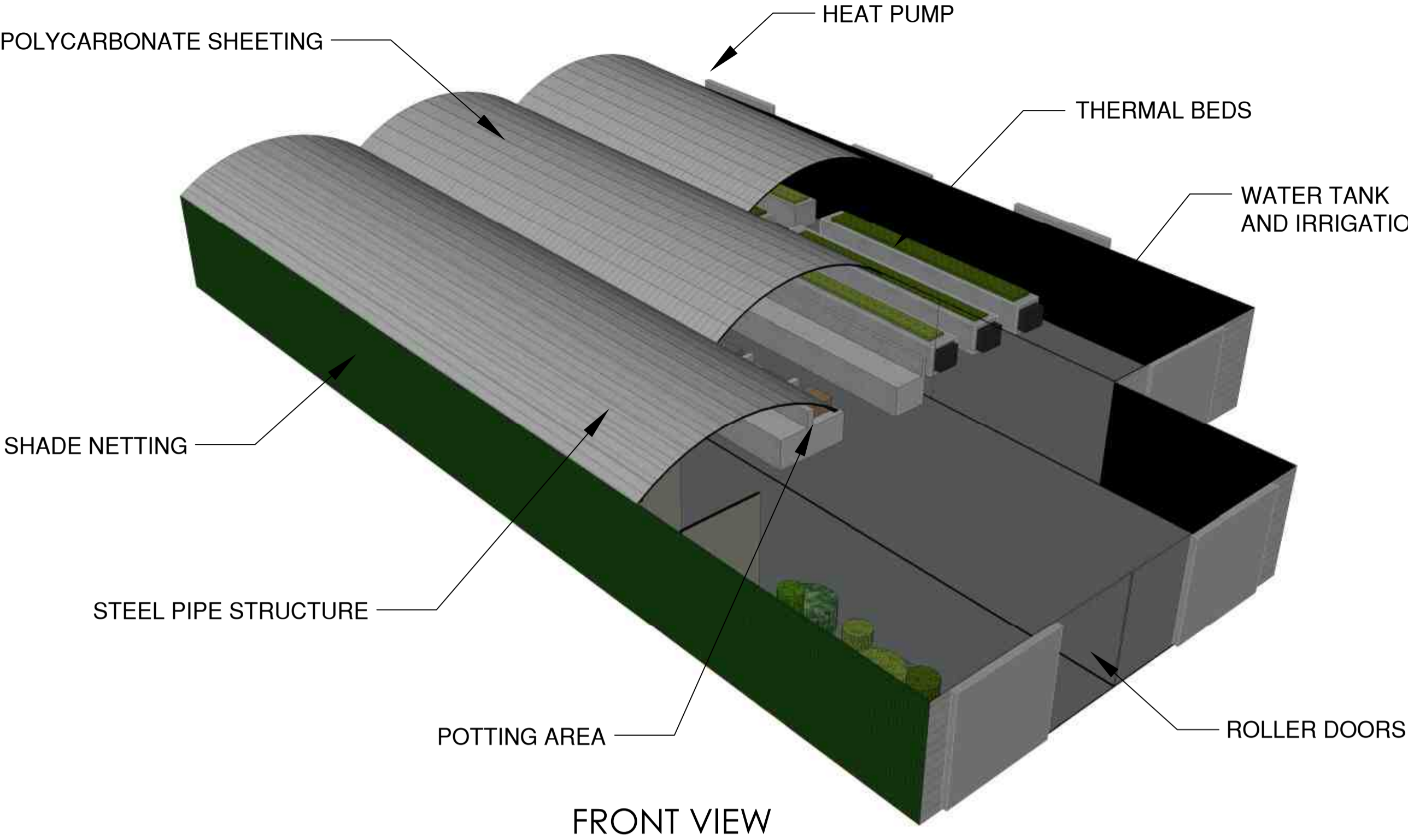
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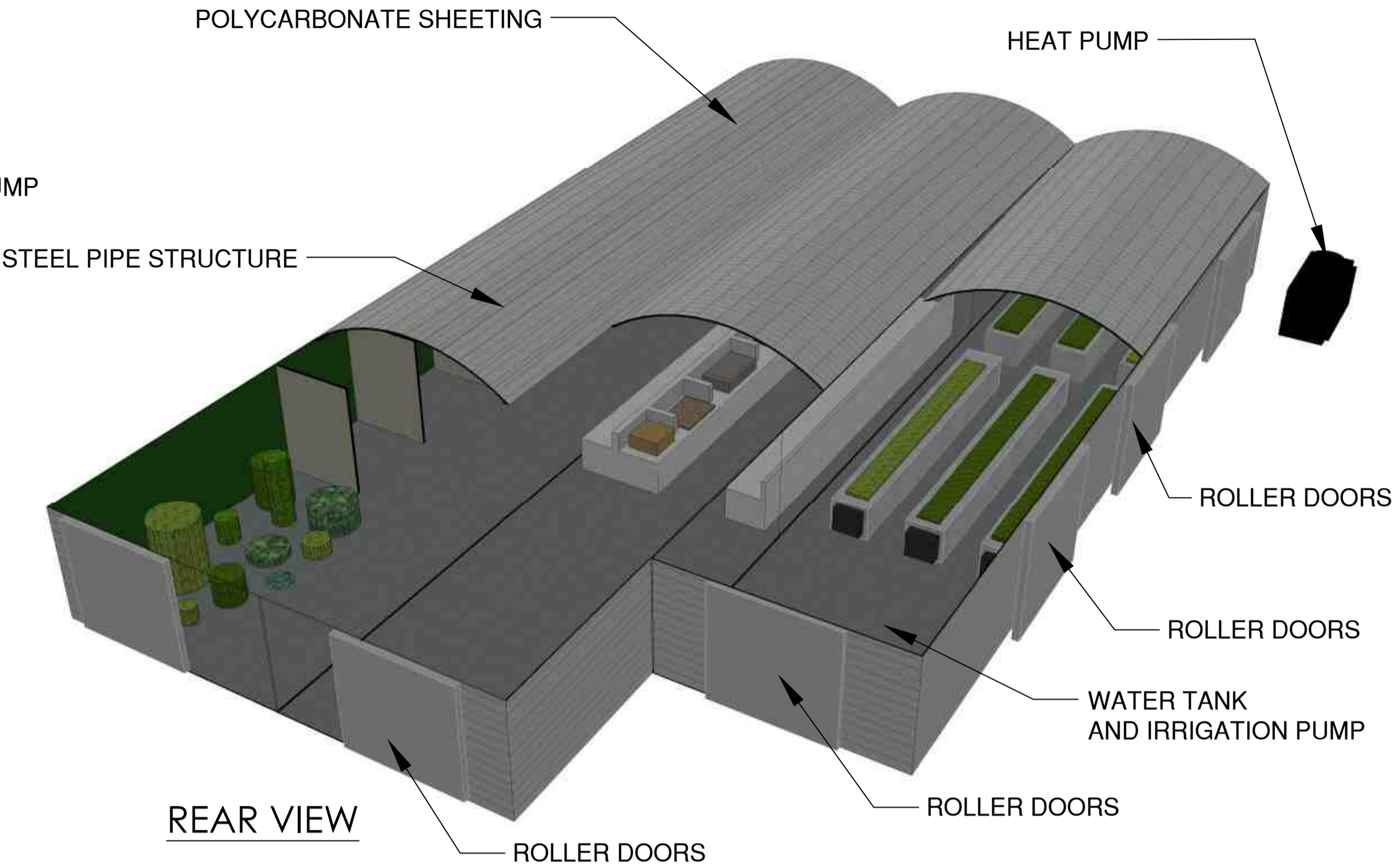
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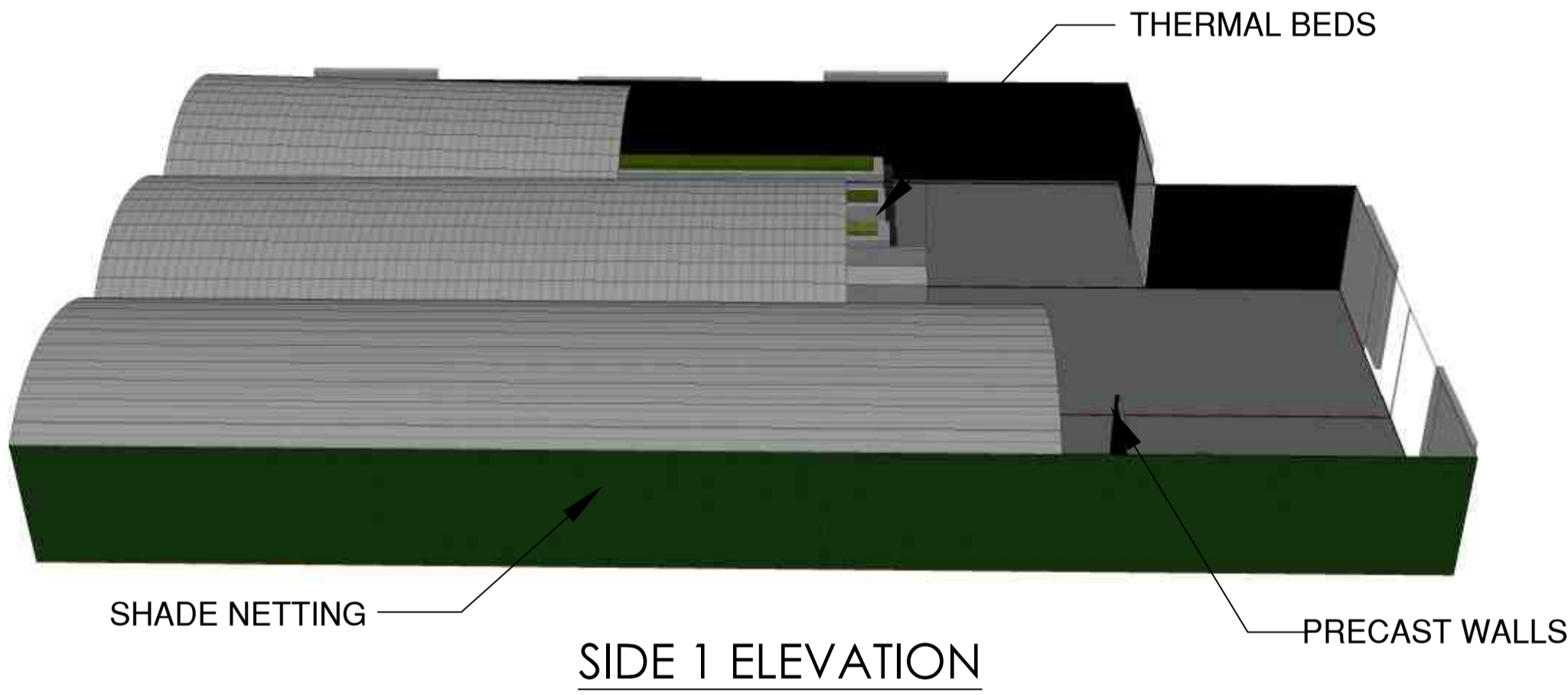
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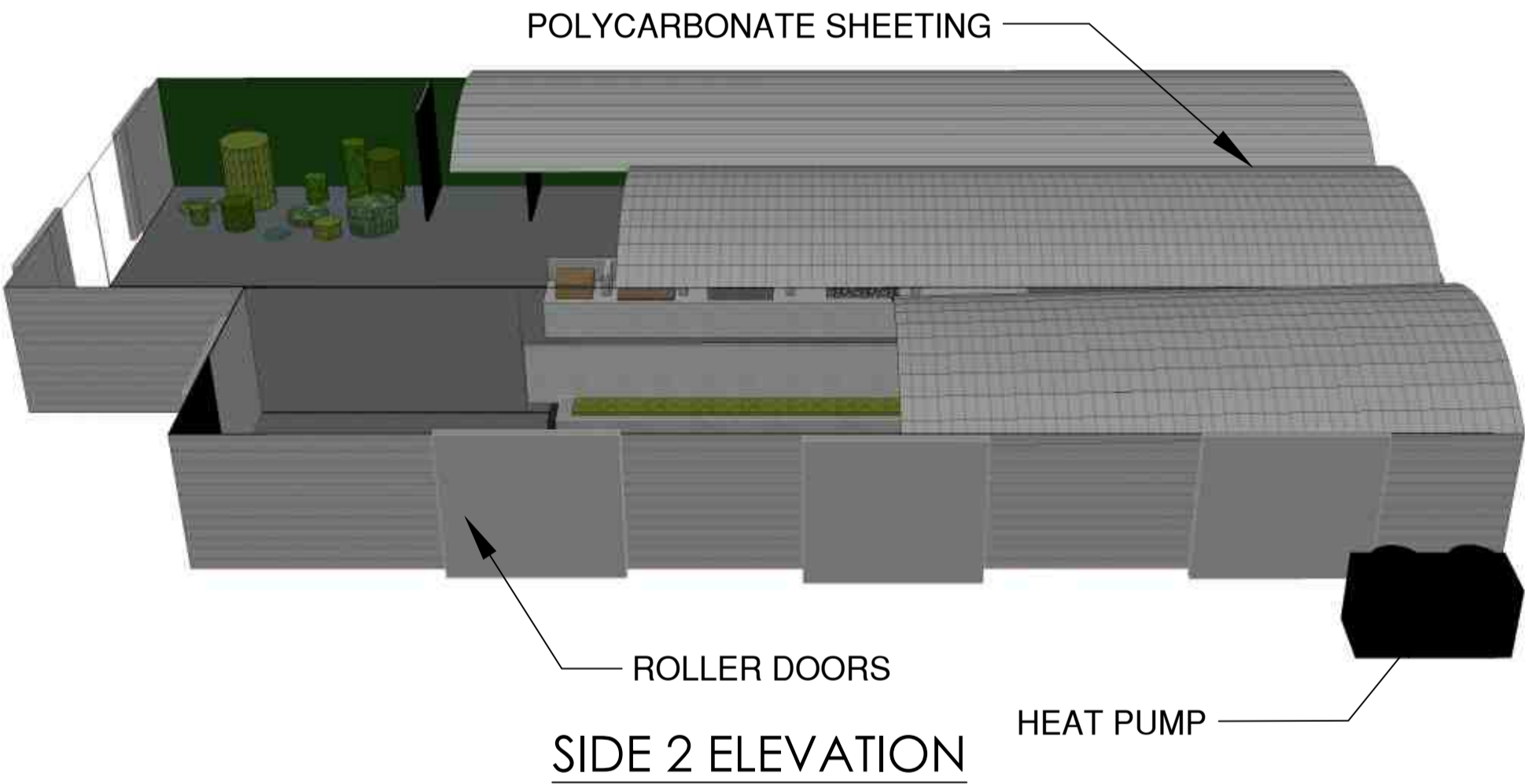
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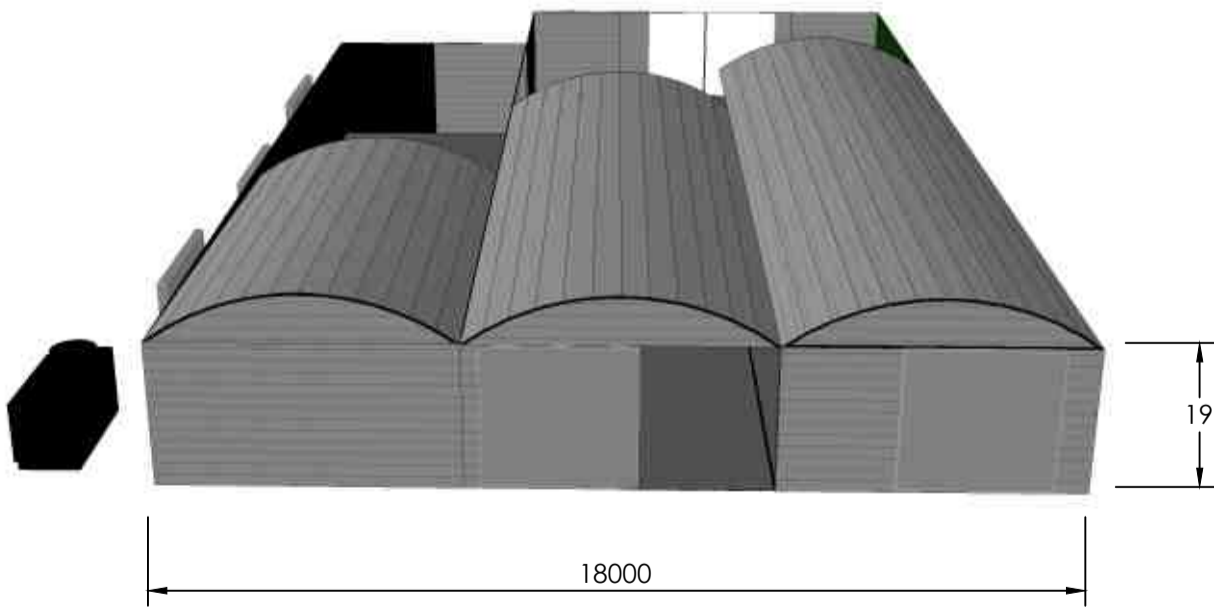
REAR VIEW



SIDE 1 ELEVATION



SIDE 2 ELEVATION



REAR ELEVATION



PLAN VIEW

0 2000 4000

FOR INFORMATION

Plant Production Nursery 1 : Scope Of Works

1. Remove netting and install polycarbonate sheeting
2. Replace galvanised post bases /baseplates and grout (SS A2 Stud + Chemical anchor)
3. Servicing and refurbish roller door mechanisms and install locksets
4. Supply and install 1000L water tank
5. Replace faulty sprayers
6. 15mm dia HDPE piping
7. Supply Install sprayers
8. Service thermal bed valves and equipment
9. Secure internal overhead shade netting
10. Supply insulation to pipework
11. Supply and install new ball valve in existing JoJo tank
12. Repair and service 13,6kW heat pump
13. Supply and install 200 liter hot water storage tank and connect to existng heat pump
14. Supply and install solenoid valves
15. Supply and install Galvanised grating to floor channels (220x8mm)
16. Clean and paint rusted structural frame members. (wirebrush/sand with polyurethane paint -Sigmadur or similar)

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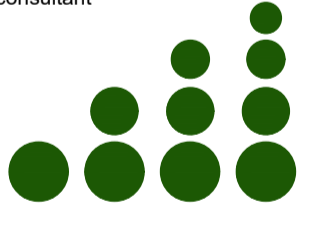
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discipline **STRUCTURAL**

service **SANBI KIRSTENBOSCH:  
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FOR THE REPAIRS AND  
UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.**

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PLANT PRODUCTION  
NURSERY 1**

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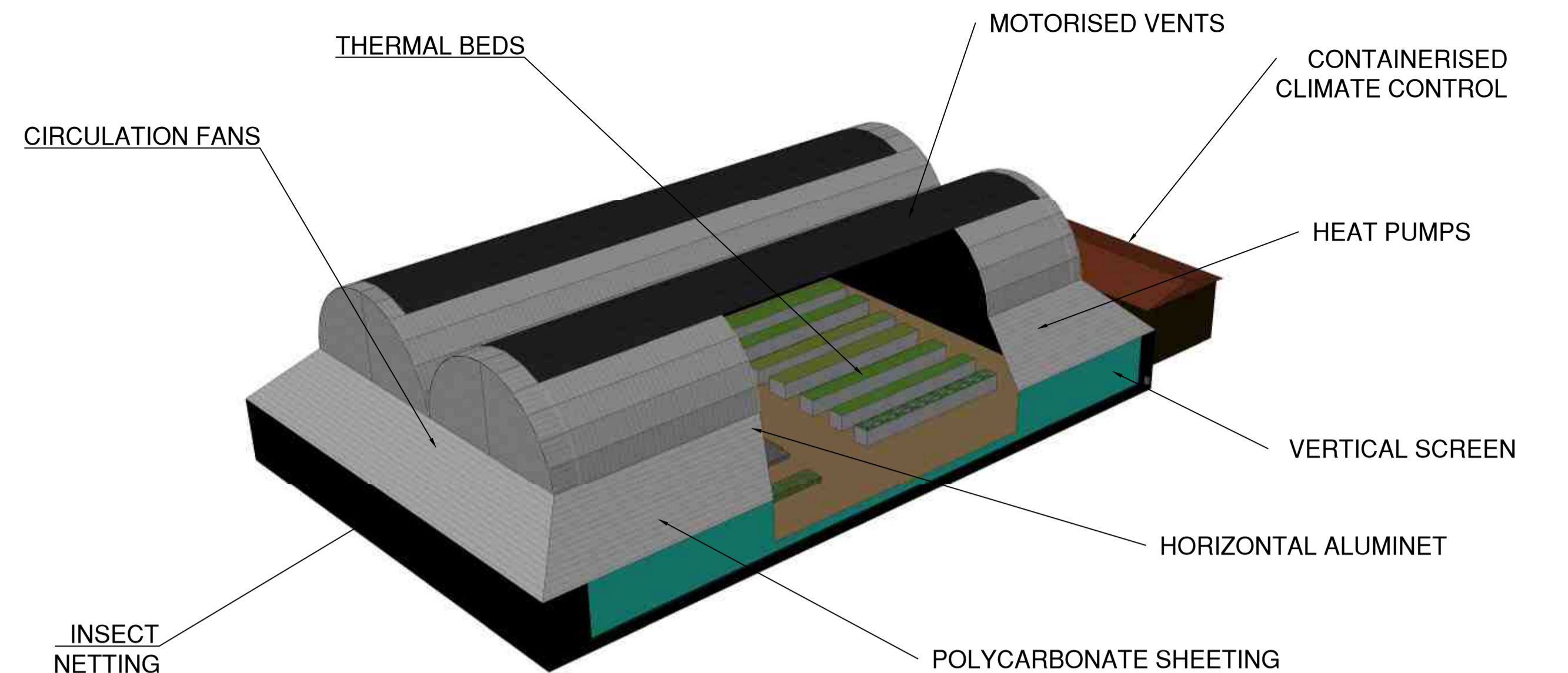
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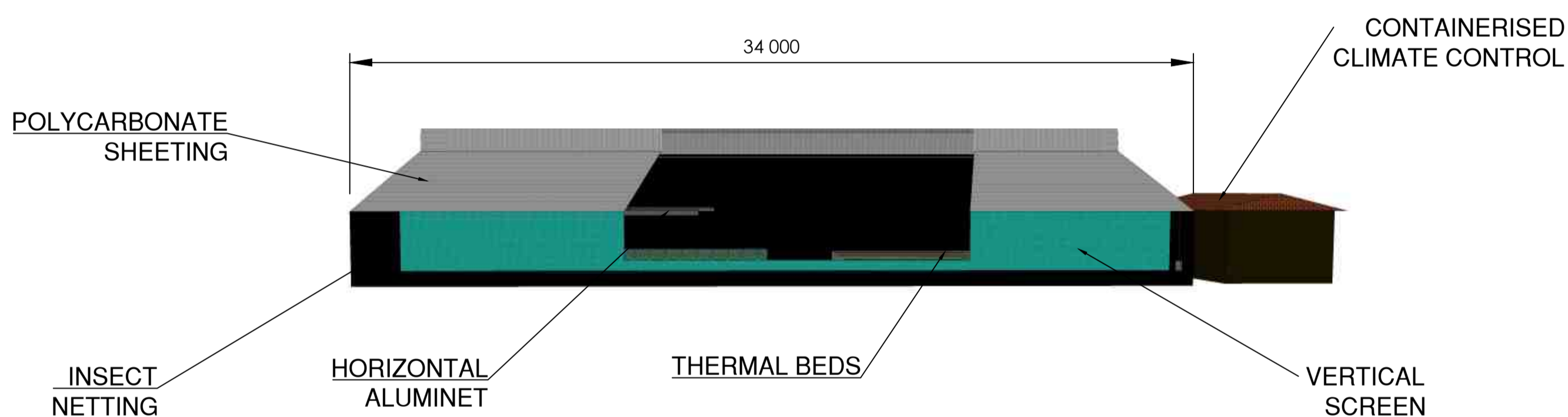
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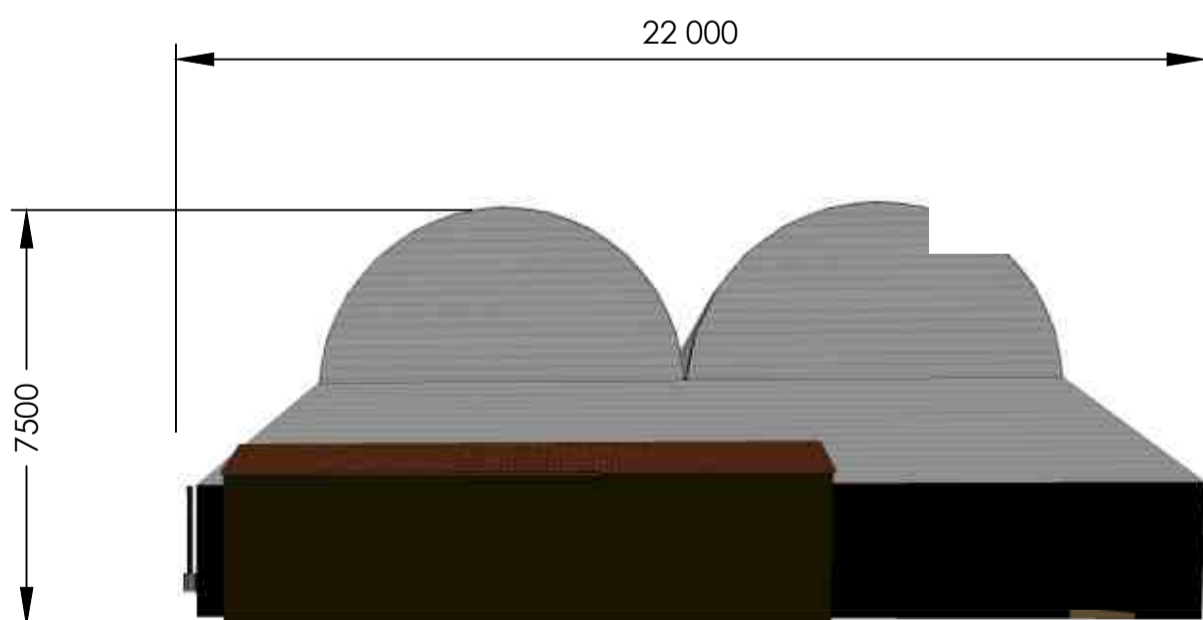
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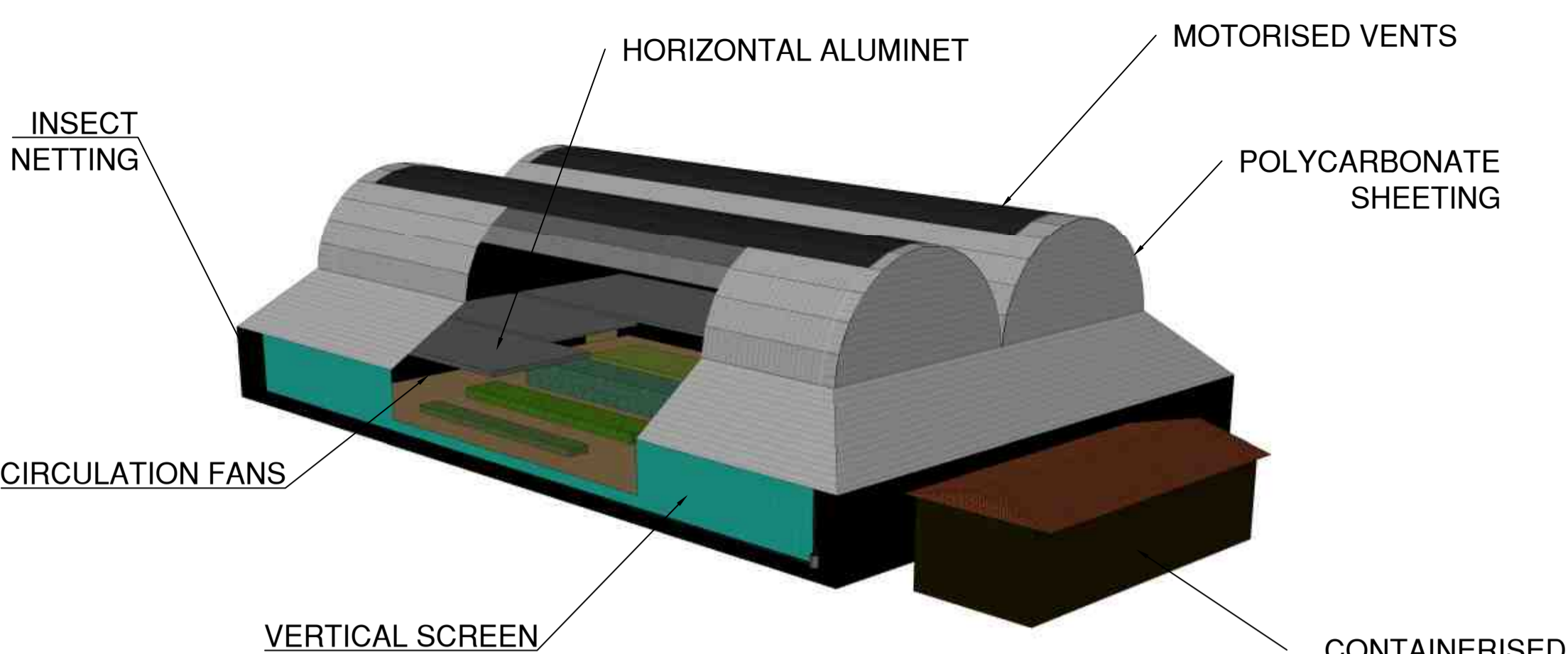
FRONT VIEW



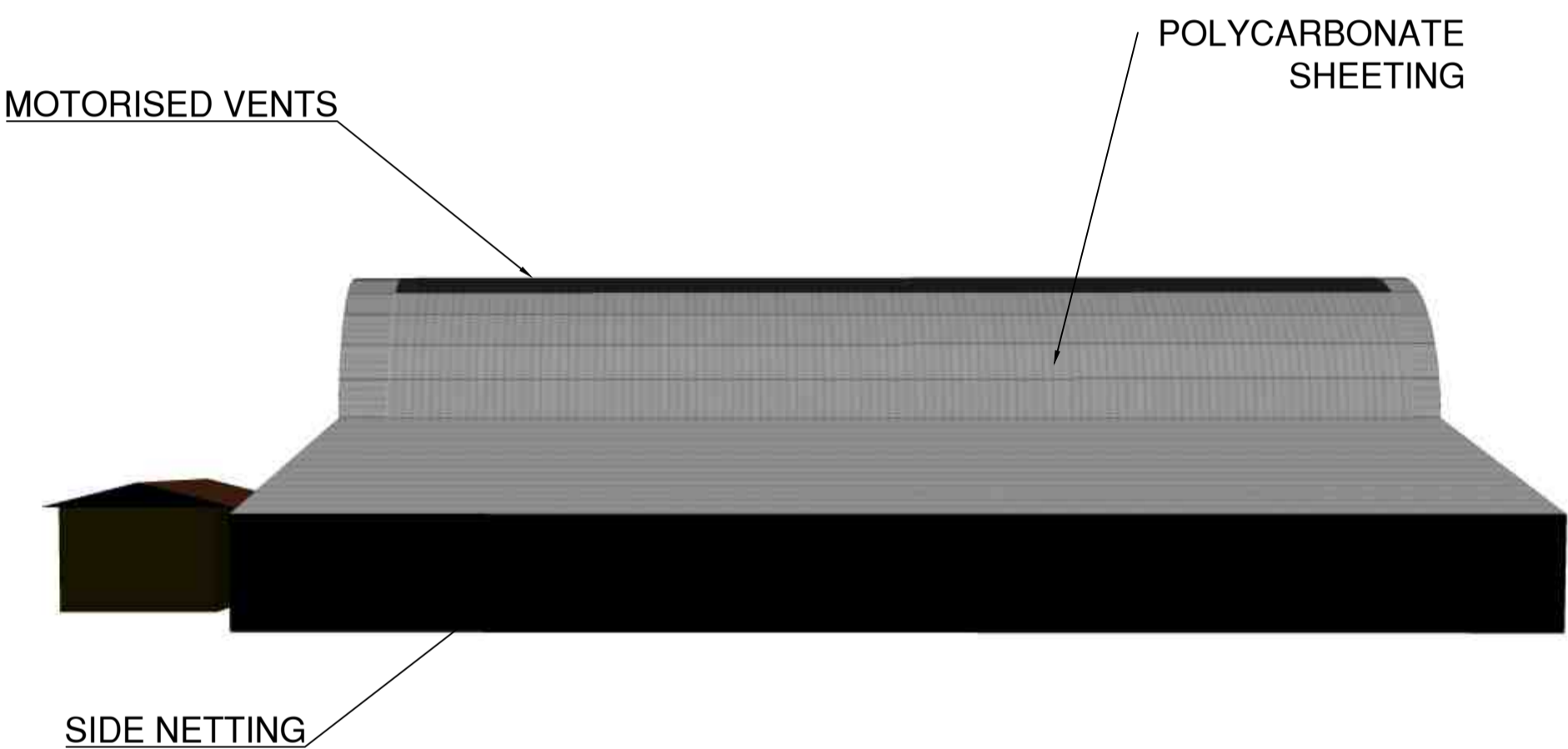
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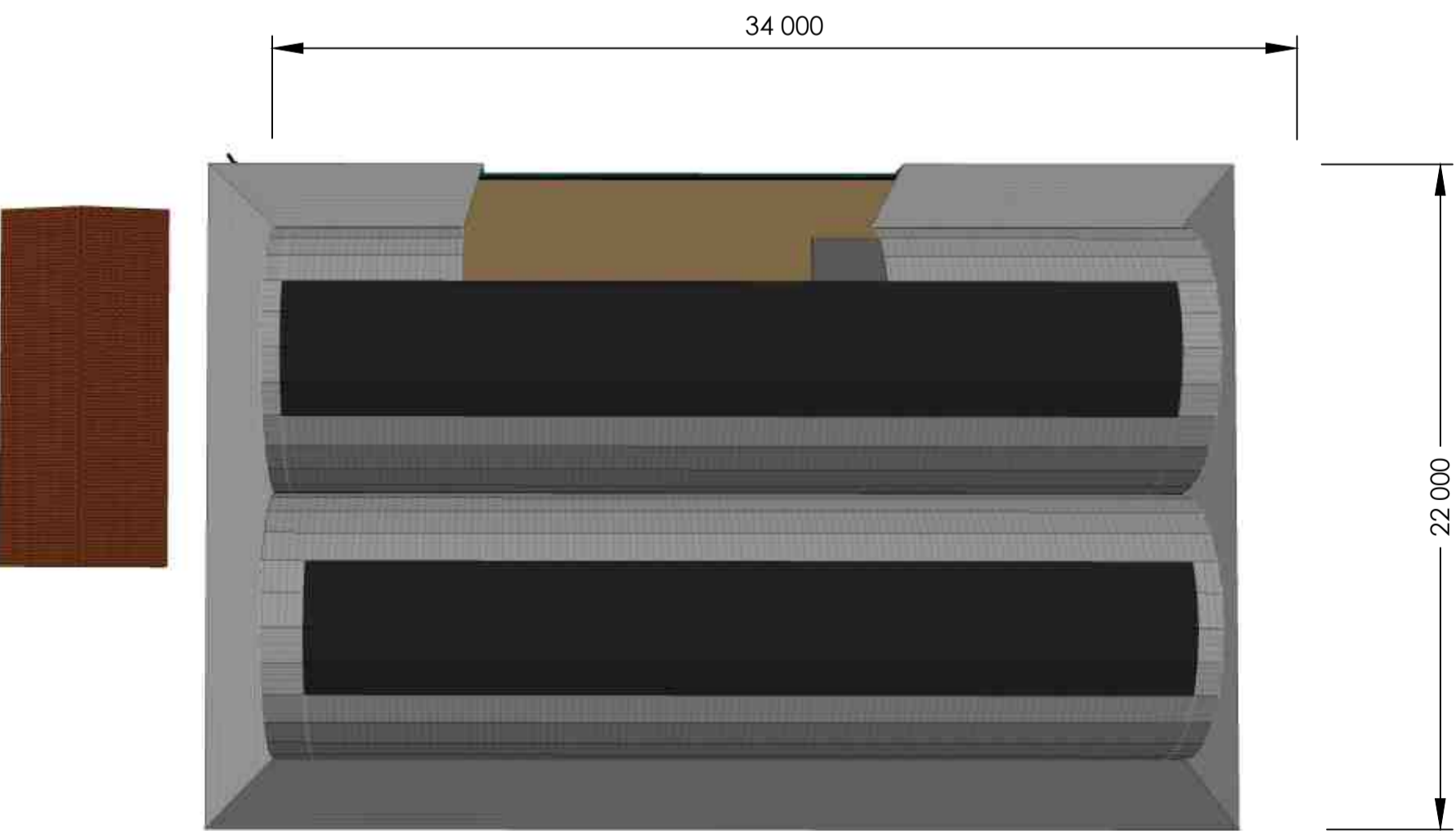
REAR ELEVATION



REAR VIEW



SIDE 2 ELEVATION



PLAN VIEW

- Plant Production Nursery 2 : Scope Of Works**
- 1- Reinstatement of irrigation controllers
  - 2- Remove and install polycarbonate sheeting
  - 3- Remove and install polycarbonate cladding
  - 4- Remove and install new insect netting
  - 5- Repair external shade net rollers and motor arms
  - 6- Temperature sensor unit
  - 7- Humidity sensor unit
  - 8- Blind position sensors
  - 9- Supply and install mist spray nozzles
  - 10- Repair or replace fogger solenoid valve
  - 11- Repair and service extract ventilation fans Ø600 / 1,1kW motor
  - 12- PIR Intruder sensor
  - 13- Supply and install floor boxes for solenoid irrigation valves
  - 14- Service hot water generation plant
  - 15- Replace flexible ducting with galvanised ducting dia 250mm
  - 16- Service heat pumps (3kW each)
  - 17- Service hot water cylinder (100L pressure type)
  - 18- Horizontal aluminet Clips, brackets cables and servicing
  - 19- Repair /replacement of motorized vent motor gearboxes
  - 20- Safety guards on external vertical blinds
  - 21- Replacement external vertical blinds net material
  - 22- Replacement of air circulation fans no 1 and 2
  - 23- Sensor cabling (6mm)
  - 24- Service electrical isolators and cabling where required
  - 25- Service, reinstate existing intruder alarm system

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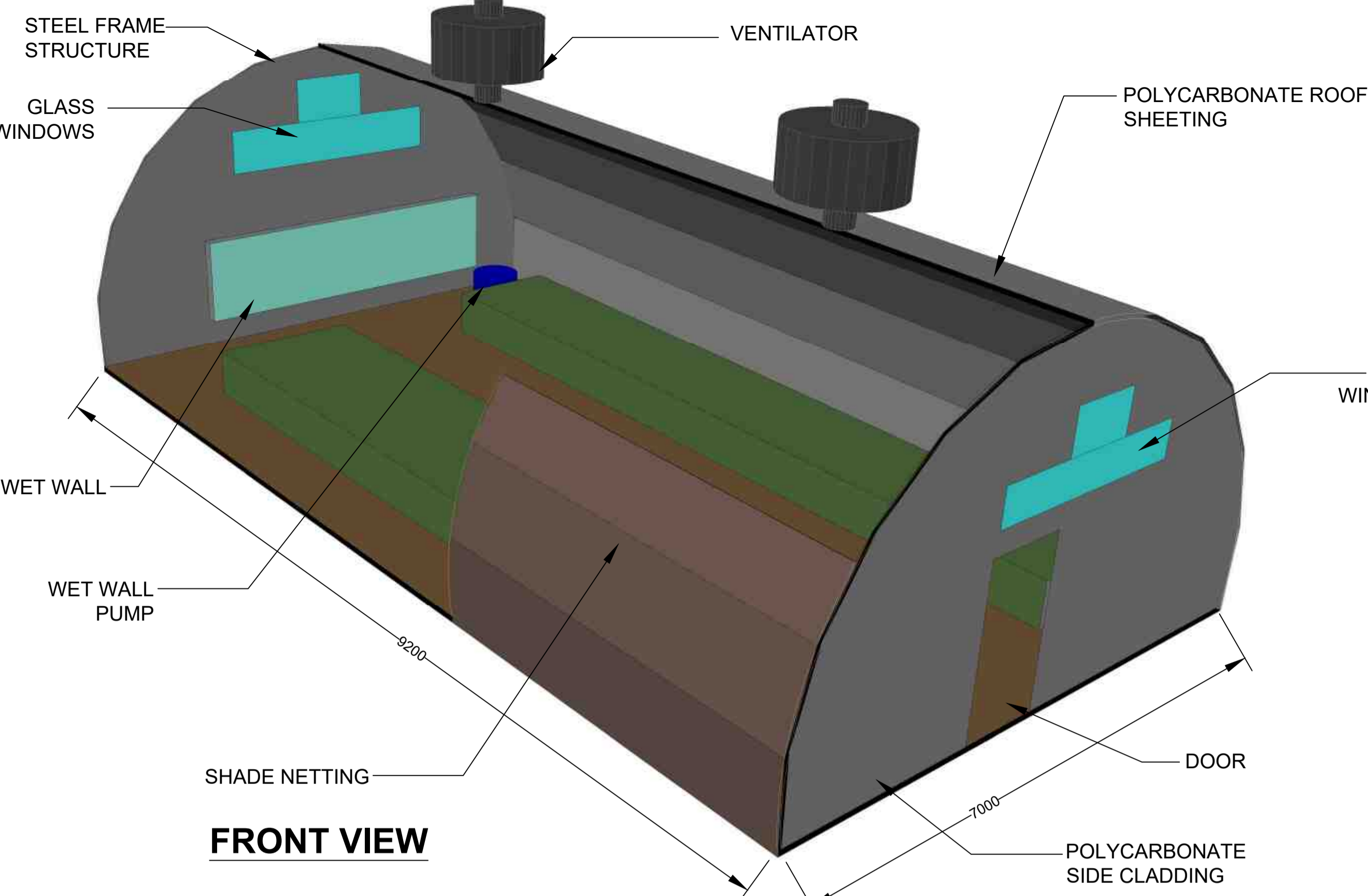
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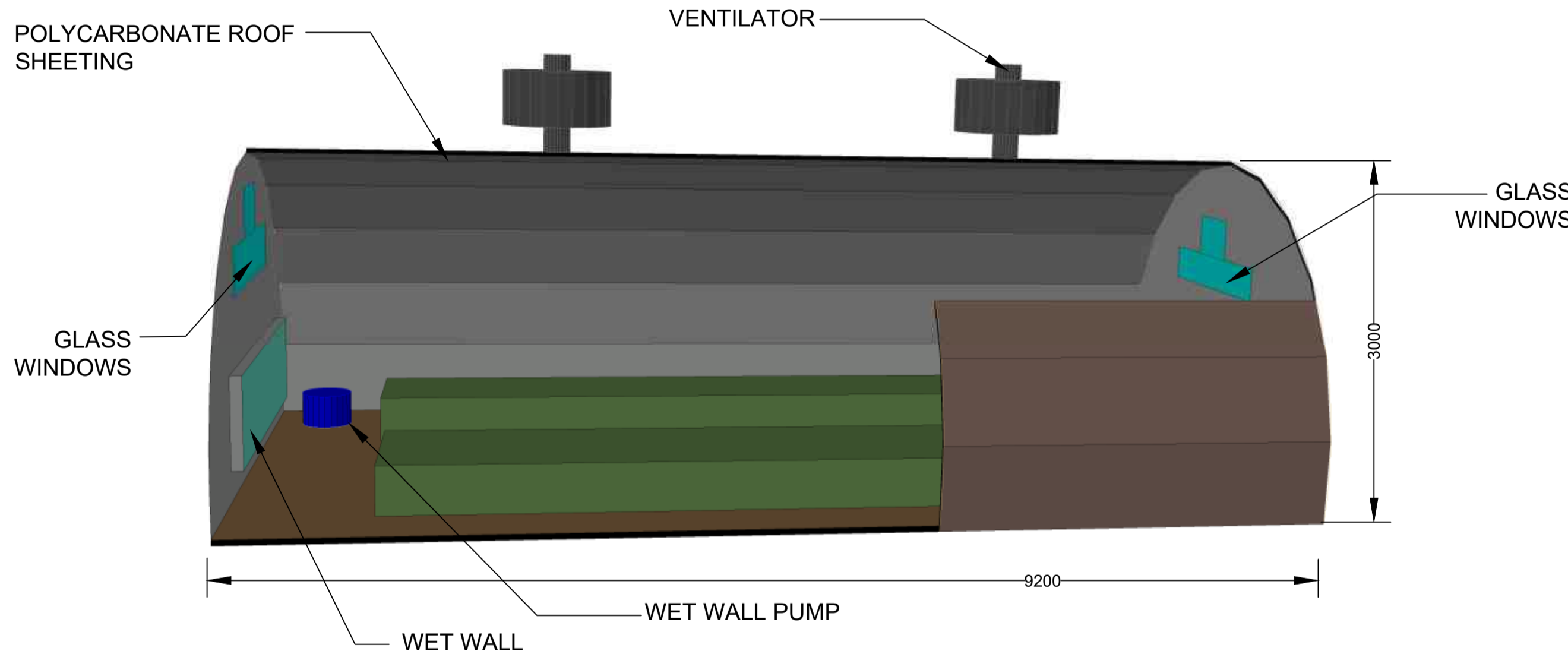
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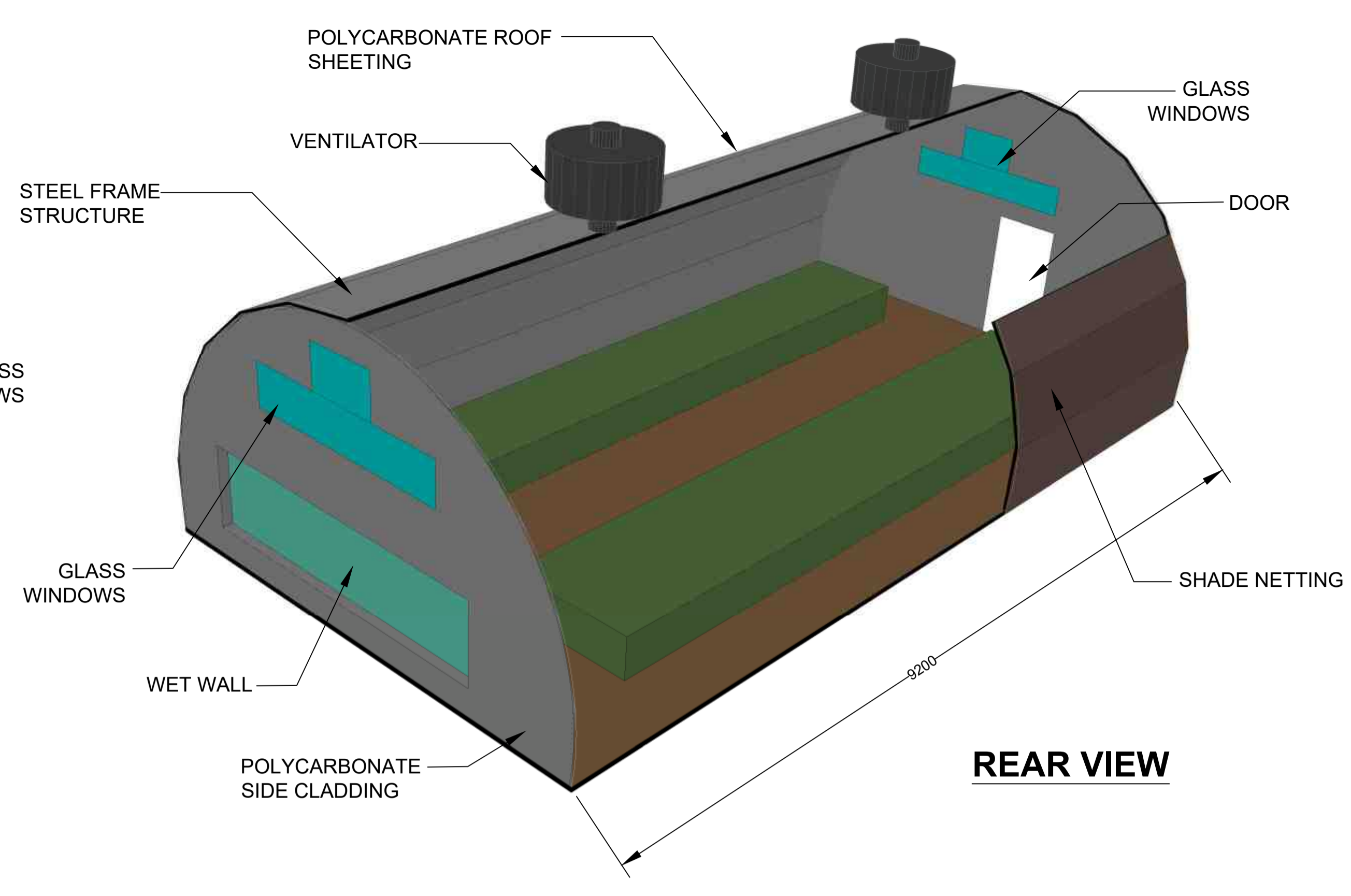
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discipline	STRUCTURAL
service	SANBI KIRSTENBOSCH: INVESTIGATION, DESIGN PROCUREMENT AND CONSTRUCTION MONITORING FOR THE REPAIRS AND UPGRADE OF EXISTING NURSERIES AND GLASSHOUSE INFRASTRUCTURE.
project number	0533
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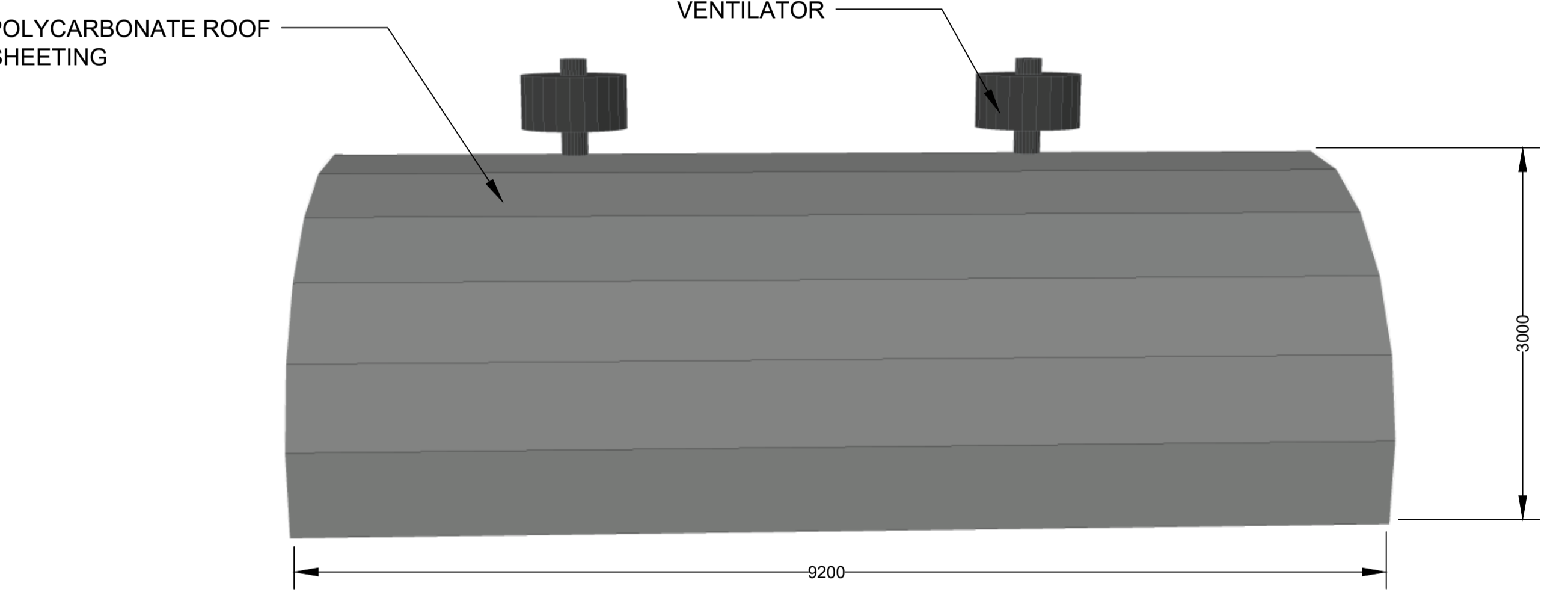
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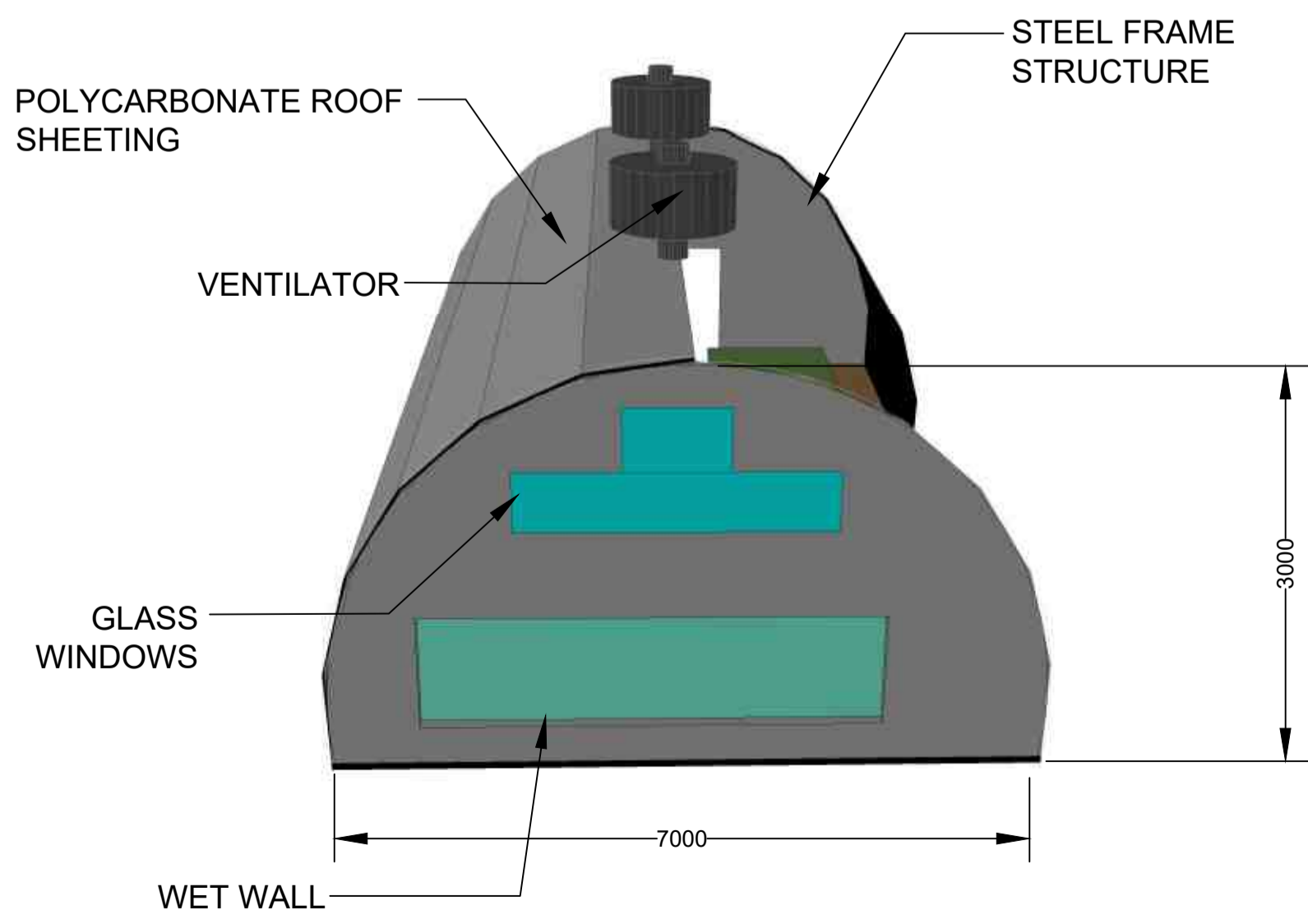
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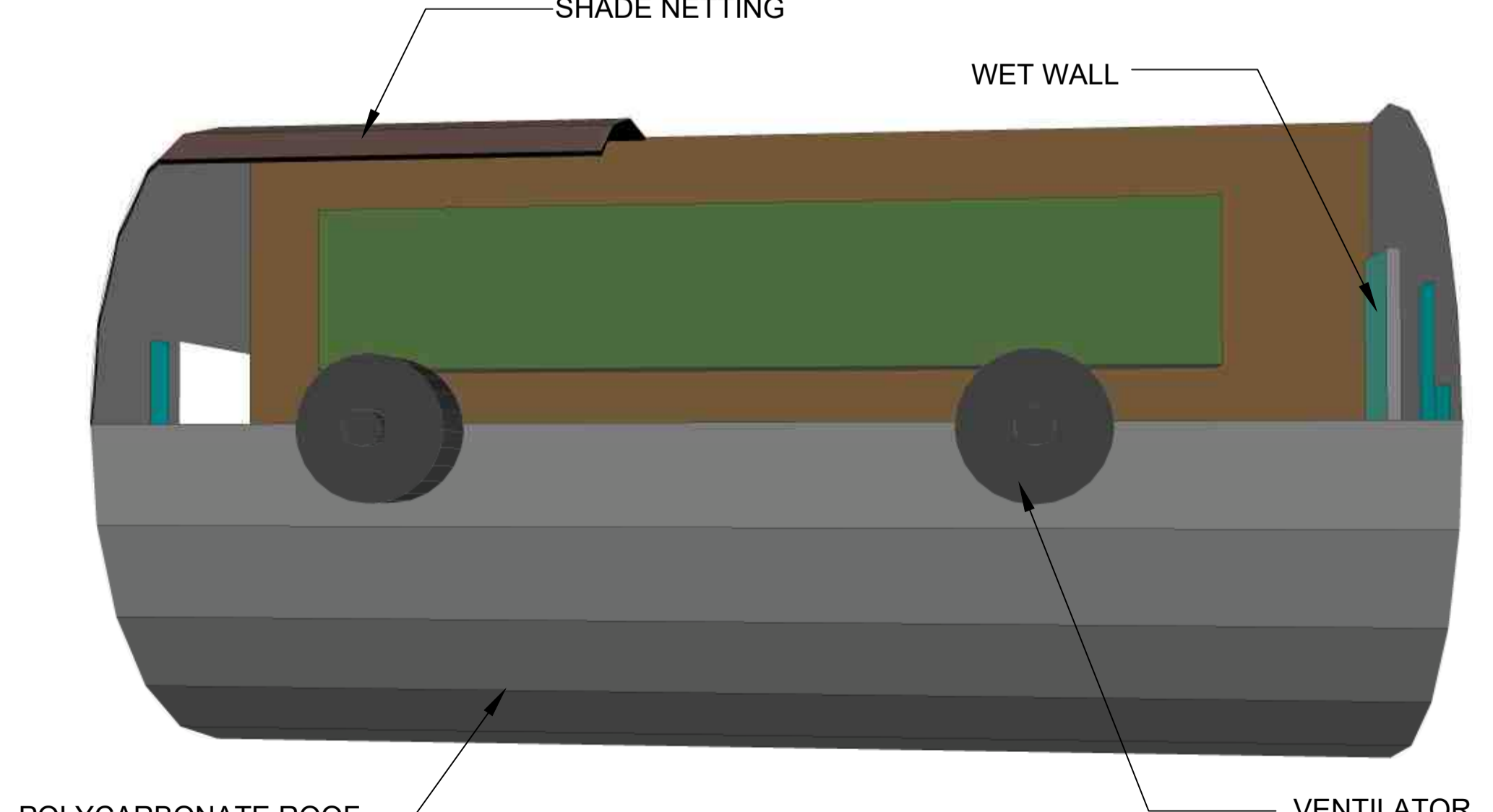
**REAR VIEW**



**SIDE 2 ELEVATION**



**REAR ELEVATION**



**PLAN VIEW**

**QUARANTINE TUNNEL Nursery: Scope Of Works**

- 1.Remove and install polycarbonate sheeting of nursery tunnels x3
- 2.Supply and install 1,6m x 1,0m water wall medium
- 3.Repair and service water wall pump with 1,1kW motor

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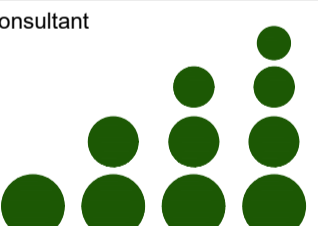
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drawing title

**SANBI KIRSTENBOSCH:  
QUARANTINE TUNNEL NURSERY**

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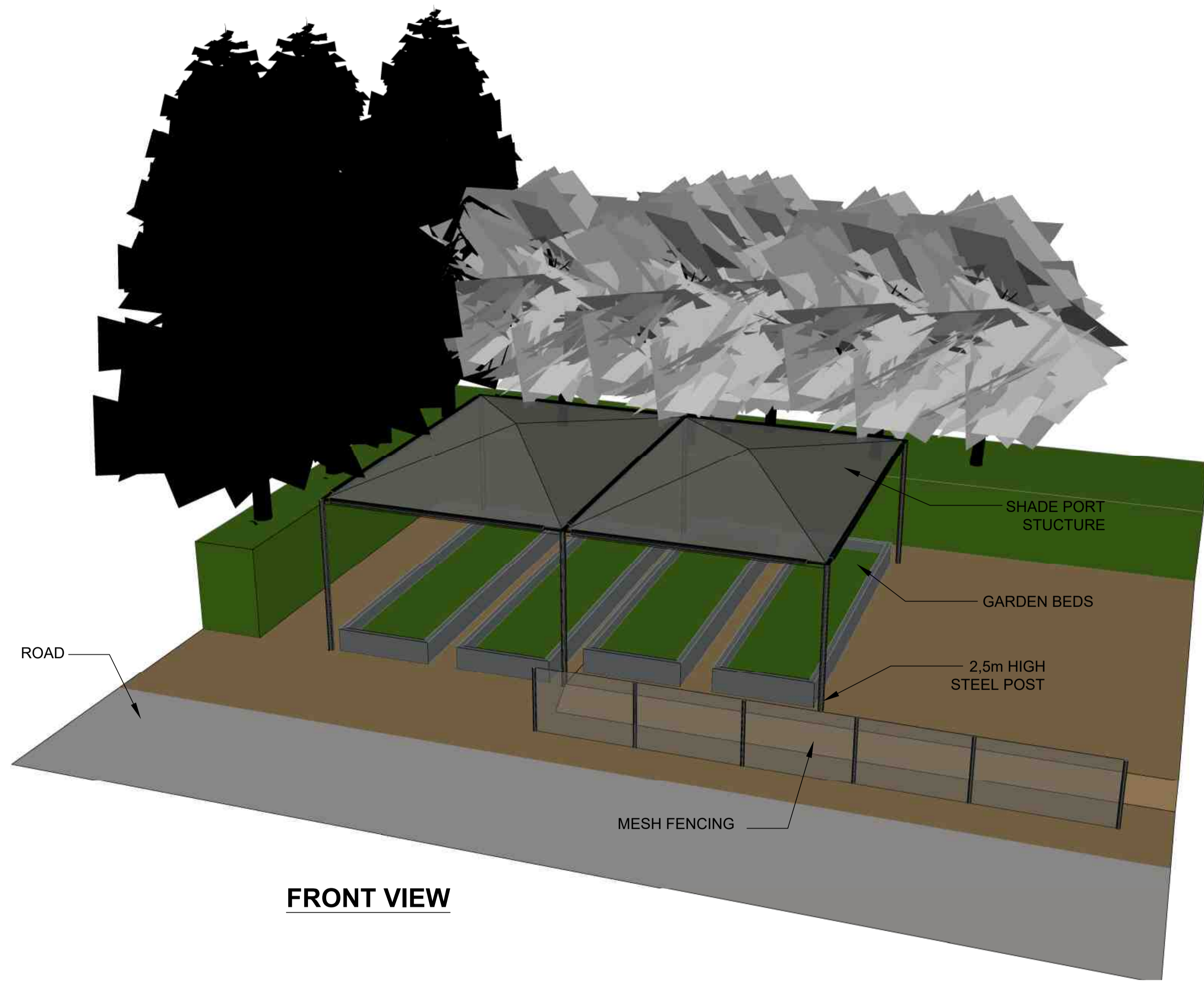
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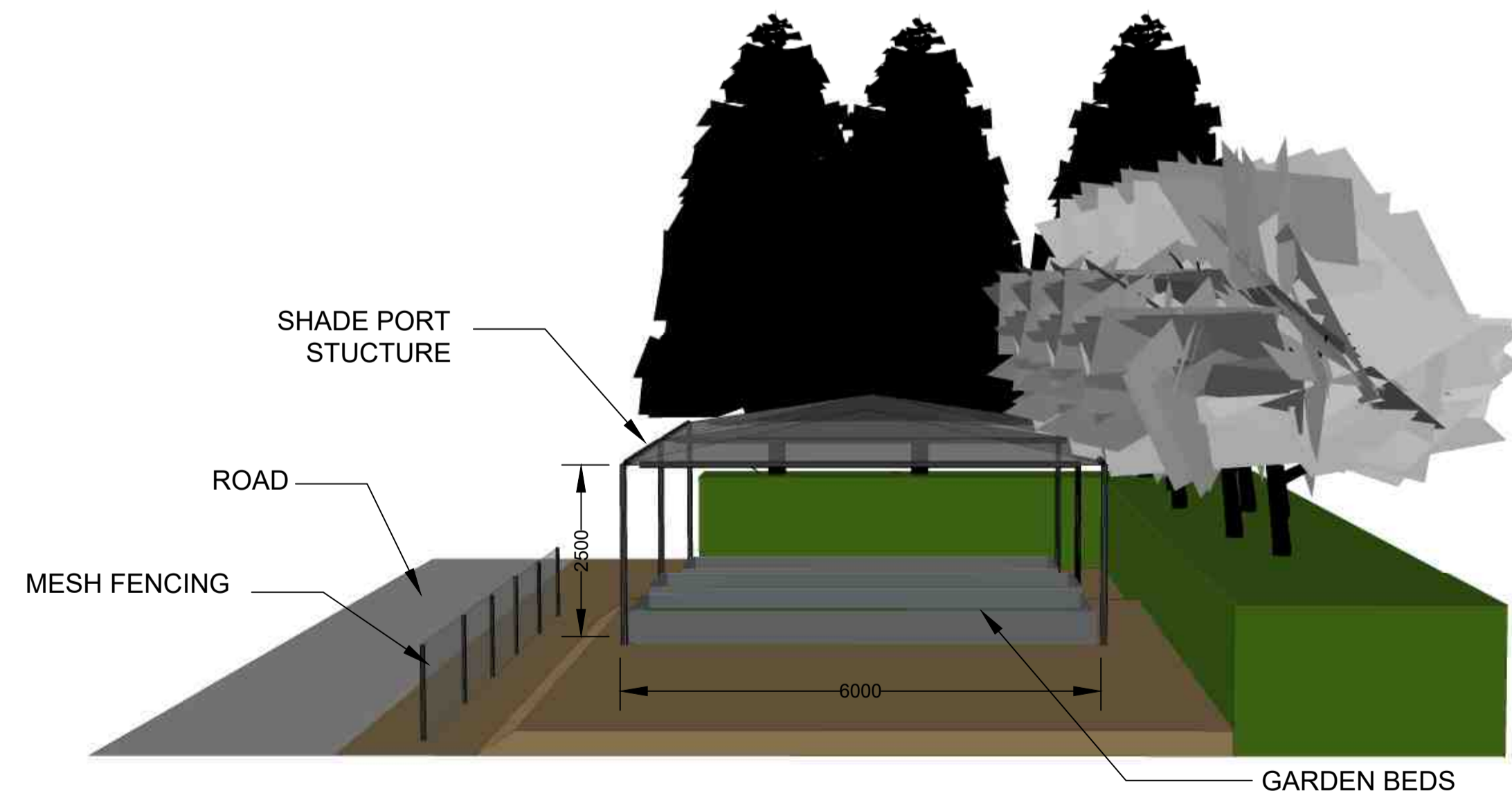
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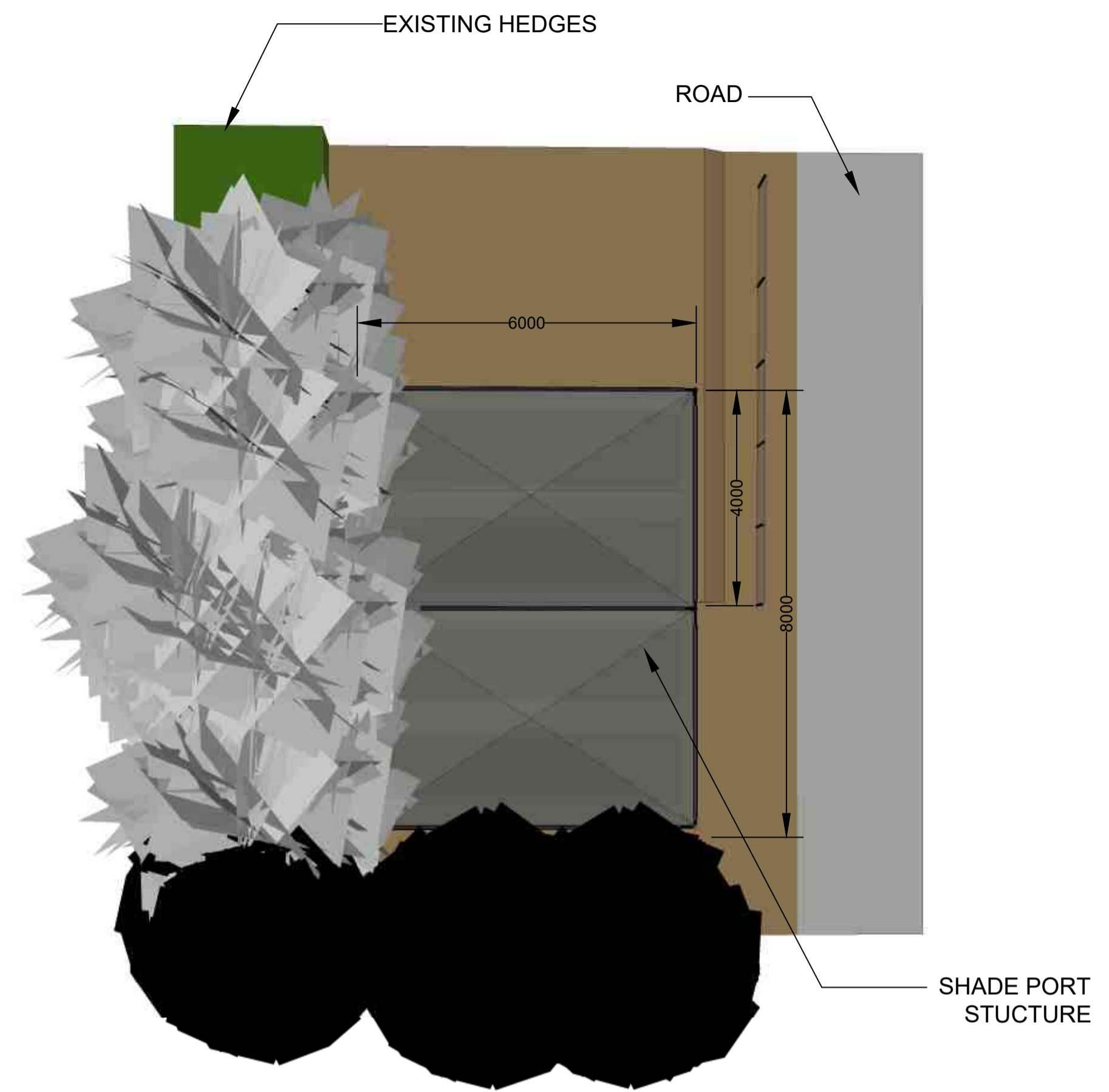
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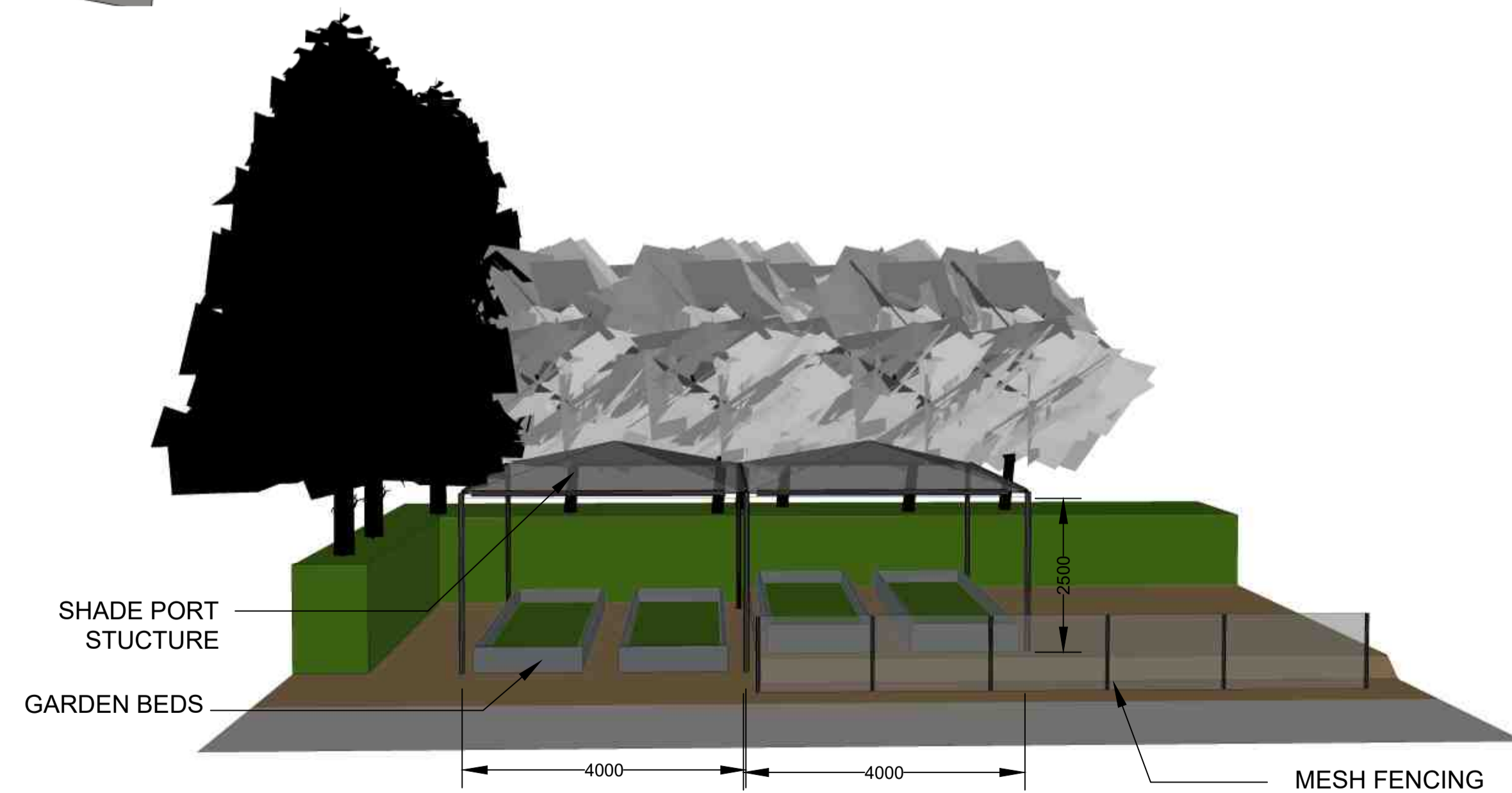
**FRONT VIEW**



**SIDE 1 ELEVATION**



**PLAN VIEW**



**SIDE 2 ELEVATION**

**COVERED ARE 2 Nursery: Scope Of Works:**

- 1 Removal of existing timber shade structure and shade netting
2. Site clearance
3. Installation of steel shade port structures

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**SANBI**  
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Biodiversity for Life

consultant

**VIRTUAL**  
CONSULTING ENGINEERS

P O BOX 323  
GROENKLOOF  
0027

discipline **STRUCTURAL**

service **SANBI KIRSTENBOSCH:  
INVESTIGATION, DESIGN  
PROCUREMENT AND  
CONSTRUCTION MONITORING  
FOR THE REPAIRS AND  
UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.**

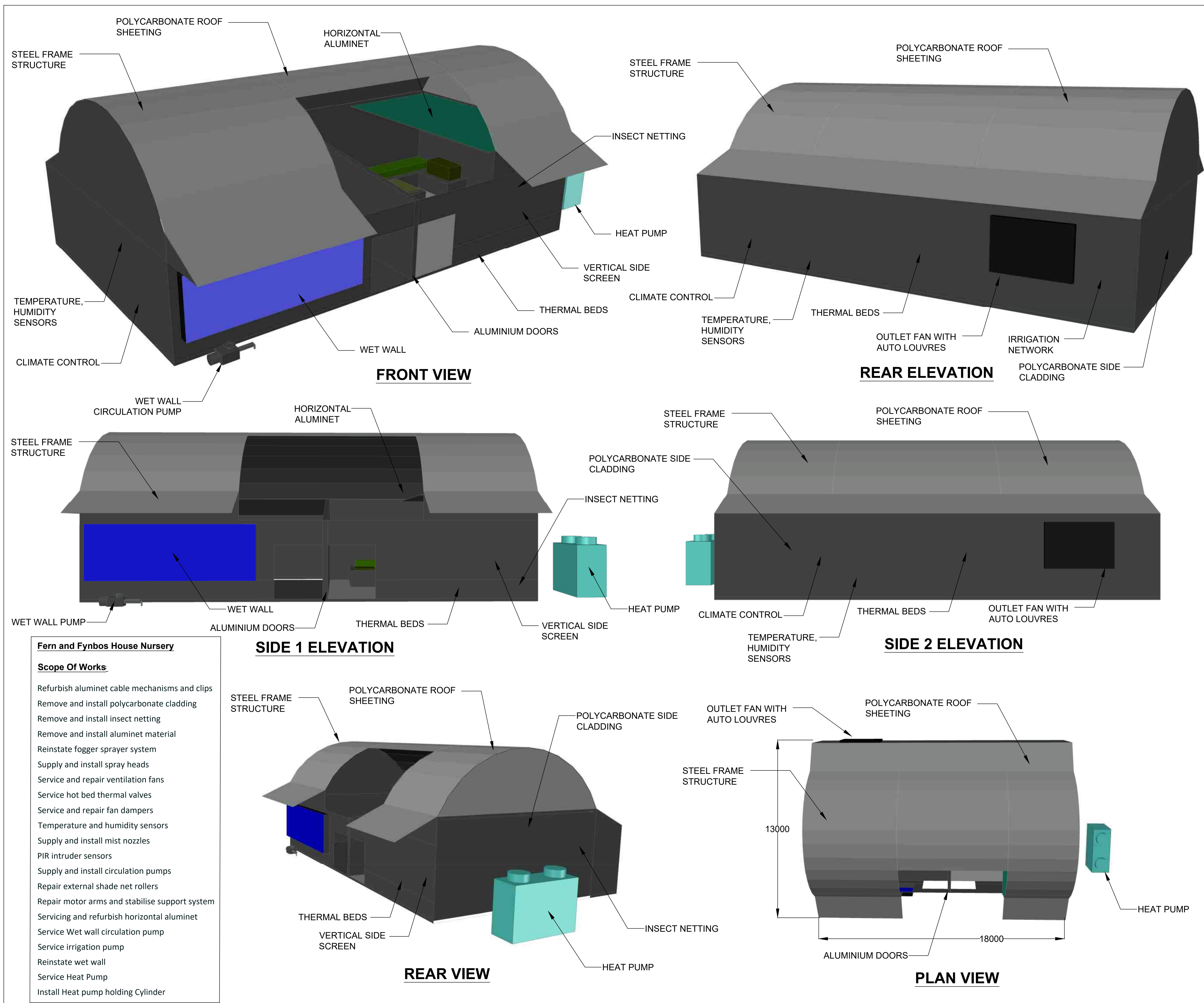
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drawing title **SANBI KIRSTENBOSCH:  
COVERED AREA 2 NURSERY**

ref.no. --	designed K JURIES
scale N.T.S	drawn T NIEFTAGODIEN
date NOV'23	checked R ISHMAIL

drawing number **0533-PH2-18**

revision **T0**



**Fern and Fynbos House Nursery**

**Scope Of Works**

Refurbish aluminet cable mechanisms and clips  
Remove and install polycarbonate cladding  
Remove and install insect netting  
Reinstall fogger sprayer system  
Supply and install spray heads  
Service and repair ventilation fans  
Service hot bed thermal valves  
Service and repair fan dampers  
Temperature and humidity sensors  
Supply and install mist nozzles  
PIR intruder sensors  
Supply and install circulation pumps  
Repair external shade net rollers  
Repair motor arms and stabilise support system  
Servicing and refurbish horizontal aluminet  
Service Wet wall circulation pump  
Service irrigation pump  
Reinstall wet wall  
Service Heat Pump  
Install Heat pump holding Cylinder

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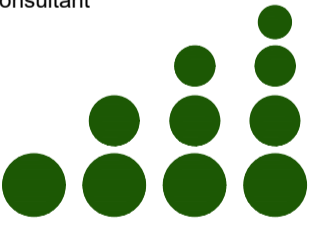
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CONSTRUCTION MONITORING  
FOR THE REPAIRS AND  
UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.

project number

0533

drawing title

SANBI KIRSTENBOSCH:  
FERN AND FYNBOS HOUSE  
NURSERIES

ref.no. --

designed K JURIES

scale N.T.S

drawn T NIEFTAGODIEN

date NOV'23

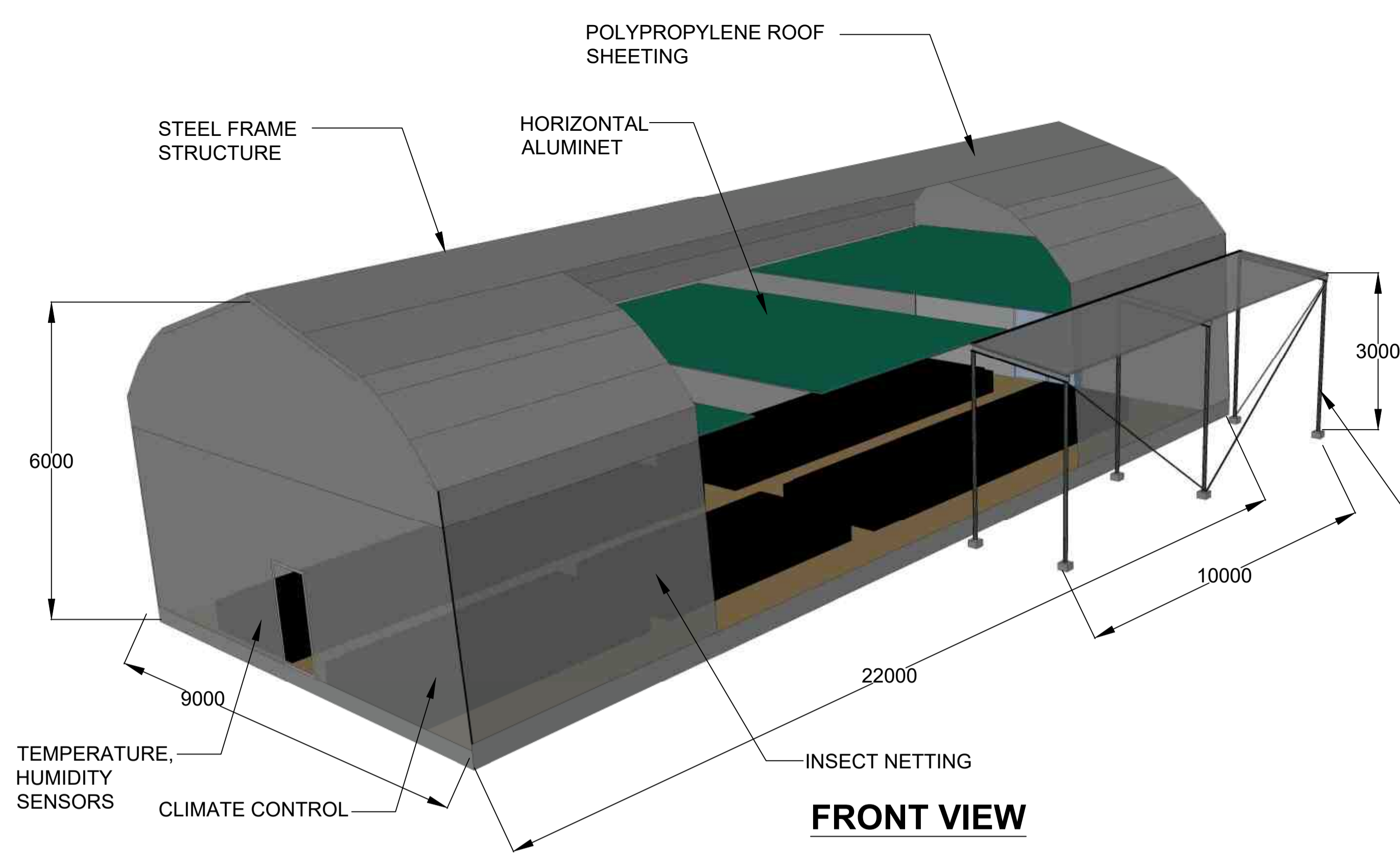
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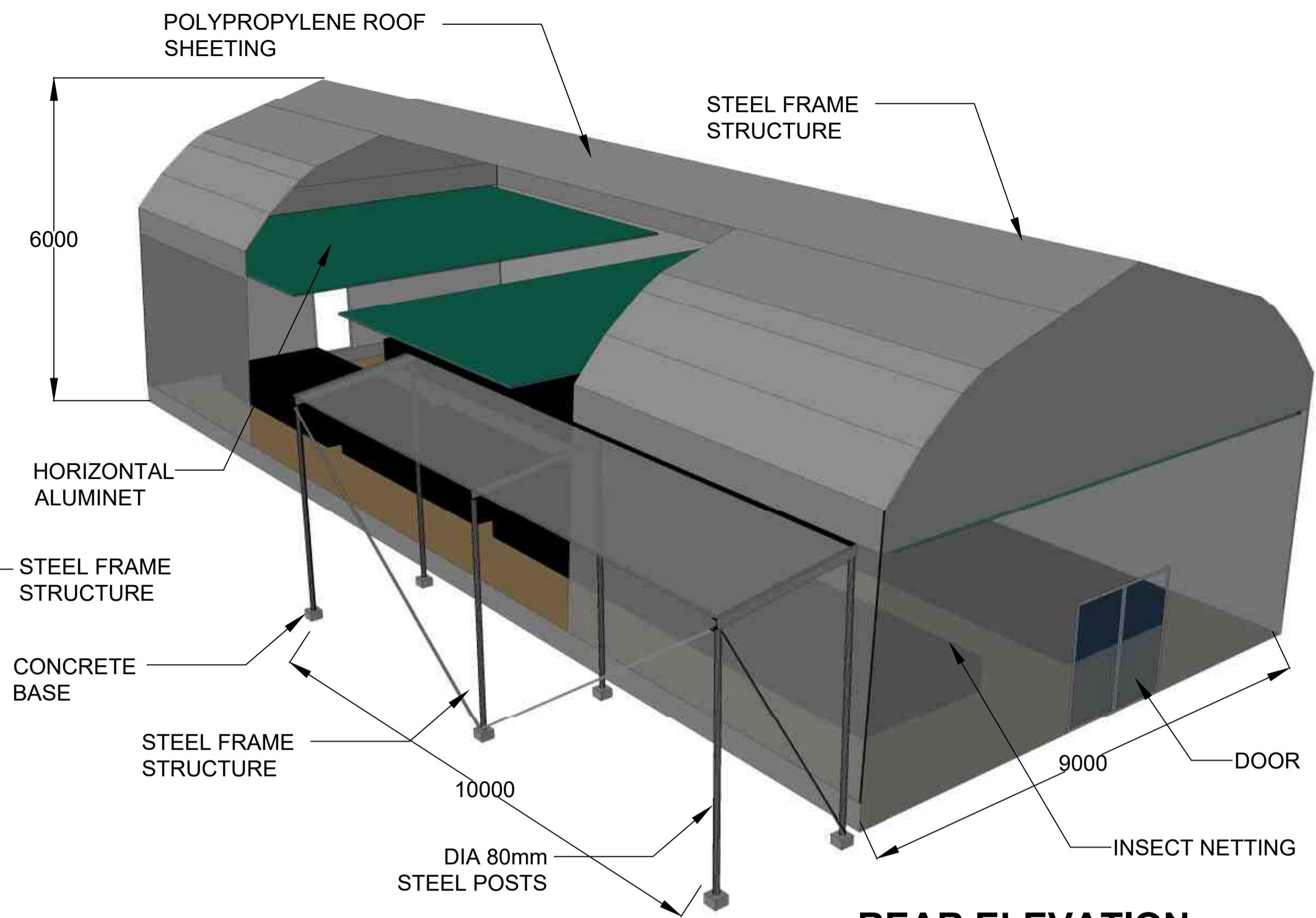
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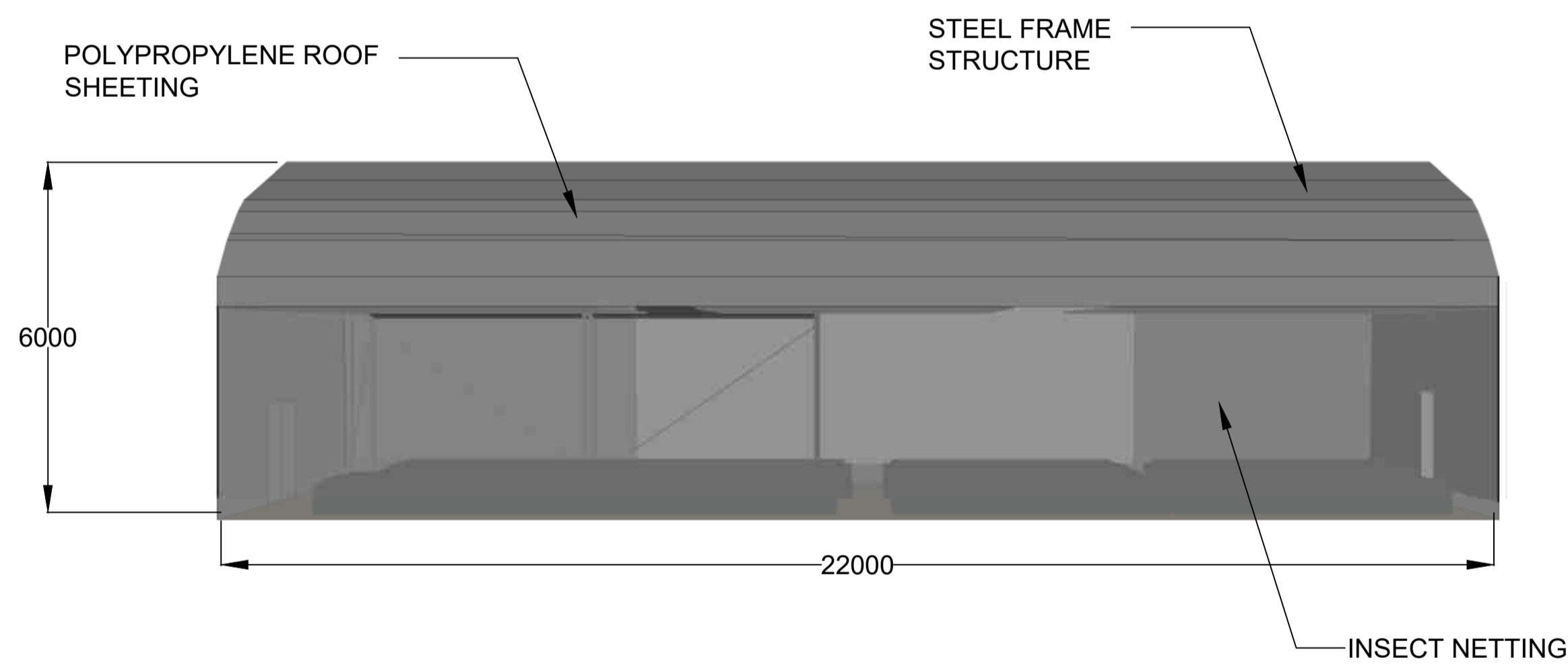
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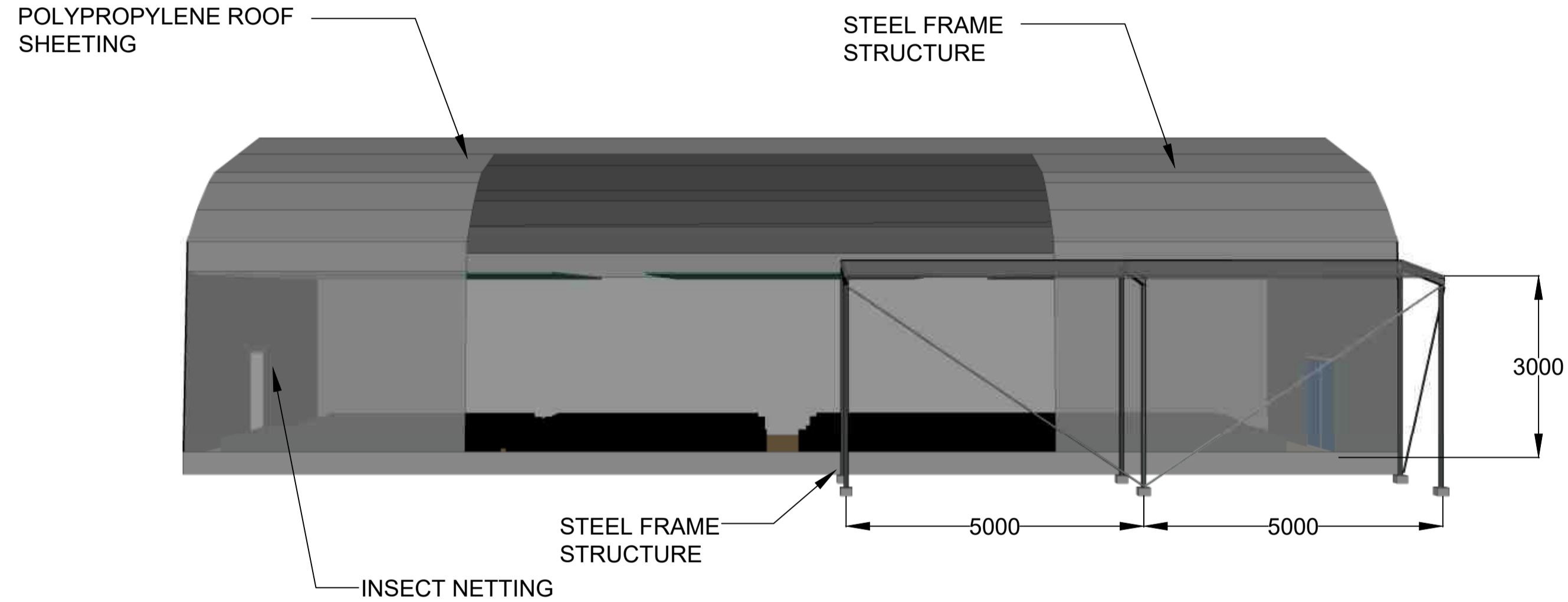
FRONT VIEW



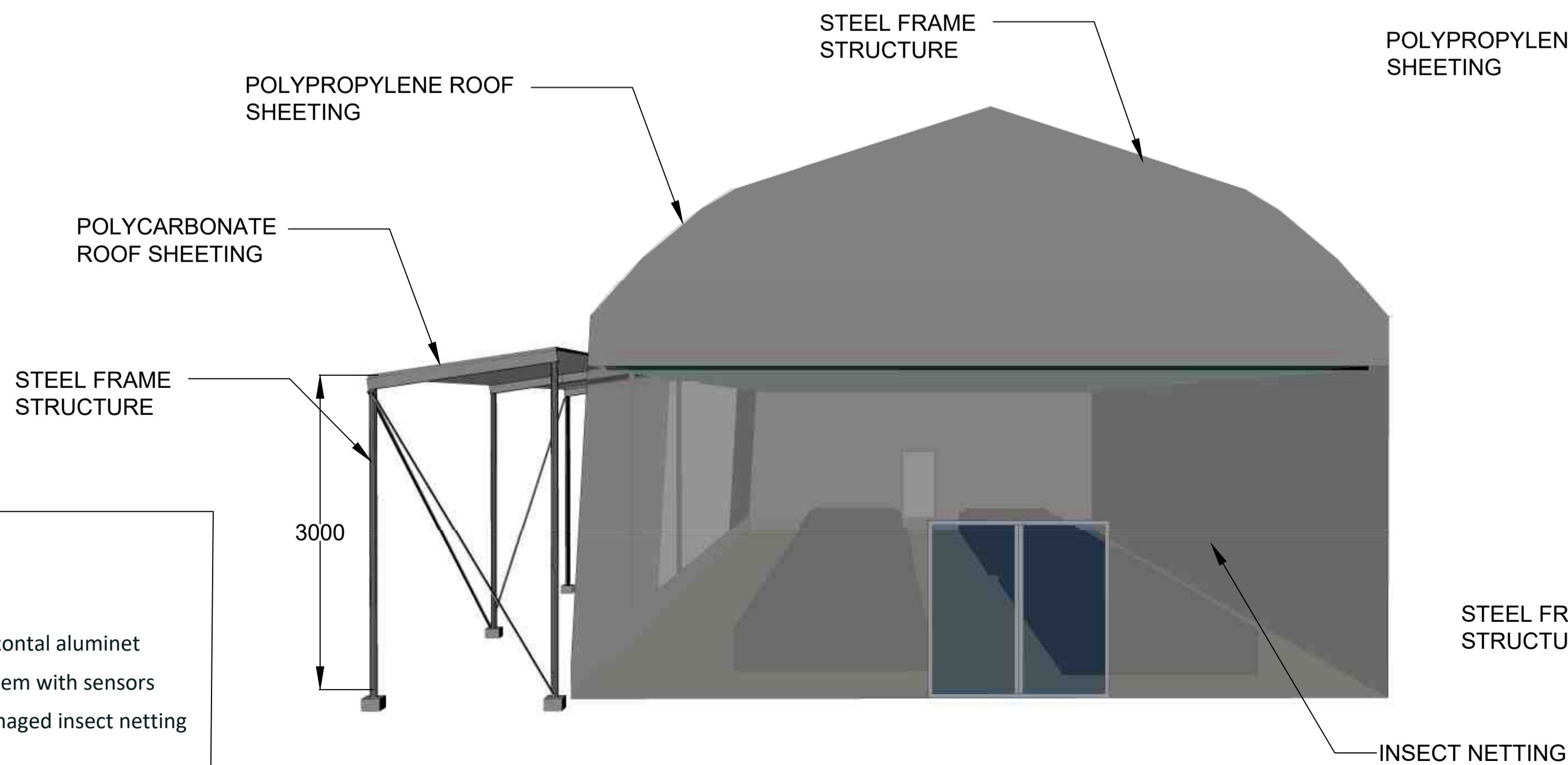
REAR ELEVATION



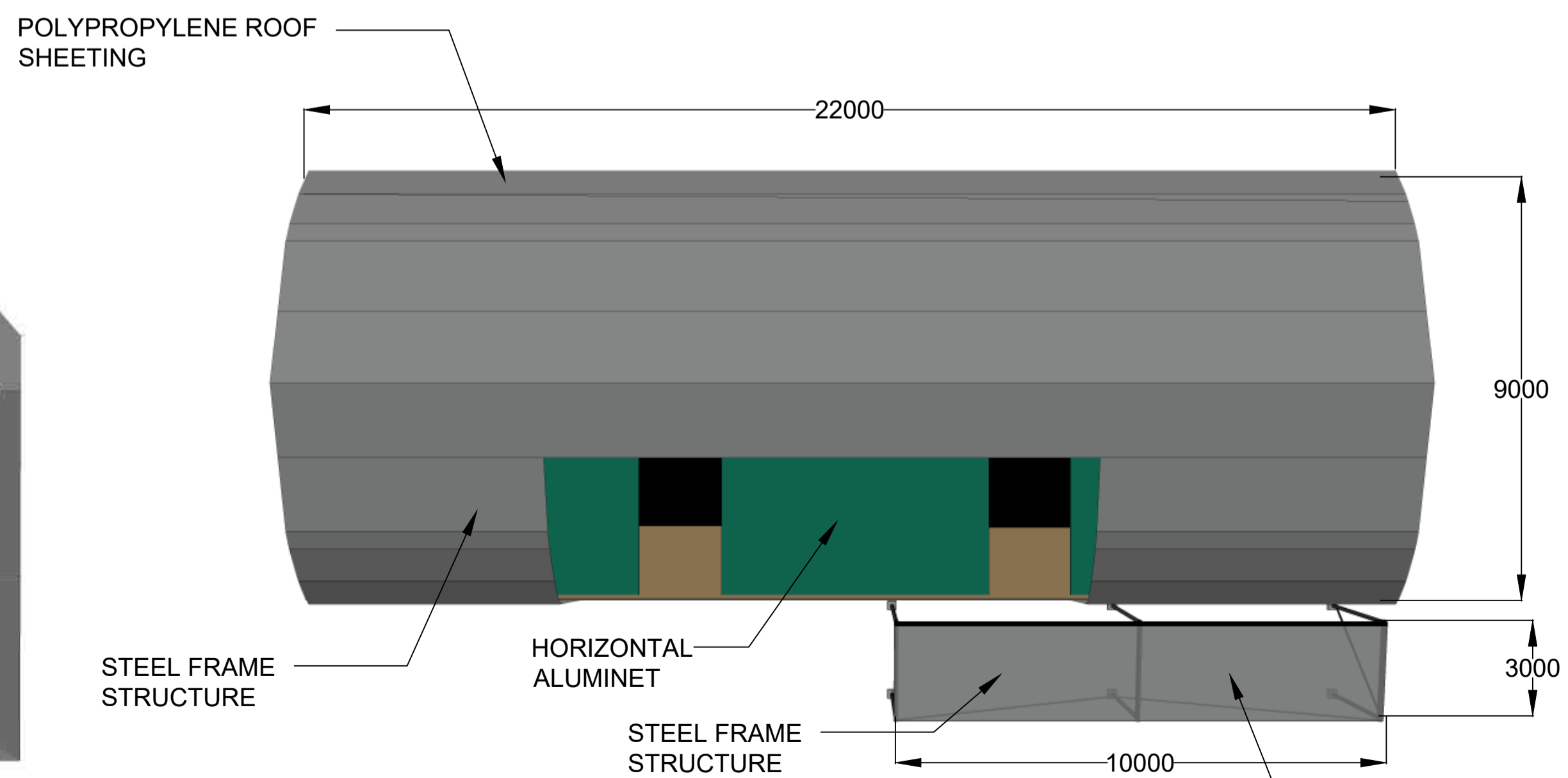
SIDE 1 ELEVATION



SIDE 2 ELEVATION



REAR VIEW



PLAN VIEW

**Succulent Nursery**

**Scope Of Works:**

1. Automation of horizontal aluminet
2. Climate Control system with sensors
3. Replacement of damaged insect netting
4. Servicing of doors
5. Installation of roof cover structure
6. Alarm system with sensors

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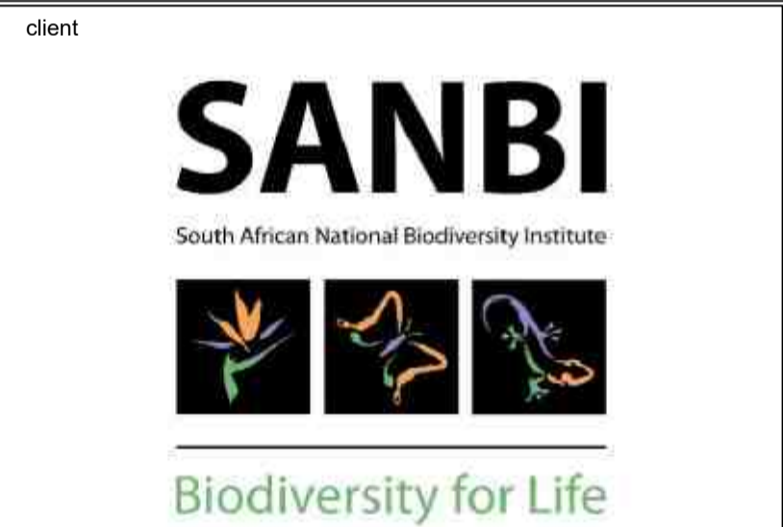
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date: N/A

professional registration no.: N/A

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discipline **STRUCTURAL**

service **SANBI KIRSTENBOSCH:  
INVESTIGATION, DESIGN  
PROCUREMENT AND  
CONSTRUCTION MONITORING  
FOR THE REPAIRS AND  
UPGRADE OF EXISTING  
NURSERIES AND  
GLASSHOUSE  
INFRASTRUCTURE.**

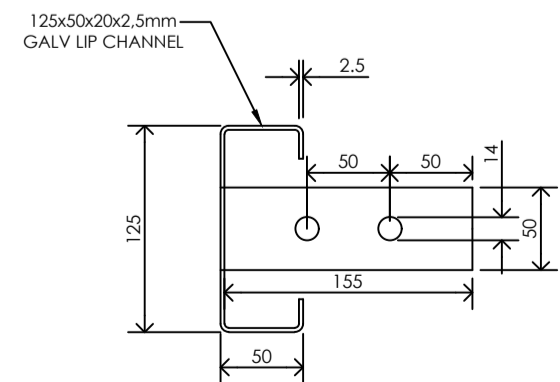
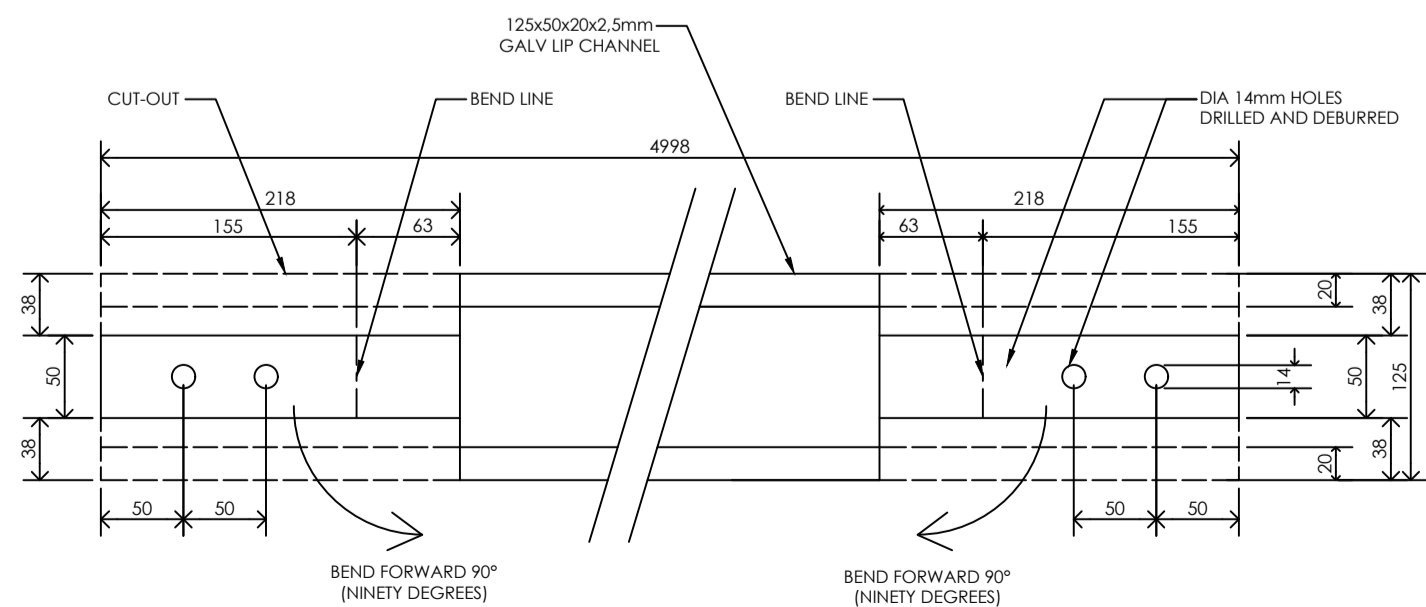
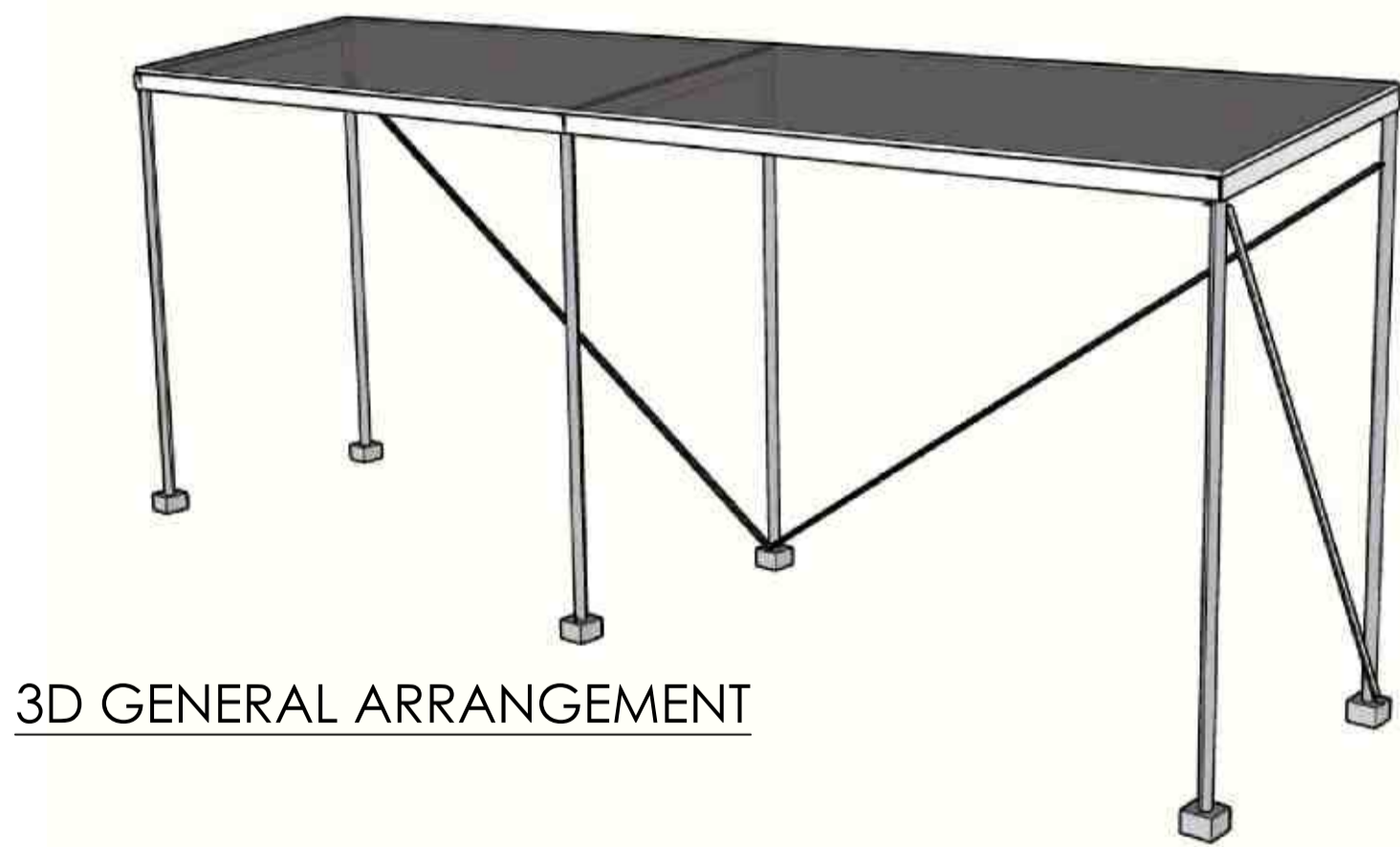
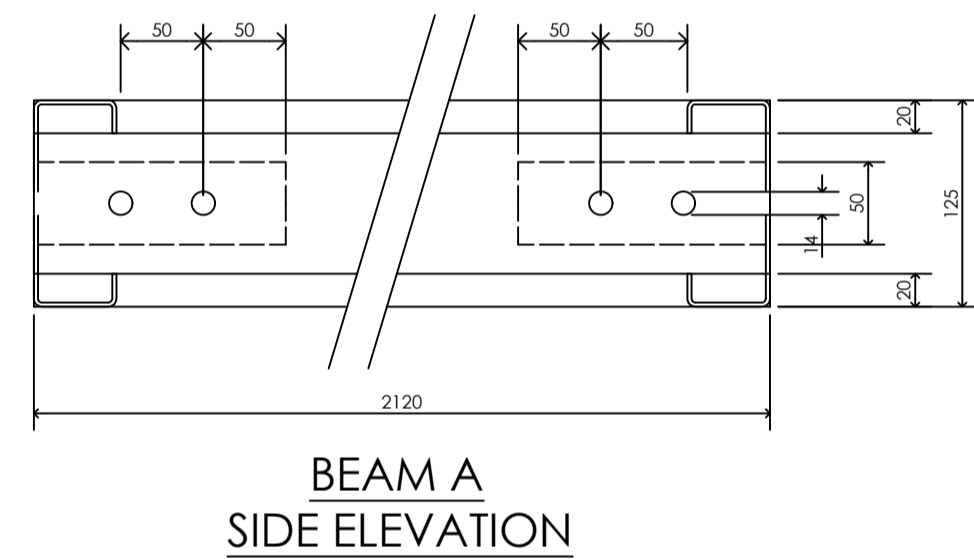
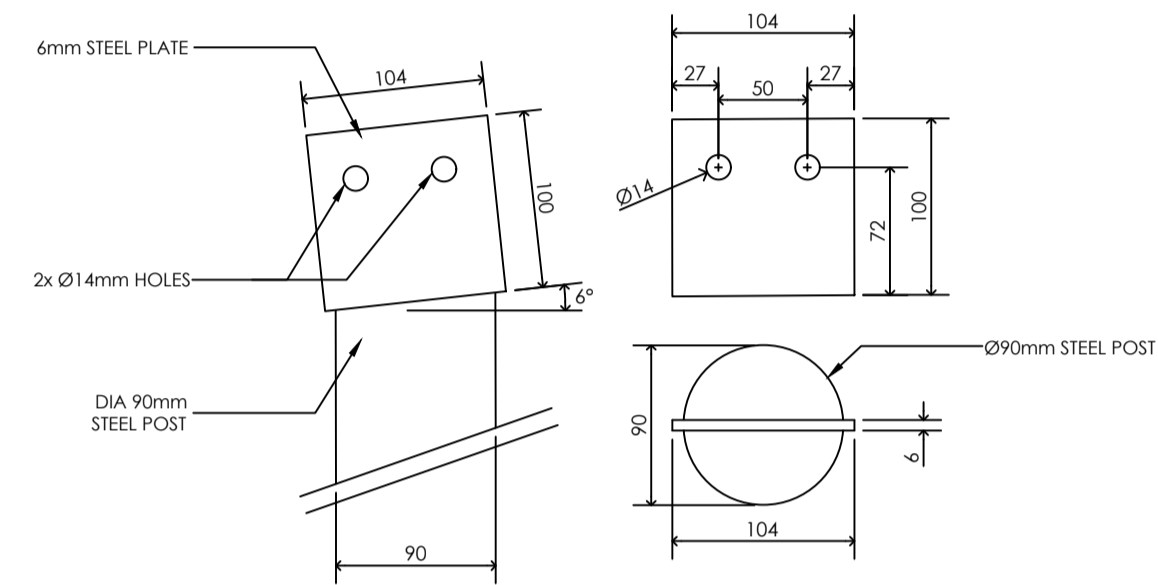
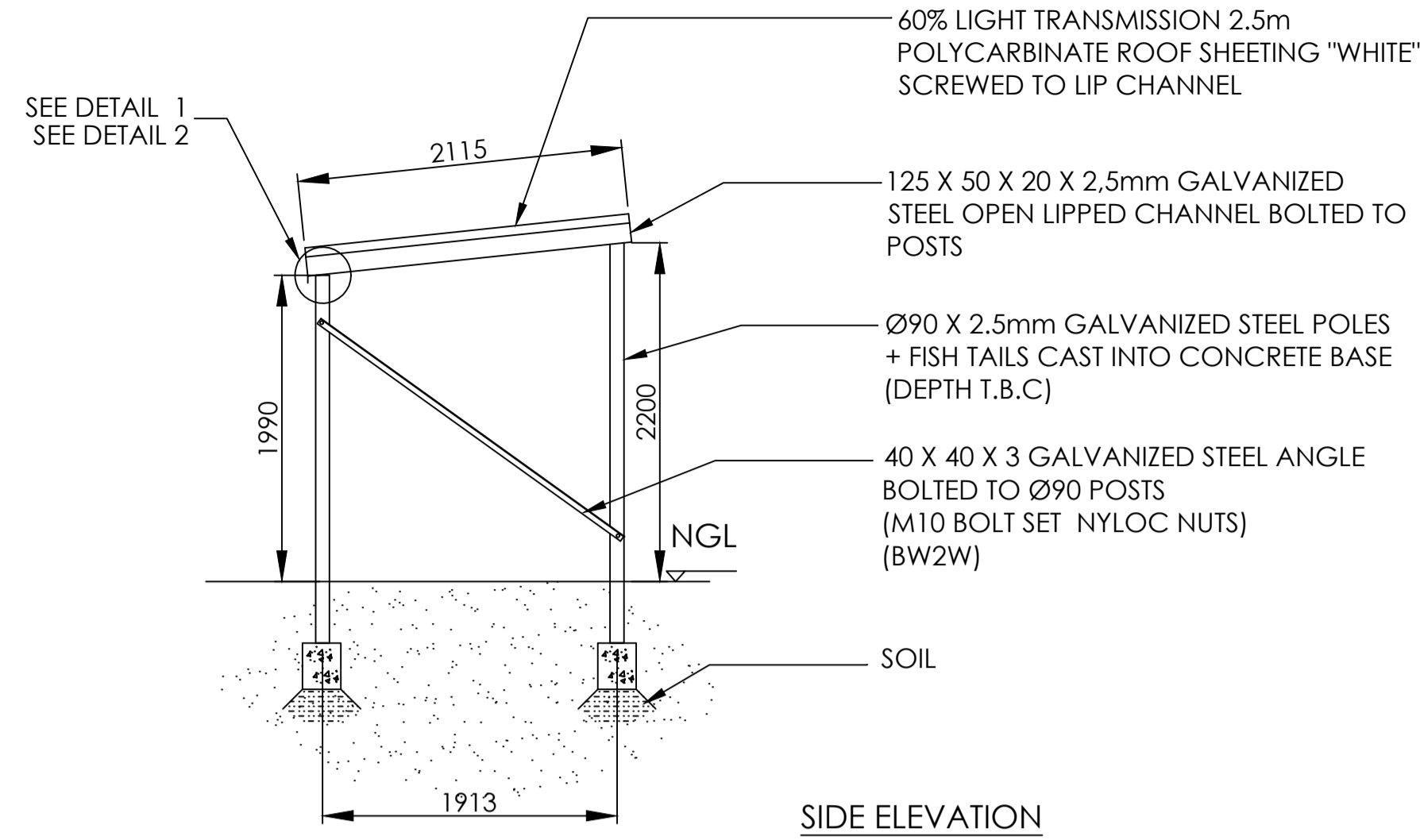
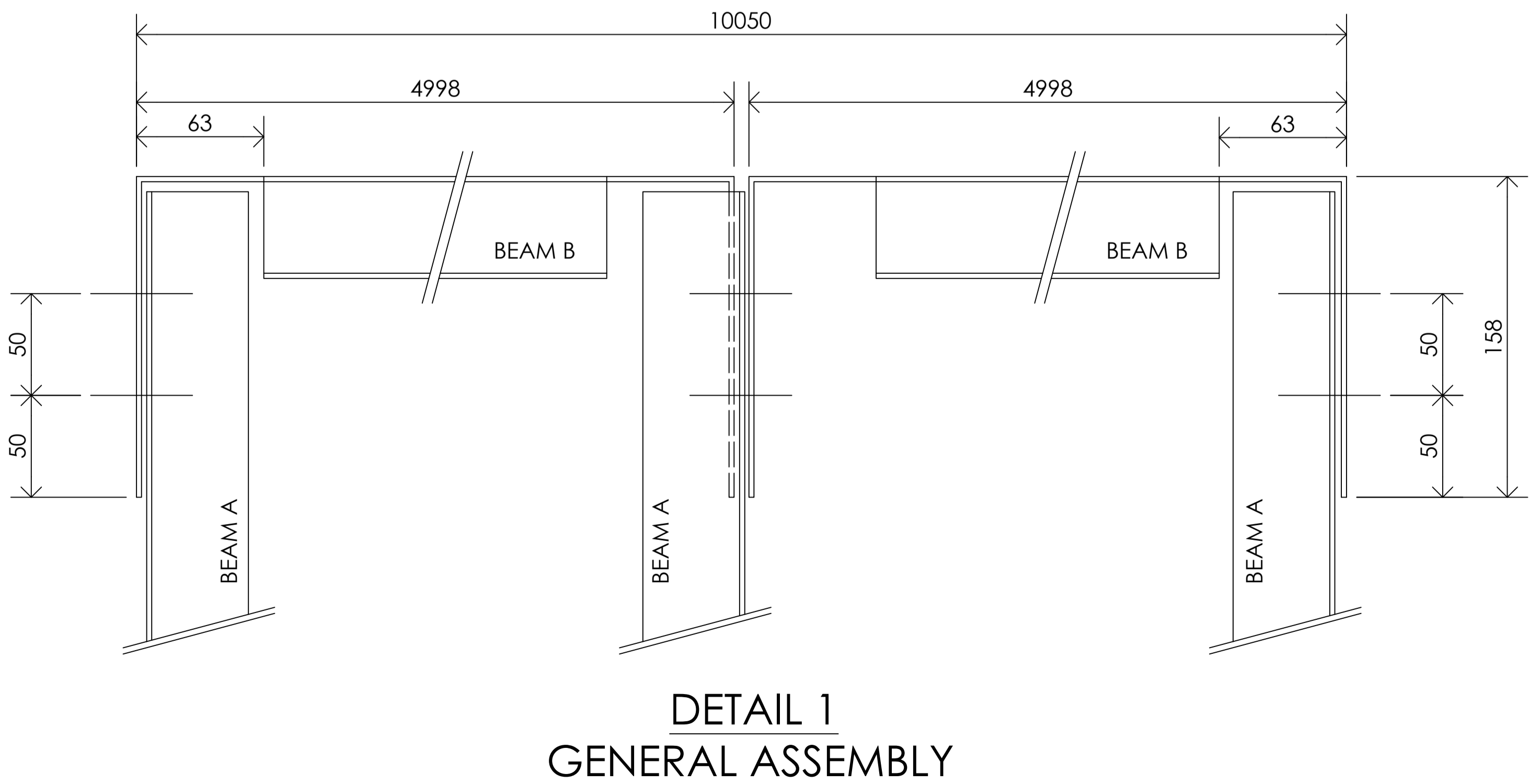
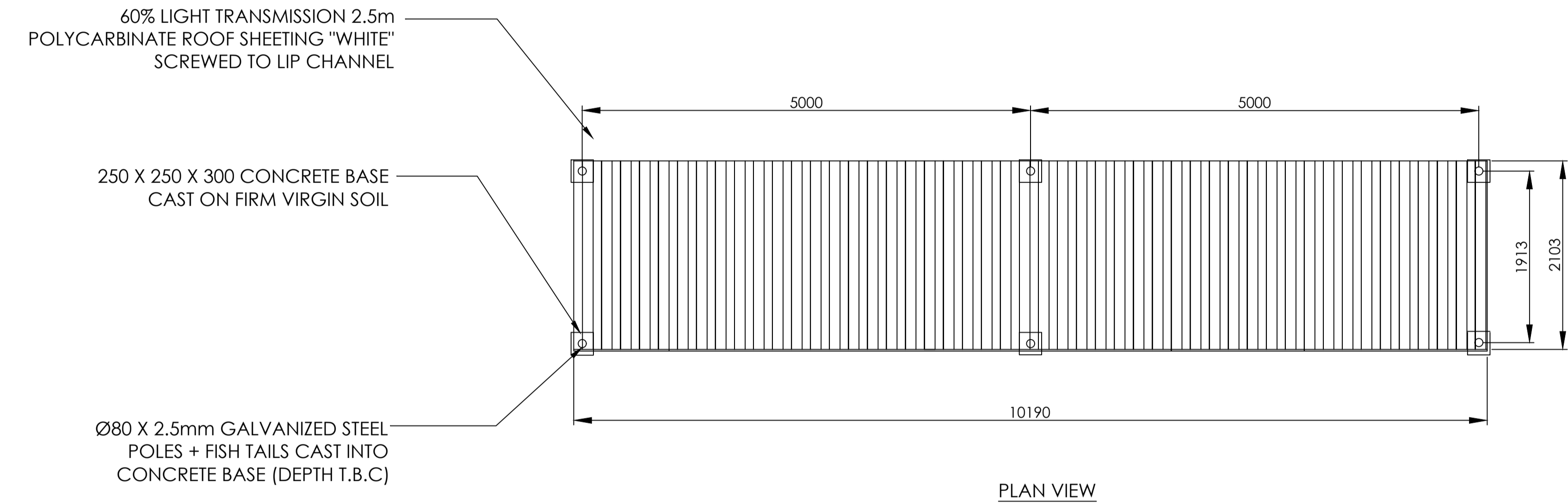
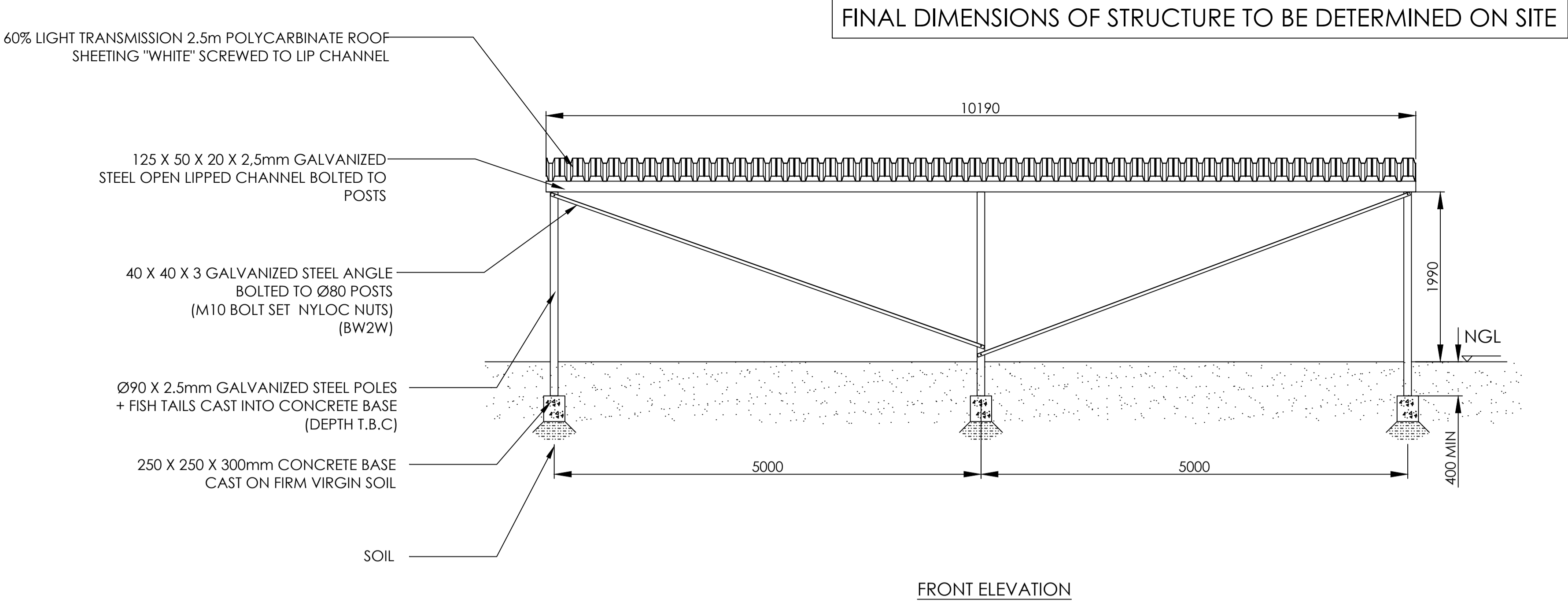
project number **0533**

drawing title **SANBI KIRSTENBOSCH:  
LOWER SUCCULENT  
NURSERIES**

ref.no. <u>--</u>	designed <u>K JURIES</u>
scale <u>N.T.S</u>	drawn <u>T NIEFTAGDIEN</u>
date <u>NOV'23</u>	checked <u>R ISHMAIL</u>
drawing number	revision

0533-PH2-20

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date: N/A	
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client

consultant		P O BOX 323 GROENKLOOF 0027	
discipline		STRUCTURAL	
service		SANBI KIRSTENBOSCH: REPAIRS AND UPGRADES OF THE EXISTING NURSERIES AND ASSOCIATED GLASS HOUSE INFRASTRUCTURE	
project number		0533	
drawing title		SANBI KIRSTENBOSCH: LOWER SUCCULENT NURSERY NEW ROOF STRUCTURE	
ref.no.	..	designed	K.JURIES
scale	1:100	drawn	T. NIEFTAGODIEN
date	DEC 23	checked	R. ISHMAIL
drawing number	0538-21		
			revision T0